



The Polarographic Reduction of Advancedly Fluorinated Aminoimine and Aminoketone

İbrahim ÇİNÇE^{1,*}, Musa ŞAHİN²

¹*Fevzi Çakmak High School, Beykoz, İstanbul, Turkey;* ²*Department of Chemistry, Faculty of Atatürk Education, Marmara University, Göztepe, İstanbul, Turkey*

Received October 15, 2010; Accepted December 31, 2010

Abstract: In this work; polarographic reduction of 1-amino-3-amino heptafluoroheksen-1 (Amino-imin) and 1-amino-3-ketoheptafluoro heksen-1 (Amino-ketone) has been investigated on the dropping mercury electrode in a solution (alcohol %30 and water % 70). The potentials were measured against a saturated calomel electrode KNO₃ was used as a supporting electrode. All the measurements were made at 25 C°. Polarograms of Amino-imin and Amino-ketone have been recorded at different pH values. As a result, it has been observed that amino-imin was reduced as two waves in acidic environment (pH=4.6 and pH=5.03) whereas amino-ketone was reduced as one wave at all pH values. At the reduction of both compounds it was recorded that 4 electrons were consumed. Polarograms for both compounds have been drawn in a solution (% 30 alcohol and %70 water) at various pH values. After various logarithmic analysis of the polarographic waves were made and kinetic parameters (αn and $k_{f,b}^0$) were calculated. For the quantitative determination of both compounds it has been observed that for amino-imin and amino-ketone compounds basic and approximately neutral environments (pH=7) are suitable, respectively.

Keywords: Polarography, electrochemistry, amino-imin, amino-ketone

* Corresponding: E-Mail: icince34@gmail.com; Tel: +905055436751