

## ANIMAL CARE SOLUTIONS: FAQ: FARM: COMMERCIAL AG

### 3M™ LAURICARE™ MOISTURIZING TEAT DIP CONCENTRATE

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#### 1. What are the active ingredients in the Lauricare teat dips?

The active ingredient in the 3M-teat dip is Lauricidin™ (Glycerol Monolaurate) plus synergists. This system has broad-spectrum activity and is effective against both gram positive and gram negative bacteria. Lauricare dip is also effective against fungi and yeast. In-vitro (laboratory) testing of Lauricare has shown it to be effective against lipid coated viruses and *Mycoplasma*. The Lauricare dip also contains a three part moisturizing system that includes a skin emollient, a humectant, and a skin plasticizer. This moisturizing system is the best available on the market today.

#### 2. What makes it better than the other many of the other dips on the market?

Biologically, Lauricare dip is equivalent to other dips teat dips that have been documented by the NMC protocols, (B or C). All dips successfully documented by NMC protocol are considered to be effective in preventing new intra-mammary infections.

There are three important factors to remember:

- Not all dips have been documented by the NMC protocols.
- Protocol B & C data demonstrates the ability of the teat dip to reduce new intra-mammary infections.
- Lauricare dip is on the NMC published list of effective teat dips

In addition to biocidal efficacy, teat skin condition is an important factor in the incidence of mastitis. Teats that are chapped or cracked provide an opportunity for colonization with mastitis causing bacteria. Selecting a teat dip with good moisturizing properties is important. . The Lauricare dip contains a three part moisturizing system that includes a skin emollient, a humectant, and a skin plasticizer. This moisturizing system is the best available on the market today.

All of the components in Lauricare dip are approved for use in the manufacture of food. The use of food grade components is an important consideration if using the teat dip as a pre-dip.

#### 3. Has the dip been tested by NMC Protocol?

Independent university trials following the National Mastitis Council protocols (A, B & C) have been conducted to document the efficacy of the 3M teat dips. These protocols include both in vitro (in the lab) and in vivo (on the cow) studies. Additionally, large scale end user field trials have been conducted. In addition, standard toxicity trials as well as independent laboratory trials have been run to document the safety of the 3M teat dips.

#### 4. How fast is the kill rate when using the Lauricare dip?

Laboratory tests have shown Lauricare dip to be greater than 99.99% effective in less than 2 minutes against against common mastitis pathogens in the presence of up to 10% organic bioburden (milk).

**5. Will it irritate teat skin?**

A standard battery of irritation and toxicity tests indicates that the Lauricare dip is not a primary skin irritant or a toxicant. Irritation studies on cows have shown the Lauricare dip to not only be non-irritating, but also have positive conditioning effects on the skin. Additionally, all of the components of Lauricare are GRAS (generally recognized as safe) listed or have food additive clearance. GRAS listed components may be used in foods.

**6. How much does it cost comparatively?**

Lauricare Plus moisturizing teat dip is just a few cents more per ready-to-use gallon of teat dip. Ask your 3M-mastitis products salesperson for information on the teat dips.

**7. Why is it orange?**

Getting good teat skin coverage is an important consideration of effective teat dipping. In our field trials the bright orange color was easy to see, a particularly important factor in the management of today's large herds.

**8. How much will I use in a year if I have 100 cows in my herd?**

The average dairy producer will use approximately 1.5 gallons predip/per cow/per year. The average postdip usage is approximately 1 gallon per cow/per year.

**9. Can it be used for pre-dipping and post-dipping?**

Lauricare and Lauricare Plus Moisturizing teat dip are labeled for both pre and post applications. All of the components in Lauricare dip are approved for use in the manufacture of food. The use of food grade components along with good soil removal characteristics are an important considerations if using the teat dip as a pre-dip.

**10. Why should I consider predipping?**

Although post-dipping with efficacious teat dips can reduce the incidence of new IMI caused by contagious pathogens; post dipping doesn't reduce the rate of new IMI infections caused by environmental pathogens. There is substantial data supporting the practice of prepping the cows with an efficacious germicide prior to milking. Field trials have shown that a good pre-dipping technique, such as the *Minnesota One Step Prep*, coupled with an efficacious pre-dip can reduce the incidence of clinical mastitis by as much as 50% in herds with low levels of contagious mastitis.

**11. What sizes is the dip available in?**

Lauricare and Lauricare Plus teat dips are shipped in the concentrate form in 4.5 gallon and 15 gallon sizes. The concentrate is diluted with 3 parts water to 1 part concentrate. The 4.5 gallon pail makes 18 gallons of ready-to-use (RTU) teat dip. The 15 gallon drum makes 60 gallons of RTU teat dip.

**12. Is it compatible with other dips and teat wash?**

The Lauricare dip is compatible with iodine based products, however, Lauricare teat dip is not compatible with chlorhexidine based products. **DO NOT EMPLOY AT THE SAME TIME OR IN EQUIPMENT PREVIOUSLY USED WITH A CHLOROHEXIDINE CONTAINING PRODUCT. THIS INCLUDES USING A CHLOROHEXIDINE UDDER WASH AND THE LAURICARE DIP AS A PRE OR POST DIP.**

The Lauricare dip is not compatible with bleach. There have been several inquiries from dairymen who have been using Clorox® or similar bleaches as part of their dipping

program and would like to continue to use bleach as an udderwash in combination with Lauricare dip as a pre or post dip. We cannot recommend this for two reasons:

- Not all bleaches are created equally and depending on the stabilizer employed may be irritating to the teat skin.
- The alkaline nature of the bleach and the acidic nature of the Lauricare dip make them chemically incompatible.

For spray systems, especially those in which chlorhexidine products were previously used, we recommend the following steps prior to using the Lauricare dip:

- Thoroughly rinse the system to remove dip residue
- Wash with an alkaline detergent
- Triple rinse

### **13. Lauricare teat dip is delivered to my dairy in a concentrate form, how do I mix it?**

To mix a gallon of ready-to-use Lauricare teat dip at a time, use a clean mixing container such as distilled or deionized water bottle. Do not use a chemical container that previously contained dips/sanitizers, cleansers, caustic chemicals or irritating materials. Add 1 part dip concentrate to the mixing container, then add 3 parts of potable (approved for drinking) water. Mix by inverting the container several times. It is important to measure both the water and teat dip concentrate accurately (1 part concentrate, 3 parts water).

All larger containers (18 & 60 gallon sizes) of Lauricare teat dip concentrate should be mixed using the 3M Mixing Wand. Make sure that the mixing wand reaches the bottom of the appropriated sized 3M Mixing Drum. Run potable water through the mixing wand at full line pressure (30PSI & 2 GPM) and fill to top fill mark of 3M Mixing Drum.

### **14. What happens if I don't mix it properly?**

While Lauricare dip is very soluble in water. Failing to mix it according to directions will likely result in concentrated dip at the bottom of the mixing drum and colored water at the top. Lauricare dip is easy to mix utilizing the 3M Mixing Equipment and following the label directions - if the Lauricare teat dip concentrates is mixed per the label directions and using a 3M Mixing Drum and 3M Mixing Wand for the mixing process, it is almost foolproof. Since the concentrate is a 4:1 mix, the 4.5 gallon pail of concentrate makes 18 gallons RTU, the 15-gallon drum of concentrate makes 60 gallons RTU. We only recommend the use of 3M Mixing Drums. Using old drums/containers can lead to possible mis-mixing or to contamination with chemical residuals.

### **15. Does 3M have mixing equipment available?**

All 3M Mastitis Products Distributor have available the #1433E 3M mixing drums and #1433MW 3M Mixing Wands to ensure a perfectly mixed ready-to-use Lauricare teat dip. The mixing drums are sized at 18 gallons (4.5 gal concentrate) and 60 gallons (15 gal concentrate) to accommodate the pail and drum sizes of the Lauricare dips. The concentrates are mixed 3 parts water to 1 part of concentrate.

### **16. How long is the diluted dip good for?**

Once diluted, the Lauricare dip is good for 90 days.

### **17. What happens if my dip is frozen? (concentrate and/or RTU dip)**

Freezing does not effect Lauricare teat dip in the concentrate form. If frozen, the Lauricare teat dip concentrate should be completely thawed prior to using. Agitation

prior to mixing will help ensure a uniform product.

Freezing of diluted Lauricare teat dip causes it to irreversibly separate. If frozen the diluted dip must be discarded. *Store Ready-to-Use (diluted) teat dip where it will not freeze.*

**18. Does my water quality affect efficacy?**

The bacterial kill-rate for Lauricare teat dip was not affected when diluted with waters of varying degrees of hardness. Tested under *Standard Methods for Water Testing* protocols, the dip had full efficacy when mixed with very hard water up to 400 grains of hardness and in the presence of 10% bioburden. (Very hard water is defined 280-320 mg/l of CaCO<sub>3</sub>).

As with any concentrated germicide or disinfectant, the water used to mix the concentrate must be potable, or fit for human consumption. Non-potable water with high levels of bacteria will tie up the biocidal components of Lauricare dip reducing or eliminating its biocidal activity.

**19. I don't like the "medicine" type smell. Do I have another option?**

Lauricare dip has a distinctive fatty acid smell. Most people get used to it very quickly. We recommend that Lauricare dip, like all chemicals, only be used in an area such as a milking parlor or barn, which can be actively or passively ventilated to allow free exchange of inside and outside air. Recently, 3M introduced Lauricare Plus Moisturizing Teat Dip Concentrate which contains a fresh, food-grade citrus scent plus the same potent germicide, Lauricidin™ with the same 3 part moisturizing system that regular Lauricare teat dip is known for.

**20. What is the difference between Lauricare and Lauricare Plus teat dips?**

Lauricare Plus Moisturizing Teat Dip Concentrate contains a fresh, food-grade citrus scent plus the same potent germicide, Lauricidin™ with the same 3 part moisturizing system that regular Lauricare teat dip is known for.

**21. What is the Quality Milk Program and what does it offer?**

The 3M Quality Milk Program is a free value added program for Lauricare and Lauricare Plus Moisturizing Teat Dip customers. 3M QMP provides no-cost diagnostic resources and evaluation tools to assist the dairyman to produce high quality milk. There is no charge for these services, the only requirement is that you are 3M mastitis products customer and you truly want to improve your herd health. To enroll in the 3M Quality Milk Program, contact your Lauricare teat dip sales rep or call the 3M Animal Care Products customer service line at 1-800-848-0829.

## TEAT SHIELD™ WITH GERMICIDE (TSG)

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### 1. What is 3M Teat Shield™ with Germicide (TSG)?

TSG is a latex barrier dip that contains Lauricidin (Glycerol Monolaurate) plus synergists as the active germicidal component. The latex dries to a water insoluble film that functions milking to milking as a bacterial barrier on the teat skin. The Lauricidin (Glycerol Monolaurate) plus synergists is a broad-spectrum biocide effective against staph., strep. and coliform organisms. TSG is non-irritating and non-chapping to both teats and hands.

### 2. When do I want to use TSG?

The use of TSG should be considered when the potential is high for coliform mastitis occurring between milkings; hot, humid weather and wet muddy environment. Other management considerations should include improving the environment (frequent bedding changes, cleaning up wet, muddy locations) and good milking prep procedure and proper functioning milking equipment, especially avoidance of liner slips. TSG is also good as a first aid product for cows with injured teats including *Bovine Herpes mammillitis* lesions.

### 3. Can I use TSG as an everyday dip?

Yes. Many people have used it for years. Depending on the environmental conditions on your farm, TSG may be the dip of choice.

### 4. How does TSG compare to other barrier dips?

TSG contains a water insoluble barrier. Most if not all other barrier dips currently on the market contain water-soluble barriers. The water insoluble barrier allows TSG to maintain a bacterial barrier milking to milking regardless of the environment. Competitive dips with water-soluble barriers would most likely be removed if exposed to wet, muddy conditions.

### 5. What bacteria is TSG effective against?

TSG is broad spectrum and is effective against gram positive and gram negative bacteria.

### 6. How do I get TSG off of cows?

This is a common objection to TSG. By design the TSG is difficult to remove to help ensure that the barrier stays in place under difficult environmental conditions.

We recommend the following procedure:

- Dip all four teats in warm water to rehydrate the TSG. (The effect of the water may be enhanced by adding a surfactant such as dish soap or a few capfuls of hydrogen peroxide in a pail of water. Change cleaning solution after 20-30 cows.)
- Go back to the first teat and using a single service towel strip off the TSG film. Removal of the TSG film following this procedure helps ensure a good pre-milking prep and helps stimulate milk let down.

### 7. Are there preventative procedures that will minimize accumulation of TSG in the milk lines cleaned by the above technique?

We recommend the following steps:

- Do the best job possible of removing the TSG film from the cows.
- Add 45% phosphoric acid at the rate of 1 oz/10 gallons of water to the first rinse

before the wash cycle. Repeat with every wash cycle.

**8. If TSG has accumulated in my pipelines, etc., how do I remove it?**

We recommend the following corrective action to be followed by the preventative measures discussed below:

- Add one pound of Monarch HD-325 soap and one quart of a bulk tank chlorine sanitizer to hot wash water.
- Circulate through the system. Repeat if necessary.

**9. How safe to humans is TSG?**

A standard battery of irritation and toxicity tests indicate that TSG is not a primary skin irritant or a toxicant.