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Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy
AECOM
1001 Bishop Street
Honolulu HI 96813
Generated 7/14/2023 12:11 PM

JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-129233-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

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Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization

M. Elaine Walker

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Definitions/Glossary

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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CASE NARRATIVE

Client: AECOM
Project: Red Hill - AFFF Assessment Sampling
Report Number: 580-129233-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
Seven samples were received on 7/8/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.2º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

GLYCOLS
Samples AF-RHMW04-WGN01LF-2307 (580-129233-1), AF-RHMW225401-WGN01B-2307 (580-129233-2), AF-RHMW02-WGN01LF-2307 (580-129233-3), AF-RHMW02-WGFD01LF-2307 (580-129233-4), AF-RHMW03-WGN01LF-2307 (580-129233-5), AF-RHMW06-WGN01LF-2307 (580-129233-6) and AF-RHMW10-WGN01LF-2307 (580-129233-7) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 07/11/2023.

The continuing calibration verification (CCV) associated with batch 680-787708 recovered above the upper control limit for 2-(2-Butoxyethoxy)ethanol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client Sample ID: AF-RHMW04-WGN01LF-2307   **Lab Sample ID: 580-129233-1**

No Detections.

Client Sample ID: AF-RHMW225401-WGN01B-2307   **Lab Sample ID: 580-129233-2**

No Detections.

Client Sample ID: AF-RHMW02-WGN01LF-2307   **Lab Sample ID: 580-129233-3**

No Detections.

Client Sample ID: AF-RHMW02-WGFD01LF-2307   **Lab Sample ID: 580-129233-4**

No Detections.

Client Sample ID: AF-RHMW03-WGN01LF-2307   **Lab Sample ID: 580-129233-5**

No Detections.

Client Sample ID: AF-RHMW06-WGN01LF-2307   **Lab Sample ID: 580-129233-6**

No Detections.

Client Sample ID: AF-RHMW10-WGN01LF-2307   **Lab Sample ID: 580-129233-7**

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: AECOM
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW04-WGN01LF-2307
Date Collected: 07/05/23 10:25
Date Received: 07/08/23 09:30

Lab Sample ID: 580-129233-1
Matrix: Water

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			07/11/23 16:52	1

Client Sample ID: AF-RHMW225401-WGN01B-2307
Date Collected: 07/03/23 14:15
Date Received: 07/08/23 09:30

Lab Sample ID: 580-129233-2
Matrix: Water

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			07/11/23 17:16	1

Client Sample ID: AF-RHMW02-WGN01LF-2307
Date Collected: 07/05/23 10:35
Date Received: 07/08/23 09:30

Lab Sample ID: 580-129233-3
Matrix: Water

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			07/11/23 17:39	1

Client Sample ID: AF-RHMW02-WGFD01LF-2307
Date Collected: 07/05/23 10:35
Date Received: 07/08/23 09:30

Lab Sample ID: 580-129233-4
Matrix: Water

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			07/11/23 18:02	1

Client Sample ID: AF-RHMW03-WGN01LF-2307
Date Collected: 07/05/23 13:20
Date Received: 07/08/23 09:30

Lab Sample ID: 580-129233-5
Matrix: Water

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			07/11/23 18:25	1

Client Sample ID: AF-RHMW06-WGN01LF-2307
Date Collected: 07/05/23 13:15
Date Received: 07/08/23 09:30

Lab Sample ID: 580-129233-6
Matrix: Water

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			07/11/23 18:48	1

Client Sample ID: AF-RHMW10-WGN01LF-2307
Date Collected: 07/05/23 14:25
Date Received: 07/08/23 09:30

Lab Sample ID: 580-129233-7
Matrix: Water

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			07/11/23 19:11	1

Default Detection Limits

Method: 8015C GLY - Glycols- Direct Injection (GC/FID)

Analyte	LOQ	DL	Units
2-(2-Butoxyethoxy)ethanol	5.0	1.1	mg/L

QC Sample Results

Method: 8015C GLY - Glycols- Direct Injection (GC/FID)

Lab Sample ID: MB 680-787708/9
Matrix: Water
Analysis Batch: 787708

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			07/11/23 14:33	1

Lab Sample ID: LCS 680-787708/5
Matrix: Water
Analysis Batch: 787708

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
2-(2-Butoxyethoxy)ethanol			20.0	22.9		mg/L		115	50 - 150	

Lab Sample ID: LCSD 680-787708/6
Matrix: Water
Analysis Batch: 787708

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol			20.0	18.3		mg/L		91	50 - 150	23	50

QC Association Summary

GC Semi VOA

Analysis Batch: 787708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-129233-1	AF-RHMW04-WGN01LF-2307	Total/NA	Water	8015C GLY	
580-129233-2	AF-RHMW225401-WGN01B-2307	Total/NA	Water	8015C GLY	
580-129233-3	AF-RHMW02-WGN01LF-2307	Total/NA	Water	8015C GLY	
580-129233-4	AF-RHMW02-WGFD01LF-2307	Total/NA	Water	8015C GLY	
580-129233-5	AF-RHMW03-WGN01LF-2307	Total/NA	Water	8015C GLY	
580-129233-6	AF-RHMW06-WGN01LF-2307	Total/NA	Water	8015C GLY	
580-129233-7	AF-RHMW10-WGN01LF-2307	Total/NA	Water	8015C GLY	
MB 680-787708/9	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-787708/5	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-787708/6	Lab Control Sample Dup	Total/NA	Water	8015C GLY	

Lab Chronicle

Client Sample ID: AF-RHMW04-WGN01LF-2307
Lab Sample ID: 580-129233-1
Date Collected: 07/05/23 10:25
Matrix: Water
Date Received: 07/08/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	787708	DBM	EET SAV	07/11/23 16:52

Client Sample ID: AF-RHMW225401-WGN01B-2307
Lab Sample ID: 580-129233-2
Date Collected: 07/03/23 14:15
Matrix: Water
Date Received: 07/08/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	787708	DBM	EET SAV	07/11/23 17:16

Client Sample ID: AF-RHMW02-WGN01LF-2307
Lab Sample ID: 580-129233-3
Date Collected: 07/05/23 10:35
Matrix: Water
Date Received: 07/08/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	787708	DBM	EET SAV	07/11/23 17:39

Client Sample ID: AF-RHMW02-WGFD01LF-2307
Lab Sample ID: 580-129233-4
Date Collected: 07/05/23 10:35
Matrix: Water
Date Received: 07/08/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	787708	DBM	EET SAV	07/11/23 18:02

Client Sample ID: AF-RHMW03-WGN01LF-2307
Lab Sample ID: 580-129233-5
Date Collected: 07/05/23 13:20
Matrix: Water
Date Received: 07/08/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	787708	DBM	EET SAV	07/11/23 18:25

Client Sample ID: AF-RHMW06-WGN01LF-2307
Lab Sample ID: 580-129233-6
Date Collected: 07/05/23 13:15
Matrix: Water
Date Received: 07/08/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	787708	DBM	EET SAV	07/11/23 18:48

Client Sample ID: AF-RHMW10-WGN01LF-2307
Lab Sample ID: 580-129233-7
Date Collected: 07/05/23 14:25
Matrix: Water
Date Received: 07/08/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	787708	DBM	EET SAV	07/11/23 19:11

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Laboratory: Eurofins Savannah

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015C GLY		Water	2-(2-Butoxyethoxy)ethanol

Method Summary

Method	Method Description	Protocol	Laboratory
8015C GLY	Glycols- Direct Injection (GC/FID)	SW846	EET SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-129233-1	AF-RHMW04-WGN01LF-2307	Water	07/05/23 10:25	07/08/23 09:30
580-129233-2	AF-RHMW225401-WGN01B-2307	Water	07/03/23 14:15	07/08/23 09:30
580-129233-3	AF-RHMW02-WGN01LF-2307	Water	07/05/23 10:35	07/08/23 09:30
580-129233-4	AF-RHMW02-WGFD01LF-2307	Water	07/05/23 10:35	07/08/23 09:30
580-129233-5	AF-RHMW03-WGN01LF-2307	Water	07/05/23 13:20	07/08/23 09:30
580-129233-6	AF-RHMW06-WGN01LF-2307	Water	07/05/23 13:15	07/08/23 09:30
580-129233-7	AF-RHMW10-WGN01LF-2307	Water	07/05/23 14:25	07/08/23 09:30

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Instrument ID: CVGG2   Analysis Batch Number: 785716

Lab Sample ID: IC 680-785716/7   Client Sample ID:

Date Analyzed: 06/27/23 14:52   Lab File ID: 2GF27007.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol	3.87	Peak Tail	X4PF	06/27/23 16:18

Lab Sample ID: ICIS 680-785716/8   Client Sample ID:

Date Analyzed: 06/27/23 15:16   Lab File ID: 2GF27008.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol, 2-propoxy	1.79	Incomplete Integration	X4PF	06/27/23 15:49
Ethylene glycol	3.87	Peak Tail	X4PF	06/27/23 16:17

Lab Sample ID: IC 680-785716/9   Client Sample ID:

Date Analyzed: 06/27/23 15:39   Lab File ID: 2GF27009.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol	3.86	Peak Tail	X4PF	06/27/23 16:18

Lab Sample ID: IC 680-785716/10   Client Sample ID:

Date Analyzed: 06/27/23 16:02   Lab File ID: 2GF27010.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	3.58	Incomplete Integration	X4PF	06/27/23 16:28
Ethylene glycol	3.87	Incomplete Integration	X4PF	06/27/23 16:28

8015C GLY

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GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Instrument ID: CVGG2   Analysis Batch Number: 785716

Lab Sample ID: IC 680-785716/11   Client Sample ID:

Date Analyzed: 06/27/23 16:26   Lab File ID: 2GF27011.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	3.59	Incomplete Integration	X4PF	06/27/23 17:20
Ethylene glycol	3.86	Incomplete Integration	X4PF	06/27/23 17:19

8015C GLY

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Instrument ID: CVGG2   Analysis Batch Number: 787708

Lab Sample ID: CCVIS 680-787708/4   Client Sample ID:

Date Analyzed: 07/11/23 12:38   Lab File ID: 1GG11004.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	3.59	Incomplete Integration	AR8P	07/11/23 14:32
Ethylene glycol	3.86	Incomplete Integration	AR8P	07/11/23 14:32

Lab Sample ID: 580-129233-4   Client Sample ID: AF-RHMW02-WGFD01LF-2307

Date Analyzed: 07/11/23 18:02   Lab File ID: 1GG11018.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	AR8P	07/11/23 20:57

Lab Sample ID: 580-129233-5   Client Sample ID: AF-RHMW03-WGN01LF-2307

Date Analyzed: 07/11/23 18:25   Lab File ID: 1GG11019.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	AR8P	07/11/23 20:57

Lab Sample ID: 580-129233-6   Client Sample ID: AF-RHMW06-WGN01LF-2307

Date Analyzed: 07/11/23 18:48   Lab File ID: 1GG11020.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	AR8P	07/11/23 20:57

Lab Sample ID: 580-129233-7   Client Sample ID: AF-RHMW10-WGN01LF-2307

Date Analyzed: 07/11/23 19:11   Lab File ID: 1GG11021.D   GC Column: J&W DB WAX   ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	AR8P	07/11/23 20:58

8015C GLY

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Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG_Gly_CAL_00050	12/14/23		o2si, Lot 480919		(Purchased Reagent)		2,2'-Oxybisethanol	2000 ug/mL
							2-(2-Butoxyethoxy)ethanol	2000 ug/mL
							2-Butoxyethanol	2000 ug/mL
							4-Hydroxy-4-methyl-2-pentanone	2000 ug/mL
							Dipropylene Glycol Methyl Ether	2000 ug/mL
							Ethanol, 2-propoxy	2000 ug/mL
							Ethylene glycol	2000 ug/mL
							Propylene glycol	2000 ug/mL
							Tetraethylene Glycol	4000 ug/mL
							Triethylene Glycol	2000 ug/mL
SG_Gly_CAL_00051	08/08/23		o2si, Lot 480919		(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL
SG_GLY_ISTD_00120	12/21/23		Agilent, Lot 0006738806		(Purchased Reagent)		n-Heptyl Alcohol	5000 ug/mL
SG_GLY_ISTD_00123	12/28/23		Agilent, Lot 0006738806		(Purchased Reagent)		n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00060	07/01/23		o2si, Lot 454407		(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL

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Reagent

SG_Gly_CAL_00050

o2si
smart solutions®

Rev 0

Certificate of Analysis

Catalog No.	Lot No.	Storage	Solvent	Date Received	Exp. Date
G34-120070-04	480919	≤ -10 °C	P/T Methanol	_____	2-May-2024

Description:
ISO 17034 -Custom Volatiles Mix,105-12, 2000 & 4,000 mg/L, 1 mL

Container:
1 ml Ampule, Amber Glass

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this Certified Reference Material (CRM). This CRM has been confirmed by GC/MS, GC, HPLC, UPLC/HRAM-MS, UV/VIS, Enzymatic, and/or wet chemistry techniques using internally developed method(s) against independent source(s). The uncertainty value is calculated for a 95% confidence interval with a k value of 2. The purity of neat materials not traceable to an ISO 17034:2016 accredited Reference Material Provider is traceable to internal analysis by GC, GC/MS, HPLC, Enzymatic, or wet chemistry techniques and compared to a National Metrological Institute such as NIST where feasible.

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
2-butoxyethanol	111-76-2	99.6	311.9.2P	1986 ± 100	mg/L
diethylene glycol butyl ether	112-34-5	99.8	2323.7.2P	2008 ± 100	mg/L
propyl cellosolve	2807-30-9	99.9	1570.7.2P	1980 ± 100	mg/L
dipropylene glycol monomethyl ether	34590-94-8	99.7	2333.7.2P	2014 ± 100	mg/L
ethylene glycol	107-21-1	100	307.201.1P	1968 ± 99	mg/L
di(ethylene glycol)	111-46-6	99.5	309.7.2P	1994 ± 100	mg/L
tri(ethylene glycol)	112-27-6	99.9	310.7.2.1.1P	1974 ± 110	mg/L
4-Hydroxy-4-methyl-2-pentanone	123-42-2	98	2334.286.1P	1991 ± 110	mg/L
1,2-propanediol	57-55-6	99.5	306.9.3P	1998 ± 100	mg/L
tetraethylene glycol	112-60-7	98	3754.7.1P	3959 ± 200	mg/L

Intended Uses:

This CRM is intended for use as a calibration standard or a quality control standard for chromatography equipment such as GC, GC/MS, HPLC, and HPLC/MS. It may also be used for various USEPA, NIOSH and ASTM methods.

Recommended storage container for ampuled products after opening is a 12 mm x 32 mm amber vial with screw cap Teflon lined silicon septum. The modeled % change per day can be calculated using the following:

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$$\% \text{ Change} = 116192x^{-2.578} + 40.383e^{-0.03y}$$

where x = boiling point of the most volatile analyte in the mix (in degrees K)
y = boiling point of the solvent (in degrees K)

This model assumes the container is stored at -10 °C and is unopened during storage. The user should determine what the acceptable error for their process is and calculate the maximum number of days the opened ampule should be stored.

Method of Preparation:

This standard was prepared gravimetrically using balances calibrated with National Institute of Standards and Technology (NIST) traceable weights (NIST Test Numbers 822/273070-06, 822/275141-07, 822/278993-10). Only calibrated Class A volumetric glassware and/or calibrated syringes were used to prepare this standard. Raw materials may have been checked for stoichiometry and purity prior to use. This standard has been analyzed against an independent source.

Packaging and Storage:

The solution should be stored according to the following storage requirements: ≤ -10 °C
Once the product is opened, it should be transferred to a vial with minimum head space if the product was received in a sealed ampule.

Glassware Calibration:

Only Class A glassware and/or calibrated syringes are used in the manufacture and quality control of standards. All glassware is calibrated using NIST traceable weights.

Weights and Balance Calibration:

Weights used to perform daily checks on balances are calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to NIST. Balances are checked daily in accordance to procedure O2-LB-G-002. Balances are calibrated annually by an ISO/IEC 17025:2017 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-011 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC 17025:2017 and ISO 17034:2016. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous Information:

Refer to MSDS.

Calculation of Uncertainty:

The following equations are used to calculate the value of the expanded uncertainty:
$u = ku_c$ u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2, u_c = the combined uncertainty
$u_c = (u_{char}{}^2 + u_{tran}{}^2 + u_{homo}{}^2 + u_{lts}{}^2)^{1/2}$ where u_i are the individual uncertainty components for manufacturing, transportation, homogeneity, and shelf life. While no significant uncertainty was detected in the replicates, a minimum contribution to

Manufactured By:	**Certified By:**	**Released By:**
Brian Stokes	*[signature]*	*Susan Mat*
Brian Stokes	Tyler Sherman	Susan Mathews
3 -May-2022	14 -Jun-2022	14 -Jun-2022
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

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7/14/2023
12:11 PM

uncertainty was added for homogeneity and long term stability as described in ISO Guide 35:2017.

Expiration Information:

The stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. Studies on the short term instability have determined no contribution to instability as observed on the concentration under controlled transportation conditions. This standard is guaranteed until 2-May-2024

Quality Standard Documentation:

- ISO/IEC 17025:2017 "General Requirements for the Competence of Testing and Calibration" - Chemical Testing - Accredited A2LA Certificate Number 3031.01

- ISO 17034:2016 "General Requirements for the Competence of Reference Material Producers" - Reference Material Production - Accredited A2LA Certificate Number 3031.02

Manufactured By:	**Certified By:**	**Released By:**
Brian Stokes	Tyler Sherman	Susan Mathews
3 -May-2022	14 -Jun-2022	14 -Jun-2022
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

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Reagent

SG_Gly_CAL_00051

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Rev 0

Certificate of Analysis

Catalog No.	Lot No.	Storage	Solvent	Date Received	Exp. Date
G34-120070-04	480919	≤ -10 °C	P/T Methanol		2-May-2024

Description:
ISO 17034 -Custom Volatiles Mix,105-12, 2000 & 4,000 mg/L, 1 mL

Container:
1 ml Ampule, Amber Glass

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this Certified Reference Material (CRM). This CRM has been confirmed by GC/MS, GC, HPLC, UPLC/HRAM-MS, UV/VIS, Enzymatic, and/or wet chemistry techniques using internally developed method(s) against independent source(s). The uncertainty value is calculated for a 95% confidence interval with a k value of 2. The purity of neat materials not traceable to an ISO 17034:2016 accredited Reference Material Provider is traceable to internal analysis by GC, GC/MS, HPLC, Enzymatic, or wet chemistry techniques and compared to a National Metrological Institute such as NIST where feasible.

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
2-butoxyethanol	111-76-2	99.6	311.9.2P	1986 ± 100	mg/L
diethylene glycol butyl ether	112-34-5	99.8	2323.7.2P	2008 ± 100	mg/L
propyl cellosolve	2807-30-9	99.9	1570.7.2P	1980 ± 100	mg/L
dipropylene glycol monomethyl ether	34590-94-8	99.7	2333.7.2P	2014 ± 100	mg/L
ethylene glycol	107-21-1	100	307.201.1P	1968 ± 99	mg/L
di(ethylene glycol)	111-46-6	99.5	309.7.2P	1994 ± 100	mg/L
tri(ethylene glycol)	112-27-6	99.9	310.7.2.1.1P	1974 ± 110	mg/L
4-Hydroxy-4-methyl-2-pentanone	123-42-2	98	2334.286.1P	1991 ± 110	mg/L
1,2-propanediol	57-55-6	99.5	306.9.3P	1998 ± 100	mg/L
tetraethylene glycol	112-60-7	98	3754.7.1P	3959 ± 200	mg/L

Intended Uses:

This CRM is intended for use as a calibration standard or a quality control standard for chromatography equipment such as GC, GC/MS, HPLC, and HPLC/MS. It may also be used for various USEPA, NIOSH and ASTM methods.

Recommended storage container for ampuled products after opening is a 12 mm x 32 mm amber vial with screw cap Teflon lined silicon septum. The modeled % change per day can be calculated using the following:

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Catalog No. G34-120070-04   **Lot No.** 480919   **Expiration Date** 2 -May-2024

$$\% \text{ Change} = 116192x^{-2.578} + 40.383e^{-0.03y}$$

where x = boiling point of the most volatile analyte in the mix (in degrees K)
y = boiling point of the solvent (in degrees K)

This model assumes the container is stored at -10 °C and is unopened during storage. The user should determine what the acceptable error for their process is and calculate the maximum number of days the opened ampule should be stored.

Method of Preparation:

This standard was prepared gravimetrically using balances calibrated with National Institute of Standards and Technology (NIST) traceable weights (NIST Test Numbers 822/273070-06, 822/275141-07, 822/278993-10). Only calibrated Class A volumetric glassware and/or calibrated syringes were used to prepare this standard. Raw materials may have been checked for stoichiometry and purity prior to use. This standard has been analyzed against an independent source.

Packaging and Storage:

The solution should be stored according to the following storage requirements: ≤ -10 °C
Once the product is opened, it should be transferred to a vial with minimum head space if the product was received in a sealed ampule.

Glassware Calibration:

Only Class A glassware and/or calibrated syringes are used in the manufacture and quality control of standards. All glassware is calibrated using NIST traceable weights.

Weights and Balance Calibration:

Weights used to perform daily checks on balances are calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to NIST. Balances are checked daily in accordance to procedure O2-LB-G-002. Balances are calibrated annually by an ISO/IEC 17025:2017 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-011 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC 17025:2017 and ISO 17034:2016. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous Information:

Refer to MSDS.

Calculation of Uncertainty:

The following equations are used to calculate the value of the expanded uncertainty:
$u = ku_c$ u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2, u_c = the combined uncertainty
$u_c = (u_{char}^2 + u_{tran}^2 + u_{homo}^2 + u_{lts}^2)^{1/2}$ where u_i are the individual uncertainty components for manufacturing, transportation, homogeneity, and shelf life. While no significant uncertainty was detected in the replicates, a minimum contribution to

Manufactured By:	Certified By:	Released By:
Brian Stokes	*signature*	*Susan Math*
Brian Stokes	Tyler Sherman	Susan Mathews
3 -May-2022	14 -Jun-2022	14 -Jun-2022
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

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Catalog No. G34-120070-04   **Lot No.** 480919   **Expiration Date** 2 -May-2024

uncertainty was added for homogeneity and long term stability as described in ISO Guide 35:2017.

Expiration Information:

The stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. Studies on the short term instability have determined no contribution to instability as observed on the concentration under controlled transportation conditions. This standard is guaranteed until 2-May-2024

Quality Standard Documentation:

- ISO/IEC 17025:2017 "General Requirements for the Competence of Testing and Calibration" - Chemical Testing - Accredited A2LA Certificate Number 3031.01

- ISO 17034:2016 "General Requirements for the Competence of Reference Material Producers" - Reference Material Production - Accredited A2LA Certificate Number 3031.02

Manufactured By:	**Certified By:**	**Released By:**
Brian Stokes		*Susan M*
Brian Stokes	Tyler Sherman	Susan Mathews
3 -May-2022	14 -Jun-2022	14 -Jun-2022
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

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ISO 17034

Reference Material Certificate
Product Information Sheet

Product Name:	Custom Standard	**Lot Number:**	0006738806
Product Number:	CUS-6046	**Lot Issue Date:**	05-Apr-2023
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	31-May-2025

Component Name	Concentration		Uncertainty	CAS#	Analyte Lot
n-heptanol	5008	±	25 µg/mL	000111-70-6	RM04540

Matrix: methanol (methyl alcohol)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above. Purity values are taken from approved vendor raw material certificates.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference (RM) standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference (RM) standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard (RM) is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

CSD-QA-015.1

ISO 17025

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Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
Monica Bourgeois
QMS Representative

RM was produced in accordance with the TUV/SUD registered ISO
9001:2015 Quality Management System. Cert# 951215321
Page: 2 of 2
www.agilent.com/quality/
CSD-QA-015.1

ISO 17025

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Reagent

SG_GLY_ISTD_00123

Agilent
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ISO 17034

Reference Material Certificate
Product Information Sheet

Product Name:	Custom Standard	**Lot Number:**	0006738806
Product Number:	CUS-6046	**Lot Issue Date:**	05-Apr-2023
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	31-May-2025

Component Name	Concentration		Uncertainty	CAS#	Analyte Lot
n-heptanol	5008	±	25 µg/mL	000111-70-6	RM04540

Matrix: methanol (methyl alcohol)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material (RM) standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above. Purity values are taken from approved vendor raw material certificates.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference (RM) standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference (RM) standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard (RM) is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

CSD-QA-015.1

ISO 17025

7/14/2023
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![Agilent - Trusted Answers]

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO
9001:2015 Quality Management System. Cert# 951215321

Page: 2 of 2

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CSD-QA-015.1

ISO 17025

Page 33 of 145

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12:11 PM

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Chemical Testing Lab
Cert. No. 3031.01

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ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02

Rev 0

Certificate of Analysis

Catalog No.	Lot No.	Storage	Solvent	Date Received	Exp. Date
G34-120070-04-SS	454407	≤ -10 °C	P/T Methanol		1-Jul-2023

Description:
ISO 17034 -Custom Volatiles Mix,105-12, Second Source, 2000 & 4,000 mg/L, 1 mL

Container:
1 ml Ampule, Amber Glass

Certified Values:

The certified value is based on gravimetric and volumetric preparation of this Certified Reference Material (CRM). This CRM has been confirmed by GC/MS, GC, HPLC, UPLC/HRAM-MS, UV/VIS, Enzymatic, and/or wet chemistry techniques using internally developed method(s) against independent source(s). The uncertainty value is calculated for a 95% confidence interval with a k value of 2. The purity of neat materials not traceable to an ISO 17034:2016 accredited Reference Material Provider is traceable to internal analysis by GC, GC/MS, HPLC, Enzymatic, or wet chemistry techniques and compared to a National Metrological Institute such as NIST where feasible.

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
2-butoxyethanol	111-76-2	99.5	311.7.1.1S	1994 ± 100	mg/L
diethylene glycol butyl ether	112-34-5	99.8	2323.7.2.1S	1992 ± 100	mg/L
2-propoxyethanol	2807-30-9	99.5	1570.7.1S	1998 ± 110	mg/L
dipropylene glycol monomethyl ether	34590-94-8	99.7	2333.7.2.1S	1998 ± 100	mg/L
ethylene glycol	107-21-1	100	307.201.1.1S	2016 ± 100	mg/L
di(ethylene glycol)	111-46-6	99.9	309.7.1.1S	1998 ± 100	mg/L
tri(ethylene glycol)	112-27-6	99.9	310.7.3.1S	2010 ± 100	mg/L
4-Hydroxy-4-methyl-2-pentanone	123-42-2	98	2334.286.1.1S	2003 ± 110	mg/L
1,2-propanediol	57-55-6	99.6	306.370.1.1S	2004 ± 110	mg/L
tetraethylene glycol	112-60-7	98	3754.7.1.1S	4049 ± 200	mg/L

Intended Uses:

This CRM is intended for use as a calibration standard or a quality control standard for chromatography equipment such as GC, GC/MS, HPLC, and HPLC/MS. It may also be used for various USEPA, NIOSH and ASTM methods.

Recommended storage container for ampuled products after opening is a 12 mm x 32 mm amber vial with screw cap Teflon lined silicon septum. The modeled % change per day can be calculated using the following:

7/14/2023
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Catalog No. G34-120070-04-SS   **Lot No.** 454407   **Expiration Date** 1 -Jul-2023

$$\text{\% Change} = 116192x^{-2.578} + 40.383e^{-0.03y}$$

where x = boiling point of the most volatile analyte in the mix (in degrees K)
y = boiling point of the solvent (in degrees K)

This model assumes the container is stored at -10 °C and is unopened during storage. The user should determine what the acceptable error for their process is and calculate the maximum number of days the opened ampule should be stored.

Method of Preparation:

This standard was prepared gravimetrically using balances calibrated with National Institute of Standards and Technology (NIST) traceable weights (NIST Test Numbers 822/273070-06, 822/275141-07, 822/278993-10). Only calibrated Class A volumetric glassware and/or calibrated syringes were used to prepare this standard. Raw materials may have been checked for stoichiometry and purity prior to use. This standard has been analyzed against an independent source.

Packaging and Storage:

The solution should be stored according to the following storage requirements: ≤ -10 °C
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Glassware Calibration:

Only Class A glassware and/or calibrated syringes are used in the manufacture and quality control of standards. All glassware is calibrated using NIST traceable weights.

Weights and Balance Calibration:

Weights used to perform daily checks on balances are calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to NIST. Balances are checked daily in accordance to procedure O2-LB-G-002. Balances are calibrated annually by an ISO/IEC 17025:2017 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-011 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC 17025:2017 and ISO 17034:2016. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous Information:

Refer to MSDS.

Calculation of Uncertainty:

The following equations are used to calculate the value of the expanded uncertainty:
$u = ku_c$ u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2, u_c = the combined uncertainty
$u_c = (u_{char}^2 + u_{tran}^2 + u_{homo}^2 + u_{lts}^2)^{1/2}$ where u_i are the individual uncertainty components for manufacturing, transportation, homogeneity, and shelf life. While no significant uncertainty was detected in the replicates, a minimum contribution to

Manufactured By:	Certified By:	Released By:
Jared Ball (signature)	*Claire Desrochers (signature)*	*Susan Mathews (signature)*
Jared Ball	Claire Desrochers	Susan Mathews
1 -Jul-2021	7 -Jul-2021	8 -Jul-2021
Quality Control Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

uncertainty was added for homogeneity and long term stability as described in ISO Guide 35:2017.

Expiration Information:

The stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. Studies on the short term instability have determined no contribution to instability as observed on the concentration under controlled transportation conditions. This standard is guaranteed until 1-Jul-2023

Quality Standard Documentation:

- ISO/IEC 17025:2017 "General Requirements for the Competence of Testing and Calibration" - Chemical Testing - Accredited A2LA Certificate Number 3031.01

- ISO 17034:2016 "General Requirements for the Competence of Reference Material Producers" - Reference Material Production - Accredited A2LA Certificate Number 3031.02

Manufactured By:	**Certified By:**	**Released By:**
Jared Ball	Claire Desrochers	Susan Mathews
1 -Jul-2021	7 -Jul-2021	8 -Jul-2021
Quality Control Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**
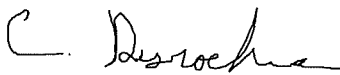
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Method 8015C - DAI Glycols

Glycols -Direct Injection (GC/FID) - Method 8015C

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Matrix: Water   Level: Low   Lab File ID: 1GG11005.D

Lab ID: LCS 680-787708/5   Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	22.9	115	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

FORM III
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Matrix: Water   Level: Low   Lab File ID: 1GG11006.D

Lab ID: LCSD 680-787708/6   Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	18.3	91	23	50	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

```
                              FORM IV
                 GC SEMI VOA METHOD BLANK SUMMARY
```

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Lab Sample ID: MB 680-787708/9

Matrix: Water   Date Extracted:

Lab File ID:(1) 1GG11009.D   Lab File ID:(2)

Date Analyzed:(1) 07/11/2023 14:33   Date Analyzed:(2)

Instrument ID:(1) CVGG2   Instrument ID:(2)

GC Column:(1) J&W DB WAX   ID: 0.45(mm) GC Column:(2)   ID:

```
            THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:
```

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-787708/5	07/11/2023 13:01	
	LCSD 680-787708/6	07/11/2023 13:24	
AF-RHMW04-WGN01LF-2307	580-129233-1	07/11/2023 16:52	
AF-RHMW225401-WGN01B-2307	580-129233-2	07/11/2023 17:16	
AF-RHMW02-WGN01LF-2307	580-129233-3	07/11/2023 17:39	
AF-RHMW02-WGFD01LF-2307	580-129233-4	07/11/2023 18:02	
AF-RHMW03-WGN01LF-2307	580-129233-5	07/11/2023 18:25	
AF-RHMW06-WGN01LF-2307	580-129233-6	07/11/2023 18:48	
AF-RHMW10-WGN01LF-2307	580-129233-7	07/11/2023 19:11	

FORM IV 8015C GLY

FORM VIII
GC SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Sample No.: CCVIS 680-787708/4   Date Analyzed: 07/11/2023 12:38

Instrument ID: CVGG2   GC Column: J&W DB WAX   ID: 0.45(mm)

Lab File ID (Standard): 1GG11004.D   Heated Purge: (Y/N) N

Calibration ID: 91299

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		3069550	2.45				
UPPER LIMIT		6139100	2.95				
LOWER LIMIT		1534775	1.95				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-787708/5		3681359	2.45				
LCSD 680-787708/6		4986166	2.44				
MB 680-787708/9		4544422	2.44				
580-129233-1	AF-RHMW04-WGN01LF-2307	1606032	2.44				
580-129233-2	AF-RHMW225401-WGN01B-2307	3937774	2.43				
580-129233-3	AF-RHMW02-WGN01LF-2307	3989045	2.43				
580-129233-4	AF-RHMW02-WGFD01LF-2307	4477233	2.43				
580-129233-5	AF-RHMW03-WGN01LF-2307	4716479	2.43				
580-129233-6	AF-RHMW06-WGN01LF-2307	3542692	2.44				
580-129233-7	AF-RHMW10-WGN01LF-2307	4373587	2.43				
CCV 680-787708/24		3793508	2.43				

nHPA = n-Heptyl Alcohol

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Client Sample ID: AF-RHMW04-WGN01LF-2307   Lab Sample ID: 580-129233-1

Matrix: Water   Lab File ID: 1GG11015.D

Analysis Method: 8015C GLY   Date Collected: 07/05/2023 10:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 16:52

Con. Extract Vol.: 1(mL)   Dilution Factor: 1

Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)

% Moisture: _____ % Solids: _____   GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11015.D	
Lims ID:	580-129233-C-1	
Client ID:	AF-RHMW04-WGN01LF-2307	
Sample Type:	Client	

Inject. Date:	11-Jul-2023 16:52:58	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0087378-015				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	11-Jul-2023 20:58:02	Calib Date:	27-Jun-2023 16:26:02
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D		

Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B
Process Host:	CTX1683		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags

*   4 n-Heptyl Alcohol

2.439	2.433	0.006	1606032	50.0	

Reagents:

SG_GLY_ISTD_00123		Amount Added: 10.00	Units: uL	Run Reagent

Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11015.D

Injection Date:	11-Jul-2023 16:52:58	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-129233-C-1	Lab Sample ID:	680-129233-1	Worklist Smp#:	15
Client ID:	AF-RHMW04-WGN01LF-2307				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11015.D
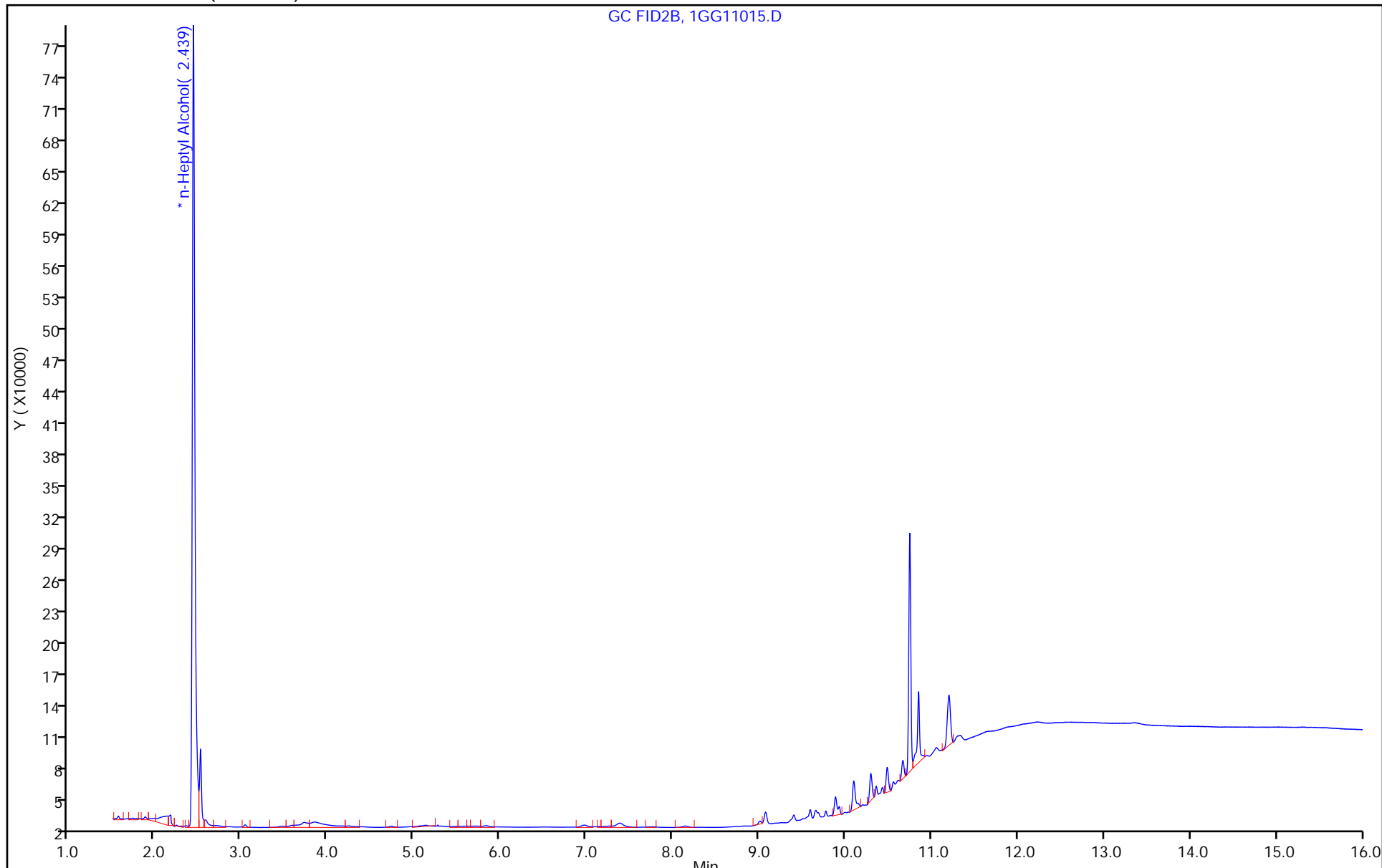
7/14/2023
12:11 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Client Sample ID: AF-RHMW225401-WGN01B-2307   Lab Sample ID: 580-129233-2

Matrix: Water   Lab File ID: 1GG11016.D

Analysis Method: 8015C GLY   Date Collected: 07/03/2023 14:15

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 17:16

Con. Extract Vol.: 1(mL)   Dilution Factor: 1

Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)

% Moisture: _____ % Solids: _____   GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11016.D	
Lims ID:	580-129233-B-2	
Client ID:	AF-RHMW225401-WGN01B-2307	
Sample Type:	Client	

Inject. Date:	11-Jul-2023 17:16:13	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0087378-016				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	11-Jul-2023 20:58:02	Calib Date:	27-Jun-2023 16:26:02
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D		

Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B
Process Host:	CTX1683		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags

*   4 n-Heptyl Alcohol

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2.433	2.433	0.000	3937774	50.0	

Reagents:

SG_GLY_ISTD_00123	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11016.D

Injection Date:	11-Jul-2023 17:16:13	Instrument ID:	CVGG2	Operator ID:
Lims ID:	580-129233-B-2	Lab Sample ID:	680-129233-2	Worklist Smp#: 16
Client ID:	AF-RHMW225401-WGN01B-2307			
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#: 0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI	

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11016.D
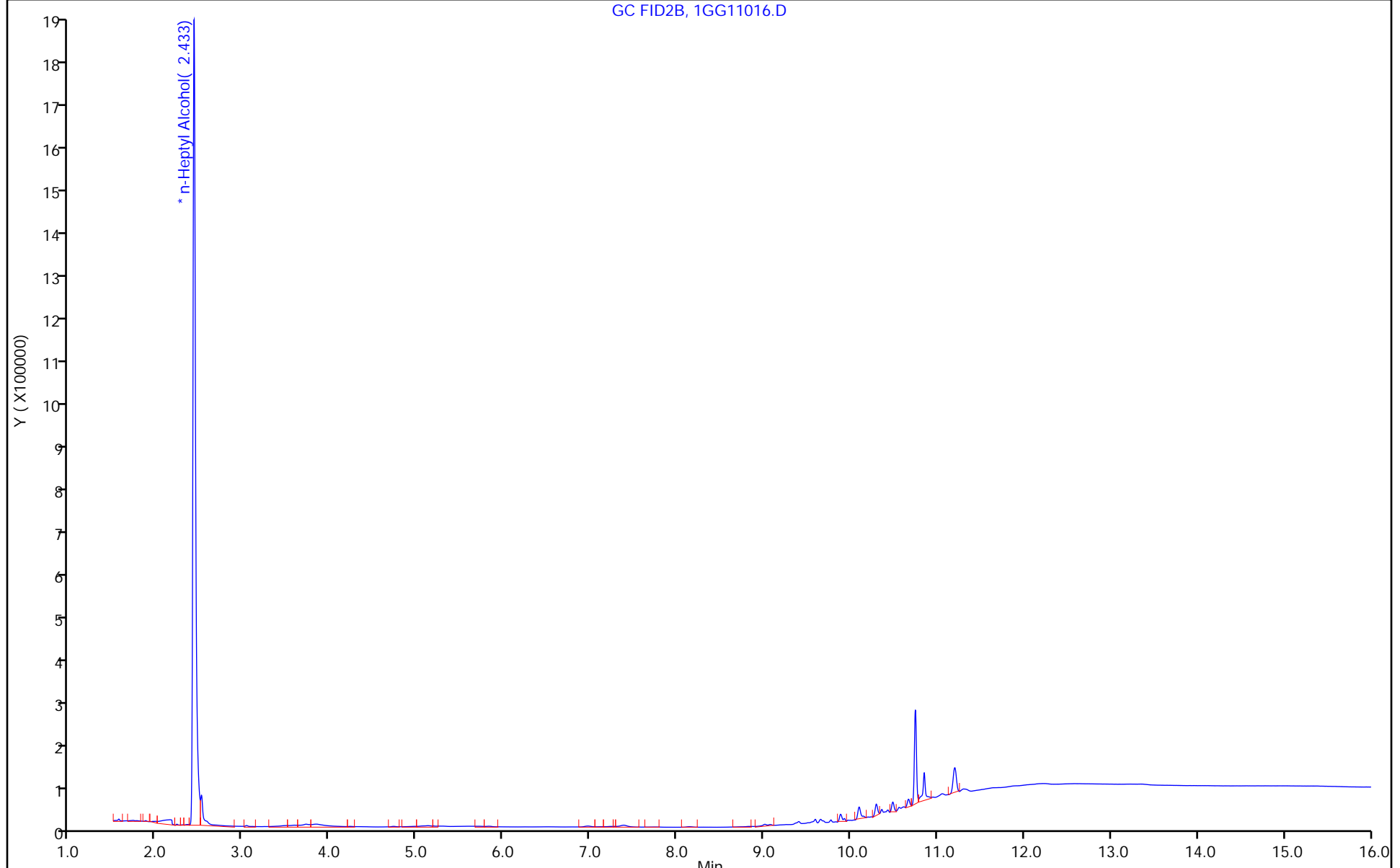
7/14/2023
12:11 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Client Sample ID: AF-RHMW02-WGN01LF-2307   Lab Sample ID: 580-129233-3

Matrix: Water   Lab File ID: 1GG11017.D

Analysis Method: 8015C GLY   Date Collected: 07/05/2023 10:35

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 17:39

Con. Extract Vol.: 1(mL)   Dilution Factor: 1

Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11017.D				
Lims ID:	580-129233-A-3				
Client ID:	AF-RHMW02-WGN01LF-2307				
Sample Type:	Client				
Inject. Date:	11-Jul-2023 17:39:20	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0087378-017				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m			
Limit Group:	8015C_DAI			
Last Update:	11-Jul-2023 20:58:02	Calib Date:	27-Jun-2023 16:26:02	
Integrator:	Falcon			
Quant Method:	Internal Standard	Quant By:	Initial Calibration	
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D			

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1683	

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags

*   4 n-Heptyl Alcohol

2.433	2.433	0.000	3989045	50.0	

Reagents:

SG_GLY_ISTD_00123	Amount Added: 10.00	Units: uL	Run Reagent

Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11017.D
Injection Date: 11-Jul-2023 17:39:20   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-129233-A-3   Lab Sample ID: 680-129233-3   Worklist Smp#:   17
Client ID: AF-RHMW02-WGN01LF-2307
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11017.D
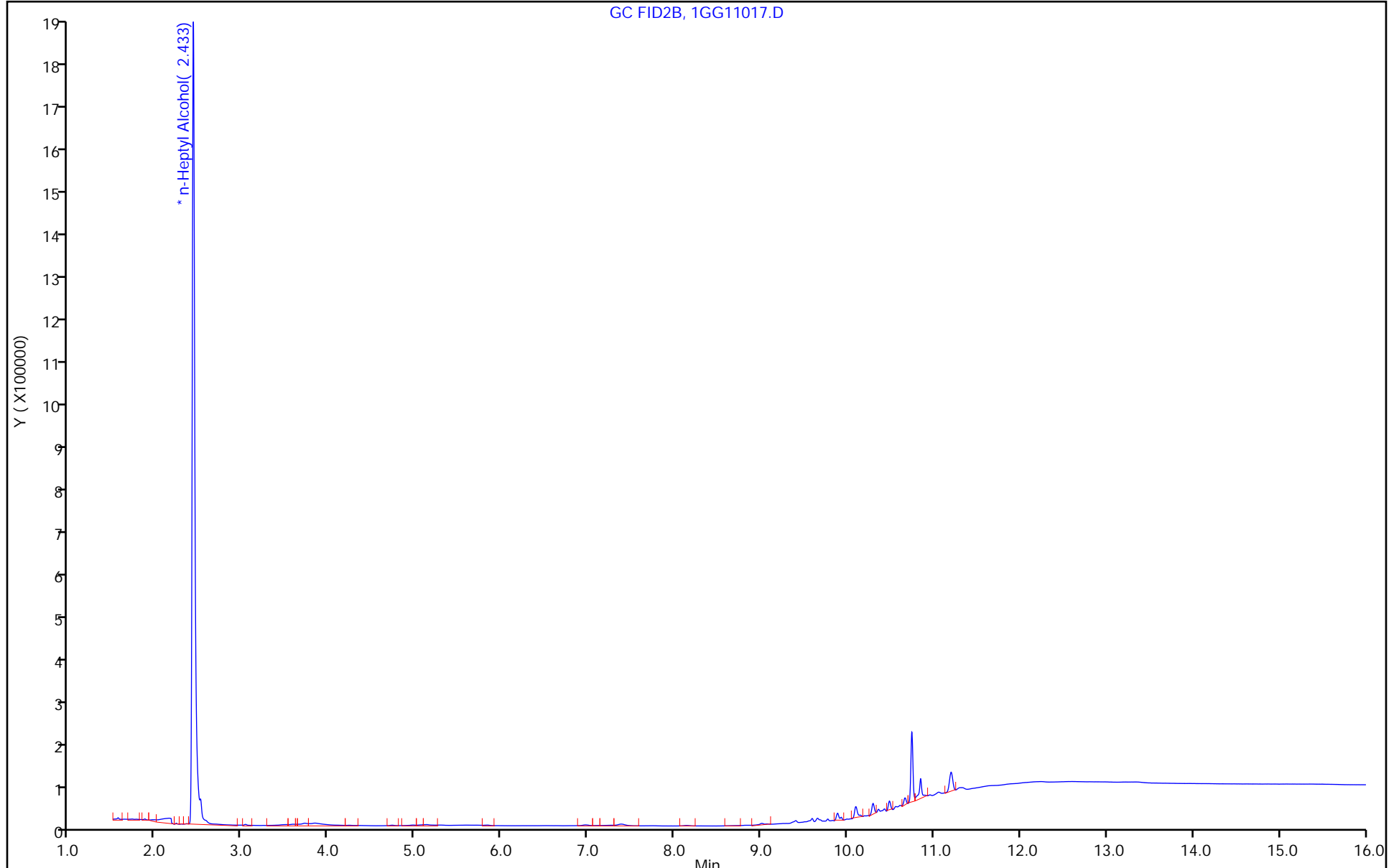
7/14/2023
12:11 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1
SDG No.:
Client Sample ID: AF-RHMW02-WGFD01LF-2307   Lab Sample ID: 580-129233-4
Matrix: Water   Lab File ID: 1GG11018.D
Analysis Method: 8015C GLY   Date Collected: 07/05/2023 10:35
Extraction Method: Date Extracted:
Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 18:02
Con. Extract Vol.: 1(mL)   Dilution Factor: 1
Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)
% Moisture: _____ % Solids: _____   GPC Cleanup:(Y/N) N
Cleanup Factor:
Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11018.D				
Lims ID:	580-129233-B-4				
Client ID:	AF-RHMW02-WGFD01LF-2307				
Sample Type:	Client				
Inject. Date:	11-Jul-2023 18:02:27	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0087378-018				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	11-Jul-2023 20:58:02	Calib Date:	27-Jun-2023 16:26:02
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D		

Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B
Process Host:	CTX1683		

First Level Reviewer: AR8P　　　　　　　　　Date:　　　　　　11-Jul-2023 20:57:44

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags

*　4 n-Heptyl Alcohol

2.434	2.433	0.001	4477233	50.0	

QC Flag Legend
Processing Flags

Reagents:

SG_GLY_ISTD_00123	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11018.D

Injection Date:	11-Jul-2023 18:02:27	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-129233-B-4	Lab Sample ID:	680-129233-4	Worklist Smp#:	18
Client ID:	AF-RHMW02-WGFD01LF-2307				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11018.D
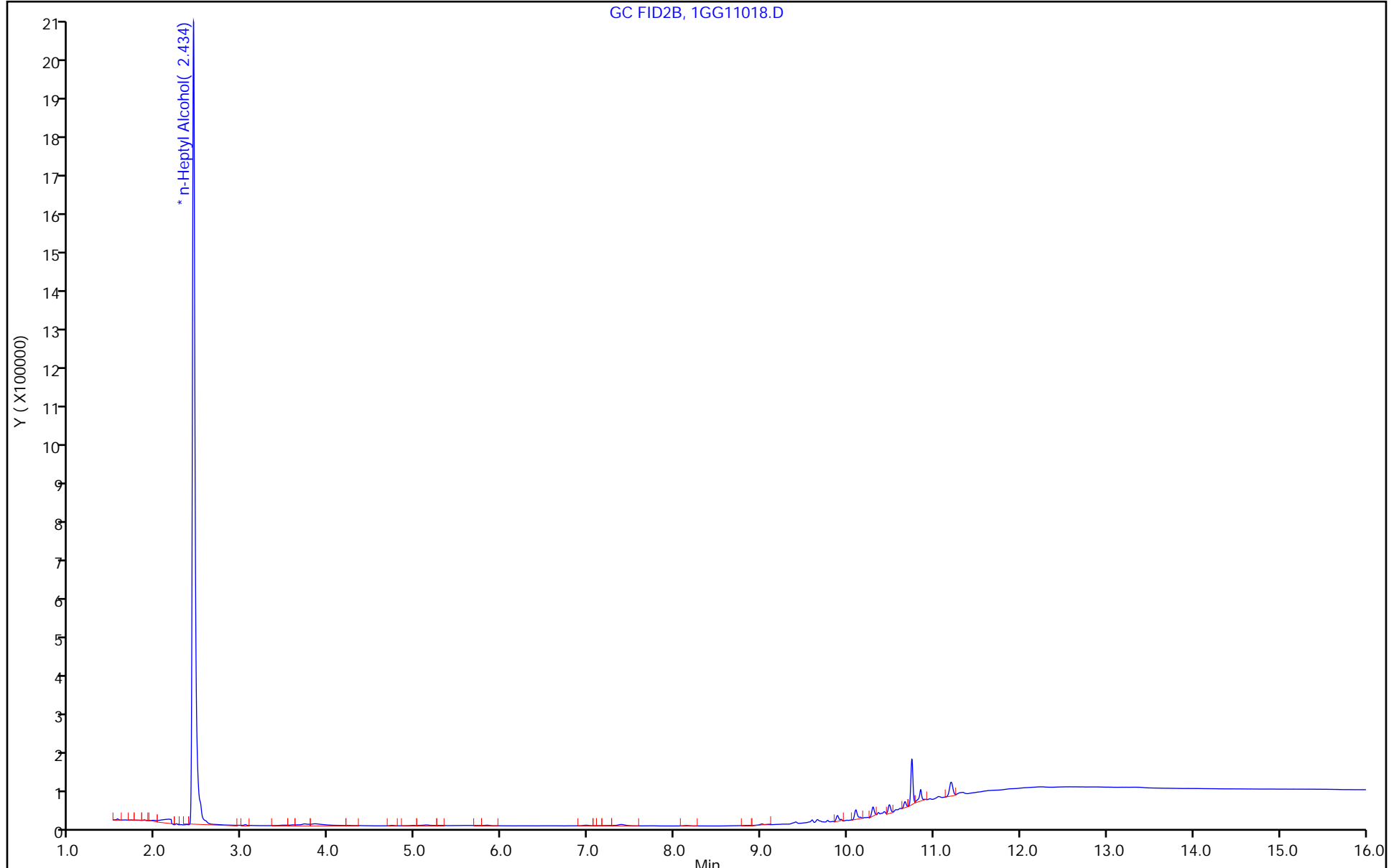
7/14/2023
12:11 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1
SDG No.:
Client Sample ID: AF-RHMW03-WGN01LF-2307   Lab Sample ID: 580-129233-5
Matrix: Water   Lab File ID: 1GG11019.D
Analysis Method: 8015C GLY   Date Collected: 07/05/2023 13:20
Extraction Method: Date Extracted:
Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 18:25
Con. Extract Vol.: 1(mL)   Dilution Factor: 1
Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)
% Moisture: _____ % Solids: _____   GPC Cleanup:(Y/N) N
Cleanup Factor:
Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11019.D
Lims ID:	580-129233-B-5
Client ID:	AF-RHMW03-WGN01LF-2307
Sample Type:	Client

Inject. Date:	11-Jul-2023 18:25:41	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0087378-019				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	11-Jul-2023 20:58:02	Calib Date:	27-Jun-2023 16:26:02
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D		

Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B
Process Host:	CTX1683		

First Level Reviewer: AR8P   Date: 11-Jul-2023 20:57:50

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags

* 4 n-Heptyl Alcohol

2.434	2.433	0.001	4716479	50.0	

Reagents:

SG_GLY_ISTD_00123	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11019.D

Injection Date: 11-Jul-2023 18:25:41   Instrument ID: CVGG2   Operator ID:

Lims ID: 580-129233-B-5   Lab Sample ID: 680-129233-5   Worklist Smp#:   19

Client ID: AF-RHMW03-WGN01LF-2307

Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0

Method: 8015_GLY_VGG   Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11019.D
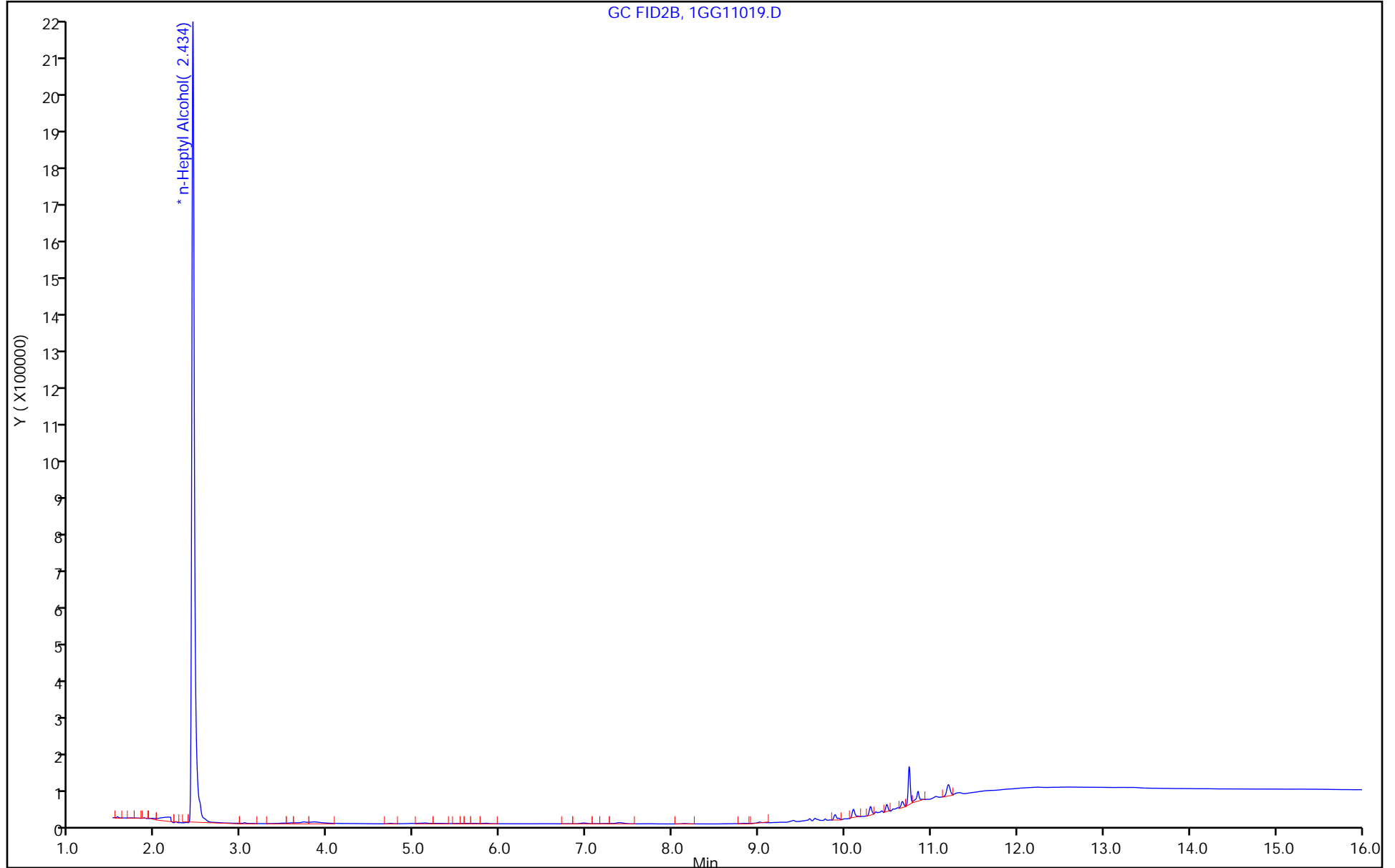
7/14/2023
12:11 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Client Sample ID: AF-RHMW06-WGN01LF-2307   Lab Sample ID: 580-129233-6

Matrix: Water   Lab File ID: 1GG11020.D

Analysis Method: 8015C GLY   Date Collected: 07/05/2023 13:15

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 18:48

Con. Extract Vol.: 1(mL)   Dilution Factor: 1

Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)

% Moisture: _____   % Solids: _____   GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11020.D
Lims ID: 580-129233-A-6
Client ID: AF-RHMW06-WGN01LF-2307
Sample Type: Client
Inject. Date: 11-Jul-2023 18:48:48   ALS Bottle#:   0   Worklist Smp#:   20
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0087378-020
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 11-Jul-2023 20:58:02   Calib Date: 27-Jun-2023 16:26:02
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1683

First Level Reviewer: AR8P   Date: 11-Jul-2023 20:57:56

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags

*   4 n-Heptyl Alcohol
  2.438   2.433   0.005   3542692   50.0

Reagents:

SG_GLY_ISTD_00123   Amount Added: 10.00   Units: uL   Run Reagent

Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11020.D			
Injection Date:	11-Jul-2023 18:48:48	Instrument ID:	CVGG2	Operator ID:
Lims ID:	580-129233-A-6	Lab Sample ID:	680-129233-6	Worklist Smp#: 20
Client ID:	AF-RHMW06-WGN01LF-2307			
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#: 0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI	

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11020.D
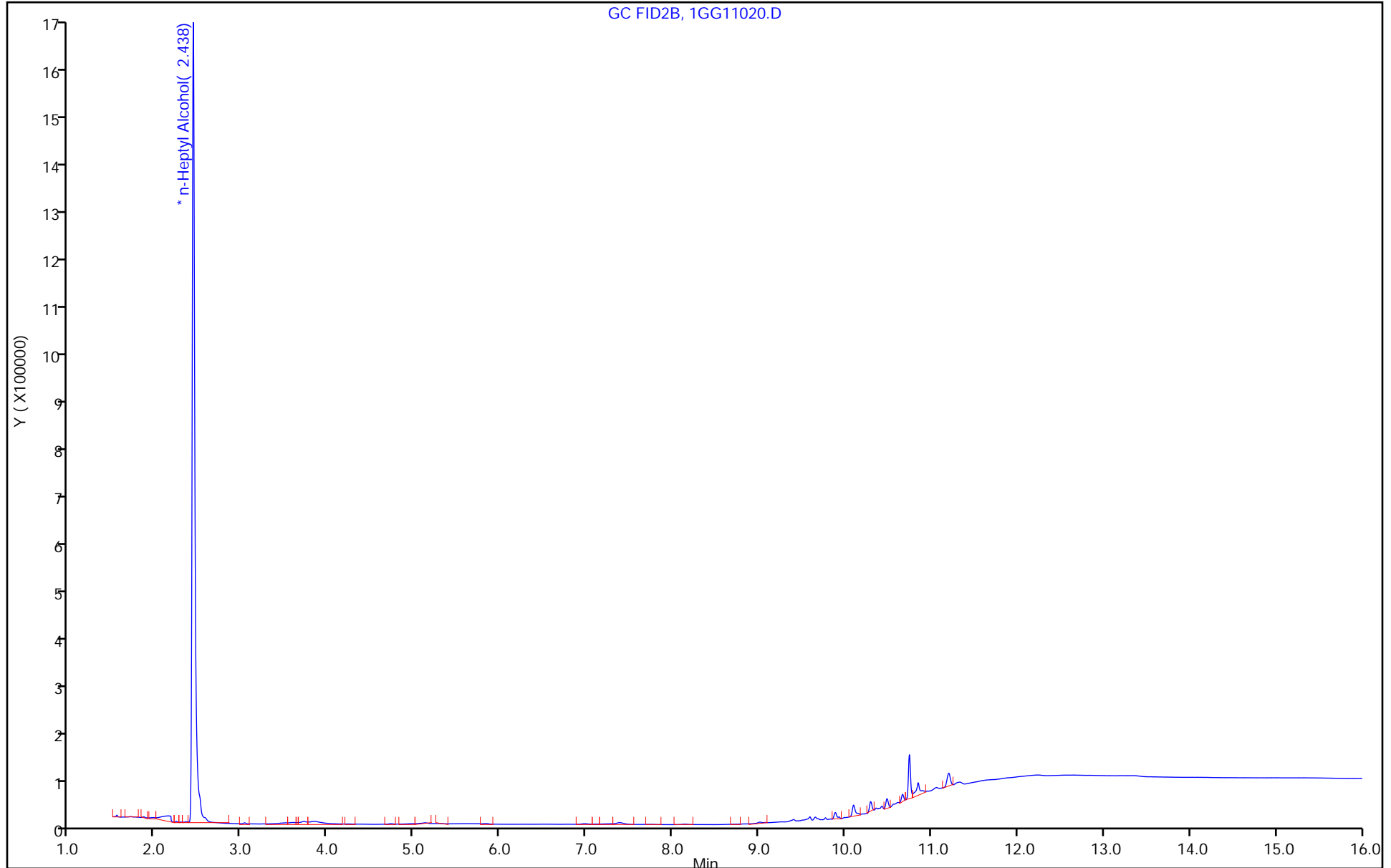
* n-Heptyl Alcohol(2.438)

Y (X100000)

Min

7/14/2023
12:11 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Client Sample ID: AF-RHMW10-WGN01LF-2307   Lab Sample ID: 580-129233-7

Matrix: Water   Lab File ID: 1GG11021.D

Analysis Method: 8015C GLY   Date Collected: 07/05/2023 14:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 19:11

Con. Extract Vol.: 1(mL)   Dilution Factor: 1

Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)

% Moisture: _____ % Solids: _____   GPC Cleanup:(Y/N) N

Cleanup Factor: Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11021.D	
Lims ID:	580-129233-C-7	
Client ID:	AF-RHMW10-WGN01LF-2307	
Sample Type:	Client	

Inject. Date:	11-Jul-2023 19:11:54	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0087378-021				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	11-Jul-2023 20:58:02	Calib Date:	27-Jun-2023 16:26:02
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det:	GC FID2B
Process Host:	CTX1683		

First Level Reviewer: AR8P   Date: 11-Jul-2023 20:58:02

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags

*   4 n-Heptyl Alcohol

2.429	2.433	-0.004	4373587	50.0

Reagents:

SG_GLY_ISTD_00123   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11021.D
Injection Date: 11-Jul-2023 19:11:54   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-129233-C-7   Lab Sample ID: 680-129233-7   Worklist Smp#:   21
Client ID: AF-RHMW10-WGN01LF-2307
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11021.D

7/14/2023
12:11 PM

Lab Name: Eurofins Savannah   Job No.: 580-129233-1   Analy Batch No.: 785716

SDG No.: _____

Instrument ID: CVGG2   GC Column: J&W DB WAX   ID: 0.45 (mm)   Heated Purge: (Y/N) N

Calibration Start Date: 06/27/2023 14:06   Calibration End Date: 06/27/2023 16:26   Calibration ID: 91299

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-785716/11	2GF27011.D
Level 2	IC 680-785716/10	2GF27010.D
Level 3	IC 680-785716/9	2GF27009.D
Level 4	ICIS 680-785716/8	2GF27008.D
Level 5	IC 680-785716/7	2GF27007.D
Level 6	IC 680-785716/6	2GF27006.D
Level 7	IC 680-785716/5	2GF27005.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol, 2-propoxy	0.7202 0.6351	0.8952 0.6958	+++++	0.5402	0.6675	Qua	0.7872	0.5414	0.0013774						0.9970		0.9900
4-Hydroxy-4-methyl-2-pentanone	1.0729 0.6487	1.0524 0.6820	+++++	0.5875	0.6900	Qua	1.2287	0.5952	0.0006944						0.9970		0.9900
2-Butoxyethanol	0.7934 0.6758	0.9595 0.7583	+++++	0.5820	0.7147	Qua	1.0660	0.5525	0.0018248						0.9960		0.9900
Dipropylene Glycol Methyl Ether	0.0762 0.0542	0.0831 0.0509	+++++	0.0498	0.0580	Qua	0.0101	0.0615	-0.000102						0.9970		0.9900
Propylene glycol	0.3387 0.2171	0.2971 +++++	+++++	0.1883	0.2255	LinF		0.2184							0.9970		0.9900
Ethylene glycol	0.5841 0.3535	0.4933 +++++	+++++	0.3104	0.3621	LinF		0.3544							0.9970		0.9900
2-(2-Butoxyethoxy)ethanol	0.6563 0.5595	0.8106 0.4984	+++++	0.5170	0.6012	Qua	-0.453	0.6932	-0.001815						0.9960		0.9900
2,2'-Oxybisethanol	0.4378 0.2627	0.3769 +++++	+++++	0.2388	0.2738	Lin	0.2684	0.2605							0.9970		0.9900
Triethylene Glycol	0.3641 0.2542	0.3420 +++++	+++++	0.2228	0.2643	Lin1	0.2555	0.2495							0.9940		0.9900
Tetraethylene Glycol	0.3356 0.2634	0.3400 +++++	+++++	0.2292	0.2755	Lin1	0.3609	0.2605							0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI 8015C GLY

7/14/2023
12:11 PM

Lab Name: Eurofins Savannah   Job No.: 580-129233-1   Analy Batch No.: 785716

SDG No.: _____

Instrument ID: CVGG2   GC Column: J&W DB WAX   ID: 0.45(mm)   Heated Purge: (Y/N) N

Calibration Start Date: 06/27/2023 14:06   Calibration End Date: 06/27/2023 16:26   Calibration ID: 91299

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-785716/11	2GF27011.D
Level 2	IC 680-785716/10	2GF27010.D
Level 3	IC 680-785716/9	2GF27009.D
Level 4	ICIS 680-785716/8	2GF27008.D
Level 5	IC 680-785716/7	2GF27007.D
Level 6	IC 680-785716/6	2GF27006.D
Level 7	IC 680-785716/5	2GF27005.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 / LVL 6	LVL 2 / LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 / LVL 6	LVL 2 / LVL 7	LVL 3	LVL 4	LVL 5
Ethanol, 2-propoxy	nHPA	Qua	96714 / 3345368	363189 / 4905205	+++++	837971	2702728	2.00 / 80.0	5.00 / 100	+++++	20.0	50.0
4-Hydroxy-4-methyl-2-pentanone	nHPA	Qua	144073 / 3417042	426955 / 4807606	+++++	911353	2793757	2.00 / 80.0	5.00 / 100	+++++	20.0	50.0
2-Butoxyethanol	nHPA	Qua	106536 / 3559961	389269 / 5345437	+++++	902832	2893868	2.00 / 80.0	5.00 / 100	+++++	20.0	50.0
Dipropylene Glycol Methyl Ether	nHPA	Qua	10230 / 285516	33708 / 358833	+++++	77228	234769	2.00 / 80.0	5.00 / 100	+++++	20.0	50.0
Propylene glycol	nHPA	LinF	45484 / 1143390	120550 / +++++	+++++	292019	912990	2.00 / 80.0	5.00 / +++++	+++++	20.0	50.0
Ethylene glycol	nHPA	LinF	78438 / 1862061	200127 / +++++	+++++	481413	1466203	2.00 / 80.0	5.00 / +++++	+++++	20.0	50.0
2-(2-Butoxyethoxy)ethanol	nHPA	Qua	88133 / 2947160	328852 / 3513119	+++++	801859	2434117	2.00 / 80.0	5.00 / 100	+++++	20.0	50.0
2,2'-Oxybisethanol	nHPA	Lin	58794 / 1383678	152913 / +++++	+++++	370424	1108481	2.00 / 80.0	5.00 / +++++	+++++	20.0	50.0
Triethylene Glycol	nHPA	Lin1	48890 / 1339189	138749 / +++++	+++++	345656	1070245	2.00 / 80.0	5.00 / +++++	+++++	20.0	50.0
Tetraethylene Glycol	nHPA	Lin1	90140 / 2774928	275922 / +++++	+++++	711160	2231427	4.00 / 160	10.0 / +++++	+++++	40.0	100

Curve Type Legend

Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
LinF = Linear ISTD forced zero
Qua = Quadratic ISTD

Lab Name: Eurofins Savannah   Job No.: 580-129233-1   Analy Batch No.: 785716

SDG No.:

Instrument ID: CVGG2   GC Column: J&W DB WAX   ID: 0.45 (mm)   Heated Purge: (Y/N) N

Calibration Start Date: 06/27/2023 14:06   Calibration End Date: 06/27/2023 16:26   Calibration ID: 91299

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-785716/11	2GF27011.D
Level 2	IC 680-785716/10	2GF27010.D
Level 3	IC 680-785716/9	2GF27009.D
Level 4	ICIS 680-785716/8	2GF27008.D
Level 5	IC 680-785716/7	2GF27007.D
Level 6	IC 680-785716/6	2GF27006.D
Level 7	IC 680-785716/5	2GF27005.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Triethylene Glycol	-5.3 +++++	16.6	+++++	-15.8	3.9	0.6	20	20		20	20	20
Tetraethylene Glycol	-5.8 +++++	16.7	+++++	-15.5	4.4	0.2	20	20		20	20	20

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27005.D
Lims ID:	ic g7
Client ID:	

Sample Type:	IC	Calib Level:	7		
Inject. Date:	27-Jun-2023 14:06:05	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0087071-005				
Operator ID:		Instrument ID:	CVGG2		
Sublist:	chrom-8015_GLY_VGG*sub2				

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	28-Jun-2023 15:58:20	Calib Date:	27-Jun-2023 16:26:02
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B	
Process Host:	CTX1628		

First Level Reviewer: AR8P   Date: 28-Jun-2023 15:27:11

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.810	1.810	0.000	4905205	100.0	101.1	
2 4-Hydroxy-4-methyl-2-pentanone						
2.156	2.156	0.000	4807606	100.0	100.7	
3 2-Butoxyethanol						
2.262	2.262	0.000	5345437	100.0	101.4	
* 4 n-Heptyl Alcohol						
2.463	2.463	0.000	3524689	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.991	2.991	0.000	358833	100.0	98.8	
6 Propylene glycol						
3.566	3.566	0.000	946482	100.0	61.5	
7 Ethylene glycol						
3.862	3.862	0.000	1431865	100.0	57.3	
8 2-(2-Butoxyethoxy)ethanol						
5.342	5.342	0.000	3513119	100.0	97.4	
9 2,2'-Oxybisethanol						
7.406	7.406	0.000	1008673	100.0	53.9	
10 Triethylene Glycol						
9.607	9.607	0.000	904473	100.0	50.4	
11 Tetraethylene Glycol						
10.465	10.465	0.000	1844902	200.0	99.1	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00050	Amount Added: 50.00	Units: uL	
SG_GLY_ISTD_00120	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27005.D
Injection Date: 27-Jun-2023 14:06:05   Instrument ID: CVGG2   Operator ID:
Lims ID: ic g7   Worklist Smp#:   5
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

7/14/2023
12:11 PM

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27006.D
Lims ID: ic g6
Client ID:

Sample Type:	IC	Calib Level:	6
Inject. Date:	27-Jun-2023 14:29:20	ALS Bottle#:	0

Worklist Smp#:   6

Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0087071-006
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Jun-2023 15:58:20   Calib Date: 27-Jun-2023 16:26:02
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1628

First Level Reviewer: X4PF   Date: 27-Jun-2023 15:49:16

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.793	1.810	-0.017	3345368	80.0	77.2	
2 4-Hydroxy-4-methyl-2-pentanone						
2.152	2.156	-0.004	3417042	80.0	78.0	
3 2-Butoxyethanol						
2.253	2.262	-0.009	3559961	80.0	76.6	
* 4 n-Heptyl Alcohol						
2.447	2.463	-0.016	3292230	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.993	2.991	0.002	285516	80.0	81.3	
6 Propylene glycol						
3.566	3.566	0.000	1143390	80.0	79.5	
7 Ethylene glycol						
3.864	3.862	0.002	1862061	80.0	79.8	
8 2-(2-Butoxyethoxy)ethanol						
5.343	5.342	0.001	2947160	80.0	83.5	
9 2,2'-Oxybisethanol						
7.403	7.406	-0.003	1383678	80.0	79.6	
10 Triethylene Glycol						
9.603	9.607	-0.004	1339189	80.0	80.5	
11 Tetraethylene Glycol						
10.439	10.465	-0.026	2774928	160.0	160.4	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00050	Amount Added: 40.00	Units: uL	
SG_GLY_ISTD_00120	Amount Added: 10.00	Units: uL	Run Reagent

GC FID2B, 2GF27006.D

7/14/2023
12:11 PM

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27007.D	
Lims ID:	ic g5	
Client ID:		
Sample Type:	IC	Calib Level: 5
Inject. Date:	27-Jun-2023 14:52:39	ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol:	1.0 ul	Dil. Factor: 1.0000
Sample Info:	680-0087071-007	
Operator ID:		Instrument ID: CVGG2
Sublist:	chrom-8015_GLY_VGG*sub2	

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	28-Jun-2023 15:58:21	Calib Date: 27-Jun-2023 16:26:02
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1628	

First Level Reviewer: X4PF   Date: 27-Jun-2023 15:49:28

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.791	1.810	-0.019	2702728	50.0	53.0	
2 4-Hydroxy-4-methyl-2-pentanone						
2.149	2.156	-0.007	2793757	50.0	52.7	
3 2-Butoxyethanol						
2.251	2.262	-0.011	2893868	50.0	53.4	
* 4 n-Heptyl Alcohol						
2.446	2.463	-0.017	4049065	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.993	2.991	0.002	234769	50.0	51.4	
6 Propylene glycol						
3.566	3.566	0.000	912990	50.0	51.6	
7 Ethylene glycol						M
3.865	3.862	0.003	1466203	50.0	51.1	M
8 2-(2-Butoxyethoxy)ethanol						
5.343	5.342	0.001	2434117	50.0	50.8	
9 2,2'-Oxybisethanol						
7.408	7.406	0.002	1108481	50.0	51.5	
10 Triethylene Glycol						
9.603	9.607	-0.004	1070245	50.0	51.9	
11 Tetraethylene Glycol						
10.438	10.465	-0.027	2231427	100.0	104.4	

QC Flag Legend
Processing Flags

Review Flags
 M - Manually Integrated

Reagents:

SG_Gly_CAL_00050   Amount Added: 25.00   Units: uL
SG_GLY_ISTD_00120   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27007.D
Injection Date: 27-Jun-2023 14:52:39   Instrument ID: CVGG2   Operator ID:
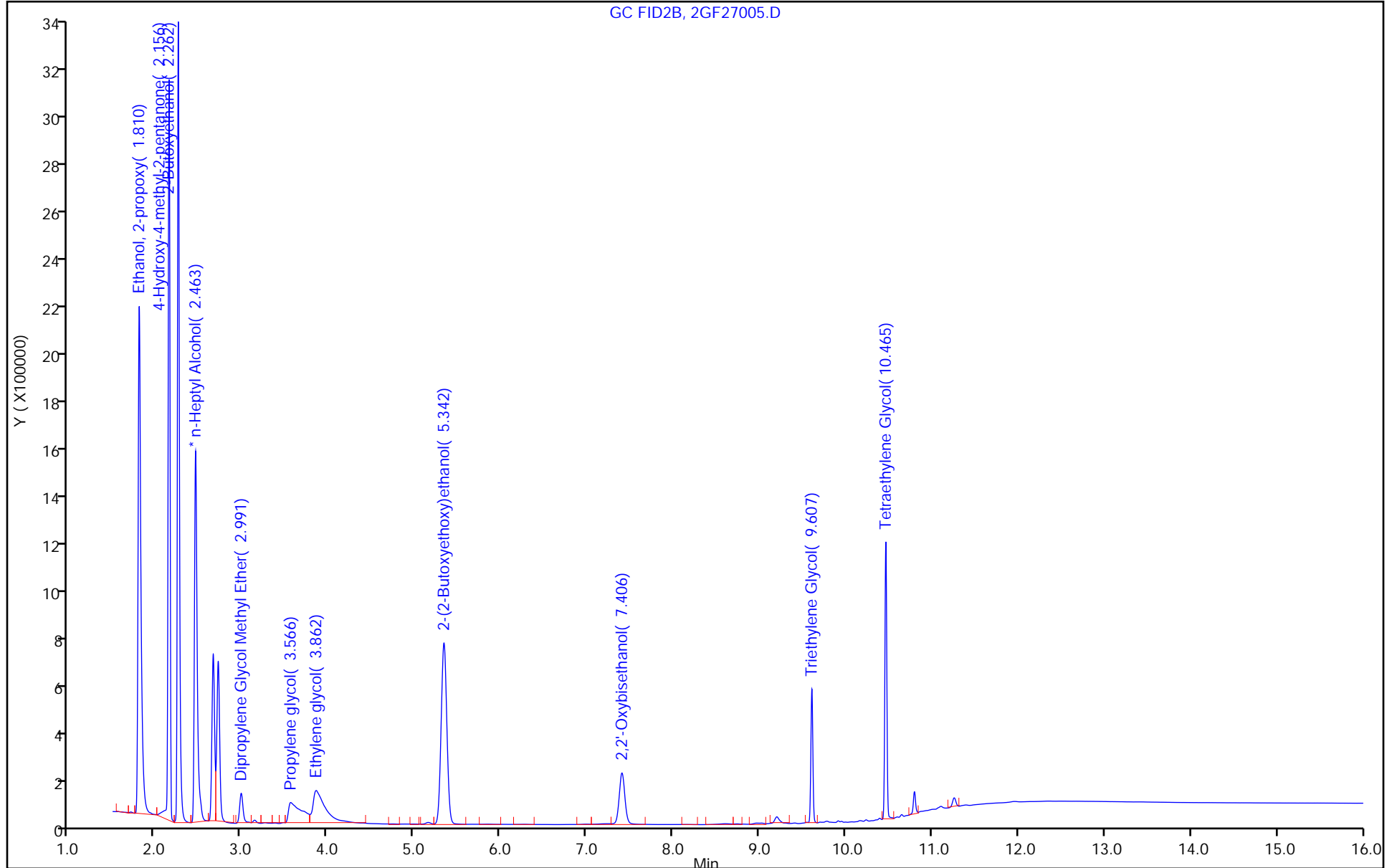Lims ID: ic g5   Worklist Smp#:   7
Client ID:
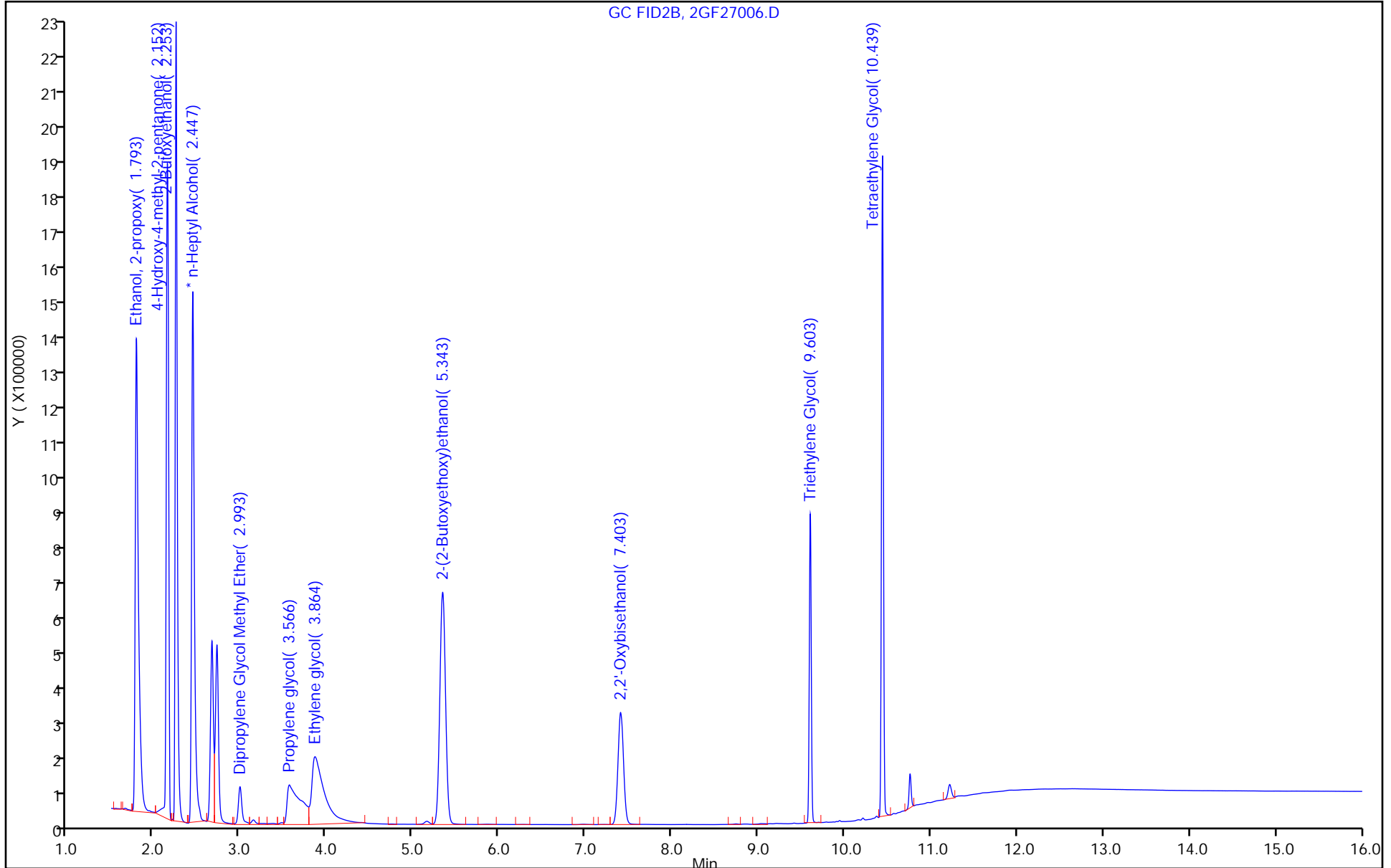Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 2GF27007.D

7/14/2023
12:11 PM

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27007.D
Injection Date: 27-Jun-2023 14:52:39   Instrument ID: CVGG2
Lims ID: ic g5
Client ID:
Operator ID: ALS Bottle#: 0   Worklist Smp#: 7
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)   Detector   GC FID2B

7 Ethylene glycol, CAS: 107-21-1
Signal: 1

Processing Integration Results

RT: 3.87
Area: 1568283
Amount: 61.758854
Amount Units: ug/ml

Manual Integration Results
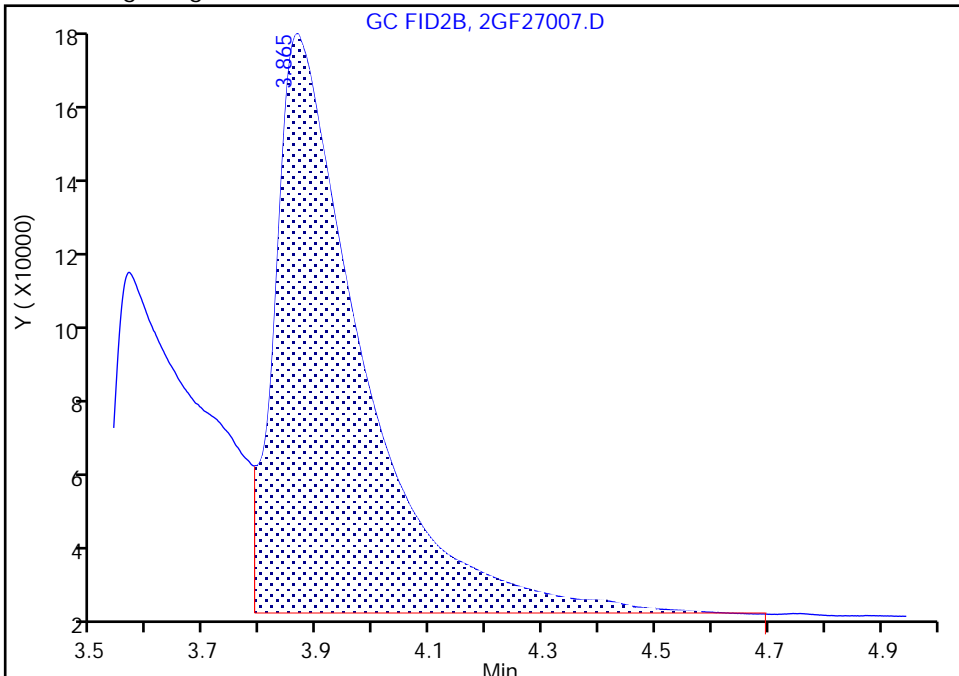
RT: 3.87
Area: 1466203
Amount: 51.083617
Amount Units: ug/ml
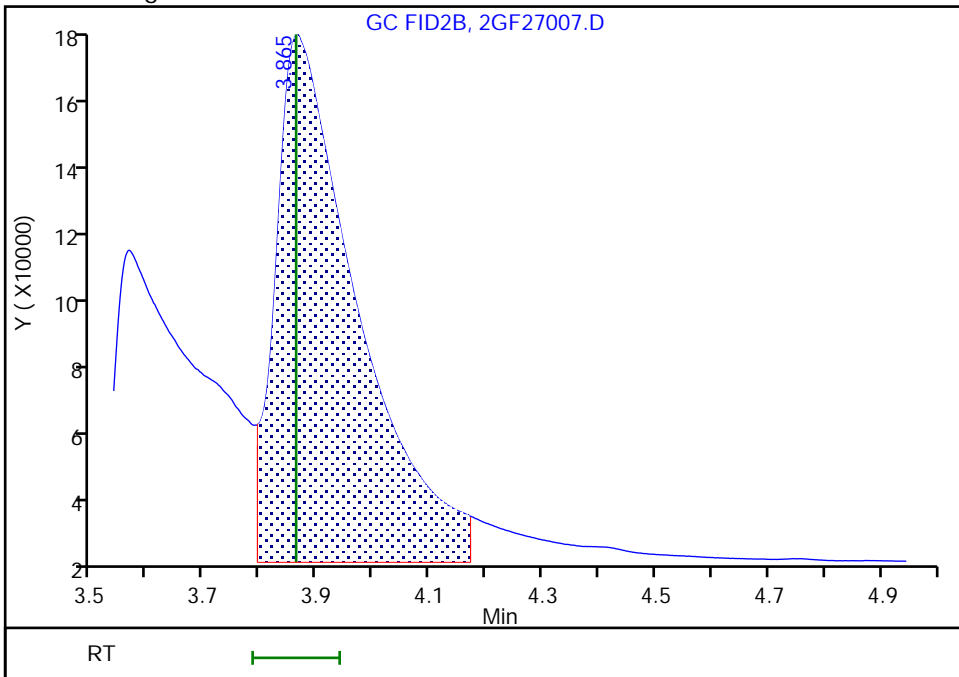
Reviewer: X4PF, 27-Jun-2023 16:18:22 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Peak Tail

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27008.D
Lims ID: icis g4
Client ID:

Sample Type:	ICIS	Calib Level:	4		
Inject. Date:	27-Jun-2023 15:16:03	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		

Sample Info: 680-0087071-008
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Jun-2023 15:58:22   Calib Date: 27-Jun-2023 16:26:02
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1628

First Level Reviewer: AR8P   Date: 28-Jun-2023 15:40:29

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						M
1.787	1.787	0.000	837971	20.0	17.7	M
2 4-Hydroxy-4-methyl-2-pentanone						
2.149	2.149	0.000	911353	20.0	17.3	
3 2-Butoxyethanol						
2.248	2.248	0.000	902832	20.0	18.1	
* 4 n-Heptyl Alcohol						
2.442	2.442	0.000	3877826	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.992	2.992	0.000	77228	20.0	16.5	
6 Propylene glycol						
3.572	3.572	0.000	292019	20.0	17.2	
7 Ethylene glycol						M
3.865	3.865	0.000	481413	20.0	17.5	M
8 2-(2-Butoxyethoxy)ethanol						
5.341	5.341	0.000	801859	20.0	16.3	
9 2,2'-Oxybisethanol						
7.405	7.405	0.000	370424	20.0	17.3	
10 Triethylene Glycol						
9.601	9.601	0.000	345656	20.0	16.8	
11 Tetraethylene Glycol						
10.438	10.438	0.000	711160	40.0	33.8	

QC Flag Legend
Processing Flags

Review Flags
 M - Manually Integrated
Reagents:
SG_Gly_CAL_00050   Amount Added: 10.00   Units: uL
SG_GLY_ISTD_00120   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27008.D
Injection Date: 27-Jun-2023 15:16:03   Instrument ID: CVGG2   Operator ID:
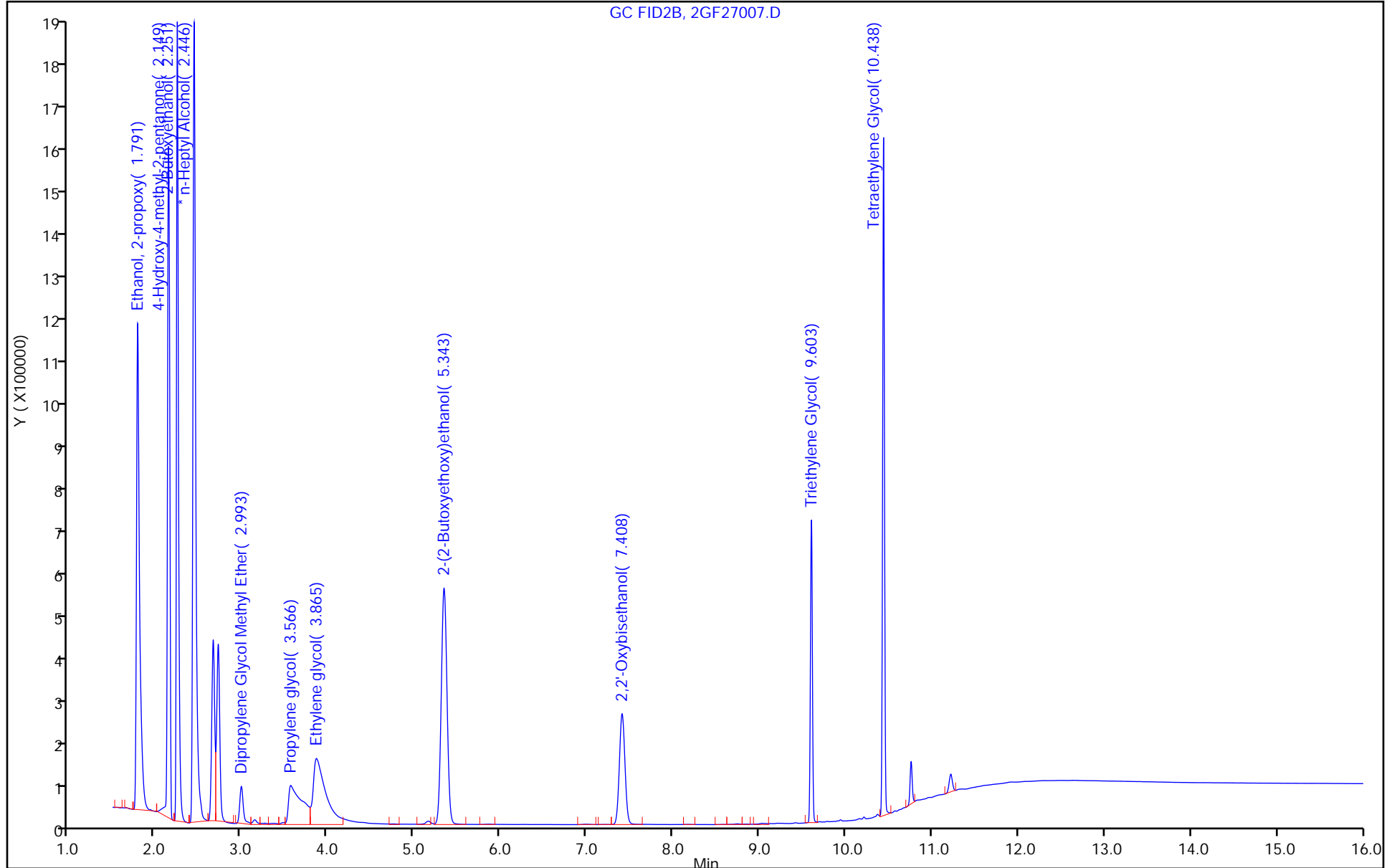Lims ID: icis g4   Worklist Smp#:   8
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 2GF27008.D

7/14/2023
12:11 PM
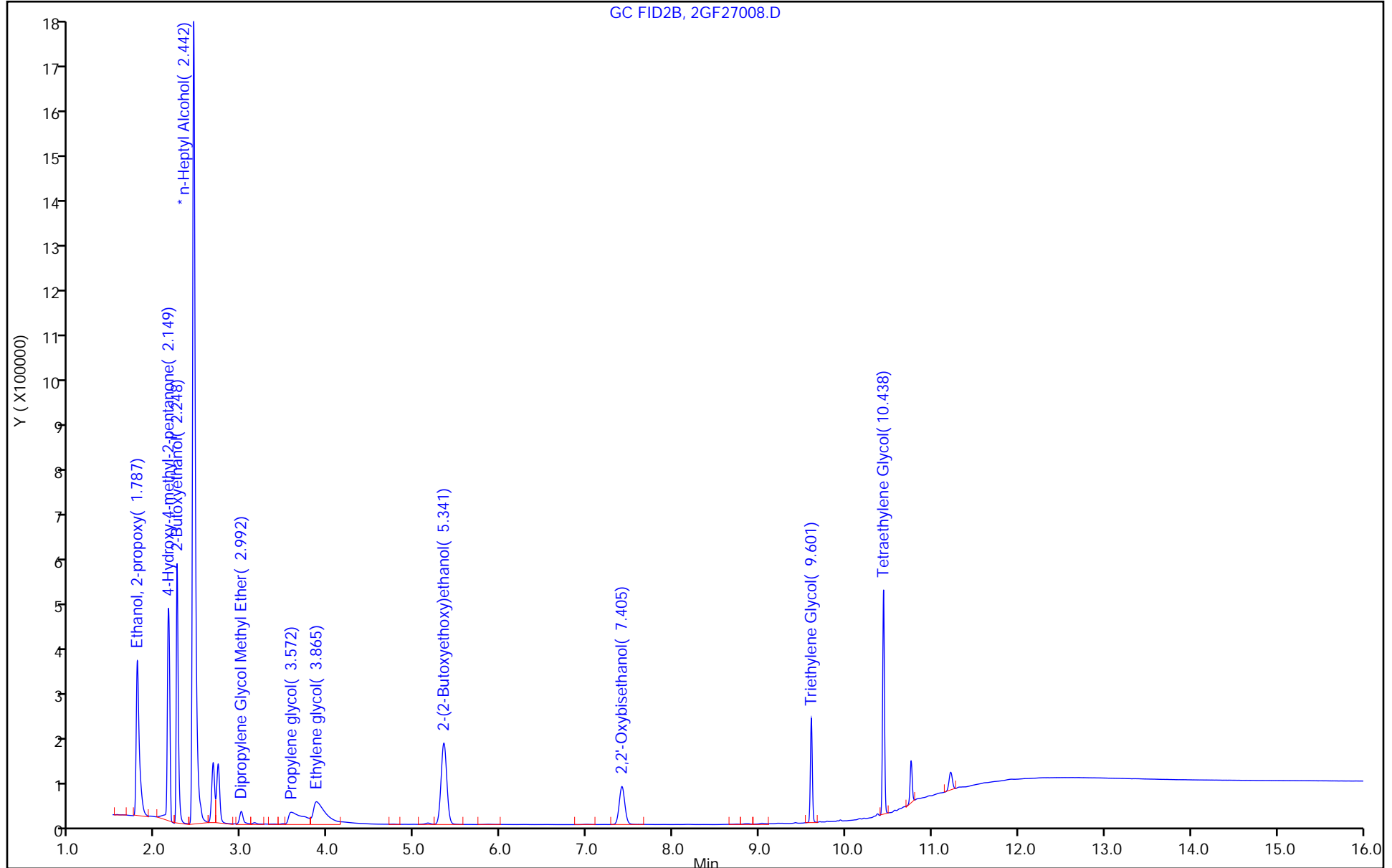
Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27008.D
Injection Date: 27-Jun-2023 15:16:03   Instrument ID: CVGG2
Lims ID: icis g4
Client ID:
Operator ID: ALS Bottle#:   0   Worklist Smp#:   8
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)   Detector   GC FID2B

1 Ethanol, 2-propoxy, CAS: 2807-30-9
Signal: 1

Processing Integration Results

RT: 1.79
Area: 790185
Amount: 16.250630
Amount Units: ug/ml

Manual Integration Results

RT: 1.79
Area: 837971
Amount: 17.705415
Amount Units: ug/ml
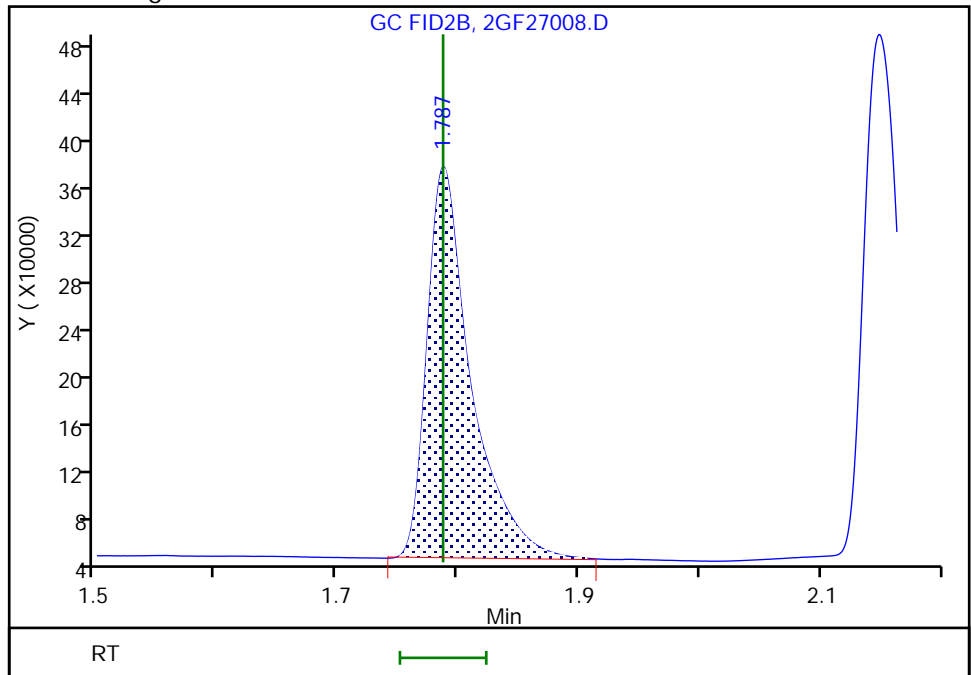
Reviewer: X4PF, 27-Jun-2023 15:49:50 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Incomplete Integration

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27008.D

Injection Date:	27-Jun-2023 15:16:03	Instrument ID:	CVGG2
Lims ID:	icis g4		
Client ID:			
Operator ID:		ALS Bottle#:	0 Worklist Smp#: 8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

Processing Integration Results

RT:	3.86
Area:	541162
Amount:	21.588972
Amount Units:	ug/ml

GC FID2B, 2GF27008.D

Manual Integration Results

RT:	3.86
Area:	481413
Amount:	17.513453
Amount Units:	ug/ml

GC FID2B, 2GF27008.D
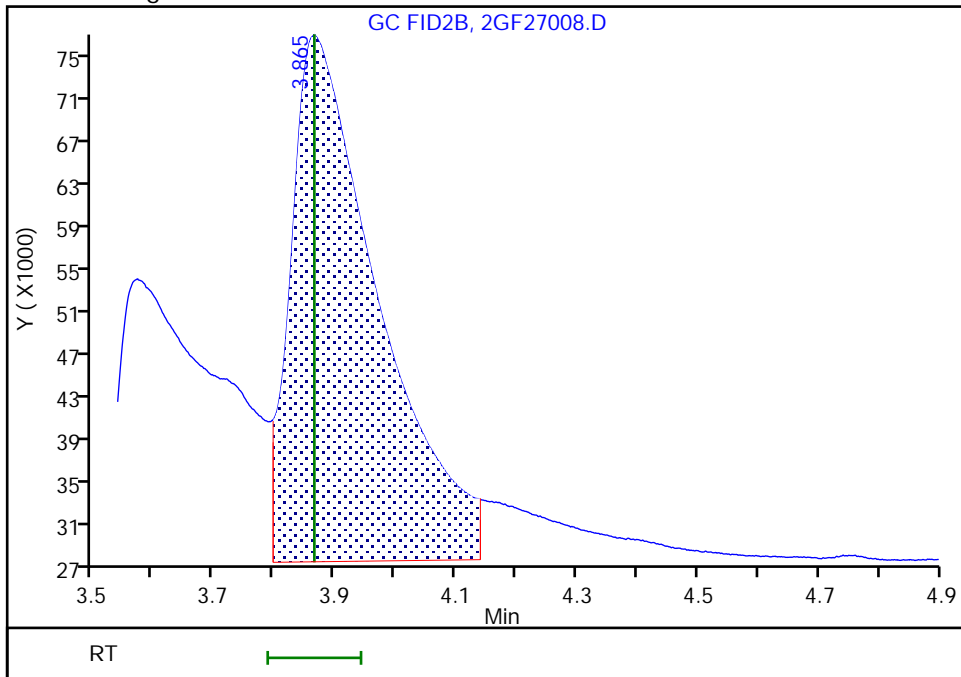
Reviewer: X4PF, 27-Jun-2023 16:17:55 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Peak Tail

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27009.D
Lims ID: ic g3
Client ID:
Sample Type: IC   Calib Level: 3
Inject. Date: 27-Jun-2023 15:39:21   ALS Bottle#:   0   Worklist Smp#:   9
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0087071-009
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Jun-2023 15:58:23   Calib Date: 27-Jun-2023 16:26:02
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1628

First Level Reviewer: X4PF   Date: 27-Jun-2023 16:28:09

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.785	1.787	-0.002	858439	10.0	16.1	
2 4-Hydroxy-4-methyl-2-pentanone						
2.147	2.149	-0.002	929690	10.0	15.6	
3 2-Butoxyethanol						
2.246	2.248	-0.002	925454	10.0	16.4	
* 4 n-Heptyl Alcohol						
2.438	2.442	-0.004	4347729	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.993	2.992	0.001	76130	10.0	14.4	
6 Propylene glycol						
3.572	3.572	0.000	271368	10.0	14.3	
7 Ethylene glycol						M
3.863	3.865	-0.002	456945	10.0	14.8	M
8 2-(2-Butoxyethoxy)ethanol						
5.342	5.341	0.001	771159	10.0	14.0	
9 2,2'-Oxybisethanol						
7.404	7.405	-0.001	355602	10.0	14.7	
10 Triethylene Glycol						
9.601	9.601	0.000	339810	10.0	14.6	
11 Tetraethylene Glycol						
10.438	10.438	0.000	701526	20.0	29.6	

QC Flag Legend
Processing Flags

Review Flags
 M - Manually Integrated

Reagents:

SG_Gly_CAL_00050   Amount Added: 5.00   Units: uL
SG_GLY_ISTD_00120   Amount Added: 10.00   Units: uL   Run Reagent

Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27009.D

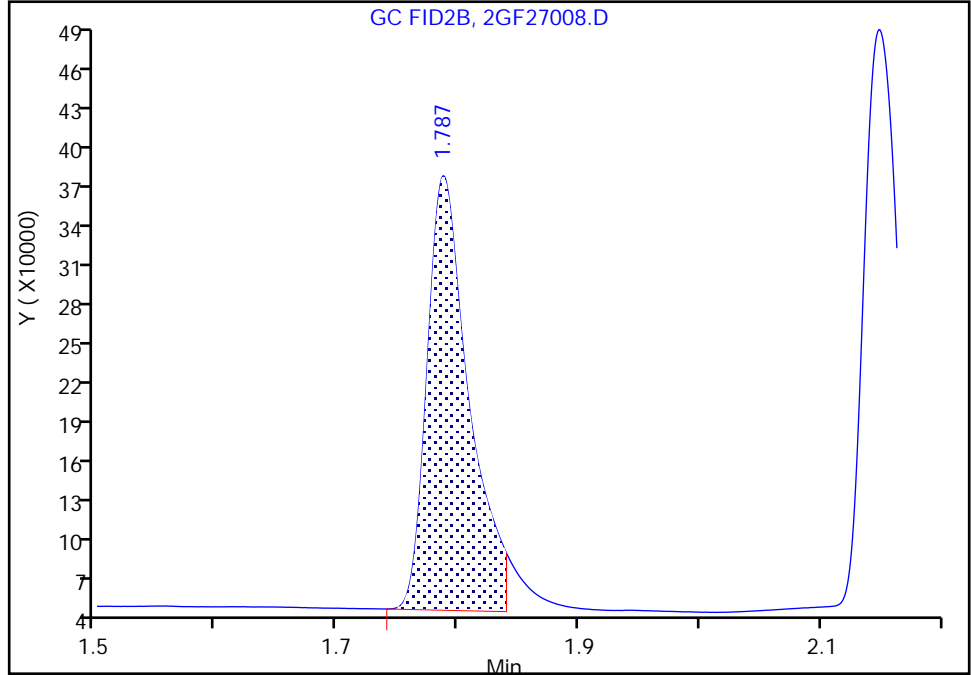| Injection Date: | 27-Jun-2023 15:39:21 | Instrument ID: | CVGG2 | Operator ID: | |
Lims ID:	ic g3			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)

GC FID2B, 2GF27009.D

7/14/2023
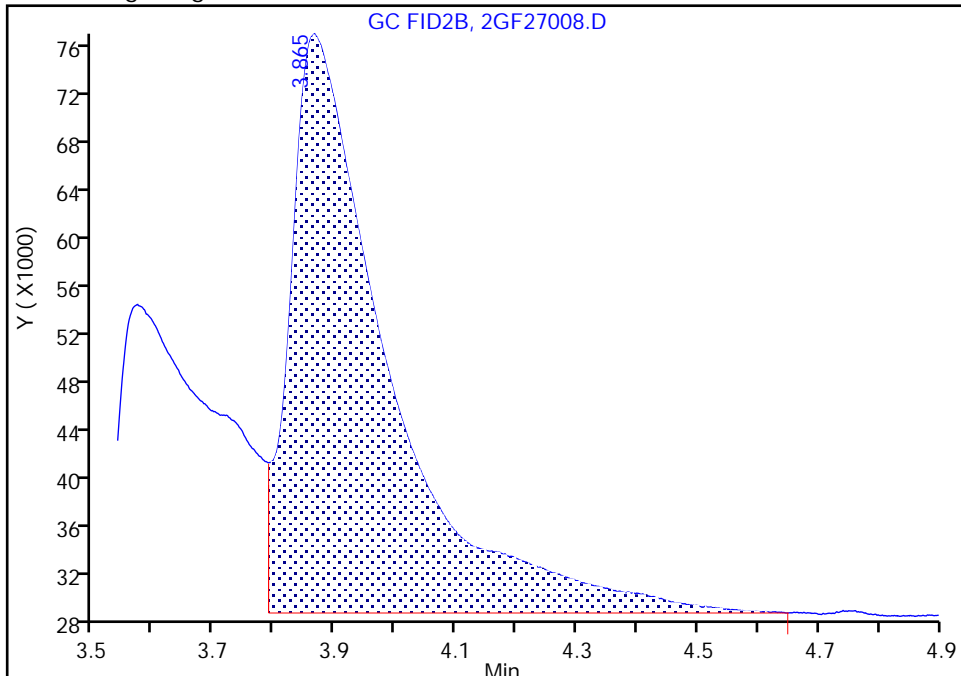12:11 PM

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27009.D
Injection Date: 27-Jun-2023 15:39:21   Instrument ID: CVGG2
Lims ID: ic g3
Client ID:
Operator ID: ALS Bottle#:   0   Worklist Smp#:   9
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)   Detector   GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

Processing Integration Results

RT: 3.86
Area: 514600
Amount: 16.250386
Amount Units: ug/ml

GC FID2B, 2GF27009.D

Manual Integration Results
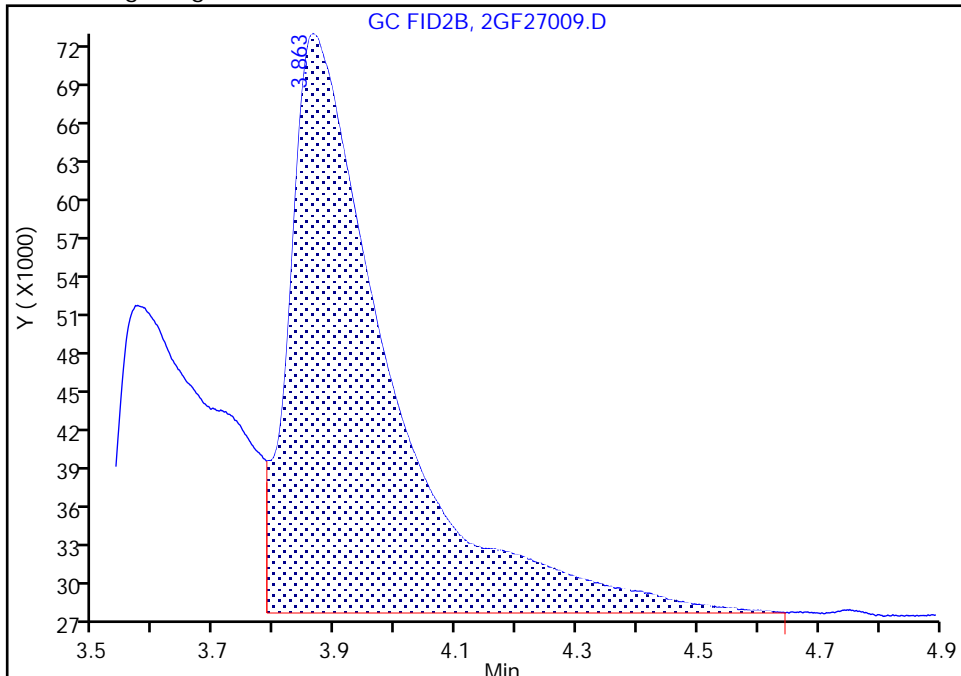
RT: 3.86
Area: 456945
Amount: 14.826674
Amount Units: ug/ml

GC FID2B, 2GF27009.D
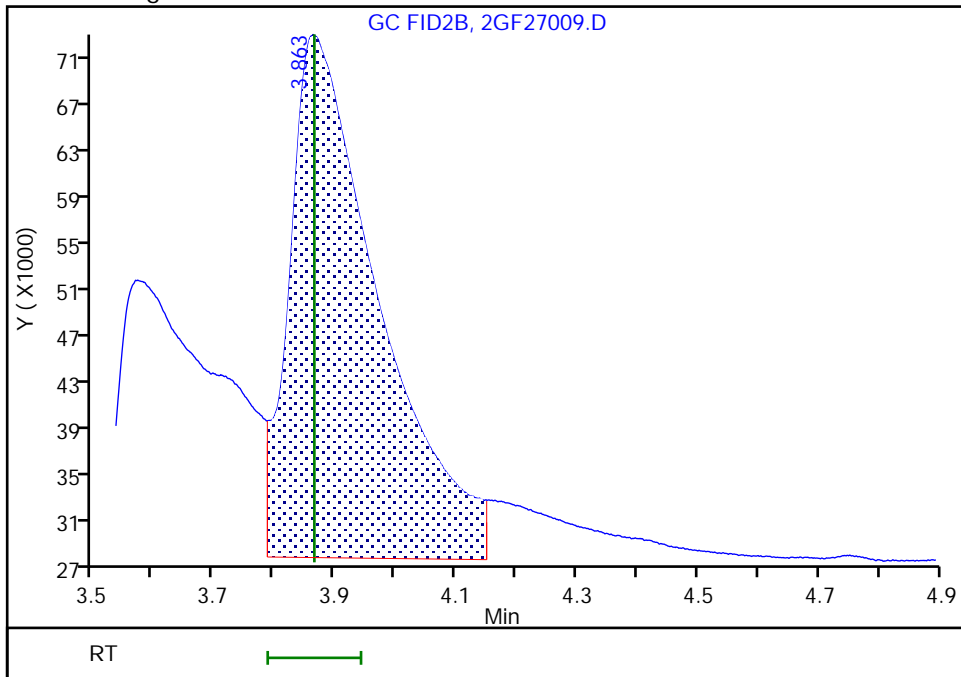
Reviewer: X4PF, 27-Jun-2023 16:18:50 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Peak Tail

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27010.D		
Lims ID:	ic g2		
Client ID:			

Sample Type:	IC	Calib Level:	2	
Inject. Date:	27-Jun-2023 16:02:38	ALS Bottle#:	0	Worklist Smp#: 10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	
Sample Info:	680-0087071-010			
Operator ID:		Instrument ID:	CVGG2	
Sublist:	chrom-8015_GLY_VGG*sub2			

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	28-Jun-2023 15:58:24	Calib Date:	27-Jun-2023 16:26:02
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D		

Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B
Process Host:	CTX1628		

First Level Reviewer: X4PF   Date: 27-Jun-2023 16:30:31

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.782	1.787	-0.005	363189	5.00	6.70	
2 4-Hydroxy-4-methyl-2-pentanone						
2.144	2.149	-0.005	426955	5.00	6.72	
3 2-Butoxyethanol						
2.244	2.248	-0.004	389269	5.00	6.61	
* 4 n-Heptyl Alcohol						
2.436	2.442	-0.006	4057103	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.991	2.992	-0.001	33708	5.00	6.67	
6 Propylene glycol						M
3.583	3.572	0.011	120550	5.00	6.80	M
7 Ethylene glycol						M
3.868	3.865	0.003	200127	5.00	6.96	M
8 2-(2-Butoxyethoxy)ethanol						
5.339	5.341	-0.002	328852	5.00	6.61	
9 2,2'-Oxybisethanol						
7.404	7.405	-0.001	152913	5.00	6.20	
10 Triethylene Glycol						
9.602	9.601	0.001	138749	5.00	5.83	
11 Tetraethylene Glycol						
10.438	10.438	0.000	275922	10.0	11.7	

QC Flag Legend
Processing Flags

Review Flags
 M - Manually Integrated

Reagents:

SG_Gly_CAL_00050   Amount Added: 2.50   Units: uL
SG_GLY_ISTD_00120   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27010.D
Injection Date: 27-Jun-2023 16:02:38   Instrument ID: CVGG2   Operator ID:
Lims ID: ic g2   Worklist Smp#:   10
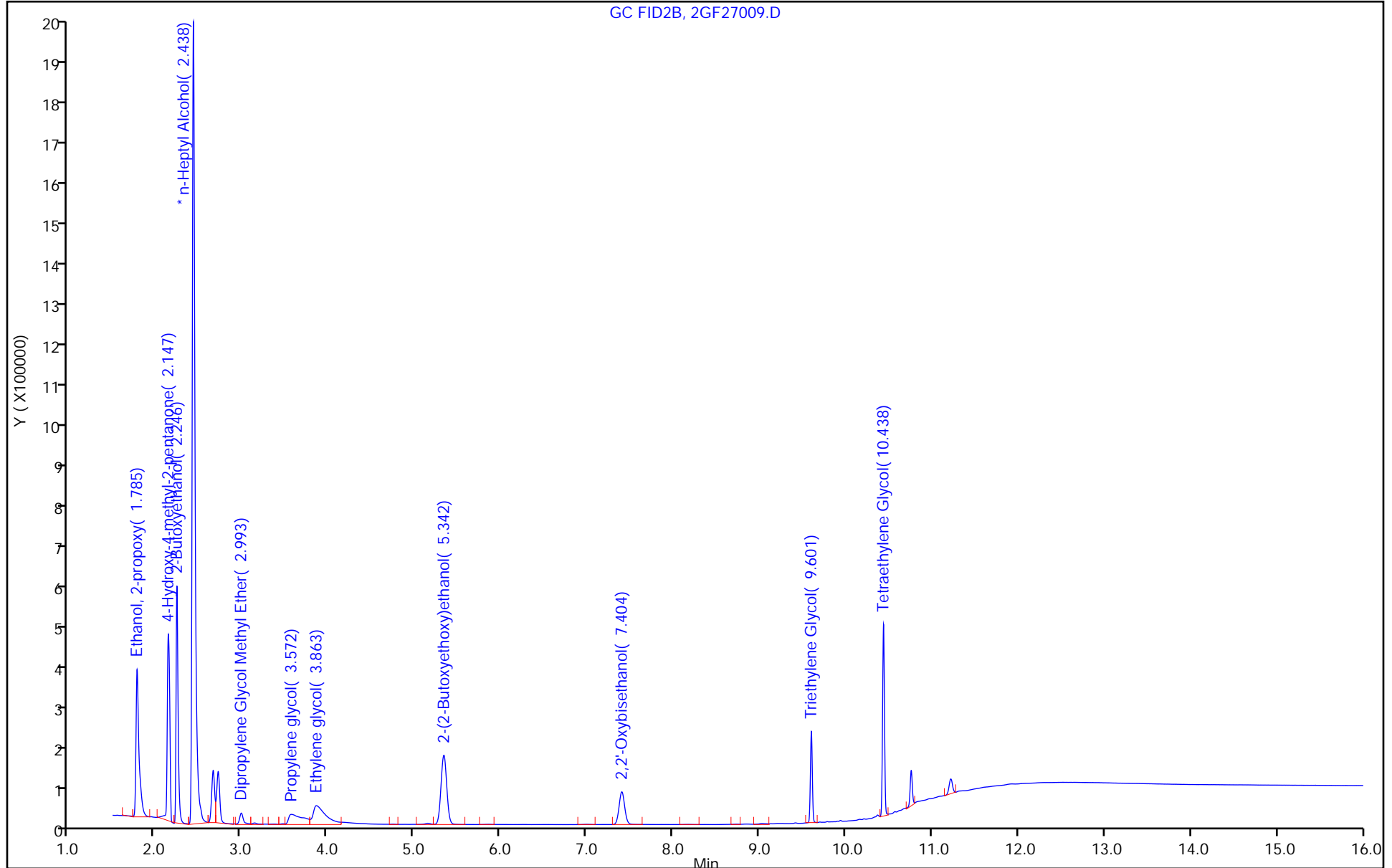Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 2GF27010.D

7/14/2023
12:11 PM
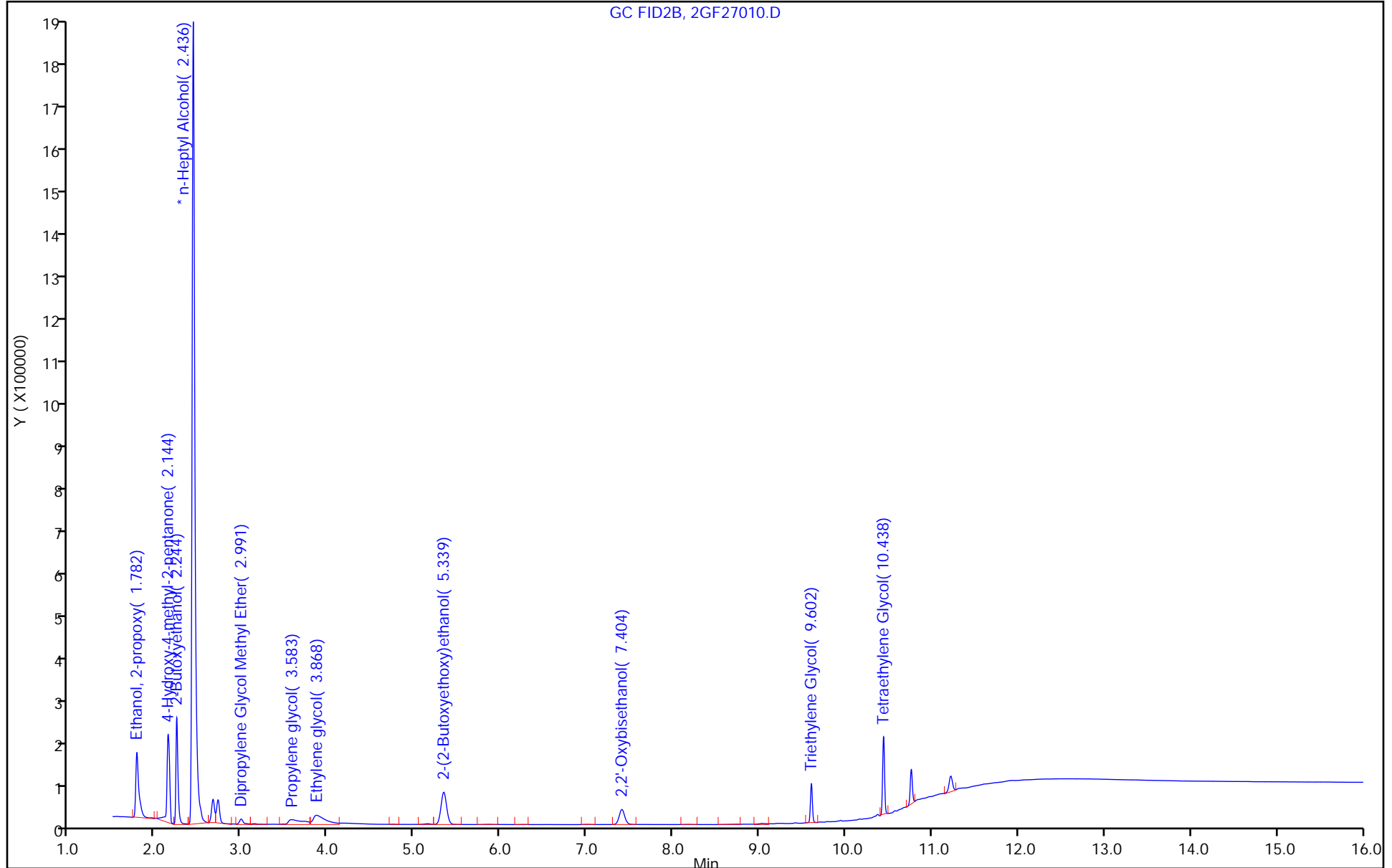
Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27010.D

Injection Date:	27-Jun-2023 16:02:38	Instrument ID:	CVGG2
Lims ID:	ic g2		
Client ID:			
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

Processing Integration Results

RT:	3.58
Area:	107878
Amount:	4.442827
Amount Units:	ug/ml

Manual Integration Results

RT:	3.58
Area:	120550
Amount:	6.804047
Amount Units:	ug/ml
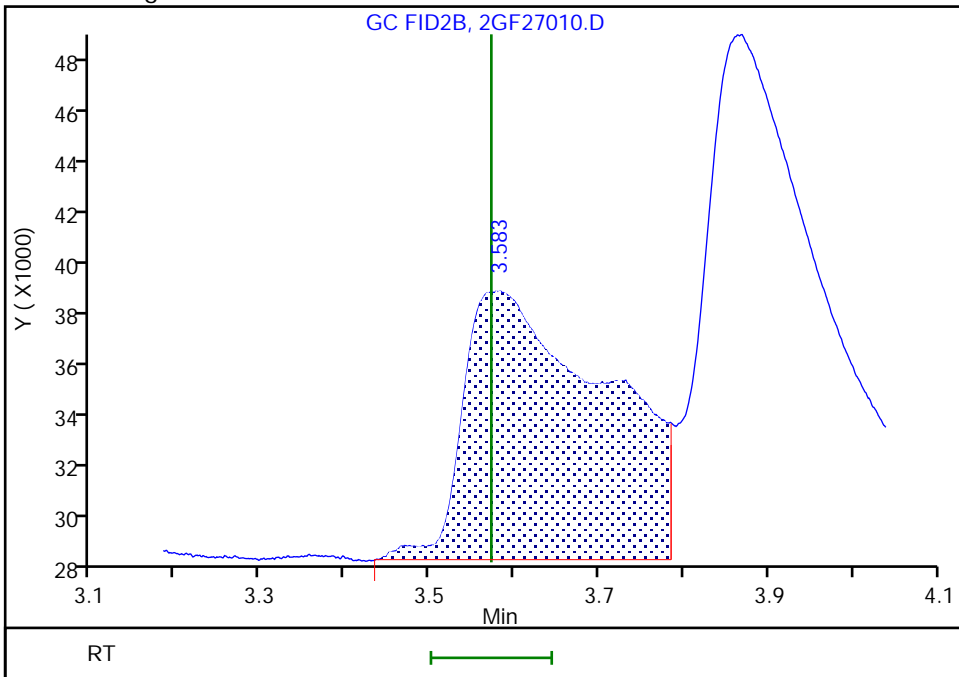
Reviewer: X4PF, 27-Jun-2023 16:28:43 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Incomplete Integration

7/14/2023
12:11 PM

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27010.D
Injection Date:	27-Jun-2023 16:02:38
Lims ID:	ic g2
Client ID:	
Operator ID:	
Injection Vol:	1.0 ul
Method:	8015_GLY_VGG
Column:	J&W DB WAX (0.45 mm)

Instrument ID:	CVGG2
ALS Bottle#:	0 Worklist Smp#: 10
Dil. Factor:	1.0000
Limit Group:	8015C_DAI
Detector	GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

Processing Integration Results

RT: 3.87
Area: 165338
Amount: 3.840910
Amount Units: ug/ml

Manual Integration Results

RT: 3.87
Area: 200127
Amount: 6.958761
Amount Units: ug/ml
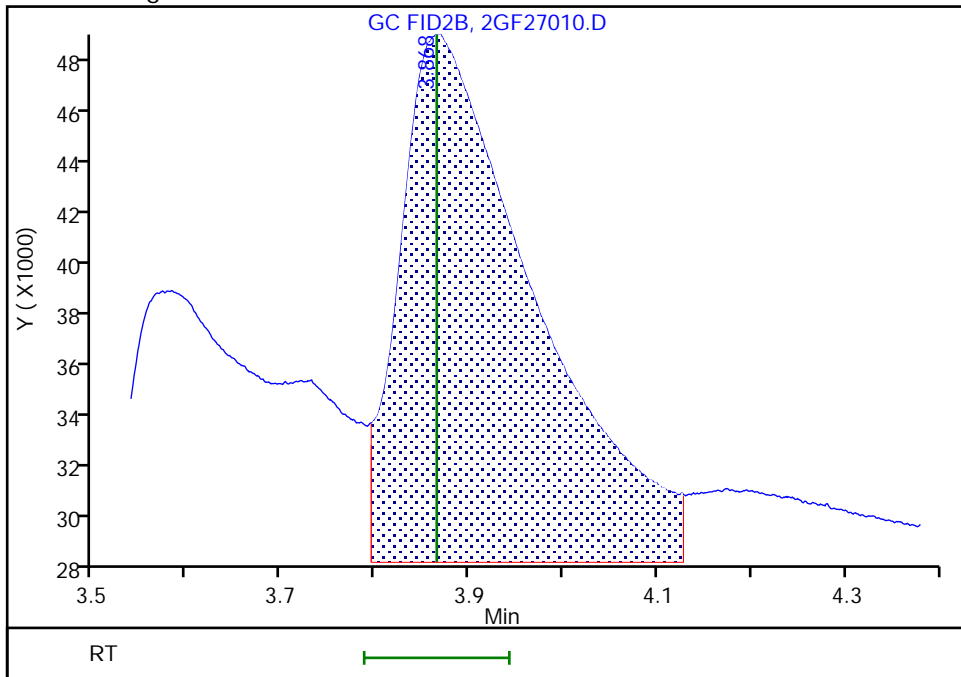
Reviewer: X4PF, 27-Jun-2023 16:28:33 -04:00:00 (UTC)
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

7/14/2023
12:11 PM

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D
Lims ID:	ic g1
Client ID:	

Sample Type:	IC	Calib Level:	1		
Inject. Date:	27-Jun-2023 16:26:02	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0087071-011				
Operator ID:		Instrument ID:	CVGG2		
Sublist:	chrom-8015_GLY_VGG*sub2				

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	28-Jun-2023 15:58:25	Calib Date:	27-Jun-2023 16:26:02
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det:	GC FID2B
Process Host:	CTX1628		

First Level Reviewer: AR8P   Date: 28-Jun-2023 15:37:07

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.781	1.787	-0.006	96714	2.00	1.20	
2 4-Hydroxy-4-methyl-2-pentanone						
2.144	2.149	-0.005	144073	2.00	1.54	
3 2-Butoxyethanol						
2.244	2.248	-0.004	106536	2.00	0.9396	
* 4 n-Heptyl Alcohol						
2.439	2.442	-0.003	3357110	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.987	2.992	-0.005	10230	2.00	2.32	
6 Propylene glycol						M
3.594	3.572	0.022	45484	2.00	3.10	M
7 Ethylene glycol						M
3.862	3.865	-0.003	78438	2.00	3.30	M
8 2-(2-Butoxyethoxy)ethanol						
5.339	5.341	-0.002	88133	2.00	2.56	
9 2,2'-Oxybisethanol						
7.404	7.405	-0.001	58794	2.00	2.33	
10 Triethylene Glycol						
9.602	9.601	0.001	48890	2.00	1.89	
11 Tetraethylene Glycol						
10.439	10.438	0.001	90140	4.00	3.77	

QC Flag Legend
Processing Flags

Review Flags
 M - Manually Integrated

Reagents:

SG_Gly_CAL_00050   Amount Added: 1.00   Units: uL
SG_GLY_ISTD_00120   Amount Added: 10.00   Units: uL   Run Reagent

Report Date: 28-Jun-2023 15:58:25　　　　Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Savannah

Data File:　　　　\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D
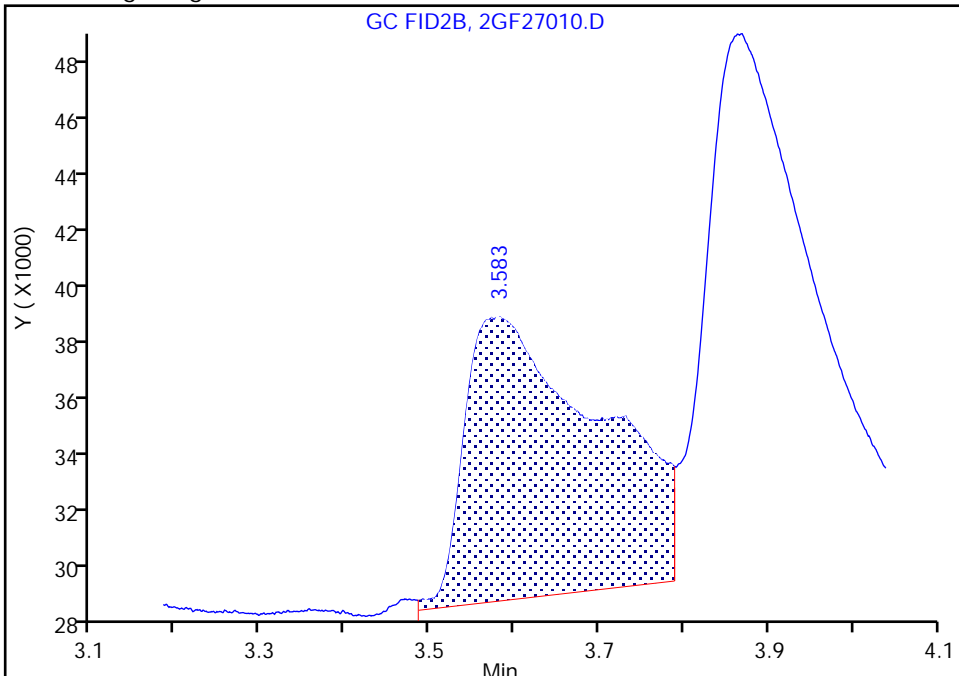Injection Date:　27-Jun-2023 16:26:02　　　Instrument ID:　　CVGG2　　　　Operator ID:
Lims ID:　　ic g1　　　　　　　　　　　　　　　　　　　　　　　　　　Worklist Smp#:　　11
Client ID:
Injection Vol:　1.0 ul　　　　　　　　Dil. Factor:　　1.0000　　　　ALS Bottle#:　　0
Method:　　8015_GLY_VGG　　　　Limit Group:　　8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 2GF27011.D

7/14/2023
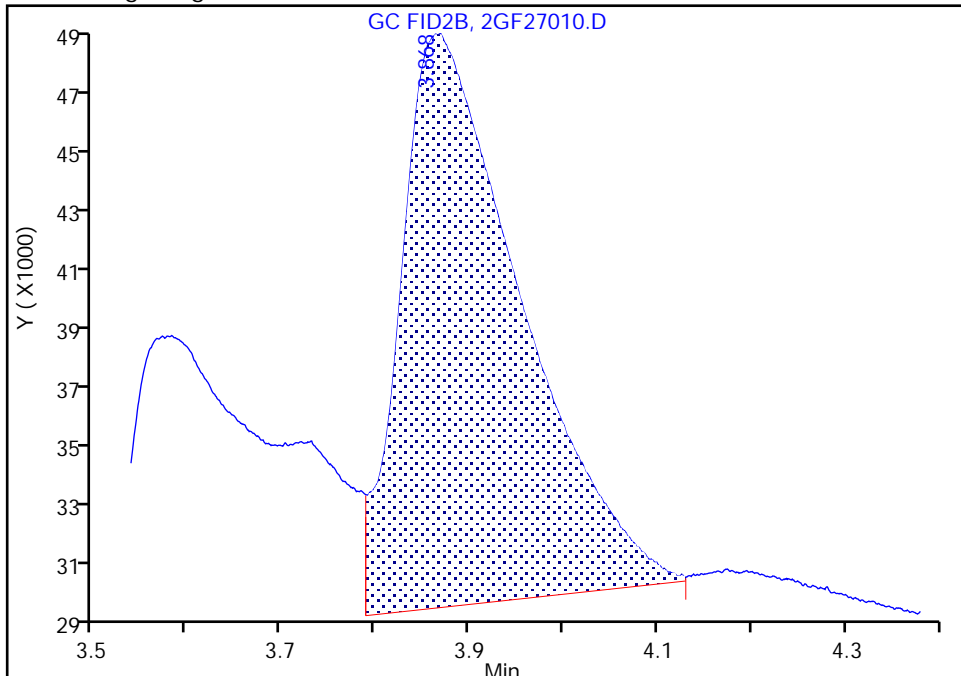12:11 PM

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D
Injection Date: 27-Jun-2023 16:26:02   Instrument ID: CVGG2
Lims ID: ic g1
Client ID:
Operator ID: ALS Bottle#:   0   Worklist Smp#:   11
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)   Detector   GC FID2B

6 Propylene glycol, CAS: 57-55-6
Signal: 1

Processing Integration Results
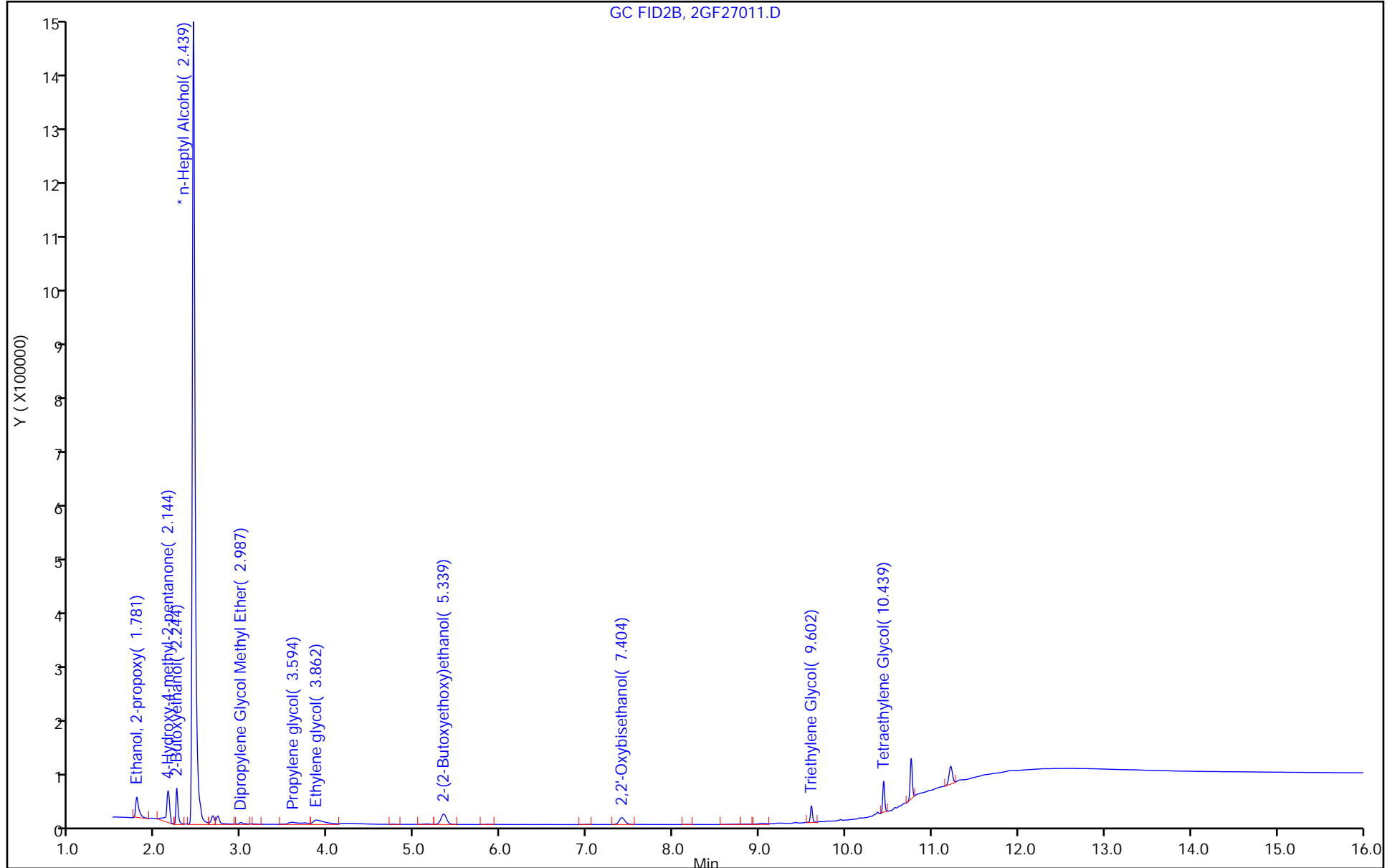
RT: 3.59
Area: 23198
Amount: 0.502286
Amount Units: ug/ml

Manual Integration Results
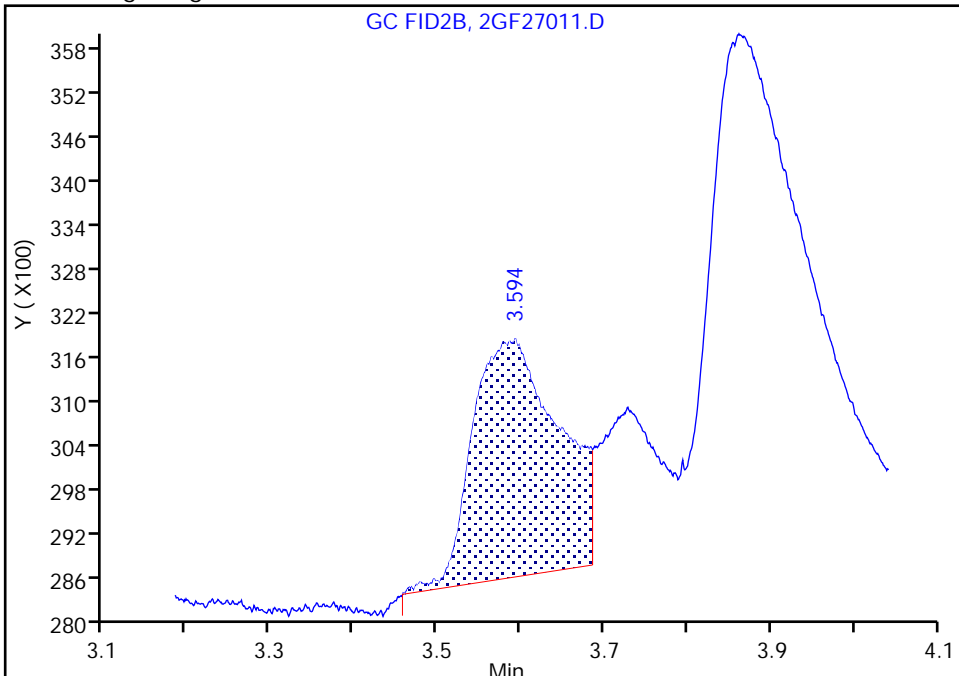
RT: 3.59
Area: 45484
Amount: 3.102481
Amount Units: ug/ml
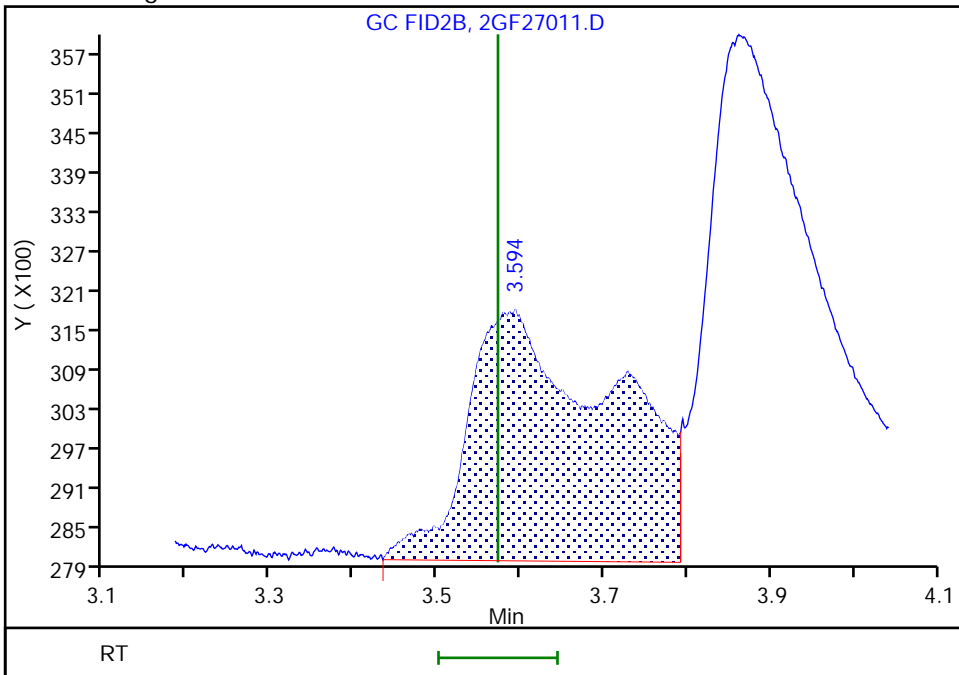
Reviewer: X4PF, 27-Jun-2023 17:20:07 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Incomplete Integration

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D
Injection Date:	27-Jun-2023 16:26:02	Instrument ID:	CVGG2
Lims ID:	ic g1		
Client ID:			
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B

7 Ethylene glycol, CAS: 107-21-1
Signal: 1

Processing Integration Results

RT:	3.86
Area:	58545
Amount:	0.583113
Amount Units:	ug/ml

Manual Integration Results
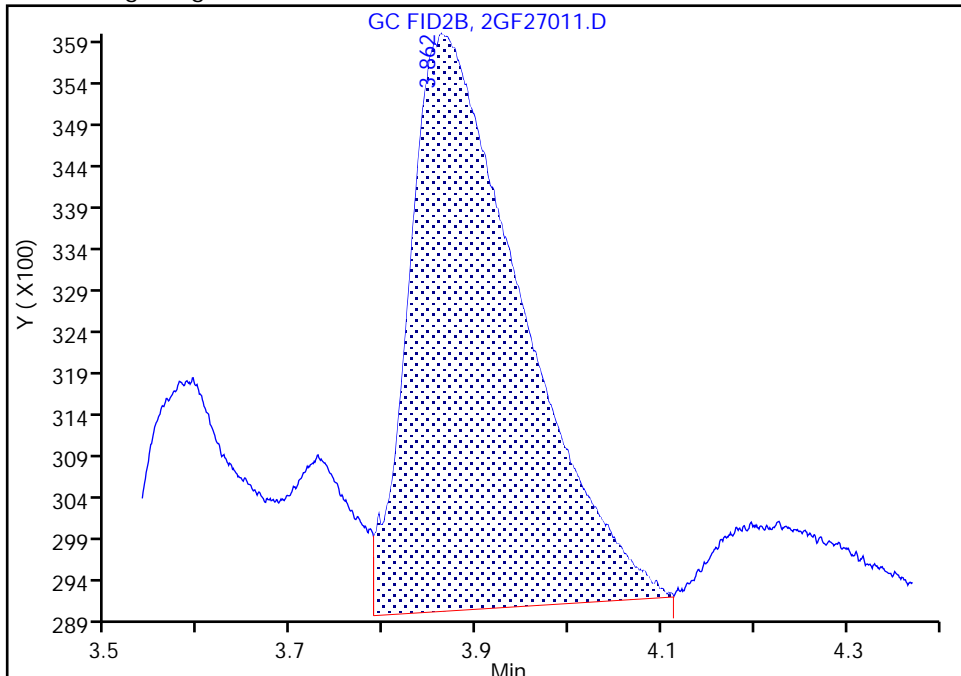
RT:	3.86
Area:	78438
Amount:	3.296122
Amount Units:	ug/ml
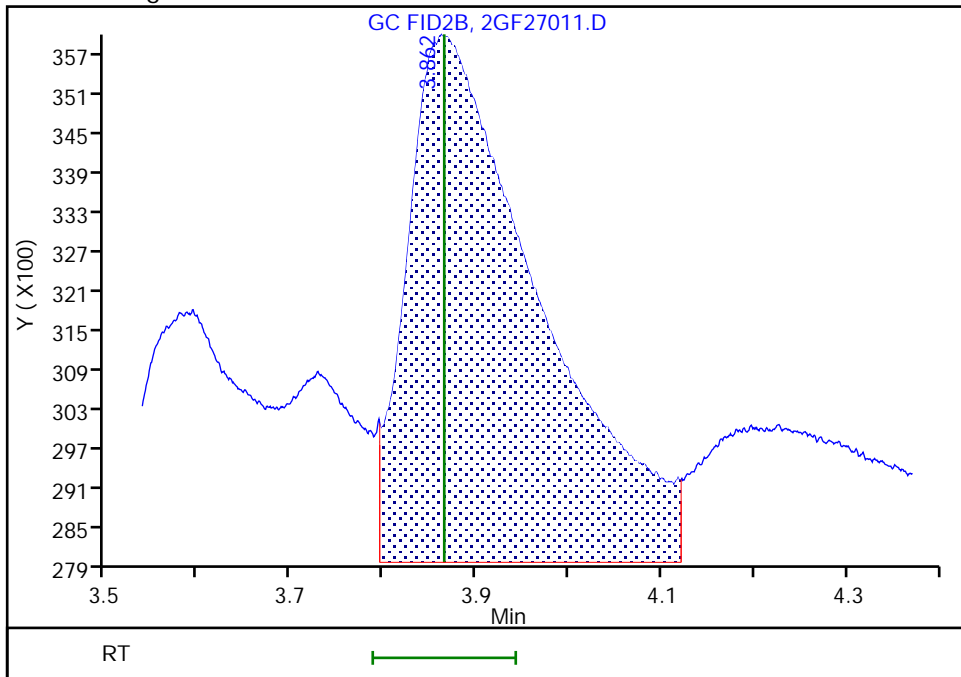
Reviewer: X4PF, 27-Jun-2023 17:19:58 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Incomplete Integration

				Curve Coefficients	
Curve Type:	Quadratic				
Weighting:	None		**Intercept:**		0.7872
Origin:	None		**Slope:**		0.5414
Dependency:	Response		**Second Order:**		0.001377
Calib Mode:	ISTD				
Response Base:	AREA			Error Coefficients	
RF Rounding:	0				
			Standard Error:		3800000
			Relative Standard Error:		31.2
			Correlation Coefficient:		0.979
			Coefficient of Determination (Adjusted):		0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	1.440435	50.0	3357110.0	0.720218	Y
2	IC 680-785716/10	5.0	4.475965	50.0	4057103.0	0.895193	Y
3	IC 680-785716/9	10.0	9.872269	50.0	4347729.0	0.987227	N
4	ICIS 680-785716/8	20.0	10.804649	50.0	3877826.0	0.540232	Y
5	IC 680-785716/7	50.0	33.374717	50.0	4049065.0	0.667494	Y
6	IC 680-785716/6	80.0	50.807021	50.0	3292230.0	0.635088	Y
7	IC 680-785716/5	100.0	69.583515	50.0	3524689.0	0.695835	Y
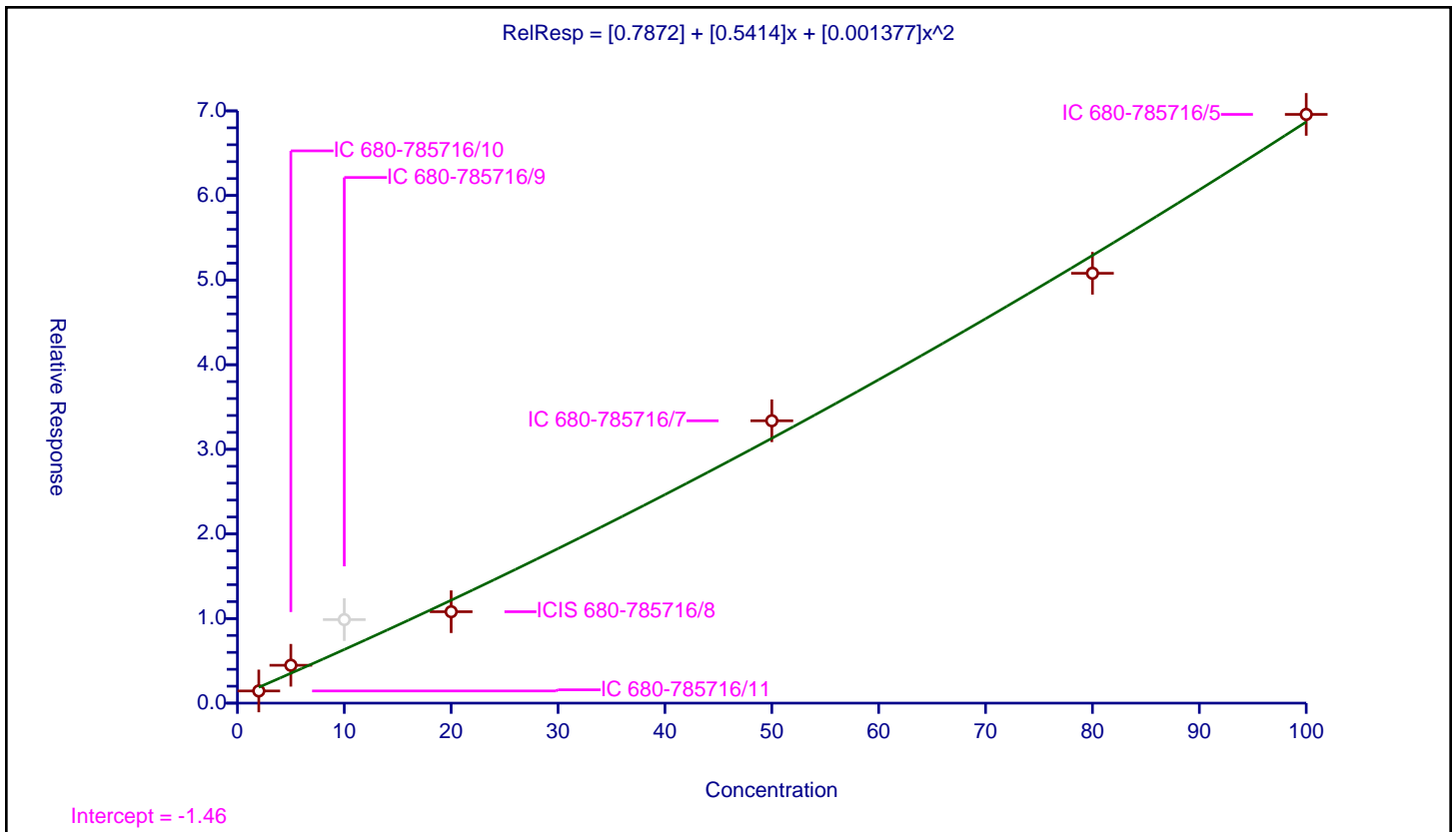
RelResp = [0.7872] + [0.5414]x + [0.001377]x^2

Intercept = -1.46

					Curve Coefficients		
Curve Type:	Quadratic				**Intercept:**		1.229
Weighting:	None				**Slope:**		0.5952
Origin:	None				**Second Order:**		0.0006944
Dependency:	Response						
Calib Mode:	ISTD					Error Coefficients	
Response Base:	AREA						
RF Rounding:	0				**Standard Error:**		3810000
					Relative Standard Error:		25.4
					Correlation Coefficient:		0.980
					Coefficient of Determination (Adjusted):		0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	2.145789	50.0	3357110.0	1.072895	Y
2	IC 680-785716/10	5.0	5.261821	50.0	4057103.0	1.052364	Y
3	IC 680-785716/9	10.0	10.691674	50.0	4347729.0	1.069167	N
4	ICIS 680-785716/8	20.0	11.750824	50.0	3877826.0	0.587541	Y
5	IC 680-785716/7	50.0	34.498792	50.0	4049065.0	0.689976	Y
6	IC 680-785716/6	80.0	51.895554	50.0	3292230.0	0.648694	Y
7	IC 680-785716/5	100.0	68.19901	50.0	3524689.0	0.68199	Y

RelResp = [1.229] + [0.5952]x + [0.0006944]x^2

Intercept = -2.07

7/14/2023
12:11 PM
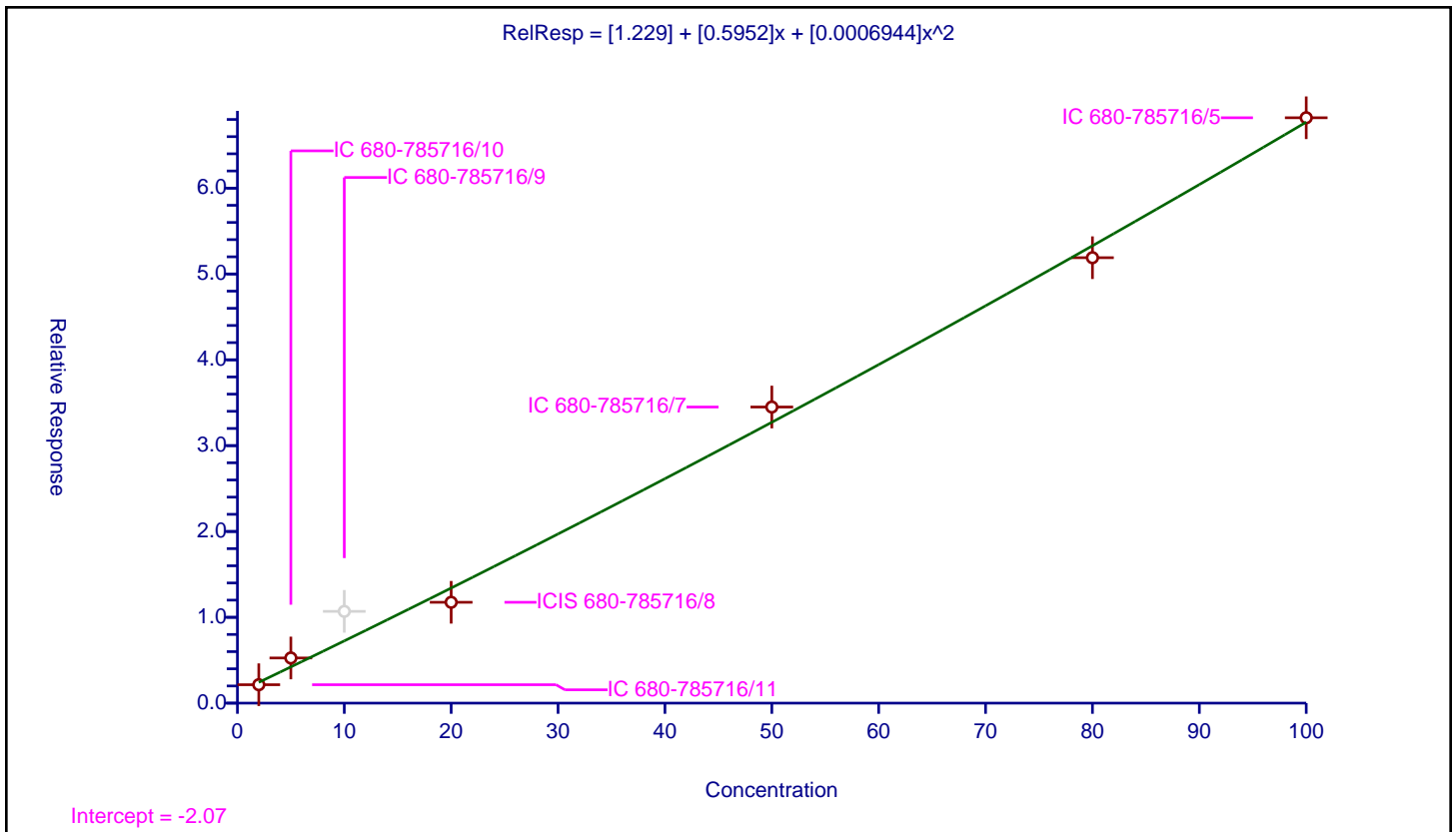
Calibration   **/ 2-Butoxyethanol**

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	1.066
Slope:	0.5525
Second Order:	0.001825

Error Coefficients

Standard Error:	4110000
Relative Standard Error:	36.5
Correlation Coefficient:	0.977
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	1.586722	50.0	3357110.0	0.793361	Y
2	IC 680-785716/10	5.0	4.797376	50.0	4057103.0	0.959475	Y
3	IC 680-785716/9	10.0	10.642959	50.0	4347729.0	1.064296	N
4	ICIS 680-785716/8	20.0	11.640956	50.0	3877826.0	0.582048	Y
5	IC 680-785716/7	50.0	35.735015	50.0	4049065.0	0.7147	Y
6	IC 680-785716/6	80.0	54.066104	50.0	3292230.0	0.675826	Y
7	IC 680-785716/5	100.0	75.828492	50.0	3524689.0	0.758285	Y
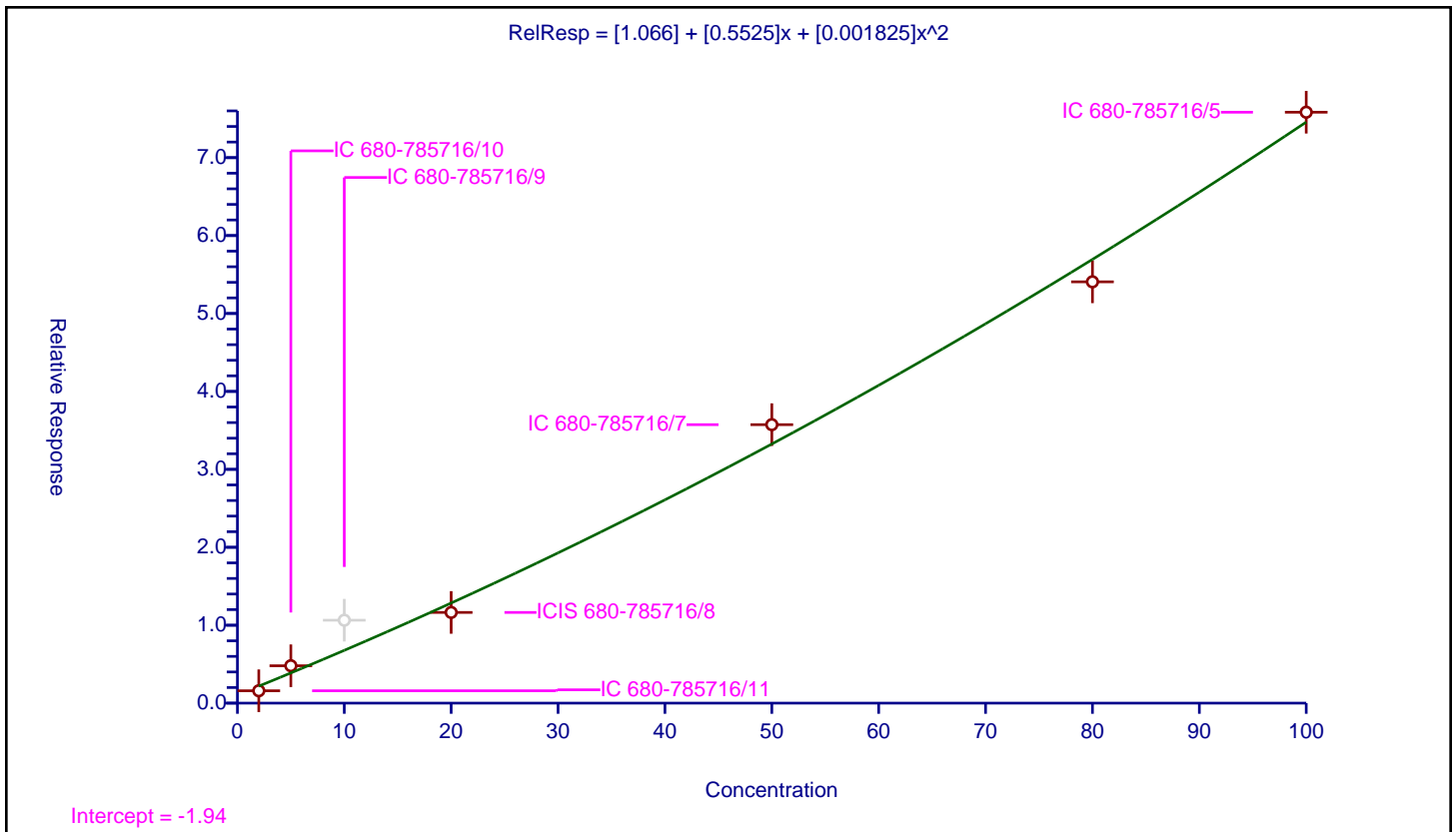
RelResp = [1.066] + [0.5525]x + [0.001825]x^2

Intercept = -1.94

Calibration

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0.0101
Slope:	0.06146
Second Order:	-0.0001017

Error Coefficients

Standard Error:	301000
Relative Standard Error:	23.8
Correlation Coefficient:	0.985
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	0.152363	50.0	3357110.0	0.076182	Y
2	IC 680-785716/10	5.0	0.41542	50.0	4057103.0	0.083084	Y
3	IC 680-785716/9	10.0	0.875515	50.0	4347729.0	0.087551	N
4	ICIS 680-785716/8	20.0	0.995764	50.0	3877826.0	0.049788	Y
5	IC 680-785716/7	50.0	2.899052	50.0	4049065.0	0.057981	Y
6	IC 680-785716/6	80.0	4.33621	50.0	3292230.0	0.054203	Y
7	IC 680-785716/5	100.0	5.090279	50.0	3524689.0	0.050903	Y

RelResp = [0.0101] + [0.06146]x + [-0.0001017]x^2
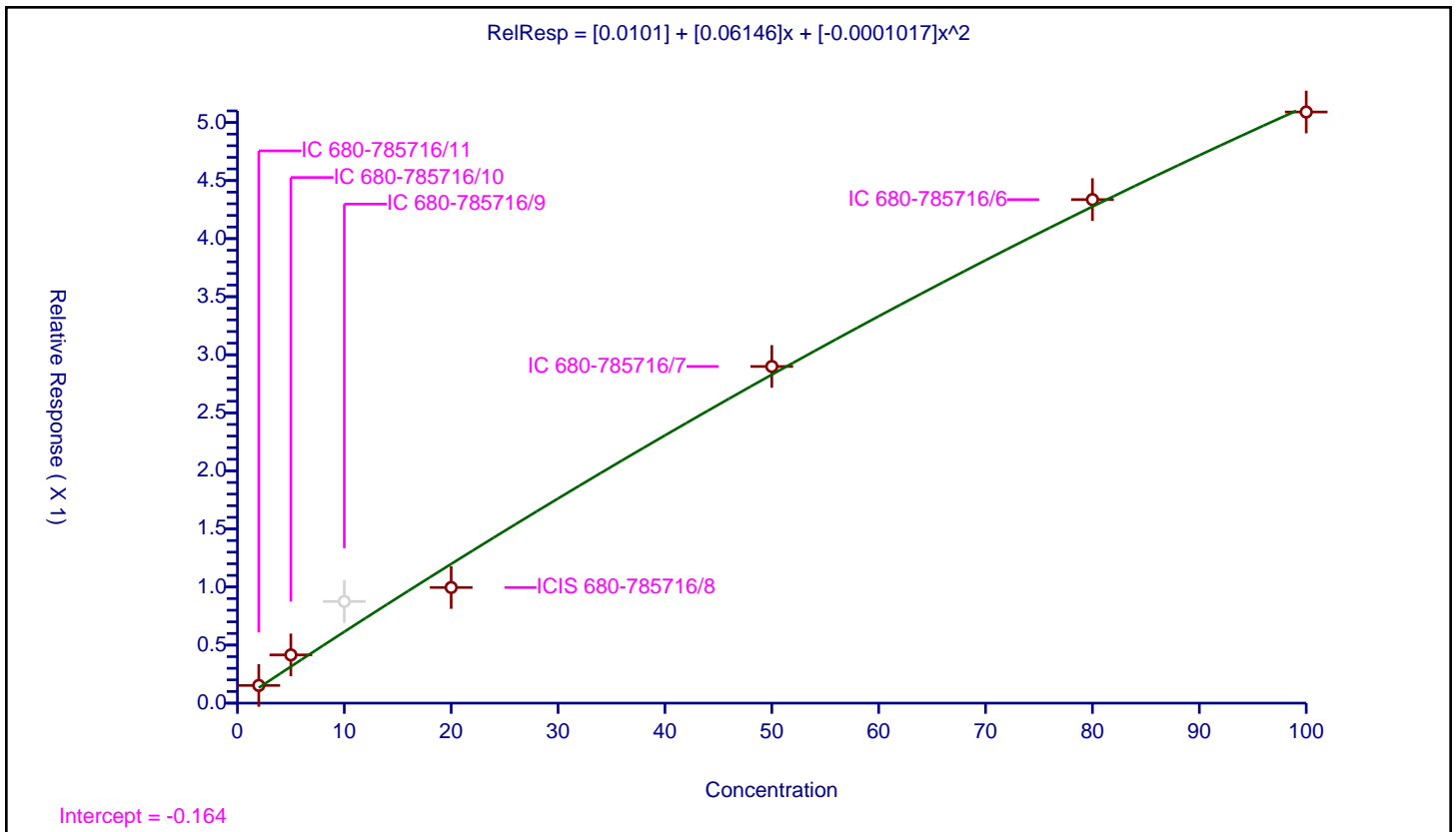
Intercept = -0.164

Calibration

/ Propylene glycol

Curve Type:	Linear
Weighting:	None
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.2184

Error Coefficients

Standard Error:	749000
Relative Standard Error:	33.7
Correlation Coefficient:	0.973
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	0.677428	50.0	3357110.0	0.338714	Y
2	IC 680-785716/10	5.0	1.485666	50.0	4057103.0	0.297133	Y
3	IC 680-785716/9	10.0	3.120802	50.0	4347729.0	0.31208	N
4	ICIS 680-785716/8	20.0	3.765241	50.0	3877826.0	0.188262	Y
5	IC 680-785716/7	50.0	11.274084	50.0	4049065.0	0.225482	Y
6	IC 680-785716/6	80.0	17.364978	50.0	3292230.0	0.217062	Y
7	IC 680-785716/5	100.0	13.426461	50.0	3524689.0	0.134265	N

RelResp = [0.2184]x

7/14/2023
12:11 PM
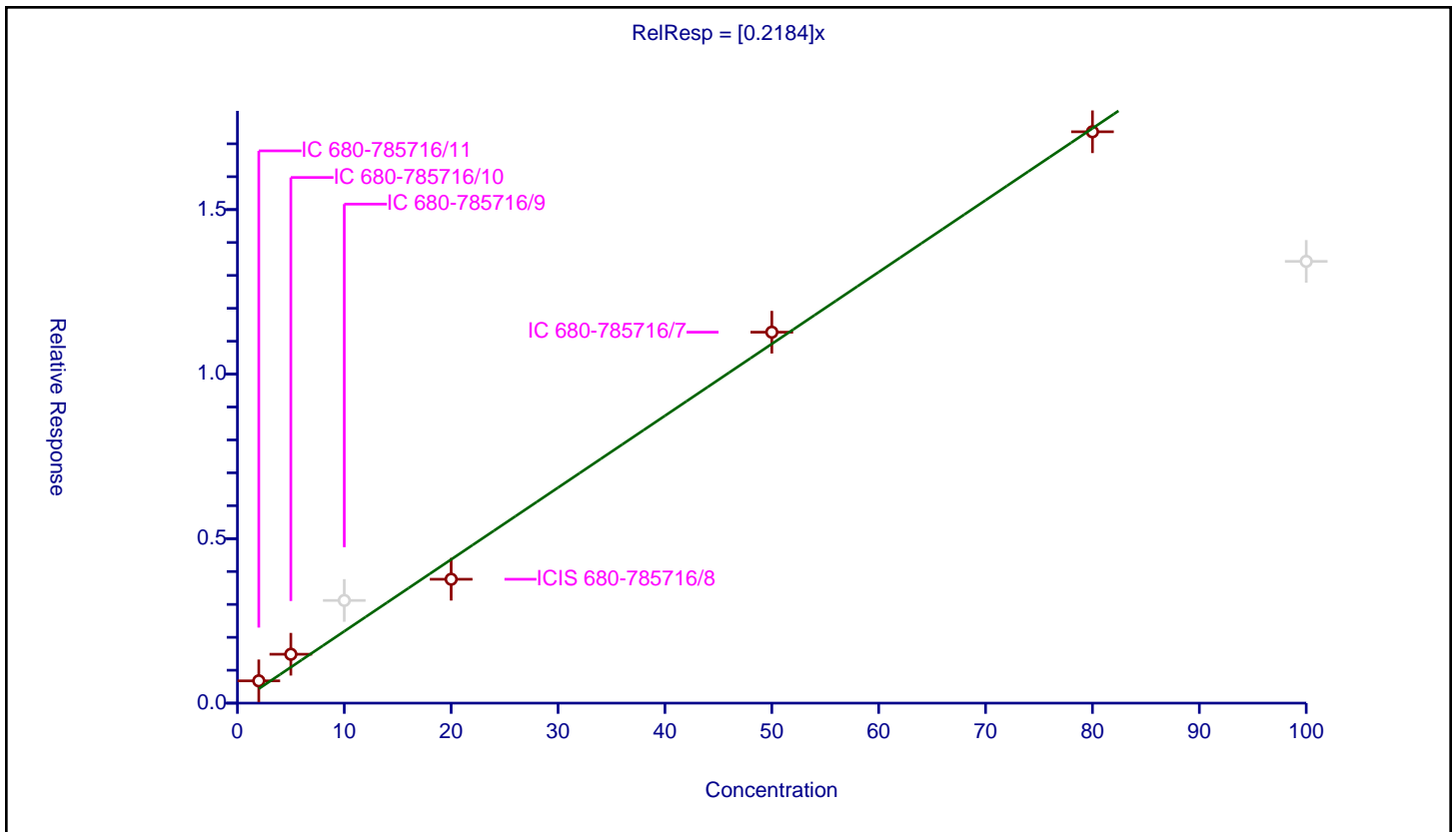
Calibration

/ Ethylene glycol

Curve Type:	Linear		
Weighting:	None		
Origin:	Force		
Dependency:	Response		
Calib Mode:	ISTD		
Response Base:	AREA		
RF Rounding:	0		

Curve Coefficients

Intercept:	0
Slope:	0.3544

Error Coefficients

Standard Error:	1210000
Relative Standard Error:	38.4
Correlation Coefficient:	0.976
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	1.168237	50.0	3357110.0	0.584118	Y
2	IC 680-785716/10	5.0	2.466378	50.0	4057103.0	0.493276	Y
3	IC 680-785716/9	10.0	5.254985	50.0	4347729.0	0.525498	N
4	ICIS 680-785716/8	20.0	6.207254	50.0	3877826.0	0.310363	Y
5	IC 680-785716/7	50.0	18.105452	50.0	4049065.0	0.362109	Y
6	IC 680-785716/6	80.0	28.279631	50.0	3292230.0	0.353495	Y
7	IC 680-785716/5	100.0	20.311934	50.0	3524689.0	0.203119	N

RelResp = [0.3544]x

7/14/2023
12:11 PM
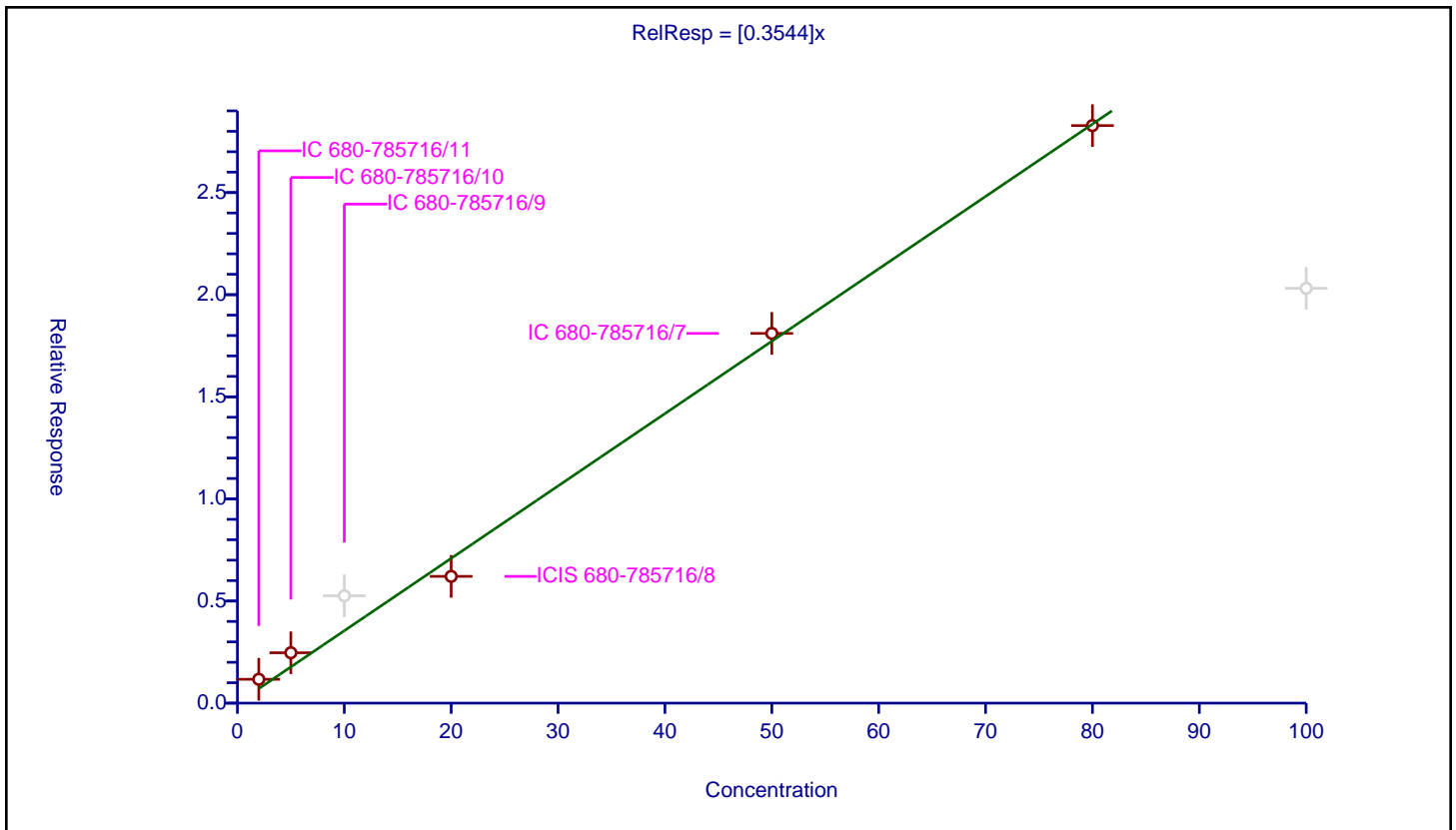
Calibration

/ 2-(2-Butoxyethoxy)ethanol

			Curve Coefficients	
Curve Type:	Quadratic			
Weighting:	None	**Intercept:**	-0.4525	
Origin:	None	**Slope:**	0.6932	
Dependency:	Response	**Second Order:**	-0.001815	
Calib Mode:	ISTD			
Response Base:	AREA			
RF Rounding:	0		**Error Coefficients**	
		Standard Error:	3040000	
		Relative Standard Error:	27.2	
		Correlation Coefficient:	0.987	
		Coefficient of Determination (Adjusted):	0.996	

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	1.312632	50.0	3357110.0	0.656316	Y
2	IC 680-785716/10	5.0	4.052793	50.0	4057103.0	0.810559	Y
3	IC 680-785716/9	10.0	8.868527	50.0	4347729.0	0.886853	N
4	ICIS 680-785716/8	20.0	10.339028	50.0	3877826.0	0.516951	Y
5	IC 680-785716/7	50.0	30.057766	50.0	4049065.0	0.601155	Y
6	IC 680-785716/6	80.0	44.759327	50.0	3292230.0	0.559492	Y
7	IC 680-785716/5	100.0	49.835872	50.0	3524689.0	0.498359	Y

RelResp = [-0.4525] + [0.6932]x + [-0.001815]x^2
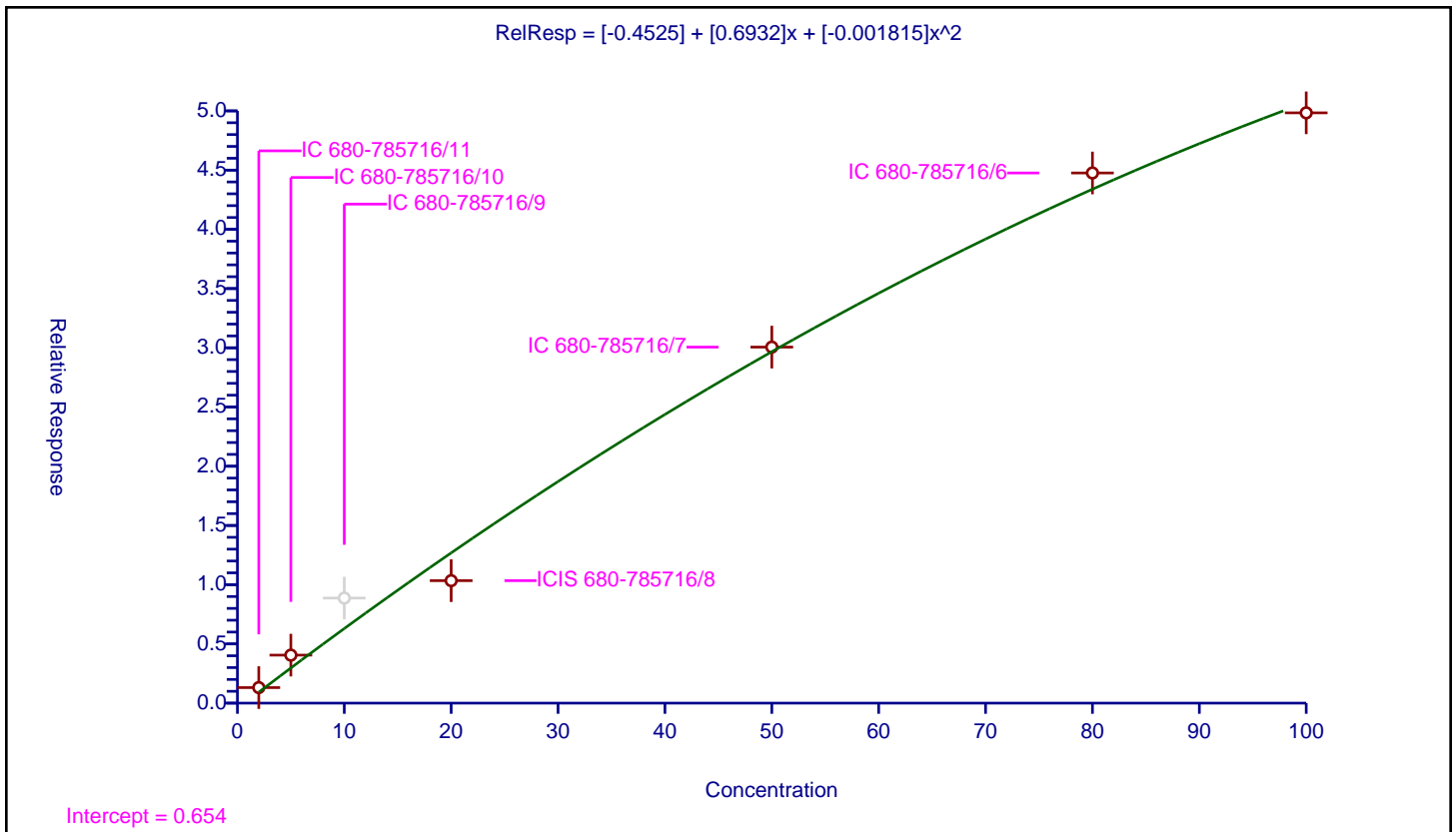
Intercept = 0.654

Calibration

/ 2,2'-Oxybisethanol

Curve Type:	Linear
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

| **Intercept:** | 0.2684 |
| **Slope:** | 0.2605 |

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	18.7
Correlation Coefficient:	0.986
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	0.875664	50.0	3357110.0	0.437832	Y
2	IC 680-785716/10	5.0	1.88451	50.0	4057103.0	0.376902	Y
3	IC 680-785716/9	10.0	4.089514	50.0	4347729.0	0.408951	N
4	ICIS 680-785716/8	20.0	4.776181	50.0	3877826.0	0.238809	Y
5	IC 680-785716/7	50.0	13.688111	50.0	4049065.0	0.273762	Y
6	IC 680-785716/6	80.0	21.014297	50.0	3292230.0	0.262679	Y
7	IC 680-785716/5	100.0	14.308681	50.0	3524689.0	0.143087	N

RelResp = [0.2684] + [0.2605]x

Relative Response

IC 680-785716/11
IC 680-785716/10
IC 680-785716/9
IC 680-785716/7
ICIS 680-785716/8

Concentration
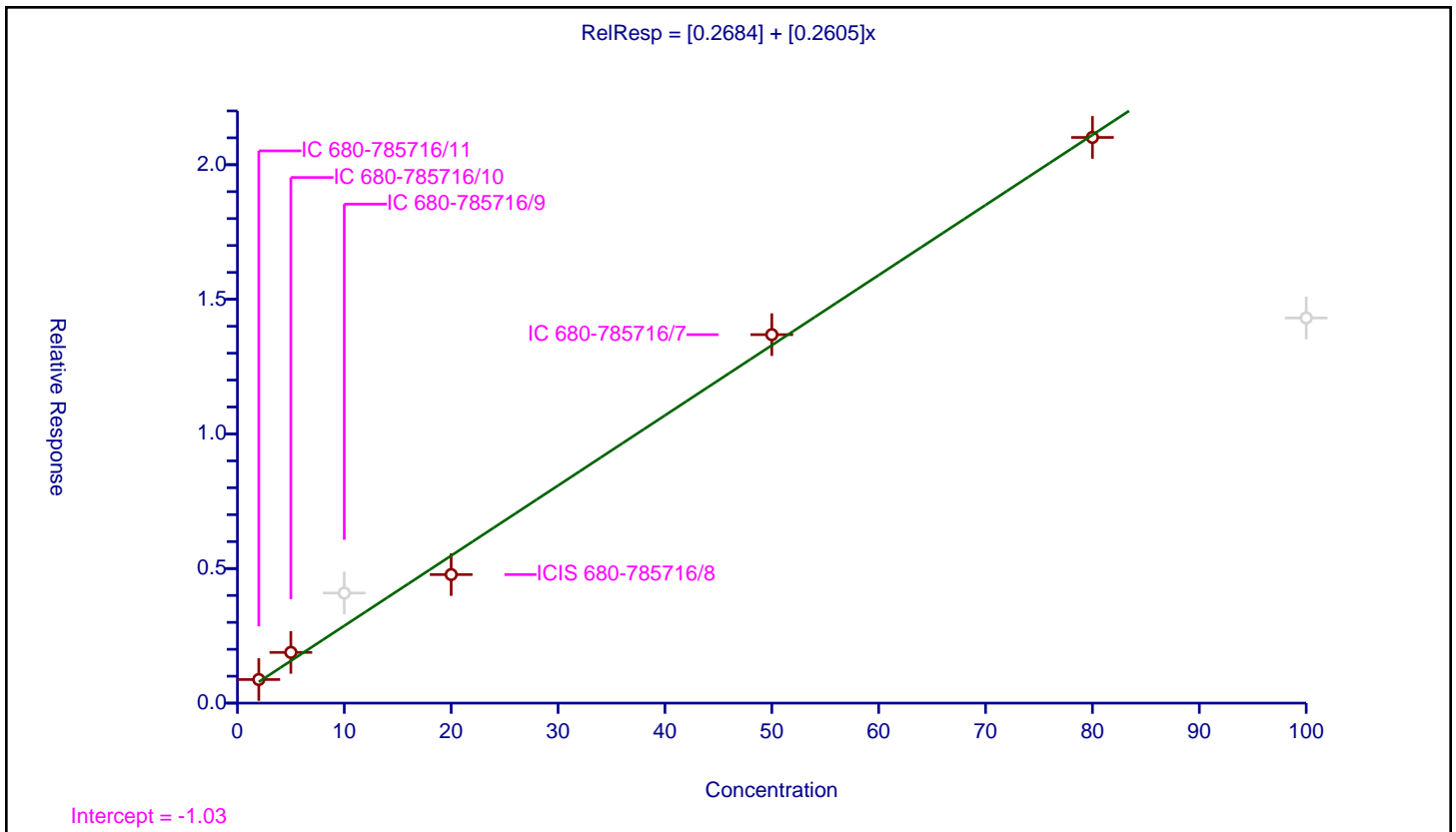
Intercept = -1.03

Calibration

/ Triethylene Glycol

Curve Type:	Linear		
Weighting:	Conc		
Origin:	None		
Dependency:	Response		
Calib Mode:	ISTD		
Response Base:	AREA		
RF Rounding:	0		

Curve Coefficients

Intercept:	0.2555
Slope:	0.2495

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	13.8
Correlation Coefficient:	0.973
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	2.0	0.728156	50.0	3357110.0	0.364078	Y
2	IC 680-785716/10	5.0	1.709952	50.0	4057103.0	0.34199	Y
3	IC 680-785716/9	10.0	3.907902	50.0	4347729.0	0.39079	N
4	ICIS 680-785716/8	20.0	4.456827	50.0	3877826.0	0.222841	Y
5	IC 680-785716/7	50.0	13.215952	50.0	4049065.0	0.264319	Y
6	IC 680-785716/6	80.0	20.338631	50.0	3292230.0	0.254233	Y
7	IC 680-785716/5	100.0	12.830536	50.0	3524689.0	0.128305	N

$$RelResp = [0.2555] + [0.2495]x$$

Intercept = -1.02

7/14/2023
12:11 PM
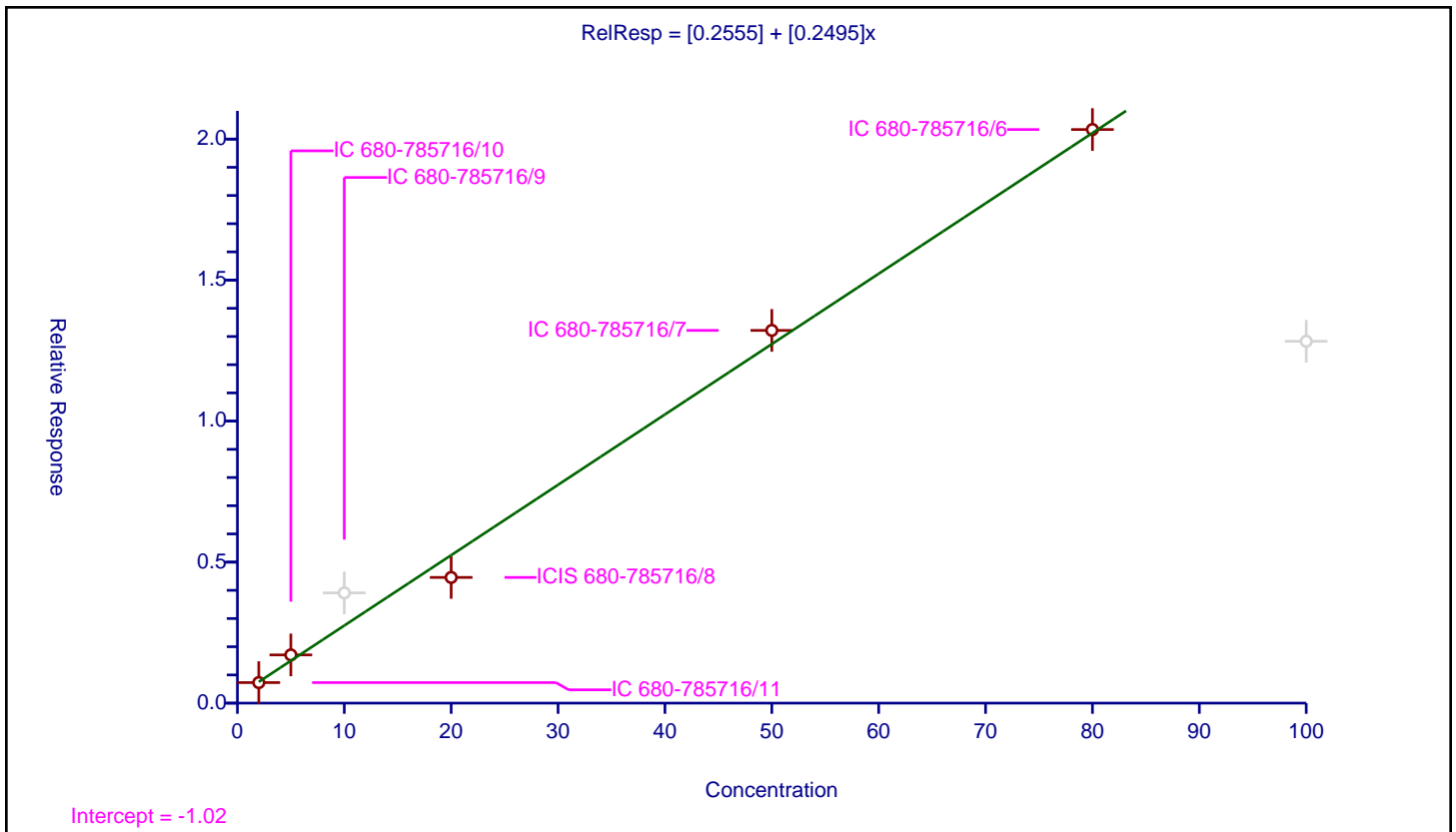
Calibration

/ Tetraethylene Glycol

Curve Type:	Linear		
Weighting:	Conc		
Origin:	None		
Dependency:	Response		
Calib Mode:	ISTD		
Response Base:	AREA		
RF Rounding:	0		

Curve Coefficients

Intercept:	0.3609
Slope:	0.2605

Error Coefficients

Standard Error:	2100000
Relative Standard Error:	13.8
Correlation Coefficient:	0.971
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-785716/11	4.0	1.342524	50.0	3357110.0	0.335631	Y
2	IC 680-785716/10	10.0	3.400481	50.0	4057103.0	0.340048	Y
3	IC 680-785716/9	20.0	8.067729	50.0	4347729.0	0.403386	N
4	ICIS 680-785716/8	40.0	9.169571	50.0	3877826.0	0.229239	Y
5	IC 680-785716/7	100.0	27.554843	50.0	4049065.0	0.275548	Y
6	IC 680-785716/6	160.0	42.143593	50.0	3292230.0	0.263397	Y
7	IC 680-785716/5	200.0	26.171132	50.0	3524689.0	0.130856	N
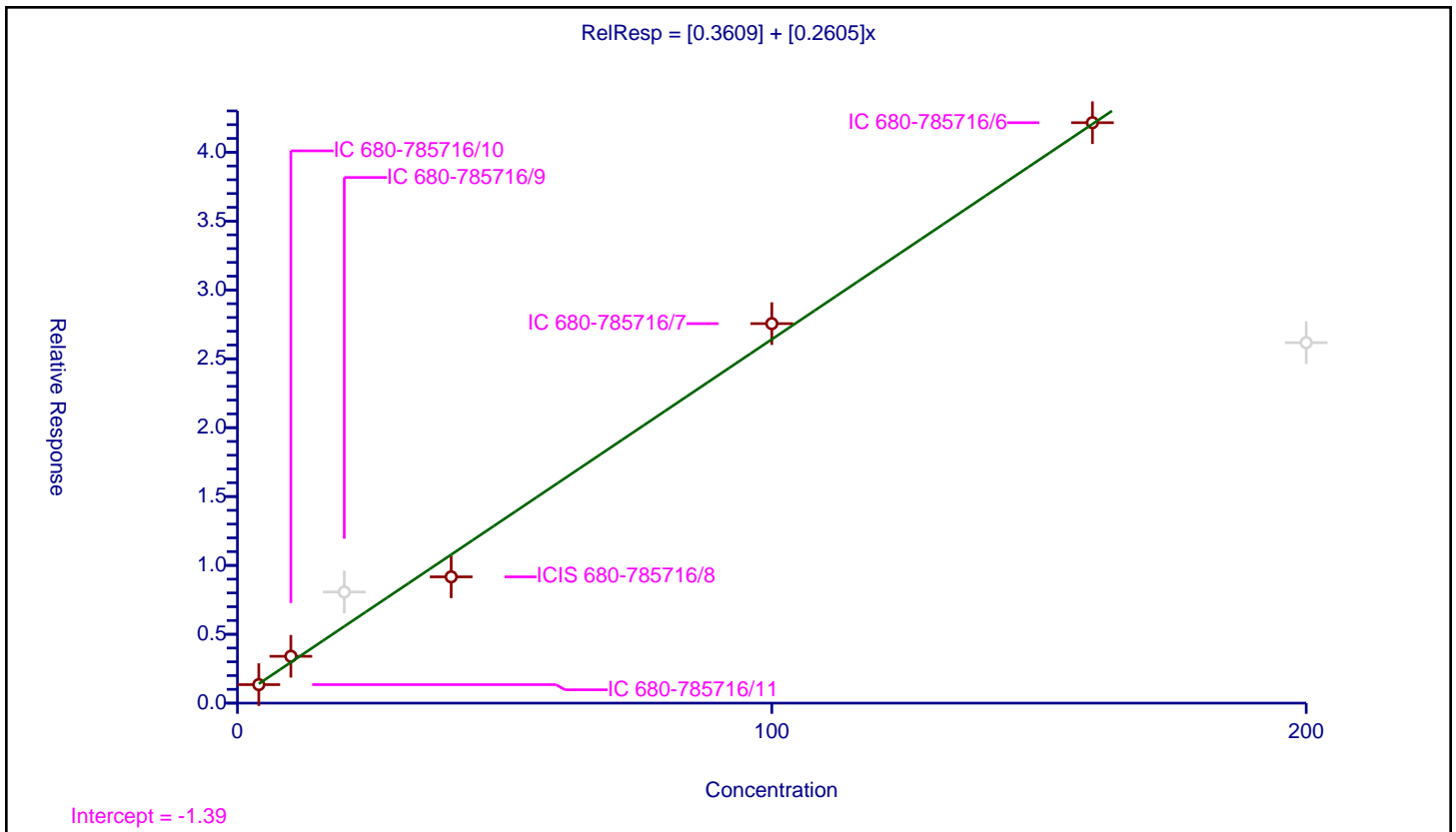
RelResp = [0.3609] + [0.2605]x

Intercept = -1.39

```
                              FORM VII
                GC SEMI VOA CONTINUING CALIBRATION DATA
```

Lab Name: Eurofins Savannah _____ Job No.: 580-129233-1 _____

SDG No.: _____

Lab Sample ID: ICV 680-785716/12 _____ Calibration Date: 06/27/2023 16:49 __

Instrument ID: CVGG2 _____ Calib Start Date: 06/27/2023 14:06 __

GC Column: J&W DB WAX _____ ID: 0.45(mm) ___ Calib End Date: 06/27/2023 16:26 __

Lab File ID: 2GF27012.D _____ Conc. Units: mg/L _____

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.5481		18.0	20.0	-10.1	20.0
4-Hydroxy-4-methyl-2-pentanone	Qua		0.5827		17.2	20.0	-14.1	20.0
2-Butoxyethanol	Qua		0.5900		18.3	20.0	-8.4	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0461		15.2	20.0	-23.8*	20.0
Propylene glycol	LinF		0.1789		16.4	20.0	-18.1	20.0
Ethylene glycol	LinF		0.2891		16.3	20.0	-18.4	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.4899		15.4	20.0	-22.9*	20.0
2,2'-Oxybisethanol	Lin		0.2266		16.4	20.0	-18.2	20.0
Triethylene Glycol	Lin1		0.2209		16.7	20.0	-16.6	20.0
Tetraethylene Glycol	Lin1		0.2260		33.3	40.0	-16.7	20.0

FORM VII 8015C GLY

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Lab Sample ID: ICV 680-785716/12   Calibration Date: 06/27/2023 16:49

Instrument ID: CVGG2   Calib Start Date: 06/27/2023 14:06

GC Column: J&W DB WAX   ID: 0.45(mm) Calib End Date: 06/27/2023 16:26

Lab File ID: 2GF27012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.78	1.75	1.82
4-Hydroxy-4-methyl-2-pentanone	2.14	2.11	2.19
2-Butoxyethanol	2.24	2.20	2.29
Dipropylene Glycol Methyl Ether	2.99	2.93	3.05
Propylene glycol	3.57	3.50	3.64
Ethylene glycol	3.86	3.79	3.94
2-(2-Butoxyethoxy)ethanol	5.34	5.23	5.45
2,2'-Oxybisethanol	7.40	7.26	7.55
Triethylene Glycol	9.60	9.41	9.79
Tetraethylene Glycol	10.44	10.23	10.65

Form VII 8015C GLY

7/14/2023
12:11 PM

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27012.D
Lims ID: icv gly
Client ID:
Sample Type: CCV
Inject. Date: 27-Jun-2023 16:49:17   ALS Bottle#:   0   Worklist Smp#:   12
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0087071-012
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Jun-2023 16:09:52   Calib Date: 27-Jun-2023 16:26:02
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1628

First Level Reviewer: X4PF   Date: 27-Jun-2023 17:29:07

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.778	1.787	-0.009	857165	20.0	18.0	
2 4-Hydroxy-4-methyl-2-pentanone						
2.141	2.149	-0.008	911169	20.0	17.2	
3 2-Butoxyethanol						
2.244	2.248	-0.004	922704	20.0	18.3	
* 4 n-Heptyl Alcohol						
2.440	2.442	-0.002	3909498	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.987	2.992	-0.005	72157	20.0	15.2	
6 Propylene glycol						
3.566	3.572	-0.006	279765	20.0	16.4	
7 Ethylene glycol						
3.862	3.865	-0.003	452108	20.0	16.3	
8 2-(2-Butoxyethoxy)ethanol						
5.339	5.341	-0.002	766174	20.0	15.4	
9 2,2'-Oxybisethanol						
7.404	7.405	-0.001	354357	20.0	16.4	
10 Triethylene Glycol						
9.600	9.601	-0.001	345416	20.0	16.7	
11 Tetraethylene Glycol						
10.437	10.438	-0.001	706810	40.0	33.3	

QC Flag Legend
Processing Flags

Reagents:

SG_GlyICV_00060	Amount Added: 10.00	Units: uL	
SG_GLY_ISTD_00120	Amount Added: 10.00	Units: uL	Run Reagent

Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27012.D
Injection Date: 27-Jun-2023 16:49:17   Instrument ID: CVGG2   Operator ID:
Lims ID: icv gly   Worklist Smp#: 12
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#: 0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 2GF27012.D

7/14/2023
12:11 PM

```
                        FORM VII
           GC SEMI VOA CONTINUING CALIBRATION DATA
```
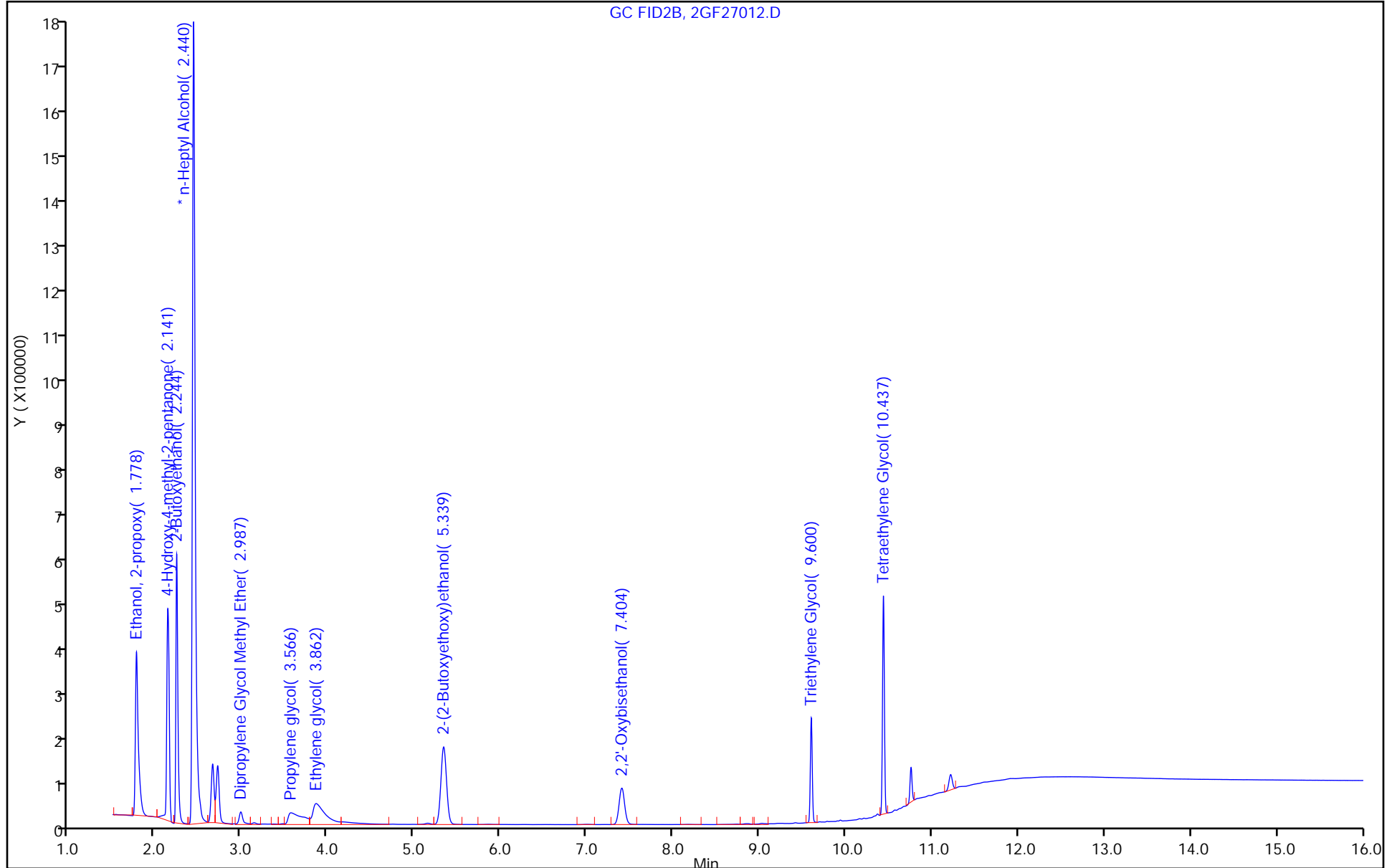
Lab Name: Eurofins Savannah_____   Job No.: 580-129233-1_____

SDG No.: _____

Lab Sample ID: CCVIS 680-787708/4_____   Calibration Date: 07/11/2023 12:38____

Instrument ID: CVGG2_____   Calib Start Date: 06/27/2023 14:06____

GC Column: J&W DB WAX_____ ID: 0.45(mm)___   Calib End Date: 06/27/2023 16:26____

Lab File ID: 1GG11004.D_____   Conc. Units: mg/L_____

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.7181		23.7	20.0	18.3	20.0
4-Hydroxy-4-methyl-2-pentanone	Qua		0.7488		22.5	20.0	12.5	20.0
2-Butoxyethanol	Qua		0.7774		24.3	20.0	21.3*	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0579		19.3	20.0	-3.6	20.0
Propylene glycol	LinF		0.2059		18.9	20.0	-5.7	20.0
Ethylene glycol	LinF		0.3395		19.2	20.0	-4.2	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.5720		18.0	20.0	-10.0	20.0
2,2'-Oxybisethanol	Lin		0.2568		18.7	20.0	-6.6	20.0
Triethylene Glycol	Lin1		0.2588		19.7	20.0	-1.4	20.0
Tetraethylene Glycol	Lin1		0.2695		40.0	40.0	-0.0	20.0

FORM VII 8015C GLY

7/14/2023
12:11 PM

```
                              FORM VII
           GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY
```

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Lab Sample ID: CCVIS 680-787708/4   Calibration Date: 07/11/2023 12:38

Instrument ID: CVGG2   Calib Start Date: 06/27/2023 14:06

GC Column: J&W DB WAX   ID: 0.45(mm)   Calib End Date: 06/27/2023 16:26

Lab File ID: 1GG11004.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.80	1.76	1.83
4-Hydroxy-4-methyl-2-pentanone	2.15	2.11	2.20
2-Butoxyethanol	2.26	2.21	2.30
Dipropylene Glycol Methyl Ether	2.99	2.93	3.05
Propylene glycol	3.59	3.52	3.66
Ethylene glycol	3.86	3.78	3.94
2-(2-Butoxyethoxy)ethanol	5.32	5.22	5.43
2,2'-Oxybisethanol	7.38	7.24	7.53
Triethylene Glycol	9.59	9.40	9.79
Tetraethylene Glycol	10.43	10.22	10.64

Form VII 8015C GLY

                                                              7/14/2023
                                                              12:11 PM

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11004.D
Lims ID: ccvis g4
Client ID:
Sample Type: CCVIS
Inject. Date: 11-Jul-2023 12:38:02   ALS Bottle#:   0   Worklist Smp#:   4
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0087378-004
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 11-Jul-2023 20:59:25   Calib Date: 27-Jun-2023 16:26:02
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1683

First Level Reviewer: AR8P   Date: 11-Jul-2023 14:33:00

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.797	1.797	0.000	881698	20.0	23.7	
2 4-Hydroxy-4-methyl-2-pentanone						
2.153	2.153	0.000	919399	20.0	22.5	
3 2-Butoxyethanol						
2.256	2.256	0.000	954551	20.0	24.3	
* 4 n-Heptyl Alcohol						
2.452	2.452	0.000	3069550	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.986	2.986	0.000	71041	20.0	19.3	
6 Propylene glycol						M
3.591	3.591	0.000	252763	20.0	18.9	M
7 Ethylene glycol						M
3.860	3.860	0.000	416785	20.0	19.2	M
8 2-(2-Butoxyethoxy)ethanol						
5.324	5.324	0.000	702315	20.0	18.0	
9 2,2'-Oxybisethanol						
7.383	7.383	0.000	315358	20.0	18.7	
10 Triethylene Glycol						
9.594	9.594	0.000	317800	20.0	19.7	
11 Tetraethylene Glycol						
10.431	10.431	0.000	661867	40.0	40.0	

QC Flag Legend
Processing Flags

Review Flags
 M - Manually Integrated

Reagents:

SG_Gly_CAL_00051   Amount Added: 10.00   Units: uL
SG_GLY_ISTD_00123   Amount Added: 10.00   Units: uL   Run Reagent

Chrom Revision: 2.3 21-Jun-2023 17:36:34

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11004.D				
Injection Date:	11-Jul-2023 12:38:02	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ccvis g4			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column: J&W DB WAX (0.45 mm)					

GC FID2B, 1GG11004.D

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11004.D
Injection Date: 11-Jul-2023 12:38:02   Instrument ID: CVGG2
Lims ID: ccvis g4
Client ID:
Operator ID: ALS Bottle#:   0   Worklist Smp#:   4
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)   Detector   GC FID2B

6 Propylene glycol, CAS: 57-55-6
Signal: 1

Processing Integration Results
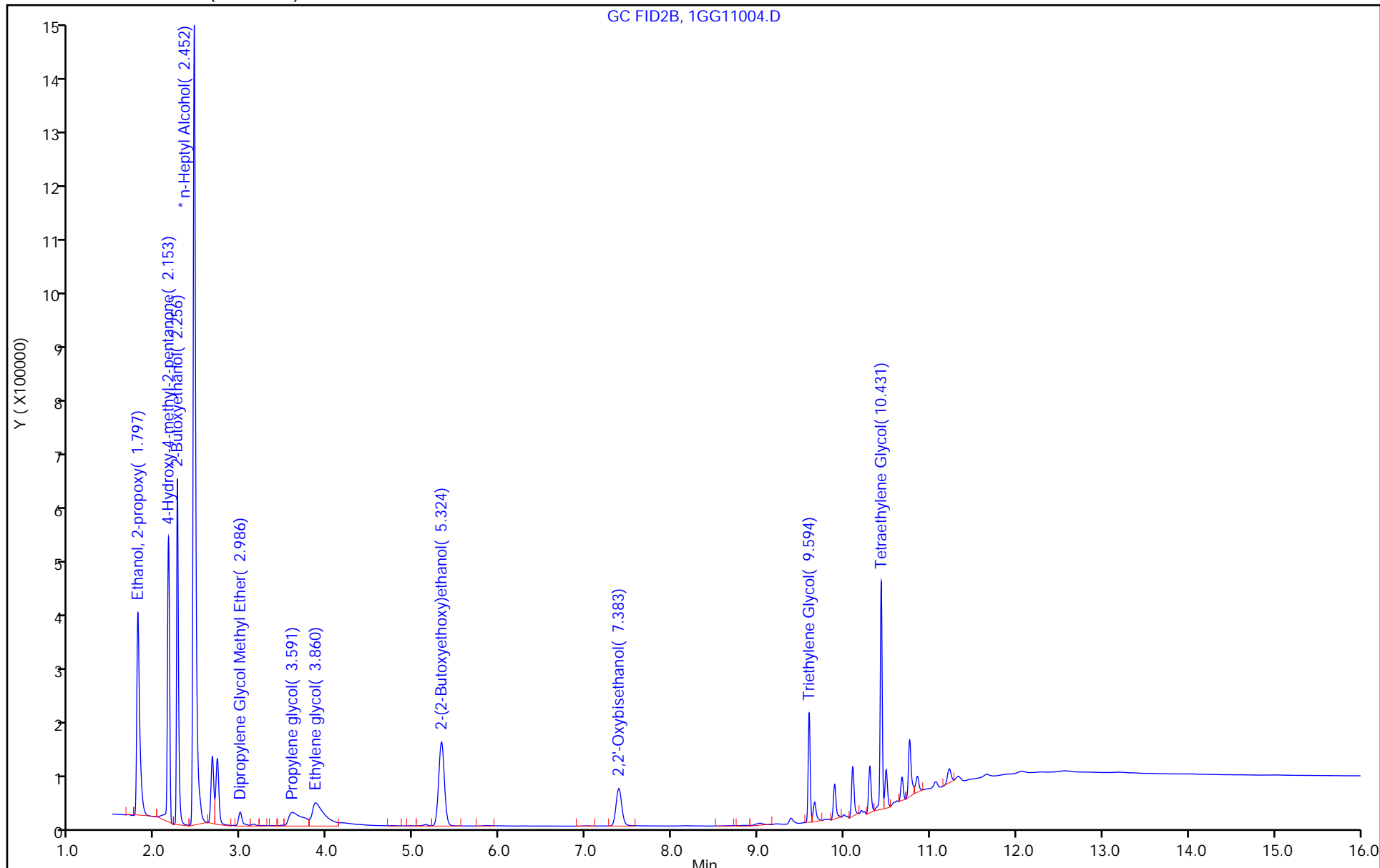
RT: 3.59
Area: 238889
Amount: 17.821225
Amount Units: ug/ml

Manual Integration Results
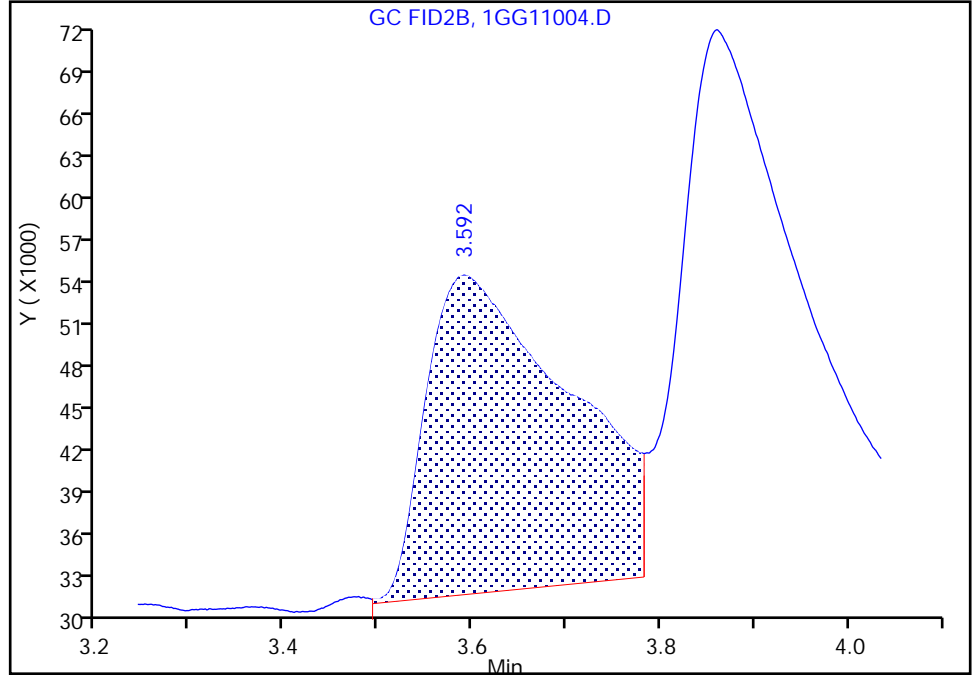
RT: 3.59
Area: 252763
Amount: 18.856231
Amount Units: ug/ml
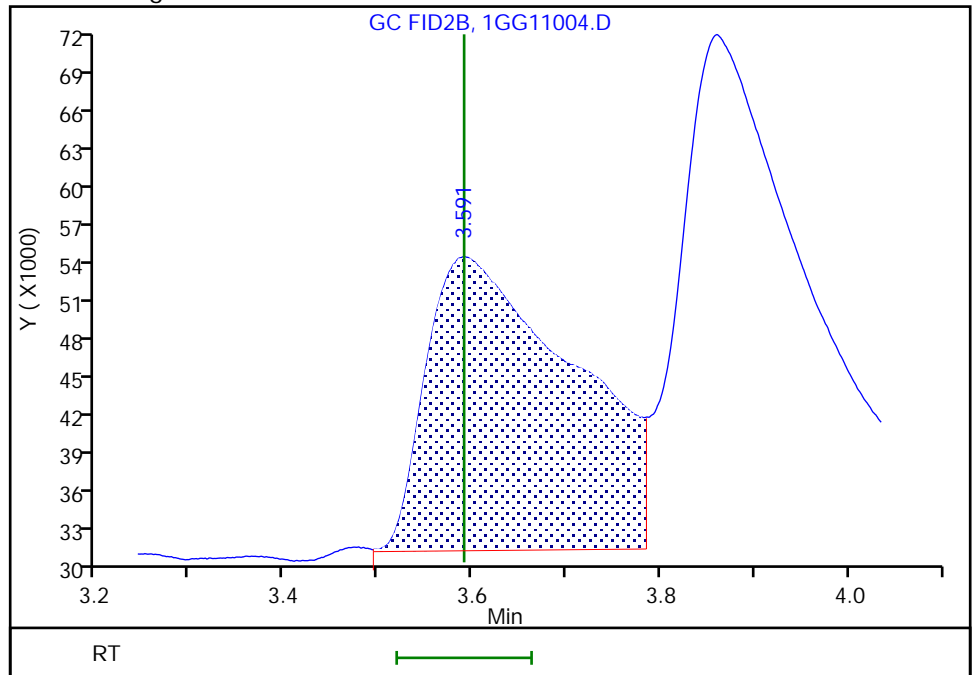
Reviewer: AR8P, 11-Jul-2023 14:32:45 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Incomplete Integration

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11004.D
Injection Date: 11-Jul-2023 12:38:02   Instrument ID: CVGG2
Lims ID: ccvis g4
Client ID:
Operator ID: ALS Bottle#:   0   Worklist Smp#:   4
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)   Detector   GC FID2B

7 Ethylene glycol, CAS: 107-21-1
Signal: 1

Processing Integration Results

RT: 3.86
Area: 344084
Amount: 15.813647
Amount Units: ug/ml

Manual Integration Results
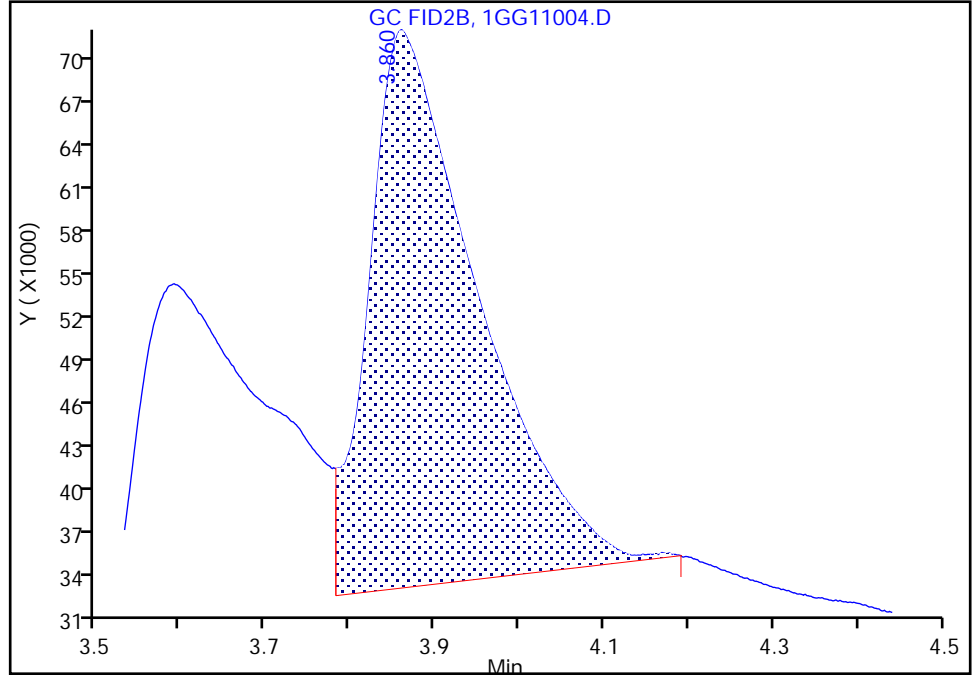
RT: 3.86
Area: 416785
Amount: 19.154890
Amount Units: ug/ml
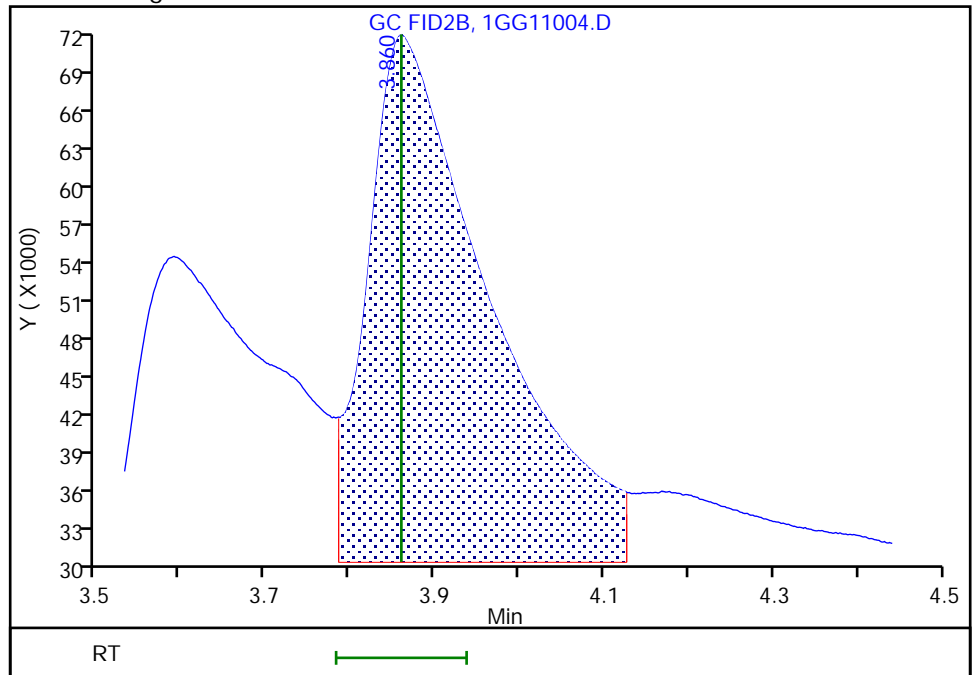
Reviewer: AR8P, 11-Jul-2023 14:32:25 -04:00:00 (UTC)
Audit Action: Manually Integrated   Audit Reason: Incomplete Integration

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Lab Sample ID: CCV 680-787708/24   Calibration Date: 07/11/2023 20:21

Instrument ID: CVGG2   Calib Start Date: 06/27/2023 14:06

GC Column: J&W DB WAX   ID: 0.45(mm)   Calib End Date: 06/27/2023 16:26

Lab File ID: 1GG11024.D   Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.8547		28.1	20.0	40.5*	20.0
4-Hydroxy-4-methyl-2-pentanone	Qua		0.8555		25.9	20.0	29.5*	20.0
2-Butoxyethanol	Qua		0.9490		29.5	20.0	47.7*	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0755		25.5	20.0	27.4*	20.0
Propylene glycol	LinF		0.2472		22.6	20.0	13.2	20.0
Ethylene glycol	LinF		0.4262		24.0	20.0	20.2*	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.7863		25.0	20.0	24.9*	20.0
2,2'-Oxybisethanol	Lin		0.2470		17.9	20.0	-10.3	20.0
Triethylene Glycol	Lin1		0.2038		15.3	20.0	-23.5*	20.0
Tetraethylene Glycol	Lin1		0.0129		10.0	40.0	-98.5*	20.0

FORM VII 8015C GLY

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Lab Sample ID: CCV 680-787708/24   Calibration Date: 07/11/2023 20:21

Instrument ID: CVGG2   Calib Start Date: 06/27/2023 14:06

GC Column: J&W DB WAX   ID: 0.45(mm)   Calib End Date: 06/27/2023 16:26

Lab File ID: 1GG11024.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.78	1.75	1.82
4-Hydroxy-4-methyl-2-pentanone	2.15	2.10	2.19
2-Butoxyethanol	2.24	2.20	2.29
Dipropylene Glycol Methyl Ether	2.98	2.92	3.04
Propylene glycol	3.59	3.52	3.66
Ethylene glycol	3.86	3.79	3.94
2-(2-Butoxyethoxy)ethanol	5.32	5.21	5.43
2,2'-Oxybisethanol	7.39	7.24	7.54
Triethylene Glycol	9.60	9.41	9.79
Tetraethylene Glycol	10.49	10.28	10.70

Form VII 8015C GLY

7/14/2023
12:11 PM

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11024.D	
Lims ID:	ccv g4	
Client ID:		
Sample Type:	CCV	
Inject. Date:	11-Jul-2023 20:21:17	ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol:	1.0 ul	Dil. Factor: 1.0000
Sample Info:	680-0087378-024	
Operator ID:		Instrument ID: CVGG2
Sublist:	chrom-8015_GLY_VGG*sub2	

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	11-Jul-2023 20:59:15	Calib Date: 27-Jun-2023 16:26:02
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1683	

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.781	1.781	0.000	1296902	20.0	28.1	
2 4-Hydroxy-4-methyl-2-pentanone						
2.145	2.145	0.000	1298174	20.0	25.9	
3 2-Butoxyethanol						
2.244	2.244	0.000	1440077	20.0	29.5	
* 4 n-Heptyl Alcohol						
2.433	2.433	0.000	3793508	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.982	2.982	0.000	114583	20.0	25.5	
6 Propylene glycol						
3.588	3.588	0.000	375042	20.0	22.6	
7 Ethylene glycol						
3.862	3.862	0.000	646672	20.0	24.0	
8 2-(2-Butoxyethoxy)ethanol						
5.318	5.318	0.000	1193103	20.0	25.0	
9 2,2'-Oxybisethanol						
7.392	7.392	0.000	374783	20.0	17.9	
10 Triethylene Glycol						
9.597	9.597	0.000	309183	20.0	15.3	
11 Tetraethylene Glycol						
10.485	10.485	0.000	39168	40.0	0.5962	

Reagents:

SG_Gly_CAL_00051	Amount Added: 10.00	Units: uL	
SG_GLY_ISTD_00123	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11024.D

Injection Date: 11-Jul-2023 20:21:17   Instrument ID: CVGG2   Operator ID:

Lims ID: ccv g4   Worklist Smp#:   24

Client ID:

Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0

Method: 8015_GLY_VGG   Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)

7/14/2023
12:11 PM
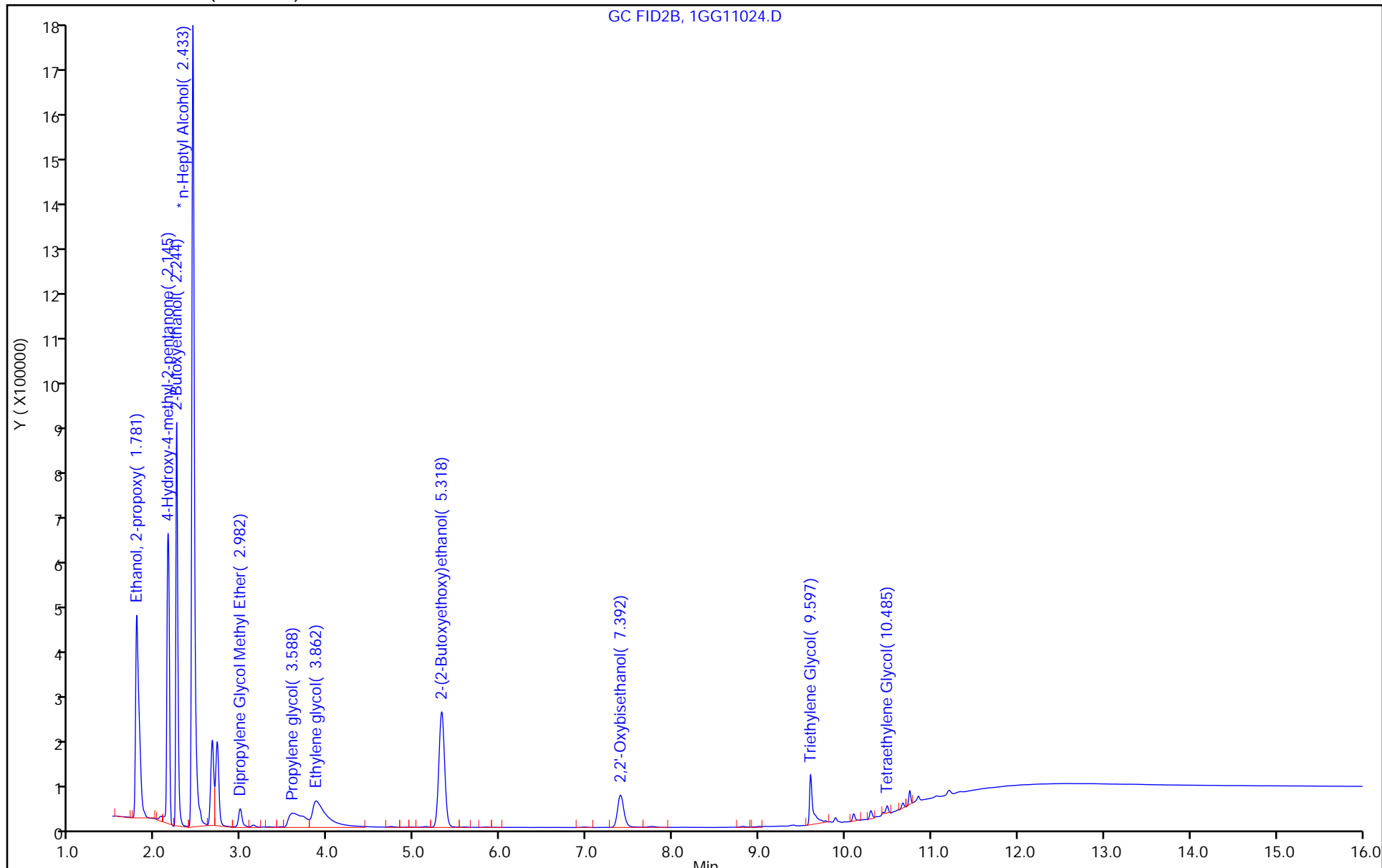
FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 680-787708/9

Matrix: Water   Lab File ID: 1GG11009.D

Analysis Method: 8015C GLY   Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 14:33

Con. Extract Vol.: 1(mL)   Dilution Factor: 1

Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)

% Moisture: _____   % Solids: _____   GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:　　　\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11009.D
Lims ID:　　　mb
Client ID:
Sample Type:　　MB
Inject. Date:　　11-Jul-2023 14:33:46　　ALS Bottle#:　　0　　Worklist Smp#:　　9
Injection Vol:　　1.0 ul　　　　　　　　Dil. Factor:　　1.0000
Sample Info:　　680-0087378-009
Operator ID:　　　　　　　　　　　　Instrument ID:　　CVGG2

Method:　　　\\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m
Limit Group:　　8015C_DAI
Last Update:　　11-Jul-2023 20:59:25　　Calib Date:　　27-Jun-2023 16:26:02
Integrator:　　Falcon
Quant Method:　　Internal Standard　　　Quant By:　　Initial Calibration
Last ICal File:　　\\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :　　J&W DB WAX (0.45 mm)　　　　　Det: GC FID2B
Process Host:　　CTX1683

First Level Reviewer: AR8P　　　　　　Date:　　　11-Jul-2023 15:24:07

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						7
1.779	1.797	-0.018	1569		-1.43	7
LOD =	0.5000					
2 4-Hydroxy-4-methyl-2-pentanone						7
2.147	2.153	-0.006	61124		-0.9355	7
LOD =	0.5000					
3 2-Butoxyethanol						7
2.240	2.256	-0.016	6713		-1.81	7
LOD =	0.5000					
* 4 n-Heptyl Alcohol						
2.438	2.452	-0.014	4544422	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						7
3.040	2.986	0.054	1630		0.1275	7
LOD =	0.5000					
6 Propylene glycol						7
3.583	3.591	-0.008	1375		0.0693	7
LOD =	0.5000					
7 Ethylene glycol						7
3.852	3.860	-0.008	8807		0.2734	7
LOD =	0.6600					
8 2-(2-Butoxyethoxy)ethanol						
5.327	5.324	0.003	1782		0.6824	
9 2,2'-Oxybisethanol						7
7.388	7.383	0.005	11437		-0.5471	7
LOD =	1.60					
10 Triethylene Glycol						7
9.658	9.594	0.064	36962		0.6058	7
LOD =	1.40					
11 Tetraethylene Glycol						7
10.489	10.431	0.058	67632		1.47	7
LOD =	4.50					

7/14/2023
12:11 PM

QC Flag Legend

Processing Flags

 7 - Failed Limit of Detection

Reagents:

SG_GLY_ISTD_00123   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11009.D

Injection Date: 11-Jul-2023 14:33:46   Instrument ID: CVGG2   Operator ID:

Lims ID: mb   Worklist Smp#:   9

Client ID:

Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0

Method: 8015_GLY_VGG   Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11009.D
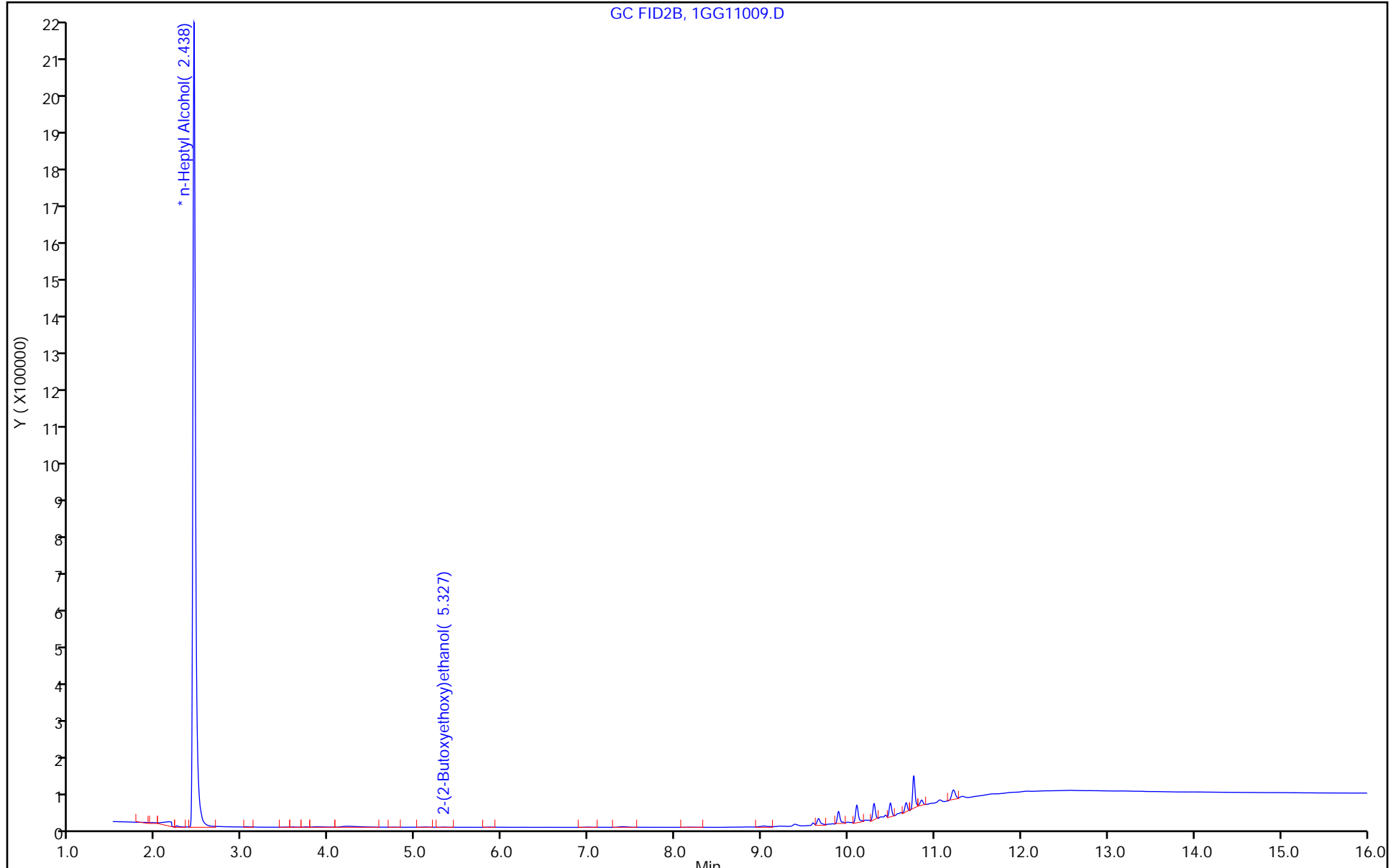
7/14/2023
12:11 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 680-787708/5

Matrix: Water   Lab File ID: 1GG11005.D

Analysis Method: 8015C GLY   Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 13:01

Con. Extract Vol.: 1(mL)   Dilution Factor: 1

Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)

% Moisture: _____ % Solids: _____   GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	22.9		5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11005.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 11-Jul-2023 13:01:10   ALS Bottle#:   0   Worklist Smp#:   5
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0087378-005
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 11-Jul-2023 20:59:25   Calib Date: 27-Jun-2023 16:26:02
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1683

First Level Reviewer: AR8P   Date: 11-Jul-2023 14:34:00

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.795	1.797	-0.002	1277629	20.0	28.5	
2 4-Hydroxy-4-methyl-2-pentanone						
2.153	2.153	0.000	1344044	20.0	27.7	
3 2-Butoxyethanol						
2.253	2.256	-0.003	1368134	20.0	28.9	
* 4 n-Heptyl Alcohol						
2.446	2.452	-0.006	3681359	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.987	2.986	0.001	105132	20.0	24.0	
6 Propylene glycol						
3.594	3.591	0.003	379310	20.0	23.6	
7 Ethylene glycol						
3.859	3.860	-0.001	697979	20.0	26.7	
8 2-(2-Butoxyethoxy)ethanol						
5.324	5.324	0.000	1067088	20.0	22.9	
9 2,2'-Oxybisethanol						
7.382	7.383	-0.001	460926	20.0	23.0	
10 Triethylene Glycol						M
9.594	9.594	0.000	464465	20.0	24.3	M
11 Tetraethylene Glycol						M
10.431	10.431	0.000	971222	40.0	49.2	M

QC Flag Legend
Processing Flags

Review Flags
 M - Manually Integrated

Reagents:

SG_Gly_CAL_00051   Amount Added: 10.00   Units: uL
SG_GLY_ISTD_00123   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11005.D
Injection Date: 11-Jul-2023 13:01:10   Instrument ID: CVGG2   Operator ID:
Lims ID: lcs   Worklist Smp#:   5
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11005.D

7/14/2023
12:11 PM
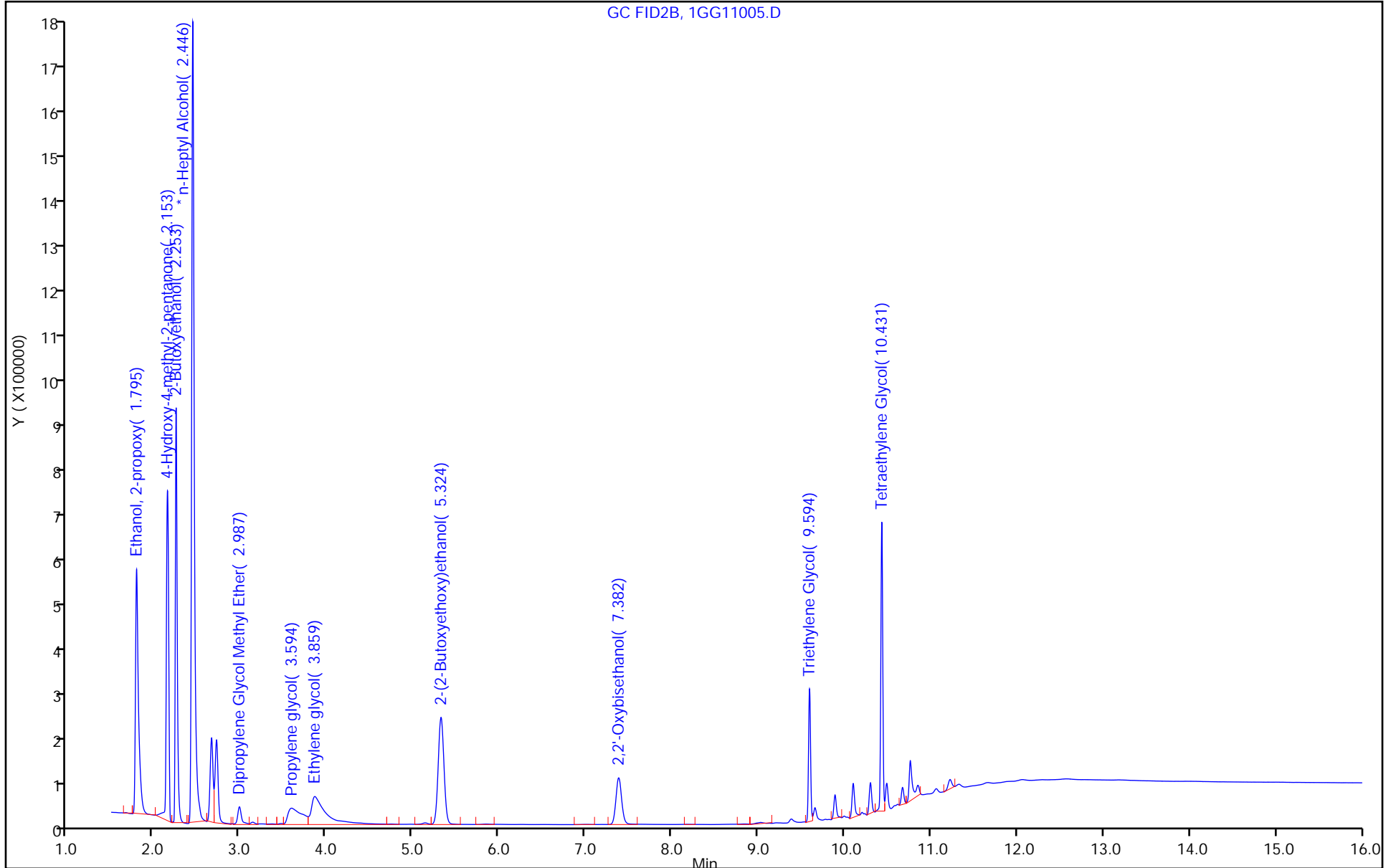
FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 680-787708/6

Matrix: Water   Lab File ID: 1GG11006.D

Analysis Method: 8015C GLY   Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 07/11/2023 13:24

Con. Extract Vol.: 1(mL)   Dilution Factor: 1

Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)

% Moisture: _____ % Solids: _____   GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 787708   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	18.3		5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11006.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 11-Jul-2023 13:24:16   ALS Bottle#:   0   Worklist Smp#:   6
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0087378-006
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 11-Jul-2023 20:59:25   Calib Date: 27-Jun-2023 16:26:02
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230627-87071.b\2GF27011.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1683

First Level Reviewer: AR8P   Date: 11-Jul-2023 14:34:45

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	1.790	1.797	-0.007	1345907	20.0	22.2	
2 4-Hydroxy-4-methyl-2-pentanone							
	2.149	2.153	-0.004	1421615	20.0	21.4	
3 2-Butoxyethanol							
	2.250	2.256	-0.006	1438669	20.0	22.5	
* 4 n-Heptyl Alcohol							
	2.443	2.452	-0.009	4986166	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	2.985	2.986	-0.001	113113	20.0	18.9	
6 Propylene glycol							
	3.588	3.591	-0.003	418695	20.0	19.2	
7 Ethylene glycol							
	3.859	3.860	-0.001	765062	20.0	21.6	
8 2-(2-Butoxyethoxy)ethanol							
	5.321	5.324	-0.003	1157936	20.0	18.3	
9 2,2'-Oxybisethanol							
	7.381	7.383	-0.002	515794	20.0	18.8	
10 Triethylene Glycol							M
	9.593	9.594	-0.001	523977	20.0	20.0	M
11 Tetraethylene Glycol							M
	10.431	10.431	0.000	1094046	40.0	40.7	M

QC Flag Legend
Processing Flags

Review Flags
 M - Manually Integrated

Reagents:

SG_Gly_CAL_00051   Amount Added: 10.00   Units: uL
SG_GLY_ISTD_00123   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230711-87378.b\1GG11006.D
Injection Date: 11-Jul-2023 13:24:16   Instrument ID: CVGG2   Operator ID:
Lims ID: lcsd   Worklist Smp#:   6
Client ID:
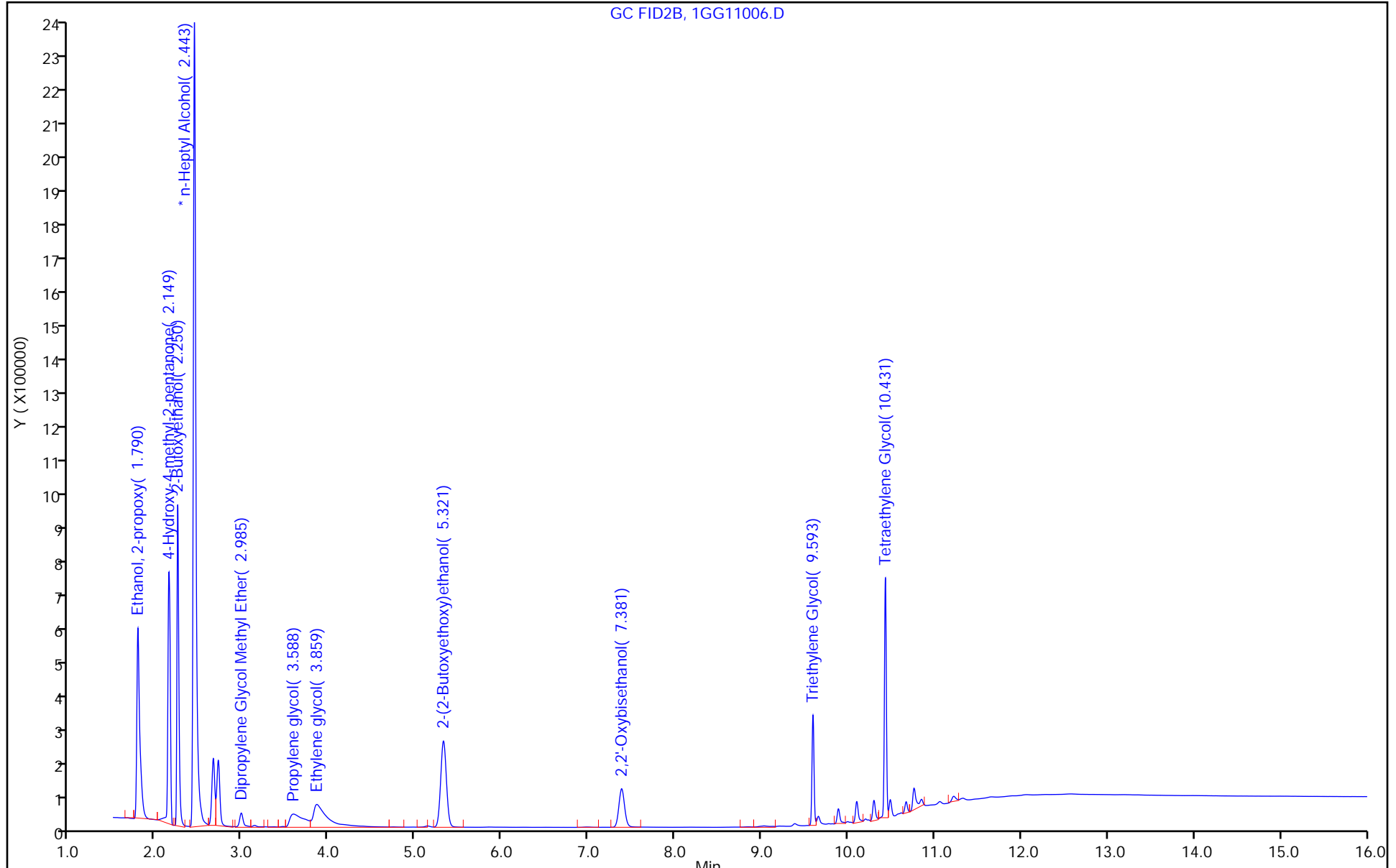Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1GG11006.D

7/14/2023
12:11 PM

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Instrument ID: CVGG2   Start Date: 06/27/2023 14:06

Analysis Batch Number: 785716   End Date: 06/28/2023 03:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-785716/5		06/27/2023 14:06	1	2GF27005.D	J&W DB WAX 0.45(mm)
IC 680-785716/6		06/27/2023 14:29	1	2GF27006.D	J&W DB WAX 0.45(mm)
IC 680-785716/7		06/27/2023 14:52	1	2GF27007.D	J&W DB WAX 0.45(mm)
ICIS 680-785716/8		06/27/2023 15:16	1	2GF27008.D	J&W DB WAX 0.45(mm)
IC 680-785716/9		06/27/2023 15:39	1	2GF27009.D	J&W DB WAX 0.45(mm)
IC 680-785716/10		06/27/2023 16:02	1	2GF27010.D	J&W DB WAX 0.45(mm)
IC 680-785716/11		06/27/2023 16:26	1	2GF27011.D	J&W DB WAX 0.45(mm)
ICV 680-785716/12 CCV		06/27/2023 16:49	1	2GF27012.D	J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 17:59	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 18:22	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 18:45	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 19:09	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 20:18	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 20:42	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 21:05	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 21:28	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 21:51	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 22:15	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 22:38	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 23:01	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 23:24	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/27/2023 23:47	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/28/2023 00:11	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/28/2023 00:34	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/28/2023 00:57	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/28/2023 01:43	1		J&W DB WAX 0.45(mm)
ZZZZZ		06/28/2023 02:30	50		J&W DB WAX 0.45(mm)
ZZZZZ		06/28/2023 02:53	50		J&W DB WAX 0.45(mm)
ZZZZZ		06/28/2023 03:16	50		J&W DB WAX 0.45(mm)
ZZZZZ		06/28/2023 03:39	50		J&W DB WAX 0.45(mm)

8015C GLY

7/14/2023

12:11 PM

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.: _____

Instrument ID: CVGG2   Start Date: 07/11/2023 12:38

Analysis Batch Number: 787708   End Date: 07/11/2023 23:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-787708/4		07/11/2023 12:38	1	1GG11004.D	J&W DB WAX 0.45(mm)
LCS 680-787708/5		07/11/2023 13:01	1	1GG11005.D	J&W DB WAX 0.45(mm)
LCSD 680-787708/6		07/11/2023 13:24	1	1GG11006.D	J&W DB WAX 0.45(mm)
MB 680-787708/9		07/11/2023 14:33	1	1GG11009.D	J&W DB WAX 0.45(mm)
580-129233-1	AF-RHMW04-WGN01LF-2307	07/11/2023 16:52	1	1GG11015.D	J&W DB WAX 0.45(mm)
580-129233-2	AF-RHMW225401-WGN01B-2307	07/11/2023 17:16	1	1GG11016.D	J&W DB WAX 0.45(mm)
580-129233-3	AF-RHMW02-WGN01LF-2307	07/11/2023 17:39	1	1GG11017.D	J&W DB WAX 0.45(mm)
580-129233-4	AF-RHMW02-WGFD01LF-2307	07/11/2023 18:02	1	1GG11018.D	J&W DB WAX 0.45(mm)
580-129233-5	AF-RHMW03-WGN01LF-2307	07/11/2023 18:25	1	1GG11019.D	J&W DB WAX 0.45(mm)
580-129233-6	AF-RHMW06-WGN01LF-2307	07/11/2023 18:48	1	1GG11020.D	J&W DB WAX 0.45(mm)
580-129233-7	AF-RHMW10-WGN01LF-2307	07/11/2023 19:11	1	1GG11021.D	J&W DB WAX 0.45(mm)
ZZZZZ		07/11/2023 19:35	500		J&W DB WAX 0.45(mm)
CCV 680-787708/24		07/11/2023 20:21	1	1GG11024.D	J&W DB WAX 0.45(mm)
ZZZZZ		07/11/2023 20:21	1		J&W DB WAX 0.45(mm)
ZZZZZ		07/11/2023 21:30	1		J&W DB WAX 0.45(mm)
ZZZZZ		07/11/2023 21:53	1		J&W DB WAX 0.45(mm)
ZZZZZ		07/11/2023 22:17	1		J&W DB WAX 0.45(mm)
ZZZZZ		07/11/2023 22:40	1		J&W DB WAX 0.45(mm)
ZZZZZ		07/11/2023 23:03	1		J&W DB WAX 0.45(mm)

8015C GLY

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Batch Number: 785716   Batch Start Date: 06/27/23 14:06   Batch Analyst: Mullis, David B

Batch Method: 8015C GLY   Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00050	SG_GLY_ISTD 00120	SG_GlyICV 00060		
IC 680-785716/5		8015C GLY		1 mL	50 uL	10 uL			
IC 680-785716/6		8015C GLY		1 mL	40 uL	10 uL			
IC 680-785716/7		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-785716/8		8015C GLY		1 mL	10 uL	10 uL			
IC 680-785716/9		8015C GLY		1 mL	5 uL	10 uL			
IC 680-785716/10		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-785716/11		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-785716/12 CCV		8015C GLY		1 mL		10 uL	10 uL		

Batch Notes

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8015C GLY

Page 1 of 1

7/14/2023
12:11 PM

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah   Job No.: 580-129233-1

SDG No.:

Batch Number: 787708   Batch Start Date: 07/11/23 12:38   Batch Analyst: Mullis, David B

Batch Method: 8015C GLY   Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00051	SG_GLY_ISTD 00123			
CCVIS 680-787708/4		8015C GLY		1 mL	10 uL	10 uL			
LCS 680-787708/5		8015C GLY		1 mL	10 uL	10 uL			
LCSD 680-787708/6		8015C GLY		1 mL	10 uL	10 uL			
MB 680-787708/9		8015C GLY		1 mL		10 uL			
580-129233-C-1	AF-RHMW04-WGN01LF-2307	8015C GLY	T	1 mL		10 uL			
580-129233-B-2	AF-RHMW225401-WGN01B-2307	8015C GLY	T	1 mL		10 uL			
580-129233-A-3	AF-RHMW02-WGN01LF-2307	8015C GLY	T	1 mL		10 uL			
580-129233-B-4	AF-RHMW02-WGFD01LF-2307	8015C GLY	T	1 mL		10 uL			
580-129233-B-5	AF-RHMW03-WGN01LF-2307	8015C GLY	T	1 mL		10 uL			
580-129233-A-6	AF-RHMW06-WGN01LF-2307	8015C GLY	T	1 mL		10 uL			
580-129233-C-7	AF-RHMW10-WGN01LF-2307	8015C GLY	T	1 mL		10 uL			
CCV 680-787708/24		8015C GLY		1 mL	10 uL	10 uL			

Batch Notes

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8015C GLY

Page 1 of 1

7/14/2023
12:11 PM

Subcontract Data

Shipping and Receiving Documents

Chain of Custody Record

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

eurofins | Environment Testing America

Client Information		
Sampler: Nate Hogsth	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx
		COC No: 2307AFEA08

Client Contact:	Phone: 804-873-0525	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii
			Page: Page 1 of 1

Company: AECOM

PWSID: — **Job #:**

Analysis Requested

Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract
City: Honolulu	TAT Requested (days): **Rush - 5 Day**
State, Zip: Hawaii 96813	Compliance Project: △ Yes △ No
Phone: 808-954-4512 / 770-331-0794	PO #:
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:
Project Name: CTO N6274223F0104	Project #: 60697810
Site: RHSF	SSOW#:

Preservation Codes:
A - HCL · M - Hexane
B - NaOH · N - None
C - Zn Acetate · O - AsNaO2
D - Nitric Acid · P - Na2O4S
E - NaHSO4 · Q - Na2SO3
F - MeOH · R - Na2S2O3
G - Amchlor · S - H2SO4
H - Ascorbic Acid · T - TSP Dodecahydrate
I - Ice · U - Acetone
J - DI Water · V - MCAA
K - EDTA · W - pH 4-5
L - EDA · Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAL_GL_D5/2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X	A	X	
AF-RHMW04-WGN01LF-2307	7/5/23	1025	G	W	N	N	X	3	

07/06/23

Possible Hazard Identification
■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.

Special Instructions/QC Requirements: DOD QSM project.

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 7/5/2023 1340	Company AECOM	Received by: Alex Edmonds	Date/Time: 7/5/23 1340	Company AECOM
Relinquished by: Alex Edmonds	Date/Time: 7/6/23 1355	Company AECOM	Received by:	Date/Time: 07/08/23 09:30	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2/0.3

Ver: 01/16/2019

7/14/2023
12:11 PM

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

.: eurofins | Environment Testing America

Sampler: H. Nishikawa, J. Stowe	Lab PM: Elaine Walker
Phone: 440-420-1736	E-Mail: M.Elaine.Walker@EurofinsET.com

Carrier Tracking No(s): FedEx
State of Origin: Hawaii
COC No: 2307AFEA07
Page: Page 1 of 1
Job #:

Client Information
Client Contact:

Company: AECOM
Address: 1001 Bishop St. Suite 1600
City: Honolulu
State, Zip: Hawaii 96813
Phone: 808-954-4512 / 770-331-0794
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)
Project Name: CTO N6274223F0104
Site: RHSF

PWSID:
Due Date Requested: see subcontract
TAT Requested (days): **Rush - 5 Day**
Compliance Project: △ Yes △ No
PO #:
WO #:
Project #: 60697810
SSOW#:

Analysis Requested

Perform MS/MSD (Yes or No)
8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-ethanol
Field Filtered Sample (Yes or No)

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)			Total Number of containers	Special Instructions/Note:
Preservation Code:				A				
AF-RHMW225401-WGN01B-2307	7/3/2023	1415	G	W	N	N	X	3

Signature: 7/3/2023

Possible Hazard Identification
■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological
Deliverable Requested: I, II, III, IV, Other (specify)

Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements: DOD QSM project.

	Date:	Time:		Method of Shipment:
Empty Kit Relinquished by:				
Relinquished by: J. Stowe	Date/Time: 7/3/2023 / 650	Company AECOM	Received by: GABRIEL ALLEN	Date/Time: 7/3/23 650	Company AECOM
Relinquished by: GABRIEL ALLEN	Date/Time: 7/6/23 / 1855	Company AECOM	Received by:	Date/Time: 07/08/23 09:70	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No
Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 0·2/ 0·3

Ver: 01/16/2019

7/14/2023
12:11 PM

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins
Environment Testing
America

Client Information	Sampler: CTRISTINA HARDTO	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2307AFEA01
Client Contact:	Phone: 867-5309	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1

Company: AECOM	PWSID:	Analysis Requested	Job #:

Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract		**Preservation Codes:**

Preservation Codes:
A - HCL   M - Hexane
B - NaOH   N - None
C - Zn Acetate   O - AsNaO2
D - Nitric Acid   P - Na2O4S
E - NaHSO4   Q - Na2SO3
F - MeOH   R - Na2S2O3
G - Amchlor   S - H2SO4
H - Ascorbic Acid   T - TSP Dodecahydrate
I - Ice   U - Acetone
J - DI Water   V - MCAA
K - EDTA   W - pH 4-5
L - EDA   Z - other (specify)

Other:

City: Honolulu — TAT Requested (days): **Rush - 5 Day**

State, Zip: Hawaii 96813 — Compliance Project: △ Yes △ No

Phone: 808-954-4512 / 770-331-0794 — PO #:

Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com) — WO #:

Project Name: CTO N6274223F0104 — Project #: 60697810

Site: RHSF — SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
Preservation Code:					X	X	A	X	
AF-RHMW02-WGN01LF-2307	7-5-23	1035	G	W	N	N	X	3	
AF-RHMW02-WGFD01LF-2307	7-5-23	1035	G	W	N	N	X	3	

Possible Hazard Identification
■ Non-Hazard   ☐ Flammable   ☐ Skin Irritant   ☐ Poison B   ☐ Unknown   ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client   ■ Disposal By Lab   ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)   Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.

Special Instructions/QC Requirements: DOD QSM project.

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:		
Relinquished by: CTRISTINA HARDTE	Date/Time: 7/5/23 1400	Company AECOM	Received by: Alex Edmonds	Date/Time: 7/5/23 1400	Company AECOM
Relinquished by: Alex Edmonds	Date/Time: 07/06/23 1355	Company AECOM	Received by:	Date/Time: 07/08/23 9:30	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.2/0.3

Ver: 01/16/2019

7/14/2023
12:11 PM

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins | Environment Testing
America

Client Information		Sampler: CHRISTINA HARDTLE	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2307AFEA02

Client Contact:		Phone: 867-5309	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1

Company: AECOM	PWSID:	**Analysis Requested**	Job #:

Address: 1001 Bishop St. Suite 1600
Due Date Requested: see subcontract

Preservation Codes:

A - HCL   M - Hexane
B - NaOH   N - None
C - Zn Acetate   O - AsNaO2
D - Nitric Acid   P - Na2O4S
E - NaHSO4   Q - Na2SO3
F - MeOH   R - Na2S2O3
G - Amchlor   S - H2SO4
H - Ascorbic Acid   T - TSP Dodecahydrate
I - Ice   U - Acetone
J - DI Water   V - MCAA
K - EDTA   W - pH 4-5
L - EDA   Z - other (specify)

Other:

City: Honolulu
TAT Requested (days): **Rush - 5 Day**

State, Zip: Hawaii 96813
Compliance Project: △ Yes △ No

Phone: 808-954-4512 / 770-331-0794
PO #:

Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)
WO #:

Project Name: CTO N6274223F0104
Project #: 60697810

Site: RHSF
SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-elhanol				Total Number of containers	Special Instructions/Note:
			Preservation Code:				A					
AF-RHMW03-WGN01LF-2307	7/5/23	1320	G	W	N	N	X				3	

Possible Hazard Identification
■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.
Special Instructions/QC Requirements: DOD QSM project.

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:

Relinquished by: CHRISTINA HARDTLE	Date/Time: 7/5/23 1600	Company AECOM	Received by: Alex Edmond.	Date/Time: 7/5/23 18:00	Company AECOM
Relinquished by: Alex Edmond,	Date/Time: 07/06/23 1355	Company AECOM	Received by:	Date/Time: 07/08/23 9:30	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2/0.5

Ver: 01/16/2019

7/14/2023
12:11 PM

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins | Environment Testing
America

Client Information	Sampler: Nate Hegster	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2307AFEA09
Client Contact:	Phone: 804-873-0525	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1

Company: AECOM		PWSID:		Job #:

Analysis Requested

Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract
City: Honolulu	TAT Requested (days): **Rush - 5 Day**
State, Zip: Hawaii 96813	Compliance Project: Δ Yes Δ No
Phone: 808-954-4512 / 770-331-0794	PO #:
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:
Project Name: CTO N6274223F0104	Project #: 60697810
Site: RHSF	SSOW#:

Preservation Codes:
A - HCL   M - Hexane
B - NaOH   N - None
C - Zn Acetate   O - AsNaO2
D - Nitric Acid   P - Na2O4S
E - NaHSO4   Q - Na2SO3
F - MeOH   R - Na2S2O3
G - Amchlor   S - H2SO4
H - Ascorbic Acid   T - TSP Dodecahydrate
I - Ice   U - Acetone
J - DI Water   V - MCAA
K - EDTA   W - pH 4-5
L - EDA   Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
Preservation Code:							A		
AF-RHMW06-WGN01LF-2307	7/5/23	1315	G	W	N	N	X	3	
									NN
									7/5/23

Possible Hazard Identification	**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**
■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B Unknown Radiological	☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)   Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.   Special Instructions/QC Requirements: DOD QSM project.

Empty Kit Relinquished by:		Date:	Time:		Method of Shipment:
Relinquished by: *(signature)*	Date/Time: 7/5/23 1440	Company AECOM	Received by: Miranda DeGarmo	Date/Time: 7/5/23 1440	Company AECOM
Relinquished by: Miranda DeGarmo	Date/Time: 07/06/23 1355	Company AECOM	Received by: *(signature)*	Date/Time: 07/08/23 09:30	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0·2/0·3

Ver: 01/16/2019

7/14/2023
12:11 PM

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins | Environment Testing America

United mo R - 010 - 4947 mD

Client Information	Sampler: Gavin Mun	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2307WAFEA03
Client Contact:	Phone: 808 987-3201	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1

Company: AECOM		PWSID:	**Analysis Requested**	Job #:

Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract
City: Honolulu	TAT Requested (days): **Rush - 5 Day**
State, Zip: Hawaii 96813	Compliance Project: △ Yes △ No
Phone: 808-954-4512 / 770-331-0794	PO #:
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:
Project Name: CTO N6274223F0104	Project #: 60697810
Site: RHSF	SSOW#:

Preservation Codes:
A - HCL   M - Hexane
B - NaOH   N - None
C - Zn Acetate   O - AsNaO2
D - Nitric Acid   P - Na2O4S
E - NaHSO4   Q - Na2SO3
F - MeOH   R - Na2S2O3
G - Amchlor   S - H2SO4
H - Ascorbic Acid   T - TSP Dodecahydrate
I - Ice   U - Acetone
J - DI Water   V - MCAA
K - EDTA   W - pH 4-5
L - EDA   Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
				Preservation Code:			A		
AF-RHMW10-WGN01LF-2307	07/05/23	1425	G	W	N	N	X	3	

Possible Hazard Identification
■ Non-Hazard   ☐ Flammable   ☐ Skin Irritant   ☐ Poison B   ☐ Unknown   ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client   ■ Disposal By Lab   ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.

Special Instructions/QC Requirements: DOD QSM project.

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment: 16:30
Relinquished by: Gavin Mun	Date/Time: 07/05/23 1430	Company AECOM	Received by: Miranda Deramo	Date/Time: 7/5/23 1630	Company AECOM
Relinquished by: Miranda Deramo	Date/Time: 7/5/23 1355 mD	Company AECOM	Received by:	Date/Time: 07/09/23 09:20	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2 / 0.3

Ver: 01/16/2019

7/14/2023
12:11 PM