

Brittney McKibbon

*Cooking Influences Potato Flavor: Comparison of Volatile Compounds*

Throughout history potatoes have become a vital agricultural crop and staple in our food chain. The particular aroma of potato cultivars has been the topic of many studies, and I hope to contribute to this body of knowledge. Flavor is a critical trait in potatoes since it can determine the success or failure of new cultivars in the market. Creating a high quality product that is easily marketable could increase incomes for the agricultural community and will greatly assist local farmers. Potato flavor is a result from the combination of taste, aroma and texture; which all can be broken down into chemical components. My project this year revolved around screening four different cultivars that were prepared in two different methods using a gas chromatography/mass spectrometer, then compared to nine chromatograms of preselected flavor compounds from other studies. The four types of potato cultivars and advanced selection of potato cultivars I used were Purple Majesty, AC99329-7PW/Y, COO1399-10P/Y produced the most flavorful compounds. This year's data will be a great stepping stone for next year's continuation which will involve the breeding of a hybrid potato containing the flavor compounds needed.