

B530

### Distribution of Heavy Metals in Sediments, Seawater and Oysters(*Crassostrea gigas*) in the Jinhae Bay

Eun-Jung Kim\* and In-Sook Lee  
Department of Biological Science, Ewha Womans University

The heavy metal concentrations in surface sediments, seawater and oysters (*Crassostrea gigas*) were determined to assess heavy metal contamination in the Jinhae Bay. The ranges of cadmium, cobalt, copper, nickel, lead and zinc concentration in surface sediments were 0.1~2.4, 12.6~14.4, 25.3~92.3, 24.1~81.2, 124~477  $\mu\text{g/g}$ , respectively. The concentrations of cadmium, copper, lead and zinc which were influenced by industrial activity were the highest in the inside of Msan Bay. Dissolved concentrations of cadmium, cobalt, copper, nickel, lead and zinc in seawater were <0.010~0.043, 0.008~0.120, 0.31~0.90, 0.25~3.10, 0.010~0.142, 0.27~9.04  $\mu\text{g/L}$ , respectively. The concentrations of cadmium, cobalt, copper, nickel, lead and zinc in seawater were also the highest inside of Masan Bay, suggesting Masan Bay is the major source of heavy metal input to the Jinhae Bay. Biological concentration factors (BCF) of zinc, copper, cadmium, lead, cobalt and nickel in *C. gigas* were 647373, 280861, 145069, 44559, 13524, 2745, respectively, showing *C. gigas* is the strongest accumulator than other bivalves.

B531

### 총알고둥(*Littorina brevicula*)에서의 Cadmium-binding protein 의 분리와 정제

박진성\*, 정수희, 이인숙  
이화여자대학교 생물과학과

The induction of cadmium binding protein (Cd-BP) in the gills, kidney and digestive gland of the marine gastropod, *Littorina brevicula* were examined. The winkles were exposed to 400 $\mu\text{g/L}$  Cd for 30 days. Metallothionein like protein were purified using various chromatographic techniques, such as gel-filtration, anion-exchange and reverse-phase high-performance liquid chromatography. Denaturing polyacrylamide gel electrophoresis of Cd-BP HPLC fraction showed one species of metallothionein-like proteins having apparent molecular masses of 45kDa.