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Lab 12. Equilibrium and Le Chatlier's Principle

Purpose:

To investigate Le Chatlier's Principle and how it relates to equilibrium/how equilibrium shifts.

Procedure:

1. Thoroughly rinse and dry a 50mL beaker with a paper towel and then use the markings on the side to measure out 20mL of ethanol into the beaker.
2. Rinse and dry 5 test tubes of about the same size.
3. Examine the solid Cobalt(II) chloride, noting both it's color and the formula for the compound as shown on the label.
4. Place a small amount of the solid in the beaker of ethanol. Stir to dissolve the solid until solution is a purple color.
5. Fill the 5 test tubes with 2-3mL of the alcoholic cobalt solution. Get roughly equal amounts. Leave some solution in the beaker for steps 8/9. One test tube will be your control.
6. In one of the test tubes, add drops, or until there is a change, of distilled water, one at a time while recording observations after each drop. Gently swirl to mix the contents. Duplicate the process with the other 3 test tubes until all 4 are the same color.
7. A.
   Take one of the test tubes from step 6 to a fume hood. Use a dropper to add 5 drops(or until there is a change) of 12M hydrochloric acid, one drop at a time, to the solution in the test tube. Gently swirl the test tube, recording observations.

   B.
   In a second test tube, add 2 small clumps of solid calcium chloride. Gently stir to dissolve, taking observations.

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