

Seasonal variations of Particulate Organic Carbon and Nitrogen and Chlorophyll a in Tokyo bay

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ABSTRACT

In order to estimate water quality in Tokyo Bay, we observed DIN, DIP, Si, Chl a, POC and PON at seven stations monthly during 1997-98. DIN was high through water column in the period of vertical mixing. DIP and Si were low in the mixing period but very high in bottom depths showing dissolution from sediment in the thermal stratification period. Flagellates and diatoms bloomed reflecting the distribution pattern of nutrient in each period. PON/POC ratios were higher than the Redfield ratio during 1997-98 and lower during 1992-93 coincided with low and high percentages of ammonium concentrations in DIN in respective period. High PON/POC could be caused by favorable physical condition for phytoplankton growth in high DIN/DIP ratio in nutrients loaded to the bay, however, factors controlling low PON/POC during 1992-93 could not be defined.