TITLE: EFFECT OF WATER FLOW REDUCTION IN THE FINAL WASHING SHOWER ON THE SURFACE CONTAMINATION OF CHICKEN BROILER CARCASSES AFTER CHILLER PRE-COOLING

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ABSTRACT: In poultry slaughterhouse establishments use large volumes of water to the slaughter and processing of chicken carcasses. One of those stages is the final washing of carcasses with pressurized water. Stage the is after the gutting. To comply current legislation are used at least 1.5 litres of water per carcass slaughtered daily, in order to remove the surface contamination. The washing stage demand a significant amount of water when considering the total consumption of a slaughterhouse in a day's work. From these observation, the aim of this study was to evaluate the possible reduction of the amount of water to be used at this in the slaughter line, as well as compare the microbial contamination of carcasses before and after washing and also after pre-cooling of the carcasses by immersion in chiller. The samples were collected at a large poultry slaughterhouse in three different points of the slaughter line, before and after the washing of carcasses and after the chiller. Analyses were undertaken of counts for the groups of microorganisms most commonly used hygiene indicators: mesophilic aerobic, Enterobacteriaceae, total coliform and Escherichia coli. In this study, the influence of the wash stage on the surface contamination of carcasses of chicken is shown in relation to the amount of water used. The results obtained can be noted that reducing the count log CFU/cm^2 was not significantly different between volume recommended by legislation (1.5 L) regarding the reduction of the volume to 1/3 (1L). As well as the counts carried out after the chiller for the three evaluated treatments (0 L, 1 L, 1.5L) is also not demonstrated significant difference of the counts carried out before washing. The amount of water used for washing influenced total coliforms and Escherichia coli. Aerobic mesophilic and Enterobacteriaceae did not affect, in the counts before and after washing. Thus, it is possible to review the currently recommended water flow, reducing the water capture, training and dumping effluents into rivers and consequently costs, making better use of water and maintaining the microbiological quality of the carcasses.

Keywords: water consumption, washing of chicken broilers, indicators microorganisms, microbiological quality

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