

Are You Using the Right Teat Dip?

Dr. Amanda Topp
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There are a multitude of teat dips options available in Canada, with 77 teat dips approved under the CQM program. With so many options, and a huge variation in price, how do you pick a teat dip that is both economical for your dairy farm and will do a good job preventing mastitis?

In this article, we will look at the different components of a teat dip and how they impact both mastitis control and teat health. We will focus on the different germicidal options as well as a few teat dipping tips. With this information you can evaluate the teat dip(s) you are using and make sure they are suited to your farm, your cows and your SCC goals. Using a good post dip properly can reduce mastitis incidence up to 50%; making it worthwhile to do your research and ask questions.

All teat dips contain a germicidal agent, skin moisturizer, thickener, surfactant, and pH buffering agent. There can be other ingredients depending on the type of teat dip, purpose and manufacturer.

The most common germicidal agents used in teat dips fall into two broad categories based on their mode of action (how they kill bacteria). The two categories are oxidative germicides such as iodine, chlorine dioxide and hydrogen peroxide and the non-oxidative germicides such as chlorhexidine and organic acids. The most common germicidal agents are compared in the following chart.

Teat Dip	Advantages	Disadvantages
Iodine	<ul style="list-style-type: none"> - Ready to use - Broad spectrum kill - Organic matter has minimal effect on killing ability 	<ul style="list-style-type: none"> - Potential for iodine residue in milk - Possibility of causing teat chapping/cracking - Takes 30-45 seconds of contact time to kill microbes
Chlorine Dioxide (teat dips that you mix and use right away)	<ul style="list-style-type: none"> - Broad spectrum kill - Killing ability least affected by organic matter - 15 seconds of contact time to kill microbes 	<ul style="list-style-type: none"> - Must be mixed before use - Not shelf stable once mixed (have to throw leftover dip out after milking)
Hydrogen Peroxide	<ul style="list-style-type: none"> - Ready to use - Cheaper compared to other germicides - Great germicide on clean, hard surfaces 	<ul style="list-style-type: none"> - Killing ability significantly affected by organic matter - Takes more than 45 seconds to kill microbes - Shelf life can be an issue
Chlorhexidine	<ul style="list-style-type: none"> - Ready to use - Broad spectrum kill with some residual activity (makes a good post dip) 	<ul style="list-style-type: none"> - Can be irritating to skin - Requires long contact time to kill microbes

Skin moisturizer or teat conditioner is an important component of teat dips, mainly found in post dips. A general rule of thumb is, the cheaper the teat dip, the less moisturizing ability it has as this is the most expensive component. The best way to tell if your post dip has enough conditioning ability is to examine the skin of your cow's teats. Ideally you want teats that are smooth, shiny and plump looking. If teats are rough, dull, scaly, or worse cracking and bleeding you need more skin moisturizer in your teat dip.

When evaluating a teat dip, make sure it is made by a reputable manufacturer and is an approved teat dip for CQM.

A Few Things to Remember About Teat Dipping:

- The goal of a pre dip is to clean and sanitize the teats before milking by killing bacteria and loosening any organic matter on the teat. This can be best achieved by wiping excess manure or other organic matter off the teats before dipping, ensuring the entire teat is covered in teat dip and leaving the teat dip on to allow for adequate kill time.
- The goal of a post dip is to kill bacteria, condition the teat skin and help maintain teat end health. To get the most out of your post dip, ensure the entire teat is covered and you're using a post dip with sufficient teat conditioners.
- Covering the entire teat with teat dip is very important. Teat dip can't do its job if there is only a little bit on the bottom of the teat or we miss the teat entirely. It is worth the extra second it takes during milking.
- Contact time is important. Many teat dips need at least 30 seconds on the teat skin to kill microbes. Dipping a teat and then immediately forestripping removes much of the teat dip and decreases the efficacy of the teat dip. Alternatively wiping the teat dip off too quickly after application also decreases contact time, and subsequently the ability to kill microbes.
- Always make sure your teat dip cups are emptied and cleaned after each milking. If contaminated during milking, take the time to clean them. Dipping cows with contaminated teat dip could be worse than not teat dipping at all!

Choosing the right teat dip(s) for your operation and using them properly is just one piece of the mastitis and udder health puzzle. If you have questions about somatic cell, mastitis, overall udder health, milking procedures or any of the many other factors affecting the udder of your dairy cattle don't hesitate to contact your herd veterinarian. We will always take the time to answer your questions and help with problem solving.