

# Complex of 1-hexadecyl-4-aza-1-azoniabicyclo[2.2.2]octane bromide with copper dibromide: structure, aggregation, and biological activity

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## Abstract

© 2016, Springer Science+Business Media New York. The aggregation and adsorption properties of a new complex of 1-hexadecyl-4-aza-1-azoniabicyclo[2.2.2]octane bromide with copper dibromide were studied by methods of conductometry, tensiometry, and dynamic light scattering. The critical micelle concentration, size of the aggregates, and adsorption characteristics at the water–air interface were determined. The antimicrobial and antifungal effects were established. The studied properties of the complex were compared with the properties of the ligand and cationic surfactants with a head group of the cyclic and acyclic types. The enhanced aggregation ability of the complex and its improved biological activity were shown.

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## Keywords

adsorption, aggregation, alkylated derivative of 1,4-diazabicyclo[2.2.2]octane, biological activity, complex