Serial Dilution of Copper(II) Chloride Solution

Procedure

1. Obtain a test tube rack and assemble your lab space by placing 4 test tubes in the rack. Label the test tubes as A, B, C, and D.
2. Using the volumetric pipette, carefully measure 9.0 mL of water into test tube B, C, and D. If you are unsure how to correctly use the volumetric pipette then ask your instructor for some additional help with this part of the procedure.
3. Once ready and approved by your instructor, carefully transfer 10.0 mL of the 1.0 M CuCl2 solution into test tube A.
4. With the volumetric pipette, carefully transfer 1.0 mL of solution from test tube A into test tube B. Mix the contents of test tube B as directed by your instructor.
5. Once thoroughly mixed, carefully transfer 1.0 mL of solution from test tube B into test tube C. Mix the contents of test tube C.
6. Repeat this by transferring 1.0 mL of solution C into test tube D and mixing.
7. Write observations regarding the color of each solution on the Serial Dilution Data Table and use the Serial Dilution Follow Up to help you calculate the concentration of each solution.

Data Table

|  |  |  |
| --- | --- | --- |
| **Test Tube** | **Concentration (mol/L)** | **Color** |
| **A** | **1.0** |  |
| **B** |  |  |
| **C** |  |  |
| **D** |  |  |

Calculation Section

Show all units and formulas for determining the concentration of each solution.