Efficacy of Two Hydrogen Peroxide Teat Disinfectants Against Staphylococcus aureus and Streptococcus agalactiae

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ABSTRACT
The process of pre-milking udder preparation and post-milking teat disinfection are widely accepted as integral components of a successful mastitis control program. The dairy industry continues to seek efficacious alternatives to iodophore-based post-milking teat disinfectants that have the ability to achieve high efficacy of bactericidal activity while maintaining the integrity of the teat skin condition. This study aims to assess the efficacy of a new Accelerated Hydrogen Peroxide® (AHP®) teat disinfectant against a commonly used industry competitor.

BACKGROUND
With the large number of teat disinfectants available in the United States and Canada, dairy producers are faced with the decision of selecting a product that has a desirable combination of bactericidal ability and promotion of teat skin health for use in their particular herd situation.

STUDY
The purpose of this study was to evaluate the efficacy of a new 0.5% AHP based post-milking teat disinfectant in preventing new IMI under conditions of experimental challenge with Staphylococcus aureus and Streptococcus agalactiae. During the trial period, immediately following every milking, each teat was challenged by immersion (25mm) in a teat dip-cup of prepared trypticase soy broth suspension of Strep. agalactiae and Staph. aureus. After the challenge, the bacterial suspension was left to air dry on the teats. The right front and left hind teats were dipped in the test teat disinfectant (0.5% AHP), whereas the right hind and left front teats were dipped in a commercially available 0.5% hydrogen peroxide teat disinfectant as a control. Furthermore, teats were examined once weekly throughout the study period for teat skin condition, teat end roughness, and teat end thickness.

RESULTS
The study revealed that the test teat disinfectant (AHP), was equally effective as the positive control teat disinfectant, as there was no statistically significant difference among the percentage of quarters becoming infected with either challenge pathogen. Additionally, the experimental product resulted in significantly improved teat skin health compared with the commercially available positive control. There was no significant difference in teat end thickness between the experimental and control products.

CONCLUSION
The efficacy of the experimental hydrogen peroxide-based teat disinfectant and the commercially available positive control product for preventing new Staph. aureus and Strep. agalactiae IMI under experimental challenge conditions did not differ significantly. These finding suggest that the test teat disinfectant provided germicidal activity similar to that of the positive control.
teat disinfectant. Average teat skin condition scores were significantly improved when the experimental disinfectant was applied.

REFERENCE