

Supporting Information

for

Phenothiazine based sensor for naked-eye detection and bioimaging of Hg(II) and F⁻ ions

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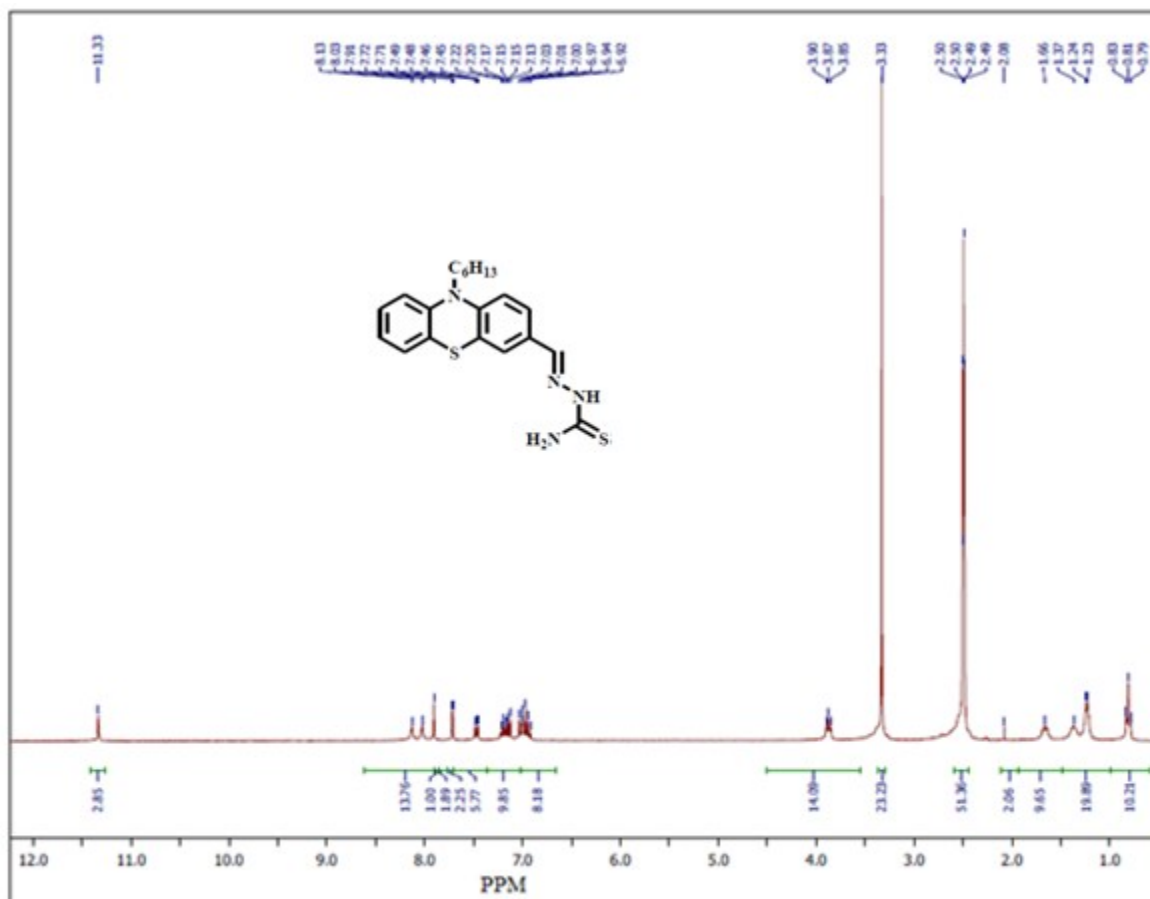


Figure S1: ^1H NMR spectrum of P-1

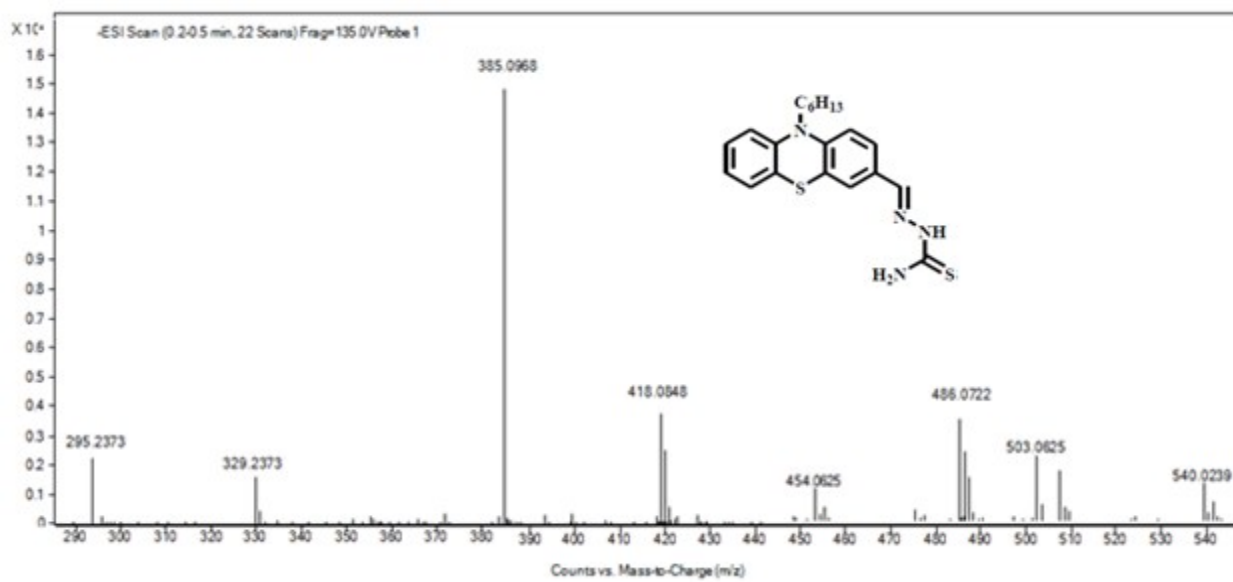


Figure S2: ESI-MS spectrum of **P-1**

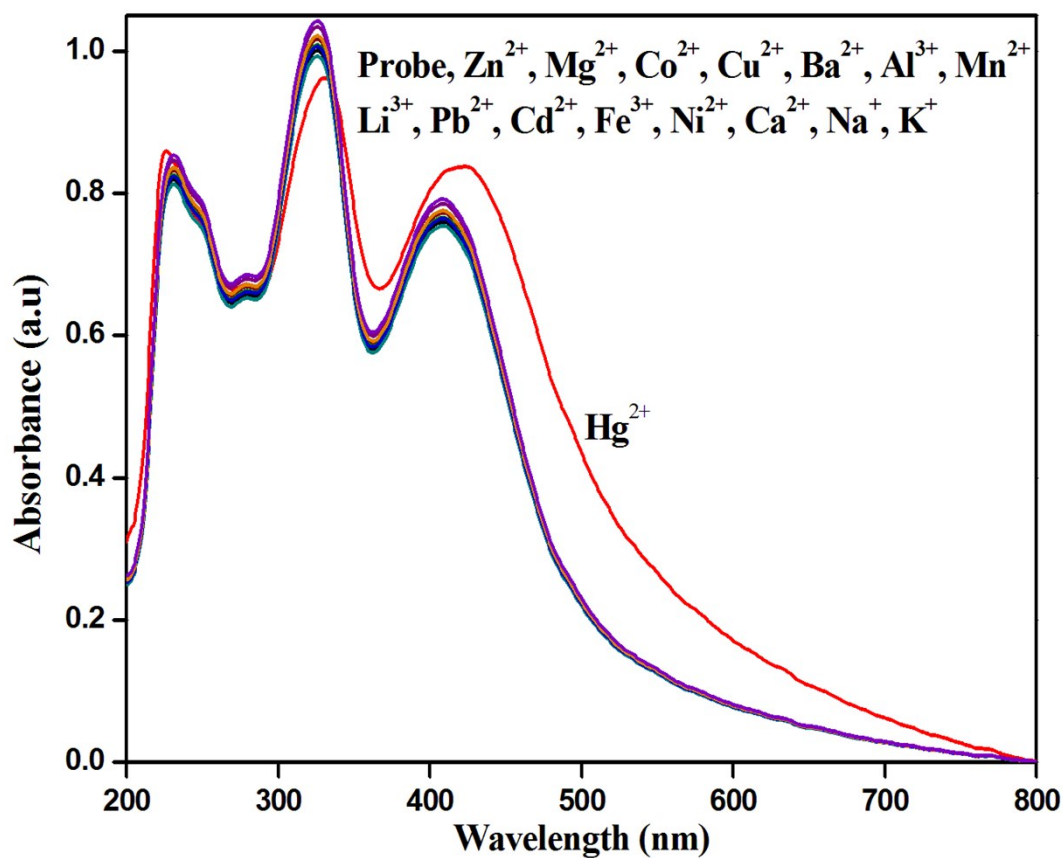


Figure S3: UV-vis spectrum of P-1 (10 μM) in the presence of Zn²⁺, Mg²⁺, Co²⁺, Cu²⁺, Ba²⁺, Al³⁺, Mn²⁺, Li³⁺, Pb²⁺, Hg²⁺, Cd²⁺, Fe³⁺, Ni²⁺, Ca²⁺, Na⁺ and K⁺ (10 μM) in ethanol-water (7:3) mixture.

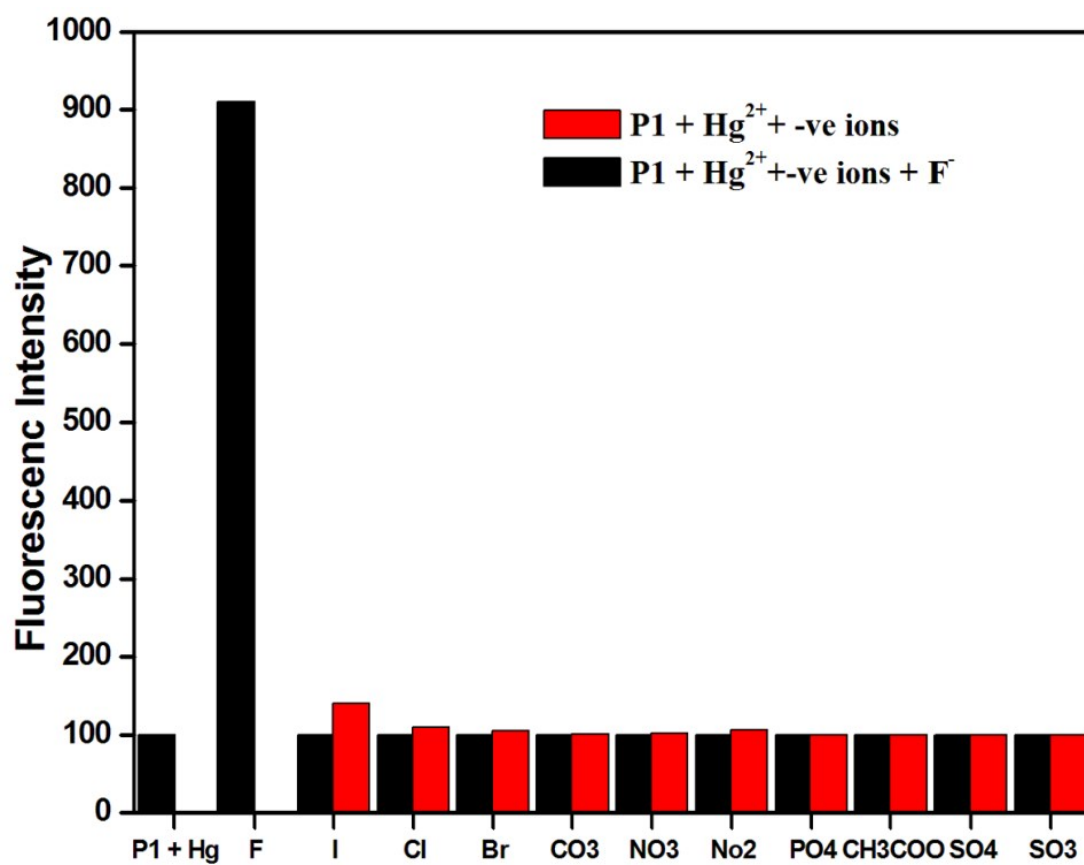


Figure S4: Fluorescence spectral data of [P-1 + Hg²⁺] ensemble (10 μM) with 5 equiv. of negative ions F⁻, I⁻, Cl⁻, Br⁻, CO₃²⁻, NO₃⁻, NO₂⁻, PO₄³⁻, CH₃COO⁻, CN⁻, SO₄²⁻ and SO₃²⁻.

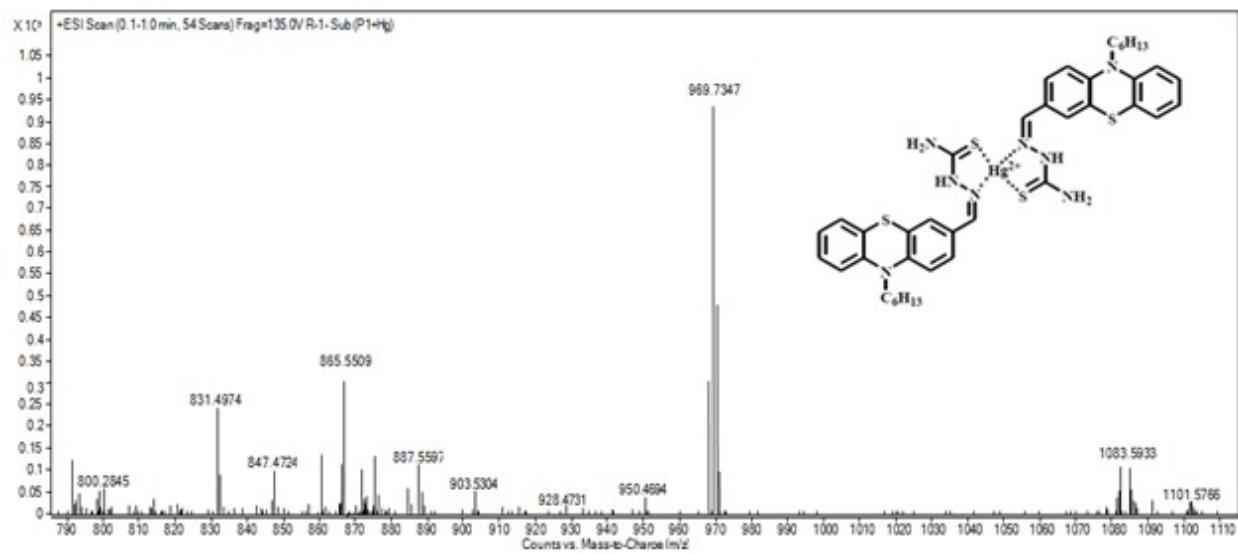


Figure S5: ESI-MS spectrum of **P-1** + Hg²⁺

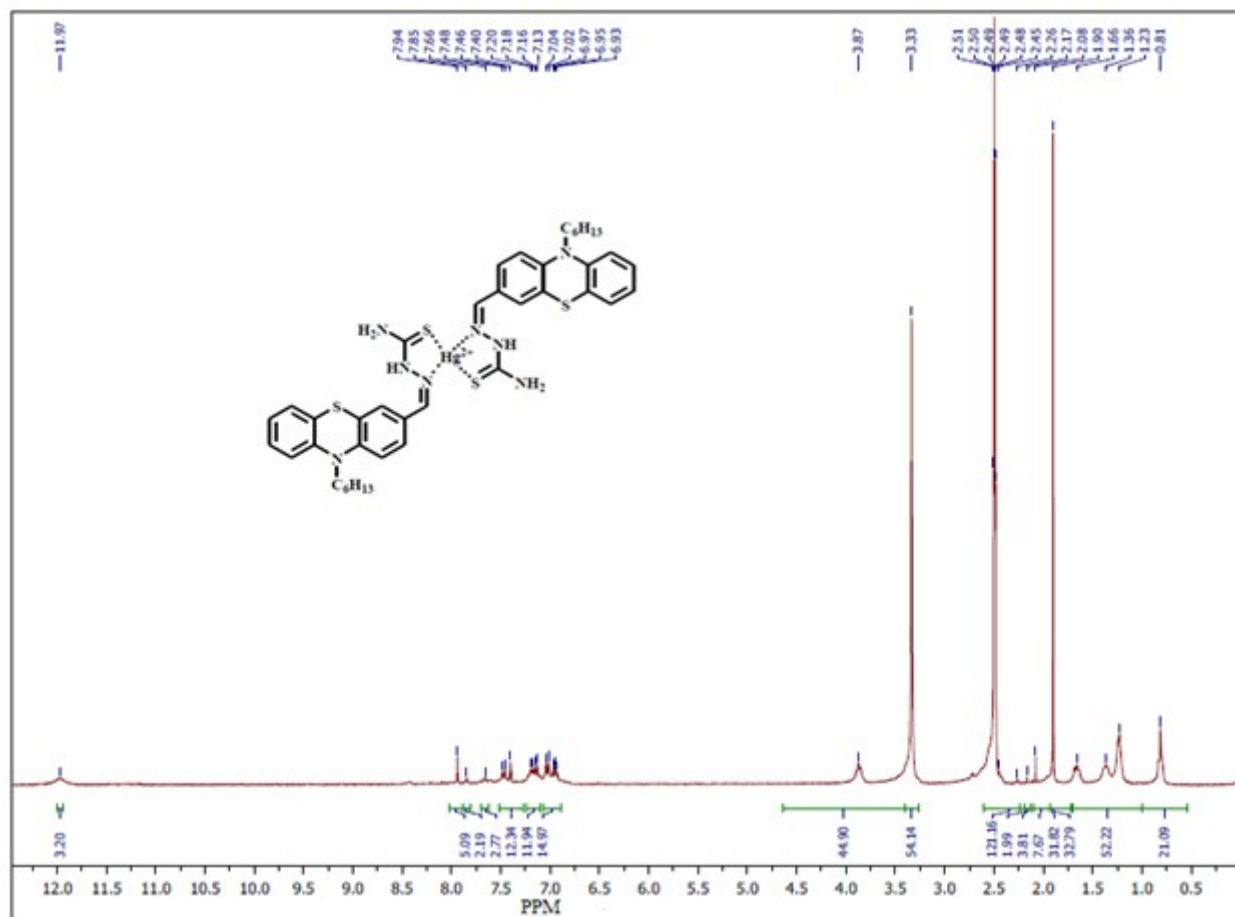


Figure S6: ¹H NMR spectrum of P-1 + Hg²⁺

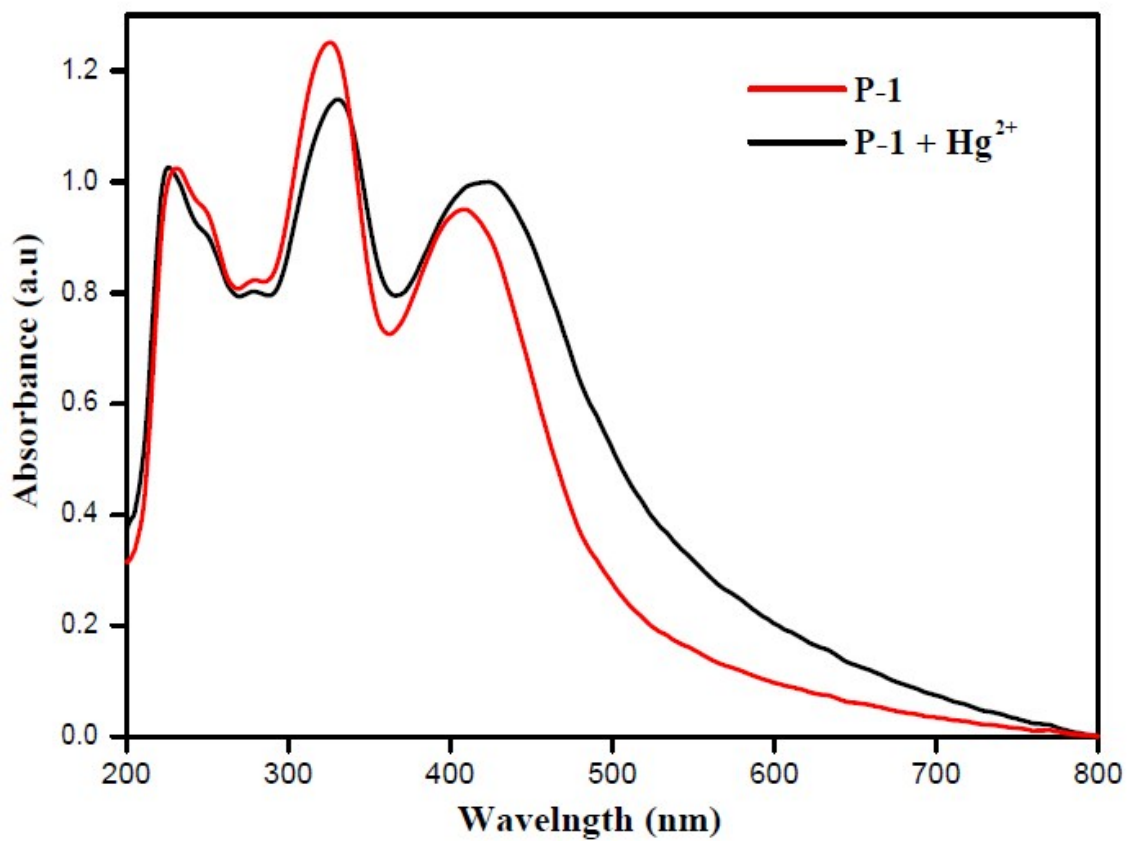


Figure S7: UV-vis spectrum of probe and P-1 + Hg²⁺ (10 μ M) in ethanol-water (7:3) mixture

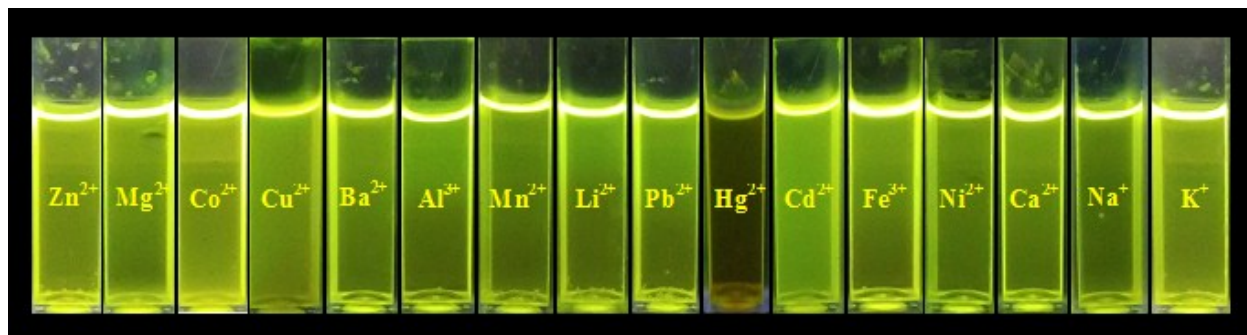


Figure S8: UV-Light Photograph of solutions of **P-1**(10 μM) in the presence of various metal ions (10 μM) under illumination.

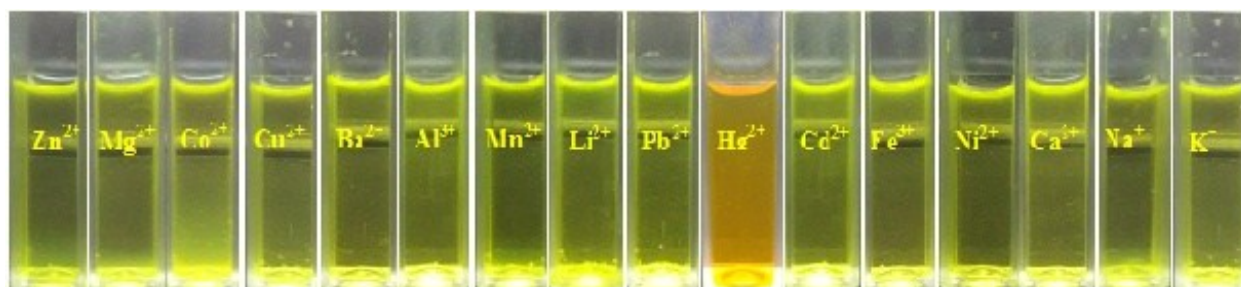


Figure S9: Visible Light Photograph of solutions of **P-1**(10 μM) in the presence of various metal ions (10 μM) under illumination.

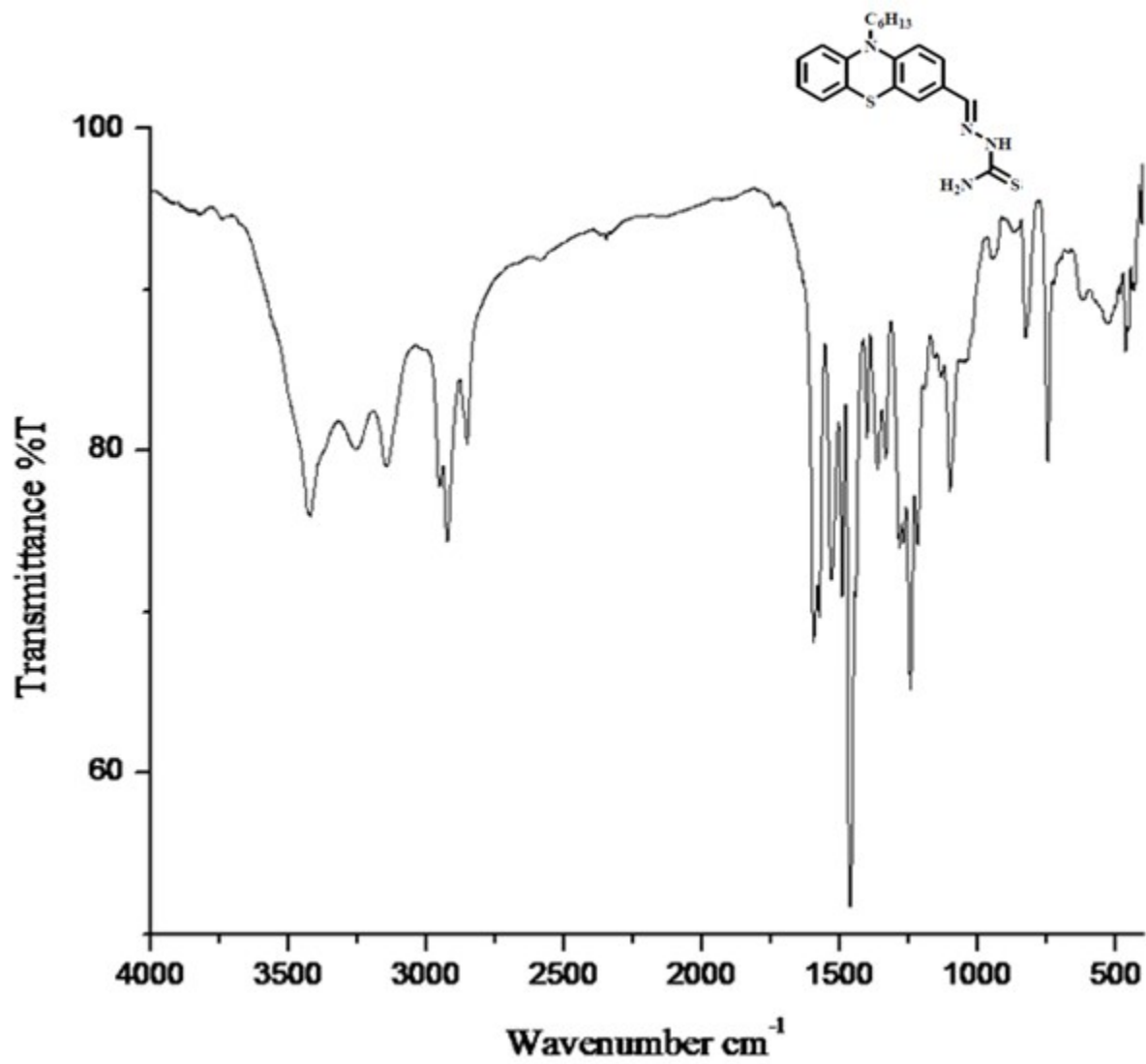


Figure S10: IR spectra of probe P-1

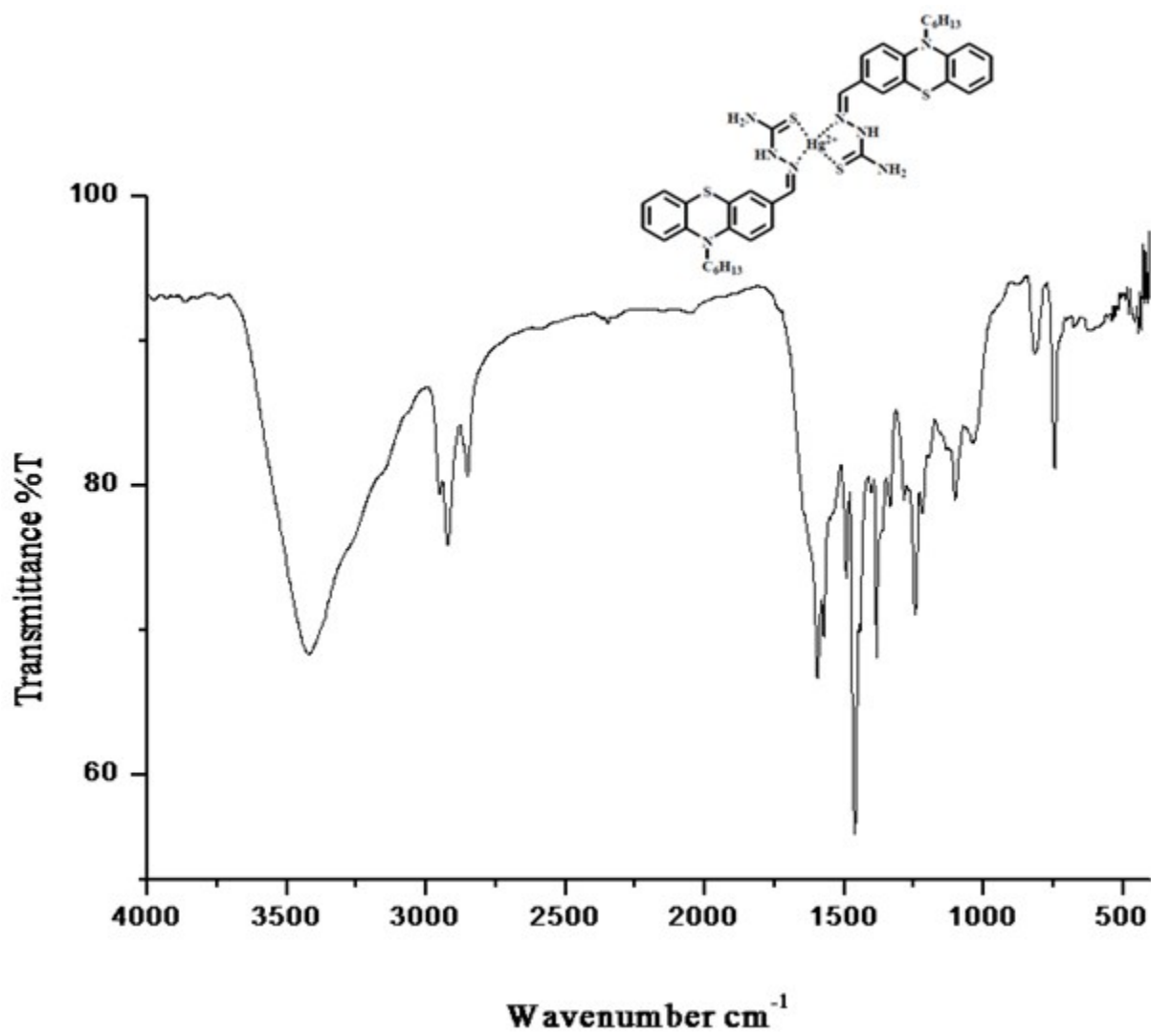


Figure S11: IR spectra of probe P-1 + Hg²⁺

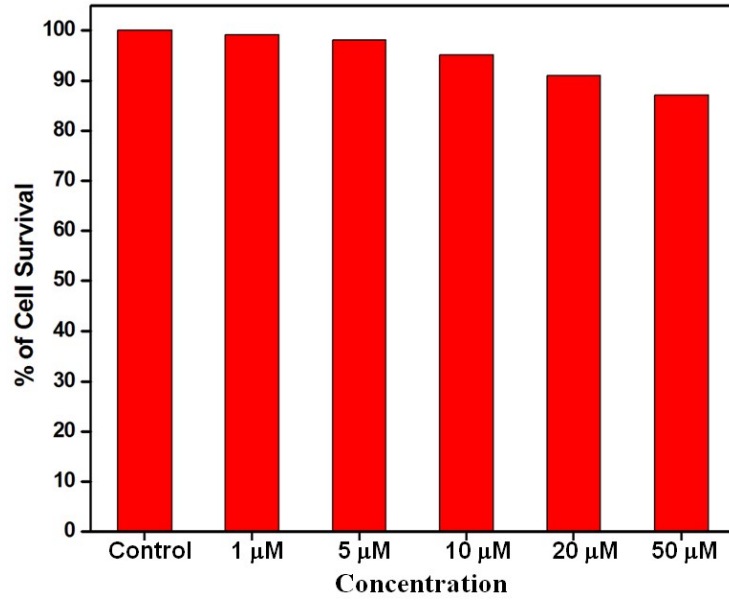


Figure S11: Percentage (%) of cell survival of HeLa cells treated with different concentrations (1-20 μM/mL) of P-1.

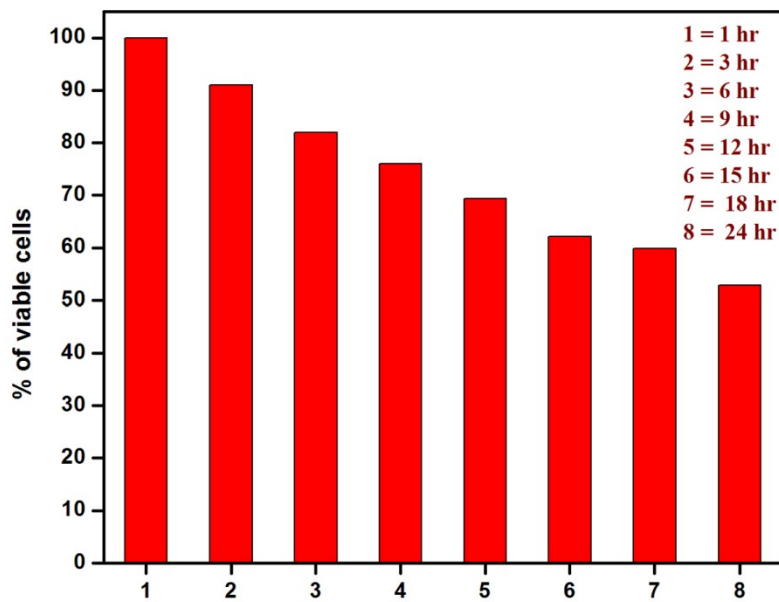


Figure S12: Percentage (%) of cell survival of HeLa cells treated with different time intervals with concentrations of 20 μM/mL of P-1.