

Charm TRIO Test for Milk

3
minutes

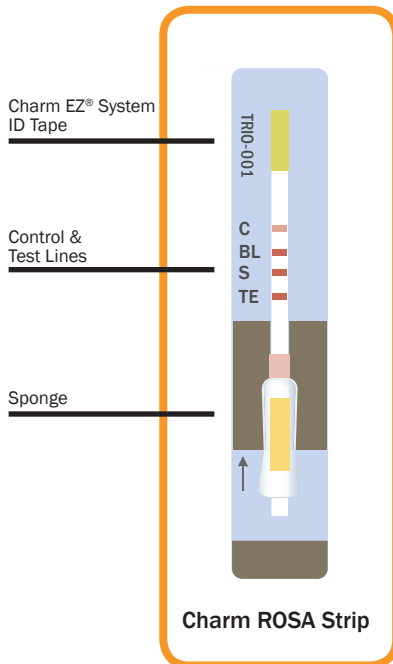
Product Overview



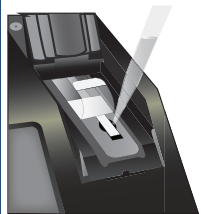
Charm® Rapid One Step Assay (ROSA®) technology is trusted by the dairy industry worldwide for fast and accurate milk residue screening. The **Charm TRIO® Test (TRIO)** detects beta-lactams, sulfa drugs, and tetracyclines in raw commingled cow milk at or below US Tolerance Level and Canadian Maximum Residue Limit (MRL).

Benefits of the TRIO Test Include:

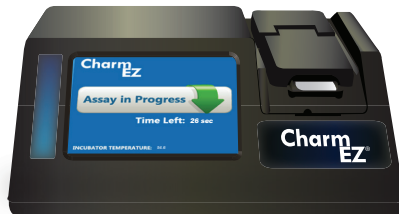
- Achieves results in 3 minutes
- Detects beta-lactams, sulfa, and tetracyclines drugs
- Incubates at 56 ± 1 °C
- Meets US Tolerance levels and Canadian Maximum Residue Limit (MRL)
- AOAC-RI Validated



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

Sensitivity-Detection ^F in Cow Milk at 0 to 7 °C					
Beta-lactam Drug	Detection Level ^A (ppb ^B)	US Safe Level or Tolerance / Canadian MRL (ppb*)	Sulfa Drug	Detection Level ^A (ppb ^B)	US Safe Level or Tolerance / Canadian MRL (ppb ^B)
Amoxicillin	3.5 ppb	10 / None ppb	Sulfadimethoxine	7.6 ppb	10 / 10 ^E ppb
Ampicillin	8.8 ppb	10 / 10 ppb	Sulfamethazine	9.2 ppb	10 / 10 ^E ppb
Ceftiofur and Metabolites ^C	50 ppb	100 / 100 ppb	Tetracycline Drug	Detection Level ^A (ppb ^B)	US Safe Level/ Tolerance / Canadian MRL (ppb ^B)
Cephapirin	14.5 ppb	20 / 20 ppb	Chlortetracycline	34 ppb	300 / 100 ppb
Cloxacillin	8.5 ppb	10 / None ppb	Oxytetracycline	53 ppb	300 / 100 ppb
Penicillin G	2.0 ppb	5 / 6 ^D ppb	Tetracycline	42 ppb	300 / 100 ppb

^A Positive at least 90% of the time with 95% confidence.

^B Parts per billion or ng/mL

^C Ceftiofur parent drug sensitivity is approximately 1/2 that reported in the table.

^D Canadian MRL for penicillin G is 0.01 IU/ml, equivalent to 6 ppb.

^E Canadian MRL for sulfa drugs are singly or in combination with other MRL listed sulfonamides.

^F Nothing stated herein, including detection level information, shall be understood to imply any warranty or guaranty.

Intra-family Cross Reactivity – Detection Level ^F in Cow Milk at 0 to 7 °C			
Beta-lactam Drug	Detection Range ^G (ppb ^B)	Sulfa Drug	Detection Level ^A (ppb ^B)
Cefacetrile	30 ppb	Sulfabenzamide	200 ppb
Cefadroxil	750 ppb	Sulfacetamide	35 ppb
Cefalexin	750 ppb	Sulfachlorpyridazine	1 ppb
Cefalonium	10 ppb	Sulfadiazine	3 ppb
Cefazolin	20 ppb	Sulfadoxine	20 ppb
Cefoperazone	2 ppb	Sulfaethoxypyridazine	7 ppb
Cefquinome	40 ppb	Sulfaguanidine	125 ppb
Cefuroxime	125 ppb	Sulfamerazine	4 ppb
Dicloxacillin	10 ppb	Sulfamethizole	1 ppb
Nafcillin	100 ppb	Sulfamethoxazole	2 ppb
Oxacillin	25 ppb	Sulfamethoxypyridazine	5 ppb
Penethamate	2 ^H ppb	Sulfanitran	300 ppb
Piperacillin	1 ppb	Sulfapyridine	5 ppb
Tetracycline Drug	Detection Level ^G (ppb ^B)	Sulfaquinoxaline	3 ppb
Doxycycline	250 ppb	Sulfathiazole	1 ppb
		Sulfisoxazole	15 ppb

^B Parts per billion or ng/mL

^F Nothing stated herein, including detection level information, shall be understood to imply any warranty or guaranty.

^G Positive at least 95% of the time.

^H Penethamate is rapidly converted to benzylpenicillin (penicillin G), the marker residue.

Ordering Info

Order Codes	Each Kit Includes
LF-TRIO-20K LF-TRIO-100K LF-TRIO-500K	Test Strips and Positive Controls

See Operator's Manual for additional kits and order codes



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