

# Counterion Effects on Interaction of Amphiphilic Quaternary Ammonium Salts with Model Membranes

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The micellization as well as the interaction with model membranes of dodecyltrimethylammonium halides (DTAX) and N-dodecyl-N,N-dimethyl-N-benzylammonium halides (DBeAX) were studied at 298K and 313K by means of titration calorimetry. The calorimetric curves reflect both the counterion and benzyl group effects on the interaction of the surfactants studied with the lipid bilayer. Bromide as counterion enhanced the interactions more than chloride of both DTAX and DBeAX compounds with model membranes.

Further, we studied the influence of DTAX and DBeAX on calcium ion desorption from the liposome membrane using a radioactive tracer method. DBeAX proved more efficient in desorption of calcium than DTAX. Iodides of these compounds enhanced this process more than bromides and chlorides.