

Supplement of Biogeosciences, 15, 6761–6772, 2018
<https://doi.org/10.5194/bg-15-6761-2018-supplement>
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Supplement of

The effect of salinity on the biogeochemistry of the coccolithophores with implications for coccolith-based isotopic proxies

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| Specific division rates vs salinity (Fig. 2) | | Linear fit | | Second-order polynomial fit | |
|-------------------------------------------------|---------------------|------------|----------|-----------------------------|-----------|
| | | r^2 | p-value | r^2 | p-value |
| RCC1314 | <i>G. oceanica</i> | 0.84 | 0.0002 | 0.93 | 8.09E-06 |
| RCC4032 | <i>G. ericsonii</i> | 0.0018 | 0.90548 | 0.45 | 0.0036141 |
| RCC1212 | <i>E. huxleyi</i> B | 0.39 | 0.029963 | 0.87 | 8.09E-06 |
| RCC1256 | <i>E. huxleyi</i> A | 0.002 | 0.87619 | 0.91 | 8.09E-06 |
| Cell size vs salinity (Fig. 3) | | Linear fit | | Second-order polynomial fit | |
| | | r^2 | p-value | r^2 | p-value |
| RCC1314 | <i>G. oceanica</i> | 0.8054 | 0.00043 | 0.86 | 0.00011 |
| RCC4032 | <i>G. ericsonii</i> | 0.82254 | 0.00029 | 0.95 | 0.01105 |
| RCC1212 | <i>E. huxleyi</i> B | 0.026086 | 0.61603 | 0.03 | 0.00011 |
| RCC1256 | <i>E. huxleyi</i> A | 0.1565 | 0.20305 | 0.81 | 0.00011 |
| Oxygen isotope composition vs salinity (Fig. 5) | | Linear fit | | Second-order polynomial fit | |
| | | r^2 | p-value | r^2 | p-value |
| RCC1314 | <i>G. oceanica</i> | 0.14324 | 0.28084 | 0.57 | 0.01153 |
| RCC4032 | <i>G. ericsonii</i> | 0.51126 | 0.03037 | 0.53 | 0.06904 |
| RCC1212 | <i>E. huxleyi</i> B | 3.55E-05 | 0.98613 | 0.32 | 0.01349 |
| RCC1256 | <i>E. huxleyi</i> A | 0.0006052 | 0.94991 | 0.006 | 0.01153 |
| Carbon isotope composition vs salinity (Fig.6) | | Linear fit | | Second-order polynomial fit | |
| | | r^2 | p-value | r^2 | p-value |
| RCC1314 | <i>G. oceanica</i> | 0.32566 | 0.08492 | 0.68 | 0.00343 |
| RCC4032 | <i>G. ericsonii</i> | 0.025911 | 0.67908 | 0.91 | 0.07549 |
| RCC1212 | <i>E. huxleyi</i> B | 0.65176 | 0.00150 | 0.72 | 0.00343 |
| RCC1256 | <i>E. huxleyi</i> A | 0.1212 | 0.32423 | 0.12 | 0.00343 |

Table S1: Goodness of fit of the regression between the various measured parameters and salinity.