



Soy in Food: What is that doing in there?

Unit Sequence:

Day 1:

Intro to “Macromolecule Composition” discussion
Protein analyses
Prepare reagents and dilution blanks for starch assay

Day2:

Composition of various field crops using starch assay and oil extraction
Analysis of results
Start overnight soaking of soybeans for soymilk making

Day 3:

Evaluate evaporated oil extractions
Quiz over macromolecular composition
Intro to “Why is soy in so many foods?”
Make soymilk

Day 4:

Make tofu from the soymilk (**NO EATING**)
Make cheese from milk (**NO EATING**)
During the heating steps, have students complete the ingredient label investigation
End with discussion about soy lecithin

Day 5:

Brief PP on soy lecithin
Make dough with and without using soy lecithin, freeze.
*teacher to take doughs home to bake

Day 6:

Sensory analysis/record results of the various breads (**NO EATING**)
Quiz

Day 7:

Continued analysis of “old bread”
Intro to “Shelf-life extension and preservation”
Product sort based on shelf-life
Analysis of reported shelf-life and water activity (from data table in handout)

Day 8:

Discussion of compositional differences and anticipated shelf-life of tofu, soy flour, and soy sauce
Processing (drying, salting, etc) of tofu samples
Set up of shelf-life experiment in ambient, refrigerated, and frozen storage
*data collection will occur over time, as the products spoil. Quiz can be administered at any point

Day 9:

Food Fermentation PP and related discussion
Break students into groups and begin by soaking soybeans overnight

Day 10:

Create fermentations

Day 11 /12:

Evaluate changes resulting from fermentations (**NO EATING**)
Quiz