

# California Mastitis Test (CMT) Fact Sheet

## Equipment



Milk samples from each quarter are collected in a clean CMT Paddle. The CMT paddle has four shallow cups marked A, B, C, and D to help identify the individual quarter from which the milk was obtained. The CMT Solution should be reconstituted according to package instructions.

## Procedure



*Step 1:* Take about 1 teaspoon (2 cc) milk from each quarter.



This is the amount of milk that would be left in the cups if the CMT Paddle were held nearly vertical.



*Step 2:* Add an equal amount of CMT solution to each cup in the paddle.



*Step 3:* Rotate the CMT Paddle in a circular motion to thoroughly mix the contents. Do not mix more than 10 seconds.



*Step 4:* “Read” the test quickly. Visible reaction disintegrates after about 20 seconds. The reaction is visually scored. The more gel formation, the higher the score.

### Reading a CMT



N = Negative (*Not Infected*). No thickening of the mixture.



T=Trace (*Possible Infection*). Slight thickening of the mixture. Trace reaction seems to disappear with continued rotation of the paddle.

Example: If all 4 quarters read “trace”, there is no infection. If one-two quarters read “trace”, infection possible.



1=Weak Positive (*Infected*). Distinct thickening of the mixture, but no tendency to form a gel. If CMT paddle rotated more than 20 seconds, thickening may disappear.



2=Distinct Positive (*Infected*). Immediate thickening of the mixture with a slight gel formation. As mixture is swirled, it moves toward the center of the cup, exposing the bottom of the outer edge. When motion stops, mixture levels out and covers bottom of the cup.

3=Strong Positive (*Infected*). Gel is formed and surface of the mixture becomes elevated (like a fried egg). Central peak remains projected even after the CMT paddle rotation is stopped.



CMT Paddle should be rinsed after each test.

## Interpretation of CMT Scores

CMT scores are directly related to average somatic cell counts. The following table shows how they are related.

*Any reaction of T (trace) or higher indicates that the quarter has subclinical mastitis.*

CMT Score	Somatic Cell Range	Interpretation
N (Negative)	0 – 200,000	Healthy Quarter
T (Trace)	200,000 – 400,000	Subclinical Mastitis
1	400,000 – 1,200,000	Subclinical Mastitis
2	1,200,000 – 5,000,000	Serious Mastitis Infection
3	Over 5,000,000	Serious Mastitis Infection

Other examples of CMT readings:



Clinical Infection



Toxic Milk  
(No reagent has been added to the CMT paddle.)

This fact sheet prepared by:  
Roger Mellenberger, Dept. of Animal Sciences, Michigan State University and  
Carol J. Roth, Dept. of Dairy Science, University of Wisconsin-Madison  
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