

Inter-species variability of okadaic acid group toxicity in relation to the content of fatty acids detected in different marine vectors

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Okadaic acid group (OA-group) is a set of lipophilic toxins which are characterised by being produced by species associated with the genera *Dinophysis* and *Prorocentrum*. OA-group has been regularly detected in endemic shellfish species from the southern zone of Chile only through the mouse bioassay. The purpose of this work was to determine the variability of OA-group toxins in endemic aquatic organisms (bivalves, crabs, gastropods and fish) and to establish the relationship with the concentration of fatty acids (FAs) detected in the evaluated species. The toxicity of OA-group and the FA profiles were determined using LC-MS/MS and gas chromatography with flame-ionisation detection, respectively. In the study area, the dinoflagellate *Dinophysis acuta* was detected in densities ≈ 2000 cells ml⁻¹ with a toxicity ≈ 18.3 pg OA equiv cel⁻¹. The analysis identified OA and dinophysistoxin-1 in shellfish in a range of ≈ 90 to ≈ 225 μ g OA eq kg⁻¹, where