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ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy
AECOM
1001 Bishop Street
Honolulu HI 96813

Generated 1/30/2023 10:44 AM

JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-122262-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

my EOL

Eurofins Seattle

Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

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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Authorized for release by
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Definitions/Glossary

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
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

CASE NARRATIVE
Client: AECOM
Project: Red Hill - AFFF Assessment Sampling
Report Number: 580-122262-1

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

Two samples were received on 1/14/2023 10:25 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 4.6º 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-2301W2 (580-122262-1) and AF-RHMW06-WGN01LF-2301W2 (580-122262-2) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 01/16/2023 and 01/17/2023.

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

Detection Summary

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW04-WGN01LF-2301W2 — Lab Sample ID: 580-122262-1

No Detections.

Client Sample ID: AF-RHMW06-WGN01LF-2301W2 — Lab Sample ID: 580-122262-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW04-WGN01LF-2301W2
Lab Sample ID: 580-122262-1

Date Collected: 01/12/23 09:50
Matrix: Water
Date Received: 01/14/23 10:25

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	5.0	1.1	mg/L			01/16/23 23:38	1

Client Sample ID: AF-RHMW06-WGN01LF-2301W2
Lab Sample ID: 580-122262-2

Date Collected: 01/12/23 11:20
Matrix: Water
Date Received: 01/14/23 10:25

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	5.0	1.1	mg/L			01/17/23 00:01	1

Default Detection Limits

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

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

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

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

Lab Sample ID: MB 680-759183/10
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 759183

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			01/16/23 15:06	1

Lab Sample ID: LCS 680-759183/6
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 759183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	20.0	19.0		mg/L		95	50 - 150

Lab Sample ID: LCSD 680-759183/7
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 759183

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	20.0	18.8		mg/L		94	50 - 150	1	50

Lab Sample ID: 580-122262-2 MS
Client Sample ID: AF-RHMW06-WGN01LF-2301W2
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 759183

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	3.0	U	20.0	19.9		mg/L		100	50 - 150

Lab Sample ID: 580-122262-2 MSD
Client Sample ID: AF-RHMW06-WGN01LF-2301W2
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 759183

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	3.0	U	20.0	15.5		mg/L		78	50 - 150	25	50

QC Association Summary

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

GC Semi VOA

Analysis Batch: 759183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-122262-1	AF-RHMW04-WGN01LF-2301W2	Total/NA	Water	8015C GLY	
580-122262-2	AF-RHMW06-WGN01LF-2301W2	Total/NA	Water	8015C GLY	
MB 680-759183/10	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-759183/6	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-759183/7	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-122262-2 MS	AF-RHMW06-WGN01LF-2301W2	Total/NA	Water	8015C GLY	
580-122262-2 MSD	AF-RHMW06-WGN01LF-2301W2	Total/NA	Water	8015C GLY	

Lab Chronicle

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW04-WGN01LF-2301W2
Lab Sample ID: 580-122262-1

Date Collected: 01/12/23 09:50
Matrix: Water
Date Received: 01/14/23 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	759183	JCK	EET SAV	01/16/23 23:38

Client Sample ID: AF-RHMW06-WGN01LF-2301W2
Lab Sample ID: 580-122262-2

Date Collected: 01/12/23 11:20
Matrix: Water
Date Received: 01/14/23 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	759183	JCK	EET SAV	01/17/23 00:01

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

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

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

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

Client: AECOM
Job ID: 580-122262-1
Project/Site: Red Hill - AFFF Assessment Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-122262-1	AF-RHMW04-WGN01LF-2301W2	Water	01/12/23 09:50	01/14/23 10:25
580-122262-2	AF-RHMW06-WGN01LF-2301W2	Water	01/12/23 11:20	01/14/23 10:25

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 758737

Lab Sample ID: IC 680-758737/12 Client Sample ID:

Date Analyzed: 01/11/23 19:18 Lab File ID: GA11012.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol, 2-propoxy	3.12	Peak assignment corrected	SWK1	01/11/23 19:39
4-Hydroxy-4-methyl-2-pentanone	3.72	Peak assignment corrected	SWK1	01/11/23 19:39
2-Butoxyethanol	4.03	Peak assignment corrected	SWK1	01/11/23 19:39
n-Heptyl Alcohol	4.51	Peak assignment corrected	SWK1	01/11/23 19:39
Dipropylene Glycol Methyl Ether	5.47	Peak assignment corrected	SWK1	01/11/23 19:39
Propylene glycol	6.34	Peak assignment corrected	SWK1	01/11/23 19:39
Ethylene glycol	6.78	Peak assignment corrected	SWK1	01/11/23 19:39
2-(2-Butoxyethoxy)ethanol	8.76	Peak assignment corrected	SWK1	01/11/23 19:39
2,2'-Oxybisethanol	9.74	Peak assignment corrected	SWK1	01/11/23 19:39
Triethylene Glycol	10.75	Baseline Smoothing	SWK1	01/11/23 19:39
Tetraethylene Glycol	12.02	Peak assignment corrected	SWK1	01/11/23 19:39

Lab Sample ID: IC 680-758737/13 Client Sample ID:

Date Analyzed: 01/11/23 19:41 Lab File ID: GA11013.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	10.75	Baseline Smoothing	SWK1	01/11/23 20:18

Lab Sample ID: IC 680-758737/14 Client Sample ID:

Date Analyzed: 01/11/23 20:04 Lab File ID: GA11014.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	10.75	Baseline Smoothing	SWK1	01/11/23 20:51

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 758737

Lab Sample ID: ICIS 680-758737/15 Client Sample ID:

Date Analyzed: 01/11/23 20:28 Lab File ID: GA11015.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol, 2-propoxy	3.12	Baseline Smoothing	SWK1	01/11/23 20:52
Triethylene Glycol	10.75	Baseline Smoothing	SWK1	01/11/23 20:52

Lab Sample ID: IC 680-758737/16 Client Sample ID:

Date Analyzed: 01/11/23 20:51 Lab File ID: GA11016.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	10.75	Baseline Smoothing	SWK1	01/11/23 21:35

Lab Sample ID: IC 680-758737/17 Client Sample ID:

Date Analyzed: 01/11/23 21:14 Lab File ID: GA11017.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	10.75	Baseline Smoothing	SWK1	01/11/23 21:35

Lab Sample ID: ICV 680-758737/18 CCV Client Sample ID:

Date Analyzed: 01/11/23 21:37 Lab File ID: GA11018.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Triethylene Glycol	10.75	Baseline Smoothing	SWK1	01/11/23 22:02

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 759183

Lab Sample ID: 580-122262-1 Client Sample ID: AF-RHMW04-WGN01LF-2301W2

Date Analyzed: 01/16/23 23:38 Lab File ID: GA16032.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	SWK1	01/17/23 11:07

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG_Gly_CAL_00052	06/30/23		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_ISTD_00105	07/11/23		Agilent, Lot 0006720623		(Purchased Reagent)		n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00052	06/30/23		o2si, Lot 454407		(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

SG_Gly_CAL_00052

ISO/IEC 17025 Accredited
Chemical Testing Lab
Cert. No. 3031.01

o2si smart solutions®

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	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:

Certificate of Analysis

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	Tyler Sherman	Susan Mathews
3 -May-2022	14 -Jun-2022	14 -Jun-2022
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

7290B Investment Drive • North Charleston, SC 29418
Phone: 866.272.0932 • Fax: 866.509.5146 www.o2si.com

Certificate of Analysis

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		
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**

7290B Investment Drive • North Charleston, SC 29418
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Reagent

SG_GLY_ISTD_00105

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-6046

Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006720623

Lot Issue Date: 15-Dec-2022

Expiration Date: 31-Jan-2025

Component Name	CERTIFIED VALUES Concentration		Expanded Uncertainty	CAS#	Analyte Lot
n-heptanol	5001	±	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 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.

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 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 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 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.

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

www.agilent.com/quality/
CSD-QA-015.1

ISO 17025

Reagent

SG_GlyICV_00052

ISO/IEC 17025 Accredited
Chemical Testing Lab
Cert. No. 3031.01

o2si smart solutions®

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:

Certificate of Analysis

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
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:
Jared Ball	Claire Desrochers	Susan Mathews
1 -Jul-2021	7 -Jul-2021	8 -Jul-2021
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

7290B Investment Drive • North Charleston, SC 29418
Phone: 866.272.0932 • Fax: 866.509.5146 www.o2si.com

Certificate of Analysis

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

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
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

7290B Investment Drive • North Charleston, SC 29418
Phone: 866.272.0932 • Fax: 866.509.5146 www.o2si.com

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.: 580-122262-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GA16006.D

Lab ID: LCS 680-759183/6 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	19.0	95	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.: 580-122262-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GA16007.D

Lab ID: LCSD 680-759183/7 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy)ethanol	20.0	18.8	94	1	50	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GA16036.D

Lab ID: 580-122262-2 MS Client ID: AF-RHMW06-WGN01LF-2301W2 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	3.0 U	19.9	100	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GA16037.D

Lab ID: 580-122262-2 MSD Client ID: AF-RHMW06-WGN01LF-2301W2 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	15.5	78	25	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.: 580-122262-1

SDG No.:

Lab Sample ID: MB 680-759183/10

Matrix: Water Date Extracted:

Lab File ID:(1) GA16010.D Lab File ID:(2)

Date Analyzed:(1) 01/16/2023 15:06 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 680-759183/6	01/16/2023 13:33	
	LCSD 680-759183/7	01/16/2023 13:56	
AF-RHMW04-WGN01LF-2301W2	580-122262-1	01/16/2023 23:38	
AF-RHMW06-WGN01LF-2301W2	580-122262-2	01/17/2023 00:01	
AF-RHMW06-WGN01LF-2301W2 MS	580-122262-2 MS	01/17/2023 01:11	
AF-RHMW06-WGN01LF-2301W2 MSD	580-122262-2 MSD	01/17/2023 01:34	

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

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Sample No.: ICIS 680-758737/15 Date Analyzed: 01/11/2023 20:28

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

Lab File ID (Standard): GA11015.D Heated Purge: (Y/N) N

Calibration ID: 89052

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		4703166	4.50				
UPPER LIMIT		9406332	5.00				
LOWER LIMIT		2351583	4.00				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-758737/18 CCV		4949602	4.51				

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 VIII
GC SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Sample No.: CCVIS 680-759183/5 Date Analyzed: 01/16/2023 13:10

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

Lab File ID (Standard): GA16005.D Heated Purge: (Y/N) N

Calibration ID: 89052

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		4434601	4.51				
UPPER LIMIT		8869202	5.01				
LOWER LIMIT		2217301	4.01				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-759183/6		4304414	4.50				
LCSD 680-759183/7		3977995	4.51				
MB 680-759183/10		5589716	4.51				
CCV 680-759183/24		5069907	4.50				
580-122262-1	AF-RHMW04-WGN01LF-2 301W2	5096293	4.50				
580-122262-2	AF-RHMW06-WGN01LF-2 301W2	5443830	4.51				
580-122262-2 MS	AF-RHMW06-WGN01LF-2 301W2 MS	4675704	4.50				
580-122262-2 MSD	AF-RHMW06-WGN01LF-2 301W2 MSD	5624301	4.50				
CCV 680-759183/39		5131743	4.50				

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.: 580-122262-1
SDG No.:
Client Sample ID: AF-RHMW04-WGN01LF-2301W2
Lab Sample ID: 580-122262-1
Matrix: Water
Lab File ID: GA16032.D
Analysis Method: 8015C GLY
Date Collected: 01/12/2023 09:50
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 01/16/2023 23:38
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.: 759183
Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16032.D				
Lims ID:	580-122262-A-1				
Client ID:	AF-RHMW04-WGN01LF-2301WK2				
Sample Type:	Client				
Inject. Date:	16-Jan-2023 23:38:30	ALS Bottle#:	0	Worklist Smp#:	32
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083281-032				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	17-Jan-2023 11:07:35	Calib Date:	11-Jan-2023 21:14:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1657				

First Level Reviewer: SWK1 Date: 17-Jan-2023 11:07:35

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
4.497	4.497	0.000	5096293	50.0	

Reagents:

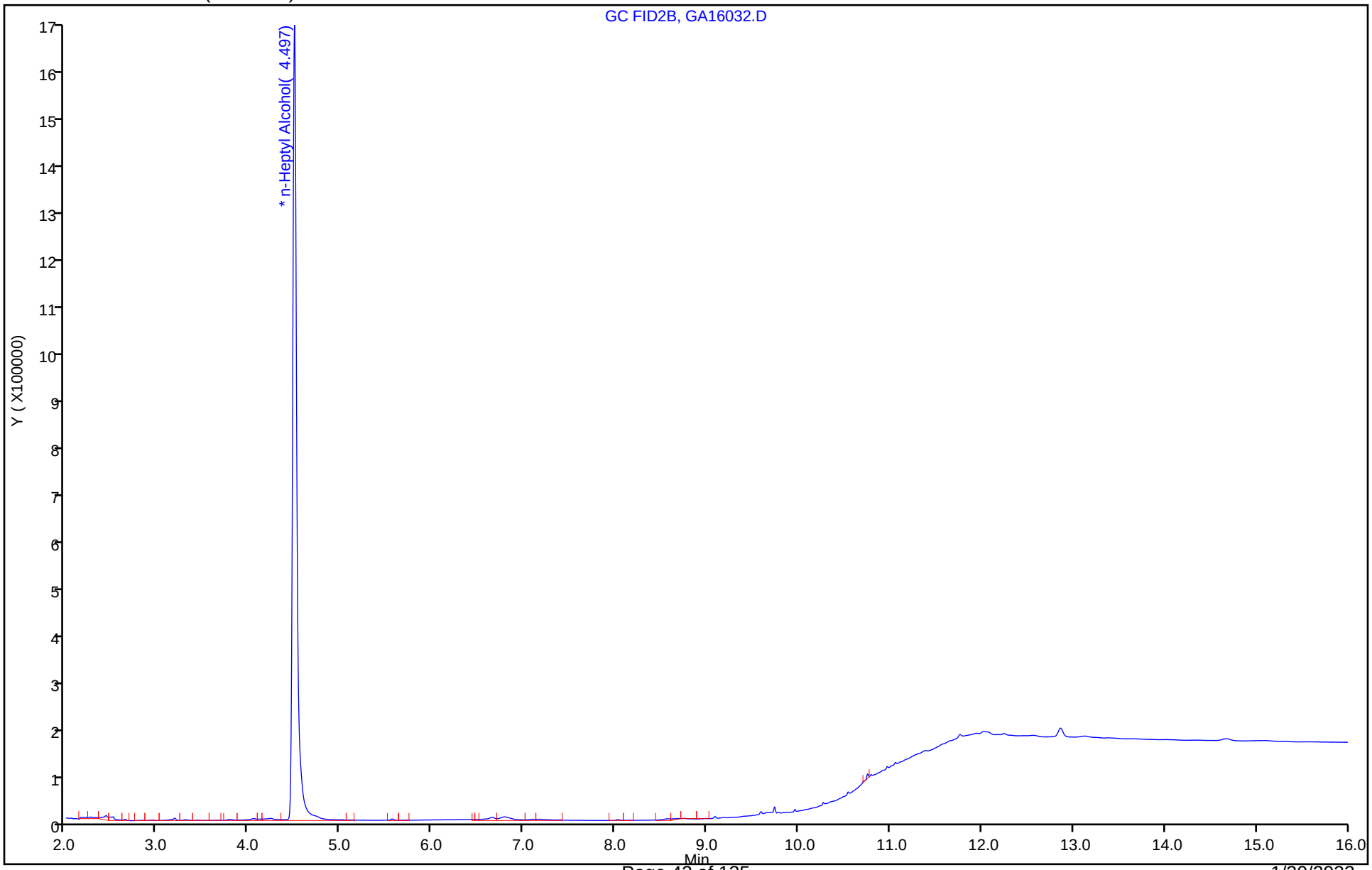
SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 17-Jan-2023 11:07:58 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16032.D				
Injection Date:	16-Jan-2023 23:38:30	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-122262-A-1	Lab Sample ID:	680-122262-1	Worklist Smp#:	32
Client ID:	AF-RHMW04-WGN01LF-2301WK2				
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)



1/30/2023
10:44 AM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah
Job No.: 580-122262-1
SDG No.:
Client Sample ID: AF-RHMW06-WGN01LF-2301W2
Lab Sample ID: 580-122262-2
Matrix: Water
Lab File ID: GA16033.D
Analysis Method: 8015C GLY
Date Collected: 01/12/2023 11:20
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 01/17/2023 00:01
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.: 759183
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

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16033.D				
Lims ID:	580-122262-A-2				
Client ID:	AF-RHMW06-WGN01LF-2301WK2				
Sample Type:	Client				
Inject. Date:	17-Jan-2023 00:01:40	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083281-033				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	17-Jan-2023 11:07:35	Calib Date:	11-Jan-2023 21:14:29
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1657	

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
4.505	4.497	0.008	5443830	50.0	
8 2-(2-Butoxyethoxy)ethanol					7
8.757	8.750	0.007	3959	0.0622	7
LOD =	0.5000				

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

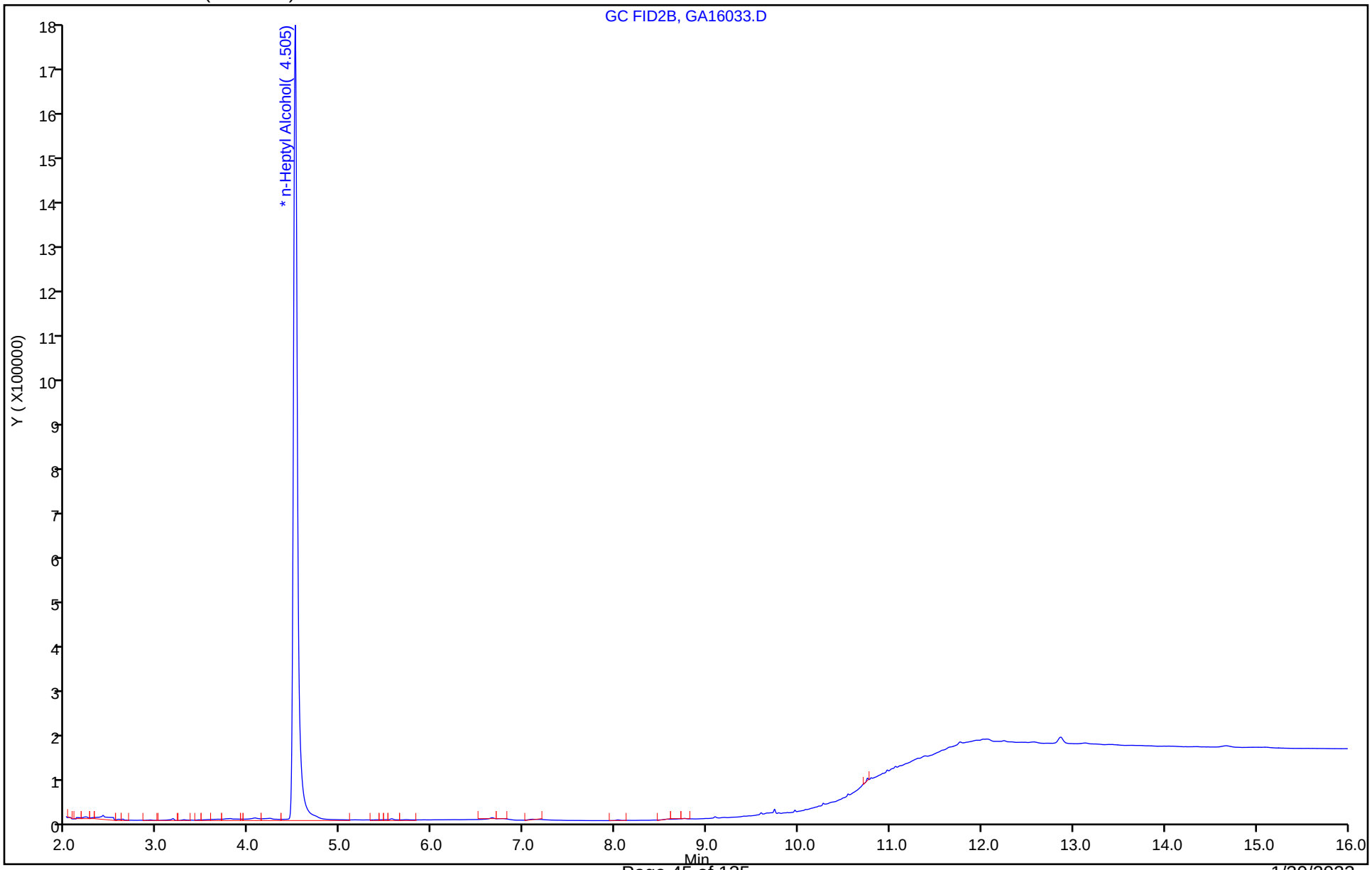
SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 17-Jan-2023 11:07:59 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16033.D				
Injection Date:	17-Jan-2023 00:01:40	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-122262-A-2	Lab Sample ID:	680-122262-2	Worklist Smp#:	33
Client ID:	AF-RHMW06-WGN01LF-2301WK2				
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)



1/30/2023
10:44 AM

FORM VI
GC SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Savannah Job No.: 580-122262-1 Analy Batch No.: 758737

SDG No.:

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

Calibration Start Date: 01/11/2023 19:18 Calibration End Date: 01/11/2023 21:14 Calibration ID: 89052

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-758737/17	GA11017.D
Level 2	IC 680-758737/16	GA11016.D
Level 3	ICIS 680-758737/15	GA11015.D
Level 4	IC 680-758737/14	GA11014.D
Level 5	IC 680-758737/13	GA11013.D
Level 6	IC 680-758737/12	GA11012.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 3	LVL 4	LVL 5		B	M1	M2								
Ethanol, 2-propoxy	0.8508 0.7063	0.7418	0.7444	0.6966	0.6744	Ave		0.7357				8.5		20.0			
4-Hydroxy-4-methyl-2-pentanone	0.8359 0.7007	0.7238	0.7293	0.6848	0.6479	Ave		0.7204				8.9		20.0			
2-Butoxyethanol	0.9281 0.7580	0.8154	0.8079	0.7506	0.7326	Ave		0.7988				8.9		20.0			
Dipropylene Glycol Methyl Ether	0.0293 0.0530	0.0542	0.0552	0.0522	0.0494	Qua	0.0073	0.0496	0.0000240						0.9970		0.9900
Propylene glycol	0.2562 0.2577	0.2682	0.2578	0.2486	0.2415	Ave		0.2550				3.6		20.0			
Ethylene glycol	0.2512 0.1973	0.2207	0.2010	0.1950	0.1860	Ave		0.2086				11.4		20.0			
2-(2-Butoxyethoxy)ethanol	0.6768 0.5727	0.5884	0.5906	0.5554	0.5248	Ave		0.5848				8.8		20.0			
2,2'-Oxybisethanol	0.2187 0.1909	0.1993	0.1896	0.1853	0.1774	Ave		0.1935				7.4		20.0			
Triethylene Glycol	0.2060 0.1885	0.1866	0.1765	0.1788	0.1731	Ave		0.1849				6.4		20.0			
Tetraethylene Glycol	0.2216 0.2007	0.2051	0.1991	0.1929	0.1852	Ave		0.2008				6.1		20.0			

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
GC SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Savannah Job No.: 580-122262-1 Analy Batch No.: 758737

SDG No.:

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

Calibration Start Date: 01/11/2023 19:18 Calibration End Date: 01/11/2023 21:14 Calibration ID: 89052

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-758737/17	GA11017.D
Level 2	IC 680-758737/16	GA11016.D
Level 3	ICIS 680-758737/15	GA11015.D
Level 4	IC 680-758737/14	GA11014.D
Level 5	IC 680-758737/13	GA11013.D
Level 6	IC 680-758737/12	GA11012.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethanol, 2-propoxy	nHPA	Ave	412485 6162790	729297	1400382	3185611	4944627	5.00 100	10.0	20.0	50.0	80.0
4-Hydroxy-4-methyl-2-pentanone	nHPA	Ave	405244 6113873	711603	1371968	3131890	4750126	5.00 100	10.0	20.0	50.0	80.0
2-Butoxyethanol	nHPA	Ave	449925 6613883	801660	1519939	3432653	5370855	5.00 100	10.0	20.0	50.0	80.0
Dipropylene Glycol Methyl Ether	nHPA	Qua	14210 462643	53252	103939	238530	362014	5.00 100	10.0	20.0	50.0	80.0
Propylene glycol	nHPA	Ave	124185 2248919	263729	485048	1136780	1770636	5.00 100	10.0	20.0	50.0	80.0
Ethylene glycol	nHPA	Ave	121803 1721527	217023	378219	891870	1363409	5.00 100	10.0	20.0	50.0	80.0
2-(2-Butoxyethoxy)ethanol	nHPA	Ave	328114 4997206	578471	1111022	2540215	3847420	5.00 100	10.0	20.0	50.0	80.0
2,2'-Oxybisethanol	nHPA	Ave	106006 1665230	195926	356750	847316	1300421	5.00 100	10.0	20.0	50.0	80.0
Triethylene Glycol	nHPA	Ave	99849 1645092	183444	332049	817829	1268874	5.00 100	10.0	20.0	50.0	80.0
Tetraethylene Glycol	nHPA	Ave	214886 3503102	403210	748973	1764754	2715743	10.0 200	20.0	40.0	100	160

Curve Type Legend
Ave = Average ISTD
Qua = Quadratic ISTD

FORM VI
GC SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Savannah Job No.: 580-122262-1 Analy Batch No.: 758737

SDG No.:

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

Calibration Start Date: 01/11/2023 19:18 Calibration End Date: 01/11/2023 21:14 Calibration ID: 89052

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-758737/17	GA11017.D
Level 2	IC 680-758737/16	GA11016.D
Level 3	ICIS 680-758737/15	GA11015.D
Level 4	IC 680-758737/14	GA11014.D
Level 5	IC 680-758737/13	GA11013.D
Level 6	IC 680-758737/12	GA11012.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Ethanol, 2-propoxy	15.6	0.8	1.2	-5.3	-8.3	-4.0	20	20	20	20	20	20
4-Hydroxy-4-methyl-2-pentanone	16.0	0.5	1.2	-4.9	-10.1	-2.7	20	20	20	20	20	20
2-Butoxyethanol	16.2	2.1	1.1	-6.0	-8.3	-5.1	20	20	20	20	20	20
Propylene glycol	0.4	5.2	1.1	-2.5	-5.3	1.1	20	20	20	20	20	20
Ethylene glycol	20.5 *	5.8	-3.6	-6.5	-10.8	-5.4	20	20	20	20	20	20
2-(2-Butoxyethoxy)ethanol	15.7	0.6	1.0	-5.0	-10.3	-2.1	20	20	20	20	20	20
2,2'-Oxybisethanol	13.0	3.0	-2.0	-4.3	-8.3	-1.4	20	20	20	20	20	20
Triethylene Glycol	11.4	0.9	-4.5	-3.3	-6.4	2.0	20	20	20	20	20	20
Tetraethylene Glycol	10.4	2.1	-0.9	-3.9	-7.8	0.0	20	20	20	20	20	20

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D
Lims ID: ic g6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 11-Jan-2023 19:18:12 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083226-012
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 12-Jan-2023 12:14:36 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1634

First Level Reviewer: SWK1 Date: 11-Jan-2023 19:40:04

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						a
	3.118	3.121	-0.003	6162790	100.0	96.0	a
	2 4-Hydroxy-4-methyl-2-pentanone						a
	3.718	3.724	-0.006	6113873	100.0	97.3	a
	3 2-Butoxyethanol						a
	4.031	4.031	0.000	6613883	100.0	94.9	a
*	4 n-Heptyl Alcohol						a
	4.507	4.504	0.003	4362652	50.0	50.0	a
	5 Dipropylene Glycol Methyl Ether						a
	5.466	5.469	-0.003	462643	100.0	101.7	a
	6 Propylene glycol						a
	6.337	6.341	-0.004	2248919	100.0	101.1	a
	7 Ethylene glycol						a
	6.777	6.782	-0.005	1721527	100.0	94.6	a
	8 2-(2-Butoxyethoxy)ethanol						a
	8.758	8.758	0.000	4997206	100.0	97.9	a
	9 2,2'-Oxybisethanol						a
	9.738	9.737	0.001	1665230	100.0	98.6	a
	10 Triethylene Glycol						Ma
	10.754	10.753	0.001	1645092	100.0	102.0	M
	11 Tetraethylene Glycol						a
	12.017	12.016	0.001	3503102	200.0	200.0	a

QC Flag Legend

Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00052	Amount Added:	50.00	Units: uL	
SG_GLY_ISTD_00105	Amount Added:	10.00	Units: uL	Run Reagent

Report Date: 12-Jan-2023 12:14:37 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D

Injection Date: 11-Jan-2023 19:18:12 Instrument ID: CVGG2 Operator ID:

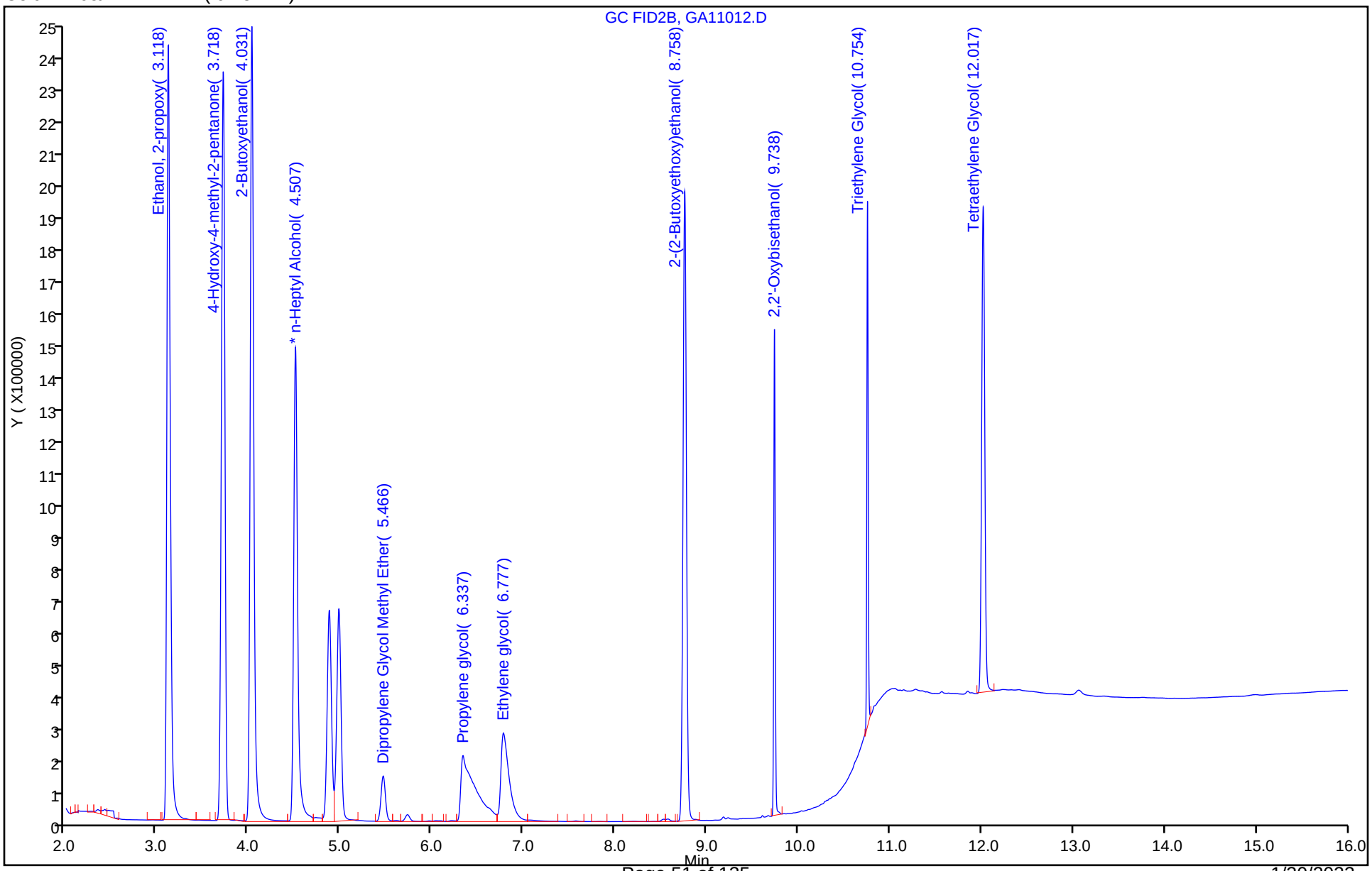
Lims ID: ic g6 Worklist Smp#: 12

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)



1/30/2023
10:44 AM

Manual Integration/User Assign Peak Report

Eurofins Savannah

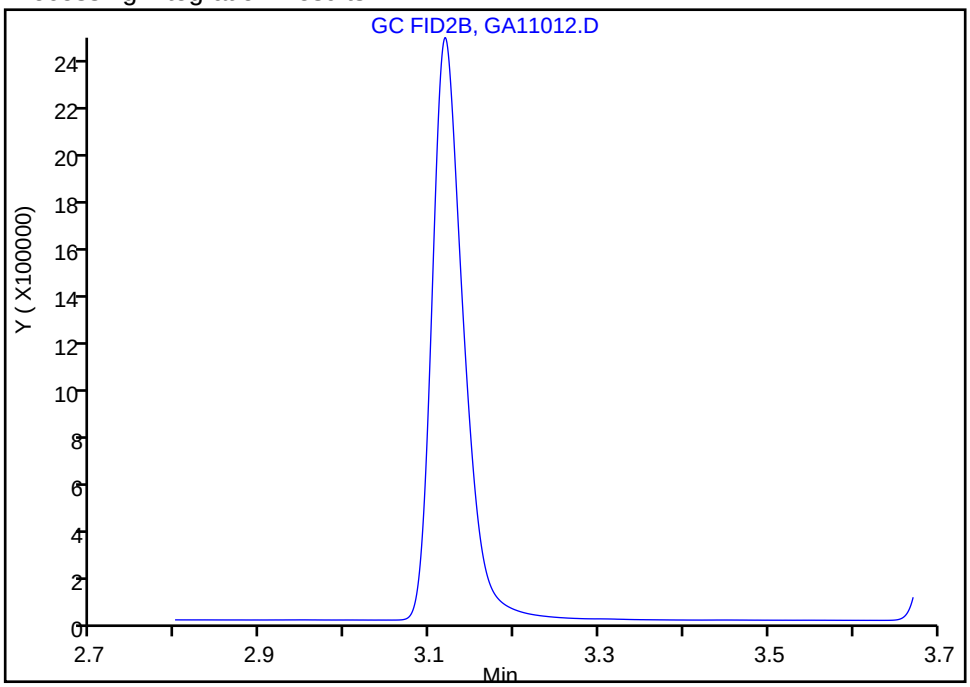
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

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

Signal: 1

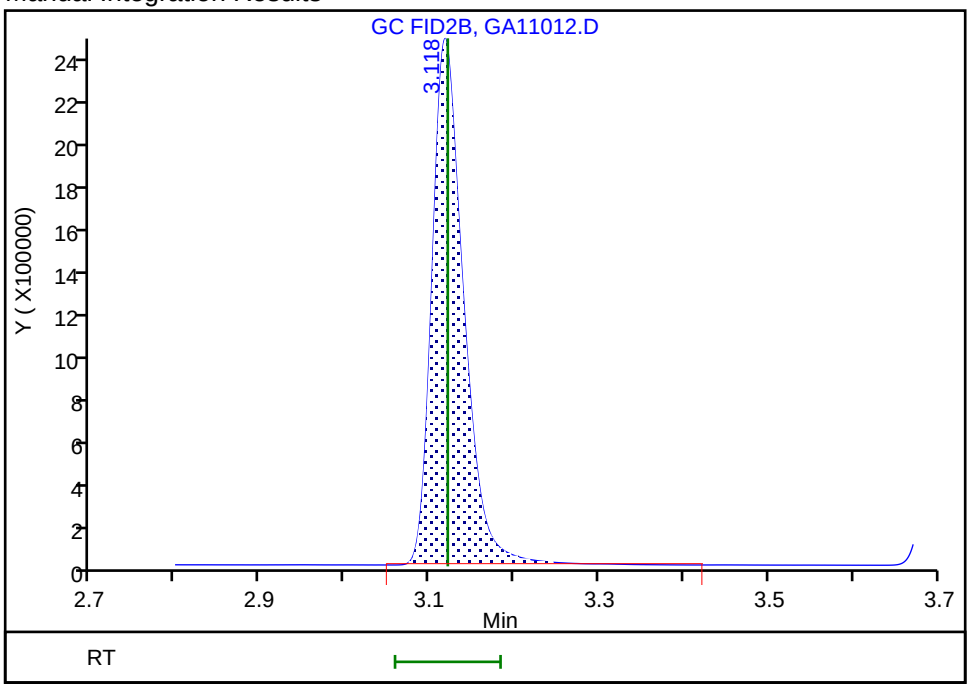
Processing Integration Results

Not Detected
Expected RT: 3.12



Manual Integration Results

RT:	3.12
Area:	6162790
Amount:	96.002889
Amount Units:	ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:16
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Savannah

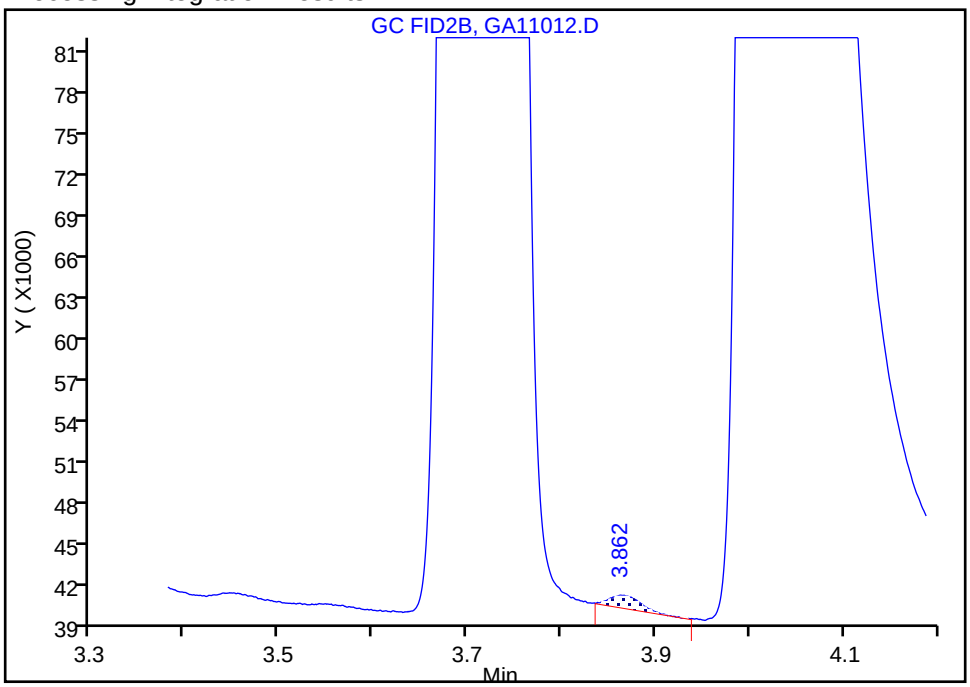
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

2 4-Hydroxy-4-methyl-2-pentanone, CAS: 123-42-2

Signal: 1

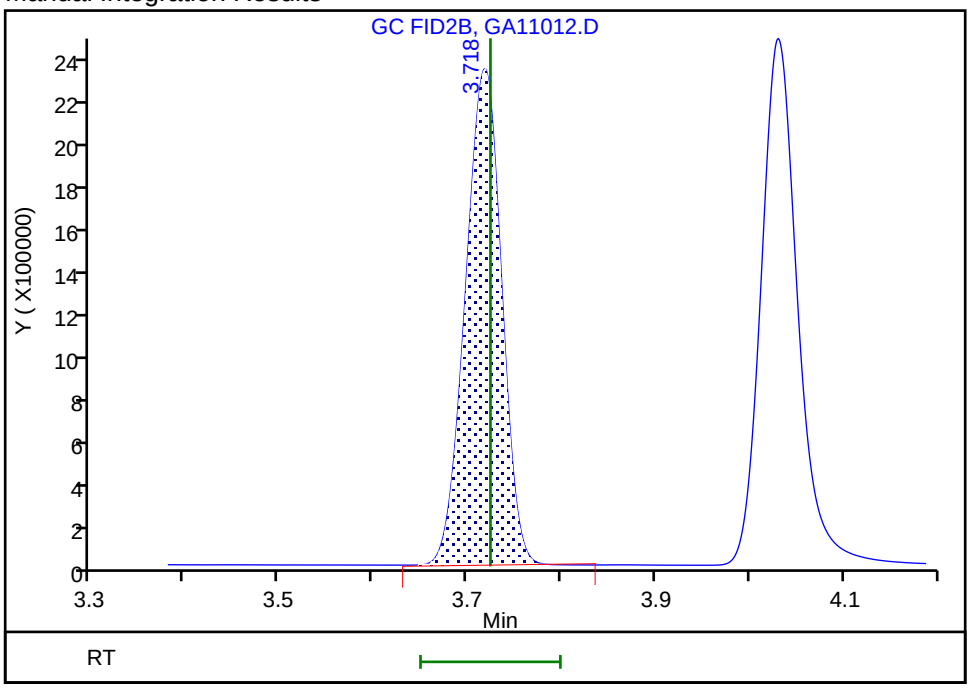
Processing Integration Results

RT: 3.86
Area: 2360
Amount: 100.0000
Amount Units: ug/ml



Manual Integration Results

RT: 3.72
Area: 6113873
Amount: 97.266243
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:21

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Savannah

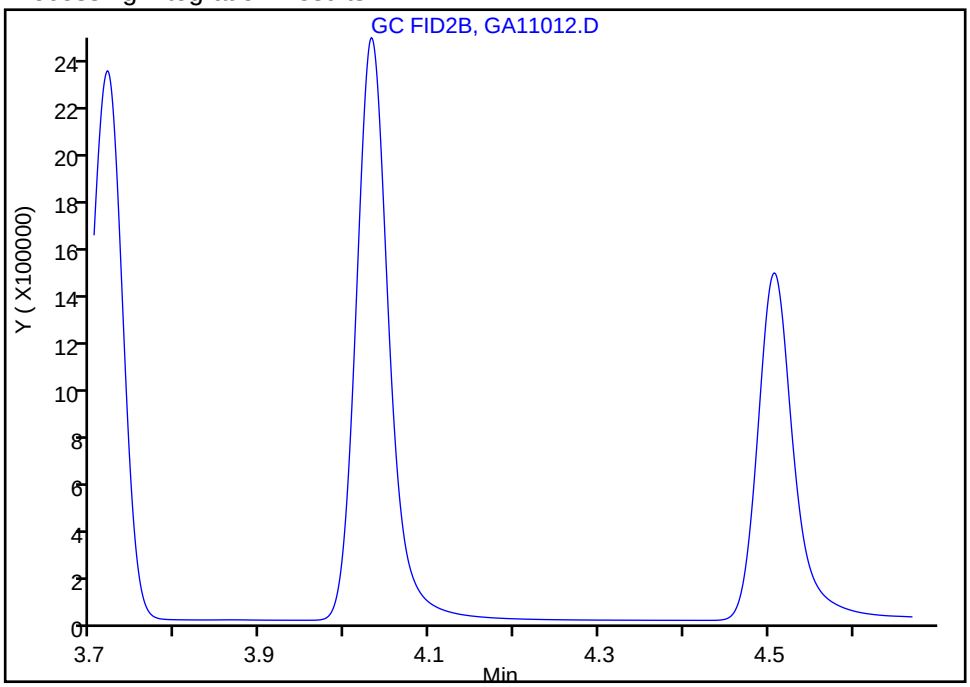
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

3 2-Butoxyethanol, CAS: 111-76-2

Signal: 1

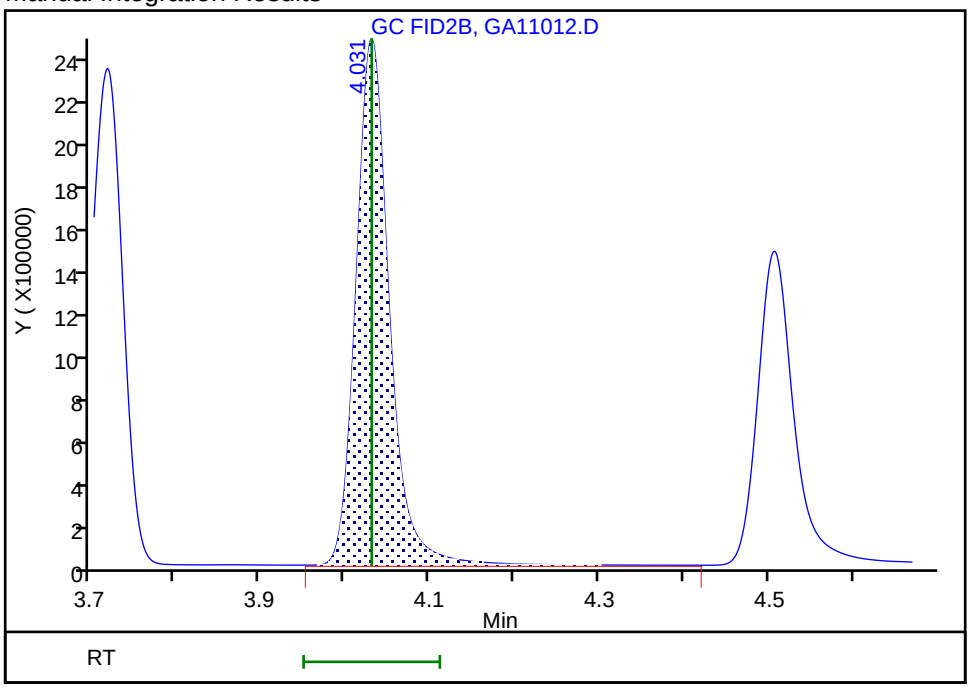
Processing Integration Results

Not Detected
Expected RT: 4.03



Manual Integration Results

RT: 4.03
Area: 6613883
Amount: 94.898661
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:25
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Savannah

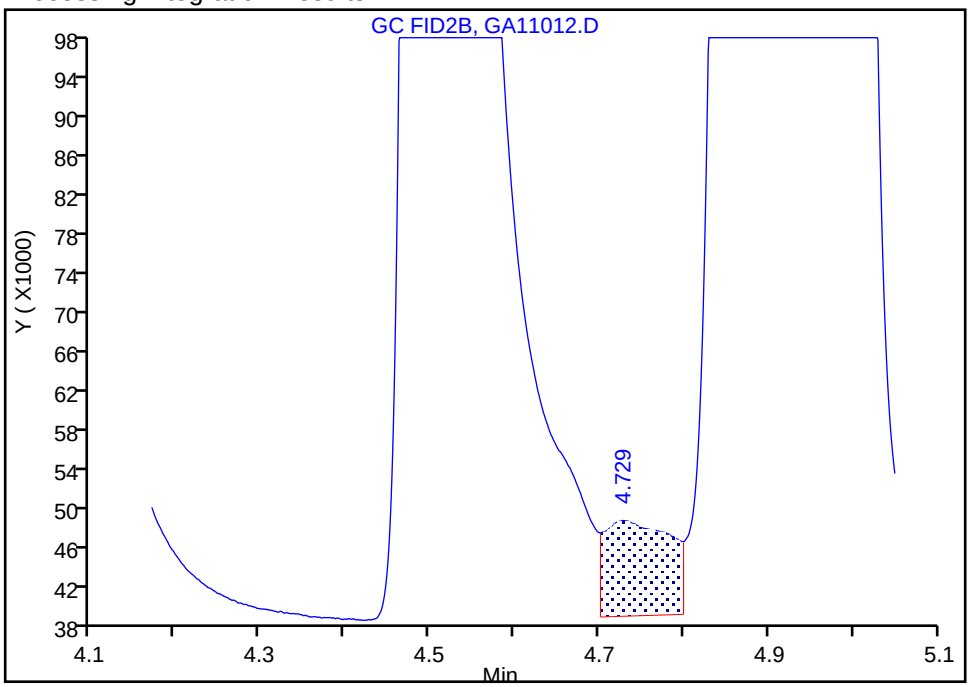
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

* 4 n-Heptyl Alcohol, CAS: 111-70-6

Signal: 1

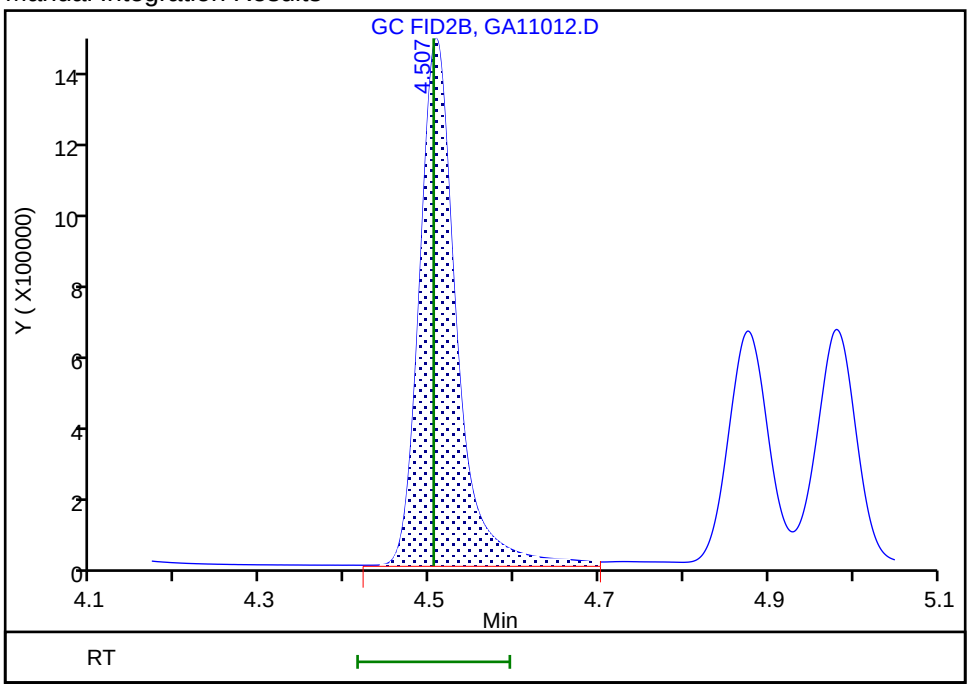
Processing Integration Results

RT: 4.73
Area: 51629
Amount: 50.000000
Amount Units: ug/ml



Manual Integration Results

RT: 4.51
Area: 4362652
Amount: 50.000000
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:29

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Savannah

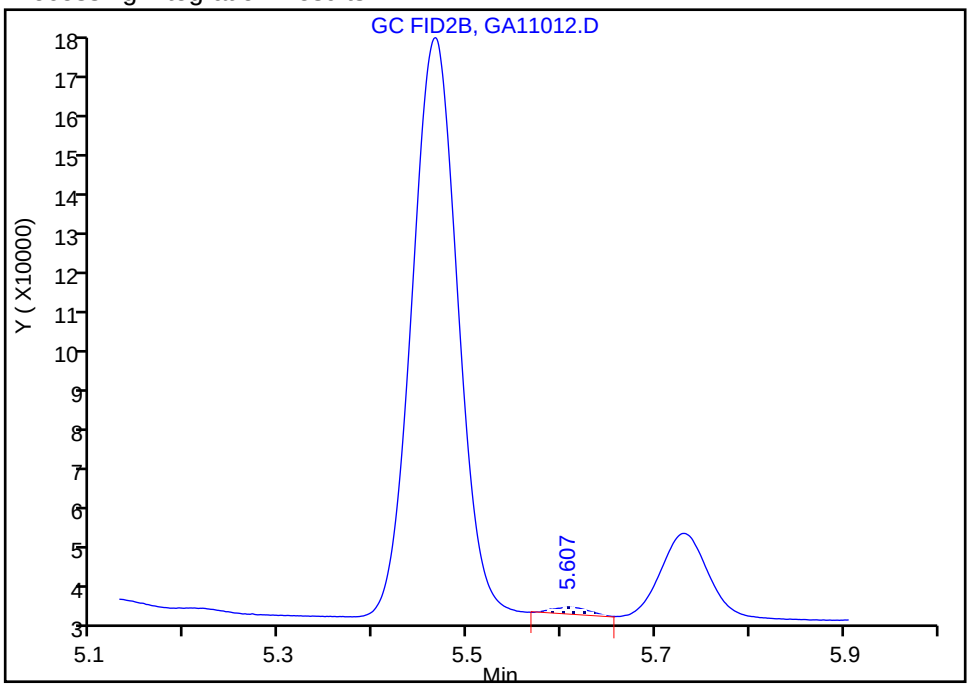
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

5 Dipropylene Glycol Methyl Ether, CAS: 34590-94-8

Signal: 1

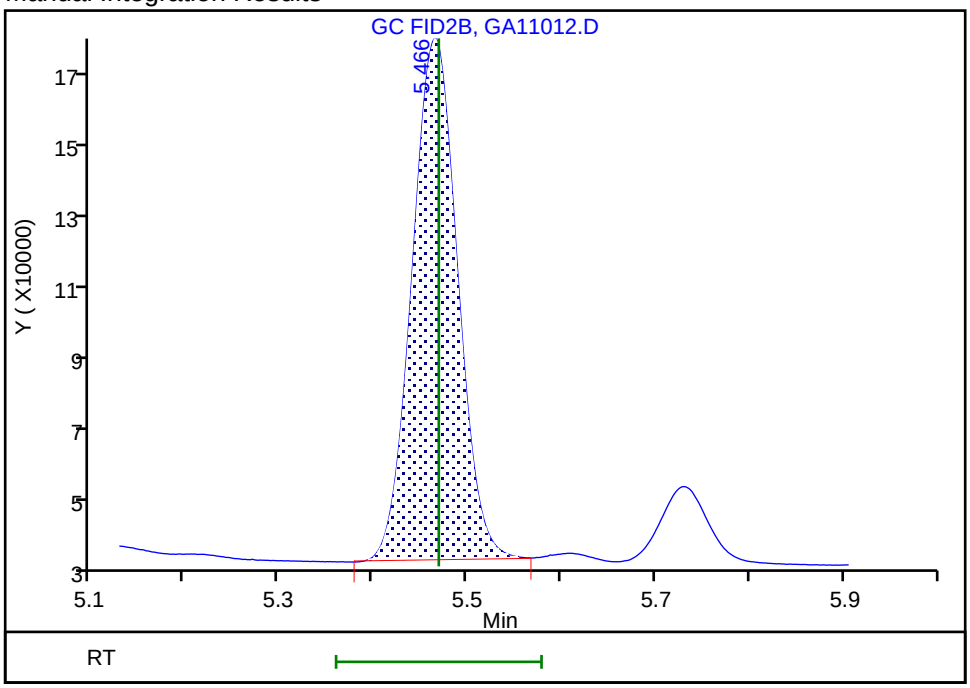
Processing Integration Results

RT: 5.61
Area: 4631
Amount: 100.0000
Amount Units: ug/ml



Manual Integration Results

RT: 5.47
Area: 462643
Amount: 101.7486
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:33
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Savannah

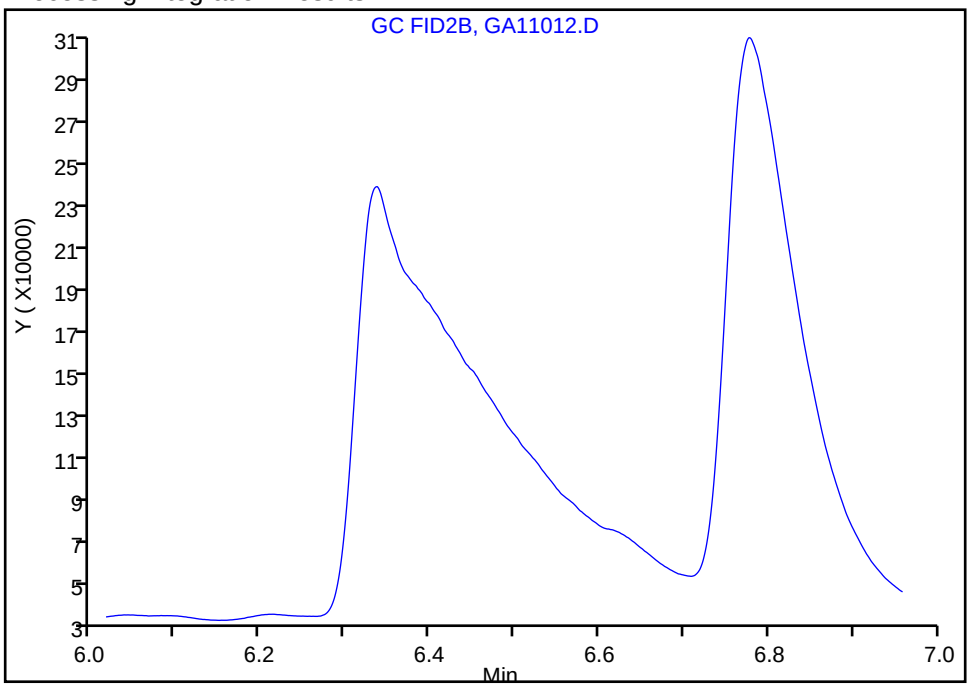
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

6 Propylene glycol, CAS: 57-55-6

Signal: 1

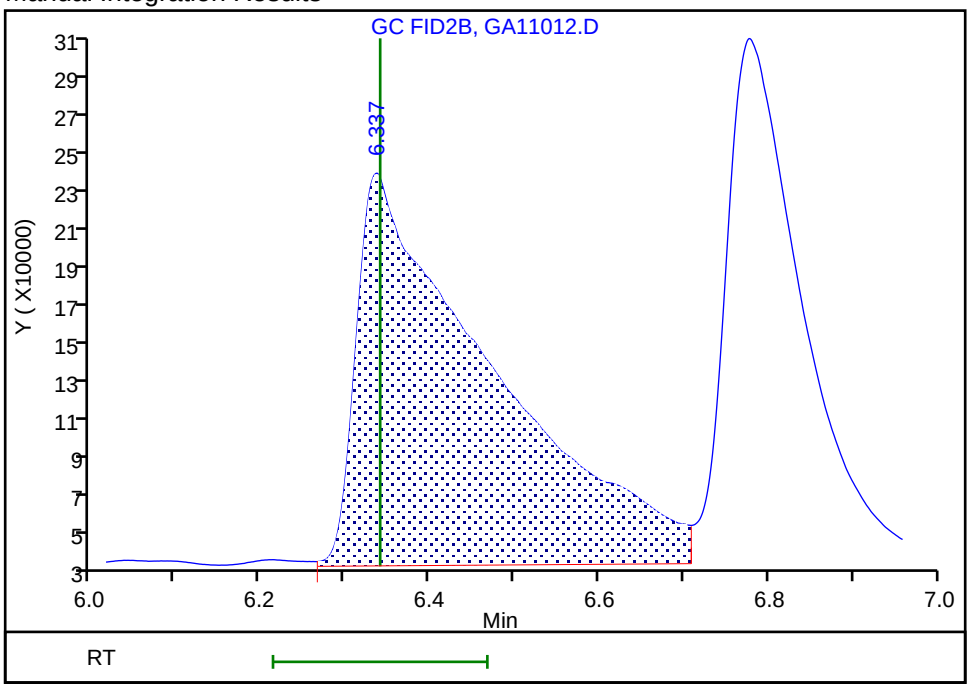
Not Detected
Expected RT: 6.34

Processing Integration Results



Manual Integration Results

RT: 6.34
Area: 2248919
Amount: 101.0732
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:36
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Savannah

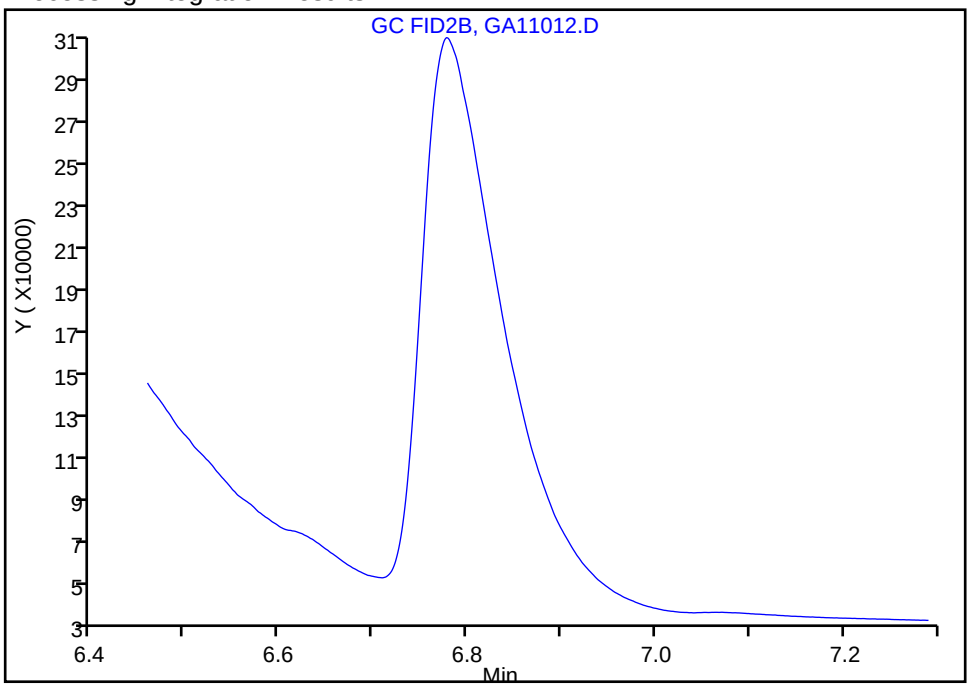
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

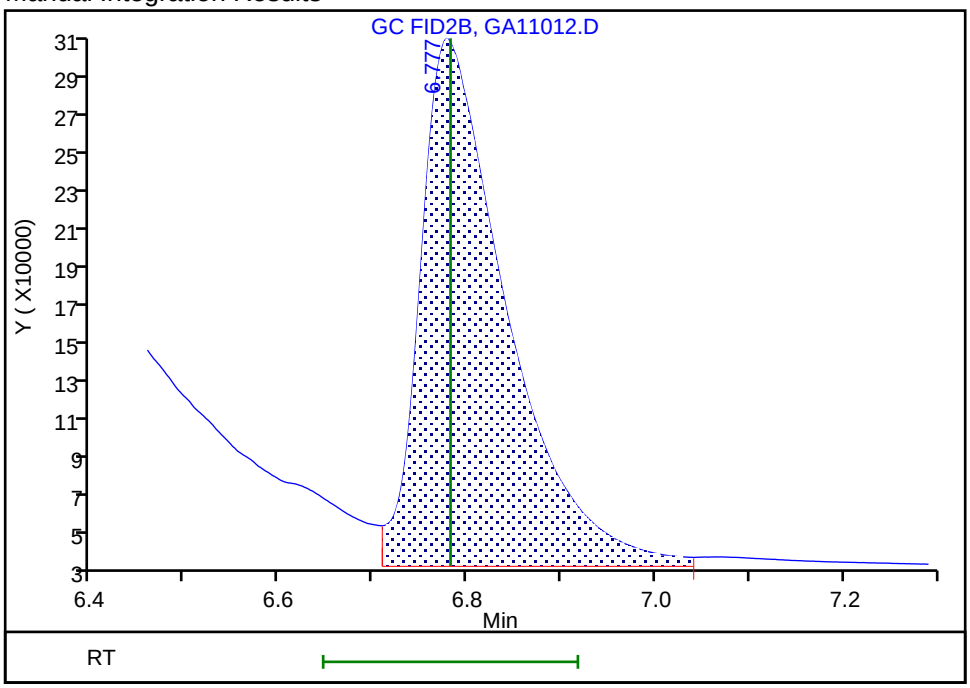
Processing Integration Results

Not Detected
Expected RT: 6.78



Manual Integration Results

RT: 6.78
Area: 1721527
Amount: 94.605933
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:39
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Savannah

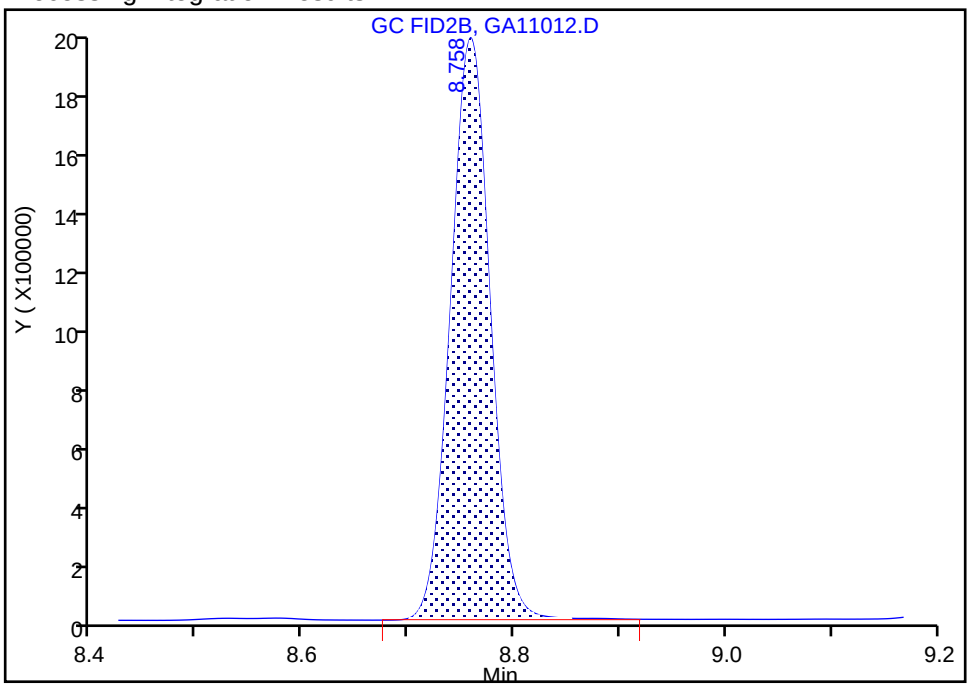
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

8 2-(2-Butoxyethoxy)ethanol, CAS: 112-34-5

Signal: 1

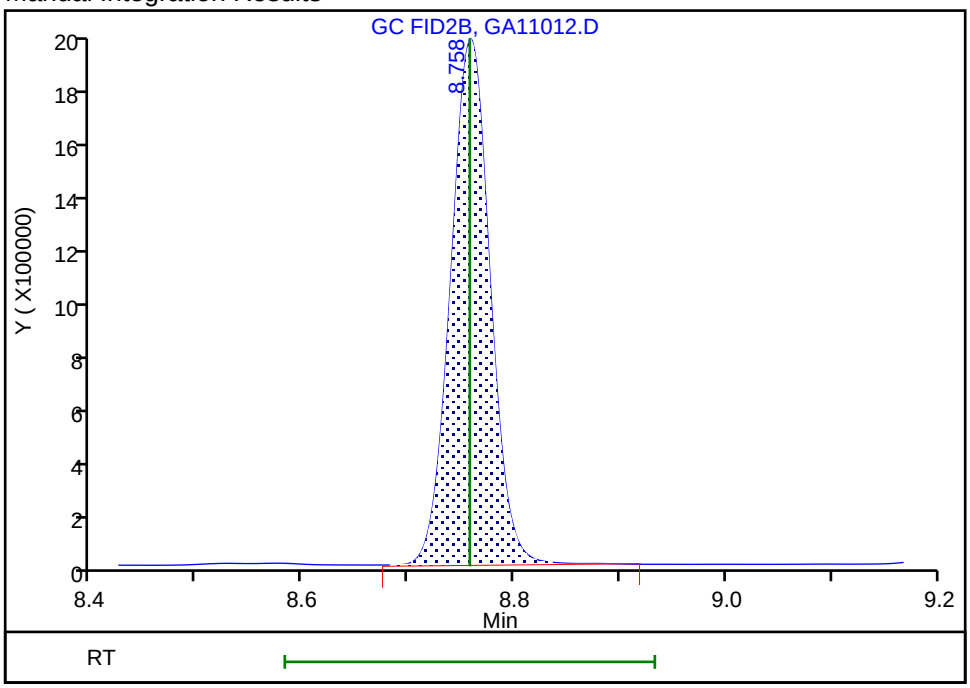
Processing Integration Results

RT: 8.76
Area: 4997206
Amount: 100.0000
Amount Units: ug/ml



Manual Integration Results

RT: 8.76
Area: 4997206
Amount: 97.938084
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:43
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins Savannah

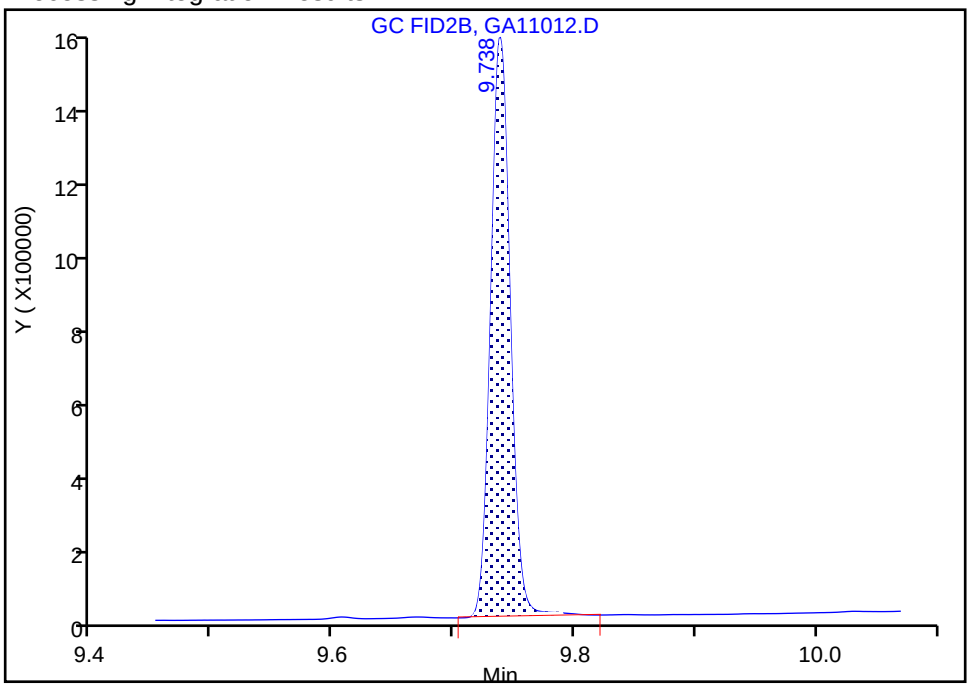
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

9 2,2'-Oxybisethanol, CAS: 111-46-6

Signal: 1

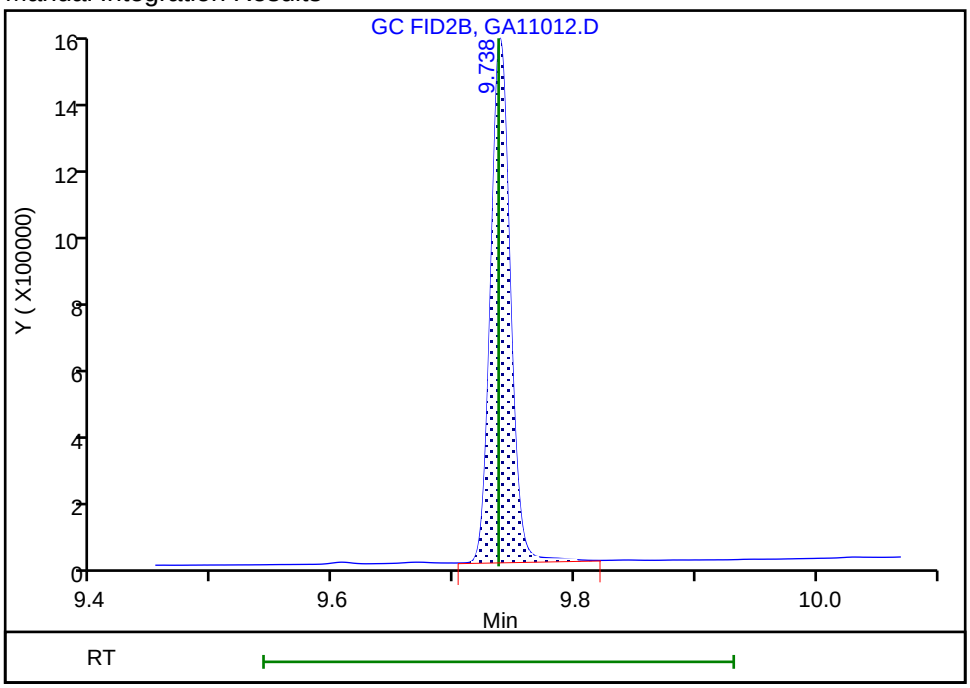
Processing Integration Results

RT: 9.74
Area: 1665230
Amount: 100.0000
Amount Units: ug/ml



Manual Integration Results

RT: 9.74
Area: 1665230
Amount: 98.624633
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:45
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Savannah

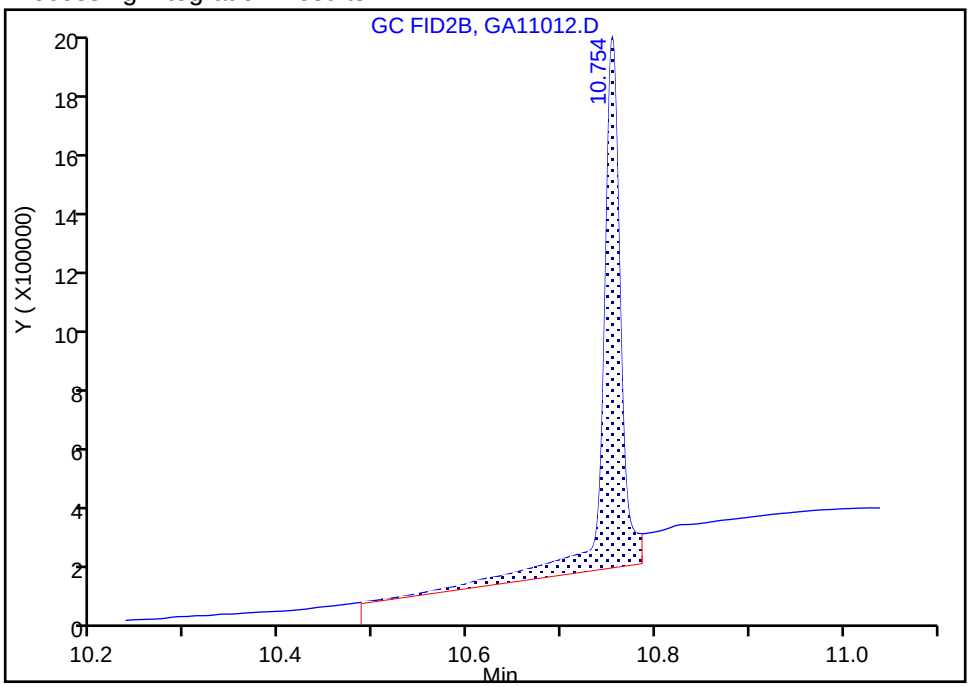
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

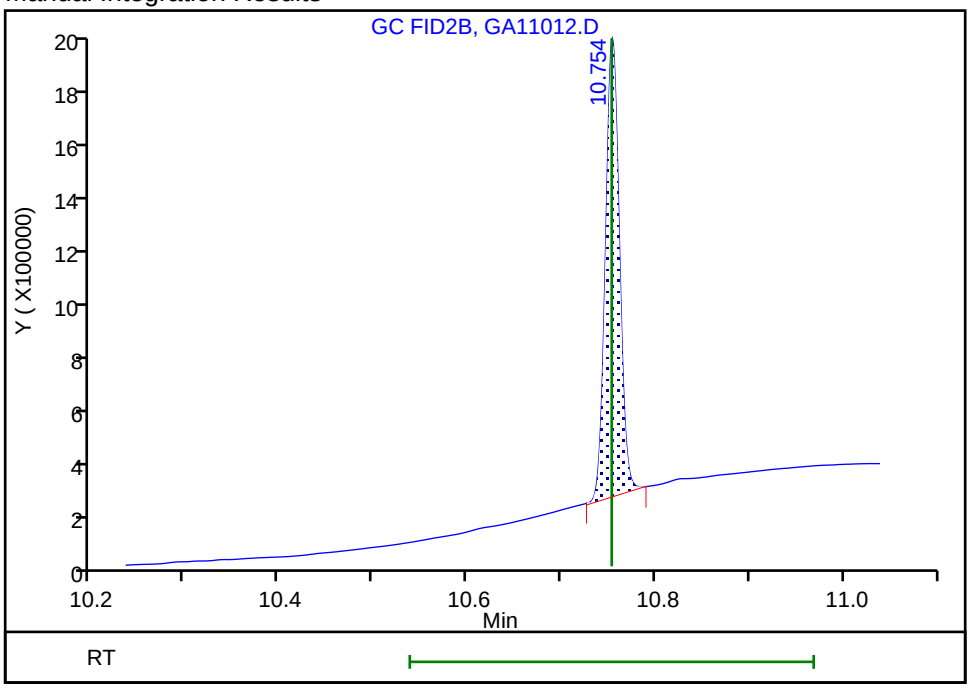
Processing Integration Results

RT: 10.75
Area: 2203486
Amount: 100.0000
Amount Units: ug/ml



Manual Integration Results

RT: 10.75
Area: 1645092
Amount: 101.9619
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:58
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah

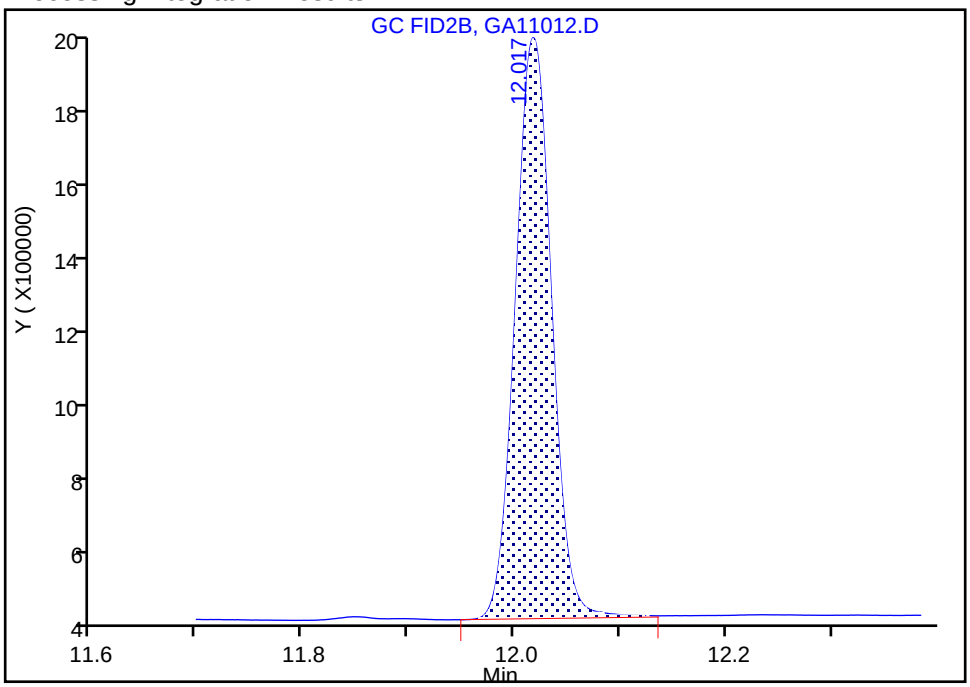
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11012.D				
Injection Date:	11-Jan-2023 19:18:12	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

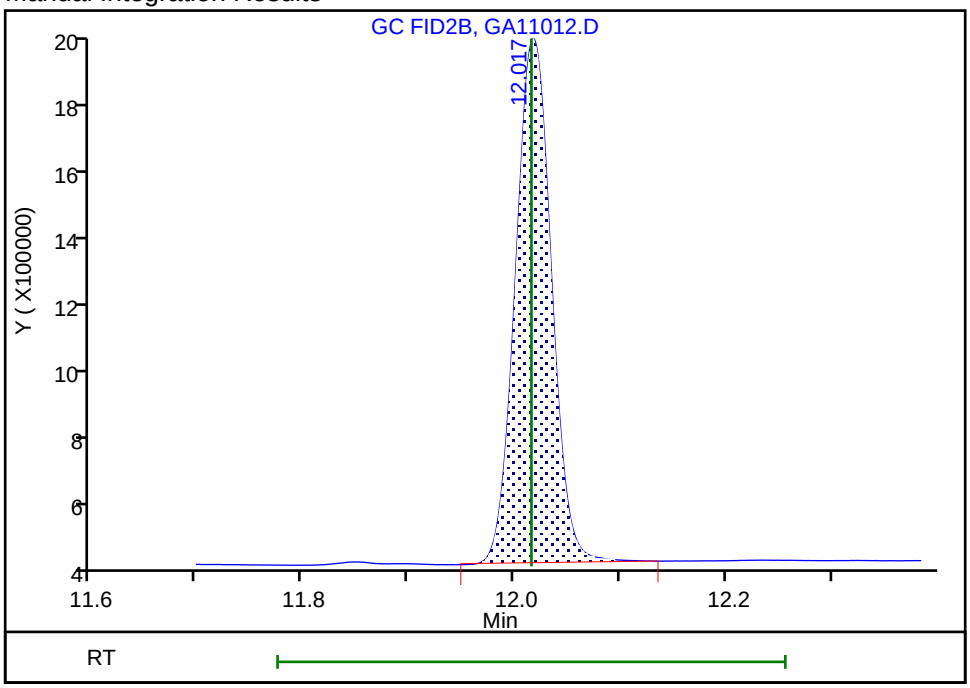
Processing Integration Results

RT: 12.02
Area: 3503102
Amount: 200.0000
Amount Units: ug/ml



Manual Integration Results

RT: 12.02
Area: 3503102
Amount: 199.9711
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 19:39:53
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11013.D				
Lims ID:	ic g5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	11-Jan-2023 19:41:27	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083226-013				
Operator ID:		Instrument ID:	CVGG2		
Sublist:	chrom-8015_GLY_VGG*sub2				
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	12-Jan-2023 12:14:38	Calib Date:	11-Jan-2023 21:14:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1634				

First Level Reviewer: SWK1 Date: 12-Jan-2023 12:14:09

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	3.115	3.121	-0.006	4944627	80.0	73.3	
2 4-Hydroxy-4-methyl-2-pentanone							
	3.711	3.724	-0.013	4750126	80.0	72.0	
3 2-Butoxyethanol							
	4.030	4.031	-0.001	5370855	80.0	73.4	
* 4 n-Heptyl Alcohol							
	4.509	4.504	0.005	4582147	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.466	5.469	-0.003	362014	80.0	76.7	
6 Propylene glycol							
	6.338	6.341	-0.003	1770636	80.0	75.8	
7 Ethylene glycol							
	6.783	6.782	0.001	1363409	80.0	71.3	
8 2-(2-Butoxyethoxy)ethanol							
	8.761	8.758	0.003	3847420	80.0	71.8	
9 2,2'-Oxybisethanol							
	9.738	9.737	0.001	1300421	80.0	73.3	
10 Triethylene Glycol							M
	10.754	10.753	0.001	1268874	80.0	74.9	M
11 Tetraethylene Glycol							
	12.018	12.016	0.002	2715743	160.0	147.6	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added: 40.00	Units: uL	
SG_GLY_ISTD_00105	Amount Added: 10.00	Units: uL	Run Reagent

Report Date: 12-Jan-2023 12:14:38 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11013.D

Injection Date: 11-Jan-2023 19:41:27 Instrument ID: CVGG2 Operator ID:

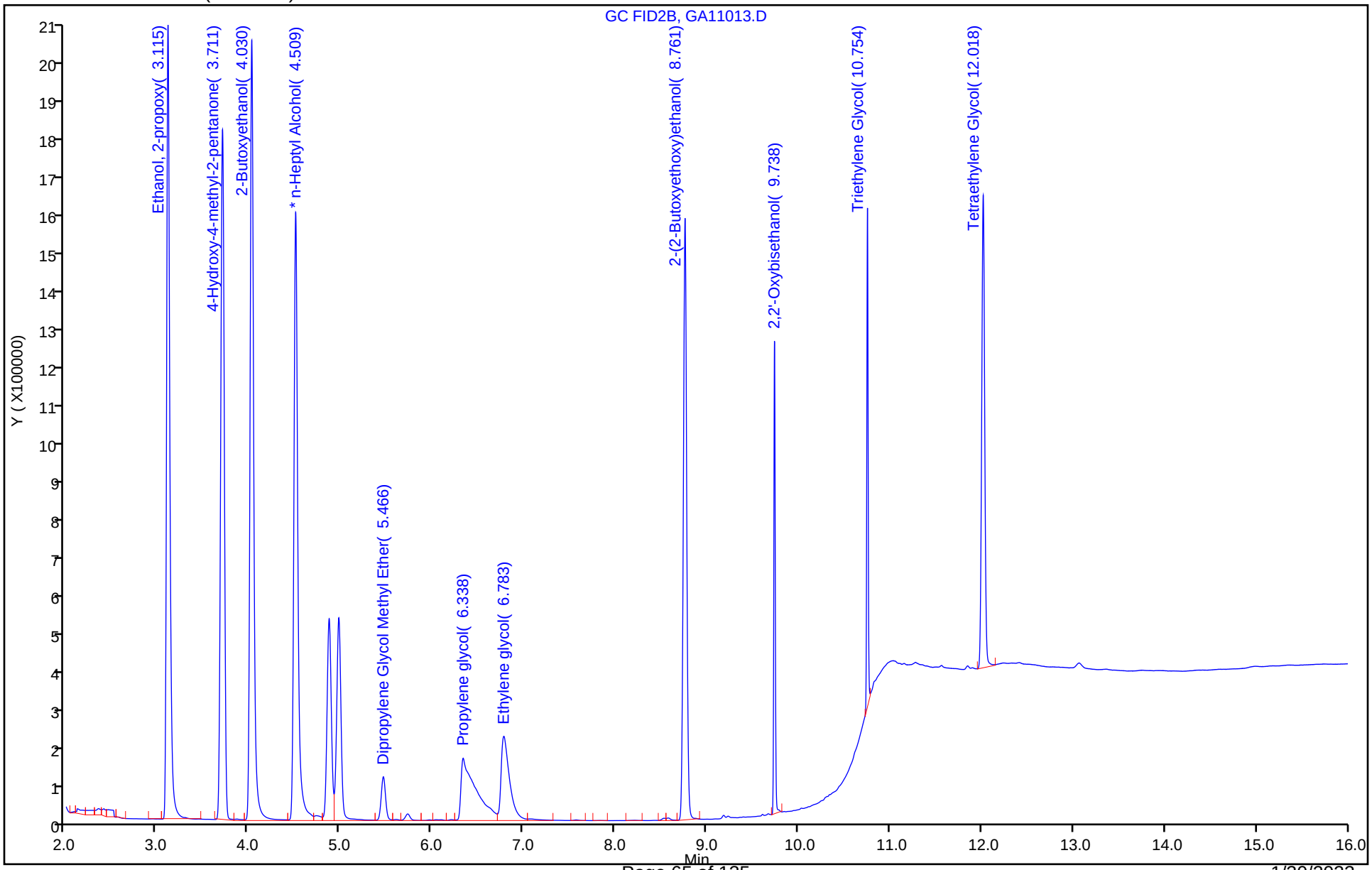
Lims ID: ic g5 Worklist Smp#: 13

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)



1/30/2023
10:44 AM

Eurofins Savannah

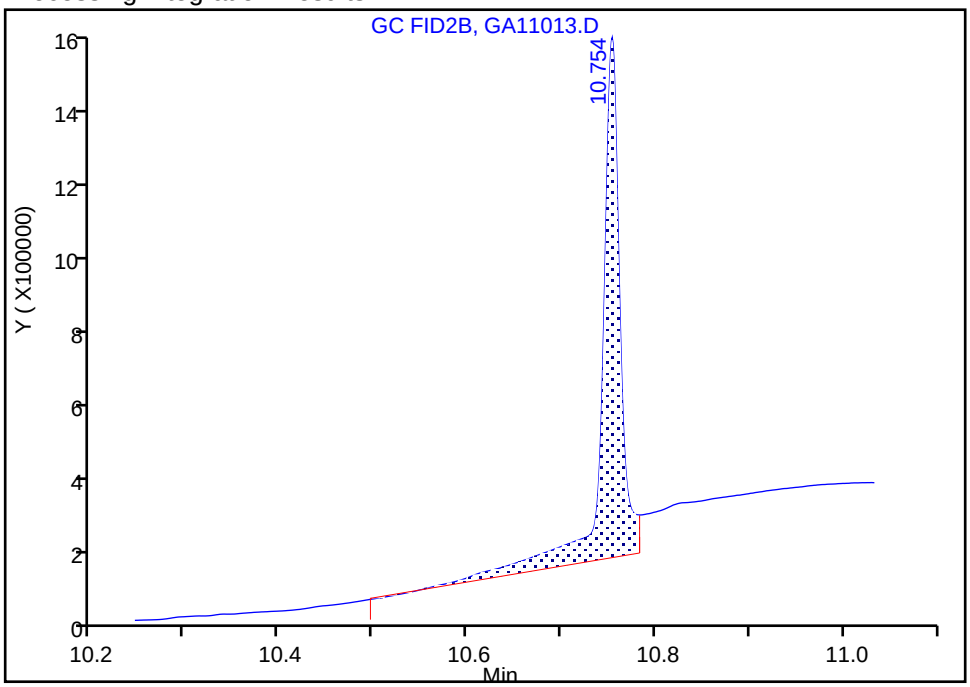
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11013.D				
Injection Date:	11-Jan-2023 19:41:27	Instrument ID:	CVGG2		
Lims ID:	ic g5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

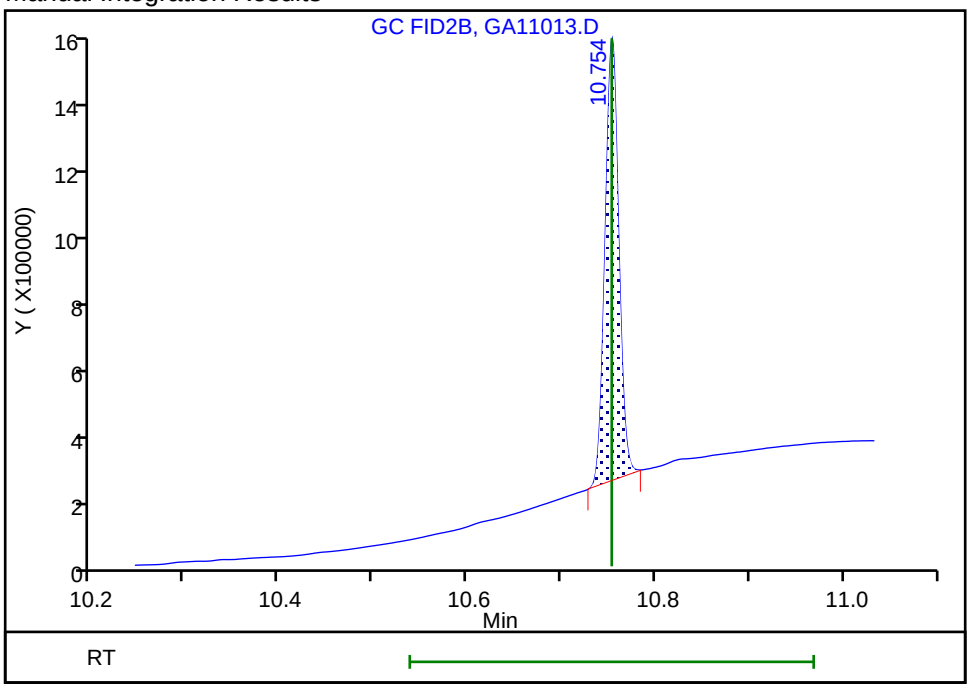
Processing Integration Results

RT: 10.75
Area: 1827634
Amount: 91.099228
Amount Units: ug/ml



Manual Integration Results

RT: 10.75
Area: 1268874
Amount: 74.876909
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 20:18:06
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11014.D
Lims ID: ic g4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 11-Jan-2023 20:04:42 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083226-014
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 12-Jan-2023 12:14:39 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1634

First Level Reviewer: SWK1 Date: 11-Jan-2023 20:52:01

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.119	3.119	0.000	3185611	50.0	47.3	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.717	3.717	0.000	3131890	50.0	47.5	
	3 2-Butoxyethanol						
	4.031	4.031	0.000	3432653	50.0	47.0	
*	4 n-Heptyl Alcohol						
	4.508	4.508	0.000	4573349	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.466	5.466	0.000	238530	50.0	51.2	
	6 Propylene glycol						
	6.335	6.335	0.000	1136780	50.0	48.7	
	7 Ethylene glycol						
	6.780	6.780	0.000	891870	50.0	46.8	
	8 2-(2-Butoxyethoxy)ethanol						
	8.761	8.761	0.000	2540215	50.0	47.5	
	9 2,2'-Oxybisethanol						
	9.738	9.738	0.000	847316	50.0	47.9	
	10 Triethylene Glycol						M
	10.753	10.753	0.000	817829	50.0	48.4	M
	11 Tetraethylene Glycol						
	12.017	12.017	0.000	1764754	100.0	96.1	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added:	25.00	Units: uL	
SG_GLY_ISTD_00105	Amount Added:	10.00	Units: uL	Run Reagent

Report Date: 12-Jan-2023 12:14:39 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11014.D

Injection Date: 11-Jan-2023 20:04:42 Instrument ID: CVGG2 Operator ID:

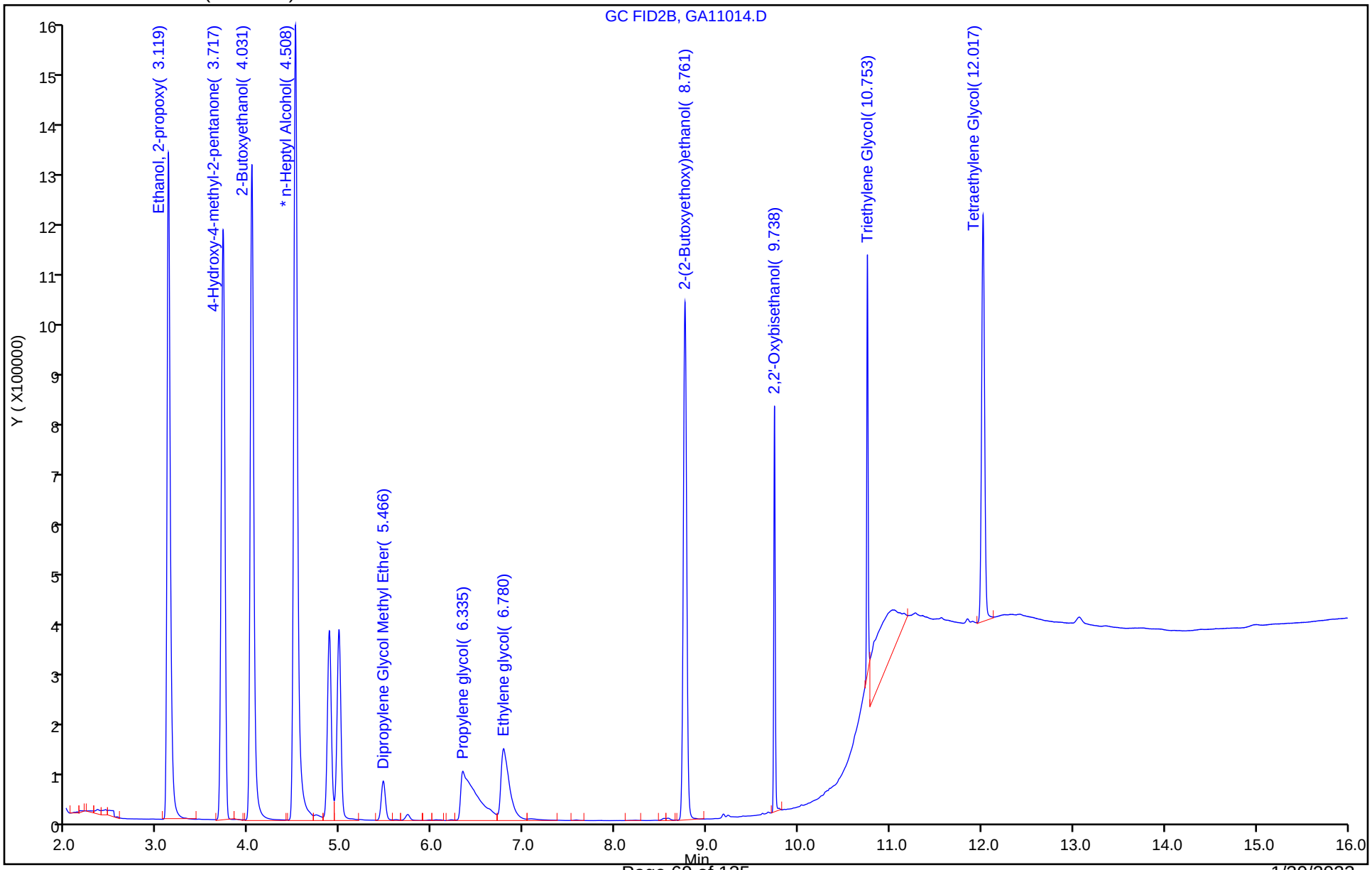
Lims ID: ic g4 Worklist Smp#: 14

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)



1/30/2023
10:44 AM

Eurofins Savannah

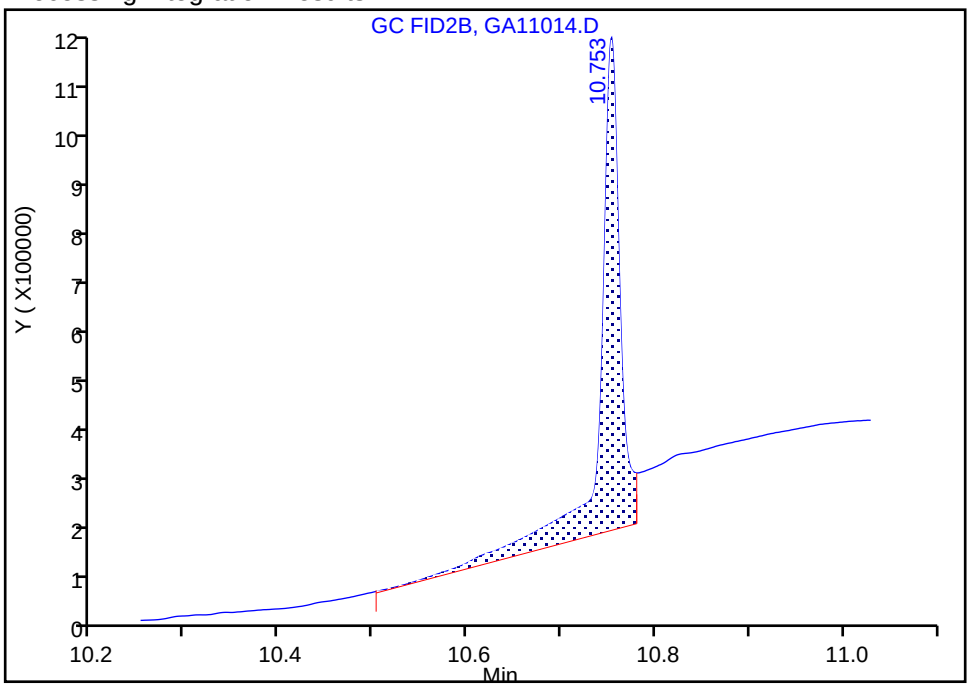
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11014.D				
Injection Date:	11-Jan-2023 20:04:42	Instrument ID:	CVGG2		
Lims ID:	ic g4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

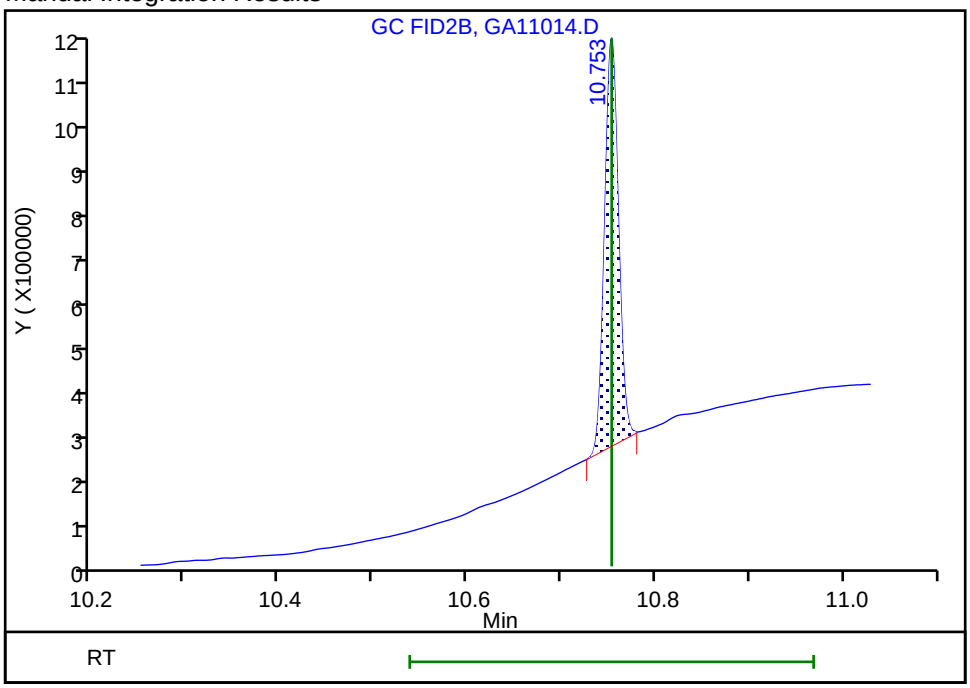
Processing Integration Results

RT: 10.75
Area: 1328259
Amount: 46.921372
Amount Units: ug/ml



Manual Integration Results

RT: 10.75
Area: 817829
Amount: 48.353352
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 20:51:59
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11015.D				
Lims ID:	icis g3				
Client ID:					
Sample Type:	ICIS	Calib Level:	3		
Inject. Date:	11-Jan-2023 20:28:01	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083226-015				
Operator ID:		Instrument ID:	CVGG2		
Sublist:	chrom-8015_GLY_VGG*sub2				
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	12-Jan-2023 12:14:40	Calib Date:	11-Jan-2023 21:14:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1634				

First Level Reviewer: SWK1 Date: 11-Jan-2023 20:52:25

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							M
	3.121	3.121	0.000	1400382	20.0	20.2	M
2 4-Hydroxy-4-methyl-2-pentanone							
	3.724	3.724	0.000	1371968	20.0	20.2	
3 2-Butoxyethanol							
	4.031	4.031	0.000	1519939	20.0	20.2	
* 4 n-Heptyl Alcohol							
	4.504	4.504	0.000	4703166	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.469	5.469	0.000	103939	20.0	21.9	
6 Propylene glycol							
	6.341	6.341	0.000	485048	20.0	20.2	
7 Ethylene glycol							
	6.782	6.782	0.000	378219	20.0	19.3	
8 2-(2-Butoxyethoxy)ethanol							
	8.758	8.758	0.000	1111022	20.0	20.2	
9 2,2'-Oxybisethanol							
	9.737	9.737	0.000	356750	20.0	19.6	
10 Triethylene Glycol							M
	10.753	10.753	0.000	332049	20.0	19.1	M
11 Tetraethylene Glycol							
	12.016	12.016	0.000	748973	40.0	39.7	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00105	Amount Added:	10.00	Units: uL	Run Reagent

Report Date: 12-Jan-2023 12:14:40 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11015.D

Injection Date: 11-Jan-2023 20:28:01 Instrument ID: CVGG2 Operator ID:

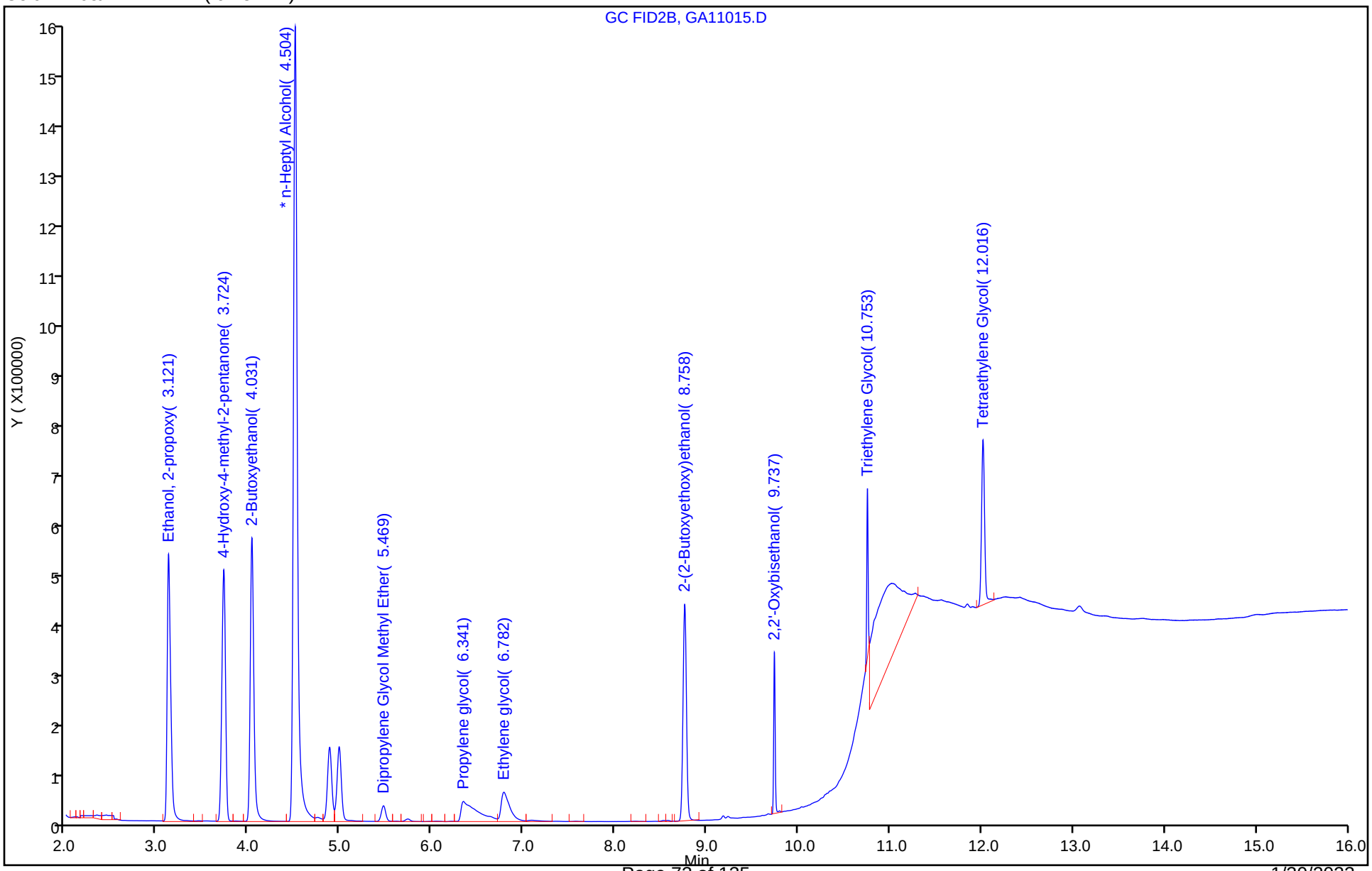
Lims ID: icis g3 Worklist Smp#: 15

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)



1/30/2023
10:44 AM

Manual Integration/User Assign Peak Report

Eurofins Savannah

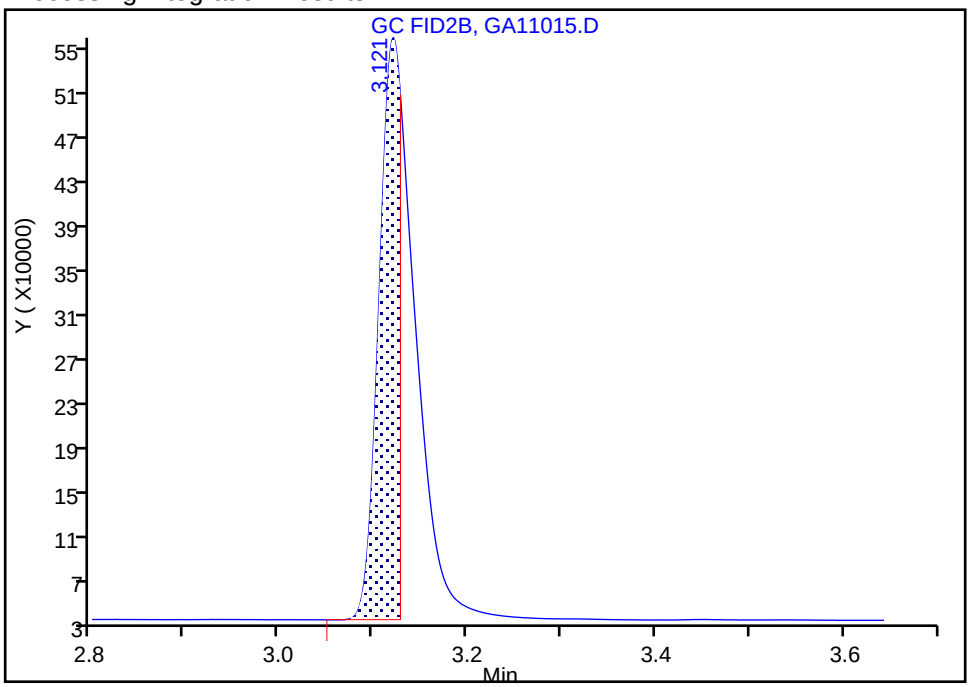
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11015.D				
Injection Date:	11-Jan-2023 20:28:01	Instrument ID:	CVGG2		
Lims ID:	icis g3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

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

Signal: 1

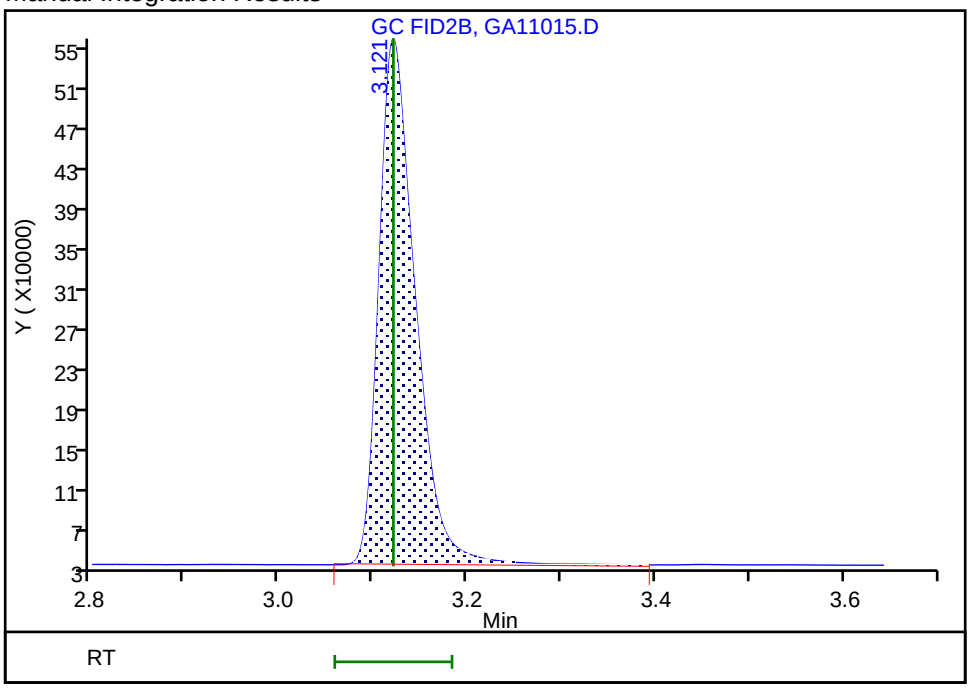
Processing Integration Results

RT: 3.12
Area: 767020
Amount: 19.716542
Amount Units: ug/ml



Manual Integration Results

RT: 3.12
Area: 1400382
Amount: 20.235490
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 20:52:14

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah

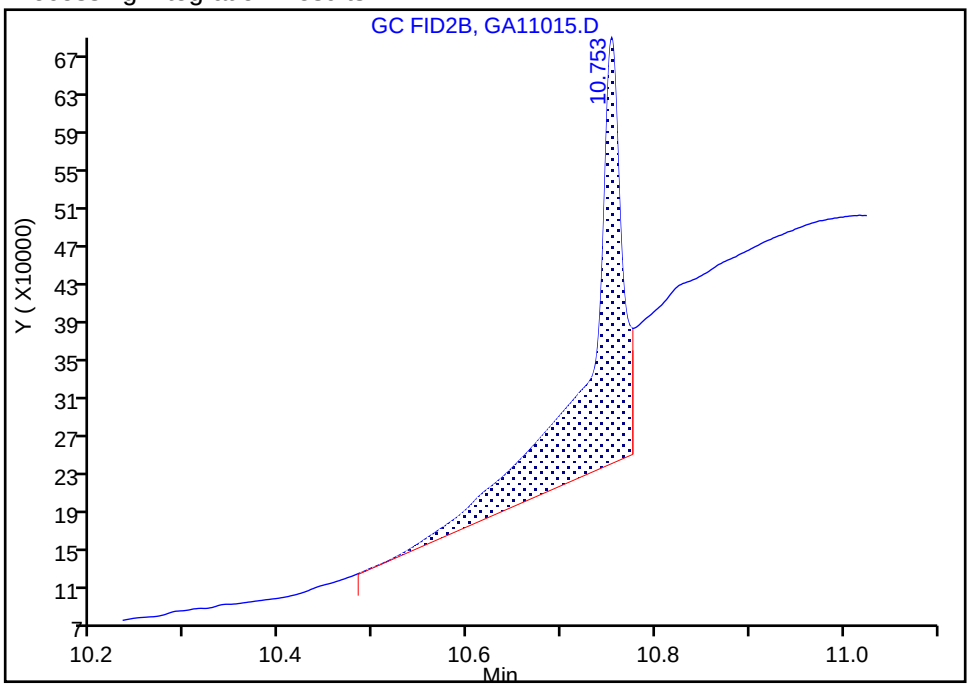
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11015.D				
Injection Date:	11-Jan-2023 20:28:01	Instrument ID:	CVGG2		
Lims ID:	icis g3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

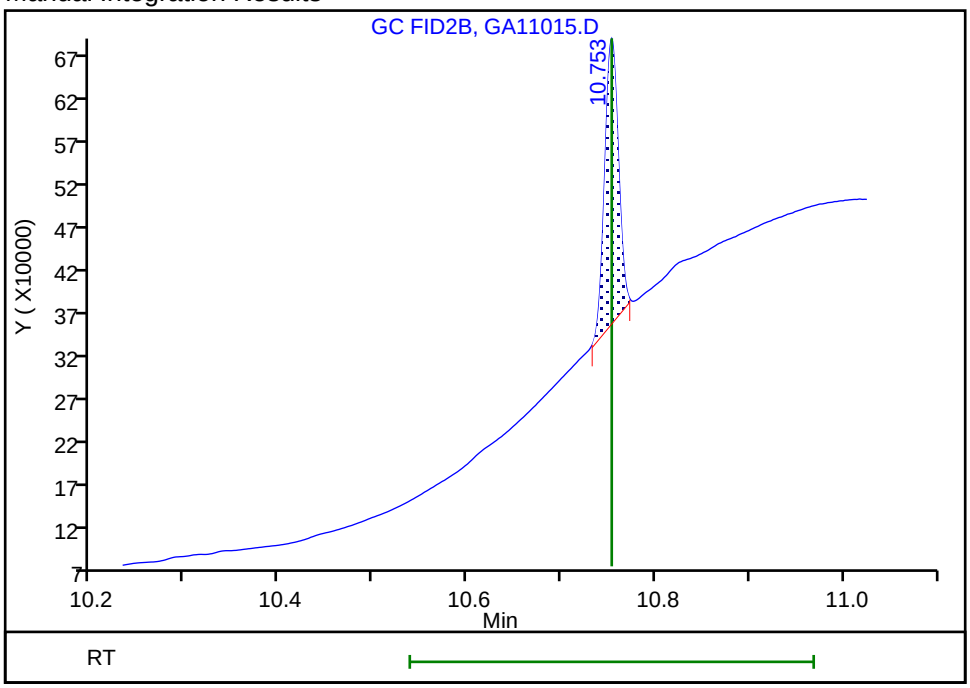
Processing Integration Results

RT: 10.75
Area: 1102258
Amount: 41.614842
Amount Units: ug/ml



Manual Integration Results

RT: 10.75
Area: 332049
Amount: 19.090192
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 20:52:21
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11016.D				
Lims ID:	ic g2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	11-Jan-2023 20:51:15	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083226-016				
Operator ID:		Instrument ID:	CVGG2		
Sublist:	chrom-8015_GLY_VGG*sub2				
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	12-Jan-2023 12:14:40	Calib Date:	11-Jan-2023 21:14:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1634				

First Level Reviewer: SWK1 Date: 11-Jan-2023 21:35:21

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	3.118	3.121	-0.003	729297	10.0	10.1	
2 4-Hydroxy-4-methyl-2-pentanone							
	3.719	3.724	-0.005	711603	10.0	10.0	
3 2-Butoxyethanol							
	4.030	4.031	-0.001	801660	10.0	10.2	
* 4 n-Heptyl Alcohol							
	4.505	4.504	0.001	4915794	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.469	5.469	0.000	53252	10.0	10.7	
6 Propylene glycol							
	6.339	6.341	-0.002	263729	10.0	10.5	
7 Ethylene glycol							
	6.785	6.782	0.003	217023	10.0	10.6	
8 2-(2-Butoxyethoxy)ethanol							
	8.759	8.758	0.001	578471	10.0	10.1	
9 2,2'-Oxybisethanol							
	9.737	9.737	0.000	195926	10.0	10.3	
10 Triethylene Glycol							M
	10.753	10.753	0.000	183444	10.0	10.1	M
11 Tetraethylene Glycol							
	12.015	12.016	-0.001	403210	20.0	20.4	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added: 5.00	Units: uL	
SG_GLY_ISTD_00105	Amount Added: 10.00	Units: uL	Run Reagent

Report Date: 12-Jan-2023 12:14:41 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11016.D

Injection Date: 11-Jan-2023 20:51:15 Instrument ID: CVGG2 Operator ID:

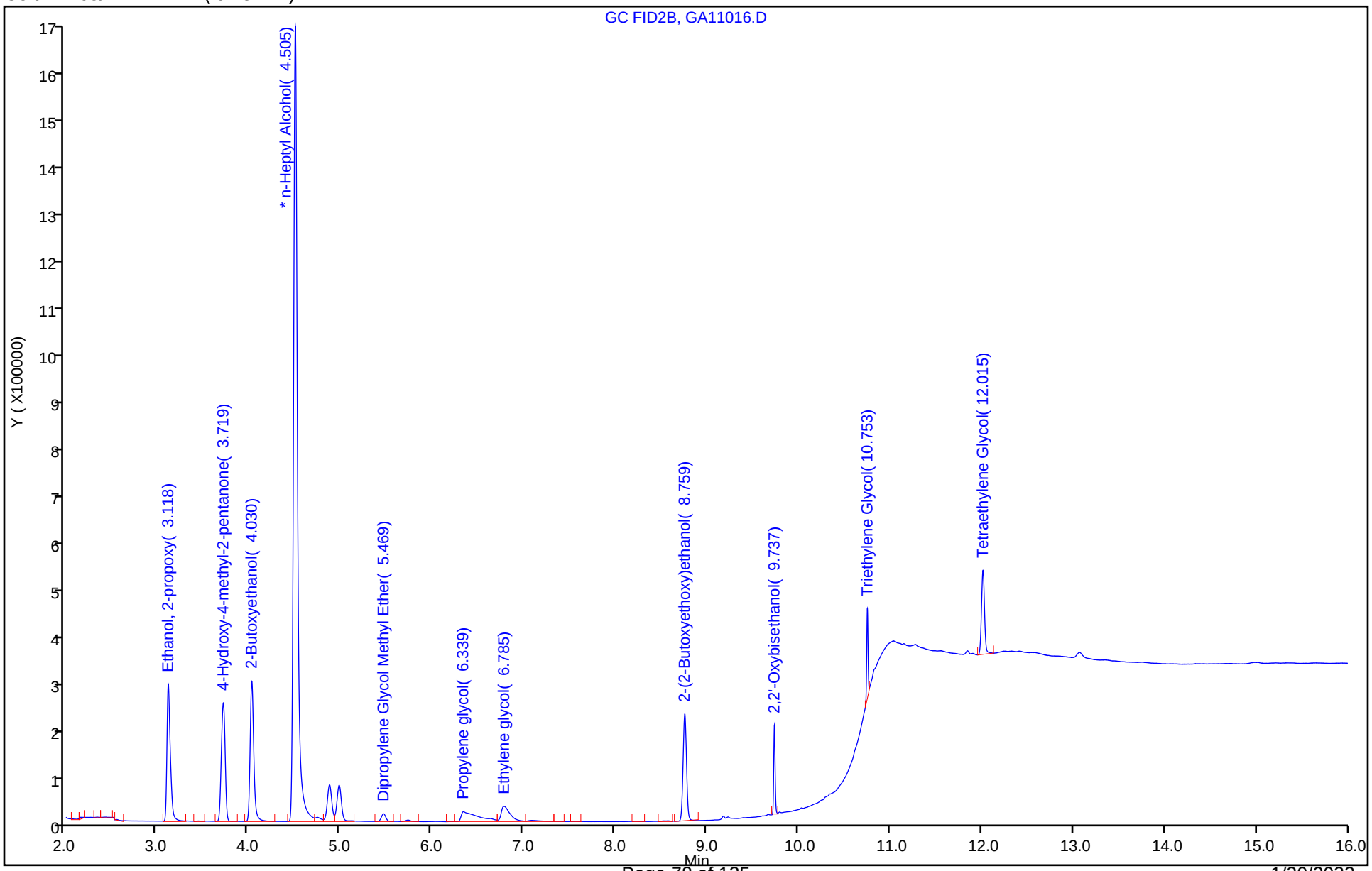
Lims ID: ic g2 Worklist Smp#: 16

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)



1/30/2023
10:44 AM

Eurofins Savannah

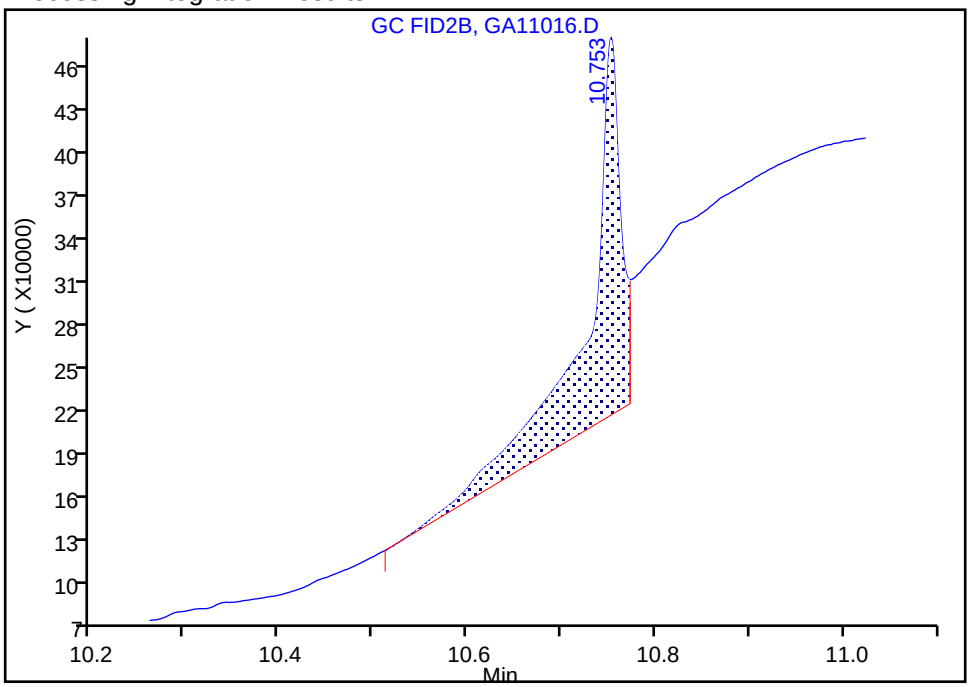
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11016.D				
Injection Date:	11-Jan-2023 20:51:15	Instrument ID:	CVGG2		
Lims ID:	ic g2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

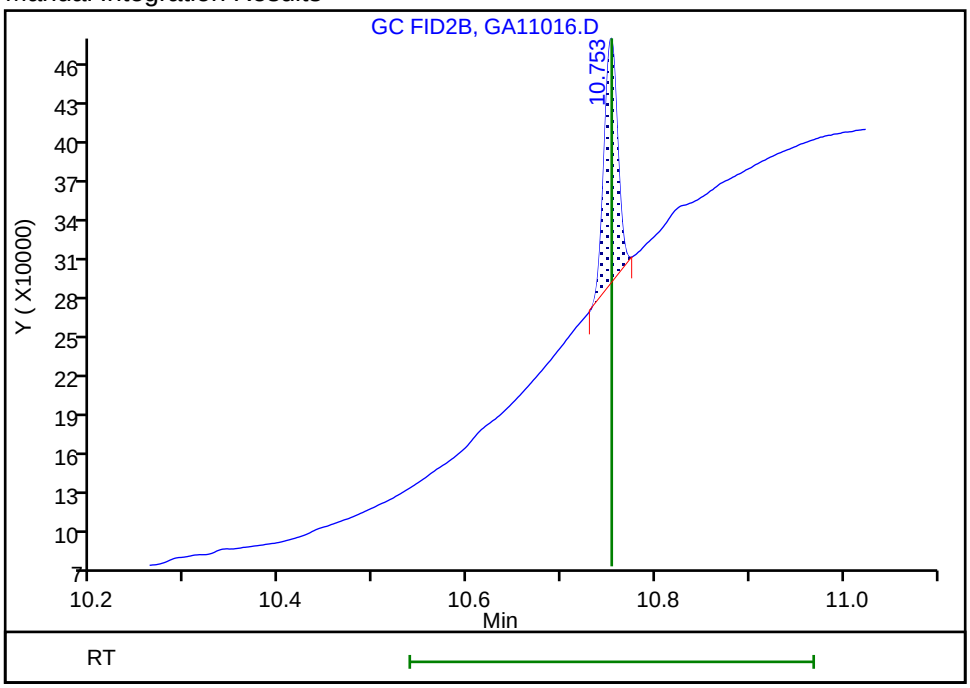
Processing Integration Results

RT: 10.75
Area: 624342
Amount: 21.077064
Amount Units: ug/ml



Manual Integration Results

RT: 10.75
Area: 183444
Amount: 10.090397
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 21:35:15
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D
Lims ID: ic g1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 11-Jan-2023 21:14:29 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083226-017
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 12-Jan-2023 12:14:41 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1634

First Level Reviewer: SWK1 Date: 11-Jan-2023 21:35:45

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	3.122	3.121	0.001	412485	5.00	5.78	
2 4-Hydroxy-4-methyl-2-pentanone							
	3.727	3.724	0.003	405244	5.00	5.80	
3 2-Butoxyethanol							
	4.031	4.031	0.000	449925	5.00	5.81	
* 4 n-Heptyl Alcohol							
	4.502	4.504	-0.002	4848013	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.463	5.469	-0.006	14210	5.00	2.80	
6 Propylene glycol							
	6.333	6.341	-0.008	124185	5.00	5.02	
7 Ethylene glycol							
	6.777	6.782	-0.005	121803	5.00	6.02	
8 2-(2-Butoxyethoxy)ethanol							
	8.756	8.758	-0.002	328114	5.00	5.79	
9 2,2'-Oxybisethanol							
	9.737	9.737	0.000	106006	5.00	5.65	
10 Triethylene Glycol							M
	10.753	10.753	0.000	99849	5.00	5.57	M
11 Tetraethylene Glycol							
	12.016	12.016	0.000	214886	10.0	11.0	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added: 2.50	Units: uL	
SG_GLY_ISTD_00105	Amount Added: 10.00	Units: uL	Run Reagent

Report Date: 12-Jan-2023 12:14:41 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Injection Date: 11-Jan-2023 21:14:29 Instrument ID: CVGG2 Operator ID:

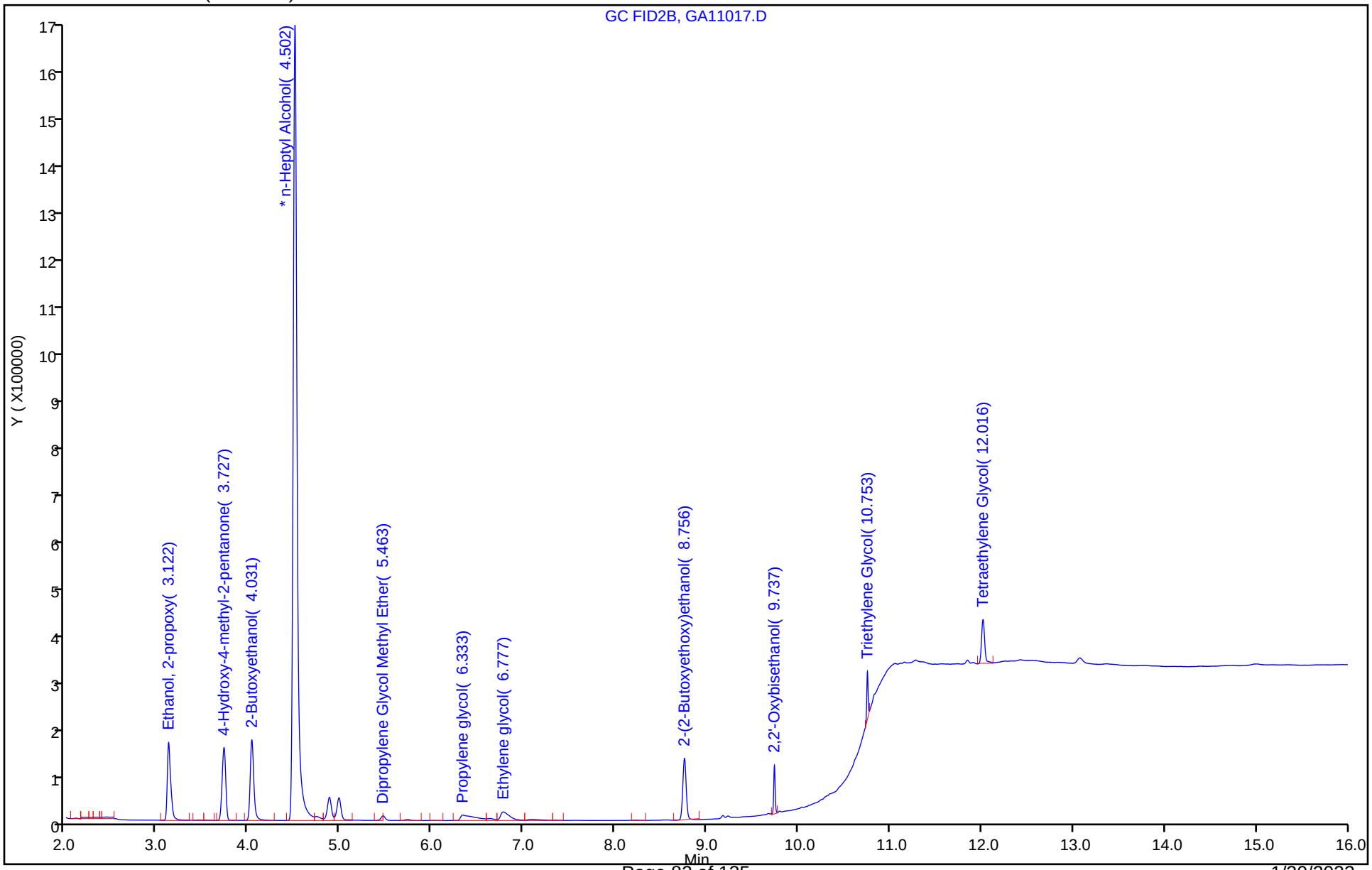
Lims ID: ic g1 Worklist Smp#: 17

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)



1/30/2023
10:44 AM

Manual Integration/User Assign Peak Report

Eurofins Savannah

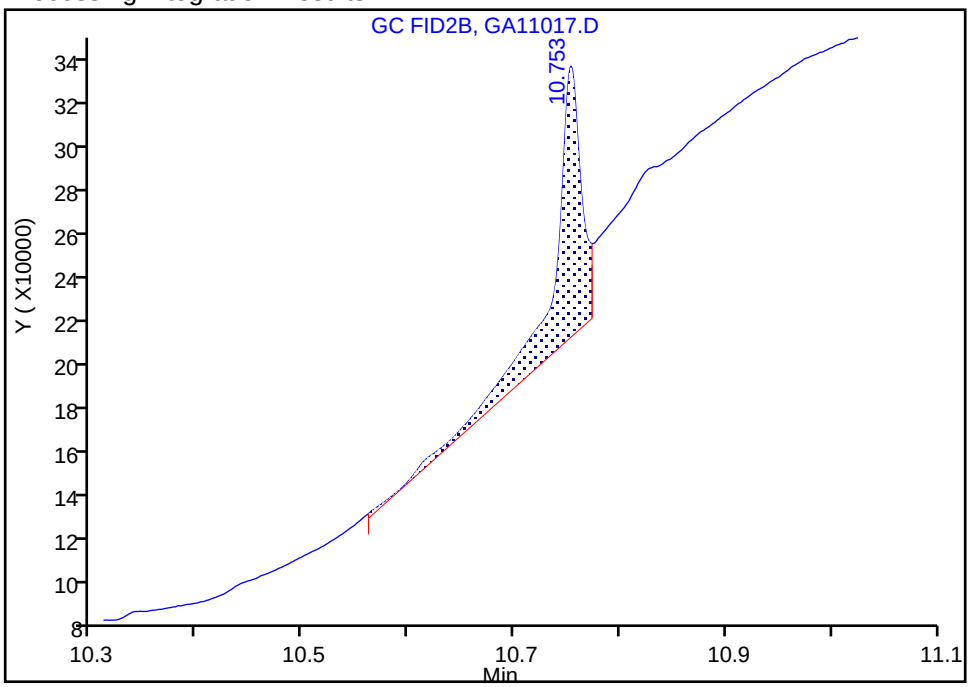
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D				
Injection Date:	11-Jan-2023 21:14:29	Instrument ID:	CVGG2		
Lims ID:	ic g1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

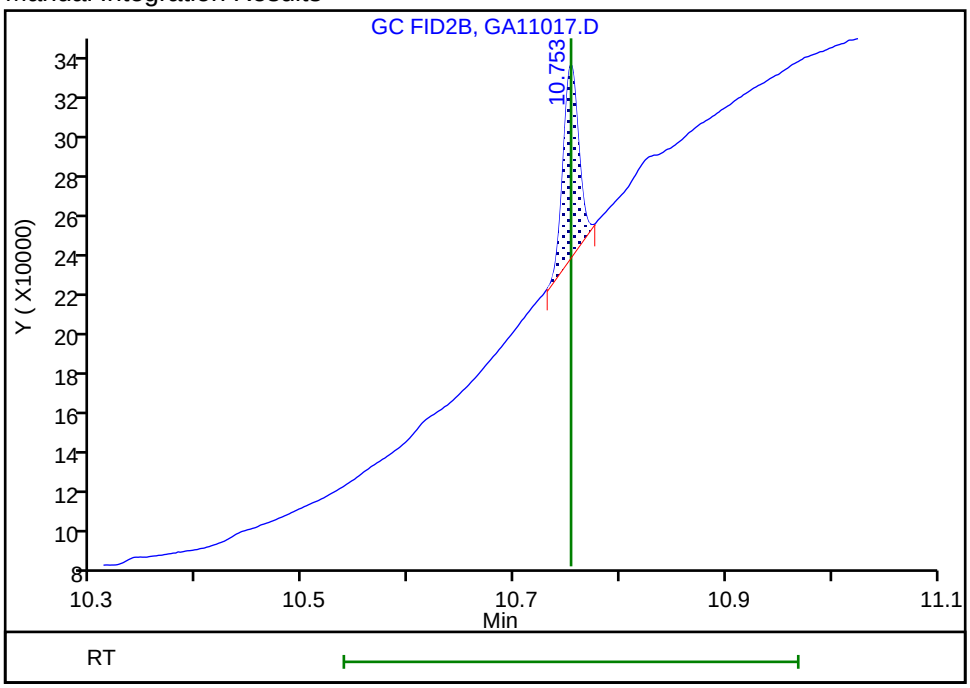
Processing Integration Results

RT: 10.75
Area: 220961
Amount: 10.059022
Amount Units: ug/ml



Manual Integration Results

RT: 10.75
Area: 99849
Amount: 5.569015
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 21:35:31

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Calibration / Ethanol, 2-propoxy

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

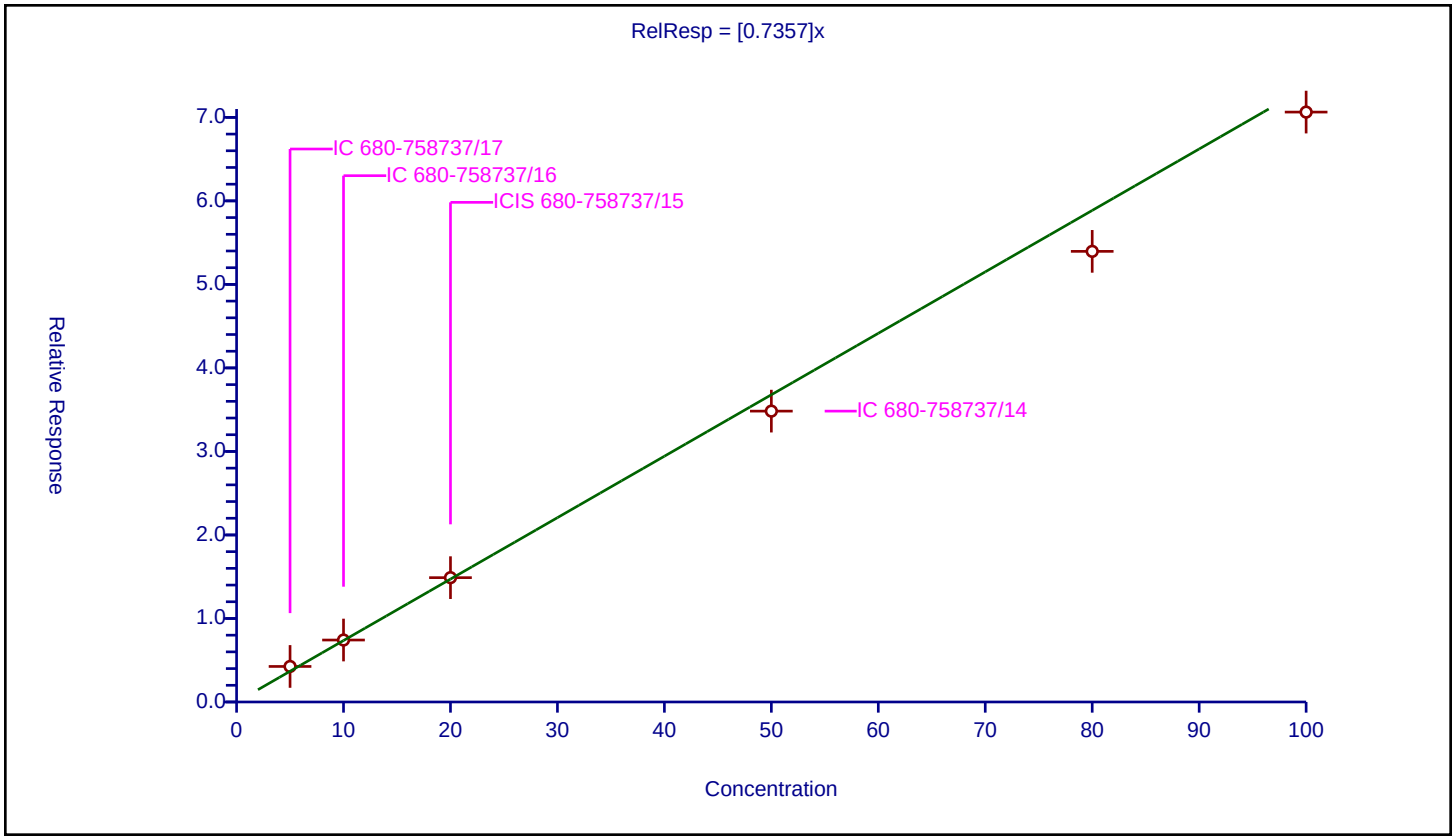
Curve Coefficients

Intercept:	0
Slope:	0.7357

Error Coefficients

Standard Error:	3880000
Relative Standard Error:	8.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	4.254166	50.0	4848013.0	0.850833	Y
2	IC 680-758737/16	10.0	7.417896	50.0	4915794.0	0.74179	Y
3	ICIS 680-758737/15	20.0	14.887652	50.0	4703166.0	0.744383	Y
4	IC 680-758737/14	50.0	34.827989	50.0	4573349.0	0.69656	Y
5	IC 680-758737/13	80.0	53.955351	50.0	4582147.0	0.674442	Y
6	IC 680-758737/12	100.0	70.631235	50.0	4362652.0	0.706312	Y



1/30/2023
10:44 AM

Calibration / 4-Hydroxy-4-methyl-2-pentanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

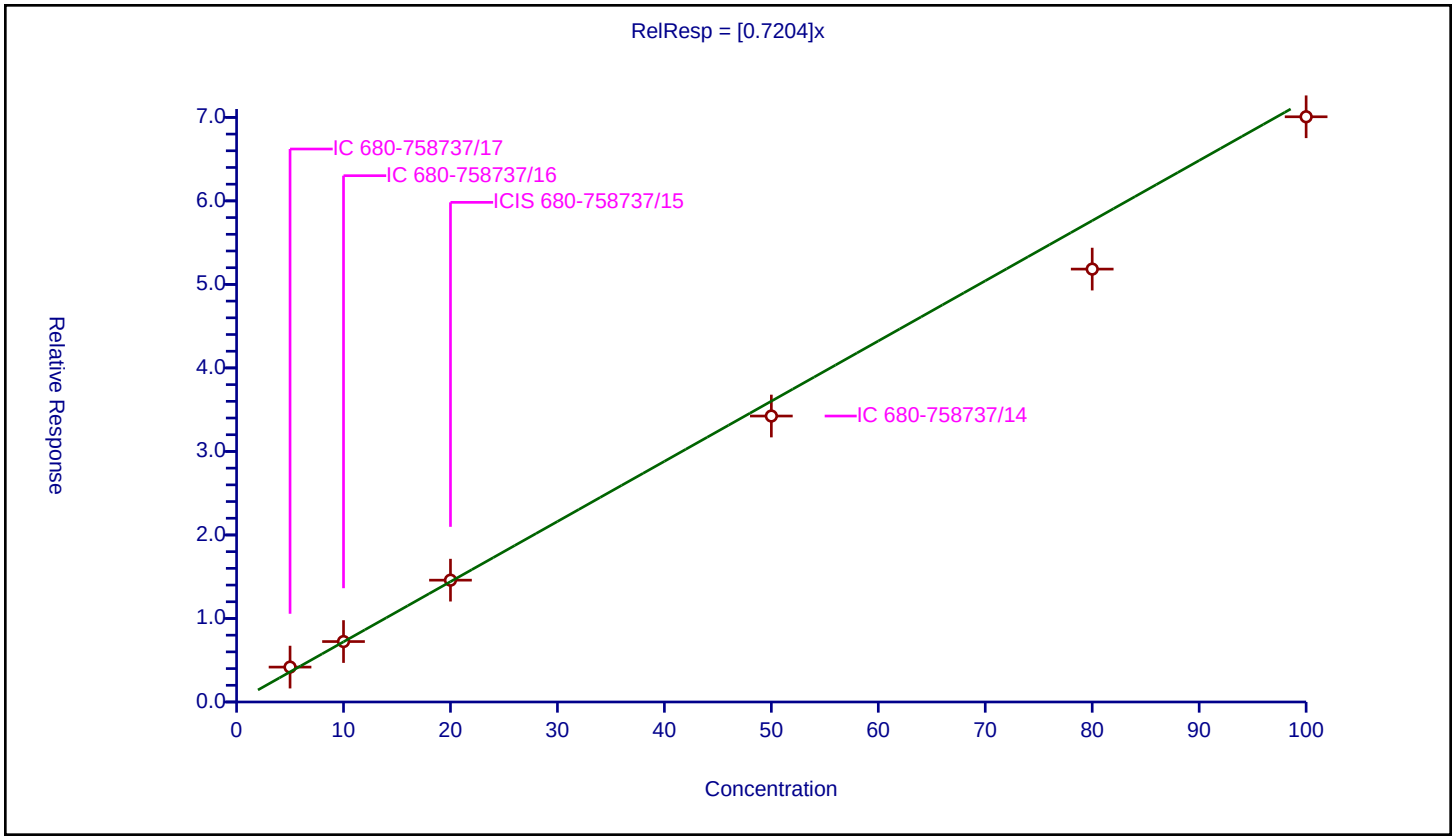
Curve Coefficients

Intercept:	0
Slope:	0.7204

Error Coefficients

Standard Error:	3800000
Relative Standard Error:	8.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	4.179485	50.0	4848013.0	0.835897	Y
2	IC 680-758737/16	10.0	7.237925	50.0	4915794.0	0.723793	Y
3	ICIS 680-758737/15	20.0	14.585579	50.0	4703166.0	0.729279	Y
4	IC 680-758737/14	50.0	34.240663	50.0	4573349.0	0.684813	Y
5	IC 680-758737/13	80.0	51.832973	50.0	4582147.0	0.647912	Y
6	IC 680-758737/12	100.0	70.070602	50.0	4362652.0	0.700706	Y



1/30/2023
10:44 AM

Calibration / 2-Butoxyethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

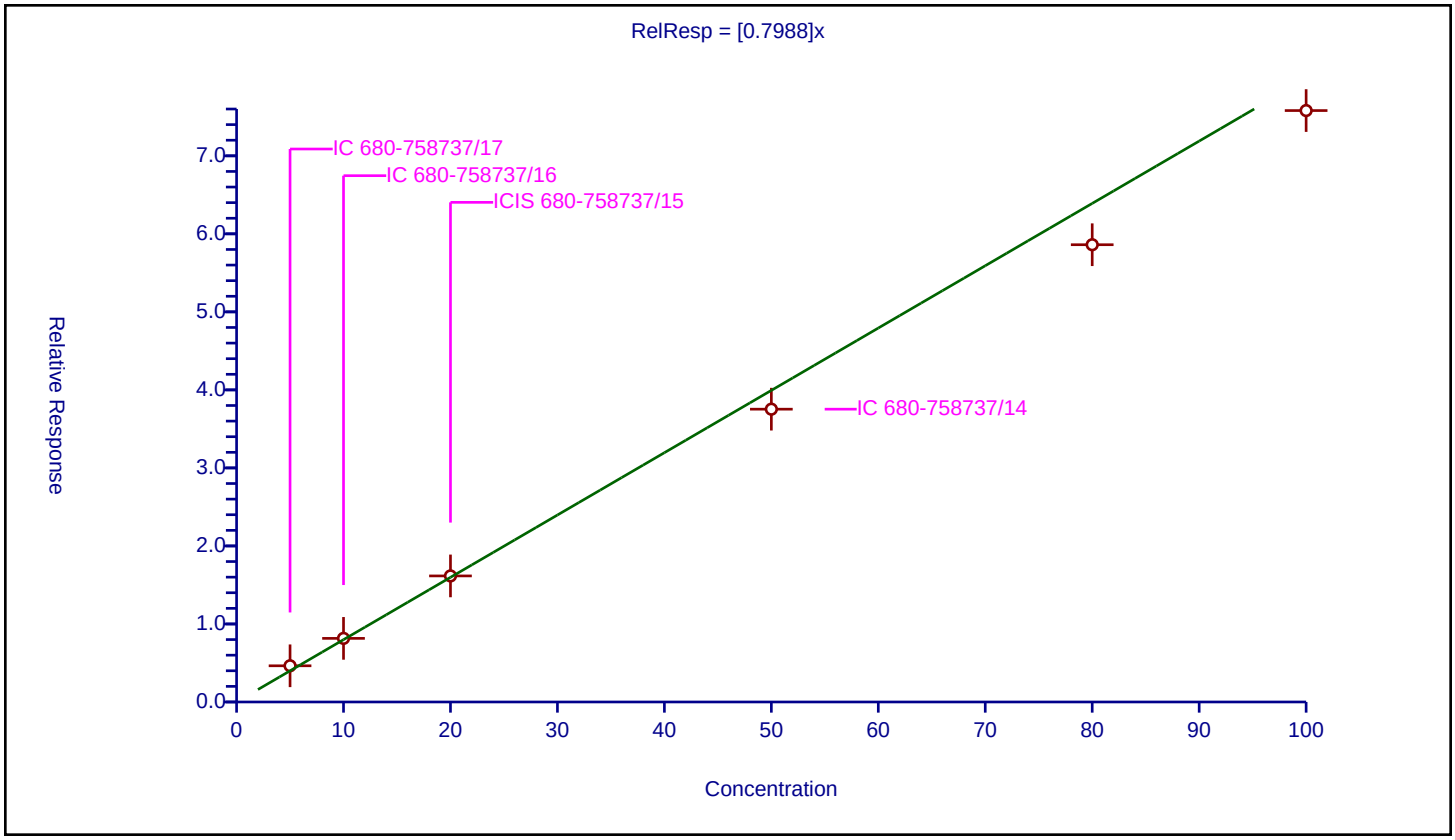
Curve Coefficients

Intercept:	0
Slope:	0.7988

Error Coefficients

Standard Error:	4180000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	4.640303	50.0	4848013.0	0.928061	Y
2	IC 680-758737/16	10.0	8.153922	50.0	4915794.0	0.815392	Y
3	ICIS 680-758737/15	20.0	16.158679	50.0	4703166.0	0.807934	Y
4	IC 680-758737/14	50.0	37.528877	50.0	4573349.0	0.750578	Y
5	IC 680-758737/13	80.0	58.606315	50.0	4582147.0	0.732579	Y
6	IC 680-758737/12	100.0	75.801176	50.0	4362652.0	0.758012	Y



Calibration / Dipropylene Glycol Methyl Ether

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

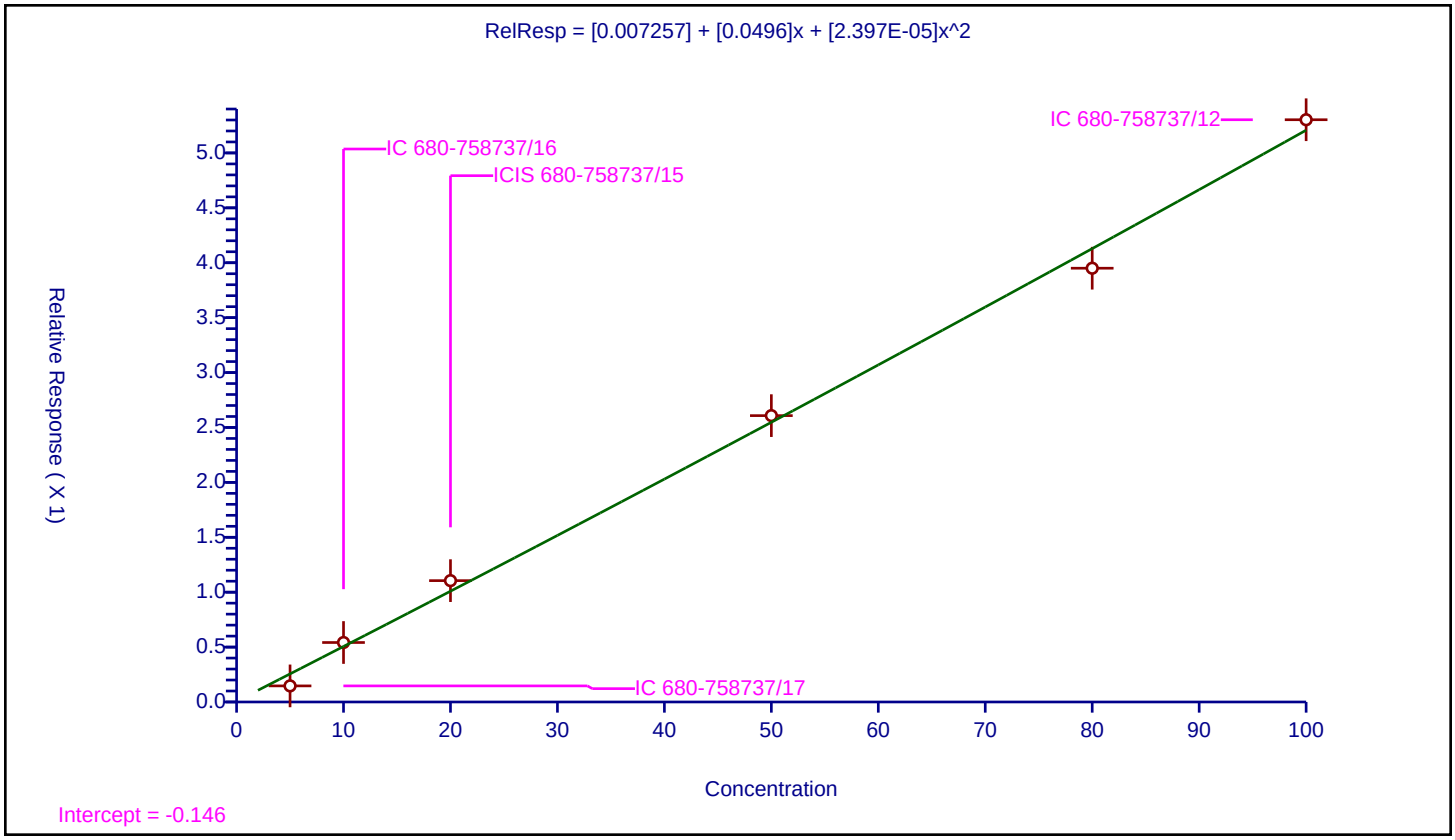
Curve Coefficients

Intercept:	0.007257
Slope:	0.0496
Second Order:	2.397E-05

Error Coefficients

Standard Error:	372000
Relative Standard Error:	26.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	0.146555	50.0	4848013.0	0.029311	Y
2	IC 680-758737/16	10.0	0.541642	50.0	4915794.0	0.054164	Y
3	ICIS 680-758737/15	20.0	1.10499	50.0	4703166.0	0.055249	Y
4	IC 680-758737/14	50.0	2.607826	50.0	4573349.0	0.052157	Y
5	IC 680-758737/13	80.0	3.950266	50.0	4582147.0	0.049378	Y
6	IC 680-758737/12	100.0	5.302314	50.0	4362652.0	0.053023	Y



1/30/2023
10:44 AM

Calibration / Propylene glycol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

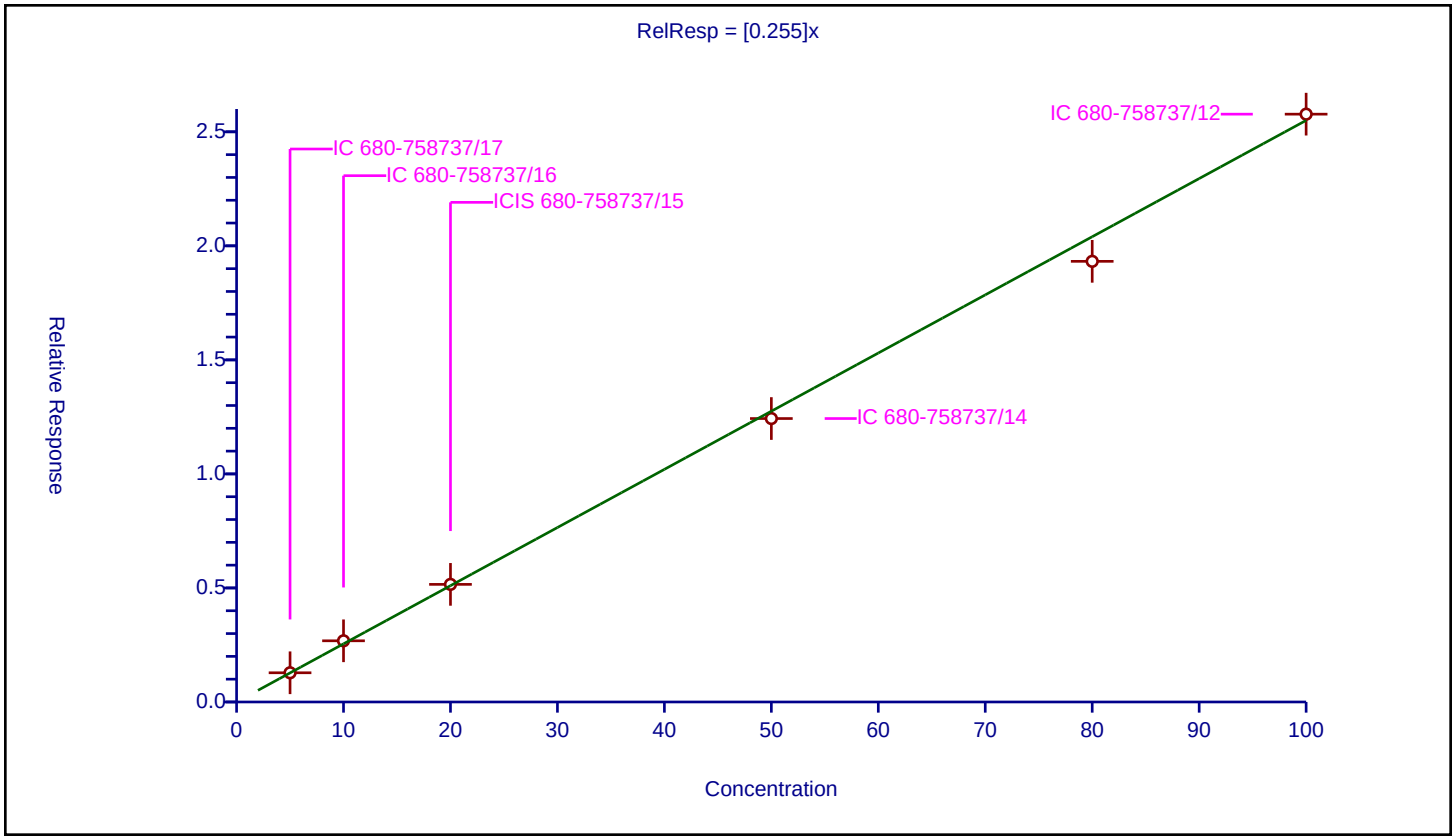
Curve Coefficients

Intercept:	0
Slope:	0.255

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	1.280782	50.0	4848013.0	0.256156	Y
2	IC 680-758737/16	10.0	2.682466	50.0	4915794.0	0.268247	Y
3	ICIS 680-758737/15	20.0	5.156612	50.0	4703166.0	0.257831	Y
4	IC 680-758737/14	50.0	12.42831	50.0	4573349.0	0.248566	Y
5	IC 680-758737/13	80.0	19.32103	50.0	4582147.0	0.241513	Y
6	IC 680-758737/12	100.0	25.774678	50.0	4362652.0	0.257747	Y



Calibration / Ethylene glycol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

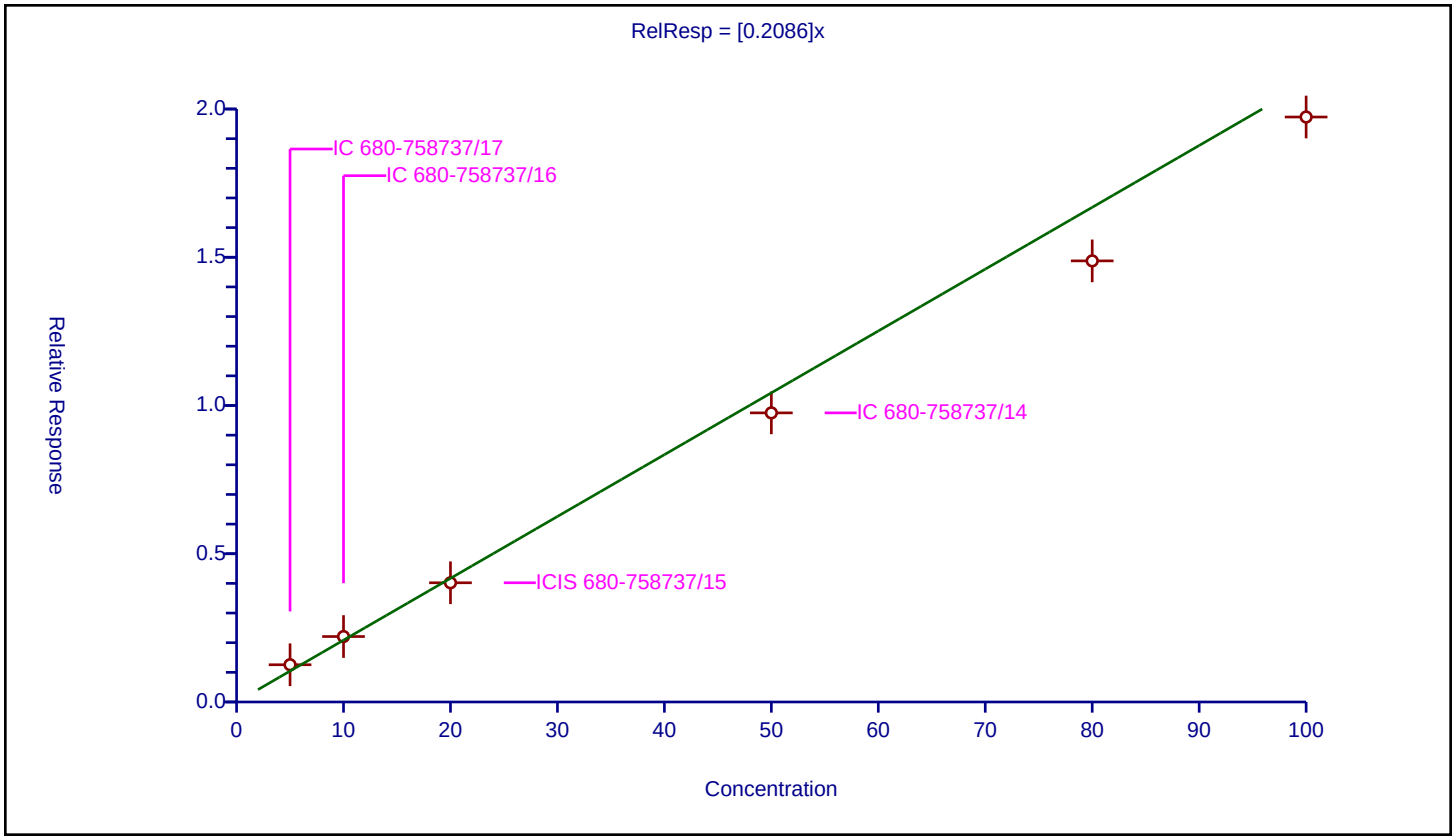
Curve Coefficients

Intercept:	0
Slope:	0.2086

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	1.256216	50.0	4848013.0	0.251243	Y
2	IC 680-758737/16	10.0	2.207405	50.0	4915794.0	0.220741	Y
3	ICIS 680-758737/15	20.0	4.020898	50.0	4703166.0	0.201045	Y
4	IC 680-758737/14	50.0	9.750732	50.0	4573349.0	0.195015	Y
5	IC 680-758737/13	80.0	14.877404	50.0	4582147.0	0.185968	Y
6	IC 680-758737/12	100.0	19.730281	50.0	4362652.0	0.197303	Y



Calibration / 2-(2-Butoxyethoxy)ethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

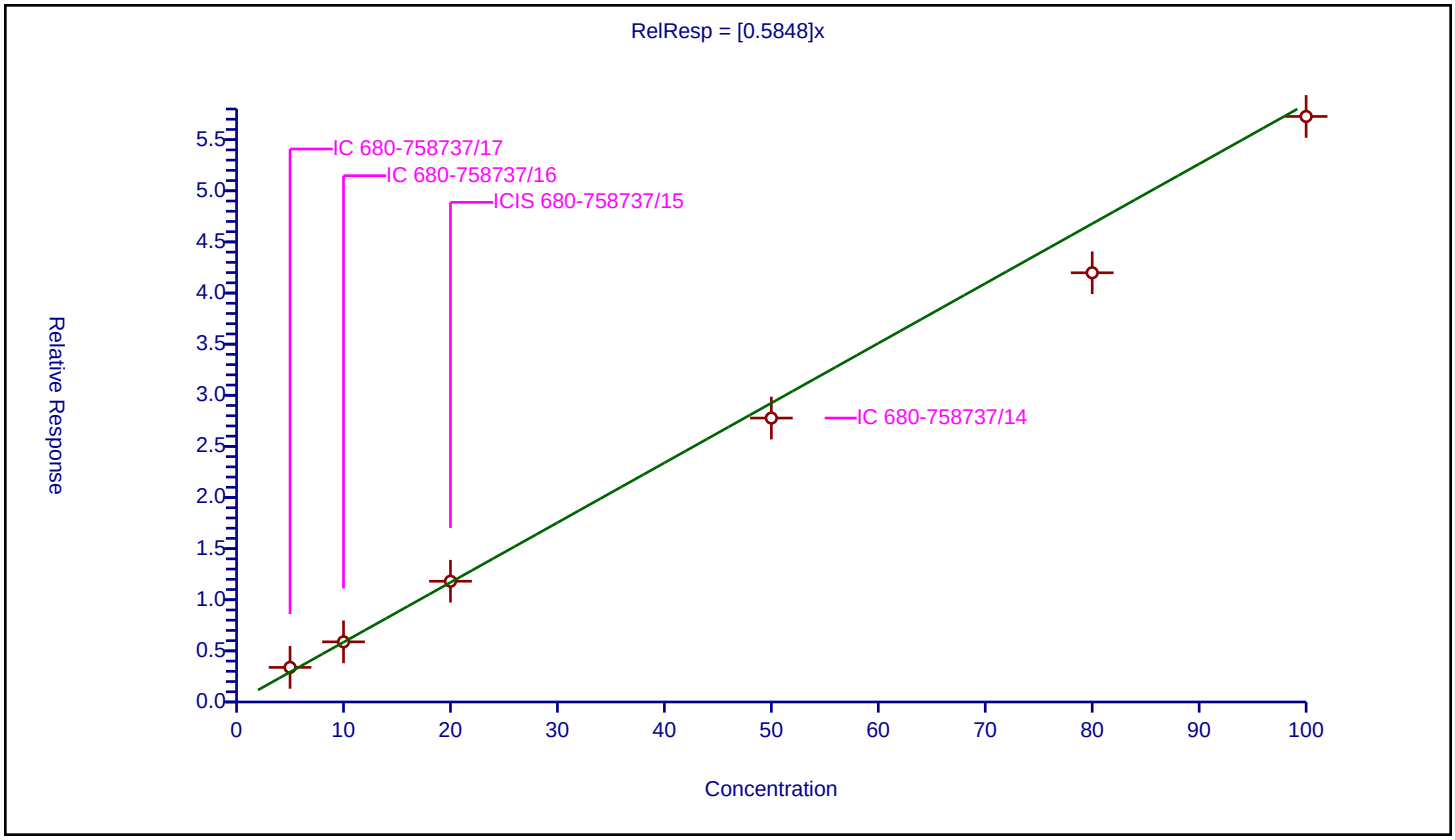
Curve Coefficients

Intercept:	0
Slope:	0.5848

Error Coefficients

Standard Error:	3100000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	3.384005	50.0	4848013.0	0.676801	Y
2	IC 680-758737/16	10.0	5.8838	50.0	4915794.0	0.58838	Y
3	ICIS 680-758737/15	20.0	11.811427	50.0	4703166.0	0.590571	Y
4	IC 680-758737/14	50.0	27.771935	50.0	4573349.0	0.555439	Y
5	IC 680-758737/13	80.0	41.982721	50.0	4582147.0	0.524784	Y
6	IC 680-758737/12	100.0	57.272572	50.0	4362652.0	0.572726	Y



Calibration / 2,2'-Oxybisethanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

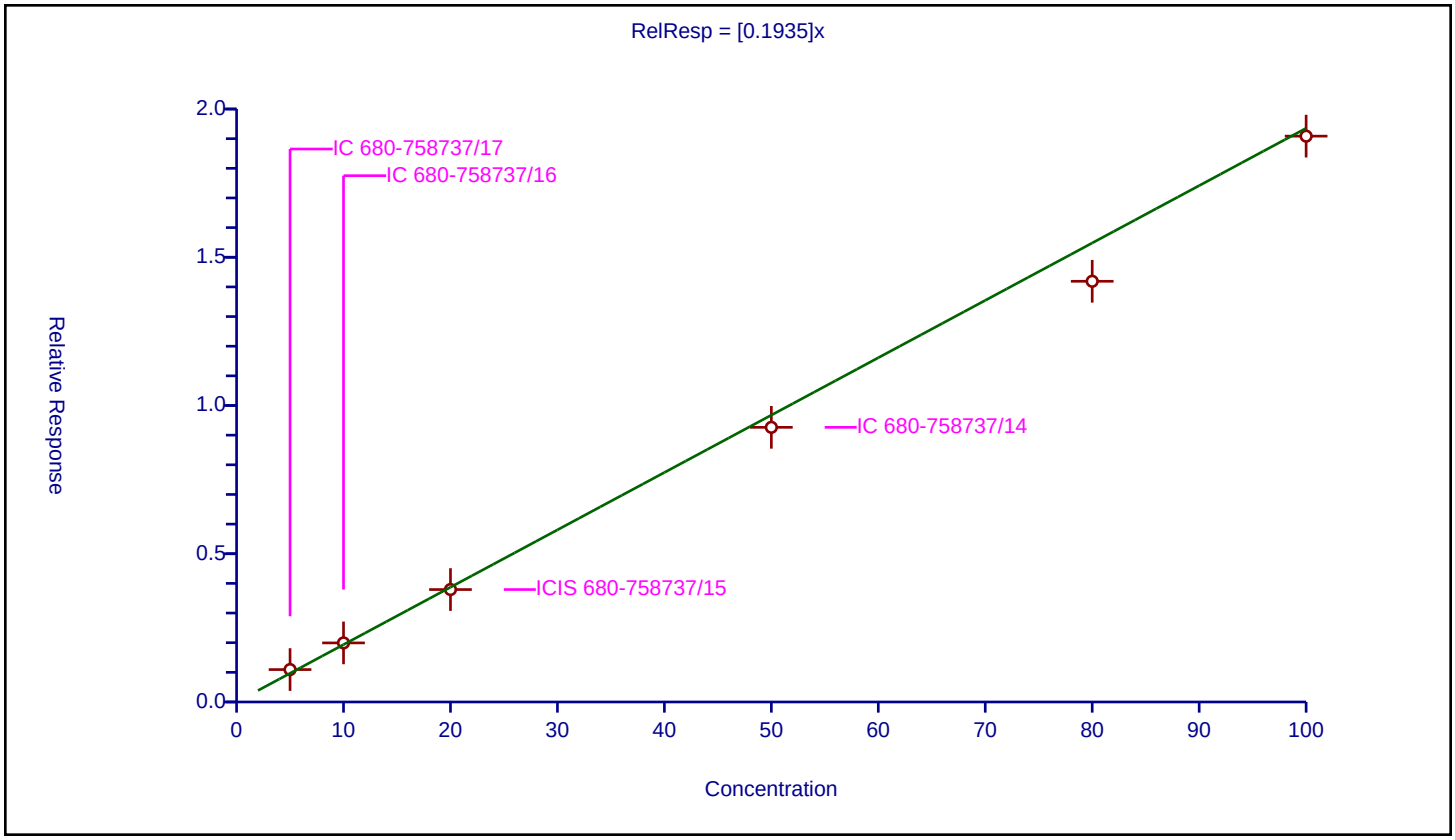
Curve Coefficients

Intercept:	0
Slope:	0.1935

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	7.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	1.093293	50.0	4848013.0	0.218659	Y
2	IC 680-758737/16	10.0	1.992822	50.0	4915794.0	0.199282	Y
3	ICIS 680-758737/15	20.0	3.792658	50.0	4703166.0	0.189633	Y
4	IC 680-758737/14	50.0	9.263627	50.0	4573349.0	0.185273	Y
5	IC 680-758737/13	80.0	14.190084	50.0	4582147.0	0.177376	Y
6	IC 680-758737/12	100.0	19.085066	50.0	4362652.0	0.190851	Y



Calibration / Triethylene Glycol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

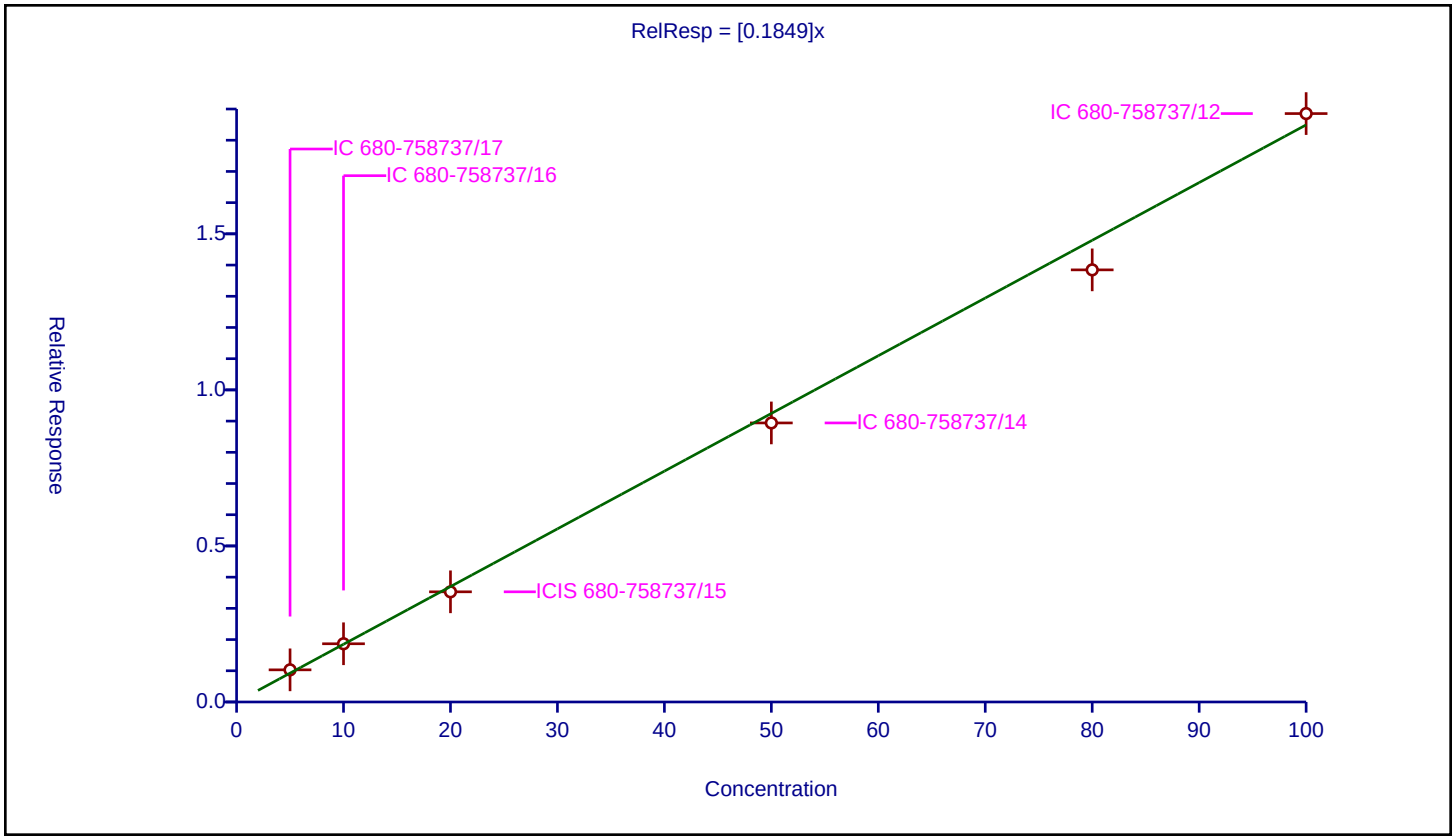
Curve Coefficients

Intercept:	0
Slope:	0.1849

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	6.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	5.0	1.029793	50.0	4848013.0	0.205959	Y
2	IC 680-758737/16	10.0	1.865863	50.0	4915794.0	0.186586	Y
3	ICIS 680-758737/15	20.0	3.530058	50.0	4703166.0	0.176503	Y
4	IC 680-758737/14	50.0	8.941249	50.0	4573349.0	0.178825	Y
5	IC 680-758737/13	80.0	13.845846	50.0	4582147.0	0.173073	Y
6	IC 680-758737/12	100.0	18.854266	50.0	4362652.0	0.188543	Y



Calibration / Tetraethylene Glycol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

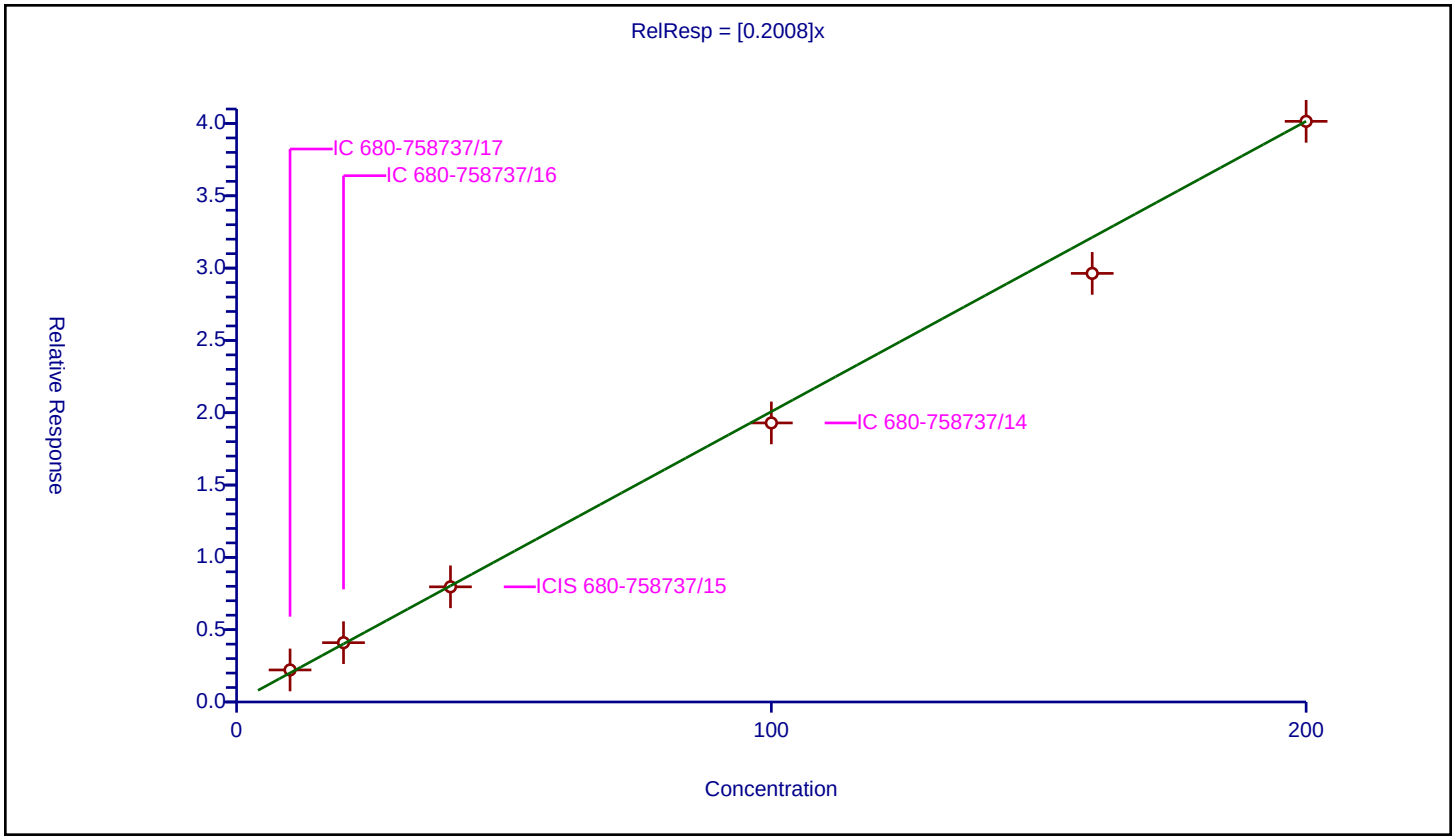
Curve Coefficients

Intercept:	0
Slope:	0.2008

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	6.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-758737/17	10.0	2.216228	50.0	4848013.0	0.221623	Y
2	IC 680-758737/16	20.0	4.101169	50.0	4915794.0	0.205058	Y
3	ICIS 680-758737/15	40.0	7.962434	50.0	4703166.0	0.199061	Y
4	IC 680-758737/14	100.0	19.293892	50.0	4573349.0	0.192939	Y
5	IC 680-758737/13	160.0	29.633958	50.0	4582147.0	0.185212	Y
6	IC 680-758737/12	200.0	40.148767	50.0	4362652.0	0.200744	Y



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Lab Sample ID: ICV 680-758737/18 Calibration Date: 01/11/2023 21:37

Instrument ID: CVGG2 Calib Start Date: 01/11/2023 19:18

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 01/11/2023 21:14

Lab File ID: GA11018.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.7357	0.6851		18.6	20.0	-6.9	20.0
4-Hydroxy-4-methyl-2-pentanone	Ave	0.7204	0.6634		18.4	20.0	-7.9	20.0
2-Butoxyethanol	Ave	0.7988	0.7754		19.4	20.0	-2.9	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0482		19.1	20.0	-4.4	20.0
Propylene glycol	Ave	0.2550	0.2110		16.5	20.0	-17.3	20.0
Ethylene glycol	Ave	0.2086	0.1803		17.3	20.0	-13.5	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.5848	0.5163		17.7	20.0	-11.7	20.0
2,2'-Oxybisethanol	Ave	0.1935	0.1552		16.0	20.0	-19.8	20.0
Triethylene Glycol	Ave	0.1849	0.1636		17.7	20.0	-11.5	20.0
Tetraethylene Glycol	Ave	0.2008	0.1723		34.3	40.0	-14.2	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Lab Sample ID: ICV 680-758737/18 Calibration Date: 01/11/2023 21:37

Instrument ID: CVGG2 Calib Start Date: 01/11/2023 19:18

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 01/11/2023 21:14

Lab File ID: GA11018.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	3.12	3.06	3.18
4-Hydroxy-4-methyl-2-pentanone	3.71	3.65	3.80
2-Butoxyethanol	4.03	3.95	4.11
Dipropylene Glycol Methyl Ether	5.46	5.36	5.58
Propylene glycol	6.33	6.21	6.47
Ethylene glycol	6.78	6.65	6.92
2-(2-Butoxyethoxy)ethanol	8.76	8.58	8.93
2,2'-Oxybisethanol	9.74	9.54	9.93
Triethylene Glycol	10.75	10.54	10.97
Tetraethylene Glycol	12.02	11.78	12.26

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11018.D
Lims ID: icv gly
Client ID:
Sample Type: CCV
Inject. Date: 11-Jan-2023 21:37:49 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083226-018
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 12-Jan-2023 12:41:36 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1634

First Level Reviewer: SWK1 Date: 11-Jan-2023 22:04:13

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	3.116	3.121	-0.005	1356430	20.0	18.6	
2 4-Hydroxy-4-methyl-2-pentanone							
	3.713	3.724	-0.011	1313425	20.0	18.4	
3 2-Butoxyethanol							
	4.029	4.031	-0.002	1535224	20.0	19.4	
* 4 n-Heptyl Alcohol							
	4.506	4.504	0.002	4949602	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.464	5.469	-0.005	95497	20.0	19.1	
6 Propylene glycol							
	6.334	6.341	-0.007	417674	20.0	16.5	
7 Ethylene glycol							
	6.779	6.782	-0.003	356978	20.0	17.3	
8 2-(2-Butoxyethoxy)ethanol							
	8.760	8.758	0.002	1022106	20.0	17.7	
9 2,2'-Oxybisethanol							
	9.739	9.737	0.002	307185	20.0	16.0	
10 Triethylene Glycol							M
	10.753	10.753	0.000	323915	20.0	17.7	M
11 Tetraethylene Glycol							
	12.016	12.016	0.000	682159	40.0	34.3	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_GlyICV_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00105	Amount Added:	10.00	Units: uL	Run Reagent

Report Date: 12-Jan-2023 12:41:37 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11018.D

Injection Date: 11-Jan-2023 21:37:49 Instrument ID: CVGG2 Operator ID:

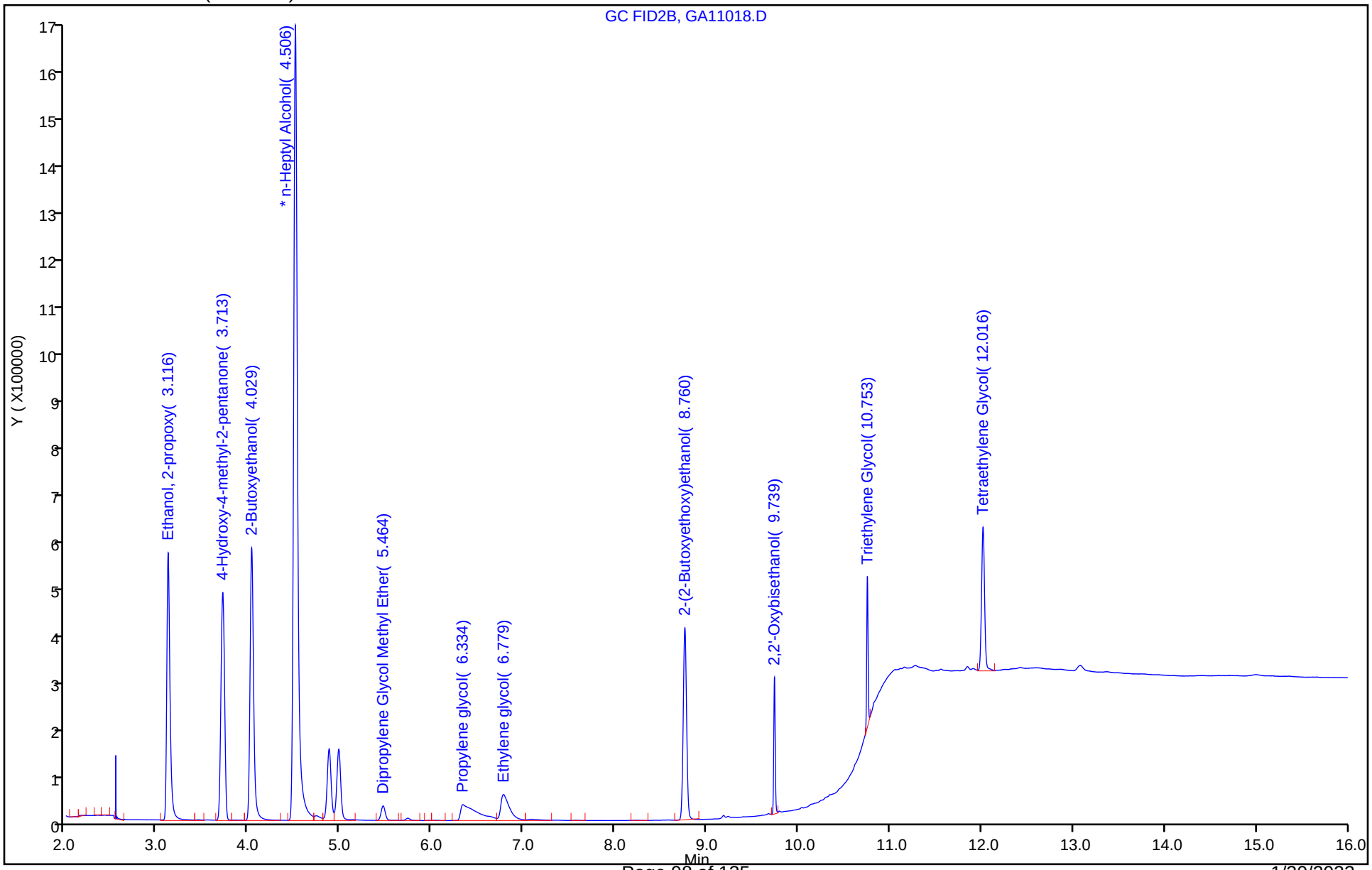
Lims ID: icv gly Worklist Smp#: 18

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)



1/30/2023
10:44 AM

Manual Integration/User Assign Peak Report

Eurofins Savannah

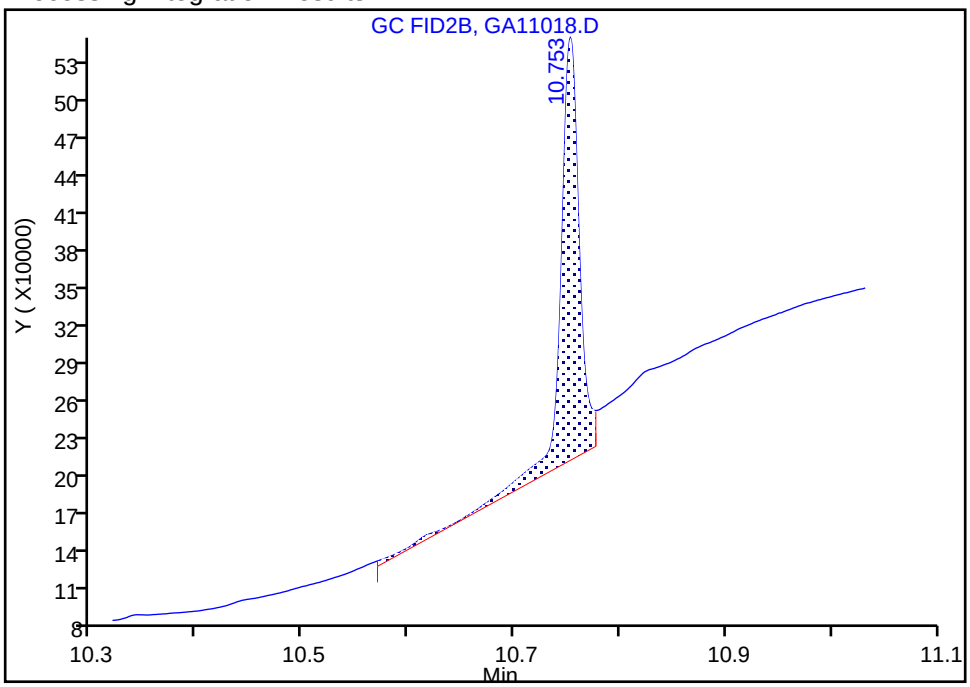
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11018.D				
Injection Date:	11-Jan-2023 21:37:49	Instrument ID:	CVGG2		
Lims ID:	icv gly				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

10 Triethylene Glycol, CAS: 112-27-6

Signal: 1

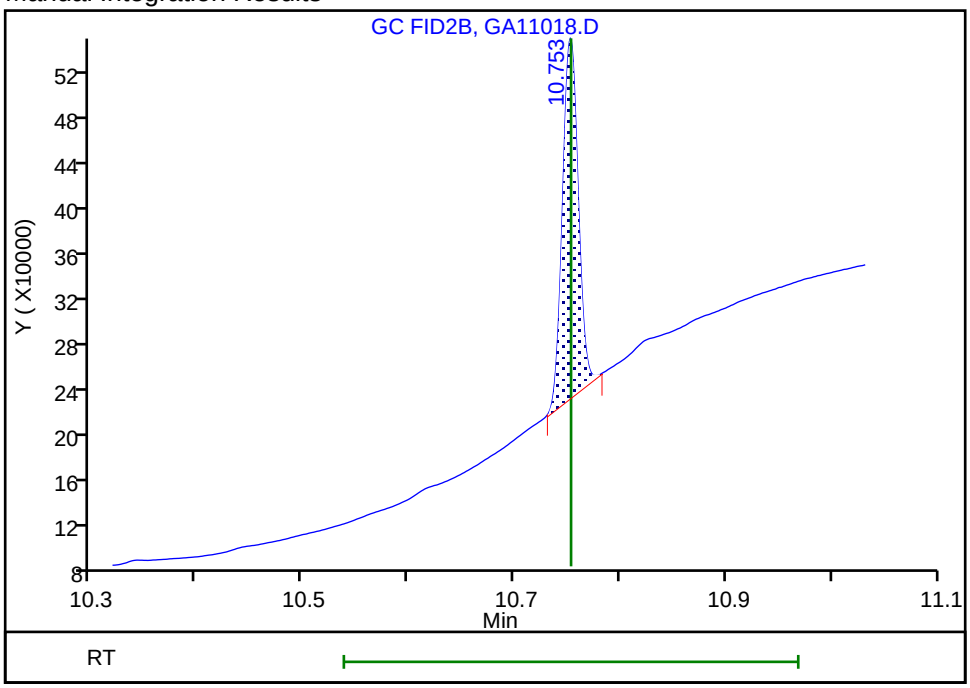
Processing Integration Results

RT: 10.75
Area: 408495
Amount: 22.315925
Amount Units: ug/ml



Manual Integration Results

RT: 10.75
Area: 323915
Amount: 17.695352
Amount Units: ug/ml



Reviewer: SWK1, 11-Jan-2023 22:02:48

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Lab Sample ID: CCVIS 680-759183/5 Calibration Date: 01/16/2023 13:10

Instrument ID: CVGG2 Calib Start Date: 01/11/2023 19:18

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 01/11/2023 21:14

Lab File ID: GA16005.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.7357	0.6284		17.1	20.0	-14.6	20.0
4-Hydroxy-4-methyl-2-pentanone	Ave	0.7204	0.6021		16.7	20.0	-16.4	20.0
2-Butoxyethanol	Ave	0.7988	0.6929		17.3	20.0	-13.3	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0444		17.6	20.0	-12.0	20.0
Propylene glycol	Ave	0.2550	0.2408		18.9	20.0	-5.6	20.0
Ethylene glycol	Ave	0.2086	0.2128		20.4	20.0	2.0	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.5848	0.4858		16.6	20.0	-16.9	20.0
2,2'-Oxybisethanol	Ave	0.1935	0.2030		21.0	20.0	4.9	20.0
Triethylene Glycol	Ave	0.1849	0.2542		27.5	20.0	37.5*	20.0
Tetraethylene Glycol	Ave	0.2008	0.2240		44.6	40.0	11.6	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Lab Sample ID: CCVIS 680-759183/5 Calibration Date: 01/16/2023 13:10

Instrument ID: CVGG2 Calib Start Date: 01/11/2023 19:18

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 01/11/2023 21:14

Lab File ID: GA16005.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	3.12	3.06	3.18
4-Hydroxy-4-methyl-2-pentanone	3.71	3.64	3.79
2-Butoxyethanol	4.03	3.95	4.11
Dipropylene Glycol Methyl Ether	5.46	5.35	5.57
Propylene glycol	6.43	6.30	6.56
Ethylene glycol	6.80	6.67	6.94
2-(2-Butoxyethoxy)ethanol	8.76	8.58	8.93
2,2'-Oxybisethanol	9.74	9.54	9.93
Triethylene Glycol	10.75	10.54	10.97
Tetraethylene Glycol	12.02	11.78	12.26

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16005.D
Lims ID: ccvis g3
Client ID:
Sample Type: CCVIS
Inject. Date: 16-Jan-2023 13:10:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083281-005
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 16-Jan-2023 17:16:09 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1643

First Level Reviewer: SWK1 Date: 16-Jan-2023 17:14:00

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	3.121	3.121	0.000	1114734	20.0	17.1	
2 4-Hydroxy-4-methyl-2-pentanone							
	3.714	3.714	0.000	1067941	20.0	16.7	
3 2-Butoxyethanol							
	4.030	4.030	0.000	1229022	20.0	17.3	
* 4 n-Heptyl Alcohol							
	4.506	4.506	0.000	4434601	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.462	5.462	0.000	78769	20.0	17.6	
6 Propylene glycol							
	6.429	6.429	0.000	427109	20.0	18.9	
7 Ethylene glycol							
	6.801	6.801	0.000	377404	20.0	20.4	
8 2-(2-Butoxyethoxy)ethanol							
	8.758	8.758	0.000	861695	20.0	16.6	
9 2,2'-Oxybisethanol							
	9.738	9.738	0.000	360107	20.0	21.0	
10 Triethylene Glycol							
	10.754	10.754	0.000	450896	20.0	27.5	
11 Tetraethylene Glycol							
	12.016	12.016	0.000	794631	40.0	44.6	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00105	Amount Added:	10.00	Units: uL	Run Reagent

Report Date: 16-Jan-2023 17:16:09 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16005.D

Injection Date: 16-Jan-2023 13:10:00 Instrument ID: CVGG2 Operator ID:

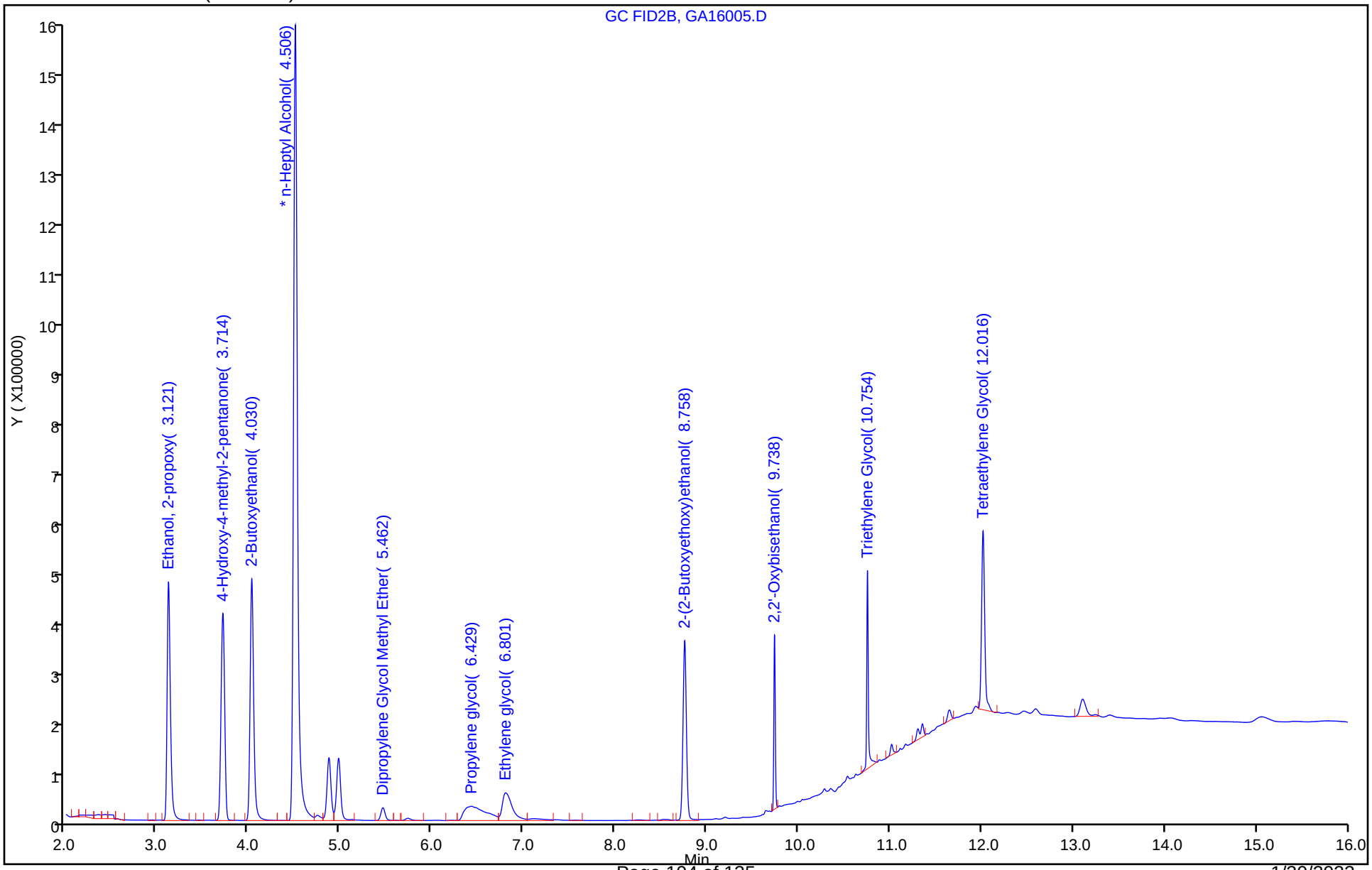
Lims ID: ccvis g3 Worklist Smp#: 5

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)



1/30/2023
10:44 AM

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Lab Sample ID: CCV 680-759183/24 Calibration Date: 01/16/2023 20:32

Instrument ID: CVGG2 Calib Start Date: 01/11/2023 19:18

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 01/11/2023 21:14

Lab File ID: GA16024.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.7357	0.6800		18.5	20.0	-7.6	20.0
4-Hydroxy-4-methyl-2-pentanone	Ave	0.7204	0.6452		17.9	20.0	-10.4	20.0
2-Butoxyethanol	Ave	0.7988	0.7729		19.4	20.0	-3.2	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0457		18.1	20.0	-9.4	20.0
Propylene glycol	Ave	0.2550	0.0176		1.38	20.0	-93.1*	20.0
Ethylene glycol	Ave	0.2086	0.1325		12.7	20.0	-36.5*	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.5848	0.4988		17.1	20.0	-14.7	20.0
2,2'-Oxybisethanol	Ave	0.1935	0.1449		15.0	20.0	-25.1*	20.0
Triethylene Glycol	Ave	0.1849	0.1761		19.0	20.0	-4.8	20.0
Tetraethylene Glycol	Ave	0.2008	0.1332		26.5	40.0	-33.7*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Lab Sample ID: CCV 680-759183/24 Calibration Date: 01/16/2023 20:32

Instrument ID: CVGG2 Calib Start Date: 01/11/2023 19:18

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 01/11/2023 21:14

Lab File ID: GA16024.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	3.12	3.05	3.18
4-Hydroxy-4-methyl-2-pentanone	3.71	3.64	3.79
2-Butoxyethanol	4.02	3.94	4.10
Dipropylene Glycol Methyl Ether	5.46	5.35	5.57
Propylene glycol	6.42	6.29	6.55
Ethylene glycol	6.81	6.67	6.94
2-(2-Butoxyethoxy)ethanol	8.75	8.58	8.93
2,2'-Oxybisethanol	9.74	9.54	9.93
Triethylene Glycol	10.75	10.54	10.97
Tetraethylene Glycol	12.02	11.78	12.26

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16024.D
Lims ID: ccvis g3
Client ID:
Sample Type: CCVIS
Inject. Date: 16-Jan-2023 20:32:19 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083281-024
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 17-Jan-2023 11:06:27 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1657

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	3.115	3.115	0.000	1379074	20.0	18.5	
2 4-Hydroxy-4-methyl-2-pentanone							
	3.713	3.713	0.000	1308523	20.0	17.9	
3 2-Butoxyethanol							
	4.024	4.024	0.000	1567352	20.0	19.4	
* 4 n-Heptyl Alcohol							
	4.497	4.497	0.000	5069907	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.459	5.459	0.000	92693	20.0	18.1	
6 Propylene glycol							
	6.416	6.416	0.000	35726	20.0	1.38	
7 Ethylene glycol							
	6.807	6.807	0.000	268622	20.0	12.7	
8 2-(2-Butoxyethoxy)ethanol							
	8.750	8.750	0.000	1011611	20.0	17.1	
9 2,2'-Oxybisethanol							
	9.739	9.739	0.000	293942	20.0	15.0	
10 Triethylene Glycol							
	10.754	10.754	0.000	357159	20.0	19.0	
11 Tetraethylene Glycol							
	12.017	12.017	0.000	540248	40.0	26.5	

Reagents:

SG_Gly_CAL_00052 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 17-Jan-2023 11:06:27 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16024.D

Injection Date: 16-Jan-2023 20:32:19 Instrument ID: CVGG2 Operator ID:

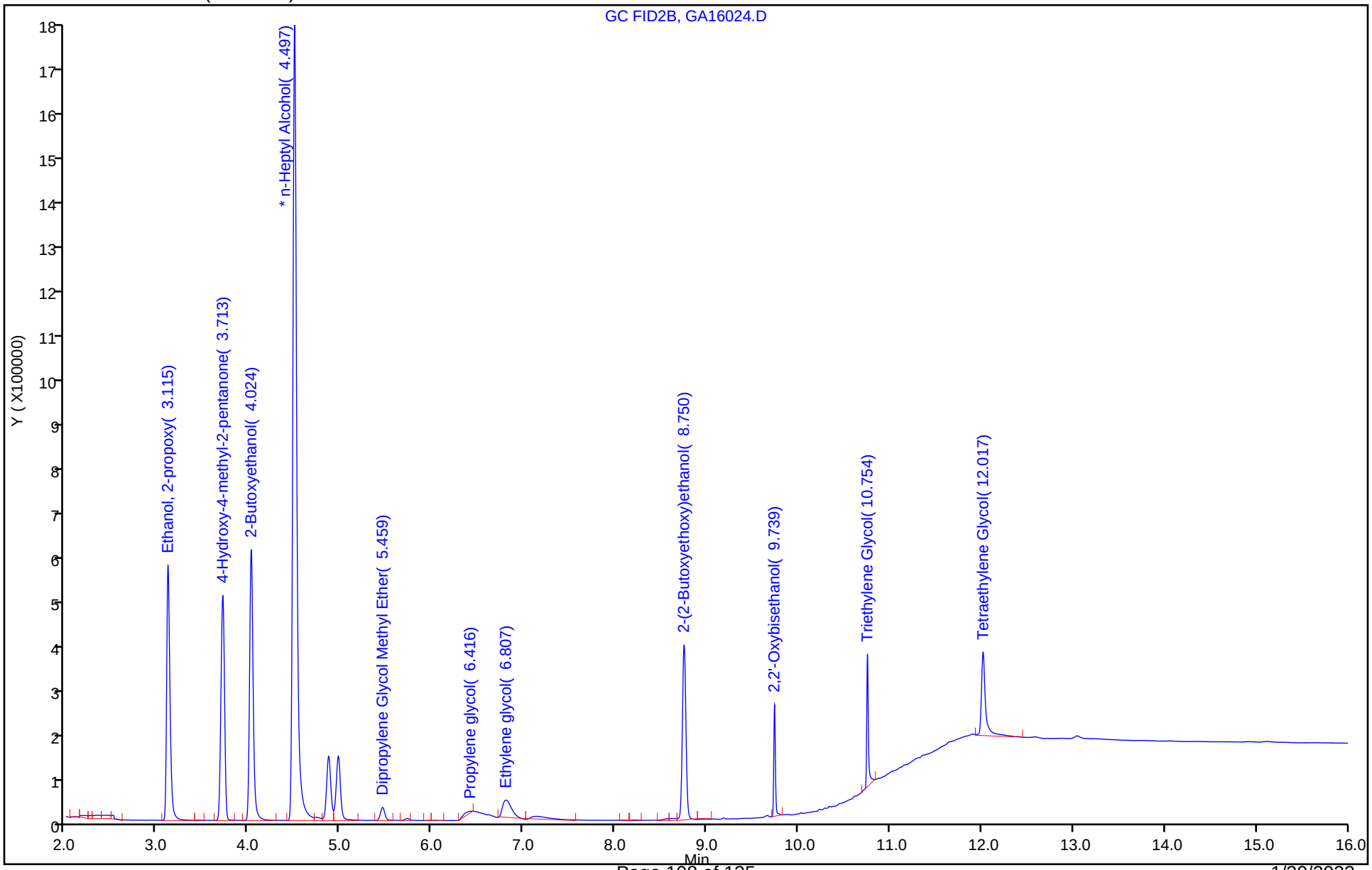
Lims ID: ccvis g3 Worklist Smp#: 24

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)



1/30/2023
10:44 AM

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Lab Sample ID: CCV 680-759183/39 Calibration Date: 01/17/2023 02:21

Instrument ID: CVGG2 Calib Start Date: 01/11/2023 19:18

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 01/11/2023 21:14

Lab File ID: GA16039.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.7357	0.6729		18.3	20.0	-8.5	20.0
4-Hydroxy-4-methyl-2-pentanone	Ave	0.7204	0.5908		16.4	20.0	-18.0	20.0
2-Butoxyethanol	Ave	0.7988	0.7710		19.3	20.0	-3.5	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0477		18.9	20.0	-5.4	20.0
Propylene glycol	Ave	0.2550	0.0632		4.95	20.0	-75.2*	20.0
Ethylene glycol	Ave	0.2086	0.2099		20.1	20.0	0.7	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.5848	0.5159		17.6	20.0	-11.8	20.0
2,2'-Oxybisethanol	Ave	0.1935	0.1730		17.9	20.0	-10.6	20.0
Triethylene Glycol	Ave	0.1849	0.2089		22.6	20.0	13.0	20.0
Tetraethylene Glycol	Ave	0.2008	0.1155		23.0	40.0	-42.5*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Lab Sample ID: CCV 680-759183/39 Calibration Date: 01/17/2023 02:21

Instrument ID: CVGG2 Calib Start Date: 01/11/2023 19:18

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 01/11/2023 21:14

Lab File ID: GA16039.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	3.11	3.05	3.17
4-Hydroxy-4-methyl-2-pentanone	3.71	3.63	3.78
2-Butoxyethanol	4.02	3.94	4.10
Dipropylene Glycol Methyl Ether	5.46	5.35	5.57
Propylene glycol	6.44	6.31	6.57
Ethylene glycol	6.82	6.68	6.95
2-(2-Butoxyethoxy)ethanol	8.75	8.58	8.93
2,2'-Oxybisethanol	9.74	9.54	9.93
Triethylene Glycol	10.76	10.54	10.97
Tetraethylene Glycol	12.02	11.78	12.26

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16039.D
Lims ID: ccv g3
Client ID:
Sample Type: CCV
Inject. Date: 17-Jan-2023 02:21:01 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083281-039
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 17-Jan-2023 11:08:01 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1657

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	3.111	3.111	0.000	1381205	20.0	18.3	
2 4-Hydroxy-4-methyl-2-pentanone							
	3.705	3.705	0.000	1212714	20.0	16.4	
3 2-Butoxyethanol							
	4.022	4.022	0.000	1582610	20.0	19.3	
* 4 n-Heptyl Alcohol							
	4.498	4.498	0.000	5131743	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.455	5.455	0.000	97943	20.0	18.9	
6 Propylene glycol							
	6.443	6.443	0.000	129678	20.0	4.95	
7 Ethylene glycol							
	6.816	6.816	0.000	430957	20.0	20.1	
8 2-(2-Butoxyethoxy)ethanol							
	8.753	8.753	0.000	1058926	20.0	17.6	
9 2,2'-Oxybisethanol							
	9.739	9.739	0.000	355201	20.0	17.9	
10 Triethylene Glycol							
	10.755	10.755	0.000	428836	20.0	22.6	
11 Tetraethylene Glycol							
	12.021	12.021	0.000	474015	40.0	23.0	

Reagents:

SG_Gly_CAL_00052 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 17-Jan-2023 11:08:01 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16039.D

Injection Date: 17-Jan-2023 02:21:01 Instrument ID: CVGG2 Operator ID:

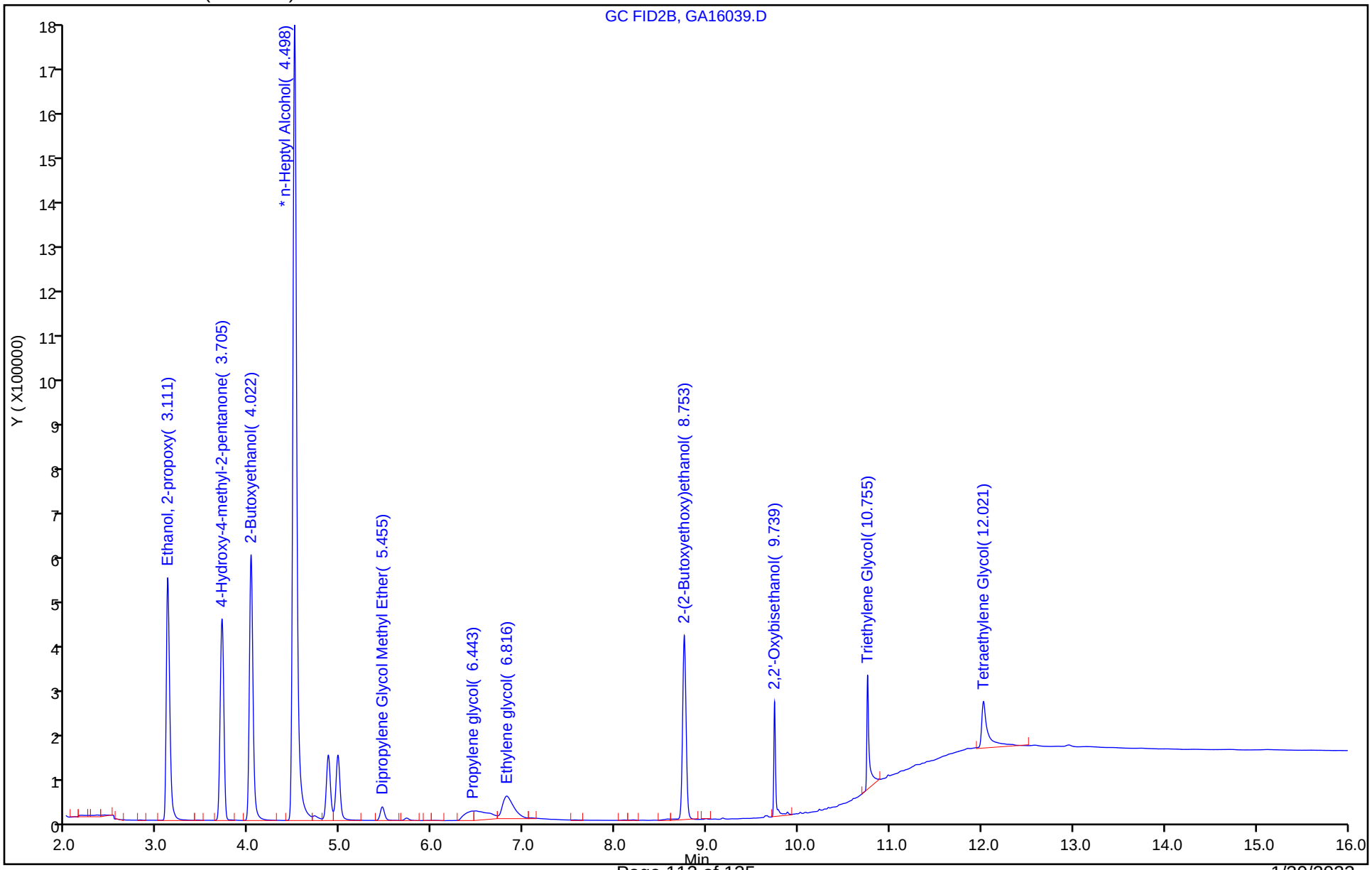
Lims ID: ccv g3 Worklist Smp#: 39

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)



1/30/2023
10:44 AM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah
Job No.: 580-122262-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 680-759183/10
Matrix: Water
Lab File ID: GA16010.D
Analysis Method: 8015C GLY
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 01/16/2023 15:06
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.: 759183
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

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16010.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	16-Jan-2023 15:06:27	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083281-010				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	16-Jan-2023 17:15:54	Calib Date:	11-Jan-2023 21:14:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1643				

First Level Reviewer: SWK1 Date: 16-Jan-2023 17:15:46

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
4.505	4.506	-0.001	5589716	50.0	50.0	
8 2-(2-Butoxyethoxy)ethanol						7
8.759	8.758	0.001	5715		0.0874	7
LOD =	0.5000					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 16-Jan-2023 17:16:07 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16010.D

Injection Date: 16-Jan-2023 15:06:27 Instrument ID: CVGG2 Operator ID:

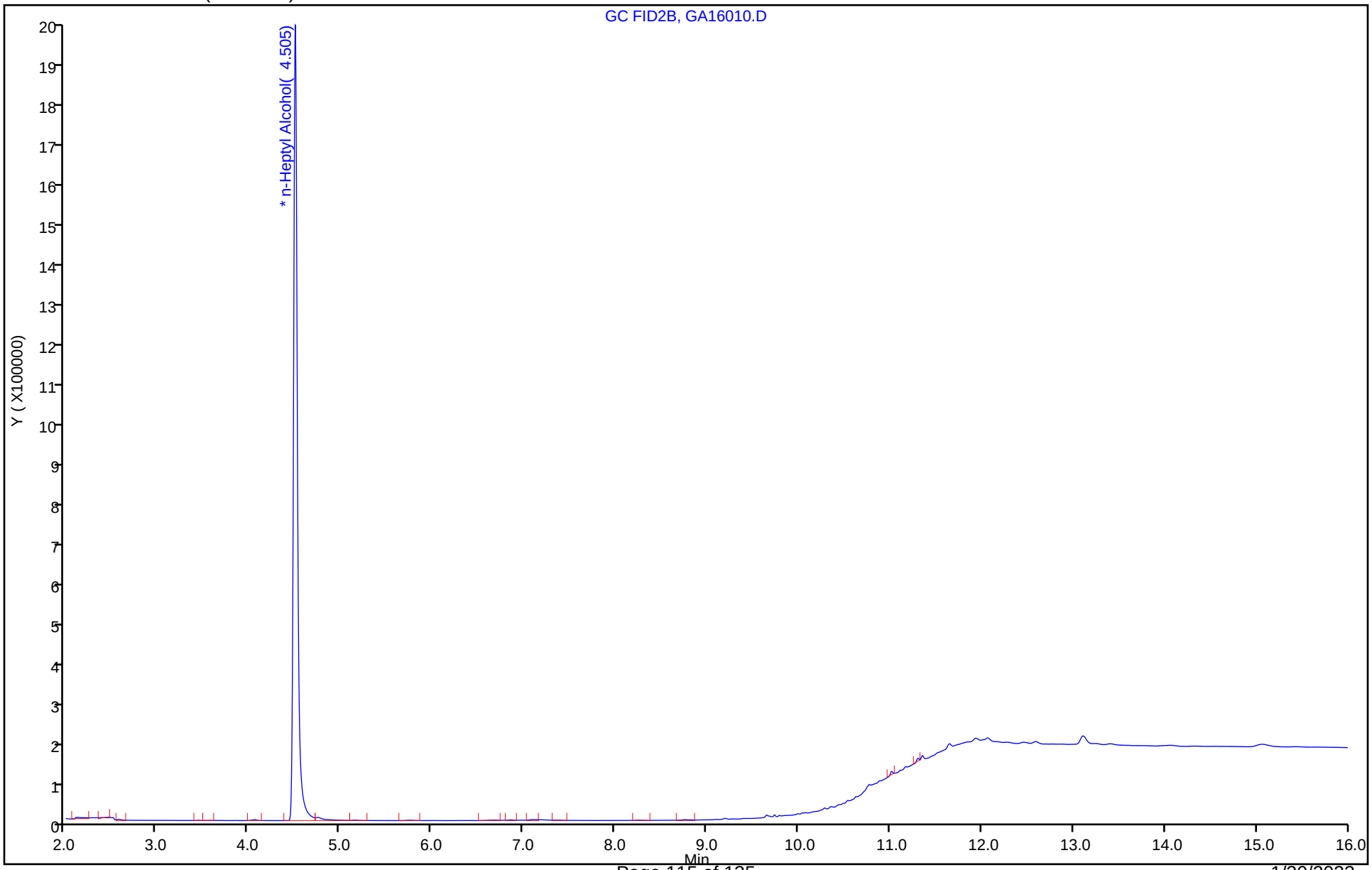
Lims ID: mb Worklist Smp#: 10

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)



1/30/2023
10:44 AM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah
Job No.: 580-122262-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 680-759183/6
Matrix: Water
Lab File ID: GA16006.D
Analysis Method: 8015C GLY
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 01/16/2023 13:33
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.: 759183
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.0		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16006.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 16-Jan-2023 13:33:14 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083281-006
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 16-Jan-2023 17:16:09 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1643

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
3.119	3.121	-0.002	1195763	20.0	18.9	
2 4-Hydroxy-4-methyl-2-pentanone						
3.713	3.714	-0.001	1182780	20.0	19.1	
3 2-Butoxyethanol						
4.028	4.030	-0.002	1309971	20.0	19.1	
* 4 n-Heptyl Alcohol						
4.503	4.506	-0.003	4304414	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.463	5.462	0.001	88527	20.0	20.4	
6 Propylene glycol						
6.425	6.429	-0.004	473418	20.0	21.6	
7 Ethylene glycol						
6.803	6.801	0.002	420392	20.0	23.4	
8 2-(2-Butoxyethoxy)ethanol						
8.757	8.758	-0.001	958804	20.0	19.0	
9 2,2'-Oxybisethanol						
9.738	9.738	0.000	381000	20.0	22.9	
10 Triethylene Glycol						
10.753	10.754	-0.001	400891	20.0	25.2	
11 Tetraethylene Glycol						
12.016	12.016	0.000	792159	40.0	45.8	

Reagents:

SG_GlyICV_00052 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 16-Jan-2023 17:16:10 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16006.D

Injection Date: 16-Jan-2023 13:33:14 Instrument ID: CVGG2 Operator ID:

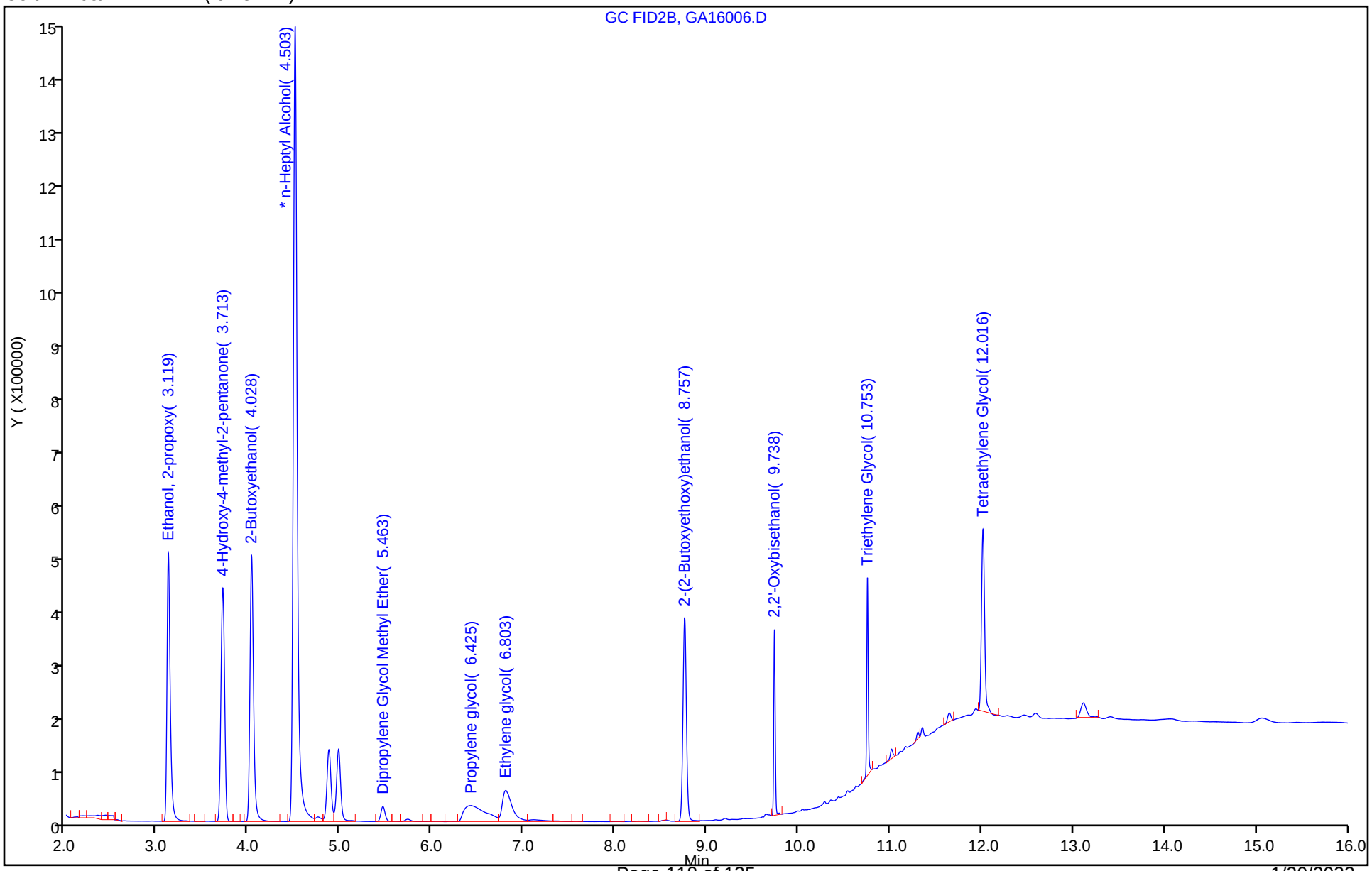
Lims ID: lcs Worklist Smp#: 6

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)



1/30/2023
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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah
Job No.: 580-122262-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCSD 680-759183/7
Matrix: Water
Lab File ID: GA16007.D
Analysis Method: 8015C GLY
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 01/16/2023 13:56
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.: 759183
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	18.8		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16007.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 16-Jan-2023 13:56:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083281-007
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 16-Jan-2023 17:16:09 Calib Date: 11-Jan-2023 21:14:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1643

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	3.113	3.121	-0.008	958789	20.0	16.4	
2 4-Hydroxy-4-methyl-2-pentanone							
	3.703	3.714	-0.011	965214	20.0	16.8	
3 2-Butoxyethanol							
	4.027	4.030	-0.003	1056609	20.0	16.6	
* 4 n-Heptyl Alcohol							
	4.510	4.506	0.004	3977995	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	5.459	5.462	-0.003	79485	20.0	19.8	
6 Propylene glycol							
	6.419	6.429	-0.010	561802	20.0	27.7	
7 Ethylene glycol							
	6.801	6.801	0.000	514974	20.0	31.0	
8 2-(2-Butoxyethoxy)ethanol							
	8.756	8.758	-0.002	876972	20.0	18.8	
9 2,2'-Oxybisethanol							
	9.738	9.738	0.000	486697	20.0	31.6	
10 Triethylene Glycol							
	10.754	10.754	0.000	494813	20.0	33.6	
11 Tetraethylene Glycol							
	12.016	12.016	0.000	990696	40.0	62.0	

Reagents:

SG_GlyICV_00052 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 16-Jan-2023 17:16:10 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16007.D

Injection Date: 16-Jan-2023 13:56:36 Instrument ID: CVGG2 Operator ID:

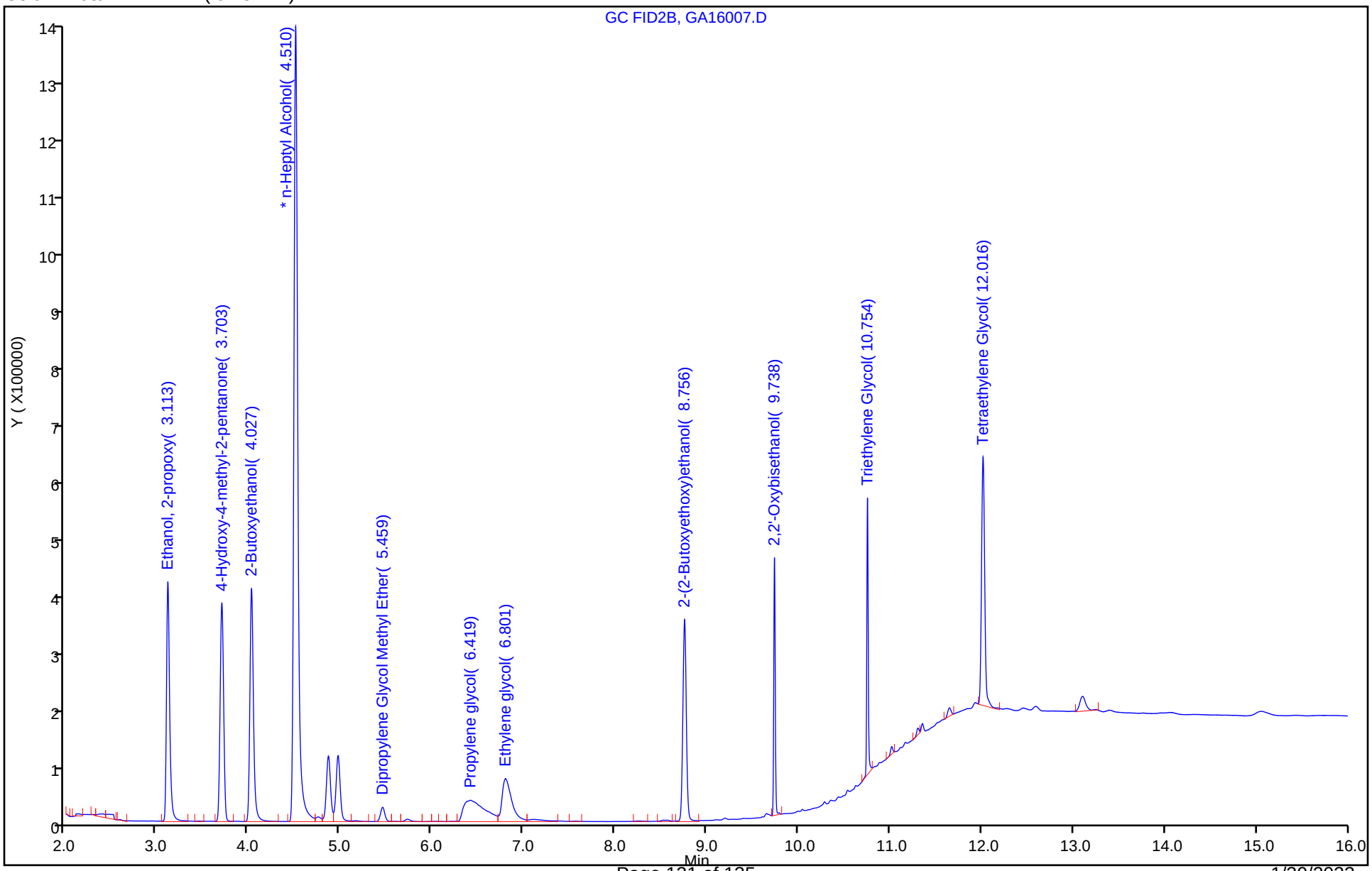
Lims ID: lcsd Worklist Smp#: 7

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)



1/30/2023
10:44 AM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah
Job No.: 580-122262-1
SDG No.:
Client Sample ID: AF-RHMW06-WGN01LF-2301W2 MS
Lab Sample ID: 580-122262-2 MS
Matrix: Water
Lab File ID: GA16036.D
Analysis Method: 8015C GLY
Date Collected: 01/12/2023 11:20
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 01/17/2023 01:11
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.: 759183
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.9		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16036.D				
Lims ID:	580-122262-A-2 MS				
Client ID:					
Sample Type:	MS				
Inject. Date:	17-Jan-2023 01:11:20	ALS Bottle#:	0	Worklist Smp#:	36
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083281-036				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	17-Jan-2023 11:07:35	Calib Date:	11-Jan-2023 21:14:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1657				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
4.501	4.497	0.004	4675704	50.0	50.0	
8 2-(2-Butoxyethoxy)ethanol						
8.755	8.750	0.005	1089737		19.9	

Reagents:

SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 17-Jan-2023 11:08:00 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16036.D

Injection Date: 17-Jan-2023 01:11:20 Instrument ID: CVGG2 Operator ID:

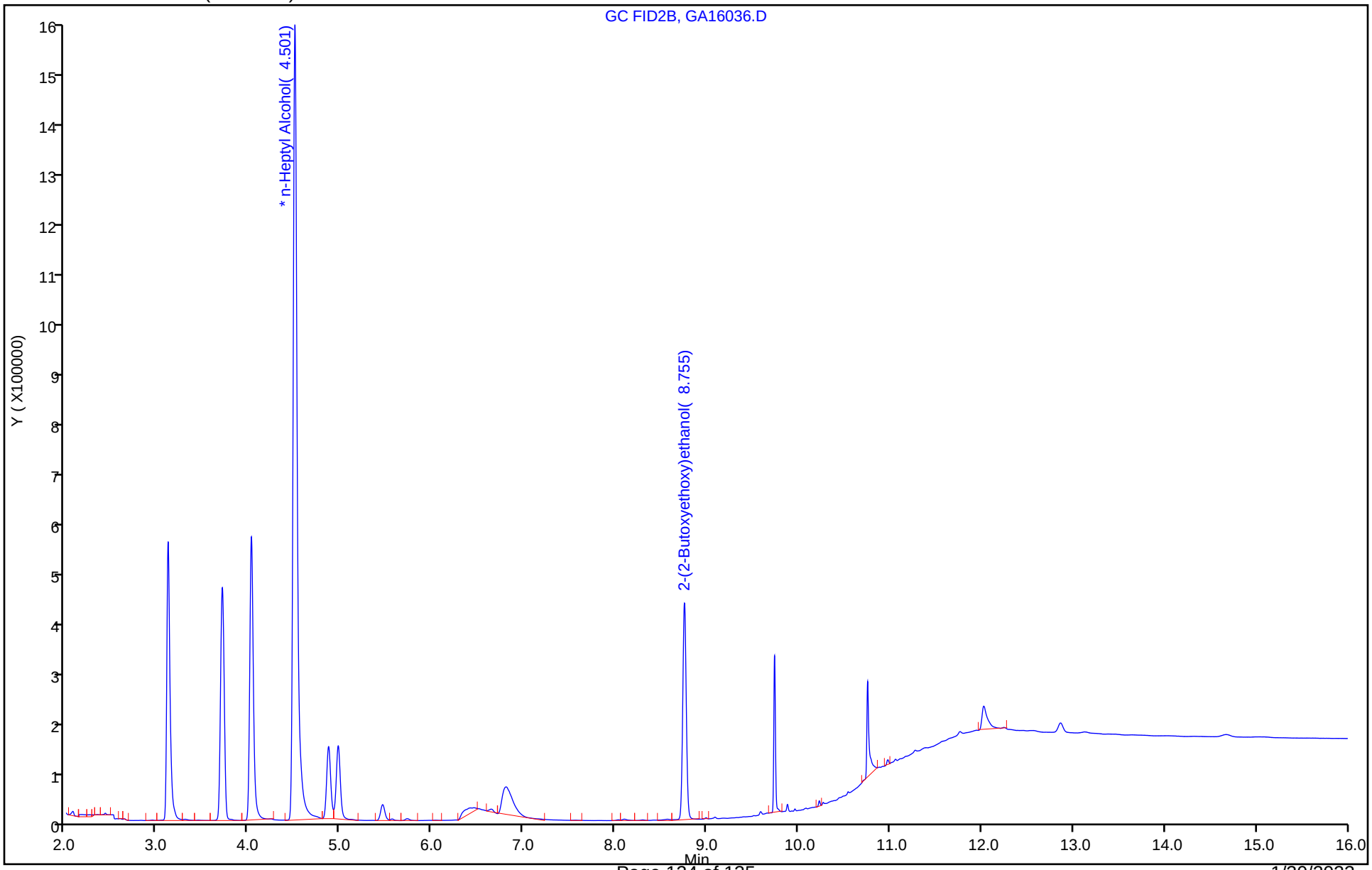
Lims ID: 580-122262-A-2 MS Worklist Smp#: 36

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)



1/30/2023
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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah
Job No.: 580-122262-1
SDG No.:
Client Sample ID: AF-RHMW06-WGN01LF-2301W2 MSD
Lab Sample ID: 580-122262-2 MSD
Matrix: Water
Lab File ID: GA16037.D
Analysis Method: 8015C GLY
Date Collected: 01/12/2023 11:20
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 01/17/2023 01:34
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.: 759183
Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	15.5		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16037.D				
Lims ID:	580-122262-A-2 MSD				
Client ID:					
Sample Type:	MSD				
Inject. Date:	17-Jan-2023 01:34:39	ALS Bottle#:	0	Worklist Smp#:	37
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083281-037				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	17-Jan-2023 11:07:35	Calib Date:	11-Jan-2023 21:14:29
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230111-83226.b\GA11017.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1657	

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
4.504	4.497	0.007	5624301	50.0	50.0	
8 2-(2-Butoxyethoxy)ethanol						
8.754	8.750	0.004	1021839		15.5	

Reagents:

SG_GLY_ISTD_00105 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 17-Jan-2023 11:08:01 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230116-83281.b\GA16037.D

Injection Date: 17-Jan-2023 01:34:39 Instrument ID: CVGG2 Operator ID:

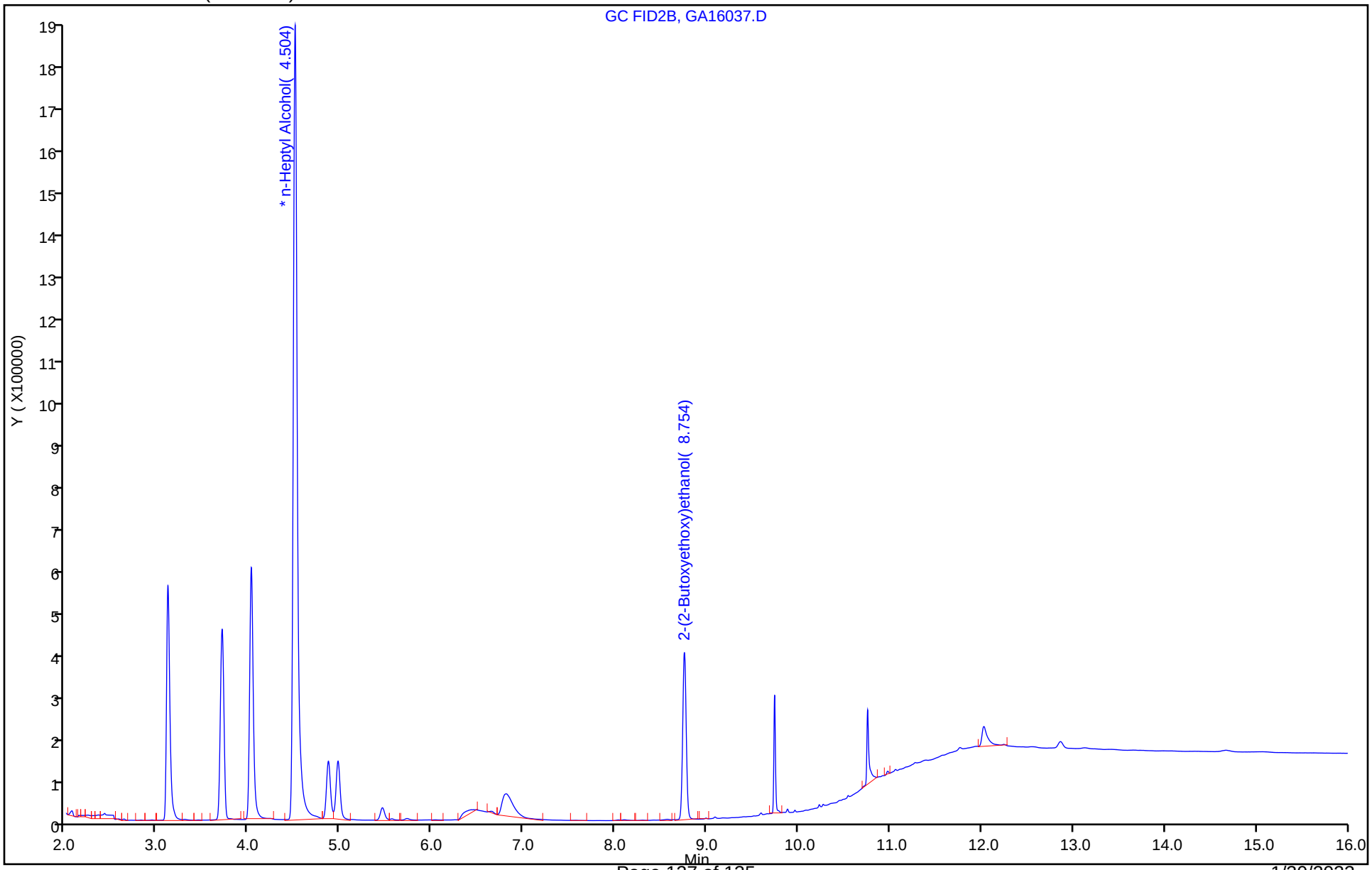
Lims ID: 580-122262-A-2 MSD Worklist Smp#: 37

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)



1/30/2023
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GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Instrument ID: CVGG2 Start Date: 01/11/2023 19:18

Analysis Batch Number: 758737 End Date: 01/12/2023 05:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-758737/12		01/11/2023 19:18	1	GA11012.D	J&W DB WAX 0.45(mm)
IC 680-758737/13		01/11/2023 19:41	1	GA11013.D	J&W DB WAX 0.45(mm)
IC 680-758737/14		01/11/2023 20:04	1	GA11014.D	J&W DB WAX 0.45(mm)
ICIS 680-758737/15		01/11/2023 20:28	1	GA11015.D	J&W DB WAX 0.45(mm)
IC 680-758737/16		01/11/2023 20:51	1	GA11016.D	J&W DB WAX 0.45(mm)
IC 680-758737/17		01/11/2023 21:14	1	GA11017.D	J&W DB WAX 0.45(mm)
ICV 680-758737/18 CCV		01/11/2023 21:37	1	GA11018.D	J&W DB WAX 0.45(mm)
ZZZZZ		01/11/2023 22:13	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/11/2023 22:36	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/11/2023 23:45	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 00:09	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 00:32	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 00:55	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 01:18	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 01:42	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 02:05	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 02:28	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 02:51	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 03:15	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 03:38	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 04:01	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/12/2023 04:24	1		J&W DB WAX 0.45(mm)
CCV 680-758737/37		01/12/2023 05:11	1		J&W DB WAX 0.45(mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Instrument ID: CVGG2 Start Date: 01/16/2023 13:10

Analysis Batch Number: 759183 End Date: 01/17/2023 02:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-759183/5		01/16/2023 13:10	1	GA16005.D	J&W DB WAX 0.45(mm)
LCS 680-759183/6		01/16/2023 13:33	1	GA16006.D	J&W DB WAX 0.45(mm)
LCSD 680-759183/7		01/16/2023 13:56	1	GA16007.D	J&W DB WAX 0.45(mm)
MB 680-759183/10		01/16/2023 15:06	1	GA16010.D	J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 15:29	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 15:52	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 16:16	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 16:39	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 17:02	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 17:26	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 17:49	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 18:12	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 18:36	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 18:59	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 19:22	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 19:45	1		J&W DB WAX 0.45(mm)
CCV 680-759183/24		01/16/2023 20:32	1	GA16024.D	J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 21:42	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 22:05	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 22:28	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 22:51	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/16/2023 23:15	1		J&W DB WAX 0.45(mm)
580-122262-1	AF-RHMW04-WGN01LF-230 1W2	01/16/2023 23:38	1	GA16032.D	J&W DB WAX 0.45(mm)
580-122262-2	AF-RHMW06-WGN01LF-230 1W2	01/17/2023 00:01	1	GA16033.D	J&W DB WAX 0.45(mm)
ZZZZZ		01/17/2023 00:24	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/17/2023 00:48	1		J&W DB WAX 0.45(mm)
580-122262-2 MS	AF-RHMW06-WGN01LF-230 1W2 MS	01/17/2023 01:11	1	GA16036.D	J&W DB WAX 0.45(mm)
580-122262-2 MSD	AF-RHMW06-WGN01LF-230 1W2 MSD	01/17/2023 01:34	1	GA16037.D	J&W DB WAX 0.45(mm)
CCV 680-759183/39		01/17/2023 02:21	1	GA16039.D	J&W DB WAX 0.45(mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Batch Number: 758737 Batch Start Date: 01/11/23 19:18 Batch Analyst: Kellar, Joshua C

Batch Method: 8015C GLY Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00052	SG_GLY_ISTD 00105	SG_GlyICV 00052		
IC 680-758737/12		8015C GLY		1 mL	50 uL	10 uL			
IC 680-758737/13		8015C GLY		1 mL	40 uL	10 uL			
IC 680-758737/14		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-758737/15		8015C GLY		1 mL	10 uL	10 uL			
IC 680-758737/16		8015C GLY		1 mL	5 uL	10 uL			
IC 680-758737/17		8015C GLY		1 mL	2.5 uL	10 uL			
ICV 680-758737/18 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.

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-122262-1

SDG No.:

Batch Number: 759183 Batch Start Date: 01/16/23 13:10 Batch Analyst: Kellar, Joshua C

Batch Method: 8015C GLY Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00052	SG_GLY_ISTD 00105	SG_GlyICV 00052		
CCVIS 680-759183/5		8015C GLY		1 mL	10 uL	10 uL			
LCS 680-759183/6		8015C GLY		1 mL		10 uL	10 uL		
LCSD 680-759183/7		8015C GLY		1 mL		10 uL	10 uL		
MB 680-759183/10		8015C GLY		1 mL		10 uL			
CCV 680-759183/24		8015C GLY		1 mL	10 uL	10 uL			
580-122262-A-1	AF-RHMW04-WGN01L F-2301WK2	8015C GLY	T	1 mL		10 uL			
580-122262-A-2	AF-RHMW06-WGN01L F-2301WK2	8015C GLY	T	1 mL		10 uL			
580-122262-A-2 MS	AF-RHMW06-WGN01L F-2301W2	8015C GLY	T	1 mL		10 uL	10 uL		
580-122262-A-2 MSD	AF-RHMW06-WGN01L F-2301W2	8015C GLY	T	1 mL		10 uL	10 uL		
CCV 680-759183/39		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.

Subcontract Data

Shipping and Receiving Documents

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Tianzhen Nie	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2301W2AFEA08
Client Contact:	Phone: 808-382-8654	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:			Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			
City: Honolulu	TAT Requested (days): Rush - ASAP			
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#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - Di Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, 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_DS/ 2-(2-butoxyethoxy)-ethanol											Total Number of containers	Special Instructions/Note:
			Preservation Code:				A												
AF-RHMW04-WGN01LF-2301W2	1/12/23	0950	G	W	N	N	X											3	

MD 01/12/23

Sn 1/12/23

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	Company	Received by	Date/Time	Company
Tianzhen Nie	1/12/23 1350	AECOM	Miranda DeGarmo	1/12/23 1350	AECOM
Miranda DeGarmo	1/12/23 1400	AECOM	[illegible]	01/14/23 10:25	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4.6

4.6

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: NOAH TURNER	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2301W2AFEA09
Client Contact:	Phone: (781) 366-4777	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:			Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			
City: Honolulu	TAT Requested (days): Rush - ASAP			
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#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, 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-2301W2	01/12/2023	1120	G	W	N	N	X	3	

NT 01/12/2023

NT 01/12/2023

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:	Company	Received by:	Date/Time:	Company
NOAH TURNER	01/12/2023 / 1350	AECOM	Miranda DeGarmo	01/12/23 1350	AECOM
Miranda DeGarmo	01/12/23 1400	AECOM		01/14/23 10:25	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4-6

4-6

Ver: 01/16/2019