

Selected organs of marine mussels as accurate biomonitors of metal bioavailability and contamination in the coastal waters: challenges

ABSTRACT

The use of selected organ such as crystalline style, gills and byssus of marine mussels can be more accurately reflective of bioavailability and contamination of heavy metals in the contaminated coastal waters. However, there are challenges in using the selected organs. First, more time is needed to separate the organs of mussels when Mussel Watch is employed for biomonitoring of chemical pollutants in the coastal waters. Second, from human health point of view, total soft tissues of mussels are preferred in the consumption rather than selected organs. Third, currently, there are still uncertainties of added decrease the non-carcinogenic risk of metal exposure after the highly metal accumulated organs / parts are discarded, which is safer for the human consumption.

Keyword: Mussel watch; Selected organs; Coastal waters