**Table S1. Results of two-way ANOVAs** testing the effect of the sub-region (area) and sampling depth (depth) and their interaction on the following parameters: phytoplankton abundance, diatom abundance, total chlorophyll *a* (TChl *a*), fucoxanthin, total fatty acid (TFA), saturated fatty acid (SFA), monounsaturated fatty acid (MUFA), polyunsaturated fatty acid (PUFA), eicosapentaenoic acid (EPA) and alpha-linolenic acid (ALA), where bold values indicate significance (*p* < 0.05).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Source of variation** | **Df** | **MS** | **F** | **Source of variation** | **Df** | **MS** | **F** |
| **Phytoplankton abundance** | | | | **Diatom abundance** | | | |
| Area | 4 | 0.15 | 0.23 | Area | 4 | 3.89 | **3.81** |
| Depth | 1 | 1.45 | 2.2 | Depth | 1 | 3.22 | **3.15** |
| Depth × area | 4 | 0.27 | 0.41 | Depth × area | 4 | 0.53 | 0.52 |
| Residuals | 31 | 0.66 | - | Residuals | 31 | 1.02 | - |
| **TChl *a*** | | | | **Fucoxanthin** | | | |
| Area | 4 | 4.08 | **4.85** | Area | 4 | 3.98 x 10-5 | **3.14** |
| Depth | 1 | 3.63 | **4.32** | Depth | 1 | 6.75 x 10-5 | **5.34** |
| Depth × area | 4 | 0.47 | 0.56 | Depth × area | 4 | 1.50 x 10-5 | 1.19 |
| Residuals | 31 | 0.84 | - | Residuals | 31 | 1.26 x 10-5 | - |
| **TFA** | | | | **SFA** | | | |
| Area | 4 | 28.64 | **9.6** | Area | 4 | 1.11 | 1.29 |
| Depth | 1 | 3.53 | 1.19 | Depth | 1 | 0.01 | 0 |
| Depth × area | 4 | 0.91 | 0.31 | Depth × area | 4 | 0.44 | 0.51 |
| Residuals | 31 | 2.98 | - | Residuals | 31 | 0.86 | - |
| **MUFA** | | | | **PUFA** | | | |
| Area | 4 | 15.74 | **10.32** | Area | 4 | 18.98 | **10.34** |
| Depth | 1 | 2.72 | 1.78 | Depth | 1 | 3.01 | 1.64 |
| Depth × area | 4 | 0.28 | 0.18 | Depth × area | 4 | 0.49 | 0.26 |
| Residuals | 31 | 1.53 | - | Residuals | 31 | 1.84 | - |
| **EPA** | | | | **ALA** | | | |
| Area | 4 | 367.5 | **7.77** | Area | 4 | 0.15 | **2.68** |
| Depth | 1 | 19 | 0.4 | Depth | 1 | 0.29 | **5.15** |
| Depth × area | 4 | 19.6 | 0.41 | Depth × area | 4 | 0.07 | 1.15 |
| Residuals | 31 | 47.3 | - | Residuals | 31 | 0.06 | - |