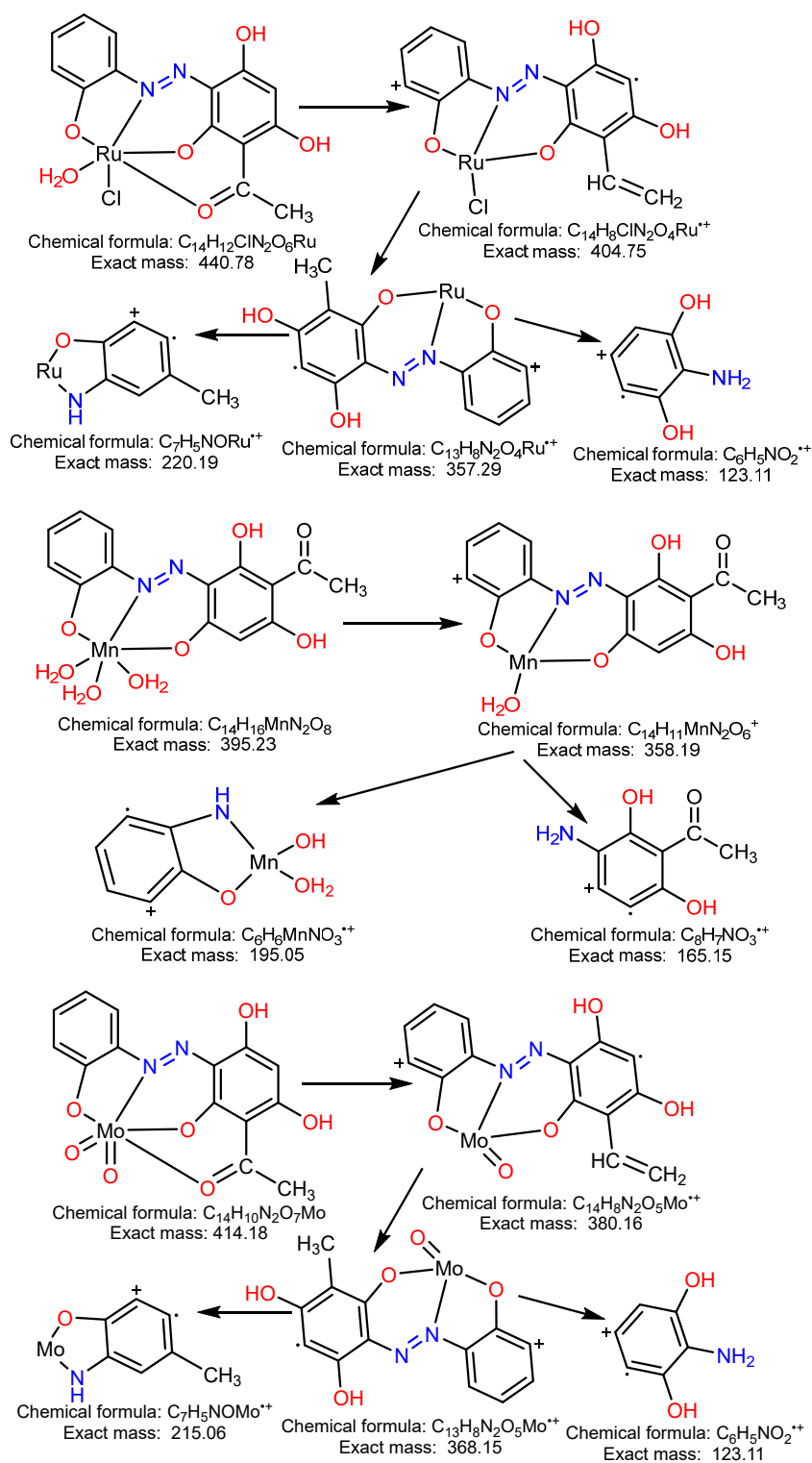
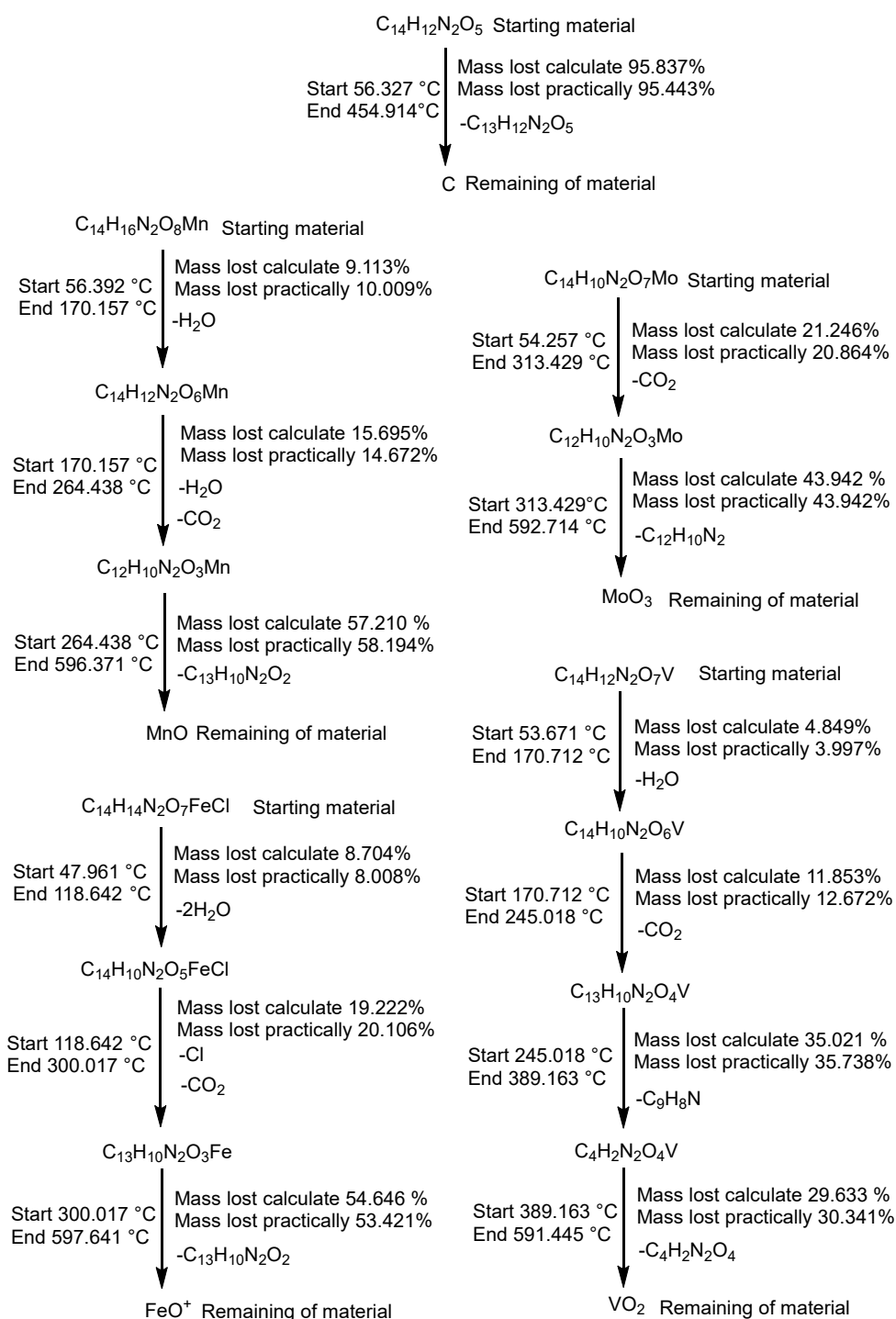




Scheme S1. Fragmentation of ligand with its complexes



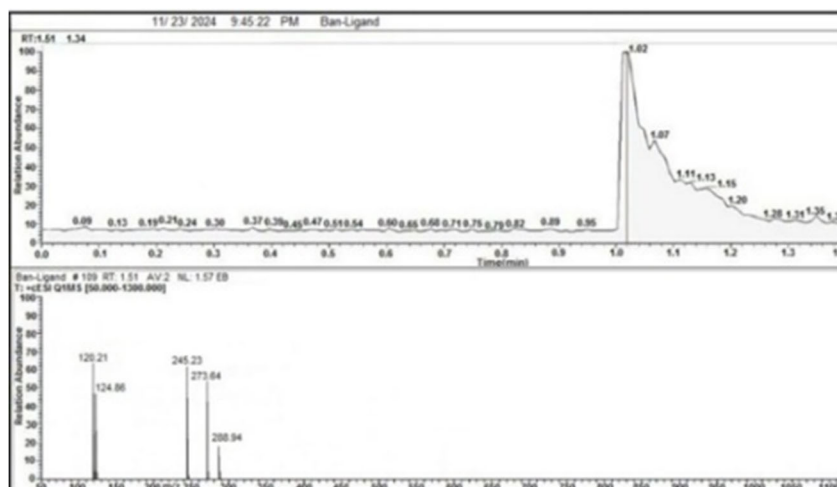


Fig S1. The mass spectrum of ligand

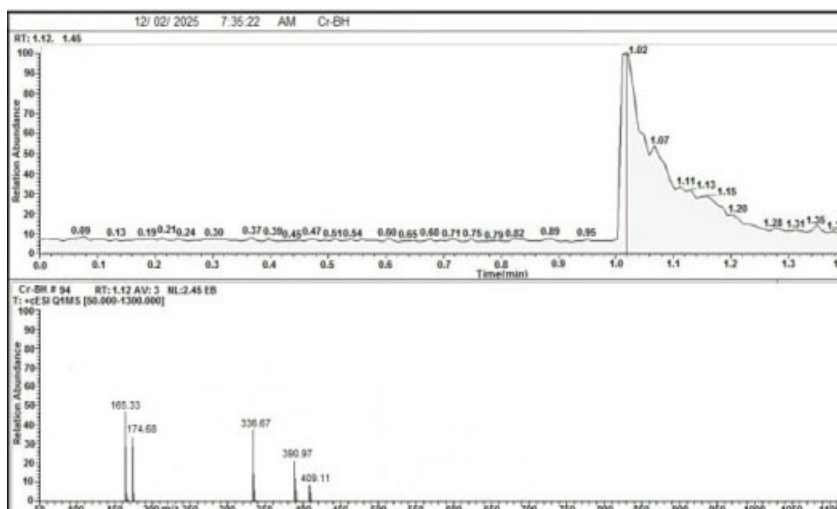


Fig S2. The mass spectrum of the Cr-complex

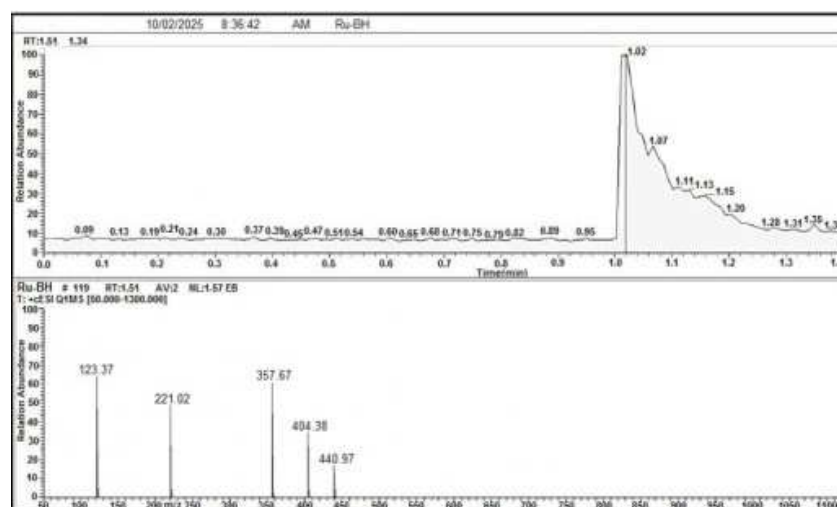


Fig S3. The mass spectrum of the Ru-complex

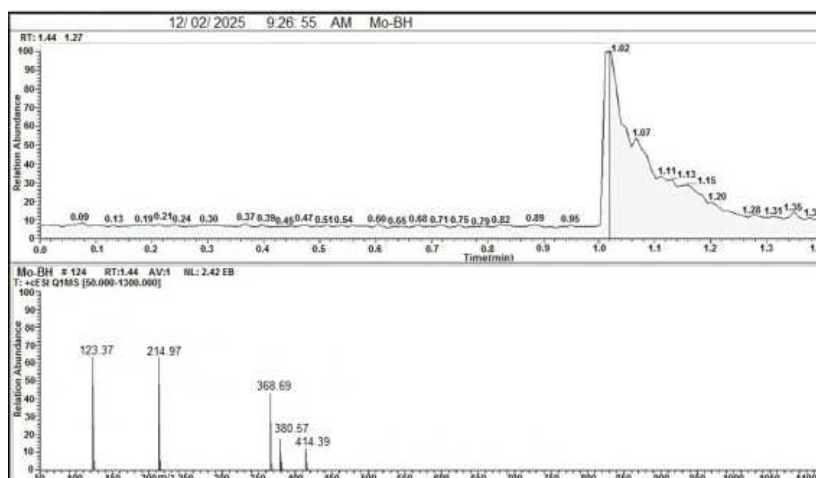


Fig S4. The mass spectrum of the Mo-complex

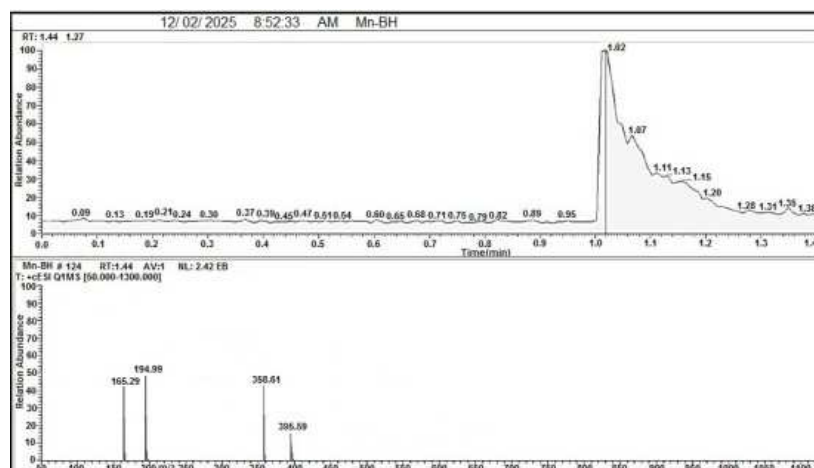


Fig S5. The mass spectrum of the Mn-complex

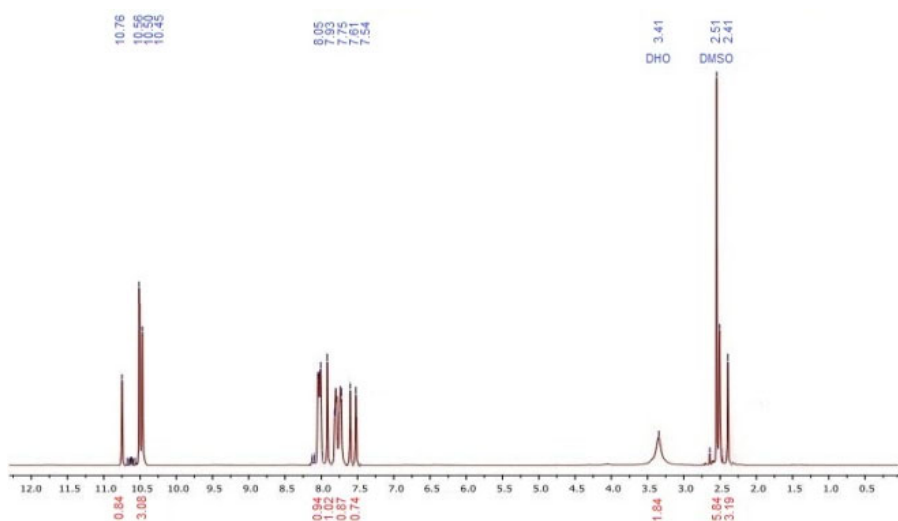


Fig S6. ¹H-NMR spectrum of the new azo dye ligand

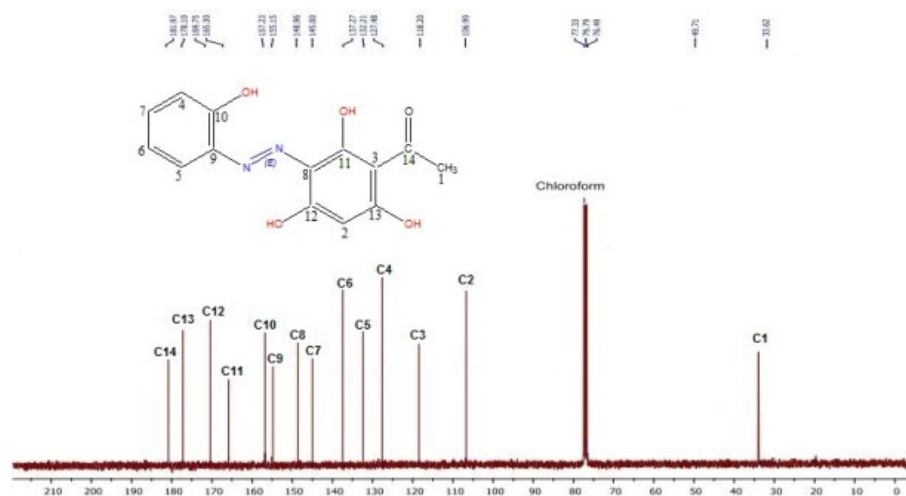
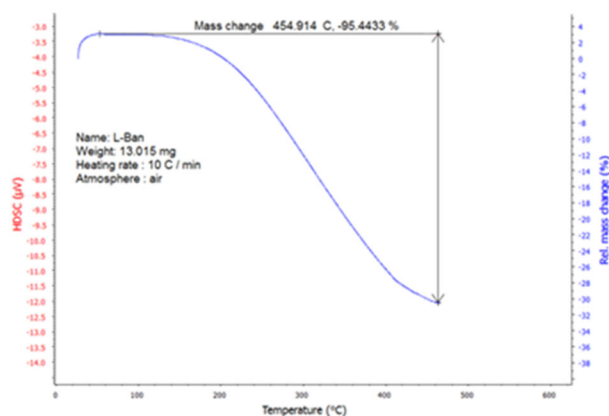
Fig S7. ^{13}C -NMR spectrum of the new azo dye ligand

Fig S8. TGA curve of ligand

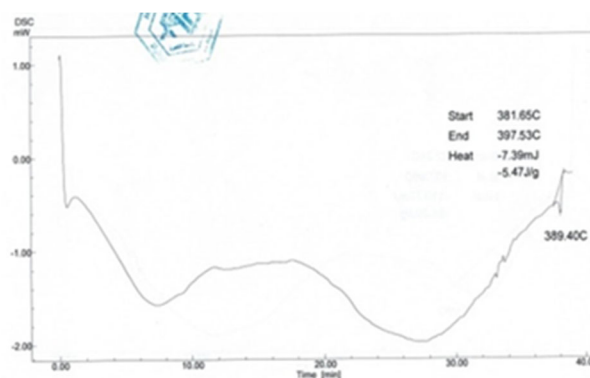


Fig S9. DSC curve of ligand

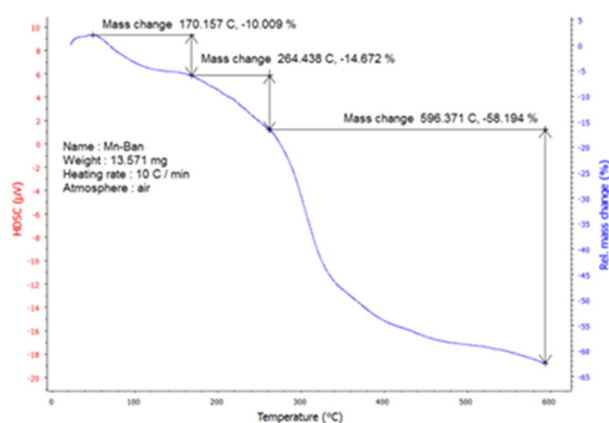


Fig S10. TGA curve of Mn-complex

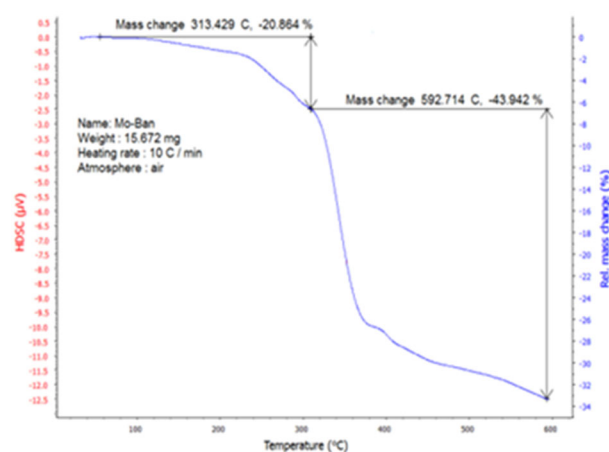


Fig S11. TGA curve of Mo-complex

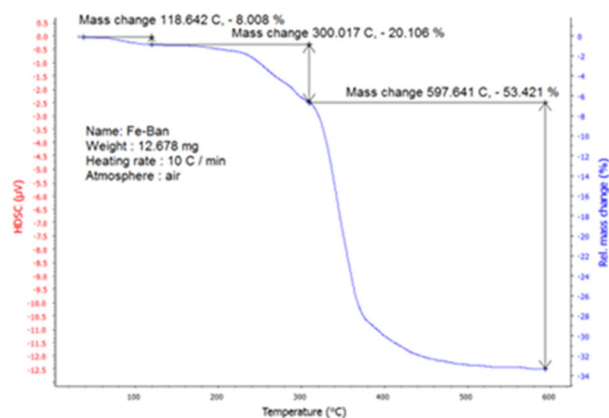


Fig S12. TGA curve of Fe-complex

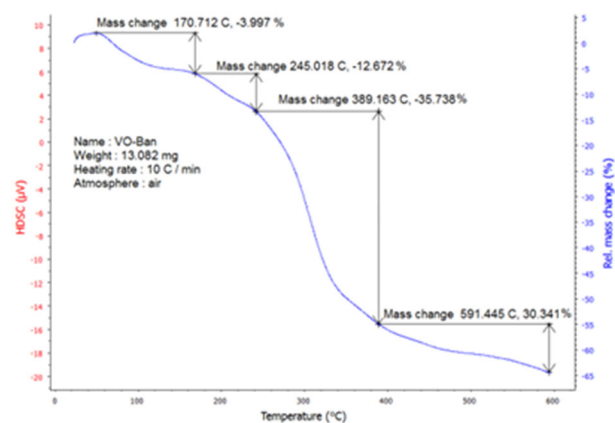


Fig S13. TGA curve of VO-complex

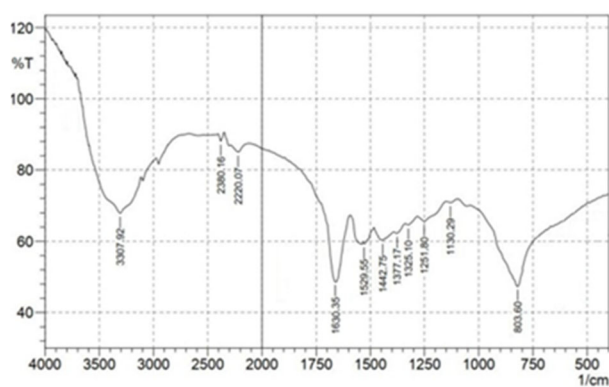
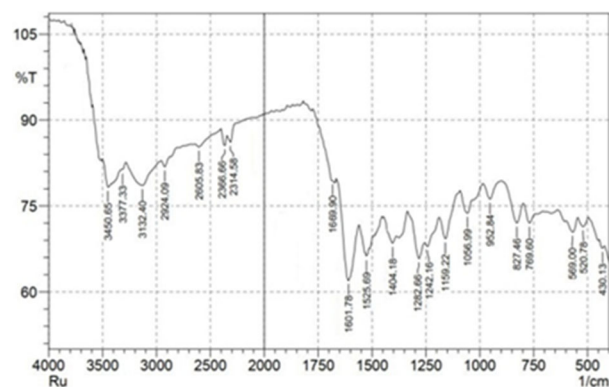
Fig S14. FTIR spectrum of ligand (H₂L)

Fig S15. FTIR spectrum of Ru-complex

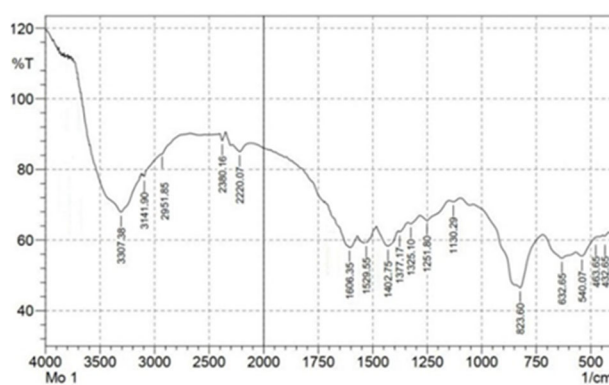


Fig S16. FTIR spectrum of Mo-complex

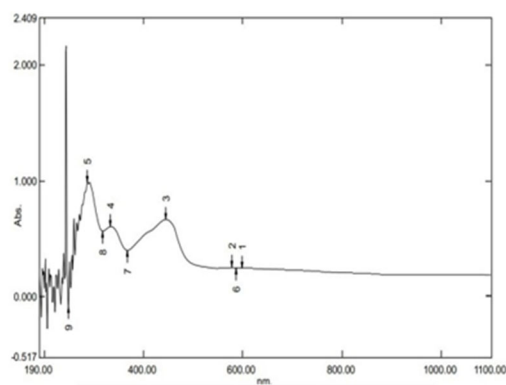


Fig S17. UV-vis spectrum of VO-complex

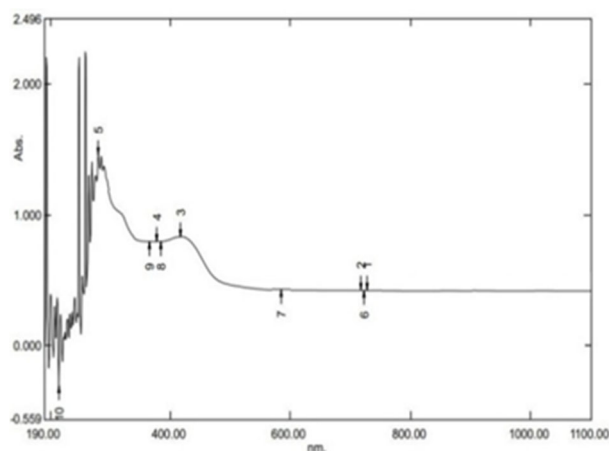


Fig S18. UV-vis spectrum of Fe-complex

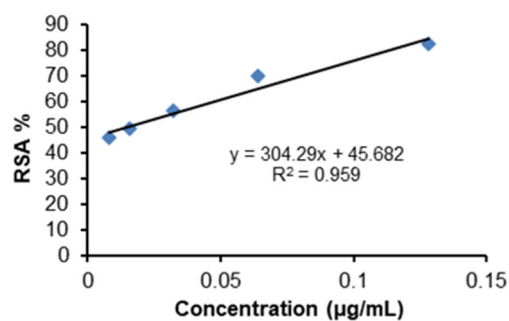


Fig S19. The antioxidant profile of the standard

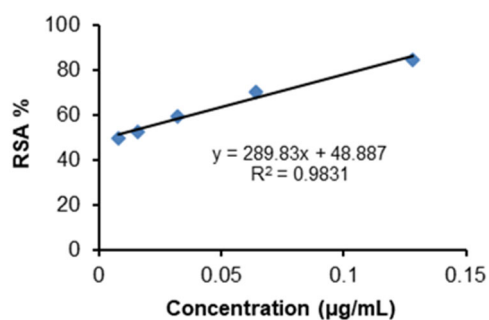
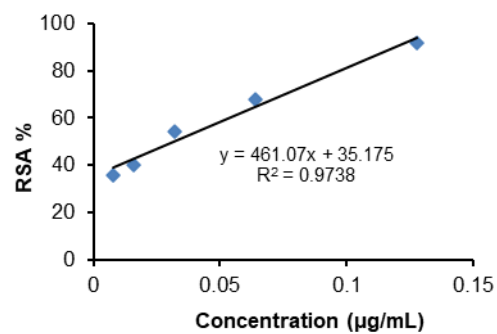
Fig S20. The antioxidant profile of the H₂L ligand

Fig S21. The antioxidant profile of Cr-complex

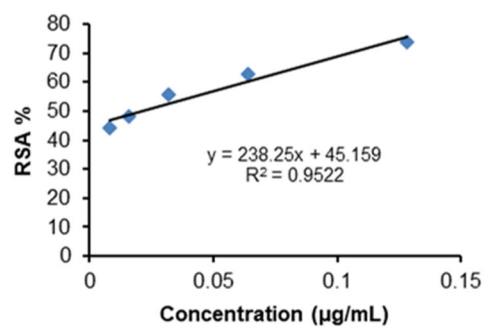


Fig S22. The antioxidant profile of VO-complex

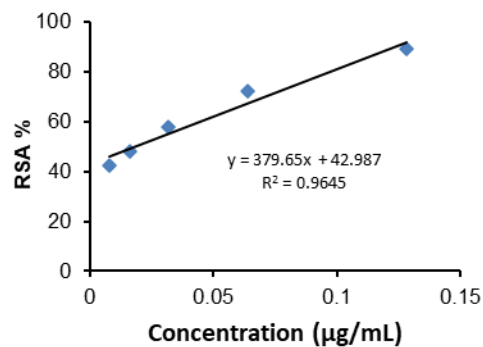


Fig S23. The antioxidant profile of Mn-complex

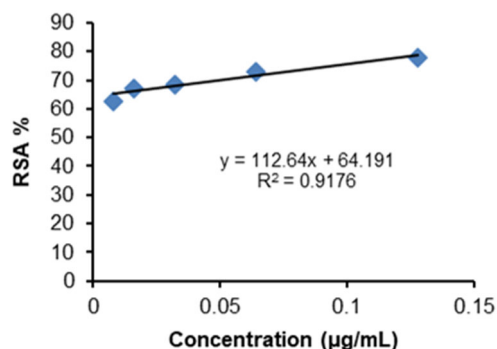


Fig S24. The antioxidant profile of Fe-complex

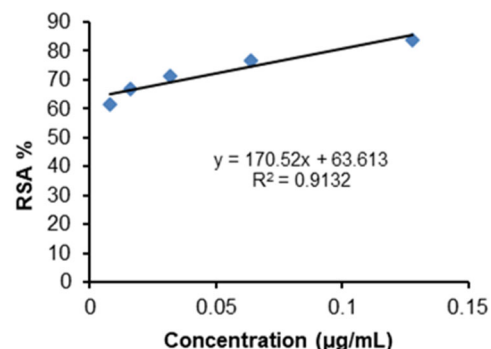


Fig S25. The antioxidant profile of Ru-complex

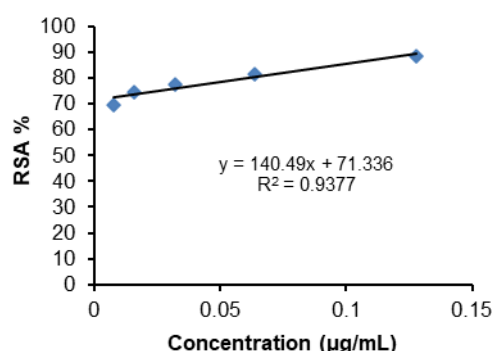


Fig S26. The antioxidant profile of Mo-complex

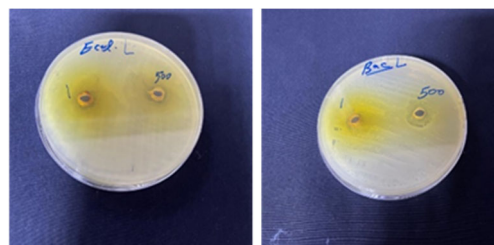


Fig S27. Biological activity of the ligand against bacteria

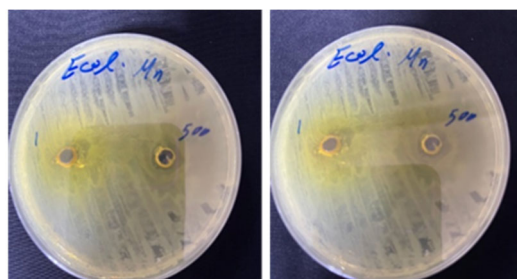


Fig S28. Biological activity of Mn-complex against bacteria

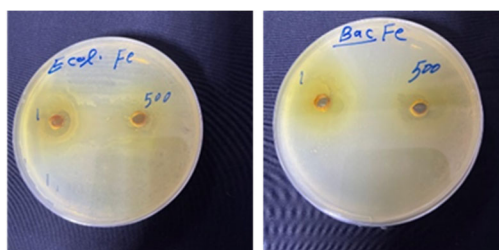


Fig S29. Biological activity of Fe-complex against bacteria

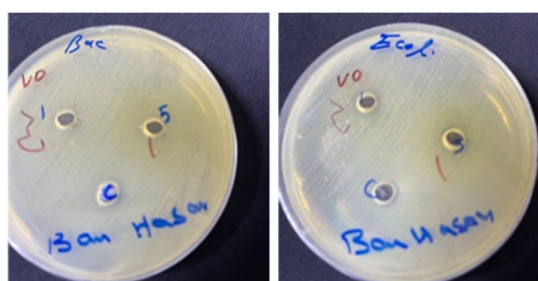


Fig S30. Biological activity of VO-complex against bacteria



Fig S31. Biological activity of Mo-complex against bacteria

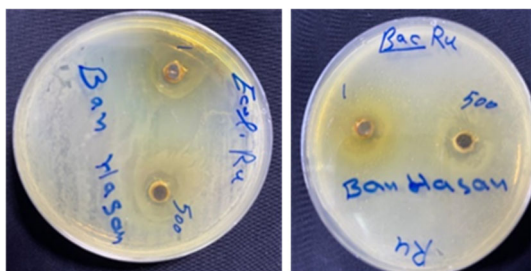


Fig S32. Biological activity of Ru-complex against bacteria

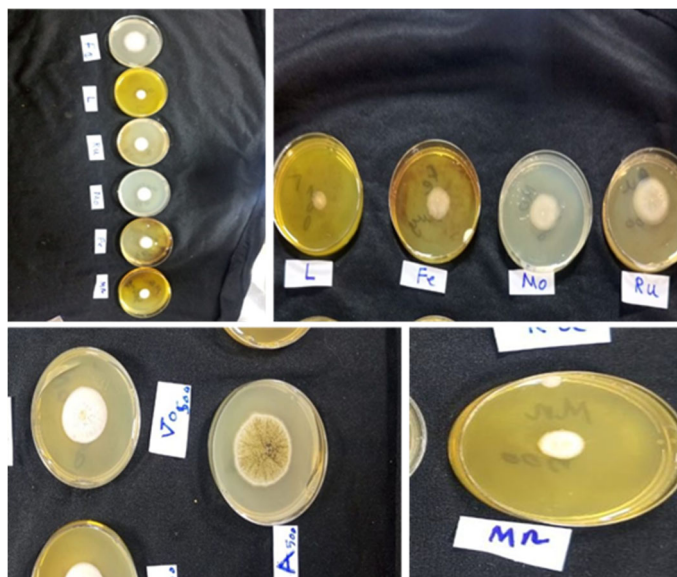


Fig S33. Biological activity of ligand and complexes against fungi