

Experiments are to be done *individually*. Data for Part B will be *shared* between students in the class.

• **Pre-lab:**

Read: Experiment 4 Parts A, B and D (pp. 32 – 37, 38 – 40), Technique 12 (pp. 669 – 688)

Prepare for class on Monday, January 29: “Purpose,” and “Materials and methods”.

In addition, within the “Materials and methods” section, perform the “Pre-lab Calculation” on page 34.

Reserve the next few pages for “Procedure” and “Data” and “Results”.

Data section: Prior to lab, lay out some data tables to fill in during lab. For instance, for Part A, the data table may be as simple as:

Data table for Part A	
Mass of caffeine before extraction (g)	
Mass of caffeine after extraction (g)	
Mass of caffeine theoretically recoverable from extraction (g)	
Percent recovery	

Similar tables should be made for Parts B and D (D is trickier – what quantities do you actually have to measure?).

• **Post-lab:**

Show the **calculation** of the partition (distribution) coefficient for the solid you used in Part B in the “Calculations” section (part 5).

In the “Results” section (part 6), make a table and copy into it the **Part B results for the whole class** (the coefficients for all three solids), as well as the initials of the experimenter for each data point.

• **Lab Result Report: (Due Monday, February 5 at the beginning of lab)**

Photocopy the lab, all parts.

The following should be included in your “Conclusions” section.

Part A: Do point 2 (p. 41), especially the comment on the similarity or difference.

Part B: Do point 2 (p. 41), especially the “explain”.

Part D: Do points 1, 3 and 4 (p. 41).

Answer questions”

End of Technique 12 (pp. 692, 693): 1, 8

[For #8, the question is asking you to explain exactly what you would do when performing the lab instructions given in (a) and (b). A drawing or two might illustrate your point nicely]

Abstract:

- attach this to the **front** of your report
- must be **word-processed** on a **separate sheet of paper**

Your name, North Seattle Community College

PURIFICATION OF _____ BY EXTRACTION

Using the format like in the previous abstract, write a 75 to 100 word abstract summarizing what happened to you in part D, the extraction of a neutral compound. Use the setup of the previous abstract to guide you in writing this abstract: the first sentence explains what was done and how – it also should state the name of the neutral compound. The second sentence gives numerical results on percent recovery. The third sentence, which is different than before, explains whether the methods employed were effective in purifying the original sample; for this you should cite melting point data and the phrase “which was used to determine the compound’s identity”.