

Supplementary materials

Multimodal Antibacterial Potency of Novel Schiff / Mannich Based Coumarin Derivatives Targeting Bacterial DNA Gyrase and Biofilm Inhibition: An *In-Vitro* and *In-Silico* Investigations.

Kakarla Pakeeraiah^a, Pragyan Paramita Swain^b, Alaka Sahoo^{a,c,d}, Preetesh Kumar Panda^a, Monalisa Mahapatra^a, Suvadeep Mal^a, Rajesh Kumar Sahoo^b, Pratap Kumar Sahu^{*e}, Sudhir Kumar Paidesetty^{*a}

^a Medicinal Chemistry Research Laboratory, School of Pharmaceutical Sciences, Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar 751003, Odisha, India.

^b Centre for Biotechnology, School of Pharmaceutical Sciences, Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar 751003, Odisha, India.

^cDepartment of Skin & VD, Institute of Medical Sciences&SUM Hospital, Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar 751003, Odisha, India.

^d Research and Development Division, Salixiras Research Private Limited, Bhubaneswar, Odisha, India.

^e Department of Pharmacology, School of Pharmaceutical Sciences, Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar 751003, Odisha, India.

***Corresponding authors: psudhirkumar@soa.ac.in; pratapsahu@soa.ac.in**

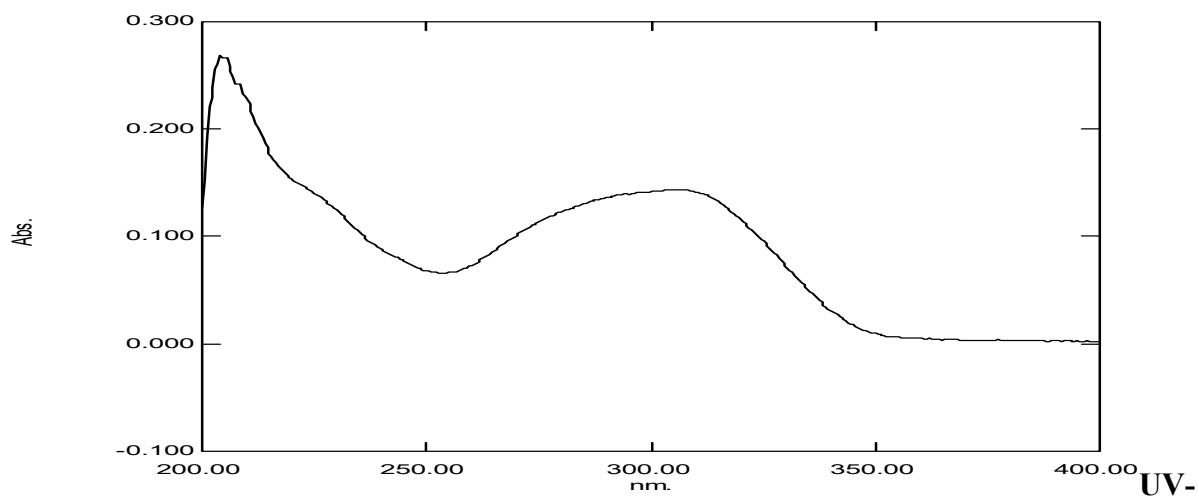


Fig. S1. Visible spectra of compound 5a

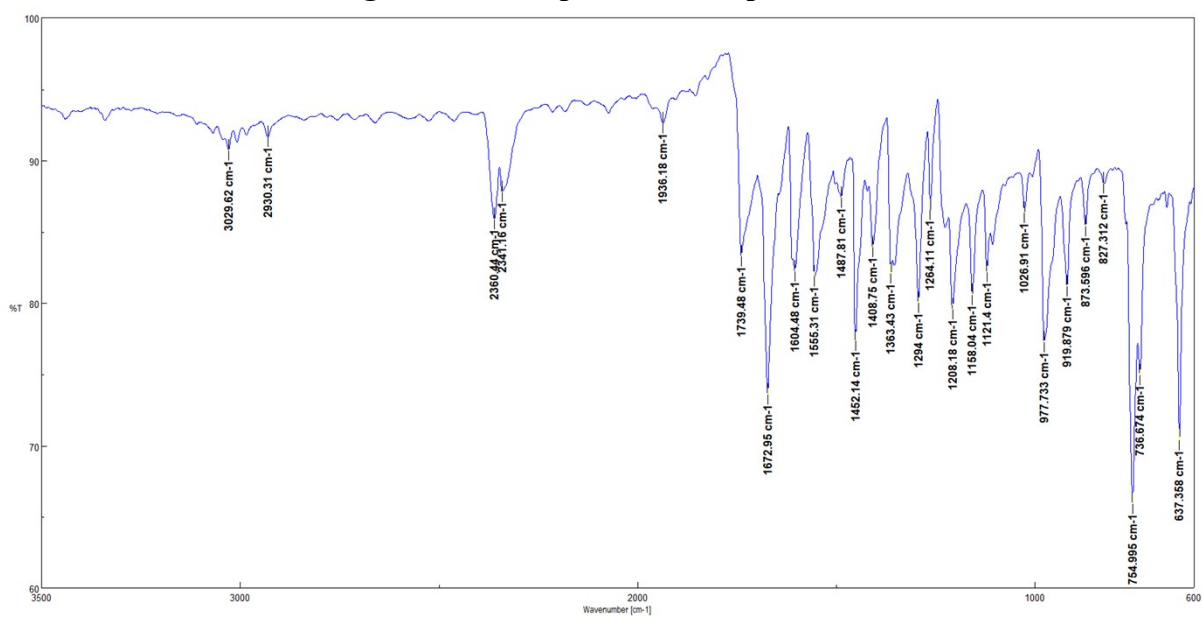


Fig. S2. FTIR Spectra of compound 5a

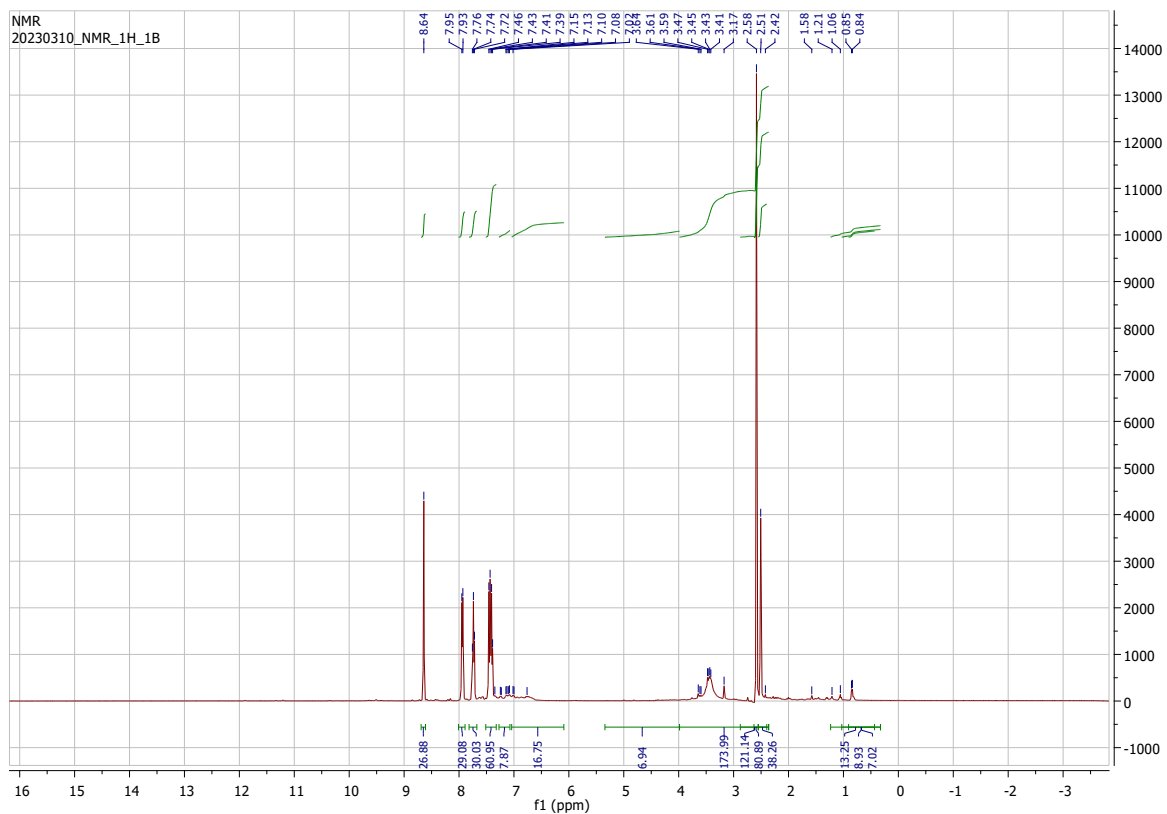


Fig. S3. ^1H NMR Spectra of compound 5a

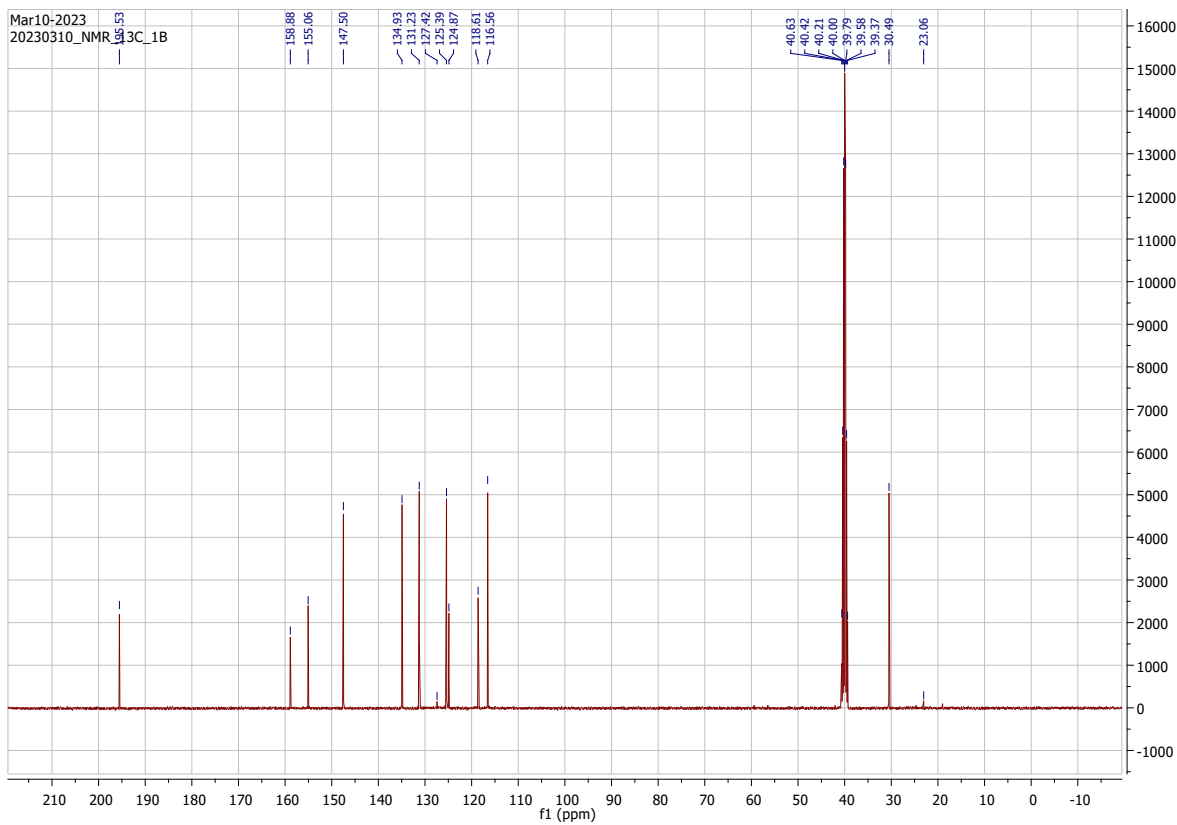


Fig. S4. ^{13}C NMR Spectra of compound 5a

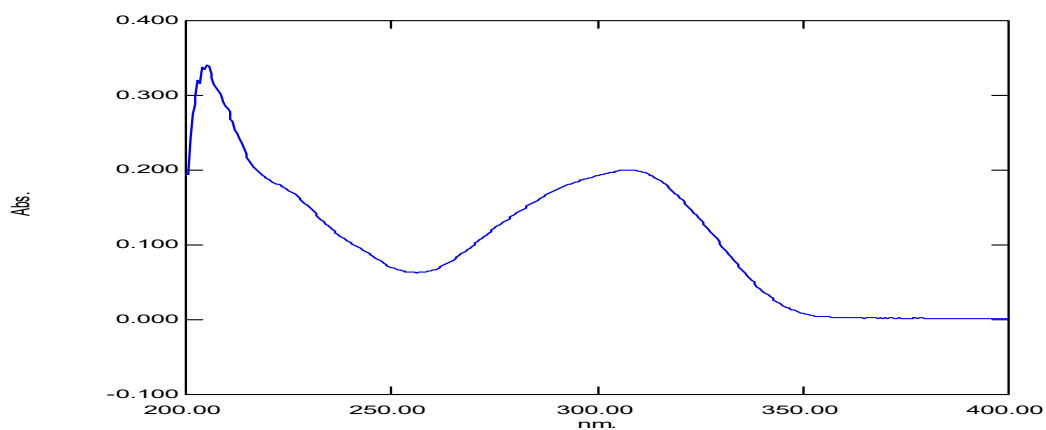


Fig. S5. UV-Visible spectra of compound 5b

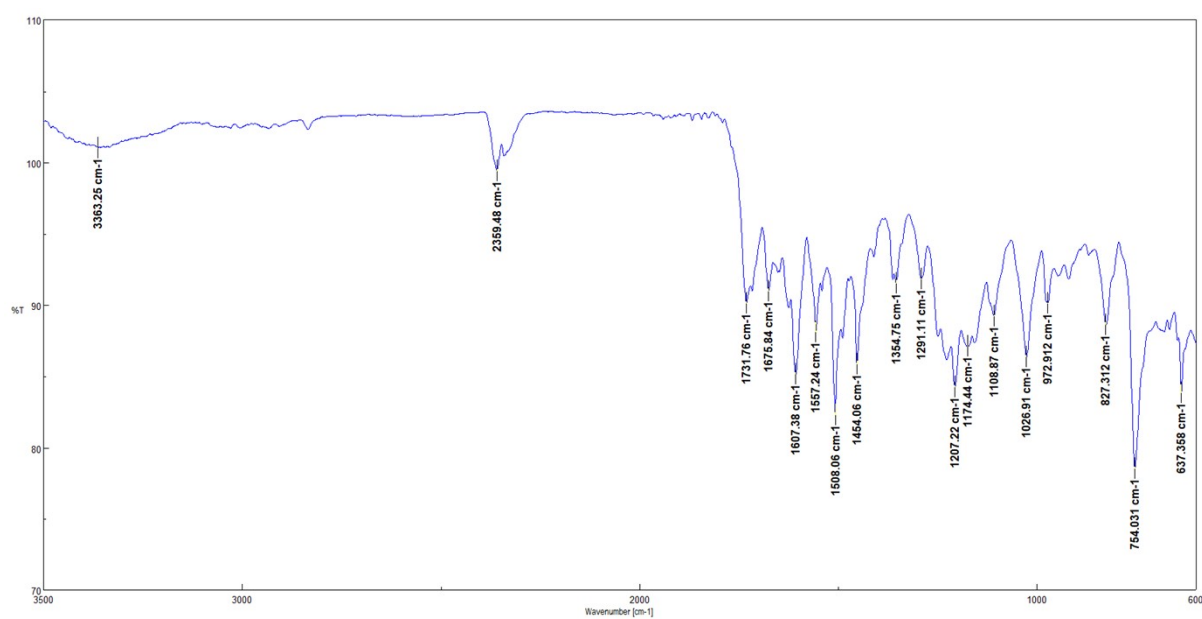


Fig. S6. FTIR Spectra of compound 5b

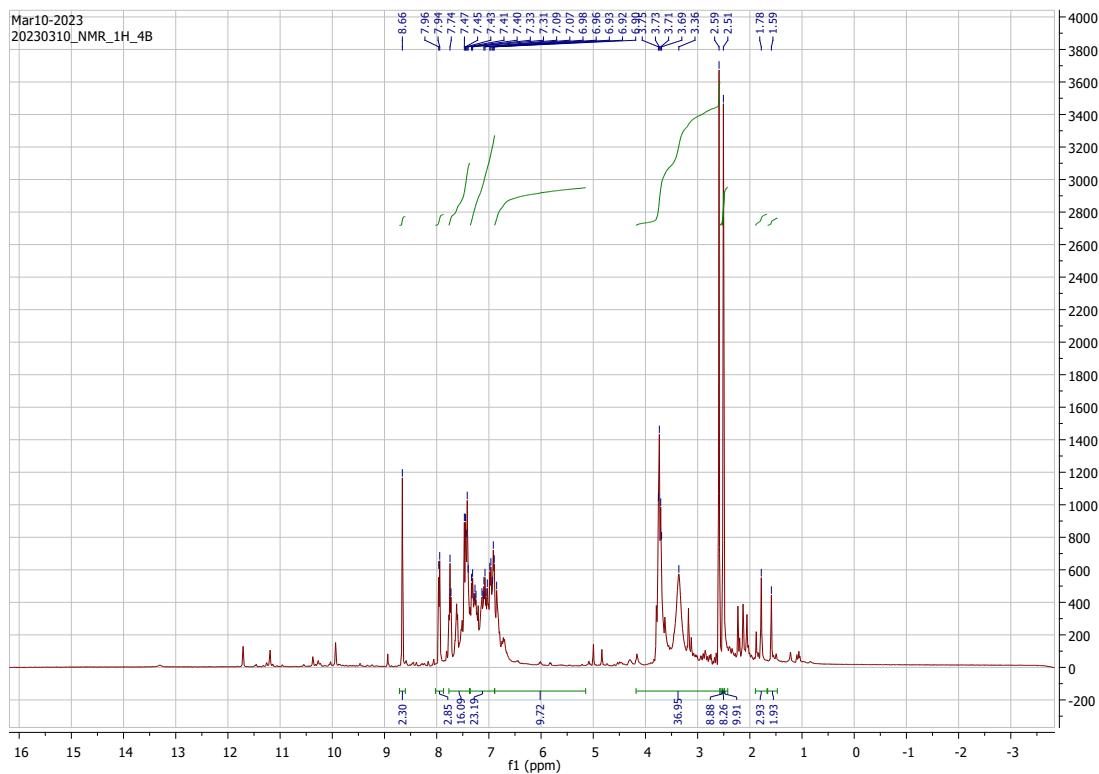


Fig. S7. ^1H NMR Spectra of compound 5b

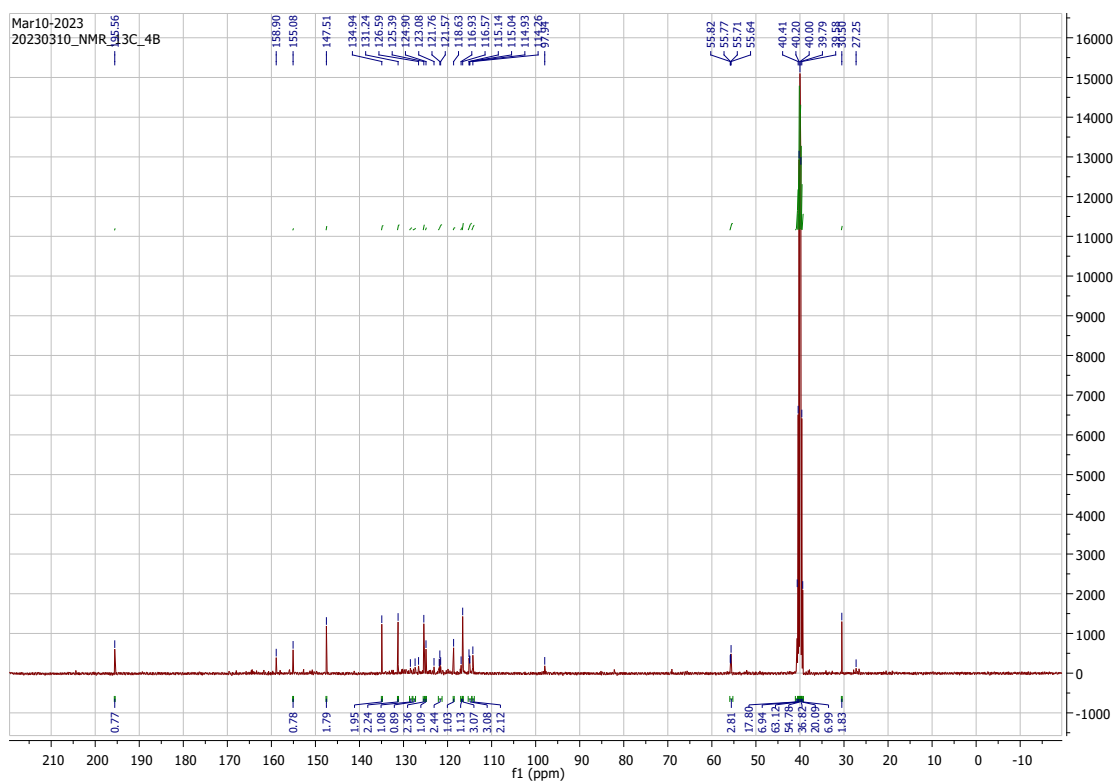


Fig. S8. ^{13}C NMR Spectra of compound 5b

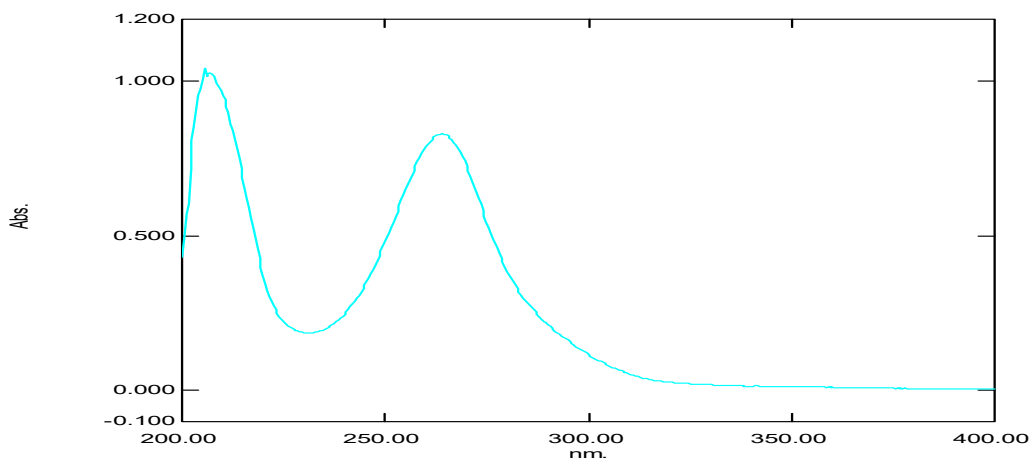


Fig. S9. UV-Visible spectra of compound 5c

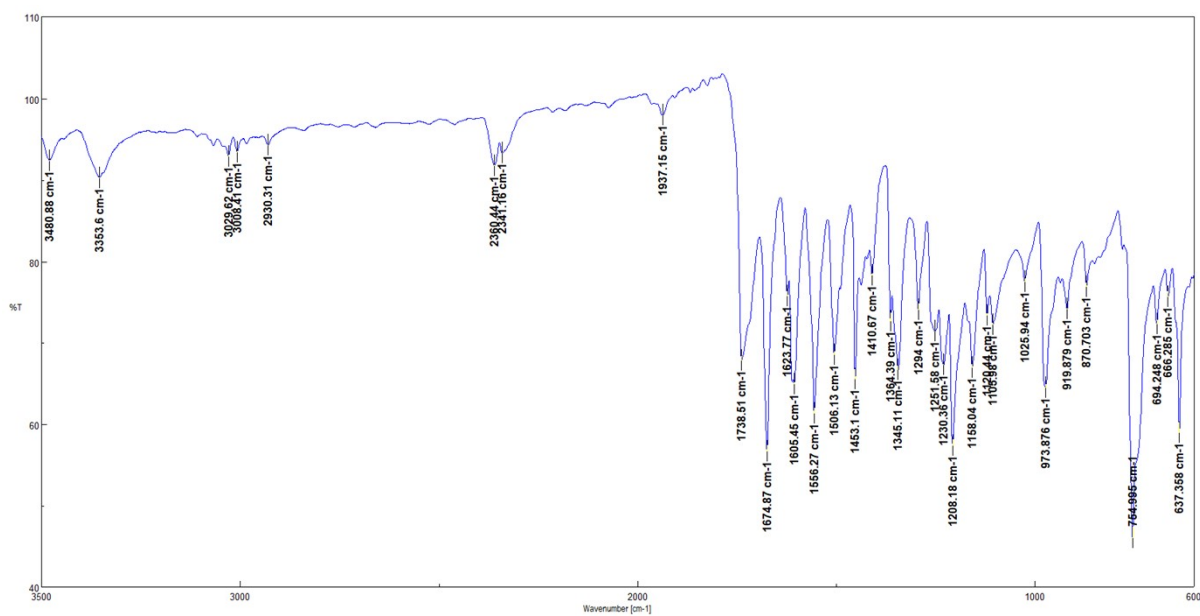


Fig. S10. FTIR Spectra of compound 5c

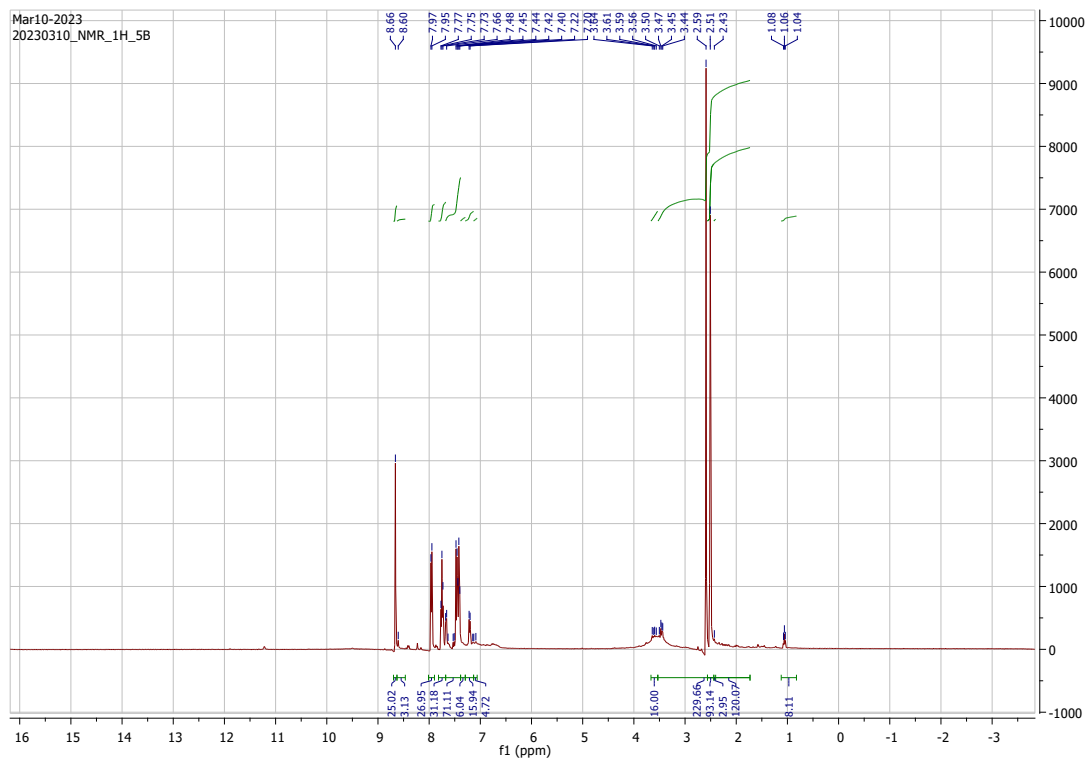


Fig. S11. ^1H NMR Spectra of compound 5c

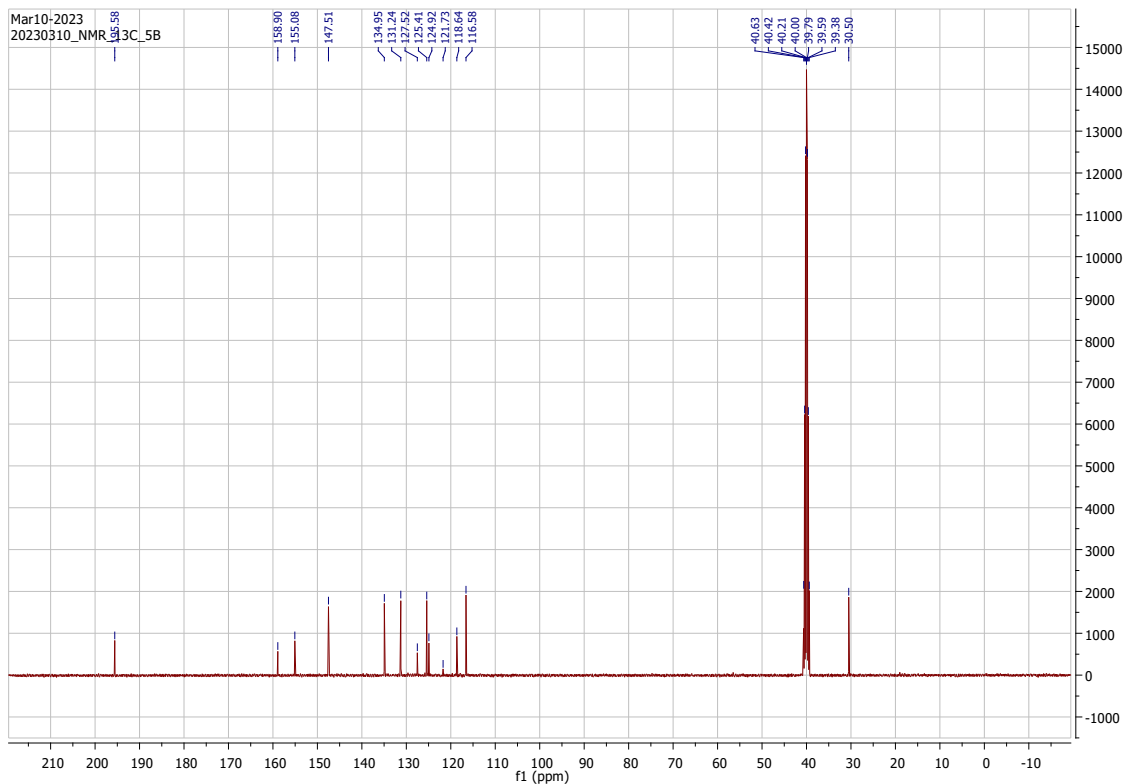


Fig. S12. ^{13}C NMR Spectra of compound 5c

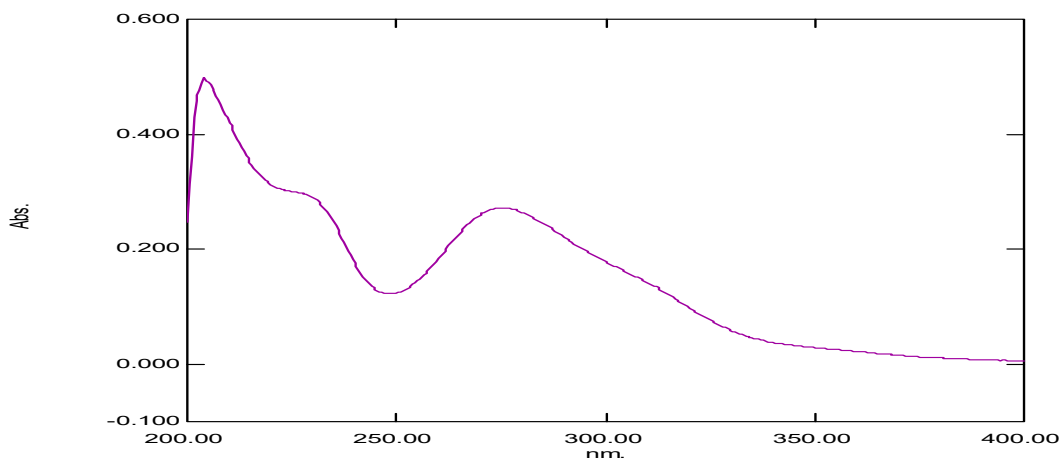


Fig. S13. UV-Visible spectra of compound 5d

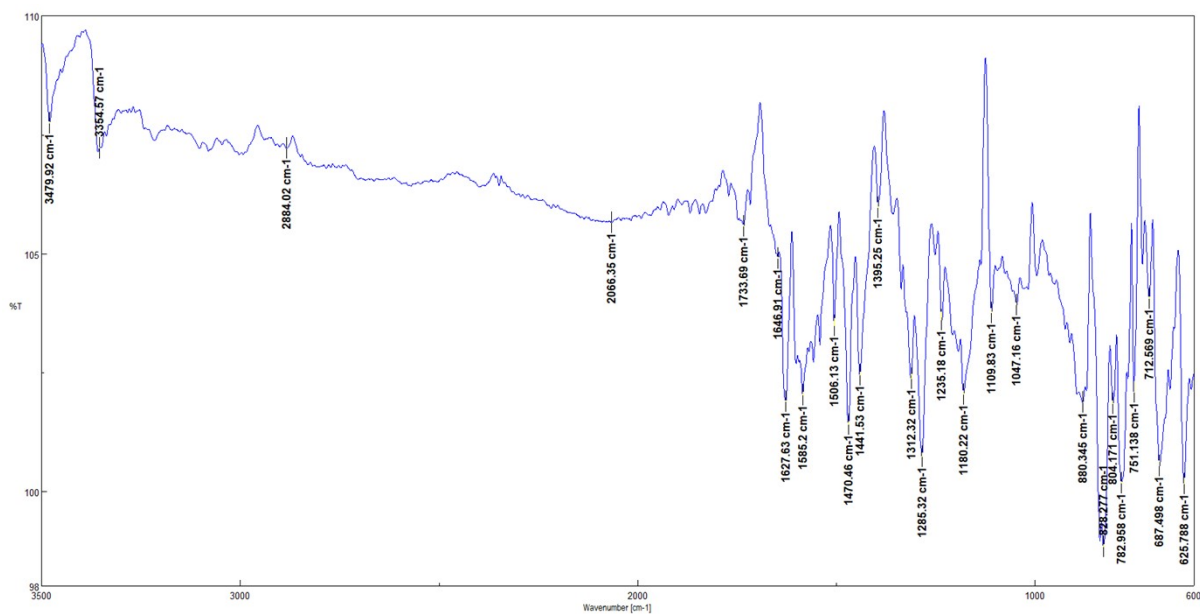


Fig. S14. FTIR Spectra of compound 5d

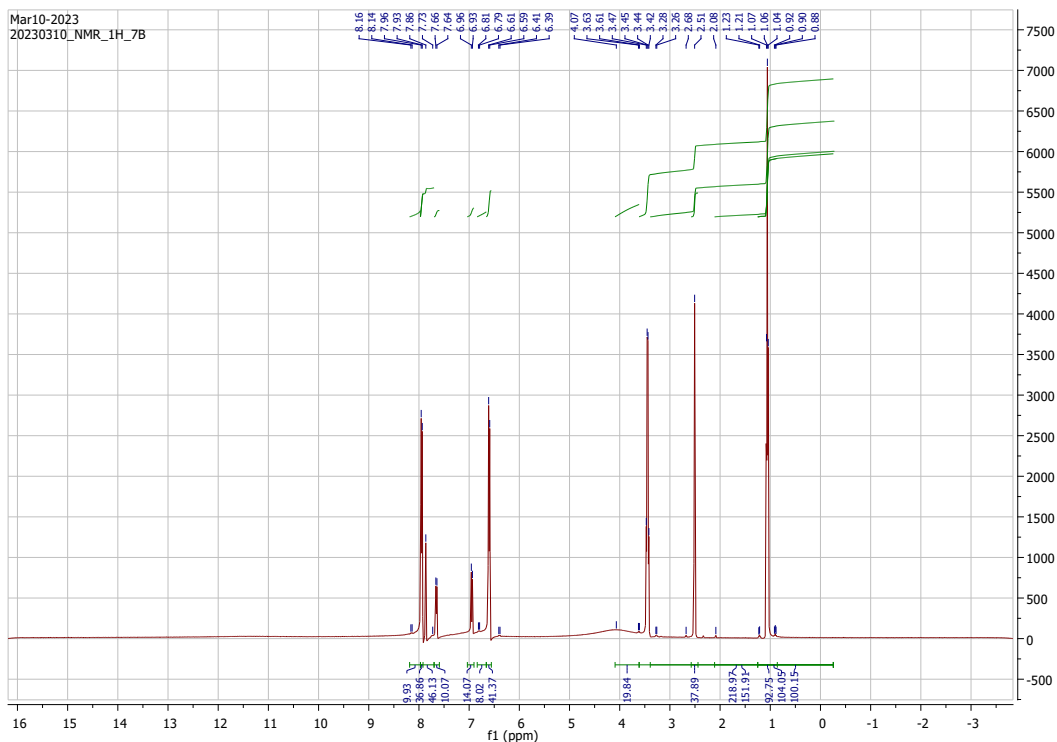


Fig. S15. ^1H NMR Spectra of compound 5d

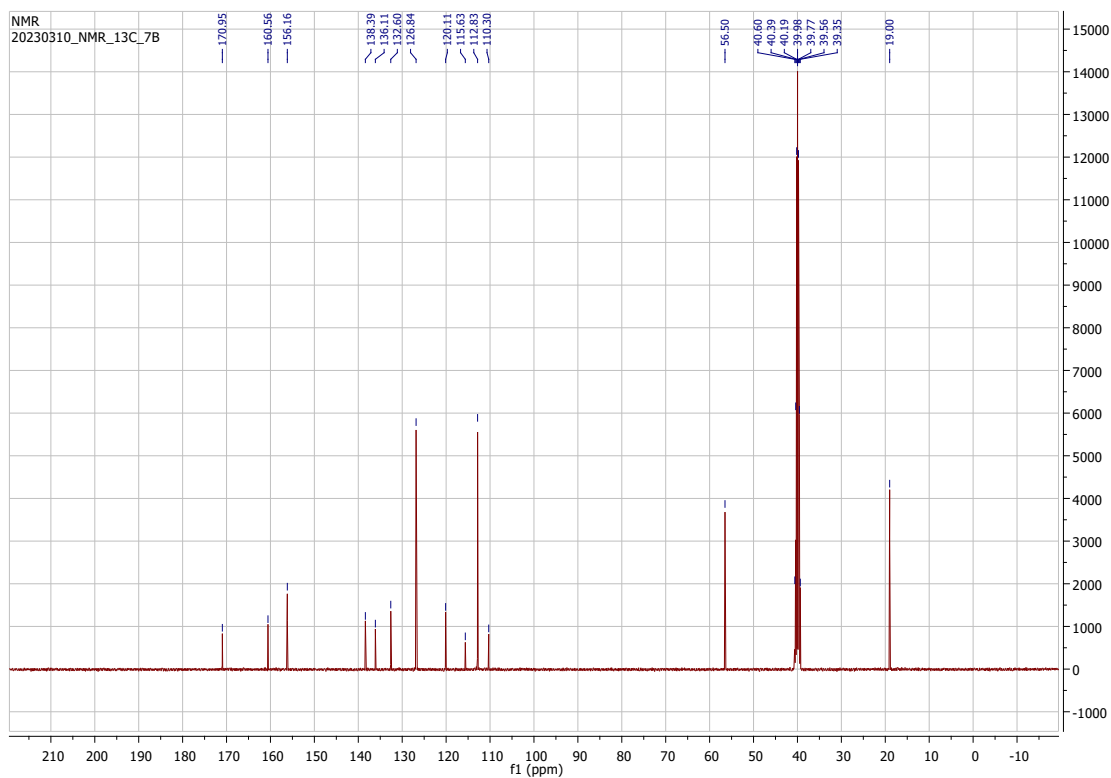


Fig. S16. ^{13}C NMR Spectra of compound 5d

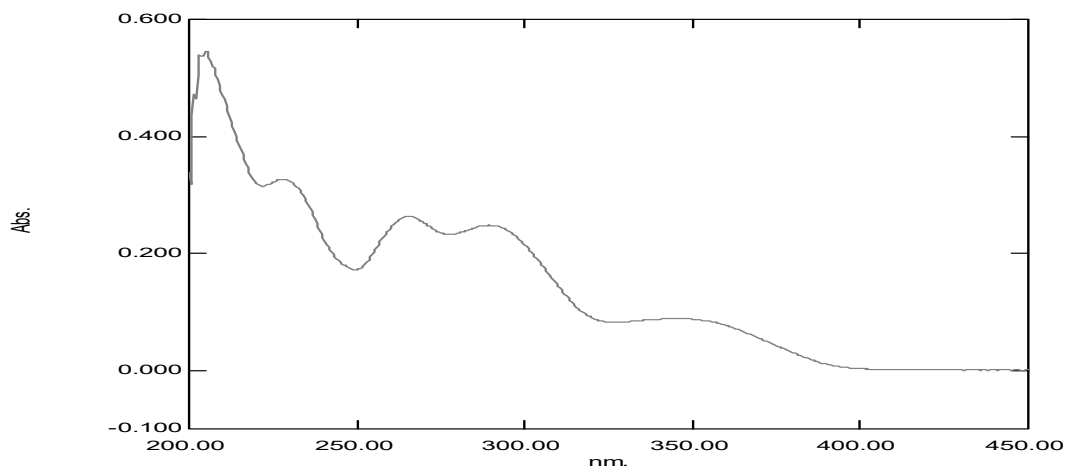


Fig. S17. UV-Visible spectra of compound 5e

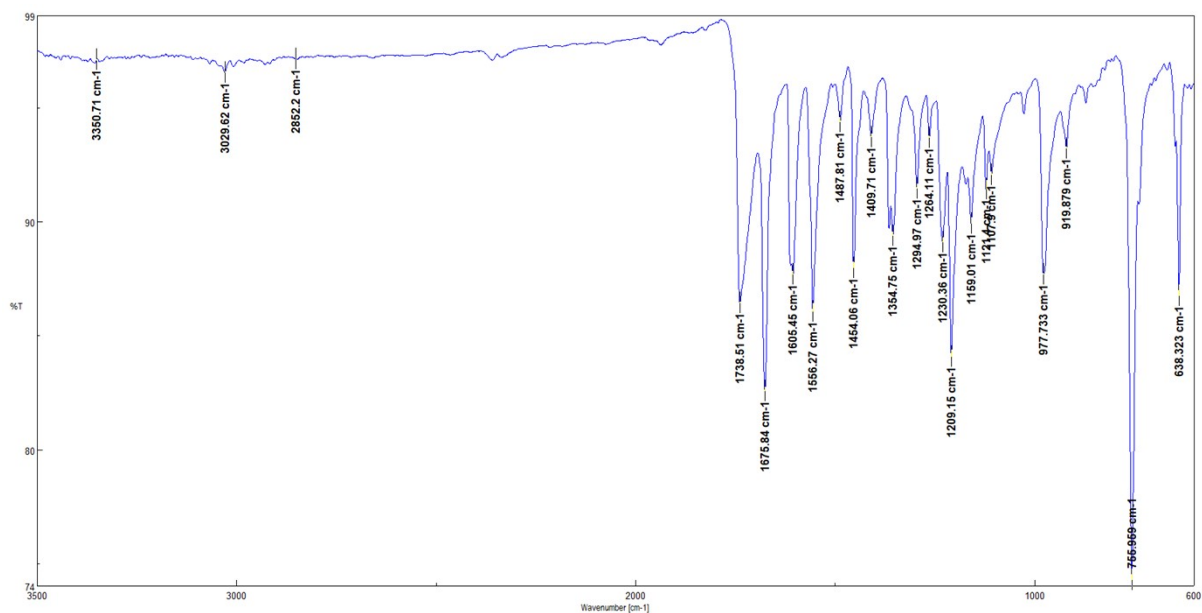


Fig. S18. FTIR Spectra of compound 5e

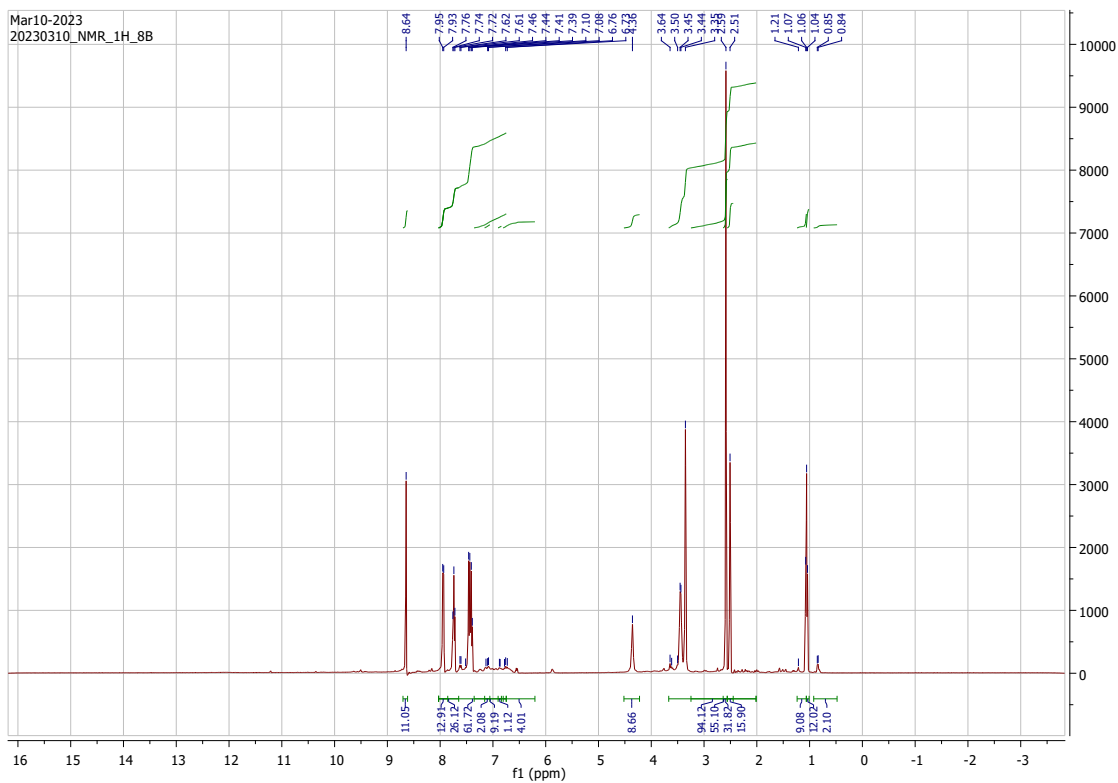


Fig. S19. ^1H NMR Spectra of compound 5e

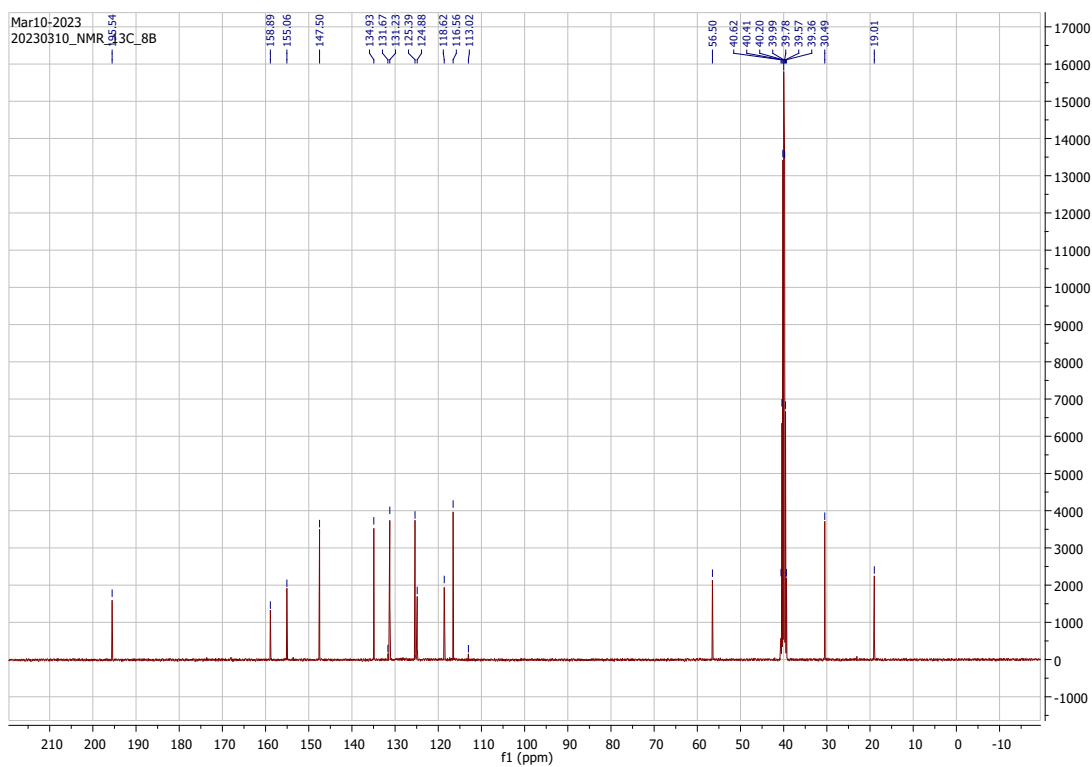


Fig. S20. ^{13}C NMR Spectra of compound 5e

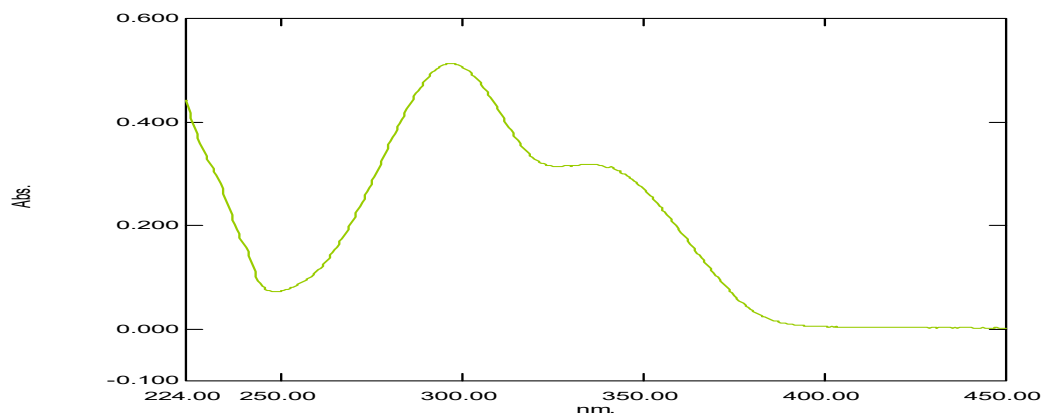


Fig. S21. UV-Visible spectra of compound 5f

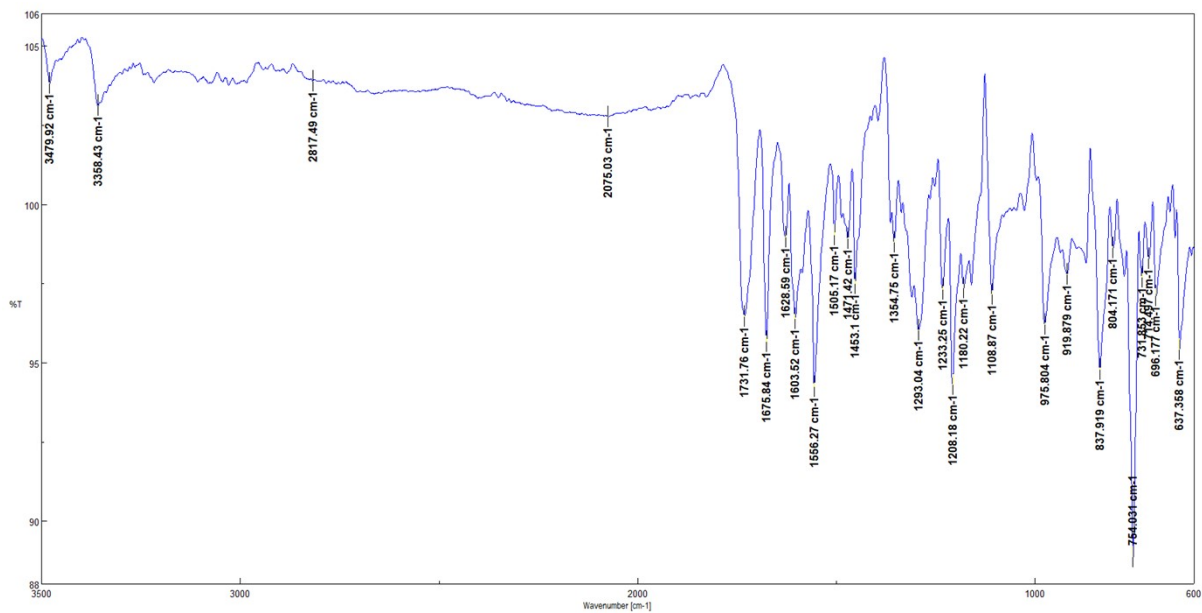


Fig. S22. FTIR Spectra of compound 5f

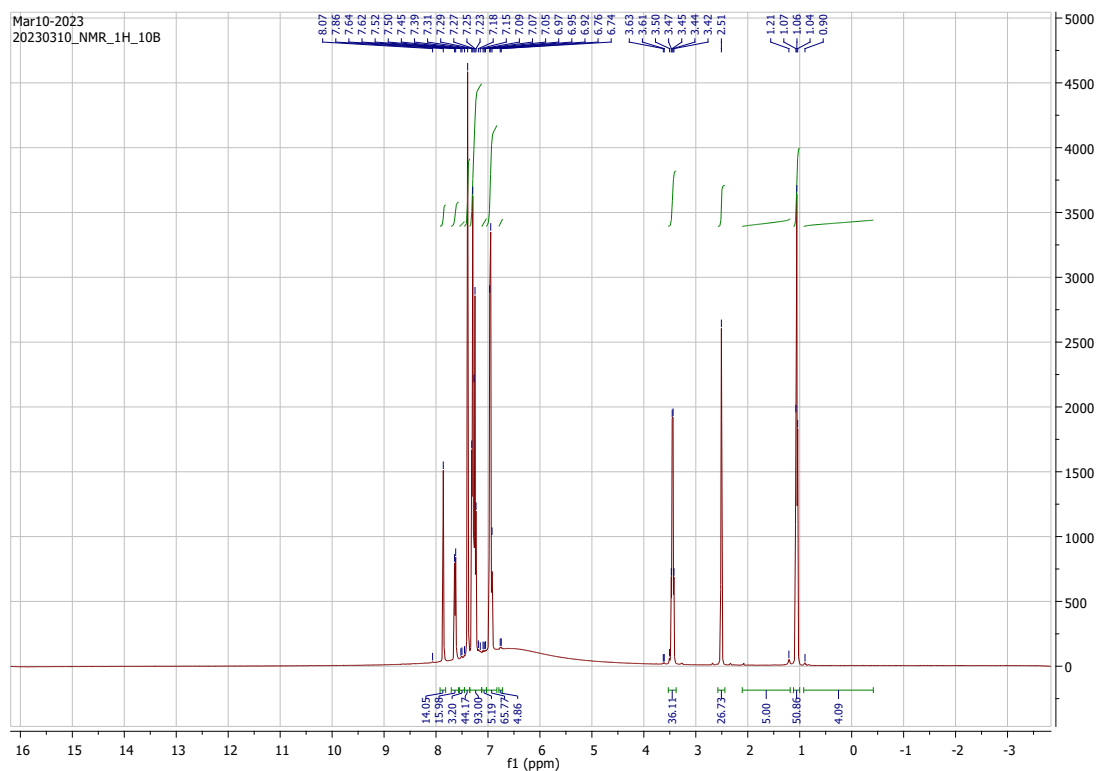


Fig. S23. ^1H NMR Spectra of compound 5f

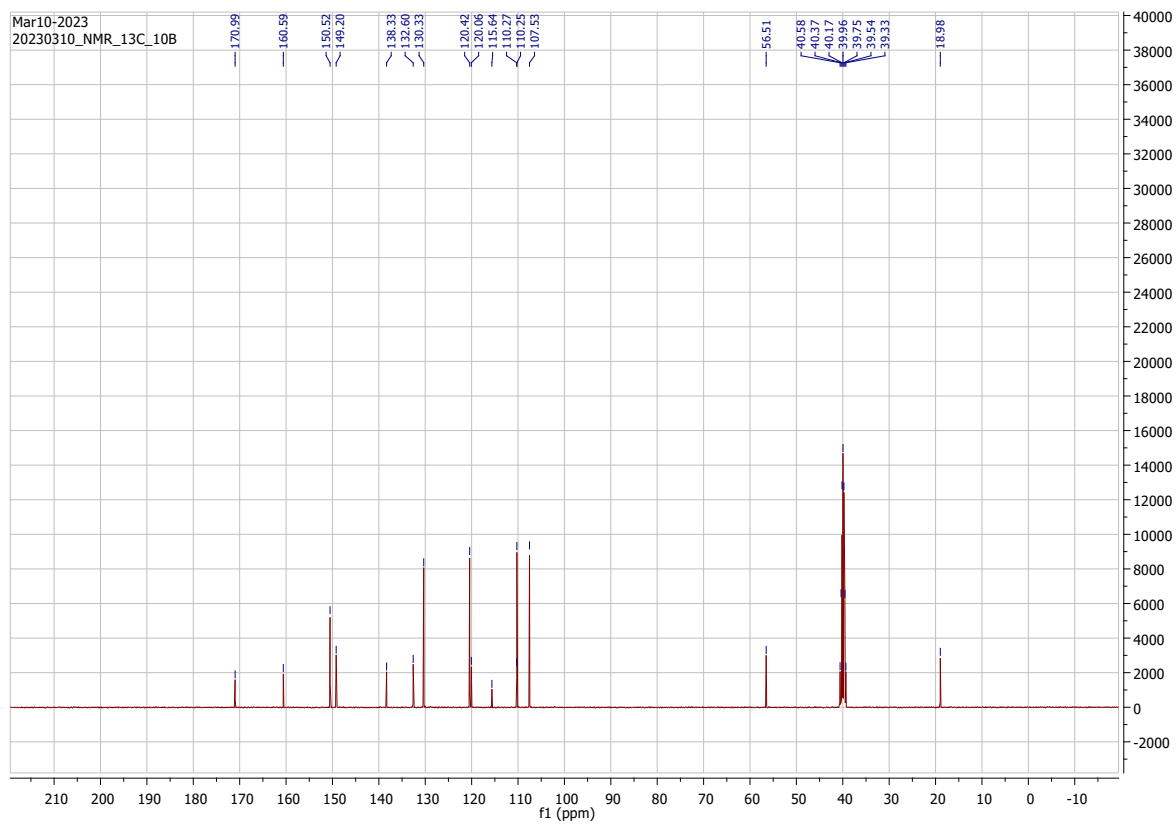


Fig. S24. ^{13}C NMR Spectra of compound 5f

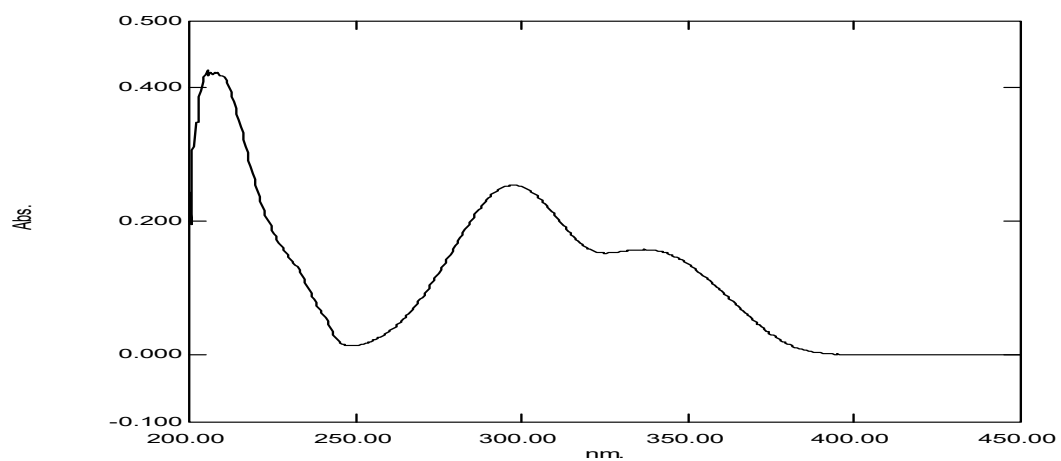


Fig. S25. UV-Visible spectra of compound 5g



Fig. S26. FTIR Spectra of compound 5g

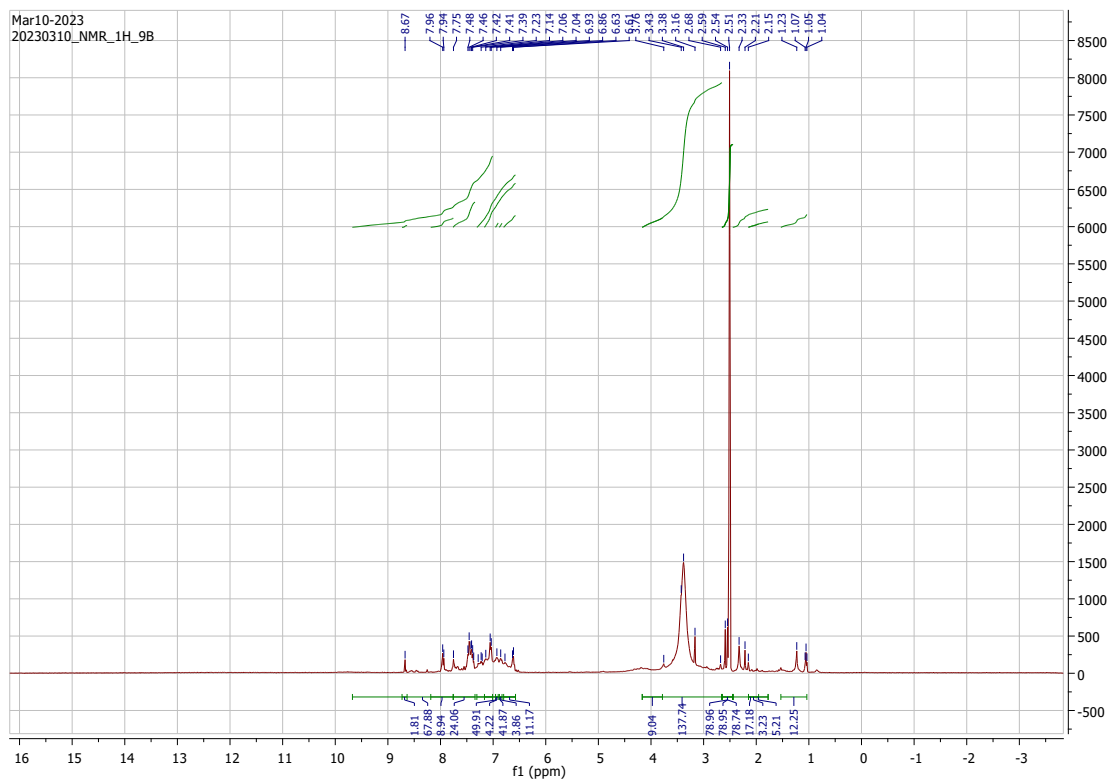


Fig. S27. ^1H NMR Spectra of compound 5g

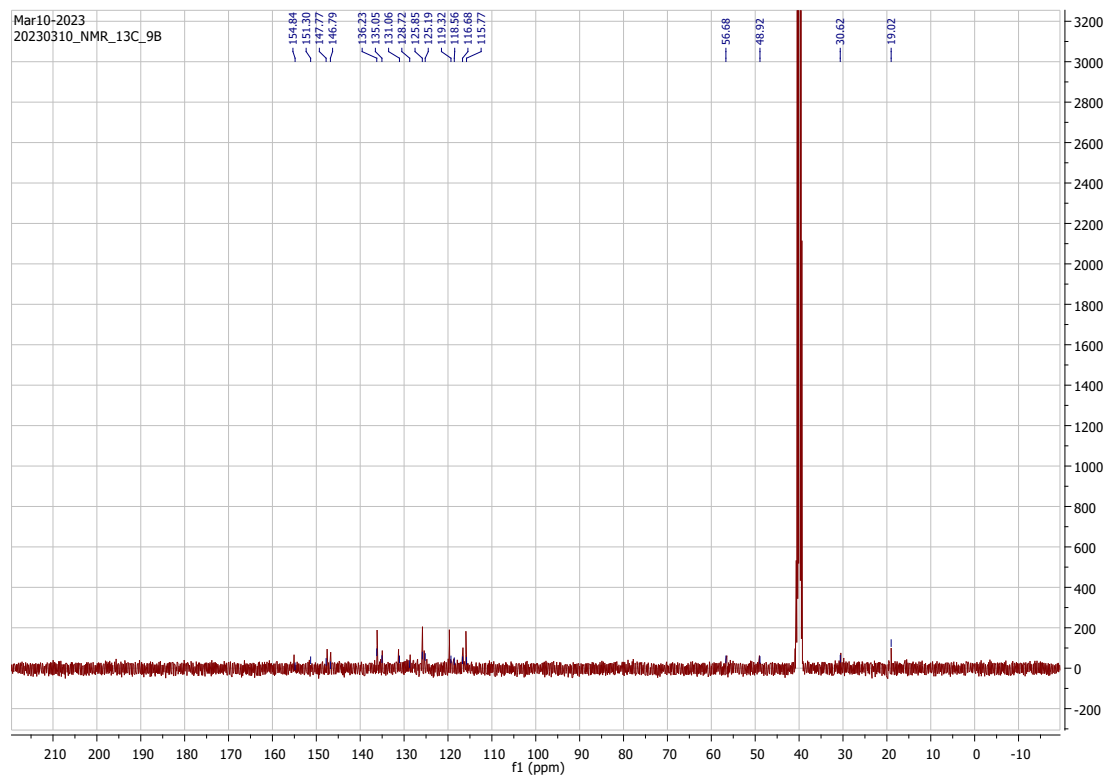


Fig. S28 ^{13}C NMR Spectra of compound 5g

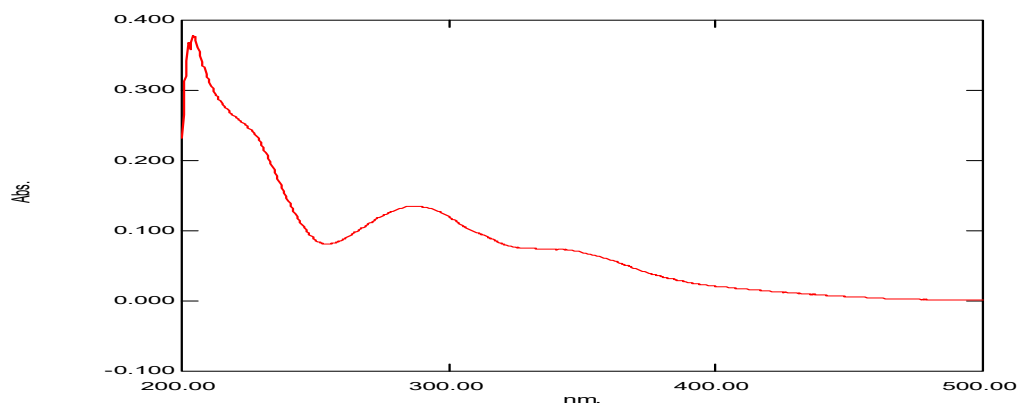


Fig. S29. UV-Visible spectra of compound 5h

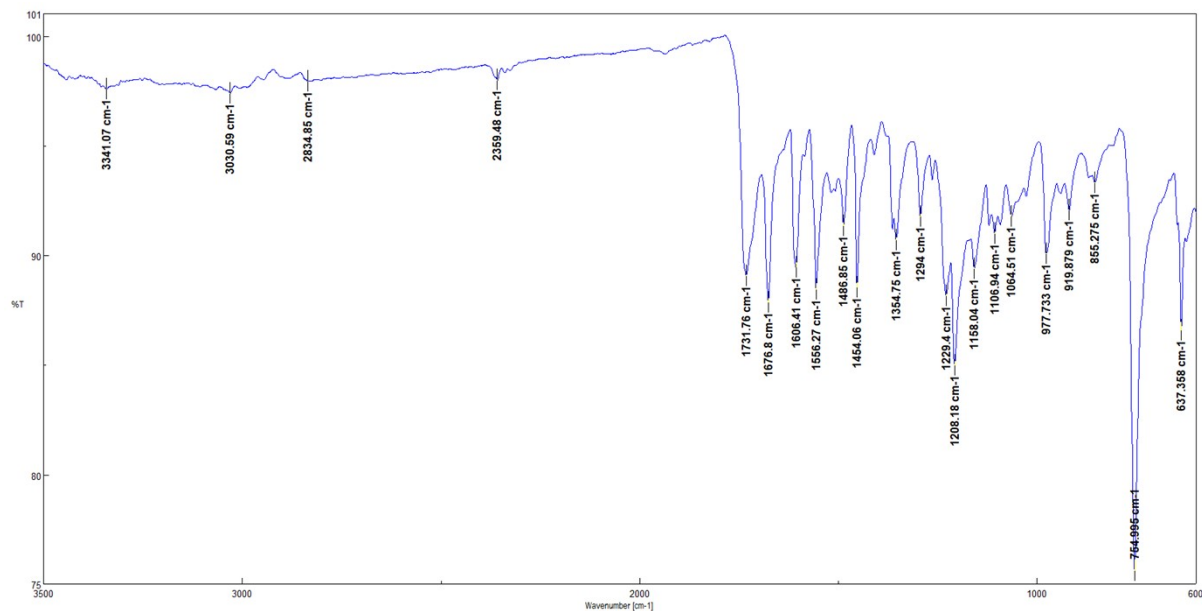


Fig. S30. FTIR Spectra of compound 5h

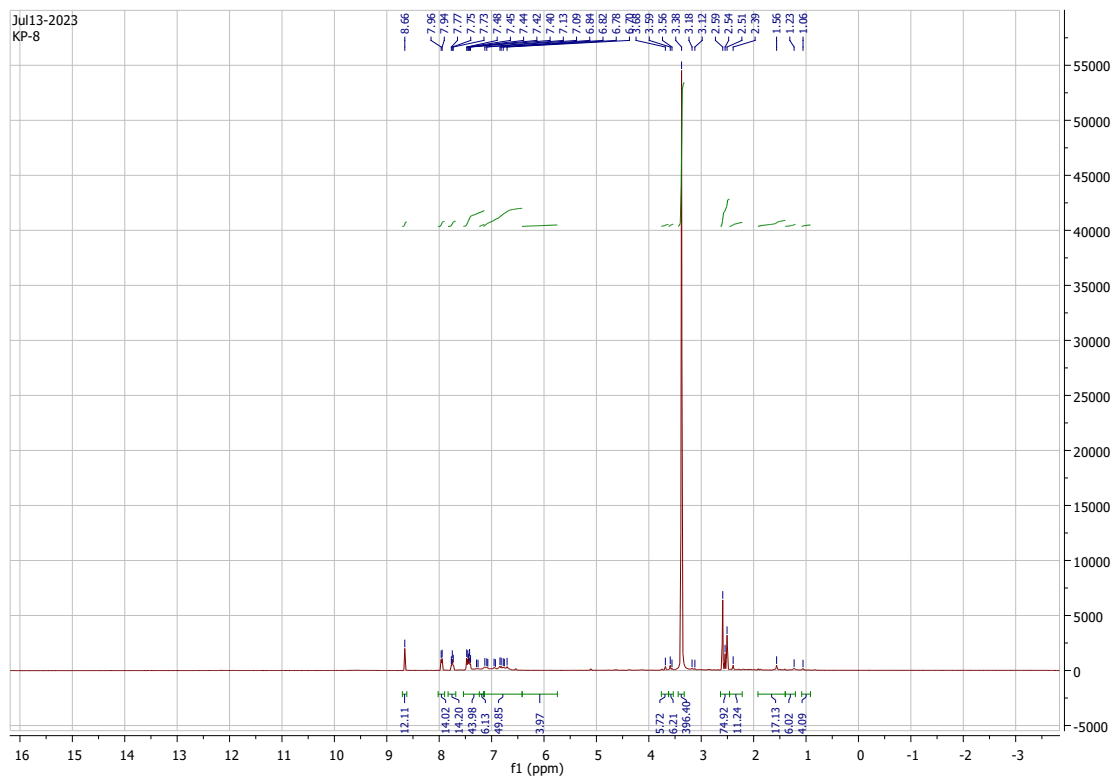


Fig. S31. ¹H NMR Spectra of compound 5h

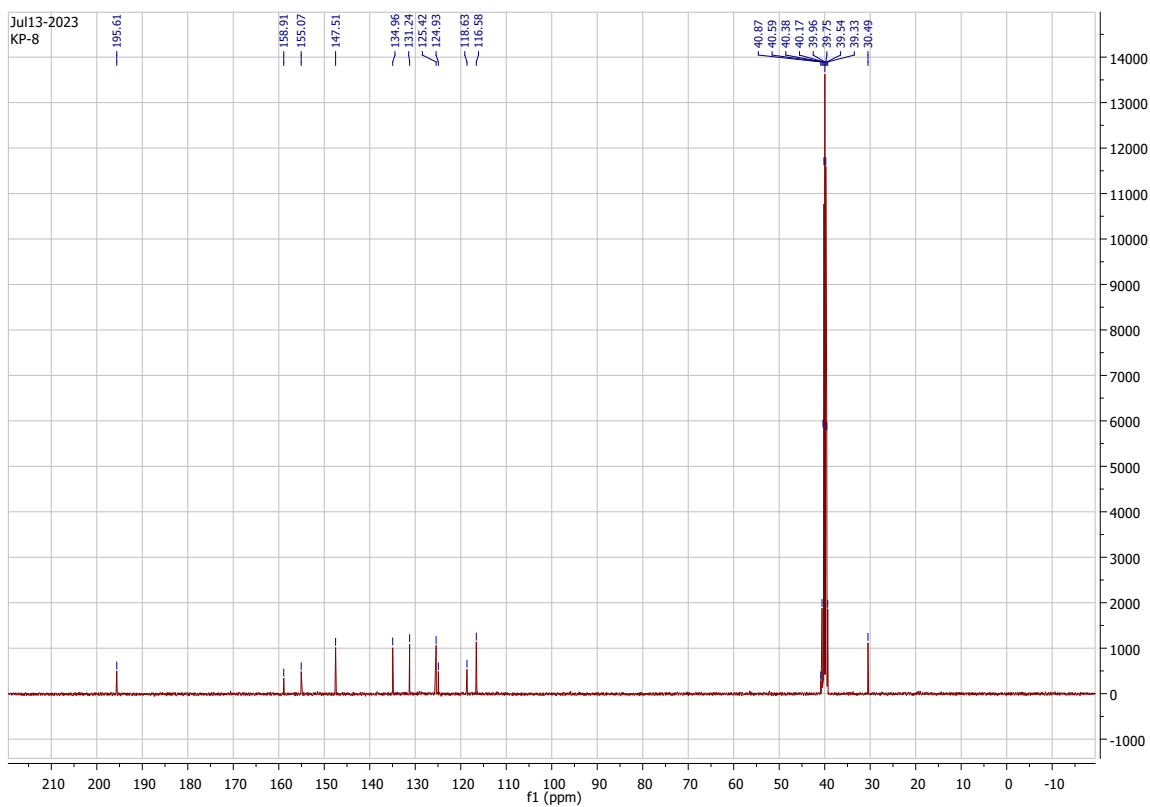


Fig. S32. ¹³C NMR Spectra of compound 5h

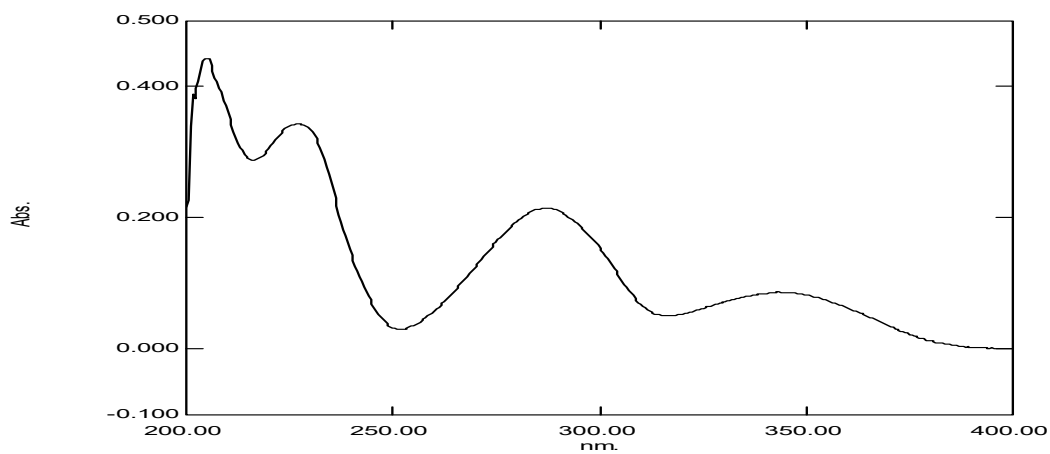


Fig. S33. UV-Visible spectra of compound 5i

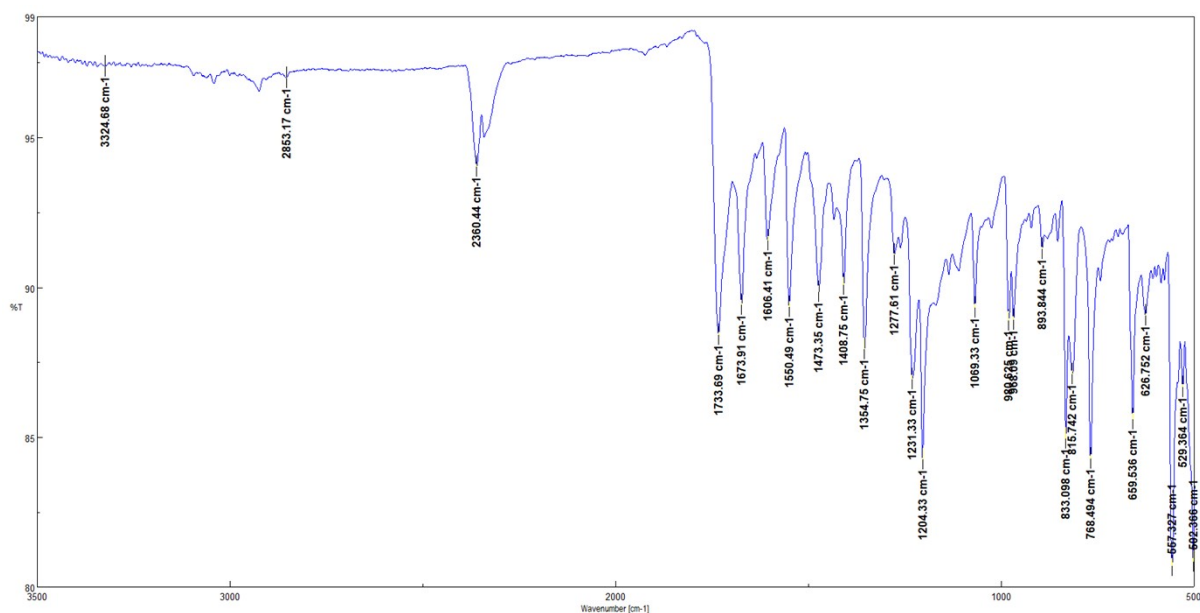


Fig. S34. FTIR Spectra of compound 5i

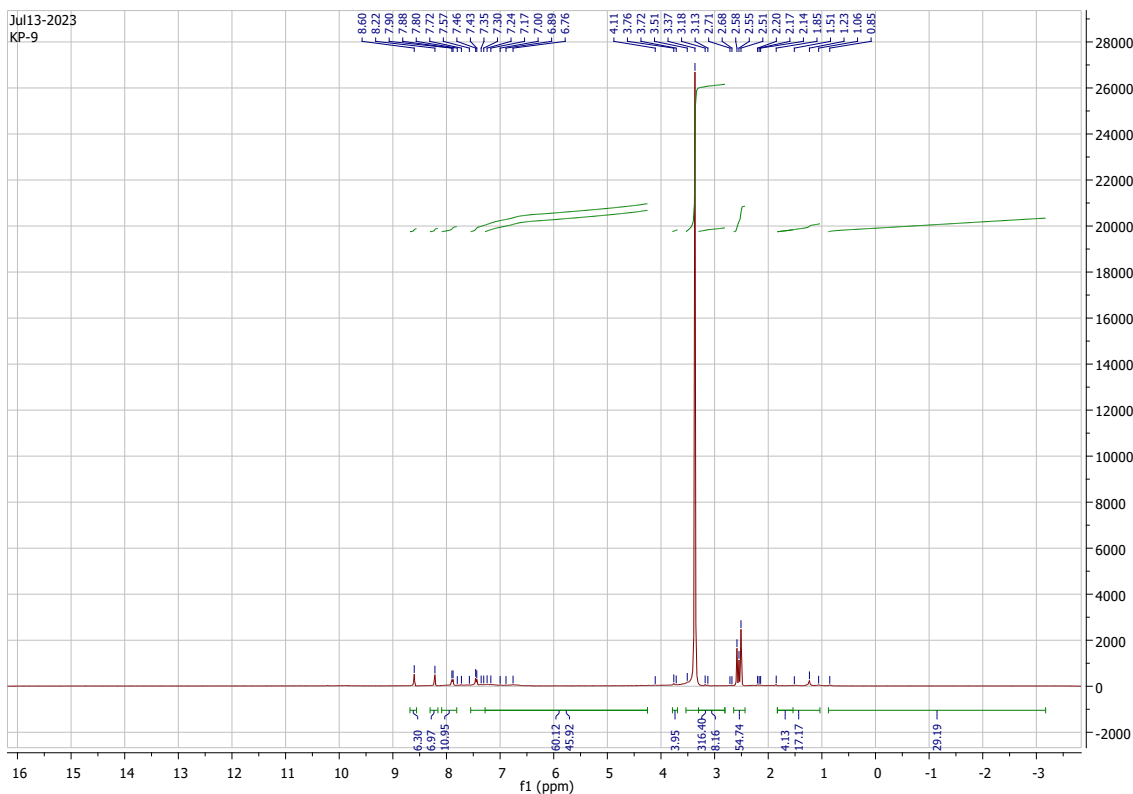


Fig. S35. ¹H NMR Spectra of compound 5i

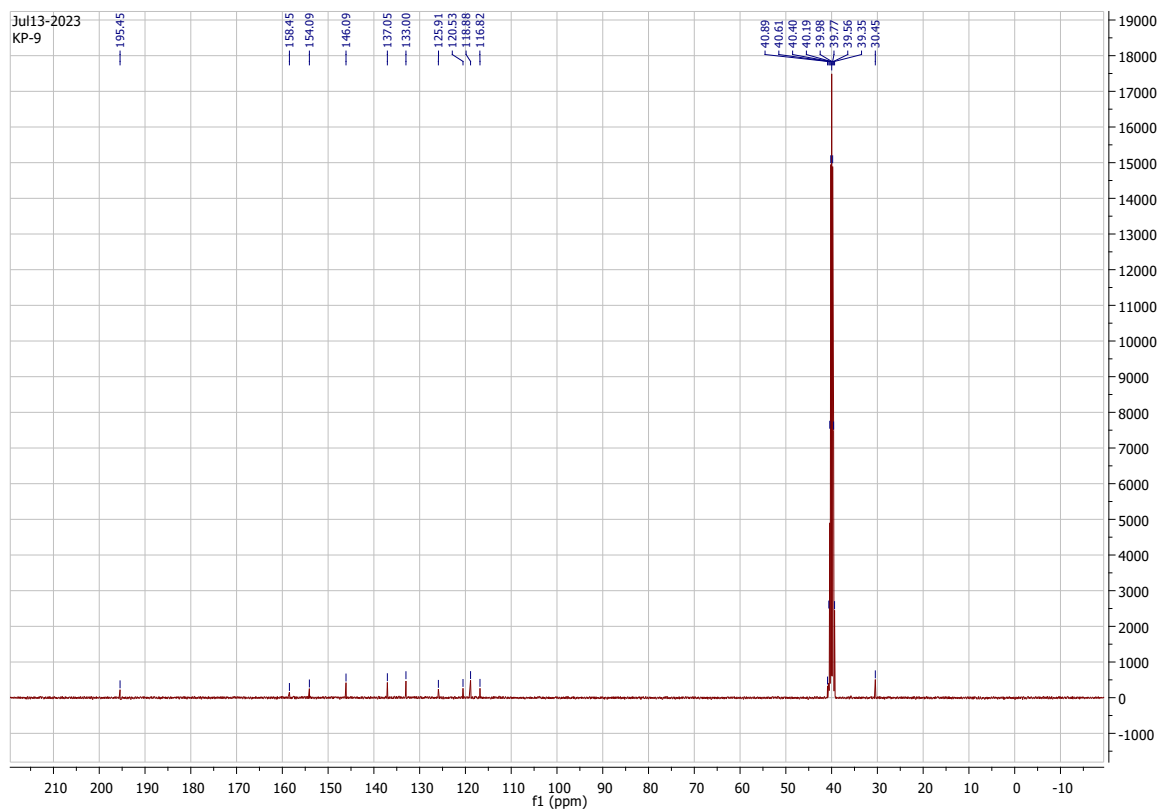


Fig. S36. ¹³C NMR Spectra of compound 5i

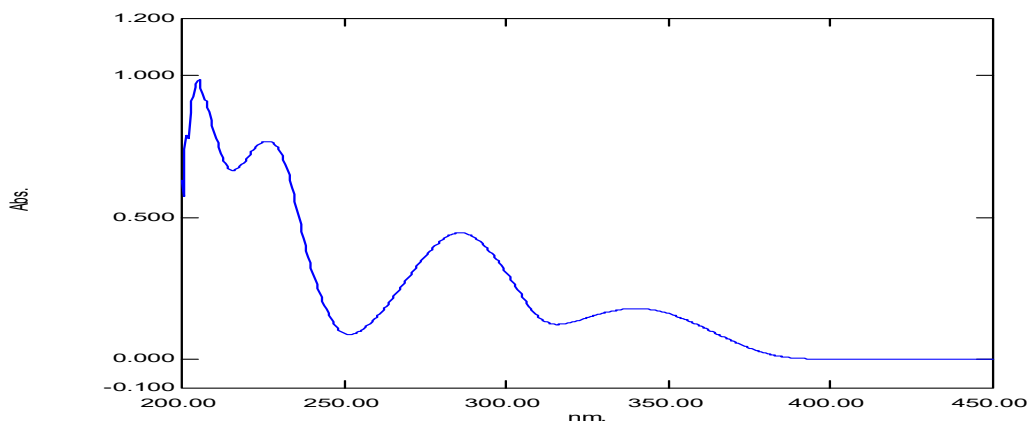


Fig. S37. UV-Visible spectra of compound 7a

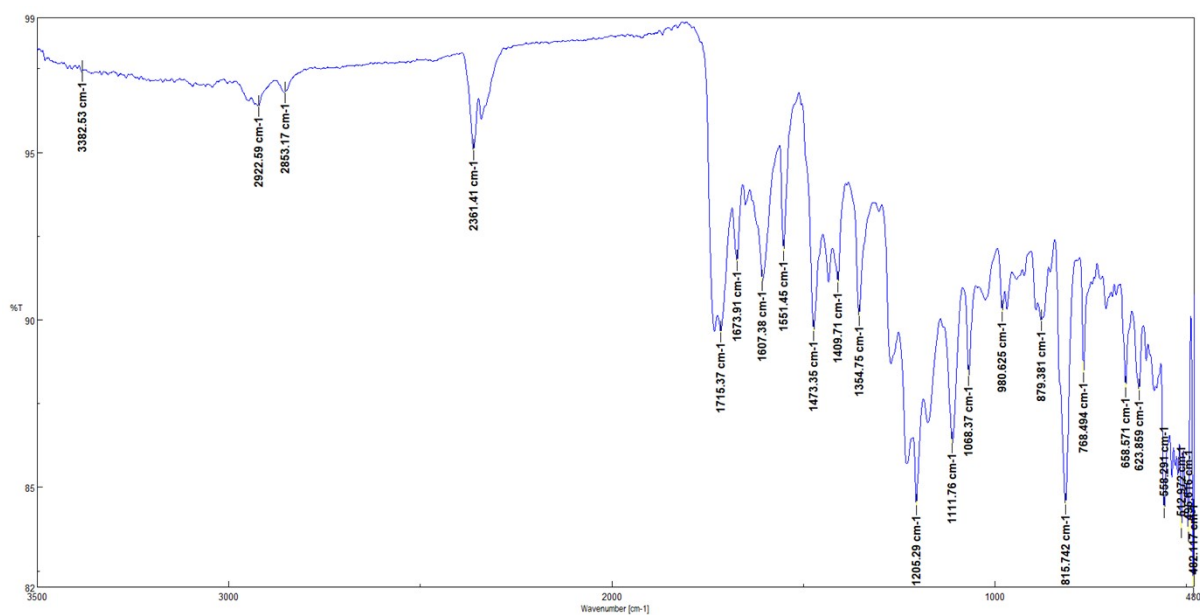


Fig. S38. FT-IR Spectra of compound 7a

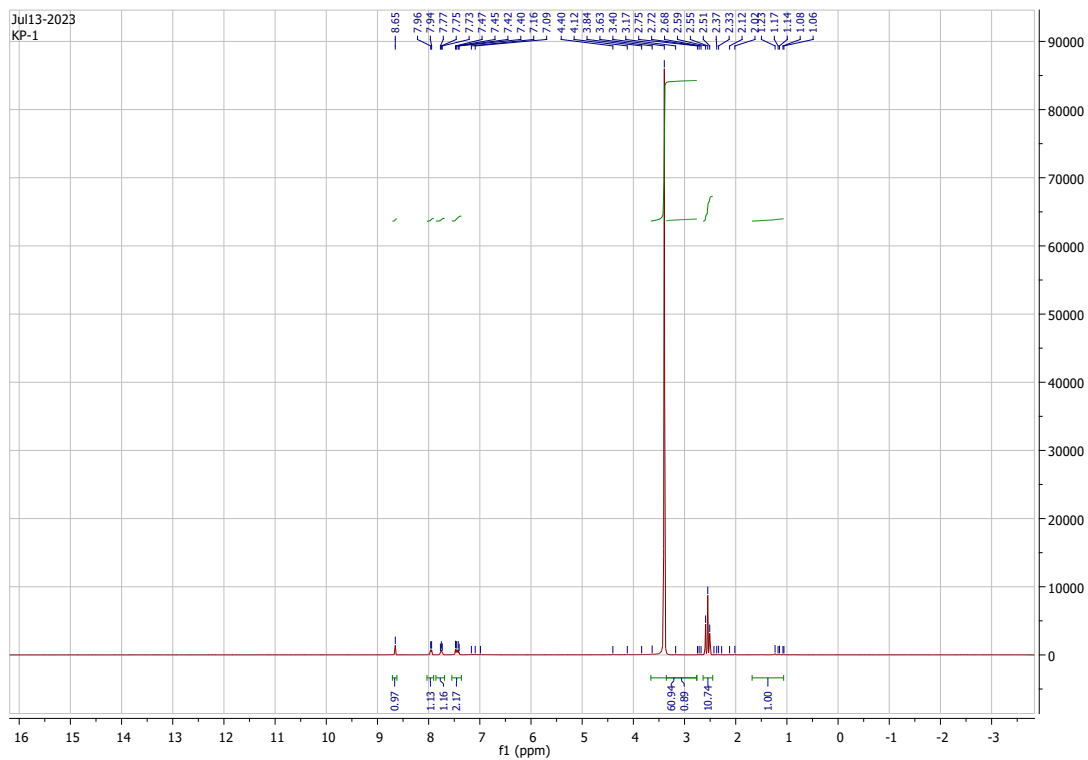


Fig. S39. ^1H NMR Spectra of compound 7a

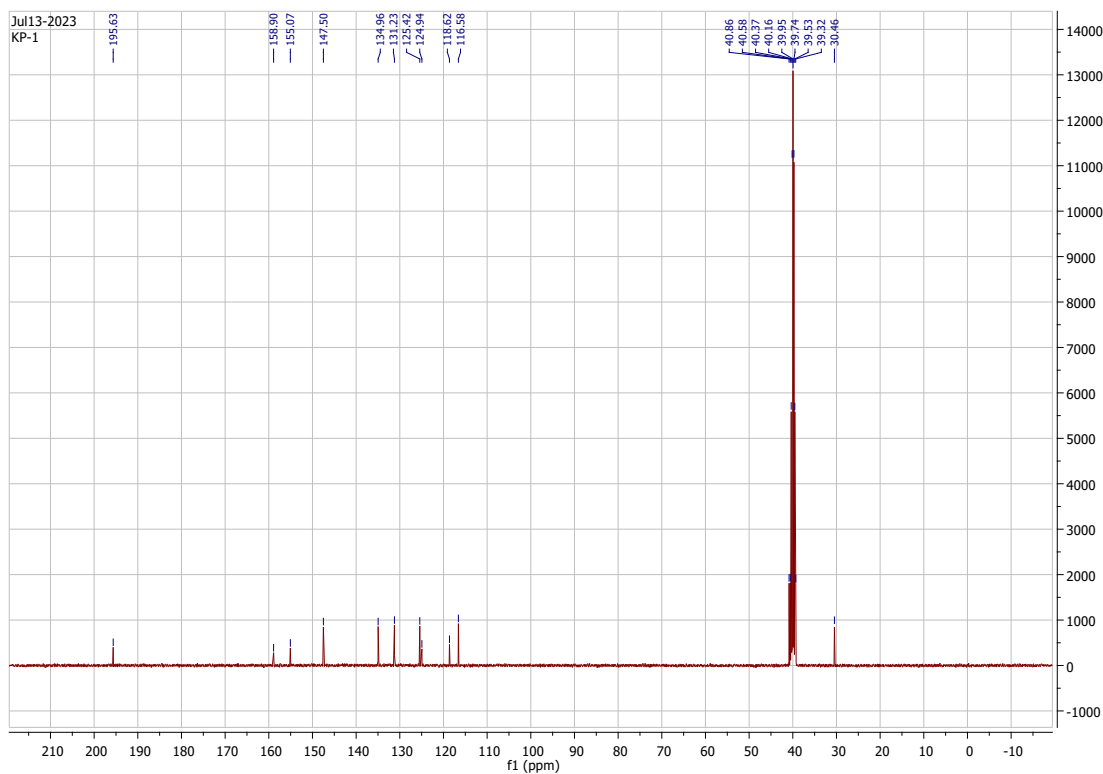


Fig. S40. ^{13}C NMR Spectra of compound 7a

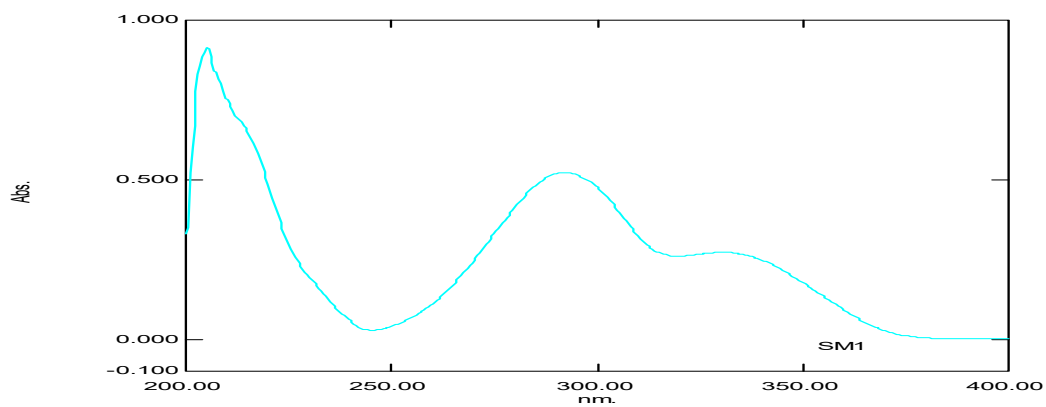


Fig. S41. UV-Visible spectra of compound 7b

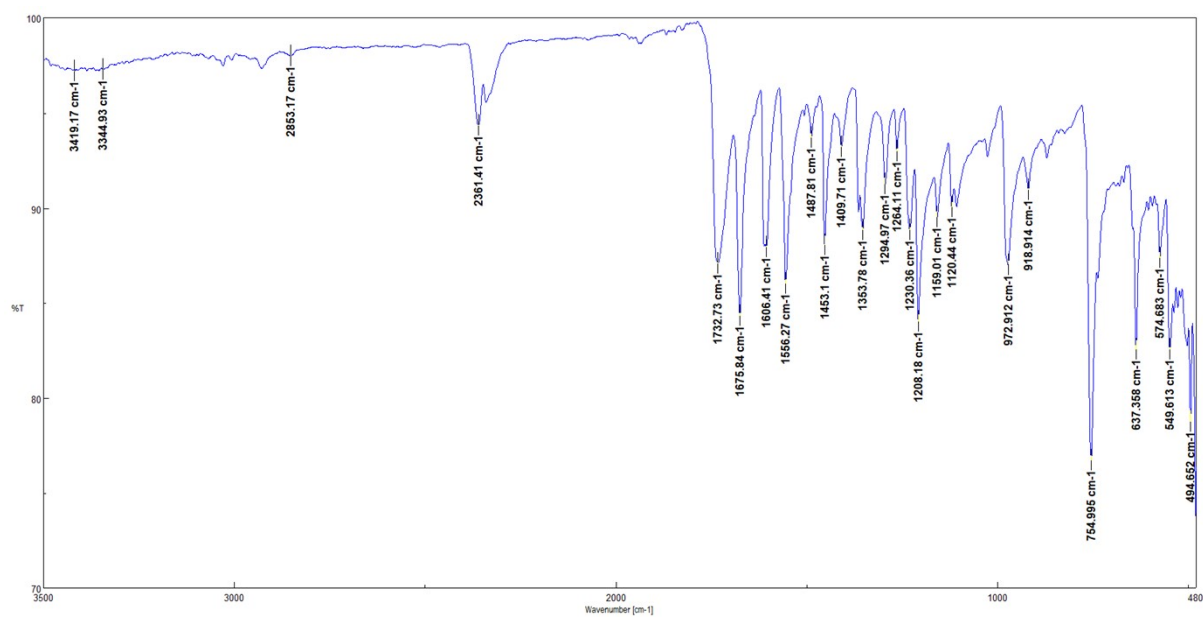


Fig. S42. FTIR Spectra of compound 7b

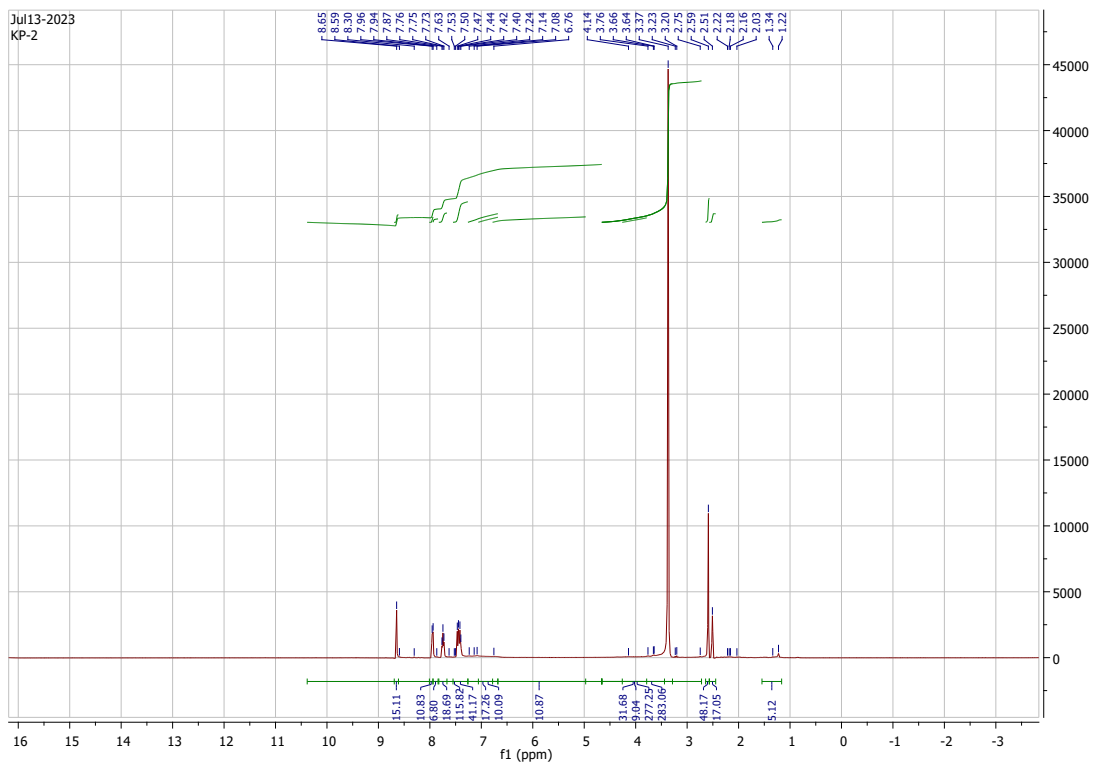


Fig. S43. ^1H NMR Spectra of compound 7b

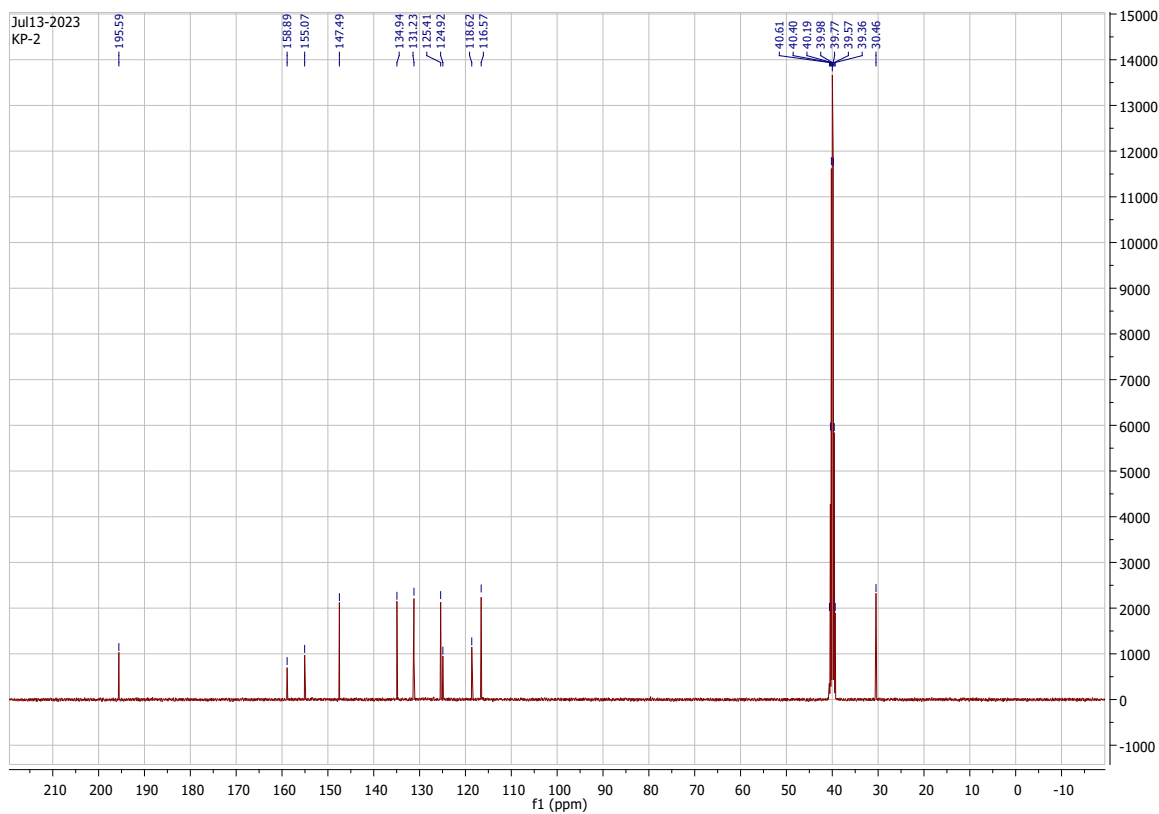


Fig. S44. ^{13}C NMR Spectra of compound 7b

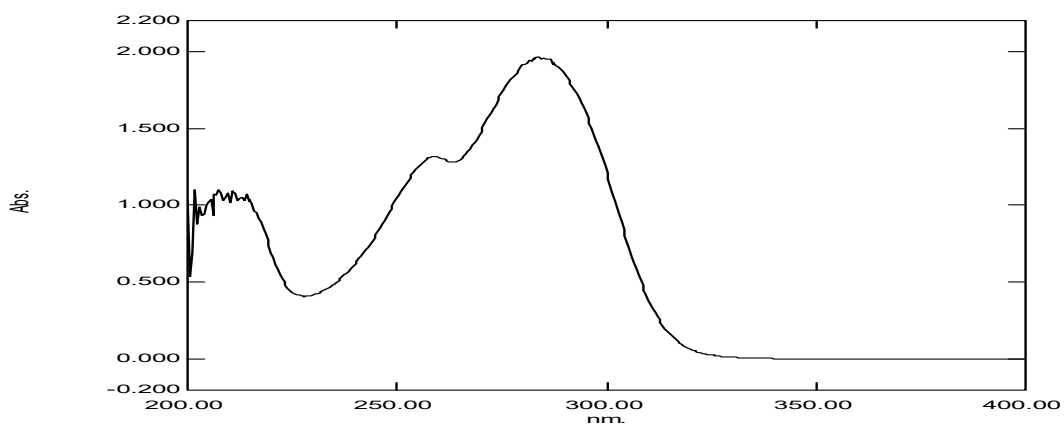


Fig. S45. UV-Visible spectra of compound 7c

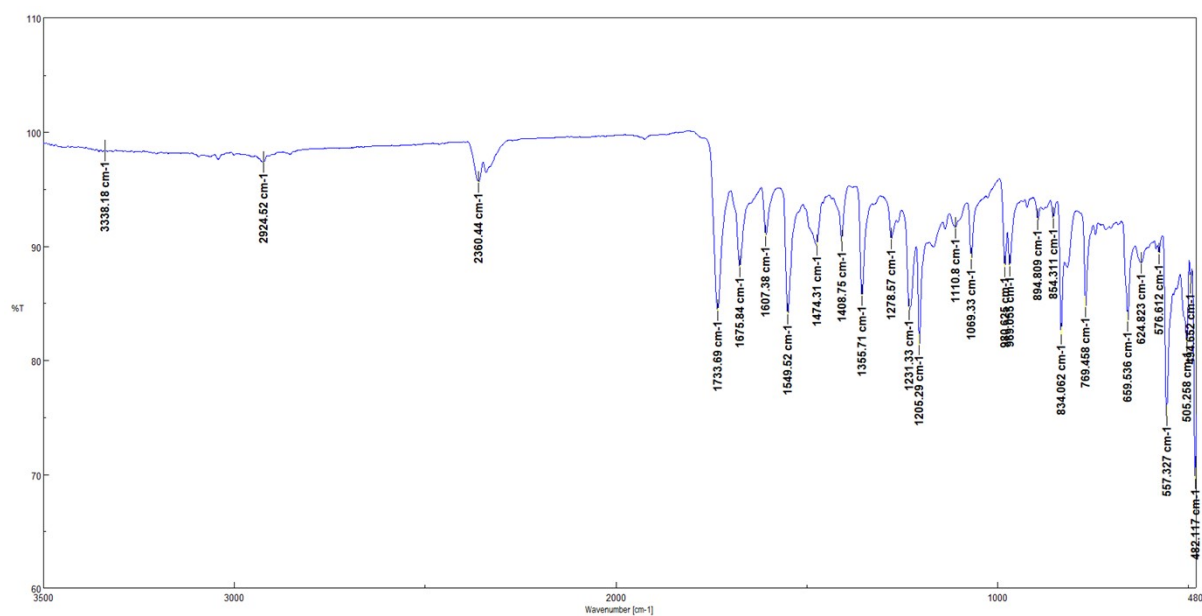


Fig. S46. FTIR Spectra of compound 7c

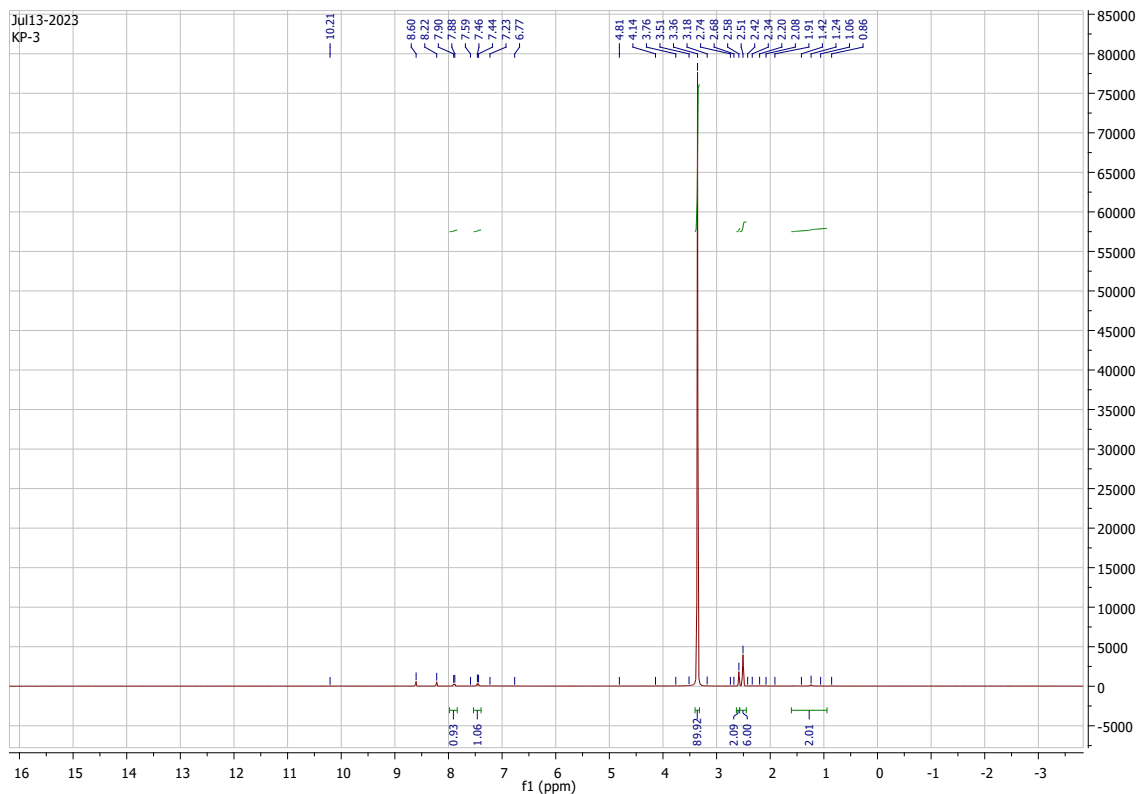


Fig. S47. ^1H NMR Spectra of compound **7c**

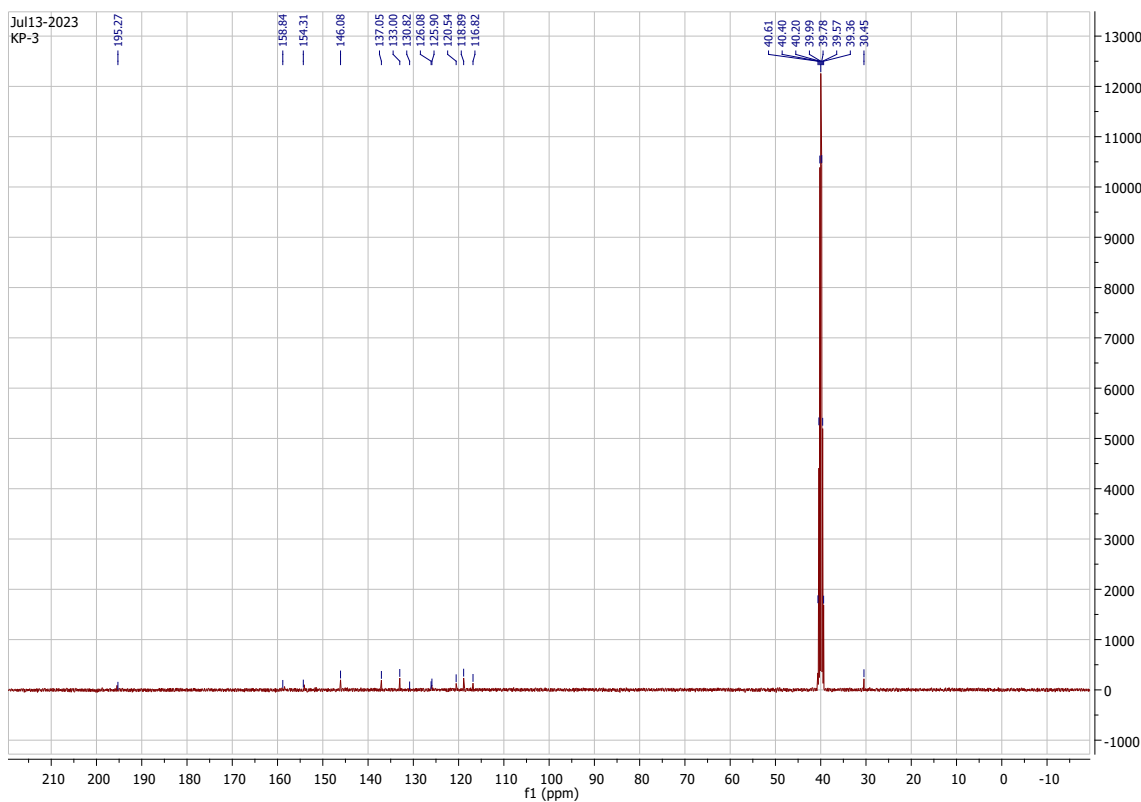


Fig. S48. ^{13}C NMR Spectra of compound **7c**

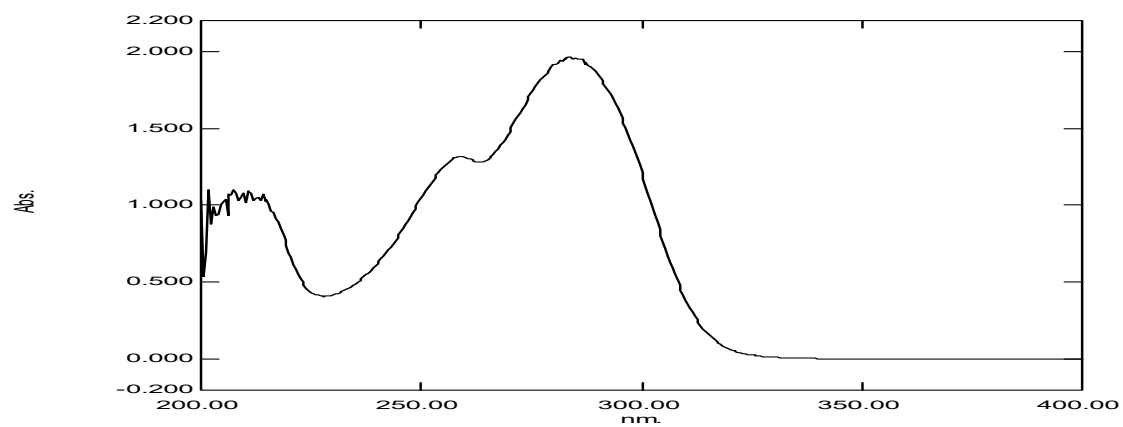


Fig. S49. UV-Visible spectra of compound 7d

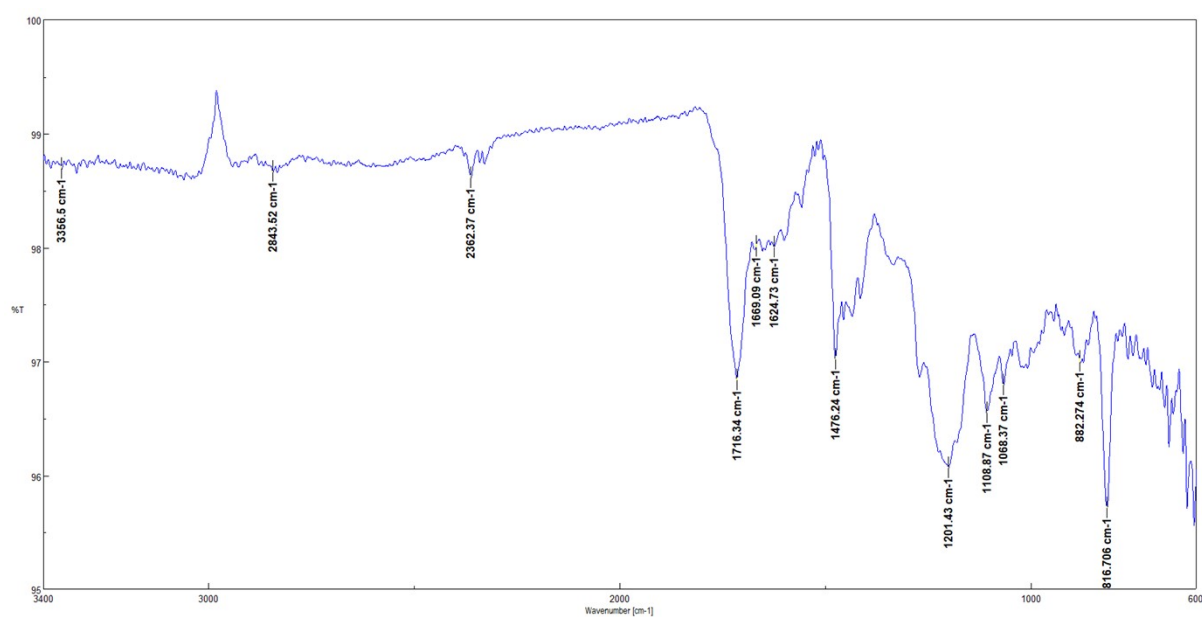


Fig. S50. FTIR Spectra of compound 7d

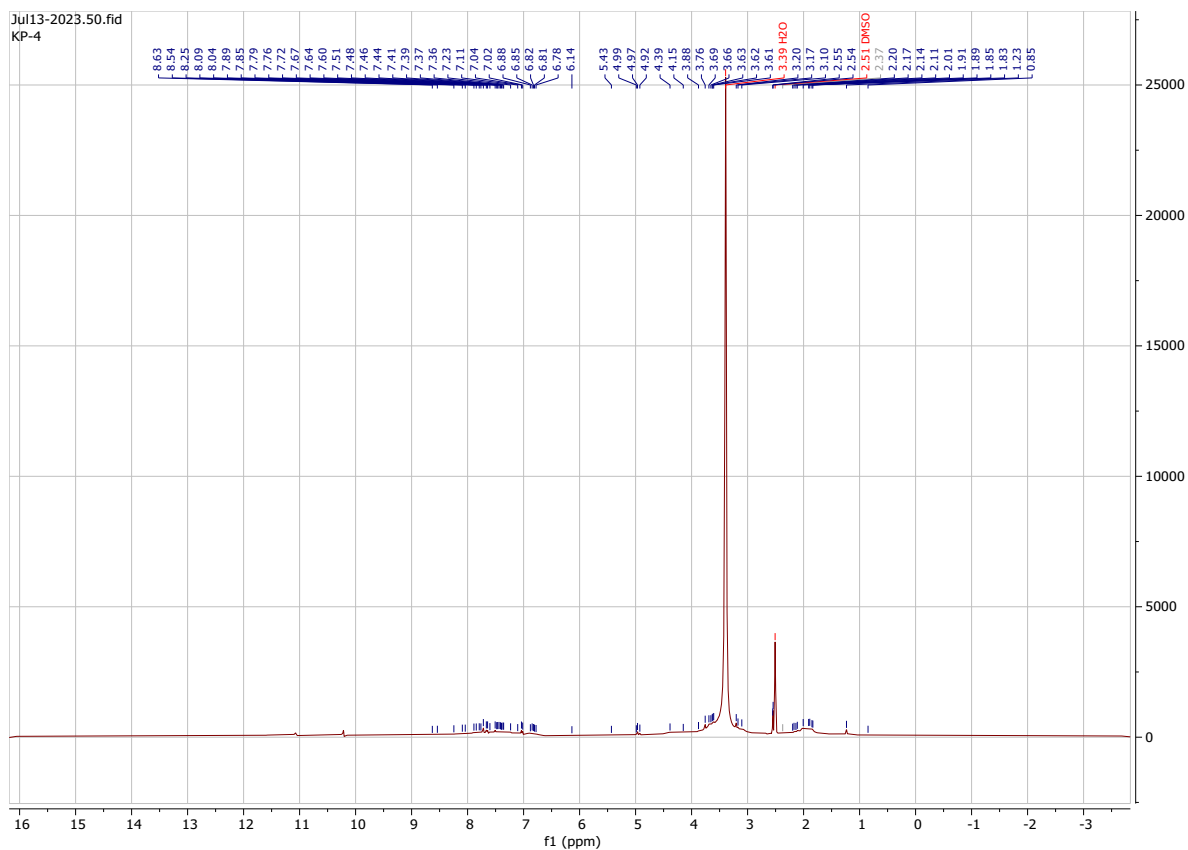


Fig. S51. ^1H NMR Spectra of compound 7d

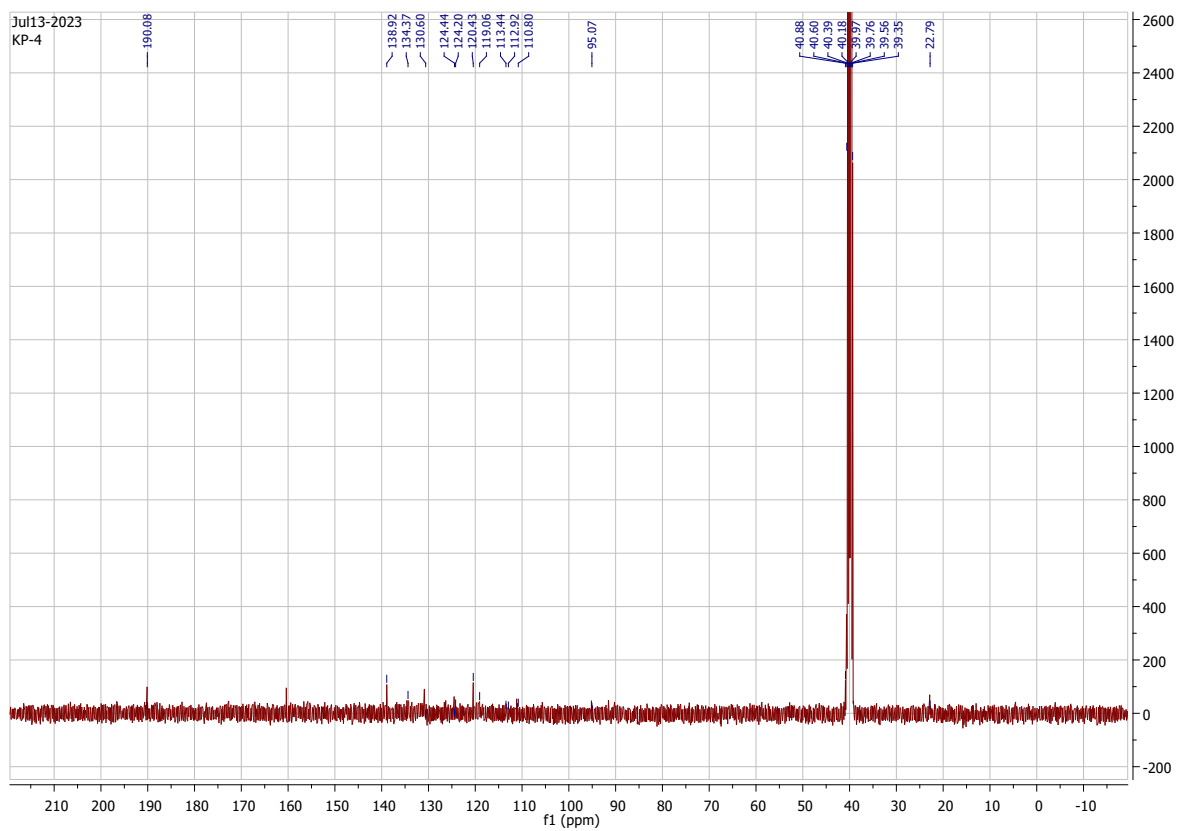


Fig. S52. ^{13}C NMR Spectra of compound 7d

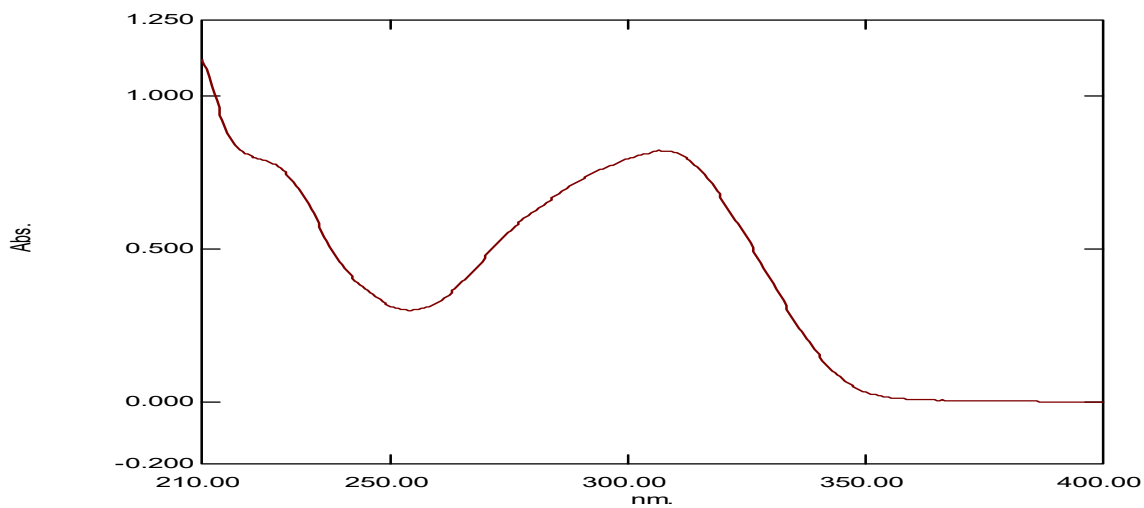


Fig. S53. UV-Visible spectra of compound 7e

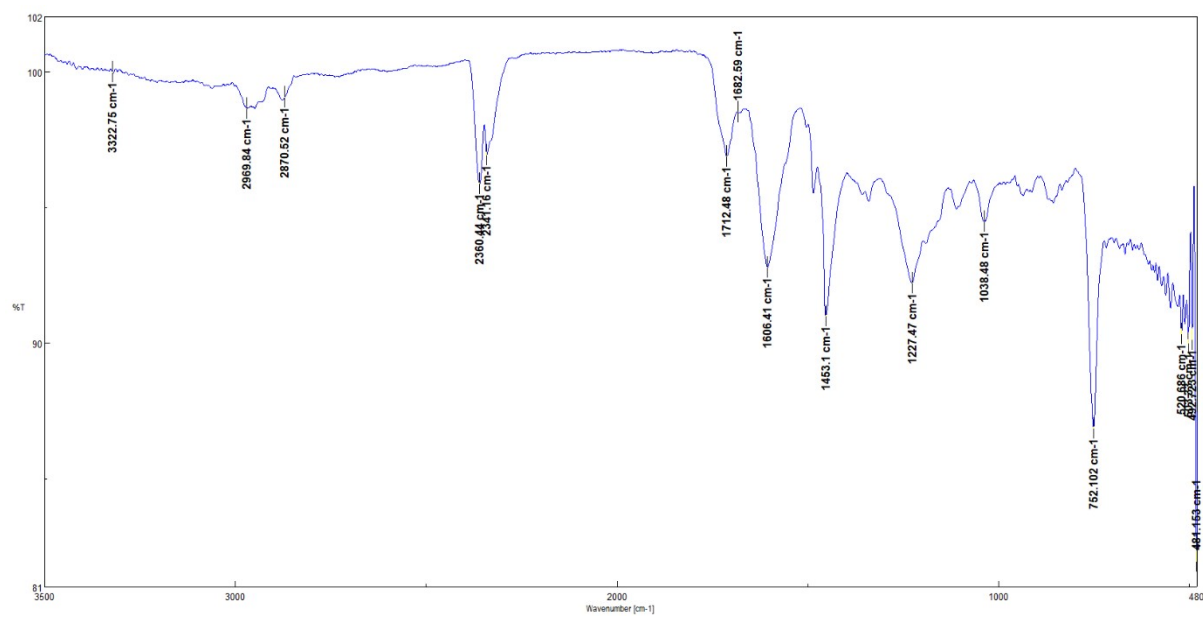


Fig. S54. FTIR Spectra of compound 7e

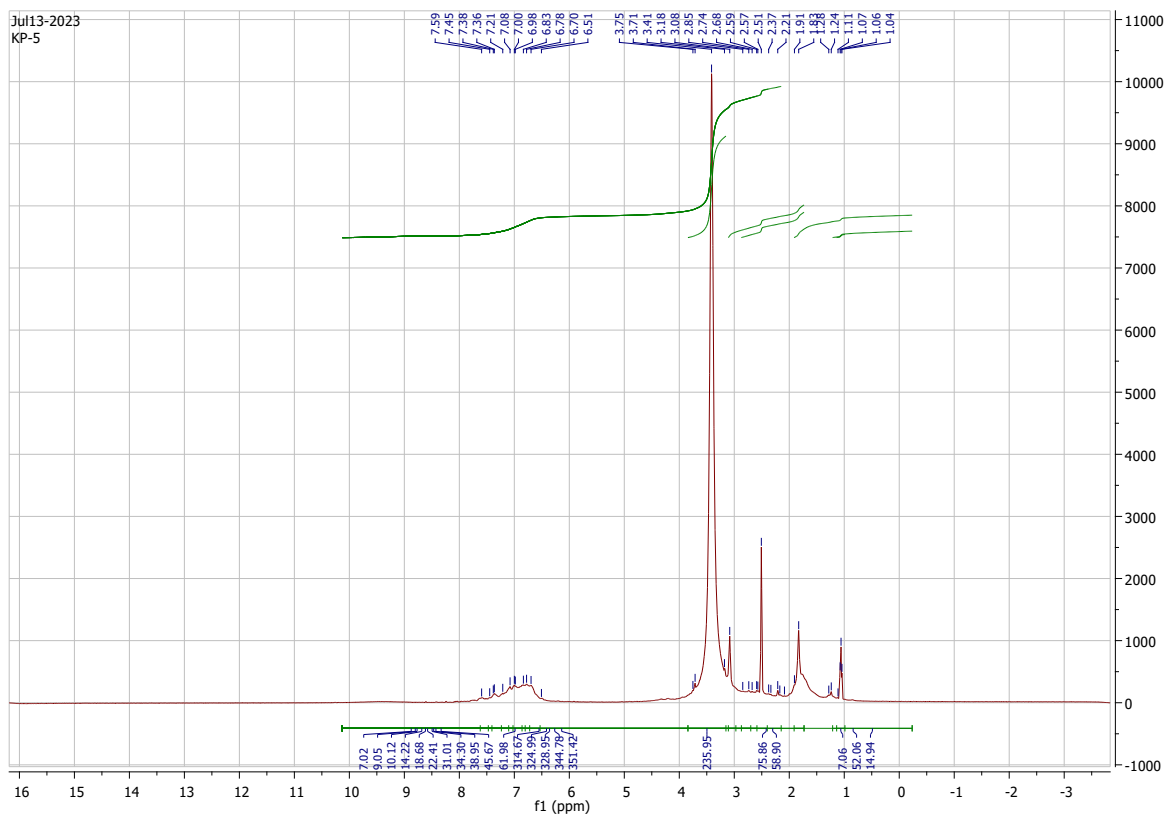


Fig. S55. ^1H NMR Spectra of compound 7e

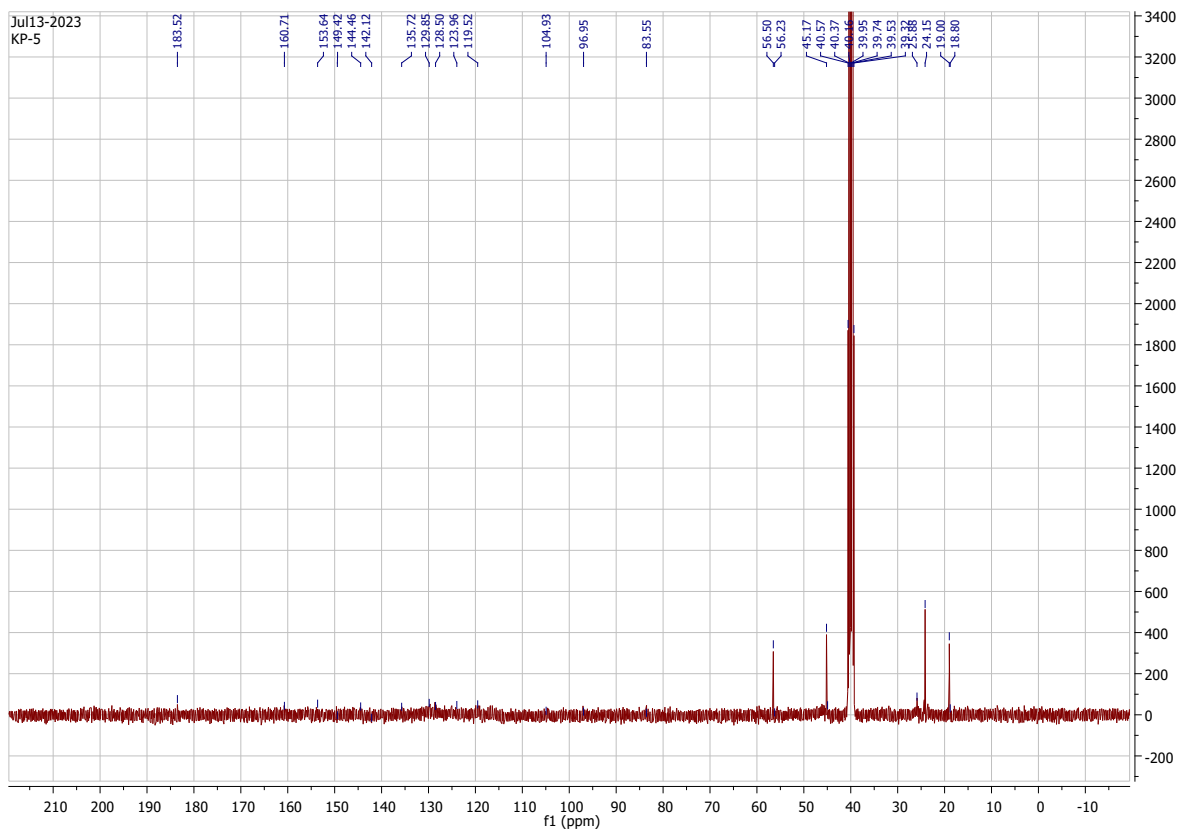


Fig. S56. ^{13}C NMR Spectra of compound 7e

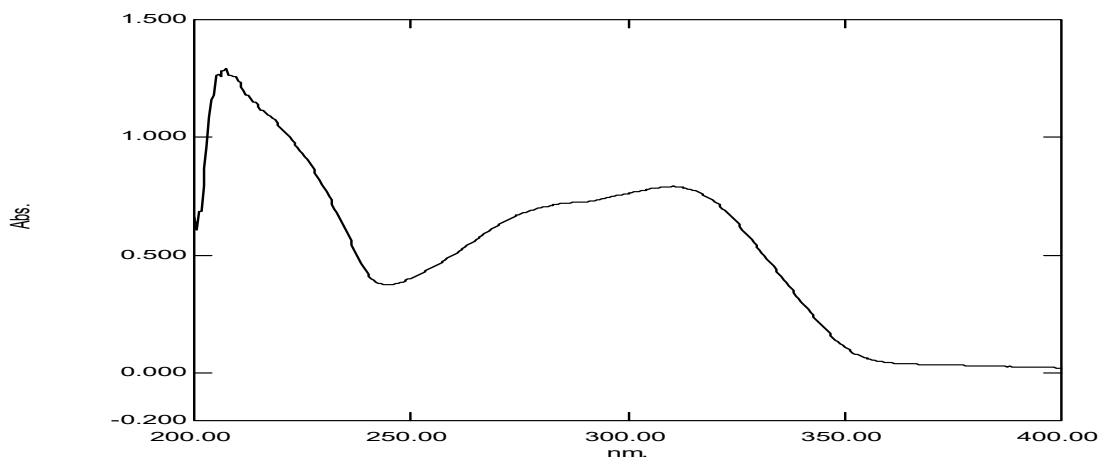


Fig. S57. UV-Visible spectra of compound 7f

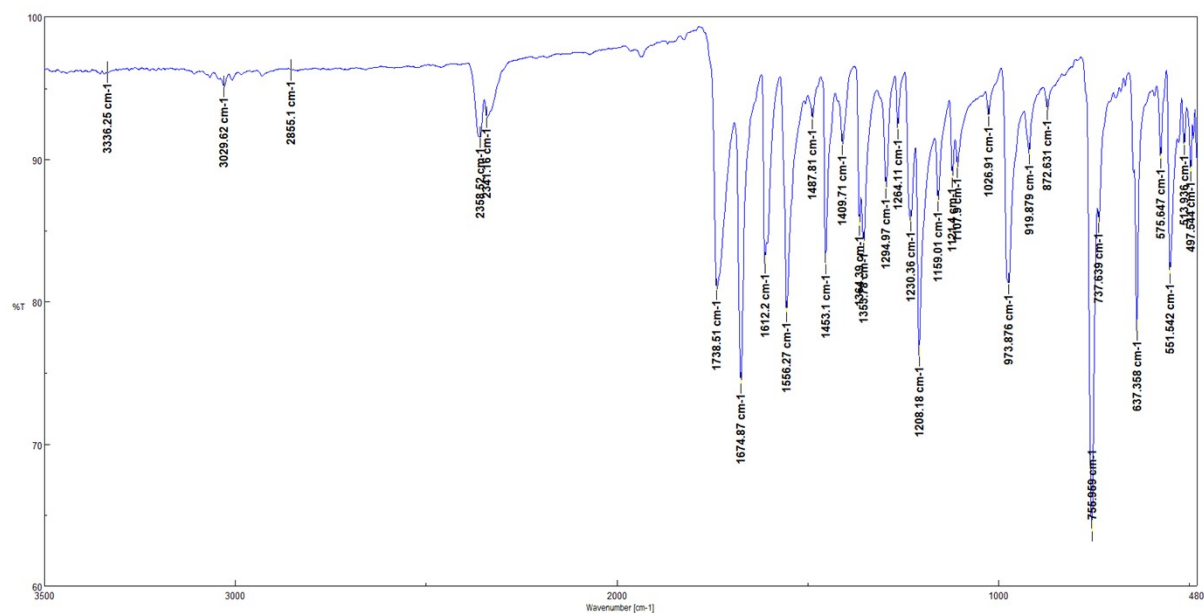


Fig. S58. FTIR Spectra of compound 7f

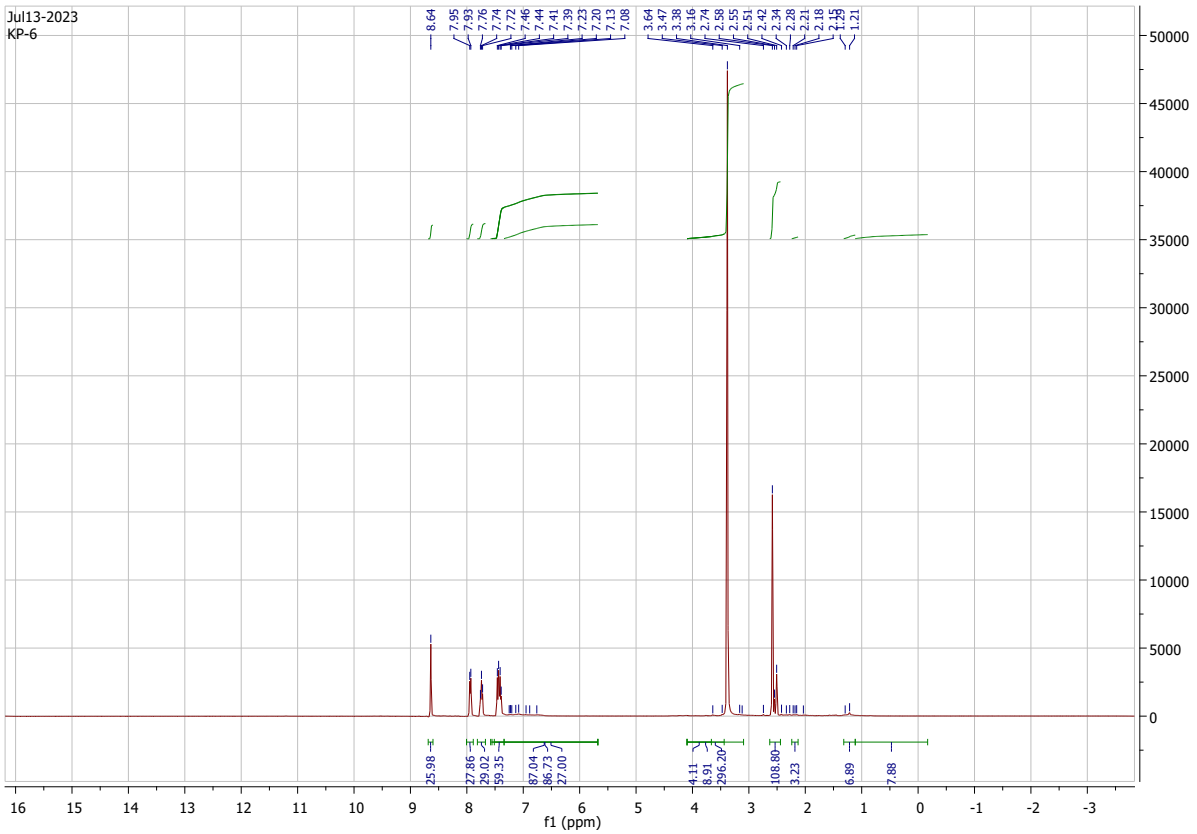


Fig. S59. ^1H NMR Spectra of compound **7f**

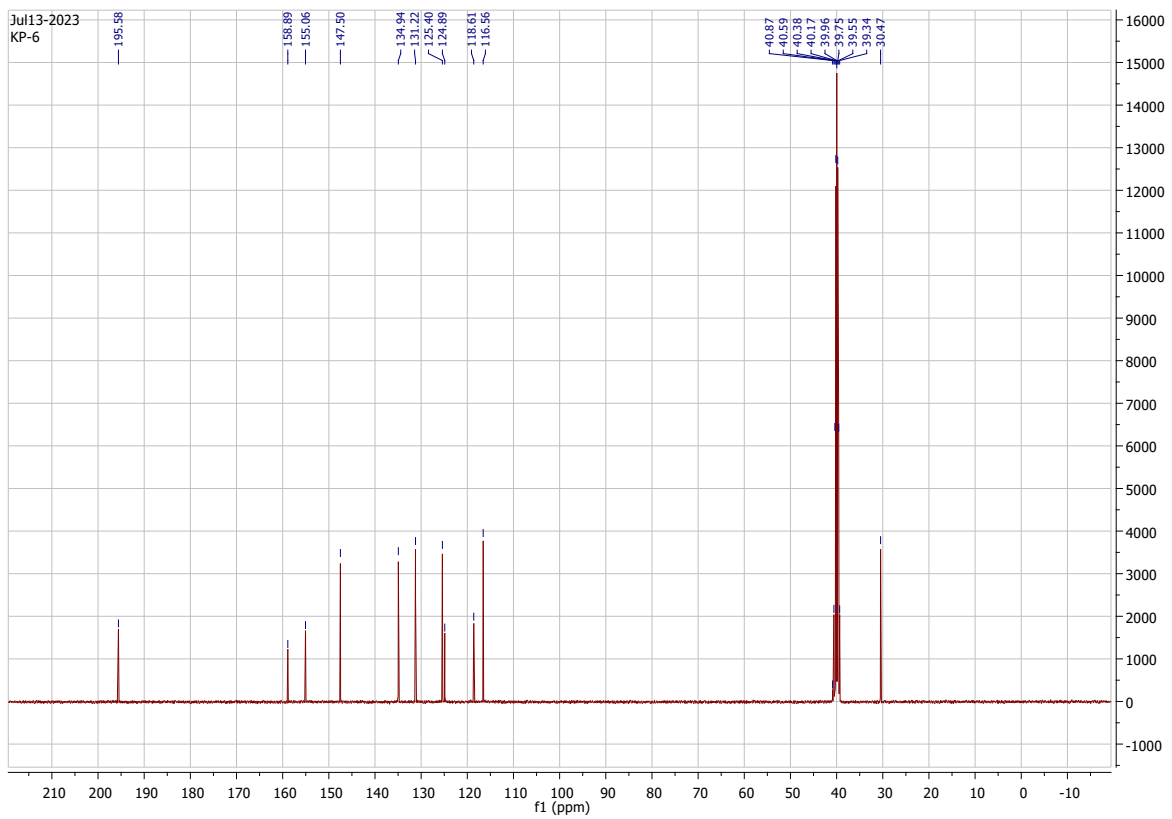


Fig. S60. ^{13}C NMR Spectra of compound **7f**

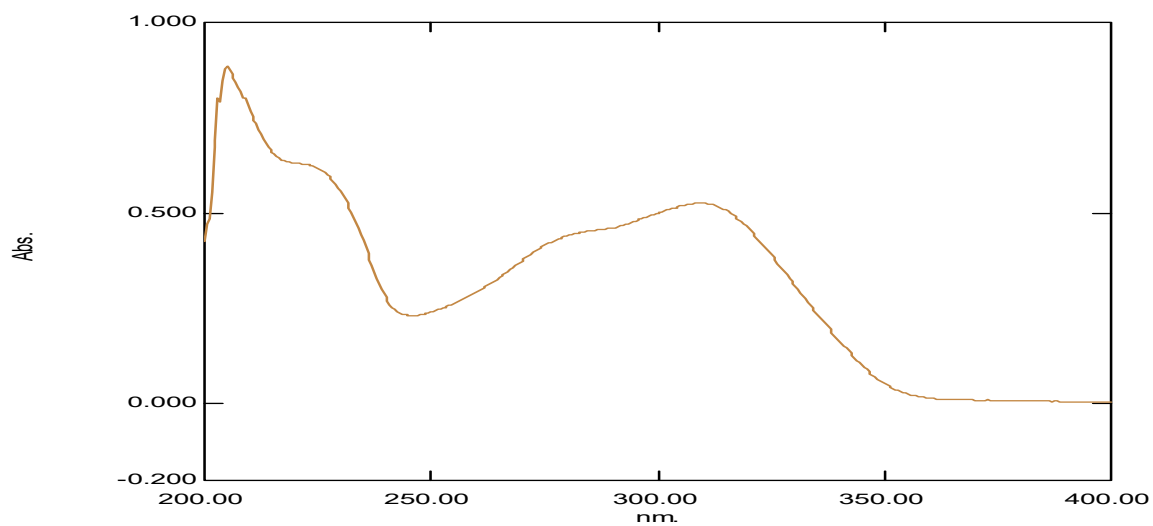


Fig. S61. UV-Visible spectra of compound 7g

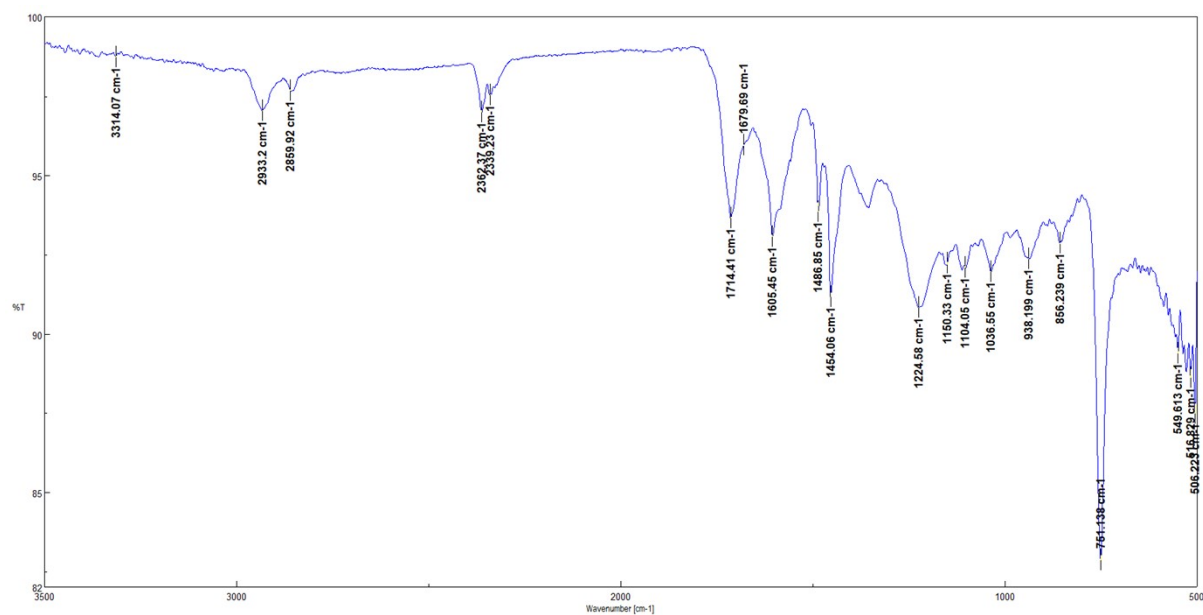


Fig. S62. FTIR Spectra of compound 7g

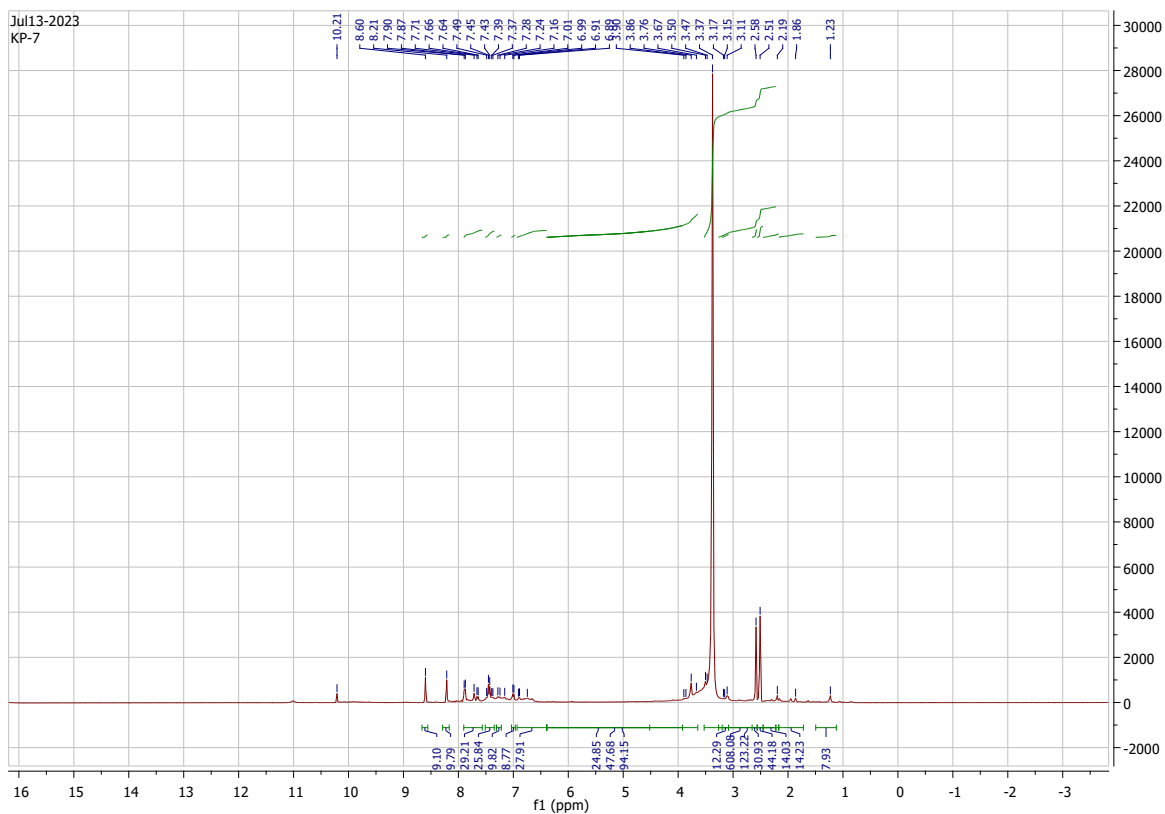


Fig. S63. ^1H NMR Spectra of compound 7g

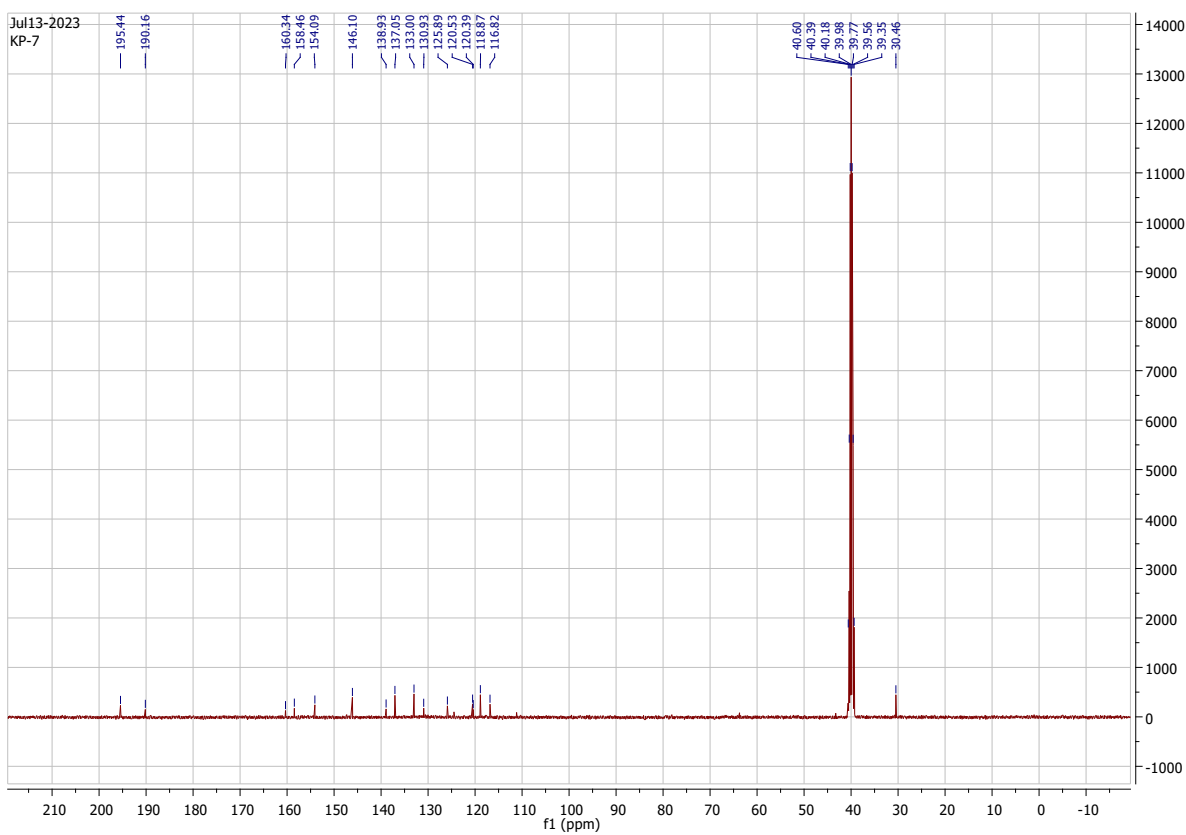


Fig. S64. ^{13}C NMR Spectra of compound 7g

Antimicrobial assessment

Zone of Inhibition of compounds 5d & 5f



Fig. S65. Zone of Inhibition of compounds 5d & 5f

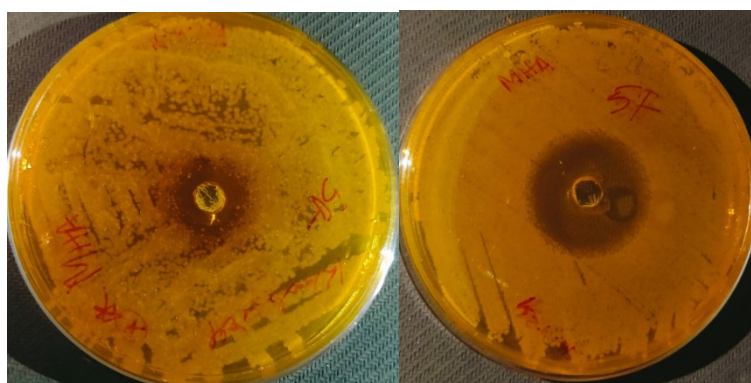


Fig. S66. Zone of Inhibition of compounds 5d & 5f

Serial dilution method



Fig. S67. Minimum Inhibitory Concentration of compounds 5d & 5f

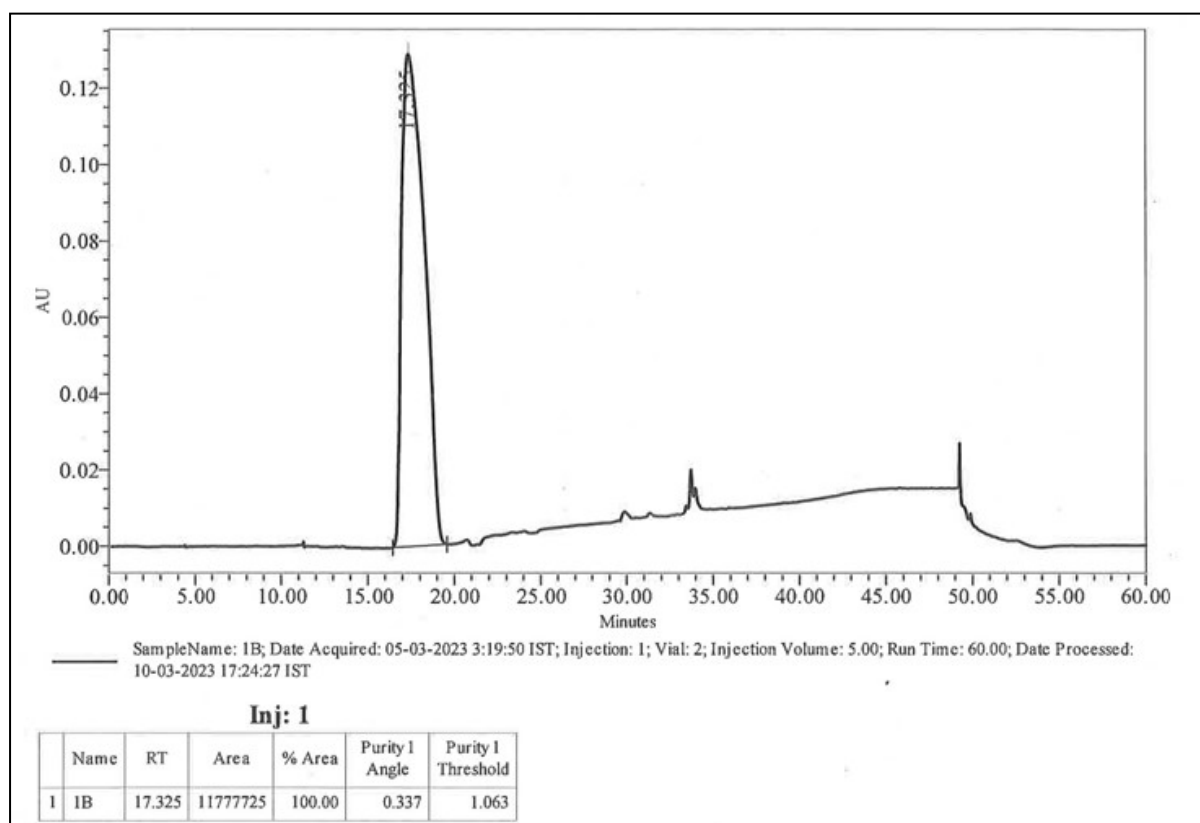


Fig. S68. HPLC chromatogram of compound 5d