

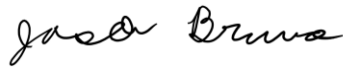
CIDER FOAM REDUCTION AT DOWNEAST CIDER HOUSE

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



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Date: 4/25/2018

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*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>*

This project analyzed the different factors that affected foam formation during the packaging process of Downeast cider. This was done by pouring Downeast cider at different flow rates under different conditions and measuring the amount of foam produced. Foam is formed by the CO<sub>2</sub> bubbles releasing from the cider. Turbulence in the liquid forces the gas bubbles to fall out of solution. Cider was placed in a sealed container and pressurized with CO<sub>2</sub> to push the cider out at a consistent flow rate. Our testing showed that slower flow rates and pouring down the side of the container reduces the amount of foam produced. The slower flow rates and pouring down the side result in less turbulence.

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.