

REPORT GUIDE Report Due: Weds, February 18

For this lab you will write a 'Formal report'

This lab is both a Discovery lab & Purification lab.

This report will be done individually.

Be sure your report has these sections (in order on the lab report): Purpose, Theory, Data, analysis, conclusion and questions to be answered (see question section below).

Finer points

The Purpose can be the same as your wrote in the pre-lab for this experiment (or you can elaborate to make it better).

The Theory should pertain to solubility (this part may be similar to PLKE #2 theory section) Be sure to comment on the theory in relation to the extraction purification technique.

For the Data section have separate sections for parts A, B and D. For part B be sure to report your own and the class results for the distribution coefficients for all 3 of the compounds tested.

For part D report the mp ranges and weight of the neutral compound you isolated. Also be sure to report the sample numbers for the mixture you purified.

For the analysis section have separate sections for parts A, B and D. For part A you should compare the weight of caffeine isolated from the initial amount dissolved in water. Was the extraction successful? For Part B comment on the values of the distribution coefficients (Do they make sense--Do they make sense in regards to the polarities of these compounds & the solvent?). Be sure to mention which structural components of a molecule are polar/nonpolar.

For Part D Identify the unknown neutral compound you purified, melting point range, weight recovered and calculate the % recovery. State the identity of the unknown and on the purity of the sample—how do you know that you purified you unknown?

For the conclusion, surmise all the data from all sections A and B. This does not have to be more than a paragraph long—just a brief and concise summary. For Part D, a simple statement regarding if purification of the mixture was achieved.

Additional questions for this experiment: In part D of this experiment what is the precipitate formed when 6 HCl is added to the NaOH extracts? 2. Question 4 c on pg 693