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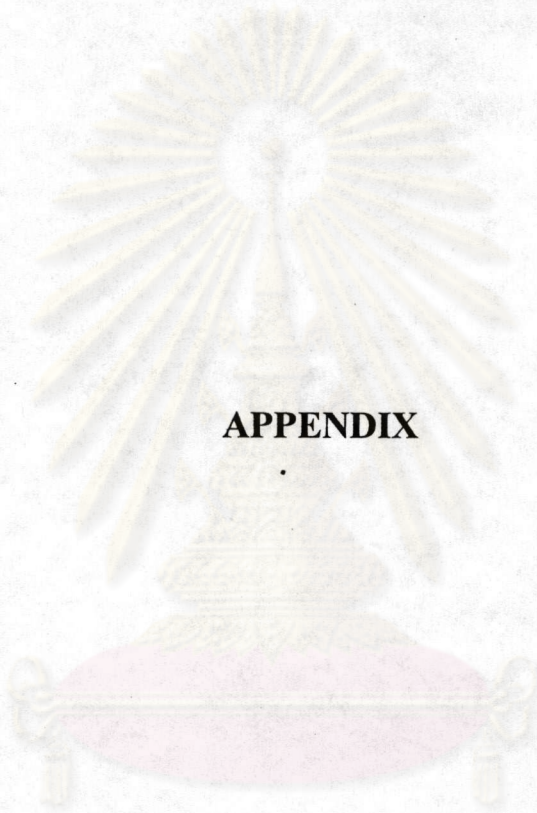
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ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย



APPENDIX

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

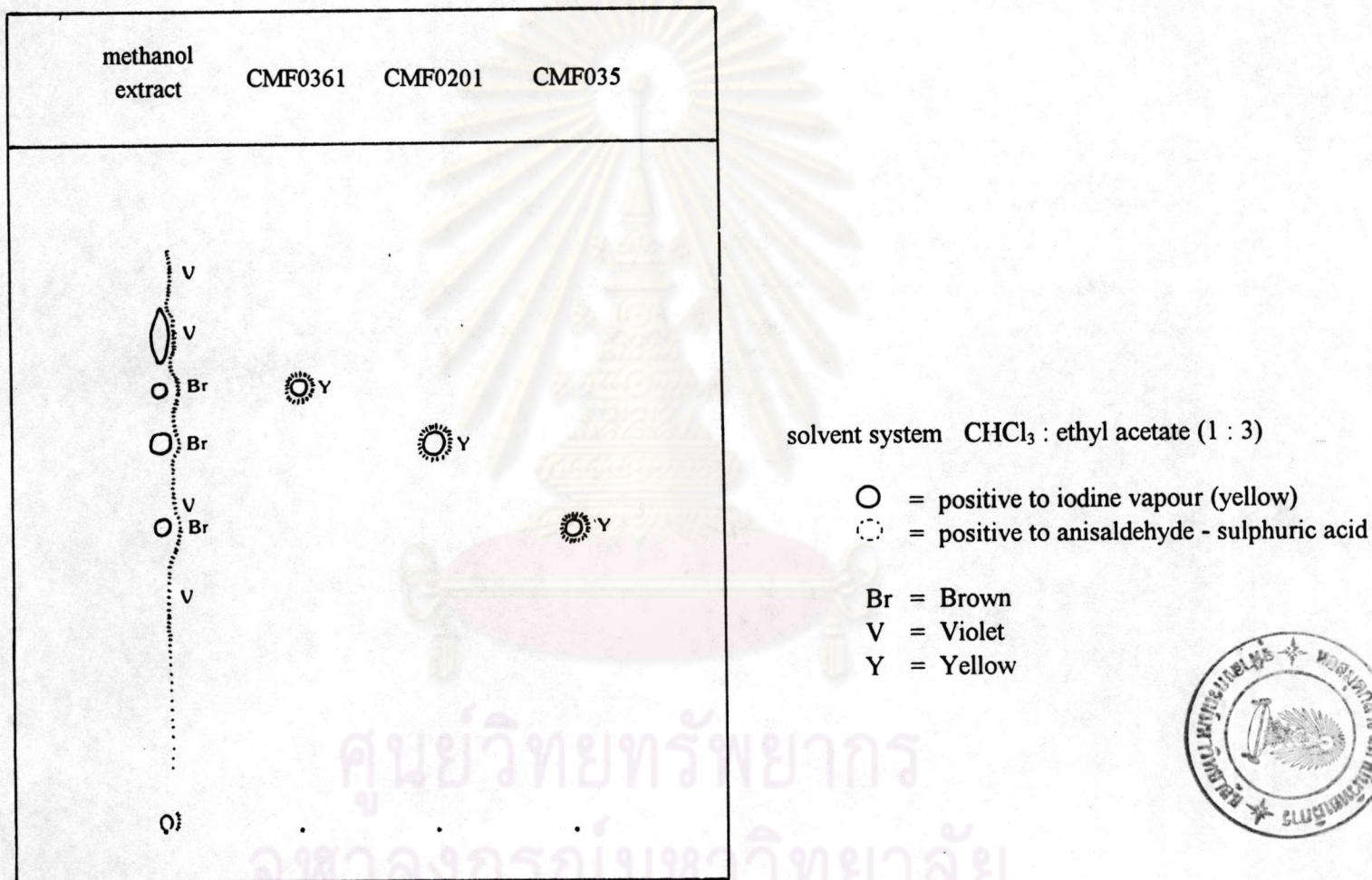
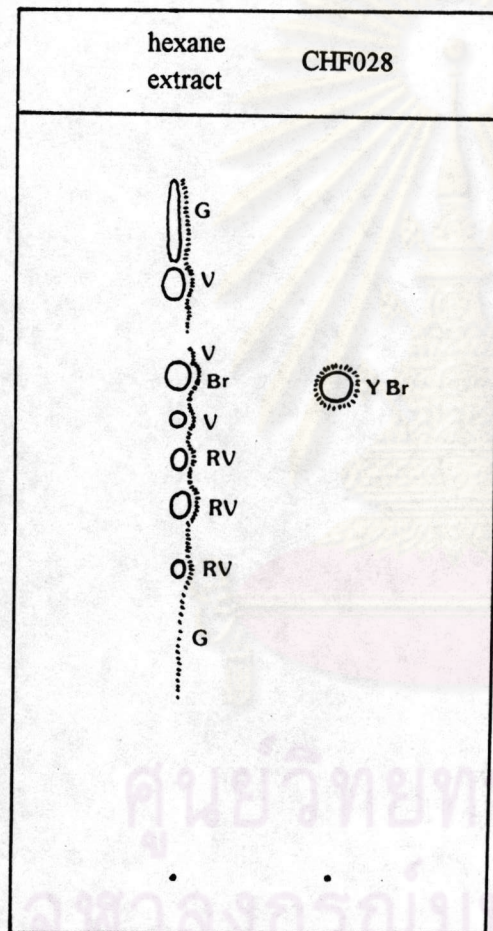


Figure 13. TLC chromatogram of the methanol extract, compounds CMF0361, CMF0201, and CMF035



solvent system hexane : ethyl acetate (4 : 1)

- = positive to iodine vapour (yellow)
- ⊙ = positive to anisaldehyde - sulphuric acid

- Br = Brown
- G = Gray
- RV = Red - Violet
- V = Violet
- Y = Yellow

Figure 14. TLC chromatogram of the hexane extract and compound CHF028

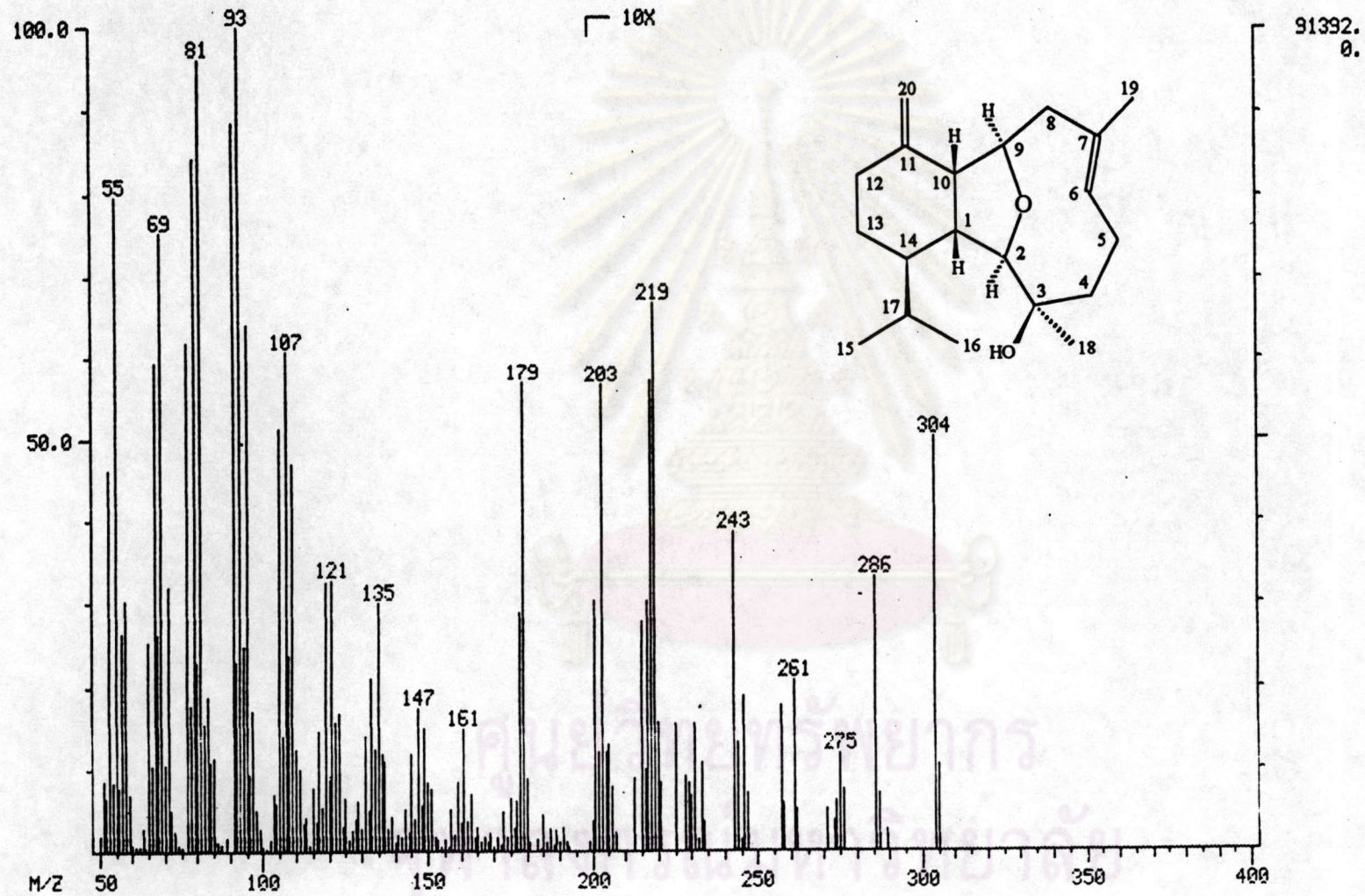


Figure 15. EIMS spectrum of compound CHF028

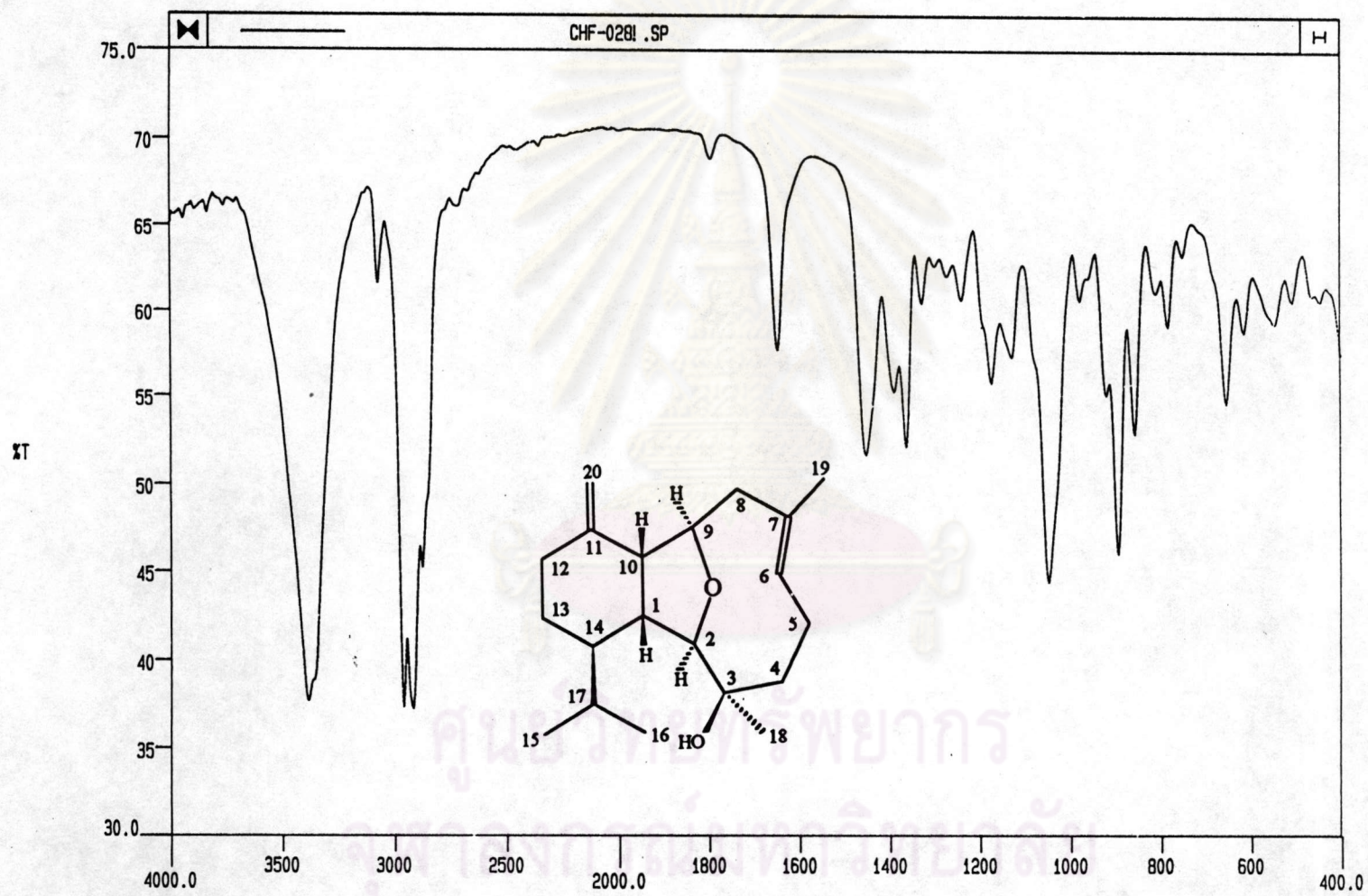


Figure 16. IR spectrum of compound CHF028 (KBr disc)

CHF028 H1

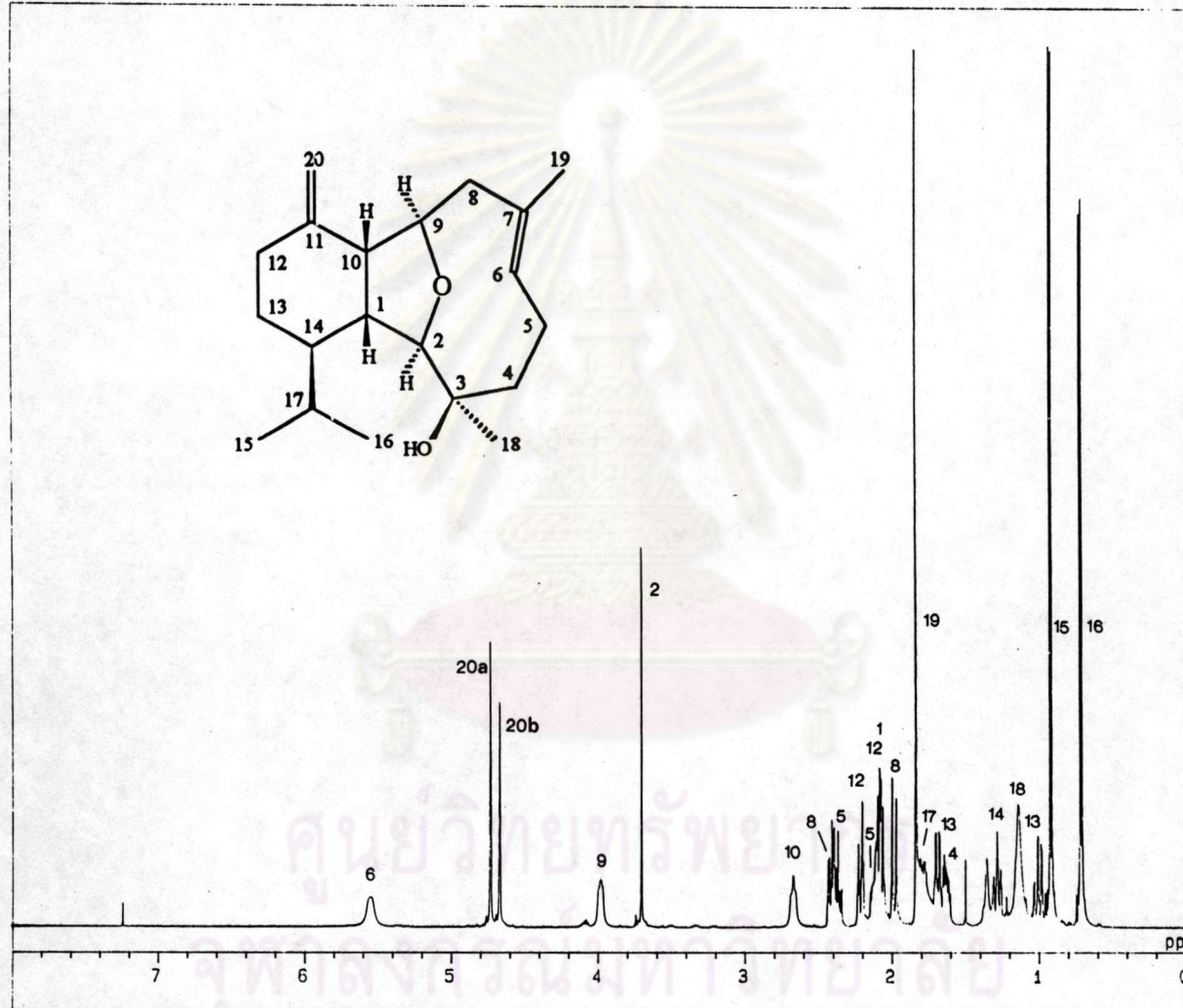


Figure 17. The 500 MHz ^1H nmr spectrum of compound CHF028 (in CDCl_3)

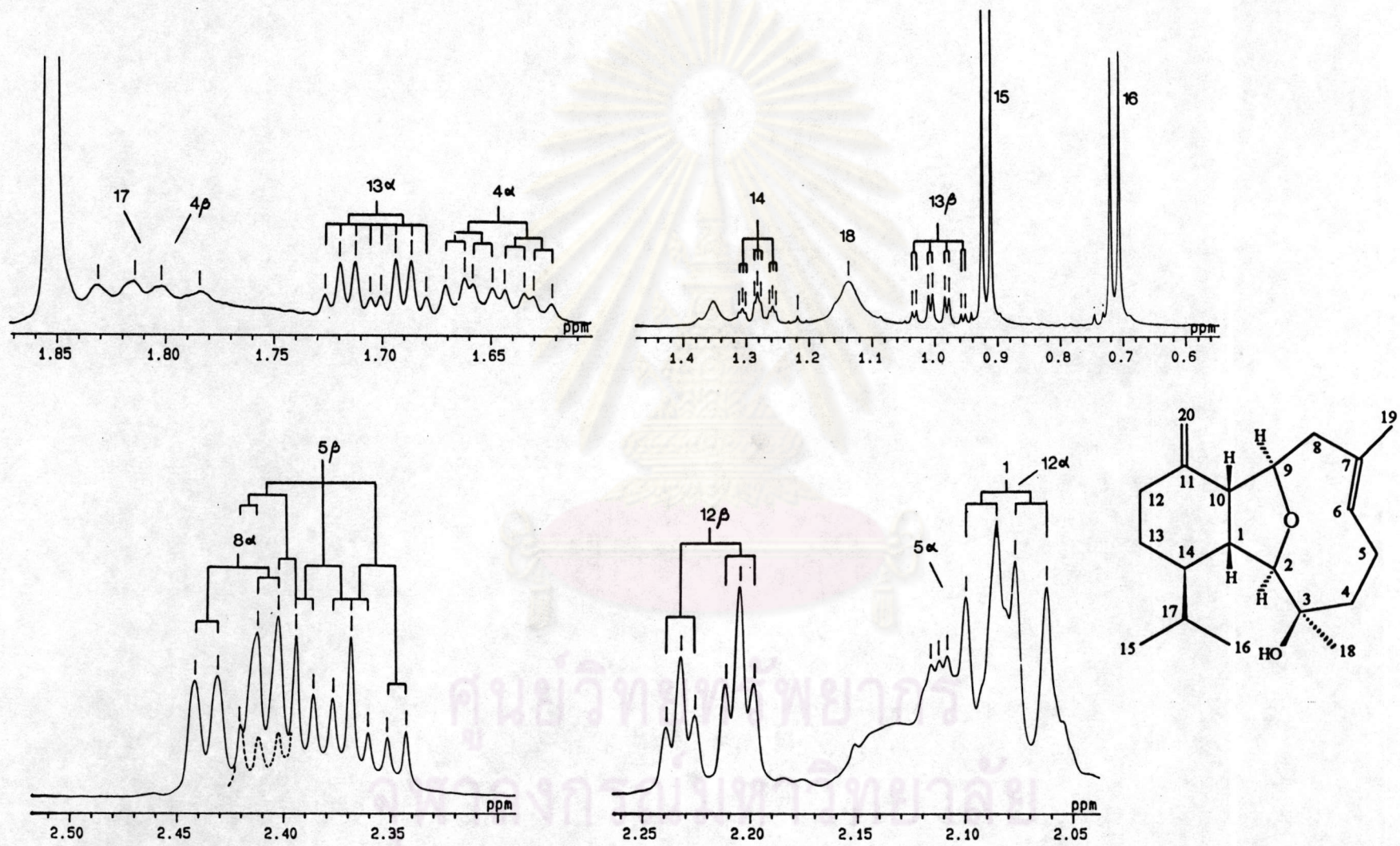


Figure 18. The 500 MHz ^1H nmr spectrum of compound CHF028 (in CDCl_3) (expanded from 0.60 - 2.50 ppm)

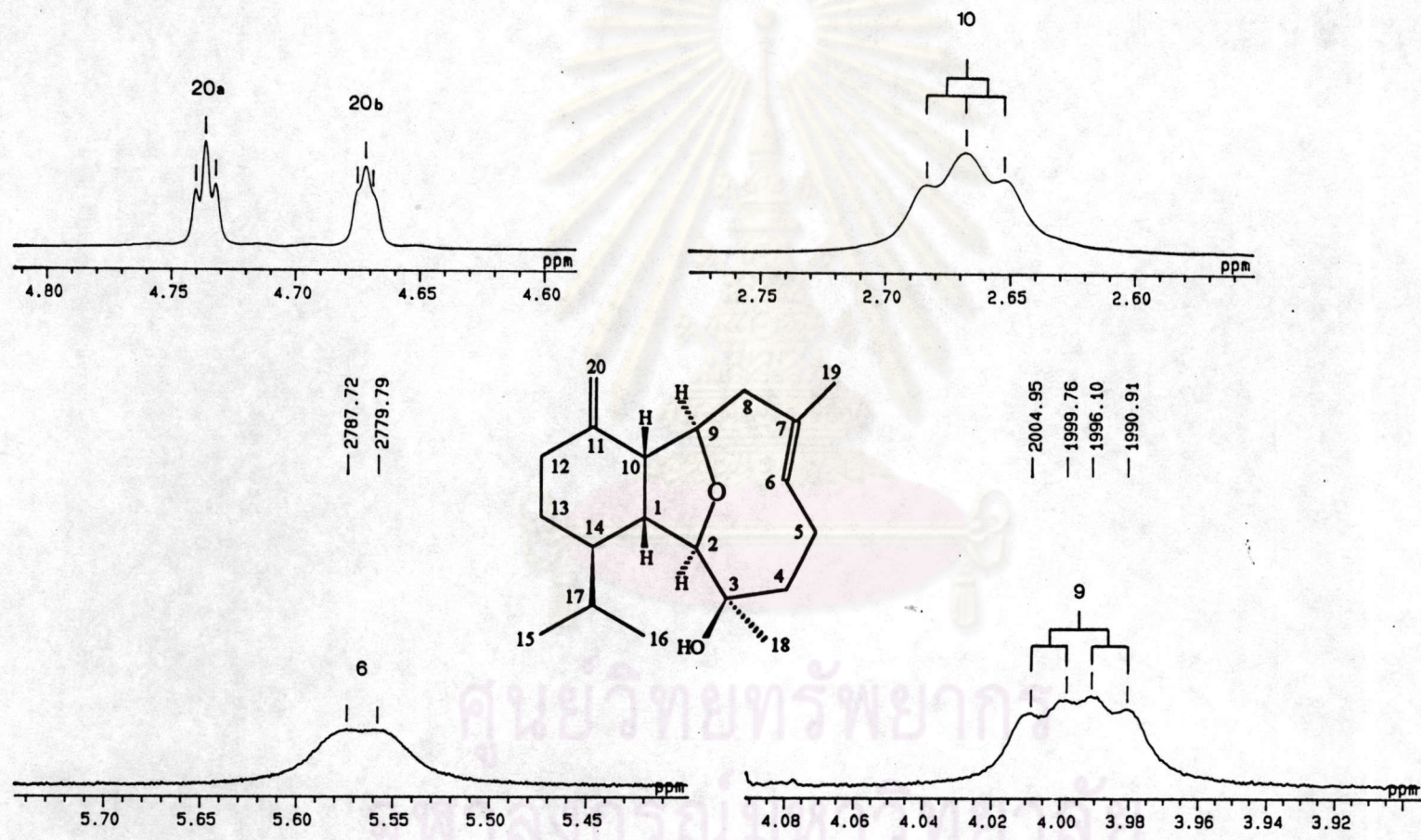


Figure 19. The 500 MHz ^1H nmr spectrum of compound CHF028 (in CDCl_3) (expanded from 2.60 - 5.70 ppm)

CHF028 13C

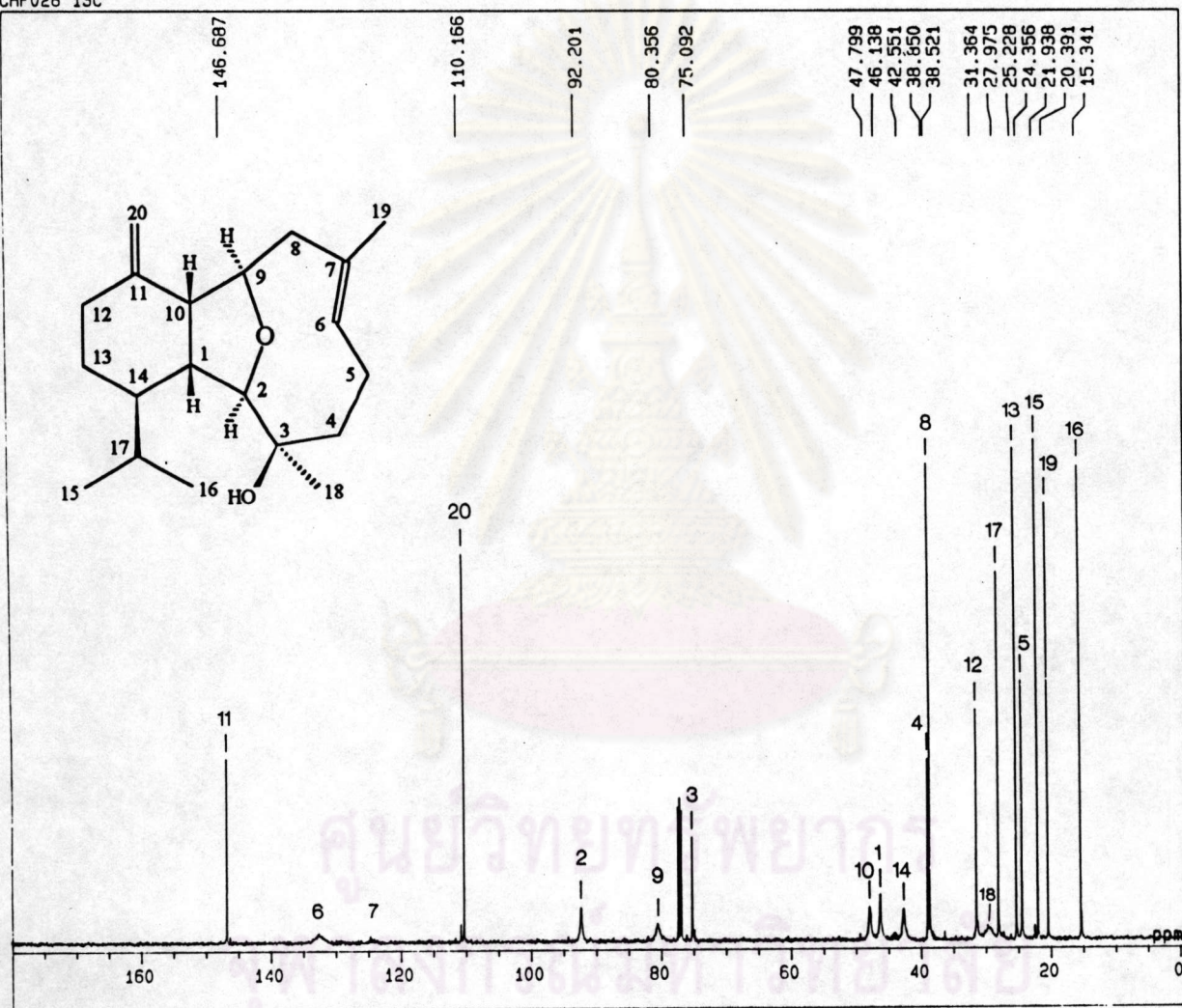


Figure 20. The 125 MHz ^{13}C nmr spectrum of compound CHF028 (in CDCl_3)

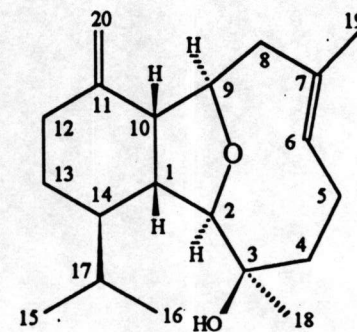
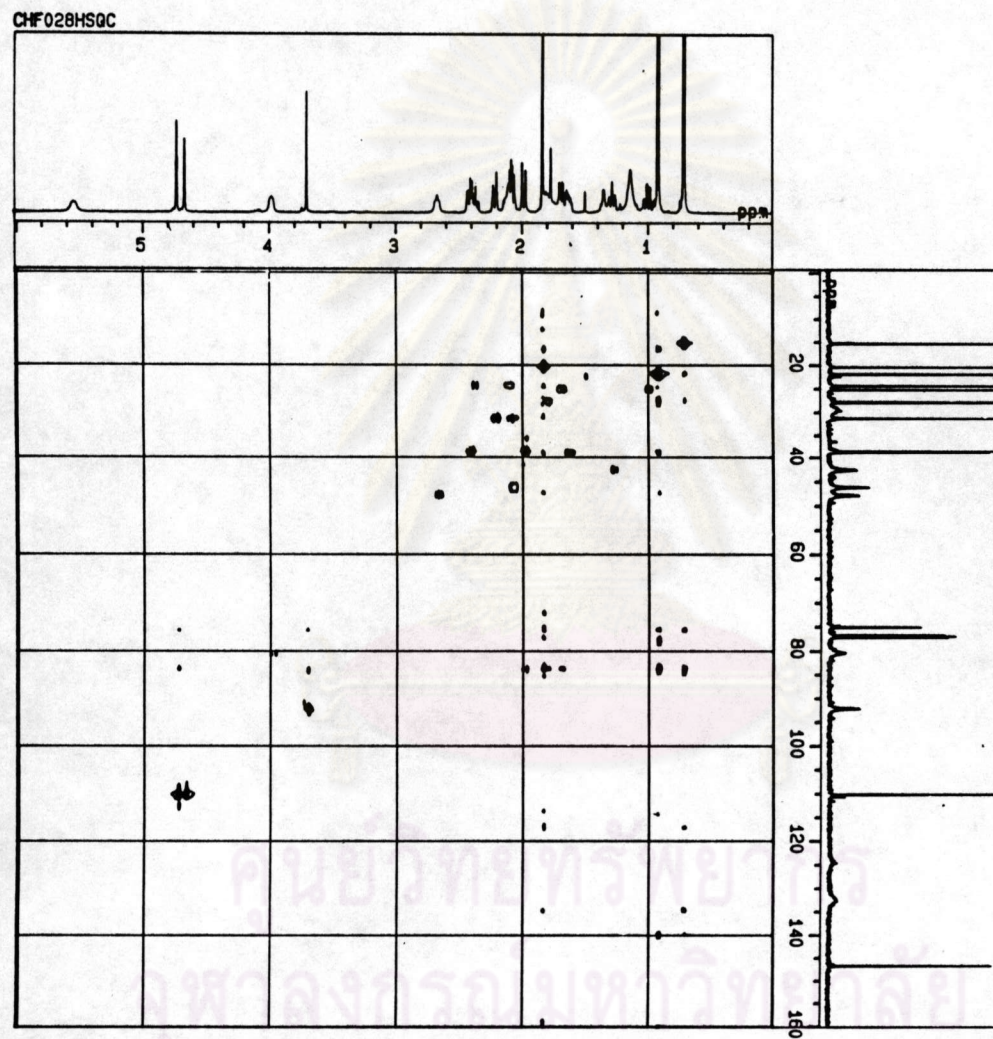


Figure 21. The 500 MHz HSQC spectrum of compound CHF028 (in CDCl_3)

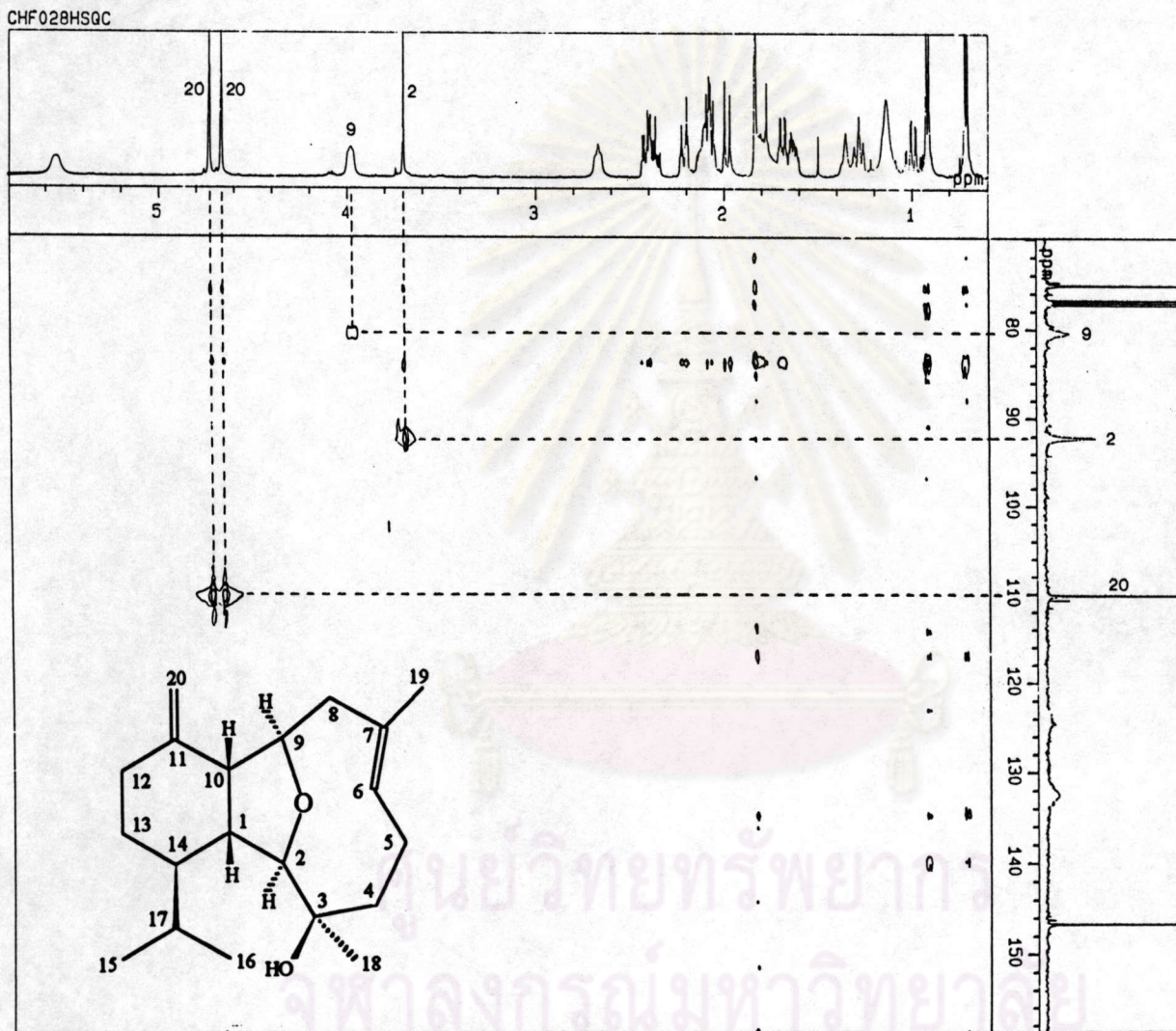


Figure 23. The 500 MHz HSQC spectrum of compound CHF028 (in CDCl₃) (expanded from 70 - 150 ppm)

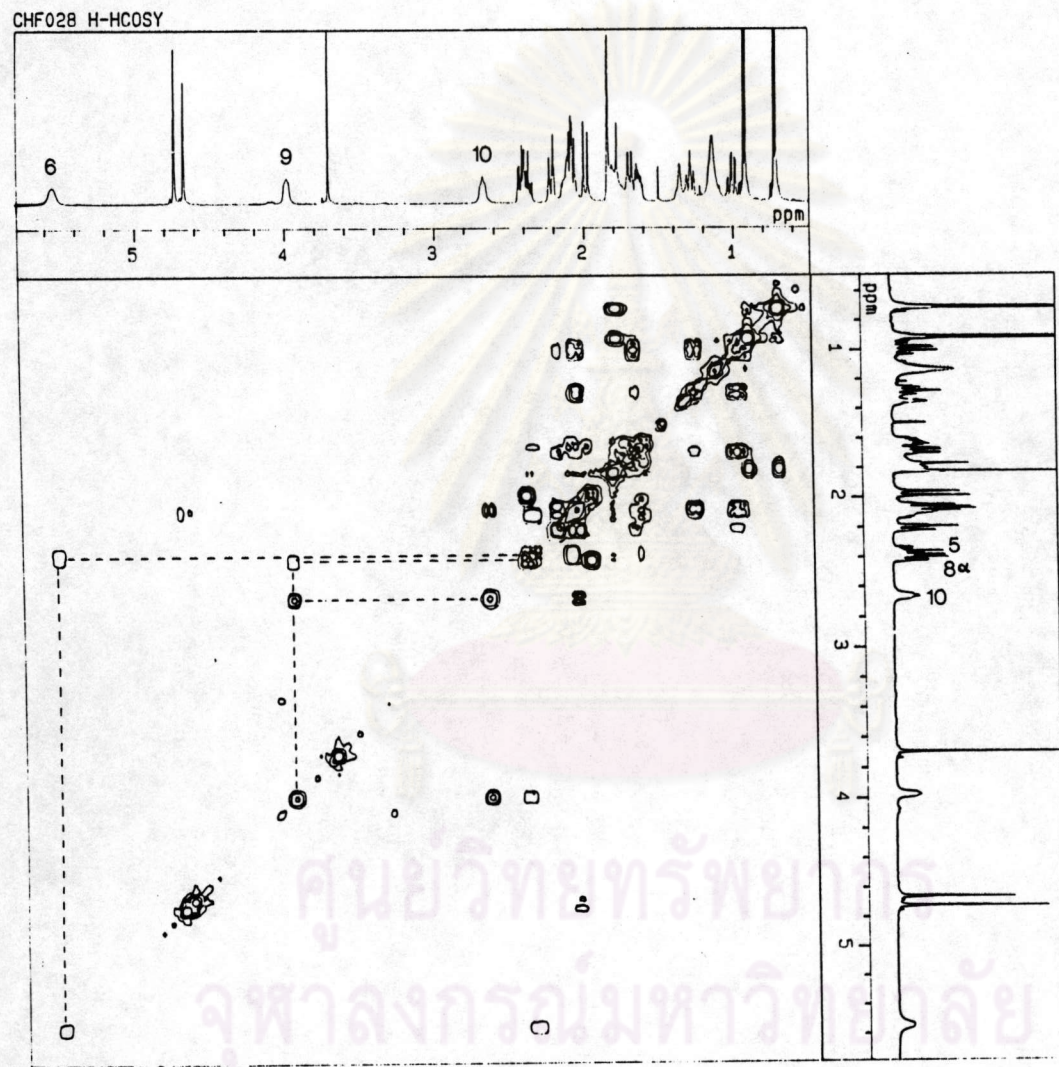


Figure 24. The 500 MHz ^1H - ^1H COSY spectrum of compound CHF028 (in CDCl_3)

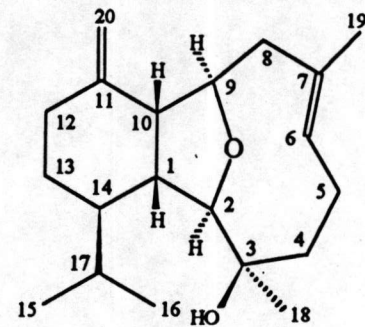
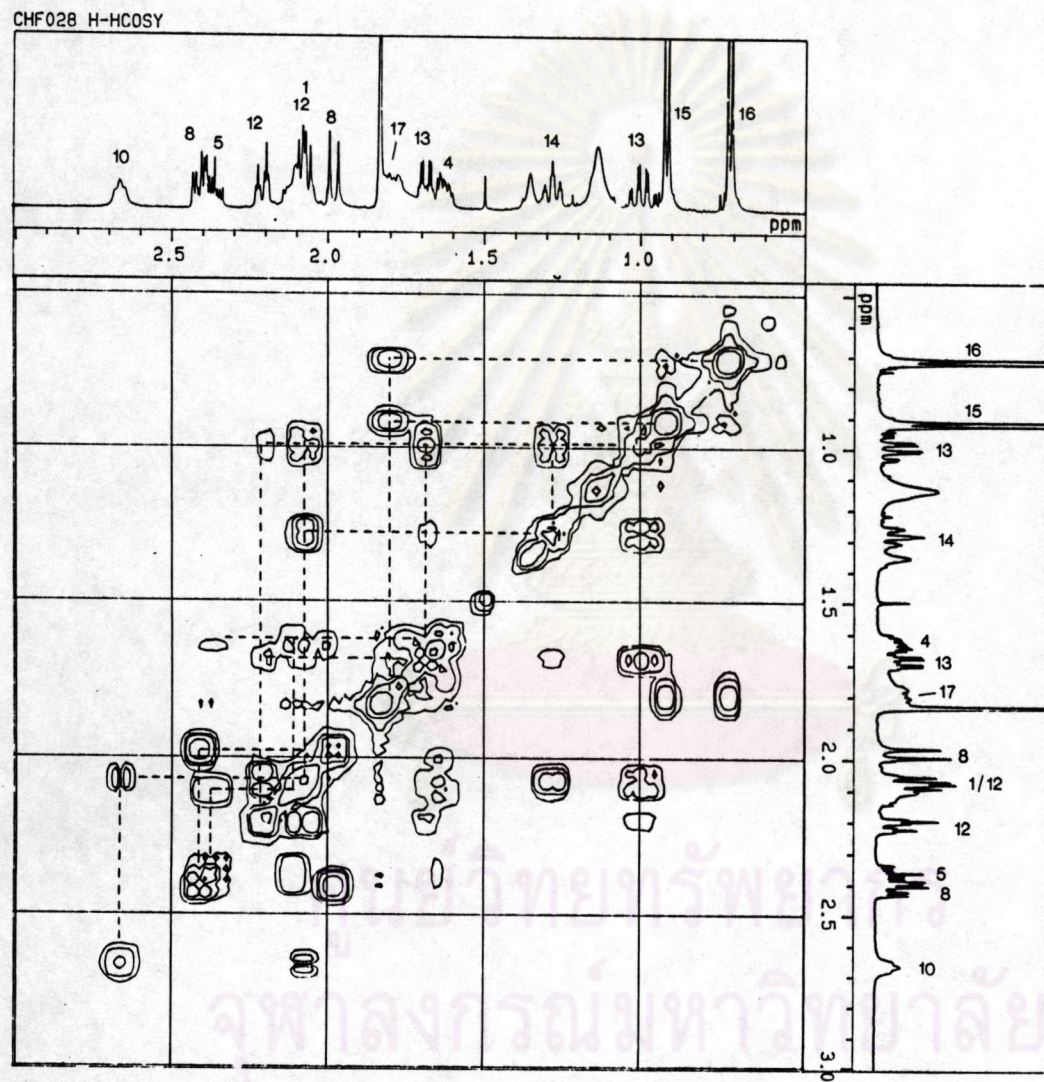


Figure 25. The 500 MHz ^1H - ^1H COSY spectrum of compound CHF028 (in CDCl_3) (expanded from 0.60 - 3.00 ppm)

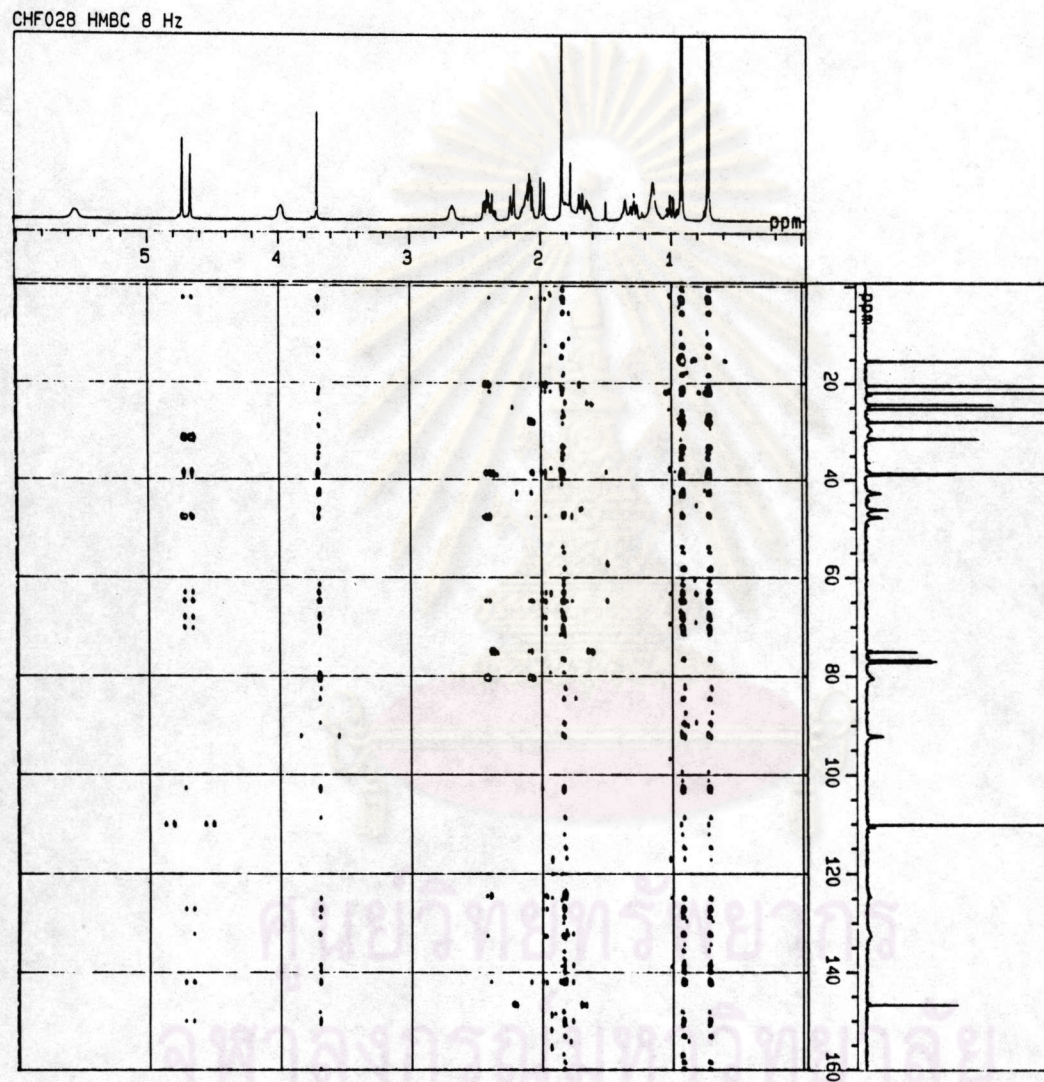


Figure 26. The 500 MHz HMBC 8 Hz spectrum of compound CHF028 (in CDCl₃)

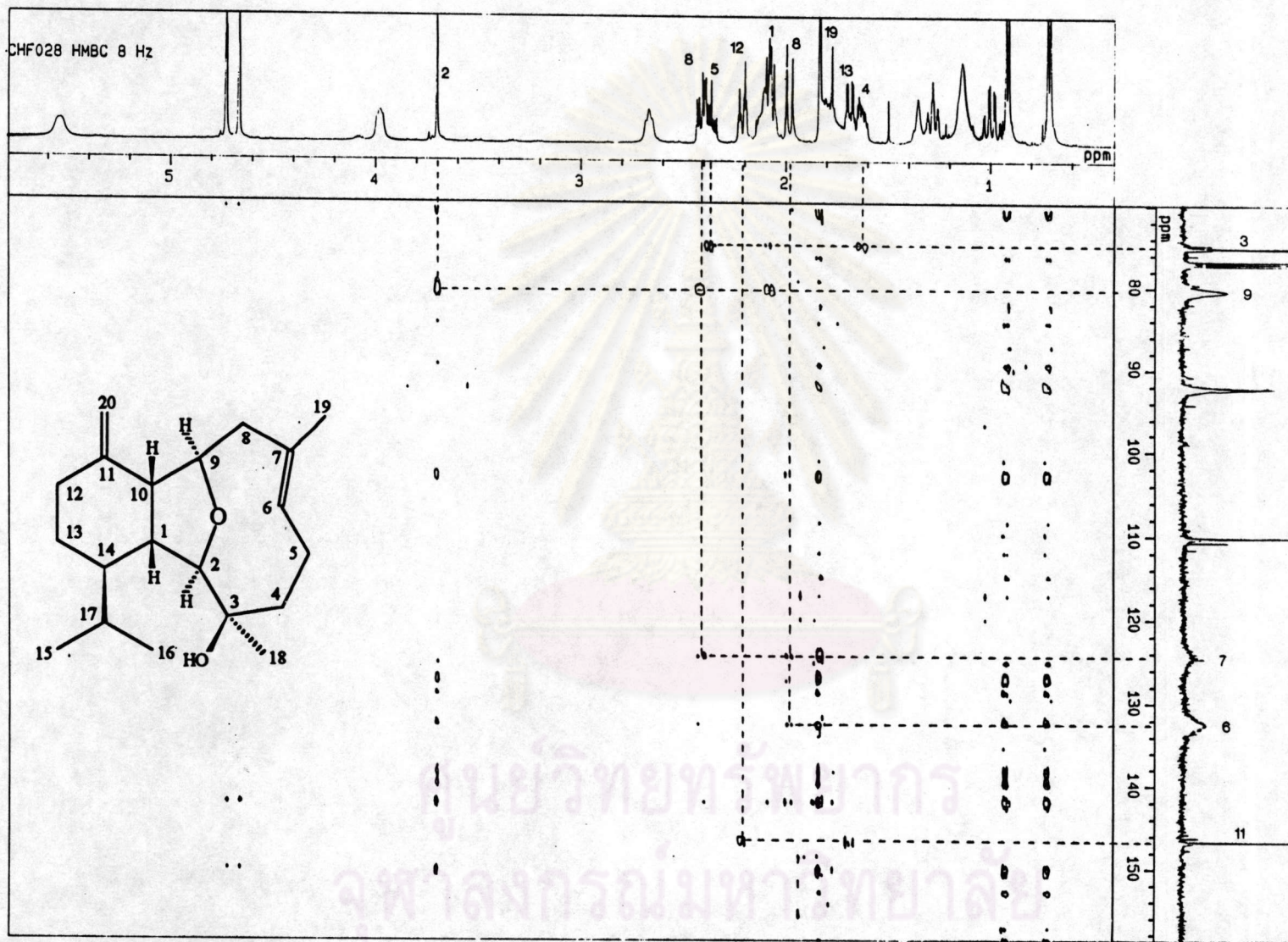


Figure 28. The 500 MHz HMBC 8 Hz spectrum of compound CHF028 (in CDCl_3) (expanded from 70 - 150 ppm)

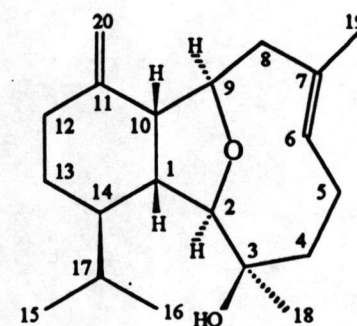
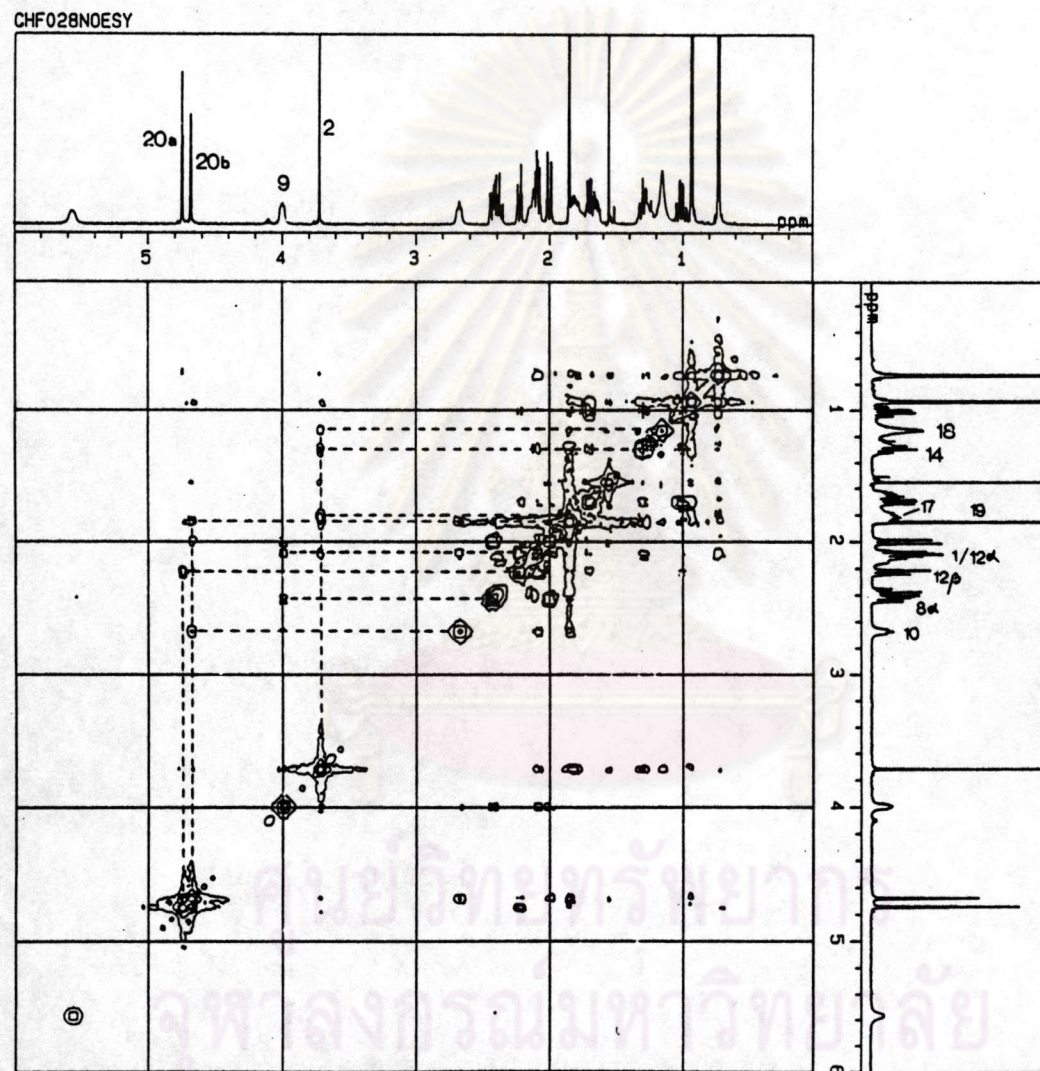


Figure 29. The 500 MHz NOESY spectrum of compound CHF028 (in CDCl_3)

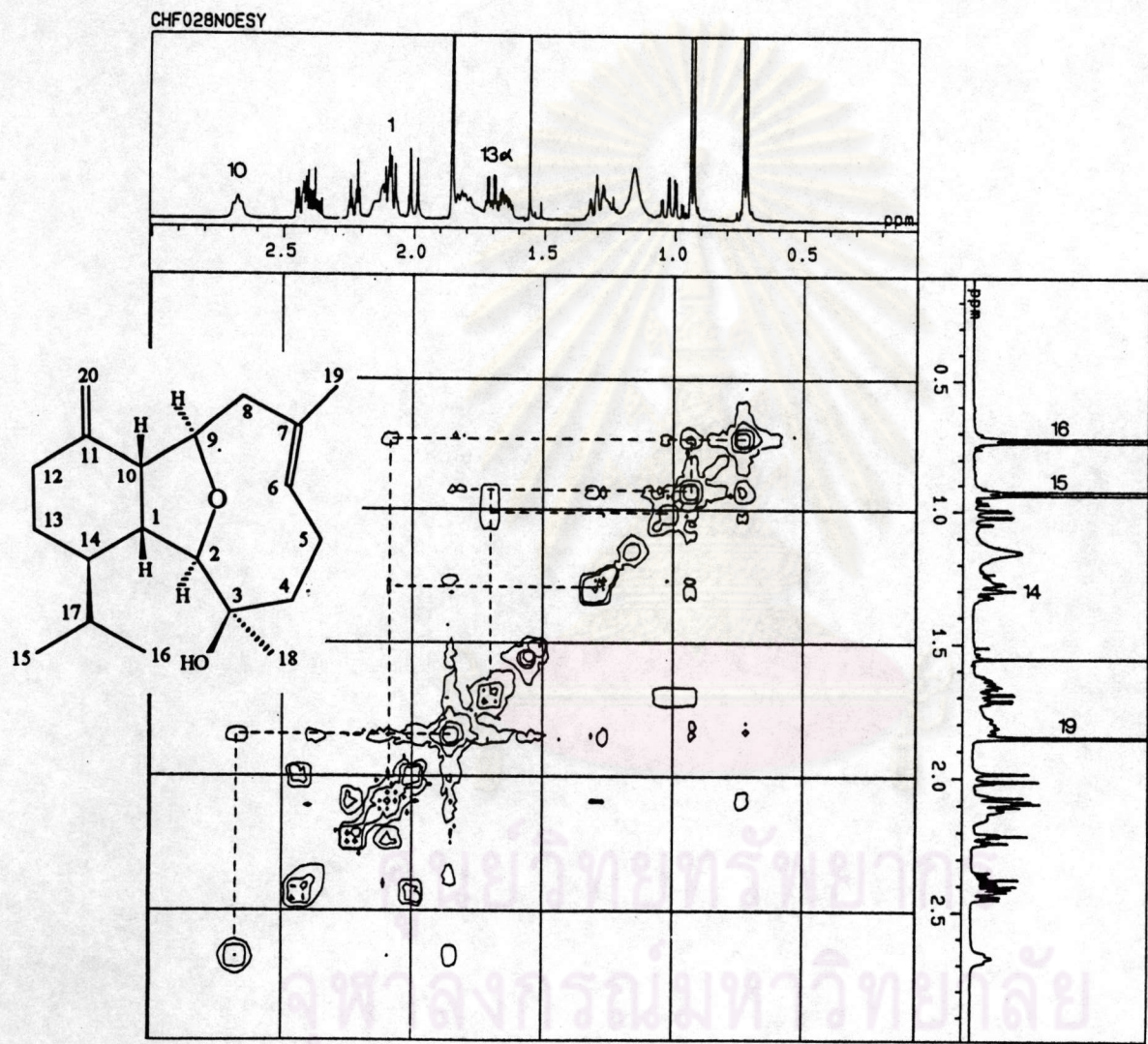


Figure 30. The 500 MHz NOESY spectrum of compound CHF028 (in CDCl₃) (expanded from 0.50 - 3.00 ppm)

CHF028 NOE IRR 2.673

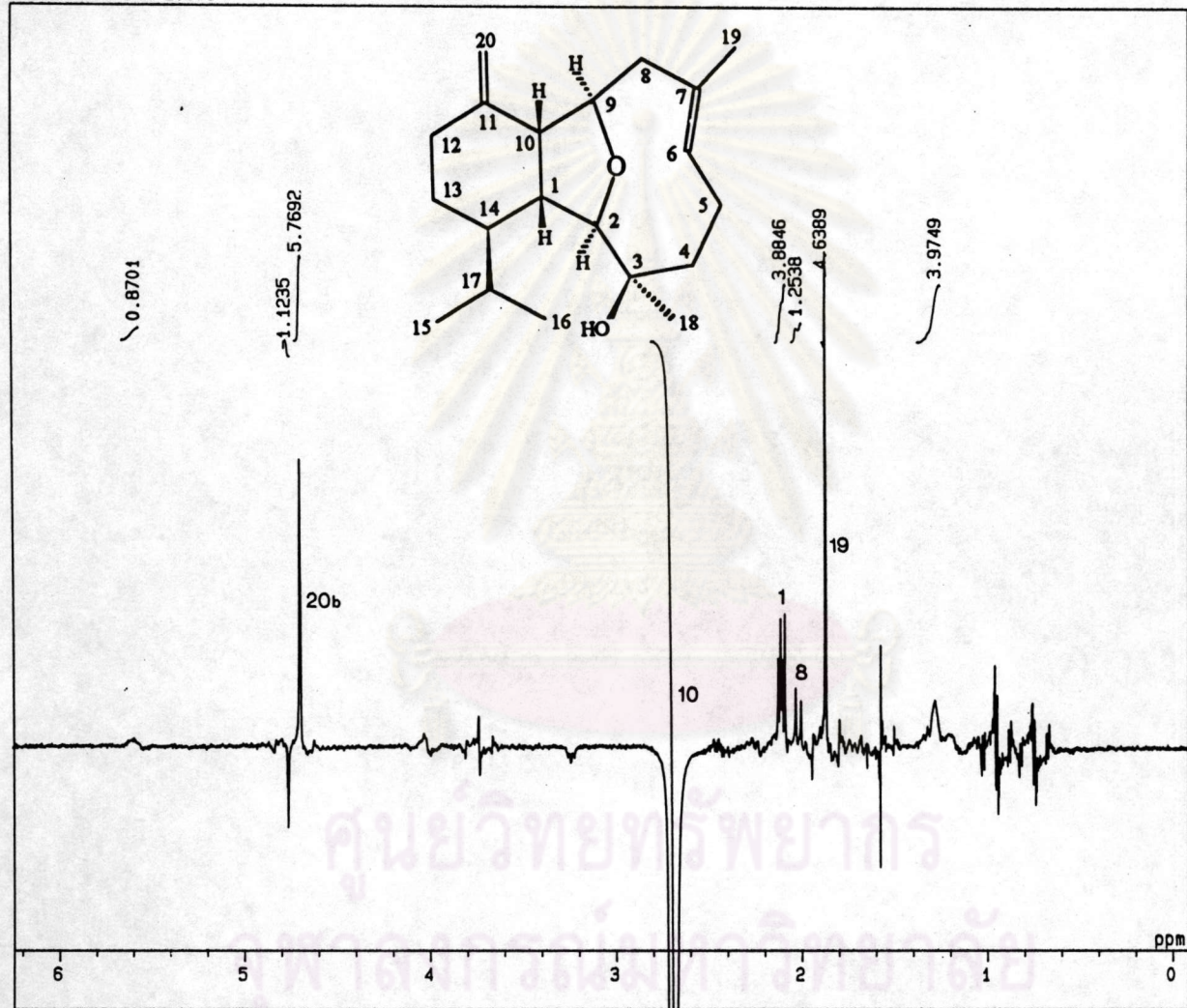


Figure 31. The 500 MHz NOE difference spectrum of compound CHF028 (in CDCl₃) irradiation at 2.67 ppm (H-10)

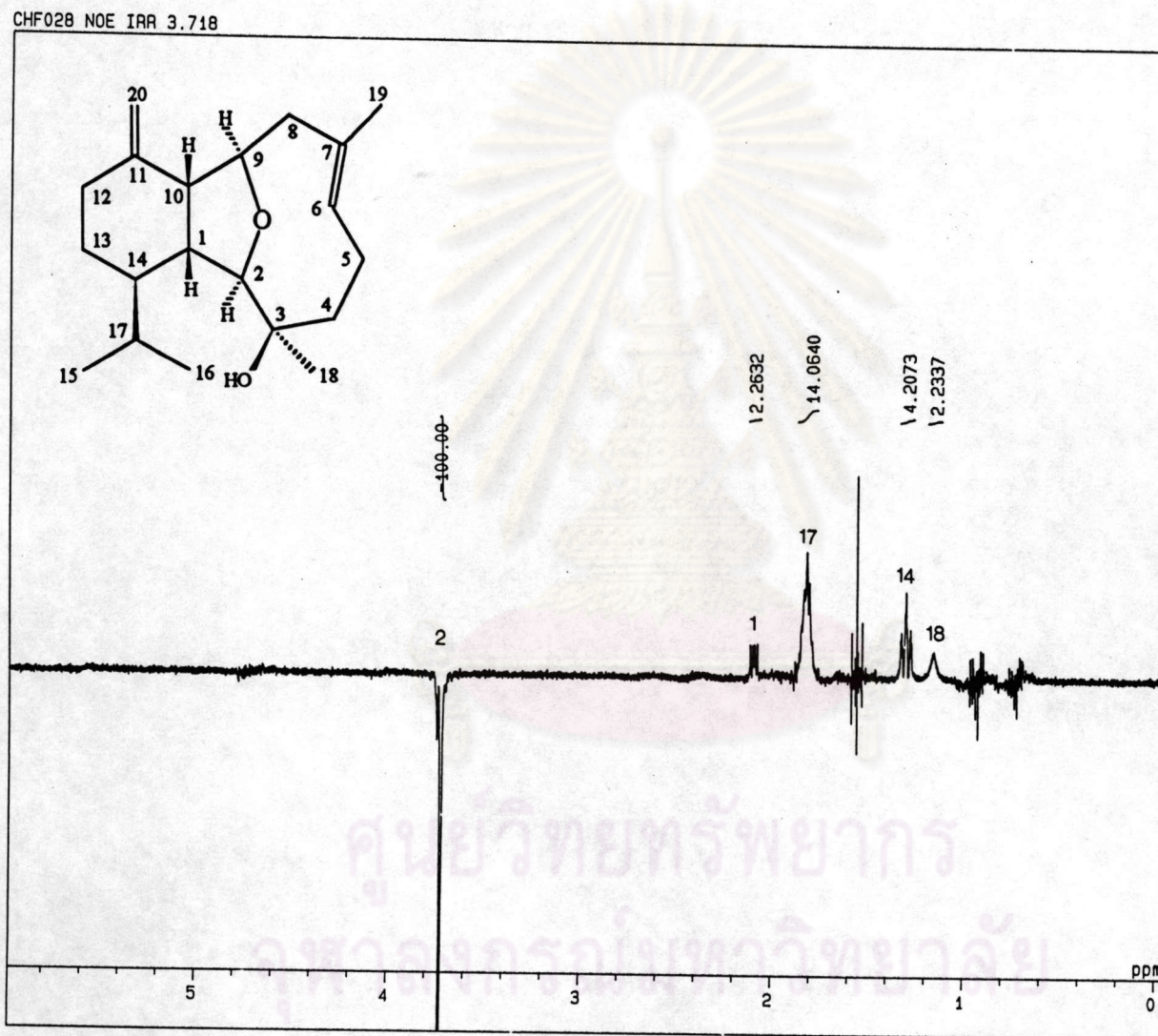


Figure 32. The 500 MHz NOE difference spectrum of compound CHF028 (in CDCl_3) irradiation at 3.70 ppm (H-2)

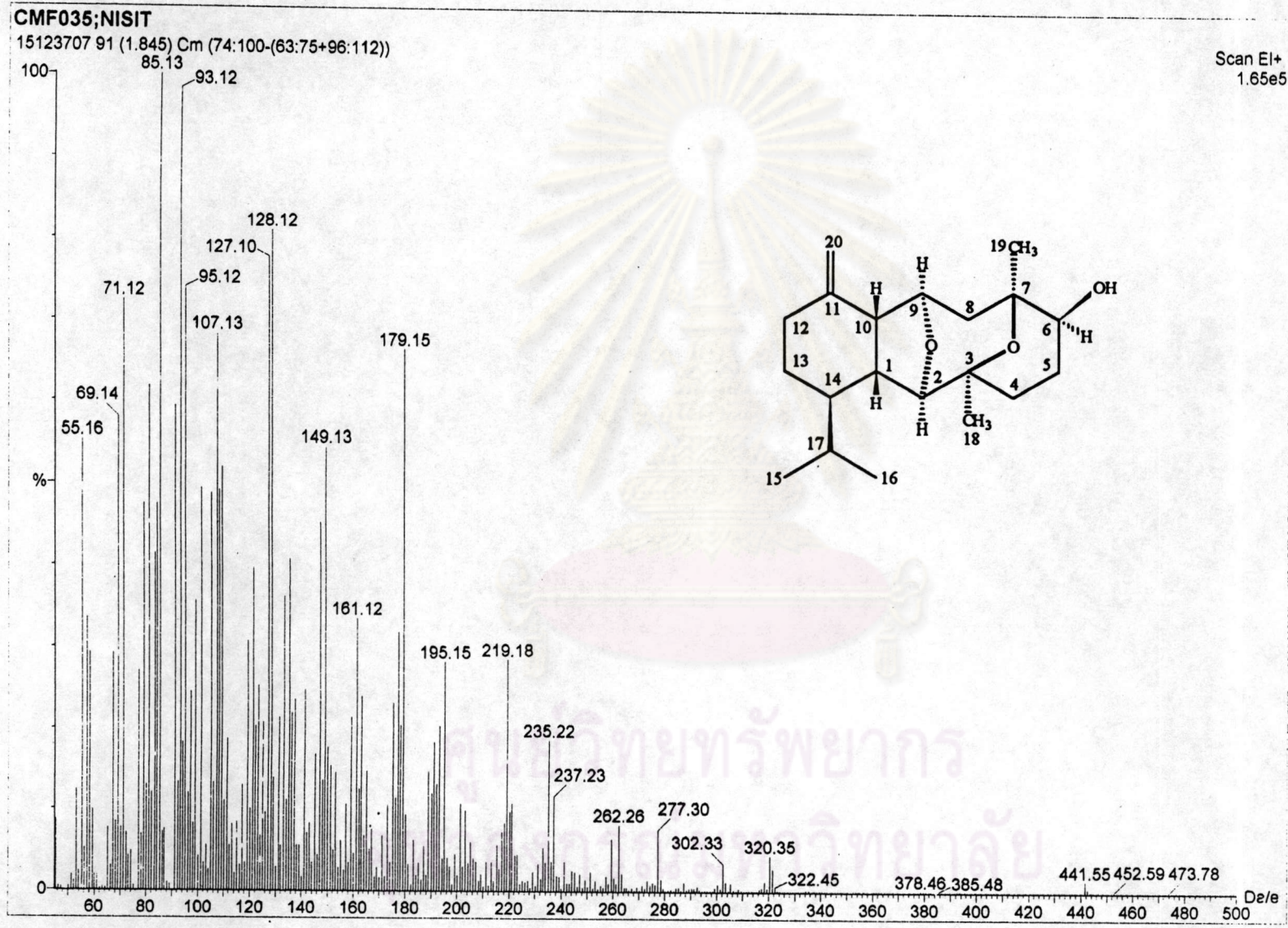


Figure 33. EIMS spectrum of compound CMF035

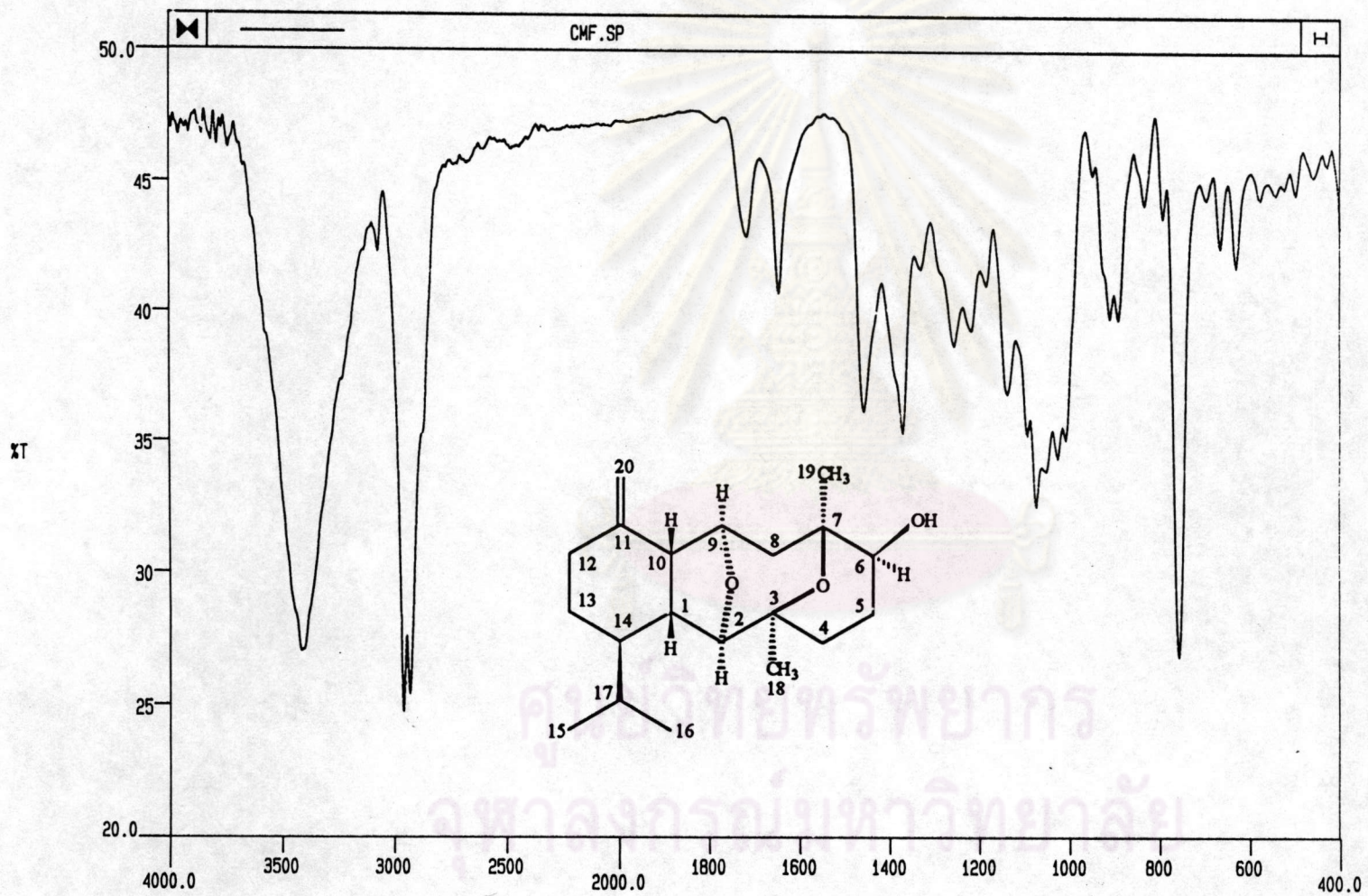


Figure 34. IR spectrum of compound CMF035 (film)

CMF035-1H

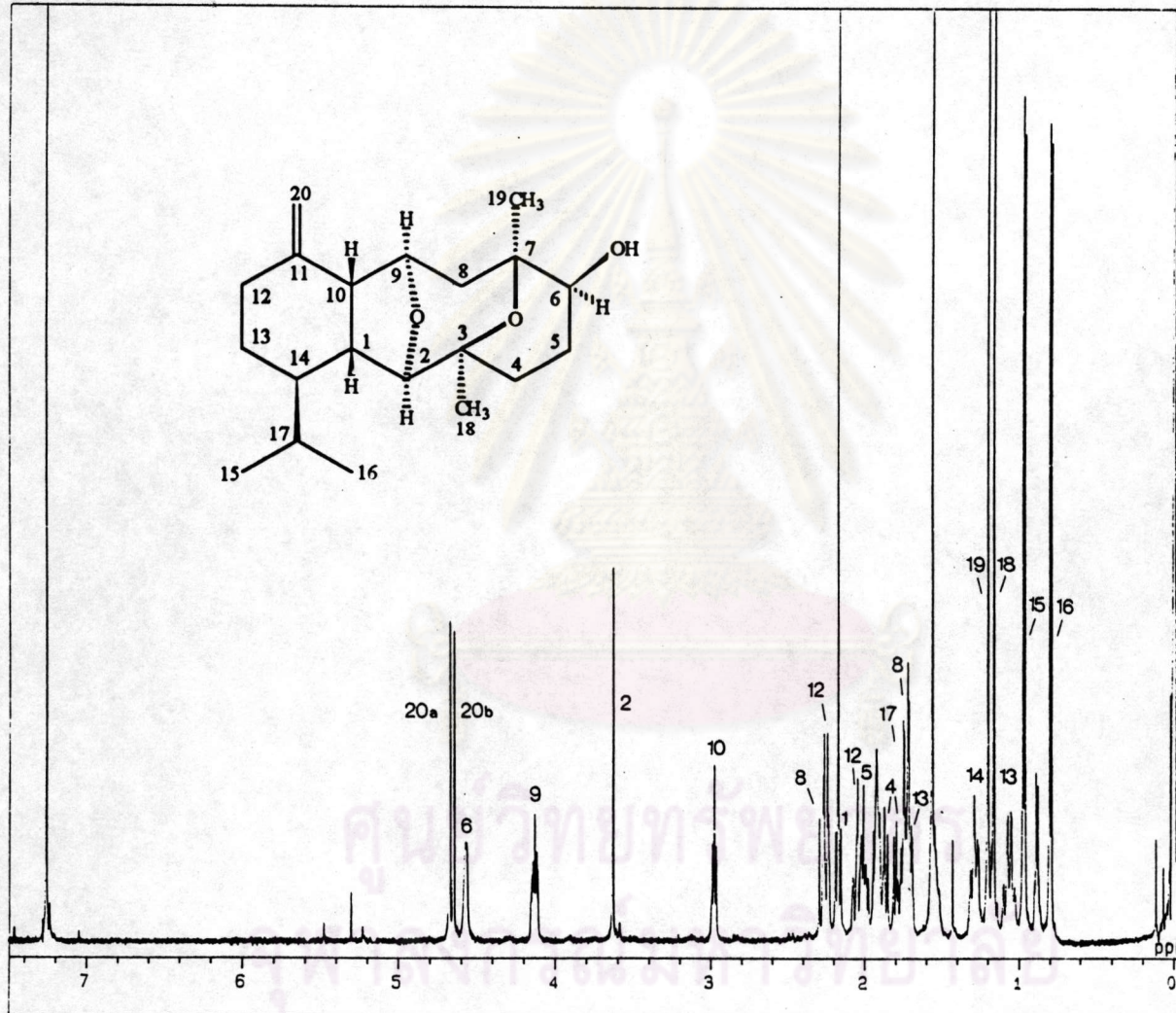


Figure 35. The 500 MHz ¹H nmr spectrum of compound CMF035 (in CDCl₃)

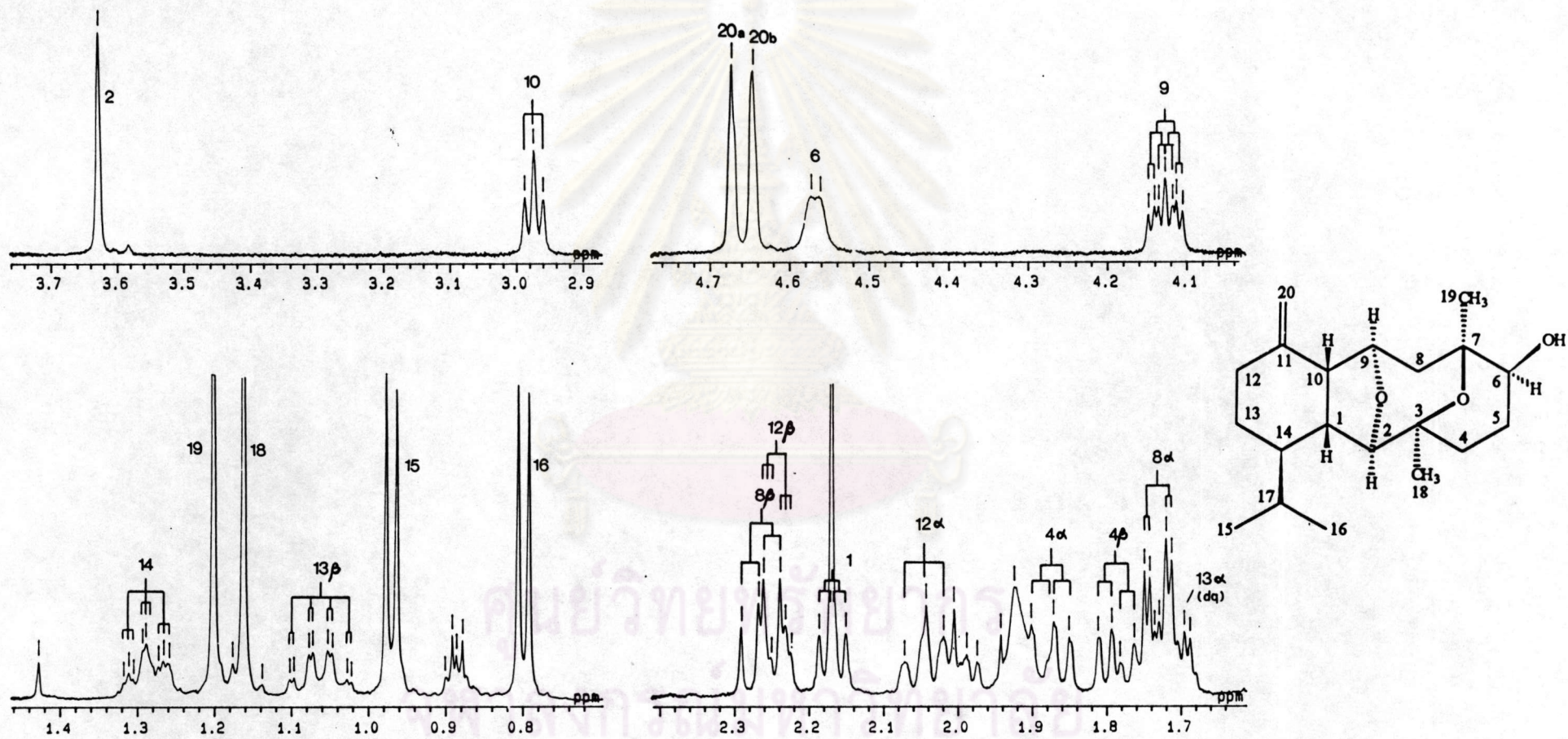


Figure 36. The 500 MHz ^1H nmr spectrum of compound CMF035 (in CDCl_3) (expanded)

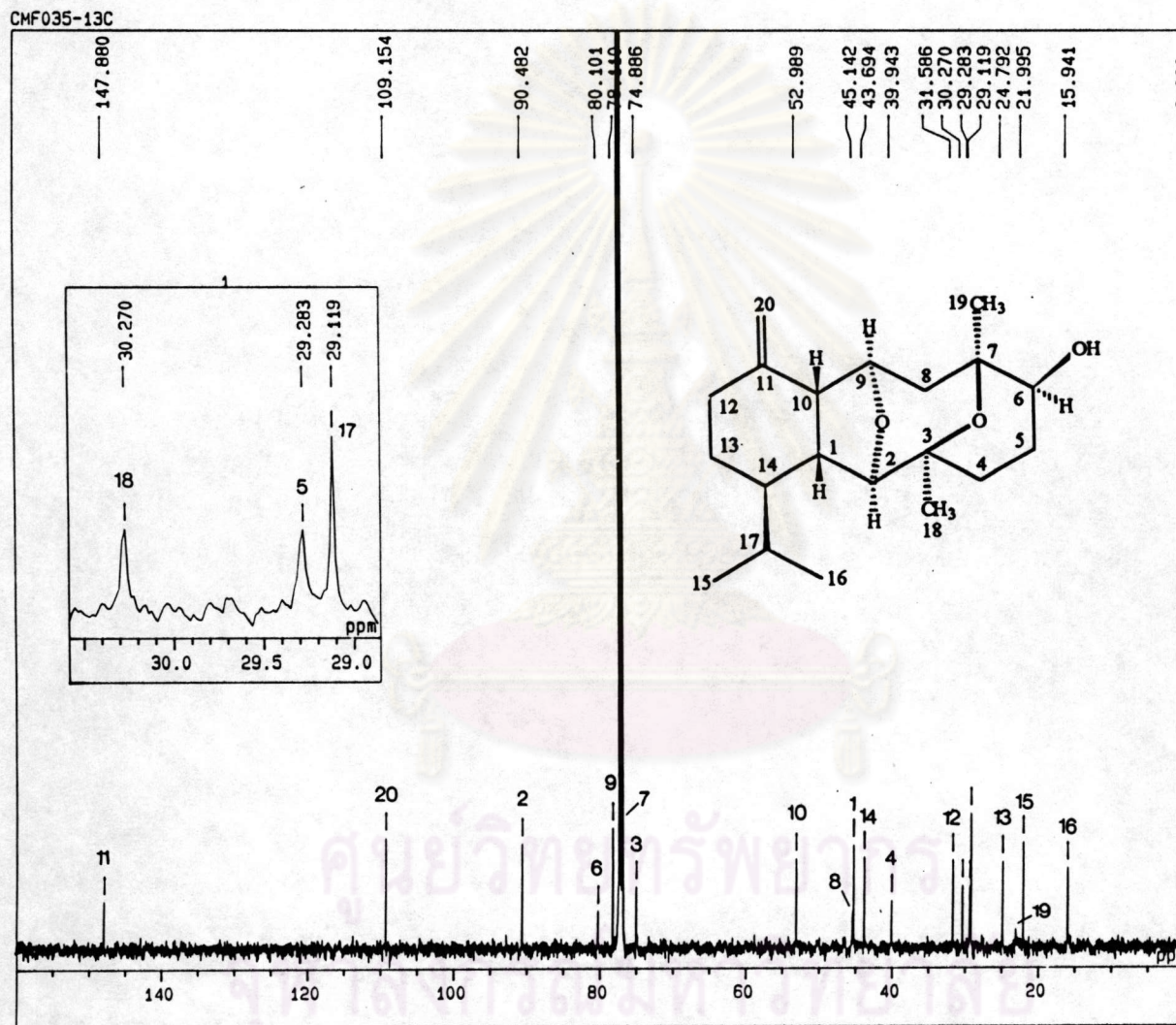


Figure 37. The 125 MHz ^{13}C nmr spectrum of compound CMF035 (in CDCl_3)

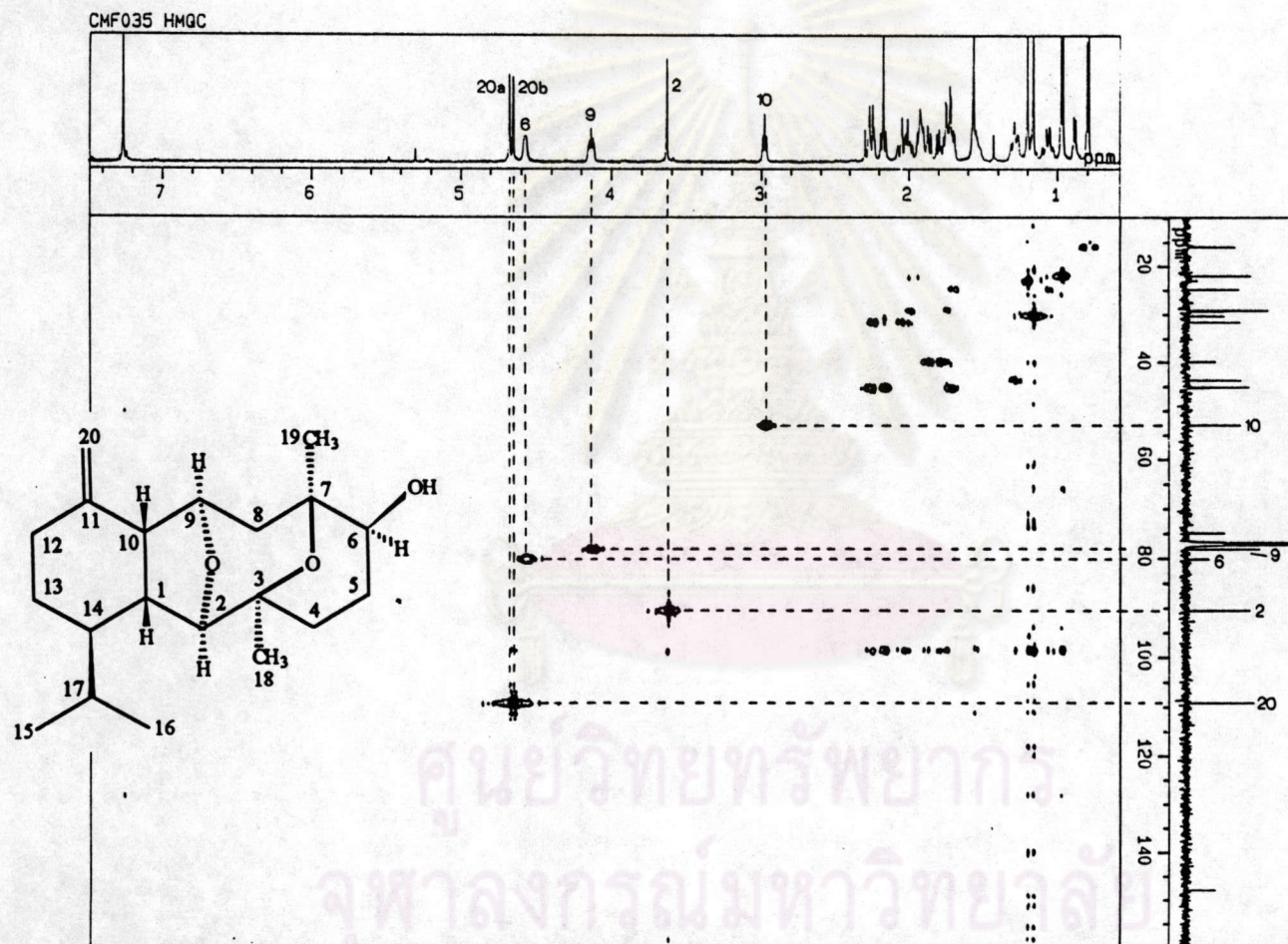


Figure 38. The 500 MHz HMQC spectrum of compound CMF035 (in CDCl₃)

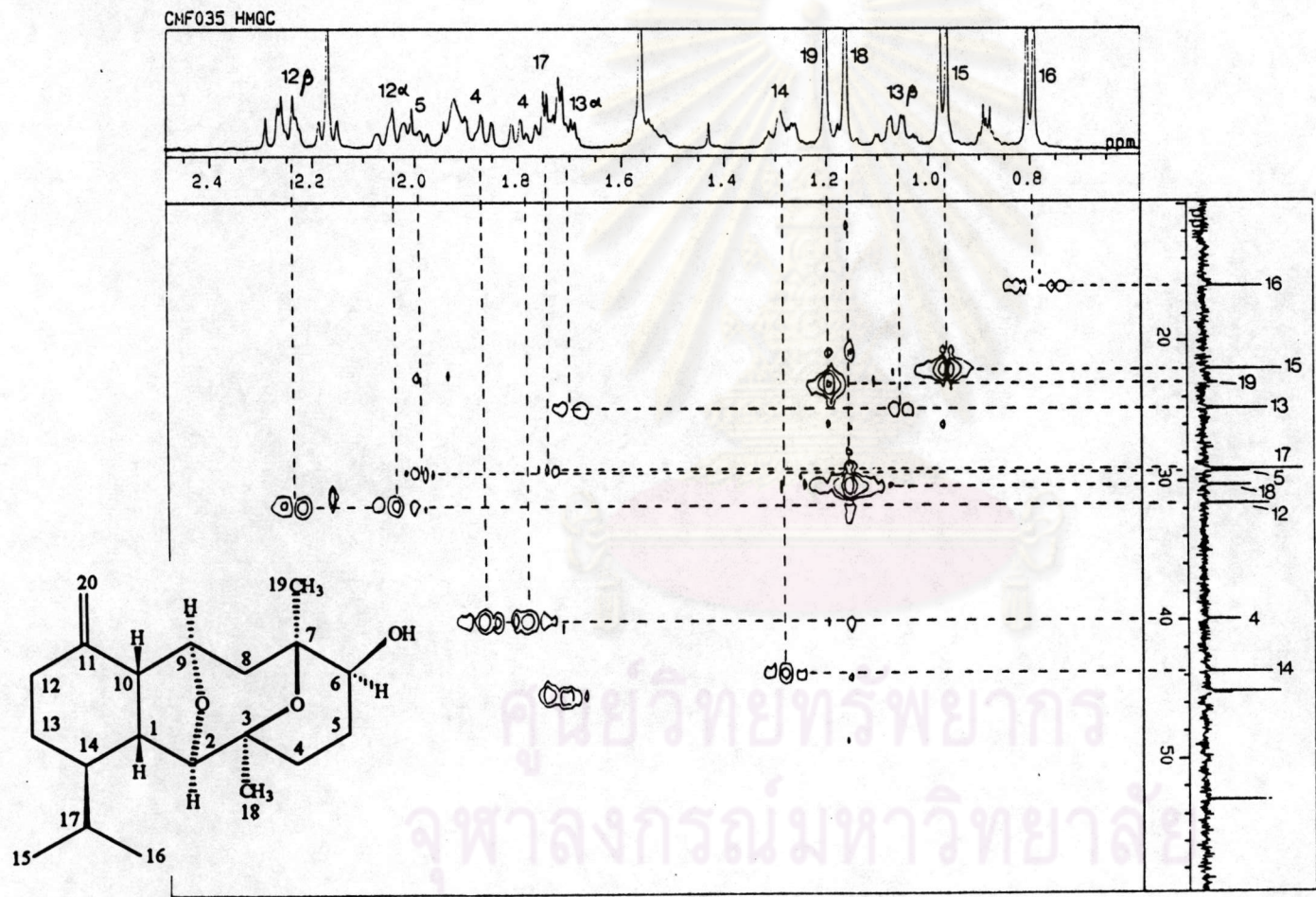


Figure 39. The 500 MHz HMQC spectrum of compound CMF035 (in CDCl₃) (expanded from 10 - 50 ppm)

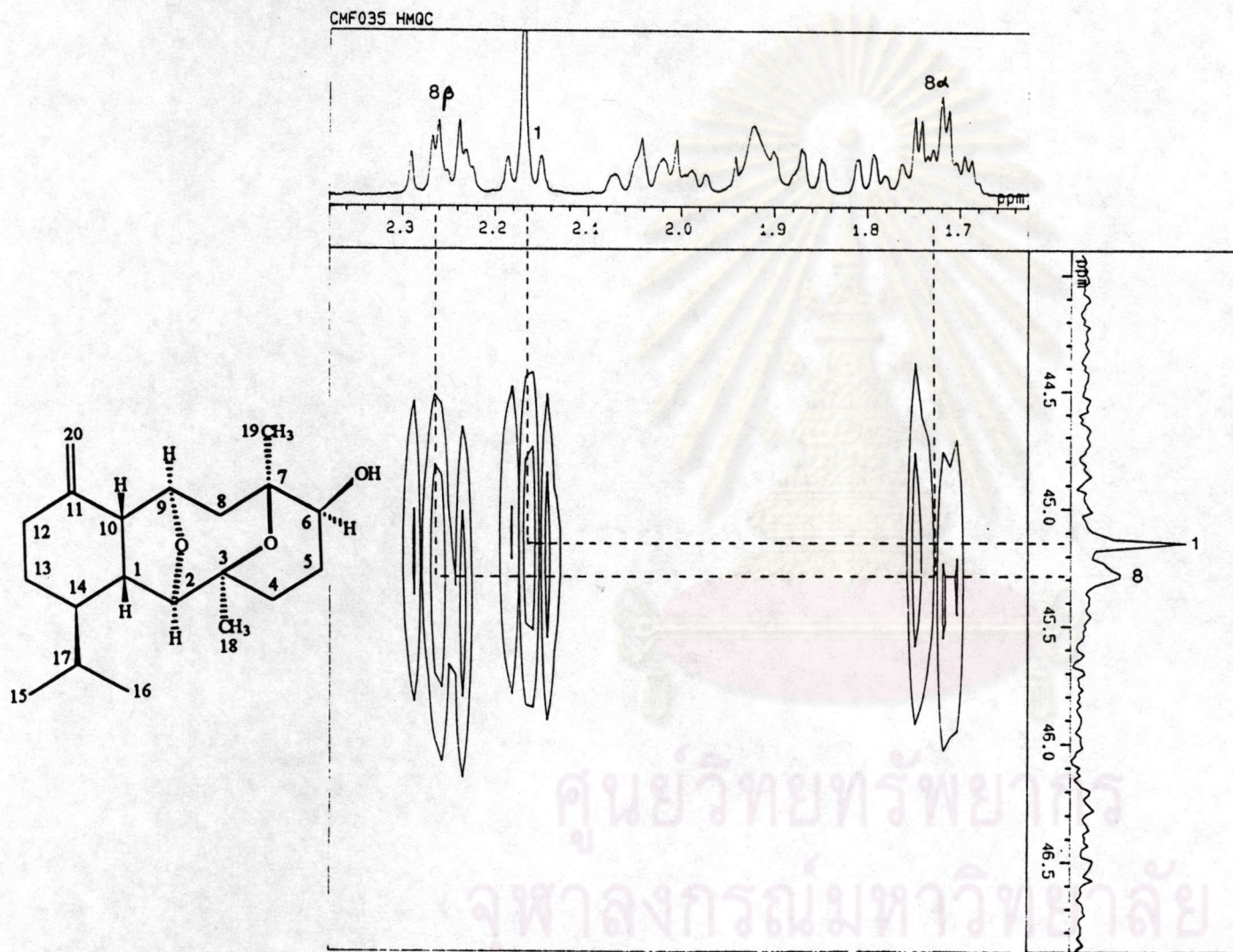


Figure 40. The 500 MHz HMQC spectrum of compound CMF035 (in CDCl₃) (expanded from 44 - 46 ppm)

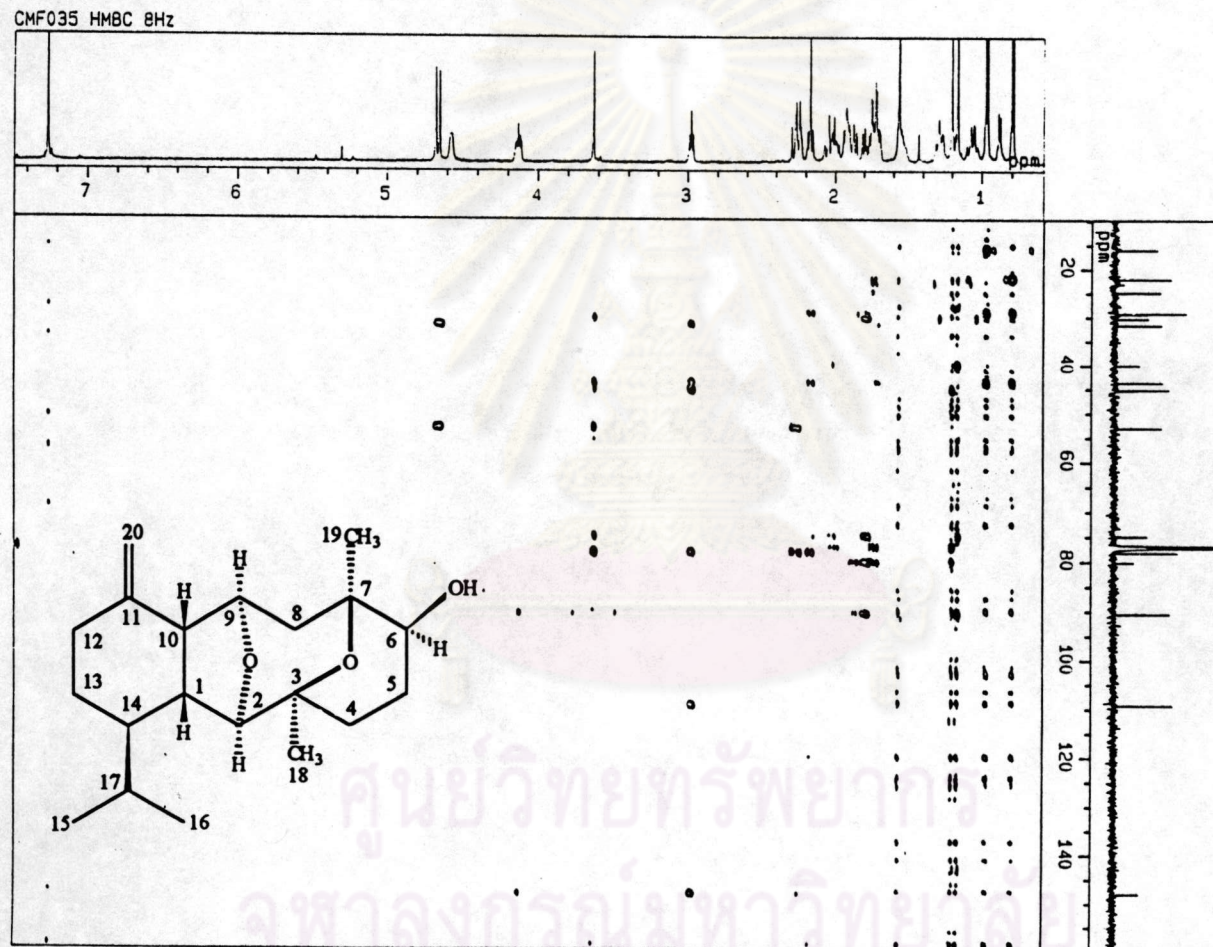


Figure 41. The 500 MHz HMBC 8 Hz spectrum of compound CMF035 (in CDCl₃)

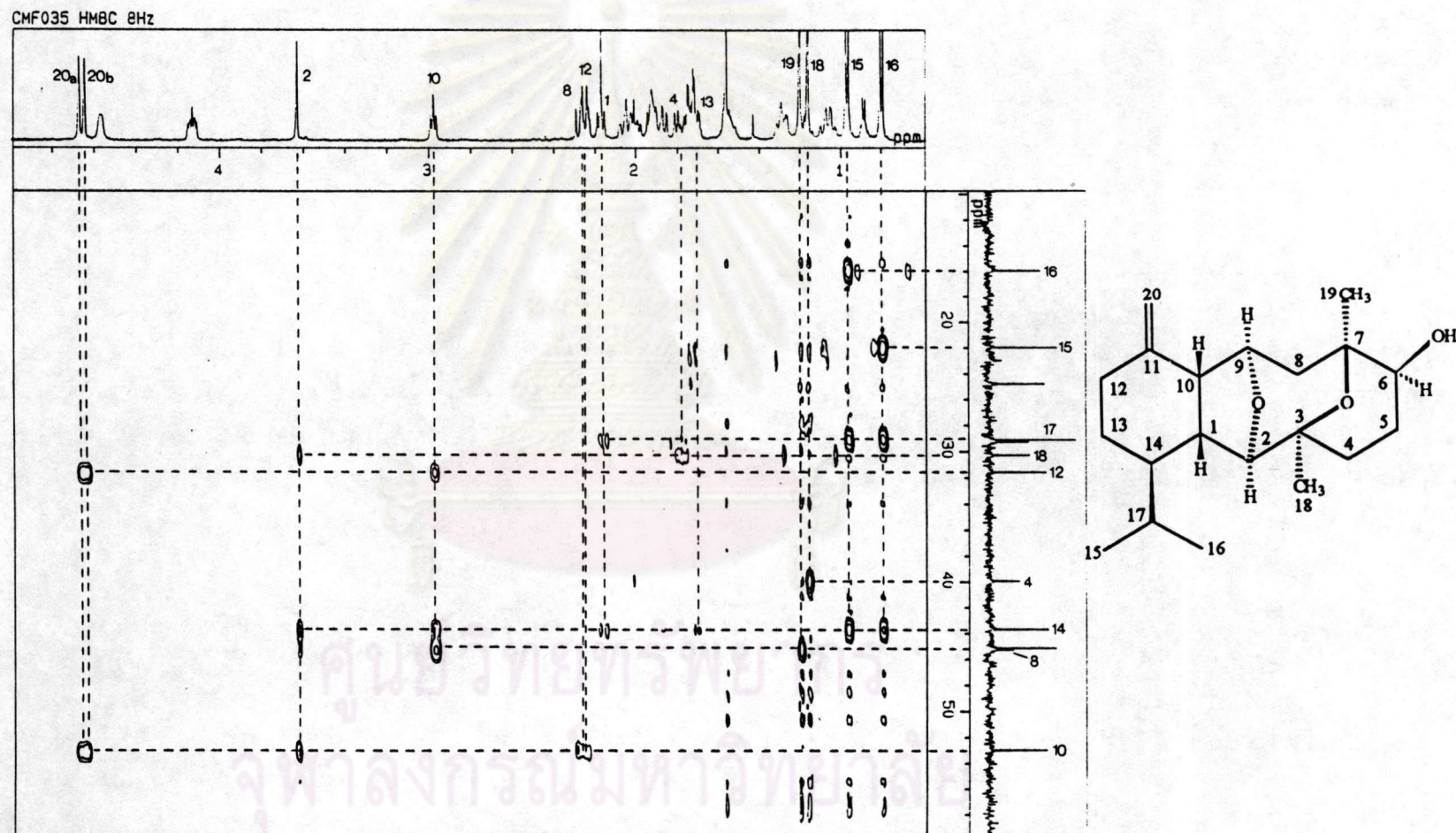


Figure 42. The 500 MHz HMBC 8 Hz spectrum of compound CMF035 (in CDCl_3) (expanded from 10 - 60 ppm)

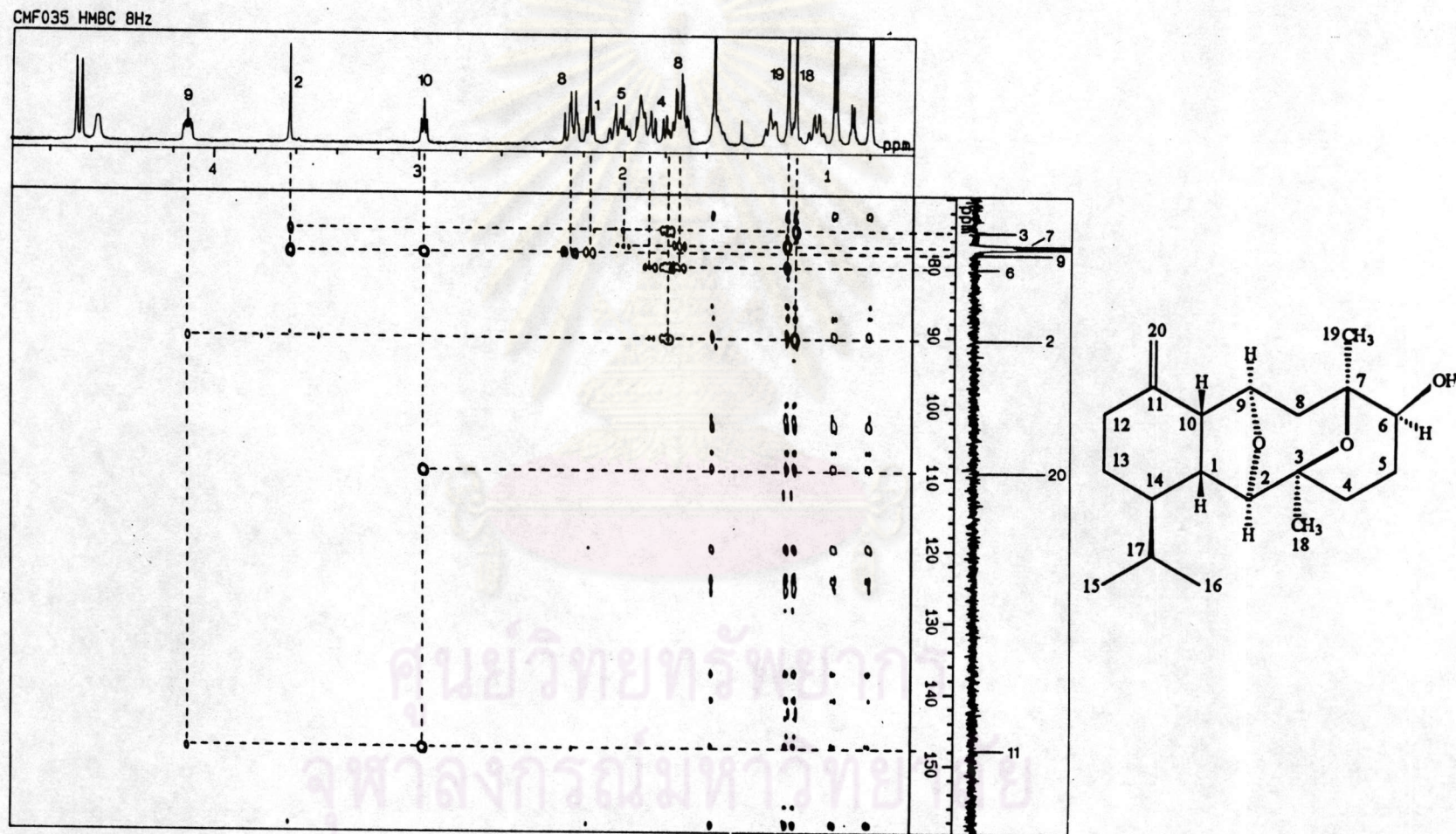


Figure 43. The 500 MHz HMBC 8 Hz spectrum of compound CMF035 (in CDCl_3) (expanded from 70 - 160 ppm)

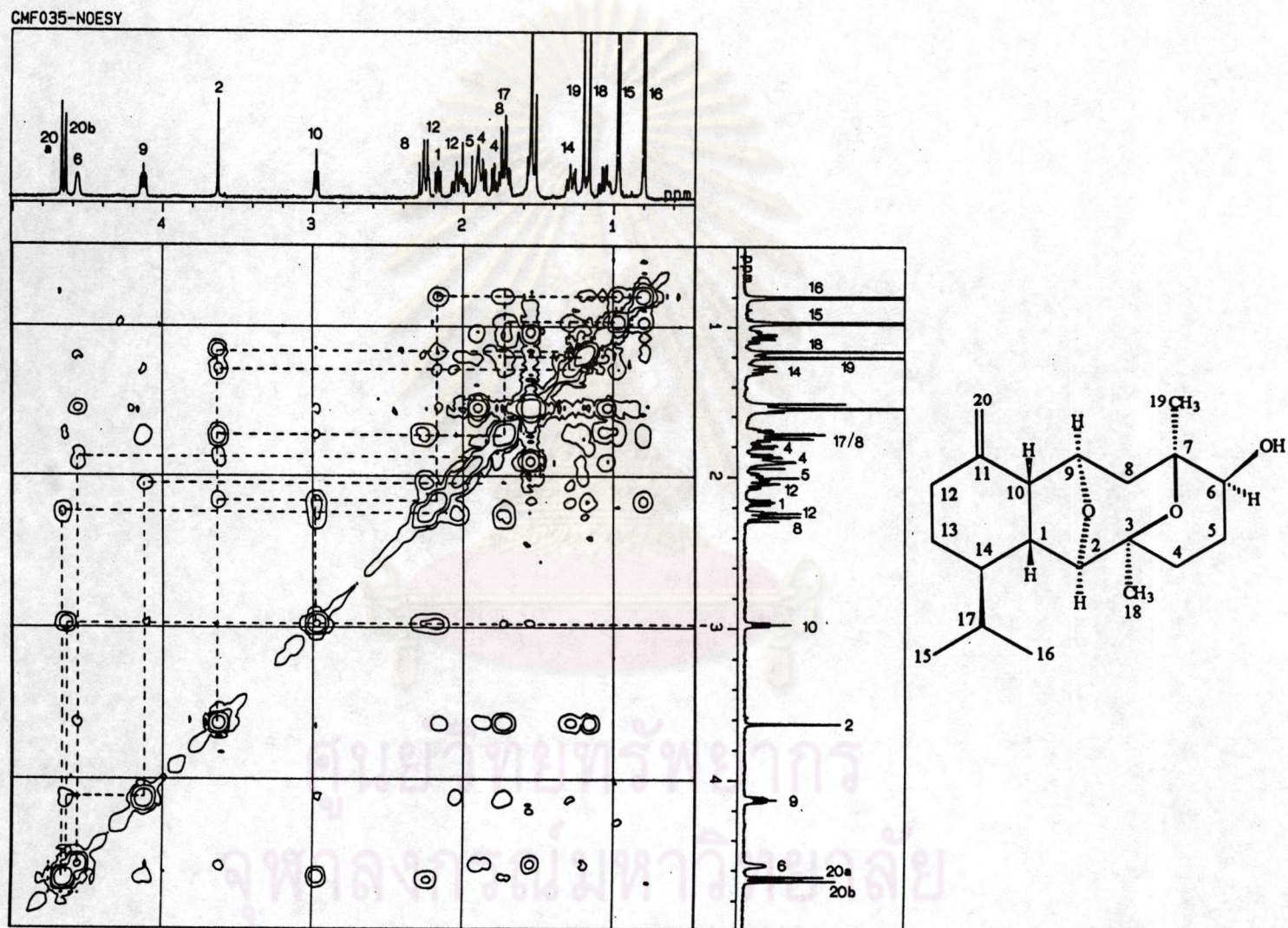


Figure 44. The 500 MHz NOESY spectrum of compound CMF035 (in CDCl₃)

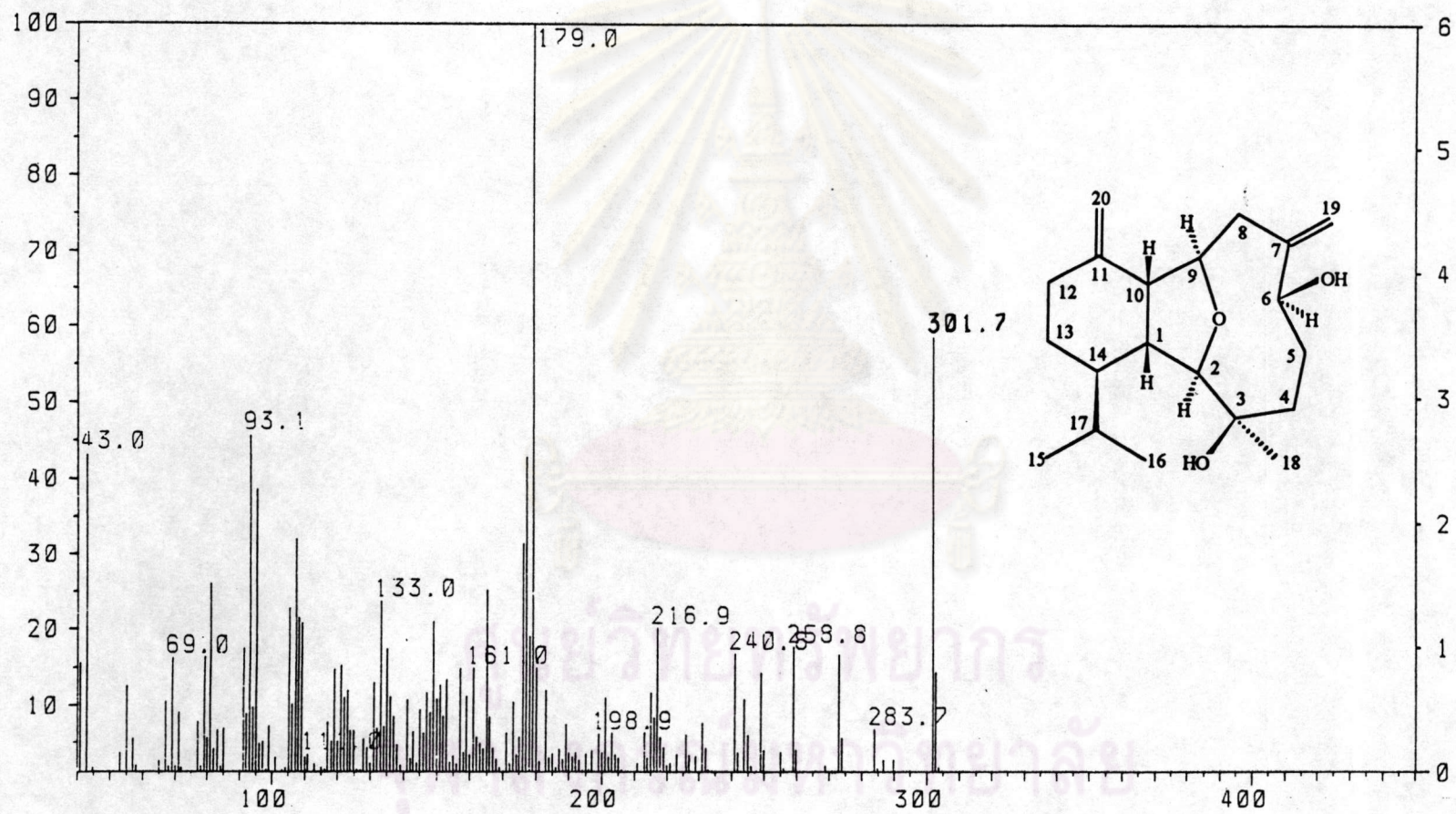


Figure 45. EIMS spectrum of compound CMF0201

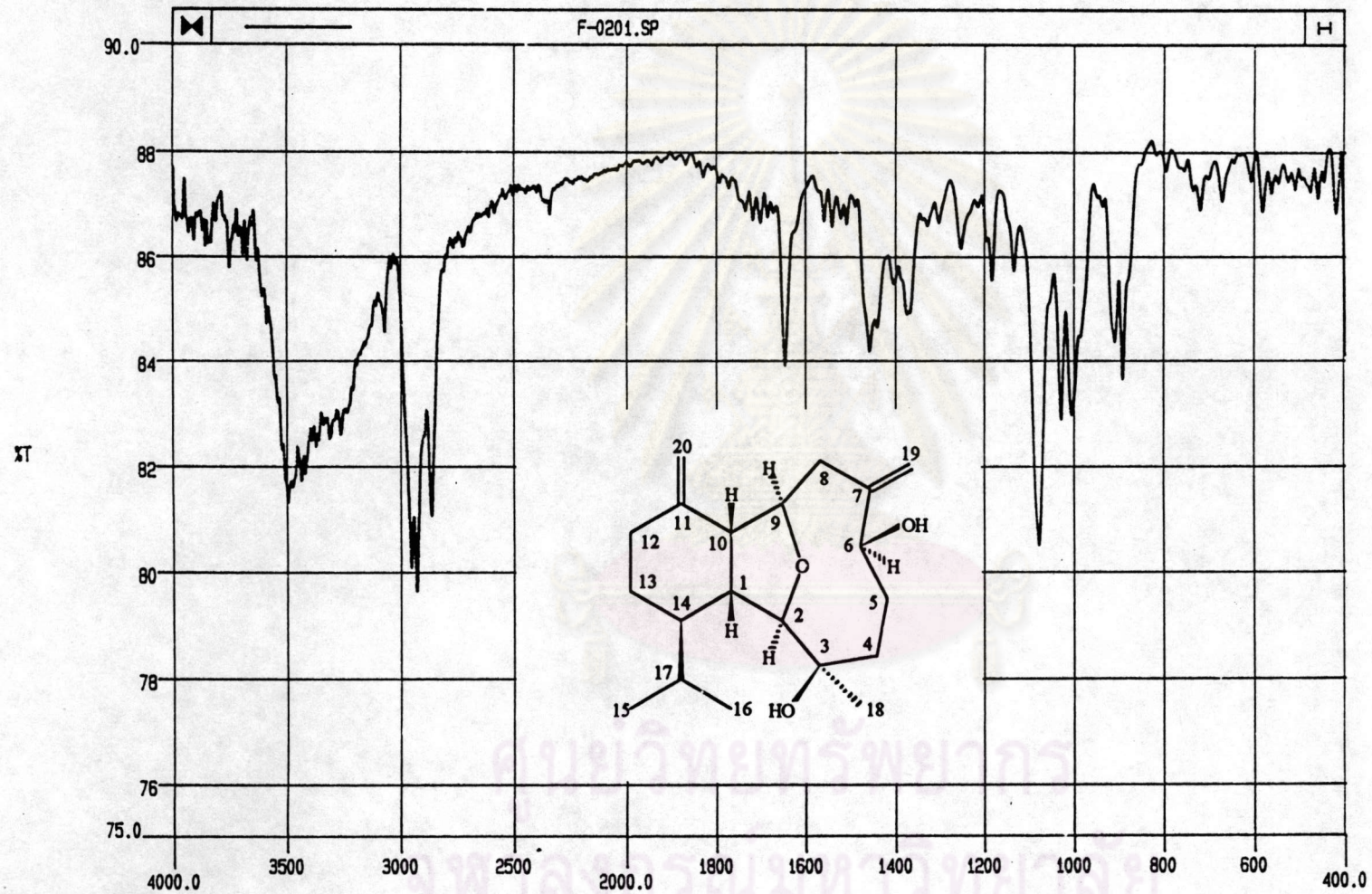


Figure 46. IR spectrum of compound CMF0201 (film)

F0201

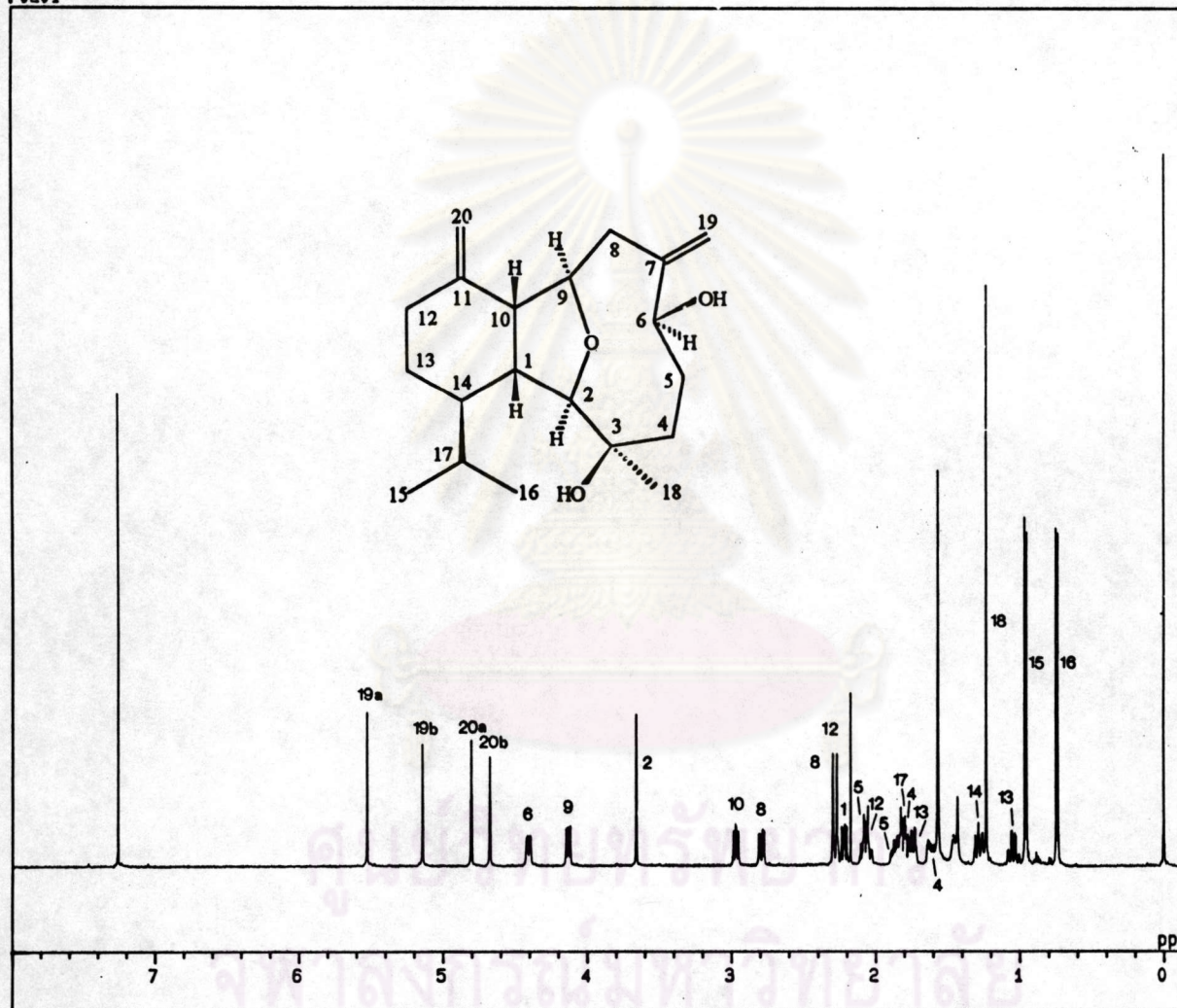


Figure 47. The 500 MHz ^1H nmr spectrum of compound CMF0201 (in CDCl_3)

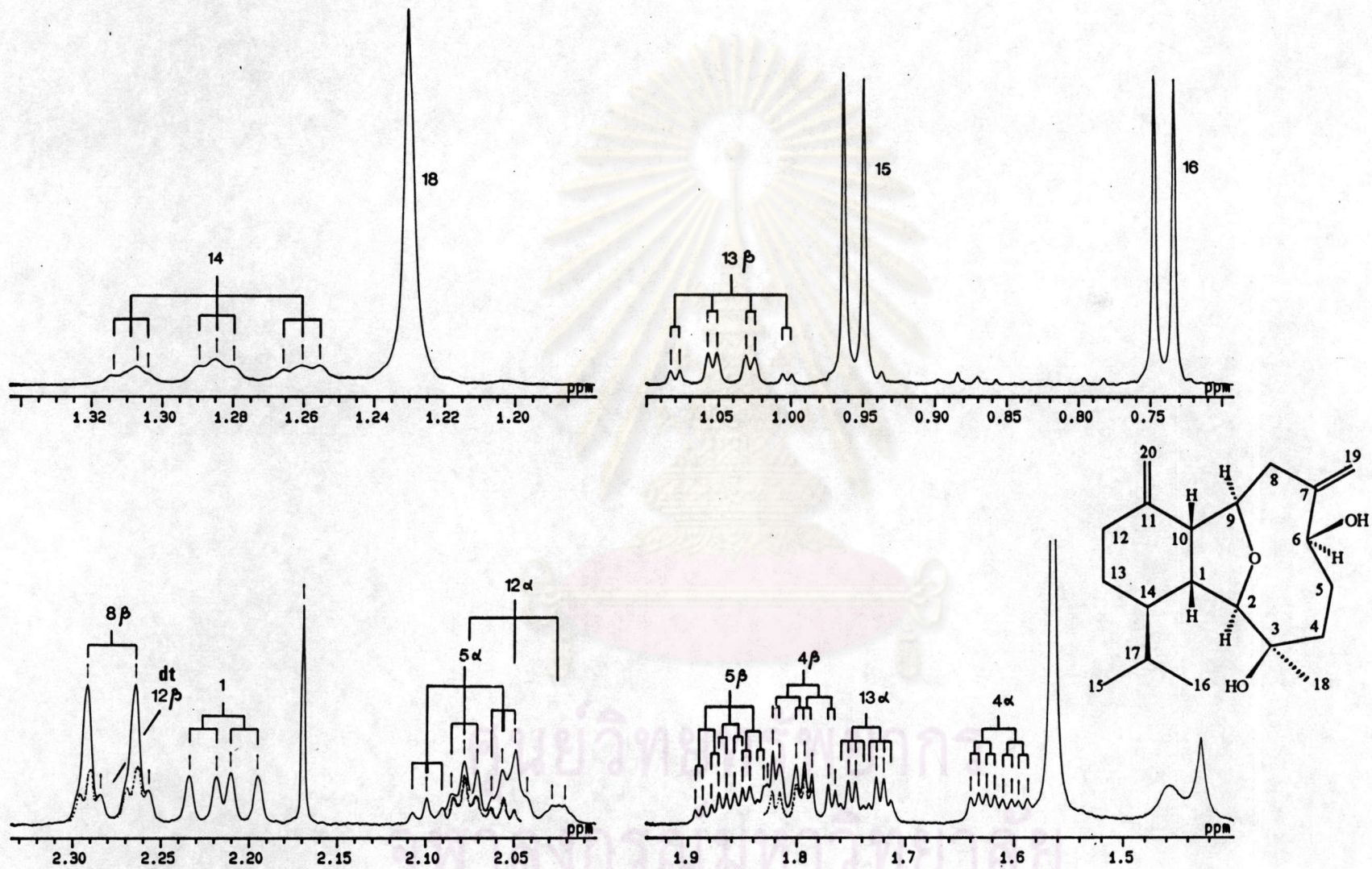


Figure 48. The 500 MHz ^1H nmr spectrum of compound CMF0201 (in CDCl_3) (expanded from 0.70 - 2.30 ppm)

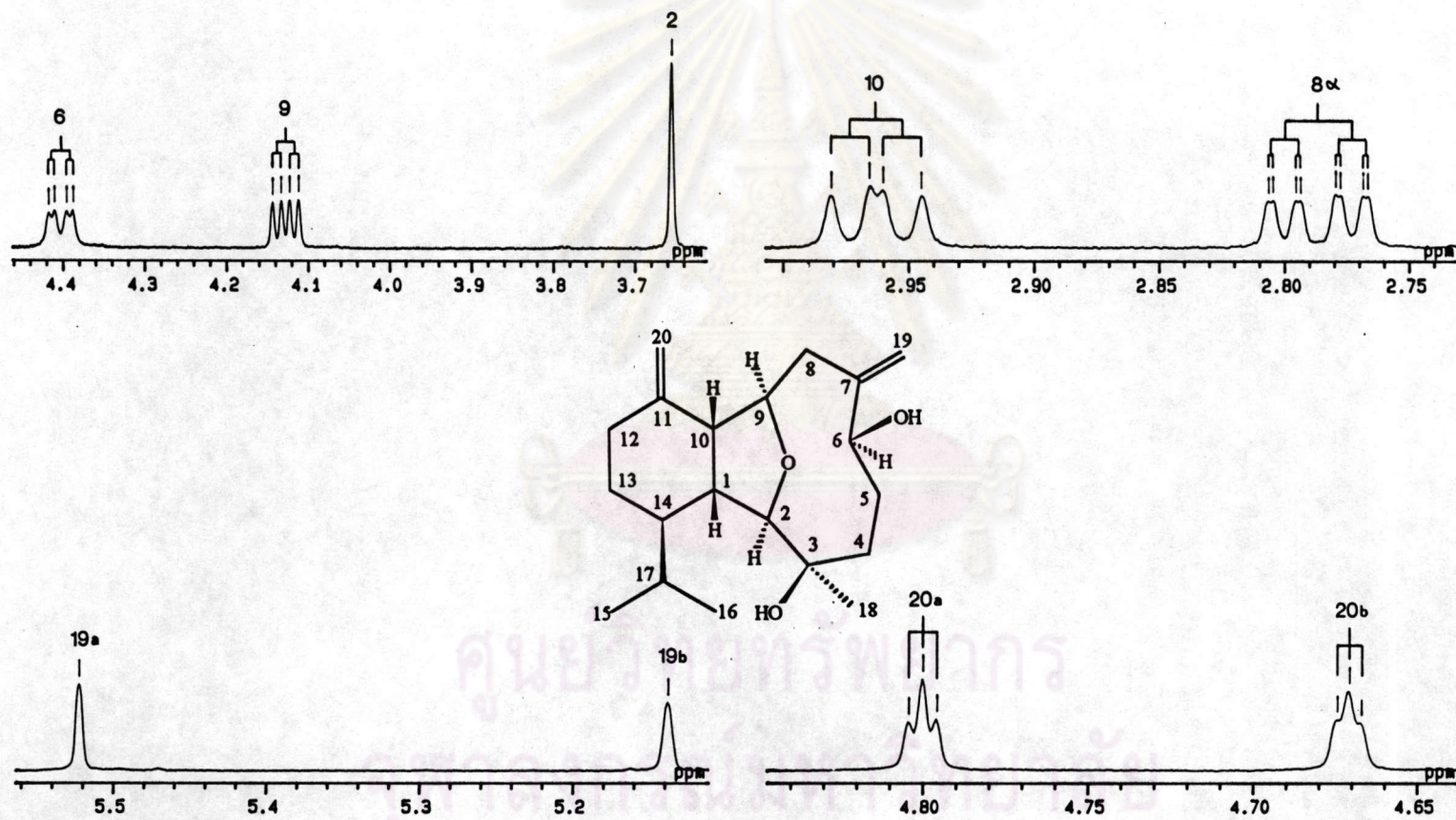


Figure 49. The 500 MHz ¹H nmr spectrum of compound CMF0201 (in CDCl₃) (expanded from 2.75 - 5.56 ppm)

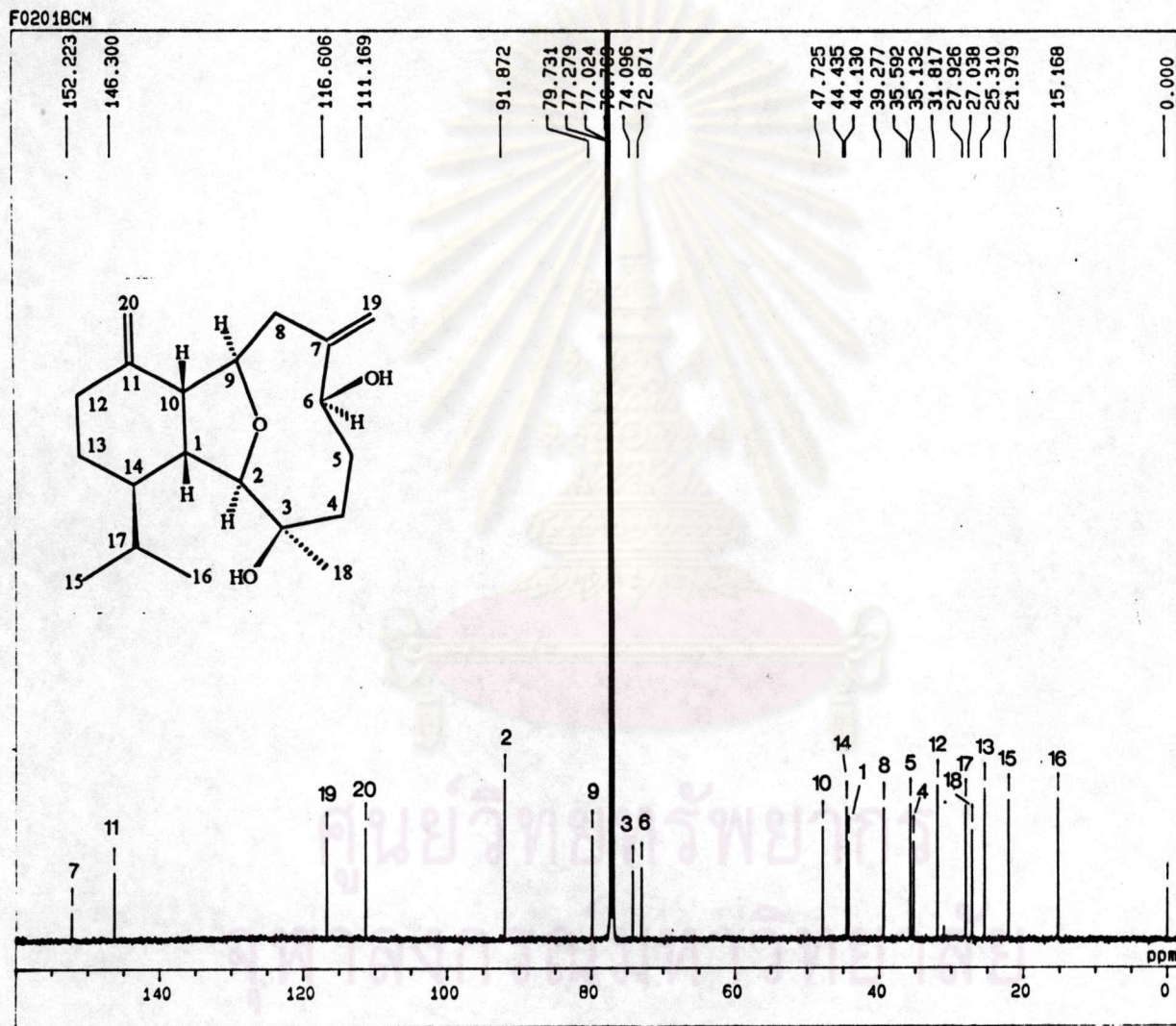


Figure 50. The 125 MHz ^{13}C nmr spectrum of compound CMF0201 (in CDCl_3)

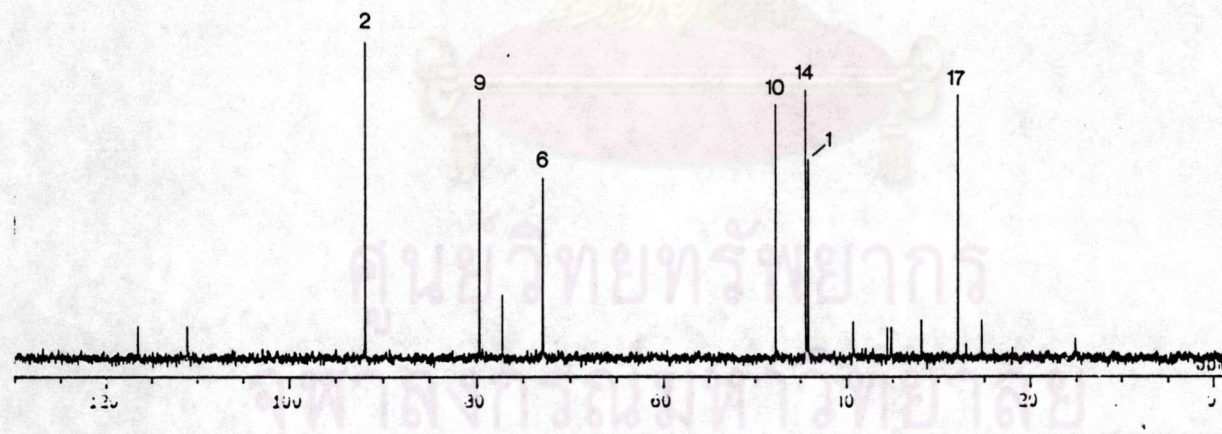
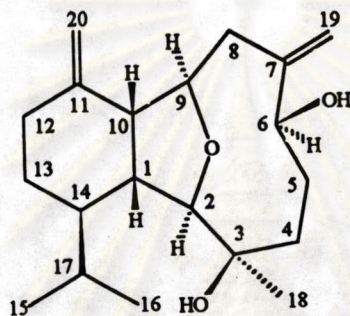


Figure 51. The 125 MHz DEPT 90° spectrum of compound CMF0201 (in CDCl₃)

CLADIELLA-F0201DEPTD135

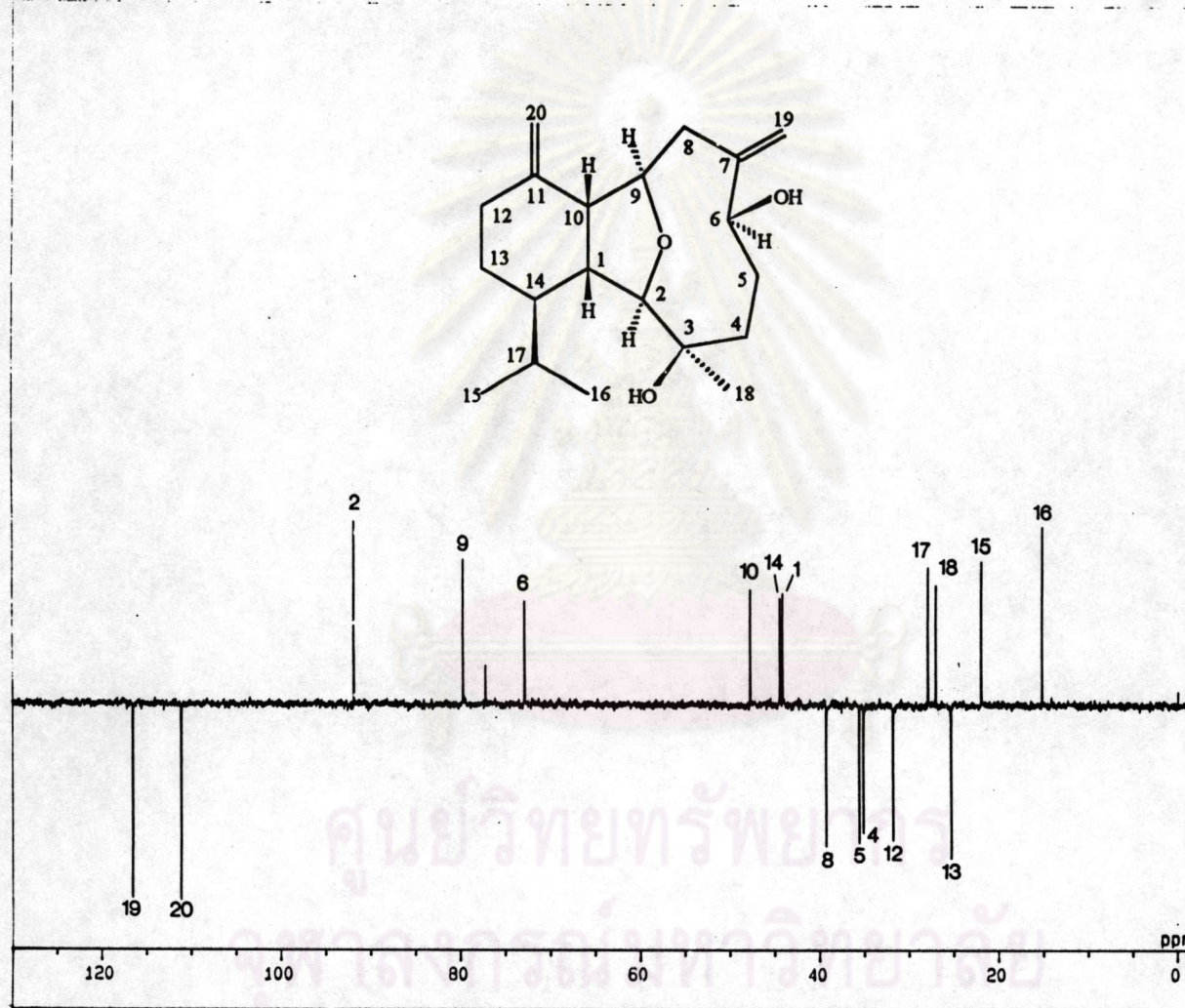


Figure 52. The 125 MHz DEPT 135° spectrum of compound CMF0201 (in CDCl₃)

CLADIELLA F0201 HSQC

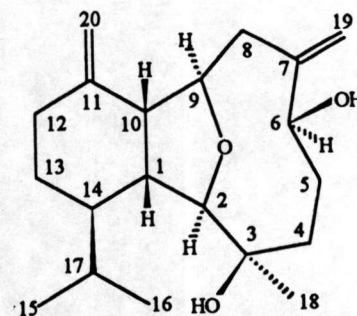
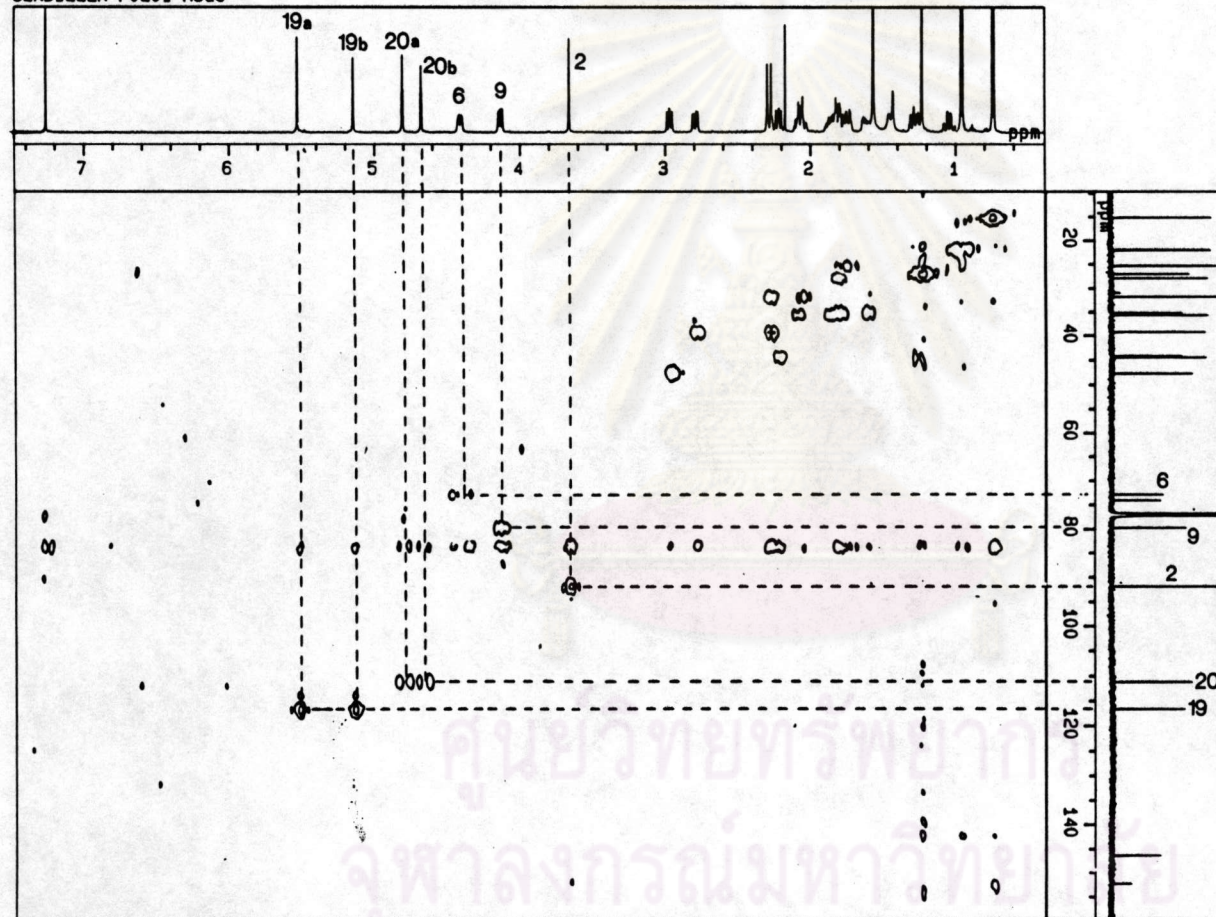


Figure 53. The 500 MHz HSQC spectrum of compound CMF0201 (in CDCl₃)

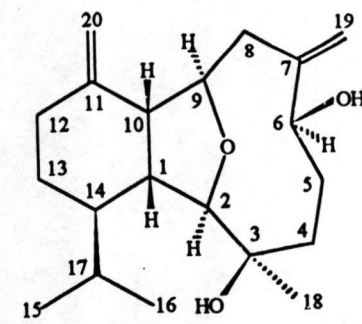
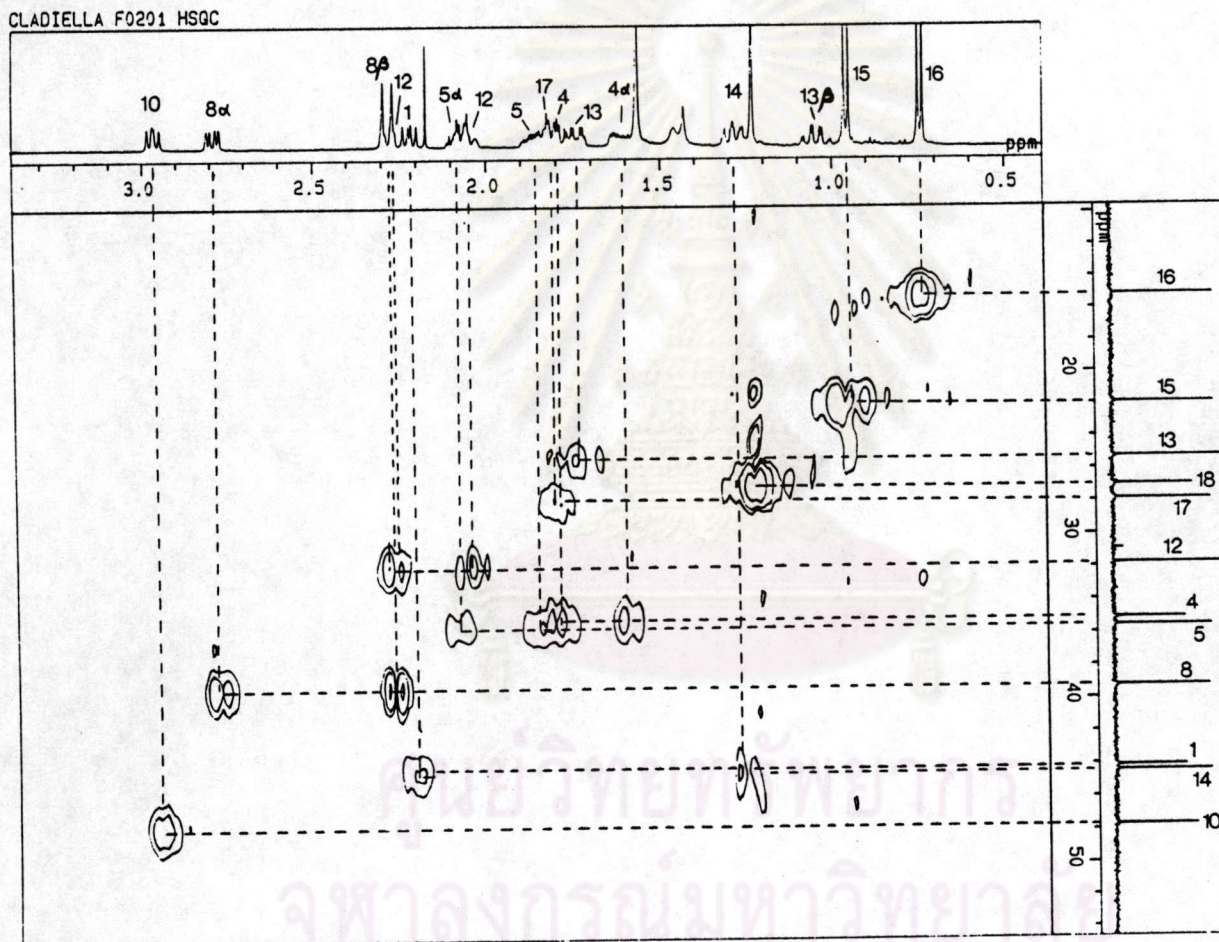


Figure 54. The 500 MHz HSQC spectrum of compound CMF0201 (in CDCl₃) (expanded from 10 - 50 ppm)

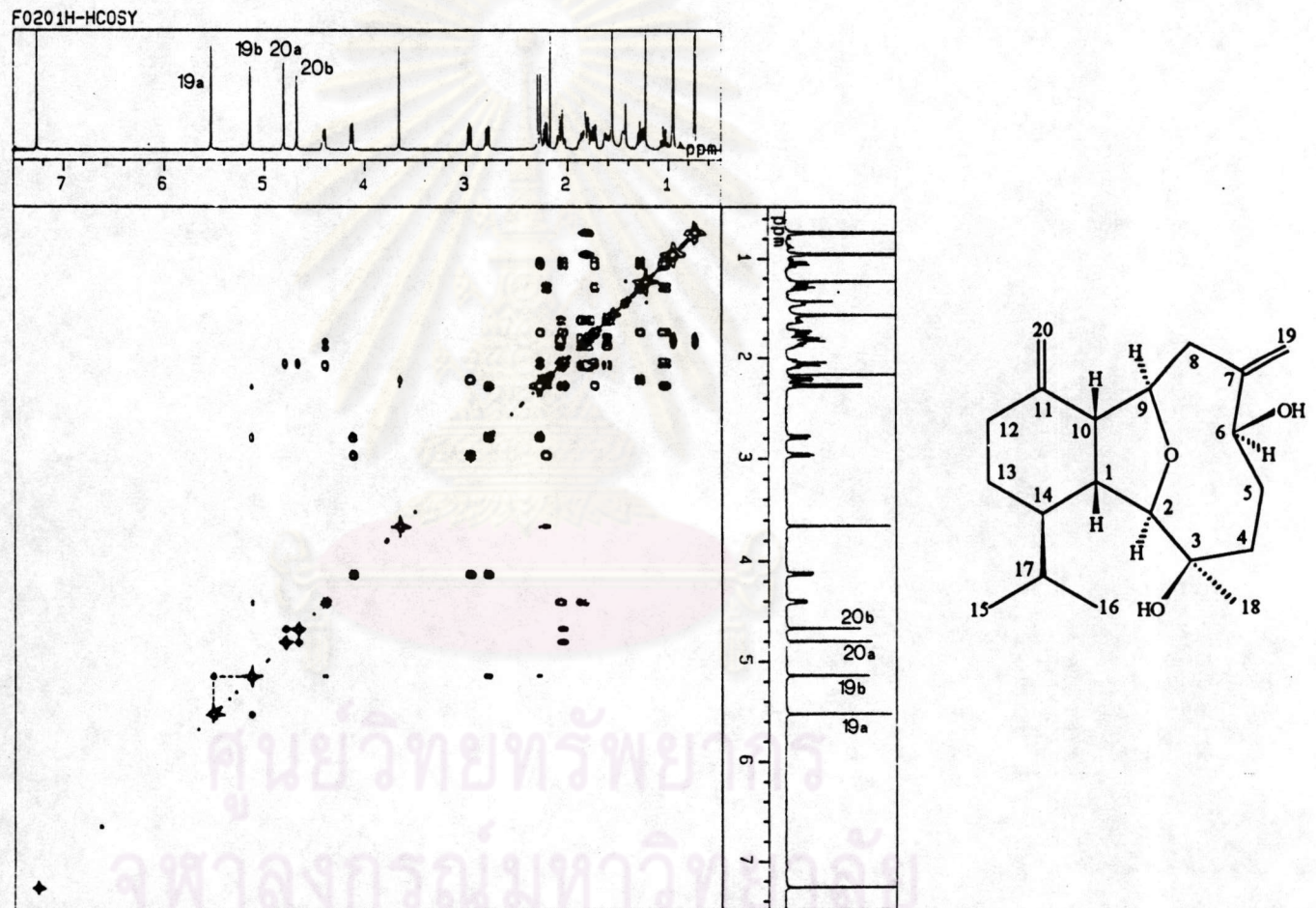


Figure 55. The 500 MHz ^1H - ^1H COSY spectrum of compound CMF0201 (in CDCl_3)

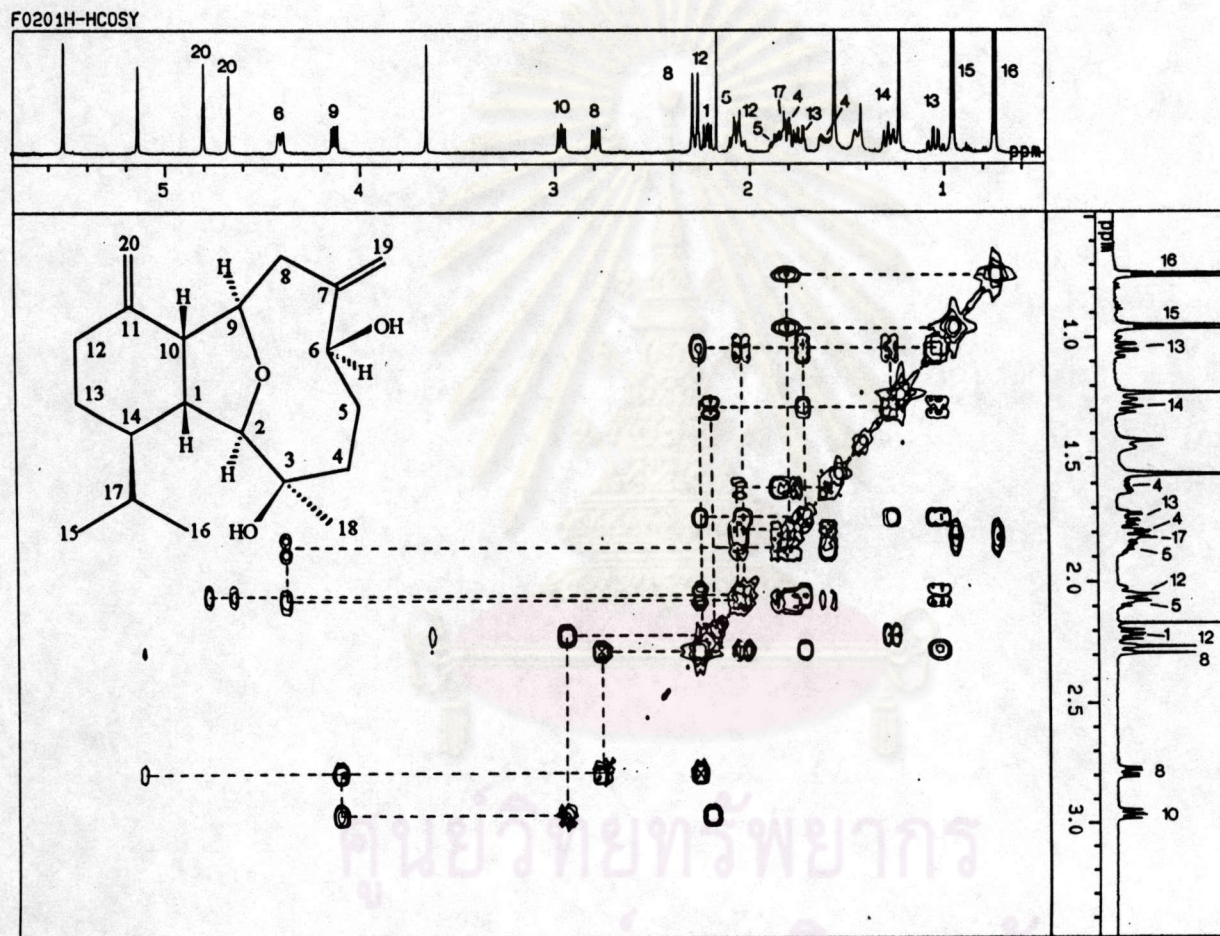


Figure 56. The 500 MHz ^1H - ^1H COSY spectrum of compound CMF0201 (in CDCl_3)
(expanded f1 : 0.60 - 5.60 ppm, f2 : 0.60 - 3.50 ppm)

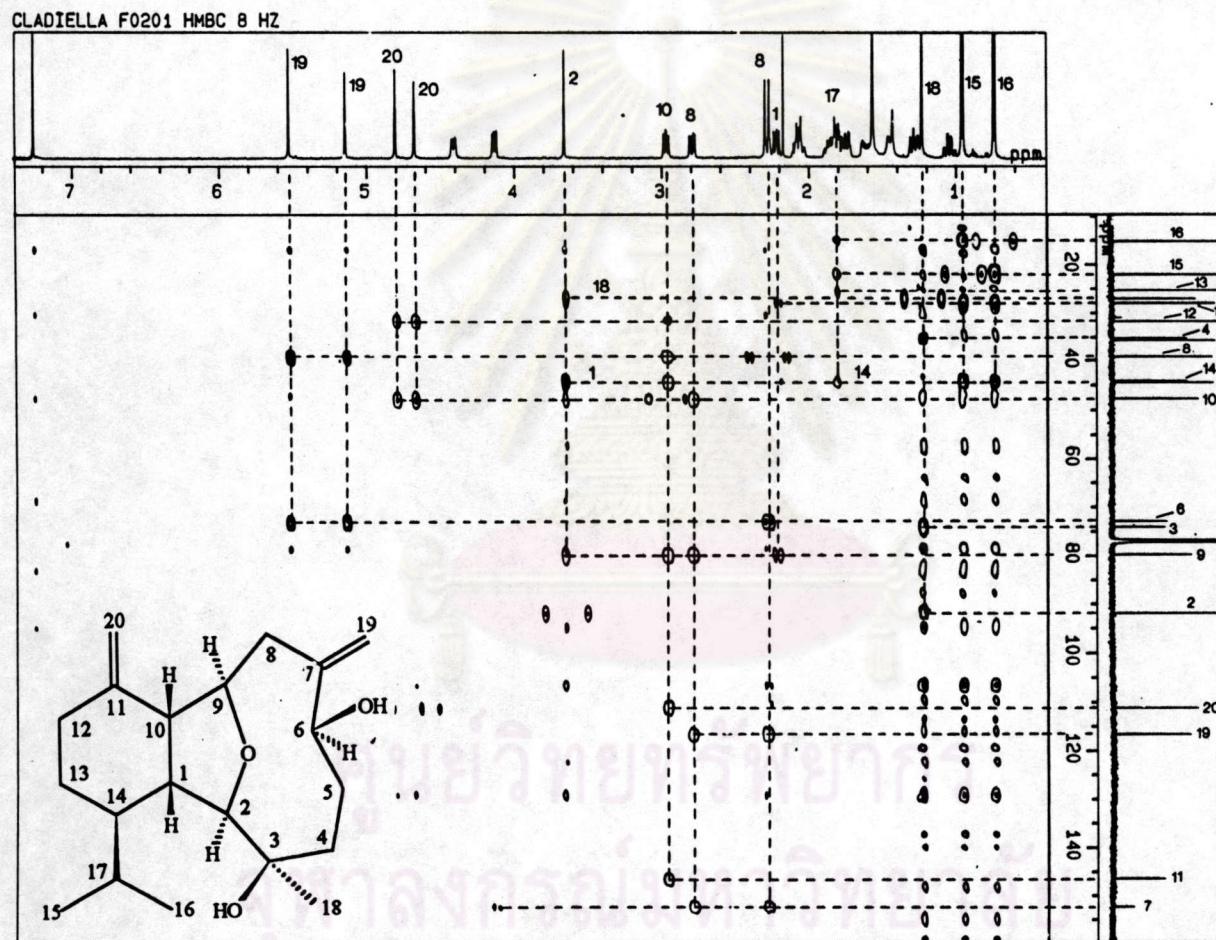


Figure 57. The 500 MHz HMBC 8 Hz spectrum of compound CMF0201 (in CDCl₃)

F02014 1H

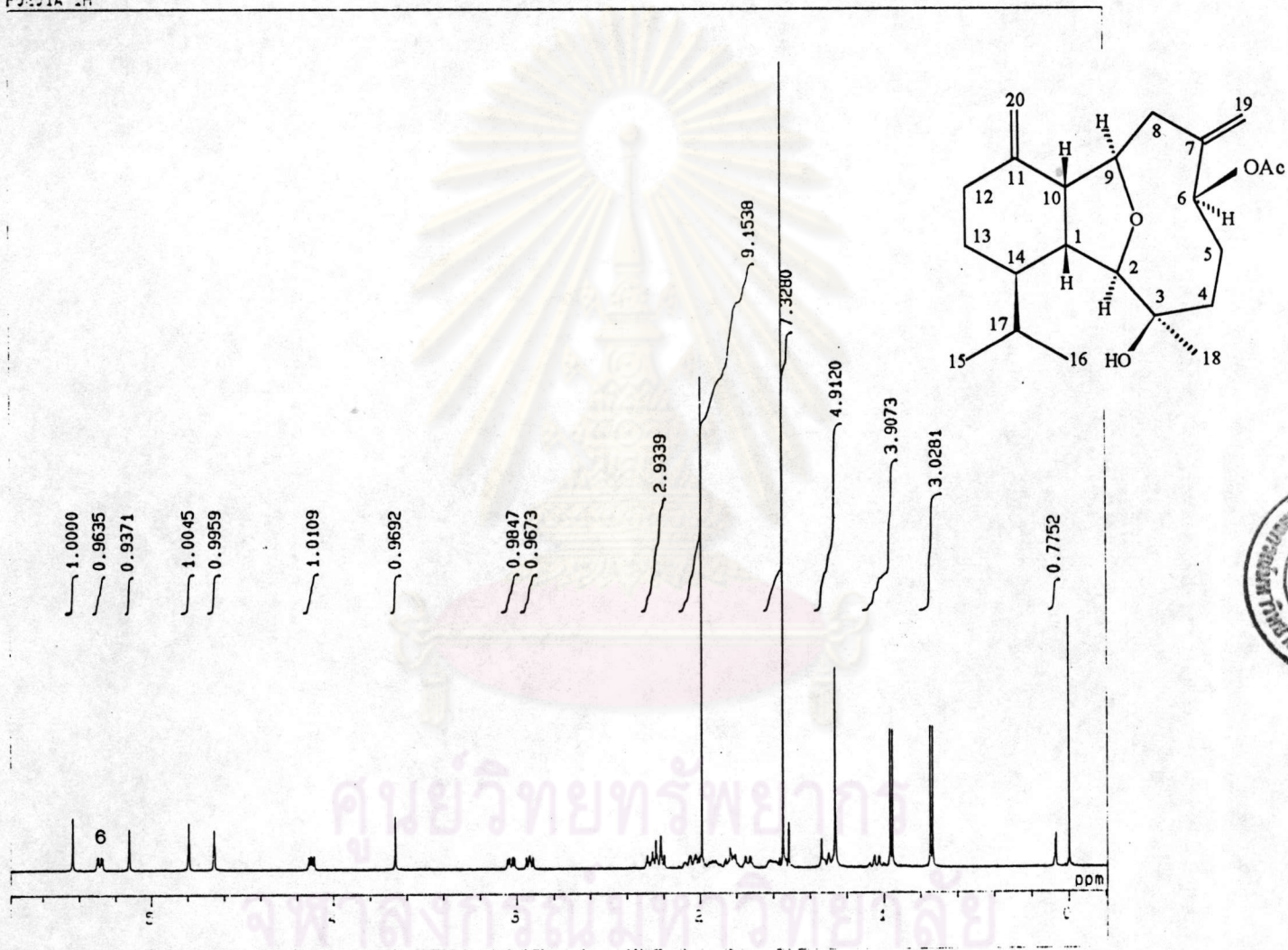


Figure 58. The 500 MHz ^1H nmr spectrum of the acetylated derivative of CMF0201 (in CDCl_3)

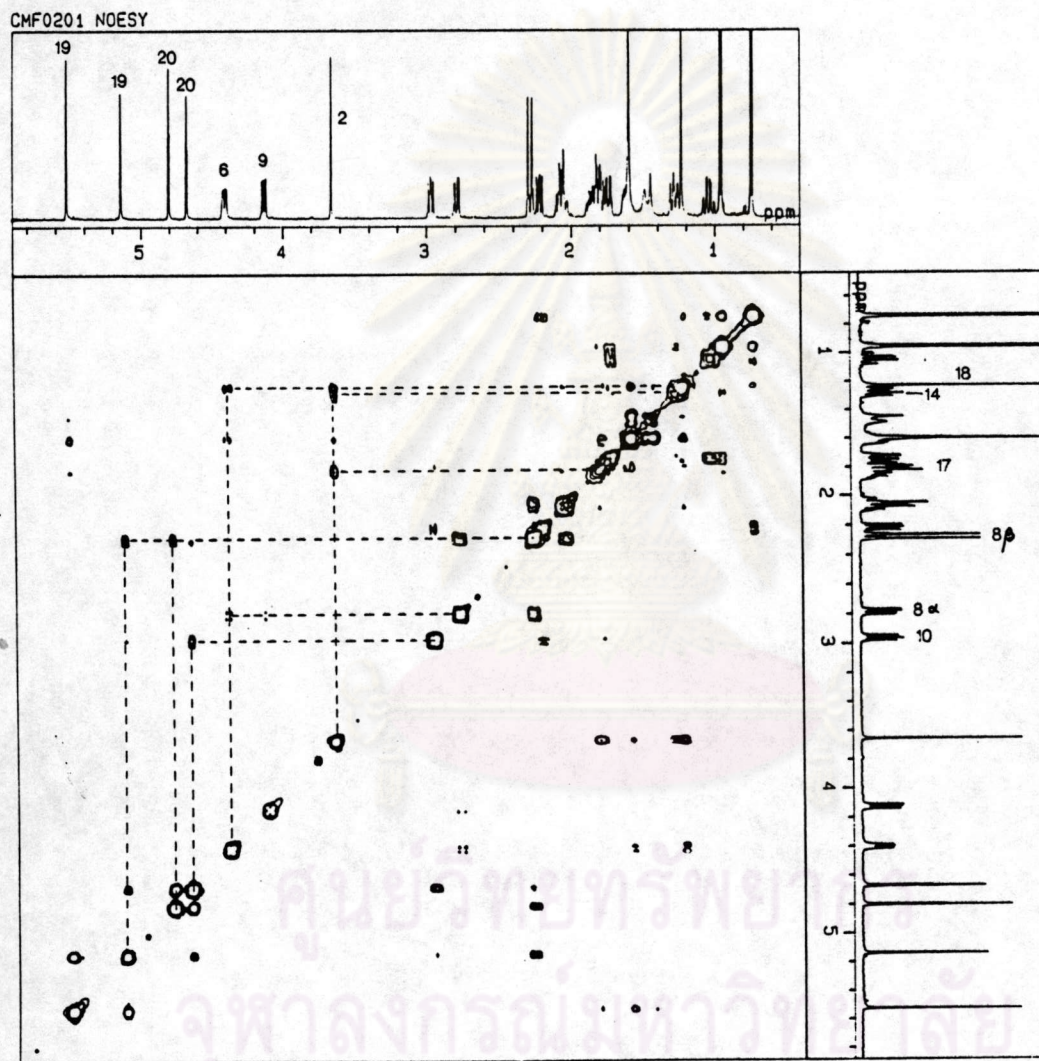


Figure 59. The 500 MHz NOESY spectrum of compound CMF0201 (in CDCl₃)

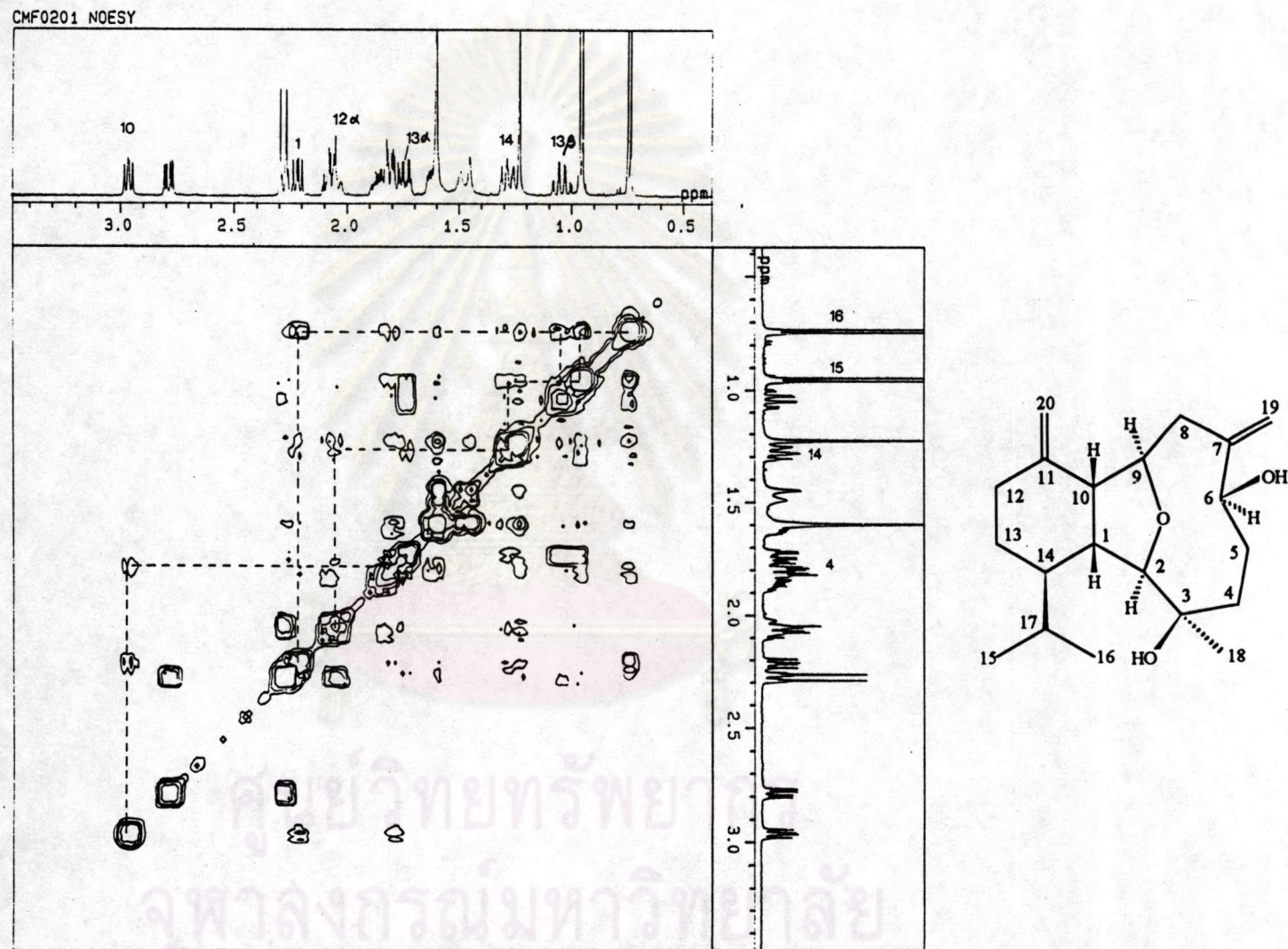


Figure 60. The 500 MHz NOESY spectrum of compound CMF0201 (in CDCl₃) (expanded from 0.50 - 3.50 ppm)

CMF0201M-S

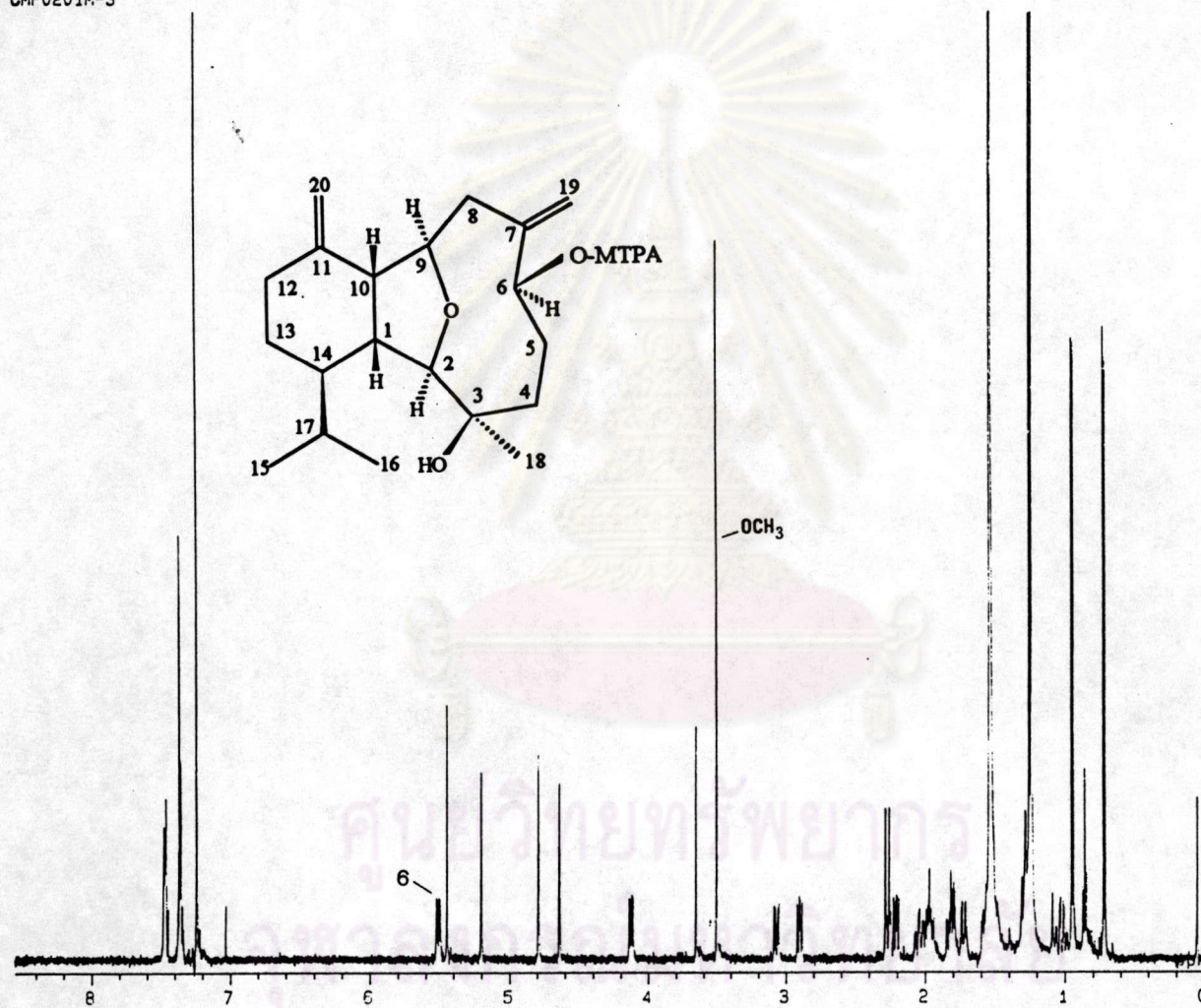


Figure 61. The 500 MHz ¹H nmr spectrum of the (S)-MTPA derivative of CMF0201 (in CDCl₃)

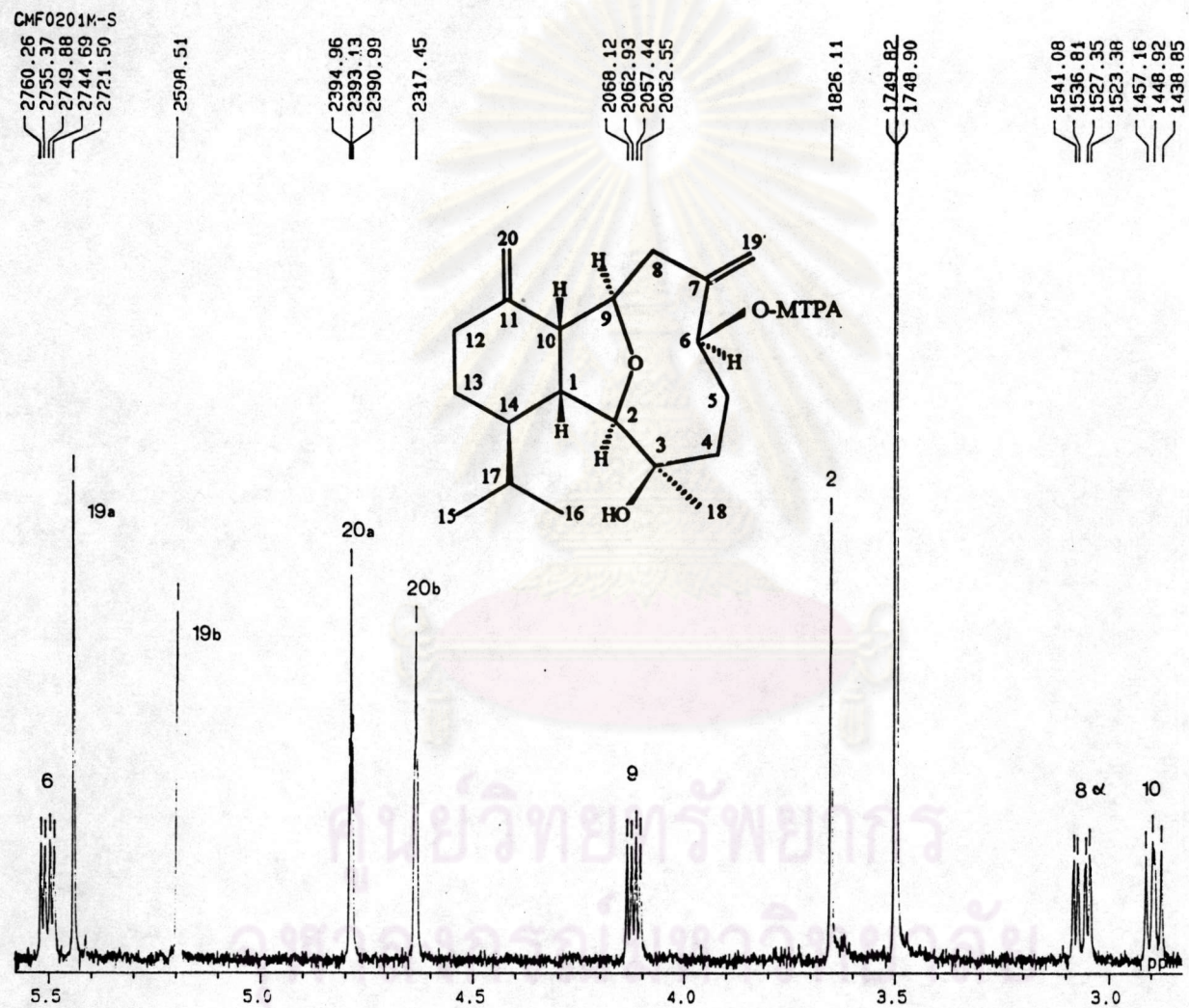


Figure 62. The 500 MHz ^1H nmr spectrum of the (*S*)-MTPA derivative of CMF0201 (in CDCl_3) (expanded from 2.90 - 5.50 ppm)

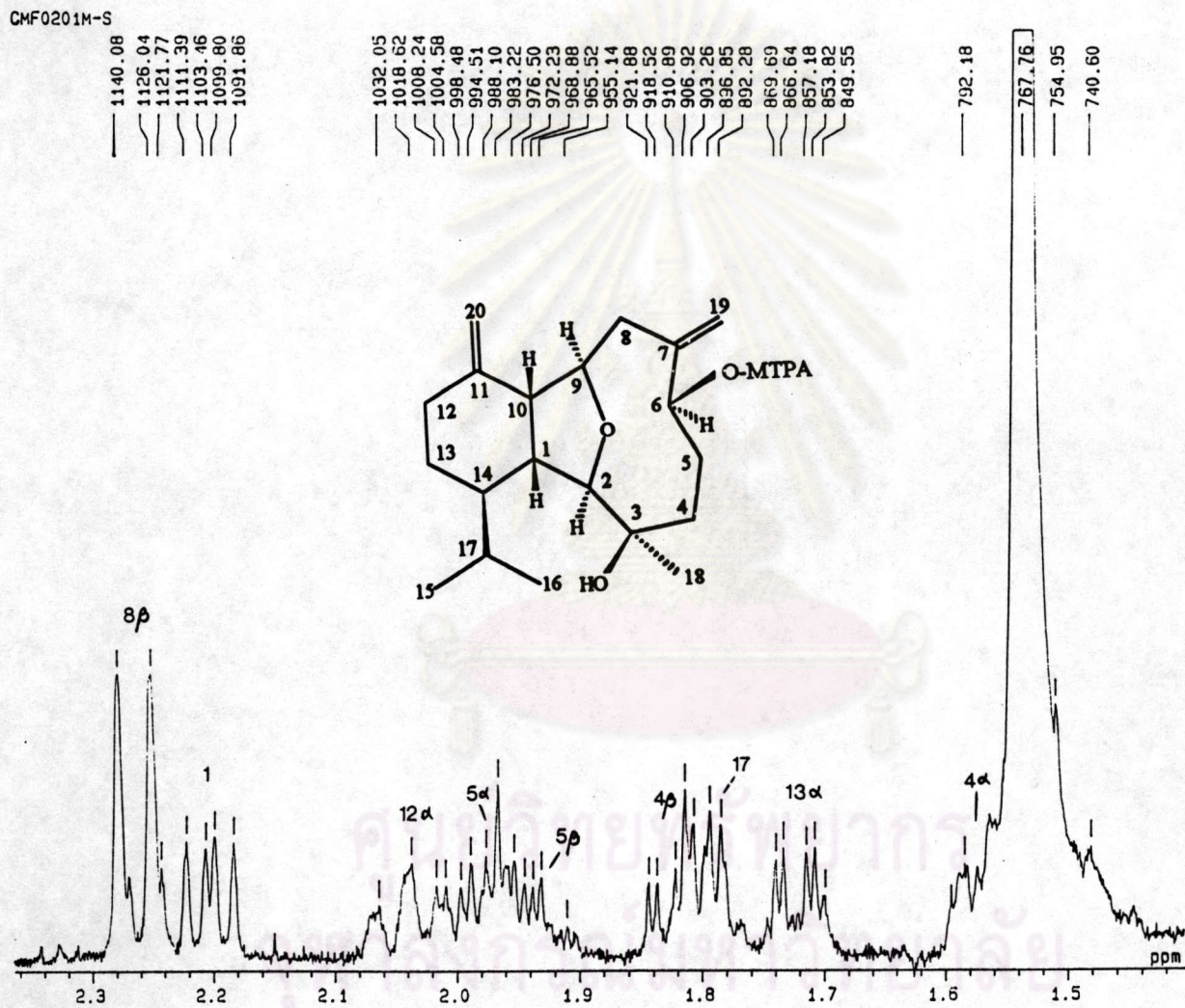


Figure 63. The 500 MHz ^1H nmr spectrum of the (*S*)-MTPA derivative of CMF0201 (in CDCl_3) (expanded from 1.50 - 2.30 ppm)

CMF0201M (R)

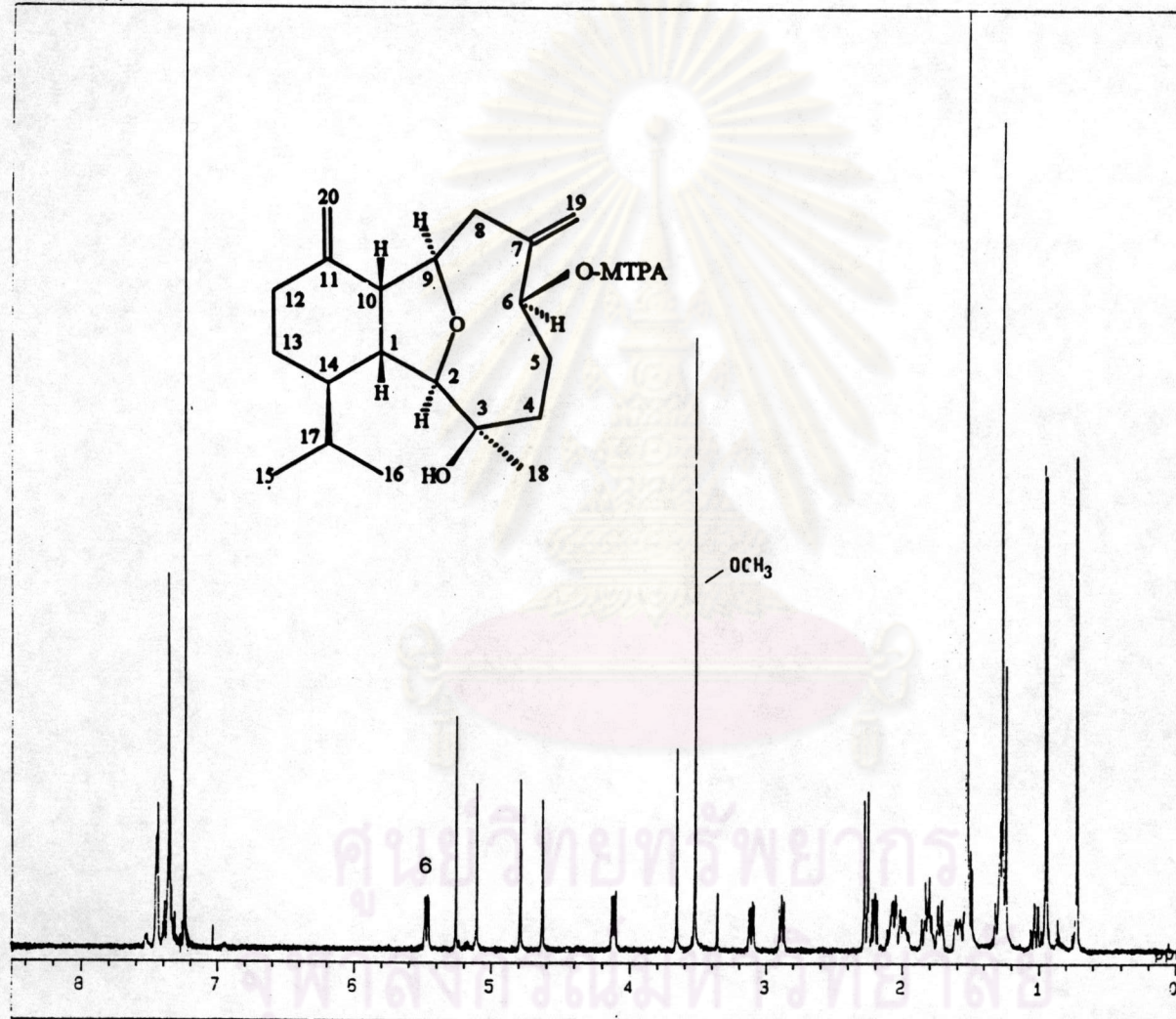


Figure 64. The 500 MHz ^1H nmr spectrum of the (*R*)-MTPA derivative of CMF0201 (in CDCl_3)

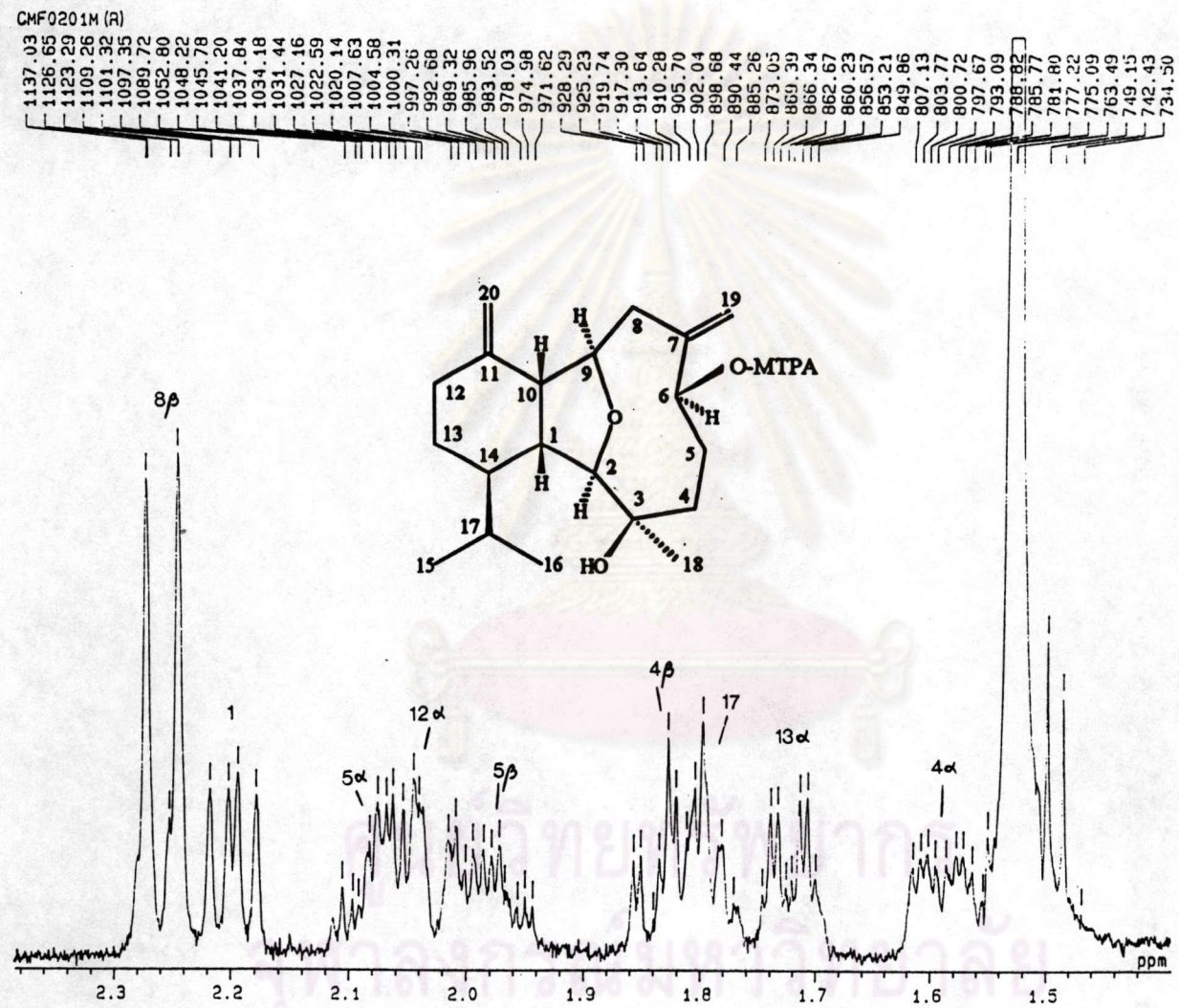


Figure 66. The 500 MHz ^1H nmr spectrum of the (*R*)-MTPA derivative of CMF0201 (in CDCl_3) (expanded from 1.50 - 2.30 ppm)

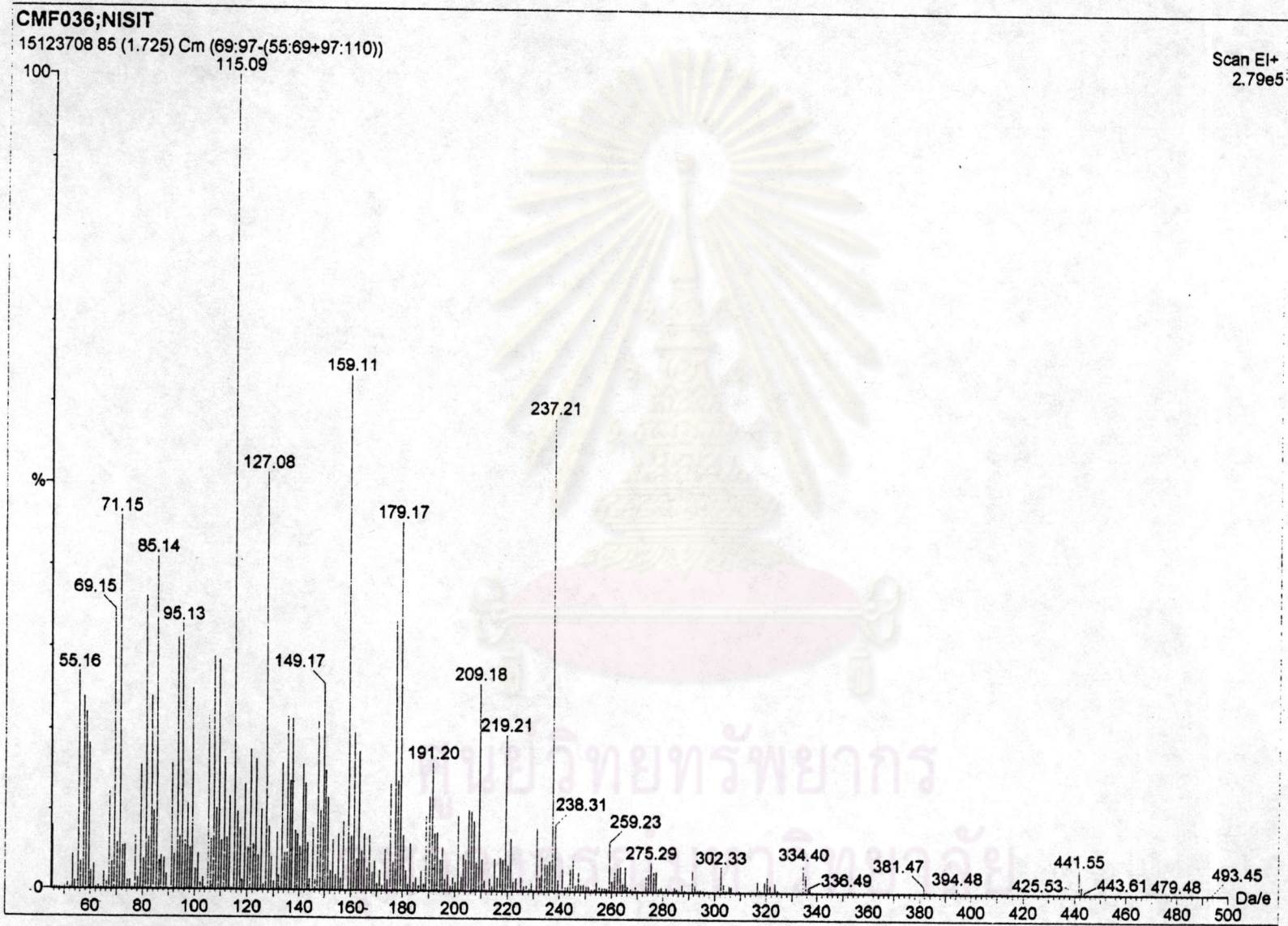


Figure 67. EIMS spectrum of compound CMF0361

Data : HR-FABMS
 Sample: CMF-0361
 Note : *
 Inlet : Direct Ion Mode : FAB+
 Spectrum Type : Regular [MF-Linear]
 RT : 0.17 min Scan# : 2 Temp : 0.0 deg.C
 BP : m/z 43.0000 Int. : 100.00
 Output m/z range : 10.0000 to 589.4330 Cut Level : 0.00 %
 1222208

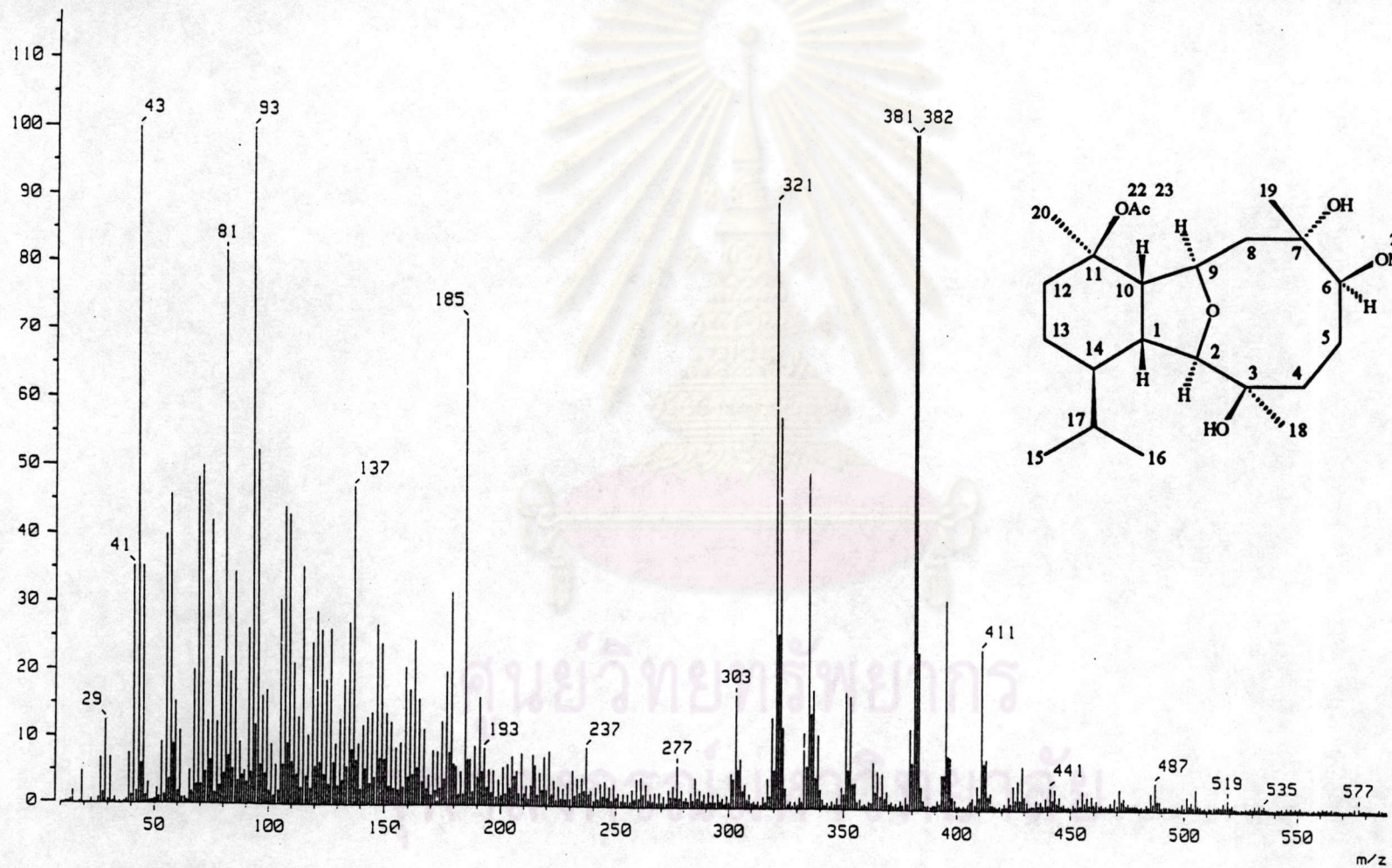


Figure 68. FABMS spectrum of compound CMF0361

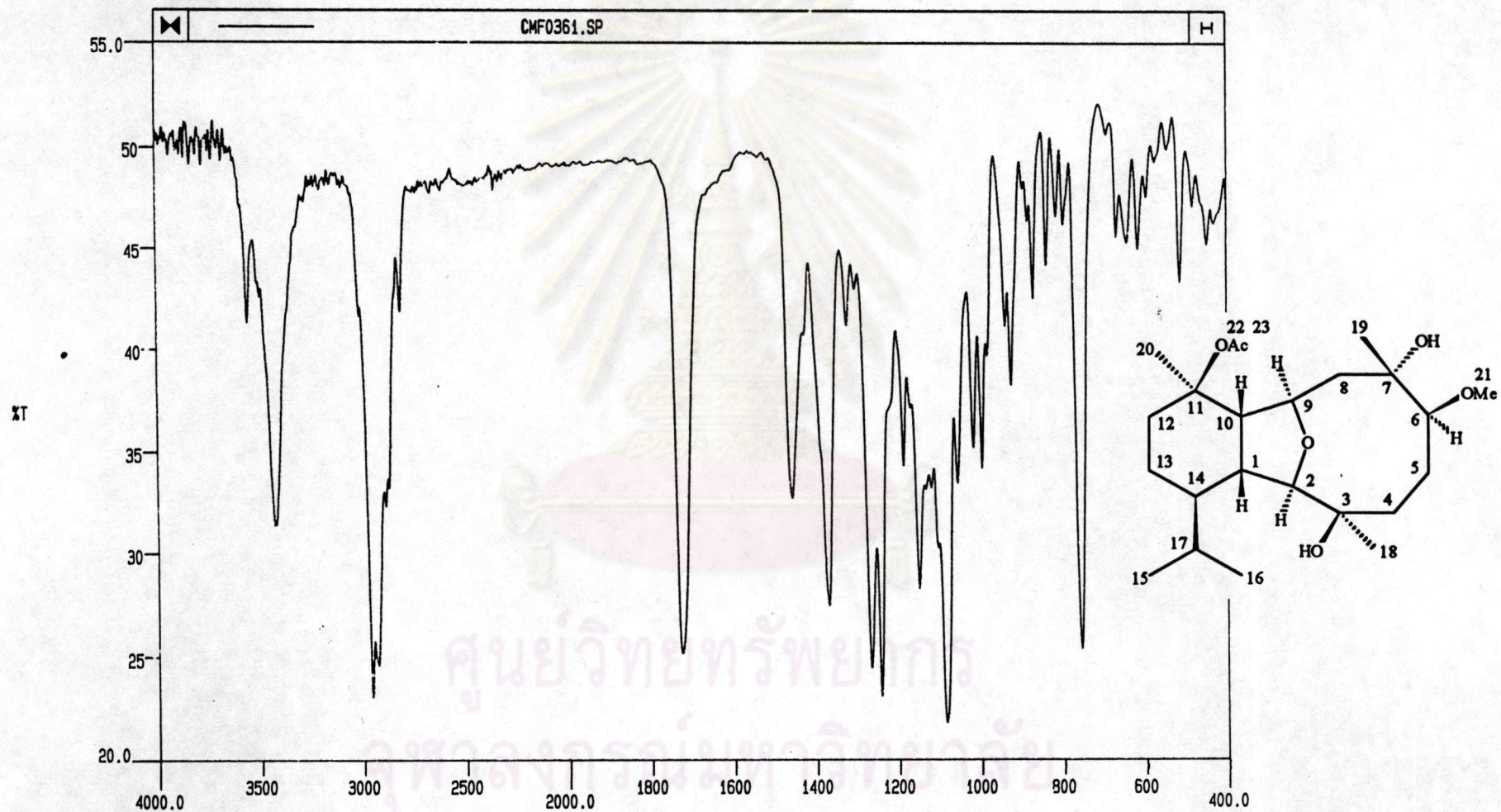


Figure 69. IR spectrum of compound CMF0361 (film)

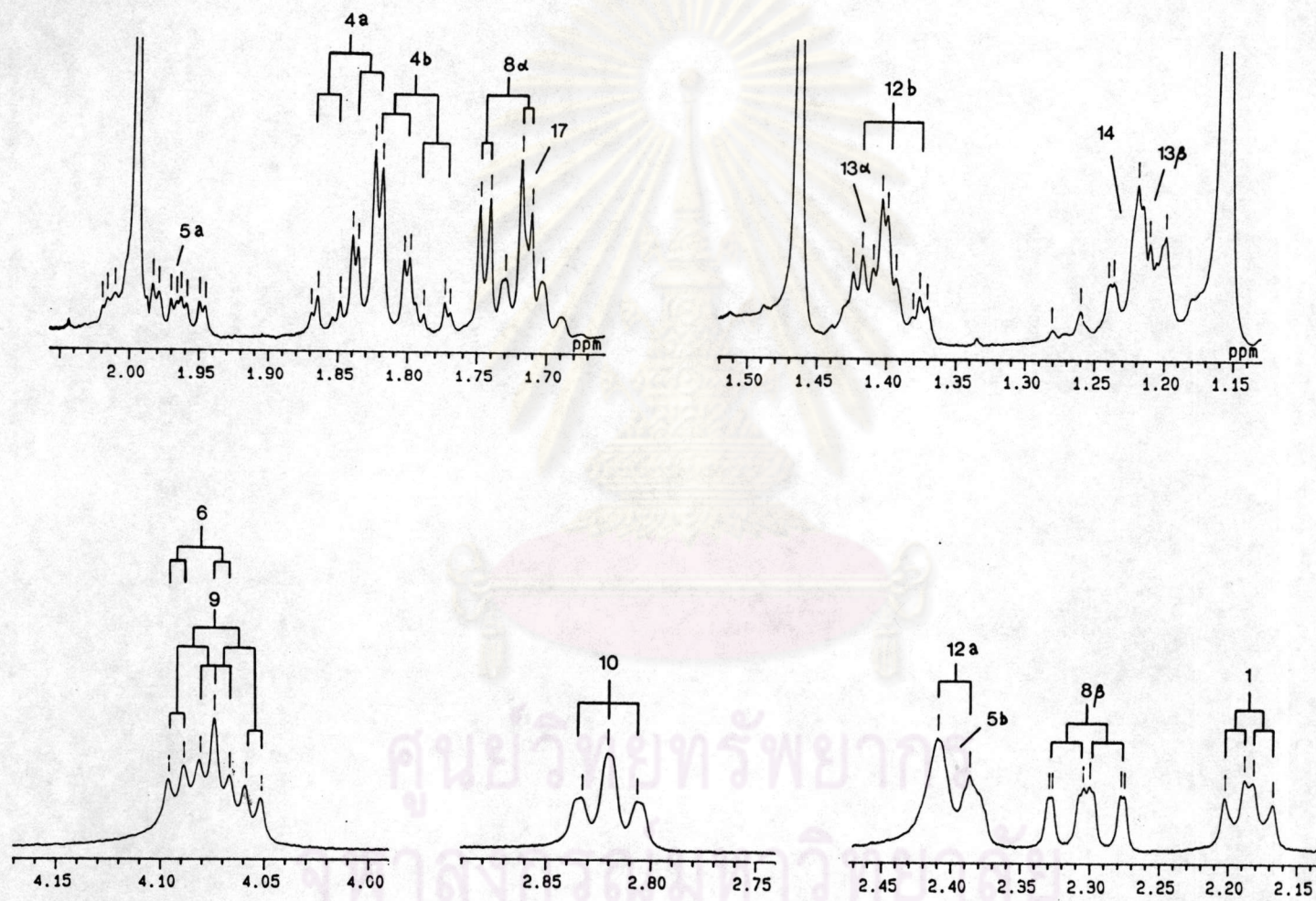


Figure 71. The 500 MHz ^1H nmr spectrum of compound CMF0361 (in CDCl_3) (expanded)

CMF0361-13C

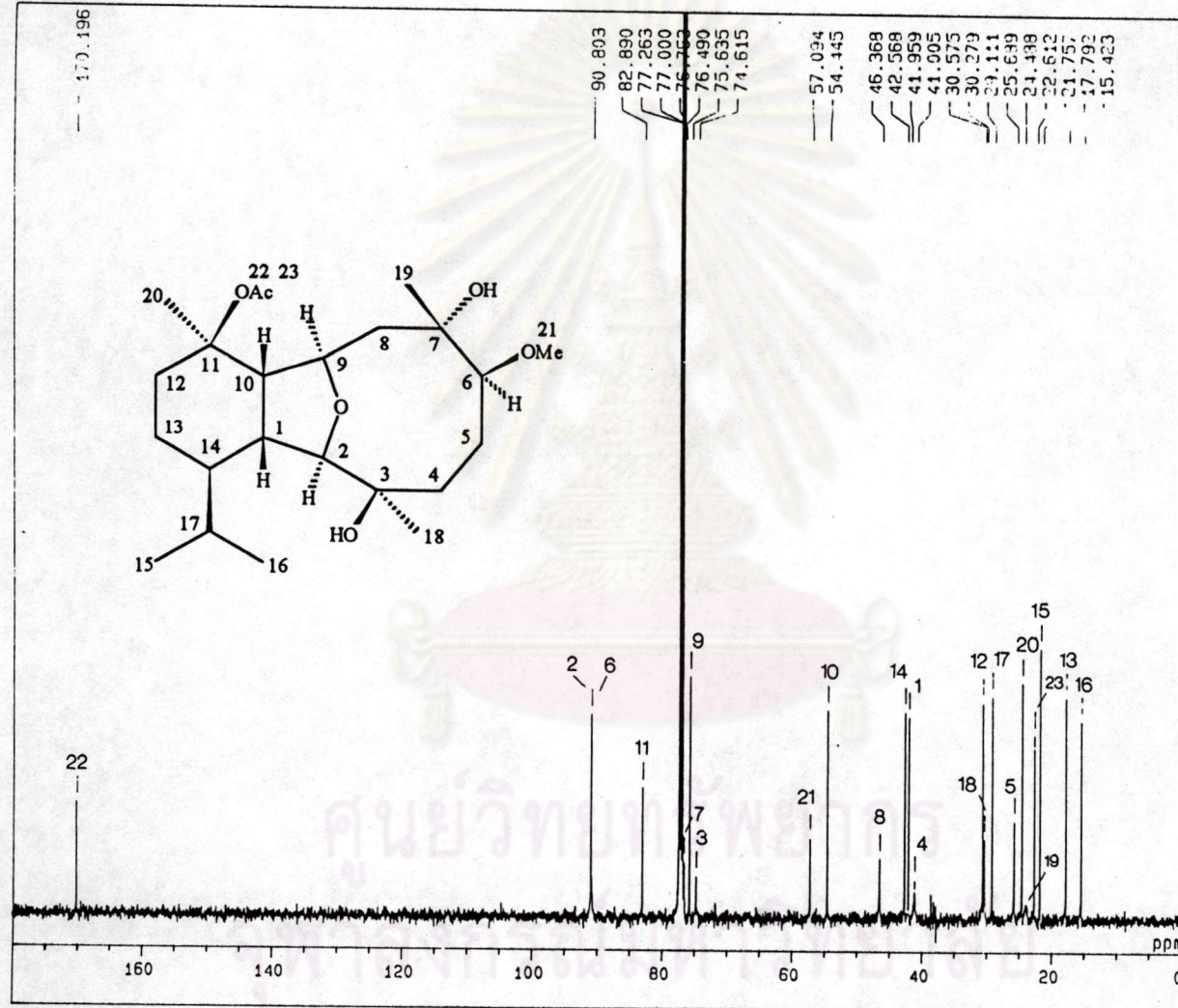


Figure 72. The 125 MHz ^{13}C nmr spectrum of compound CMF0361 (in CDCl_3)

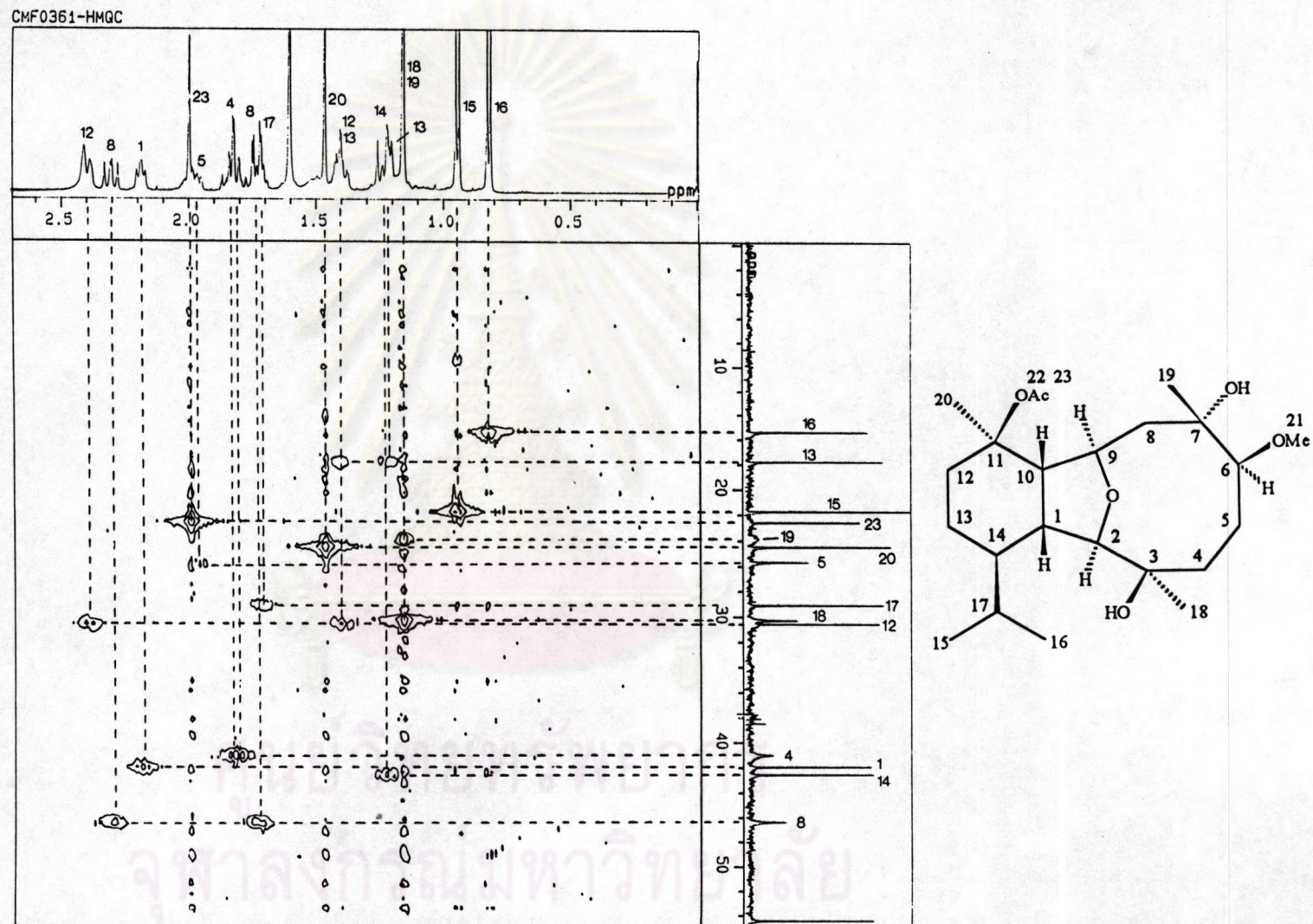


Figure 74. The 500 MHz HMQC spectrum of compound CMF0361 (in CDCl₃) (expanded from 10 - 50 ppm)

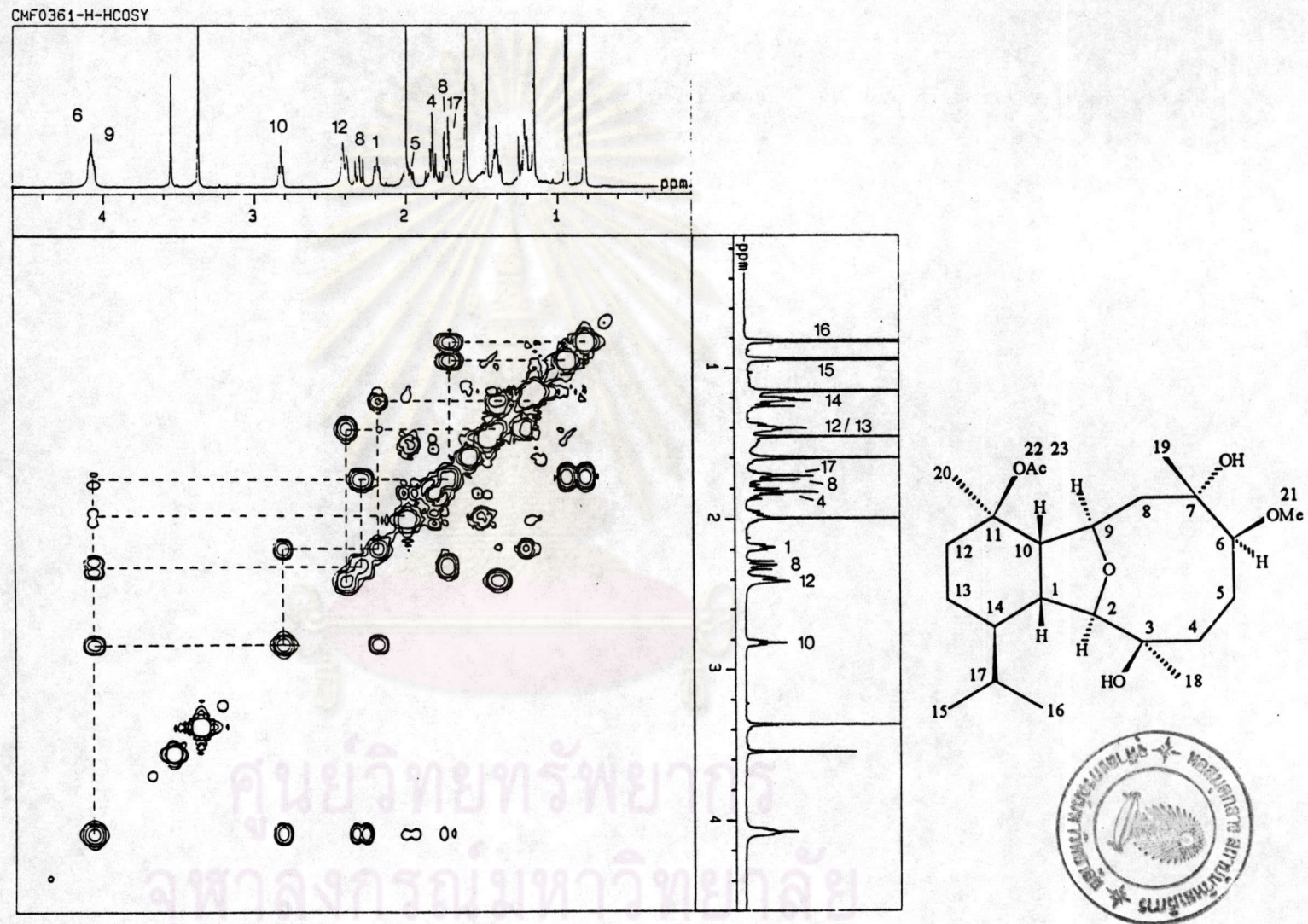


Figure 75. The 500 MHz ^1H - ^1H COSY spectrum of compound CMF0361 (in CDCl_3)

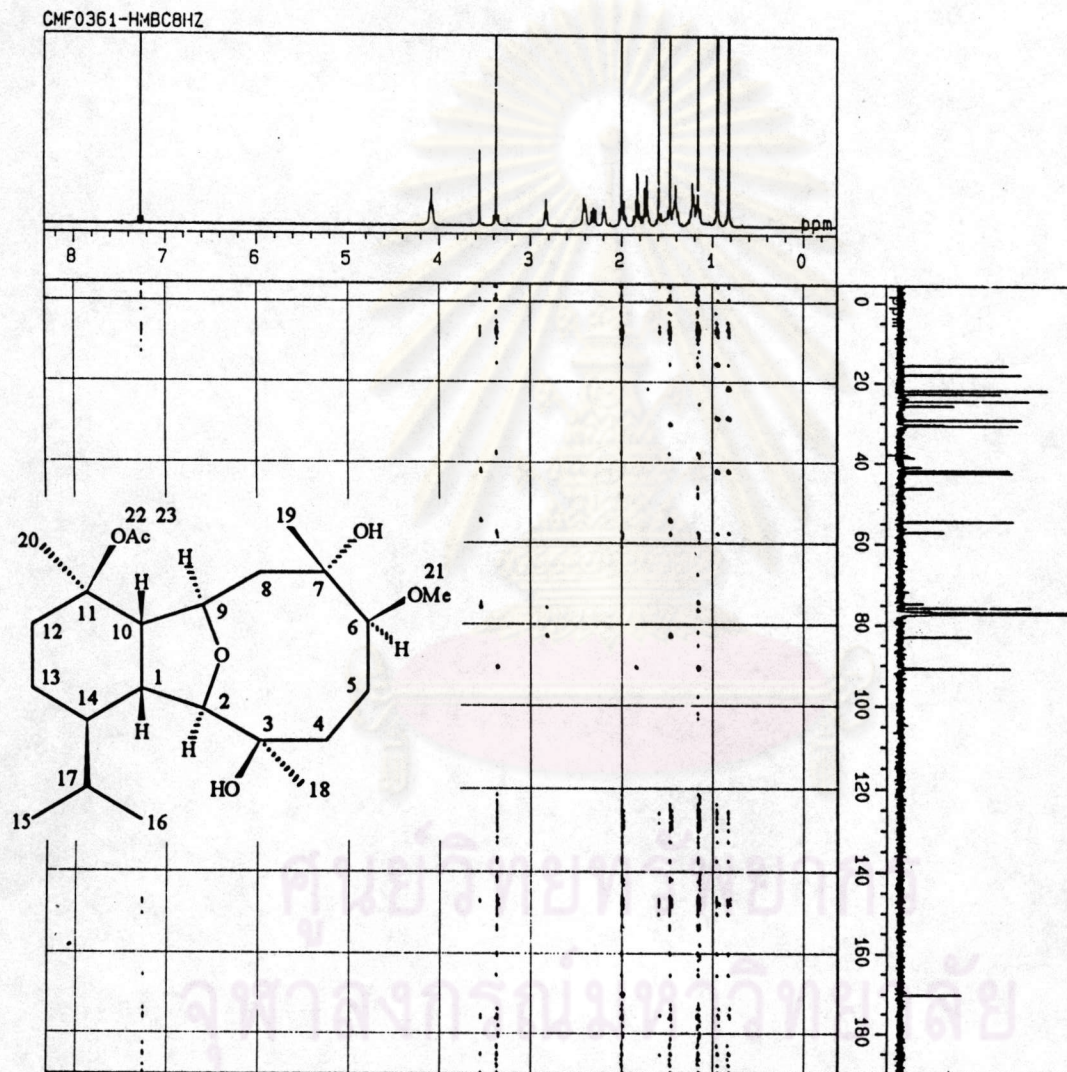


Figure 76. The 500 MHz HMBC 8 Hz spectrum of compound CMF0361 (in CDCl_3)

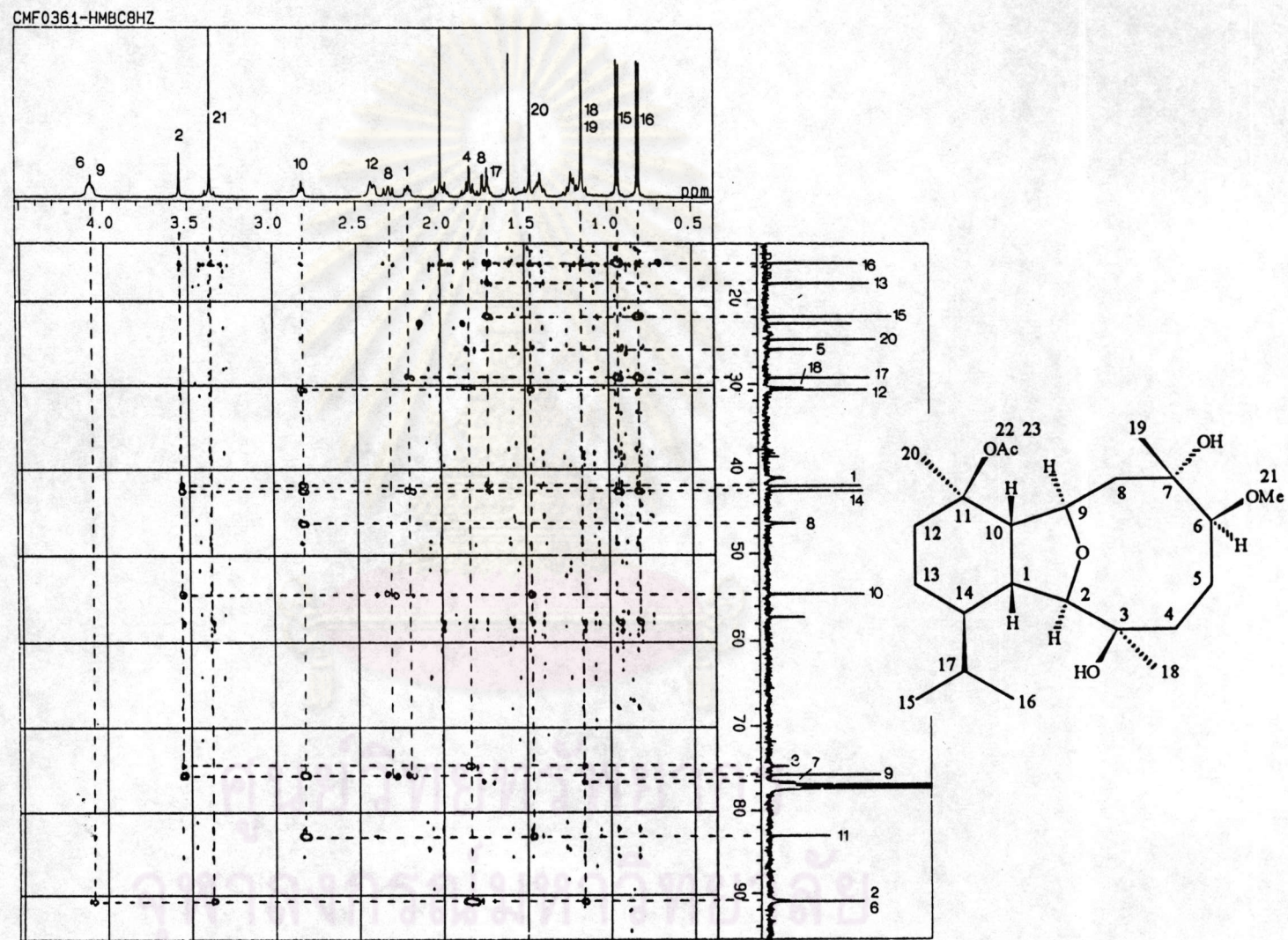


Figure 77. The 500 MHz HMBC 8 Hz spectrum of compound CMF0361 (in CDCl₃) (expanded from 14 - 94 ppm)

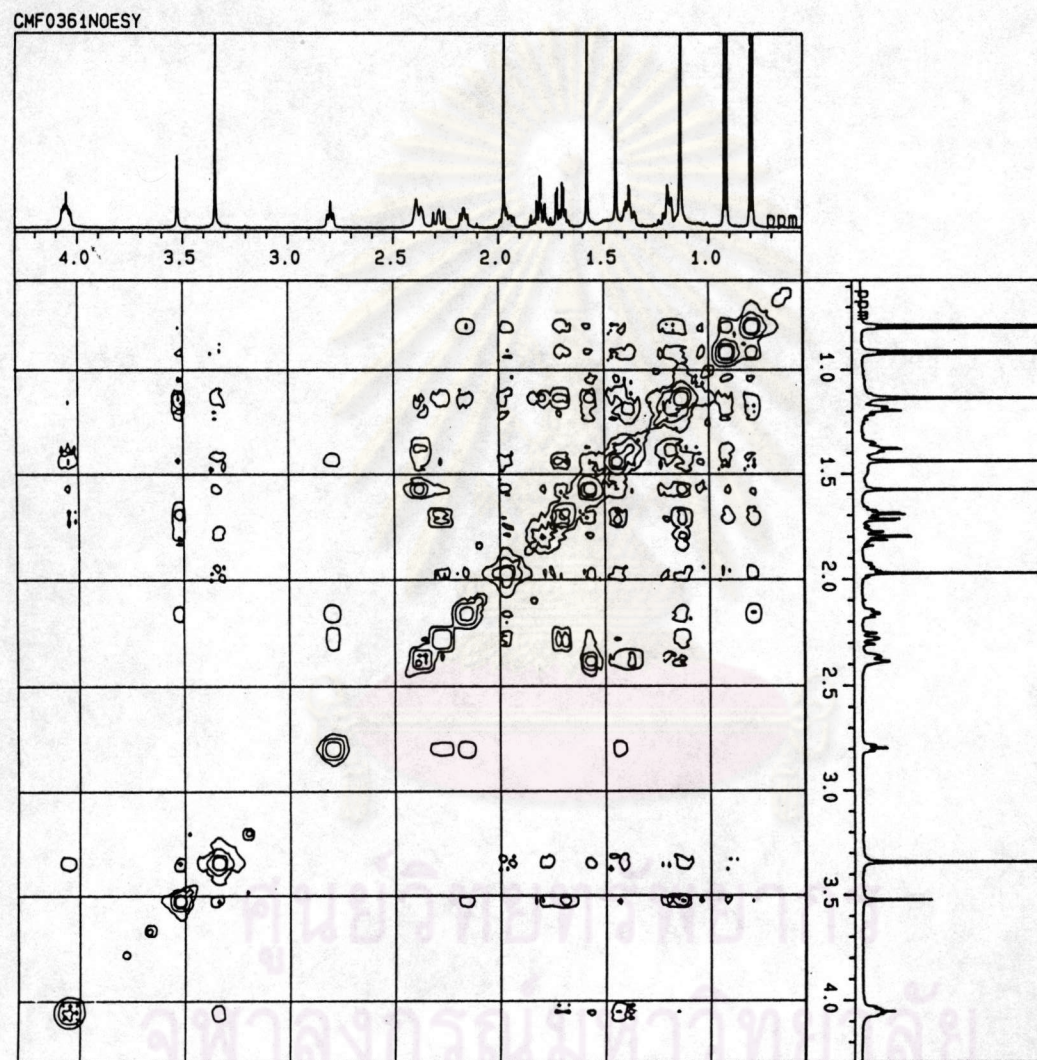


Figure 79. The 500 MHz NOESY spectrum of compound CMF0361 (in CDCl_3)

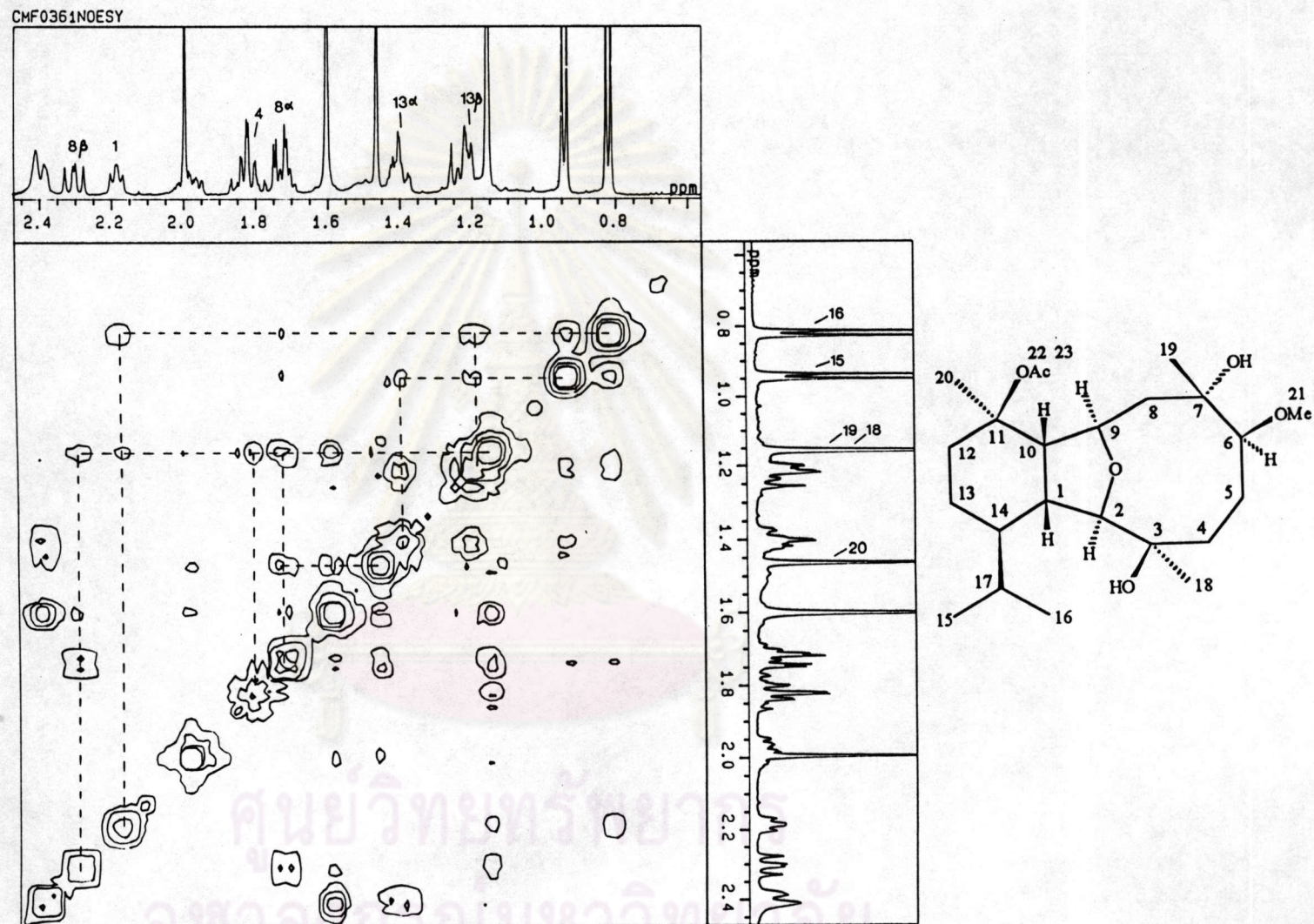


Figure 80. The 500 MHz NOESY spectrum of compound CMF0361 (in CDCl₃) (expanded from 0.80 - 2.40 ppm)

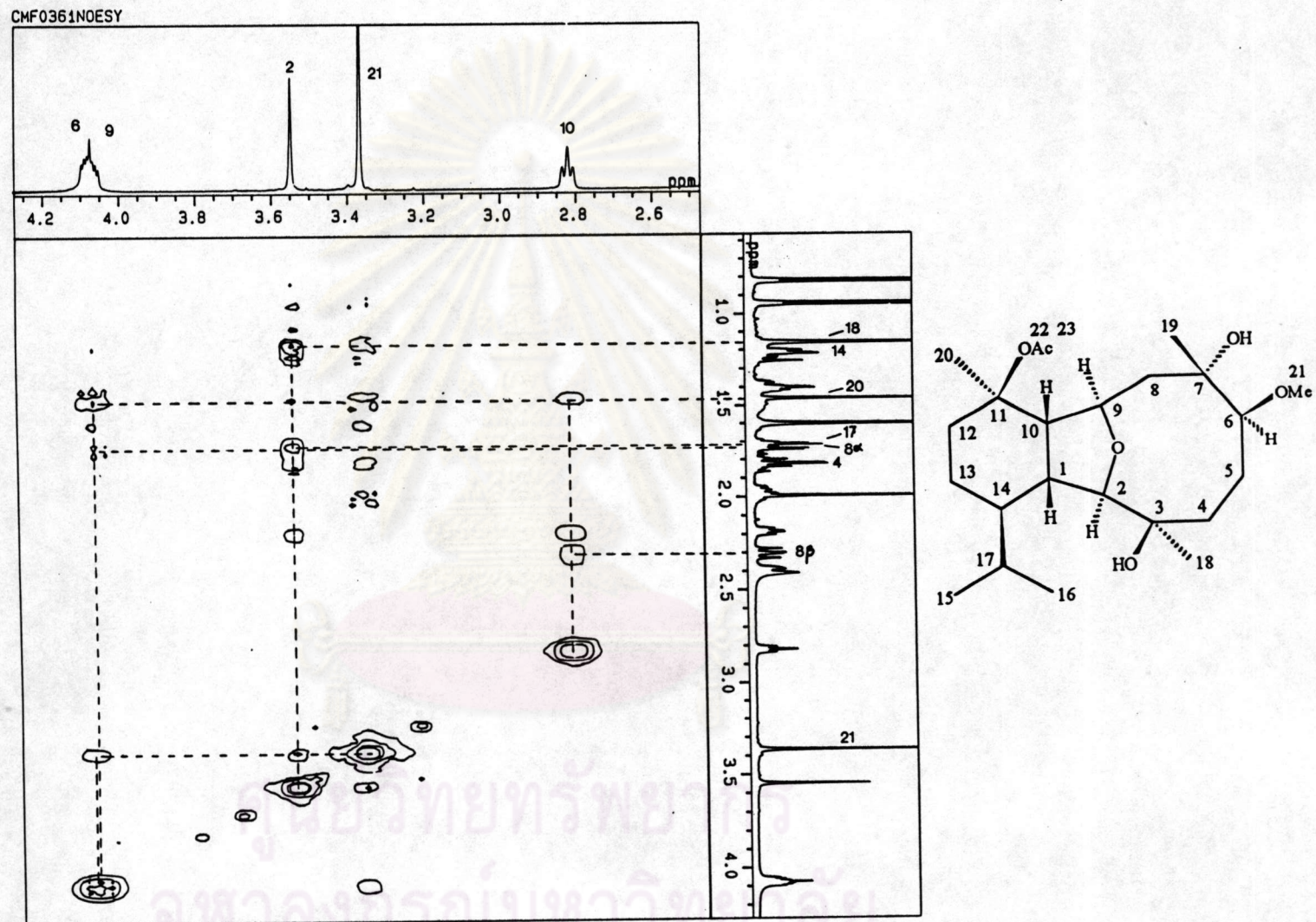


Figure 81. The 500 MHz NOESY spectrum of compound CMF0361 (in CDCl₃)
(expanded f1 : 2.60 - 4.20, f2 : 0 - 4.20 ppm)

VITA



Mr. Nisit Pisutthanan was born on August 27, 1971 in Bangkok, Thailand. He received his Bachelor of Science in Pharmacy in 1993 from the Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand. Since his graduation, he has become a faculty member of the Department of Medicinal Chemistry and Natural Products, Faculty of Pharmaceutical Sciences, Naresuan University, Phitsanulok, Thailand.



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จุฬาลงกรณ์มหาวิทยาลัย