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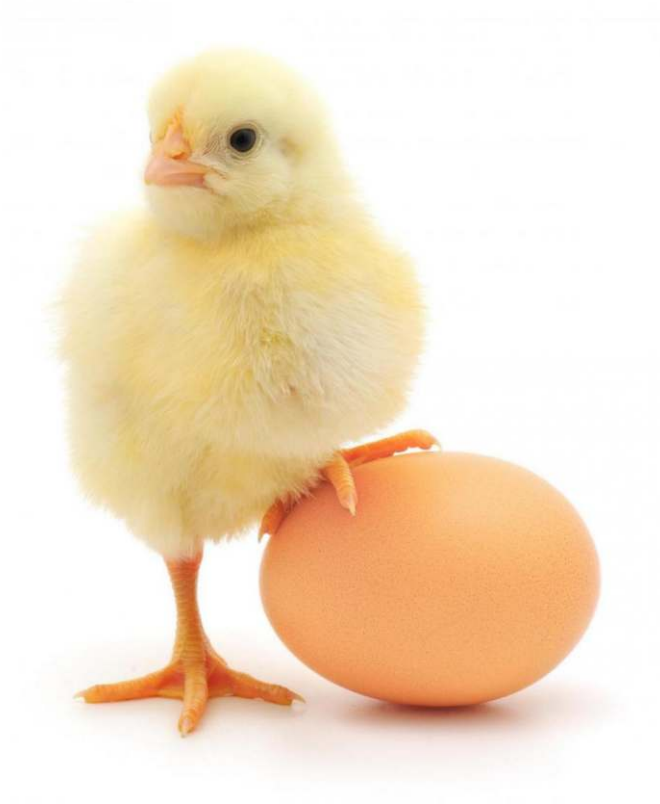

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Pre-chill Use of the Precure™ Antimicrobial[1] for the On-Line Reprocessing of Broilers

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Abstract: In 1993, the USDA approved the use of on-line reprocessing which allows poultry carcasses that are accidentally contaminated, during the evisceration process, with digestive tract contents to remain on the processing line if an approved antimicrobial process is in place. Prior to allowance for on-line reprocessing, contaminated carcasses had to be transferred to a salvage line where they were manually rinsed and cleaned with chlorinated water. In accordance with USDA guidelines, all on-line reprocessing procedures must result in pre-chill poultry carcasses of equal or improved microbiological quality in comparison to carcasses that are visibly clean. The objective of the following study was to demonstrate the efficacy of the Precure™ (Safe Foods Corporation, N. Little Rock, AR) antimicrobial as an effective on-line reprocessing treatment. Precure™ is listed as a solution of GRAS acids for use by FDA and is listed as a safe and suitable ingredient by USDA for use on poultry. In this study, fully automated Precure™ application systems were installed in three USDA-inspected broiler processing facilities. Visibly clean, uncontaminated carcasses (control group) and visibly contaminated Precure™-treated (pH = 1.5) carcasses were sampled (400 mL Butterfield's Phosphate Diluent) on-site prior to immersion chilling and were shipped on ice and overnight to MCA Services (Rogers, AR) for microbiological evaluation. Upon arrival at the laboratory (< 48 hours after collection), all samples were evaluated in accordance with USDA/FSIS laboratory procedures for Aerobic Plate Count, coliforms and *Escherichia coli* using Petrifilm™[3]. The lower detection level for all groups of organisms was 1 colony forming unit per mL. There were no differences in the levels of any of the groups of organisms between the control group (visibly clean, uncontaminated, n=345) and the visibly contaminated carcasses that had been treated with Precure™ on-line (n=354). The mean bacterial counts for the two groups of carcasses (control vs. Precure™-treated on-line reprocessed) were as follows: 3.7 vs. 3.6 logs for Aerobic Plate Count, 2.4 vs. 2.4 logs for coliforms and 2.4 vs. 2.3 logs for *E. coli*. Thus, in three commercially operated USDA-inspected broiler processing plants, the Precure™ antimicrobial treatment was microbiologically effective, and subsequently approved by the USDA, for the on-line reprocessing of broilers in poultry slaughter facilities nationwide. These studies clearly demonstrate that the Precure™ antimicrobial is a very effective and low cost means for the on-line reprocessing of broilers.

Key words: Precure™, on-line reprocessing, broilers, USDA-approved, cost effective

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