

Chemical Analysis Report

NE-DIST-2021-04-09-03

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Little Fishweir and Butcher pen Source**
Request ID: **RQ-2021-04-05-69**
Customer: **NE-DIST**
Project ID: **BMAP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 21-APR-2021 15:01

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Stormwater Grate @ Lift Station

Collection Date/Time: 04/08/2021 10:05

Field ID: BP1

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2238363	EPA 8321B	2,4-D	0.0028	I	ug/L	P396348	
		Acesulfame K	0.50		ug/L	P396370	
		2,4,5-T	0.0040	U	ug/L	P396348	
		AMPA	0.10	U	ug/L	P396370	
		Sucralose	1.4		ug/L	P396370	
		Acetaminophen	0.055		ug/L	P396348	
		Acetamiprid	0.0020	U	ug/L	P396348	
		Endothall	0.25	U	ug/L	P396370	
		Glufosinate	0.10	U	ug/L	P396370	
		Glyphosate	0.10	U	ug/L	P396370	
		Afidopyropen	0.0020	U	ug/L	P396348	
		Bentazon	0.021		ug/L	P396348	
		Benzovindiflupyr	0.0020	U	ug/L	P396348	
		Carbamazepine	8.0E-04	U	ug/L	P396348	
		Clothianidin	0.0032	I	ug/L	P396348	
		Dinotefuran	0.0020	U	ug/L	P396348	
		Diuron	0.0020	U	ug/L	P396348	
		Fenuron	0.016	U	ug/L	P396348	
		Fluridone	8.0E-04	U	ug/L	P396348	
		Imazapyr	0.15		ug/L	P396348	
		Hydrocodone	0.0020	U	ug/L	P396348	
		Ibuprofen	0.020	U	ug/L	P396348	
		Imidacloprid	0.045		ug/L	P396348	
		Linuron	0.0040	U	ug/L	P396348	
		Mandestrobin	0.0020	U	ug/L	P396348	
		MCPP	0.0020	U	ug/L	P396348	
		Naproxen	0.0080	U	ug/L	P396348	
		Primidone	0.0040	U	ug/L	P396348	
		Pyraclostrobin	0.0020	U	ug/L	P396348	
		Thiamethoxam	0.0044	I	ug/L	P396348	
		Tolfenpyrad	0.0020	U	ug/L	P396348	
		Triclopyr	0.0040	U	ug/L	P396348	

Sample Location: Ditch @ Arthur Durham

Collection Date/Time: 04/08/2021 10:32

Field ID: BP2

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2238364	EPA 8321B	2,4-D	0.0031	I	ug/L	P396348	
		Acesulfame K	0.45		ug/L	P396370	
		2,4,5-T	0.0040	U	ug/L	P396348	
		AMPA	0.16	I	ug/L	P396370	
		Sucralose	1.8		ug/L	P396370	
		Acetaminophen	0.0080	U	ug/L	P396348	
		Acetamiprid	0.0020	U	ug/L	P396348	
		Endothall	0.25	U	ug/L	P396370	
		Glufosinate	0.10	U	ug/L	P396370	
		Glyphosate	0.10	U	ug/L	P396370	
		Afidopyropen	0.0020	U	ug/L	P396348	
		Bentazon	0.025		ug/L	P396348	
		Benzovindiflupyr	0.0020	U	ug/L	P396348	
		Carbamazepine	8.0E-04	U	ug/L	P396348	
		Clothianidin	0.0050	I	ug/L	P396348	
		Dinotefuran	0.0020	U	ug/L	P396348	
		Diuron	0.0020	U	ug/L	P396348	
		Fenuron	0.016	U	ug/L	P396348	
		Fluridone	8.0E-04	U	ug/L	P396348	
		Imazapyr	0.19		ug/L	P396348	
		Hydrocodone	0.0020	U	ug/L	P396348	
		Ibuprofen	0.020	U	ug/L	P396348	
		Imidacloprid	0.060		ug/L	P396348	
		Linuron	0.0040	U	ug/L	P396348	
		Mandestrobin	0.0020	U	ug/L	P396348	
		MCPP	0.0021	I	ug/L	P396348	
		Naproxen	0.0080	U	ug/L	P396348	
		Primidone	0.0040	U	ug/L	P396348	
		Pyraclostrobin	0.0020	U	ug/L	P396348	
		Thiamethoxam	0.0055	I	ug/L	P396348	
		Tolfenpyrad	0.0020	U	ug/L	P396348	
		Triclopyr	0.0040	U	ug/L	P396348	

Sample Location: Butcher Pen Downstream of Car Camp

Collection Date/Time: 04/08/2021 11:15

Field ID: BP3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2238365	EPA 8321B	2,4-D	0.0061	I	ug/L	P396348	
		Acesulfame K	0.25	I	ug/L	P396512	
		2,4,5-T	0.0040	U	ug/L	P396348	
		AMPA	0.72		ug/L	P396512	
		Sucralose	0.22		ug/L	P396370	
		Acetaminophen	0.039		ug/L	P396348	
		Acetamiprid	0.0020	U	ug/L	P396348	
		Endothall	0.25	U	ug/L	P396512	
		Glufosinate	0.10	U	ug/L	P396512	
		Glyphosate	0.75		ug/L	P396512	
		Afidopyropen	0.0020	U	ug/L	P396348	
		Bentazon	0.015		ug/L	P396348	
		Benzovindiflupyr	0.0020	U	ug/L	P396348	
		Carbamazepine	8.0E-04	U	ug/L	P396348	
		Clothianidin	0.0020	U	ug/L	P396348	
		Dinotefuran	0.0020	U	ug/L	P396348	
		Diuron	0.0039	I	ug/L	P396348	
		Fenuron	0.016	U	ug/L	P396348	
		Fluridone	8.0E-04	U	ug/L	P396348	
		Imazapyr	0.17		ug/L	P396348	
		Hydrocodone	0.0020	U	ug/L	P396348	
		Ibuprofen	0.020	U	ug/L	P396348	
		Imidacloprid	0.0052	I	ug/L	P396348	
		Linuron	0.0040	U	ug/L	P396348	
		Mandestrobin	0.0020	U	ug/L	P396348	
		MCPP	0.0054	I	ug/L	P396348	
		Naproxen	0.0080	U	ug/L	P396348	
		Primidone	0.0040	U	ug/L	P396348	
		Pyraclostrobin	0.0020	U	ug/L	P396348	
		Thiamethoxam	0.0020	U	ug/L	P396348	
		Tolfenpyrad	0.0020	U	ug/L	P396348	
		Triclopyr	0.0040	U	ug/L	P396348	

Sample Location: Butcher Pen CR at Confederate

Collection Date/Time: 04/08/2021 12:16

Field ID: 20030082

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2238366	EPA 8321B	Acesulfame K	1.0	U	ug/L	P396370	
		2,4-D	0.15		ug/L	P396348	
		2,4,5-T	0.0040	U	ug/L	P396348	
		AMPA	0.26	I J	ug/L	P396370	SUR
		Sucralose	0.79		ug/L	P396370	
		Acetaminophen	0.0080	U	ug/L	P396348	
		Endothall	2.5	U	ug/L	P396370	
		Acetamiprid	0.0020	U	ug/L	P396348	
		Glufosinate	0.10	UJ	ug/L	P396370	SUR
		Glyphosate	0.60	J	ug/L	P396370	SUR
		Afidopyropen	0.0020	U	ug/L	P396348	
		Bentazon	0.030		ug/L	P396348	
		Benzovindiflupyr	0.0020	U	ug/L	P396348	
		Carbamazepine	8.0E-04	U	ug/L	P396348	
		Clothianidin	0.0020	U	ug/L	P396348	
		Dinotefuran	0.0020	U	ug/L	P396348	
		Diuron	0.015		ug/L	P396348	
		Fenuron	0.016	U	ug/L	P396348	
		Fluridone	0.0052		ug/L	P396348	
		Imazapyr	0.10		ug/L	P396348	
		Hydrocodone	0.0020	U	ug/L	P396348	
		Ibuprofen	0.020	U	ug/L	P396348	
		Imidacloprid	0.017		ug/L	P396348	
		Linuron	0.0040	U	ug/L	P396348	
		Mandestrobin	0.0020	U	ug/L	P396348	
		MCPP	0.0049	I	ug/L	P396348	
		Naproxen	0.0080	U	ug/L	P396348	
		Primidone	0.0040	U	ug/L	P396348	
		Pyraclostrobin	0.0020	U	ug/L	P396348	
		Thiamethoxam	0.0020	U	ug/L	P396348	
		Tolfenpyrad	0.0020	U	ug/L	P396348	
		Triclopyr	0.0040	U	ug/L	P396348	

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Butcher Pen @ Wesconnett

Collection Date/Time: 04/08/2021 12:40

Field ID: 20030760

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2238367	EPA 8321B	2,4-D	0.0077	I	ug/L	P396348	
		Acesulfame K	0.16	I	ug/L	P396512	
		2,4,5-T	0.0040	U	ug/L	P396348	
		AMPA	1.2		ug/L	P396512	
		Sucralose	0.25		ug/L	P396370	
		Acetaminophen	0.0080	U	ug/L	P396348	
		Acetamiprid	0.0020	U	ug/L	P396348	
		Endothall	0.25	U	ug/L	P396512	
		Glufosinate	0.10	U	ug/L	P396512	
		Glyphosate	0.82		ug/L	P396512	
		Afidopyropen	0.0020	U	ug/L	P396348	
		Bentazon	0.016		ug/L	P396348	
		Benzovindiflupyr	0.0020	U	ug/L	P396348	
		Carbamazepine	8.0E-04	U	ug/L	P396348	
		Clothianidin	0.0020	U	ug/L	P396348	
		Dinotefuran	0.0020	U	ug/L	P396348	
		Diuron	0.0021	I	ug/L	P396348	
		Fenuron	0.016	U	ug/L	P396348	
		Fluridone	8.0E-04	U	ug/L	P396348	
		Imazapyr	0.15		ug/L	P396348	
		Hydrocodone	0.0020	U	ug/L	P396348	
		Ibuprofen	0.020	U	ug/L	P396348	
		Imidacloprid	0.0057	I	ug/L	P396348	
		Linuron	0.0040	U	ug/L	P396348	
		Mandestrobin	0.0020	U	ug/L	P396348	
		MCPP	0.0056	I	ug/L	P396348	
		Naproxen	0.0080	U	ug/L	P396348	
		Primidone	0.0040	U	ug/L	P396348	
		Pyraclostrobin	0.0020	U	ug/L	P396348	
		Thiamethoxam	0.0038	I	ug/L	P396348	
		Tolfenpyrad	0.0020	U	ug/L	P396348	
		Triclopyr	0.0040	U	ug/L	P396348	

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P396348

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P396370

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P396512

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P396348

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	152		P	30 - 160
2,4,5-T	127		P	30 - 160
Acetaminophen	91.1		P	30 - 160
Acetamiprid	83.0		P	30 - 160
Afidopyropen	62.7		P	30 - 160
Bentazon	92.5		P	30 - 160
Benzovindiflupyr	77.3		P	30 - 160
Carbamazepine	92.9		P	30 - 160
Clothianidin	89.5		P	30 - 160
Dinotefuran	90.4		P	30 - 160
Diuron	64.8		P	30 - 160
Fenuron	101		P	30 - 160
Fluridone	87.3		P	30 - 160
Hydrocodone	86.3		P	30 - 160
Ibuprofen	85.3		P	30 - 160
Imazapyr	100		P	30 - 160
Imidacloprid	103		P	30 - 160
Linuron	73.7		P	30 - 160
Mandestrobin	88.6		P	30 - 160
MCPP	148		P	30 - 160
Naproxen	78.6		P	30 - 160
Primidone	91.6		P	30 - 160
Pyraclostrobin	75.3		P	30 - 160
Thiamethoxam	95.3		P	30 - 160
Tolfenpyrad	46.0		P	30 - 160
Triclopyr	130		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P396370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	140		P	40 - 150
AMPA	130		P	40 - 150
Endothall	108		P	40 - 150
Glufosinate	127		P	40 - 150
Glyphosate	137		P	40 - 140
Sucralose	91.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P396512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	91.3		P	40 - 150
Endothall	80.3		P	40 - 150
Glufosinate	82.6		P	40 - 150
Glyphosate	100		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P396348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2237823	2,4-D	125	142	P/P	30 - 160
2237823	2,4,5-T	107	109	P/P	30 - 160
2237823	Acetaminophen	100	109	P/P	30 - 160
2237823	Acetamiprid	89.0	90.6	P/P	30 - 160
2237823	Afidopyropen	67.6	69.6	P/P	30 - 160
2237823	Bentazon	49.5	60.4	P/P	30 - 160
2237823	Benzovindiflupyr	69.4	72.5	P/P	30 - 160
2237823	Carbamazepine	84.9	88.4	P/P	30 - 160
2237823	Clothianidin	97.9	103	P/P	30 - 160
2237823	Dinotefuran	109	111	P/P	30 - 160
2237823	Diuron	53.4	56.4	P/P	30 - 160
2237823	Fenuron	80.0	86.2	P/P	30 - 160
2237823	Fluridone	69.0	70.7	P/P	30 - 160
2237823	Hydrocodone	91.1	114	P/P	30 - 160
2237823	Ibuprofen	83.5	75.6	P/P	30 - 160
2237823	Imazapyr	95.9	94.0	P/P	30 - 160
2237823	Imidacloprid	141	144	P/P	30 - 160
2237823	Linuron	58.1	61.1	P/P	30 - 160
2237823	Mandestrobin	78.4	83.7	P/P	30 - 160
2237823	MCCP	132	134	P/P	30 - 160
2237823	Naproxen	72.8	79.5	P/P	30 - 160
2237823	Primidone	85.2	87.7	P/P	30 - 160
2237823	Pyraclostrobin	71.0	75.0	P/P	30 - 160
2237823	Thiamethoxam	139	138	P/P	30 - 160
2237823	Tolfenpyrad	37.8	37.1	P/P	30 - 160
2237823	Triclopyr	106	115	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P396370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2237810	Acesulfame K	105	105	P/P	40 - 150
2237810	AMPA	129	119	P/P	40 - 150
2237810	Endothall	68.2	63.3	P/P	40 - 150
2237810	Glufosinate	100	94.1	P/P	40 - 150
2237810	Glyphosate	95.6	89.0	P/P	40 - 140
2237810	Sucralose	108	108	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P396512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2238884	Acesulfame K	108	131	P/P	40 - 150
2238884	AMPA	116	124	P/P	40 - 150
2238884	Endothall	94.3	93.9	P/P	40 - 150
2238884	Glufosinate	104	104	P/P	40 - 150
2238884	Glyphosate	76.4	86.2	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P396348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2237823	2,4-D	11.6	Spike	P	0 - 30
2237823	2,4,5-T	2.57	Spike	P	0 - 30
2237823	Acetaminophen	8.69	Spike	P	0 - 30
2237823	Acetamiprid	1.76	Spike	P	0 - 30
2237823	Afidopyropen	2.92	Spike	P	0 - 30
2237823	Bentazon	8.46	Spike	P	0 - 30
2237823	Benzovindiflupyr	4.40	Spike	P	0 - 30
2237823	Carbamazepine	4.05	Spike	P	0 - 30
2237823	Clothianidin	5.17	Spike	P	0 - 30
2237823	Dinotefuran	1.53	Spike	P	0 - 30
2237823	Diuron	5.48	Spike	P	0 - 30
2237823	Fenuron	7.43	Spike	P	0 - 30
2237823	Fluridone	2.44	Spike	P	0 - 30
2237823	Hydrocodone	22.5	Spike	P	0 - 30
2237823	Ibuprofen	10.0	Spike	P	0 - 30
2237823	Imazapyr	1.06	Spike	P	0 - 30
2237823	Imidacloprid	2.40	Spike	P	0 - 30
2237823	Linuron	4.98	Spike	P	0 - 30
2237823	Mandestrobin	6.52	Spike	P	0 - 30
2237823	MCP	1.21	Spike	P	0 - 30
2237823	Naproxen	8.83	Spike	P	0 - 30
2237823	Primidone	2.90	Spike	P	0 - 30
2237823	Pyraclostrobin	5.47	Spike	P	0 - 30
2237823	Thiamethoxam	0.873	Spike	P	0 - 30
2237823	Tolfenpyrad	1.69	Spike	P	0 - 30
2237823	Triclopyr	8.00	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P396370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2237810	Acesulfame K	0.292	Spike	P	0 - 30
2237810	AMPA	7.94	Spike	P	0 - 30
2237810	Endothall	7.49	Spike	P	0 - 30
2237810	Glufosinate	6.18	Spike	P	0 - 30
2237810	Glyphosate	7.19	Spike	P	0 - 30
2237810	Sucralose	0.336	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P396512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2238884	Acesulfame K	19.0	Spike	P	0 - 30
2238884	AMPA	6.81	Spike	P	0 - 30
2238884	Endothall	0.410	Spike	P	0 - 30
2238884	Glufosinate	0.212	Spike	P	0 - 30
2238884	Glyphosate	12.1	Spike	P	0 - 30

Quality Assurance Report Precision

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2238363

Field Sample ID: BP1

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	140	P	30 - 160
EPA 8321B	Acetaminophen-d4	94.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.7	P	30 - 160
EPA 8321B	Diuron-d6	60.8	P	30 - 160
EPA 8321B	Endothall-d6	85.3	P	40 - 160
EPA 8321B	Endothall-d6	85.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	80.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	80.5	P	40 - 160
EPA 8321B	Ibuprofen-d3	86.8	P	30 - 160
EPA 8321B	Primidone-d5	95.8	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2238364

Field Sample ID: BP2

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	137	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.4	P	30 - 160
EPA 8321B	Diuron-d6	54.7	P	30 - 160
EPA 8321B	Endothall-d6	117	P	40 - 160
EPA 8321B	Endothall-d6	117	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	150	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	150	P	40 - 160
EPA 8321B	Ibuprofen-d3	81.4	P	30 - 160
EPA 8321B	Primidone-d5	88.5	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160

Lab Sample ID: 2238365

Field Sample ID: BP3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	156	P	30 - 160
EPA 8321B	Acetaminophen-d4	116	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.5	P	30 - 160
EPA 8321B	Diuron-d6	58.2	P	30 - 160
EPA 8321B	Endothall-d6	91.1	P	40 - 160
EPA 8321B	Endothall-d6	91.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	117	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	117	P	40 - 160
EPA 8321B	Ibuprofen-d3	97.3	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Lab Sample ID: 2238366

Field Sample ID: 20030082

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	146	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2238366

Field Sample ID: 20030082

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.1	P	30 - 160
EPA 8321B	Diuron-d6	48.0	P	30 - 160
EPA 8321B	Endothall-d6	89.3	P	40 - 160
EPA 8321B	Endothall-d6	89.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	471	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	471	F	40 - 160
EPA 8321B	Ibuprofen-d3	84.5	P	30 - 160
EPA 8321B	Primidone-d5	94.5	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2238367

Field Sample ID: 20030760

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	146	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.1	P	30 - 160
EPA 8321B	Diuron-d6	53.9	P	30 - 160
EPA 8321B	Endothall-d6	125	P	40 - 160
EPA 8321B	Endothall-d6	125	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	75.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	75.5	P	40 - 160
EPA 8321B	Ibuprofen-d3	88.8	P	30 - 160
EPA 8321B	Primidone-d5	109	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A104684

Included Lab Sample IDs: 2238363, 2238364, 2238365, 2238366, 2238367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.8	101	P/P	50 - 150
2,4,5-T	107	104	P/P	50 - 150
Acetaminophen	93.7	96.0	P/P	60 - 160
Acetamiprid	98.3	105	P/P	50 - 150
Afidopyropen	84.8	97.8	P/P	50 - 150
Bentazon	96.1	115	P/P	50 - 160
Benzovindiflupyr	94.4	98.8	P/P	50 - 160
Carbamazepine	107	108	P/P	60 - 150
Clothianidin	97.1	93.1	P/P	60 - 150
Dinotefuran	110	106	P/P	50 - 150
Diuron	104	98.3	P/P	60 - 160
Fenuron	109	97.2	P/P	60 - 150
Fluridone	107	98.1	P/P	60 - 160
Hydrocodone	104	108	P/P	60 - 150
Ibuprofen	96.4	107	P/P	50 - 160
Imazapyr	106	122	P/P	50 - 160
Imidacloprid	109	100	P/P	60 - 150
Linuron	94.7	106	P/P	60 - 150
Mandestrobin	112	101	P/P	50 - 150
MCPP	103	112	P/P	50 - 150
Naproxen	111	106	P/P	50 - 160
Primidone	95.6	91.2	P/P	60 - 150
Pyraclostrobin	102	101	P/P	60 - 150
Thiamethoxam	106	83.7	P/P	50 - 150
Tolfenpyrad	102	100	P/P	60 - 150
Triclopyr	102	101	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A104755

Included Lab Sample IDs: 2238363, 2238364, 2238366

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	110	60.4	P/P	40 - 160
Acesulfame K	60.4	62.5	P/P	40 - 160
AMPA	153	110	P/P	40 - 160
AMPA	153	95.0	P/P	40 - 160
Endothall	68.9	60.3	P/P	40 - 160
Endothall	90.2	68.9	P/P	40 - 160
Glufosinate	144	106	P/P	40 - 160
Glufosinate	156	112	P/P	40 - 160
Glyphosate	148	150	P/P	40 - 160
Glyphosate	152	110	P/P	40 - 160

Reference Method: EPA 8321B

Run ID: A104794

Included Lab Sample IDs: 2238363, 2238364, 2238365, 2238366, 2238367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	93.5	96.9	P/P	60 - 160
Sucralose	96.9	94.5	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A104854

Included Lab Sample IDs: 2238365, 2238367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	128	122	P/P	40 - 160
AMPA	104	96.4	P/P	40 - 160
Endothall	141	72.7	P/P	40 - 160
Glufosinate	103	82.6	P/P	40 - 160
Glyphosate	113	119	P/P	40 - 160

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	2,4-D	152	125	142			11.6
	2,4,5-T	127	107	109			2.57
	Acesulfame K	140	105	105			0.292
	Acesulfame K	104	108	131			19.0
	Acetaminophen	91.1	100	109			8.69
	Acetamiprid	83.0	89.0	90.6			1.76
	Afidopyropen	62.7	67.6	69.6			2.92
	AMPA	130	129	119			7.94
	AMPA	91.3	116	124			6.81
	Bentazon	92.5	49.5	60.4			8.46
	Benzovindiflupyr	77.3	69.4	72.5			4.40
	Carbamazepine	92.9	84.9	88.4			4.05
	Clothianidin	89.5	97.9	103			5.17
	Dinotefuran	90.4	109	111			1.53
	Diuron	64.8	53.4	56.4			5.48
	Endothall	108	68.2	63.3			7.49
	Endothall	80.3	94.3	93.9			0.410
	Fenuron	101	80.0	86.2			7.43
	Fluridone	87.3	69.0	70.7			2.44
	Glufosinate	127	100	94.1			6.18
	Glufosinate	82.6	104	104			0.212
	Glyphosate	137	95.6	89.0			7.19
	Glyphosate	100	76.4	86.2			12.1
	Hydrocodone	86.3	91.1	114			22.5
	Ibuprofen	85.3	83.5	75.6			10.0
	Imazapyr	100	95.9	94.0			1.06
	Imidacloprid	103	141	144			2.40
	Linuron	73.7	58.1	61.1			4.98
	Mandestrobin	88.6	78.4	83.7			6.52
	MCPP	148	132	134			1.21
	Naproxen	78.6	72.8	79.5			8.83
	Primidone	91.6	85.2	87.7			2.90
	Pyraclostrobin	75.3	71.0	75.0			5.47
	Sucralose	91.7	108	108			0.336
	Thiamethoxam	95.3	139	138			0.873
	Tolfenpyrad	46.0	37.8	37.1			1.69
	Triclopyr	130	106	115			8.00

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2238363, 2238364, 2238365, 2238366, 2238367
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2238363, 2238364, 2238365, 2238366, 2238367

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	04/09/2021	04/12/2021 14:00	Hoor Shaik	04/13/2021 08:26	Juyoung Kim	2238363
	04/09/2021	04/12/2021 14:00	Hoor Shaik	04/13/2021 09:01	Juyoung Kim	2238364
	04/09/2021	04/12/2021 14:00	Hoor Shaik	04/13/2021 09:36	Juyoung Kim	2238365
	04/09/2021	04/12/2021 14:00	Hoor Shaik	04/13/2021 10:10	Juyoung Kim	2238366
	04/09/2021	04/12/2021 14:00	Hoor Shaik	04/13/2021 10:45	Juyoung Kim	2238367
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/12/2021 18:55	Rebecca Ware	2238363
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/12/2021 19:09	Rebecca Ware	2238364
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/12/2021 22:08	Rebecca Ware	2238366
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/13/2021 17:18	Rebecca Ware	2238366
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/14/2021 20:59	Rebecca Ware	2238365
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/14/2021 21:13	Rebecca Ware	2238367
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/16/2021 21:33	Mohammad Ghaffari	2238363
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/16/2021 21:44	Mohammad Ghaffari	2238364
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/16/2021 22:08	Mohammad Ghaffari	2238365
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/16/2021 22:20	Mohammad Ghaffari	2238366
	04/09/2021	04/12/2021 15:00	Rebecca Ware	04/16/2021 22:31	Mohammad Ghaffari	2238367