Chemical Analysis Report

SO-DIST-2021-05-28-02

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

Event Description: **2021 SMP: Billy Creek**
Request ID: **RQ-2021-05-24-16**
Customer: **SO-DIST**
Project ID: **SMP**

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FLDEP South District Office
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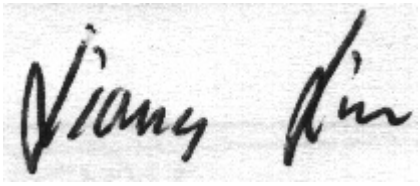
Date Certified: 07-JUN-2021 14:54



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: Billy Creek @SeaboardSt. **Collection Date/Time: 05/27/2021 09:05**

Field ID: G3SD0203 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251026	EPA 8321B	Acesulfame K	0.10	U	ug/L	P399017	
		2,4-D	0.010		ug/L	P399014	
		AMPA	1.0	U	ug/L	P399017	
		2,4,5-T	0.0040	U	ug/L	P399014	
		Sucralose	0.28		ug/L	P399017	MS
		Acetaminophen	0.0080	U	ug/L	P399014	
		Endothall	0.25	U	ug/L	P399017	
		Acetamiprid	0.0020	U	ug/L	P399014	
		Glufosinate	1.0	U	ug/L	P399017	
		Glyphosate	1.0	U	ug/L	P399017	
		Afidopyropen	0.0020	U	ug/L	P399014	
		Bentazon	0.019		ug/L	P399014	
		Benzovindiflupyr	0.0020	U	ug/L	P399014	
		Carbamazepine	8.0E-04	U	ug/L	P399014	
		Clothianidin	0.0020	U	ug/L	P399014	
		Dinotefuran	0.0082		ug/L	P399014	
		Diuron	0.0020	U	ug/L	P399014	
		Fenuron	0.016	U	ug/L	P399014	
		Fluridone	0.0039		ug/L	P399014	
		Imazapyr	0.28		ug/L	P399014	
		Hydrocodone	0.0020	U	ug/L	P399014	
		Ibuprofen	0.020	U	ug/L	P399014	
		Imidacloprid	0.0063	I	ug/L	P399014	
		Linuron	0.0040	U	ug/L	P399014	
		Mandestrobin	0.0020	U	ug/L	P399014	
		MCPP	0.0020	U	ug/L	P399014	
		Naproxen	0.0080	U	ug/L	P399014	
		Primidone	0.0040	U	ug/L	P399014	
		Pyraclostrobin	0.0020	U	ug/L	P399014	
		Thiamethoxam	0.0020	U	ug/L	P399014	
		Tolfenpyrad	0.0020	U	ug/L	P399014	
		Triclopyr	0.0040	U	ug/L	P399014	

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: BillyCrk@ShadyOaks Brdwk **Collection Date/Time: 05/27/2021 09:30**

Field ID: G3SD0196 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251027	EPA 8321B	2,4-D	0.0031	I	ug/L	P399014	
		Acesulfame K	0.10	U	ug/L	P399017	
		2,4,5-T	0.0040	U	ug/L	P399014	
		AMPA	0.10	U	ug/L	P399017	
		Sucralose	0.39		ug/L	P399017	MS
		Acetaminophen	0.0080	U	ug/L	P399014	
		Acetamiprid	0.0020	U	ug/L	P399014	
		Endothall	0.25	U	ug/L	P399017	
		Glufosinate	0.10	U	ug/L	P399017	
		Glyphosate	3.6		ug/L	P399017	
		Afidopyropen	0.0020	U	ug/L	P399014	
		Bentazon	0.045		ug/L	P399014	
		Benzovindiflupyr	0.0020	U	ug/L	P399014	
		Carbamazepine	8.0E-04	U	ug/L	P399014	
		Clothianidin	0.0020	U	ug/L	P399014	
		Dinotefuran	0.0020	U	ug/L	P399014	
		Diuron	0.0020	U	ug/L	P399014	
		Fenuron	0.016	U	ug/L	P399014	
		Fluridone	8.0E-04	U	ug/L	P399014	
		Imazapyr	0.92		ug/L	P399014	
		Hydrocodone	0.0020	U	ug/L	P399014	
		Ibuprofen	0.020	U	ug/L	P399014	
		Imidacloprid	0.0045	I	ug/L	P399014	
		Linuron	0.0040	U	ug/L	P399014	
		Mandestrobin	0.0020	U	ug/L	P399014	
		MCPP	0.0020	U	ug/L	P399014	
		Naproxen	0.0080	U	ug/L	P399014	
		Primidone	0.0040	U	ug/L	P399014	
		Pyraclostrobin	0.0020	U	ug/L	P399014	
		Thiamethoxam	0.0020	U	ug/L	P399014	
		Tolfenpyrad	0.0020	U	ug/L	P399014	
		Triclopyr	0.0040	U	ug/L	P399014	

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: BillyCreek@VSShoemaker **Collection Date/Time: 05/27/2021 10:00**

Field ID: G3SD0197 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251028	EPA 8321B	2,4-D	0.0064	I	ug/L	P399014	
		Acesulfame K	0.10	U	ug/L	P399017	
		2,4,5-T	0.0040	U	ug/L	P399014	
		AMPA	0.10	U	ug/L	P399017	
		Sucralose	0.28		ug/L	P399017	MS
		Acetaminophen	0.013	I	ug/L	P399014	
		Acetamiprid	0.0020	U	ug/L	P399014	
		Endothall	0.25	U	ug/L	P399017	
		Glufosinate	0.10	U	ug/L	P399017	
		Glyphosate	19		ug/L	P399017	
		Afidopyropen	0.0020	U	ug/L	P399014	
		Bentazon	0.022		ug/L	P399014	
		Benzovindiflupyr	0.0020	U	ug/L	P399014	
		Carbamazepine	8.0E-04	U	ug/L	P399014	
		Clothianidin	0.0020	U	ug/L	P399014	
		Dinotefuran	0.0047	I	ug/L	P399014	
		Diuron	0.0020	U	ug/L	P399014	
		Fenuron	0.017	I	ug/L	P399014	
		Fluridone	0.0020	I	ug/L	P399014	
		Imazapyr	0.48		ug/L	P399014	
		Hydrocodone	0.0020	U	ug/L	P399014	
		Ibuprofen	0.020	U	ug/L	P399014	
		Imidacloprid	0.0048	I	ug/L	P399014	
		Linuron	0.0040	U	ug/L	P399014	
		Mandestrobin	0.0020	U	ug/L	P399014	
		MCPP	0.0020	U	ug/L	P399014	
		Naproxen	0.0080	U	ug/L	P399014	
		Primidone	0.0040	U	ug/L	P399014	
		Pyraclostrobin	0.0020	U	ug/L	P399014	
		Thiamethoxam	0.0020	U	ug/L	P399014	
		Tolfenpyrad	0.0020	U	ug/L	P399014	
		Triclopyr	0.0040	U	ug/L	P399014	

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: BillyCreeknearDemeryCir **Collection Date/Time: 05/27/2021 10:20**

Field ID: G3SD0198 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251029	EPA 8321B	2,4-D	0.0068	I	ug/L	P399014	
		Acesulfame K	0.10	U	ug/L	P399017	
		2,4,5-T	0.0040	U	ug/L	P399014	
		AMPA	0.10	U	ug/L	P399017	
		Sucralose	0.38		ug/L	P399017	MS
		Acetaminophen	0.0080	U	ug/L	P399014	
		Acetamiprid	0.0020	U	ug/L	P399014	
		Endothall	0.25	U	ug/L	P399017	
		Glufosinate	0.10	U	ug/L	P399017	
		Glyphosate	6.1		ug/L	P399017	
		Afidopyropen	0.0020	U	ug/L	P399014	
		Bentazon	0.020		ug/L	P399014	
		Benzovindiflupyr	0.0020	U	ug/L	P399014	
		Carbamazepine	8.0E-04	U	ug/L	P399014	
		Clothianidin	0.0020	U	ug/L	P399014	
		Dinotefuran	0.0036	I	ug/L	P399014	
		Diuron	0.0020	U	ug/L	P399014	
		Fenuron	0.022	I	ug/L	P399014	
		Fluridone	0.0017	I	ug/L	P399014	
		Imazapyr	0.48		ug/L	P399014	
		Hydrocodone	0.0020	U	ug/L	P399014	
		Ibuprofen	0.020	U	ug/L	P399014	
		Imidacloprid	0.0042	I	ug/L	P399014	
		Linuron	0.0040	U	ug/L	P399014	
		Mandestrobin	0.0020	U	ug/L	P399014	
		MCPP	0.0020	U	ug/L	P399014	
		Naproxen	0.0080	U	ug/L	P399014	
		Primidone	0.0040	U	ug/L	P399014	
		Pyraclostrobin	0.0020	U	ug/L	P399014	
		Thiamethoxam	0.0020	U	ug/L	P399014	
		Tolfenpyrad	0.0020	U	ug/L	P399014	
		Triclopyr	0.0040	U	ug/L	P399014	

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: BillyCreekUpstrmofMarsh **Collection Date/Time: 05/27/2021 11:00**

Field ID: G3SD0199 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251030	EPA 8321B	2,4-D	0.11		ug/L	P399014	
		Acesulfame K	0.12	I	ug/L	P399017	
		2,4,5-T	0.0040	U	ug/L	P399014	
		AMPA	8.9		ug/L	P399017	
		Sucralose	0.20		ug/L	P399017	MS
		Acetaminophen	0.0080	U	ug/L	P399014	
		Acetamiprid	0.0020	U	ug/L	P399014	
		Endothall	0.25	U	ug/L	P399017	
		Glufosinate	0.10	U	ug/L	P399017	
		Glyphosate	4.9		ug/L	P399017	
		Afidopyropen	0.0020	U	ug/L	P399014	
		Bentazon	0.020		ug/L	P399014	
		Benzovindiflupyr	0.0020	U	ug/L	P399014	
		Carbamazepine	8.0E-04	U	ug/L	P399014	
		Clothianidin	0.0020	U	ug/L	P399014	
		Dinotefuran	0.0028	I	ug/L	P399014	
		Diuron	0.0020	U	ug/L	P399014	
		Fenuron	0.016	U	ug/L	P399014	
		Fluridone	0.0014	I	ug/L	P399014	
		Imazapyr	0.30		ug/L	P399014	
		Hydrocodone	0.0020	U	ug/L	P399014	
		Ibuprofen	0.020	U	ug/L	P399014	
		Imidacloprid	0.017		ug/L	P399014	
		Linuron	0.0040	U	ug/L	P399014	
		Mandestrobin	0.0020	U	ug/L	P399014	
		MCPP	0.0022	I	ug/L	P399014	
		Naproxen	0.0080	U	ug/L	P399014	
		Primidone	0.0040	U	ug/L	P399014	
		Pyraclostrobin	0.0020	U	ug/L	P399014	
		Thiamethoxam	0.0020	U	ug/L	P399014	
		Tolfenpyrad	0.0020	U	ug/L	P399014	
		Triclopyr	0.0040	U	ug/L	P399014	

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: P399014

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: P399017

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: P399014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	113		P	40 - 150
2,4,5-T	111		P	40 - 150
Acetaminophen	92.4		P	30 - 150
Acetamiprid	84.1		P	40 - 150
Afidopyropen	75.4		P	40 - 150
Bentazon	96.7		P	30 - 150
Benzovindiflupyr	97.0		P	40 - 150
Carbamazepine	91.2		P	40 - 150
Clothianidin	86.9		P	40 - 150
Dinotefuran	94.2		P	40 - 150
Diuron	78.3		P	40 - 150
Fenuron	111		P	40 - 150
Fluridone	82.3		P	40 - 150
Hydrocodone	86.6		P	40 - 150
Ibuprofen	77.1		P	40 - 150
Imazapyr	96.0		P	40 - 150
Imidacloprid	85.8		P	40 - 150
Linuron	75.1		P	40 - 150
Mandestrobin	109		P	40 - 150
MCPP	116		P	40 - 150
Naproxen	60.5		P	40 - 150
Primidone	92.0		P	40 - 150
Pyraclostrobin	72.8		P	40 - 150
Thiamethoxam	85.6		P	40 - 150
Tolfenpyrad	61.4		P	30 - 150
Triclopyr	108		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	94.1		P	40 - 150
AMPA	89.9		P	40 - 150
Endothall	88.2		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	104		P	40 - 150
Sucralose	113		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P399014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250793	2,4-D	119	109	P/P	40 - 150
2250793	2,4,5-T	92.1	77.2	P/P	40 - 150
2250793	Acetaminophen	84.2	82.6	P/P	30 - 150
2250793	Acetamiprid	66.2	66.9	P/P	40 - 150
2250793	Afidopyropen	102	84.3	P/P	40 - 150
2250793	Benzovindiflupyr	95.7	91.9	P/P	40 - 150
2250793	Carbamazepine	72.2	68.9	P/P	40 - 150
2250793	Clothianidin	70.9	78.2	P/P	40 - 150
2250793	Dinotefuran	90.2	94.5	P/P	40 - 150
2250793	Diuron	52.4	51.7	P/P	40 - 150
2250793	Fenuron	75.6	77.9	P/P	40 - 150
2250793	Fluridone	75.7	77.2	P/P	40 - 150
2250793	Hydrocodone	70.7	69.7	P/P	40 - 150
2250793	Ibuprofen	79.6	76.3	P/P	40 - 150
2250793	Imidacloprid	133	125	P/P	40 - 150
2250793	Linuron	75.9	72.8	P/P	40 - 150
2250793	Mandestrobin	129	113	P/P	40 - 150
2250793	MCPP	102	104	P/P	40 - 150
2250793	Naproxen	65.5	65.1	P/P	40 - 150
2250793	Primidone	85.8	86.3	P/P	40 - 150
2250793	Pyraclostrobin	77.3	75.8	P/P	40 - 150
2250793	Thiamethoxam	89.5	87.3	P/P	40 - 150
2250793	Tolfenpyrad	57.1	54.5	P/P	30 - 150
2250793	Triclopyr	88.0	83.7	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250902	Acesulfame K	84.9	81.4	P/P	40 - 150
2250902	AMPA	72.3	70.9	P/P	40 - 150
2250902	Endothall	93.1	103	P/P	40 - 150
2250902	Glufosinate	105	95.8	P/P	40 - 150
2250902	Glyphosate	99.6	90.0	P/P	40 - 150
2250902	Sucralose	38.7	52.0	F/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P399014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250793	2,4-D	8.58	Spike	P	0 - 30
2250793	2,4,5-T	17.5	Spike	P	0 - 30
2250793	Acetaminophen	1.98	Spike	P	0 - 30
2250793	Acetamiprid	0.967	Spike	P	0 - 30
2250793	Afidopyropen	18.7	Spike	P	0 - 30
2250793	Bentazon	6.97	Spike	P	0 - 30
2250793	Benzovindiflupyr	4.07	Spike	P	0 - 30
2250793	Carbamazepine	4.79	Spike	P	0 - 30
2250793	Clothianidin	9.73	Spike	P	0 - 30
2250793	Dinotefuran	4.61	Spike	P	0 - 30
2250793	Diuron	1.23	Spike	P	0 - 30
2250793	Fenuron	3.03	Spike	P	0 - 30
2250793	Fluridone	1.97	Spike	P	0 - 30
2250793	Hydrocodone	1.38	Spike	P	0 - 30
2250793	Ibuprofen	4.25	Spike	P	0 - 30
2250793	Imazapyr	4.99	Spike	P	0 - 30
2250793	Imidacloprid	6.13	Spike	P	0 - 30
2250793	Linuron	4.22	Spike	P	0 - 30
2250793	Mandestrobin	13.8	Spike	P	0 - 30
2250793	MCPP	1.87	Spike	P	0 - 30
2250793	Naproxen	0.658	Spike	P	0 - 30
2250793	Primidone	0.591	Spike	P	0 - 30
2250793	Pyraclostrobin	1.87	Spike	P	0 - 30
2250793	Thiamethoxam	2.45	Spike	P	0 - 30
2250793	Tolfenpyrad	4.69	Spike	P	0 - 30
2250793	Triclopyr	4.98	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250902	Acesulfame K	3.94	Spike	P	0 - 30
2250902	AMPA	1.92	Spike	P	0 - 30
2250902	Endothall	10.5	Spike	P	0 - 30
2250902	Glufosinate	8.87	Spike	P	0 - 30
2250902	Glyphosate	8.49	Spike	P	0 - 30
2250902	Sucralose	27.3	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2251026
Field Sample ID: G3SD0203

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160
EPA 8321B	Acetaminophen-d4	127	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.2	P	30 - 160
EPA 8321B	Diuron-d6	59.9	P	30 - 160
EPA 8321B	Endothall-d6	96.8	P	30 - 160
EPA 8321B	Endothall-d6	96.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.2	P	30 - 160
EPA 8321B	Primidone-d5	92.9	P	30 - 160
EPA 8321B	Sucralose-d6	62.9	P	30 - 160
EPA 8321B	Sucralose-d6	62.9	P	30 - 160

Lab Sample ID: 2251027
Field Sample ID: G3SD0196

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	132	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.6	P	30 - 160
EPA 8321B	Diuron-d6	61.8	P	30 - 160
EPA 8321B	Endothall-d6	91.1	P	30 - 160
EPA 8321B	Endothall-d6	91.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	53.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	53.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	78.5	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	70.3	P	30 - 160
EPA 8321B	Sucralose-d6	70.3	P	30 - 160

Lab Sample ID: 2251028
Field Sample ID: G3SD0197

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	125	P	30 - 160
EPA 8321B	Carbamazepine-d10	85.5	P	30 - 160
EPA 8321B	Diuron-d6	59.6	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	35.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	35.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.5	P	30 - 160
EPA 8321B	Primidone-d5	88.5	P	30 - 160
EPA 8321B	Sucralose-d6	65.3	P	30 - 160
EPA 8321B	Sucralose-d6	65.3	P	30 - 160

Lab Sample ID: 2251029
Field Sample ID: G3SD0198

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2251029
Field Sample ID: G3SD0198

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.5	P	30 - 160
EPA 8321B	Diuron-d6	55.1	P	30 - 160
EPA 8321B	Endothall-d6	88.6	P	30 - 160
EPA 8321B	Endothall-d6	88.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	36.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	36.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.8	P	30 - 160
EPA 8321B	Primidone-d5	80.7	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	30 - 160

Lab Sample ID: 2251030
Field Sample ID: G3SD0199

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	118	P	30 - 160
EPA 8321B	Acetaminophen-d4	114	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.0	P	30 - 160
EPA 8321B	Diuron-d6	54.1	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	53.8	P	30 - 160
EPA 8321B	Primidone-d5	83.8	P	30 - 160
EPA 8321B	Sucralose-d6	99.0	P	30 - 160
EPA 8321B	Sucralose-d6	99.0	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A105827
Included Lab Sample IDs: 2251026, 2251027, 2251028, 2251029, 2251030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	95.8	113	P/P	60 - 160
Endothall	120	125	P/P	60 - 160
Sucralose	94.1	116	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A105838
Included Lab Sample IDs: 2251027, 2251028, 2251029, 2251030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	89.1	94.3	P/P	60 - 160
Glufosinate	97.4	99.9	P/P	60 - 160
Glyphosate	107	112	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A105839
Included Lab Sample IDs: 2251026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	101	107	P/P	60 - 160
Glufosinate	103	115	P/P	60 - 160
Glyphosate	100	108	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A105850
Included Lab Sample IDs: 2251026, 2251027, 2251028, 2251029, 2251030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.5	109	P/P	50 - 150
2,4,5-T	121	109	P/P	50 - 150
Acetaminophen	105	119	P/P	60 - 160
Acetamiprid	107	107	P/P	50 - 150
Afidopyropen	102	107	P/P	50 - 150
Bentazon	134	121	P/P	50 - 160
Benzovindiflupyr	119	141	P/P	50 - 150
Carbamazepine	105	109	P/P	60 - 150
Clothianidin	101	110	P/P	60 - 150
Dinotefuran	99.3	107	P/P	50 - 150
Diuron	103	101	P/P	60 - 160
Fenuron	95.7	96.3	P/P	60 - 150
Fluridone	107	103	P/P	60 - 160
Hydrocodone	98.0	102	P/P	60 - 150
Ibuprofen	122	119	P/P	50 - 160
Imazapyr	82.1	97.1	P/P	50 - 150
Imidacloprid	95.2	101	P/P	60 - 150
Linuron	94.1	98.9	P/P	60 - 150
Mandestrobin	132	140	P/P	50 - 150
MCPP	96.1	94.7	P/P	50 - 150
Naproxen	71.9	84.1	P/P	50 - 160
Primidone	97.3	87.2	P/P	60 - 150
Pyraclostrobin	109	112	P/P	60 - 150
Thiamethoxam	104	105	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A105850
Included Lab Sample IDs: 2251026, 2251027, 2251028, 2251029, 2251030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	105	114	P/P	60 - 150
Triclopyr	105	110	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A105868
Included Lab Sample IDs: 2251027

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	121	128	P/P	50 - 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	113	119	109			8.58
	2,4,5-T	111	92.1	77.2			17.5
	Acesulfame K	94.1	84.9	81.4			3.94
	Acetaminophen	92.4	84.2	82.6			1.98
	Acetamiprid	84.1	66.2	66.9			0.967
	Afidopyropen	75.4	102	84.3			18.7
	AMPA	89.9	72.3	70.9			1.92
	Bentazon	96.7					6.97
	Benzovindiflupyr	97.0	95.7	91.9			4.07
	Carbamazepine	91.2	72.2	68.9			4.79
	Clothianidin	86.9	70.9	78.2			9.73
	Dinotefuran	94.2	90.2	94.5			4.61
	Diuron	78.3	52.4	51.7			1.23
	Endothall	88.2	93.1	103			10.5
	Fenuron	111	75.6	77.9			3.03
	Fluridone	82.3	75.7	77.2			1.97
	Glufosinate	104	105	95.8			8.87
	Glyphosate	104	99.6	90.0			8.49
	Hydrocodone	86.6	70.7	69.7			1.38
	Ibuprofen	77.1	79.6	76.3			4.25
	Imazapyr	96.0					4.99
	Imidacloprid	85.8	133	125			6.13
	Linuron	75.1	75.9	72.8			4.22
	Mandestrobin	109	129	113			13.8
	MCPP	116	102	104			1.87
	Naproxen	60.5	65.5	65.1			0.658
	Primidone	92.0	85.8	86.3			0.591
	Pyraclostrobin	72.8	77.3	75.8			1.87
	Sucralose	113	38.7	52.0			27.3
	Thiamethoxam	85.6	89.5	87.3			2.45
	Tolfenpyrad	61.4	57.1	54.5			4.69
	Triclopyr	108	88.0	83.7			4.98

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2251026, 2251027, 2251028, 2251029, 2251030
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2251026, 2251027, 2251028, 2251029, 2251030

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	05/28/2021	06/01/2021 09:00	Hoor Shaik	06/02/2021 10:00	Juyoung Kim	2251026
	05/28/2021	06/01/2021 09:00	Hoor Shaik	06/02/2021 10:35	Juyoung Kim	2251027
	05/28/2021	06/01/2021 09:00	Hoor Shaik	06/02/2021 11:10	Juyoung Kim	2251028
	05/28/2021	06/01/2021 09:00	Hoor Shaik	06/02/2021 11:44	Juyoung Kim	2251029
	05/28/2021	06/01/2021 09:00	Hoor Shaik	06/02/2021 12:19	Juyoung Kim	2251030
	05/28/2021	06/01/2021 09:00	Hoor Shaik	06/03/2021 21:12	Juyoung Kim	2251027
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 11:14	Juyoung Kim	2251027
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 11:24	Juyoung Kim	2251028
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 11:35	Juyoung Kim	2251029
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 11:46	Juyoung Kim	2251030
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 14:45	Pramila Ghimire	2251026
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 14:59	Pramila Ghimire	2251027
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 15:13	Pramila Ghimire	2251028
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 15:26	Pramila Ghimire	2251029
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 15:40	Pramila Ghimire	2251030
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 17:45	Juyoung Kim	2251026