

Chemical Analysis Report

CEN-DIST-2023-07-28-02

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

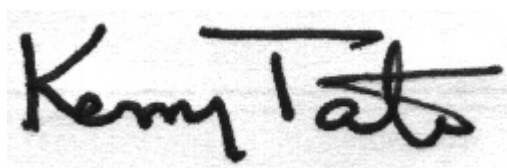
Event Description: **Mattress Drain**
Request ID: **RQ-2023-07-24-55**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 04-AUG-2023 09:58

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the end of the name.

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: MATTRESS DRAIN AT ROCKRIDGE RD

Collection Date/Time: 07/27/2023 10:57

Field ID: G4CE0247

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427522	EPA 8321B	2,4-D	0.0070	I	ug/L	P433126	
		Acesulfame K	0.10	U	ug/L	P433285	
		2,4,5-T	0.0040	U	ug/L	P433126	
		AMPA	0.17	I	ug/L	P433285	
		Acetaminophen	0.0080	U	ug/L	P433126	
		Acetamiprid	0.0020	U	ug/L	P433126	
		Endothall	0.25	U	ug/L	P433285	
		Glufosinate	0.10	U	ug/L	P433285	
		Glyphosate	0.28	I	ug/L	P433285	
		Afidopyropen	0.0020	U	ug/L	P433126	
		Bentazon	8.0E-04	U	ug/L	P433126	
		Sucralose	0.010	U	ug/L	P433285	
		Benzovindiflupyr	0.0020	U	ug/L	P433126	
		Carbamazepine	8.0E-04	U	ug/L	P433126	
		Clothianidin	0.0020	U	ug/L	P433126	
		Dinotefuran	0.0020	U	ug/L	P433126	
		Diuron	0.0020	U	ug/L	P433126	MS
		Fenuron	0.032	U	ug/L	P433126	
		Fluridone	8.0E-04	U	ug/L	P433126	
		Imazapyr	0.0040	U	ug/L	P433126	
		Hydrocodone	0.0020	U	ug/L	P433126	
		Ibuprofen	0.080	U	ug/L	P433126	
		Imidacloprid	0.0020	U	ug/L	P433126	
		Linuron	0.0040	U	ug/L	P433126	
		Mandestrobin	0.0020	U	ug/L	P433126	
		MCPP	0.0020	U	ug/L	P433126	
		Naproxen	0.0080	U	ug/L	P433126	
		Primidone	0.0040	U	ug/L	P433126	
		Pyraclostrobin	0.0020	U	ug/L	P433126	
		Silvex	0.0040	U	ug/L	P433126	
		Thiamethoxam	0.0020	U	ug/L	P433126	
		Tolfenpyrad	0.0020	U	ug/L	P433126	
		Triclopyr	0.0040	U	ug/L	P433126	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B**Batch ID: P433126**

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B**Batch ID: P433285**

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: P433126

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	76.6		P	40 - 150
2,4,5-T	69.9		P	40 - 150
Acetaminophen	77.6		P	30 - 150
Acetamiprid	83.8		P	40 - 150
Afidopyropen	49.9		P	30 - 150
Bentazon	120		P	30 - 150
Benzovindiflupyr	77.3		P	40 - 150
Carbamazepine	71.5		P	40 - 150
Clothianidin	86.3		P	40 - 150
Dinotefuran	103		P	40 - 150
Diuron	66.8		P	40 - 150
Fenuron	95.0		P	40 - 150
Fluridone	88.5		P	40 - 150
Hydrocodone	101		P	40 - 150
Ibuprofen	73.9		P	40 - 150
Imazapyr	80.5		P	40 - 150
Imidacloprid	82.2		P	40 - 150
Linuron	71.8		P	40 - 150
Mandestrobin	87.4		P	40 - 150
MCPP	83.0		P	40 - 150
Naproxen	84.0		P	40 - 150
Primidone	83.4		P	40 - 150
Pyraclostrobin	67.5		P	40 - 150
Silvex	81.3		P	40 - 150
Thiamethoxam	90.9		P	40 - 150
Tolfenpyrad	34.4		P	30 - 150
Triclopyr	75.2		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P433285

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	99.3		P	40 - 150
AMPA	127		P	40 - 150
Endothall	103		P	40 - 150
Glufosinate	99.2		P	40 - 150
Glyphosate	106		P	40 - 150
Sucralose	100		P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P433126

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427264	2,4,5-T	127	111	P/P	40 - 150
2427264	Acetaminophen	78.9	77.1	P/P	30 - 150
2427264	Acetamiprid	42.4	42.3	P/P	40 - 150
2427264	Afidopyropen	50.1	51.9	P/P	30 - 150
2427264	Benzovindiflupyr	84.0	80.6	P/P	40 - 150
2427264	Carbamazepine	43.7	43.2	P/P	40 - 150
2427264	Clothianidin	68.4	69.1	P/P	40 - 150
2427264	Dinotefuran	63.4	61.3	P/P	40 - 150
2427264	Diuron	30.4	39.8	F/F	40 - 150
2427264	Fenuron	44.2	52.0	P/P	40 - 150
2427264	Fluridone	92.4	87.6	P/P	40 - 150
2427264	Hydrocodone	54.5	52.4	P/P	40 - 150
2427264	Ibuprofen	73.5	70.1	P/P	40 - 150
2427264	Imidacloprid	105	101	P/P	40 - 150
2427264	Linuron	49.4	48.3	P/P	40 - 150
2427264	Mandestrobin	83.7	80.5	P/P	40 - 150
2427264	MCCP	133	135	P/P	40 - 150
2427264	Naproxen	99.2	91.9	P/P	40 - 150
2427264	Primidone	69.9	62.7	P/P	40 - 150
2427264	Pyraclostrobin	81.1	73.7	P/P	40 - 150
2427264	Silvex	125	126	P/P	40 - 150
2427264	Thiamethoxam	67.6	67.4	P/P	40 - 150
2427264	Tolfenpyrad	58.7	54.2	P/P	30 - 150
2427264	Triclopyr	109	105	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P433285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427498	Acesulfame K	115	117	P/P	40 - 150
2427498	AMPA	88.0	89.1	P/P	40 - 150
2427498	Endothall	112	111	P/P	40 - 150
2427498	Glufosinate	79.2	80.9	P/P	40 - 150
2427498	Glyphosate	81.4	96.2	P/P	40 - 150
2427498	Sucralose	97.1	105	P/P	40 - 150

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P433126

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427264	2,4-D	8.54	Spike	P	0 - 30
2427264	2,4,5-T	13.1	Spike	P	0 - 30
2427264	Acetaminophen	2.25	Spike	P	0 - 30
2427264	Acetamiprid	0.0553	Spike	P	0 - 30
2427264	Afidopyropen	3.52	Spike	P	0 - 30
2427264	Bentazon	4.23	Spike	P	0 - 30
2427264	Benzovindiflupyr	4.14	Spike	P	0 - 30
2427264	Carbamazepine	1.19	Spike	P	0 - 30
2427264	Clothianidin	0.980	Spike	P	0 - 30
2427264	Dinotefuran	3.31	Spike	P	0 - 30
2427264	Diuron	26.7	Spike	P	0 - 30
2427264	Fenuron	16.2	Spike	P	0 - 30
2427264	Fluridone	3.34	Spike	P	0 - 30
2427264	Hydrocodone	4.00	Spike	P	0 - 30
2427264	Ibuprofen	4.74	Spike	P	0 - 30
2427264	Imazapyr	17.0	Spike	P	0 - 30
2427264	Imidacloprid	3.90	Spike	P	0 - 30
2427264	Linuron	2.21	Spike	P	0 - 30
2427264	Mandestrobin	3.85	Spike	P	0 - 30
2427264	MCPP	1.83	Spike	P	0 - 30
2427264	Naproxen	7.62	Spike	P	0 - 30
2427264	Primidone	10.9	Spike	P	0 - 30
2427264	Pyraclostrobin	9.65	Spike	P	0 - 30
2427264	Silvex	0.871	Spike	P	0 - 30
2427264	Thiamethoxam	0.222	Spike	P	0 - 30
2427264	Tolfenpyrad	8.07	Spike	P	0 - 30
2427264	Triclopyr	3.66	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P433285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427498	Acesulfame K	1.58	Spike	P	0 - 30
2427498	AMPA	1.28	Spike	P	0 - 30
2427498	Endothall	1.33	Spike	P	0 - 30
2427498	Glufosinate	2.13	Spike	P	0 - 30
2427498	Glyphosate	16.7	Spike	P	0 - 30
2427498	Sucralose	7.95	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2427522
Field Sample ID: G4CE0247

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	61.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	34.1	P	30 - 160
EPA 8321B	Diuron-d6	50.9	P	30 - 160
EPA 8321B	Endothall-d6	132	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	30 - 160
EPA 8321B	Ibuprofen-d3	63.2	P	30 - 160
EPA 8321B	Primidone-d5	44.9	P	30 - 160
EPA 8321B	Sucralose-d6	91.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A120735
Included Lab Sample IDs: 2427522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.5	94.0	P/P	50 - 150
2,4,5-T	102	102	P/P	50 - 150
Acetaminophen	93.7	77.8	P/P	60 - 160
Acetamiprid	102	105	P/P	50 - 150
Afidopyropen	90.2	74.4	P/P	50 - 150
Bentazon	116	134	P/P	50 - 160
Benzovindiflupyr	103	105	P/P	50 - 150
Carbamazepine	108	103	P/P	60 - 150
Clothianidin	105	107	P/P	60 - 150
Dinotefuran	120	129	P/P	50 - 150
Diuron	99.3	97.0	P/P	60 - 160
Fenuron	106	109	P/P	60 - 150
Fluridone	102	103	P/P	60 - 160
Hydrocodone	117	111	P/P	60 - 150
Ibuprofen	106	102	P/P	50 - 160
Imazapyr	90.3	94.7	P/P	50 - 150
Imidacloprid	97.6	96.6	P/P	60 - 150
Linuron	108	96.6	P/P	60 - 150
Mandestrobin	106	107	P/P	50 - 150
MCPP	95.9	95.6	P/P	50 - 150
Naproxen	141	104	P/P	50 - 160
Primidone	104	98.9	P/P	60 - 150
Pyraclostrobin	116	118	P/P	60 - 150
Silvex	76.0	89.1	P/P	50 - 150
Thiamethoxam	114	117	P/P	50 - 150
Tolfenpyrad	104	107	P/P	60 - 150
Triclopyr	90.3	101	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A120811
Included Lab Sample IDs: 2427522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	130	70.9	P/P	60 - 160
Endothall	95.2	90.7	P/P	60 - 160
Glufosinate	91.5	86.0	P/P	60 - 160
Glyphosate	96.3	97.8	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A120812
Included Lab Sample IDs: 2427522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	98.5	105	P/P	60 - 160
Sucralose	97.3	96.6	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	76.6				8.54
	2,4,5-T	69.9	127	111		13.1
	Acesulfame K	99.3	115	117		1.58
	Acetaminophen	77.6	77.1	78.9		2.25
	Acetamiprid	83.8	42.3	42.4		0.0553
	Afidopyropen	49.9	50.1	51.9		3.52
	AMPA	127	88.0	89.1		1.28
	Bentazon	120				4.23
	Benzovindiflupyr	77.3	84.0	80.6		4.14
	Carbamazepine	71.5	43.7	43.2		1.19
	Clothianidin	86.3	69.1	68.4		0.980
	Dinotefuran	103	61.3	63.4		3.31
	Diuron	66.8	30.4	39.8		26.7
	Endothall	103	112	111		1.33
	Fenuron	95.0	52.0	44.2		16.2
	Fluridone	88.5	92.4	87.6		3.34
	Glufosinate	99.2	79.2	80.9		2.13
	Glyphosate	106	81.4	96.2		16.7
	Hydrocodone	101	52.4	54.5		4.00
	Ibuprofen	73.9	73.5	70.1		4.74
	Imazapyr	80.5				17.0
	Imidacloprid	82.2	101	105		3.90
	Linuron	71.8	49.4	48.3		2.21
	Mandestrobin	87.4	83.7	80.5		3.85
	MCPPP	83.0	133	135		1.83
	Naproxen	84.0	99.2	91.9		7.62
	Primidone	83.4	62.7	69.9		10.9
	Pyraclostrobin	67.5	81.1	73.7		9.65
	Silvex	81.3	125	126		0.871
	Sucralose	100	97.1	105		7.95
	Thiamethoxam	90.9	67.4	67.6		0.222
	Tolfenpyrad	34.4	58.7	54.2		8.07
	Triclopyr	75.2	109	105		3.66

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2427522

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	07/28/2023	07/28/2023 14:00	Hoor Shaik	07/29/2023 06:52	Juyoung Kim	2427522
	07/28/2023	08/02/2023 08:00	Tae K Lee	08/02/2023 11:12	Hana Lee	2427522
	07/28/2023	08/02/2023 08:00	Tae K Lee	08/03/2023 04:32	Hana Lee	2427522