Report for Chem 101 Laboratory Exercise #6
Extraction of caffeine from Tea –[1,2]

Using Microsoft Word, students are to insert responses in all yellow highlighted areas. It is recommended that the report be completed without changing font size, column width, row width, margins and highlights. The completed report must be uploaded to the Chem 101 lab Brightspace site as a .pdf file by the due date posted on Brightspace. All answers must be the student's own work without assistance from others. Only reports which are completed using the template will be marked.

Name: _Talia Hadikin_ **Lab Section:** _B12_**Quad:** _2_ **Date:** _December 1_

Abstract *(max. 3 lines)*

The objective of this lab was to isolate caffeine from tea[2] using a liquid-liquid extraction[1]. It was found that in a tea[2] bag, with tea[2] leaves weighing 3.071 g, there was 27 mg of caffeine present.

Data/Results

Table 1. Experimental data and calculated values

Extraction and isolation	
Weight of tea leaves [-2-]	3.071g
Weight of caffeine	0.027 g
Weight % caffeine in tea[2]	0.88%
Lethal dose for a 700 g rat	23 (cups of tea)

Algebraic Equation

Weight % of caffeine in tea[2] = _0.88%_

Discussion *Respond to the following:*

Give one shortcoming of this experiment, not a personal error, that could contribute to an inaccurate value of caffeine that was in the teabag[2]. (max 3 lines). _

Throughout the experiment, the tea[2] solution was mixed with many other substances and transferred to many different pieces of equipment, so it is likely that some of the tea[2] liquid (which contained the caffeine) was lost during each transfer. _

Conclusions

(max 1 line)

_In conclusion, the mass of caffeine in 3.071 g of tea leaves[2] was found to be 27 mg, and the % mass of caffeine in tea[2] was found to be 0.88%.

References

_1. _ Reimer, M. et al, *Laboratory Manual, Chemistry 101*, pp. 27-34. (University of Victoria: Victoria, B.C.). Fall **2022**.___

2. Orange Pekoe, *Tetley*, Etobicoke, Ontario M9W 6L2, CTN304MA

Feedback Summary	max.
Pre-lab quiz: Are all responses correct?	4
Laboratory Notebook: Have ALL data, observations and procedures been recorded?	1
Report: Are all sections completed accurately? Is the abstract accurate and complete? Are responses in the Discussion correct? Does the conclusion only include the appropriate information? Are the References correctly formatted and cited?	3
Participation: Did the student come prepared, was time used well in lab and was student engaged in the experiment? Did the student show the email confirmation letter and request the TA to check their drawers for completeness before they left the lab?	1
Performance evaluation: Did student follow the safe practice guidelines throughout the whole lab period?	1
Total mark	10