

## INHIBITORY SUBSTANCES

The inhibitory substance test is carried out to detect substances that inhibit or reduce the growth of bacteria in milk. The test is performed by adding a standard bacterium to a milk sample. The presence of an inhibitory substance will stop the bacteria growing. This is indicated by a lack of colour change to a standard indicator dye.

Inhibitory substances are antibiotic residues from such things as mastitis treatment, pessaries, injections and other forms of antibiotic treatment there is the potential for residues to be left in the milk. Intramammary treatments are the predominant source of inhibitor substance downgrades.

### Procedures to reduce the risk of Inhibitory Substance Grades

The following practices should be adopted by dairy farm operators:

1. Permanent records of all treatments administered to animals must be kept and this should include:
  - a. Animal Number
  - b. Type of Disease
  - c. The type of treatment used
  - d. Date of first and last treatment (including am and pm)
  - e. Date when animal allowed to return to the milking herd (including am and pm)
2. Keep treated cows in a separate paddock at all times. This paddock should not be directly adjoining that of the main supply herd in order to reduce the risk cows jumping. It should be securely fenced to prevent treated cows breaking out.
3. All treated cows need to be effectively identified. They should be marked with adequate paint and leg bands for quick identification. Also a record of cows under treatment should be available for all staff to see i.e. recorded on a whiteboard. This should include cow number, treatment used, withholding time and date clear for return to milking herd.
4. Milk treated cows separately from the main supply herd.
5. Remove the delivery line or otherwise divert it from the milk tank before milking the treated herd. This should be double checked and the milking herd should be clear of milking area.
6. Wash the plant with every milking to ensure any antibiotic residues have been removed from the milking system.
7. Mark and record cows that require antibiotic treatment before administering treatment. These cows should be drafted and treated once the main herd has been milked.
8. Wash your hands immediately after administering any antibiotic treatments.
9. Keep Dry Cow Therapy and lactational antibiotics well apart. Dry Cow Therapy only needs to be held in the farm dairy when cows are being dried off.
10. When administering Dry Cow Therapy – milk all the cows and after this has been completed return the cows to the milking area for treatment.

11. If drying off is staggered record the individual numbers of all cows treated along with the name of the product used. Mark the cows paint and put them in a secure paddock away from the milking herd. Paint should be reapplied regularly.
12. Record animals kept in the treated herd and/or dry cow herd and count herd regularly to ensure no cows get into the main supply herd.
13. Keep all antibiotics in a secure facility.
14. Dispose of old syringes and do not reuse for administering other treatments.
15. Follow the instructions on the labels of antibiotic treatments. This includes items like ointments, pessaries, and volumes of injectables.
16. Shake injectable antibiotics well before drawing from their containers.
17. Check or request records for purchased animals before milking to ensure that they have no antibiotic treatments in their system.
18. Discuss with vet – the withholding period of any cows having more than one quarter treated.
19. Discuss with vet – the withholding period of any multiple drug administrations to a cow.
20. Discuss with vet – the withholding period for treated cows that are only milked once a day.
21. Discard the milk from all four quarters of treated animals.

Article end.