

Name: \_\_\_\_\_



Fall 2014

QUIM3025L Section: \_\_\_\_\_

Date: \_\_\_\_\_

**Experiment 10: Determination of iron in a Mohr's salt sample using manual and potentiometric titration**

**Pre-lab Exercise (10 pts)**

**\*Include References**

1. Write the two half-reactions involved in the titration of the unknown sample and indicate the number of electrons involved in the net redox reaction.(3 pts)
2. Explain why the titration is performed in the presence of acids. (2 pt)
3. 1.567 g of an unknown Mohr's salt was dissolved in 80 mL of the sulfuric acid / phosphoric acid mixture solution. This iron solution was then titrated with a potassium permanganate solution (0.02M), what will be the volume at the equivalence point for the titration? Show all your calculations including formulas. No credit will be given for results only! (3 pts)
4. Compare the two graphical methods (Normal E vs Volume, and first derivative curves) used to determine the equivalence point for your titration. Mention the advantages and disadvantages of each method. (2 pts)