

## Assessment and Improvement of Microbial Quality of Fresh Produce

Consumption of raw fruits and vegetables provides people with vital nutrients, vitamins, and enzymes essential for everyday function. Benefits from consuming raw produce include protection from many chronic medical conditions and illnesses; such as diabetes, cardiovascular diseases and cancer. However, these benefits do not come without risk. Raw produce potentially harbors harmful microbial contamination on the surface. Bacterial contamination can come from any number of places as the produce is grown, harvested, stored, transported, displayed and further handled in the grocery store. According to the CDC, one in every six Americans suffers from food poisoning and a third of these cases are from consuming raw produce. This study assesses the quality and quantity of bacteria grown from the surface of produce. The produce included in this study will be pre-washed cherry tomatoes, pre-washed and pre-packaged salad mix, peaches, and grapes. Bacteria will be cultured, identified, and different cleaning methods including water, diluted vinegar, and Fit Fruit and Vegetable Wash will be used. The effectiveness of the aforementioned cleaning methods will be assessed to compare bacterial contamination before and after cleaning of each fruit and vegetable. The overarching aim of this study will be to assess and improve microbial quality of fresh produce, especially those commonly consumed raw, in simple, convenient and cost-effective ways.