Supplementary Materials for

**Multiple roles of bamboo as a regulator of cyanobacterial bloom in aquatic systems**

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**Table S1**. Ingredients in BG-11 and CSi media.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| BG-11 | |  | CSi | |
| Ingredient | Concentration |  | Ingredient | Concentration |
| NaNO3 | 1.5 g L−1 |  | Ca(NO3) ·4H2O | 0.15 g L−1 |
| K2HPO4 | 0.04 g L−1 |  | KNO3 | 0.1 g L−1 |
| MgSO4·7H2O | 0.075 g L−1 |  | MgSO4·7H2O | 0.04 g L−1 |
| CaCl2·2H2O | 0.036 g L−1 |  | β-Na2 glycerophosphate·5H2O | 0.025 g L−1 |
| Citric acid | 0.006 g L−1 |  | Vitamin B12 | 0.1 μg L−1 |
| Ferric ammonium citrate | 0.006 g L−1 |  | Biotin | 0.1 μg L−1 |
| EDTANa2 | 0.001 g L−1 |  | Thiamine HCl | 10 μg L−1 |
| Na2CO3 | 0.02 g L−1 |  | PIV | 6 ml L−1 |
| A5 (Trace mental solution) | 1 ml L−1 |  | HEPES | 0.5 g L−1 |
|  |  |  | Na2SiO3·9H2O | 0.1 g L−1 |
|  |  |  | Soil extract | 30 ml L−1 |

**Fig. S1.** Overview of material preparation procedures



**Fig. S2.** Fitting a logistic growth curve by estimating intrinsic growth rate (*r*) and carrying capacity (*K*).



**Table S2**. Evaluation of MDA content and activities of SOD, POD, and CAT.

|  |  |  |  |
| --- | --- | --- | --- |
| Sample preparation | 1. Count algal cell 2. Centrifuge a 10 mL sample at 5000 rpm for 20 min 3. Wash by 0.9% sodium chloride solution at 4℃ 4. Ultrasonic crush of algal cells in ice bath ((crush 3s + interval 10s) × 30) 5. Centrifuge at 5000 rpm for 5 min at 4°C, and collect the supernatant 6. Add reagents in sample according to the instructions 7. Preheat spectrophotometer for 30 minutes, adjust to zero with distilled water | | |
|  | Absorbance measurement by spectrometer | Calculation formula | Unit |
| MDA content | 532 and 600 nm  *Δ*A = A532 − A600 |  | nmol cells−1 |
| SOD activity | 560 nm  IR (inhibition rate) = (Acontrol – Asample)/Acontrol |  | U cells−1 |
| POD activity | 470 nm  *Δ*A = A470 (at 1 min) – A470 (at 2 min) |  | U cells−1 |
| CAT activity | 240 nm  *Δ*A = A240 (initial) – A240 (at 1 min) |  | nmol min−1 cells−1 |

*n*: number of algal cells in the sample

*V*: volume of sample (mL)