

Lampiran I. Perhitungan

1.1 Pembuatan Larutan HCl 6 N

Diketahui: $\rho_{HCl} = 1,19 \text{ g/mL}$

$\% \text{ b/b} = 37 \%$

Normalitas HCl 37 % (N)

$$N = \%(\text{b/b}) \times \frac{\rho}{M_r} \times \eta_{eq}$$

$$N = \frac{37}{100} \times \frac{1,19 \text{ g/mL}}{36,46 \text{ g/mol}} \times 1$$

$$N = 12,08 \text{ N}$$

$$V_x = \frac{N \times V}{N_x}$$

V_x = Volume HCl 37 % yang diperlukan

N_x = Normalitas HCl 37 %

N = Normalitas larutan HCl yang diinginkan

V = Volume larutan HCl yang diinginkan

$$V_x = \frac{6 \text{ N} \times 1000 \text{ mL}}{12,08 \text{ N}}$$

$$V_x = 496,69 \text{ mL}$$

1.2 Pembuatan Larutan NH_4Cl 0,1 M

Diketahui: $M_r \text{ NH}_4\text{Cl} = 53,5$ $\eta_{eq} = 1$

$$N = \frac{m/M_r}{V} \times \eta_{eq} \quad ;$$

$$m = M_r \times V \times N \times \eta_{eq}$$

m = Berat NH_4Cl yang diperlukan

N = Normalitas NH_4Cl yang diinginkan

V = Volume NH_4Cl yang diinginkan

$$m = 53,5 \text{ g/mol} \times 1 \text{ L} \times 0,1 \text{ N} \times 1$$

$$m = 5,35 \text{ g}$$

1.3 Keasaman zeolit alam sebelum aktivasi

$$\begin{aligned} \text{Keasaman} &= \frac{\text{berat zeolit setelah adsorpsi}}{\text{berat zeolit sebelum adsorpsi}} \times \text{BM NH}_3 \\ &= \frac{w_2 - w_1}{w_1 - w_0} \times \text{BM NH}_3 \end{aligned}$$

Diketahui: Berat krus kosong (w_0) = 20,1593

Berat krus + zeolit setelah pemanasan (w_1) = 20,6306

Berat krus + zeolit setelah adsorpsi (w_2) = 20,6575

BM NH₃ = 17

$$\begin{aligned} \text{Keasaman} &= \frac{20,6575 - 20,6306}{20,6306 - 20,1593} \times 17 \\ &= 0,6703 \end{aligned}$$

1.4 Keasaman zeolit alam setelah aktivasi

Diketahui: Berat krus kosong (w_0) = 20,1596

Berat krus + zeolit setelah pemanasan (w_1) = 20,6181

Berat krus + zeolit setelah adsorpsi (w_2) = 20,6605

BM NH₃ = 17

$$\begin{aligned} \text{Keasaman} &= \frac{20,6605 - 20,6181}{20,6181 - 20,1596} \times 17 \\ &= 1,5708 \end{aligned}$$

1.5 Efisiensi produk pirolisis non katalitik

$$\begin{aligned} \text{Efisiensi} &= \frac{\text{berat hidrokarbon cair}}{\text{berat sampel polietilena}} \times 100\% \\ &= \frac{\rho \times V}{\text{berat sampel polietilena}} \times 100\% \end{aligned}$$

Diketahui: ρ = 0,9058 g/mL

V = 20,5 mL

Berat sampel polietilena = 75,9547 g

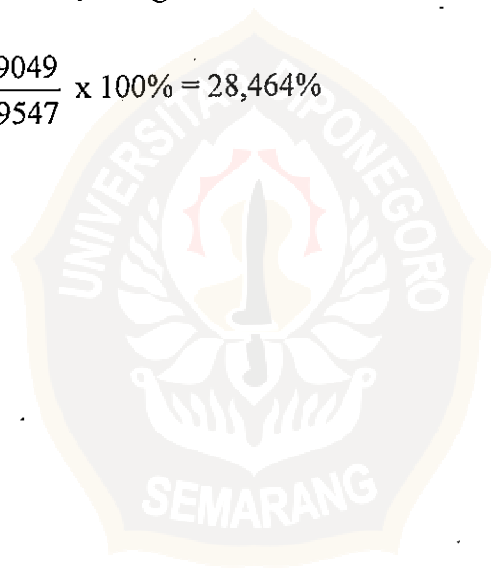
$$\begin{aligned}\text{Efisiensi} &= \frac{0,9058 \text{ g/mL} \times 20,5 \text{ mL}}{75,9547 \text{ g}} \times 100\% \\ &= \frac{18,5689}{75,9547} \times 100\% = 24,129\%\end{aligned}$$

1.6 Efisiensi produk pirolisis katalitik

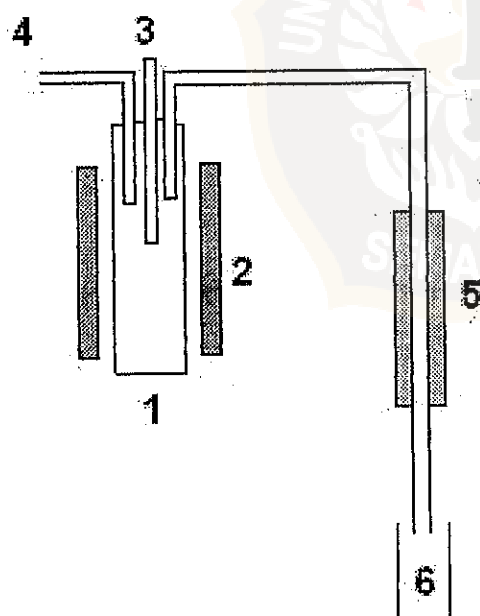
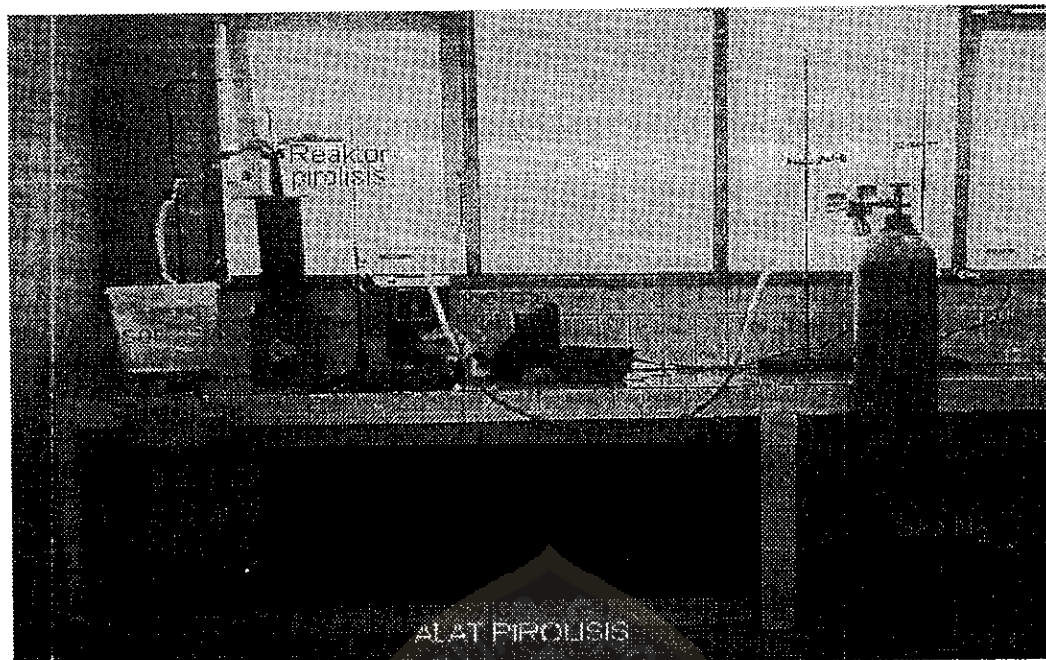
$$\text{Diketahui: } \rho = 0,8641 \text{ g/mL} \qquad V = 25,35 \text{ mL}$$

$$\text{Berat sampel polietilena} = 75,9547 \text{ g}$$

$$\begin{aligned}\text{Efisiensi} &= \frac{0,8641 \text{ g/mL} \times 25,35 \text{ mL}}{75,9547 \text{ g}} \times 100\% \\ &= \frac{21,9049}{75,9547} \times 100\% = 28,464\%\end{aligned}$$



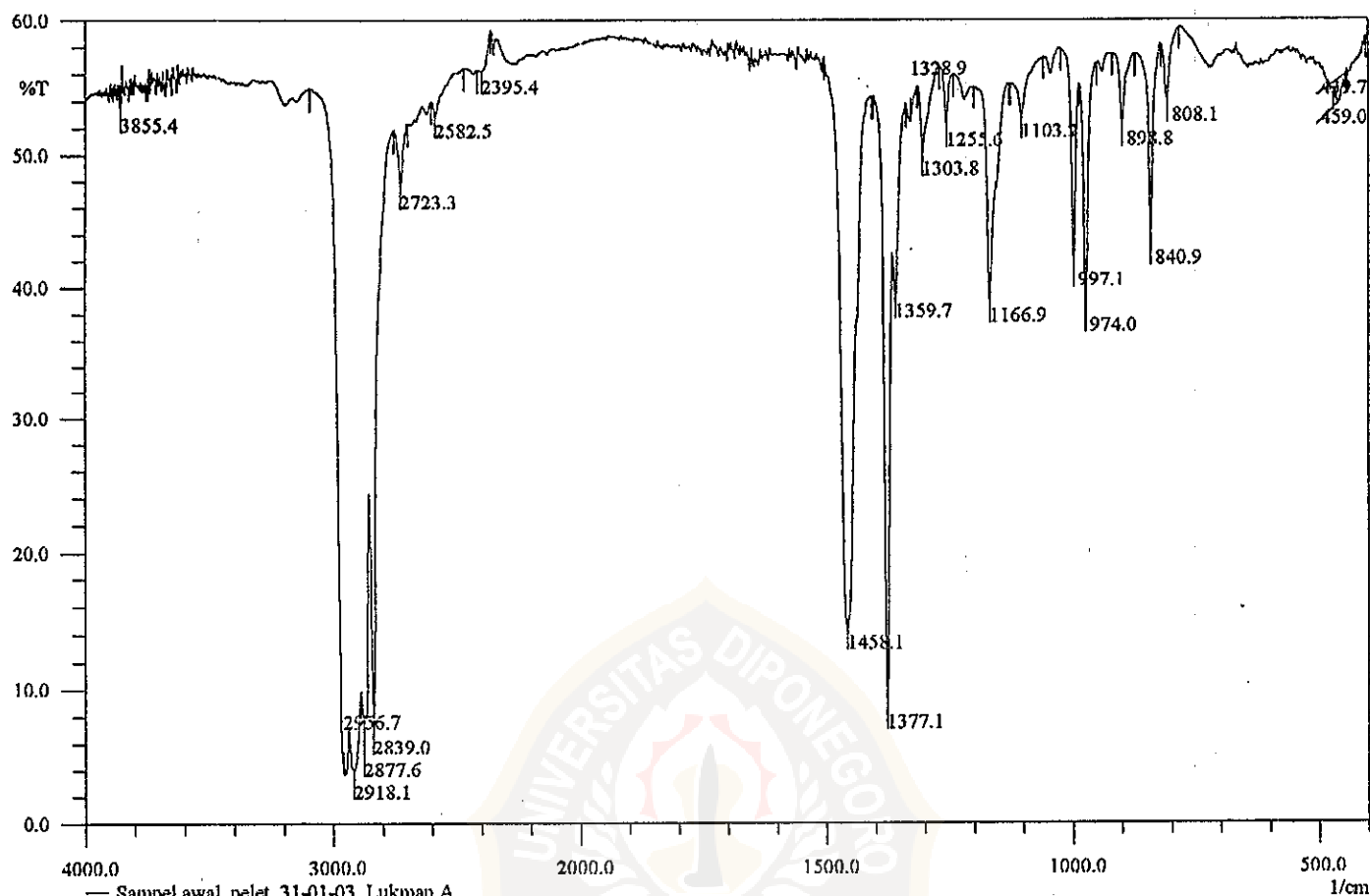
Lampiran II. Gambar reaktor



Keterangan Gambar:

1. Reaktor
2. Furnace
3. Termokopel
4. Gas Nitrogen
5. Pendingin es + garam
6. Penampung hasil pirolisis

Lampiran III. Spektra FTIR sampel plastik



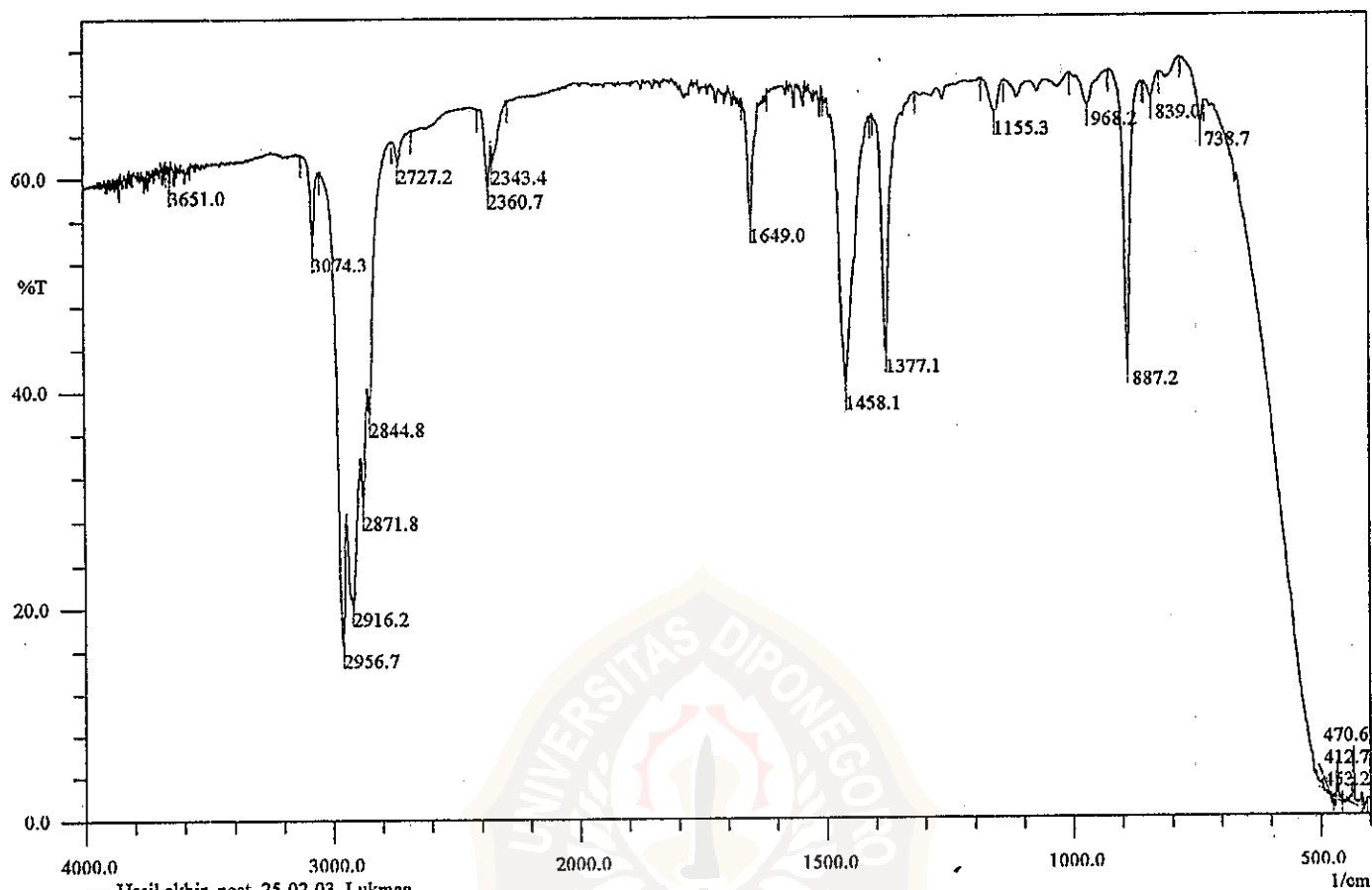
— Sampel awal, pelet, 31-01-03, Lukman A

Peaktable of LUKMAN.IRS, 23 Peaks

Threshold: 80, Noise: 2, No Range Selection

Nr.	Pos. (1/cm)	Inten. (%T)
1	439.7	56.088
2	459.0	53.864
3	808.1	54.121
4	840.9	43.380
5	898.8	52.313
6	974.0	38.339
7	997.1	41.744
8	1103.2	52.906
9	1166.9	39.056
10	1255.6	52.286
11	1303.8	50.134
12	1328.9	52.477
13	1359.7	39.366
14	1377.1	8.789
15	1458.1	14.615
16	2395.4	56.252
17	2582.5	52.972
18	2723.3	47.609
19	2839.0	6.890
20	2877.6	7.529
21	2918.1	3.941
22	2956.7	3.715
23	3855.4	53.399

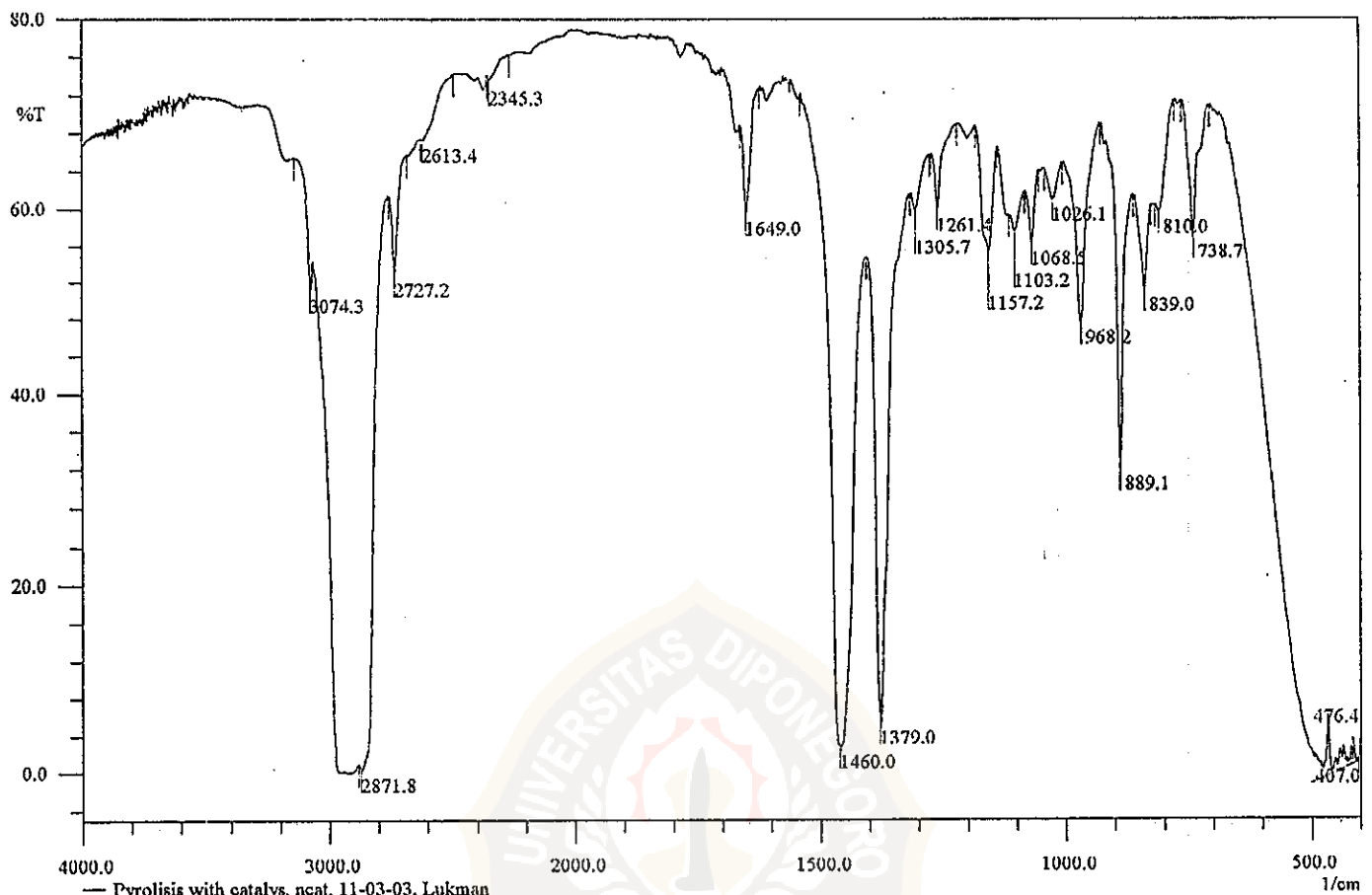
Lampiran IV. Spektra FTIR produk pirolisis non katalitik



— Hasil akhir, neat, 25-02-03, Lukman
 Peaktable of LUKMAN3.IRS, 20 Peaks
 Threshold: 80, Noise: 2, No Range Selection

Nr.	Pos. (1/cm)	Inten. (%T)
1	412.7	0.423
2	453.2	0.949
3	470.6	0.579
4	738.7	64.681
5	839.0	67.243
6	887.2	42.351
7	968.2	66.693
8	1155.3	65.871
9	1377.1	43.678
10	1458.1	40.205
11	1649.0	55.898
12	2343.4	61.489
13	2360.7	59.228
14	2727.2	61.606
15	2844.8	37.904
16	2871.8	29.351
17	2916.2	20.511
18	2956.7	16.611
19	3074.3	53.402
20	3651.0	59.651

Lampiran V. Spektra FTIR produk pirolisis katalitik



Peaktable of LUKMAN4.IRS, 21 Peaks
Threshold: 80, Noise: 2, No Range Selection

Nr.	Pos. (1/cm)	Inten. (%T)
1	407.0	1.077
2	476.4	0.374
3	738.7	56.957
4	810.0	59.705
5	839.0	51.252
6	889.1	32.134
7	968.2	47.686
8	1026.1	61.085
9	1068.5	56.257
10	1103.2	57.523
11	1157.2	55.736
12	1261.4	59.910
13	1305.7	59.919
14	1379.0	5.409
15	1460.0	2.826
16	1649.0	59.601
17	2345.3	73.396
18	2613.4	67.319
19	2727.2	52.909
20	2871.8	0.348
21	3074.3	51.154

Lampiran VI. Kondisi operasi GC-MS

Jenis kolom : HPS

Suhu kolom : suhu awal = 40 °C; waktu awal = 5 menit; kenaikan = 10 °C;
suhu akhir = 280 °C

Detektor : Jenis detektor = FID (Flame Ionization Detector);
suhu detektor = 270 °C

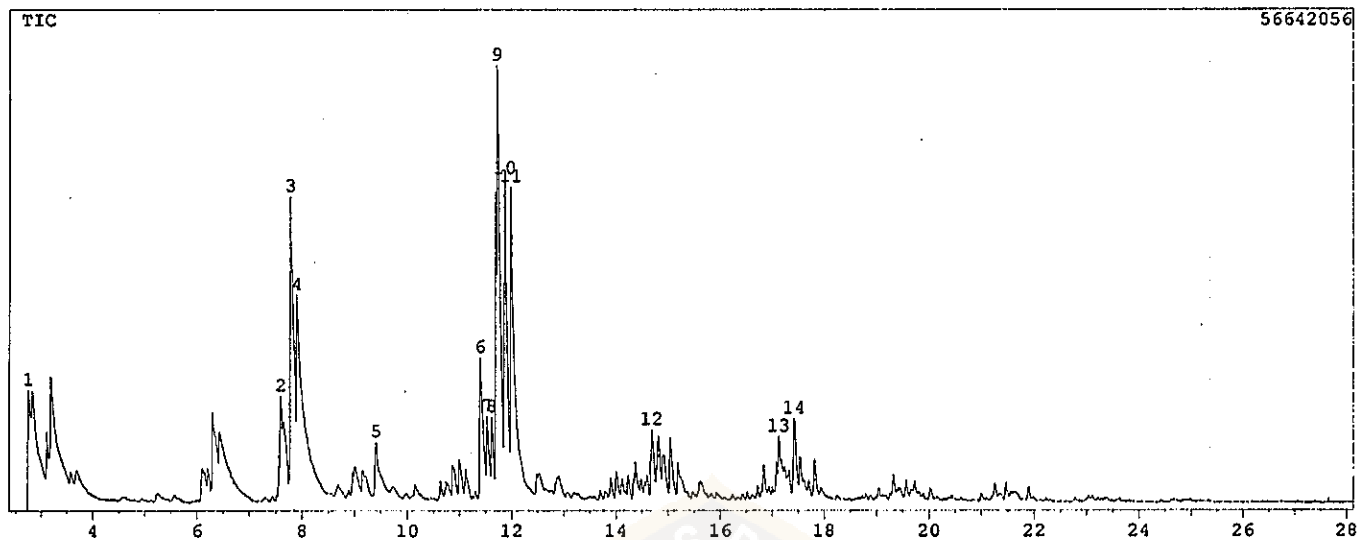
Suhu injektor : 270 °C

Gas pembawa : He



Lampiran VII. Kromatogram produk pirolisis non katalitik

Data : LUKMAN.D02 02/12/23 13:36:48
Sample : POLYETHYLENE, PIROLISIS, LUKMAN APRIANTO
Operator : POY
Method File Name : WIN.MET



Data : LUKMAN.D02 02/12/23 13:36:48
 Sample : POLYETHYLENE, PIROLISIS, LUKMAN APRIANTO
 Operator : POY
 Method File Name : WIN.MET

**** Peak Report ****

PKNO	R.Time	I.Time	F.Time	Area	Height	A/H(sec)	MK	%Total	Name
1	2.750	2.733	7.583	770343105	13595883	56.660		35.01	
2	7.603	7.583	7.633	29485138	11897363	2.478	V	1.34	
3	7.783	7.633	7.892	203553536	34422776	5.913	V	9.25	
4	7.908	7.892	8.092	165566753	23114239	7.163	V	7.53	
5	9.408	8.092	11.375	239932730	5875416	40.837	V	10.91	
6	11.393	11.375	11.508	66559622	15478899	4.300	V	3.03	
7	11.533	11.508	11.600	28251598	8755720	3.227	V	1.28	
8	11.623	11.600	11.683	25466590	8675916	2.935	V	1.16	
9	11.725	11.683	11.850	250647922	48370292	5.182	V	11.39	
10	11.867	11.850	11.975	128463211	35584814	3.610	V	5.84	
11	11.983	11.975	12.167	163784650	34645253	4.727	V	7.44	
12	14.692	12.167	15.025	89014678	6513974	13.665	V	4.05	
13	17.125	17.108	17.408	17618266	4166923	4.228		0.80	
14	17.424	17.408	17.508	21371906	7257857	2.945	V	0.97	
Total				2200059701				100.00	



Lampiran VIII. Spektra Massa produk pirolisis non katalitik

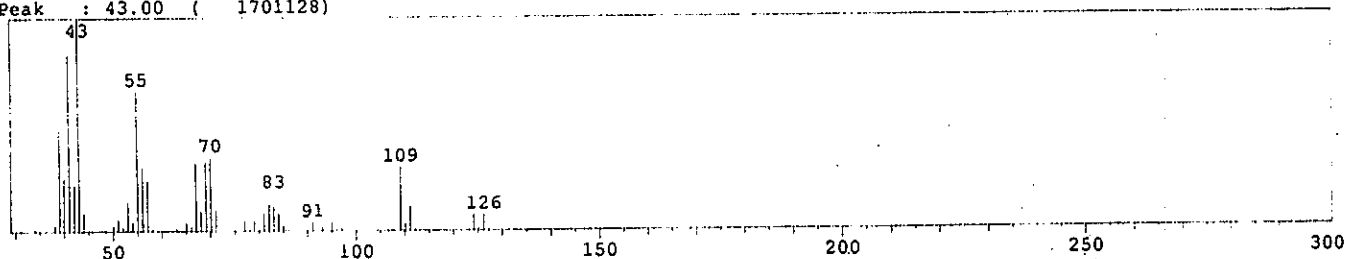
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Data : LUKMAN.D02

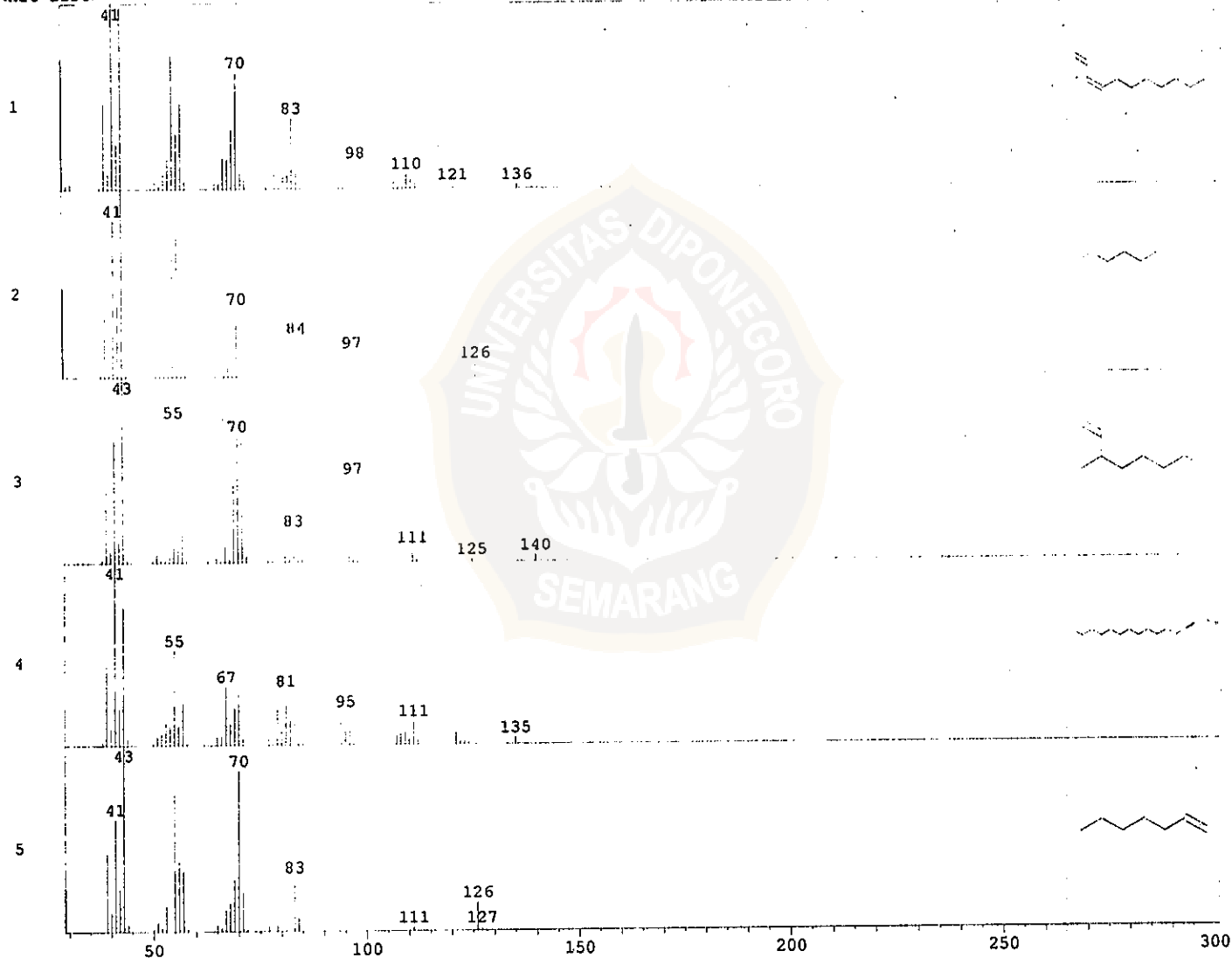
Mass Peak # : 62 Ret. Time : 2.750

Scan # : 91 B.G. Scan # : 255

Base Peak : 43.00 (1701128)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	87	154	C ₁₀ H ₁₈ O 2-Decenal, (Z)- \$\$ (Z)-2-Decenal	2497-25-8	11008	1
2	87	126	C ₉ H ₁₈ 1-Nonene \$\$ n-Non-1-ene \$\$ 1-C9H18 \$\$ Nonene \$\$ Nonene-(1) \$\$ NONYLENE	124-11-8	4675	1
3	87	140	C ₁₀ H ₂₀ Diisoamylene	54063-09-1	7607	1
4	86	224	C ₁₅ H ₂₈ O 2-Pentadecyn-1-ol	2834-00-6	28746	1
5	86	126	C ₉ H ₁₈ 2,4-Dimethyl-1-heptene	19549-87-2	4662	1

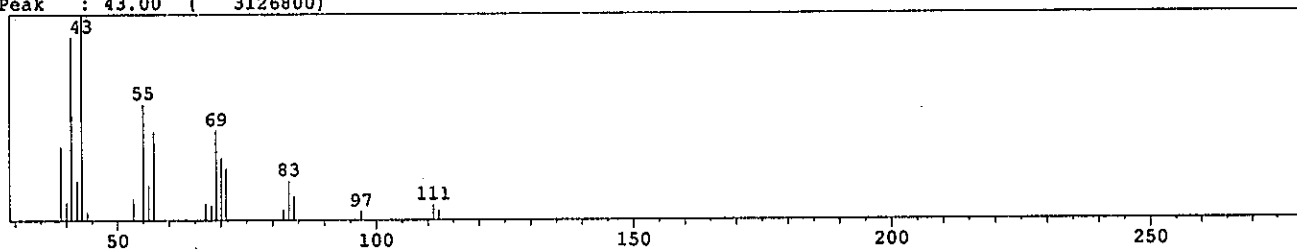
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Data : LUKMAN.D02

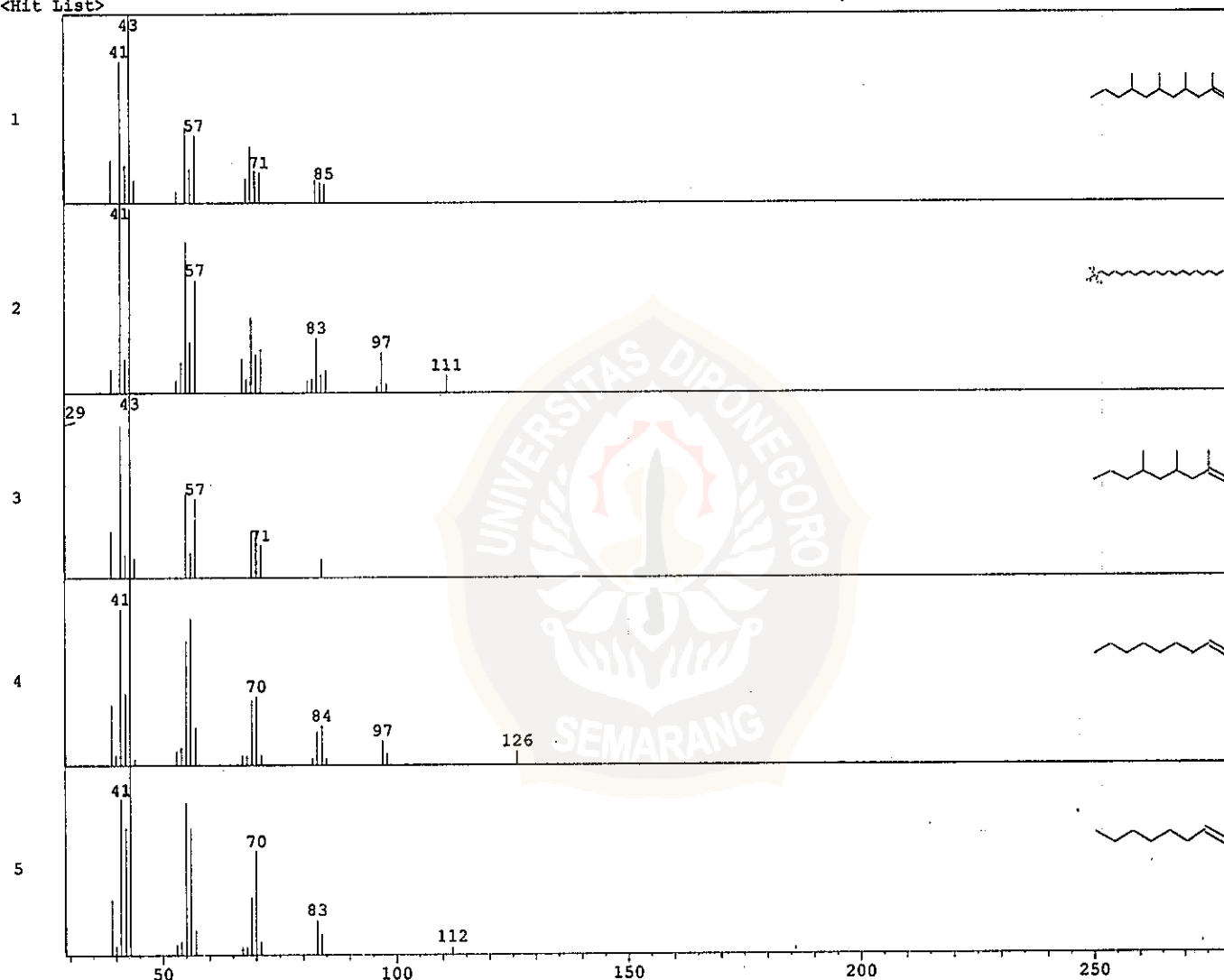
Mass Peak # : 21 Ret. Time : 7.783

Scan # : 695 B.G. Scan # : 705

Base Peak : 43.00 (3126800)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	90	210	C ₁₅ H ₃₀ 2,4,6,8-Tetramethyl-1-undecene	59920-26-2	25485	1
2	89	414	C ₂₀ H ₄₁ Cl ₃ Si Silane, trichloro-eicosyl- \$\$ Eicosyltrichlorosilane	18733-57-8	54853	1
3	89	168	C ₁₂ H ₂₄ 2,4,6-Trimethyl-1-nonene	55771-40-9	14709	1
4	88	126	C ₉ H ₁₈ 1-Nonene \$\$ n-Non-1-ene \$\$ 1-C ₉ H ₁₈ \$\$ Nonene \$\$ Nonene-(1) \$\$ NONYLENE	124-11-8	4675	1
5	88	112	C ₈ H ₁₆ 1-Octene \$\$.alpha.-Octene \$\$.alpha.-Octylene \$\$ n-1-Octene \$\$ Caprylene \$\$ 1-C ₈ H ₁₆	111-66-0	2657	1

Library Name
(1) NIST62.LIB

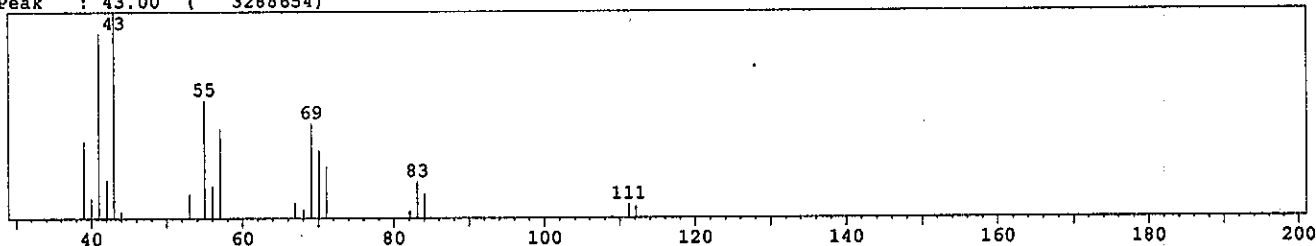
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Data : LUKMAN.D02

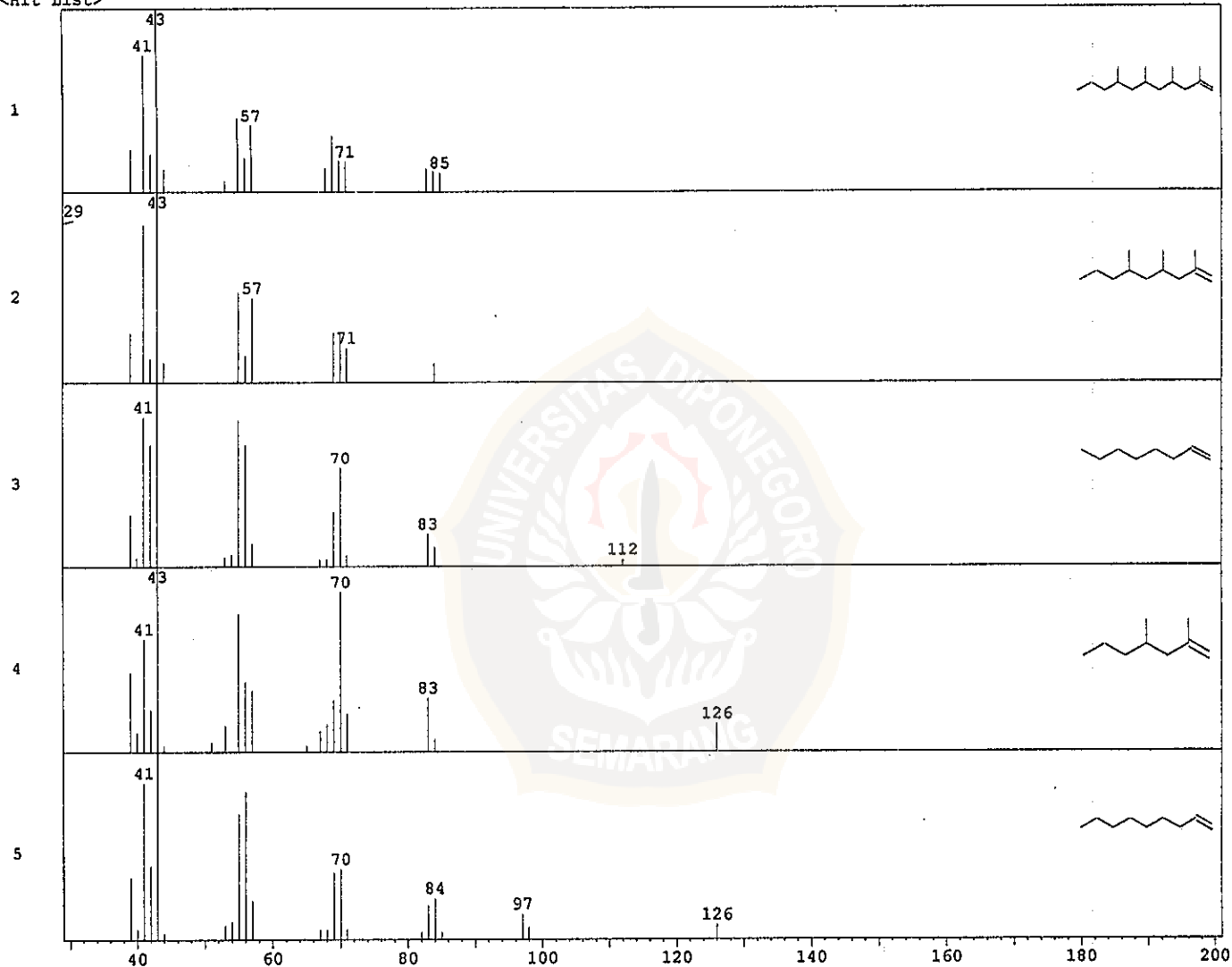
Mass Peak # : 20 Ret. Time : 7.908

Scan # : 710 B.G. Scan # : 744

Base Peak : 43.00 (3288654)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	90	210	C ₁₅ H ₃₀ 2,4,6,8-Tetramethyl-1-undecene	59920-26-2	25485	1
2	89	168	C ₁₂ H ₂₄ 2,4,6-Trimethyl-1-nonene	55771-40-9	14709	1
3	88	112	C ₈ H ₁₆ 1-Octene \$\$.alpha.-Octene \$\$.alpha.-Octylene \$\$ n-1-Octene \$\$ Caprylene \$\$ 1-C ₈ H ₁₆	111-66-0	2657	1
4	87	126	C ₉ H ₁₈ 2,4-Dimethyl-1-heptene	19549-87-2	4662	1
5	87	126	C ₉ H ₁₈ 1-Nonene \$\$ n-Non-1-ene \$\$ 1-C ₉ H ₁₈ \$\$ Nonene \$\$ Nonene-(1) \$\$ NONYLENE	124-11-8	4675	1

Library Name
(1) NIST62.LIB

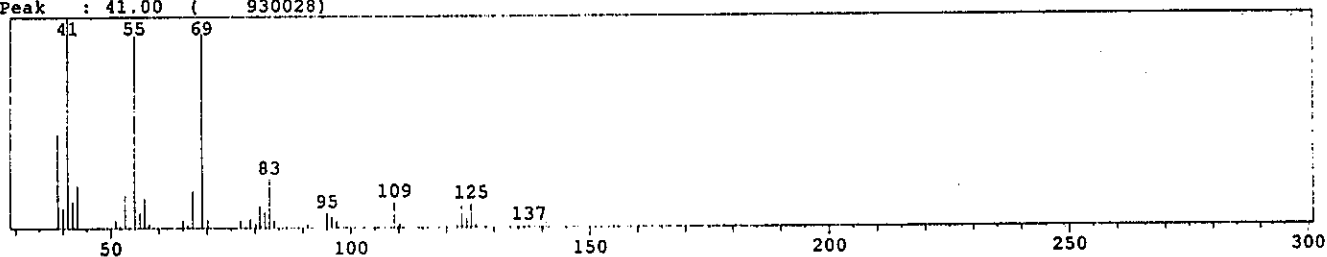
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Data : LUKMAN.D02

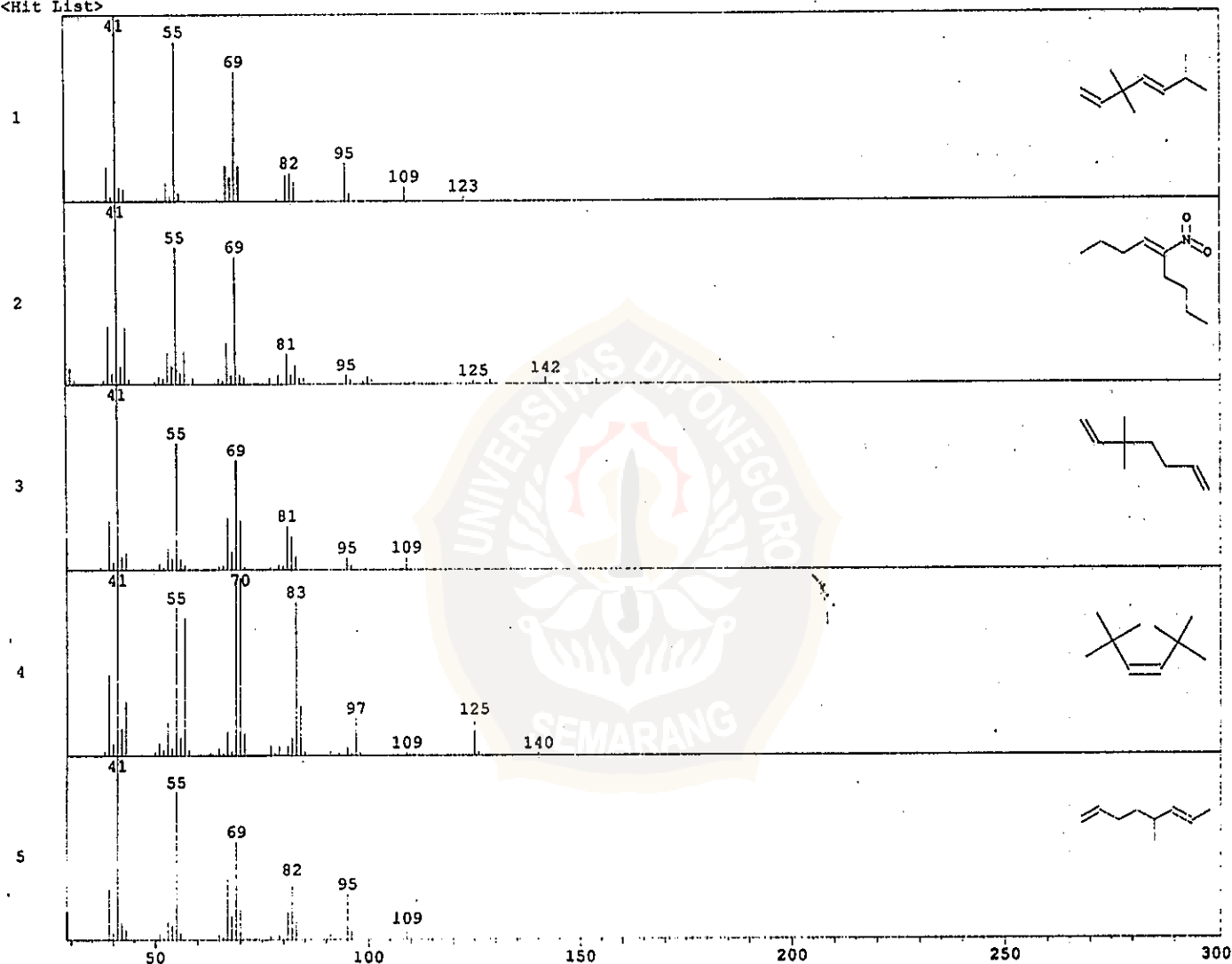
Mass Peak # : 42 Ret. Time : 9.408

Scan # : 890 B.G. Scan # : 923

Base Peak : 41.00 (930028)



<Hit List>



No	SI	Mol.Wgt.	Mol.Form./Compound Name	CAS No.	Entry	LIB#
1	87	138	C ₁₀ H ₁₈ 1,4-Heptadiene, 3,3,6-trimethyl-	74498-89-8	7060	1
2	86	171	C ₉ H ₁₇ NO ₂ 4-Nonene, 5-nitro- \$\$ 5-Nitro-4-nonene	6065-01-6	15465	1
3	85	124	C ₉ H ₁₆ 1,6-Heptadiene, 3,3-dimethyl-	68701-61-1	4257	1
4	84	140	C ₁₀ H ₂₀ 3-Hexene, 2,2,5,5-tetramethyl-, (Z)- \$\$ (Z)-2,2,5,5-Tetramethyl-3-hexene \$\$ cis-Di-te	692-47-7	7611	1
5	84	124	C ₉ H ₁₆ 2,7-Octadiene, 4-methyl-	- -0	4209	1

Library Name

(1) NIST62.LIB

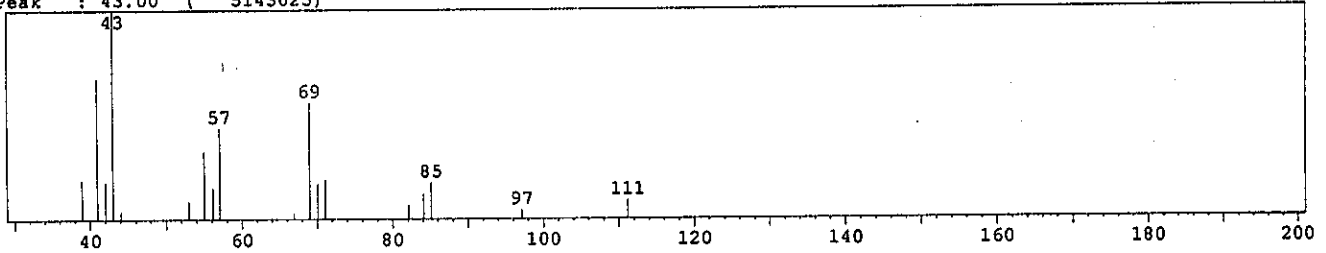
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Data : LUKMAN.D02

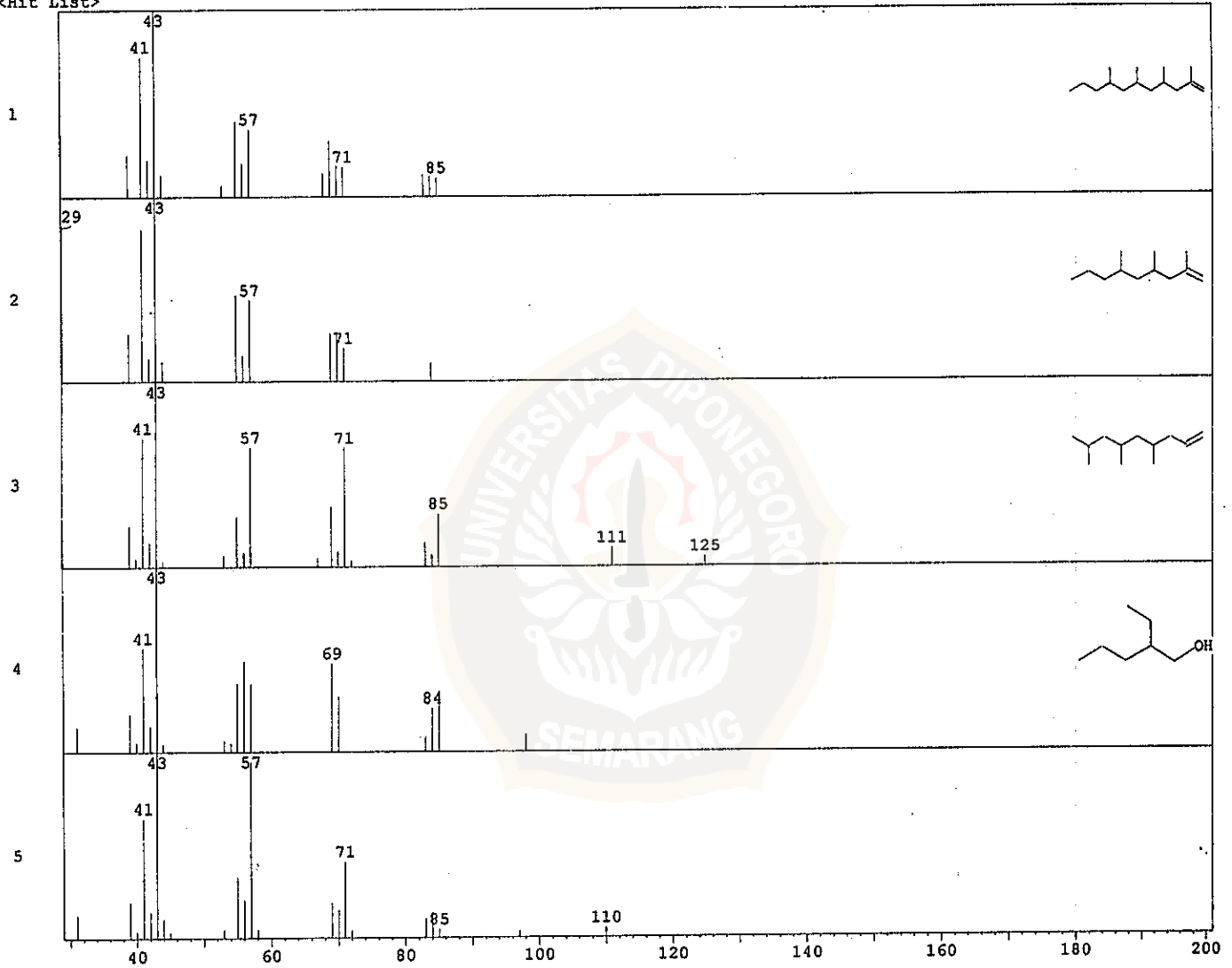
Mass Peak # : 18 Ret. Time : 11.725

Scan # : 1168 B.G. Scan # : 1167

Base Peak : 43.00 (5143025)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	91	210	C ₁₅ H ₃₀ 2,4,6,8-Tetramethyl-1-undecene	59920-26-2	25485	1
2	90	168	C ₁₂ H ₂₄ 2,4,6-Trimethyl-1-nonene	55771-40-9	14709	1
3	87	168	C ₁₂ H ₂₄ 1-Nonene, 4,6,8-trimethyl-	54410-98-9	14791	1
4	87	116	C ₇ H ₁₆ O 1-Pentanol, 2-ethyl- \$\$ 2-Ethyl-1-pentanol	27522-11-8	3351	1
5	87	156	C ₁₀ H ₂₀ O Isooctane, (ethenyloxy)- \$\$ Isooctylvinyl ether	37769-62-3	11569	1

Library Name

(1) NIST62.LIB

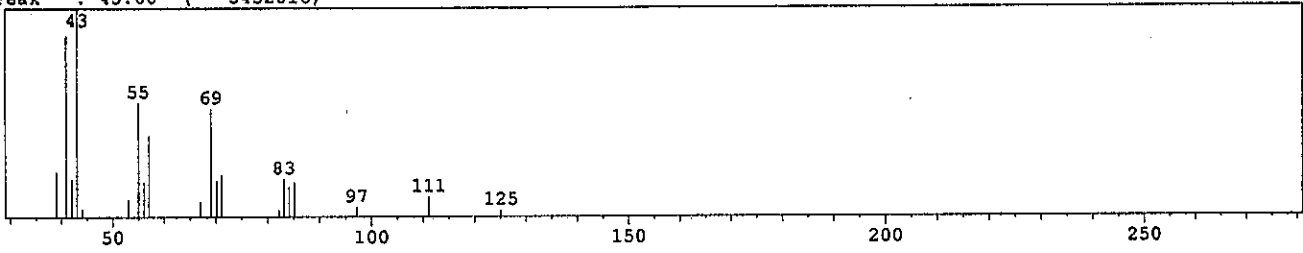
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Data : LUKMAN.D02

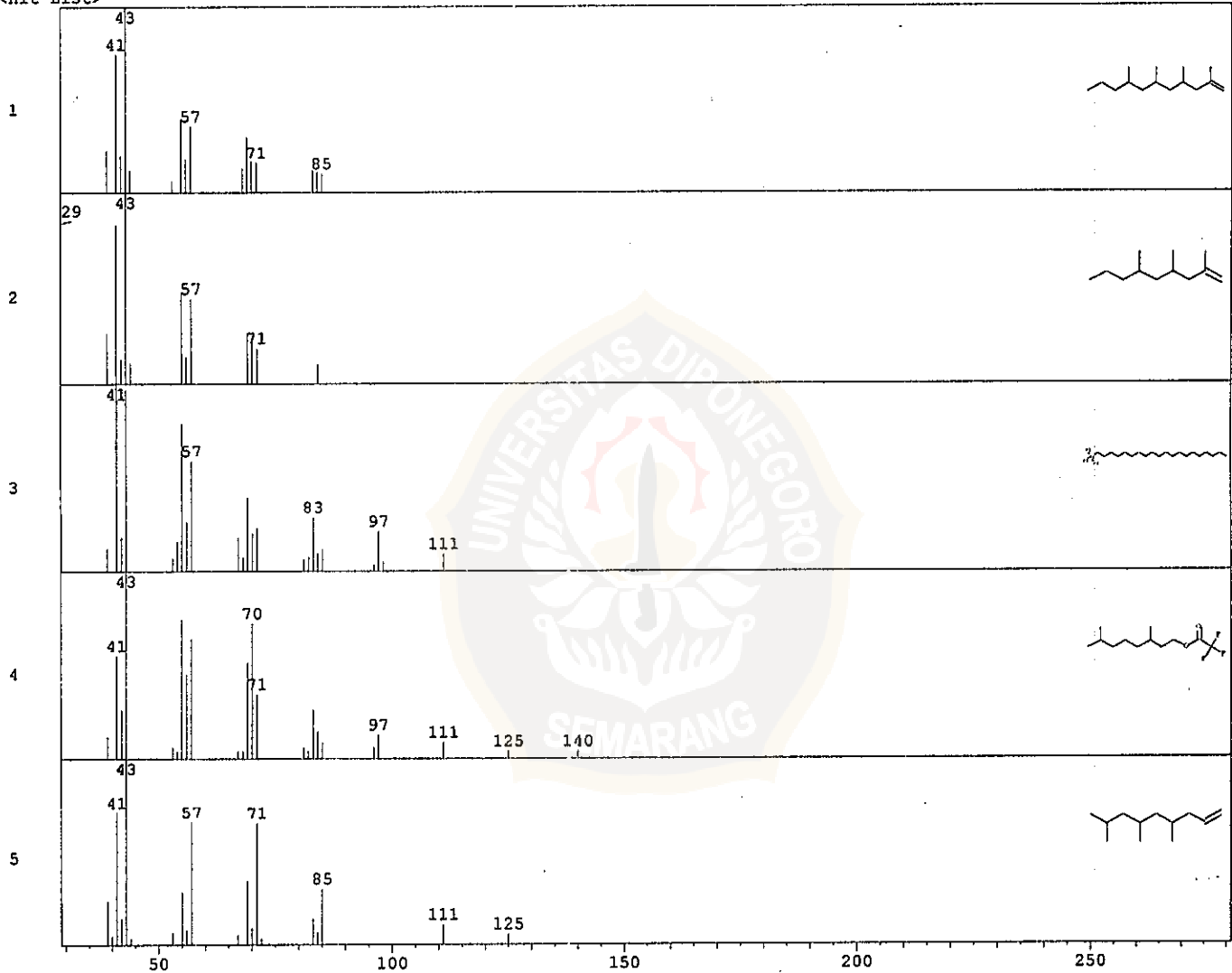
Mass Peak # : 20 Ret. Time : 11.867

Scan # : 1185 B.G. Scan # : 1182

Base Peak : 43.00 (5432816)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form. /Compound Name	CAS No.	Entry	LIB#
1	92	210	C ₁₅ H ₃₀ 2,4,6,8-Tetramethyl-1-undecene	59920-26-2	25485	1
2	89	168	C ₁₂ H ₂₄ 2,4,6-Trimethyl-1-nonene	55771-40-9	14709	1
3	89	414	C ₂₀ H ₄₁ Cl ₃ Si Silane, trichloro-eicosyl- \$\$ Eicosyltrichlorosilane	18733-57-8	54853	1
4	88	254	C ₁₂ H ₂₁ F ₃ O ₂ Trifluoroacetyl-3,7-dimethyloctanol	- -0	34655	1
5	88	168	C ₁₂ H ₂₄ 1-Nonene, 4,6,8-trimethyl-	54410-98-9	14791	1

Library Name

(1) NIST62.LIB

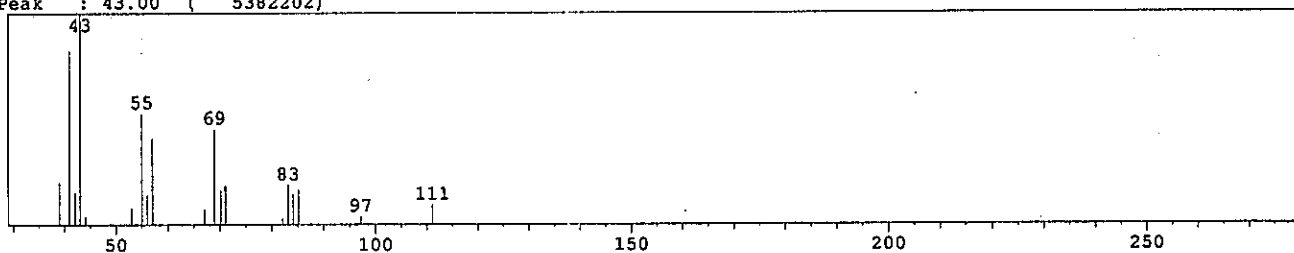
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Data : LUKMAN.D02

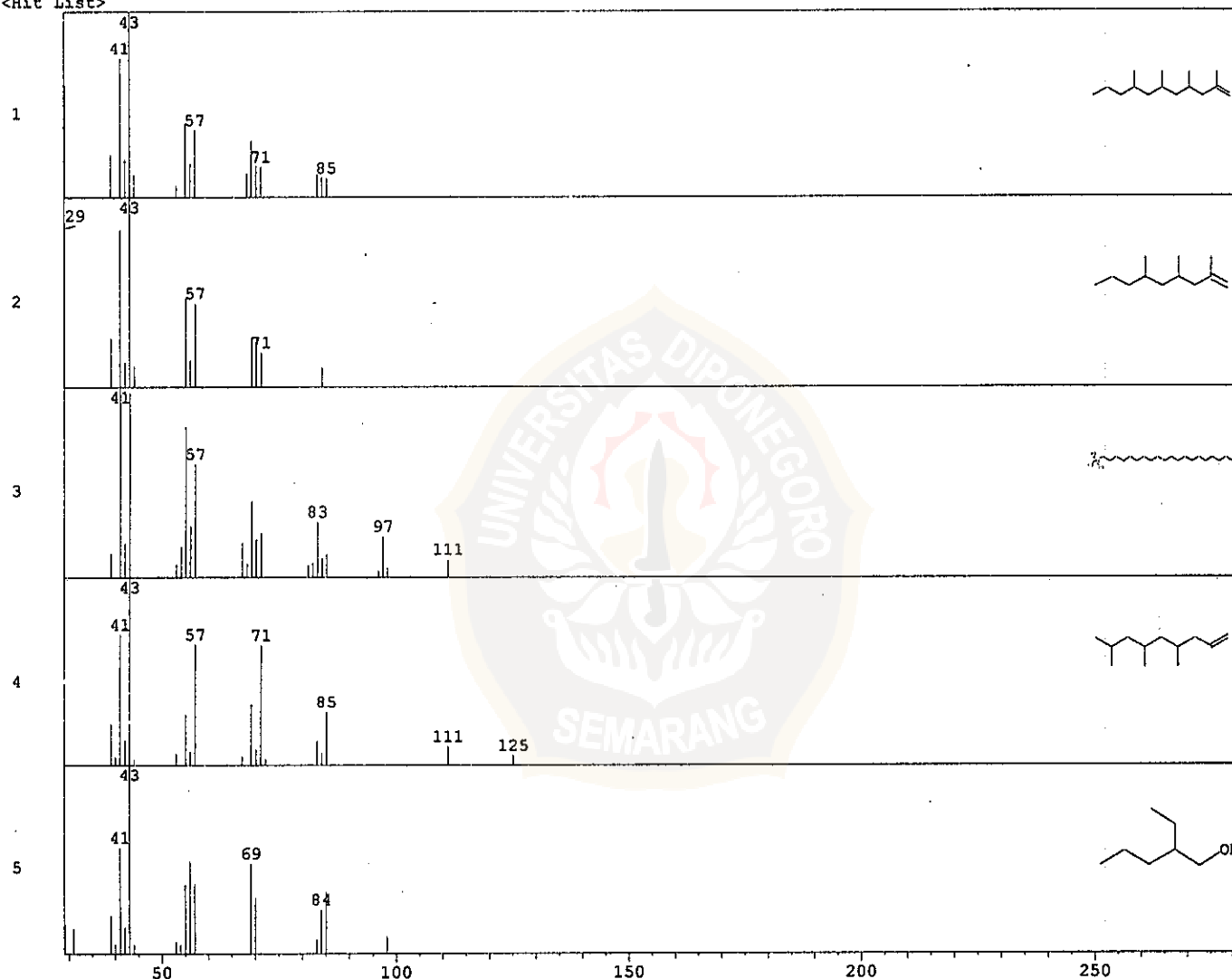
Mass Peak # : 19 Ret. Time : 11.983

Scan # : 1199 B.G. Scan # : 1196

Base Peak : 43.00 (5382202)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	92	210	C ₁₅ H ₃₀ 2,4,6,8-Tetramethyl-1-undecene	59920-26-2	25485	1
2	90	168	C ₁₂ H ₂₄ 2,4,6-Trimethyl-1-nonene	55771-40-9	14709	1
3	89	414	C ₂₀ H ₄₁ Cl ₃ Si Silane, trichloroelcosyl- \$\$ Eicosyltrichlorosilane	18733-57-8	54853	1
4	88	168	C ₁₂ H ₂₄ 1-Nonene, 4,6,8-trimethyl-	54410-98-9	14791	1
5	87	116	C ₇ H ₁₆ O 1-Pentanol, 2-ethyl- \$\$ 2-Ethyl-1-pentanol	27522-11-8	3351	1

Library Name
(1) NIST62.LIB

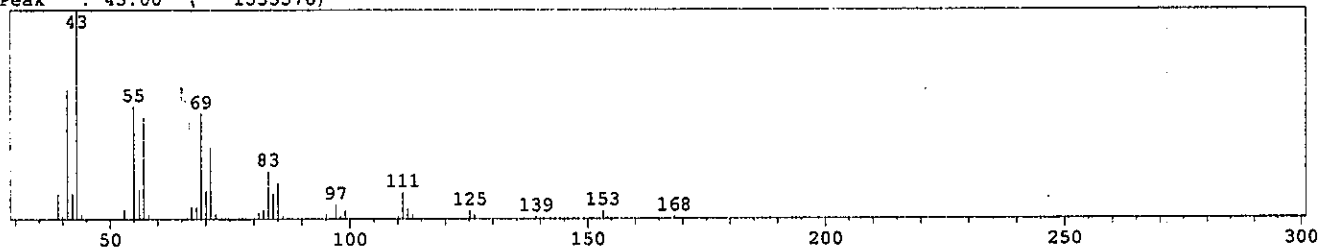
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Data : LUKMAN.D02

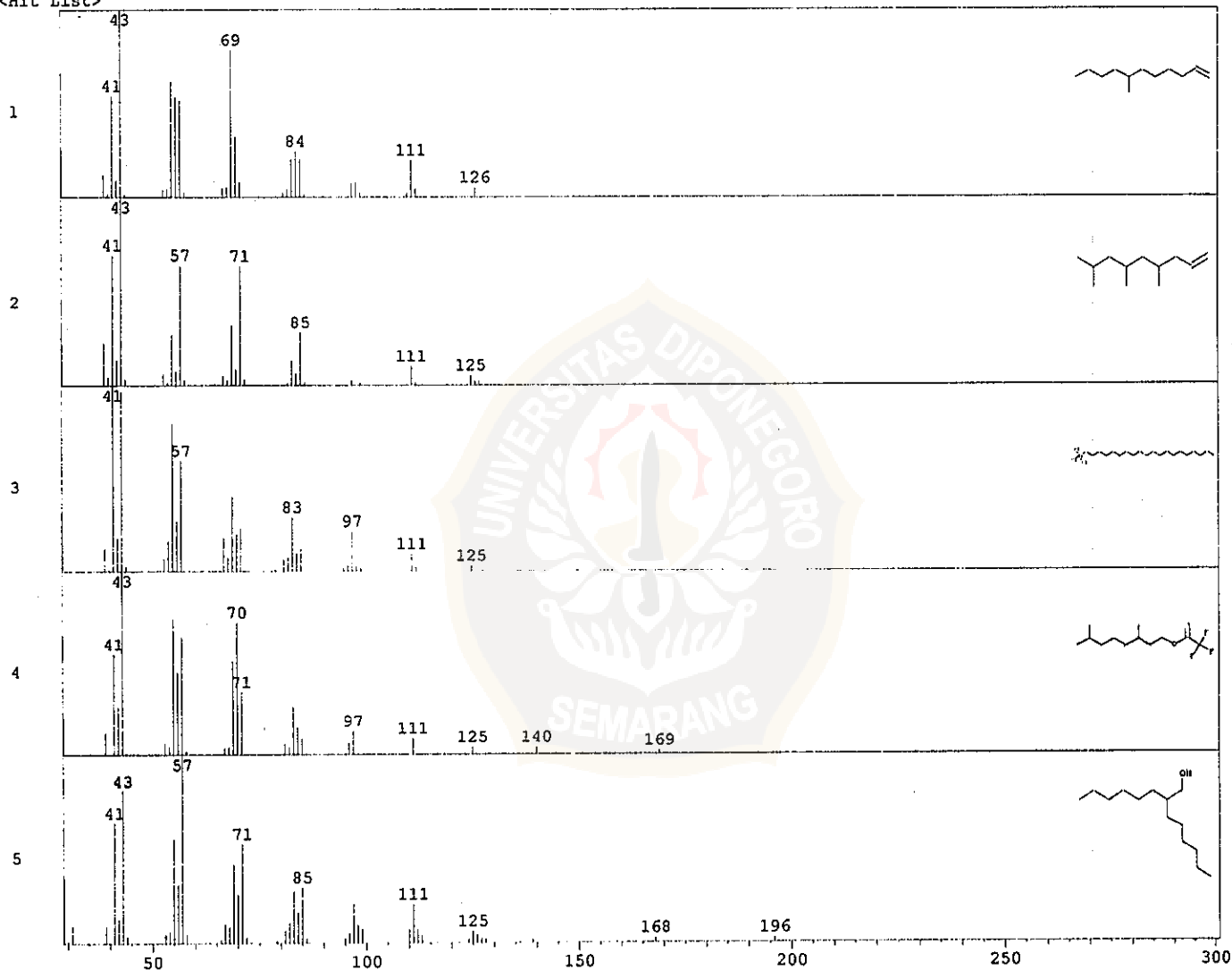
Mass Peak # : 39 Ret. Time : 17.425

Scan # : 1852 B.G. Scan # : 1918

Base Peak : 43.00 (1533376)



<Hit List>



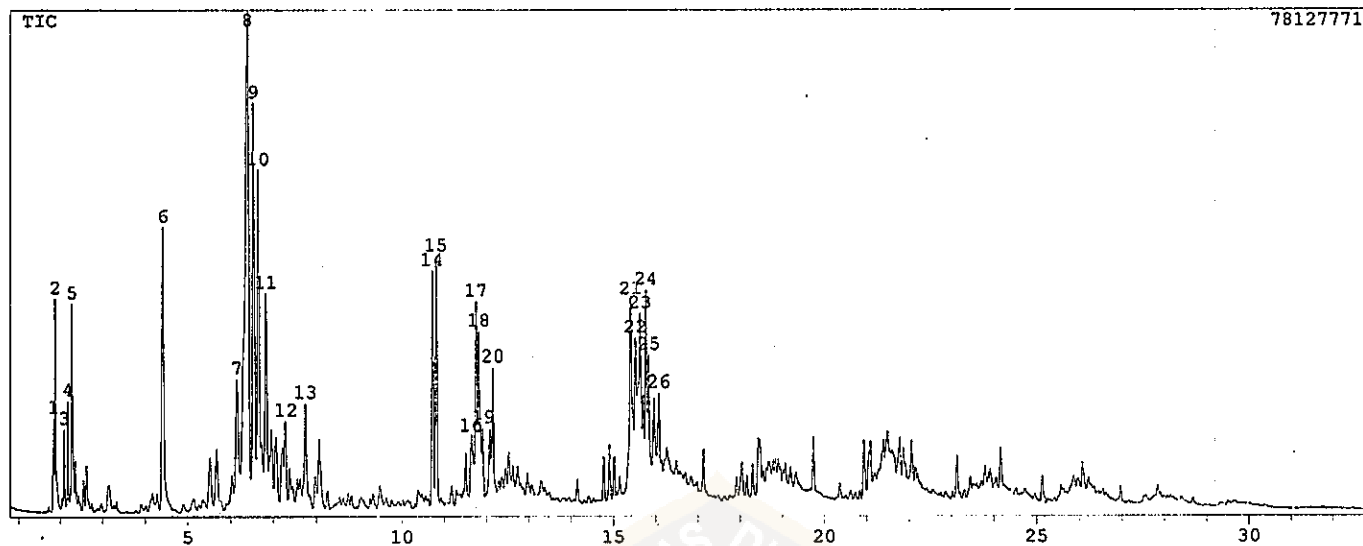
No	SI	Mol.Wgt.	Mol.Form./Compound Name	CAS No.	Entry	LIB#
1	91	168	C ₁₂ H ₂₄ 1-Undecene, 7-methyl-	74630-42-5	14715	1
2	90	168	C ₁₂ H ₂₄ 1-Nonene, 4,6,8-trimethyl-	54410-98-9	14791	1
3	89	414	C ₂₀ H ₄₁ Cl ₃ Si Silane, trichloroeicosyl- \$\$ Eicosyltrichlorosilane	18733-57-8	54853	1
4	88	254	C ₁₂ H ₂₁ F ₃ O ₂ Trifluoroacetyl-3,7-dimethyloctanol	- -0	34655	1
5	88	214	C ₁₄ H ₃₀ O 2-Hexyl-1-octanol	- -0	26413	1

Library Name

(1) NIST62.LIB

Lampiran IX. Kromatogram produk pirolisis katalitik

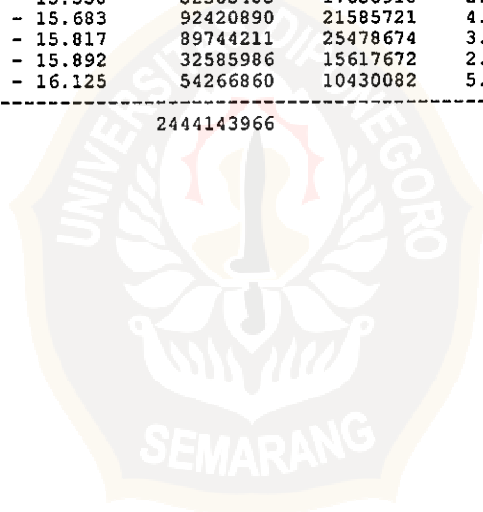
** CLASS-5000 *** Report No. = 1 Data : LUKMAN.D02 03/03/15 11:56:37
Sample : POLYETHYLEN PYROLISIS, LUKMAN APRIANTO
Operator : POY
Method File Name : LUKMAN1.MET



Data : LUKMAN.D02 03/03/15 11:56:37
 Sample : POLYETHYLEN PYROLISIS, LUKMAN APRIANTO
 Operator : POY
 Method File Name : LUKMAN1.MET

**** Peak Report ****

PKNO	R.Time	I.Time	F.Time	Area	Height	A/H(sec)	MK	%Total	Name
1	1.836	1.800	1.858	23849230	14067600	1.695		0.98	
2	1.881	1.858	1.933	61724883	31867605	1.937	V	2.53	
3	2.093	1.933	2.142	26430262	11622987	2.274	V	1.08	
4	2.178	2.142	2.225	25068554	15448343	1.623		1.03	
5	2.280	2.225	2.342	59746895	29018176	2.059		2.44	
6	4.428	4.358	4.508	137268769	41606307	3.299		5.62	
7	6.160	6.100	6.233	66699960	16783569	3.974		2.73	
8	6.428	6.233	6.492	452018867	75384020	5.996	V	18.49	
9	6.557	6.492	6.608	195351877	60181185	3.246	V	7.99	
10	6.671	6.608	6.717	160806675	49597457	3.242	V	6.58	
11	6.841	6.717	6.892	127887479	30507478	4.192	V	5.23	
12	7.300	6.892	7.342	141452252	9972420	14.184	V	5.79	
13	7.754	7.717	7.825	30769234	12288576	2.504		1.26	
14	10.735	10.675	10.783	95433279	35217890	2.710		3.90	
15	10.823	10.783	10.883	92769092	37347734	2.484	V	3.80	
16	11.633	10.883	11.725	83928711	7463584	11.245	V	3.43	
17	11.759	11.725	11.800	89195884	29508059	3.023	V	3.65	
18	11.825	11.800	11.892	78029583	24843382	3.141	V	3.19	
19	11.925	11.892	11.967	23932954	9419449	2.541	V	0.98	
20	12.154	11.967	12.217	77513256	18114232	4.279		3.17	
21	15.412	15.358	15.483	72942840	23353981	3.123		2.98	
22	15.524	15.483	15.558	52305485	17650918	2.963	V	2.14	
23	15.637	15.558	15.683	92420890	21585721	4.282	V	3.78	
24	15.777	15.683	15.817	89744211	25478674	3.522	V	3.67	
25	15.842	15.817	15.892	32585986	15617672	2.086	V	1.33	
26	16.079	15.892	16.125	54266860	10430082	5.203	V	2.22	
Total				2444143966				100.00	



Lampiran X. Spektra Massa produk pirolisis katalitik

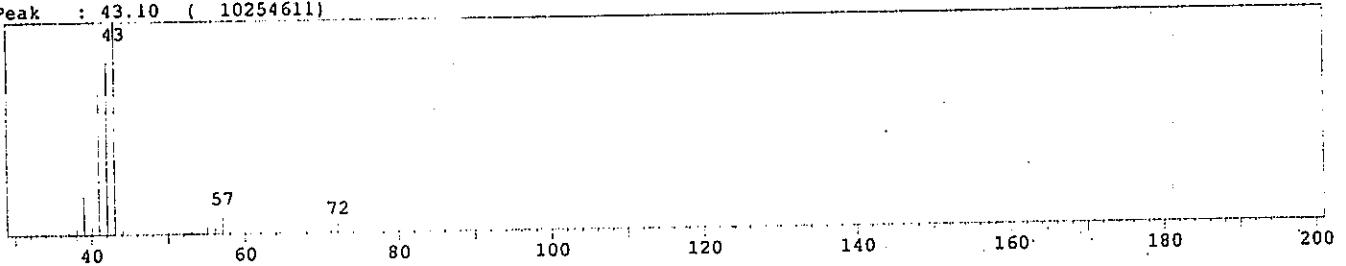
Unknown Spectrum>

Data : LUKMAN.D02

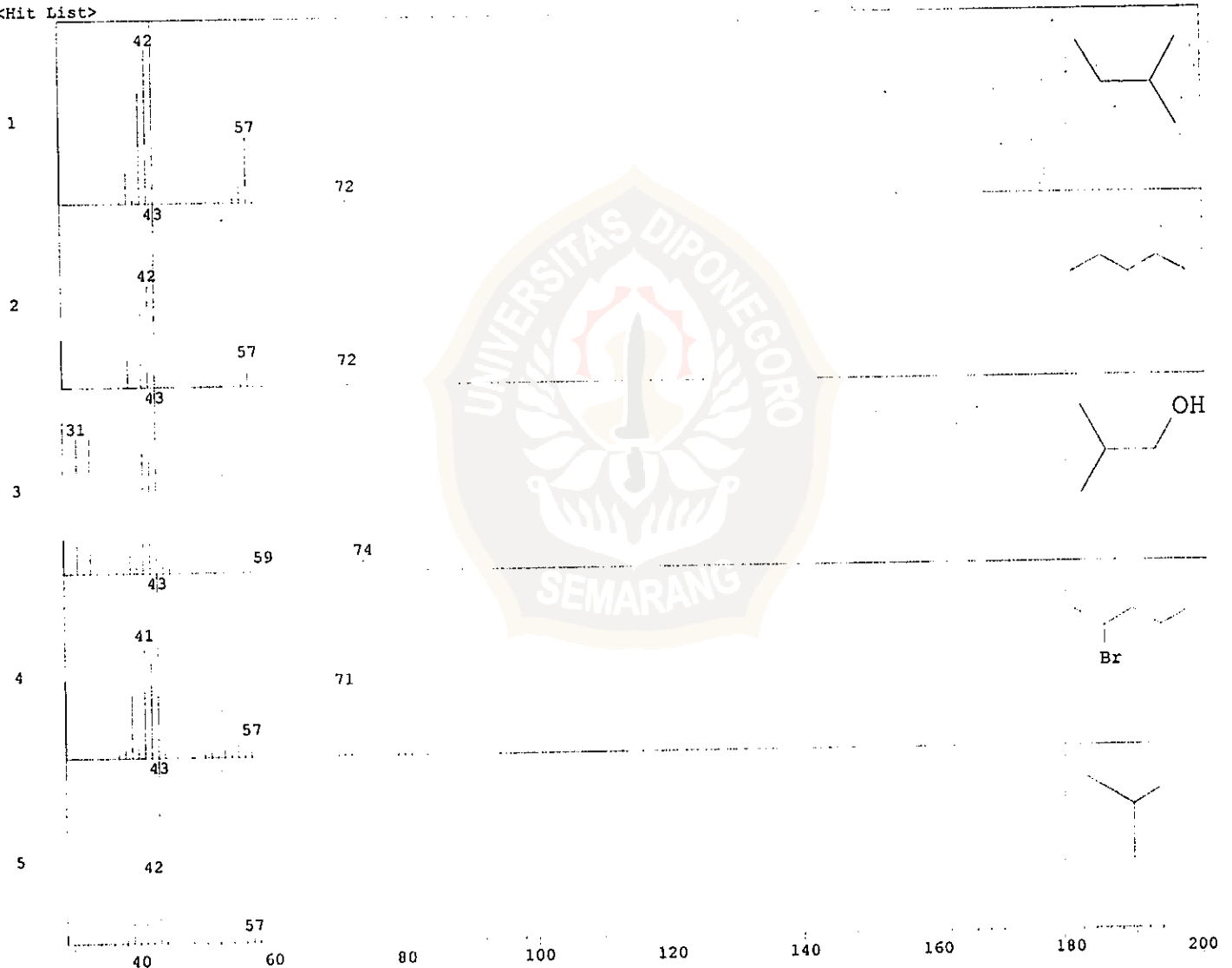
Mass Peak # : 17 Ret. Time : 1.883

Scan # : 167 B.G. Scan # : 238

Base Peak : 43.10 (10254611)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	95	72	C ₅ H ₁₂ Butane, 2-methyl- \$\$ iso-Pentane \$\$ 1,1,2-Trimethylethane \$\$ 2-Methylbutane \$\$ Iso-C5	78-78-4	281	1
2	94	72	C ₅ H ₁₂ Pentane \$\$ n-Pentane \$\$ Skellysolve A \$\$ n-C5H12 \$\$ Pentan \$\$ Pentanen \$\$ Pentani \$\$	109-66-0	280	1
3	94	74	C ₄ H ₁₀ O 1-Propanol, 2-methyl- \$\$ Isobutyl alcohol \$\$ Isobutanol \$\$ Isopropylcarbinol \$\$ 2-Met	78-83-1	340	1
4	89	150	C ₅ H ₁₁ Br Pentane, 2-bromo- \$\$ 2-Bromopentane \$\$ 2-Pentyl bromide \$\$ UN 2343	107-81-3	9581	1
5	89	58	C ₄ H ₁₀ Isobutane \$\$ Propane, 2-methyl- \$\$ Trimethylmethane \$\$ 1,1-Dimethylethane \$\$ 2-Methyl	75-28-5	98	1

Library Name

(1) NIST62.LIB

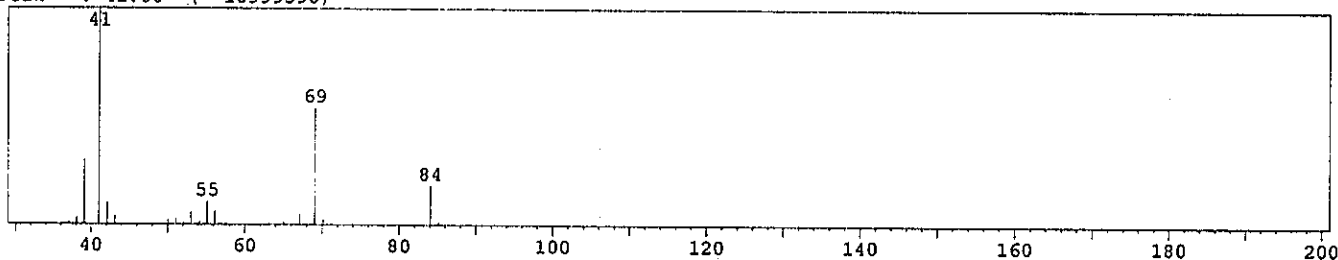
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Data : LUKMAN.D02

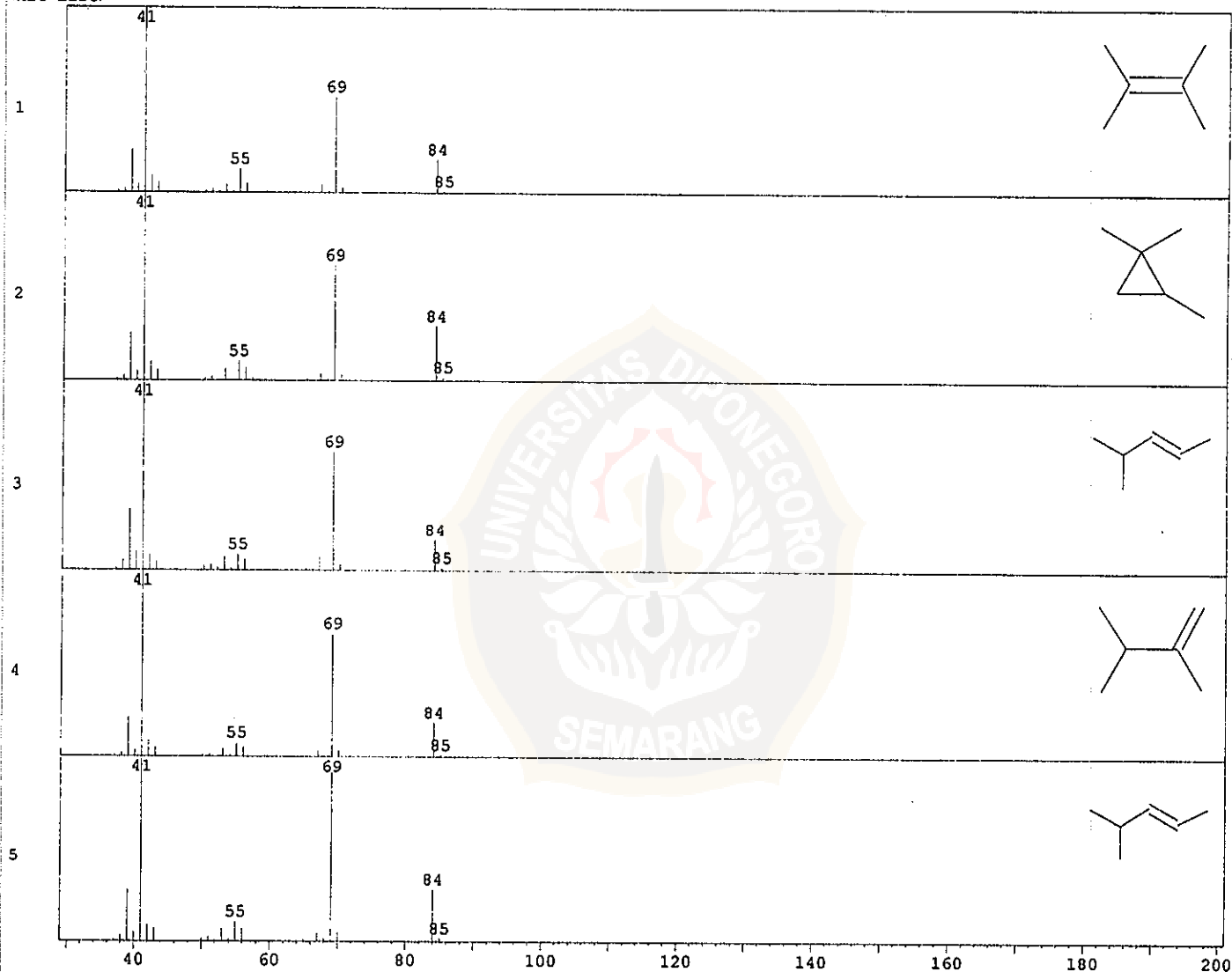
Mass Peak # : 21 Ret. Time : 2.283

Scan # : 215 B.G. Scan # : 233

Base Peak : 41.00 (10999390)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	97	84	C ₆ H ₁₂ 2-Butene, 2,3-dimethyl- \$\$ Tetramethylethylene \$\$	563-79-1	591	1
2	96	84	C ₆ H ₁₂ Cyclopropane, 1,1,2-trimethyl- \$\$ 1,1,2-Trimethylcyclopropane	4127-45-1	605	1
3	96	84	C ₆ H ₁₂ 2-Pentene, 4-methyl- \$\$ 1,1-Dimethyl-2-butene \$\$ 2-Methyl-3-pentene \$\$ 4-Methyl-2-pen	4461-48-7	600	1
4	95	84	C ₆ H ₁₂ 1-Butene, 2,3-dimethyl- \$\$ 2,3-Dimethyl-1-butene \$\$ Tetramethylethylene \$\$ (CH ₃) ₂ CHC(563-78-0	590	1
5	94	84	C ₆ H ₁₂ 2-Pentene, 4-methyl-, (E)- \$\$ (E)-4-Methyl-2-pentene \$\$ trans-4-Methyl-2-Pentene \$\$ 4	674-76-0	603	1

Library Name

(1) NIST62.LIB

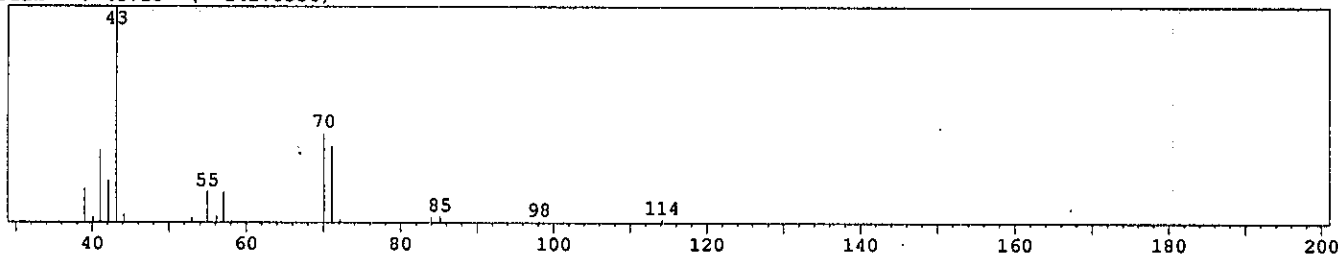
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Data : LUKMAN.D02

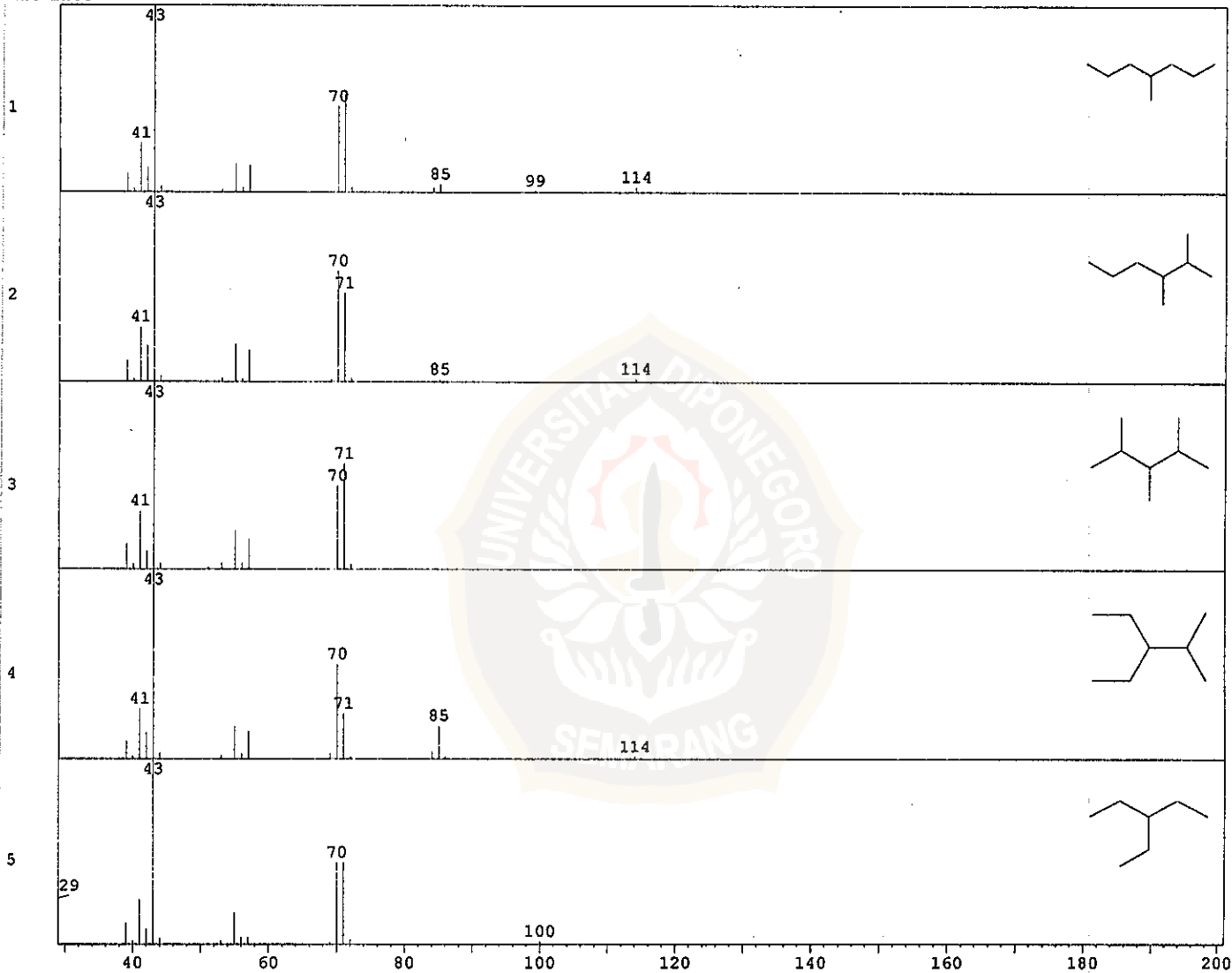
Mass Peak # : 18 Ret. Time : 4.433

Scan # : 473 B.G. Scan # : 577

Base Peak : 43.15 (14278556)



Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	96	114	C ₈ H ₁₈ Heptane, 4-methyl- \$\$ 4-Methylheptane \$\$ (n-C ₃ H ₇) ₂ CHCH ₃	589-53-7	3096	1
2	95	114	C ₈ H ₁₈ Hexane, 2,3-dimethyl- \$\$ 2,3-Dimethylhexane	584-94-1	3097	1
3	94	114	C ₈ H ₁₈ Pentane, 2,3,4-trimethyl- \$\$ 2,3,4-Trimethylpentane \$\$ (CH ₃) ₂ CHCH(CH ₃)CH(CH ₃) ₂	565-75-3	3100	1
4	94	114	C ₈ H ₁₈ Pentane, 3-ethyl-2-methyl- \$\$ 2-Methyl-3-ethylpentane \$\$ 3-Ethyl-2-methylpentane	609-26-7	3098	1
5	94	100	C ₇ H ₁₆ Pentane, 3-ethyl- \$\$ 3-Ethylpentane	617-78-7	1595	1

Library Name

(1) NIST62.LIB

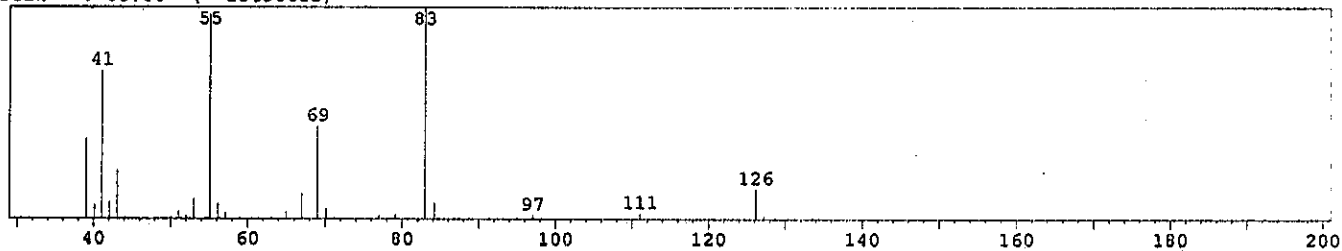
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Data : LUKMAN.D02

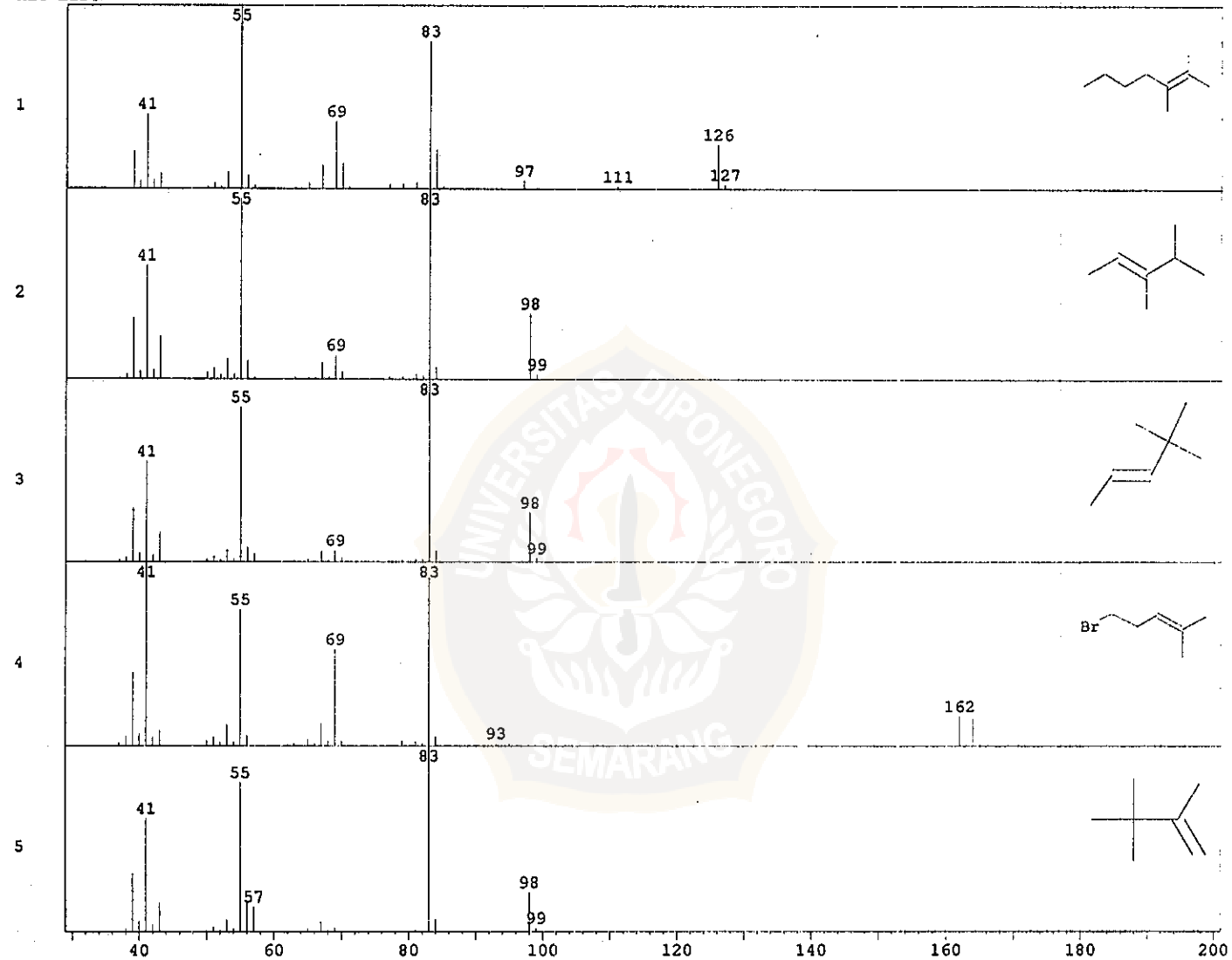
Mass Peak # : 28 Ret. Time : 6.433

Scan # : 713 B.G. Scan # : 720

Base Peak : 83.00 (15690635)



<Hit List>



No	SI	Mol.Wgt.	Mol.Form./Compound Name	CAS No.	Entry	LIB#
1	91	126	C ₉ H ₁₈ n-C ₄ H ₉ C(CH ₃)=C(CH ₃) ₂ \$\$ 2-Heptene, 2,3-dimethyl- \$\$ 2,3-Dimethyl-2-heptene	3074-64-4	4638	1
2	89	98	C ₇ H ₁₄ 2-Pentene, 3,4-dimethyl-, (E)- \$\$ (E)-3,4-Dimethyl-2-pentene \$\$ trans-3,4-Dimethyl-2-	4914-92-5	1362	1
3	87	98	C ₇ H ₁₄ 2-Pentene, 4,4-dimethyl-, (E)- \$\$ (E)-4,4-Dimethyl-2-pentene \$\$ trans-4,4-Dimethyl-2-	690-08-4	1344	1
4	87	162	C ₆ H ₁₁ Br 5-Bromo-2-methyl-2-pentene	2270-59-9	12783	1
5	87	98	C ₇ H ₁₄ 1-Butene, 2,3,3-trimethyl- \$\$ Triptene \$\$ 2,3,3-Trimethyl-1-butene \$\$ (CH ₃) ₃ CC(CH ₃)=C	594-56-9	1336	1

Library Name
(1) NIST62.LIB

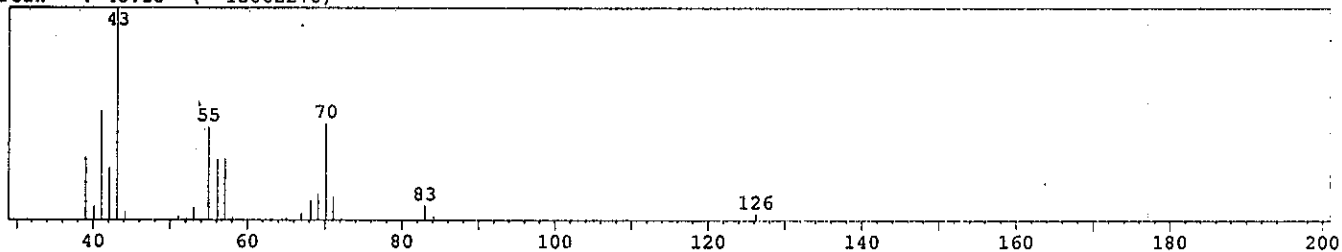
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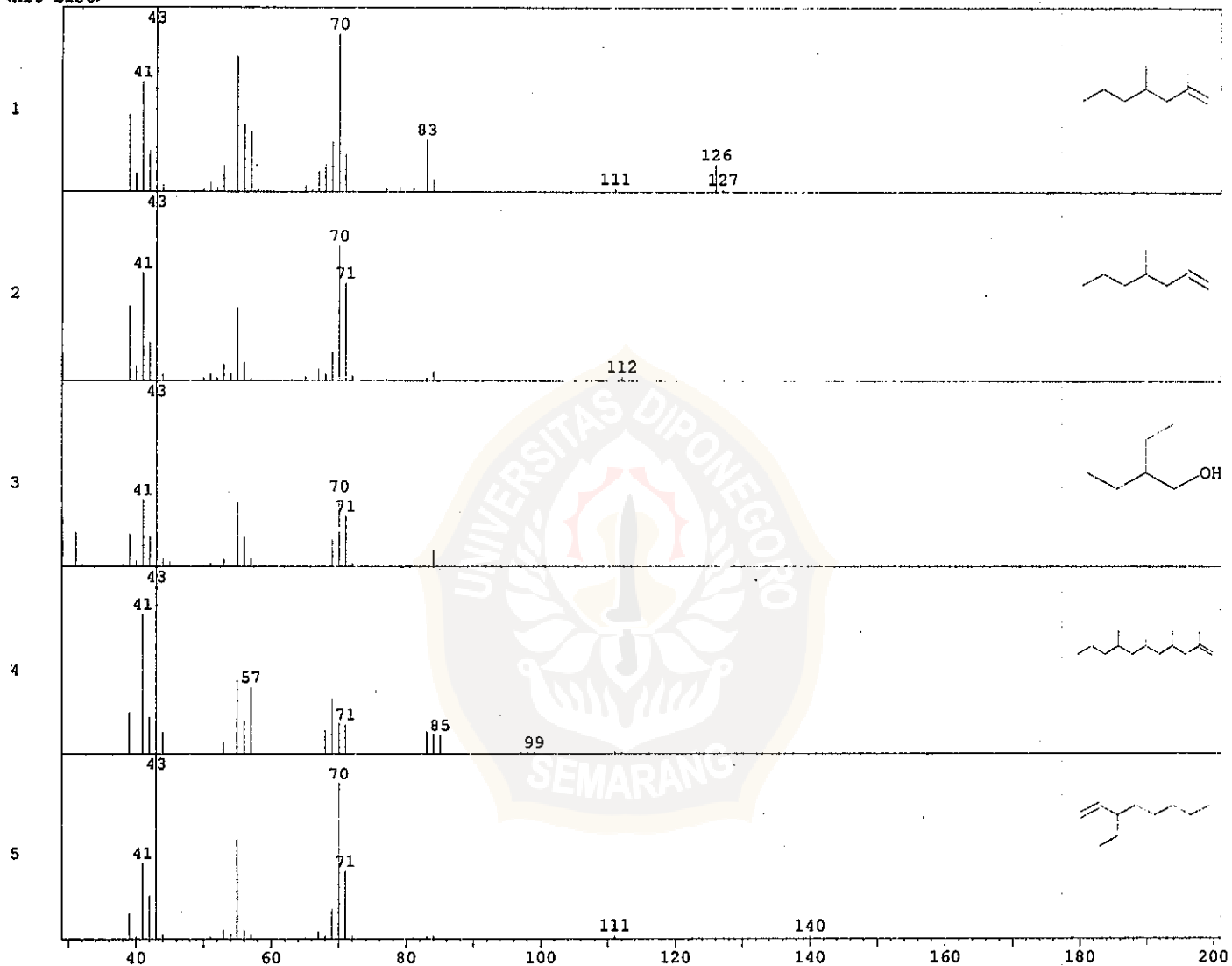
Mass Peak # : 24 Ret. Time : 6.558

Scan # : 728 B.G. Scan # : 720

Base Peak : 43.15 (13802270)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	89	126	C ₉ H ₁₈ 2,4-Dimethyl-1-heptene	19549-87-2	4662	1
2	89	112	C ₈ H ₁₆ 1-Heptene, 4-methyl- \$\$ 4-Methyl-1-heptene	13151-05-8	2675	1
3	89	102	C ₆ H ₁₄ O 1-Butanol, 2-ethyl- \$\$ Pseudoheptyl alcohol \$\$ 2-Ethyl-1-butanol \$\$ 2-Ethylbutyl alcoh	97-95-0	1780	1
4	89	210	C ₁₅ H ₃₀ 2,4,6,8-Tetramethyl-1-undecene	59920-26-2	25485	1
5	88	140	C ₁₀ H ₂₀ 1-Octene, 3-ethyl-	74630-08-3	7585	1

Library Name
(1) NIST62.LIB

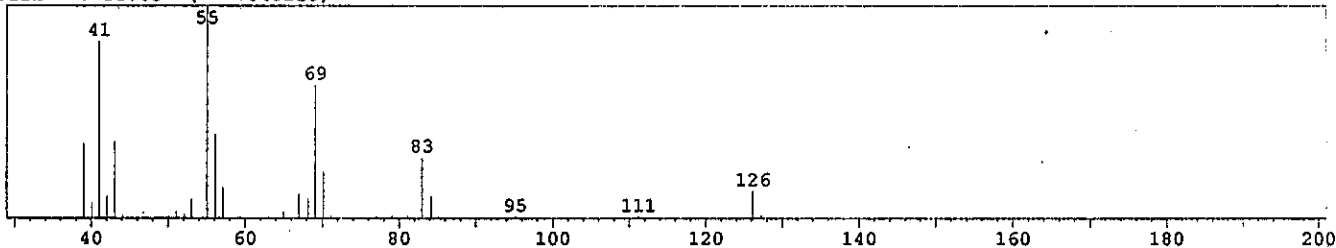
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Data : LUKMAN.D02

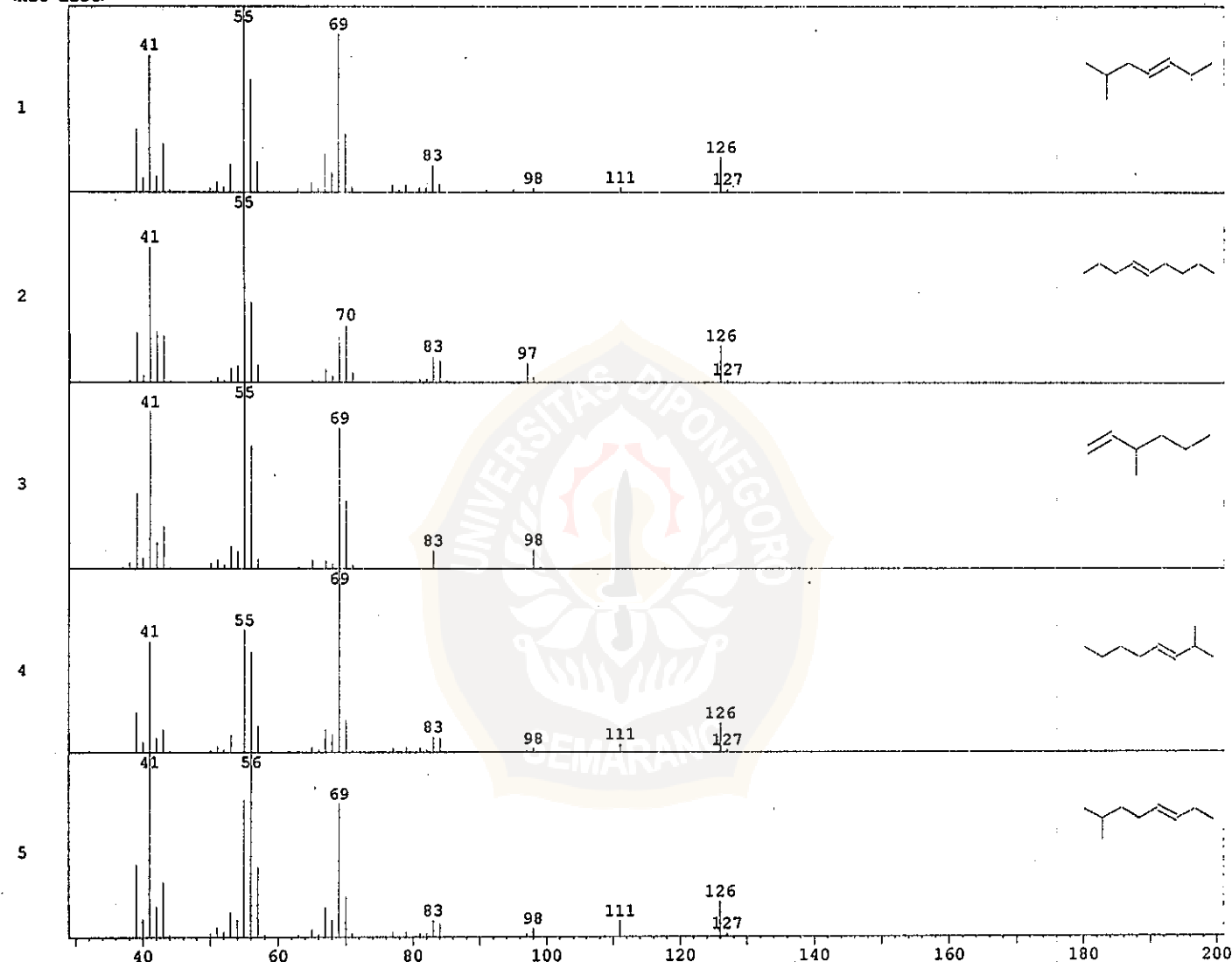
Mass Peak # : 31 Ret. Time : 6.675

Scan # : 742 B.G. Scan # : 736

Base Peak : 55.05 (7848228)



<Hit List>



No	SI	Mol. Wgt.	Mol. Form./Compound Name	CAS No.	Entry	LIB#
1	93	126	C ₉ H ₁₈ 3-Heptene, 2,6-dimethyl- \$\$ 2,6-Dimethyl-3-heptene	2738-18-3	4620	1
2	90	126	C ₉ H ₁₈ 4-Nonene \$\$ 4-Nonene, c&t	2198-23-4	4676	1
3	90	98	C ₇ H ₁₄ 1-Hexene, 3-methyl- \$\$ 3-Methyl-1-hexene	3404-61-3	1325	1
4	90	126	C ₉ H ₁₈ trans-2-Methyl-3-octene	52937-36-7	4654	1
5	89	126	C ₉ H ₁₈ trans-7-Methyl-3-octene	- -0	4617	1

Library Name

(1) NIST62.LIB

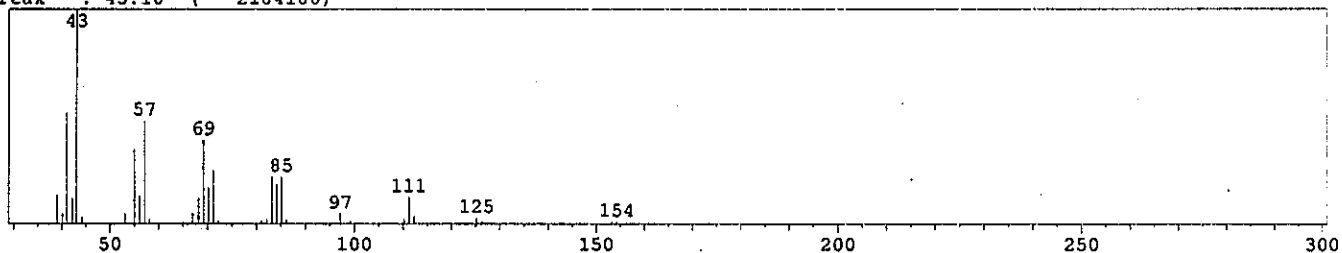
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Data : LUKMAN.D02

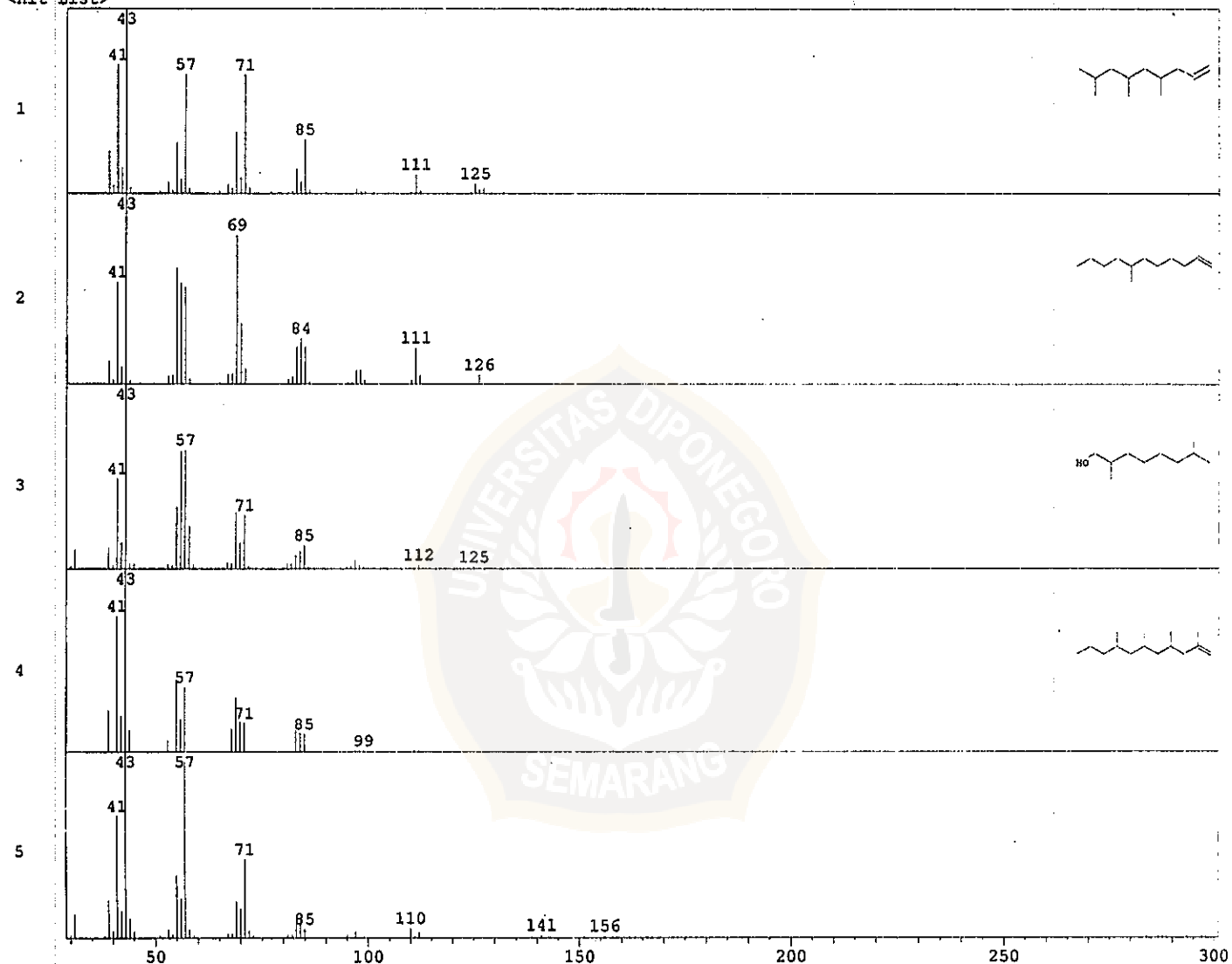
Mass Peak # : 36 Ret. Time : 16.083

Scan # : 1871 B.G. Scan # : 1850

Base Peak : 43.10 (2184180)



<Hit List>



No	SI	Mol.Wgt.	Mol.Form./Compound Name	CAS No.	Entry	LIB#
1	91	168	C ₁₂ H ₂₄ 1-Nonene, 4,6,8-trimethyl-	54410-98-9	14791	1
2	90	168	C ₁₂ H ₂₄ 1-Undecene, 7-methyl-	74630-42-5	14715	1
3	89	158	C ₁₀ H ₂₂ O 1-Octanol, 2,7-dimethyl-	15250-22-3	12054	1
4	89	210	C ₁₅ H ₃₀ 2,4,6,8-Tetramethyl-1-undecene	59920-26-2	25485	1
5	89	156	C ₁₀ H ₂₀ O Isooctane, (ethenyloxy)- \$\$ Isooctylvinyl ether	37769-62-3	11569	1

Library Name

(1) NIST62.LIB