CHEMICAL AND MICROBIOLOGICAL QUALITY OF PORTUGUESE SHELLFISH WATERS: 2019-2021 PERIOD

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INTRODUCTION

The aim of this work was to evaluate the quality of the Portuguese shellfish waters through chemical and biological parameters. Several bivalves species were collected between 2019 and 2021, from 12 littoral areas and 10 estuaries/lagoons, as defined in the national official monitoring program. Total mercury (THg) was determined by atomic absorption spectrometry according to the method 7473 EPA (2007) [1]. Cadmium (Cd) and lead (Pb) were performed by graphite furnace atomic absorption spectrometry following NP EN 14084 (2003) [2]. Chromium (Cr), copper (Cu), nickel (Ni) and zinc (Zn) were analysed by flame atomic absorption spectrometry according to Jorhem *et al.* (2000) [3]. Faecal coliforms were quantified using a multiple tube fermentation technique followed by confirmation in chromogenic agar, as described by standard protocols (adapted from ISO 16649-3, 2015) and expressed per 100g of flesh and intervalvar liquid [4].

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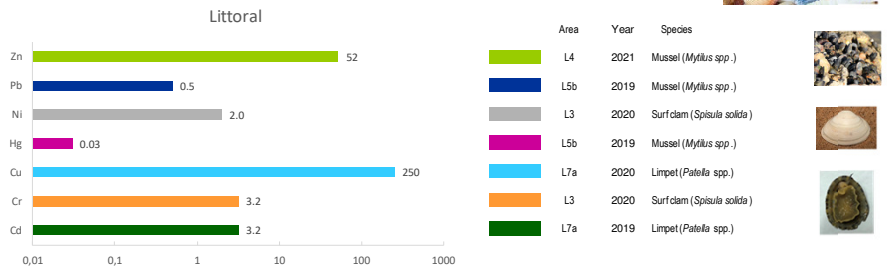
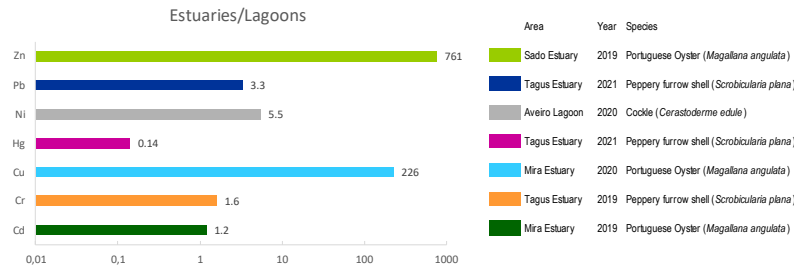
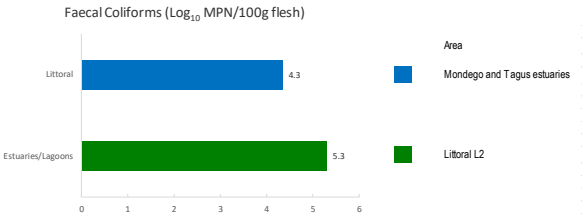
RESULTS & DISCUSSION







Conclusions

The highest levels of Cd, Cr and Cu, were observed in littoral areas, whereas the highest levels of Hg, Ni, Pb, Zn and faecal coliform were recorded in the areas located in estuaries/lagoons areas. These contaminants can be due to telluric and anthropogenic factors, so different strategies for mitigation need to be addressed.

References

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Acknowledgments

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