



Allan Bros Fruit Inc Naches, Wa



**Austin Wilson
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Allan Bros is located in Naches, Washington and specializes in the production of apple and cherry orchards as well as packaging of each. During my experience there, I worked with Allan Bros' horticulture research specialist to carry out experimental trials for apple quality development. I was able to learn the process used at Allan Bros to carry out post-harvest experimental trials with apples and also aided in data collection. The project I spent most of my time working on involved juicing apples and analyzing the juice's sugar and acid content.



First, each apple was sliced. On the **left**, I am slicing each apple and selecting two slices to be juiced.

The picture on the **right** shows a refractometer. This is a common tool in the industry to test sugar content in fruit by pipetting a small amount of juice onto the testing area and pressing start. The units expressed are in percent brix which is simply grams of sucrose/100 grams of solution



Second, selected slices are juiced and juice is collected to be analyzed.



On the **left**, I am analyzing the acid content in the juice by measuring the amount of malic acid. This is achieved by pipetting an exact amount of juice into a pre-made solution and observing color change. The color is compared against a chart that expresses the color change as a numerical value.

The picture on the **right** shows an example of a malic acid test tube that has changed color. The color chart is shown on the far right of the picture.



My experience at Allan Bros was great. Working with the research team, I gained a lot of knowledge and insight into fruit quality improvement. I was also able to work with people in different positions and learn about how their role makes the company function successfully. The most fascinating part of working in this field is being exposed to the highly orchestrated process. From orchard/tree management to picking and field transportation to packing and shipping, there is so many coordinated moving parts that get the fruit we eat into the markets. I am grateful to Allan Bros for allowing me the opportunity to participate in this internship and I would highly recommend the company to future WSU student interns.