

Nanochemistry and Nanobiotechnology

Nano- and microparticle modification of structured peloid suspensions

I.G. Kovzun¹, V.O. Oliynik¹, A.V. Panko¹, E.M. Nikipelova²

¹ F.D.Ovcharenko Institute of biocolloid chemistry, NAS of Ukraine,
42, Ak.Vernadskogo Blvd., Kyiv, Ukraine, 03680.
E-mail: gr.k.ibcc@ukr.net

² Ukrainian Research Institute of Medical Rehabilitation and Balneology, Ministry
of Health of Ukraine, 6, Lermontovskiy Lane, Odessa, Ukraine, 65014

Concepts of carbonate and clay mineral nano- and microparticle's role in structure organization of clay-carbonate ferrioxide-silicate peloids and their influence on balneological properties of therapeutical muds have been developed [1, 2].

Features of carbonate and clay mineral nanoparticle influence on peloid medical properties have been theoretically considered and experimentally proved with chemical, SEM, XRD, adsorption, rheological, biomedical, mechanochemical and hydration dispersion methods. General factors of directed peloid properties' regulation by virtue of their nanostructural modification has been defined. And it was showed that mechanochemical and hydration dispersion of carbonate and clay additives in peloids considerably increases their medicobiological characteristics.

1. Panko A.V., Kovzun I.G., Nikipelova E.M., Protsenko I.T. Biocolloid-chemical influence of calcium carbonate nanoparticles on medical-endocological properties of peloids // CERECO-2014: Book of Abstracts. – 2014. – P. 69-70.
2. Olejnik V.A., Panko A.V., Nikipelova E.M., Alekseenko N.A., Kovzun I.G. Influence of nanomaterials on bio-logical activity of marine pelagic sediments (peloids) // Proceedings of the International Conference Nanomaterials: Applications and Properties. – 2012. – V 1, N 2. – 02NNBM16(3pp).