

Chemical Analysis Report

CEN-DIST-2018-09-11-01

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

Event Description: **Soldier / Six + D&B**
Request ID: **RQ-2018-09-17-61**
Customer: **CEN-DIST**
Project ID: **SMP**

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

Date Certified: 28-SEP-2018 11:08



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 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: Elder Springs Run @ US of Myrtle St.

Collection Date/Time: 09/10/2018 11:40

Field ID: G2CE0120

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023683	EPA 8321B	2,4-D	0.0098		ug/L	P351415	MS
		Bentazon	0.013		ug/L	P351415	
		MCP	0.0021	I	ug/L	P351415	MS
		Triclopyr**	0.0040	U	ug/L	P351415	MS
		Imidacloprid	0.0087		ug/L	P351415	MS
		Diuron	0.0024	I	ug/L	P351415	
		Pyraclostrobin**	0.0020	U	ug/L	P351415	
		Primidone**	0.0081	I	ug/L	P351415	RPD
		Linuron	0.0040	U	ug/L	P351415	
		Acetaminophen**	0.0080	U	ug/L	P351415	
		Fenuron	0.016	U	ug/L	P351415	
		Imazapyr**	0.092		ug/L	P351415	
		Carbamazepine**	8.0E-04	U	ug/L	P351415	
		Fluridone**	0.0077		ug/L	P351415	
		Hydrocodone**	8.0E-04	U	ug/L	P351415	
		Naproxen**	0.0080	U	ug/L	P351415	
		Ibuprofen**	0.020	U	ug/L	P351415	
		Sucralose**	0.23		ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	

Ref. Method and Comment:

EPA 8321B: MS accuracy for fenuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Six Mile Creek @ 400m US of Lake Jesup

Collection Date/Time: 09/10/2018 11:56

Field ID: G2CE0074

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023684	EPA 8321B	2,4-D	0.038		ug/L	P351415	MS
		Bentazon	0.013		ug/L	P351415	
		MCP	0.0020	U	ug/L	P351415	MS
		Triclopyr**	0.0040	U	ug/L	P351415	MS
		Imidacloprid	0.0076	I	ug/L	P351415	MS
		Diuron	0.0026	I	ug/L	P351415	
		Pyraclostrobin**	0.0020	U	ug/L	P351415	
		Primidone**	0.0076	I	ug/L	P351415	RPD
		Linuron	0.0040	U	ug/L	P351415	
		Acetaminophen**	0.0080	U	ug/L	P351415	
		Fenuron	0.016	U	ug/L	P351415	
		Imazapyr**	0.078		ug/L	P351415	
		Carbamazepine**	8.0E-04	U	ug/L	P351415	
		Fluridone**	0.0080		ug/L	P351415	
		Hydrocodone**	8.0E-04	U	ug/L	P351415	
		Naproxen**	0.0080	U	ug/L	P351415	
		Ibuprofen**	0.020	U	ug/L	P351415	
		Sucralose**	0.21		ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	

Ref. Method and Comment:

EPA 8321B: MS accuracy for fenuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Soldier Creek @ 150m Upstream of SR Hwy 419 Collection Date/Time: 09/10/2018 12:45

Field ID: G2CE0071

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023681	EPA 8321B	2,4-D	0.0075	I	ug/L	P351415	MS
		Bentazon	0.051		ug/L	P351415	
		MCP	0.0032	I	ug/L	P351415	MS
		Triclopyr**	0.0040	U	ug/L	P351415	MS
		Imidacloprid	0.026		ug/L	P351415	MS
		Diuron	0.0020	U	ug/L	P351415	
		Pyraclostrobin**	0.0020	U	ug/L	P351415	
		Primidone**	0.0040	U	ug/L	P351415	RPD
		Linuron	0.0040	U	ug/L	P351415	
		Acetaminophen**	0.0080	U	ug/L	P351415	
		Fenuron	0.016	U	ug/L	P351415	
		Imazapyr**	0.29		ug/L	P351415	
		Carbamazepine**	0.0011	I	ug/L	P351415	
		Fluridone**	0.028		ug/L	P351415	
		Hydrocodone**	8.0E-04	U	ug/L	P351415	
		Naproxen**	0.0080	U	ug/L	P351415	
		Ibuprofen**	0.020	U	ug/L	P351415	
		Sucralose**	1.1		ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	

Ref. Method and Comment:

EPA 8321B: MS accuracy for fenuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Soldier Creek @ just downstream of SR Hwy 419

Collection Date/Time: 09/10/2018 13:00

Field ID: G2CE0162

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023682	EPA 8321B	2,4-D	0.0077	I	ug/L	P351415	MS
		Bentazon	0.051		ug/L	P351415	
		MCP	0.0031	I	ug/L	P351415	MS
		Triclopyr**	0.0040	U	ug/L	P351415	MS
		Imidacloprid	0.022		ug/L	P351415	MS
		Diuron	0.0020	U	ug/L	P351415	
		Pyraclostrobin**	0.0020	U	ug/L	P351415	
		Primidone**	0.0040	U	ug/L	P351415	RPD
		Linuron	0.0040	U	ug/L	P351415	
		Acetaminophen**	0.0080	U	ug/L	P351415	
		Fenuron	0.016	U	ug/L	P351415	
		Imazapyr**	0.27		ug/L	P351415	
		Carbamazepine**	0.0021	I	ug/L	P351415	
		Fluridone**	0.024		ug/L	P351415	
		Hydrocodone**	8.0E-04	U	ug/L	P351415	
		Naproxen**	0.0080	U	ug/L	P351415	
		Ibuprofen**	0.020	U	ug/L	P351415	
		Sucralose**	1.3		ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	

Ref. Method and Comment:

EPA 8321B: MS accuracy for fenuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Soldier Creek @ just downstream of SR Hwy 419

Collection Date/Time: 09/10/2018 13:03

Field ID: G2CE0162_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023685	EPA 8321B	2,4-D	0.0067	I	ug/L	P351415	MS
		Bentazon	0.051		ug/L	P351415	
		MCP	0.0028	I	ug/L	P351415	MS
		Triclopyr**	0.0040	U	ug/L	P351415	MS
		Imidacloprid	0.024		ug/L	P351415	MS
		Diuron	0.0020	U	ug/L	P351415	
		Pyraclostrobin**	0.0020	U	ug/L	P351415	
		Primidone**	0.0040	U	ug/L	P351415	RPD
		Linuron	0.0040	U	ug/L	P351415	
		Acetaminophen**	0.0080	U	ug/L	P351415	
		Fenuron	0.016	U	ug/L	P351415	
		Imazapyr**	0.29		ug/L	P351415	
		Carbamazepine**	0.0021	I	ug/L	P351415	
		Fluridone**	0.025		ug/L	P351415	
		Hydrocodone**	8.0E-04	U	ug/L	P351415	
		Naproxen**	0.0080	U	ug/L	P351415	
		Ibuprofen**	0.020	U	ug/L	P351415	
		Sucralose**	1.3		ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	

Ref. Method and Comment:

EPA 8321B: MS accuracy for fenuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Washroom

Collection Date/Time: 09/10/2018 13:12

Field ID: Blank_09102018

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023686	EPA 8321B	2,4-D	0.0020	U	ug/L	P351415	MS
		Bentazon	8.0E-04	U	ug/L	P351415	
		MCP	0.0020	U	ug/L	P351415	MS
		Triclopyr**	0.0040	U	ug/L	P351415	MS
		Imidacloprid	0.0020	U	ug/L	P351415	MS
		Diuron	0.0020	U	ug/L	P351415	
		Pyraclostrobin**	0.0020	U	ug/L	P351415	
		Primidone**	0.0040	U	ug/L	P351415	RPD
		Linuron	0.0040	U	ug/L	P351415	
		Acetaminophen**	0.0080	U	ug/L	P351415	
		Fenuron	0.016	U	ug/L	P351415	
		Imazapyr**	0.0040	U	ug/L	P351415	
		Carbamazepine**	8.0E-04	U	ug/L	P351415	
		Fluridone**	4.0E-04	U	ug/L	P351415	
		Hydrocodone**	8.0E-04	U	ug/L	P351415	
		Naproxen**	0.0080	U	ug/L	P351415	
		Ibuprofen**	0.020	U	ug/L	P351415	
		Sucralose**	0.010	U	ug/L	P351382	
		Acesulfame K**	0.10	U	ug/L	P351382	

Ref. Method and Comment:

EPA 8321B: MS accuracy for fenuron 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: P351382

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P351415

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	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P351382

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	78.3		P	40 - 150
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351415

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.6		P	40 - 150
Acetaminophen	95.9		P	30 - 150
Bentazon	109		P	30 - 150
Carbamazepine	91.6		P	40 - 150
Diuron	77.8		P	40 - 150
Fenuron	99.5		P	40 - 150
Fluridone	85.9		P	40 - 150
Hydrocodone	93.7		P	40 - 150
Ibuprofen	96.0		P	40 - 150
Imazapyr	78.8		P	40 - 150
Imidacloprid	88.9		P	40 - 160
Linuron	64.2		P	40 - 150
MCPP	96.4		P	40 - 150
Naproxen	94.9		P	40 - 150
Primidone	79.1		P	40 - 150
Pyraclostrobin	83.9		P	40 - 150
Triclopyr	92.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P351382

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023766	Acesulfame K	68.6	81.6	P/P	40 - 150
2023766	Sucralose	117	114	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P351415

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023791	2,4-D	167	179	F/F	40 - 150
2023791	Acetaminophen	119	102	P/P	30 - 150
2023791	Bentazon	43.3	42.8	P/P	30 - 150
2023791	Carbamazepine	86.0	75.2	P/P	40 - 150
2023791	Diuron	72.3	63.8	P/P	40 - 150
2023791	Fluridone	92.5	80.6	P/P	40 - 150
2023791	Hydrocodone	93.9	75.6	P/P	40 - 150
2023791	Ibuprofen	92.0	108	P/P	40 - 150
2023791	Imazapyr	127	83.5	P/P	40 - 150
2023791	Imidacloprid	169	141	F/P	40 - 160
2023791	Linuron	68.7	64.8	P/P	40 - 150
2023791	MCP	164	185	F/F	40 - 150
2023791	Naproxen	149	147	P/P	40 - 150
2023791	Primidone	95.5	70.3	P/P	40 - 150
2023791	Pyraclostrobin	102	81.9	P/P	40 - 150
2023791	Triclopyr	172	153	F/F	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P351382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023766	Acesulfame K	17.2	Spike	P	0 - 30
2023766	Sucralose	2.41	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P351415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023791	2,4-D	6.84	Spike	P	0 - 30
2023791	Acetaminophen	15.3	Spike	P	0 - 30
2023791	Bentazon	1.01	Spike	P	0 - 30
2023791	Carbamazepine	13.4	Spike	P	0 - 30
2023791	Diuron	12.4	Spike	P	0 - 30
2023791	Fenuron	11.2	Spike	P	0 - 30
2023791	Fluridone	13.7	Spike	P	0 - 30
2023791	Hydrocodone	21.6	Spike	P	0 - 30
2023791	Ibuprofen	16.1	Spike	P	0 - 30
2023791	Imazapyr	18.8	Spike	P	0 - 30
2023791	Imidacloprid	17.7	Spike	P	0 - 30
2023791	Linuron	5.75	Spike	P	0 - 30
2023791	MCPP	11.9	Spike	P	0 - 30
2023791	Naproxen	1.04	Spike	P	0 - 30
2023791	Primidone	30.3	Spike	F	0 - 30
2023791	Pyraclostrobin	21.7	Spike	P	0 - 30
2023791	Triclopyr	11.9	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: 2023681
Field Sample ID: G2CE0071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	109	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.2	P	30 - 160
EPA 8321B	Diuron-d6	59.9	P	30 - 160
EPA 8321B	Endothall-d6	145	P	40 - 160
EPA 8321B	Ibuprofen-d3	108	P	30 - 160
EPA 8321B	Primidone-d5	78.1	P	30 - 160
EPA 8321B	Sucralose-d6	132	P	40 - 160

Lab Sample ID: 2023682
Field Sample ID: G2CE0162

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	125	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	62.8	P	30 - 160
EPA 8321B	Diuron-d6	53.1	P	30 - 160
EPA 8321B	Endothall-d6	148	P	40 - 160
EPA 8321B	Ibuprofen-d3	130	P	30 - 160
EPA 8321B	Primidone-d5	69.0	P	30 - 160
EPA 8321B	Sucralose-d6	135	P	40 - 160

Lab Sample ID: 2023683
Field Sample ID: G2CE0120

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	115	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.8	P	30 - 160
EPA 8321B	Diuron-d6	55.9	P	30 - 160
EPA 8321B	Endothall-d6	129	P	40 - 160
EPA 8321B	Ibuprofen-d3	105	P	30 - 160
EPA 8321B	Primidone-d5	75.1	P	30 - 160
EPA 8321B	Sucralose-d6	147	P	40 - 160

Lab Sample ID: 2023684
Field Sample ID: G2CE0074

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.4	P	30 - 160
EPA 8321B	Diuron-d6	58.7	P	30 - 160
EPA 8321B	Endothall-d6	143	P	40 - 160
EPA 8321B	Ibuprofen-d3	117	P	30 - 160
EPA 8321B	Primidone-d5	68.2	P	30 - 160
EPA 8321B	Sucralose-d6	150	P	40 - 160

Lab Sample ID: 2023685
Field Sample ID: G2CE0162_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
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Quality Assurance Report Surrogates

Lab Sample ID: 2023685

Field Sample ID: G2CE0162_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.1	P	30 - 160
EPA 8321B	Diuron-d6	58.9	P	30 - 160
EPA 8321B	Endothall-d6	152	P	40 - 160
EPA 8321B	Ibuprofen-d3	104	P	30 - 160
EPA 8321B	Primidone-d5	68.9	P	30 - 160
EPA 8321B	Sucralose-d6	145	P	40 - 160

Lab Sample ID: 2023686

Field Sample ID: Blank_09102018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	81.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.2	P	30 - 160
EPA 8321B	Diuron-d6	93.2	P	30 - 160
EPA 8321B	Endothall-d6	100	P	40 - 160
EPA 8321B	Ibuprofen-d3	89.8	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	141	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A86482

Included Lab Sample IDs: 2023681, 2023682, 2023683, 2023684, 2023685, 2023686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	111	105	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A86520

Included Lab Sample IDs: 2023681, 2023682, 2023683, 2023684, 2023685, 2023686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	109	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A86528

Included Lab Sample IDs: 2023681, 2023682, 2023683, 2023684, 2023685, 2023686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.2	94.2	P/P	50 - 150
Bentazon	105	118	P/P	50 - 160
Ibuprofen	123	108	P/P	50 - 160
MCP	98.5	95.7	P/P	50 - 150
Naproxen	85.2	107	P/P	50 - 160
Triclopyr	96.4	98.1	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A86696

Included Lab Sample IDs: 2023681, 2023682, 2023683, 2023684, 2023685, 2023686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	92.3	105	P/P	60 - 160
Carbamazepine	112	110	P/P	60 - 160
Diuron	106	110	P/P	60 - 150
Fenuron	96.7	97.5	P/P	60 - 150
Fluridone	99.8	95.5	P/P	60 - 160
Hydrocodone	87.3	92.6	P/P	60 - 150
Imazapyr	89.2	77.5	P/P	50 - 150
Imidacloprid	92.6	84.0	P/P	60 - 150
Linuron	98.9	102	P/P	60 - 150
Primidone	83.8	74.7	P/P	60 - 150
Pyraclostrobin	114	104	P/P	60 - 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 LCS	SMP	MS
EPA 8321B	2,4-D	95.6	167	179			6.84
	Acesulfame K	78.3	68.6	81.6			17.2
	Acetaminophen	95.9	119	102			15.3
	Bentazon	109	43.3	42.8			1.01
	Carbamazepine	91.6	86.0	75.2			13.4
	Diuron	77.8	72.3	63.8			12.4
	Fenuron	99.5					11.2
	Fluridone	85.9	92.5	80.6			13.7
	Hydrocodone	93.7	93.9	75.6			21.6
	Ibuprofen	96.0	92.0	108			16.1
	Imazapyr	78.8	127	83.5			18.8
	Imidacloprid	88.9	169	141			17.7
	Linuron	64.2	68.7	64.8			5.75
	MCPD	96.4	164	185			11.9
	Naproxen	94.9	149	147			1.04
	Primidone	79.1	95.5	70.3			30.3
	Pyraclostrobin	83.9	102	81.9			21.7
	Sucralose	100	117	114			2.41
	Triclopyr	92.2	172	153			11.9

Reference Method Descriptions

Method / DoH Cert #
 EPA 8321B / E31780

Description
 Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Associated Samples
 2023681, 2023682, 2023683, 2023684,
 2023685, 2023686

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/15/2018 05:26	Juyoung Kim	2023681
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/15/2018 06:01	Juyoung Kim	2023682
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/15/2018 06:35	Juyoung Kim	2023683
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/15/2018 07:10	Juyoung Kim	2023684
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/15/2018 07:45	Juyoung Kim	2023685
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/15/2018 08:19	Juyoung Kim	2023686
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/22/2018 09:04	Mohammad Ghaffari	2023681
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/22/2018 09:39	Mohammad Ghaffari	2023682
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/22/2018 10:14	Mohammad Ghaffari	2023683
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/22/2018 10:48	Mohammad Ghaffari	2023684
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/22/2018 11:23	Mohammad Ghaffari	2023685
	09/11/2018	09/12/2018 09:00	Hoor Shaik	09/22/2018 11:57	Mohammad Ghaffari	2023686
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 15:45	Mohammad Ghaffari	2023681
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 15:59	Mohammad Ghaffari	2023682
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 16:14	Mohammad Ghaffari	2023683
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 16:29	Mohammad Ghaffari	2023684
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 16:43	Mohammad Ghaffari	2023685
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/13/2018 16:58	Mohammad Ghaffari	2023686
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 17:45	Mohammad Ghaffari	2023681
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 18:00	Mohammad Ghaffari	2023682
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 18:14	Mohammad Ghaffari	2023683
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 18:29	Mohammad Ghaffari	2023684
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 18:44	Mohammad Ghaffari	2023685
	09/11/2018	09/13/2018 13:00	Mohammad Ghaffari	09/14/2018 18:58	Mohammad Ghaffari	2023686