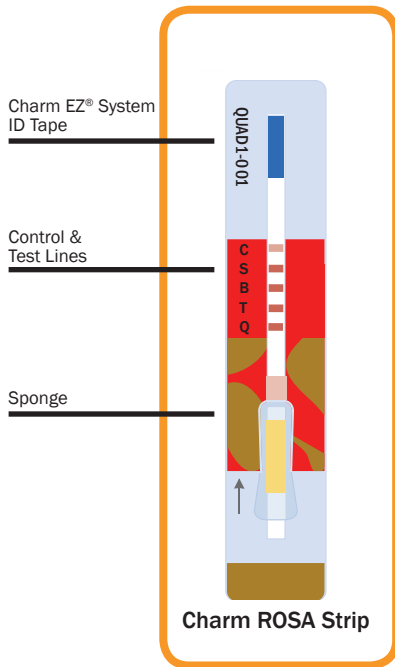


# Charm QUAD1 Test for Milk

5  
minutes

## Product Overview

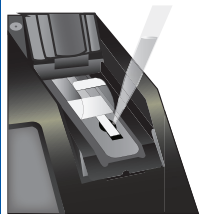


Charm® ROSA® (Rapid One Step Assay) technology is trusted by the dairy industry world-wide for fast and accurate milk residue screening. The **Charm QUAD1 Test (QUAD1)** detects beta-lactam, quinolone, sulfonamide, and tetracycline drugs in raw commingled milk. The QUAD1 test may be used to test at or below EU/CODEX and China Maximum Residue Limits (MRL).

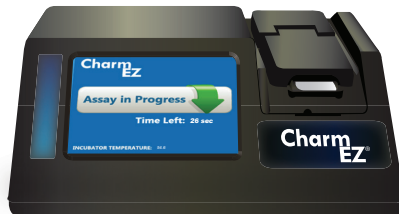
### Benefits of QUAD1 Test Include:

- Achieves results in 5 minutes
- Detects beta-lactams, quinolones, sulfonamides and tetracyclines
- Incubates at  $56 \pm 1$  °C
- Meets EU/CODEX MRL and China MRL

## 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

Beta-lactam, quinolone, sulfa, and tetracycline-free raw milk yields negative results at least 99% of the time.

**Table Sensitivity - Detection Ranges in Cow Milk at 0 to 7 °C**

Beta-lactam Drug	Detection Range <sup>B</sup> (ppb <sup>A</sup> )	EU/CODEX MRL (ppb <sup>A</sup> )	China MRL (ppb <sup>A</sup> )	Sulfa Drug	Detection Range <sup>B</sup> (ppb <sup>A</sup> )	EU/CODEX MRL (ppb <sup>A</sup> )	China MRL (ppb <sup>A</sup> )
Amoxicillin	2 to 4	4	10	Sulfacetamide	30 to 50	100	100
Ampicillin	2 to 4	4	10	Sulfachlorpyridazine	10 to 20	100	100
Cefacetrole	20 to 40	125		Sulfadiazine	10 to 20	100	100
Cefalexin	40 to 80	100	100	Sulfadimethoxine	10 to 20	100	100
Cefalonium	4 to 8	20		Sulfadoxine	80 to 100	100	100
Cefazolin	15 to 25	50		Sulfaethoxypyridazine	10 to 20	100	100
Cefoperazone	1 to 3	50		Sulfamerazine	20 to 40	100	100
Cefquinome	8 to 15	20		Sulfamethizole	10 to 20	100	100
Ceftiofur and Metabolites <sup>C</sup>	50 to 70	100	100	Sulfadimidine (Sulfamenthazine)	10 to 20	100 / 25	25
Cefuroxime	15 to 25	None		Sulfamethoxazole	30 to 50	100	100
Cephapirin	6 to 10	60		Sulfamethoxy-pyridazine	20 to 40	100	100
Cloxacillin	15 to 25	30	30	Sulfapyridine	10 to 20	100	100
Dicloxacillin	15 to 20	30		Sulfaquinoxaline	10 to 20	100	100
Oxacillin	15 to 25	30	30	Sulfathiazole	10 to 20	100	100
Penicillin G	2 to 4	4	4	Sulfisoxazole	10 to 20	100	100

Quinolone Drug	Detection Range <sup>B</sup> (ppb <sup>A</sup> )	EU/CODEX MRL (ppb <sup>A</sup> )	China MRL (ppb <sup>A</sup> )	Tetracycline Drug	Detection Range <sup>B</sup> (ppb <sup>A</sup> )	EU/CODEX MRL (ppb <sup>A</sup> )	China MRL (ppb <sup>A</sup> )
Ciprofloxacin	10 to 15	100 <sup>D</sup>	100	Chlortetracycline	40 to 70	100	100
Danofloxacin	15 to 20	30	30	Doxycycline	80 to 100	0 <sup>H</sup>	100
Enrofloxacin	10 to 15	100 <sup>D</sup>	100	Oxytetracycline	40 to 70	100	100
Flumequin	20 to 40	50	50	Tetracycline	5 to 20	100	100
Lomefloxacin	10 to 15						
Marbofloxacin	20 to 30	75					
Naladixic Acid	10 to 15						
Ofloxacin	10 to 15						
Norfloxacin	5 to 10						
Pefloxacin	5 to 10						
Orbifloxacin	5 to 10						

<sup>A</sup> Parts per billion, µg/kg or µg/L  
<sup>B</sup> Positive at least 95% of the time  
<sup>C</sup> Ceftiofur parent drug sensitivity is approximately 1/2 that reported in the table.  
<sup>D</sup> EU MRL is 100 ppb (µg/kg) total sum of enrofloxacin and ciprofloxacin as marker residues of which approximately 8% is enrofloxacin and 80% is ciprofloxacin in milk from enrofloxacin treated cows.  
<sup>H</sup> Not for use in animals from which milk is produced for human consumption.

## Ordering Info

Order Codes	Each Kit Includes
<b>LF-QUAD1-20K</b> <b>LF-QUAD1-100K</b>	Test strips

See Operator's Manual for additional kits and order codes



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MRK-908-003 Dec-2019