

Analysis Report

Report# 250228_USEPA

Client and sample receipt information

Submitted to: Donna Hill
Project: NA
PO/Contract #: NA
Organization: US EPA
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Sample Receipt Date: 28 February 2025
Temp Upon Receipt (°C): -41
Lab Order ID: USEPA-2025-529
Date Report Generated: 25 June 2025
Generated by: Christopher Schaller

Laboratory identification (Lab ID), sample identification, description/site, collection date, and notes

Lab ID	Sample ID	Site	Date	Notes
GWL25-432	C1F1	F	28 February 2025	Mice
GWL25-433	C1F2	F	28 February 2025	Mice
GWL25-434	C2F1	F	28 February 2025	Mice
GWL25-435	C2F2	F	28 February 2025	Mice
GWL25-436	C3M1a	M	28 February 2025	Mice
GWL25-437	C3M2	M	28 February 2025	Mice
GWL25-438	C4M1a	M	28 February 2025	Mice
GWL25-439	C4M2a	M	28 February 2025	Mice
GWL25-440	C3F1	F	28 February 2025	Mice
GWL25-441	C3F2	F	28 February 2025	Mice
GWL25-442	C5F1	F	28 February 2025	Mice
GWL25-443	C4M2b	M	28 February 2025	Mice
GWL25-444	C5M2	M	28 February 2025	Mice
GWL25-445	C4F1	F	28 February 2025	Mice
GWL25-446	C4F2	F	28 February 2025	Mice
GWL25-447	C5F2	F	28 February 2025	Mice
GWL25-448	C5F3	F	28 February 2025	Mice
GWL25-449	C3M1b	M	28 February 2025	Mice
GWL25-450	C4M1b	M	28 February 2025	Mice
GWL25-451	C5M1	M	28 February 2025	Mice
GWL25-452	16	F	28 February 2025	Mice
GWL25-453	18	F	28 February 2025	Mice
GWL25-454	21	F	28 February 2025	Mice
GWL25-455	29	F	28 February 2025	Mice
GWL25-456	30	F	28 February 2025	Mice

Lab ID	Sample ID	Site	Date	Notes
GWL25-457	31	F	28 February 2025	Mice
GWL25-458	32	F	28 February 2025	Mice
GWL25-459	35	F	28 February 2025	Mice
GWL25-460	36	F	28 February 2025	Mice
GWL25-461	37	F	28 February 2025	Mice
GWL25-462	38	F	28 February 2025	Mice
GWL25-463	39	F	28 February 2025	Mice
GWL25-464	40	F	28 February 2025	Mice
GWL25-465	42	F	28 February 2025	Mice
GWL25-466	43	F	28 February 2025	Mice
GWL25-467	44	F	28 February 2025	Mice
GWL25-468	45	F	28 February 2025	Mice
GWL25-469	47	F	28 February 2025	Mice
GWL25-470	48	F	28 February 2025	Mice
GWL25-471	49	F	28 February 2025	Mice
GWL25-472	50	F	28 February 2025	Mice
GWL25-473	51	F	28 February 2025	Mice
GWL25-474	53	F	28 February 2025	Mice
GWL25-475	54	F	28 February 2025	Mice
GWL25-476	55	F	28 February 2025	Mice
GWL25-477	56	F	28 February 2025	Mice
GWL25-478	57	F	28 February 2025	Mice
GWL25-479	59	F	28 February 2025	Mice
GWL25-480	60	F	28 February 2025	Mice

Test, method, standard operating procedure (SOP), analyte, and acronym

Test	Method	SOP#	Analyte	Acronym
ATX - Suite	LC-MS/MS	64	anatoxin-a	ATX
-	LC-MS/MS	64	dihydroanatoxin-a	dhATX
-	LC-MS/MS	64	epoxyanatoxin-a	epoxyATX
-	LC-MS/MS	64	homoanatoxin-a	HTX
-	LC-MS/MS	64	dihydrohomoanatoxin-a	dhHTX
-	LC-MS/MS	64	epoxyhomoanatoxin-a	epoxyHTX

Sample Preparation/Extraction

Sample preparation SOP#, name, and summary

SOP#	Name	Summary
31	Tissue or biological specimen homogenization	A bead ruptor is used to homogenize samples in solvent or buffer
41	Extraction of Biological Specimens and Tissues	Specimens are extracted for the analyte of interest using analyte specific solvent with QC samples

Method Modifications

None

Abbreviations and Qualifier Flags (QF)

Abbreviations			
MRL	Method Reporting Limit	FS	Field Sample
MDL	Method Detection Limit	LFSM	Lab Fortified Sample Matrix
Blank	Water/buffer free from interferences	LFSMD	Lab Fortified Sample Matrix Duplicate
LFB	Lab Fortified Blank	LD	Lab Duplicate
MB	Method Blank	IS	Internal Standard
CCC	Continued Calibration Check	—	Not Analyzed
ND	Not Detected above the MDL/MRL	NA	Not Applicable

Qualifier Flag

CL	Analytical result is estimated due to ineffective quenching.
J	Analyte was positively identified; the associated numerical value is estimated.
PT	The reported result is estimated because the sample was not analyzed within required holding time.
B	Analytical result is estimated. Analyte was detected in associated reagent blank as well as the samples.
E	Analytical result is estimated. Values achieved were outside calibration range.
N	Spiked sample (LFSM) control was outside limits (water $\pm 30\%$; complicated matrix and within $2 \times \text{MDL} \pm 50\%$)
T	The reported result is estimated because the sample exceeded temperature threshold when received

Reporting Unit Conversions

Sample Type	Units
Water	$\mu\text{g/L} = \text{ng/mL} = \text{ppb}$
Biological Specimens	$\text{ng/g} = \mu\text{g/kg} = \text{ppb}$
Supplements/Food	$\mu\text{g/g} = \text{mg/kg} = \text{ppm}$
Swabs/Filters/Etc.	ng/unit

Quality Control Tables

The percent reproducibility (%RPD) between lab duplicates/replicates (LDs) or Lab Fortified Sample Matrix duplicates/replicates (LFSMDs) prepared and analyzed

QC Type	Lab ID	Analyte	Value 1	Value 2	Value 3	%RPD	Pass/Fail
LD	GWL25-470	ATX	26800	26139	—	2%	PASS
LD	GWL25-472	ATX	45669	36985	—	21%	PASS
LD	GWL25-440	ATX	93868	69487	—	30%	PASS
LD	GWL25-435	ATX	57208	69956	—	20%	PASS
LD	GWL25-448	ATX	57660	64551	—	11%	PASS
LD	GWL25-448	dhATX	375	455	—	19%	PASS
LD	GWL25-470	dhATX	244	224	—	9%	PASS
LD	GWL25-472	dhATX	408	309	—	28%	PASS
LD	GWL25-440	dhATX	675	460	—	38%	PASS
LD	GWL25-435	dhATX	451	586	—	26%	PASS
LD	GWL25-440	epoxyATX	DETECT	DETECT	—	NA	PASS
LD	GWL25-435	epoxyATX	DETECT	DETECT	—	NA	PASS
LD	GWL25-472	epoxyATX	DETECT	DETECT	—	NA	PASS
LD	GWL25-470	epoxyATX	DETECT	DETECT	—	NA	PASS
LD	GWL25-448	epoxyATX	DETECT	DETECT	—	NA	PASS
LD	GWL25-472	HTX	<10	<10	—	NA	PASS
LD	GWL25-470	HTX	<10	<10	—	NA	PASS
LD	GWL25-440	HTX	<10	<10	—	NA	PASS
LD	GWL25-435	HTX	<10	<10	—	NA	PASS
LD	GWL25-448	HTX	<10	<10	—	NA	PASS
LD	GWL25-448	dhHTX	ND	ND	—	NA	PASS
LD	GWL25-472	dhHTX	ND	ND	—	NA	PASS
LD	GWL25-470	dhHTX	ND	ND	—	NA	PASS
LD	GWL25-440	dhHTX	ND	ND	—	NA	PASS
LD	GWL25-435	dhHTX	ND	ND	—	NA	PASS
LD	GWL25-440	epoxyHTX	ND	ND	—	NA	PASS
LD	GWL25-435	epoxyHTX	ND	ND	—	NA	PASS
LD	GWL25-448	epoxyHTX	ND	ND	—	NA	PASS
LD	GWL25-472	epoxyHTX	ND	ND	—	NA	PASS
LD	GWL25-470	epoxyHTX	ND	ND	—	NA	PASS

Control Limits = %RPD ≤ 40%. The %RPD is NA when values are below the method reporting/detection limit.

LC-MS/MS Results

LC-MS/MS Data including the laboratory identification, analyte, average interpolated result, method reporting limit (MRL), units, LFSM (where applicable), percent recovery (%Rec), Qualifier Flag (QF), analyst initials (IN), and analysis date.

Lab ID	Analyte	Result	MRL	Units	LFSM Level	%Rec	QF	IN	Date
GWL25-432	ATX	77	10	ng/g				LK	06/16/2025
GWL25-432	dhATX	<10	10	ng/g				LK	06/16/2025
GWL25-432	epoxyATX	ND	NA	ng/g				LK	06/16/2025
GWL25-432	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-432	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-432	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-433	ATX	409	10	ng/g				LK	06/16/2025
GWL25-433	dhATX	<10	10	ng/g				LK	06/16/2025
GWL25-433	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-433	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-433	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-433	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-434	ATX	156	10	ng/g	200	52%		LK	06/16/2025
GWL25-434	dhATX	<10	10	ng/g	200	50%		LK	06/16/2025
GWL25-434	epoxyATX	ND	NA	ng/g	NA			LK	06/16/2025
GWL25-434	HTX	<10	10	ng/g	200	65%		LK	06/16/2025
GWL25-434	dhHTX	ND	NA	ng/g	NA			LK	06/16/2025
GWL25-434	epoxyHTX	ND	NA	ng/g	NA			LK	06/16/2025
GWL25-435	ATX	57208	10	ng/g				LK	06/16/2025
GWL25-435	dhATX	451	10	ng/g				LK	06/16/2025
GWL25-435	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-435	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-435	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-435	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-436	ATX	<10	10	ng/g				LK	06/16/2025
GWL25-436	dhATX	<10	10	ng/g				LK	06/16/2025
GWL25-436	epoxyATX	ND	NA	ng/g				LK	06/16/2025
GWL25-436	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-436	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-436	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-437	ATX	154614	10	ng/g				LK	06/16/2025
GWL25-437	dhATX	1020	10	ng/g				LK	06/16/2025
GWL25-437	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-437	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-437	dhHTX	ND	NA	ng/g				LK	06/16/2025

Control Limits: Water LFSM $\pm$ 30%; Complicated matrix LFSM and when LFSM within 2X MDL $\pm$ 50; %Rec NR when LFSM level below result

Lab ID	Analyte	Result	MRL	Units	LFSM Level	%Rec	QF	IN	Date
GWL25-437	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-438	ATX	251	10	ng/g				LK	06/16/2025
GWL25-438	dhATX	<10	10	ng/g				LK	06/16/2025
GWL25-438	epoxyATX	ND	NA	ng/g				LK	06/16/2025
GWL25-438	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-438	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-438	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-439	ATX	24226	10	ng/g	30000	107%		LK	06/16/2025
GWL25-439	dhATX	195	10	ng/g				LK	06/16/2025
GWL25-439	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-439	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-439	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-439	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-440	ATX	93868	10	ng/g				LK	06/16/2025
GWL25-440	dhATX	675	10	ng/g				LK	06/16/2025
GWL25-440	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-440	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-440	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-440	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-441	ATX	165226	10	ng/g				LK	06/16/2025
GWL25-441	dhATX	1350	10	ng/g				LK	06/16/2025
GWL25-441	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-441	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-441	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-441	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-442	ATX	100584	10	ng/g				LK	06/16/2025
GWL25-442	dhATX	853	10	ng/g				LK	06/16/2025
GWL25-442	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-442	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-442	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-442	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-443	ATX	93195	10	ng/g				LK	06/16/2025
GWL25-443	dhATX	713	10	ng/g				LK	06/16/2025
GWL25-443	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-443	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-443	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-443	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-444	ATX	52610	10	ng/g				LK	06/16/2025
GWL25-444	dhATX	463	10	ng/g				LK	06/16/2025
GWL25-444	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-444	HTX	<10	10	ng/g				LK	06/16/2025

Control Limits: Water LFSM $\pm$ 30%; Complicated matrix LFSM and when LFSM within 2X MDL $\pm$ 50; %Rec NR when LFSM level below result

Lab ID	Analyte	Result	MRL	Units	LFSM Level	%Rec	QF	IN	Date
GWL25-444	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-444	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-445	ATX	18993	10	ng/g	20000	114%		LK	06/16/2025
GWL25-445	dhATX	122	10	ng/g				LK	06/16/2025
GWL25-445	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-445	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-445	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-445	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-446	ATX	94426	10	ng/g				LK	06/16/2025
GWL25-446	dhATX	685	10	ng/g				LK	06/16/2025
GWL25-446	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-446	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-446	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-446	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-447	ATX	38676	10	ng/g				LK	06/16/2025
GWL25-447	dhATX	256	10	ng/g				LK	06/16/2025
GWL25-447	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-447	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-447	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-447	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-448	ATX	57660	10	ng/g				LK	06/16/2025
GWL25-448	dhATX	375	10	ng/g				LK	06/16/2025
GWL25-448	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-448	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-448	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-448	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-449	ATX	37258	10	ng/g				LK	06/16/2025
GWL25-449	dhATX	229	10	ng/g				LK	06/16/2025
GWL25-449	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-449	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-449	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-449	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-450	ATX	110327	10	ng/g				LK	06/16/2025
GWL25-450	dhATX	720	10	ng/g				LK	06/16/2025
GWL25-450	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-450	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-450	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-450	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-451	ATX	35180	10	ng/g				LK	06/16/2025
GWL25-451	dhATX	194	10	ng/g				LK	06/16/2025
GWL25-451	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025

Control Limits: Water LFSM $\pm$ 30%; Complicated matrix LFSM and when LFSM within 2X MDL $\pm$ 50; %Rec NR when LFSM level below result

Lab ID	Analyte	Result	MRL	Units	LFSM Level	%Rec	QF	IN	Date
GWL25-451	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-451	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-451	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-452	ATX	91	10	ng/g				LK	06/16/2025
GWL25-452	dhATX	<10	10	ng/g				LK	06/16/2025
GWL25-452	epoxyATX	ND	NA	ng/g				LK	06/16/2025
GWL25-452	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-452	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-452	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-453	ATX	611	10	ng/g				LK	06/16/2025
GWL25-453	dhATX	<10	10	ng/g				LK	06/16/2025
GWL25-453	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-453	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-453	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-453	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-454	ATX	97	10	ng/g				LK	06/16/2025
GWL25-454	dhATX	<10	10	ng/g				LK	06/16/2025
GWL25-454	epoxyATX	ND	NA	ng/g				LK	06/16/2025
GWL25-454	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-454	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-454	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-455	ATX	21806	10	ng/g				LK	06/16/2025
GWL25-455	dhATX	177	10	ng/g				LK	06/16/2025
GWL25-455	epoxyATX	DETECT	NA	ng/g				LK	06/16/2025
GWL25-455	HTX	<10	10	ng/g				LK	06/16/2025
GWL25-455	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-455	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-456	ATX	109441	10	ng/g				LK	06/23/2025
GWL25-456	dhATX	841	10	ng/g				LK	06/23/2025
GWL25-456	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-456	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-456	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-456	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-457	ATX	11112	10	ng/g				LK	06/23/2025
GWL25-457	dhATX	77	10	ng/g				LK	06/23/2025
GWL25-457	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-457	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-457	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-457	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-458	ATX	54099	10	ng/g	60000	87%		LK	06/16/2025
GWL25-458	dhATX	448	10	ng/g				LK	06/16/2025

Control Limits: Water LFSM $\pm 30\%$; Complicated matrix LFSM and when LFSM within 2X MDL ± 50 ; %Rec NR when LFSM level below result

Lab ID	Analyte	Result	MRL	Units	LFSM Level	%Rec	QF	IN	Date
GWL25-458	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-458	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-458	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-458	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-459	ATX	68763	10	ng/g				LK	06/23/2025
GWL25-459	dhATX	545	10	ng/g				LK	06/23/2025
GWL25-459	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-459	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-459	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-459	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-460	ATX	36123	10	ng/g				LK	06/23/2025
GWL25-460	dhATX	252	10	ng/g				LK	06/23/2025
GWL25-460	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-460	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-460	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-460	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-461	ATX	25943	10	ng/g				LK	06/23/2025
GWL25-461	dhATX	175	10	ng/g				LK	06/23/2025
GWL25-461	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-461	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-461	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-461	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-462	ATX	11500	10	ng/g	12000	139%		LK	06/23/2025
GWL25-462	dhATX	88	10	ng/g				LK	06/23/2025
GWL25-462	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-462	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-462	dhHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-462	epoxyHTX	ND	NA	ng/g				LK	06/16/2025
GWL25-463	ATX	<10	10	ng/g	10	132%		LK	06/16/2025
GWL25-463	dhATX	<10	10	ng/g	10	106%		LK	06/23/2025
GWL25-463	epoxyATX	ND	NA	ng/g	NA			LK	06/23/2025
GWL25-463	HTX	<10	10	ng/g	10	106%		LK	06/23/2025
GWL25-463	dhHTX	ND	NA	ng/g	NA			LK	06/23/2025
GWL25-463	epoxyHTX	ND	NA	ng/g	NA			LK	06/23/2025
GWL25-464	ATX	21404	10	ng/g				LK	06/23/2025
GWL25-464	dhATX	154	10	ng/g				LK	06/23/2025
GWL25-464	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-464	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-464	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-464	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-465	ATX	27078	10	ng/g				LK	06/23/2025

Control Limits: Water LFSM $\pm 30\%$; Complicated matrix LFSM and when LFSM within 2X MDL ± 50 ; %Rec NR when LFSM level below result

Lab ID	Analyte	Result	MRL	Units	LFSM Level	%Rec	QF	IN	Date
GWL25-465	dhATX	222	10	ng/g				LK	06/23/2025
GWL25-465	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-465	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-465	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-465	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-466	ATX	26027	10	ng/g				LK	06/23/2025
GWL25-466	dhATX	196	10	ng/g				LK	06/23/2025
GWL25-466	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-466	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-466	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-466	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-467	ATX	61446	10	ng/g				LK	06/23/2025
GWL25-467	dhATX	217	10	ng/g				LK	06/23/2025
GWL25-467	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-467	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-467	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-467	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-468	ATX	<10	10	ng/g				LK	06/23/2025
GWL25-468	dhATX	<10	10	ng/g				LK	06/23/2025
GWL25-468	epoxyATX	ND	NA	ng/g				LK	06/23/2025
GWL25-468	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-468	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-468	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-469	ATX	39940	10	ng/g				LK	06/23/2025
GWL25-469	dhATX	308	10	ng/g				LK	06/23/2025
GWL25-469	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-469	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-469	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-469	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-470	ATX	26800	10	ng/g				LK	06/23/2025
GWL25-470	dhATX	244	10	ng/g				LK	06/23/2025
GWL25-470	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-470	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-470	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-470	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-471	ATX	6762	10	ng/g				LK	06/23/2025
GWL25-471	dhATX	56	10	ng/g				LK	06/23/2025
GWL25-471	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-471	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-471	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-471	epoxyHTX	ND	NA	ng/g				LK	06/23/2025

Control Limits: Water LFSM $\pm$ 30%; Complicated matrix LFSM and when LFSM within 2X MDL $\pm$ 50; %Rec NR when LFSM level below result

Lab ID	Analyte	Result	MRL	Units	LFSM Level	%Rec	QF	IN	Date
GWL25-472	ATX	45669	10	ng/g				LK	06/23/2025
GWL25-472	dhATX	408	10	ng/g				LK	06/23/2025
GWL25-472	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-472	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-472	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-472	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-473	ATX	116	10	ng/g				LK	06/23/2025
GWL25-473	dhATX	<10	10	ng/g				LK	06/23/2025
GWL25-473	epoxyATX	ND	NA	ng/g				LK	06/23/2025
GWL25-473	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-473	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-473	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-474	ATX	34431	10	ng/g				LK	06/23/2025
GWL25-474	dhATX	301	10	ng/g				LK	06/23/2025
GWL25-474	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-474	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-474	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-474	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-475	ATX	11194	10	ng/g				LK	06/23/2025
GWL25-475	dhATX	82	10	ng/g				LK	06/23/2025
GWL25-475	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-475	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-475	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-475	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-476	ATX	50753	10	ng/g				LK	06/23/2025
GWL25-476	dhATX	407	10	ng/g				LK	06/23/2025
GWL25-476	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-476	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-476	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-476	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-477	ATX	12416	10	ng/g				LK	06/23/2025
GWL25-477	dhATX	73	10	ng/g				LK	06/23/2025
GWL25-477	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-477	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-477	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-477	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-478	ATX	64274	10	ng/g				LK	06/23/2025
GWL25-478	dhATX	506	10	ng/g				LK	06/23/2025
GWL25-478	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-478	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-478	dhHTX	ND	NA	ng/g				LK	06/23/2025

Control Limits: Water LFSM $\pm$ 30%; Complicated matrix LFSM and when LFSM within 2X MDL $\pm$ 50; %Rec NR when LFSM level below result

Lab ID	Analyte	Result	MRL	Units	LFSM Level	%Rec	QF	IN	Date
GWL25-478	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-479	ATX	18843	10	ng/g				LK	06/23/2025
GWL25-479	dhATX	121	10	ng/g				LK	06/23/2025
GWL25-479	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-479	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-479	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-479	epoxyHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-480	ATX	834	10	ng/g				LK	06/23/2025
GWL25-480	dhATX	14	10	ng/g				LK	06/23/2025
GWL25-480	epoxyATX	DETECT	NA	ng/g				LK	06/23/2025
GWL25-480	HTX	<10	10	ng/g				LK	06/23/2025
GWL25-480	dhHTX	ND	NA	ng/g				LK	06/23/2025
GWL25-480	epoxyHTX	ND	NA	ng/g				LK	06/23/2025

Control Limits: Water LFSM $\pm 30\%$; Complicated matrix LFSM and when LFSM within $2X$ MDL ± 50 ; %Rec NR when LFSM level below result

Summary of Results

Summary of LC-MS/MS test results (ng/g)

Customer Sample ID	Lab ID	Sum ATX Suite
C1F1	GWL25-432	77
C1F2	GWL25-433	409
C2F1	GWL25-434	156
C2F2	GWL25-435	57659
C3M1a	GWL25-436	ND
C3M2	GWL25-437	155634
C4M1a	GWL25-438	251
C4M2a	GWL25-439	24421
C3F1	GWL25-440	94543
C3F2	GWL25-441	166576
C5F1	GWL25-442	101437
C4M2b	GWL25-443	93908
C5M2	GWL25-444	53073
C4F1	GWL25-445	19115
C4F2	GWL25-446	95111
C5F2	GWL25-447	38932
C5F3	GWL25-448	58035
C3M1b	GWL25-449	37487
C4M1b	GWL25-450	111047
C5M1	GWL25-451	35374
16	GWL25-452	91
18	GWL25-453	611
21	GWL25-454	97
29	GWL25-455	21983
30	GWL25-456	110282
31	GWL25-457	11189
32	GWL25-458	54547
35	GWL25-459	69308
36	GWL25-460	36375
37	GWL25-461	26118
38	GWL25-462	11588
39	GWL25-463	ND
40	GWL25-464	21558
42	GWL25-465	27300
43	GWL25-466	26223
44	GWL25-467	61663
45	GWL25-468	ND

Customer Sample ID	Lab ID	Sum ATX Suite
47	GWL25-469	40248
48	GWL25-470	27044
49	GWL25-471	6818
50	GWL25-472	46077
51	GWL25-473	116
53	GWL25-474	34732
54	GWL25-475	11276
55	GWL25-476	51160
56	GWL25-477	12489
57	GWL25-478	64780
59	GWL25-479	18964
60	GWL25-480	848
MRL:		10

Submitted by:



Amanda Foss
Lab Director

Date: June 25, 2025

The results in this report relate only to the samples listed above.

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