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Application of the laser interferometry in studies of biophysical model systems

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In this paper some selected applications of laser interferometry method in studies of biophysical model systems are presented. With the aid of a laser interferometric method, specific experiments were performed, which confirm that the gravitational field significantly modifies the amount of transported substance and affects the concentration profiles as well as the time evolution of the concentration field. The laser interferometry was also used to investigation of diffusion of antibiotics (ciprofloxacin or ampicillin) into the water phase from mixtures of neutral or negatively charged liposomes, and antibiotic–liposome interactions. Differences in the diffusion kinetics of ciprofloxacin and ampicillin from liposomal solutions to the water phase were observed. Moreover, the amount of ampicillin and ciprofloxacin released from the anionic liposomal phase was higher than that from the neutral one.

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