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## The study of complexing reactions in the system erbium(III) – citric acid in aqueous solution

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### Abstract

The complex formation of erbium(III) with citric acid was investigated by pH-metric, proton magnetic relaxation and mathematical simulation methods in the pH range 2-10 at 25 °C. The stoichiometry and stability of the erbium(III) citrates were determined. The system erbium(III) – citric acid is characterized by mononuclear and binuclear citrates with varying degrees of protonation. The formation of highly polymerized citrates of erbium(III) was not found. With the three-fold excess of ligand, binuclear complexes are not formed, and throughout the pH range mononuclear forms of 1:3 composition dominate.