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Complexation of 1-hexadecyl-4-a-a-1-azoniabicyclo[2.2.2]octane bromide with nickel nitrate in acetone

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Abstract

© 2016, Pleiades Publishing, Ltd. The complexation of 1-hexadecyl-4-a-a-1-azoniabicyclo[2.2.2]octane bromide with Ni(II) nitrate in acetone is studied by means of spectrophotometry (the Job-Ostrowski technique and molar ratios). The formation of 3: 1 and 1: 1 ligand: metal complexes is established and confirmed by mathematical modeling. The stability constants of the complexes and the change in the Gibbs free energy are determined.

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Keywords

alkylated derivative of cyclic diamine 1,4-diazabicyclo[2.2.2]octane (DABCO), complex stability constant, complexation, transition metals