

**ROSA® FAST5 Fumonisin Quantitative Test Flow Chart**

See Approved Commodities Below

**Test Ranges:**  
0 to 1.5 ppm  
0 to 6 ppm  
0 to 25 ppm

Charm-Validated Commodities:

**A 2:1 Extraction Ratio:** Barley, Corn, Corn Gluten Meal, Flaking Corn Grits, Millet, Oat Groats, Rough Rice, Sorghum, Wheat

**B 3:1 Extraction Ratio:** Distillers Dried Grain with Solubles (DDGS)

**C 3:1 Extraction Ratio:** Corn Germ Meal

Sample Preparation

**(1) Weigh**  
Ground sample<sup>D</sup>  
**50 g**  
or 10 g

**(2) Add Solvent**  
70% Methanol  
**100 mL<sup>A</sup> / 150 mL<sup>BC</sup>**  
or 20 mL<sup>A</sup>/30 mL<sup>BC</sup>

**(3) Extract**  
Shake vigorously or blend for 1 minute; do not exceed 2 minutes.

**(4) Clarify**  
Centrifuge or allow to settle

**(5) Dilute<sup>C</sup>**  
Prepare **Diluted Extract**  
100 µL Extract<sup>C</sup> + 1.0 mL FUM Dilution Buffer  
Mix → **Diluted Extract**  
<sup>C</sup>158 µL Extract for Corn Germ Meal

**Filter for:**  
Barley, Corn Gluten Meal, and Wheat only

Pass Diluted Extract through RC15 Filter

**(6) Dilute**  
Prepare **2<sup>nd</sup> Diluted Extract**  
300 µL Diluted Extract + 1.0 mL FUM Dilution Buffer  
Mix → **2<sup>nd</sup> Diluted Extract**

<sup>D</sup>50 g is the Charm recommended sample weight, 10 g is an optional sample weight

Test Procedure

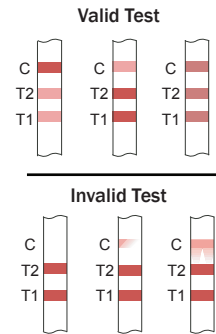
**(1)**  
Place test strip in ROSA Incubator or Charm EZ<sup>®</sup>-M system.  
  
For Charm EZ-M system, select appropriate test, commodity, and dilution if prompted.

**(2)**  
Peel tape.  
Pipet 300 µL **Diluted Extract** or **2<sup>nd</sup> Diluted Extract** into sample compartment.  
Reseal tape.

**(3)**  
Close lid.  
Incubate for 5 minutes.

Read Result

**(1) Inspect test strip**



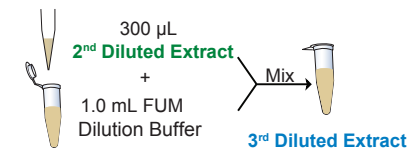
**(2) Read result with ROSA-M Reader or Charm EZ-M system**

**ROSA-M Reader:** Select FUM channel in 3-line mode (blinking) and appropriate MATRIX.

**Charm EZ-M system:** Select appropriate test, commodity and dilution if prompted.

Extraction Ratio	Sample (Dilution)	MATRIX	Quantitation Range	LOD
<b>2:1<sup>A</sup></b>	Diluted Extract (DE)	00	0.5 to 1.5 ppm	0.25 ppm
	<b>2<sup>nd</sup> Diluted Extract (2ND DE)</b>	01	<b>1 to 5.4 ppm</b>	-
	<b>3<sup>rd</sup> Diluted Extract (3RD DE)</b>	02	<b>5 to 25 ppm</b>	-
<b>3:1<sup>B</sup></b>	Diluted Extract (DE)	03	0.5 to 1.5 ppm	0.25 ppm
	<b>2<sup>nd</sup> Diluted Extract (2ND DE)</b>	04	<b>1 to 5.4 ppm</b>	-
	<b>3<sup>rd</sup> Diluted Extract (3RD DE)</b>	05	<b>5 to 25 ppm</b>	-
<b>3:1<sup>C</sup></b>	<b>2<sup>nd</sup> Diluted Extract (2ND DE)</b>	01	<b>1 to 5.4 ppm</b>	-
	<b>3<sup>rd</sup> Diluted Extract (3RD DE)</b>	02	<b>5 to 25 ppm</b>	-

**For quantitation of 5 to 25 ppm:**



- (1) Prepare 3<sup>rd</sup> Diluted Extract**
- (2) Repeat Test Procedure (steps 1, 2, 3) with 3<sup>rd</sup> Diluted Extract**
- (3) Read Result**