

FARMER GUIDE

CALIFORNIA MASTITIS TEST

The California Mastitis Test [CMT] is a cow side test to estimate the somatic cell count of milk.

The test can be carried out by the milker in the parlour and it gives an immediate result. This result is not a numerical result but rather an indication as to whether the cell count is high or low. The CMT will only show changes in cell counts above approximately 400,000 cells/ml. The advantage of the CMT over individual cow cell counts is that it assesses the level of infection of each quarter rather than an overall udder result.



There are a number of ways to score the CMT, but dividing the results into four categories is the most straightforward. A negative result is seen when the milk remains watery. A score of 3, the highest, is when the solution almost solidifies.

| Score | Gelling / thickening |
|----------|--------------------------|
| Negative | None |
| 1 | Mild |
| 2 | Moderate |
| 3 | Heavy, almost solidifies |

Results for infected quarters on each animal tested should be recorded. If there is any doubt about the results of a test, then it can either be repeated immediately or at the next milking.

The CMT is very subjective and the results can vary depending on who is carrying out the test. It is important to make sure that the method is consistent. If too much or too little reagent is added, this will affect the outcome.

▶ The benefits of the CMT include

- Can be carried out by the milker
- Instant result
- Gives an indication of the level of infection of each quarter
- Inexpensive

▶ The test is carried out in the following way

- Discard the foremilk
- Draw one or two squirts of milk from each quarter into the paddle dish, remember which quarter is in each well!
- Tip the paddle so that most of this milk is discarded, most of the paddle disks have a mark to indicate how much milk should be remaining
- Add an equal volume of reagent to the remaining milk, most of the paddle disks have a mark to indicate how much milk should be remaining
- Swirl the milk using a circular movement and examine for the presence of a gel or slime reaction
- Record your result by quarter
- Rinse out the paddle before testing the next cow

▶ The CMT can be used in herds for the following

- Identification of high cell count cows and quarters. Remember that quarters are not independent so decisions about treatment at dry off for example should still be made at a cow rather than a quarter level
- Double checking individual cell count results
- Checking a cow which you suspect may have mastitis
- Checking the cell counts of quarters after mastitis treatment, and maybe discarding this milk until it returns to normal, i.e. looking for a negative result
- Identifying quarters for bacteriology sampling to identify the mastitis bacteria responsible for high cell counts in the herd

The CMT is a very useful test. Farmers should be aware of its advantages and use these to improve the mastitis management in their herd. They should also be aware of the limitations of the test. Your vet should be able to help you if in doubt about how to perform this test.

