

# Lab 8: Chronoamperometry and Cyclic Voltammetry

## Questions

## Lab Notebook

Exp. No. 8	Experiment/Subject cyclic voltammetry & chronoamperometry	Date
Name	Lab Partner	Locker/Desk No.
		Course & Section No.

Objective: A perform cyclic voltammetry for potassium ferricyanide

B perform chronoamperometry to calculate  $D_0$  for  $K_3Fe(CN)_6$

A' Only polish working

electrode

Mass ferricyanide, make

1.0M solution with 1.0M  $KNO_3$

Create electrochemical cell with this solution.

Recorded approximate peaks for different scan rates

Scan Rate	$E_{onset}$ mV	$I_{anodic}$ $\mu A$	$E_{cathodic}$ mV	$I_{cathodic}$ $\mu A$
100	272	117	199	-122
50	268	77	204	-90
20	268	46	203	-60

The cyclic voltammetry was repeated for each scan rate over the same range with only  $KNO_3$  to confirm that there were no peaks from there alone.

B Prepare electrochemical cell like in part A.

Do chronoamperometry with settings in protocol, with these modifications

0.600V vs ref  
duration 1 sec  
sampling control 250, 500, 1000 intervals

0.0333 g  $K_3Fe(CN)_6$

Signature <i>[Signature]</i>	Date	Witness/TA <i>[Signature]</i>	Date
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THE HAYDEN-McNEIL STUDENT LAB NOTEBOOK

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