

# X-RAY SPECTROSCOPY IN TRACE ELEMENTS ANALYSIS IN BIOLOGICAL SPECIMENS

N. Orlić, S. Holjević and B. Bek

Faculty of Education, University of Rijeka

J. Dobrinić, Faculty of Technical Science, Rijeka

A. Ljubičić and V. Valković, "Ruđer Bošković" Institute,  
Zagreb, Yugoslavia

In this work the concentration of trace elements in marine organisms was investigated, as part of the FAO (GFCM)/UNEP Coordinated Project on Pollution in the Mediterranean<sup>1)</sup>. Trace element concentrations were determined by a X-ray emission method with sample excitation by a radioactive  $^{109}\text{Cd}$  source. Samples of Mytilus galloprovincialis, Mullus barbatus, Sardina pilchardus and Sepia officinalis were monitored. Sampling of Mytilus galloprovincialis was made in March 1977 and in June 1978 from four stations: Rovinj, Rabac, Omišalj and Limski kanal. Other organisms were collected in March 1977 from the trawling grounds of Rovinj and Rabac. Samples were dried at  $105^{\circ}\text{C}$  and glued on the kepton foil with perspex-aceton solution. Deep-frozen storage technique was applied during transportations. Absolute concentrations of Fe, Cu, Zn, As, Br, and Sr were determined. Slightly increased concentrations of As in Sepia officinalis and of Sr in Mullus barbatus were observed.

1) Joint FAO(GFCM)/UNEP Coordinated Project on Pollution in the Mediterranean, Report No. 3, May 1978, p. 28