

## Iron(III) Salicylate complexes in surfactant solutions

Mirsaizyanova S., Ziyatdinova A., Amirov R.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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### Abstract

Electron spectroscopy combined with the computer simulation of experimental data is employed to study the influence of different surfactants on the equilibria involved in the formation processes of bis- and tris(ligand) complexes of iron with salicylic acid (H<sub>2</sub>L). It is established that the formation of tris(ligand) complexes FeL<sub>3</sub> is stimulated by both micelles and pre-micellar aggregates of cationic surfactants in the presence of excess ligand and only by pre-micellar aggregates at the deficiency of the ligand. The replacement of pyridinium head group by trimethylammonium group decreases the effect, while the application of cationic surfactants with hexadecyl radicals reduces the solubility of the complexes in water. © Pleiades Publishing, Ltd., 2011.

<http://dx.doi.org/10.1134/S1061933X11040090>

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