**Table S1.** Operating conditions for dye wastewater using CWs in a sequencing batch mode

| Batch No. | Period | Dye (mg/L) | HRT (d) |
|---|---|---|---|
| 1–6 | 22 Aug 2020-21 Sep 2020 | RO16 10 | 5 |
| 7–12 | 12 Oct 2020– 11 Nov 2020 | 15 | |
| 13–21 | 11 Nov 2020–26 Dec 2020 | 20 | |
| 22–27 | 5 Jan 2021– 4 Feb 2021 | 25 | |
| 28–33 | 4 Feb 2021–6 Mar 2021 | 30 | |
| 34–39 | 11 Mar 2021–5 Apr 2021 | 40 | |
| 40–45 | 10 Apr 2021–5 May 2021 | 50 | |
| 46 | 5 May 2021–6 May 2021 | | 1 |
| 47 | 6 May 2021–9 May 2021 | | 3 |
| 48 | 9 May 2021–19 May 2021 | | 10 |
| 49 | 19 May 2021–3 Jun 2021 | | 15 |
| 50–52 | 14 Jun 2021–29 Jun 2021 | RB5 10 | 5 |
| 53–55 | 29 Jun 2021–14 Jul 2021 | 20 | |
| 56–58 | 14 Jul 2021–29 Jul 2021 | 30 | |
| 59–61 | 29 Jul 2021–13 Aug 2021 | 40 | |
| 62–64 | 13 Aug 2021–28 Aug 2021 | 50 | |
| 65 | 28 Aug 2021–29 Aug2021 | | 1 |
| 66 | 29 Aug 2021–1 Sep2021 | | 3 |
| 67 | 1 Sep 2021–11 Sep2021 | | 10 |
| 68 | 11 Sep 2021–26 Sep 2021 | | 15 |

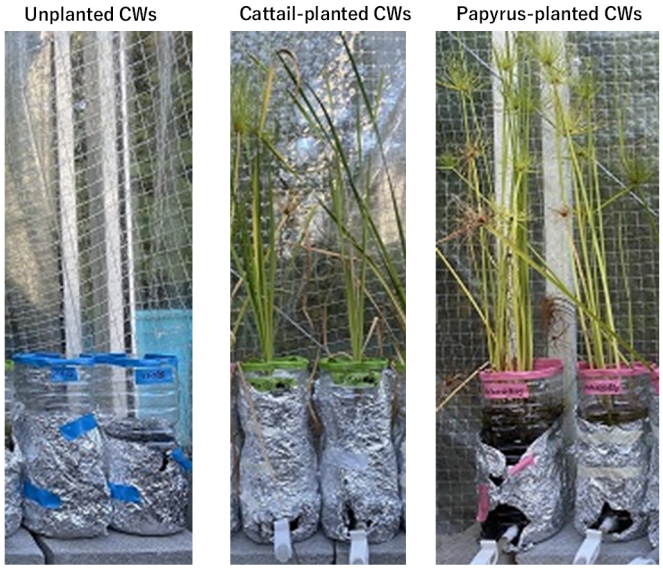



**Figure S1.** Photographs of the CW units used in this study.

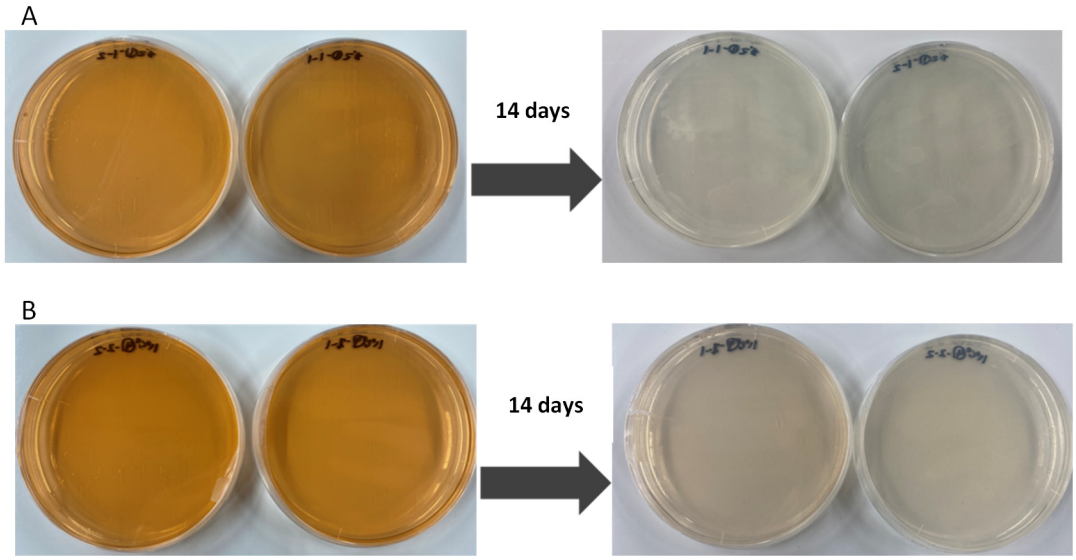



**Figure S2.** Anaerobic decolorization of RO16 in R2A medium by microorganisms in CW effluent: (A) cattail-planted CW and (B) papyrus-planted CW.

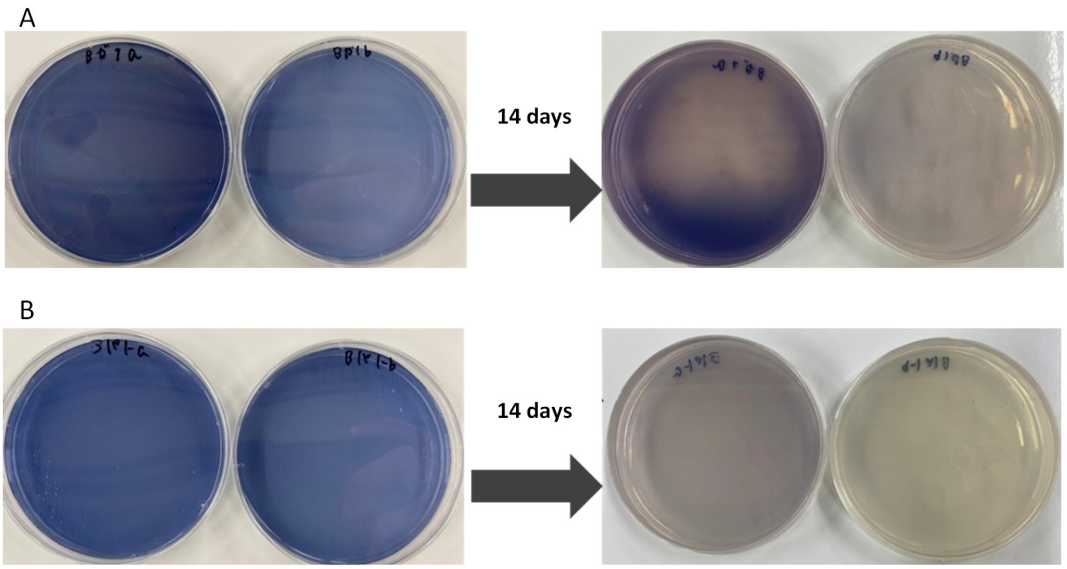



**Figure S3.** Anaerobic decolorization of RB5 in R2A medium by microorganisms in CW effluent: (A) cattail-planted CW and (B) papyrus-planted CW.