

In vitro Anti-*Toxoplasma gondii* and Antimicrobial Activity of Amides Derivated From Cinnamic Acid

Graziela Rangel Silveira^{1,*}, Karoline Azerêdo Campelo¹, Gleice Rangel Silveira Lima¹, Lais Pessanha Carvalho², Solange Silva Samarão³, Olney Vieira-da-Motta³, Leda Mathias¹, Carlos Roberto Ribeiro Matos¹, Ivo José Curcino Vieira¹, Edesio José Tenório de Melo², Edmilson José Maria¹

¹ Laboratório de Ciências Químicas, Centro de Ciências e Tecnologia, Universidade Estadual do Norte Fluminense-Darcy Ribeiro, Av. Alberto Lamego, 2000 - Parque Califórnia, Campos dos Goytacazes/RJ, 28013-602, Brasil; graziela_sil@hotmail.com (G. R. S.); karolcampelo16@yahoo.com.br (K. A. C.); gleice.sil@hotmail.com (G. R. S. L.); leddam8@gmail.com (L. M.); matos@uenf.br (C. R. R. M.); curcino@uenf.br (I. J. C. V.); edmilson_maria@yahoo.com.br (E. J. M.).

² Laboratório de Biologia Celular e Tecidual, Centro de Biociências e Biotecnologia, Universidade Estadual do Norte Fluminense-Darcy Ribeiro, Av. Alberto Lamego, 2000 - Parque Califórnia, Campos dos Goytacazes/RJ, 28013-602, Brasil; lais_pessanha@hotmail.com (L. P. C.); ejtm1202@gmail.com (E. J. T. M.).

³ Laboratório de Sanidade Animal, Centro de Ciências e Tecnologias Agropecuárias, Universidade Estadual do Norte Fluminense-Darcy Ribeiro, Av. Alberto Lamego, 2000 - Parque Califórnia, Campos dos Goytacazes/RJ, 28013-602, Brasil; solangesamarao@gmail.com (S. S. S.); olney.motta@gmail.com (O. V.dM.).

* Corresponding author: graziela_sil@hotmail.com; Tel.: +55-022-2728-6167

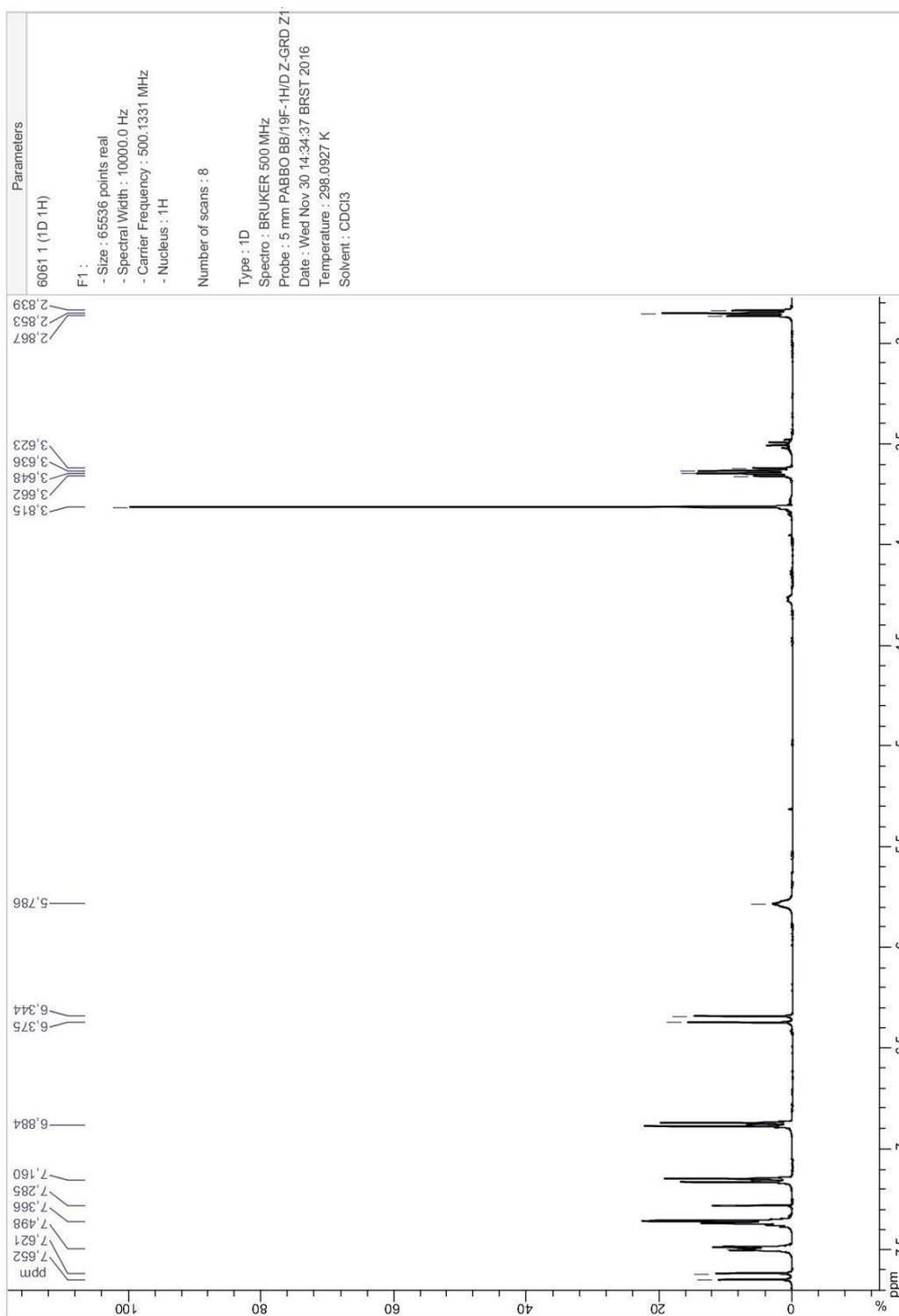


Figure S1. ¹H NMR spectrum of compound **1** (CDCl₃, 500 MHz).

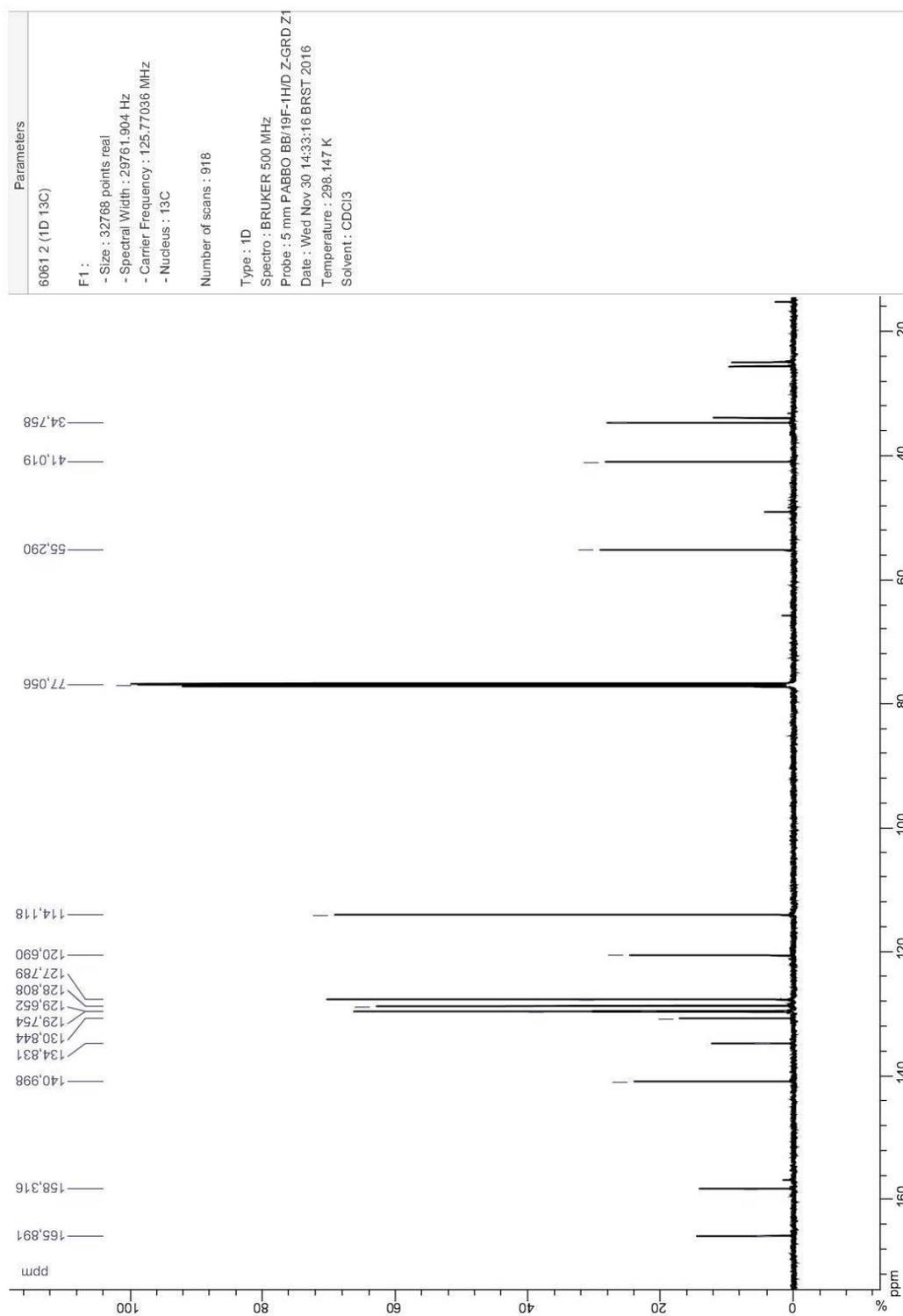


Figure S2. ¹³C NMR spectrum of compound 1 (CDCl₃, 125 MHz).

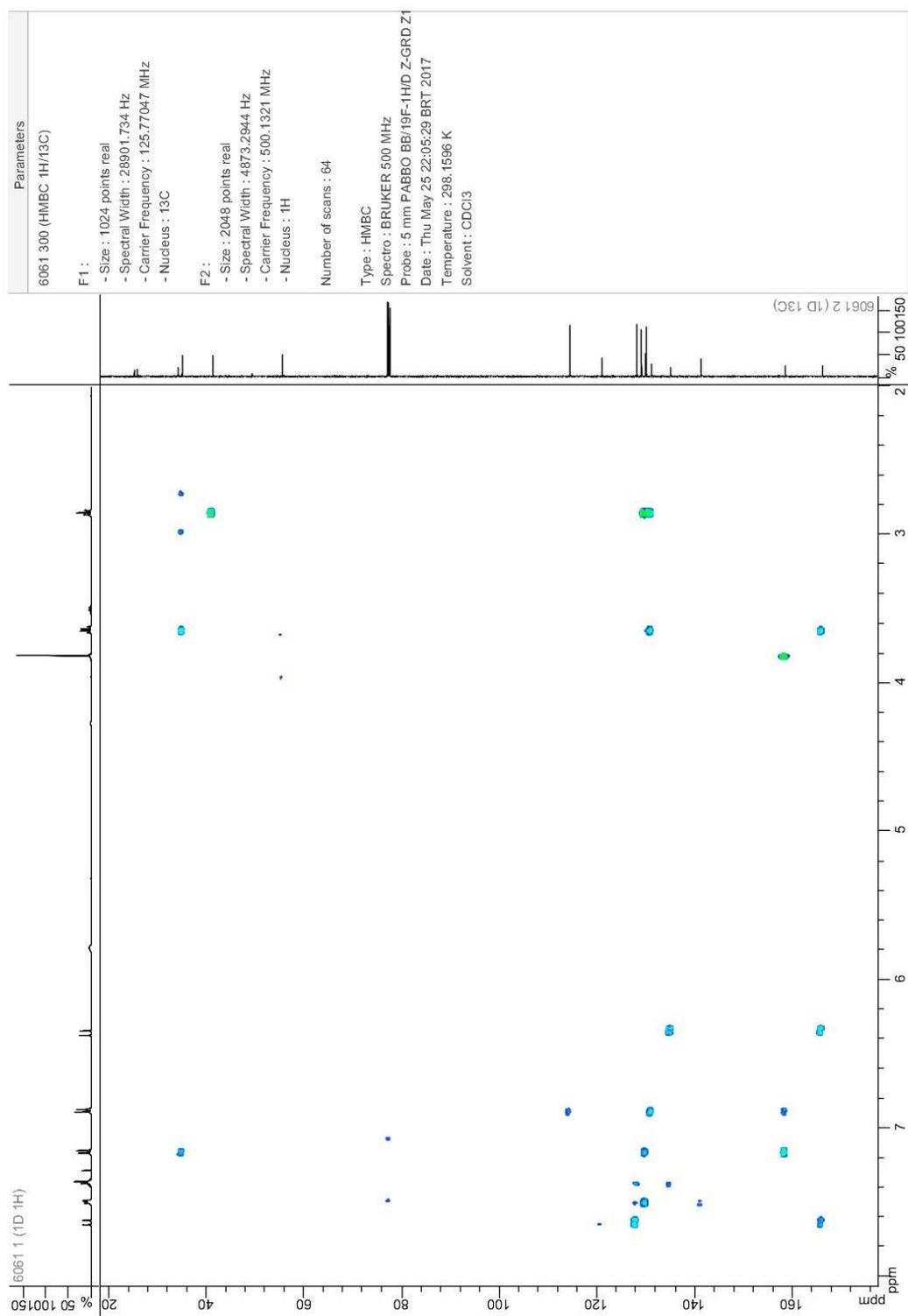


Figure S3. HMBC spectrum of compound 1 (CDCl₃, 500 MHz).

001 HSQC.ESP

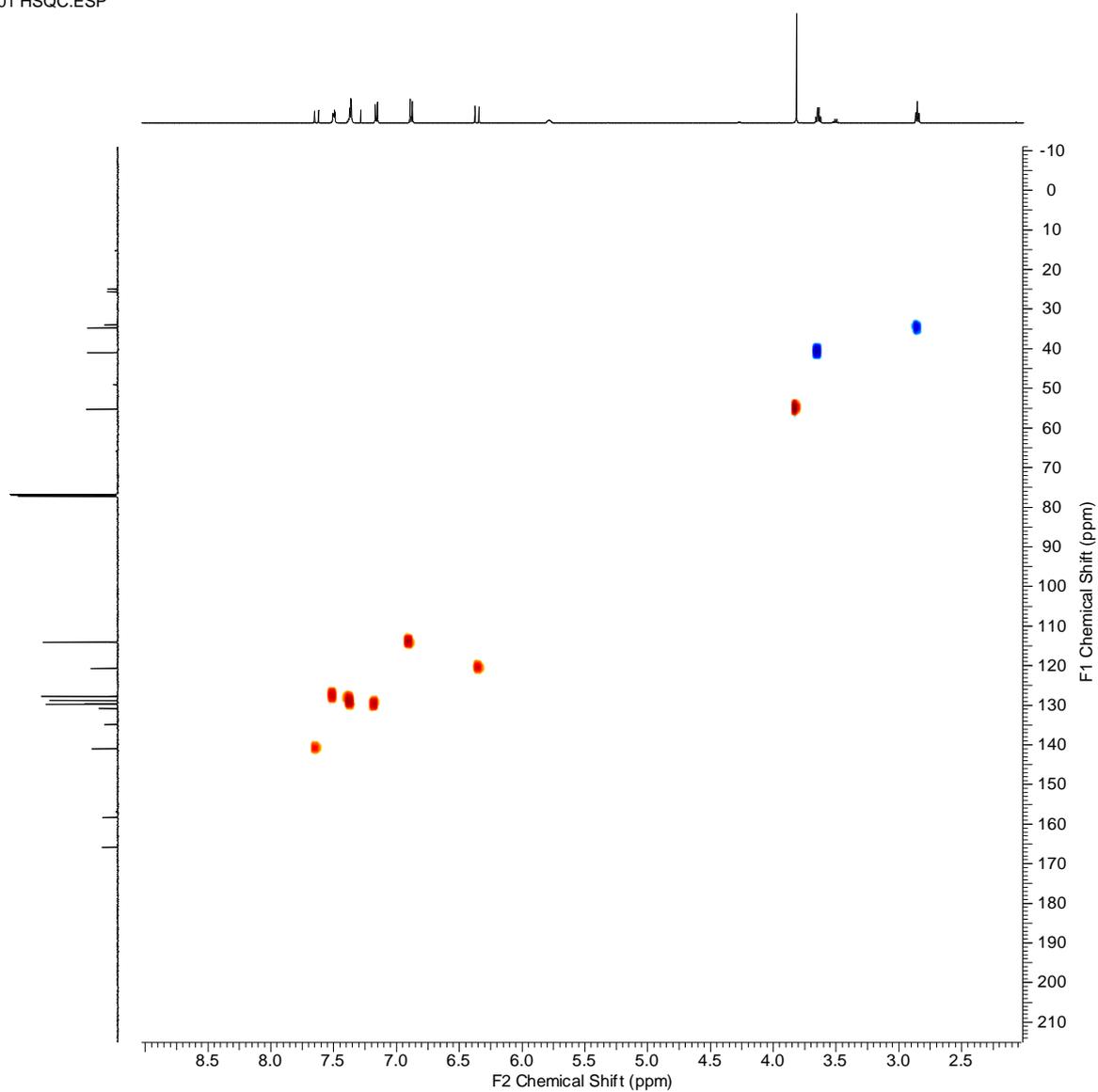
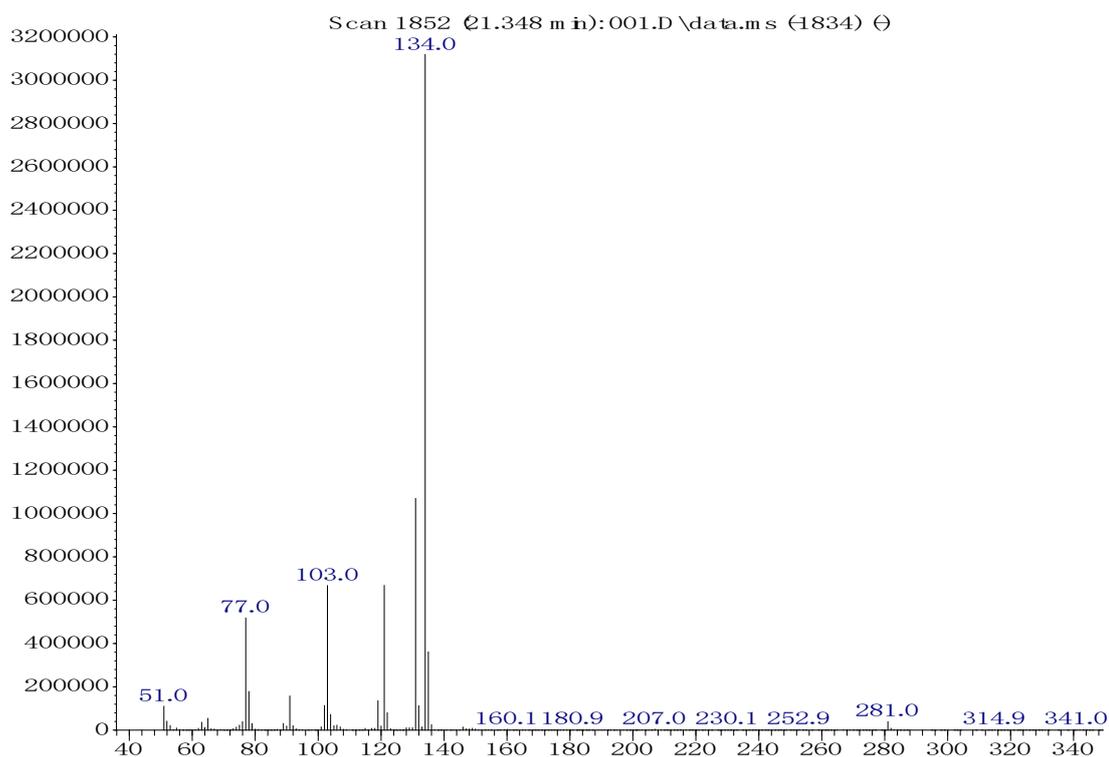


Figure S4. HSQC spectrum of compound **1** (CDCl₃, 500 MHz).

Abundance



m/z→

Figure S5. Mass spectrum of compound 1 (CH_2Cl_2).

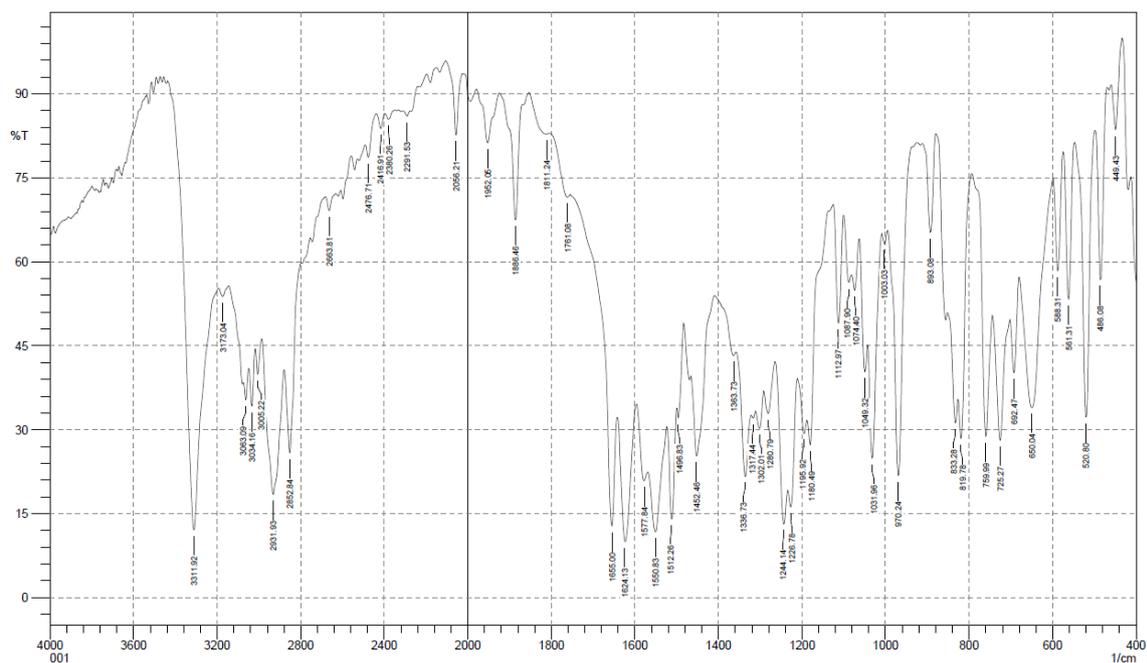


Figure S6. IR spectrum (KBr) of compound 1.

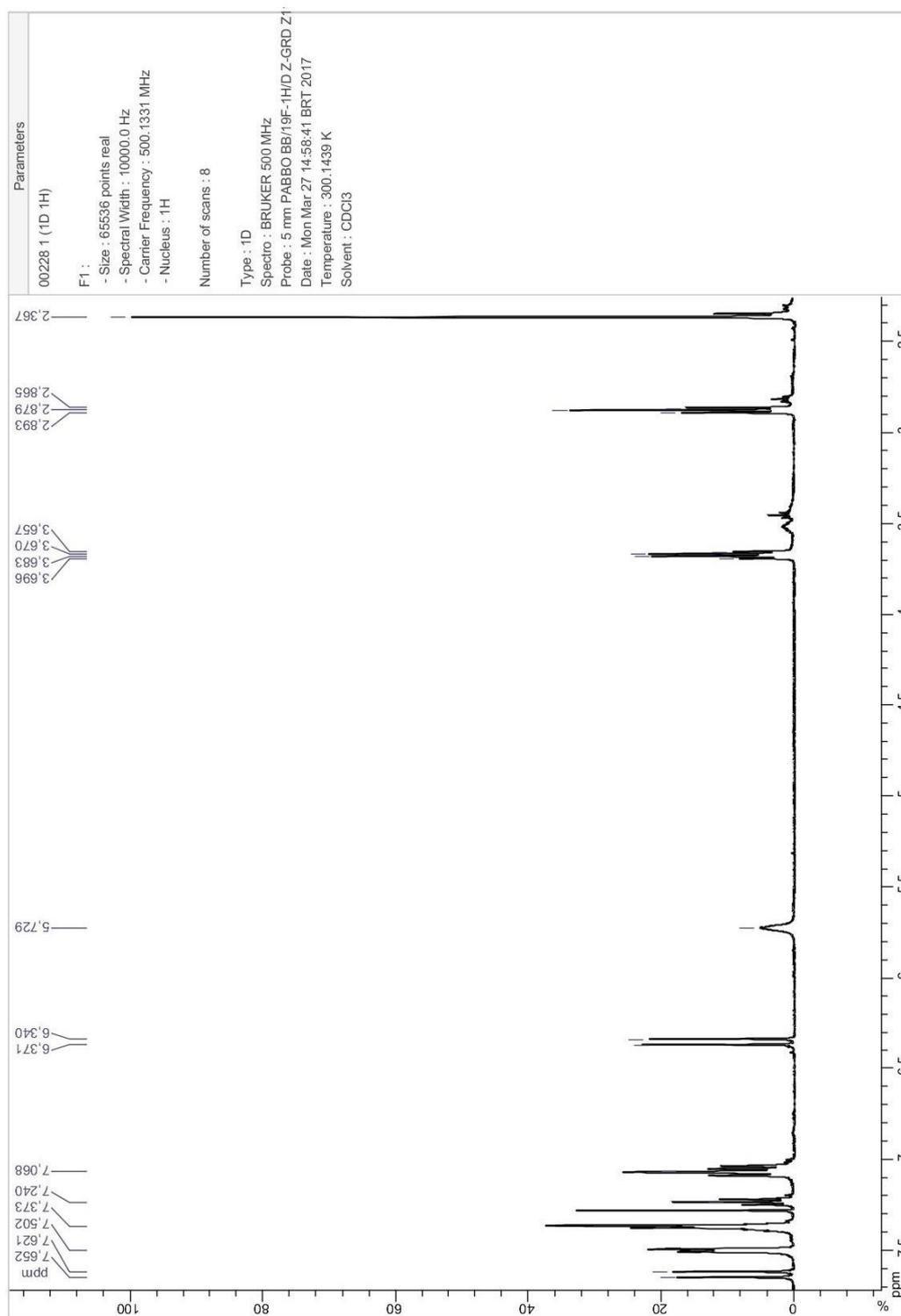


Figure S7. ^1H NMR spectrum of compound 2 (CDCl_3 , 500 MHz).

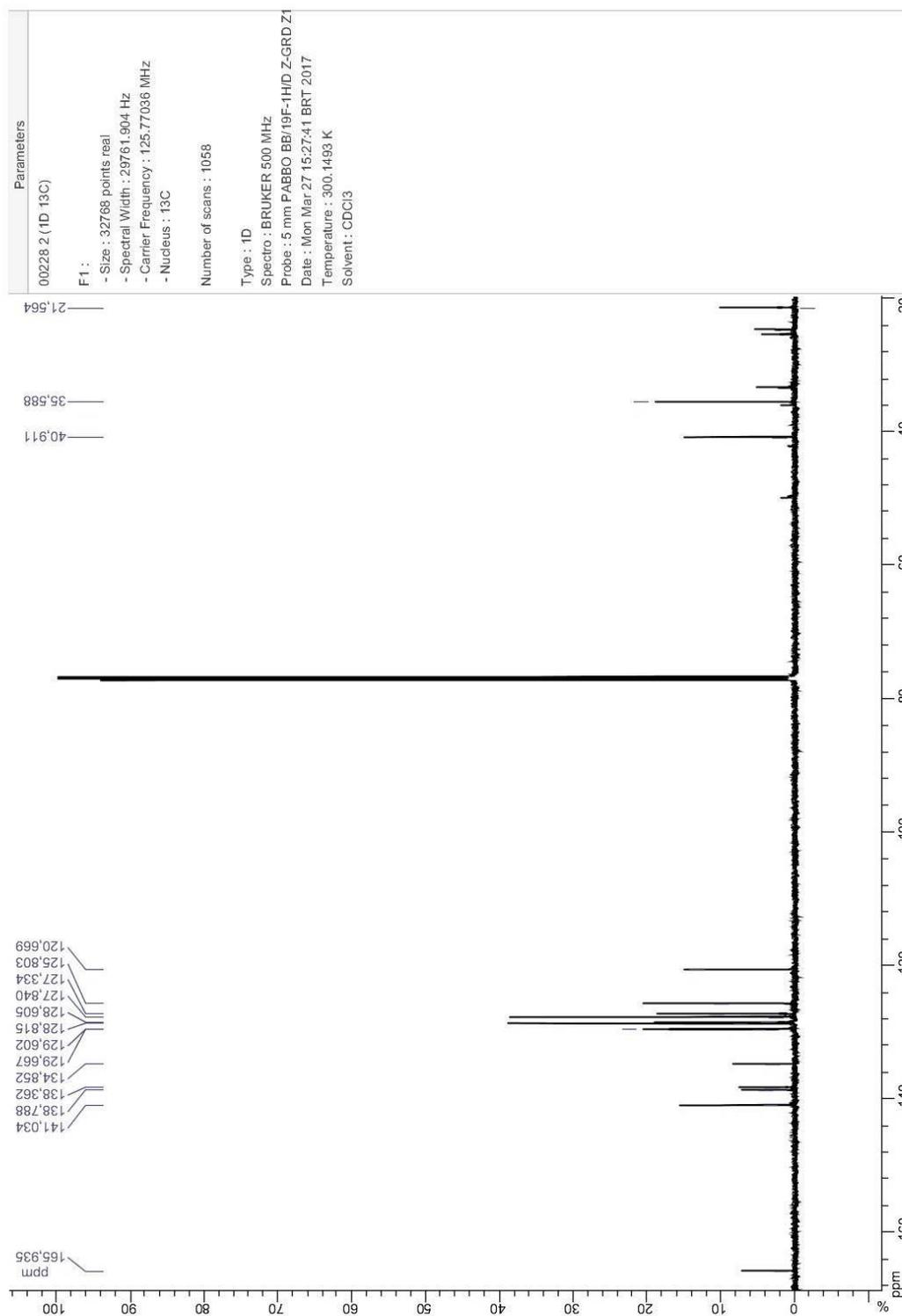


Figure S8. ^{13}C NMR spectrum of compound **2** (CDCl_3 , 125 MHz).

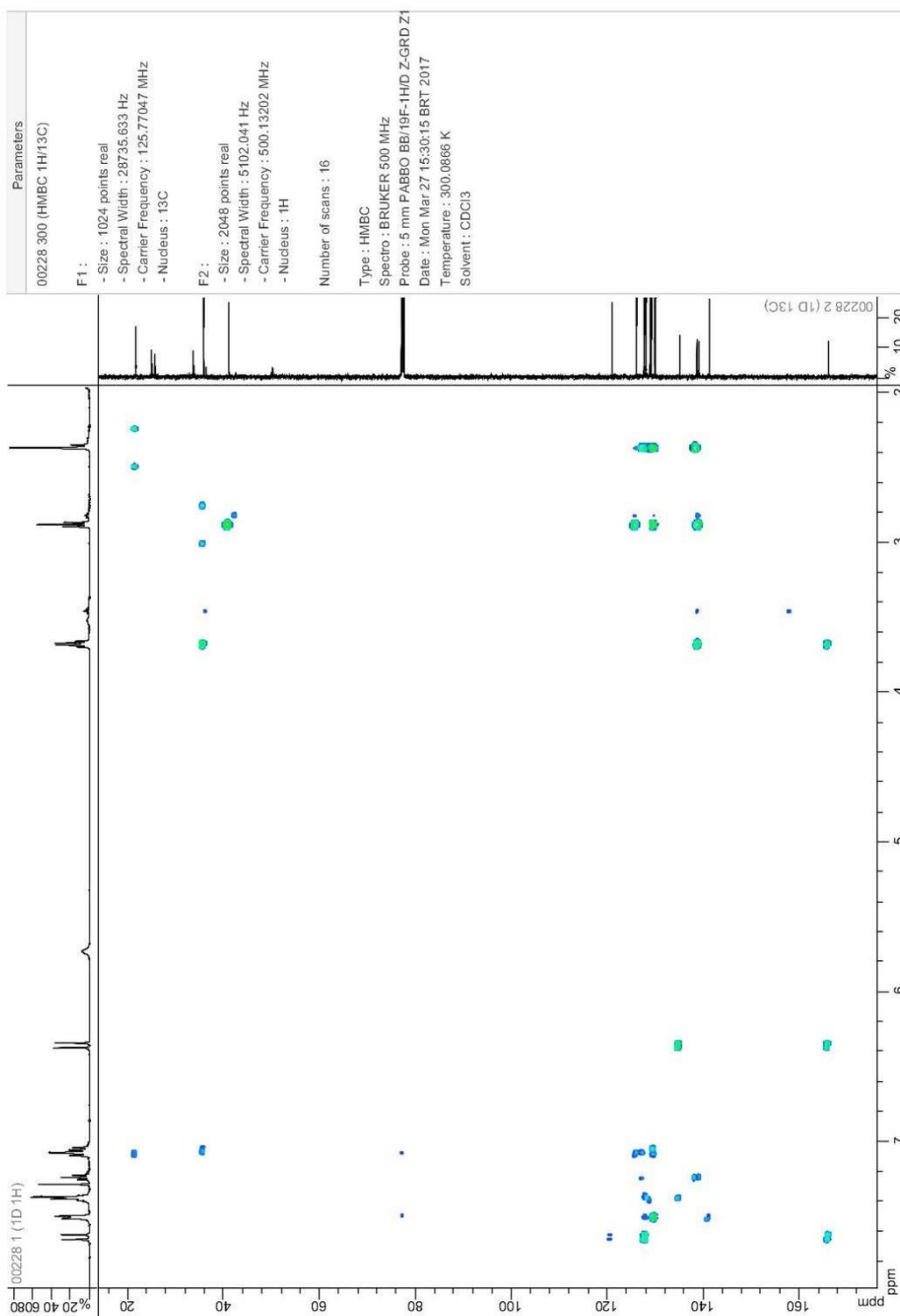


Figure S9. HMBC spectrum of compound 2 (CDCl_3 , 500 MHz).

002 HSQC.ESP

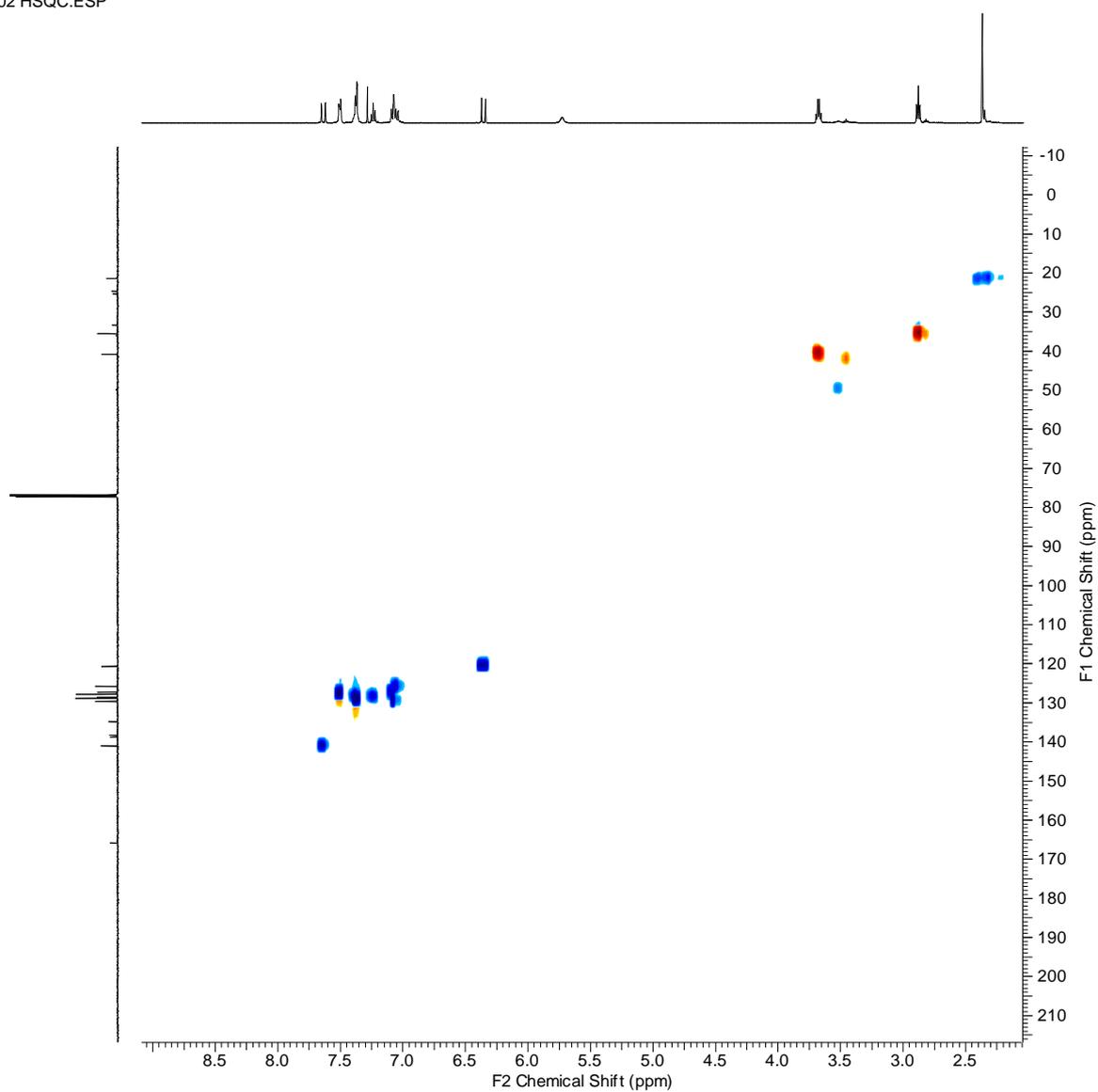


Figure S10. HSQC spectrum of compound **2** (CDCl₃, 500 MHz).

Abundance

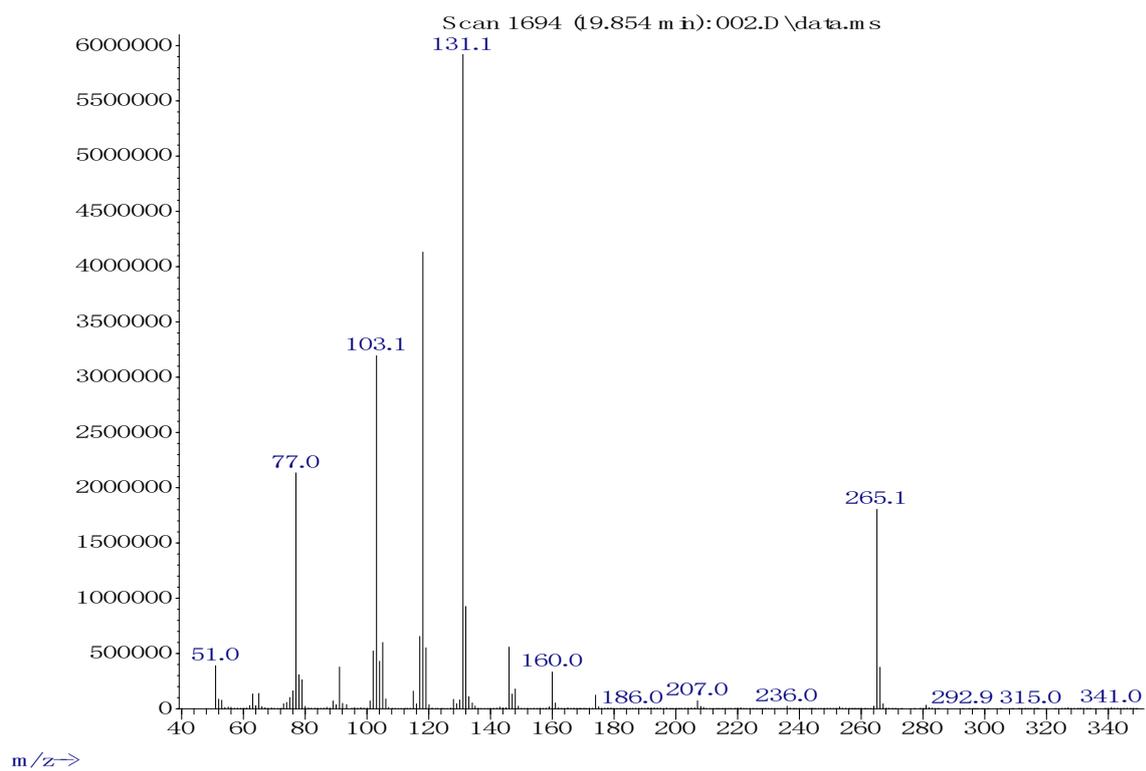


Figure S11. Mass spectrum of compound 2 (CH_2Cl_2).

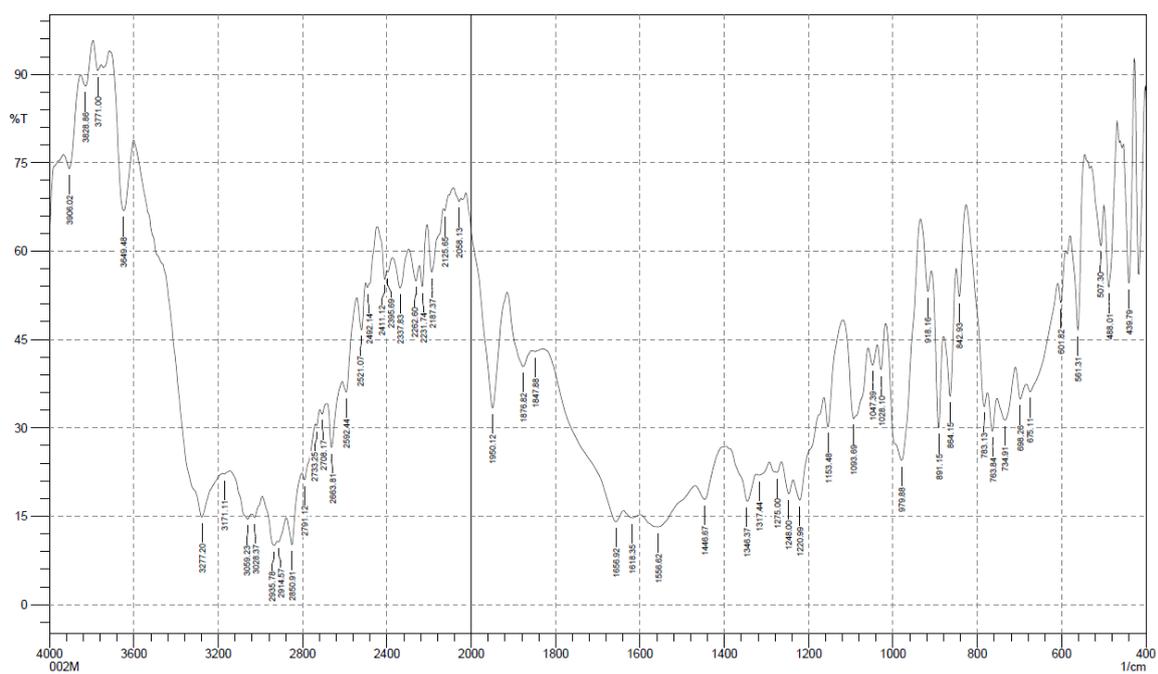


Figure S12. IR spectrum (KBr) of compound 2.

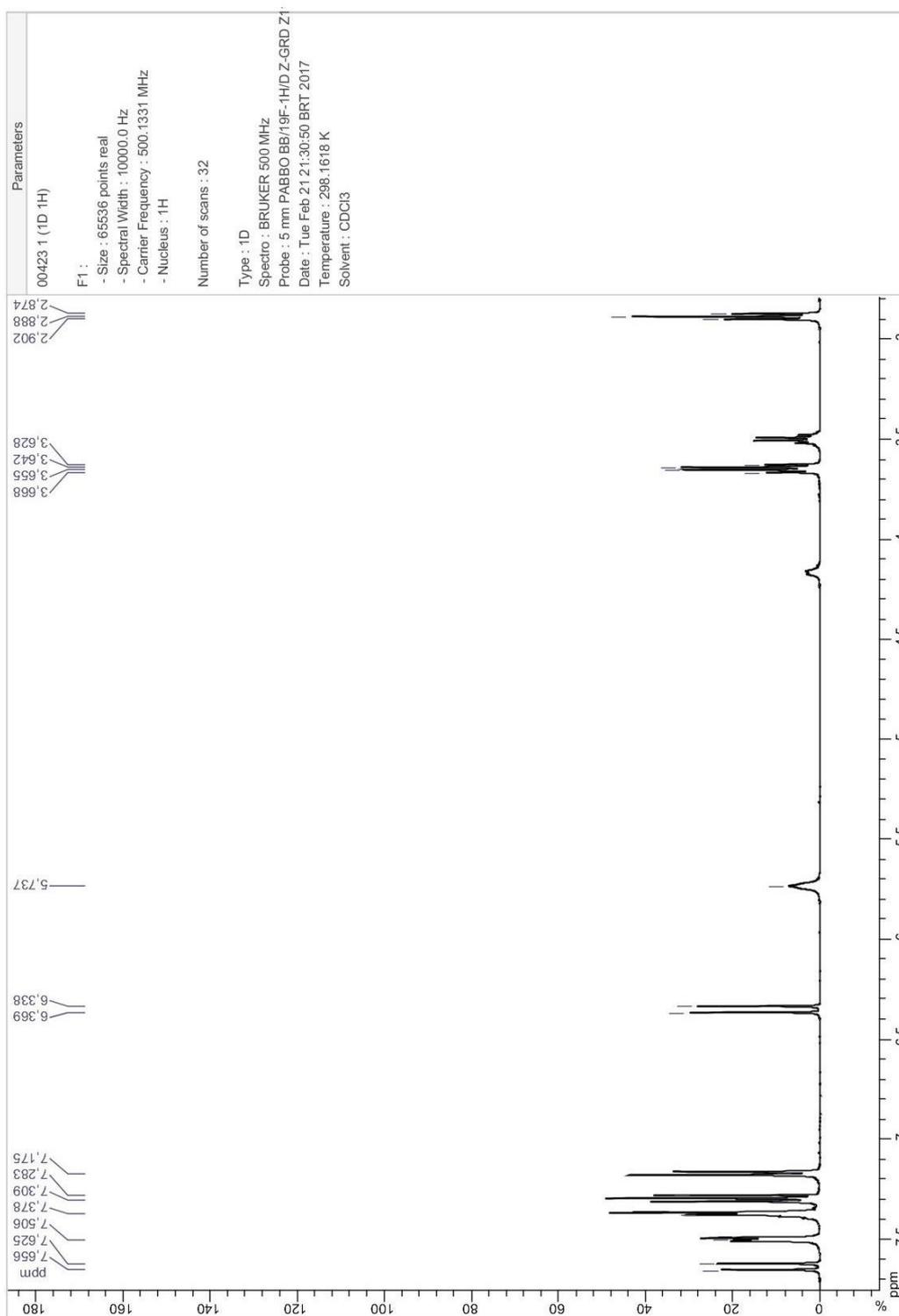


Figure 13. ^1H NMR spectrum of compound **3** (CDCl_3 , 500 MHz).

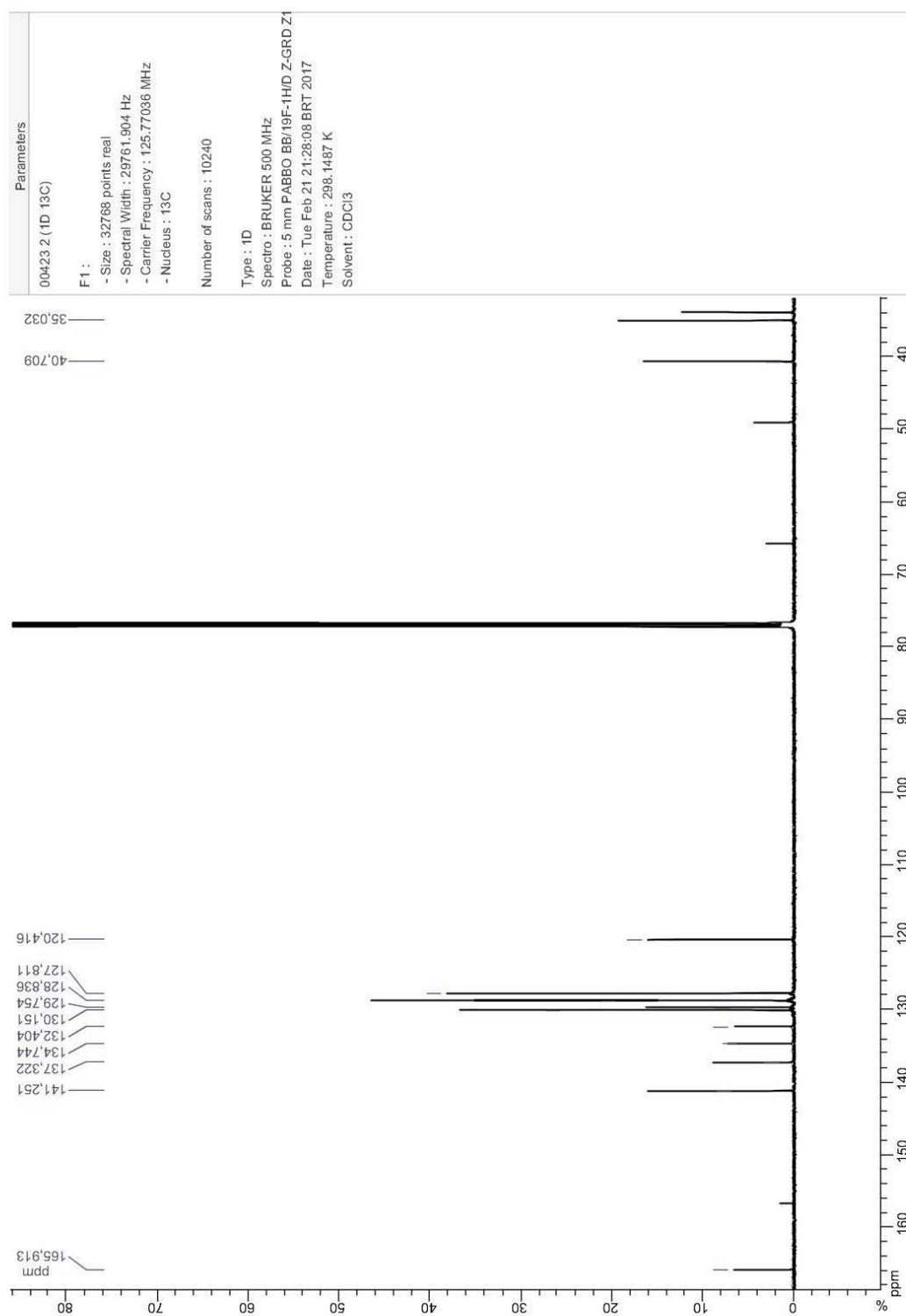


Figure S14. ¹³C NMR spectrum of compound **3** (CDCl₃, 125 MHz).

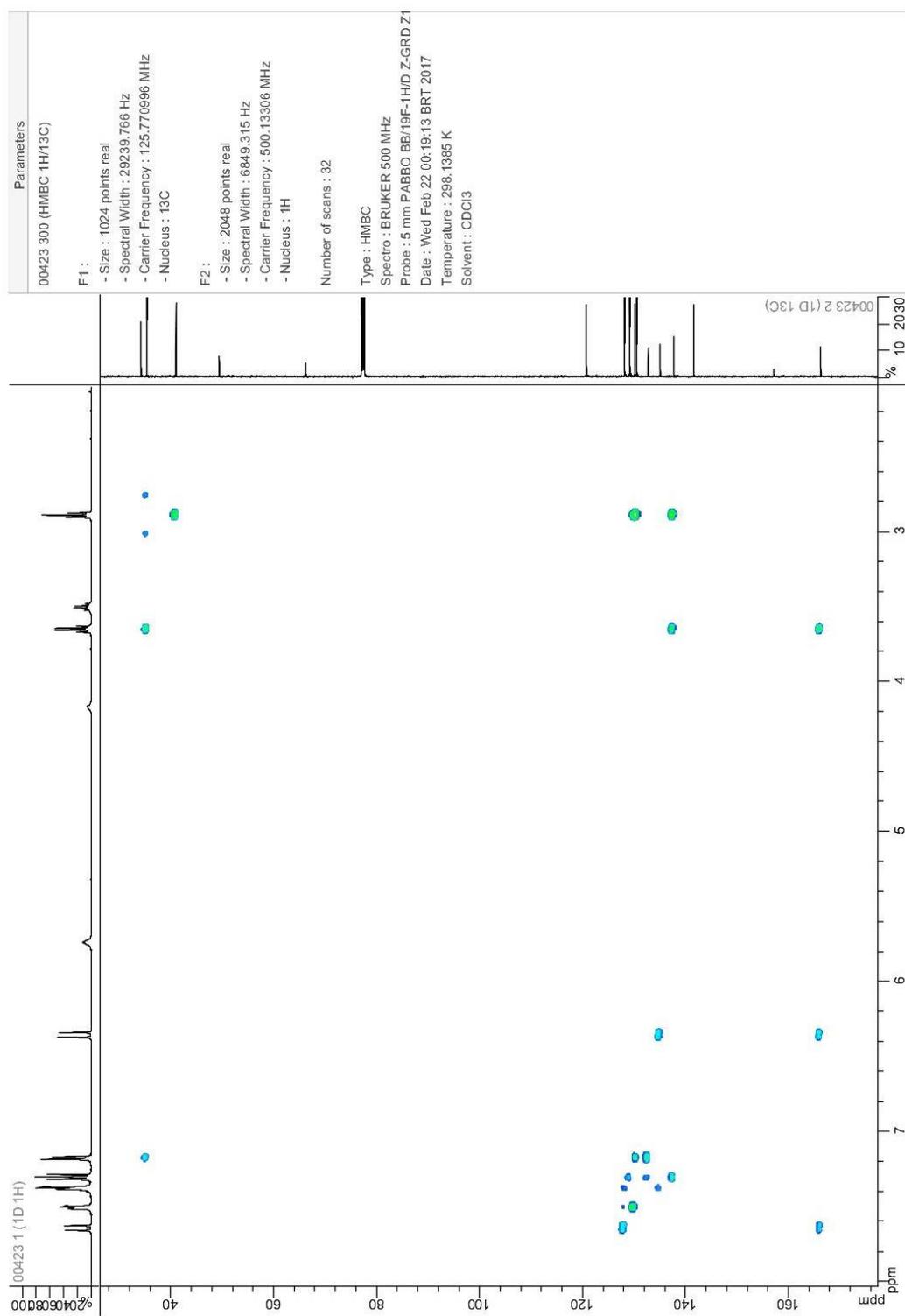


Figure S15. HMBC spectrum of compound 3 (CDCl₃, 500 MHz).

003 HSQC.ESP

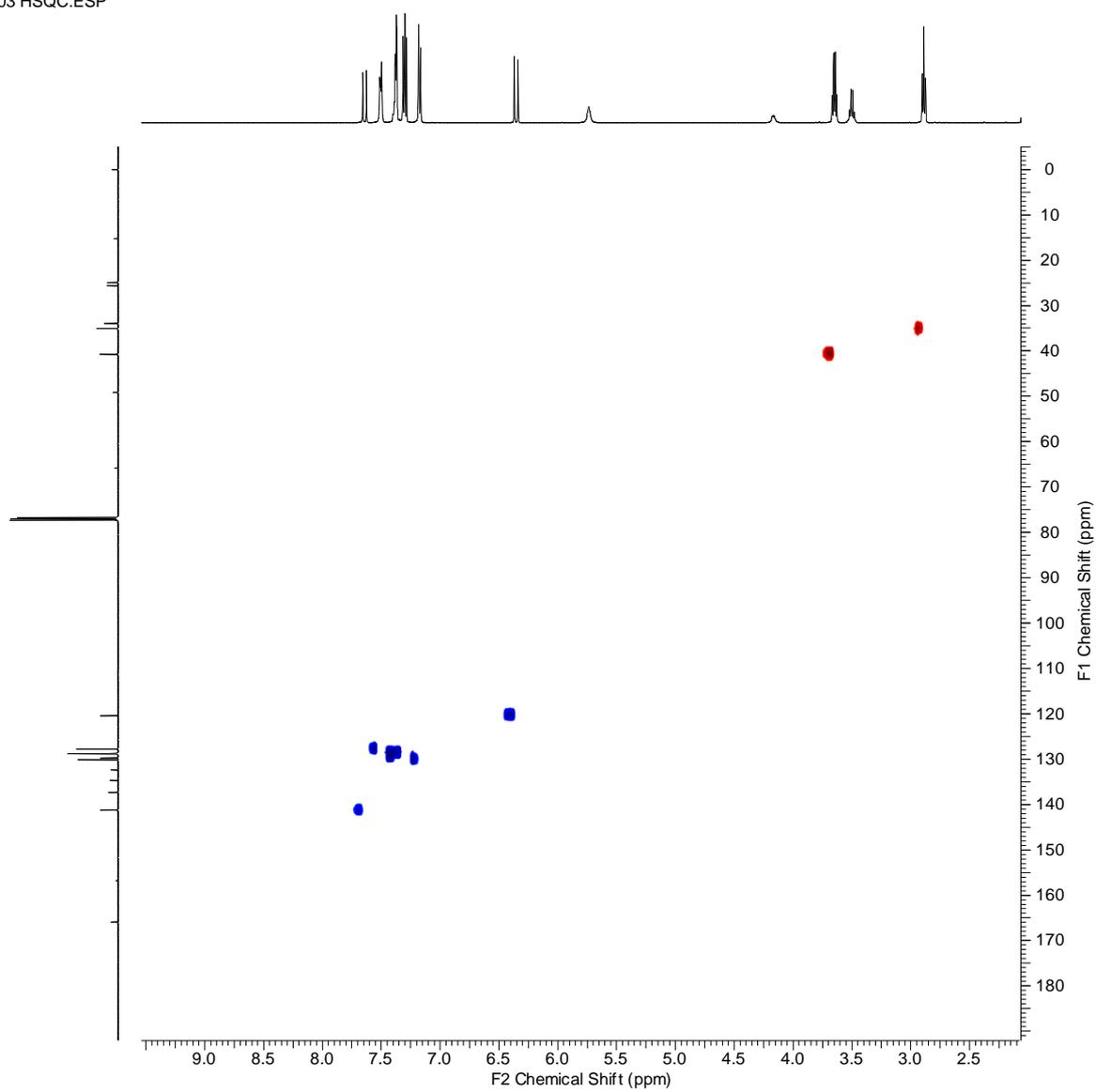


Figure S16 HSQC spectrum of compound **3** (CDCl₃, 500 MHz).

Abundance

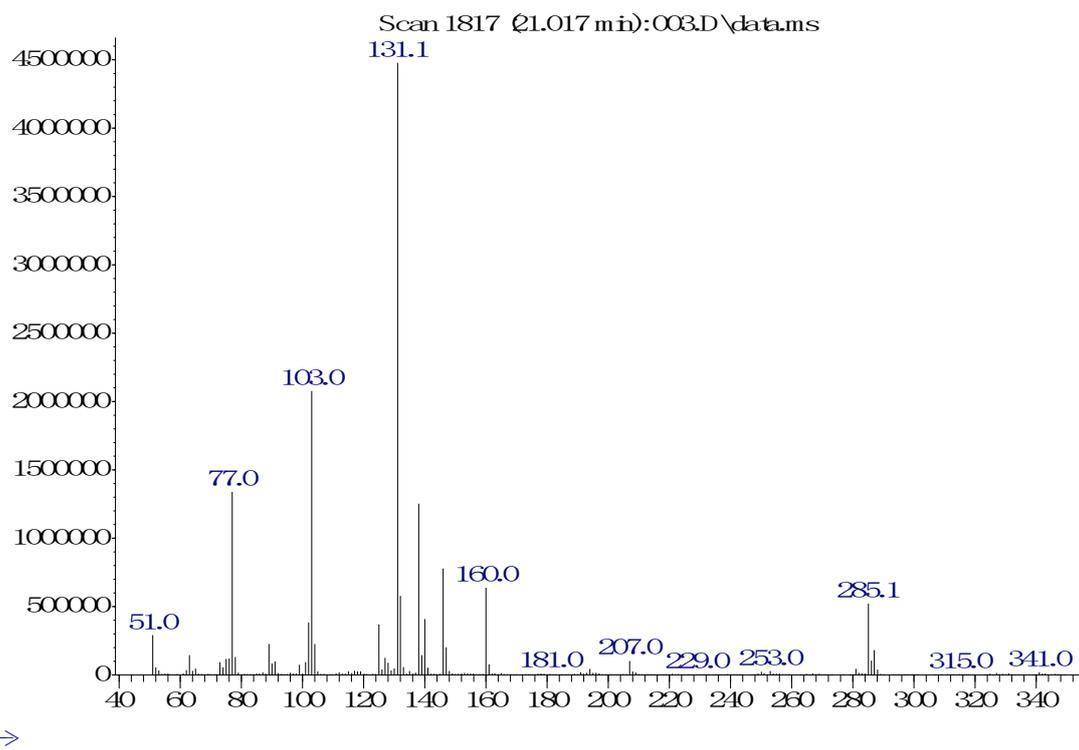


Figure S17. Mass spectrum of compound 3 (CH_2Cl_2).

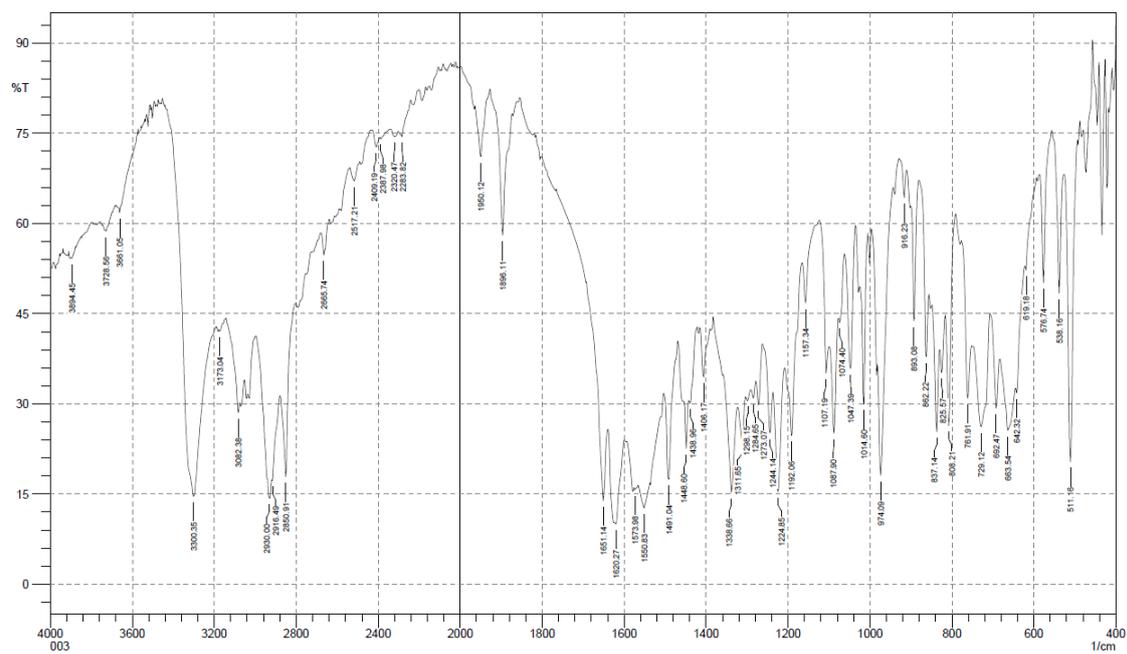


Figure S18. IR spectrum (KBr) of compound 3.

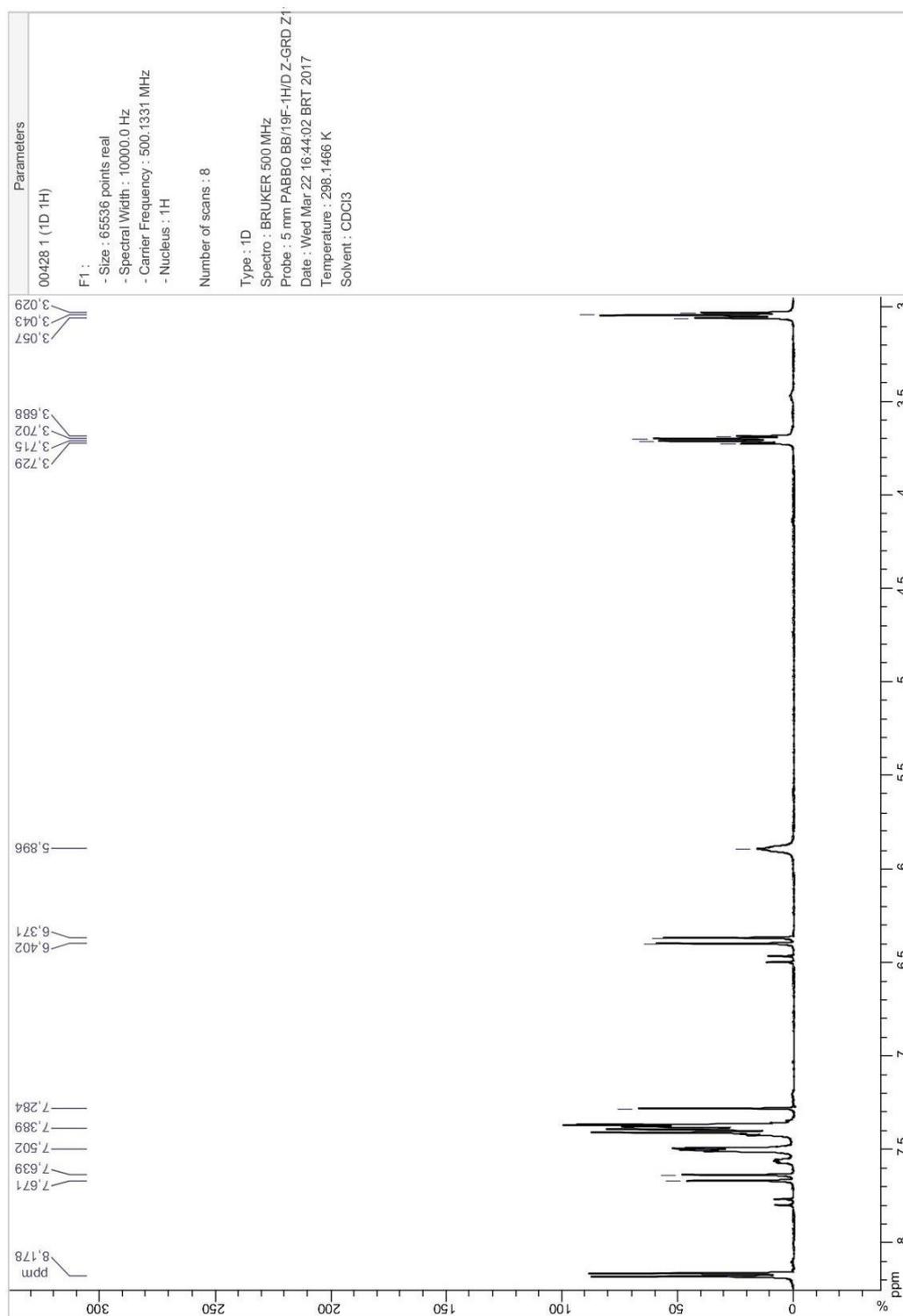


Figure S19. ^1H NMR spectrum of compound 4 (CDCl_3 , 500 MHz).

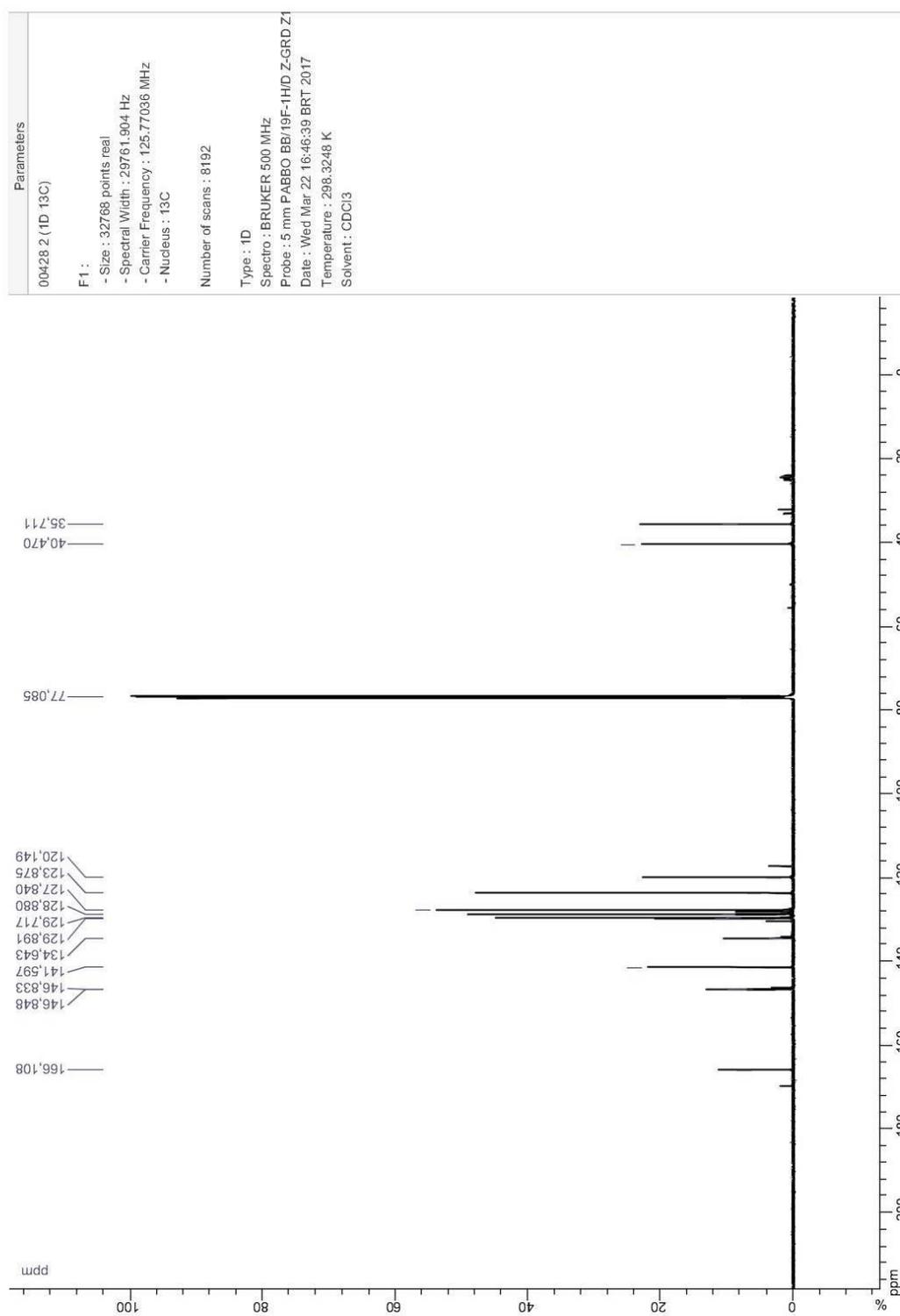


Figure S20. ^{13}C NMR spectrum of compound 4 (CDCl_3 , 125 MHz).

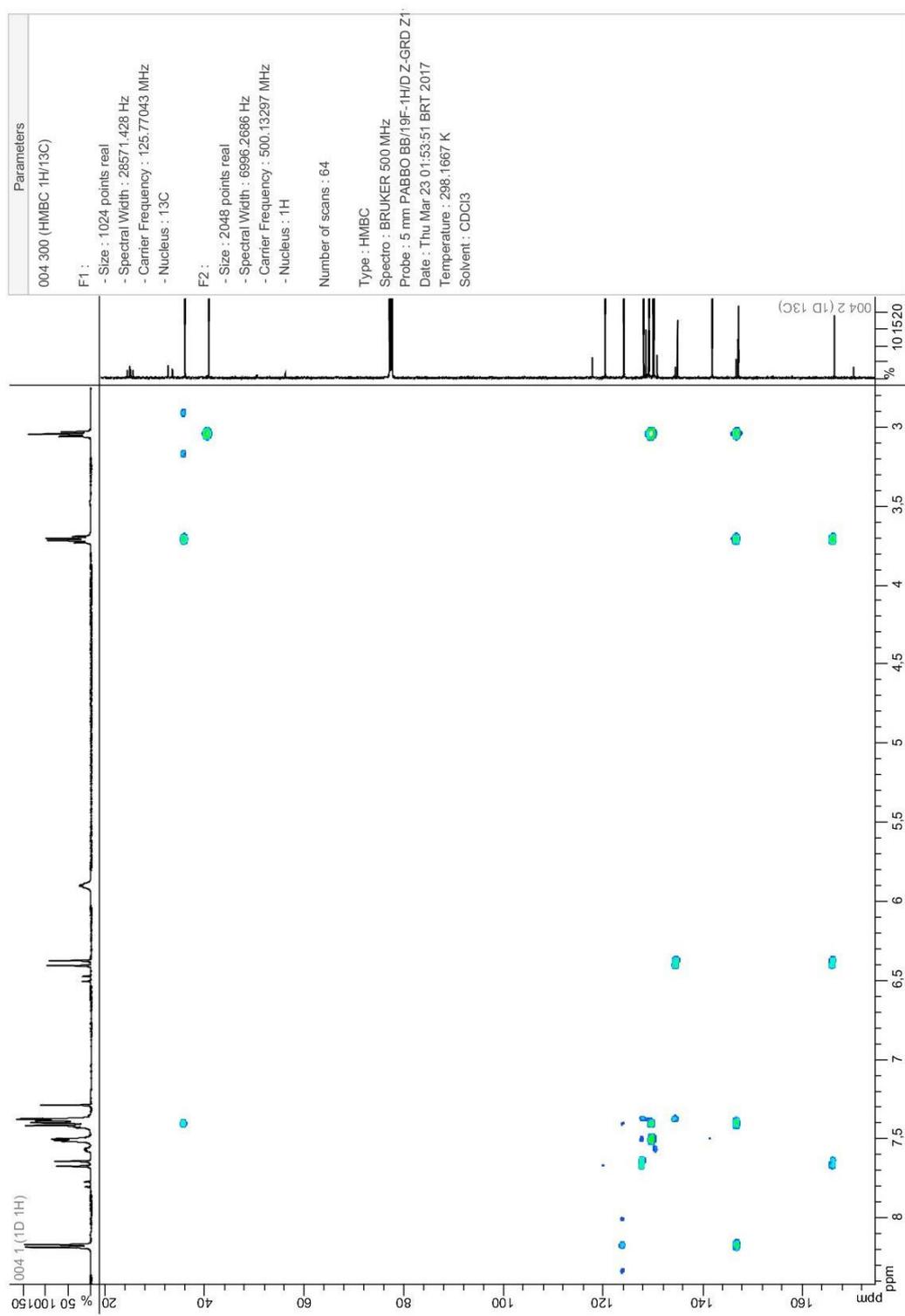


Figure S21. HMBC spectrum of compound 4 (CDCl₃, 500 MHz).

004 HSQCED.ESP

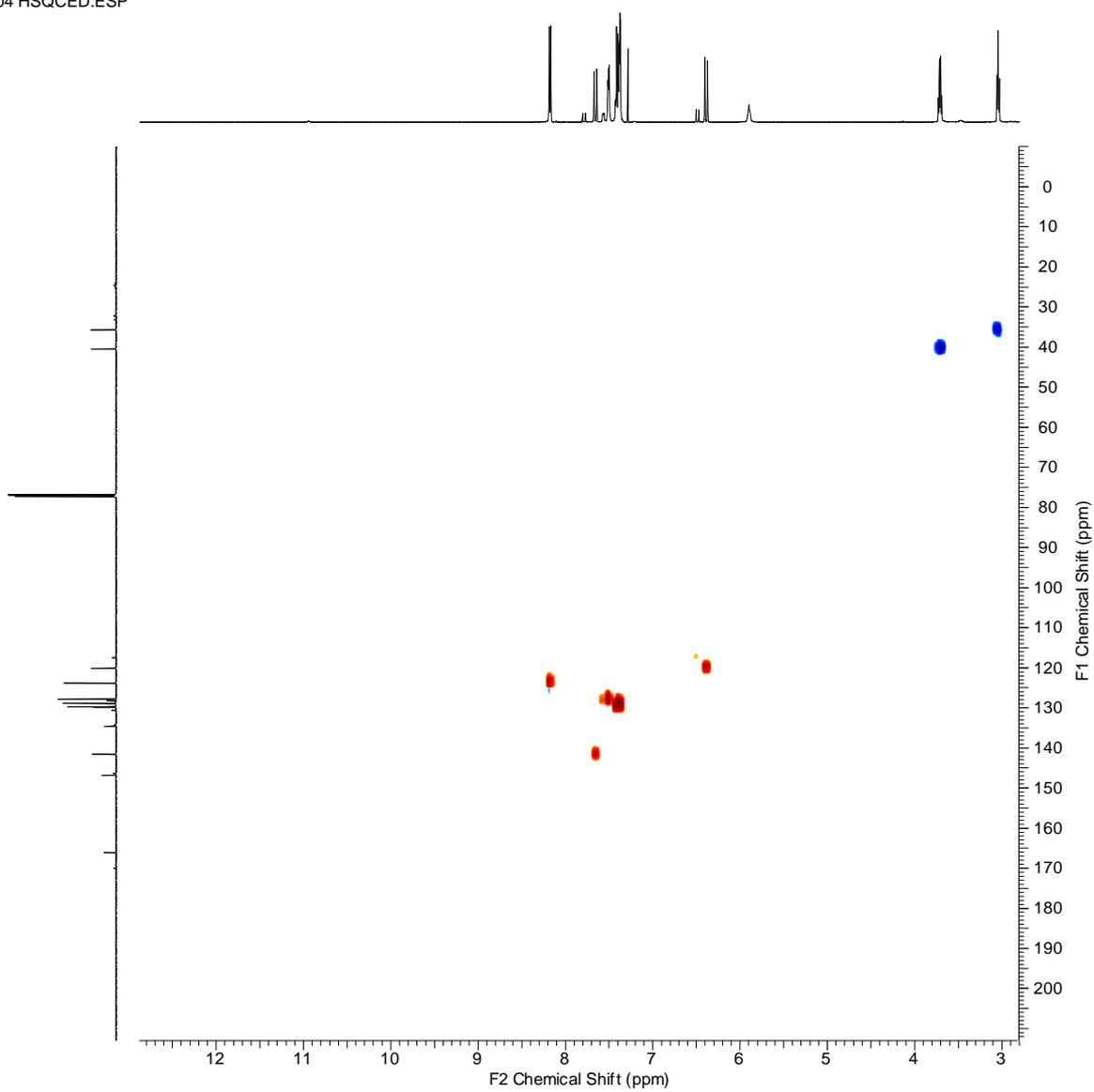


Figure S22. HSQC spectrum of compound **4** (CDCl_3 , 500 MHz).

Abundance

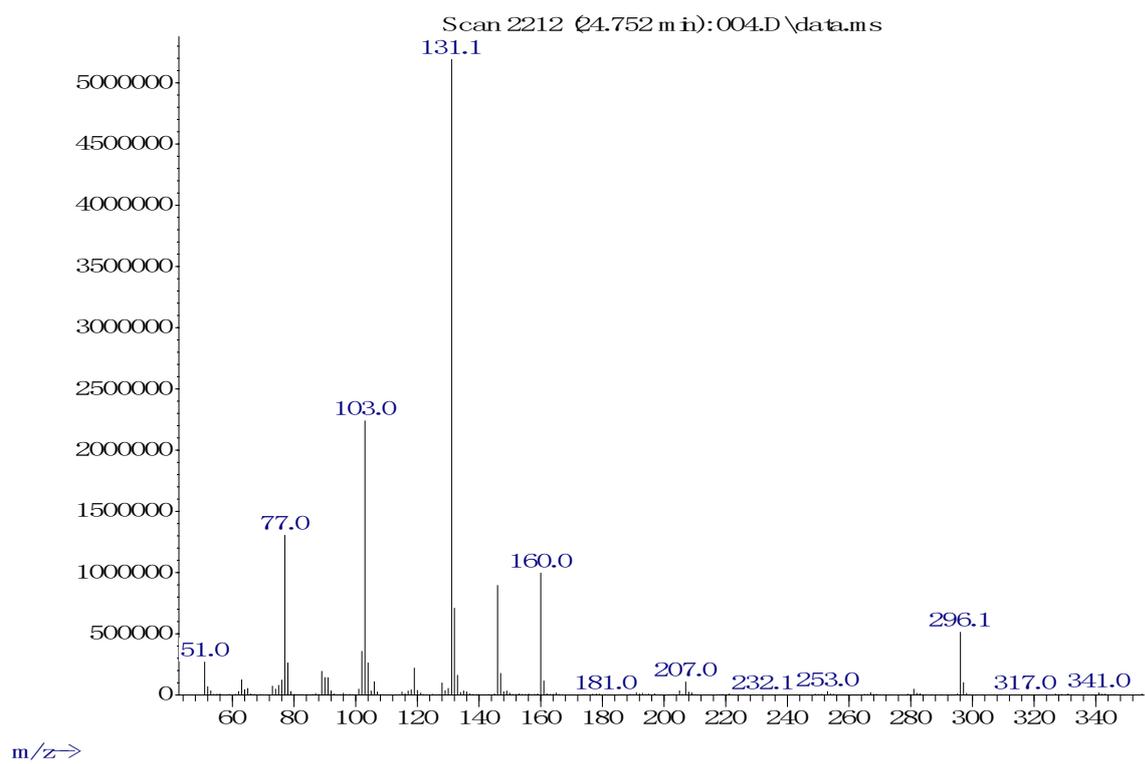


Figure S23. Mass spectrum of compound 4 (CH_2Cl_2).

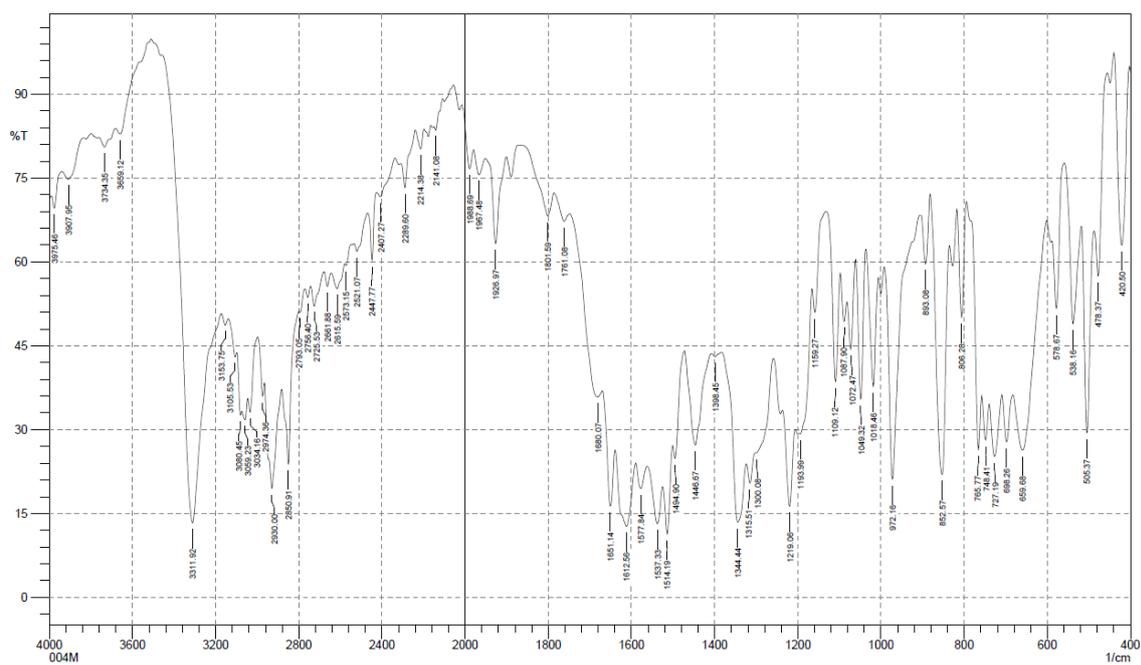


Figure S24. IR spectrum (KBr) of compound 4.

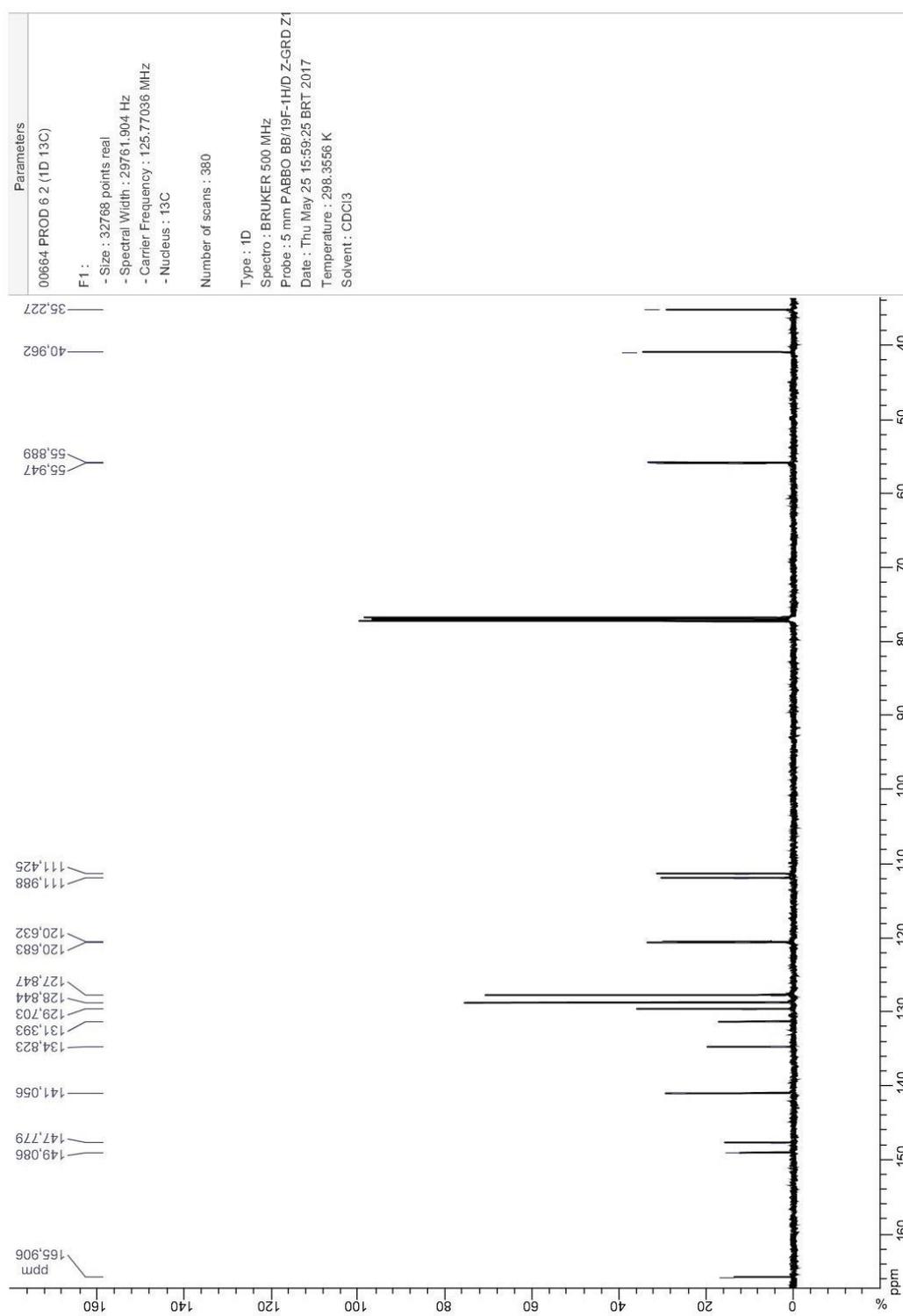


Figure S26. ^{13}C NMR spectrum of compound 5 (CDCl_3 , 125 MHz).

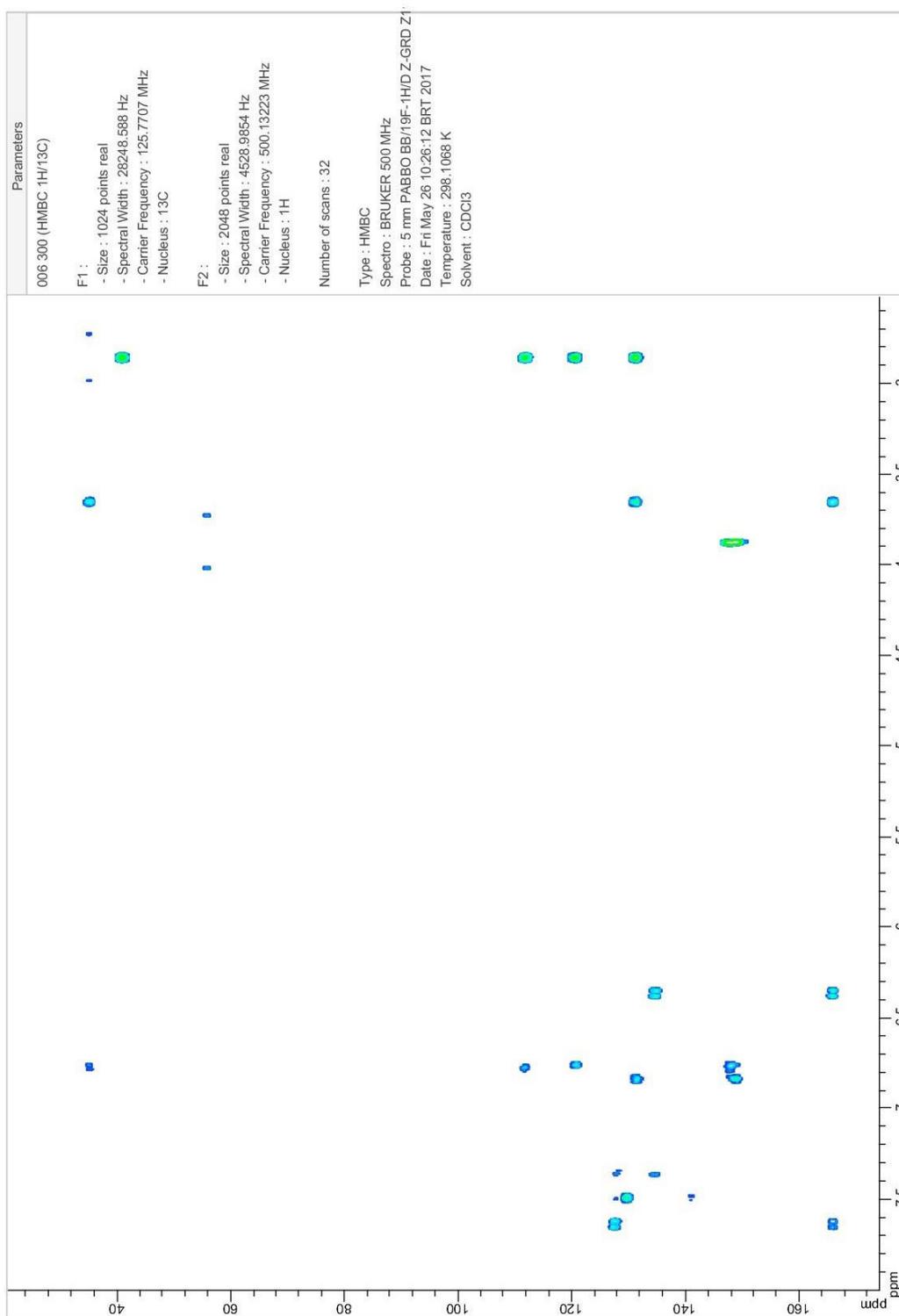


Figure S27. HMBC spectrum of compound 5 (CDCl₃, 500 MHz).

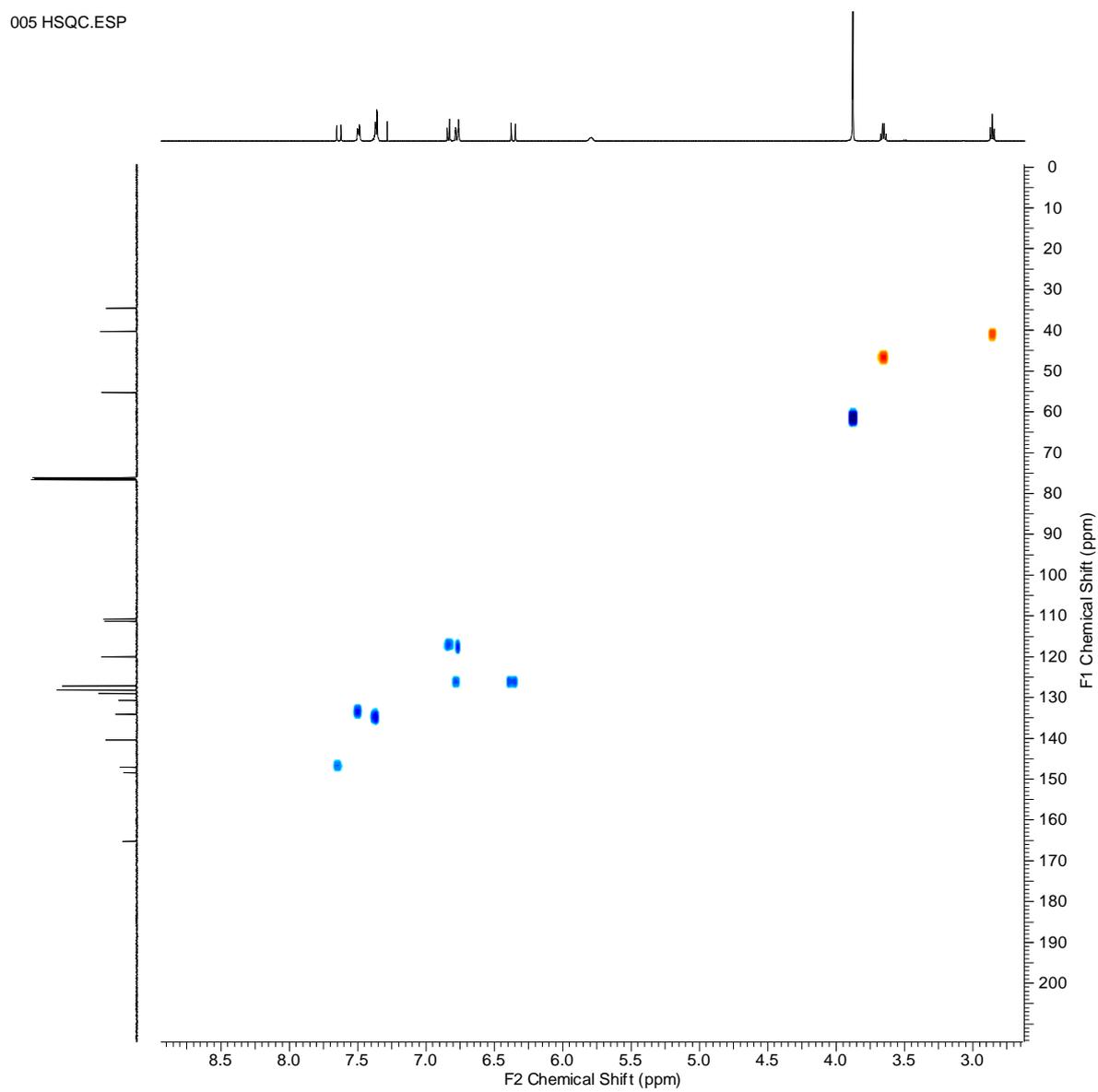


Figure S28. HSQC spectrum of compound **5** (CDCl_3 , 500 MHz).

Abundance

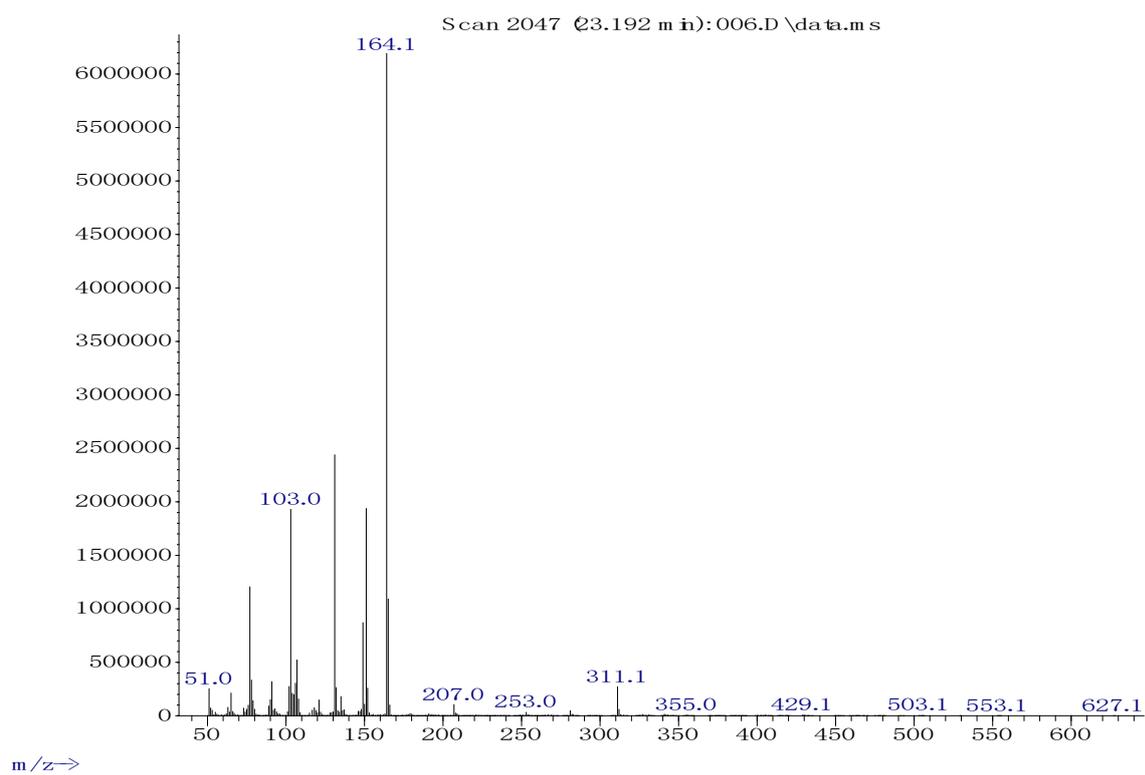


Figure S29. Mass spectrum of compound 5 (CH_2Cl_2).

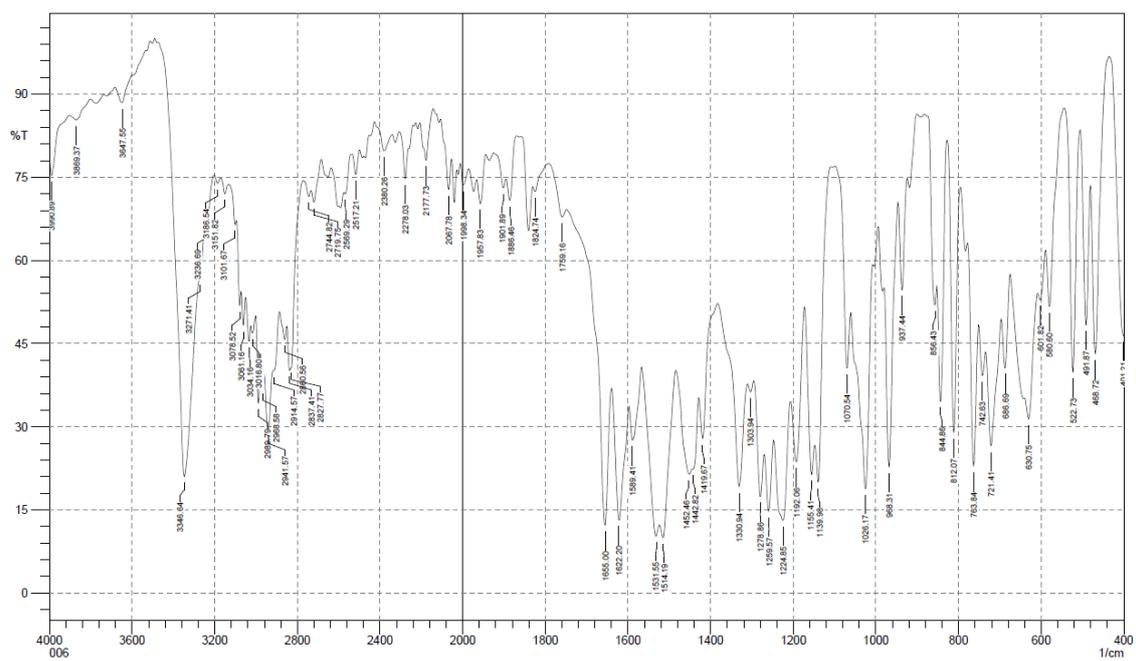


Figure S30. IR spectrum (KBr) of compound 5.

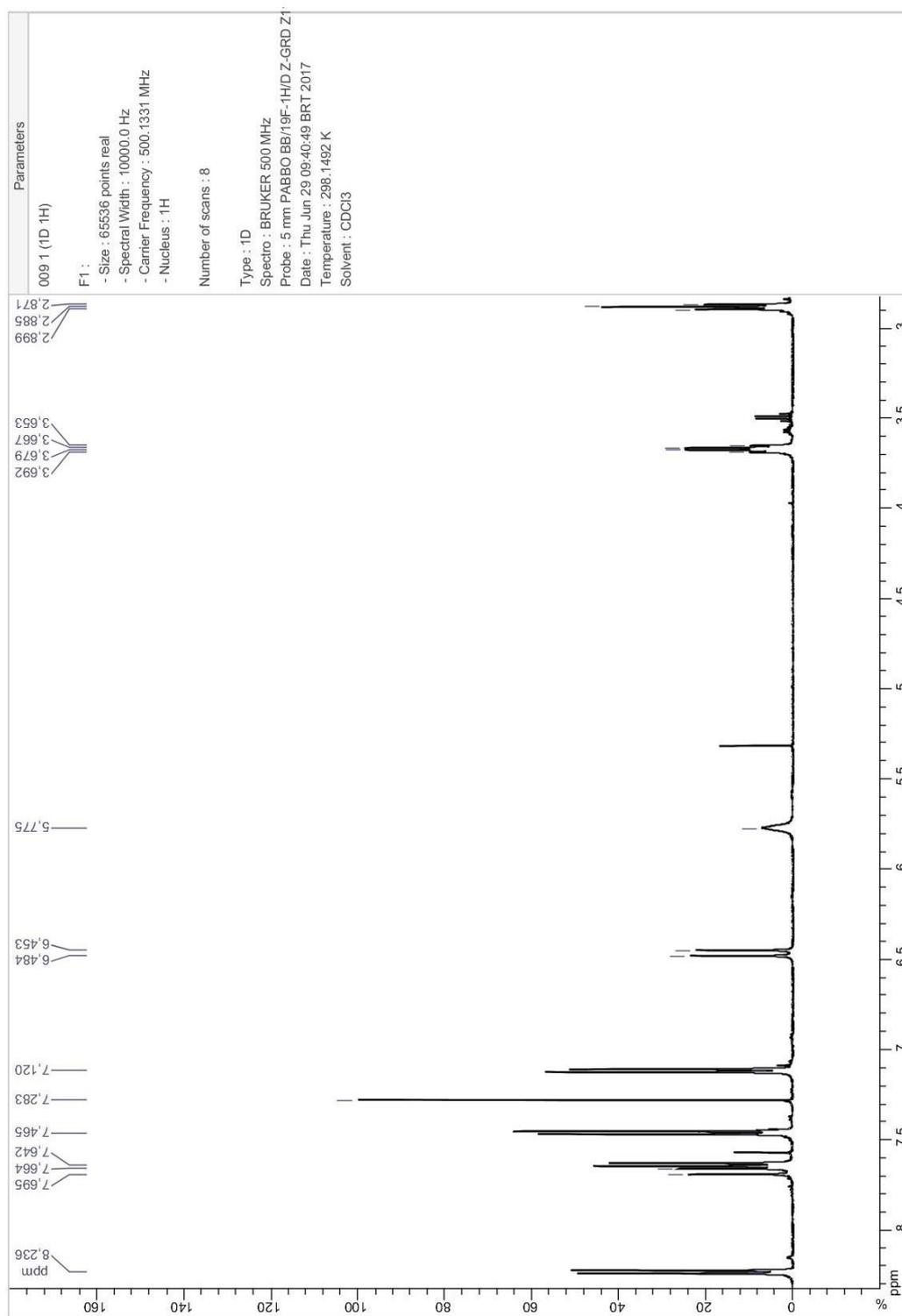


Figure S31. ^1H NMR spectrum of compound 6 (CDCl_3 , 500 MHz).

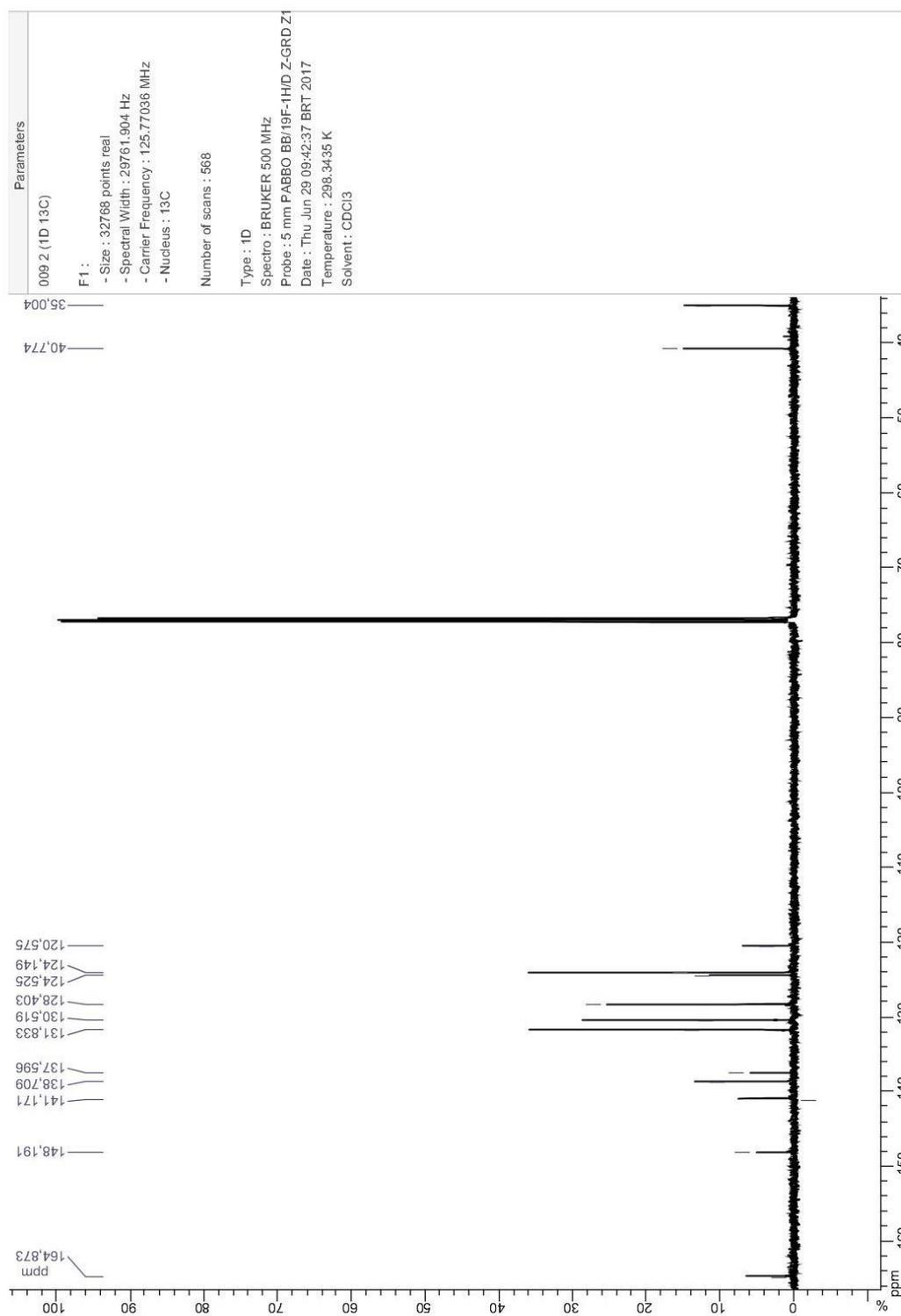


Figure S32. ^{13}C NMR spectrum of compound 6 (CDCl_3 , 125 MHz).

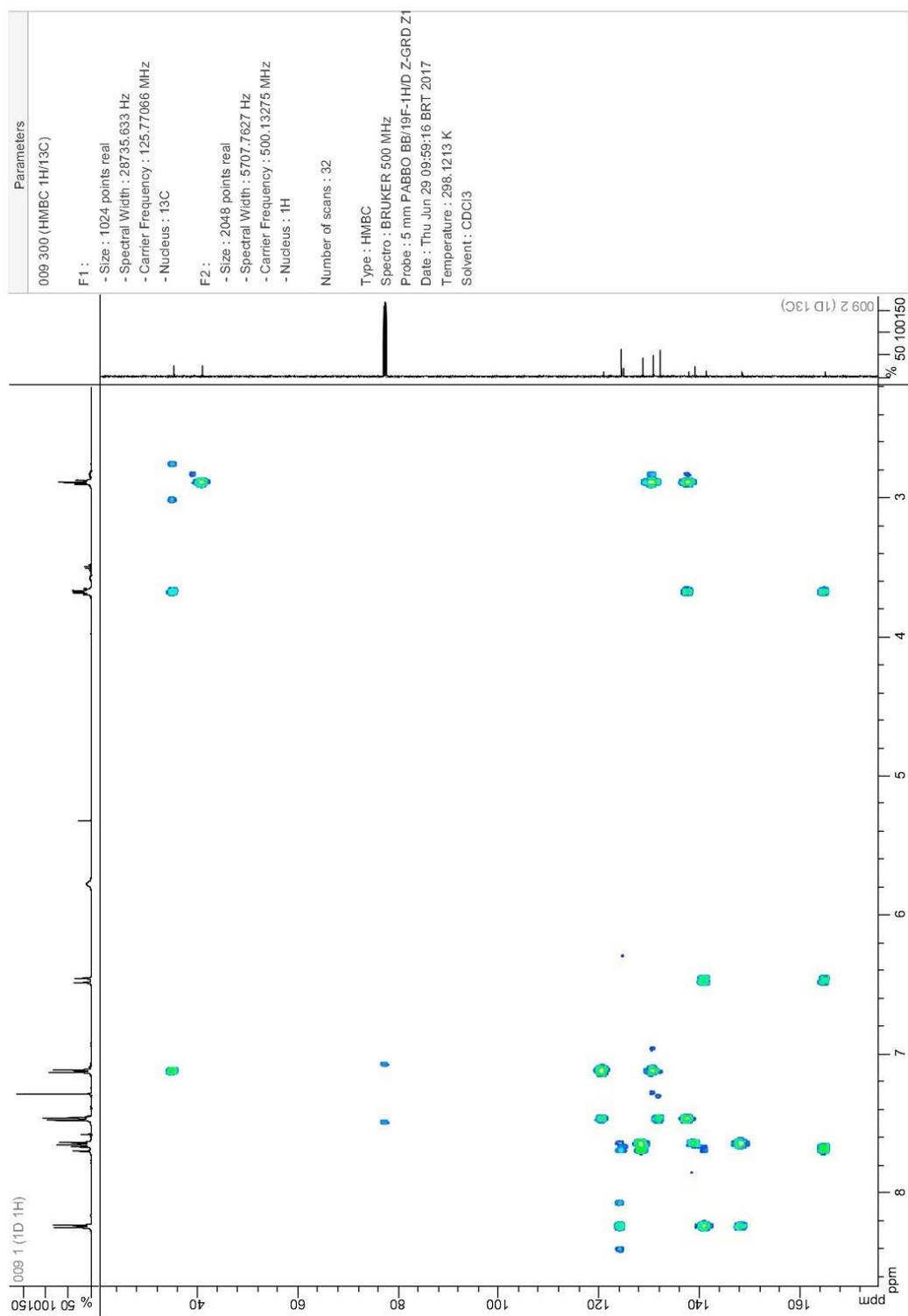


Figure S33. HMBC spectrum of compound **6** (CDCl₃, 500 MHz).

006 HSQC.ESP

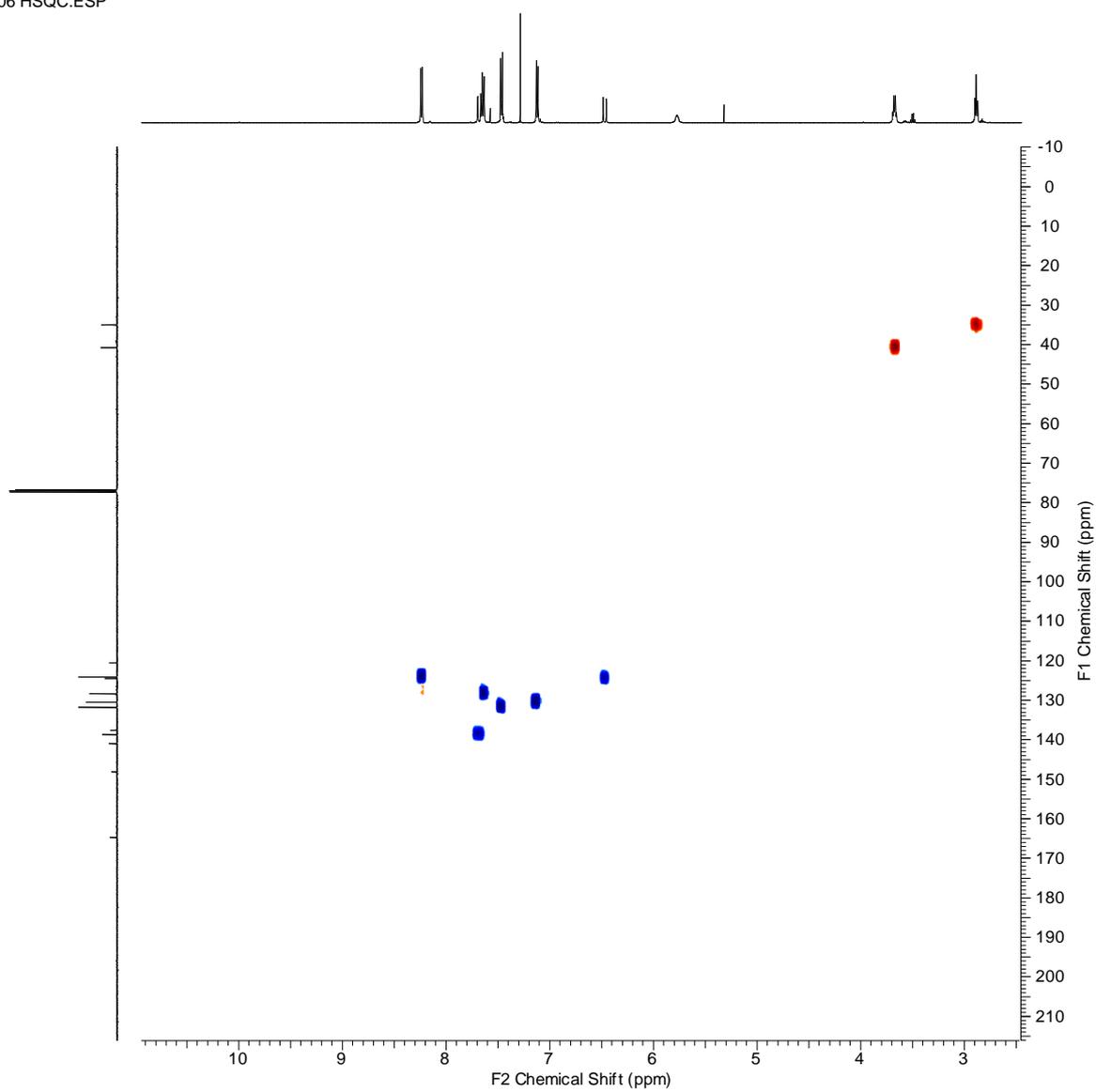


Figure S34. HSQC spectrum of compound **6** (CDCl₃, 500 MHz).

Abundance

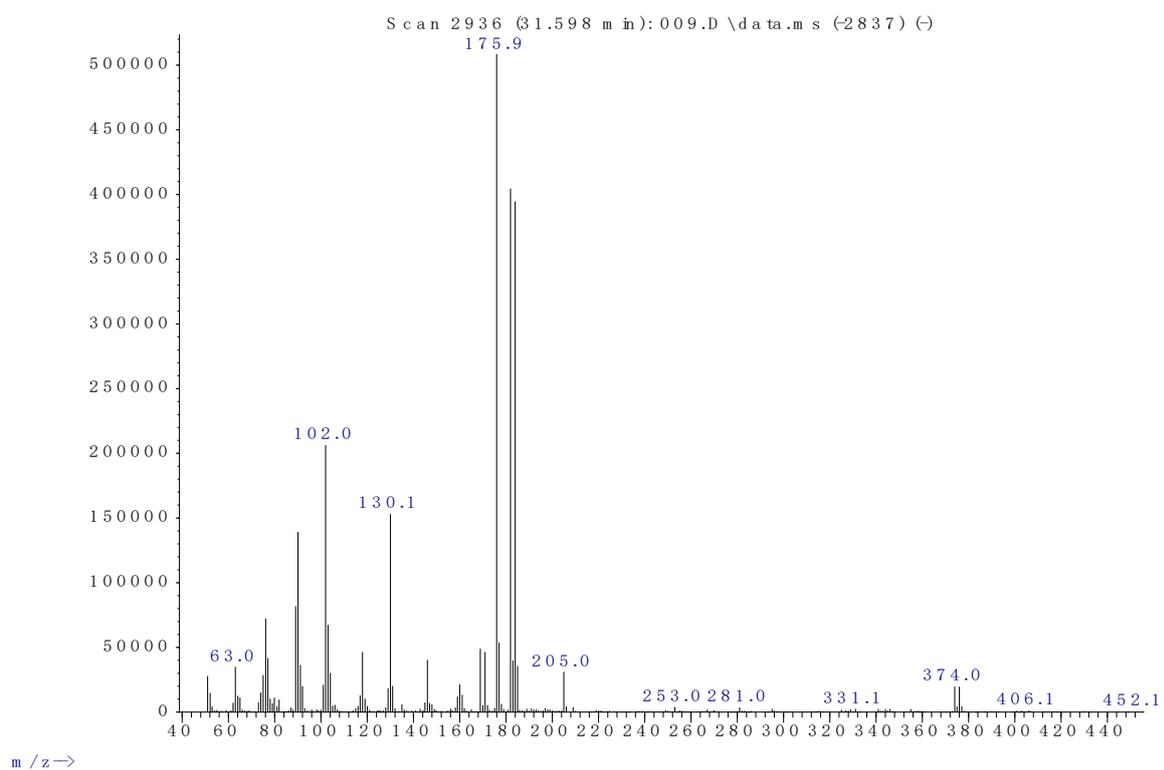


Figure S35. Mass spectrum of compound 6 (CH₂Cl₂).

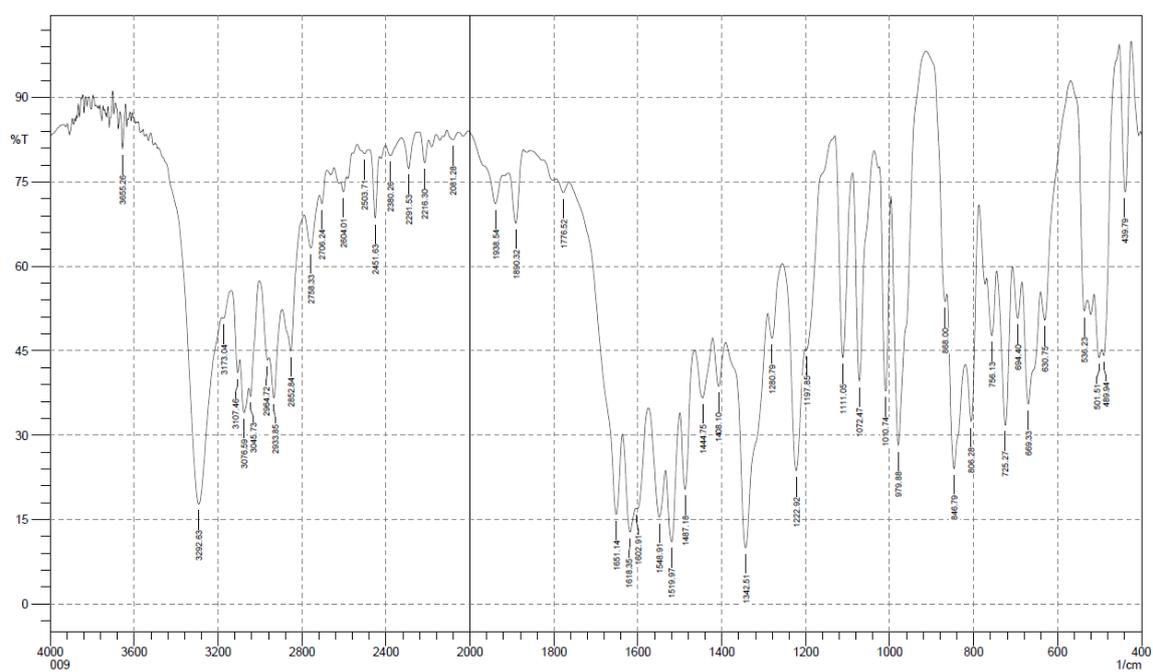


Figure S36. IR spectrum (KBr) of compound 6.

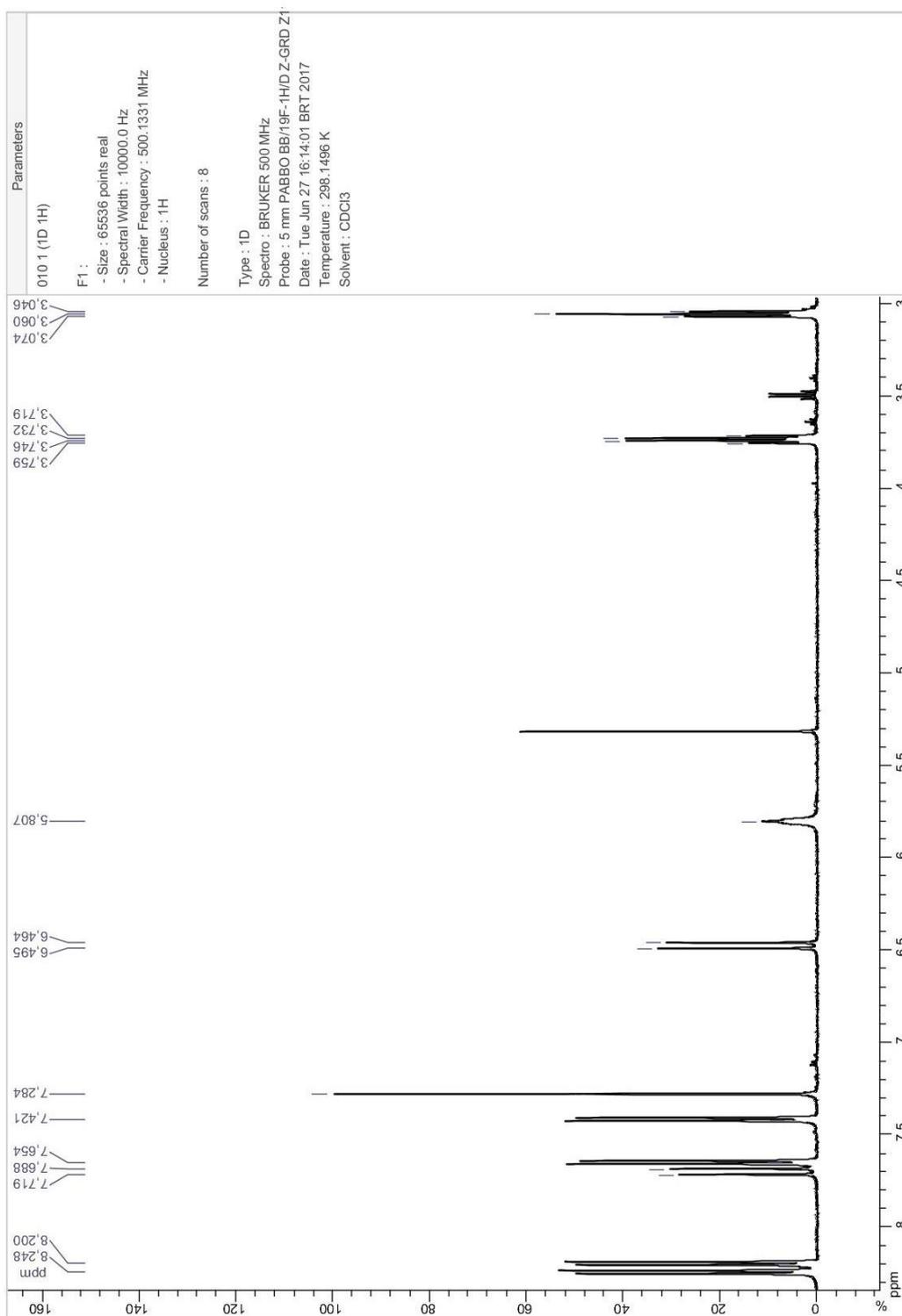


Figure S37. ^1H NMR spectrum of compound 7 (CDCl_3 , 500 MHz).

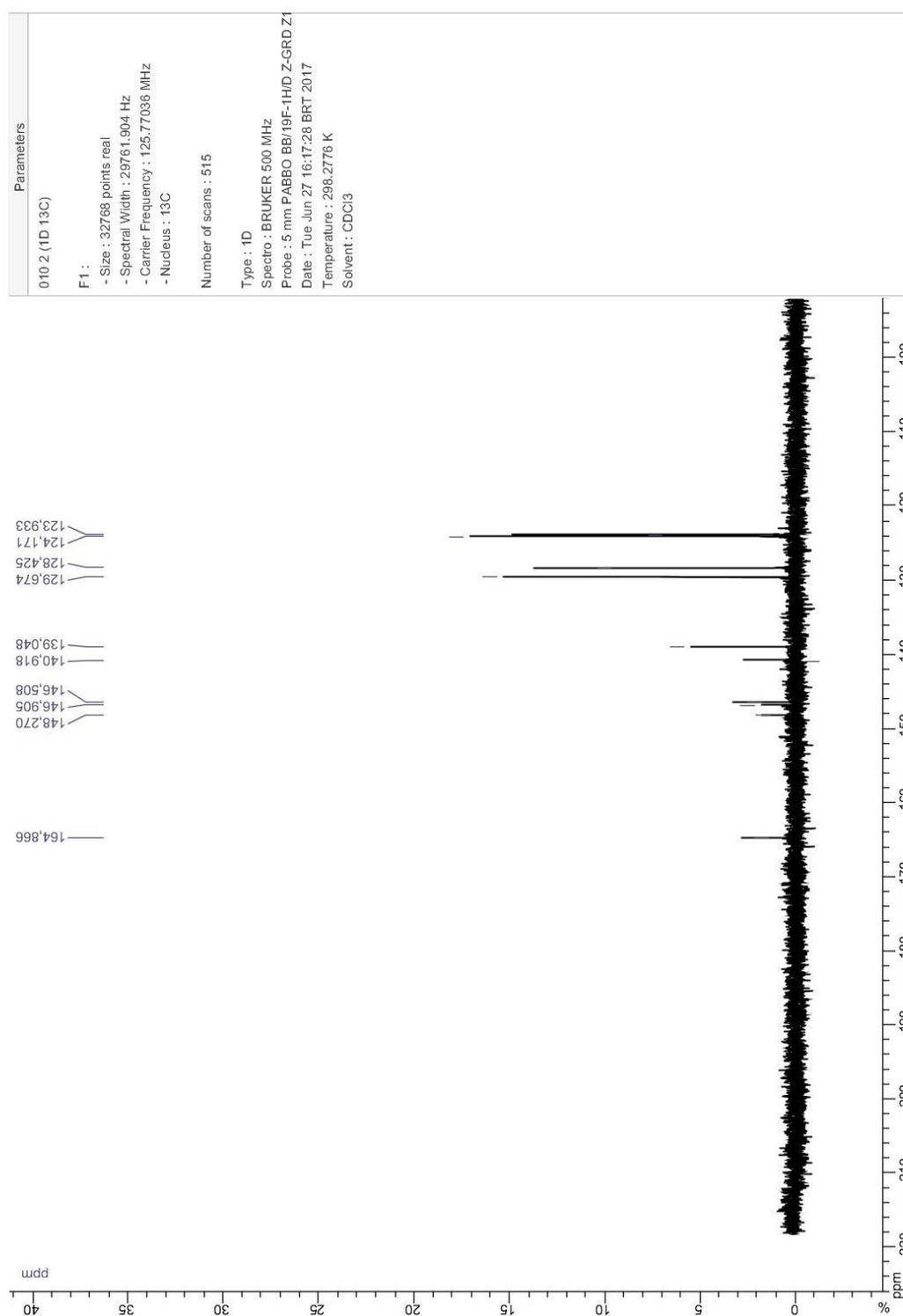


Figure S38. ^{13}C NMR spectrum of compound 7 (CDCl_3 , 125 MHz).

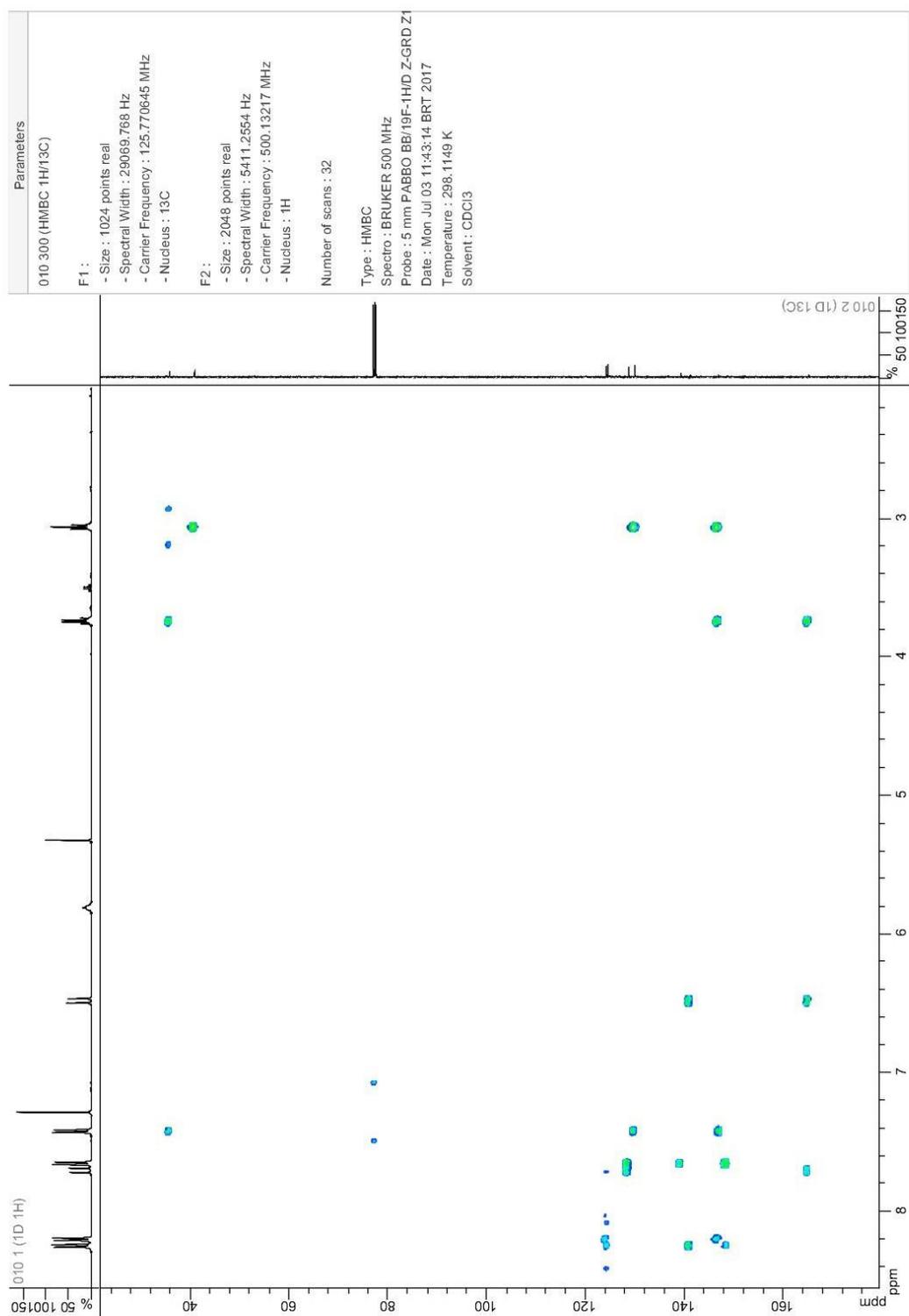


Figure S39. HMBC spectrum of compound 7 (CDCl₃, 500 MHz).

007 HSQC.ESP

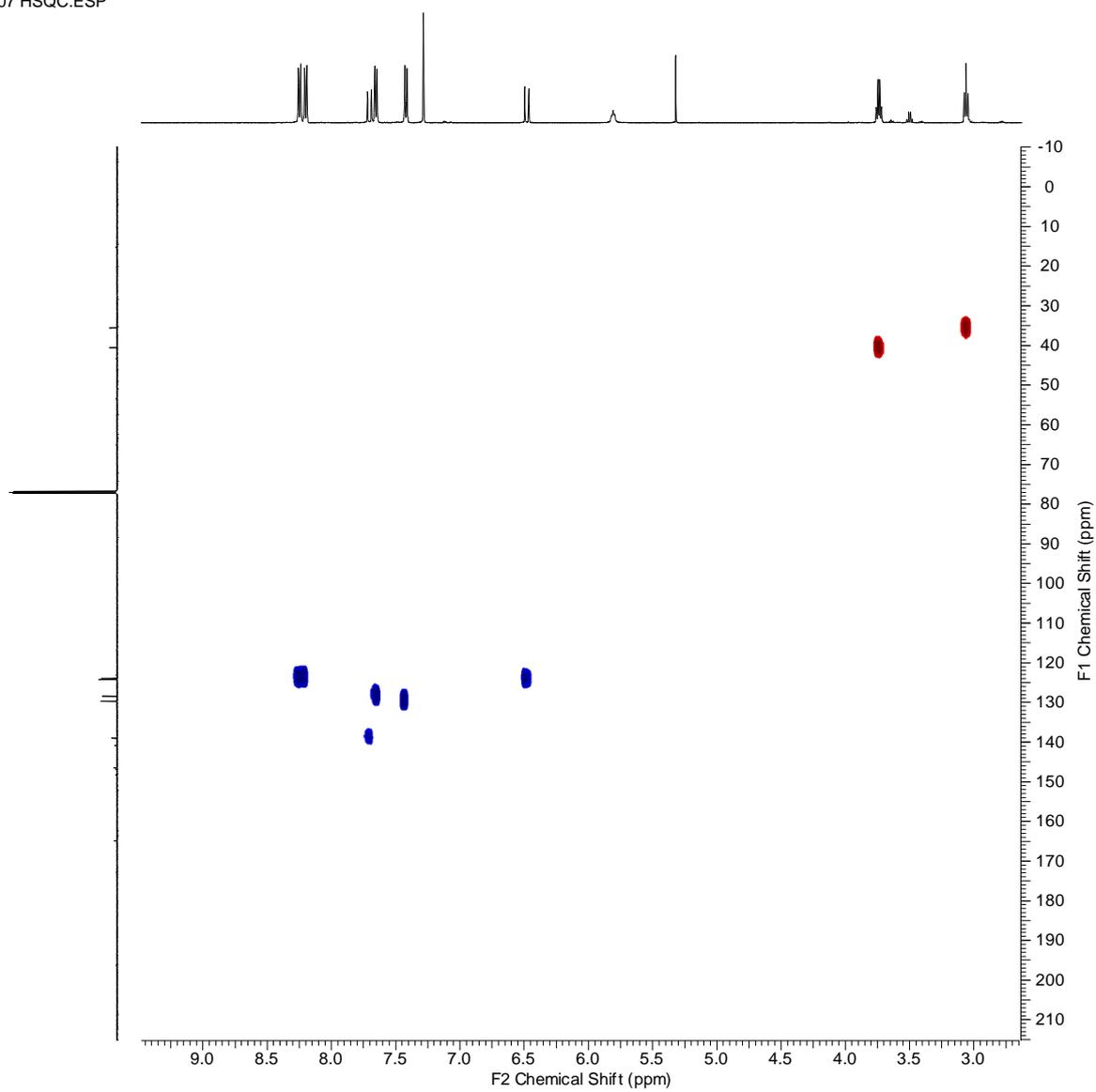


Figure S40. HSQC spectrum of compound 7 (CDCl₃, 500 MHz).

Abundance

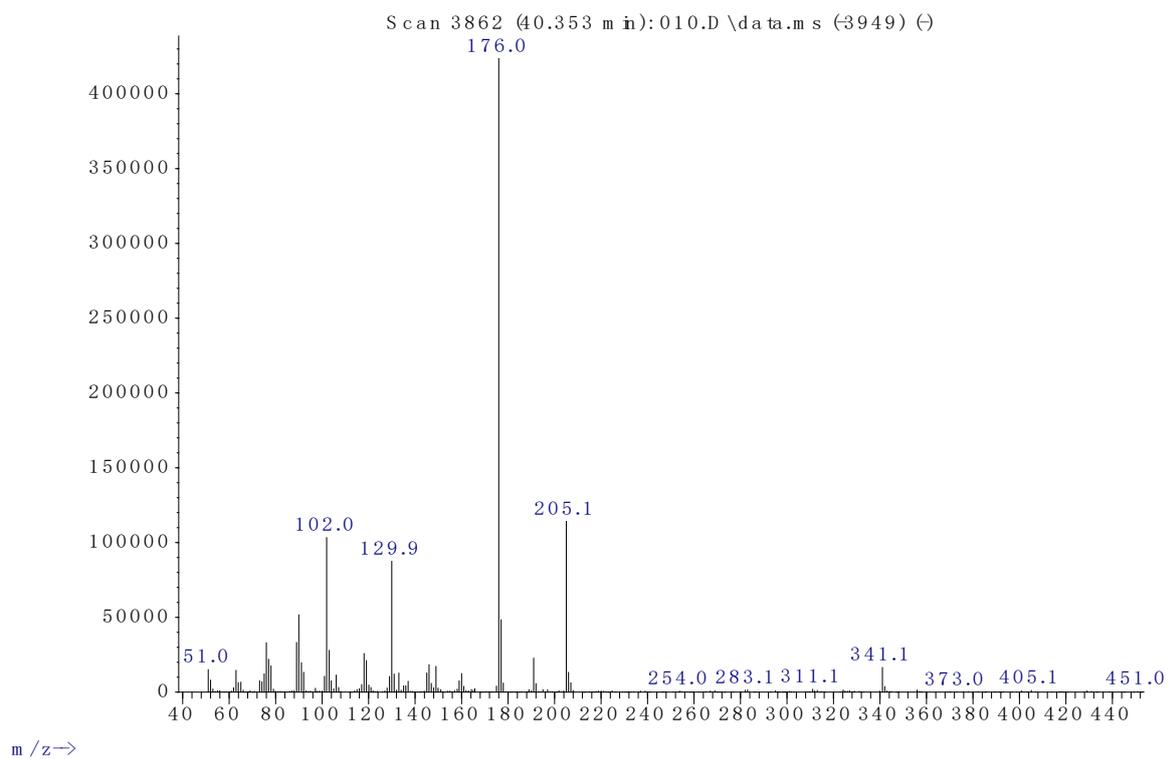


Figure S41. Mass spectrum of compound 7 (CH_2Cl_2).

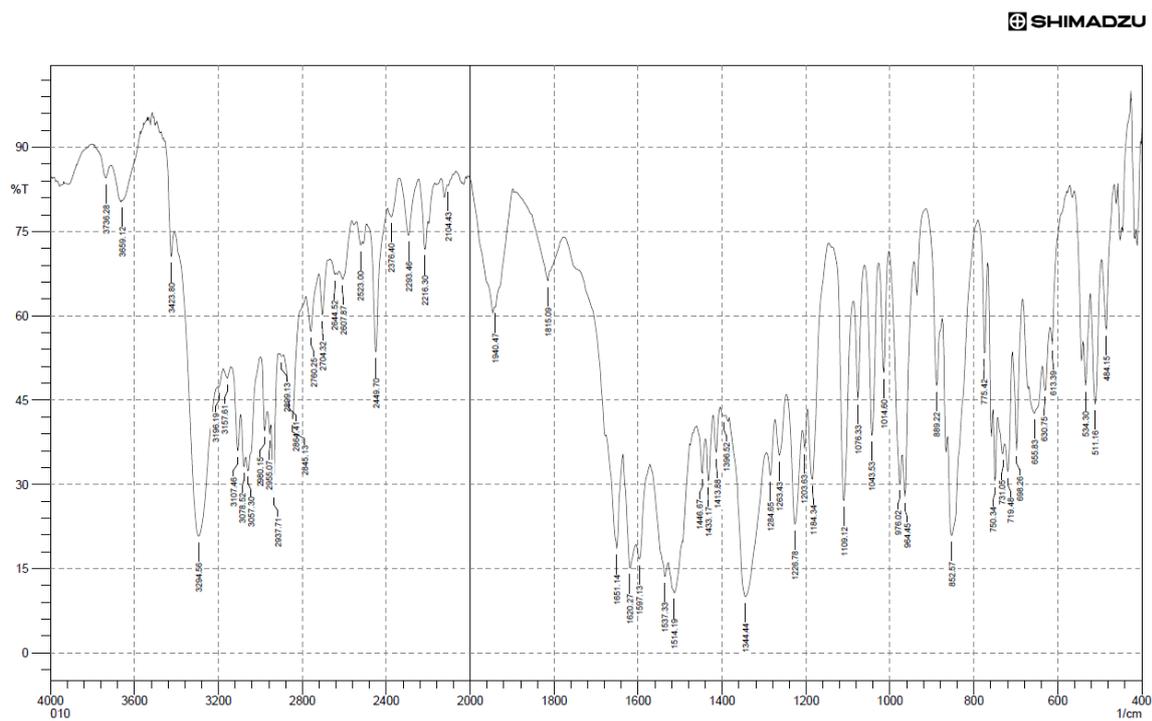


Figure S42. IR spectrum (KBr) of compound 7.

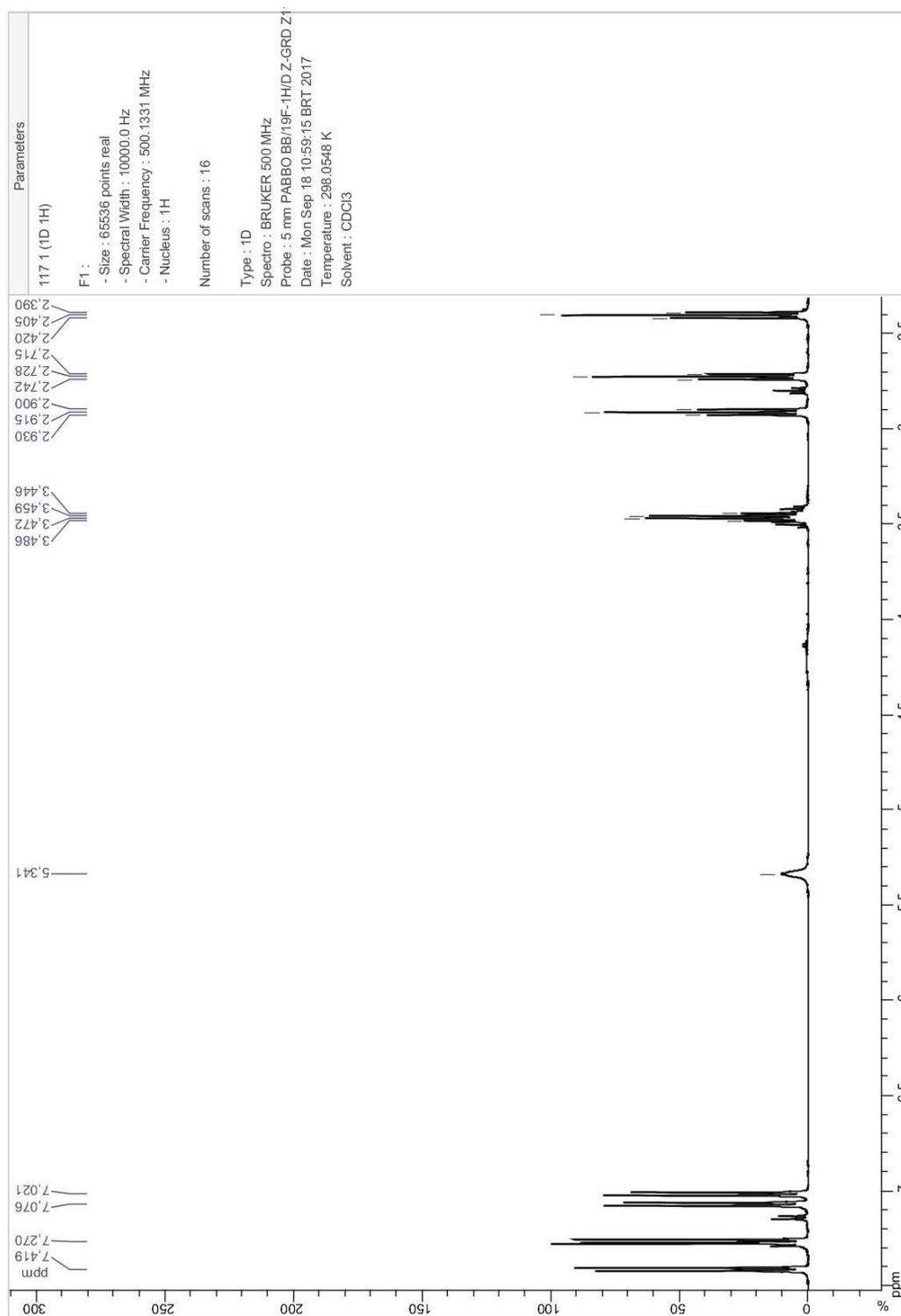


Figure S43. ^1H NMR spectrum of compound **8** (CDCl_3 , 500 MHz).

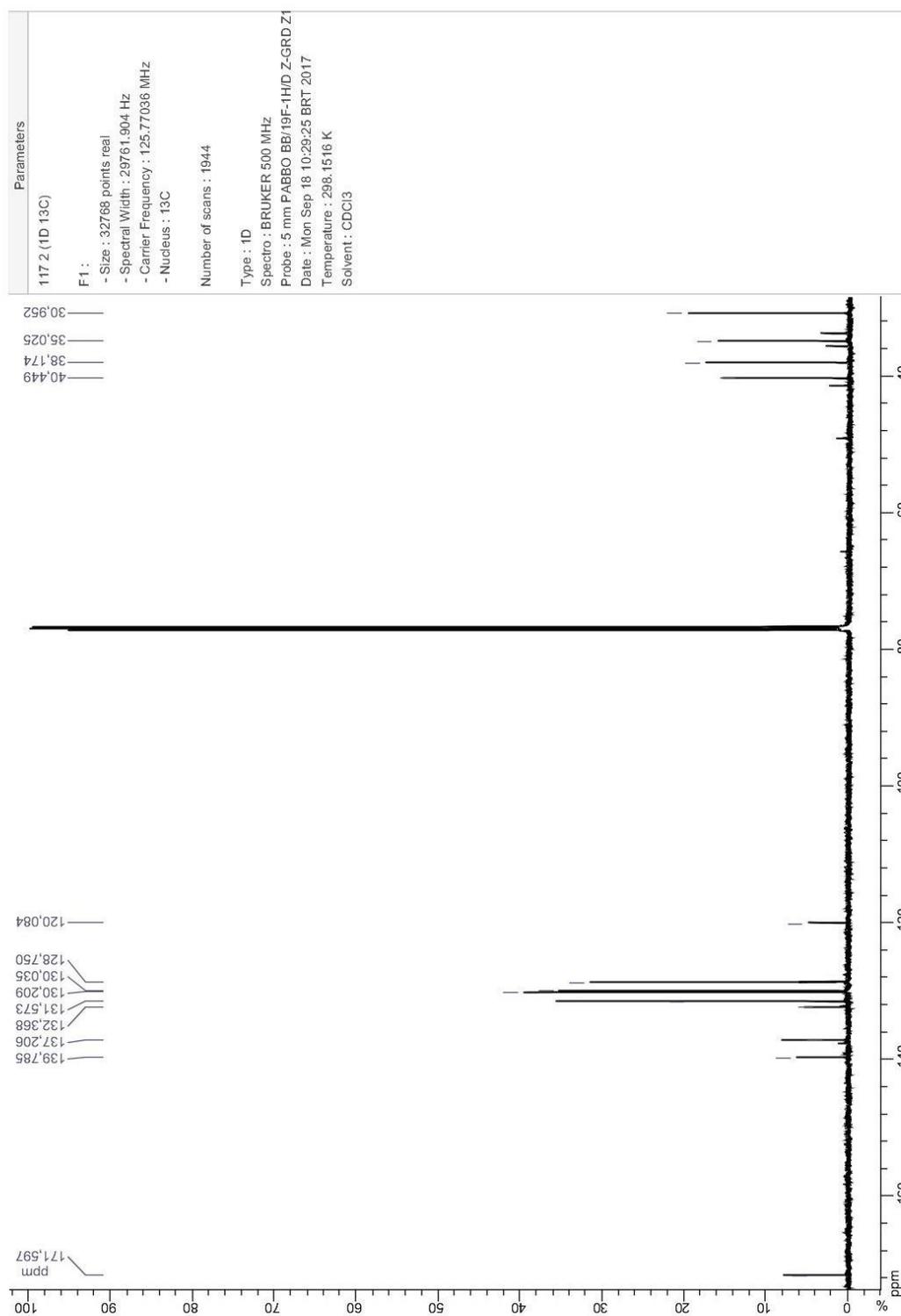


Figure S44. ^{13}C NMR spectrum of compound **8** (CDCl_3 , 125 MHz).

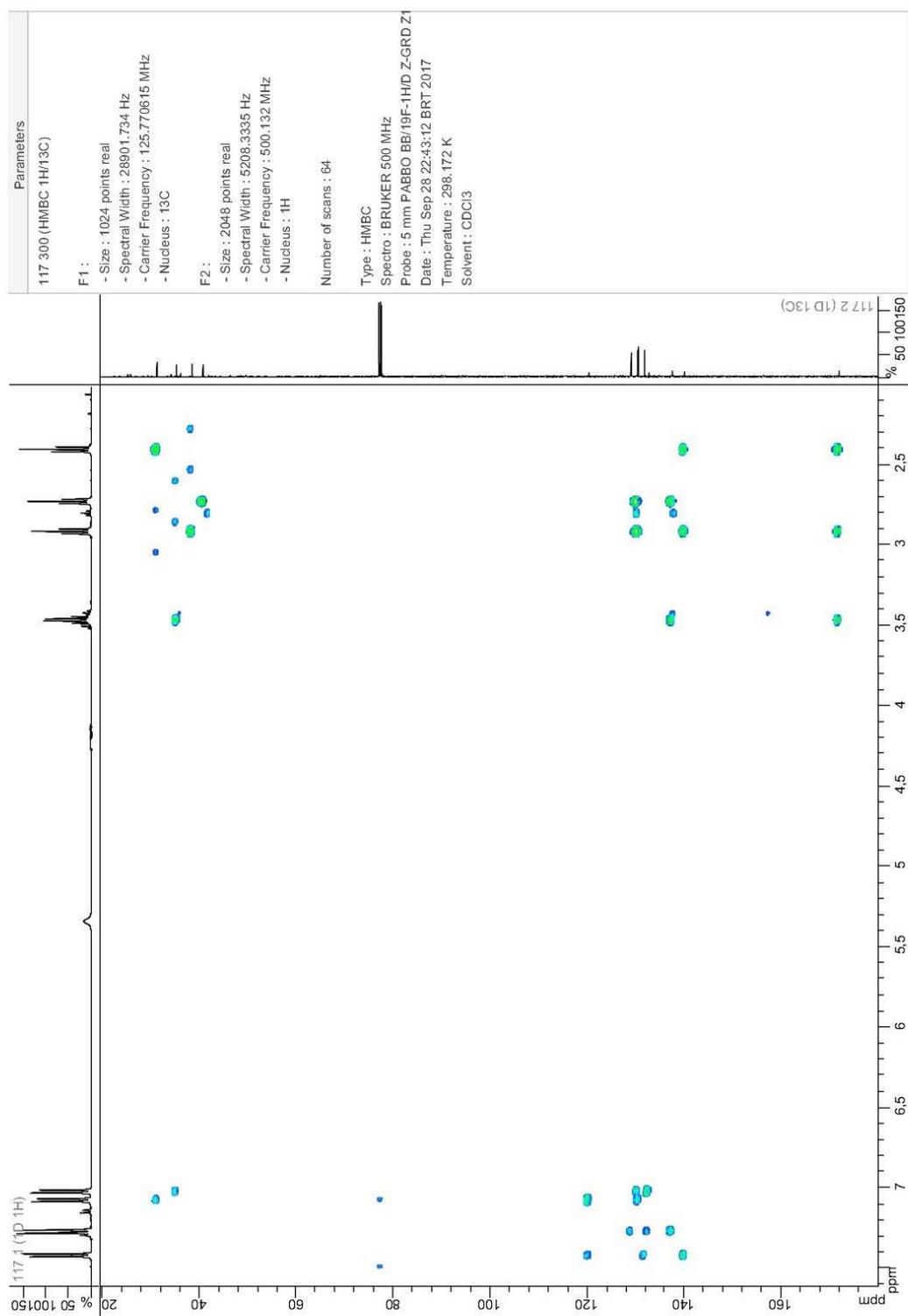


Figure S45. HMBC spectrum of compound **8** (CDCl₃, 500 MHz).

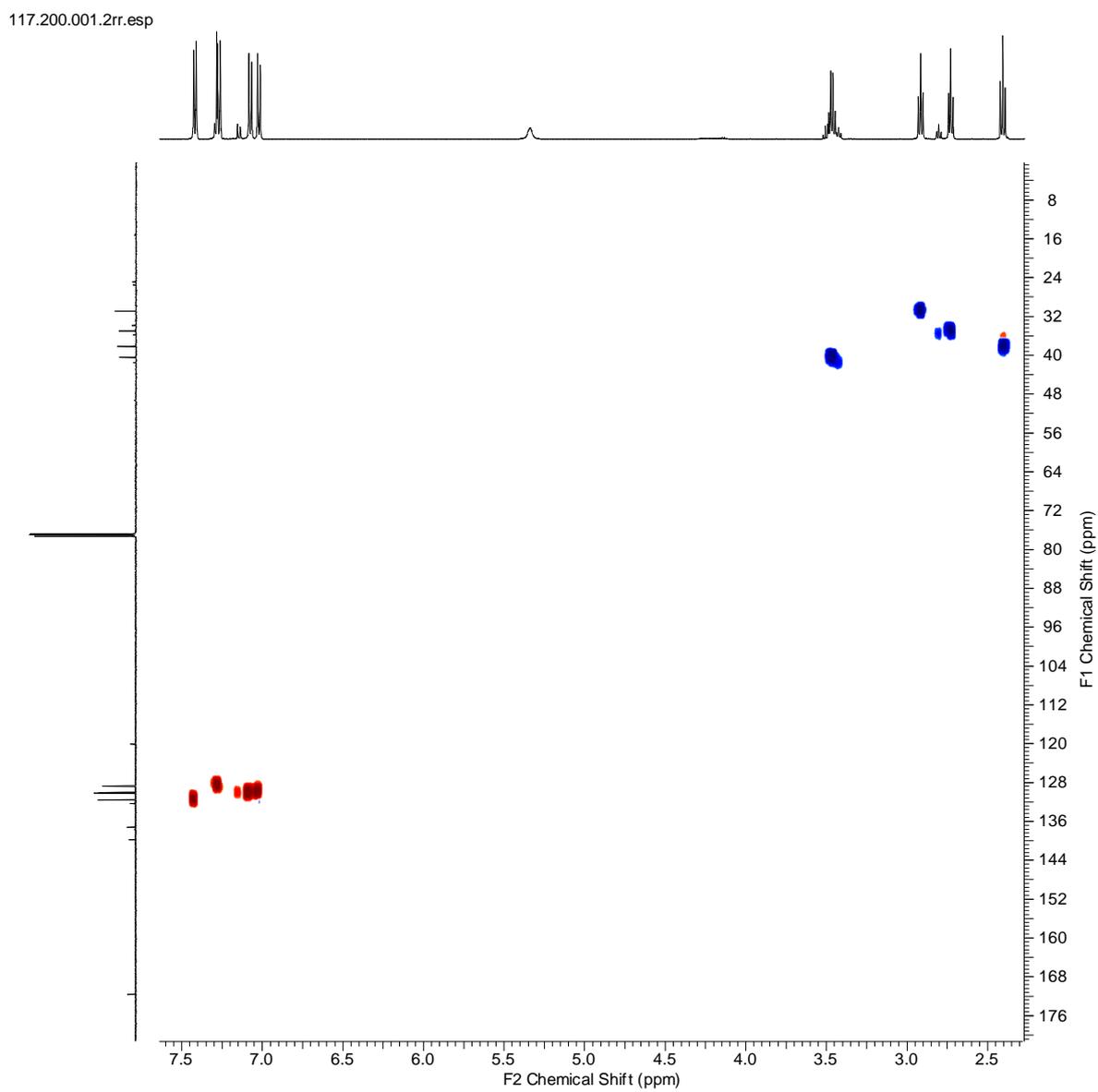


Figure S46. HSQC spectrum of compound **8** (CDCl₃, 500 MHz).

Abundance

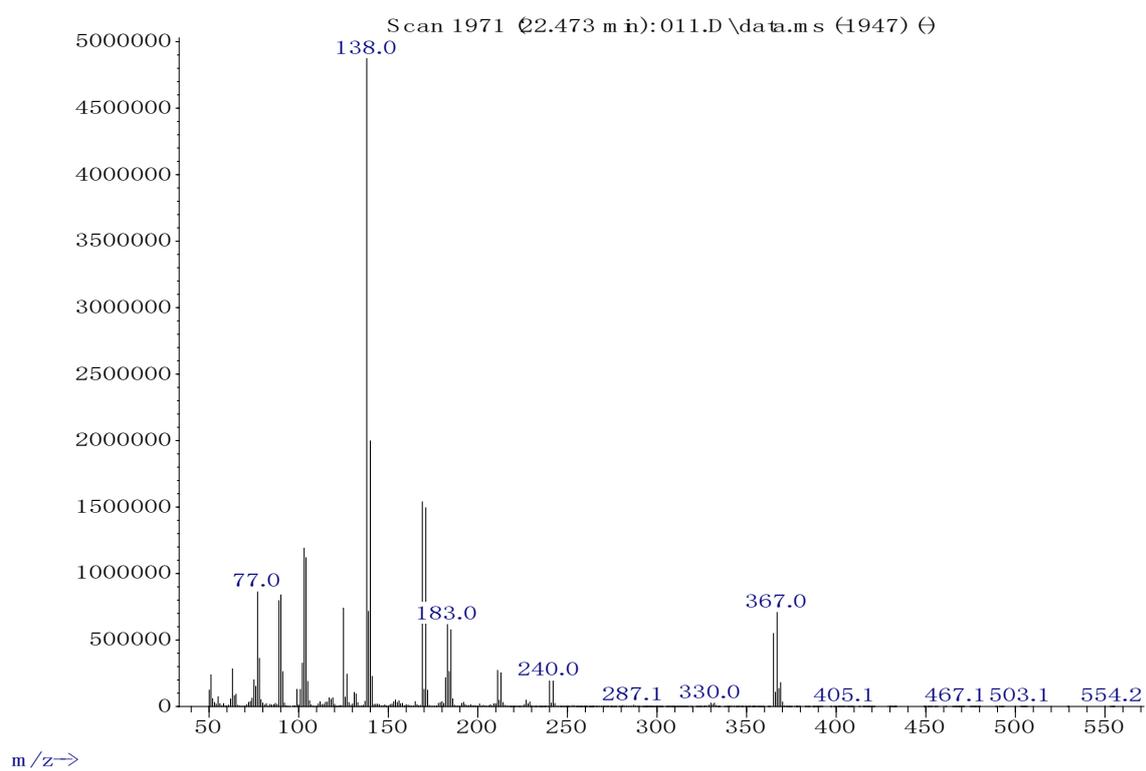


Figure S47. Mass spectrum of compound 8 (CH_2Cl_2).

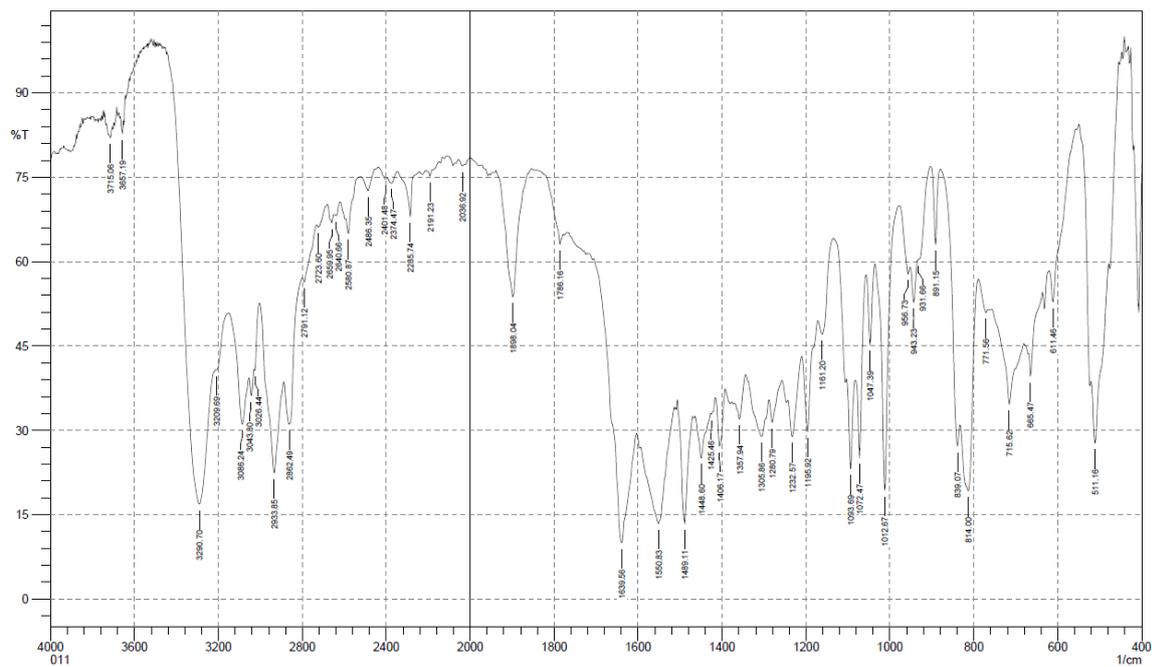


Figure S48. IR spectrum (KBr) of compound 8.