



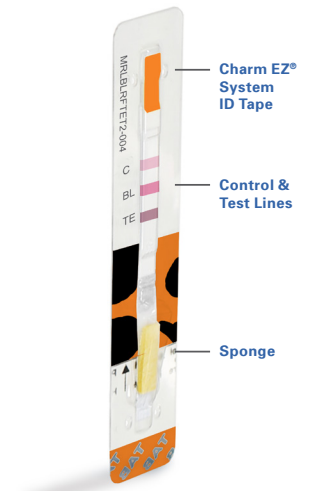
## Charm MRL Beta-lactam and RF Tetracycline 2-Minute Test for Milk

### Product Overview

Charm® ROSA® (Rapid One Step Assay) technology is trusted by the dairy industry worldwide for fast and accurate milk residue screening.

The Charm MRL Beta-lactam and RF Tetracycline 2-Minute Test (MRLBLRFET2) is the fastest combo test for the detection of beta-lactam and tetracycline drugs in milk... just 2 minutes! Charm Sciences designed this test to meet the specific requirements for dairies exporting milk products to the Customs Union Countries (Russia, Kazakhstan, and Belarus).

The 2-minute combination test is designed for use by dairy producer, milk intake, laboratory, field, transport, and regulatory personnel.



Charm ROSA Strip

### Benefits of MRLBLRFET2 Test Include:

- Achieves results in 2 minutes for cow milk
- Achieves results in 5 minutes for goat milk and 8 minutes for sheep milk
- Detects 13 beta-lactam and 4 tetracycline drugs
- Meets EU / CODEX Maximum Residue Limit
- Meets Custom Union Import Requirements

### Simple Procedure with the Charm EZ System



Add Sample



Incubate



Read Results in Less Than 5 Seconds



For Batch Processing

Incubate multiple strips simultaneously, then read results in the Charm EZ system.

## Sensitivity in Milk

Detection Ranges in Cow Milk at 0 to 7 °C		
Beta-lactam Drug	Detection Range <sup>†</sup> (ppb*)	EU/CODEX MRL (ppb*)
Amoxicillin	3 to 5 ppb	4 ppb
Ampicillin	3 to 4 ppb	4 ppb
Cefacetrile	30 to 50 ppb	125 ppb
Cefalonium	8 to 12 ppb	20 ppb
Cefazolin	15 to 30 ppb	50 ppb
Cefoperazone	1 to 2 ppb	50 ppb
Cefquinome	15 to 20 ppb	20 ppb
Ceftiofur and Metabolite <sup>^</sup>	40 to 70 ppb	100/100 ppb
Cephapirin	10 to 20 ppb	60 <sup>§</sup> ppb
Cloxacillin	10 to 20 ppb	30 ppb
Dicloxacillin	10 to 20 ppb	30 ppb
Oxacillin	10 to 20 ppb	30 ppb
Penicillin G	1.5 to 2.5 ppb	4/4 ppb
Tetracycline Drug	Detection Range <sup>†</sup> (ppb*)	Russian Technical Regulations (ppb*)
Chlortetracycline	6 to 10 ppb	10 <sup>‡</sup> ppb
Doxycycline	6 to 10 ppb	10 <sup>‡</sup> ppb
Oxytetracycline	6 to 10 ppb	10 ppb
Tetracycline	6 to 10 ppb	10 <sup>‡</sup> ppb

<sup>†</sup> Positive at least 95% of the time  
<sup>\*</sup> parts per billion or µg/kg  
<sup>^</sup> Ceftiofur parent drug sensitivity is at levels approximately ¼ those reported in the table.  
<sup>§</sup> U.S. tolerance is 20 ppb cephapirin.  
<sup>‡</sup> Russian Technical Regulation on Milk and Milk Products (TR TS 021/2011 and TR TS 033/2013).

## Ordering Information

Order Codes	Each Kit Includes
LF-MRLBLRFET2-40NSK	Test Strips and Positive Controls
LF-MRLBLRFET2-100K	Test Strips and Positive Controls

See Operator's Manual for additional kits and order codes.

[www.charm.com](http://www.charm.com)

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