Supporting Information

Synthesis, Purification, Characterization and ABTS Antioxidant Evaluation of Novel Azo Dyes

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Spectral Data and ABTS Antioxidant Activity Data

Figure S1. ^{1}H NMR Spectrum of Compound **7a** (500 MHz, DMSO-d_6)

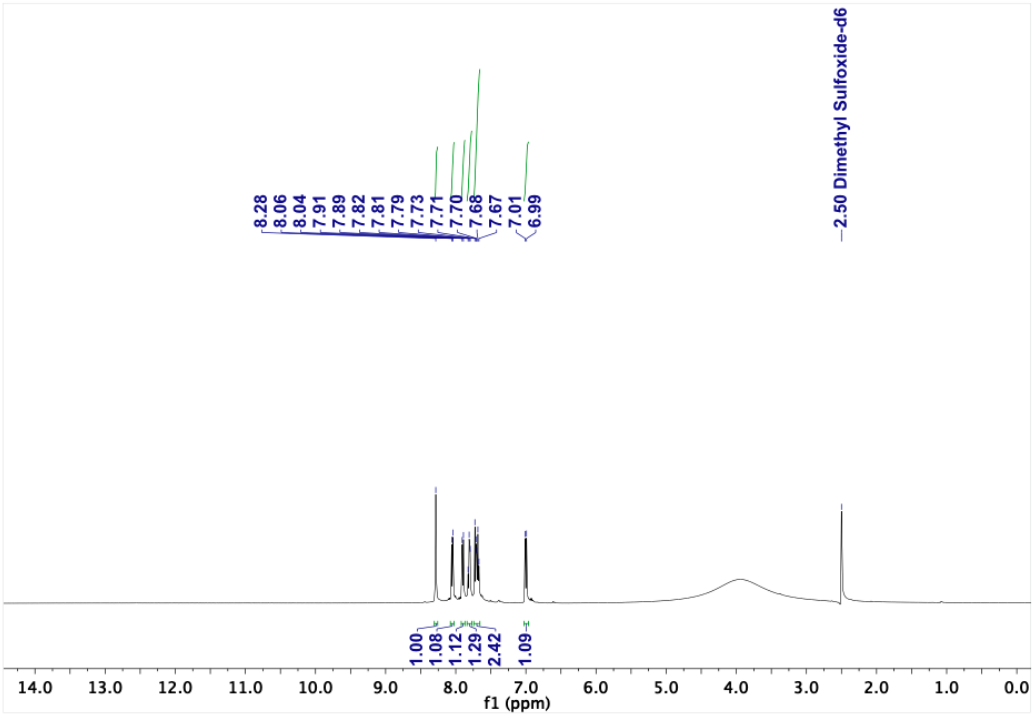


Figure S2. ^{13}C NMR Spectrum of Compound **7a** (125 MHz, DMSO-d_6)

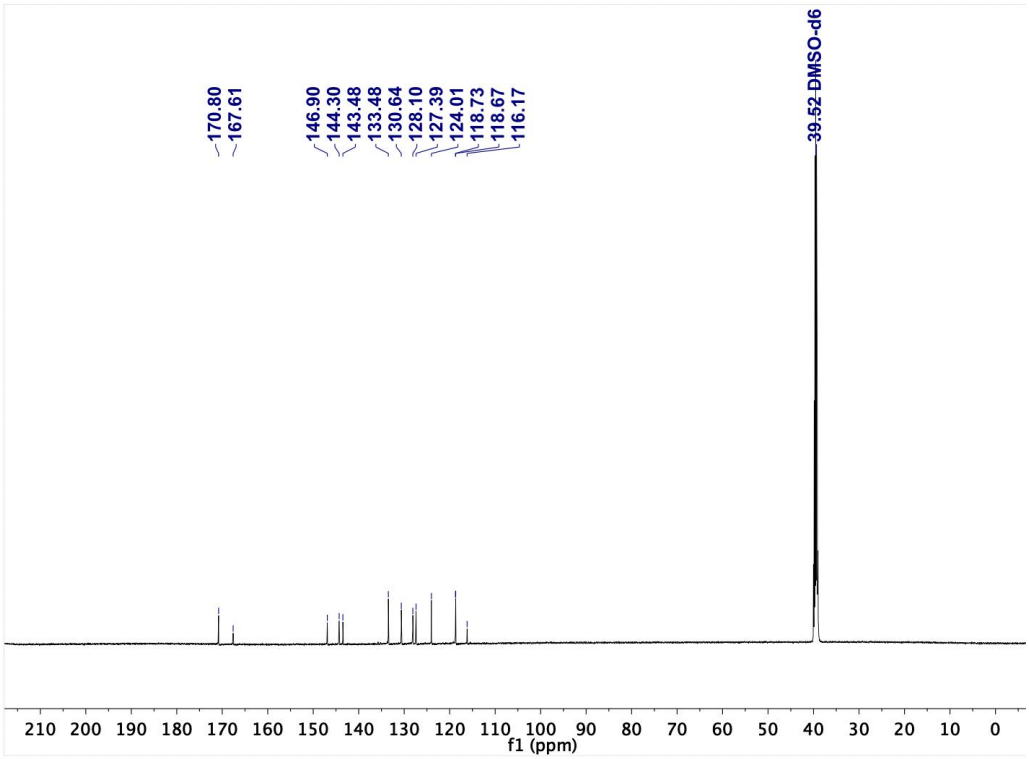


Figure S3. FTIR Spectrum of Compound **7a** (neat)

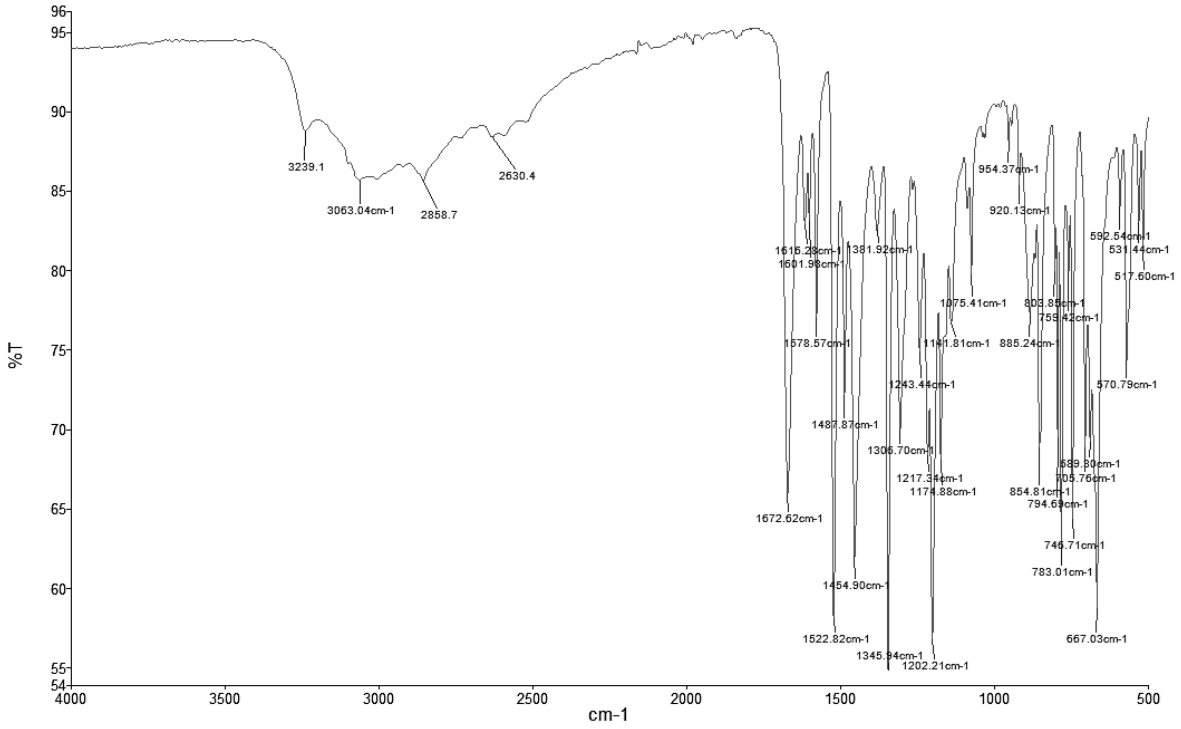


Figure S4. ABTS antioxidant assay data for **7a**

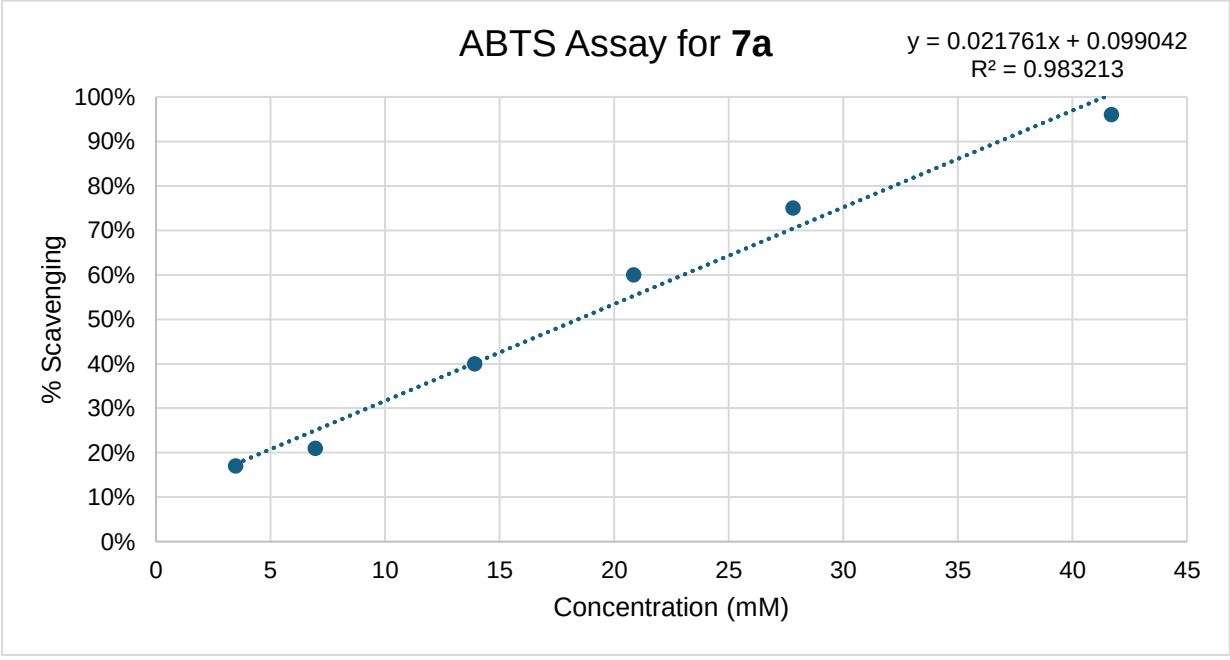


Figure S5. ^{1}H NMR Spectrum of Compound **7b** (500 MHz, DMSO-d_6)

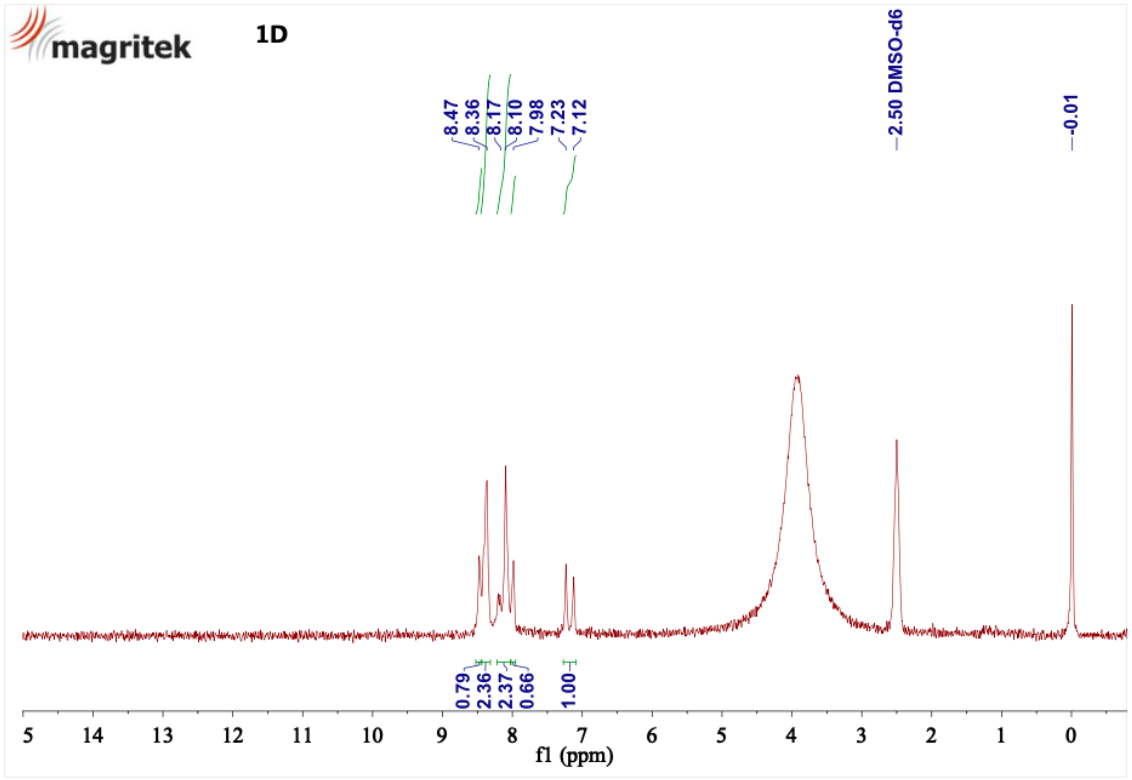


Figure S6. ^{13}C NMR Spectrum of Compound **7b** (80 MHz, DMSO-d_6)

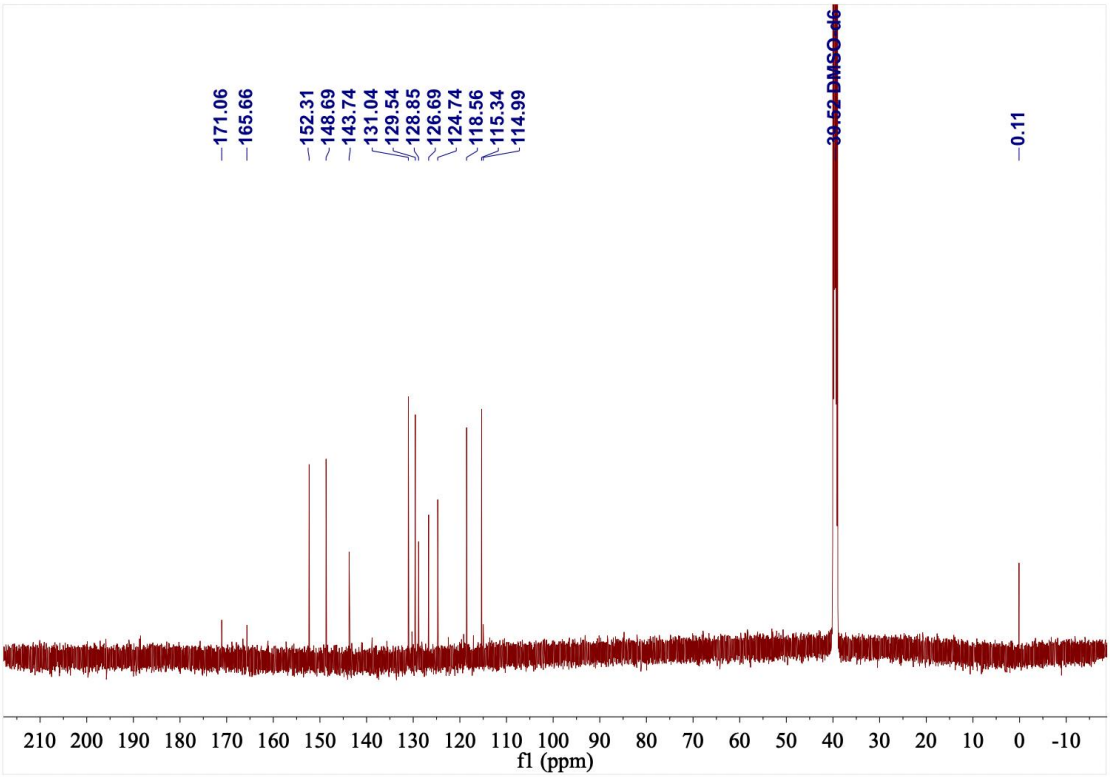


Figure S7. FTIR Spectrum of Compound **7b** (neat)

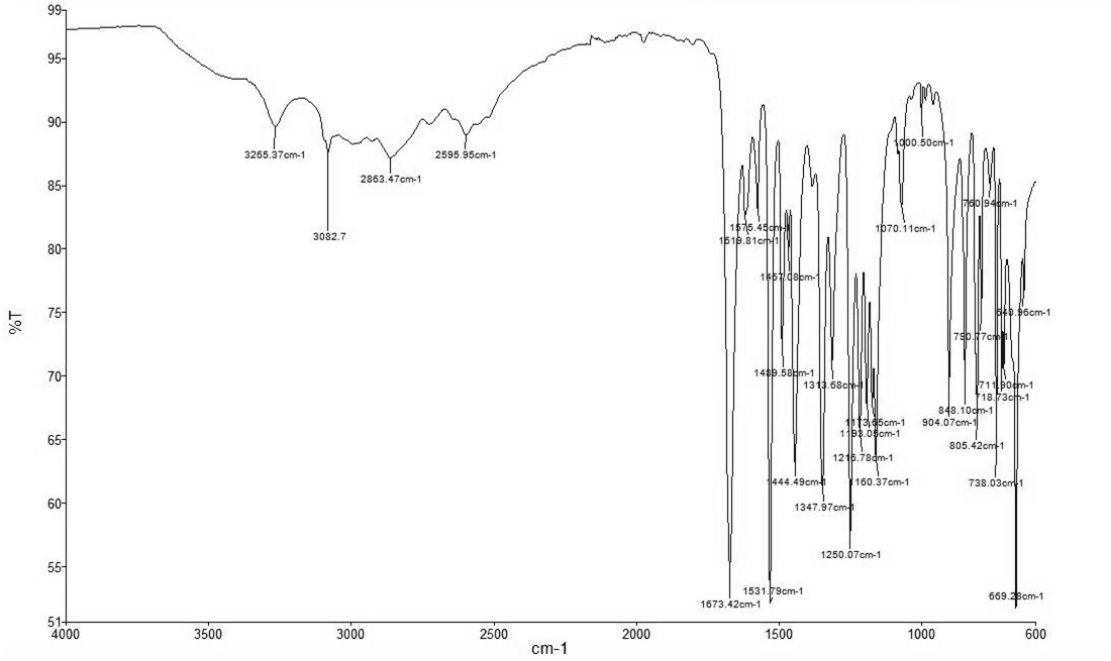


Figure S8. ABTS antioxidant assay data for **7b**

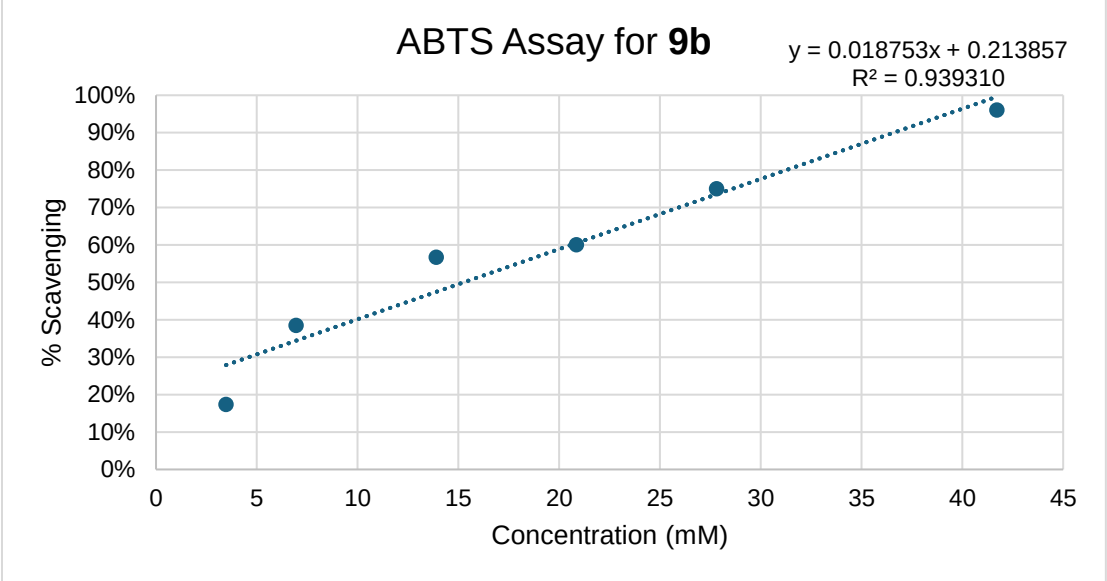


Figure S9. ^{1}H NMR Spectrum of Compound **7c** (80 MHz, DMSO-d_6)

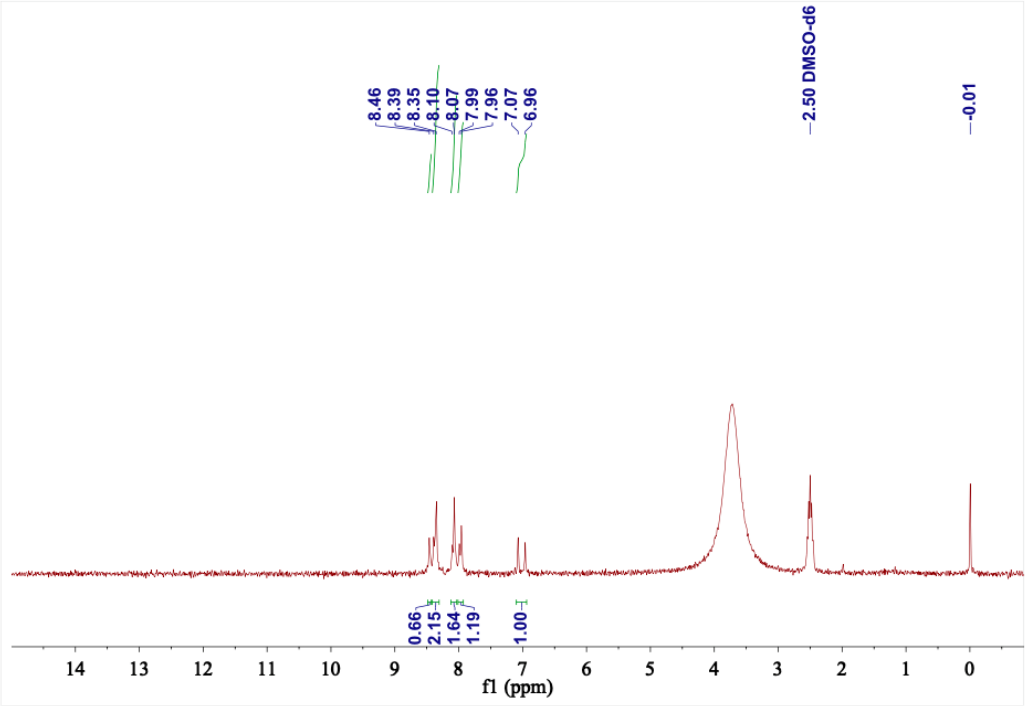


Figure S10. ^{13}C NMR Spectrum of Compound **7c** (125 MHz, DMSO-d_6)

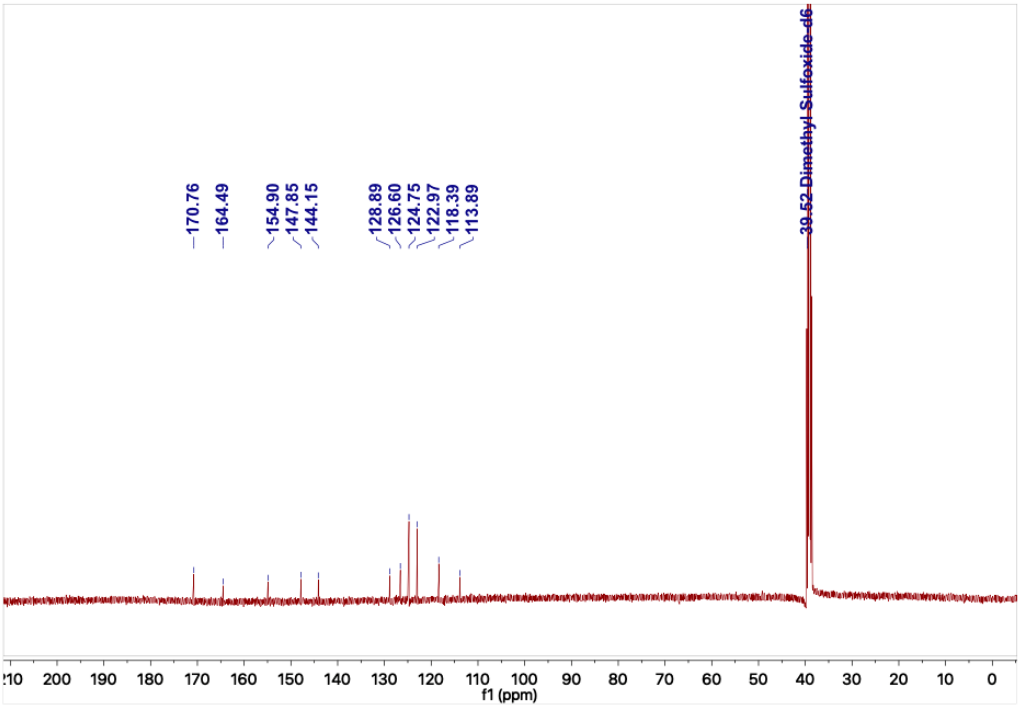


Figure S11. FTIR Spectrum of Compound **7c** (neat)

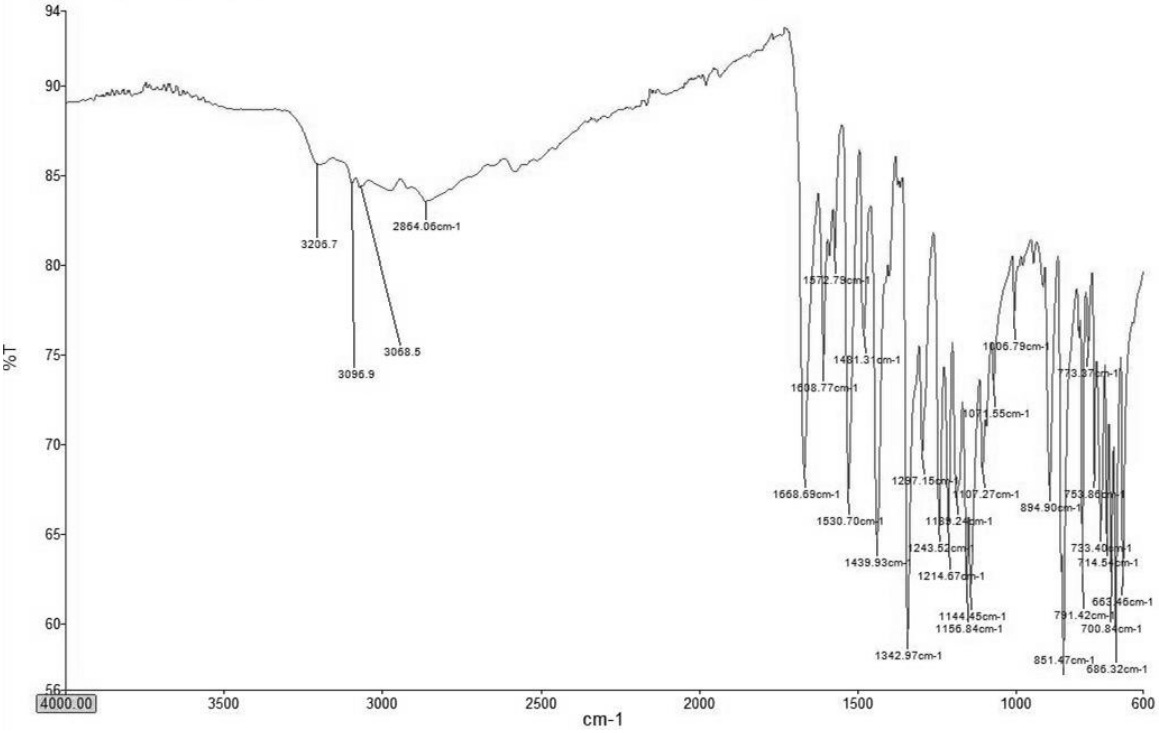


Figure S12. ABTS antioxidant assay data for **7c**

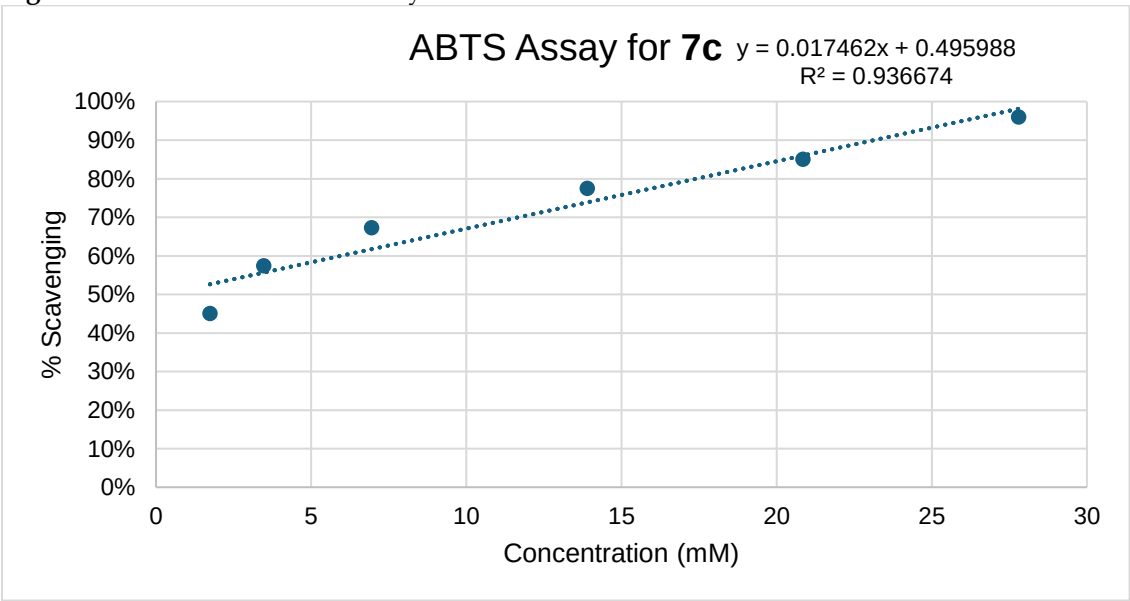


Figure S13. ^{1}H NMR Spectrum of Compound **8a** (500 MHz, $CDCl_3$)

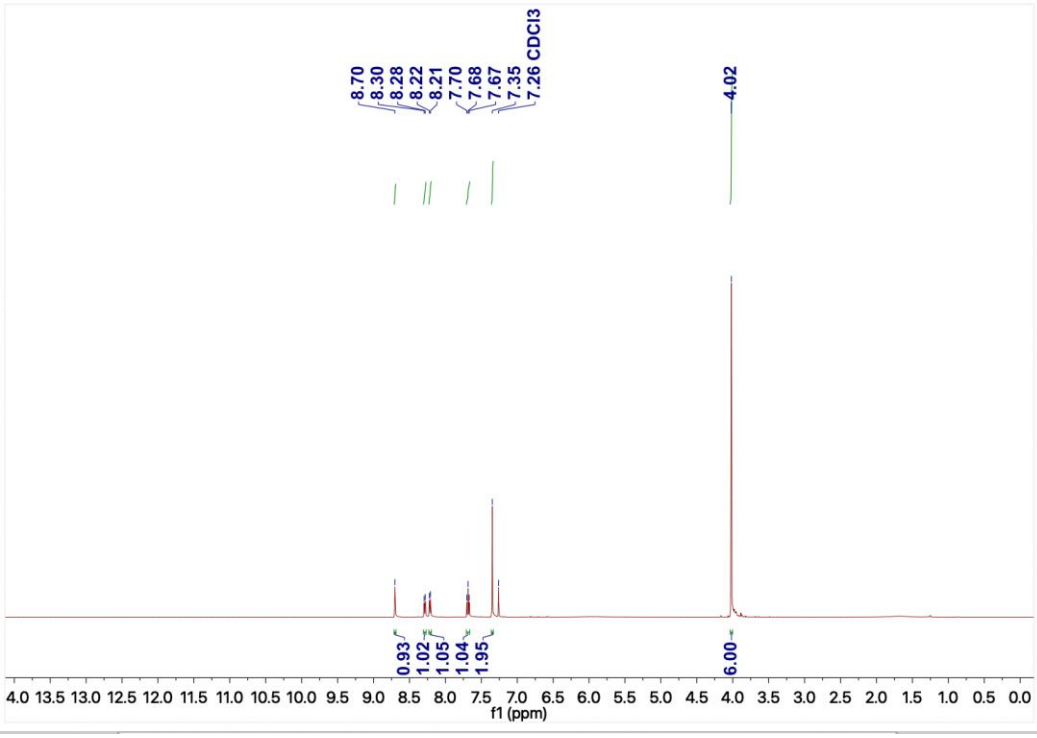


Figure S14. ^{13}C NMR Spectrum of Compound **8a** (125 MHz, $CDCl_3$)

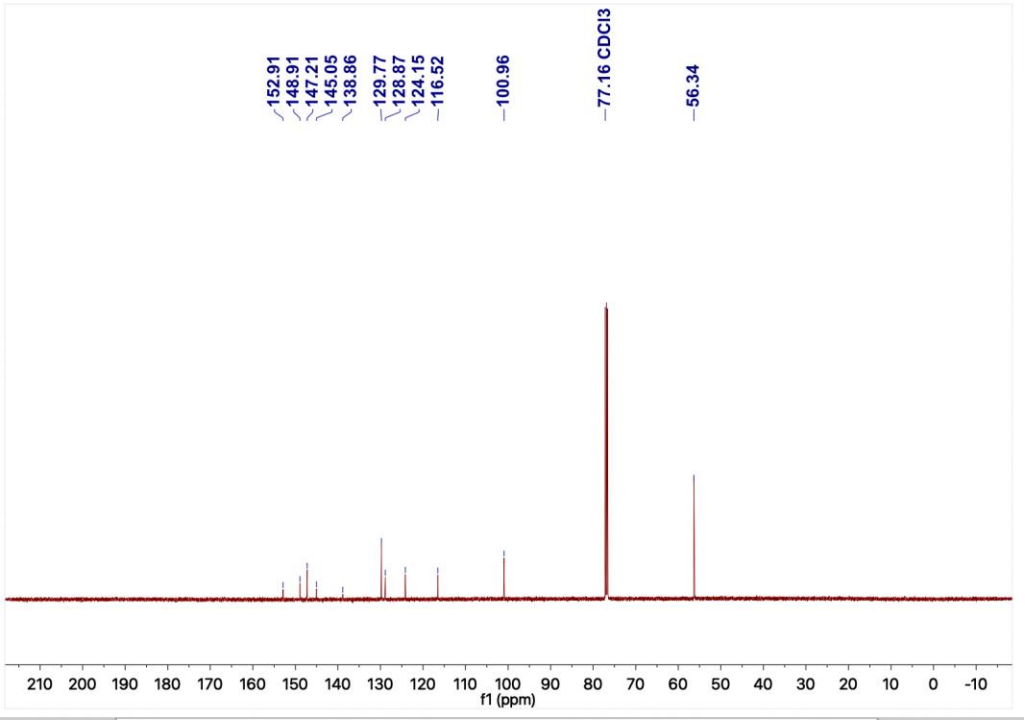


Figure S15. FTIR Spectrum of Compound **8a** (neat)

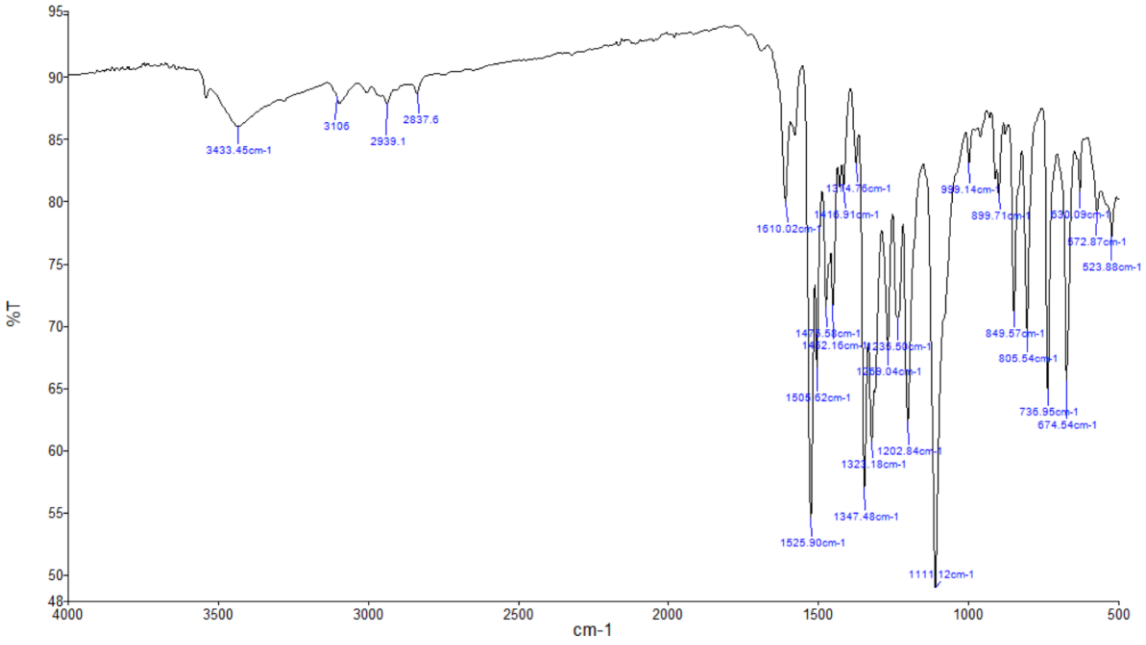


Figure S16. ABTS antioxidant assay data for **8a**

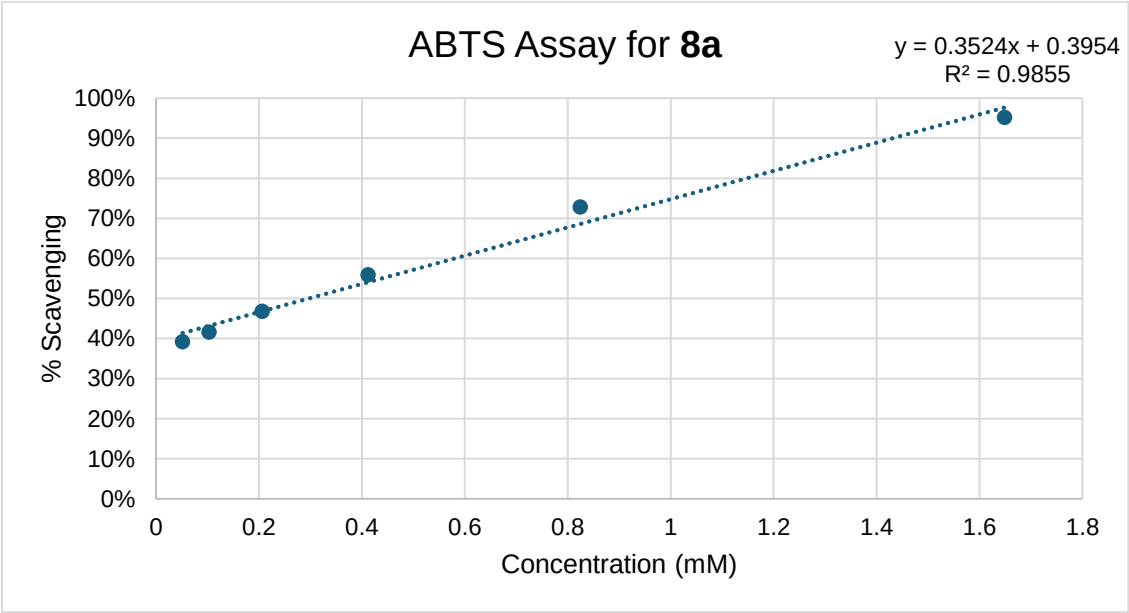


Figure S17. MS spectra for **8a**

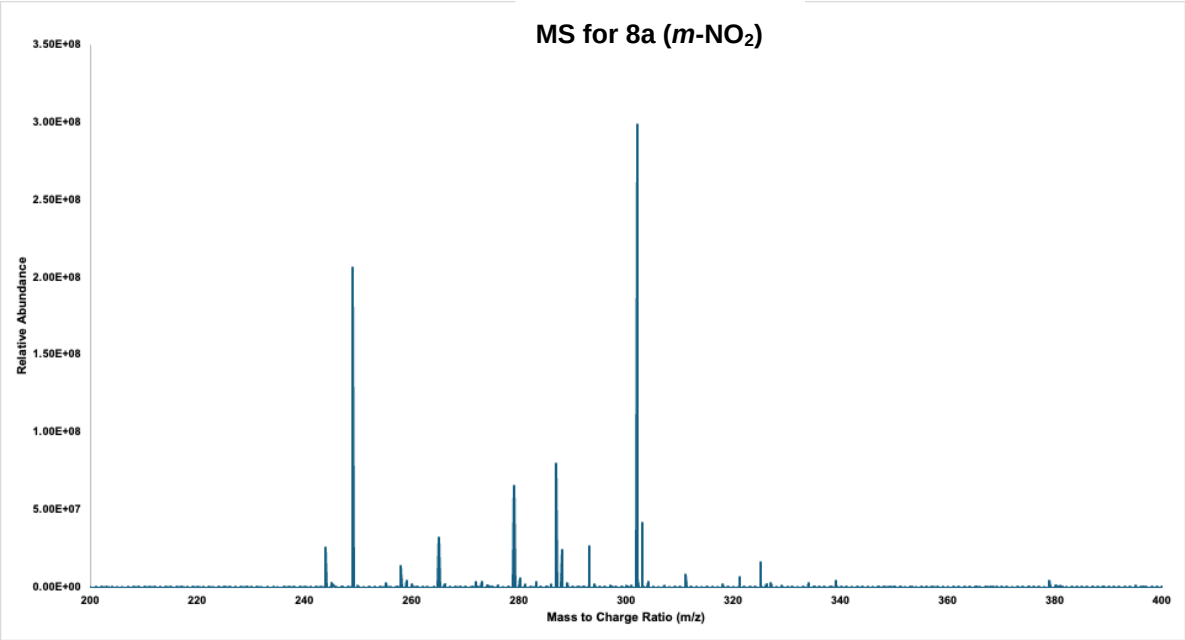


Figure S18. ^{1}H NMR Spectrum of Compound **8b** (500 MHz, $CDCl_3$)

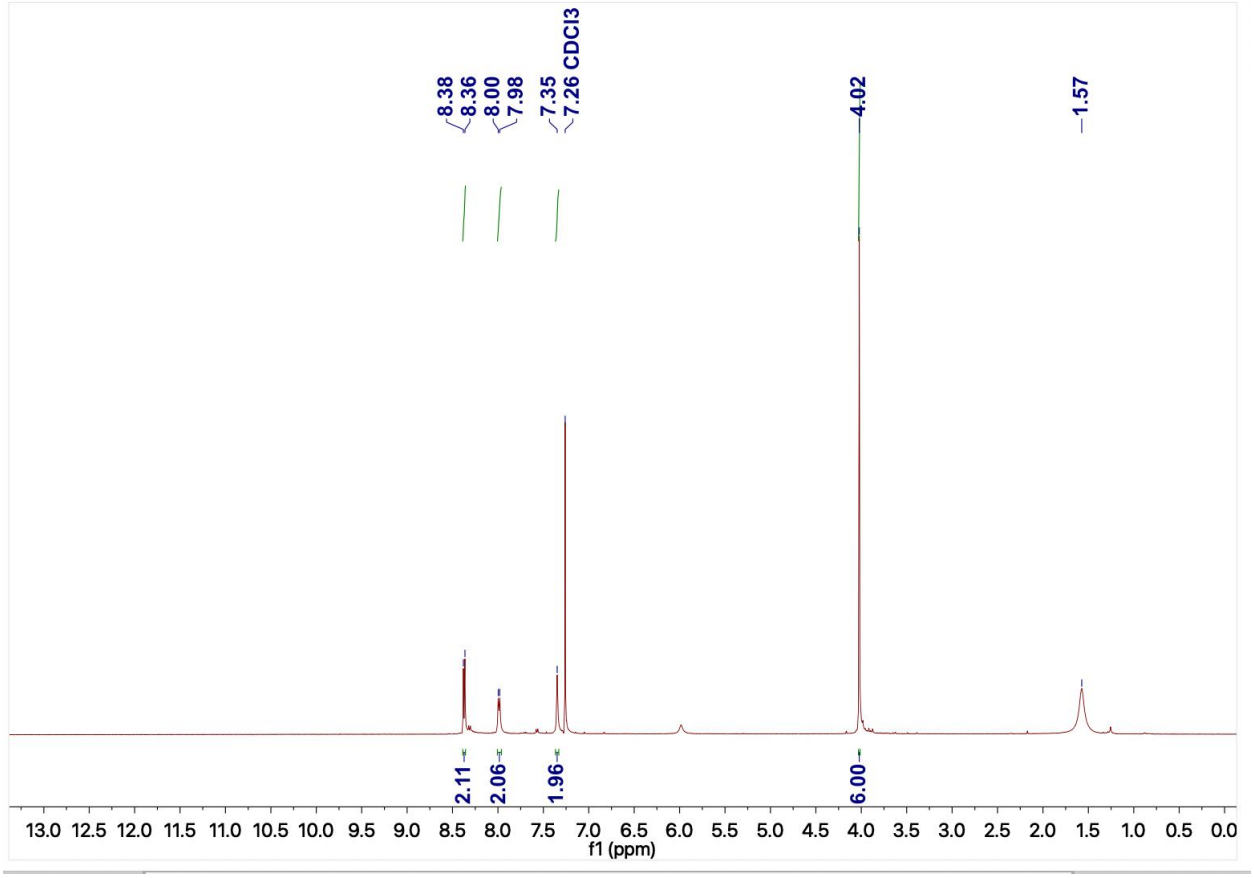


Figure S19. ^{13}C NMR Spectrum of Compound **8**b (125 MHz, $CDCl_3$)

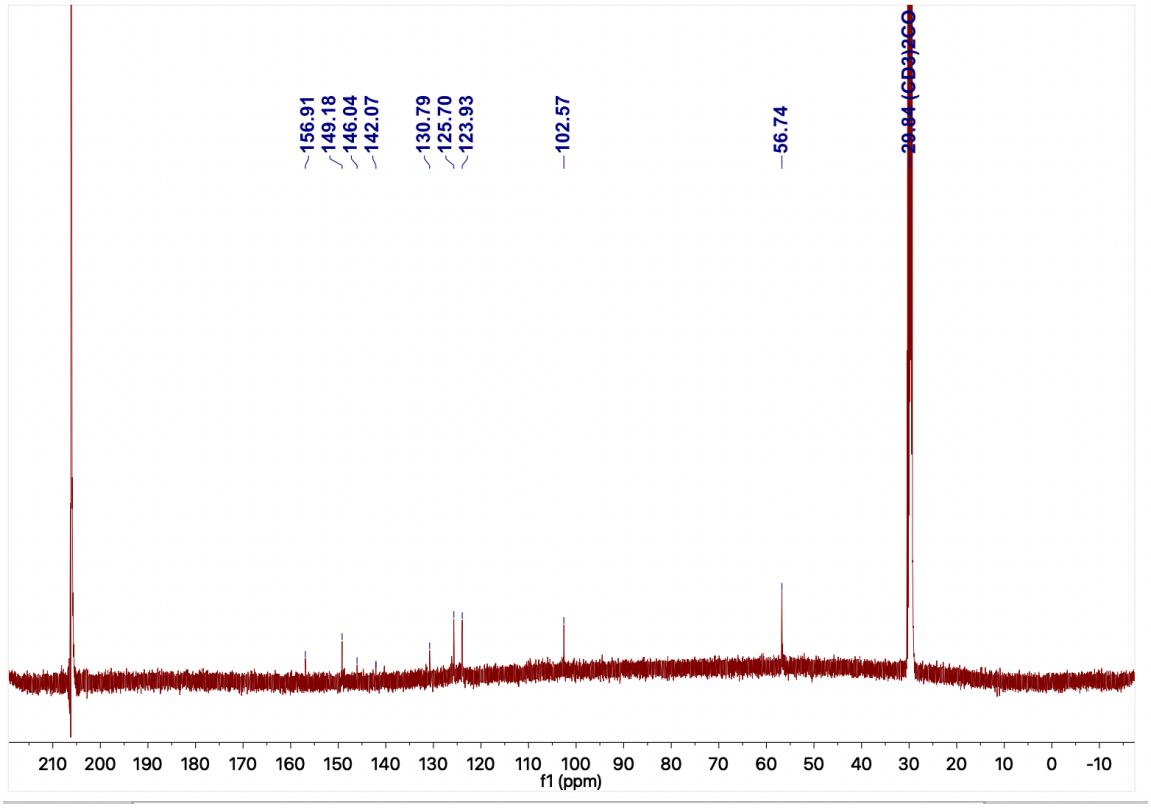


Figure S20. FTIR Spectrum of Compound **8b** (neat)

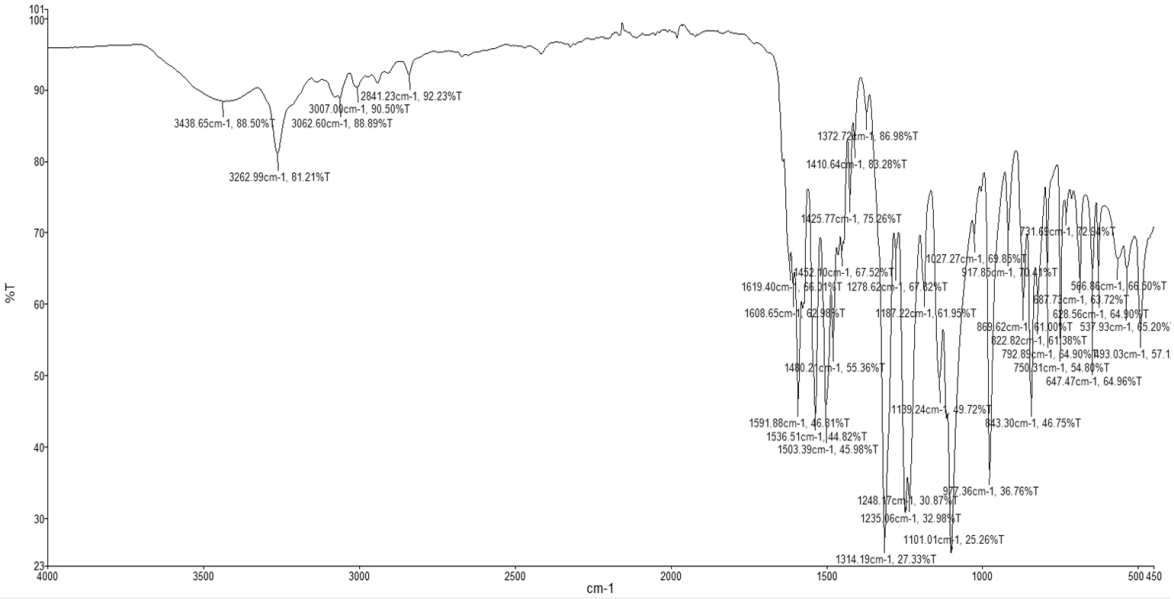


Figure S21. ABTS antioxidant assay data for **8b**

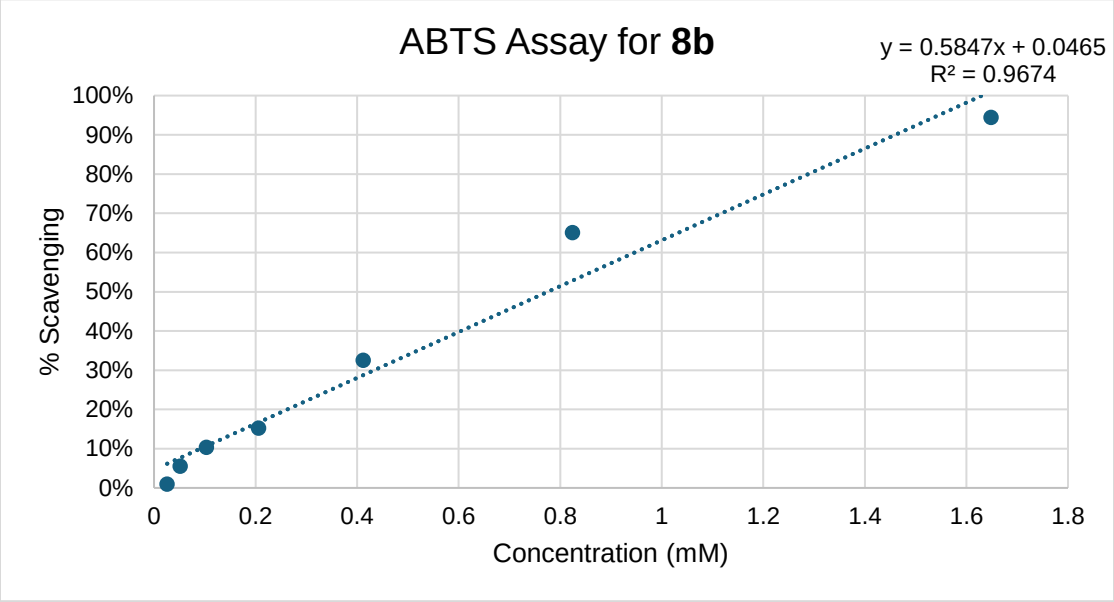


Figure S22. ^{1}H NMR Spectrum of Compound **8c** (500 MHz, $CDCl_3$)

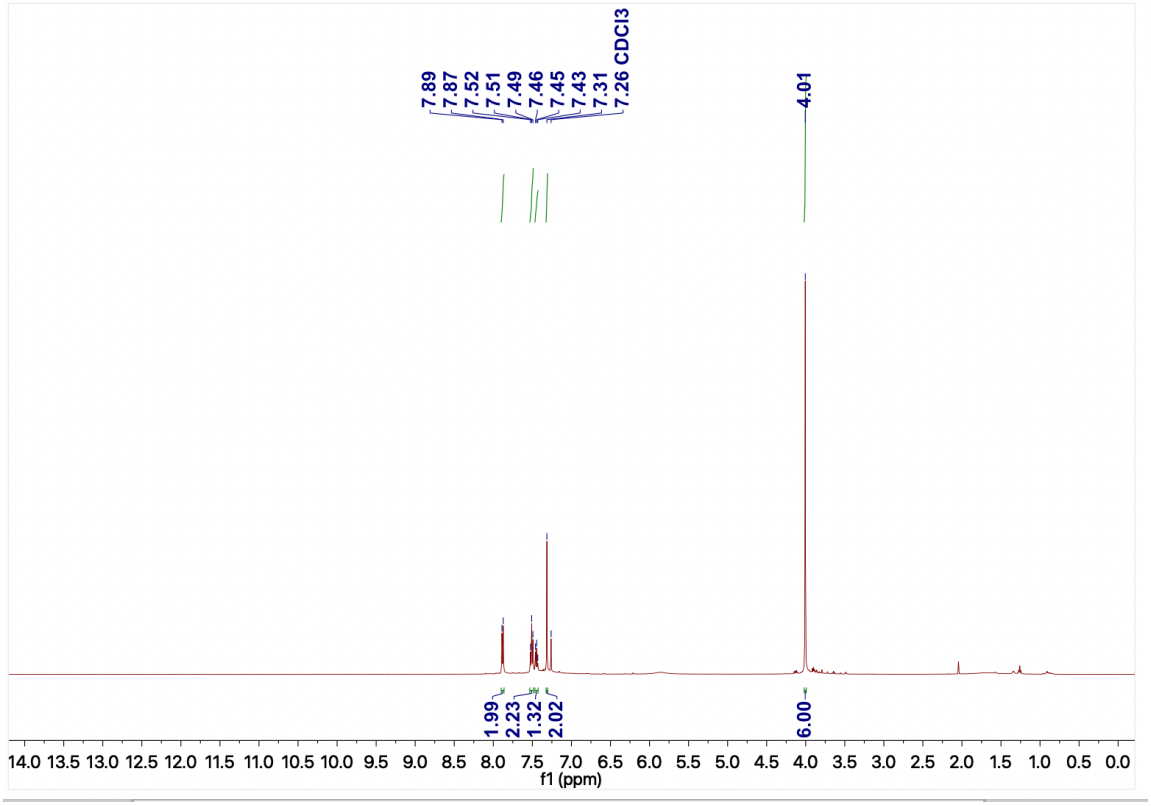


Figure S23. ^{13}C NMR Spectrum of Compound **8c** (125 MHz, $CDCl_3$)

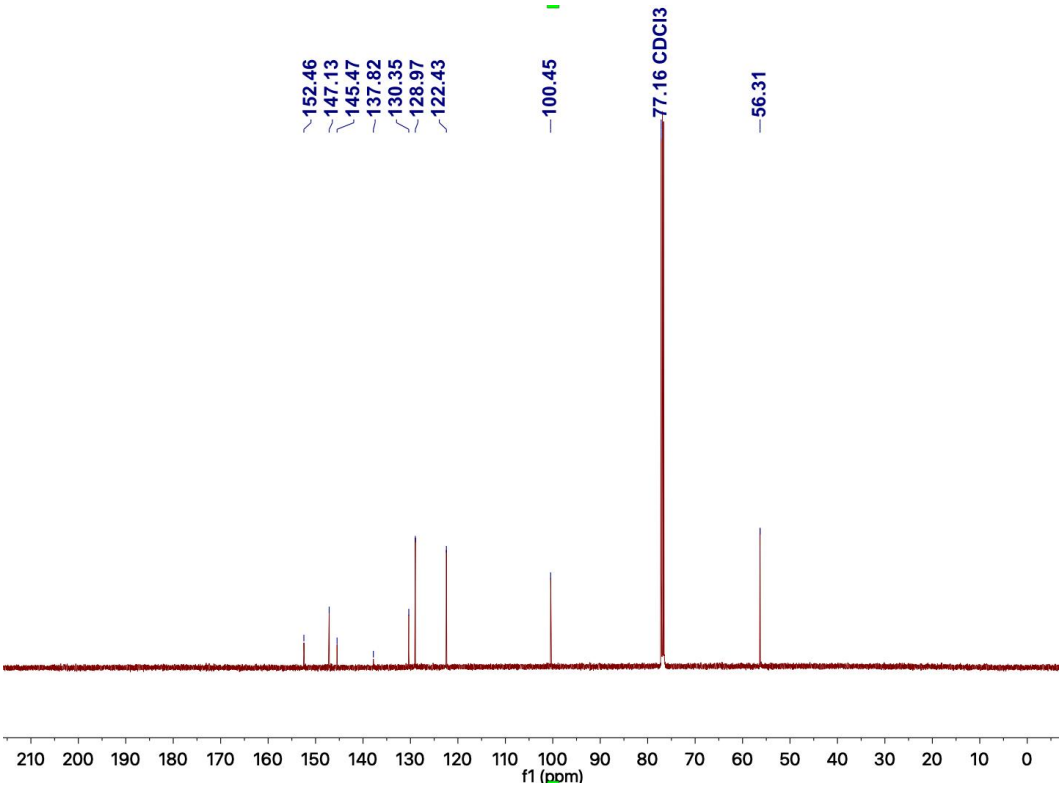


Figure S24. FTIR Spectrum of Compound **8c** (neat)

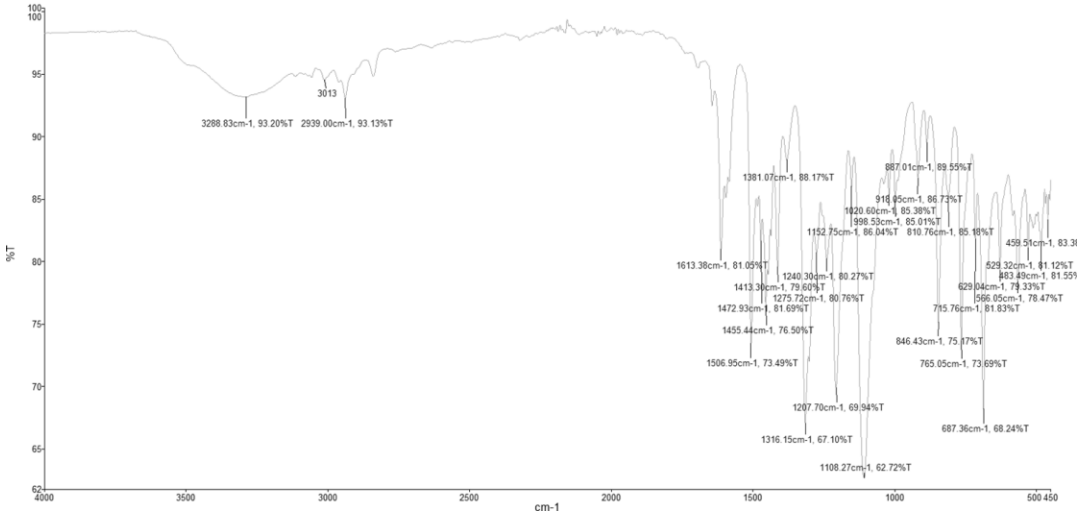


Figure S25. ABTS antioxidant assay data for **8c**

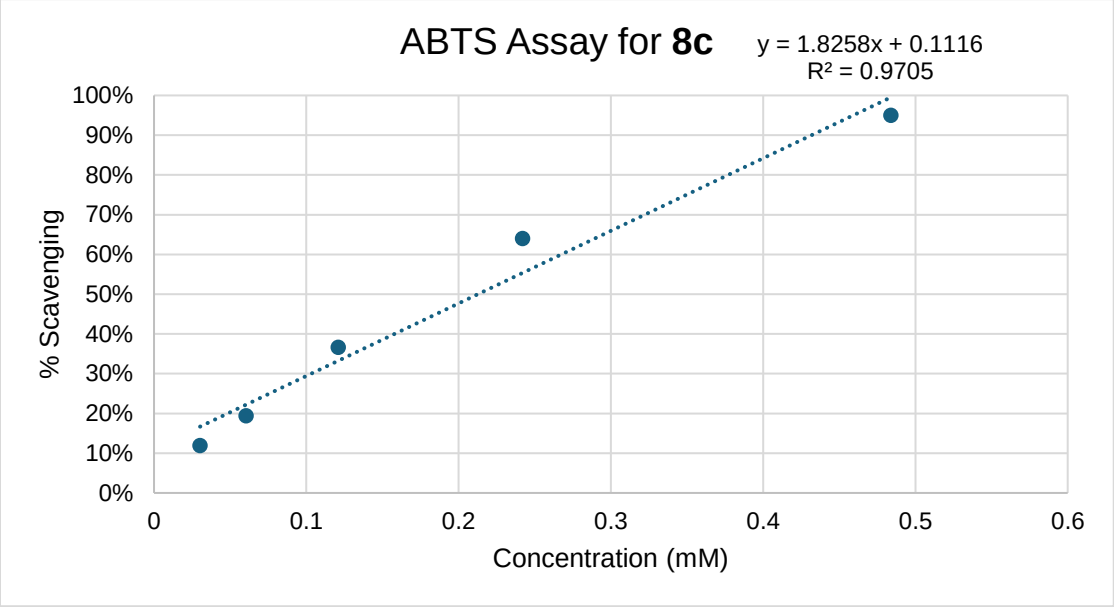


Figure S26. ^{1}H NMR Spectrum of Compound **8d** (500 MHz, $CDCl_3$)

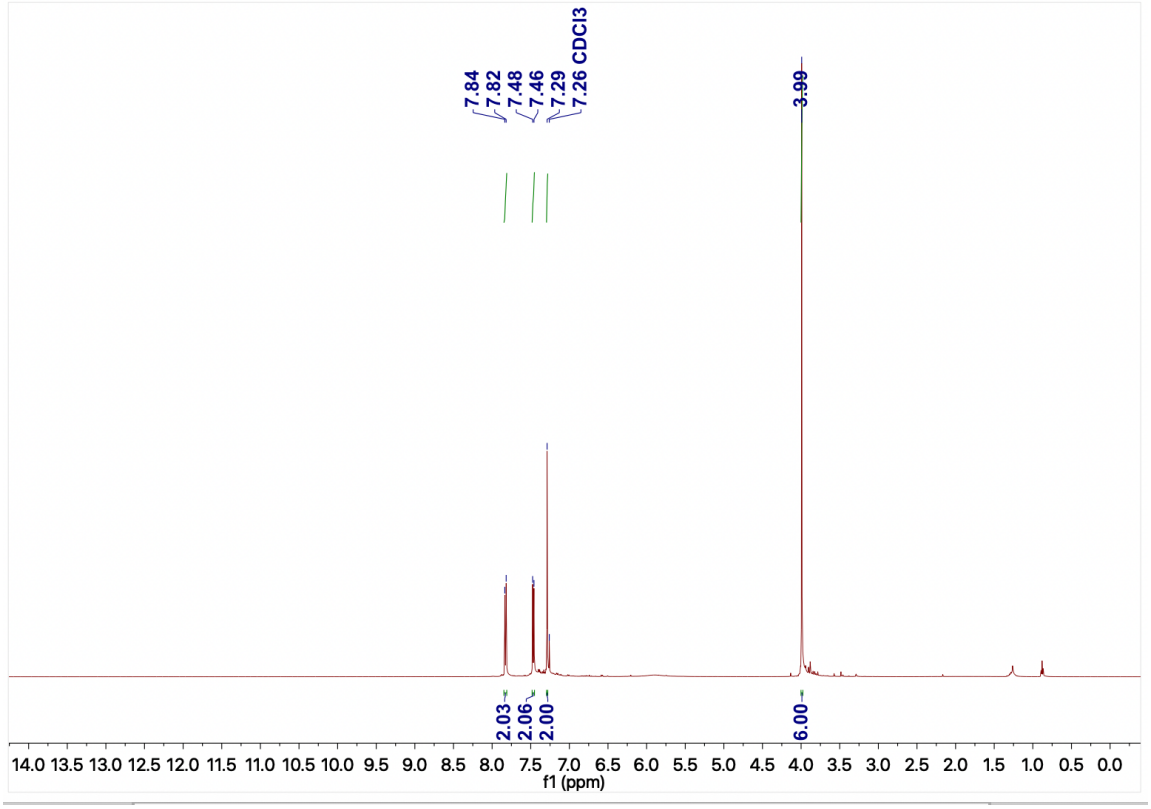


Figure S27. ^{13}C NMR Spectrum of Compound **8d** (125 MHz, Acetone-d_6)

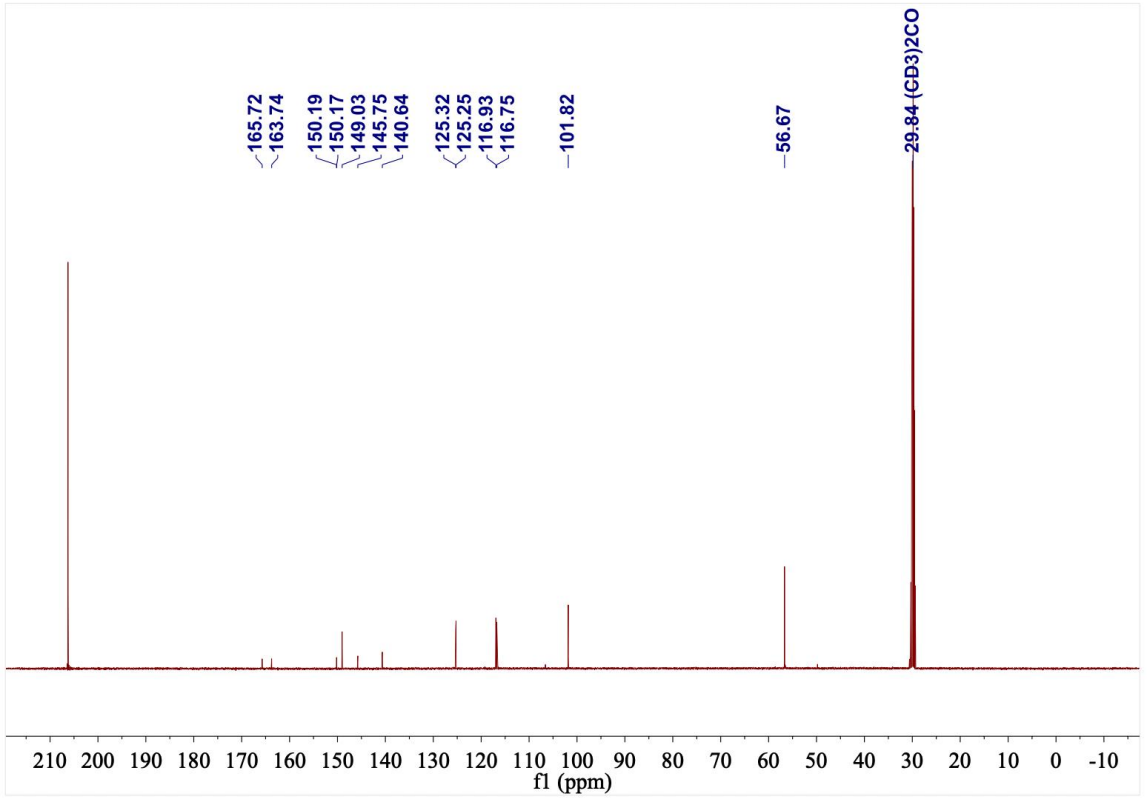


Figure S28. FTIR Spectrum of Compound **8d** (neat)

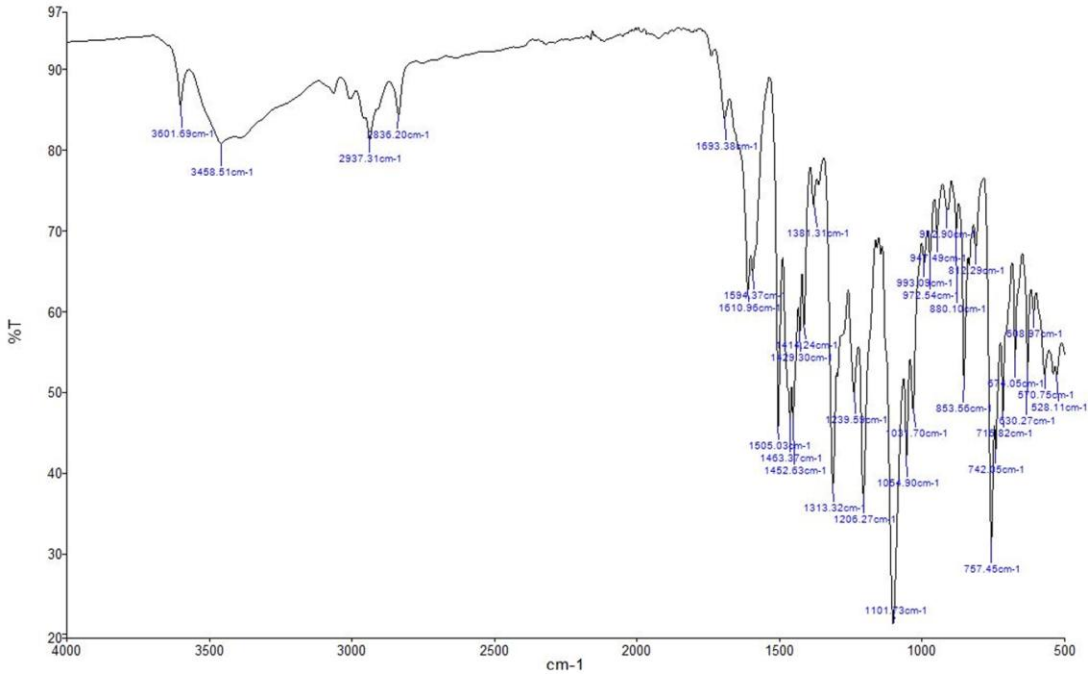


Figure S29. ABTS antioxidant assay data for **8d**

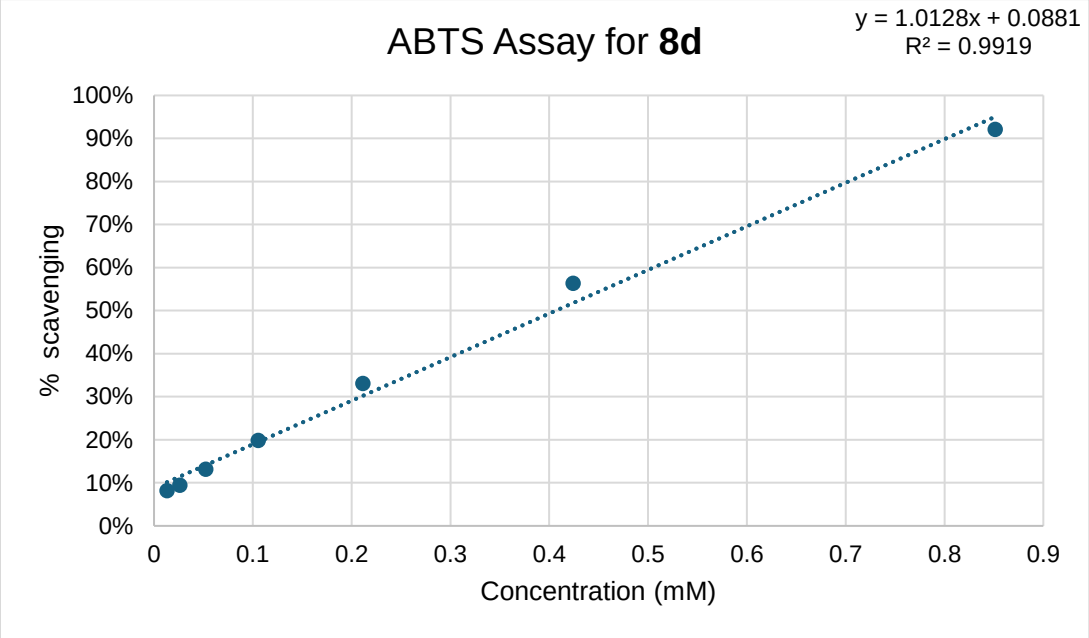


Figure S30. ^{1}H NMR Spectrum of Compound **9a** (500 MHz, Acetone-d_6)

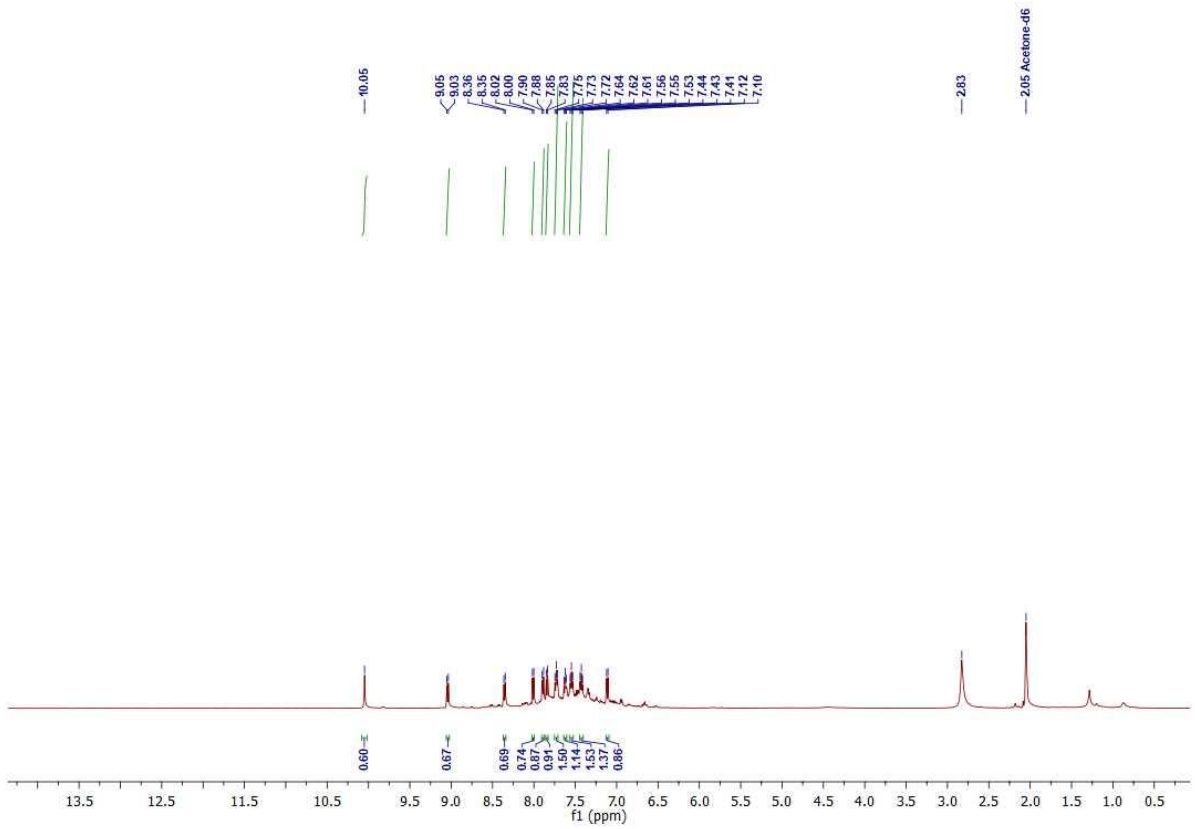


Figure S31. ^{13}C NMR Spectrum of Compound **9a** (125 MHz, Acetone-d_6)

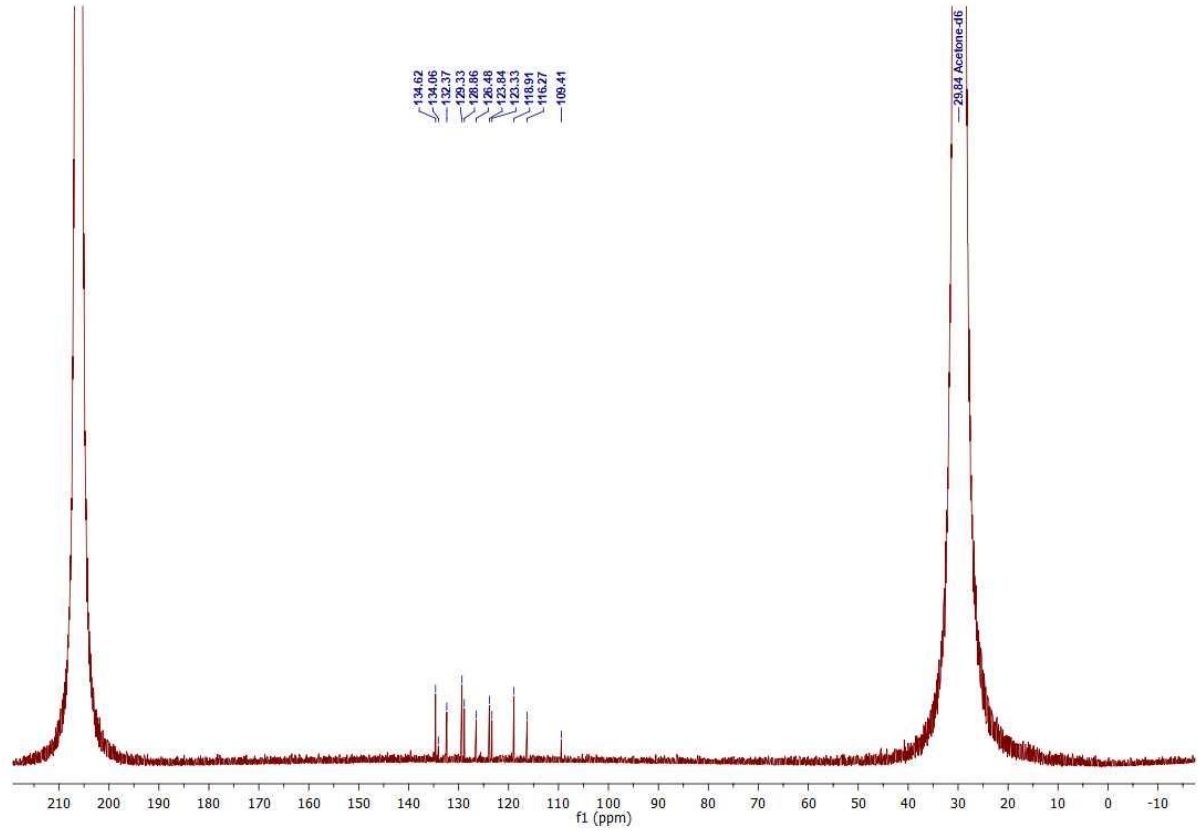


Figure S32. FTIR Spectrum of Compound **9a** (neat)

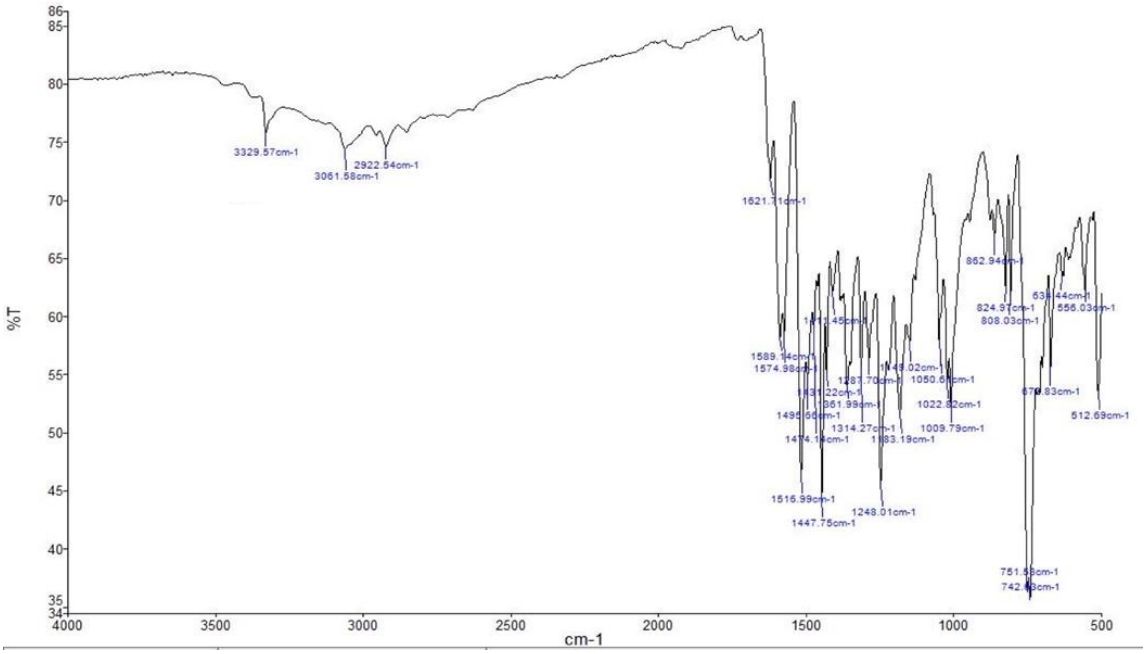


Figure S33. ABTS antioxidant assay data for **9a**

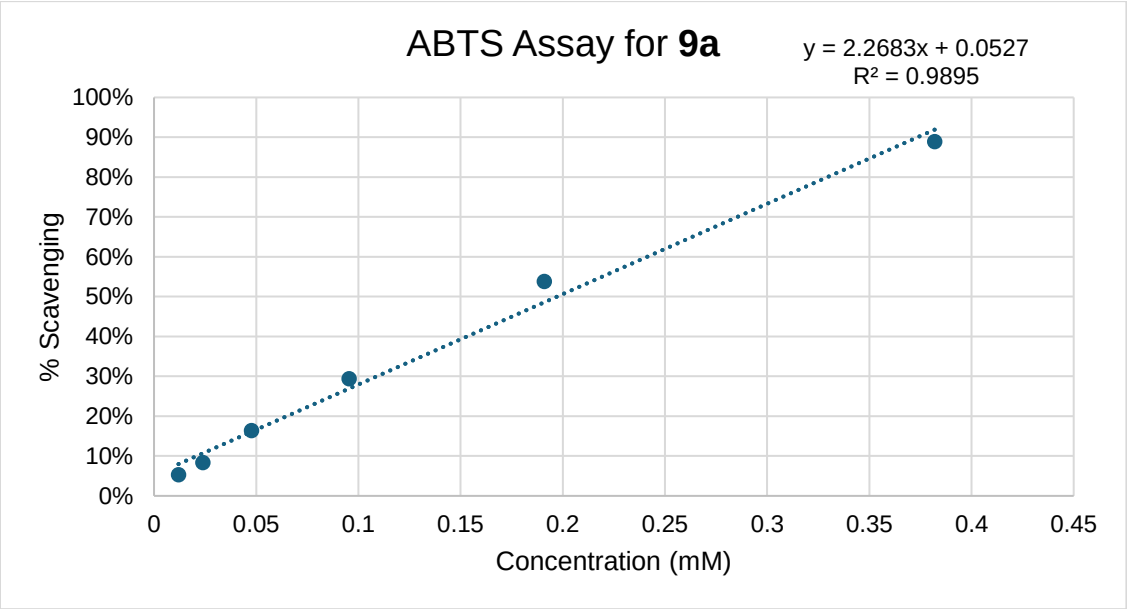


Figure S34. MS spectra for **9a**

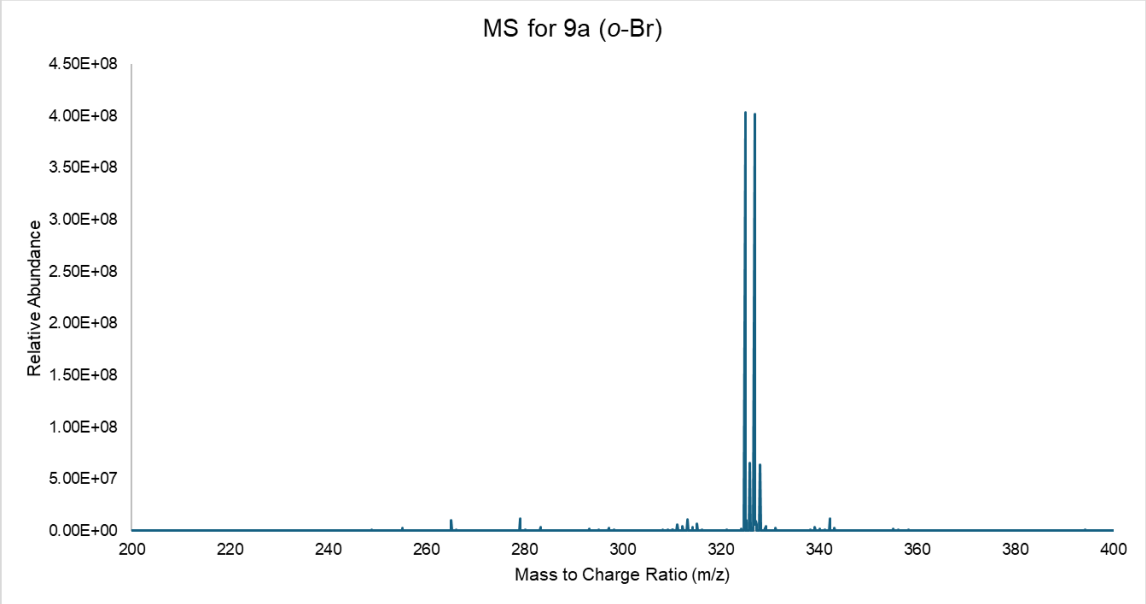


Figure S35. ^{1}H NMR Spectrum of Compound **9b** (500 MHz, Acetone-d_6)

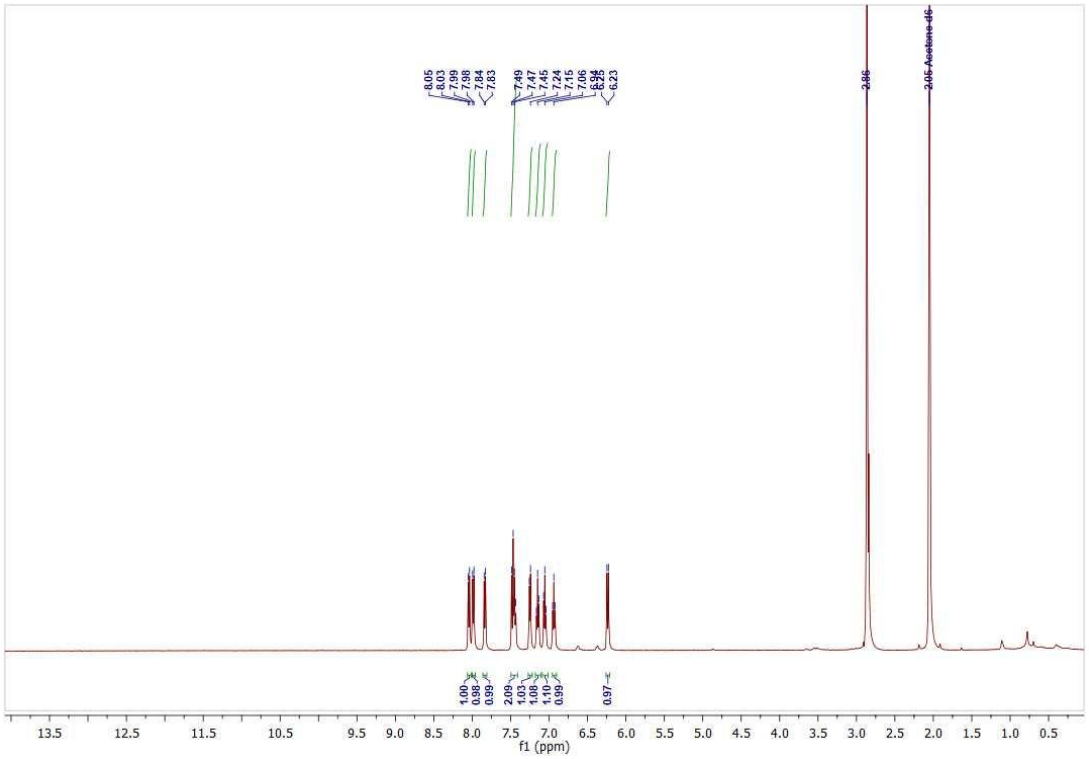


Figure S36. ^{13}C NMR Spectrum of Compound **9b** (125 MHz, Acetone-d_6)

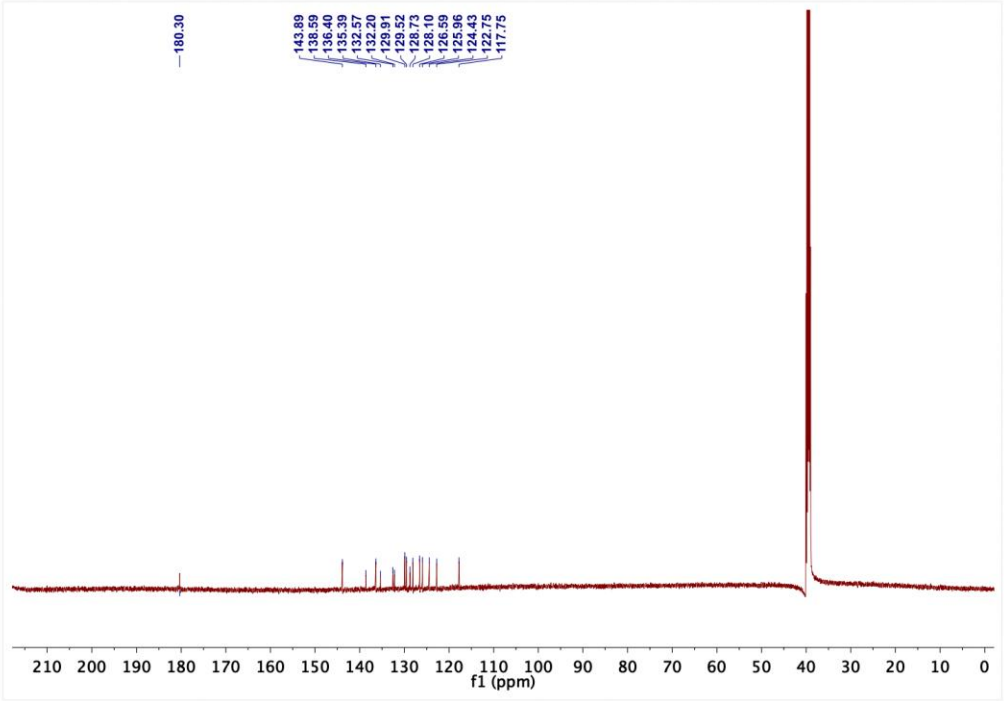


Figure S37. FTIR Spectrum of Compound **9b** (neat)

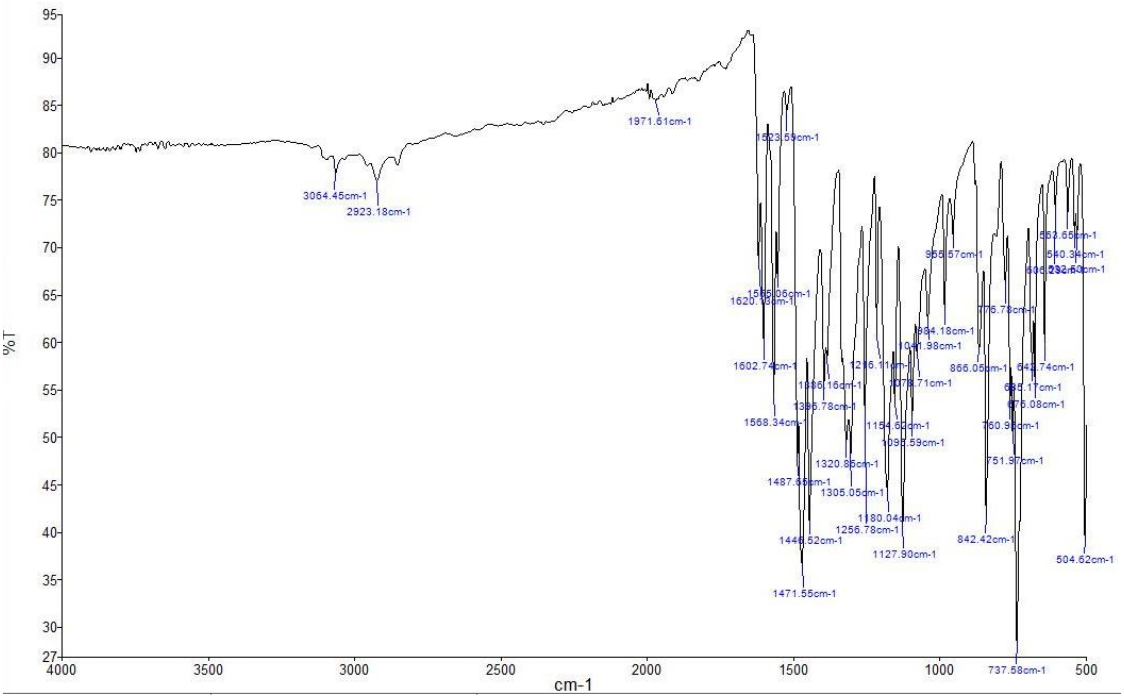


Figure S38. ABTS antioxidant assay data for **9b**

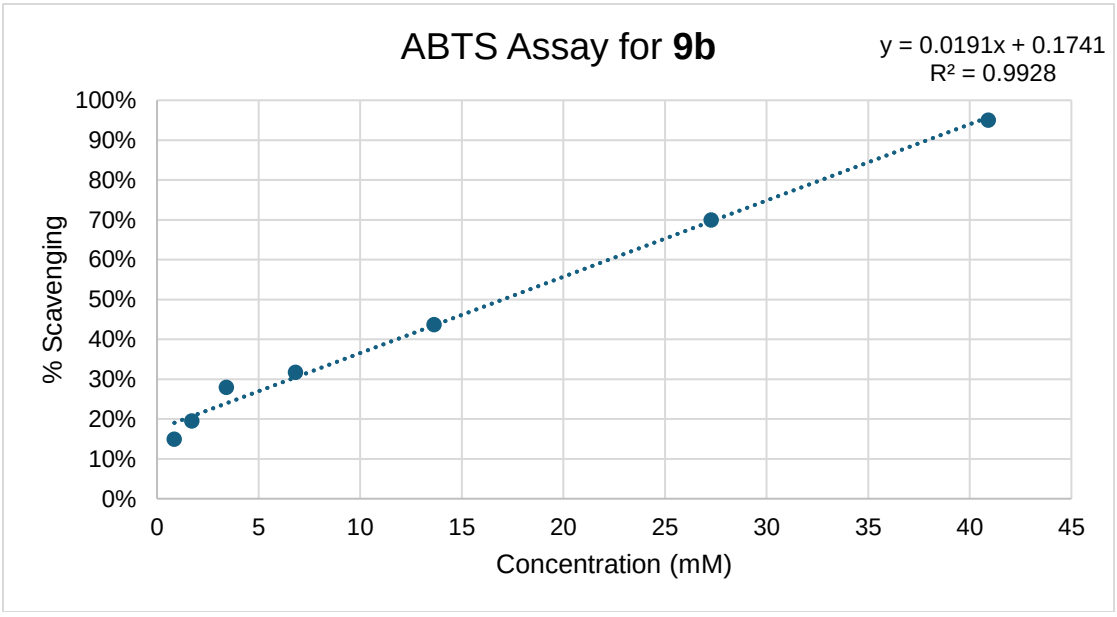


Figure S39. ^{1}H NMR Spectrum of Compound **9c** (80 MHz, $CDCl_3$)

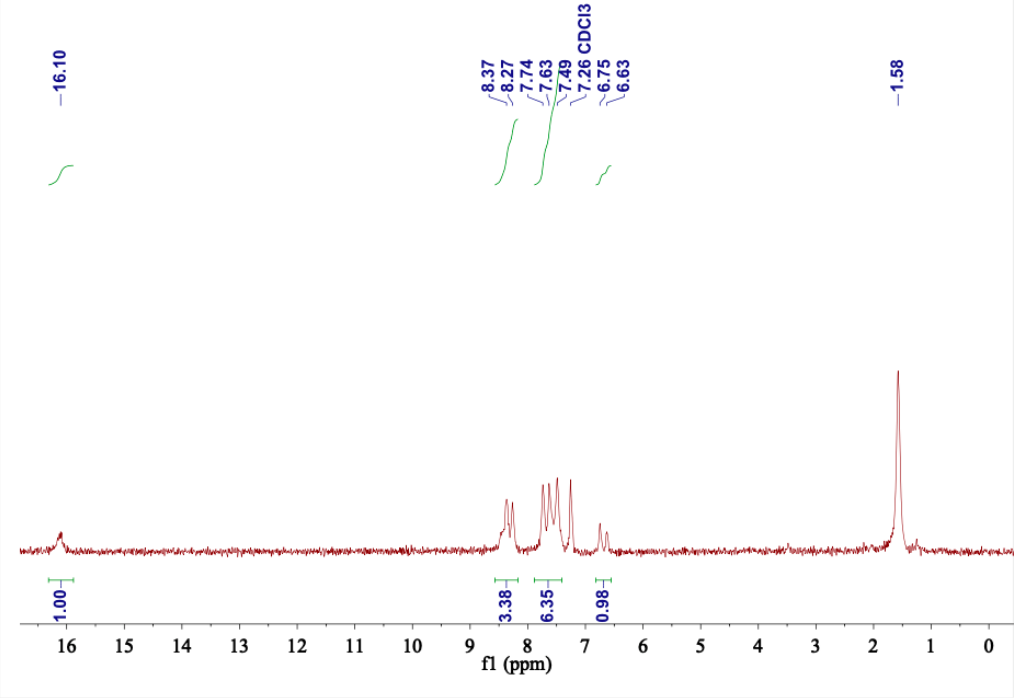


Figure S40. ^{13}C NMR Spectrum of Compound **9c** (125 MHz, Acetone-d_6)

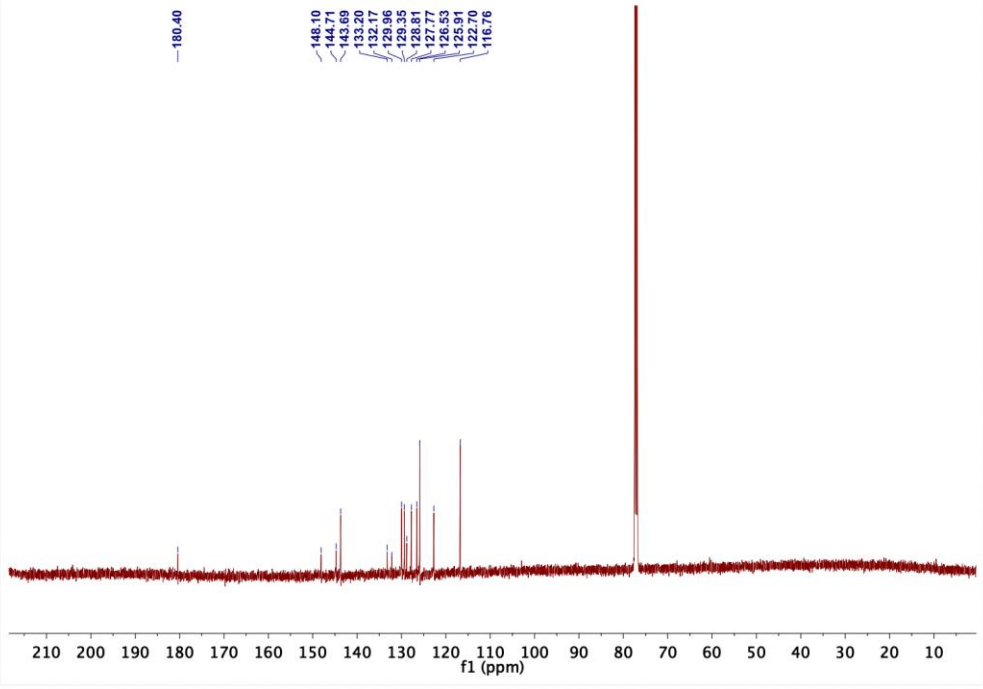


Figure S41. FTIR Spectrum of Compound **9c** (neat)

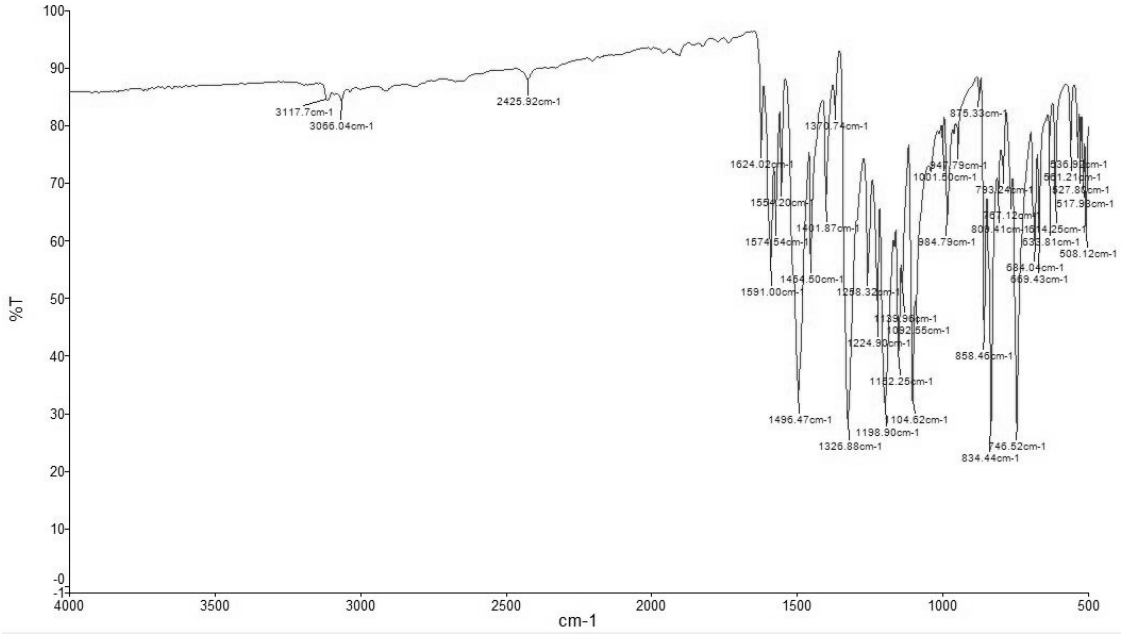


Figure S42. ABTS antioxidant assay data for **9c**

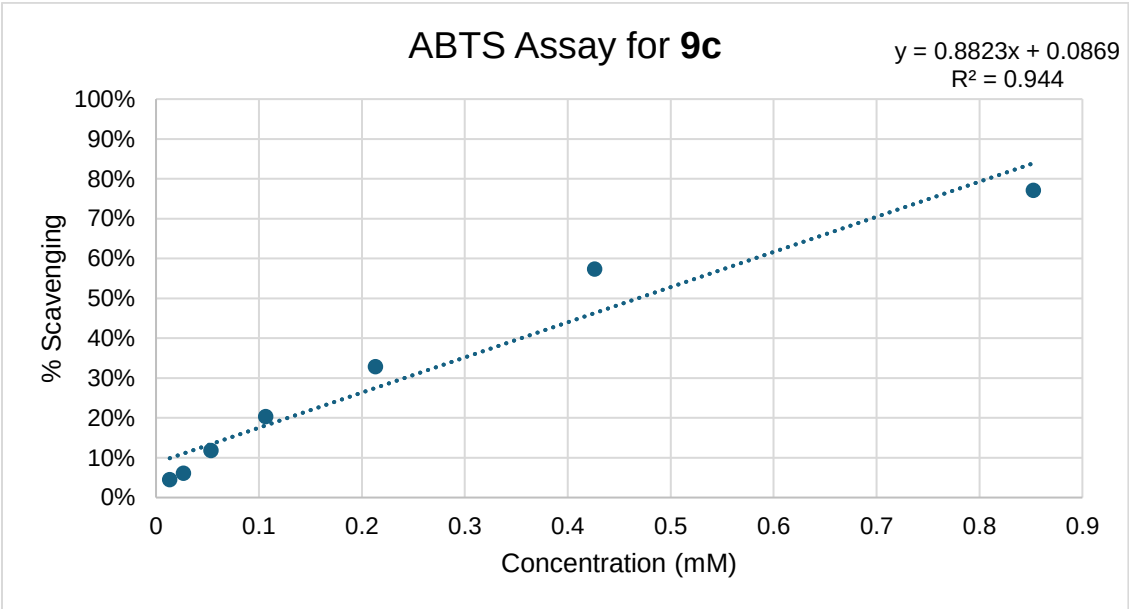


Figure S43. ^{1}H NMR Spectrum of Compound **10a** (500 MHz, $CDCl_3$)

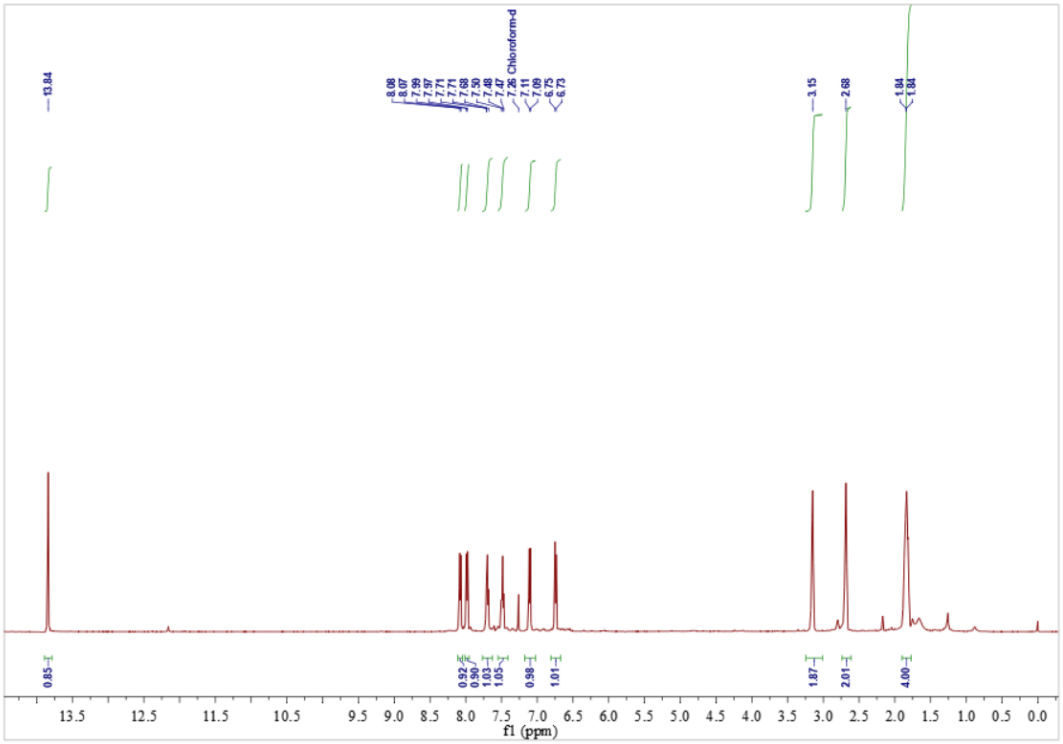


Figure S44. ^{13}C NMR Spectrum of Compound **10a** (125 MHz, $CDCl_3$)

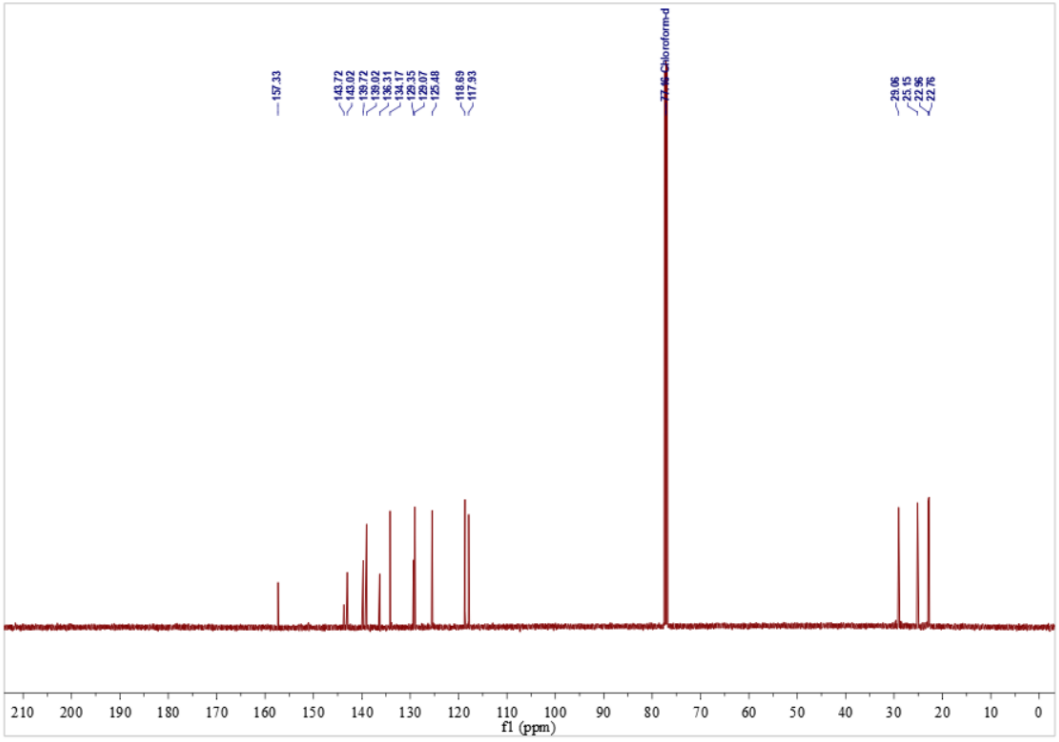


Figure S45. FTIR Spectrum of Compound **10a** (neat)

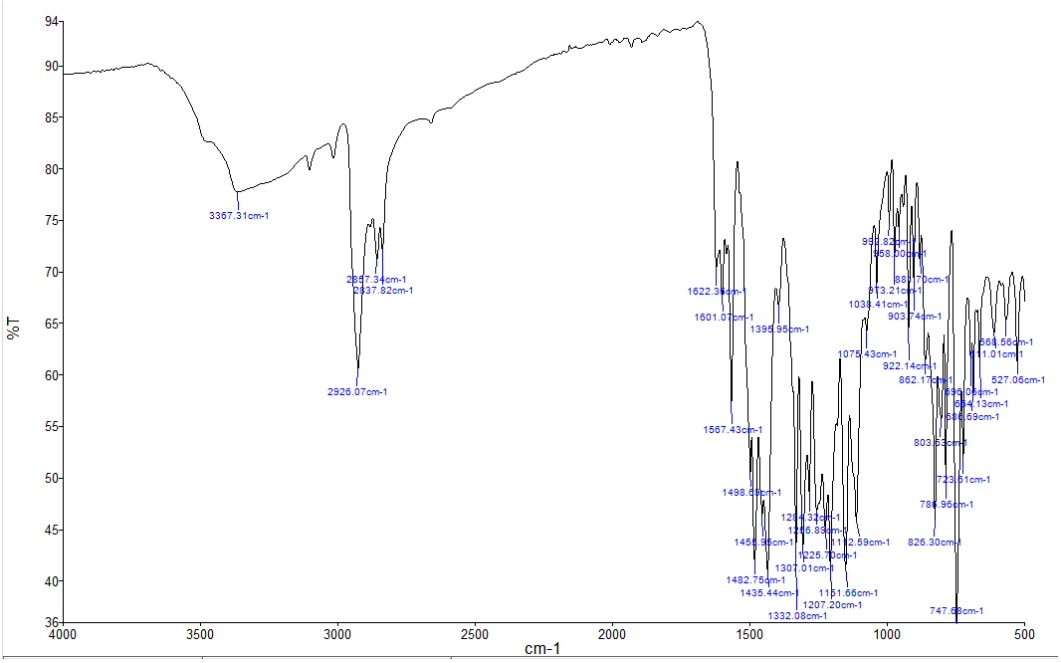


Figure S46. ABTS antioxidant assay data for **10a**

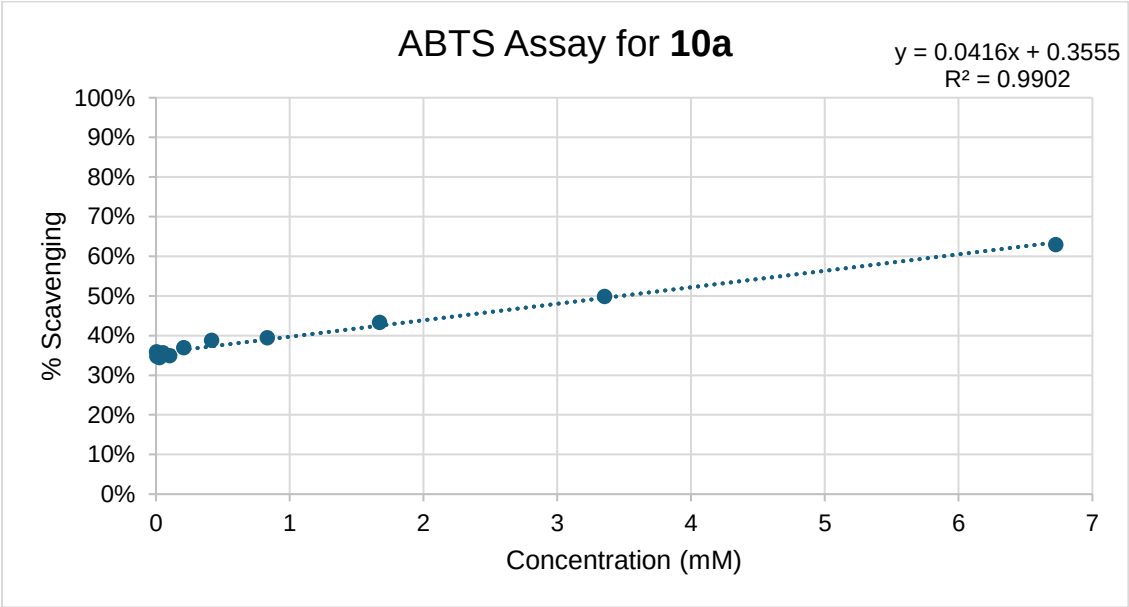


Figure S47. MS spectra for **10a**

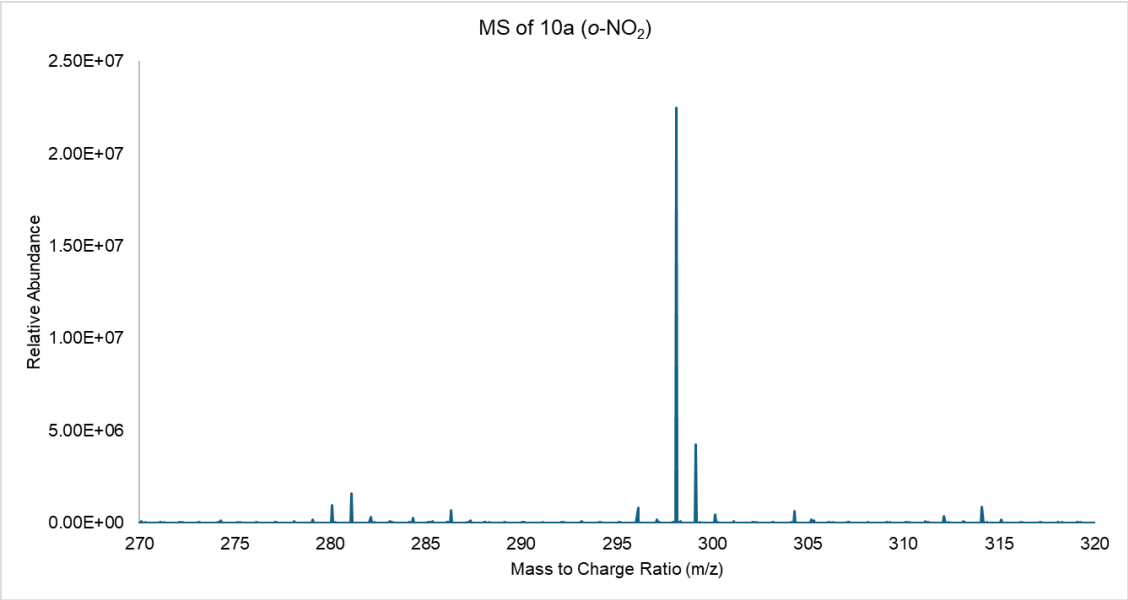


Figure S48 ^{1}H NMR Spectrum of Compound **10b** (500 MHz, $CDCl_3$)

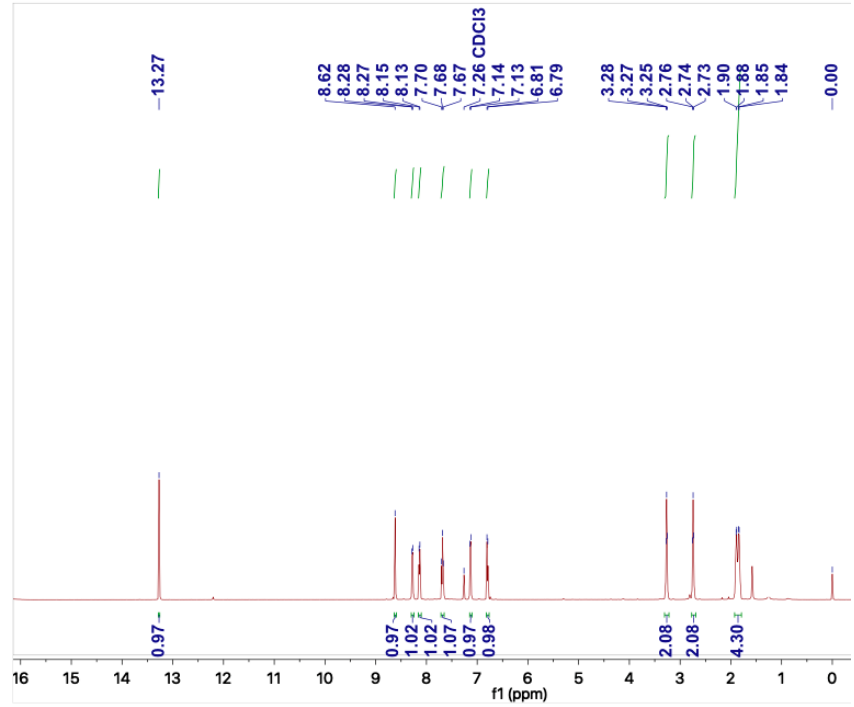


Figure S49. ^{13}C NMR Spectrum of Compound **10b** (125 MHz, $CDCl_3$)

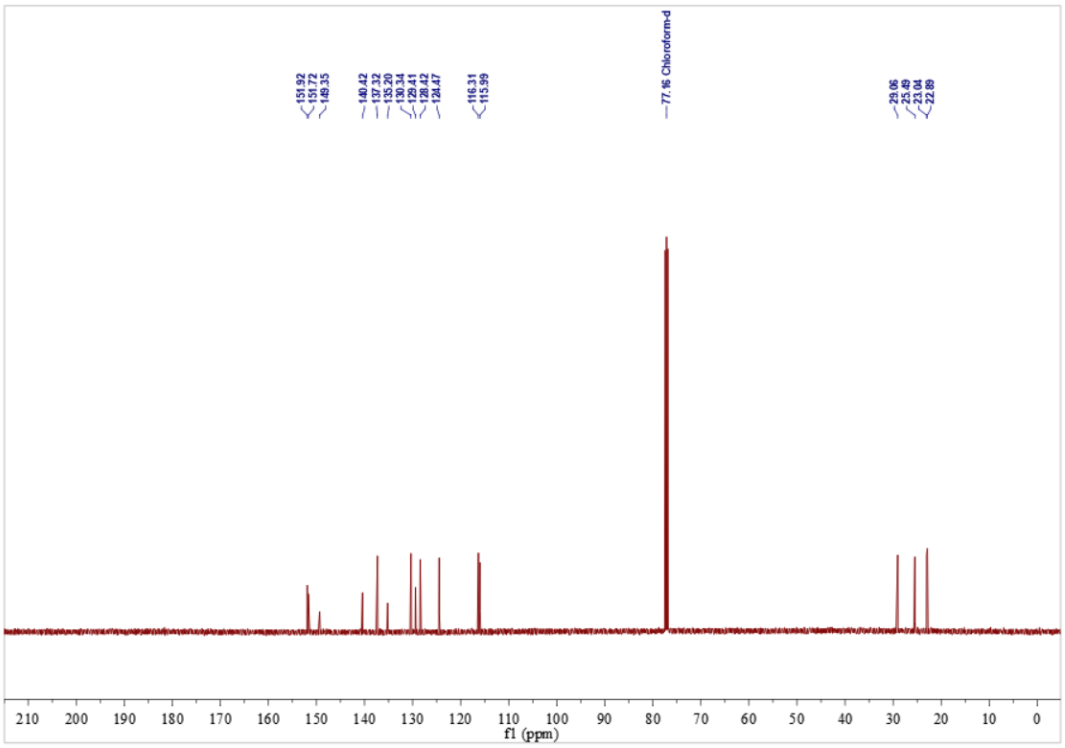


Figure S50. FTIR Spectrum of Compound **10b** (neat)

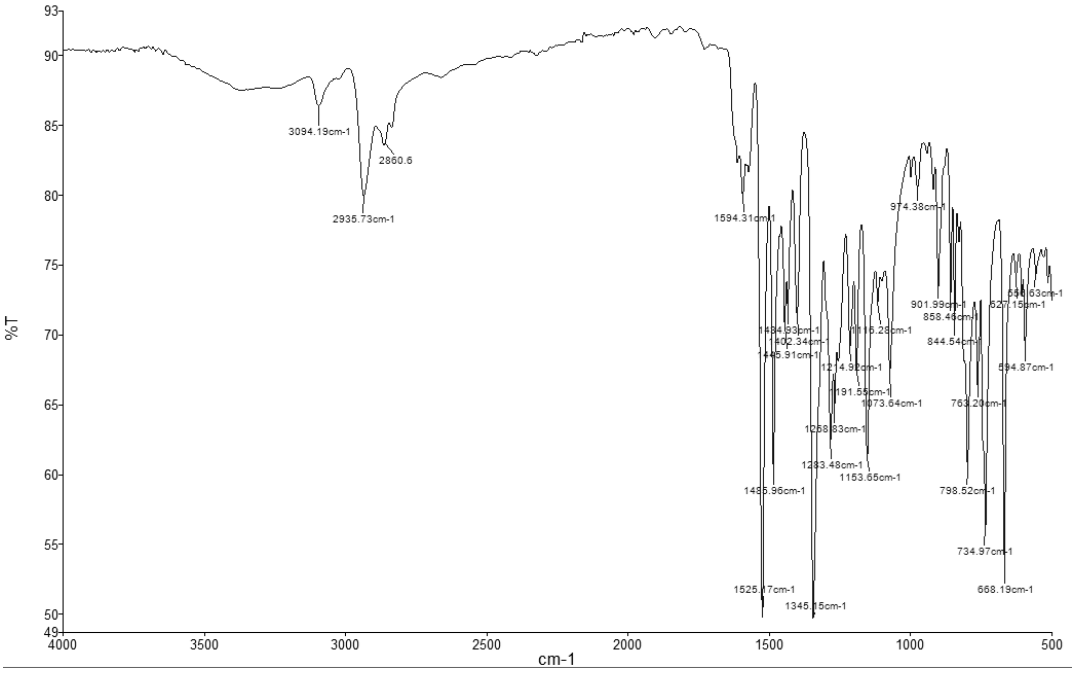


Figure S51. ABTS antioxidant assay data for **10b**

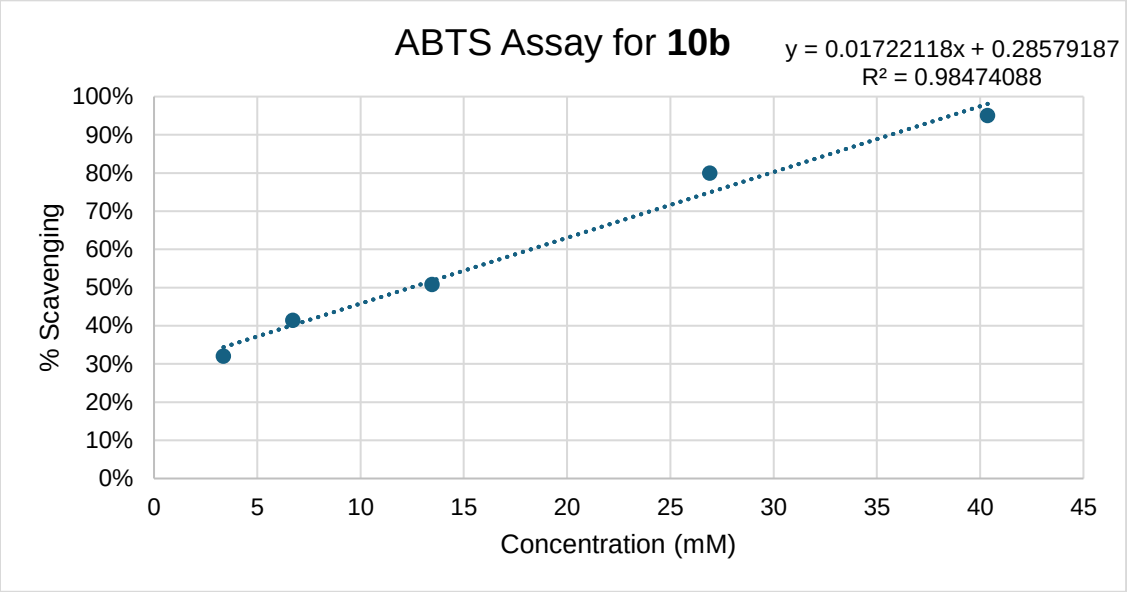


Figure S52. MS spectra for **10b**

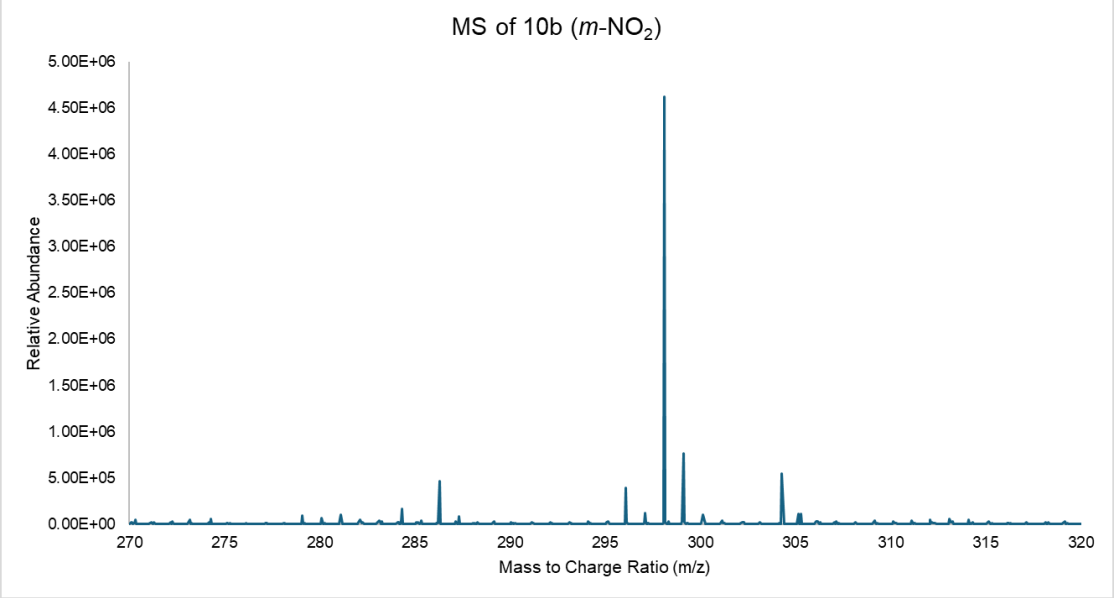


Figure S53. ^{1}H NMR Spectrum of Compound **10c** (500 MHz, $CDCl_3$)

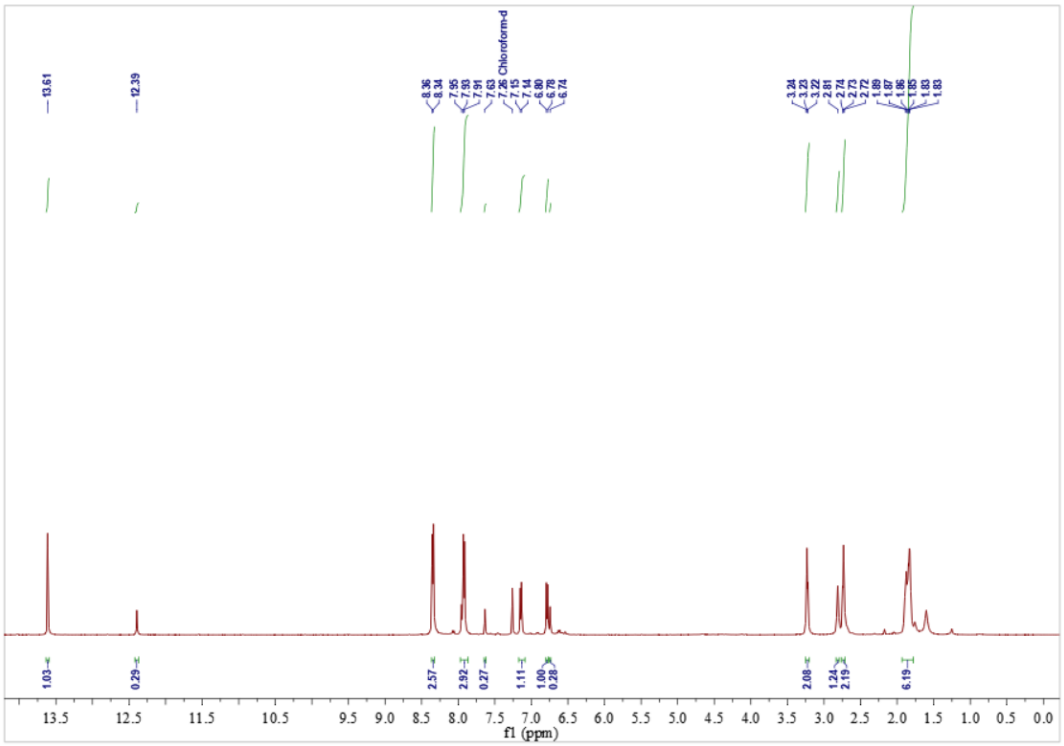


Figure S54. ^{13}C NMR Spectrum of Compound **10c** (125 MHz, $CDCl_3$)

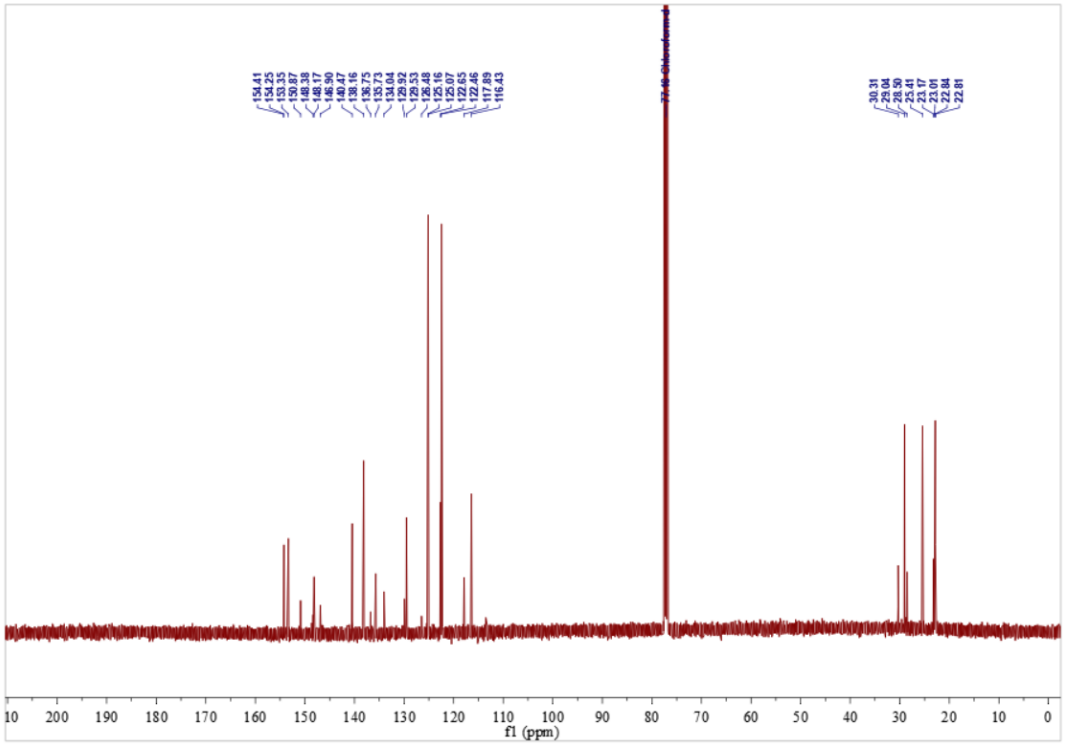


Figure S55. FTIR Spectrum of Compound **10c** (neat)

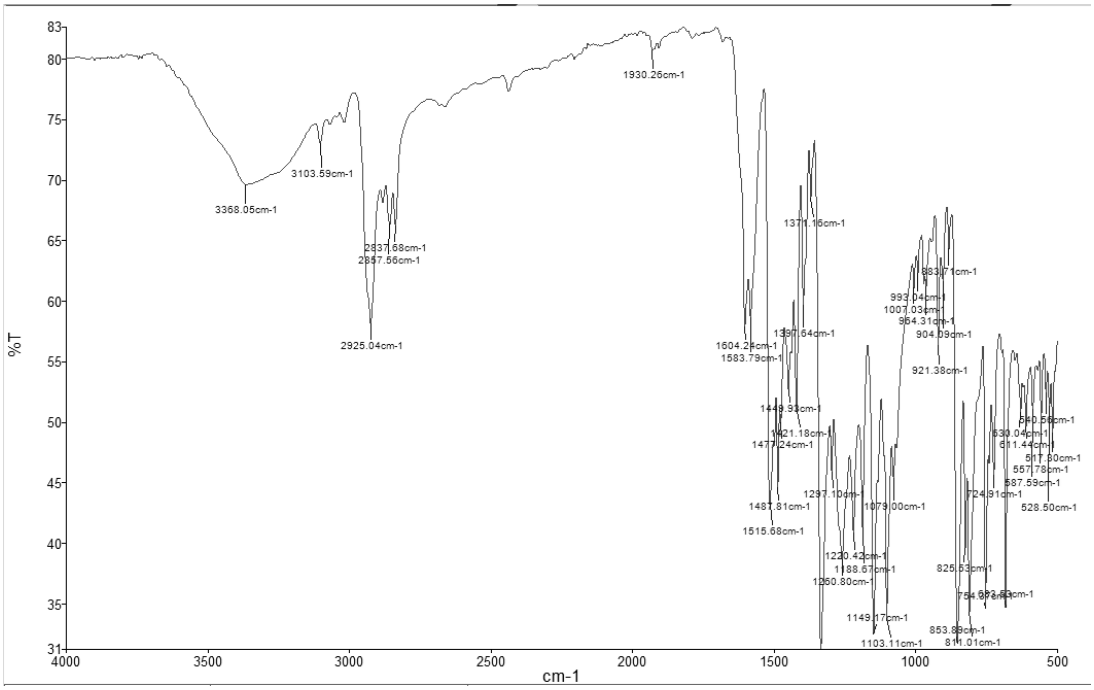


Figure S56. ABTS antioxidant assay data for **10c**

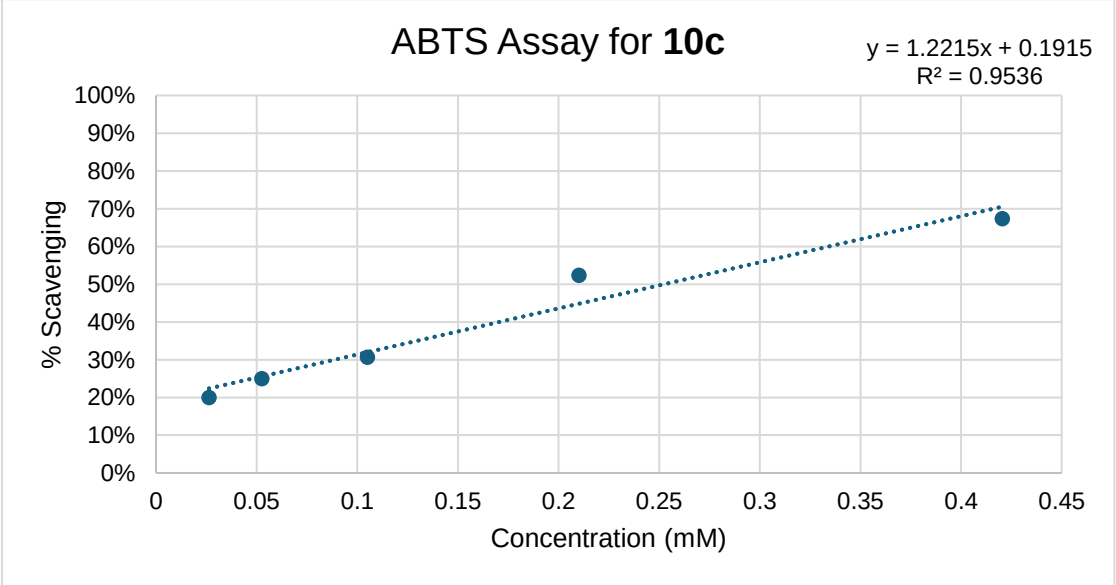


Figure S57. ^{1}H NMR Spectrum of Compound **10d** (500 MHz, $CDCl_3$)

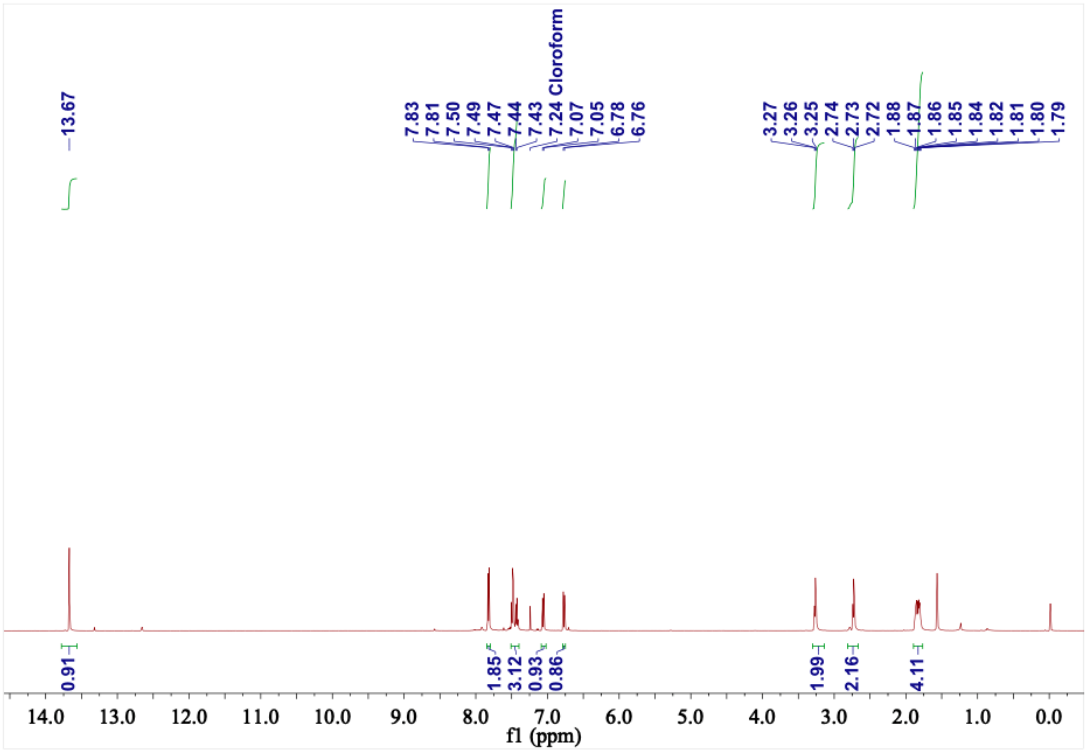


Figure S58. ^{13}C NMR Spectrum of Compound **10d** (125 MHz, $CDCl_3$)

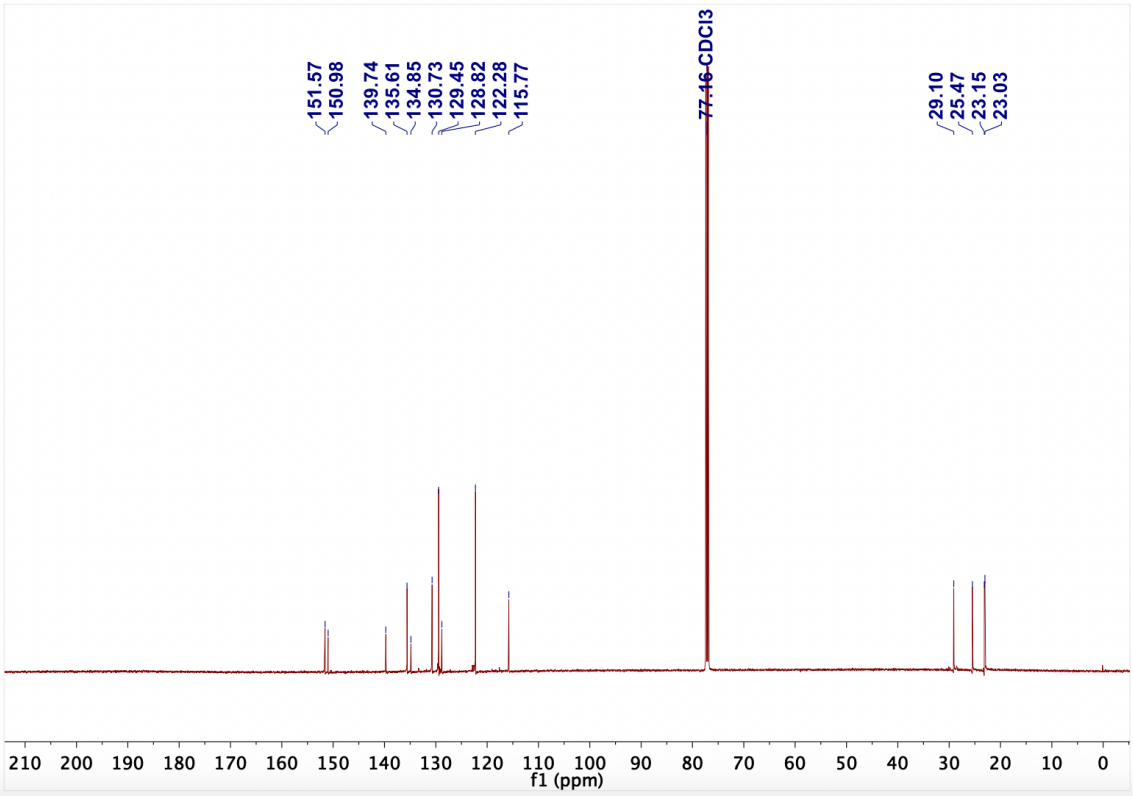


Figure S59. FTIR Spectrum of Compound **10d** (neat)

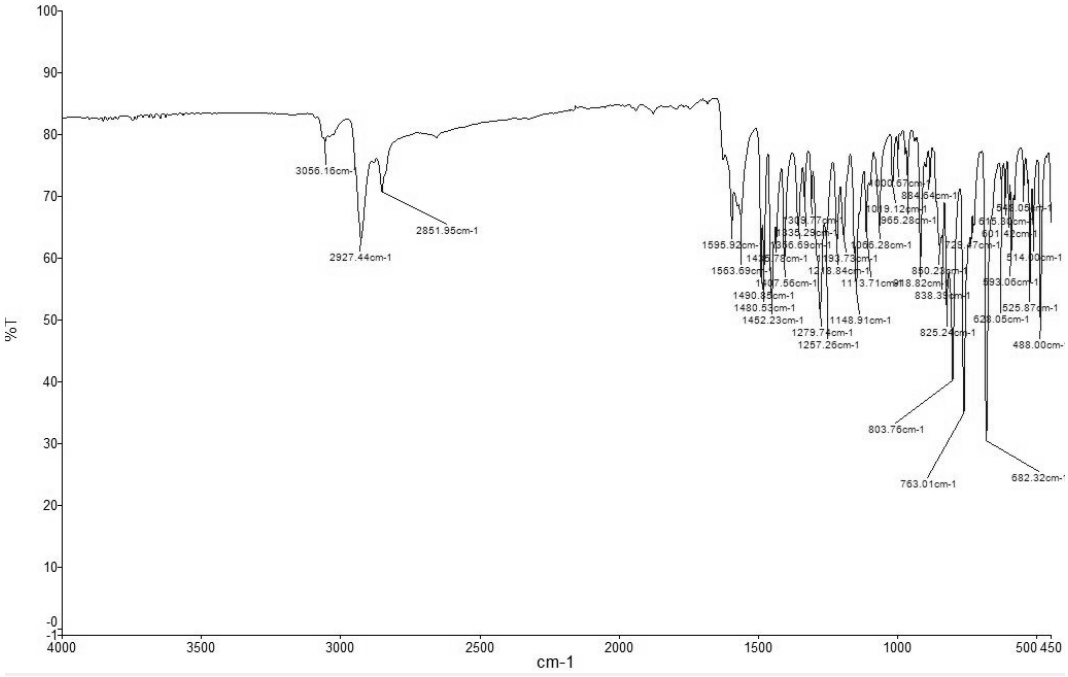


Figure S60. ABTS antioxidant assay data for **10d**

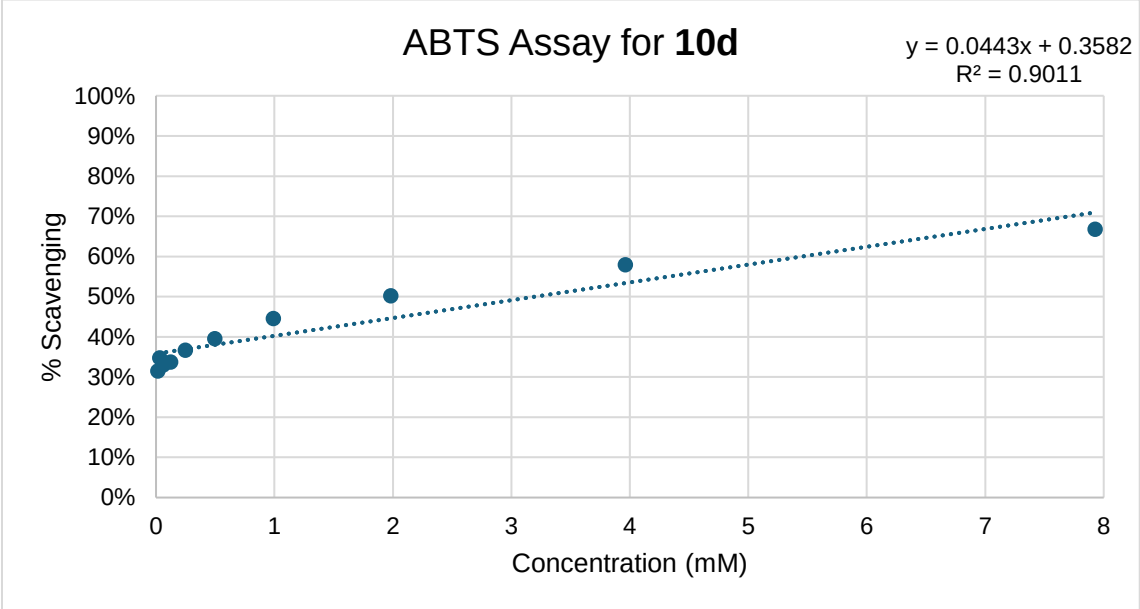


Figure S61. MS spectra for **10d**

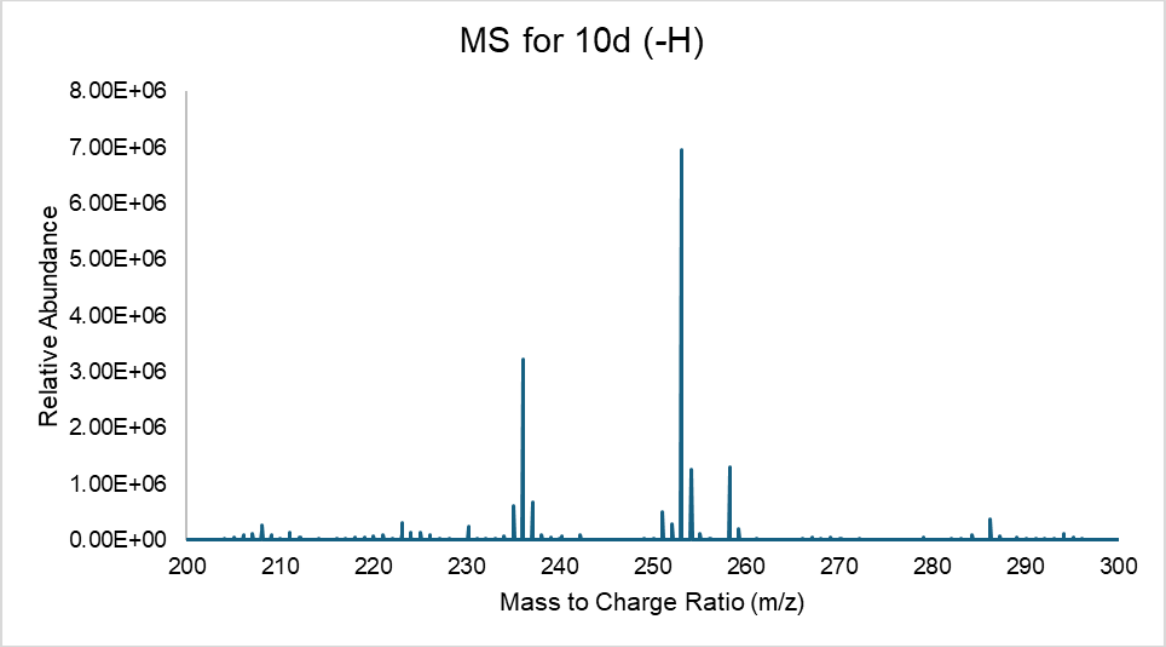


Figure S62 ^{1}H NMR Spectrum of Compound **10e** (500 MHz, $CDCl_3$)

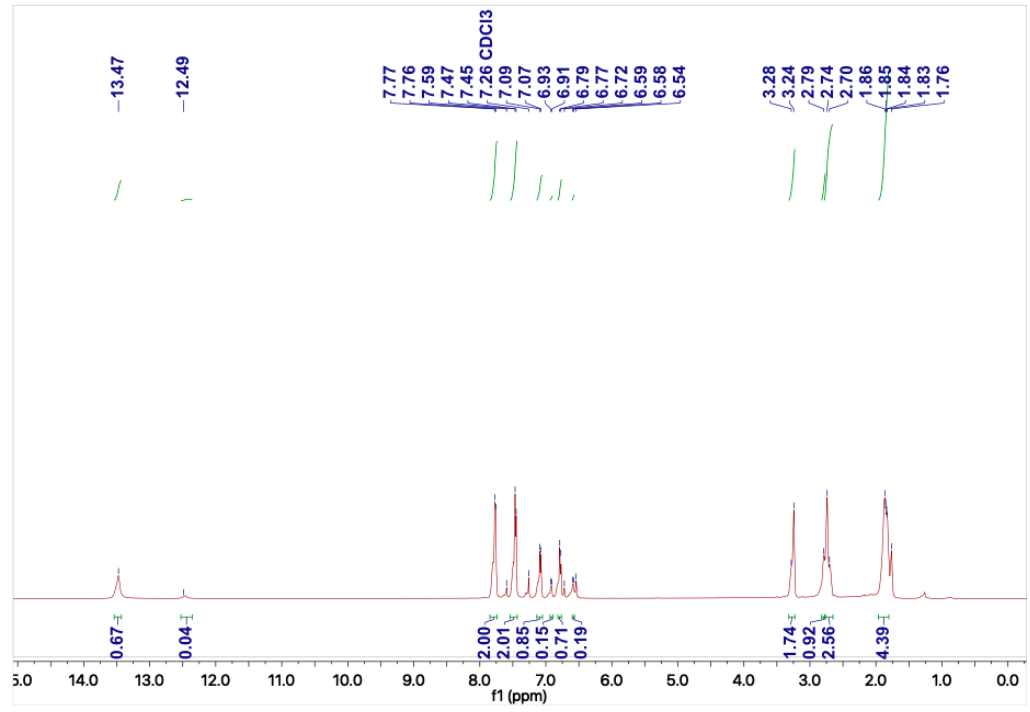


Figure S63. ^{13}C NMR Spectrum of Compound **10e** (125 MHz, $CDCl_3$)

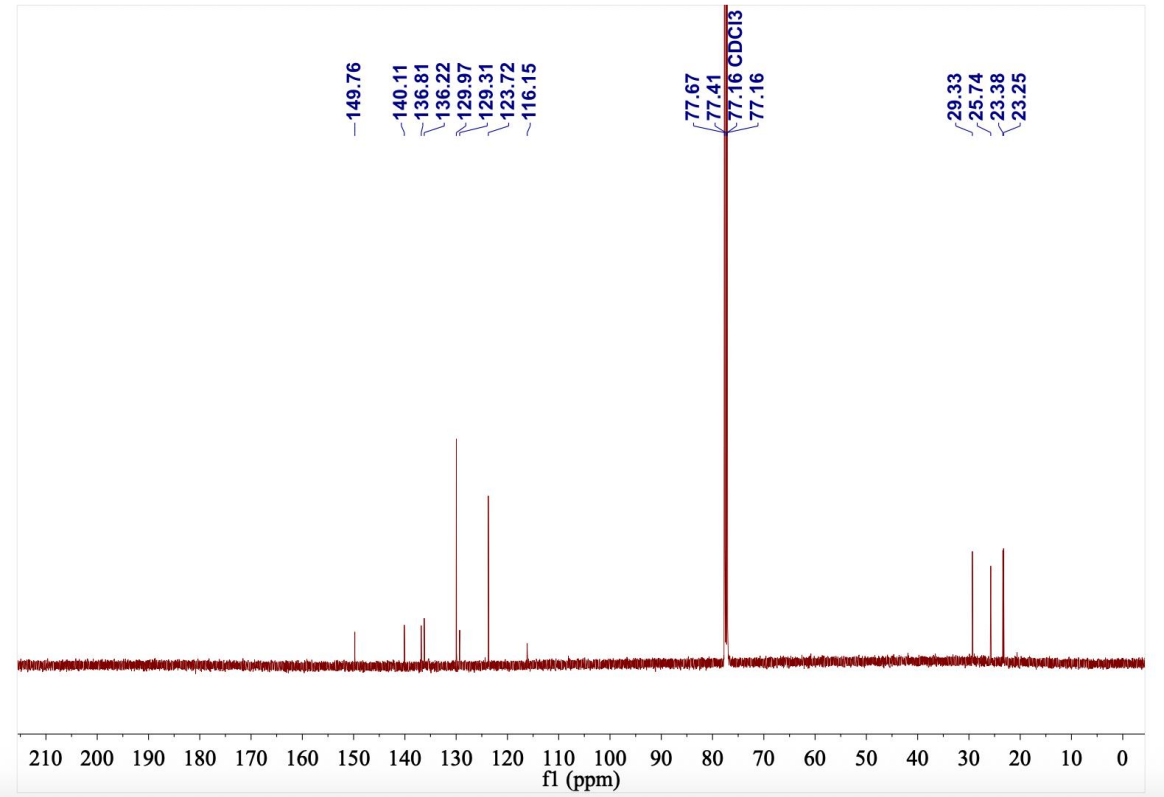


Figure S64. FTIR Spectrum of Compound **10e** (neat)

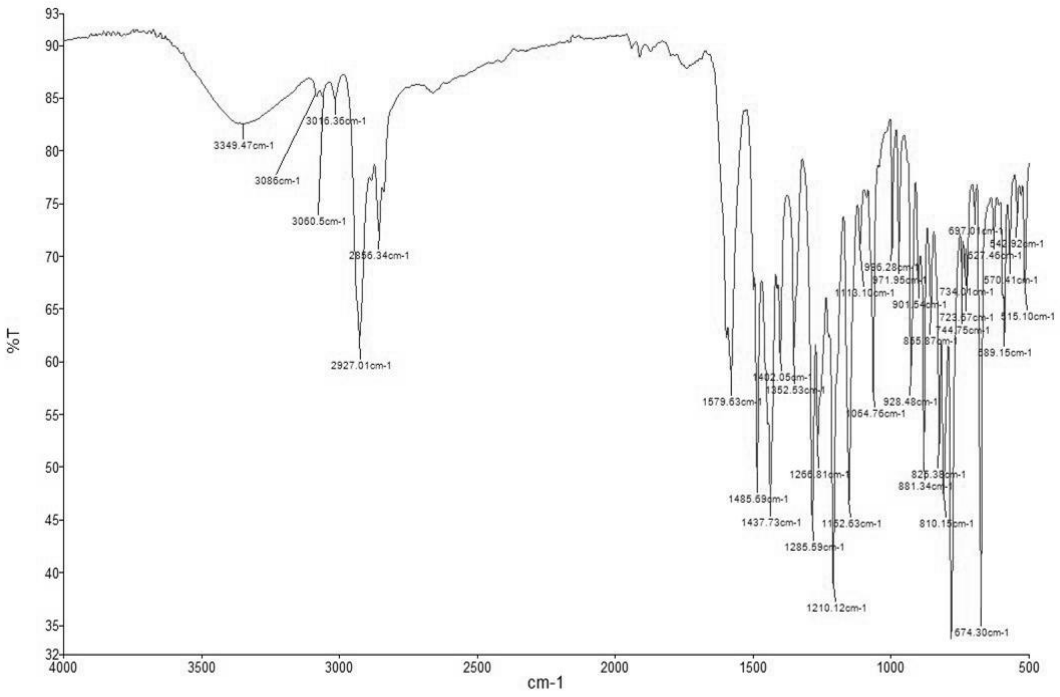


Figure S65. ABTS antioxidant assay data for **10e**

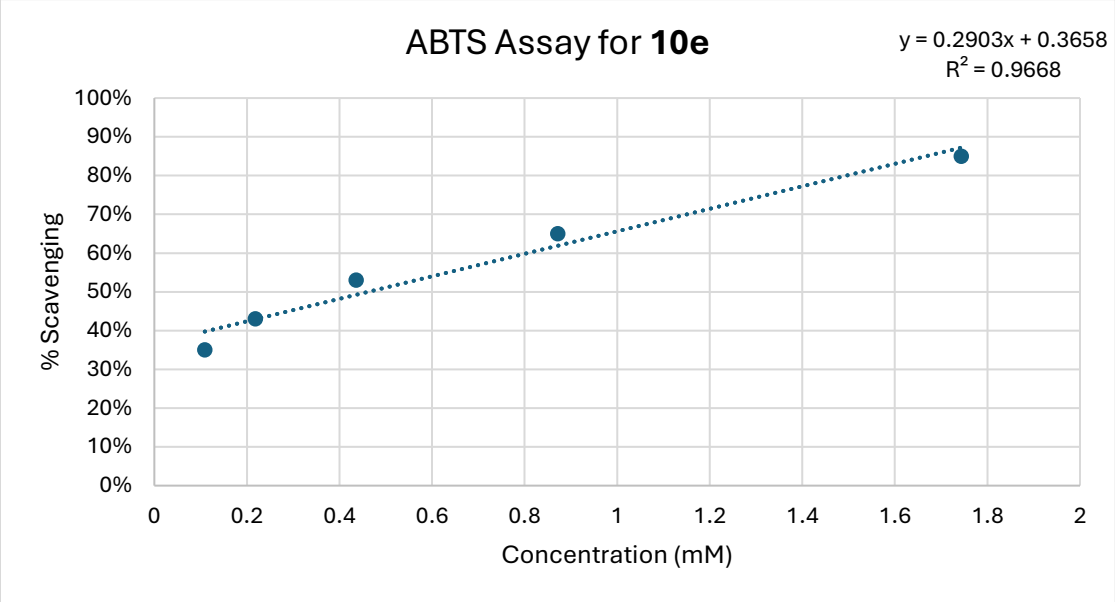


Figure S66. ^{1}H NMR Spectrum of Compound **10f** (500 MHz, $CDCl_3$)

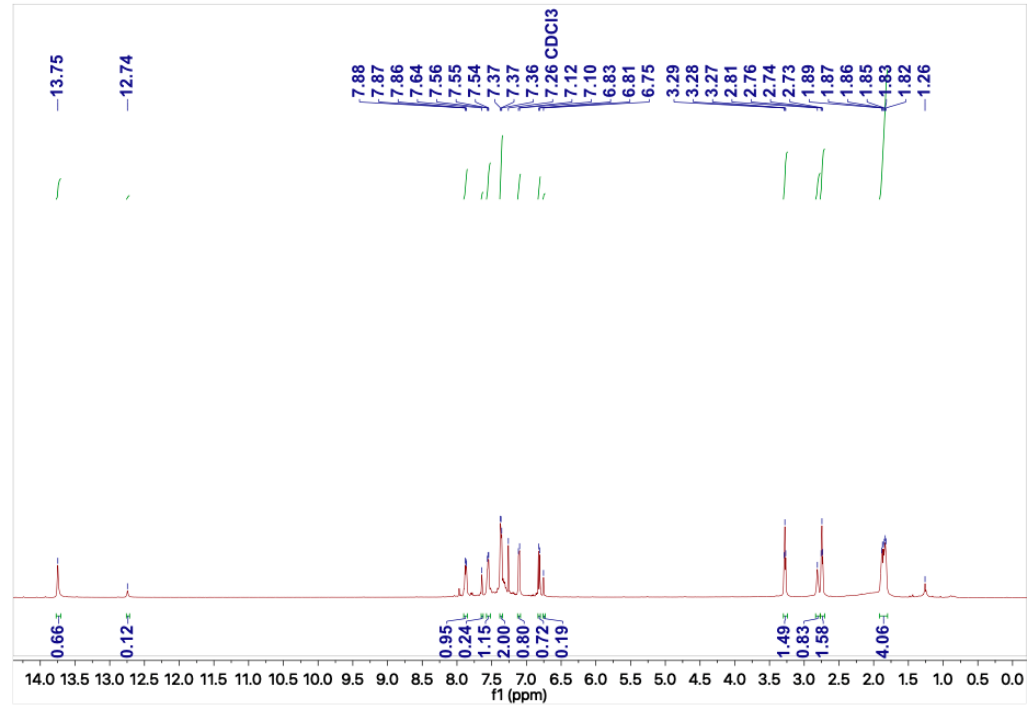


Figure S67. ^{13}C NMR Spectrum of Compound **10f** (125 MHz, $CDCl_3$)

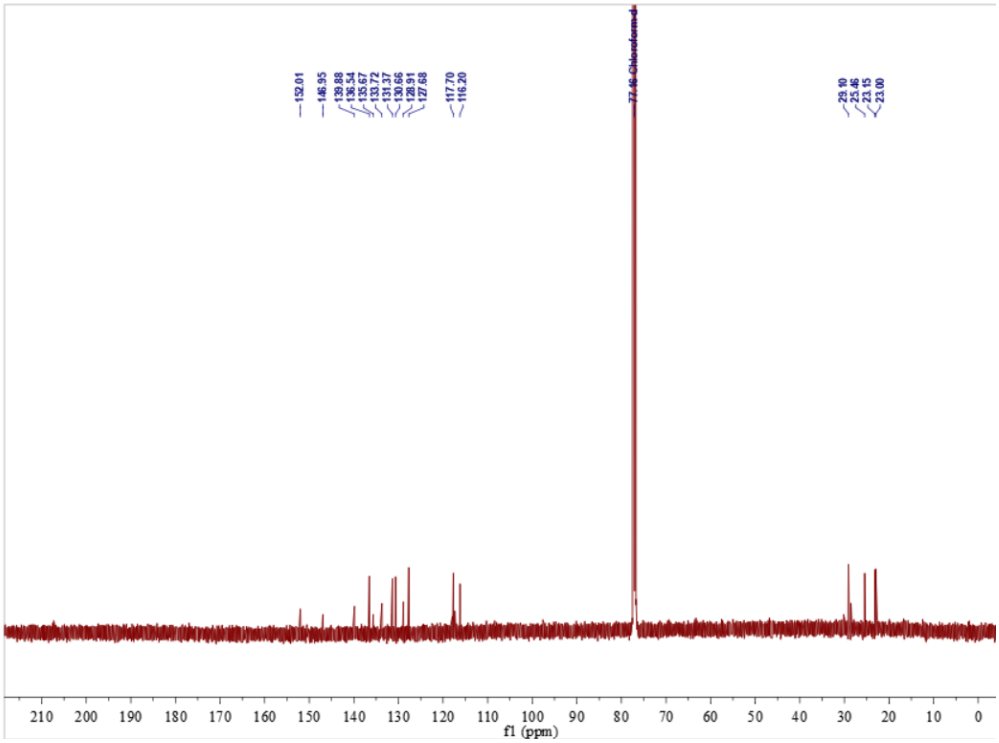


Figure S68. FTIR Spectrum of Compound **10f** (neat)

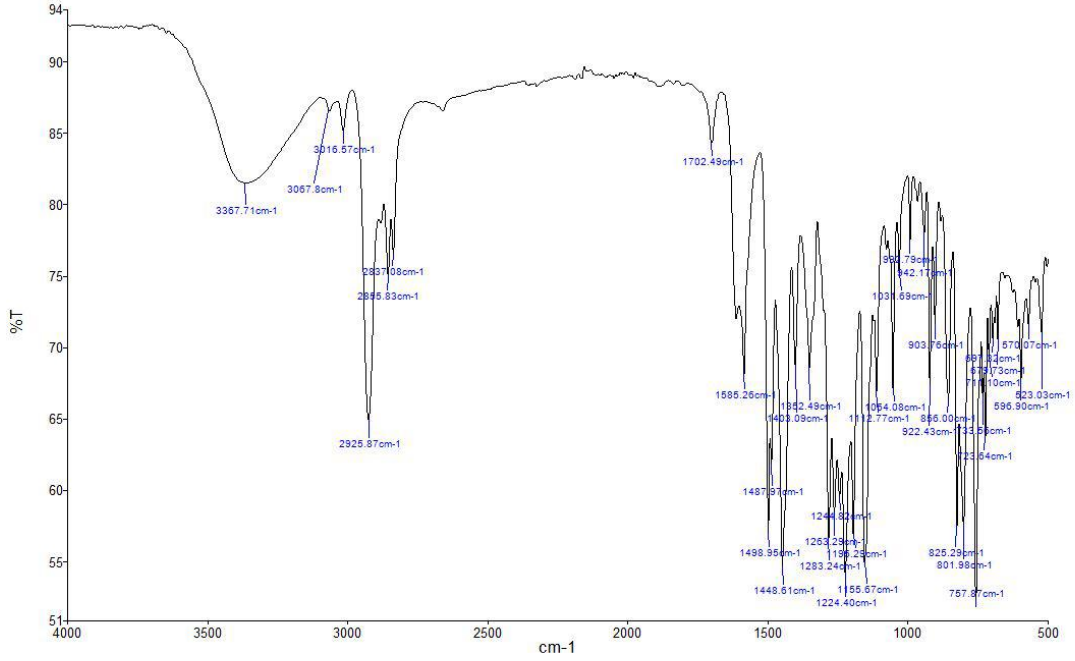


Figure S69. ABTS antioxidant assay data for **10f**

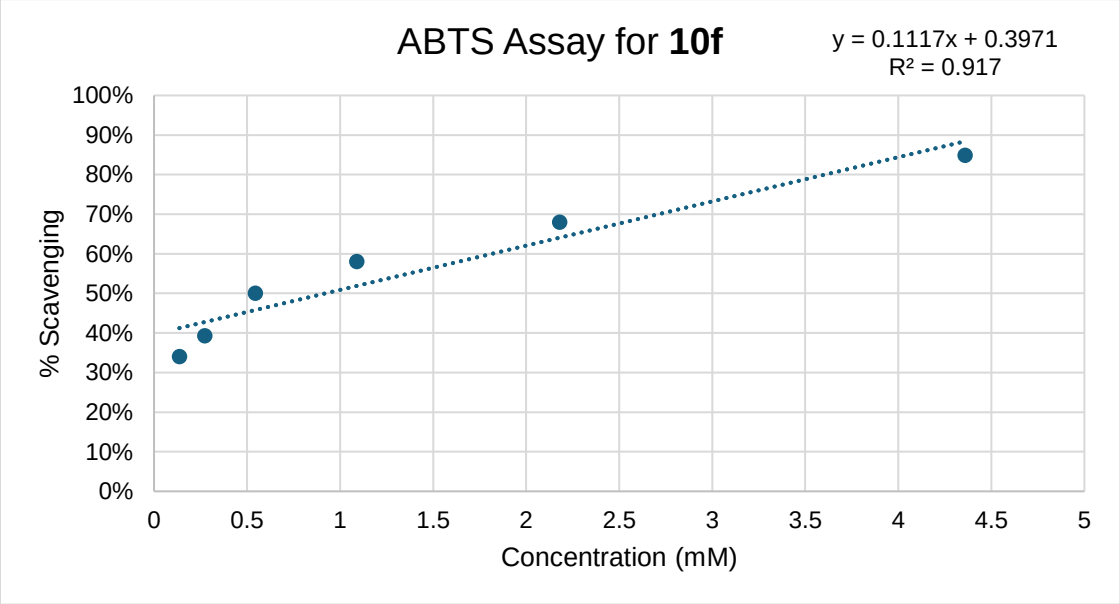


Figure S70. ^{1}H NMR Spectrum of Compound **10g** (500 MHz, $CDCl_3$)

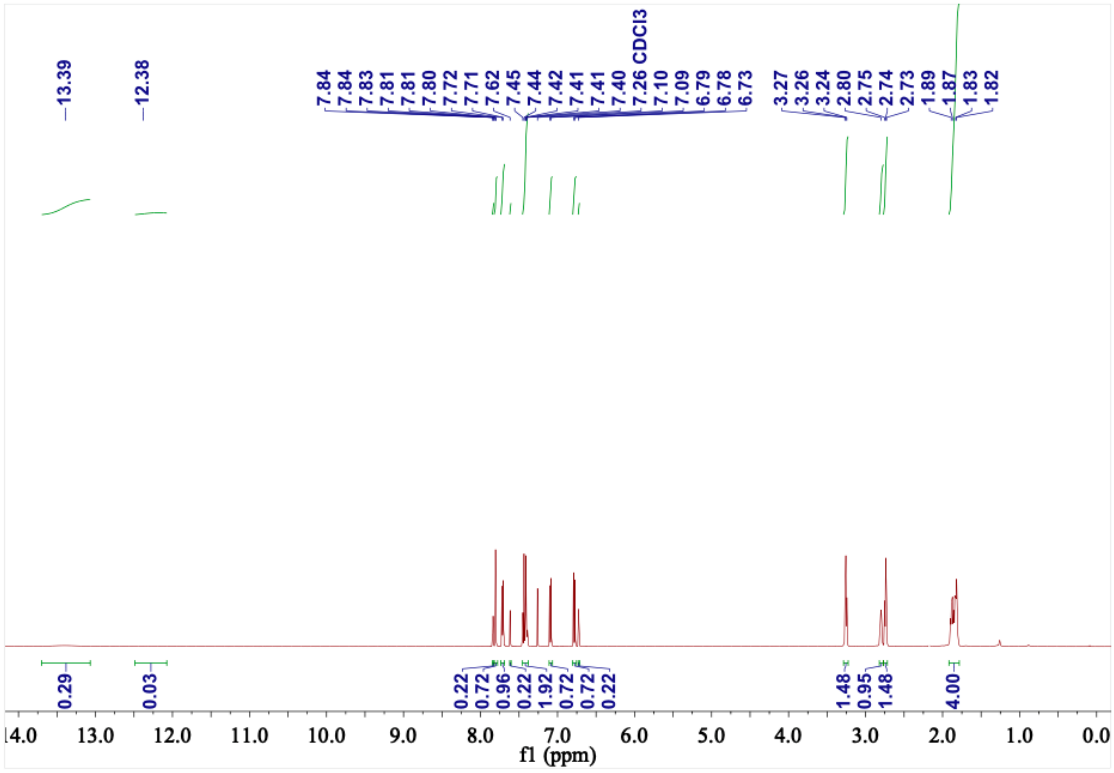


Figure S71. ^{13}C NMR Spectrum of Compound **10g** (125 MHz, $CDCl_3$)

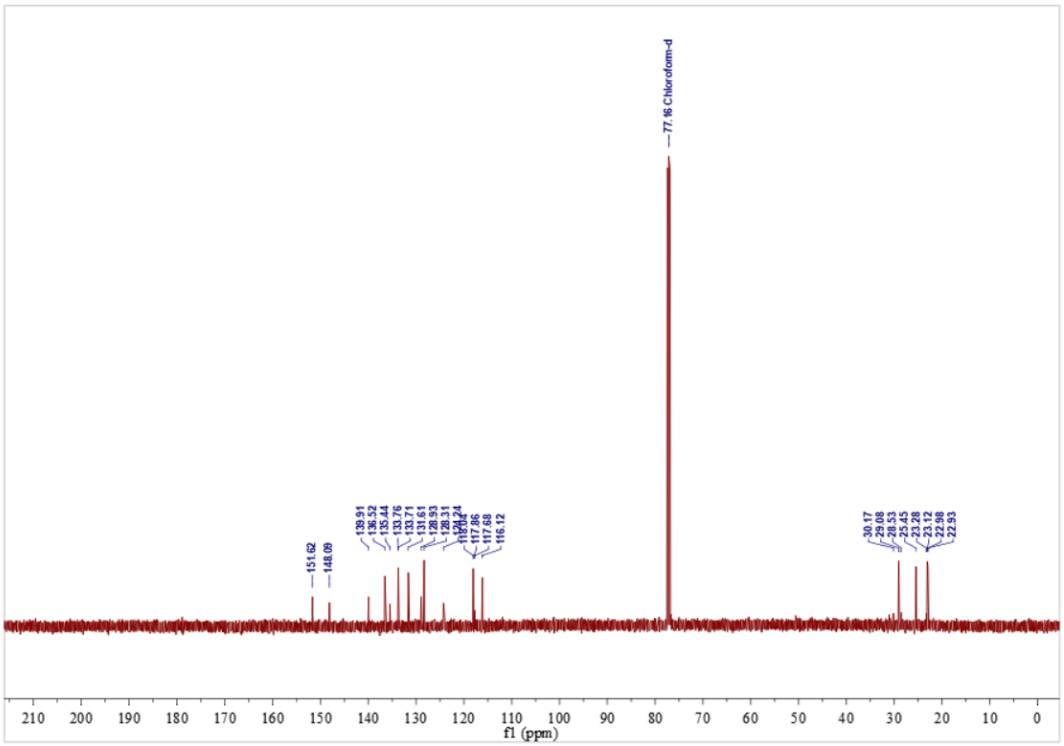


Figure S72. FTIR Spectrum of Compound **10g** (neat)

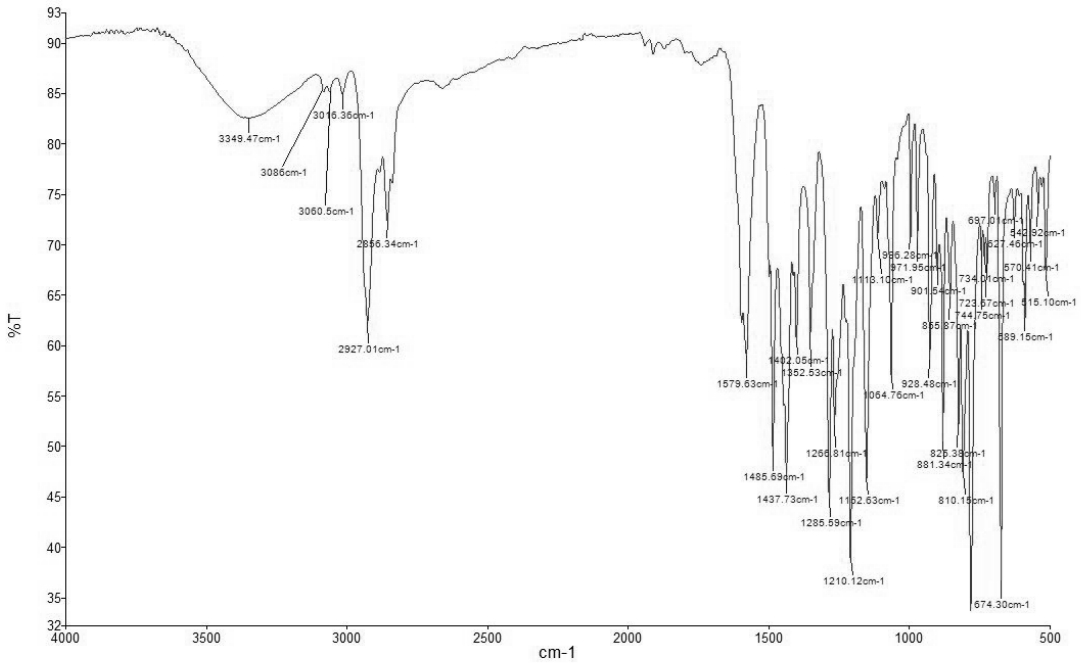


Figure S73. ABTS antioxidant assay data for **10g**

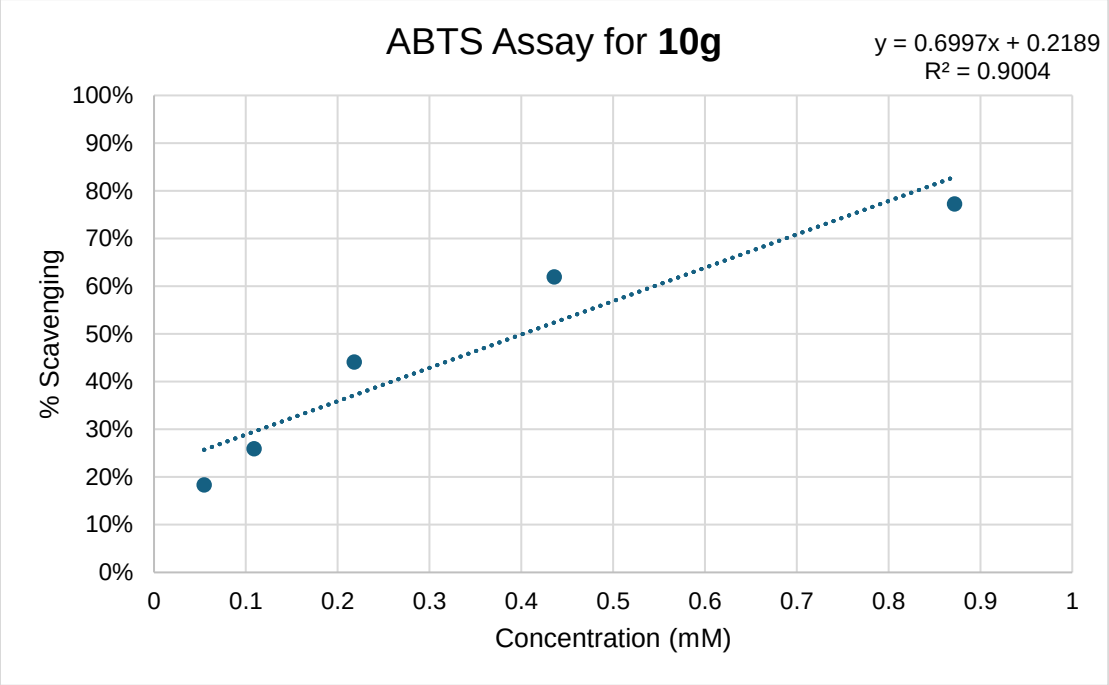


Figure S74. ^{1}H NMR Spectrum of Compound **10h** (500 MHz, $CDCl_3$)

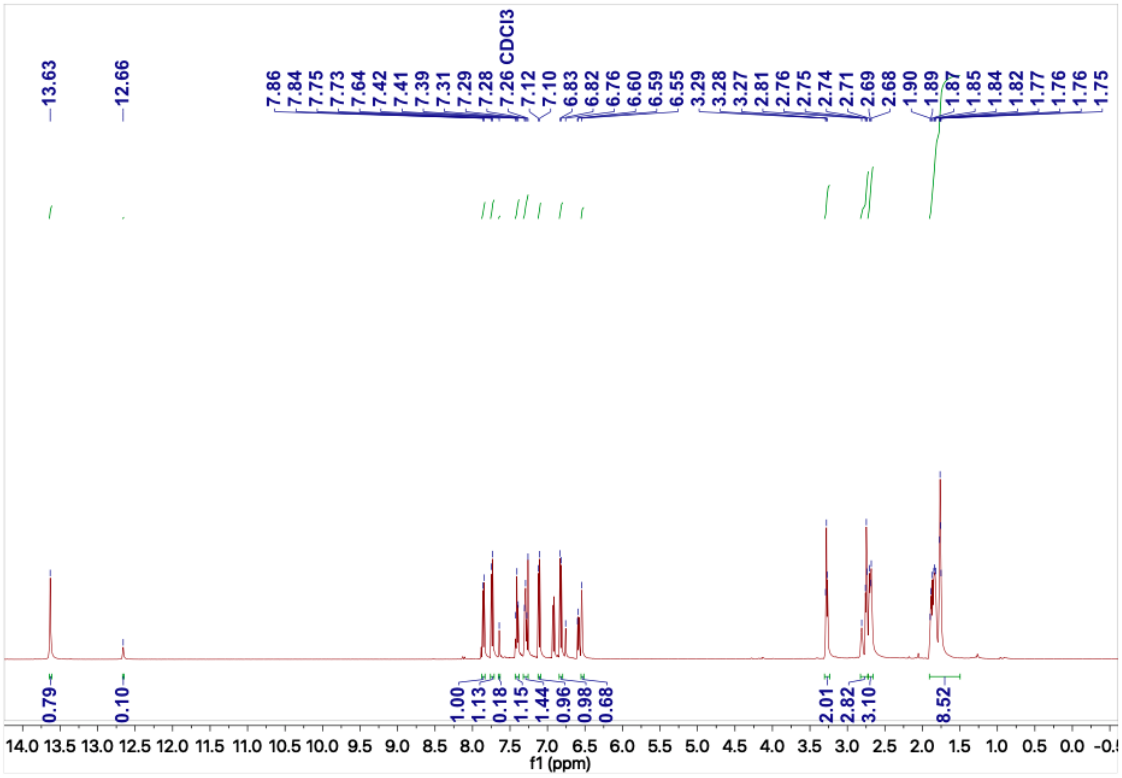


Figure S75. ^{13}C NMR Spectrum of Compound **10h** (125 MHz, $CDCl_3$)

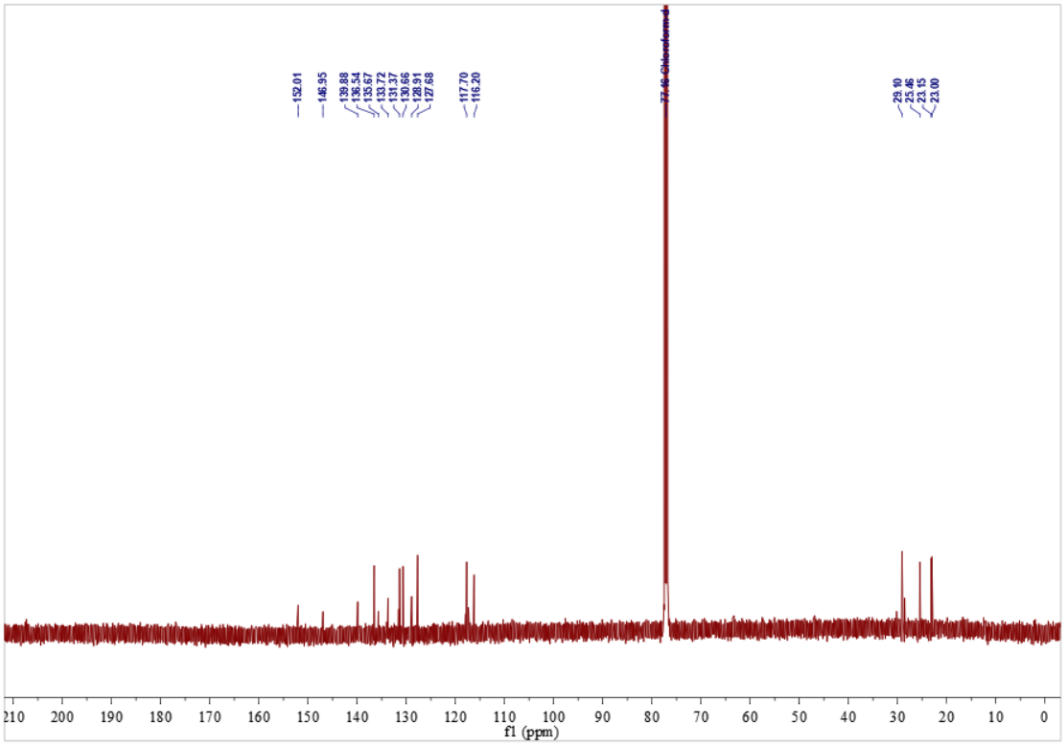


Figure S76. FTIR Spectrum of Compound **10h** (neat)

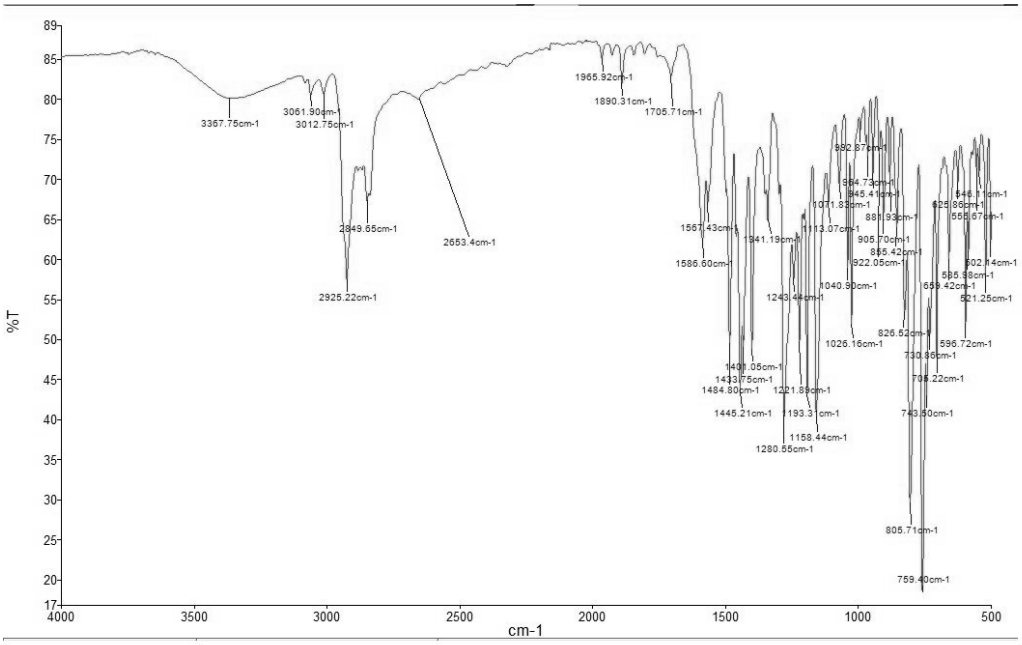


Figure S77. ABTS antioxidant assay data for **10h**

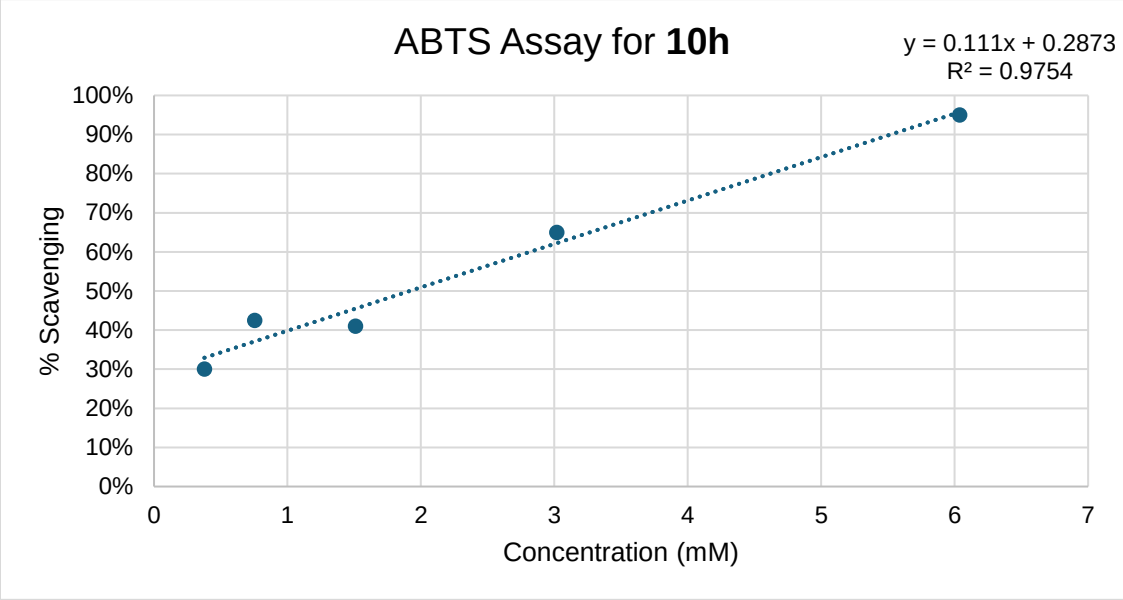


Figure S78. ^{1}H NMR Spectrum of Compound **10i** (500 MHz, $CDCl_3$)

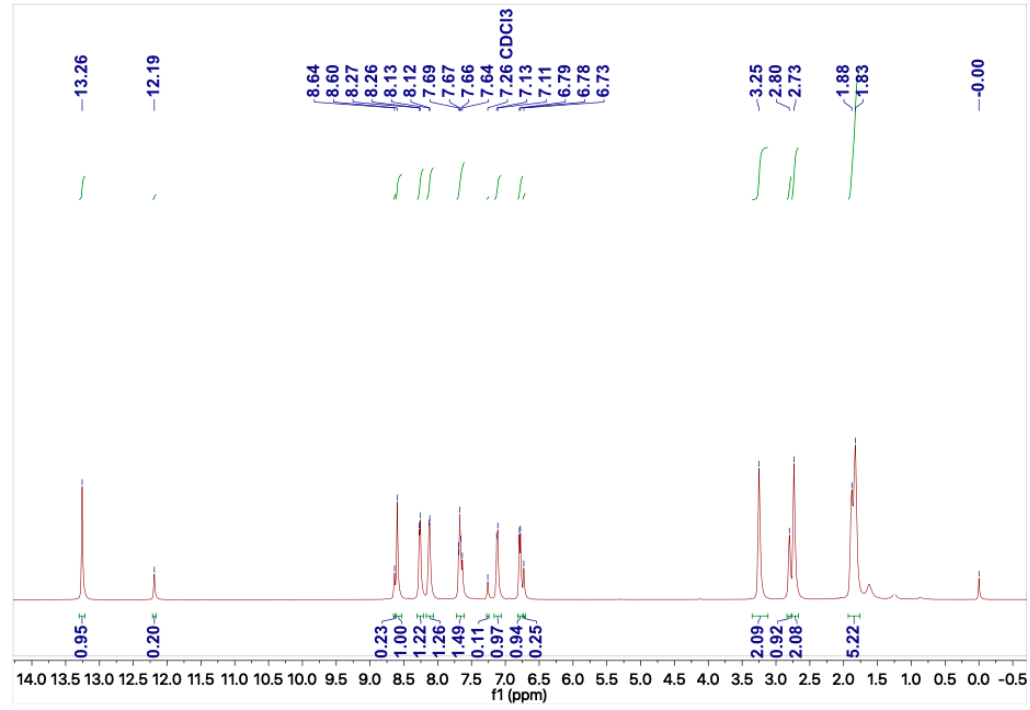


Figure S79. ^{13}C NMR Spectrum of Compound **10i** (125 MHz, $CDCl_3$)

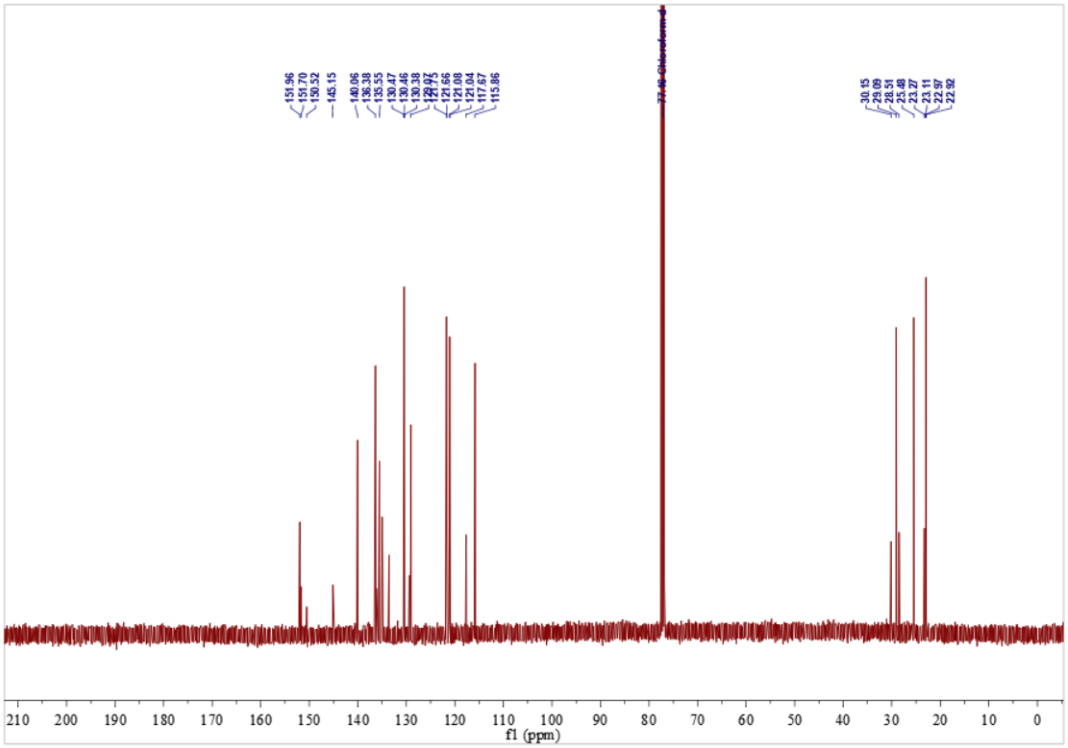


Figure S80. FTIR Spectrum of Compound **10i** (neat)

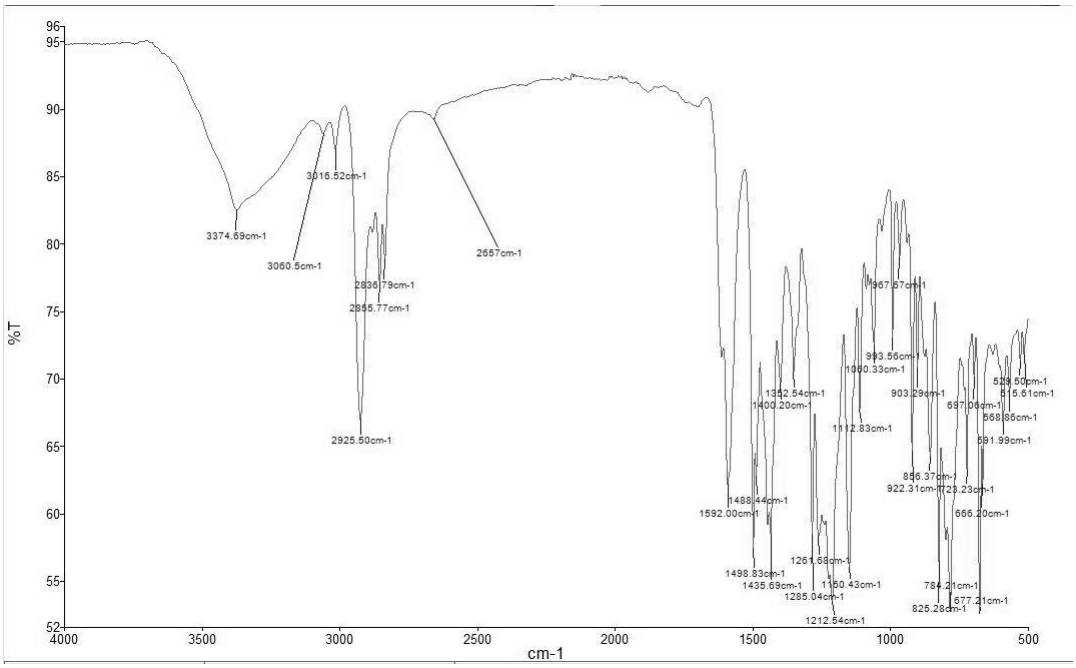


Figure S81. ABTS antioxidant assay data for **10i**

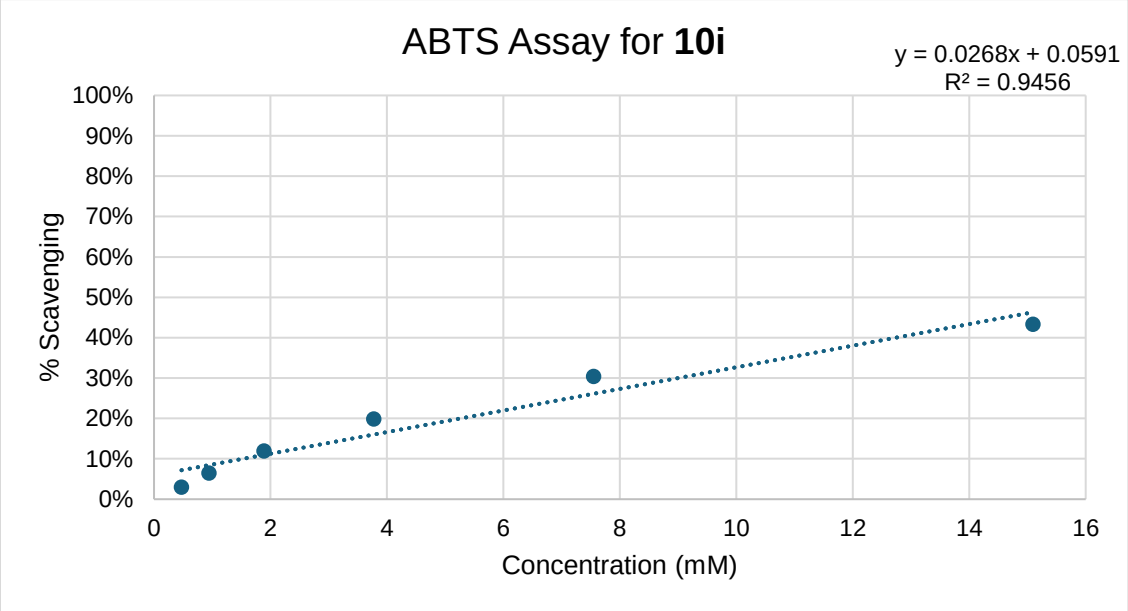


Figure S82 ^{1}H NMR Spectrum of Compound **10j** (500 MHz, $CDCl_3$)

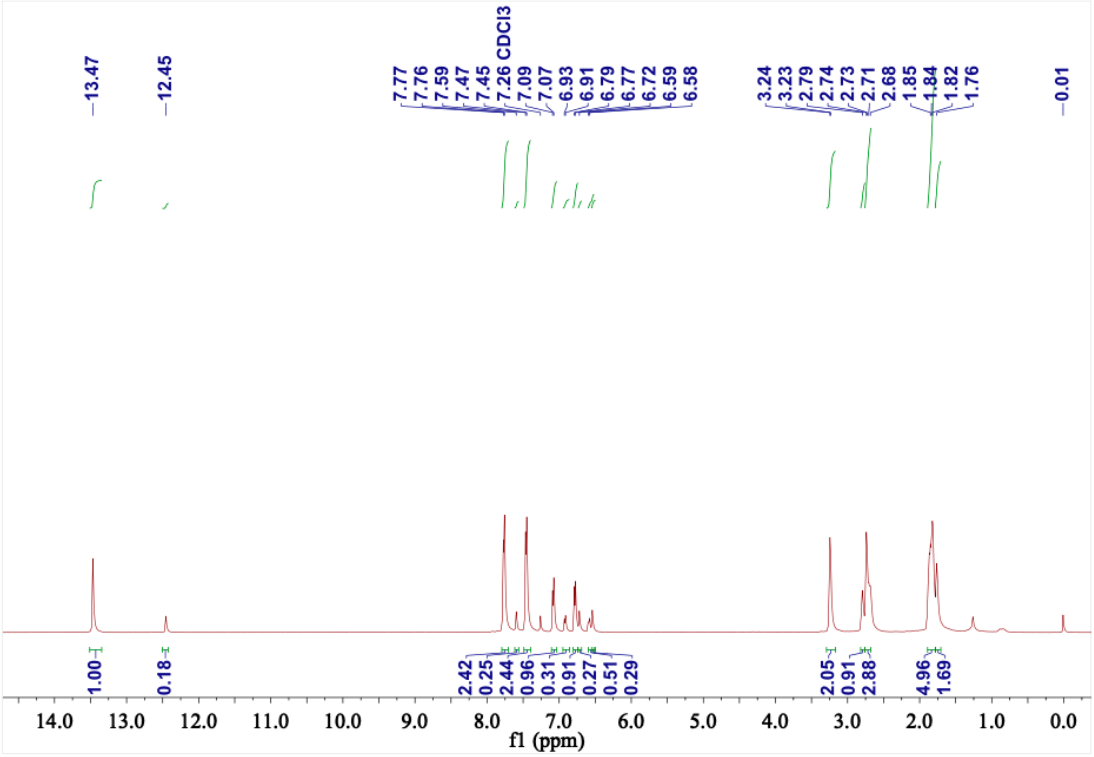


Figure S83. ^{13}C NMR Spectrum of Compound **10j** (125 MHz, $CDCl_3$)

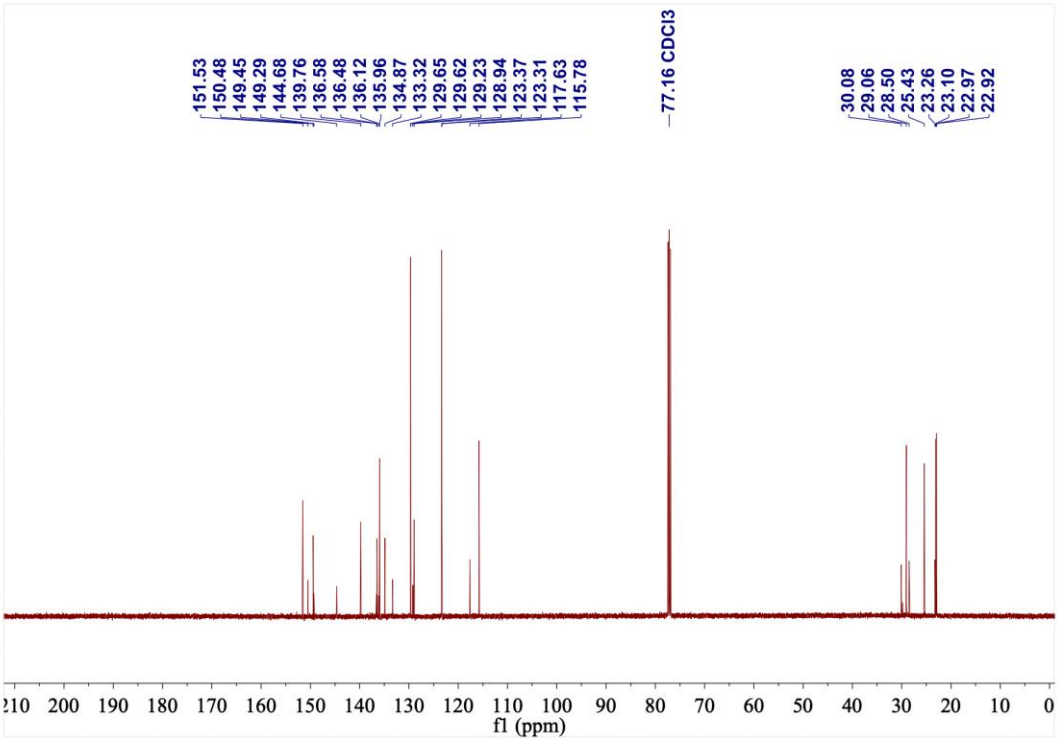


Figure S84. FTIR Spectrum of Compound **10j** (neat)

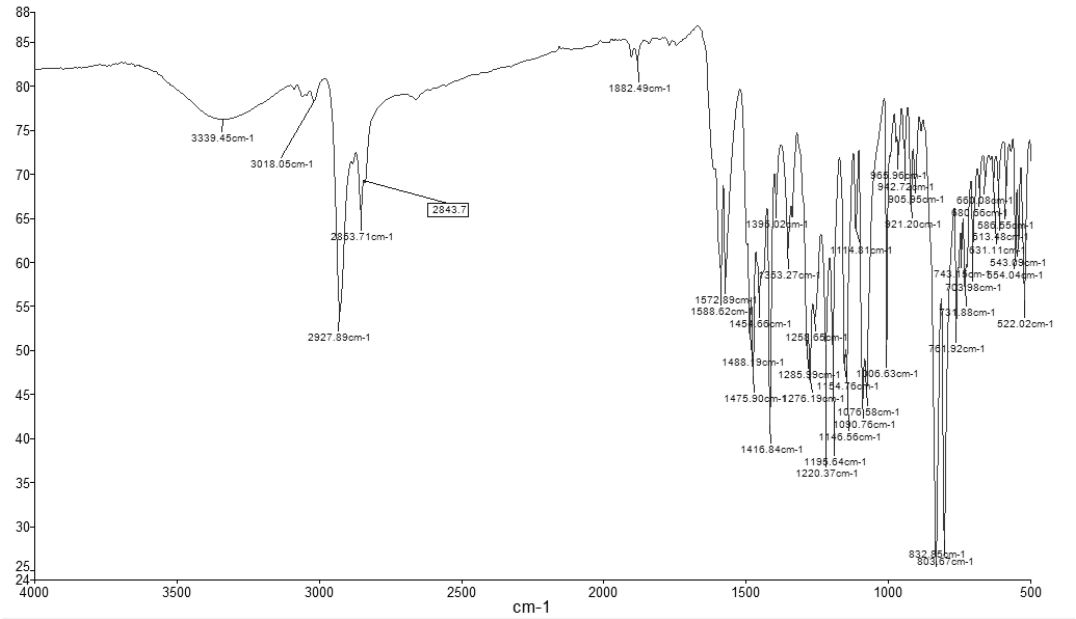


Figure S85. ABTS antioxidant assay data for **10j**

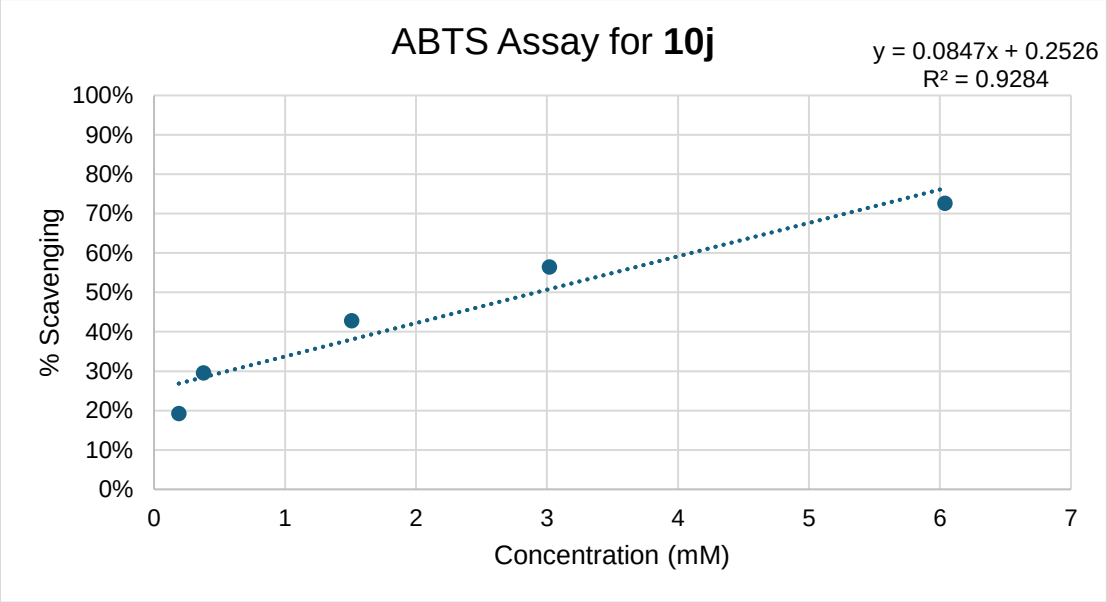


Figure S86. MS spectra for **10j**

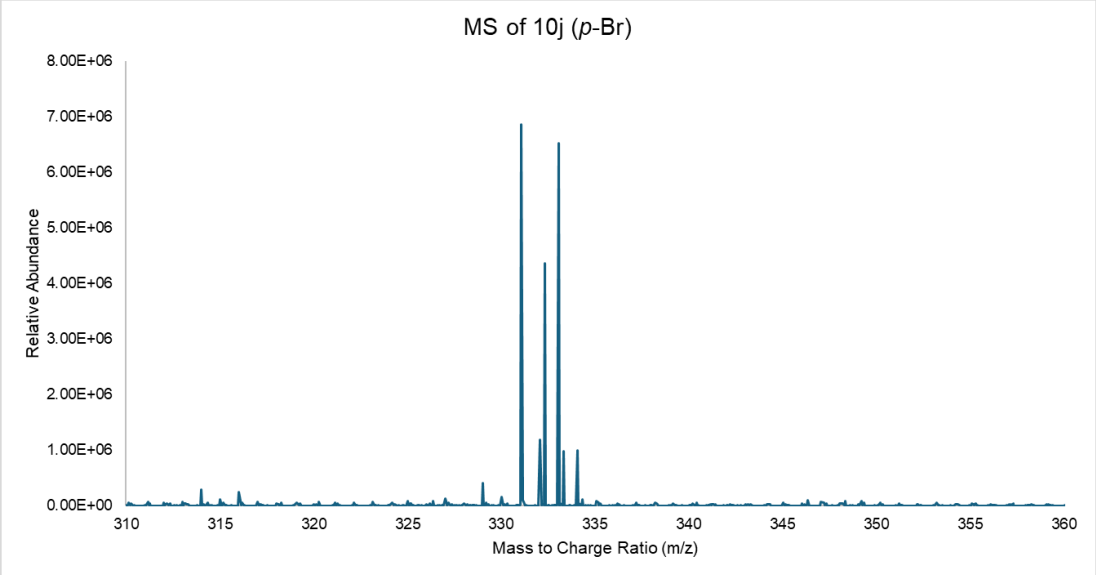


Figure S87. ^{1}H NMR Spectrum of Compound **10k** (500 MHz, $CDCl_3$)

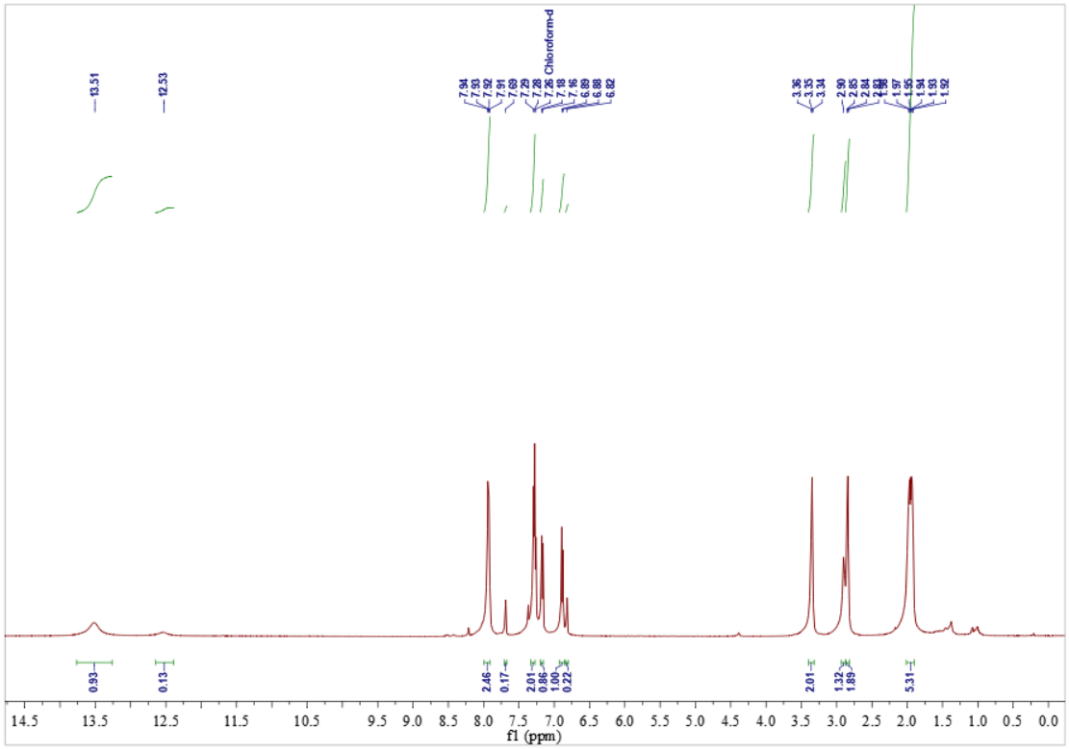


Figure S88. ^{13}C NMR Spectrum of Compound **10k** (125 MHz, $CDCl_3$)

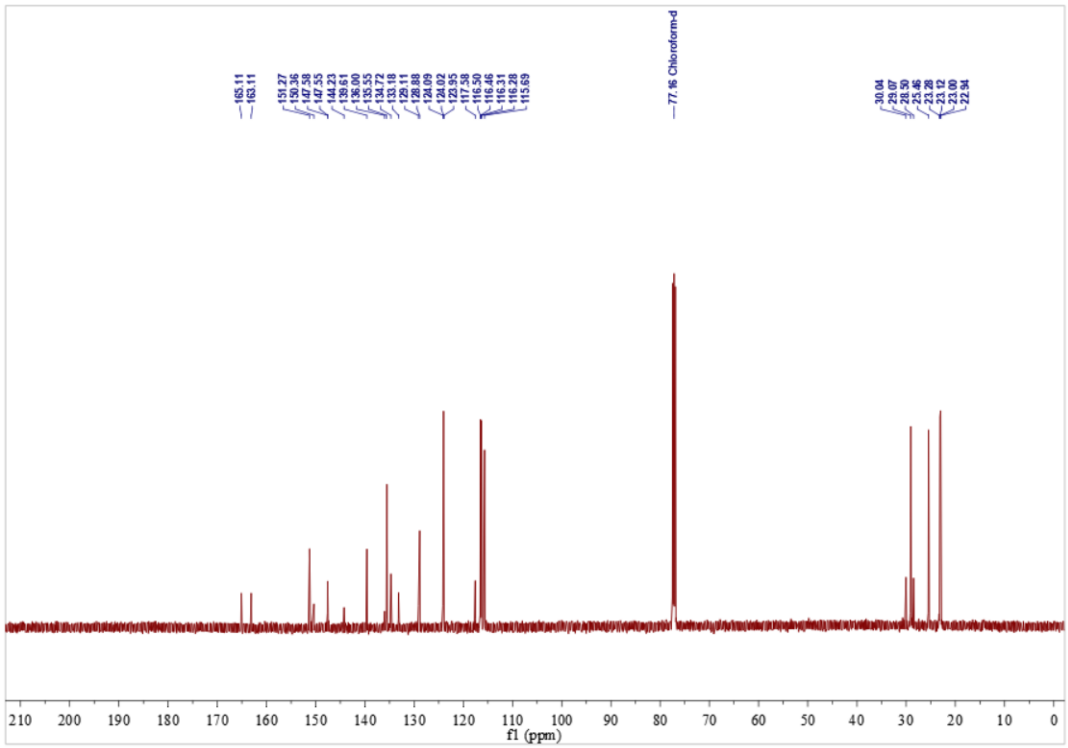


Figure S89. FTIR Spectrum of Compound **10k** (neat)

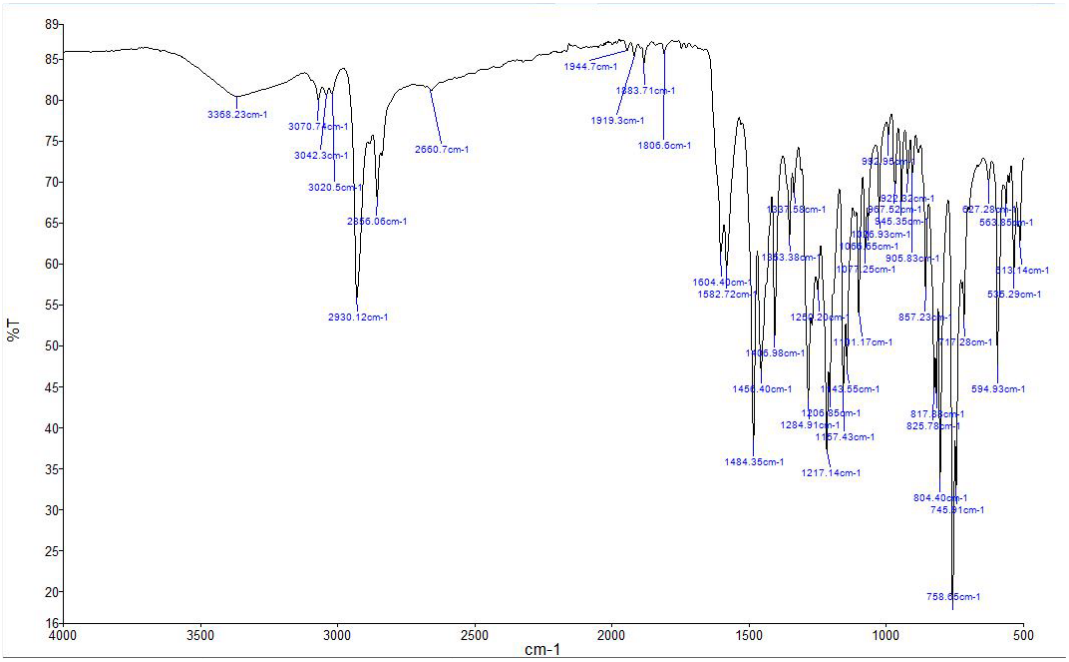


Figure S90. ABTS antioxidant assay data for **10k**

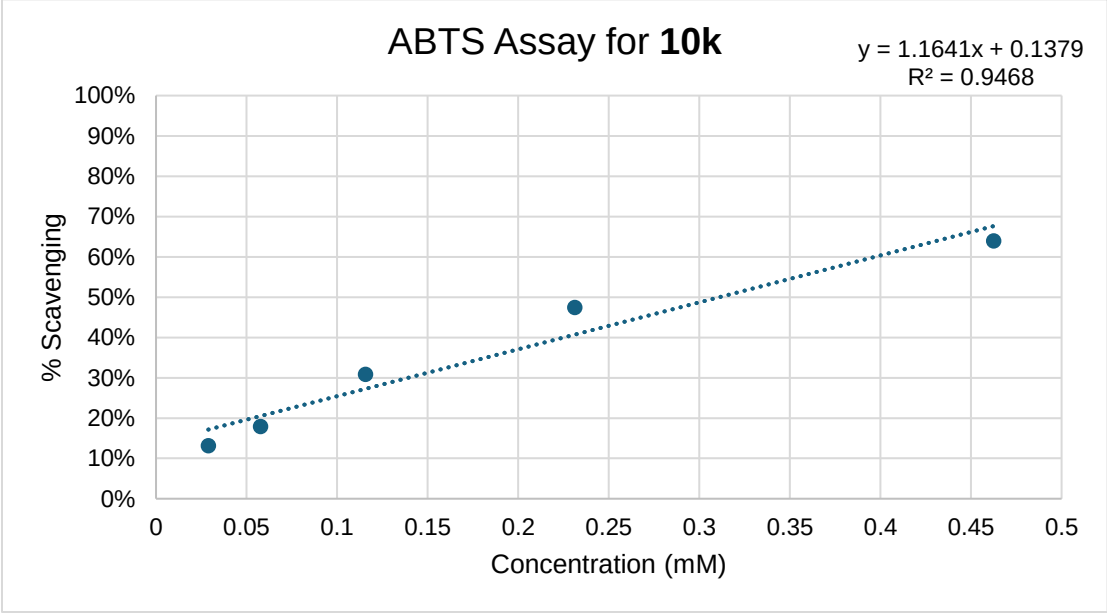


Figure S91. ^{1}H NMR Spectrum of Compound **10l** (500 MHz, $CDCl_3$)

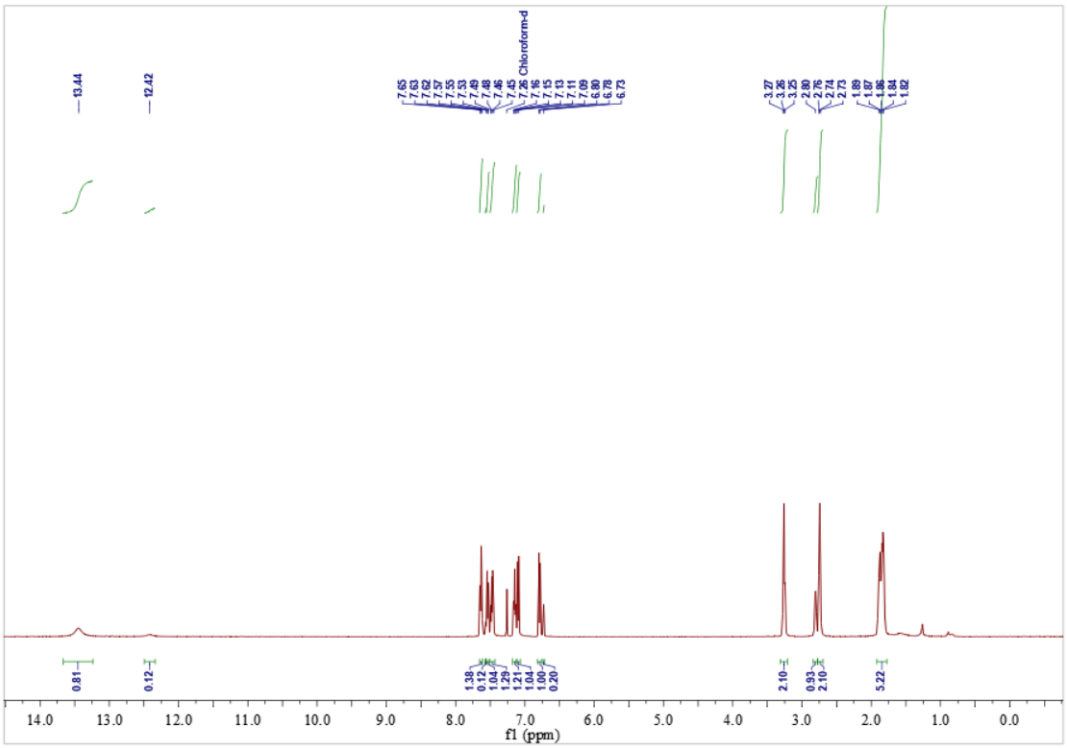


Figure S92. ^{13}C NMR Spectrum of Compound **10l** (125 MHz, $CDCl_3$)

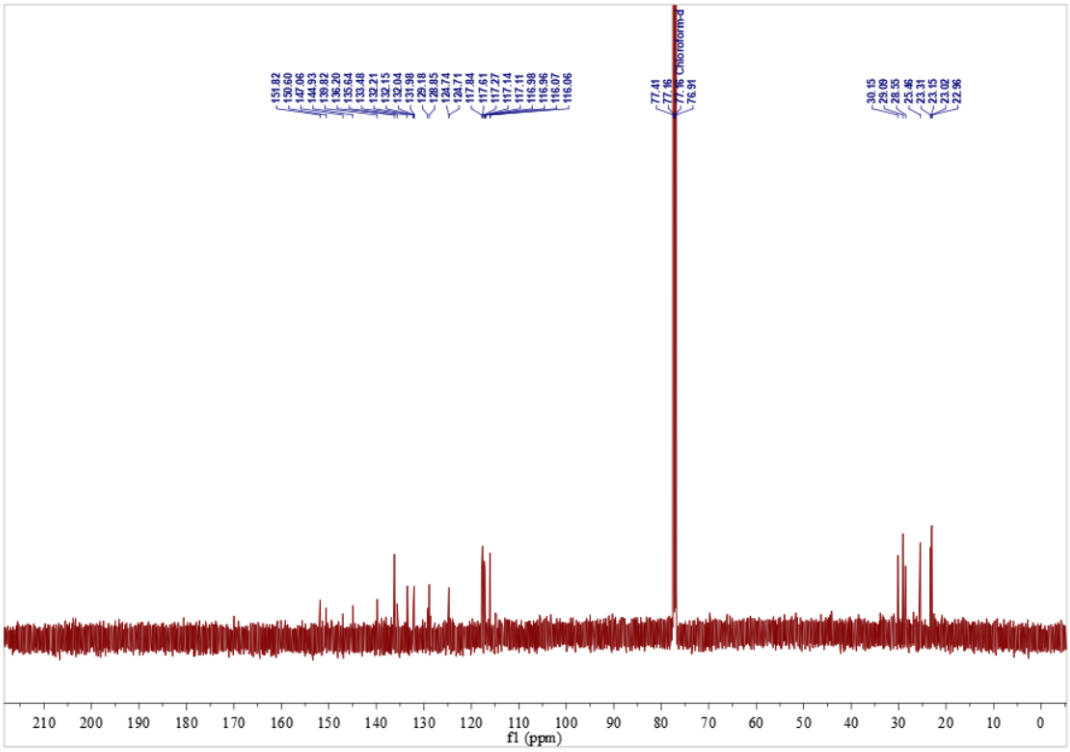


Figure S93. FTIR Spectrum of Compound **10l** (neat)

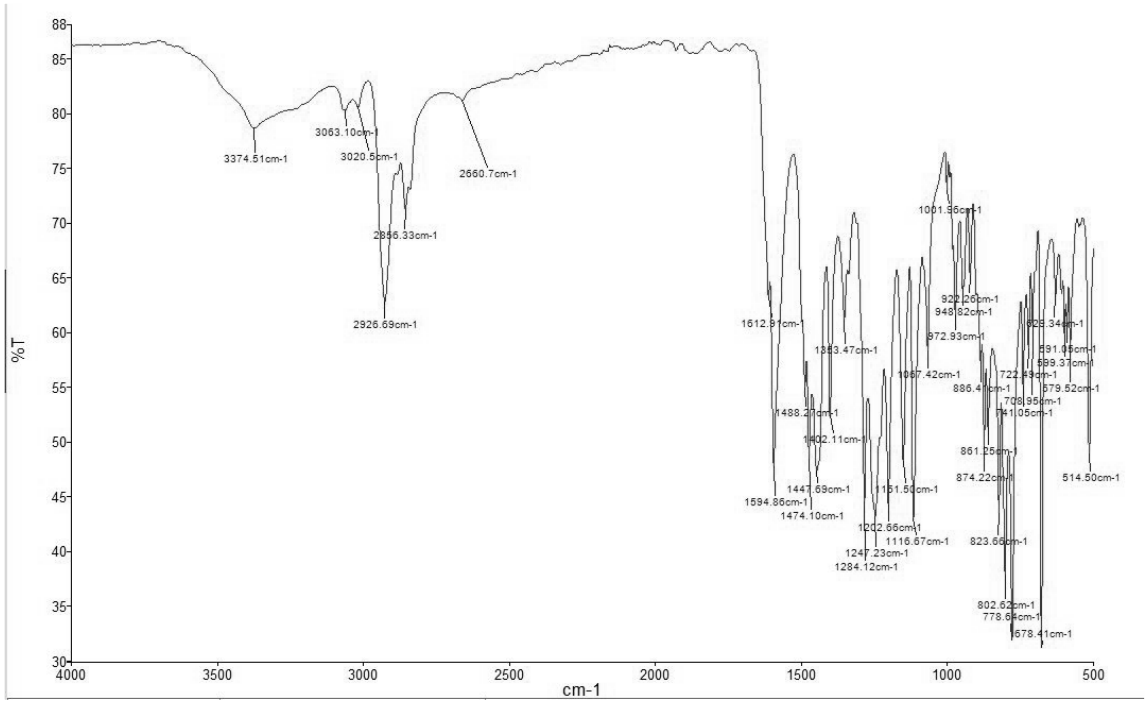


Figure S94. ABTS antioxidant assay data for **10l**

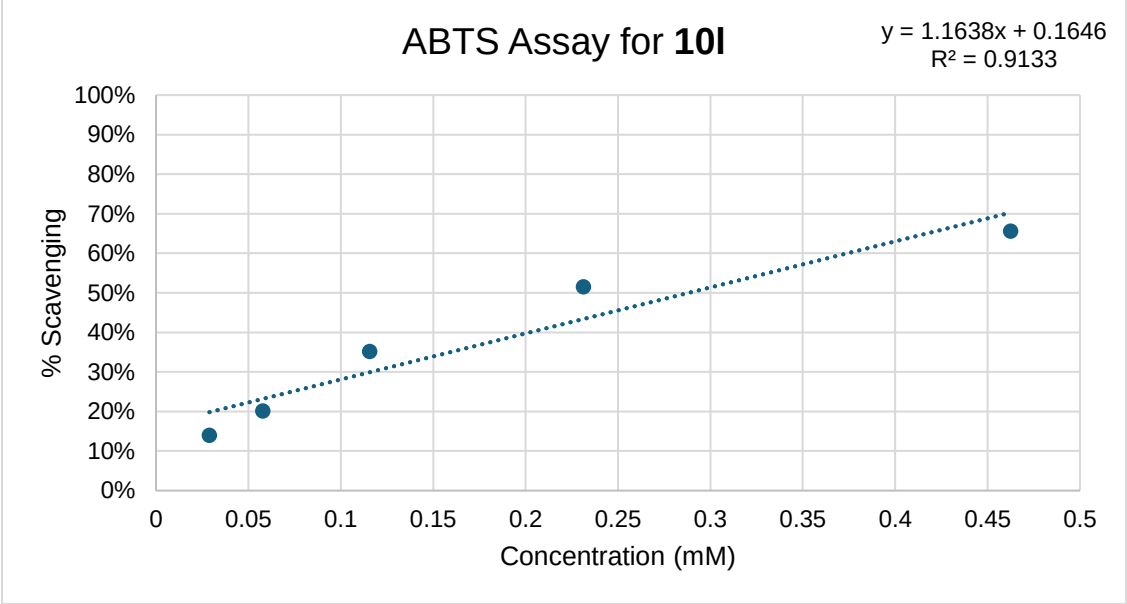


Figure S95. ^{1}H NMR Spectrum of Compound **10m** (500 MHz, $CDCl_3$)

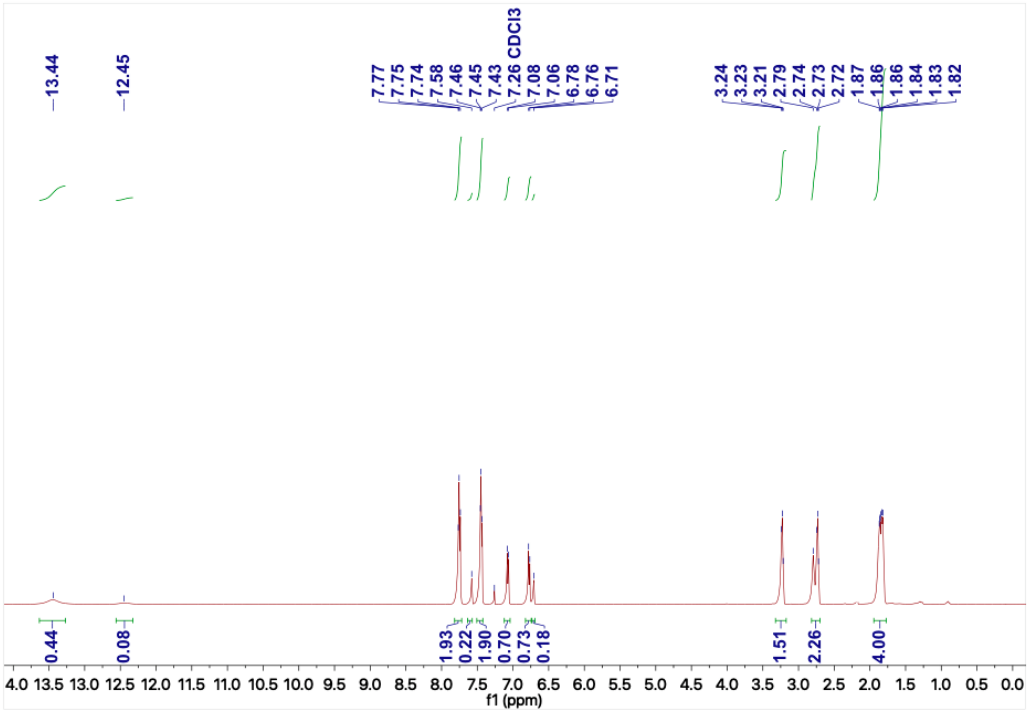


Figure S96. ^{13}C NMR Spectrum of Compound **10m** (125 MHz, $CDCl_3$)

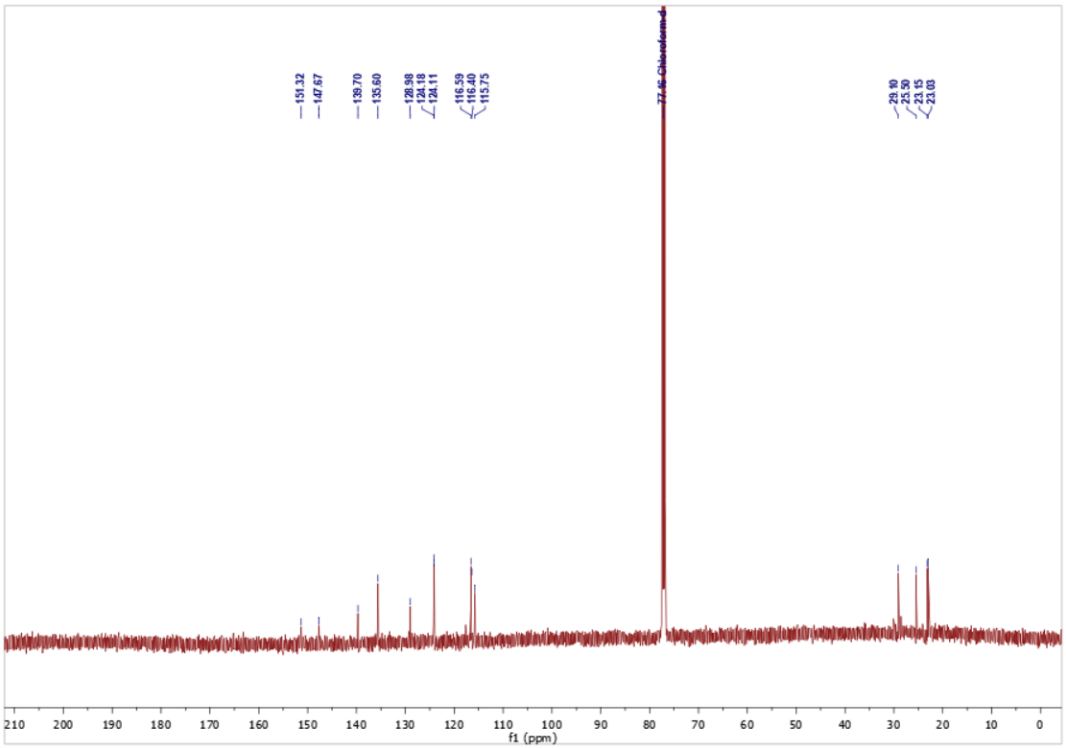


Figure S97. FTIR Spectrum of Compound **10m** (neat)

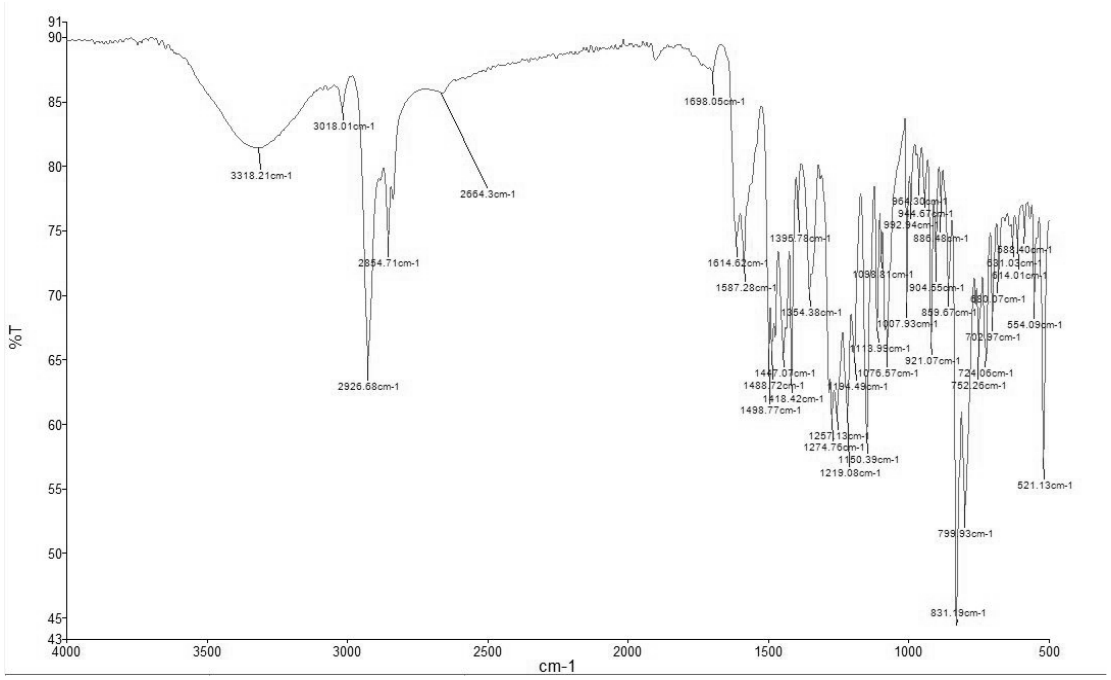


Figure S98. ABTS antioxidant assay data for **10m**

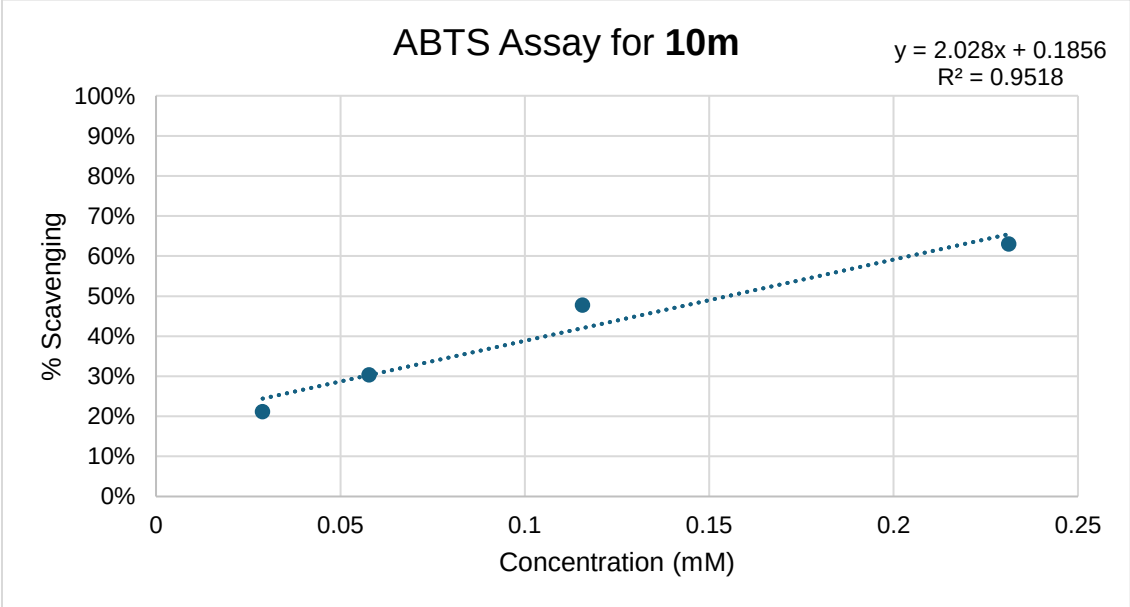


Figure S99. ^{1}H NMR Spectrum of Compound **11a** (500 MHz, Acetone-d_6)

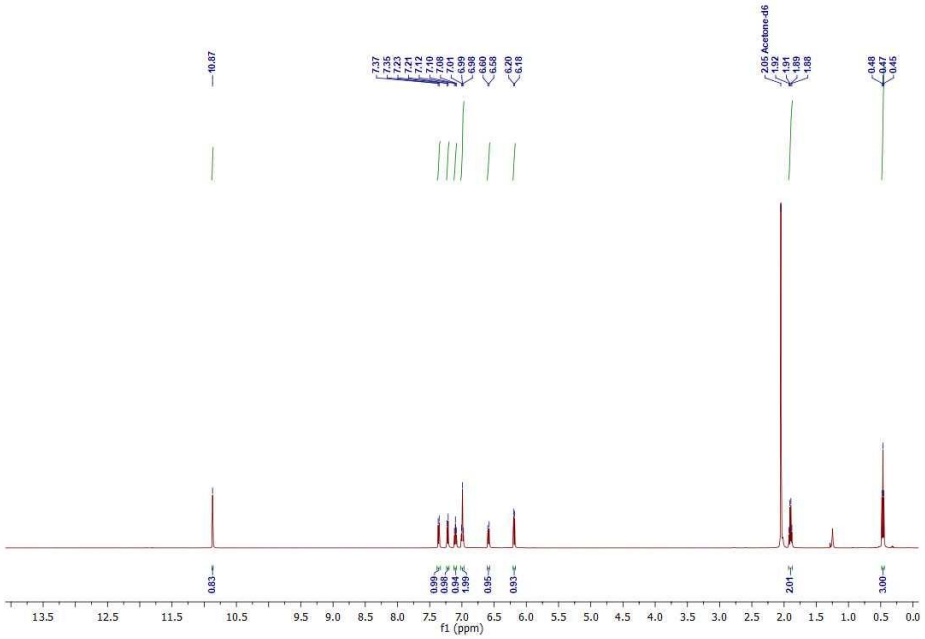


Figure S100. ^{13}C NMR Spectrum of Compound **11a** (125 MHz, Acetone-d_6)

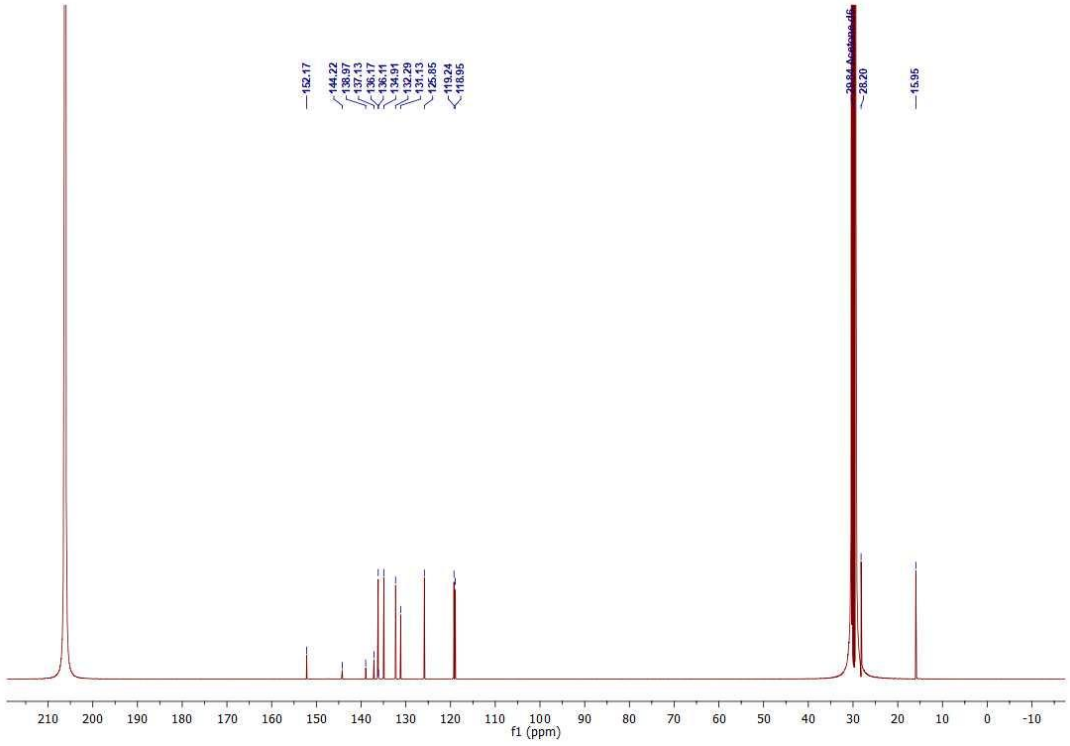


Figure S101. FTIR Spectrum of Compound **11a** (neat)

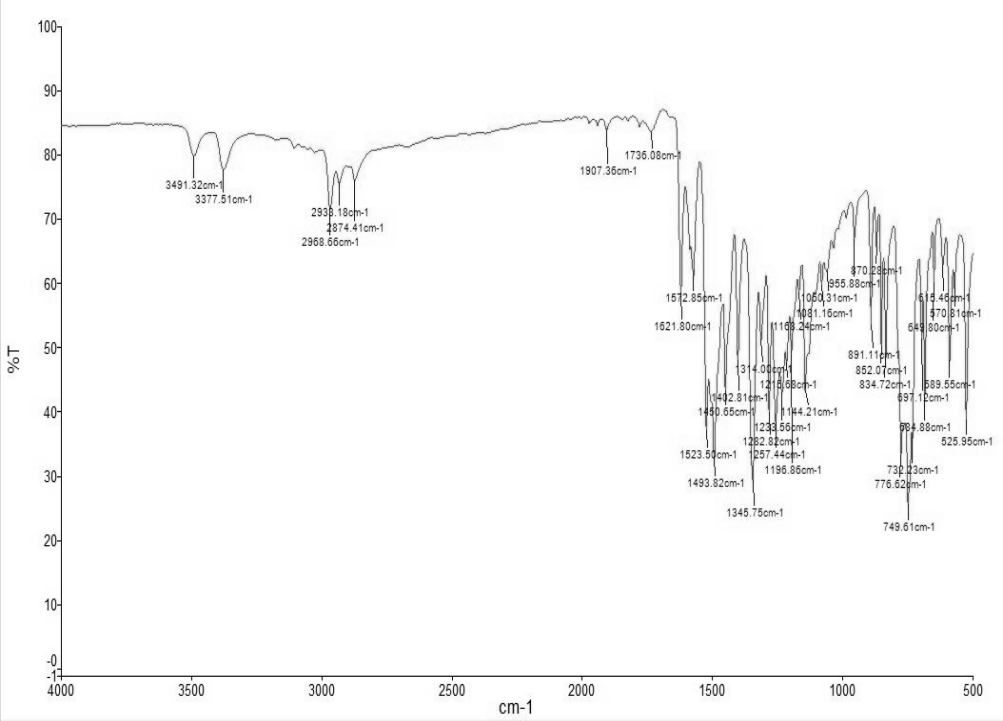


Figure S102. ABTS antioxidant assay data for **11a**

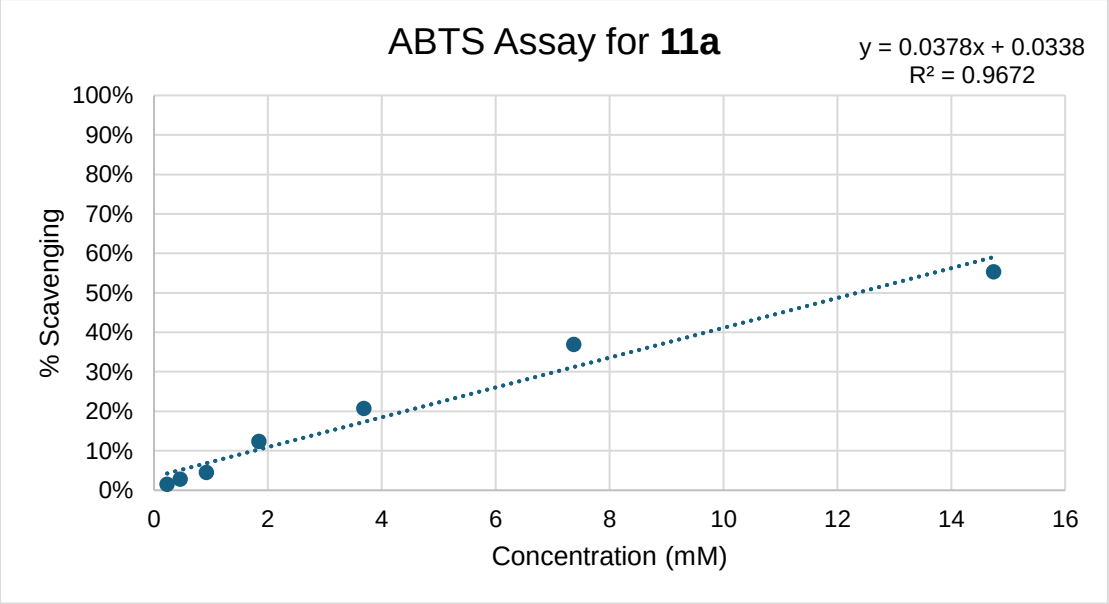


Figure S103. ^{1}H NMR Spectrum of Compound **11b** (500 MHz, Acetone-d_6)

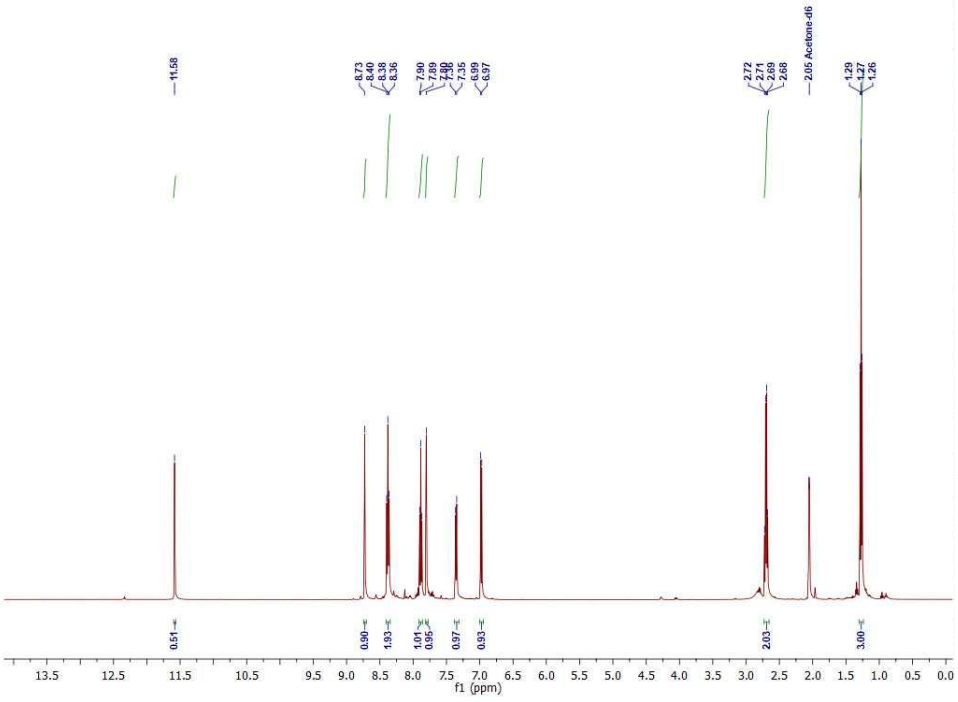


Figure S104. ^{13}C NMR Spectrum of Compound **11b** (125 MHz, Acetone-d_6)

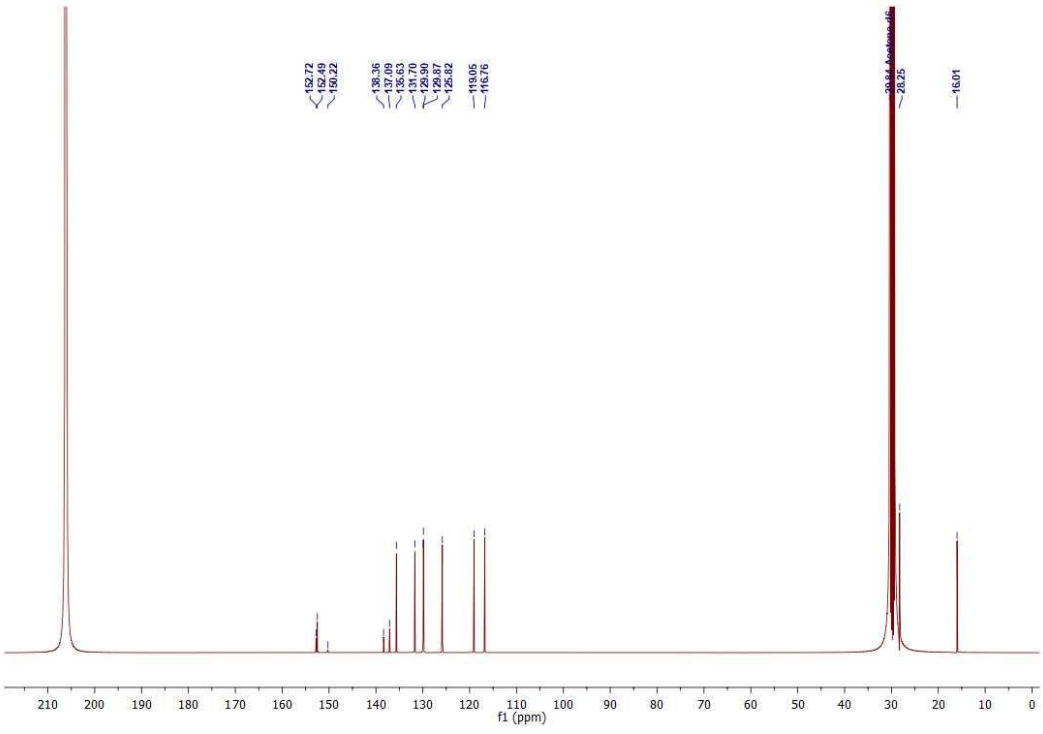


Figure S105. FTIR Spectrum of Compound **11b** (neat)

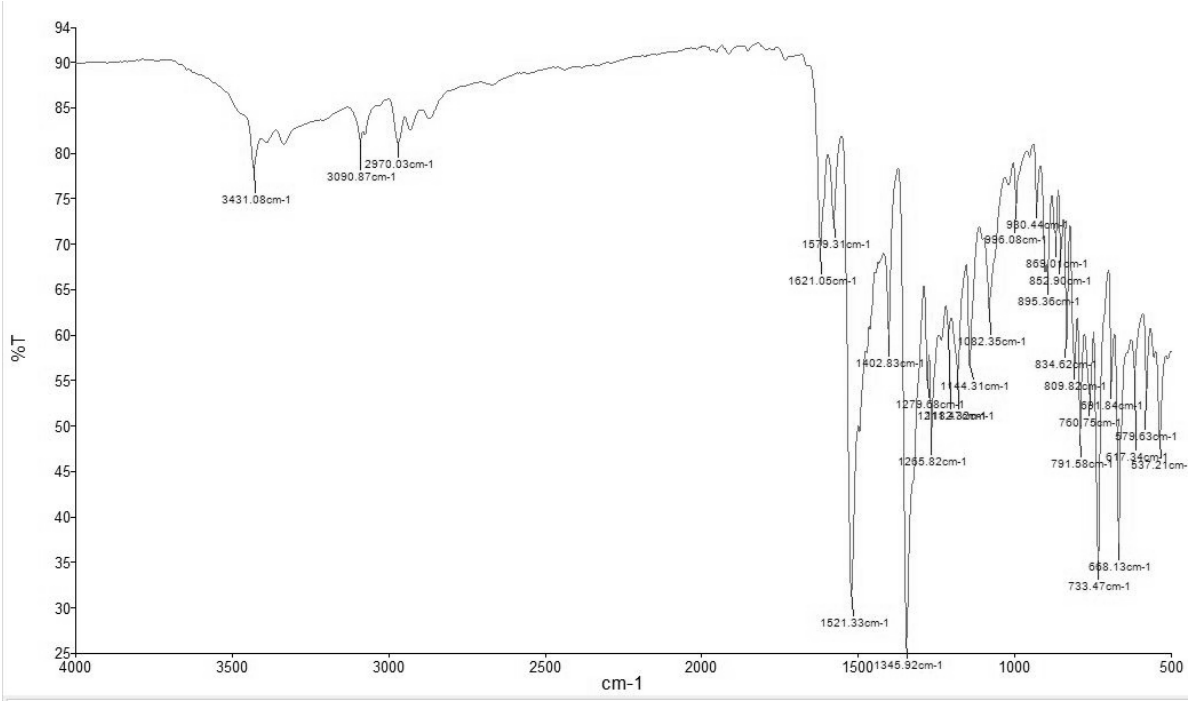


Figure S106. ABTS antioxidant assay data for **11b**

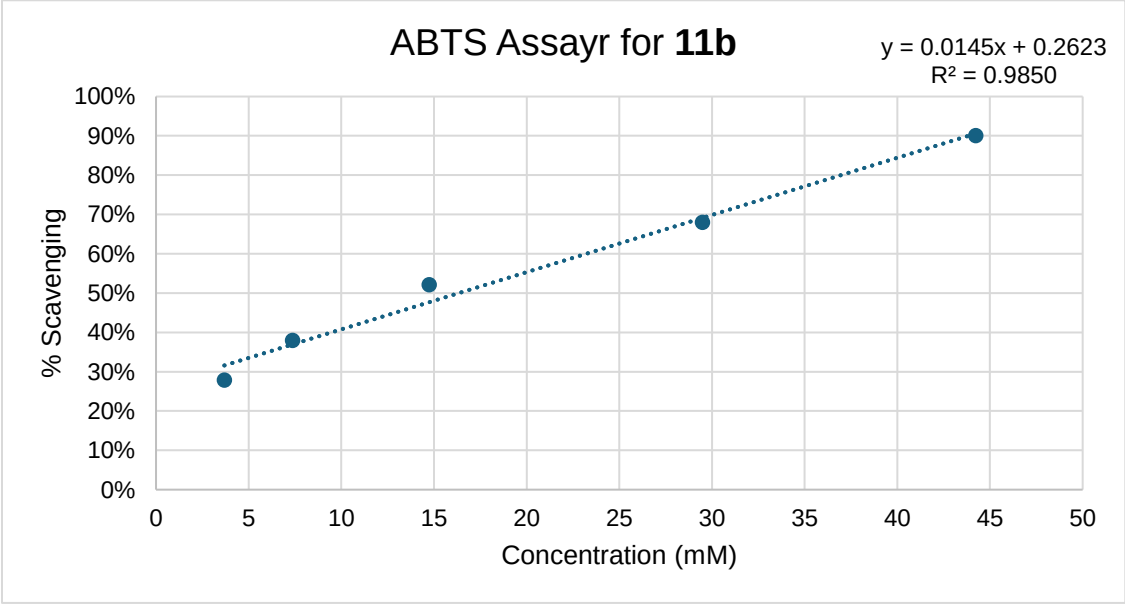


Figure S107. ^{1}H NMR Spectrum of Compound **11c** (500 MHz, Acetone-d_6)

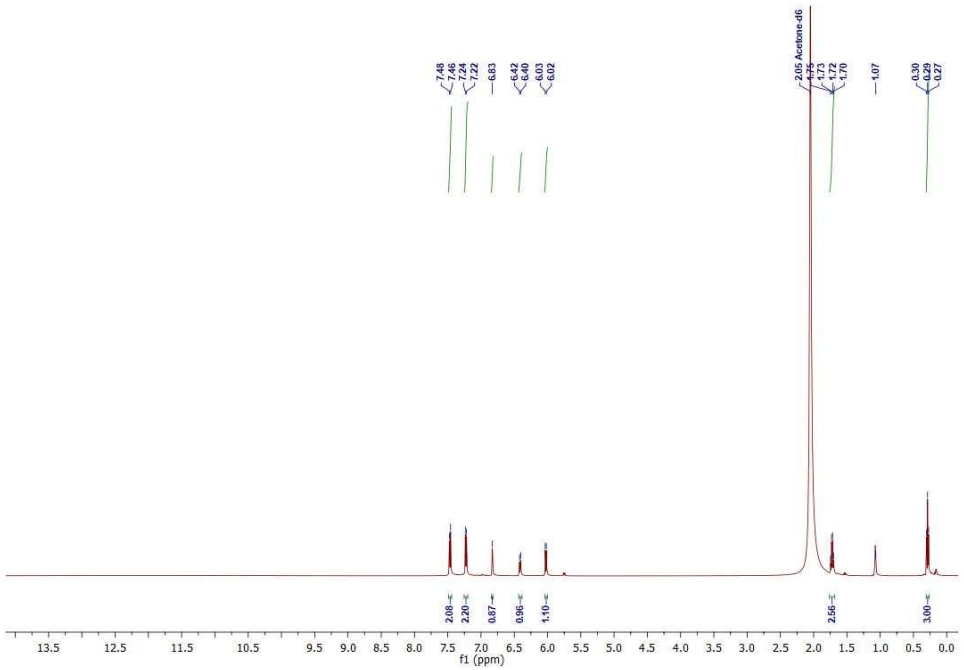


Figure S108. ^{13}C NMR Spectrum of Compound **11c** (125 MHz, Acetone-d_6)

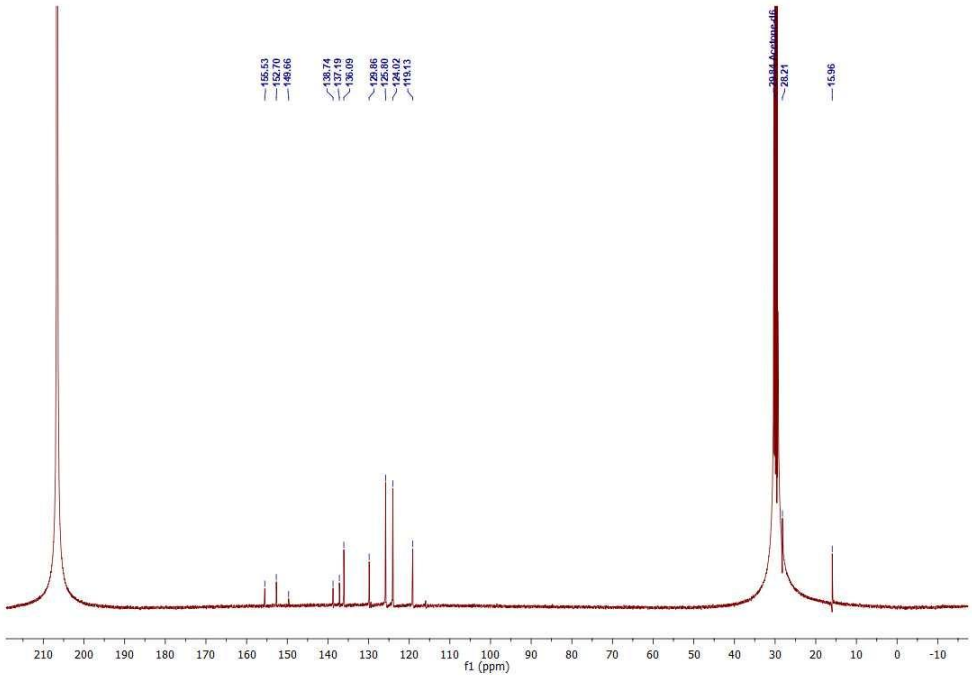


Figure S109. FTIR Spectrum of Compound **11c** (neat)

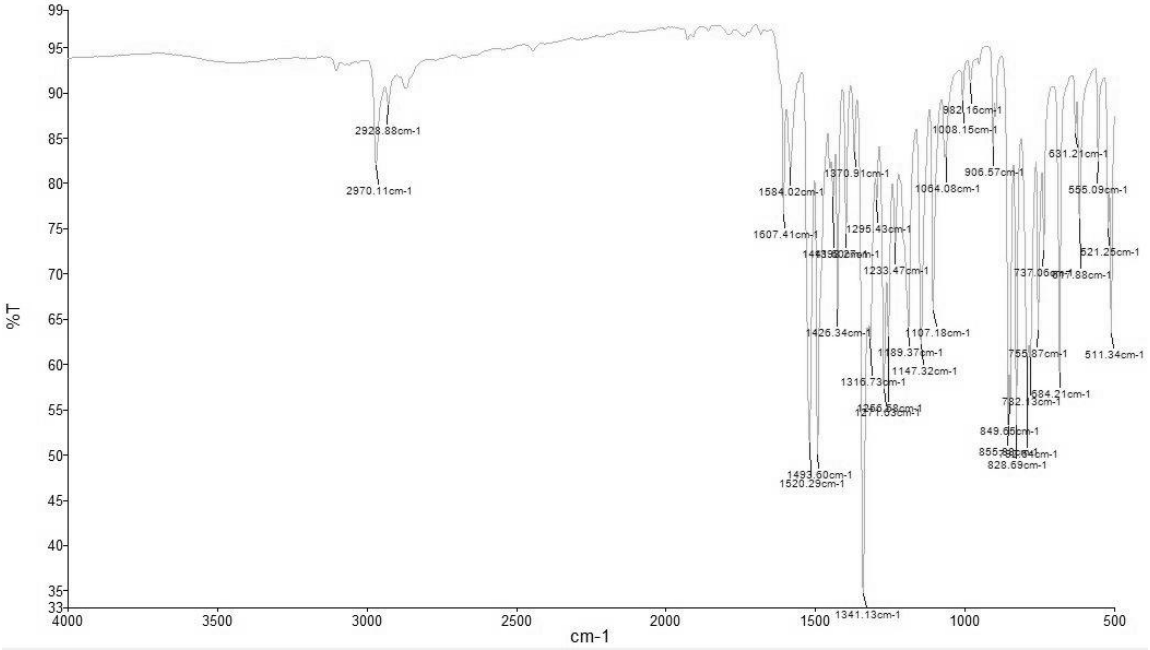


Figure S110. ABTS antioxidant assay data for **11c**

