

Supplementary Materials

Chemical constituents from the fruits of *Amomum kravanh* and their role in activating alcohol dehydrogenase

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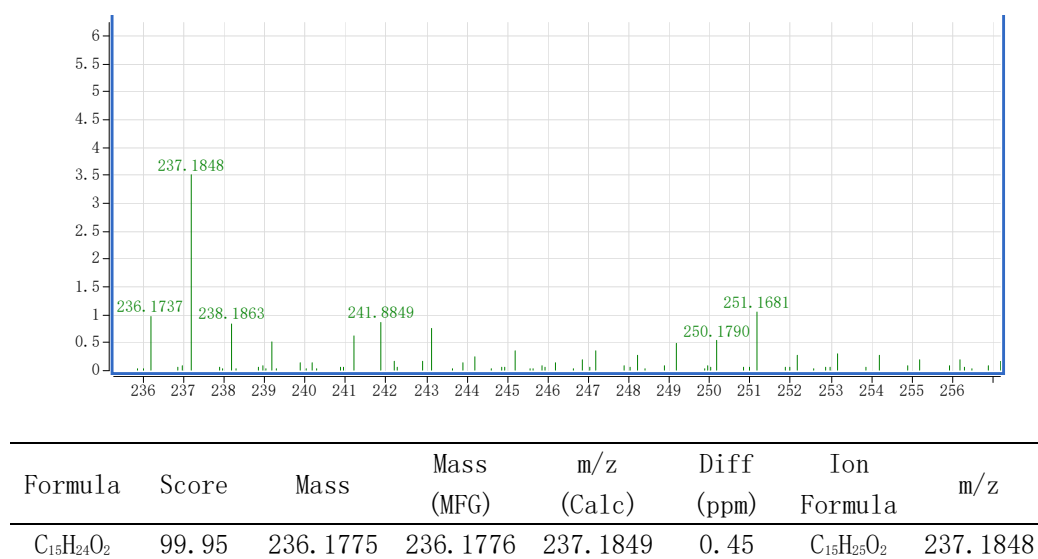


Figure S1. The HRESIMS spectrum of compound **1**

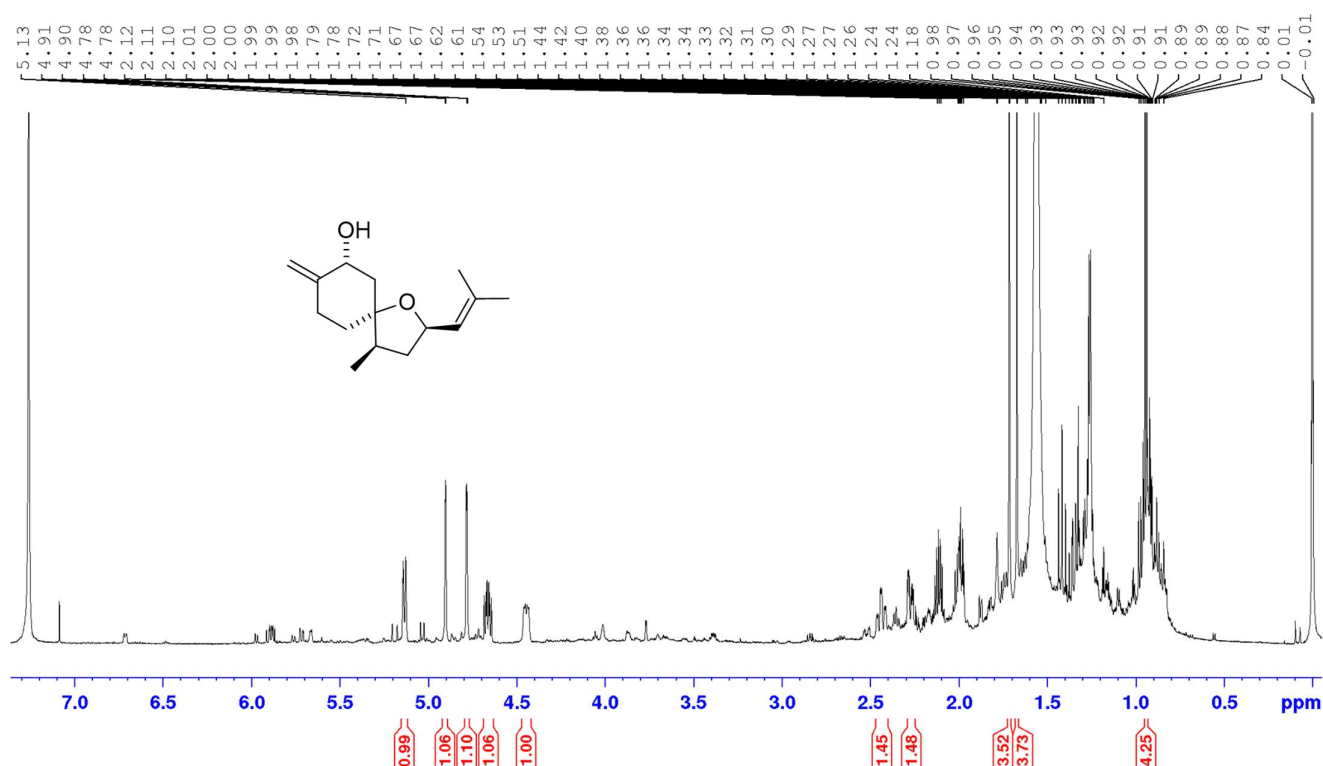


Figure S2. The ¹H NMR spectrum of compound **1**

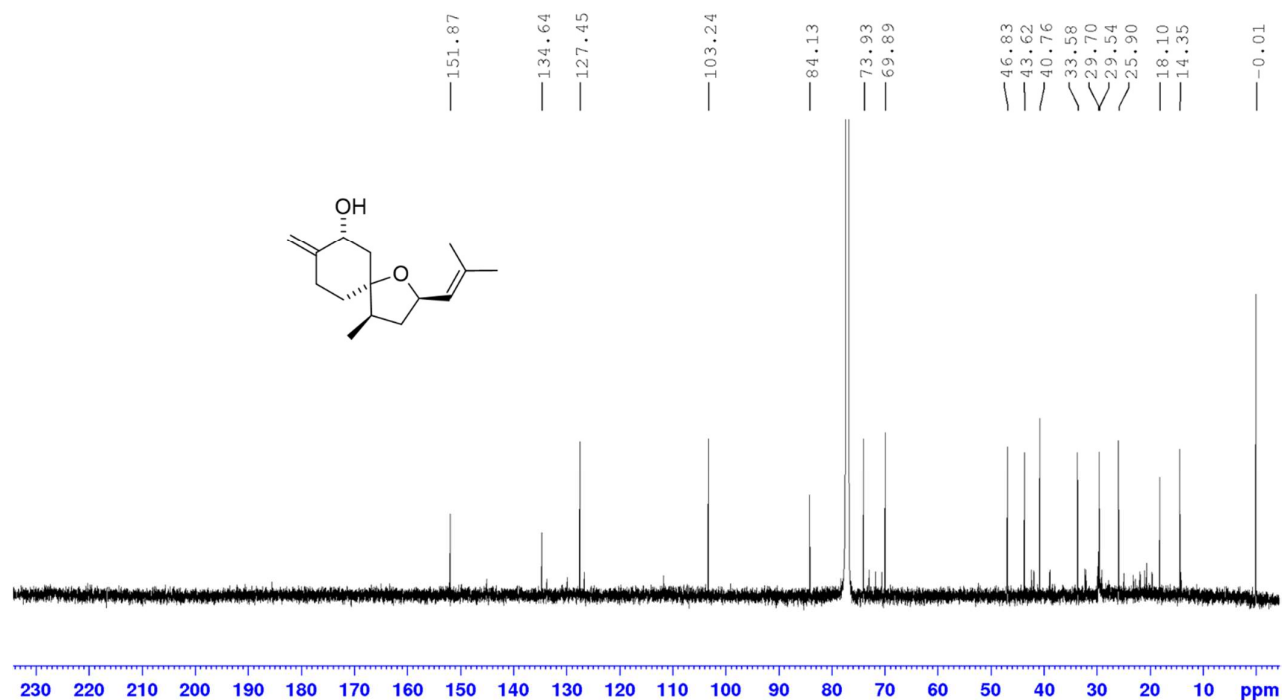


Figure S3. The ¹³CNMR spectrum of compound **1**

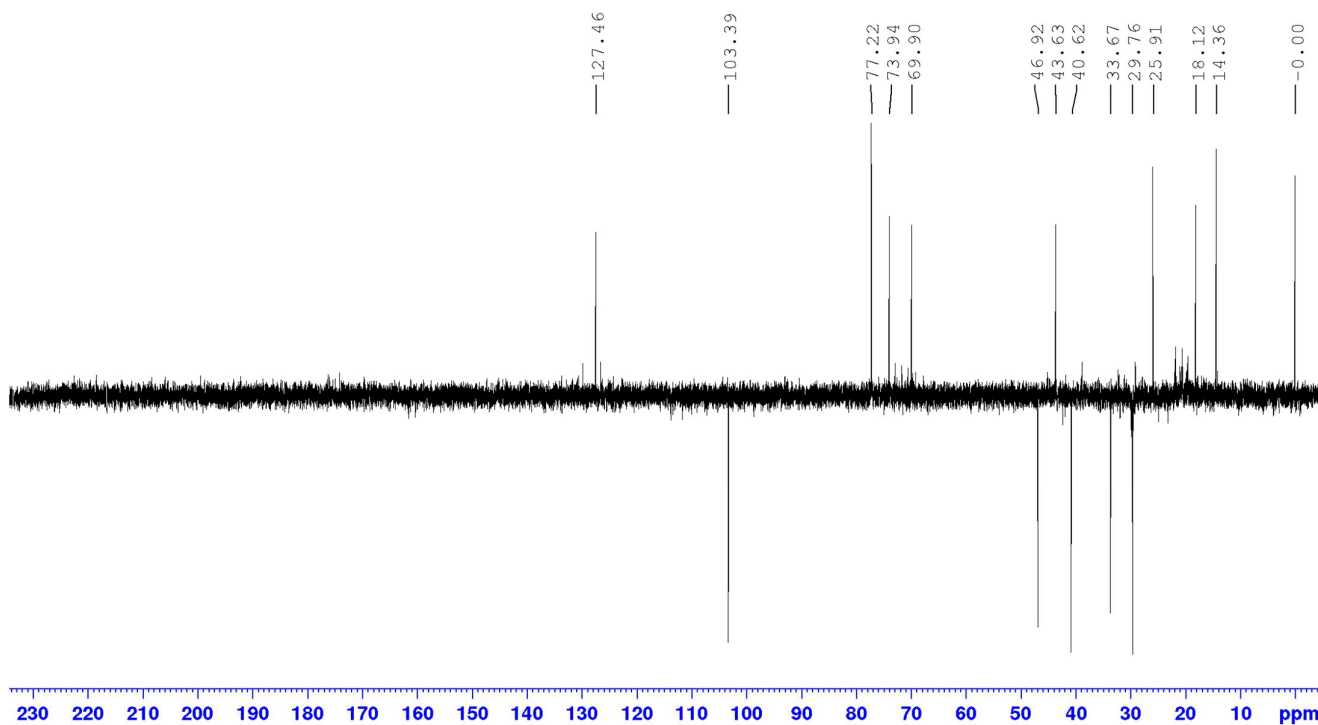


Figure S4. The DEPT135 spectrum of compound **1**

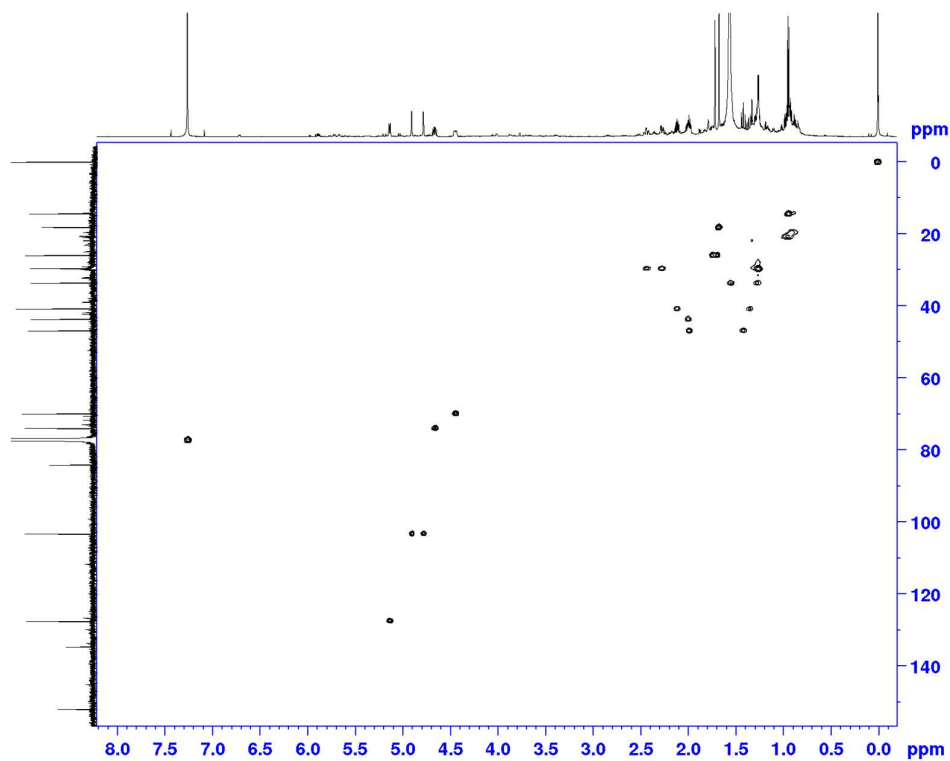


Figure S5. The HSQC spectrum of compound **1**

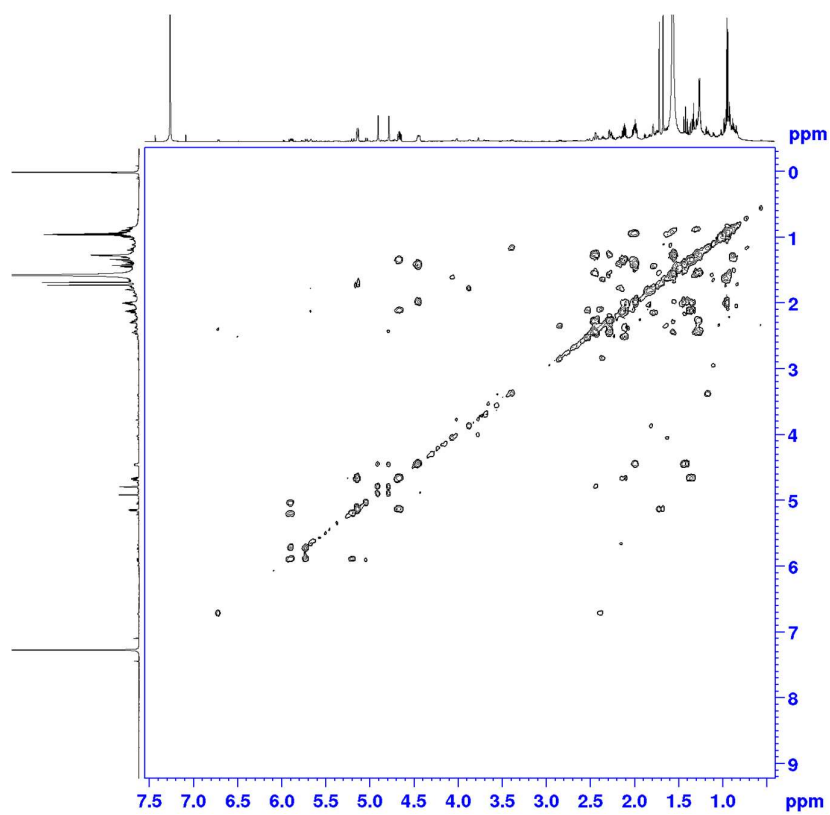


Figure S6. The ^1H - ^1H COSY spectrum of compound **1**

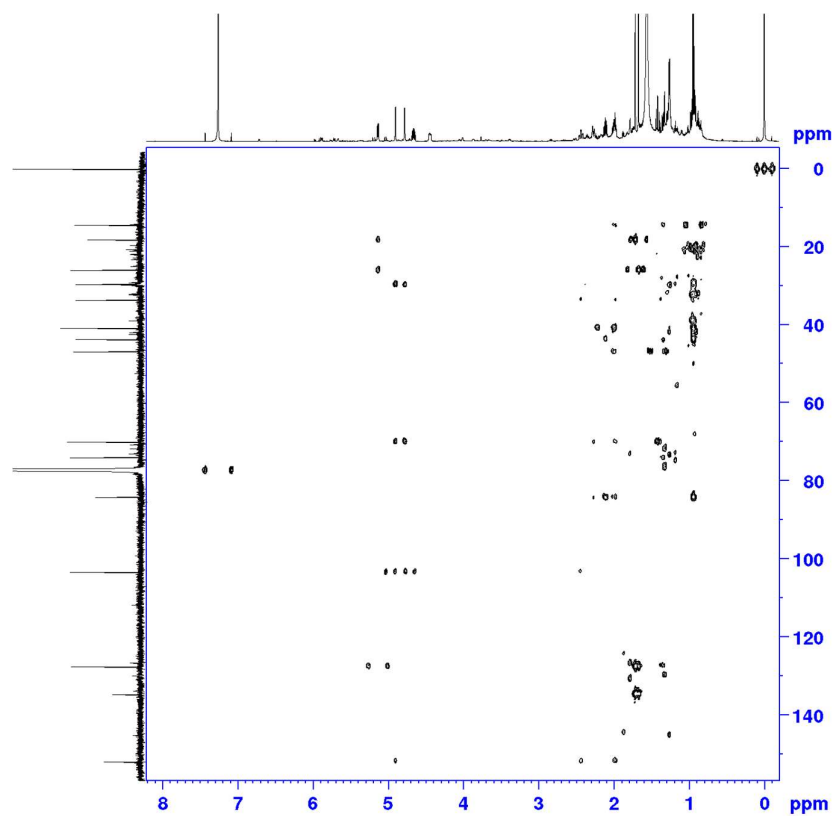


Figure S7. The HMBC spectrum of compound **1**

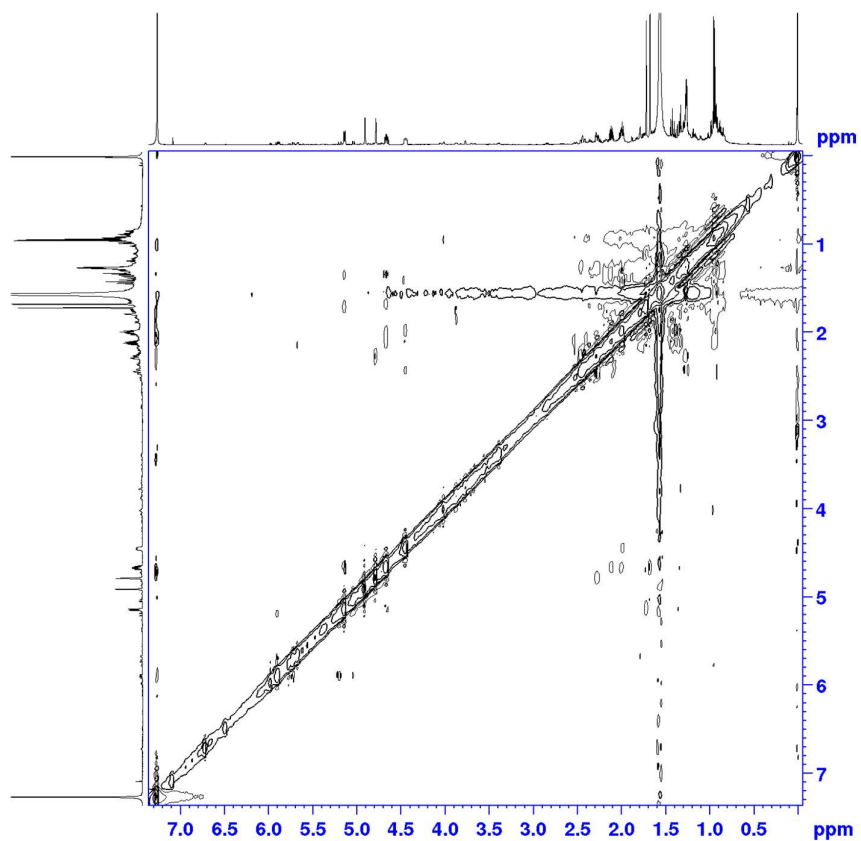


Figure S8. The NOESY spectrum of compound **1**

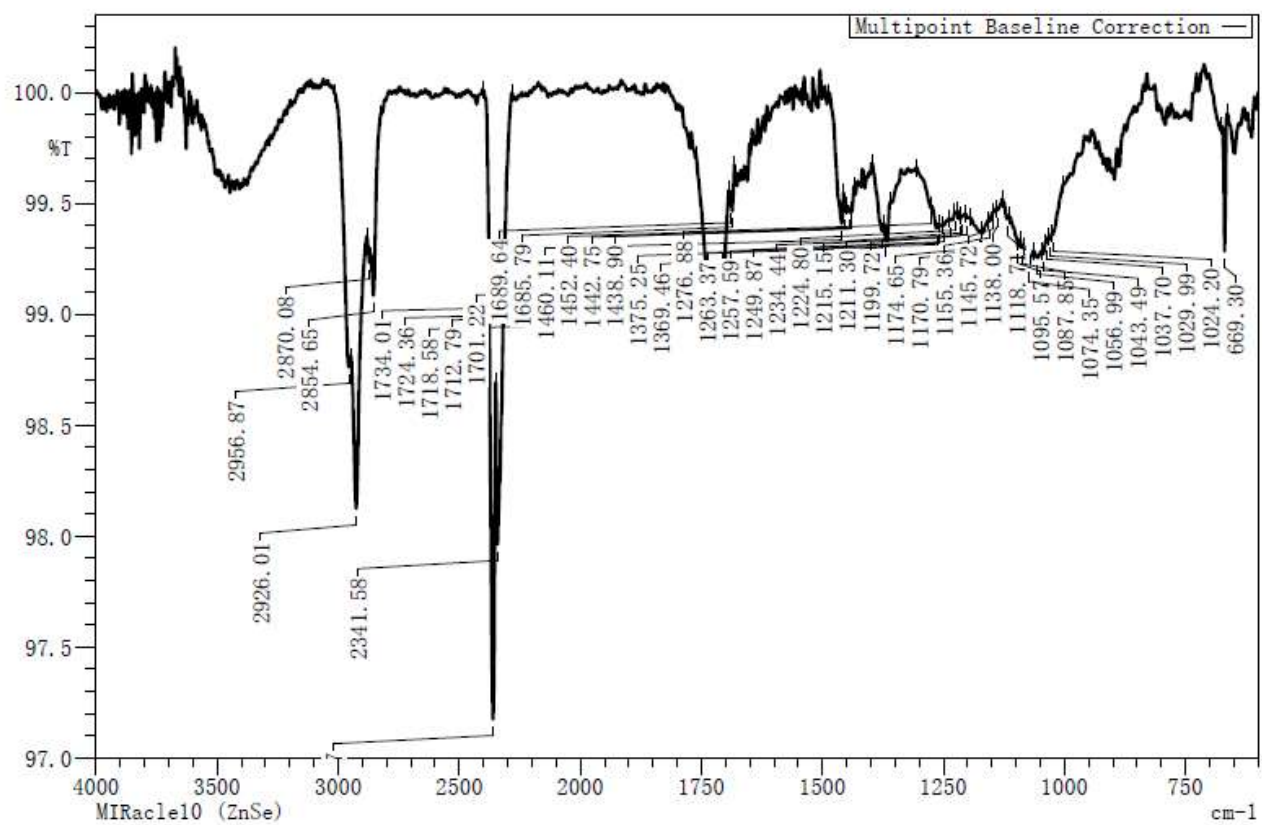


Figure S9. The IR spectrum of compound **1**

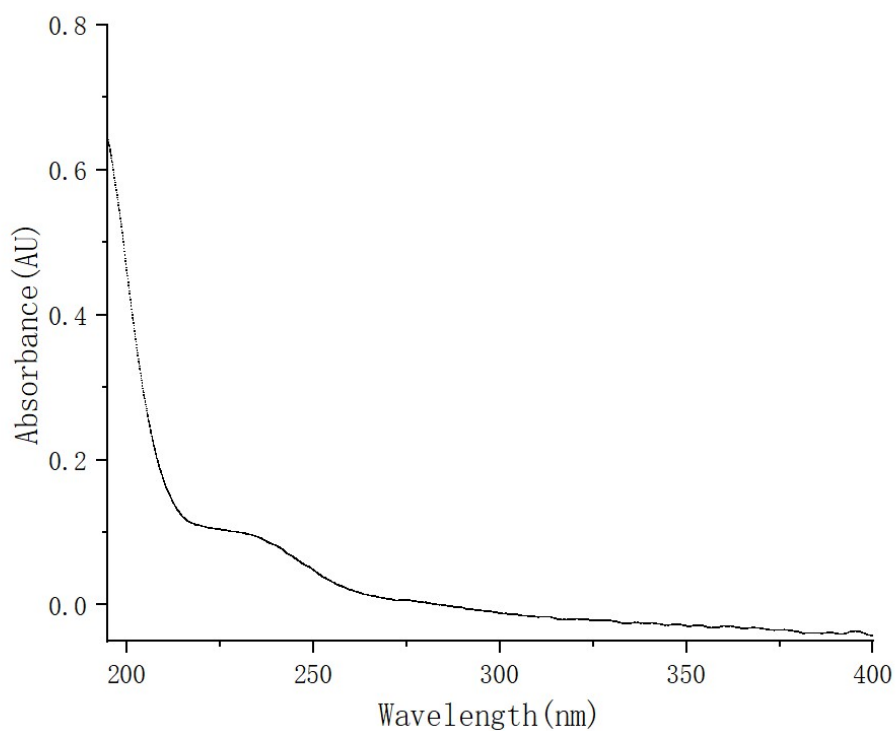


Figure S10. The UV spectrum of compound **1**

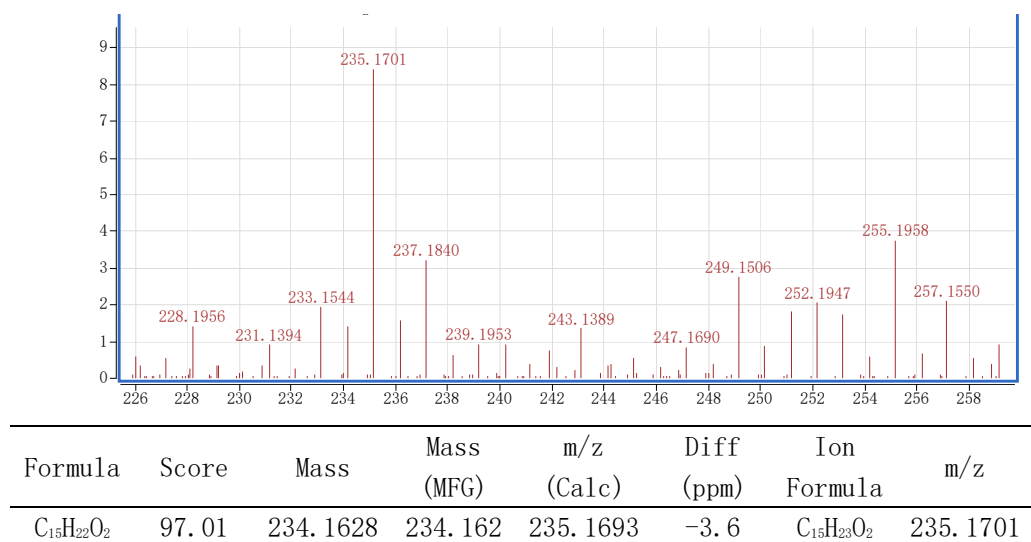


Figure S11. The HRESIMS spectrum of compound **2**

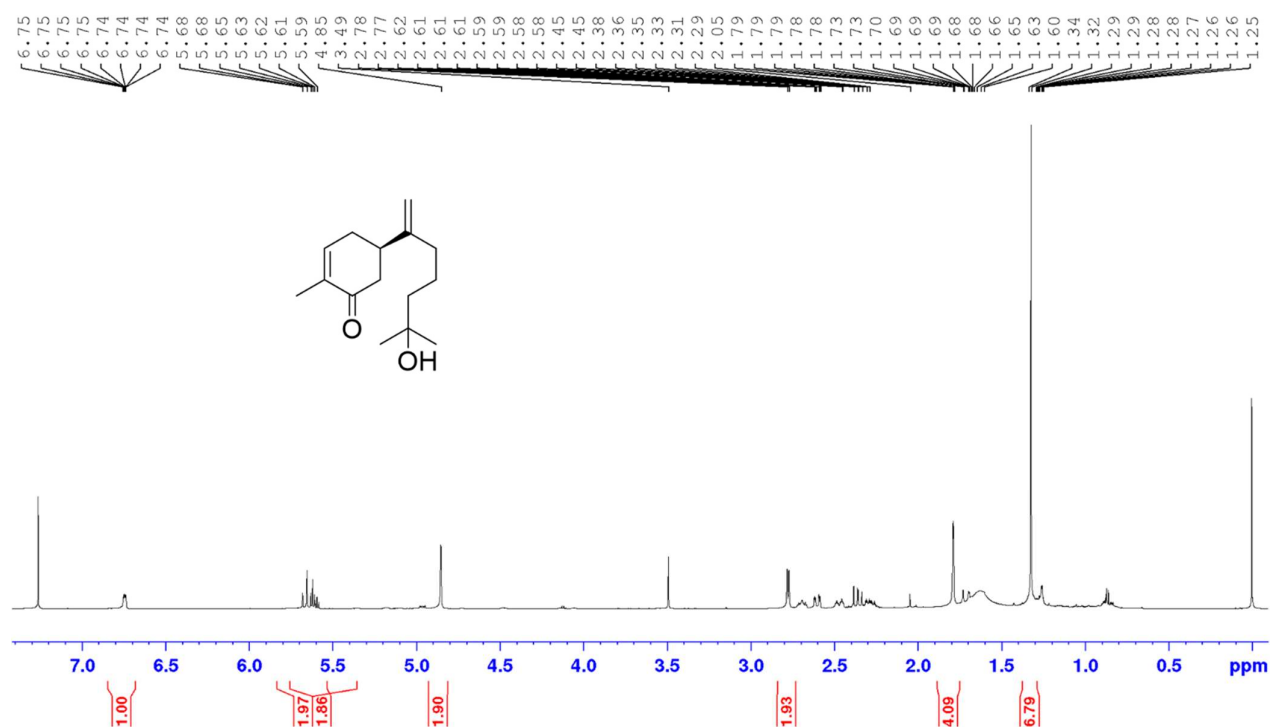


Figure S12. The ¹H NMR spectrum of compound **2**

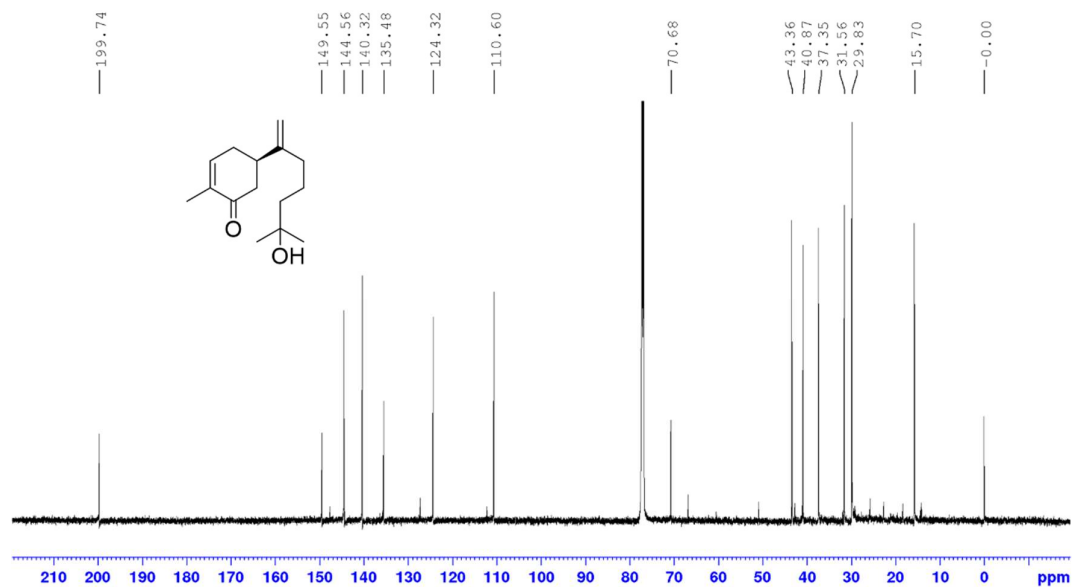


Figure S13. The ¹³CNMR spectrum of compound 2

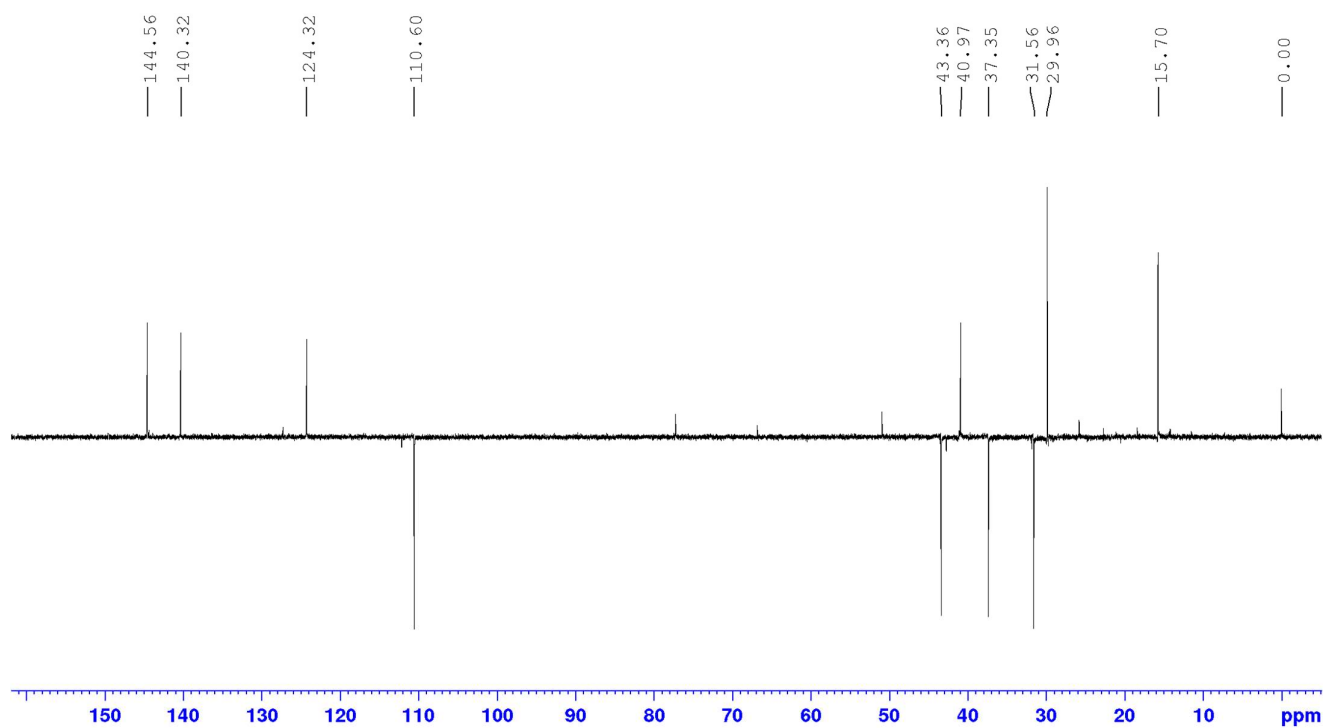


Figure S14. The DEPT135 spectrum of compound 2

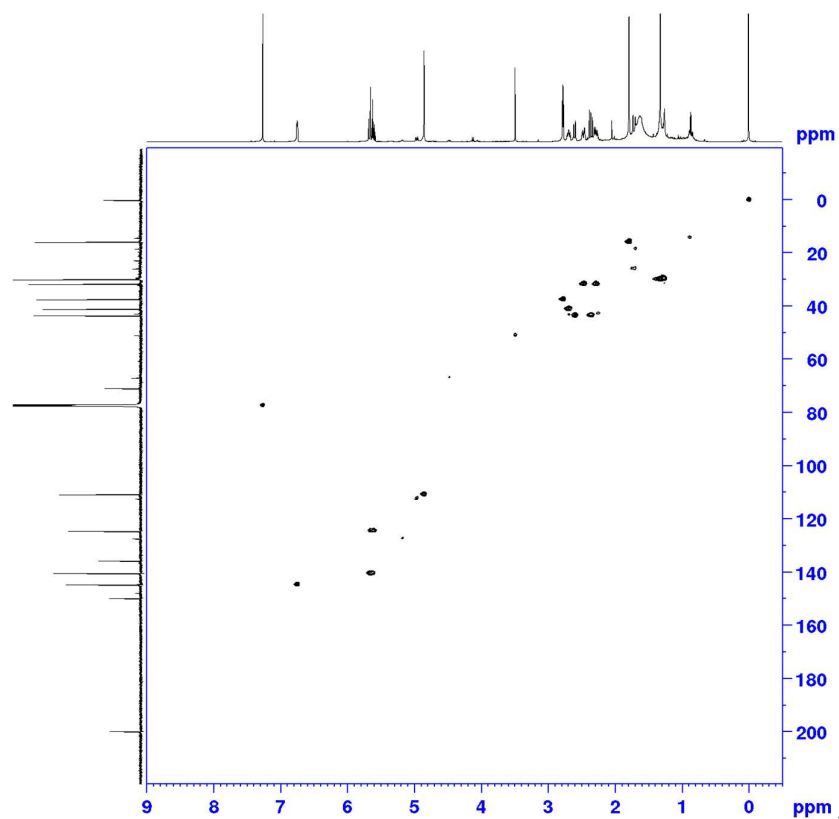


Figure S15. The HSQC spectrum of compound **2**

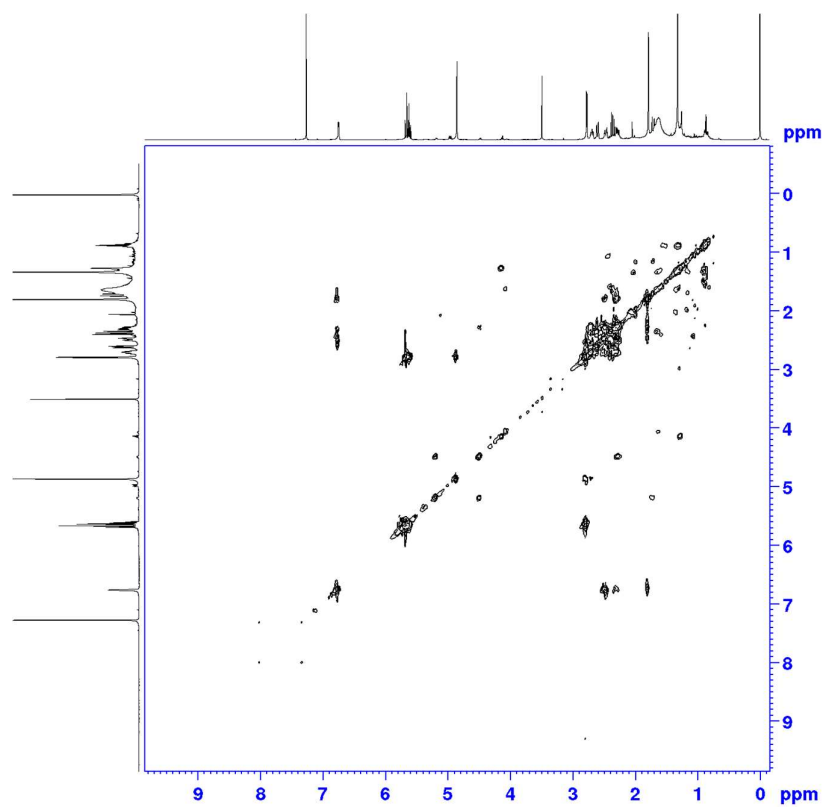


Figure S16. The ^1H - ^1H COSY spectrum of compound **2**

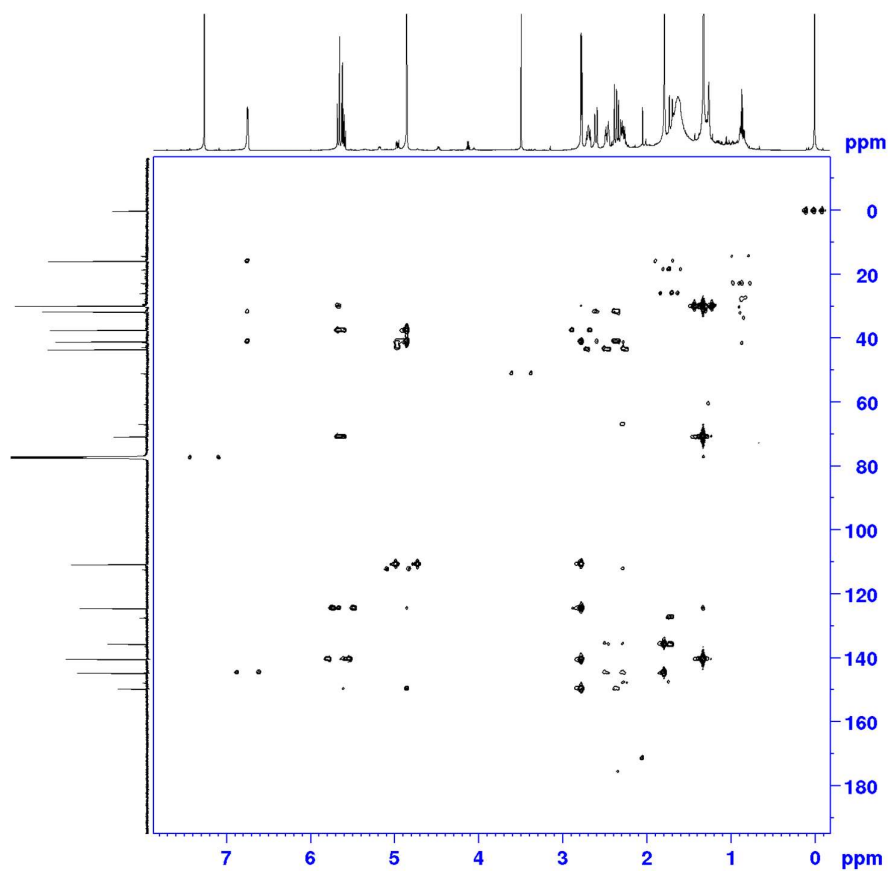


Figure S17. The HMBC spectrum of compound 2

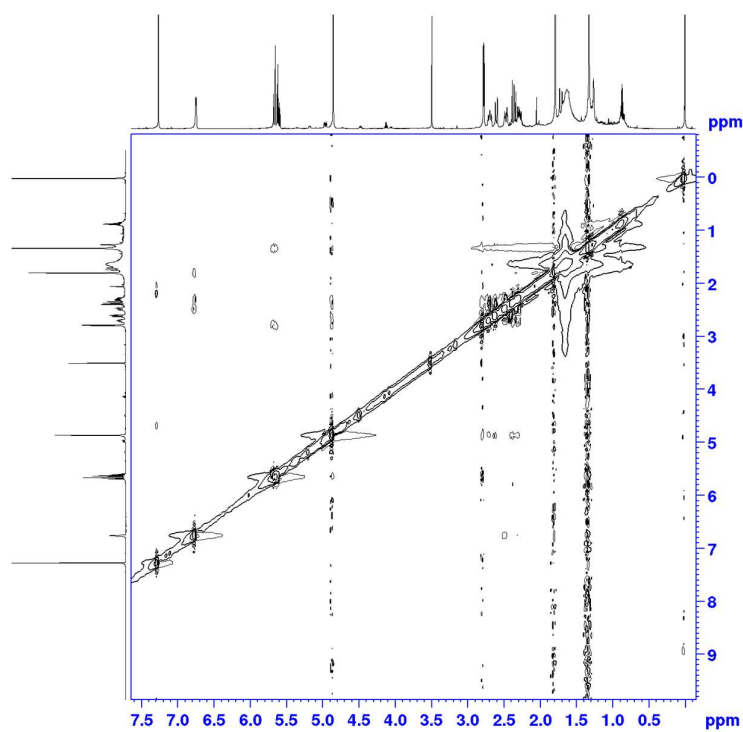
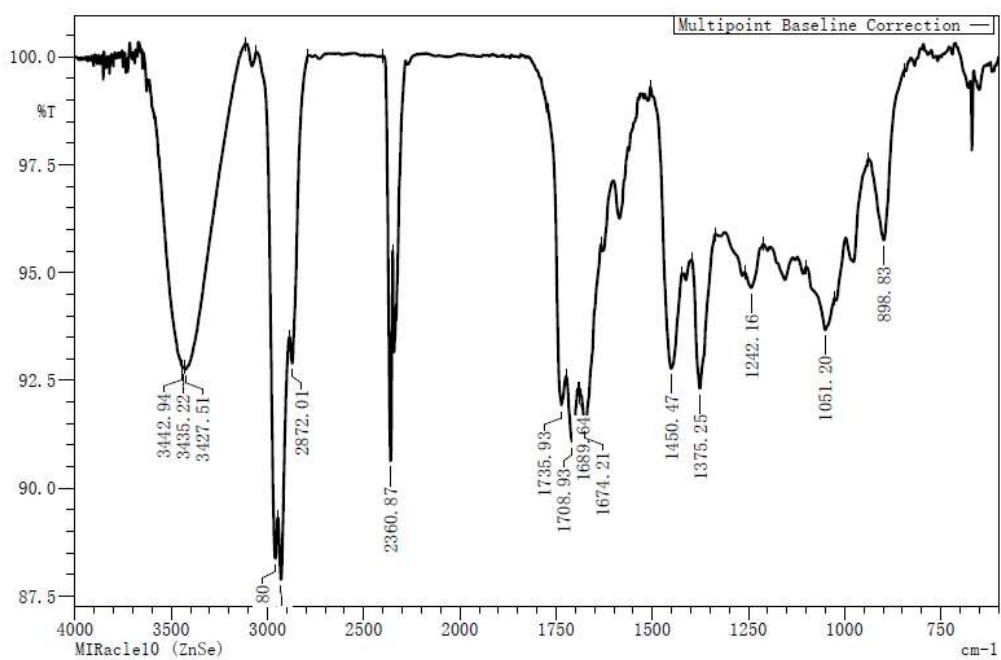


Figure S18. The NOESY spectrum of compound 2



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Figure S19. The IR spectrum of compound **2**

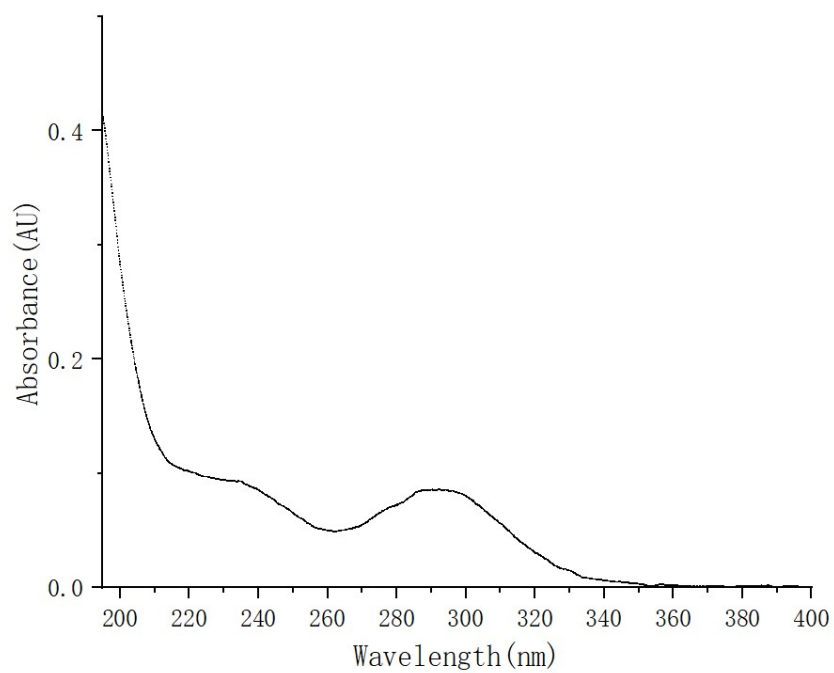


Figure S20. The UV spectrum of compound **2**

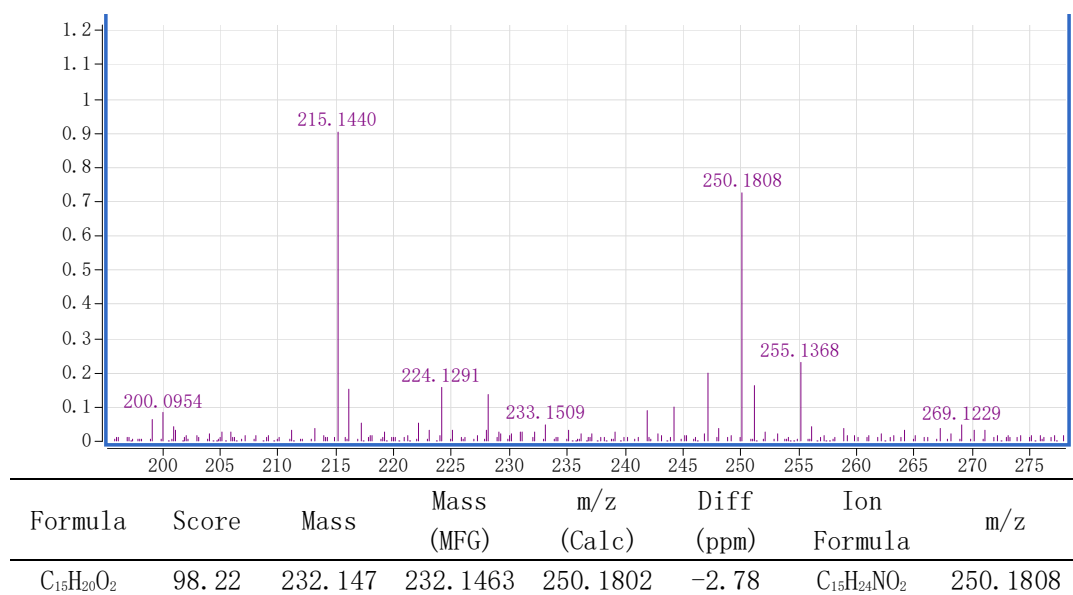


Figure S21. The HRESIMS spectrum of compound **3**

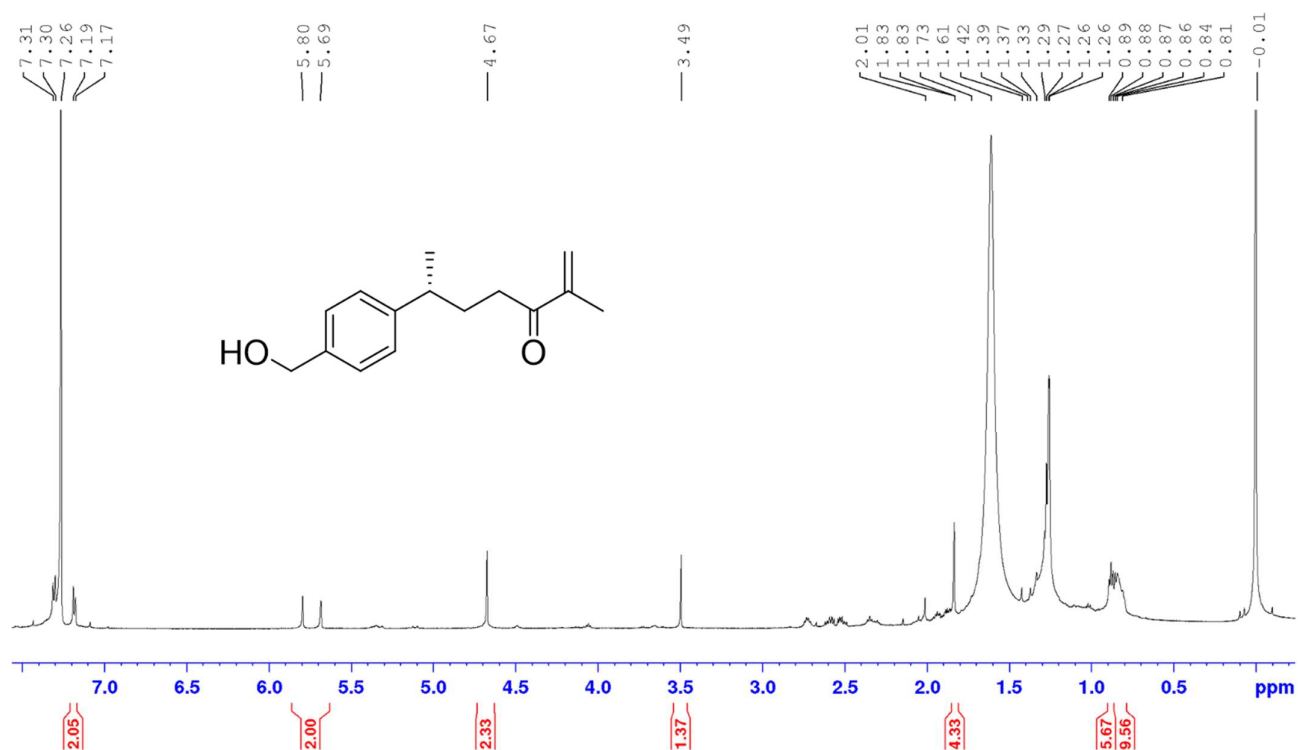


Figure S22. The ¹H NMR spectrum of compound **3**

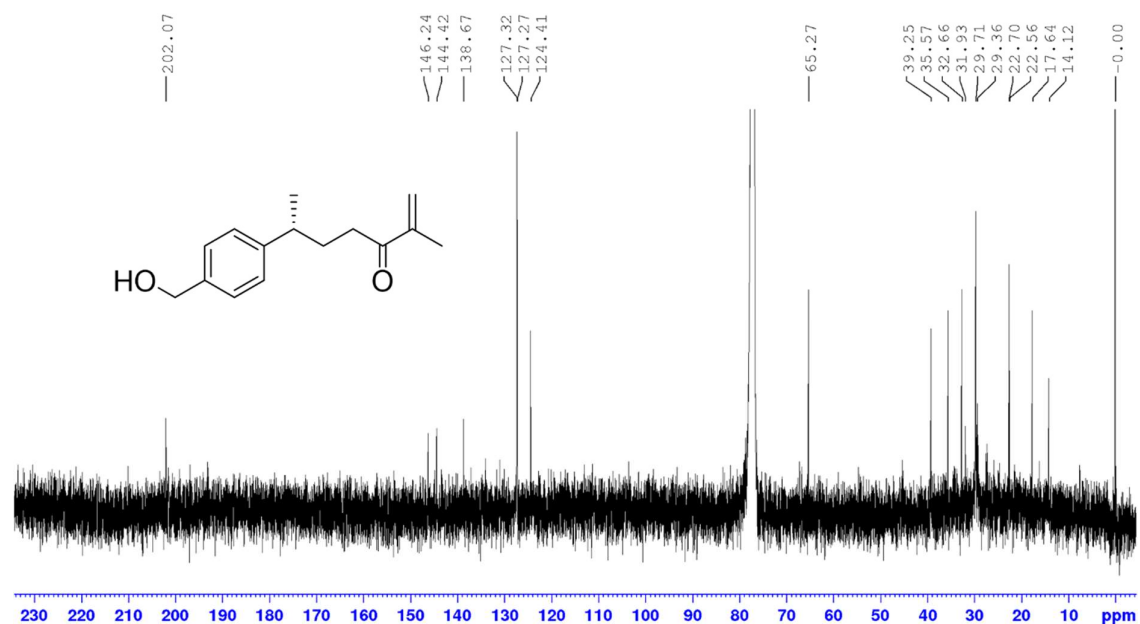


Figure S23. The ¹³CNMR spectrum of compound **3**

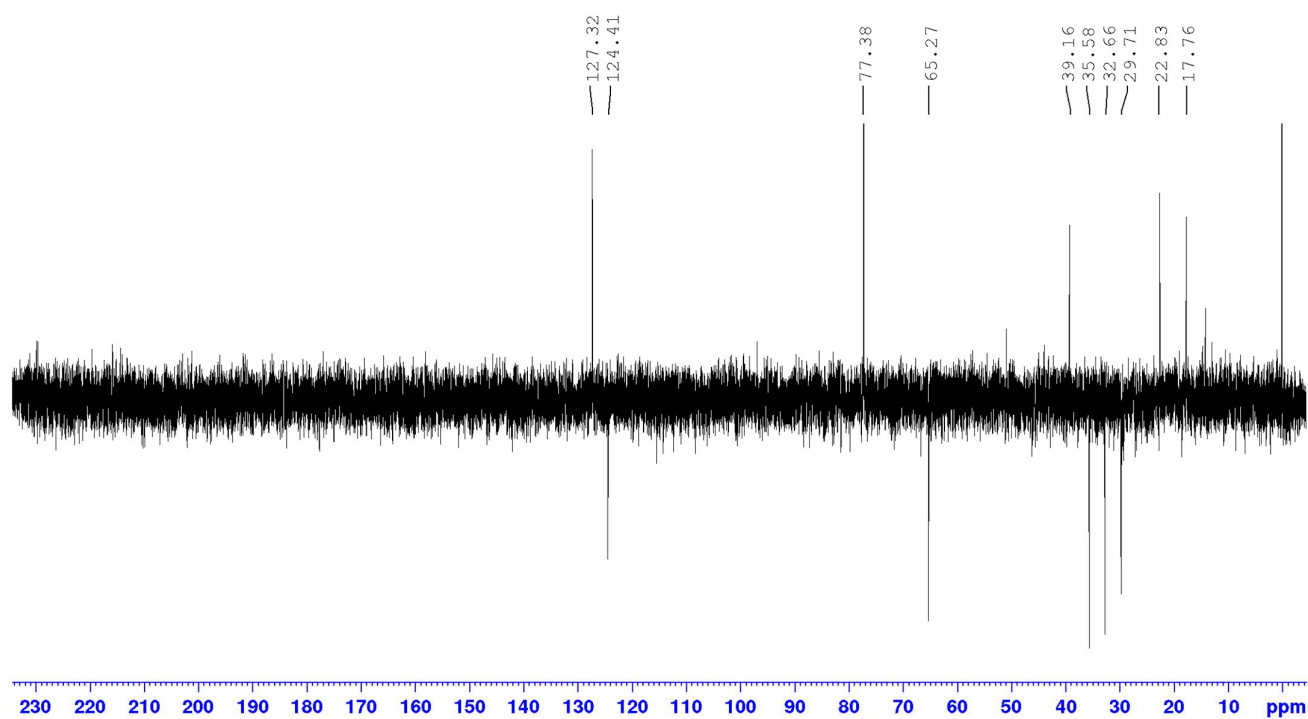


Figure S24. The DEPT135 spectrum of compound **3**

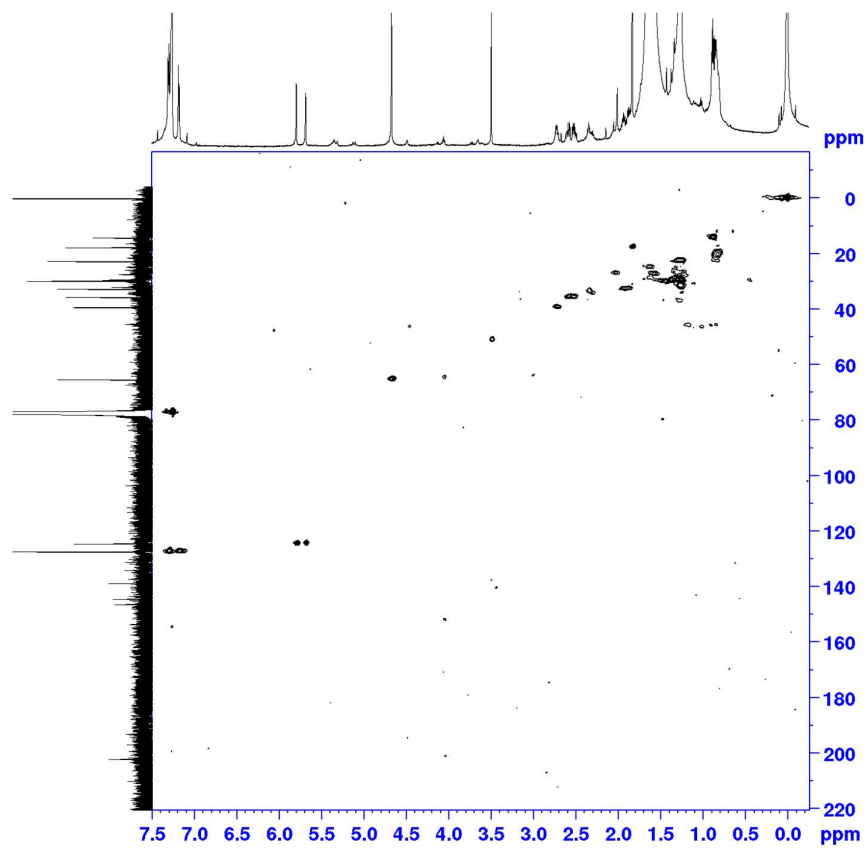


Figure S25. The HSQC spectrum of compound **3**

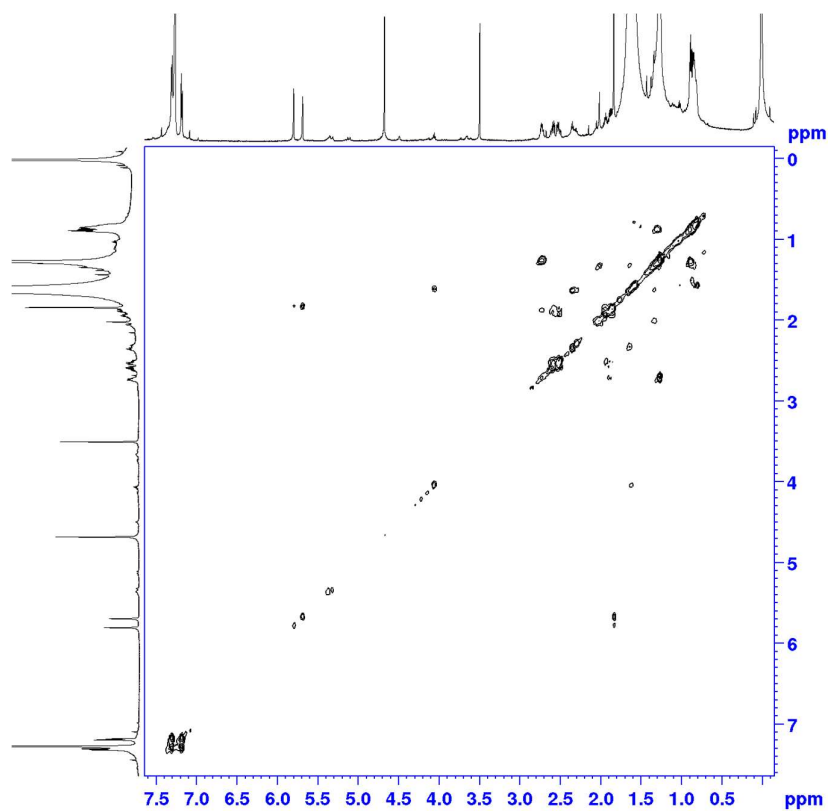


Figure S26. The ^1H - ^1H COSY spectrum of compound **3**

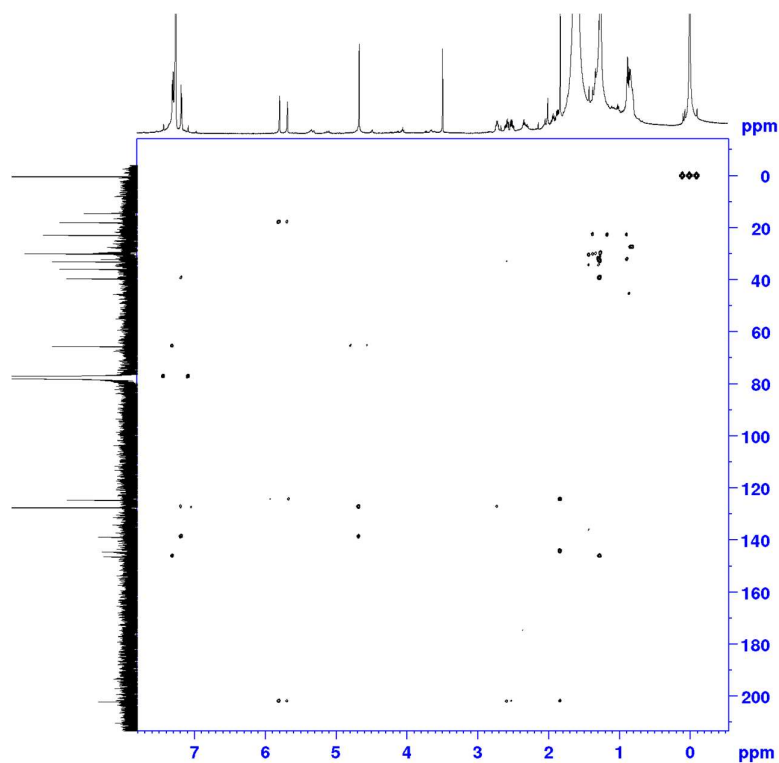


Figure S27. The HMBC spectrum of compound **3**

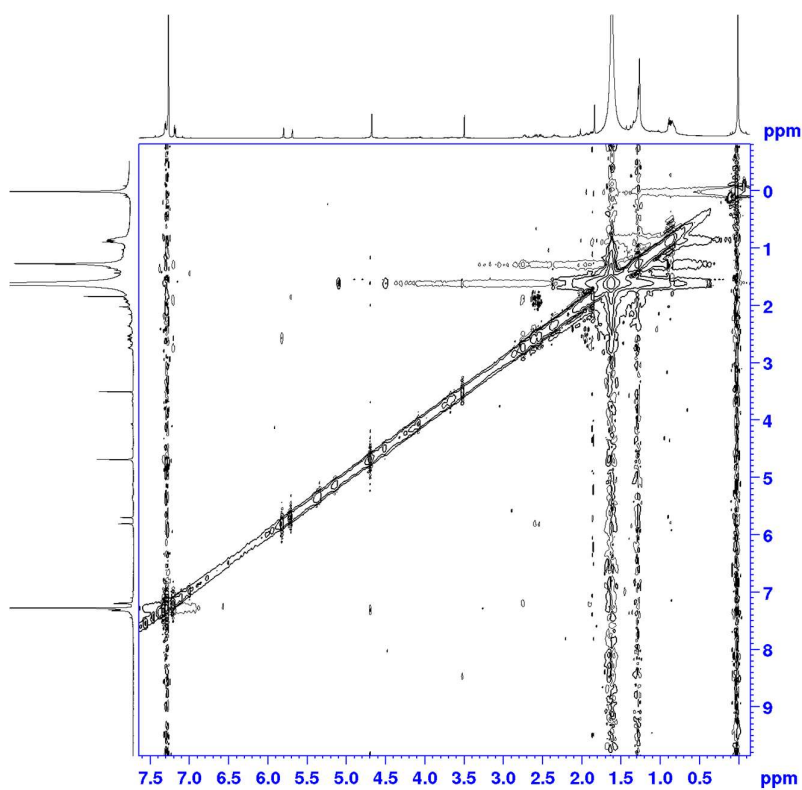


Figure S28. The NOESY spectrum of compound **3**

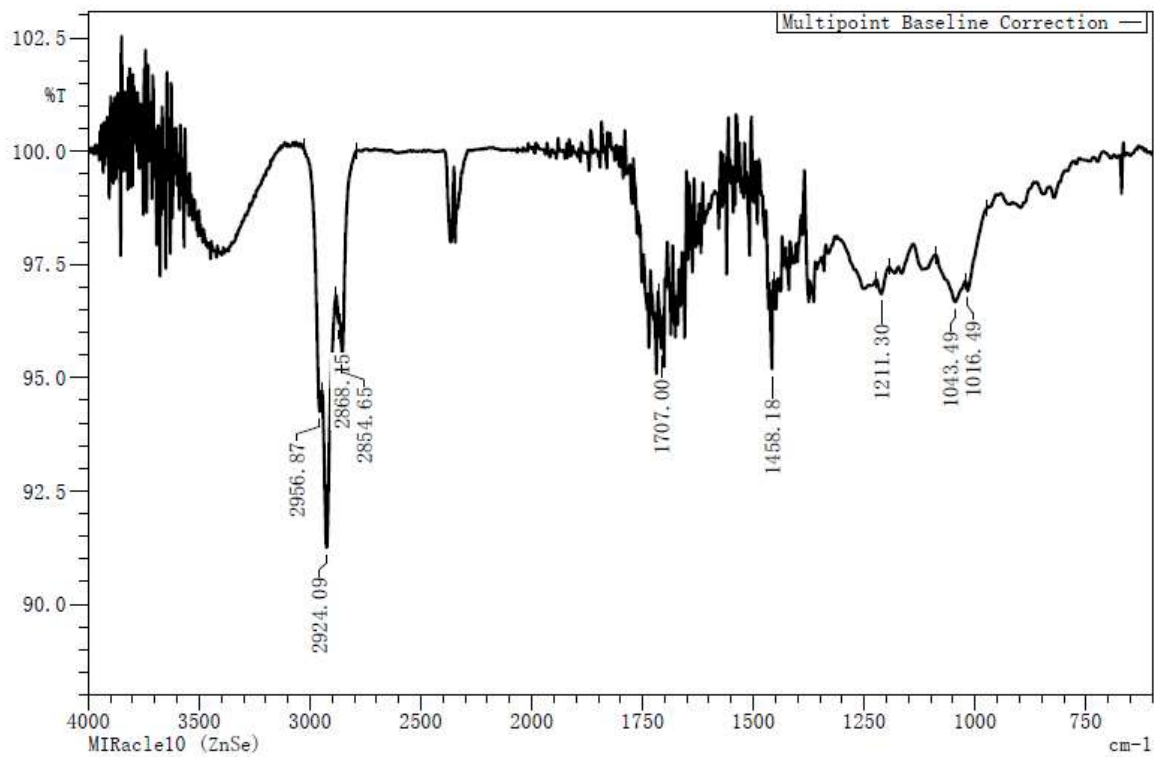


Figure S29. The IR spectrum of compound **3**

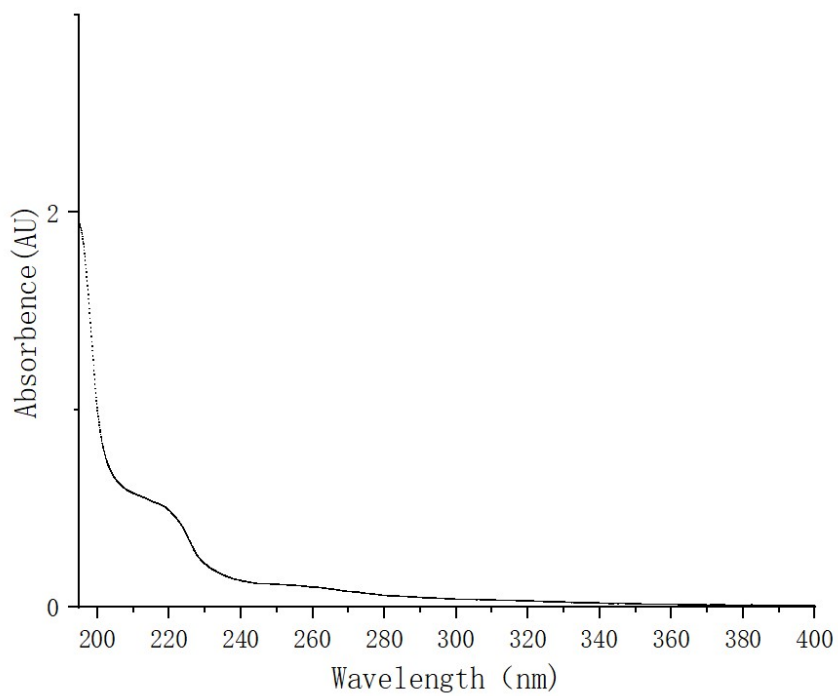
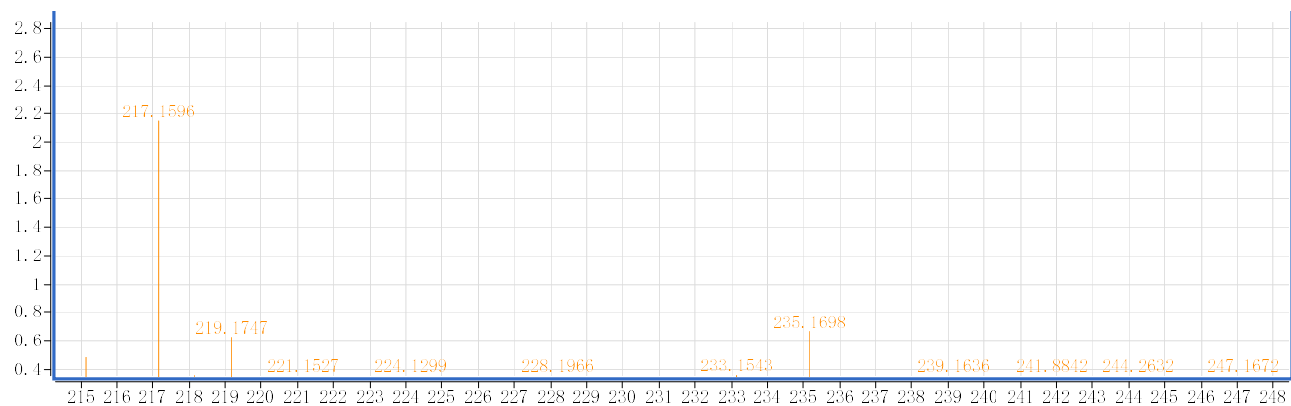


Figure S30. The UV spectrum of compound **3**



Formula	Score	Mass	Mass (MFG)	m/z (Calc)	Diff (ppm)	Ion Formula	m/z
C ₁₅ H ₂₂ O ₂	99.45	234.1616	234.162	235.1693	1.52	C ₁₅ H ₂₃ O ₂	235.1689

Figure S31. The HRESIMS spectrum of compound **4**

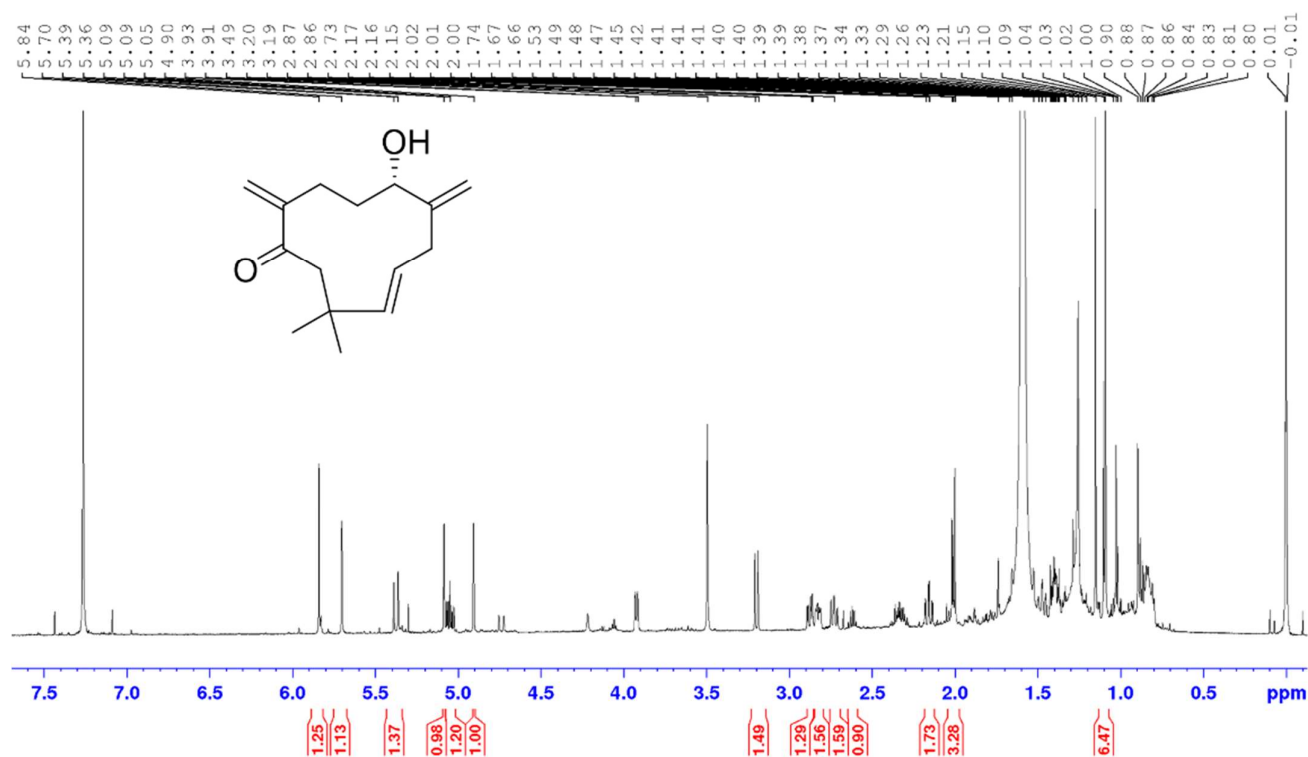


Figure S32. The ¹H NMR spectrum of compound **4**

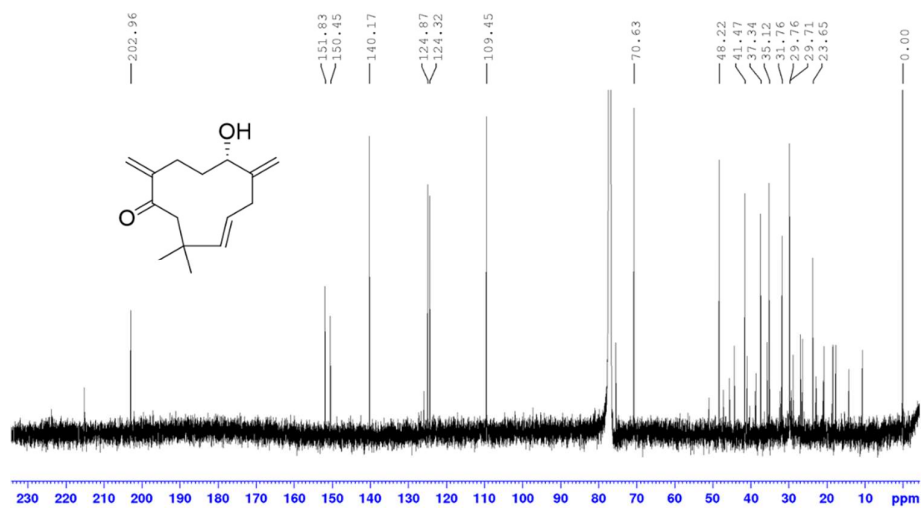


Figure S33. The ¹³CNMR spectrum of compound **4**

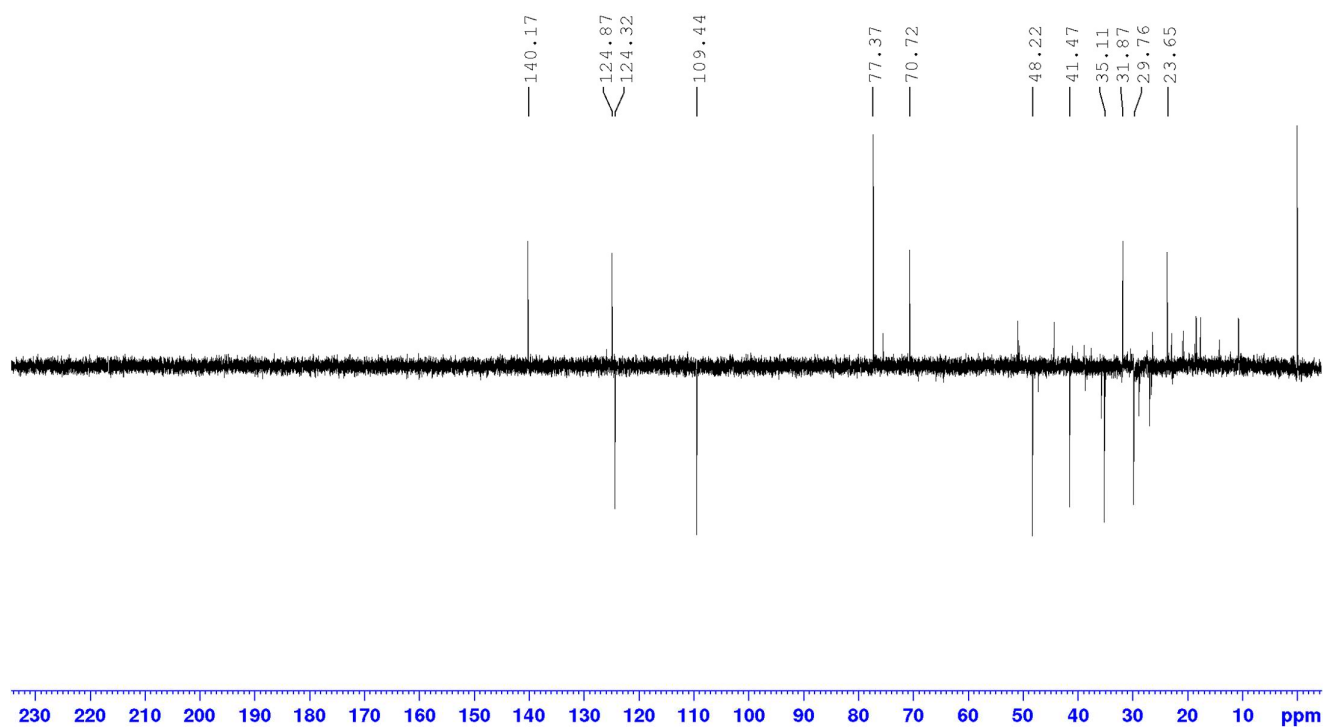


Figure S34. The DEPT135 spectrum of compound **4**

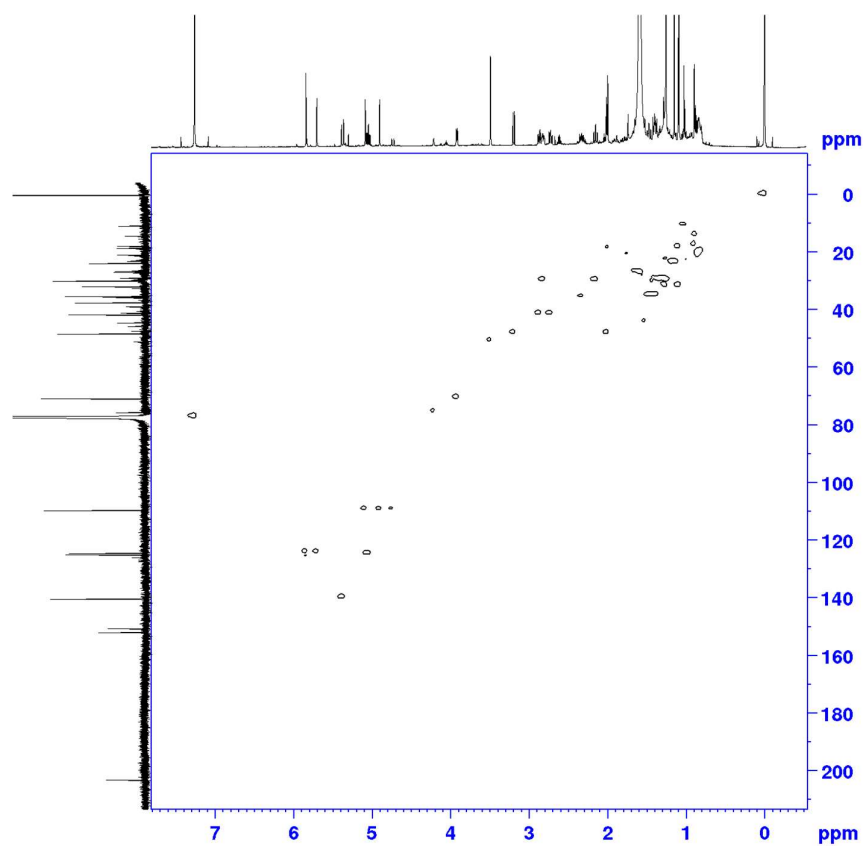


Figure S35. The HSQC spectrum of compound **4**

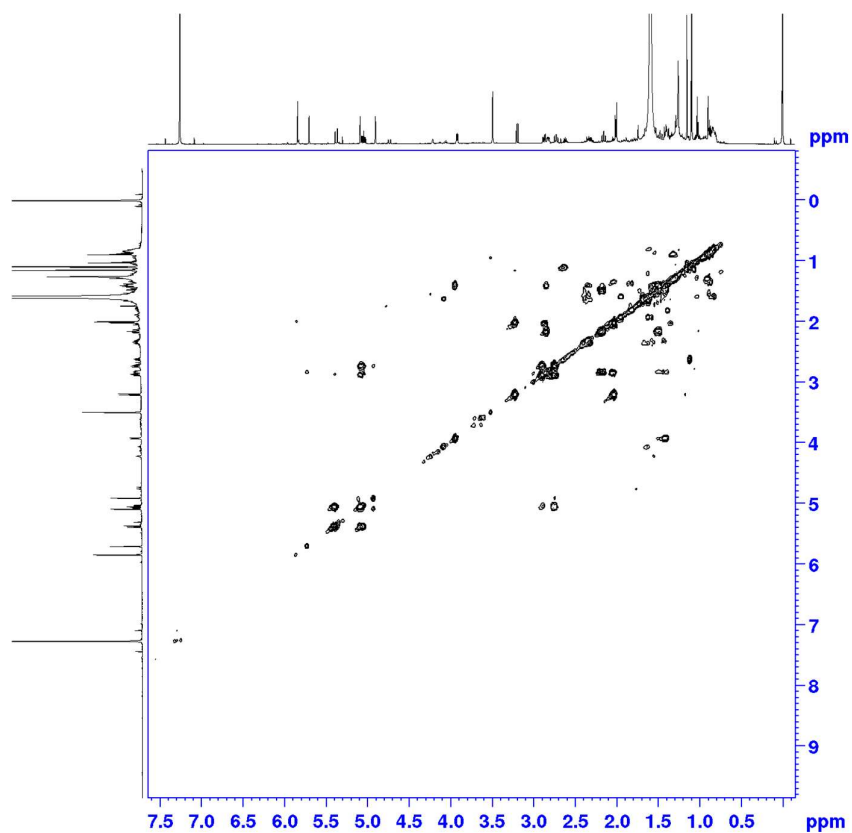


Figure S36. The ^1H - ^1H COSY spectrum of compound **4**

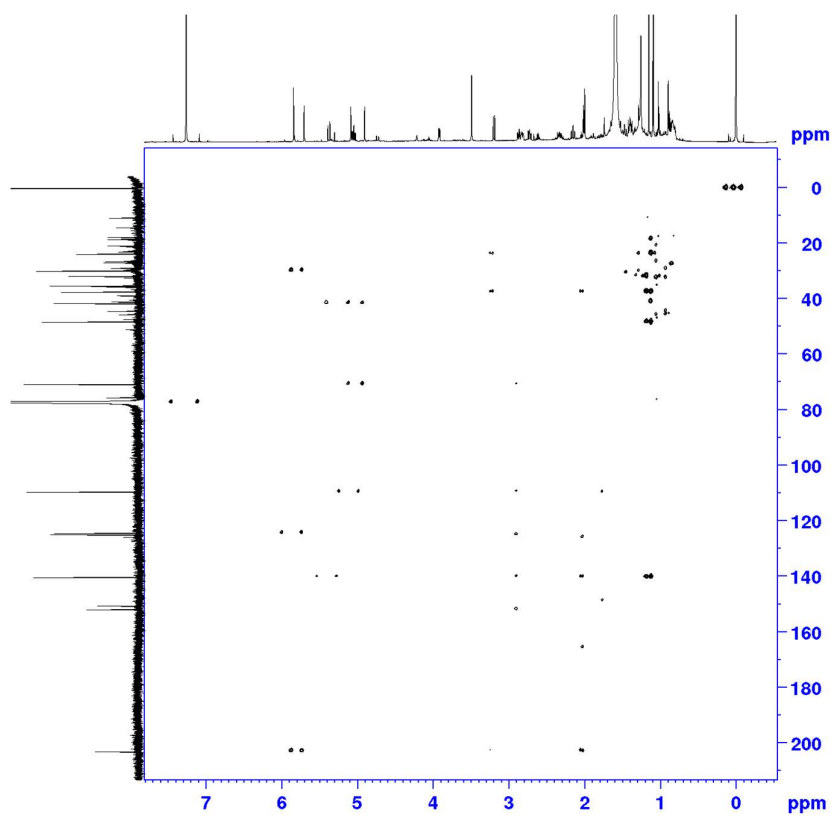


Figure S37. The HMBC spectrum of compound **4**

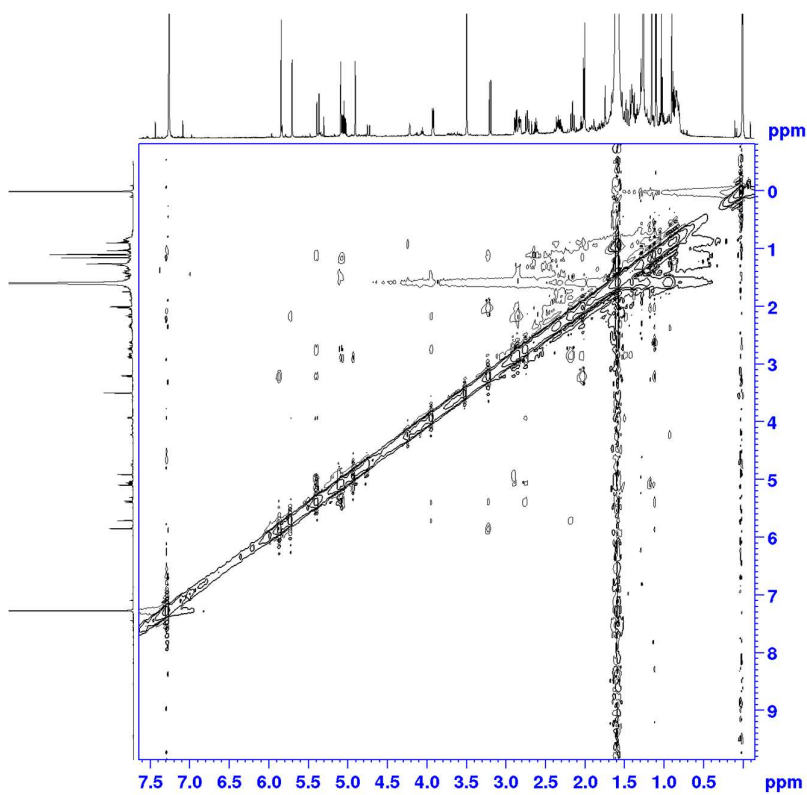


Figure S38. The NOESY spectrum of compound **4**

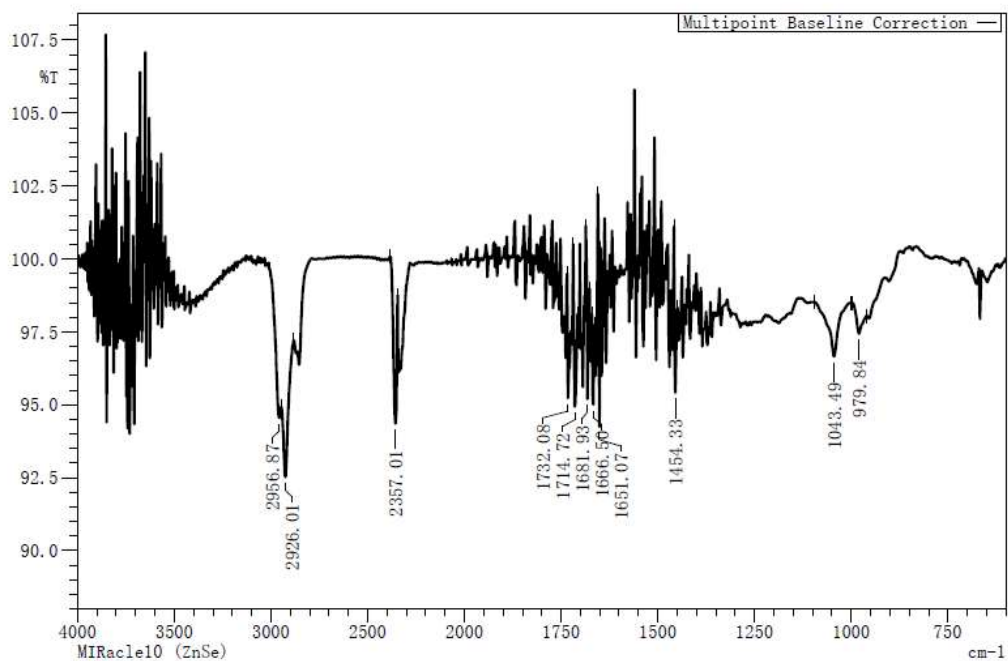


Figure S39. The IR spectrum of compound **4**

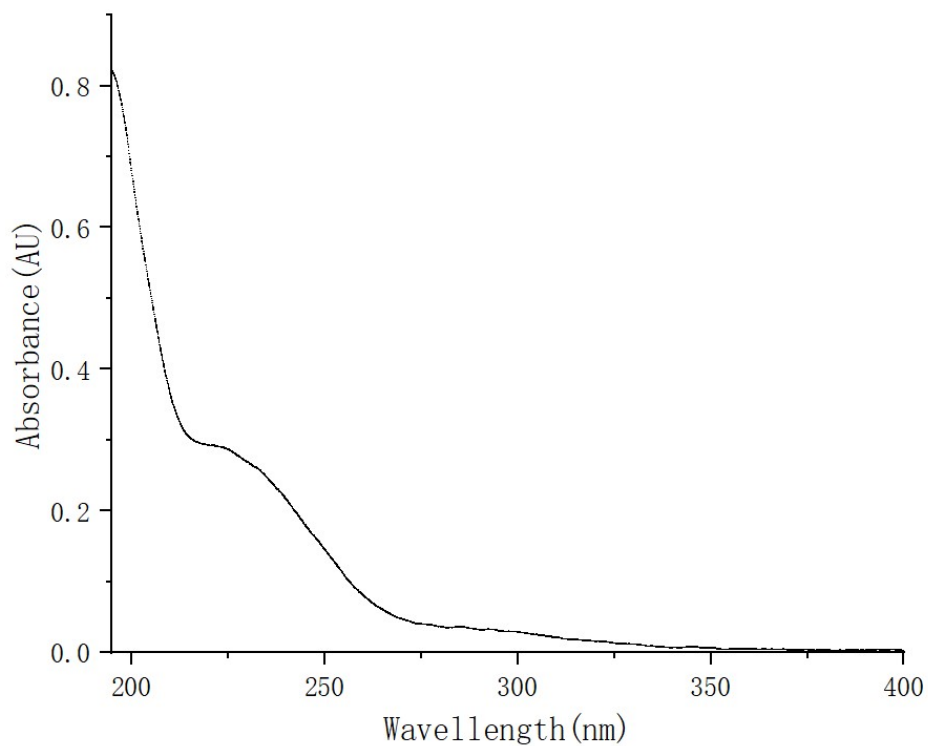


Figure S40. The UV spectrum of compound **4**

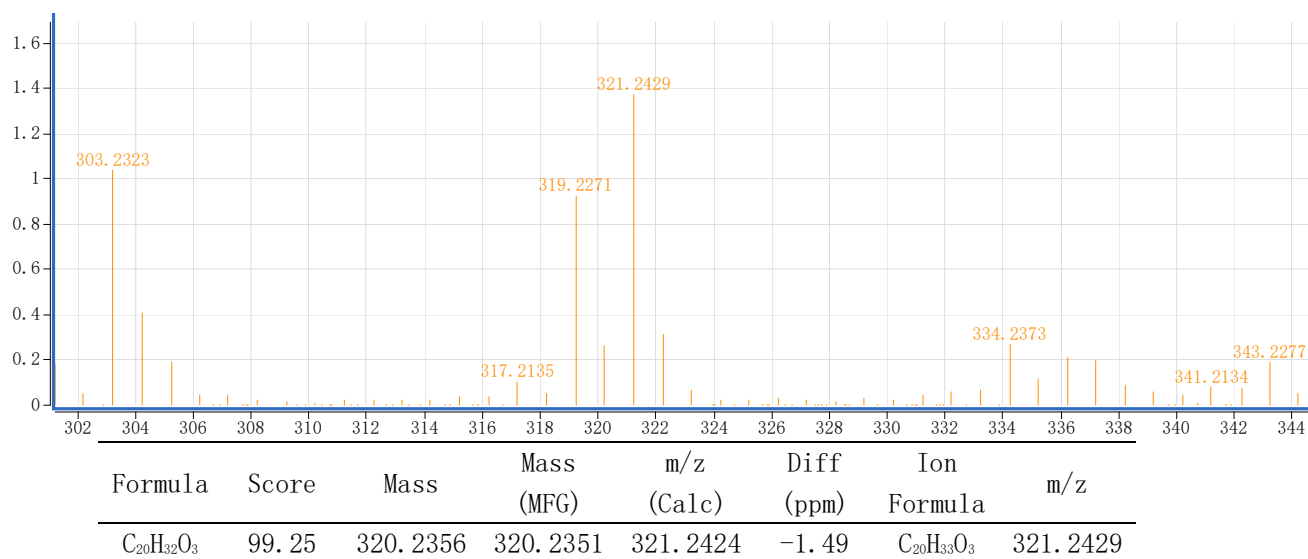


Figure S41. The HRESIMS spectrum of compound **5**

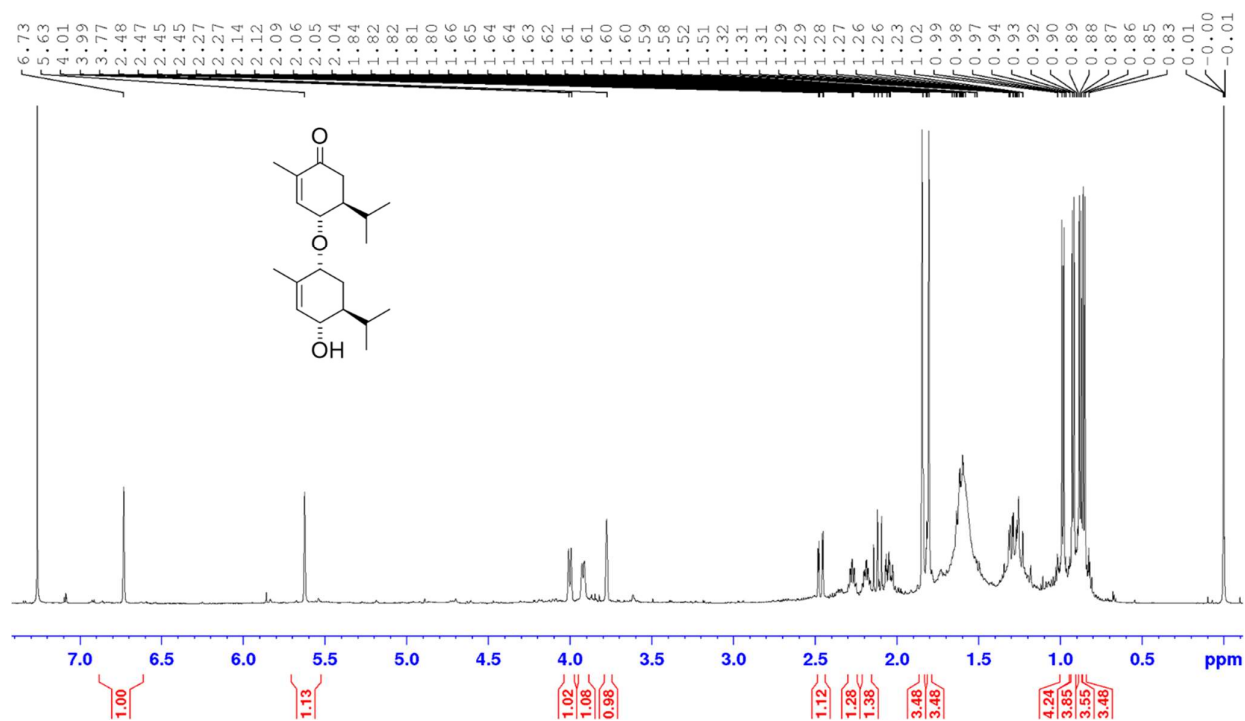


Figure S42. The ¹H NMR spectrum of compound **5**

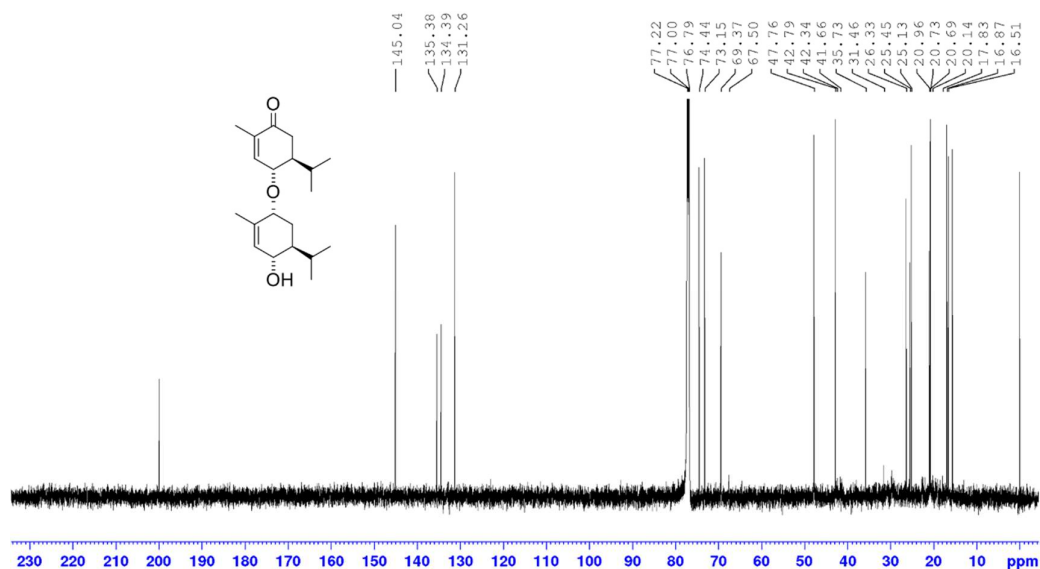


Figure S43. The ¹³CNMR spectrum of compound **5**

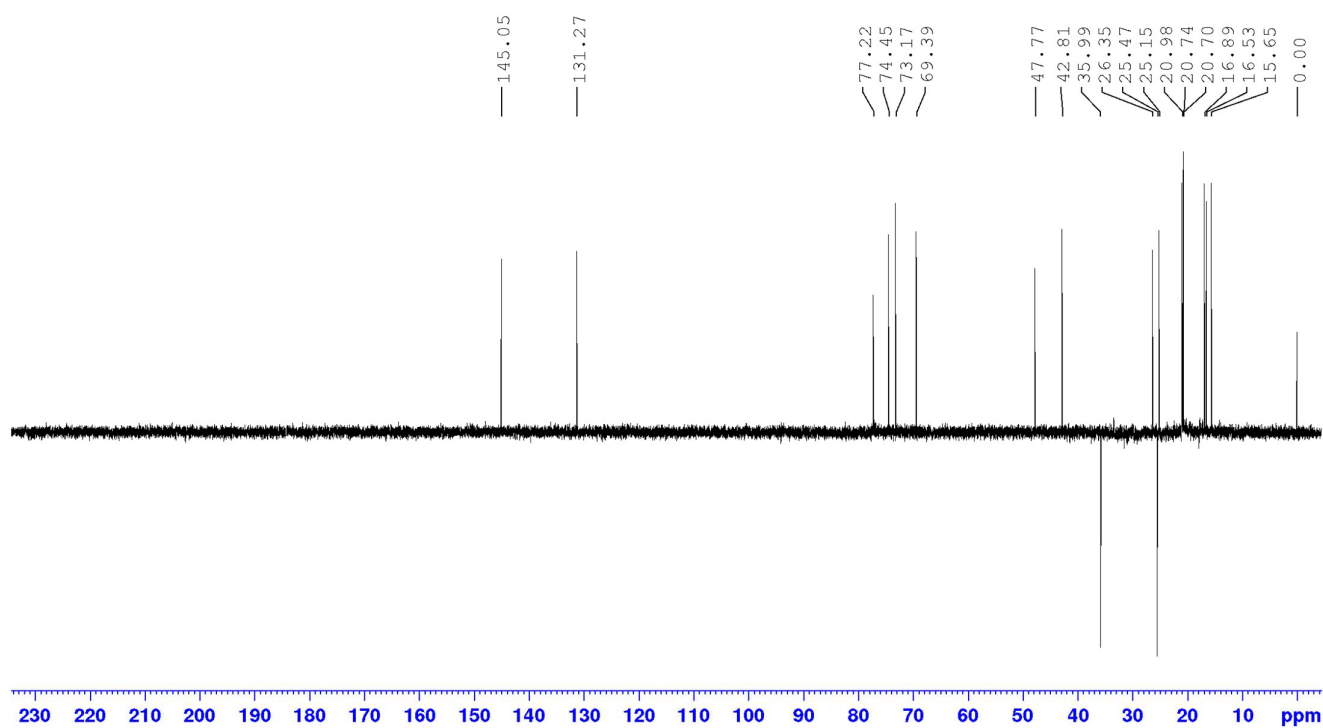


Figure S44. The DEPT135 spectrum of compound **5**

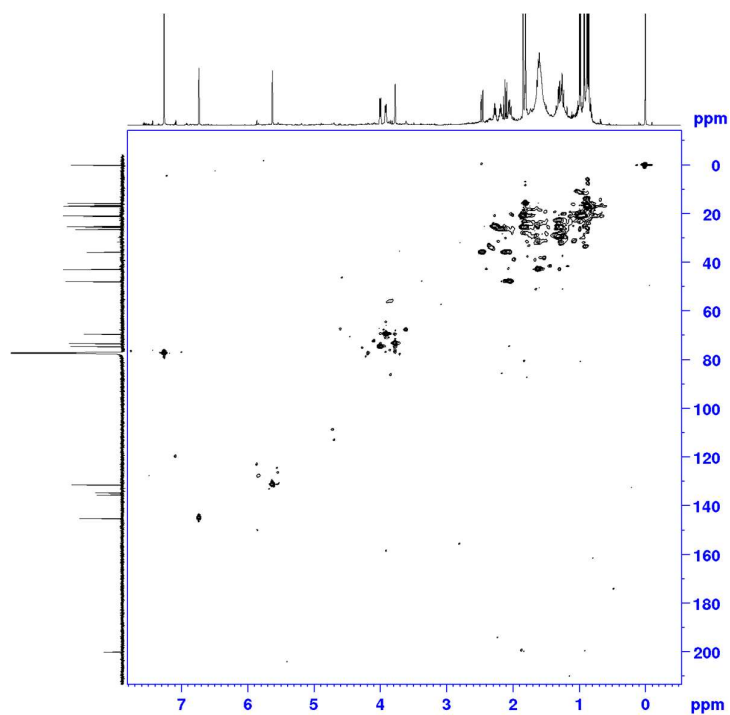


Figure S45. The HSQC spectrum of compound **5**

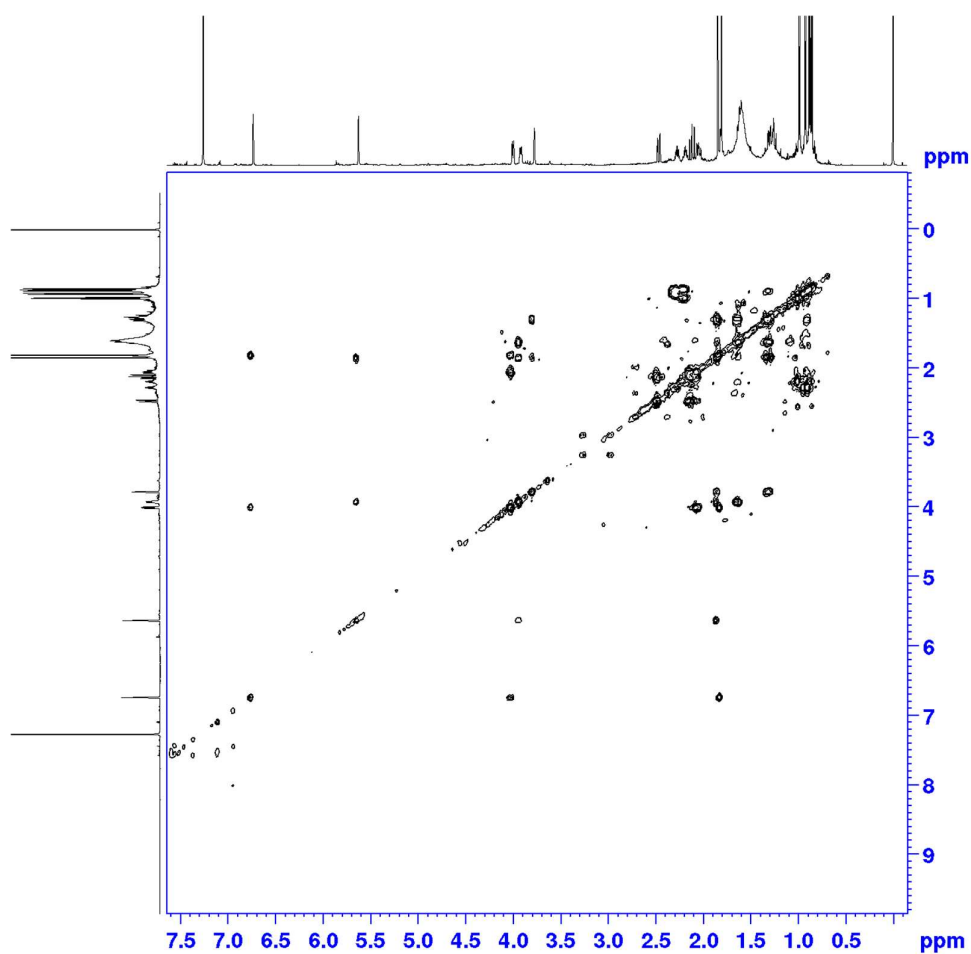


Figure S46. The ^1H - ^1H COSY spectrum of compound **5**

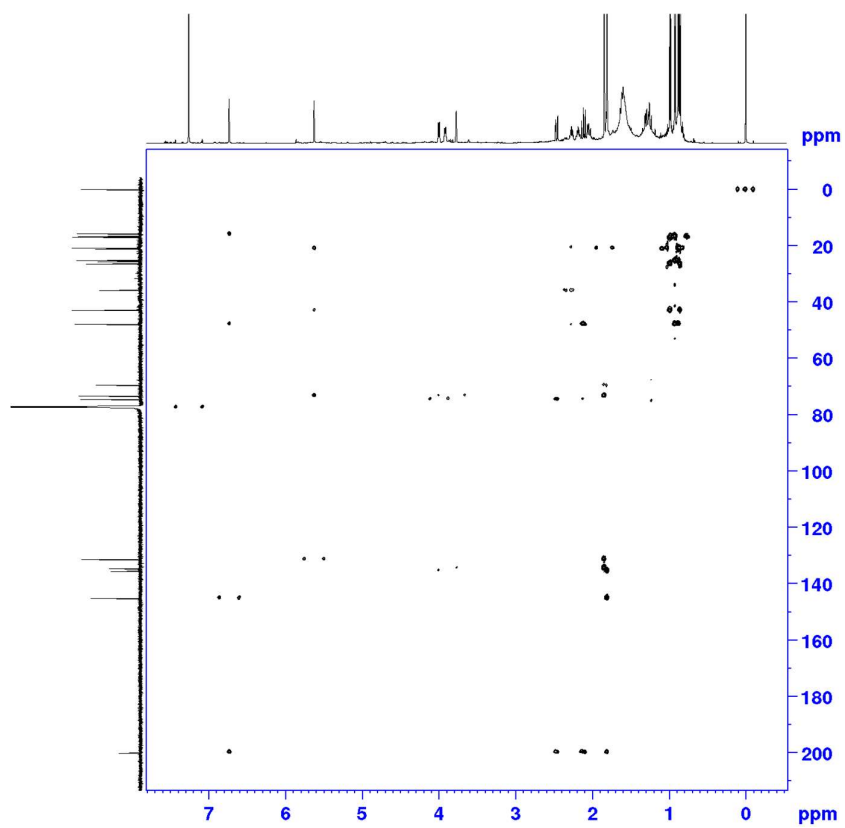


Figure S47. The HMBC spectrum of compound **5**

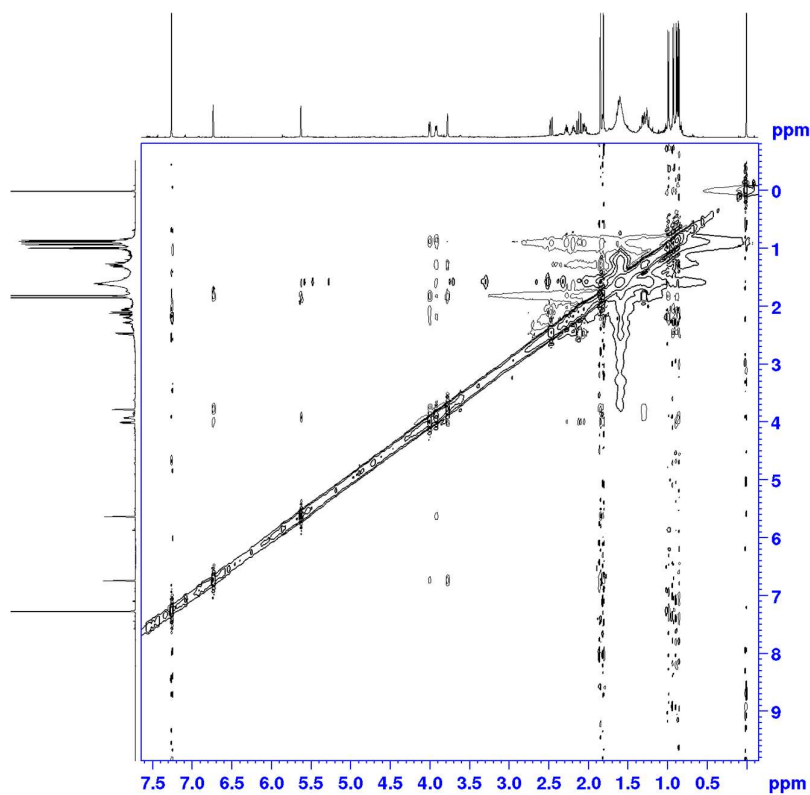


Figure S48. The NOESY spectrum of compound **5**

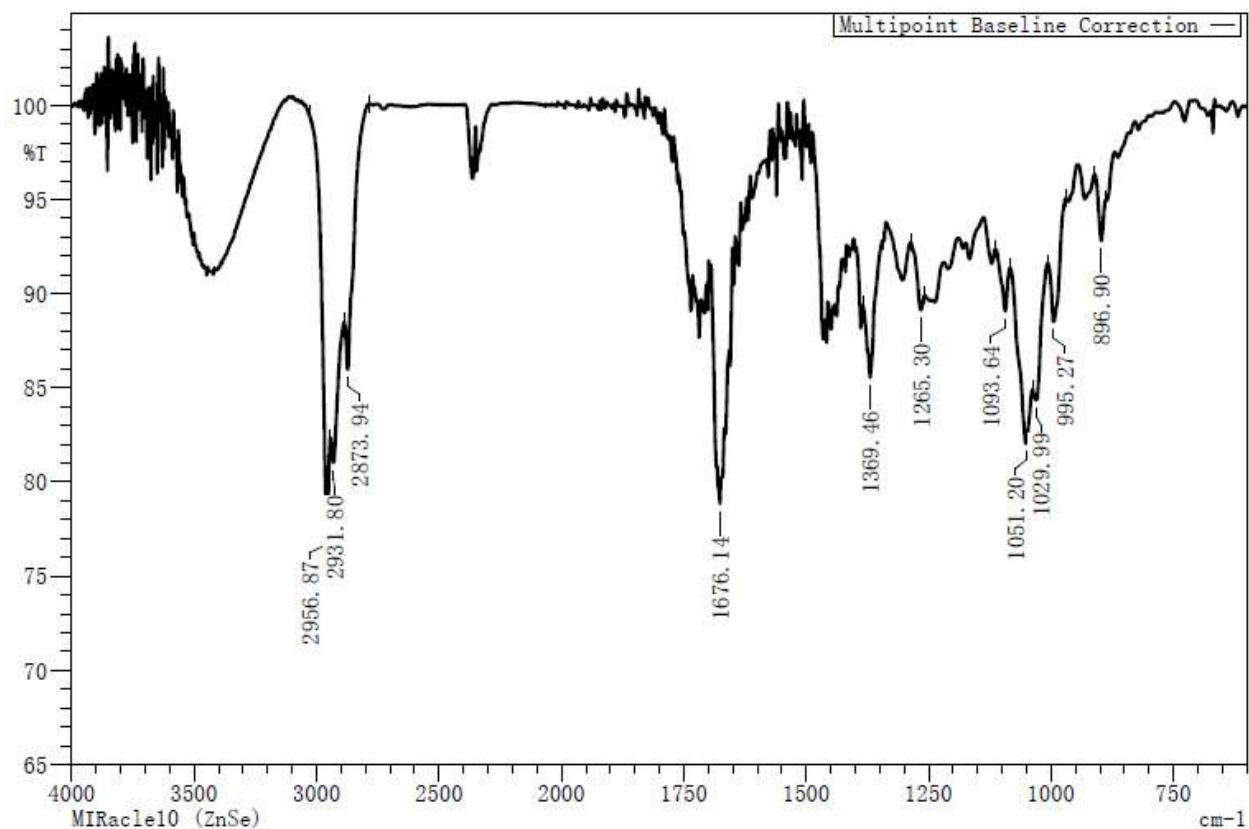


Figure S49. The IR spectrum of compound 5

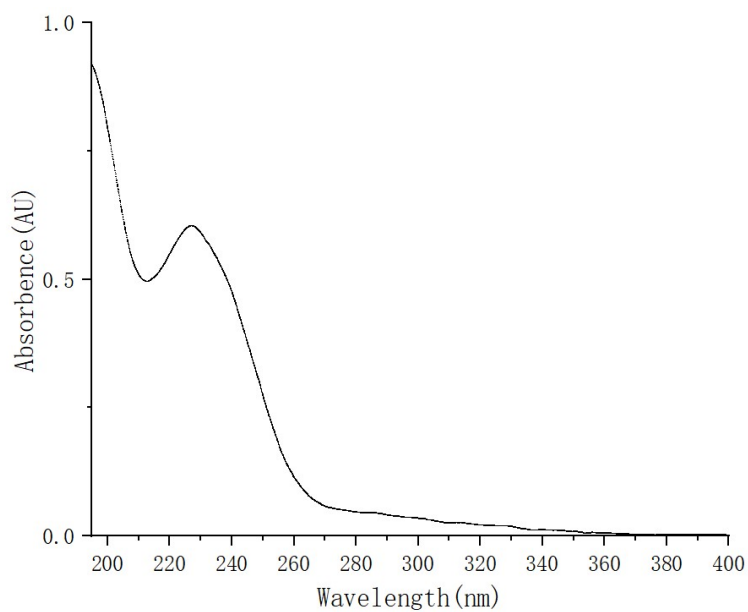
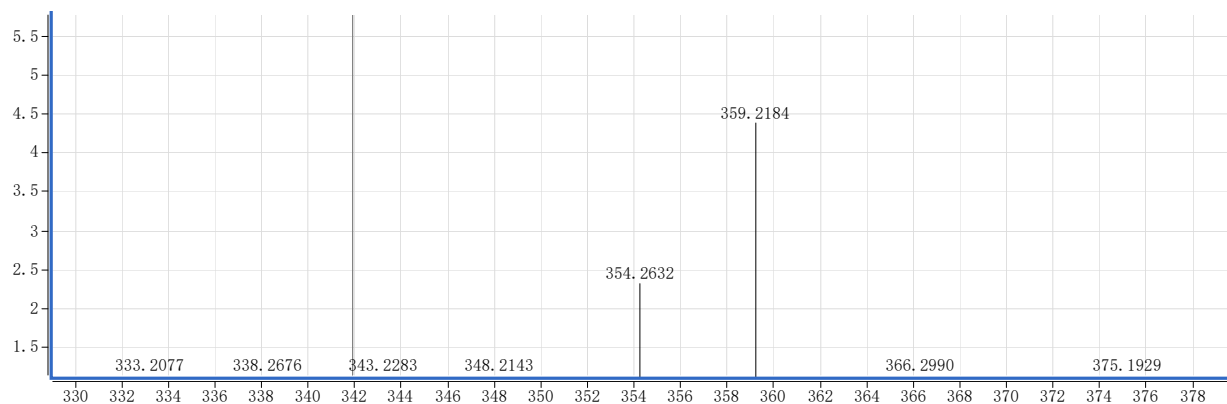


Figure S50. The IR spectrum of compound 5



Formula	Score	Mass	Mass (MFG)	m/z (Calc)	Diff (ppm)	Ion Formula	m/z
C ₂₀ H ₃₂ O ₄	97.61	336.2292	336.2301	359.2193	-1.49	C ₂₀ H ₃₃ NaO ₃	359.2184

Figure S51. The HRESIMS spectrum of compound **6**

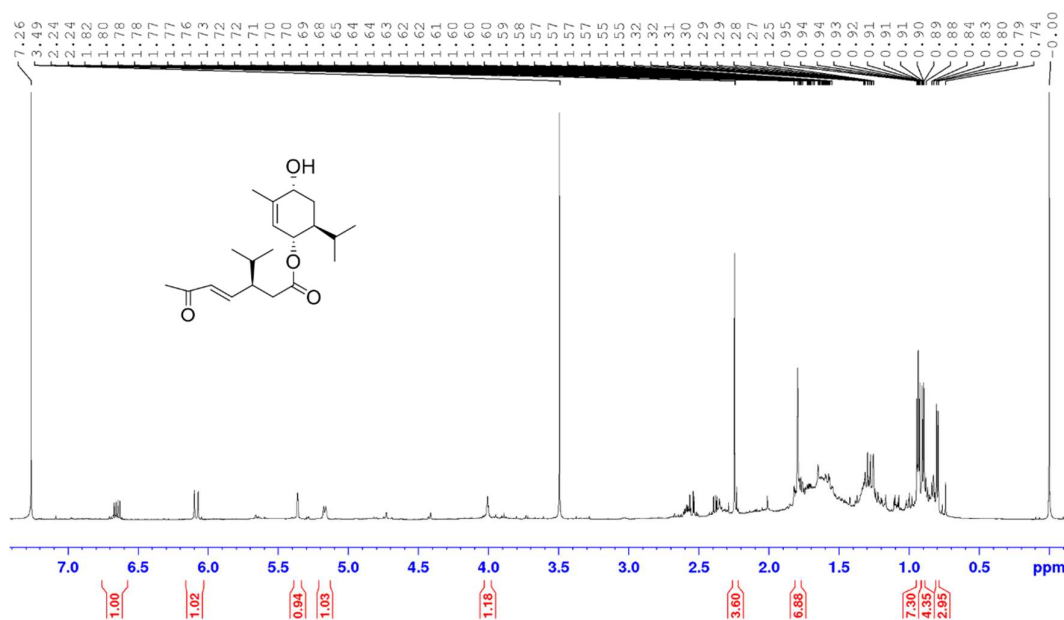


Figure S52. The ¹H NMR spectrum of compound **6**

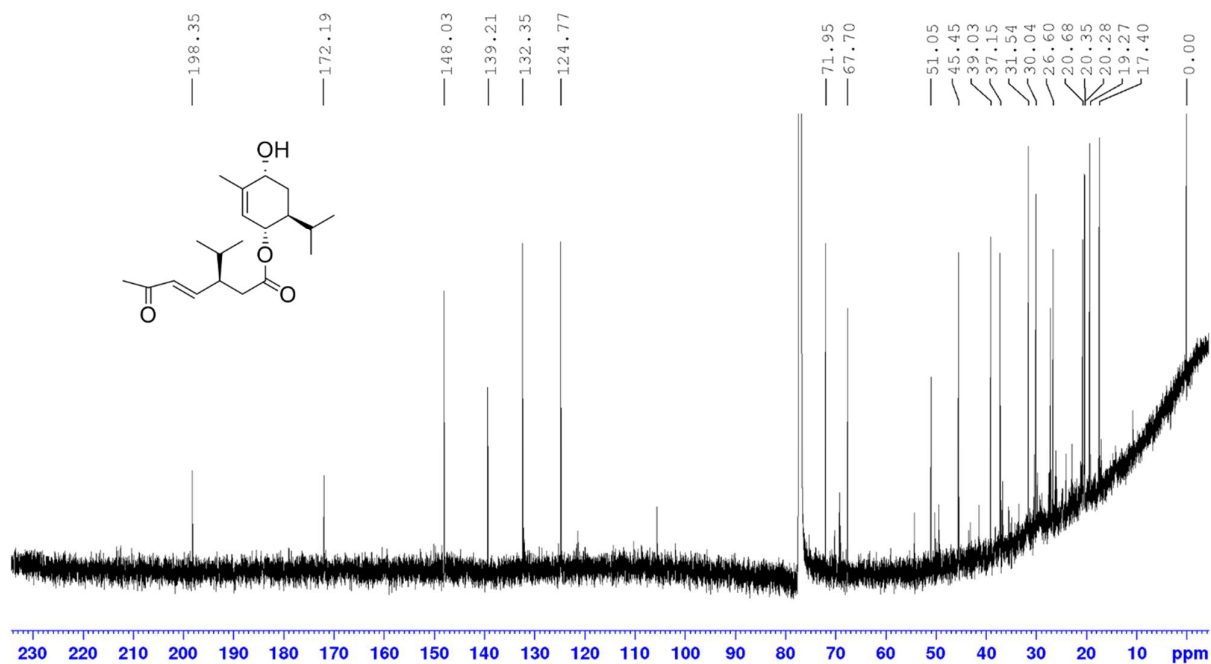


Figure S53. The ¹³CNMR spectrum of compound **6**

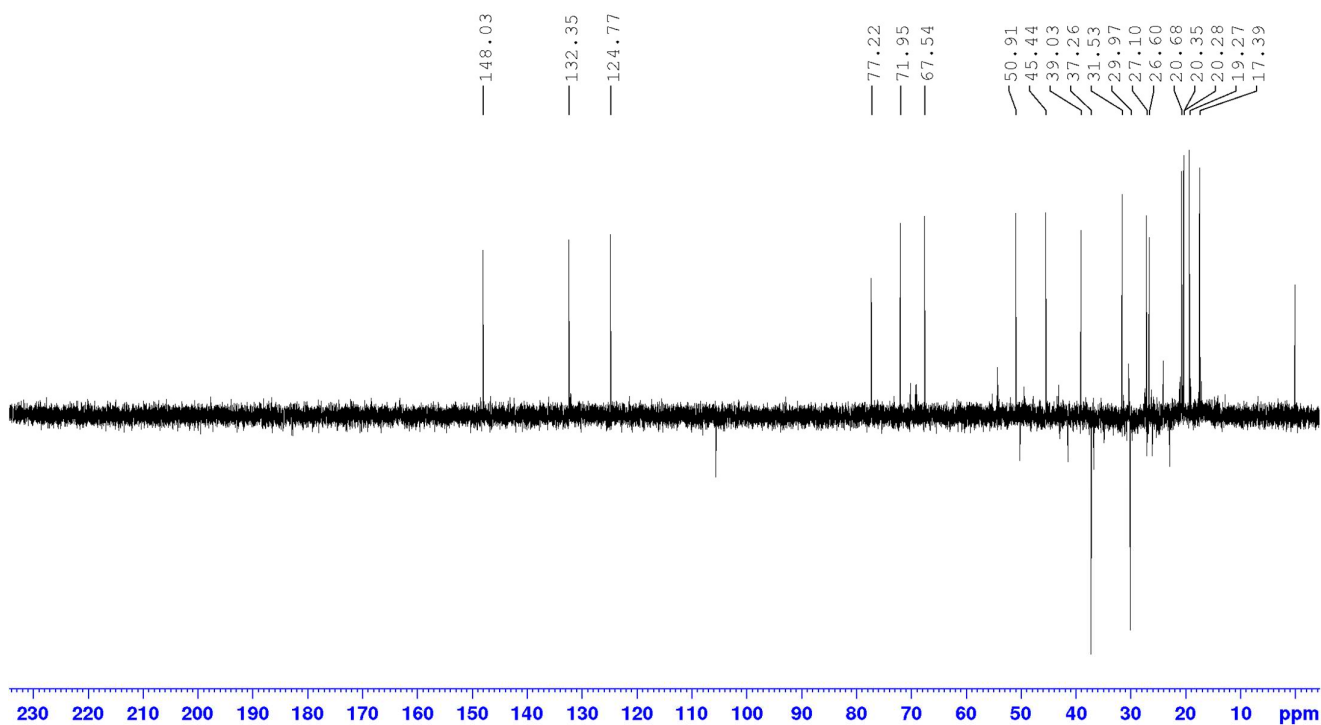


Figure S54. The DEPT135 spectrum of compound **6**

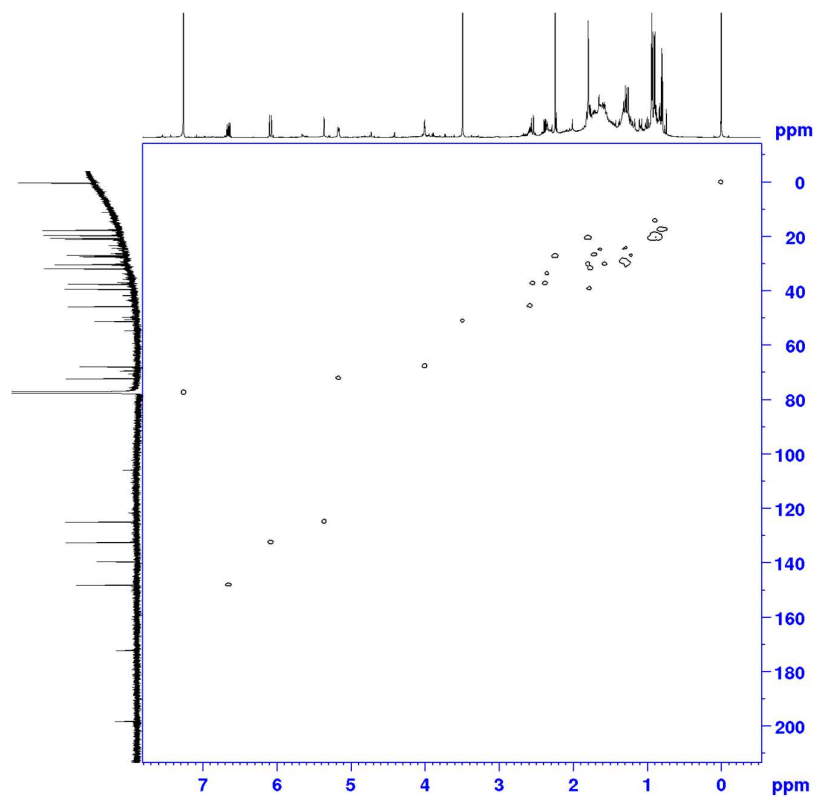


Figure S55. The HSQC spectrum of compound **6**

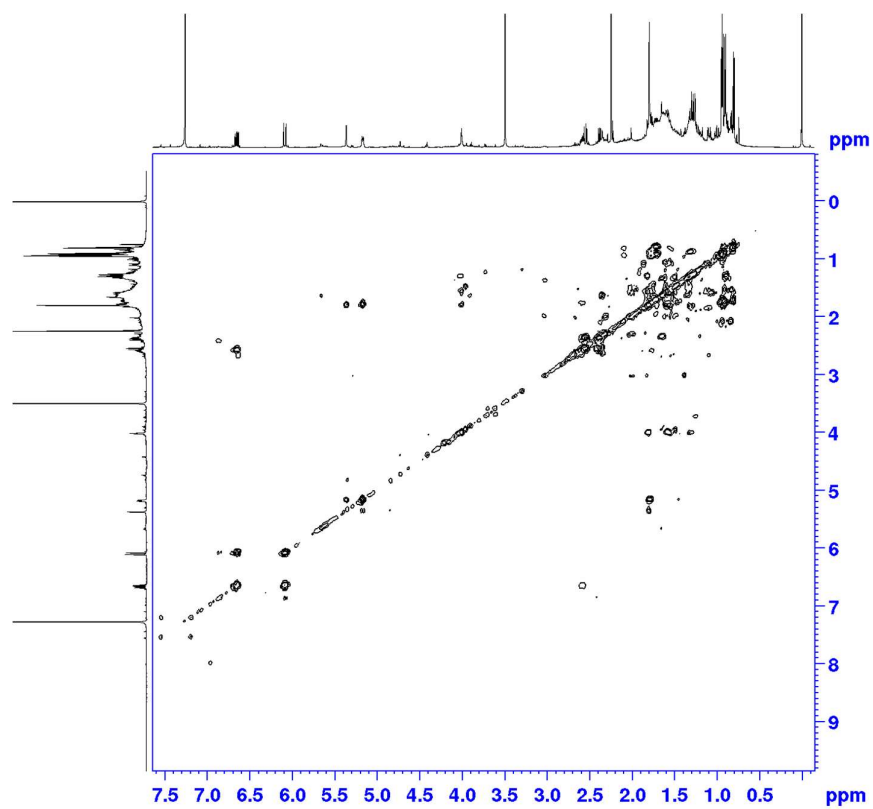


Figure S56. The ^1H - ^1H COSY spectrum of compound **6**

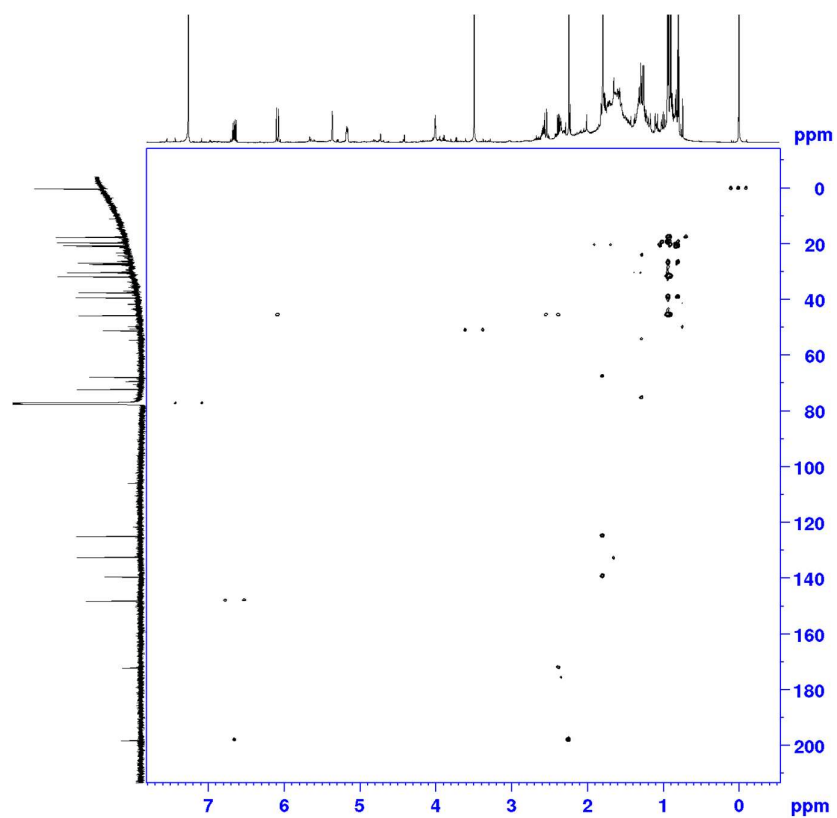


Figure S57. The HMBC spectrum of compound **6**

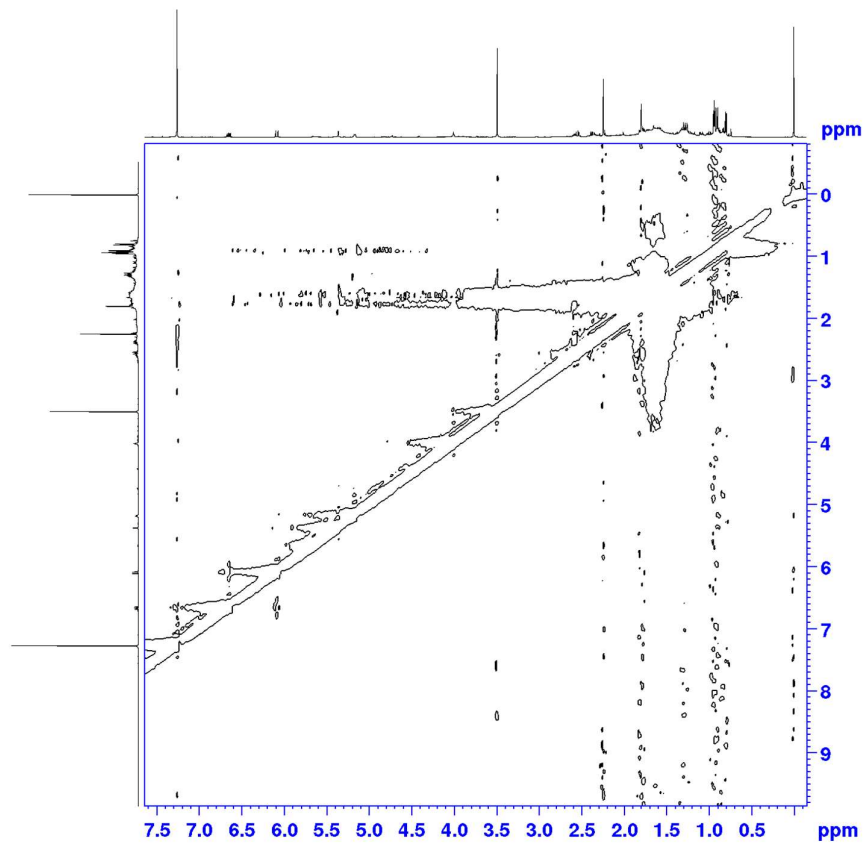


Figure S58. The NOESY spectrum of compound **6**

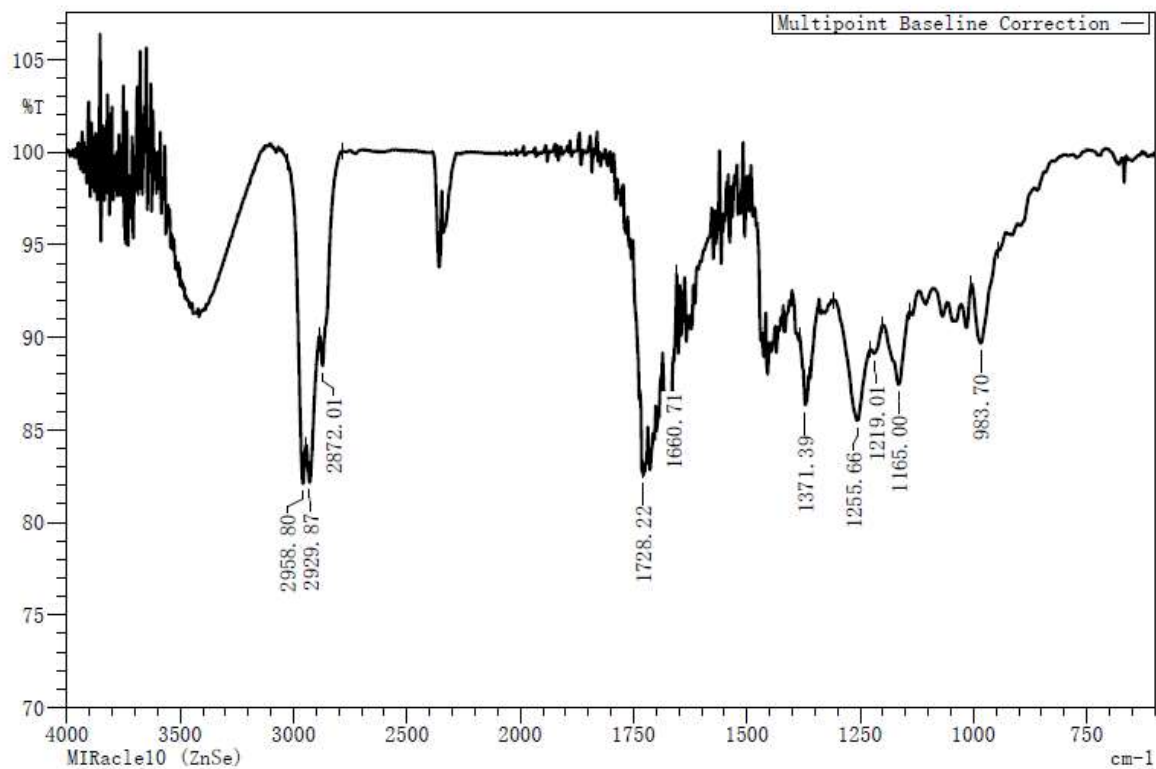


Figure S59. The IR spectrum of compound **6**

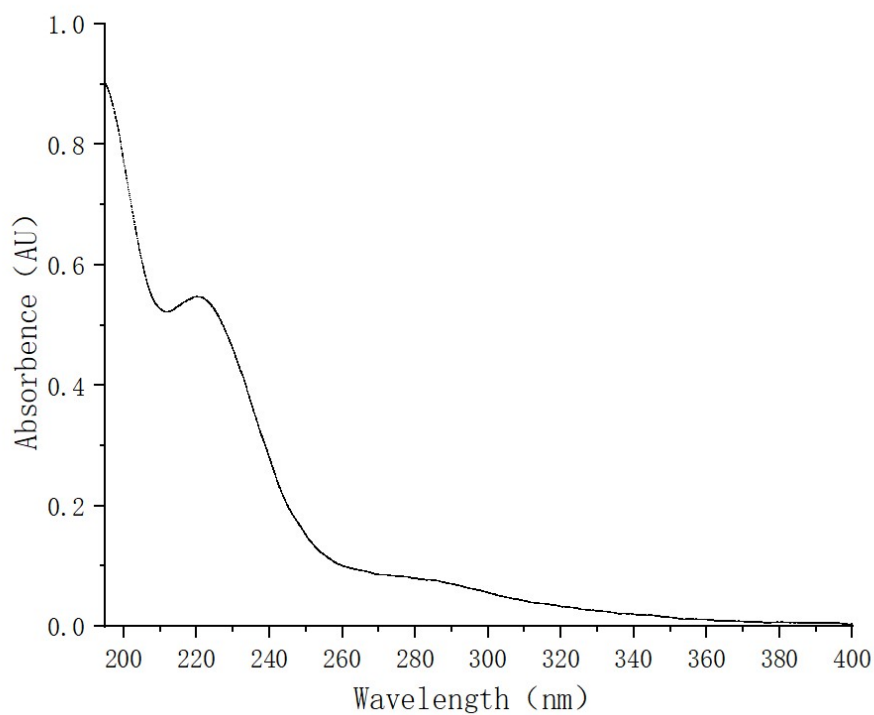


Figure S60. The UV spectrum of compound **6**

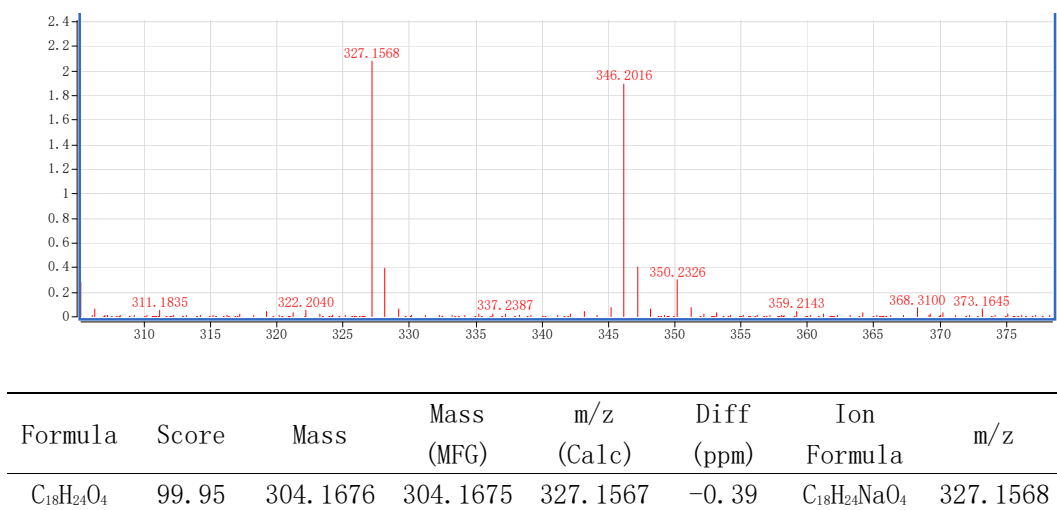


Figure S61. The HRESIMS spectrum of compound **7**

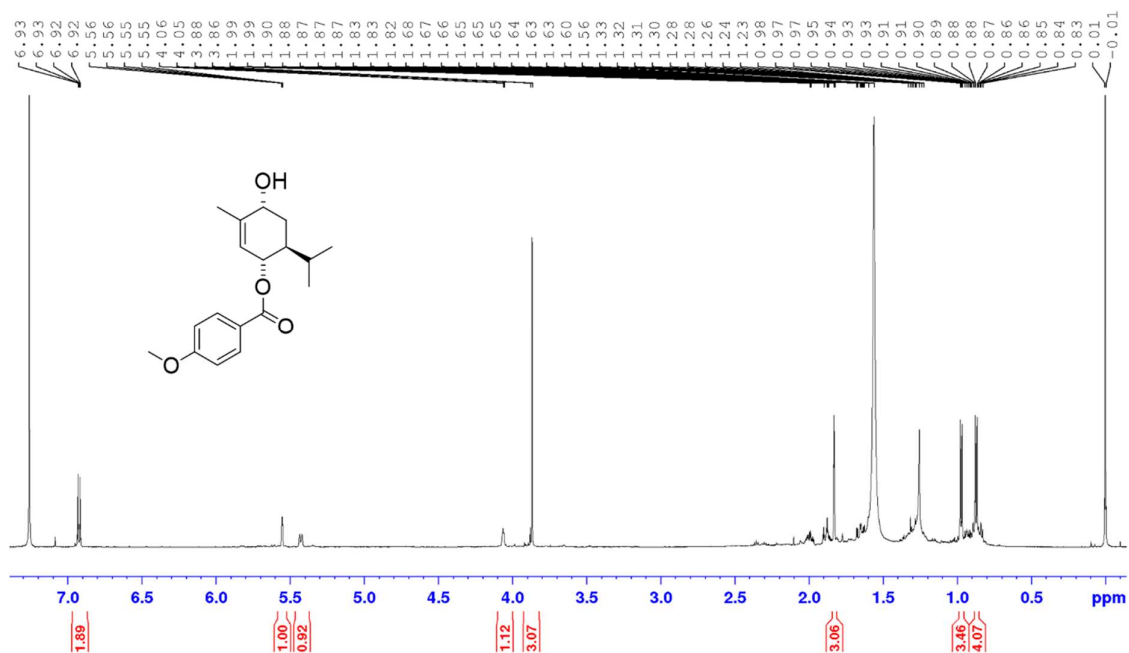


Figure S62. The ¹H NMR spectrum of compound **7**

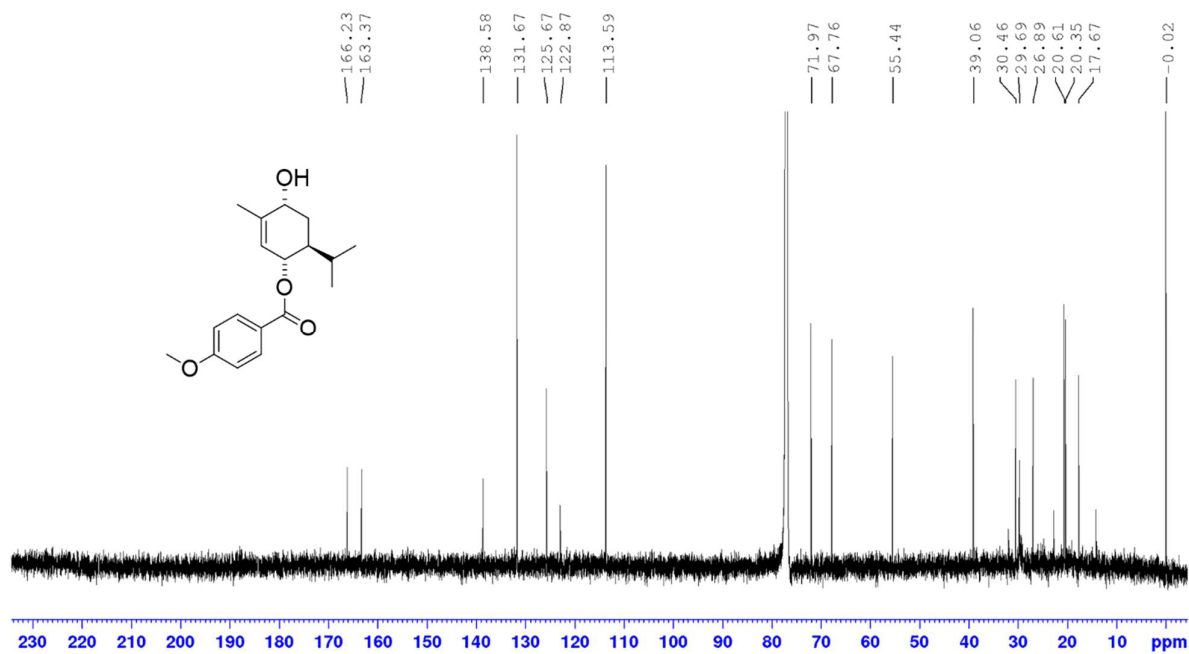


Figure S63. The ¹³CNMR spectrum of compound **7**

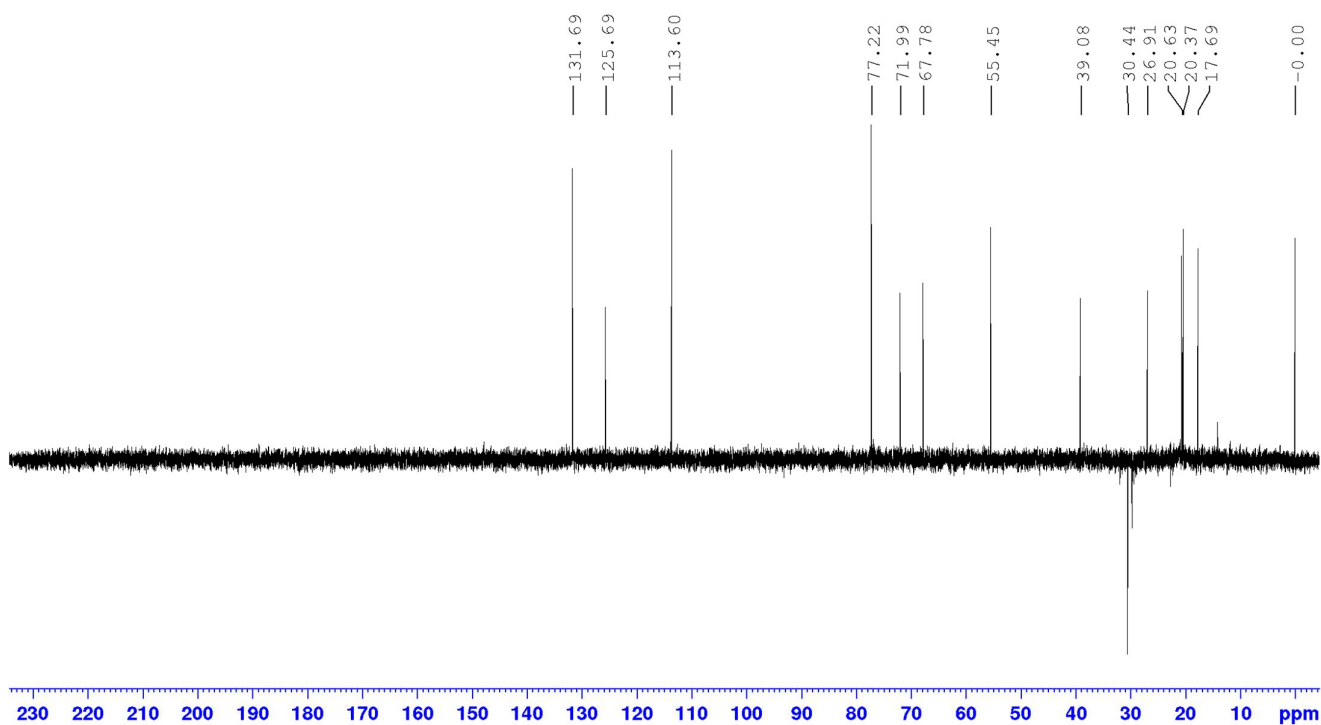


Figure S64. The DEPT135 spectrum of compound **7**

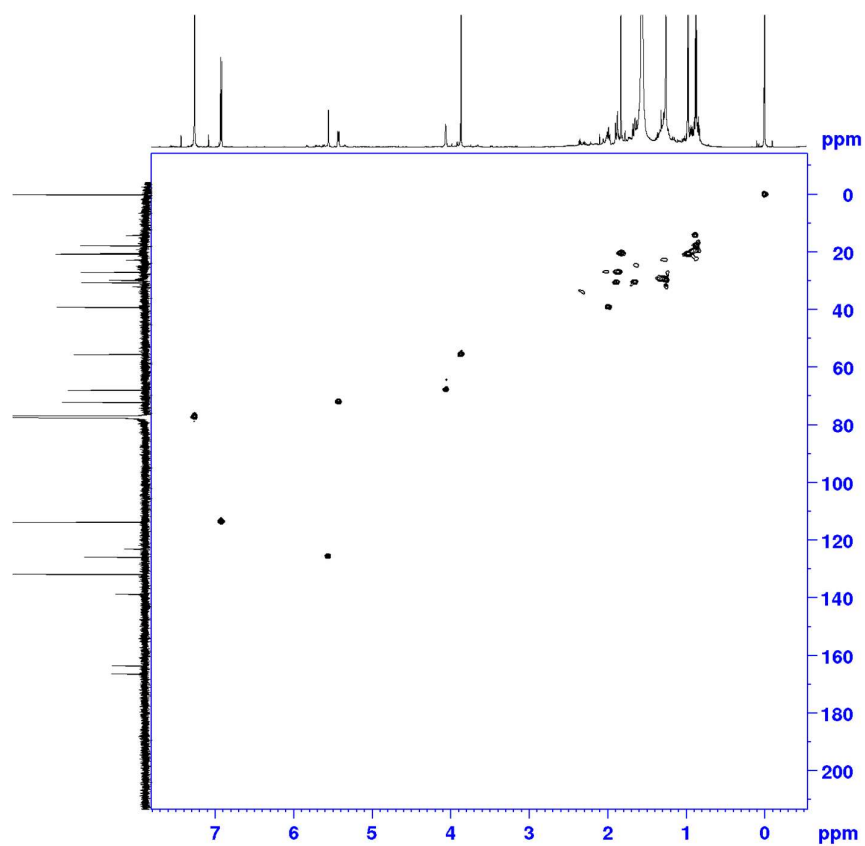


Figure S65. The HSQC spectrum of compound **7**

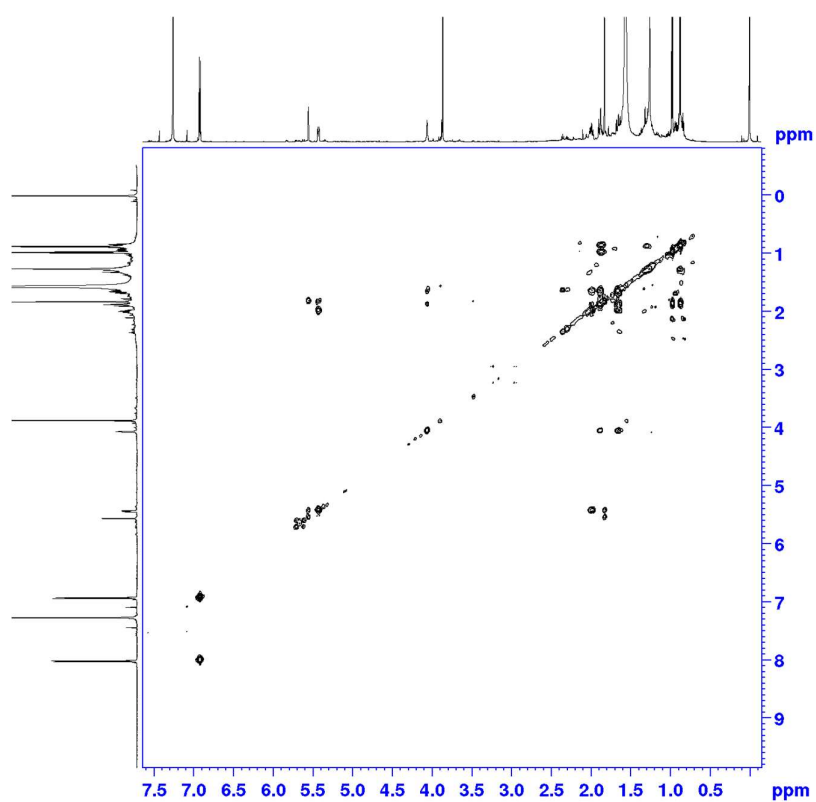


Figure S66. The ^1H - ^1H COSY spectrum of compound **7**

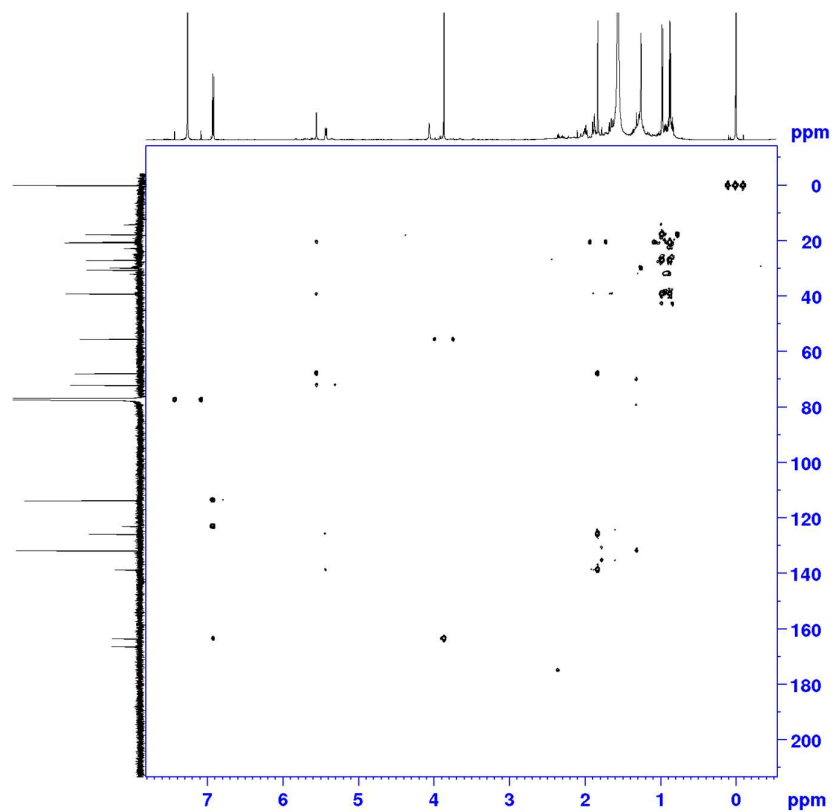


Figure S67. The HMBC spectrum of compound **7**

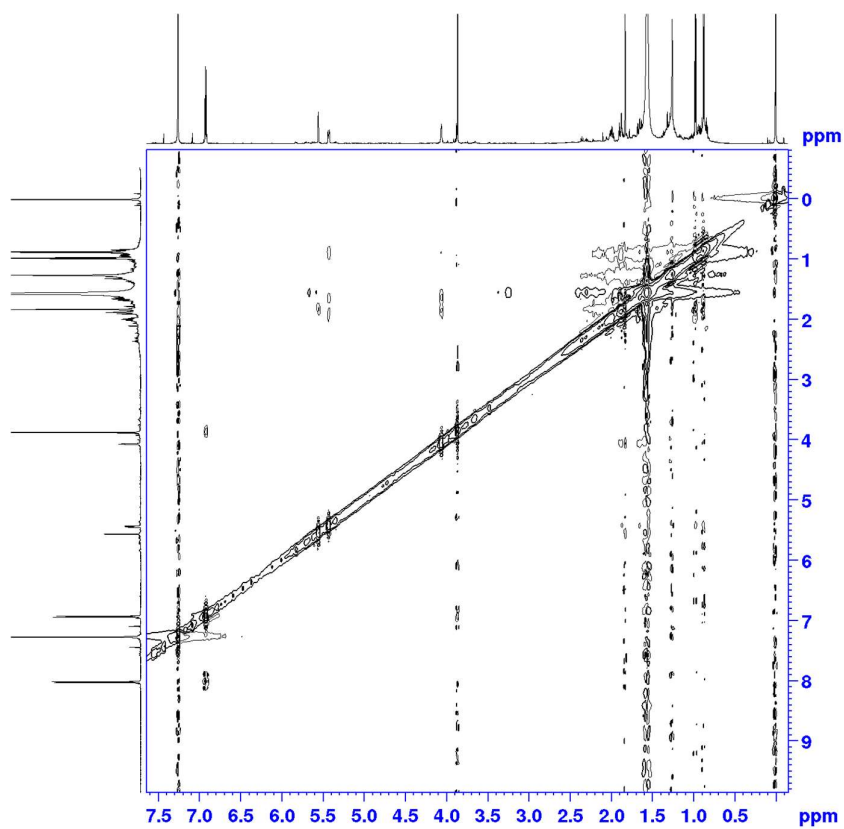


Figure S68. The NOESY spectrum of compound **7**

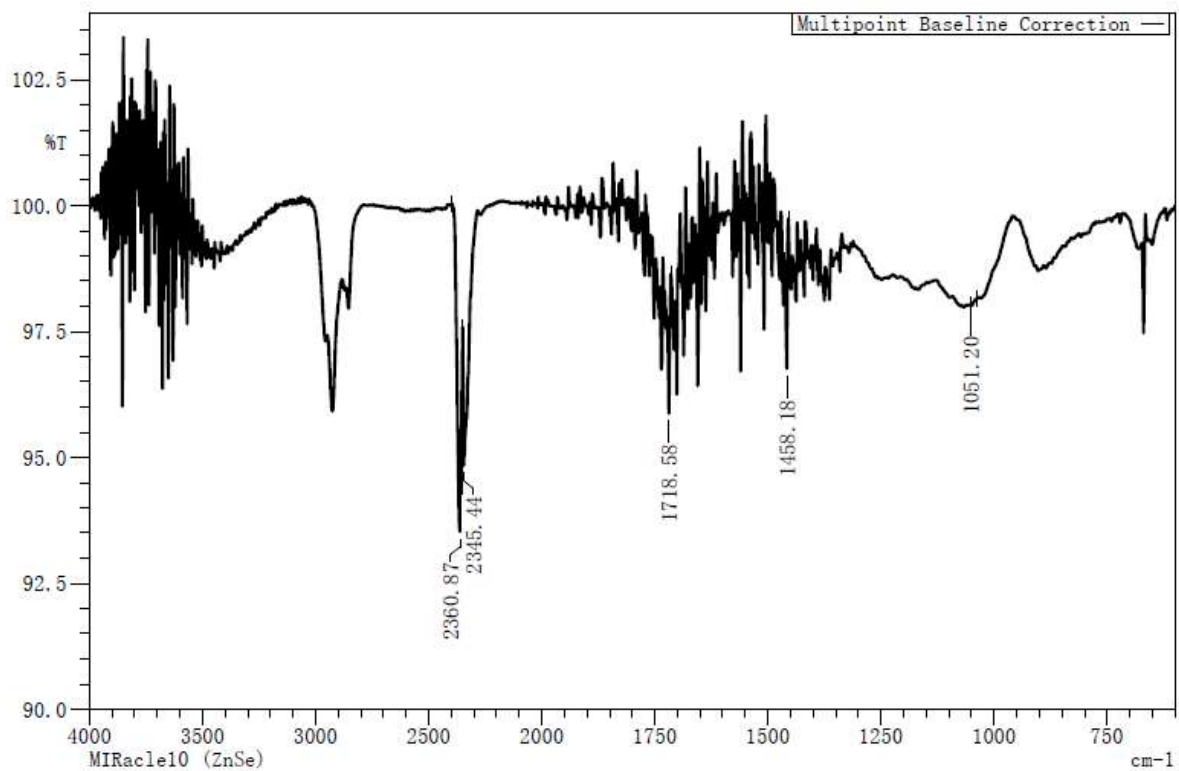


Figure S69. The IR spectrum of compound **7**

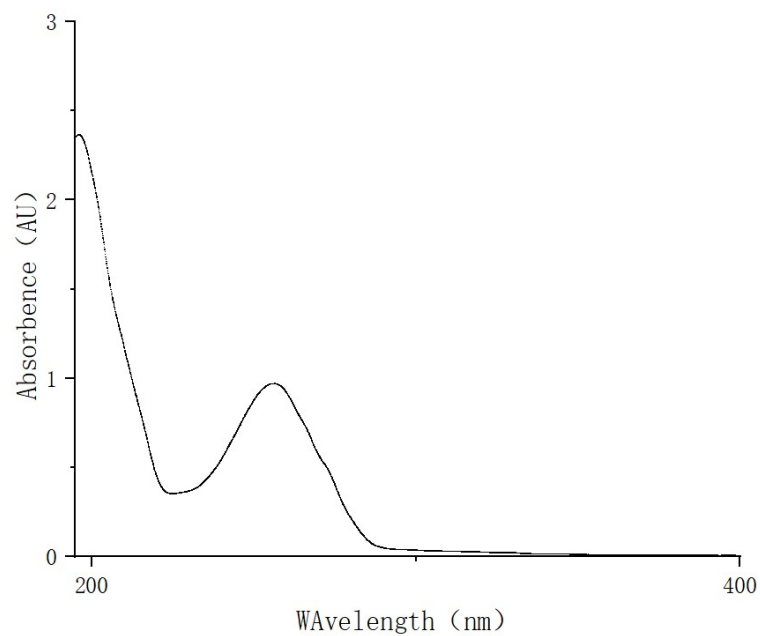


Figure S70. The UV spectrum of compound **7**

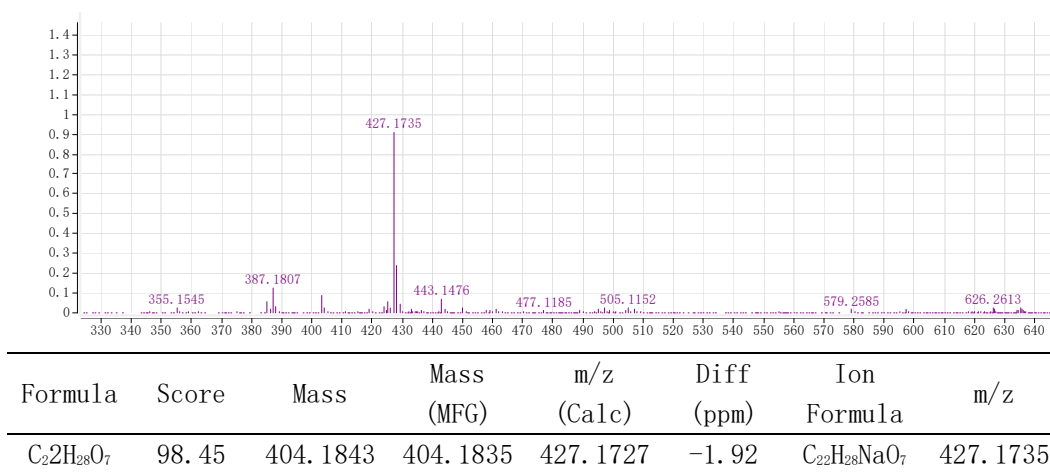


Figure S71. The HRESIMS spectrum of compound **8**

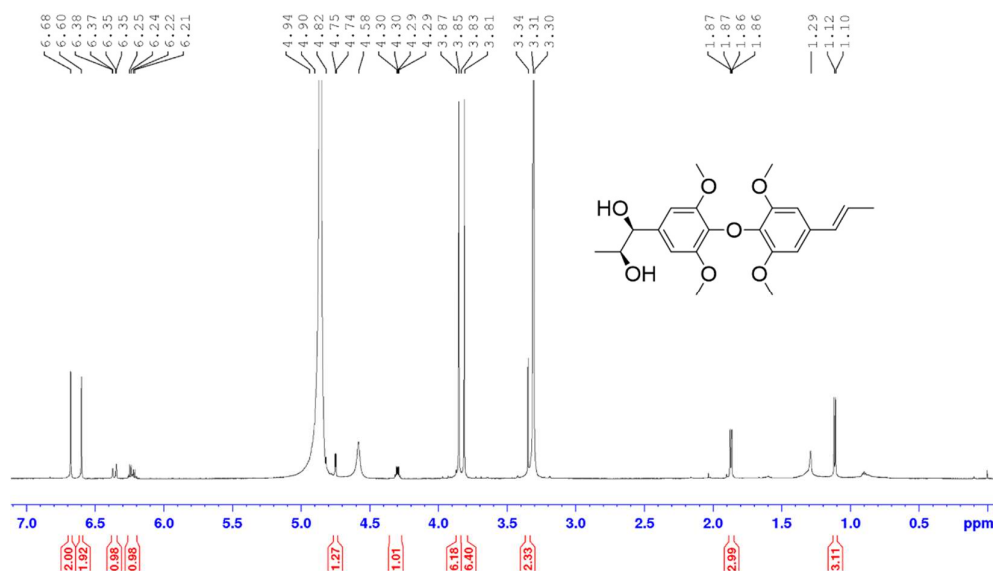


Figure S72. The ¹H NMR spectrum of compound **8**

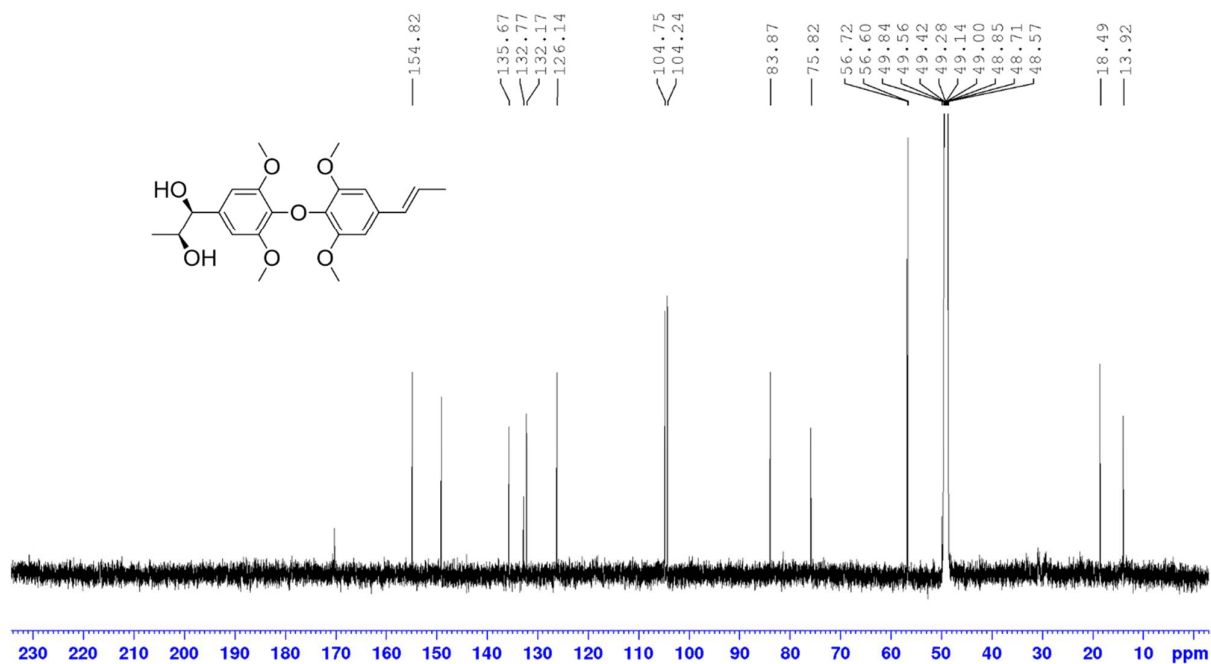


Figure S73. The ¹³CNMR spectrum of compound **8**

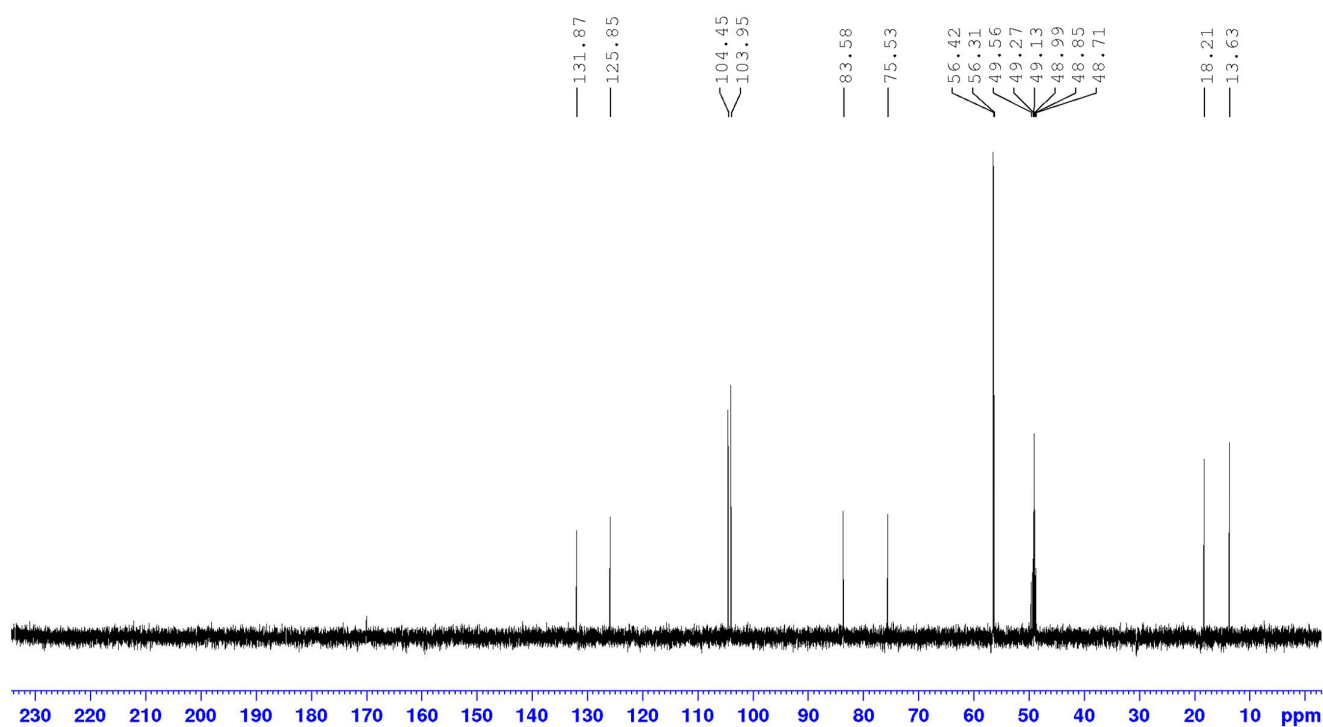


Figure S74. The DEPT135 spectrum of compound **8**

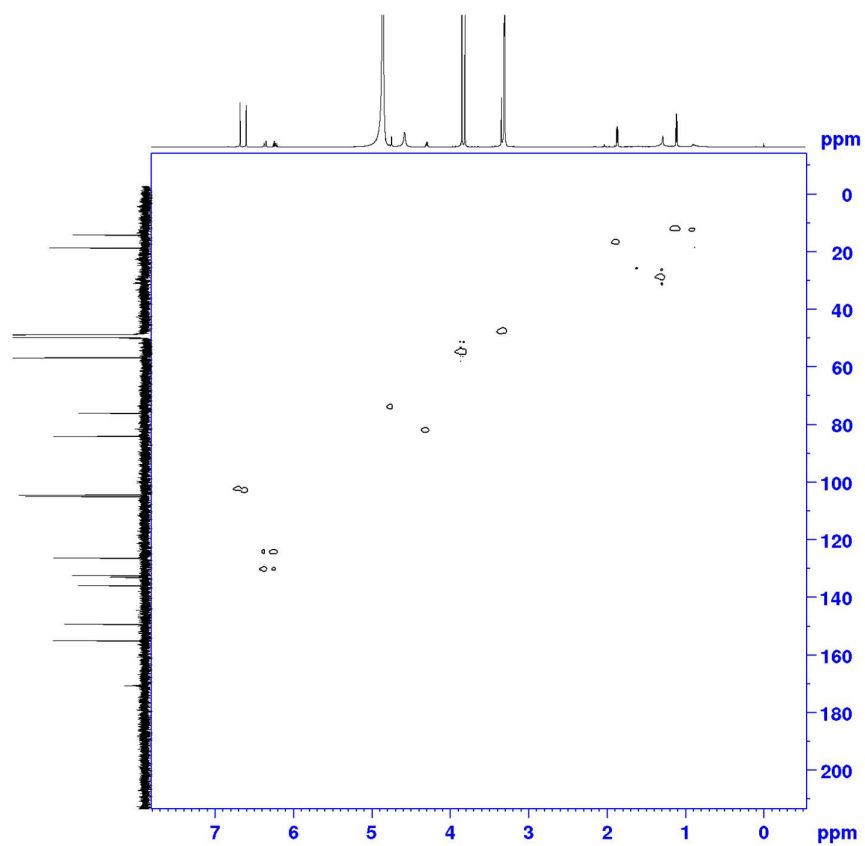


Figure S75. The HSQC spectrum of compound **8**

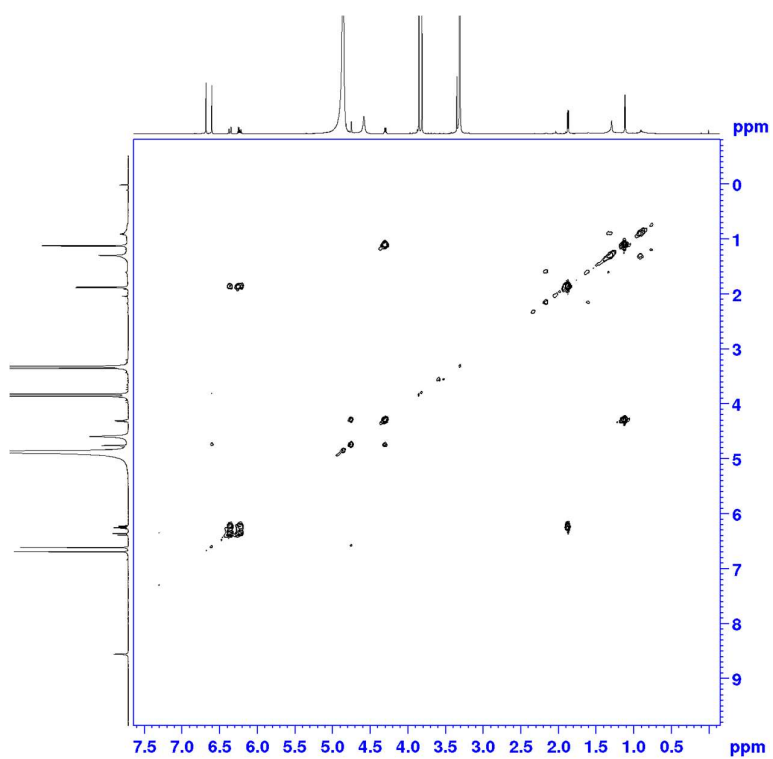


Figure S76. The ^1H - ^1H COSY spectrum of compound **8**

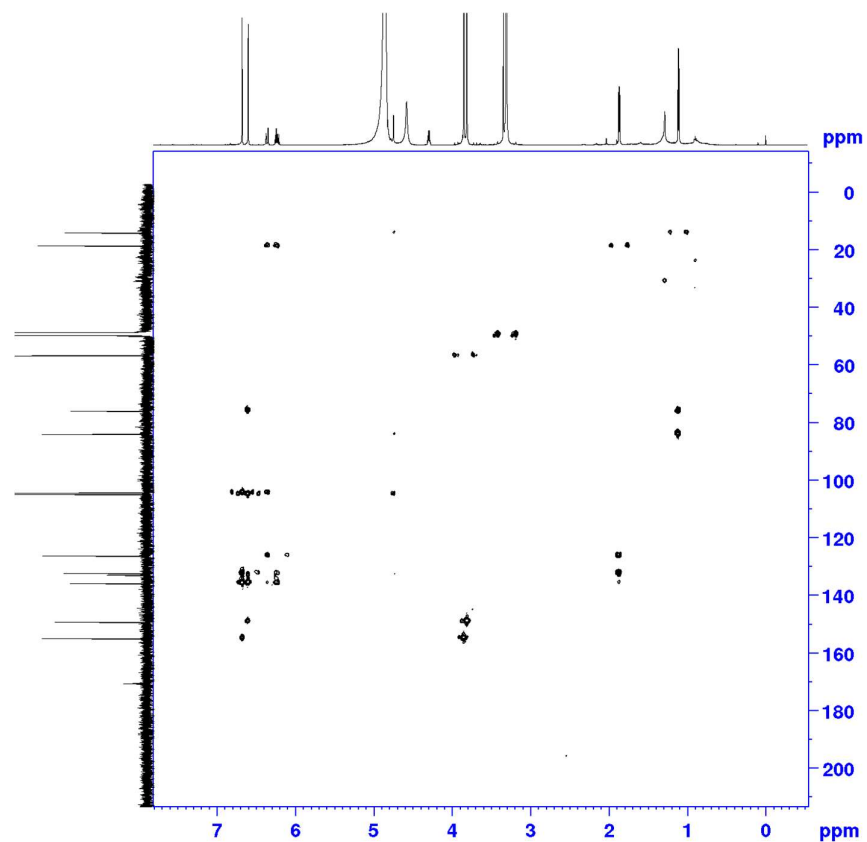


Figure S77. The HMBC spectrum of compound **8**

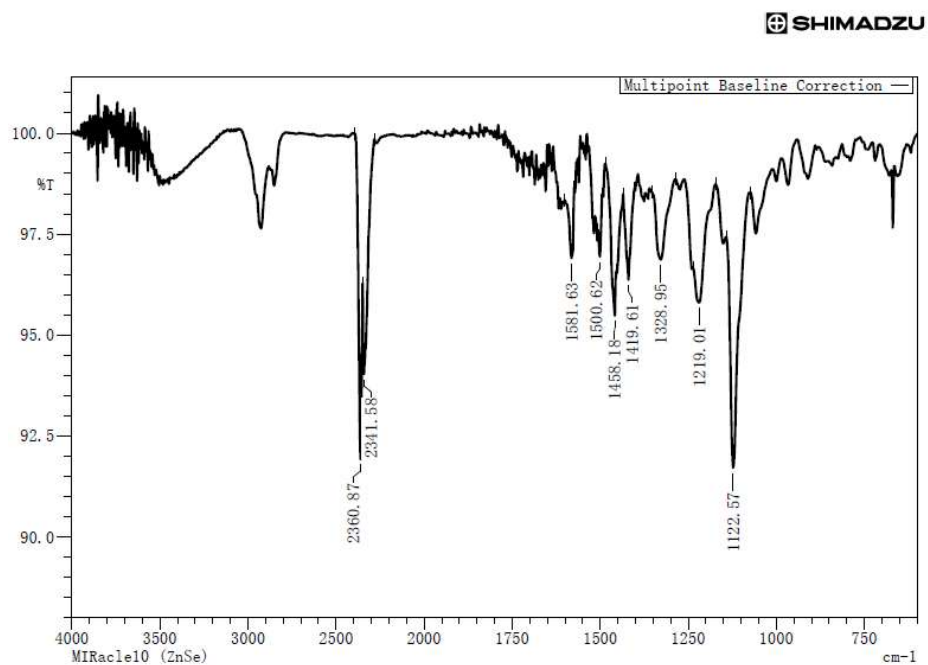


Figure S78. The IR spectrum of compound **8**

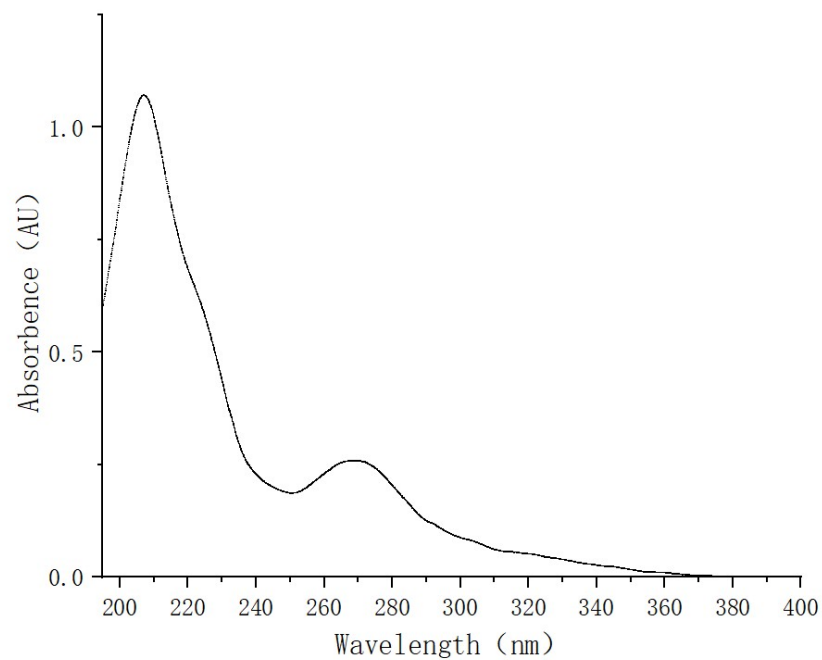


Figure S79. The IR spectrum of compound **8**

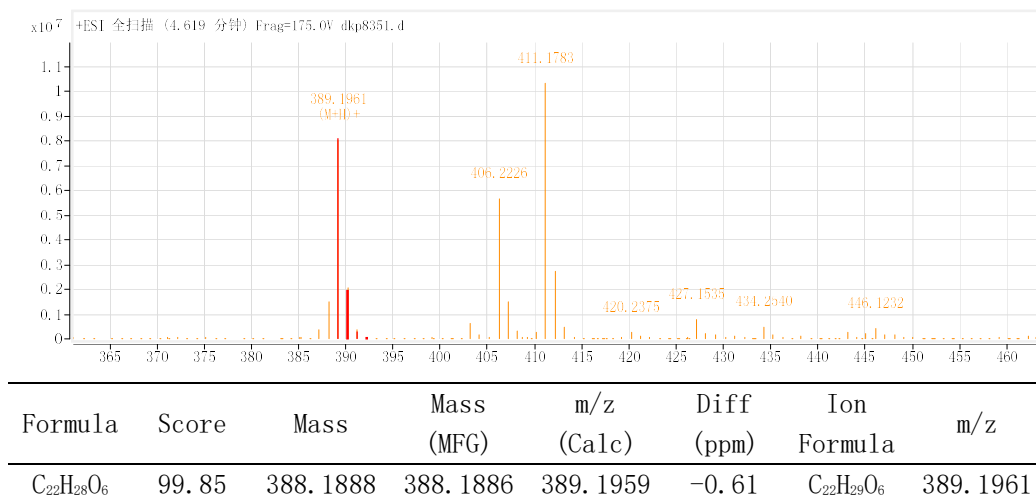


Figure S80. The HRESIMS spectrum of compound **9**

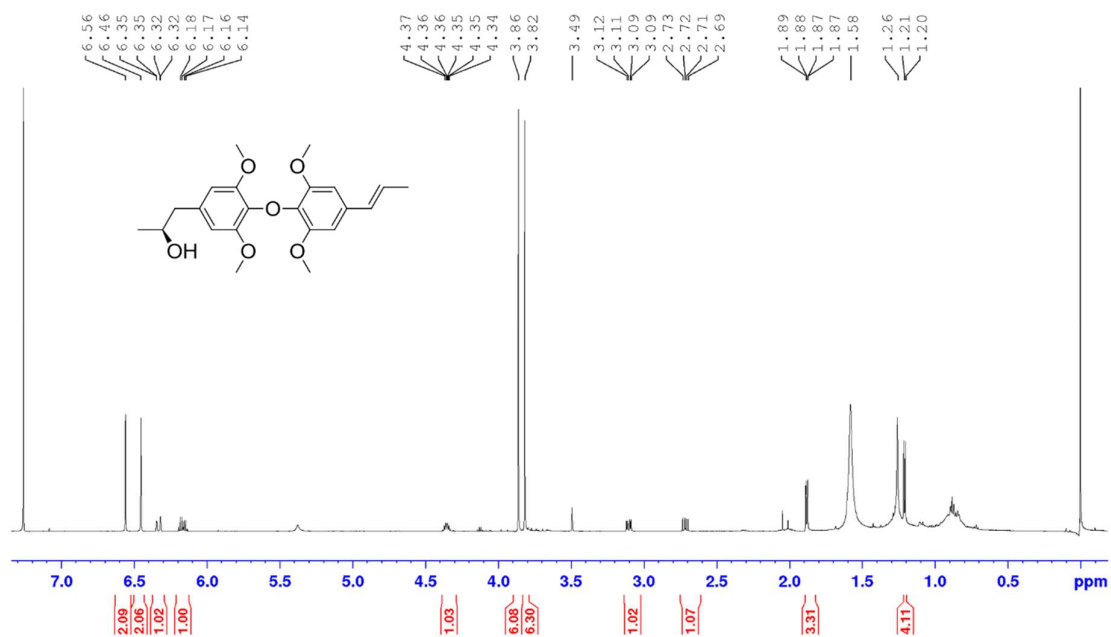


Figure S81. The ¹H NMR spectrum of compound **9**

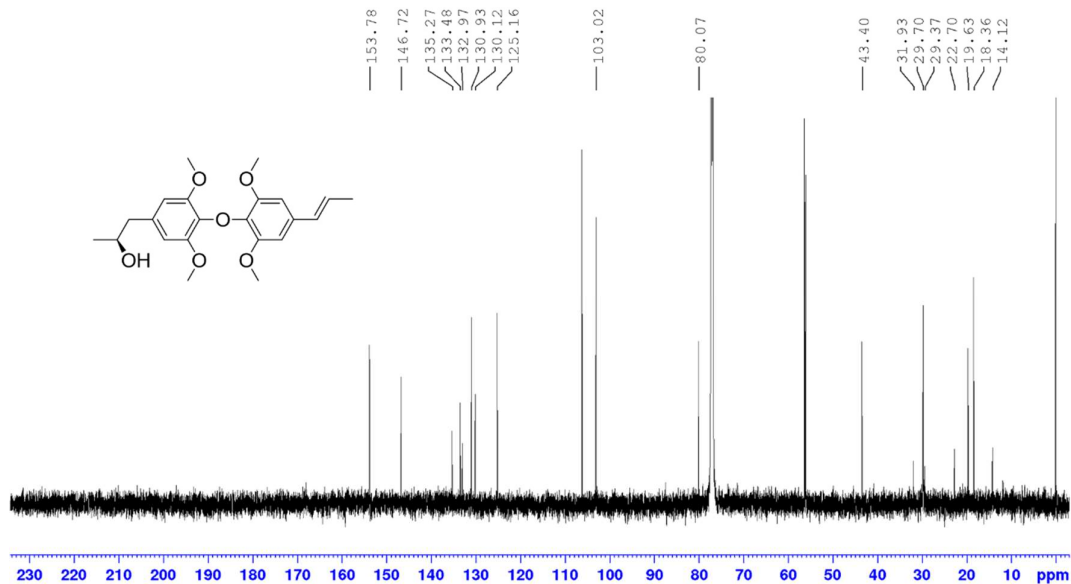


Figure S82. The ¹³C NMR spectrum of compound **9**

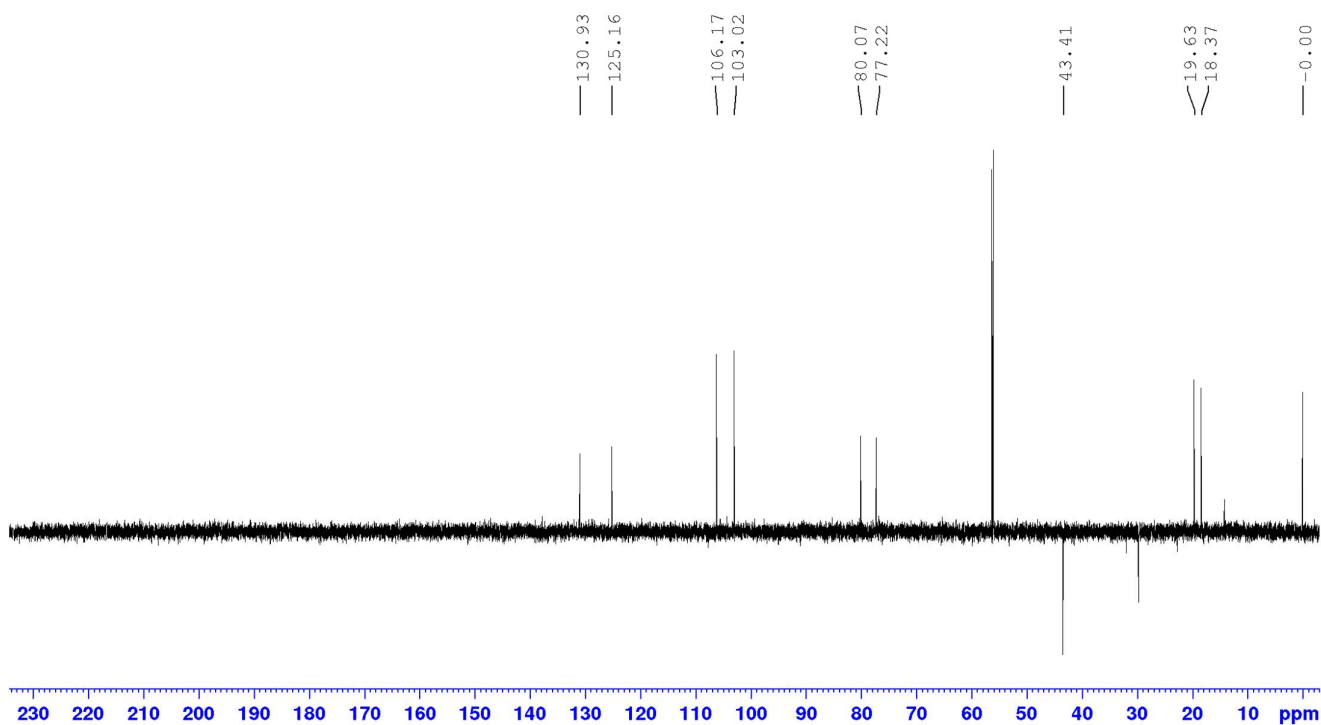


Figure S83. The DEPT135 spectrum of compound **9**

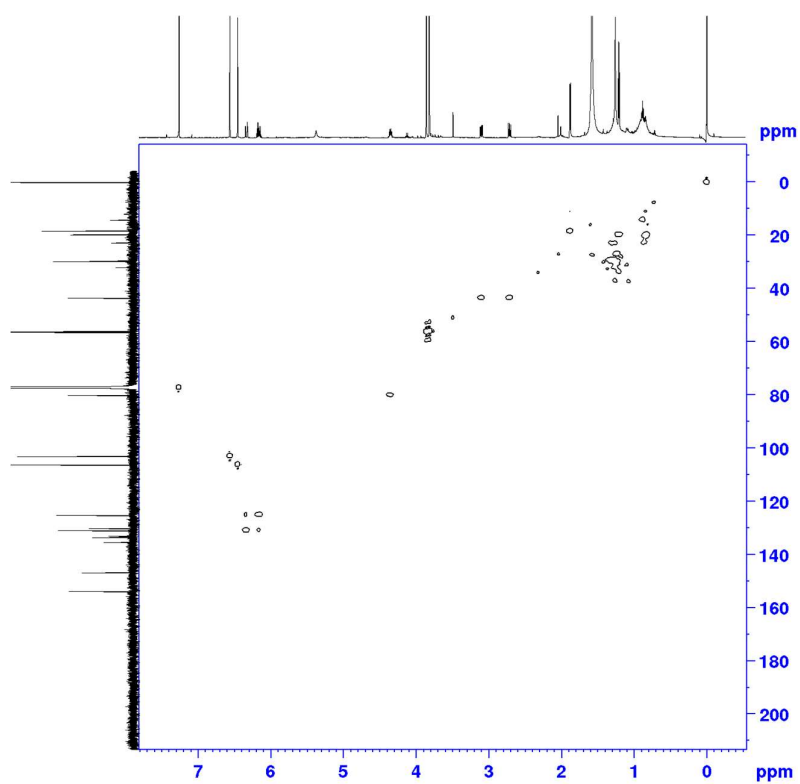


Figure S84. The HSQC spectrum of compound **9**

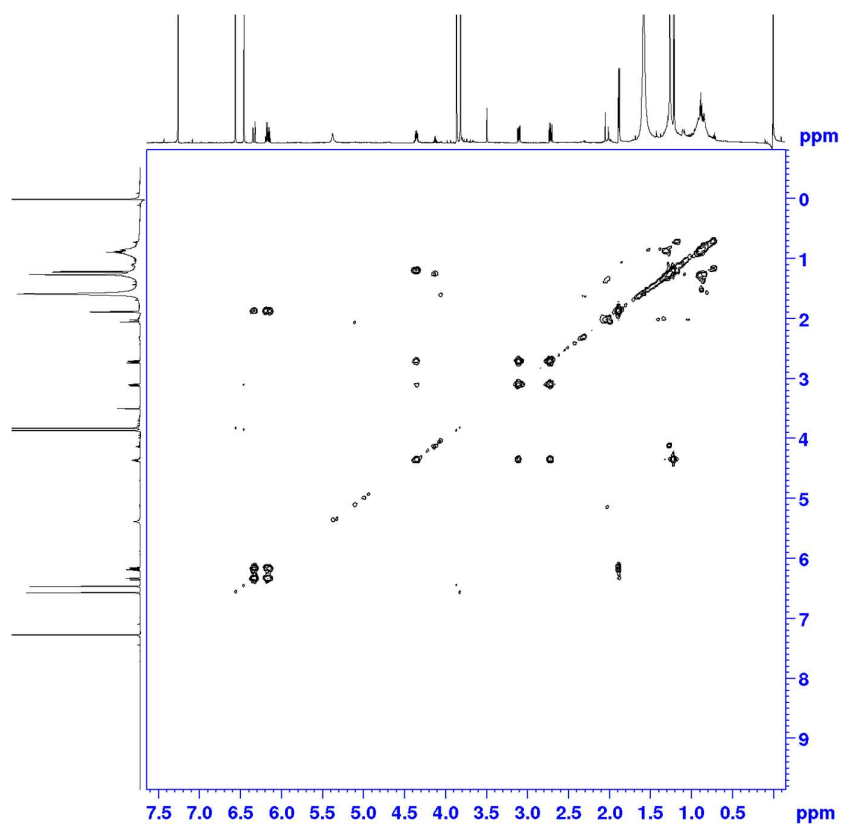


Figure S85. The ^1H - ^1H COSY spectrum of compound **9**

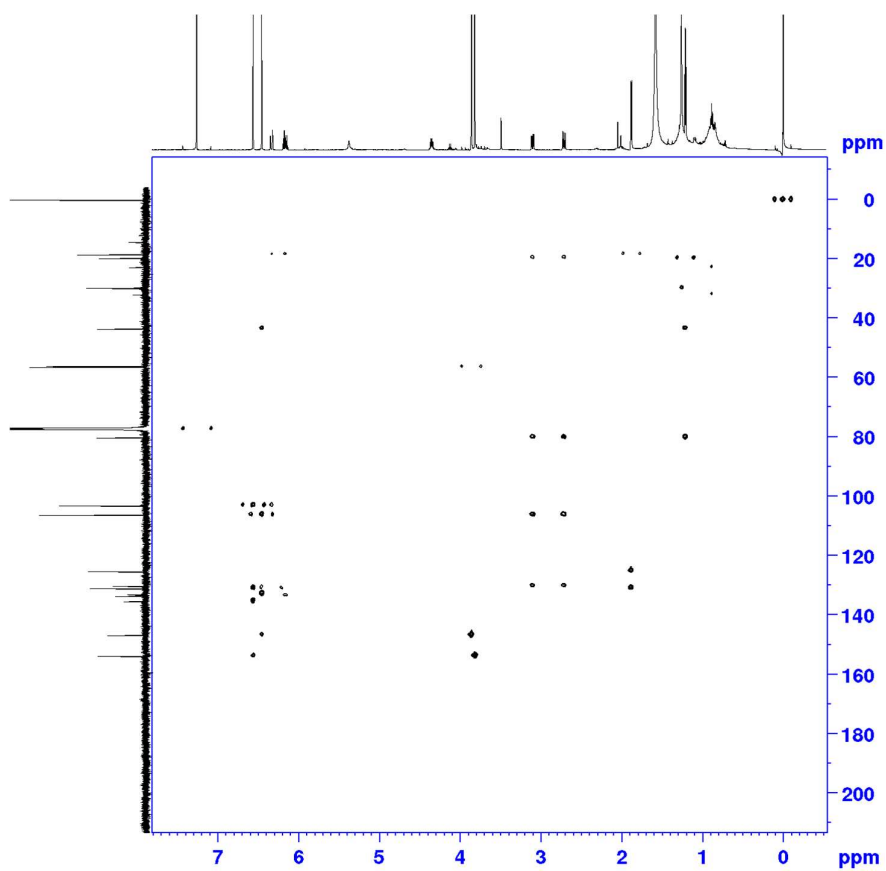


Figure S86. The HMBC spectrum of compound **9**

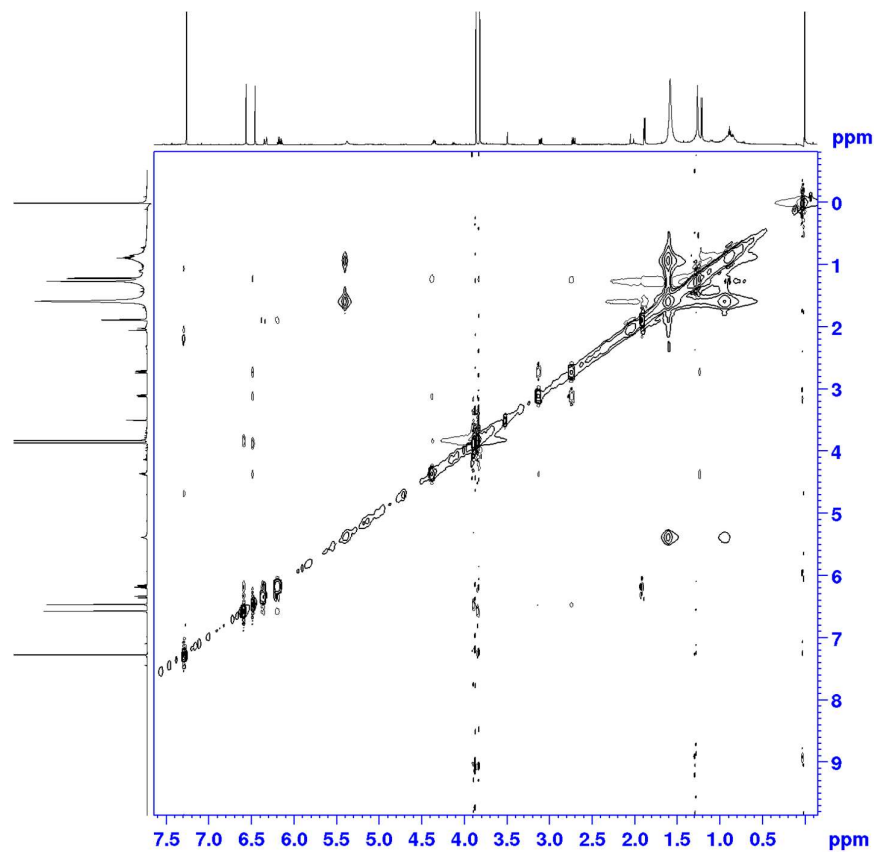


Figure S87. The NOESY spectrum of compound **9**

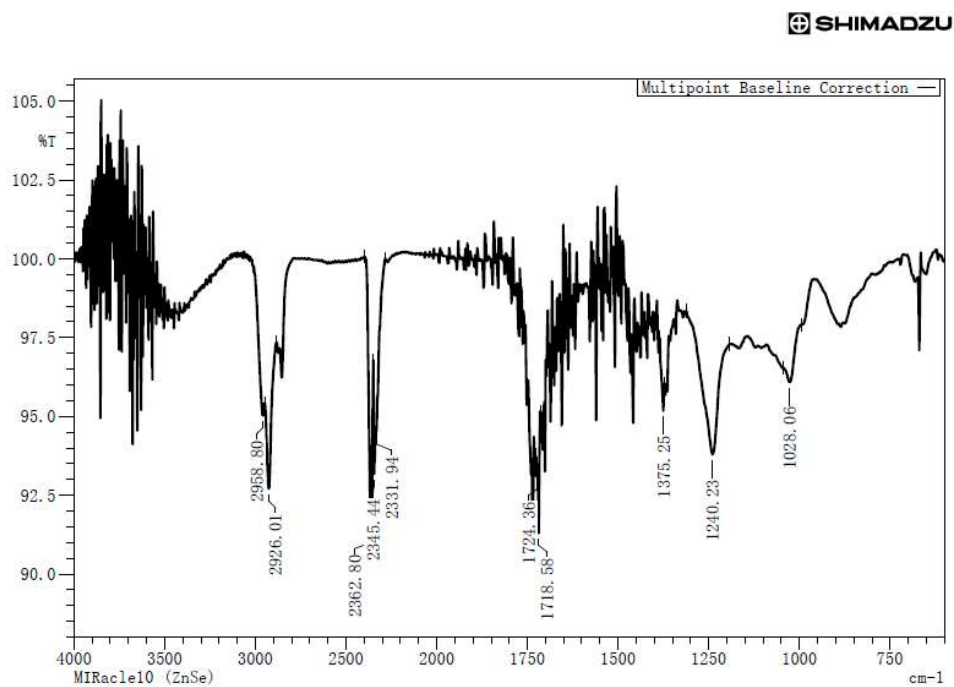


Figure S88. The IR spectrum of compound **9**

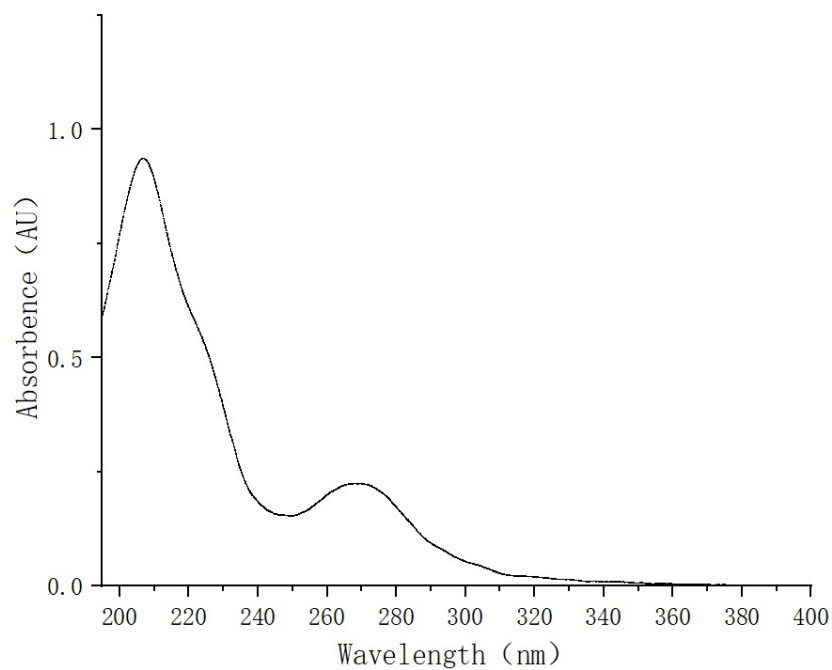


Figure S89. The UV spectrum of compound **9**

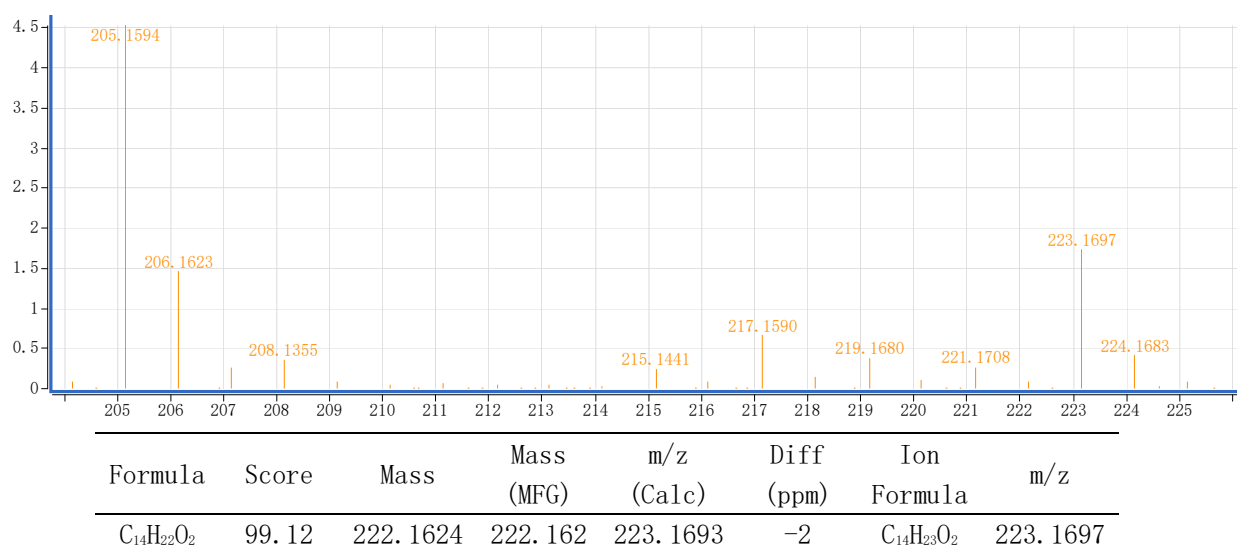


Figure S90. The HRESIMS spectrum of compound **10**

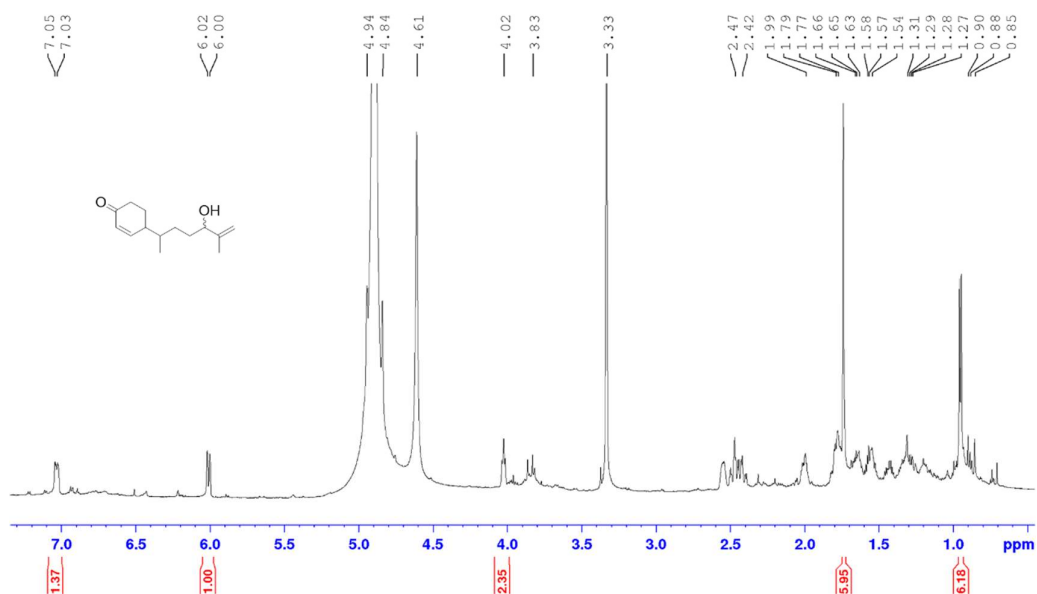


Figure S91. The ¹H NMR spectrum of compound **10**

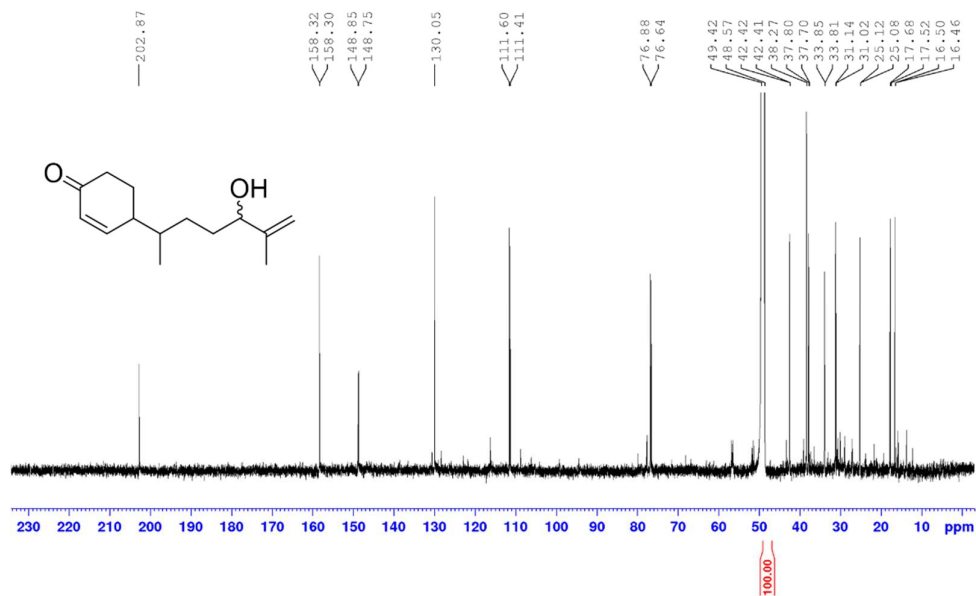


Figure S92. The ¹³C NMR spectrum of compound **10**

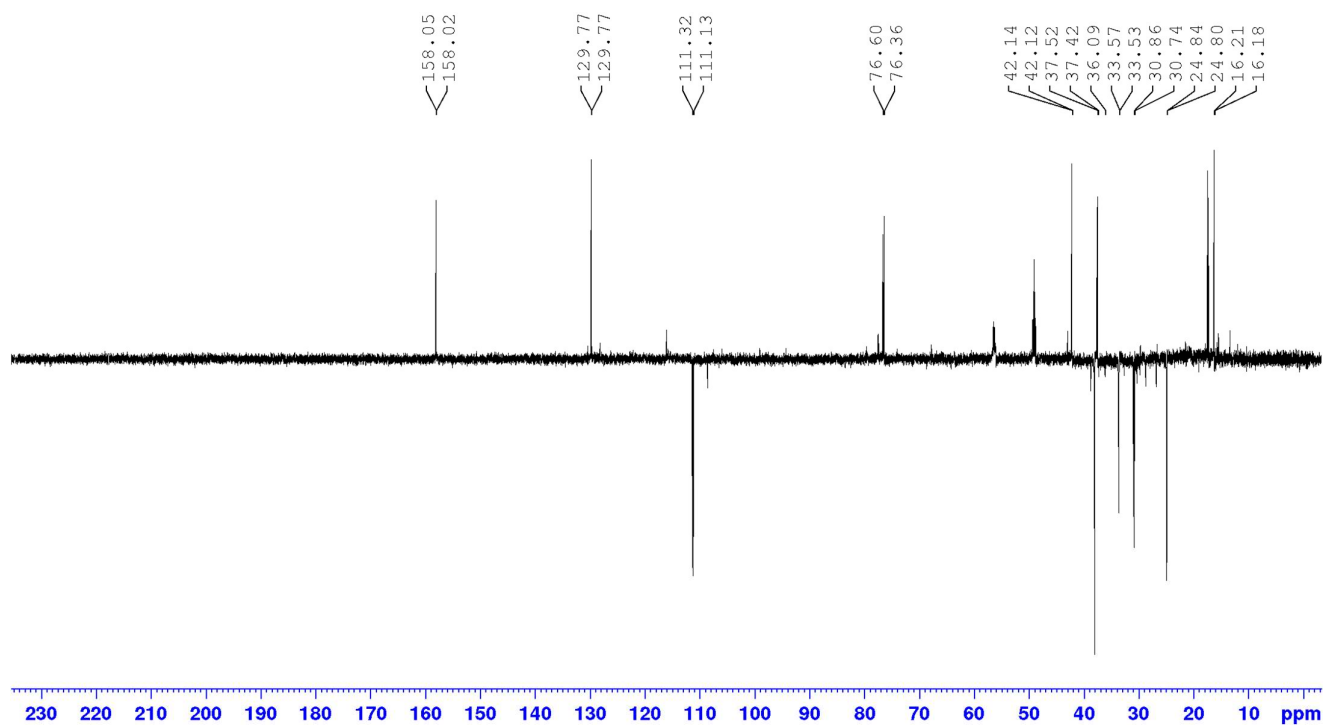


Figure S93. The DEPT135 spectrum of compound **10**

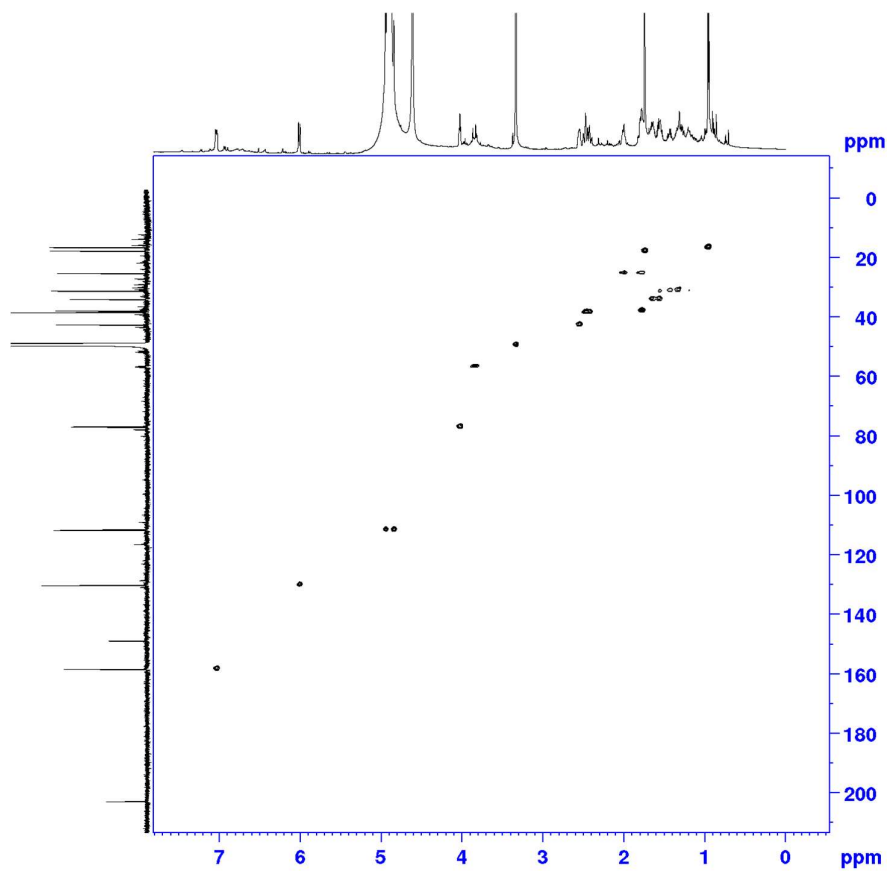


Figure S94. The HSQC spectrum of compound **10**

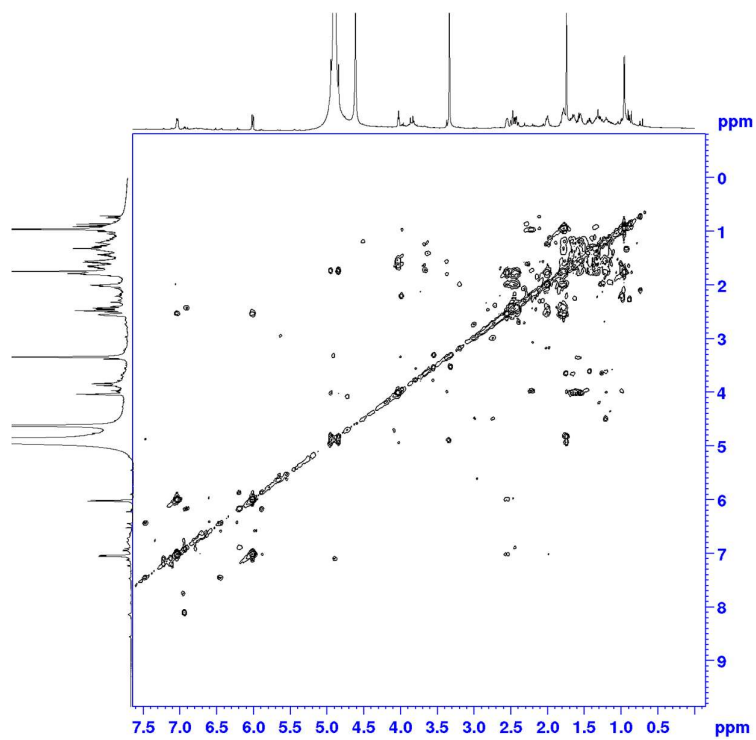


Figure S95. The ^1H - ^1H COSY spectrum of compound **10**

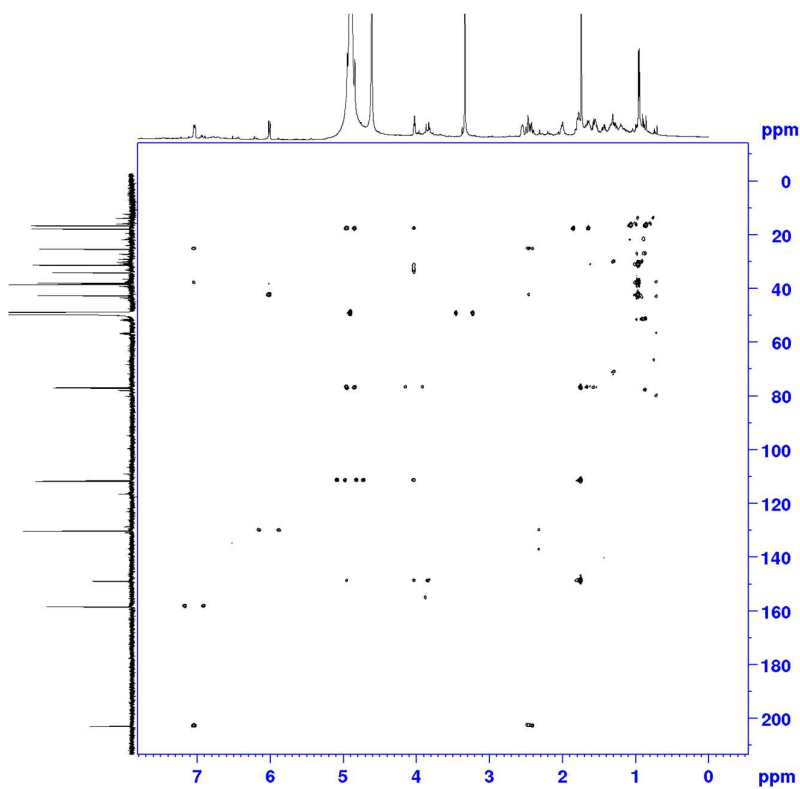


Figure S96. The HMBC spectrum of compound **10**

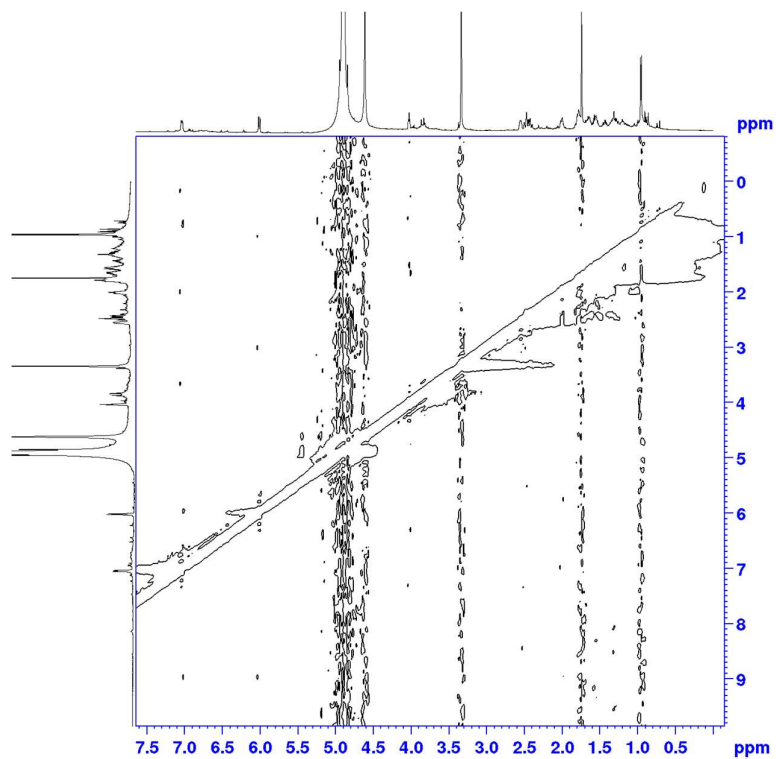


Figure S97. The NOESY spectrum of compound **10**

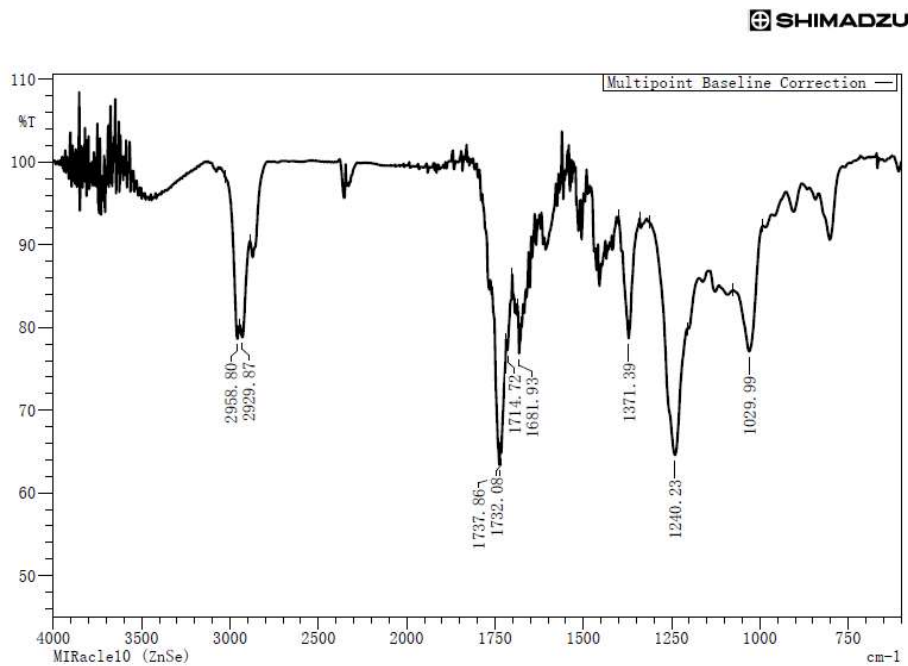


Figure S98. The IR spectrum of compound **10**

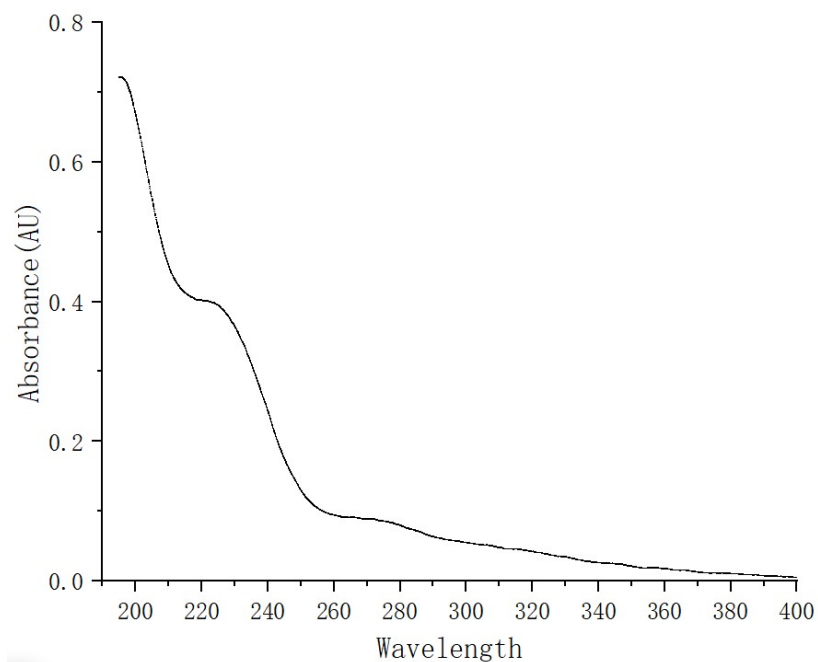


Figure S99. The UV spectrum of compound **10**

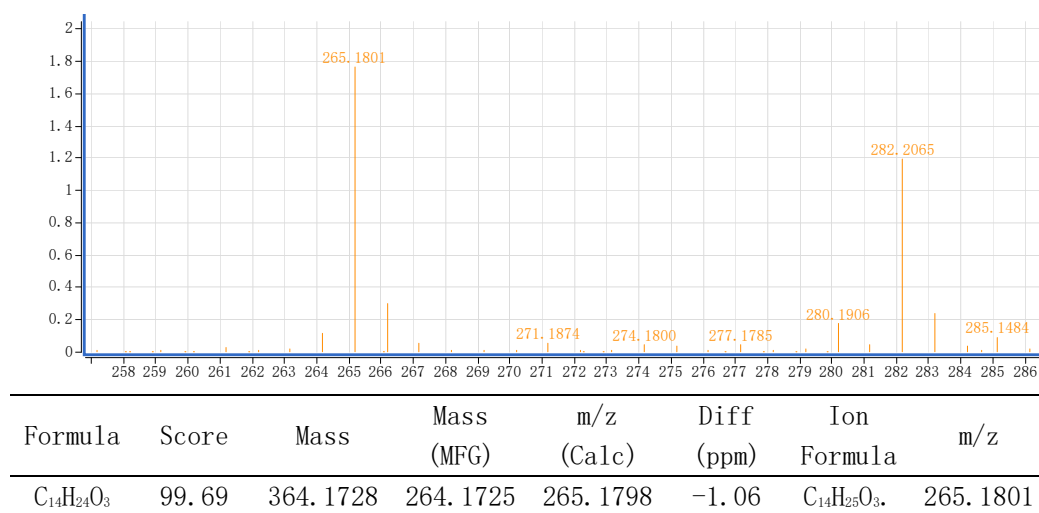


Figure S100. The HRESIMS spectrum of compound **10a**

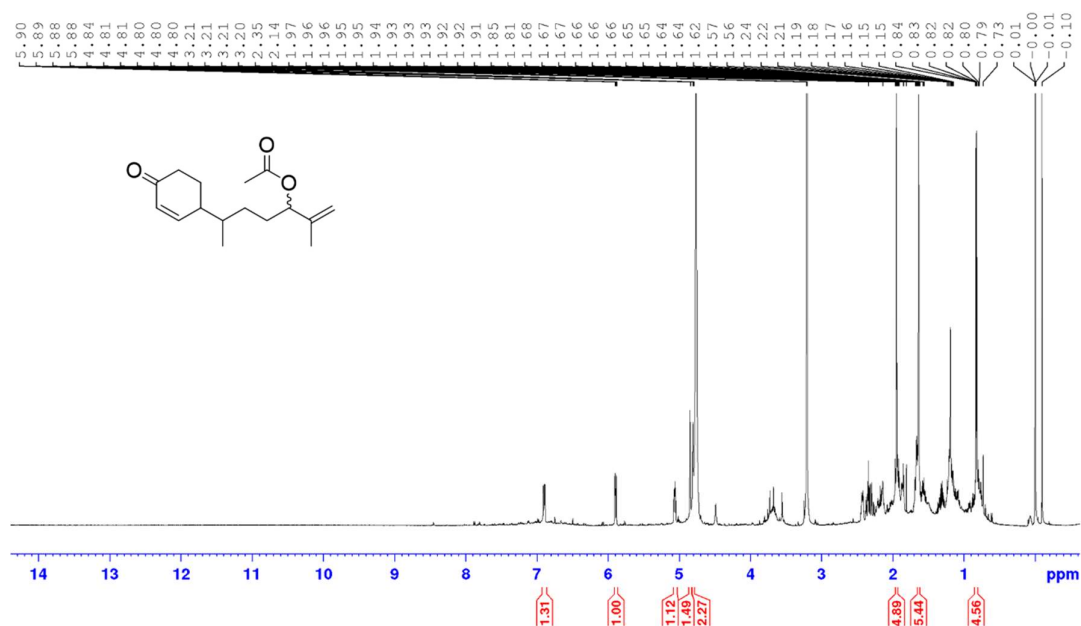


Figure S101. The ¹H NMR spectrum of compound 10a

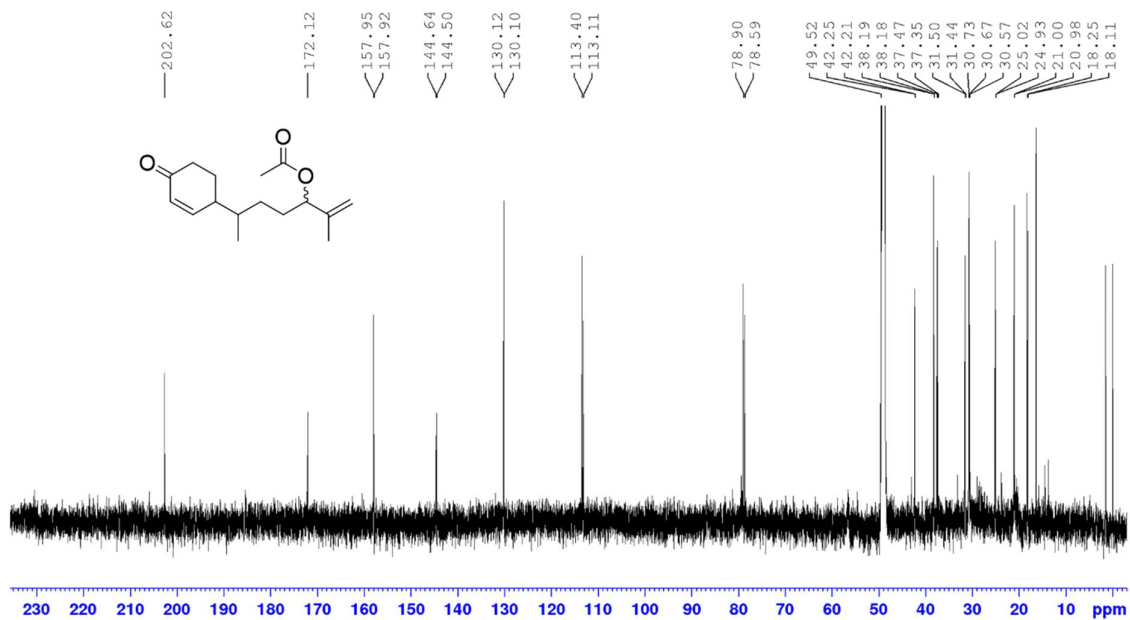


Figure S102. The ¹³C NMR spectrum of compound 10a

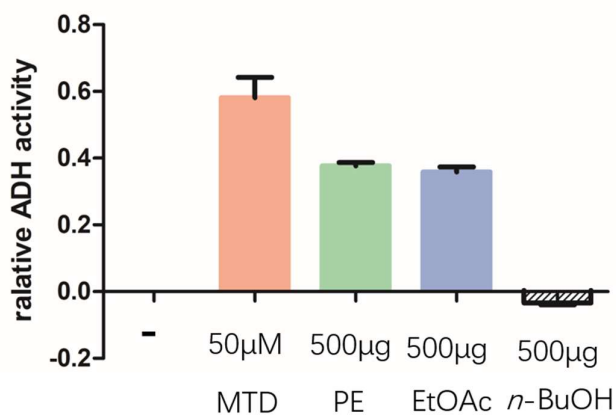


Figure S103. The effects of PE, EtOAc, and *n*-BuOH extracts on ADH activity.

Table S1. ^1H -NMR (600 MHz) and ^{13}C -NMR (150 MHz) data of compound **10a**.

10a (MeOD)	
δ_{C}	δ_{H}
202.8	
129.9	5.89, dd, 2.9, 10.5
158.1	6.89, brd, 10.5
42.2	2.43, m
25.0 (25.1)	1.84, 1.64, m
38.2	2.31, dd, 5.0, 12.6
	2.36, dt, 4.0, 12.6
37.7 (37.8)	1.67, m
30.5	1.32, 1.19, m
31.5 (31.6)	1.65, 1.57, m
79.3 (79.3)	5.06, m
148.7 (148.8)	
18.0 (18.1)	1.63, s
113.4 (113.6)	4.83, brs
	4.94, brs
16.2	0.83, d, 6.9
172.2	
21.0	1.94, s