

## **SUMMARY**

In the Doctoral thesis is presented theoretical overview of relevant scientific knowledge concerning preparation and use of silver colloidal particles enlarged with technical information concerning drying and quality control methods of dispersion systems. Experimental section of the work is focused on two methodically different areas. The first one is dedicated to newly developed procedure of increasing colloidal silver particles concentration, the second one to the approach to the system stabilization. Kinetics of nanosuspension concentrating is studied and short-time stability of concentrated systems is subsequently monitored. The influence of model adsorption polymers on parameters and behavior of colloidal system is tried. Also nanosystem spray drying method and products image analysis are solved in the thesis.