# Induction of Extracellular Hydroxyl Radicals Production in the White-Rot Fungus *Pleurotus eryngii* for Dyes Degradation: An Advanced Bio-oxidation Process

**Table S1.** Dyes used in the present study, showing their names and abbreviations, chemical structures, and absorption maxima in the visible spectrum, determined at pH 2.

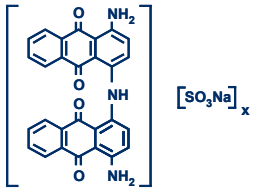
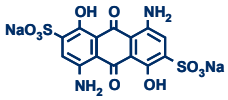
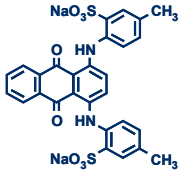
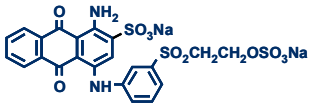
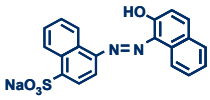
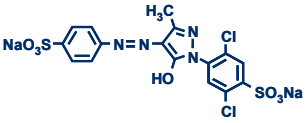
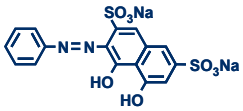
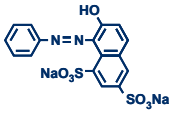
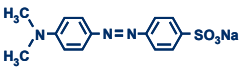
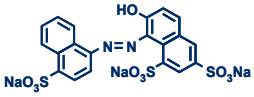
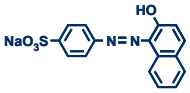
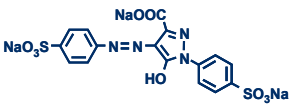
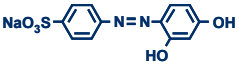
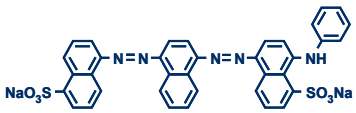
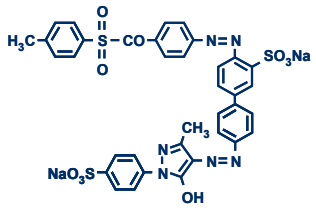
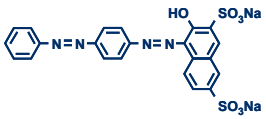
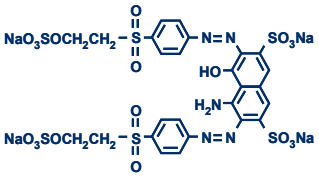
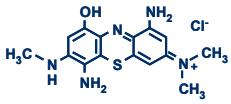
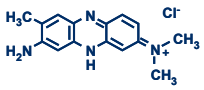
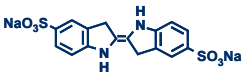
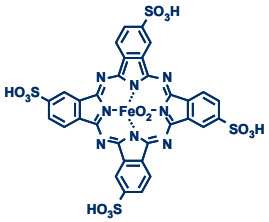
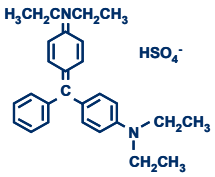
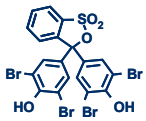
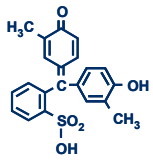
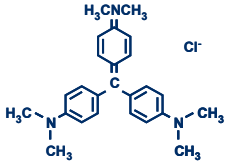
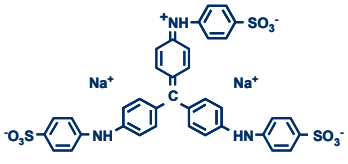
| Type | **Name** (abbreviation), $\lambda_{max}$ | **Name** (abbreviation), $\lambda_{max}$ | **Name** (abbreviation), $\lambda_{max}$ |
|---|---|---|---|
| Anthraquinone | **Acid Black 48** (AB48), **657 nm**  | **Acid Blue 45** (AB45), **587 nm**  | **Acid Green 25** (AG25), **608 nm**  |
| | **Reactive Blue 19** (RB19), **592 nm**  | | |
| Azo | **Acid Red 88** (AR88), **502 nm**  | **Acid Yellow 17** (AY17), **402 nm**  | **Chromotrope 2R** (C2R), **505 nm**  |
| | **Crocein Orange G** (COG), **480 nm**  | **Methyl Orange** (MO), **474 nm**  | **New Coccine** (NC), **506 nm**  |
| | **Orange II** (OII), **485 nm**  | **Tartrazine** (TA), **427 nm**  | **Tropaeolin O** (TO), **388 nm**  |

**Table S1. Continuation.**

| Type | Name (abbreviation), $\lambda_{max}$ | Name (abbreviation), $\lambda_{max}$ | Name (abbreviation), $\lambda_{max}$ |
|---|---|---|---|
| Diazo | **Acid Black 24** (AB24), **608 nm**  | **Acid Blue 113** (AB113), **549 nm**  | **Acid Orange 63** (AO63), **425 nm**  |
| | **Ponceau SS** (PSS), **513 nm**  | **Reactive Black 5** (RB5), **596 nm**  | |
| Heterocycle | **Azure B** (AB), **645 nm**  | **Neutral Red** (NR), **530 nm**  | |
| Indigo Phthalocyanine | **Indigo Carmine** (IC), **609 nm**  | **Iron(III)phthalocyanine** (I3P), **631 nm**  | |
| Triarylmethane | **Brilliant Green** (BG), **624 nm**  | **Bromophenol Blue** (BB), **436 nm**  | **Cresol Red** (CR), **434 nm**  |
| | **Crystal Violet** (CV), **597 nm**  | **Methyl Blue** (MB), **601 nm**  | |

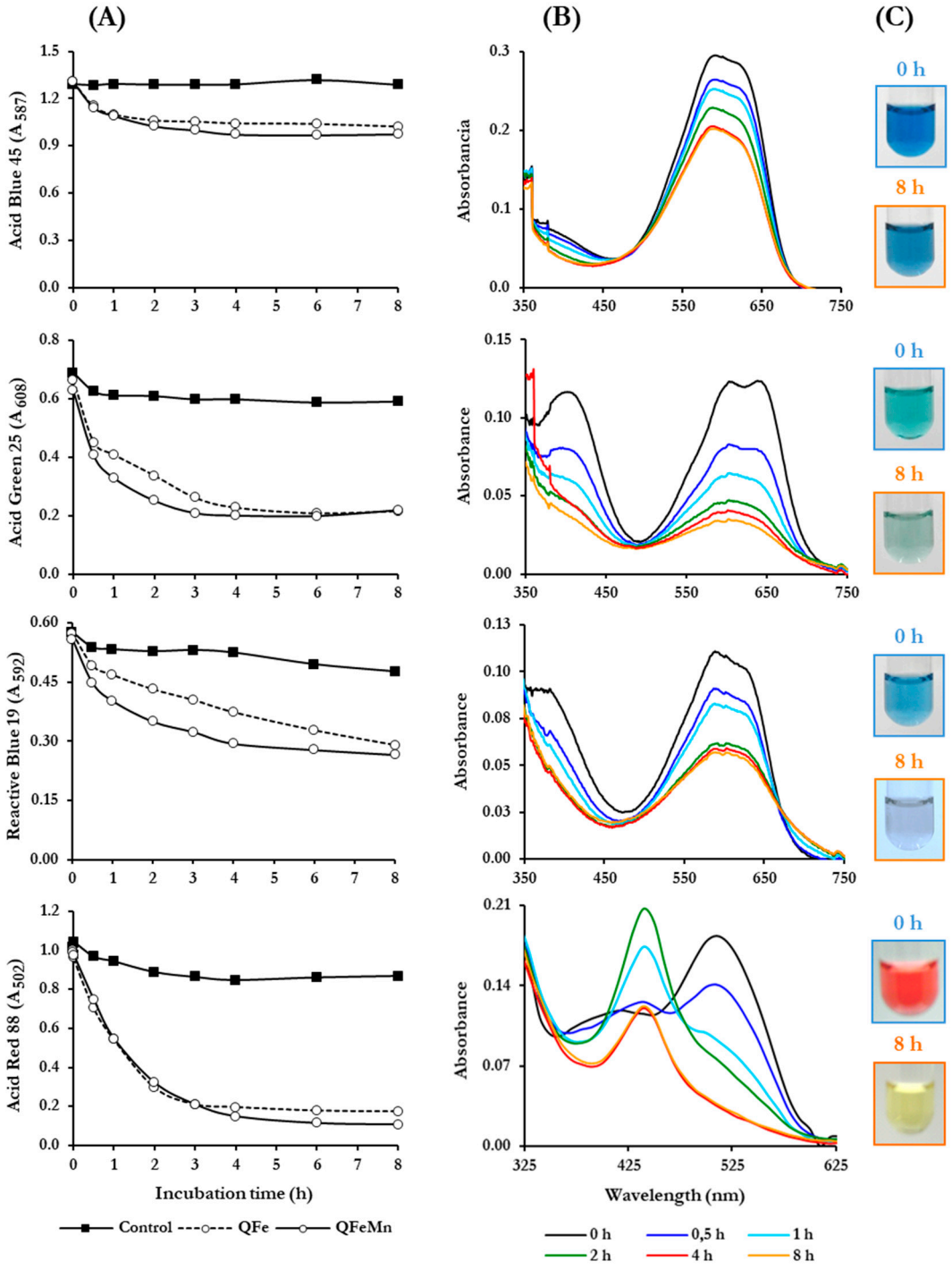



**Figure S1. Advanced oxidation of dyes by *P. eryngii*. (A) Time course of decolourisation at $\lambda_{max}$ of each dye; (B) changes in visible spectra of diluted samples from incubations with $Mn^{2+}$ along the incubation time; (C) pictures of QFeMn incubation samples taken at 0 and 8 hours.** Incubations contained 7-day-old washed mycelium (50 ± 5 mg, dry weight), 30 ml of 20 mM phosphate buffer, pH 5.0, dyes 50 µM, DBQ 500 µM, $Fe^{3+}$ 100 µM-Oxalate 300 µM (incubation QFe) and $Mn^{2+}$ 100 µM (incubation QFeMn). Control incubations lacked DBQ, iron complex and $Mn^{2+}$.

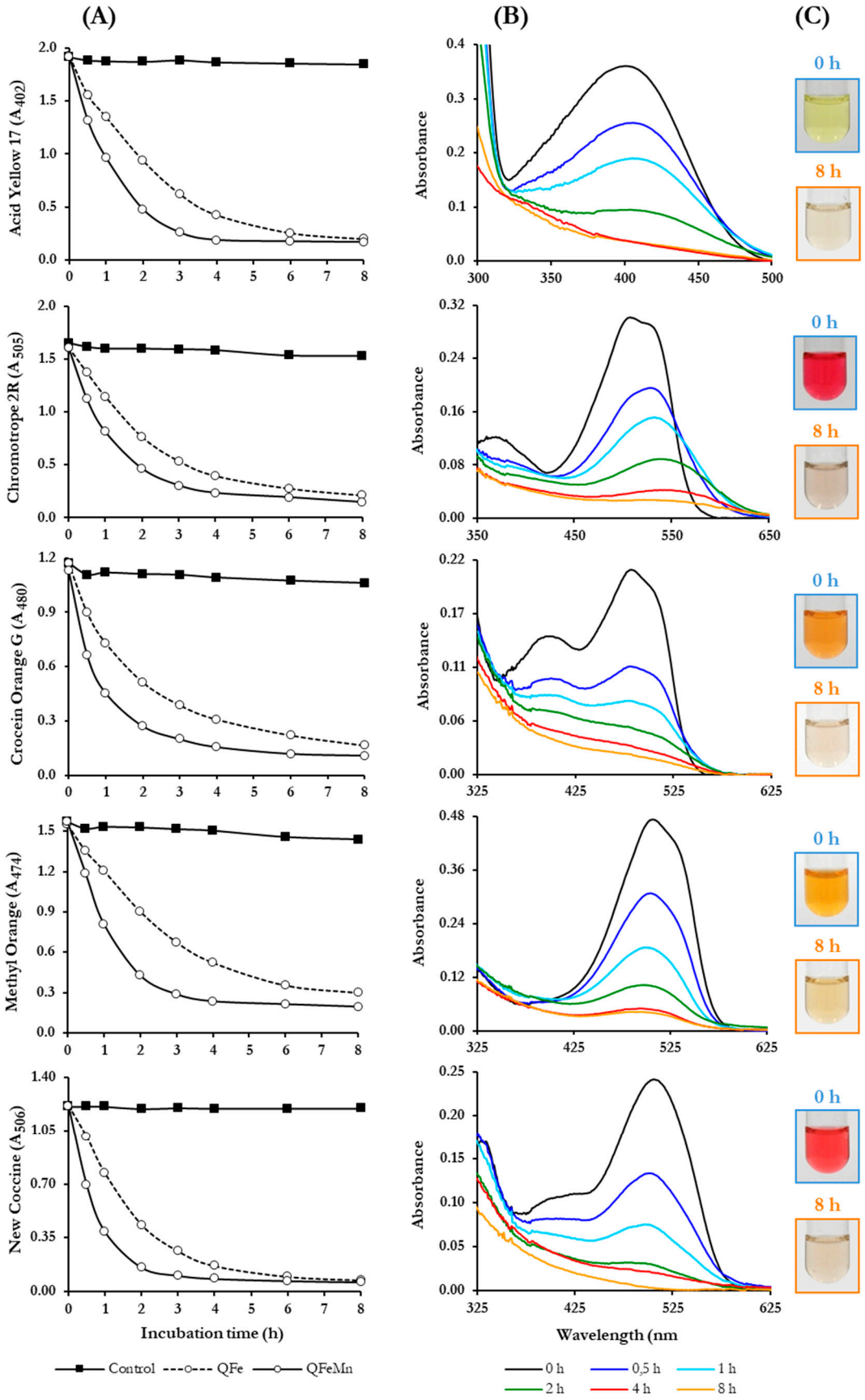



**Figure S1. Continuation.**

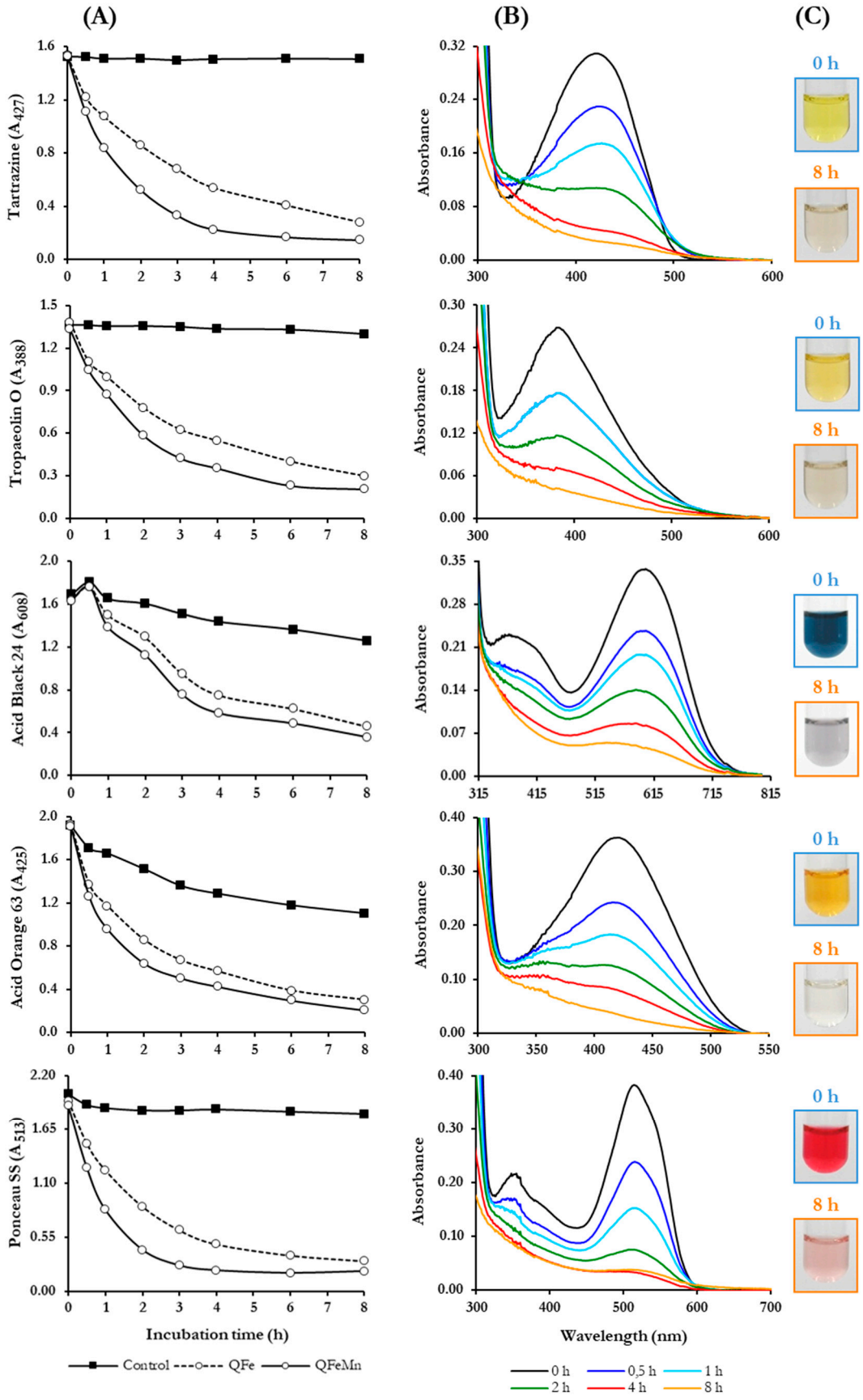



**Figure S1. Continuation.**

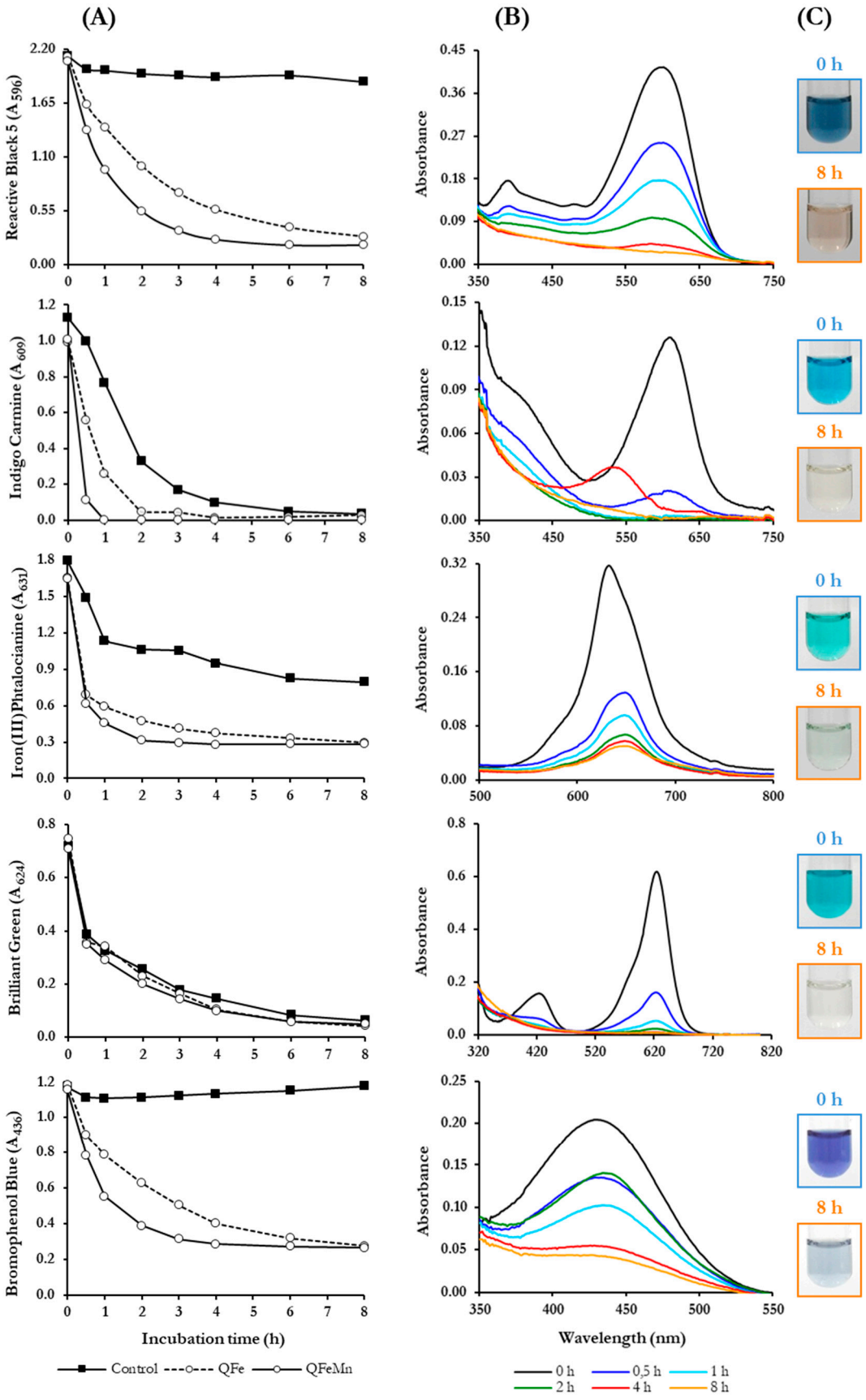



**Figure S1. Continuation.**

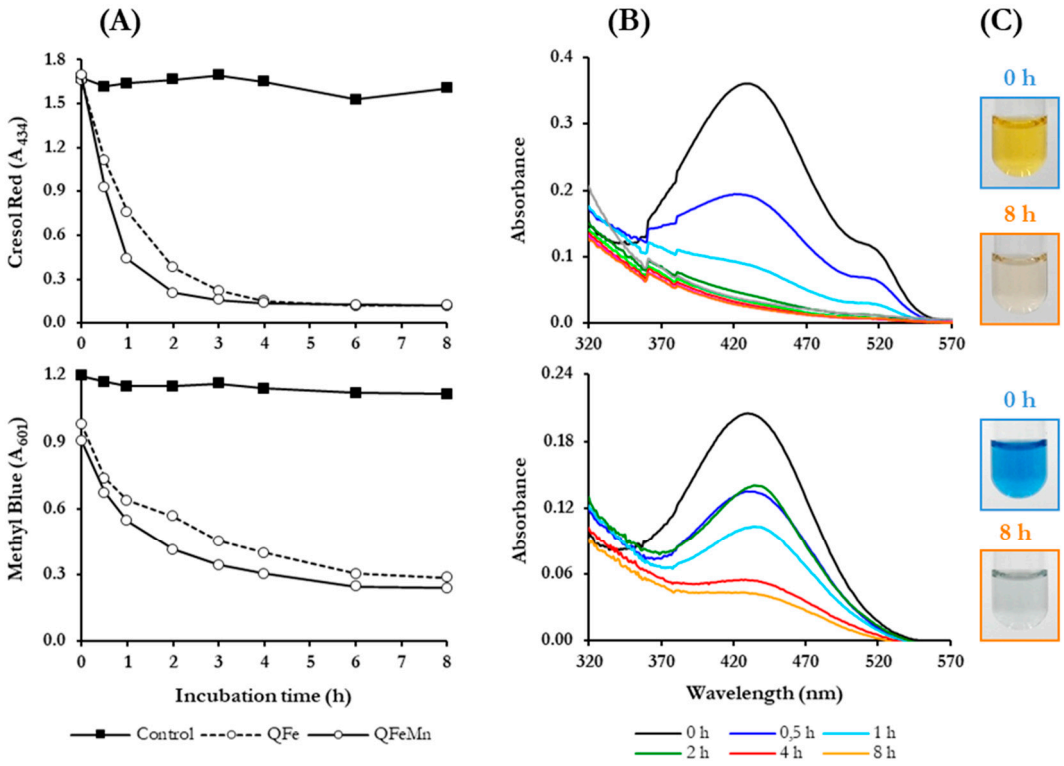



**Figure S1. Continuation.**

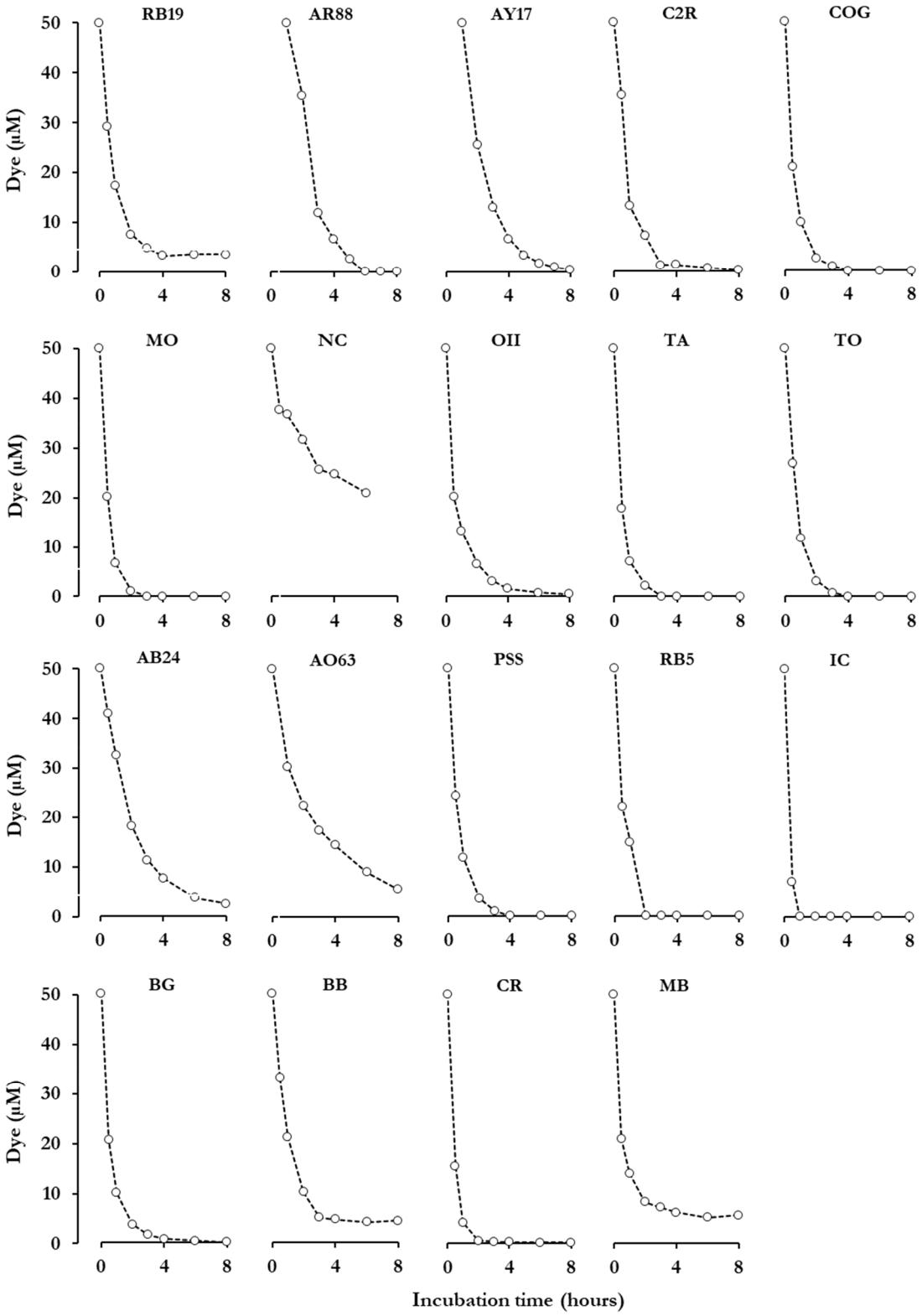



**Figure S2. Advanced bioxidation of dyes by *P.eryngii*, analysed by HPLC.** Incubations contained 7-day-old washed mycelium (50 ± 5 mg, dry weight), 30 ml of 20 mM phosphate buffer, pH 5.0, dyes 50 µM, DBQ 500 µM, $Fe^{3+}$ 100 µM-Oxalate 300 µM and $Mn^{2+}$ 100 µM (QFeMn incubation). Control incubations, which lacked DBQ, iron complex and $Mn^{2+}$, were analysed spectrophotometrycally and the results are shown in Figure S1.