

Aseptic Milk Sample Collection

Follow these guidelines to collect a clean milk sample for mastitis culture on-farm or for submission to the Laboratory for Udder Health.

1. Collect the following supplies: clean, disposable gloves, waterproof marking pen, milk sample tubes, cotton balls or pads soaked in 70% alcohol, cooler with ice or freezer packs, germicidal teat dip, paper or cloth towels.



2. Wash your hands and then put on new disposable gloves. Label the sample tube using a waterproof marking pen. Clearly record the date, the cow ID and the quarter from which the sample will be taken. RF = right front, LF = left front, RR = right rear, LR = left rear.



3. Brush off any loose manure, dirt or bedding particles from the udder and teats. Pre-dip with an effective germicidal teat dip, leaving the dip on for 30 seconds. (If the udder and teats are extremely dirty, thoroughly wash and dry the udder and teats before pre-dipping.)



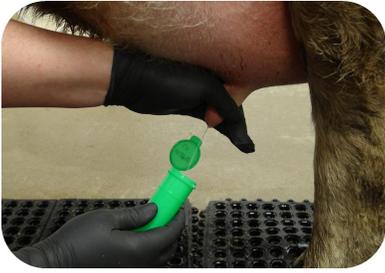
4. Wipe each teat dry with a single-use paper or cloth towel, paying particular attention to the teat end. Be sure there is no teat dip remaining on the teat, as it will kill bacteria in your milk sample.



5. Discard 3 to 4 streams of milk on the floor to minimize chances of contaminating the sample with bacteria in the teat canal.



6. Scrub teat ends using a cotton ball or gauze pad soaked in alcohol. Scrub until the ball or pad comes away clean, using as many as necessary. If sampling more than one quarter of the same cow, scrub far teats first, followed by near teats to avoid re-contaminating teats you have already scrubbed. Use a new swab for each teat. Teats should not be dripping with alcohol, as this will also kill any bacteria in your milk sample. Do not touch the teat ends again after this step.



7. Open the sample vial immediately before the sample is taken, not before. Do not touch the inside of the vial or cap or let the teat end touch the vial. Hold the vial at an angle to keep loose dirt or hair from falling into it. Direct streams of milk into the vial without touching the teat end. Sample as quickly as possible, starting with near teats first, followed by far teats. Fill the vial 1/3 to 1/2 full. Immediately close the sample vial so that it is airtight. Collect milk from each quarter into a separate vial (quarter samples).

8. Immediately place the sample vial on ice or in the refrigerator. Keep samples on ice or in the refrigerator until plated and freeze samples that will not be plated within 24 hours. It is best to freeze samples before shipping to the lab.

Additional Tips:

- Plastic test tubes with snap-on lids work best for collecting milk samples. Whirl pack bags **should not** be used because they frequently leak during shipment. Whirl packs also frequently become contaminated while taking the sample.
- Sample tubes should be handled properly to ensure sterility at all times. Do not put caps into pockets, touch the tops or touch the inside of the collection tubes. Avoid getting particles of dust, dirt, or manure into/on the sample tube.
- Ensure that tubes are filled no more than half full and lids are completely closed. Over-filling tubes makes it more likely that tubes will become contaminated or burst when frozen.
- Samples should be taken directly from teats. Bucket or milk meter samples carry over bacteria from previous cows.
- It is best to sample at milking time (before milking the cow). If the sample not taken at milking time, it should be taken at least 4 hours after the last milking.
- If possible, label the collection tube with the proper cow and quarter identification number **prior** to sample collection (milk fat will cause marker to smear). Use a waterproof permanent marker.
- If collecting milk from all quarters into the same tube (composite sample), try to take the same amount of milk from each quarter.
- Sampling in a clean location (such as a parlor) reduces the likelihood of contaminants falling into the sample. Open barn doors or tunnel ventilation can cause massive air movement, resulting in major contamination problems from bedding and dust.
- Be aware of manure on your clothing or hands and wash or change before collecting samples if needed.
- Samples should be kept cold or frozen until delivery to the Minnesota Veterinary Diagnostic Laboratory. Bacteria in samples that are not cooled or frozen may grow excessively, resulting in misleading results.