

P16-12**RELATIONSHIP BETWEEN ELEMENT DISTRIBUTION AND ORGANIC MATTER IN THE HOLOCENE SEDIMENTS FROM THE SOUTHWESTERN MARMARA SHELVES, TURKEY**

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Type and amounts of organic carbon and relationships between the concentrations of Cu, Zn, Co, Zr, Yb, Nb, Sn, P, Pb, Ti, Cr, Mn and Ga obtained in 20 samples from four sediment cores from the southwestern Marmara Sea are investigated using chemical and physical methods. The elements reflect geochemical conditions related to deposition and burial of detritic, calcareous and biogenic materials.

The sediments rich in organic matter are also rich in elements such as P, S, Mo, V, Cu, Zn, Ni, Cr, U, Co, Re, Ag, Pb, Y, Au and As. The relationships between element concentrations and the type of organic matter are obtained in cores 162, 163, 173 and 181 which ranged in thickness between 200 and 290 cm. V, Mo, Ni, Co, Zn, Zr and Ba show significant increases down the cores. The increases in the element concentrations are in good agreement with the S₁ and S₂ hydrocarbon percentages. The concentrations of Cu, Pb, Yb, Sc, Nb, Ga, Y and Sr do not show changes down the cores.

It is remarkable that there exist significant differences among the cores in view of element and organic carbon concentrations. Cores 173 and 181 look similar with respect to their organic carbon type and contents whereas in cores 162 and 163 such similarities are not observed. Exceptionally, there is a relationship between the contents of V, Y, organic carbon, S₁ and S₂ hydrocarbons while the concentrations of Zn, Zr, Pb, Ti and Ba show partly increases along the core.

In conclusion, the depositional and hydrodynamic conditions in the basin, water depth and diagenetic processes played important role explain differences among the cores with respect to concentrations and distributions of elements and organic matter.