Electrochemical Oxidation of Aniline in Sodium Chloride Solution Using a Ti/RuO₂ Anode

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The degradation of aniline by electrochemical oxidation process using Ti/RuO₂ anode has been studied under different operating conditions. Compared with the result conducted without Cl⁻, aniline removal rate increased sharply when using NaCl as the electrolyte for the electro generation of active chlorine. Researches showed that the removal rate of aniline and COD increased with the increase of NaCl concentration, current density, initial pH and plate distance. Aniline was removed completely and quickly in less than 25 min while the mineralization efficiency achieved 75.11%. The result of the research showed that Cl⁻ was an excellent agent in electrochemical oxidation degradation of aniline when using Ti/RuO₂ as the anode.

Keywords: Aniline, Electrochemical oxidation, Ti/RuO₂ anode, active chlorine

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