

Pilot study on the influence of premilking iodine-based teat disinfection on milk iodine content

F. Böhm¹, D. Klocke², J.-H. Paduch², V. Krömker^{1,2}

¹ Clinic for Cattle, University of Veterinary Medicine Hannover, Foundation, Bischofsholer Damm 15, 30173 Hannover, Germany

² University of Applied Sciences and Arts Hannover, Faculty II, Department of Microbiology, Heisterbergallee 12, 30453 Hannover, Germany

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Abstract

Premilking cleaning and disinfection of teats were shown to be effective to prevent environmental mastitis. However, premilking teat disinfection is not a commonly used practice in Germany because of the risk of disinfection product residues in the milk.

The objective of this study was to evaluate the effects of five differently concentrated iodine-based, foaming, premilking teat disinfectants on the iodine content of raw milk. The concentrations of the teat disinfectants were 250, 500, 1000, 2000 and 3000 ppm iodine. For each concentration five cows were treated and used for sample collection. Per udder two teats were dipped in the iodine disinfectant before milking; the other two teats were left untreated as a negative control (split-udder design). The contact time amounted to thirty seconds. Afterwards, all teats were cleaned with a dry paper towel. 15 mL milk from one treated and one untreated teat were manually milked into the test tubes before the milking cluster was attached. No significant differences in iodine concentration of the milk samples from the treated and the untreated teats were detected for all five disinfectant concentrations.

Keywords: premilking, disinfection, predipping, iodine, residues