A colorimetric analytical method based on TCPP-CuCo$_2$O$_4$-like peroxidase for the detection of trichlorfon

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1. **Effect of concentration of TCPP-CuCo$_2$O$_4$ on the absorbance values of ox-TMB at 652 nm**

![Graph showing relative activity (%) vs. concentration (μg/mL) of TCPP-CuCo$_2$O$_4$.](image)

**Fig. S1** Effect of concentration of TCPP-CuCo$_2$O$_4$ on the absorbance values in NaAc-HAc buffer (The concentration of TMB and H$_2$O$_2$ was fixed at 0.12 mmol/L and 12 mmol/L, respectively; reaction time: 8 min; pH 4.5)

2. **Effect of reaction time on the absorbance values of ox-TMB at 652 nm**

![Graph showing relative activity (%) vs. time (min).](image)

**Fig. S2** Effect of color development time on relative activity in NaAc-HAc buffer (The concentration of TMB and H$_2$O$_2$ was fixed at 0.12 mmol/L and 12 mmol/L, respectively; concentration of TCPP-CuCo$_2$O$_4$ was fixed at 40 μg/mL; pH 4.5)
3. **Effect of type of buffer solution on the absorbance values of ox-TMB at 652 nm**

![Figure S3](image)

*Fig. S3* Effect of buffer type on relative activity (The concentration of TMB and H₂O₂ was fixed at 0.12 mmol/L and 12 mmol/L, respectively; concentration of TCPP-CuCo₄O₄ was fixed at 40 μg/mL; reaction time: 8 min; pH was fixed at 4.5)

4. **Effect of pH of buffer solution on the absorbance values of ox-TMB at 652 nm**

![Figure S4](image)

*Fig. S4* Effect of buffer pH on relative activity (The concentration of TMB and H₂O₂ was fixed at 0.12 mmol/L and 12 mmol/L, respectively; concentration of TCPP-CuCo₄O₄ was fixed at 40 μg/mL; reaction time: 8 min)
5. Effect of concentration of TCPP-CuCo$_2$O$_4$ on $\Delta A$

![Graph showing the effect of concentration of TCPP-CuCo$_2$O$_4$ on $\Delta A$.]

Fig. S5 Effect of concentration of TCPP-CuCo$_2$O$_4$ on $\Delta A$

6. Effect of concentration of ATCh on $\Delta A$

![Graph showing the effect of concentration of ATCh on $\Delta A$.]

Fig. S6 Effect of concentration of ATCh on $\Delta A$ (The concentration of TCPP-CuCo$_2$O$_4$ was fixed at 35 $\mu$g/mL)