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โรงพิมพ์องค์การสงเคราะห์ทหารผ่านศึก หน้า 52-53.

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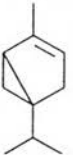



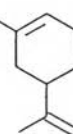
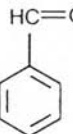

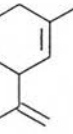
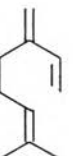
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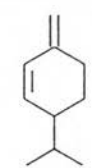
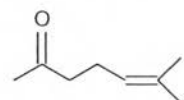
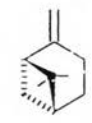
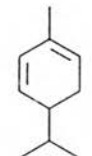
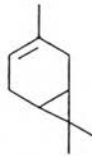
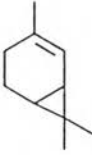
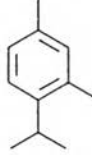
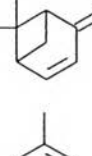
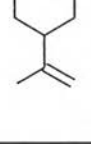
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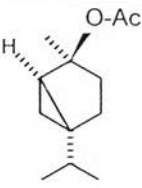
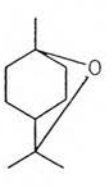
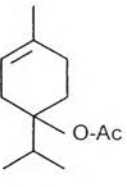
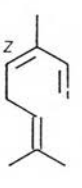
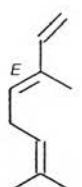
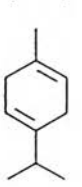
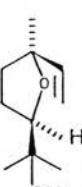
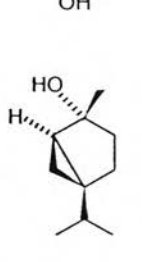
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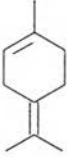
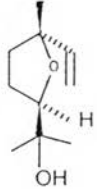

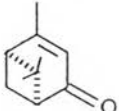
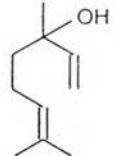
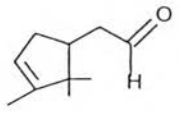
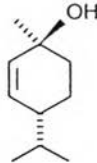
APPENDICES

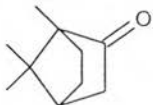
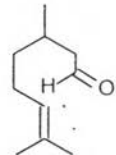
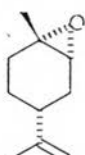
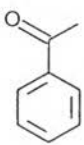
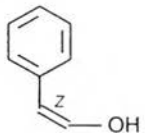
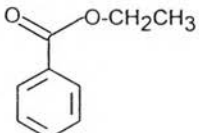
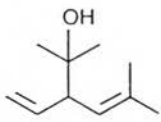
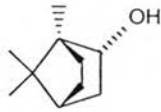
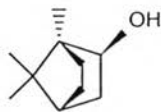
A. The chemical components of essential oil isolated from selected Lauraceous Plants

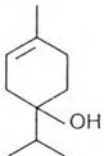

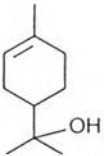
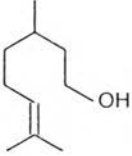
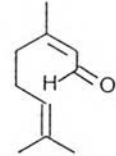
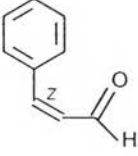
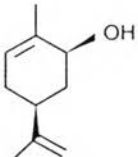
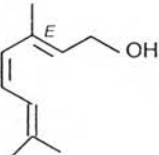
Retention time (min)	Compound	Structure
4.38	α -thujene	
4.98	tricyclene	
5.03	α -pinene	
5.48	camphene	
5.98	sylvestrene	
6.01	benzaldehyde	HC=O 
6.08	sabinene	
6.09	isosylvestrene	
6.11	myrcene	

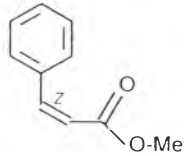
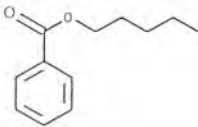
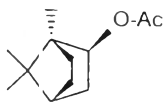
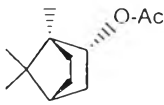
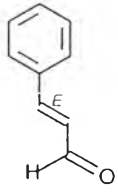
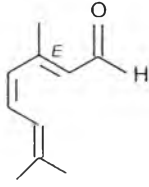
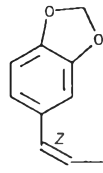
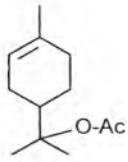
Retention time (min)	Compound	Structure
6.23	β -phellandrene	
6.37	6-methyl-5-hepten-2-one	
6.54	β -pinene	
6.83	<i>n</i> -decane	$\text{CH}_3(\text{CH}_2)_8\text{CH}_3$
7.11	α -phellandrene	
7.16	δ -3-carene	
7.44	δ -2-carene	
7.59	<i>o</i> -cymene	
7.78	verbenene	
7.88	limonene	

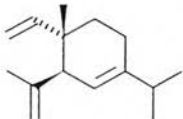
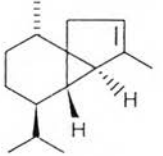
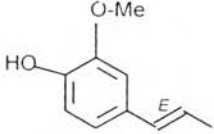
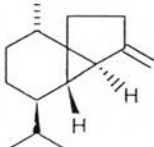
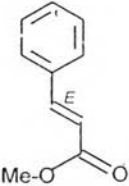
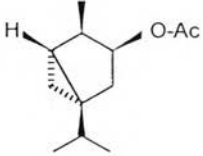
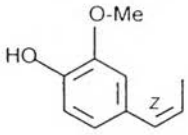
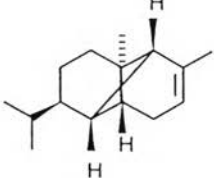
Retention time (min)	Compound	Structure
7.94	<i>trans</i> -sabinene hydrate acetate	
7.98	<i>1,8</i> -cineole	
8.09	terpin-4-ol-acetate	
8.13	<i>(Z)</i> - β -ocimene	
8.48	<i>(E)</i> - β -ocimene	
8.91	γ -terpinene	
9.51	<i>cis</i> -linalool oxide	
9.61	<i>trans</i> -sabinene hydrate	

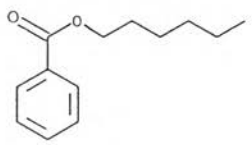
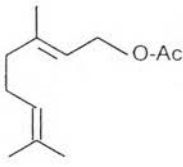
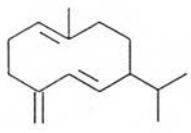
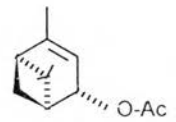
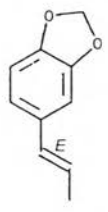
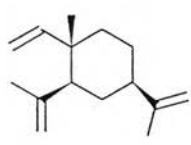
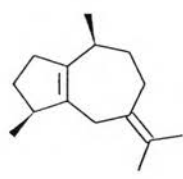
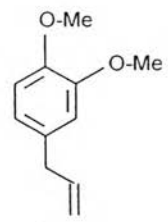
Retention time (min)	Compound	Structure
9.76	α -terpinene	
9.93	terpinolene	
10.13	<i>trans</i> -linalool oxide	
10.23	2-nonanone	$\text{CH}_3\text{CO}(\text{CH}_2)_6\text{CH}_3$
10.27	1,4-cineole	
10.35	verbenone	
10.44	<i>n</i> -heneicosane	$\text{CH}_3(\text{CH}_2)_{19}\text{CH}_3$
10.81	linalool	
11.73	α -campholenal	
11.81	<i>trans</i> - <i>para</i> -menth-2-en-1-ol	

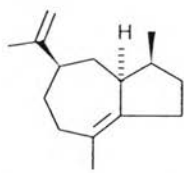
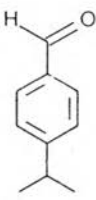
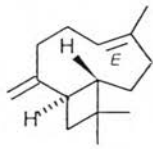
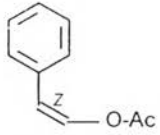
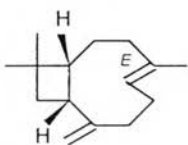

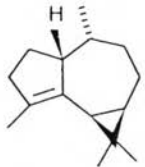
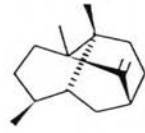
Retention time (min)	Compound	Structure
12.54	camphor	
12.76	citronellal	
13.19	<i>cis</i> -limonene oxide	
13.25	acetophenone	
13.46	(<i>Z</i>)-cinnamyl alcohol	
13.66	ethyl benzoate	
13.88	santolina alcohol	
13.93	isoborneol	
13.99	borneol	

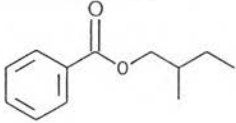
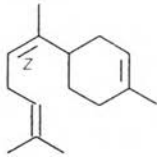
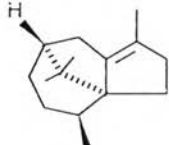
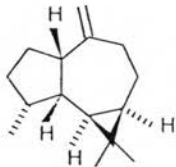
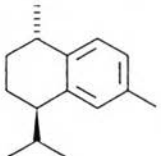
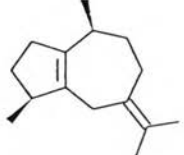
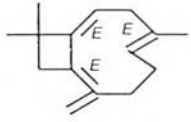
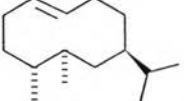
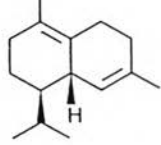
Retention time (min)	Compound	Structure
14.16	terpin- <i>t</i> -ol	
14.88	methyl chavicol	
14.98	α -terpineol	
16.34	citronellol	
16.63	neral	
16.81	(<i>Z</i>)-cinnamaldehyde	
17.23	<i>cis</i> -carveol	
17.38	geraniol	

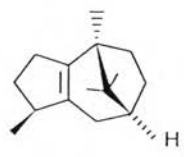
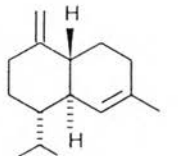
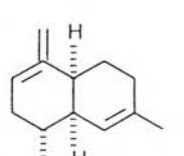
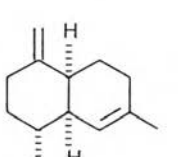
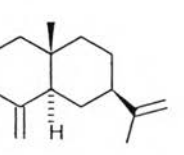
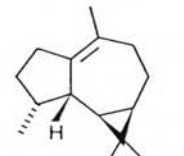
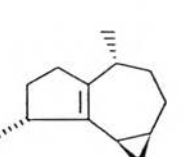
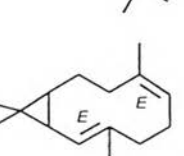
Retention time (min)	Compound	Structure
17.94	(Z)-methyl cinnamate	
18.04	n-pentyl benzoate	
18.44	bornyl acetate	
18.46	isobornyl acetate	
18.50	2-undecanone	$\text{CH}_3\text{CO}(\text{CH}_2)_8\text{CH}_3$
18.61	(E)-cinnamaldehyde	
18.77	geranial	
18.99	(Z)-isosafrole	
19.79	α -terpinyl acetate	

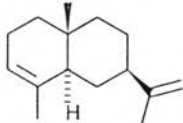
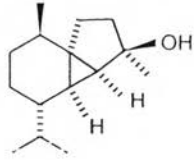
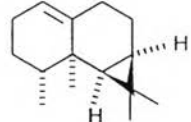
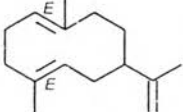
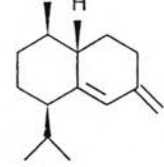
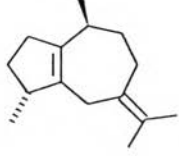
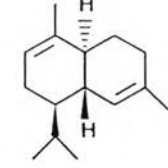
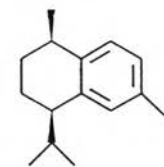
Retention time (min)	Compound	Structure
20.63	δ -elemene	
20.17	α -cubebene	
21.02	<i>(E)</i> -isoeugenol	
21.13	β -cubebene	
21.21	<i>(E)</i> -methyl cinnamate	
21.29	3-thujyl acetate	
22.10	<i>(Z)</i> -isoeugenol	
22.38	α -copaene	

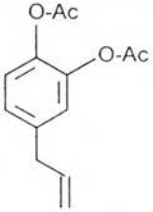
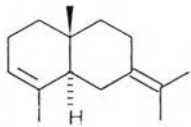
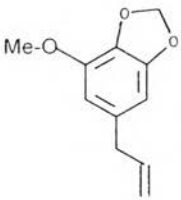
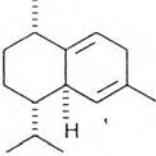
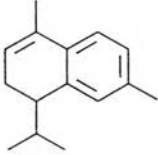
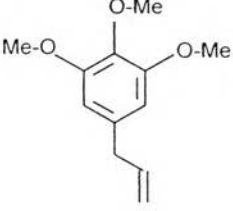
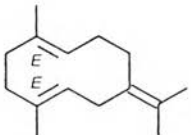
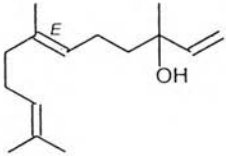
Retention time (min)	Compound	Structure
22.66	<i>n</i> -hexyl benzoate	
22.73	geranyl acetate	
22.93	germacrene D	
23.01	<i>cis</i> -verbenyl acetate	
23.04	(<i>E</i>)-isosafrole	
23.09	β -elemene	
23.71	<i>cis</i> - β -guiene	
23.98	methyl eugenol	

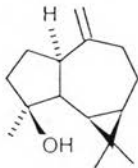
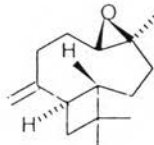
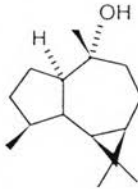
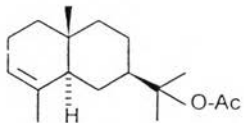
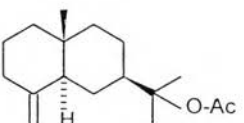
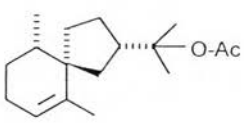
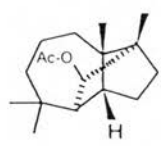
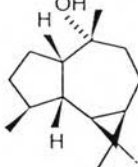
Retention time (min)	Compound	Structure
24.10	α -bulnesene	
24.16	tetradecanal	$\text{CH}_3(\text{CH}_2)_{12}\text{COH}$
24.20	cumin aldehyde	
24.33	(<i>E</i>)-caryophyllene	
24.89	(<i>Z</i>)-cinnamyl acetate	
25.07	9- <i>epi</i> -(<i>E</i>)-caryophyllene	
25.11	longifolene	
25.23	α -gurjunene	
25.37	seychellene	

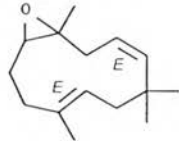
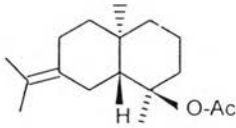
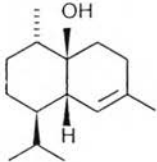
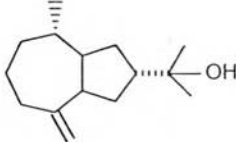
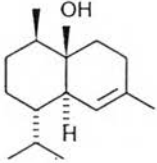
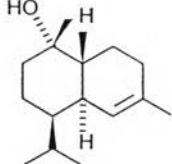
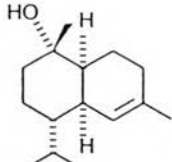
Retention time (min)	Compound	Structure
25.41	<i>(Z)</i> -methyl-butyl-benzoate	
25.44	<i>(Z)</i> - α -bisabolene	
25.54	cyperene	
25.56	<i>allo</i> -aromadendrene	
25.58	<i>trans</i> -calamenene	
25.73	<i>cis</i> - β -guaiene	
25.89	α -humulene	
26.03	valencene	
26.58	δ -cadinene	

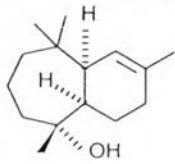
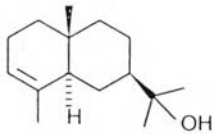
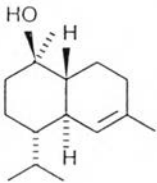
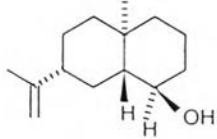
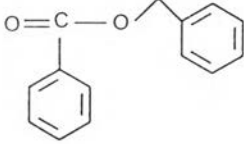
Retention time (min)	Compound	Structure
26.61	β -patchoulene	
26.75	γ -cadinene	
26.89	α -muurolene	
26.92	2-methyl-undecanal	$\text{CH}_3(\text{CH}_2)_8\text{CH}(\text{CH}_3)\text{COH}$
26.99	γ -muurolene	
27.34	β -selinene	
27.38	viridiflorene	
27.43	isolekene	
27.59	bicyclogermacrene	

Retention time (min)	Compound	Structure
27.63	α -selinene	
27.84	<i>epi</i> -cubebol	
27.88	β -gurjunene	
28.11	germacrene A	
28.39	<i>cis</i> -muurola-4(14),5-diene	
28.59	<i>trans</i> - β -guaiene	
28.76	α -cadinene	
28.78	<i>cis</i> -calamenene	

Retention time (min)	Compound	Structure
28.84	eugenyl acetate	
28.91	3,7(11)-selinadiene	
29.09	myristicin	
29.19	cadina-1,4-diene	
29.61	α -calacorene	
30.15	elemicin	
30.19	germacrene B	
30.66	<i>(E)</i> -nerolidol	

Retention time (min)	Compound	Structure
31.29	spathulenol	
31.32	caryophyllene oxide	
31.47	globulol	
31.59	α -eudesmol acetate	
31.63	β -eudesmol acetate	
31.96	hinesol acetate	
32.26	longiborneol acetate	
32.30	ledol	

Retention time (min)	Compound	Structure
32.44	humulene epoxide II	
32.64	dodecanal	$\text{CH}_3(\text{CH}_2)_{10}\text{COH}$
33.08	juniper camphor acetate	
33.19	<i>l</i> - <i>epi</i> -cubenol	
33.54	bicyclo-vetivenol	
33.68	cubenol	
33.93	α -muurolol	
33.98	<i>epi</i> - α -muurolol	

Retention time (min)	Compound	Structure
34.36	himachalol	
34.48	α -eudesmol	
34.49	α -cadinol	
34.58	selin-11-en-4-alpha-ol	
38.86	benzyl benzoate	

Note : GC/MS Condition**Instrument model :** Varian Saturn 3**Column :** fused silica capillary column (30 m X 0.25 mm i.d.) coated with DB-5 (J&w), film thickness 0.25 μ m**Column programming :** 60-240°C rate 3.3°C/min**Injector temperature :** 180°C**Helium carrier gas :** 1 ml/min**Split ratio :** 100 : 1**Accelerating voltage :** 1700 volts**Sample size :** 1 μ l**Solvent :** methanol (HPLC grade)

B. Mass spectra of terpenoid and nonterpenoid compound.

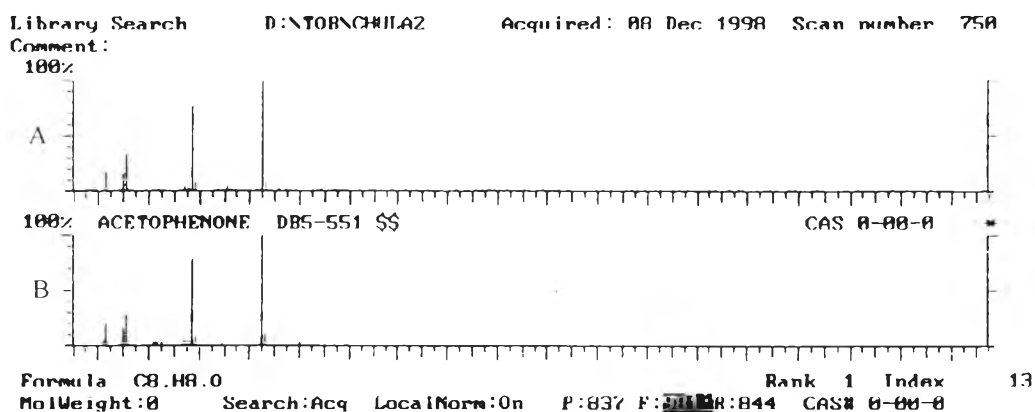


Figure 40 Mass spectra of acetophenone (A) and authentic acetophenone (B) by GC-MS

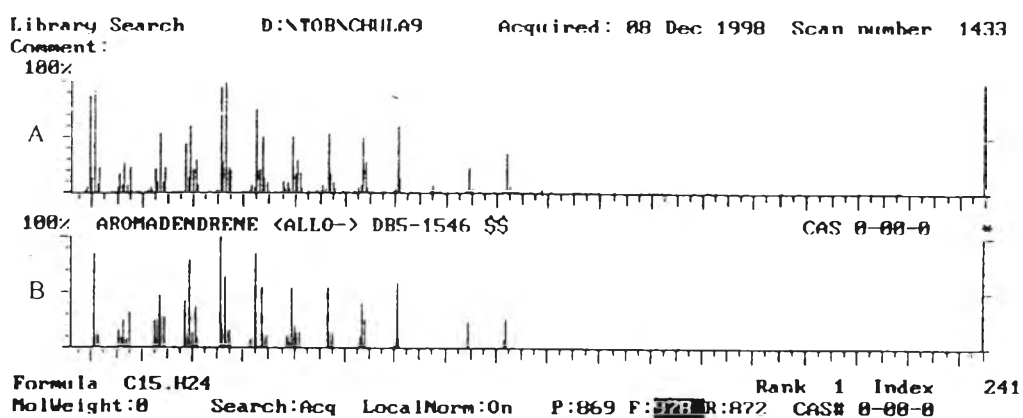


Figure 41 Mass spectra of aromadendrene <allo-> (A) and authentic aromadendrene <allo-> (B) by GC-MS

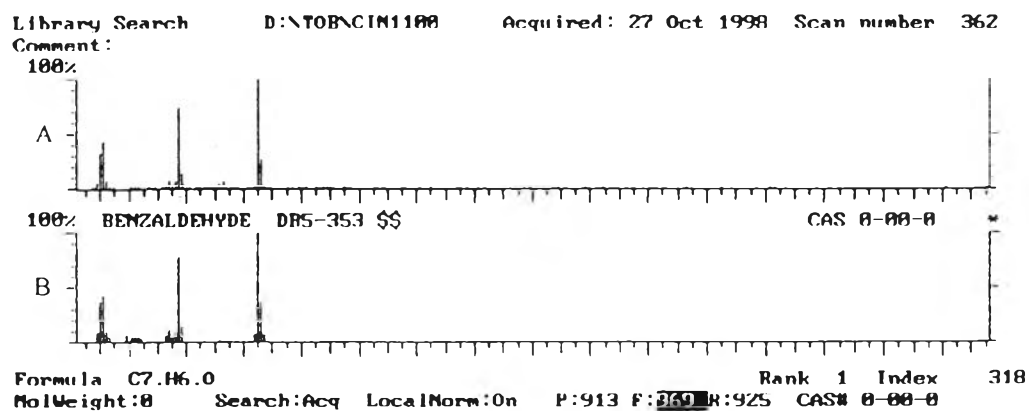


Figure 42 Mass spectra of benzaldehyde (A) and authentic benzaldehyde (B) by GC-MS

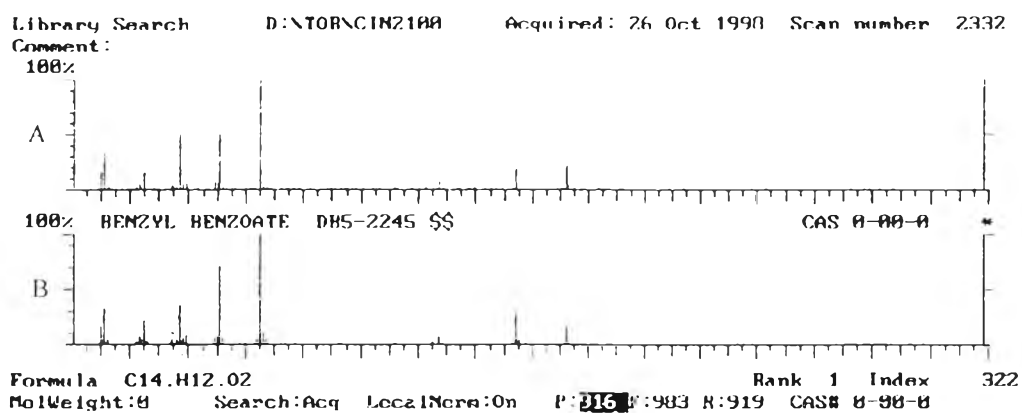


Figure 43 Mass spectra of benzyl benzoate (A) and authentic benzyl benzoate (B) by GC-MS

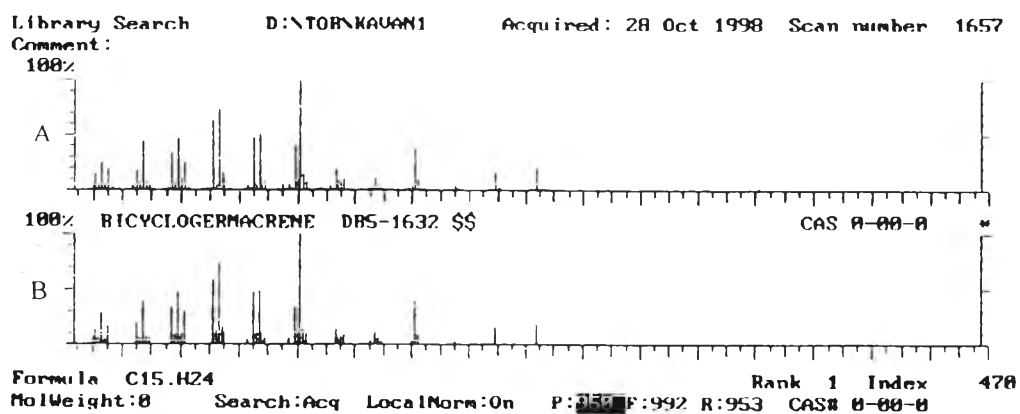


Figure 44 Mass spectra of bicyclogermacrene (A) and authentic bicyclogermacrene (B) by GC-MS

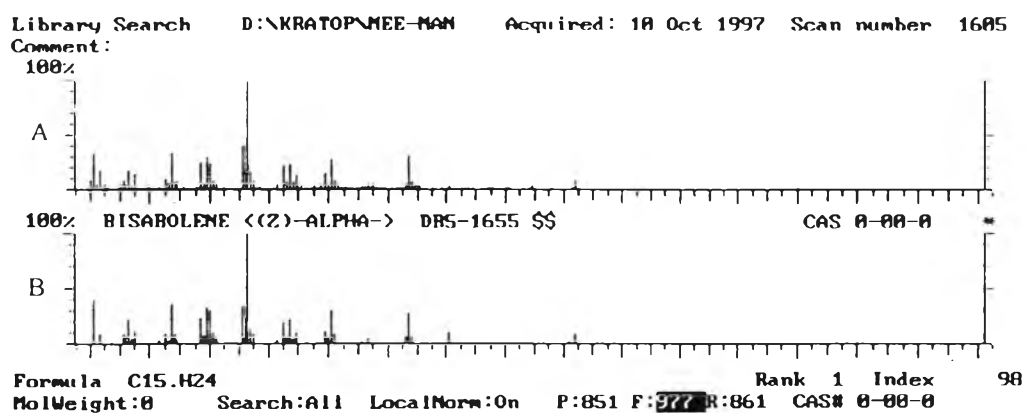


Figure 45 Mass spectra of bisabolene <(Z)-alpha-> (A) and authentic bisabolene <(Z)-alpha-> (B) by GC-MS

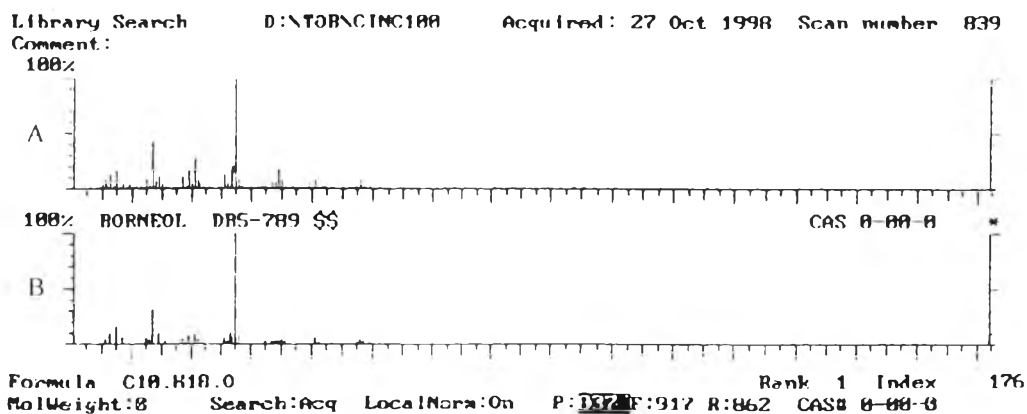


Figure 46 Mass spectra of borneol (A) and authentic borneol (B) by GC-MS

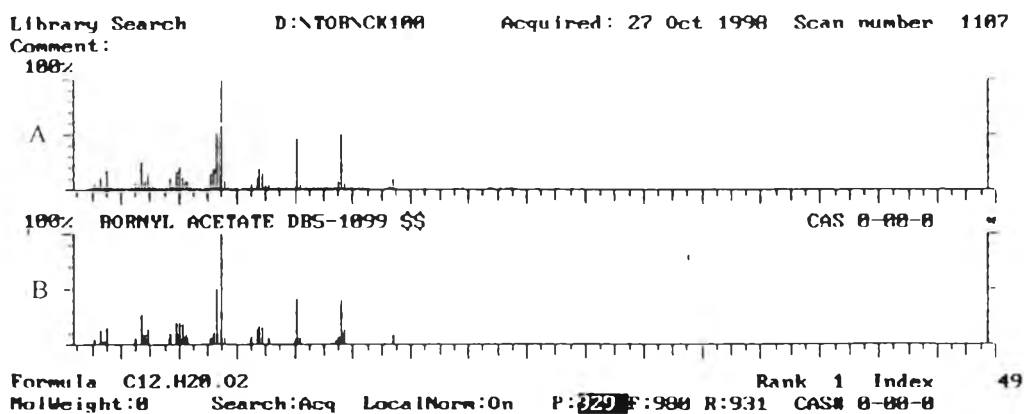


Figure 47 Mass spectra of bornyl acetate (A) and authentic bornyl acetate (B) by GC-MS

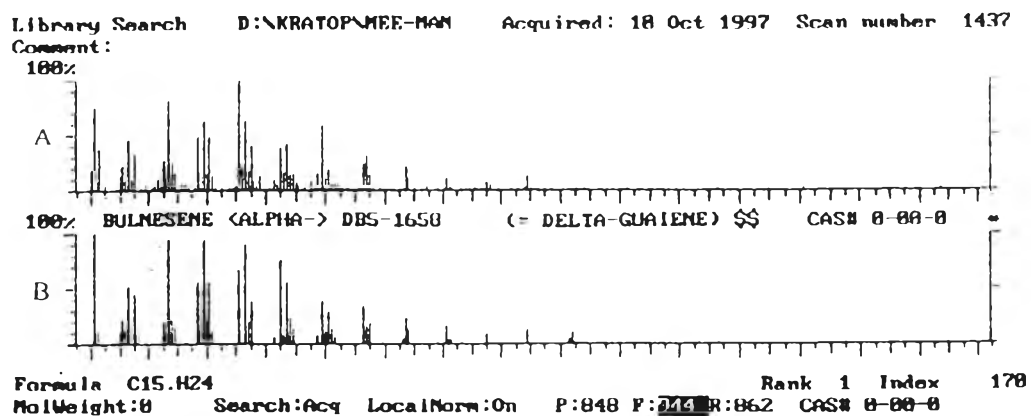


Figure 48 Mass spectra of bulnesene α - (A) and authentic bulnesene α - (B) by GC-MS

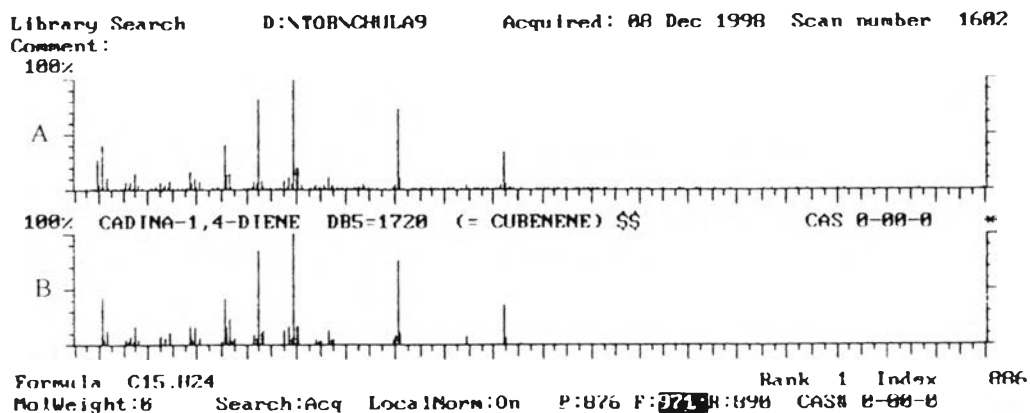


Figure 49 Mass spectra of cadina-1,4-diene (A) and authentic cadina-1,4-diene (B) by GC-MS

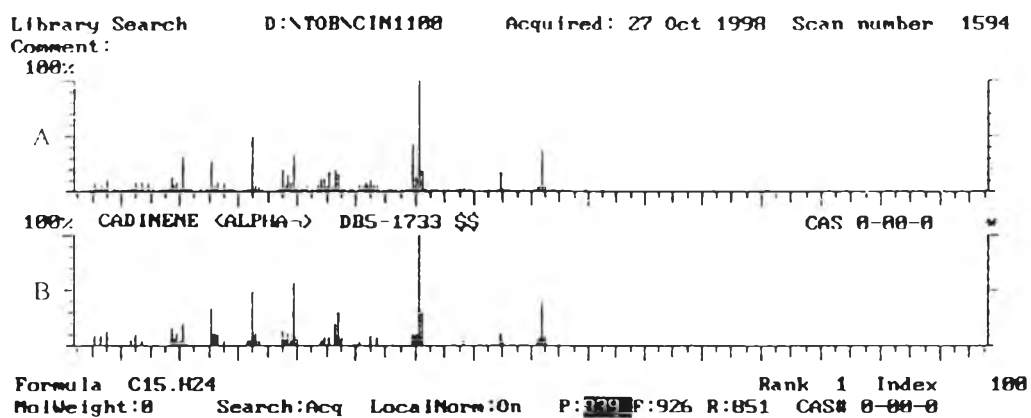


Figure 50 Mass spectra of cadinene α- (A) and authentic cadinene α- (B) by GC-MS

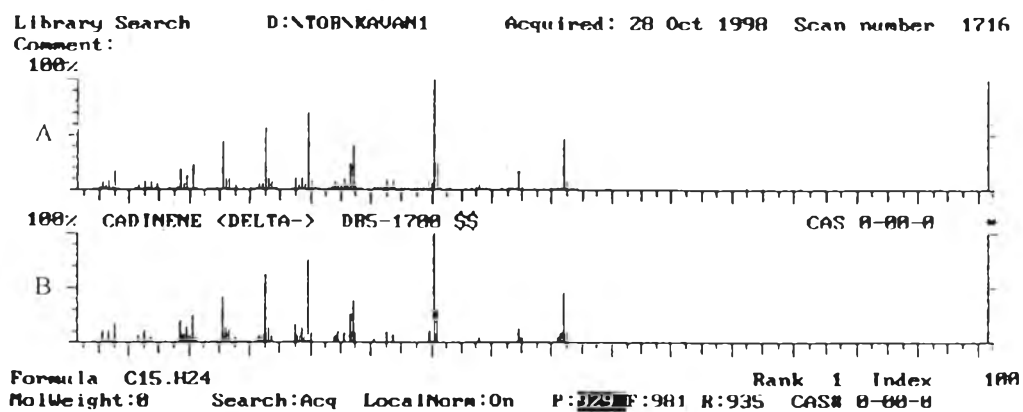


Figure 51 Mass spectra of cadinene δ- (A) and authentic cadinene δ- (B) by GC-MS

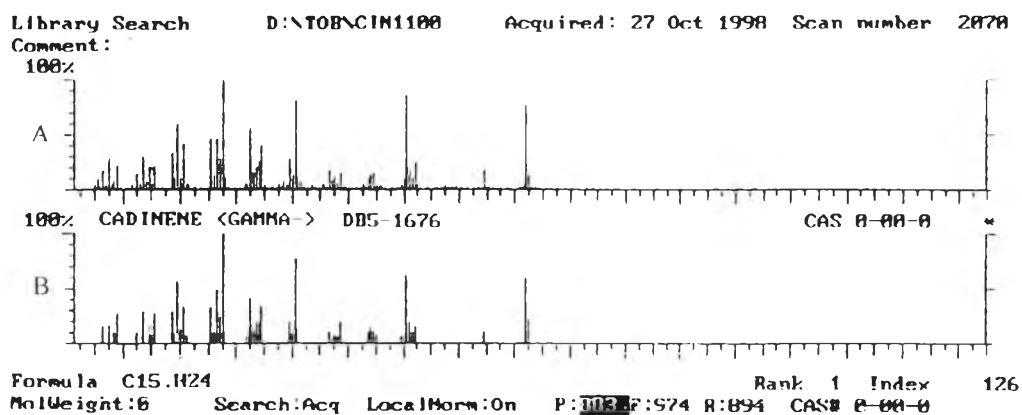


Figure 52 Mass spectra of cadinene $\langle\gamma\rangle$ (A) and authentic cadinene $\langle\gamma\rangle$ (B) by GC-MS

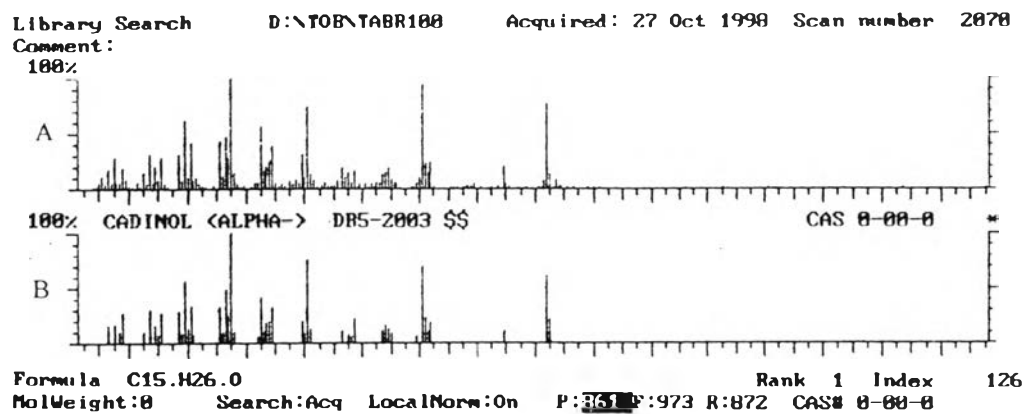


Figure 53 Mass spectra of cadinol $\langle\alpha\rangle$ (A) and authentic cadinol $\langle\alpha\rangle$ (B) by GC-MS

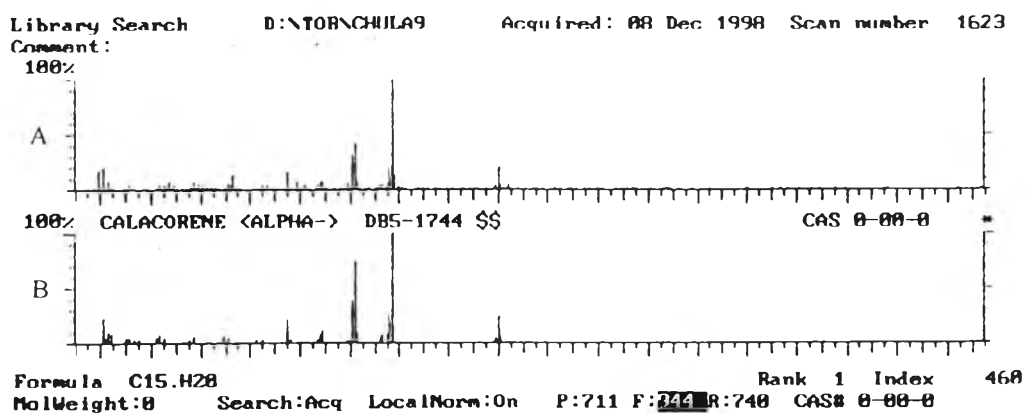


Figure 54 Mass spectra of calacorene $\langle\alpha\rangle$ (A) and authentic calacorene $\langle\alpha\rangle$ (B) by GC-MS

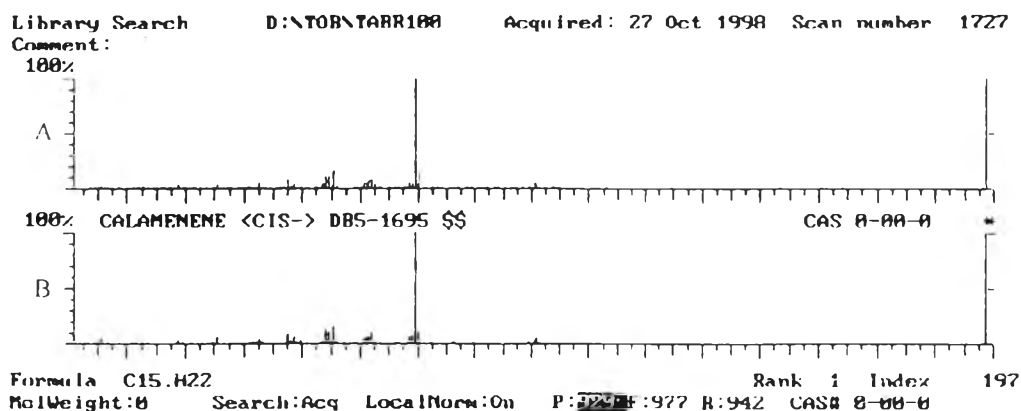


Figure 55 Mass spectra of calamenene < cis-> (A) and authentic calamenene < cis-> (B) by GC-MS

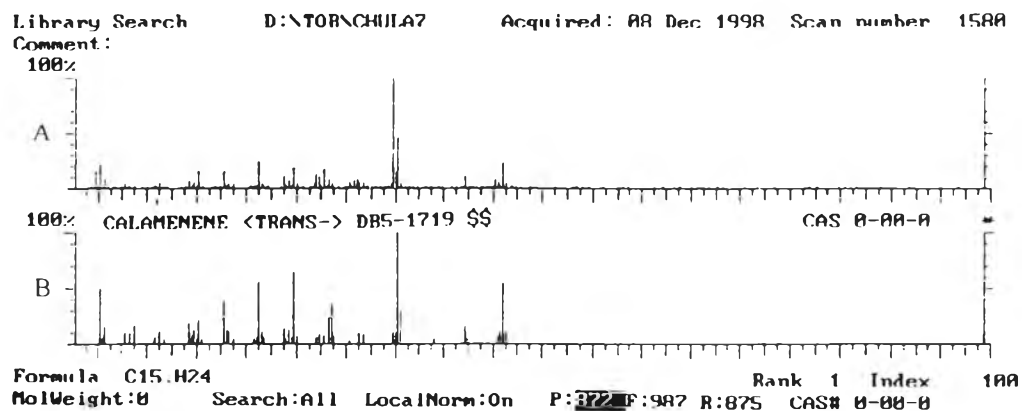


Figure 56 Mass spectra of calamenene < trans-> (A) and authentic calamenene < trans-> (B) by GC-MS

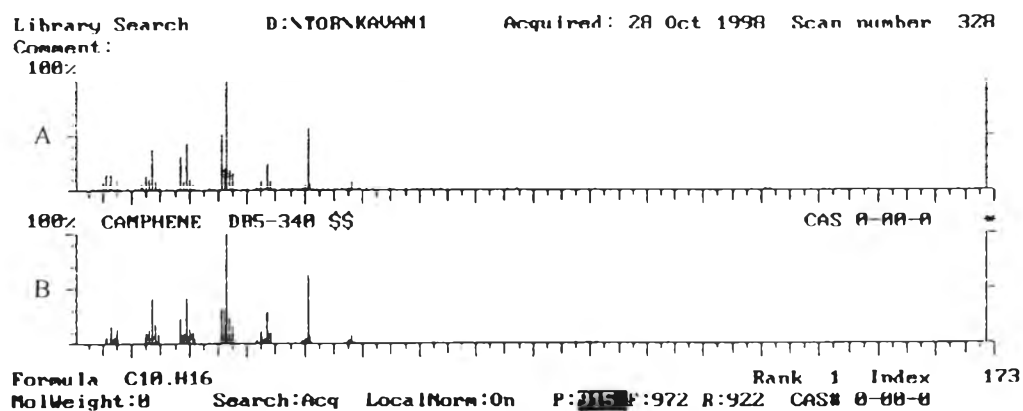


Figure 57 Mass spectra of camphene (A) and authentic camphene (B) by GC-MS

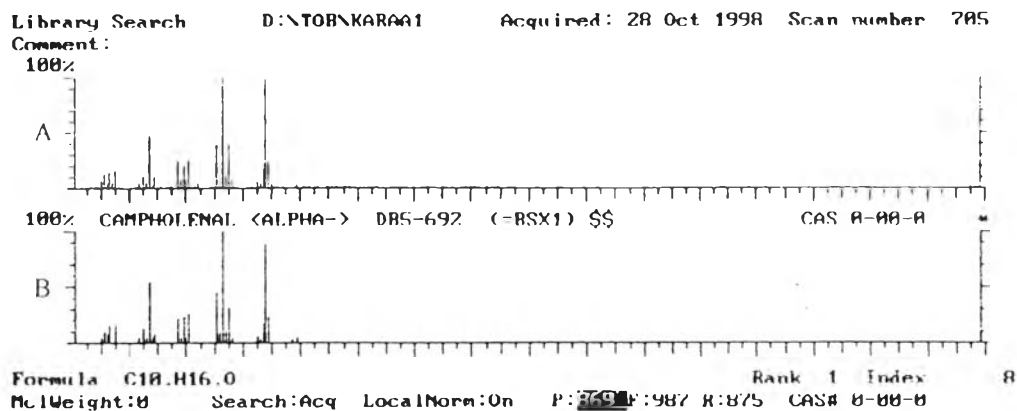


Figure 58 Mass spectra of campholenal α - (A) and authentic campholenal α - (B) by GC-MS

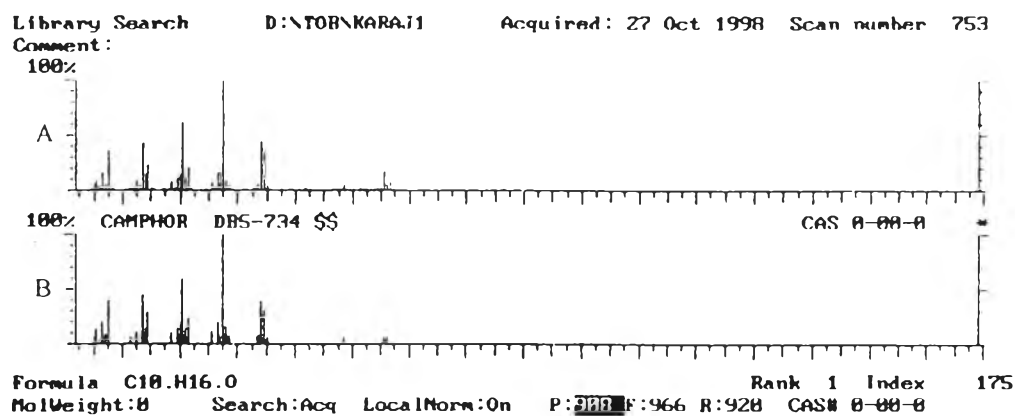


Figure 59 Mass spectra of camphor (A) and authentic camphor (B) by GC-MS

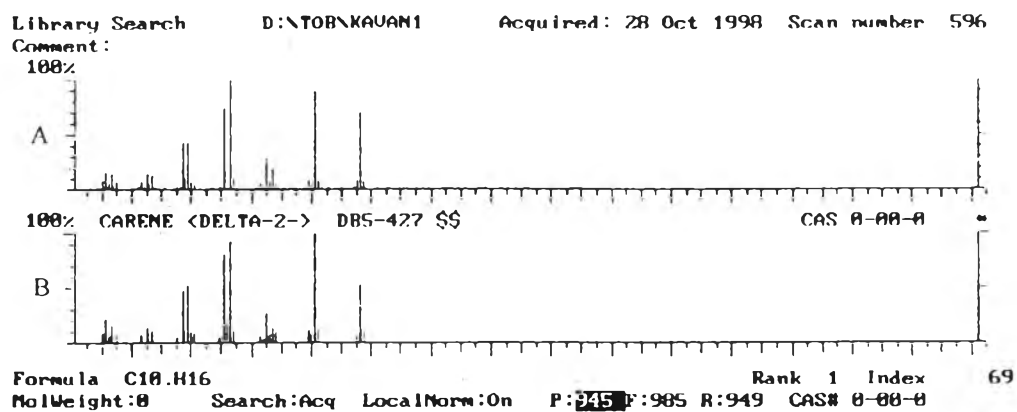


Figure 60 Mass spectra of carene δ -2-> (A) and authentic carene δ -2-> (B) by GC-MS

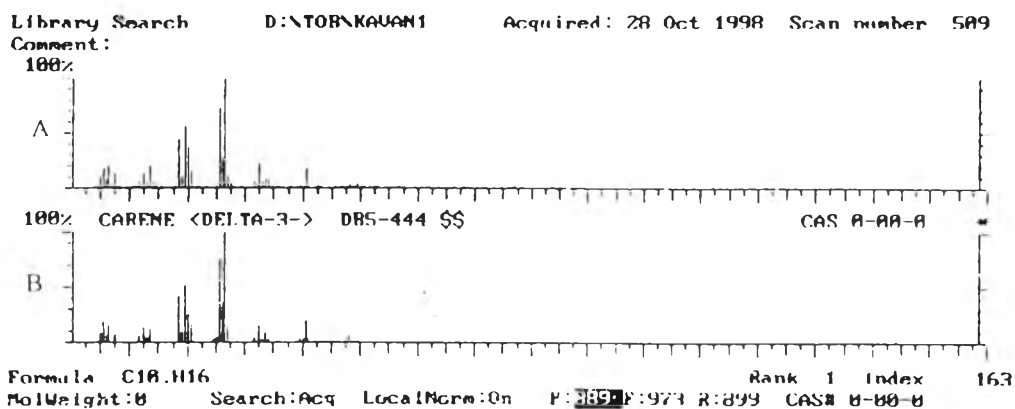


Figure 61 Mass spectra of carene δ -3- (A) and authentic carene δ -3- (B) by GC-MS

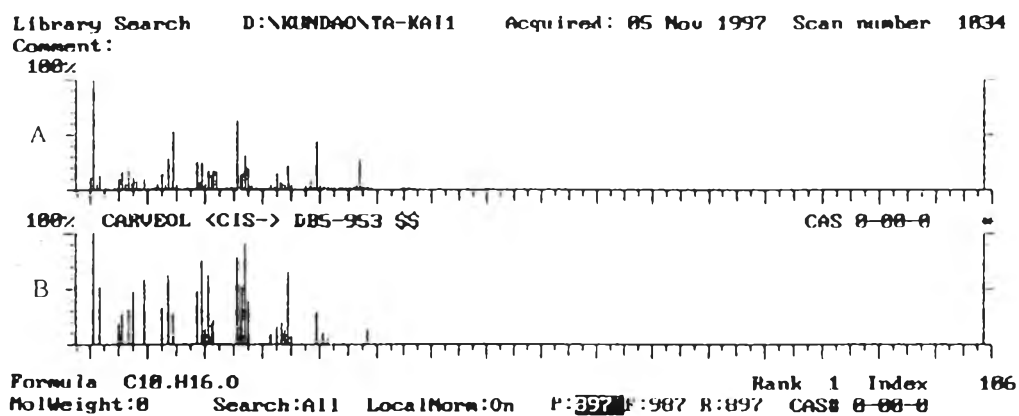


Figure 62 Mass spectra of carveol cis - (A) and authentic carveol cis - (B) by GC-MS

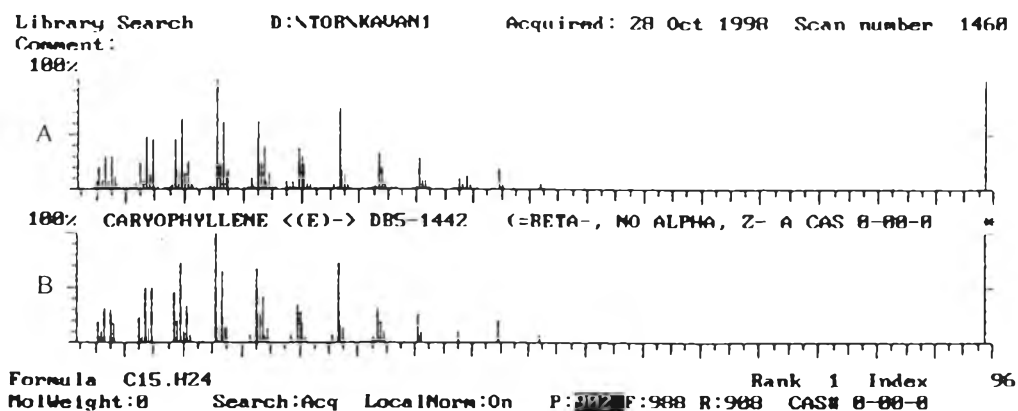


Figure 63 Mass spectra of caryophellene (E) - (A) and authentic caryophellene (E) - (B) by GC-MS

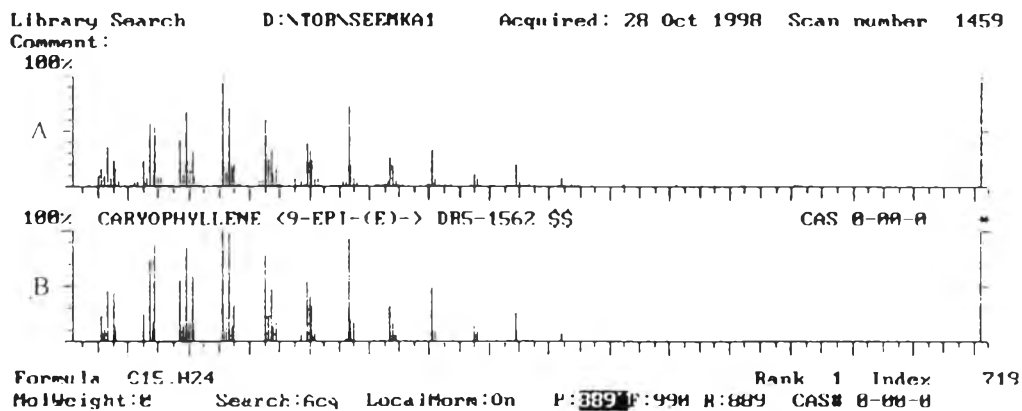


Figure 64 Mass spectra of caryophyllene <9-epi-(E)-> (A) and authentic caryophyllene <9-epi-(E)-> (B) by GC-MS

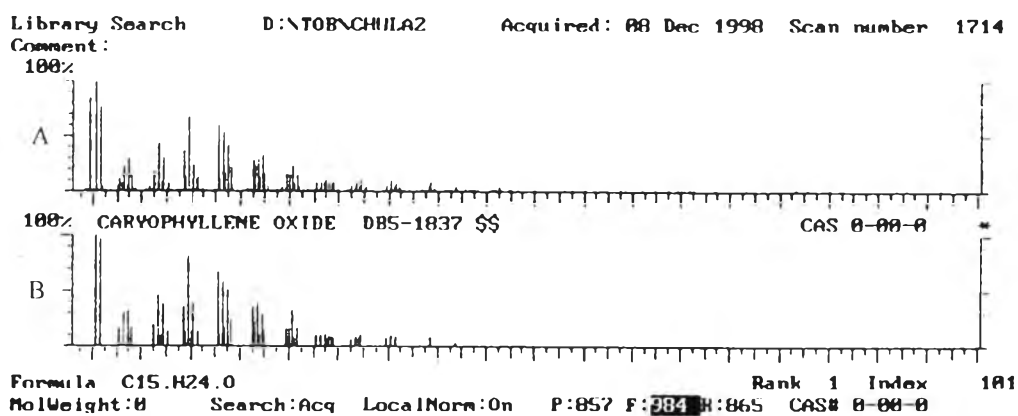


Figure 65 Mass spectra of caryophyllene oxide (A) and authentic caryophyllene oxide (B) by GC-MS

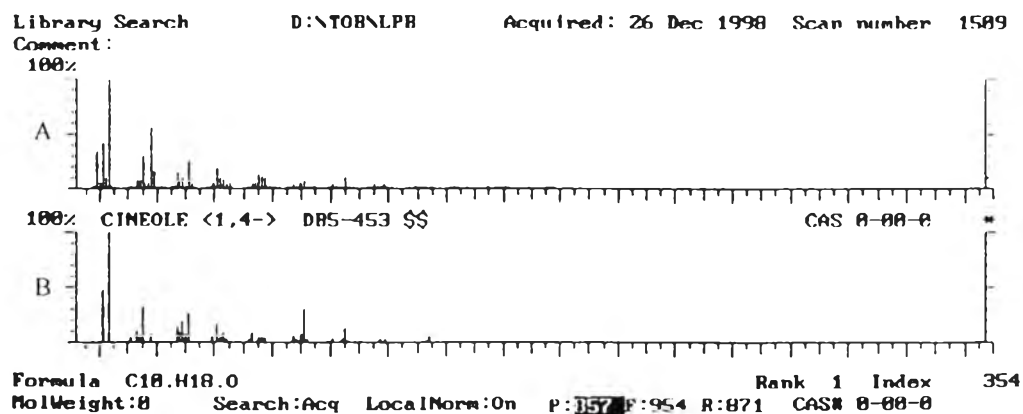


Figure 66 Mass spectra of cineole <1,4-> (A) and authentic cineole <1,4-> (B) by GC-MS

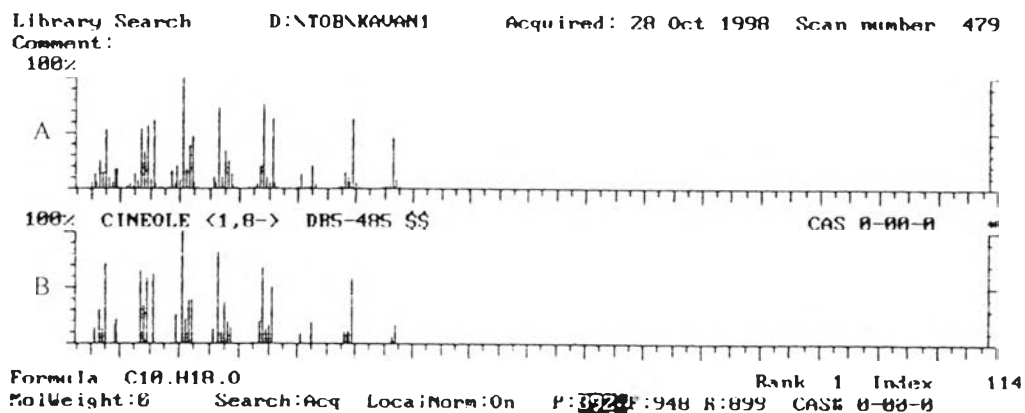


Figure 67 Mass spectra of cineole <1,8-> (A) and authentic cineole <1,8-> (B) by GC-MS

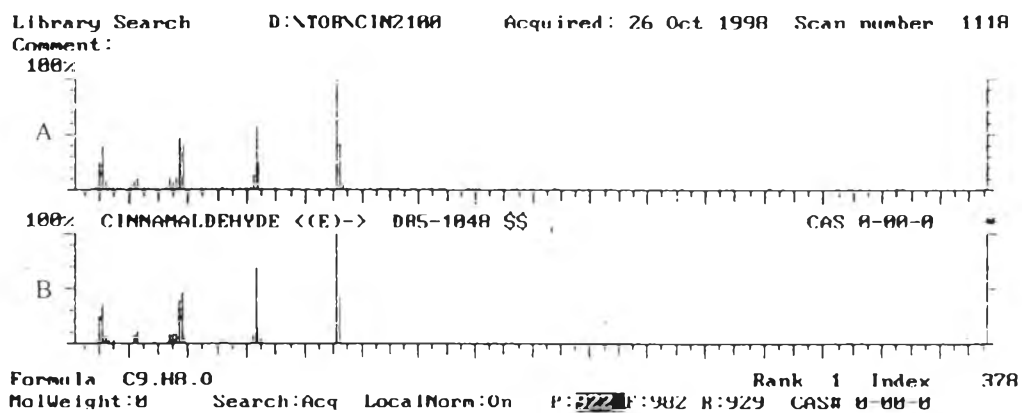


Figure 68 Mass spectra of cinnamaldehyde <(E)-> (A) and authentic cinnamaldehyde <(E)-> (B) by GC-MS

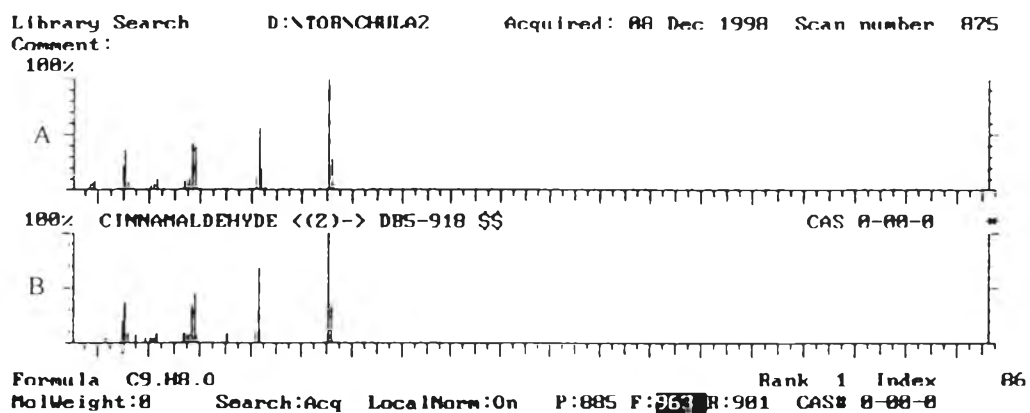


Figure 69 Mass spectra of cinnamaldehyde <(Z)-> (A) and authentic cinnamaldehyde <(Z)-> (B) by GC-MS

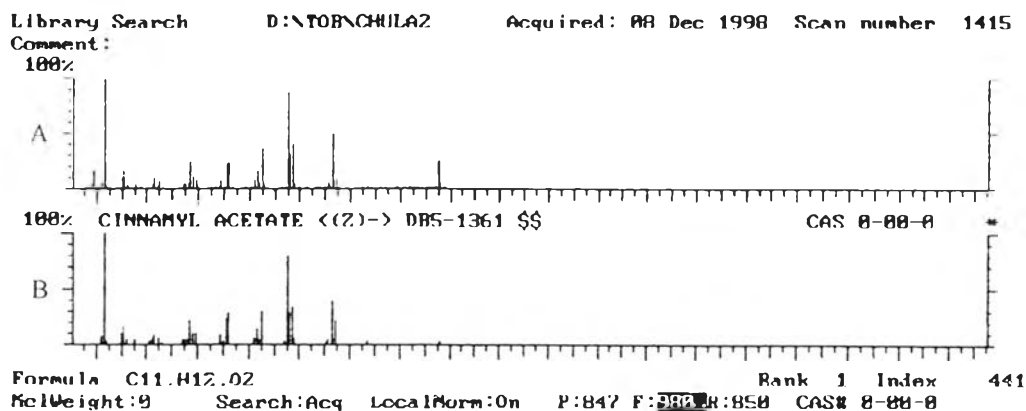


Figure 70 Mass spectra of cinnamyl acetate <(Z)-> (A) and authentic cinnamyl acetate <(Z)-> (B) by GC-MS

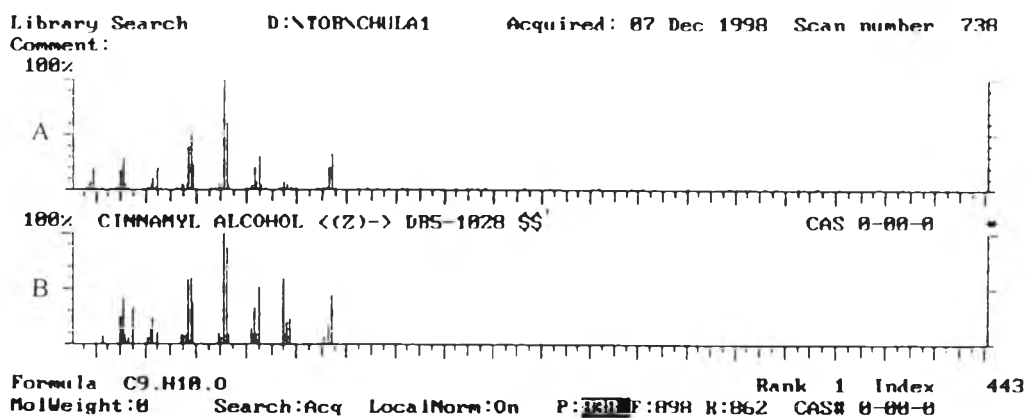


Figure 71 Mass spectra of cinnamyl alcohol <(Z)-> (A) and authentic cinnamyl alcohol <(Z)-> (B) by GC-MS

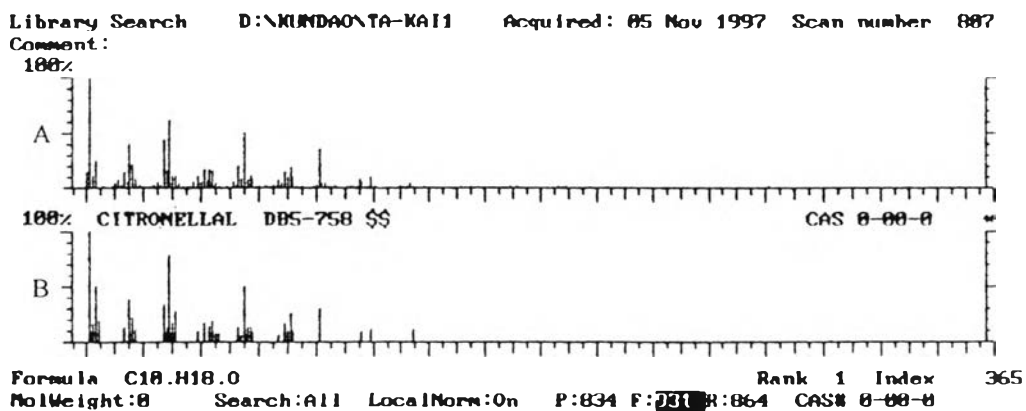


Figure 72 Mass spectra of citronellal (A) and authentic citronellal (B) by GC-MS

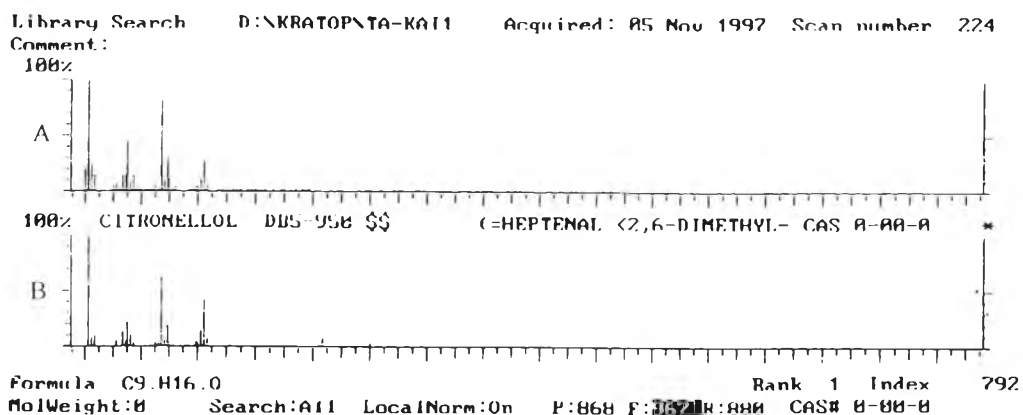


Figure 73 Mass spectra of citronellol (A) and authentic citronellol (B) by GC-MS

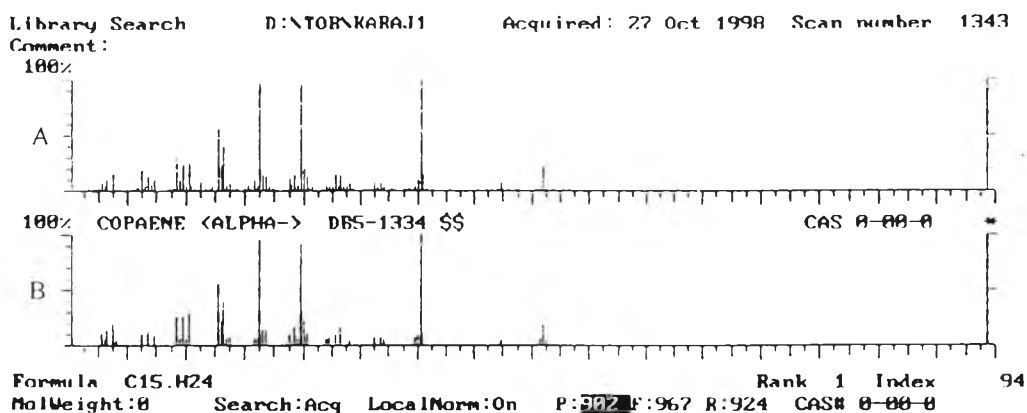


Figure 74 Mass spectra of copaene α - (A) and authentic copaene α - (B) by GC-MS

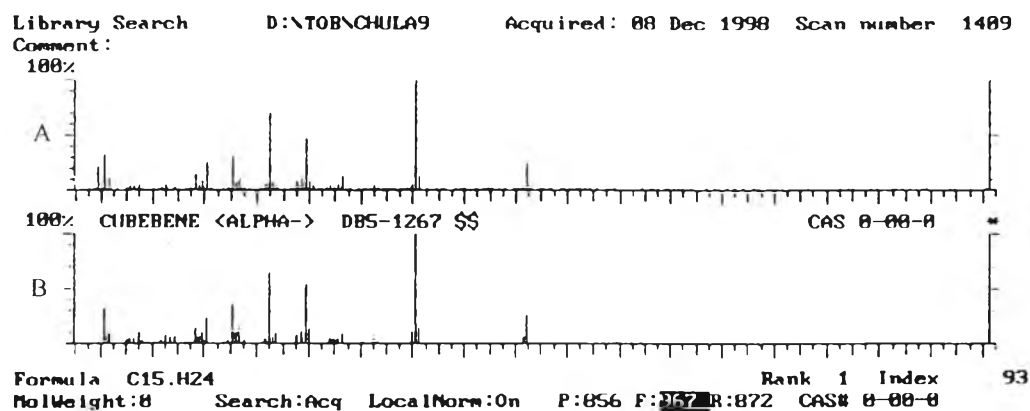


Figure 75 Mass spectra of cubebene α - (A) and authentic cubebene α - (B) by GC-MS

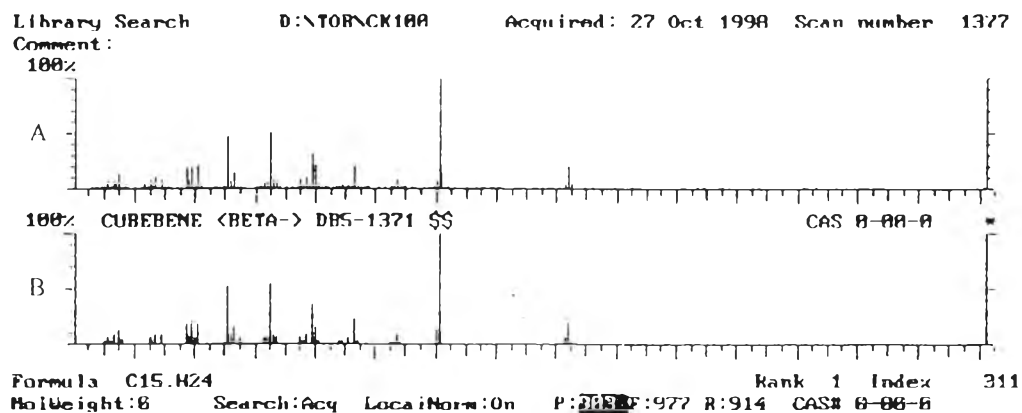


Figure 76 Mass spectra of cubebene β - (A) and authentic cubebene β - (B) by GC-MS

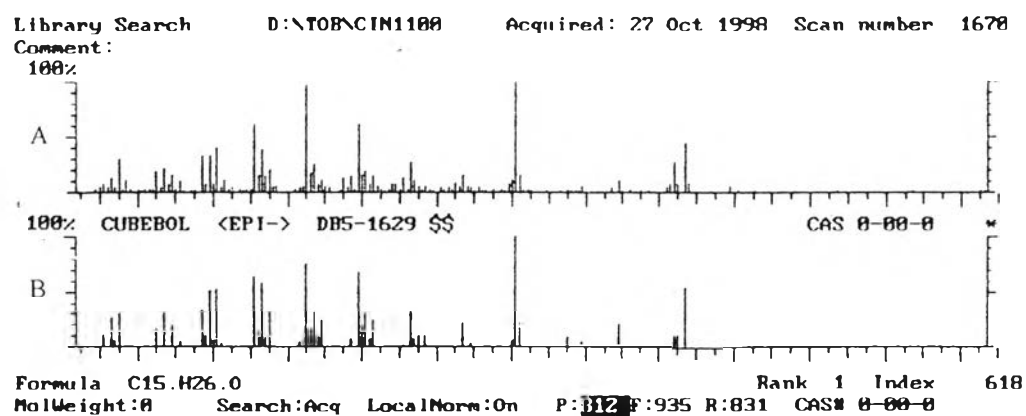


Figure 77 Mass spectra of cubebol epi - (A) and authentic cubebol epi - (B) by GC-MS

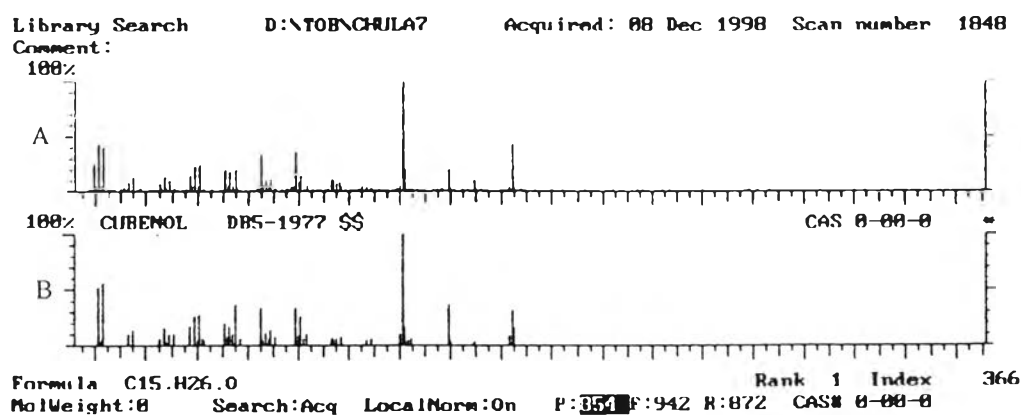


Figure 78 Mass spectra of cubenol (A) and authentic cubenol (B) by GC-MS

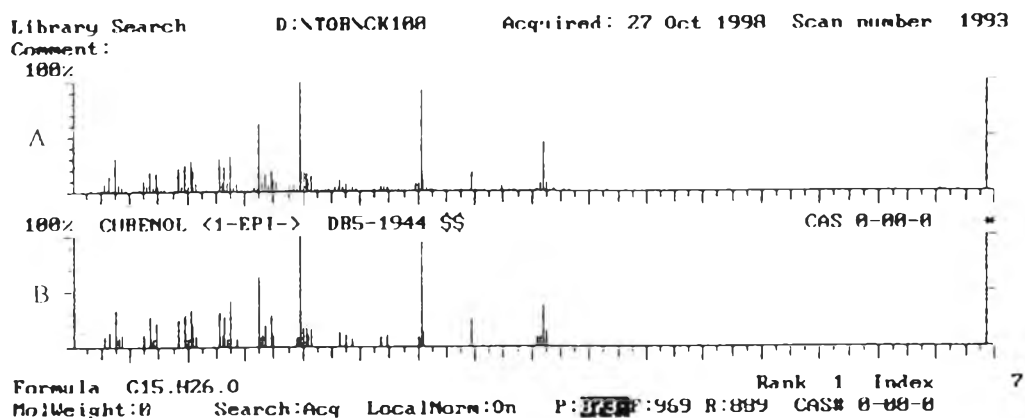


Figure 79 Mass spectra of cubenol $\langle 1\text{-}epi\text{-}$ (A) and authentic cubenol $\langle 1\text{-}epi\text{-}$ (B) by GC-MS

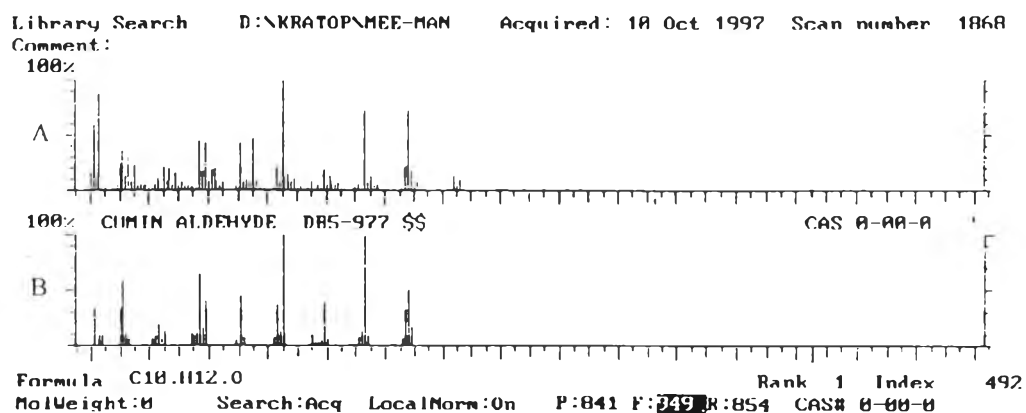


Figure 80 Mass spectra of cuminaldehyde (A) and authentic cuminaldehyde (B) by GC-MS

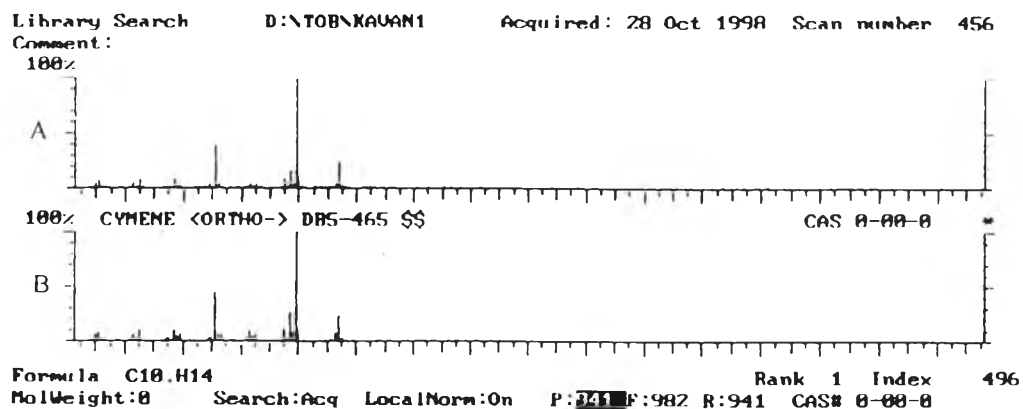


Figure 81 Mass spectra of cymene $\langle o\text{-}$ (A) and authentic cymene $\langle o\text{-}$ (B) by GC-MS

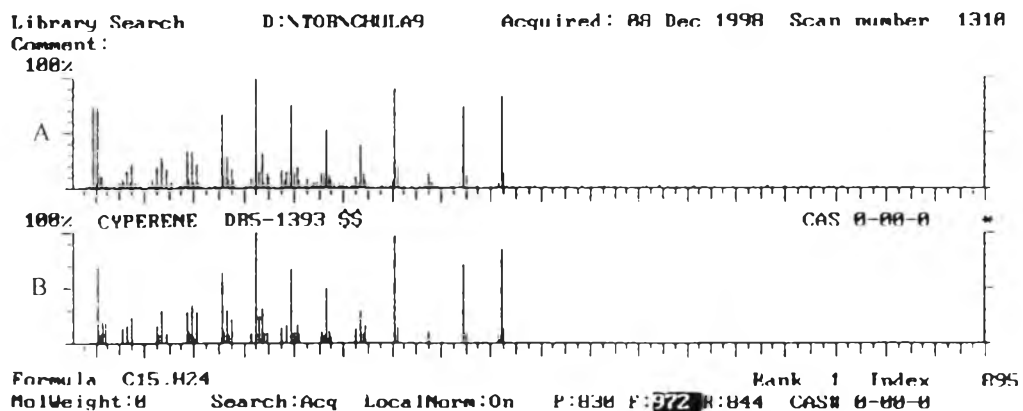


Figure 82 Mass spectra of cyperene (A) and authentic cyperene (B) by GC-MS

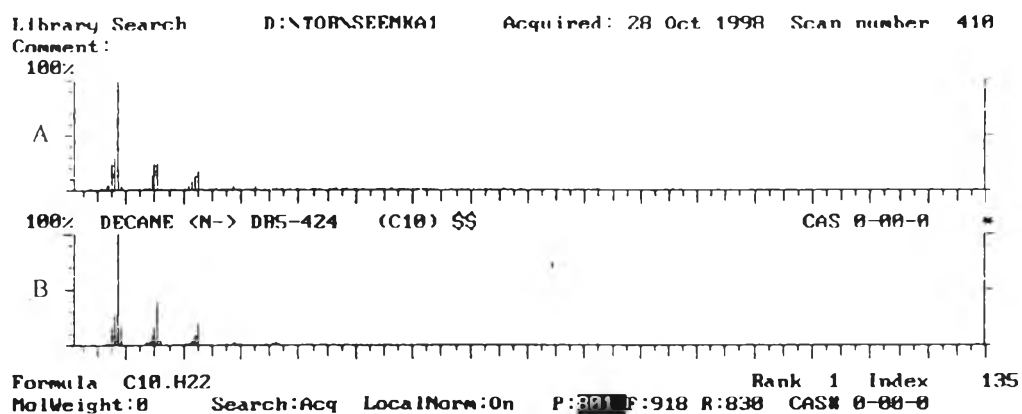


Figure 83 Mass spectra of decane n- (A) and authentic decane n- (B) by GC-MS

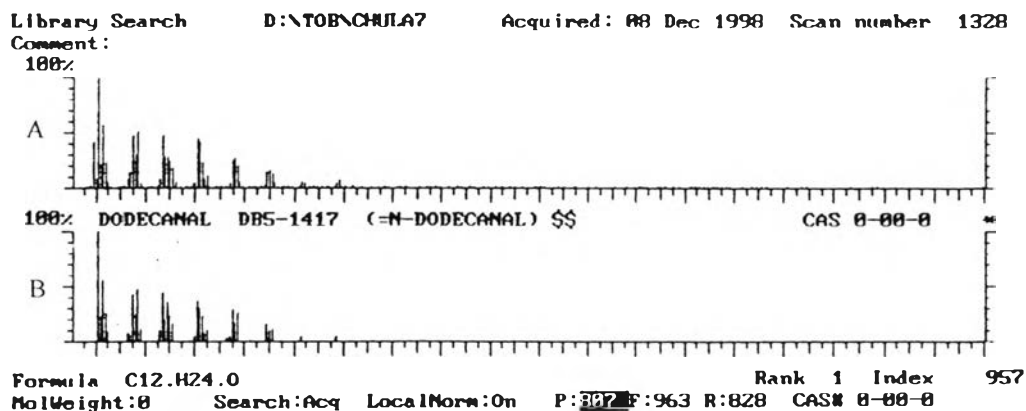


Figure 84 Mass spectra of dodecanal (A) and authentic dodecanal (B) by GC-MS

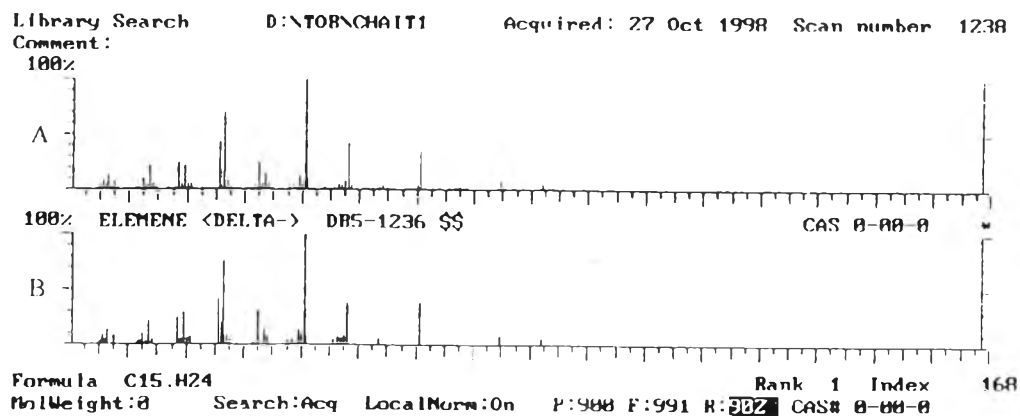


Figure 85 Mass spectra of elemene δ- (A) and authentic elemene δ- (B) by GC-MS

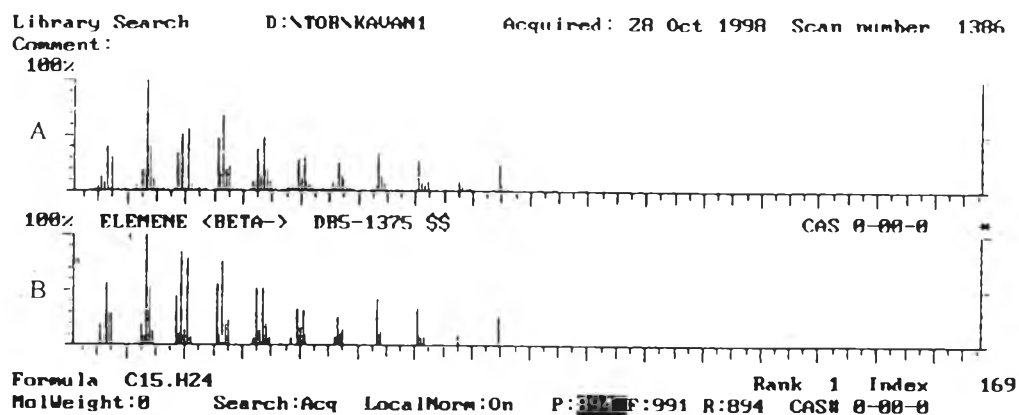


Figure 86 Mass spectra of elemene β- (A) and authentic elemene β- (B) by GC-MS

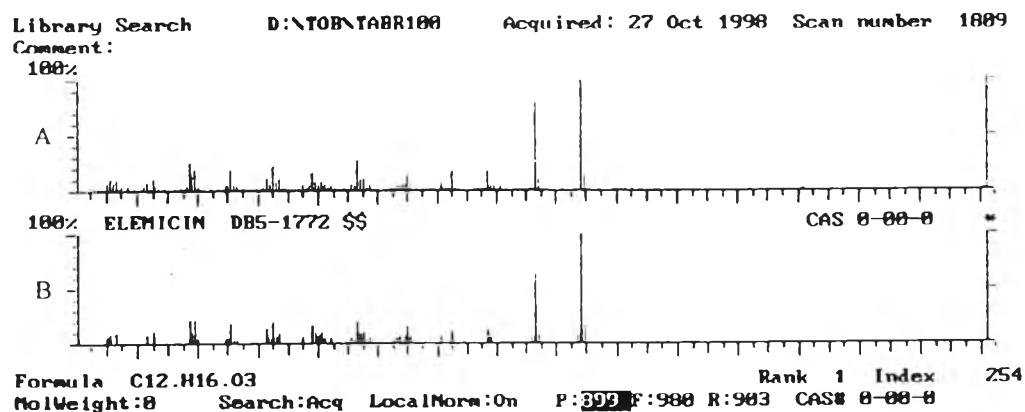


Figure 87 Mass spectra of elemicin (A) and authentic elemicin (B) by GC-MS

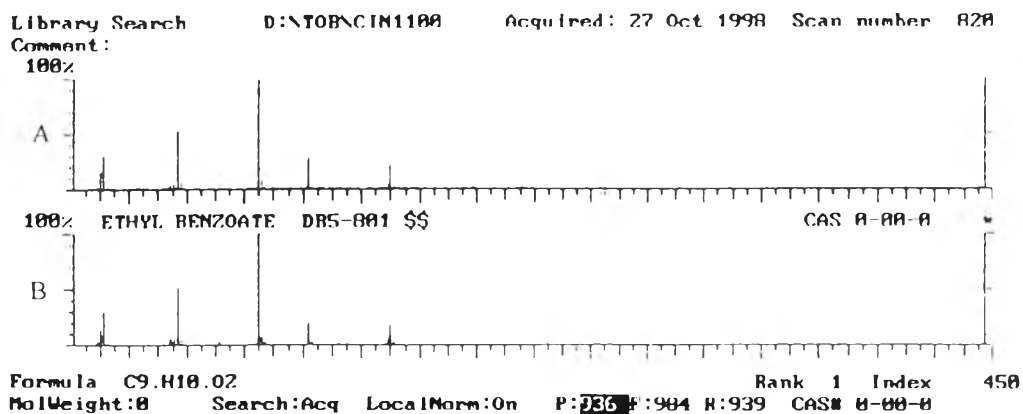


Figure 88 Mass spectra of ethyl benzoate (A) and authentic ethyl benzoate (B) by GC-MS

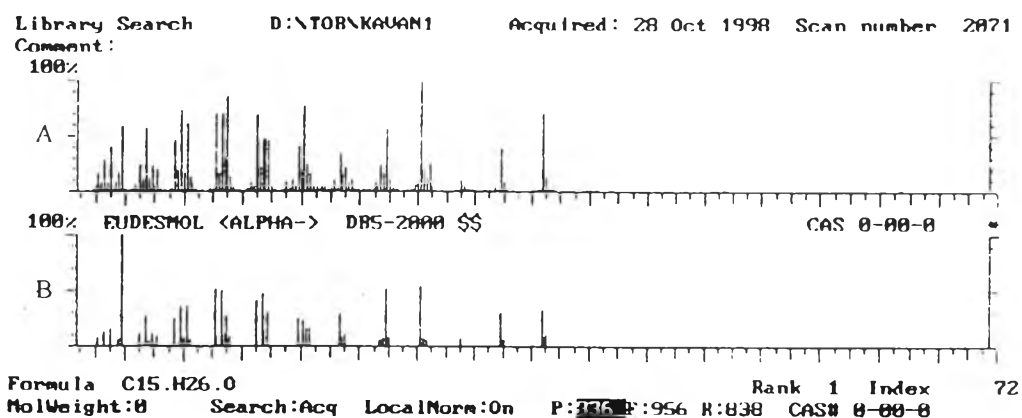


Figure 89 Mass spectra of eudesmol α - (A) and authentic eudesmol α - (B) by GC-MS

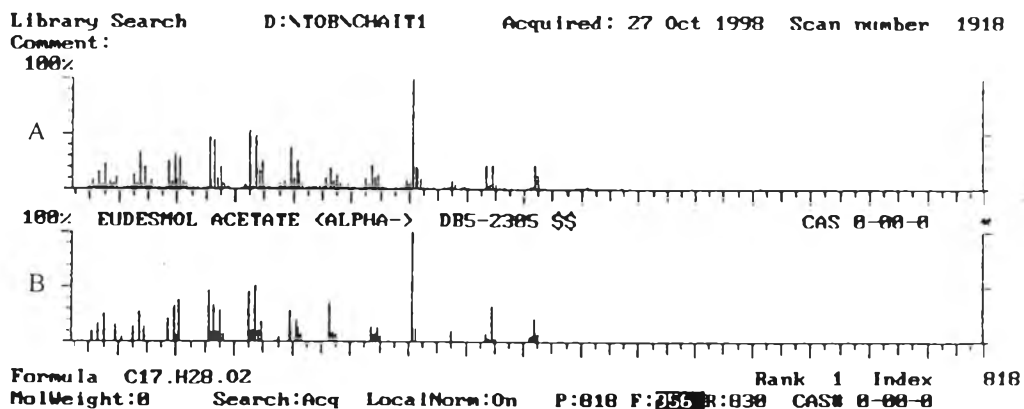


Figure 90 Mass spectra of eudesmol acetate α - (A) and authentic eudesmol acetate α - (B) by GC-MS

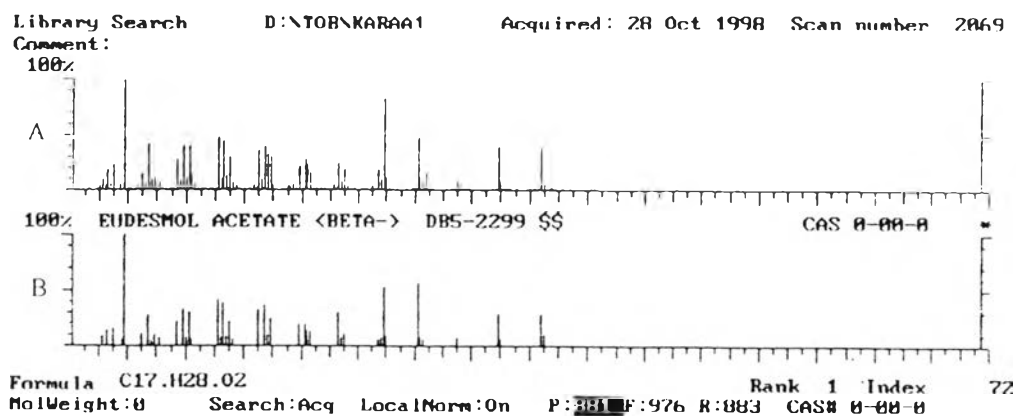


Figure 91 Mass spectra of eudesmol acetate β- (A) and authentic eudesmol acetate β- (B) by GC-MS

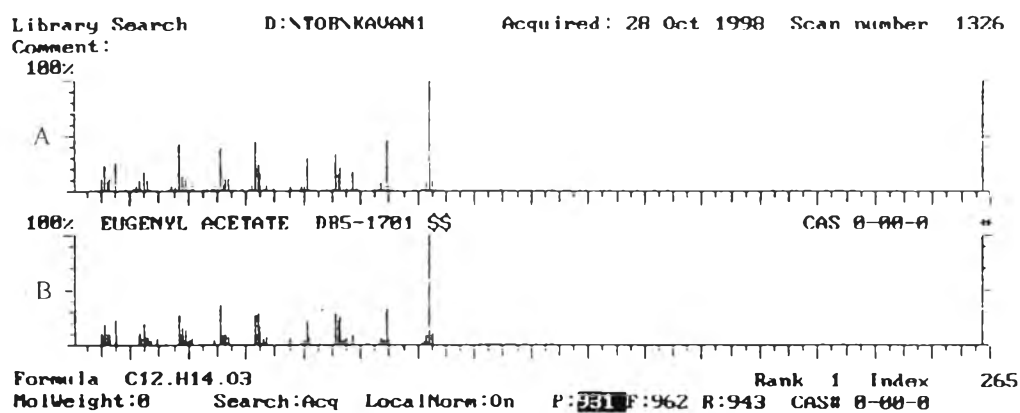


Figure 92 Mass spectra of eugenyl acetate (A) and authentic eugenyl acetate (B) by GC-MS

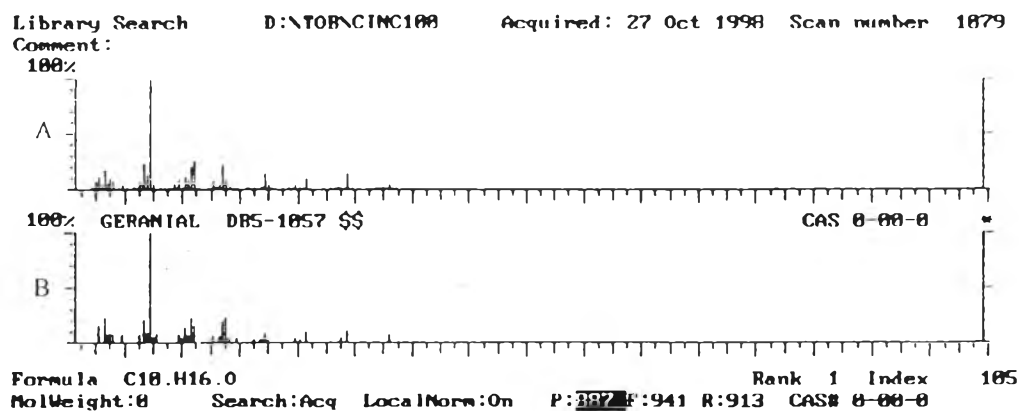


Figure 93 Mass spectra of geranial (A) and authentic geranial (B) by GC-MS

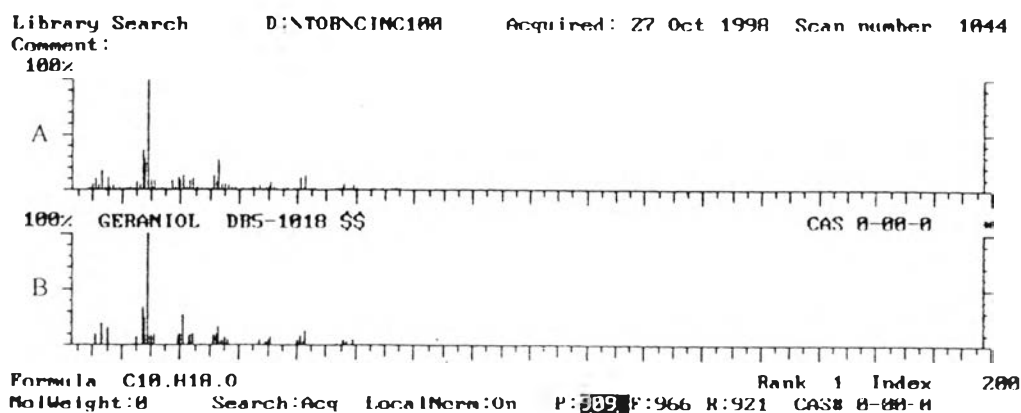


Figure 94 Mass spectra of geraniol (A) and authentic geraniol (B) by GC-MS

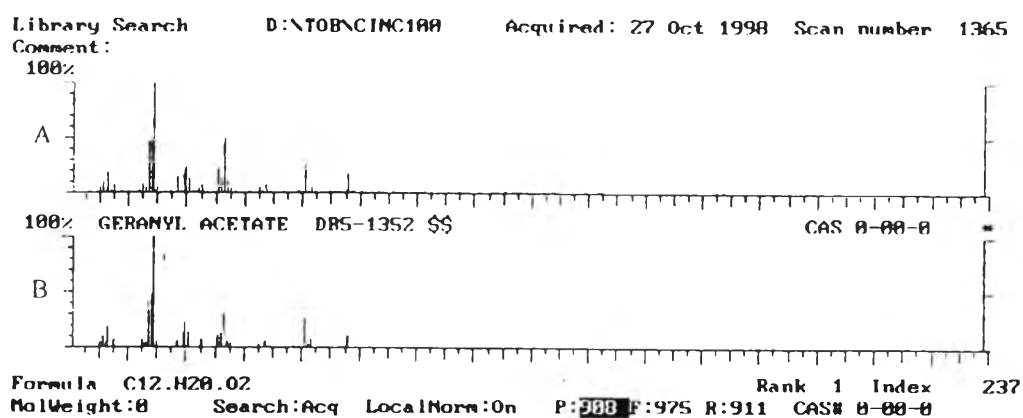


Figure 95 Mass spectra of geranyl acetate (A) and authentic geranyl acetate (B) by GC-MS

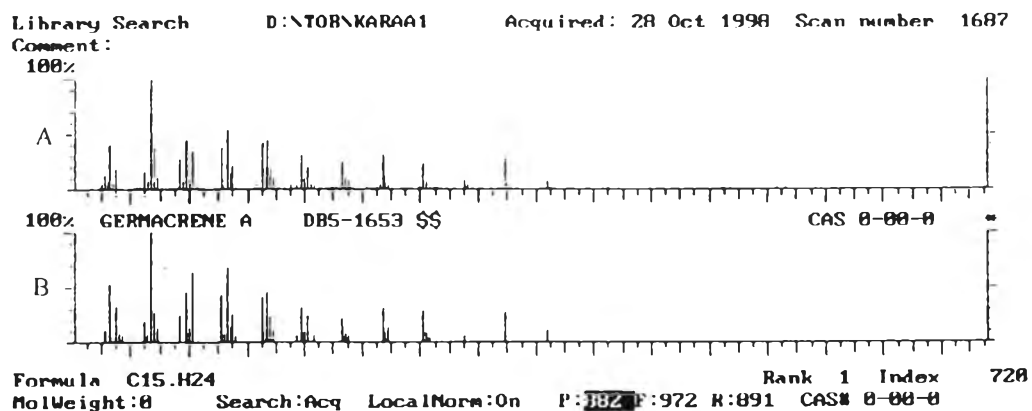


Figure 96 Mass spectra of germacrene A (A) and authentic germacrene A (B) by GC-MS

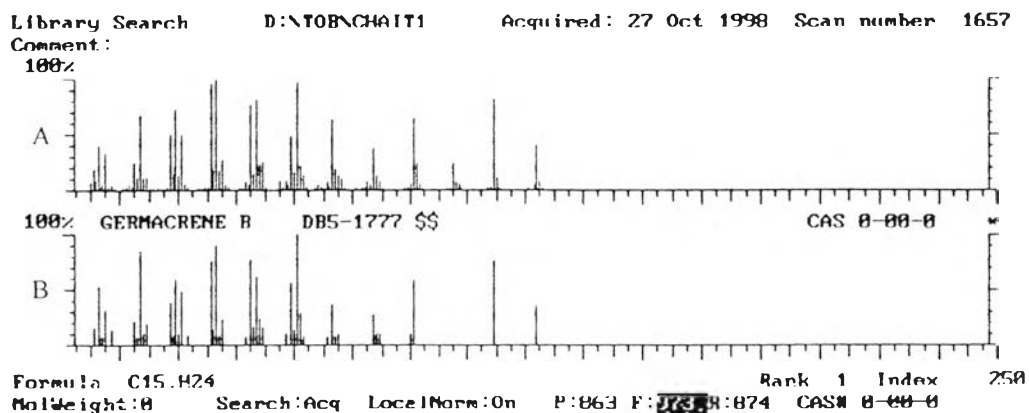


Figure 97 Mass spectra of germacrene B (A) and authentic germacrene B (B) by GC-MS

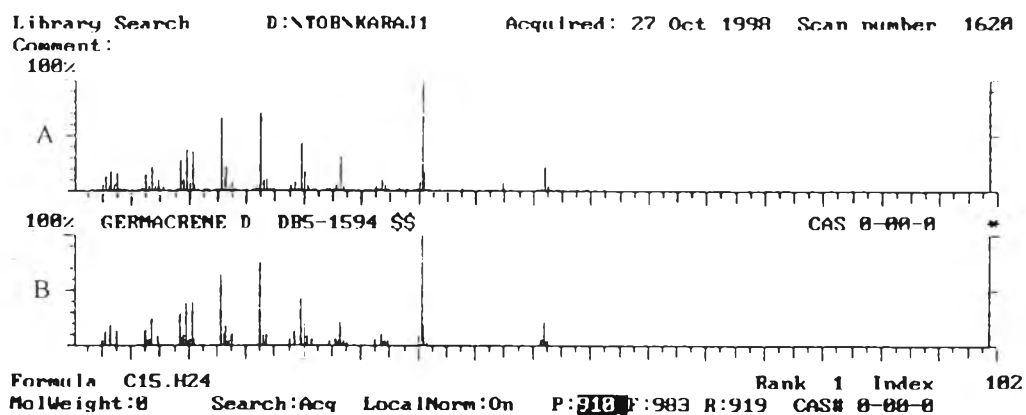


Figure 98 Mass spectra of germacrene D (A) and authentic germacrene D (B) by GC-MS

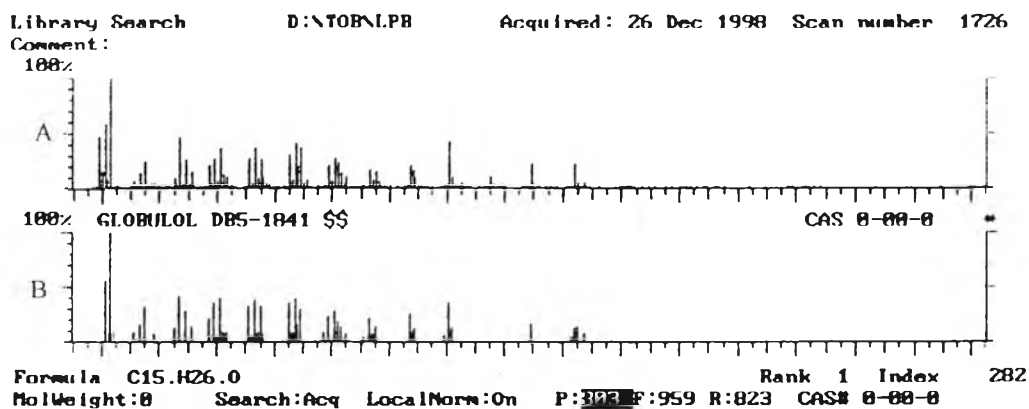


Figure 99 Mass spectra of globulol (A) and authentic globulol (B) by GC-MS

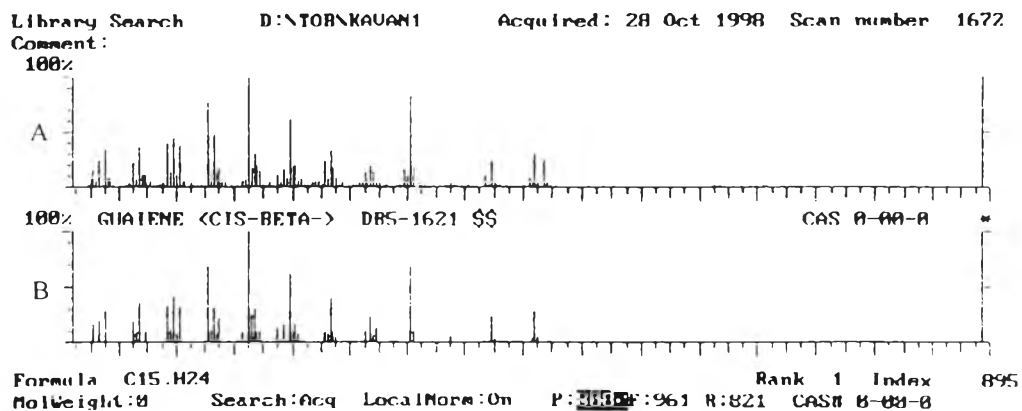


Figure 100 Mass spectra of guaiene < *cis*-β-> (A) and authentic guaiene < *cis*-β-> (B) by GC-MS

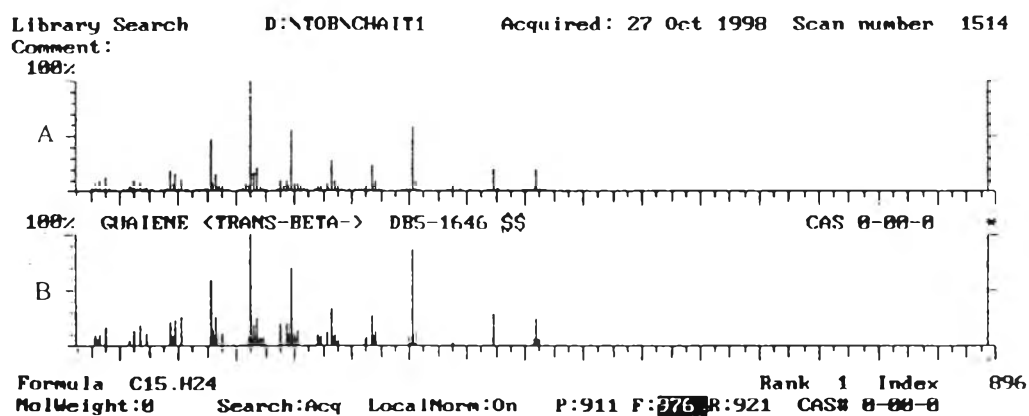


Figure 101 Mass spectra of guaiene < *trans*-β-> (A) and authentic guaiene < *trans*-β-> (B) by GC-MS

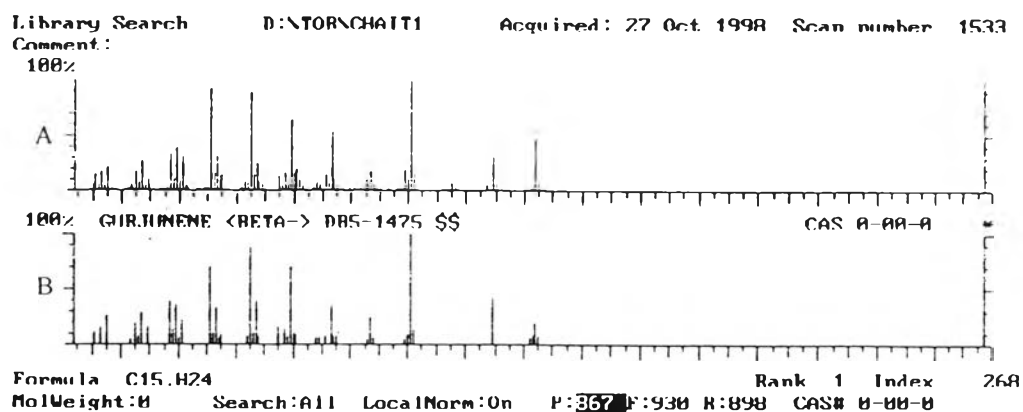


Figure 102 Mass spectra of gurjunene < β-> (A) and authentic gurjunene < β-> (B) by GC-MS

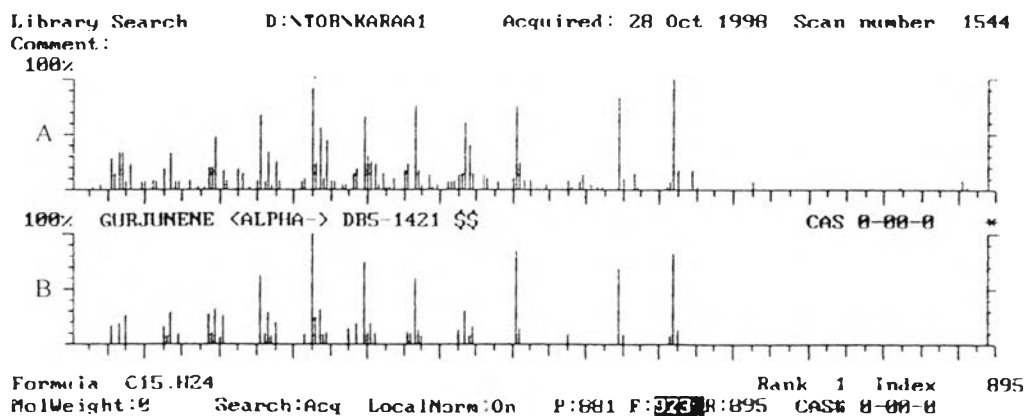


Figure 103 Mass spectra of gurjunene α- (A) and authentic gurjunene α- (B) by GC-MS

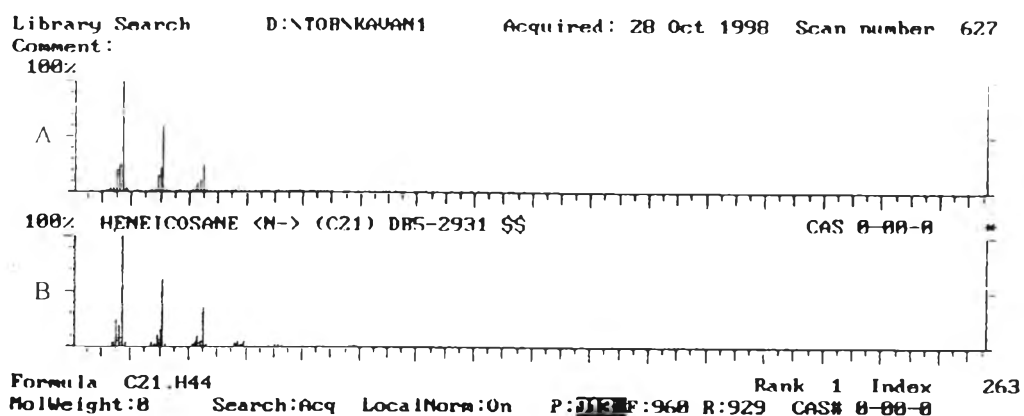


Figure 104 Mass spectra of heneicosane n- (A) and authentic heneicosane n- (B) by GC-MS

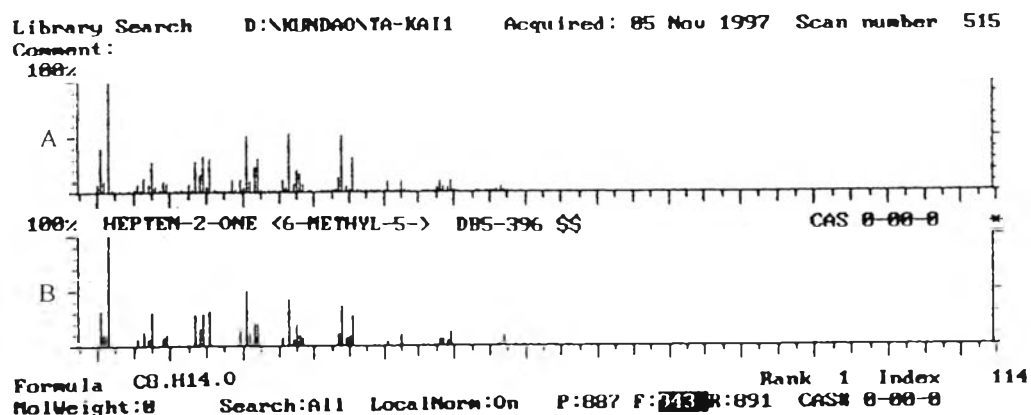


Figure 105 Mass spectra of hepten-2-one 6-methyl-5-> (A) and authentic hepten-2-one 6-methyl-5-> (B) by GC-MS

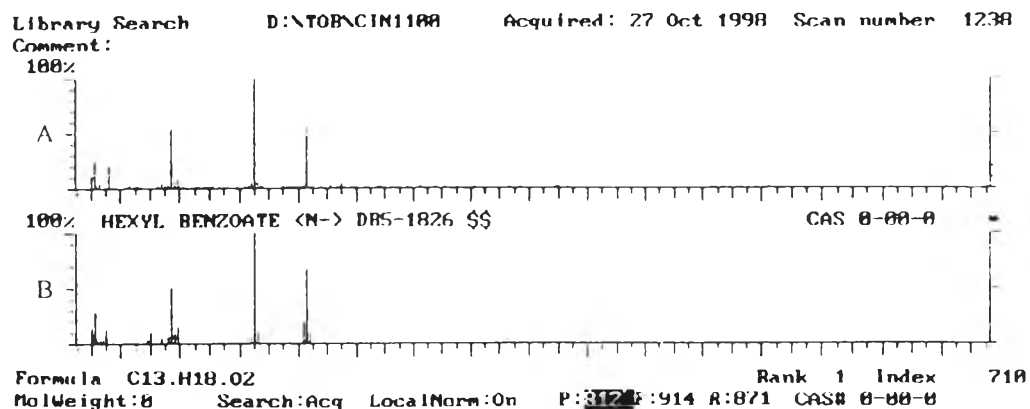


Figure 106 Mass spectra of hexyl benzoate <n-> (A) and authentic hexyl benzoate <n-> (B) by GC-MS

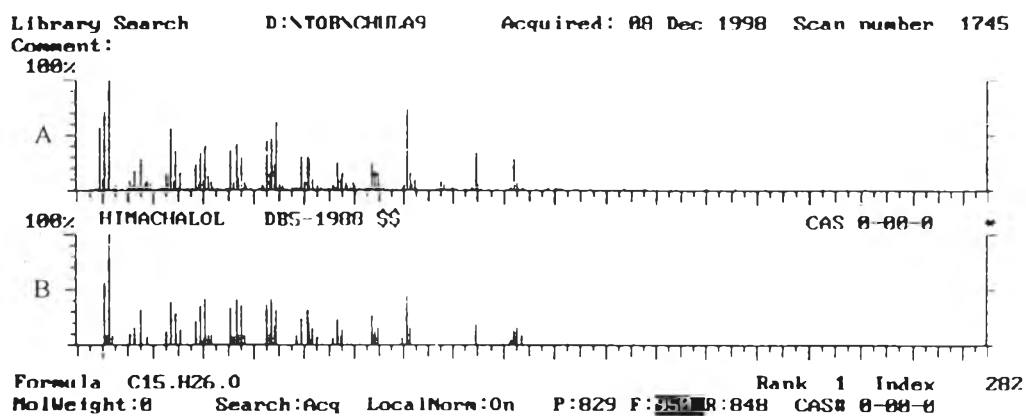


Figure 107 Mass spectra of himachalol (A) and authentic himachalol (B) by GC-MS

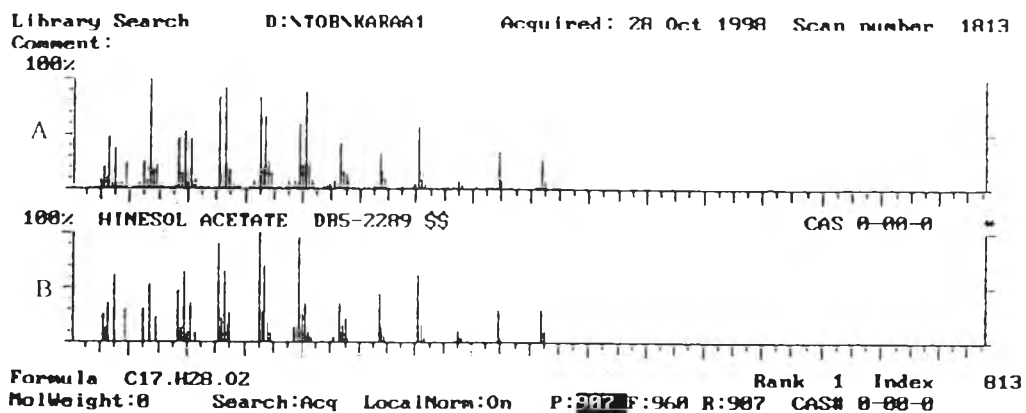


Figure 108 Mass spectra of hinesol acetate (A) and authentic hinesol acetate (B) by GC-MS

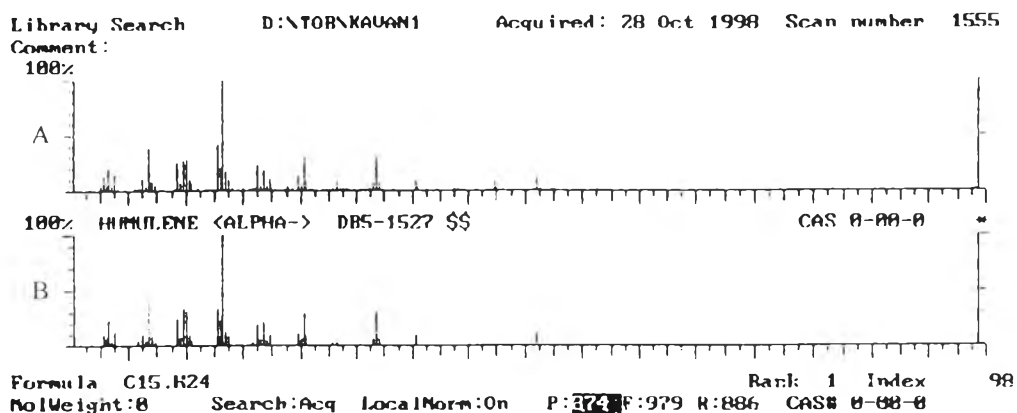


Figure 109 Mass spectra of humulene α (A) and authentic humulene α (B) by GC-MS

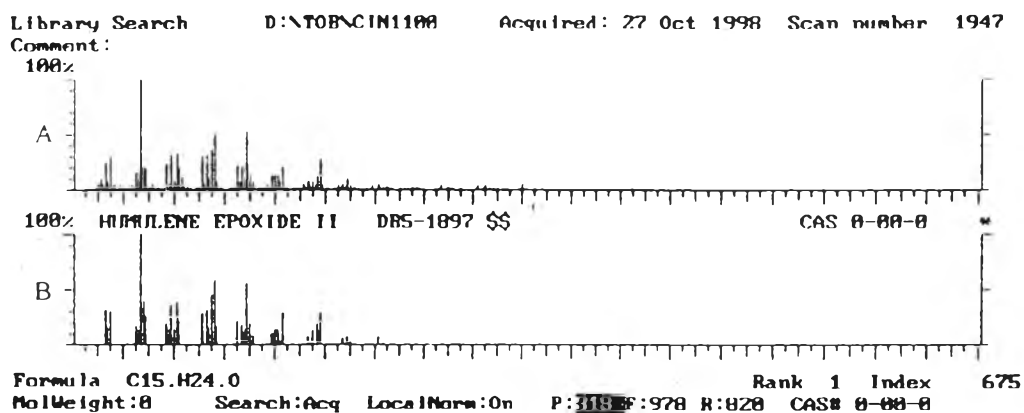


Figure 110 Mass spectra of humulene epoxide II (A) and authentic humulene epoxide II (B) by GC-MS

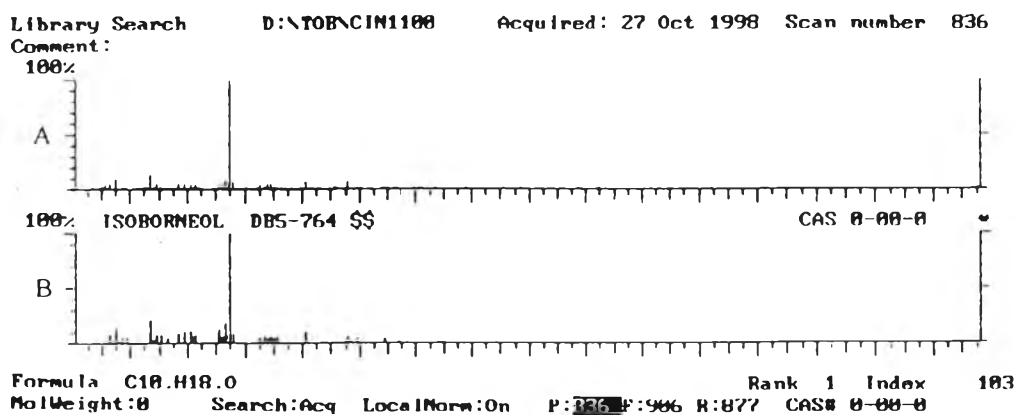


Figure 111 Mass spectra of isoborneol (A) and authentic isoborneol (B) by GC-MS

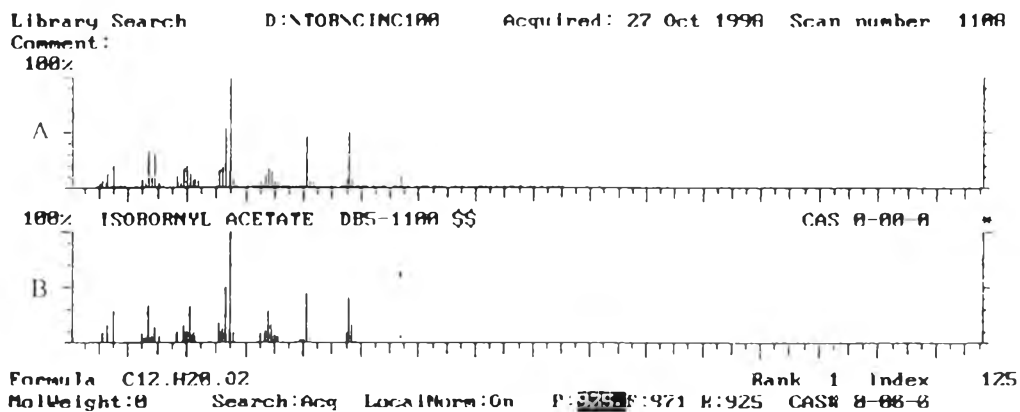


Figure 112 Mass spectra of isobornyl acetate (A) and authentic isobornyl acetate (B) by GC-MS

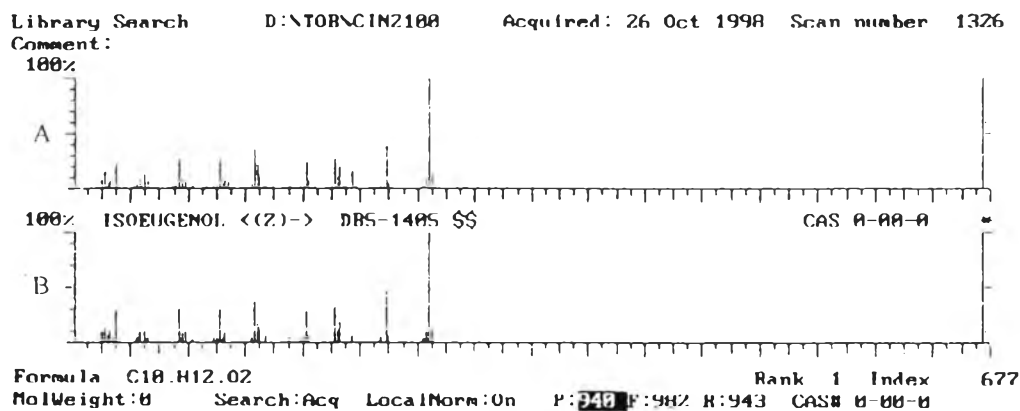


Figure 113 Mass spectra of isoeugenol <(Z)-> (A) and authentic isoeugenol <(Z)-> (B) by GC-MS

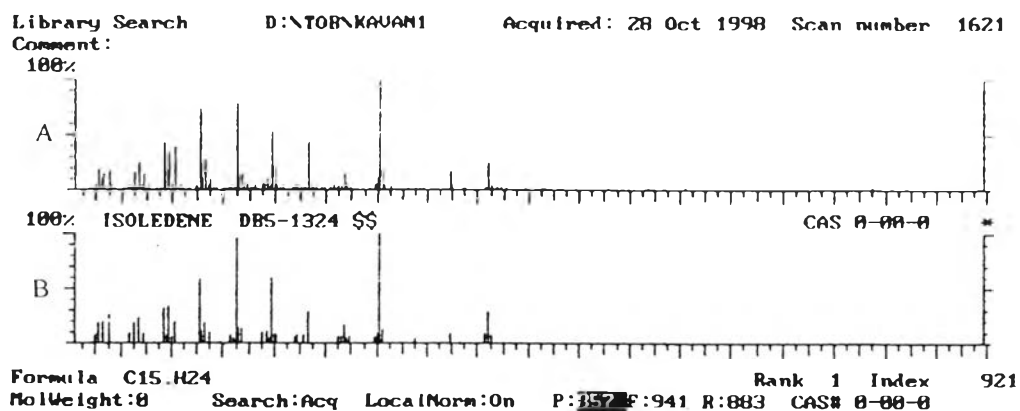


Figure 114 Mass spectra of isolekene (A) and authentic isolekene (B) by GC-MS

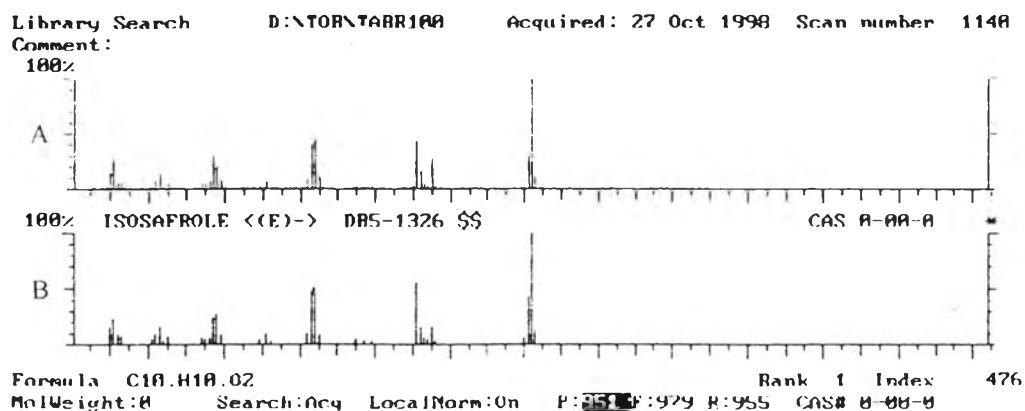


Figure 115 Mass spectra of isosafrole <(E)-> (A) and authentic isosafrole <(E)-> (B) by GC-MS

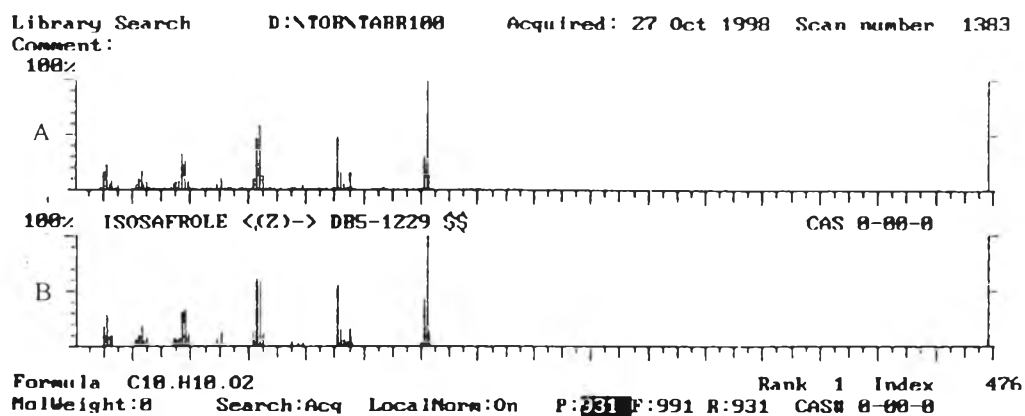


Figure 116 Mass spectra of isosafrole <(Z)-> (A) and authentic isosafrole <(Z)-> (B) by GC-MS

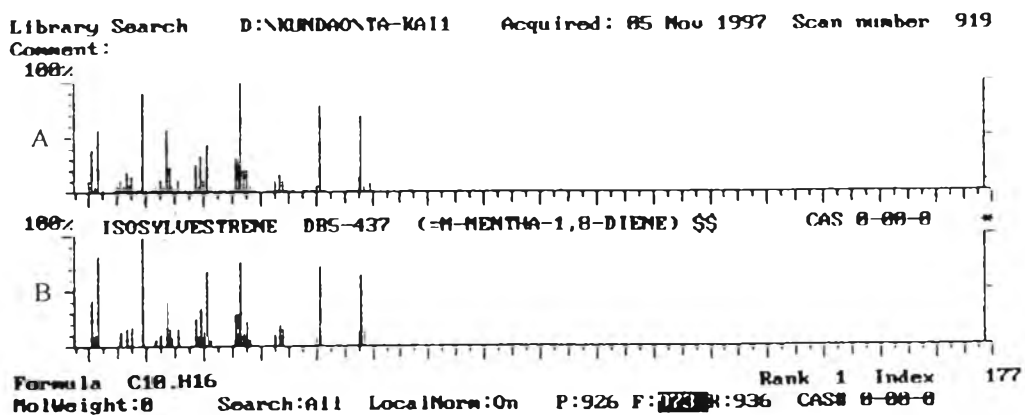


Figure 117 Mass spectra of isosylvestrene (A) and authentic isosylvestrene (B) by GC-MS

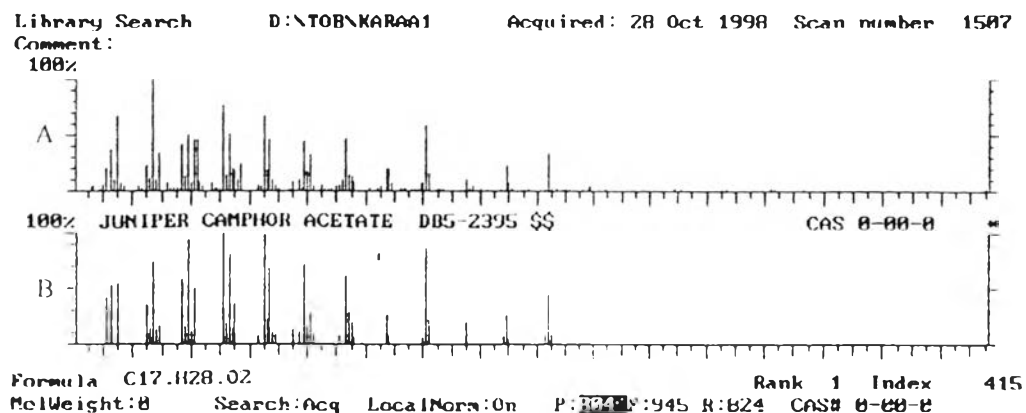


Figure 118 Mass spectra of juniper camphor acetate (A) and authentic juniper camphor acetate (B) by GC-MS

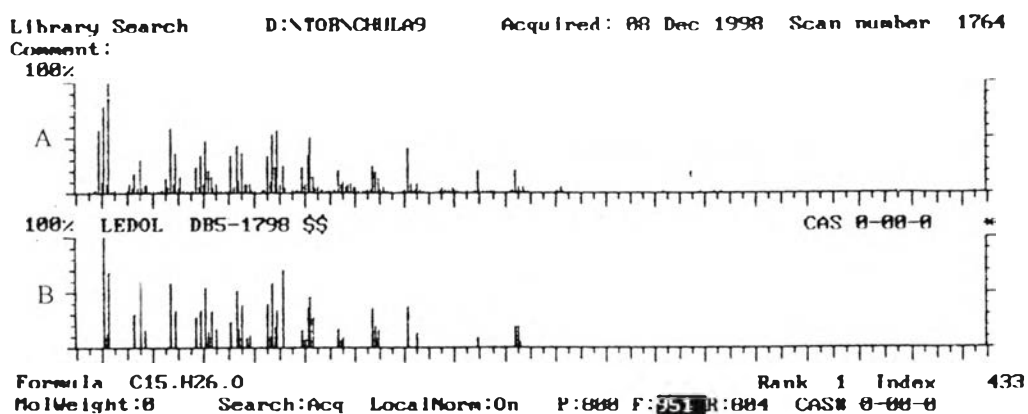


Figure 119 Mass spectra of ledol (A) and authentic ledol (B) by GC-MS

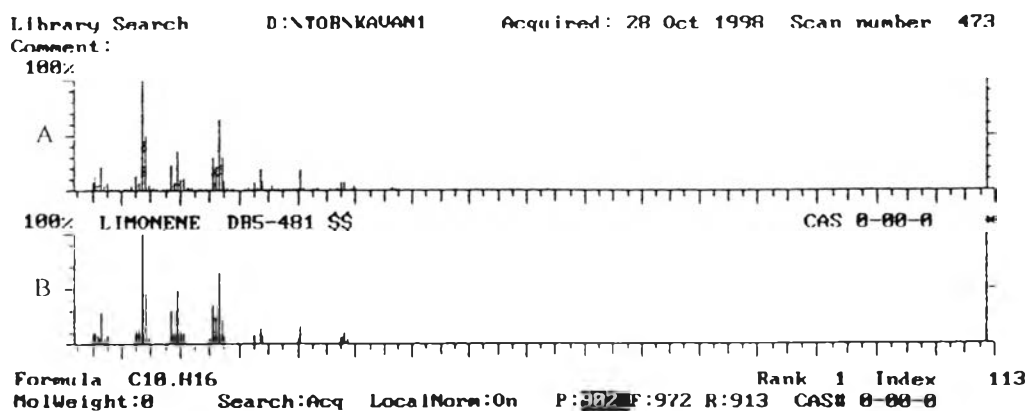


Figure 120 Mass spectra of limonene (A) and authentic limonene (B) by GC-MS

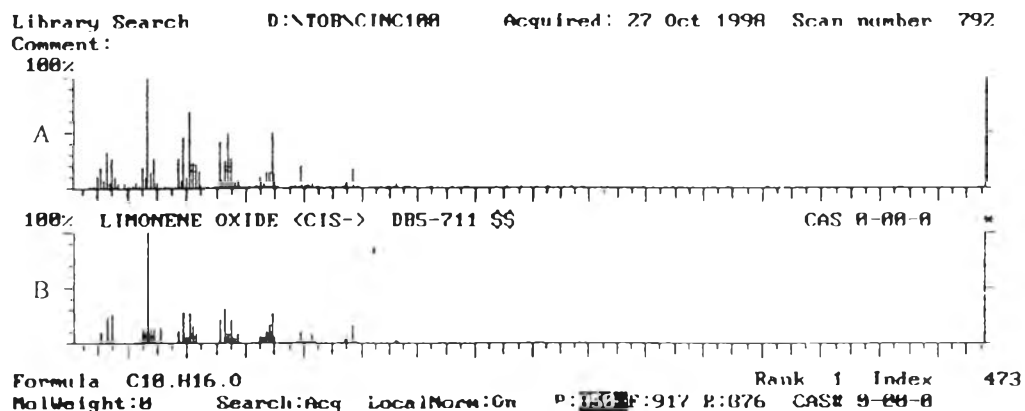


Figure 121 Mass spectra of limonene oxide < cis-> (A) and authentic limonene oxide < cis-> (B) by GC-MS

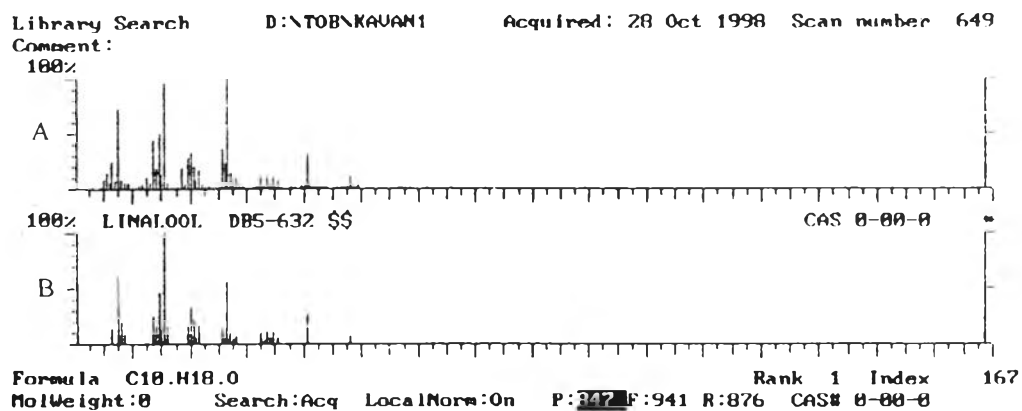


Figure 122 Mass spectra of linalool (A) and authentic linalool (B) by GC-MS

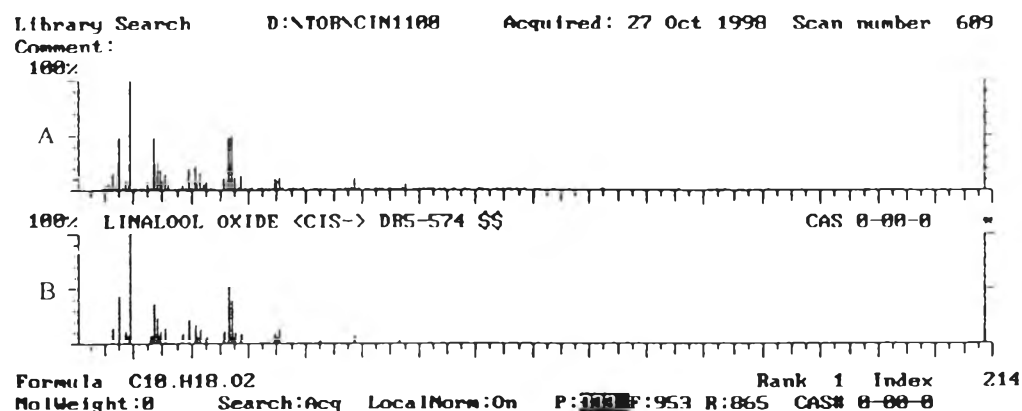


Figure 123 Mass spectra of linalool oxide < cis-> (A) and authentic linalool oxide < cis-> (B) by GC-MS

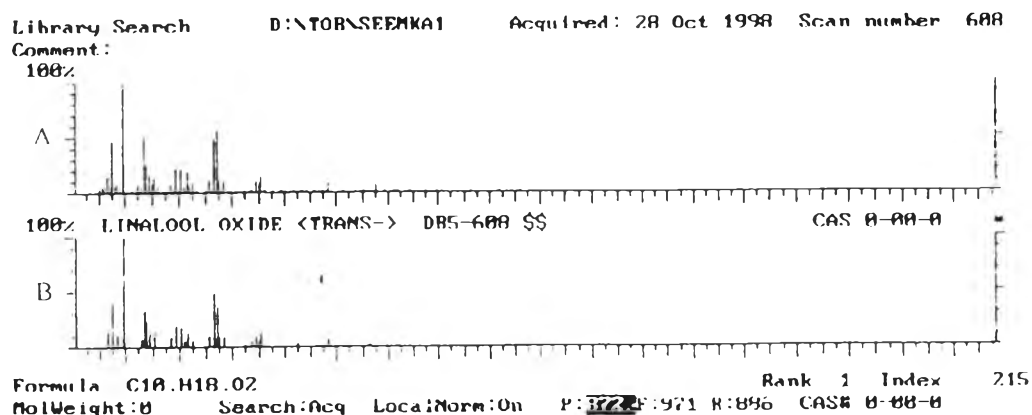


Figure 124 Mass spectra of linalool oxide <trans> (A) and authentic linalool oxide <trans> (B) by GC-MS

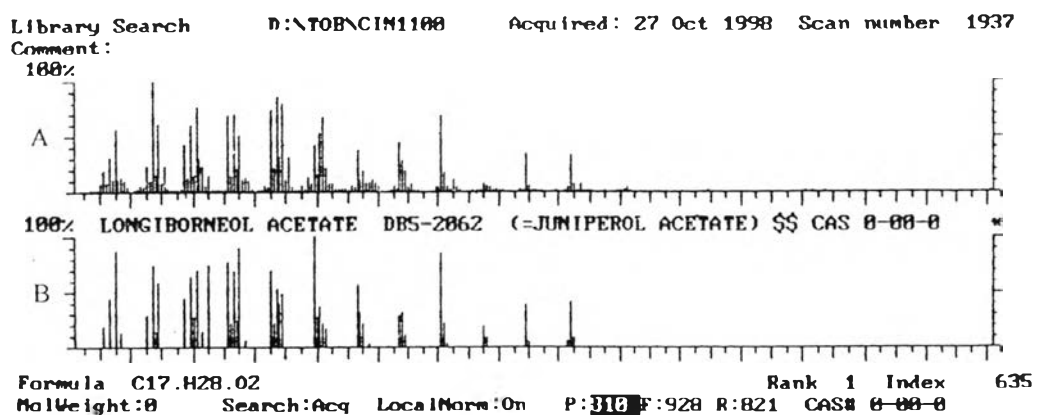


Figure 125 Mass spectra of longiborneol acetate (A) and authentic longiborneol acetate (B) by GC-MS

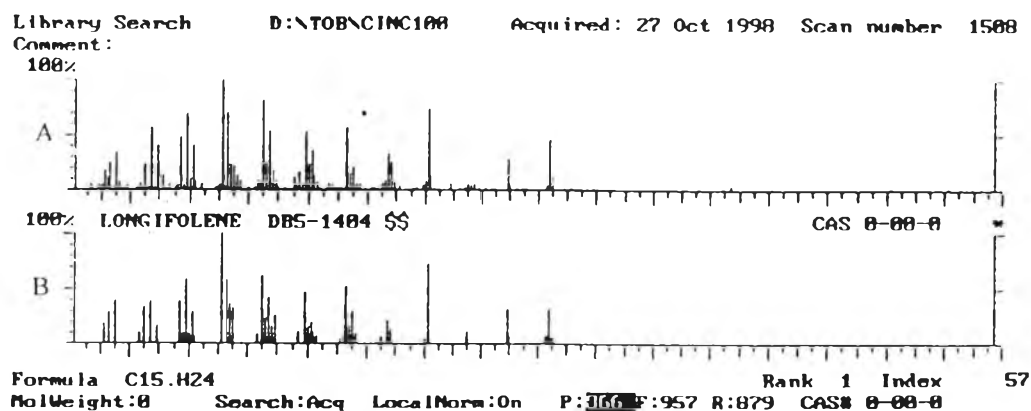


Figure 126 Mass spectra of longifolene (A) and authentic longifolene (B) by GC-MS

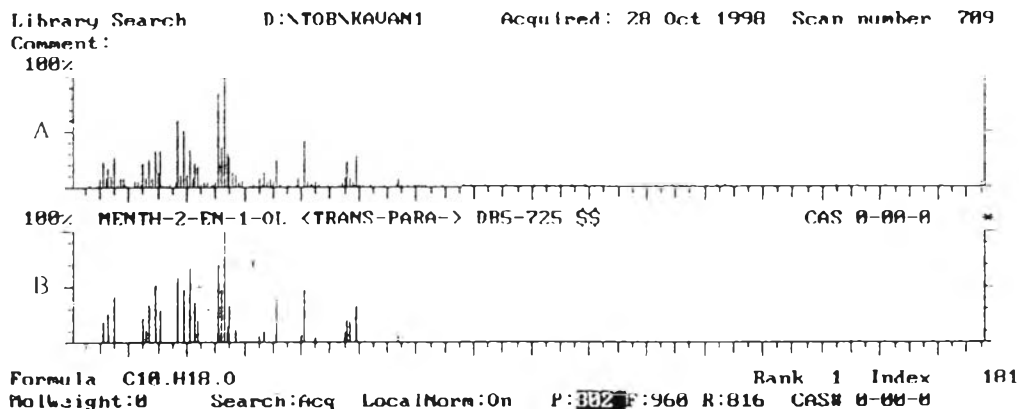


Figure 127 Mass spectra of menth-2-en-1-ol <trans-para> (A) and authentic menth-2-en-1-ol <trans-para> (B) by GC-MS

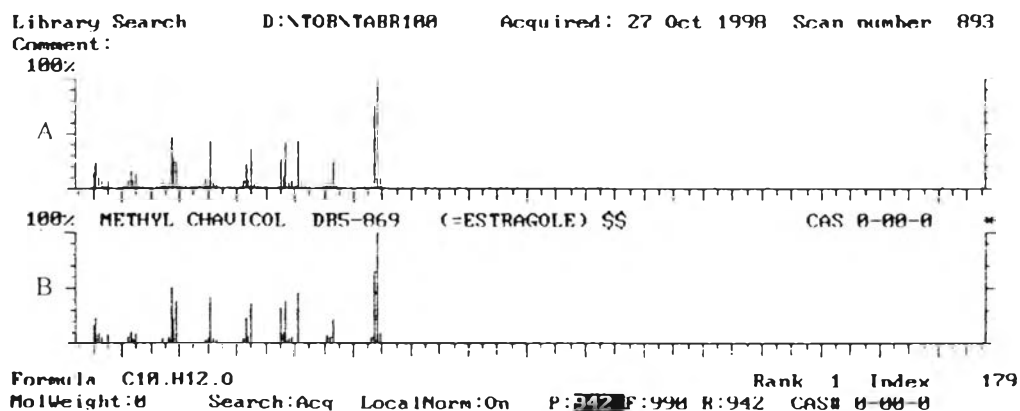


Figure 128 Mass spectra of methyl chavicol (A) and authentic methyl chavicol (B) by GC-MS

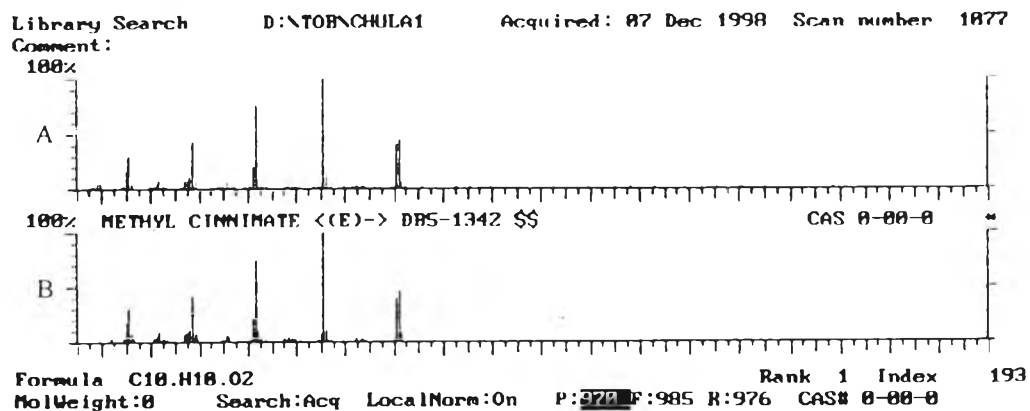


Figure 129 Mass spectra of methyl cinnamate <E>-> (A) and authentic methyl cinnamate <E>-> (B) by GC-MS

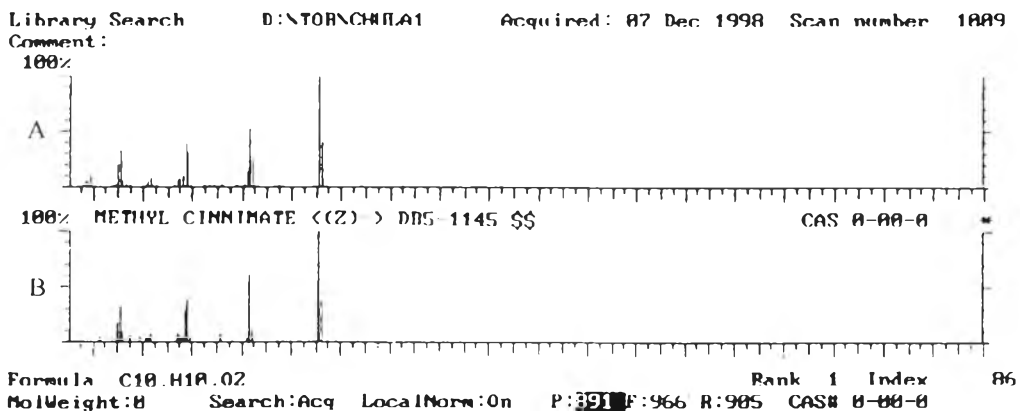


Figure 130 Mass spectra of methyl cinnamate <(Z)> (A) and authentic methyl cinnamate <(Z)> (B) by GC-MS

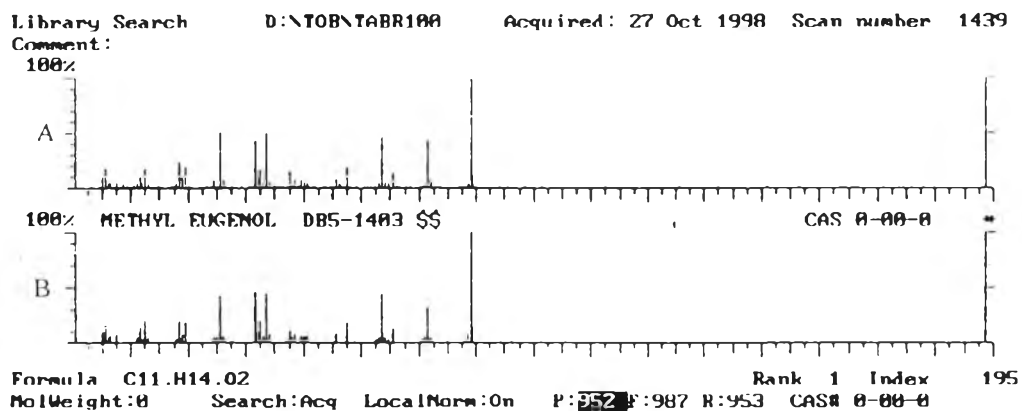


Figure 131 Mass spectra of methyl eugenol (A) and authentic methyl eugenol (B) by GC-MS

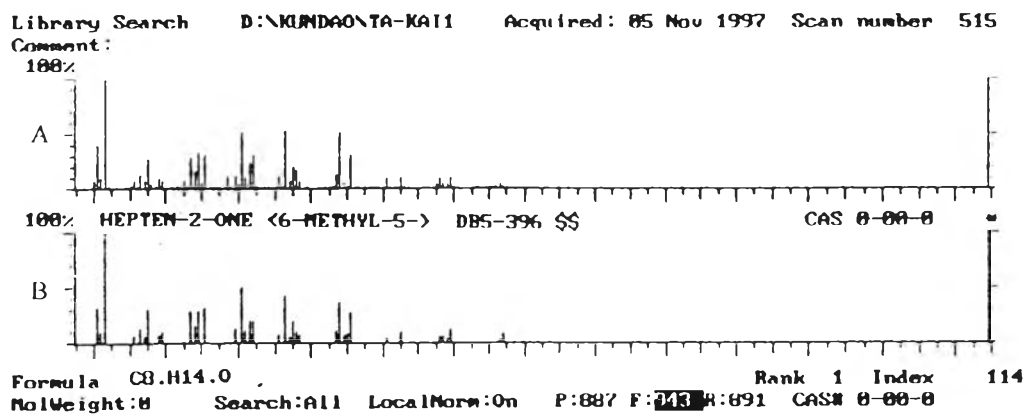


Figure 132 Mass spectra of 6-methyl-5-hepten-2-one (A) and authentic 6-methyl-5-hepten-2-one (B) by GC-MS

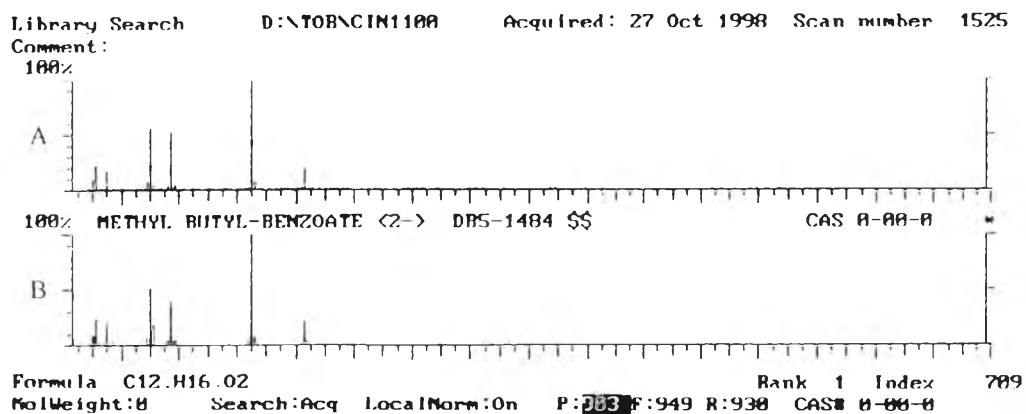


Figure 133 Mass spectra of methyl-butyl-benzoate < 2-> (A) and authentic methyl-butyl-benzoate < 2-> (B) by GC-MS

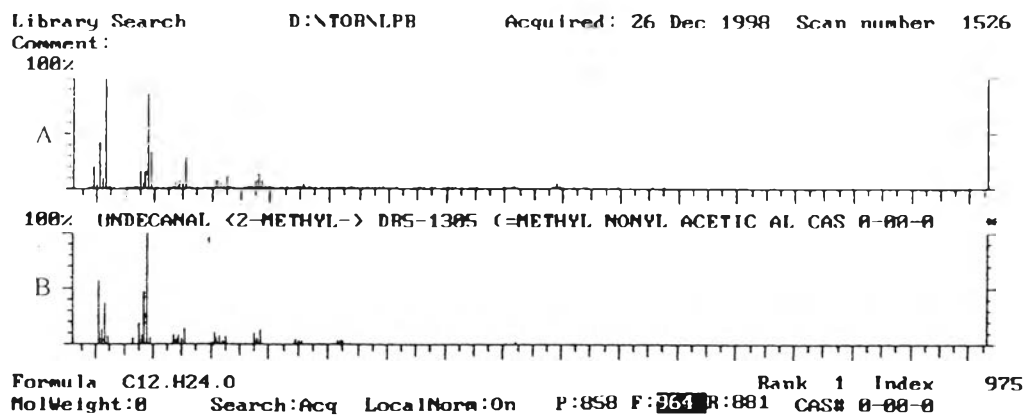


Figure 134 Mass spectra of methyl-undecanal < 2-> (A) and authentic methyl-undecanal < 2-> (B) by GC-MS

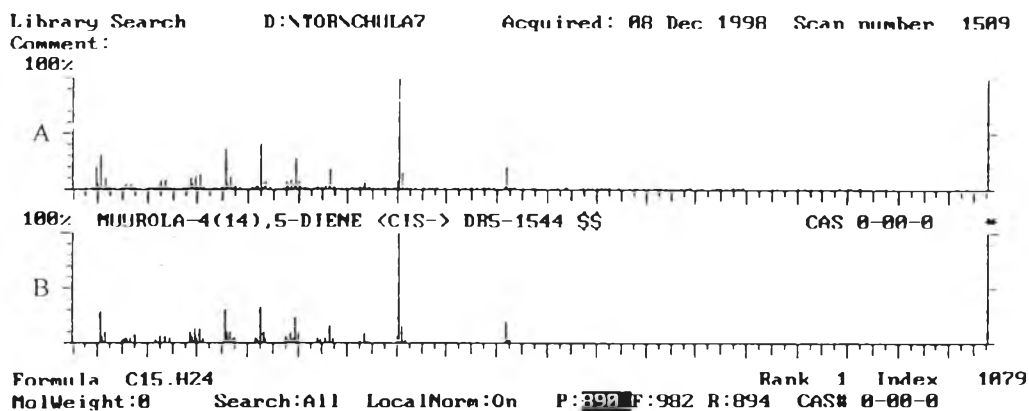


Figure 135 Mass spectra of muurola-4(14),5-diene < cis-> (A) and authentic muurola-4(14),5-diene < cis-> (B) by GC-MS

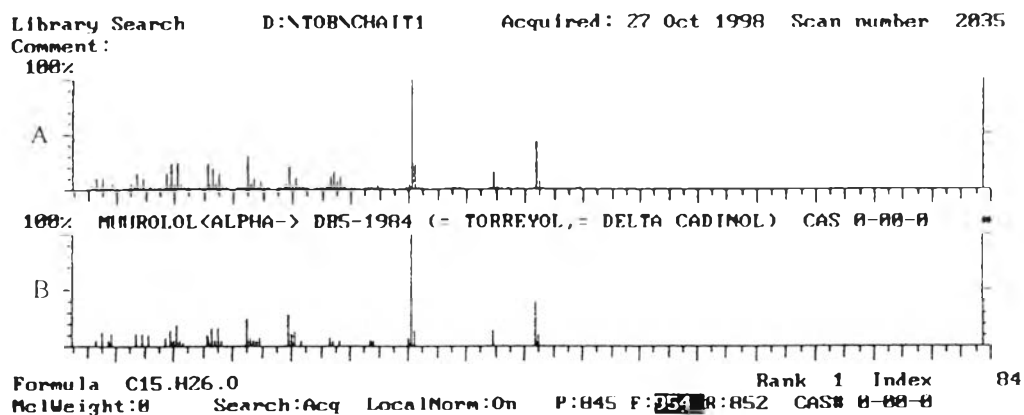


Figure 136 Mass spectra of muurolene α - (A) and authentic muurolene α - (B) by GC-MS

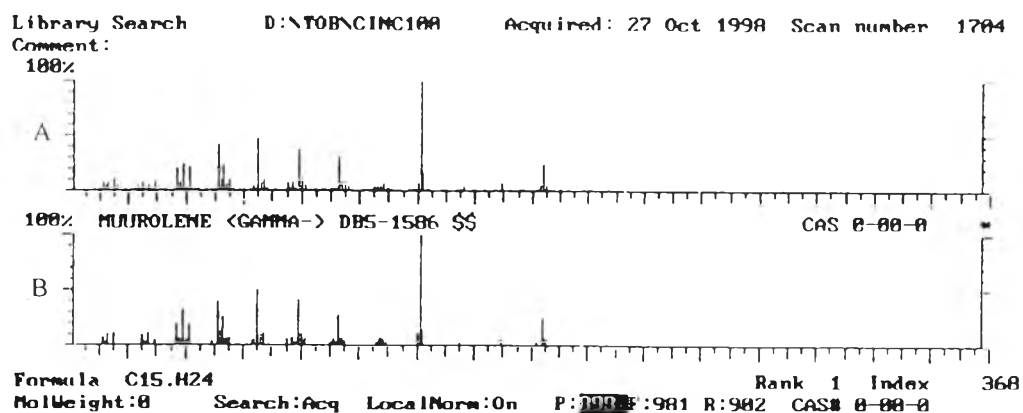


Figure 137 Mass spectra of muurolene γ - (A) and authentic muurolene γ - (B) by GC-MS

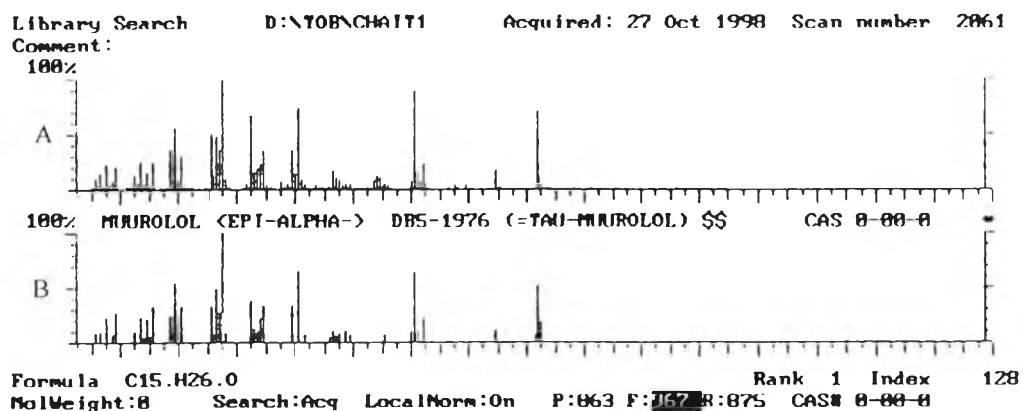


Figure 138 Mass spectra of muurolol $epi\text{-}\alpha$ - (A) and authentic muurolol $epi\text{-}\alpha$ - (B) by GC-MS

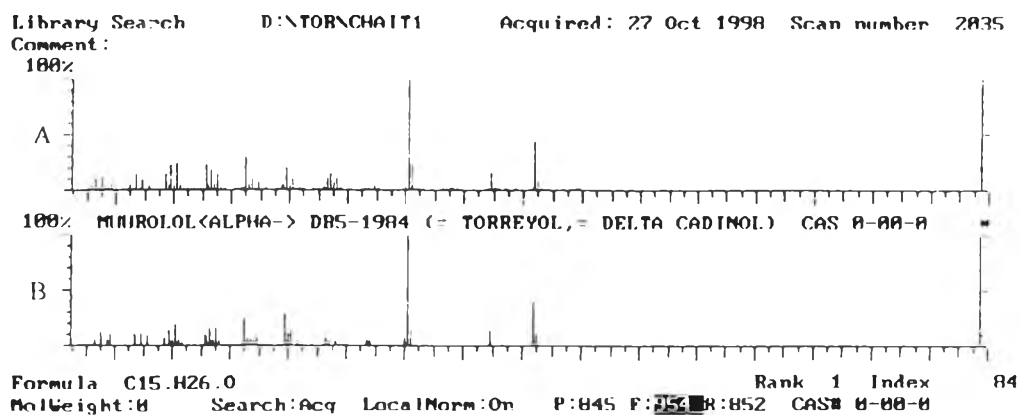


Figure 139 Mass spectra of muurololα-> (A) and authentic muurololα-> (B) by GC-MS

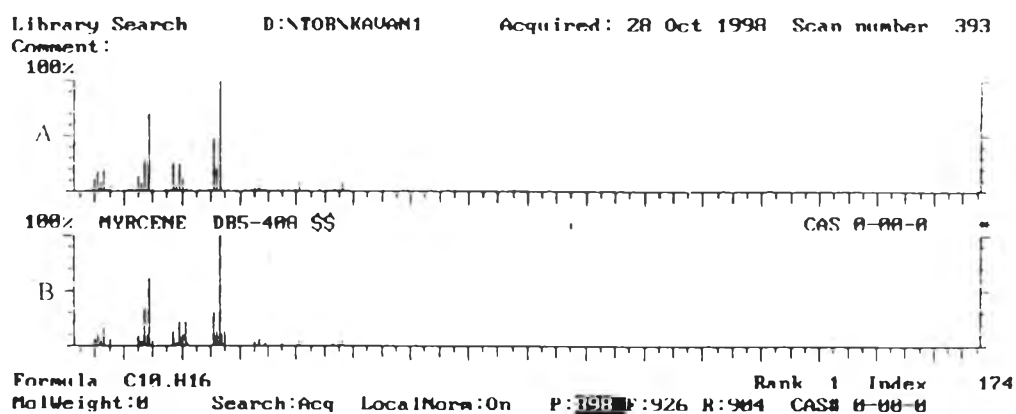


Figure 140 Mass spectra of myrcene (A) and authentic myrcene (B) by GC-MS

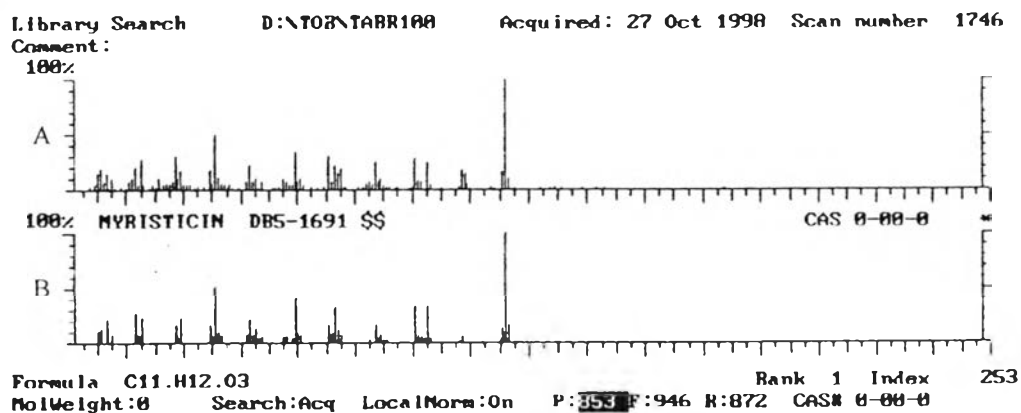


Figure 141 Mass spectra of myristicin (A) and authentic myristicin (B) by GC-MS

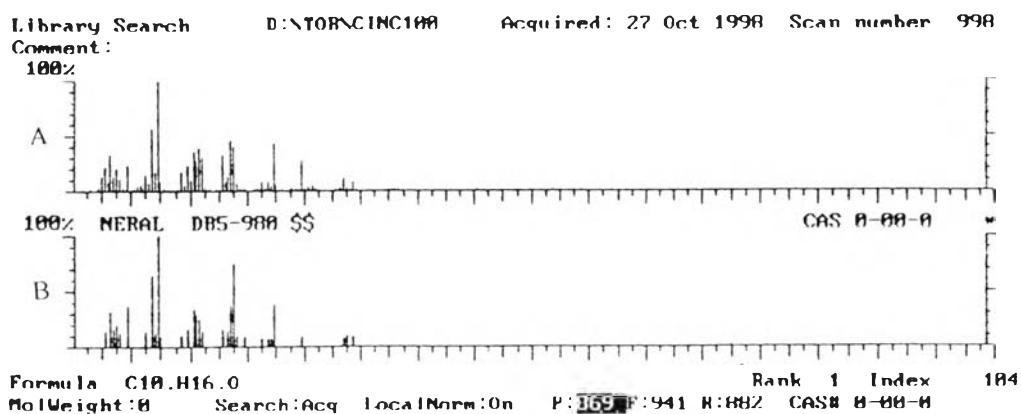


Figure 142 Mass spectra of neral (A) and authentic neral (B) by GC-MS

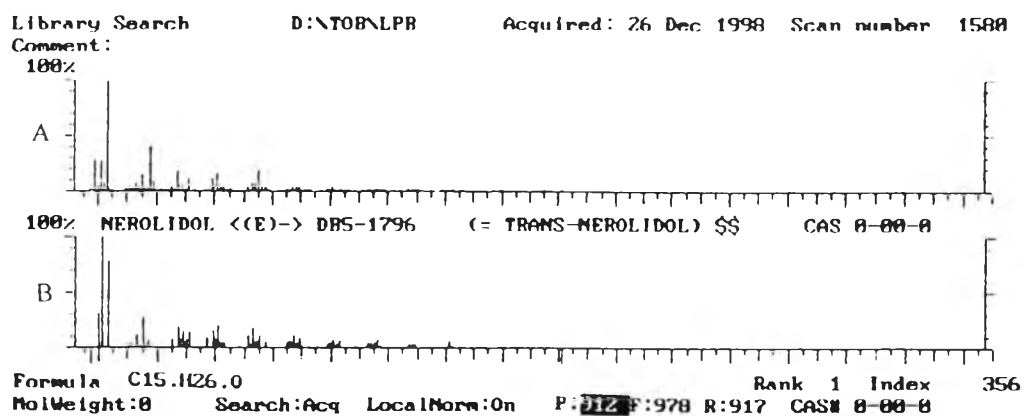


Figure 143 Mass spectra of nerolidol <(E)-> (A) and authentic nerolidol <(E)-> (B) by GC-MS

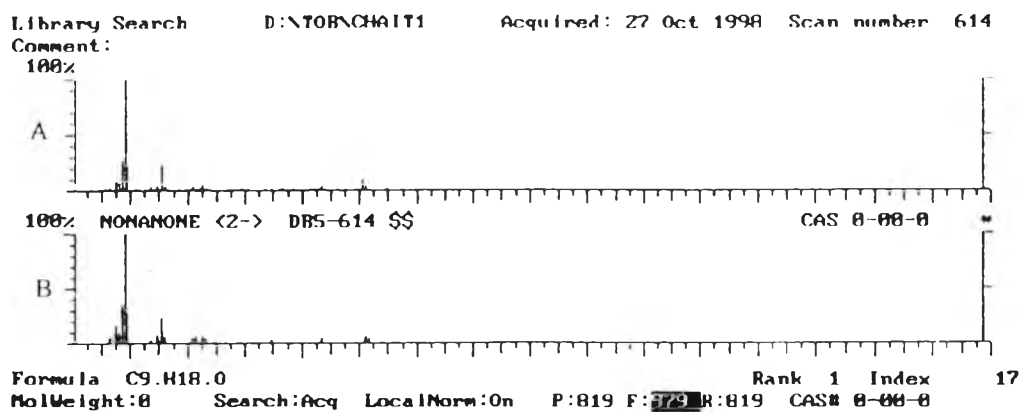


Figure 144 Mass spectra of nonanone <2-> (A) and authentic nonanone <2-> (B) by GC-MS

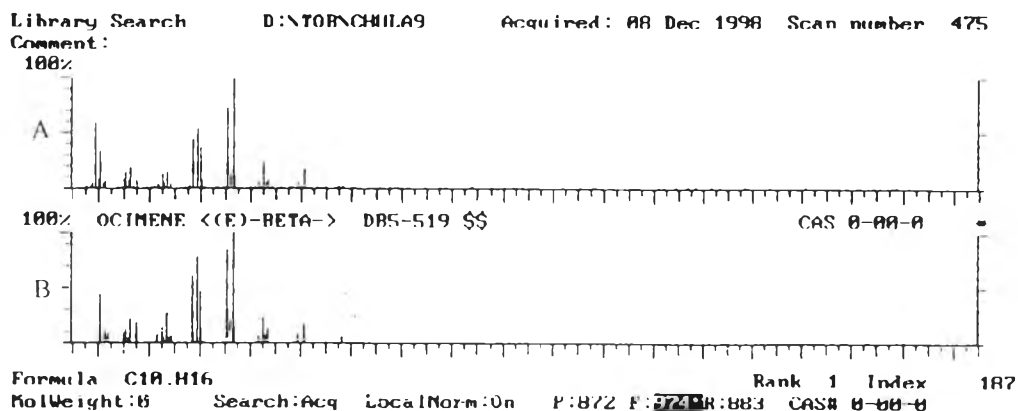


Figure 145 Mass spectra of ocimene <(E)- β -> (A) and authentic ocimene <(E)- β -> (B) by GC-MS

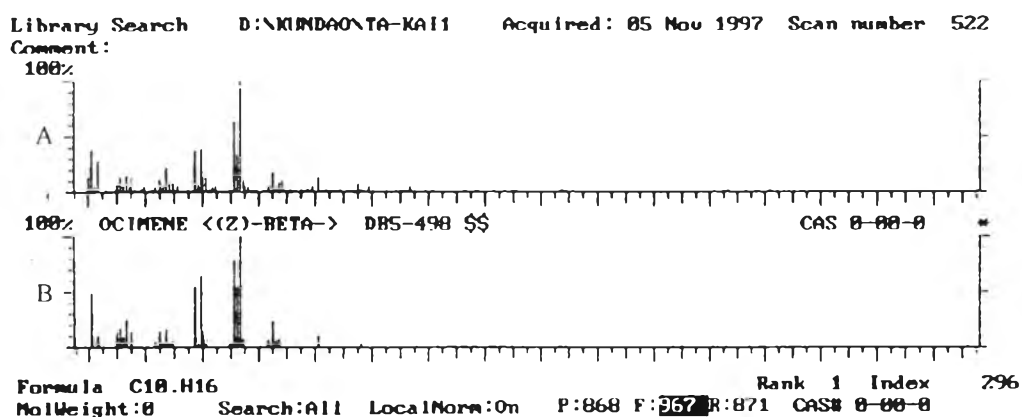


Figure 146 Mass spectra of ocimene <(Z)- β -> (A) and authentic ocimene <(Z)- β -> (B) by GC-MS

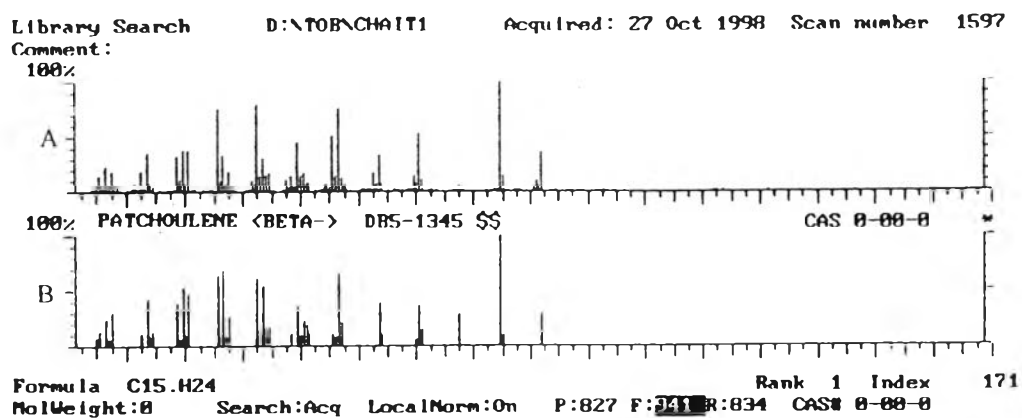


Figure 147 Mass spectra of patchoulene < β -> (A) and authentic patchoulene < β -> (B) by GC-MS

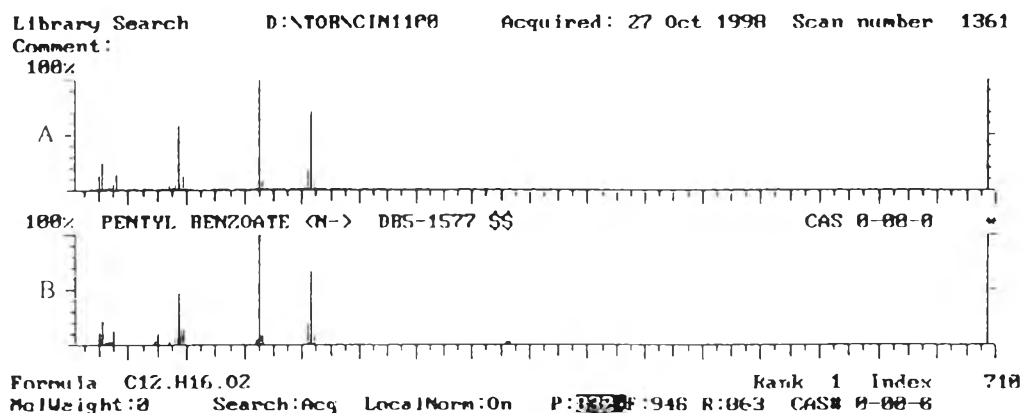


Figure 148 Mass spectra of pentyl benzoate <n-> (A) and authentic pentyl benzoate <n-> (B) by GC-MS

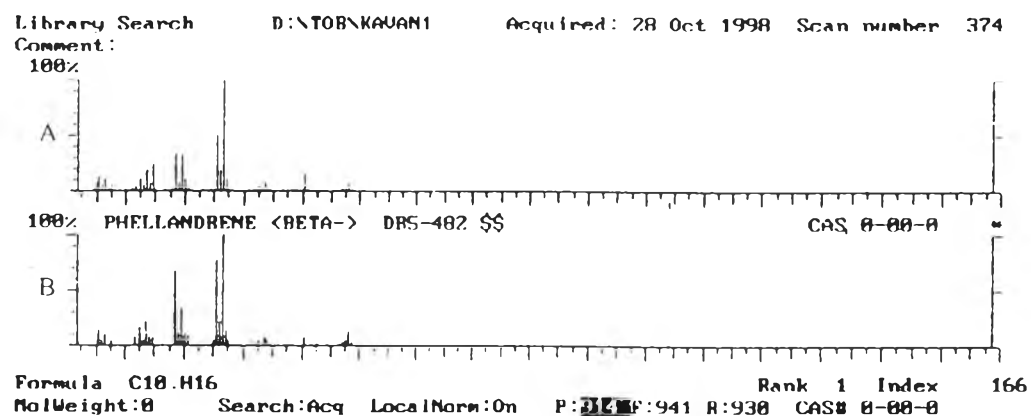


Figure 149 Mass spectra of phellandrene β-> (A) and authentic phellandrene β-> (B) by GC-MS

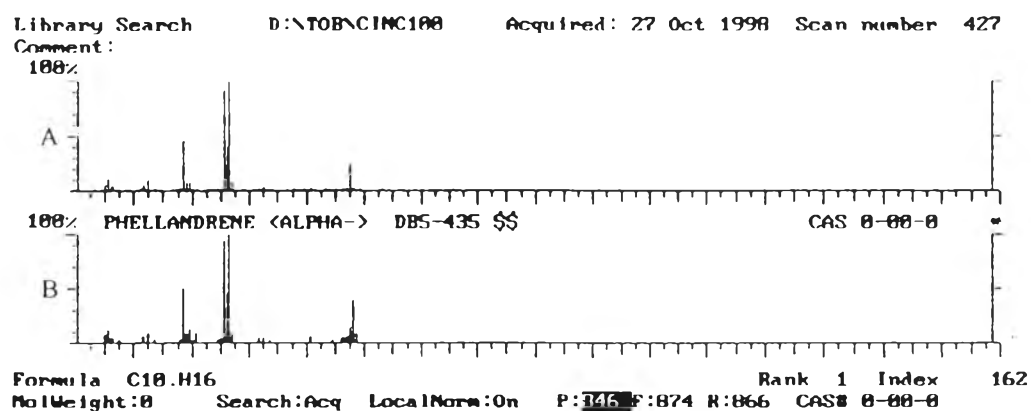


Figure 150 Mass spectra of phellandrene α-> (A) and authentic phellandrene α-> (B) by GC-MS

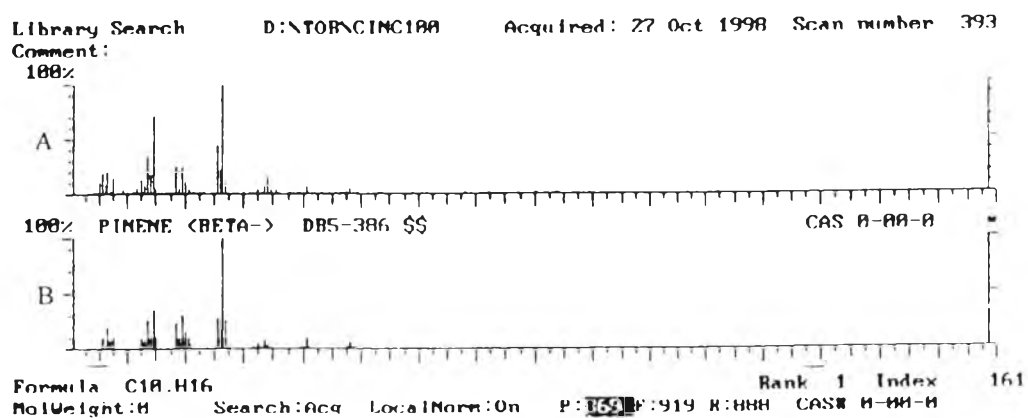


Figure 151 Mass spectra of pinene β-pinene (A) and authentic pinene β-pinene (B) by GC-MS

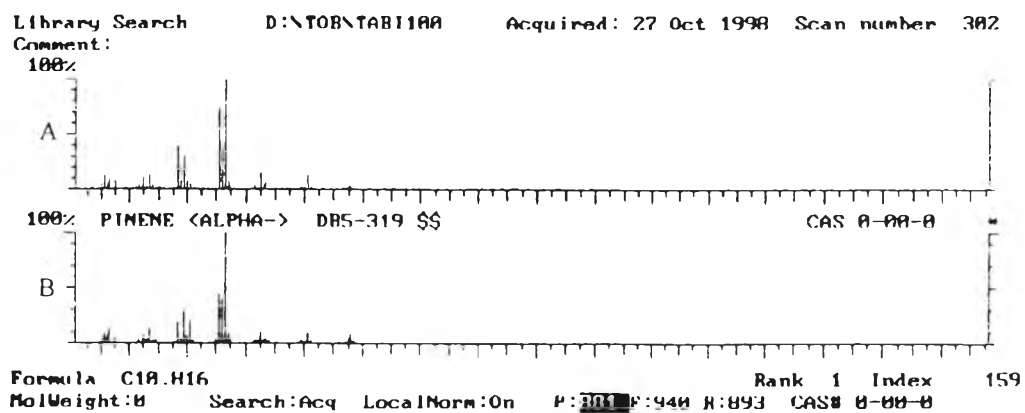


Figure 152 Mass spectra of pinene α-pinene (A) and authentic pinene α-pinene (B) by GC-MS

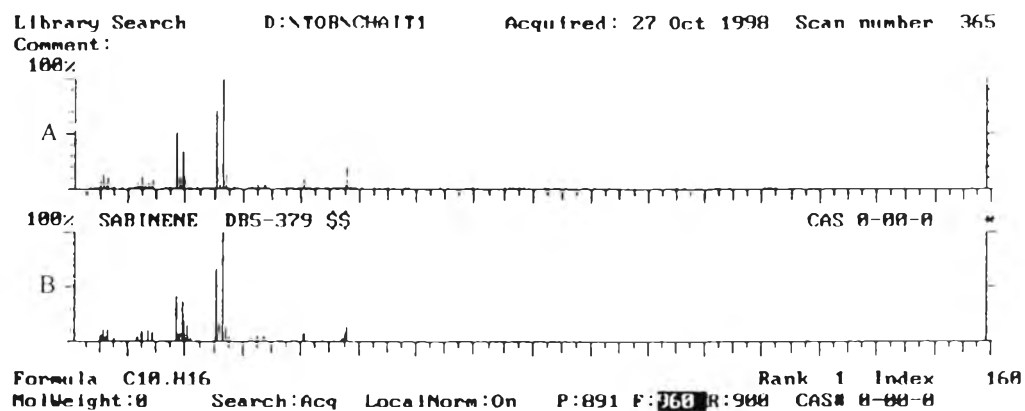


Figure 153 Mass spectra of sabinene (A) and authentic sabinene (B) by GC-MS

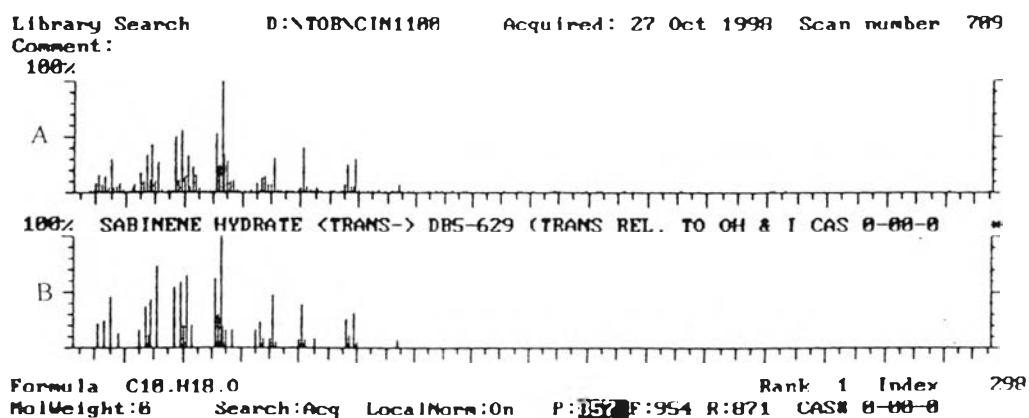


Figure 154 Mass spectra of sabinene hydrate <trans-> (A) and authentic sabinene hydrate <trans-> (B) by GC-MS

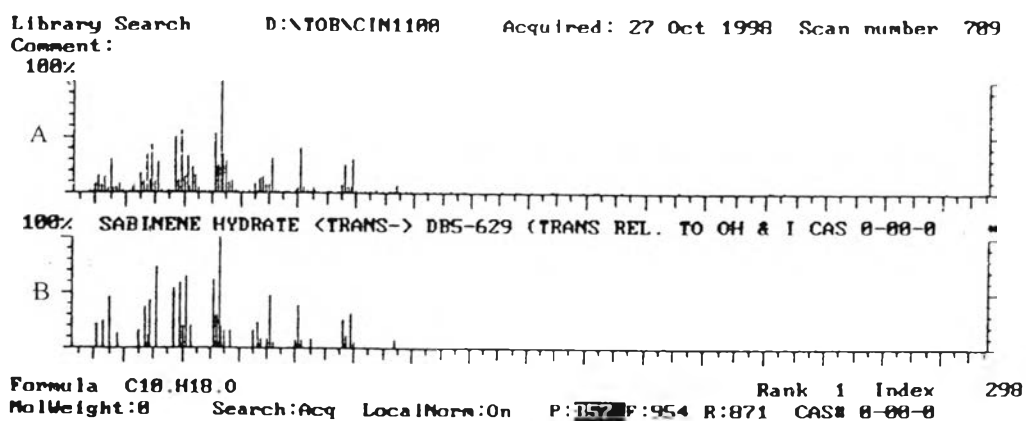


Figure 155 Mass spectra of sabinene hydrate acetate <trans-> (A) and authentic sabinene hydrate acetate <trans-> (B) by GC-MS

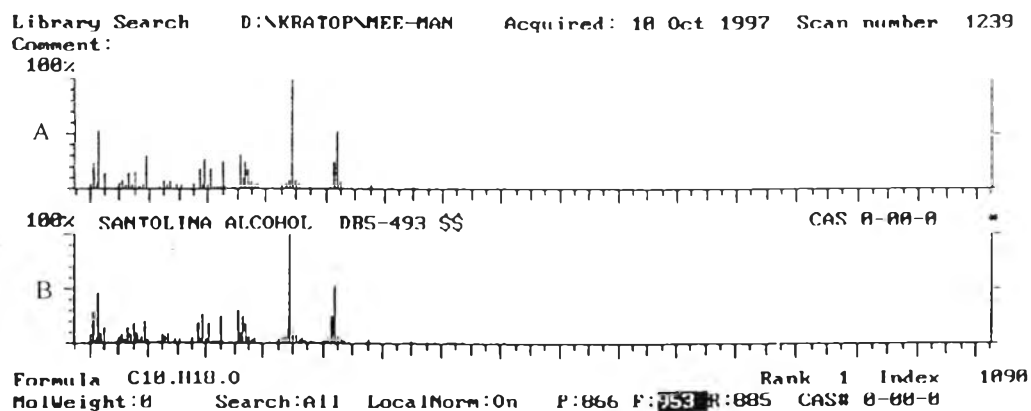


Figure 156 Mass spectra of santolina alcohol (A) and authentic santolina alcohol (B) by GC-MS

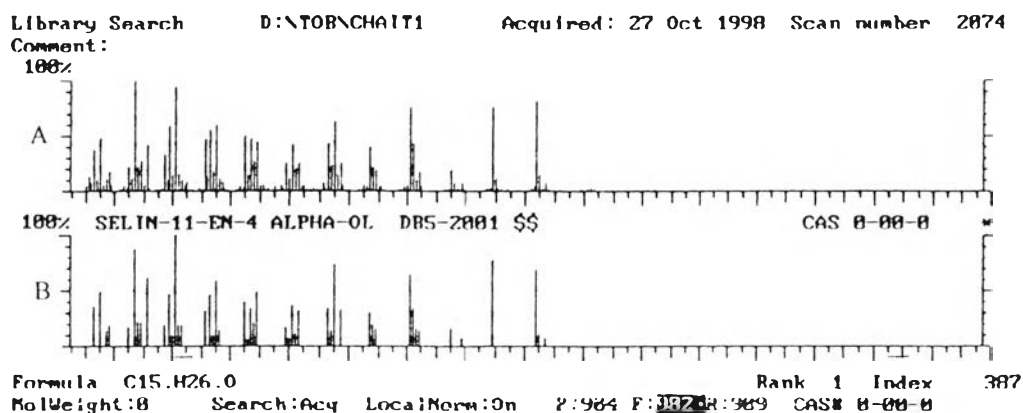


Figure 157 Mass spectra of selin-11-en-4-alpha-ol (A) and authentic selin-11-en-4-alpha-ol (B) by GC-MS

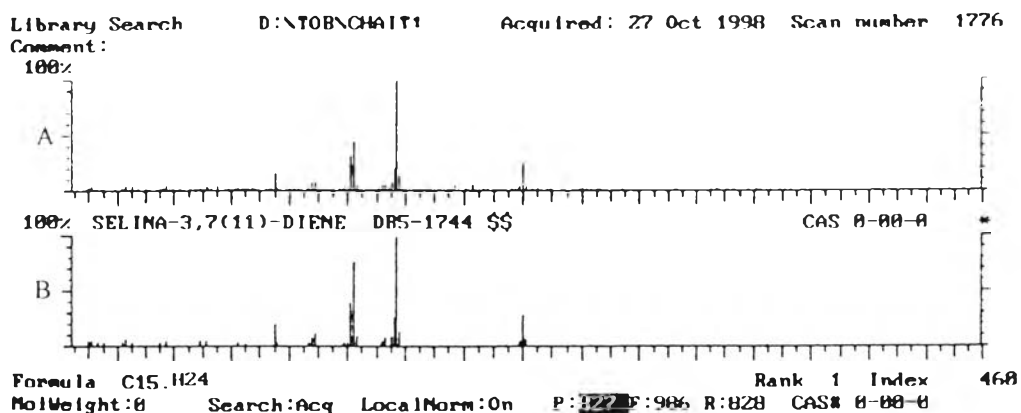


Figure 158 Mass spectra of selinadiene <3,7(11)-> (A) and authentic selinadiene <3,7(11)-> (B) by GC-MS

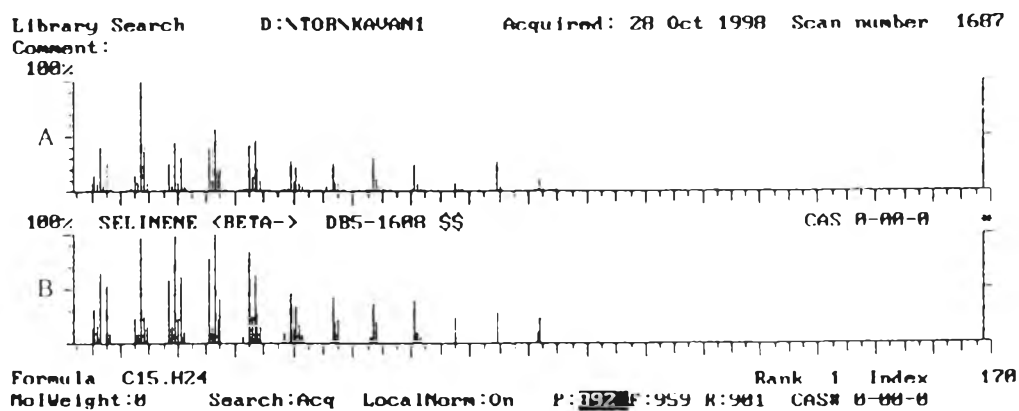


Figure 159 Mass spectra of selinene β-> (A) and authentic selinene β-> (B) by GC-MS

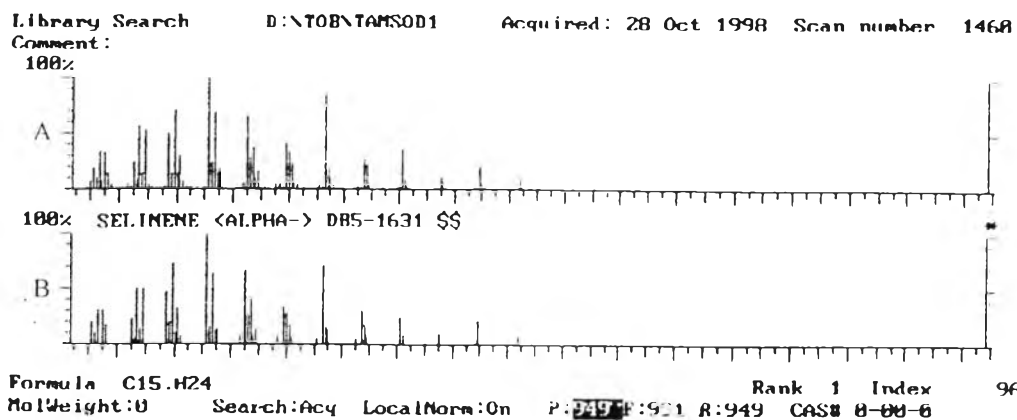


Figure 160 Mass spectra of selinene α- (A) and authentic selinene α- (B) by GC-MS

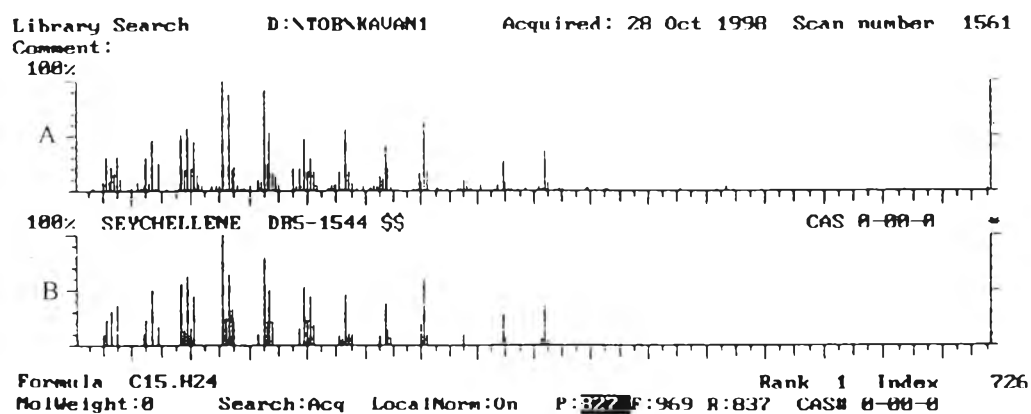


Figure 161 Mass spectra of seychellene (A) and authentic seychellene (B) by GC-MS

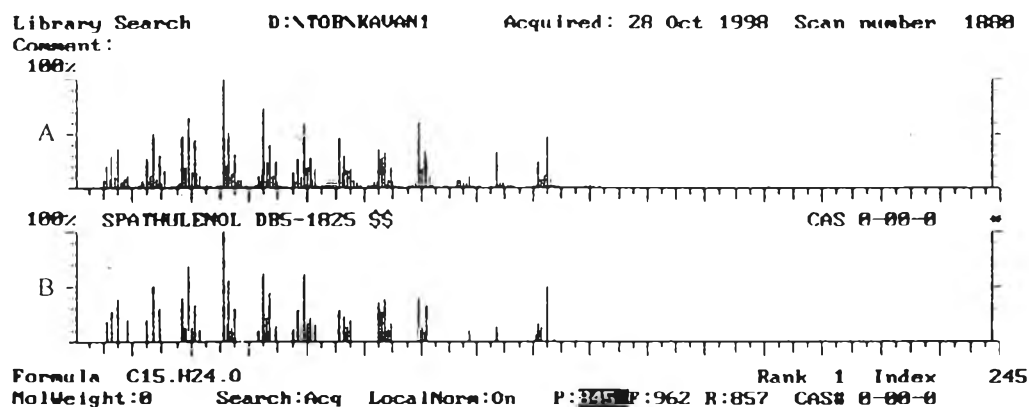


Figure 162 Mass spectra of spathulenol (A) and authentic spathulenol (B) by GC-MS

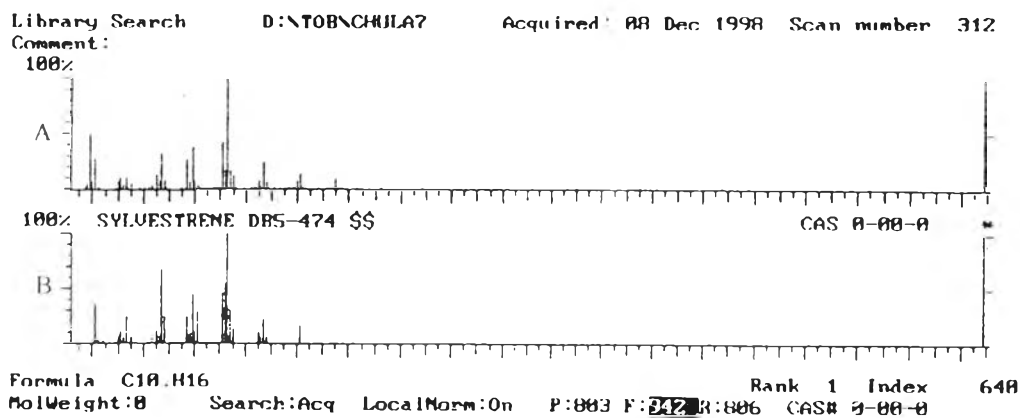


Figure 163 Mass spectra of sylvestrene (A) and authentic sylvestrene (B) by GC-MS

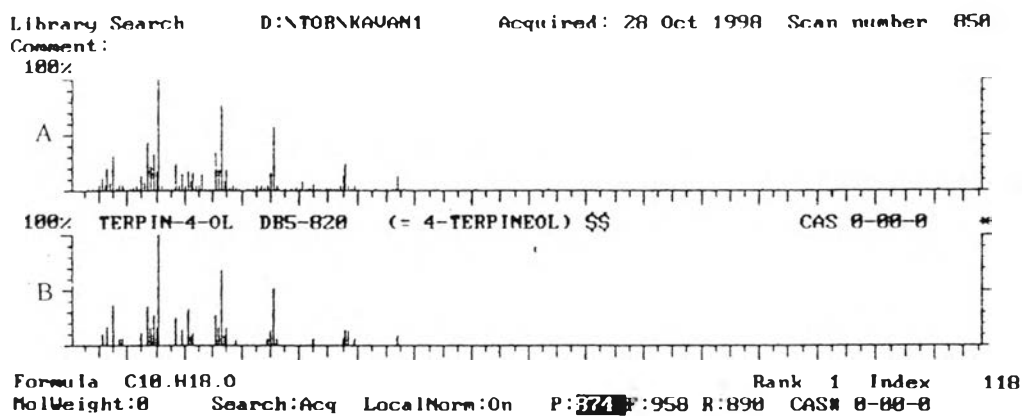


Figure 164 Mass spectra of terpin-4-ol (A) and authentic terpin-4-ol (B) by GC-MS

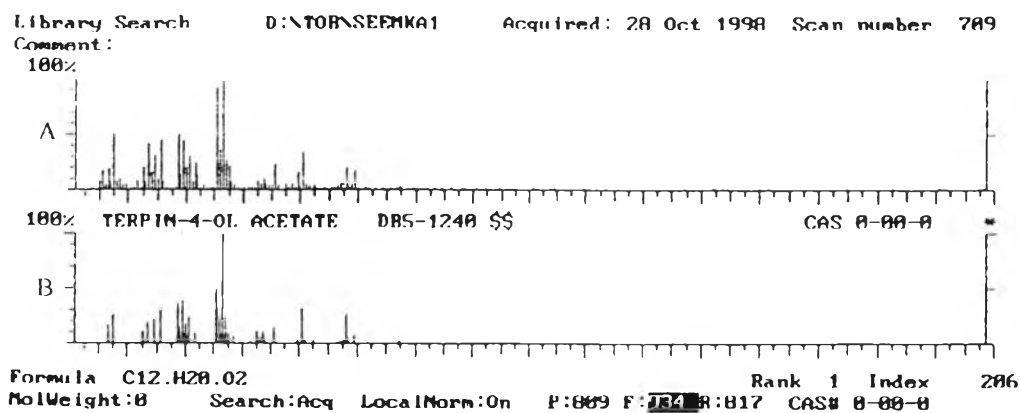


Figure 165 Mass spectra of terpin-4-ol-acetate (A) and authentic terpin-4-ol-acetate (B) by GC-MS

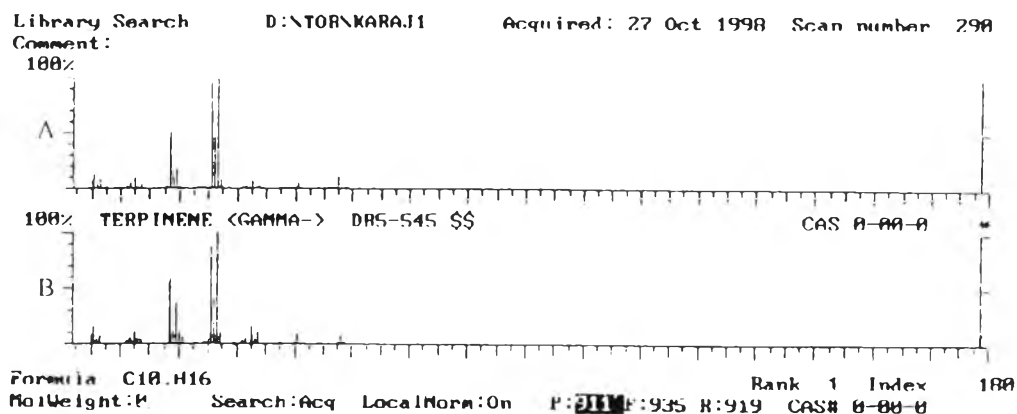


Figure 166 Mass spectra of terpinene γ -> (A) and authentic terpinene γ -> (B) by GC-MS

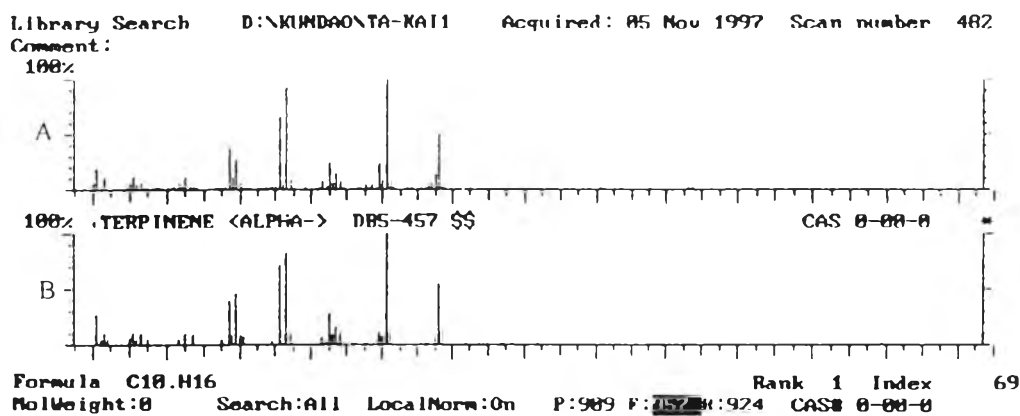


Figure 167 Mass spectra of terpinene α -> (A) and authentic terpinene α -> (B) by GC-MS

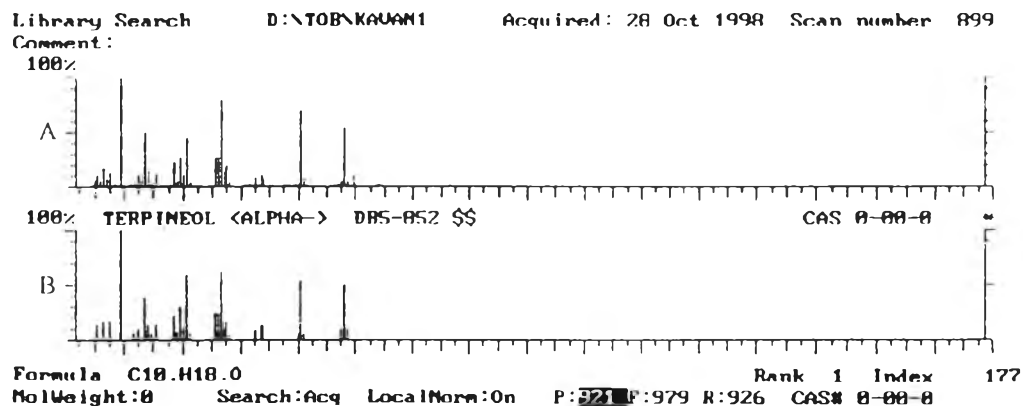


Figure 168 Mass spectra of terpineol α -> (A) and authentic terpineol α -> (B) by GC-MS

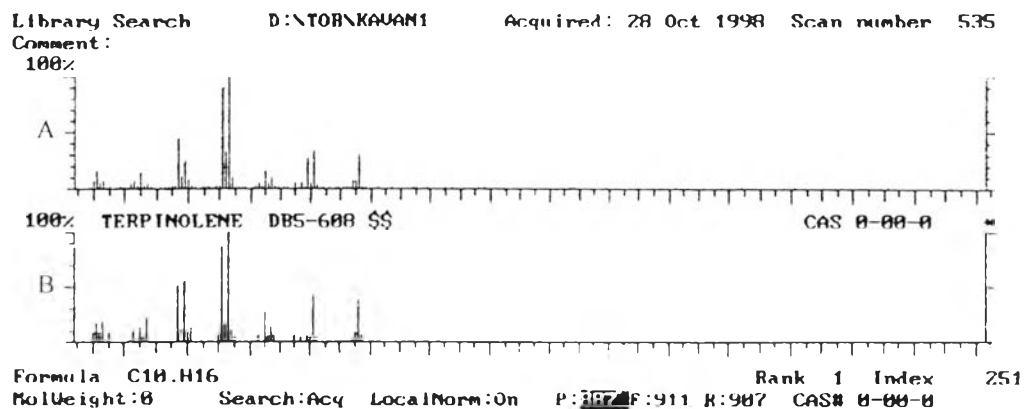


Figure 169 Mass spectra of terpinolene (A) and authentic terpinolene (B) by GC-MS

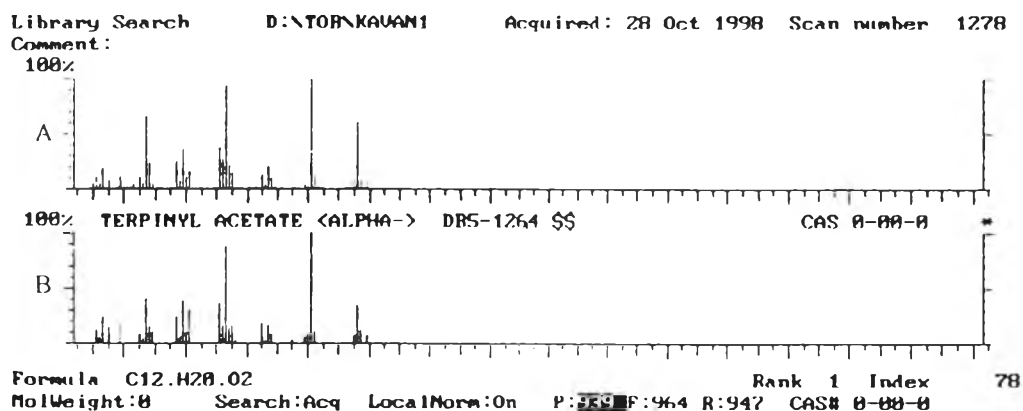


Figure 170 Mass spectra of terpinyl acetate α - (A) and authentic terpinyl acetate α - (B) by GC-MS

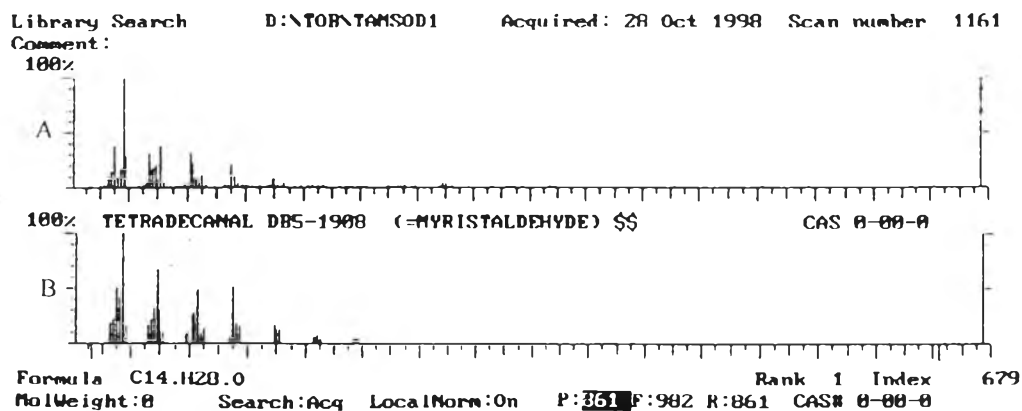


Figure 171 Mass spectra of tetradecanal (A) and authentic tetradecanal (B) by GC-MS

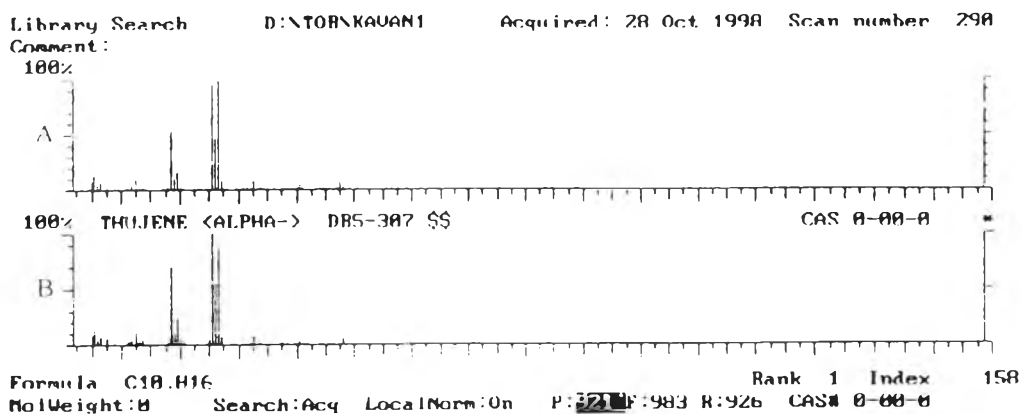


Figure 172 Mass spectra of thujene α- (A) and authentic thujene α- (B) by GC-MS

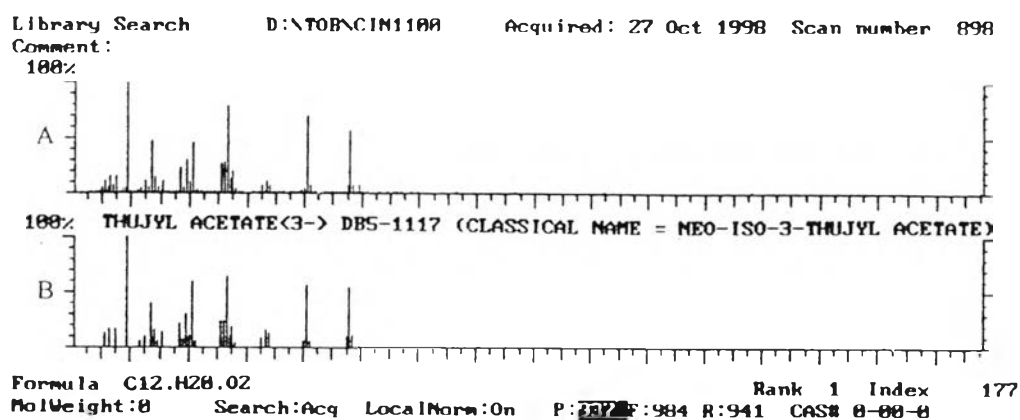


Figure 173 Mass spectra of thujyl acetate α- (A) and authentic thujyl acetate α- (B) by GC-MS

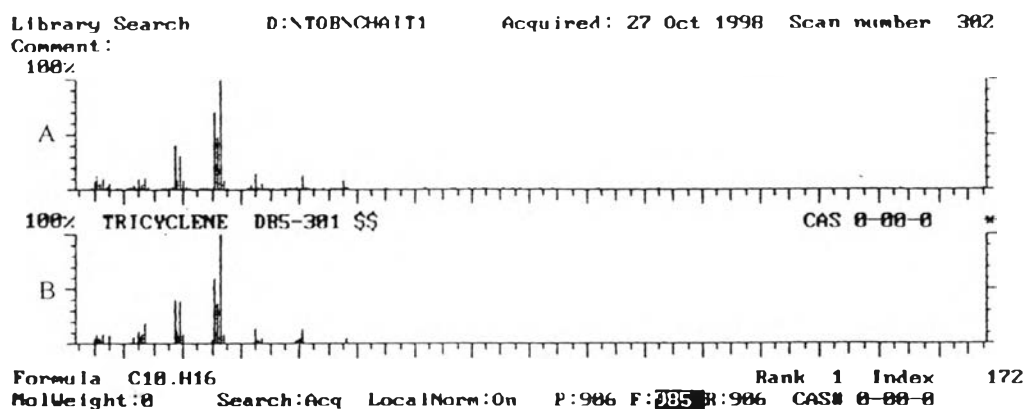


Figure 174 Mass spectra of tricyclene (A) and authentic tricyclene (B) by GC-MS

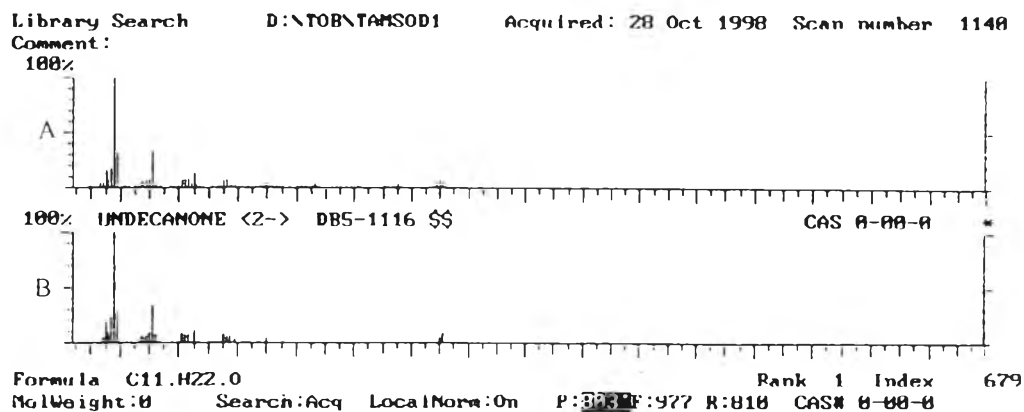


Figure 175 Mass spectra of undecanone <2-> (A) and authentic undecanone <2-> (B) by GC-MS

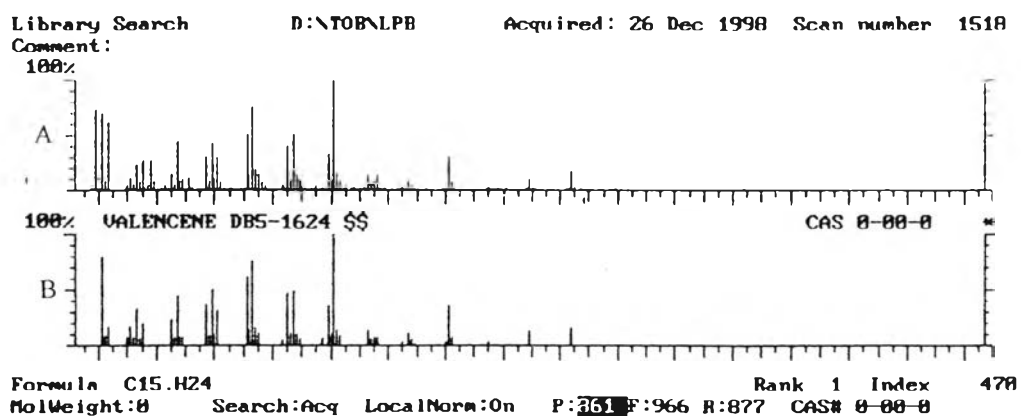


Figure 176 Mass spectra of valencene (A) and authentic valencene (B) by GC-MS

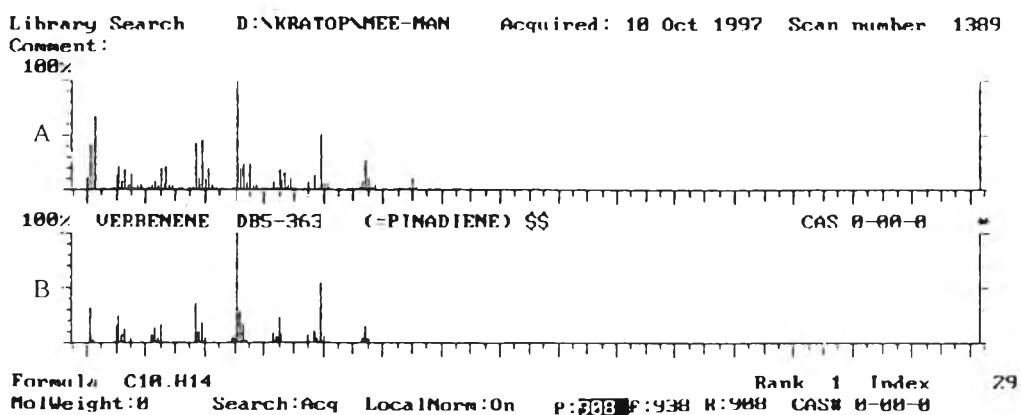


Figure 177 Mass spectra of verbenene (A) and authentic verbenene (B) by GC-MS

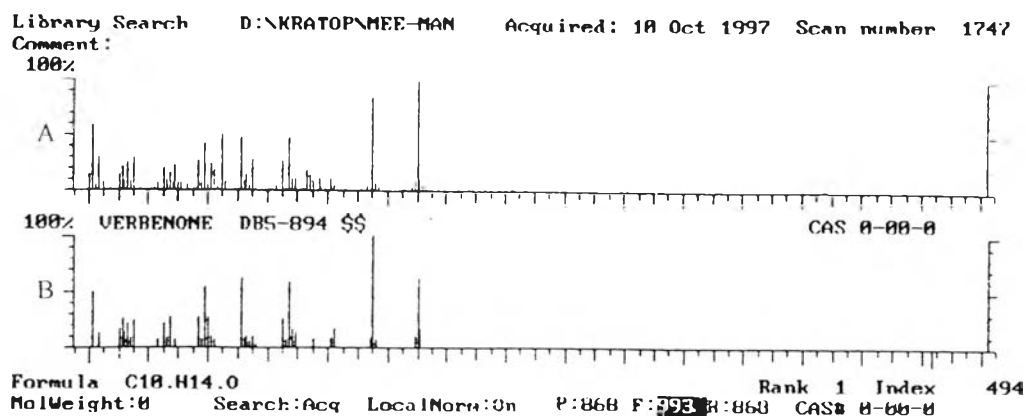


Figure 178 Mass spectra of verbenone (A) and authentic verbenone (B) by GC-MS

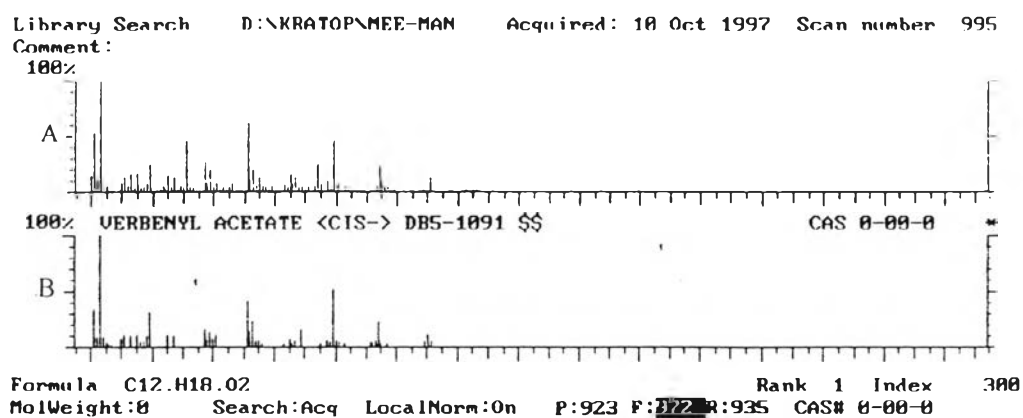


Figure 179 Mass spectra of verbanyl acetate < cis-> (A) and authentic verbanyl acetate < cis-> (B) by GC-MS

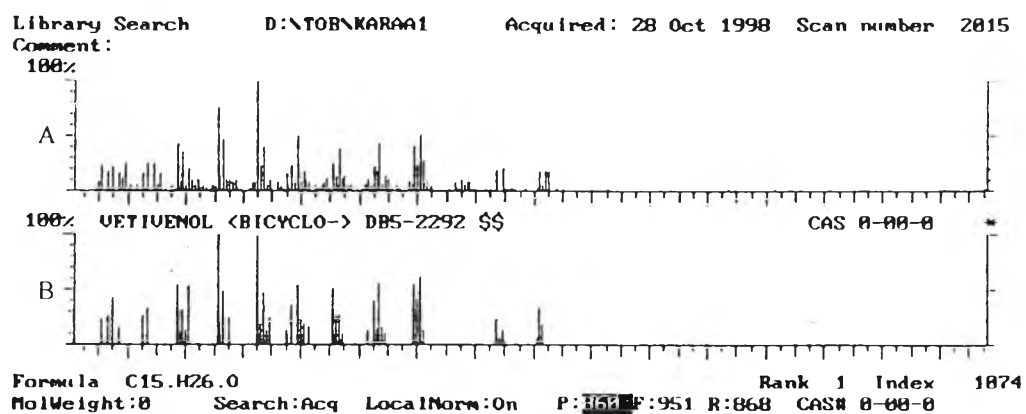


Figure 180 Mass spectra of vetivenol < bicyclo-> (A) and authentic vetivenol < bicyclo-> (B) by GC-MS

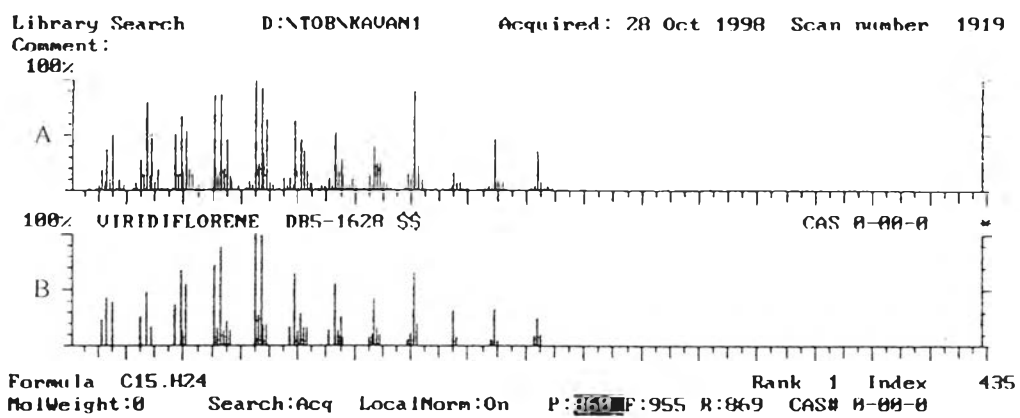


Figure 181 Mass spectra of viridiflorene (A) and authentic viridiflorene (B) by GC-MS

VITA

Miss Chomkamon Ubonnuch was born in April 23,1975 in Bangkok Thailand. She received her bechelor of Science in Pharmacy in 1997 from Rangsit University, Pathum Thani, Thailand. At present, she is a faculty member of the Department of Pharmacognosy, Faculty of Pharmacy, Rungsit University, Phathum Thani, Thailand.

