

Comparative Studies of *Fraxinus* Species from Korea Using Microscopic Characterization, Phytochemical Analysis, and Anti-lipase Enzyme Activity

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F. chiisanensis
PGSC-560



F. mandshurica
PGSC-561



F. rhynchophylla
PGSC-562



F. sieboldiana
PGSC-563



F. sieboldiana var. *angustata*
PGSC-564

Figure S1. Herbarium specimens of four *Fraxinus* spp. and one variety.

[Mass Spectrum]
 Date : 11-Oct-2018 14:44
 Data : FM-ER-fr.6-9-20
 Sample : -
 Note : -
 Inlet : Direct Ion Mode : FRB+
 Spectrum Type : Normal Ion [M⁺-Linear]
 RT : 1.05 min Scan# : 8
 BP : m/z 154.1037 Int. : 634.59
 Output m/z range : 100.0000 to 1002.0772 Cut Level : 0.00 %

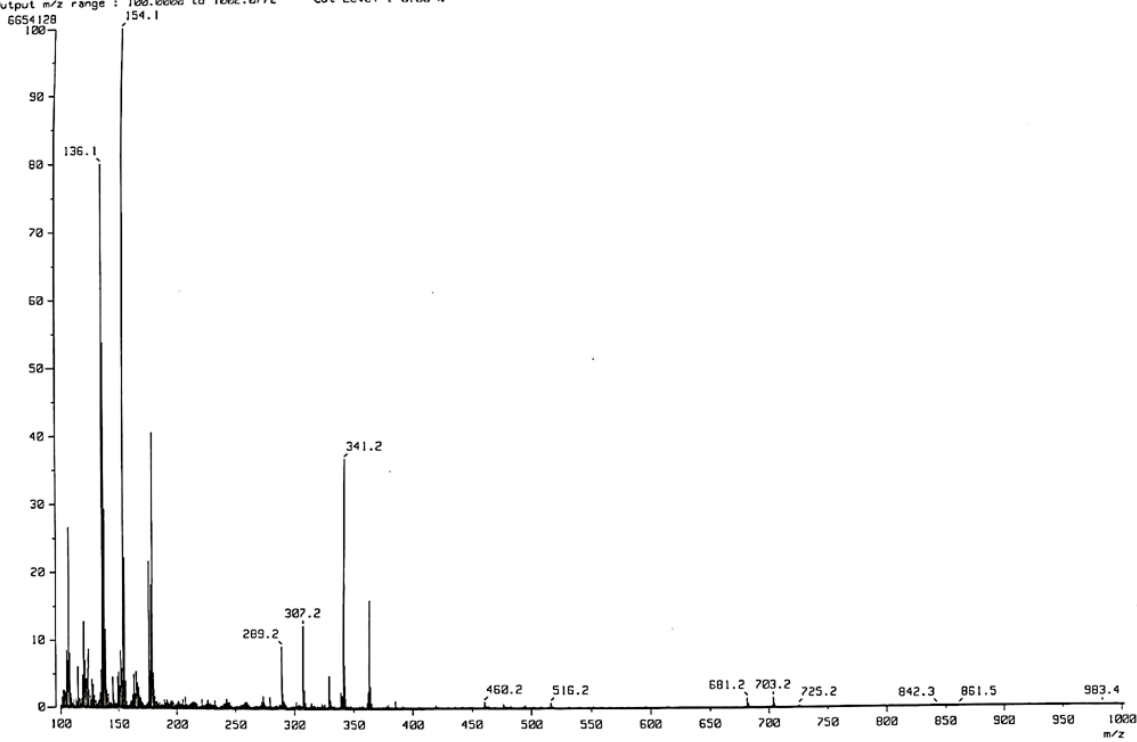


Figure S2. FAB-MS of compound 1 (*m*-NBA).

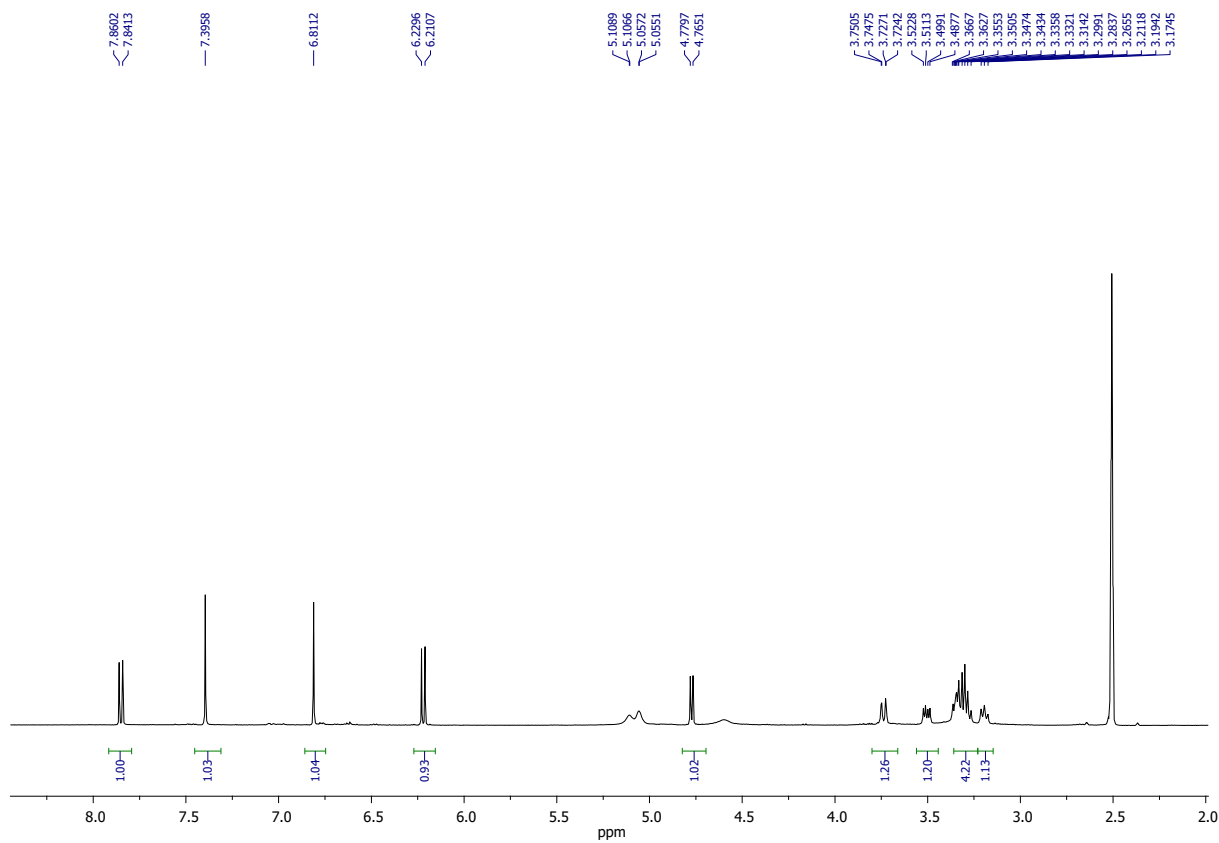


Figure S3. ¹H-NMR spectrum of compound 1 (500 MHz, DMSO-*d*₆).

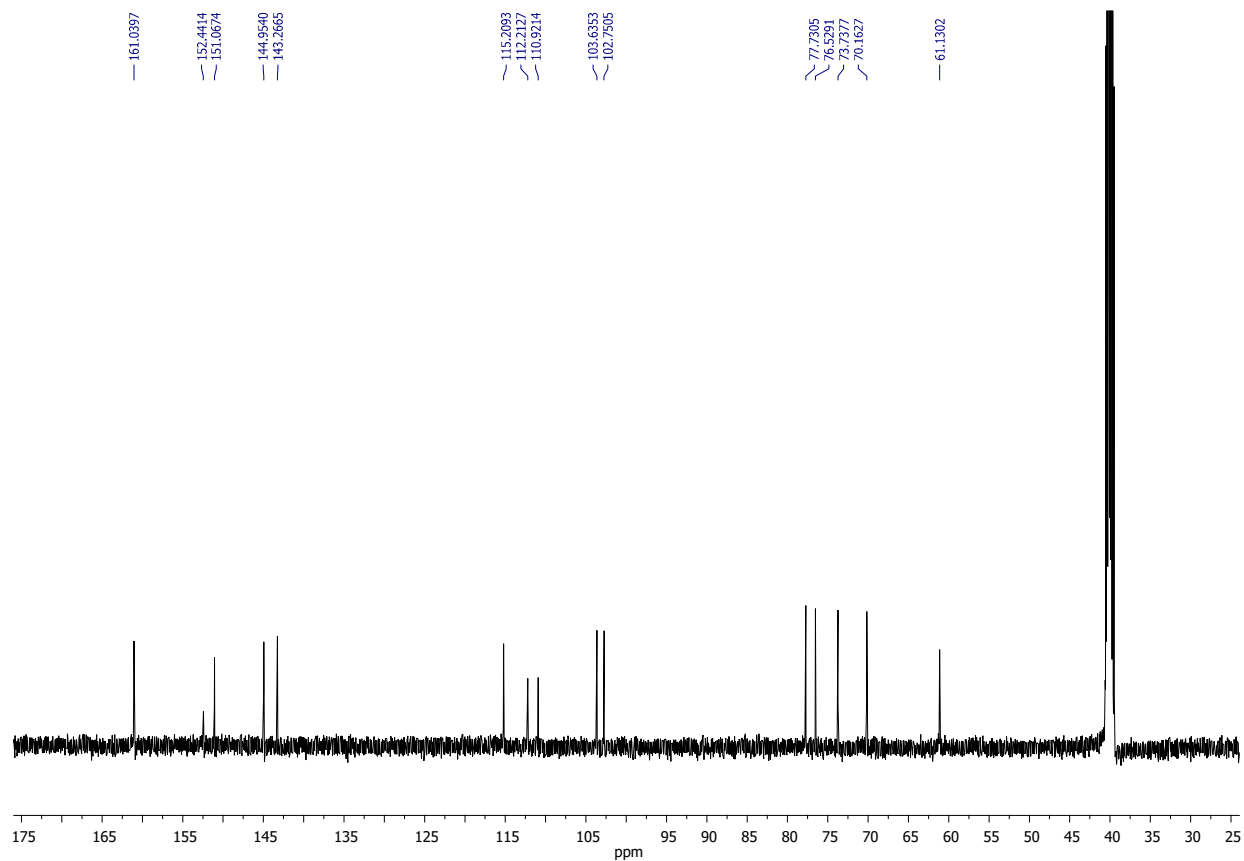


Figure S4. ^{13}C -NMR spectrum of compound 1 (125 MHz, $\text{DMSO-}d_6$).

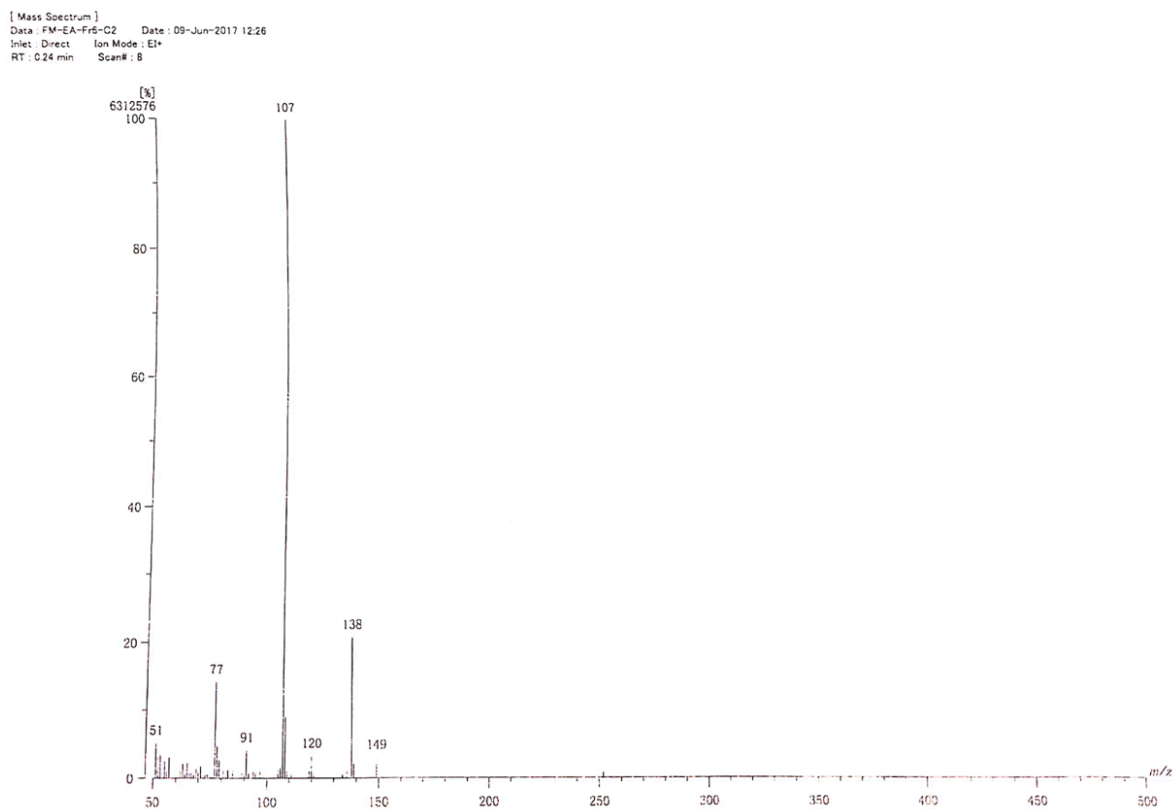


Figure S5. EI-MS of compound 2 (70 eV).

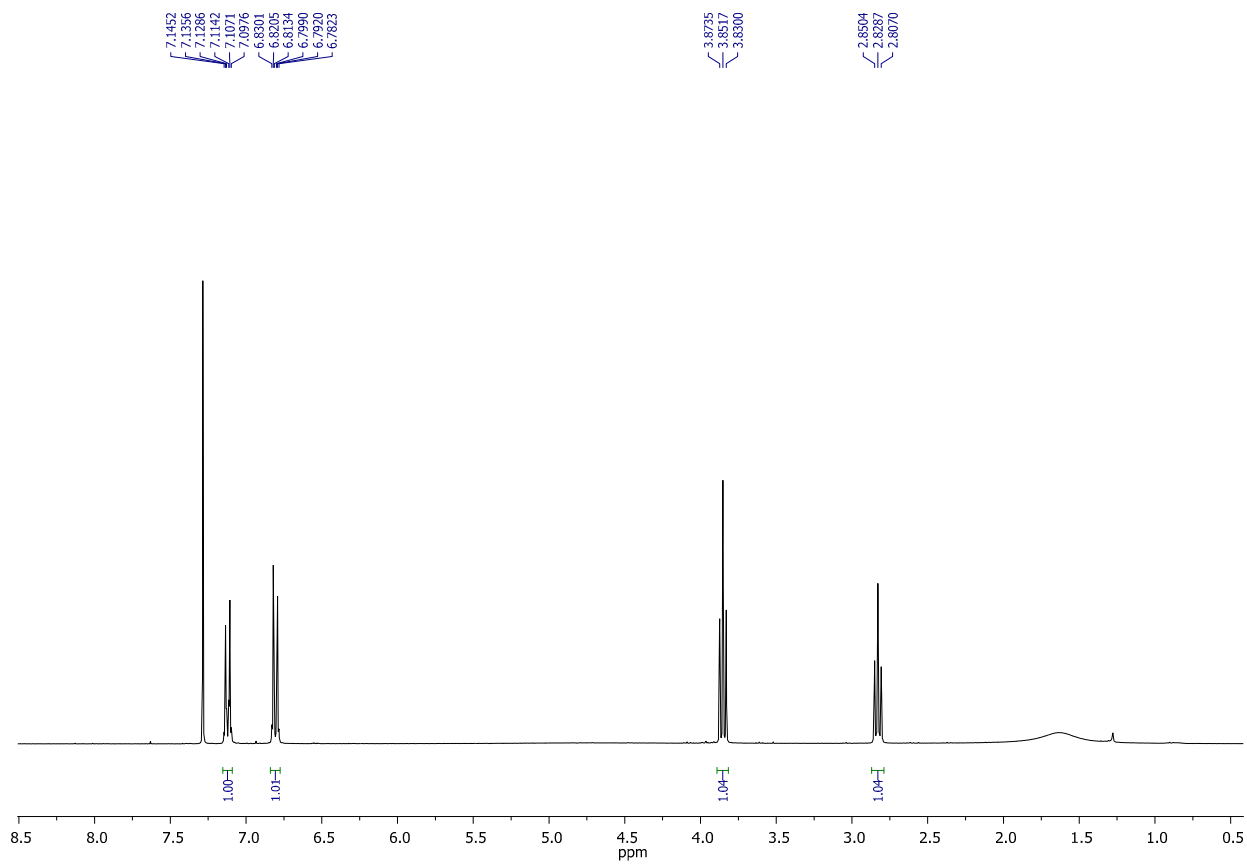


Figure S6. ¹H-NMR spectrum of compound 2 (300 MHz, CDCl₃).

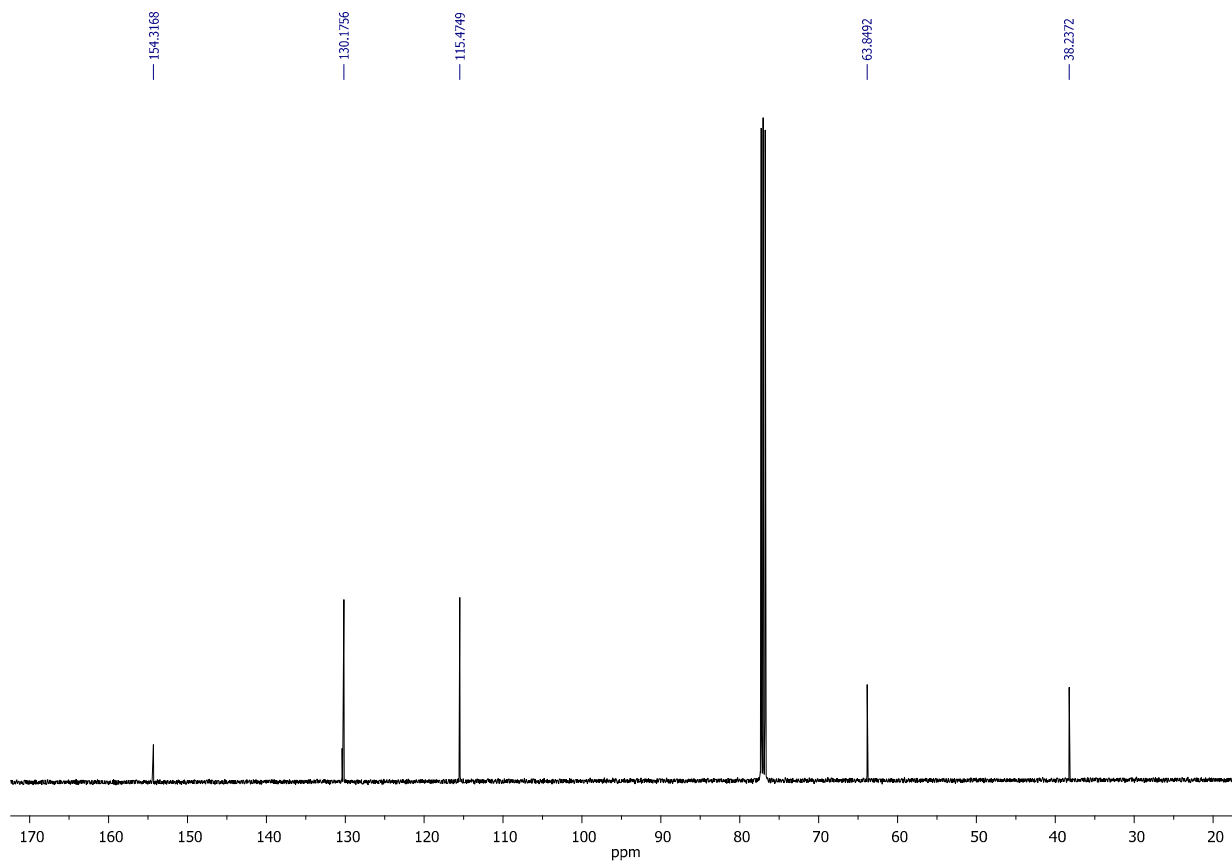


Figure S7. ^{13}C -NMR spectrum of compound 2 (125 MHz, CDCl_3).

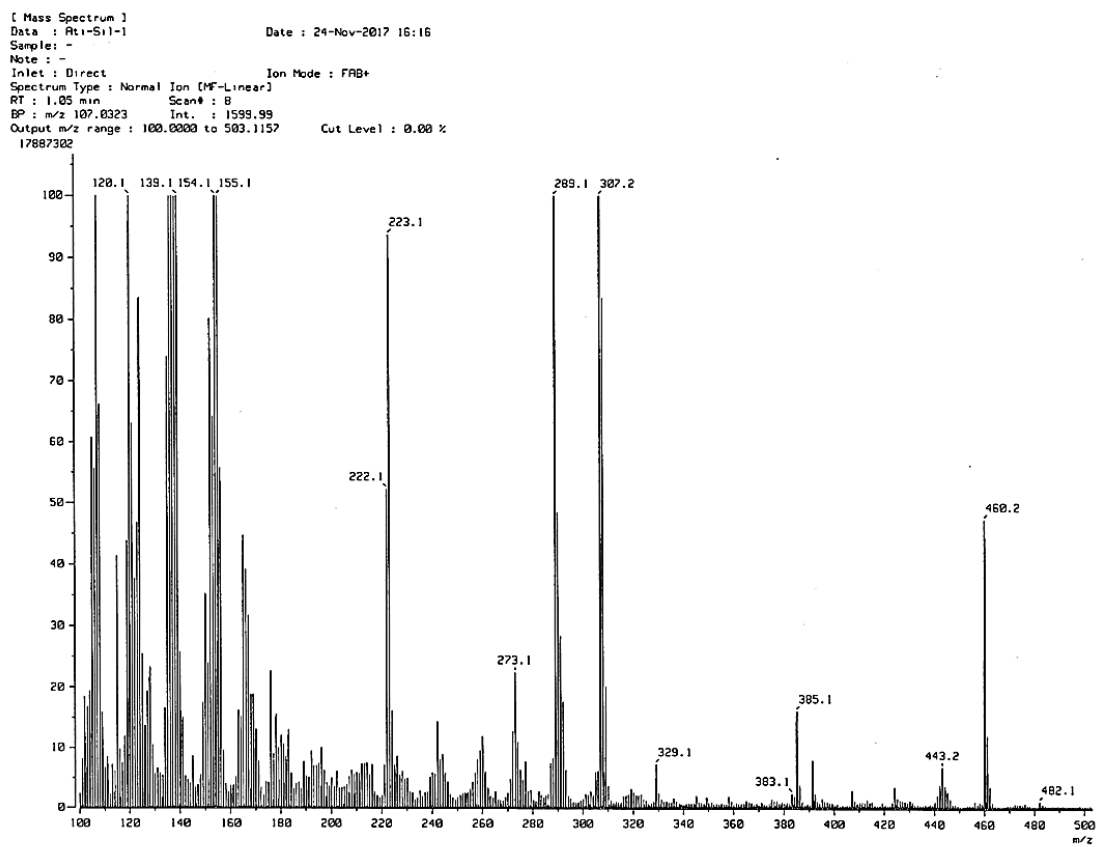


Figure S8. FAB-MS of compound 3 (*m*-NBA).

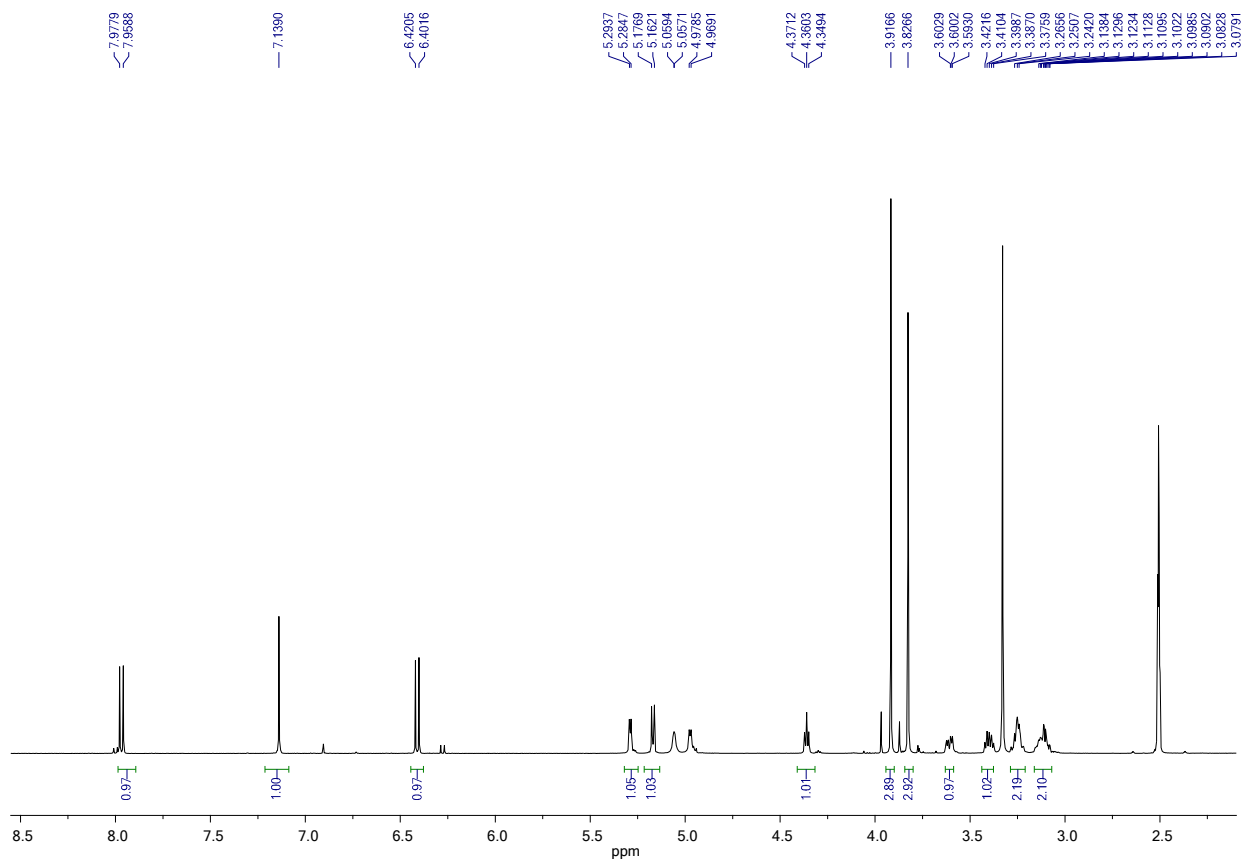


Figure S9. ¹H-NMR spectrum of compound 3 (500 MHz, DMSO-*d*₆).

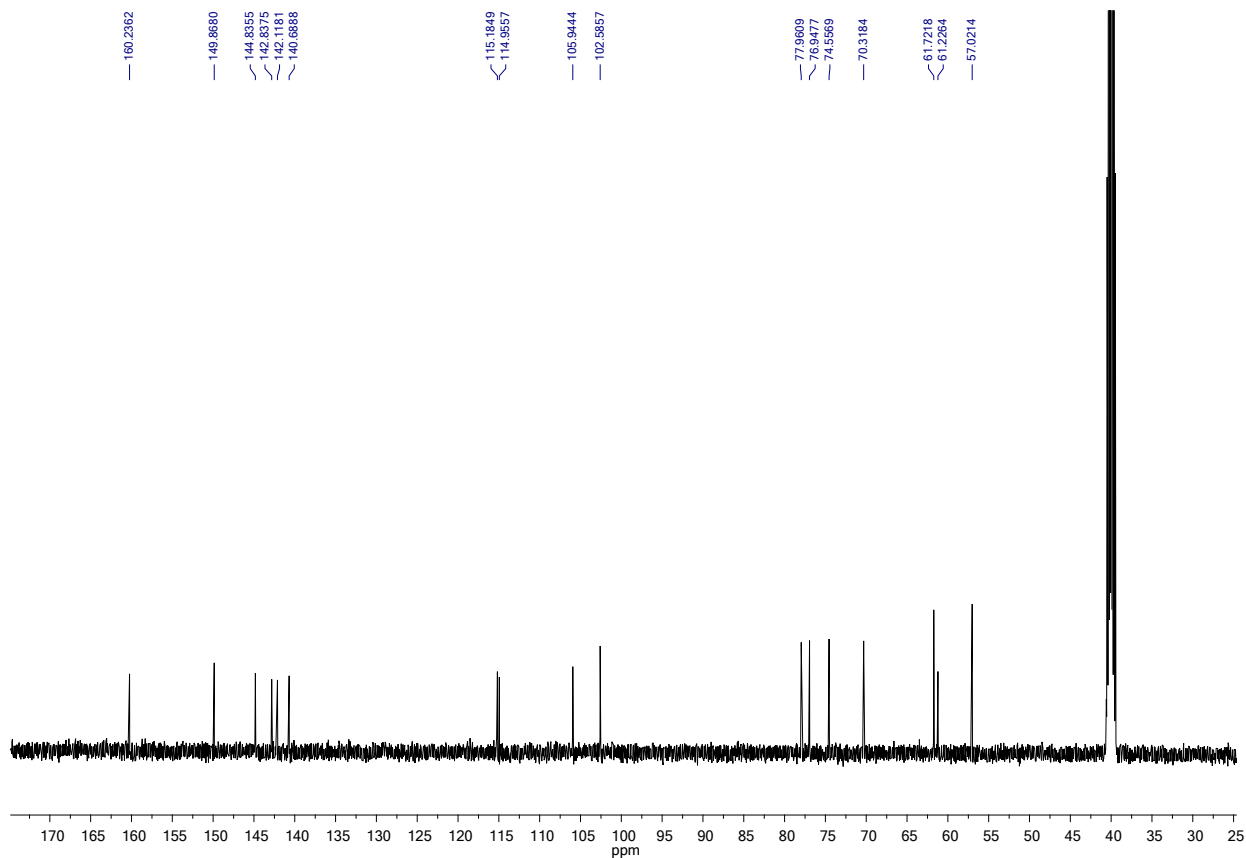


Figure S10. ^{13}C -spectrum of compound 3 (125 MHz, $\text{DMSO-}d_6$).

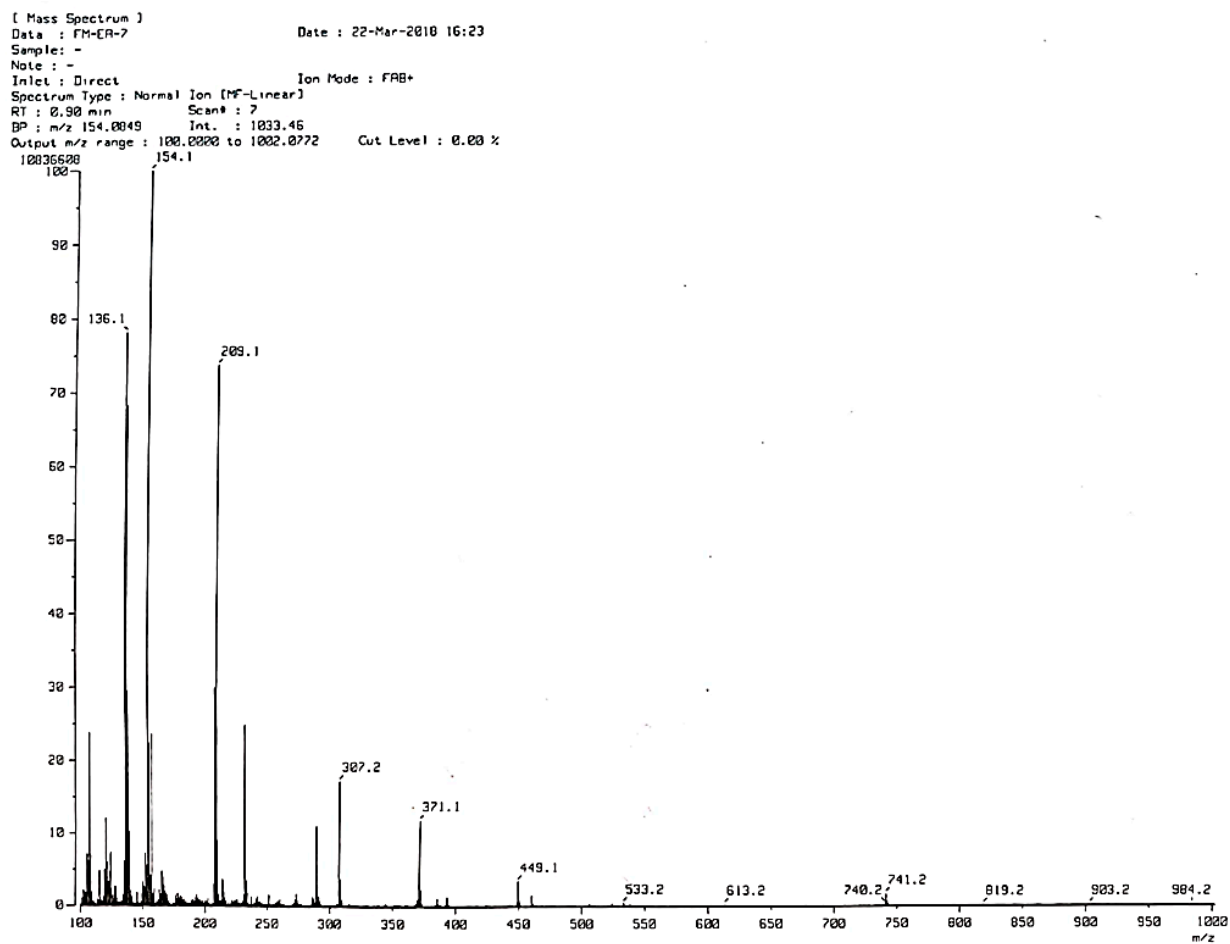


Figure S11. FAB-MS of compound 4 (*m*-NBA).

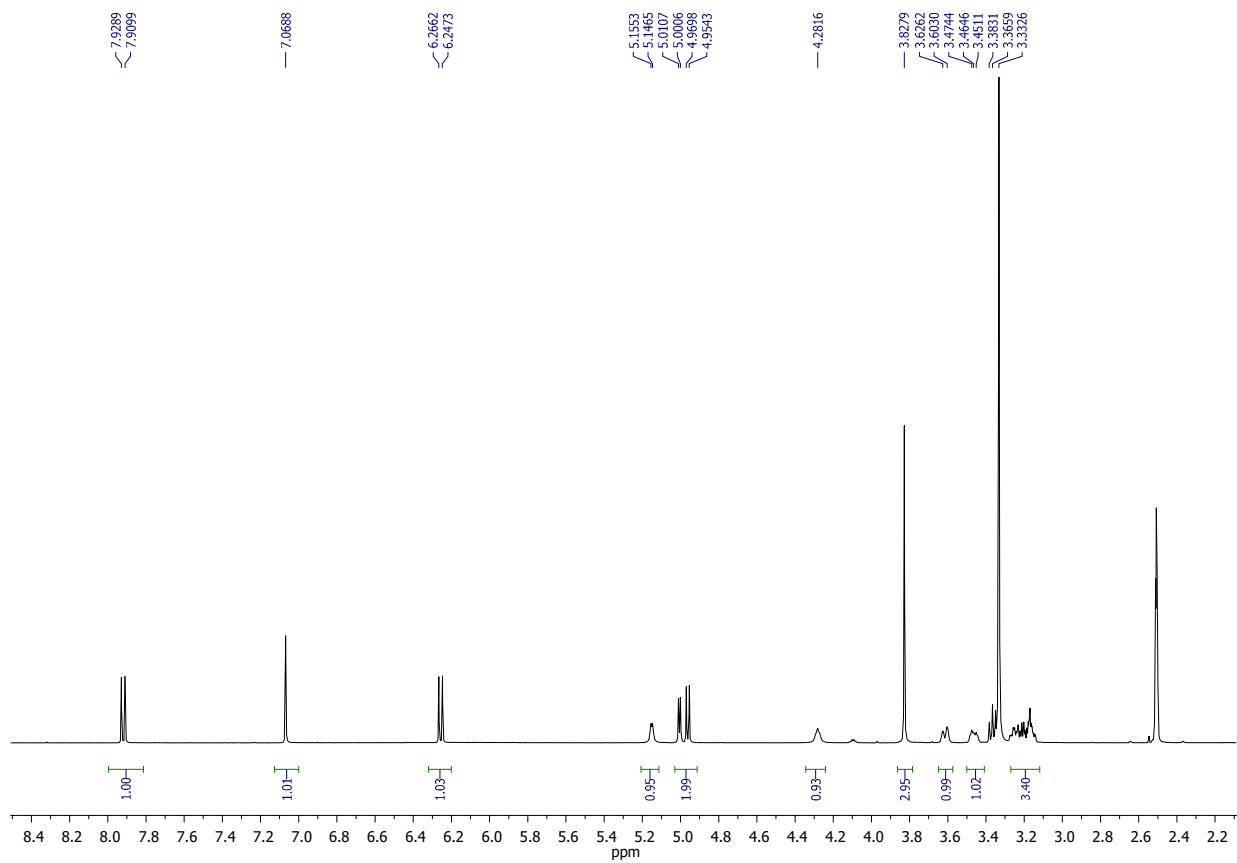


Figure S12. ¹H-NMR spectrum of compound 4 (500 MHz, DMSO-*d*₆).

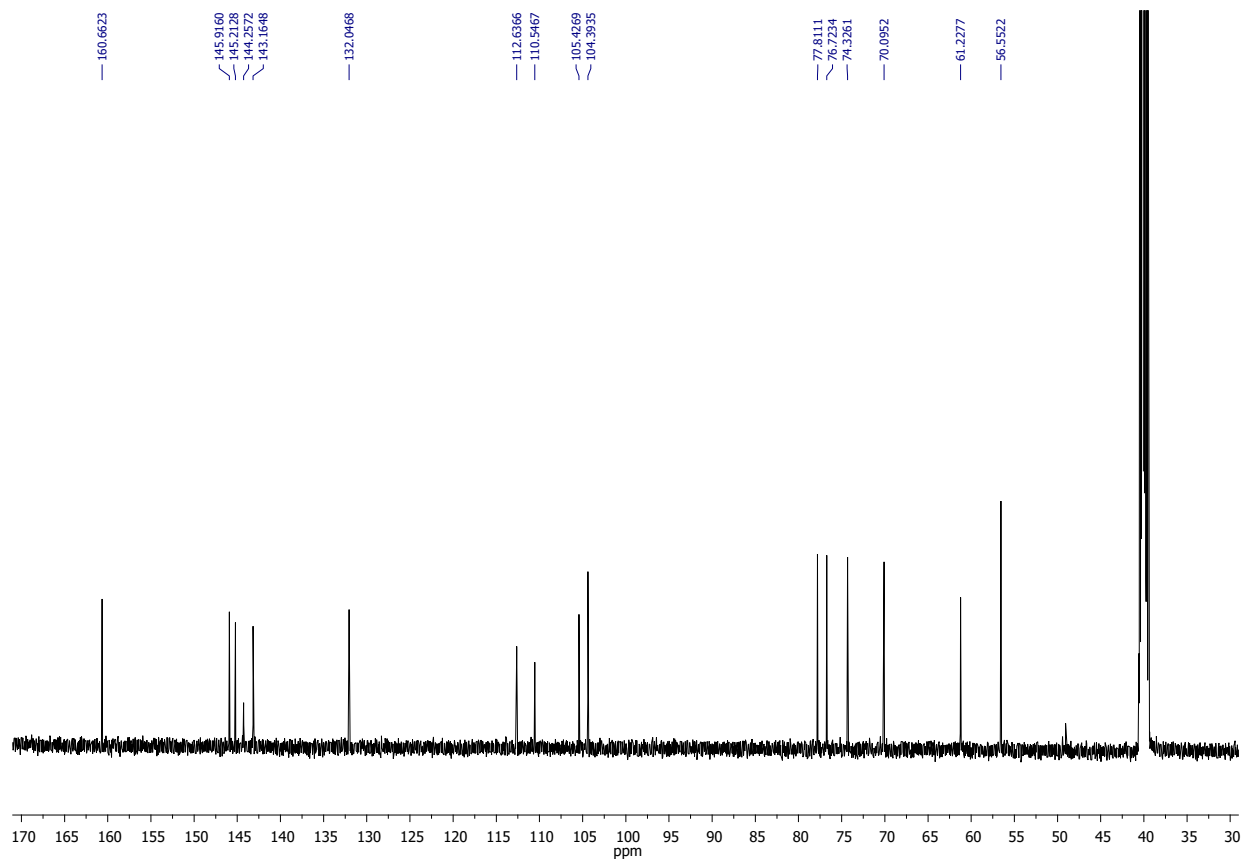


Figure S13. ^{13}C -NMR spectrum of compound **4** (125 MHz, $\text{DMSO-}d_6$).

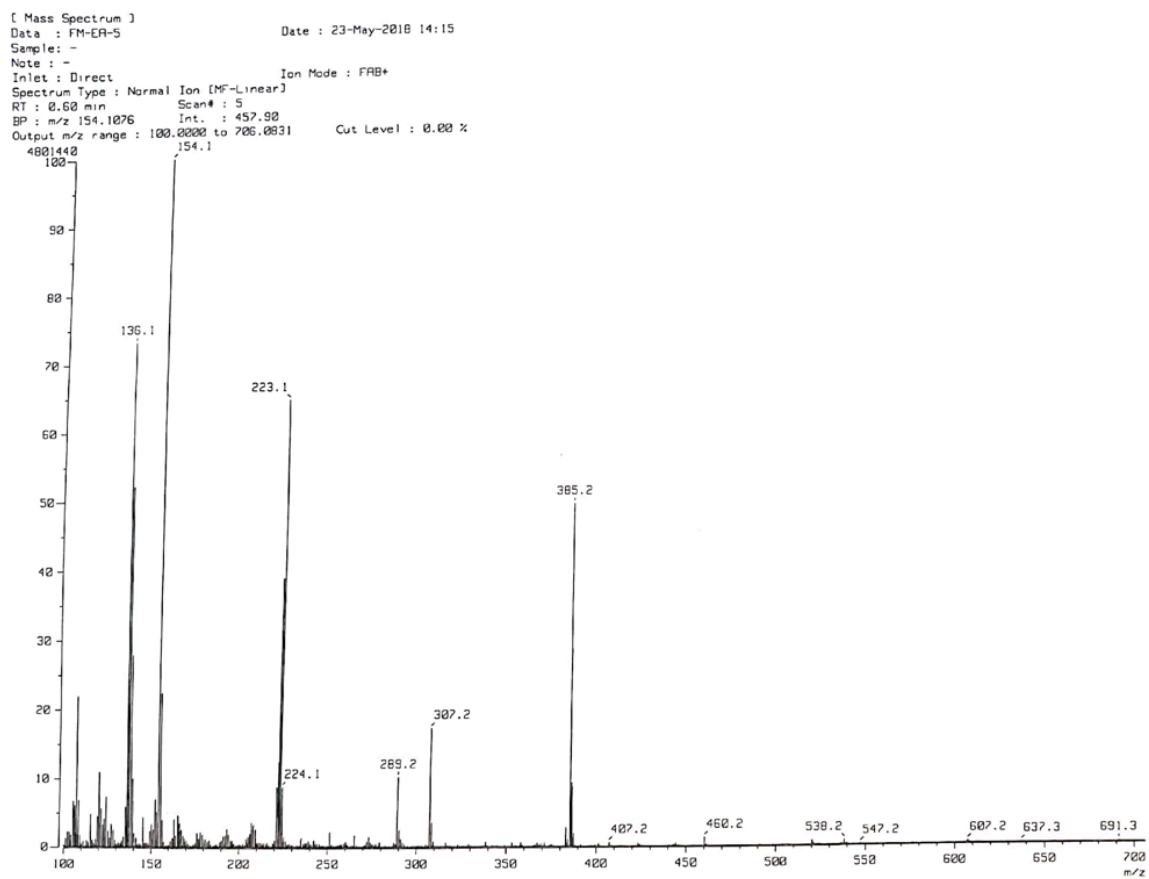


Figure S14. FAB-MS of compound **5** (*m*-NBA).

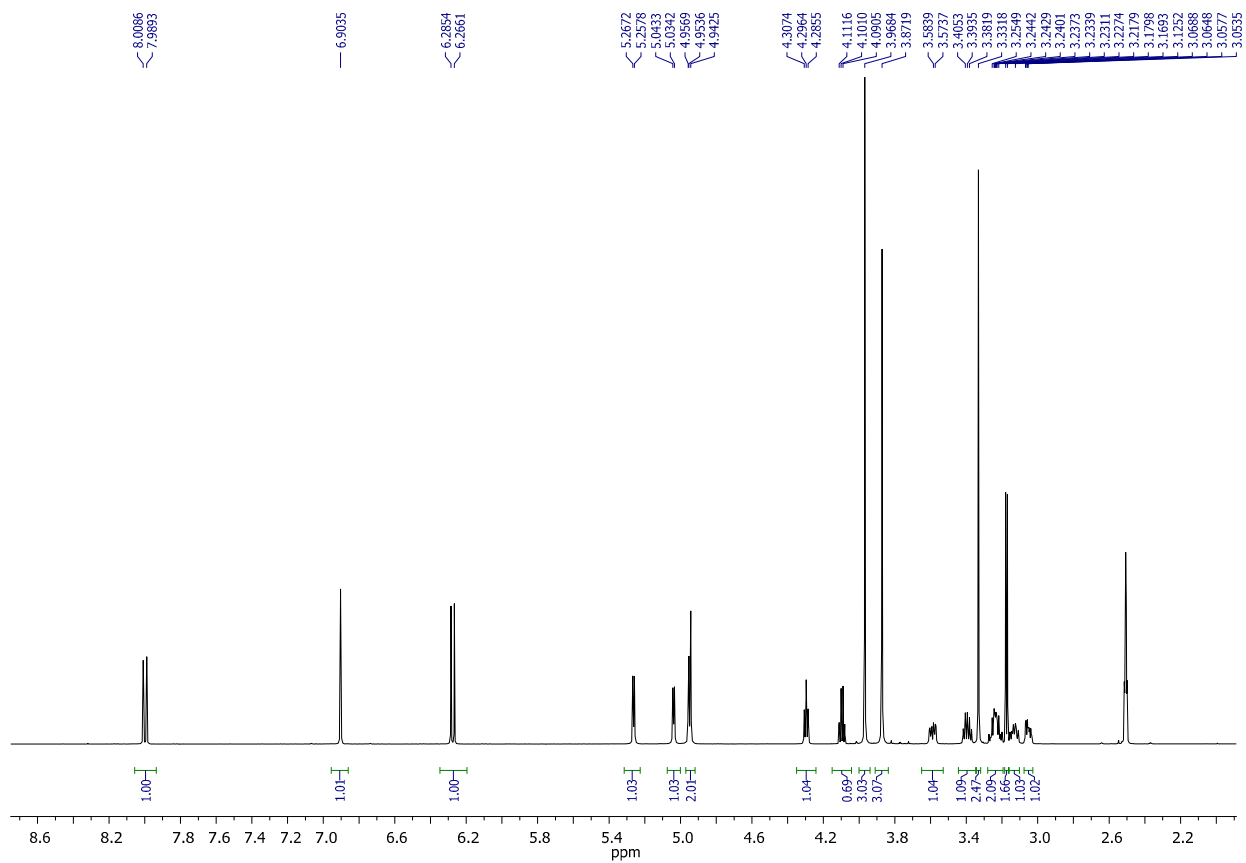


Figure S15. ¹H-NMR spectrum of compound 5 (500 MHz, DMSO-*d*₆).

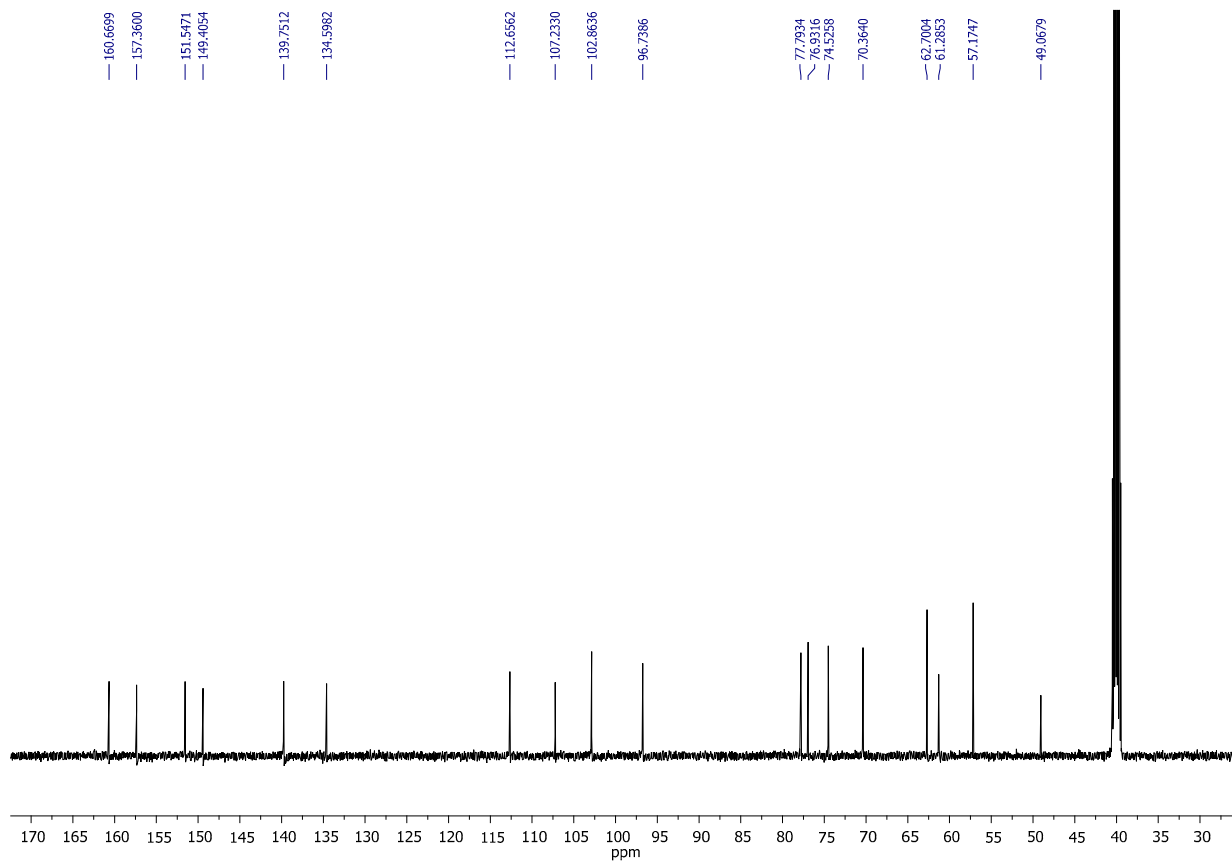


Figure S16. ^{13}C -spectrum of compound 5 (125 MHz, $\text{DMSO-}d_6$).

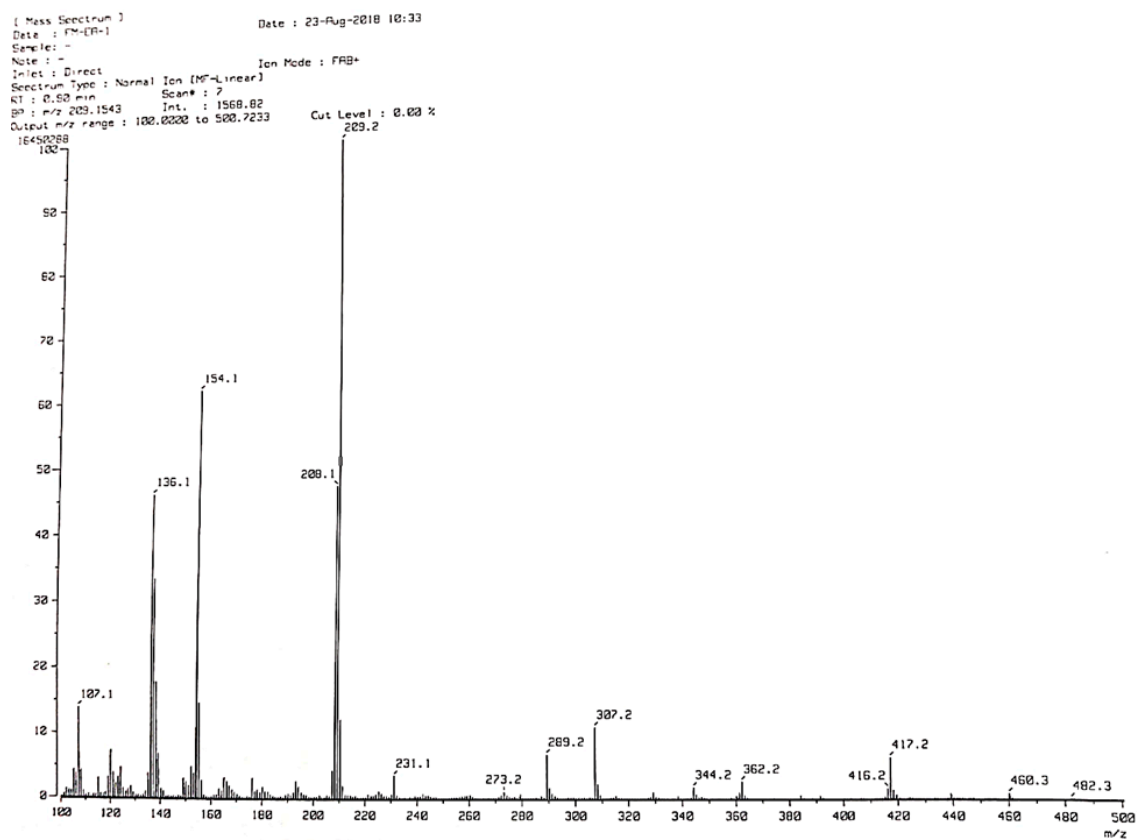


Figure S17. FAB-MS of compound 6 (*m*-NBA).

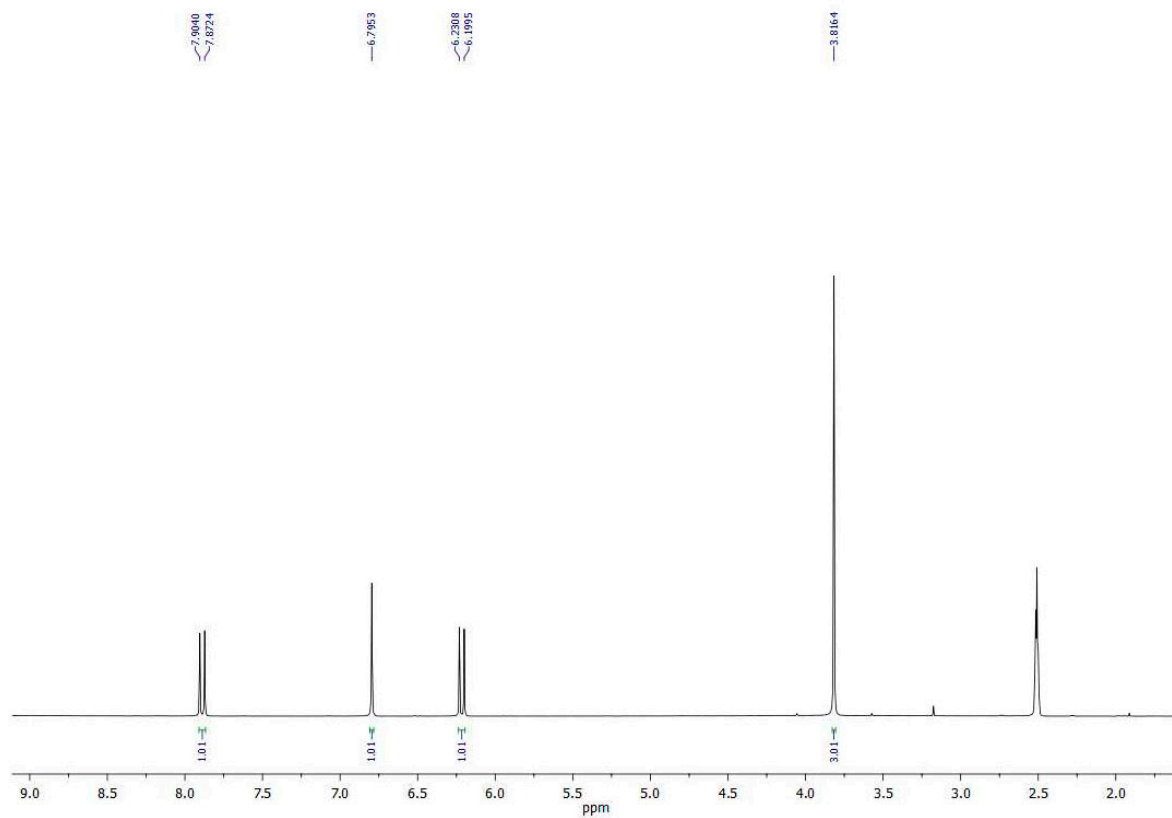


Figure S18. $^1\text{H-NMR}$ spectrum of compound **6** (300 MHz, $\text{DMSO-}d_6$).

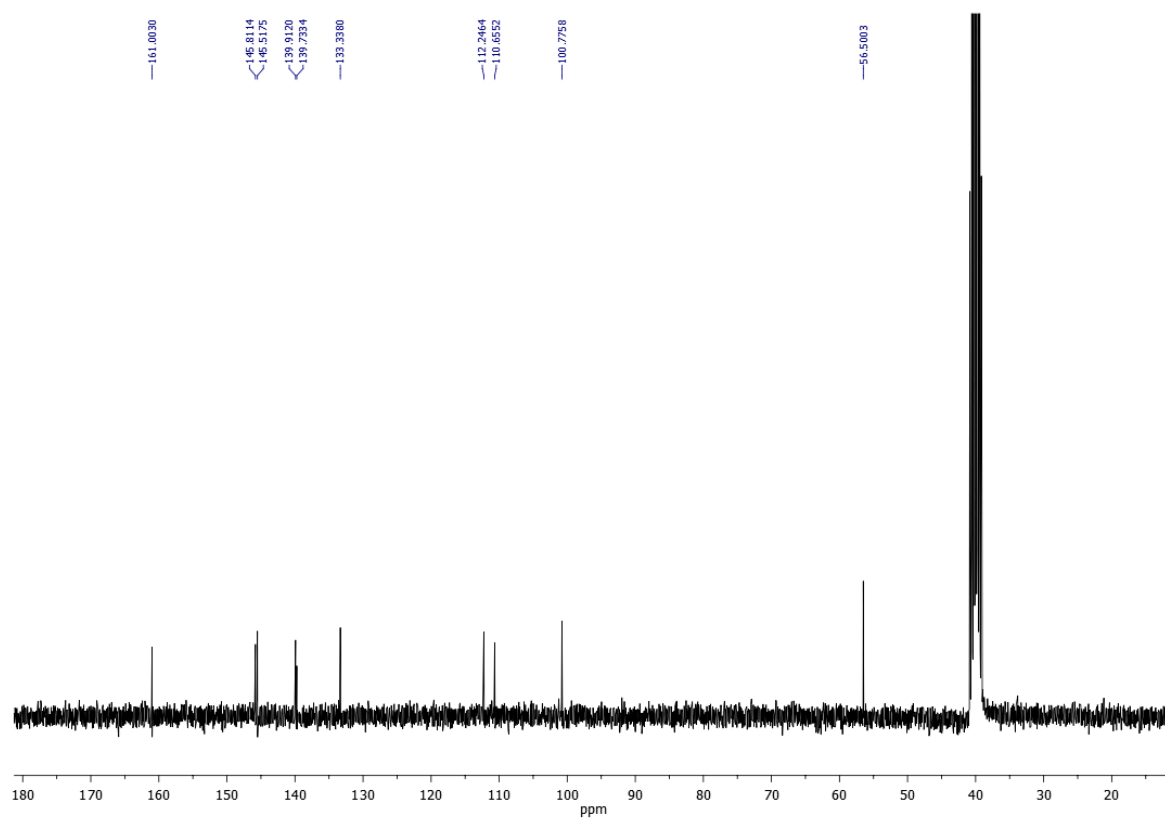


Figure S19. $^{13}\text{C-NMR}$ spectrum of compound **6** (75 MHz, $\text{DMSO-}d_6$).

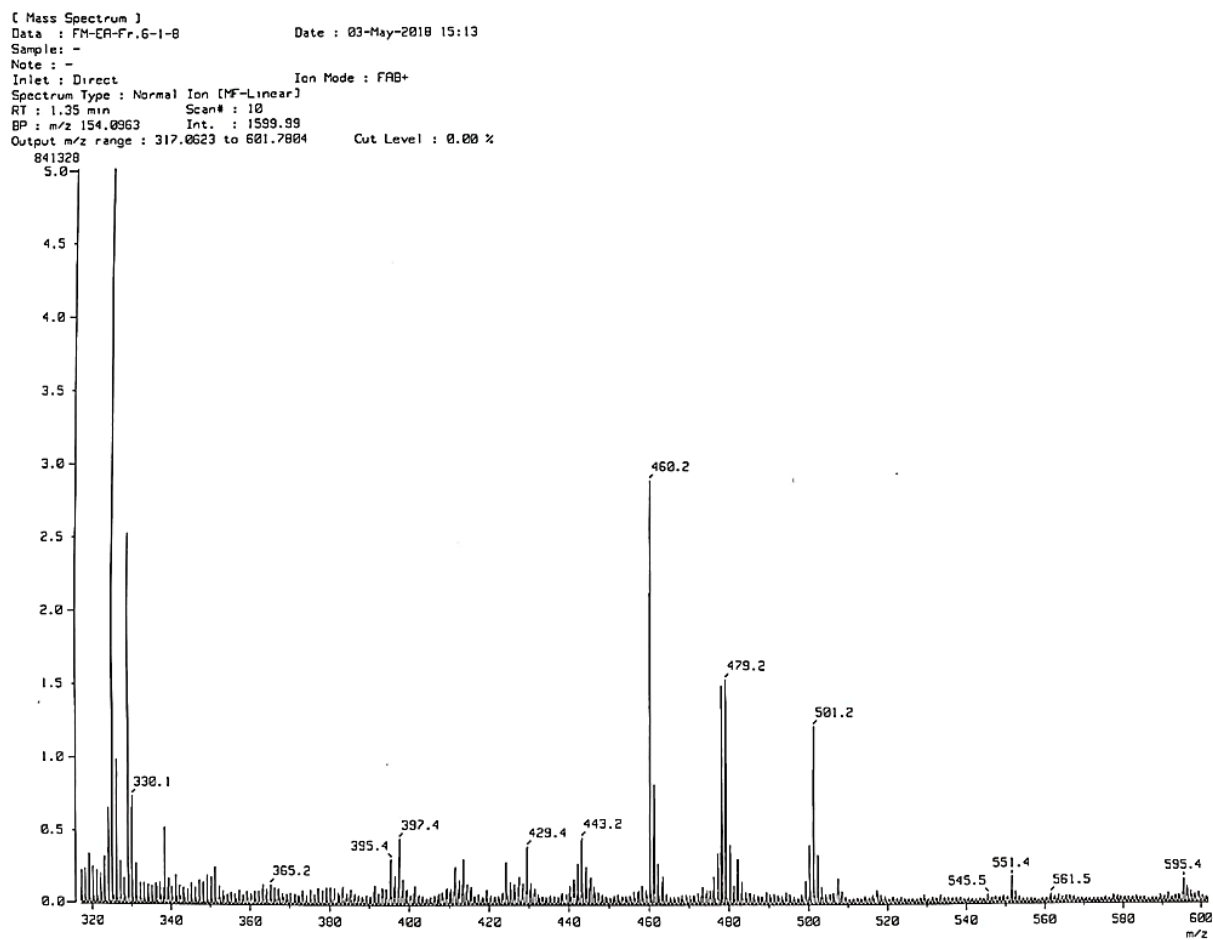


Figure S20. FAB-MS of compound 7 (*m*-NBA).

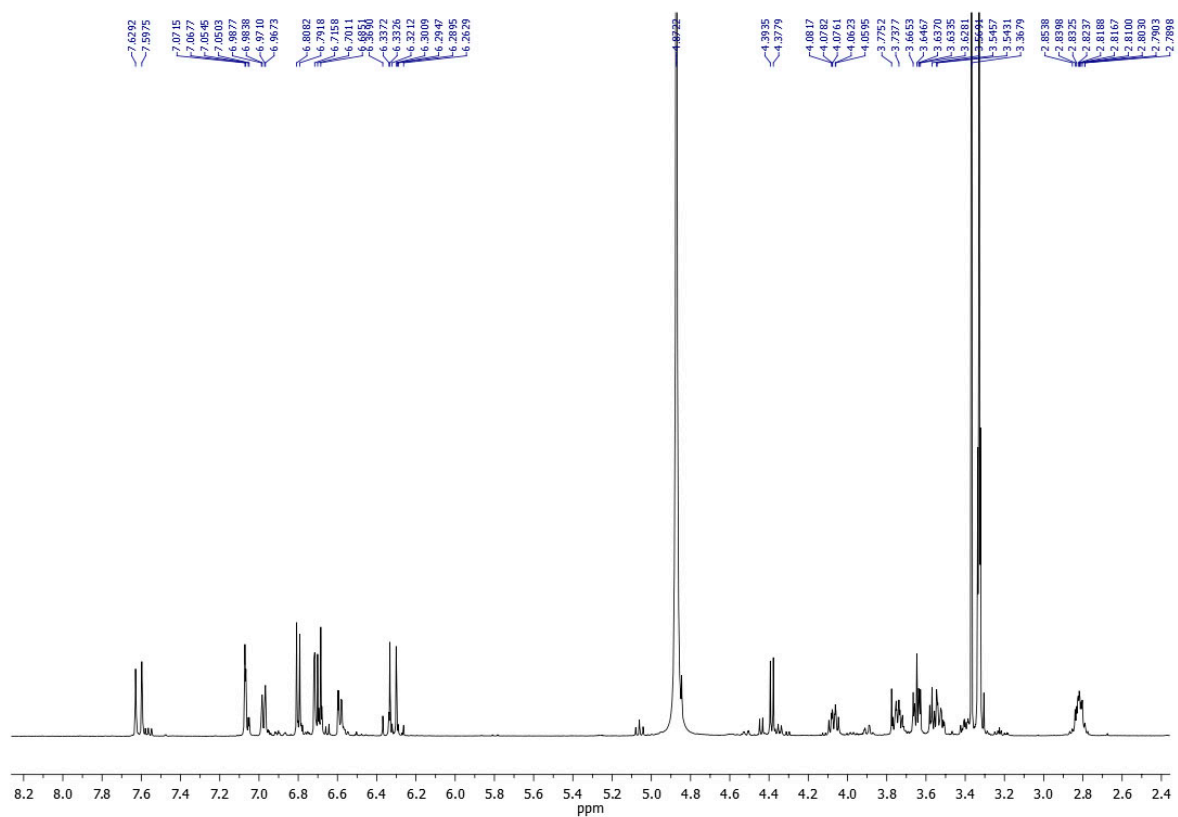


Figure S21. ¹H-NMR spectrum of compound 7 (500 MHz, CD₃OD).

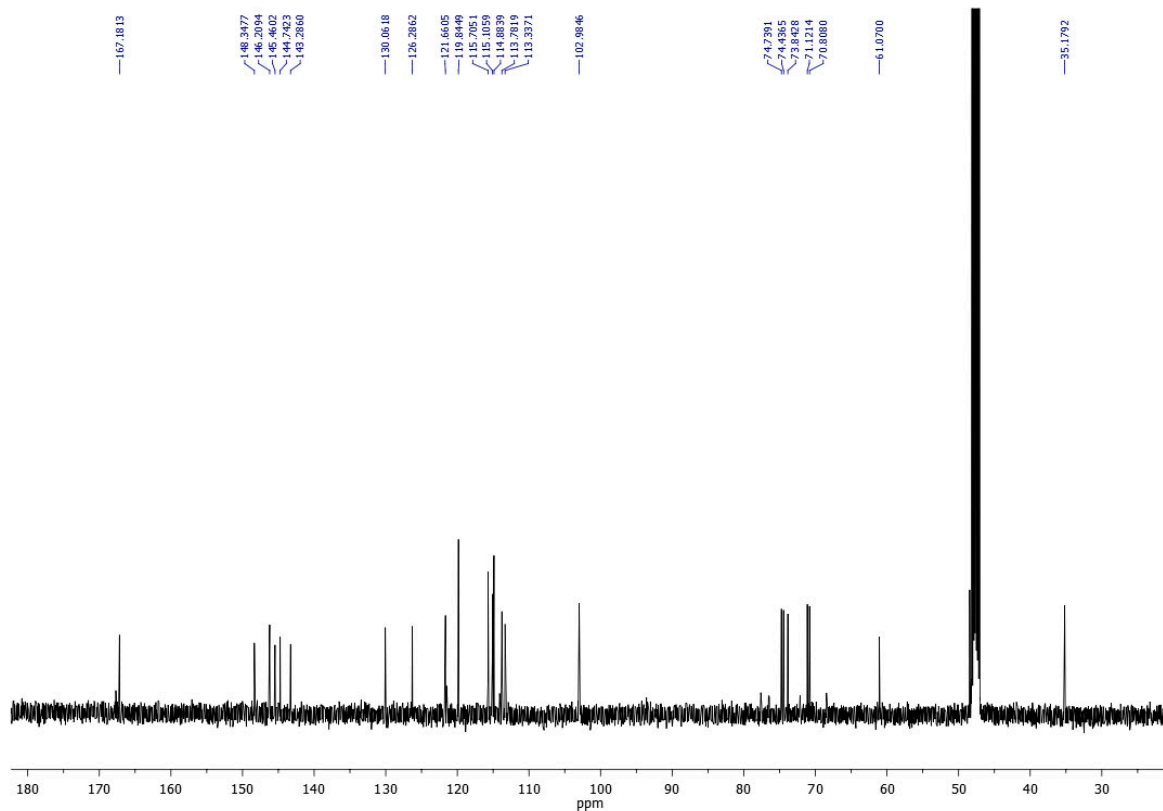


Figure S22. ^{13}C -NMR spectrum of compound 7 (125 MHz, CD_3OD).

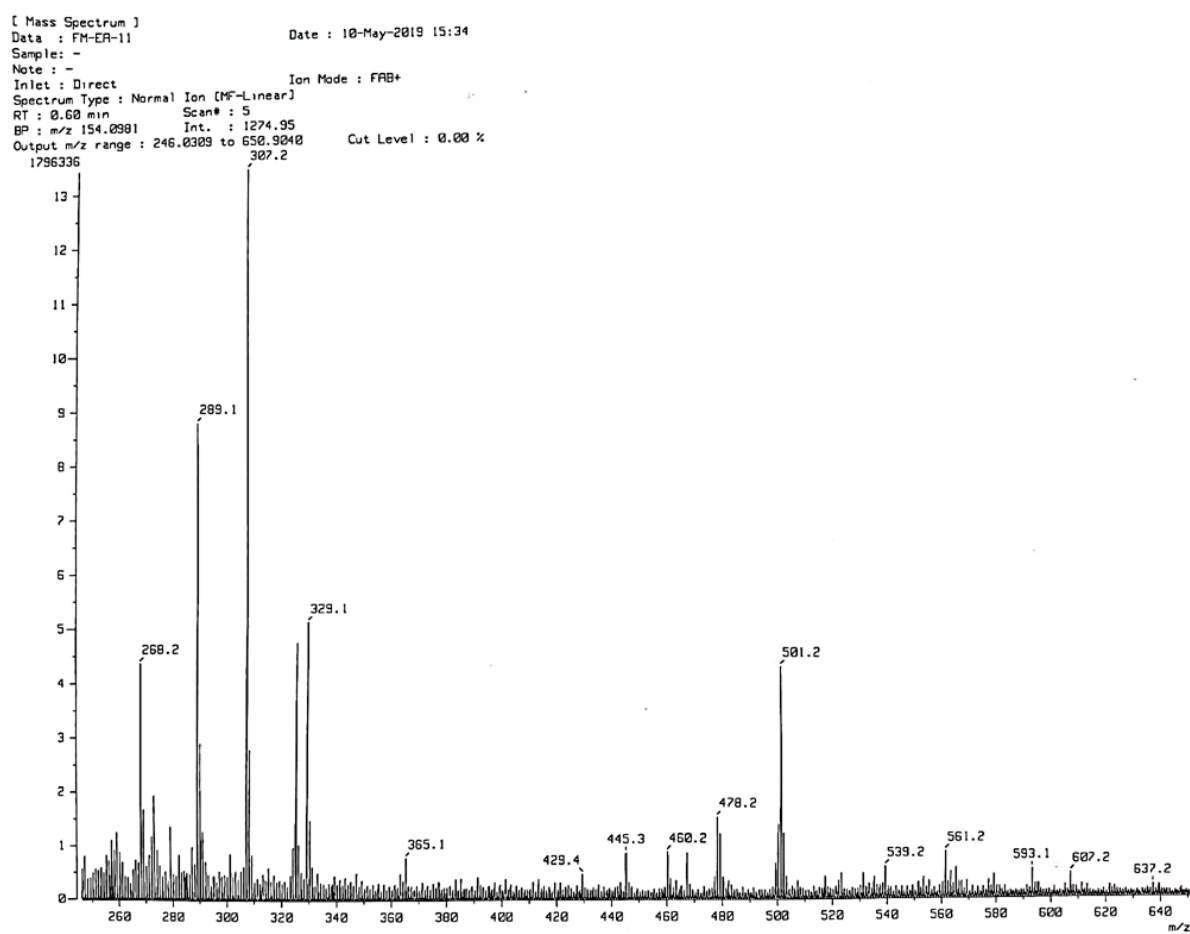


Figure S23. FAB-MS of compound 8 (*m*-NBA).

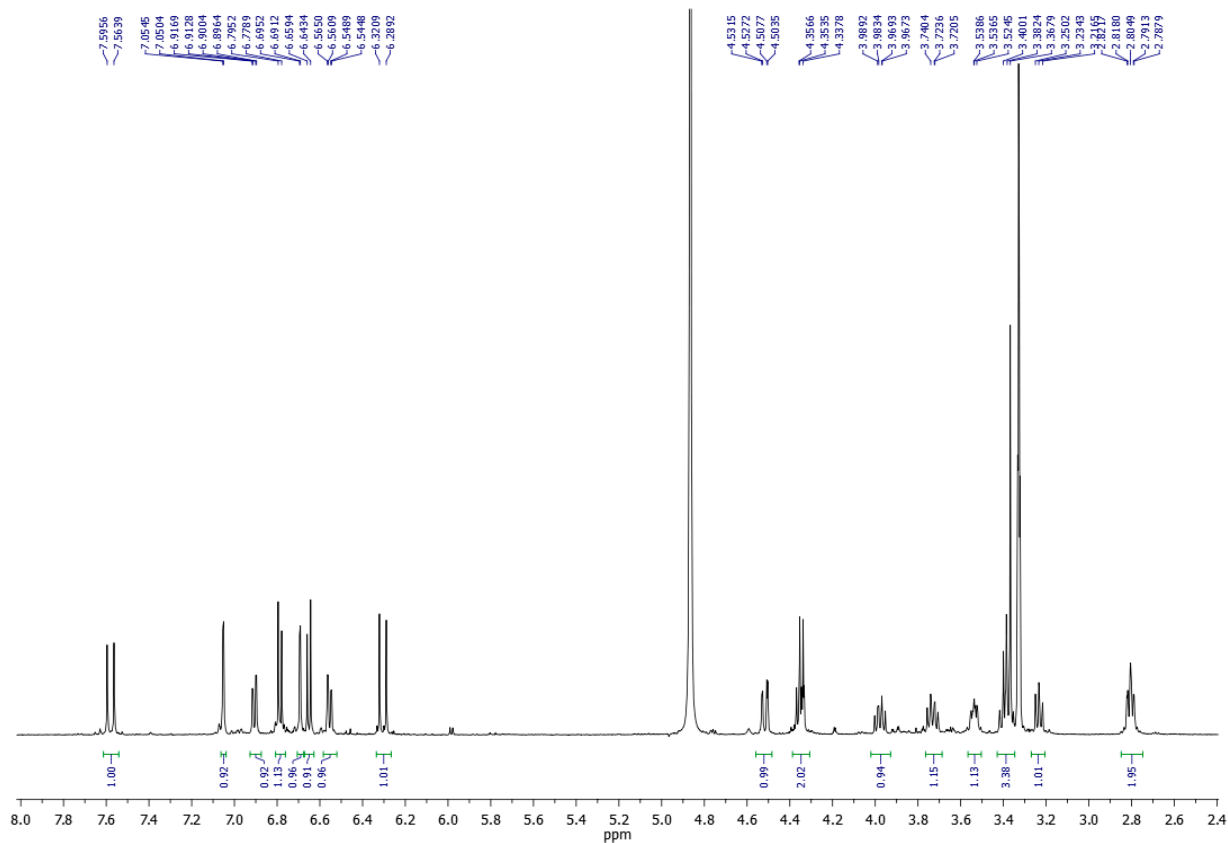


Figure S24. ^1H -NMR spectrum of compound **8** (500 MHz, CD_3OD).

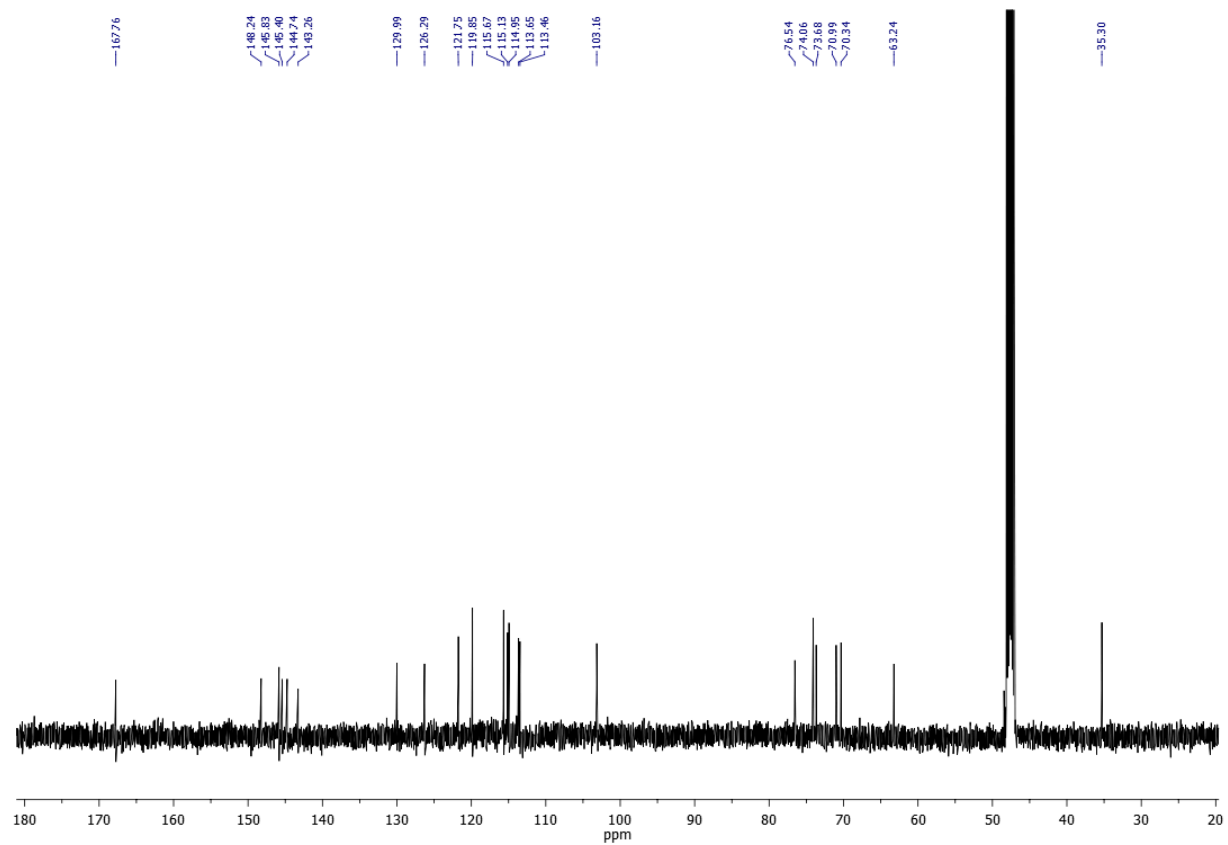


Figure S25. ^{13}C -NMR spectrum of compound **8** (125 MHz, CD_3OD).

[Mass Spectrum]
 Date : 20-Mar-2018 17:16
 Sample : -
 Note : -
 Inlet : Direct Ion Mode : FRB+
 Spectrum Type : Normal Ion [MF-Linear]
 RT : 1.20 min Scan# : 9
 BP : m/z 154.0363 Int. : 1599.99
 Output m/z range : 100.0000 to 601.7804 Cut Level : 0.00 %
 16777072

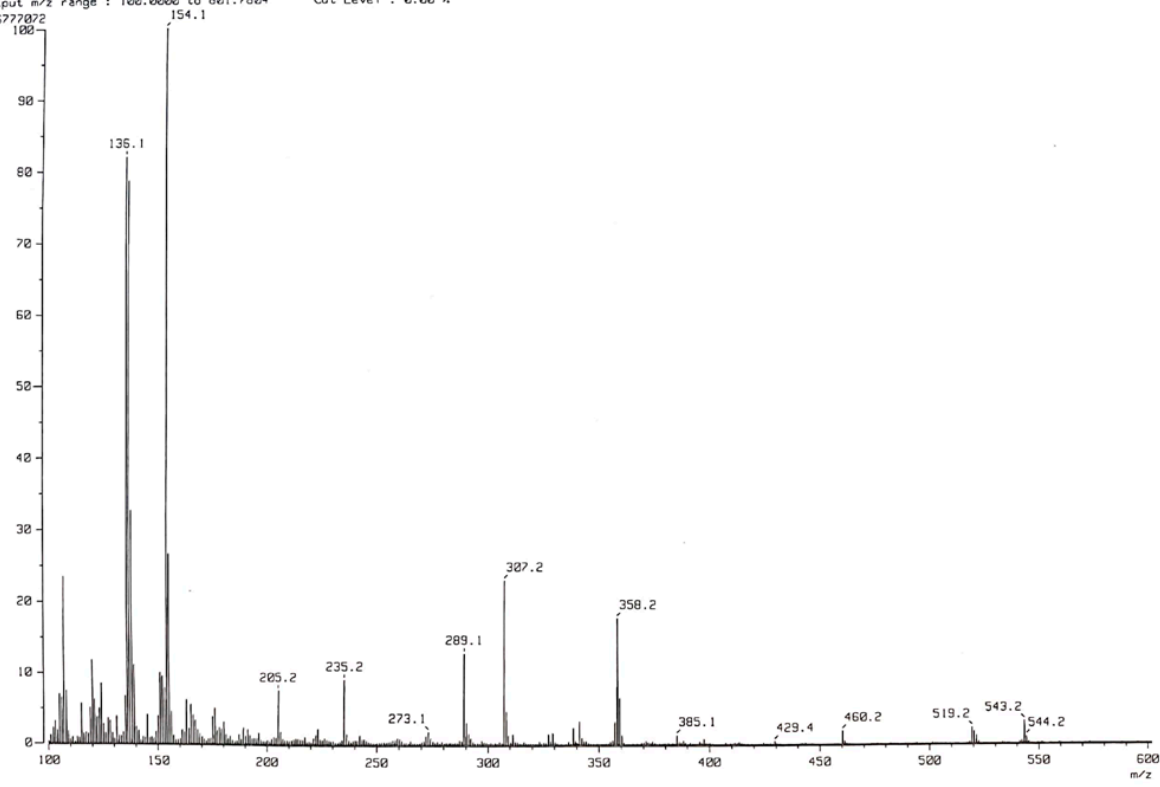


Figure S26. FAB-MS of compound 9 (*m*-NBA).

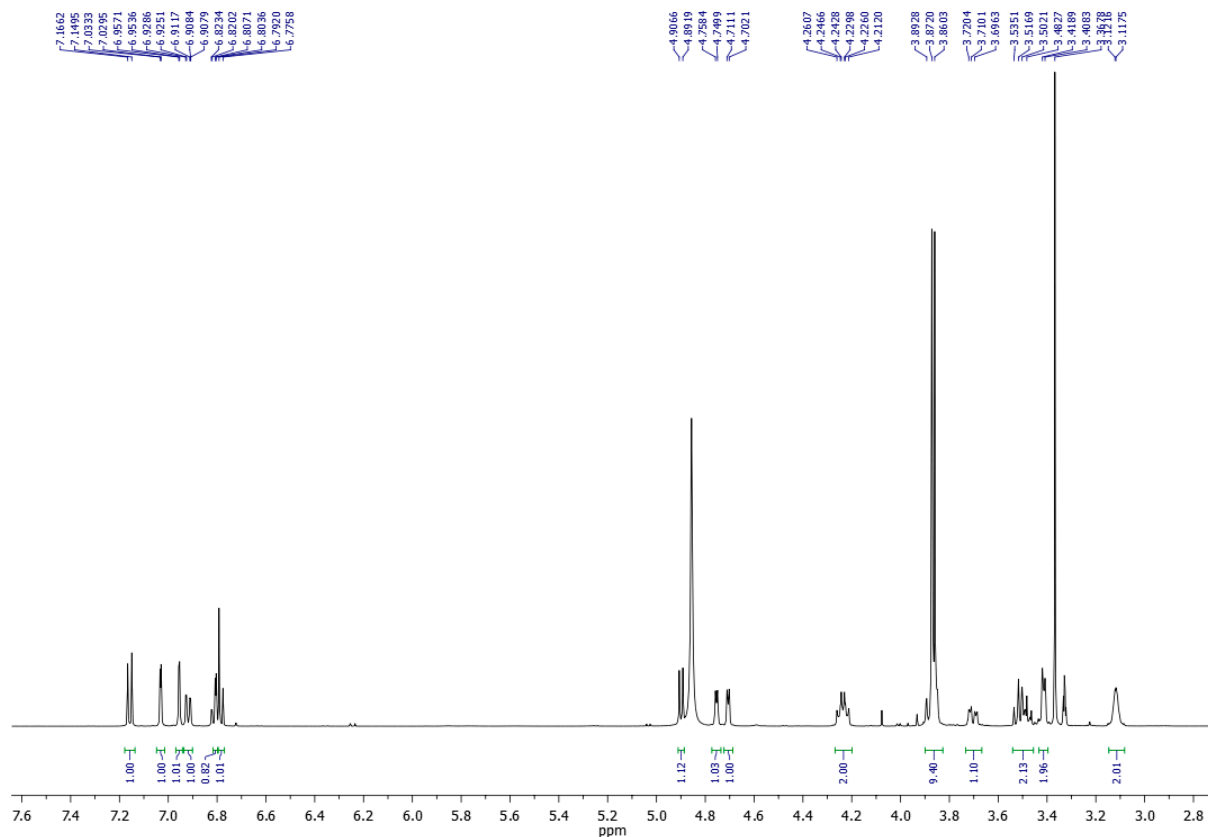


Figure S27. $^1\text{H-NMR}$ spectrum of compound 9 (500 MHz, CD_3OD).

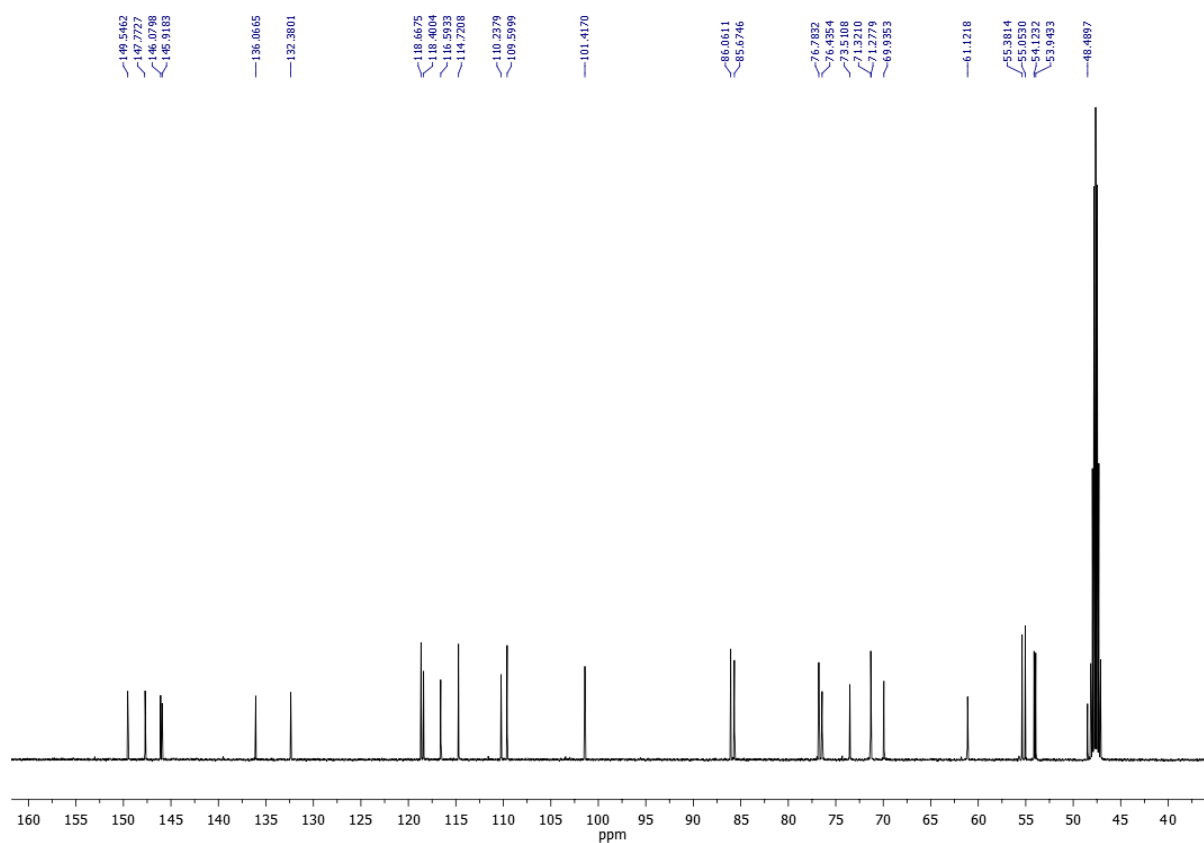


Figure S28. $^{13}\text{C-NMR}$ spectrum of compound 9 (125 MHz, CD_3OD).

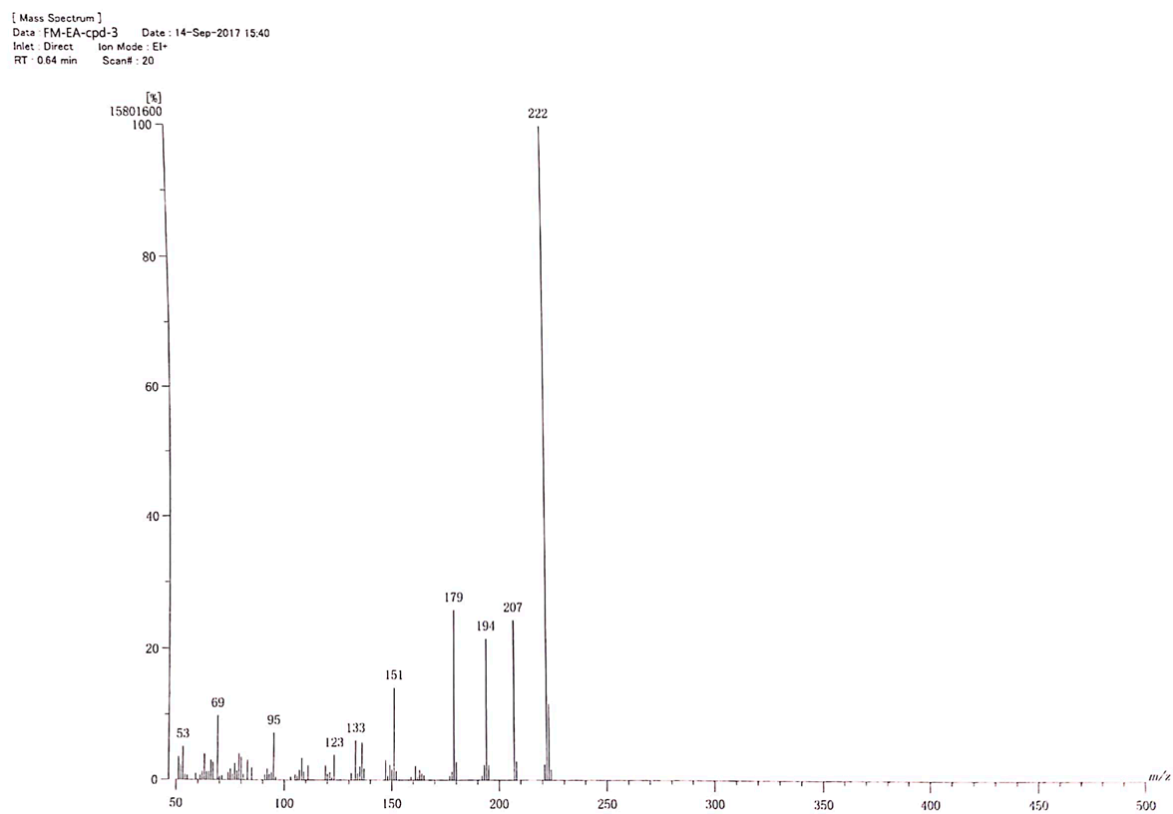


Figure S29. EI-MS of compound 10 (70 eV).

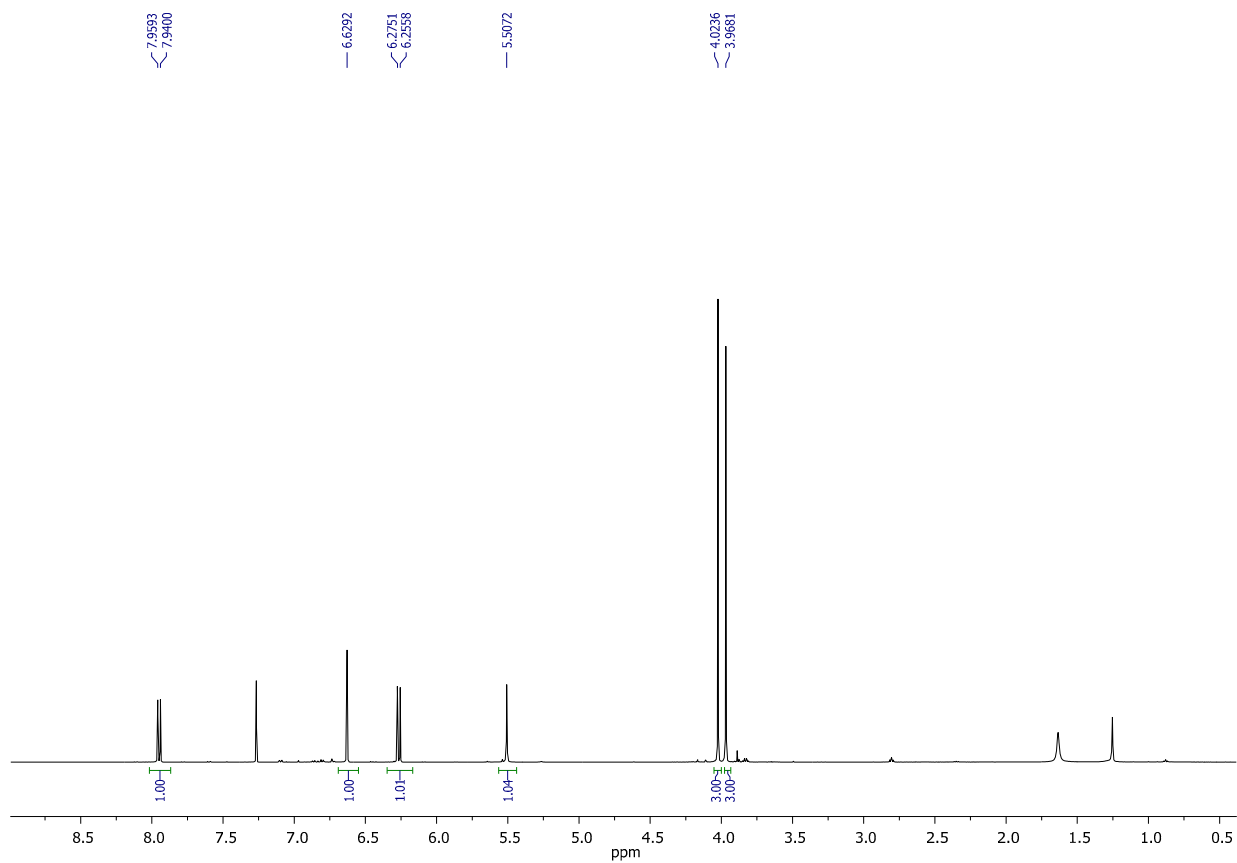


Figure S30. ¹H-NMR spectrum of compound 10 (500 MHz, CDCl₃).

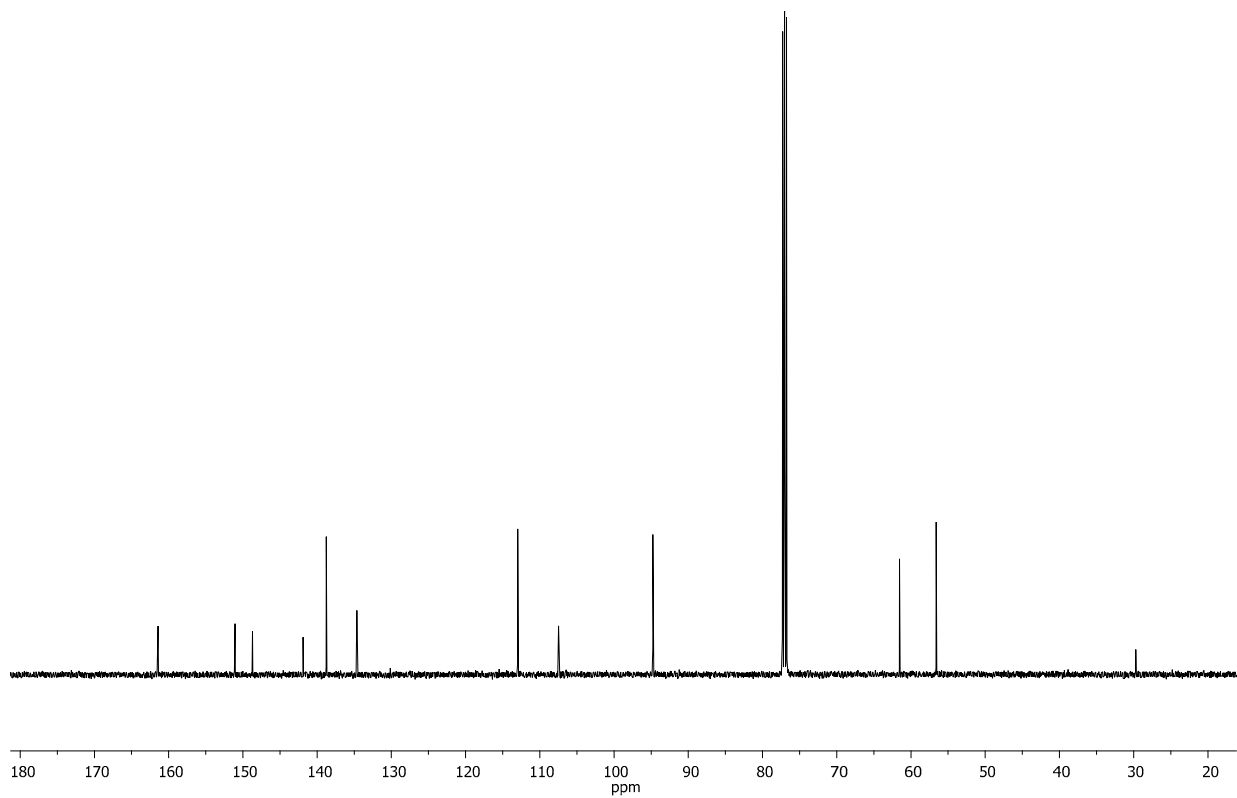


Figure S31. ^{13}C -NMR spectrum of compound **10** (125 MHz, CDCl_3).

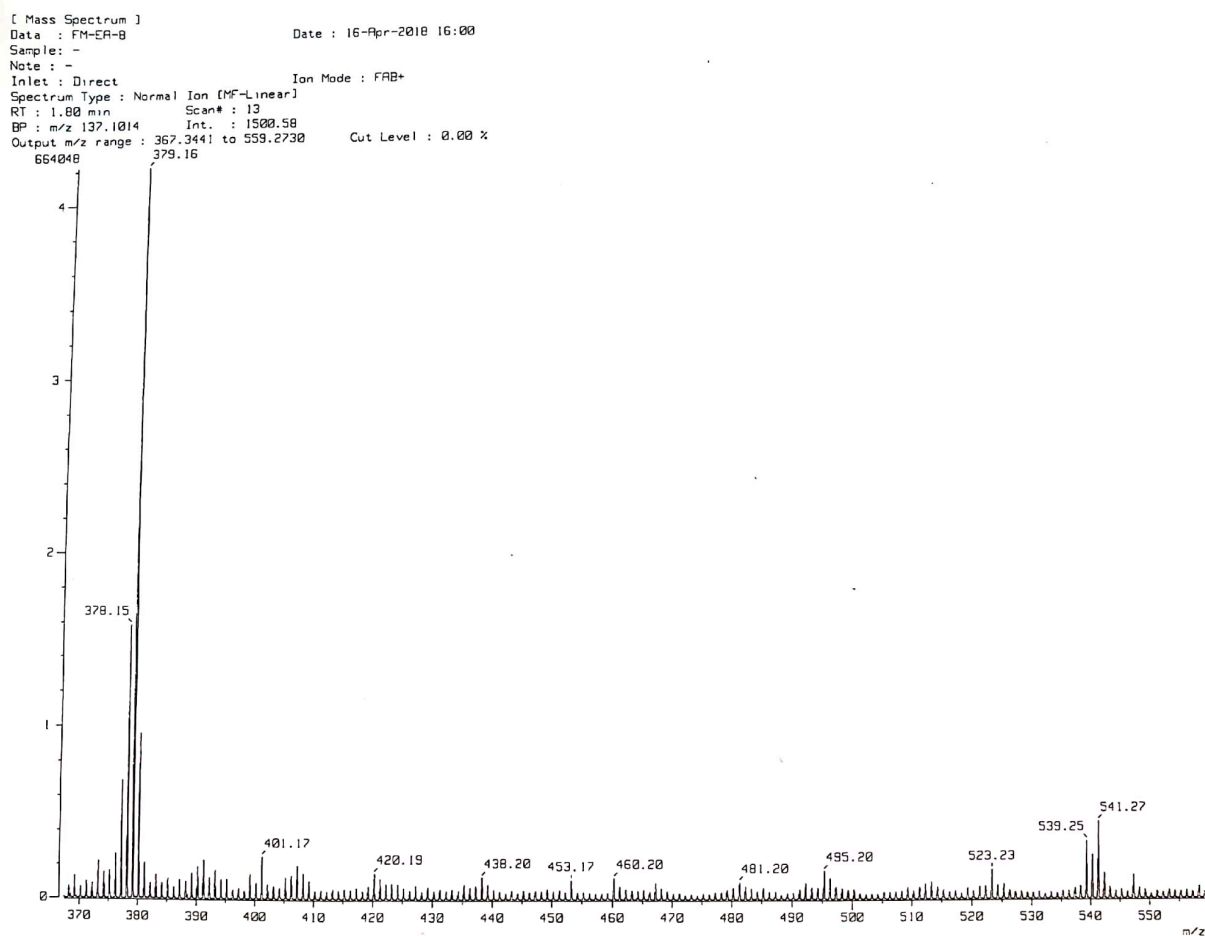


Figure S32. FAB-MS of compound **11** (*m*-NBA).

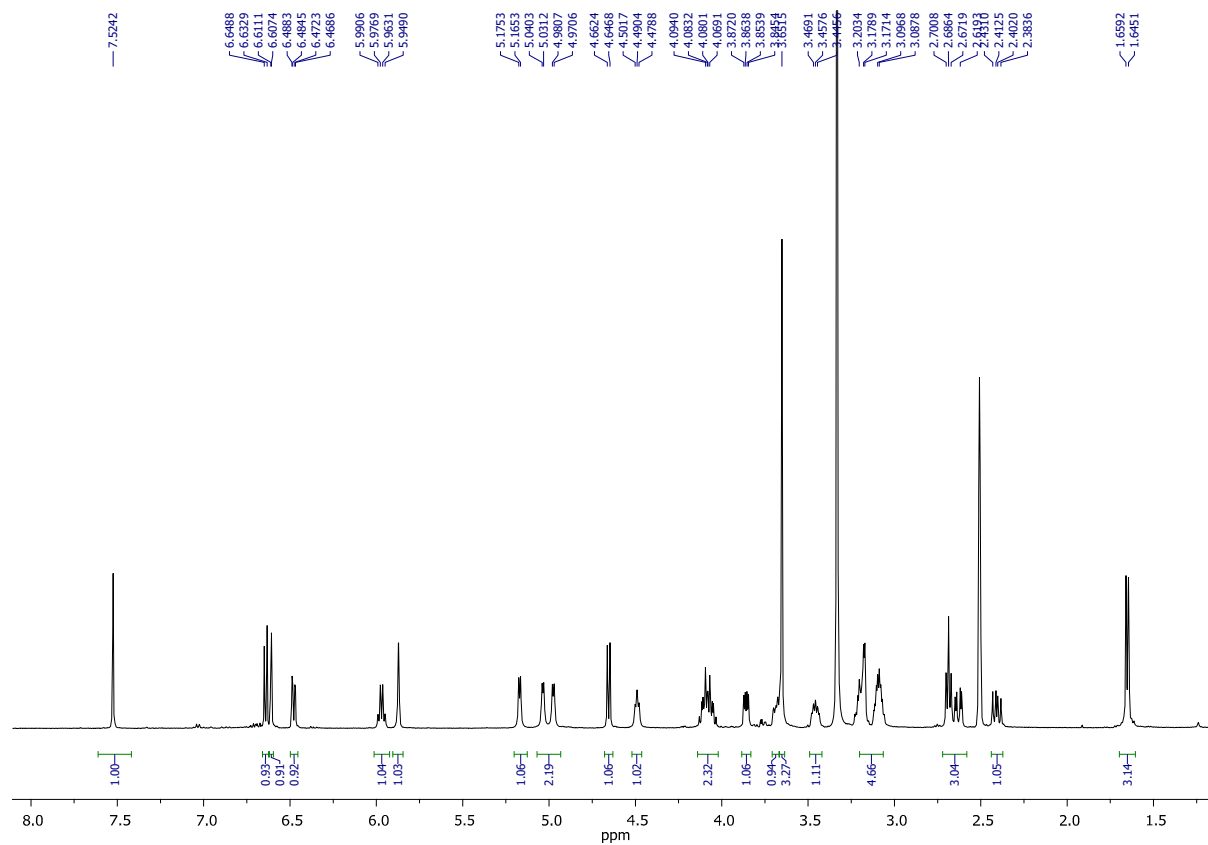


Figure S33. $^1\text{H-NMR}$ spectrum of compound **11** (500 MHz, $\text{DMSO-}d_6$).

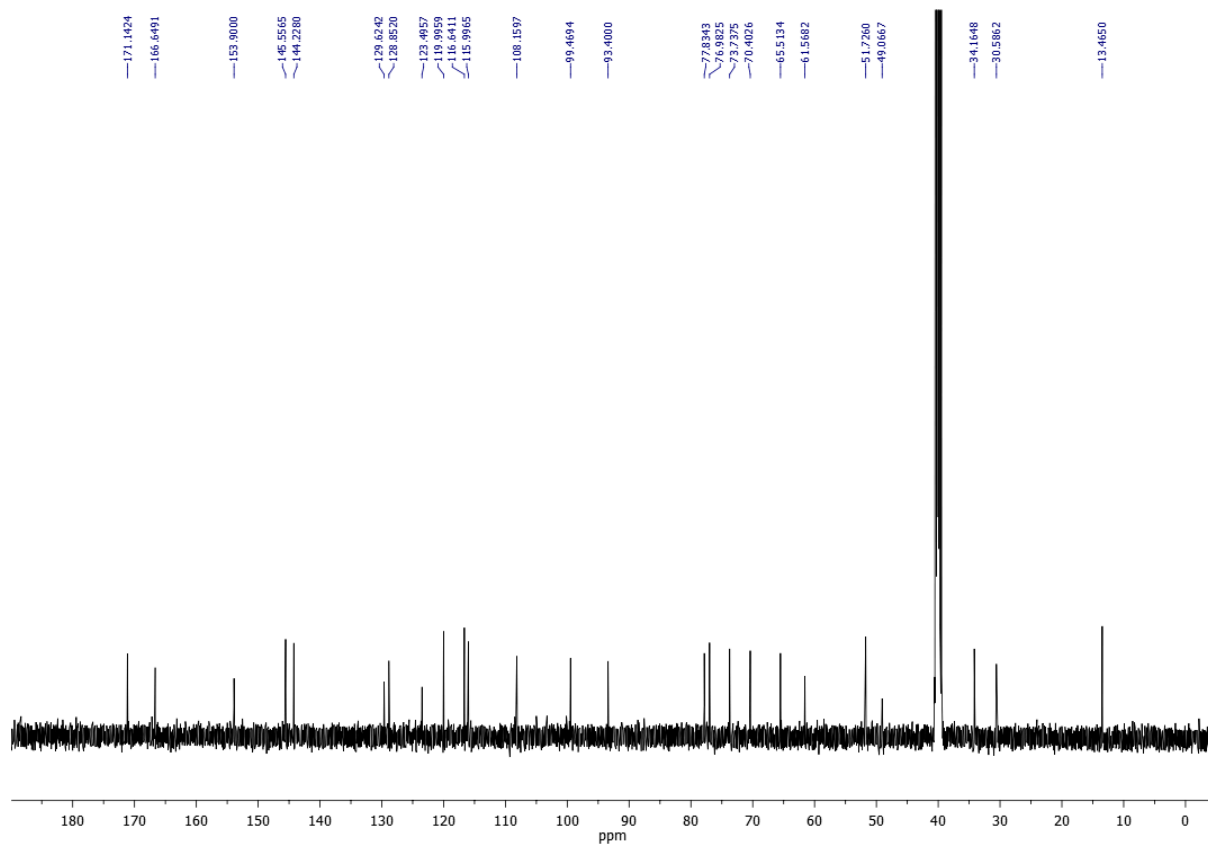


Figure S34. $^{13}\text{C-NMR}$ spectrum of compound **11** (125 MHz, $\text{DMSO-}d_6$).

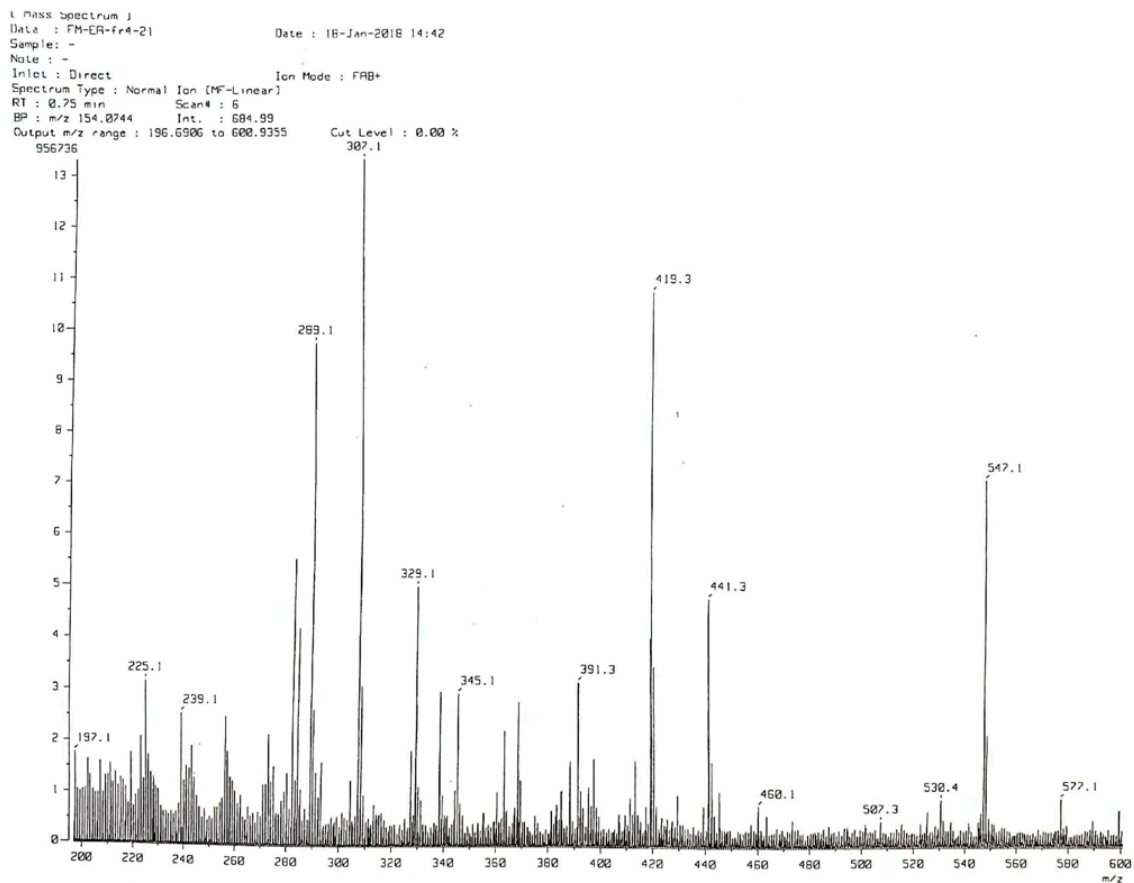


Figure S35. FAB-MS of compound 12 (*m*-NBA).

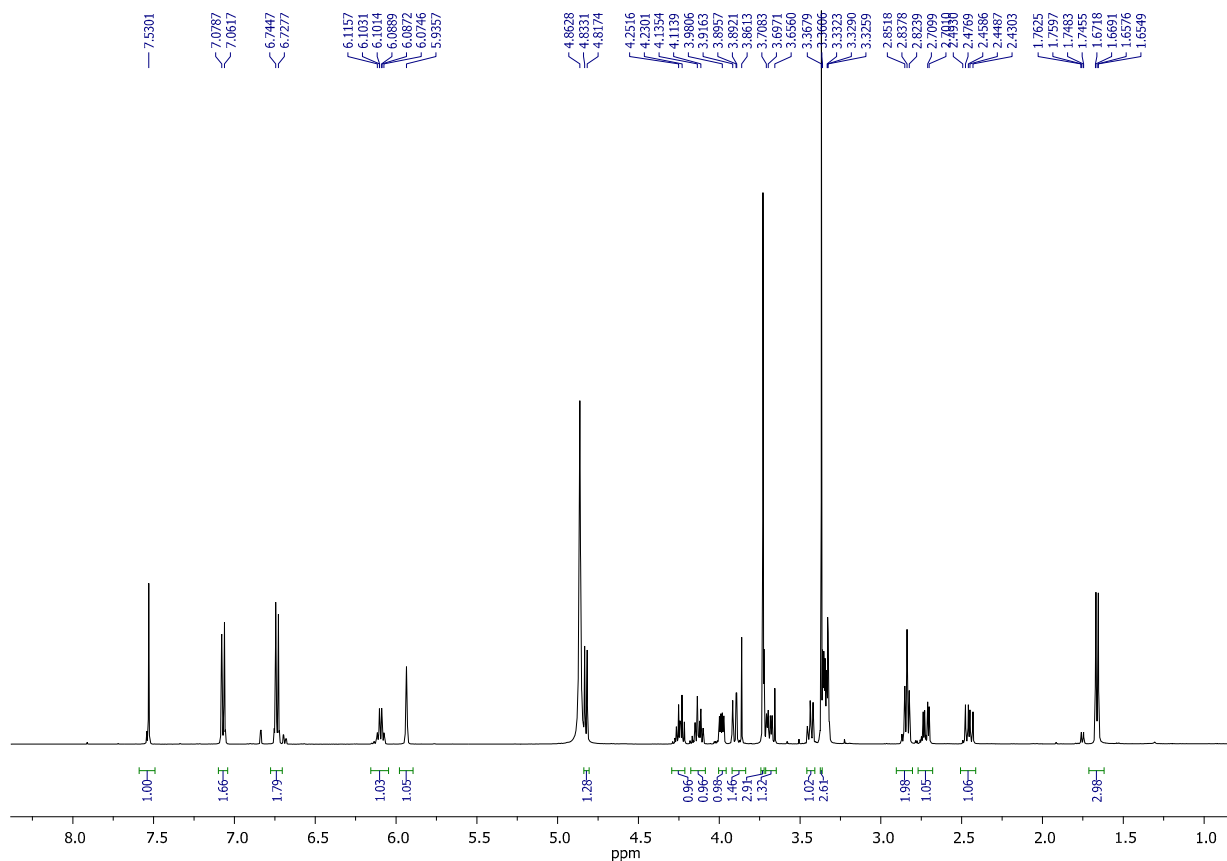


Figure S36. $^1\text{H-NMR}$ spectrum of compound **12** (500 MHz, CD_3OD).

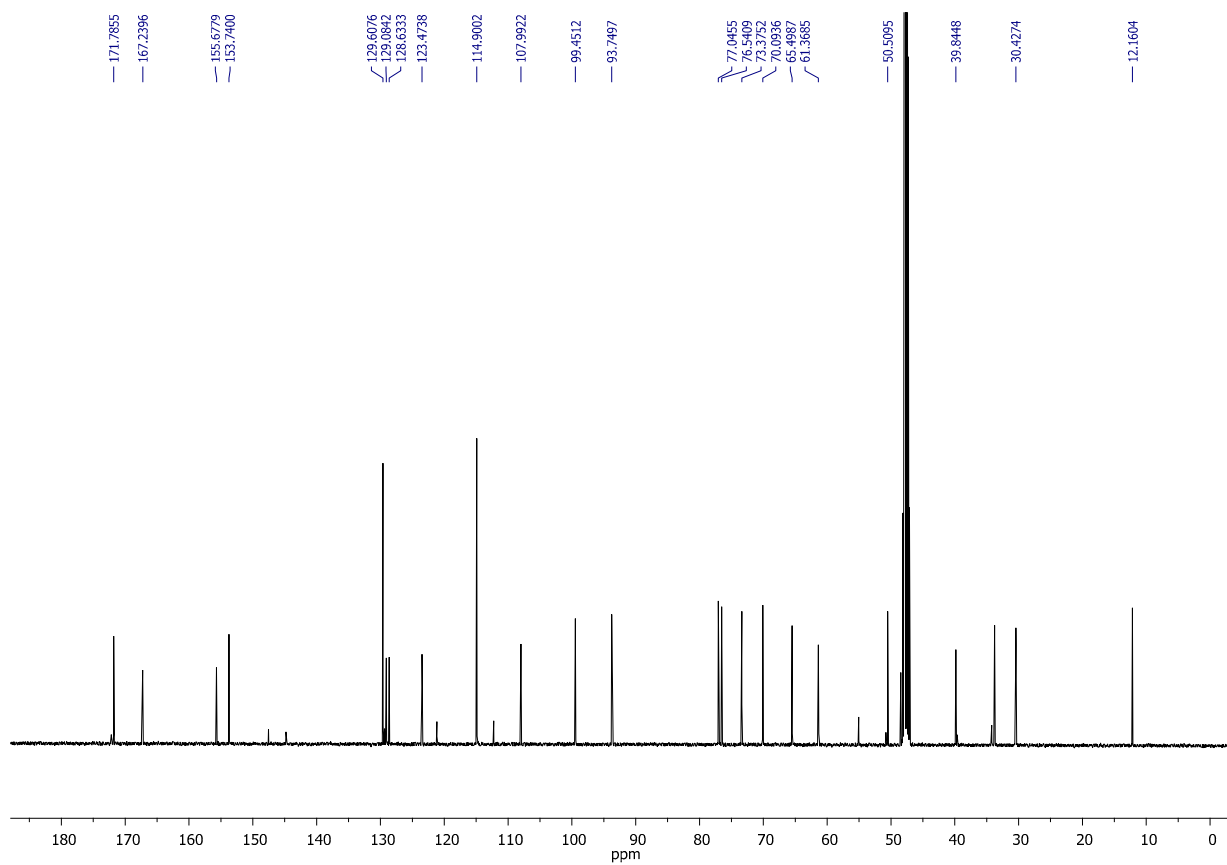


Figure S37. $^{13}\text{C-NMR}$ spectrum of compound **12** (125 MHz, CD_3OD).