

Biomonitoring of Mercury in Coastal Regions of São Paulo by Using the Transplanted Mussel *Perna perna*

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In Brazil, due to the extension of the coast and to the innumerable pollution problems encountered in several regions, it is necessary to obtain a great volume of data with relation to the monitoring of many environmental compartments, such as water, soils, sediments and biomonitors. The aim of this project is to give a contribution to the biomonitoring of toxic elements like Hg, Pb and Cd in some regions of the coast of the State of São Paulo, by using the bivalve *Perna perna*, which is commonly found in the whole Brazilian coast and is consumed by the population, in an amount estimated in several tons per month, in São Paulo. Due to its sedentary habits and its ability to concentrate many pollutants, the mussel *Perna perna* is been used in studies of evaluation of the quality of coastal waters. The project is being conducted in collaboration with the Oceanographic Institute of the University of São Paulo. For the utilization in the experiments, healthy animals were obtained, collected in regions far away from sources of pollution. The organisms to be utilized in this project were acquired in a cultivation site situated in the Cocanha Beach in Ubatuba, a site not close to pollution sources, which will constitute the control for the present study. The organisms were transplanted to several points along the coast, from São Sebastião to Santos. The sites chosen in Santos are strategic in the sense that they monitor the Bay of Santos, with relation to industrial emissions and to the emmissary of domestic effluents. Every three months, the organisms were removed from the transplant points, cleaned and freeze-dried. The analysis of mercury were be carried out at the Neutron Activation Analysis Laboratory, at IPEN/CNEN-SP, using CVAAS after dissolution with HNO₃ - H₂O₂ mixture. Results obtained for mercury up to present did not show concentrations in the mussels above the limits of 1 mg kg⁻¹ in shellfish set by UNEP (1998) and 0.5 mg kg⁻¹ set by Brazilian regulations.

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