

Metallothionein Levels in the Bivalves *Callista chione* and *Venus verrucosa* from Two Mediterranean Sites

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Metallothioneins levels (MTs) in the clams *Callista chione* and *Venus verrucosa*, collected from two coastal sites in Greece, were determined and quantified by SDS polyacrylamide gel electrophoresis (SDS-PAGE) and a spectrophotometric assay (Ellman's reaction). SDS-PAGE separation in the digestive gland, which represents the hepato-pancreas in clams, demonstrated the presence of MTs similar to mammalian MT (rabbit liver Cd, Zn-thionein). No other SH-containing proteins apart from the MTs were detected. MT levels quantified by the Ellman's reaction indicated seasonal variation for both species. The highest values were recorded in the spring and the lowest in the autumn. The seasonal variation and the differences in the MT levels of the two areas seem to be related to the reproductive cycle of the organisms as well as to abiotic factors of each area. Our results show that both *C. chione* and *V. verrucosa* have the potential to be used as biomarkers of metal pollution, provided that the influence of the external factors is safely quantified.