

Charm vs. Competitor X Comparison

This comparison shows the procedural steps for Charm Sciences' ROSA® Mycotoxin water-based tests side-by-side with another well-known industry competitor.

All four Charm ROSA WET® methods for the detection of aflatoxin, vomitoxin (DON), fumonisin and zearalenone use the same extract and require an incubation time of 5 minutes or less after sample preparation. Charm's AFQ-WETS3, AFQ-WETS5 (not shown), FUMQ-WETS5, and ZEARQ-WETS5 are all approved by the United States Department of Agriculture's Federal Grain Inspection Service (USDA-FGIS).

Charm also has a faster 2-minute DON test that is FGIS approved and mycotoxin methods available to detect ochratoxin and T-2/HT-2 toxins.

In summary – Charm is the easiest and fastest method, requiring the fewest procedural steps and has more FGIS-approved methods than the competitor.

Aflatoxin Test Comparison

Manufacturer	Charm	Aflatoxin Competitor
Test	AFQ-WETS3	Test X
Mycotoxin	Aflatoxin	Aflatoxin
Approval	FGIS	FGIS
Solvent	Water	Water
Assay Type	LF	LF
After Weighing and Grinding Sample		
Add Solvent	0.25	0.25
Extract	1.5	3
Settle	-	5
Centrifuge	0.25	-
Filter	-	0.25
Dilution Cup Setup	-	0.25
Dilute	0.25	0.25
Pipet	0.25	0.25
Incubate	3	6
Insert Strip into Cartridge	-	0.25
Read	0.25	0.25
Total (minutes)	5.75	15.75
Range	5 to 100 ppb	5 to 50 ppb

Vomitoxin (DON) Test Comparison

Manufacturer	Charm	DON Competitor
Test	DONQ-WETS5	Test X
Mycotoxin	DON	DON
Approval	NA	NA
Solvent	Water	Water
Assay Type	LF	LF
After Weighing and Grinding Sample		
Add Solvent	0.25	0.25
Extract	1.5	3
Settle	-	5
Centrifuge	0.25	-
Filter	-	0.25
Dilution Cup Setup	-	0.25
Dilute	0.25	0.25
Pipet	0.25	0.25
Incubate	5	3
Insert Strip into Cartridge	-	0.25
Read	0.25	0.25
Total (minutes)	7.75	12.75
Range	0.5 to 5 ppm	0.5 to 5 ppm

Vomitoxin (DON) Test Comparison

Manufacturer	Charm	DON Competitor
Test	DONQ2	Test X
Mycotoxin	DON	DON
Approval	FGIS	FGIS
Solvent	Water	Water
Assay Type	LF	LF
After Weighing and Grinding Sample		
Add Solvent	0.25	0.25
Extract	1	3
Settle	-	3
Centrifuge	0.25	-
Filter	-	0.25
Dilution Cup Setup	-	0.25
Dilute	0.25	0.25
Pipet	0.25	0.25
Incubate	2	3
Insert Strip into Cartridge	-	0.25
Read	0.25	0.25
Total (minutes)	4.25	10.75
Range	0.5 to 5 ppm	0.5 to 5 ppm

Fumonisin Test Comparison

Manufacturer	Charm	Fumonisin Competitor
Test	FUMQ-WETS5	Test X
Mycotoxin	Fumonisin	Fumonisin
Approval	FGIS	FGIS
Solvent	Water	65% EtoH
Assay Type	LF	LF
After Weighing and Grinding Sample		
Add Solvent	0.25	0.25
Extract	1.5	3
Settle	-	1
Centrifuge	0.25	-
Filter	-	0.25
Dilution Cup Setup	-	0.25
Dilute	0.25	0.25
Pipet	0.25	0.25
Incubate	5	6
Insert Strip into Cartridge	-	0.25
Read	0.25	0.25
Total (minutes)	7.75	11.75
Range	0.5 to 5 ppm	0.5 to 5 ppm

Zearalenone Test Comparison

Manufacturer	Charm	Zearalenone Competitor
Test	ZEARQ-WETS5	Test X
Mycotoxin	Zearalenone	Zearalenone
Approval	FGIS	NA
Solvent	Water	Water
Assay Type	LF	LF
After Weighing and Grinding Sample		
Add Solvent	0.25	0.25
Extract	1.5	3
Settle	-	5
Centrifuge	0.25	-
Filter	-	0.25
Dilution Cup Setup	-	0.25
Dilute	0.25	0.25
Pipet	0.25	0.25
Incubate	5	5
Insert Strip into Cartridge	-	0.25
Read	0.25	0.25
Total (minutes)	7.75	14.75
Range	50 to 350 ppb	50 to 500 ppb

T2-HT2 Test Comparison

Manufacturer	Charm	T2-HT2 Competitor
Test	T2/HT2	Test X
Mycotoxin	T2/HT2	T2/HT2
Approval	NA	NA
Solvent	70% MeOH	Water
Assay Type	LF	LF
After Weighing and Grinding Sample		
Add Solvent	0.25	0.25
Extract	1	3
Settle	-	5
Centrifuge	0.25	-
Filter	-	0.25
Dilution Cup Setup	-	0.25
Dilute	0.25	0.25
Filter	0.25	-
Pipet	0.25	0.25
Incubate	10	5
Insert Strip into Cartridge	-	0.25
Read	0.25	0.25
Total (minutes)	12.5	14.75
Range	5 to 30 ppb	25 to 500 ppb

Ochratoxin Test Comparison

Manufacturer	Charm	Ochratoxin Competitor
Test	OCHRAQ	Test X
Mycotoxin	Ochratoxin	Ochratoxin
Approval	FGIS	NA
Solvent	70% MeOH	Water
Assay Type	LF	LF
After Weighing and Grinding Sample		
Add Solvent	0.25	0.25
Extract	1	3
Settle	-	5
Centrifuge	0.25	-
Filter	-	0.25
Dilution Cup Setup	-	0.25
Dilute	0.25	0.25
Filter	0.25	-
Pipet	0.25	0.25
Incubate	10	5
Insert Strip into Cartridge	-	0.25
Read	0.25	0.25
Total (minutes)	12.50	14.75
Range	5 to 30 ppb	5 to 25 ppb