

Chemical Analysis Report

SW-DIST-2019-04-18-01

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

Event Description: **SMP - Run 2**
Request ID: **RQ-2019-04-08-13**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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13051 N. Telecom Parkway
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 02-MAY-2019 19:09



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: SPARTMAN BRANCH AT HARVEY TEW RD

Collection Date/Time: 04/17/2019 11:30

Field ID: G2SW0067

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079351	EPA 8321B	2,4-D	0.0020	U	ug/L	P362343	
		Acesulfame K**	0.24	I	ug/L	P362469	
		AMPA**	0.87		ug/L	P362469	
		Sucralose**	0.25		ug/L	P362469	
		Acetaminophen**	0.0080	U	ug/L	P362343	
		Endothall**	0.25	U	ug/L	P362469	
		Glufosinate**	0.10	U	ug/L	P362469	
		Bentazon	0.029		ug/L	P362343	
		Glyphosate**	0.99		ug/L	P362469	
		Carbamazepine**	8.0E-04	U	ug/L	P362343	
		Diuron	0.0020	U	ug/L	P362343	
		Fenuron	0.016	U	ug/L	P362343	
		Fluridone**	0.0075		ug/L	P362343	
		Imazapyr**	0.023		ug/L	P362343	
		Hydrocodone**	0.0020	U	ug/L	P362343	
		Ibuprofen**	0.020	U	ug/L	P362343	
		Imidacloprid	0.038		ug/L	P362343	MS
		Linuron	0.0040	U	ug/L	P362343	
		MCPP	0.0020	U	ug/L	P362343	
		Naproxen**	0.0080	U	ug/L	P362343	
		Primidone**	0.0040	U	ug/L	P362343	
		Pyraclostrobin**	0.0020	U	ug/L	P362343	
		Triclopyr**	0.0040	U	ug/L	P362343	

Sample Location: POLEY CREEK @ SR 60

Collection Date/Time: 04/17/2019 12:45

Field ID: G2SW0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079352	EPA 8321B	2,4-D	0.019		ug/L	P362343	
		Acesulfame K**	0.29	I	ug/L	P362469	
		AMPA**	0.98		ug/L	P362469	
		Sucralose**	0.77		ug/L	P362469	
		Acetaminophen**	0.0080	U	ug/L	P362343	
		Endothall**	0.25	U	ug/L	P362469	
		Glufosinate**	0.10	U	ug/L	P362469	
		Bentazon	0.012		ug/L	P362343	
		Glyphosate**	1.3		ug/L	P362469	
		Carbamazepine**	0.0026	I	ug/L	P362343	
		Diuron	0.0074	I	ug/L	P362343	
		Fenuron	0.016	U	ug/L	P362343	
		Fluridone**	0.023		ug/L	P362343	
		Imazapyr**	0.096		ug/L	P362343	
		Hydrocodone**	0.0020	U	ug/L	P362343	
		Ibuprofen**	0.020	U	ug/L	P362343	
		Imidacloprid	0.011		ug/L	P362343	MS
		Linuron	0.0040	U	ug/L	P362343	
		MCPP	0.0051	I	ug/L	P362343	
		Naproxen**	0.0080	U	ug/L	P362343	
		Primidone**	0.0058	I	ug/L	P362343	
		Pyraclostrobin**	0.0020	U	ug/L	P362343	
		Triclopyr**	0.0040	U	ug/L	P362343	

Sample Location: MUSTANG RANCH CREEK @ HOPEWELL

Collection Date/Time: 04/17/2019 11:00

Field ID: G2SW0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079353	EPA 8321B	2,4-D	0.0020	U	ug/L	P362343	
		Acesulfame K**	0.10	U	ug/L	P362469	
		AMPA**	2.9		ug/L	P362469	
		Sucralose**	0.11		ug/L	P362469	
		Acetaminophen**	0.0080	U	ug/L	P362343	
		Endothall**	0.25	U	ug/L	P362469	
		Glufosinate**	0.10	U	ug/L	P362469	
		Bentazon	8.0E-04	U	ug/L	P362343	
		Glyphosate**	0.64		ug/L	P362469	
		Carbamazepine**	8.0E-04	U	ug/L	P362343	
		Diuron	0.0026	I	ug/L	P362343	
		Fenuron	0.016	U	ug/L	P362343	
		Fluridone**	8.0E-04	U	ug/L	P362343	
		Imazapyr**	0.0085	I	ug/L	P362343	
		Hydrocodone**	0.0020	U	ug/L	P362343	
		Ibuprofen**	0.020	U	ug/L	P362343	
		Imidacloprid	0.12		ug/L	P362343	MS
		Linuron	0.0040	U	ug/L	P362343	
		MCPP	0.0020	U	ug/L	P362343	
		Naproxen**	0.0080	U	ug/L	P362343	
		Primidone**	0.0040	U	ug/L	P362343	
		Pyraclostrobin**	0.0089		ug/L	P362343	
		Triclopyr**	0.0040	U	ug/L	P362343	

Sample Location: BAKER CREEK EAST @ PEMBERTON DR

Collection Date/Time: 04/17/2019 12:05

Field ID: G2SW0080

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079349	EPA 8321B	2,4-D	0.0023	I	ug/L	P362343	
		Acesulfame K**	0.22	I	ug/L	P362469	
		AMPA**	1.0		ug/L	P362469	
		Sucralose**	0.29		ug/L	P362469	
		Acetaminophen**	0.0080	U	ug/L	P362343	
		Endothall**	0.25	U	ug/L	P362469	
		Glufosinate**	0.10	U	ug/L	P362469	
		Bentazon	0.014		ug/L	P362343	
		Glyphosate**	1.0		ug/L	P362469	
		Carbamazepine**	8.0E-04	U	ug/L	P362343	
		Diuron	0.0047	I	ug/L	P362343	
		Fenuron	0.016	U	ug/L	P362343	
		Fluridone**	0.012		ug/L	P362343	
		Imazapyr**	0.078		ug/L	P362343	
		Hydrocodone**	0.0020	U	ug/L	P362343	
		Ibuprofen**	0.020	U	ug/L	P362343	
		Imidacloprid	0.038		ug/L	P362343	MS
		Linuron	0.0040	U	ug/L	P362343	
		MCPP	0.0020	U	ug/L	P362343	
		Naproxen**	0.0080	U	ug/L	P362343	
		Primidone**	0.0040	U	ug/L	P362343	
		Pyraclostrobin**	0.0020	U	ug/L	P362343	
		Triclopyr**	0.0040	U	ug/L	P362343	

Sample Location: BAKER CREEK EAST @ McINTOSH RD

Collection Date/Time: 04/17/2019 11:55

Field ID: G2SW0081

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079350	EPA 8321B	2,4-D	0.0020	U	ug/L	P362343	
		Acesulfame K**	0.20	I	ug/L	P362469	
		AMPA**	1.0		ug/L	P362469	
		Sucralose**	0.29		ug/L	P362469	
		Acetaminophen**	0.0080	U	ug/L	P362343	
		Endothall**	0.25	U	ug/L	P362469	
		Glufosinate**	0.10	U	ug/L	P362469	
		Bentazon	0.013		ug/L	P362343	
		Glyphosate**	0.99		ug/L	P362469	
		Carbamazepine**	8.0E-04	U	ug/L	P362343	
		Diuron	0.0054	I	ug/L	P362343	
		Fenuron	0.070		ug/L	P362343	
		Fluridone**	0.011		ug/L	P362343	
		Imazapyr**	0.079		ug/L	P362343	
		Hydrocodone**	0.0020	U	ug/L	P362343	
		Ibuprofen**	0.020	U	ug/L	P362343	
		Imidacloprid	0.038		ug/L	P362343	MS
		Linuron	0.0040	U	ug/L	P362343	
		MCPP	0.0020	U	ug/L	P362343	
		Naproxen**	0.0080	U	ug/L	P362343	
		Primidone**	0.0040	U	ug/L	P362343	
		Pyraclostrobin**	0.0020	U	ug/L	P362343	
		Triclopyr**	0.0040	U	ug/L	P362343	

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P362343

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P362469

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: P362343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	86.2		P	40 - 150
Acetaminophen	83.1		P	30 - 150
Bentazon	83.4		P	30 - 150
Carbamazepine	81.0		P	40 - 150
Diuron	82.1		P	40 - 150
Fenuron	93.8		P	40 - 150
Fluridone	120		P	40 - 150
Hydrocodone	110		P	40 - 150
Ibuprofen	83.3		P	40 - 150
Imazapyr	85.5		P	40 - 150
Imidacloprid	97.9		P	40 - 150
Linuron	75.2		P	40 - 150
MCPP	97.9		P	40 - 150
Naproxen	76.6		P	40 - 150
Primidone	95.6		P	40 - 150
Pyraclostrobin	70.0		P	40 - 150
Triclopyr	75.1		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P362469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	116		P	40 - 150
Endothall	114		P	40 - 150
Glufosinate	119		P	40 - 150
Glyphosate	118		P	40 - 140
Sucralose	107		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P362343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079441	2,4-D	98.0	81.8	P/P	40 - 150
2079441	Acetaminophen	80.9	79.6	P/P	30 - 150
2079441	Bentazon	56.9	52.0	P/P	30 - 150
2079441	Carbamazepine	92.7	85.8	P/P	40 - 150
2079441	Diuron	72.6	71.6	P/P	40 - 150
2079441	Fenuron	116	111	P/P	40 - 150
2079441	Fluridone	117	122	P/P	40 - 150
2079441	Hydrocodone	107	102	P/P	40 - 150
2079441	Ibuprofen	87.2	78.2	P/P	40 - 150
2079441	Imazapyr	92.8	85.9	P/P	40 - 150
2079441	Imidacloprid	154	122	F/P	40 - 150
2079441	Linuron	79.6	81.1	P/P	40 - 150
2079441	MCPP	107	99.0	P/P	40 - 150
2079441	Naproxen	62.2	66.5	P/P	40 - 150
2079441	Primidone	89.6	90.7	P/P	40 - 150
2079441	Pyraclostrobin	65.5	68.2	P/P	40 - 150
2079441	Triclopyr	75.4	62.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078457	Acesulfame K	102	86.1	P/P	40 - 150
2078457	AMPA	147	145	P/P	40 - 150
2078457	Endothall	103	105	P/P	40 - 150
2078457	Glufosinate	112	123	P/P	40 - 150
2078457	Glyphosate	113	114	P/P	40 - 140
2078457	Sucralose	76.2	93.8	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P362343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079441	2,4-D	16.6	Spike	P	0 - 30
2079441	Acetaminophen	1.65	Spike	P	0 - 30
2079441	Bentazon	5.47	Spike	P	0 - 30
2079441	Carbamazepine	7.29	Spike	P	0 - 30
2079441	Diuron	1.36	Spike	P	0 - 30
2079441	Fenuron	3.79	Spike	P	0 - 30
2079441	Fluridone	2.62	Spike	P	0 - 30
2079441	Hydrocodone	4.57	Spike	P	0 - 30
2079441	Ibuprofen	10.9	Spike	P	0 - 30
2079441	Imazapyr	4.83	Spike	P	0 - 30
2079441	Imidacloprid	19.3	Spike	P	0 - 30
2079441	Linuron	1.78	Spike	P	0 - 30
2079441	MCPP	7.34	Spike	P	0 - 30
2079441	Naproxen	6.69	Spike	P	0 - 30
2079441	Primidone	1.16	Spike	P	0 - 30
2079441	Pyraclostrobin	4.04	Spike	P	0 - 30
2079441	Triclopyr	18.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P362469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078457	Acesulfame K	16.8	Spike	P	0 - 30
2078457	AMPA	1.17	Spike	P	0 - 30
2078457	Endothall	1.13	Spike	P	0 - 30
2078457	Glufosinate	9.39	Spike	P	0 - 30
2078457	Glyphosate	1.08	Spike	P	0 - 30
2078457	Sucralose	20.7	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2079349
Field Sample ID: G2SW0080

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	123	P	30 - 160
EPA 8321B	Diuron-d6	97.1	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	143	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	143	P	30 - 160
EPA 8321B	Ibuprofen-d3	107	P	30 - 160
EPA 8321B	Primidone-d5	94.8	P	30 - 160
EPA 8321B	Sucralose-d6	93.6	P	30 - 160
EPA 8321B	Sucralose-d6	93.6	P	30 - 160

Lab Sample ID: 2079350
Field Sample ID: G2SW0081

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	114	P	30 - 160
EPA 8321B	Diuron-d6	91.3	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Endothall-d6	116	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	150	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	150	P	30 - 160
EPA 8321B	Ibuprofen-d3	102	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	90.7	P	30 - 160
EPA 8321B	Sucralose-d6	90.7	P	30 - 160

Lab Sample ID: 2079351
Field Sample ID: G2SW0067

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	78.7	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	140	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	140	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.6	P	30 - 160
EPA 8321B	Primidone-d5	69.8	P	30 - 160
EPA 8321B	Sucralose-d6	82.2	P	30 - 160
EPA 8321B	Sucralose-d6	82.2	P	30 - 160

Lab Sample ID: 2079352
Field Sample ID: G2SW0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.0	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2079352
Field Sample ID: G2SW0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	96.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	109	P	30 - 160
EPA 8321B	Diuron-d6	81.0	P	30 - 160
EPA 8321B	Endothall-d6	96.5	P	30 - 160
EPA 8321B	Endothall-d6	96.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	156	P	30 - 160
EPA 8321B	Ibuprofen-d3	88.3	P	30 - 160
EPA 8321B	Primidone-d5	94.6	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Lab Sample ID: 2079353
Field Sample ID: G2SW0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.7	P	30 - 160
EPA 8321B	Diuron-d6	75.0	P	30 - 160
EPA 8321B	Endothall-d6	92.7	P	30 - 160
EPA 8321B	Endothall-d6	92.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	155	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	155	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.6	P	30 - 160
EPA 8321B	Primidone-d5	77.4	P	30 - 160
EPA 8321B	Sucralose-d6	95.9	P	30 - 160
EPA 8321B	Sucralose-d6	95.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A90878

Included Lab Sample IDs: 2079349, 2079350, 2079351, 2079352, 2079353

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	140	154	P/P	60 - 160
Endothall	117	125	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A90917

Included Lab Sample IDs: 2079349, 2079350, 2079351, 2079352, 2079353

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	117	119	P/P	60 - 160
Glufosinate	121	122	P/P	60 - 160
Glyphosate	120	118	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A90953

Included Lab Sample IDs: 2079349, 2079350, 2079351, 2079352, 2079353

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	110	78.3	P/P	50 - 150
2,4-D	78.3	96.6	P/P	50 - 150
Acetaminophen	112	114	P/P	60 - 160
Acetaminophen	114	101	P/P	60 - 160
Bentazon	101	85.0	P/P	50 - 160
Bentazon	82.4	101	P/P	50 - 160
Carbamazepine	102	109	P/P	60 - 150
Carbamazepine	109	92.2	P/P	60 - 150
Diuron	102	104	P/P	60 - 150
Diuron	104	102	P/P	60 - 150
Fenuron	104	107	P/P	60 - 150
Fenuron	111	104	P/P	60 - 150
Fluridone	104	97.5	P/P	60 - 160
Fluridone	97.5	104	P/P	60 - 160
Hydrocodone	102	96.9	P/P	60 - 150
Hydrocodone	110	102	P/P	60 - 150
Ibuprofen	101	107	P/P	50 - 160
Ibuprofen	107	108	P/P	50 - 160
Imazapyr	102	91.5	P/P	50 - 150
Imazapyr	106	102	P/P	50 - 150
Imidacloprid	109	92.6	P/P	60 - 150
Imidacloprid	111	109	P/P	60 - 150
Linuron	99.2	100	P/P	60 - 150
Linuron	100	108	P/P	60 - 150
MCP	89.6	94.8	P/P	50 - 150
MCP	94.8	90.9	P/P	50 - 150
Naproxen	133	82.8	P/P	50 - 160
Naproxen	80.6	133	P/P	50 - 160
Primidone	101	113	P/P	60 - 150
Primidone	96.5	101	P/P	60 - 150
Pyraclostrobin	106	96.3	P/P	60 - 150
Pyraclostrobin	96.3	96.1	P/P	60 - 150
Triclopyr	94.1	97.9	P/P	50 - 150
Triclopyr	97.9	98.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A90990

Included Lab Sample IDs: 2079349, 2079350, 2079351, 2079352, 2079353

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.2	98.7	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 LCS	SMP	MS
EPA 8321B	2,4-D	86.2	98.0	81.8			16.6
	Acesulfame K	106	102	86.1			16.8
	Acetaminophen	83.1	80.9	79.6			1.65
	AMPA	116	145	147			1.17
	Bentazon	83.4	56.9	52.0			5.47
	Carbamazepine	81.0	92.7	85.8			7.29
	Diuron	82.1	72.6	71.6			1.36
	Endothall	114	103	105			1.13
	Fenuron	93.8	116	111			3.79
	Fluridone	120	117	122			2.62
	Glufosinate	119	123	112			9.39
	Glyphosate	118	114	113			1.08
	Hydrocodone	110	107	102			4.57
	Ibuprofen	83.3	87.2	78.2			10.9
	Imazapyr	85.5	92.8	85.9			4.83
	Imidacloprid	97.9	154	122			19.3
	Linuron	75.2	79.6	81.1			1.78
	MCPP	97.9	107	99.0			7.34
	Naproxen	76.6	62.2	66.5			6.69
	Primidone	95.6	89.6	90.7			1.16
	Pyraclostrobin	70.0	65.5	68.2			4.04
	Sucralose	107	76.2	93.8			20.7
	Triclopyr	75.1	75.4	62.5			18.6

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2079349, 2079350, 2079351, 2079352, 2079353
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2079349, 2079350, 2079351, 2079352, 2079353

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/19/2019 16:07	Rebecca Ware	2079349
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/19/2019 16:21	Rebecca Ware	2079350
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/19/2019 16:35	Rebecca Ware	2079351
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/19/2019 16:49	Rebecca Ware	2079352
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/19/2019 17:02	Rebecca Ware	2079353
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/22/2019 13:04	Rebecca Ware	2079349
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/22/2019 13:13	Rebecca Ware	2079350
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/22/2019 13:21	Rebecca Ware	2079351
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/22/2019 13:29	Rebecca Ware	2079352
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/22/2019 13:37	Rebecca Ware	2079353
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/24/2019 20:05	Rebecca Ware	2079349
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/24/2019 20:17	Rebecca Ware	2079350
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/24/2019 20:29	Rebecca Ware	2079351
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/24/2019 20:41	Rebecca Ware	2079352
	04/18/2019	04/19/2019 10:15	Rebecca Ware	04/24/2019 20:52	Rebecca Ware	2079353
	04/18/2019	04/22/2019 14:00	Hoor Shaik	04/24/2019 03:13	Juyoung Kim	2079349
	04/18/2019	04/22/2019 14:00	Hoor Shaik	04/24/2019 03:48	Juyoung Kim	2079350
	04/18/2019	04/22/2019 14:00	Hoor Shaik	04/24/2019 04:23	Juyoung Kim	2079351
	04/18/2019	04/22/2019 14:00	Hoor Shaik	04/24/2019 05:32	Juyoung Kim	2079352
	04/18/2019	04/22/2019 14:00	Hoor Shaik	04/24/2019 06:06	Juyoung Kim	2079353