

## Data Table

1. Mass of  $\text{Fe}(\text{NH}_4)_2(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$ , g \_\_\_\_\_ g
2. Mass of  $\text{K}_3[\text{Fe}(\text{C}_2\text{O}_4)_3] \cdot 3\text{H}_2\text{O}$ , g \_\_\_\_\_ g

Wavelength, nm	Absorbance
360	
370	
380	

## Post-Lab Calculations and Questions

### Results Table

 Theoretical yield of  $\text{K}_3[\text{Fe}(\text{C}_2\text{O}_4)_3] \cdot 3\text{H}_2\text{O}$ , g \_\_\_\_\_ g

 Percent yield of  $\text{K}_3[\text{Fe}(\text{C}_2\text{O}_4)_3] \cdot 3\text{H}_2\text{O}$ , g \_\_\_\_\_ %

Absorbance Ratios	Standard	Product
360/370 nm	1.43	
370/380 nm	1.64	
360/380 nm	2.35	

1. Calculate the theoretical yield of  $\text{K}_3[\text{Fe}(\text{C}_2\text{O}_4)_3] \cdot 3\text{H}_2\text{O}$ , based on the sample weight of  $\text{Fe}(\text{NH}_4)_2(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$ . Enter this value in the Results Table.
2. Calculate the percent yield for the  $\text{K}_3[\text{Fe}(\text{C}_2\text{O}_4)_3] \cdot 3\text{H}_2\text{O}$  product. Enter this value in the Results Table.
3. Calculate the absorbance ratios of the product solution. Calculate the 360 nm/370 nm, the 370 nm/380 nm, and the 360 nm/380 nm absorbance ratios and enter these values in the Results Table. Was the product  $\text{K}_3[\text{Fe}(\text{C}_2\text{O}_4)_3] \cdot 3\text{H}_2\text{O}$ ?