

Application of Principle Component Analysis on Some Nutrients in Iskenderun Bay, Turkey

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Abstract

In this study, Principal Component Analysis was applied to ammonium, nitrate, phosphate and silicate - which are among the nutrient elements of phytoplankton - to determine how many components represent the total variation and which component provides the highest contribution to the total variation. First the amounts of the nutrient elements of the water samples taken from Iskenderun bay were determined, and then Principal Component Analysis was applied to them. With the analysis, it was seen that first component accounted for 87% of total variation. It was also seen that the contribution of the silicate, one of the nutrient elements, to the total variation of the first component was 99.4%. Those who study on nutritional elements and/or contamination of water resources may find these results very useful for their studies.

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