

16 Ksp Lab (1241116)

Question

[1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#)**Description**

Solubility Product of Silver Acetate Lab

Instructions

Purpose: To determine the solubility product of silver acetate. Equipment: one 150 mL beaker, saturated silver acetate solution, one approx 20 cm piece copper wire, balance.

Procedure:

1. Using a clean graduated cylinder, carefully measure 50.0 mL of saturated silver acetate solution and pour it into a clean 150 mL beaker.
2. Obtain a bare copper wire and coil it several times around a medium test tube. Leave the top portion uncoiled as a handle.
3. Find the mass of the copper coil and record it in the data table. Place the coil into the beaker containing the saturated silver acetate solution. Allow the system to stand overnight so all the silver ions will have an opportunity to react.
4. Shake the silver crystals free from the copper wire into the beaker. Straighten the wire and gently scrape any adhering crystals into the beaker. Dry the copper wire and find its mass.
5. Decant the solution off the silver crystals into the sink and place the silver in a container designated by your instructor so that it can be recycled.

1. Question Details

Objective and procedure summary [3413760]

Restate the objective in your own words using complete sentences. Summarize the steps in your procedure. (Be sure and include any safety concerns).

2. Question Details

Upload Lab Photo [3413757]

Upload a photo of the lab apparatus with your face in the photo as you perform some part of the lab. Title the image with a unique file name before you upload it. (Maybe use your initials and part of the lab title) no file selected **It** must be less than 5 MB in size.

3. Question Details

Ksp Lab #1 [1406454]

Write the balanced net ionic equation for the reaction taking place.

4. Question Details

Ksp Lab #2 [1406455]

Enter the mass of the copper wire before the experiment: g

Enter the mass of the copper wire after the experiment: g

Calculate the moles of copper which reacted. mol

Calculate the moles of silver which reacted. mol

Determine the molar concentration of the silver ions M

Determine the Ksp of the silver acetate.

Using 0.00194 as the accepted value for the Ksp of silver acetate, calculate the percent of error. %

5. Question Details

Ksp Lab #3 [1406543]

Why do you think the method employed in this experiment called for using the difference in copper mass rather than the mass of the silver produced?

6. Question Details

Ksp Lab #4 [1406544]

Which of the following could be a cause of a high positive percent error?

- Mis-measuring the volume of the solution of silver acetate.
- Mis-measuring the mass of the copper
- Failure to dry the copper completely after removal from the solution
- Removing the copper from the solution too soon.

Why?

7. Question Details

AP Ch. 15 Precipitation [2064903]

Choose the combinations that will form a precipitate:

K_{sp} of $PbCl_2 = 1.6 \times 10^{-5}$

- 50.0 mL 0.080 M $Pb(NO_3)_2$ and 100.0 mL 0.080 M NaCl
- 100.0 mL 0.070 M $Pb(NO_3)_2$ and 100.0 mL 0.060 M NaCl
- 100.0 mL 0.060 M $Pb(NO_3)_2$ and 100.0 mL 0.060 M NaCl
- 100.0 mL 0.080 M $Pb(NO_3)_2$ and 50.0 mL 0.040 M NaCl
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8. Question Details

Observations, Skills utilized and learning [3413764]

What observations did you make during the lab? What chemistry concepts, laws, and/or skills were necessary to complete this lab? What did you learn or re-learn? Use complete sentences.

Assignment Details

Name (AID): **16 Ksp Lab (1241116)**Submissions Allowed: **5**Category: **Homework**

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