

# Lipophilic toxin profiles detected in farmed and benthic mussels populations from the most relevant production zones in Southern Chile

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Lipophilic toxins associated with diarrhoeic toxins were found in *Mytilus chilensis* (Blue mussels) and *Aulacomya ater* (Ribbed mussels). These shellfish samples were collected from Chiloe Island, Southern Chile. The samples were tested by liquid chromatography-tandem mass spectrometry (LC-MS/MS). After the analysis, four toxins were found: DTX-1, DTX-3, YTX and PTX. All toxins were identified by comparing their HPLC retention times with those of analytical standards and confirmed by LC-MS/MS. Dinophysistoxin-1 (DTX-1) and dinophysistoxin-3 (DTX-3) toxins were the major components within the mussel extracts. Nevertheless, the percentages of these toxins differed depending on the area they were collected from and/or the sampling date. The levels detected in Butacheuques Island for okadaic acid (OA) was  $267 \pm 3.5 \text{ ?g OA eq kg}^{-1}$  ( $p < 0.05$ ) and for DTX-3 was  $183.4 \pm 7.5 \text{ ?g kg}^{-1}$  in ribbed mussels. Pectenotoxin (PTX) and yessotoxin (YTX) were the toxins detected in minor proportions in the toxi