U.S. DEPARTMENT OF AGRICULTURE
Federal Grain Inspection Service

CERTIFICATE NO.: FGIS 2023-173

CERTIFICATE OF CONFORMANCE

Quantitative test kit for fumonisins in corn (including dent or field corn, corn meal, cracked corn, corn grits or polenta, and corn screenings).

For: EnviroLogix Inc.
Method: Lateral Flow Strip

Submitted by: EnviroLogix Inc.
500 Riverside Industrial Pkwy
Portland, ME 04103
Telephone: (207) 797-0300
Contact: Ms. Carolyn Malloy

Standard Features and Options

Model:	TotalTox Fumonisin, Product # AQ 411 BG
Sample Preparation:	Grind sample so that ≥ 95% passes through a 20 mesh sieve
Extraction Method:	Shake 50-gram sample with two EB17 pouches and 150 mL deionized or distilled water using mechanical shaker at 300 rpm for one minute.
Temperature Range:	18 – 30 ºC (64 – 86 ºF)
Fumonisin Level:	0.50 – 100 ppm
Detection Technique:	EnviroLogix QuickScan System and EnviroLogix QuickScan II Reader

Test kits must be operated according to the FGIS-issued instructions.

This test kit underwent an initial verification of performance under the authority of Section 79b (c) of the United States Grain Standards Act, as amended, and was found to meet all test performance criteria as defined in "Design Criteria and Test Performance Specifications for Quantitative Fumonisin Test Kits," January 2023 version. Evaluation tests that passed are summarized in Attachment I.

For further information, contact:

USDA, Federal Grain Inspection Service
Technology and Science Division
Analytical Chemistry Branch
10383 N. Ambassador Drive
Kansas City, Missouri 64153-1394 Telephone: (816) 702-3800

THOMAS WEBER

Digitally signed by THOMAS WEBER
Date: 2023.04.27 07:24:35 -05'00'

Date: 4/27/2023

Thomas A. Weber, Chief, Analytical Chemistry Branch
Technology and Science Division

Certificate Expires Three Years from the Date Signed

Note: The mention of firm name or trade products does not imply that they are endorsed or recommended by the United States Department of Agriculture over other firms or similar products not mentioned.

Type Evaluation
Certificate No.: FGIS 2023-173

ATTACHMENT I

Manufacturer: EnviroLogix Inc.
500 Riverside Industrial Pkwy
Portland, ME 04103
Telephone: (207) 797-0300
Contact: Ms. Carolyn Malloy

TEST 1: TIME REQUIRED FOR COMPLETION OF AN ANALYSIS.

The data submitted by the manufacturer indicated that the analysis time required for one sample was less than the maximum limit of 30 minutes.

TEST 2: COMPARATIVE ACCURACY OF TEST KITS ON CORN SAMPLES NATURALLY CONTAMINATED WITH FUMONISINS.

The data submitted by the test kit manufacturer for four corn samples, naturally contaminated at approximately 0.5, 2, 5, 30, and 100 ppm total fumonisins, met the performance criteria.

TEST 3: ADDITIONAL COMMODITIES.

The manufacturer did not submit data supporting the performance of this kit for any additional commodity.

TEST 4: AVOIDANCE OF TOXIC OR HAZARDOUS SUBSTANCES.

The Safety Data Sheets (SDS) provided by the manufacturer confirmed this test kit meets safety requirements.

TEST 5: SENSITIVITY TO ELECTROMAGNETIC FIELDS (EMF).

A statement of certification has been provided that indicated the EnviroLogix QuickScan System and EnviroLogix QuickScan II Reader met the EMF sensitivity requirements.

TEST 6: TEMPERATURE SENSITIVITY.

The data submitted by the test kit manufacturer supported performance of the kit at 18 ºC, 24 ºC, and 30 ºC.

TEST 7: STABILITY.

The data submitted by the test kit manufacturer supported storage and stability claims.

TEST 8: FGIS PERFORMANCE VERIFICATION.

The data generated by FGIS staff showed the test kit is capable of quantifying fumonisins in corn in the range of 0.50–100 ppm total fumonisins. The evaluation was conducted using the EnviroLogix QuickScan System and EnviroLogix QuickScan II Reader

United States Department of Agriculture
Agricultural Marketing Service
Federal Grain Inspection Service
Technology and Science Division
10383 North Ambassador Drive
Kansas City, MO 64153

Attachment I - Summary of Verification Data for Test Kit (2023224QN) Fumonisins in Corn

EnviroLogix QuickScan System

0.5 ppm Level		2 ppm Level		30 ppm Level	
Analyst	Reading	Analyst	Reading	Analyst	Reading
1	0.39	1	1.9	1	29
1	0.37	1	1.8	1	26
1	0.39	1	1.7	1	26
1	0.39	1	1.9	1	27
1	0.36	1	1.9	1	28
1	0.40	1	1.7	1	28
1	0.38	1	1.8	1	30
2	0.41	2	1.8	2	28
2	0.43	2	1.9	2	33
2	0.44	2	1.7	2	30
2	0.40	2	1.6	2	32
2	0.41	2	1.7	2	30
2	0.44	2	1.7	2	29
2	0.39	2	1.6	2	30
3	0.44	3	1.7	3	26
3	0.43	3	1.8	3	27
3	0.47	3	1.7	3	30
3	0.41	3	1.7	3	30
3	0.42	3	1.8	3	26
3	0.40	3	1.8	3	29
3	0.46	3	1.7	3	29
Total Out-of-Range	**0**		**0**		**0**

Acceptable Ranges CRV ± 2*0.18*CRV CRV ± 2*0.14*CRV CRV ± 2*0.13*CRV

CRV – Certified Reference Value

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Attachment I - Summary of Verification Data for Test Kit (2023224QN)
Fumonisins in Corn

EnviroLogix QuickScan II Reader

0.5 ppm Level		2 ppm Level		30 ppm Level	
Analyst	Reading	Analyst	Reading	Analyst	Reading
1	0.40	1	2.0	1	28
1	0.39	1	1.8	1	27
1	0.38	1	1.7	1	26
1	0.39	1	1.8	1	28
1	0.36	1	2.0	1	27
1	0.36	1	1.8	1	28
1	0.35	1	1.8	1	29
2	0.40	2	1.6	2	27
2	0.41	2	1.6	2	32
2	0.43	2	1.6	2	33
2	0.40	2	1.4†	2	29
2	0.37	2	1.8	2	29
2	0.41	2	1.6	2	29
2	0.37	2	1.6	2	29
3	0.41	3	1.6	3	29
3	0.44	3	1.9	3	27
3	0.49	3	1.7	3	30
3	0.37	3	1.7	3	25
3	0.38	3	2.0	3	29
3	0.43	3	1.8	3	29
3	0.45	3	1.8	3	28
Total Out-of-Range	**0**		**1**		**0**

Acceptable Ranges CRV ± 2*0.18*CRV CRV ± 2*0.14*CRV CRV ± 2*0.13*CRV

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† = Out of the Range

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EnviroLogix QuickScan System 100 ppm Level		EnviroLogix QuickScan II Reader 100 ppm Level	
Analyst	Reading	Analyst	Reading
1	120	1	120
1	90	1	90
1	100	1	100
1	100	1	93
1	120	1	120
1	92	1	95
1	99	1	100
2	120	2	120
2	110	2	100
2	94	2	83
2	100	2	99
2	98	2	95
2	98	2	98
2	110	2	100
3	100	3	98
3	96	3	81
3	90	3	100
3	97	3	93
3	110	3	100
3	98	3	97
3	93	3	100
Total Out-of-Range	**0**		**0**

Acceptable Ranges CRV ± 2*0.13*CRV

CRV – Certified Reference Value