

Chemical Analysis Report

SO-DIST-2021-04-22-01

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

Event Description: **2021 SMP: Lee County Sampling**

Request ID: **RQ-2021-04-19-56**

Customer: **SO-DIST**

Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Chris Hormuth

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 11-MAY-2021 12:40



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: IMPRGR51

Collection Date/Time: 04/21/2021 09:55

Field ID: IMPRGR51

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241711	EPA 8321B	2,4-D	0.015		ug/L	P396984	
		Acesulfame K	0.10	U	ug/L	P396966	
		2,4,5-T	0.0040	U	ug/L	P396984	
		AMPA	0.26	I	ug/L	P396966	
		Sucralose	0.082		ug/L	P396966	
		Acetaminophen	0.0080	U	ug/L	P396984	
		Acetamiprid	0.0020	U	ug/L	P396984	
		Endothall	0.25	U	ug/L	P396966	
		Glufosinate	0.10	U	ug/L	P396966	
		Glyphosate	0.57		ug/L	P396966	MS
		Afidopyropen	0.0020	U	ug/L	P396984	
		Bentazon	0.21		ug/L	P396984	
		Benzovindiflupyr	0.0020	U	ug/L	P396984	
		Carbamazepine	8.0E-04	U	ug/L	P396984	
		Clothianidin	0.0020	U	ug/L	P396984	
		Dinotefuran	0.0020	U	ug/L	P396984	
		Diuron	0.0028	I	ug/L	P396984	
		Fenuron	0.016	U	ug/L	P396984	
		Fluridone	0.022		ug/L	P396984	
		Imazapyr	0.30		ug/L	P396984	
		Hydrocodone	0.0020	U	ug/L	P396984	
		Ibuprofen	0.020	U	ug/L	P396984	
		Imidacloprid	0.020		ug/L	P396984	MS
		Linuron	0.0040	U	ug/L	P396984	
		Mandestrobin	0.0020	U	ug/L	P396984	
		MCPP	0.0020	U	ug/L	P396984	MS
		Naproxen	0.0080	U	ug/L	P396984	
		Primidone	0.0040	U	ug/L	P396984	
		Pyraclostrobin	0.0020	U	ug/L	P396984	
		Thiamethoxam	0.0020	U	ug/L	P396984	MS
		Tolfenpyrad	0.0020	U	ug/L	P396984	
		Triclopyr	0.0040	U	ug/L	P396984	MS

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: IMPRGR41

Collection Date/Time: 04/21/2021 10:19

Field ID: IMPRGR41

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241712	EPA 8321B	Acesulfame K	0.10	U	ug/L	P396966	
		2,4-D	0.055		ug/L	P396984	
		AMPA	1.0	U	ug/L	P396966	
		2,4,5-T	0.0040	U	ug/L	P396984	
		Sucralose	0.12		ug/L	P396966	
		Acetaminophen	0.0080	U	ug/L	P396984	
		Endothall	0.25	U	ug/L	P396966	
		Acetamiprid	0.0020	U	ug/L	P396984	
		Glufosinate	1.0	U	ug/L	P396966	
		Glyphosate	1.0	U	ug/L	P396966	MS
		Afidopyropen	0.0020	U	ug/L	P396984	
		Bentazon	0.24		ug/L	P396984	
		Benzovindiflupyr	0.0020	U	ug/L	P396984	
		Carbamazepine	8.3E-04	I	ug/L	P396984	
		Clothianidin	0.0020	U	ug/L	P396984	
		Dinotefuran	0.0020	U	ug/L	P396984	
		Diuron	0.0020	U	ug/L	P396984	
		Fenuron	0.016	U	ug/L	P396984	
		Fluridone	0.054		ug/L	P396984	
		Imazapyr	0.31		ug/L	P396984	
		Hydrocodone	0.0020	U	ug/L	P396984	
		Ibuprofen	0.020	U	ug/L	P396984	
		Imidacloprid	0.011		ug/L	P396984	MS
		Linuron	0.0040	U	ug/L	P396984	
		Mandestrobin	0.0020	U	ug/L	P396984	
		MCPP	0.0020	U	ug/L	P396984	MS
		Naproxen	0.0080	U	ug/L	P396984	
		Primidone	0.0040	U	ug/L	P396984	
		Pyraclostrobin	0.0020	U	ug/L	P396984	
		Thiamethoxam	0.0020	U	ug/L	P396984	MS
		Tolfenpyrad	0.0020	U	ug/L	P396984	
		Triclopyr	0.0040	U	ug/L	P396984	MS

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: IMPRGR30

Collection Date/Time: 04/21/2021 10:43

Field ID: IMPRGR30

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241713	EPA 8321B	Acesulfame K	0.10	U	ug/L	P396966	
		2,4-D	0.023		ug/L	P396984	
		AMPA	1.0	U	ug/L	P396966	
		2,4,5-T	0.0040	U	ug/L	P396984	
		Sucralose	0.14		ug/L	P396966	
		Acetaminophen	0.0080	U	ug/L	P396984	
		Endothall	0.25	U	ug/L	P396966	
		Acetamiprid	0.0020	U	ug/L	P396984	
		Glufosinate	1.0	U	ug/L	P396966	
		Glyphosate	1.0	U	ug/L	P396966	MS
		Afidopyropen	0.0020	U	ug/L	P396984	
		Bentazon	0.21		ug/L	P396984	
		Benzovindiflupyr	0.0020	U	ug/L	P396984	
		Carbamazepine	8.0E-04	U	ug/L	P396984	
		Clothianidin	0.0020	U	ug/L	P396984	
		Dinotefuran	0.0020	U	ug/L	P396984	
		Diuron	0.0020	U	ug/L	P396984	
		Fenuron	0.016	U	ug/L	P396984	
		Fluridone	0.30		ug/L	P396984	
		Imazapyr	0.24		ug/L	P396984	
		Hydrocodone	0.0020	U	ug/L	P396984	
		Ibuprofen	0.020	U	ug/L	P396984	
		Imidacloprid	0.015		ug/L	P396984	MS
		Linuron	0.0040	U	ug/L	P396984	
		Mandestrobin	0.0020	U	ug/L	P396984	
		MCPP	0.0020	U	ug/L	P396984	MS
		Naproxen	0.0080	U	ug/L	P396984	
		Primidone	0.0040	U	ug/L	P396984	
		Pyraclostrobin	0.0020	U	ug/L	P396984	
		Thiamethoxam	0.0020	U	ug/L	P396984	MS
		Tolfenpyrad	0.0020	U	ug/L	P396984	
		Triclopyr	0.0040	U	ug/L	P396984	MS

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: 47A-15GR

Collection Date/Time: 04/21/2021 09:20

Field ID: 47A-15GR

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241714	EPA 8321B	Acesulfame K	0.10	U	ug/L	P396966	
		2,4-D	0.025		ug/L	P396984	
		AMPA	1.0	U	ug/L	P396966	
		2,4,5-T	0.0040	U	ug/L	P396984	
		Sucralose	0.80		ug/L	P396966	
		Acetaminophen	0.068		ug/L	P396984	
		Endothall	0.25	U	ug/L	P396966	
		Acetamiprid	0.0020	U	ug/L	P396984	
		Glufosinate	1.0	U	ug/L	P396966	
		Glyphosate	1.0	U	ug/L	P396966	MS
		Afidopyropen	0.0020	U	ug/L	P396984	
		Bentazon	0.23		ug/L	P396984	
		Benzovindiflupyr	0.0020	U	ug/L	P396984	
		Carbamazepine	0.0012	I	ug/L	P396984	
		Clothianidin	0.0020	U	ug/L	P396984	
		Dinotefuran	0.0020	U	ug/L	P396984	
		Diuron	0.0020	U	ug/L	P396984	
		Fenuron	0.016	U	ug/L	P396984	
		Fluridone	0.85		ug/L	P396984	
		Imazapyr	0.48		ug/L	P396984	
		Hydrocodone	0.0020	U	ug/L	P396984	
		Ibuprofen	0.020	U	ug/L	P396984	
		Imidacloprid	0.011		ug/L	P396984	MS
		Linuron	0.0040	U	ug/L	P396984	
		Mandestrobin	0.0020	U	ug/L	P396984	
		MCPP	0.0020	U	ug/L	P396984	MS
		Naproxen	0.0080	U	ug/L	P396984	
		Primidone	0.0040	U	ug/L	P396984	
		Pyraclostrobin	0.0020	U	ug/L	P396984	
		Thiamethoxam	0.0020	U	ug/L	P396984	MS
		Tolfenpyrad	0.0020	U	ug/L	P396984	
		Triclopyr	0.0040	U	ug/L	P396984	MS

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: 47A-4GR

Collection Date/Time: 04/21/2021 09:39

Field ID: 47A-4GR

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241715	EPA 8321B	Acesulfame K	0.10	U	ug/L	P396966	
		2,4-D	0.012		ug/L	P396984	
		AMPA	1.0	U	ug/L	P396966	
		2,4,5-T	0.0040	U	ug/L	P396984	
		Sucralose	0.82		ug/L	P396966	
		Acetaminophen	0.0080	U	ug/L	P396984	
		Endothall	0.25	U	ug/L	P396966	
		Acetamiprid	0.0020	U	ug/L	P396984	
		Glufosinate	1.0	U	ug/L	P396966	
		Glyphosate	1.0	U	ug/L	P396966	MS
		Afidopyropen	0.0020	U	ug/L	P396984	
		Bentazon	0.24		ug/L	P396984	
		Benzovindiflupyr	0.0020	U	ug/L	P396984	
		Carbamazepine	0.0015	I	ug/L	P396984	
		Clothianidin	0.0020	U	ug/L	P396984	
		Dinotefuran	0.0020	U	ug/L	P396984	
		Diuron	0.0044	I	ug/L	P396984	
		Fenuron	0.016	U	ug/L	P396984	
		Fluridone	0.70		ug/L	P396984	
		Imazapyr	0.34		ug/L	P396984	
		Hydrocodone	0.0020	U	ug/L	P396984	
		Ibuprofen	0.020	U	ug/L	P396984	
		Imidacloprid	0.0020	U	ug/L	P396984	MS
		Linuron	0.0040	U	ug/L	P396984	
		Mandestrobin	0.0020	U	ug/L	P396984	
		MCPP	0.0020	I	ug/L	P396984	MS
		Naproxen	0.0080	U	ug/L	P396984	
		Primidone	0.0062	I	ug/L	P396984	
		Pyraclostrobin	0.0020	U	ug/L	P396984	
		Thiamethoxam	0.0020	U	ug/L	P396984	MS
		Tolfenpyrad	0.0020	U	ug/L	P396984	
		Triclopyr	0.0040	U	ug/L	P396984	MS

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
 Batch ID: P396966

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: P396984

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P396966

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	139		P	40 - 150
AMPA	84.7		P	40 - 150
Endothall	93.4		P	40 - 150
Glufosinate	80.7		P	40 - 150
Glyphosate	60.4		P	40 - 140
Sucralose	105		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P396984

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	151		P	30 - 160
2,4,5-T	138		P	30 - 160
Acetaminophen	112		P	30 - 150
Acetamiprid	111		P	30 - 160
Afidopyropen	92.0		P	30 - 160
Bentazon	44.0		P	30 - 150
Benzovindiflupyr	83.1		P	30 - 160
Carbamazepine	94.7		P	30 - 160
Clothianidin	110		P	30 - 160
Dinotefuran	85.9		P	30 - 160
Diuron	78.4		P	30 - 160
Fenuron	103		P	30 - 160
Fluridone	103		P	30 - 160
Hydrocodone	111		P	30 - 160
Ibuprofen	77.4		P	30 - 160
Imazapyr	111		P	30 - 160
Imidacloprid	114		P	30 - 160
Linuron	77.8		P	30 - 160
Mandestrobin	98.6		P	30 - 160
MCPP	158		P	30 - 160
Naproxen	111		P	30 - 160
Primidone	103		P	30 - 160
Pyraclostrobin	76.6		P	30 - 160
Thiamethoxam	121		P	30 - 160
Tolfenpyrad	49.9		P	30 - 160
Triclopyr	150		P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P396966

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241502	Acesulfame K	132	117	P/P	40 - 150
2241502	AMPA	48.7	55.8	P/P	40 - 150
2241502	Endothall	124	111	P/P	40 - 150
2241502	Glufosinate	92.2	94.2	P/P	40 - 150
2241502	Glyphosate	51.3	32.3	P/F	40 - 140
2241502	Sucralose	107	106	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P396984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241346	2,4-D	154	158	P/P	30 - 160
2241346	2,4,5-T	146	150	P/P	30 - 160
2241346	Acetaminophen	111	91.8	P/P	30 - 150
2241346	Acetamiprid	115	120	P/P	30 - 160
2241346	Afidopyropen	104	102	P/P	30 - 160
2241346	Benzovindiflupyr	100	98.5	P/P	30 - 160
2241346	Carbamazepine	96.4	90.0	P/P	30 - 160
2241346	Clothianidin	125	127	P/P	30 - 160
2241346	Dinotefuran	155	156	P/P	30 - 160
2241346	Diuron	73.3	56.6	P/P	30 - 160
2241346	Fenuron	118	111	P/P	30 - 160
2241346	Fluridone	120	121	P/P	30 - 160
2241346	Hydrocodone	131	132	P/P	30 - 160
2241346	Ibuprofen	102	76.7	P/P	30 - 160
2241346	Imidacloprid	244	236	F/F	30 - 160
2241346	Linuron	78.6	81.6	P/P	30 - 160
2241346	Mandestrobin	107	110	P/P	30 - 160
2241346	MCPP	181	184	F/F	30 - 160
2241346	Naproxen	89.7	99.3	P/P	30 - 160
2241346	Primidone	131	119	P/P	30 - 160
2241346	Pyraclostrobin	98.5	99.1	P/P	30 - 160
2241346	Thiamethoxam	195	196	F/F	30 - 160
2241346	Tolfenpyrad	66.3	70.6	P/P	30 - 160
2241346	Triclopyr	163	152	F/P	30 - 160

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P396966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241502	Acesulfame K	11.3	Spike	P	0 - 30
2241502	AMPA	10.8	Spike	P	0 - 30
2241502	Endothall	11.2	Spike	P	0 - 30
2241502	Glufosinate	2.15	Spike	P	0 - 30
2241502	Glyphosate	6.62	Spike	P	0 - 30
2241502	Sucralose	0.275	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P396984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241346	2,4-D	2.49	Spike	P	0 - 30
2241346	2,4,5-T	2.47	Spike	P	0 - 30
2241346	Acetaminophen	15.7	Spike	P	0 - 30
2241346	Acetamiprid	4.09	Spike	P	0 - 30
2241346	Afidopyropen	1.46	Spike	P	0 - 30
2241346	Bentazon	16.5	Spike	P	0 - 30
2241346	Benzovindiflupyr	1.66	Spike	P	0 - 30
2241346	Carbamazepine	6.87	Spike	P	0 - 30
2241346	Clothianidin	1.52	Spike	P	0 - 30
2241346	Dinotefuran	0.803	Spike	P	0 - 30
2241346	Diuron	25.7	Spike	P	0 - 30
2241346	Fenuron	5.96	Spike	P	0 - 30
2241346	Fluridone	0.683	Spike	P	0 - 30
2241346	Hydrocodone	0.830	Spike	P	0 - 30
2241346	Ibuprofen	28.5	Spike	P	0 - 30
2241346	Imazapyr	4.89	Spike	P	0 - 30
2241346	Imidacloprid	2.76	Spike	P	0 - 30
2241346	Linuron	3.71	Spike	P	0 - 30
2241346	Mandestrobin	3.57	Spike	P	0 - 30
2241346	MCPP	1.32	Spike	P	0 - 30
2241346	Naproxen	10.1	Spike	P	0 - 30
2241346	Primidone	9.53	Spike	P	0 - 30
2241346	Pyraclostrobin	0.678	Spike	P	0 - 30
2241346	Thiamethoxam	0.613	Spike	P	0 - 30
2241346	Tolfenpyrad	6.33	Spike	P	0 - 30
2241346	Triclopyr	6.93	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2241711

Field Sample ID: IMPRGR51

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	131	P	30 - 160
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	65.5	P	30 - 160
EPA 8321B	Endothall-d6	88.9	P	40 - 160
EPA 8321B	Endothall-d6	88.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	71.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	71.4	P	40 - 160
EPA 8321B	Ibuprofen-d3	70.7	P	30 - 160
EPA 8321B	Primidone-d5	107	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Lab Sample ID: 2241712

Field Sample ID: IMPRGR41

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	126	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	75.1	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	61.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	61.8	P	40 - 160
EPA 8321B	Ibuprofen-d3	73.0	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Lab Sample ID: 2241713

Field Sample ID: IMPRGR30

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	135	P	30 - 160
EPA 8321B	Acetaminophen-d4	120	P	30 - 160
EPA 8321B	Carbamazepine-d10	112	P	30 - 160
EPA 8321B	Diuron-d6	71.0	P	30 - 160
EPA 8321B	Endothall-d6	80.0	P	40 - 160
EPA 8321B	Endothall-d6	80.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	57.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	57.7	P	40 - 160
EPA 8321B	Ibuprofen-d3	103	P	30 - 160
EPA 8321B	Primidone-d5	130	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Lab Sample ID: 2241714

Field Sample ID: 47A-15GR

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	130	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2241714

Field Sample ID: 47A-15GR

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	80.3	P	30 - 160
EPA 8321B	Endothall-d6	85.6	P	40 - 160
EPA 8321B	Endothall-d6	85.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	62.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	62.9	P	40 - 160
EPA 8321B	Ibuprofen-d3	88.6	P	30 - 160
EPA 8321B	Primidone-d5	93.2	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Lab Sample ID: 2241715

Field Sample ID: 47A-4GR

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	156	P	30 - 160
EPA 8321B	Acetaminophen-d4	134	P	30 - 160
EPA 8321B	Carbamazepine-d10	118	P	30 - 160
EPA 8321B	Diuron-d6	78.0	P	30 - 160
EPA 8321B	Endothall-d6	83.3	P	40 - 160
EPA 8321B	Endothall-d6	83.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	62.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	62.9	P	40 - 160
EPA 8321B	Ibuprofen-d3	101	P	30 - 160
EPA 8321B	Primidone-d5	118	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A105073

Included Lab Sample IDs: 2241711, 2241712, 2241713, 2241714, 2241715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	112	128	P/P	40 - 160
Acesulfame K	140	112	P/P	40 - 160
AMPA	100	88.1	P/P	40 - 160
AMPA	88.1	95.1	P/P	40 - 160
Endothall	96.9	99.3	P/P	40 - 160
Endothall	99.3	103	P/P	40 - 160
Glufosinate	84.2	97.6	P/P	40 - 160
Glufosinate	85.0	84.2	P/P	40 - 160
Glyphosate	74.1	87.3	P/P	40 - 160
Glyphosate	87.3	93.5	P/P	40 - 160

Reference Method: EPA 8321B

Run ID: A105083

Included Lab Sample IDs: 2241711, 2241712, 2241713, 2241714, 2241715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	110	109	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A105098

Included Lab Sample IDs: 2241711, 2241712, 2241713, 2241714, 2241715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.4	107	P/P	50 - 150
2,4,5-T	104	103	P/P	50 - 150
Acetaminophen	114	110	P/P	60 - 160
Acetamiprid	122	127	P/P	50 - 150
Afidopyropen	123	139	P/P	50 - 150
Bentazon	113	94.4	P/P	50 - 160
Bentazon	132	113	P/P	50 - 160
Benzovindiflupyr	115	128	P/P	50 - 160
Carbamazepine	117	123	P/P	60 - 150
Clothianidin	103	119	P/P	60 - 150
Dinotefuran	136	121	P/P	50 - 150
Diuron	120	98.0	P/P	60 - 160
Fenuron	116	108	P/P	60 - 150
Fluridone	135	133	P/P	60 - 160
Fluridone	139	133	P/P	60 - 160
Hydrocodone	134	124	P/P	60 - 150
Ibuprofen	80.9	107	P/P	50 - 160
Imazapyr	115	107	P/P	50 - 150
Imidacloprid	114	127	P/P	60 - 150
Linuron	103	104	P/P	60 - 150
Mandestrobin	114	119	P/P	50 - 150
MCPP	102	111	P/P	50 - 150
Naproxen	118	139	P/P	50 - 160
Primidone	94.1	127	P/P	60 - 150
Pyraclostrobin	116	116	P/P	60 - 150
Thiamethoxam	136	135	P/P	50 - 150
Tolfenpyrad	108	123	P/P	60 - 150
Triclopyr	118	110	P/P	50 - 150

Quality Assurance Report

Calibration Verification

* 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 SMP	MS
			LCS			
EPA 8321B	2,4-D	151	154	158		2.49
	2,4,5-T	138	146	150		2.47
	Acesulfame K	139	132	117		11.3
	Acetaminophen	112	111	91.8		15.7
	Acetamiprid	111	115	120		4.09
	Afidopyropen	92.0	104	102		1.46
	AMPA	84.7	48.7	55.8		10.8
	Bentazon	44.0				16.5
	Benzovindiflupyr	83.1	100	98.5		1.66
	Carbamazepine	94.7	96.4	90.0		6.87
	Clothianidin	110	125	127		1.52
	Dinotefuran	85.9	155	156		0.803
	Diuron	78.4	73.3	56.6		25.7
	Endothall	93.4	124	111		11.2
	Fenuron	103	118	111		5.96
	Fluridone	103	120	121		0.683
	Glufosinate	80.7	92.2	94.2		2.15
	Glyphosate	60.4	51.3	32.3		6.62
	Hydrocodone	111	131	132		0.830
	Ibuprofen	77.4	102	76.7		28.5
	Imazapyr	111				4.89
	Imidacloprid	114	244	236		2.76
	Linuron	77.8	78.6	81.6		3.71
	Mandestrobin	98.6	107	110		3.57
	MCPP	158	181	184		1.32
	Naproxen	111	89.7	99.3		10.1
	Primidone	103	131	119		9.53
	Pyraclostrobin	76.6	98.5	99.1		0.678
	Sucralose	105	107	106		0.275
	Thiamethoxam	121	195	196		0.613
	Tolfenpyrad	49.9	66.3	70.6		6.33
	Triclopyr	150	163	152		6.93

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2241711, 2241712, 2241713, 2241714, 2241715
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2241711, 2241712, 2241713, 2241714, 2241715

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 16:59	Rebecca Ware	2241711
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 17:13	Rebecca Ware	2241712
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 17:40	Rebecca Ware	2241713
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 17:54	Rebecca Ware	2241714
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 18:08	Rebecca Ware	2241715
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 18:22	Rebecca Ware	2241712
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 18:35	Rebecca Ware	2241713
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 18:49	Rebecca Ware	2241714
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/27/2021 19:03	Rebecca Ware	2241715
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/29/2021 02:12	Rebecca Ware	2241711
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/29/2021 02:24	Rebecca Ware	2241712
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/29/2021 02:36	Rebecca Ware	2241713
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/29/2021 02:47	Rebecca Ware	2241714
	04/22/2021	04/22/2021 13:00	Rebecca Ware	04/29/2021 02:59	Rebecca Ware	2241715
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/01/2021 04:15	Juyoung Kim	2241711
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/01/2021 04:50	Juyoung Kim	2241712
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/01/2021 05:25	Juyoung Kim	2241713
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/01/2021 05:59	Juyoung Kim	2241714
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/01/2021 06:34	Juyoung Kim	2241715
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/03/2021 16:25	Juyoung Kim	2241711
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/03/2021 16:59	Juyoung Kim	2241712
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/03/2021 18:08	Juyoung Kim	2241713
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/03/2021 18:43	Juyoung Kim	2241714
	04/22/2021	04/26/2021 09:00	Hoor Shaik	05/03/2021 19:18	Juyoung Kim	2241715