

Chemical Analysis Report

SO-DIST-2021-02-10-01

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

Event Description: **2021 SMP : Estero Cricks**

Request ID: **RQ-2021-02-08-48**

Customer: **SO-DIST**

Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 19-FEB-2021 17:33



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: Mullock Creek Near US41

Collection Date/Time: 02/09/2021 09:25

Field ID: G1SD0100

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224678	EPA 8321B	2,4-D	0.0020	U	ug/L	P393602	
		Acesulfame K	0.22	I	ug/L	P393719	
		AMPA	0.27	I	ug/L	P393719	
		Sucralose	4.2		ug/L	P393719	
		Acetaminophen**	0.0093	I	ug/L	P393602	
		Endothall	0.25	U	ug/L	P393719	
		Acetamiprid**	0.0020	U	ug/L	P393602	RPD
		Glufosinate	0.10	U	ug/L	P393719	
		Glyphosate	0.10	U	ug/L	P393719	
		Afidopyropen**	0.0020	U	ug/L	P393602	RPD
		Bentazon	0.031		ug/L	P393602	
		Benzovindiflupyr**	0.0020	U	ug/L	P393602	
		Carbamazepine**	0.0062		ug/L	P393602	
		Clothianidin**	0.0020	U	ug/L	P393602	
		Dinotefuran**	0.0020	U	ug/L	P393602	
		Diuron	0.0020	U	ug/L	P393602	
		Fenuron	0.016	U	ug/L	P393602	
		Fluridone**	0.14		ug/L	P393602	
		Imazapyr**	0.084		ug/L	P393602	
		Hydrocodone**	0.0020	U	ug/L	P393602	
		Ibuprofen**	0.020	U	ug/L	P393602	
		Imidacloprid	0.0020	U	ug/L	P393602	
		Linuron	0.0040	U	ug/L	P393602	
		Mandestrobin**	0.0020	U	ug/L	P393602	
		MCPP	0.0020	U	ug/L	P393602	
		Naproxen**	0.0080	U	ug/L	P393602	
		Primidone**	0.025		ug/L	P393602	
		Pyraclostrobin**	0.0020	U	ug/L	P393602	
		Thiamethoxam**	0.0020	U	ug/L	P393602	
		Tolfenpyrad**	0.0020	U	ug/L	P393602	
		Triclopyr**	0.0040	U	ug/L	P393602	

Sample Location: Mullock Creek Upstream of US 41

Collection Date/Time: 02/09/2021 10:00

Field ID: G1SD0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224679	EPA 8321B	2,4-D	0.0020	U	ug/L	P393602	
		Acesulfame K	0.36	I	ug/L	P393719	
		AMPA	0.13	I	ug/L	P393719	
		Sucralose	2.2		ug/L	P393719	
		Acetaminophen**	0.0080	U	ug/L	P393602	
		Endothall	0.25	U	ug/L	P393719	
		Acetamiprid**	0.0020	U	ug/L	P393602	RPD
		Glufosinate	0.10	U	ug/L	P393719	
		Glyphosate	0.52		ug/L	P393719	
		Afidopyropen**	0.0020	U	ug/L	P393602	RPD
		Bentazon	0.32		ug/L	P393602	
		Benzovindiflupyr**	0.0020	U	ug/L	P393602	
		Carbamazepine**	0.013		ug/L	P393602	
		Clothianidin**	0.0020	U	ug/L	P393602	
		Dinotefuran**	0.0020	U	ug/L	P393602	
		Diuron	0.0020	U	ug/L	P393602	
		Fenuron	0.016	U	ug/L	P393602	
		Fluridone**	0.065		ug/L	P393602	
		Imazapyr**	0.098		ug/L	P393602	
		Hydrocodone**	0.0020	U	ug/L	P393602	
		Ibuprofen**	0.020	U	ug/L	P393602	
		Imidacloprid	0.0031	I	ug/L	P393602	
		Linuron	0.0040	U	ug/L	P393602	
		Mandestrobin**	0.0020	U	ug/L	P393602	
		MCPP	0.0020	U	ug/L	P393602	
		Naproxen**	0.0080	U	ug/L	P393602	
		Primidone**	0.0065	I	ug/L	P393602	
		Pyraclostrobin**	0.0020	U	ug/L	P393602	
		Thiamethoxam**	0.0020	U	ug/L	P393602	
		Tolfenpyrad**	0.0020	U	ug/L	P393602	
		Triclopyr**	0.0040	U	ug/L	P393602	

Sample Location: Hendry Creek House 1 Upstrm

Collection Date/Time: 02/09/2021 11:25

Field ID: G1SD0118

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224680	EPA 8321B	Acesulfame K	0.10	U	ug/L	P393719	
		2,4-D	0.0028	I	ug/L	P393602	
		AMPA	1.0	U	ug/L	P393719	
		Sucralose	0.67		ug/L	P393719	
		Acetaminophen**	0.0080	U	ug/L	P393602	
		Endothall	0.25	U	ug/L	P393719	
		Acetamiprid**	0.0020	U	ug/L	P393602	RPD
		Glufosinate	1.0	U	ug/L	P393719	
		Glyphosate	1.0	U	ug/L	P393719	
		Afidopyropen**	0.0020	U	ug/L	P393602	RPD
		Bentazon	0.042		ug/L	P393602	
		Benzovindiflupyr**	0.0020	U	ug/L	P393602	
		Carbamazepine**	0.0011	I	ug/L	P393602	
		Clothianidin**	0.0020	U	ug/L	P393602	
		Dinotefuran**	0.0020	U	ug/L	P393602	
		Diuron	0.030		ug/L	P393602	
		Fenuron	0.016	U	ug/L	P393602	
		Fluridone**	0.046		ug/L	P393602	
		Imazapyr**	0.10		ug/L	P393602	
		Hydrocodone**	0.0020	U	ug/L	P393602	
		Ibuprofen**	0.020	U	ug/L	P393602	
		Imidacloprid	0.0074	I	ug/L	P393602	
		Linuron	0.0040	U	ug/L	P393602	
		Mandestrobin**	0.0020	U	ug/L	P393602	
		MCPP	0.0020	U	ug/L	P393602	
		Naproxen**	0.0080	U	ug/L	P393602	
		Primidone**	0.0056	I	ug/L	P393602	
		Pyraclostrobin**	0.0020	U	ug/L	P393602	
		Thiamethoxam**	0.0020	U	ug/L	P393602	
		Tolfenpyrad**	0.0020	U	ug/L	P393602	
		Triclopyr**	0.0040	U	ug/L	P393602	

Ref. Method and Comment:
EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: Hendry Creek @ Gladiolus Rd.

Collection Date/Time: 02/09/2021 12:45

Field ID: G1SD0097

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224681	EPA 8321B	Acesulfame K	0.10	U	ug/L	P393719	
		2,4-D	0.0052	I	ug/L	P393602	
		AMPA	1.0	U	ug/L	P393719	
		Sucralose	0.67		ug/L	P393719	
		Acetaminophen**	0.0080	U	ug/L	P393602	
		Endothall	0.25	U	ug/L	P393719	
		Acetamiprid**	0.0020	U	ug/L	P393602	RPD
		Glufosinate	1.0	U	ug/L	P393719	
		Glyphosate	1.0	U	ug/L	P393719	
		Afidopyropen**	0.0020	U	ug/L	P393602	RPD
		Bentazon	0.14		ug/L	P393602	
		Benzovindiflupyr**	0.0020	U	ug/L	P393602	
		Carbamazepine**	0.0012	I	ug/L	P393602	
		Clothianidin**	0.0020	U	ug/L	P393602	
		Dinotefuran**	0.0022	I	ug/L	P393602	
		Diuron	0.059		ug/L	P393602	
		Fenuron	0.016	U	ug/L	P393602	
		Fluridone**	0.047		ug/L	P393602	
		Imazapyr**	0.11		ug/L	P393602	
		Hydrocodone**	0.0020	U	ug/L	P393602	
		Ibuprofen**	0.020	U	ug/L	P393602	
		Imidacloprid	0.0077	I	ug/L	P393602	
		Linuron	0.0040	U	ug/L	P393602	
		Mandestrobin**	0.0020	U	ug/L	P393602	
		MCP	0.0020	U	ug/L	P393602	
		Naproxen**	0.0080	U	ug/L	P393602	
		Primidone**	0.0052	I	ug/L	P393602	
		Pyraclostrobin**	0.0020	U	ug/L	P393602	
		Thiamethoxam**	0.0020	U	ug/L	P393602	
		Tolfenpyrad**	0.0020	U	ug/L	P393602	
		Triclopyr**	0.0040	U	ug/L	P393602	

Ref. Method and Comment:
EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: Hendry Creek @ Summerlin Rd.

Collection Date/Time: 02/09/2021 13:10

Field ID: G1SD0098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224682	EPA 8321B	Acesulfame K	0.10	U	ug/L	P393719	
		2,4-D	0.0023	I	ug/L	P393602	
		AMPA	1.5	I	ug/L	P393719	
		Sucralose	2.3		ug/L	P393719	
		Acetaminophen**	0.011	I	ug/L	P393602	
		Endothall	0.25	U	ug/L	P393719	
		Acetamiprid**	0.0020	U	ug/L	P393602	RPD
		Glufosinate	1.0	U	ug/L	P393719	
		Glyphosate	1.0	U	ug/L	P393719	
		Afidopyropen**	0.0020	U	ug/L	P393602	RPD
		Bentazon	0.36		ug/L	P393602	
		Benzovindiflupyr**	0.0020	U	ug/L	P393602	
		Carbamazepine**	0.0035		ug/L	P393602	
		Clothianidin**	0.0020	U	ug/L	P393602	
		Dinotefuran**	0.0031	I	ug/L	P393602	
		Diuron	0.0024	I	ug/L	P393602	
		Fenuron	0.016	U	ug/L	P393602	
		Fluridone**	0.68		ug/L	P393602	
		Imazapyr**	0.12		ug/L	P393602	
		Hydrocodone**	0.0020	U	ug/L	P393602	
		Ibuprofen**	0.020	U	ug/L	P393602	
		Imidacloprid	0.0067	I	ug/L	P393602	
		Linuron	0.0040	U	ug/L	P393602	
		Mandestrobin**	0.0020	U	ug/L	P393602	
		MCPP	0.0020	U	ug/L	P393602	
		Naproxen**	0.010	I	ug/L	P393602	
		Primidone**	0.013	I	ug/L	P393602	
		Pyraclostrobin**	0.0020	U	ug/L	P393602	
		Thiamethoxam**	0.0020	U	ug/L	P393602	
		Tolfenpyrad**	0.0020	U	ug/L	P393602	
		Triclopyr**	0.0040	U	ug/L	P393602	

Ref. Method and Comment:
EPA 8321B: MDL for some parameters elevated due to matrix interference.

Sample Location: Mullock Creek @ Park Rd.

Collection Date/Time: 02/09/2021 10:25

Field ID: G1SD0101

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224683	EPA 8321B	Acesulfame K	0.10	U	ug/L	P393719	
		2,4-D	0.0020	U	ug/L	P393672	
		AMPA	1.0	U	ug/L	P393719	
		Sucralose	0.53		ug/L	P393719	
		Acetaminophen**	0.0080	UJ	ug/L	P393672	RPD
		Endothall	0.25	U	ug/L	P393719	
		Acetamiprid**	0.0020	UJ	ug/L	P393672	RPD
		Glufosinate	1.0	U	ug/L	P393719	
		Glyphosate	1.0	U	ug/L	P393719	
		Afidopyropen**	0.0020	UJ	ug/L	P393672	RPD
		Bentazon	0.038		ug/L	P393672	
		Benzovindiflupyr**	0.0020	U	ug/L	P393672	
		Carbamazepine**	0.0013	I	ug/L	P393672	
		Clothianidin**	0.0020	U	ug/L	P393672	
		Dinotefuran**	0.0020	U	ug/L	P393672	
		Diuron	0.0020	U	ug/L	P393672	
		Fenuron	0.016	U	ug/L	P393672	
		Fluridone**	0.062		ug/L	P393672	
		Imazapyr**	0.084		ug/L	P393672	
		Hydrocodone**	0.0020	U	ug/L	P393672	
		Ibuprofen**	0.020	U	ug/L	P393672	
		Imidacloprid	0.0050	I	ug/L	P393672	
		Linuron	0.0040	U	ug/L	P393672	
		Mandestrobin**	0.0020	U	ug/L	P393672	
		MCPP	0.0020	U	ug/L	P393672	
		Naproxen**	0.0080	U	ug/L	P393672	
		Primidone**	0.0040	UJ	ug/L	P393672	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P393672	
		Thiamethoxam**	0.0020	U	ug/L	P393672	
		Tolfenpyrad**	0.0020	U	ug/L	P393672	
		Triclopyr**	0.0040	U	ug/L	P393672	

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Hendry Creek @ Whitney Way

Collection Date/Time: 02/09/2021 13:30

Field ID: G1SD0099

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224684	EPA 8321B	Acesulfame K	0.10	U	ug/L	P393719	
		2,4-D	0.0033	I	ug/L	P393672	
		AMPA	1.5	I	ug/L	P393719	
		Sucralose	0.44		ug/L	P393719	
		Acetaminophen**	0.0080	U	ug/L	P393672	RPD
		Endothall	0.25	U	ug/L	P393719	
		Acetamiprid**	0.0020	U	ug/L	P393672	RPD
		Glufosinate	1.0	U	ug/L	P393719	
		Glyphosate	1.0	U	ug/L	P393719	
		Afidopyropen**	0.0020	U	ug/L	P393672	RPD
		Bentazon	0.045		ug/L	P393672	
		Benzovindiflupyr**	0.0020	U	ug/L	P393672	
		Carbamazepine**	8.4E-04	I	ug/L	P393672	
		Clothianidin**	0.0020	U	ug/L	P393672	
		Dinotefuran**	0.0051	I	ug/L	P393672	
		Diuron	0.0086		ug/L	P393672	
		Fenuron	0.016	U	ug/L	P393672	
		Fluridone**	0.025		ug/L	P393672	
		Imazapyr**	0.12		ug/L	P393672	
		Hydrocodone**	0.0020	U	ug/L	P393672	
		Ibuprofen**	0.020	U	ug/L	P393672	
		Imidacloprid	0.0093		ug/L	P393672	
		Linuron	0.0040	U	ug/L	P393672	
		Mandestrobin**	0.0020	U	ug/L	P393672	
		MCPP	0.0020	U	ug/L	P393672	
		Naproxen**	0.0080	U	ug/L	P393672	
		Primidone**	0.0040	U	ug/L	P393672	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P393672	
		Thiamethoxam**	0.0021	I	ug/L	P393672	
		Tolfenpyrad**	0.0020	U	ug/L	P393672	
		Triclopyr**	0.0040	U	ug/L	P393672	

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference.

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

Sample Location: Hendry Creek @ Old Gladiolus Dr.

Collection Date/Time: 02/09/2021 12:35

Field ID: G1SD0062

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224685	EPA 8321B	Acesulfame K	0.10	U	ug/L	P393719	
		2,4-D	0.012		ug/L	P393672	
		AMPA	1.0	U	ug/L	P393719	
		Sucralose	0.62		ug/L	P393719	
		Acetaminophen**	0.0080	U	ug/L	P393672	RPD
		Endothall	0.25	U	ug/L	P393719	
		Acetamiprid**	0.0020	U	ug/L	P393672	RPD
		Glufosinate	1.0	U	ug/L	P393719	
		Glyphosate	1.0	U	ug/L	P393719	
		Afidopyropen**	0.0020	U	ug/L	P393672	RPD
		Bentazon	0.034		ug/L	P393672	
		Benzovindiflupyr**	0.0020	U	ug/L	P393672	
		Carbamazepine**	8.0E-04	U	ug/L	P393672	
		Clothianidin**	0.0020	U	ug/L	P393672	
		Dinotefuran**	0.0020	U	ug/L	P393672	
		Diuron	0.12		ug/L	P393672	
		Fenuron	0.016	U	ug/L	P393672	
		Fluridone**	0.047		ug/L	P393672	
		Imazapyr**	0.16		ug/L	P393672	
		Hydrocodone**	0.0020	U	ug/L	P393672	
		Ibuprofen**	0.020	U	ug/L	P393672	
		Imidacloprid	0.0057	I	ug/L	P393672	
		Linuron	0.0040	U	ug/L	P393672	
		Mandestrobin**	0.0020	U	ug/L	P393672	
		MCPP	0.0020	U	ug/L	P393672	
		Naproxen**	0.0080	U	ug/L	P393672	
		Primidone**	0.0040	U	ug/L	P393672	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P393672	
		Thiamethoxam**	0.0020	U	ug/L	P393672	
		Tolfenpyrad**	0.0020	U	ug/L	P393672	
		Triclopyr**	0.0040	U	ug/L	P393672	

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference.

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: P393602

Component	Result	Code	Units
2,4-D	0.0020	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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	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: P393672

Component	Result	Code	Units
2,4-D	0.0020	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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P393672

Component	Result	Code	Units
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P393719

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: P393602

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	109		P	30 - 160
Acetaminophen	131		P	30 - 160
Acetamiprid	94.0		P	30 - 160
Afidopyropen	61.7		P	30 - 160
Bentazon	100		P	30 - 160
Benzovindiflupyr	76.9		P	30 - 160
Carbamazepine	116		P	30 - 160
Clothianidin	91.5		P	30 - 160
Dinotefuran	84.4		P	30 - 160
Diuron	72.1		P	30 - 160
Fenuron	103		P	30 - 160
Fluridone	91.4		P	30 - 160
Hydrocodone	99.4		P	30 - 160
Ibuprofen	87.4		P	30 - 160
Imazapyr	85.3		P	30 - 160
Imidacloprid	104		P	30 - 160
Linuron	82.7		P	30 - 160
Mandestrobin	88.1		P	30 - 160
MCPP	104		P	30 - 160
Naproxen	68.2		P	30 - 160
Primidone	102		P	30 - 160
Pyraclostrobin	83.9		P	30 - 160
Thiamethoxam	92.1		P	30 - 160
Tolfenpyrad	45.9		P	30 - 160
Triclopyr	110		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P393672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.6		P	30 - 160
Acetaminophen	148		P	30 - 160
Acetamiprid	86.9		P	30 - 160
Afidopyropen	72.0		P	30 - 160
Bentazon	89.3		P	30 - 160
Benzovindiflupyr	76.9		P	30 - 160
Carbamazepine	106		P	30 - 160
Clothianidin	90.2		P	30 - 160
Dinotefuran	82.1		P	30 - 160
Diuron	63.8		P	30 - 160
Fenuron	97.7		P	30 - 160
Fluridone	82.4		P	30 - 160
Hydrocodone	89.6		P	30 - 160
Ibuprofen	86.6		P	30 - 160
Imazapyr	97.9		P	30 - 160
Imidacloprid	93.7		P	30 - 160
Linuron	69.0		P	30 - 160
Mandestrobin	81.5		P	30 - 160
MCPP	97.0		P	30 - 160
Naproxen	52.5		P	30 - 160
Primidone	88.8		P	30 - 160
Pyraclostrobin	75.5		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P393672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thiamethoxam	83.4		P	30 - 160
Tolfenpyrad	45.0		P	30 - 160
Triclopyr	86.2		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P393719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	85.1		P	40 - 150
AMPA	109		P	40 - 150
Endothall	149		P	40 - 150
Glufosinate	132		P	40 - 150
Glyphosate	79.7		P	40 - 140
Sucralose	101		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P393602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224278	2,4-D	101	102	P/P	30 - 160
2224278	Acetaminophen	115	106	P/P	30 - 160
2224278	Acetamiprid	58.4	96.3	P/P	30 - 160
2224278	Afidopyropen	42.0	75.1	P/P	30 - 160
2224278	Bentazon	88.6	78.8	P/P	30 - 160
2224278	Benzovindiflupyr	71.1	70.4	P/P	30 - 160
2224278	Carbamazepine	97.9	91.3	P/P	30 - 160
2224278	Clothianidin	91.6	89.6	P/P	30 - 160
2224278	Dinotefuran	87.3	92.3	P/P	30 - 160
2224278	Diuron	60.1	58.5	P/P	30 - 160
2224278	Fenuron	94.4	95.3	P/P	30 - 160
2224278	Fluridone	90.7	83.4	P/P	30 - 160
2224278	Hydrocodone	100	94.6	P/P	30 - 160
2224278	Ibuprofen	82.8	81.7	P/P	30 - 160
2224278	Imazapyr	93.1	86.3	P/P	30 - 160
2224278	Imidacloprid	108	110	P/P	30 - 160
2224278	Linuron	67.0	66.4	P/P	30 - 160
2224278	Mandestrobin	83.5	82.2	P/P	30 - 160
2224278	MCCP	99.9	96.7	P/P	30 - 160
2224278	Naproxen	58.5	66.6	P/P	30 - 160
2224278	Primidone	95.9	98.9	P/P	30 - 160
2224278	Pyraclostrobin	76.5	77.2	P/P	30 - 160
2224278	Thiamethoxam	102	99.0	P/P	30 - 160
2224278	Tolfenpyrad	40.9	37.8	P/P	30 - 160
2224278	Triclopyr	103	96.9	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P393672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224683	2,4-D	74.4	75.3	P/P	30 - 160
2224683	Acetaminophen	148	104	P/P	30 - 160
2224683	Acetamiprid	57.5	96.6	P/P	30 - 160
2224683	Afidopyropen	45.1	79.1	P/P	30 - 160
2224683	Benzovindiflupyr	65.1	70.2	P/P	30 - 160
2224683	Carbamazepine	69.5	76.1	P/P	30 - 160
2224683	Clothianidin	81.6	86.7	P/P	30 - 160
2224683	Dinotefuran	86.3	92.7	P/P	30 - 160
2224683	Diuron	46.5	47.6	P/P	30 - 160
2224683	Fenuron	61.5	68.8	P/P	30 - 160
2224683	Hydrocodone	84.6	88.6	P/P	30 - 160
2224683	Ibuprofen	73.9	74.2	P/P	30 - 160
2224683	Imidacloprid	122	129	P/P	30 - 160
2224683	Linuron	60.6	57.8	P/P	30 - 160
2224683	Mandestrobin	69.3	75.2	P/P	30 - 160
2224683	MCCP	74.9	85.5	P/P	30 - 160
2224683	Naproxen	70.9	53.6	P/P	30 - 160
2224683	Primidone	62.4	88.5	P/P	30 - 160
2224683	Pyraclostrobin	72.7	78.4	P/P	30 - 160
2224683	Thiamethoxam	97.4	110	P/P	30 - 160
2224683	Tolfenpyrad	41.7	44.4	P/P	30 - 160
2224683	Triclopyr	77.0	87.4	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P393719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224678	Acesulfame K	103	112	P/P	40 - 150
2224678	AMPA	129	134	P/P	40 - 150
2224678	Endothall	123	134	P/P	40 - 150
2224678	Glufosinate	103	119	P/P	40 - 150
2224678	Glyphosate	89.4	101	P/P	40 - 140
2224678	Sucralose	94.0	115	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P393602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224278	2,4-D	1.30	Spike	P	0 - 30
2224278	Acetaminophen	8.27	Spike	P	0 - 30
2224278	Acetamiprid	49.1	Spike	F	0 - 30
2224278	Afidopyropen	56.6	Spike	F	0 - 30
2224278	Bentazon	9.71	Spike	P	0 - 30
2224278	Benzovindiflupyr	0.900	Spike	P	0 - 30
2224278	Carbamazepine	6.92	Spike	P	0 - 30
2224278	Clothianidin	2.19	Spike	P	0 - 30
2224278	Dinotefuran	5.51	Spike	P	0 - 30
2224278	Diuron	2.54	Spike	P	0 - 30
2224278	Fenuron	1.01	Spike	P	0 - 30
2224278	Fluridone	8.45	Spike	P	0 - 30
2224278	Hydrocodone	5.54	Spike	P	0 - 30
2224278	Ibuprofen	1.30	Spike	P	0 - 30
2224278	Imazapyr	7.57	Spike	P	0 - 30
2224278	Imidacloprid	1.85	Spike	P	0 - 30
2224278	Linuron	0.926	Spike	P	0 - 30
2224278	Mandestrobin	1.61	Spike	P	0 - 30
2224278	MCP	3.26	Spike	P	0 - 30
2224278	Naproxen	13.0	Spike	P	0 - 30
2224278	Primidone	3.03	Spike	P	0 - 30
2224278	Pyraclostrobin	0.949	Spike	P	0 - 30
2224278	Thiamethoxam	3.32	Spike	P	0 - 30
2224278	Tolfenpyrad	7.96	Spike	P	0 - 30
2224278	Triclopyr	6.22	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P393672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224683	2,4-D	1.12	Spike	P	0 - 30
2224683	Acetaminophen	35.1	Spike	F	0 - 30
2224683	Acetamiprid	50.8	Spike	F	0 - 30
2224683	Afidopyropen	54.7	Spike	F	0 - 30
2224683	Bentazon	0.00733	Spike	P	0 - 30
2224683	Benzovindiflupyr	7.60	Spike	P	0 - 30
2224683	Carbamazepine	8.36	Spike	P	0 - 30
2224683	Clothianidin	6.03	Spike	P	0 - 30
2224683	Dinotefuran	7.16	Spike	P	0 - 30
2224683	Diuron	2.41	Spike	P	0 - 30
2224683	Fenuron	11.3	Spike	P	0 - 30
2224683	Fluridone	6.25	Spike	P	0 - 30
2224683	Hydrocodone	4.64	Spike	P	0 - 30
2224683	Ibuprofen	0.424	Spike	P	0 - 30
2224683	Imazapyr	13.5	Spike	P	0 - 30
2224683	Imidacloprid	5.25	Spike	P	0 - 30
2224683	Linuron	4.72	Spike	P	0 - 30
2224683	Mandestrobin	8.17	Spike	P	0 - 30
2224683	MCP	13.3	Spike	P	0 - 30
2224683	Naproxen	27.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P393672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224683	Primidone	34.5	Spike	F	0 - 30
2224683	Pyraclostrobin	7.57	Spike	P	0 - 30
2224683	Thiamethoxam	11.8	Spike	P	0 - 30
2224683	Tolfenpyrad	6.33	Spike	P	0 - 30
2224683	Triclopyr	12.7	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P393719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224678	Acesulfame K	8.14	Spike	P	0 - 30
2224678	AMPA	3.35	Spike	P	0 - 30
2224678	Endothall	8.43	Spike	P	0 - 30
2224678	Glufosinate	14.1	Spike	P	0 - 30
2224678	Glyphosate	12.5	Spike	P	0 - 30
2224678	Sucralose	7.53	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2224678
Field Sample ID: G1SD0100

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.5	P	30 - 160
EPA 8321B	Diuron-d6	55.0	P	30 - 160
EPA 8321B	Endothall-d6	140	P	30 - 160
EPA 8321B	Endothall-d6	140	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	74.9	P	30 - 160
EPA 8321B	Primidone-d5	56.8	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2224679
Field Sample ID: G1SD0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.3	P	30 - 160
EPA 8321B	Diuron-d6	58.4	P	30 - 160
EPA 8321B	Endothall-d6	128	P	30 - 160
EPA 8321B	Endothall-d6	128	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	118	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	118	P	30 - 160
EPA 8321B	Ibuprofen-d3	82.3	P	30 - 160
EPA 8321B	Primidone-d5	90.2	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Lab Sample ID: 2224680
Field Sample ID: G1SD0118

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	109	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.2	P	30 - 160
EPA 8321B	Diuron-d6	57.4	P	30 - 160
EPA 8321B	Endothall-d6	132	P	30 - 160
EPA 8321B	Endothall-d6	132	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	35.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	35.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.6	P	30 - 160
EPA 8321B	Primidone-d5	81.9	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	30 - 160

Lab Sample ID: 2224681
Field Sample ID: G1SD0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.3	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2224681

Field Sample ID: G1SD0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.6	P	30 - 160
EPA 8321B	Diuron-d6	56.4	P	30 - 160
EPA 8321B	Endothall-d6	139	P	30 - 160
EPA 8321B	Endothall-d6	139	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	35.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	35.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	73.3	P	30 - 160
EPA 8321B	Primidone-d5	93.7	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2224682

Field Sample ID: G1SD0098

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	74.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	109	P	30 - 160
EPA 8321B	Carbamazepine-d10	53.4	P	30 - 160
EPA 8321B	Diuron-d6	41.6	P	30 - 160
EPA 8321B	Endothall-d6	129	P	30 - 160
EPA 8321B	Endothall-d6	129	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	120	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	120	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.5	P	30 - 160
EPA 8321B	Primidone-d5	76.4	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160

Lab Sample ID: 2224683

Field Sample ID: G1SD0101

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	64.6	P	30 - 160
EPA 8321B	Diuron-d6	55.2	P	30 - 160
EPA 8321B	Endothall-d6	131	P	30 - 160
EPA 8321B	Endothall-d6	131	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	41.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	41.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.0	P	30 - 160
EPA 8321B	Primidone-d5	78.3	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2224684

Field Sample ID: G1SD0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.0	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2224684
Field Sample ID: G1SD0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	59.7	P	30 - 160
EPA 8321B	Diuron-d6	50.9	P	30 - 160
EPA 8321B	Endothall-d6	124	P	30 - 160
EPA 8321B	Endothall-d6	124	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	82.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.0	P	30 - 160
EPA 8321B	Primidone-d5	83.1	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Lab Sample ID: 2224685
Field Sample ID: G1SD0062

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	81.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	93.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	62.8	P	30 - 160
EPA 8321B	Diuron-d6	52.5	P	30 - 160
EPA 8321B	Endothall-d6	138	P	30 - 160
EPA 8321B	Endothall-d6	138	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	54.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	54.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.4	P	30 - 160
EPA 8321B	Primidone-d5	82.5	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A103561

Included Lab Sample IDs: 2224678, 2224679, 2224680, 2224681, 2224682, 2224683, 2224684, 2224685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	101	94.9	P/P	50 - 150
2,4-D	109	101	P/P	50 - 150
Acetaminophen	102	107	P/P	60 - 160
Acetaminophen	111	102	P/P	60 - 160
Acetamiprid	112	112	P/P	50 - 150
Acetamiprid	112	111	P/P	50 - 150
Afidopyropen	107	102	P/P	50 - 150
Afidopyropen	97.5	107	P/P	50 - 150
Bentazon	138	137	P/P	50 - 160
Bentazon	141	136	P/P	50 - 160
Bentazon	149	138	P/P	50 - 160
Benzovindiflupyr	103	102	P/P	50 - 160
Benzovindiflupyr	104	103	P/P	50 - 160
Carbamazepine	104	110	P/P	60 - 150
Carbamazepine	113	104	P/P	60 - 150
Clothianidin	101	96.2	P/P	60 - 150
Clothianidin	96.2	105	P/P	60 - 150
Dinotefuran	104	102	P/P	50 - 150
Dinotefuran	106	104	P/P	50 - 150
Diuron	107	84.9	P/P	60 - 160
Diuron	108	107	P/P	60 - 160
Fenuron	102	106	P/P	60 - 150
Fenuron	106	102	P/P	60 - 150
Fluridone	111	118	P/P	60 - 160
Fluridone	117	117	P/P	60 - 160
Fluridone	117	122	P/P	60 - 160
Hydrocodone	106	113	P/P	60 - 150
Hydrocodone	113	102	P/P	60 - 150
Ibuprofen	116	91.3	P/P	50 - 160
Ibuprofen	91.3	124	P/P	50 - 160
Imazapyr	101	117	P/P	50 - 160
Imazapyr	117	111	P/P	50 - 160
Imidacloprid	101	101	P/P	60 - 150
Imidacloprid	101	100	P/P	60 - 150
Linuron	101	110	P/P	60 - 150
Linuron	110	105	P/P	60 - 150
Mandestrobin	102	108	P/P	50 - 150
Mandestrobin	108	108	P/P	50 - 150
MCP	102	95.2	P/P	50 - 150
MCP	110	102	P/P	50 - 150
Naproxen	141	82.3	P/P	50 - 160
Naproxen	69.1	141	P/P	50 - 160
Primidone	113	97.4	P/P	60 - 150
Primidone	97.4	92.6	P/P	60 - 150
Pyraclostrobin	106	111	P/P	60 - 150
Pyraclostrobin	111	105	P/P	60 - 150
Thiamethoxam	101	95.9	P/P	50 - 150
Thiamethoxam	95.9	97.8	P/P	50 - 150
Tolfenpyrad	106	96.7	P/P	60 - 150
Tolfenpyrad	96.7	94.9	P/P	60 - 150
Triclopyr	108	120	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A103561

Included Lab Sample IDs: 2224678, 2224679, 2224680, 2224681, 2224682, 2224683, 2224684, 2224685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triclopyr	120	94.4	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A103625

Included Lab Sample IDs: 2224682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	120	126	P/P	40 - 160
Glufosinate	118	110	P/P	60 - 200
Glyphosate	110	117	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A103631

Included Lab Sample IDs: 2224678, 2224679, 2224680, 2224681, 2224682, 2224683, 2224684, 2224685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	83.9	74.6	P/P	60 - 160
Acesulfame K	84.4	83.9	P/P	60 - 160
AMPA	106	114	P/P	40 - 160
AMPA	108	101	P/P	40 - 160
Endothall	153	150	P/P	60 - 160
Endothall	154	153	P/P	60 - 160
Glufosinate	107	118	P/P	60 - 200
Glufosinate	134	110	P/P	60 - 200
Glyphosate	117	76.3	P/P	60 - 160
Glyphosate	77.4	99.4	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A103647

Included Lab Sample IDs: 2224678, 2224679, 2224680, 2224681, 2224682, 2224683, 2224684, 2224685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	108	110	P/P	60 - 160
Sucralose	110	103	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	109	101	102		1.30
	2,4-D	95.6	74.4	75.3		1.12
	Acesulfame K	85.1	103	112		8.14
	Acetaminophen	131	115	106		8.27
	Acetaminophen	148	148	104		35.1
	Acetamiprid	94.0	58.4	96.3		49.1
	Acetamiprid	86.9	57.5	96.6		50.8
	Afidopyropen	61.7	42.0	75.1		56.6
	Afidopyropen	72.0	45.1	79.1		54.7
	AMPA	109	129	134		3.35
	Bentazon	100	88.6	78.8		9.71
	Bentazon	89.3				0.0073
	Benzovindiflupyr	76.9	71.1	70.4		0.900
	Benzovindiflupyr	76.9	65.1	70.2		7.60
	Carbamazepine	116	97.9	91.3		6.92
	Carbamazepine	106	69.5	76.1		8.36
	Clothianidin	91.5	91.6	89.6		2.19
	Clothianidin	90.2	81.6	86.7		6.03
	Dinotefuran	84.4	87.3	92.3		5.51
	Dinotefuran	82.1	86.3	92.7		7.16
	Diuron	72.1	60.1	58.5		2.54
	Diuron	63.8	46.5	47.6		2.41
	Endothall	149	123	134		8.43
	Fenuron	103	94.4	95.3		1.01
	Fenuron	97.7	61.5	68.8		11.3
	Fluridone	91.4	90.7	83.4		8.45
	Fluridone	82.4				6.25
	Glufosinate	132	103	119		14.1
	Glyphosate	79.7	89.4	101		12.5
	Hydrocodone	99.4	100	94.6		5.54
	Hydrocodone	89.6	84.6	88.6		4.64
	Ibuprofen	87.4	82.8	81.7		1.30
	Ibuprofen	86.6	73.9	74.2		0.424
	Imazapyr	85.3	93.1	86.3		7.57
	Imazapyr	97.9				13.5
	Imidacloprid	104	108	110		1.85
	Imidacloprid	93.7	122	129		5.25
	Linuron	82.7	67.0	66.4		0.926
	Linuron	69.0	60.6	57.8		4.72
	Mandestrobin	88.1	83.5	82.2		1.61
	Mandestrobin	81.5	69.3	75.2		8.17
	MCPP	104	99.9	96.7		3.26
	MCPP	97.0	74.9	85.5		13.3
	Naproxen	68.2	58.5	66.6		13.0
	Naproxen	52.5	70.9	53.6		27.9
	Primidone	102	95.9	98.9		3.03
	Primidone	88.8	62.4	88.5		34.5
	Pyraclostrobin	83.9	76.5	77.2		0.949
	Pyraclostrobin	75.5	72.7	78.4		7.57
	Sucralose	101	94.0	115		7.53
	Thiamethoxam	92.1	102	99.0		3.32
	Thiamethoxam	83.4	97.4	110		11.8
	Tolfenpyrad	45.9	40.9	37.8		7.96
	Tolfenpyrad	45.0	41.7	44.4		6.33

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Triclopyr	110	103	96.9		6.22
	Triclopyr	86.2	77.0	87.4		12.7

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2224678, 2224679, 2224680, 2224681, 2224682, 2224683, 2224684, 2224685
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2224678, 2224679, 2224680, 2224681, 2224682, 2224683, 2224684, 2224685

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	02/10/2021	02/11/2021 10:00	Hoor Shaik	02/13/2021 01:57	Juyoung Kim	2224678
	02/10/2021	02/11/2021 10:00	Hoor Shaik	02/13/2021 02:32	Juyoung Kim	2224679
	02/10/2021	02/11/2021 10:00	Hoor Shaik	02/13/2021 03:07	Juyoung Kim	2224680
	02/10/2021	02/11/2021 10:00	Hoor Shaik	02/13/2021 03:41	Juyoung Kim	2224681
	02/10/2021	02/11/2021 10:00	Hoor Shaik	02/13/2021 04:16	Juyoung Kim	2224682
	02/10/2021	02/11/2021 10:00	Hoor Shaik	02/15/2021 11:30	Juyoung Kim	2224679
	02/10/2021	02/11/2021 10:00	Hoor Shaik	02/15/2021 12:04	Juyoung Kim	2224681
	02/10/2021	02/11/2021 10:00	Hoor Shaik	02/15/2021 12:39	Juyoung Kim	2224682
	02/10/2021	02/12/2021 13:00	Hoor Shaik	02/13/2021 07:44	Juyoung Kim	2224683
	02/10/2021	02/12/2021 13:00	Hoor Shaik	02/13/2021 08:19	Juyoung Kim	2224684
	02/10/2021	02/12/2021 13:00	Hoor Shaik	02/13/2021 08:53	Juyoung Kim	2224685
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 01:16	Rebecca Ware	2224678
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 01:30	Rebecca Ware	2224679
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 01:43	Rebecca Ware	2224680
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 01:57	Rebecca Ware	2224681
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 02:38	Rebecca Ware	2224682
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 02:52	Rebecca Ware	2224683
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 03:06	Rebecca Ware	2224684
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 03:20	Rebecca Ware	2224685
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 07:00	Rebecca Ware	2224680
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 07:14	Rebecca Ware	2224681
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 07:28	Rebecca Ware	2224683
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 07:41	Rebecca Ware	2224684
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/13/2021 07:55	Rebecca Ware	2224685
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/15/2021 17:57	Rebecca Ware	2224682
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/17/2021 20:29	Rebecca Ware	2224678
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/17/2021 20:40	Rebecca Ware	2224679
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/17/2021 20:52	Rebecca Ware	2224680
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/17/2021 21:04	Rebecca Ware	2224681
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/17/2021 21:27	Rebecca Ware	2224682
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/17/2021 21:39	Rebecca Ware	2224683
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/17/2021 21:51	Rebecca Ware	2224684
	02/10/2021	02/12/2021 16:30	Rebecca Ware	02/17/2021 22:03	Rebecca Ware	2224685