Metal concentrations (Cu, Pb, Zn and Cd) in *Patella piperata* throughout the Canarian Archipelago, Spain

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Metal concentrations were measured in *Patella piperata* (Gould, 1846), using the standard atomic absorption spectrophotometer technique, in order to assess the extent of metal contamination at 8 different rocky shores, (one at each island of the Canary Archipelago). Ranges of element concentrations measured (in µg/g) found in the biota were: Zn 10.3769±4.60823; Cu 2.0510±0.90975, Cd 0.3626±0.26479 and Pb 1.97±0.31. There is an increasing interest in focusing the attention on the identification of a suitable group of bioindicators for trace metal pollution, such as the gastropod molluscs *Patella piperata*. Moreover, the harvest of these macroinvertebrates ("shellfishing") is a common practice in the region and is practiced at both the professional and recreational levels. This collection has also an important involvement in human consumption. *P. piperata* showed the highest abundance (0.069 ± 0.16 individuals 0.25 m^{-2}) and also the smallest sizes (21.0 ± 9.21 and 18.1 ± 7.94 mm, respectively) for all the species of limpets in the Archipelago. Implications in biomonitoring of the observed accumulation patterns and the use of this specie as a "bioindicator organism" in the littoral zone for monitoring metal levels in the environment are also discussed. Variation in metal concentrations in *Patella* collected from different sites was tested by using non-parametric statistical methods and one-factorial analysis of variance (ANOVA) calculated the interaction of the island factors sampling site. Sampling site had a significant influence on metal bioconcentrations, where anthropogenic activities probably caused increased metal contents.