

TITLE

A Major Qualifying Project Report

submitted to the Faculty

of the

WORCESTER POLYTECHNIC INSTITUTE

In partial fulfillment of the requirements for the

Degree of Bachelor of Science

by

Carlos Chong, Claudia Dufour, Joshua Moniz, and Patrick Wang

Date: April 23, 2018

Approved:

---

Professor Stephen Kmiotek, Major Advisor

*This report represents the work of WPI undergraduate students submitted to the faculty as evidence of completion of a degree requirement. WPI routinely publishes these reports on its website without editorial or peer review. For more information about the projects program at WPI, please see <http://www.wpi.edu/academics/ugradstudies/project-learning.html>*

We worked with North Country Cider in NH to improve the taste of the hard cider. The goal was to investigate the cause and potential solution to the increased levels of diacetyl found in their ciders made with Ginger Gold and Jonah Gold apples. We utilized the brewing supplies in the Unit Operations Lab in Goddard Hall at WPI to replicate the process and tested our samples using a refractometer and an IR Spectroscopy machine in the Biomedical Engineering department. The team found that there was no strong correlation between different brewing parameters and the levels of diacetyl found, leading us to believe that the diacetyl must be found in the batches of apples utilized for the process. Further investigation into the apples would be beneficial in order to confirm this conclusion.

This MQP contains information deemed confidential to the business interest of the industrial sponsor. Please contact Stephen Kmiotek at [sjkmiotek@wpi.edu](mailto:sjkmiotek@wpi.edu) for additional information.