



5 Minute Test



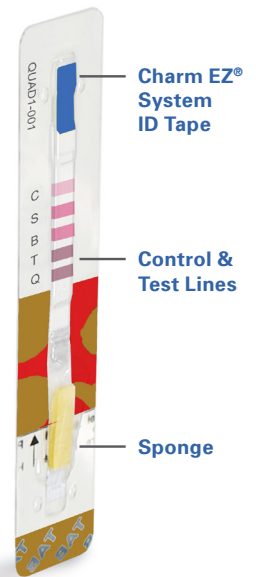
Charm QUAD1 Test for Milk

Product Overview

The Charm® QUAD®1 Test (QUAD1) delivers rapid and accurate results using ROSA® (Rapid One Step Assay) lateral flow technology. The QUAD1 test 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 ± 1 °C
- Meets EU/CODEX MRL and China MRL

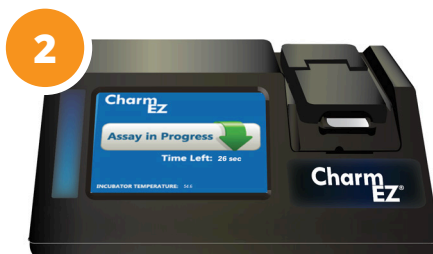


Charm ROSA Strip

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 [†] (ppb [*])	EU/CODEX MRL (ppb [*])	China MRL (ppb [*])	Sulfa Drug	Detection Range [†] (ppb [*])	EU/CODEX MRL (ppb [*])	China MRL (ppb [*])
Amoxicillin	2 to 4 ppb	4 ppb	10 ppb	Sulfacetamide	30 to 50 ppb	100 ppb	100 ppb
Ampicillin	2 to 4 ppb	4 ppb	10 ppb	Sulfachlorpyridazine	10 to 20 ppb	100 ppb	100 ppb
Cefacetrile	20 to 40 ppb	125 ppb		Sulfadiazine	10 to 20 ppb	100 ppb	100 ppb
Cefalexin	40 to 80 ppb	100 ppb	100 ppb	Sulfadimethoxine	10 to 20 ppb	100 ppb	100 ppb
Cefalonium	4 to 8 ppb	20 ppb		Sulfadoxine	80 to 100 ppb	100 ppb	100 ppb
Cefazolin	15 to 25 ppb	50 ppb		Sulfaethoxypyridazine	10 to 20 ppb	100 ppb	100 ppb
Cefoperazone	1 to 3 ppb	50 ppb		Sulfamerazine	20 to 40 ppb	100 ppb	100 ppb
Cefquinome	8 to 15 ppb	20 ppb		Sulfamethizole	10 to 20 ppb	100 ppb	100 ppb
Ceftiofur and Metabolites [^]	50 to 70 ppb	100 ppb	100 ppb	Sulfadimidine (Sulfamethazine)	10 to 20 ppb	100/25 ppb	25 ppb
Cefuroxime	15 to 25 ppb	None		Sulfamethoxazole	30 to 50 ppb	100 ppb	100 ppb
Cephapirin	6 to 10 ppb	60 ppb		Sulfamethoxypyridazine	20 to 40 ppb	100 ppb	100 ppb
Cloxacillin	15 to 25 ppb	30 ppb	30 ppb	Sulfapyridine	10 to 20 ppb	100 ppb	100 ppb
Dicloxacillin	15 to 20 ppb	30 ppb		Sulfaquinoxaline	10 to 20 ppb	100 ppb	100 ppb
Oxacillin	15 to 25 ppb	30 ppb	30 ppb	Sulfathiazole	10 to 20 ppb	100 ppb	100 ppb
Penicillin G	2 to 4 ppb	4 ppb	4 ppb	Sulfisoxazole	10 to 20 ppb	100 ppb	100 ppb

Quinolone Drug	Detection Range [†] (ppb [*])	EU/CODEX MRL (ppb [*])	China MRL (ppb [*])	Tetracycline Drug	Detection Range [†] (ppb [*])	EU/CODEX MRL (ppb [*])	China MRL (ppb [*])
Ciprofloxacin	10 to 15 ppb	100 ppb	100 ppb	Chlortetracycline	40 to 70 ppb	100 ppb	100 ppb
Danofloxacin	15 to 20 ppb	30 ppb	30 ppb	Doxycycline	80 to 100 ppb	0 [‡] ppb	100 ppb
Enrofloxacin	10 to 15 ppb	100 ppb	100 ppb	Oxytetracycline	40 to 70 ppb	100 ppb	100 ppb
Flumequin	20 to 40 ppb	50 ppb	50 ppb	Tetracycline	5 to 20 ppb	100 ppb	100 ppb
Lomefloxacin	10 to 15 ppb			* parts per billion, µg/kg or µg/L † Positive at least 95% of the time ^ Ceftiofur parent drug sensitivity is approximately 1/2 that reported in the table ‡ Not for use in animals from which milk is produced for human consumption.			
Marbofloxacin	20 to 30 ppb	75 ppb					
Naladixic Acid	10 to 15 ppb						
Ofloxacin	10 to 15 ppb						
Norfloxacin	5 to 10 ppb						
Pefloxacin	5 to 10 ppb						
Orbifloxacin	5 to 10 ppb						

Ordering Information

Order Codes	Each Kit Includes
LF-QUAD1-40NSK	Test Strips
LF-QUAD1-100K	Test Strips and Positive Controls

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

www.charm.com

T +1.978.687.9200 | F +1.978.687.9216 | E info@charm.com | 659 Andover Street, Lawrence, MA 01843-1032
© 2025 Charm Sciences, Inc. | Charm, Charm EZ, and ROSA are registered trademarks, and test strip product packaging is trade dress, of Charm Sciences, Inc. | MRK-908-006 Feb-2025

