



Polarographic Determination of the Complexation of the Cd(II) Ion with NTA, in the Presence of Succinic Acid

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Abstract: This study presents the experimental results derived from the polarographic analysis of the complexation of the Cd(II) ion with NTA in the presence of succinic acid, as well as the precipitation of Cd(II) ions with succinates. The obtained experimental results showed that Cd(II) with succinic acid outputs well-defined polarographic waves. According to the experimental results which are presented in this study, we may conclude that the extent of the creation of Cd(II)NTA complexes is greatly influenced by the succinic acid, which forms unstable Cd(II) succinate complexes with the Cd(II) ions. In order to fully complex Cd(II) ionic in perchlorates, an almost equivalent quantity of NTA is required; however, in the presence of succinic acid, a much greater amount of NTA is needed, due to the fact that the unstable Cd(II)succinate complexes competes with the stable Cd(II)NTA complexes. In addition, the precipitation of Cd(II) ions with succinic acid was also studied. The infrared spectrum was recorded from the solid Cd(II)NTA complexes and this was compared to the infrared spectrum of the succinic acid. We then witnessed a significant difference in the spectra's forms, as well as in the intensities of the spectral waves.

Keywords: *polarography; complexes; cadmium; succinic acid, NTA; precipitation;*

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