## Washing Milk Containers Checklist

	YES	NO
1. I rinse my milk containers with lukewarm water before washing them.		
<ol> <li>I wash my milk containers in water above 49° C (120° F).</li> </ol>		
<b>3.</b> I use soap and chlorine in my wash water.		
4. I rinse my milk containers in an acid solution after washing.		
5. I allow my milk containers to dry completely between uses.		

## LEARN MORE ABOUT EACH STEP

1. Are the containers rinsed with lukewarm water before going into the wash water?

Organic compounds destroy the bacteria-killing power of chlorine in the wash water. Dirt and milk are organic compounds. Most of them will rinse off easily before washing.

High temperatures change milk proteins. It makes them stick to surfaces. We don't want milk protein, especially whey, to stick to milk containers. Thus, we use lukewarm water to rinse the protein off the containers before we wash them in hot water. ALWAYS USE LUKEWARM WATER. Do not rinse with hot water.

2. Are the containers washed in hot soapy water with chlorine? Are they brushed vigorously?

Milk fats, proteins and sugars are sources of food for bacteria. We brush container surfaces vigorously to loosen these solids. These milk solids are suspended in the wash water.

If wash water temperatures fall below 49°C (120°F) the suspended solids will stick to container surfaces. Do not put containers into wash water below 49° that contains suspended milk solids. The containers will come out dirtier than when they went into the water. KEEP WASH WATER ABOVE 49°.

3. Are the containers rinsed in an acid solution after washing?

Even with the best rinsing and washing, small amounts of milk solids remain on containers. Small numbers of bacteria remain there, too. An acid rinse lowers the surface pH. Most bacteria grow poorly in very acid conditions.

Common pipeline acids at the rate of about 30ml per 19 litres (1 ounce per 5 gallons) of lukewarm water will lower container surface pH adequately. Acid/sanitizers used for manual cleaning or bulk tanks dilute at about the same rate. They are preferred for this step. They keep the pH lower longer than milk line acid. Always check container labels for proper dilution rates as they can vary by product.

> Sam Leadley, Calf & Heifer Management Specialist Shirley Macmillan, United Kingdom Editor <u>smleadley@yahoo.com</u> <u>www.atticacows.com</u> © Attica Vet. Assoc. 2017 All Rights Reserved

## 4. Are the containers allowed to completely dry between uses?

Bacteria require moisture in order to grow. If we dry our containers between uses the rate of bacterial regrowth slows down or even stops.

Avoid stacking pails inside each other until completely dry. Never sit freshly washed pails upside down on a concrete floor. That creates a bacterial incubator (warm, damp, dark).

> Sam Leadley, Calf & Heifer Management Specialist Shirley Macmillan, United Kingdom Editor <u>smleadley@yahoo.com</u> <u>www.atticacows.com</u> © Attica Vet. Assoc. 2017 All Rights Reserved