

The efficacy of a foaming iodine-based pre-milking teat disinfectant

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Abstract

Pre-milking teat disinfection is practised in several countries to prevent environment-related mastitis. This study was designed to prove the antimicrobial efficacy of a foaming, iodine-based teat disinfectant with five different concentrations (250; 500; 1,000; 2,000 and 3,000 ppm) against a negative control. For this purpose the split-udder design was used and within an udder two teats were dipped with the test product before milking, while the other two teats were left untreated. After the customary udder preparation (pre-milking, cleaning of the teats with dry paper towel) the teat skin's microbial load was investigated using the wet and dry swab technique. The total bacterial count, the counts of streptococci and streptococci like organisms (SSLO) and coliform bacteria were analysed. The associations between the treatment of the teats and the microbial load were analysed with a linear mixed regression model for repeated measurements. Microbial load with considered microorganisms was significantly lower on the skin of teats disinfected before milking compared to teats that were only cleaned. There are no differences in efficacy between the tested concentrations, e.g. the 250 ppm teat disinfectant was as effective as the 3000 ppm teat disinfectant.

Keywords: udder hygiene, teat skin, microbial load reduction, iodine