

## Supplementary file

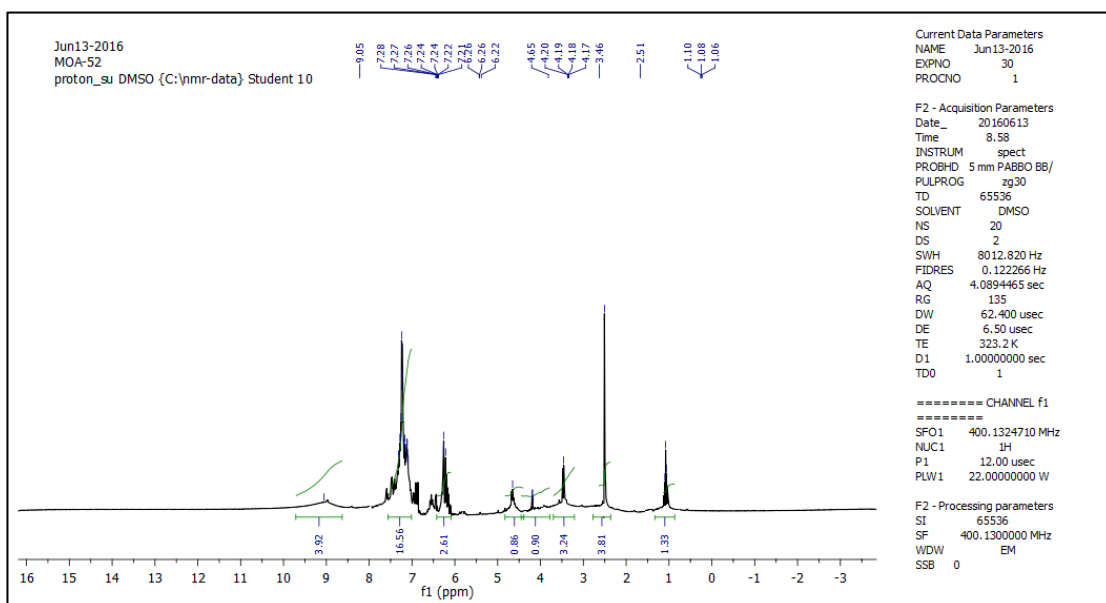


Figure S1.  $^1\text{H}$ -NMR spectrum of compound 5a

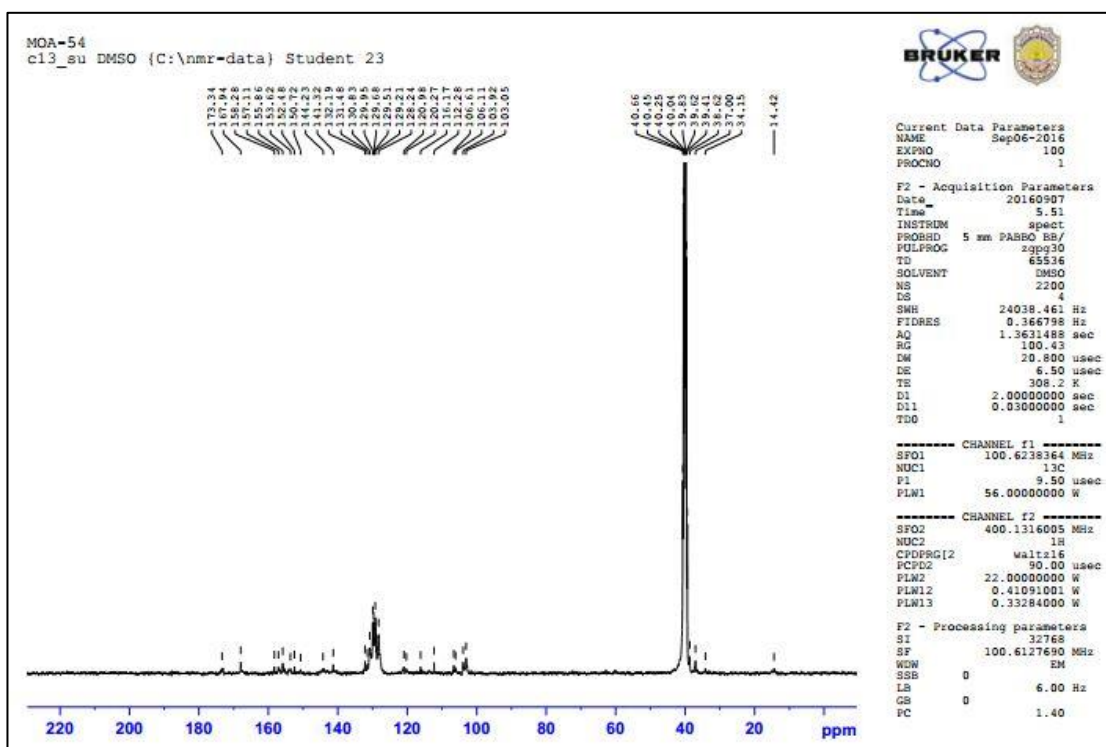


Figure S2.  $^{13}\text{C}$ -NMR spectrum of compound 5a

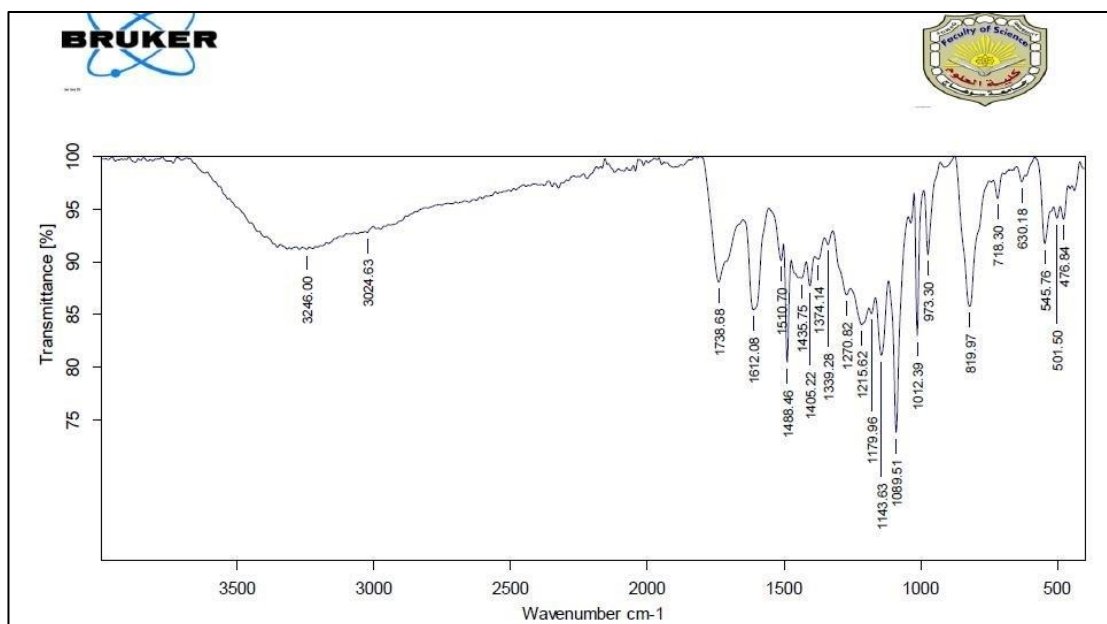


Figure S3. IR spectrum of compound 5b

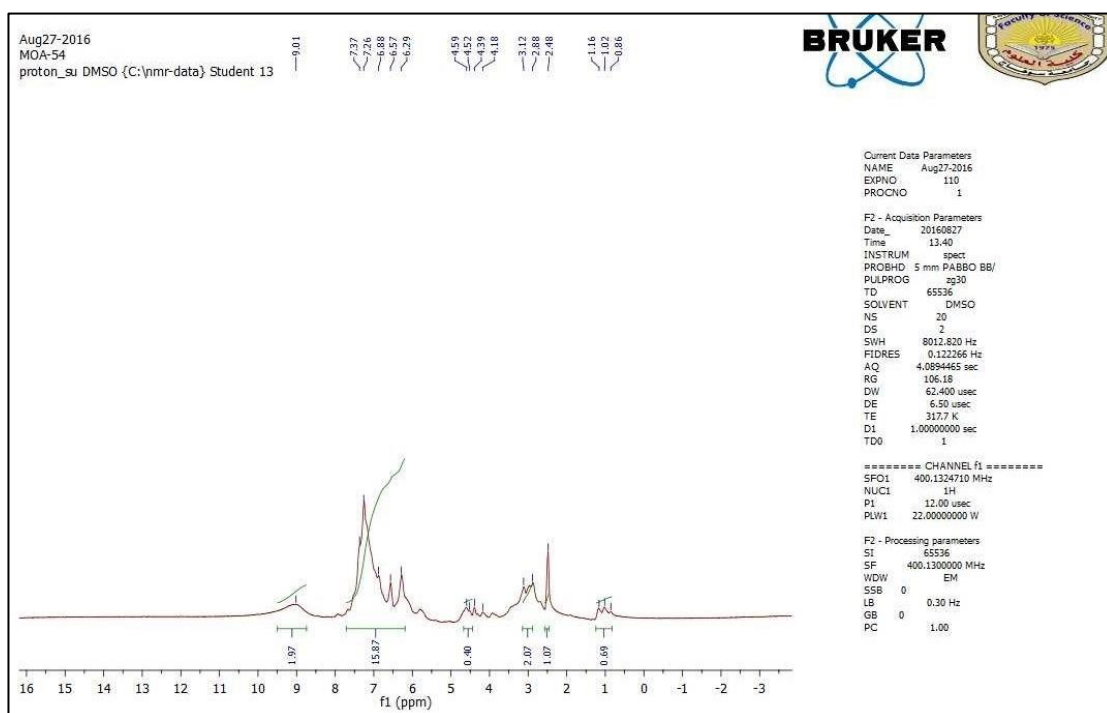


Figure S4. <sup>1</sup>H-NMR spectrum of compound 5b

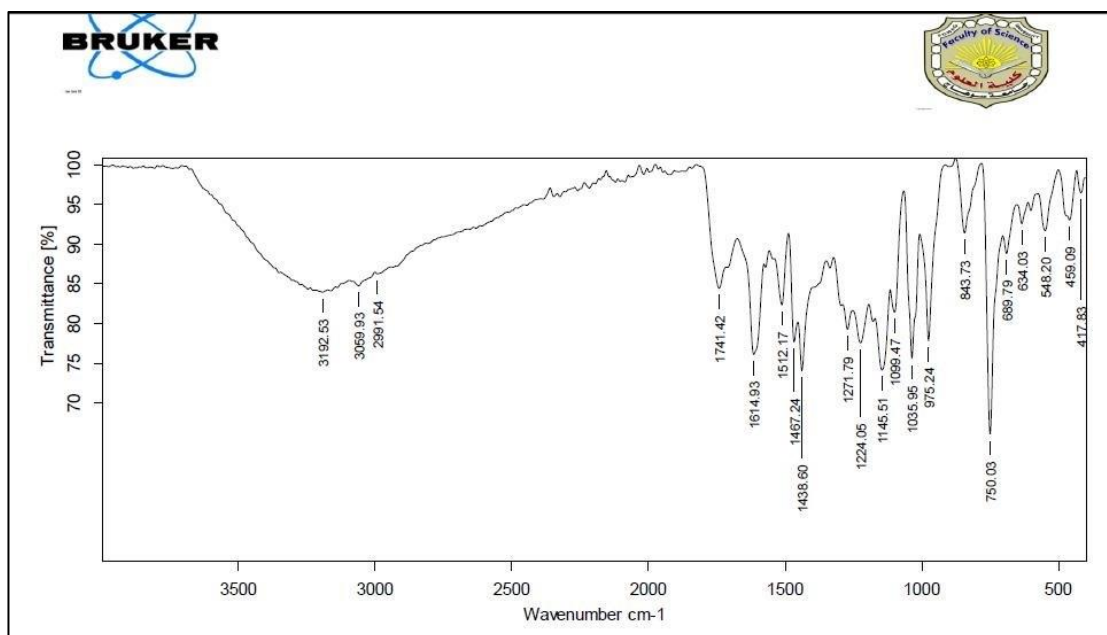


Figure S5. IR spectrum of compound 5c

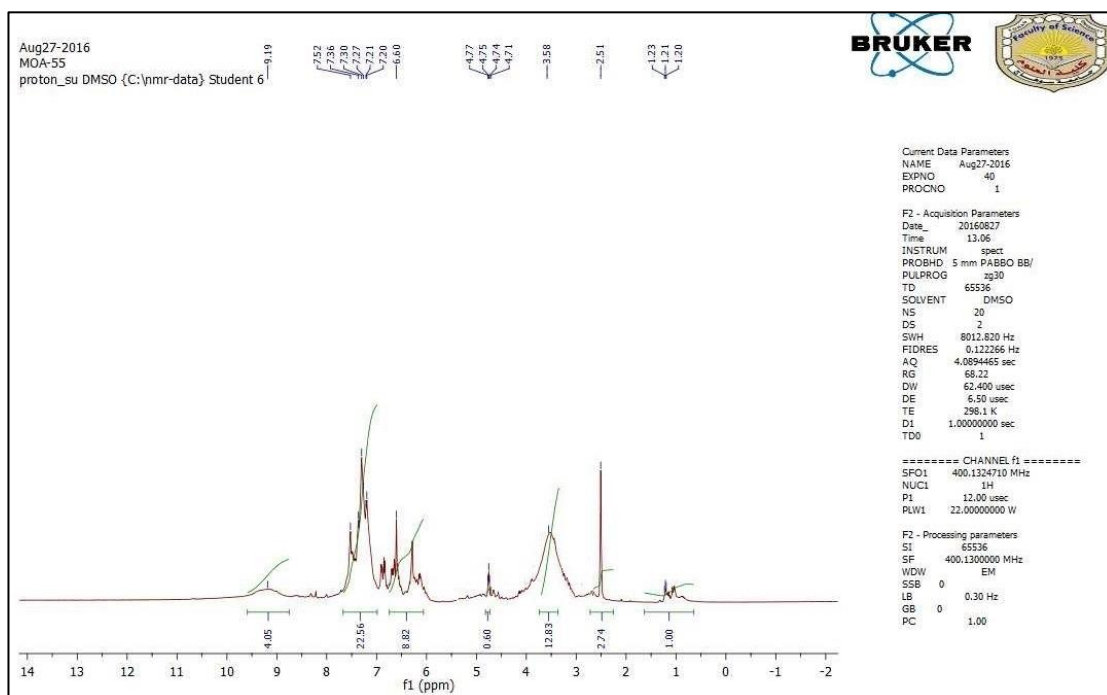


Figure S6. <sup>1</sup>H-NMR spectrum of compound 5c

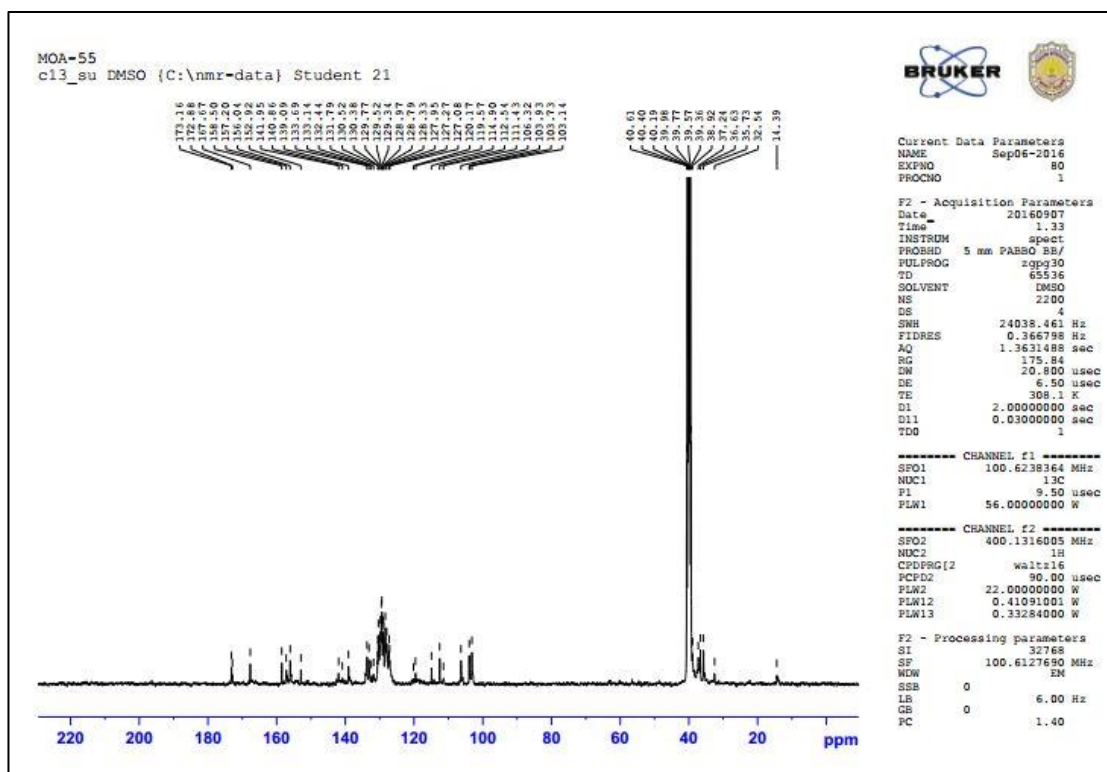


Figure S7.  $^{13}\text{C}$ -NMR spectrum of compound 5c

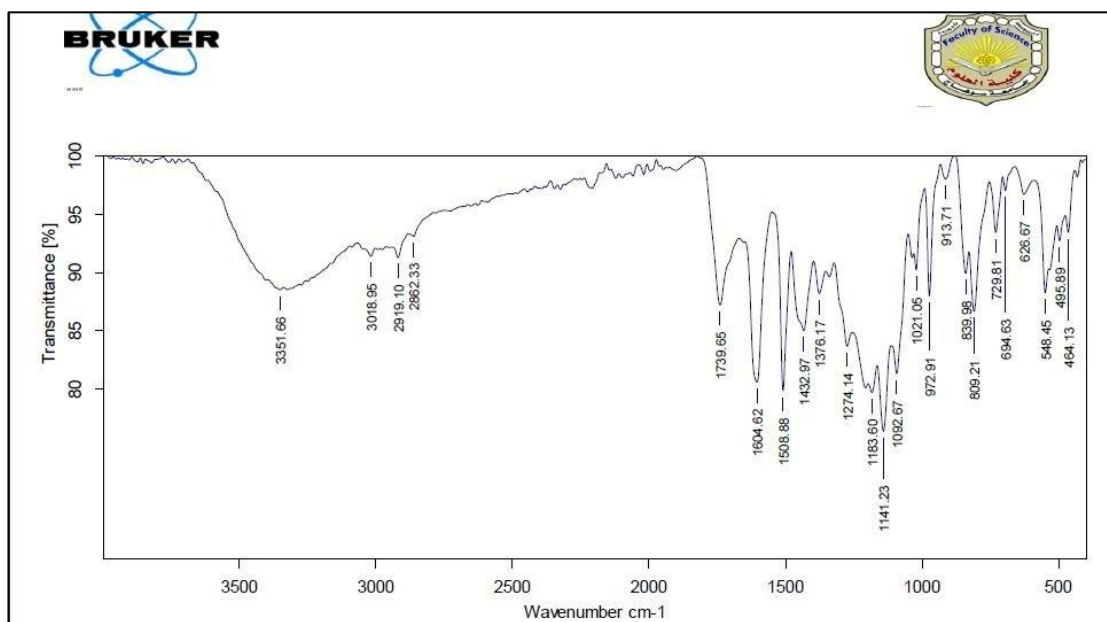


Figure S8. IR spectrum of compound 5d

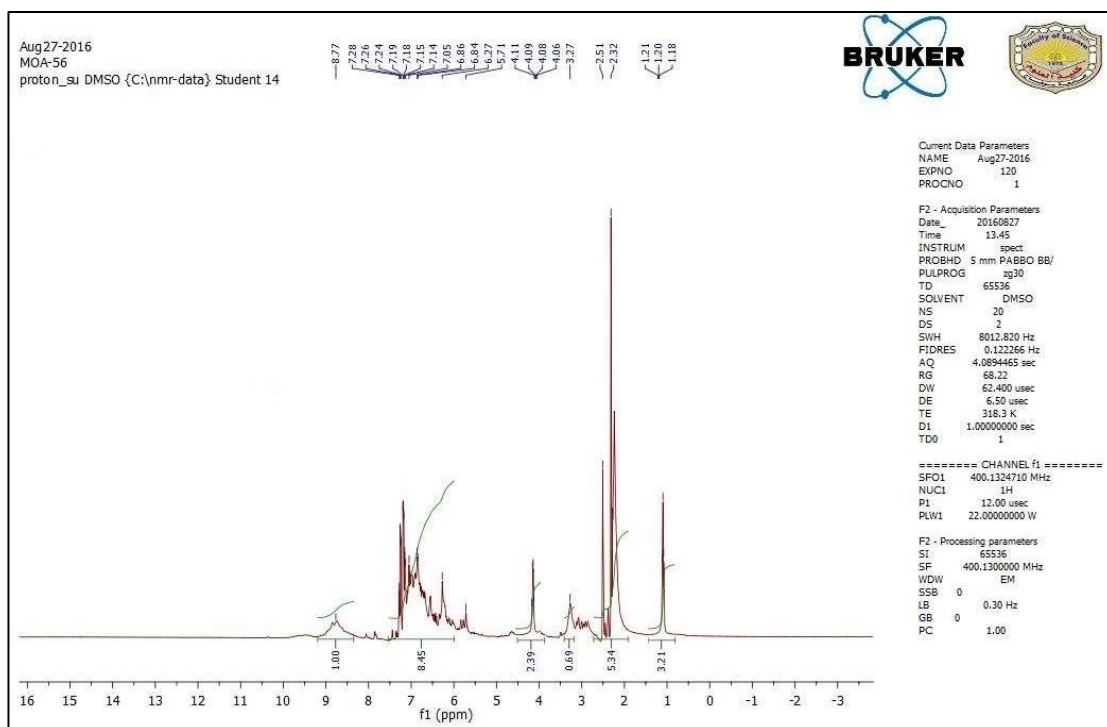


Figure S9.  $^1\text{H}$ -NMR spectrum of compound 5d

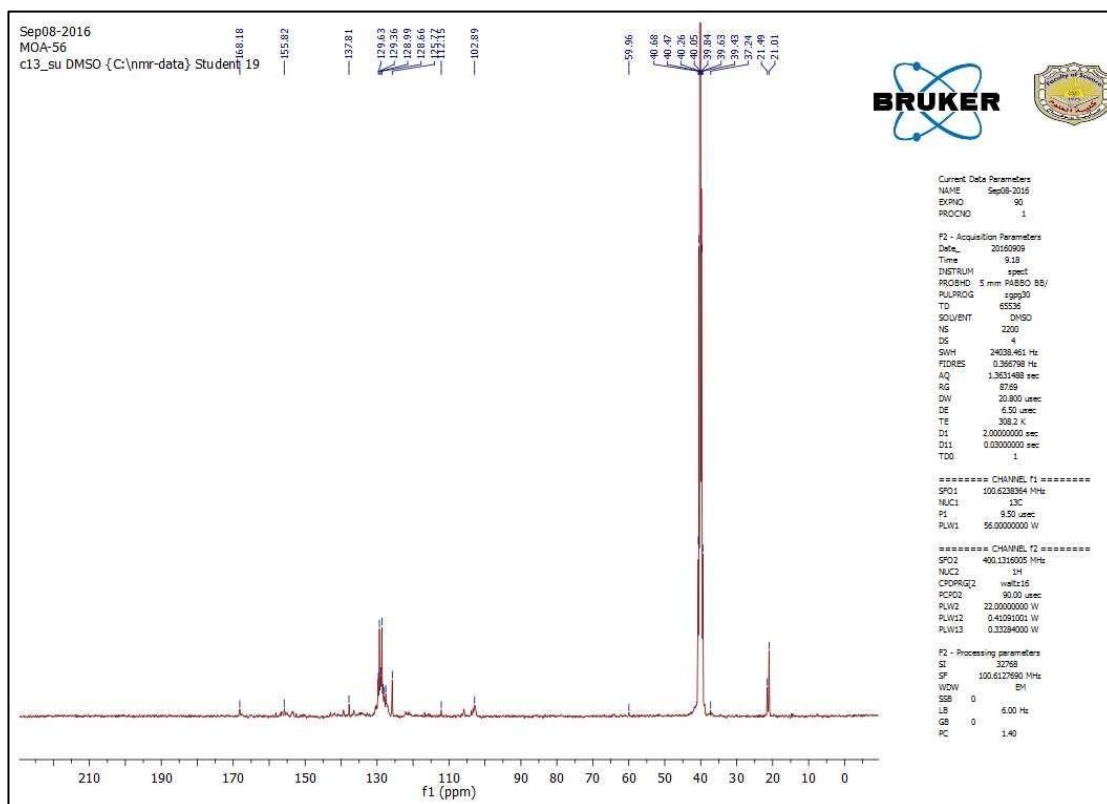


Figure S10.  $^{13}\text{C}$ -NMR spectrum of compound 5d



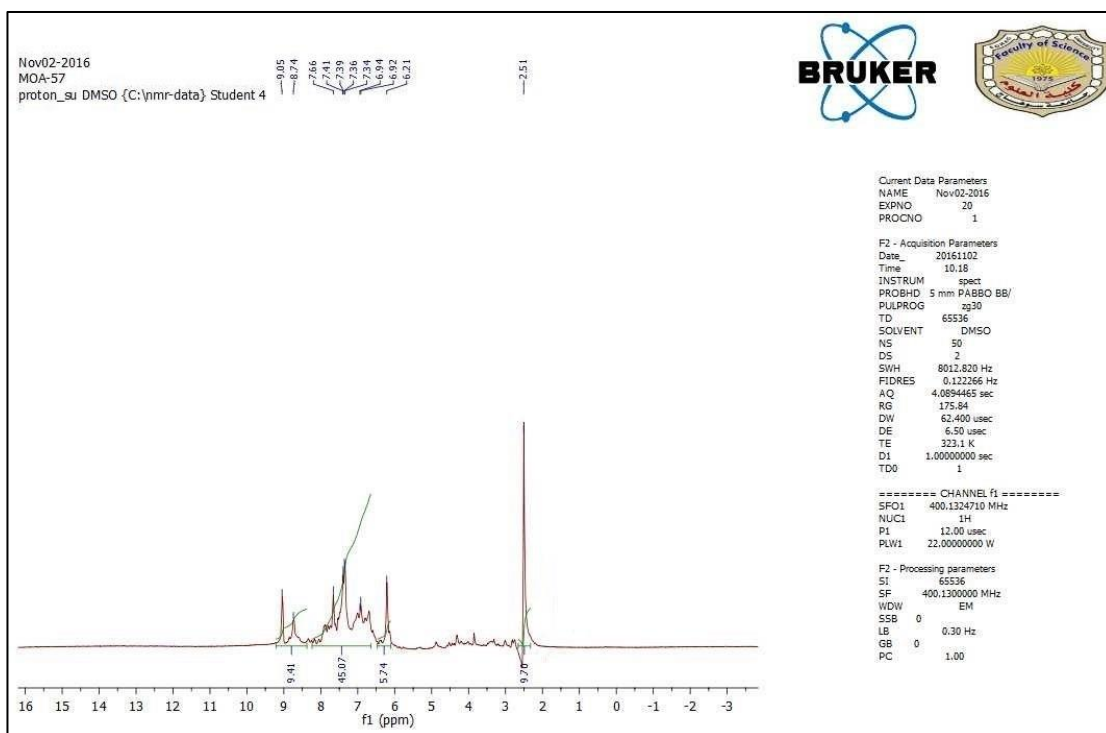


Figure S13.  $^1\text{H}$ -NMR spectrum of compound 6

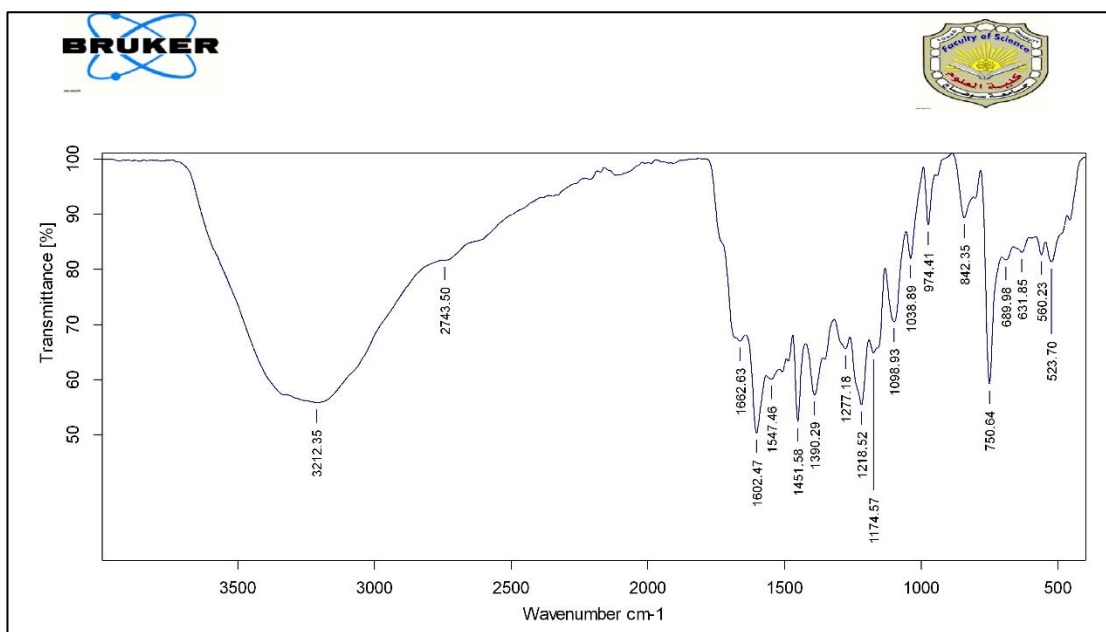
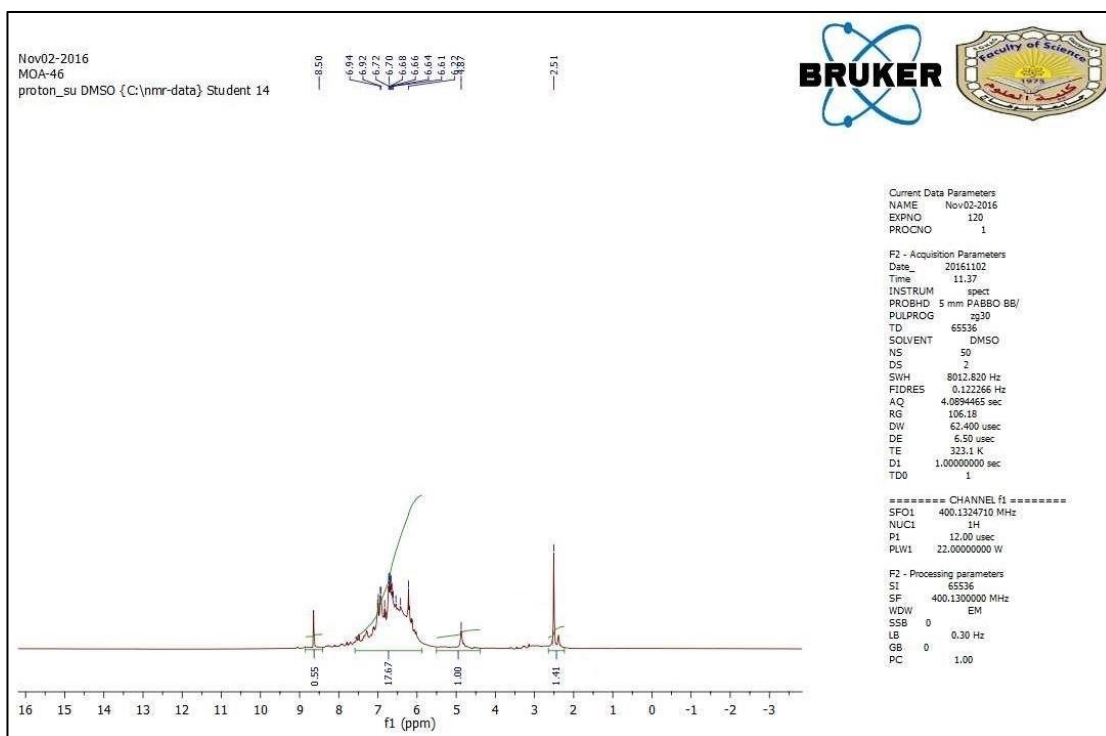
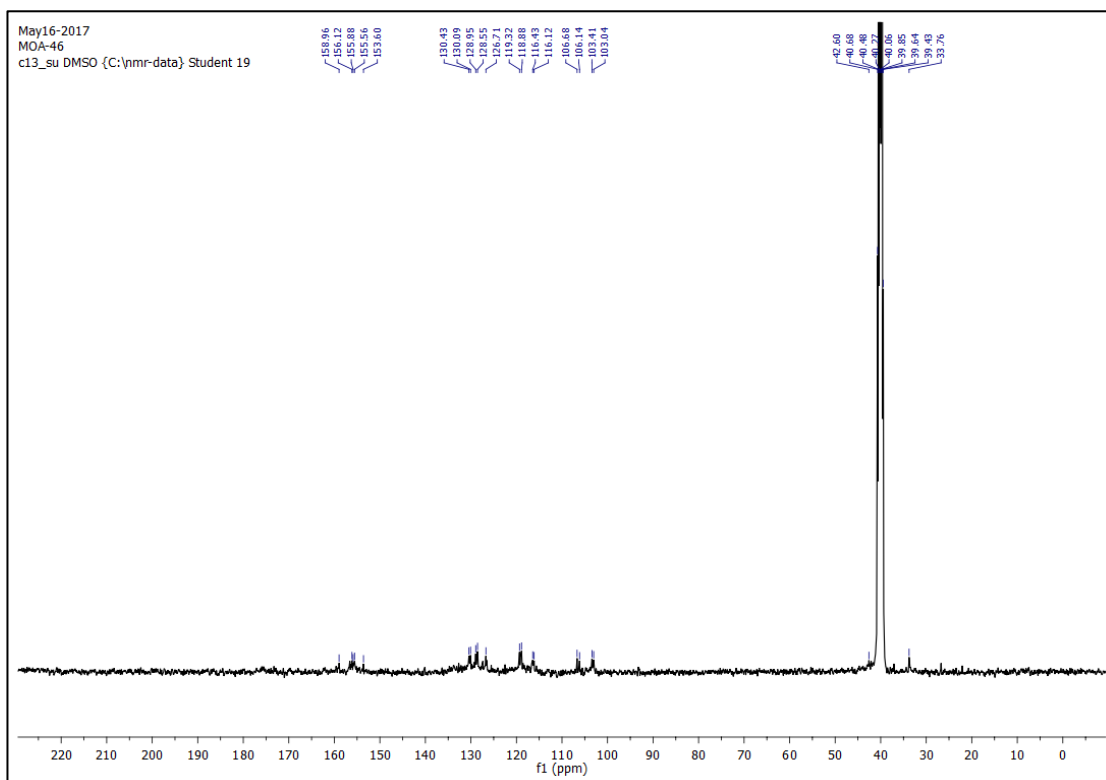


Figure S14. IR spectrum of compound 7





**Figure S15.  $^1\text{H}$ -NMR spectrum of compound 7**



**Figure S16.  $^{13}\text{C}$ -NMR spectrum of compound 7**



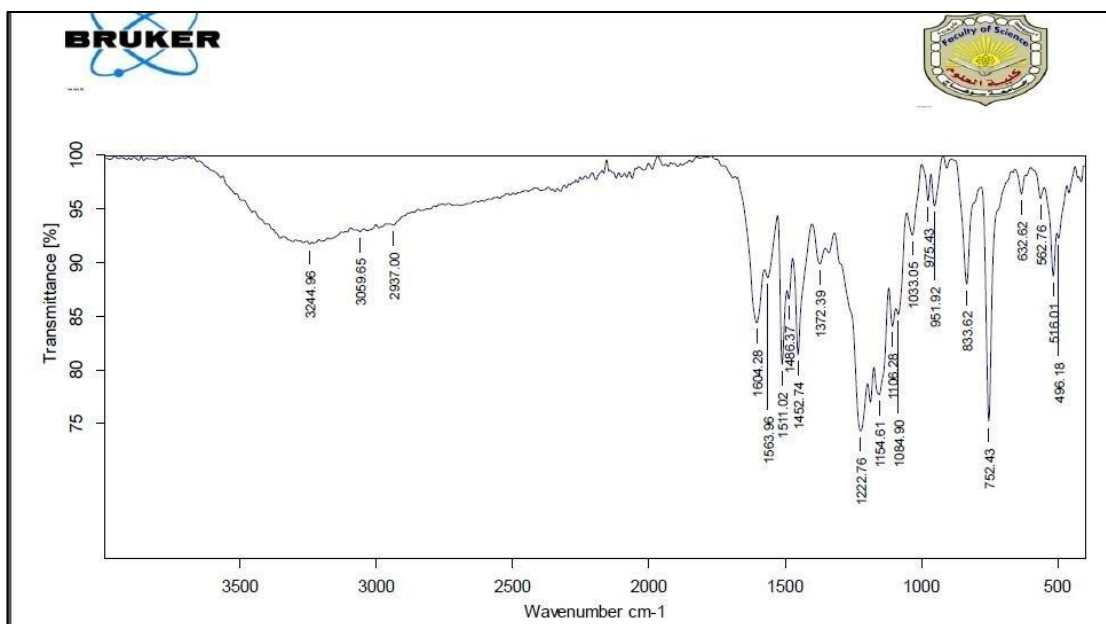


Figure S17. IR spectrum of compound 9

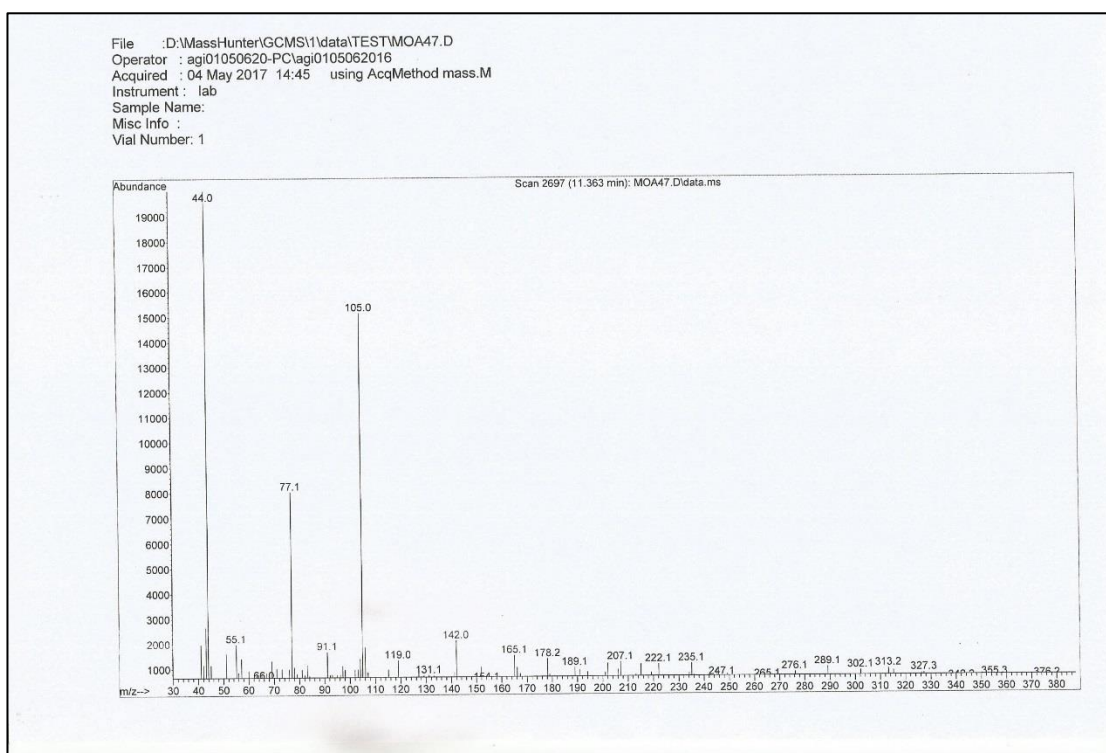
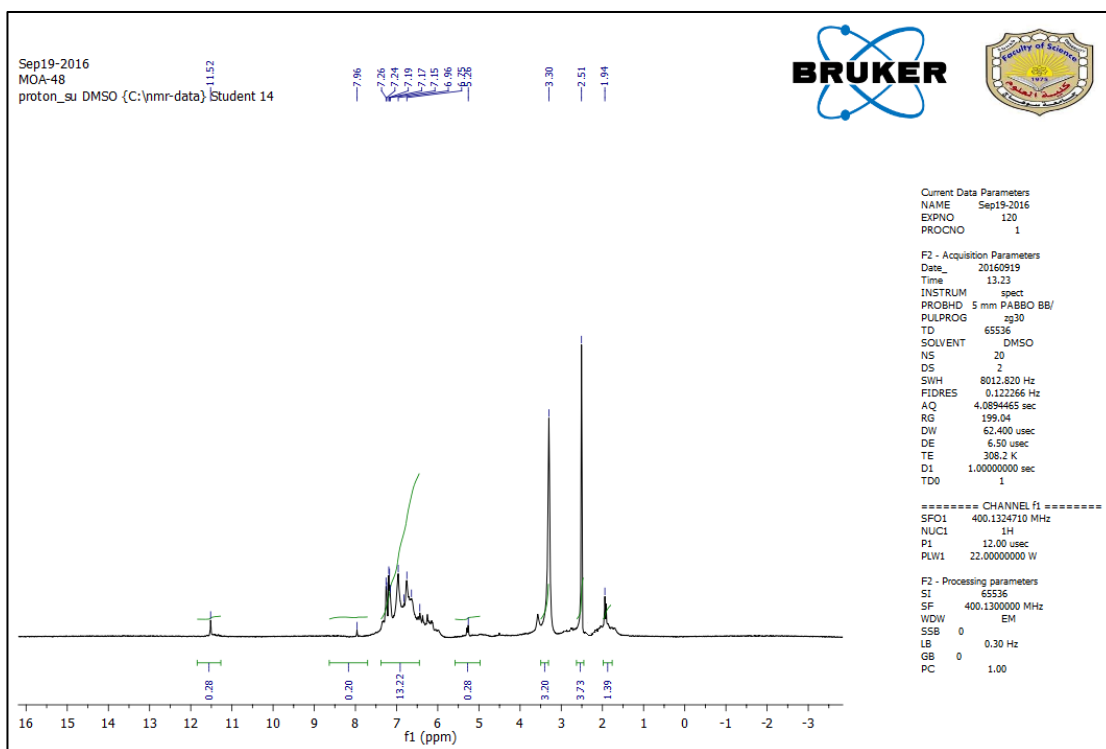
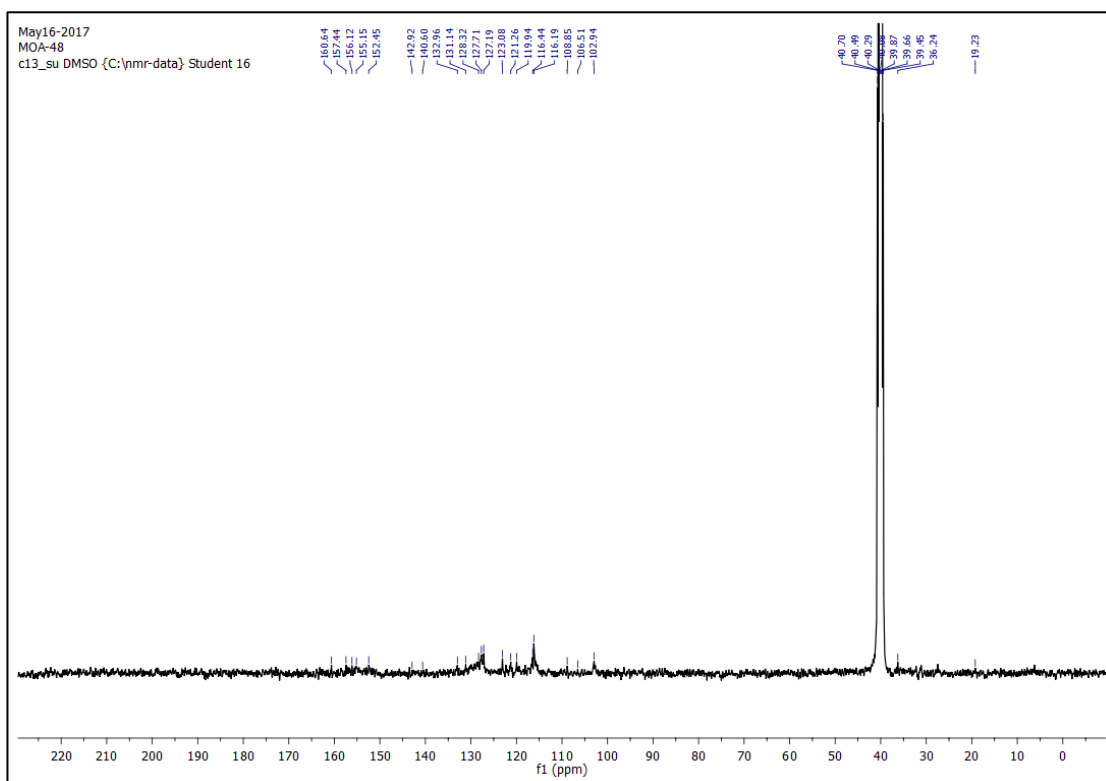


Figure S18. Mass spectrum of compound 9



**Figure S19.  $^1\text{H}$ -NMR spectrum of compound 9**



**Figure S20.  $^{13}\text{C}$ -NMR spectrum of compound 9**

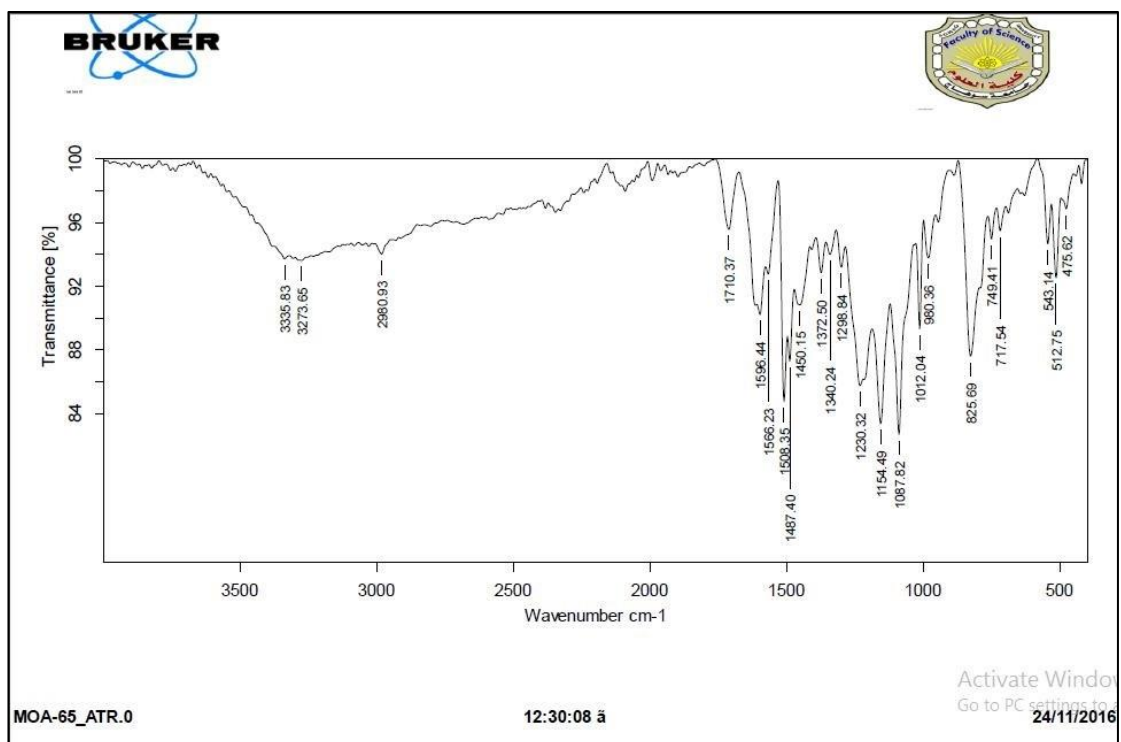


Figure S21. IR spectrum of compound 10

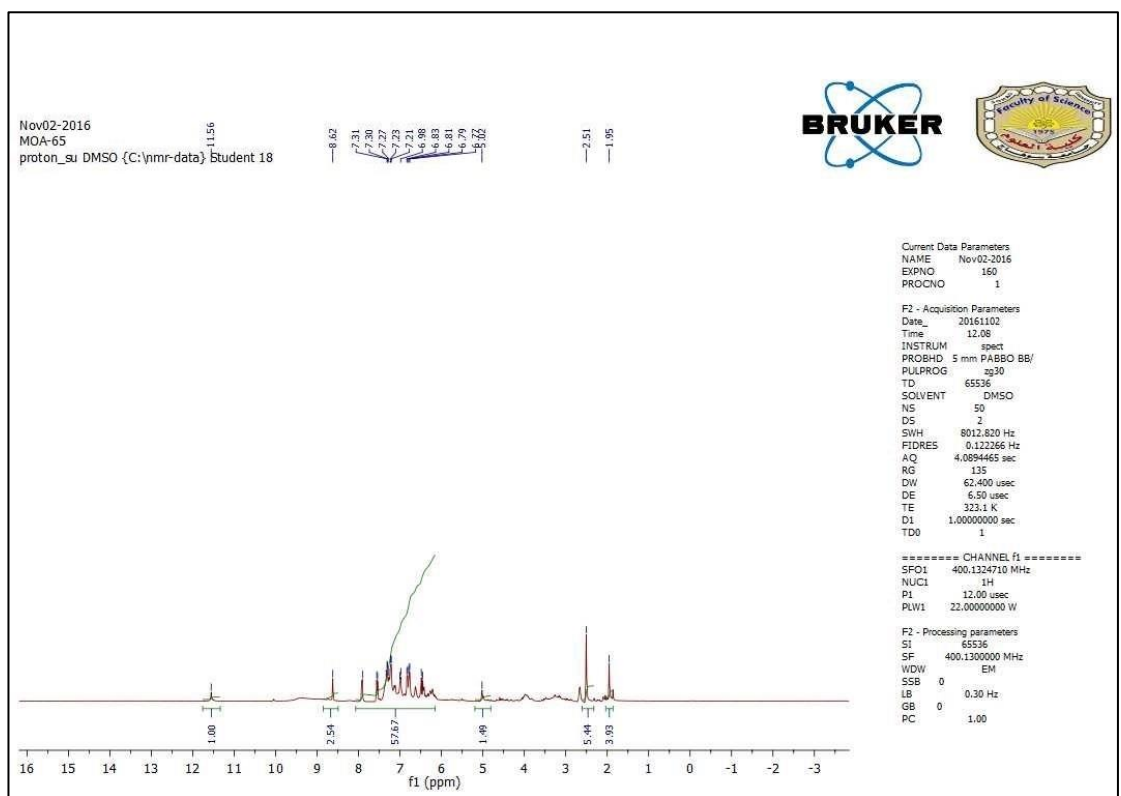


Figure S22. <sup>1</sup>H-NMR spectrum of compound 10

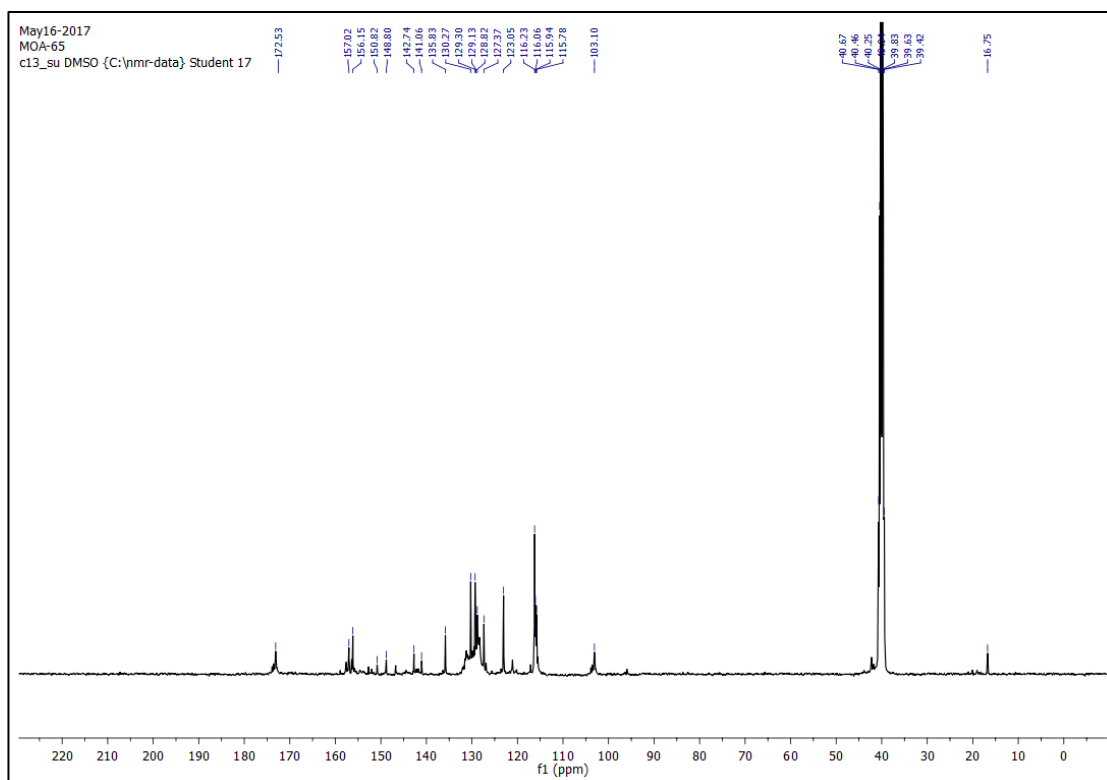


Figure S23.  $^{13}\text{C}$ -NMR spectrum of compound 10

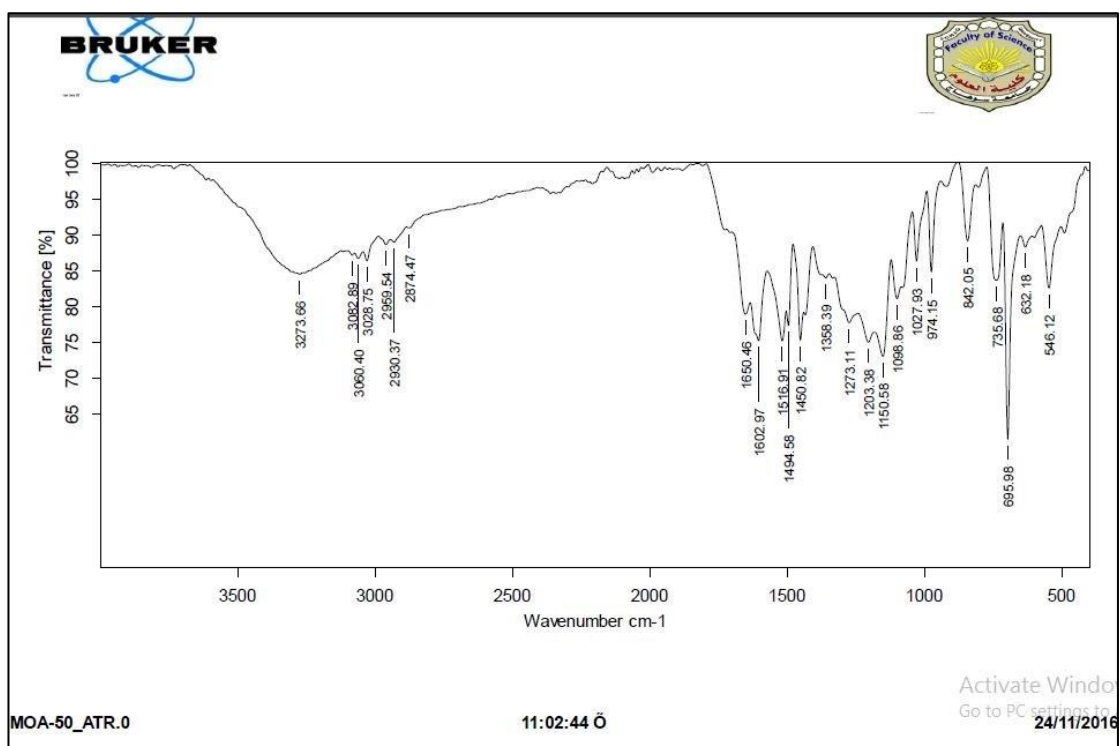


Figure S24. IR spectrum of compound 11

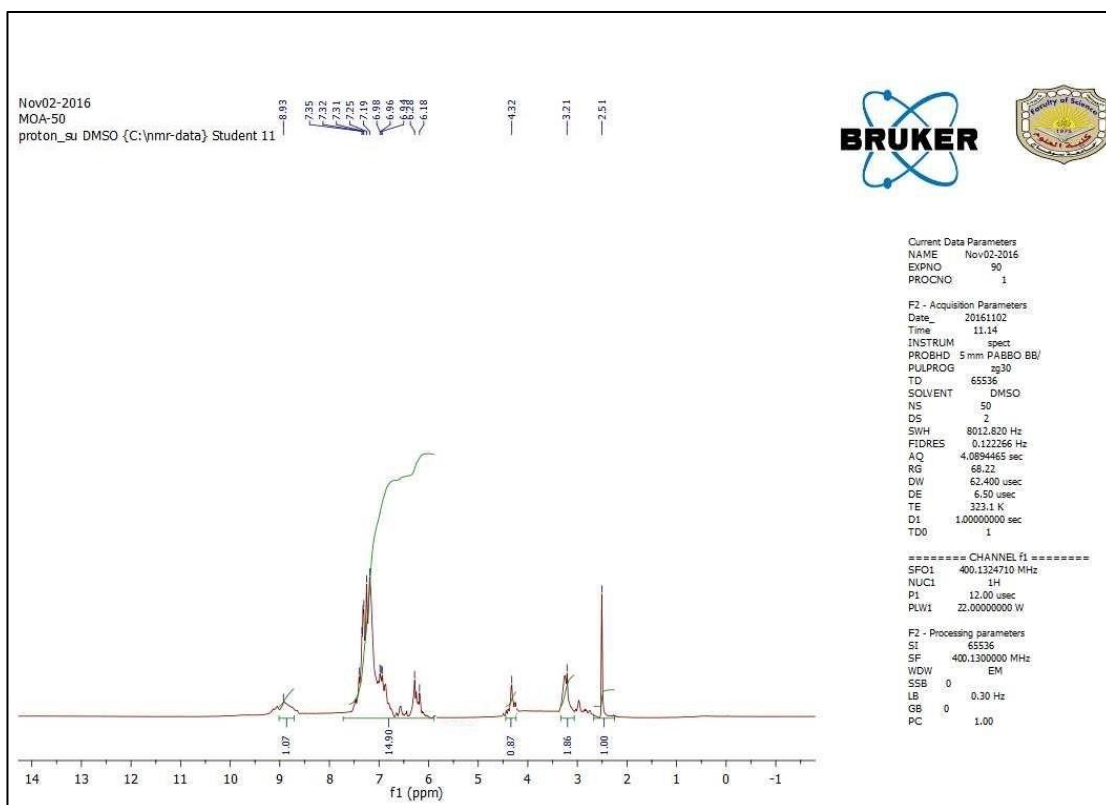


Figure S25.  $^1\text{H}$ -NMR spectrum of compound 11

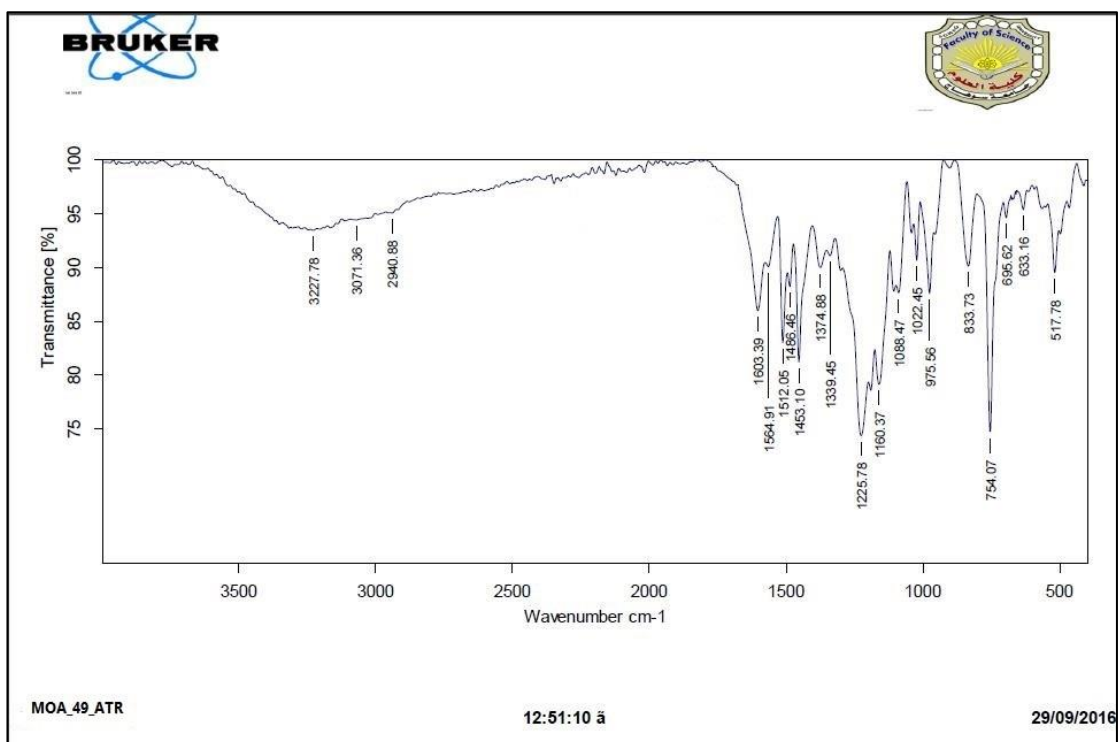
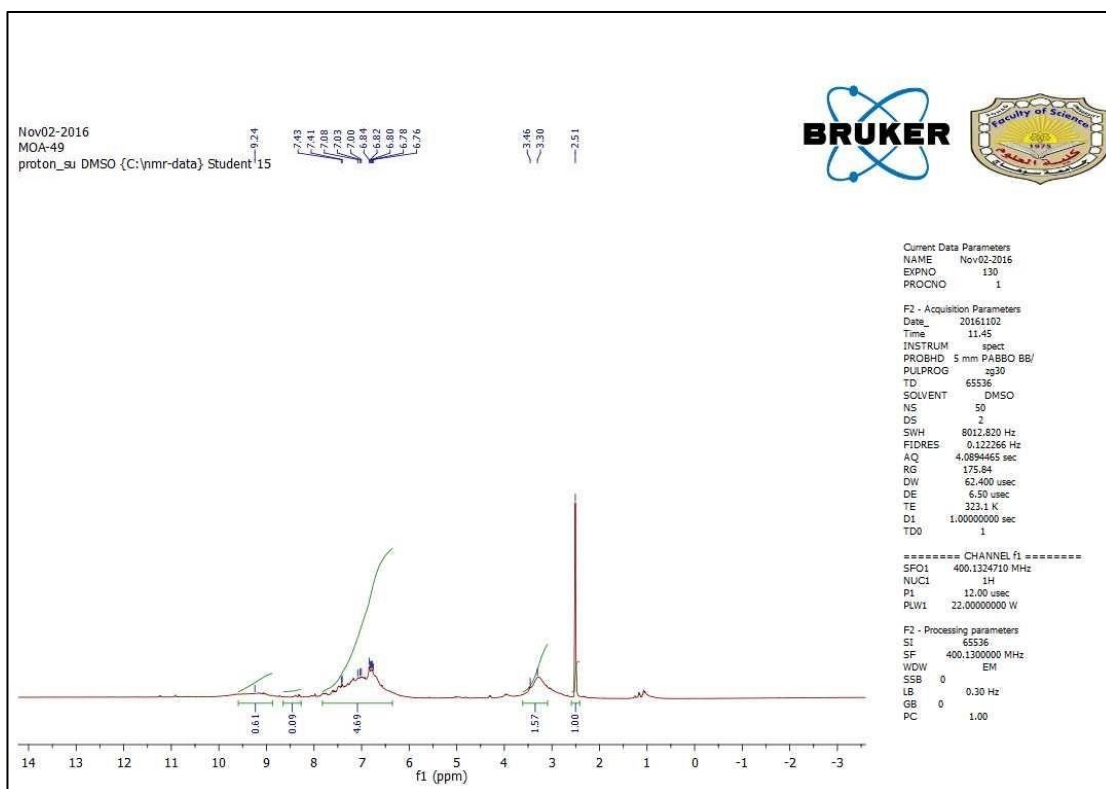
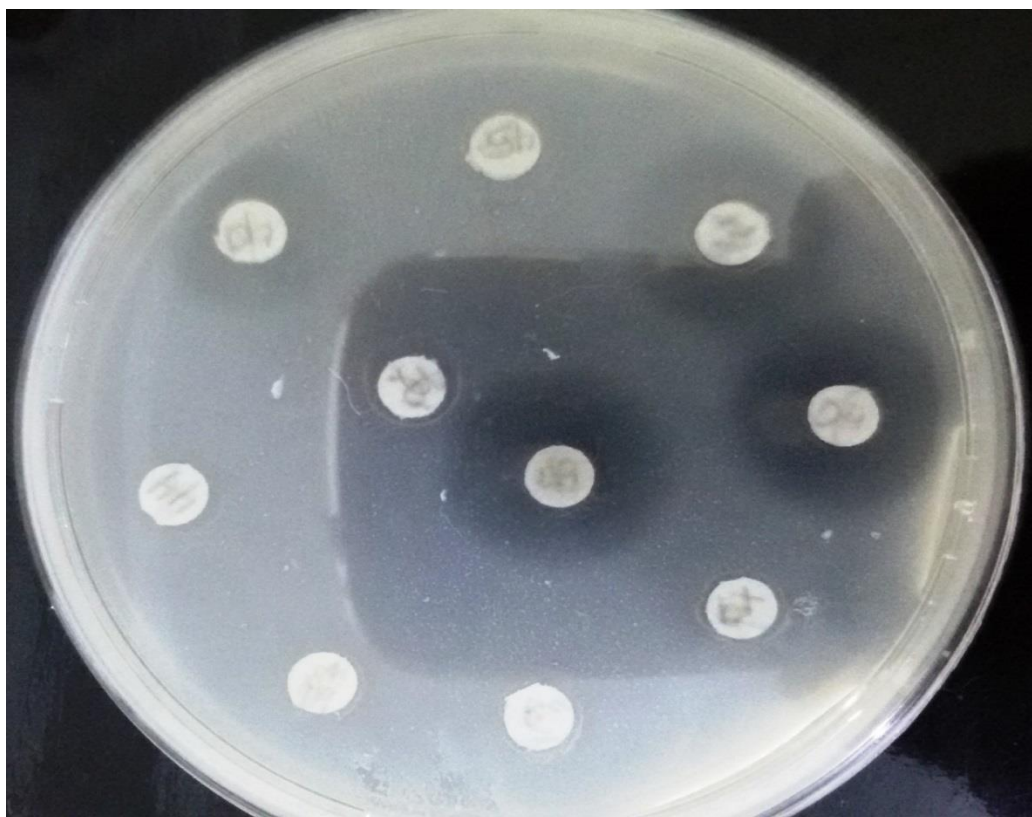


Figure S26. IR spectrum of compound 12



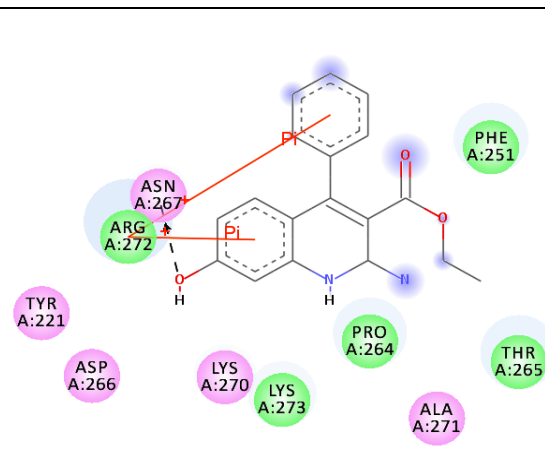
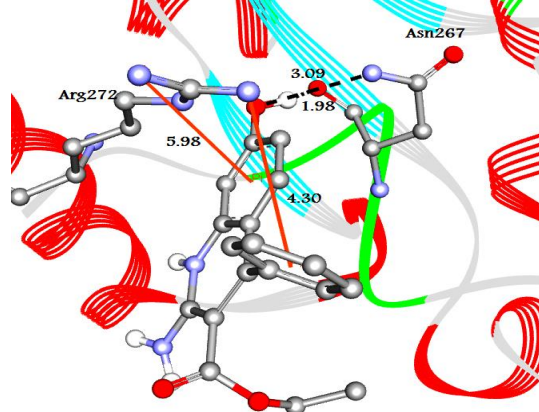
**Figure S27.  $^1\text{H}$ -NMR spectrum of compound 12**



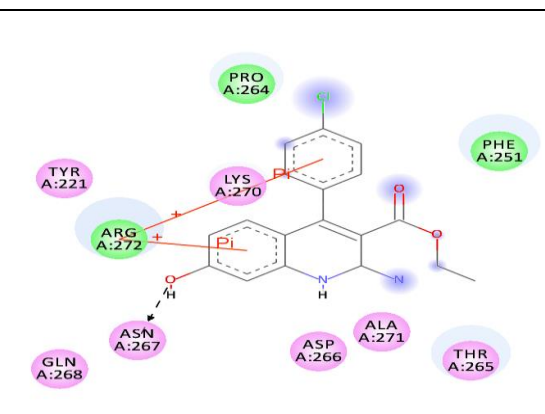
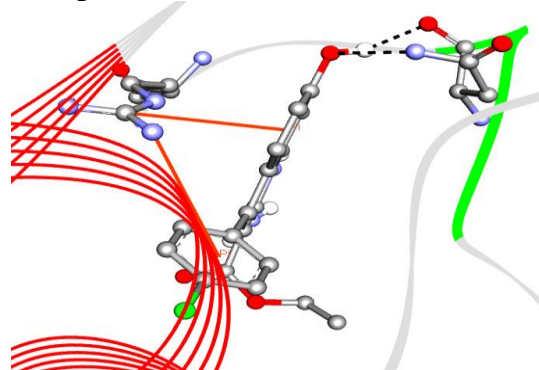
**Figure S28. Antibacterial activity of the tested compounds.**



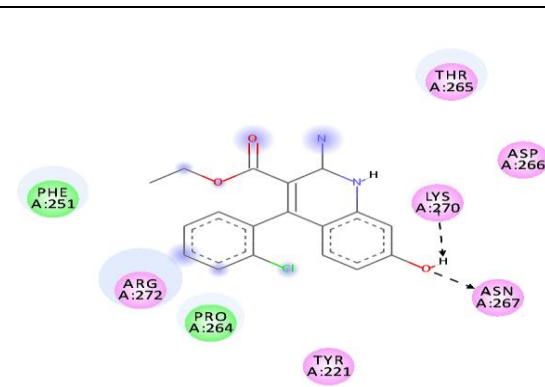
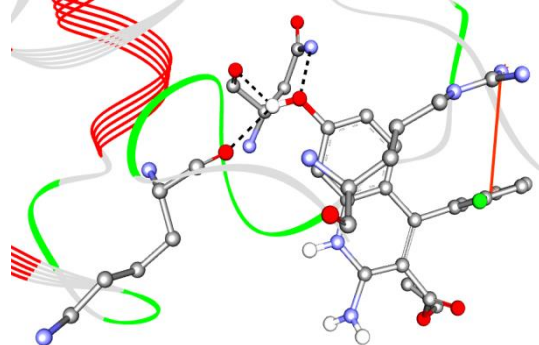
**Compound 5a**



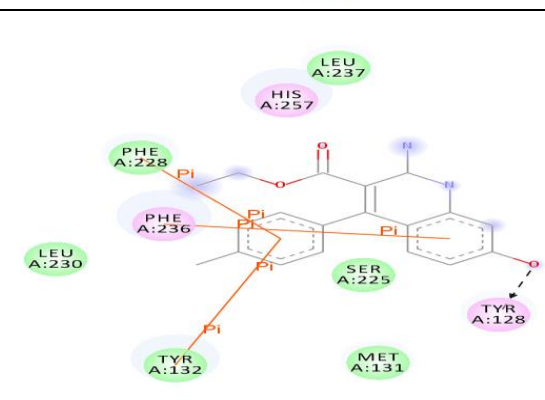
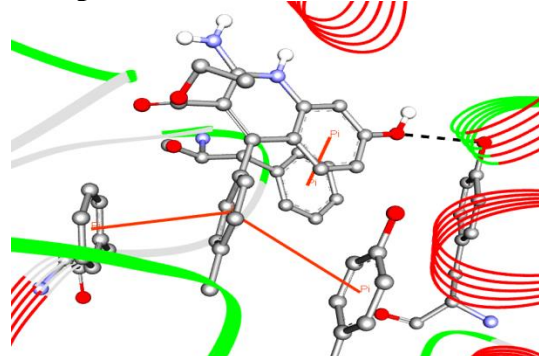
**Compound 5b**



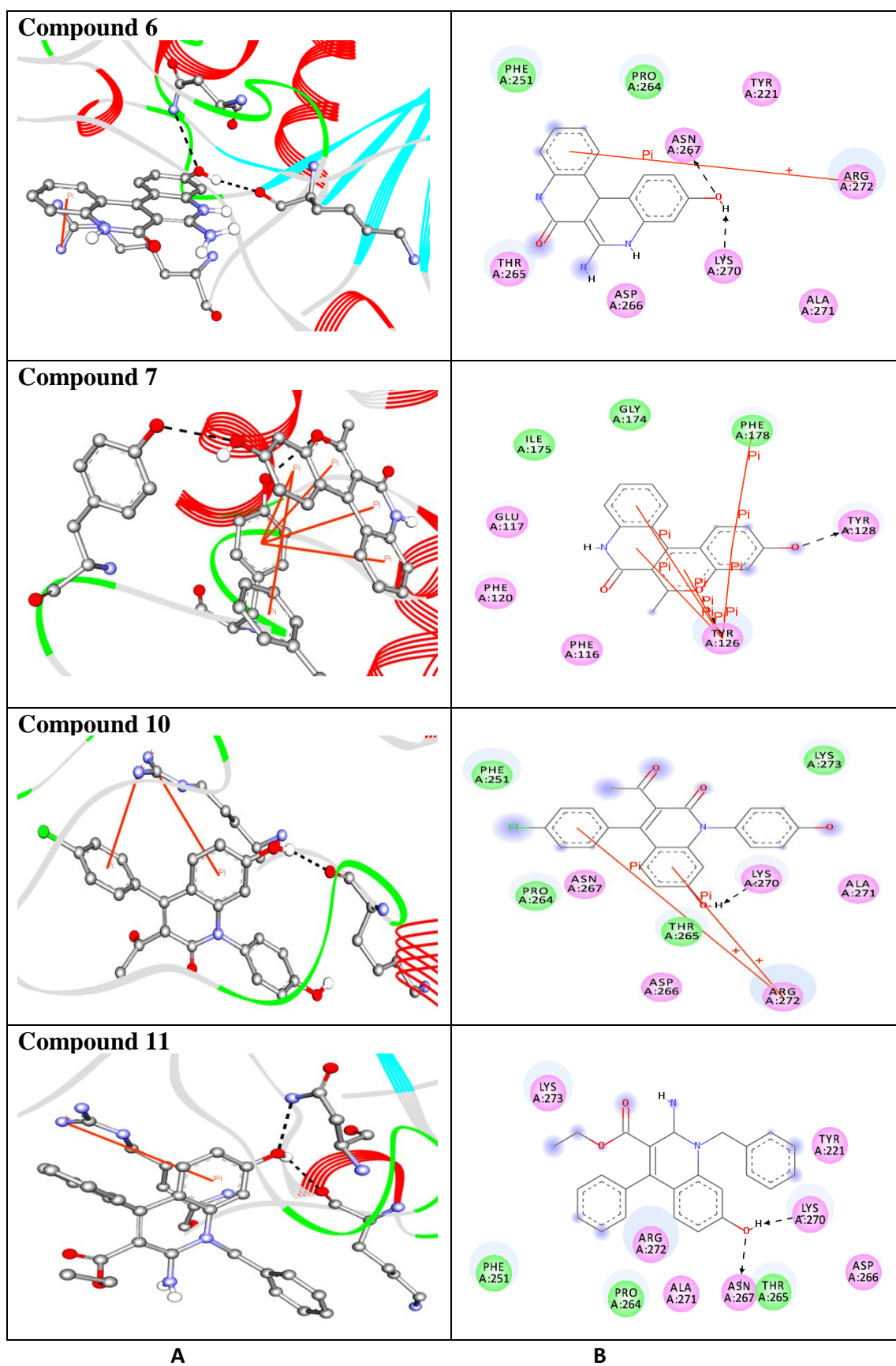
**Compound 5c**



**Compound 5d**

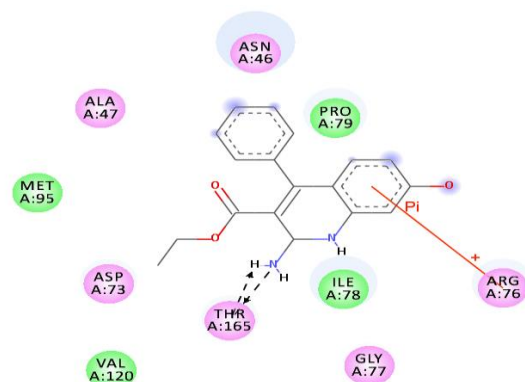
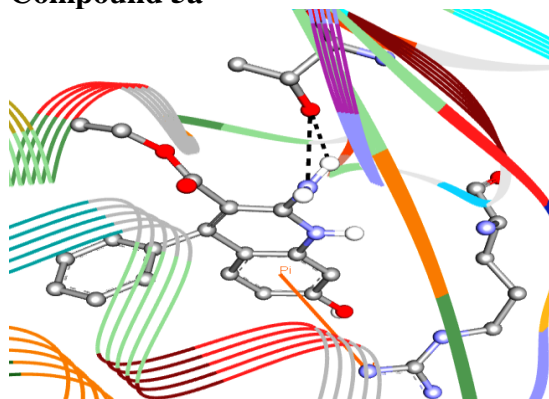




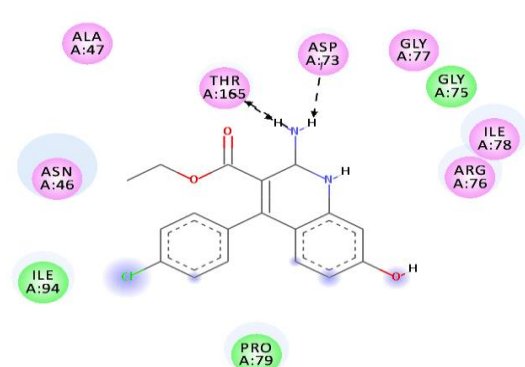
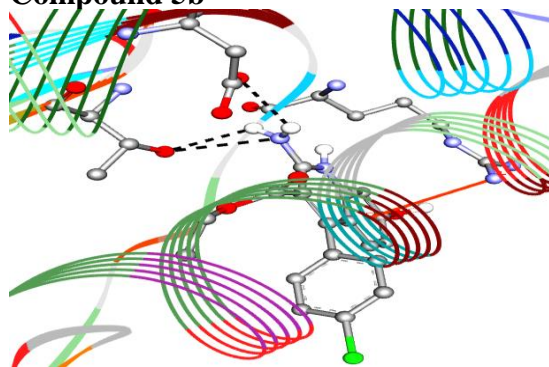


**Figure S29.** (A) 3D, (B) 2D representations of the other docked compound with 1DXO. H-bonds are represented in black dotted lines while pi-interactions are shown in orange lines.

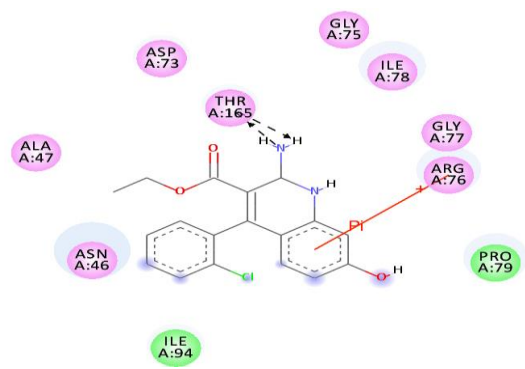
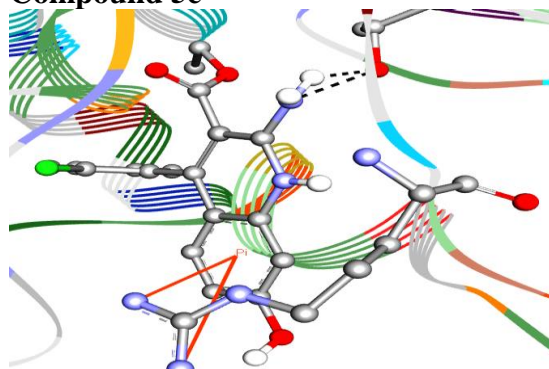
**Compound 5a**



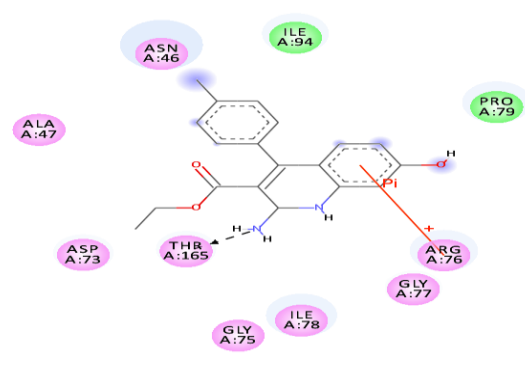
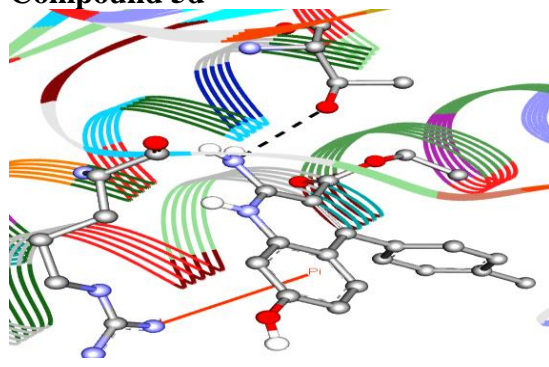
**Compound 5b**

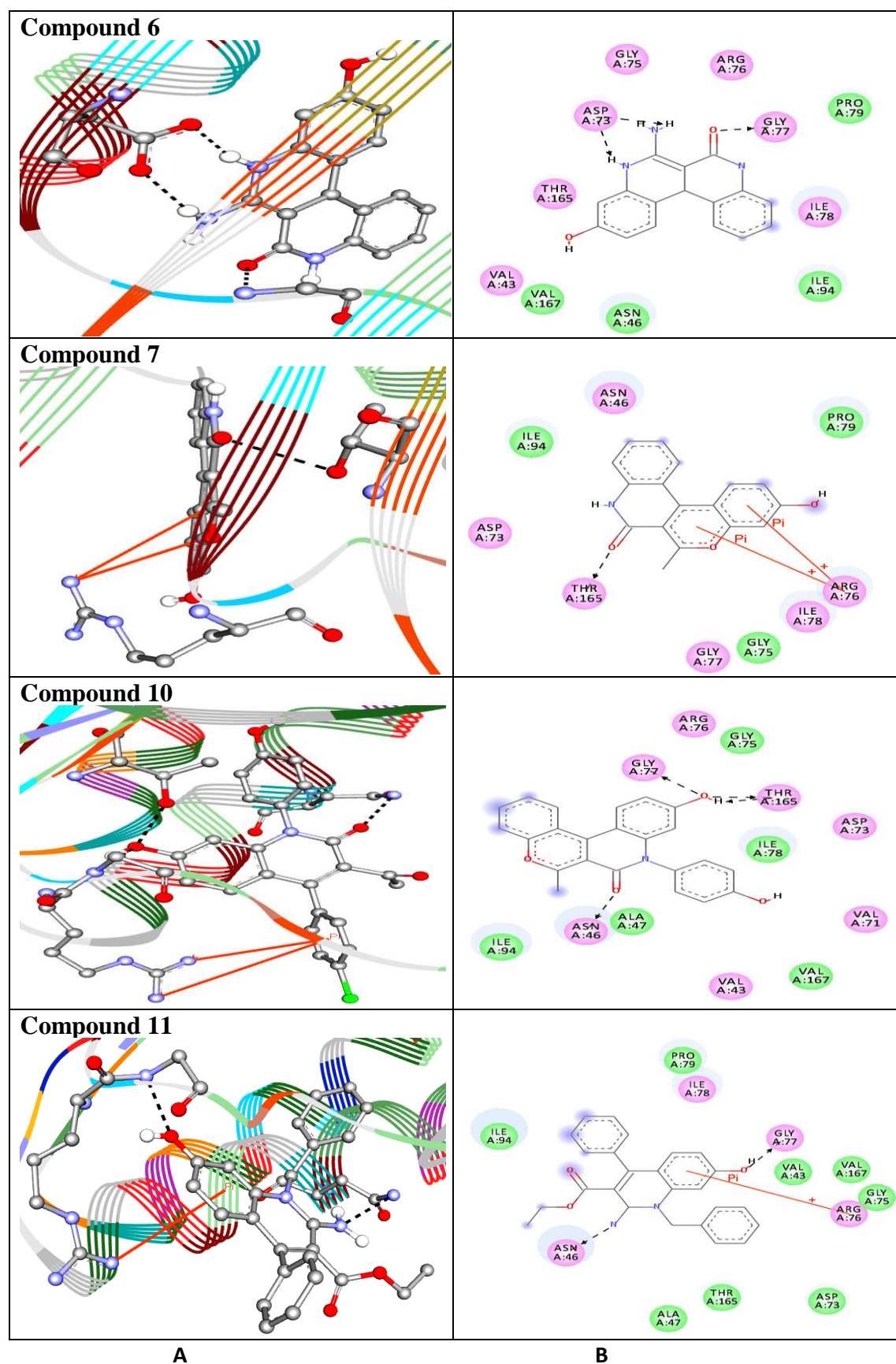


**Compound 5c**



**Compound 5d**





**Figure S30.** (A) 3D, (B) 2D representations of the other docked compound with 1JA6. H-bonds are represented in black dotted lines while pi-interactions are shown in orange lines.