

Chemical Analysis Report

CEN-DIST-2022-05-03-03

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

Event Description: **Bear (x4)**
Request ID: **RQ-2022-05-02-75**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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3319 Maguire Blvd., Suite 232
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Certified by: Colin Wright, Program Administrator

Date Certified: 18-MAY-2022 09:44

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: Lightwood Knot Canal E of 426

Collection Date/Time: 05/02/2022 09:58

Field ID: G2CE0263

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2323615	EPA 8321B	2,4-D	0.020		ug/L	P413315	
		Acesulfame K	0.12	I	ug/L	P413319	
		2,4,5-T	0.0040	U	ug/L	P413315	
		AMPA	0.51		ug/L	P413319	
		Acetaminophen	0.0080	U	ug/L	P413315	
		Acetamiprid	0.0040	U	ug/L	P413315	
		Endothall	0.25	U	ug/L	P413319	
		Glufosinate	0.10	U	ug/L	P413319	
		Glyphosate	1.6		ug/L	P413319	
		Afidopyropen	0.0020	U	ug/L	P413315	
		Bentazon	0.035		ug/L	P413315	
		Sucralose	0.96		ug/L	P413319	
		Benzovindiflupyr	0.0020	U	ug/L	P413315	
		Carbamazepine	8.0E-04	U	ug/L	P413315	
		Clothianidin	0.0026	I	ug/L	P413315	
		Dinotefuran	0.0025	I	ug/L	P413315	
		Diuron	0.0041	I	ug/L	P413315	
		Fenuron	0.064	U	ug/L	P413315	
		Fluridone	0.0059		ug/L	P413315	
		Imazapyr	0.094		ug/L	P413315	
		Hydrocodone	0.0040	U	ug/L	P413315	
		Ibuprofen	0.020	U	ug/L	P413315	
		Imidacloprid	0.0034	IJ	ug/L	P413315	MS
		Linuron	0.0080	U	ug/L	P413315	
		Mandestrobin	0.0020	U	ug/L	P413315	
		MCPP	0.0040	U	ug/L	P413315	
		Naproxen	0.016	U	ug/L	P413315	
		Primidone	0.0040	U	ug/L	P413315	
		Pyraclostrobin	0.0020	U	ug/L	P413315	
		Silvex	0.0040	U	ug/L	P413315	
		Thiamethoxam	0.0040	UJ	ug/L	P413315	MS
		Tolfenpyrad	0.0020	U	ug/L	P413315	
		Triclopyr	0.0040	U	ug/L	P413315	

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference. MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Bear Creek at Northern Way (BERC)

Collection Date/Time: 05/02/2022 10:30

Field ID: G2CE0182

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2323616	EPA 8321B	2,4-D	0.017		ug/L	P413315	
		Acesulfame K	0.11	I	ug/L	P413319	
		2,4,5-T	0.0040	U	ug/L	P413315	
		AMPA	0.39	I	ug/L	P413319	
		Acetaminophen	0.0080	U	ug/L	P413315	
		Acetamiprid	0.0020	U	ug/L	P413315	
		Endothall	0.25	U	ug/L	P413319	
		Glufosinate	0.10	U	ug/L	P413319	
		Glyphosate	0.98		ug/L	P413319	
		Afidopyropen	0.0020	U	ug/L	P413315	
		Bentazon	0.037		ug/L	P413315	
		Sucralose	1.2		ug/L	P413319	
		Benzovindiflupyr	0.0020	U	ug/L	P413315	
		Carbamazepine	8.0E-04	U	ug/L	P413315	
		Clothianidin	0.0022	I	ug/L	P413315	
		Dinotefuran	0.0040	I	ug/L	P413315	
		Diuron	0.0020	U	ug/L	P413315	
		Fenuron	0.032	U	ug/L	P413315	
		Fluridone	0.0060		ug/L	P413315	
		Imazapyr	0.12		ug/L	P413315	
		Hydrocodone	0.0020	U	ug/L	P413315	
		Ibuprofen	0.020	U	ug/L	P413315	
		Imidacloprid	0.0028	I	ug/L	P413315	MS
		Linuron	0.0040	U	ug/L	P413315	
		Mandestrobin	0.0020	U	ug/L	P413315	
		MCPP	0.0040	U	ug/L	P413315	
		Naproxen	0.0080	U	ug/L	P413315	
		Primidone	0.0040	U	ug/L	P413315	
		Pyraclostrobin	0.0020	U	ug/L	P413315	
		Silvex	0.0040	U	ug/L	P413315	
		Thiamethoxam	0.0020	U	ug/L	P413315	MS
		Tolfenpyrad	0.0020	U	ug/L	P413315	
		Triclopyr	0.0040	U	ug/L	P413315	

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: Bear Crk just north of Winter Springs Blvd in Bear Crk Par

Collection Date/Time: 05/02/2022 10:53

Field ID: G2CE0069

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2323617	EPA 8321B	2,4-D	0.013		ug/L	P413315	
		Acesulfame K	0.11	I	ug/L	P413319	
		2,4,5-T	0.0040	U	ug/L	P413315	
		AMPA	0.40		ug/L	P413319	
		Acetaminophen	0.0080	U	ug/L	P413315	
		Acetamiprid	0.0020	U	ug/L	P413315	
		Endothall	0.25	U	ug/L	P413319	
		Glufosinate	0.10	U	ug/L	P413319	
		Glyphosate	0.97		ug/L	P413319	
		Afidopyropen	0.0020	U	ug/L	P413315	
		Bentazon	0.038		ug/L	P413315	
		Sucralose	1.3		ug/L	P413319	
		Benzovindiflupyr	0.0020	U	ug/L	P413315	
		Carbamazepine	8.0E-04	U	ug/L	P413315	
		Clothianidin	0.0025	I	ug/L	P413315	
		Dinotefuran	0.0039	I	ug/L	P413315	
		Diuron	0.0020	U	ug/L	P413315	
		Fenuron	0.032	U	ug/L	P413315	
		Fluridone	0.0059		ug/L	P413315	
		Imazapyr	0.11		ug/L	P413315	
		Hydrocodone	0.0020	U	ug/L	P413315	
		Ibuprofen	0.020	U	ug/L	P413315	
		Imidacloprid	0.0031	I	ug/L	P413315	MS
		Linuron	0.0040	U	ug/L	P413315	
		Mandestrobin	0.0020	U	ug/L	P413315	
		MCPP	0.0040	U	ug/L	P413315	
		Naproxen	0.0080	U	ug/L	P413315	
		Primidone	0.0040	U	ug/L	P413315	
		Pyraclostrobin	0.0020	U	ug/L	P413315	
		Silvex	0.0040	U	ug/L	P413315	
		Thiamethoxam	0.0020	U	ug/L	P413315	MS
		Tolfenpyrad	0.0020	U	ug/L	P413315	
		Triclopyr	0.0040	U	ug/L	P413315	

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: Bear Creek behind shopping center

Collection Date/Time: 05/02/2022 11:20

Field ID: G2CE0260

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2323618	EPA 8321B	2,4-D	0.026		ug/L	P413315	
		Acesulfame K	0.10	U	ug/L	P413319	
		2,4,5-T	0.0040	U	ug/L	P413315	
		AMPA	0.26	I	ug/L	P413319	
		Acetaminophen	0.0080	U	ug/L	P413315	
		Acetamiprid	0.0020	U	ug/L	P413315	
		Endothall	0.25	U	ug/L	P413319	
		Glufosinate	0.10	U	ug/L	P413319	
		Glyphosate	0.56		ug/L	P413319	
		Afidopyropen	0.0020	U	ug/L	P413315	
		Bentazon	0.029		ug/L	P413315	
		Sucralose	0.35		ug/L	P413319	
		Benzovindiflupyr	0.0020	U	ug/L	P413315	
		Carbamazepine	8.0E-04	U	ug/L	P413315	
		Clothianidin	0.0020	U	ug/L	P413315	
		Dinotefuran	0.0020	I	ug/L	P413315	
		Diuron	0.0020	U	ug/L	P413315	
		Fenuron	0.032	U	ug/L	P413315	
		Fluridone	0.0072		ug/L	P413315	
		Imazapyr	0.11		ug/L	P413315	
		Hydrocodone	0.0020	U	ug/L	P413315	
		Ibuprofen	0.020	U	ug/L	P413315	
		Imidacloprid	0.0020	U	ug/L	P413315	MS
		Linuron	0.0040	U	ug/L	P413315	
		Mandestrobin	0.0020	U	ug/L	P413315	
		MCPP	0.0040	U	ug/L	P413315	
		Naproxen	0.0080	U	ug/L	P413315	
		Primidone	0.0040	U	ug/L	P413315	
		Pyraclostrobin	0.0020	U	ug/L	P413315	
		Silvex	0.0040	U	ug/L	P413315	
		Thiamethoxam	0.0020	U	ug/L	P413315	MS
		Tolfenpyrad	0.0020	U	ug/L	P413315	
		Triclopyr	0.0040	U	ug/L	P413315	

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: P413315**

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	0.032	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	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	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: P413319**

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: P413315

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	61.6		P	40 - 150
2,4,5-T	51.9		P	40 - 150
Acetaminophen	75.2		P	30 - 150
Acetamiprid	58.8		P	40 - 150
Afidopyropen	42.7		P	30 - 150
Bentazon	66.0		P	30 - 150
Benzovindiflupyr	66.4		P	40 - 150
Carbamazepine	65.0		P	40 - 150
Clothianidin	89.9		P	40 - 150
Dinotefuran	105		P	40 - 150
Diuron	69.4		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	71.1		P	40 - 150
Hydrocodone	72.3		P	40 - 150
Ibuprofen	63.0		P	40 - 150
Imazapyr	64.1		P	40 - 150
Imidacloprid	71.7		P	40 - 150
Linuron	53.9		P	40 - 150
Mandestrobin	63.6		P	40 - 150
MCPP	78.6		P	40 - 150
Naproxen	49.4		P	40 - 150
Primidone	94.0		P	40 - 150
Pyraclostrobin	55.4		P	40 - 150
Silvex	55.5		P	40 - 150
Thiamethoxam	79.7		P	40 - 150
Tolfenpyrad	35.6		P	30 - 150
Triclopyr	52.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P413319

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	89.0		P	40 - 150
Endothall	98.5		P	40 - 150
Glufosinate	103		P	40 - 150
Glyphosate	91.0		P	40 - 150
Sucralose	98.9		P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P413315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323615	2,4-D	74.9	69.2	P/P	40 - 150
2323615	2,4,5-T	75.0	66.8	P/P	40 - 150
2323615	Acetaminophen	132	127	P/P	30 - 150
2323615	Acetamiprid	98.9	100	P/P	40 - 150
2323615	Afidopyropen	40.5	37.8	P/P	30 - 150
2323615	Benzovindiflupyr	47.9	47.2	P/P	40 - 150
2323615	Carbamazepine	42.1	41.9	P/P	40 - 150
2323615	Clothianidin	42.1	40.1	P/P	40 - 150
2323615	Dinotefuran	97.9	99.6	P/P	40 - 150
2323615	Diuron	67.5	87.9	P/P	40 - 150
2323615	Fenuron	117	121	P/P	40 - 150
2323615	Fluridone	49.4	49.8	P/P	40 - 150
2323615	Hydrocodone	97.5	109	P/P	40 - 150
2323615	Ibuprofen	53.9	51.4	P/P	40 - 150
2323615	Imidacloprid	34.2	33.6	F/F	40 - 150
2323615	Linuron	86.9	81.4	P/P	40 - 150
2323615	Mandestrobin	49.2	49.0	P/P	40 - 150
2323615	MCPP	116	104	P/P	40 - 150
2323615	Naproxen	64.5	129	P/P	40 - 150
2323615	Primidone	66.4	68.6	P/P	40 - 150
2323615	Pyraclostrobin	50.5	52.3	P/P	40 - 150
2323615	Silvex	77.8	80.1	P/P	40 - 150
2323615	Thiamethoxam	147	160	P/F	40 - 150
2323615	Tolfenpyrad	33.9	36.0	P/P	30 - 150
2323615	Triclopyr	71.9	73.1	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P413319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323213	Acesulfame K	74.3	75.6	P/P	40 - 150
2323213	AMPA	61.0	64.8	P/P	40 - 150
2323213	Endothall	98.8	103	P/P	40 - 150
2323213	Glufosinate	73.9	76.4	P/P	40 - 150
2323213	Glyphosate	71.2	79.0	P/P	40 - 150
2323213	Sucralose	97.9	103	P/P	40 - 150

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P413315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323615	2,4-D	5.93	Spike	P	0 - 30
2323615	2,4,5-T	11.5	Spike	P	0 - 30
2323615	Acetaminophen	3.87	Spike	P	0 - 30
2323615	Acetamiprid	1.30	Spike	P	0 - 30
2323615	Afidopyropen	6.82	Spike	P	0 - 30
2323615	Bentazon	4.97	Spike	P	0 - 30
2323615	Benzovindiflupyr	1.39	Spike	P	0 - 30
2323615	Carbamazepine	0.660	Spike	P	0 - 30
2323615	Clothianidin	4.59	Spike	P	0 - 30
2323615	Dinotefuran	1.63	Spike	P	0 - 30
2323615	Diuron	24.6	Spike	P	0 - 30
2323615	Fenuron	3.31	Spike	P	0 - 30
2323615	Fluridone	0.490	Spike	P	0 - 30
2323615	Hydrocodone	11.5	Spike	P	0 - 30
2323615	Ibuprofen	4.71	Spike	P	0 - 30
2323615	Imazapyr	3.29	Spike	P	0 - 30
2323615	Imidacloprid	1.57	Spike	P	0 - 30
2323615	Linuron	6.59	Spike	P	0 - 30
2323615	Mandestrobin	0.387	Spike	P	0 - 30
2323615	MCPP	11.5	Spike	P	0 - 30
2323615	Naproxen	14.3	Spike	P	0 - 30
2323615	Primidone	3.22	Spike	P	0 - 30
2323615	Pyraclostrobin	3.53	Spike	P	0 - 30
2323615	Silvex	3.02	Spike	P	0 - 30
2323615	Thiamethoxam	8.28	Spike	P	0 - 30
2323615	Tolfenpyrad	6.05	Spike	P	0 - 30
2323615	Triclopyr	1.69	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P413319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323213	Acesulfame K	1.73	Spike	P	0 - 30
2323213	AMPA	5.57	Spike	P	0 - 30
2323213	Endothall	4.57	Spike	P	0 - 30
2323213	Glufosinate	3.29	Spike	P	0 - 30
2323213	Glyphosate	9.30	Spike	P	0 - 30
2323213	Sucralose	4.90	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2323615
Field Sample ID: G2CE0263

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Carbamazepine-d10	42.2	P	30 - 160
EPA 8321B	Diuron-d6	31.0	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.2	P	30 - 160
EPA 8321B	Primidone-d5	65.8	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2323616
Field Sample ID: G2CE0182

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	72.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	119	P	30 - 160
EPA 8321B	Carbamazepine-d10	44.8	P	30 - 160
EPA 8321B	Diuron-d6	33.1	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	61.1	P	30 - 160
EPA 8321B	Primidone-d5	65.4	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160

Lab Sample ID: 2323617
Field Sample ID: G2CE0069

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	120	P	30 - 160
EPA 8321B	Carbamazepine-d10	43.0	P	30 - 160
EPA 8321B	Diuron-d6	30.7	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.2	P	30 - 160
EPA 8321B	Primidone-d5	65.1	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2323618
Field Sample ID: G2CE0260

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	77.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	120	P	30 - 160
EPA 8321B	Carbamazepine-d10	42.7	P	30 - 160
EPA 8321B	Diuron-d6	31.6	P	30 - 160
EPA 8321B	Endothall-d6	96.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.3	P	30 - 160
EPA 8321B	Primidone-d5	67.0	P	30 - 160
EPA 8321B	Sucralose-d6	98.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A111932

Included Lab Sample IDs: 2323615, 2323616, 2323617, 2323618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.4	81.6	P/P	50 - 150
2,4,5-T	94.2	85.5	P/P	50 - 150
Acetaminophen	99.8	98.7	P/P	60 - 160
Acetamiprid	95.4	93.6	P/P	50 - 150
Afidopyropen	76.4	73.7	P/P	50 - 150
Bentazon	102	103	P/P	50 - 160
Benzovindiflupyr	97.0	95.2	P/P	50 - 150
Carbamazepine	96.0	94.4	P/P	60 - 150
Clothianidin	108	106	P/P	60 - 150
Dinotefuran	102	104	P/P	50 - 150
Diuron	100	101	P/P	60 - 160
Fenuron	105	107	P/P	60 - 150
Fluridone	96.4	96.0	P/P	60 - 160
Hydrocodone	98.0	97.3	P/P	60 - 150
Ibuprofen	86.7	107	P/P	50 - 160
Imazapyr	76.9	81.6	P/P	50 - 150
Imidacloprid	106	104	P/P	60 - 150
Linuron	96.9	95.4	P/P	60 - 150
Mandestrobin	88.2	91.3	P/P	50 - 150
MCPP	90.5	86.0	P/P	50 - 150
Naproxen	82.2	85.5	P/P	50 - 160
Primidone	101	95.7	P/P	60 - 150
Pyraclostrobin	84.0	87.4	P/P	60 - 150
Silvex	86.8	84.0	P/P	50 - 150
Thiamethoxam	107	103	P/P	50 - 150
Tolfenpyrad	78.8	80.9	P/P	60 - 150
Triclopyr	82.4	81.9	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A111975

Included Lab Sample IDs: 2323615, 2323616, 2323617, 2323618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	110	110	P/P	60 - 160
Acesulfame K	110	112	P/P	60 - 160
Sucralose	97.5	96.5	P/P	60 - 160
Sucralose	98.0	97.5	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111978

Included Lab Sample IDs: 2323615, 2323616, 2323617, 2323618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	95.7	92.3	P/P	60 - 160
AMPA	99.4	95.7	P/P	60 - 160
Endothall	99.4	99.8	P/P	60 - 160
Endothall	99.8	93.6	P/P	60 - 160
Glufosinate	92.7	93.4	P/P	60 - 160
Glufosinate	97.7	92.7	P/P	60 - 160
Glyphosate	100	92.6	P/P	60 - 160
Glyphosate	92.0	100	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A112157

Included Lab Sample IDs: 2323615

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetamiprid	103	89.9	P/P	50 - 150
Diuron	101	80.9	P/P	60 - 160
Fenuron	107	103	P/P	60 - 150
Hydrocodone	114	109	P/P	60 - 150
Linuron	100	119	P/P	60 - 150
Naproxen	85.5	135	P/P	50 - 160
Thiamethoxam	111	103	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	61.6	74.9	69.2		5.93
	2,4,5-T	51.9	75.0	66.8		11.5
	Acesulfame K	107	74.3	75.6		1.73
	Acetaminophen	75.2	132	127		3.87
	Acetamiprid	58.8	98.9	100		1.30
	Afidopyropen	42.7	40.5	37.8		6.82
	AMPA	89.0	61.0	64.8		5.57
	Bentazon	66.0				4.97
	Benzovindiflupyr	66.4	47.9	47.2		1.39
	Carbamazepine	65.0	42.1	41.9		0.660
	Clothianidin	89.9	42.1	40.1		4.59
	Dinotefuran	105	97.9	99.6		1.63
	Diuron	69.4	67.5	87.9		24.6
	Endothall	98.5	98.8	103		4.57
	Fenuron	101	117	121		3.31
	Fluridone	71.1	49.4	49.8		0.490
	Glufosinate	103	73.9	76.4		3.29
	Glyphosate	91.0	71.2	79.0		9.30
	Hydrocodone	72.3	97.5	109		11.5
	Ibuprofen	63.0	53.9	51.4		4.71
	Imazapyr	64.1				3.29
	Imidacloprid	71.7	34.2	33.6		1.57
	Linuron	53.9	86.9	81.4		6.59
	Mandestrobin	63.6	49.2	49.0		0.387
	MCPP	78.6	116	104		11.5
	Naproxen	49.4	64.5	129		14.3
	Primidone	94.0	66.4	68.6		3.22
	Pyraclostrobin	55.4	50.5	52.3		3.53
	Silvex	55.5	77.8	80.1		3.02
	Sucralose	98.9	97.9	103		4.90
	Thiamethoxam	79.7	147	160		8.28
	Tolfenpyrad	35.6	33.9	36.0		6.05
	Triclopyr	52.9	71.9	73.1		1.69

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2323615, 2323616, 2323617, 2323618

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	05/03/2022	05/04/2022 10:00	June Rhew	05/05/2022 20:41	Juyoung Kim	2323615
	05/03/2022	05/04/2022 10:00	June Rhew	05/05/2022 20:59	Juyoung Kim	2323616
	05/03/2022	05/04/2022 10:00	June Rhew	05/05/2022 21:17	Juyoung Kim	2323617
	05/03/2022	05/04/2022 10:00	June Rhew	05/05/2022 21:35	Juyoung Kim	2323618
	05/03/2022	05/04/2022 10:00	June Rhew	05/14/2022 21:30	Juyoung Kim	2323615
	05/03/2022	05/05/2022 09:00	Umesh Chiluwal	05/05/2022 14:04	Umesh Chiluwal	2323615
	05/03/2022	05/05/2022 09:00	Umesh Chiluwal	05/05/2022 14:19	Umesh Chiluwal	2323616
	05/03/2022	05/05/2022 09:00	Umesh Chiluwal	05/05/2022 14:34	Umesh Chiluwal	2323617
	05/03/2022	05/05/2022 09:00	Umesh Chiluwal	05/05/2022 15:04	Umesh Chiluwal	2323618
	05/03/2022	05/05/2022 09:00	Umesh Chiluwal	05/06/2022 05:28	Umesh Chiluwal	2323615
	05/03/2022	05/05/2022 09:00	Umesh Chiluwal	05/06/2022 05:41	Umesh Chiluwal	2323616
	05/03/2022	05/05/2022 09:00	Umesh Chiluwal	05/06/2022 05:54	Umesh Chiluwal	2323617
	05/03/2022	05/05/2022 09:00	Umesh Chiluwal	05/06/2022 06:20	Umesh Chiluwal	2323618