**Table S2: OISO Formulas used for calculation of phytoplankton functional types and size class fractions based on diagnostic pigments after Hirata et al. (2011) and Uitz et al. (2006).**

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| --- | --- | --- | --- |
| **Reference** | **Phytoplankton Size Class / Functional Type** | **Diagnostic Pigments** | **Estimation Formula** |
| **Hirata et al 2011** | Diatoms | Fuco | 1.41[Fuco] / ∑DPw |
| Dinoflagellates | Perid | 1.41[Perid] / ∑DPw |
| Green algae | TChl-*b* | 1.01[Chl-*b*]/ ∑DPw |
| Prokaryotes | Zea | 0.86[Zea] / ∑DPw |
| *Prochlorococcus* | Divinyl Chlorophyll-*a* (DV Chl-*a*) | 0.74[DV Chl-*a*] / ∑DPw |
| Prymnesiophytes (Haptophytes) | Hex-fuco, But-fuco | Approximated with Nanoplankton – Green algae |
| Pico-Eukaryotes | Hex-fuco, Chl-*b* | Approximated with Picoplankton – Prokaryotes |
| **Uitz et al 2006** | Microplankton | Fuco, Perid | 1.41[Fuco + Perid] / ∑DPW  = diatoms + dinoflagellates |
| Nanoplankton | Hex-fuco, But-fuco, Allo | (1.27[Hex-fuco] + 0.35[But-fuco] + 0.6[Allo]) / ∑DPW |
| Picoplankton | Zea, Hex-fuco, Chl-*b* | (0.86[Zea] + 1.01[TChl-*b*]) / ∑DPW  = prokaryotes + Green |