

The article is published on the materials of speech at the XX All-Russian Conference

"The structure and dynamics of molecular systems." Yalchik 2013.

Publication is available for discussion in the framework of the on-line Internet conference "Butlerov readings".

<http://butlerov.com/readings/>

Contributed: June 12, 2013.

The structure and solubilization properties of aqueous solutions of lithium and sodium dodecyl sulfates

© Lilia R. Bogdanova,¹⁺ Nadezhda N. Benevolenskaya,² Anastasia O. Borovskaya,²
Ellina A. Sharipova,² Olga S. Zueva,² and Yury F. Zuev^{1*}

¹ Kazan Institute of Biochemistry and Biophysics. Kazan Scientific Center of the Russian Academy of Science
Lobachevsky St., 2/31. Kazan, 420111. Russia.

² Kazan State Energy University. Krasnoselskaya St., 51. Kazan, 420066. Russia.

Phone: +7 (843) 292-62-88. E-mail: bogdanova.lilly@gmail.com

*Supervising author; ⁺Corresponding author

Keywords: surfactant, counterions, micelles. structure, properties.

Abstract

Micellization of lithium and sodium dodecyl sulfates (LDS and SDS respectively) was studied in aqueous solutions by conductometry. Besides the CMC inflection point the other one was observed on electrolytic conductivity plots. Phenomenological explanation of this event was proposed basing on overlapping the diffusion regions of electrical double layers. Solubilization properties of SDS and LDS solutions were determined before and after micelle formation.