

PHOSPHOLIPID STABILIZED FLUOROCARBON AQUEOUS DISPERSIONS

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Phospholipids (PL) stabilize fluorocarbons (FC), forming aggregates with lamellar (bi- or multilayer) vesicle-like structures. The state of aggregates depends on PL-composition and can be confirmed by ^{31}P -NMR. Phosphorus in a lamellar surrounding causes a special type of NMR line broadening, because of restricted segmental motions in the hydrophobic part.

Multilamellar PL-structures are very stable also at elevated temperature. Such aggregates are able to carry FC's up to 100 % w/v. Their stability properties and viscosity data will be presented. Enhanced stability is attributed to the negatively charged surface and to multilayer film formation.

Critical solution temperatures (CST) of FC mixtures used were found to behave as ideal liquids. Highly PL soluble FC's with low CST-values penetrate cell membranes and seem to interfere with liver microsomes blocking the oxidative phosphorylation.

Additionally, the persistent FC radical $\text{C}_{10}\text{F}_{21}$, obtained by treatment of TFE-pentamer with F_2 , was encapsulated with PL by sonication giving a longterm stable ESR marker for in vivo investigations.