**S2 Table. MIMS analysis of oxygen pathways as a percentage of gross oxygen production (% of GPO2).**

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| --- | --- | --- |
| **Species** | **Light** | **% of GPO2** |
| **RDARK** | **LDR**  | **NetO2**  |
| ***T. weissflogii*** | Ig | 21.67 (3.33) | 11.83 (4.35) | 66.50 (1.02) |
| HL | 19.33 (2.17) | 8.07 (2.81) | 72.60 (4.98) |
| ***T. oceanica*** | Ig | 9.38 (2.45) | 10.98 (0.22) | 79.64 (2.66) |
| HL | 8.46 (2.34) | 17.72 (2.50) | 73.82 (0.17) |
| ***T. pseudonana*** | Ig | 20.02 (4.67) | 9.98 (3.35) | 69.99 (4.57) |
| HL | 16.58 (4.03) | 15.42 (6.15) | 68.01 (2.47) |
| ANOVA(2-way) | Species | **<0.05**\* | >0.05 | >0.05 |
| Light | >0.05 | >0.05 | >0.05 |
| Species\*Light | >0.05 | >0.05 | >0.05 |

Fractions (as a %) include light dependent respiration (LDR), dark respiration (RDARK), and net oxygen production (NetO2) for *T. weissflogii*, *T. oceanica*, and *T. pseudonana* under 20 min incubation at Ig (85 µmol photons m-2 s-1) and HL (1200 µmol photons m-2 s-1). Data averaged from 2 or 3 independent replicates. Values in parentheses are SE of the mean. A 2-way ANOVA comparing species and light treatment with oxygen measurements (RDARK, NetO2, LDR) are presented with significant p-values (< 0.05) in bold. Superscripted asterisks (\*) identifies the Fisher’s Tukey post-hoc analysis for significance between species groups.

\* *T. oceanica* – *T. weissflogii*/*T. pseudonana*