ENVIROLOGIX™

QuickTox™ Kit for QuickScan DON Flex

Catalog AQ 304 BG *Part # 12208, 12120*

Matrices and Detection Ranges:

Matrix Group ID	Matrices	Limit of Detection (LOD)^	Maximum Reported Value of Base Range	Range with Dilution*
DF MG1	Wheat	0.1 ppm	8.0 ppm	2.0-30 ppm
DF MG2	Corn			
DF MG3	Wheat Flour			
DF MG4	White Wheat Flour; Wheat Bran			
DF MG5	Wheat Midds			
DF MG6	Wheat Red Dog			
DF MG7	DDGS			
DF MG8	Corn Gluten Meal			
DF MG9	Corn Germ			
DF MG11	Corn Flour			
DF MG12	Malted Barley			
DF MG13	Barley			
DF MG14	Oats			
DF MG15	Wheat Gluten			
DF MG16	Sorghum	0.2 ppm		
DF MG17	Soybean Meal			
DF MG18	Milled Rice			
DF MG19	Rough Rice			
DF MG20	Whole Rye			
DF MG10	Corn Gluten Feed	0.29 ppm		

^ *Do not assume accuracy for results reported below the assay's LOD.*

**Do not assume accuracy for results reported below 2 or above 30 ppm*

Important Notes:

- Before testing, the enclosed Multi-Matrix Barcode Card (MMBC) must be scanned just once for each kit lot to upload information to the QuickScan
- Scan MMBC with all MG barcodes facing down to enable selection of target matrix during analysis or fold the MMBC and scan only the MG1 or MG2 barcode if you want QuickScan to skip the matrix selection and default to only the matrices associated with the selected group
- QuickScan Software Version 4.11.0 Update 1 or later is required
- DB6 Buffer is matched with specific DON Flex kit lot numbers. Be sure to use DB6 with the kit it is provided with. There is a "use with" label on the DB6 that will indicate the matching DON Flex Lot Number.

If only testing matrix is Wheat or Corn, fold the Multi Matrix Barcode and scan only the DF MG1 or DF MG2 barcode. This allows the software to skip the step which prompts users to select a Matrix Group.

Matrix Group ID	Matrices
DF MG1	Wheat

Matrix Group ID	Matrices
DF MG2	Corn

Table A on page 9 is provided as a Summary Guide for testing each matrix. More details for each step in the process are described below, and are important for achieving optimal, accurate results.

Contents of Kit:

- 50 QuickTox Strips packed in a moisture-resistant canister
- 50 clear Reaction Tubes
- 100 pipette tips
- DB6 Buffer, kit lot specific
- Multi-Matrix Barcode Card, kit lot specific

Items Not Provided:

- QuickScan System*
- Incubator Base (Mini Dry Bath)*
- Incubator Block*
- Bunn grinder or equivalent
- 20-mesh screen (available through Seedburo or other vendors)
- Digital scale for weighing samples
- Plastic sample cups with lids* or other extraction vessels
- Graduated cylinder*
- Orbital/rotary shaker
- Pipette to deliver 100 µL*
- Approved Coffee Filters (EnviroLogix validated)*
- Timer
- Scissors
- Blue dilution tubes (for some matrices)
- Oster blender with ½ gallon glass vessel
- Bottled, distilled or deionized water
- Dilution tubes for high positive samples*
- Microcentrifuge*

*Available as Accessories

Available Accessories:

Item	*Catalog No.*	*Part #*
QuickScan™ System	ACC 131	10050 + 10198
Sample cups w/ lids (500/case) *For extracting samples up to 30g; extracting larger samples requires different vessels. Sample cups may also be used to collect filtrate.*	ACC 012-CS	10167
Graduated cylinder (100 mL)	ACC 068	11207
Coffee filters (100)	ACC 083	11434
MiniPet pipette 100 µL (one/location free)	ACC 041	11202
1 mL adjustable pipette *Helpful for dilution testing*	ACC 1303-PRO-1000	11964
Pipette Tips (50) for 1 mL pipette	20-0127	12243
Centrifugation Set: Disposables for 50 tests	ACC 010	11214
Microcentrifuge	ACC 064 E	11204
Dilution Tubes (50) *12 x 75 mm*	ACC 098	12236
Incubator	ACC BSH 301	12458
Microcentrifuge	ACC 064 E	11204

Intended Use

The QuickTox Kit for QuickScan DON Flex is designed to quickly extract and screen milled samples for the presence of Deoxynivalenol (DON) residues. The QuickTox Kit will then provide quantitative results when used in conjunction with the QuickScan System.

- Limit of detection (LOD) = 0.1 ppm (0.29 ppm for Corn Gluten Feed)
- Assay range = up to 8.0 ppm in a base range and up to 30 ppm with additional dilution.

- In the assay's Base Range, results are reported from 0 to 8 ppm. Accuracy of results less than LOD for each matrix should not be assumed. Results greater than 8 ppm are reported as "> 8 ppm."... When following the Range with Dilution, accuracy should not be assumed for results reported under 2 ppm or over 30 ppm.

How the Test Works

A composite sample is first collected, then extracted to solubilize any DON present. Each sample should be ground to a fineness of 20 mesh and extracted following the protocol specified for the matrix being run. This extract is further diluted for testing with the QuickTox Kit.

Each QuickTox Strip has an absorbent pad at each end. The protective tape with the arrow indicates which end of the strip to insert into the reaction tube. The sample extract travels up the membrane strip and is absorbed into the larger pad at the top of the strip. At the end of the test time, the strip is cut off at the top of the arrow tape, the bottom pads are discarded, and the strip is inserted into the QuickScan reader to obtain quantitative results.

A unified extraction and analysis protocol for most matrices avoids sample preparation error without compromising test accuracy and precision. Each matrix is assigned to a Matrix Group (MG). Each MG has a common standard curve and maximum reported value. When the user selects the MG during testing, the QuickScan System software reads the test strip, retrieves the lot specific information that was uploaded using the Multi-Matrix Barcode Card (MMBC), and uses the appropriate curve to obtain a result for the matrix being tested.

Assay Preparation

Table A on page 9 is provided as a Summary Guide for testing each matrix. More details for each step in the process are described below, and are important for achieving optimal, accurate results. Notice a special sample preparation protocol for Whole Rye and Corn Gluten Feed where intermediate extract dilution has to be applied. Notice Wheat Gluten requires a blender and centrifuge along with a 50g sample size.

Preparation of the Sample

Turn on the incubator and set to 22°C for a minimum of 10 minutes before testing. Ensure the temperature display has stabilized and indicates “OK” before starting the assay. Make sure all reagents including samples, strips, buffer, and sample extractant are at room temperature and ready for use before starting the assay. The sample extract should be tested shortly after dilution with buffer.

Determine number and size of sub-samples and weigh out

1. Collect a composite sample according to your own sampling plan or USDA/GIPSA guidelines. Consult USDA/GIPSA reference documents to help design a plan that fits your needs.
2. Grind samples using a Bunn grinder or mill which provides a sample such that ≥95% passes through a 20-mesh sieve. Mix ground material thoroughly before sub-sampling.
3. Weigh samples into containers that will allow enough head room for the liquid to move forcefully when shaken vigorously.

Extract samples

1. All commodities require the same 5X extraction ratio with water.
   For example, 50 grams x 5 = 250 mL (water) to sample
2. Make sure the grain is completely wet, and then mix thoroughly as stated in the table. Liquid should be moving forcefully through the matrix to extract the DON.
3. The order of addition has been optimized. Please refer to and follow Summary Guide instructions for each matrix regarding the order of addition.
4. Samples that are not thoroughly mixed and <u>fully wetted</u> may adversely affect test results due to inconsistent extraction.

Clarify extracts (adhere to the Summary Guide table for optimal performance)

1. <u>Filtering:</u> Add an approved coffee filter (example: BUNN part #BUNBCF100B) to a clean vessel and pour extract into the filter, allow the sample to sit for 2 minutes. Pull back an edge of the filter to gain access to the filtered extract.

2. Centrifugation: Fill a microcentrifuge tube with extract and centrifuge for the specific time at 2000 x *g* (***not rpm***). The clear layer is the extract that will be used in the testing.
3. Settling: Allow the sample to sit undisturbed until it separates into two layers.. The top layer containing the DON residues will be used in testing In some instances, a foamy layer will float above the desired top layer. The best technique to retrieve this extract is to tip the extraction cup at a 45 degree angle, exposing the supernatant beneath the foamy layer, avoiding particulates.

Add reagents to reaction tube

1. Take care not to contaminate the DB6 Buffer. Keep Buffer covered when not in use, and use a new pipette tip for each test. **Please note**: DB6 Buffer is matched with specific DON Flex kit lot numbers; be sure to use the DB6 that is provided with the kit (do not mix and match buffers with different kit lots). There is a "use with" label on the DB6 that will indicate the matching DON Flex lot number.
2. Follow Table A instructions for Buffer and extract order of addition.
3. Use two pipette tips (one for Buffer, one for extract) for each sample.
4. Mix Buffer and sample extract thoroughly by stirring or drawing the liquids up and down in the pipette tip. Samples that are not thoroughly mixed and/or accurately pipetted will adversely affect test results.
5. Do not reuse diluted samples. Use a new reaction tube for each sample.

How to Run the QuickTox Strip Test

A minimum of 10 minutes before testing is to start, turn on the incubator and set to 22°C (follow manufacturer's instructions for setting temperature). Ensure the temperature display has stabilized and indicates “OK” before starting the assay. If testing is planned throughout the day it recommended to turn the incubator on in the morning and leave it on throughout the day.

1. Allow refrigerated canisters to come to room temperature before opening.
2. Add the Reaction Tube containing the diluted sample to the incubator If the temperature of the testing environment is unknown or outside of the range of 20-24°C (68-75°F), **allow the sample to acclimate in the incubator for 2 minutes before proceeding.**
3. Remove the QuickTox Strips to be used. Avoid bending the strips. Reseal the canister immediately.
4. Place the strip into the reaction tube containing the Buffer and sample extract. The arrow tape on the end of the strip should point into the reaction tube.
5. Allow the strip to develop for the time noted in Table A.
6. Immediately cut off and discard the bottom section of the strip covered by the arrow tape. Insert strip into the QuickScan reader for quantitation.

Use of the QuickScan System

Detailed instructions for use of the QuickScan System are supplied with each unit, and can also be found at http://www.envirologix.com/support/quickscan . The Multi-Matrix Barcode Card must be scanned into the system prior to testing.

In summary, a strip is inserted face down in the carrier with the barcoded end closest to the handle. The carrier is inserted into the reader and the strips are read by touching or clicking on the “Read Test” area of the screen. If the “Select Matrix Groups” screen appears, select the group that displays the matrix run for each device. Results are then recorded in an electronic worksheet, allowing each user to report and track data easily.

Results are reported up to 8.0 ppm. Results will be reported down to ‘0’, but accuracy should not be assumed for results below the LOD for the matrix being tested; reference Table A for the Matrix Group LOD levels. Results greater than 8.0 ppm are reported as ">8.0 ppm."

Range with Dilution

If after running and reading the test, the initial result is greater than 8 ppm (">8 ppm" on QuickScan), and further knowledge about the level of contamination is desired, samples can be retested by further dilution of the sample extract. Do not assume accuracy for results reported below 2 and above 30 ppm using this Dilution protocol.

1. In a separate tube (not provided) combine extract with water to create a 1:8 dilution. Example: 1 part clarified extract + 7 parts water; 100 µL + 700 µL). Measure carefully and mix well.
2. Rerun assay as before, adding Buffer + diluted extract as instructed in Summary Guide into the clear reaction tube (mix, add to the incubator and acclimate if necessary), add a new strip for the time specified. Example: for corn, pipette 100 µL DB6 + 100 µL of the extract diluted with water into a new vial (acclimate), add a new test strip, and allow the strip to develop for the time noted in Table A.
3. In the QuickScan Results Screen, choose "1:A" under the Dilution tab (dropdown menu). The System will calculate and record the DON level in the diluted sample.

Kit Storage

This QuickTox Kit should be stored refrigerated. Note the shelf life on the kit box. Prolonged exposure to high temperatures may adversely affect the test results. Do not open the desiccated canister until ready to use the strips.

Cross-reactivity

The following mycotoxins have been tested with this kit and no false positive results occurred at the 100 ppm level: Aflatoxin B_1, Fumonisin B_1, Ochratoxin A, Zearalenone, T-2 and HT-2.

Precautions and Notes

- Strips must be read wet promptly at the specified time for the matrix run to ensure accurate results.
- Accuracy of results less than the stated LOD for the matrix being tested, should not be assumed.
- This product is currently not applicable for use in testing any other crops beyond those specified in this Product Insert.
- This assay is calibrated against wheat and corn reference samples supplied by Trilogy Analytical Laboratory, Washington, MO, and other vendors and associated HPLC data. Where possible, performance in other sample matrices has been validated using naturally contaminated samples. Where naturally contaminated samples are not available, performance has been validated using fortified samples.
- As with all screening tests, it is recommended that results be confirmed by an alternate method when necessary.
- The assay has been optimized for use with the protocols provided in the kit. Deviation from these protocols may invalidate the results of the test. Room-temperature components, proper and thorough mixing, accurate pipetting, and using the kit lot specific DB6 Buffer provided in the kit are essential to accurate results.
- The results generated through the proper use of this diagnostic tool reflect the condition of the working sample directly tested. Extrapolation as to the condition of the originating lot, from which the working sample was derived, should be based on sound sampling procedures and statistical calculations which address random sampling effects, non-random sampling effects and assay system uncertainty. A negative result obtained when properly testing the working sample does not necessarily mean the originating lot is entirely negative for the analyte in question.
- Protect all components from hot or cold extremes of temperature when not in use. Do not leave in direct sunlight or in vehicle.
- Observe any applicable regulations when disposing of samples and extracts.

For Technical Support Contact Us At:

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LIMITED WARRANTY

EnviroLogix Inc. ("EnviroLogix") warrants the products sold hereunder ("the Products") against defects in materials and workmanship when used in accordance with the applicable instructions for a period not to extend beyond a product's printed expiration date. If the Products do not conform to this Limited Warranty and the customer notifies EnviroLogix in writing of such defects during the warranty period, including an offer by the customer to return the Products to EnviroLogix for evaluation, EnviroLogix will repair or replace, at its option, any product or part thereof that proves defective in materials or workmanship within the warranty period.

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This Limited Warranty states the entire obligation of EnviroLogix with respect to the Products. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

License

EnviroLogix has developed this kit using proprietary reagents.

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Material Safety Data Sheet
According to OSHA 29CFR 1910.1200

SECTION 1 . Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name: **DB 6 Dilution Buffer**
Part number 11151 (KK-268)

1.2 Relevant identified uses of the substance or mixture and uses advised against application of the substance / the preparation : Laboratory chemicals; kit component. Not to be used for purposes other than those specified in product literature.

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier: EnviroLogix Inc., 500 Riverside Industrial Pkwy, Portland ME 04103, USA
Phone: (207) 797-0300

1.4 Emergency telephone number: (207) 797-0300 Technical Service

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to 29CFR 1910.1200: Not Classified

2.2 Label elements
Labeling according to 29CFR 1910.1200

Pictogram: None
Signal word: None
Hazard Statements: None

2.3 Other Statements: None

SECTION 3. Composition/information on ingredients

3.2 Mixture

Chemical name	CAS No	EC No	Classification According to 29CFR 1910.1200	Amount (%)
Sodium Tetraborate Decahydrate	1303-96-4	215-540-4	H360 Rep 1B	1 – 3 %

SECTION 4. First aid measures

4.1 Description of first aid measures
After inhalation : In case of inhalation. Remove to fresh air. If not breathing give artificial respiration. Get medical attention immediately.
After skin contact : In case of skin contact. Remove contaminated clothing and shoes immediately. Wash affected area with mild soap or detergent for at least 10 minutes or until no evidence of chemical remains.
After eye contact : In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Lifting eyelids occasionally, until no evidence of chemical remains. Get medical attention immediately.
After swallowing : In case of ingestion. DO NOT Induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a physician immediately.

4.2 Most important symptoms and effects, both acute And delayed: None

4.3 Indication of any immediate medical attention and special treatment needed: None

SECTION 5. Firefighting measures

5.1 Extinguishing media: CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture: None

5.3 Advice for firefighters: Wear protective gear appropriate for fire conditions including respiratory protective gear.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: In the case of spilled mixture wear gloves to prevent skin contact. In the case of a large spill, additional protection is recommended.

6.2 Environmental precautions: Do not discharge mixture to sewer system or waterways.

6.3 Methods and material for containment and cleanup: Absorb in paper towel or suitable absorbent for larger spills and discard in appropriate waste. Clean with water afterwards.

6.4 References to other sections: For safe handling refer to Section 7. For information on PPE refer to Section 8. For disposal refer to Section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling: Practice good chemical hygiene when handling. Avoid contact with eyes, skin, and clothing.

7.2 Conditions for safe storage, including any Incompatibilities: Store in tightly closed, non-metal container, in a corrosive compatible area. Prevent direct sunlight and heat. Store in well aired storage rooms.

7.3 Specific end use(s): Apart from the uses mentioned in section 1.2, no other specific uses are stipulated

SECTION 8. Exposure controls/personal protection

8.1 Exposure limits:
Components with limit values that require monitoring at the workplace:

	EH40/2005	OSHA
Sodium Tetraborate Decahydrate	8 Hr TWA = 5mg/m³	8 Hr TWA = 10 mg/m³

8.2 Exposure Controls:

8.2.1 Engineering controls: Facilities using this mixture should be equipped with an eyewash and safety shower. Use general or local exhaust ventilation to keep airborne concentrations below permissible exposure limits.

8.2.2 General protective and hygienic measures: The usual precautionary measures should be adhered to when handling chemicals.

Eye Protection: Safety glasses with side shields, goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Eye and face protection regulations are described by OSHA (US) in 29CFR1910.133. Do not wear contact lenses when working with chemicals

Hand Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Breathing Equipment: Appropriate respiratory protection should be determined according to local conditions using risk analysis protocols. An approved disposable air purifying particulate respirator may be used as a backup to engineering controls. Always use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.2.3 Environmental exposure controls: Contain spills, do not allow into environment

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

a) Appearance:	Clear liquid, colorless to slight yellow.
b) Odor:	None
c) Odor Threshold:	No Data Available
d) pH:	8.6
e) Melting point/freezing point:	No Data Available
f) Boiling point/Boiling range:	No Data Available.
g) Flash point:	Not applicable.
h) Evaporation rate:	No Data Available
i) Flammability (solid, gaseous):	No Data Available
j) Upper/lower flammability or explosive limits:	No Data Available
k) Vapor pressure:	No Data Available
l) Vapor density	No Data Available
m) Relative density:	No Data Available
n) Solubility(ies):	Fully miscible, water.
o) Partition Coefficient: n-Octanol/water:	No Data Available
p) Auto-ignition temperature:	No Data Available
q) Decomposition temperature:	No Data Available
r) Viscosity:	No Data Available
s) Explosive properties:	No Data Available.
t) Oxidizing properties:	No Data Available

9.2 Other information: No further relevant information available.

SECTION 10. Stability and reactivity

10.1 Reactivity: No data available

10.2 Chemical Stability: Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10 4 Conditions to avoid: No specific data

10.5 Incompatible materials: No Data Available.

10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decompositions products should not be produced.

SECTION 11. Toxicological information

Information on Toxicological Effects
Acute effects (toxicity tests): No Data Available

Sensitization: No sensitizing effects known

CMR (carcinogenicity, mutagenicity and toxicity for reproduction) effects: No CMR effects.

Additional toxicological information: No Additional Information

SECTION 12. Ecological information

12.1 Toxicity: No Data Available

12.2 Persistence and degradability : No Data Available

12.3 Bio accumulative potential: No Data Available

12.4 Mobility in soil : No Data Available

12.5 Results of PBT and vPvB assessment: Not available as a chemical safety assessment, not required/not conducted.

12.6 Other adverse effects: No Data Available

SECTION 13. Disposal considerations

Waste treatment methods: Contact a licensed professional waste disposal service to dispose of this material. Disposal of surplus or waste solutions must be in accordance with applicable local, state, and national laws and regulations.

SECTION 14. Transport information

14.1 UN-Number DOT, ADR, ADN, IMDG, IATA : Not Hazardous for Transport
14.2 UN proper shipping name DOT, ADR, ADN, IMDG, IATA : Not Hazardous for Transport

14.3 Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA): Not Hazardous for Transport
14.4 Packing group (DOT, ADR, IMDG, IATA): Not Hazardous for Transport

14.5 Environmental hazards No environmental hazard.

14.6 Special precautions for user : None

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code: No information available.

SECTION 15. Regulatory information

15.1 Safety, health, and environmental regulations

US Federal Regulations

OSHA	Not a hazardous material
SARA 313	Not listed

US State Regulations

European/International Regulations

European labeling in accordance with EC Directives	Not hazardous according to European directives
15.2 Chemical Safety Assessment	Not carried out

SECTION 16. Other information

This information is true based on our present knowledge. However, EnviroLogix makes no representation of its accuracy or completeness. Persons receiving this information must exercise their independent judgment in determining the product's safety and suitability for its intended use. This document shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship

EHS Department
EnviroLogix Inc.

Codes:
H360 May damage fertility or the unborn child

SDS : Dilution Buffer DB 6 Revision : 17 June, 2015 Page 5 of 5

Table A: Validated Matrices

<table>
<tr><th>Table A:
Approved Matrices</th><th>Matrix Group</th><th>Limit of Detection – LOD (ppm)</th><th>Add Grain to Vessel First, then Water*</th><th>Fully wet sample, then mix</th><th>Clarify/dilute</th><th>Add to the reaction tube and mix</th><th>Add reaction tube to Incubator set at 22°C</th><th>Add strip for</th><th>For testing >8ppm, dilute extract†</th></tr>
<tr><td>Wheat</td><td>DF MG1</td><td rowspan="15">0.1</td><td rowspan="13">20g to 50g
then
5X volume of water*
(e.g. 20g sample, then 100 mL water)</td><td rowspan="13">30 seconds at the highest speed on shaker table, or vigorously by hand</td><td>Filter
(2 min maximum) or
Centrifuge (30 sec)
or Settle</td><td rowspan="15">100 µL of buffer + 100 µL of clarified extract</td><td rowspan="15">Acclimate tube for 2 min^</td><td rowspan="15">2 min</td><td rowspan="15">1:8 in water (100 µL sample plus 700 µL water) followed by 1:1 with buffer; select 1:A on Dilution tab</td></tr>
<tr><td>Corn</td><td>DF MG2</td><td></td></tr>
<tr><td>Wheat Flour</td><td>DF MG3</td><td rowspan="12">Filter
(2 min maximum)</td></tr>
<tr><td>White Wheat Flour, Wheat Bran</td><td>DF MG4</td></tr>
<tr><td>Wheat Midds</td><td>DF MG5</td></tr>
<tr><td>Wheat Red Dog</td><td>DF MG6</td></tr>
<tr><td>DDGS</td><td>DF MG7</td></tr>
<tr><td>Corn Gluten Meal</td><td>DF MG8</td></tr>
<tr><td>Corn Germ</td><td>DF MG9</td></tr>
<tr><td>Corn Flour</td><td>DF MG11</td></tr>
<tr><td>Malted Barley</td><td>DF MG12</td></tr>
<tr><td>Barley</td><td>DF MG13</td></tr>
<tr><td>Oats</td><td>DF MG14</td></tr>
<tr><td>Wheat Gluten</td><td>DF MG15</td><td>Add 250 mL water to blender vessel
then
50g sample</td><td>Blend sample at highest speed for 2 minutes</td><td>Centrifuge for 1 min @ 2000 X g</td></tr>
</table>

Notes:

* Use distilled, deionized, or flat (non-carbonated) bottled water.

^ The tube acclimation step is only required if the temperature of the testing environment is unknown or outside of 20-24°C (68-75°F)

† Follow the protocol outlined under 'Range with Dilution'

Table A: Validated Matrices (cont.)

Table A: Approved Matrices	Matrix Group	Limit of Detection – LOD (ppm)	Add Grain to Vessel First, then Water*	Fully wet sample, then mix	Clarify/dilute	Add to the reaction tube and mix	Add reaction tube to Incubator set at 22°C	Add strip for	For testing >8ppm, dilute extract†
Sorghum	DF MG16	0.2	20g to 50g *then* 5X volume of water* (e.g. 20g sample, then 100 mL water	30 seconds at the highest speed on shaker table, or vigorously by hand	Filter (2 min maximum)	100 µL of buffer + 100 µL of clarified extract	Acclimate tube for 2 min^	2 min	1:8 in water (100 µL sample plus 700 µL water) followed by 1:1 with buffer; select 1:A on Dilution tab
Soybean Meal	DF MG17	0.2							
Milled Rice	DF MG18	0.2							
Rough Rice	DF MG19	0.2							
Whole Rye	DF MG20	0.2			Filter (2 min maximum) and dilute extract 1:1 with water	100 µL of buffer + 100 µL of diluted extract			
Corn Gluten Feed	DF MG10	0.29			Filter (2 min maximum)	200 µL of buffer + 100 µL of clarified extract			1:8 in water (100 µL sample plus 700 µL water) followed by 2:1 with buffer; select 1:A on Dilution tab

Notes:

* Use distilled, deionized, or flat (non-carbonated) bottled water.

^ The tube acclimation step is only required if the temperature of the testing environment is unknown or outside of 20-24°C (68-75°F)

† Follow the protocol outlined under 'Range with Dilution'