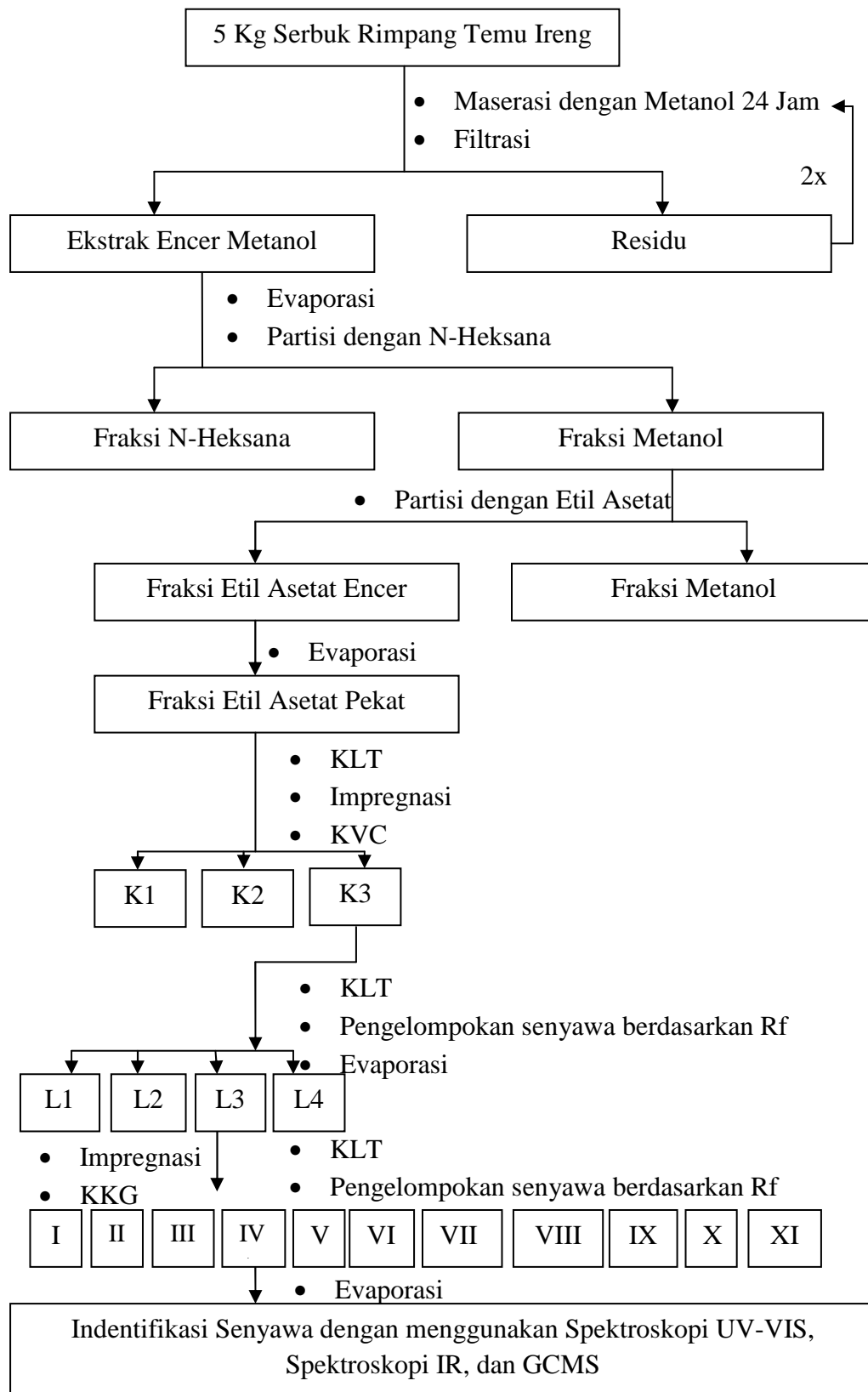


LAMPIRAN

Lampiran I. Skema Kerja Penelitian



Lampiran II. Perhitungan Rf Hasil Identifikasi Kemurnian dengan KLT

$$Rf = \frac{\text{Jarak yang ditempuh komponen sampel}}{\text{jarak yang ditempuh eluen}}$$

- a. Jarak yang ditempuh komponen sampel adalah 1,2 cm dan jarak yang ditempuh eluen adalah 3,5 cm.

N-heksana : etil asetat = 8:2 dengan $Rf = \frac{1,2}{3,5} = 0,342$

- b. Jarak yang ditempuh komponen sampel adalah 0,4 cm dan jarak yang ditempuh eluen adalah 3,5 cm.

N-heksana : kloroform = 6:4 dengan $Rf = \frac{0,4}{3,5} = 0,114$

- c. Jarak yang ditempuh komponen sampel adalah 2,5 cm dan jarak yang ditempuh eluen adalah 3,5 cm.

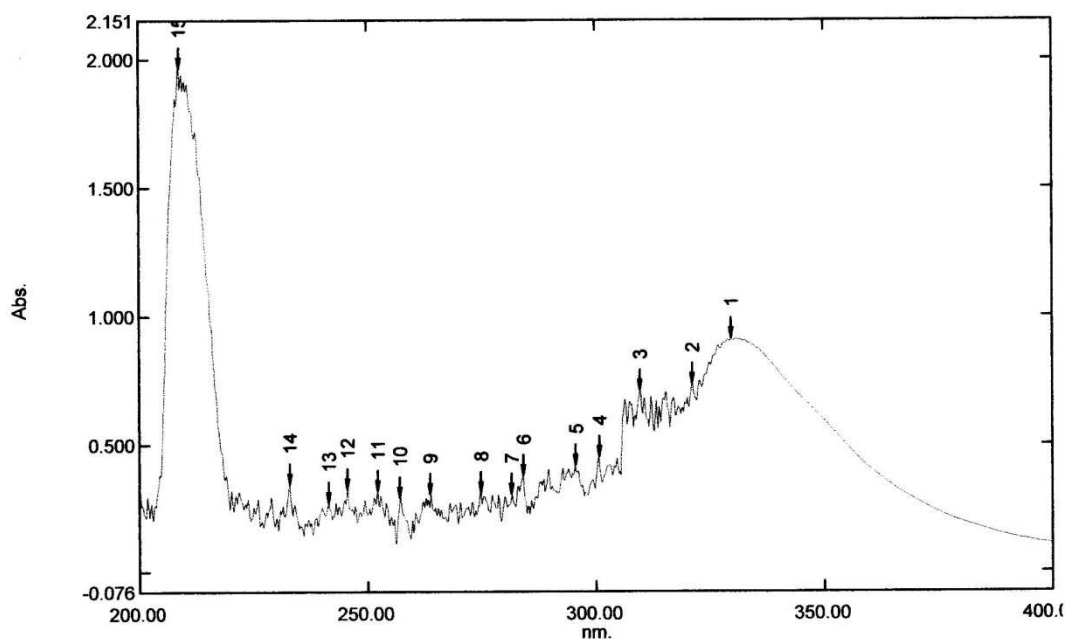
Kloroform : etil asetat = 8:2 dengan $Rf = \frac{2,5}{3,5} = 0,714$

Lampiran III. Spektra UV-Vis Fraksi IV.

Spectrum Peak Pick Report

04/05/2012 11

Data Set: Sampel temu ireng polar - RawData



Measurement Properties
Wavelength Range (nm.): 200.00 to 400.00
Scan Speed: Fast
Sampling Interval: 0.2
Auto Sampling Interval: Enabled
Scan Mode: Single

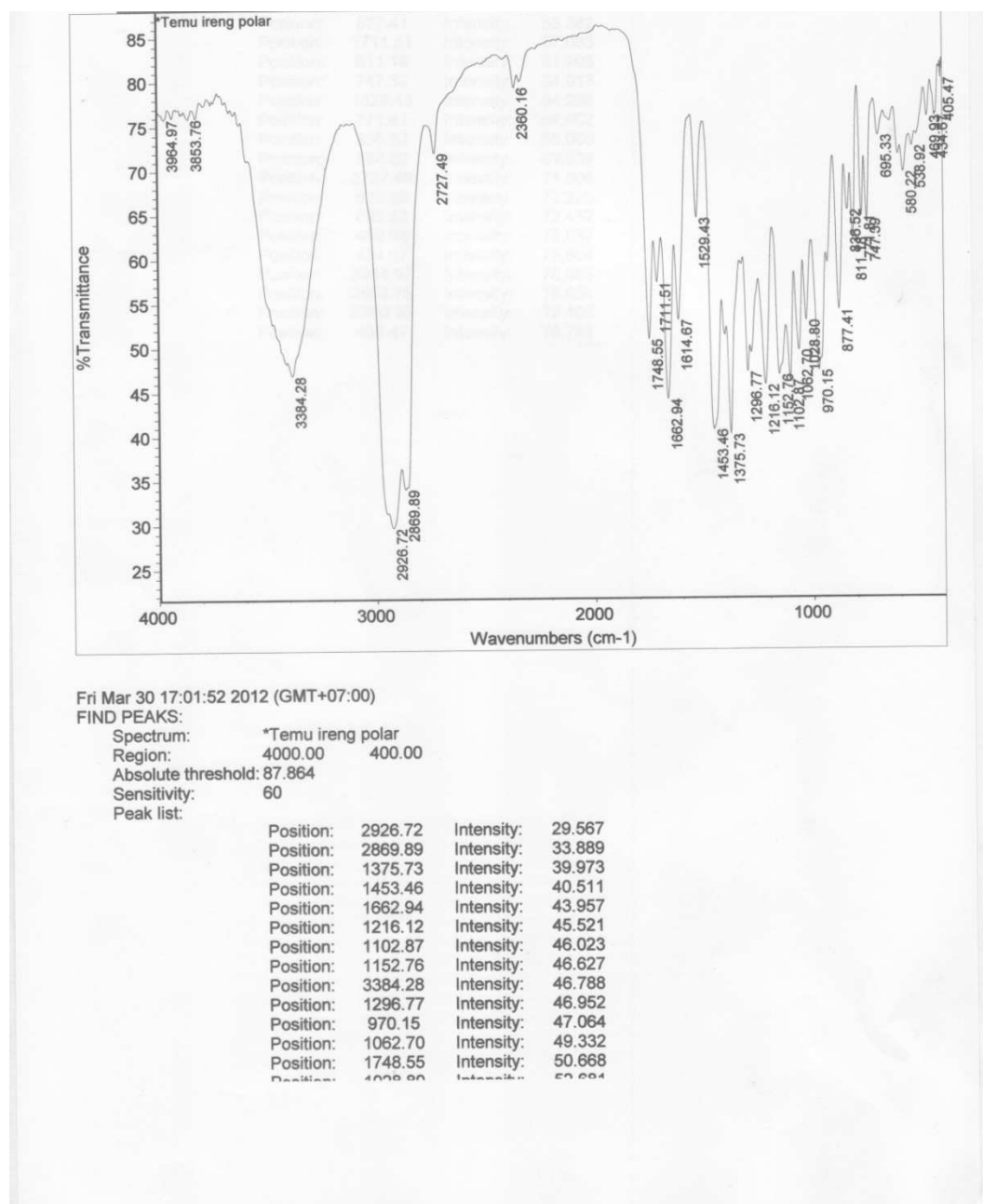
Instrument Properties
Instrument Type: UV-2400PC Series
Measuring Mode: Absorbance
Slit Width: 1.0 nm
Light Source Change Wavelength: 360.0 nm
S/R Exchange: Normal

Attachment Properties
Attachment: None

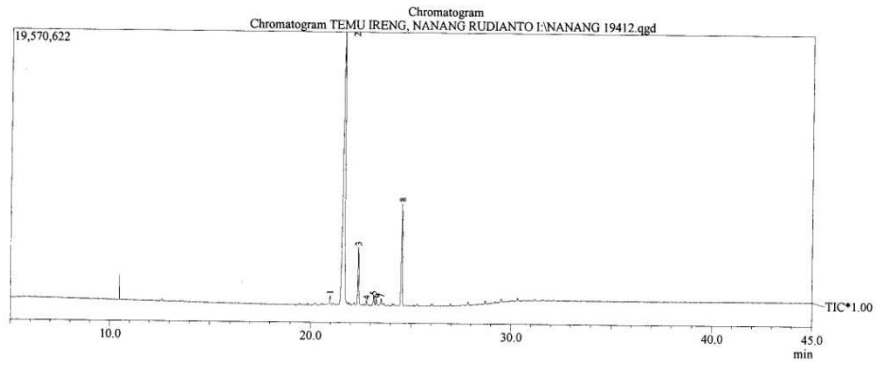
Sample Preparation Properties
Weight:
Volume:
Dilution:
Path Length:
Additional Information:

No.	P/V	Wavelength	Abs.	Description
1	●	329.80	0.910	
2	●	321.20	0.736	
3	●	309.60	0.709	
4	●	300.60	0.451	
5	●	295.40	0.418	
6	●	284.00	0.378	
7	●	281.60	0.307	
8	●	274.80	0.316	
9	●	263.80	0.304	
10	●	257.20	0.296	
11	●	252.20	0.317	
12	●	245.60	0.327	
13	●	241.40	0.275	
14	●	233.00	0.345	
15	●	208.80	1.966	

Lampiran IV. Spektra IR Fraksi IV.



Lampiran V. Kromatogram GC Fraksi IV.



Peak#	R.Time	I.Time	F.Time	Area	Area%	Height	Name
1	20.977	20.900	21.042	2052271	1.13	634180	
2	21.655	21.425	21.842	132906285	73.10	18322119	
3	22.377	22.267	22.500	13740122	7.56	3949522	
4	22.785	22.733	22.858	1167506	0.64	358937	
5	23.146	23.083	23.208	2144472	1.18	637917	
6	23.268	23.217	23.325	1292678	0.71	445881	
7	23.515	23.442	23.583	1396735	0.77	436521	
8	24.547	24.417	24.625	27113904	14.91	6962348	
				181813973	100.00	31747525	

Lampiran VI. Spektra MS Fraksi IV.

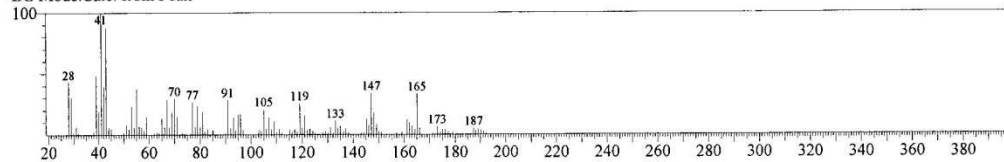
Library

<< Target >>

Line#:1 R.Time:20.975(Scan#:2374) MassPeaks:112

RawMode:Averaged 20.967-20.983(2373-2375) BasePeak:41.00(50391)

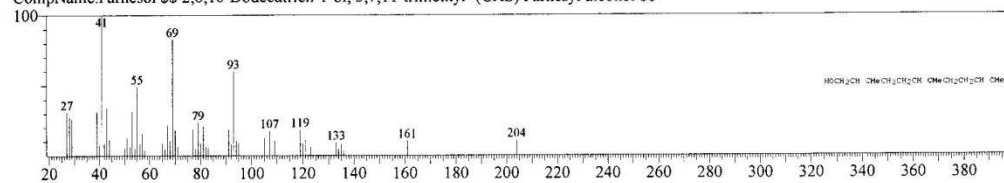
BG Mode:Calc. from Peak



Hit#:1 Entry:86454 Library:WILEY229.LIB

SI:77 Formula:C15 H26 O CAS:4602-84-0 MolWeight:222 RetIndex:0

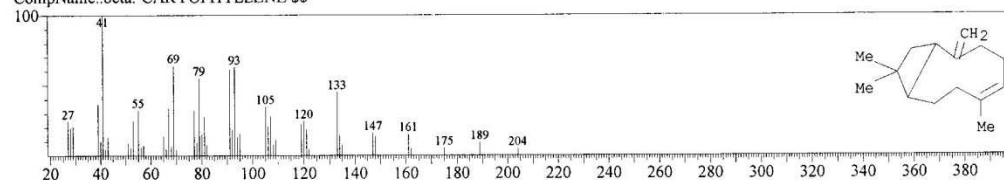
CompName:Farnesol \$\$ 2,6,10-Dodecatrien-1-ol, 3,7,11-trimethyl- (CAS) Farnesyl alcohol \$\$



Hit#:2 Entry:71237 Library:WILEY229.LIB

SI:75 Formula:C15 H24 CAS:87-44-5 MolWeight:204 RetIndex:0

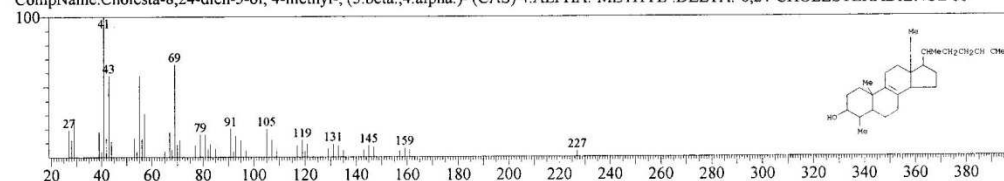
CompName:beta.-CARYOPHYLLENE \$\$



Hit#:3 Entry:193365 Library:WILEY229.LIB

SI:75 Formula:C28 H46 O CAS:7199-92-0 MolWeight:398 RetIndex:0

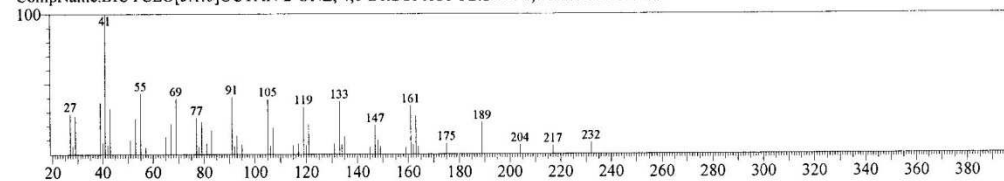
CompName:Cholesta-8,24-dien-3-ol, 4-methyl-, (3.beta.,4.alpha.)- (CAS) 4.ALPHA.-METHYL.-DELTA.-8,24-CHOLESTERADIENOL \$\$



Hit#:4 Entry:94934 Library:WILEY229.LIB

SI:75 Formula:C16 H24 O CAS:0-00-0 MolWeight:232 RetIndex:0

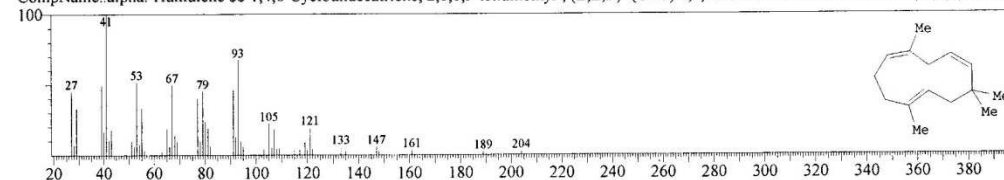
CompName:BICYCLO[5.1.0]OCTAN-2-ONE, 4,6-DIISOPROPYLIDEN-8,8-DIMETHYL- \$\$



Hit#:5 Entry:70795 Library:WILEY229.LIB

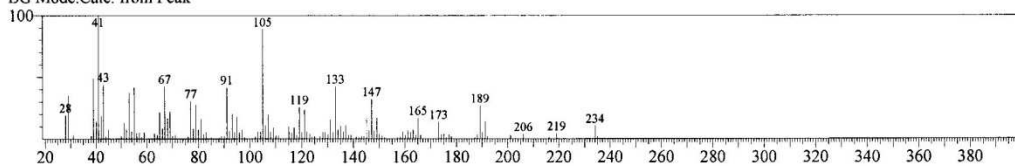
SI:75 Formula:C15 H24 CAS:6753-98-6 MolWeight:204 RetIndex:0

CompName:alpha.-Humulene \$\$ 1,4,8-Cycloundecatriene, 2,6,6,9-tetramethyl-, (E,E,E)- (CAS) 4,7,10-CYCLOUNDECATRIENE, 1,1,4,8-TETR.

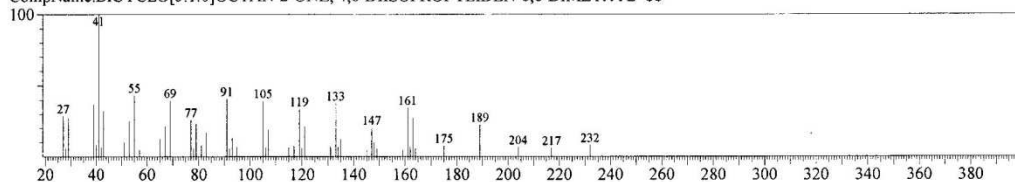


<< Target >>

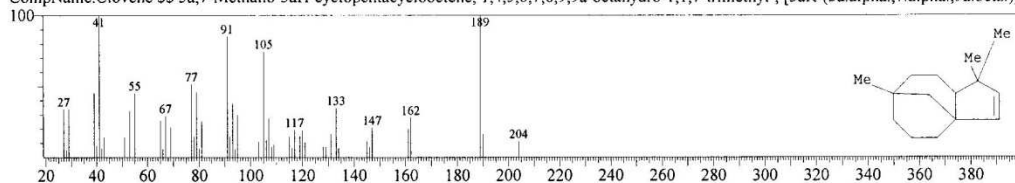
Line#:2 R.Time:21.658(Scan#:2456) MassPeaks:124
 RawMode:Averaged 21.650-21.667(2455-2457) BasePeak:41.00(1278751)
 BG Mode:Calc. from Peak



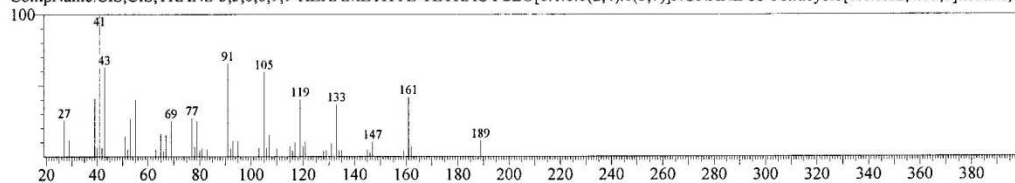
Hit#:1 Entry:94934 Library:WILEY229.LIB
 SI:80 Formula:C16 H24 O CAS:0-00-0 MolWeight:232 RetIndex:0
 CompName:BICYCLO[5.1.0]OCTAN-2-ONE, 4,6-DIISOPROPYLIDEN-8,8-DIMETHYL- \$\$



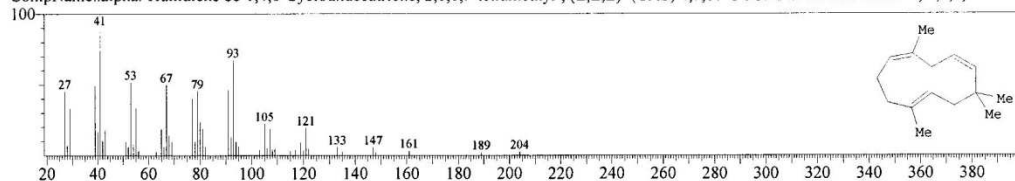
Hit#:2 Entry:70912 Library:WILEY229.LIB
 SI:79 Formula:C15 H24 CAS:469-92-1 MolWeight:204 RetIndex:0
 CompName:Clavene \$\$ 3a,7-Methano-3aH-cyclopentacyclooctene, 1,4,5,6,7,8,9,9a-octahydro-1,1,7-trimethyl-, [3aR-(3a.alpha.,7.alpha.,9a.beta.)]-



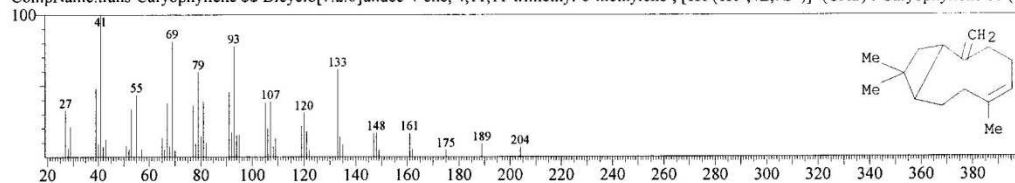
Hit#:3 Entry:71100 Library:WILEY229.LIB
 SI:79 Formula:C15 H24 CAS:56390-01-3 MolWeight:204 RetIndex:0
 CompName:CIS,CIS,TRANS-3,3,6,6,9,9-HEXAMETHYL-TETRACYCLO[6.1.0.0(2,4).0(5,7)]NONANE \$\$ Tetracyclo[6.1.0.02,4.05,7]nonane, 3



Hit#:4 Entry:70795 Library:WILEY229.LIB
 SI:78 Formula:C15 H24 CAS:6753-98-6 MolWeight:204 RetIndex:0
 CompName:alpha-Humulene \$\$ 1,4,8-Cycloundecatriene, 2,6,6,9-tetramethyl-, (E,E,E)- (CAS) 4,7,10-CYCLOUNDECATRIENE, 1,1,4,8-TETR-

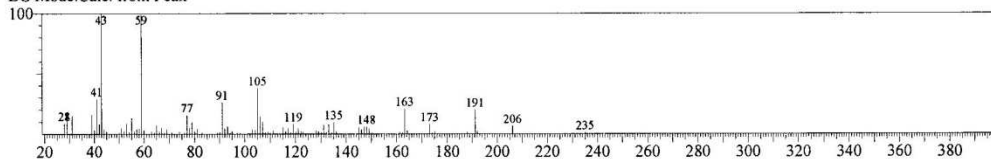


Hit#:5 Entry:70834 Library:WILEY229.LIB
 SI:77 Formula:C15 H24 CAS:87-44-5 MolWeight:204 RetIndex:0
 CompName:trans-Caryophyllene \$\$ Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-, [1R-(1R*,4E,9S*)]- (CAS) l-Caryophyllene \$\$ (-)

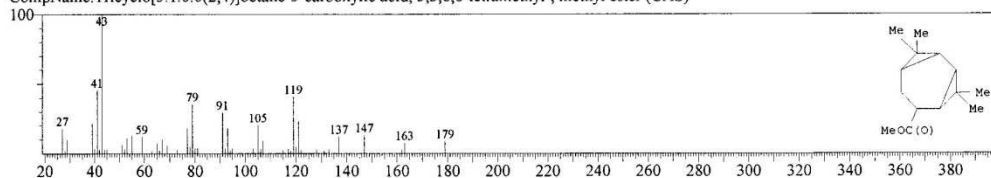


<< Target >>

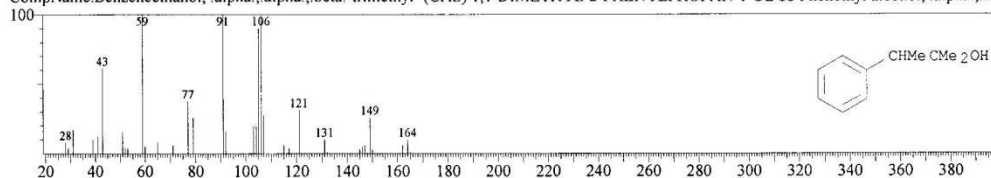
Line#:3 R.Time:22.375(Scan#:2542) MassPeaks:90
 RawMode:Averaged 22.367-22.383(2541-2543) BasePeak:42.95(522230)
 BG Mode:Calc. from Peak



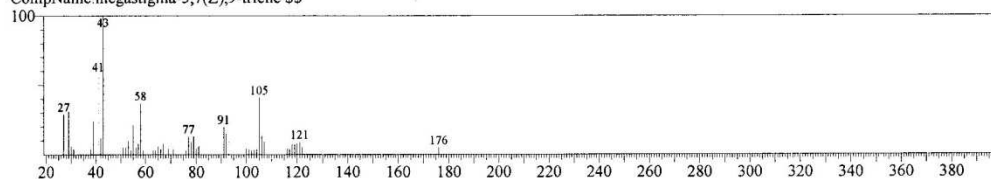
Hit#:1 Entry:86270 Library:WILEY229.LIB
 SI:75 Formula:C14 H22 O2 CAS:74810-39-2 MolWeight:222 RetIndex:0
 CompName:Tricyclo[5.1.0.0(2,4)]octane-5-carboxylic acid, 3,3,8,8-tetramethyl-, methyl ester (CAS)



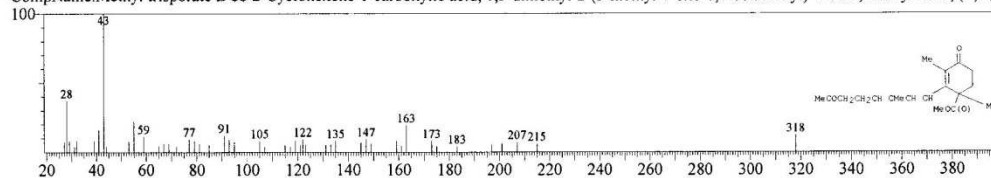
Hit#:2 Entry:38535 Library:WILEY229.LIB
 SI:72 Formula:C11 H16 O CAS:3280-08-8 MolWeight:164 RetIndex:0
 CompName:Benzenethanol, alpha., alpha., beta.-trimethyl- (CAS) 1,1-DIMETHYL-2-PHENYLPROPAN-1-OL \$\$ Phenethyl alcohol, .alpha.,.alp



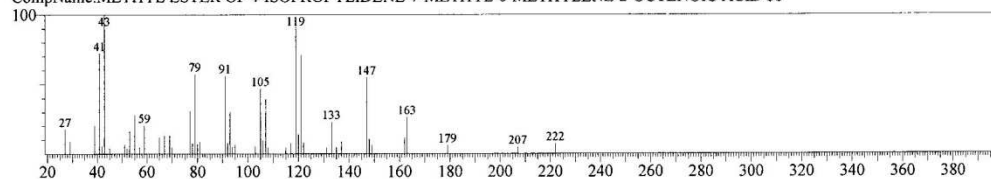
Hit#:3 Entry:48025 Library:WILEY229.LIB
 SI:71 Formula:C13 H20 CAS:0-00-0 MolWeight:176 RetIndex:0
 CompName:megastigma-3,7(Z),9-triene \$\$



Hit#:4 Entry:156979 Library:WILEY229.LIB
 SI:71 Formula:C19 H26 O4 CAS:16981-58-1 MolWeight:318 RetIndex:0
 CompName:Methyl trisporate B \$\$ 2-Cyclohexene-1-carboxylic acid, 1,3-dimethyl-2-(3-methyl-7-oxo-1,3-octadienyl)-4-oxo-, methyl ester, (+)- (CAS)

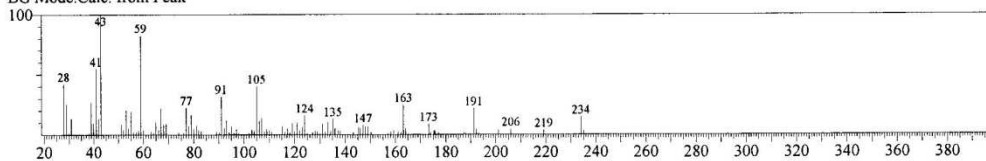


Hit#:5 Entry:86192 Library:WILEY229.LIB
 SI:71 Formula:C14 H22 O2 CAS:0-00-0 MolWeight:222 RetIndex:0
 CompName:METHYL ESTER OF 4-ISOPROPYLIDENE-7-METHYL-6-METHYLENE-2-OCTENOIC ACID \$\$

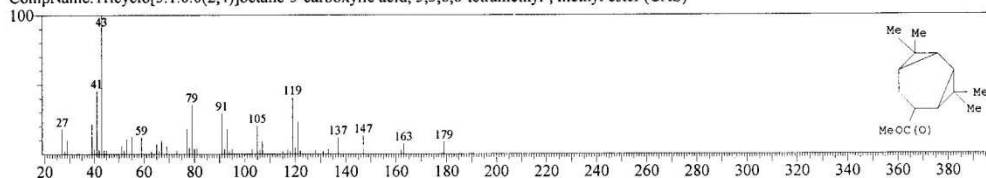


<< Target >>

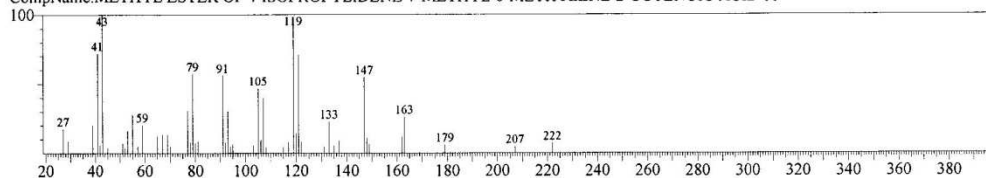
Line#:4 R.Time:22.783(Scan#:2591) MassPeaks:109
 RawMode:Averaged 22.775-22.792(2590-2592) BasePeak:43.00(33536)
 BG Mode:Calc. from Peak



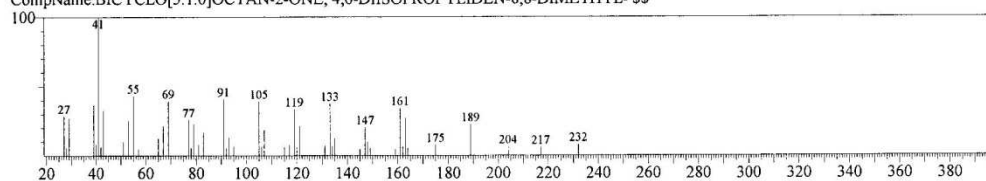
Hit#:1 Entry:86270 Library:WILEY229.LIB
 SI:72 Formula:C14 H22 O2 CAS:74810-39-2 MolWeight:222 RetIndex:0
 CompName:Tricyclo[5.1.0.0(2,4)]octane-5-carboxylic acid, 3,3,8,8-tetramethyl-, methyl ester (CAS)



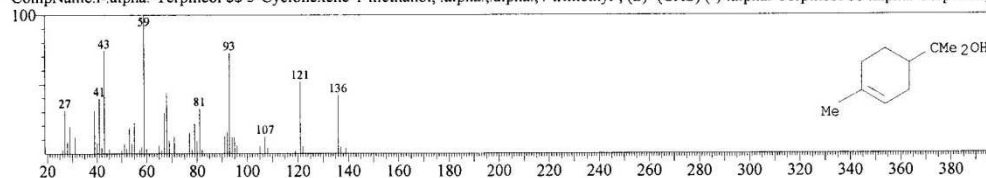
Hit#:2 Entry:86192 Library:WILEY229.LIB
 SI:72 Formula:C14 H22 O2 CAS:0-00-0 MolWeight:222 RetIndex:0
 CompName:METHYL ESTER OF 4-ISOPROPYLIDENE-7-METHYL-6-METHYLENE-2-OCTENOIC ACID \$\$



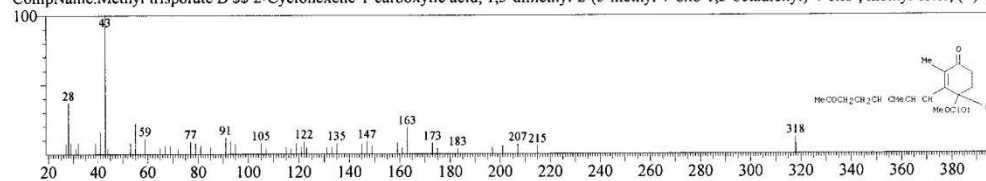
Hit#:3 Entry:94934 Library:WILEY229.LIB
 SI:71 Formula:C16 H24 O CAS:0-00-0 MolWeight:232 RetIndex:0
 CompName:BICYCLO[5.1.0]OCTAN-2-ONE, 4,6-DIISOPROPYLIDEN-8,8-DIMETHYL- \$\$



Hit#:4 Entry:31358 Library:WILEY229.LIB
 SI:71 Formula:C10 H18 O CAS:10482-56-1 MolWeight:154 RetIndex:0
 CompName:l-alpha-Terpineol \$\$ 3-Cyclohexene-1-methanol, alpha, alpha, 4-trimethyl-, (S)- (CAS) (-)-alpha-Terpineol, (-

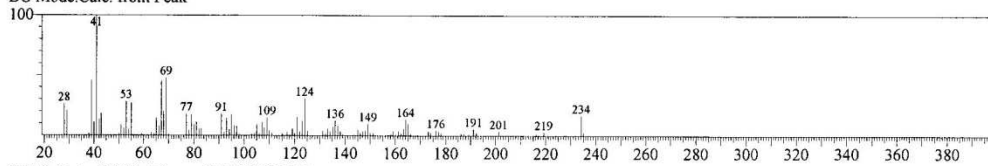


Hit#:5 Entry:156979 Library:WILEY229.LIB
 SI:70 Formula:C19 H26 O4 CAS:16981-58-1 MolWeight:318 RetIndex:0
 CompName:Methyl trisporate B \$\$ 2-Cyclohexene-1-carboxylic acid, 1,3-dimethyl-2-(3-methyl-7-oxo-1,3-octadienyl)-4-oxo-, methyl ester, (+)- (CAS)

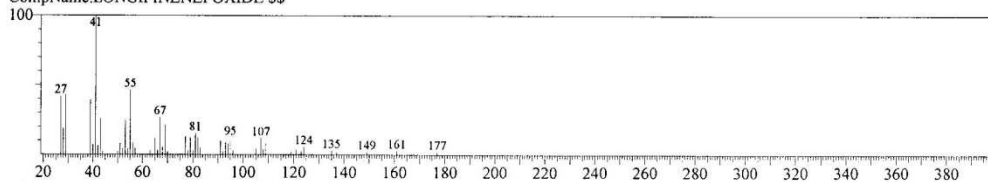


<< Target >>

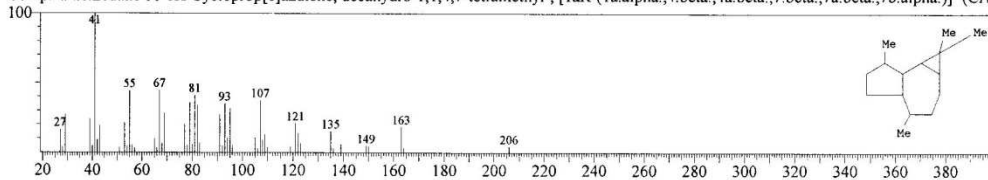
Line#:5 R.Time:23.142(Scan#:2634) MassPeaks:97
 RawMode:Averaged 23.133-23.150(2633-2635) BasePeak:41.00(65532)
 BG Mode:Calc. from Peak



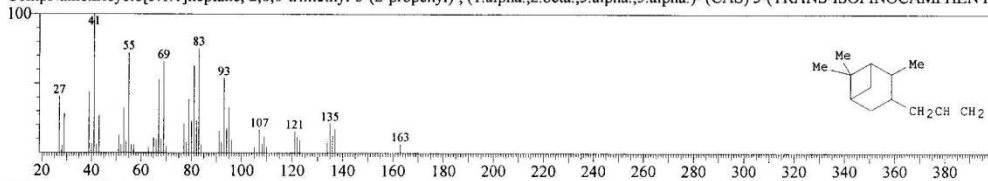
Hit#:1 Entry:84614 Library:WILEY229.LIB
 SI:81 Formula:C15 H24 O CAS:0-00-0 MolWeight:220 RetIndex:0
 CompName:LONGIPINENEPOXIDE \$\$



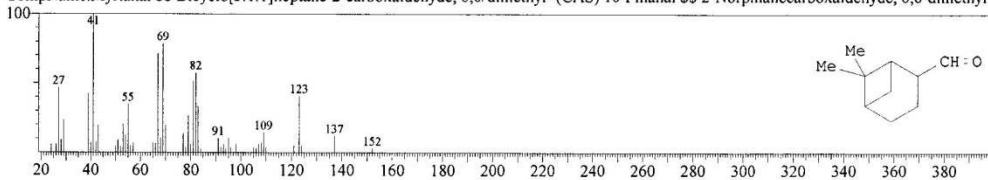
Hit#:2 Entry:73099 Library:WILEY229.LIB
 SI:80 Formula:C15 H26 CAS:28580-43-0 MolWeight:206 RetIndex:0
 CompName:Ledane \$\$ 1H-Cycloprop[e]juzulene, decahydro-1,1,4,7-tetramethyl-, [1aR-(1a.alpha.,4.beta.,4a.beta.,7.beta.,7a.beta.,7b.alpha.)]- (CAS)



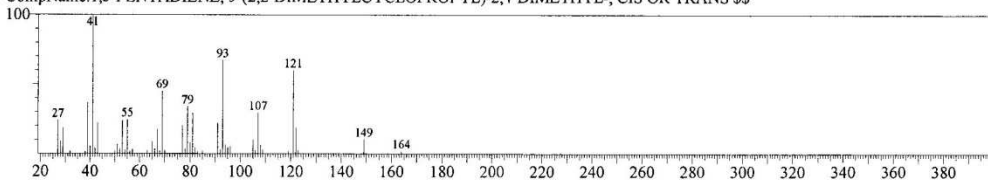
Hit#:3 Entry:49566 Library:WILEY229.LIB
 SI:79 Formula:C13 H22 CAS:50746-55-9 MolWeight:178 RetIndex:0
 CompName:Bicyclo[3.1.1]heptane, 2,6,6-trimethyl-3-(2-propenyl)-, (1.alpha.,2.beta.,3.alpha.,5.alpha.)- (CAS) 3-(TRANS-ISOPINOCAMPHENYL)



Hit#:4 Entry:29932 Library:WILEY229.LIB
 SI:78 Formula:C10 H16 O CAS:4764-14-1 MolWeight:152 RetIndex:0
 CompName:Myrtanal \$\$ Bicyclo[3.1.1]heptane-2-carboxaldehyde, 6,6-dimethyl- (CAS) 10-Pinanal \$\$ 2-Norpinancarboxaldehyde, 6,6-dimethyl-

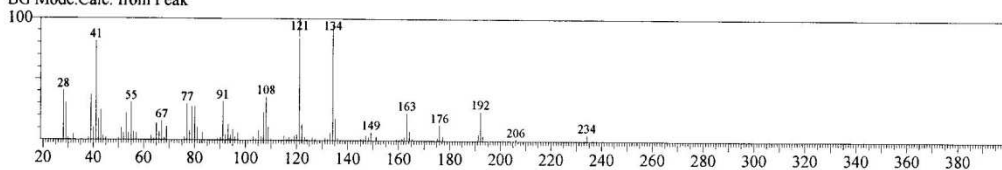


Hit#:5 Entry:38764 Library:WILEY229.LIB
 SI:78 Formula:C12 H20 CAS:0-00-0 MolWeight:164 RetIndex:0
 CompName:1,3-PENTADIENE, 5-(2,2-DIMETHYLCYCLOPROPYL)-2,4-DIMETHYL-, CIS OR TRANS \$\$

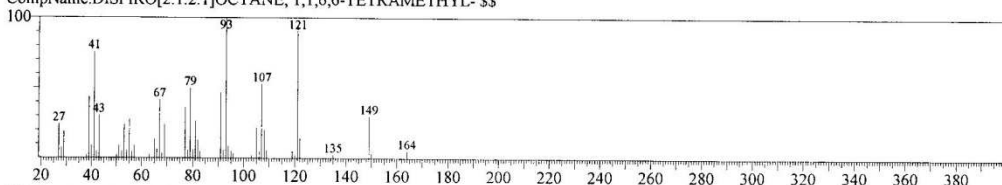


<< Target >>

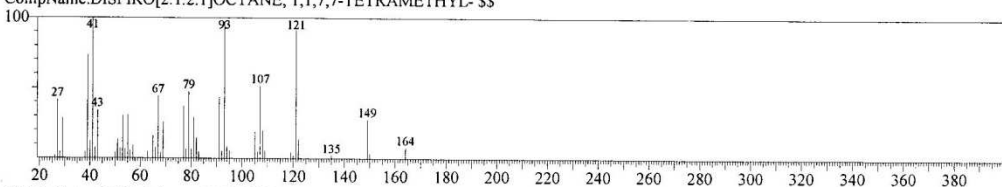
Line#:6 R.Time:23.267(Scan#:2649) MassPeaks:92
 RawMode:Averaged 23.258-23.275(2648-2650) BasePeak:121.05(38448)
 BG Mode:Calc. from Peak



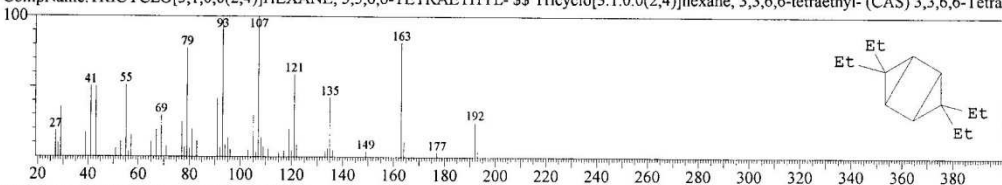
Hit#:1 Entry:38816 Library:WILEY229.LIB
 SI:76 Formula:C12 H20 CAS:0-00-0 MolWeight:164 RetIndex:0
 CompName:DISPIRO[2.1.2.1]OCTANE, 1,1,6,6-TETRAMETHYL- \$\$



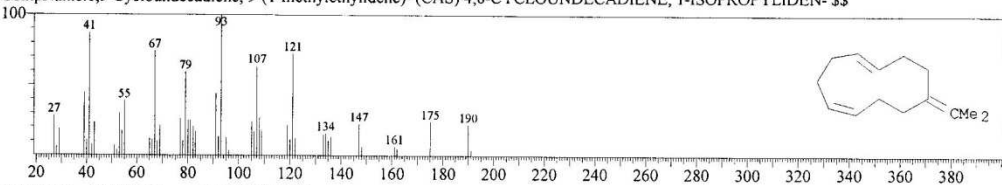
Hit#:2 Entry:38817 Library:WILEY229.LIB
 SI:76 Formula:C12 H20 CAS:0-00-0 MolWeight:164 RetIndex:0
 CompName:DISPIRO[2.1.2.1]OCTANE, 1,1,7,7-TETRAMETHYL- \$\$



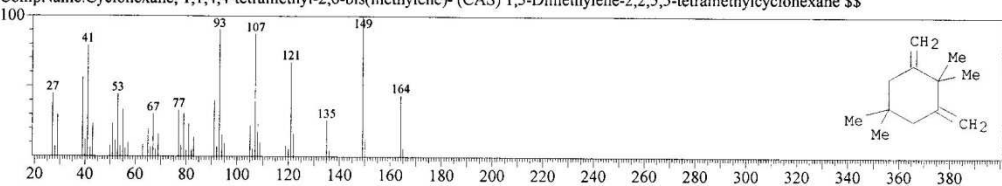
Hit#:3 Entry:60691 Library:WILEY229.LIB
 SI:75 Formula:C14 H24 CAS:78578-92-4 MolWeight:192 RetIndex:0
 CompName:TRICYCLO[3.1.0.0(2,4)]HEXANE, 3,3,6,6-TETRAETHYL- \$\$ Tricyclo[3.1.0.0(2,4)]hexane, 3,3,6,6-tetraethyl- (CAS) 3,3,6,6-Tetra



Hit#:4 Entry:59057 Library:WILEY229.LIB
 SI:75 Formula:C14 H22 CAS:62338-55-0 MolWeight:190 RetIndex:0
 CompName:1,5-Cycloundecadiene, 9-(1-methylethylidene)- (CAS) 4,8-CYCLOUNDECADIENE, 1-ISOPROPYLIDEN- \$\$

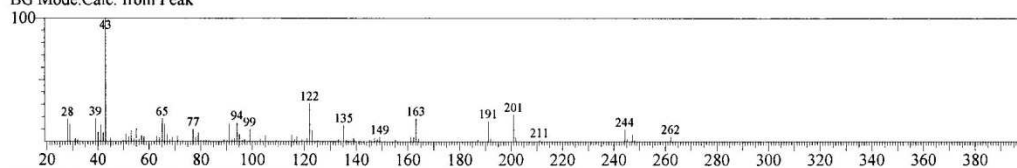


Hit#:5 Entry:38778 Library:WILEY229.LIB
 SI:74 Formula:C12 H20 CAS:40482-18-6 MolWeight:164 RetIndex:0
 CompName:Cyclohexane, 1,1,4,4-tetramethyl-2,6-bis(methylene)- (CAS) 1,3-Dimethylene-2,2,5,5-tetramethylcyclohexane \$\$

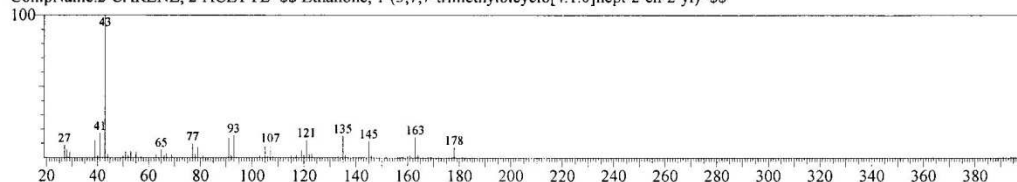


<< Target >>

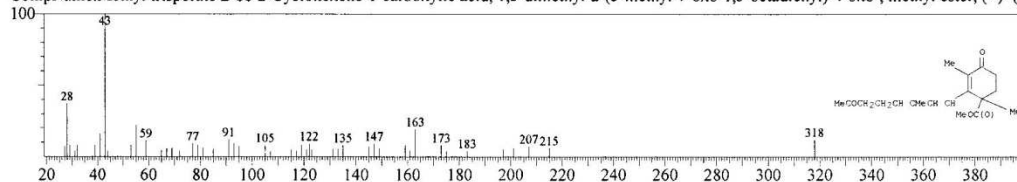
Line#:7 R.Time:23.517(Scan#:2679) MassPeaks:80
 RawMode:Averaged 23.508-23.525(2678-2680) BasePeak:43.00(69100)
 BG Mode:Calc. from Peak



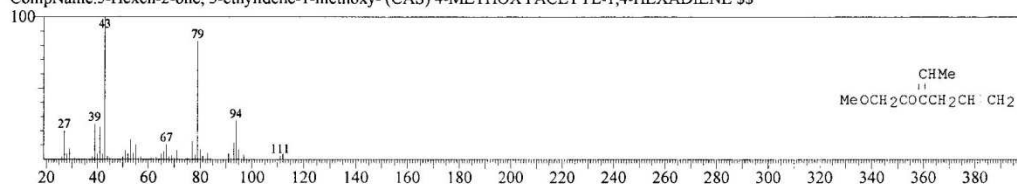
Hit#:1 Entry:49366 Library:WILEY229.LIB
 SI:70 Formula:C12 H18 O CAS:66378-50-5 MolWeight:178 RetIndex:0
 CompName:2-CARENE, 2-ACETYL- \$\$ Ethanone, 1-(3,7,7-trimethylbicyclo[4.1.0]hept-2-en-2-yl)- \$\$



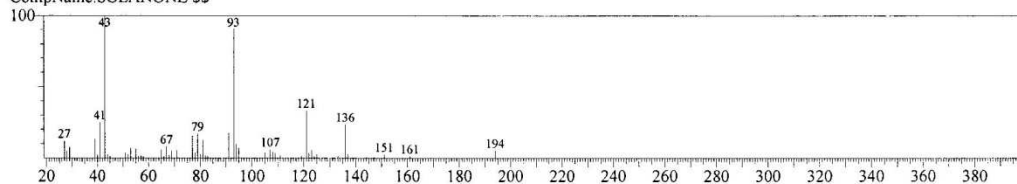
Hit#:2 Entry:156979 Library:WILEY229.LIB
 SI:67 Formula:C19 H26 O4 CAS:16981-58-1 MolWeight:318 RetIndex:0
 CompName:Methyl trisporate B \$\$ 2-Cyclohexene-1-carboxylic acid, 1,3-dimethyl-2-(3-methyl-7-oxo-1,3-octadienyl)-4-oxo-, methyl ester, (+)- (CAS)



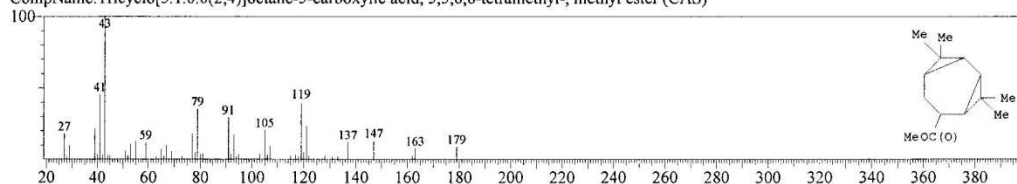
Hit#:3 Entry:30835 Library:WILEY229.LIB
 SI:65 Formula:C9 H14 O2 CAS:55956-40-6 MolWeight:154 RetIndex:0
 CompName:5-Hexen-2-one, 3-ethylidene-1-methoxy- (CAS) 4-METHOXYACETYL-1,4-HEXADIENE \$\$



Hit#:4 Entry:62412 Library:WILEY229.LIB
 SI:64 Formula:C13 H22 O CAS:1937-54-8 MolWeight:194 RetIndex:0
 CompName:SOLANONE \$\$

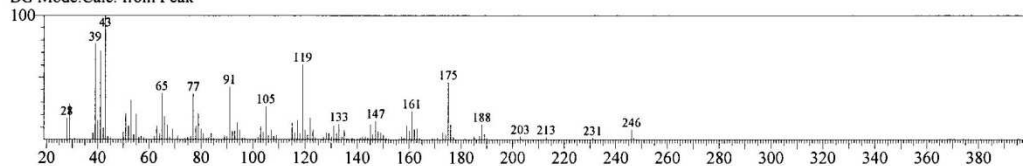


Hit#:5 Entry:86270 Library:WILEY229.LIB
 SI:64 Formula:C14 H22 O2 CAS:74810-39-2 MolWeight:222 RetIndex:0
 CompName:Tricyclo[5.1.0.0(2,4)]octane-5-carboxylic acid, 3,3,8,8-tetramethyl-, methyl ester (CAS)

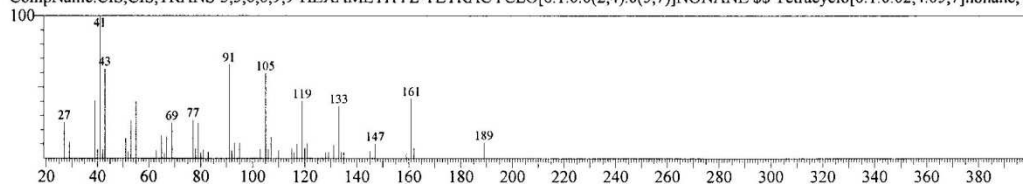


<< Target >>

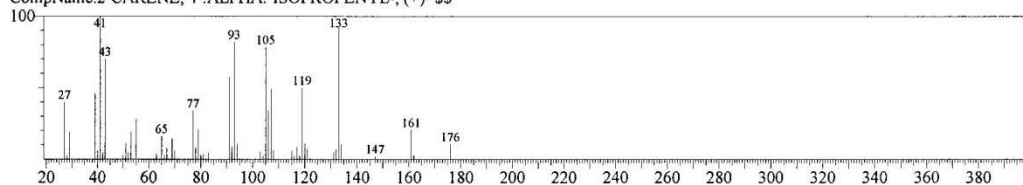
Line#:8 R.Time:24.550(Scan#:2803) MassPeaks:114
 RawMode:Averaged 24.542-24.558(2802-2804) BasePeak:43.00(531009)
 BG Mode:Calc. from Peak



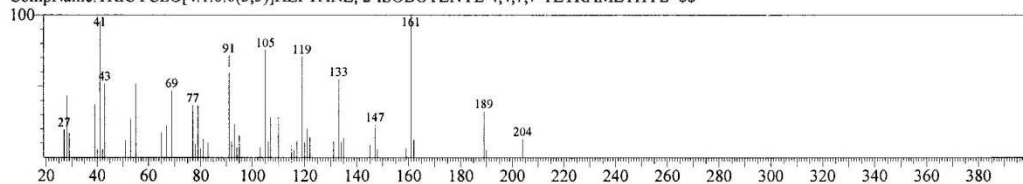
Hit#:1 Entry:71100 Library:WILEY229.LIB
 SI:77 Formula:C15 H24 CAS:56390-01-3 MolWeight:204 RetIndex:0
 CompName:CIS,CIS,TRANS-3,3,6,6,9,9-HEXAMETHYL-TETRACYCLO[6.1.0.0(2,4).0(5,7)]NONANE \$\$ Tetracyclo[6.1.0.02,4.05,7]nonane, 3



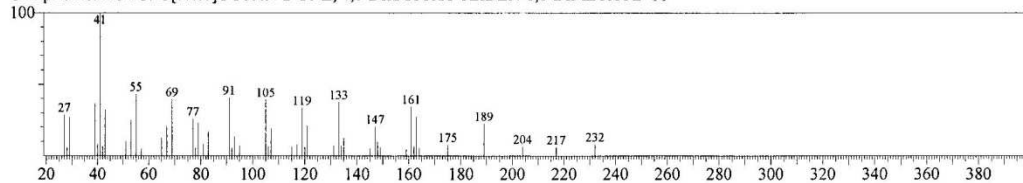
Hit#:2 Entry:48032 Library:WILEY229.LIB
 SI:74 Formula:C13 H20 CAS:0-00-0 MolWeight:176 RetIndex:0
 CompName:2-CARENE, 4-ALPHA.-ISOPROPENYL-, (+)- \$\$



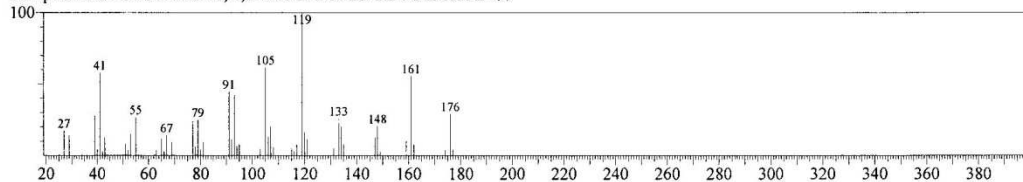
Hit#:3 Entry:71071 Library:WILEY229.LIB
 SI:74 Formula:C15 H24 CAS:0-00-0 MolWeight:204 RetIndex:0
 CompName:TRICYCLO[4.1.0.0(3,5)]HEPTANE, 2-ISOBUTENYL-4,4,7,7-TETRAMETHYL- \$\$



Hit#:4 Entry:94934 Library:WILEY229.LIB
 SI:74 Formula:C16 H24 O CAS:0-00-0 MolWeight:232 RetIndex:0
 CompName:BICYCLO[5.1.0]OCTAN-2-ONE, 4,6-DIISOPROPYLIDEN-8,8-DIMETHYL- \$\$



Hit#:5 Entry:48029 Library:WILEY229.LIB
 SI:74 Formula:C13 H20 CAS:0-00-0 MolWeight:176 RetIndex:0
 CompName:CYCLOHEXENE, 1,3-DIISOPROPENYL-6-METHYL- \$\$



Lampiran VII. Dokumentasi Penelitian



Rimpang Temu Ireng

Proses Penggilingan Rimpang yang
Telah Kering

Rimpang Temu Ireng Diiris Tipis



Serbuk Rimpang Temu Ireng



Rimpang Temu Ireng Dioven



Proses Filtrasi Hasil Maserasi



Evaporasi



Impregnasi



Partisi



KVC



Destilasi



KKG



Fraksi Hasil KVC



Fraksi IV/Senyawa Hasil Isolasi



Fraksi Hasil KKG