

Table S1. Hydrogenase productivity comparisons between *Tetraselmis* strains and *C. reinhardtii*.

Hydrogen assay	<i>Tetraselmis</i> GSL1	<i>Tetraselmis</i> QNM1	<i>C. reinhardtii</i> 4h	<i>C. reinhardtii</i> 24h
Photoproduction (nmol H ₂ •µg chl ⁻¹ •h ⁻¹)	68.34 ± 2.46 ^a	78.25 ± 0.89 ^a	98 ± 5 ^b	20 ± 10 ^b
Dark fermentative production (nmol H ₂ •µg chl ⁻¹)	44.81 ± 4.06 ^a	32.56 ± 4.38 ^a	1.29 ± 0.56	1.93 ± 0.92
Methyl-viologen (nmol H ₂ •µg chl ⁻¹ •h ⁻¹)	4h:	4h:	4h:	
			0 % [NaCl]	
			121 ± 27	
	1.6 % [NaCl] ^c	1.6 % [NaCl] ^c	1.6 % [NaCl] ^d	
	700 ± 125	1064 ± 429	129 ± 76	
	2.5 % [NaCl] ^c	2.5 % [NaCl] ^c	2.5 % [NaCl] ^d	
	658 ± 148	695 ± 207	141 ± 57	
	3.18 % [NaCl] ^c	3.18 % [NaCl] ^c	3.18 % [NaCl] ^d	
	534 ± 62	608 ± 149	146 ± 44	
	24h:	24h:		24h:
				0 % [NaCl]
				71 ± 13
1.6 % [NaCl] ^c	1.6 % [NaCl] ^c		1.6 % [NaCl] ^d	
2190 ± 505	2035 ± 456		65 ± 5	
2.5 % [NaCl] ^c	2.5 % [NaCl] ^c		2.5 % [NaCl] ^d	
1476 ± 161	1766 ± 326		145 ± 86	
3.18 % [NaCl] ^c	3.18 % [NaCl] ^c		3.18 % [NaCl] ^d	
1260 ± 245	1734 ± 354		117 ± 47	
Methyl-viologen (nmol H ₂ •µg tot prot ⁻¹ •h ⁻¹)	4h:	4h:	4h:	
			0 % [NaCl]	
			2.9 ± 0.7	
	1.6 % [NaCl] ^c	1.6 % [NaCl] ^c	1.6 % [NaCl] ^d	
	14 ± 4.6	18.5 ± 4	3.3 ± 1.9	
	2.5 % [NaCl] ^c	2.5 % [NaCl] ^c	2.5 % [NaCl] ^d	
	18.2 ± 7.9	14.2 ± 4.8	3.4 ± 1.4	
	3.18 % [NaCl] ^c	3.18 % [NaCl] ^c	3.18 % [NaCl] ^d	
	15.5 ± 4.7	12.5 ± 6.4	4 ± 2.3	
	24h:	24h:		24h:
				0 % [NaCl]
				1.7 ± 0.3
1.6 % [NaCl] ^c	1.6 % [NaCl] ^c		1.6 % [NaCl] ^d	
56 ± 11.5	40 ± 16.7		2 ± 1.4	
2.5 % [NaCl] ^c	2.5 % [NaCl] ^c		2.5 % [NaCl] ^d	
44 ± 4	37.6 ± 6		3.3 ± 2	
3.18 % [NaCl] ^c	3.18 % [NaCl] ^c		3.18 % [NaCl] ^d	
37 ± 15	36 ± 6.8		2.8 ± 1	

^a 7.0% (w/v) NaCl, 24h anoxia induction.

^b Data from Meuser, et al. (2012) [61].

^d Anoxia induced in anaerobic induction buffer (AIB) and methyl-viologen (MV) assay performed in MV-f/2 solutions adjusted to the salinities indicated (final concentration). Values represent averages and standard deviations from 6 experimental repetitions.