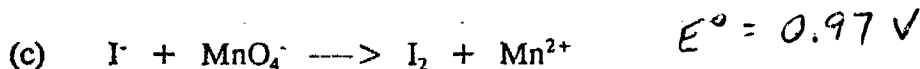
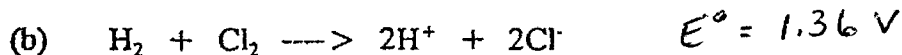
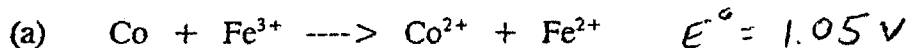


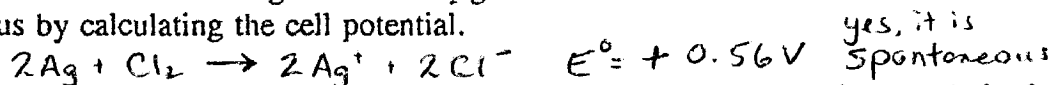
# Electrochemistry #5

Key.

1. Calculate the electrochemical cell potential for the following reactions and indicate whether the reaction is spontaneous as written.



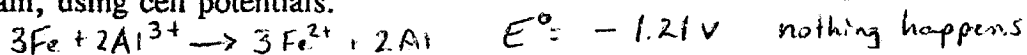
2. Write a red-ox reaction for Ag metal in  $\text{Cl}_2$  gas and determine whether the reaction is spontaneous by calculating the cell potential.



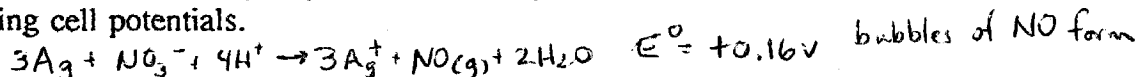
3. Will anything happen if an aluminum spoon is used to stir an iron III nitrate solution? Explain, using cell potentials.



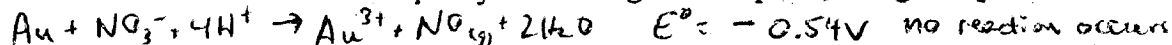
4. Will anything happen if an iron spoon is used to stir an aluminum chloride solution? Explain, using cell potentials.



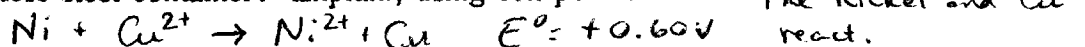
5. A common test for silver purity is to add a drop of nitric acid. Explain what this test does, using cell potentials.



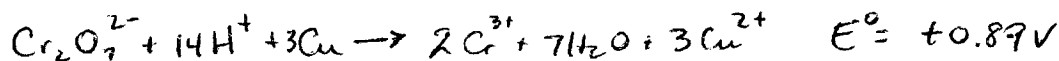
6. Would the nitric acid test for silver purity work for gold? Explain, using cell potentials.



7. Good stainless steel is mostly nickel metal. Can copper II sulphate solution be stored in a stainless steel container? Explain, using cell potentials.



8. Will anything happen to the copper plumbing in a house if acidified dichromate solution is poured down the drain? Explain, using cell potentials.



The copper is oxidized by the dichromate solution