Stability of phospholipid liposomes with encapsulated *Rosa canina* L. seed oil

Abstract

In the present study, phospholipid liposomes with encapsulated *Rosa canina* L. seed oil were developed using the proliposome method. Particle size, polydispersity index (PDI), zeta potential, conductivity, and mobility of the obtained liposomes were monitored for 60 days. Particle size measured immediately after the liposomal preparation was 509.3±13.2 nm, while PDI was 0.280±0.015. Zeta potential, conductivity, and mobility determined immediately after the preparation of liposomes were -27.3±2.3 mV, 0.024±0.005 mS/cm, and -2.14±0.18μmcm/Vs, respectively. The vesicle sizes of oil-loaded liposomes changed significantly after the 21st day of storage (become smaller), while statistically significant changes in PDI values did not notice. The zeta potential (as a measurement of liposomal stability) and mobility did not vary in the liposomal population, but the conductivity of the liposomes statistically significantly decreased during the 60-day stability study. The beneficial effects of active compounds from *R. canina* seed oil on human skin, highlight the use of stable oil-loaded liposomes for potential application in pharmaceutical and cosmetic industries.