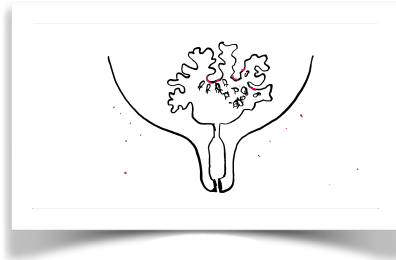


Diagnosis - Subclinical Mastitis

Subclinical mastitis is defined as the presence of inflammation with a normal appearing mammary gland and visibly normal milk. Many tests have been evaluated for the diagnosis of subclinical mastitis. Some of the more common are listed here.



Somatic cell count (SCC): Concentration of leukocytes (primarily)/ml of milk. Leukocytes comprise 80% of the somatic cells in uninfected quarters and 99% in infected quarters. The most important factor that causes a rise in SCC is an Intra mammary infection .

California mastitis test (CMT): A qualitative measurement of SCC. The reagent causes lysis of cell membranes and precipitation of the cell DNA and proteins resulting in change in viscosity of the reagent when added to milk.

Safety Milk Test Kit (SMT)*: A modification of the CMT developed for easy to use & interpreting the results in field condition even by a layman

Lactose: The percentage of lactose in mastitic milk is lower. This change occurs owing to tissue damage causing decreased synthetic ability of the enzyme systems in the secretory cells, resulting in reduced lactose biosynthesis.

Lactate dehydrogenase (LDH): An enzyme found in most tissues, including the cytoplasm of leukocytes. When cell damage occurs, to either mammary epithelial cells or leukocytes, LDH is released into the milk. Some commercially available mastitis detection tools incorporate measurement of LDH activity.

N-acetyl-b-D-glucosaminidase (NAGase): A lysosomal enzyme that is released into the milk from damaged mammary epithelial cells and, to a lesser extent, from milk somatic cells.

Acute phase proteins: Haptoglobin and milk amyloid A have been found in milk owing to their migration from blood into milk across the blood–milk barrier because of increased capillary permeability and loss of tight junctions, or through local production by milk leukocytes or mammary epithelial cells.

Conductivity: Electrical conductivity (EC) of milk increases with mastitis owing to an increase in sodium and chloride concentrations and a decrease in the potassium concentration

*For more details about SAFETY MILK TEST KIT please go through video presentation Detection of sub clinical mastitis in field conditions

