

Ken Mitchell, DVM
Valley Veterinarians, Inc. Milk Quality Laboratory

Valley Veterinarians, Inc. Milk Quality Laboratory

Mastitis Lab Culture Report

1) Bulk Tank Cultures

Bulk tank milk (BTM) cultures are a convenient and inexpensive tool to monitor milk quality in a large dairy herd. BTM cultures can provide information on the extent of sub-clinical mastitis in a herd, the pathogens involved, and the effectiveness of milking hygiene and equipment sanitation. BTM cultures are NOT an indicator of mastitis prevalence or causes of clinical mastitis in a herd: these must be monitored by sampling individual clinical cases. But regular BTM culture does allow us to detect sub-clinical trends or problems in the "clean" herd and prevent problems from becoming widespread.

Our BTM culture reports will:

- Identify infectious and environmental organisms frequently found in bulk tank milk
- List bacterial results in # bacteria per .01 ml milk
- Approximate a Standard Plate Count (SPC) as the number of bacterial colonies per milliliter of raw milk (equal to # bacteria in tank times 100).
- Identify mycoplasma presence both by **direct** and **enrichment broth** methods. Direct plating mycoplasma results are reported by # colonies per .01 ml milk. Enrichment results are a more sensitive test, just indicate presence or absence of organism (#'s not imp.).

2) Individual cow results

Bulk tank results show which bacteria contribute most to the "raw" count in your clean herd (sub-clinical population). Individual cow culture results identify organisms reflected in clinical mastitis, unless we are screening clean cows in the case of herd cultures or fresh cow cultures.

- Individual cow samples should ALWAYS be taken in conjunction with regular BTM's.
- Primary goal is to identify infectious vs. environmental causes, and to establish environmental trends.

Infectious organisms

- Primary reservoir is infected mammary gland.
- Spread occurs from cow to cow via milking machine during milking.
- Also spread by contaminated hands, reused towels and sponges, and reusable cannulas.
- Individual cows should be treated or culled.
- Zero tolerance in BTM. High counts of infectious organisms in a BTM culture indicate the presence of infected cows.
- organisms include....
 - * *Staph Aureus* (coagulase positive staph)
 - * *Strep agalactiae*
 - * *Mycoplasma*

* a separate fact sheet covers each of these organisms and their control.