

**EVALUATION OF HEAVY METALS AND SOME INORGANIC
POLLUTANTS, THE SOUTH MARMARA STREAMS (II), TURKEY**

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Most of the industrial and domestic discharges of 1.000.000 populated Bursa city flow untreated into Nilüfer River and then to Kocasu River at the south Marmara (Turkey). Water samples were taken from four stations of these two rivers from Summer 1991 until Summer 1994. Seasonal variations of all inorganic parameters such as Na, K, Ca, Mg, Fe, Cl, SO_4^{2-} , O-P_04 , $\text{NH}_3\text{-N}$, $\text{NO}_2\text{-N}$ were determined in these rivers. BOD-5 and COD levels, dissolved dispersed polyaromatic petroleum hydrocarbons (PAH); PH and some heavy metals concentrations such as Hg, Cd, V, Zn, Pb of the some samples were also determined. The inorganic parameters were analyzed by wet methods and heavy metals were determined by atomic absorption spectrometry, only chromium and lead concentrations are above the standard limits given for the heavily polluted class of water. Zinc levels show some input of this metal into these rivers and these waters are included in less polluted class of waters. As is well known the source of these type pollutants is definitely industry hence the metal, textile, automotive industries are concentrated in Bursa area. The mercury and cadmium pollution were not observed in these rivers on the other hand, the methodology used for the analysis of the mercury is developed very recently and eliminates the contamination problems during measurement thus the values were less than expected.

All measured parameters were correlated with the standard limits of the water quality criteria and classification of the waters were performed according to the governmental regulations.

The results showed that the waters of the monitored streams are included in the heavily polluted class of waters in terms of organic pollution since high values of biological oxygen demand values were recorded.



35th IUPAC Congress
14 - 19 August 1995, İstanbul
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