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Chemistry Lab Overview

(B,C)

The purpose of this lab is to compare and contrast the precision of a graduated cylinder, a graduated pipet and an automatic delivery pipet.

B1) place 50 ml of water in a beaker(supply beaker who’s temperature you have recorded), allow it to reach room temperature and record said temperature. Estimate the temperature to a precision of 1 order of magnitude greater than the tick marks.

Measure 2mL of water (room temp) in a 10 mL graduated cylinder, measure the meniscus at eye level to eliminate parallax error. Record (estimate) one order of magnitude greater than provided.

Transfer the water into a Erlenmeyer flask and weigh it on a balance.

Use a table of densities at varying temperatures to derive the volume.

B2)

Use a 2 mL graduated pipet and pump to draw water a little past the 0 mark. Remove the pump and replace it with a dry finger. Release some of the water by lessening the pressure applied by your finger. Transfer 2 mL of water into a 10 mL Erlenmeyer flask weigh it on a balance and a table of densities at varying temperatures to derive the volume.

B3) Use automatic delivery pipet (set at 500\*10^-6L) to measure 500 uL. Draw to the first stop and then dump to the second stop into a 10 mL flask. Weigh it on the balance and then derive it’s density.

C1) Weigh 1.5g of KNO3 on a tared piece of glazed weighing paper and record it’s mass. Transfer the salt into a 25mL flask and add 5 mL of water.

C2) Place your flask on a hot plate and stir until all the salt is dissolved. Cool to room temperature and then place in an ice bath for 10 minutes.

C3)Set up a Suction filter using a Hirsh funnel, filter flask and adapter. Place the paper in the funnel secure the filtration unit to a ring stand and add deionized water to moisten the paper.

C4) Record the temperature of the chilled solution. Turn on the suction for 4 minutes and stir the solution.

C5)Weigh the solid KNO3 remaining and record data.

C6)Calculate the solubility by (original mass- precipitate mass )/ volume of water.