



Selection and use of teat disinfectants

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Teat disinfectants (teat dips) and teat end/skin health are important for mastitis prevention in the dairy industry. Various teat dip classes exist for pre- and post-milking teat disinfection include: Iodophors, Chlorhexidine, Quaternary ammonium compounds (QACs), Dodecyl benzene sulfonic acid (DDBSA), Hypochlorite, Acidified sodium chlorite, Barrier dips.

The efficacy of a teat dip is determined not only by the active ingredient and its concentration, but by many additional factors like emollients. Preservation of healthy teat skin is essential for maintaining its natural defense against infection, because sore, dry, cracked teats may harbor mastitis-causing pathogens

Pre-dipping, where cows' teats are dipped in germicidal teat dip prior to milking, has become an important part of the pre-milking preparation. Pre-dipping reduces the incidence of environmental mastitis. Dip should remain on the teat approximately 30 seconds before it is dried-off with a paper or cloth towel. Drying is important to avoid increased teat dip residues in milk. Pre-dip will destroy those microorganisms which contaminate the teat skin between milkings.

Dipping all teats after each milking has a greater impact on reduction of milk somatic cell counts and increased milk yields than any other milking practice. Post dipping reduces the incidence of opportunistic and contagious mastitis. They destroy microorganisms present on teat skin, prevent bacteria from establishing a colony at the teat end or in teat lesions and improve teat skin quality. Failing to post-dip corresponded with a 45% increase in Bulk tank SCC (Reyes et al., 2017). Barrier type teat disinfectants have been developed to extend the germicidal properties of the disinfectant after the cow leaves the milking parlor. These products contain components that can provide a protective film and seal the teat from mastitis-causing bacteria.

There are enough teat dips and different teat dip formulations on the market to make your head spin, how do you make decisions about which teat-dip to choose?

Suggested references:

Blowey RW, Edmondson P. Mastitis control in dairy herds. Cabi; 2010. Chapter 7, page 116-129.



Radostits OM, Gay CC, Hinchcliff KW, Constable PD, editors. *Veterinary Medicine: A textbook of the diseases of cattle, horses, sheep, pigs and goats*. Elsevier Health Sciences; 2006 Dec 28. Chapter 15, page 732-734

Pankey JW, Eberhart RJ, Cuming AL, Daggett RD, Farnsworth RJ, McDuff CK. Uptake on Postmilking Teat Antisepsis I. *Journal of Dairy Science*. 1984 Jun 1;67(6):1336-53.

Enger BD, Fox LK, Gay JM, Johnson KA. Reduction of teat skin mastitis pathogen loads: Differences between strains, dips, and contact times. *Journal of dairy science*. 2015 Feb 28;98(2):1354-61.

Reyes J, Sanchez J, Stryhn H, Ortiz T, Olivera M, Keefe GP. Influence of milking method, disinfection and herd management practices on bulk tank milk somatic cell counts in tropical dairy herds in Colombia. *The Veterinary Journal*. 2017 Feb 28;220:34-9.

Enger BD, White RR, Nickerson SC, Fox LK. Identification of factors influencing teat dip efficacy trial results by meta-analysis. *Journal of Dairy Science*. 2016 Dec 31;99(12):9900-11.

Lago A, Bruno DR, Lopez-Benavides M, Leibowitz S. Short communication: Efficacy of glycolic acid-based and iodine-based postmilking barrier teat disinfectants for prevention of new intramammary infections in dairy cattle. *Journal of Dairy Science*. 2016 Sep 30;99(9):7467-72.