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REPORT ON THE TOPIC

THE ROLE OF STABILIZERS IN THE CREATION OF ORAL SUSPENSIONS

Relevance. Suspension is a liquid dosage form containing in the dispersed phase one or more crushed powdered substances distributed in the liquid dispersion medium. Suspensions as microheterogeneous systems belong to unstable systems and therefore, over time, stratify. The rate of sedimentation of solid phase particles depends on measures of their dispersion and is reflected in Stokes' law. Thus, the stability of the suspension is directly proportional the viscosity of the dispersion medium, inversely proportional to the square of the diameter of the suspended particles, the difference between the density of the dispersed phase and the dispersion medium and the acceleration of gravity.

The second approach in the suspension stabilization is to use a stabilizers. Substances that increase viscosity and density are products of natural and synthetic origin. In this case the stability of suspensions increases when a so-called solvation shell forms on solid particles, which prevents them from sticking and precipitating. The formation of such shell is greatly facilitated by adding to the dispersion medium a suspension of a small amounts of surfactants that are soluble in it. In this case, the latter, being adsorbed on suspended particles, make it possible to form a solvation shell around the particles of the dispersed phase.

Conclusions. Stabilizers, which widely used in the composition of oral suspensions, are low molecular weight electrolytes, colloidal surfactants and high molecular weight substances. Most often used gum (xantan, guar), pectins, starch, agar, sodium alginate, aerosil, gelatin, derivatives cellulose, carbomers and others.