

The aim of the bachelor thesis was to study the influence of conditions on the reduction of ammonium perrhenate by selected reduction agents. The amount of reduced perrhenate was followed by differential pulse voltammetry (as the decrease of the height of DPV peak). The percentage of reduced perrhenate was expressed as a function of molar ratio of the reduction agent to perrhenate. The following four agents were employed: sodium borohydride, hydroxylamine hydrochloride, hydrazine hydrochloride, and ascorbic acid. An amount of 97.8% of rhenium reduced was achieved by 0.9-fold of molar excess of sodium borohydride in 2 mol dm^{-3} perchlorid acid. The threefold molar excess of hydroxylamine hydrochloride reduced rhenium by 85% (in medium with $\text{pH} = 8.5$). The threefold molar excess of hydrazine hydrochloride reduced rhenium by 68% (in medium with $\text{pH} = 5.0$). Ascorbic acid was the last studied reduction agent; its threefold molar excess reduced rhenium by 98.7%.