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## Complexation of copper(II) with nitrilotriacetic acid in aqueous and water-acetonitrile solutions at variable concentrations of supporting electrolyte

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### Abstract

The pH-metric titration was used to determine dissociation constants of nitrilotriacetic acid (H3L) and to study its complexation with copper(II) in aqueous and water-acetonitrile solutions ( $t = 25 \pm 0.05^\circ\text{C}$ ) at variable concentrations of a supporting electrolyte ( $\mu = 0.5-3.0$ ,  $\text{NaClO}_4$ ,  $\text{NaNO}_3$ ). The dissociation constants of H3L increase as the content of the supporting salt in an aqueous solution increases. The composition of the copper(II) nitrilotriacetate complexes in the presence of  $\text{NaClO}_4$  and  $\text{NaNO}_3$  is more complicated than in the presence of  $\text{KNO}_3$ . A tendency of the carboxyl groups of H3L toward dissociation decreases and the stability of the similar copper(II) complexes increases in aqueous acetonitrile ( $X_s = 0.19$  mole fractions) compared to those in an aqueous solution. © 1997 MAEe cyrillic signK Hayka/Interperiodica Publishing.

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