

Chemical Analysis Report

SO-DIST-2021-05-04-01

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

Event Description: **2021 SMP : Estero Cricks**
Request ID: **RQ-2021-05-03-63**
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
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 18-MAY-2021 17:40

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored 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: Mullock Creek near US41

Collection Date/Time: 05/03/2021 10:10

Field ID: G1SD0100

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2244602	EPA 8321B	2,4-D	0.0046	I	ug/L	P397580	
		Acesulfame K	0.12	I	ug/L	P397588	
		2,4,5-T	0.0040	U	ug/L	P397580	
		AMPA	0.20	I	ug/L	P397588	
		Sucralose	4.3		ug/L	P397588	
		Acetaminophen	0.0098	I	ug/L	P397580	
		Acetamiprid	0.0020	U	ug/L	P397580	
		Endothall	0.25	U	ug/L	P397588	
		Glufosinate	0.10	U	ug/L	P397588	
		Glyphosate	0.34	I	ug/L	P397588	
		Afidopyropen	0.0020	U	ug/L	P397580	
		Bentazon	0.037		ug/L	P397580	
		Benzovindiflupyr	0.0020	U	ug/L	P397580	
		Carbamazepine	0.0035		ug/L	P397580	
		Clothianidin	0.0020	U	ug/L	P397580	
		Dinotefuran	0.0020	U	ug/L	P397580	
		Diuron	0.0020	U	ug/L	P397580	
		Fenuron	0.016	U	ug/L	P397580	
		Fluridone	0.15		ug/L	P397580	
		Imazapyr	0.14		ug/L	P397580	
		Hydrocodone	0.0020	U	ug/L	P397580	
		Ibuprofen	0.020	U	ug/L	P397580	
		Imidacloprid	0.0020	U	ug/L	P397580	
		Linuron	0.0040	U	ug/L	P397580	
		Mandestrobin	0.0020	U	ug/L	P397580	
		MCPP	0.0020	U	ug/L	P397580	
		Naproxen	0.0080	U	ug/L	P397580	
		Primidone	0.028		ug/L	P397580	
		Pyraclostrobin	0.0020	U	ug/L	P397580	
		Thiamethoxam	0.0020	U	ug/L	P397580	
		Tolfenpyrad	0.0020	U	ug/L	P397580	
		Triclopyr	0.0040	U	ug/L	P397580	

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: Mullock Creek upstream of US 41

Collection Date/Time: 05/03/2021 10:45

Field ID: G1SD0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2244603	EPA 8321B	2,4-D	0.0020	U	ug/L	P397580	
		Acesulfame K	0.42		ug/L	P397588	
		2,4,5-T	0.0040	U	ug/L	P397580	
		AMPA	1.0		ug/L	P397588	
		Sucralose	2.4		ug/L	P397588	
		Acetaminophen	0.0080	U	ug/L	P397580	
		Acetamiprid	0.0020	U	ug/L	P397580	
		Endothall	0.25	U	ug/L	P397588	
		Glufosinate	0.10	U	ug/L	P397588	
		Glyphosate	2.8		ug/L	P397588	
		Afidopyropen	0.0020	U	ug/L	P397580	
		Bentazon	0.16		ug/L	P397580	
		Benzovindiflupyr	0.0020	U	ug/L	P397580	
		Carbamazepine	0.010		ug/L	P397580	
		Clothianidin	0.0020	U	ug/L	P397580	
		Dinotefuran	0.0020	U	ug/L	P397580	
		Diuron	0.0020	U	ug/L	P397580	
		Fenuron	0.016	U	ug/L	P397580	
		Fluridone	0.055		ug/L	P397580	
		Imazapyr	0.11		ug/L	P397580	
		Hydrocodone	0.0020	U	ug/L	P397580	
		Ibuprofen	0.020	U	ug/L	P397580	
		Imidacloprid	0.0028	I	ug/L	P397580	
		Linuron	0.0040	U	ug/L	P397580	
		Mandestrobin	0.0020	U	ug/L	P397580	
		MCPP	0.0024	I	ug/L	P397580	
		Naproxen	0.020	I	ug/L	P397580	
		Primidone	0.0074	I	ug/L	P397580	
		Pyraclostrobin	0.0020	U	ug/L	P397580	
		Thiamethoxam	0.0020	U	ug/L	P397580	
		Tolfenpyrad	0.0020	U	ug/L	P397580	
		Triclopyr	0.0040	U	ug/L	P397580	

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: Hendry Creek @ Old Gladiolus Dr

Collection Date/Time: 05/03/2021 11:20

Field ID: G1SD0062

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2244604	EPA 8321B	Acesulfame K	0.10	I	ug/L	P397588	
		2,4-D	0.080		ug/L	P397580	
		AMPA	1.0	U	ug/L	P397588	
		2,4,5-T	0.0040	U	ug/L	P397580	
		Sucralose	0.35		ug/L	P397588	
		Acetaminophen	0.0080	U	ug/L	P397580	
		Endothall	0.25	U	ug/L	P397588	
		Acetamiprid	0.0020	U	ug/L	P397580	
		Glufosinate	1.0	U	ug/L	P397588	
		Glyphosate	2.7	I	ug/L	P397588	
		Afidopyropen	0.0020	U	ug/L	P397580	
		Bentazon	0.090		ug/L	P397580	
		Benzovindiflupyr	0.0020	U	ug/L	P397580	
		Carbamazepine	8.0E-04	U	ug/L	P397580	
		Clothianidin	0.0020	U	ug/L	P397580	
		Dinotefuran	0.0020	U	ug/L	P397580	
		Diuron	0.099		ug/L	P397580	
		Fenuron	0.016	U	ug/L	P397580	
		Fluridone	0.058		ug/L	P397580	
		Imazapyr	0.29		ug/L	P397580	
		Hydrocodone	0.0020	U	ug/L	P397580	
		Ibuprofen	0.020	U	ug/L	P397580	
		Imidacloprid	0.027		ug/L	P397580	
		Linuron	0.0040	U	ug/L	P397580	
		Mandestrobin	0.0020	U	ug/L	P397580	
		MCPP	0.0020	U	ug/L	P397580	
		Naproxen	0.0080	U	ug/L	P397580	
		Primidone	0.0040	U	ug/L	P397580	
		Pyraclostrobin	0.0020	U	ug/L	P397580	
		Thiamethoxam	0.0032	I	ug/L	P397580	
		Tolfenpyrad	0.0020	U	ug/L	P397580	
		Triclopyr	0.0040	U	ug/L	P397580	

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: Hendry Creek @ Gladiolus Rd

Collection Date/Time: 05/03/2021 11:40

Field ID: G1SD0097

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2244605	EPA 8321B	Acesulfame K	0.10	U	ug/L	P397588	
		2,4-D	0.040		ug/L	P397580	
		AMPA	1.2	I	ug/L	P397588	
		2,4,5-T	0.0040	U	ug/L	P397580	
		Sucralose	0.59		ug/L	P397588	
		Acetaminophen	0.0098	I	ug/L	P397580	
		Endothall	0.25	U	ug/L	P397588	
		Acetamiprid	0.0020	U	ug/L	P397580	
		Glufosinate	1.0	U	ug/L	P397588	
		Glyphosate	3.8	I	ug/L	P397588	
		Afidopyropen	0.0020	U	ug/L	P397580	
		Bentazon	0.12		ug/L	P397580	
		Benzovindiflupyr	0.0020	U	ug/L	P397580	
		Carbamazepine	9.9E-04	I	ug/L	P397580	
		Clothianidin	0.0020	U	ug/L	P397580	
		Dinotefuran	0.0032	I	ug/L	P397580	
		Diuron	0.035		ug/L	P397580	
		Fenuron	0.016	U	ug/L	P397580	
		Fluridone	0.045		ug/L	P397580	
		Imazapyr	0.37		ug/L	P397580	
		Hydrocodone	0.0020	U	ug/L	P397580	
		Ibuprofen	0.020	U	ug/L	P397580	
		Imidacloprid	0.029		ug/L	P397580	
		Linuron	0.0040	U	ug/L	P397580	
		Mandestrobin	0.0020	U	ug/L	P397580	
		MCPP	0.0020	U	ug/L	P397580	
		Naproxen	0.0080	U	ug/L	P397580	
		Primidone	0.0040	I	ug/L	P397580	
		Pyraclostrobin	0.0020	U	ug/L	P397580	
		Thiamethoxam	0.0031	I	ug/L	P397580	
		Tolfenpyrad	0.0020	U	ug/L	P397580	
		Triclopyr	0.0040	U	ug/L	P397580	

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: Henry Creek @ Summerlin Rd

Collection Date/Time: 05/03/2021 12:10

Field ID: G1SD0098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2244606	EPA 8321B	2,4-D	0.0020	U	ug/L	P397580	
		Acesulfame K	0.16	I	ug/L	P397588	
		2,4,5-T	0.0040	U	ug/L	P397580	
		AMPA	2.6		ug/L	P397588	
		Sucralose	3.9		ug/L	P397588	
		Acetaminophen	0.0080	U	ug/L	P397580	
		Acetamiprid	0.0020	U	ug/L	P397580	
		Endothall	0.25	U	ug/L	P397588	
		Glufosinate	0.10	U	ug/L	P397588	
		Glyphosate	5.2		ug/L	P397588	
		Afidopyropen	0.0020	U	ug/L	P397580	
		Bentazon	0.63		ug/L	P397580	
		Benzovindiflupyr	0.0020	U	ug/L	P397580	
		Carbamazepine	0.0041		ug/L	P397580	
		Clothianidin	0.0020	U	ug/L	P397580	
		Dinotefuran	0.0075	I	ug/L	P397580	
		Diuron	0.0020	U	ug/L	P397580	
		Fenuron	0.016	U	ug/L	P397580	
		Fluridone	0.42		ug/L	P397580	
		Imazapyr	1.3		ug/L	P397580	
		Hydrocodone	0.0020	U	ug/L	P397580	
		Ibuprofen	0.020	U	ug/L	P397580	
		Imidacloprid	0.0038	I	ug/L	P397580	
		Linuron	0.0040	U	ug/L	P397580	
		Mandestrobin	0.0020	U	ug/L	P397580	
		MCPP	0.0020	U	ug/L	P397580	
		Naproxen	0.0080	U	ug/L	P397580	
		Primidone	0.025		ug/L	P397580	
		Pyraclostrobin	0.0020	U	ug/L	P397580	
		Thiamethoxam	0.0020	U	ug/L	P397580	
		Tolfenpyrad	0.0020	U	ug/L	P397580	
		Triclopyr	0.0040	U	ug/L	P397580	

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: Hendry Creek @ Whitney Way

Collection Date/Time: 05/03/2021 12:35

Field ID: G1SD0099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2244622	EPA 8321B	2,4-D	0.0068	I	ug/L	P397580	
		Acesulfame K	0.10	U	ug/L	P397588	
		2,4,5-T	0.0040	U	ug/L	P397580	
		AMPA	0.42		ug/L	P397588	
		Sucralose	0.26		ug/L	P397588	
		Acetaminophen	0.0093	I	ug/L	P397580	
		Acetamiprid	0.0020	U	ug/L	P397580	
		Endothall	0.25	U	ug/L	P397588	
		Glufosinate	0.10	U	ug/L	P397588	
		Glyphosate	4.6		ug/L	P397588	
		Afidopyropen	0.0020	U	ug/L	P397580	
		Bentazon	0.21		ug/L	P397580	
		Benzovindiflupyr	0.0020	U	ug/L	P397580	
		Carbamazepine	8.0E-04	U	ug/L	P397580	
		Clothianidin	0.0071	I	ug/L	P397580	
		Dinotefuran	0.017		ug/L	P397580	
		Diuron	0.010		ug/L	P397580	
		Fenuron	0.016	U	ug/L	P397580	
		Fluridone	0.018		ug/L	P397580	
		Imazapyr	0.23		ug/L	P397580	
		Hydrocodone	0.0020	U	ug/L	P397580	
		Ibuprofen	0.020	U	ug/L	P397580	
		Imidacloprid	0.031		ug/L	P397580	
		Linuron	0.0040	U	ug/L	P397580	
		Mandestrobin	0.0020	U	ug/L	P397580	
		MCPP	0.0020	U	ug/L	P397580	
		Naproxen	0.0080	U	ug/L	P397580	
		Primidone	0.0040	U	ug/L	P397580	
		Pyraclostrobin	0.0020	U	ug/L	P397580	
		Thiamethoxam	0.0036	I	ug/L	P397580	
		Tolfenpyrad	0.0020	U	ug/L	P397580	
		Triclopyr	0.0040	U	ug/L	P397580	

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.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P397580

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: P397588

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P397580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	113		P	30 - 160
2,4,5-T	119		P	30 - 160
Acetaminophen	121		P	30 - 160
Acetamiprid	77.3		P	30 - 160
Afidopyropen	69.0		P	30 - 160
Bentazon	142		P	30 - 160
Benzovindiflupyr	72.2		P	30 - 160
Carbamazepine	83.2		P	30 - 160
Clothianidin	95.3		P	30 - 160
Dinotefuran	79.5		P	30 - 160
Diuron	59.6		P	30 - 160
Fenuron	99.9		P	30 - 160
Fluridone	85.7		P	30 - 160
Hydrocodone	90.3		P	30 - 160
Ibuprofen	74.8		P	30 - 160
Imazapyr	100		P	30 - 160
Imidacloprid	101		P	30 - 160
Linuron	67.8		P	30 - 160
Mandestrobin	84.8		P	30 - 160
MCPP	115		P	30 - 160
Naproxen	67.9		P	30 - 160
Primidone	81.7		P	30 - 160
Pyraclostrobin	70.5		P	30 - 160
Thiamethoxam	90.5		P	30 - 160
Tolfenpyrad	46.4		P	30 - 160
Triclopyr	119		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P397588

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	76.5		P	40 - 150
AMPA	110		P	40 - 150
Endothall	108		P	40 - 150
Glufosinate	80.5		P	40 - 150
Glyphosate	134		P	40 - 140
Sucralose	93.0		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P397580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243842	2,4-D	118	113	P/P	30 - 160
2243842	2,4,5-T	99.2	107	P/P	30 - 160
2243842	Acetaminophen	88.3	90.1	P/P	30 - 160
2243842	Acetamiprid	72.6	73.5	P/P	30 - 160
2243842	Afidopyropen	77.1	78.2	P/P	30 - 160
2243842	Benzovindiflupyr	68.8	72.0	P/P	30 - 160
2243842	Carbamazepine	65.0	67.6	P/P	30 - 160
2243842	Clothianidin	100	95.6	P/P	30 - 160
2243842	Dinotefuran	98.3	101	P/P	30 - 160
2243842	Diuron	41.6	43.5	P/P	30 - 160
2243842	Fenuron	73.7	77.4	P/P	30 - 160
2243842	Hydrocodone	94.8	86.9	P/P	30 - 160
2243842	Ibuprofen	65.8	75.4	P/P	30 - 160
2243842	Imidacloprid	125	137	P/P	30 - 160
2243842	Linuron	52.2	60.4	P/P	30 - 160
2243842	Mandestrobin	73.9	81.0	P/P	30 - 160
2243842	MCPP	98.8	103	P/P	30 - 160
2243842	Naproxen	62.4	81.0	P/P	30 - 160
2243842	Primidone	94.7	93.6	P/P	30 - 160
2243842	Pyraclostrobin	67.7	75.2	P/P	30 - 160
2243842	Thiamethoxam	111	119	P/P	30 - 160
2243842	Tolfenpyrad	43.3	47.7	P/P	30 - 160
2243842	Triclopyr	104	114	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P397588

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2244549	Acesulfame K	109	135	P/P	40 - 150
2244549	AMPA	120	118	P/P	40 - 150
2244549	Endothall	110	81.8	P/P	40 - 150
2244549	Glufosinate	73.3	56.0	P/P	40 - 150
2244549	Glyphosate	83.6	112	P/P	40 - 140
2244549	Sucralose	78.4	81.6	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P397580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243842	2,4-D	3.56	Spike	P	0 - 30
2243842	2,4,5-T	7.20	Spike	P	0 - 30
2243842	Acetaminophen	1.93	Spike	P	0 - 30
2243842	Acetamiprid	1.31	Spike	P	0 - 30
2243842	Afidopyropen	1.37	Spike	P	0 - 30
2243842	Bentazon	14.1	Spike	P	0 - 30
2243842	Benzovindiflupyr	4.52	Spike	P	0 - 30
2243842	Carbamazepine	3.44	Spike	P	0 - 30
2243842	Clothianidin	4.47	Spike	P	0 - 30
2243842	Dinotefuran	2.16	Spike	P	0 - 30
2243842	Diuron	3.88	Spike	P	0 - 30
2243842	Fenuron	4.81	Spike	P	0 - 30
2243842	Fluridone	11.7	Spike	P	0 - 30
2243842	Hydrocodone	8.60	Spike	P	0 - 30
2243842	Ibuprofen	13.6	Spike	P	0 - 30
2243842	Imazapyr	2.18	Spike	P	0 - 30
2243842	Imidacloprid	8.69	Spike	P	0 - 30
2243842	Linuron	14.6	Spike	P	0 - 30
2243842	Mandestrobin	9.17	Spike	P	0 - 30
2243842	MCPP	4.07	Spike	P	0 - 30
2243842	Naproxen	26.0	Spike	P	0 - 30
2243842	Primidone	1.11	Spike	P	0 - 30
2243842	Pyraclostrobin	10.6	Spike	P	0 - 30
2243842	Thiamethoxam	6.90	Spike	P	0 - 30
2243842	Tolfenpyrad	9.73	Spike	P	0 - 30
2243842	Triclopyr	9.46	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P397588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2244549	Acesulfame K	21.0	Spike	P	0 - 30
2244549	AMPA	0.800	Spike	P	0 - 30
2244549	Endothall	29.6	Spike	P	0 - 30
2244549	Glufosinate	26.8	Spike	P	0 - 30
2244549	Glyphosate	17.8	Spike	P	0 - 30
2244549	Sucralose	3.52	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2244602
Field Sample ID: G1SD0100

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.2	P	30 - 160
EPA 8321B	Diuron-d6	38.1	P	30 - 160
EPA 8321B	Endothall-d6	137	P	40 - 160
EPA 8321B	Endothall-d6	137	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	91.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	91.9	P	40 - 160
EPA 8321B	Ibuprofen-d3	85.8	P	30 - 160
EPA 8321B	Primidone-d5	78.9	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2244603
Field Sample ID: G1SD0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	126	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.4	P	30 - 160
EPA 8321B	Diuron-d6	53.8	P	30 - 160
EPA 8321B	Endothall-d6	156	P	40 - 160
EPA 8321B	Endothall-d6	156	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	72.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	72.4	P	40 - 160
EPA 8321B	Ibuprofen-d3	84.9	P	30 - 160
EPA 8321B	Primidone-d5	92.6	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2244604
Field Sample ID: G1SD0062

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	132	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.6	P	30 - 160
EPA 8321B	Diuron-d6	52.4	P	30 - 160
EPA 8321B	Endothall-d6	144	P	40 - 160
EPA 8321B	Endothall-d6	144	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	159	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	159	P	40 - 160
EPA 8321B	Ibuprofen-d3	83.5	P	30 - 160
EPA 8321B	Primidone-d5	99.0	P	30 - 160
EPA 8321B	Sucralose-d6	98.6	P	30 - 160
EPA 8321B	Sucralose-d6	98.6	P	30 - 160

Lab Sample ID: 2244605
Field Sample ID: G1SD0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2244605

Field Sample ID: G1SD0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	87.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.2	P	30 - 160
EPA 8321B	Diuron-d6	51.6	P	30 - 160
EPA 8321B	Endothall-d6	105	P	40 - 160
EPA 8321B	Endothall-d6	105	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	139	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	139	P	40 - 160
EPA 8321B	Ibuprofen-d3	86.2	P	30 - 160
EPA 8321B	Primidone-d5	76.1	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2244606

Field Sample ID: G1SD0098

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.1	P	30 - 160
EPA 8321B	Diuron-d6	43.6	P	30 - 160
EPA 8321B	Endothall-d6	97.2	P	40 - 160
EPA 8321B	Endothall-d6	97.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.6	P	40 - 160
EPA 8321B	Ibuprofen-d3	83.0	P	30 - 160
EPA 8321B	Primidone-d5	78.4	P	30 - 160
EPA 8321B	Sucralose-d6	94.5	P	30 - 160
EPA 8321B	Sucralose-d6	94.5	P	30 - 160

Lab Sample ID: 2244622

Field Sample ID: G1SD0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	134	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.3	P	30 - 160
EPA 8321B	Diuron-d6	55.5	P	30 - 160
EPA 8321B	Endothall-d6	132	P	40 - 160
EPA 8321B	Endothall-d6	132	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	40 - 160
EPA 8321B	Ibuprofen-d3	84.3	P	30 - 160
EPA 8321B	Primidone-d5	100	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: A105191

Included Lab Sample IDs: 2244602, 2244603, 2244604, 2244605, 2244606, 2244622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	75.0	61.5	P/P	40 - 160
Acesulfame K	78.6	75.0	P/P	40 - 160
AMPA	109	112	P/P	40 - 160
AMPA	109	109	P/P	40 - 160
AMPA	109	112	P/P	40 - 160
Endothall	78.1	95.6	P/P	40 - 160
Endothall	98.9	78.1	P/P	40 - 160
Glufosinate	60.7	88.4	P/P	40 - 160
Glufosinate	79.1	88.8	P/P	40 - 160
Glufosinate	88.8	76.9	P/P	40 - 160
Glyphosate	128	140	P/P	40 - 160
Glyphosate	157	128	P/P	40 - 160
Glyphosate	158	132	P/P	40 - 160

Reference Method: EPA 8321B

Run ID: A105241

Included Lab Sample IDs: 2244602, 2244603, 2244604, 2244605, 2244606, 2244622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	91.3	96.2	P/P	60 - 160
Sucralose	96.2	93.5	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A105376

Included Lab Sample IDs: 2244602, 2244603, 2244604, 2244605, 2244606, 2244622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	116	P/P	50 - 150
2,4-D	116	134	P/P	50 - 150
2,4,5-T	124	144	P/P	50 - 150
2,4,5-T	98.6	124	P/P	50 - 150
Acetaminophen	88.5	98.9	P/P	60 - 160
Acetaminophen	98.9	93.6	P/P	60 - 160
Acetamiprid	106	105	P/P	50 - 150
Acetamiprid	97.1	106	P/P	50 - 150
Afidopyropen	109	119	P/P	50 - 150
Afidopyropen	119	109	P/P	50 - 150
Bentazon	122	135	P/P	50 - 160
Bentazon	158	160	P/P	50 - 160
Bentazon	87.3	158	P/P	50 - 160
Benzovindiflupyr	122	131	P/P	50 - 160
Benzovindiflupyr	96.6	122	P/P	50 - 160
Carbamazepine	101	113	P/P	60 - 150
Carbamazepine	99.0	101	P/P	60 - 150
Clothianidin	107	117	P/P	60 - 150
Clothianidin	109	107	P/P	60 - 150
Dinotefuran	86.6	91.6	P/P	50 - 150
Dinotefuran	93.7	86.6	P/P	50 - 150
Diuron	104	108	P/P	60 - 160
Diuron	108	115	P/P	60 - 160
Fenuron	106	109	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A105376

Included Lab Sample IDs: 2244602, 2244603, 2244604, 2244605, 2244606, 2244622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	109	124	P/P	60 - 150
Fluridone	117	119	P/P	60 - 160
Fluridone	122	133	P/P	60 - 160
Fluridone	133	138	P/P	60 - 160
Hydrocodone	101	108	P/P	60 - 150
Hydrocodone	108	108	P/P	60 - 150
Ibuprofen	103	125	P/P	50 - 160
Ibuprofen	89.9	103	P/P	50 - 160
Imazapyr	109	120	P/P	50 - 160
Imazapyr	118	138	P/P	50 - 160
Imazapyr	90.5	118	P/P	50 - 160
Imidacloprid	93.1	98.1	P/P	60 - 150
Imidacloprid	98.1	114	P/P	60 - 150
Linuron	104	110	P/P	60 - 150
Linuron	110	115	P/P	60 - 150
Mandestrobin	108	129	P/P	50 - 150
Mandestrobin	129	130	P/P	50 - 150
MCPP	110	129	P/P	50 - 150
MCPP	129	143	P/P	50 - 150
Naproxen	147	117	P/P	50 - 160
Naproxen	92.1	147	P/P	50 - 160
Primidone	87.0	107	P/P	60 - 150
Primidone	89.8	87.0	P/P	60 - 150
Pyraclostrobin	110	122	P/P	60 - 150
Pyraclostrobin	122	130	P/P	60 - 150
Thiamethoxam	97.2	100	P/P	50 - 150
Thiamethoxam	99.6	97.2	P/P	50 - 150
Tolfenpyrad	114	117	P/P	60 - 150
Tolfenpyrad	96.2	114	P/P	60 - 150
Triclopyr	114	122	P/P	50 - 150
Triclopyr	122	146	P/P	50 - 150

* 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	113	118	113		3.56
	2,4,5-T	119	99.2	107		7.20
	Acesulfame K	76.5	109	135		21.0
	Acetaminophen	121	88.3	90.1		1.93
	Acetamiprid	77.3	72.6	73.5		1.31
	Afidopyropen	69.0	77.1	78.2		1.37
	AMPA	110	120	118		0.800
	Bentazon	142				14.1
	Benzovindiflupyr	72.2	68.8	72.0		4.52
	Carbamazepine	83.2	65.0	67.6		3.44
	Clothianidin	95.3	100	95.6		4.47
	Dinotefuran	79.5	98.3	101		2.16
	Diuron	59.6	41.6	43.5		3.88
	Endothall	108	110	81.8		29.6
	Fenuron	99.9	73.7	77.4		4.81
	Fluridone	85.7				11.7
	Glufosinate	80.5	73.3	56.0		26.8
	Glyphosate	134	83.6	112		17.8
	Hydrocodone	90.3	94.8	86.9		8.60
	Ibuprofen	74.8	65.8	75.4		13.6
	Imazapyr	100				2.18
	Imidacloprid	101	125	137		8.69
	Linuron	67.8	52.2	60.4		14.6
	Mandestrobin	84.8	73.9	81.0		9.17
	MCPP	115	98.8	103		4.07
	Naproxen	67.9	62.4	81.0		26.0
	Primidone	81.7	94.7	93.6		1.11
	Pyraclostrobin	70.5	67.7	75.2		10.6
	Sucralose	93.0	78.4	81.6		3.52
	Thiamethoxam	90.5	111	119		6.90
	Tolfenpyrad	46.4	43.3	47.7		9.73
	Triclopyr	119	104	114		9.46

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2244602, 2244603, 2244604, 2244605, 2244606, 2244622
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2244602, 2244603, 2244604, 2244605, 2244606, 2244622

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/04/2021 13:26	Rebecca Ware	2244602
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/04/2021 13:40	Rebecca Ware	2244603
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/04/2021 16:53	Rebecca Ware	2244604
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/04/2021 17:07	Rebecca Ware	2244605
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/04/2021 17:21	Rebecca Ware	2244606
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/04/2021 17:35	Rebecca Ware	2244622
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/05/2021 10:35	Rebecca Ware	2244604
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/05/2021 10:49	Rebecca Ware	2244605
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/06/2021 15:13	Rebecca Ware	2244602
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/06/2021 15:24	Rebecca Ware	2244603
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/06/2021 15:55	Rebecca Ware	2244604
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/06/2021 16:07	Rebecca Ware	2244605
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/06/2021 16:18	Rebecca Ware	2244606
	05/04/2021	05/04/2021 11:50	Rebecca Ware	05/06/2021 16:30	Rebecca Ware	2244622
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/06/2021 08:56	Juyoung Kim	2244602
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/06/2021 10:05	Juyoung Kim	2244603
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/06/2021 10:40	Juyoung Kim	2244604
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/06/2021 11:15	Juyoung Kim	2244605
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/06/2021 11:50	Juyoung Kim	2244606
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/06/2021 12:24	Juyoung Kim	2244622
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/07/2021 23:08	Juyoung Kim	2244604
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/07/2021 23:42	Juyoung Kim	2244605
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/08/2021 00:17	Juyoung Kim	2244606
	05/04/2021	05/05/2021 09:00	Hoor Shaik	05/08/2021 00:52	Juyoung Kim	2244622