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## *Mytilus galloprovincialis* as Mussel Watch for Butyltins, Tin, Copper and Zinc Contamination, from Antifouling Paint Particles, in West Algerian Coastal Waters

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### ABSTRACT

Butyltin compounds (BTs) including tributyltin (TBT) and its degradation product (DBT) and concentrations of heavy metals (Sn, Cu and Zn) were determined in mussels (*Mytilus galloprovincialis*) collected from some West Algerian harbours. BTs were detected in all the mussels. Quantification of BTs and heavy metals was carried respectively by Gas Chromatography coupled with Mass Spectrometer (GC-MS) and Atomic Absorption Spectrometry, flame AAS. Concentrations of total butyltin (BTs: DBT + TBT) in mussels ranged from 0.49 to 2438 ng/g wet wt. The concentrations ( $\mu\text{g/g}$  wet wt) of heavy metals ranged from 0.40 to 3.55 for Sn, 9.62 to 67.03 for Cu, and 87.13 to 731.51 for Zn. Total of tin in mussels ranged from 0.2 to 1054.78 ng/g. Higher concentrations of butyltin compounds were found in mussels collected from Mers El Kebir shipyard, Arzew, a petroleum harbour (industrial), and Beni Saf fishing harbour. This suggested that maritime activities nearby the harbours play a major role as the source of BTs. Indeed, harbour of Arzew is frequented by voluminous tanker. TBT was the predominant compound in mussels collected from almost all the sampling locations; indicate the fresh input of TBT in harbours.

### KEYWORDS

 Organotin; Tin; Copper; Zinc; *Mytilus galloprovincialis*; GC-MS; AAS

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