

Chemistry of Food & Cooking: Reflection

DUE: Friday, December 9th

Reflection Expectations

1. Thoughtfully answer **three** of the following five reflection questions. All students must answer *question A* **and** then answer **either B or C** **and either D or E**. I am expecting approximately 6-8 sentences per question and that all of your claims will be specific and supported with evidence. The reflections should be carefully proofread for grammar, sentence structure, and writing conventions.

Answer A

- A. How successful was your experiment in helping you understand your food and/or improve its characteristics? What would be next steps if you were to continue research on this topic? In support of your answer you might choose to discuss any of the following or other questions of your own design:**
- i. To what extent did your experiment yield conclusive results?
 - ii. What might be altered in your experiment to increase your confidence in your results?
 - iii. Were your measurements of the IV and DV accurate and precise?
 - iv. Was your choice of DVs relevant for the desirability of the food?
 - v. Were you asking a relevant question? What question do your results make you want to investigate?

The experiment was successful in helping me understand the effect of soy sauce in pork pieces. The result matched the evidence and information provided. I would alter the pork to some other meat to make sure if the result of the experiment matches with other types of meat. My measurements of the IV which is the time is precise because that will affect the experiment, the DV is also quite precise because it will determine my result of the experiment. My DV option is relevant because the moisture is going to be determined by the time. I asked how marinating time affects the meat. I would like to investigate if it affects other things like vegetables.

Answer EITHER B or C but not both

- B. **How does the ingredient(or process) you experimented with affect the food's overall characteristics? Be specific and discuss the chemical structure of the ingredient and the chemical structures of the aspects of the food the chosen ingredient interacted with as part of your answer!**
- C. **How did your cooking process transform your food macroscopically and affect the food's overall characteristics? Be specific and describe the transformations that happened on the molecular level that led to the observed macroscopic changes.**

The Soy Sauce had many properties that made the pork to be more moist and obtain that moisture/liquid particles. When there are liquid particles in the meat, the fat helps transfer the fat soluble, therefore keeping the meat moist. The acid or enzyme in a marinade causes the meat's tissue to weaken on the surface causing the meat to be more tender. So looking at it macroscopically, we can see more moist/liquid based on the different molecular process that took place in the meat.

Answer EITHER D or E but not both

- D. **In what way(s) are cooking and doing science similar and in what way(s) are they different? How are a cook and a scientist investigating food similar or different?**

Cooking and science are similar because cooking uses different scientific principles that can be explained scientifically to cook their food. What the cook does, the scientist can do too and can be explained. It is quite different because when a cook is investigating the food, the cook is looking for a different recipe and looking to make better food. When a scientist is investigating a food, they are looking to find out how the food work, what chemical/ properties is in the food and how it reacts to other substances,etc.

E. To what extent does knowledge about how and or why your recipe or cooking process works affect your enjoyment of the cooking or eating process?

The reflections will be assessed subjectively graded based on the length of responses, depth of thought exhibited, quality of evidence used and refinement(absence of spelling, punctuation, grammar or sentence structure errors).