

### Supplementary Data

This supplementary data is a part of a paper entitled “New Series of Ni(II), Cu(II), Zr(IV), Ag(I), and Cd(II) Complexes of Trimethoprim and Diamine Ligands: Synthesis, Characterization, and Biological Studies”.

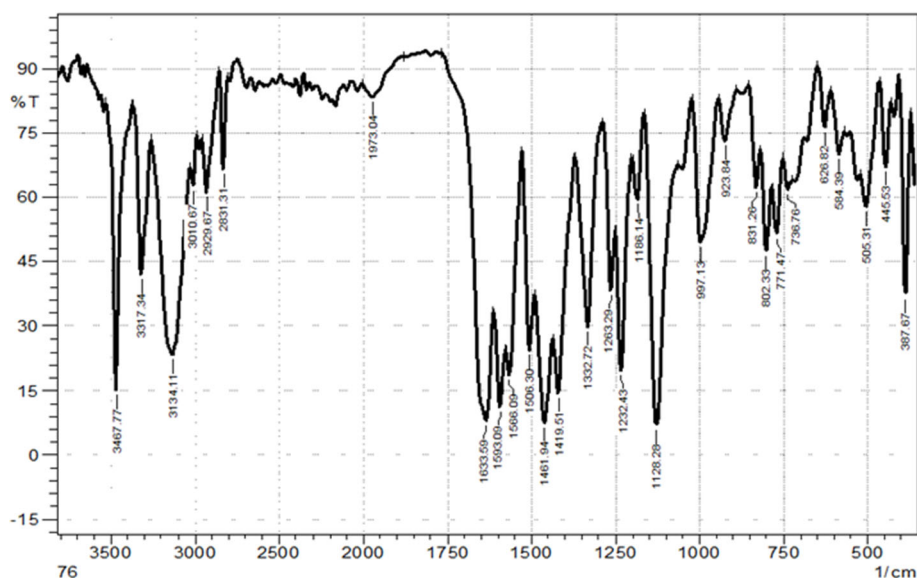


Fig S1. FTIR spectrum of TMP ligand

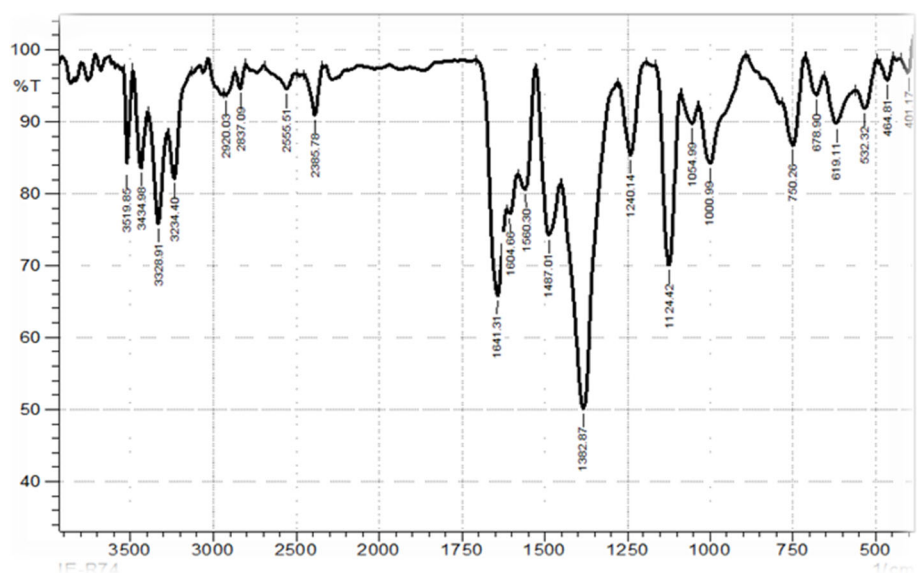


Fig S2. FTIR spectrum of  $[\text{ZrO}(\text{tmp})(\text{PD})](\text{NO}_3)_2 \cdot \text{H}_2\text{O}$

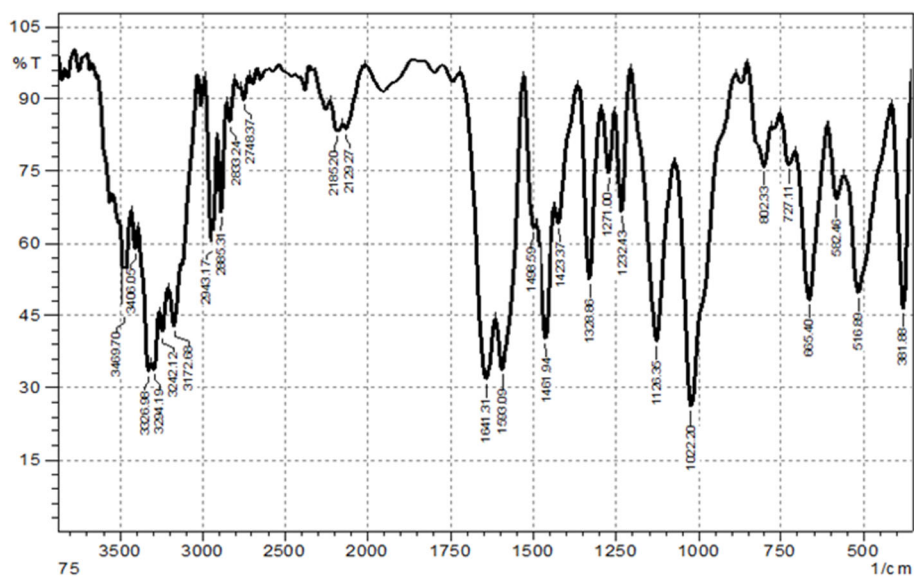
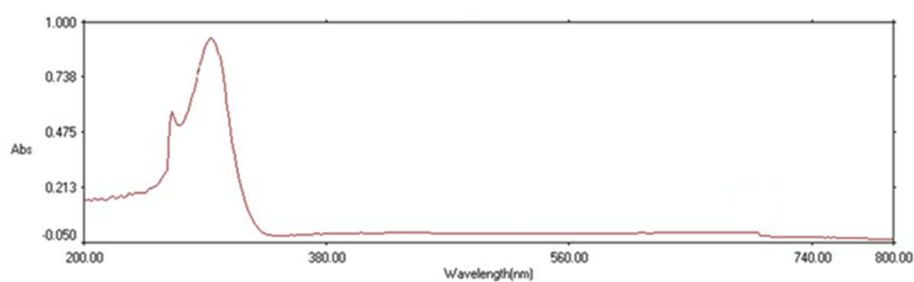
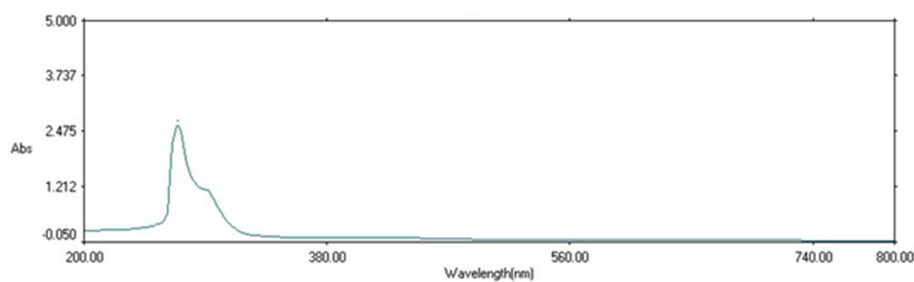
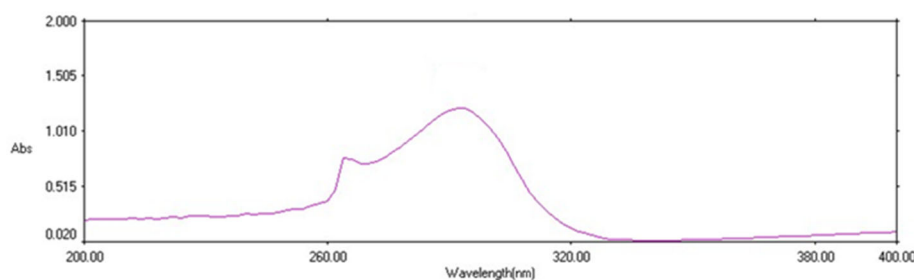
Fig S3. FTIR spectrum of [Ni(tmp)(en)Cl<sub>2</sub>]

Fig S4. UV-vis spectrum of TMP ligand

Fig S5. UV-vis spectrum of [ZrO(tmp)(en)H<sub>2</sub>O](NO<sub>3</sub>)<sub>2</sub>·H<sub>2</sub>OFig S6. UV-vis spectrum of [Ag(tmp)(en)]NO<sub>3</sub>·H<sub>2</sub>O

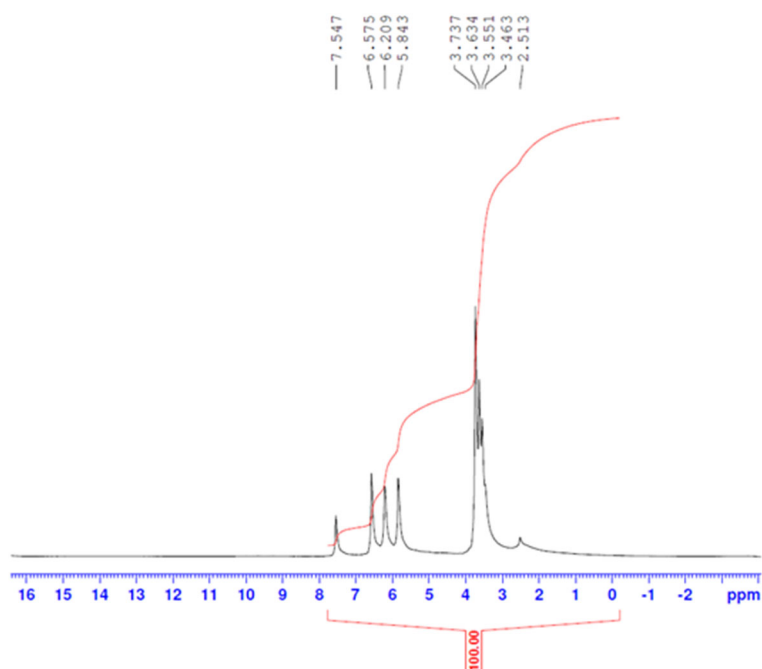


Fig S7. <sup>1</sup>H-NMR spectrum of TMP ligand

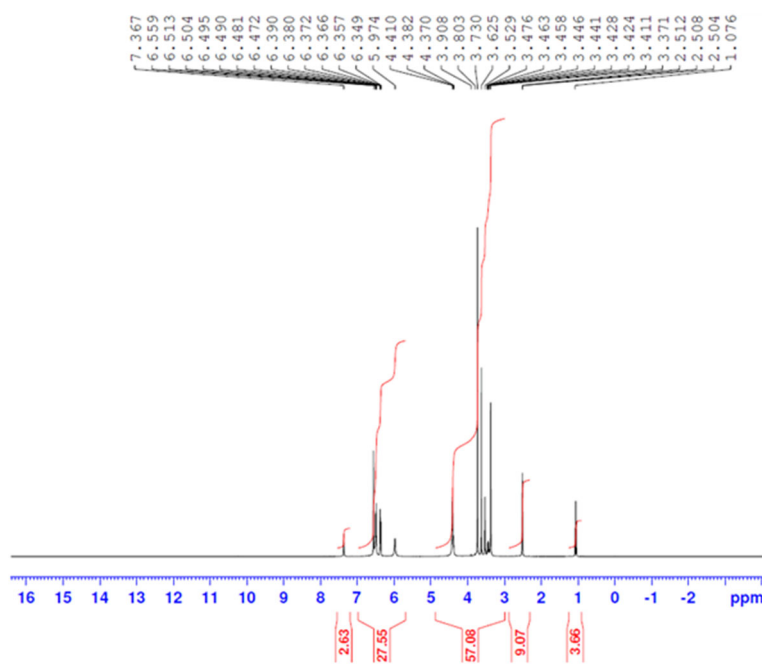
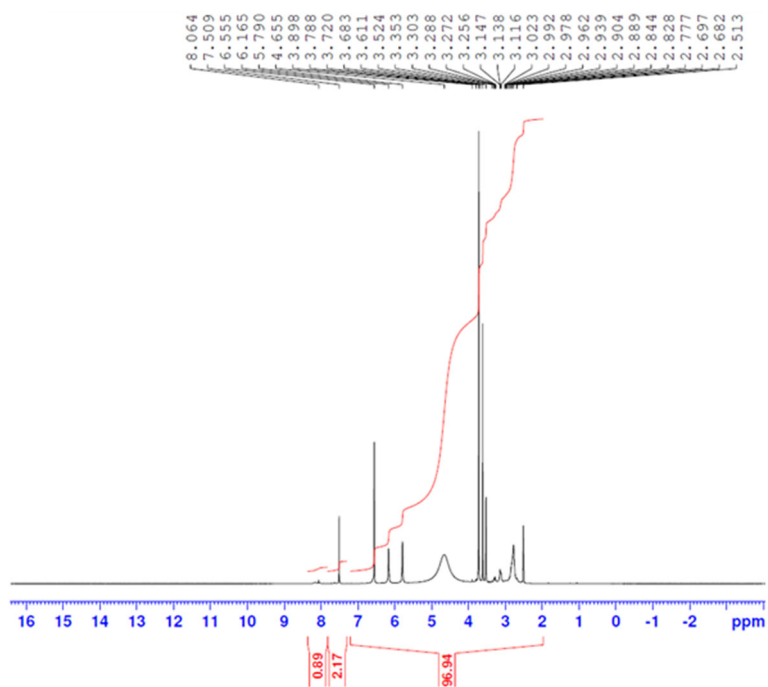
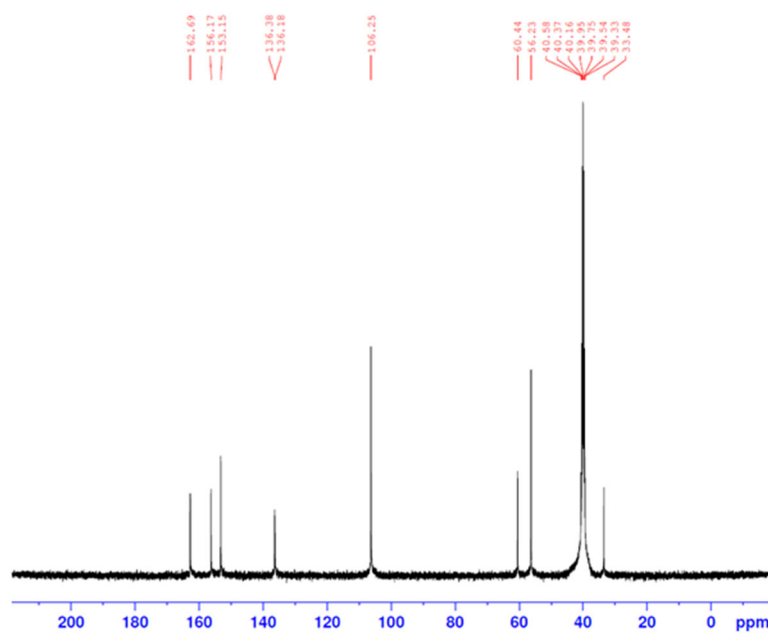


Fig S8. <sup>1</sup>H-NMR spectrum of [Cd(tmp)(PD)](NO<sub>3</sub>)<sub>2</sub>·H<sub>2</sub>O

Fig S9. <sup>1</sup>H-NMR spectrum of [ZrO(tmp)(en)(H<sub>2</sub>O)](NO<sub>3</sub>)<sub>2</sub>·H<sub>2</sub>OFig S10. <sup>13</sup>C-NMR spectrum of TMP ligand

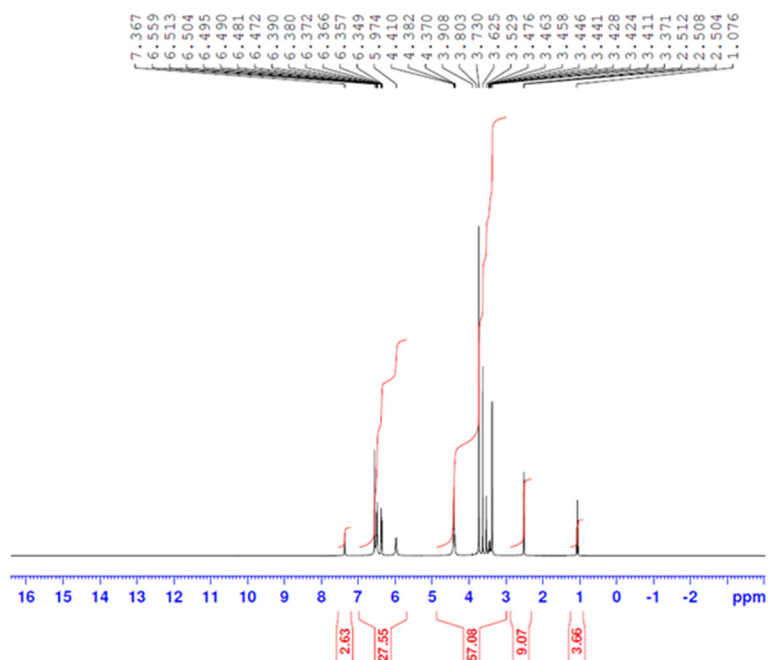


Fig S11.  $^{13}\text{C}$ -NMR spectrum of  $[\text{Cd}(\text{tmp})(\text{PD})](\text{NO}_3)_2 \cdot \text{H}_2\text{O}$

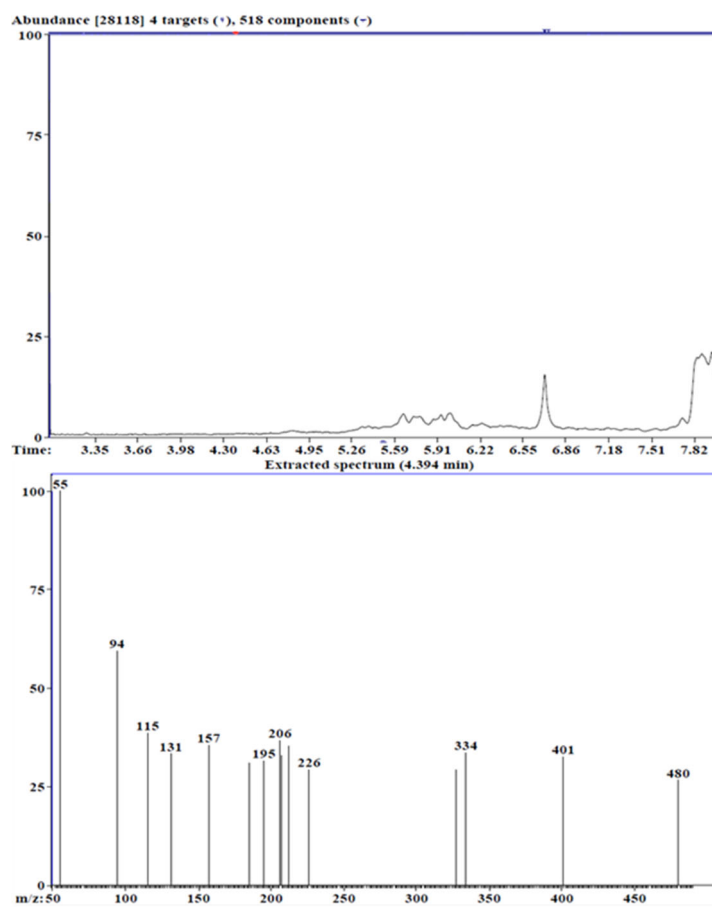
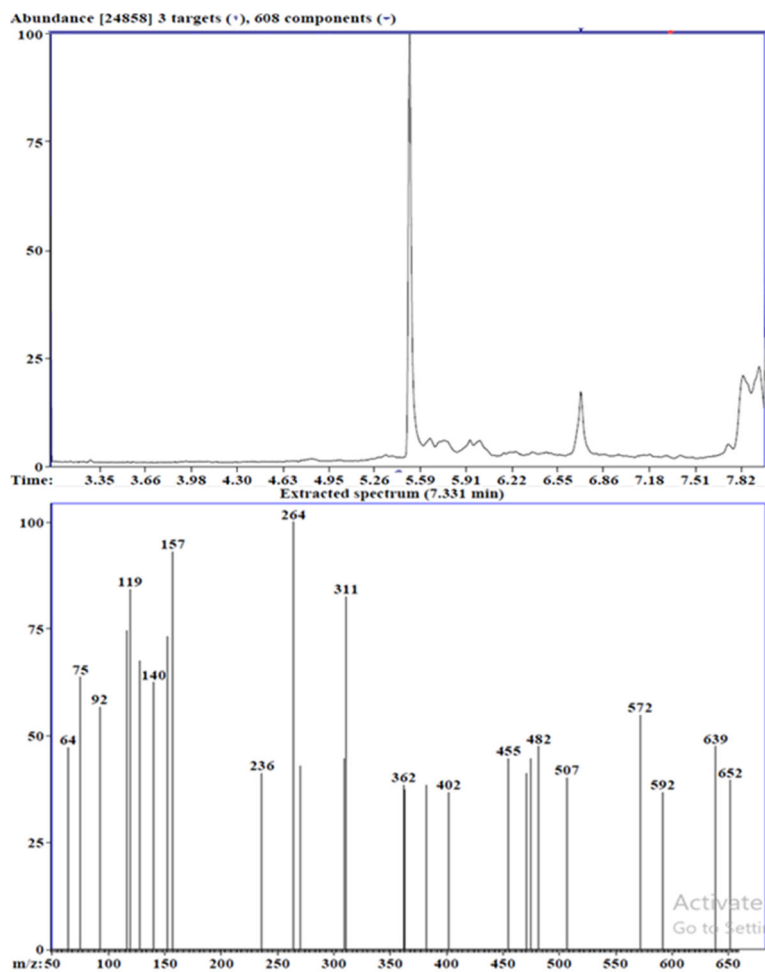
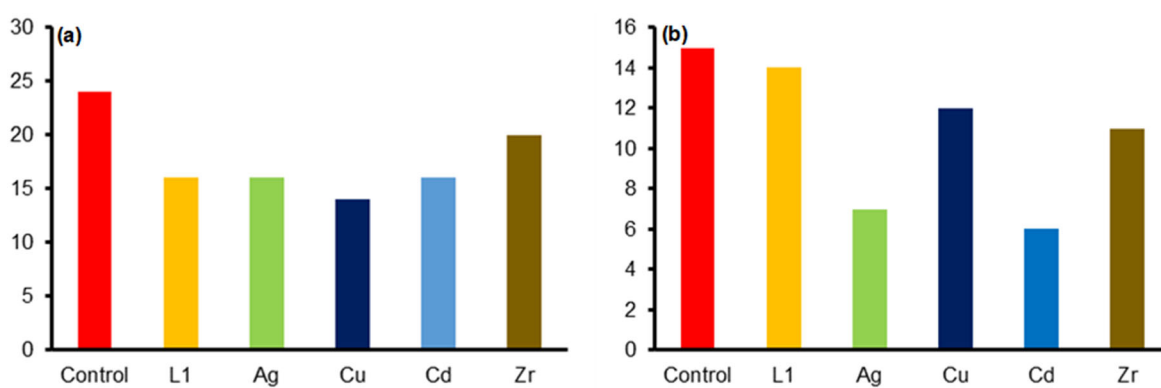
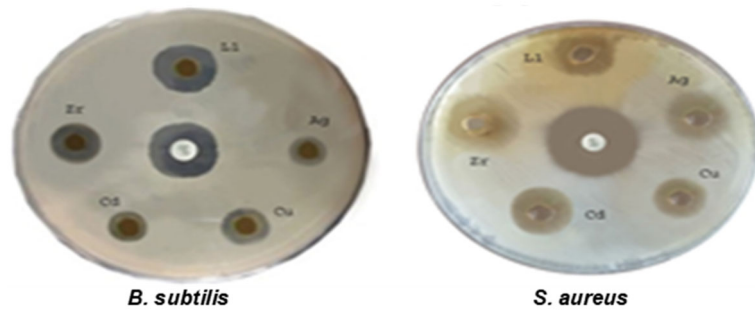


Fig S12. GC-MS data of  $[\text{Ni}(\text{tmp})(\text{en})\text{Cl}_2]$

Fig S13. GC-MS data of  $[\text{Cd}(\text{tmp})(\text{PD})](\text{NO}_3)_2 \cdot \text{H}_2\text{O}$ Fig S14. Effect of different concentration of materials on the growth of (a) *B. subtilis* and (b) *S. aureus*



**Fig S15.** Inhibition zones of complexes with ligands for two types of bacteria