



ANSWER KEY

Soy in Food: What is that doing in there?

Soy as an Ingredient

1. Based on your results from the macromolecule analysis, what did you find to be unique about soybean composition?

Soy is high in protein and is a good source of oils

2. What vegetarian/vegan foods are made out of soy? Why do so many vegetarian/vegan foods include soy?

Vegetarian protein source

3. Tofu is essentially made the same way as cheese. Below is the protocol for making both tofu (from soymilk) and a soft cheese (from dairy). How does adding acid to milk impact the proteins? How does this play a role in making tofu/cheese?

Acid hydrolyzes the hydrogen bonds holding the tertiary structure in place, which results in coagulation. Coagulated protein can be collected and pressed into cheese or tofu, depending on the source of the protein

4. Observe the ingredient label demos. Which foods contain soy?
5. What is the protein content in those foods? Did you expect the protein content to be different knowing that soy is an ingredient?
6. What type of molecule is lecithin and what role does it play in product formulations?

Phospholipid which acts as an emulsifier in food

7. What quality differences do expect to observe between dough prepared with and dough prepared without lecithin?

Easier to handle, less sticky, dries out less easily, mixes better, smoother texture, more tender, less stale



Results: NO EATING

Describe the differences in consistency between the two DOUGH formulations. Which is easier to handle?

Describe the differences in bread (shape, texture, air pockets) between the two BREADS. Which is more appealing as a consumer?

Describe the staleness of the two BREADS one day after baking.

Depending on when the instructor bakes the bread, staleness may set in by the time students evaluate the bread 1 day after making the dough