

Supplementary Table 1. Detailed raw read data summary for unfiltered, Albacore “pass” and filtered Oxford Nanopore long-read sequencing datasets for *Thalassiosira pseudonana* and *Phaeodactylum tricornutum*. The filtered datasets for *T. pseudonana* and *P. tricornutum* included reads  $\geq 30$  kb and  $\geq 20$  kb, respectively.

<i>Thalassiosira pseudonana</i>			<i>Phaeodactylum tricornutum</i>			
	Unfiltered Data	Albacore “pass” Data	Filtered Data	Unfiltered Data	Albacore “pass” Data	Filtered Data
<b>General Summary</b>						
Total bases (bp)	7,445,183,025	6,987,392,466	1,772,209,890	8,199,773,433	7,500,371,505	2,700,036,591
No. of reads	701,596	580,845	46,708	986,604	820,187	84,445
Read length N50 (bp)	20,088	20,514	37,303	18,756	19,261	32,648
Mean read length (bp)	10,611.8	12,029.7	37,942.3	8,311.1	9,144.7	31,973.9
Mean read quality	9.9	10.8	10.9	8.5	9.2	9.6
Median read length (bp)	6,755	8,578.0	36,095	3,815	4,537.0	29,187
Median read quality	10.5	11.1	11.2	8.9	9.2	9.6
<b>Number, percentage and megabases of reads above quality cutoffs</b>						
Q5	641,236 (91.4%) 7,416.7 Mbp	580,845 (100.0%) 6,987.4 Mbp	46,708 (100.0%) 1,772.2 Mbp	917,011 (92.9%) 8,141.7 Mbp	820,187 (100.0%) 7,500.4 Mbp	84,445 (100.0%) 2,700.0 Mbp
Q7	580,397 (82.7%) 6,982.1 Mbp	580,329 (99.9%) 6,982.1 Mbp	46,676 (99.9%) 1,771.0 Mbp	819,256 (83.0%) 7,513.9 Mbp	819,380 (99.9%) 7,494.6 Mbp	84,445 (100.0%) 2,700.0 Mbp
Q10	391,138 (55.7%) 4,788.0 Mbp	391,138 (67.3%) 4,788.0 Mbp	32,875 (70.4%) 1,251.2 Mbp	189,235 (19.2%) 1,681.4 Mbp	195,528 (23.8%) 1,694.8 Mbp	25,313 (30.0%) 790.5 Mbp
Q12	192,403 (27.4%) 2,321.3 Mbp	192,403 (33.1%) 2,321.3 Mbp	16,143 (34.6%) 614.2 Mbp	6,828 (0.7%) 55.5 Mbp	7,207 (0.9%) 56.4 Mbp	786 (0.9%) 23.6 Mbp
Q15	111 (0.0%) 0.3 Mbp	111 (0.0%) 0.3 Mbp	0 (0.0%) 0.0 Mbp	0 (0.0%) 0.0 Mbp	1 (0.0%) 0.0 Mbp	0 (0.0%) 0.0 Mbp
<b>Top 5 highest mean base-call quality scores and read lengths</b>						
1	16.3 (712)	16.3 (712)	15.0 (36,789)	14.9 (1,287)	15.1 (769)	14.2 (25,833)
2	16.1 (776)	16.1 (776)	14.9 (38,761)	14.9 (7,981)	15.0 (725)	14.1 (38,993)
3	16.1 (696)	16.1 (696)	14.8 (34,635)	14.8 (2,594)	15.0 (1,256)	14.0 (34,753)
4	15.9 (495)	15.9 (495)	14.7 (32,641)	14.7 (757)	14.9 (7,948)	13.9 (33,295)
5	15.9 (2,188)	15.9 (2,188)	14.6 (45,800)	14.6 (2,052)	14.9 (2,576)	13.9 (22,405)
<b>Top 5 longest reads and mean basecall quality score</b>						
1	122,142 Mbp (12.3)	122,142 Mbp (12.3)	122,142 Mbp (12.3)	282,534 Mbp (6.4)	140,471 Mbp (8.4)	140,471 Mbp (8.4)
2	110,728 Mbp (8.5)	110,728 Mbp (8.5)	110,728 Mbp (8.5)	140,502 Mbp (8.4)	139,006 Mbp (9.1)	139,006 Mbp (9.1)
3	99,505 Mbp (10.4)	99,505 Mbp (10.4)	99,505 Mbp (10.4)	139,039 Mbp (9.1)	125,792 Mbp (8.5)	125,792 Mbp (8.5)
4	97,967 Mbp (9.1)	97,967 Mbp (9.1)	97,967 Mbp (9.1)	125,837 Mbp (8.5)	125,267 Mbp (9.9)	125,267 Mbp (9.9)
5	97,308 Mbp (10.2)	97,308 Mbp (10.2)	97,308 Mbp (10.2)	125,299 Mbp (9.9)	120,285 Mbp (9.5)	120,285 Mbp (9.5)