

# Feasibility of using ultrasound for drug delivery through micellar systems

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## Abstract

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## Abstract:

A study of micellar structures subjected to continuous high-intensity ultrasonic perturbation was carried out. The micelles were characterized by high-speed absorption spectrophotometry and the use of fluorophores, such as Rhodamine 123, as a spectroscopic indicator of the micellar kinetic process. It was found that above the critical micellar concentration, the absorbance peak of the fluorophore experiences a 14 nm red shift. Preliminary experiments indicate a reversal of this shift under certain ultrasonic conditions. In subsequent experiments, no effect of high intensity ultrasonic radiation on the micellar systems studied was observed. A dependence of the spectroscopic response of Rh123 on temperature is found, which can be confused with the effect of micelle breaking in solutions. The study presented considers the use of Quillaja Saponaria Molina and Triton X-100 as a surfactant, but it is extensible to other micellar systems.

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