

Overhead Equilibrium Demonstration Worksheet

Results Table

| Substance Added | Color Observations |
|--|--------------------|
| 0.002 M Potassium thiocyanate solution | |
| 0.2 M Ferric nitrate solution | |
| Potassium thiocyanate crystals | |
| Sodium phosphate monobasic crystals | |
| 0.2 M Ferric nitrate solution | |
| Potassium thiocyanate crystals | |

Discussion Questions

- 1. Write chemical equations for the following reactions.
 - a. The reaction between Fe³⁺ and SCN⁻ ions
 - b. The reaction between $\mathrm{Fe^{3+}}$ and $\mathrm{H_2PO_4^{-1}}$ ions
- 2. What direction does equilibrium for the first reaction above shift when ferric nitrate or potassium thiocyanate is added?
- 3. Why did the solution turn colorless when the sodium phosphate monobasic was added?