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BIOLOGICAL AND PHYSICOCHEMICAL DEMANDS TO PERFLUOROCHEMICALS (PFC) USED AS COMPONENT OF BIOCOMPATABLE EMULSIONS

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The main requirements to PFC in manufacturing biocompatible emulsions is their ability to give stable emulsions and their rapid elimination from animal tissues. The stability of emulsions depends on the types of PFC. The order of PFC stability is the following: perfluoroamines, perfluoroethers and perfluorocarbons. Those requiring extremely high energy for emulga-tion can not be widely used in practice. The PFC making stable emulsions were found to be kept in organisms longer and *vice versa*. The choice of PFC depends on the aim of the further practical use of emulsions. Biocompatibility of PFC emulsions can largely be accounted for by toxical impurities of PFC and surfactants, low level of free fluorid ions, range of particle size and reological properties of emulsions an important criterion of PFC is their biological activity mainly related to membranotropic properties.

The membrane activity of PFC reveals itself in membrane hydrophobic phase modification and should be taken into account in practical usage (cardioplegia, organ conservation, blood substitution, treatment of toxical states).