

A study of the thermotropic phase behaviour of the pseudoceramide 14S24 and its mixture with cholesterol

Abstract

The thermotropic phase behaviour of mixture of ceramide analogue 14S24 with cholesterol was scoped in this diploma thesis. The samples were measured under non-hydrated and hydrated conditions for the various ratios of 14S24. Two methods were used for the measurement and determination, namely DSC and Infrared spectroscopy. The phase transitions and the changes in a structure of the ceramide analogue 14S24 were studied.

The influence of concentration on temperature was monitored by DSC. Interestingly, the eutectic mixture occurred with 30% content of ceramide analogue 14S24. Furthermore, a hydration of the mixture influenced its melting point by means of decrease. The crystalline lattice was determined by IR showing triclinic or optional hexagonal structure.