Influence of Dodecyltrimethylammonium Halides on Interaction of Phenyltin Compounds with Model Membranes

Bożenna Różycka-Roszak* and Hanna Pruchnik

Agricultural University, Department of Physics and Biophysics, Norwida 25, 50–375 Wrocław, Poland. Fax: +48-71-3205172. E-mail: BORO@ozi.ar.wroc.pl

* Author for correspondence and reprint requests

Z. Naturforsch. **56 c,** 623–628 (2001); received December 27, 2000/February 19, 2001

Dodecyltrimethylammonium Halides, Phenyltin Compounds, Model Membranes

The effects were studied of dodecyltrimethylammonium chloride (DTAC), dodecyltrimethylammonium bromide (DTAB) and dodecyltrimethylammonium iodide (DTAI) on thermotropic phase behaviour of phosphatidylcholine bilayers, as well as on ^{1}H NMR and ^{31}P NMR spectra, in the presence of diphenyltin dichloride (DPhT) and triphenyltin chloride (TPhT). The obtained results indicate that in the presence of the surfactant studied the interaction of phenyltin compounds with model membranes was changed and the changes depended on the kind of the counterion. The surfactants studied (especially DTAC) decrease the ability of phenyltin compounds to induce structural changes in the bilayer. It is suggested that DTAB, and especially DTAC, prevent DPhT induced interdigitated phase formation as well as formation of an inverted hexagonal phase (H_{II}) in the case of TPhT/DPPC liposomes.