

Synthesis of ferrodiphenylsiloxanes using the method of mechanochemical activation

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Abstract

Interaction of diphenylsilanediol with iron acetylacetonates in the conditions of mechanochemical activation has been studied. Mechanical activation was performed in the activator of oscillation type at the frequency 2.5 Hz. The reaction mixture after mechanical activation was divided into soluble and insoluble fractions. The products were tested with the method of element analysis, gel-penetrating chromatography, IR-spectroscopy. The products were obtained with the ratio Si/Fe, which differed from the specified one. Fractioning by gel-penetrating chromatography and fractional sedimentation has shown the uneven distribution of elements in fractions. The majority of soluble fractions were presented by cyclic ferrosiloxanes.