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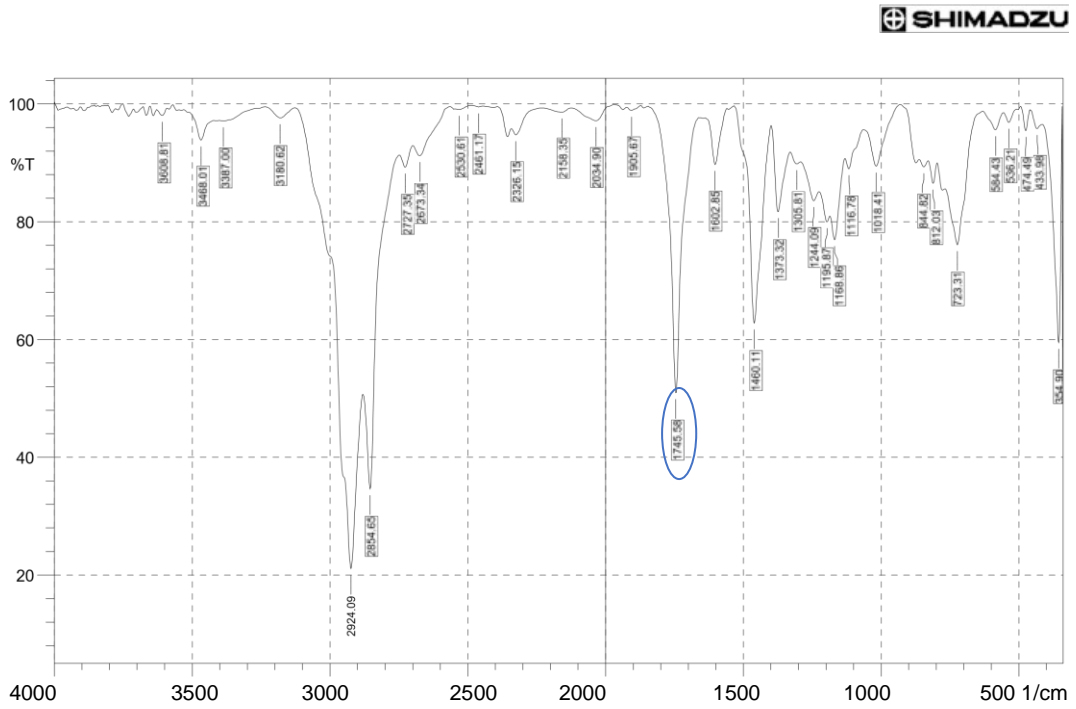


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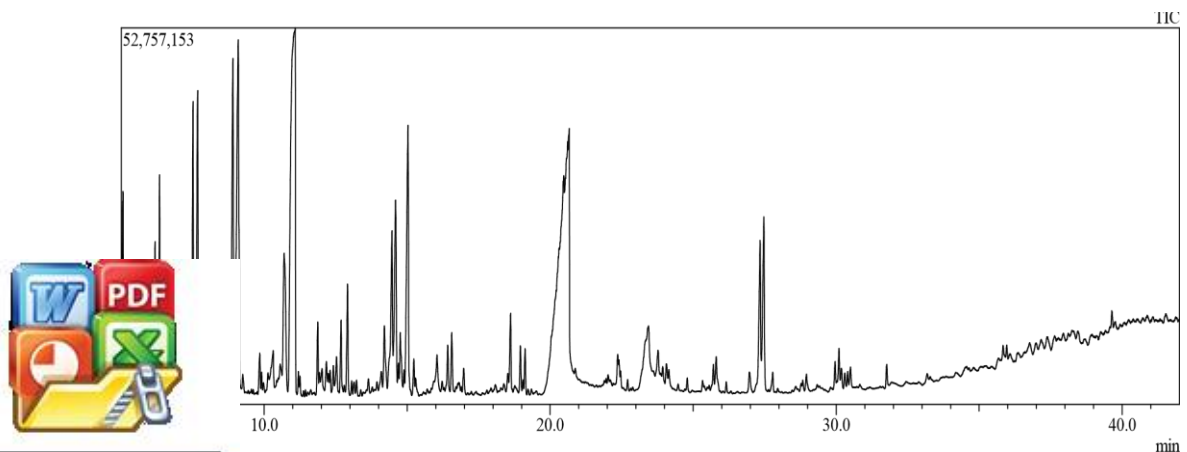
Lampiran 1 Hasil Pengujian FT-IR dan GC-MS Solar

- Hasil Pengujian FT-IR



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
Solar	2924,09	21,122	C-H Stretch (Alkanes)
	2854,65	34,659	C-H Stretch (Alkanes)
	1745,58	50,946	C=O Stretch (Ester)
	1460,11	62,793	C≡C Stretch (Aromatic Compounds)
	1195,87	79,98	C-O Stretch (Alcohols)
	1168,86	76,929	C-O Stretch (Alcohols)
	723,31	76,09	(CH ₂) _n bend (Alkyls)
	354,9	59,505	-I Stretch (Alkyl halides)

- Hasil Pengujian GC-MS



Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
1	5.067	5.005	5.100	78697891	1.50	28093219		Cyclopropane, octyl- (CAS) Octylcyclopropan
2	5.180	5.145	5.235	23108834	0.44	14209028	V	Cyclopropane, 1-heptyl-2-methyl- (CAS)
3	5.332	5.285	5.360	5723513	0.11	2864154	V	Cyclopentene, 3-undecyl- (CAS) 1-Undecyley
4	5.624	5.585	5.655	6774356	0.13	3047258	V	Benzene, pentyl- (CAS) Pentylbenzene
5	5.700	5.655	5.720	5559672	0.11	2457413	V	2,4-Dodecadiene, (E,Z)- (CAS)
6	5.841	5.775	5.870	9626803	0.18	2593978	V	1,11-Dodecadiene (CAS)
7	5.973	5.870	6.005	26335025	0.50	5022044	V	2-Decanone (CAS) Decan-2-one
8	6.100	6.005	6.115	34182736	0.65	6758198	V	Cyclopropane, 1,2-dimethyl-3-pentyl- (CAS)
9	6.185	6.115	6.225	67502895	1.29	21768937	V	1-Dodecene (CAS) Adacene 12
10	6.342	6.280	6.390	64232502	1.22	31160535	V	Dodecane (CAS) n-Dodecane
11	6.846	6.810	6.895	6294179	0.12	2011836	V	Perilla alcohol
12	6.954	6.895	6.985	6616023	0.13	2270915	V	Benzene, hexyl- (CAS) 1-Phenylhexane
13	7.250	7.065	7.270	32767743	0.62	5017282	V	3-Undecanone (CAS) Ethyl octyl ketone
14	7.308	7.270	7.340	30298338	0.58	8714221	V	2-Undecanone (CAS) 2-Hendecanone
15	7.513	7.340	7.595	174002217	3.32	41210349	V	1-Dodecanol (CAS) n-Dodecanol
16	7.673	7.595	7.710	105758219	2.02	42678606	V	Hexadecane (CAS) n-Hexadecane
17	8.216	8.155	8.245	9002909	0.17	3171553	V	Cyclopentane, decyl- (CAS) n-Decylcyclopent
18	8.430	8.345	8.460	9250459	0.18	2310206	V	Cyclohexene, 1-pentyl- (CAS) 1-N-AMYLKY
19	8.505	8.460	8.540	15680109	0.30	3783566	V	Cyclopentane, 1-butyl-2-pentyl- (CAS)
20	8.672	8.540	8.695	63540905	1.21	9301931	V	Oxirane, tetradecyl-
21	8.910	8.695	8.955	289327350	5.52	45438843	V	1-Dodecanol (CAS) n-Dodecanol
22	9.092	8.955	9.205	302126926	5.76	49475216	V	Tetradecane (CAS) n-Tetradecane
23	9.255	9.205	9.325	8541749	0.16	2591556	V	TRANS-2-TRIDECENAL
24	9.846	9.785	9.885	16400594	0.31	5615971	V	Cyclotetradecane (CAS)
25	9.915	9.885	9.945	6599524	0.13	3009262	V	Cyclopentene, 1-(3-methylbutyl)- (CAS) 1-Iso
26	10.136	10.035	10.175	12759830	0.24	2959739	V	Cyclohexene, 1-butyl- (CAS) 1-Butylcyclohex
27	10.318	10.175	10.365	39779892	0.76	5926834	V	9-Octadecenoic acid (Z)- (CAS) Oleic acid
28	10.565	10.365	10.625	36559974	0.70	4182557	V	7-Tetradecene, (E)- (CAS)
29	10.702	10.625	10.835	118350515	2.26	19539280	V	1-Hexadecene (CAS) Cetene
30	11.080	10.835	11.145	574369673	10.95	50952311	V	Tetradecane (CAS) n-Tetradecane
31	11.200	11.155	11.335	12696285	0.24	3028785	V	9-Octadecene, (E)- (CAS)
32	11.632	11.485	11.675	5663289	0.11	913031	V	OLEIC ACID, PROPYL ESTER
33	11.875	11.675	11.905	29567289	0.56	10292794	V	Cyclohexane, undecyl- (CAS) Undecylcyclohe
34	11.936	11.905	11.965	9617411	0.18	3319637	V	5-Heptadecene, 1-bromo- (CAS) 1-BROMOH
35	12.023	11.965	12.115	19050516	0.36	3860939	V	Dodecanoic acid (CAS) Lauric acid
36	12.177	12.115	12.225	19622728	0.37	4797129	V	Cyclohexene, 1-decyl- (CAS)
37	12.308	12.225	12.355	18216664	0.35	3569399	V	9-Octadecen-1-ol, (Z)- (CAS) cis-9-Octadecen
38	12.420	12.355	12.455	13401962	0.26	4098893	V	3-Hexadecene, (Z)- (CAS)
39	12.531	12.455	12.595	22549704	0.43	5378731	V	3-Hexadecene, (Z)- (CAS)
40	12.691	12.595	12.765	33625898	0.64	10233842	V	3-Octadecene, (E)- (CAS)
41	12.915	12.845	12.995	45981626	0.88	15549374	V	Pentadecane (CAS) n-Pentadecane
42	13.062	12.995	13.105	5732641	0.11	2055097	V	CYCLOHEXANE, 1,5-DIISOPROPYL-2,3-D
43	13.146	13.105	13.185	5941221	0.11	1914779	V	9-Octadecene, (E)- (CAS)
44	13.233	13.185	13.285	5970515	0.11	2175843	V	Cyclohexene, 1-decyl- (CAS)
45	13.945	13.905	13.995	5509480	0.11	1649377	V	Cyclohexane, octyl- (CAS) n-Octylcyclohexan
46	14.098	13.995	14.145	15847053	0.30	3100313	V	Benzene, decyl- (CAS) n-Decylbenzene
47	14.205	14.145	14.305	43316302	0.83	9525052	V	9-Tricosene, (Z)- (CAS) Muscalure
48	14.469	14.305	14.515	110560519	2.11	22143552	V	9-Octadecene, (E)- (CAS)
49	14.596	14.515	14.655	123638430	2.36	27225877	V	9-Octadecene, (E)- (CAS)
50	14.762	14.655	14.855	46779083	0.89	8459937	V	3-Octadecene, (E)- (CAS)
51	15.031	14.855	15.165	177125059	3.38	37117731	V	Nonadecane (CAS) n-Nonadecane
52	15.236	15.165	15.415	24075575	0.46	5048980	V	9-Octadecene, (E)- (CAS)
53	16.047	15.765	16.175	41311484	0.79	5449107	V	9-Octadecenoic acid (Z)- (CAS) Oleic acid
	16.223	16.175	16.325	9145690	0.17	1816913	V	1-Nonadecene (CAS)
	16.423	16.325	16.495	24339041	0.46	6805463	V	9-Eicosene, (E)- (CAS)
	16.562	16.495	16.665	27554304	0.53	8447858	V	9-Eicosene, (E)- (CAS)
	16.815	16.665	16.865	13671979	0.26	1724774	V	3-Eicosene, (E)- (CAS)
	16.977	16.865	17.075	14988045	0.29	3696148	V	Nonadecane (CAS) n-Nonadecane
	18.515	18.455	18.555	8619489	0.16	2446646	V	10-METHYL-OCTADEC-1-ENE
	18.615	18.555	18.705	32412702	0.62	10851253	V	2-Heptadecanone (CAS) 2-HEPTADECANOL

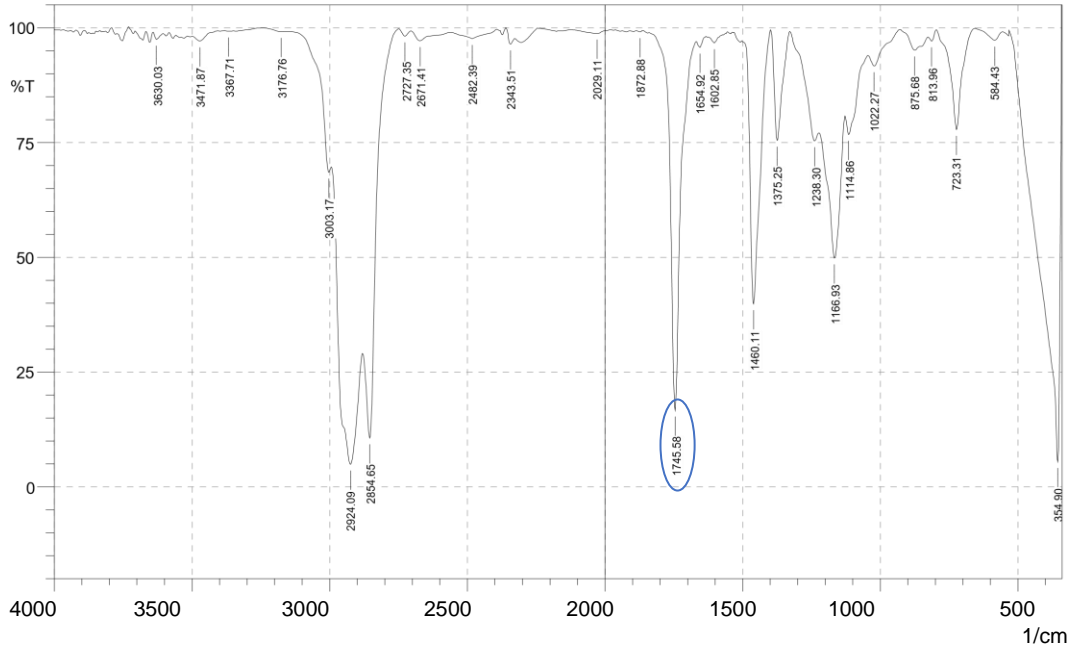


Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
61	18.962	18.895	19.015	18415781	0.35	6521109		Tetratetracontane (CAS) n-Tetratetracontane
62	19.124	19.015	19.185	20768697	0.40	6312738	V	Hexadecanoic acid, methyl ester (CAS) Methyl hexadecanoate
63	20.658	19.755	21.195	909659658	17.34	34679801		Hexadecanoic acid (CAS) Palmitic acid
64	22.374	22.195	22.645	30875504	0.59	4368798		9-Tricosene, (Z)- (CAS) Muscalure
65	23.435	22.970	23.695	154545800	2.95	8962247		OCTADEC-9-ENOIC ACID
66	23.770	23.695	24.020	57720064	1.10	5315807	V	Octadecanoic acid (CAS) Stearic acid
67	24.075	24.020	24.420	32492710	0.62	3655534	V	1-Octadecene (CAS) .alpha.-Octadecene
68	24.801	24.420	24.895	12612385	0.24	1696439	V	Hexadecanoic acid, 1-[[[(2-aminoethoxy)hydr
69	25.344	25.270	25.470	7725368	0.15	1431880		TETRACONTAN-1,40-DIOL
70	25.816	25.470	25.995	42421354	0.81	4684010	V	1-Octadecene (CAS) .alpha.-Octadecene
71	26.979	26.845	27.095	12972067	0.25	2712423		1-Eicosanol (CAS) n-Eicosanol
72	27.473	27.095	27.595	197267297	3.76	21896304	V	1-Octadecene (CAS) .alpha.-Octadecene
73	27.795	27.595	28.445	9806564	0.19	2457654	V	Nonacosane (CAS) n-Nonacosane
74	28.968	28.745	29.120	16871719	0.32	2194849	V	1-Octadecanol (CAS) Stenol
75	30.106	29.745	30.245	51500205	0.98	4851396		(Z)14-Tricosenyl formate
76	30.312	30.245	30.370	9153595	0.17	2101420	V	9-Heptadecanone (CAS) Octyl ketone
77	30.508	30.370	30.595	21292435	0.41	2811248	V	1-Eicosanol (CAS) n-Eicosanol
78	30.845	30.595	31.020	8573192	0.16	688351	V	Dotriacontane (CAS) n-Dotriacontane
79	32.445	32.320	33.070	9868629	0.19	509786		TETRACOSAMETHYLCYCLODODECASI
80	33.193	33.070	33.420	11702373	0.22	1303841		1H-Purin-6-amine, [(2-fluorophenyl)methyl]- (
81	33.670	33.420	34.120	9557670	0.18	374853	V	Iron, monocarbonyl-(1,3-butadiene-1,4-dicarb
82	34.568	34.370	34.695	14773854	0.28	1174835		1H-Purin-6-amine, [(2-fluorophenyl)methyl]- (
83	34.820	34.695	34.945	8286809	0.16	830203	V	OCTADECAMETHYLCYCLONONASILOX
84	35.020	34.945	35.570	17874656	0.34	658261	V	SILIKONFETT SE30 (GREVELS)
85	35.971	35.570	36.195	50505389	0.96	2751312		1-Eicosanol (CAS) n-Eicosanol
86	36.345	36.195	36.495	15414442	0.29	1367772	V	OCTADECAMETHYLCYCLONONASILOX
87	36.774	36.495	36.895	33511926	0.64	2345576	V	TETRACOSAMETHYLCYCLODODECASI
88	36.995	36.895	37.070	16673269	0.32	2089100	V	TETRACOSAMETHYLCYCLODODECASI
89	37.175	37.070	37.295	23452541	0.45	2382653	V	TETRACOSAMETHYLCYCLODODECASI
90	37.391	37.295	37.520	22913839	0.44	2546263	V	TETRACOSAMETHYLCYCLODODECASI
91	37.950	37.520	38.045	58187212	1.11	2422308	V	TETRACOSAMETHYLCYCLODODECASI
92	38.270	38.045	38.395	42818092	0.82	2518115	V	TETRACOSAMETHYLCYCLODODECASI
93	38.470	38.395	38.595	15837365	0.30	2168997	V	Iron, monocarbonyl-(1,3-butadiene-1,4-dicarb
94	38.720	38.595	38.820	6997832	0.13	842404	V	OCTADECAMETHYLCYCLONONASILOX
95	38.920	38.820	39.195	16938239	0.32	1137577		OCTADECAMETHYLCYCLONONASILOX
96	39.270	39.195	39.520	16452278	0.31	1084565	V	Heptasiloxane, hexadecamethyl- (CAS) Hexad
97	39.650	39.520	39.845	29895658	0.57	3235390	V	16-Hentriacontanone (CAS) Palmitone
98	40.220	39.845	40.645	45478312	0.87	1295145	V	TETRACOSAMETHYLCYCLODODECASI
99	40.888	40.645	40.995	11522050	0.22	881809	V	OCTADECAMETHYLCYCLONONASILOX
100	41.537	41.445	41.620	5914829	0.11	995363	V	TETRACOSAMETHYLCYCLODODECASI
				5245554998	100.00	807092188		



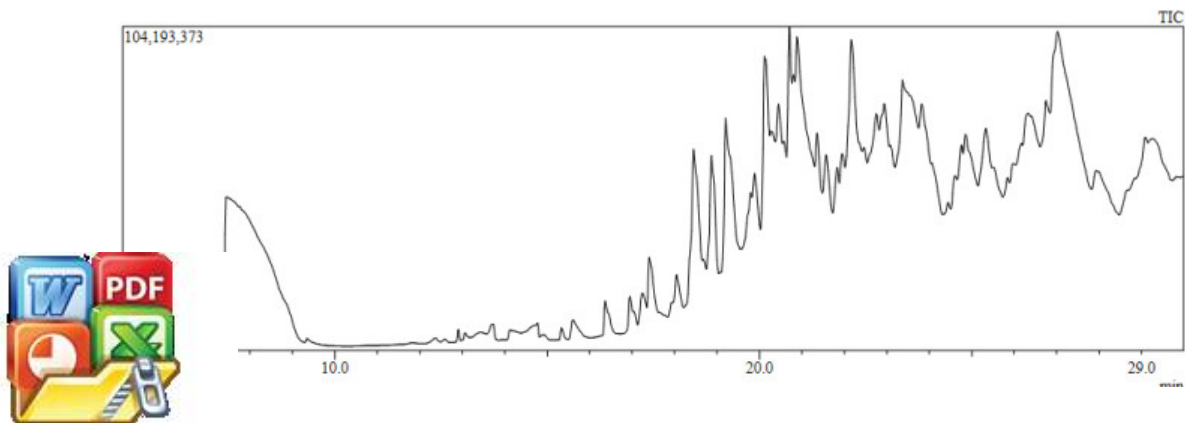
Lampiran 2 Hasil Pengujian FT-IR dan GC-MS B35P6

- Hasil Pengujian FT-IR



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
B35P6	3003.17	68.53	O-H Stretch (Carboxylic Acid)
	2924.09	4.92	C-H Stretch (Alkanes)
	2854.65	10.63	C-H Stretch (Alkanes)
	1745.58	16.69	C=O Stretch (Ketones dan ester)
	1460.11	39.85	C=C Stretch
	1375.25	75.47	CH ₃ C-H bend (Alkyl)
	1238.3	75.35	C-O Stretch (Alcohols)
	1166.93	49.84	C-O Stretch (Alcohols)
	354.9	5.49	C-I Stretch (Alkyl halides)

- Hasil Pengujian GC-MS



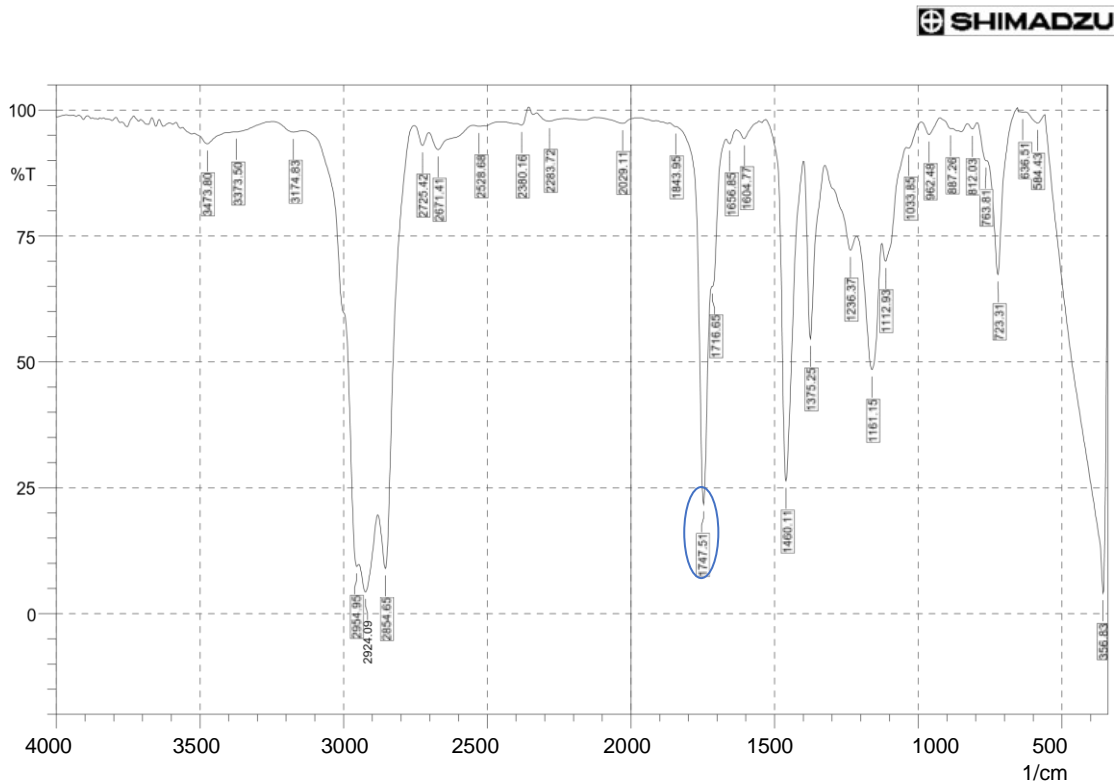
Peak Report TIC							
Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark Name
1	6.716	6.650	6.800	479231	0.00	125369	Butane (CAS) n-Butane
2	7.047	7.000	7.250	3482173	0.01	630722	Ethanol (CAS) Ethyl alcohol
3	7.467	7.367	9.900	3280064515	12.09	49156139	S (3a.alpha.,4.alpha.,6a.alpha.)-Hexahydro-4-me
4	9.348	9.300	9.683	9250421	0.03	1377247	T 2-Propanone (CAS) Acetone
5	11.500	11.317	11.600	1491176	0.01	126180	1-Decanol, 2-ethyl- (CAS)
6	11.813	11.600	12.033	7658103	0.03	439676	V Dodecane (CAS) n-Dodecane
7	12.363	12.033	12.483	20883321	0.08	1878756	V Pentane, 2-methyl- (CAS) 2-Methylpentane
8	12.586	12.483	12.733	11219441	0.04	1303426	V Pentane, 3-methyl- (CAS) 3-Methylpentane
9	12.910	12.733	12.950	15838266	0.06	4356816	V Hexane (CAS) n-Hexane
10	13.066	12.950	13.200	27493835	0.10	3232413	V Cyclopentane, methyl- (CAS) Methylcyclopentane
11	13.421	13.200	13.583	62314512	0.23	3229654	V 1H-Indene, 2,3-dihydro-1,2-dimethyl- (CAS)
12	13.725	13.583	13.850	51380625	0.19	5720365	V Cyclohexane (CAS) Hexanaphthene
13	13.933	13.850	14.017	5647569	0.02	601688	V KONDURANGOGENINS A
14	14.123	14.017	14.383	59994630	0.22	3765272	V OLEIC ACID, PROPYL ESTER
15	14.766	14.383	14.817	99101492	0.37	5699017	V KONDURANGOGENINS A
16	14.927	14.817	15.150	17528886	0.06	1835615	V Cyclopentane, 1,3-dimethyl-, trans- (CAS) trans-2,3-Dimethylcyclopentane
17	15.339	15.183	15.500	17937792	0.07	3804922	V Heptane (CAS) n-Heptane
18	15.607	15.500	16.000	71297104	0.26	6088386	V Cyclohexane, methyl- (CAS) Methylcyclohexane
19	16.267	16.167	16.300	1467007	0.01	216533	Bicyclo[3.1.1]heptan-3-one, 2,6,6-trimethyl-
20	16.370	16.300	16.667	88204799	0.33	11227037	V 1,3,5-Cycloheptatriene (CAS) Cycloheptatriene
21	16.948	16.817	17.133	94078036	0.35	11435709	V Hexane, 2,5-dimethyl- (CAS) 2,5-Dimethylhexane
22	17.243	17.133	17.350	107218431	0.40	11436021	V CYCLOHEXANE, 1,2-DIMETHYL-
23	17.407	17.350	17.833	246836825	0.91	22440413	V Octane (CAS) n-Octane
24	17.933	17.833	17.967	37176292	0.14	6199186	V Cyclopentane, propyl- (CAS) n-Propylcyclopentane
25	18.048	17.967	18.217	135657096	0.50	14801997	V Cyclohexane, ethyl- (CAS) Ethylcyclohexane
26	18.452	18.217	18.650	697019748	2.57	53766188	V Benzene, 1,2-dimethyl- (CAS) o-Xylene
27	18.676	18.650	18.750	97349470	0.36	17691583	V Heptane, 2,3-dimethyl- (CAS) 2,3-Dimethylheptane
28	18.869	18.750	19.050	529408452	1.95	50505970	V Decane, 1-chloro- (CAS) 1-Chlorodecane
29	19.204	19.050	19.550	994544277	3.67	61371301	V 1-Octanol, 2-butyl- (CAS) 2-Butyl-1-octanol
30	19.791	19.550	19.817	408926657	1.51	35439585	V Benzene, 1,3,5-trimethyl- (CAS) 1,3,5-Trimethylbenzene
31	19.882	19.817	20.017	404124143	1.49	41345183	V Cyclohexane, propyl- (CAS) Propylcyclohexane
32	20.123	20.017	20.233	752520956	2.77	78276722	V Decane, 1-chloro- (CAS) 1-Chlorodecane
33	20.274	20.233	20.367	418506467	1.54	53677989	V Benzene, 1-ethyl-3-methyl- (CAS) m-Ethyltoluene
34	20.447	20.367	20.533	553009983	2.04	61829031	V 1-Heptanol, 6-methyl- (CAS) 6-Methyl-1-heptanol
35	20.568	20.533	20.633	285853385	1.05	49529834	V Tridecane, 3-methyl- (CAS) 3-Methyltridecane
36	20.705	20.633	20.767	566692640	2.09	85880933	V Benzene, 1,3,5-trimethyl- (CAS) 1,3,5-Trimethylbenzene
37	20.797	20.767	20.833	276444983	1.02	70133072	V Cyclohexane, 1-ethyl-2,3-dimethyl- (CAS)
38	20.888	20.833	21.300	1596488341	5.89	82027993	V 3,6-Dimethyldecane
39	21.358	21.300	21.483	435991091	1.61	49471099	V Benzene, 1,3,5-trimethyl- (CAS) 1,3,5-Trimethylbenzene
40	21.572	21.483	21.717	465441395	1.72	41819580	V p-Mentha-1,5,8-triene
41	21.829	21.717	21.883	312831856	1.15	36975767	V 5,9-CYCLOODECADADIENE, 1-EPOXY-, CIS
42	21.946	21.883	22.017	306499352	1.13	40974998	V Cyclohexane, butyl- (CAS) n-Butylcyclohexane
43	22.168	22.017	22.417	1281091006	4.72	76907573	V Octane, 4-bromo- (CAS) 4-Bromooctane
44	22.455	22.417	22.533	275785927	1.02	41303143	V 1H-Cycloprop[e]azulene, 1a,2,3,5,6,7,7a,7b-o
45	22.754	22.533	22.817	743599755	2.74	51209993	V 2-Decen-1-ol, (E)- (CAS) trans-2-Decenol
46	22.941	22.817	23.050	676357290	2.49	53791268	V Heptane, 5-ethyl-2-methyl- (CAS) 2-Methyl-5-ethylheptane
47	23.080	23.050	23.183	295237939	1.09	39980745	V Decane, 3-methyl- (CAS) 3-Methyldecane
48	23.371	23.183	23.750	1667812384	6.15	60074784	V 1-Octanol, 2-butyl- (CAS) 2-Butyl-1-octanol
49	23.822	23.750	24.317	1105356939	4.07	50843789	V Cyclopropanedodecanoic acid, 2-octyl-, methyl
50	24.445	24.317	24.500	167669200	0.62	17095532	V Benzene, 1-methyl-2-(2-propenyl)- (CAS) o-Allylbenzene
51	24.606	24.500	24.650	197027167	0.73	25144309	V OXACYCLOTETRADECA-4,11-DIYNE
52	24.755	24.650	24.800	272619732	1.00	34653069	V Cyclopentane, (3-methylbutyl)- (CAS) Cyclopentyl 3-methylbutyl ether
53	24.856	24.800	25.150	611554054	2.25	37635636	V Cyclohexane, butyl- (CAS) n-Butylcyclohexane
54	25.330	25.150	25.483	595844288	2.20	38046379	V 1-(10-METHYL-ANTHRACEN-9-YL)-ETHANOL
55	25.517	25.483	25.733	294726982	1.09	24947955	V 7-METHYL-1,2,3,5,8,8A-HEXAHYDRONAPHTHALENE
56	25.733	25.900	182284779	0.67	20553650	V DEHYDROLINALOOL	
57	25.900	26.033	189390896	0.70	24557149	V Heptane, 2,5-dimethyl- (CAS) 2,5-Dimethylheptane	
58	26.033	26.200	280745590	1.03	30555641	V (E)-3,4-Dimethyl-2-pentenol	
59	26.200	26.617	876701098	3.23	39666976	V Tridecane, 3-methyl- (CAS) 3-Methyltridecane	
60	26.617	26.833	473222007	1.74	42382186	V Tetradecane (CAS) n-Tetradecane	



Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
61	27.023	26.833	27.817	2261313216	8.34	63670959	V	Naphthalene (CAS) White tar
62	27.932	27.817	28.467	348179805	1.28	16028404	V	Octadecane, 1-chloro- (CAS) 1-Chlorooctadec
63	29.088	28.467	29.150	373260297	1.38	19777280		Cholesta-8,24-dien-3-ol, 4-methyl-, (3.beta.,4.
64	29.262	29.150	29.733	373072777	1.38	17964197	V	Octane, 1,1'-oxybis- (CAS) n-Octyl ether
65	29.821	29.733	29.850	6652356	0.02	1204314	V	Benzene, (2-decyldodecyl)- (CAS) 11-Benzyl
66	29.878	29.850	29.917	1577450	0.01	539785	V	Bicyclo[5.2.0]nonane, 1,7-dimethyl-, cis- (CA
				27126437708	100.00	1910380103		

Lampiran 3 Hasil Pengujian FT-IR dan GC-MS B35030

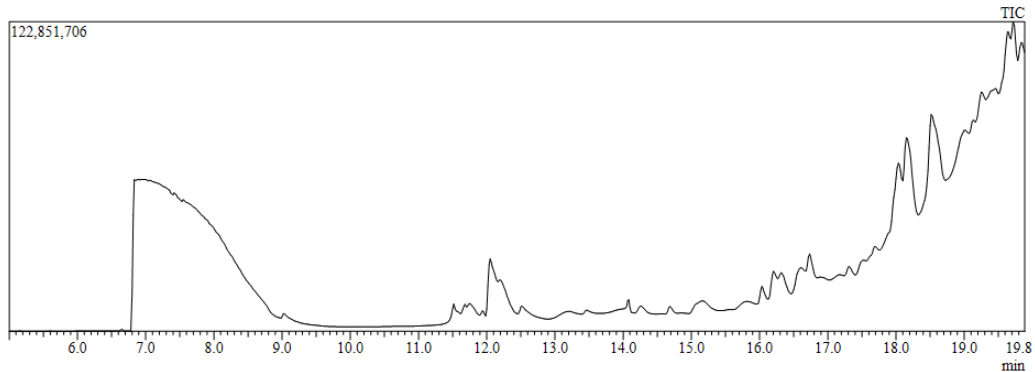
- Hasil Pengujian FT-IR



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
B35030	2954,95	9,38	C-H Stretch (Alkanes)
	2924,09	4,28	C-H Stretch(Alkanes)
	2854,65	8,93	C-H Stretch (Alkanes)
	1747,51	21,72	C=O Stretch (Ketones)
	1716,65	64,69	C=O Stretch (Ketones)
	1460,11	26,33	C=C Stretch (Aromatic Compounds)
	1375,25	54,56	CH ₃ C-H bend (Alkyl)
	1236,37	72,2	C-F Stretch (Alkyl halides)
	1161,15	48,48	C-O Stretch (Alcohols)
	1112,93	69,98	C-F Stretch (Alkyl halides)
	723,31	67,36	(CH ₂) _n bend (Alkyls)
	356,83	4,05	C-I Stretch (Alkyl halides)



• Hasil Pengujian GC-MS

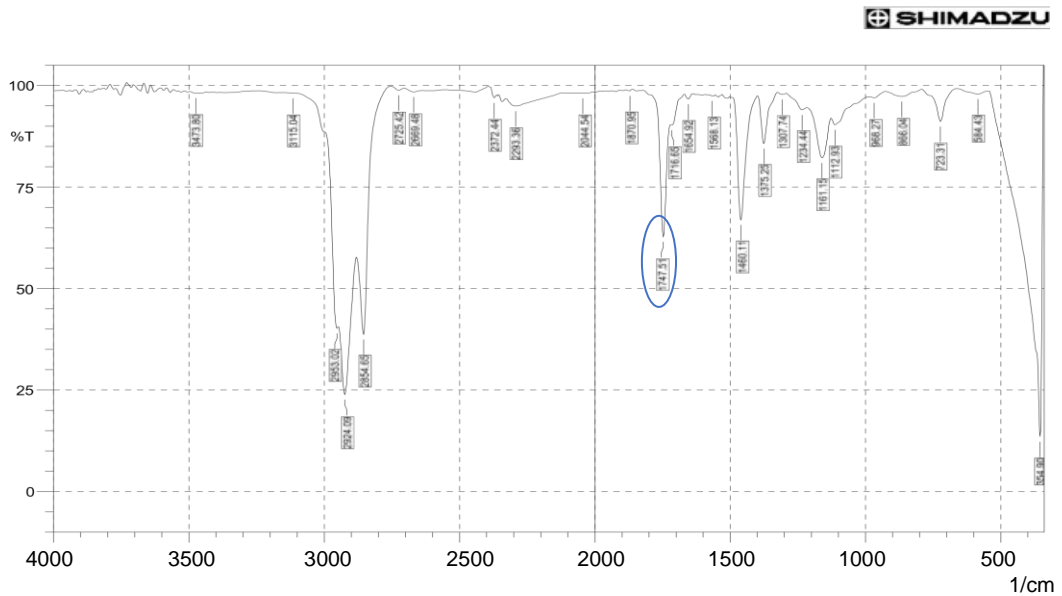


Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
1	6.651	6.583	6.750	1853436	0.02	648884		Ethanol (CAS) Ethyl alcohol
2	6.833	6.783	6.917	421377224	5.47	59960664		Oxirane, trimethyl- (CAS) 2-METHYL-2,3-EI
3	6.955	6.917	8.983	4555568712	59.12	60077783	V	1,2-DIETHYLDIBORANE-D4
4	9.030	8.983	9.750	79292319	1.03	5601137	V	2-Propanone (CAS) Acetone
5	11.117	11.033	11.150	188840	0.00	34690		3-Octanone (CAS) EAK
6	11.517	11.150	11.617	57837998	0.75	8061505		Pentane, 2-methyl- (CAS) 2-Methylpentane
7	11.683	11.617	11.717	39281455	0.51	7802507	V	Decane, 2-methyl- (CAS) 2-Methyldecane
8	11.750	11.717	11.900	62937398	0.82	7989859	V	Pentane, 3-methyl- (CAS) 3-Methylpentane
9	11.939	11.900	11.983	19611258	0.25	4776624	V	Pentane, 3-methyl- (CAS) 3-Methylpentane
10	12.052	11.983	12.167	205406826	2.67	25378313	V	Hexane (CAS) n-Hexane
11	12.194	12.167	12.450	161411536	2.09	16720447	V	Cyclopentane, methyl- (CAS) Methylcyclopentane
12	12.515	12.450	12.900	67917541	0.88	6068336	V	Pentadecane, 8-methylene- (CAS) 2-Heptyl-1-
13	13.211	12.900	13.383	56071425	0.73	3057098	V	Cyclohexane (CAS) Hexanaphthene
14	13.469	13.383	13.617	32512119	0.42	3206055	V	Benzene (CAS) Phene
15	14.076	13.617	14.167	83381206	1.08	6483161	V	Undecane, 2,4-dimethyl- (CAS) 2,4-Dimethyl
16	14.257	14.167	14.483	33978550	0.44	3818074	V	Cyclopentane, 1,3-dimethyl-, trans- (CAS) tra
17	14.685	14.483	14.800	18139965	0.24	3168466	V	Heptane (CAS) n-Heptane
18	14.852	14.800	14.950	2169926	0.03	363367	V	Cyclopentane, 1,3-dimethyl-
19	15.163	14.967	15.417	62504308	0.81	4538046		Cycloheptane (CAS)
20	15.567	15.467	15.617	1044886	0.01	141843		Pentane, 2-isocyano-2,4,4-trimethyl- (CAS) T-
21	15.821	15.633	15.967	23836596	0.31	1961183		6-METHYL-1-OCTENE
22	16.035	15.967	16.117	29474921	0.38	6534235		1,3,5-Cycloheptatriene (CAS) Cycloheptatrien
23	16.206	16.117	16.267	65407431	0.85	11046007	V	Heptane, 2-methyl- (CAS) 2-Methylheptane
24	16.318	16.267	16.467	62558047	0.81	9712046	V	1-Decene (CAS) Dec-1-ene
25	16.605	16.467	16.667	78589808	1.02	9280720	V	Cyclohexane, 1,2-dimethyl-, cis- (CAS) 1,cis-
26	16.732	16.667	16.850	90298366	1.17	13768158	V	Octane (CAS) n-Octane
27	16.893	16.850	17.033	25976722	0.34	3233986	V	Cyclohexane, 1,4-dimethyl-, cis- (CAS) 1,cis-
28	17.175	17.033	17.233	18673597	0.24	1870744	V	1-Undecene (CAS) n-1-Undecene
29	17.313	17.233	17.400	21443685	0.28	4040355	V	Cyclopentane, propyl- (CAS) n-Propylcyclope
30	17.526	17.417	17.567	22065228	0.29	2895663		Cyclohexane, ethyl- (CAS) Ethylcyclohexane
31	17.694	17.567	17.750	29476865	0.38	3954017	V	Heptane, 2,5-dimethyl- (CAS) 2,5-Dimethylhe
32	18.037	17.750	18.100	257346209	3.34	28229935	V	1-Heptanol, 2-propyl- (CAS) 2-Propyl-1-hepta
33	18.157	18.100	18.333	264242689	3.43	35202177	V	Benzene, 1,2-dimethyl- (CAS) o-Xylene
34	18.523	18.333	18.733	322619395	4.19	33327485		Pyridinium, 1-hexadecyl-, chloride, monohydr
35	19.010	18.800	19.067	88601802	1.15	8154721		Cyclopentane, 1-methyl-3-(2-methylpropyl)- (C
36	19.134	19.067	19.167	33926876	0.44	6514348	V	Cyclopentane, ethyl- (CAS) Ethylcyclopentane
37	19.257	19.167	19.317	80263257	1.04	11862660	V	Cyclohexane, propyl- (CAS) Propylcyclohexan
38	19.455	19.317	19.500	52629080	0.68	4031787	V	2-Hexen-1-ol, 3-methyl-, (E)- (CAS)
39	19.641	19.517	19.683	108187844	1.40	18292375		BORAN, 2,3-DIMETHYL-2-BUTYL- (DIME
40	19.721	19.683	19.783	66922746	0.87	18382156	V	Benzene, 1,3,5-trimethyl- (CAS) 1,3,5-Trimet
				7705028092	100.00	460191617		



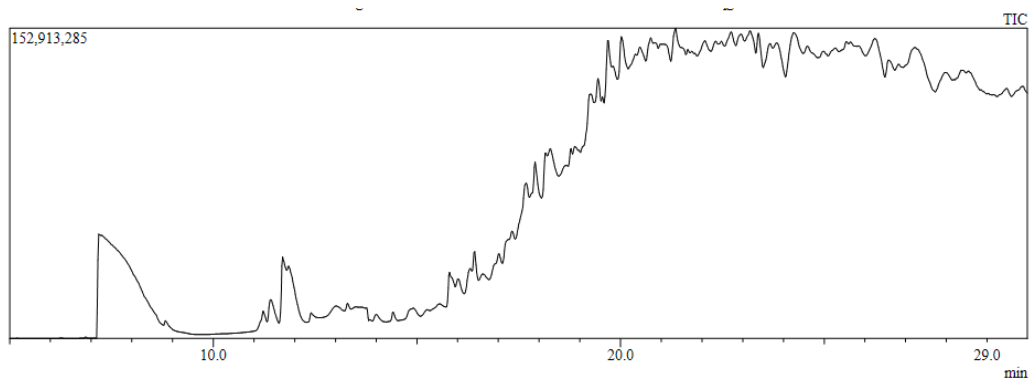
Lampiran 4 Hasil Pengujian FT-IR dan GC-MS B35O60

- Hasil Pengujian FT-IR



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
B35O60	2953,02	40,21	C-H Stretch (Alkanes)
	2924,09	23,91	C-H Stretch(Alkanes)
	2854,65	38,72	C-H Stretch (Alkanes)
	1747,51	62,77	C=O Stretch (Ketones)
	1460,11	66,91	C=C Stretch (Aromatic Compounds)
	354,9	13,55	C-I Stretch (Alkyl halides)

- Hasil Pengujian GC-MS

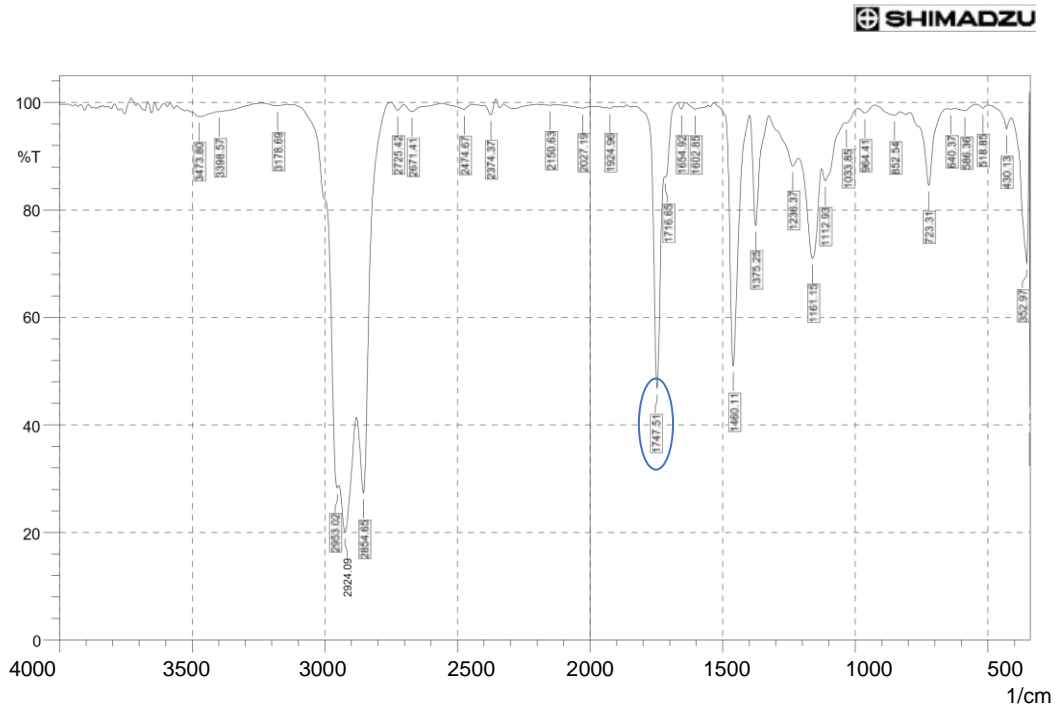


Peak Report TIC							
Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark Name
1	6.253	6.183	6.350	733244	0.01	171350	Butane (CAS) n-Butane
2	6.867	6.817	6.983	2229413	0.03	695928	Ethanol (CAS) Ethyl alcohol
3	7.191	7.133	7.233	255116568	3.00	51251590	(3a.alpha.,4.alpha.,6a.alpha.)-Hexahydro-4-me
4	7.267	7.233	8.783	2782986676	32.72	50543930	Carbamic acid, 2-propenyl ester (CAS) Allyl c
5	8.828	8.783	9.567	103198515	1.21	7312795	2-Propanone (CAS) Acetone
6	11.225	10.683	11.317	89800102	1.06	9702907	Pentane, 2-methyl- (CAS) 2-Methylpentane
7	11.409	11.317	11.617	167332684	1.97	15150347	Pentane, 3-methyl- (CAS) 3-Methylpentane
8	11.705	11.617	11.800	289414798	3.40	35913751	Hexane (CAS) n-Hexane
9	11.847	11.800	12.300	443724733	5.22	31133041	Cyclopentane, methyl- (CAS) Methylcyclopent
10	12.402	12.300	12.583	86070769	1.01	7312548	Pentadecane, 8-methylene- (CAS) 2-Heptyl-1-
11	13.015	12.583	13.217	263847289	3.10	9712930	1-Pentanol, 4-methyl-2-propyl- (CAS) 2-PROI
12	13.298	13.217	13.383	87241268	1.03	10684189	Benzene (CAS) Phene
13	13.509	13.383	13.583	99598646	1.17	8498707	Tetradecane (CAS) n-Tetradecane
14	13.633	13.583	13.817	97937113	1.15	8268557	ISOCHIAPIN B %2<
15	13.844	13.817	13.900	6991657	0.08	1706575	Hexane, 2-methyl- (CAS) 2-Methylhexane
16	14.003	13.900	14.250	36560435	0.43	4176670	Cyclopentane, 1,3-dimethyl-, trans- (CAS) tra
17	14.415	14.250	14.533	22459873	0.26	4526060	Heptane (CAS) n-Heptane
18	14.912	14.650	15.083	63469854	0.75	4709259	Cyclohexane, methyl- (CAS) Methylcyclohex
19	15.254	15.100	15.317	17333734	0.20	2072976	Tetradecane (CAS) n-Tetradecane
20	15.552	15.317	15.717	39717020	0.47	2724300	1-HEPTAN-1-D-OL
21	15.801	15.733	15.950	141593714	1.66	16162851	1,3,5-Cycloheptatriene (CAS) Cycloheptatrien
22	16.012	15.950	16.150	76531471	0.90	10151103	Heptane, 3-methyl- (CAS) 3-Methylheptane
23	16.306	16.150	16.350	87707426	1.03	11382487	Cyclohexane, 1,2-dimethyl-, cis- (CAS) 1,cis-
24	16.411	16.350	16.517	106278695	1.25	18415454	Octane (CAS) n-Octane
25	16.617	16.517	16.767	46124184	0.54	4695190	Cyclohexane, 1,4-dimethyl-, cis- (CAS) 1,cis-
26	17.013	16.783	17.100	68458703	0.80	6933546	Isooctyl chloride
27	17.337	17.100	17.417	125994334	1.48	9059820	Heptane, 3-ethyl-2-methyl- (CAS) 2-Methyl-3-
28	17.680	17.417	17.767	288821079	3.40	23044852	4-CHLORO-3-METHYL-BUT-2-EN-1-OL
29	17.901	17.767	18.067	267091810	3.14	27059846	Benzene, 1,2-dimethyl- (CAS) o-Xylene
30	18.160	18.067	18.200	141977051	1.67	24127537	Cyclopentane, 1-methyl-2-propyl- (CAS)
31	18.274	18.200	18.483	248630341	2.92	22857234	Benzene, 1,2-dimethyl- (CAS) o-Xylene
32	18.676	18.483	18.717	51791890	0.61	3346420	Cycloheptanemethanol
33	18.782	18.717	18.817	37051985	0.44	8543173	Cyclopentane, butyl- (CAS) n-Butylcyclopent
34	18.874	18.817	19.017	50772540	0.60	6813084	trans,trans - Di(2-oxabicyclo[3.1.0(1,3)]hexyl
35	19.277	19.017	19.350	202066586	2.38	19527983	1,3-Cyclopentanedione, 4-butyl- (CAS) 4-N-B
36	19.448	19.350	19.517	152241159	1.79	21093012	Benzene, 1,3,5-trimethyl- (CAS) 1,3,5-Trimet
37	19.555	19.517	19.600	33334237	0.39	8277624	Benzene, 1-ethyl-4-methyl- (CAS) p-Ethyltolu
38	19.792	19.600	19.933	263605407	3.10	14839139	VE
39	20.150	19.933	20.183	73924227	0.87	2353229	VE Benzene, 1,3,5-trimethyl- (CAS) 1,3,5-Trimet
40	26.658	26.500	26.733	74887786	0.88	6262463	E
41	26.858	26.733	26.933	82966997	0.98	7463442	VE
42	27.458	26.933	27.717	362512535	4.26	11066379	VE
43	27.967	27.733	28.150	168406218	1.98	9771164	ISO JASMONE
44	28.183	28.150	28.217	25295041	0.30	6467913	V
45	28.409	28.217	28.483	152864364	1.80	11139885	V 2,5,5-TRIMETHYL-3-PHENYL-CYCLOHE
46	28.542	28.483	28.817	143319529	1.68	10916742	V 6,6-(D2)MENTH-2-ENE
47	28.850	28.817	28.983	10602034	0.12	1967879	V 2-butyl-2-ethyl-perhydro-1,3-oxazine
48	29.021	28.983	29.133	1030214	0.01	425427	Cyclohexane, 1,2,4-trimethyl- (CAS) 1,2,4-TR
49	29.477	29.250	29.600	40680663	0.48	4019706	1,4-diaza-2,5-dioxobicyclo[4.3.0]nonane
50	29.877	29.600	29.917	23557426	0.28	1739117	Cyclododecane (CAS) CYCLODODECAN
				8505884037	100.00	596192111	



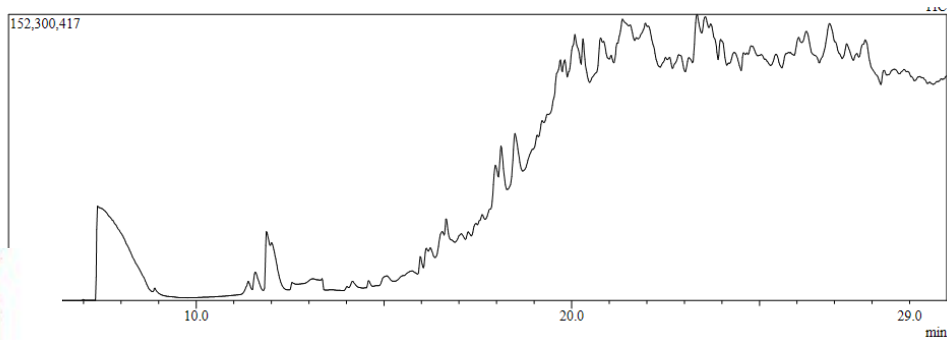
Lampiran 5 Hasil Pengujian FT-IR dan GC-MS B35O120

- Hasil Pengujian FT-IR



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
B35O120	2953.02	28.284	C-H Stretch (Alkanes)
	2924.09	20.023	C-H Stretch (Alkanes)
	2854.65	27.338	C-H Stretch (Alkanes)
	1747.51	46.847	C=O Stretch (Ketones dan ester)
	1460.11	50.964	C=C Stretch (Aromatic Compounds)
	1375.25	77.119	CH ₃ C-H bend (Alkyl)
	1161.15	70.957	C-O Stretch (Alcohols)
	723.31	84.577	(CH ₂) _n bend (Alkyls)
	352.97	70.096	C-I Stretch (Alkyl halides)

- Hasil Pengujian GC-MS



Peak Report TIC							
Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark Name
1	6.993	6.933	7.100	1653448	0.02	484416	Ethanol (CAS) Ethyl alcohol
2	7.375	7.317	8.850	2683784167	24.42	50120676	(3.alpha.,4.alpha.,6a.alpha.)-Hexahydro-4-me
3	8.894	8.850	9.633	70909529	0.65	5522114	V 2-Propanone (CAS) Acetone
4	11.388	10.783	11.483	70437914	0.64	7256601	Pentane, 2-methyl- (CAS) 2-Methylpentane
5	11.574	11.483	11.783	120823361	1.10	11888316	V Pentane, 3-methyl- (CAS) 3-Methylpentane
6	11.875	11.783	11.967	251440385	2.29	33191713	V Hexane (CAS) n-Hexane
7	12.009	11.967	12.450	336478157	3.06	27178605	V Cyclopentane, methyl- (CAS) Methylcyclopent
8	12.557	12.450	12.700	61789282	0.56	5533666	V 1-Pentadecene, 2-methyl- (CAS) 2-Methyl-1-p
9	13.103	12.700	13.200	169315034	1.54	7013576	V Cyclohexane (CAS) Hexanaphthene
10	13.233	13.200	13.300	37617197	0.34	6347106	V HYDROXYAMYLOBARBITONE, 3-
11	13.347	13.300	13.483	32349619	0.29	6866181	V Dotriacontane (CAS) n-Dotriacontane
12	13.595	13.483	13.917	10825178	0.10	698631	V Retinal (CAS) Retinene
13	14.016	13.933	14.067	9712421	0.09	1867917	Hexane, 2-methyl- (CAS) 2-Methylhexane
14	14.163	14.067	14.450	41382505	0.38	4342613	V 1-Heptanol (CAS) HEPTANOL
15	14.594	14.517	14.700	17241565	0.16	3469422	Heptane (CAS) n-Heptane
16	14.800	14.700	14.867	1666437	0.02	183113	V Cyclopentane, 1,3-dimethyl-
17	15.076	14.867	15.250	52112914	0.47	3898285	Cycloheptane (CAS)
18	15.752	15.317	15.900	56417650	0.51	2570895	1-Octene (CAS) Caprylene
19	15.971	15.900	16.050	39085101	0.36	8340354	1,3,5-Cycloheptatriene (CAS) Cycloheptatrien
20	16.128	16.050	16.183	63993505	0.58	10434842	V Hexane, 2,5-dimethyl- (CAS) 2,5-Dimethylhe
21	16.236	16.183	16.367	67344399	0.61	9166737	V Heptane, 3-methyl- (CAS) 3-Methylheptane
22	16.548	16.367	16.600	129698194	1.18	13447351	V Cyclohexane, 1,2-dimethyl-, cis- (CAS) 1,cis-
23	16.657	16.600	16.883	155080350	1.41	18588032	V Octane (CAS) n-Octane
24	17.059	16.883	17.167	60122282	0.55	4895461	V Octadecane, 1-chloro- (CAS) 1-Chlorooctadec
25	17.243	17.167	17.333	17706207	0.16	3270570	V Cyclopentane, propyl- (CAS) n-Propylcyclope
26	17.450	17.333	17.483	26055788	0.24	3874675	Cyclohexane, ethyl- (CAS) Ethylcyclohexane
27	17.616	17.483	17.700	36333667	0.33	4508922	V Heptane, 2,5-dimethyl- (CAS) 2,5-Dimethylhe
28	17.969	17.717	18.050	197732830	1.80	22233578	Isooctyl chloride
29	18.119	18.050	18.283	213647915	1.94	28951450	V Benzene, 1,2-dimethyl- (CAS) o-Xylene
30	18.489	18.283	18.700	270315882	2.46	26522326	V Pyridinium, 1-hexadecyl-, chloride, monohydr
31	19.080	18.700	19.117	146060075	1.33	11184703	V CYCLOHEXANE, DEUTEROMETHYLEN-
32	19.216	19.117	19.267	122282436	1.11	15750392	V Cyclopentane, 1-ethyl-3-methyl-, trans- (CAS)
33	19.355	19.267	19.383	105082256	0.96	15712885	V 2-METHYL-HEPT-1-EN-3-OL
34	19.697	19.383	19.750	557902153	5.08	36217463	V 1,3,5,7-Tetraazabicyclo[3.3.1]nonane, 3,7-dini
35	19.814	19.750	19.883	237116023	2.16	33399062	V 2-Propanone, 2-propenylhydrazone (CAS) All
36	20.158	19.883	20.483	879469281	8.00	31000985	VE
37	20.875	20.483	21.000	306730780	2.79	13523233	VE
38	21.047	21.000	21.117	25639107	0.23	5715476	V Hexane, 1,6-diisocyanato- (CAS) 1,6-Diisocya
39	22.500	22.350	22.550	39006825	0.35	5551150	1,10-Dicyanodecane
40	22.605	22.550	22.683	28635013	0.26	5688468	V 7-Heptadecene, 1-chloro- (CAS) 1 CHLORO-
41	22.850	22.683	23.017	90086325	0.82	8201025	Tetradecane (CAS) n-Tetradecane
42	23.120	23.033	23.217	34513620	0.31	5208338	Cyclohexane, pentyl- (CAS) Pentylcyclohexan
43	24.326	24.133	24.517	97606158	0.89	8310429	(Z)-6,6-Dimethylcyclooct-4-en-1-one
44	24.578	24.517	24.617	47321330	0.43	9687733	5-KETO-GLUCOSE, BIS(O-METHYLOXIM
45	24.663	24.617	24.700	46779357	0.43	9842919	V Benzene, (3-methyl-2-butenyl)- (CAS) 2-MET
46	24.842	24.700	24.967	176351167	1.60	12449930	VE
47	25.044	24.967	25.300	147021489	1.34	9690829	V CITRONELLA
48	25.441	25.300	25.600	126807058	1.15	10540852	V 1,2-Oxathiane, 6-dodecyl-, 2,2-dioxide (CAS)
49	25.773	25.600	25.800	120560709	1.10	12244583	V 10-(TETRAHYDRO-PYRAN-2-YLOXY)-TR
50	25.833	25.800	25.917	81315779	0.74	12232609	V Piperazine, 2,6-dimethyl- (CAS) 2,6-Dimethyl
51	26.342	25.917	26.600	556757545	5.07	15407922	VE
52	27.058	26.600	27.200	538318948	4.90	16821185	VE
53	27.358	27.200	27.500	268719755	2.45	17412783	VE
54	27.594	27.500	27.650	125502893	1.14	15180871	V 1-BENZYL-2,3,3-TRIMETHYLDIAZIRIDIN
55	27.875	27.650	28.233	383909968	3.49	18431647	VE
56	28.315	28.233	28.400	54941029	0.50	7489915	Diaziridinone, bis(1,1-dimethylpropyl)- (CAS)
57	28.600	28.400	28.717	129550588	1.18	8119824	V 2,8-dimethyl-5,8-tricyclo[5.3.0.0]decadiene
58	28.849	28.717	28.917	83700765	0.76	7959704	V Diaziridinone, bis(1,1-dimethylpropyl)- (CAS)
59	28.945	28.917	29.133	59475096	0.54	6916303	V Cholestan-3-ol, 2-methylene-, (3.beta.,5.alpha.
60	29.266	29.133	29.483	60140872	0.55	4174763	V neo-Menthol



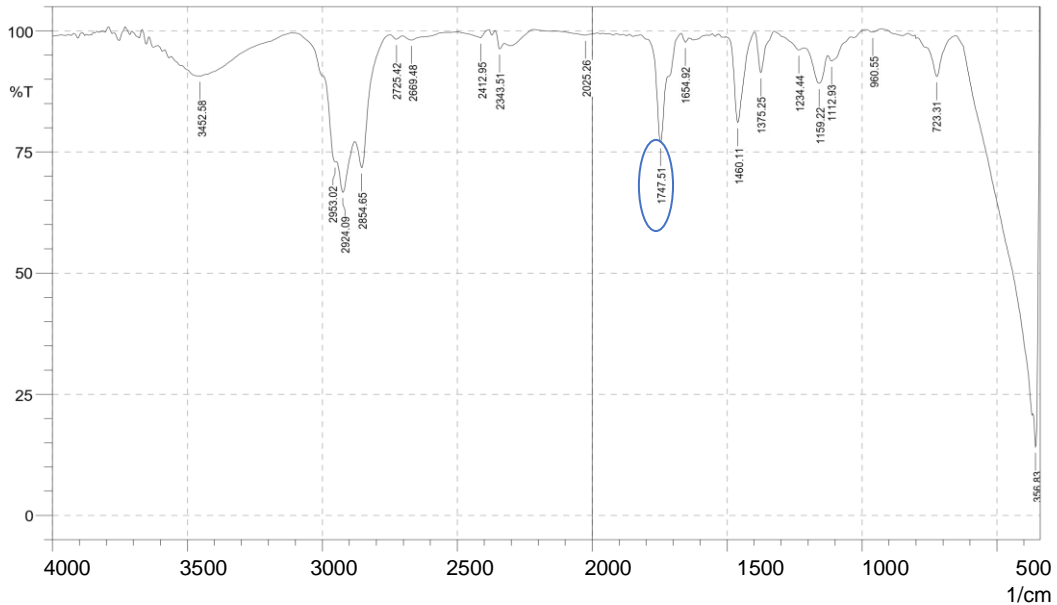
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Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
61	29.533	29.483	29.617	5098059	0.05	1121304	V	Tetradecane (CAS) n-Tetradecane
62	29.717	29.633	29.750	1975296	0.02	491853		trans-Pinane
63	29.837	29.750	29.867	2548255	0.02	751786	V	1,7,7-trimethyl-2-exo-(1-oxacyclohex-2-yloxy)
				10989998893	100.00	725101068		

Lampiran 6 Hasil Pengujian FT-IR dan GC-MS B35O180

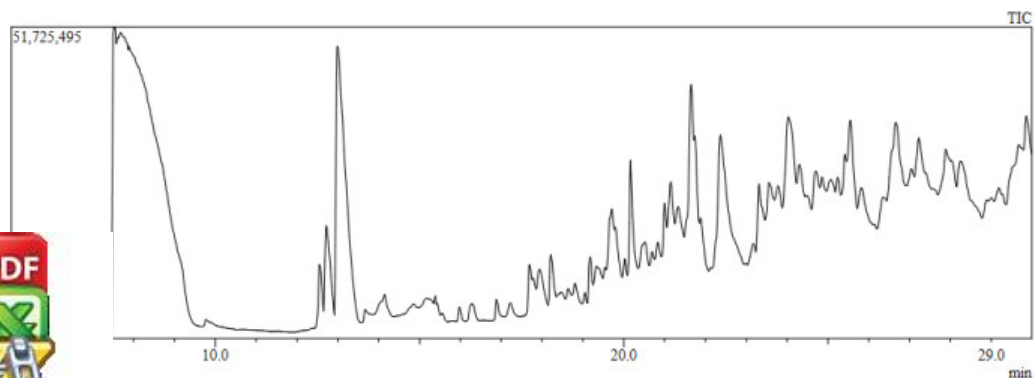
- Hasil Pengujian FT-IR

SHIMADZU



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
B35O180	2953.02	72.97	C-H Stretch (Alkanes)
	2924.09	66.68	C-H Stretch (Alkanes)
	2854.65	71.79	C-H Stretch (Alkanes)
	1747.51	77.01	C=O Stretch (Ketones dan ester)
	356.83	14.13	C-I Stretch (Alkyl halides)

- Hasil Pengujian GC-MS



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Peak Report TIC								
Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
1	7.083	7.017	7.233	11107450	0.10	2134453		Ethanol (CAS) Ethyl alcohol
2	7.275	7.233	7.450	1646638	0.01	289790	V	2-Undecanol (CAS) sec-Undecyl alcohol
3	7.542	7.450	7.633	501855430	4.49	51189562		(3a.alpha.,4.alpha.,6a.alpha.)-Hexahydro-4-me
4	7.681	7.633	10.533	3308796641	29.62	50393628	SV	2-Heptanamine (CAS) Heptin
5	9.772	9.700	10.517	17961078	0.16	1197055	T	2-Hexanone, 5-methyl- (CAS) MIAK
6	12.167	11.950	12.283	3818110	0.03	256385		2-Furancarboxaldehyde, 5-(hydroxymethyl)- (
7	12.557	12.283	12.650	75958488	0.68	11015800	V	Pentane, 2-methyl- (CAS) 2-Methylpentane
8	12.718	12.650	12.917	167208319	1.50	17370879	V	1-Hexene, 4-methyl- (CAS) 4-Methyl-1-hexen
9	12.992	12.917	13.867	806365617	7.22	47001769	SV	Hexane (CAS) n-Hexane
10	13.671	13.617	13.850	11324374	0.10	1751942	T	1-Dodecene (CAS) Adacene 12
11	14.142	13.867	14.367	97539845	0.87	5349212	V	Cyclohexane (CAS) Hexanaphthene
12	14.467	14.367	14.533	17233236	0.15	1751597	V	2-Furancarboxaldehyde, 5-(hydroxymethyl)- (
13	14.852	14.533	14.967	69799932	0.62	3533306	V	Butane, 2,2,3-trimethyl- (CAS) 2,2,3-Trimethy
14	15.171	14.967	15.350	86133454	0.77	4303846	V	Octane, 2,6-dimethyl- (CAS) 2,6-Dimethyloct
15	15.380	15.350	15.517	29493059	0.26	4672696	V	1-Pentene, 4-methyl- (CAS) 4-Methyl-1-pente
16	15.557	15.517	15.683	9731875	0.09	1679484	V	Heptane (CAS) n-Heptane
17	15.802	15.683	15.867	3279442	0.03	349955	V	CIS-10-METHYL-4-KETOPERHYDROAZL
18	15.977	15.867	16.117	13287159	0.12	2524973	V	Heptane (CAS) n-Heptane
19	16.288	16.117	16.467	28808127	0.26	3003502	V	Cyclohexane, methyl- (CAS) Methylcyclohexa
20	16.617	16.467	16.667	1083556	0.01	80922	V	Bicyclo[4.1.0]heptane, 3-methyl-7-pentyl- (C/
21	16.887	16.800	17.083	20348043	0.18	3468237		1,3,5-Cycloheptatriene (CAS) Cycloheptatrien
22	17.222	17.083	17.467	22760056	0.20	2557322	V	1-Decene (CAS) Dec-1-ene
23	17.693	17.483	17.767	52847688	0.47	8341755		Hexane, 2,5-dimethyl- (CAS) 2,5-Dimethylhe
24	17.783	17.767	17.850	25377800	0.23	6004243	V	Heptane, 3-methyl- (CAS) 3-Methylheptane
25	17.938	17.850	18.150	80589151	0.72	7276311	V	Cyclohexane, 1,2-dimethyl-, cis- (CAS) 1,cis-
26	18.217	18.150	18.350	64900268	0.58	9322457	V	2,4,6,8-Tetramethyl-1-undecene
27	18.400	18.350	18.433	12334190	0.11	2560258	V	Decane, 2,9-dimethyl- (CAS) 2,9-Dimethyldec
28	18.469	18.433	18.567	18068196	0.16	2754043	V	1-Octene (CAS) Caprylene
29	18.640	18.567	18.733	23351806	0.21	3076554	V	Cyclopentane, propyl- (CAS) n-Propylcyclope
30	18.808	18.733	18.983	27090081	0.24	3670592	V	Cyclohexane, ethyl- (CAS) Ethylcyclohexane
31	19.049	18.983	19.100	6432931	0.06	1855940	V	Benzene, ethyl- (CAS) EB
32	19.175	19.100	19.250	41319987	0.37	7542690		Benzene, 1,2-dimethyl- (CAS) o-Xylene
33	19.335	19.250	19.483	67517691	0.60	5849105	V	Heptane, 2,5-dimethyl- (CAS) 2,5-Dimethylhe
34	19.706	19.483	19.767	161253987	1.44	14798084	V	Octane (CAS) n-Octane
35	19.793	19.767	19.967	83815912	0.75	11646698	V	Butane, 2,2,3,3-tetramethyl- (CAS) 2,2,3,3-Te
36	20.025	19.967	20.083	32735428	0.29	6023241	V	Cyclopentane, 1-ethyl-3-methyl-, trans- (CAS)
37	20.166	20.083	20.350	159897895	1.43	22204100	V	1-Heptanol, 2-propyl- (CAS) 2-Propyl-1-hepta
38	20.517	20.350	20.633	106580613	0.95	8128583	V	Tetradecane (CAS) n-Tetradecane
39	20.694	20.633	20.750	38248266	0.34	6224281	V	3-Undecene, (Z)- (CAS) cis-3-Undecene
40	20.835	20.750	20.917	62113247	0.56	7600326	V	Cyclopentane, 1-ethyl-3-methyl-, trans- (CAS)
41	21.002	20.917	21.050	78620910	0.70	13844974	V	1,3,5-Cycloheptatriene, 7-ethyl- (CAS) 7-Ethy
42	21.149	21.050	21.250	159782681	1.43	17191864	V	1-Octyn-3-ol, 4-ethyl- (CAS) 4-Ethyl-1-octyn-
43	21.330	21.250	21.483	146264435	1.31	12796586	V	Octane, 2,6-dimethyl- (CAS) 2,6-Dimethyloct
44	21.649	21.483	21.850	415234745	3.72	32595605	V	Iso Octyl Chloride
45	21.881	21.850	22.083	70135563	0.63	10127808	V	Nonane, 3-methyl- (CAS) 3-Methylnonane
46	22.135	22.083	22.167	6944037	0.06	1510945	V	2-Octene, 4-ethyl- (CAS) 4-ETHYL-OCT-2-E
47	22.365	22.167	22.950	418284957	3.74	23171619	V	Tetradecane, 1-chloro- (CAS) Myristyl chlorid
48	22.991	22.950	23.033	4201927	0.04	945964	V	Acetyl valeryl
49	23.172	23.033	23.233	32335476	0.29	3914041	V	9-Dodecenol
50	23.313	23.233	23.467	129612272	1.16	13680412	V	Bicyclo[3.1.1]heptan-3-ol, 6,6-dimethyl-2-met
51	23.558	23.467	23.700	159484801	1.43	13460868	V	PROPANOIC ACID, 2,2-DIMETHYL-, HEX
52	23.778	23.700	23.883	123051281	1.10	12651785	V	Octadecane, 1-chloro- (CAS) 1-Chlorooctadec
53	24.030	23.883	24.233	377359969	3.38	23716580	V	2-Decen-1-ol, (E)- (CAS) trans-2-Decenol
54	24.301	24.233	24.433	157085521	1.41	15428231	V	Ether, heptyl hexyl (CAS)
55	24.469	24.433	24.600	91337988	0.82	10069838	V	2-METHYL-BUTYL BUTYRATE
56	24.702	24.600	24.800	142993089	1.28	13724706	V	Heptane, 2,6-dimethyl- (CAS) 2,6-Dimethylhe
57	24.856	24.800	24.967	111825591	1.00	12502905	V	Decane, 3-methyl- (CAS) 3-Methyldecane
58	25.076	24.967	25.183	142302826	1.27	11797937	V	Cyclooctene, 1,2-dimethyl- (CAS) 1,2-Dimeth
59	25.238	25.183	25.317	84446001	0.76	11947448	V	Cyclopentane, (2-methylpropyl)- (CAS) Isobu
60	25.417	25.317	25.450	100540406	0.90	15482221	V	Dodecane (CAS) n-Dodecane

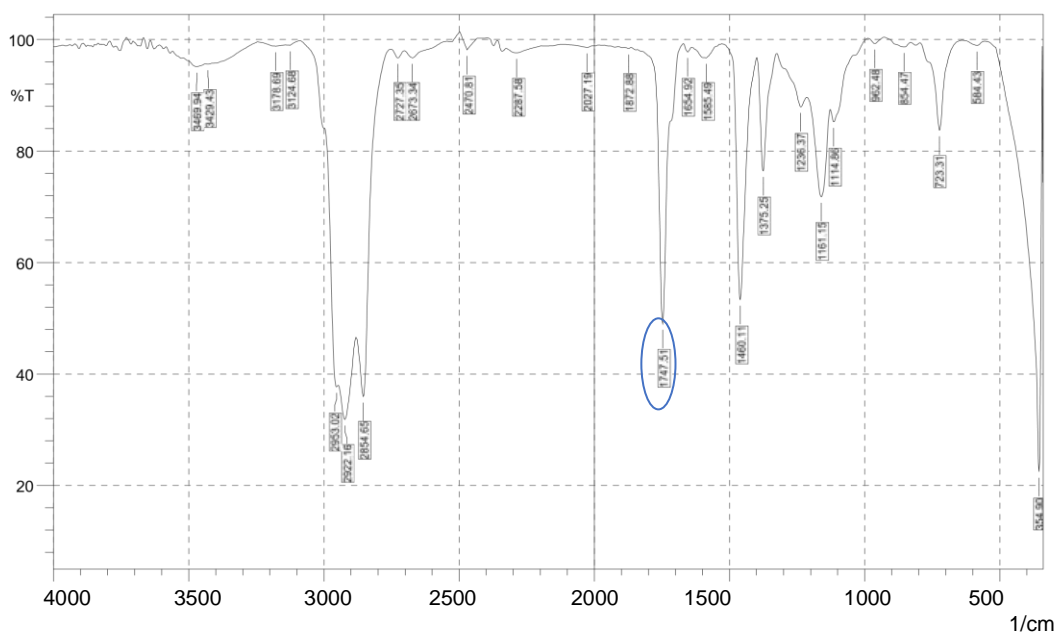


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Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
61	25.543	25.450	25.717	228385439	2.04	20942435	V	Benzene, (2-decyl)dodecyl)- (CAS) 11-Benzyl
62	25.823	25.717	26.100	138448183	1.24	9331050	V	3-CHLORO-2-METHYL-CYCLOPENT-2-EN
63	26.132	26.100	26.200	14788156	0.13	2844549	V	TRANS-PINOCARVEOL
64	26.348	26.200	26.433	76550801	0.69	6938969	V	2-Propyl-1-pentanol
65	26.662	26.433	26.900	359024459	3.21	18951271	V	1-Dodecyne (CAS) 1-C12H22
66	27.042	26.900	27.117	122499883	1.10	10677010	V	Undecane, 4,8-dimethyl- (CAS)
67	27.222	27.117	27.550	274108566	2.45	15564595	V	TRANS-3(10)-CAREN-4-OL
68	27.583	27.550	27.683	49625861	0.44	6559027	V	Benzene, (1,1,4,6,6-pentamethylheptyl)- (CAS)
69	27.887	27.683	28.150	256423495	2.30	12707780	V	TRANS-2-UNDECEN-1-OL
70	28.253	28.150	28.767	183087509	1.64	10146863	V	Octane, 4-ethyl- (CAS) 4-Ethyl-octane
71	28.917	28.783	28.950	19272198	0.17	2442649		Undecane, 2-methyl- (CAS) 2-Methylundecan
72	29.000	28.950	29.067	15680816	0.14	2524644	V	1-Nonene, 4,6,8-trimethyl- (CAS) 4,6,8-TRIM
73	29.187	29.067	29.367	36403648	0.33	3426012	V	Undecane, 3-methyl- (CAS) 3-Methylundecan
74	29.674	29.367	29.783	57000598	0.51	3250077		7-Heptadecene, 1-chloro- (CAS) 1 CHLORO-
75	29.857	29.800	29.917	16529803	0.15	3921719		Dodecane (CAS) n-Dodecane
				11169688957	100.00	751546563		

Lampiran 7 Hasil Pengujian FT-IR dan GC-MS B35I30

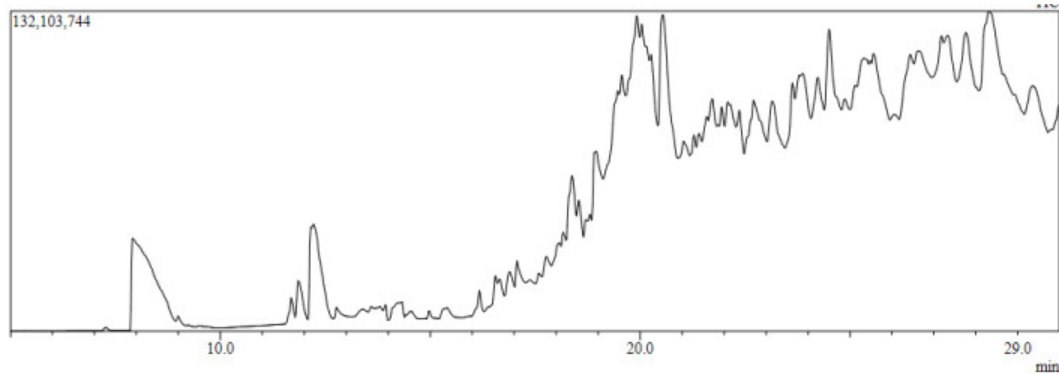
- Hasil Pengujian FT-IR



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
I30	2953.02	37.69	C-H Stretch (Alkanes)
	2922.16	31.85	C-H Stretch (Alkanes)
	2854.65	35.96	C-H Stretch (Alkanes)
	1747.51	49.01	C=O Stretch (Ketones dan ester)
	1460.11	53.34	C=C Stretch (Aromatic Compounds)
	1375.25	76.45	CH ₃ C-H bend (Alkyl)
	1161.15	71.78	C-O Stretch (Alcohols)
	354.9	22.48	C-I Stretch (Alkyl halides)



• Hasil Pengujian GC-MS



Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
1	7.281	7.167	7.467	10002290	0.03	1396790		Ethanol (CAS) Ethyl alcohol
2	7.911	7.833	8.933	1435598036	4.08	38010152		(3a.alpha.,4.alpha.,6a.alpha.)-Hexahydro-4-me
3	8.991	8.933	9.167	44272234	0.13	5363172	V	2-Propanone (CAS) Acetone
4	9.231	9.167	9.400	16571479	0.05	1542826	V	Oxirane, 2,2-dimethyl- (CAS) Isobutylene oxi
5	9.512	9.400	9.650	13649650	0.04	1167763	V	2-Propanol (CAS) Isopropyl alcohol
6	9.750	9.650	9.883	4853510	0.01	486687	V	Butane, 2-methyl- (CAS) Isopentane
7	11.688	11.517	11.783	73840354	0.21	10683996		Pentane, 2-methyl- (CAS) 2-Methylpentane
8	11.857	11.783	12.083	172557210	0.49	17702851	V	Pentane, 3-methyl- (CAS) 3-Methylpentane
9	12.217	12.083	12.683	754720527	2.14	40881219	V	Hexane (CAS) n-Hexane
10	12.768	12.683	13.133	85159146	0.24	6218263	V	Pentadecane, 8-methylene- (CAS) 2-Heptyl-1-
11	13.386	13.133	13.517	86095204	0.24	4983706	V	Cyclohexane (CAS) Hexanaphthene
12	13.597	13.517	13.667	46914633	0.13	5979753	V	Benzene (CAS) Phene
13	13.796	13.667	13.867	63511357	0.18	5957762	V	2,5-Furandione, 3-(dodecenyldihydro-
14	13.933	13.867	13.983	29425519	0.08	6574376	V	ETHYL ISO-ALLOCHOLATE
15	14.327	13.983	14.383	119006209	0.34	7431678	V	2,5-Furandione, 3-(dodecenyldihydro-
16	14.549	14.383	14.750	42044693	0.12	3495536	V	Formic acid, heptyl ester (CAS) Heptyl format
17	14.971	14.750	15.200	18928810	0.05	3475326	V	Heptane (CAS) n-Heptane
18	15.317	15.200	15.350	23804169	0.07	4076471		Cyclohexane, methyl- (CAS) Methylcyclohexa
19	15.398	15.350	15.700	35357920	0.10	4406008	V	Cyclopentane, ethyl- (CAS) Ethylcyclopentane
20	15.933	15.783	15.983	1336095	0.00	103173		CYCLOHEXANE, 1-(1,1-DIMETHYLETHYL
21	16.170	15.983	16.283	57213413	0.16	9505120		Benzene, methyl- (CAS) Toluene
22	16.551	16.283	16.600	91204690	0.26	13529664	V	Heptane, 2-methyl- (CAS) 2-Methylheptane
23	16.653	16.600	16.767	84445372	0.24	11639193	V	Heptane, 3-methyl- (CAS) 3-Methylheptane
24	16.892	16.767	17.017	143139467	0.41	13274339	V	Cyclohexane, 1,2-dimethyl-, cis- (CAS) 1,cis-
25	17.067	17.017	17.283	169140245	0.48	16799947	V	Octane (CAS) n-Octane
26	17.374	17.283	17.500	84305131	0.24	7181729	V	Undecane, 4,8-dimethyl- (CAS)
27	17.590	17.500	17.667	72966611	0.21	8848226	V	Cyclopentane, propyl- (CAS) n-Propylcyclo
28	17.768	17.667	17.883	156354469	0.44	14784523	V	Cyclohexane, ethyl- (CAS) Ethylcyclohexane
29	18.076	17.883	18.117	215892857	0.61	18558314	V	Octane, 2,7-dimethyl- (CAS) 2,7-Dimethyloct
30	18.170	18.117	18.233	144385259	0.41	22644176	V	Benzene, ethyl- (CAS) EB
31	18.378	18.233	18.483	531218457	1.51	44781953	V	Decane, 1-chloro- (CAS) 1-Chlorodecane
32	18.539	18.483	18.650	271174720	0.77	33629198	V	3-Undecene, 6-methyl-, (E)- (CAS)
33	18.711	18.650	18.750	140522981	0.40	24673154	V	Benzene, 1,2-dimethyl- (CAS) o-Xylene
34	18.804	18.750	18.850	150836697	0.43	26464042	V	Cyclopentane, 1-ethyl-3-methyl-, cis- (CAS) 1
35	18.952	18.850	19.117	721131191	2.05	51685443	V	Hexadecane (CAS) n-Hexadecane
36	19.470	19.117	19.500	1290577202	3.66	73748644	V	Cyclopentane, pentyl- (CAS) Pentylcyclopenta
37	19.565	19.500	19.650	676726589	1.92	79728564	V	Cyclohexane, propyl- (CAS) Propylcyclohexa
38	19.921	19.650	19.983	1748813305	4.96	102223719	V	
39	20.038	19.983	20.217	1265062818	3.59	98068258	V	2-Nonen-4-one (CAS) NON-2-EN-4-ONE
40	20.262	20.217	20.417	843703477	2.40	84283657	V	ALPHA-CITRONELLOL
41	20.538	20.417	20.900	1954103798	5.55	99185489	V	11-Chloro-1-undecene
42	21.038	20.900	21.183	690150962	1.96	44228684	V	Benzene, 1,3,5-trimethyl- (CAS) 1,3,5-Trimet
43	21.283	21.183	21.333	372128054	1.06	45491002	V	Cyclopentane, ethyl- (CAS) Ethylcyclopentane
44	21.401	21.333	21.467	347470637	0.99	45397046	V	Cyclohexane, (2-methylpropyl)- (CAS) Isobut
45	21.589	21.467	21.633	479721073	1.36	51394398	V	Heptane, 3,3,5-trimethyl- (CAS) 3,3,5-Trimet
46	21.719	21.633	21.833	632004129	1.79	58073384	V	Benzene, 1,2-diethyl- (CAS) 1,2-Diethylbenze
47	21.941	21.833	22.017	531821124	1.51	53304489	V	9-Octadecenoic acid (Z)-, phenylmethyl ester (
48	22.088	22.017	22.117	312274912	0.89	54669004	V	(E)-3,4-Dimethyl-2-pentenol
49	22.146	22.117	22.283	486533249	1.38	53415892	V	Tetradecane (CAS) n-Tetradecane
50	22.364	22.283	22.483	500694831	1.42	49763513	V	Nonane, 5-(2-methylpropyl)- (CAS) OCTANE
51	22.704	22.483	23.017	1341525612	3.81	52011668	V	DIHYDRO-CITRONELLAL
52	23.150	23.017	23.450	989166187	2.81	49165293	V	Bicyclo[3.1.1]heptan-3-one, 2,6,6-trimethyl-, 4
	632	23.450	23.683	565742208	1.61	53931969	V	9-Borabicyclo[3.3.1]nonane, 9-hydroxy- (CAS
	870	23.683	24.067	1153878989	3.28	56626780	V	Tricyclo[4.2.1.12,5]deca-3,7-diene-9,10-diol,
	230	24.067	24.383	853250851	2.42	53018201	V	9-Eicosyne (CAS)
	505	24.383	24.800	1245526042	3.54	71330946	V	Benzene, (2-decyldecyl)- (CAS) 11-Benzyl
	877	24.800	25.000	457025179	1.30	40419877	V	1,3,5,7-Tetraazabicyclo[3.3.1]nonane, 3,7-dim
	122	25.000	25.167	415189376	1.18	44888317	V	CYCLOOCTANE, 1,2-DIMETHYL-
	332	25.167	25.450	887479451	2.52	54948063	V	Methyl cis-secoipimate
	485	25.450	25.517	209886463	0.60	53089454	V	CYCLOOCTANE, CYCLOHEXYL-



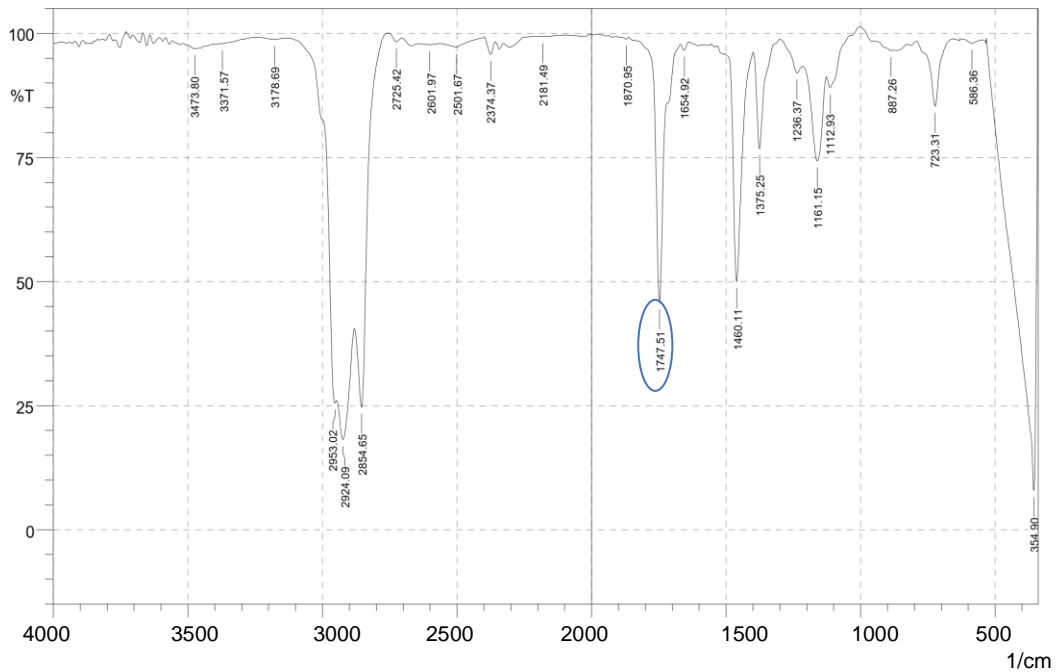
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Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
61	25.561	25.517	25.950	1055481712	3.00	55426315	V	Diaziridinone, bis(1,1-dimethylpropyl)- (CAS)
62	26.064	25.950	26.167	347297132	0.99	27530647	V	2-Hexadecene, 2,6,10,14-tetramethyl- (CAS)
63	26.437	26.167	26.533	907010856	2.58	50245078	V	Cyclopentanone, 3-(3-hydroxy-1-propenyl)- (CAS)
64	26.633	26.533	26.950	1130267125	3.21	50758526	V	Tetradecane (CAS) n-Tetradecane
65	27.181	26.950	27.233	767464576	2.18	53846684	V	CYCLOPENTAN, 1-METHYL-1-(1-VINYL-)
66	27.321	27.233	27.533	821323115	2.33	53218264	V	Cyclopentane, 1-ethyl-3-methyl-, trans- (CAS)
67	27.766	27.533	28.067	1231983607	3.50	52069870	V	7-Heptadecene, 1-chloro- (CAS) 1 CHLORO-
68	28.313	28.067	28.900	1925323582	5.47	57740433	V	7-Heptadecene, 1-chloro- (CAS) 1 CHLORO-
69	28.917	28.900	29.150	229532115	0.65	20154606	V	Tridecane, 3-methyl- (CAS) 3-Methyltridecan
70	29.353	29.150	29.717	442662004	1.26	21388418	V	Benzene, (2-decyldodecyl)- (CAS) 11-Benzyl
71	29.800	29.717	29.833	2594412	0.01	403568	V	2-Octene, 4-ethyl- (CAS) 4-ETHYL-OCT-2-E
				35222977359	100.00	2453125249		

Lampiran 8 Hasil Pengujian FT-IR dan GCMS B35I60

- Hasil Pengujian FT-IR

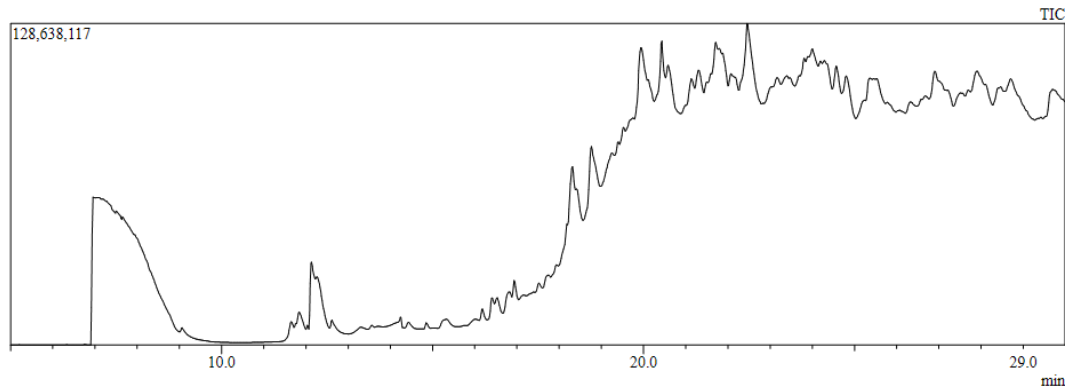
SHIMADZU



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
B35I60	2953.02	25.51	C-H Stretch (Alkanes)
	2924.09	18.18	C-H Stretch (Alkanes)
	2854.65	24.7	C-H Stretch (Alkanes)
	1747.51	45.71	C=O Stretch (Ketones dan ester)
	1460.11	50	C=C Stretch (Aromatic Compounds)
	1161.15	74.28	C-O Stretch (Alcohols)
	354.9	7.95	C-I Stretch (Alkyl halides)



• Hasil Pengujian GC-MS



Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
1	6.759	6.700	6.833	703805	0.00	236320		Ethanol (CAS) Ethyl alcohol
2	6.958	6.900	7.017	354234308	0.99	59199335		Oxirane, trimethyl- (CAS) 2-METHYL-2,3-EI
3	7.100	7.017	9.017	4370609963	12.22	58934599	V	Carbamic acid, 2-propenyl ester (CAS) Allyl c
4	9.062	9.017	9.883	91283379	0.26	6097880	V	2-Propanone (CAS) Acetone
5	11.652	11.383	11.717	57843926	0.16	7593138		Pentane, 2-methyl- (CAS) 2-Methylpentane
6	11.838	11.717	12.000	129089323	0.36	11196085	V	Butane, 2-chloro- (CAS) 2-Chlorobutane
7	12.037	12.000	12.067	19470300	0.05	5574638	V	Pentane, 3-methyl- (CAS) 3-Methylpentane
8	12.129	12.067	12.217	223598517	0.63	30746035	V	Hexane (CAS) n-Hexane
9	12.261	12.217	12.567	293148897	0.82	24566137	V	Cyclopentane, methyl- (CAS) Methylcyclop
10	12.614	12.567	13.000	73305596	0.20	6923195	V	1-Octene, 2-methyl- (CAS) 2-Methyl-1-octene
11	13.302	13.000	13.467	55032406	0.15	3049672	V	Cyclohexane (CAS) Hexanaphthene
12	13.561	13.467	13.633	27933480	0.08	3440703	V	Benzene (CAS) Phene
13	13.713	13.633	13.817	29659681	0.08	2867809	V	Pentane, 2,4-dimethyl- (CAS) 2,4-Dimethylpe
14	14.242	13.817	14.333	95054213	0.27	5723955	V	Octadecane, 1-chloro- (CAS) 1-Chlorooctadec
15	14.430	14.333	14.650	33081235	0.09	3483192	V	Cyclopentane, 1,3-dimethyl-, trans- (CAS) tra
16	14.854	14.650	14.967	16687349	0.05	2653532	V	Heptane (CAS) n-Heptane
17	15.022	14.967	15.117	2315447	0.01	352564	V	Cyclopentane, 1,3-dimethyl-
18	15.320	15.117	15.600	45140553	0.13	3441086	V	Cyclohexane, methyl- (CAS) Methylcyclohex
19	15.767	15.650	15.817	1289982	0.00	166978		Heicosane, 11-(2,2-dimethylpropyl)- (CAS)
20	16.015	15.833	16.100	17876848	0.05	1595179		1-Heptene, 5-methyl- (CAS) 5-Methyl-1-hepte
21	16.177	16.100	16.300	25655979	0.07	4919602	V	1,3,5-Cycloheptatriene (CAS) Cycloheptatrien
22	16.408	16.300	16.467	45629115	0.13	8090413		Heptane, 2-methyl- (CAS) 2-Methylheptane
23	16.528	16.467	16.667	50973638	0.14	7450719	V	Heptane, 3-methyl- (CAS) 3-Methylheptane
24	16.816	16.667	16.883	73598692	0.21	8027636	V	Cyclohexane, 1,2-dimethyl-, cis- (CAS) 1,cis-
25	16.937	16.883	17.033	70056971	0.20	11863209	V	Octane (CAS) n-Octane
26	17.162	17.033	17.217	47966967	0.13	4676976	V	Cyclohexane, 1,4-dimethyl-, cis- (CAS) 1,cis-
27	17.394	17.217	17.433	55575876	0.16	4421603	V	Decane, 1,1'-oxybis- (CAS) Decyl ether
28	17.520	17.433	17.600	58397687	0.16	7307059	V	Cyclopentane, propyl- (CAS) n-Propylcyclope
29	17.744	17.600	17.800	93600912	0.26	9080317	V	Cyclohexane, 1-propenyl- (CAS) Propenylcyc
30	17.939	17.800	17.983	113414957	0.32	11990918	V	Heptane, 2,5-dimethyl- (CAS) 2,5-Dimethylhe
31	18.313	17.983	18.383	689010455	1.93	49074708	V	Octane, 1-chloro- (CAS) 1-Chlorooctane
32	18.411	18.383	18.567	359957868	1.01	39464176	V	1-Undecene, 5-methyl- (CAS)
33	18.765	18.567	18.983	1012238864	2.83	54298820	V	Pyridinium, 1-hexadecyl-, chloride, monohydr
34	19.252	18.983	19.317	879986774	2.46	48827111	V	Cyclopentane, 1-methyl-3-(2-methylpropyl)- (0
35	19.397	19.317	19.433	353580303	0.99	52310485	V	Cyclopentane, ethyl- (CAS) Ethylcyclopentanc
36	19.524	19.433	19.567	441201113	1.23	57245154	V	Cyclohexane, propyl- (CAS) Propylcyclohexan
37	19.747	19.567	19.783	759732015	2.12	59670828	V	2-Hexen-1-ol, 3-methyl-, (E)- (CAS)
38	19.941	19.783	20.250	2050895466	5.73	86619200	V	1,3-Cyclopentanedione, 4-butyl- (CAS) 4-N-B
39	20.428	20.250	20.517	1158229639	3.24	86302832	V	Cyclodecane
40	20.582	20.517	20.883	1404510135	3.93	75737500	V	Benzene, 1,2,4-trimethyl- (CAS) 1,2,4-Trimet
41	21.138	20.883	21.217	1207964031	3.38	66890022	V	11-Chloro-1-undecene
42	21.306	21.217	21.433	846654528	2.37	69240627	V	Tricyclo[4.2.1.12,5]deca-3,7-diene-9,10-diol, :
43	21.502	21.433	21.533	375932370	1.05	63412090	V	Hexane, 1,6-diisocyanato- (CAS) 1,6-Diisocya
44	21.710	21.533	21.767	990458304	2.77	77950234	V	N-(4-PYRIDYLETHYL)-PIPERIDINE
45	21.795	21.767	22.000	970355032	2.71	74964455	V	2-METHYLCYCLOHEXA-5-EN-1-OL
46	22.071	22.000	22.250	908748695	2.54	63144503	V	Dodecane, 2,2,4,9,11,11-hexamethyl- (CAS) 2
47	22.458	22.250	22.800	2036205078	5.69	80872460	V	7-Heptadecene, 1-chloro- (CAS) 1 CHLORO-
48	23.017	22.800	23.050	738543491	2.06	52168644	V	Cyclohexane, 1-(cyclohexylmethyl)-2-methyl-,
49	23.167	23.050	23.250	639848249	1.79	54987151	V	2-Benzoyl-8-octanediol
50	23.398	23.250	23.583	1047500520	2.93	54298436	V	Tetradecane (CAS) n-Tetradecane
51	23.807	23.583	23.850	860898038	2.41	58727288	V	TRICYCLO[4.2.1.1 2,5]DEC-3-EN-9-ONE
52	23.999	23.850	24.133	990588531	2.77	61348441	V	CIS-DECALIN, 2-SYN-METHYL-
53	24.193	24.133	24.233	327406042	0.92	55235230	V	Azetidine, 2-methyl-1-(1-methyl-ethyl)- (CAS)
54	24.284	24.233	24.467	710787426	1.99	54947951	V	Benzene, (1-cyclohexylethyl)- (CAS) 1-Pheny
	4.569	24.467	24.700	633057393	1.77	50941521	V	Benzene, (2,3-dimethyldecyl)- (CAS) 1-PHEN
	4.802	24.700	25.033	747239169	2.09	45620167	V	Naphthalene, 1,2,3,4-tetrahydro- (CAS) Tetra
	5.237	25.033	25.267	434819271	1.22	33306617	V	5,7-DIMETHYLOCTAHYDROCOUMARIN
	5.366	25.267	25.417	355266686	0.99	41308110	V	5-KETO-GLUCOSE, BIS(O-METHYLOXIM
	5.463	25.417	25.500	201906007	0.56	40504021	V	3-HEPTENE, 2-METHYL-
	5.533	25.500	25.733	479493985	1.34	40086820	V	Benzene, (3-methyl-2-butyl)- (CAS) 2-MET

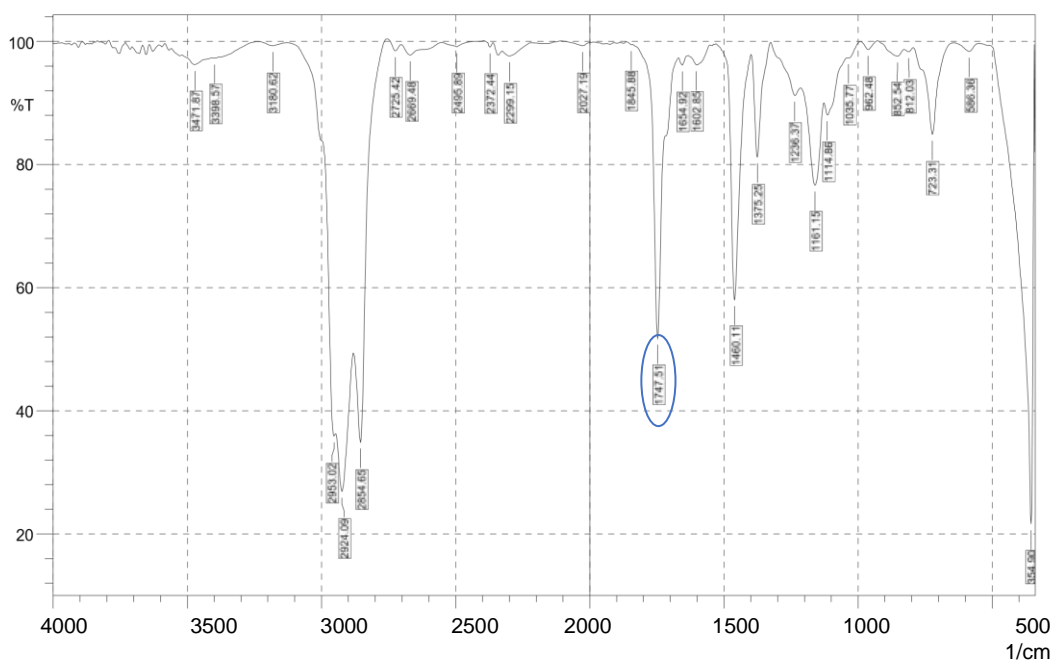


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Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
61	25.775	25.733	25.983	402610106	1.13	29095161	V	trans-2-Hydroxy-4-ethylcyclohexanol (trans d
62	26.069	25.983	26.200	306148527	0.86	24143043	V	Cyclohexane, 1-methyl-2-propyl- (CAS)
63	26.324	26.200	26.467	389806610	1.09	25833775	V	1-Dodecanol, 2-methyl-, (S)- (CAS) 2L-METI
64	26.674	26.467	26.767	449721086	1.26	26125115	V	BUTANAL, 4-[(TETRAHYDRO-2H-PYRAN
65	26.904	26.767	27.133	651304746	1.82	34629375	V	3-HYDROXY-2-HYDROXYMETHYL-4,4-E
66	27.204	27.133	27.350	294894756	0.82	25207380	V	Cyclohexane, propyl- (CAS) Propylcyclohexa
67	27.506	27.350	27.617	336688559	0.94	22285771	V	Benzene, (2,3-dimethyldecyl)- (CAS) 1-PHEN
68	27.697	27.617	27.750	172581289	0.48	22305206	V	Tetradecane (CAS) n-Tetradecane
69	27.905	27.750	28.283	710795482	1.99	28524115	V	1-(10-METHYL-ANTHRACEN-9-YL)-ETHI
70	28.466	28.283	28.567	291514678	0.82	18923197	V	Benzene, (1,3,3-trimethylnonyl)- (CAS) 2-PHI
71	28.700	28.567	29.267	457564148	1.28	20710080	V	Naphthalene, 1,2,3,4-tetrahydro-5-methyl- (C/
72	29.418	29.267	29.467	8487049	0.02	869259	V	Isophytol
73	29.700	29.550	29.917	108203814	0.30	7986089	V	5-KETO-GLUCOSE, BIS(O-METHYLOXIM
				35765566330	100.00	2351813852		

Lampiran 9 Hasil Pengujian FT-IR dan GC-MS B35I120

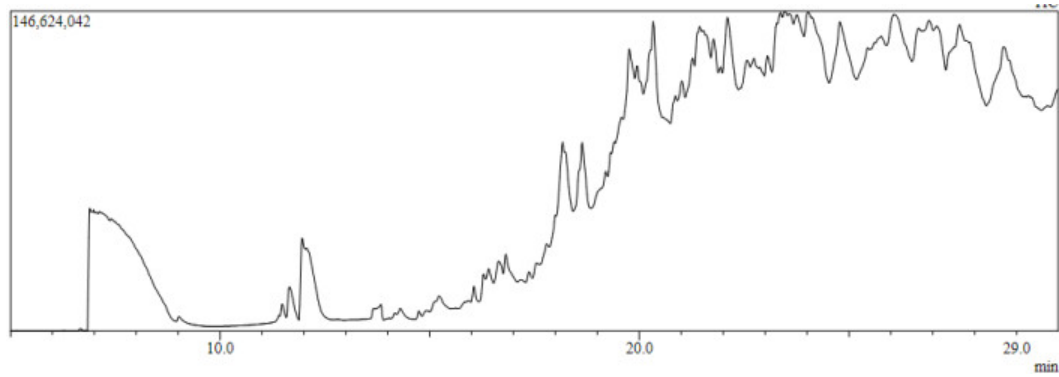
- Hasil Pengujian FT-IR



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
B35I120	2953.02	35.92	C-H Stretch (Alkanes)
	2924.09	26.92	C-H Stretch (Alkanes)
	2854.65	34.91	C-H Stretch (Alkanes)
	1747.51	51.77	C=O Stretch (Ketones)
	1460.11	58.05	C=C Stretch (Aromatic Compounds)
	1375.25	81.26	CH ₃ C-H bend (Alkyl)
	1161.15	76.64	C-O Stretch (Alcohols)
	354.9	21.61	C-I Stretch (Alkyl halides)



• Hasil Pengujian GC-MS



Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
1	6.669	6.600	6.817	4165742	0.02	1009279		Ethanol (CAS) Ethyl alcohol
2	6.891	6.833	6.933	278110966	1.52	55981161		(3a.alpha.,4.alpha.,6a.alpha.)-Hexahydro-4-mc
3	7.029	6.933	7.083	488473934	2.67	54249232	V	Borane, trimethyl- (CAS) Trimethylborane
4	7.117	7.083	7.367	896976844	4.90	54586717	V	Acetamide, 2-cyano- (CAS) Cyanacetamide
5	7.400	7.367	8.950	2746425876	15.01	51017149	V	2-Propanamine (CAS) Isopropylamine
6	9.016	8.950	9.733	74518342	0.41	5101168	V	2-Propanone (CAS) Acetone
7	11.405	10.717	11.433	36427224	0.20	4070204		Cholesta-4,6-dien-3-ol, benzoate, (3.beta.)- (C
8	11.479	11.433	11.567	51511599	0.28	9151905	V	Pentane, 2-methyl- (CAS) 2-Methylpentane
9	11.654	11.567	11.883	166579230	0.91	16734409	V	Pentane, 3-methyl- (CAS) 3-Methylpentane
10	11.955	11.883	12.033	284505363	1.56	38997635	V	Hexane (CAS) n-Hexane
11	12.060	12.033	13.483	543878832	2.97	34250058	SV	Cyclopentane, methyl- (CAS) Methylcyclop
12	12.817	12.683	12.950	2065361	0.01	285210	T	ISOCHIAPIN B
13	13.117	12.967	13.317	1491442	0.01	138147	T	1-Pentene, 2-methyl- (CAS) 2-Methyl-1-pente
14	13.400	13.317	13.483	795761	0.00	143322	T	Octadecanoic acid, 2-oxo-, methyl ester (CAS
15	13.650	13.483	13.717	40451453	0.22	5464094	V	Hexadecanoic acid, 2-oxo-, methyl ester (CAS
16	13.829	13.717	13.883	51175419	0.28	7247271	V	ISOCHIAPIN B %2<
17	14.017	13.883	14.083	6748832	0.04	745220	V	Pentadecane (CAS) n-Pentadecane
18	14.168	14.083	14.217	17971850	0.10	3035048	V	Hexane, 2-methyl- (CAS) 2-Methylhexane
19	14.300	14.217	14.600	45750346	0.25	5007378	V	1-Heptanol (CAS) HEPTANOL
20	14.738	14.667	14.817	14823233	0.08	3263420		Heptane (CAS) n-Heptane
21	14.918	14.817	15.000	22821230	0.12	2651831	V	Tridecane, 3-methyl- (CAS) 3-Methyltridecan
22	15.223	15.000	15.500	128565958	0.70	7943714	V	2-Heptenal, (Z)- (CAS) CIS-HEPT-2-ENAL
23	15.600	15.500	15.700	5318997	0.03	505022	V	Cyclopentane, 1,1,3-trimethyl- (CAS) 1,1,3-Tri
24	15.923	15.717	15.983	25055033	0.14	2006533		2-Octene (CAS) oct-2-ene
25	16.050	15.983	16.167	36014566	0.20	7690715	V	1,3,5-Cycloheptatriene (CAS) Cycloheptatrien
26	16.282	16.183	16.333	63781026	0.35	11660047		Heptane, 2-methyl- (CAS) 2-Methylheptane
27	16.404	16.333	16.517	107709963	0.59	13127309	V	Heptane, 3-methyl- (CAS) 3-Methylheptane
28	16.645	16.517	16.750	155753371	0.85	14795848	V	Cyclohexane, 1,2-dimethyl-, cis- (CAS) 1,cis-2
29	16.811	16.750	17.083	162341220	0.89	16584490	V	Octane (CAS) n-Octane
30	17.174	17.083	17.283	17692287	0.10	2010812	V	Tetradecane, 1-chloro- (CAS) Myristyl chlorid
31	17.368	17.300	17.450	18400615	0.10	3806430		3-Undecene, (Z)- (CAS) cis-3-Undecene
32	17.551	17.450	17.633	40452485	0.22	5186013		Cyclohexane, ethyl- (CAS) Ethylcyclohexane
33	17.790	17.633	17.850	92324373	0.50	9943261	V	Heptane, 2,5-dimethyl- (CAS) 2,5-Dimethylhe
34	18.168	17.850	18.417	930036963	5.08	50489396	V	Decane, 1-chloro- (CAS) 1-Chlorodecane
35	18.632	18.417	18.850	607530970	3.32	42512009	V	Tetradecane, 1-chloro- (CAS) Myristyl chlorid
36	19.199	18.850	19.250	339777893	1.86	19988106	V	3-Nonen-1-ol, (E)- (CAS) TRANS-NON-3-OL
37	19.400	19.250	19.433	295328894	1.61	30185200	V	DECANE, 3,7-DIMETHYL-
38	19.575	19.433	19.617	392533542	2.15	38333336	V	Nonane, 3-methyl- (CAS) 3-Methylnonane
39	19.758	19.617	19.883	870774518	4.76	66628806	V	
40	19.942	19.883	20.100	635607045	3.47	56023359	V	Ethanamine, N-pentylidene- (CAS) Ethylamin
41	20.342	20.100	20.533	1194555239	6.53	62072650	VE	
42	20.567	20.533	20.733	239061813	1.31	22252322	V	3-Hexene, 3-ethyl-2,5-dimethyl- (CAS)
43	20.858	20.733	20.900	237774436	1.30	27066079	V	3,7-DIMETHYL-1,5-OCTADIENE-3,7-DIOL
44	21.012	20.900	21.083	300583967	1.64	31421001	V	Benzene, 1-propenyl- (CAS) Propenylbenzene
45	21.267	21.083	21.317	428348862	2.34	37714745	V	neo-Menthol
46	21.608	21.317	21.700	945953609	5.17	41159428	VE	
47	21.770	21.700	21.883	341809927	1.87	38212835	V	neo-Menthol
48	21.932	21.883	21.983	127600435	0.70	22791273	V	2H-Inden-2-one, octahydro- (CAS) Perhydro-
49	22.158	21.983	22.367	517549038	2.83	32078687	VE	
50	22.569	22.367	22.650	175272908	0.96	15239327	V	6-BROMO-2,2-DIMETHYL-CYCLOHEXAN
51	22.728	22.650	22.833	119090562	0.65	13430600	V	4-Phenylvaleric acid
52	22.868	22.833	22.983	41938268	0.23	7123229	V	2,3-EPONICARAN, TRANS-
53	23.054	22.983	23.167	54300137	0.30	9307684	V	1,1-Dideuterocyclododecane
	175	24.533	25.183	432412265	2.36	19544064	E	
	149	25.183	25.483	121822259	0.67	12789651		1,1,4,4,7,7-HEXAMETHYL-CYCLONONA
	100	25.483	25.633	116765699	0.64	14188639	V	Naphthalene, decahydro-2,6-dimethyl- (CAS)
	175	25.633	25.883	214749516	1.17	15125745	VE	
	175	25.883	26.500	378466421	2.07	11998982	VE	
	125	27.300	27.850	525548621	2.87	21710507	E	
	183	27.850	28.267	245726870	1.34	22679333	V	2-Propanone, propylhydrazone (CAS) n-Propy

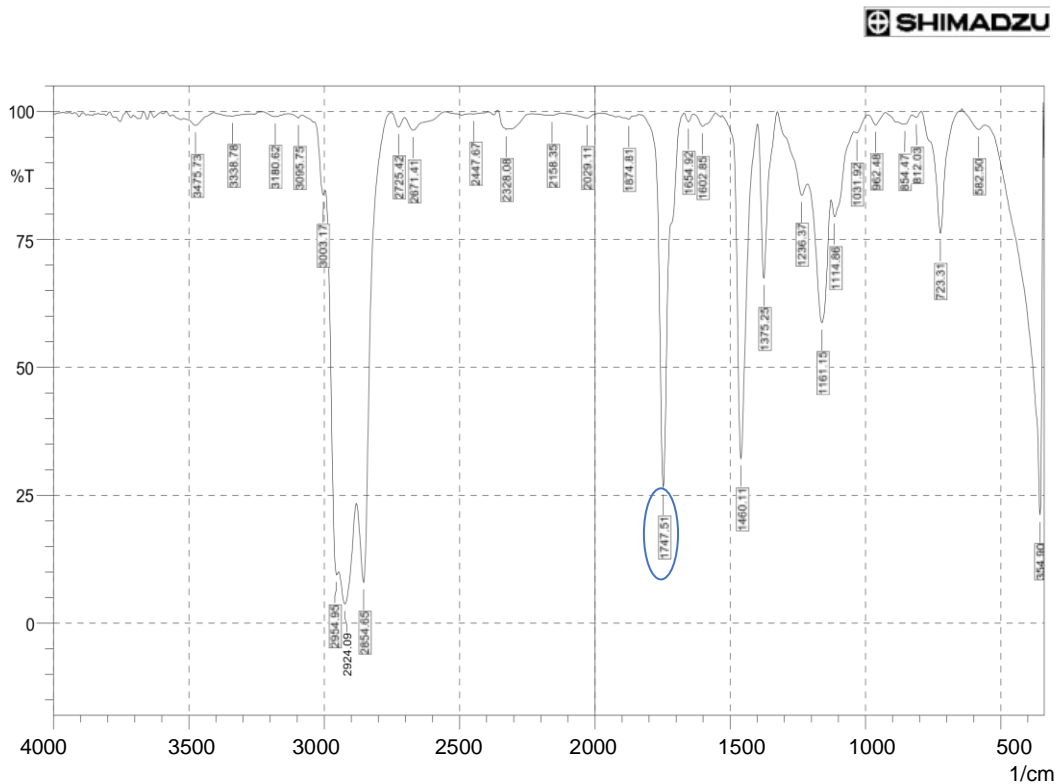


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Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
61	28.691	28.267	29.167	738029672	4.03	27646024		5-HYDROXY-4,4,6-TRIMETHYL-7-OXA-B
62	29.198	29.167	29.233	22263294	0.12	5724711	V	2,6-Piperidinedione, 1,4,4-trimethyl- (CAS) N
63	29.272	29.233	29.600	65904925	0.36	6299208	V	4,5-ALPHA.,ALPHA.-EUDESMANE
64	29.749	29.600	29.800	8627126	0.05	978276		neo-Menthol
				18294824467	100.00	1271105264		

Lampiran 10 Hasil Pengujian FT-IR dan GC-MS B35I180

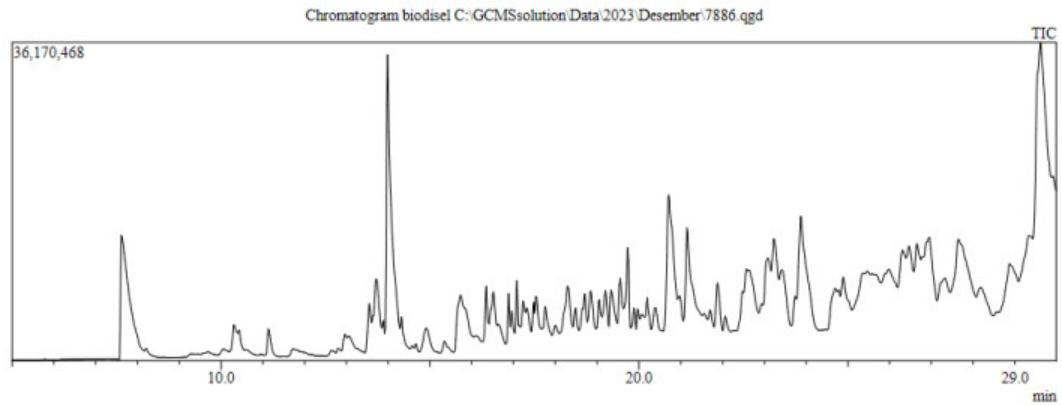
- Hasil Pengujian FT-IR



Sampel	Peak (cm ⁻¹)	Intensity	Jenis Ikatan
B35I180	2954.95	9.46	C-H Stretch (Alkanes)
	2924.09	3.74	C-H Stretch (Alkanes)
	2854.65	7.99	C-H Stretch (Alkanes)
	1747.51	26.53	C=O Stretch (Ketones dan ester)
	1460.11	32.22	C=C Stretch (Aromatic Compounds)
	1375.25	67.44	CH ₃ C-H bend (Alkyl)
	1161.15	58.74	C-O Stretch (Alcohols)
	354.9	21.1	C-I Stretch (Alkyl halides)



• Hasil Pengujian GC-MS



Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
1	5.780	5.700	5.950	423822	0.01	71327		Acetaldehyde (CAS) Ethanal
2	7.624	7.567	10.183	241228289	5.32	14084257	S	Ethanol (CAS) Ethyl alcohol
3	8.205	8.167	8.333	1094567	0.02	378754	T	Ethanol (CAS) Ethyl alcohol
4	8.683	8.533	8.733	179261	0.00	18276	T	Acetyl bromide (CAS) CH ₃ COBr
5	8.800	8.750	9.083	120113	0.00	17168	T	1,1,4,4-TETRADEUTERIOTERTAMETHYL
6	9.133	9.083	9.167	46567	0.00	11059	T	1,3,5-Cycloheptatriene (CAS) Cycloheptatrien
7	9.282	9.167	9.383	3226434	0.07	334087	TV	1,2-Propanediol (CAS) Propylene glycol
8	9.687	9.383	9.900	7487227	0.17	424674	TV	2-Propanone, 1-methoxy- (CAS) CH ₃ COCH ₂
9	10.058	9.950	10.183	3887114	0.09	475084	T	Acetic acid (CAS) Ethylic acid
10	10.310	10.183	10.400	30265052	0.67	3680503	V	2-Propanol (CAS) Isopropyl alcohol
11	10.430	10.400	10.567	17402750	0.38	3104701	V	2-Butanone, 3-hydroxy- (CAS) Acetoin
12	10.607	10.567	10.867	9405463	0.21	878351	V	Butane, 2-methyl- (CAS) Isopentane
13	10.969	10.867	11.050	2685139	0.06	280735	V	1,2-Propanediol (CAS) Propylene glycol
14	11.138	11.050	11.417	19572746	0.43	3203275	V	Pentane (CAS) n-Pentane
15	11.497	11.417	11.583	187439	0.00	31368	V	1,2-Propanediol (CAS) Propylene glycol
16	11.723	11.583	12.300	16866270	0.37	844107	V	Acetic acid (CAS) Ethylic acid
17	12.642	12.533	12.750	5122198	0.11	625340	V	Hexane (CAS) n-Hexane
18	12.805	12.750	12.883	5263645	0.12	839672	V	Formic acid (CAS) Biliroin
19	12.966	12.883	13.017	14803976	0.33	2438349	V	ACETIC ACID, ANHYDRIDE WITH FORM
20	13.064	13.017	13.433	26380971	0.58	2207289	V	Acetic acid (CAS) Ethylic acid
21	13.548	13.433	13.600	33102600	0.73	5817178	V	Pentane, 2-methyl- (CAS) 2-Methylpentane
22	13.714	13.600	13.850	84235883	1.86	8592264	V	Butane, 2-chloro- (CAS) 2-Chlorobutane
23	13.881	13.850	13.917	13053888	0.29	3862704	V	Pentane, 3-methyl- (CAS) 3-Methylpentane
24	13.985	13.917	14.283	292938604	6.46	34054838	V	1-Pentene, 2-methyl- (CAS) 2-Methyl-1-pente
25	14.319	14.283	14.517	24972765	0.55	4198653	V	Hexane (CAS) n-Hexane
26	14.574	14.517	14.617	4353854	0.10	879803	V	2-Propanone, 1-hydroxy- (CAS) Acetol
27	14.660	14.617	14.750	4924626	0.11	1093939	V	Benzene (CAS) Phene
28	14.911	14.750	15.250	30921577	0.68	2841830	V	Cyclohexane (CAS) Hexanaphthene
29	15.350	15.250	15.567	9918859	0.22	1317311	V	2-Furancarboxaldehyde (CAS) Furfural
30	15.732	15.567	16.033	107041075	2.36	6455624	V	2-Furancarboxaldehyde (CAS) Furfural
31	16.106	16.033	16.267	20013018	0.44	1717488	V	ETHER, OCTYL METHYL-
32	16.346	16.267	16.417	34926962	0.77	7295118	V	Cyclopentane, 1,3-dimethyl-, trans- (CAS) tra
33	16.515	16.417	16.600	51667956	1.14	6628546	V	Hexane, 3,3,4-trimethyl- (CAS) 3,3,4-Trimeth
34	16.637	16.600	16.817	23543905	0.52	2880852	V	Acetic acid, methyl ester (CAS) Methyl acetat
35	16.883	16.817	16.917	19747264	0.44	6286058	V	Heptane (CAS) n-Heptane
36	16.953	16.917	17.033	20260280	0.45	4335021	V	1-HEPTAN-1-D-OL
37	17.079	17.033	17.167	32580649	0.72	7731919	V	Cyclohexane, methyl- (CAS) Methylcyclohex
38	17.230	17.167	17.283	29489464	0.65	5356273	V	Cyclohexane, propyl- (CAS) n-Propylcyclope
39	17.320	17.283	17.433	28958991	0.64	4540030	V	2-Furanmethanol (CAS) Furfuryl alcohol
40	17.542	17.433	17.683	55010870	1.21	5750491	V	MOLYBDENUM, DI-.MU.-CHLOROBIS[(1,
41	17.760	17.683	17.917	36821981	0.81	4557883	V	2-Furanmethanol (CAS) Furfuryl alcohol
42	17.999	17.917	18.100	199751113	0.44	2378800	V	Cyclopentane, 1,1,3-trimethyl- (CAS) 1,1,3-Tri
43	18.300	18.100	18.417	73438435	1.62	6768169	V	1-Octene (CAS) Caprylene
44	18.479	18.417	18.567	25045350	0.55	4197920	V	Hexanal (CAS) n-Hexanal
45	18.700	18.567	18.767	44106321	0.97	5769793	V	Octane, 4,5-dimethyl- (CAS) 4,5-Dimethyloct
46	18.846	18.767	18.983	48009713	1.06	6046659	V	Cyclopentane, 1-ethyl-3-methyl-, cis- (CAS) 1
47	19.046	18.983	19.117	28601011	0.63	5008068	V	CYCLOHEXANE, 1,2-DIMETHYL-
48	19.200	19.117	19.283	40017964	0.88	5996173	V	Octane (CAS) n-Octane
49	19.337	19.283	19.483	47819731	1.06	6010209	V	CYCLOHEXANE, 1,2-DIMETHYL-
50	19.551	19.483	19.633	45233003	1.00	7264473	V	Cyclopentane, propyl- (CAS) n-Propylcyclope
51	19.734	19.633	19.800	56345740	1.24	10708421	V	Cyclohexane, ethyl- (CAS) Ethylcyclohexane
52	19.881	19.800	19.933	19142811	0.42	3790729	V	Benzene, 1,4-dimethyl- (CAS) p-Xylene
	.975	19.933	20.017	14792628	0.33	3619811	V	Benzenethanol, .alpha.,.beta.-dimethyl- (CAS
	.072	20.017	20.133	19849131	0.44	3002655	V	2-Undecanol (CAS) sec-Undecyl alcohol
	.198	20.133	20.300	28777253	0.64	4883098	V	Benzene, 1,2-dimethyl- (CAS) o-Xylene
	.391	20.300	20.517	30864513	0.68	3701523	V	1-Hexanol, 2-ethyl- (CAS) 2-Ethylhexanol
	.550	20.517	20.583	4198370	0.09	1093063	V	Silane, [(11-fluoroundecyl)oxy]trimethyl- (CA
	.714	20.583	20.933	190312256	4.20	16419804	V	Heptane, 2,6-dimethyl- (CAS) 2,6-Dimethylhe
	.970	20.933	21.067	28969512	0.64	4871282	V	Cyclopentane, 1-ethyl-3-methyl-, trans- (CAS)
	.154	21.067	21.517	148916912	3.29	12552430	V	Silane, trichloroisicosyl-



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Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Mark	Name
61	21.562	21.517	21.650	19161564	0.42	2706763	V	1,2,3-Propanetriol (CAS) Glycerol
62	21.705	21.650	21.800	19334825	0.43	3071389	V	Cyclopentane, butyl- (CAS) n-Butylcyclopent
63	21.880	21.800	22.000	40330532	0.89	6074856	V	Cyclohexane, 1,2,4-tris(methylene)- (CAS) C
64	22.066	22.000	22.200	13966444	0.31	2234187	V	Benzene, 1,2,4-trimethyl- (CAS) 1,2,4-Trimet
65	22.267	22.200	22.333	4388384	0.10	599196	V	9-Octadecen-1-ol, (Z)- (CAS) cis-9-Octadec
66	22.576	22.333	22.867	146563285	3.23	7431903	V	Benzene, 1,3,5-trimethyl- (CAS) 1,3,5-Trimet
67	22.940	22.867	22.967	18679248	0.41	3402094	V	1-Decanol, 2-ethyl- (CAS)
68	23.084	22.967	23.167	85748108	1.89	8564329	V	Nonane (CAS) n-Nonane
69	23.229	23.167	23.350	95524971	2.11	10724865	V	Octane, 2,7-dimethyl- (CAS) 2,7-Dimethyloct
70	23.420	23.350	23.650	77075252	1.70	7144704	V	1-Pentanol, 4-methyl-2-propyl- (CAS) 2-PROI
71	23.741	23.650	23.767	19640386	0.43	4031316	V	Cyclopentane, 1-ethyl-3-methyl-, trans- (CAS)
72	23.874	23.767	24.317	175319505	3.87	13074703	V	3-HEXADECYLOXYCARBONYL-5-(2-HYI
73	24.367	24.317	24.417	154884	0.00	38393	V	Cyclohexane, 1-methyl-4-(1-methylbutyl)- (C
74	24.467	24.417	24.517	181341	0.00	50562	V	Cyclohexane, 1-ethyl-2-methyl-, cis- (CAS) 1-
75	24.699	24.517	24.750	46046031	1.02	4648033	V	1-Decyne (CAS) Octylacetylene
76	24.777	24.750	24.817	16636696	0.37	4446840	V	Benzeneacetaldehyde, alpha-methyl- (CAS) ;
77	24.887	24.817	25.100	64006898	1.41	5860634	V	Cyclopentane, 1-methyl-2-(2-propenyl)-, trans
78	25.354	25.100	25.383	69201491	1.53	6083554	V	1-METHYL-2-PHENYLCYCLOPROPANE 1
79	25.467	25.383	25.550	60627595	1.34	6275217	V	Decane, 5-methyl- (CAS)
80	25.596	25.550	25.650	35146972	0.78	5912717	V	Pentane, 2,3,4-trimethyl- (CAS) 2,3,4-Trimeth
81	25.683	25.650	25.783	42902114	0.95	5808642	V	Decanal (CAS) n-Decanal
82	25.982	25.783	26.183	129641865	2.86	6282916	V	Tridecane, 3-methyl- (CAS) 3-Methyltridecan
83	26.308	26.183	26.400	90922316	2.01	8298362	V	1-Hexanol, 2-ethyl- (CAS) 2-Ethylhexanol
84	26.462	26.400	26.583	81259133	1.79	8735250	V	2-METHYL-BUTYL BUTYRATE
85	26.651	26.583	26.750	77473785	1.71	8938385	V	Decane, 2-methyl- (CAS) 2-Methyldecane
86	26.942	26.750	27.133	157707254	3.48	9489244	V	1-Pentanol, 4-methyl-2-propyl- (CAS) 2-PROI
87	27.320	27.133	27.450	74457450	1.64	4725611	V	1,2-trimethylene-8,9,10-trinorborna-2(3'),5-di
88	27.648	27.450	28.067	208720622	4.61	9022631	V	Octane, 2,7-dimethyl- (CAS) 2,7-Dimethyloct
89	28.181	28.067	28.483	47057921	1.04	3326497	V	Naphthalene, 1,2,3,4-tetrahydro- (CAS) Tetra
90	28.569	28.500	28.600	830542	0.02	145609	V	Benzene, (2-methylbutyl)- (CAS) 1-Phenyl-2-
91	28.872	28.650	29.083	46791956	1.03	3639642	V	Isooctyl chloride
92	29.332	29.100	29.417	17307526	0.38	1629832	V	11-Chloro-1-undecene
93	29.606	29.433	29.883	270207561	5.96	19580313	V	DECANE, 2,3,5,8-TETRAMETHYL-
				4531564338	100.00	466224468		

