

## Effect of stearic acid on the phase equilibrium in the system triacylglycerides-ethanol-stearic acid

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### Abstract

The paper presents the results of the study of phase composition of two-component systems TAG – StA and EtOH – StA at the temperatures from 30 to 72 °C and phase composition of ternary system TAG – StA – EtOH at the temperatures from 50 to 70 °C, where TAG – triacylglycerides(sunflower oil), OIA – oleic acid, EtOH – ethanol, StA – stearic acid. The role of StA ascosolvent of the mixture TAG – EtOH was investigated. The relative ability of StA and OIA for homogenization of the system was determined. For the separation region of system TAG – StA – EtOHat 70 °C nodes were built, critical point of the system was determined, the distribution coefficients of StA between phases TAG and EtOH at 70 °C and different compositions of the system were found. Ability of StA and OIA for homogenization of the TAG-EtOH mixture was analyzed with GSP model which took into account molecular interact ions of the components of systems with the participation of functional groups of their molecules.