



How to use Mastit 4 on bulk tank milk samples in surveillance for contagious mastitis pathogens. *Staphylococcus aureus*, *Streptococcus agalactiae* and *Mycoplasma bovis*.

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Bulk tank milk samples is a useful tool in surveillance of contagious mastitis pathogens. Results from samples taken directly from a well mixed tank can be used directly, but be careful with silo tanks and take out 75 – 100 liter from the tube before you sample, unless you use special sampling devices.

If the bulk tank sample is taken in the trunk through a valve under pumping of the milk to the trunk, it is found that there is high risk for carry over. You might then get a false positive result if the farm sampled before is highly positive.

Use only negative results under these conditions, and if a bulk tank sample gets positive from a farm that used to be negative, then always confirm the result with a sample taken directly in the tank.

Always take follow up samples and confirmation samples directly from the tank.

The Ct value will give you an impression of the amount of bacteria in your sample.

For *Streptococcus agalactiae* and *Mycoplasma bovis* the cut of is <40. Any reaction of these two bacteria must be considered carefully in relation to clinical findings on the farm.

For *Streptococcus agalactiae* eradication see our plan.

For *Mycoplasma bovis* control see our plan

For *Staphylococcus aureus* lower than Ct 30-32 indicates that the spread of bacteria in the herd is too high. Focus on the traditional 5 point plan, better milking with a maintained milking machine, post milk teat dipping, dry cow therapy, fast treatment of clinical cases and segregation or culling of chronic cases must be optimized.

In some countries the possibilities for a farm total free of *Staphylococcus aureus* is an option. Then the testing and segregation must be more often ex. every ½ year until no cows gets new infected. Also, heifers can get *Staphylococcus aureus* infection after calving so all new calvers must be controlled continuously until a negative farm in bulk tank samples. The intensive testing program with focus on *Staphylococcus aureus* must be carefully evaluated in relation to economics and risk of new infection.

In some areas, the *Staphylococcus aureus* prevalence is surveyed at yearly testing and all positive cows is segregated but as soon the prevalence is reduced to under 4% no further actions but continued yearly testing of all cows is in place. After milking of positive cows the cluster is flushed to reduce new infection.

Before you start eradication plan it is a good idea to take composite milk samples from at least 5-10 high SCC cows and try to estimate a prevalence of the infection in the herd. *Staphylococcus aureus* will mostly be found in high SCC cows. *Streptococcus agalactiae* and *Mycoplasma* can be found in cows with low SCC even in cows lower than 100.000 cells/ml can be infected with *Strep agalactiae*.