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**PO3247****EFFICACY OF MALIC ACID AND MODIFIED ATMOSPHERE PACKAGING AGAINST CAMPYLOBACTER JEJUNI IN POULTRY***E. Gonzalez-Fandos<sup>1</sup>, N. Maya<sup>1</sup>*<sup>1</sup>University of La Rioja, Logroño, Spain

**Background and Objectives:** Raw poultry is a well-recognized source of *Campylobacter jejuni* and many surveys have confirmed the presence of this pathogen on fresh poultry. There is a great interest in reducing surface microbial contamination of poultry, with particular regard to reducing the levels of pathogens. The aim of this study was to evaluate the combined effect of malic acid washing and packaging in modified atmospheres on the growth of *Campylobacter jejuni* on poultry legs stored at 4°C.

**Methods:** Fresh chicken legs were inoculated with *Campylobacter jejuni*. After the inoculation, the chicken legs were dipped into a 2% malic acid solution or distilled water (control). Inoculated samples were packaged under different gas mixtures: vacuum, 20%CO<sub>2</sub>/80%N<sub>2</sub>, 40%CO<sub>2</sub>/60%N<sub>2</sub> or air. Surface pH values, sensorial characteristics and *Campylobacter jejuni*, mesophiles and psychrotrophs counts were evaluated after treatment (day 0) and after 1, 3, 6, 8, 10, 13, 15 and 17 days of storage at 4°C.

**Results:** Significant differences ( $p < 0.05$ ) in mesophiles and psychrotrophs counts were found between the legs treated with 2% malic acid and the control legs after treatment. The lowest mesophiles counts were observed in those samples packaged in 40%CO<sub>2</sub>/60%N<sub>2</sub>. Legs washed with a 2% malic acid solution showed a significant ( $p < 0.05$ ) inhibitory effect on *Campylobacter jejuni* compared to control legs, being about 1.38 log units lower in the first ones than in control legs after treatment. No significant reduction on *Campylobacter jejuni* was observed in samples packaged in modified atmospheres.

**Conclusions:** Immersion of chicken legs in a 2% malic acid solution can reduce *Campylobacter jejuni* populations on fresh poultry. Atmospheres containing 20%CO<sub>2</sub> or 40%CO<sub>2</sub> are not able to reduce *Campylobacter jejuni*.

**Key words:** Food safety, poultry, modified atmosphere packaging.

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**PO3248****EFFICACY OF TRISODIUM PHOSPHATE AGAINST SALMONELLA ATTACHED TO POULTRY SKIN DURING REFRIGERATED STORAGE***E. Gonzalez-Fandos<sup>1</sup>, C. Ferreira<sup>1</sup>*<sup>1</sup>University of La Rioja, Logroño, Spain

**Background and Objectives:** Raw poultry is a well-recognized source of *Salmonella* spp. and many surveys have confirmed the presence of this pathogen on poultry. The presence of *Salmonella* in poultry receives major attention because of the importance of this bacteria as causative agent of human foodborne illness. There is a great interest in reducing surface microbial contamination of poultry, with particular regard to reducing the levels of pathogens. The aim of this study was to evaluate the effect of trisodium phosphate washing on the growth of *Salmonella* on poultry legs stored at 4°C for 8 days.

**Methods:** Fresh chicken legs were inoculated with *Salmonella*. After the inoculation, the chicken legs were dipped into either a 8, 10 or 12% trisodium phosphate solution or distilled water (control). Surface pH values, sensorial characteristics and *Salmonella* and mesophiles counts were evaluated after treatment (day 0) and after 1, 3, 6 and 8 days of storage at 4°C.

**Results:** Significant differences ( $p < 0.05$ ) in mesophiles counts were found between the legs treated with trisodium phosphate and the control legs. Legs washed with a 12% trisodium phosphate solution showed a significant ( $p < 0.05$ ) inhibitory effect on *Salmonella* compared to control legs, being above 1.0 log unit lower in the first ones than in control legs after treatment. After treatment, *Salmonella* counts were 2.65 log cycles lower in legs treated with 12% trisodium phosphate than in control ones.

**Conclusions:** Immersion of chicken legs in a trisodium phosphate solution can reduce *Salmonella* populations on fresh poultry.

**Key words:** Food safety, poultry, pathogens.

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