

---

## HYGROSCOPIC PROPERTIES OF ENOXIL-SILICA COMPOSITES

Oksana Stavinskaya <sup>a\*</sup>, Iryna Laguta <sup>a</sup>, Olga Kazakova <sup>a</sup>, Pavlo Kuzema <sup>a</sup>, Tudor Lupascu <sup>b</sup>

<sup>a</sup>*Chuiko Institute of Surface Chemistry of National Academy of Sciences of Ukraine, 17, General Naumov str., Kiev-03164, Ukraine*

<sup>b</sup>*Institute of Chemistry of Academy of Sciences of Moldova, 3, Academiei str., Chisinau, MD 2028, Republic of Moldova  
\*e-mail: icvmtt34@gmail.com*

**Abstract.** Enoxil-silica composites with various Enoxil-to-silica ratios were prepared by mechanical mixing of the biologically active Enoxil preparation and fumed silica. The hygroscopic properties of the composites were studied by gravimetric method. It has been shown that the use of Enoxil in the composition with silica may reduce significantly the Enoxil ability to absorb water from the gas phase and, therefore, improve its storage stability. The strongest hygroscopicity reduction is observed for the composites with Enoxil-to-silica ratio of (0.15-0.35):1, which corresponds to approximately monolayer distribution of the Enoxil biomolecules at the silica surface.

**Keywords:** Enoxil, biomolecules, fumed silica, composite, hygroscopicity.