

Chemical Analysis Report

CEN-DIST-2022-01-19-01

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

Event Description: **Run 23**
Request ID: **RQ-2022-01-24-16**
Customer: **CEN-DIST**
Project ID: **SMP**

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

Date Certified: 28-JAN-2022 15:23



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: Bear Creek behind shopping center

Collection Date/Time: 01/18/2022 11:35

Field ID: G2CE0260

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2300312	EPA 8321B	2,4-D	0.013		ug/L	P408675	
		Acesulfame K	0.10	U	ug/L	P408673	
		2,4,5-T	0.0040	U	ug/L	P408675	
		AMPA	0.20	I	ug/L	P408673	
		Acetaminophen	0.0080	U	ug/L	P408675	
		Acetamiprid	0.0020	U	ug/L	P408675	
		Endothall	0.25	U	ug/L	P408673	
		Glufosinate	0.10	U	ug/L	P408673	
		Glyphosate	0.82		ug/L	P408673	
		Afidopyropen	0.0020	U	ug/L	P408675	
		Bentazon	0.17	J	ug/L	P408675	
		Sucralose	0.33		ug/L	P408673	
		Benzovindiflupyr	0.0020	U	ug/L	P408675	
		Carbamazepine	8.0E-04	U	ug/L	P408675	
		Clothianidin	0.0054	I J	ug/L	P408675	MS
		Dinotefuran	0.0063	I	ug/L	P408675	
		Diuron	0.0041	I	ug/L	P408675	
		Fenuron	0.016	U	ug/L	P408675	
		Fluridone	0.010		ug/L	P408675	
		Imazapyr	0.67		ug/L	P408675	
		Hydrocodone	0.0020	U	ug/L	P408675	
		Ibuprofen	0.020	U	ug/L	P408675	
		Imidacloprid	0.012	J	ug/L	P408675	MS
		Linuron	0.0040	U	ug/L	P408675	
		Mandestrobin	0.0020	U	ug/L	P408675	
		MCPP	0.0040	U	ug/L	P408675	
		Naproxen	0.0080	U	ug/L	P408675	
		Primidone	0.0040	U	ug/L	P408675	
		Pyraclostrobin	0.0020	U	ug/L	P408675	
		Silvex	0.0040	U	ug/L	P408675	
		Thiamethoxam	0.0020	UJ	ug/L	P408675	MS
		Tolfenpyrad	0.0020	U	ug/L	P408675	
		Triclopyr	0.0040	UJ	ug/L	P408675	RPD

Ref. Method and Comment:

EPA 8321B: MS accuracy and precision for bentazon and MS accuracy for imazapyr could not be assessed due to a high concentration of these analytes in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Lightwood Knot Canal E of 426

Collection Date/Time: 01/18/2022 11:55

Field ID: G2CE0263

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2300313	EPA 8321B	2,4-D	0.014		ug/L	P408675	
		Acesulfame K	0.12	I	ug/L	P408673	
		2,4,5-T	0.0040	U	ug/L	P408675	
		AMPA	0.49		ug/L	P408673	
		Acetaminophen	0.0080	U	ug/L	P408675	
		Acetamiprid	0.0020	U	ug/L	P408675	
		Endothall	0.25	U	ug/L	P408673	
		Glufosinate	0.10	U	ug/L	P408673	
		Glyphosate	1.1		ug/L	P408673	
		Afidopyropen	0.0020	U	ug/L	P408675	
		Bentazon	0.20		ug/L	P408675	
		Sucralose	0.76		ug/L	P408673	
		Benzovindiflupyr	0.0020	U	ug/L	P408675	
		Carbamazepine	0.0015	I	ug/L	P408675	
		Clothianidin	0.0075	I	ug/L	P408675	MS
		Dinotefuran	0.0020	U	ug/L	P408675	
		Diuron	0.0020	U	ug/L	P408675	
		Fenuron	0.016	U	ug/L	P408675	
		Fluridone	0.013		ug/L	P408675	
		Imazapyr	0.27		ug/L	P408675	
		Hydrocodone	0.0020	U	ug/L	P408675	
		Ibuprofen	0.020	U	ug/L	P408675	
		Imidacloprid	0.018		ug/L	P408675	MS
		Linuron	0.0040	U	ug/L	P408675	
		Mandestrobin	0.0020	U	ug/L	P408675	
		MCPP	0.0040	U	ug/L	P408675	
		Naproxen	0.0080	U	ug/L	P408675	
		Primidone	0.0040	I	ug/L	P408675	
		Pyraclostrobin	0.0020	U	ug/L	P408675	
		Silvex	0.0040	U	ug/L	P408675	
		Thiamethoxam	0.0020	U	ug/L	P408675	MS
		Tolfenpyrad	0.0020	U	ug/L	P408675	
		Triclopyr	0.0040	U	ug/L	P408675	RPD

Ref. Method and Comment:

EPA 8321B: MS accuracy and precision for bentazon and MS accuracy for imazapyr could not be assessed due to a high concentration of these analytes in the spiked sample.

Sample Location: Bear Creek at Northern Way (BERC)

Collection Date/Time: 01/18/2022 12:35

Field ID: G2CE0182

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2300314	EPA 8321B	2,4-D	0.0087		ug/L	P408675	
		Acesulfame K	0.10	I	ug/L	P408673	
		2,4,5-T	0.0040	U	ug/L	P408675	
		AMPA	0.31	I	ug/L	P408673	
		Acetaminophen	0.0080	U	ug/L	P408675	
		Acetamiprid	0.0020	U	ug/L	P408675	
		Endothall	0.25	U	ug/L	P408673	
		Glufosinate	0.10	U	ug/L	P408673	
		Glyphosate	0.93		ug/L	P408673	
		Afidopyropen	0.0020	U	ug/L	P408675	
		Bentazon	0.20		ug/L	P408675	
		Sucralose	1.2		ug/L	P408673	
		Benzovindiflupyr	0.0020	U	ug/L	P408675	
		Carbamazepine	0.0020	I	ug/L	P408675	
		Clothianidin	0.0059	I	ug/L	P408675	MS
		Dinotefuran	0.012		ug/L	P408675	
		Diuron	0.0032	I	ug/L	P408675	
		Fenuron	0.016	U	ug/L	P408675	
		Fluridone	0.0095		ug/L	P408675	
		Imazapyr	0.56		ug/L	P408675	
		Hydrocodone	0.0020	U	ug/L	P408675	
		Ibuprofen	0.020	U	ug/L	P408675	
		Imidacloprid	0.014		ug/L	P408675	MS
		Linuron	0.0040	U	ug/L	P408675	
		Mandestrobin	0.0020	U	ug/L	P408675	
		MCPP	0.0040	U	ug/L	P408675	
		Naproxen	0.0080	U	ug/L	P408675	
		Primidone	0.0072	I	ug/L	P408675	
		Pyraclostrobin	0.0020	U	ug/L	P408675	
		Silvex	0.0040	U	ug/L	P408675	
		Thiamethoxam	0.0020	U	ug/L	P408675	MS
		Tolfenpyrad	0.0020	U	ug/L	P408675	
		Triclopyr	0.0040	U	ug/L	P408675	RPD

Ref. Method and Comment:

EPA 8321B: MS accuracy and precision for bentazon and MS accuracy for imazapyr could not be assessed due to a high concentration of these analytes in the spiked sample.

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

Collection Date/Time: 01/18/2022 13:01

Field ID: G2CE0069

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2300315	EPA 8321B	2,4-D	0.015		ug/L	P408675	
		Acesulfame K	0.10	U	ug/L	P408673	
		2,4,5-T	0.0040	U	ug/L	P408675	
		AMPA	0.32	I	ug/L	P408673	
		Acetaminophen	0.0080	U	ug/L	P408675	
		Acetamiprid	0.0020	U	ug/L	P408675	
		Endothall	0.25	U	ug/L	P408673	
		Glufosinate	0.10	U	ug/L	P408673	
		Glyphosate	0.97		ug/L	P408673	
		Afidopyropen	0.0020	U	ug/L	P408675	
		Bentazon	0.22		ug/L	P408675	
		Sucralose	1.1		ug/L	P408673	
		Benzovindiflupyr	0.0020	U	ug/L	P408675	
		Carbamazepine	0.0021	I	ug/L	P408675	
		Clothianidin	0.0062	I	ug/L	P408675	MS
		Dinotefuran	0.011		ug/L	P408675	
		Diuron	0.0032	I	ug/L	P408675	
		Fenuron	0.016	U	ug/L	P408675	
		Fluridone	0.0093		ug/L	P408675	
		Imazapyr	0.64		ug/L	P408675	
		Hydrocodone	0.0020	U	ug/L	P408675	
		Ibuprofen	0.020	U	ug/L	P408675	
		Imidacloprid	0.014		ug/L	P408675	MS
		Linuron	0.0040	U	ug/L	P408675	
		Mandestrobin	0.0020	U	ug/L	P408675	
		MCPP	0.0040	U	ug/L	P408675	
		Naproxen	0.0080	U	ug/L	P408675	
		Primidone	0.0082	I	ug/L	P408675	
		Pyraclostrobin	0.0020	U	ug/L	P408675	
		Silvex	0.0040	U	ug/L	P408675	
		Thiamethoxam	0.0020	U	ug/L	P408675	MS
		Tolfenpyrad	0.0020	U	ug/L	P408675	
		Triclopyr	0.0040	U	ug/L	P408675	RPD

Ref. Method and Comment:

EPA 8321B: MS accuracy and precision for bentazon and MS accuracy for imazapyr could not be assessed due to a high concentration of these analytes in the spiked sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B**Batch ID: P408673**

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: P408675**

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	0.0040	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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P408673

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	91.2		P	40 - 150
AMPA	93.6		P	40 - 150
Endothall	79.0		P	40 - 150
Glufosinate	91.1		P	40 - 150
Glyphosate	89.2		P	40 - 150
Sucralose	104		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P408675

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	92.6		P	40 - 150
2,4,5-T	53.2		P	40 - 150
Acetaminophen	96.0		P	30 - 150
Acetamiprid	83.2		P	40 - 150
Afidopyropen	101		P	40 - 150
Bentazon	89.5		P	30 - 150
Benzovindiflupyr	116		P	40 - 150
Carbamazepine	105		P	40 - 150
Clothianidin	91.5		P	40 - 150
Dinotefuran	99.5		P	40 - 150
Diuron	90.5		P	40 - 150
Fenuron	117		P	40 - 150
Fluridone	111		P	40 - 150
Hydrocodone	86.1		P	40 - 150
Ibuprofen	124		P	40 - 150
Imazapyr	137		P	40 - 150
Imidacloprid	91.8		P	40 - 150
Linuron	122		P	40 - 150
Mandestrobin	123		P	40 - 150
MCPP	117		P	40 - 150
Naproxen	116		P	40 - 150
Primidone	130		P	40 - 150
Pyraclostrobin	95.2		P	40 - 150
Silvex	54.9		P	40 - 150
Thiamethoxam	104		P	40 - 150
Tolfenpyrad	63.0		P	30 - 150
Triclopyr	57.7		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P408673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300292	Acesulfame K	138	138	P/P	40 - 150
2300292	AMPA	85.4	85.1	P/P	40 - 150
2300292	Endothall	109	111	P/P	40 - 150
2300292	Glufosinate	84.8	81.7	P/P	40 - 150
2300292	Glyphosate	79.7	83.3	P/P	40 - 150
2300292	Sucralose	95.5	107	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P408675

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300312	2,4-D	126	122	P/P	40 - 150
2300312	2,4,5-T	97.3	96.6	P/P	40 - 150
2300312	Acetaminophen	123	144	P/P	30 - 150
2300312	Acetamiprid	117	103	P/P	40 - 150
2300312	Afidopyropen	92.9	71.5	P/P	40 - 150
2300312	Benzovindiflupyr	105	124	P/P	40 - 150
2300312	Carbamazepine	122	108	P/P	40 - 150
2300312	Clothianidin	153	166	F/F	40 - 150
2300312	Dinotefuran	138	129	P/P	40 - 150
2300312	Diuron	86.9	101	P/P	40 - 150
2300312	Fenuron	98.5	95.9	P/P	40 - 150
2300312	Fluridone	92.4	103	P/P	40 - 150
2300312	Hydrocodone	100	95.5	P/P	40 - 150
2300312	Ibuprofen	112	147	P/P	40 - 150
2300312	Imidacloprid	214	175	F/F	40 - 150
2300312	Linuron	82.7	94.5	P/P	40 - 150
2300312	Mandestrobin	118	93.7	P/P	40 - 150
2300312	MCP	127	97.8	P/P	40 - 150
2300312	Naproxen	94.4	113	P/P	40 - 150
2300312	Primidone	84.4	66.2	P/P	40 - 150
2300312	Pyraclostrobin	94.8	73.6	P/P	40 - 150
2300312	Silvex	101	87.4	P/P	40 - 150
2300312	Thiamethoxam	198	174	F/F	40 - 150
2300312	Tolfenpyrad	38.8	34.8	P/P	30 - 150
2300312	Triclopyr	144	99.8	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P408673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300292	Acesulfame K	0.233	Spike	P	0 - 30
2300292	AMPA	0.376	Spike	P	0 - 30
2300292	Endothall	1.42	Spike	P	0 - 30
2300292	Glufosinate	3.67	Spike	P	0 - 30
2300292	Glyphosate	4.33	Spike	P	0 - 30
2300292	Sucralose	10.9	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P408675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300312	2,4-D	2.58	Spike	P	0 - 30
2300312	2,4,5-T	0.714	Spike	P	0 - 30
2300312	Acetaminophen	15.6	Spike	P	0 - 30
2300312	Acetamiprid	12.5	Spike	P	0 - 30
2300312	Afidopyropen	26.1	Spike	P	0 - 30
2300312	Benzovindiflupyr	16.6	Spike	P	0 - 30
2300312	Carbamazepine	12.5	Spike	P	0 - 30
2300312	Clothianidin	8.18	Spike	P	0 - 30
2300312	Dinotefuran	6.48	Spike	P	0 - 30
2300312	Diuron	13.9	Spike	P	0 - 30
2300312	Fenuron	2.75	Spike	P	0 - 30
2300312	Fluridone	7.18	Spike	P	0 - 30
2300312	Hydrocodone	4.95	Spike	P	0 - 30
2300312	Ibuprofen	26.5	Spike	P	0 - 30
2300312	Imazapyr	9.11	Spike	P	0 - 30
2300312	Imidacloprid	18.2	Spike	P	0 - 30
2300312	Linuron	13.2	Spike	P	0 - 30
2300312	Mandestrobin	22.9	Spike	P	0 - 30
2300312	MCPP	25.6	Spike	P	0 - 30
2300312	Naproxen	17.8	Spike	P	0 - 30
2300312	Primidone	24.2	Spike	P	0 - 30
2300312	Pyraclostrobin	25.2	Spike	P	0 - 30
2300312	Silvex	14.1	Spike	P	0 - 30
2300312	Thiamethoxam	12.8	Spike	P	0 - 30
2300312	Tolfenpyrad	10.9	Spike	P	0 - 30
2300312	Triclopyr	36.2	Spike	F	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2300312
Field Sample ID: G2CE0260

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	96.9	P	30 - 160
EPA 8321B	Diuron-d6	89.3	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.7	P	30 - 160
EPA 8321B	Primidone-d5	59.3	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2300313
Field Sample ID: G2CE0263

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Diuron-d6	85.0	P	30 - 160
EPA 8321B	Endothall-d6	131	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.4	P	30 - 160
EPA 8321B	Primidone-d5	91.3	P	30 - 160
EPA 8321B	Sucralose-d6	120	P	30 - 160

Lab Sample ID: 2300314
Field Sample ID: G2CE0182

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	112	P	30 - 160
EPA 8321B	Diuron-d6	111	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	57.0	P	30 - 160
EPA 8321B	Primidone-d5	76.5	P	30 - 160
EPA 8321B	Sucralose-d6	97.2	P	30 - 160

Lab Sample ID: 2300315
Field Sample ID: G2CE0069

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	118	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	111	P	30 - 160
EPA 8321B	Diuron-d6	58.5	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.9	P	30 - 160
EPA 8321B	Primidone-d5	64.6	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8321B

Run ID: A109919

Included Lab Sample IDs: 2300312, 2300313, 2300314, 2300315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	90.6	94.1	P/P	60 - 160
Endothall	91.7	79.6	P/P	60 - 160
Sucralose	107	97.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A109920

Included Lab Sample IDs: 2300312, 2300313, 2300314, 2300315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.4	72.9	P/P	50 - 150
2,4-D	96.6	94.4	P/P	50 - 150
2,4,5-T	100	91.0	P/P	50 - 150
2,4,5-T	91.0	86.4	P/P	50 - 150
Acetaminophen	64.3	63.2	P/P	60 - 160
Acetaminophen	69.4	64.3	P/P	60 - 160
Acetamiprid	107	102	P/P	50 - 150
Acetamiprid	96.0	107	P/P	50 - 150
Afidopyropen	89.8	88.9	P/P	50 - 150
Afidopyropen	90.5	89.8	P/P	50 - 150
Bentazon	87.0	103	P/P	50 - 160
Benzovindiflupyr	104	111	P/P	50 - 150
Benzovindiflupyr	89.5	104	P/P	50 - 150
Carbamazepine	87.1	97.5	P/P	60 - 150
Carbamazepine	97.5	89.6	P/P	60 - 150
Clothianidin	111	96.4	P/P	60 - 150
Clothianidin	126	111	P/P	60 - 150
Dinotefuran	94.3	93.9	P/P	50 - 150
Dinotefuran	98.8	94.3	P/P	50 - 150
Diuron	107	126	P/P	60 - 160
Diuron	115	107	P/P	60 - 160
Fenuron	94.9	99.2	P/P	60 - 150
Fenuron	99.2	105	P/P	60 - 150
Fluridone	92.8	107	P/P	60 - 160
Fluridone	99.4	92.8	P/P	60 - 160
Hydrocodone	88.1	91.4	P/P	60 - 150
Hydrocodone	92.9	88.1	P/P	60 - 150
Ibuprofen	100	150	P/P	50 - 160
Ibuprofen	150	106	P/P	50 - 160
Imazapyr	125	140	P/P	50 - 150
Imazapyr	136	125	P/P	50 - 150
Imidacloprid	88.0	90.1	P/P	60 - 150
Imidacloprid	90.1	83.8	P/P	60 - 150
Linuron	86.0	83.0	P/P	60 - 150
Linuron	91.3	86.0	P/P	60 - 150
Mandestrobin	108	113	P/P	50 - 150
Mandestrobin	113	111	P/P	50 - 150
MCP	77.9	81.9	P/P	50 - 150
MCP	81.9	95.8	P/P	50 - 150
Naproxen	131	61.2	P/P	50 - 160
Naproxen	61.2	60.2	P/P	50 - 160
Primidone	102	117	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A109920

Included Lab Sample IDs: 2300312, 2300313, 2300314, 2300315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	117	102	P/P	60 - 150
Pyraclostrobin	110	101	P/P	60 - 150
Pyraclostrobin	93.9	110	P/P	60 - 150
Silvex	96.1	84.9	P/P	50 - 150
Silvex	98.8	96.1	P/P	50 - 150
Thiamethoxam	84.7	95.6	P/P	50 - 150
Thiamethoxam	95.6	89.6	P/P	50 - 150
Tolfenpyrad	79.3	60.1	P/P	60 - 150
Tolfenpyrad	96.4	79.3	P/P	60 - 150
Triclopyr	113	92.8	P/P	50 - 150
Triclopyr	92.8	106	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A109941

Included Lab Sample IDs: 2300312, 2300313, 2300314, 2300315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	100	101	P/P	60 - 160
AMPA	92.0	100	P/P	60 - 160
Glufosinate	101	97.5	P/P	60 - 160
Glufosinate	88.2	101	P/P	60 - 160
Glyphosate	84.3	93.1	P/P	60 - 160
Glyphosate	93.1	92.3	P/P	60 - 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 SMP	MS
			LCS			
EPA 8321B	2,4-D	92.6	126	122		2.58
	2,4,5-T	53.2	97.3	96.6		0.714
	Acesulfame K	91.2	138	138		0.233
	Acetaminophen	96.0	123	144		15.6
	Acetamiprid	83.2	117	103		12.5
	Afidopyropen	101	92.9	71.5		26.1
	AMPA	93.6	85.4	85.1		0.376
	Bentazon	89.5				
	Benzovindiflupyr	116	105	124		16.6
	Carbamazepine	105	122	108		12.5
	Clothianidin	91.5	153	166		8.18
	Dinotefuran	99.5	138	129		6.48
	Diuron	90.5	86.9	101		13.9
	Endothall	79.0	109	111		1.42
	Fenuron	117	98.5	95.9		2.75
	Fluridone	111	92.4	103		7.18
	Glufosinate	91.1	84.8	81.7		3.67
	Glyphosate	89.2	79.7	83.3		4.33
	Hydrocodone	86.1	100	95.5		4.95
	Ibuprofen	124	112	147		26.5
	Imazapyr	137				9.11
	Imidacloprid	91.8	214	175		18.2
	Linuron	122	82.7	94.5		13.2
	Mandestrobin	123	118	93.7		22.9
	MCPP	117	127	97.8		25.6
	Naproxen	116	94.4	113		17.8
	Primidone	130	84.4	66.2		24.2
	Pyraclostrobin	95.2	94.8	73.6		25.2
	Silvex	54.9	101	87.4		14.1
	Sucralose	104	95.5	107		10.9
	Thiamethoxam	104	198	174		12.8
	Tolfenpyrad	63.0	38.8	34.8		10.9
	Triclopyr	57.7	144	99.8		36.2

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2300312, 2300313, 2300314, 2300315

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/19/2022	01/19/2022 13:00	Juyoung Kim	01/19/2022 15:07	Manjita Shrestha	2300312
	01/19/2022	01/19/2022 13:00	Juyoung Kim	01/19/2022 15:21	Juyoung Kim	2300312
	01/19/2022	01/19/2022 13:00	Juyoung Kim	01/19/2022 15:21	Manjita Shrestha	2300313
	01/19/2022	01/19/2022 13:00	Juyoung Kim	01/19/2022 15:32	Juyoung Kim	2300313
	01/19/2022	01/19/2022 13:00	Juyoung Kim	01/19/2022 15:36	Manjita Shrestha	2300314
	01/19/2022	01/19/2022 13:00	Juyoung Kim	01/19/2022 15:43	Juyoung Kim	2300314
	01/19/2022	01/19/2022 13:00	Juyoung Kim	01/19/2022 15:51	Manjita Shrestha	2300315
	01/19/2022	01/19/2022 13:00	Juyoung Kim	01/19/2022 16:04	Juyoung Kim	2300315
	01/19/2022	01/20/2022 09:00	Hoor Shaik	01/21/2022 05:59	Juyoung Kim	2300312
	01/19/2022	01/20/2022 09:00	Hoor Shaik	01/21/2022 07:43	Juyoung Kim	2300313
	01/19/2022	01/20/2022 09:00	Hoor Shaik	01/21/2022 08:18	Juyoung Kim	2300314
	01/19/2022	01/20/2022 09:00	Hoor Shaik	01/21/2022 08:53	Juyoung Kim	2300315
	01/19/2022	01/20/2022 09:00	Hoor Shaik	01/21/2022 10:36	Juyoung Kim	2300312
	01/19/2022	01/20/2022 09:00	Hoor Shaik	01/21/2022 11:11	Juyoung Kim	2300313
	01/19/2022	01/20/2022 09:00	Hoor Shaik	01/21/2022 11:46	Juyoung Kim	2300314
	01/19/2022	01/20/2022 09:00	Hoor Shaik	01/21/2022 12:20	Juyoung Kim	2300315