

## Supplementary Materials

Species	Volumes ( $\mu\text{m}^3$ )	From Young and Ziveri (2000)		Equivalent Spherical Diameters ( $\mu\text{m}$ )	
		Min.	Max.	Min.	Max.
<i>C. pelagicus</i>	13	246		2.92	7.77
<i>C. leptoporus</i>	10	106		2.67	5.87
<i>O. fragilis</i>	9	36		2.58	4.10
<i>H. carteri</i>	27	86		3.72	5.48
<i>G. muellerae</i>	1.4	4.6		1.39	2.06
<i>G. oceanica</i>	2.14	6.2		1.60	2.28
<i>E. huxleyi</i>	0.31	1.8		0.84	1.51

Table 1. Conversion of typical coccolith volumes to equivalent spherical diameters, using the formula for a sphere.

$\text{CaCO}_3$  particle volume frequency distribution in 256 size bins distributed on a log basis across the 9.37  $\mu\text{m}$  equivalent spherical diameter sizing window (0.63 to 10  $\mu\text{m}$ ), from 1770 to 2004. Individual bin values normalised by dividing by the total number of counts in that sample.