

Title            A Recovery Study of *Salmonella* spp. from the Surfaces of Tomatoes and Packinghouse Materials  
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### **Abstract**

In this study, tomatoes and packing line materials (stainless steel, polyvinyl chloride, conveyor belt, sponge roller and untreated oak wood) were artificially inoculated with a rifampicin resistant, 5-strain *Salmonella* cocktail. Inoculated tomatoes and packing line materials were maintained for 28 days at temperature and relative humidity (RH) combinations which simulated the Florida fall/winter tomato season (20°C/60% RH), the Florida spring tomato season (30°C/80% RH), and standard ripening room conditions (20°C/90% RH). Inocula were recovered from surfaces by a vigorous shake-rub method. After 28 days, *Salmonella* populations remained detectable on tomato surfaces at all three environmental conditions investigated. Inoculated *Salmonella* populations declined to undetectable levels on all packing line materials tested at Florida spring conditions by day 11, with the exception of the unfinished oak, which reached undetectable levels by day 21. In contrast, inoculated *Salmonella* populations declined to undetectable levels on sponge rollers and conveyor belts tested at fall/winter conditions by days 7 and 21, respectively. Stainless steel, polyvinyl chloride (PVC), and unfinished oak surfaces supported the survival of detectable populations of *Salmonella* over the entire 28 day sampling period. Results of this study demonstrate the potential for *Salmonella* to persist on tomato and packing line surfaces at environmental conditions in Florida.