

# Get to know your bacteria!

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**C**ows The medicines regulation impacts the prescribing of antimicrobials for treatment of mastitis and presents challenges to vets. Some of these challenges can be overcome by obtaining accurate culture and sensitivity results from suitable milk samples and are invaluable to both the farmer and the vet.

By collecting milk samples from cows with mastitis, and/or samples from high Somatic Cell Count (SCC) cows it enables us to identify:

- Which pathogen(s) are to blame, to target effective treatment, and;
- Which control measures can be implemented on the farm to reduce the incidence of the disease in the future.

## Aseptic milk sample collection

It is imperative for any milk sample to be collected as hygienically as possible to avoid any contamination. Mixed bacterial infections can occur in mastitis, but when three or more different bacteria are identified in one sample, this is universally recognised as a contaminated sample. Submitting contaminated samples is a waste of money; the lab will still incur the cost of processing them and thus will have to charge the farmer. Poor technique will give misleading results - if your lab report identifies three or more bacteria, then it means you submitted a sample that was contaminated. Resampling and resubmission, with the associated cost, will be required to get any meaningful answers.

Sterile collection is the most important step for successful culturing of milk samples.

Materials required to collect a sterile sample:

- Permanent marker.
- Cotton balls or cotton pads soaked with 70% alcohol.
- Teat dip.
- Paper towel.
- Disposable gloves.
- Sterile plastic sample tube (5 to 10 ml volume) (Do not use tubes with a preservative tablet).

## Five steps to collect a quality sample

1

Using the permanent marker, label the sample tube with the date, animal ID and quarter (full details will be recorded on the laboratory submission form).

2

Brush off any loose dried material (bedding, faeces) from the teat. If the teat is very dirty, wipe clean using paper towels and warm water.

3

Apply a teat dip, wait at least 30 seconds, wipe teat dry with paper towel.

4

Scrub the teat end (teat orifice) for at least twenty seconds using cotton balls or pads soaked with 70% alcohol. If dirt continues to appear on the cotton, repeat this step using a second cotton ball/pad until the cotton comes away clean.

5

Open the sample tube immediately before collection. Discard a few squirts of milk and holding the tube 3-4 cm from the teat at an angle of 45°, direct milk into the tube. Do not touch the teat end with your hand during sampling. Cap the tube immediately sampling is complete and place in the fridge.