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Article

Magnetic Sulfonated Melamine-Formaldehyde Resin as an Efficient Catalyst for the Synthesis of Antioxidant and Antimicrobial Pyrazolone Derivatives

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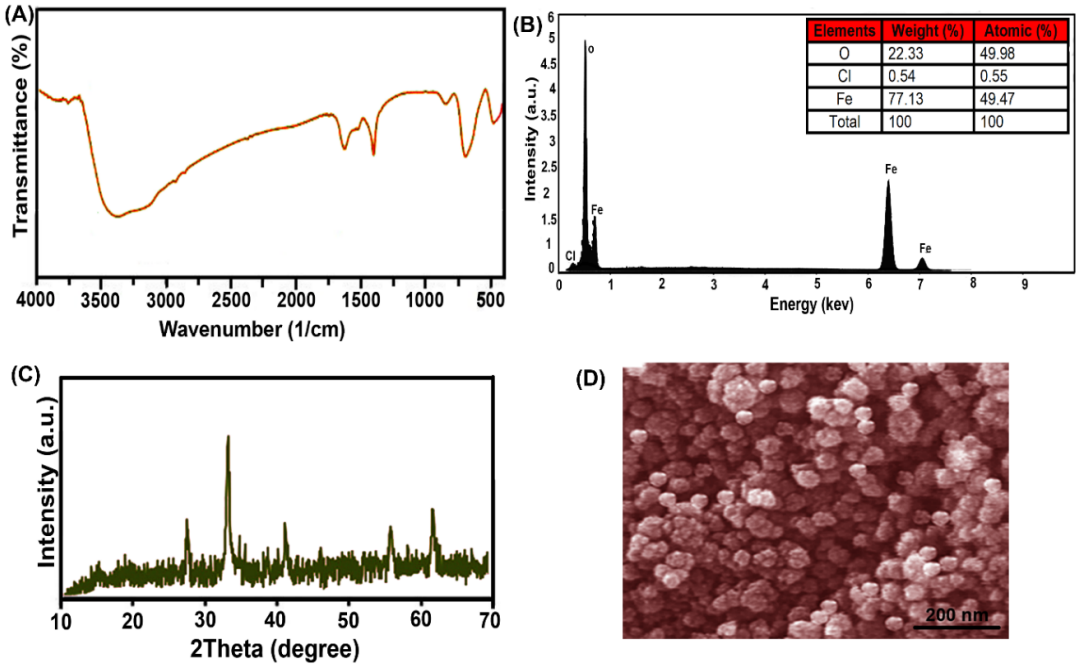
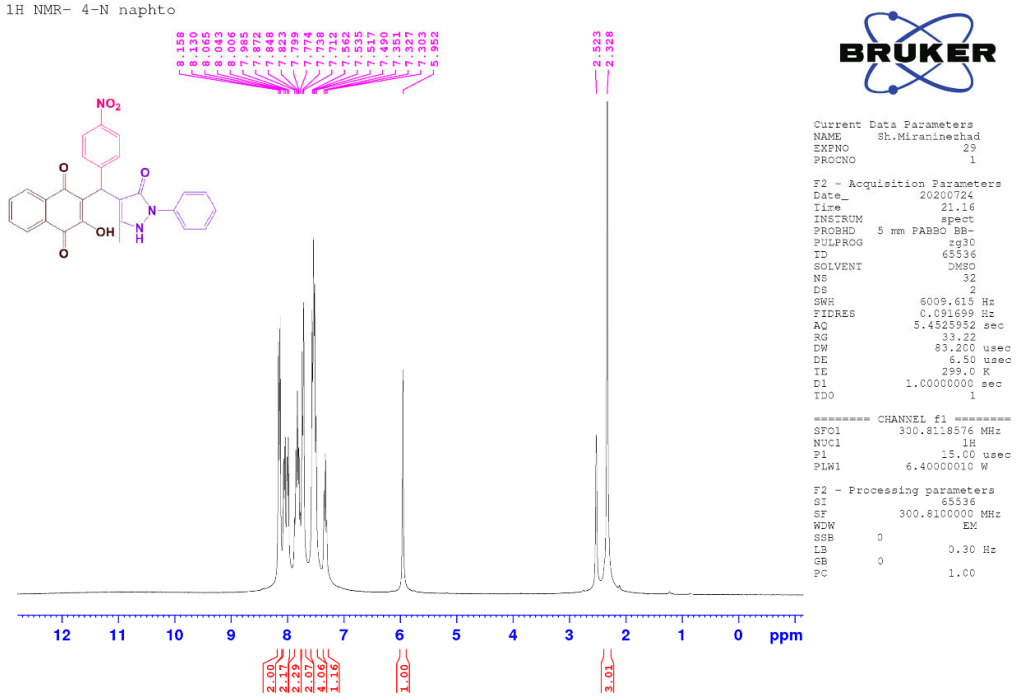


Figure S1. FTIR spectrum (**A**), EDX spectrum (**B**), XRD pattern (**C**), and SEM image (**D**) of Fe_3O_4 nanoparticles.

Figure S2. mixture of the sulfonated melamine–formaldehyde (SMF) in distilled water, mixture of SMF and Fe_3O_4 nanoparticles **(A)**, magnetic property of Fe_3O_4 nanoparticles and MSMF**(B).**



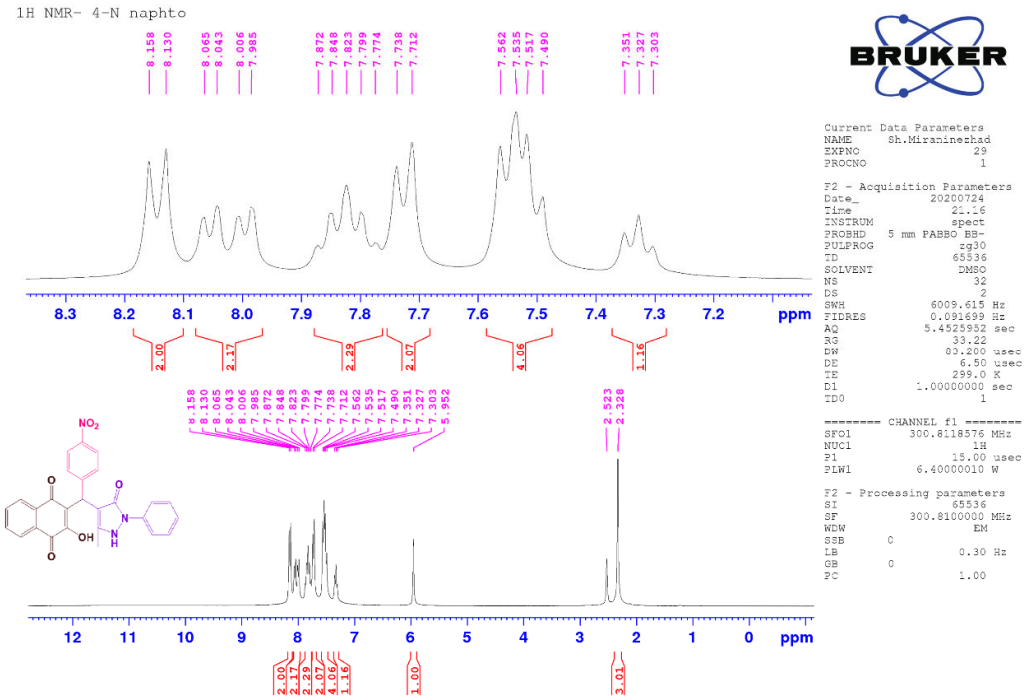


Figure S3. [1]H-NMR spectrum of **4e.**

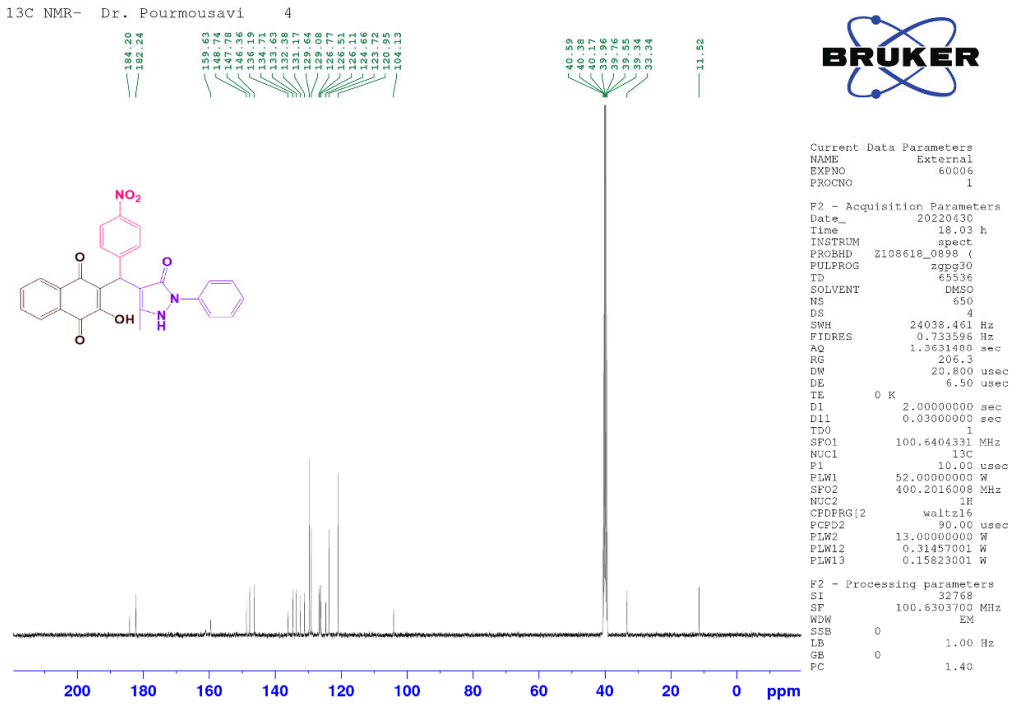


Figure S4. [13]C-NMR spectrum of **4e.**

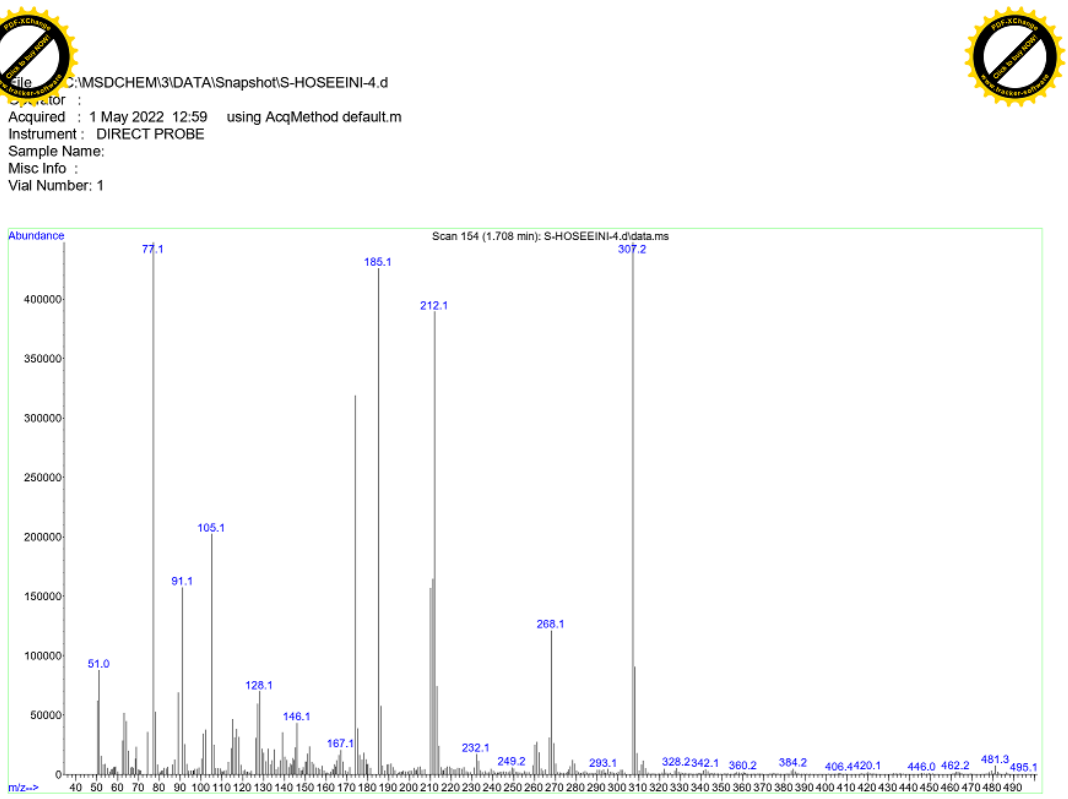


Figure S5. MASS Spectrum of 4e.

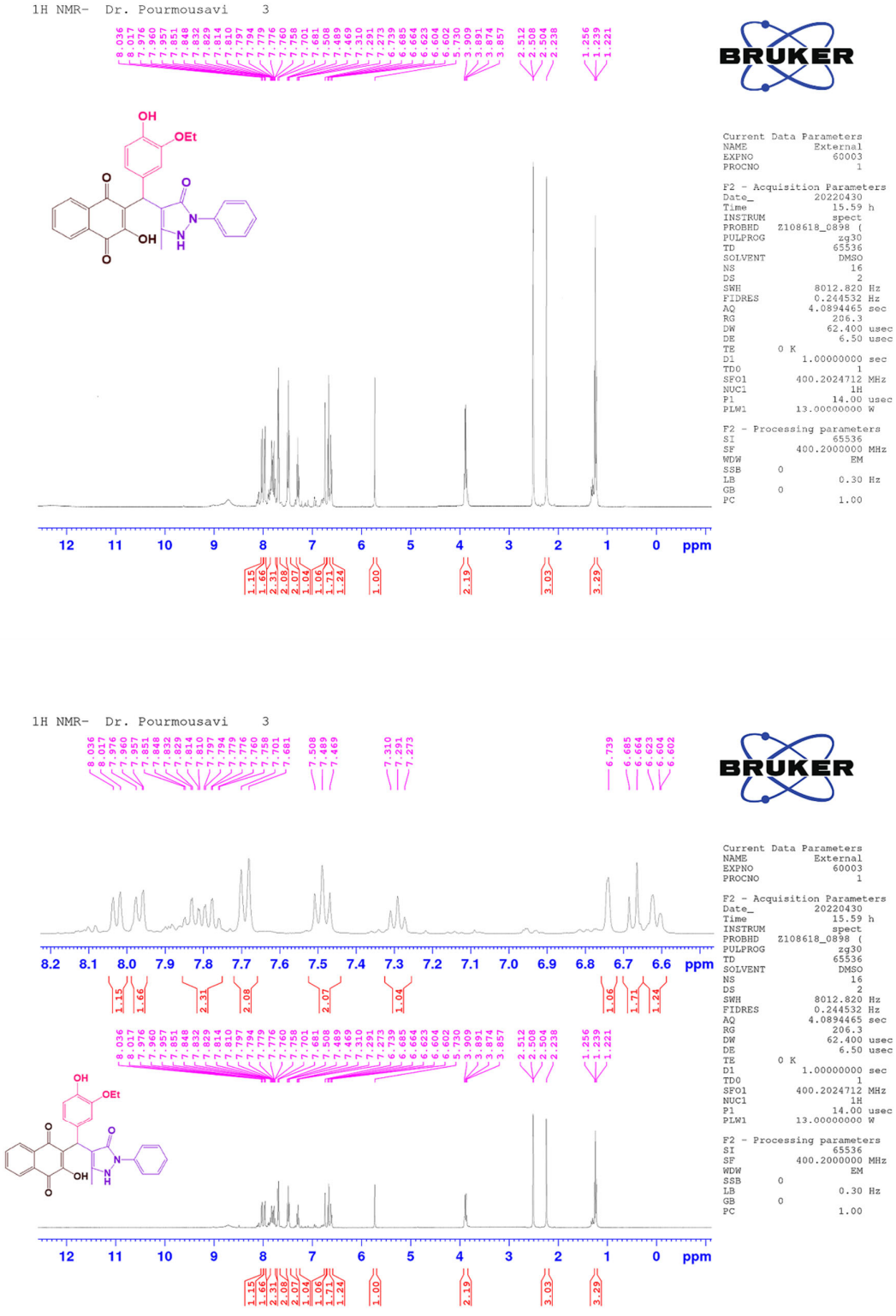


Figure S6. ^{1}H-NMR spectrum of **4j.**

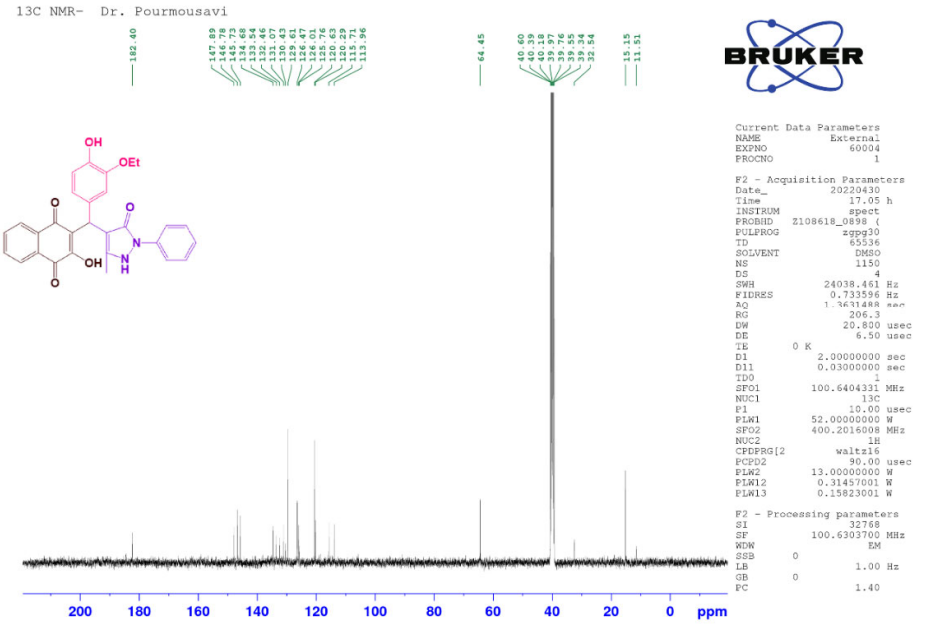


Figure S7. ^{13}C-NMR spectrum of **4j.**

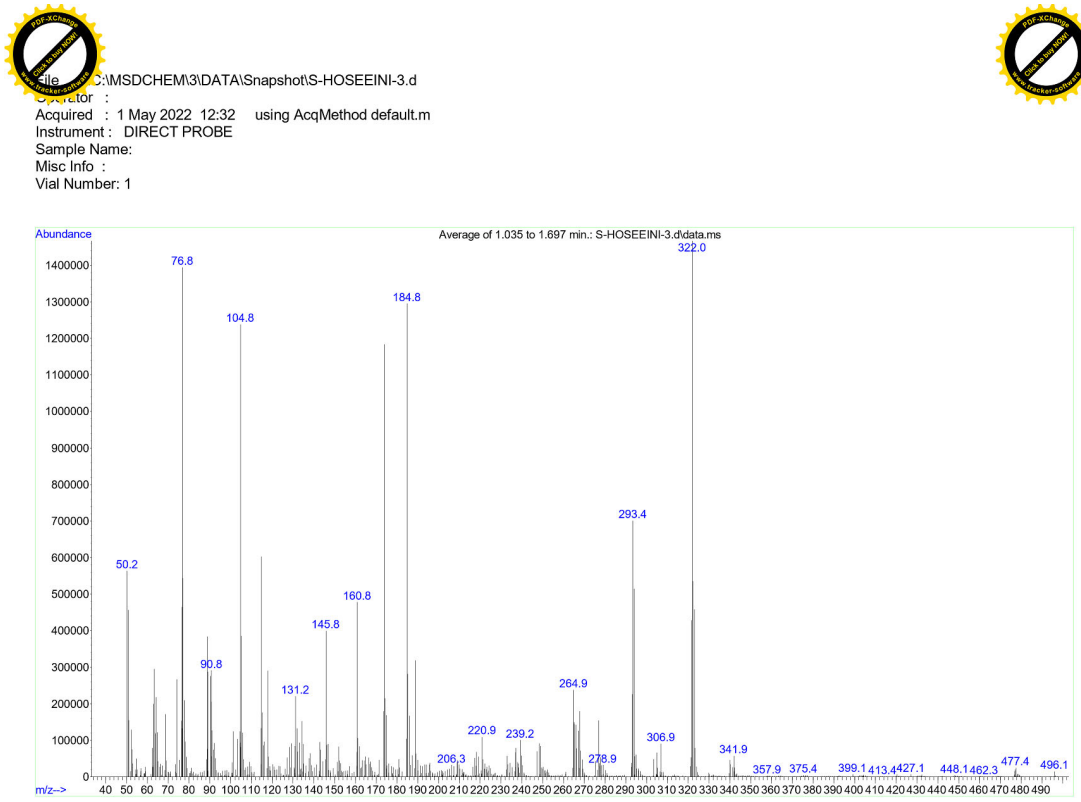


Figure S8. MASS Spectrum of 4j.

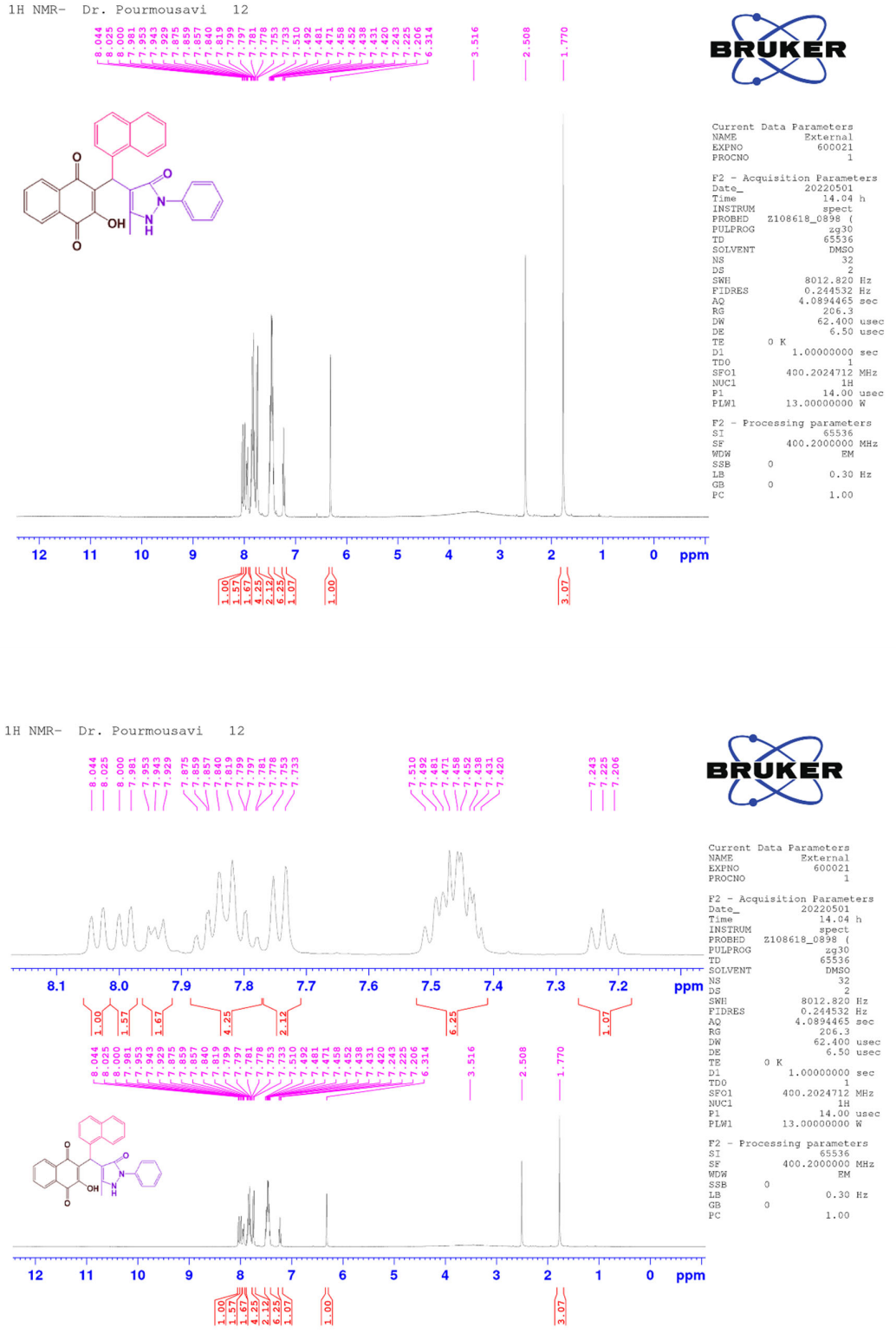


Figure S9. [1]H-NMR spectrum of **4k.**

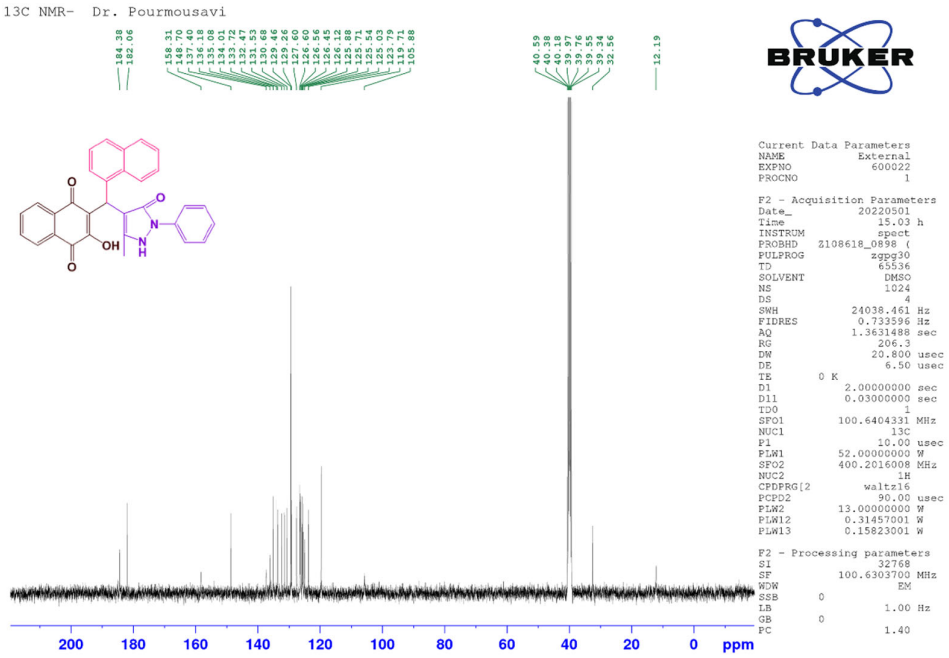


Figure S10. ^{13}C-NMR spectrum of **4k.**

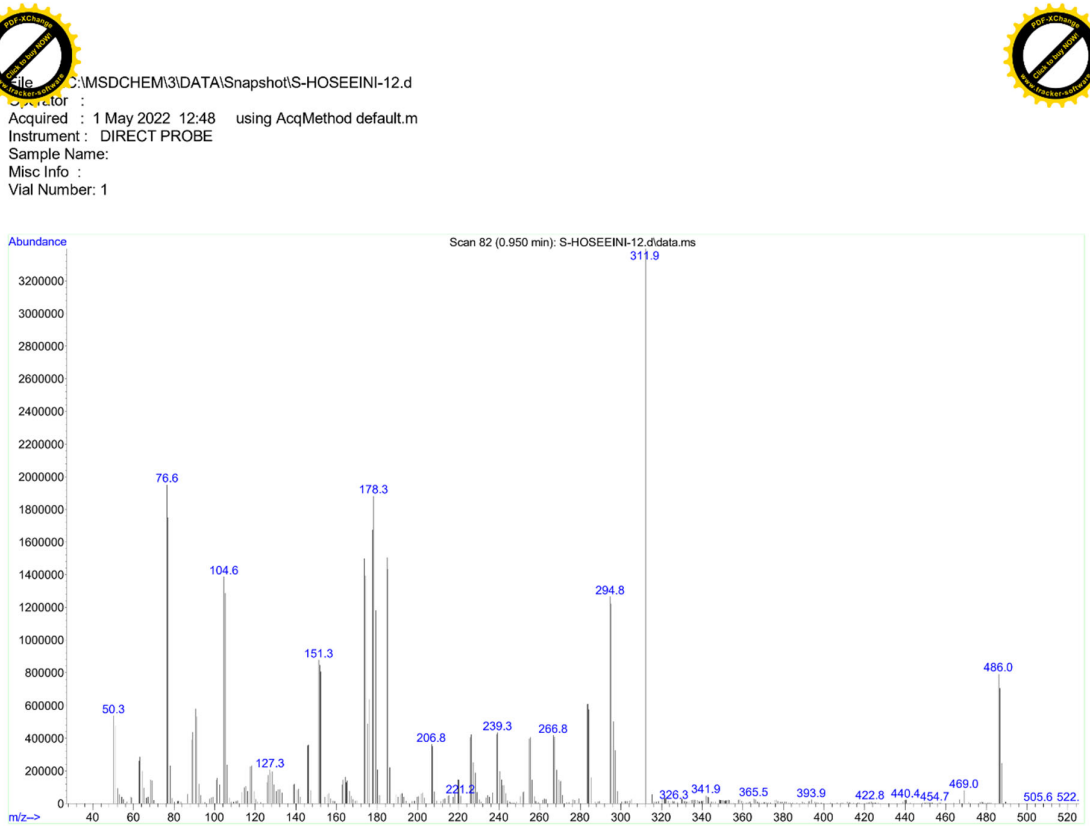


Figure S11. MASS Spectrum of 4k.

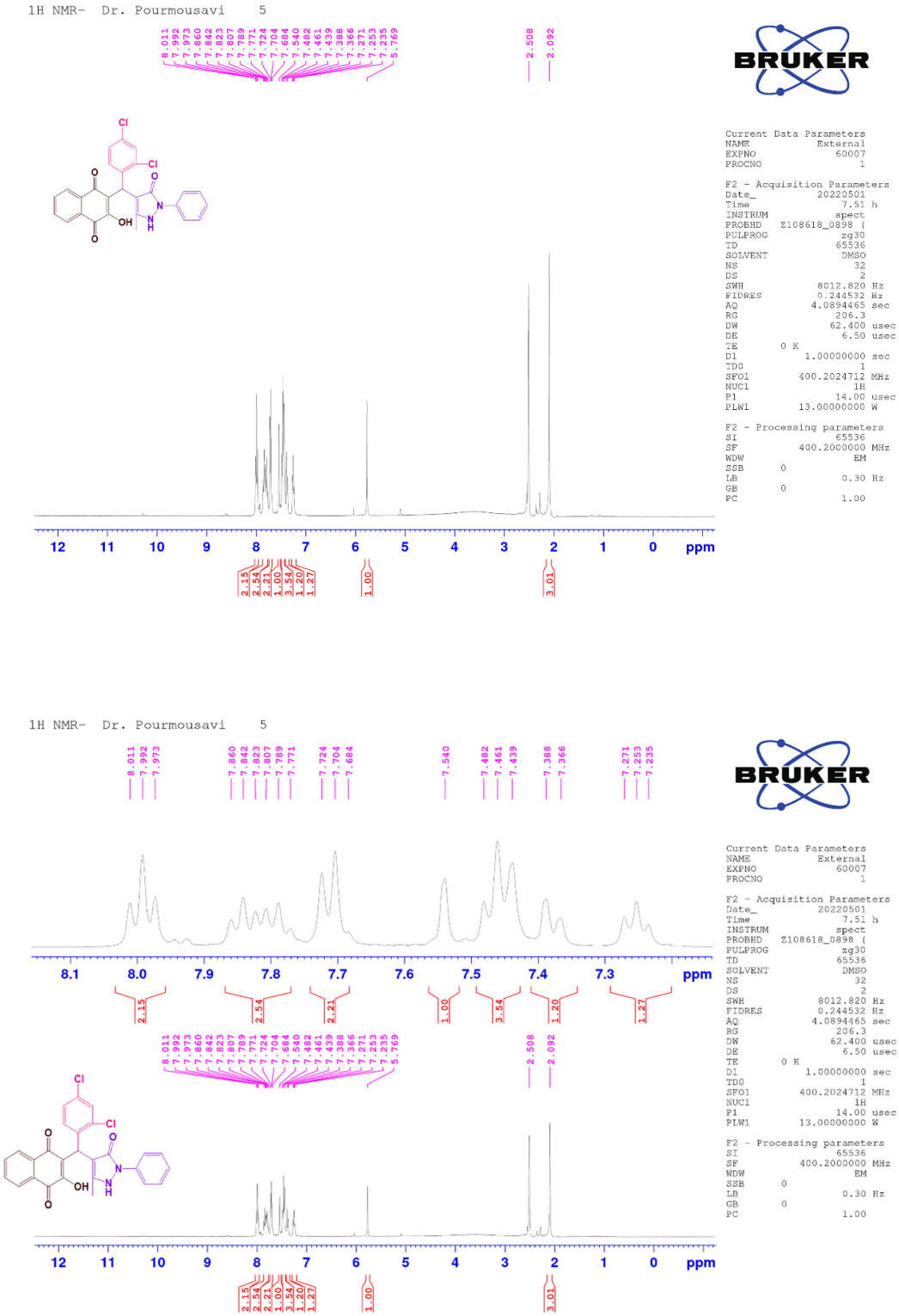


Figure S12. ^{1}H-NMR spectrum of **4l.**

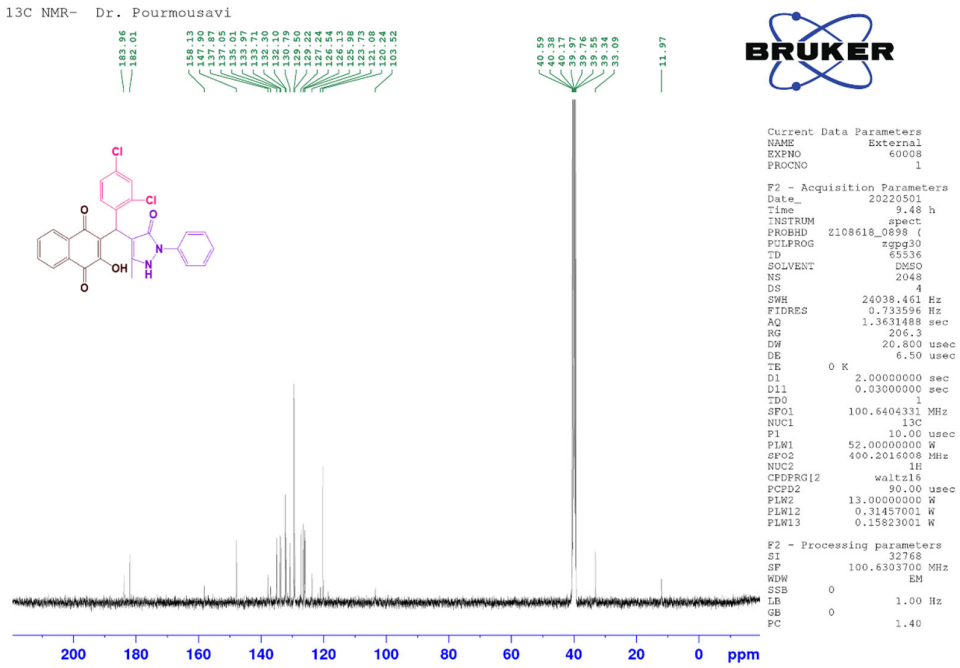


Figure S13. [1]H-NMR spectrum of **4l.**

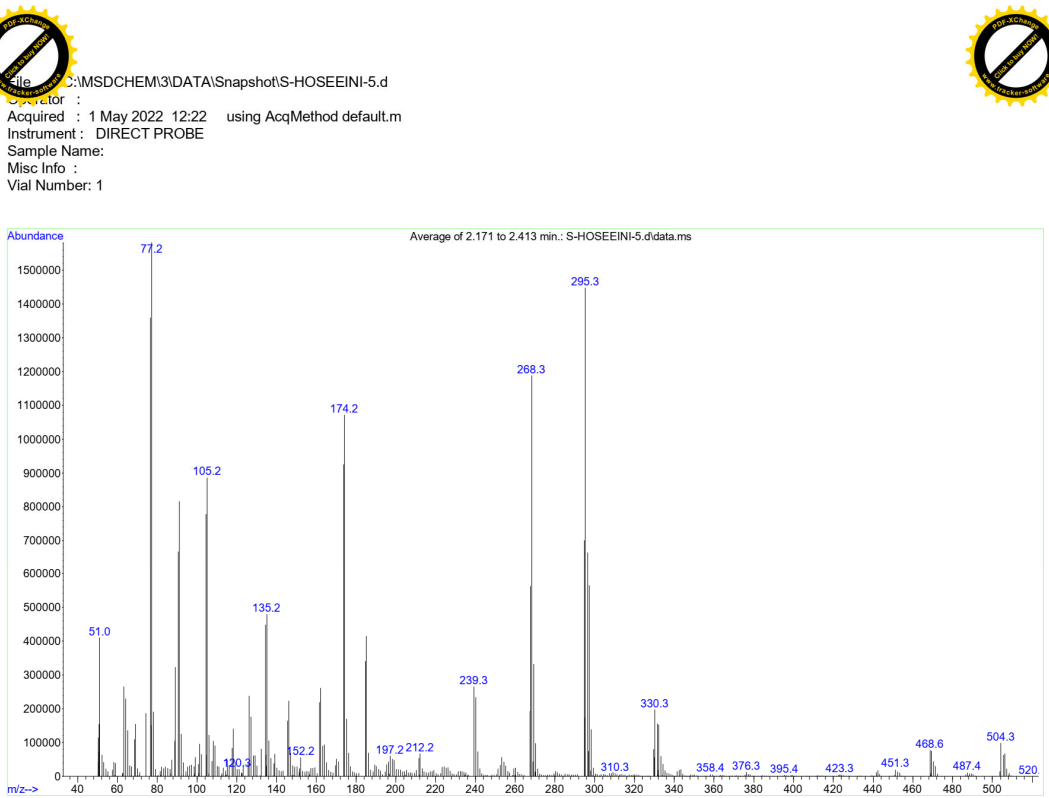


Figure S14. MASS Spectrum of 4l.

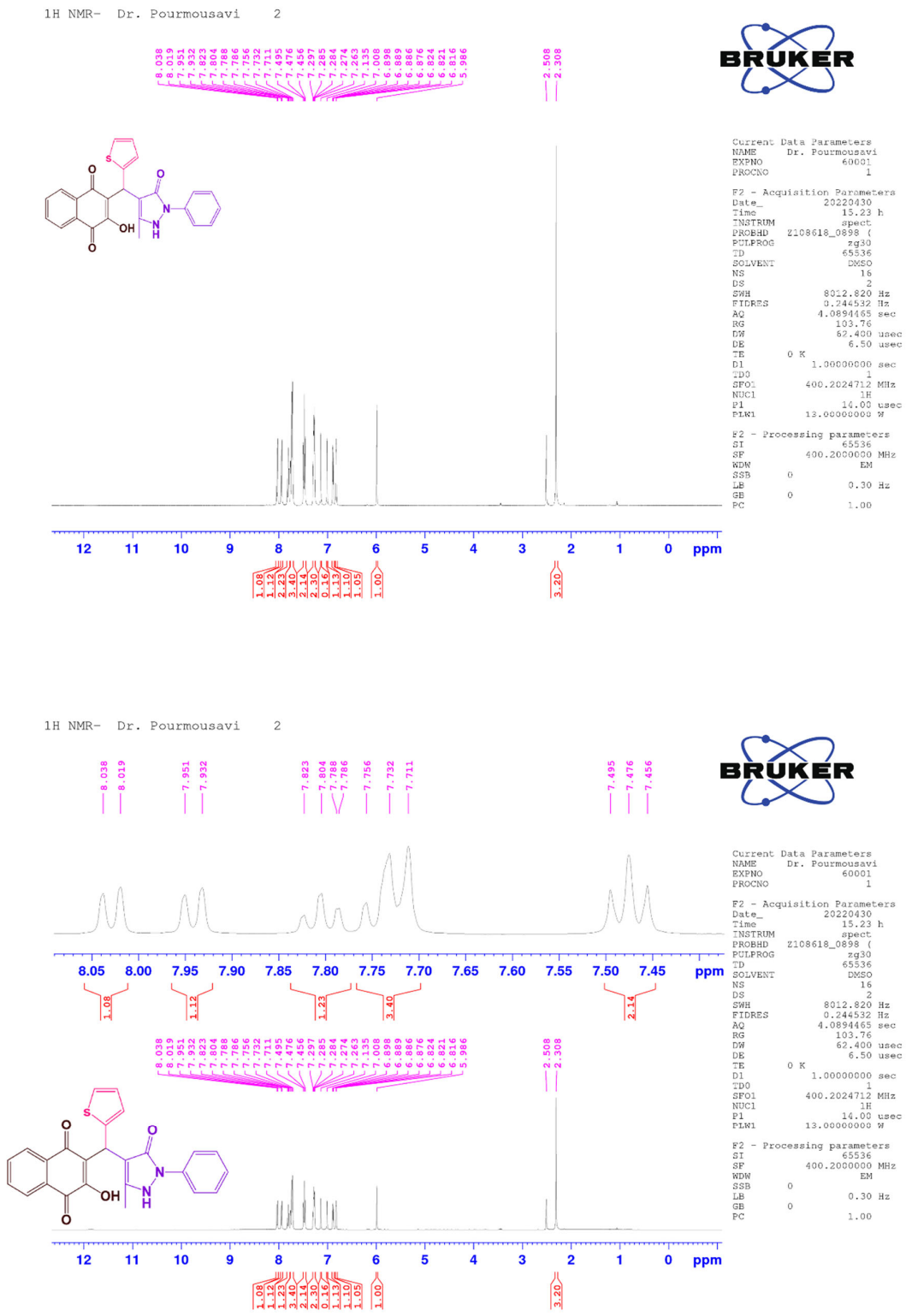


Figure S15. [1]H-NMR spectrum of **4n.**

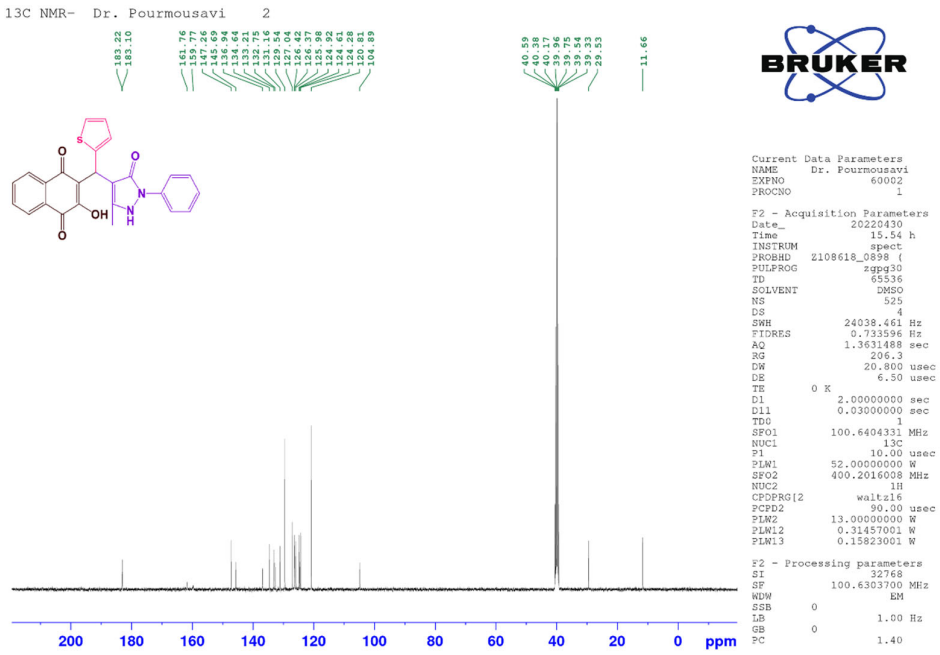


Figure S16. ^{13}C-NMR spectrum of **4n.**

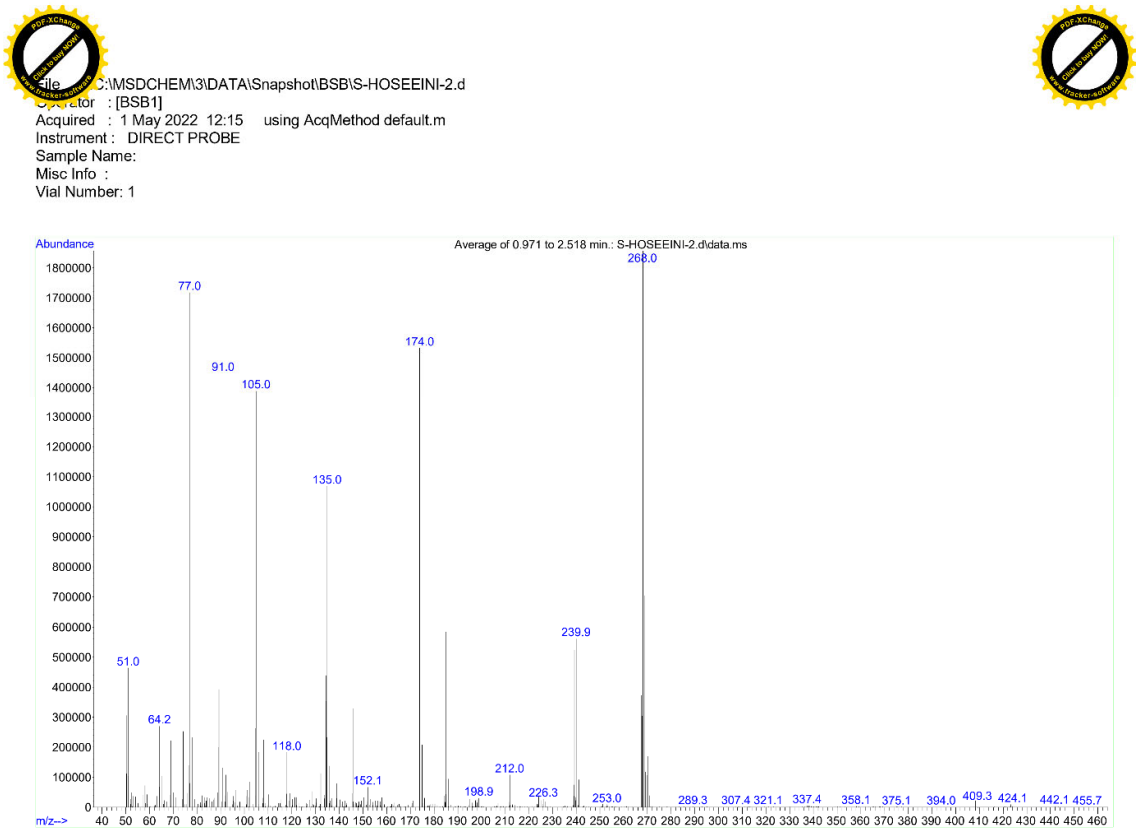


Figure S17. MASS Spectrum of 4n.

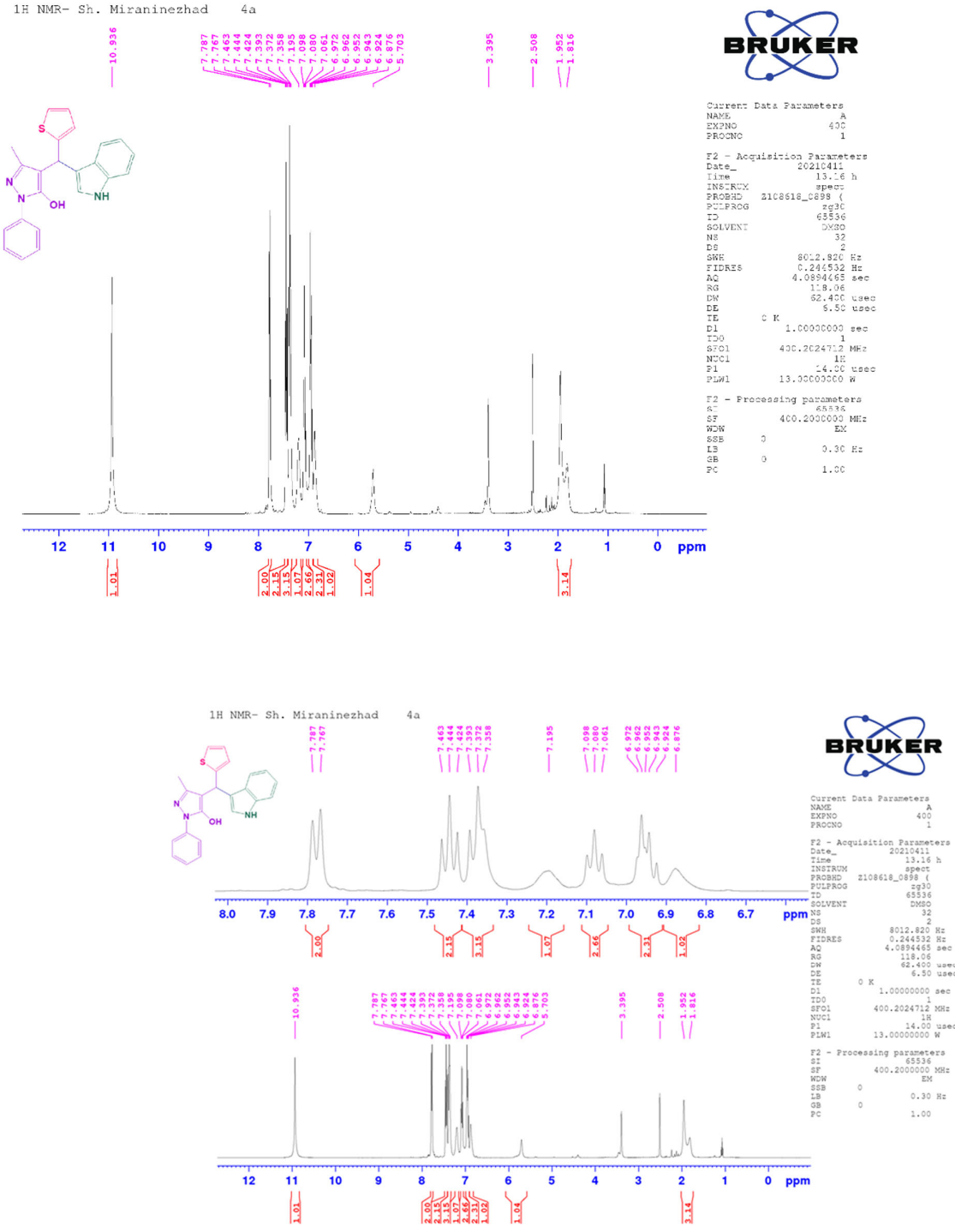


Figure S18. ^{1}H-NMR spectrum of **6j.**

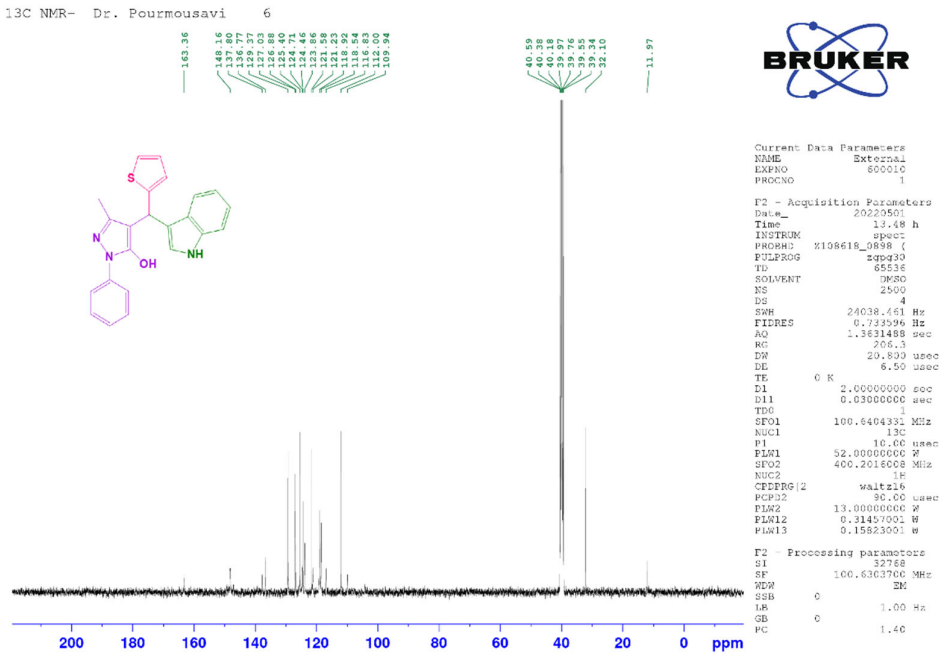


Figure S19. ^{13}C-NMR spectrum of **4j.**

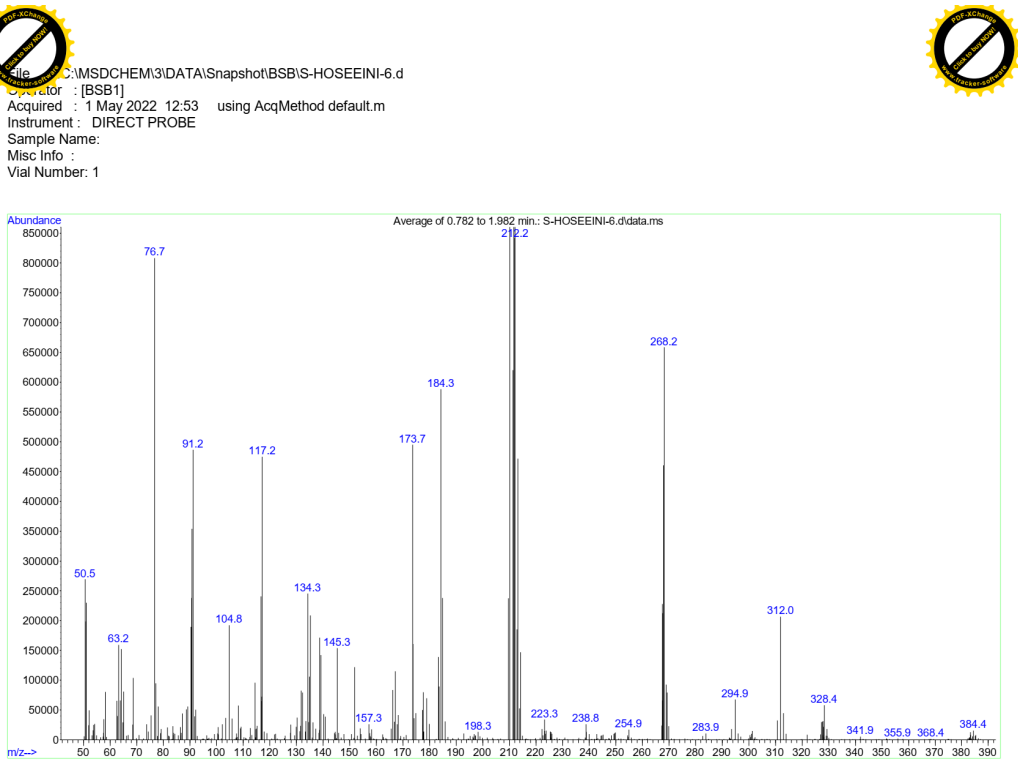


Figure S20. MASS Spectrum of 4o.

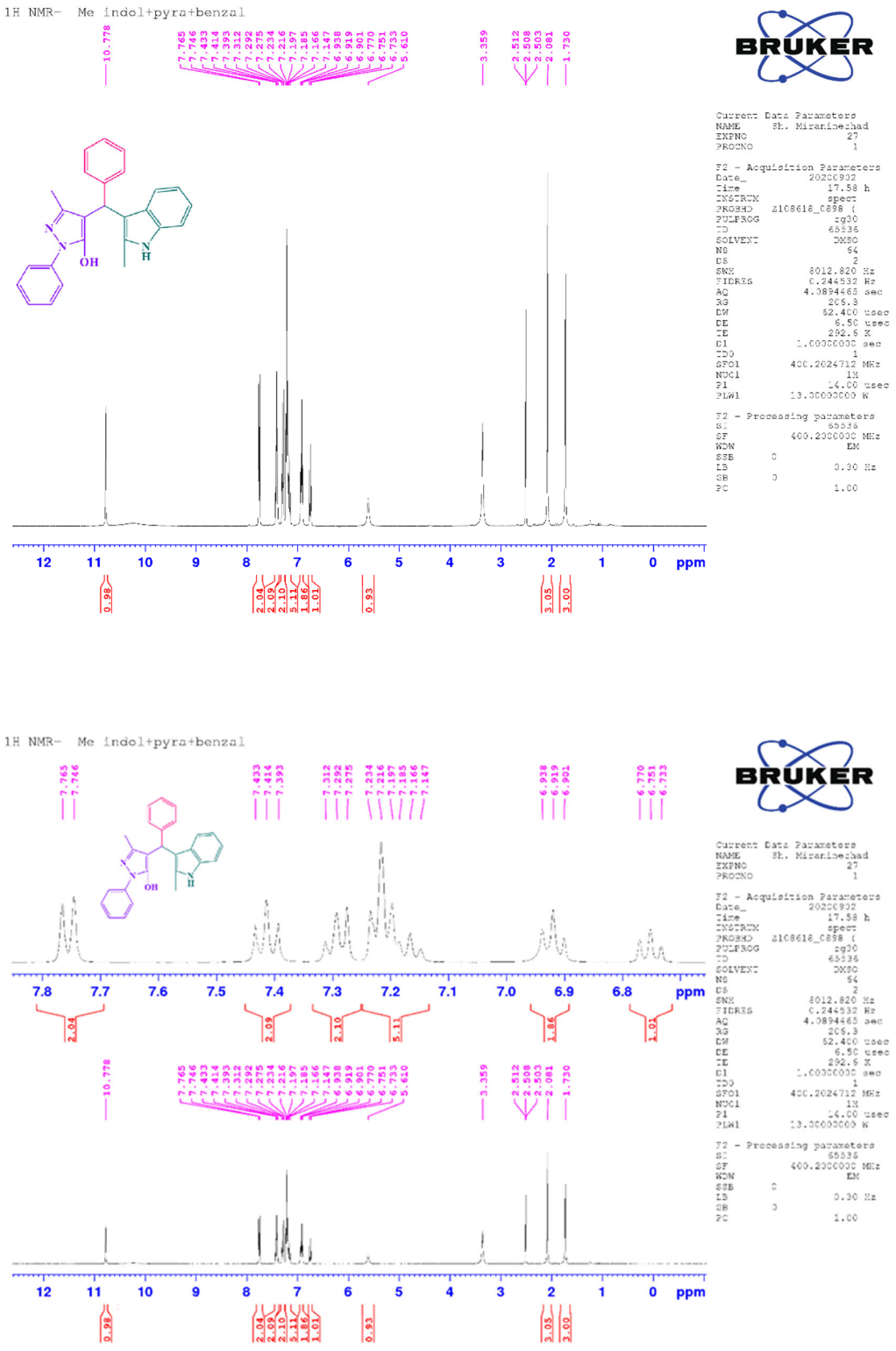


Figure S21. [1]H-NMR spectrum of **6l.**

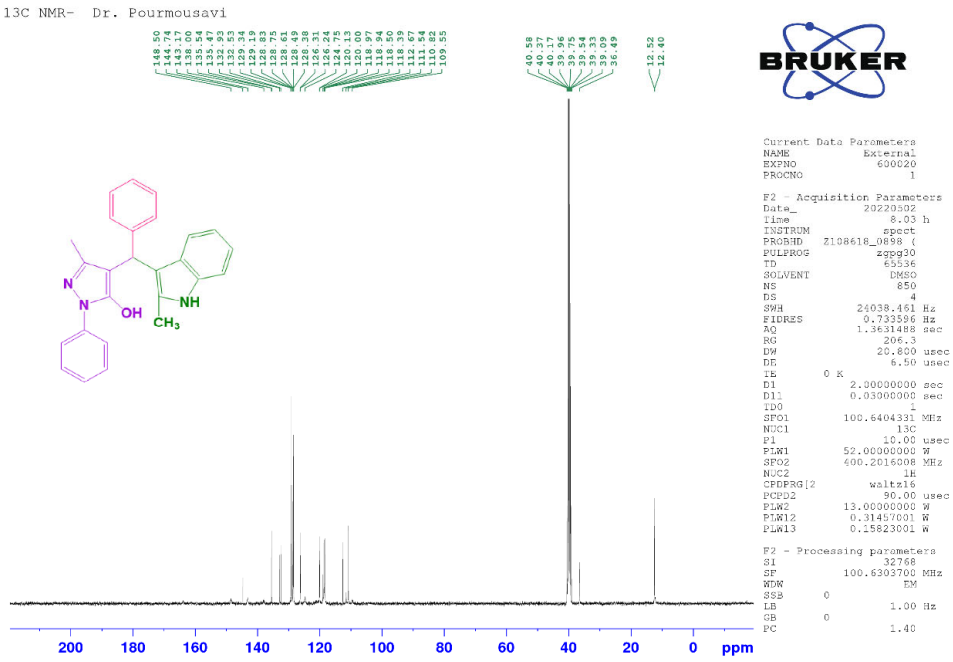


Figure S22. ^{13}C-NMR spectrum of **6l.**

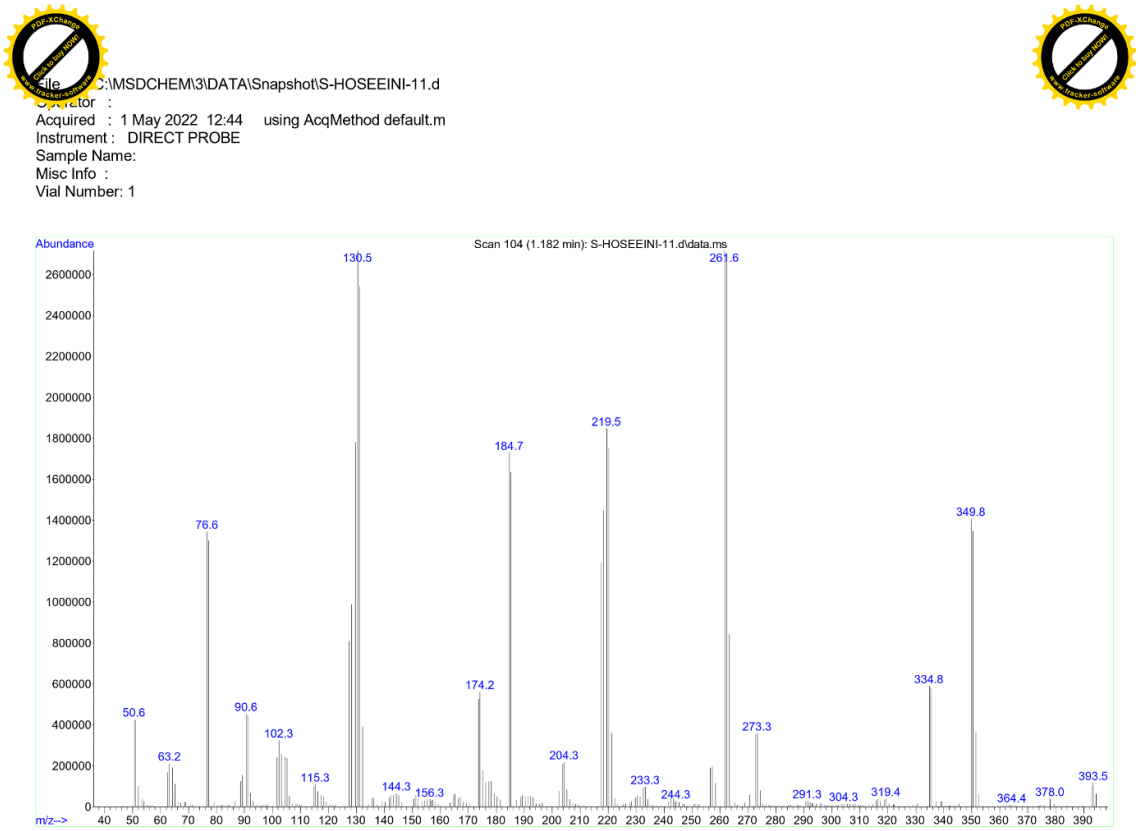


Figure S23. MASS Spectrum of 6l.

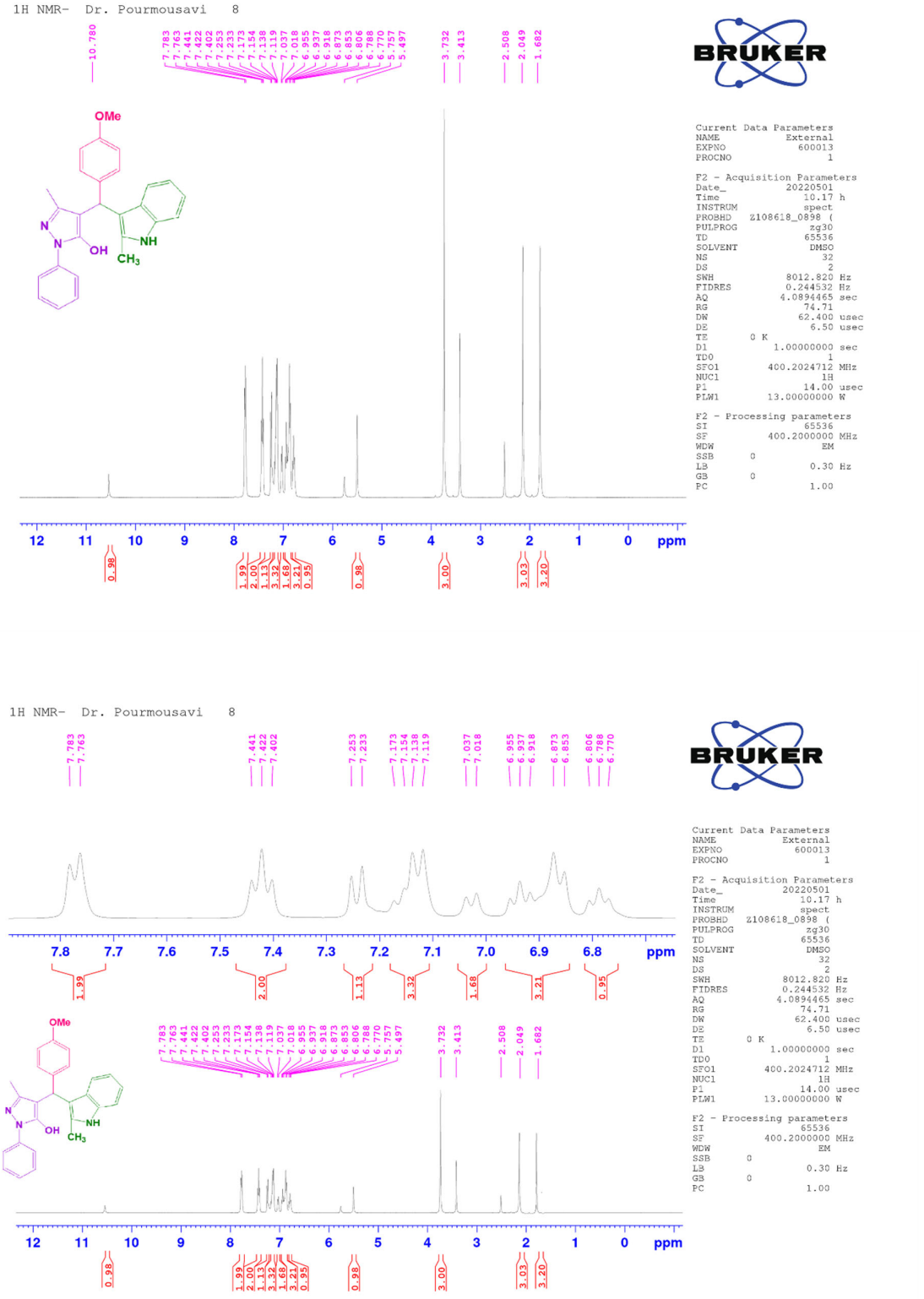


Figure S24. [1]H-NMR spectrum of **6m.**

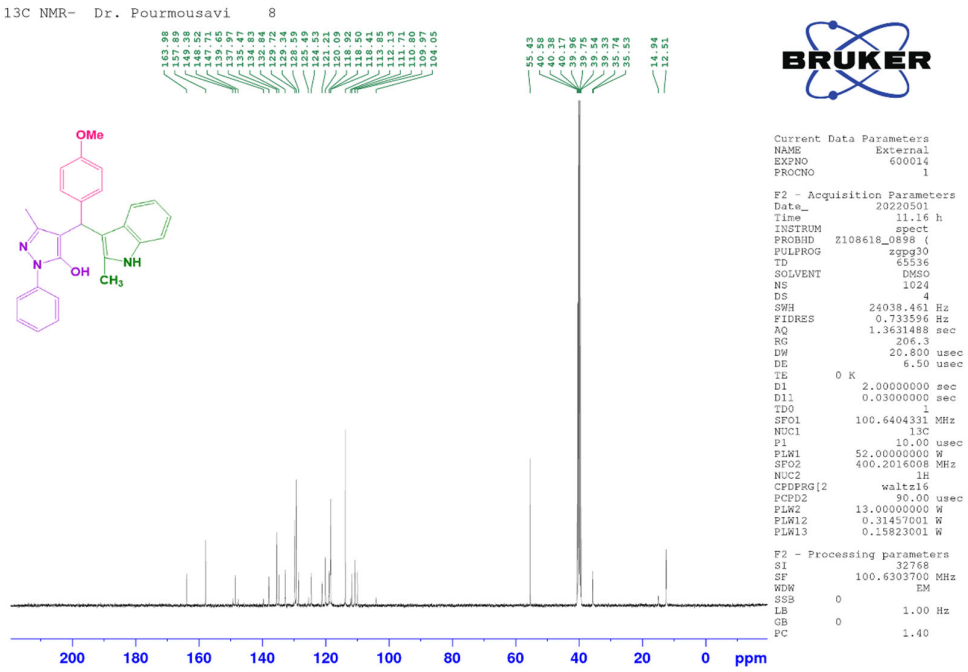


Figure S25. ^{13}C-NMR spectrum of **6m.**

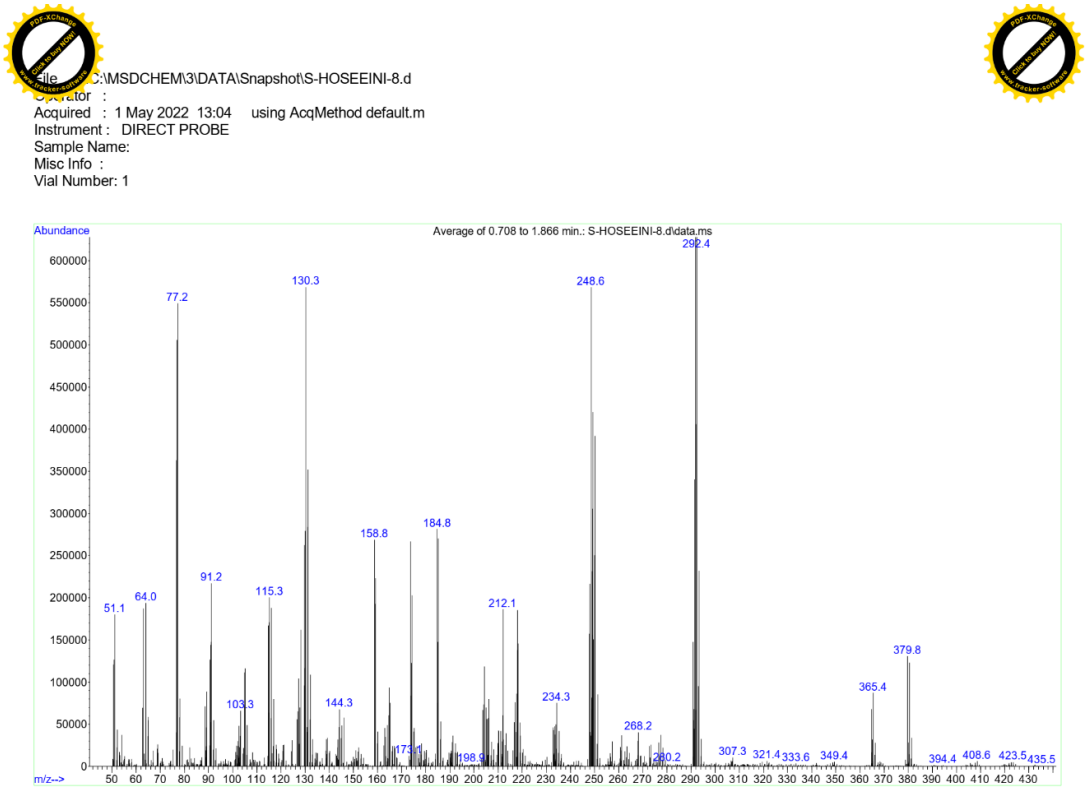


Figure S26. MASS Spectrum of 6m.

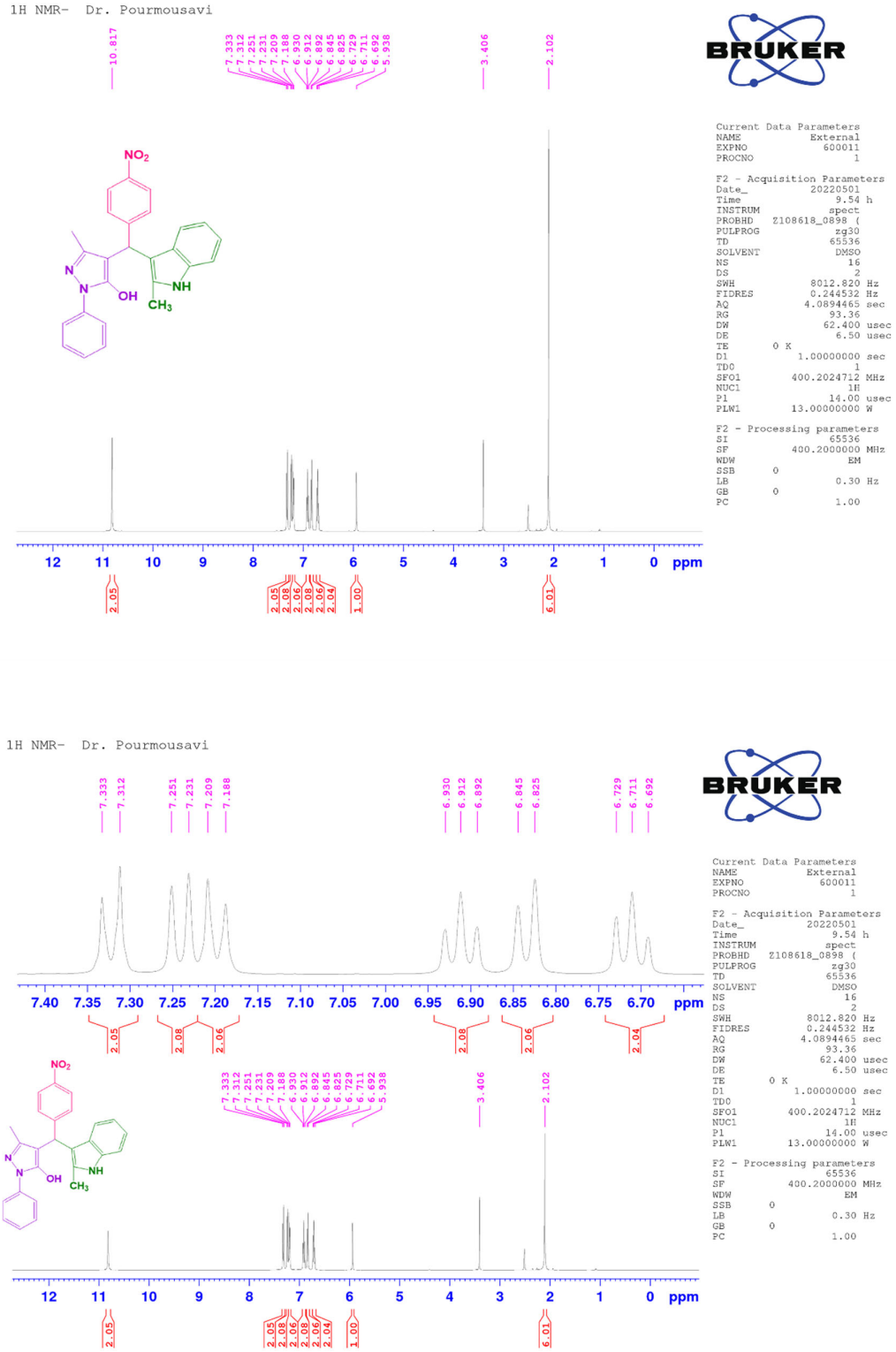


Figure S27. [1]H-NMR spectrum of **6n.**

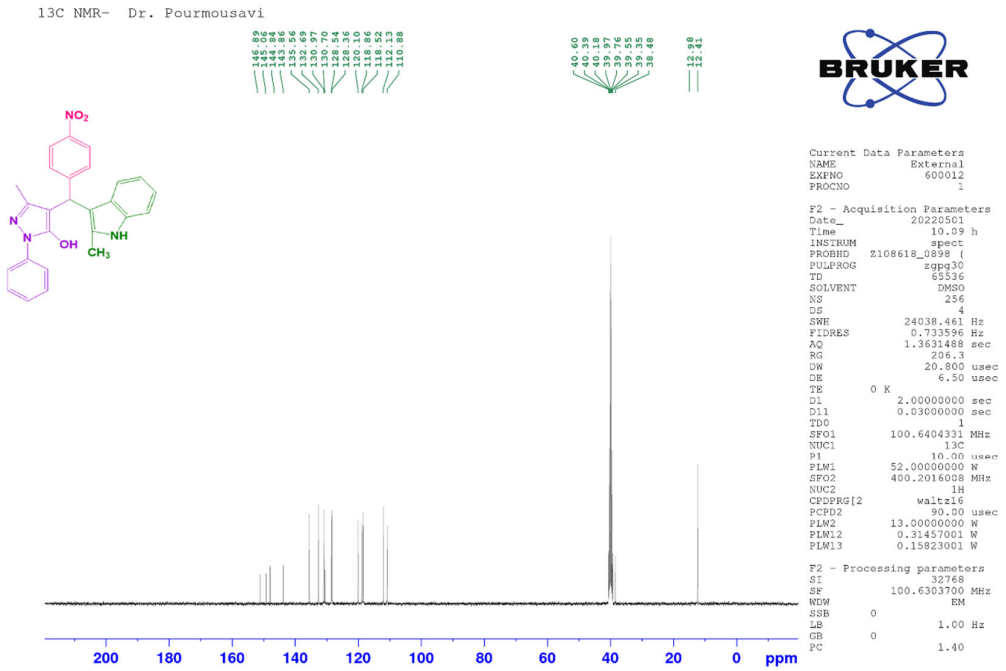


Figure S28. [13]C-NMR spectrum of **6n.**

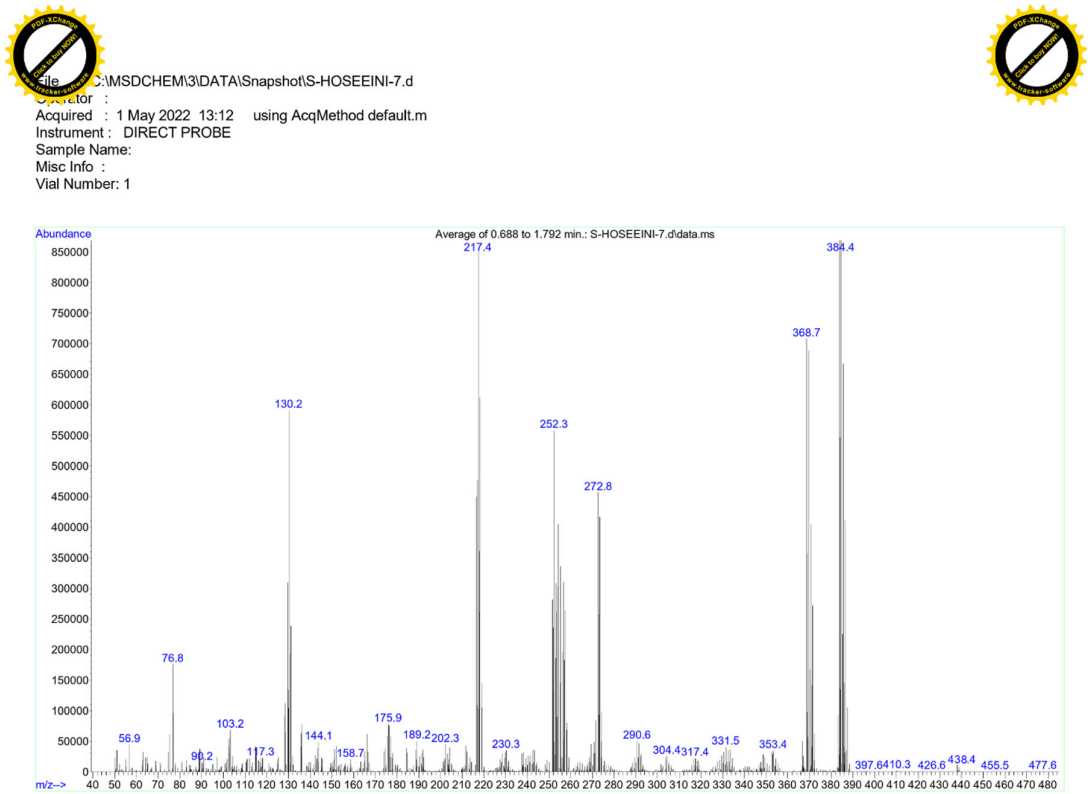


Figure S29. MASS Spectrum of **6n.**

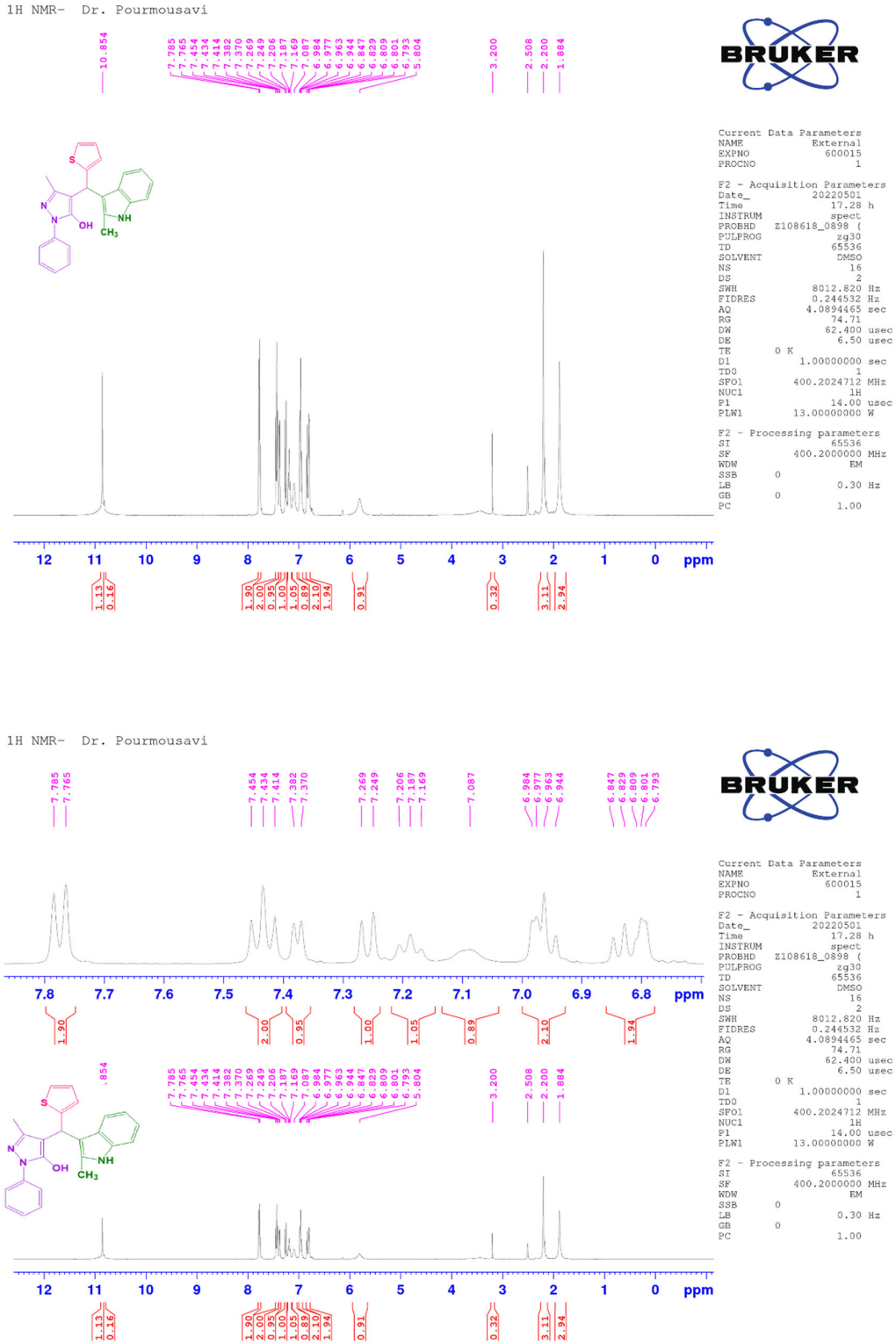


Figure S30. [1]H-NMR spectrum **6o.**

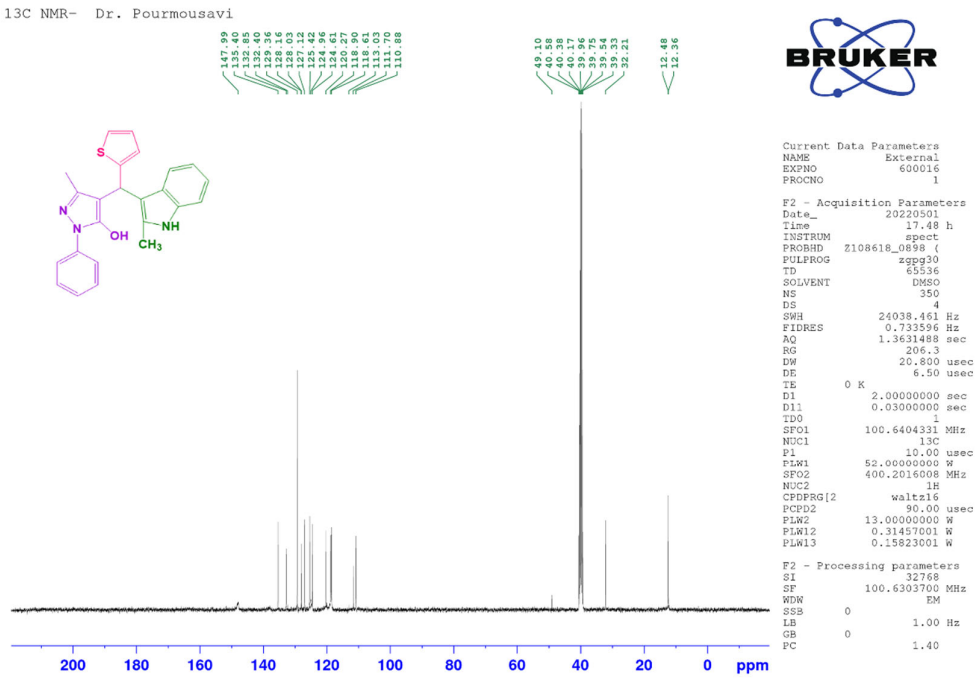


Figure S31. ^{13}C-NMR spectrum of **6o.**

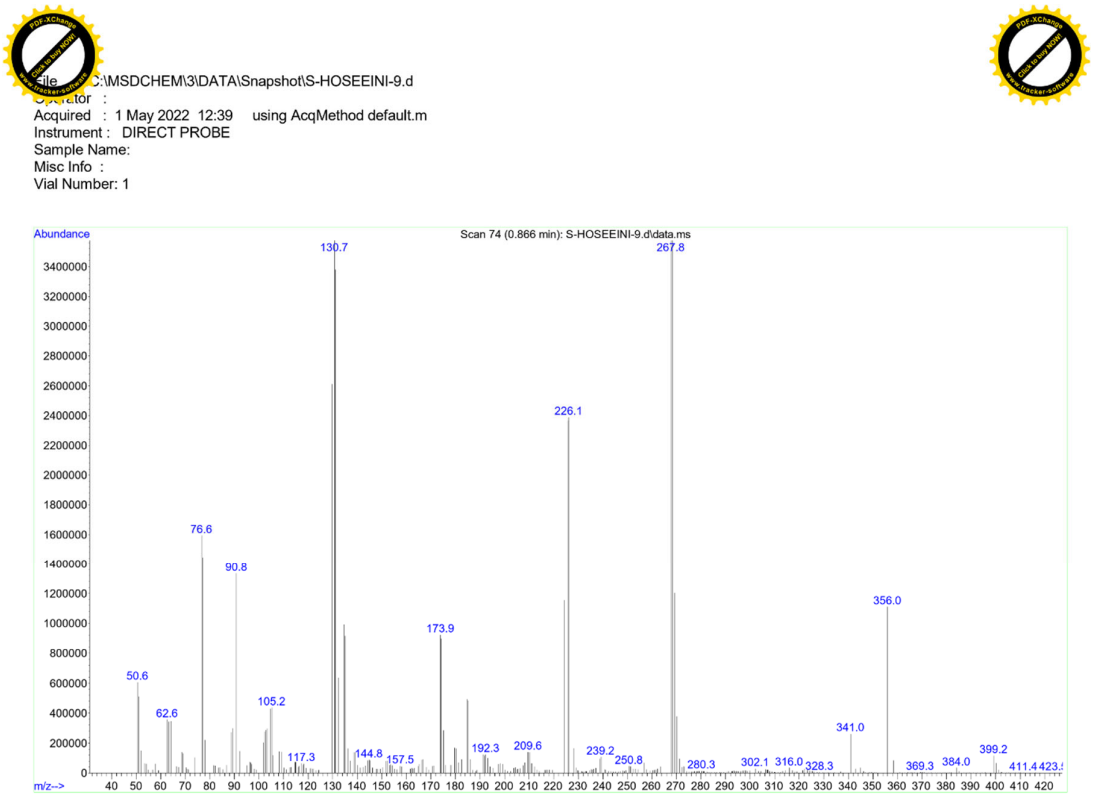


Figure S32. MASS Spectrum of **6O.**

Figure S33. [1]H-NMR spectrum **6p.**

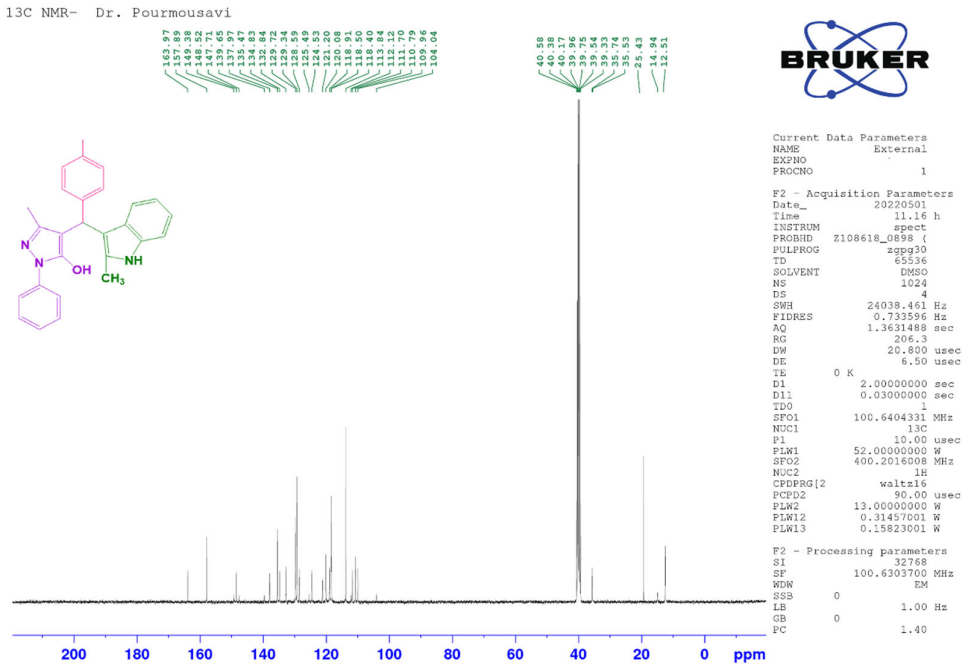


Figure S34. [13]C-NMR spectrum of **6p.**

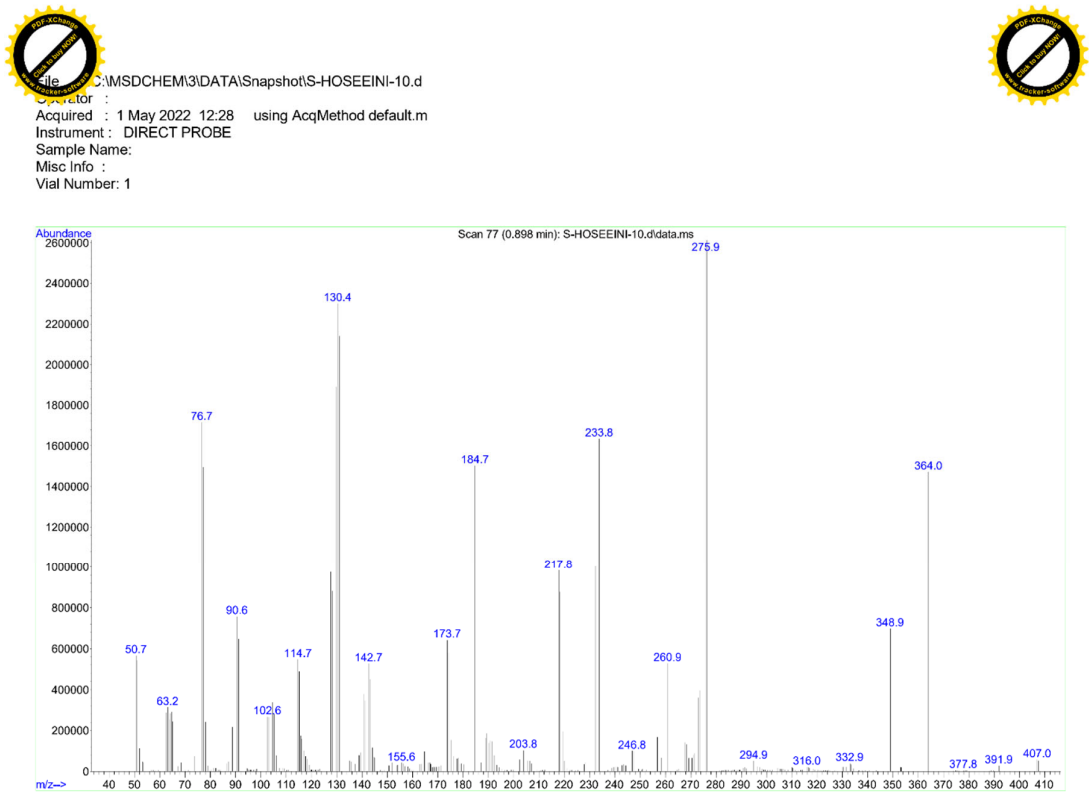


Figure S35. MASS Spectrum of **6p.**