Abstract

Charles University, Faculty of Pharmacy in Hradec Králové

Department:	Pharmaceutical Technology
Consultant:	PharmDr. Barbora Vraníková, Ph.D.
Student:	Zuzana Semričová
Title of Thesis:	Self-emulsifying drug delivery systems and their utilization for bioavailability enhancement

Up to 80 % of modern drugs are poorly water soluble substances, which causes difficulties in the development of solid dosage forms with sufficient bioavailability. Self-emulsifying drug delivery systems (SEDDS) are modern formulations containing the drug with suitable excipients (oils and surfactants) that are incorporated to the liquid, semisolid or solid dosage form. After mild agitation (e.g. peristaltic in gastrointestinal tract) they form the emulsion/microemulsion/nanoemulsion. These systems are capable to enhance bioavailability of lipophilic drugs after peroral administration, selectively target the drug to the specific absorption sites in GIT, avoid first pass effect, protect sensitive drugs as peptids and reduce inter- and intraindividual variability and food effect on releasing of the drug.

This diploma thesis tries to clarify specific aspects of classification, preparation, composition and characterization of SEDDS.