Abstract

Titanium dioxide colloid with a size of particles between 20 – 40 nm was prepared. Subsequently, three substances were syntetized – methylen bis(phosphonic) acid $H_4L_1$, 4-phosphono-butyric acid $H_3L_2$ and 4-hydroxy-4,4-diphosphono-butyric acid $H_5L_3$. Surface of the colloidal nanoparticles was modified using these substances ($H_4L_1$, $H_3L_2$ and $H_5L_3$). Then stability of these systems was studied using acid-base titration and addition of calcium ions.

Keywords: TiO$_2$, nanoparticles, surface modification