

Abstract in english:

Goal of the Bachelor Thesis was an optimization of liposome membrane preparation with different composition for the drop coating deposition Raman (DCDR) method, measuring of the DCDR spectra from dried droplets and their interpretation. The DCDR method lies in deposition of small volume of suspension ($\sim\mu\text{l}$) on special surface and measuring of Raman spectra from the ring formed at the edge of the dried droplet. The main advantage of used method is the possibility of measuring spectra from the sample with low concentration. Our results show that the DCDR method is very useful in studies of biological membranes with different composition. Two synthetic lipids and one natural extract were chosen for making a comparison. We have found out that spectra obtained from the ring of dried droplet are not different from the spectra measured in the suspension. The important characteristic of spectra is that dried droplet keeps the same lipid phase as in suspension. Spectral mapping proved good reproducibility of the signal inside the ring.