

New potential multifunctional agents for the Alzheimer's disease treatment based on tacrine conjugates with 2-arylhydrazilidene-1,3-diketones

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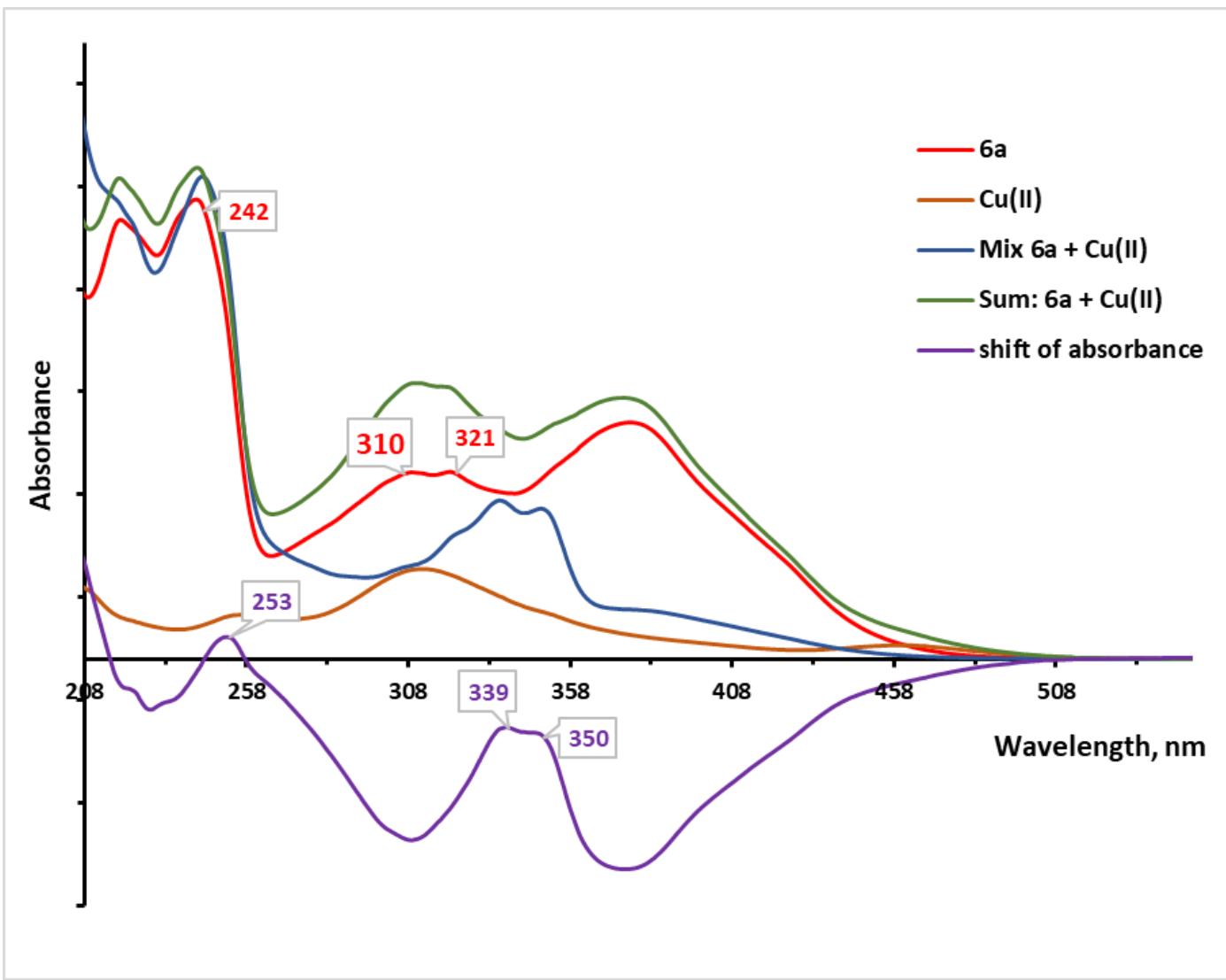


Figure S1. Absorption spectra of compound **6a** (40 μ M), Cu²⁺ ions solution (40 μ M), a sum of **6a** and Cu²⁺, their mixture, and the shift of the spectra caused by the formation of a complex.

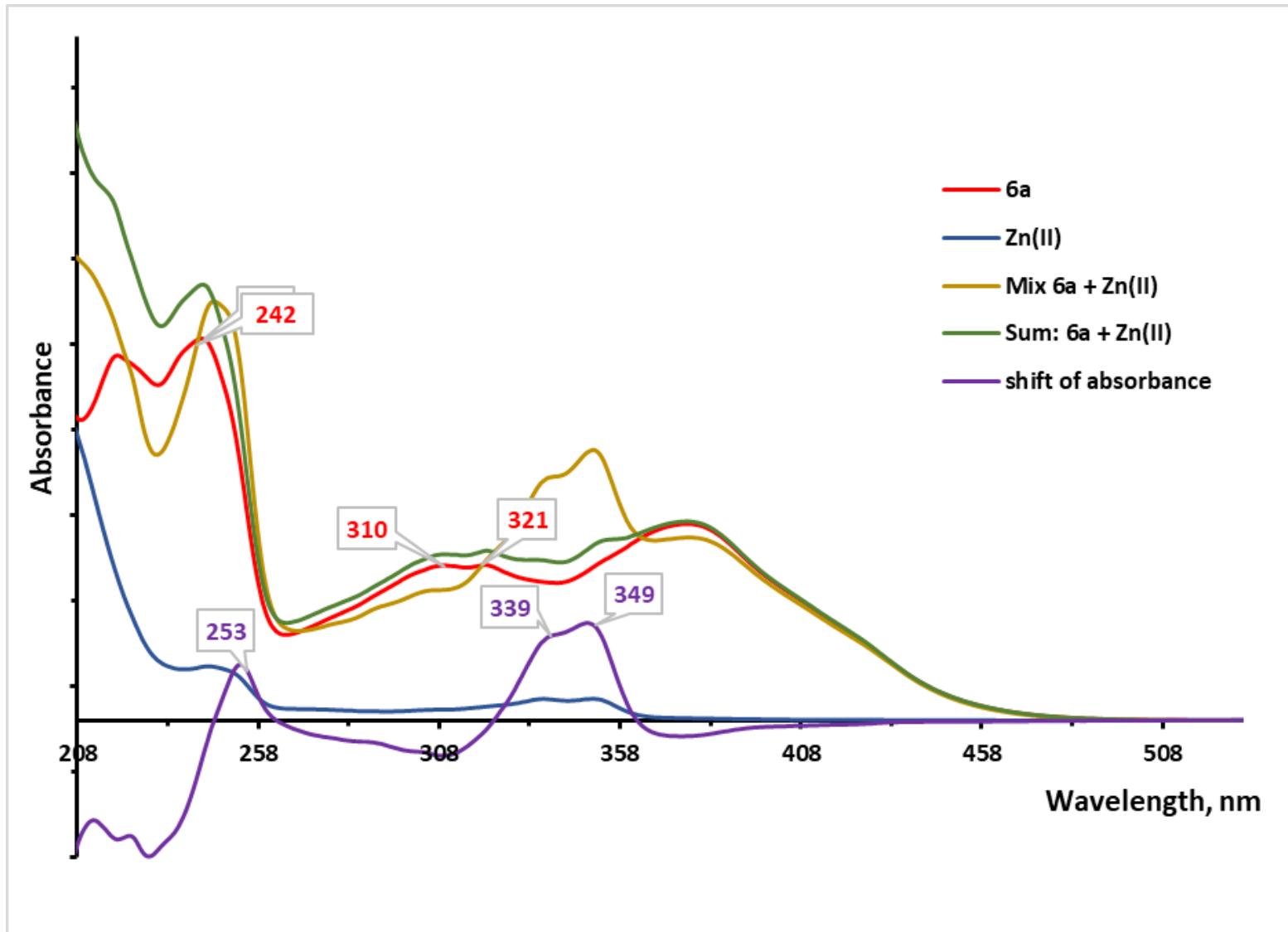


Figure S2. Absorption spectra of compound **6a** (40 μ M), Zn²⁺ ions solution (40 μ M), a sum of **6a** and Zn²⁺, their mixture, and the shift of the spectra caused by the formation of a complex.

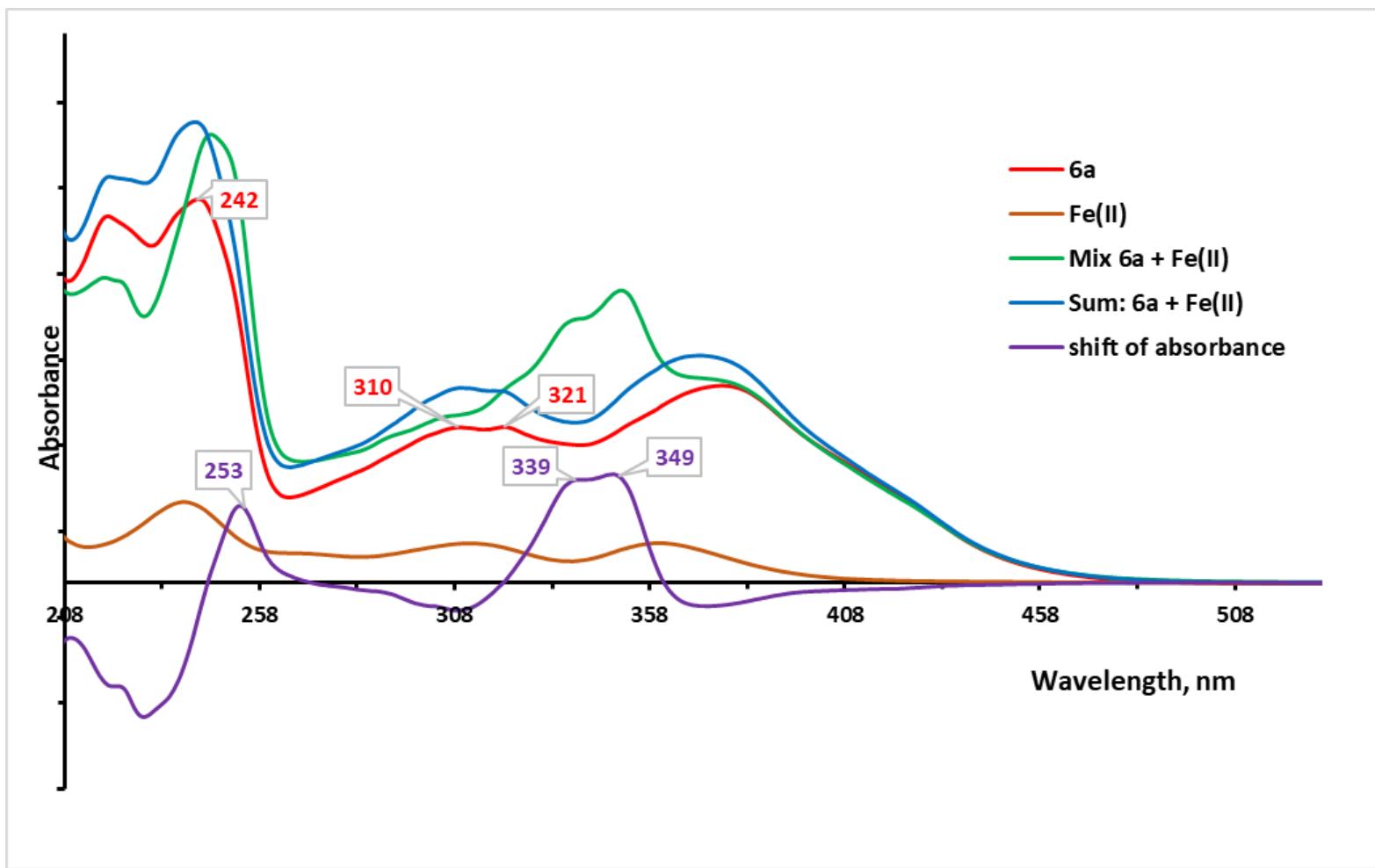


Figure S3. Absorption spectra of compound **6a** ($40\mu\text{M}$), Fe^{2+} ions solution ($40\mu\text{M}$), a sum of **6a** and Fe^{2+} , their mixture, and the shift of the spectra caused by the formation of a complex.

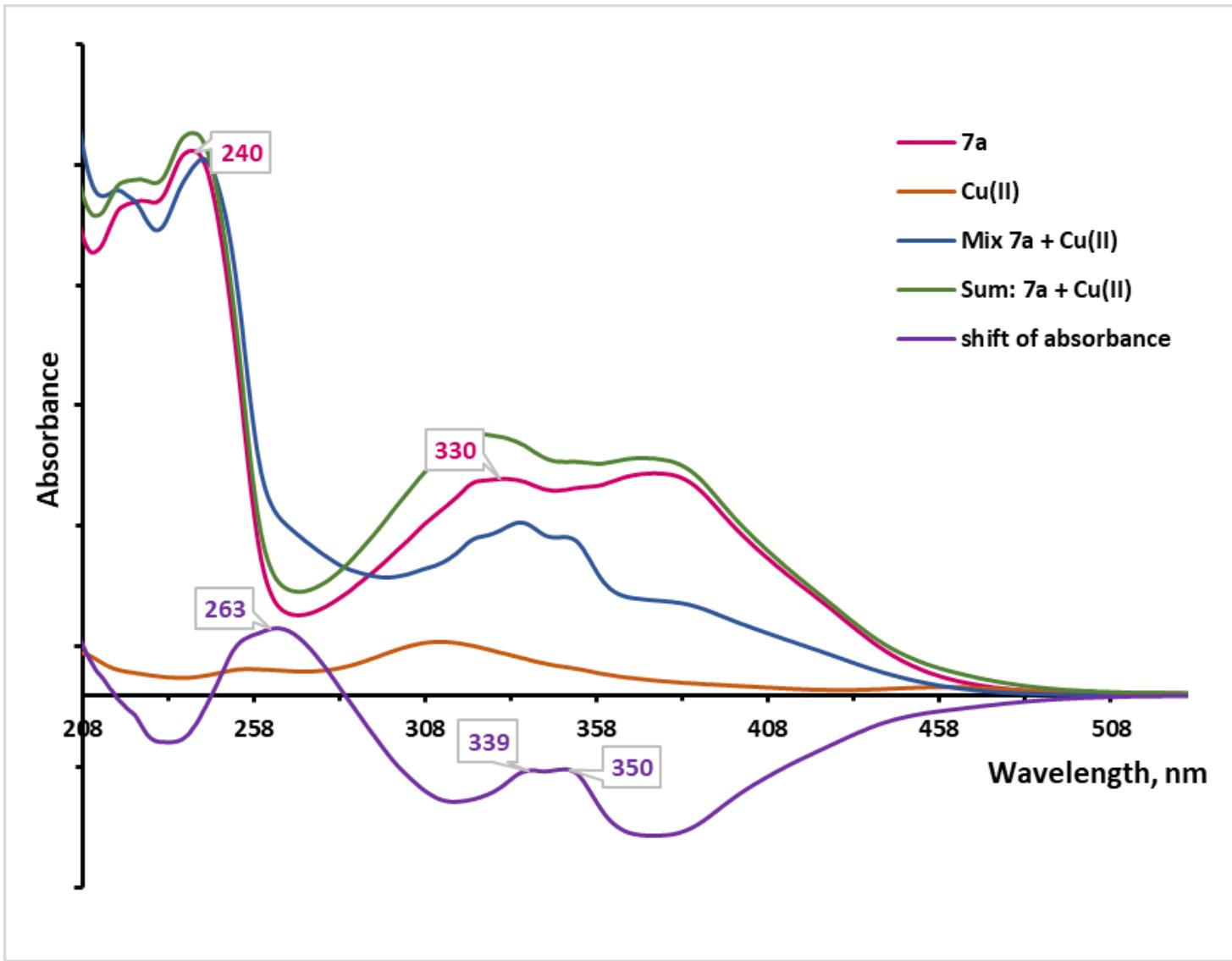


Figure S4. Absorption spectra of compound 7a (40 μ M), Cu²⁺ ions solution (40 μ M), a sum of 7a and Cu²⁺, their mixture, and the shift of the spectra caused by the formation of a complex.

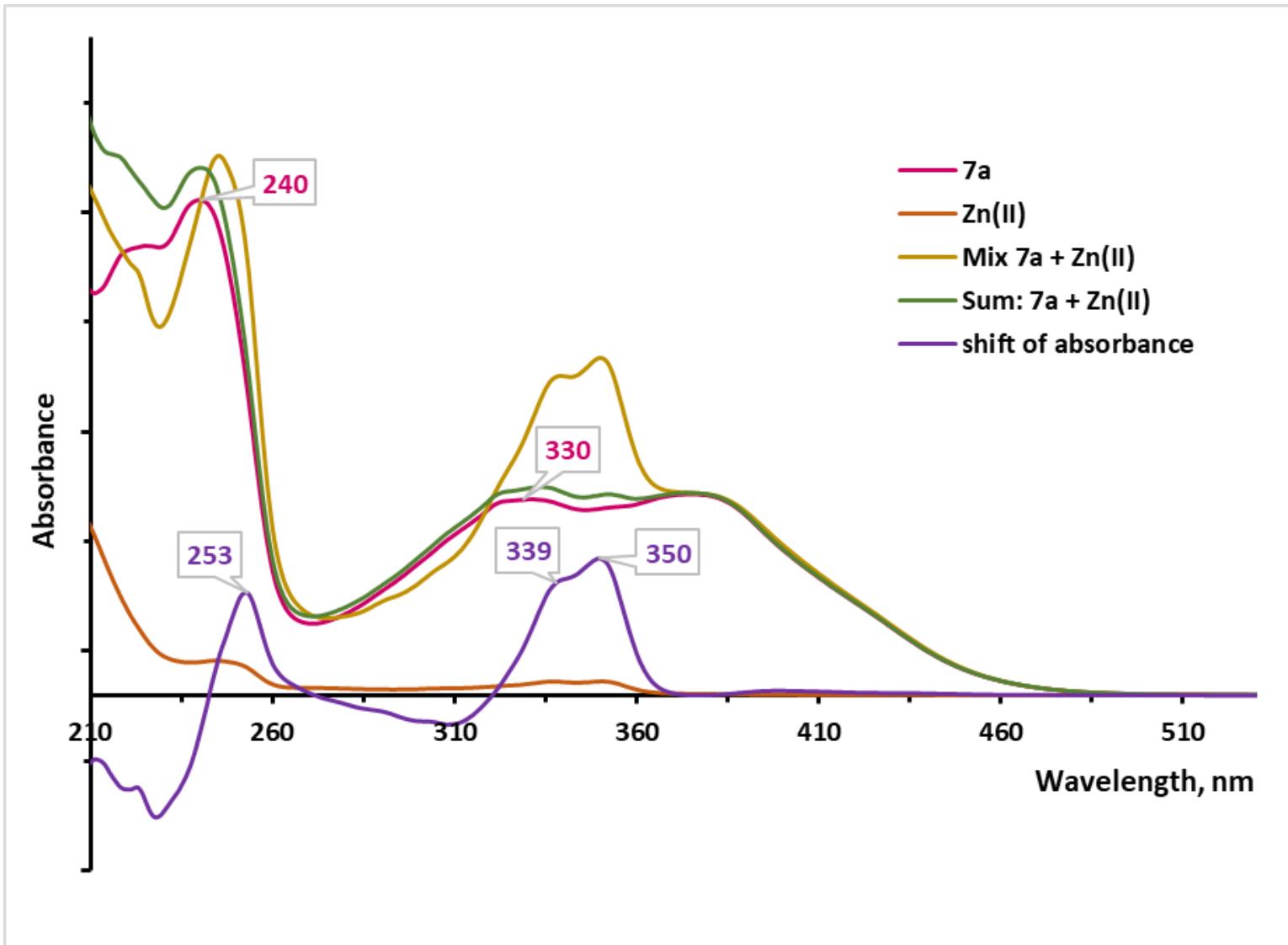


Figure S5. Absorption spectra of compound **7a** (40 μ M), Zn²⁺ ions solution (40 μ M), a sum of **7a** and Zn²⁺, their mixture, and the shift of the spectra caused by the formation of a complex.

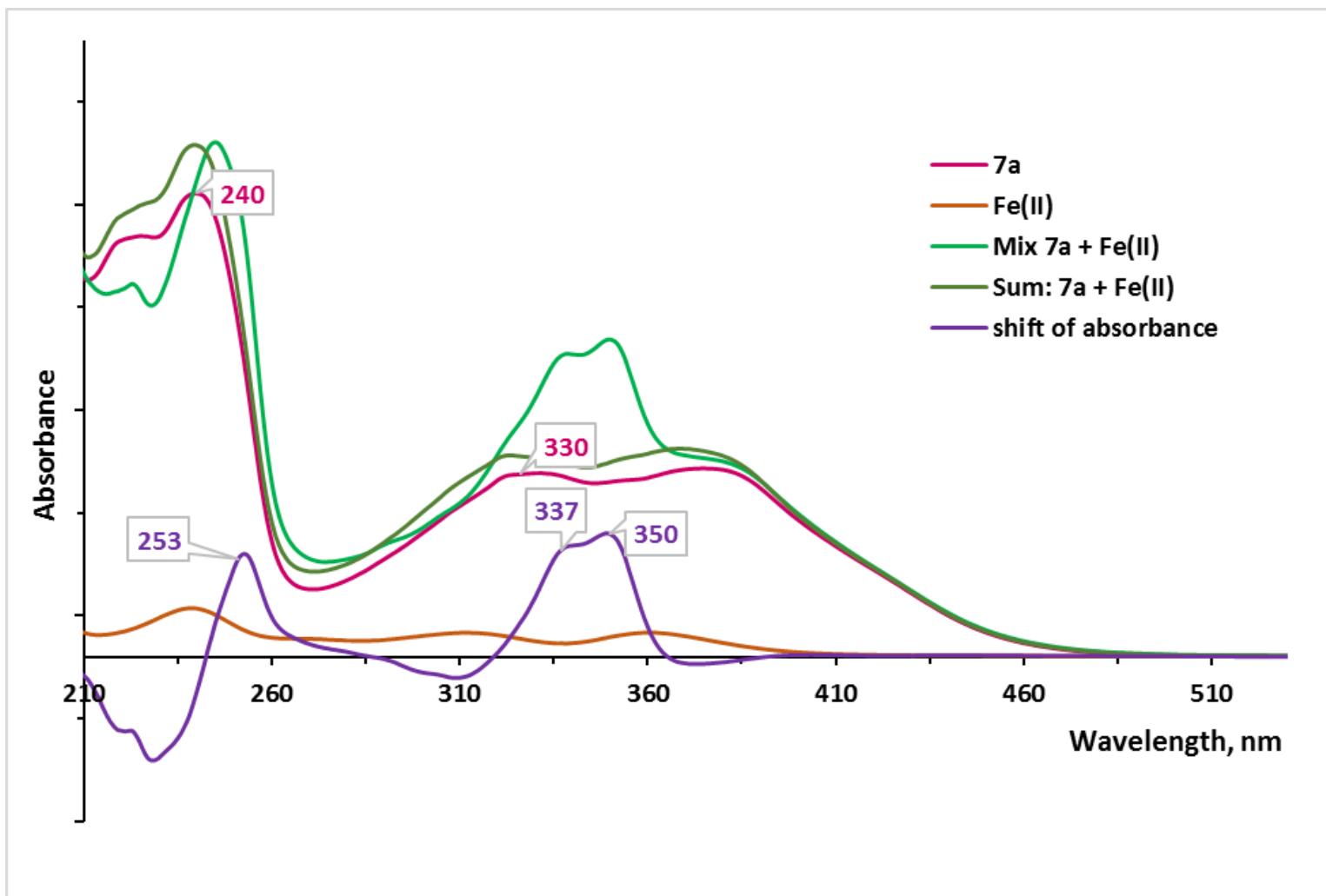


Figure S6. Absorption spectra of compound **7a** (40 μ M), Fe²⁺ ions solution (40 μ M), a sum of **7a** and Fe²⁺, their mixture, and the shift of the spectra caused by the formation of a complex.

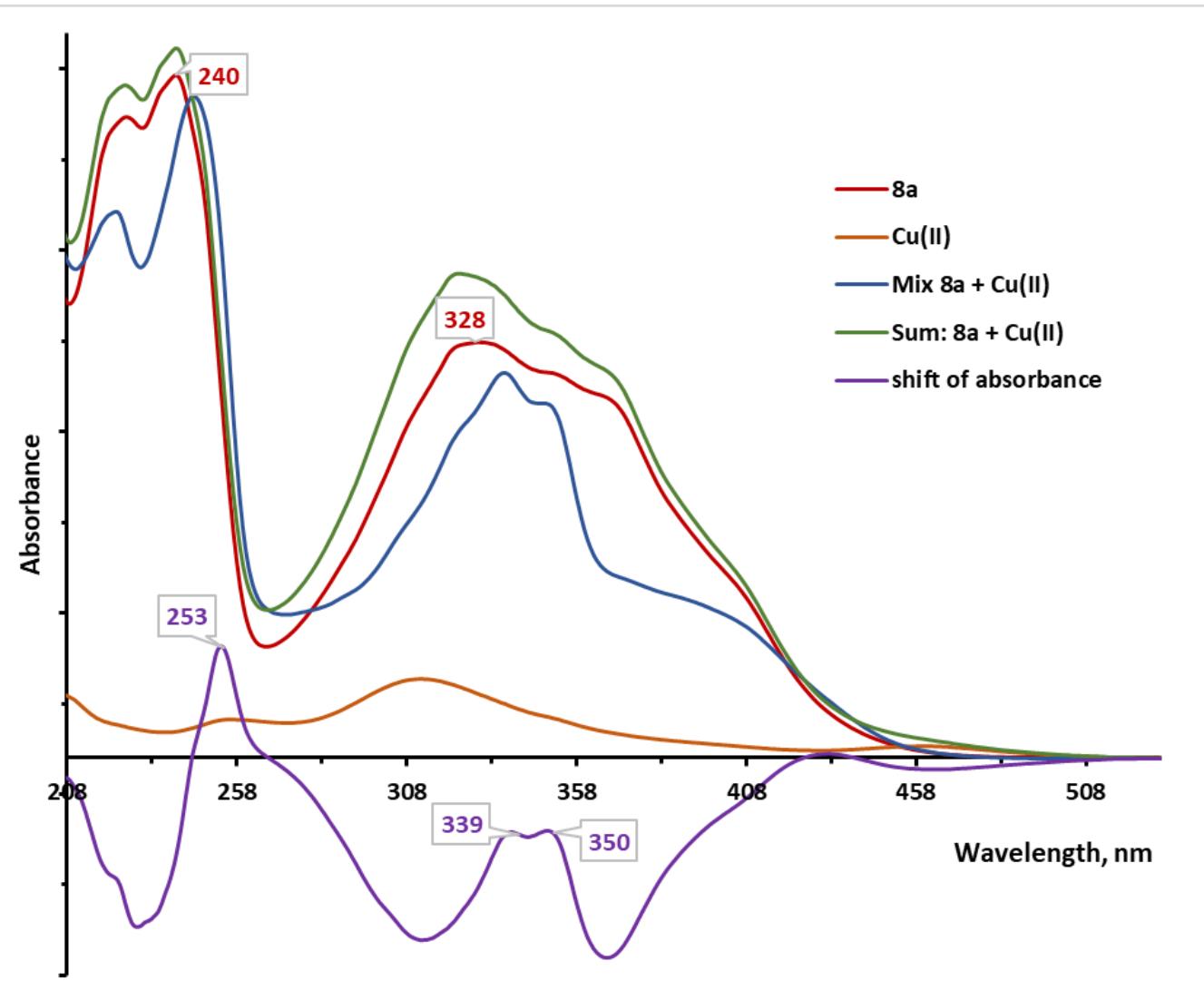


Figure S7. Absorption spectra of compound **8a** ($40\mu\text{M}$), Cu^{2+} ions solution ($40\mu\text{M}$), a sum of **8a** and Cu^{2+} , their mixture, and the shift of the spectra caused by the formation of a complex

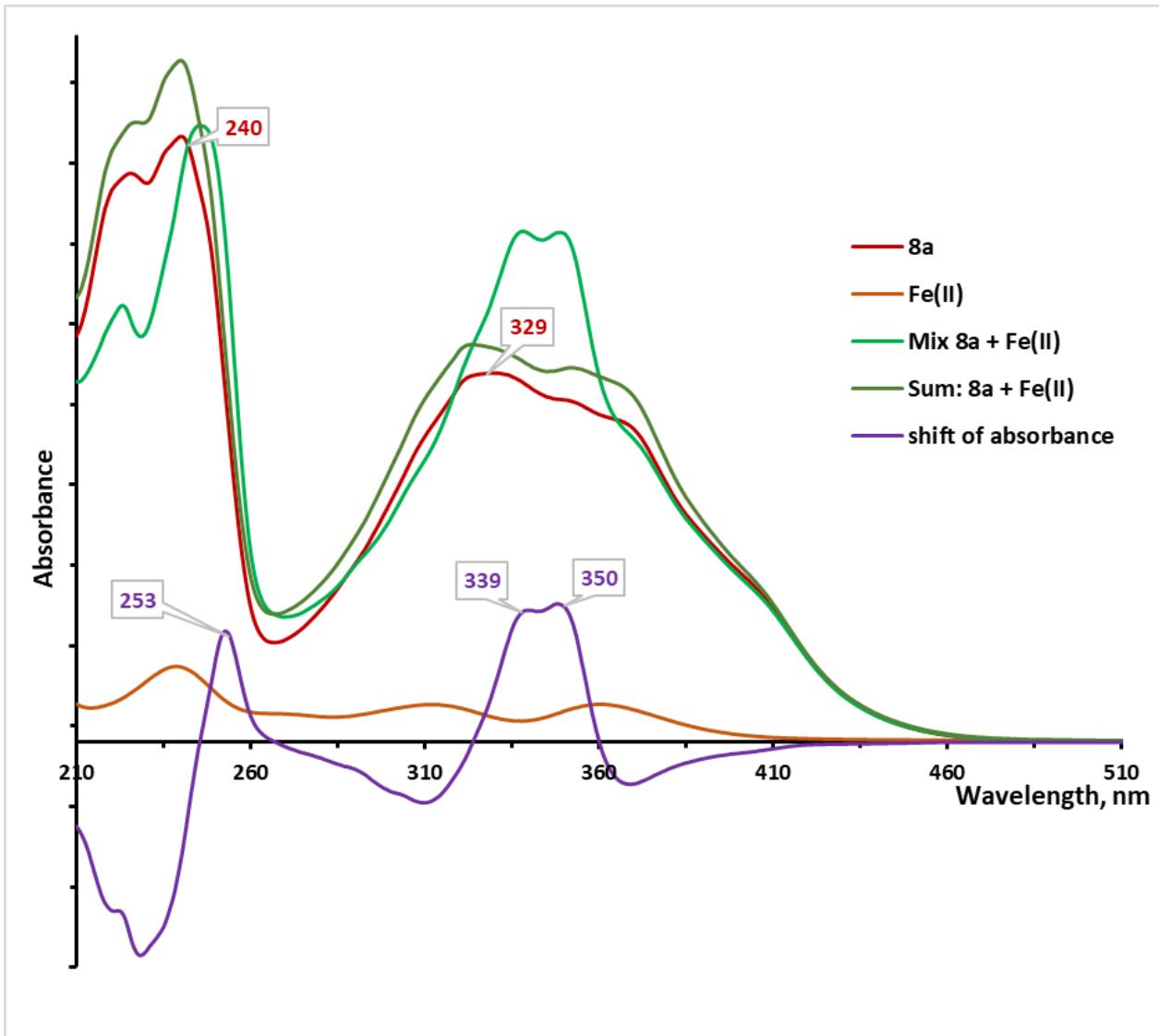


Figure S8. Absorption spectra of compound 8a (40 μ M), Fe²⁺ ions solution (40 μ M), a sum of 8a and Fe²⁺, their mixture, and the shift of the spectra caused by the formation of a complex

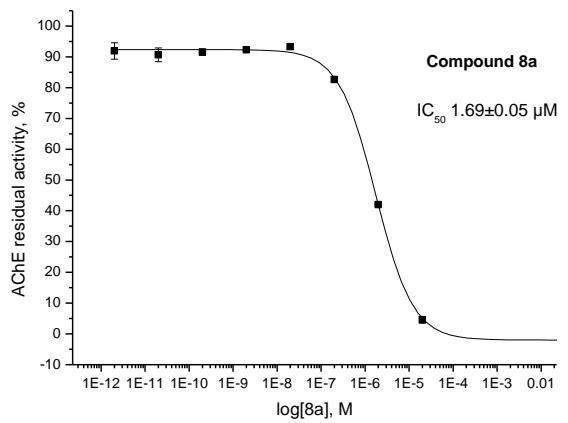
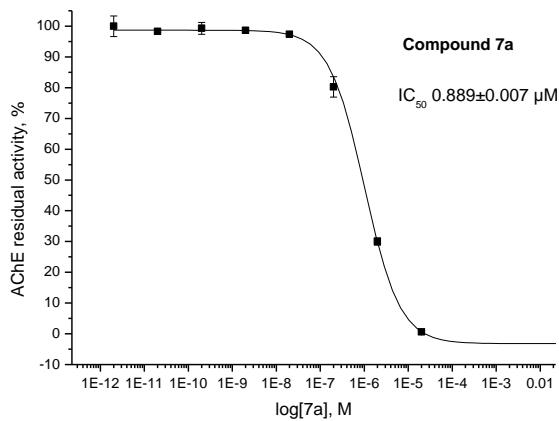
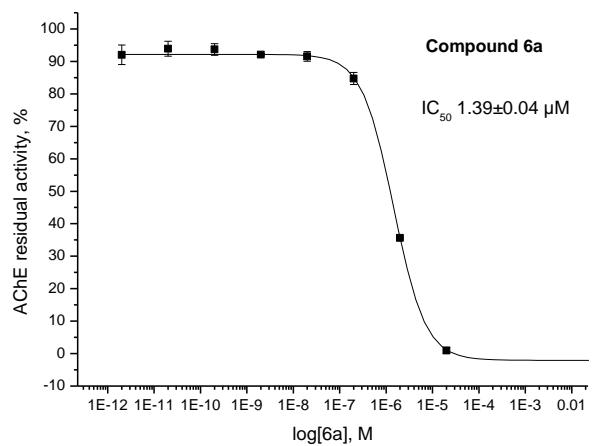


Figure S9. IC_{50} values for AChE inhibition by compounds **6a,7a,8a** (MEAN \pm SEM, n = 3)

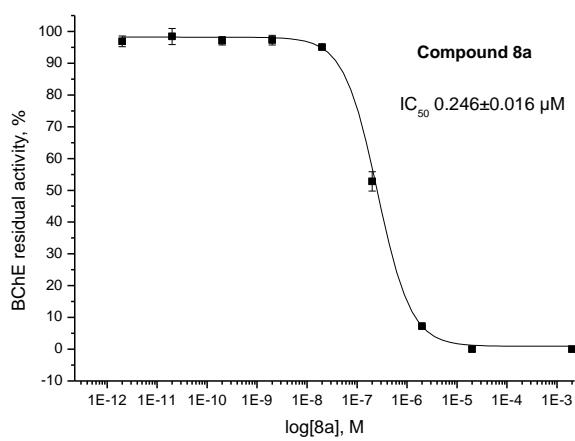
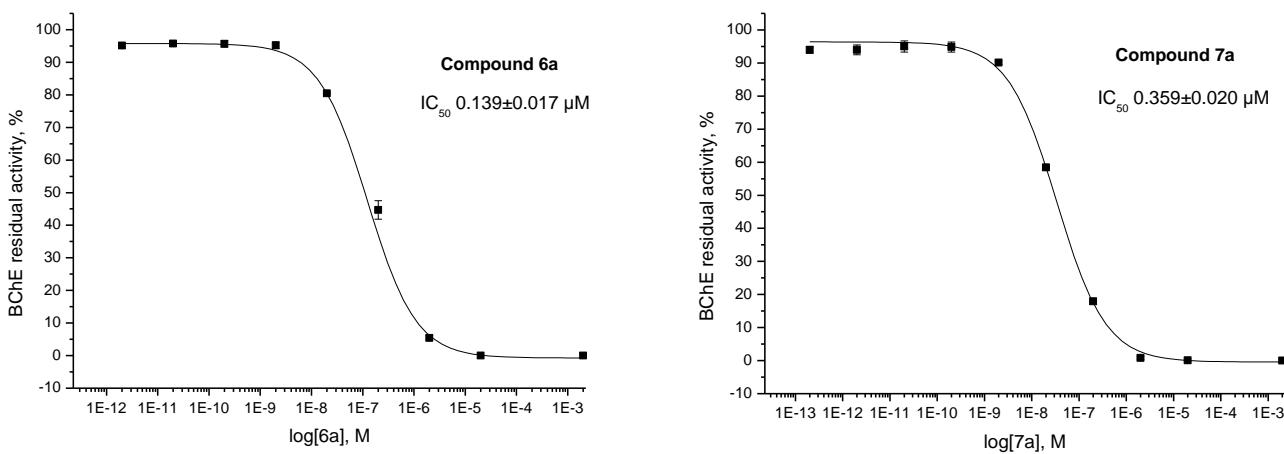


Figure S10. IC₅₀ values for BChE inhibition by compounds 6a,7a,8a (MEAN \pm SEM, n = 3)

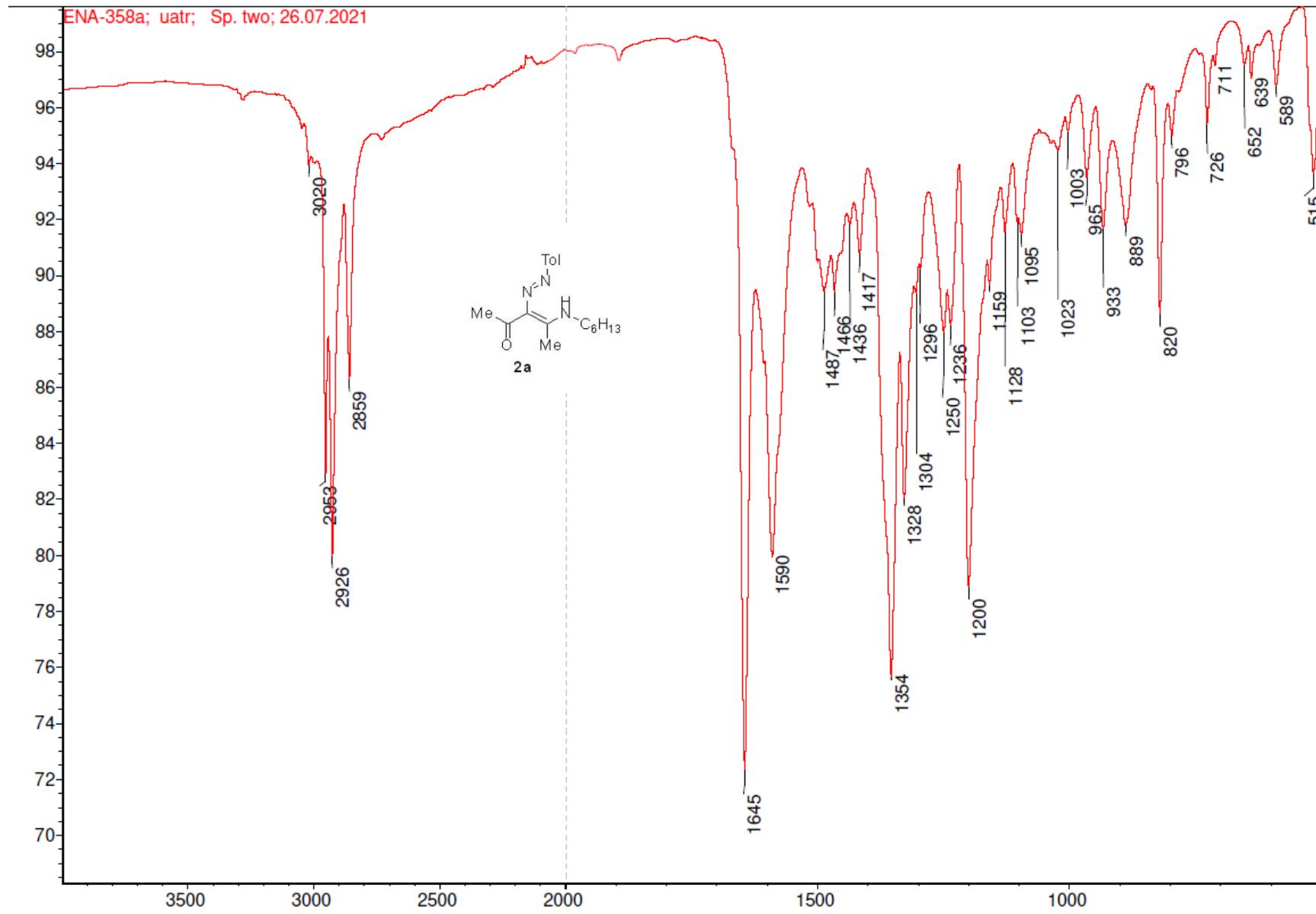


Figure S11. IR spectrum of compound **2a**

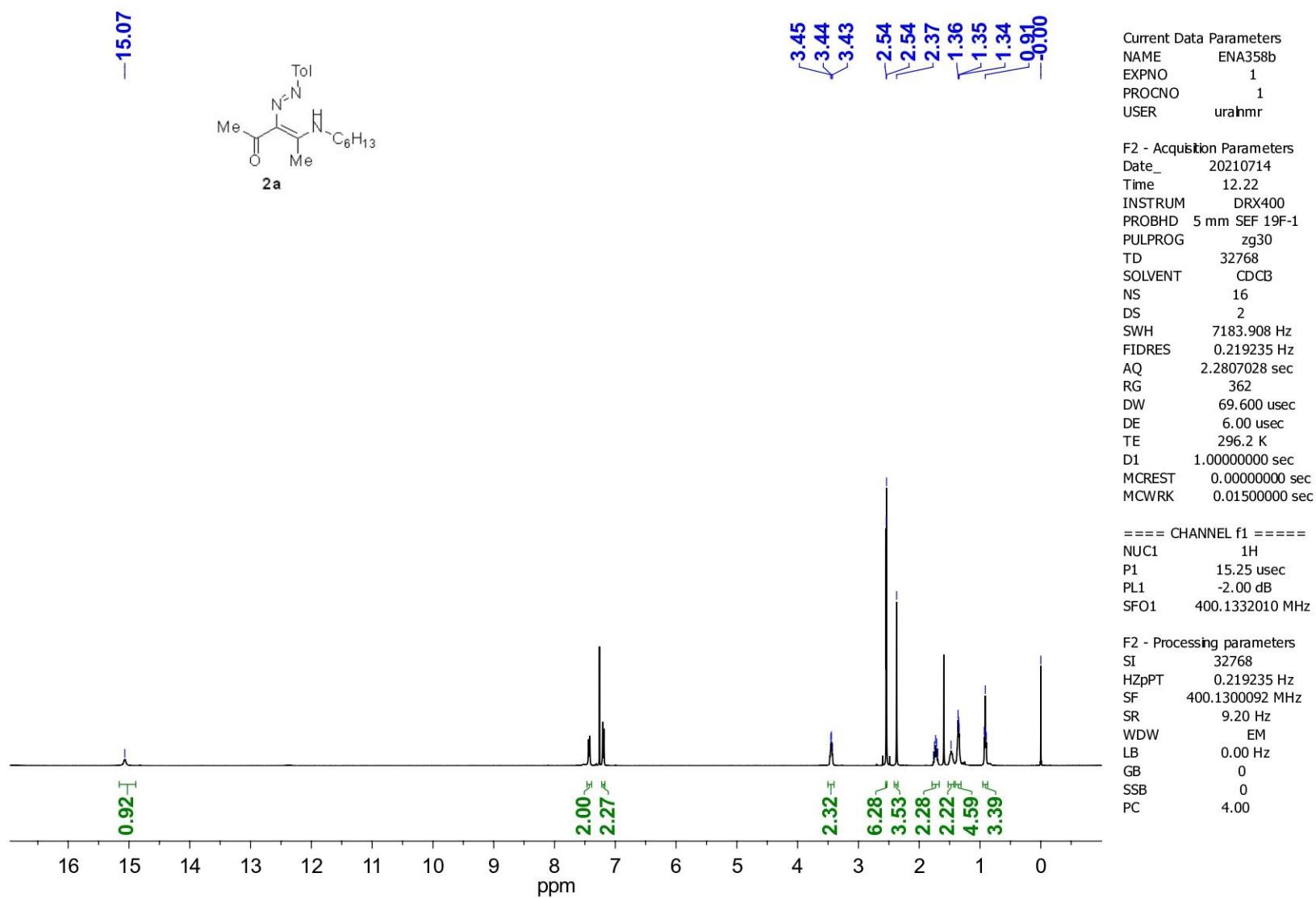


Figure S12. ¹H NMR spectrum of compound **2a**

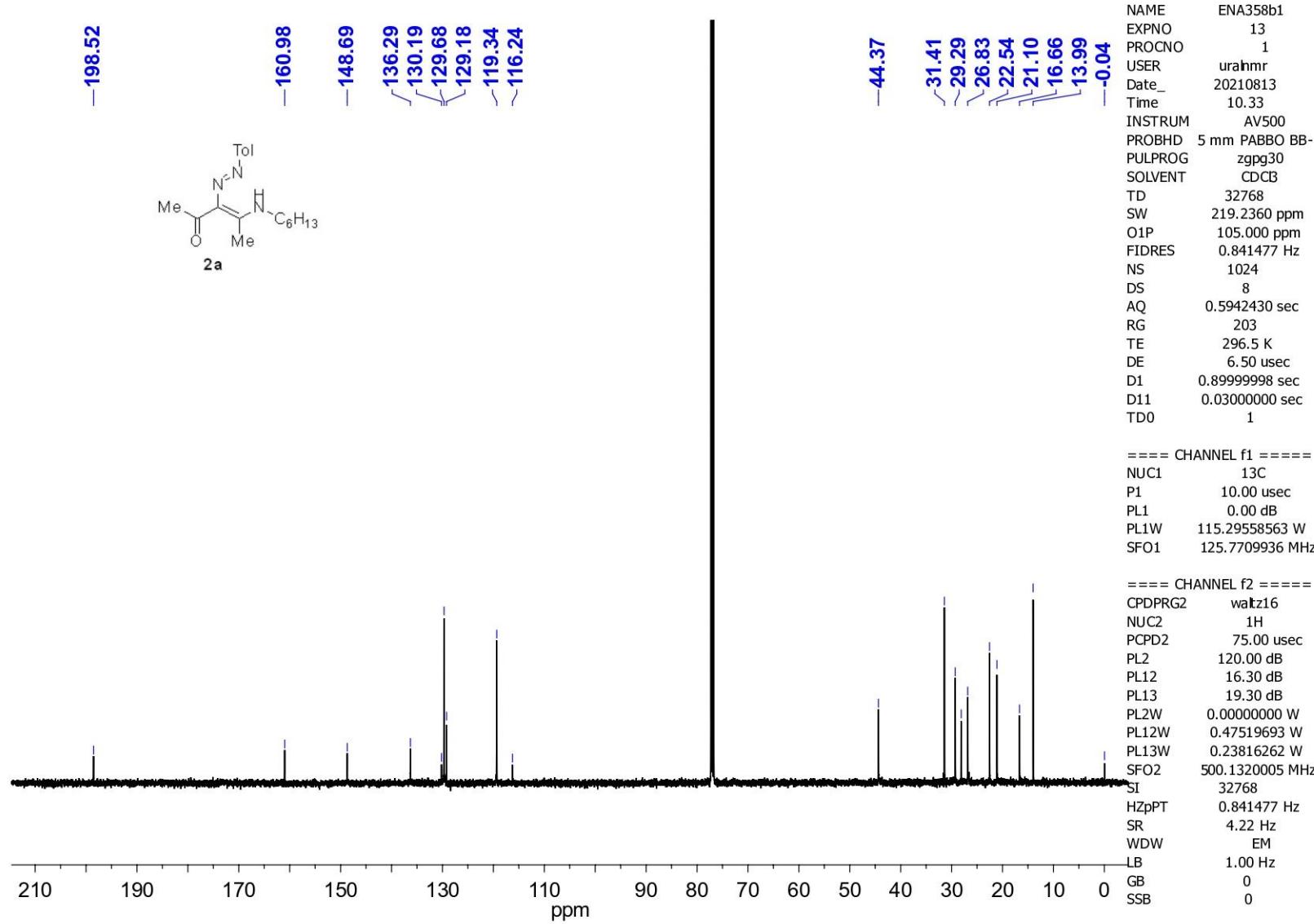


Figure S13. ¹³C NMR spectrum of compound **2a**

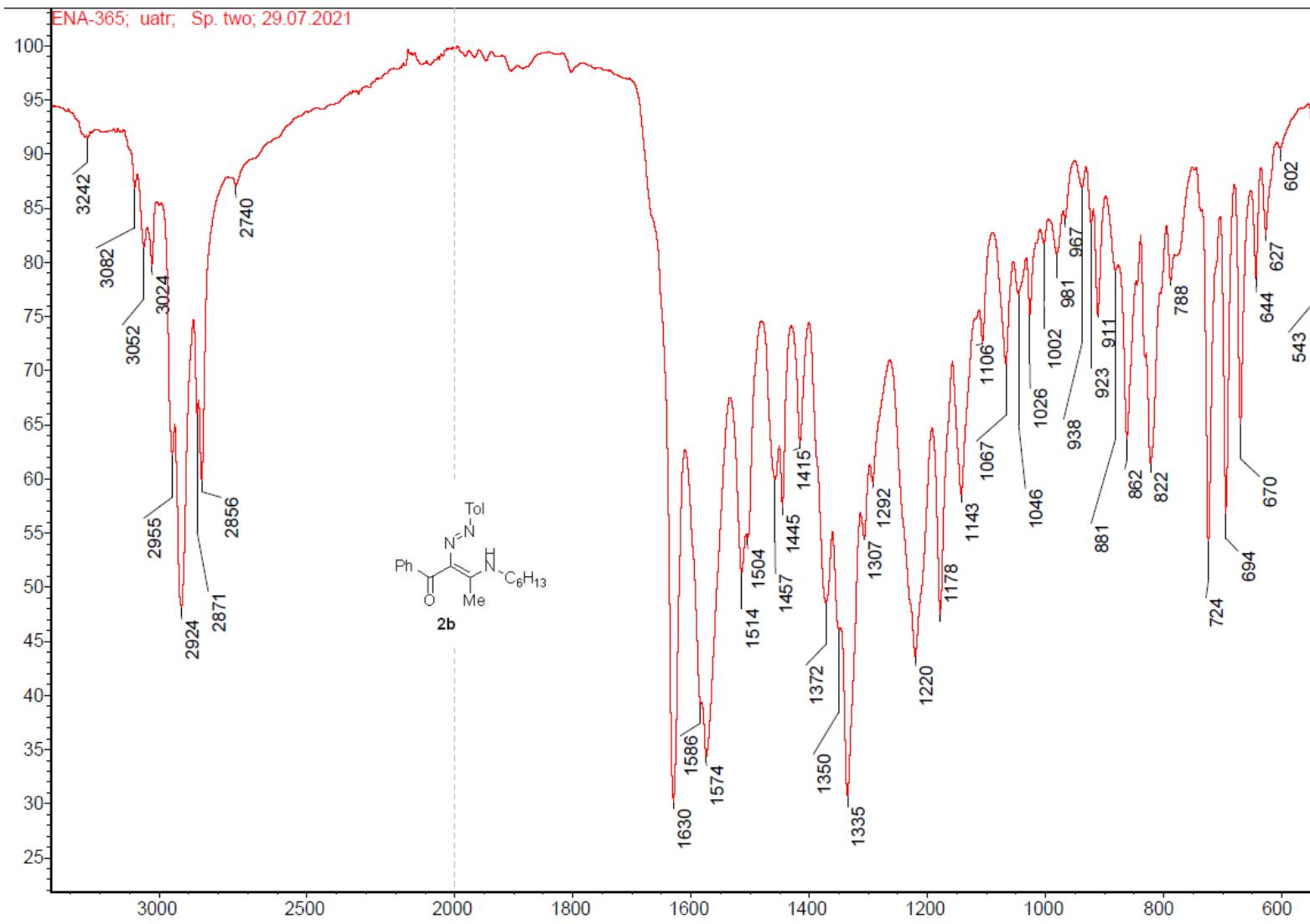
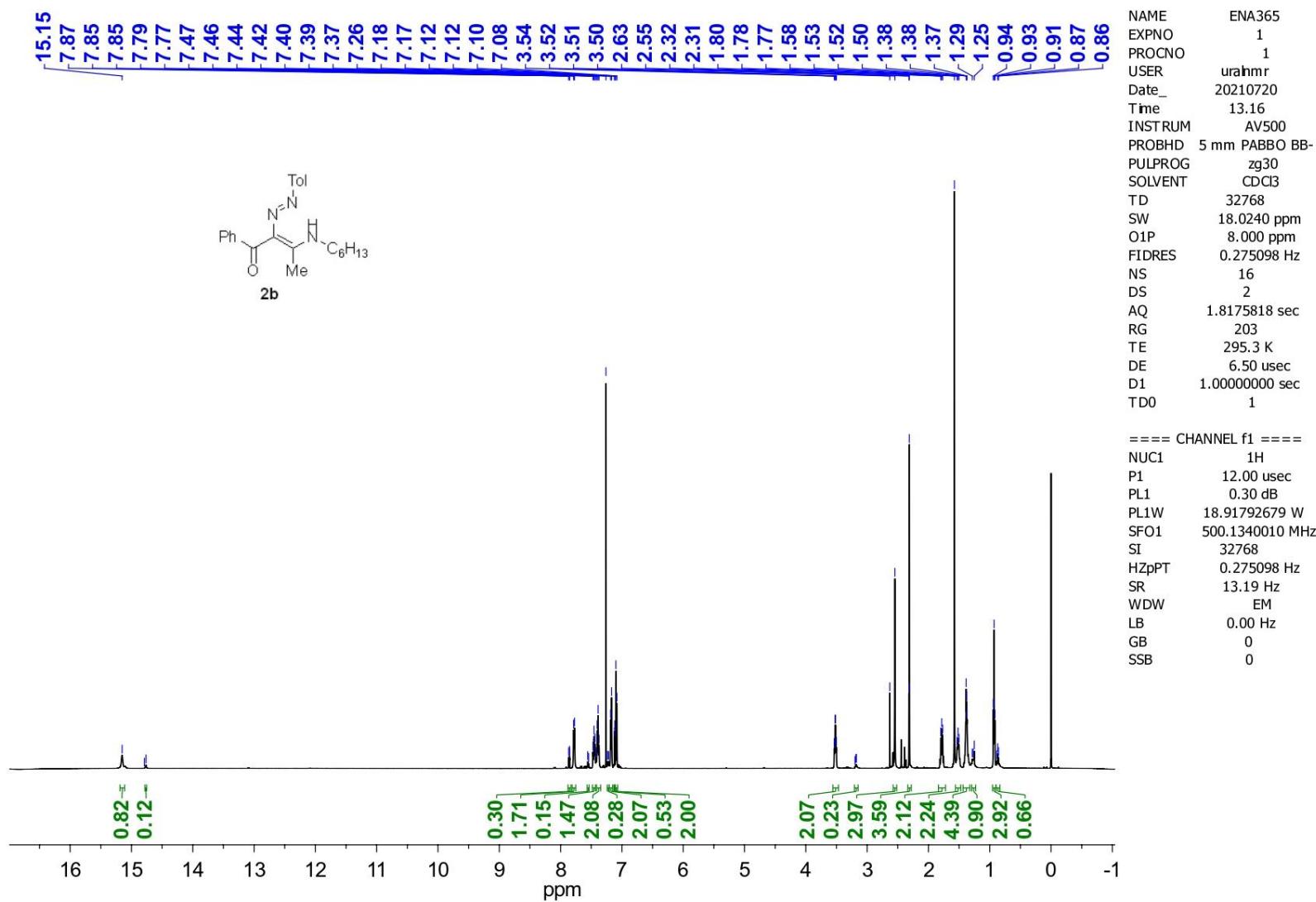


Figure S14. IR spectrum of compound **2b**



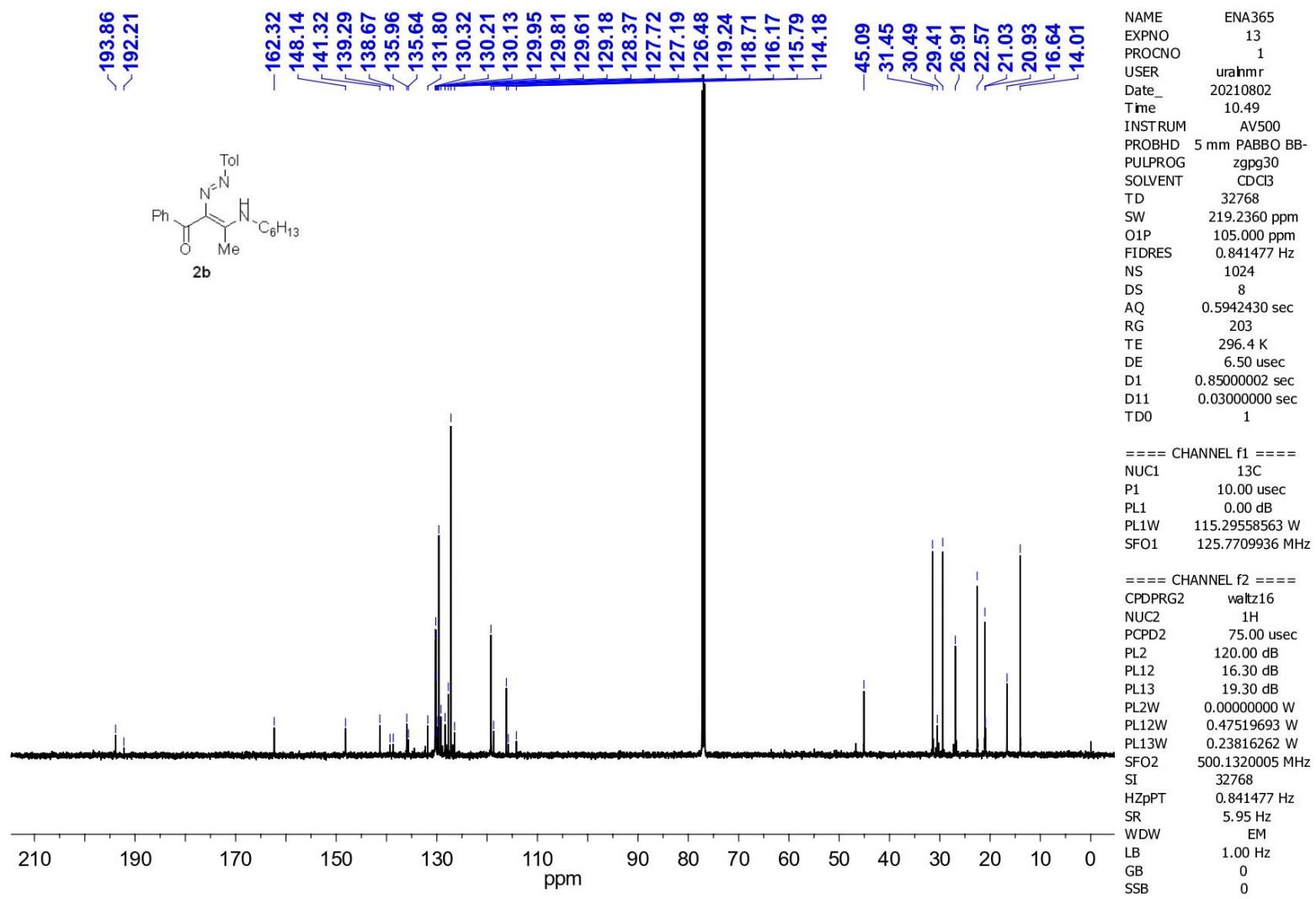


Figure S16. ^{13}C NMR spectrum of compound **2b**

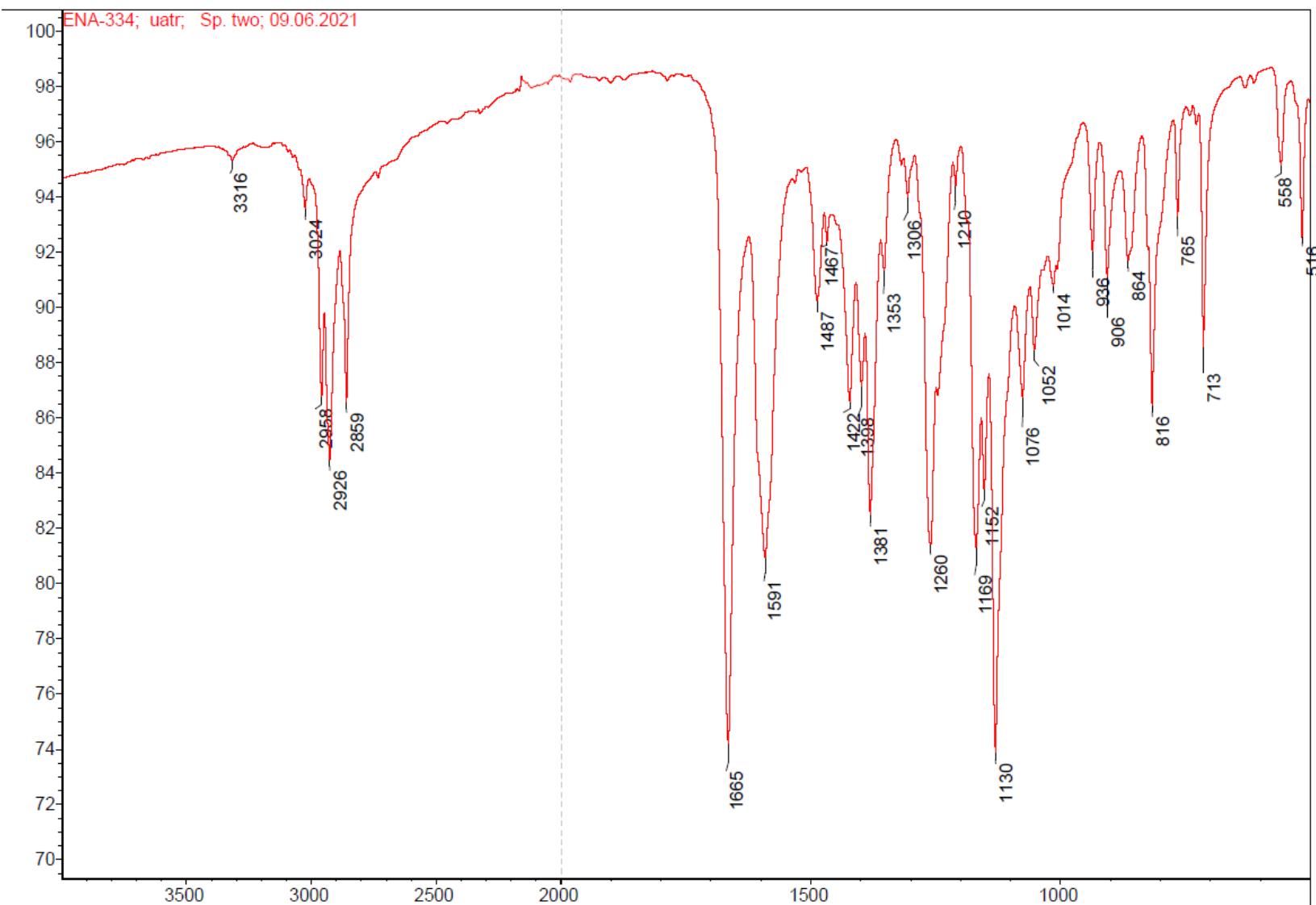


Figure S17. IR spectrum of compound 2c

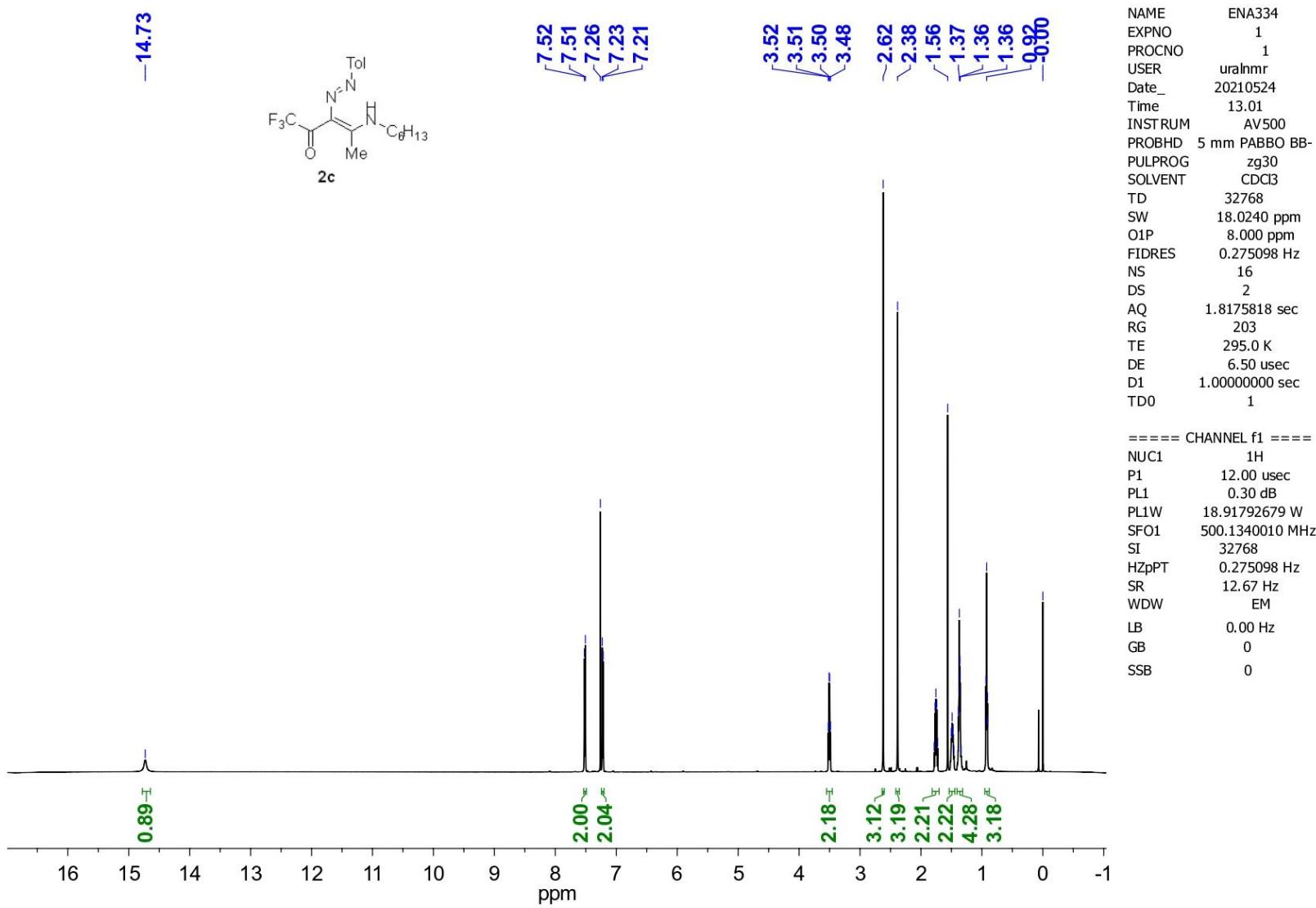


Figure S18. ¹H NMR spectrum of compound 2c

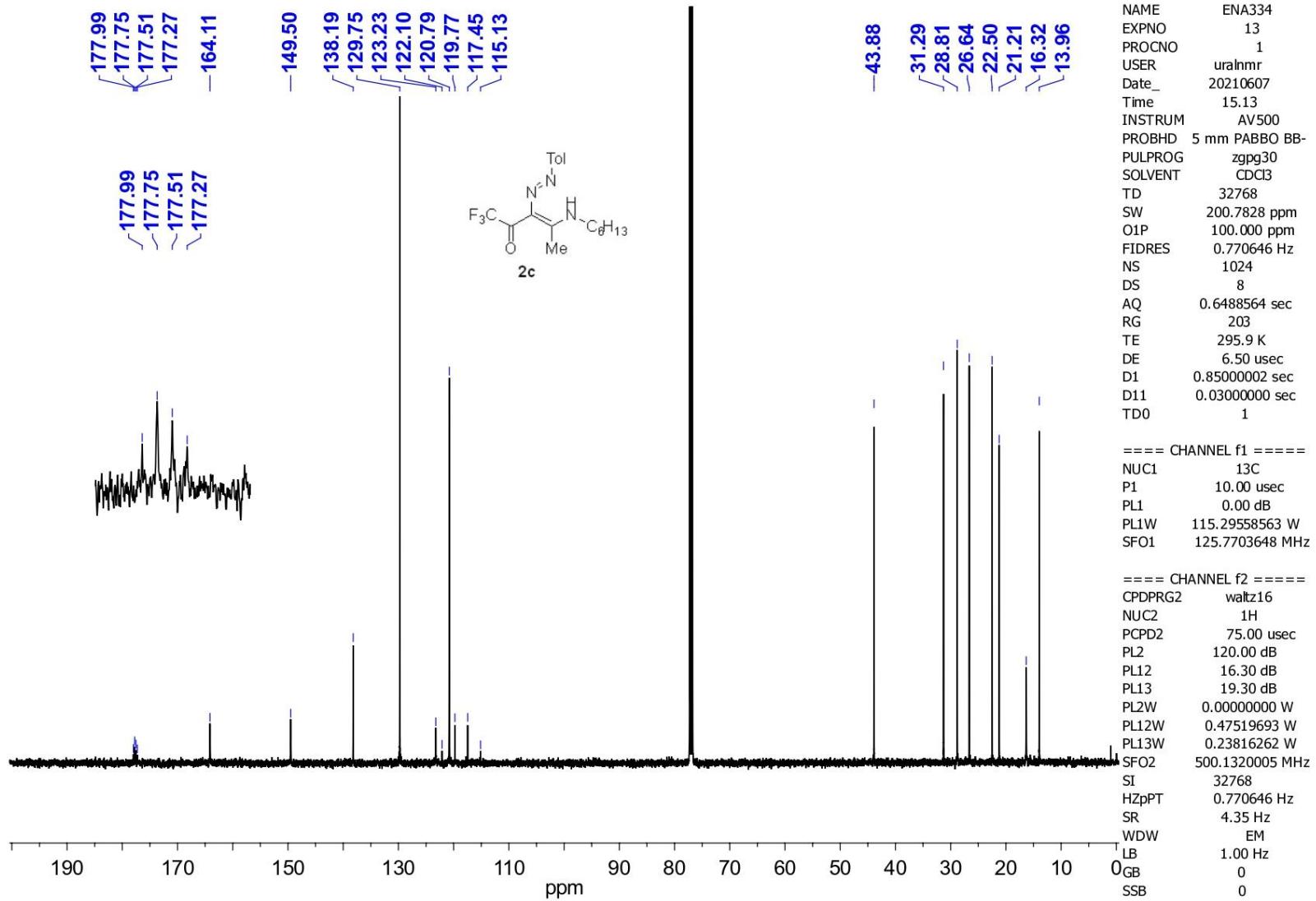


Figure S19. ¹³C NMR spectrum of compound 2c

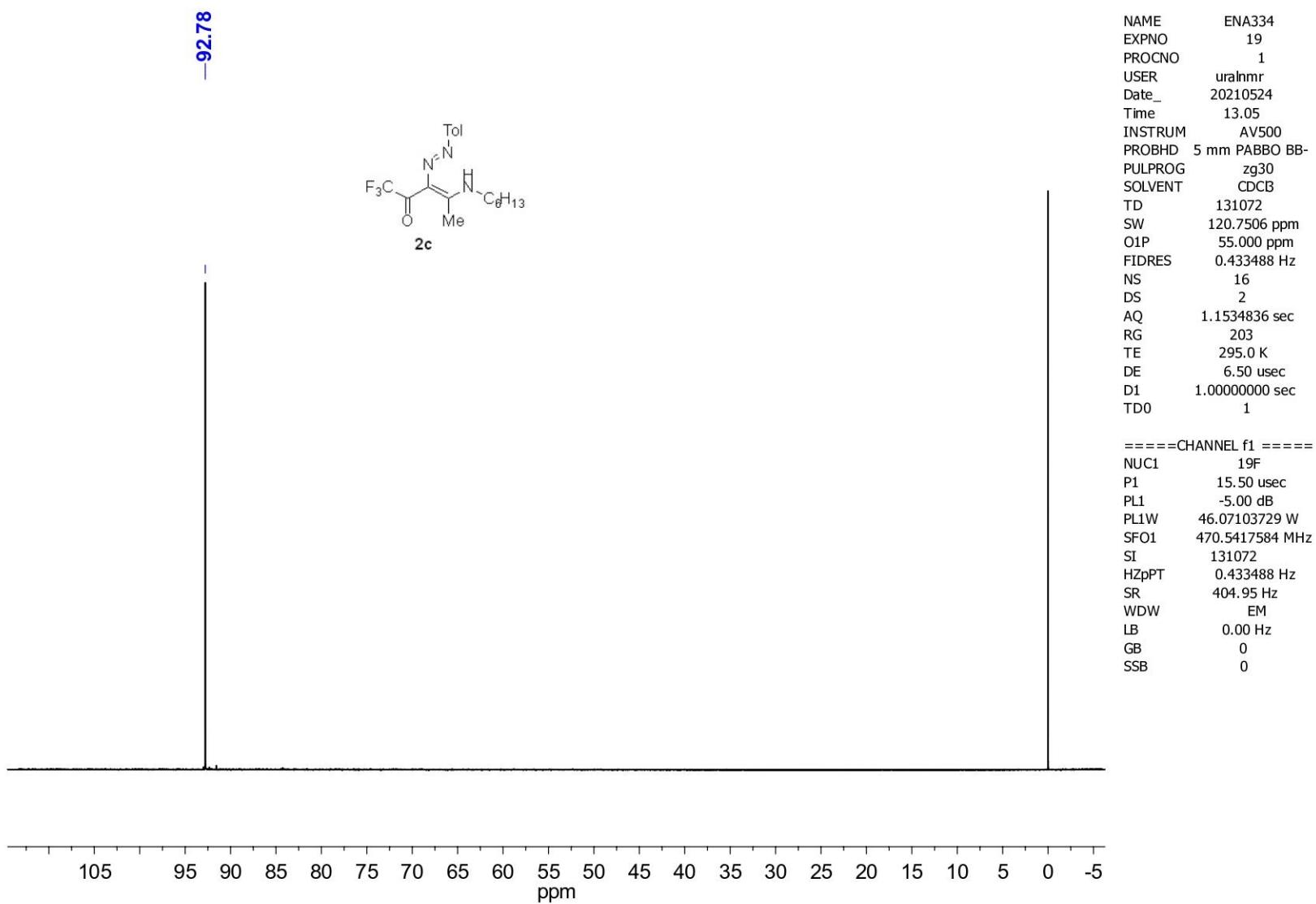


Figure S20. ^{19}F NMR spectrum of compound **2c**

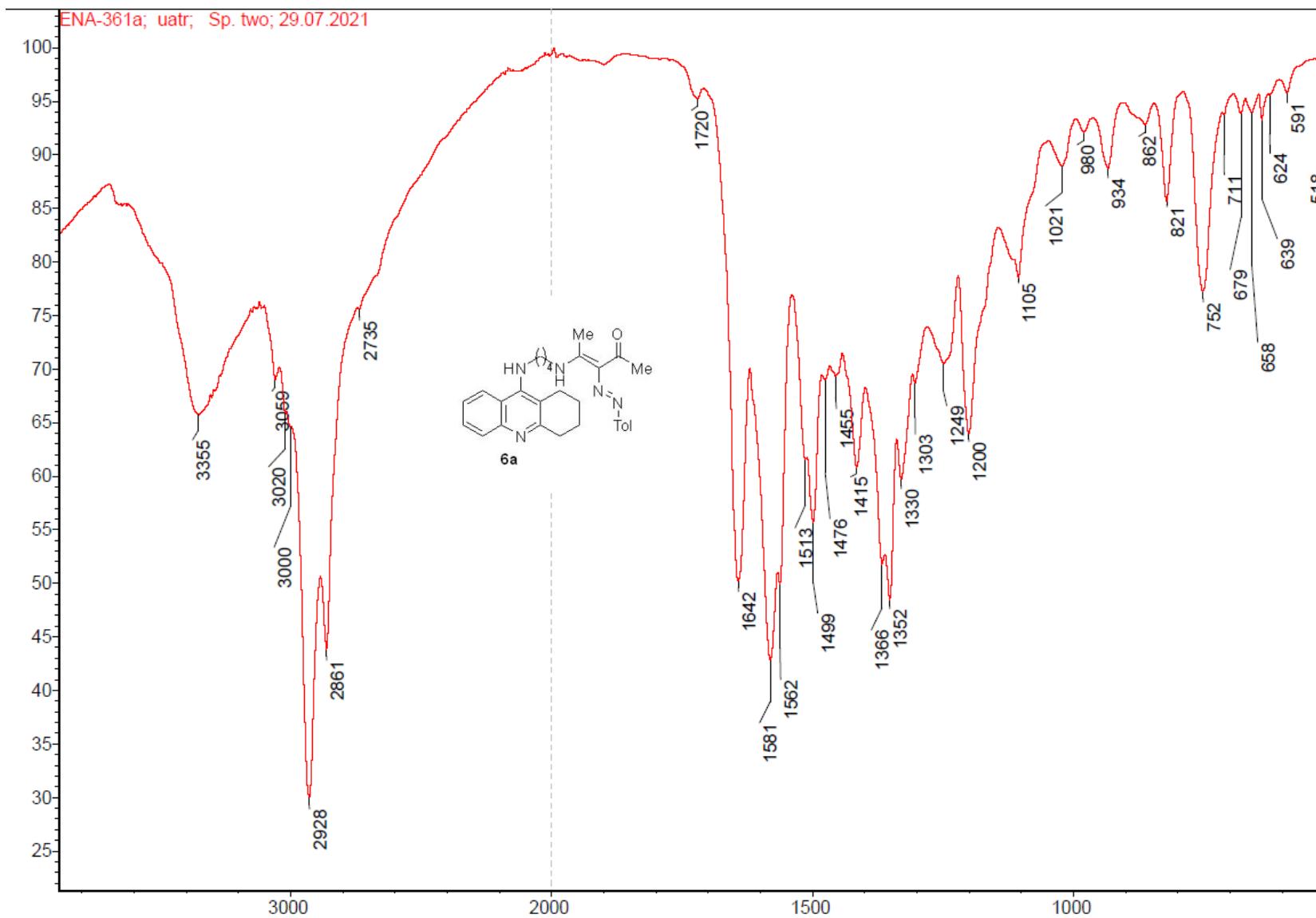


Figure S21. IR spectrum of compound 6a

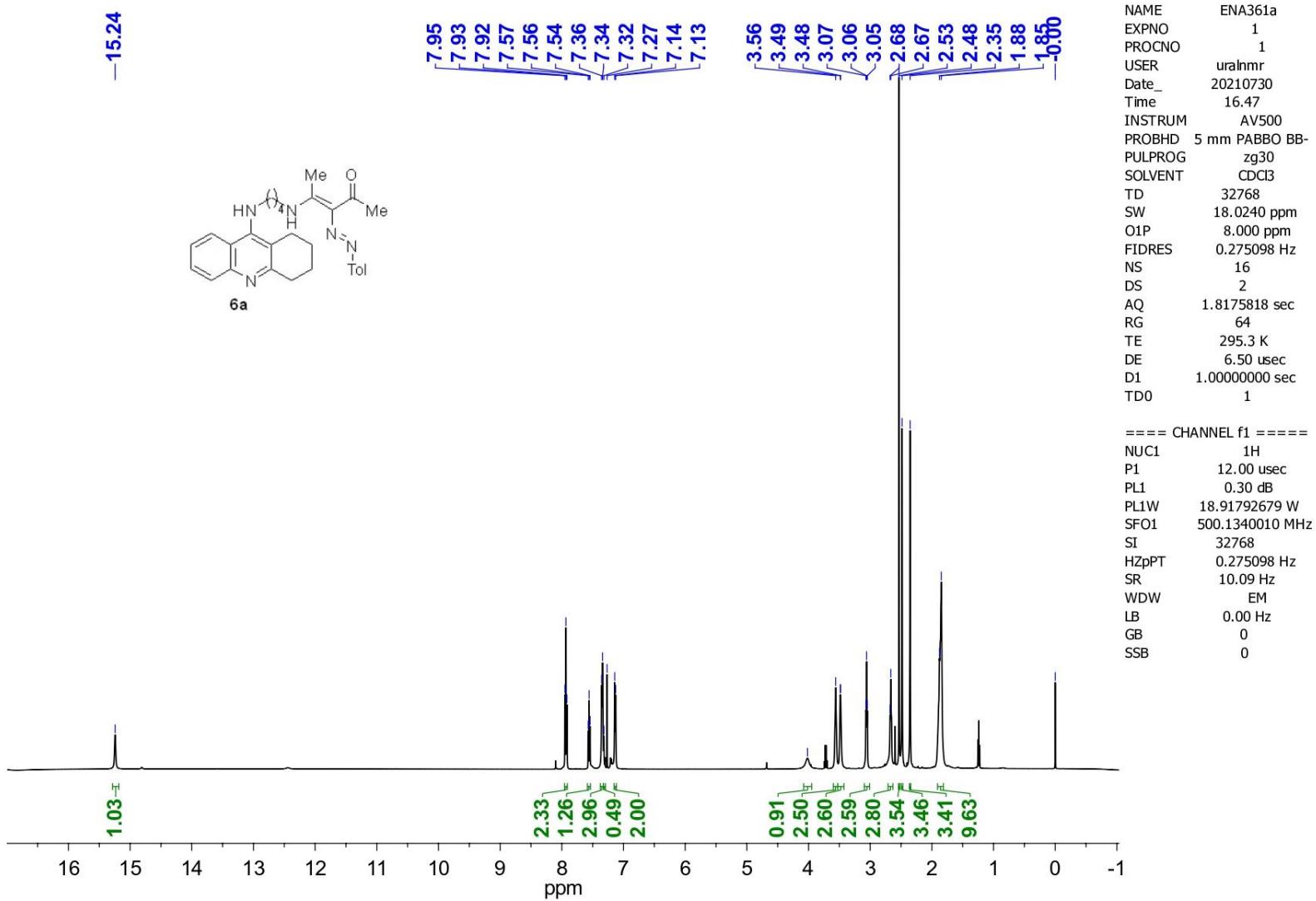


Figure S22. ¹H NMR spectrum of compound 6a

—198.41

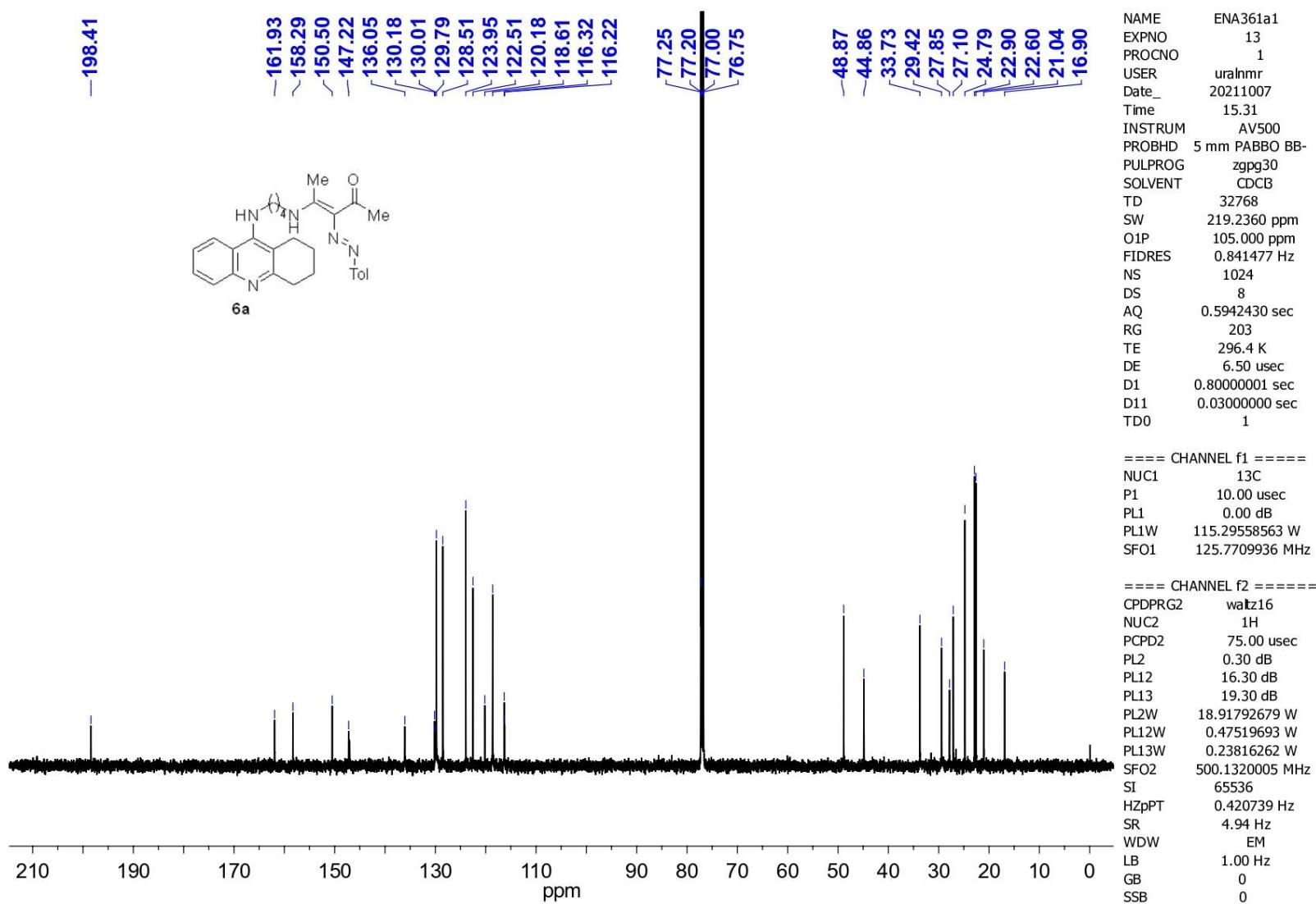


Figure S23. ¹³C NMR spectrum of compound **6a**

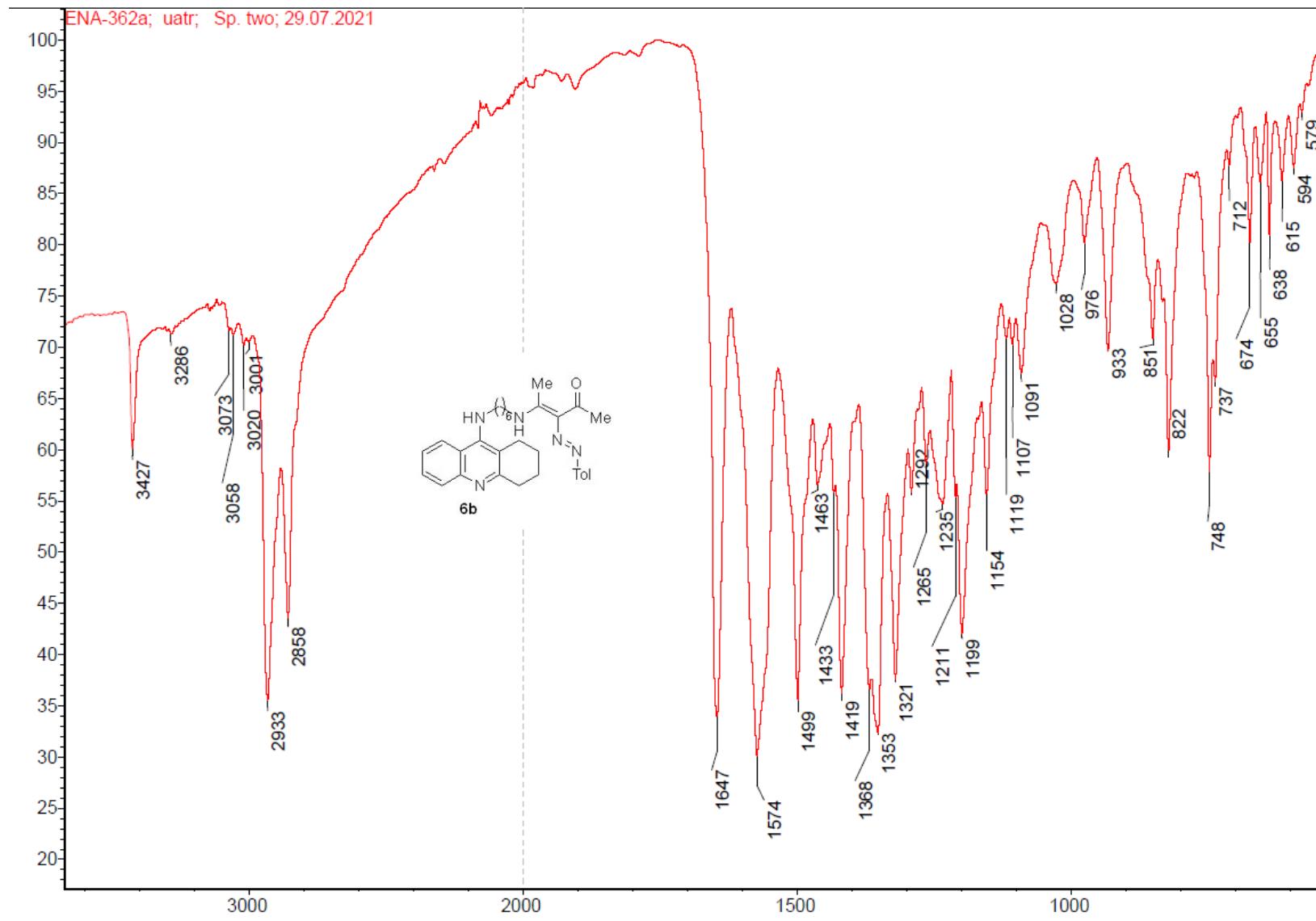


Figure S24. IR spectrum of compound **6b**

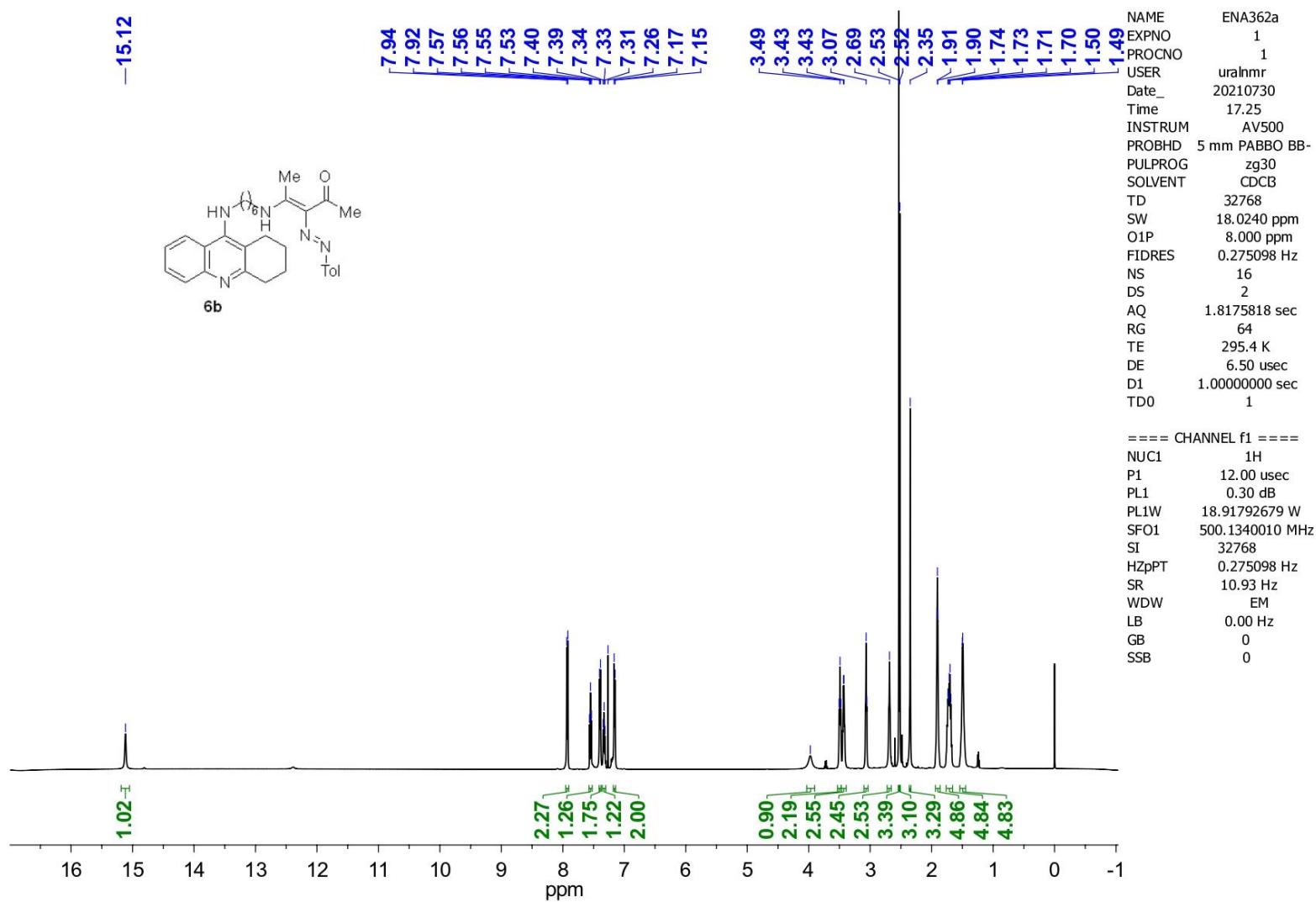


Figure S25. ^1H NMR spectrum of compound **6b**

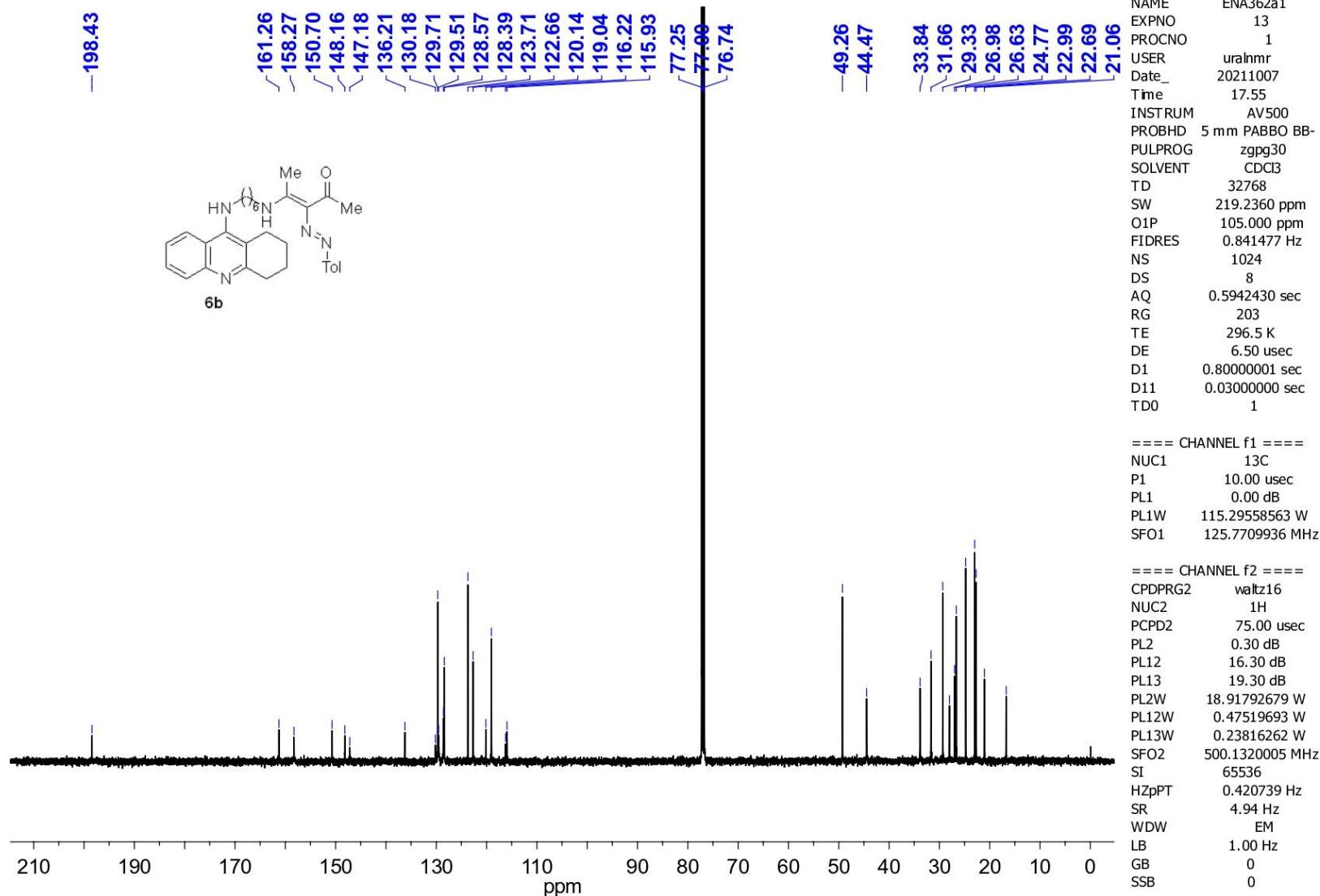


Figure S26. ¹³C NMR spectrum of compound 6b

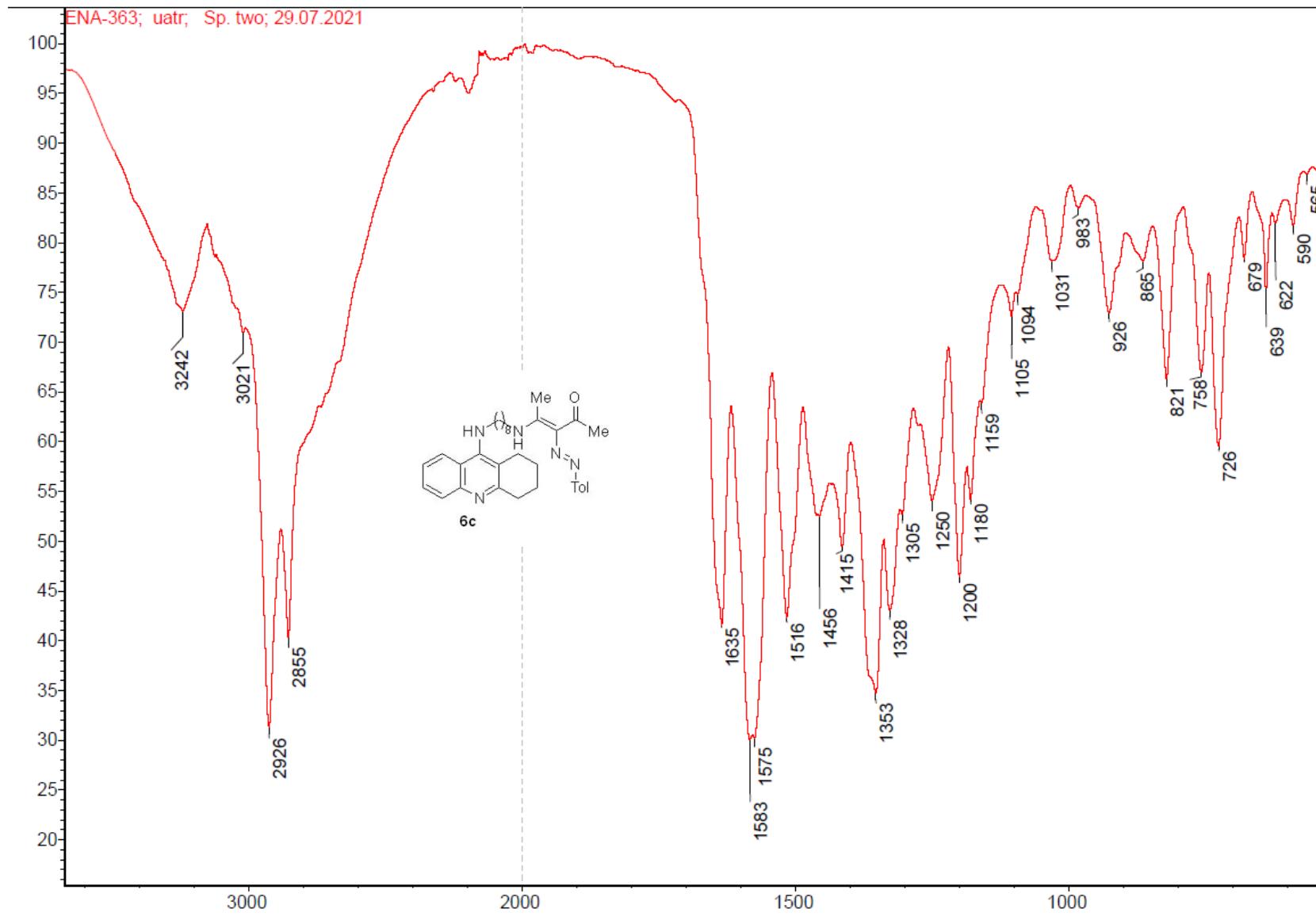


Figure S27. IR spectrum of compound 6c

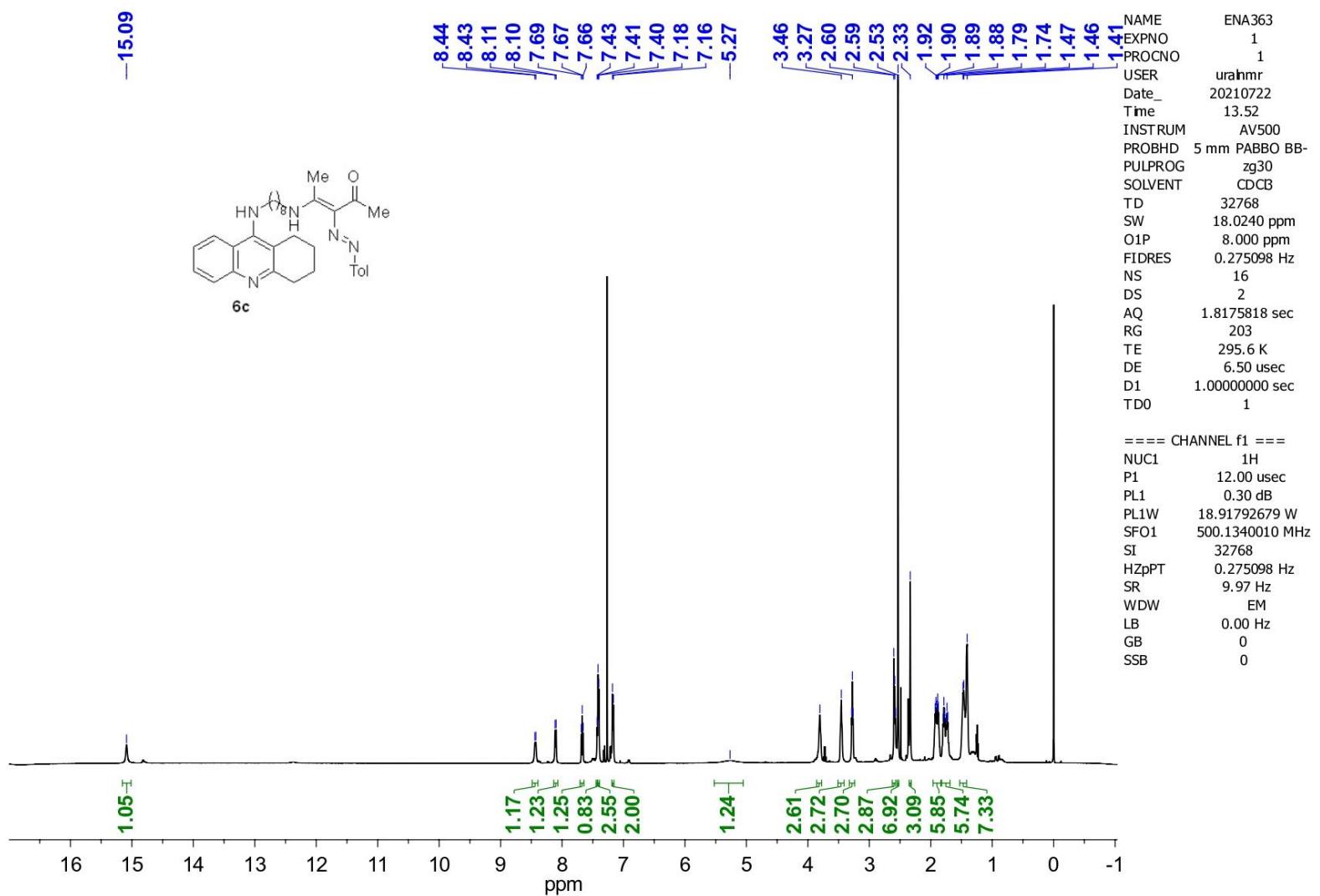


Figure S28. ^1H NMR spectrum of compound **6c**

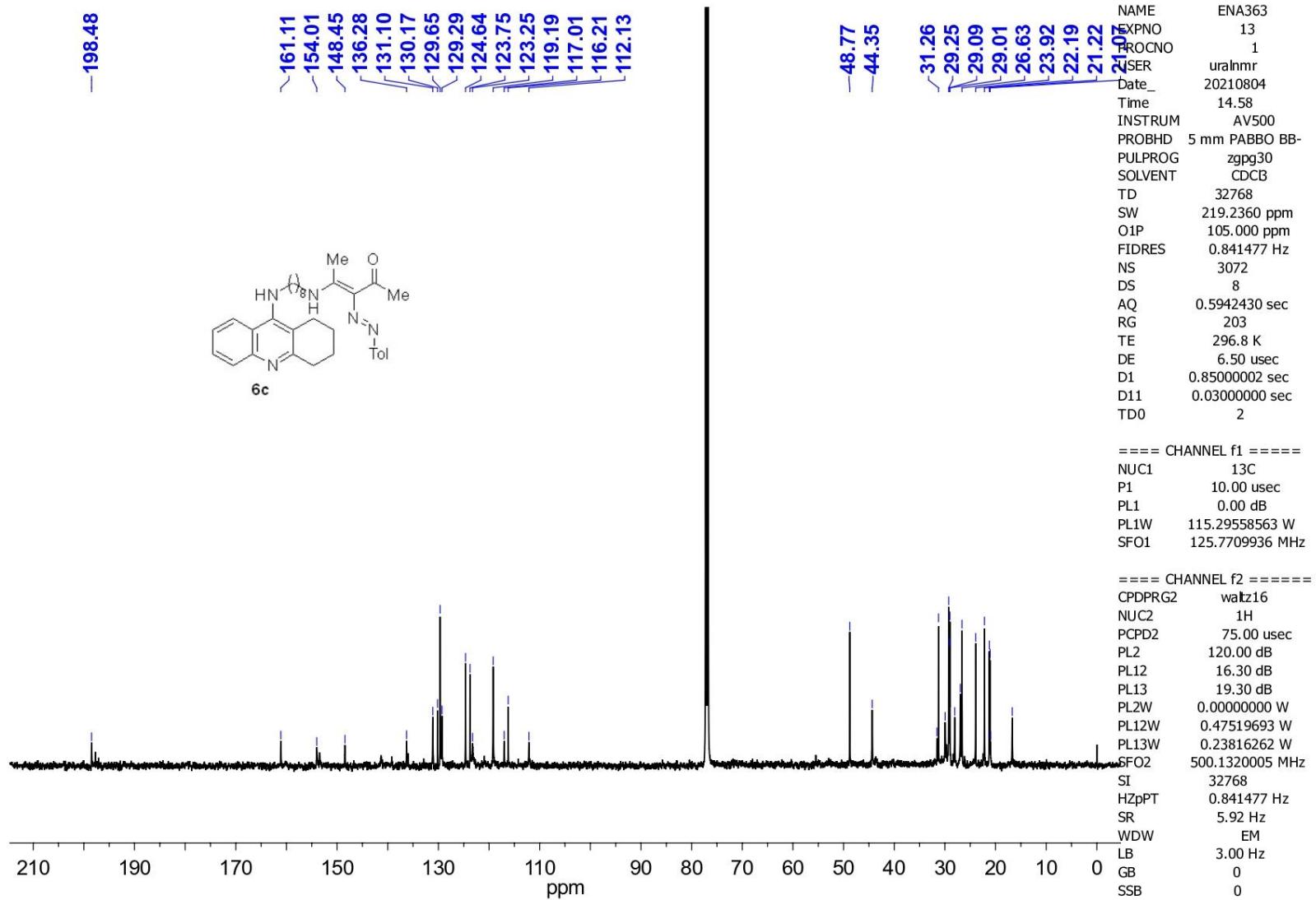


Figure S29. ¹³C NMR spectrum of compound 6c

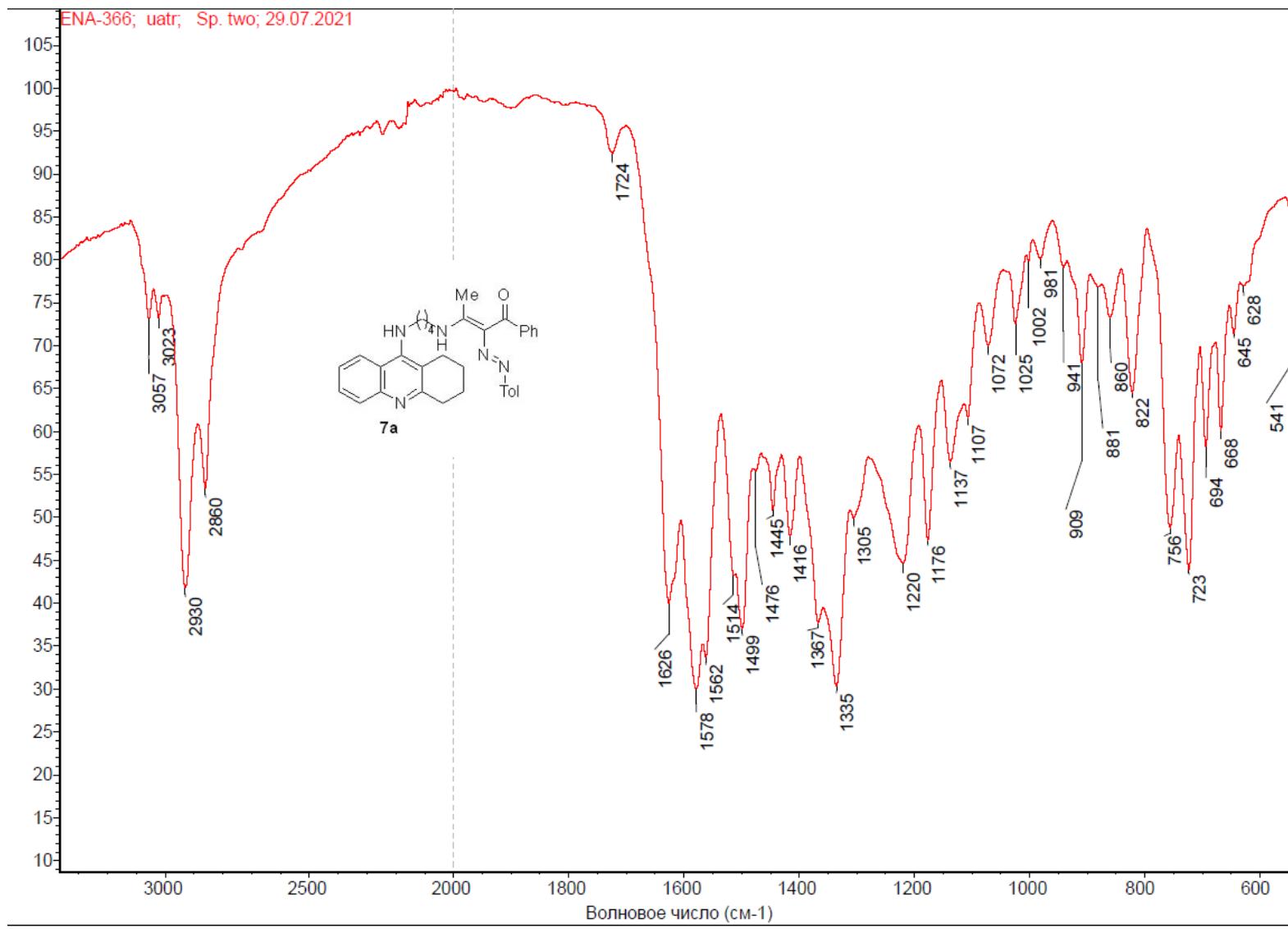


Figure S30. IR spectrum of compound **7a**

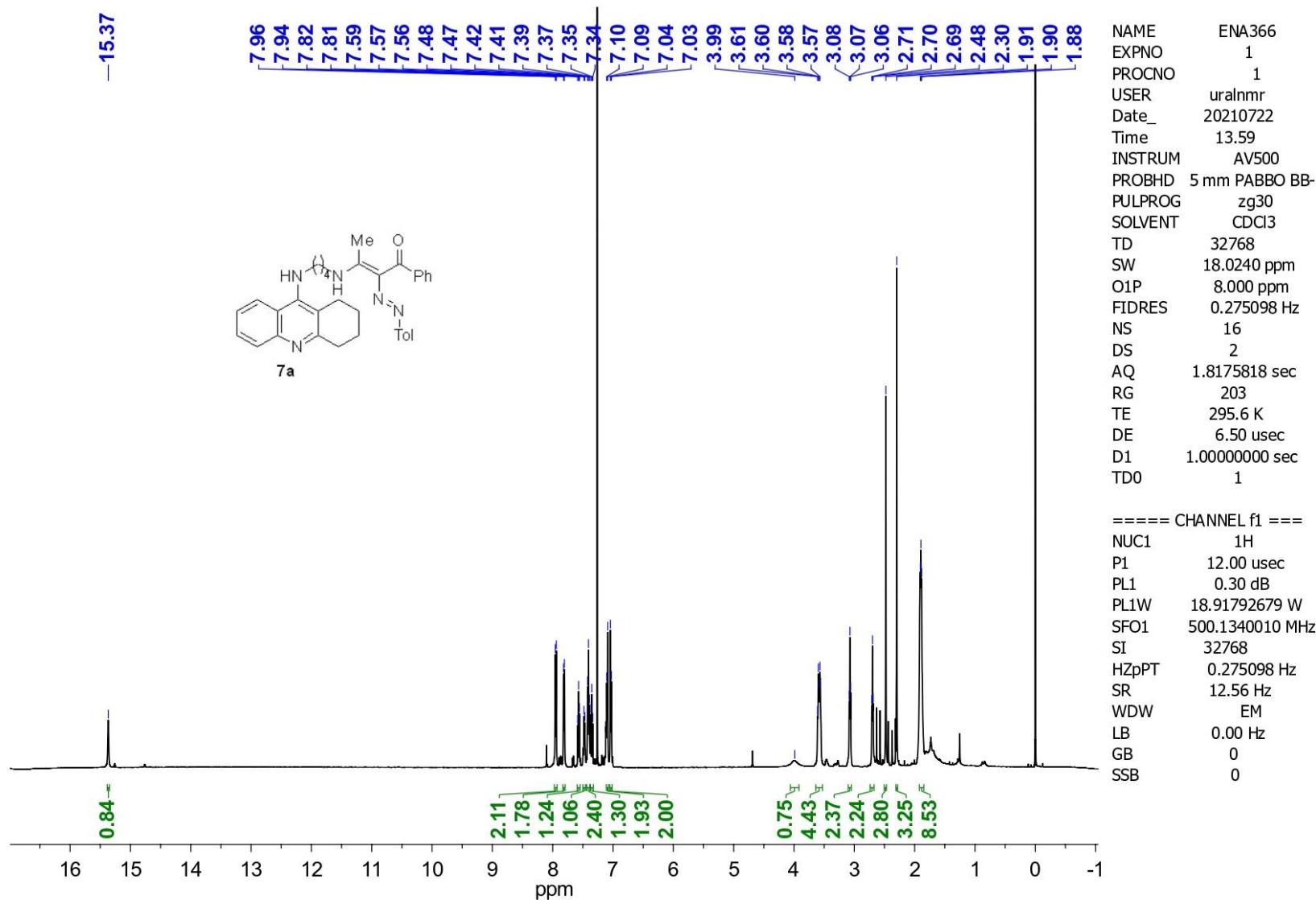


Figure S31. ¹H NMR spectrum of compound 7a

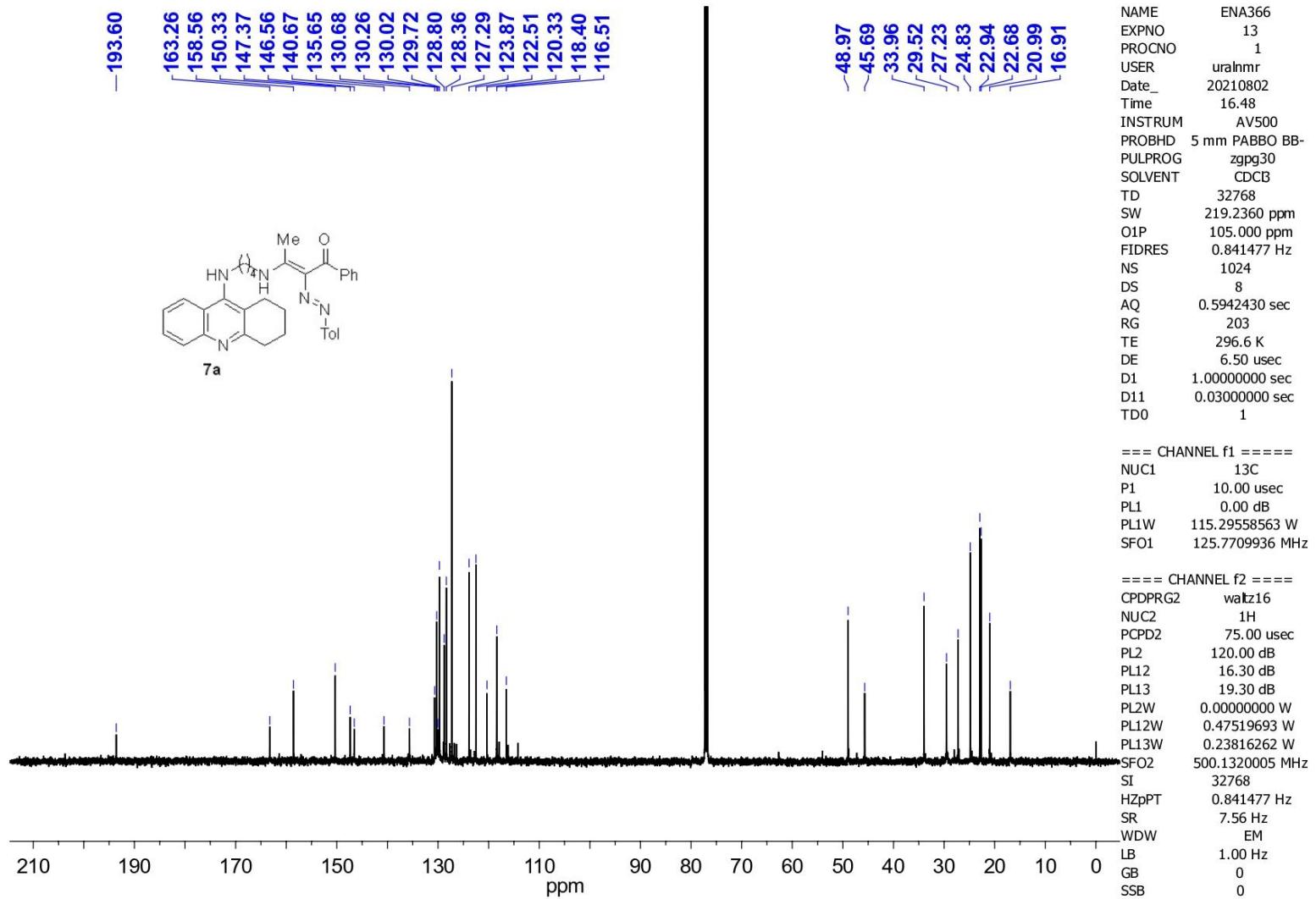


Figure S32. ^{13}C NMR spectrum of compound **7a**

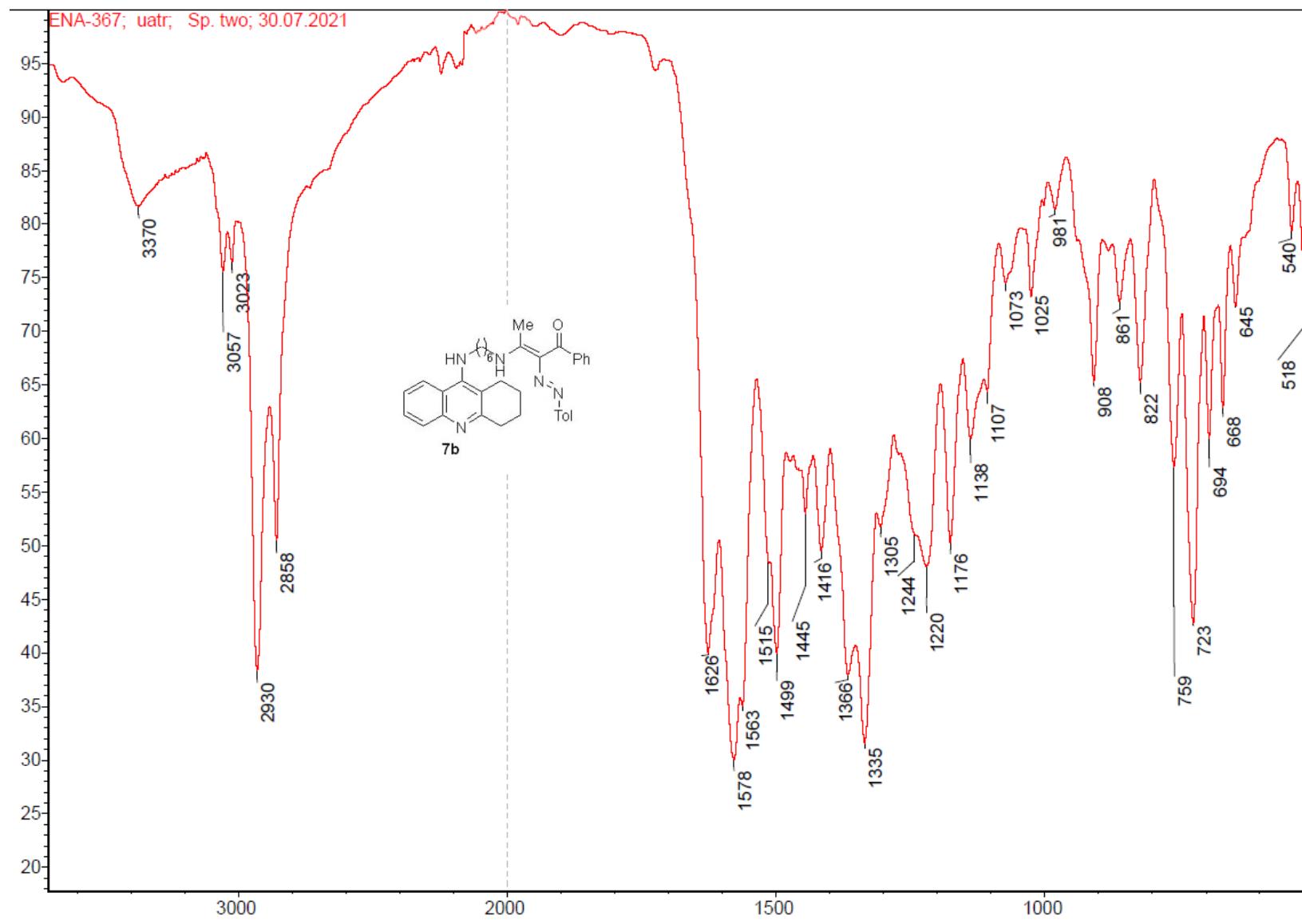


Figure S33. IR spectrum of compound 7b

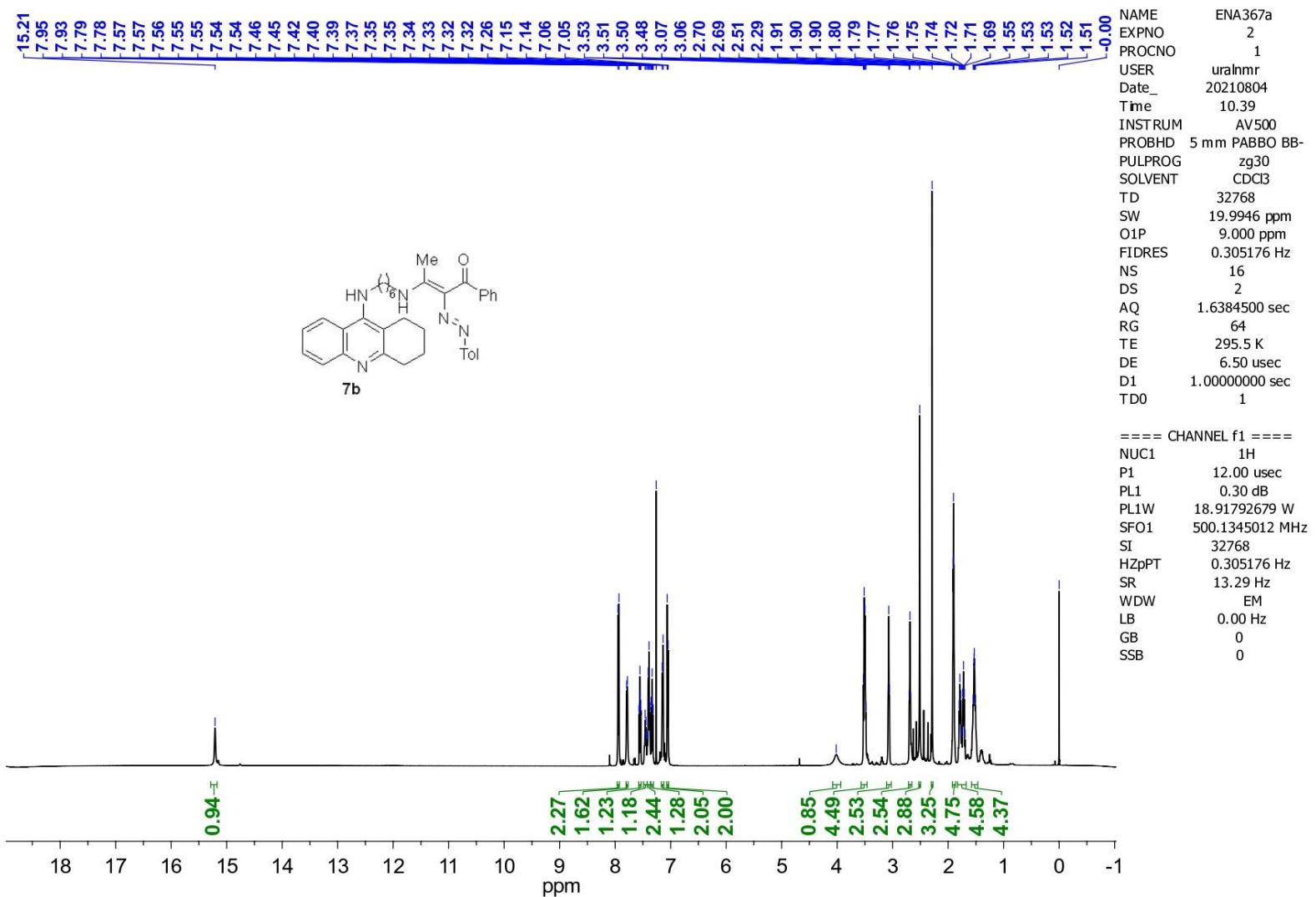


Figure S34. ¹H NMR spectrum of compound 7b

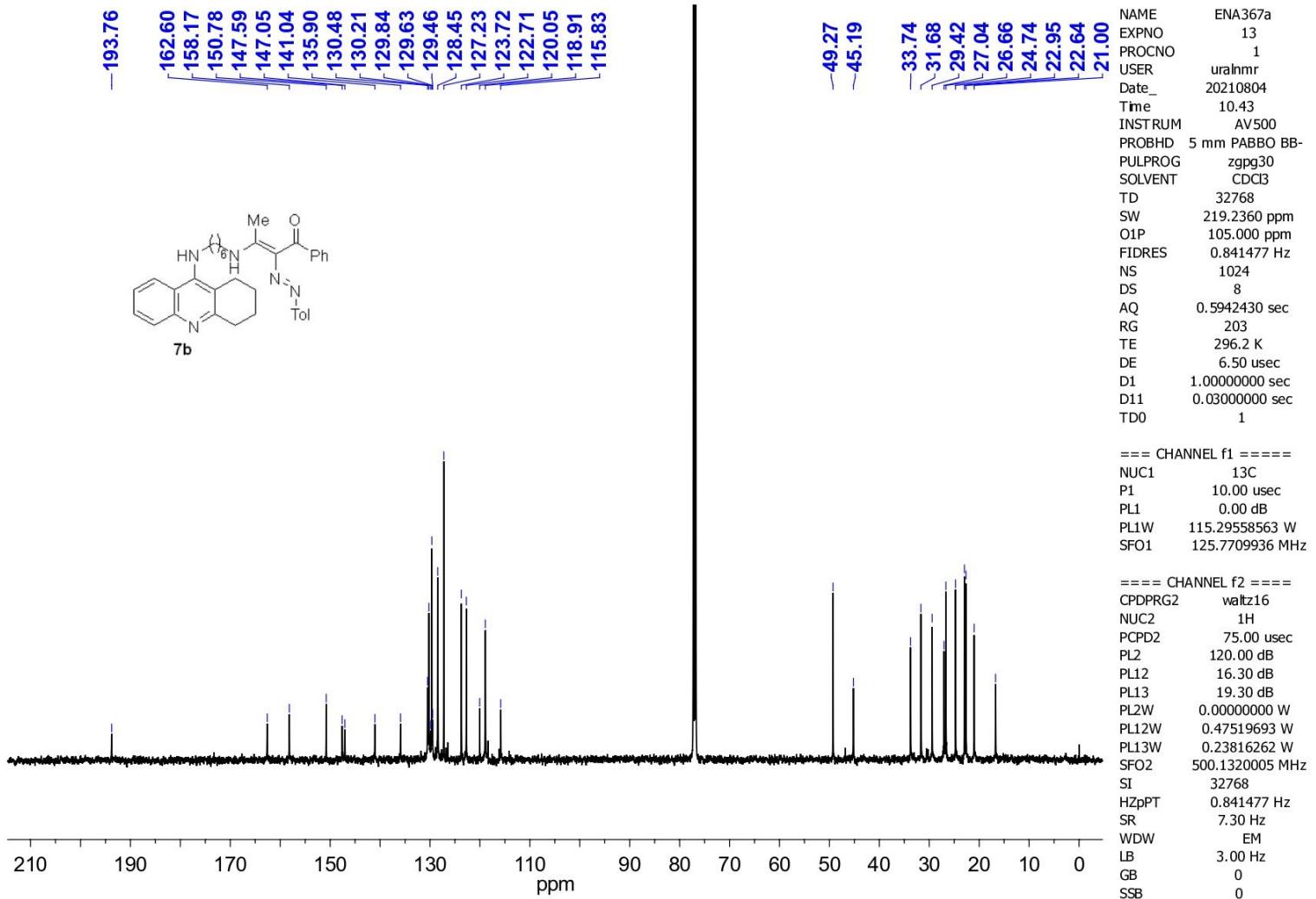


Figure S35. ¹³C NMR spectrum of compound 7b

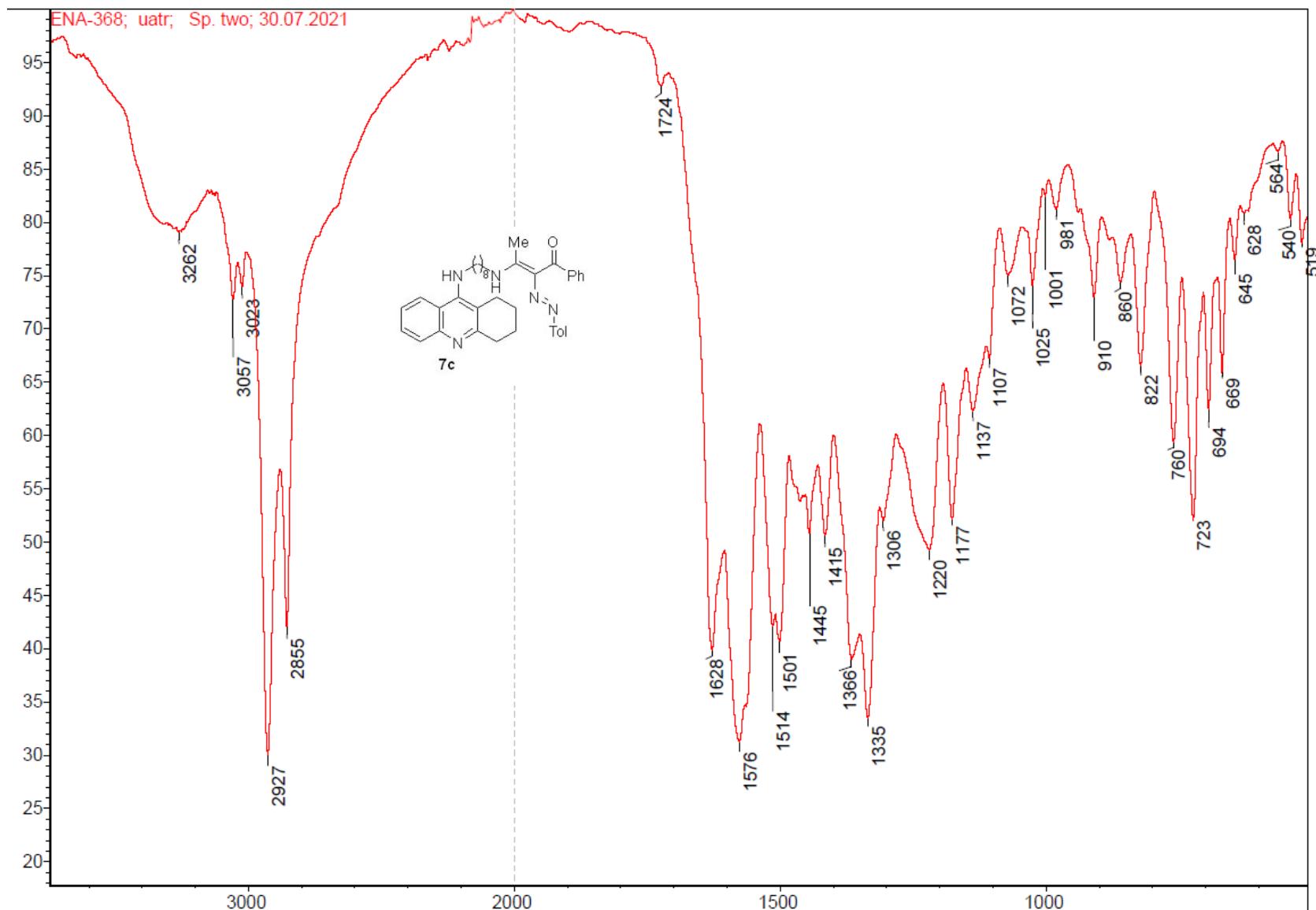


Figure S36. IR spectrum of compound **7c**

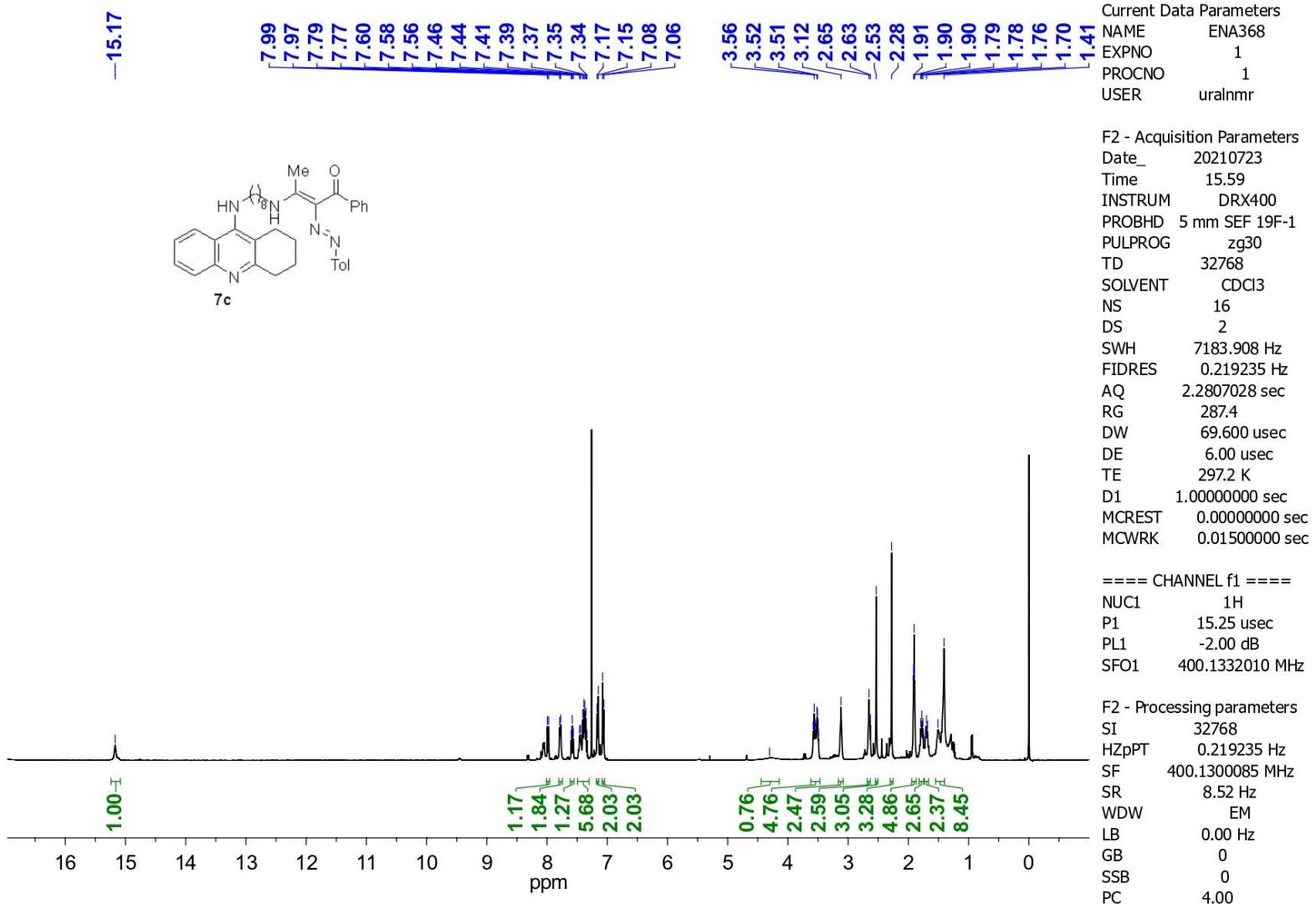


Figure S37. ¹H NMR spectrum of compound 7c

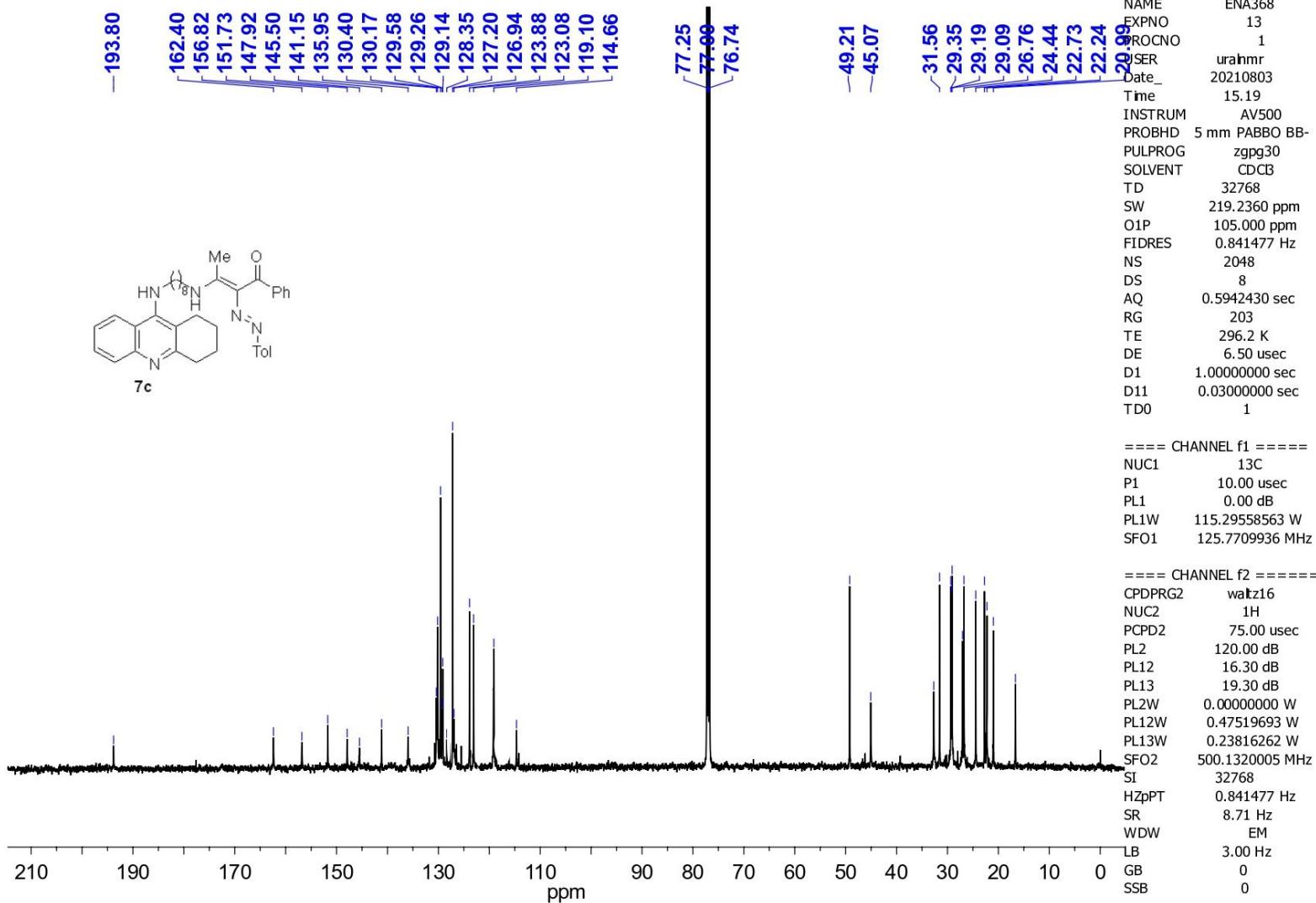


Figure S38. ¹³C NMR spectrum of compound 7c

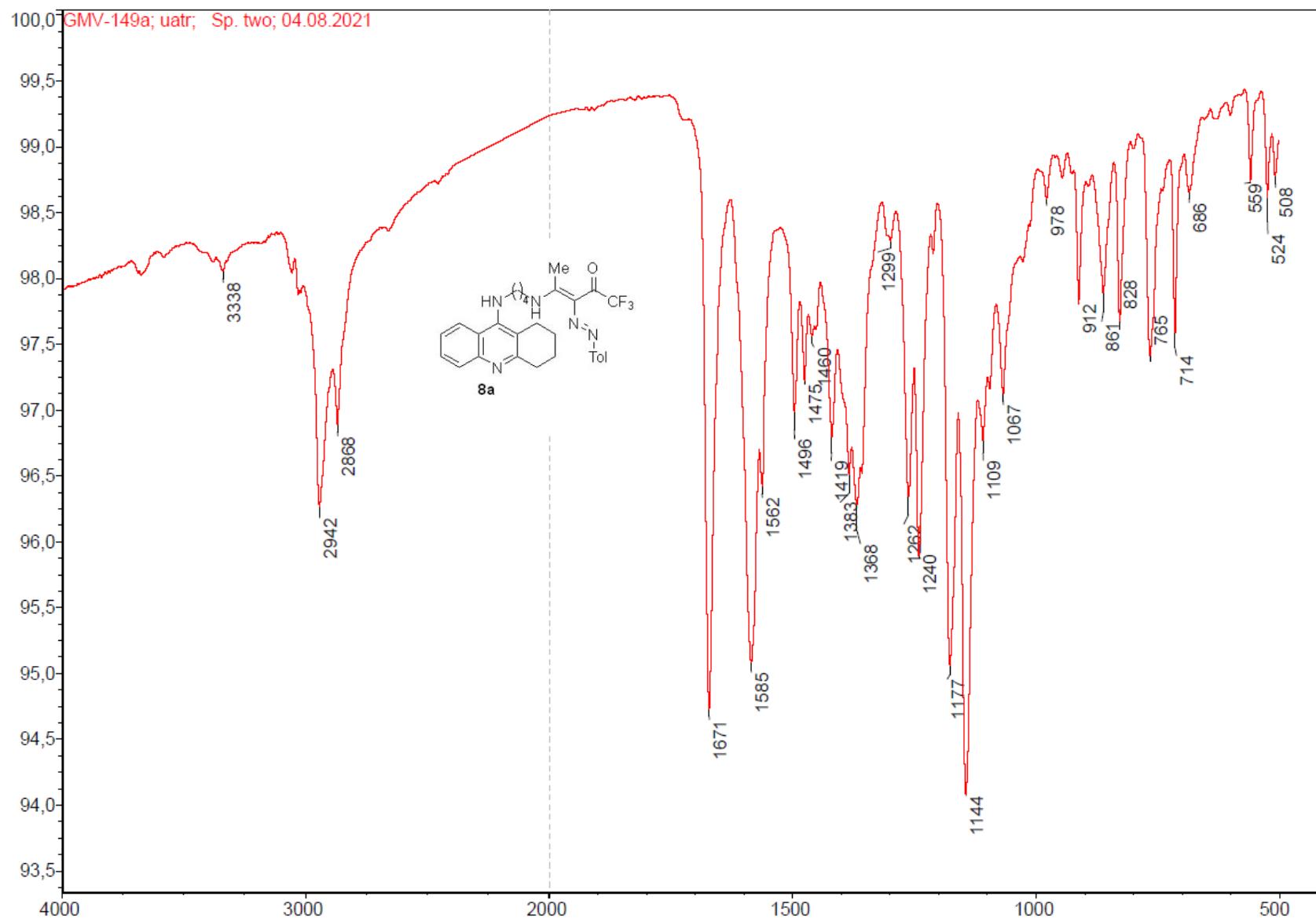


Figure S39. IR spectrum of compound 8a

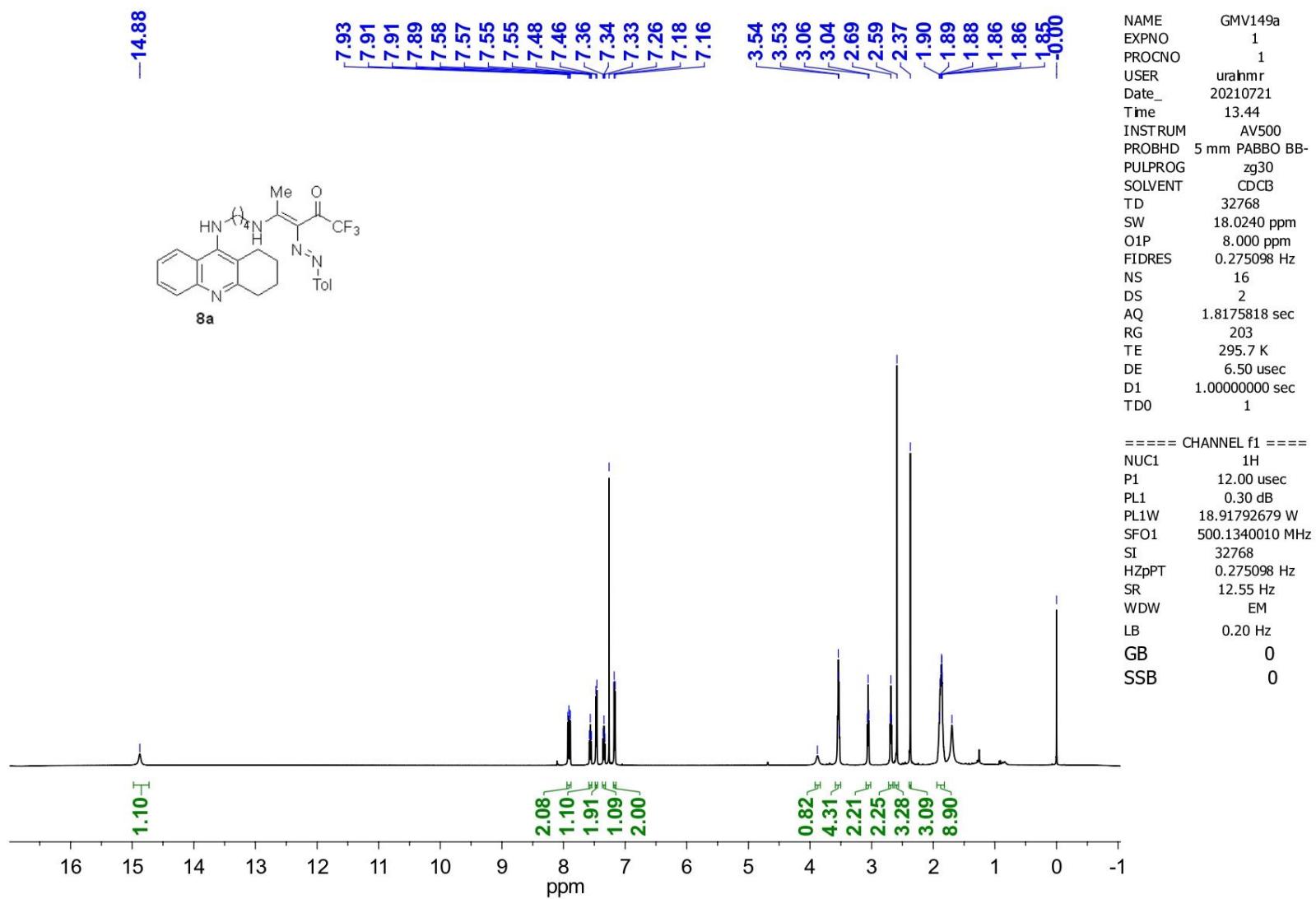
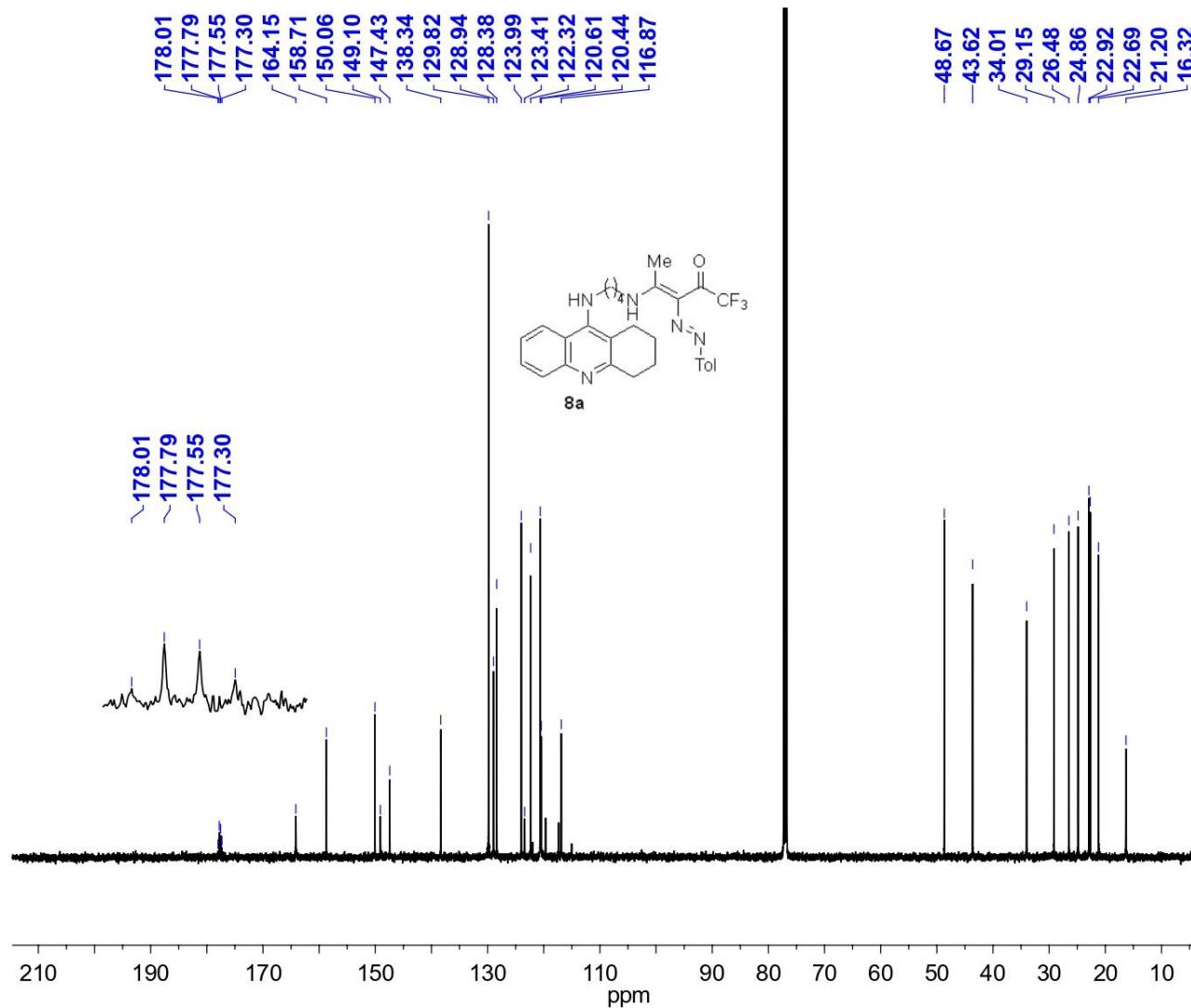


Figure S40. ¹H NMR spectrum of compound 8a



```

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PROCNO    1
USER      urahmhr
Date_     20210805
Time      11.42
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PROBHD   5 mm PABBO BB-
PULPROG  zgpg30
SOLVENT   CDCl3
TD        32768
SW        219.2360 ppm
O1P       105.000 ppm
FIDRES   0.841477 Hz
NS        2048
DS        8
AQ        0.5942430 sec
RG        203
TE        295.7 K
DE        6.50 usec
D1        1.0000000 sec
D11       0.03000000 sec
TD0       1

===== CHANNEL f1 =====
NUC1      13C
P1         10.00 usec
PL1        0.00 dB
PL1W      115.29558563 W
SFO1      125.7709936 MHz

===== CHANNEL f2 =====
CPDPRG2  waltz16
NUC2      1H
PCPD2     75.00 usec
PL2        120.00 dB
PL12       16.30 dB
PL13       19.30 dB
PL2W      0.0000000 W
PL12W     0.47519693 W
PL13W     0.23816262 W
SFO2      500.1320005 MHz
SI        32768
HZPT      0.841477 Hz
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WDW       EM
LB         1.00 Hz
GB         0
SSB        0

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Figure S41. ¹³C NMR spectrum of compound 8a

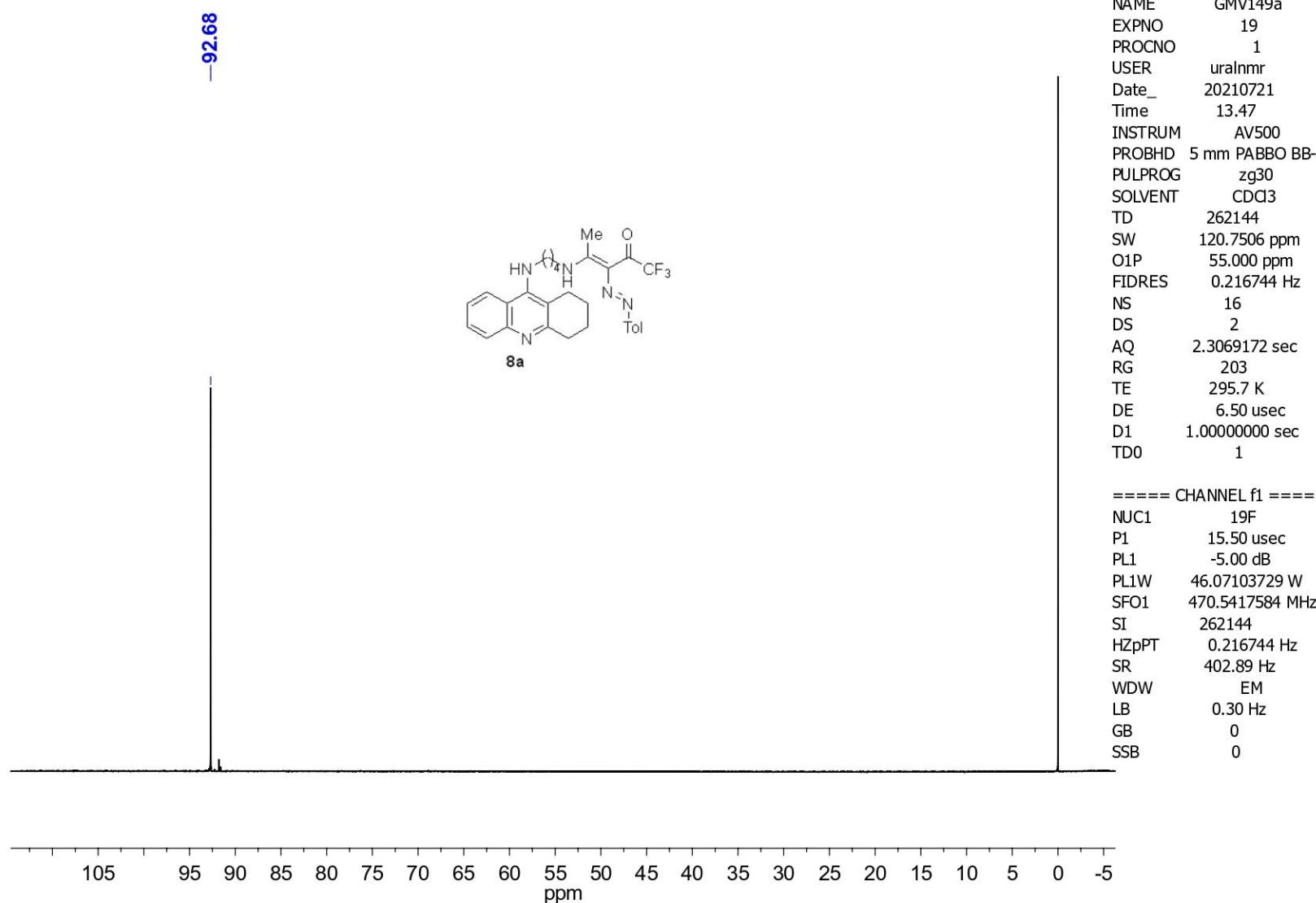


Figure S42. ¹⁹F NMR spectrum of compound 8a

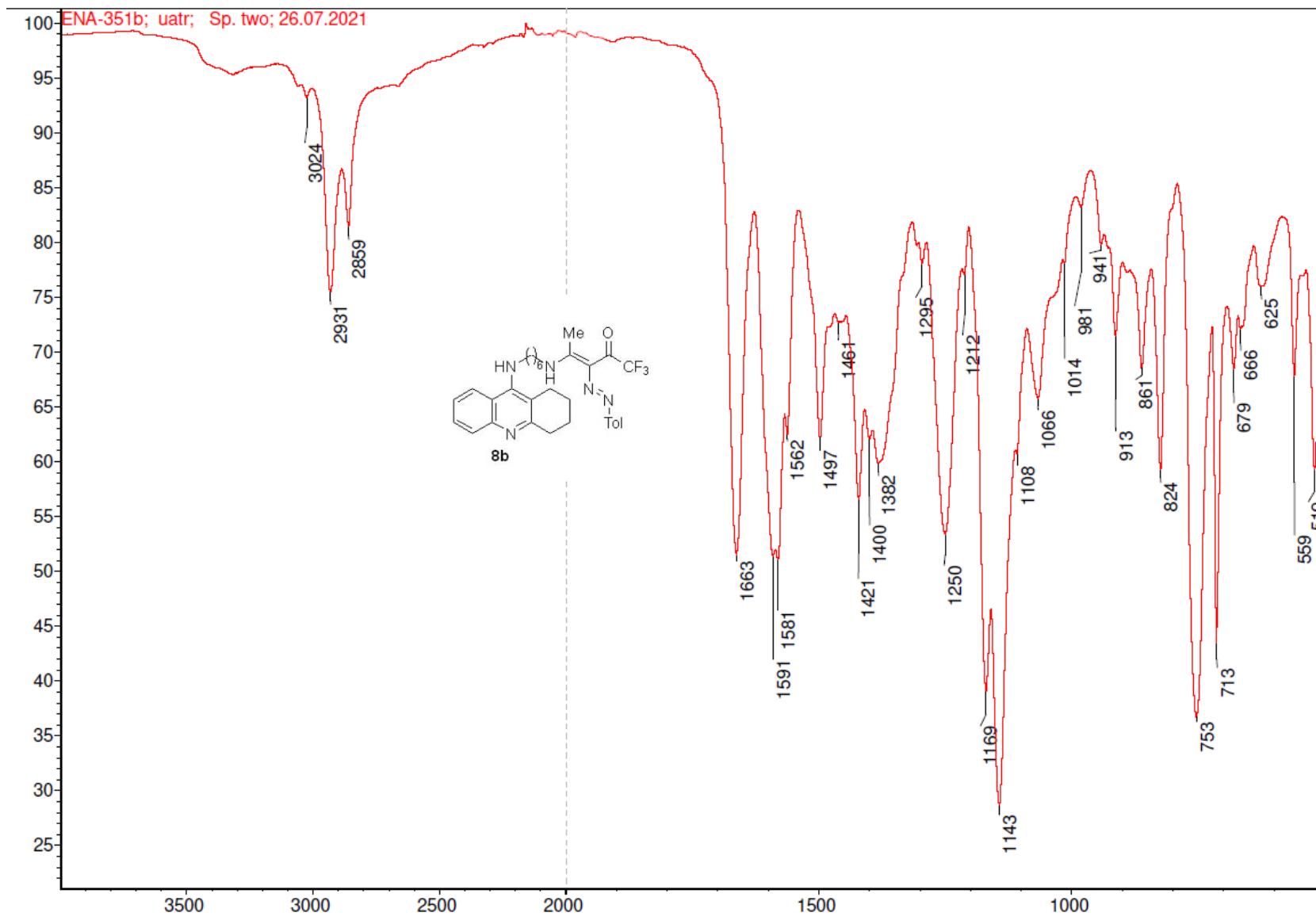


Figure S43. IR spectrum of compound 8b

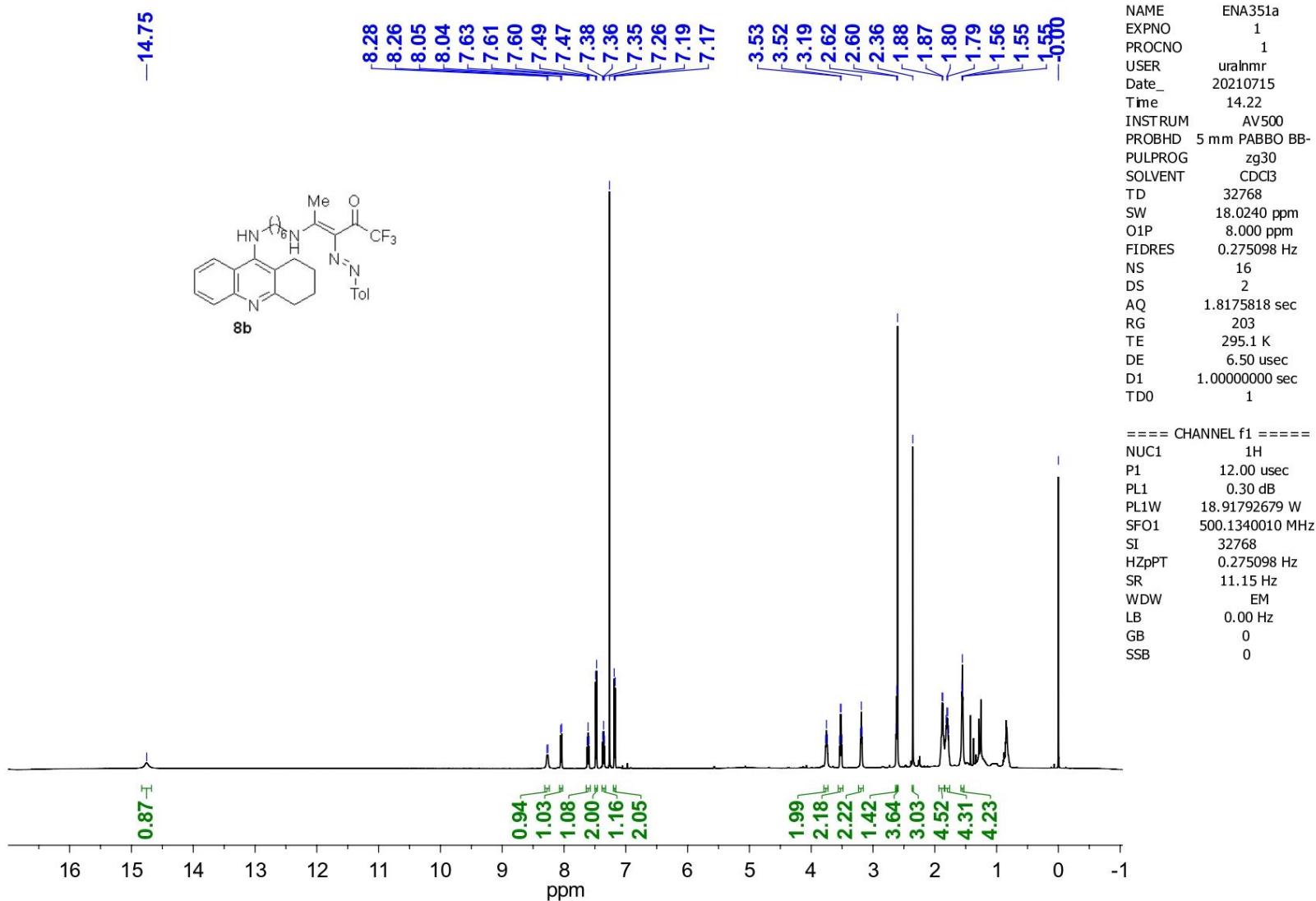


Figure S44. ^1H NMR spectrum of compound 8b

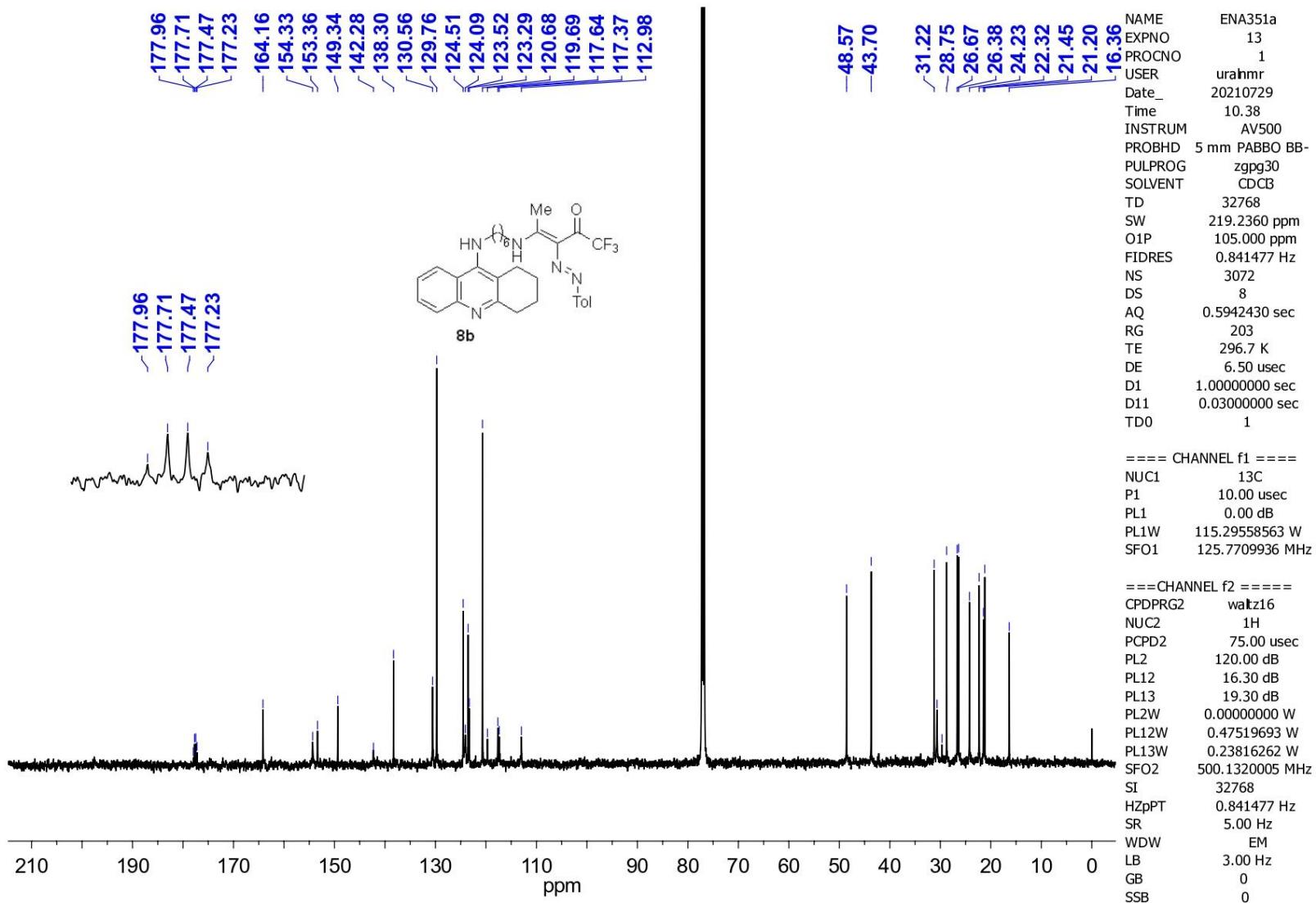


Figure S45. ¹³C NMR spectrum of compound **8b**

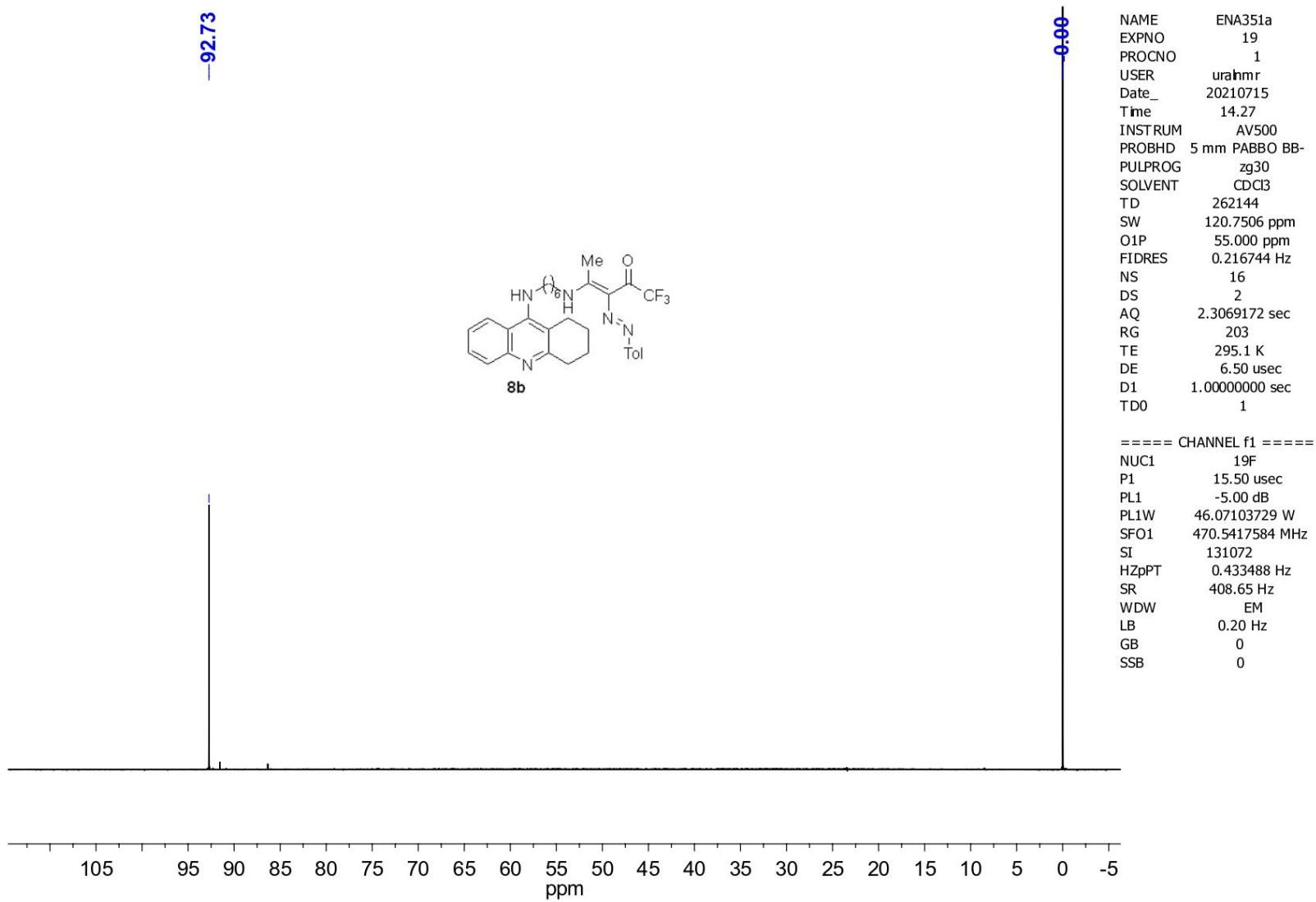


Figure S46. ¹⁹F NMR spectrum of compound 8b

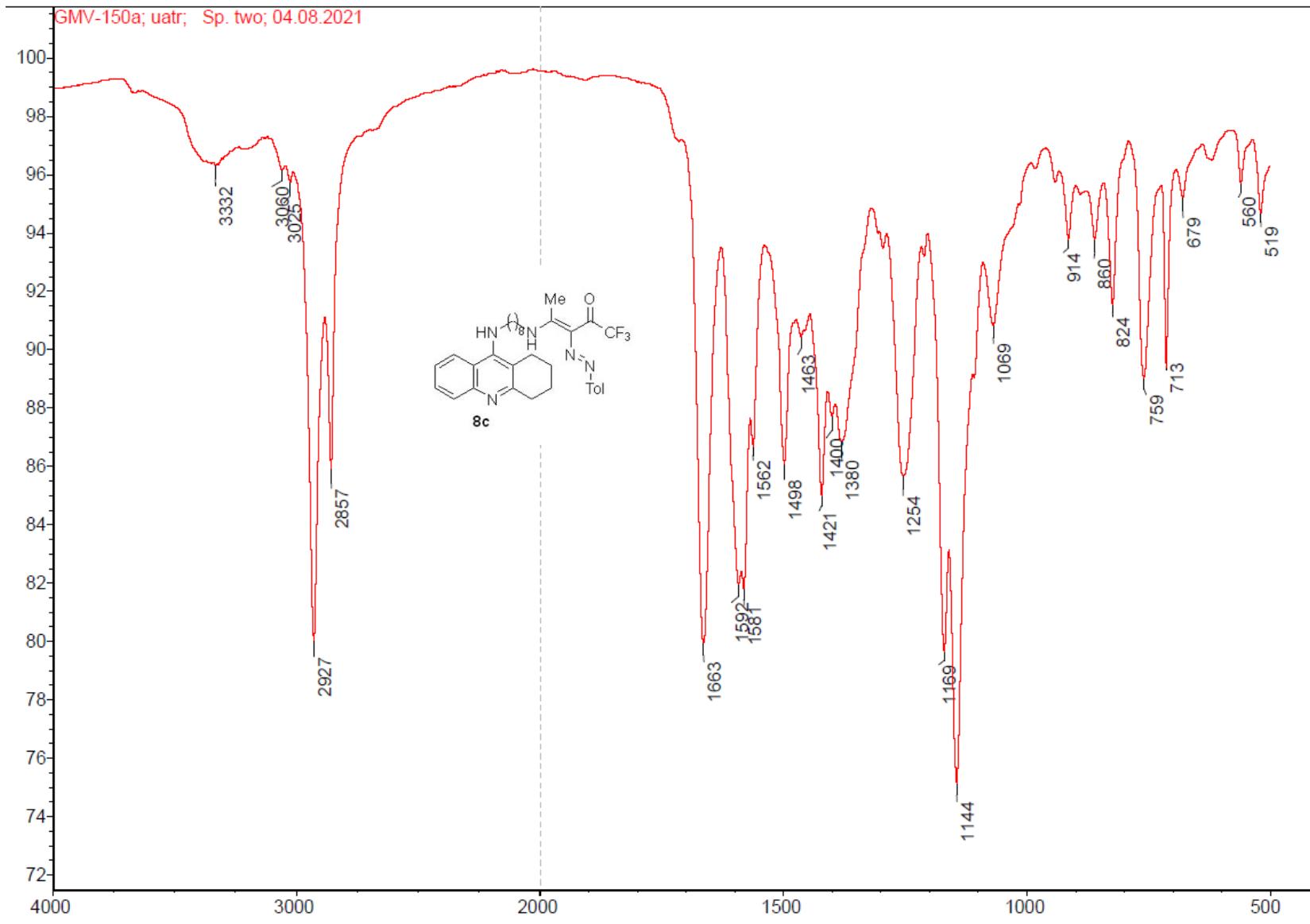


Figure S47. IR spectrum of compound 8c

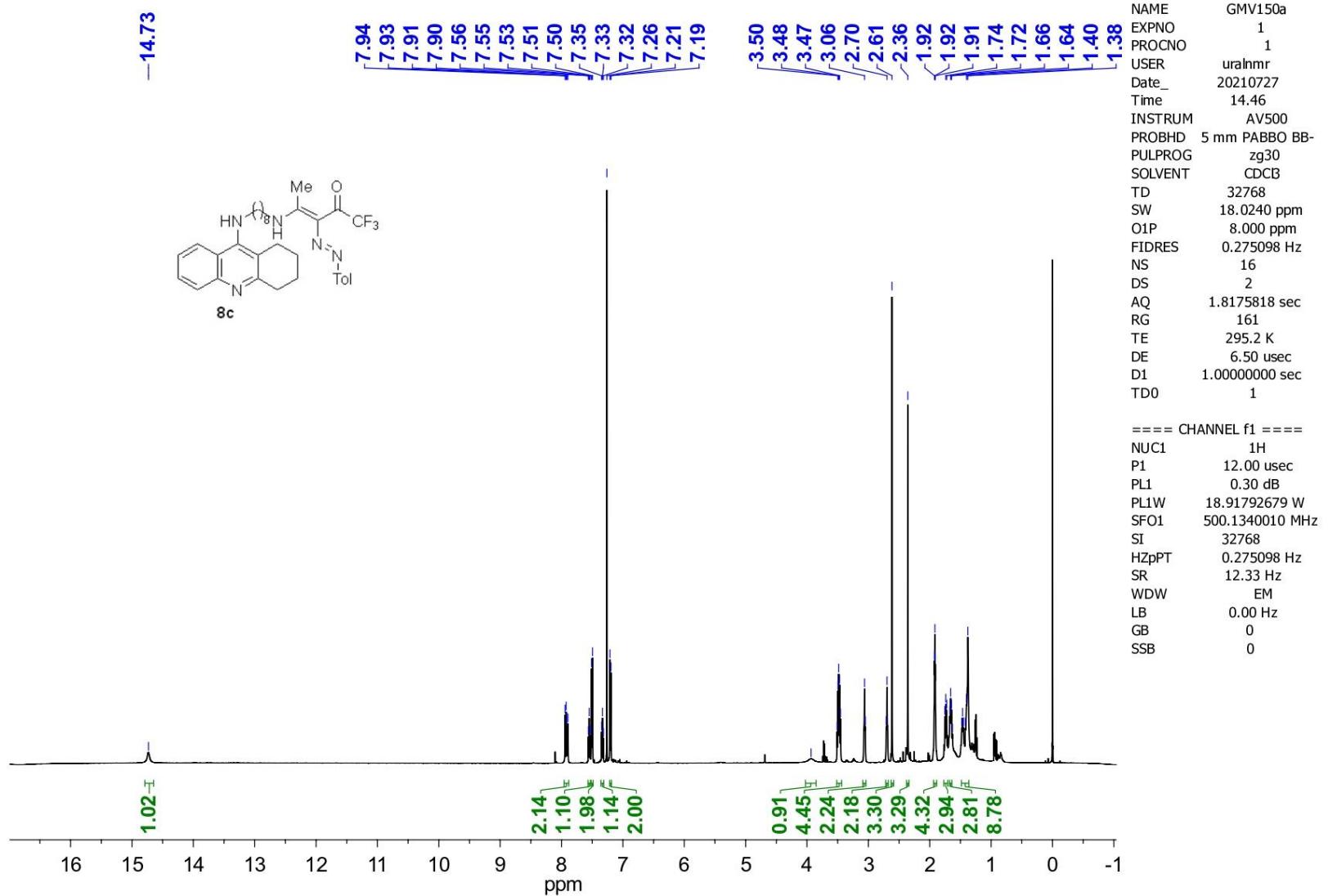


Figure S48. ¹H NMR spectrum of compound 8c

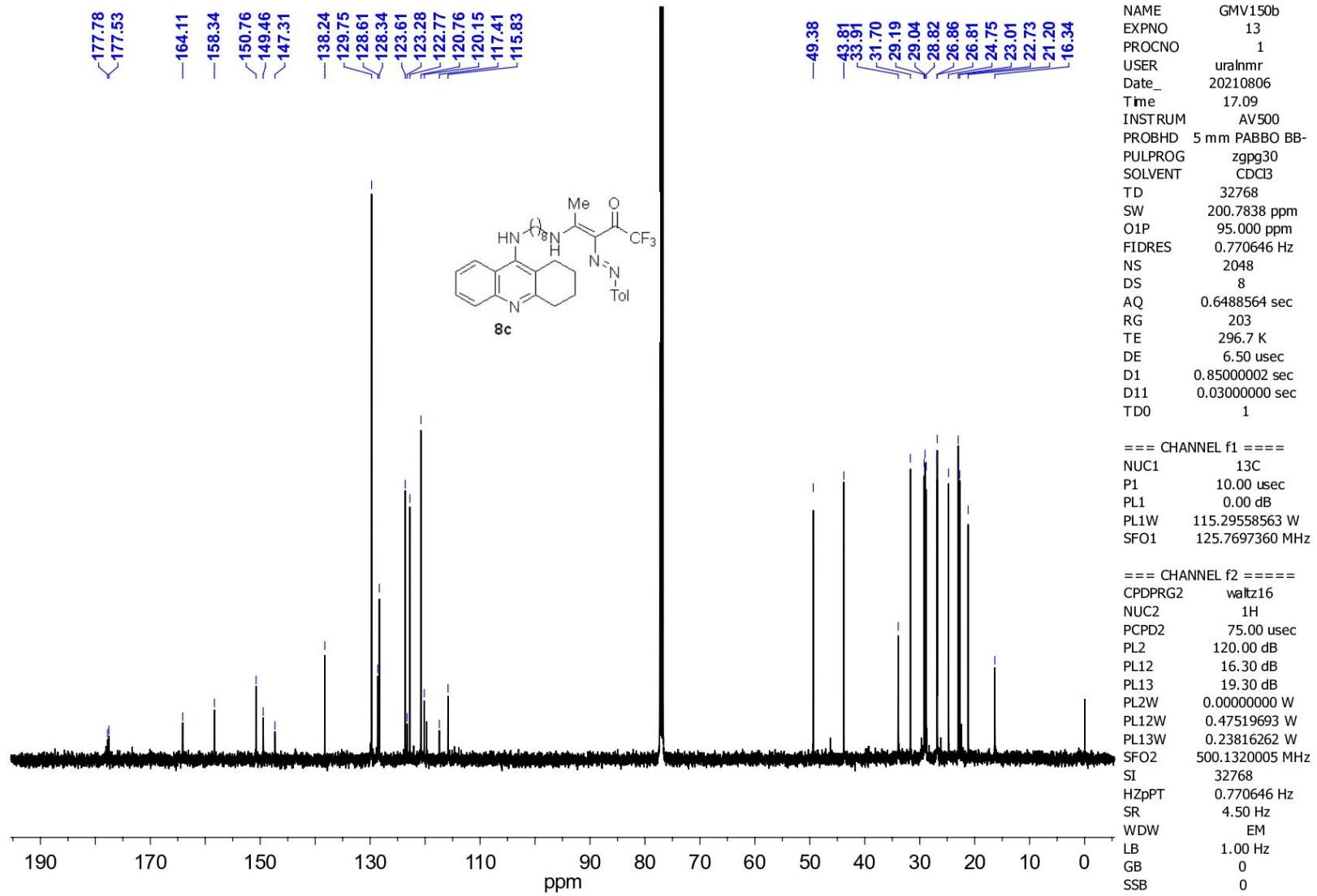


Figure S49. ^{13}C NMR spectrum of compound 8c

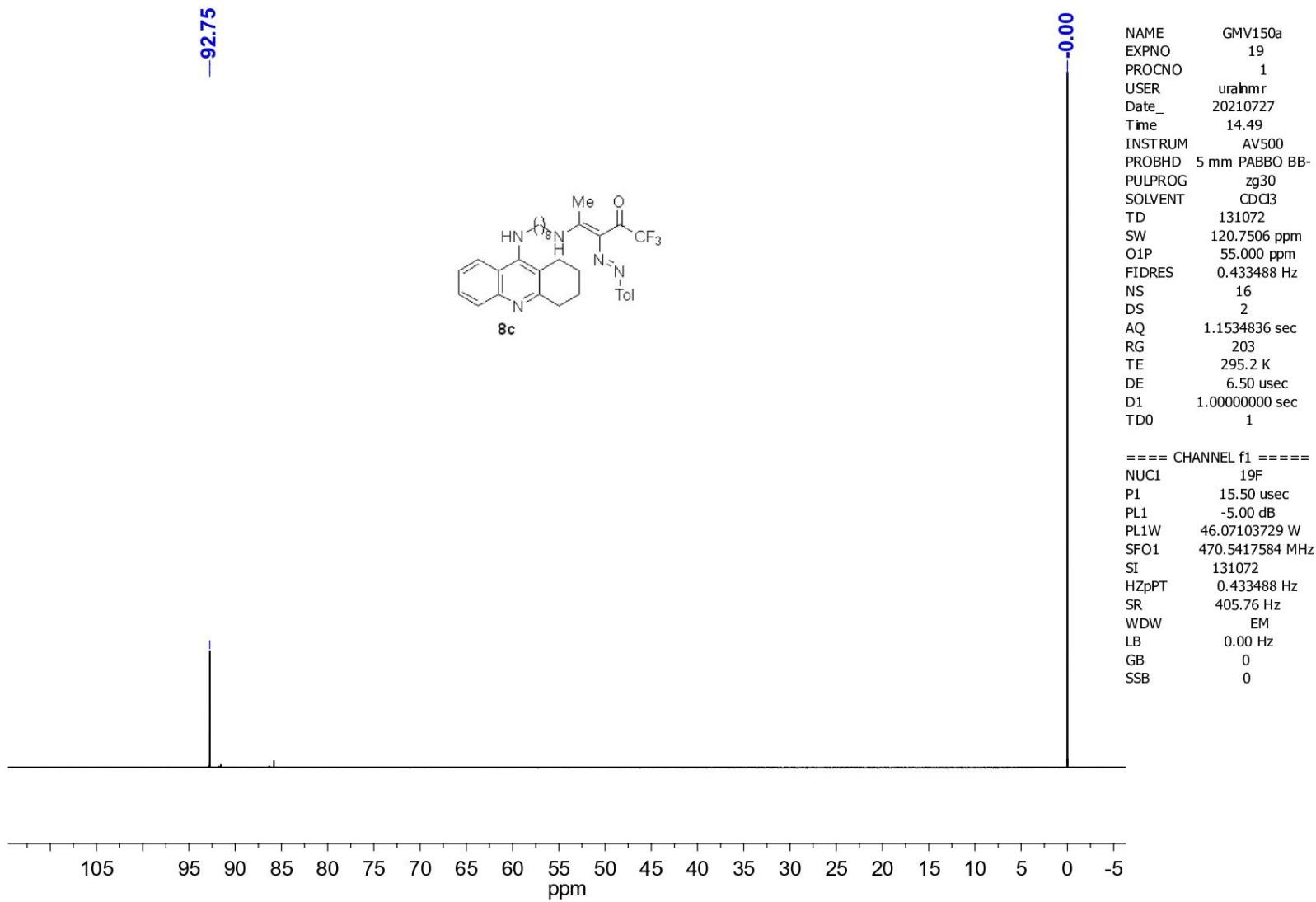


Figure S50. ^{19}F NMR spectrum of compound **8c**