

## The Influence of Preliminary Mechanical Activation of Sodium Fluoride on the Process of Heterophase Fluorination of Pentachloropyridine

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Previously we established the influence of preliminary mechanical activation of metal's fluorides used in reactions of an exchange of chlorine on fluorine in polychlorinated aromatic compounds. It is marked, that under the conditions of autoclave and liquid-phase fluorination processes the yield of fluorinated products is considerably increased, reaction time decreases, the quantity of the fluorinating agent is essentially reduced in comparison with the use of not activated agent. It was shown also, that activity of alkaline fluorides and earth metals fluorides in reactions of fluorination depends on duration of their preliminary mechanical activation in a planetary mill.

Making a start from earlier obtained results [1] and researches of our Institute [2] concerning investigation of mechanical activation of the sodium fluoride, we carry out experiences on studying of the influence of mechanochemical activation of NaF on the course of fluorination reaction of pentachloropyridine.

Reaction of heterophase fluorination of pentachloropyridine carried out with NaF within 20 hours at temperature of 220 °C. In this conditions we observed only an initial stage of fluorination process, thus the degree of transformation of reagents did not exceed several interests. Thus, kinetic laws of reaction it was studied on accumulation the lowsubstituted fluoroaromatic products. Results of experiments allow estimating the contribution of various ways of storage of energy at mechanical activation on reactionary ability NaF as the fluorination agent for the fluorination processes of chloroaromatic compounds connections.

[1] *A.V. Dushkin, L.M. Karnatovskaia, E.N. Chabueva et al.// Synth. Communications. 2001. vol. 31. №7, p. 1041-1045.*

[2] *E.L. Goldberg, A.Y. Yeremin//Izv. SO AN USSR. Chem. Ser. 1985, 6, 16-22 (in Russian).*