Supplementary Material

**Supplementary Table 1. Composition of freshwater media used in this study and prepared by modifying BG-11 medium from Sigma Aldrich’s C3061.**

|  |  |  |
| --- | --- | --- |
| **Nutrient Name**  | **Concentration,****mg/L (Exp #1, BG-11)** | **Concentration,****mg/L (Exp #2, 3 & 4)** |
| Nitrogen  | 45, (as sodium nitrate) | 45 (as AN wastewater) |
| Magnesium sulfate.7H2O  | 75 | 75 |
| Potassium phosphate dibasic  | 40 | 40 |
| Calcium Chloride dihydrate  | 36 | 36 |
| Sodium carbonate  | 20 | 20 |
| Citric acid  | 6 | 6 |
| Ferric ammonium citrate  | 6 | 6 |
| Boric acid  | 2.86 | 2.86 |
| Manganese chloride. 4H2O | 1.81 | 1.81 |
| EDTA disodium magnesium | 1 | 1 |
| Sodium molybdate. 2H2O  | 0.39 | 0.39 |
| Zinc sulfate. 7 H2O  | 0.222 | 0.222 |
| Cupric sulfate. 5H2O  | 0.079 | 0.079 |
| Cobalt nitrate. 6H2O  | 0.0494 | 0.0494 |
| Dissolved in  | Filtered water | Plant influent wastewater |



**Supplementary Figure 1. Biomass growth and pH observed for freshwater microalga, *S. obliquus*, when growing on ammonium modified BG-11 medium using different C sources such as a) CO2 alone ( ), b) CO2 + NaHCO3 ( ), c) CO2 + MgCO3-3H2O (o).**