

## Effets du chlorure de tributylétain sur la croissance et le métabolisme de la diatomée marine *Phaeodactylum tricornutum* (Bohlin)



Tributyltin (TBT) is a toxic organometallic compound, used as a biocide in marine antifouling paints, that may be harmful to marine organisms living in coastal waters. This study attempts to provide a better understanding of the effects of TBT on the growth and metabolism of a dominant marine diatom from the St Lawrence Estuary: *Phaeodactylum tricornutum*. Experiments were conducted in batch cultures exposed during one week to TBT concentrations ranging from 0.5 to 20.0  $\mu\text{g l}^{-1}$ . The algal growth was much reduced by concentrations of 2.0 to 20.0  $\mu\text{g l}^{-1}$ , with reduction of cell density and cell death occurring within a few days at higher TBT concentrations. Exposure to pollutant also resulted in mucilaginous agglutination of cells into large, rapidly sinking aggregates. The physiological toxic effects of TBT on  $\text{NO}_3^- + \text{NO}_2^-$  uptake after a 72-hour exposure to high TBT level (20.0  $\mu\text{g l}^{-1}$ ) and on assimilation and incorporation activities were reflected in an important intracellular accumulation of these nutrients. Bioaccumulation of TBT by algae was detected after 24 h of continuous exposure, and concentrations increased with increasing levels of contamination. A plateau in algal bioaccumulation of organotins appeared after 72 h with a partial biodegradation of TBT into dibutyltin (DBT).

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