**Spatial Variations of the Bacterial Diversity in an Alkaline Lake**

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**Table S1.** Physical and chemical properties of Lake Iznik during the winter turnover

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | | **Station\_1** | **Station\_2** | **Station\_3** | **Station\_4** | **Station\_5** | **Station\_6** | **Station\_6 40m** |
| **Temperature** | °C | 8.23 | 10.17 | 9.54 | 10.23 | 10.12 | 9.99 | 9.19 |
| **Electrical Cond.** | uS/cm | 886 | 996 | 928 | 937 | 760 | 748 | 734 |
| **pH** | - | 8.29 | 8.57 | 8.67 | 8.58 | 8.56 | 8.58 | 8.39 |
| **Dissolved Oxygen** | mg/L | 10.25 | 10.12 | 10.77 | 11.65 | 10.53 | 11.08 | 9.72 |
| **PO4** | µg/L | 22.97 | 13.35 | 16.90 | 10.48 | 17.91 | 18.25 | 19.77 |
| **TP** | µg/L | 34.21 | 38.63 | 31.75 | 30.89 | 32.49 | 29.91 | 30.77 |
| **NO2** | µg/L | 9.36 | 8.86 | 4.45 | 5.36 | 5.39 | 5.41 | 7.21 |
| **NO3** | µg/L | 134.26 | 139.32 | 114.01 | 132.24 | 166.66 | 118.06 | 137.30 |
| **SiO2** | mg/L | 1.59 | 1.48 | 0.93 | 2.92 | 1.51 | 1.58 | 1.79 |
| **kl-*a*** | µg/L | 9.32 | 8.44 | 8.88 | 8.44 | 2.66 | 5.33 | 5.33 |
| **NO2+NO3** | µg/L | 143.62 | 148.18 | 118.46 | 137.60 | 172.05 | 123.48 | 144.51 |
| **NH4** | µg/L | 208.12 | 197.12 | 131.13 | 257.06 | 168.52 | 191.07 | 202.62 |
| **NO2+NO3+NH4** | mg/L | 0.35 | 0.35 | 0.25 | 0.39 | 0.34 | 0.31 | 0.35 |
| **SO4** | mg/L | 9.92 | 10.26 | 9.34 | 13.95 | 9.13 | 9.52 | 9.39 |
| **Alkalinity** | mg/L CaCO3 | 455 | 453 | 451 | 454 | 478 | 475 | 443 |
| **Ca** | mg/L | 10 | 6 | 8 | 8 | 8 | 10 | 16 |
| **Mg** | mg/L | 68 | 76 | 74 | 64 | 56 | 70 | 68 |

**Table S2.** Alpha diversity indices of bacterial communities

|  |  |  |  |
| --- | --- | --- | --- |
| Sample | Shannon | Simpson | Pielou's evenness |
| Station\_1 water | 4.31 | 0.96 | 0.74 |
| Station\_2 water | 4.42 | 0.97 | 0.78 |
| Station\_3 water | 4.22 | 0.96 | 0.76 |
| Station\_4 water | 4.39 | 0.97 | 0.77 |
| Station\_5 water | 4.15 | 0.95 | 0.75 |
| Station\_6 water | 4.25 | 0.96 | 0.77 |
| Station\_6 40m | 4.24 | 0.96 | 0.76 |
| Station\_1 sediment | 4.03 | 0.95 | 0.70 |
| Station\_2 sediment | 4.08 | 0.96 | 0.73 |
| Station\_3 sediment | 4.21 | 0.96 | 0.75 |
| Station\_4 sediment | 4.06 | 0.95 | 0.72 |
| Station\_5 sediment | 3.99 | 0.95 | 0.71 |
| Station\_6 sediment | 3.96 | 0.95 | 0.71 |