

# **Oxidation**-Reduction Titration

## Data Tables

#### Part 1

Molarity of Fe<sup>2+</sup> \_\_\_\_\_ M

	Trial 1	Trial 2	Trial 3	
Volume of Fe <sup>2+</sup> solution titrated	mL	mL	mL	
Initial volume of MnO <sub>4</sub> <sup>-</sup> solution	mL	mL	mL	
Final volume of $MnO_4^-$ solution	mL	mL	mL	
Volume of MnO <sub>4</sub> <sup>-</sup> added	mL	mL	mL	

#### Part 2

Molarity of MnO<sub>4</sub><sup>-</sup> solution \_\_\_\_\_ M

	Trial 1	Trial 2
Volume of $H_2C_2O_4$ solution titrated	mL	mL
Initial volume of $MnO_4^-$ solution	mL	mL
Final volume of MnO <sub>4</sub> <sup>-</sup> solution	mL	mL
Volume of MnO <sub>4</sub> <sup>-</sup> added	mL	mL

Molarity of H<sub>2</sub>C<sub>2</sub>O<sub>4</sub> solution \_\_\_\_\_ M

### **Post-Lab Calculations**

- 1. From the Part 1 standardization data, calculate the molarity of the MnO<sub>4</sub><sup>-</sup> solution for each trial. Average the values and enter the average in the Part 2 Data Table.
- 2. From the Part 2 titration data, calculate the molarity of the  $H_2C_2O_4$  solution for each trial. Average the values and enter the average in the Part 2 Data Table.
- 3. How many moles of  $Fe^{2+}$  ions and  $MnO_4^{-}$  ions were titrated in each Part 1 trial?
- 4. How many moles of oxalic acid, H<sub>2</sub>C<sub>2</sub>O<sub>4</sub> were titrated in each Part 2 trial?

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