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ABSTRACTS**

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CHANGE IN GRANULOMETRICAL COMPOSITION OF SUSPENSIONS OF MEDICINAL AND COSMETIC PRODUCTS DURING PROCESSING IN A BEAD MILL

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Abstract: It is studied the change in the particle size composition of medical and cosmetic suspensions during processing in a bead mill. Suspensions according to two recipes were ground on an experimental unit — a laboratory bead mill of periodic action. Suspensions based on castor refined oil Ph. Eur. and iron oxide pigment "Red 120" were chosen as model samples. The change in particle size composition and the degree of grinding were researched by light microscopy using a digital monocular camera.

A curve of the degree of grinding during grinding shows that the compositions of the suspensions within the studied range are actively grinded. The resulting particle size distribution diagrams illustrate the dynamics of the formation of a monodisperse system.

The curve of the degree of grinding and the size distribution diagrams demonstrates that suspensions with a higher content of the solid phase are crushed more intensively and have a more pronounced monodispersity. It can be concluded that for the production of medicinal and cosmetic products it is advisable to use formulations of suspensions which have a higher concentration of the solid phase in their composition.

The obtained results of studies on changes in the granulometric composition of suspensions allow monitoring and adjusting the necessary parameters of the ultrafine grinding process to achieve the required product quality

Key words: *granulometric, particle, grinding, beads, mill, suspension.*