

Chemical Analysis Report

SW-DIST-2019-04-12-01

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

Event Description: **SMP - Alafia, Alafia, 30 Mile, and McDonalds**
Request ID: **RQ-2019-04-08-12**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Date Certified: 02-MAY-2019 13:54



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: ALAFIA RIVER @ CENTER AVE

Collection Date/Time: 04/11/2019 11:20

Field ID: G2SW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077961	EPA 8321B	2,4-D	0.0025	I	ug/L	P361970	
		Acesulfame K**	0.11	I	ug/L	P362188	MS
		AMPA**	0.63		ug/L	P362188	
		Sucralose**	2.7		ug/L	P362188	
		Acetaminophen**	0.0080	U	ug/L	P361970	
		Endothall**	0.25	U	ug/L	P362188	
		Glufosinate**	0.10	U	ug/L	P362188	
		Bentazon	0.029		ug/L	P361970	
		Glyphosate**	0.84		ug/L	P362188	
		Carbamazepine**	0.0080		ug/L	P361970	
		Diuron	0.0030	I	ug/L	P361970	
		Fenuron	0.016	U	ug/L	P361970	
		Fluridone**	0.014		ug/L	P361970	
		Imazapyr**	0.081		ug/L	P361970	
		Hydrocodone**	0.0020	U	ug/L	P361970	
		Ibuprofen**	0.020	U	ug/L	P361970	
		Imidacloprid	0.018		ug/L	P361970	MS
		Linuron	0.0040	U	ug/L	P361970	
		MCPP	0.0020	U	ug/L	P361970	
		Naproxen**	0.0080	U	ug/L	P361970	
		Primidone**	0.012	I	ug/L	P361970	
		Pyraclostrobin**	0.0020	U	ug/L	P361970	
		Triclopyr**	0.0040	U	ug/L	P361970	

Sample Location: THIRTYMILE CREEK @ NICHOLS RD

Collection Date/Time: 04/11/2019 10:00

Field ID: G2SW0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077962	EPA 8321B	2,4-D	0.0020	U	ug/L	P361970	
		Acesulfame K**	0.14	I	ug/L	P362188	MS
		AMPA**	0.33	I	ug/L	P362188	
		Sucralose**	0.16		ug/L	P362188	
		Acetaminophen**	0.0080	U	ug/L	P361970	
		Endothall**	0.25	U	ug/L	P362188	
		Glufosinate**	0.10	U	ug/L	P362188	
		Bentazon	8.0E-04	U	ug/L	P361970	
		Glyphosate**	0.33	I	ug/L	P362188	
		Carbamazepine**	8.0E-04	U	ug/L	P361970	
		Diuron	0.0020	U	ug/L	P361970	
		Fenuron	0.016	U	ug/L	P361970	
		Fluridone**	8.0E-04	U	ug/L	P361970	
		Imazapyr**	0.11		ug/L	P361970	
		Hydrocodone**	0.0020	U	ug/L	P361970	
		Ibuprofen**	0.020	U	ug/L	P361970	
		Imidacloprid	0.0020	U	ug/L	P361970	MS
		Linuron	0.0040	U	ug/L	P361970	
		MCPP	0.0020	U	ug/L	P361970	
		Naproxen**	0.0080	U	ug/L	P361970	
		Primidone**	0.0040	U	ug/L	P361970	
		Pyraclostrobin**	0.0020	U	ug/L	P361970	
		Triclopyr**	0.0040	U	ug/L	P361970	

**Sample Location: THIRTYMILE CREEK @ TRAIN TRACKS
MOSAIC**

Collection Date/Time: 04/11/2019 09:35

Field ID: G2SW0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077963	EPA 8321B	2,4-D	0.0020	U	ug/L	P361970	
		Acesulfame K**	0.24	I	ug/L	P362188	MS
		AMPA**	0.58		ug/L	P362188	
		Sucralose**	0.21		ug/L	P362188	
		Acetaminophen**	0.0080	U	ug/L	P361970	
		Endothall**	0.25	U	ug/L	P362188	
		Glufosinate**	0.10	U	ug/L	P362188	
		Bentazon	8.0E-04	U	ug/L	P361970	
		Glyphosate**	0.46		ug/L	P362188	
		Carbamazepine**	8.0E-04	U	ug/L	P361970	
		Diuron	0.0020	U	ug/L	P361970	
		Fenuron	0.016	U	ug/L	P361970	
		Fluridone**	8.0E-04	U	ug/L	P361970	
		Imazapyr**	0.075		ug/L	P361970	
		Hydrocodone**	0.0020	U	ug/L	P361970	
		Ibuprofen**	0.020	U	ug/L	P361970	
		Imidacloprid	0.0020	U	ug/L	P361970	MS
		Linuron	0.0040	U	ug/L	P361970	
		MCPP	0.0020	U	ug/L	P361970	
		Naproxen**	0.0080	U	ug/L	P361970	
		Primidone**	0.0040	U	ug/L	P361970	
		Pyraclostrobin**	0.0020	U	ug/L	P361970	
		Triclopyr**	0.0040	U	ug/L	P361970	

Sample Location: McDONALD BRANCH @ THOMPSON RD

Collection Date/Time: 04/11/2019 10:44

Field ID: G2SW0093

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077964	EPA 8321B	2,4-D	0.0020	U	ug/L	P361970	
		Acesulfame K**	0.12	I	ug/L	P362188	MS
		AMPA**	0.16	I	ug/L	P362188	
		Sucralose**	0.081		ug/L	P362188	
		Acetaminophen**	0.0080	U	ug/L	P361970	
		Endothall**	0.25	U	ug/L	P362188	
		Glufosinate**	0.10	U	ug/L	P362188	
		Bentazon	8.0E-04	U	ug/L	P361970	
		Glyphosate**	0.10	U	ug/L	P362188	
		Carbamazepine**	8.0E-04	U	ug/L	P361970	
		Diuron	0.0020	U	ug/L	P361970	
		Fenuron	0.016	U	ug/L	P361970	
		Fluridone**	0.0071		ug/L	P361970	
		Imazapyr**	0.0040	U	ug/L	P361970	
		Hydrocodone**	0.0020	U	ug/L	P361970	
		Ibuprofen**	0.020	U	ug/L	P361970	
		Imidacloprid	0.0020	U	ug/L	P361970	MS
		Linuron	0.0040	U	ug/L	P361970	
		MCPP	0.0020	U	ug/L	P361970	
		Naproxen**	0.0080	U	ug/L	P361970	
		Primidone**	0.0048	I	ug/L	P361970	
		Pyraclostrobin**	0.0020	U	ug/L	P361970	
		Triclopyr**	0.0040	U	ug/L	P361970	

Sample Location: ALAFIA RIVER @ BOAT RAMP DOCK

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

Field ID: G2SW0091

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2077965	EPA 8321B	2,4-D	0.0020	U	ug/L	P361970	
		Acesulfame K**	0.10	U	ug/L	P362188	MS
		AMPA**	1.0	U	ug/L	P362188	
		Sucralose**	1.0		ug/L	P362188	
		Endothall**	0.25	U	ug/L	P362188	
		Acetaminophen**	0.0080	U	ug/L	P361970	
		Glufosinate**	1.0	U	ug/L	P362188	
		Glyphosate**	1.0	U	ug/L	P362188	
		Bentazon	0.011		ug/L	P361970	
		Carbamazepine**	0.0024	I	ug/L	P361970	
		Diuron	0.0030	I	ug/L	P361970	
		Fenuron	0.016	U	ug/L	P361970	
		Fluridone**	0.0055		ug/L	P361970	
		Imazapyr**	0.023		ug/L	P361970	
		Hydrocodone**	0.0020	U	ug/L	P361970	
		Ibuprofen**	0.020	U	ug/L	P361970	
		Imidacloprid	0.0033	I	ug/L	P361970	MS
		Linuron	0.0040	U	ug/L	P361970	
		MCPP	0.0020	U	ug/L	P361970	
		Naproxen**	0.0080	U	ug/L	P361970	
		Primidone**	0.0047	I	ug/L	P361970	
		Pyraclostrobin**	0.0020	U	ug/L	P361970	
		Triclopyr**	0.0040	U	ug/L	P361970	

Ref. Method and Comment:

EPA 8321B: MDL elevated due to matrix interference.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P361970

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: P362188

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: P361970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	56.2		P	40 - 150
Acetaminophen	78.8		P	30 - 150
Bentazon	98.9		P	30 - 150
Carbamazepine	90.4		P	40 - 150
Diuron	78.0		P	40 - 150
Fenuron	107		P	40 - 150
Fluridone	117		P	40 - 150
Hydrocodone	85.3		P	40 - 150
Ibuprofen	92.2		P	40 - 150
Imazapyr	75.2		P	40 - 150
Imidacloprid	96.3		P	40 - 150
Linuron	79.2		P	40 - 150
MCPP	72.0		P	40 - 150
Naproxen	60.5		P	40 - 150
Primidone	77.1		P	40 - 150
Pyraclostrobin	72.8		P	40 - 150
Triclopyr	40.5		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P362188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	130		P	40 - 150
AMPA	118		P	40 - 150
Endothall	99.8		P	40 - 150
Glufosinate	122		P	40 - 150
Glyphosate	116		P	40 - 140
Sucralose	95.7		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P361970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077724	2,4-D	81.2	72.2	P/P	40 - 150
2077724	Acetaminophen	96.4	93.7	P/P	30 - 150
2077724	Bentazon	69.9	61.9	P/P	30 - 150
2077724	Carbamazepine	96.8	83.7	P/P	40 - 150
2077724	Diuron	80.2	75.4	P/P	40 - 150
2077724	Fenuron	115	96.6	P/P	40 - 150
2077724	Fluridone	115	95.7	P/P	40 - 150
2077724	Hydrocodone	95.2	82.9	P/P	40 - 150
2077724	Ibuprofen	99.7	97.0	P/P	40 - 150
2077724	Imazapyr	109	82.0	P/P	40 - 150
2077724	Imidacloprid	185	161	F/F	40 - 150
2077724	Linuron	84.6	74.4	P/P	40 - 150
2077724	MCPP	106	92.1	P/P	40 - 150
2077724	Naproxen	75.4	65.2	P/P	40 - 150
2077724	Primidone	64.8	75.3	P/P	40 - 150
2077724	Pyraclostrobin	80.5	84.5	P/P	40 - 150
2077724	Triclopyr	62.6	60.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2077462	Acesulfame K	168	125	F/P	40 - 150
2077462	AMPA	62.2	73.4	P/P	40 - 150
2077462	Endothall	97.8	103	P/P	40 - 150
2077462	Glufosinate	103	110	P/P	40 - 150
2077462	Glyphosate	86.4	84.6	P/P	40 - 140
2077462	Sucralose	104	98.0	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P361970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077724	2,4-D	11.7	Spike	P	0 - 30
2077724	Acetaminophen	2.76	Spike	P	0 - 30
2077724	Bentazon	12.1	Spike	P	0 - 30
2077724	Carbamazepine	14.6	Spike	P	0 - 30
2077724	Diuron	6.06	Spike	P	0 - 30
2077724	Fenuron	17.8	Spike	P	0 - 30
2077724	Fluridone	18.6	Spike	P	0 - 30
2077724	Hydrocodone	13.8	Spike	P	0 - 30
2077724	Ibuprofen	2.73	Spike	P	0 - 30
2077724	Imazapyr	28.5	Spike	P	0 - 30
2077724	Imidacloprid	13.7	Spike	P	0 - 30
2077724	Linuron	12.8	Spike	P	0 - 30
2077724	MCP	13.8	Spike	P	0 - 30
2077724	Naproxen	14.5	Spike	P	0 - 30
2077724	Primidone	15.1	Spike	P	0 - 30
2077724	Pyraclostrobin	4.89	Spike	P	0 - 30
2077724	Triclopyr	3.40	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P362188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2077462	Acesulfame K	25.8	Spike	P	0 - 30
2077462	AMPA	4.51	Spike	P	0 - 30
2077462	Endothall	5.45	Spike	P	0 - 30
2077462	Glufosinate	6.91	Spike	P	0 - 30
2077462	Glyphosate	0.537	Spike	P	0 - 30
2077462	Sucralose	4.33	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: 2077961
Field Sample ID: G2SW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	74.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.2	P	30 - 160
EPA 8321B	Diuron-d6	77.1	P	30 - 160
EPA 8321B	Endothall-d6	91.2	P	30 - 160
EPA 8321B	Endothall-d6	91.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	153	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	153	P	30 - 160
EPA 8321B	Ibuprofen-d3	119	P	30 - 160
EPA 8321B	Primidone-d5	84.8	P	30 - 160
EPA 8321B	Sucralose-d6	95.0	P	30 - 160
EPA 8321B	Sucralose-d6	95.0	P	30 - 160

Lab Sample ID: 2077962
Field Sample ID: G2SW0046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.7	P	30 - 160
EPA 8321B	Diuron-d6	72.1	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	157	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	157	P	30 - 160
EPA 8321B	Ibuprofen-d3	117	P	30 - 160
EPA 8321B	Primidone-d5	80.2	P	30 - 160
EPA 8321B	Sucralose-d6	94.0	P	30 - 160
EPA 8321B	Sucralose-d6	94.0	P	30 - 160

Lab Sample ID: 2077963
Field Sample ID: G2SW0047

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.0	P	30 - 160
EPA 8321B	Diuron-d6	86.7	P	30 - 160
EPA 8321B	Endothall-d6	125	P	30 - 160
EPA 8321B	Endothall-d6	125	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	154	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	154	P	30 - 160
EPA 8321B	Ibuprofen-d3	129	P	30 - 160
EPA 8321B	Primidone-d5	91.5	P	30 - 160
EPA 8321B	Sucralose-d6	98.8	P	30 - 160
EPA 8321B	Sucralose-d6	98.8	P	30 - 160

Lab Sample ID: 2077964
Field Sample ID: G2SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.6	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2077964
Field Sample ID: G2SW0093

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.4	P	30 - 160
EPA 8321B	Diuron-d6	75.1	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	148	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	148	P	30 - 160
EPA 8321B	Ibuprofen-d3	119	P	30 - 160
EPA 8321B	Primidone-d5	80.7	P	30 - 160
EPA 8321B	Sucralose-d6	96.5	P	30 - 160
EPA 8321B	Sucralose-d6	96.5	P	30 - 160

Lab Sample ID: 2077965
Field Sample ID: G2SW0091

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.5	P	30 - 160
EPA 8321B	Diuron-d6	67.6	P	30 - 160
EPA 8321B	Endothall-d6	142	P	30 - 160
EPA 8321B	Endothall-d6	142	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	99.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	99.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	93.1	P	30 - 160
EPA 8321B	Primidone-d5	82.1	P	30 - 160
EPA 8321B	Sucralose-d6	89.3	P	30 - 160
EPA 8321B	Sucralose-d6	89.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A90788

Included Lab Sample IDs: 2077961, 2077962, 2077963, 2077964, 2077965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	114	129	P/P	60 - 160
AMPA	132	96.6	P/P	60 - 160
AMPA	96.6	114	P/P	60 - 160
Glufosinate	112	123	P/P	60 - 160
Glufosinate	114	112	P/P	60 - 160
Glufosinate	123	127	P/P	60 - 160
Glyphosate	115	118	P/P	60 - 160
Glyphosate	118	131	P/P	60 - 160
Glyphosate	131	126	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A90825

Included Lab Sample IDs: 2077961, 2077962, 2077963, 2077964, 2077965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	143	113	P/P	60 - 160
Acesulfame K	151	128	P/P	60 - 160
Endothall	112	105	P/P	60 - 160
Endothall	124	107	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A90848

Included Lab Sample IDs: 2077961, 2077962, 2077963, 2077964, 2077965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	84.8	82.8	P/P	50 - 150
Acetaminophen	98.3	90.0	P/P	60 - 160
Bentazon	112	119	P/P	50 - 160
Carbamazepine	105	103	P/P	60 - 150
Diuron	98.1	101	P/P	60 - 150
Fenuron	104	99.3	P/P	60 - 150
Fluridone	98.5	90.4	P/P	60 - 160
Hydrocodone	92.5	82.1	P/P	60 - 150
Ibuprofen	155	151	P/P	50 - 160
Imazapyr	119	109	P/P	50 - 150
Imidacloprid	99.6	92.0	P/P	60 - 150
Linuron	97.7	105	P/P	60 - 150
MCPP	89.4	96.0	P/P	50 - 150
Naproxen	78.3	75.0	P/P	50 - 160
Primidone	99.0	86.2	P/P	60 - 150
Pyraclostrobin	104	83.9	P/P	60 - 150
Triclopyr	98.8	98.7	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A90984

Included Lab Sample IDs: 2077961, 2077962, 2077963, 2077964, 2077965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	99.9	P/P	60 - 160
Sucralose	99.7	102	P/P	60 - 160

Quality Assurance Report

Calibration Verification

* 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	56.2	81.2	72.2			11.7
	Acesulfame K	130	168	125			25.8
	Acetaminophen	78.8	96.4	93.7			2.76
	AMPA	118	62.2	73.4			4.51
	Bentazon	98.9	69.9	61.9			12.1
	Carbamazepine	90.4	96.8	83.7			14.6
	Diuron	78.0	80.2	75.4			6.06
	Endothall	99.8	97.8	103			5.45
	Fenuron	107	115	96.6			17.8
	Fluridone	117	115	95.7			18.6
	Glufosinate	122	103	110			6.91
	Glyphosate	116	86.4	84.6			0.537
	Hydrocodone	85.3	95.2	82.9			13.8
	Ibuprofen	92.2	99.7	97.0			2.73
	Imazapyr	75.2	109	82.0			28.5
	Imidacloprid	96.3	185	161			13.7
	Linuron	79.2	84.6	74.4			12.8
	MCPP	72.0	106	92.1			13.8
	Naproxen	60.5	75.4	65.2			14.5
	Primidone	77.1	64.8	75.3			15.1
	Pyraclostrobin	72.8	80.5	84.5			4.89
	Sucralose	95.7	104	98.0			4.33
	Triclopyr	40.5	62.6	60.5			3.40

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2077961, 2077962, 2077963, 2077964, 2077965
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2077961, 2077962, 2077963, 2077964, 2077965

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	04/12/2019	04/12/2019 14:00	Hoor Shaik	04/20/2019 16:43	Juyoung Kim	2077961
	04/12/2019	04/12/2019 14:00	Hoor Shaik	04/20/2019 17:17	Juyoung Kim	2077962
	04/12/2019	04/12/2019 14:00	Hoor Shaik	04/20/2019 17:52	Juyoung Kim	2077963
	04/12/2019	04/12/2019 14:00	Hoor Shaik	04/20/2019 18:26	Juyoung Kim	2077964
	04/12/2019	04/12/2019 14:00	Hoor Shaik	04/20/2019 19:01	Juyoung Kim	2077965
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/16/2019 17:15	Rebecca Ware	2077961
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/16/2019 17:29	Rebecca Ware	2077962
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/16/2019 17:43	Rebecca Ware	2077963
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/16/2019 17:56	Rebecca Ware	2077964
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/17/2019 10:47	Rebecca Ware	2077961
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/17/2019 11:04	Rebecca Ware	2077963
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/17/2019 11:12	Rebecca Ware	2077964
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/17/2019 13:28	Rebecca Ware	2077962
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/17/2019 14:14	Rebecca Ware	2077965
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/17/2019 15:29	Rebecca Ware	2077965
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/25/2019 02:45	Rebecca Ware	2077961
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/25/2019 02:56	Rebecca Ware	2077962
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/25/2019 03:08	Rebecca Ware	2077963
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/25/2019 03:32	Rebecca Ware	2077964
	04/12/2019	04/16/2019 14:30	Rebecca Ware	04/25/2019 03:43	Rebecca Ware	2077965