

**Title** Development of HACCP plans for fresh-cut fruit and vegetable processing

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### **Abstract**

While HACCP is not yet mandatory for the fresh-cut product industry, the trade group IFPA (International Fresh-cut Produce Association) has been encouraging its fresh-cut fruit and vegetable processors to voluntarily implement HACCP programs in their plants for the past ten years. This “minimally processed” industry, unlike most other food processors, faces the daunting task of ensuring product safety with no true “kill” step in their processing operations. Preservation and safety are primarily achieved using hurdle technology, which includes the intervention steps of modified atmospheric packaging and refrigeration. In addition, IFPA has taken proactive steps to offer educational materials (i.e., food safety guidelines, HACCP models) and training programs (I.e., yearly technical seminars, basic technology training and a two and one-half-day accredited HACCP workshop) to its members. Due to the vulnerable nature of fresh-cut produce, it is imperative that the best process control techniques be utilized to promote safety. The majority of fresh-cut processors have already implemented HACCP programs, but these typically focus on qualitative issues rather than quantitative data. A HACCP program’s effectiveness and reliability as a food safety prevention tool can be greatly enhanced by using statistical techniques, specifically statistical process control (SPC). SPC offers an objective, quantitative and scientifically valid means for determining process capability and for prediction CCP control during the monitoring and verification activities of a HACCP plan. The National Academy of Sciences recently recommended SPC as a means for food processors to achieve performance safety standards. They also recommended that such principles be incorporated into food safety regulations, thereby providing regulatory agencies with a tool to monitor compliance of these performance standards in the food industry. The objective of this presentation will be to discuss, with examples, ways to integrate SPC methodology into HACCP programs for the fresh-cut produce industry.