



## TREATMENT OF CELERY WITH PURE CONTROL®

Many antimicrobials previously approved for use in produce processing have physical and chemical properties which make them more challenging to use and, therefore, less desirable for the intended use. In addition, the increasing pressure to continue to improve control of foodborne pathogens in produce processing makes it necessary to use antimicrobials such as PURE Control in order to achieve needed reductions in microbial populations without undesirable side effects related to worker exposure and the quality of processed produce.

### Objective

The study was developed with a leading produce processor to validate in plant use using a simulated use application. The reduction of APC's, *E. coli*, coliforms, yeast & mold, and Lactic Acid Bacteria on celery after various treatments of PURE Control were evaluated. Aerobic plate count (APC) is used as an indicator of the number of bacteria in a food product.

### Materials and Methods

Two 30 PPM formulations were tested and consisted of the following:

1. A 1:80 dilution of PURE Control in 2.5% Activator
2. A 1:80 dilution of PURE Control in 5.0% Activator

Testing was performed both by direct spraying and immersion of 3/8" diced celery. 50 g of celery were exposed to the treatment solutions listed above for a 15 second exposure time. 10 grams were then harvested and sent to the lab for testing. All testing was done in triplicate.

### Results and Discussion

All application methods and concentrations were highly effective in reducing total aerobic plate counts with reductions well over 2.0 Log CFU/g. The 15-second spray with 5.0% PURE Control Activator was overall the best application method and concentration, achieving a 3.74 Log CFU/g reduction.

