

## **Research into the structure of amorphous regions of some sorts of cellulose**

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### **Abstract**

Possibility for studying amorphous regions of cellulose with the help of NMR-relaxation and sorption methods has been established. Structural model taking into account the acquisition of nano-sized fragments of cellulose fibrils in its amorphous regions has been presented. In the framework of this model parameters of structure of amorphous regions have been defined. A great portion of surface macromolecules of microcrystallites of amorphous fields facilitate the formation of its structure, sorption and reaction properties. It has been proved that the process of mild acidic hydrolysis of cellulose preparations is accompanied with the growth of their crystallinity degree, reduction of the total specific area and lowering of free energy of all polymer system as a whole.