
Microbial Food Safety and Postharvest Fruit Disinfection

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ABSTRACT

1. We observed very poor survival of non-pathogenic isolates of *E. coli* 0157:H7, *Salmonella*, and generic *E. coli*, following applications of high concentration on maturing peach, nectarine, and plum fruit at the UCD Experimental Orchard. Position of the fruit relative, to direct sunlight intensity, affected the rate and maximal extent of die-off. Survival was poorest on plum. *Salmonella* survived better than *E. coli*.
2. Gaseous chlorine dioxide was confirmed to be an effective disinfectant on both intact fruit surfaces and mildly abraded/scuffed skin. Log reductions of at least 99.95% and up to 99.999%, for *E. coli* 0157:h7 and *Salmonella* were observed in fruit held at 32-33F for 48 to 72h.
3. Cherry tomatoes were evaluated as a potential model fruit for PPN disinfection studies during off-season periods. Survival and die-ff behavior of *E. coli* 0157:h7 and *Salmonella* was similar between plum and cherry tomatoes but not with peach or nectarine.

Note: Full report was not available at time of publication of this report.

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