

**Table S1.** Monosaccharide and uronic acid concentrations in initial biomass (no digestion).

|  | <i>C. nivalis</i> | <i>P. purpureum</i> | <i>C. vulgaris</i> | Disrupted<br><i>N. gaditana</i> | Disrupted<br><i>Scenedesmus</i> |
|--|-------------------|---------------------|--------------------|---------------------------------|---------------------------------|
| Sum monosaccharides <sup>1</sup> (mg/g dm) | 384.3 ± 5.3       | 512.2 ± 19.2        | 160.0 ± 32.0       | 157.9 ± 3.5                     | 454.4 ± 69.4                    |
| Mannitol (mg/g dm)                         | 0.5 ± 0.2         | 0.3 ± 0.1           | 0.7 ± 0.7          | 9.1 ± 0.4                       | 0.5 ± 0.2                       |
| Fucose (mg/g dm)                           | 2.4 ± 0.2         | 0.7 ± 0.1           | 2.1 ± 0.5          | 1.9 ± 0.0                       | 5.0 ± 0.0                       |
| Rhamnose (mg/g dm)                         | 13.7 ± 0.1        | 0                   | 16.4 ± 2.8         | 7.3 ± 0.2                       | 5.0 ± 0.0                       |
| Arabinose (mg/g dm)                        | 48.3 ± 0.2        | 0                   | 15.7 ± 2.9         | 1.1 ± 0.1                       | 1.1 ± 0.0                       |
| Galactose (mg/g dm)                        | 54.6 ± 0.9        | 100.2 ± 36.4        | 32.1 ± 7.0         | 26.9 ± 1.0                      | 32.3 ± 0.5                      |
| Glucose (mg/g dm)                          | 280.7 ± 7.3       | 380.6 ± 13.5        | 71.4 ± 12.3        | 93.6 ± 2.3                      | 368.1 ± 76.4                    |
| Xylose (mg/g dm)                           | 17.9 ± 0.9        | 92.0 ± 33.9         | 10.4 ± 3.2         | 12.3 ± 1.1                      | 72.3 ± 0.5                      |
| Fructose (mg/g dm)                         | 4.2 ± 0.8         | 0.6 ± 0.0           | 9.9 ± 2.6          | 4.7 ± 0.1                       | 11.2 ± 0.2                      |
| Ribose (mg/g dm)                           | 3.5 ± 0.4         | 2.8 ± 0.7           | 15.8 ± 2.8         | 16.3 ± 0.1                      | 3.8 ± 0.2                       |
| Galacturonic acid (mg/g dm)                | 0                 | 37.2 ± 13.5         | 0.2 ± 0.4          | 0                               | 0                               |
| Glucuronic acid (mg/g dm)                  | 2.9 ± 0.0         | 4.6 ± 0.3           | 4.3 ± 0.7          | 3.0 ± 0.1                       | 7.4 ± 0.0                       |
| Mannuronic acid (mg/g dm)                  | 0.1 ± 0.0         | 0.2 ± 0.0           | 0.7 ± 0.1          | 0.5 ± 0.0                       | 0.2 ± 0.0                       |

<sup>1</sup> Corrected for water uptake.