DID YOU KNOW?

- Antibiotics in milk can kill the bacterial cultures that are added during the manufacturing of some dairy products, such as yogurt and cheese.
- Consumers who are allergic to antibiotics can become very sick if exposed to even small doses of antibiotics.
- Low-level intake of antibiotics from food could result in resistant microorganisms.

DEPARTMENT OF AGRICULTURE

Testing Milk on the Farm

On farm testing of the bulk tank is one of the best ways to ensure milk with drug residues does not leave your farm. Because each test has slight variations in testing capabilities, understanding how tests differ and which test(s) your creamery is using will help you make the most of your testing program.

What should you know about on-farm testing?

- Tests are easy to set up and run.
- Test kits vary in their cost, length of time to run *(See Table 1)* and which drugs and drug levels they detect. *(See Table 2)*
- Test kits may be provided at a discount through your processor. Contact your dairy field service representative to find out what tests are available to you and at what price. If they are not available through your processor, you can contact the manufacturer directly. *(See Table 1)*

Which test should you use?

Whenever possible, on-farm bulk tank testing should be performed with the same test as your processor uses to test milk upon arrival at their facility. Using the same test as your processor will increase your ability to detect the same drug residues at the same levels. Using a test that differs from your processor may lead to an on-farm result that conflicts with your processor's result.

Should you test individual animals?

Producers should always test treated animals and fresh cows individually before commingling their milk into the bulk tank. Testing should start after the milk withholding time has been met and continue until the animal's results are negative/not found. Some tests, such as a Delvotest®, are more appropriate for testing individual animals, and are designed to detect a wide variety of antibiotics used on the farm, and at a low sensitivity level for most drugs.

In accordance with the Americans with Disabilities Act, this information is available in alternative forms of communication upon request by calling 651-201-6000. TTY users can call the Minnesota Relay Service at 711. The MDA is an equal opportunity employer and provider.

Table 1. Widely available on-farm screening test kits.

Test	Test run time	Cost to you**	How to order
Charm® BL30SEC	30 seconds	$71.00/20 tests $326.00/100 tests $1538 for EZ Lite reader/incubator combo (one-time cost)	Contact 1-800-343-2170 to be put in touch with your local representative
Charm® SL	8 minutes	$69.00/20 tests $318.00/100 tests $373.00 for incubator (one-time cost)	Contact 1-800-343-2170 to be put in touch with your local representative
Charm® SL3	3 minutes	$71.00/20 tests $326.00/100 tests $373.00 for incubator (one-time cost)	Contact 1-800-343-2170 to be put in touch with your local representative
Delvotest® P Mini	2-3 hours	$40.12/25 tests $153.44 for the Delvotest® block heater (one-time cost)	Call DSM (Distributor Nelson Jameson): 1-800-826-8302
IDEXX New SNAP® Beta Lactam Test	5 minutes to heat 4 minutes to read	$101.97/30 tests $309 for heater block (one-time cost) $445 Dairy Starter Kit (timer, heater, 40 tests- 20 beta lactam, 20 tetracycline)	Call 1-800-321-0207 and ask to be put in touch with your local representative

****These are list prices and they are subject to change. Make sure to contact the appropriate party to ask about current prices and discounts.**

While the MDA does not endorse specific products, the tests included in table 1 are commonly used on farms and approved for use by the FDA for testing of beta lactam drugs.

Table 2. Milk Drug Residue Screening Test Detection Levels for the Beta Lactam Group

DRUG	AMOXICILLIN	AMPICILLIN	CEFTIOFUR	CEPHAPIRIN	CLOXACILLIN	PENICILLIN
TOLERANCE OR SAFE LEVEL	10 ppb	10 ppb	100 ppb	20 ppb	10 ppb	5 ppb
SCREENING TEST						
Charm® BL30SEC Beta Lactam Test	5.8	5.9	73	13	8.1	2.9
Charm® SL Beta Lactam Test	5.6	8.5	77	13.7	50	3.6
Charm® 3 SL3 Beta Lactam Test	8.4	8.0	79	20.0	8.6	3.8
*Delvotest® P 5 Pack	4.6	4.0	ND[1]	8.2	NA	2.1
*Delvotest® P Mini	7.7	5.1	NA[2]	7.0	30	3.1
New SNAP® Beta Lactam Test	7.3	5.8	12	11.7	50	3.0

*Delvotests® are not specific for Beta-lactams only. A non-Beta lactam drug residue, such as a sulfa or a tetracycline, can cause a positive test.

[1] ND indicates not detected at or below the tolerance level. Ceftiofur and its metabolites may be detected at levels above the tolerance level.

[2] NA indicates that test detection levels are not available from the manufacturer.

Table 2 is based on information found in FDA m-a-85, Revision #16. This document details the list of all approved tests and their limits of detection. New tests are approved frequently and changes to requirements can occur.

For additional information visit **www.mda.state.mn.us/residue-prevention**