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# Kaolin dispersion destabilization with microparticles of cationic starches

Rima Klimaviciute*, Dalia Sableviciene, Joana Bendoraitienė, Algirdas Zemaitaitis

*Department of Organic Technology, Kaunas University of Technology, Radvilenu pl. 19, LT-50254 Kaunas, Lithuania*
*Tel./Fax +370 37 456081; email: rimakli@ktu.lt.*

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**ABSTRACT**

The flocculation efficiency of microparticles of cold-water-dispersible cationic starches (DCS) in the destabilization of kaolin dispersion in distilled water and anionic dye solution was investigated. DCS could act as both flocculants and adsorbents. The flocculation efficiency of DCS has been changed in the presence of inorganic salt or anionic dye in the kaolin dispersion. These changes depended on the degree of substitution and accessibility of cationic groups, i.e. on the factors that determined both the size of DCS microparticles and charge distribution on their surface. The best flocculation of kaolin dispersion was achieved at the particular size and surface charge density of DCS microparticles. In that case the balanced areas of negatively and positively charged patches were formed on the surface of DCS after adsorption of kaolin particles and during ensuing flocculation heavier floccules were formed.

*Keywords*: Cationic starch; Flocculation; Flocculation mechanism; Fluorescence

* Corresponding author.