eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy
AECOM
1001 Bishop Street
Honolulu HI 96813

Generated 2/28/2023 4:34 PM

JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-123711-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

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

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Authorized for release by
Marie E Walker, Senior Project Manager
M.Elaine.Walker@et.eurofinsus.com
253 248-4972

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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: 580-123711-1

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

One sample was received on 2/18/2023 6:30 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.4º 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

Sample AF-RHMW225401-WGN01B-2302W2 (580-123711-1) was analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The sample was analyzed on 02/27/2023.

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

Detection Summary

Client: AECOM
Job ID: 580-123711-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW225401-WGN01B-2302W2 **Lab Sample ID: 580-123711-1**

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: AF-RHMW225401-WGN01B-2302W2
Lab Sample ID: 580-123711-1

Date Collected: 02/15/23 12:10
Matrix: Water
Date Received: 02/18/23 18:30

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			02/27/23 17:40	1

Default Detection Limits

Client: AECOM
Job ID: 580-123711-1
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 680-765165/10
Matrix: Water
Analysis Batch: 765165

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M	5.0	1.1	mg/L			02/27/23 16:06	1

Lab Sample ID: LCS 680-765165/1006
Matrix: Water
Analysis Batch: 765165

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2-(2-Butoxyethoxy)ethanol			20.0	21.1	M	mg/L		105	50 - 150		

Lab Sample ID: LCSD 680-765165/7
Matrix: Water
Analysis Batch: 765165

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol			20.0	24.3		mg/L		121	50 - 150	14	50

Lab Sample ID: 580-123711-1 MS
Matrix: Water
Analysis Batch: 765165

Client Sample ID: AF-RHMW225401-WGN01B-2302W2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
2-(2-Butoxyethoxy)ethanol	3.0	U M	20.0	19.2		mg/L		96	50 - 150		

Lab Sample ID: 580-123711-1 MSD
Matrix: Water
Analysis Batch: 765165

Client Sample ID: AF-RHMW225401-WGN01B-2302W2
Prep Type: Total/NA

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 M	20.0	19.9		mg/L		100	50 - 150	4	50

QC Association Summary

Client: AECOM
Job ID: 580-123711-1
Project/Site: Red Hill - AFFF Assessment Sampling

GC Semi VOA

Analysis Batch: 765165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-123711-1	AF-RHMW225401-WGN01B-2302W2	Total/NA	Water	8015C GLY	
MB 680-765165/10	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-765165/1006	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-765165/7	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-123711-1 MS	AF-RHMW225401-WGN01B-2302W2	Total/NA	Water	8015C GLY	
580-123711-1 MSD	AF-RHMW225401-WGN01B-2302W2	Total/NA	Water	8015C GLY	

Lab Chronicle

Client: AECOM
Job ID: 580-123711-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW225401-WGN01B-2302W2
Lab Sample ID: 580-123711-1

Date Collected: 02/15/23 12:10
Matrix: Water
Date Received: 02/18/23 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	765165	JCK	EET SAV	02/27/23 17:40

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 580-123711-1
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: 580-123711-1
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: 580-123711-1
Project/Site: Red Hill - AFFF Assessment Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-123711-1	AF-RHMW225401-WGN01B-2302W2	Water	02/15/23 12:10	02/18/23 18:30

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 764742

Lab Sample ID: IC 680-764742/5 Client Sample ID:

Date Analyzed: 02/23/23 18:06 Lab File ID: GB23005.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.29	Baseline Smoothing	SK9U	02/24/23 11:11
Tetraethylene Glycol	11.77	Baseline Smoothing	SK9U	02/24/23 11:16

Lab Sample ID: IC 680-764742/6 Client Sample ID:

Date Analyzed: 02/23/23 18:29 Lab File ID: GB23006.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.28	Baseline Smoothing	SK9U	02/24/23 11:11
Ethylene glycol	6.53	Baseline Smoothing	SK9U	02/24/23 11:10
Tetraethylene Glycol	11.77	Baseline Smoothing	SK9U	02/24/23 11:16

Lab Sample ID: IC 680-764742/7 Client Sample ID:

Date Analyzed: 02/23/23 18:53 Lab File ID: GB23007.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.29	Baseline Smoothing	SK9U	02/24/23 11:11
Tetraethylene Glycol	11.77	Baseline Smoothing	SK9U	02/24/23 11:15

Lab Sample ID: ICIS 680-764742/8 Client Sample ID:

Date Analyzed: 02/23/23 19:16 Lab File ID: GB23008.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.36	Baseline Smoothing	SK9U	02/24/23 11:12
Ethylene glycol	6.55	Baseline Smoothing	SK9U	02/24/23 11:09
Tetraethylene Glycol	11.77	Baseline Smoothing	SK9U	02/24/23 11:15

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 764742

Lab Sample ID: IC 680-764742/9 Client Sample ID:

Date Analyzed: 02/23/23 19:39 Lab File ID: GB23009.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.27	Baseline Smoothing	SK9U	02/24/23 11:12
Tetraethylene Glycol	11.77	Baseline Smoothing	SK9U	02/24/23 11:15

Lab Sample ID: IC 680-764742/10 Client Sample ID:

Date Analyzed: 02/23/23 20:02 Lab File ID: GB23010.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.26	Baseline Smoothing	SK9U	02/24/23 11:12
Ethylene glycol	6.54	Baseline Smoothing	SK9U	02/24/23 11:12
Tetraethylene Glycol	11.77	Baseline Smoothing	SK9U	02/24/23 11:15

Lab Sample ID: IC 680-764742/11 Client Sample ID:

Date Analyzed: 02/23/23 20:25 Lab File ID: GB23011.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.26	Baseline Smoothing	SK9U	02/24/23 11:13
Ethylene glycol	6.56	Baseline Smoothing	SK9U	02/24/23 11:13
Tetraethylene Glycol	11.77	Baseline Smoothing	SK9U	02/24/23 11:14

Lab Sample ID: ICV 680-764742/12 CCV Client Sample ID:

Date Analyzed: 02/23/23 20:49 Lab File ID: GB23012.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.26	Baseline Smoothing	SK9U	02/24/23 11:14
Ethylene glycol	6.54	Baseline Smoothing	SK9U	02/24/23 11:13
Tetraethylene Glycol	11.77	Baseline Smoothing	SK9U	02/24/23 11:17

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 765165

Lab Sample ID: CCVIS 680-765165/6 Client Sample ID:

Date Analyzed: 02/27/23 14:32 Lab File ID: GB27006.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.36	Baseline Smoothing	SWK1	02/27/23 15:04
Ethylene glycol	6.55	Baseline Smoothing	SWK1	02/27/23 15:04
2-(2-Butoxyethoxy)ethanol	8.42	Baseline Smoothing	SWK1	02/27/23 15:04
2-(2-Butoxyethoxy)ethanol	8.42	Baseline Smoothing	SWK1	02/27/23 15:04

Lab Sample ID: MB 680-765165/10 Client Sample ID:

Date Analyzed: 02/27/23 16:06 Lab File ID: GB27010.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	02/27/23 16:29

Lab Sample ID: 580-123711-1 Client Sample ID: AF-RHMW225401-WGN01B-2302W2

Date Analyzed: 02/27/23 17:40 Lab File ID: GB27014.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	02/28/23 10:29

Lab Sample ID: CCV 680-765165/18 Client Sample ID:

Date Analyzed: 02/27/23 19:13 Lab File ID: GB27018.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.36	Baseline Smoothing	SWK1	02/28/23 10:29
Ethylene glycol	6.55	Baseline Smoothing	SWK1	02/28/23 10:29

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG_Gly_CAL_00048	05/21/23	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_00106	05/22/23	Agilent, Lot 0006720623			(Purchased Reagent)		n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00055	08/21/23	o2si, Lot 454407			(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

SG_Gly_CAL_00048

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:

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

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	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

Reagent

SG_GLY_ISTD_00106

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

	CERTIFIED VALUES				
Component Name	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

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

ISO 17025

Reagent

SG_GlyICV_00055

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

o2si
smart solutions®

ACCREDITED
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:

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**

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Phone: 866.272.0932 • Fax: 866.509.5146 www.o2si.com

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
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Method 8015C - DAI Glycols

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

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -GB27006-LCS.d

Lab ID: LCS 680-765165/1006 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	21.1	105	50-150	M

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.: 580-123711-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GB27007.D

Lab ID: LCSD 680-765165/7 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	24.3	121	14	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.: 580-123711-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GB27015.D

Lab ID: 580-123711-1 MS Client ID: AF-RHMW225401-WGN01B-2302W2 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	19.2	96	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.: 580-123711-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GB27016.D

Lab ID: 580-123711-1 MSD Client ID: AF-RHMW225401-WGN01B-2302W2 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	19.9	100	4	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.: 580-123711-1

SDG No.:

Lab Sample ID: MB 680-765165/10

Matrix: Water Date Extracted:

Lab File ID:(1) GB27010.D Lab File ID:(2)

Date Analyzed:(1) 02/27/2023 16:06 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 680-765165/1006	02/27/2023 14:32	
	LCSD 680-765165/7	02/27/2023 14:55	
AF-RHMW225401-WGN01B-230 2W2	580-123711-1	02/27/2023 17:40	
AF-RHMW225401-WGN01B-230 2W2 MS	580-123711-1 MS	02/27/2023 18:03	
AF-RHMW225401-WGN01B-230 2W2 MSD	580-123711-1 MSD	02/27/2023 18:26	

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

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Sample No.: CCVIS 680-765165/6 Date Analyzed: 02/27/2023 14:32

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

Lab File ID (Standard): GB27006.D Heated Purge: (Y/N) N

Calibration ID: 89990

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5233747	4.21				
UPPER LIMIT		10467494	4.71				
LOWER LIMIT		2616874	3.71				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-765165/1006		5233747	4.21				
LCSD 680-765165/7		4967770	4.21				
MB 680-765165/10		5046573	4.21				
580-123711-1	AF-RHMW225401-WGN01 B-2302W2	5863216	4.21				
580-123711-1 MS	AF-RHMW225401-WGN01 B-2302W2 MS	5597533	4.21				
580-123711-1 MSD	AF-RHMW225401-WGN01 B-2302W2 MSD	5549430	4.21				
CCV 680-765165/18		4964793	4.21				

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.: 580-123711-1

SDG No.:

Client Sample ID: AF-RHMW225401-WGN01B-2302 W2 Lab Sample ID: 580-123711-1

Matrix: Water Lab File ID: GB27014.D

Analysis Method: 8015C GLY Date Collected: 02/15/2023 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/27/2023 17:40

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.: 765165 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\20230227-84081.b\GB27014.D				
Lims ID:	580-123711-C-1				
Client ID:	AF-RHMW225401-WGN01B-2302W2				
Sample Type:	Client				
Inject. Date:	27-Feb-2023 17:40:00	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0084081-014				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	28-Feb-2023 10:29:45	Calib Date:	23-Feb-2023 20:25:53		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1657				
First Level Reviewer: SWK1		Date:	28-Feb-2023 10:29:07		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
4.207	4.209	-0.002	5863216	50.0	

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

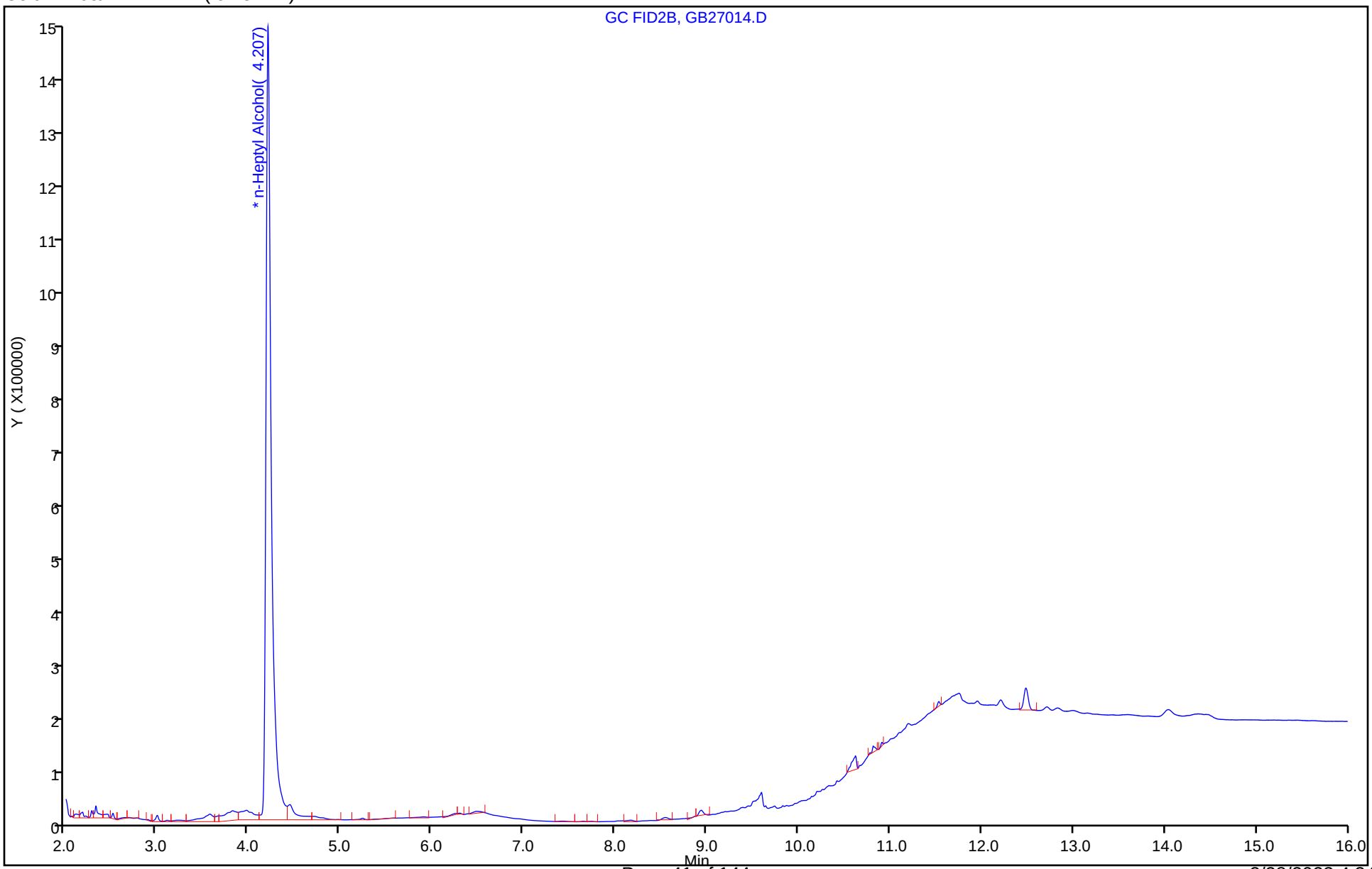
Report Date: 28-Feb-2023 10:29:55 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27014.D

Injection Date:	27-Feb-2023 17:40:00	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-123711-C-1	Lab Sample ID:	680-123711-1	Worklist Smp#:	14
Client ID:	AF-RHMW225401-WGN01B-2302W2				
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)



2/28/2023 4:34 PM

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

Lab Name: Eurofins Savannah Job No.: 580-123711-1 Analy Batch No.: 764742

SDG No.:

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

Calibration Start Date: 02/23/2023 18:06 Calibration End Date: 02/23/2023 20:25 Calibration ID: 89990

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-764742/11	GB23011.D
Level 2	IC 680-764742/10	GB23010.D
Level 3	IC 680-764742/9	GB23009.D
Level 4	ICIS 680-764742/8	GB23008.D
Level 5	IC 680-764742/7	GB23007.D
Level 6	IC 680-764742/6	GB23006.D
Level 7	IC 680-764742/5	GB23005.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol, 2-propoxy	0.8540 0.5622	0.6674 0.5445	0.6242	0.5857	0.5852	Lin2	0.5936	0.5562							0.9990		0.9900
4-Hydroxy-4-methyl-2-pentanone	0.8285 0.5653	0.6424 0.5585	0.5956	0.5767	0.5863	Lin2	0.5304	0.5543							0.9990		0.9900
2-Butoxyethanol	0.9883 0.6168	0.7539 0.5950	0.7042	0.6479	0.6428	Lin2	0.7565	0.6105							0.9990		0.9900
Dipropylene Glycol Methyl Ether	0.0707 0.0486	0.0529 0.0483	0.0469	0.0468	0.0500	Lin2	0.0456	0.0462							0.9960		0.9900
Propylene glycol	0.3577 0.1978	0.2447 0.2002	0.1771	0.1986	0.2018	Qua	0.1656	0.1915	0.0000674						0.9990		0.9900
Ethylene glycol	+++++ 0.5158	0.5835 0.5123	0.4588	0.5170	0.5407	Ave		0.5213				7.8		20.0			
2-(2-Butoxyethoxy)ethanol	0.8722 0.5415	0.6347 0.5384	0.5412	0.5488	0.5569	Lin2	0.6764	0.5186							0.9970		0.9900
2,2'-Oxybisethanol	0.5136 0.3319	0.3444 0.3318	0.3068	0.3442	0.3480	Lin1	0.2337	0.3303							0.9980		0.9900
Triethylene Glycol	+++++ 0.3191	0.3384 0.3192	0.3005	0.3207	0.3315	Ave		0.3216				4.0		20.0			
Tetraethylene Glycol	+++++ 0.3347	0.3660 0.3343	0.3204	0.3394	0.3503	Ave		0.3408				4.6		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.: 580-123711-1 Analy Batch No.: 764742

SDG No.:

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

Calibration Start Date: 02/23/2023 18:06 Calibration End Date: 02/23/2023 20:25 Calibration ID: 89990

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-764742/11	GB23011.D
Level 2	IC 680-764742/10	GB23010.D
Level 3	IC 680-764742/9	GB23009.D
Level 4	ICIS 680-764742/8	GB23008.D
Level 5	IC 680-764742/7	GB23007.D
Level 6	IC 680-764742/6	GB23006.D
Level 7	IC 680-764742/5	GB23005.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethanol, 2-propoxy	nHPA	Lin2	170693 4180502	325093 4611149	665275	1073905	2510727	2.00 80.0	5.00 100	10.0	20.0	50.0
4-Hydroxy-4-methyl-2-pentanone	nHPA	Lin2	165584 4203890	312940 4729980	634792	1057441	2515115	2.00 80.0	5.00 100	10.0	20.0	50.0
2-Butoxyethanol	nHPA	Lin2	197529 4587088	367255 5039356	750536	1188046	2757849	2.00 80.0	5.00 100	10.0	20.0	50.0
Dipropylene Glycol Methyl Ether	nHPA	Lin2	14138 361491	25757 409101	49937	85755	214369	2.00 80.0	5.00 100	10.0	20.0	50.0
Propylene glycol	nHPA	Qua	71503 1470744	119218 1695172	188734	364141	865576	2.00 80.0	5.00 100	10.0	20.0	50.0
Ethylene glycol	nHPA	Ave	+++++ 3835661	284223 4338595	489008	947943	2319537	+++++ 80.0	5.00 100	10.0	20.0	50.0
2-(2-Butoxyethoxy)ethanol	nHPA	Lin2	174322 4026679	309195 4560144	576794	1006289	2389344	2.00 80.0	5.00 100	10.0	20.0	50.0
2,2'-Oxybisethanol	nHPA	Lin1	102648 2467804	167783 2809921	327036	631196	1492784	2.00 80.0	5.00 100	10.0	20.0	50.0
Triethylene Glycol	nHPA	Ave	+++++ 2373220	164825 2703664	320265	588069	1422327	+++++ 80.0	5.00 100	10.0	20.0	50.0
Tetraethylene Glycol	nHPA	Ave	+++++ 4977315	356548 5661877	683040	1244615	3005923	+++++ 160	10.0 200	20.0	40.0	100

Curve Type Legend

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

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

Lab Name: Eurofins Savannah Job No.: 580-123711-1 Analy Batch No.: 764742

SDG No.:

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

Calibration Start Date: 02/23/2023 18:06 Calibration End Date: 02/23/2023 20:25 Calibration ID: 89990

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-764742/11	GB23011.D
Level 2	IC 680-764742/10	GB23010.D
Level 3	IC 680-764742/9	GB23009.D
Level 4	ICIS 680-764742/8	GB23008.D
Level 5	IC 680-764742/7	GB23007.D
Level 6	IC 680-764742/6	GB23006.D
Level 7	IC 680-764742/5	GB23005.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Ethanol, 2-propoxy	0.2 -3.2	-1.4	1.6	0.0	3.1	-0.3	20 20	20	20	20	20	20
4-Hydroxy-4-methyl-2-pentanone	1.6 -0.2	-3.2	-2.1	-0.7	3.9	0.8	20 20	20	20	20	20	20
2-Butoxyethanol	-0.1 -3.8	-1.3	2.9	-0.1	2.8	-0.5	20 20	20	20	20	20	20
Dipropylene Glycol Methyl Ether	3.8 3.6	-5.3	-8.5	-3.7	6.2	4.0	20 20	20	20	20	20	20
Ethylene glycol	+++++ -1.7	11.9	-12.0	-0.8	3.7	-1.1	 20	20	20	20	20	20
2-(2-Butoxyethoxy)ethanol	3.0 2.5	-3.7	-8.7	-0.7	4.8	2.8	20 20	20	20	20	20	20
2,2'-Oxybisethanol	20.1 * -0.3	-9.9	-14.2	0.7	3.9	-0.4	20 20	20	20	20	20	20
Triethylene Glycol	+++++ -0.7	5.2	-6.6	-0.3	3.1	-0.8	 20	20	20	20	20	20
Tetraethylene Glycol	+++++ -1.9	7.4	-6.0	-0.4	2.8	-1.8	 20	20	20	20	20	20

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23005.D
Lims ID: ic g7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Feb-2023 18:06:04 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084021-005
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 24-Feb-2023 13:23:49 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1637

First Level Reviewer: SK9U Date: 24-Feb-2023 11:00:15

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.911	2.920	-0.009	4611149	100.0	96.8	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.459	3.477	-0.018	4729980	100.0	99.8	
	3 2-Butoxyethanol						
	3.770	3.770	0.000	5039356	100.0	96.2	
*	4 n-Heptyl Alcohol						
	4.237	4.222	0.015	4234617	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.144	5.152	-0.008	409101	100.0	103.6	
	6 Propylene glycol						Ma
	6.285	6.271	0.014	1695172	100.0	100.1	M
	7 Ethylene glycol						
	6.534	6.555	-0.021	4338595	100.0	98.3	
	8 2-(2-Butoxyethoxy)ethanol						
	8.427	8.425	0.002	4560144	100.0	102.5	
	9 2,2'-Oxybisethanol						
	9.604	9.607	-0.003	2809921	100.0	99.7	
	10 Triethylene Glycol						
	10.631	10.633	-0.002	2703664	100.0	99.3	
	11 Tetraethylene Glycol						M
	11.769	11.777	-0.008	5661877	200.0	196.1	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00048	Amount Added:	50.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

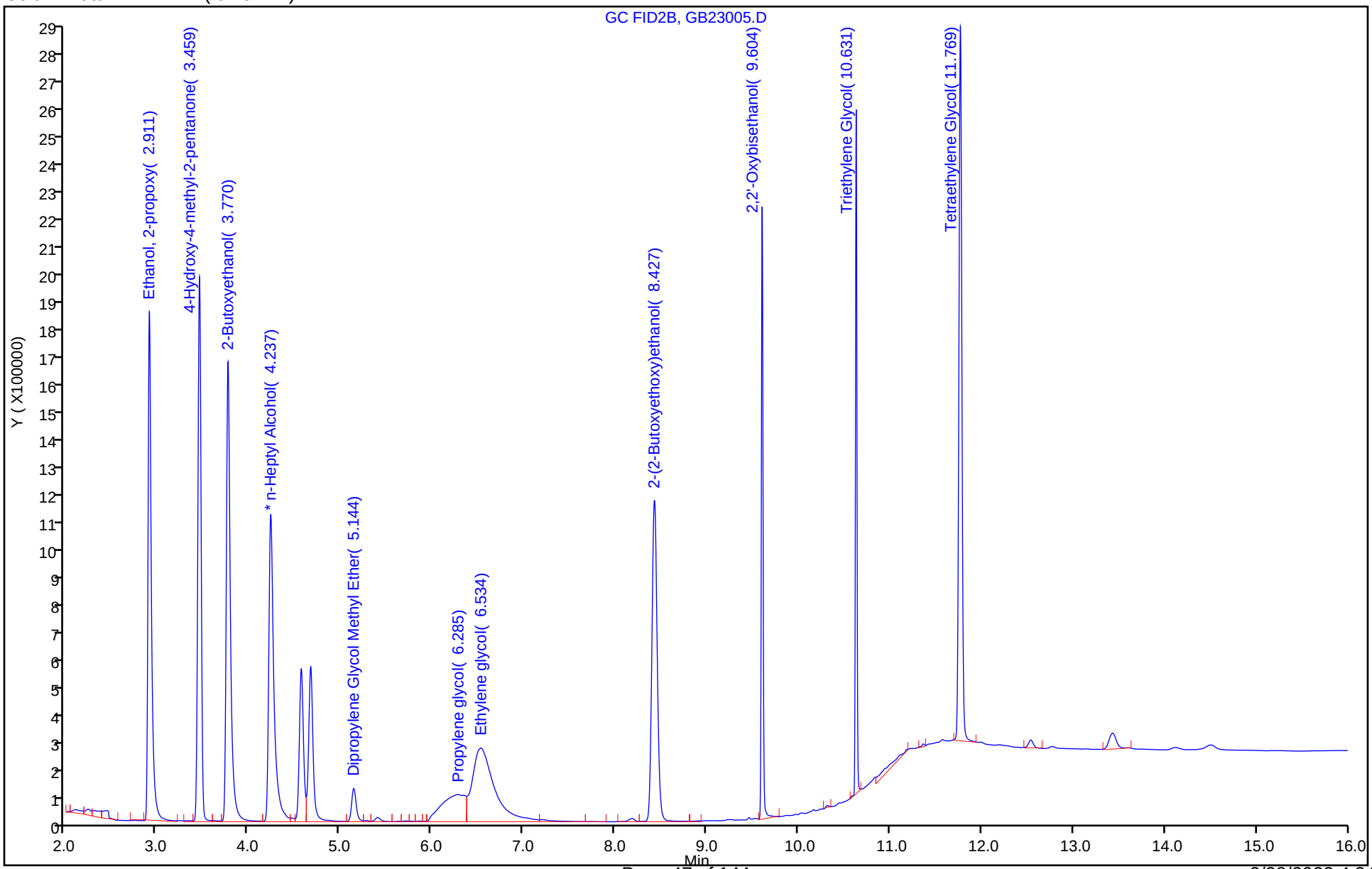
Report Date: 24-Feb-2023 13:23:50 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23005.D

Injection Date:	23-Feb-2023 18:06:04	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g7			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



2/28/2023 4:34 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

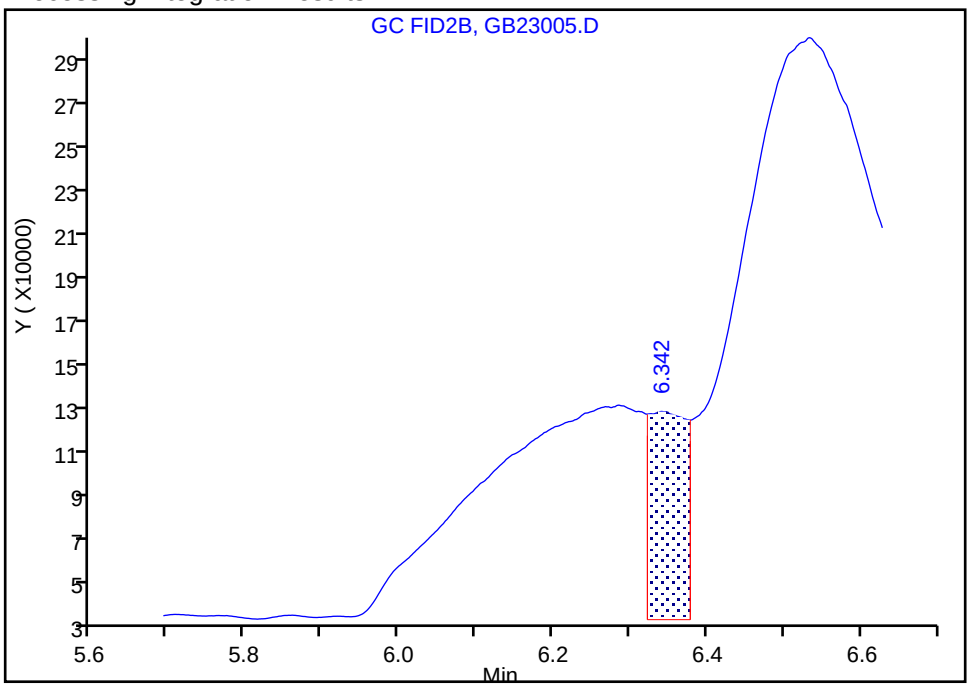
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23005.D
Injection Date: 23-Feb-2023 18:06:04 Instrument ID: CVGG2
Lims ID: ic g7
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

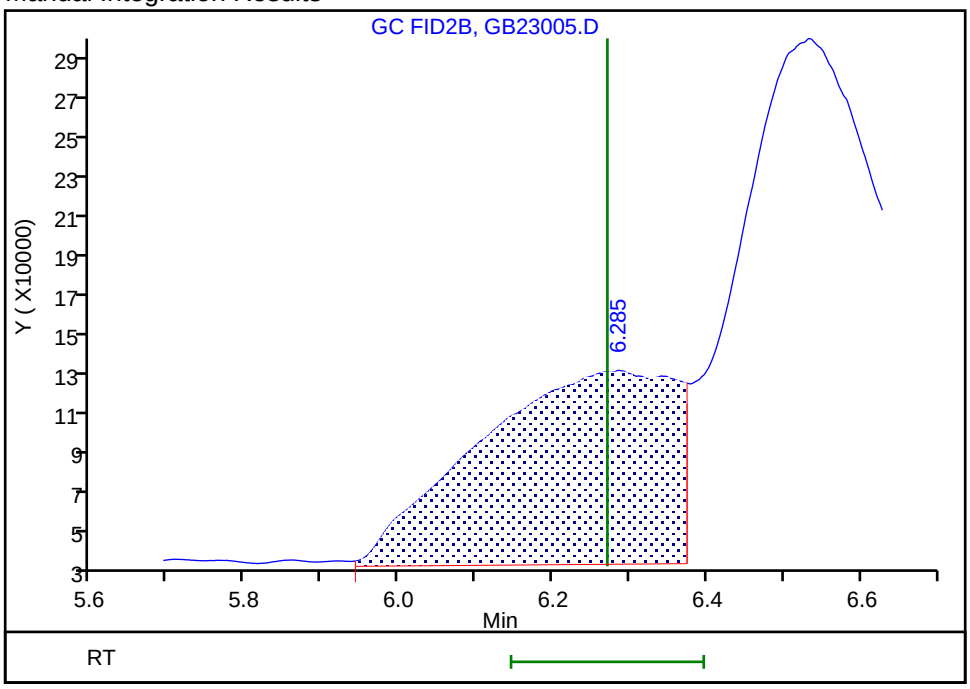
Processing Integration Results

RT: 6.34
Area: 306574
Amount: 22.876952
Amount Units: ug/ml



Manual Integration Results

RT: 6.29
Area: 1695172
Amount: 100.1115
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:11:18
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

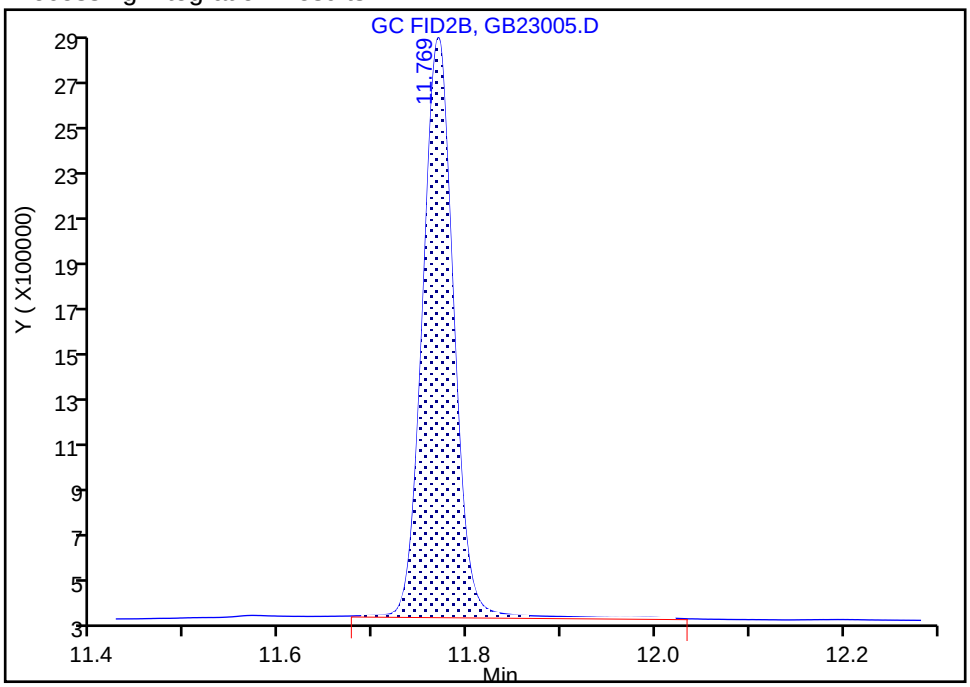
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23005.D
Injection Date: 23-Feb-2023 18:06:04 Instrument ID: CVGG2
Lims ID: ic g7
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

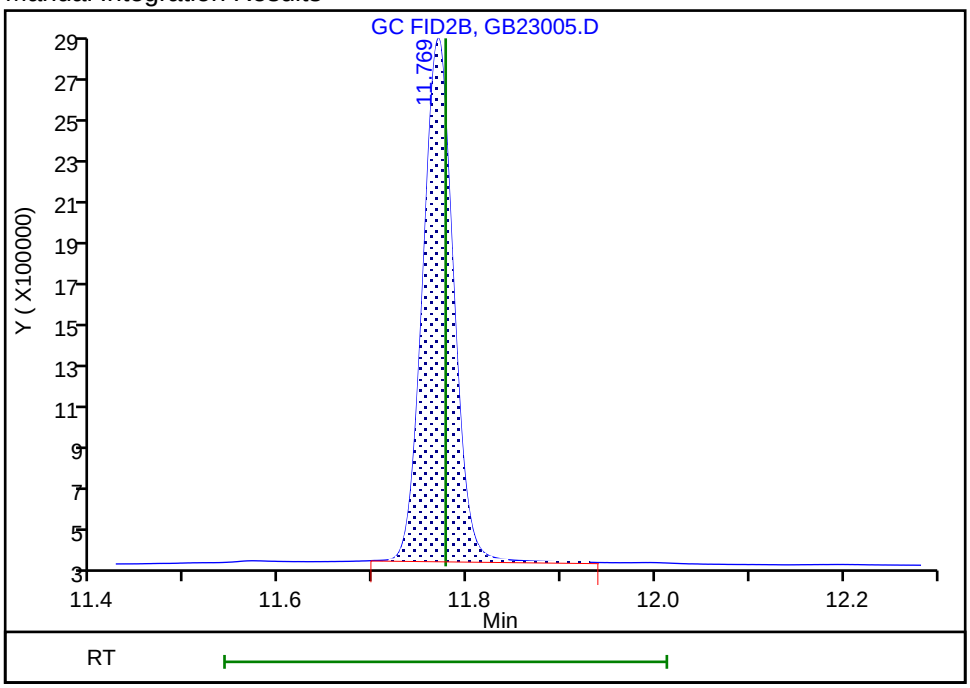
Processing Integration Results

RT: 11.77
Area: 5725484
Amount: 200.6838
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 5661877
Amount: 196.1384
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:16:16
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23006.D
Lims ID: ic g6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 23-Feb-2023 18:29:41 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084021-006
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 24-Feb-2023 13:23:50 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1637

First Level Reviewer: SK9U Date: 24-Feb-2023 11:00:44

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.910	2.920	-0.010	4180502	80.0	79.8	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.459	3.477	-0.018	4203890	80.0	80.6	
	3 2-Butoxyethanol						
	3.769	3.770	-0.001	4587088	80.0	79.6	
*	4 n-Heptyl Alcohol						
	4.234	4.222	0.012	4647729	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.143	5.152	-0.009	361491	80.0	83.2	
	6 Propylene glycol						Ma
	6.275	6.271	0.004	1470744	80.0	79.5	M
	7 Ethylene glycol						M
	6.534	6.555	-0.021	3835661	80.0	79.1	M
	8 2-(2-Butoxyethoxy)ethanol						
	8.426	8.425	0.001	4026679	80.0	82.2	
	9 2,2'-Oxybisethanol						
	9.604	9.607	-0.003	2467804	80.0	79.7	
	10 Triethylene Glycol						
	10.630	10.633	-0.003	2373220	80.0	79.4	
	11 Tetraethylene Glycol						M
	11.768	11.777	-0.009	4977315	160.0	157.1	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00048	Amount Added:	40.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

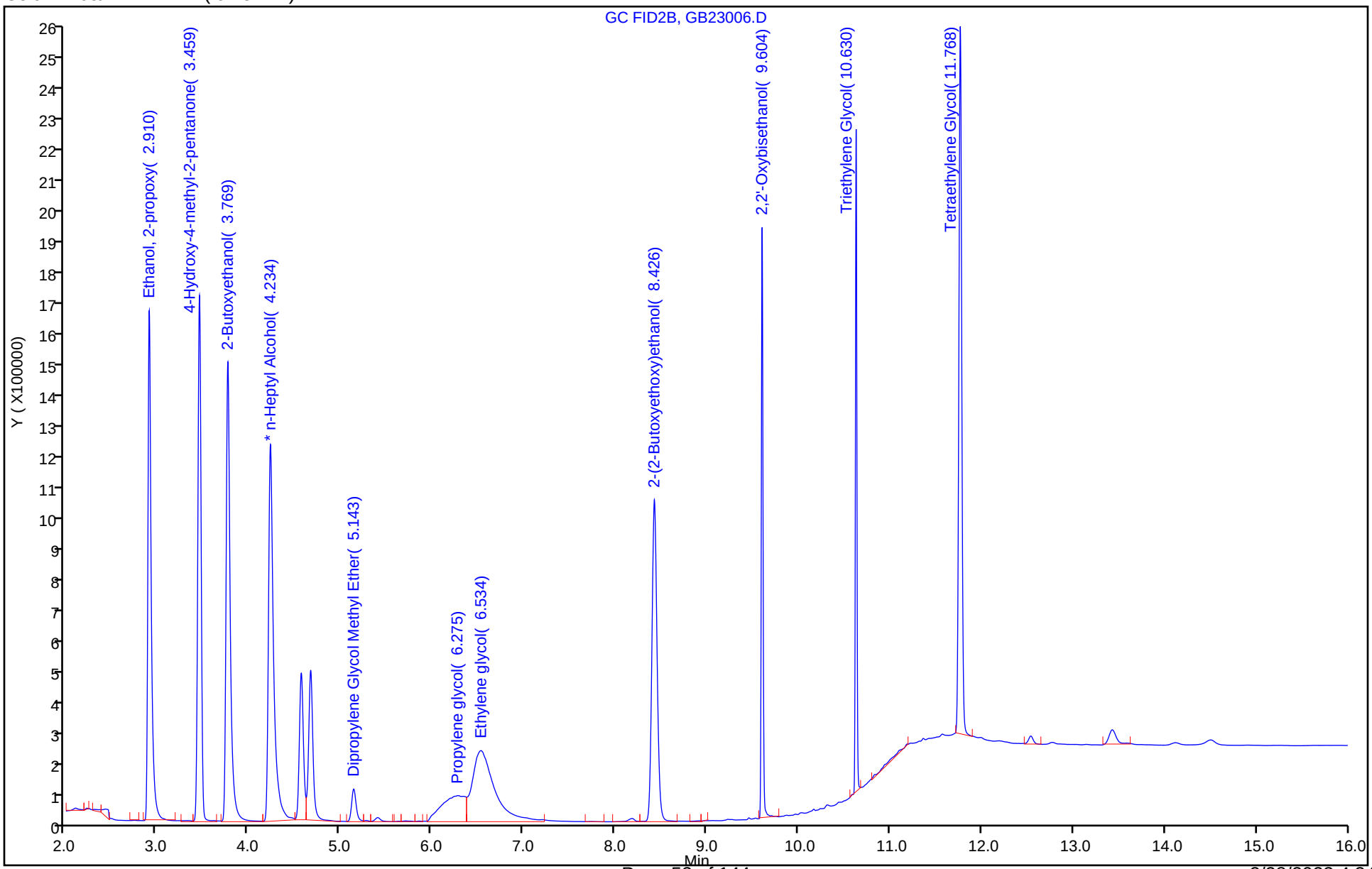
Report Date: 24-Feb-2023 13:23:50 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23006.D

Injection Date:	23-Feb-2023 18:29:41	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g6			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)



2/28/2023 4:34 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

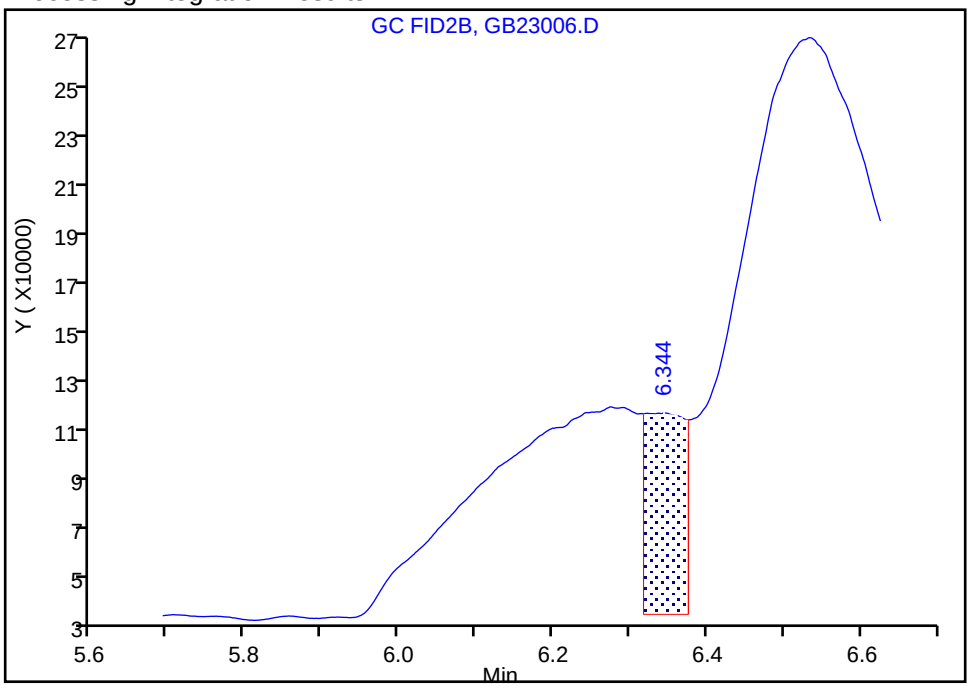
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23006.D
Injection Date: 23-Feb-2023 18:29:41 Instrument ID: CVGG2
Lims ID: ic g6
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

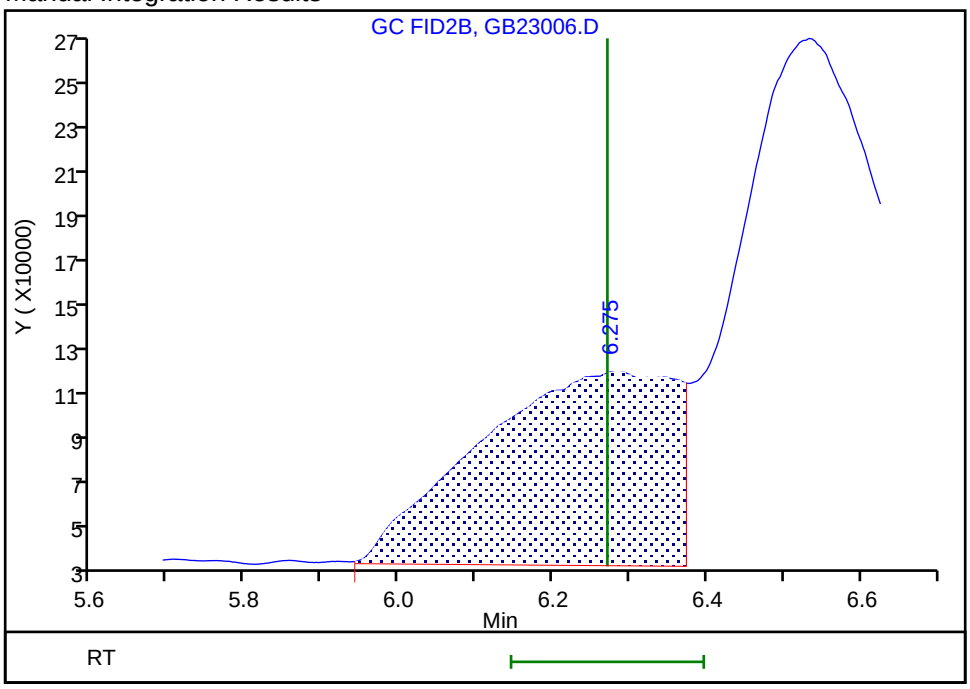
Processing Integration Results

RT: 6.34
Area: 271622
Amount: 17.810733
Amount Units: ug/ml



Manual Integration Results

RT: 6.28
Area: 1470744
Amount: 79.518720
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:11:33
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

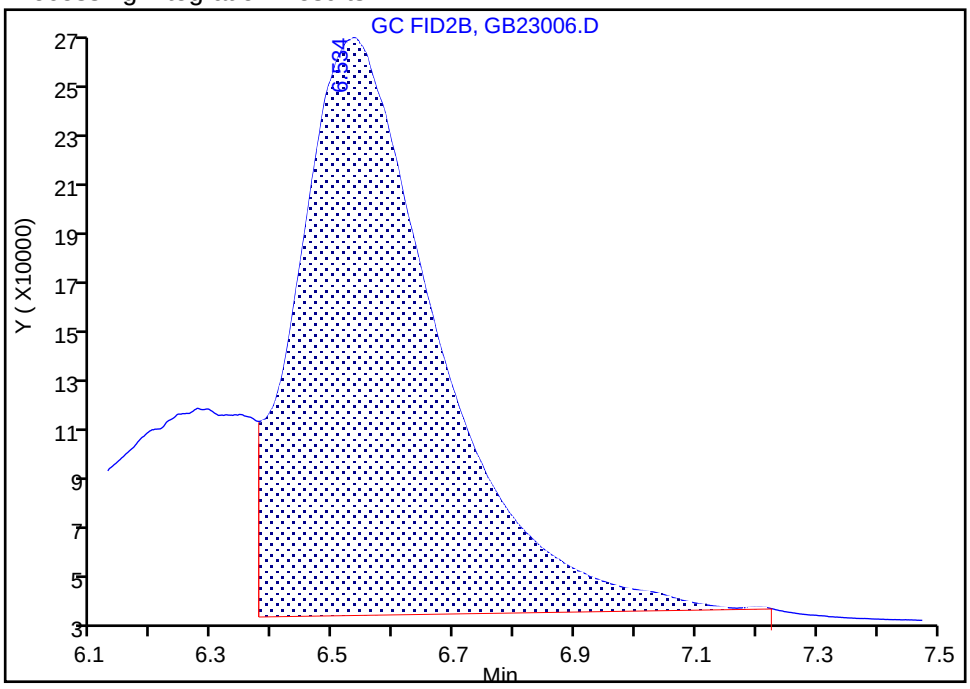
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23006.D
Injection Date: 23-Feb-2023 18:29:41 Instrument ID: CVGG2
Lims ID: ic g6
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

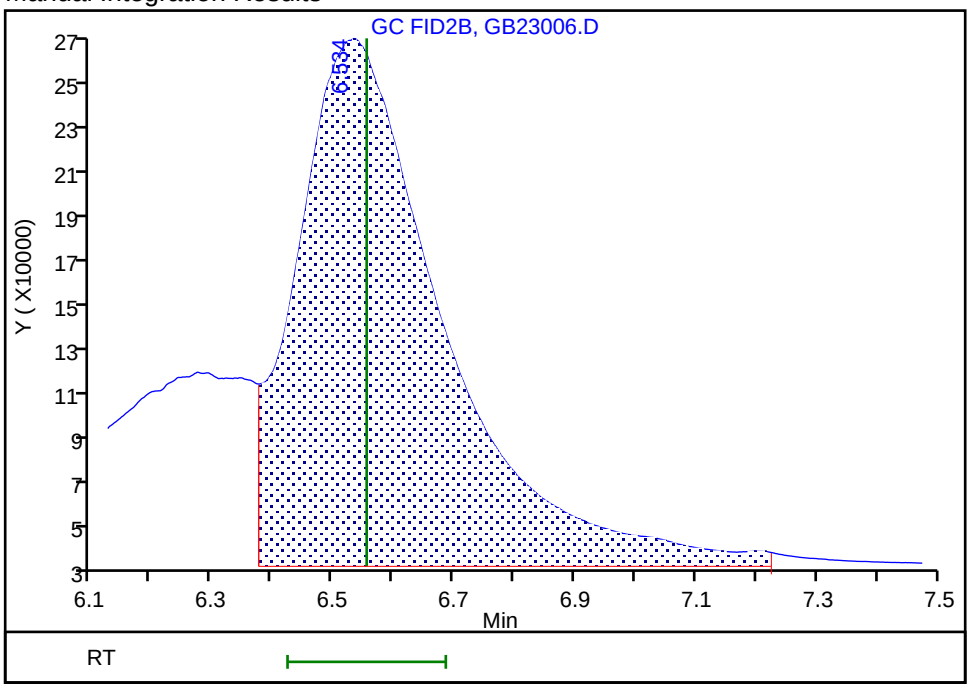
Processing Integration Results

RT: 6.53
Area: 3632727
Amount: 77.239582
Amount Units: ug/ml



Manual Integration Results

RT: 6.53
Area: 3835661
Amount: 79.149932
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:10:24
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

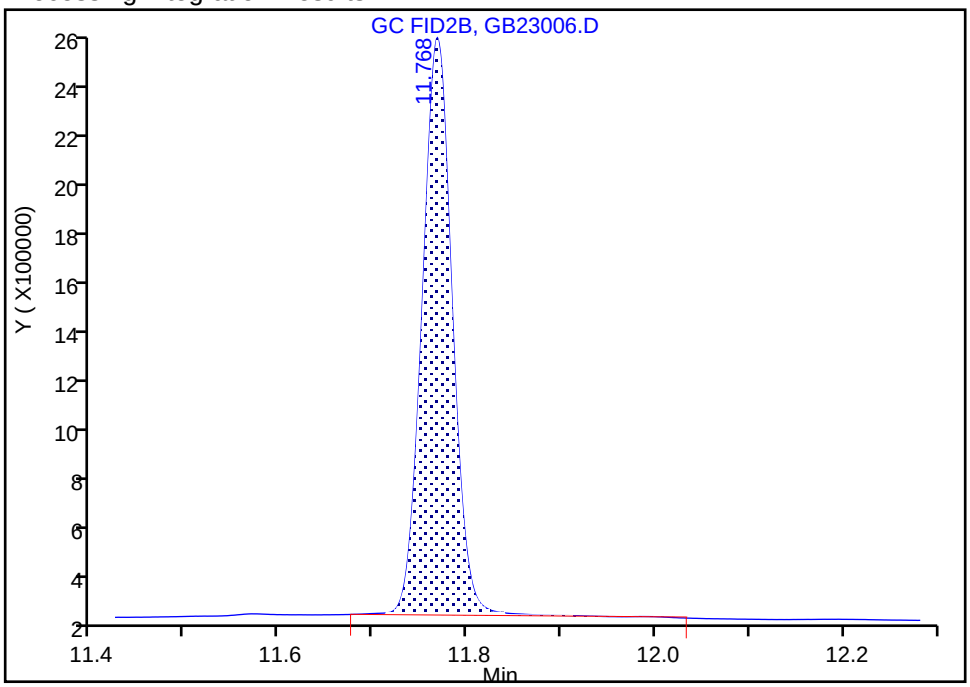
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23006.D				
Injection Date:	23-Feb-2023 18:29:41	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

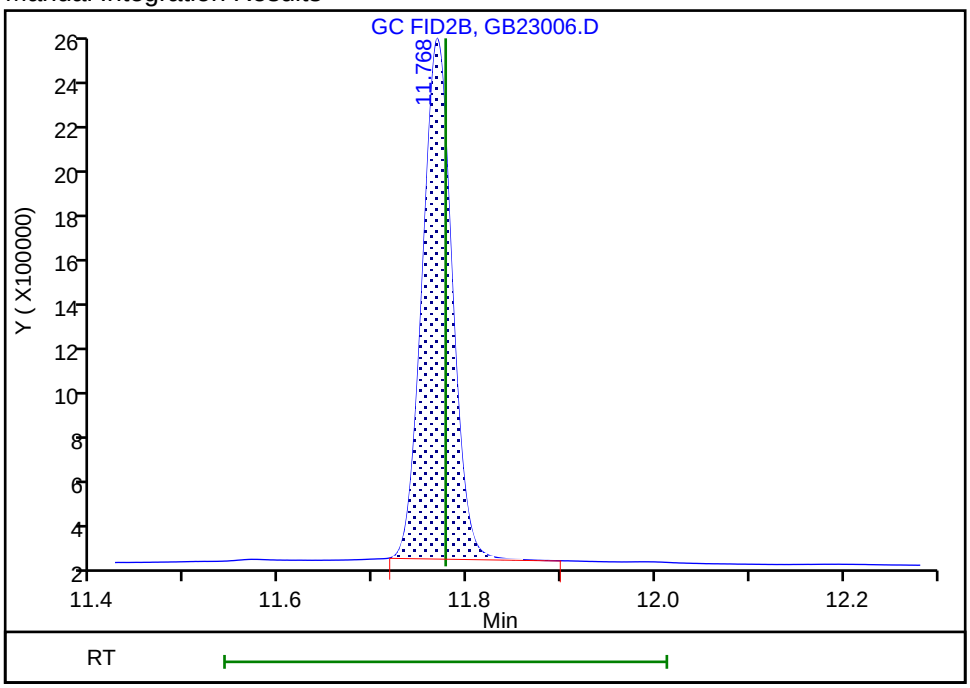
Processing Integration Results

RT: 11.77
Area: 5071440
Amount: 159.9457
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 4977315
Amount: 157.0980
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:16:01

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23007.D
Lims ID: ic g5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 23-Feb-2023 18:53:08 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084021-007
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 24-Feb-2023 13:23:51 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1637

First Level Reviewer: SK9U Date: 24-Feb-2023 11:01:31

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.911	2.920	-0.009	2510727	50.0	51.5	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.460	3.477	-0.017	2515115	50.0	51.9	
	3 2-Butoxyethanol						
	3.768	3.770	-0.002	2757849	50.0	51.4	
*	4 n-Heptyl Alcohol						
	4.232	4.222	0.010	4290074	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.144	5.152	-0.008	214369	50.0	53.1	
	6 Propylene glycol						Ma
	6.285	6.271	0.014	865576	50.0	50.9	M
	7 Ethylene glycol						
	6.538	6.555	-0.017	2319537	50.0	51.9	
	8 2-(2-Butoxyethoxy)ethanol						
	8.426	8.425	0.001	2389344	50.0	52.4	
	9 2,2'-Oxybisethanol						
	9.604	9.607	-0.003	1492784	50.0	52.0	
	10 Triethylene Glycol						
	10.629	10.633	-0.004	1422327	50.0	51.5	
	11 Tetraethylene Glycol						M
	11.766	11.777	-0.011	3005923	100.0	102.8	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00048	Amount Added:	25.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

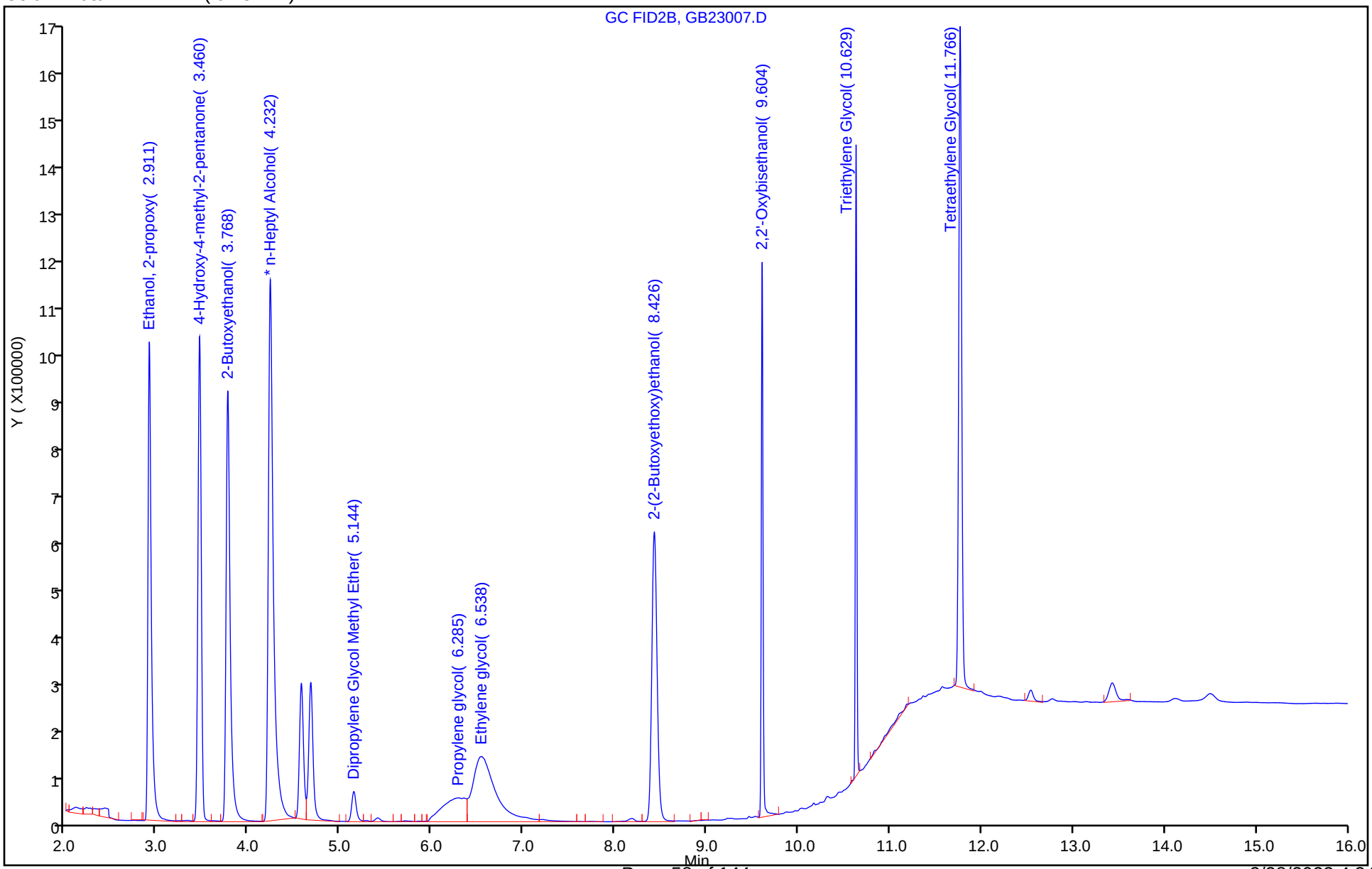
Report Date: 24-Feb-2023 13:23:51 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23007.D

Injection Date:	23-Feb-2023 18:53:08	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g5			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



2/28/2023 4:34 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

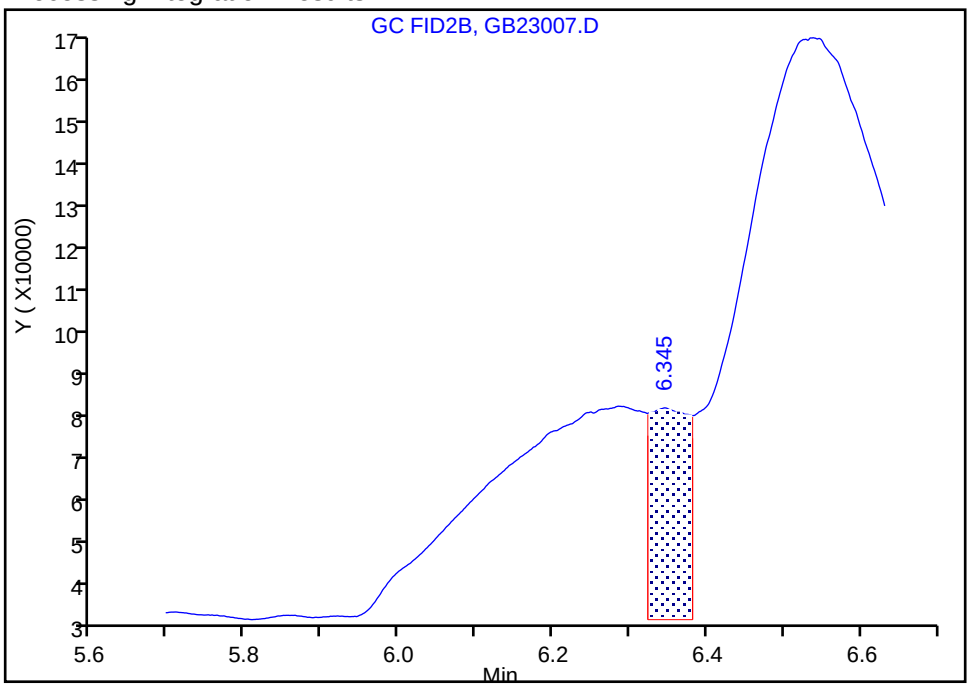
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23007.D
Injection Date: 23-Feb-2023 18:53:08 Instrument ID: CVGG2
Lims ID: ic g5
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

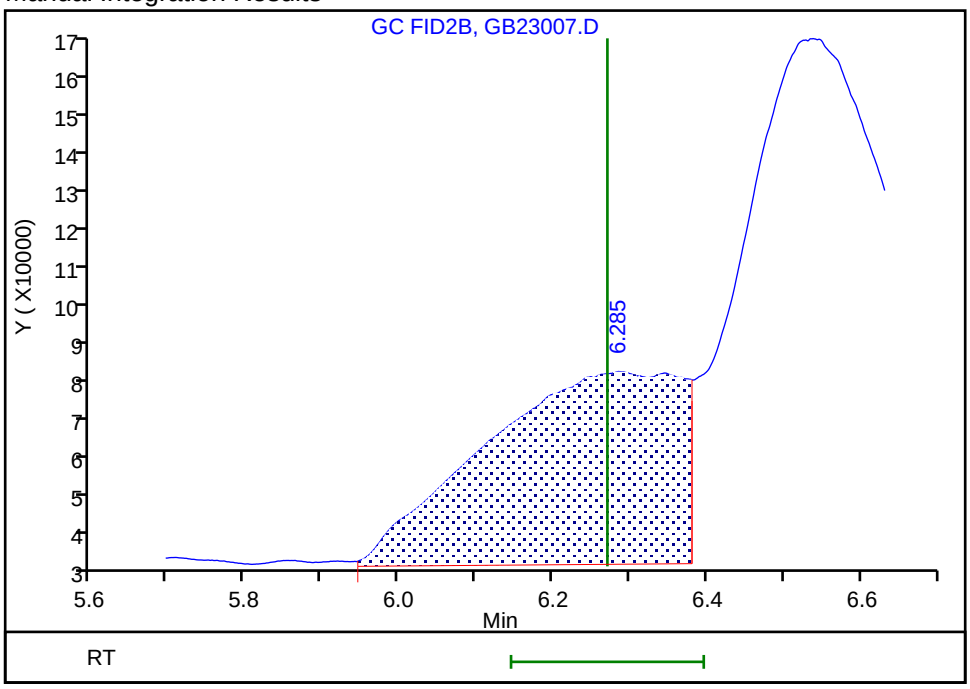
Processing Integration Results

RT: 6.35
Area: 167178
Amount: 11.555034
Amount Units: ug/ml



Manual Integration Results

RT: 6.29
Area: 865576
Amount: 50.894399
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:11:53
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

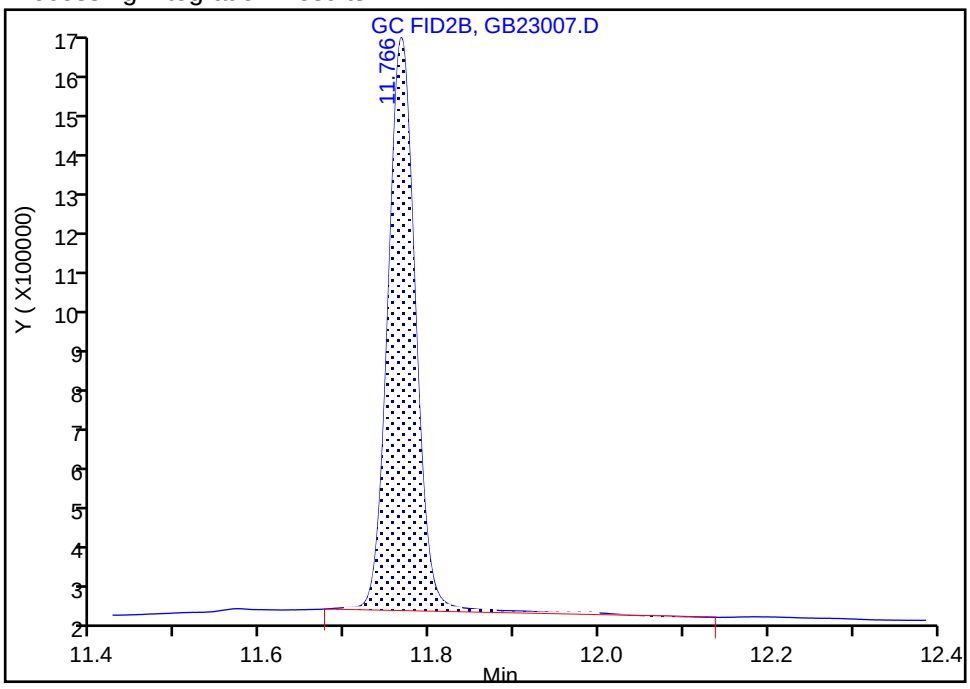
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23007.D
Injection Date: 23-Feb-2023 18:53:08 Instrument ID: CVGG2
Lims ID: ic g5
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

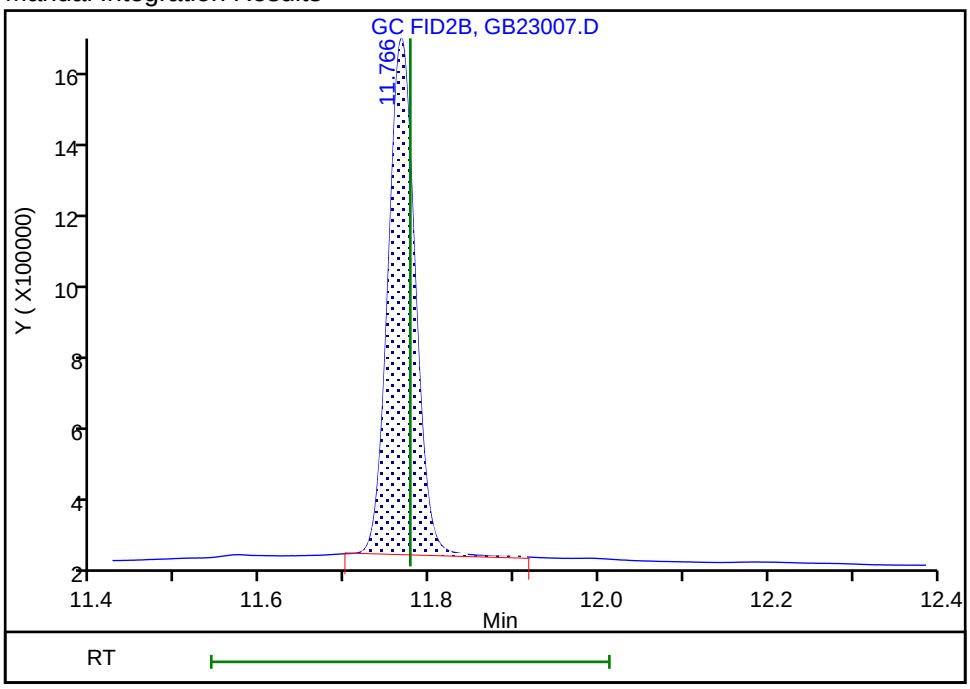
Processing Integration Results

RT: 11.77
Area: 3096971
Amount: 102.7928
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 3005923
Amount: 102.7849
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:15:45
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23008.D
Lims ID: icis g4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 23-Feb-2023 19:16:31 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084021-008
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 24-Feb-2023 13:23:52 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1637

First Level Reviewer: SK9U Date: 24-Feb-2023 11:01:53

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.912	2.912	0.000	1073905	20.0	20.0	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.461	3.461	0.000	1057441	20.0	19.9	
	3 2-Butoxyethanol						
	3.767	3.767	0.000	1188046	20.0	20.0	
*	4 n-Heptyl Alcohol						
	4.231	4.231	0.000	4583875	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.144	5.144	0.000	85755	20.0	19.3	
	6 Propylene glycol						Ma
	6.362	6.362	0.000	364141	20.0	19.7	M
	7 Ethylene glycol						M
	6.547	6.547	0.000	947943	20.0	19.8	M
	8 2-(2-Butoxyethoxy)ethanol						
	8.426	8.426	0.000	1006289	20.0	19.9	
	9 2,2'-Oxybisethanol						
	9.602	9.602	0.000	631196	20.0	20.1	
	10 Triethylene Glycol						
	10.630	10.630	0.000	588069	20.0	19.9	
	11 Tetraethylene Glycol						M
	11.767	11.767	0.000	1244615	40.0	39.8	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00048	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

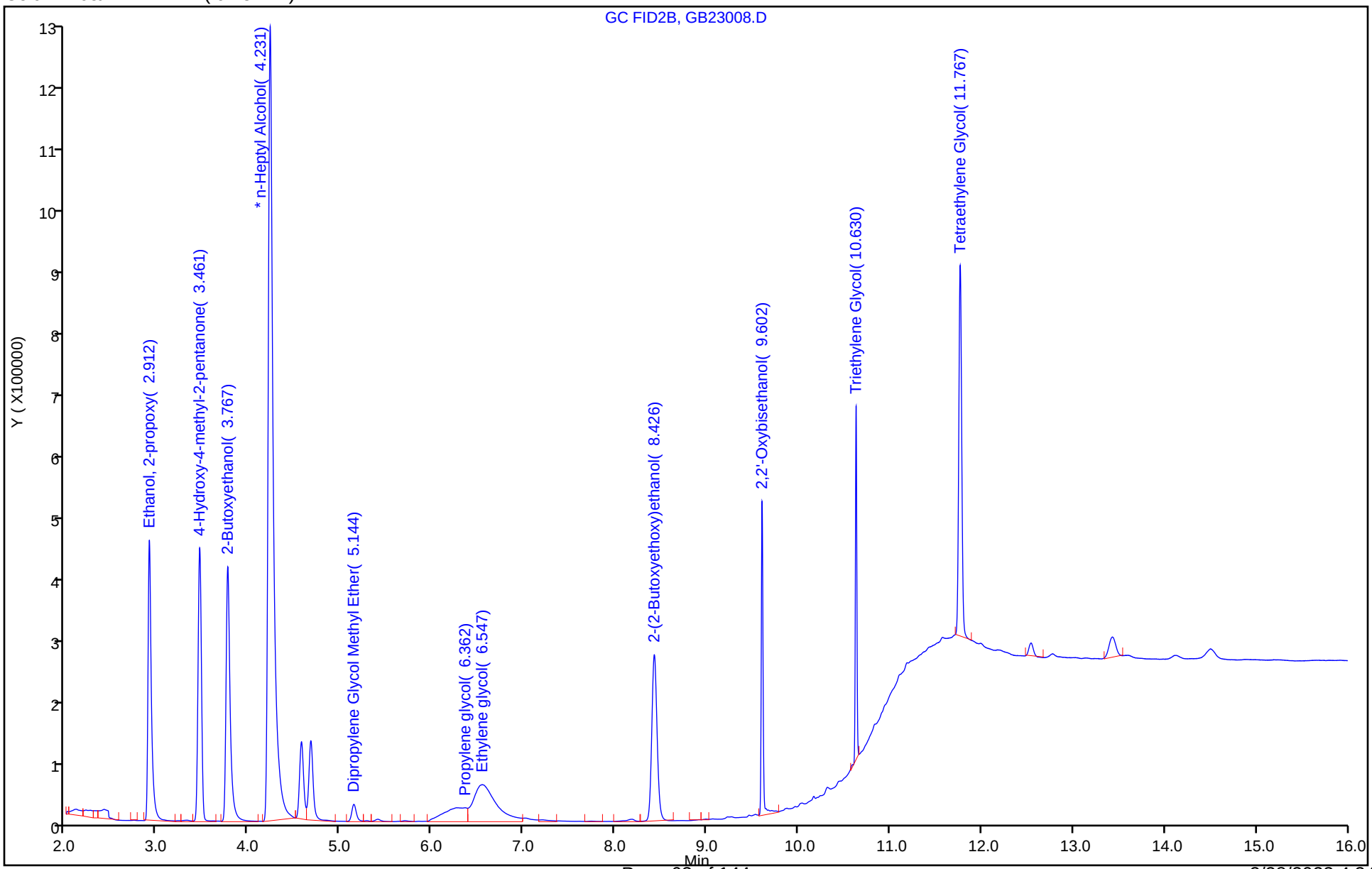
Report Date: 24-Feb-2023 13:23:52 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23008.D

Injection Date:	23-Feb-2023 19:16:31	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	icis g4			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



2/28/2023 4:34 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

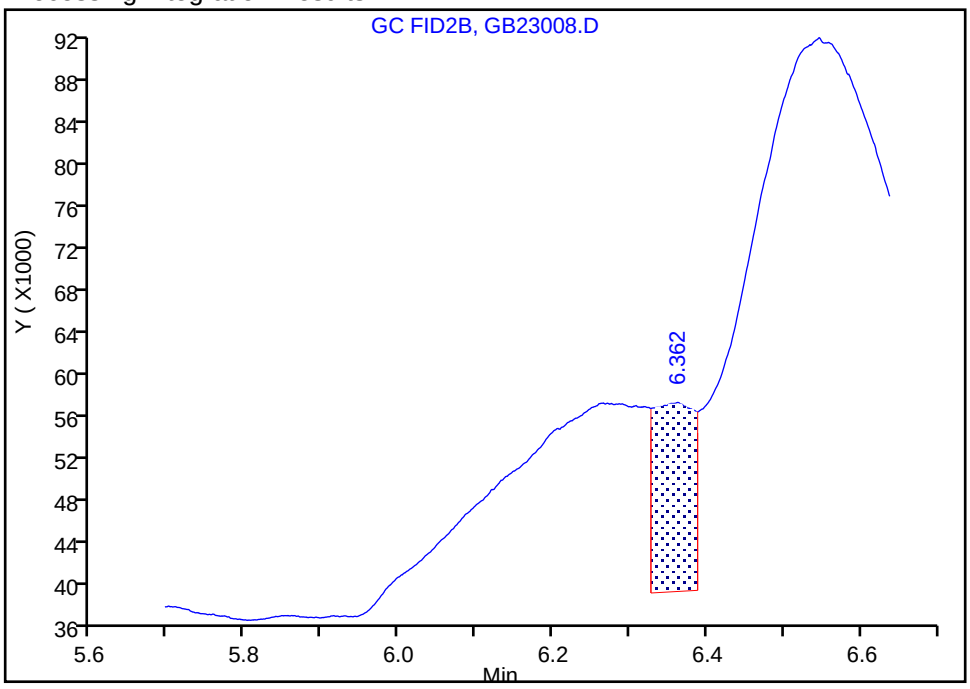
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23008.D				
Injection Date:	23-Feb-2023 19:16:31	Instrument ID:	CVGG2		
Lims ID:	icis g4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

6 Propylene glycol, CAS: 57-55-6

Signal: 1

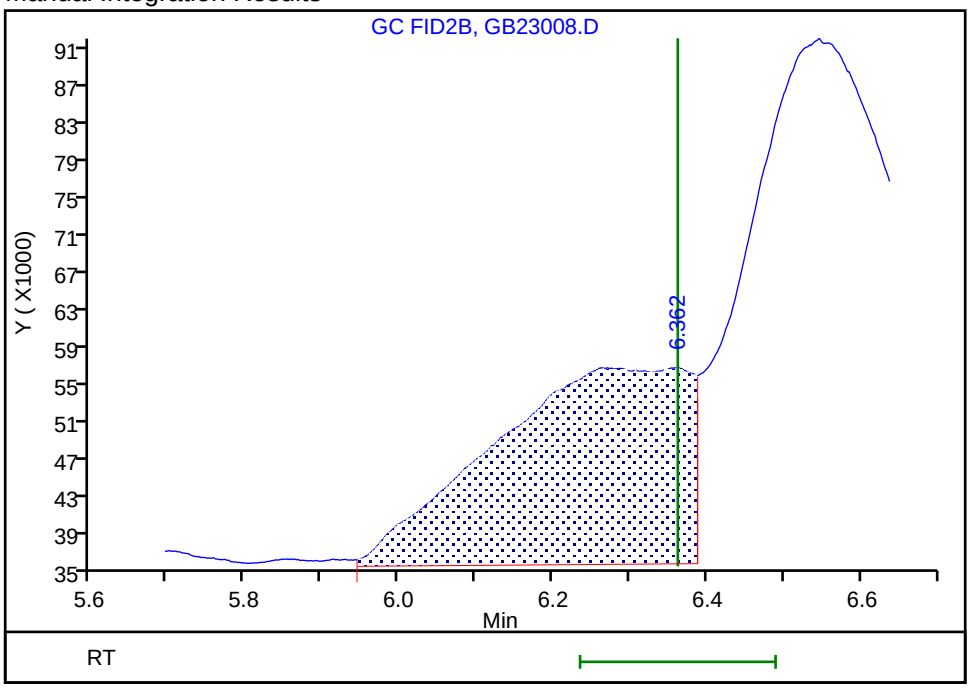
Processing Integration Results

RT: 6.36
Area: 63987
Amount: 4.005166
Amount Units: ug/ml



Manual Integration Results

RT: 6.36
Area: 364141
Amount: 19.736106
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:12:11
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

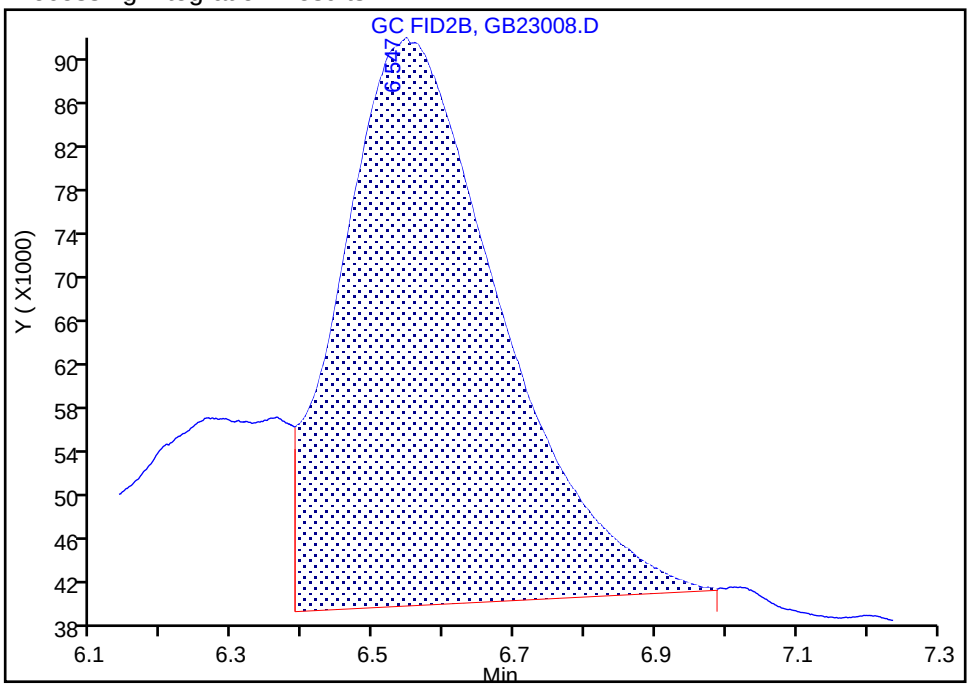
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23008.D
Injection Date: 23-Feb-2023 19:16:31 Instrument ID: CVGG2
Lims ID: icis g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

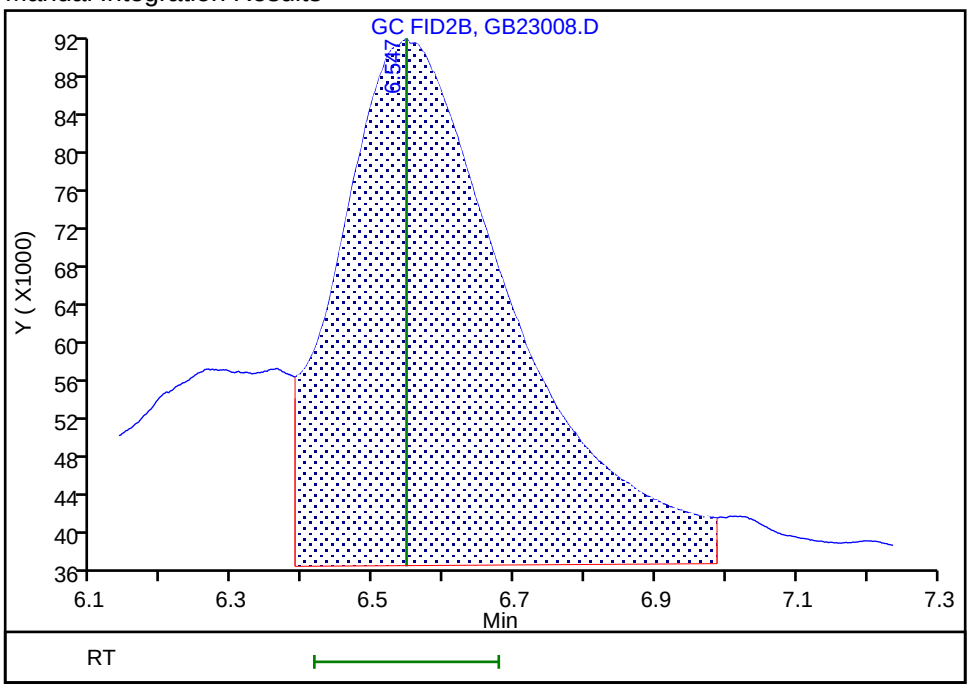
Processing Integration Results

RT: 6.55
Area: 812987
Amount: 17.511168
Amount Units: ug/ml



Manual Integration Results

RT: 6.55
Area: 947943
Amount: 19.833556
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:09:58
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Savannah

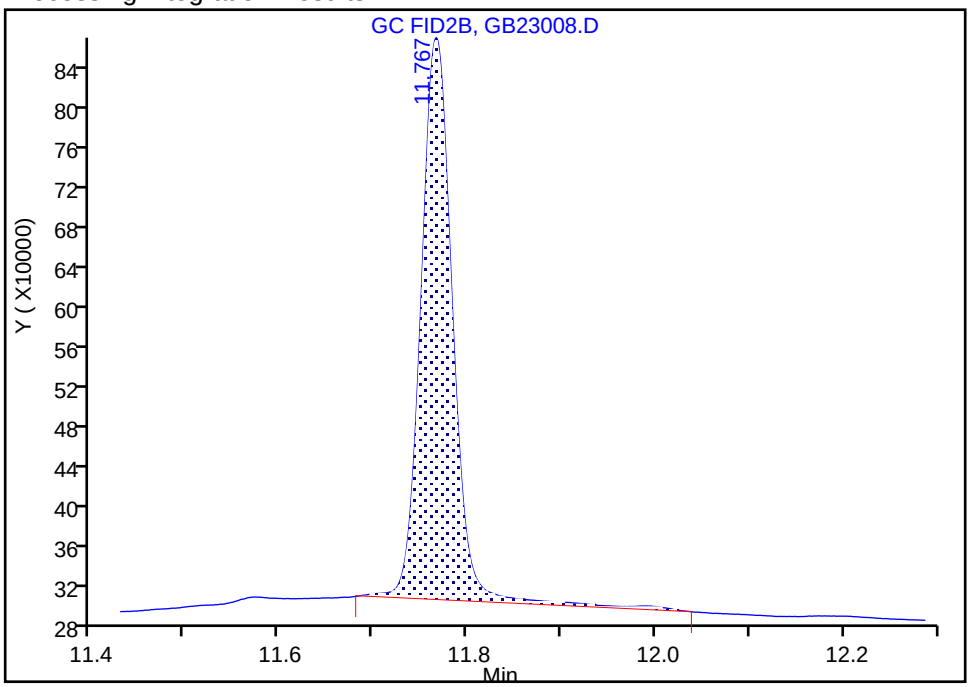
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23008.D				
Injection Date:	23-Feb-2023 19:16:31	Instrument ID:	CVGG2		
Lims ID:	icis g4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

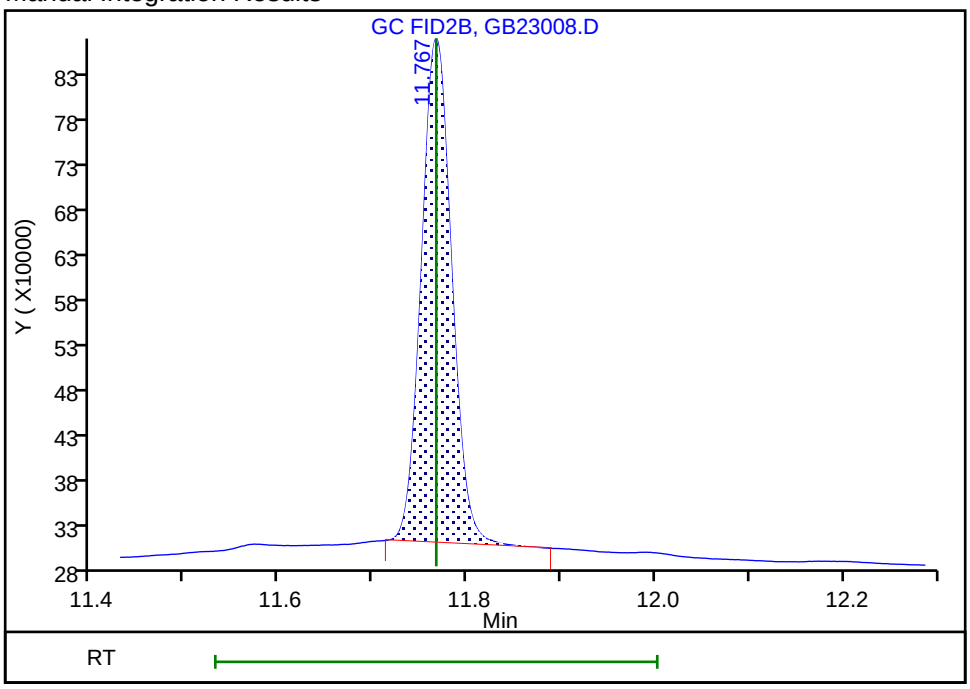
Processing Integration Results

RT: 11.77
Area: 1315484
Amount: 39.425517
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 1244615
Amount: 39.830764
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:15:29
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23009.D
Lims ID: ic g3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-Feb-2023 19:39:01 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084021-009
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 24-Feb-2023 13:23:53 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1637

First Level Reviewer: SK9U Date: 24-Feb-2023 11:02:15

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.914	2.912	0.002	665275	10.0	10.2	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.466	3.461	0.005	634792	10.0	9.79	
	3 2-Butoxyethanol						
	3.769	3.767	0.002	750536	10.0	10.3	
*	4 n-Heptyl Alcohol						
	4.229	4.231	-0.002	5329257	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.147	5.144	0.003	49937	10.0	9.15	
	6 Propylene glycol						Ma
	6.274	6.362	-0.088	188734	10.0	8.36	M
	7 Ethylene glycol						
	6.547	6.547	0.000	489008	10.0	8.80	
	8 2-(2-Butoxyethoxy)ethanol						
	8.427	8.426	0.001	576794	10.0	9.13	
	9 2,2'-Oxybisethanol						
	9.604	9.602	0.002	327036	10.0	8.58	
	10 Triethylene Glycol						
	10.630	10.630	0.000	320265	10.0	9.34	
	11 Tetraethylene Glycol						M
	11.767	11.767	0.000	683040	20.0	18.8	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00048	Amount Added:	5.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

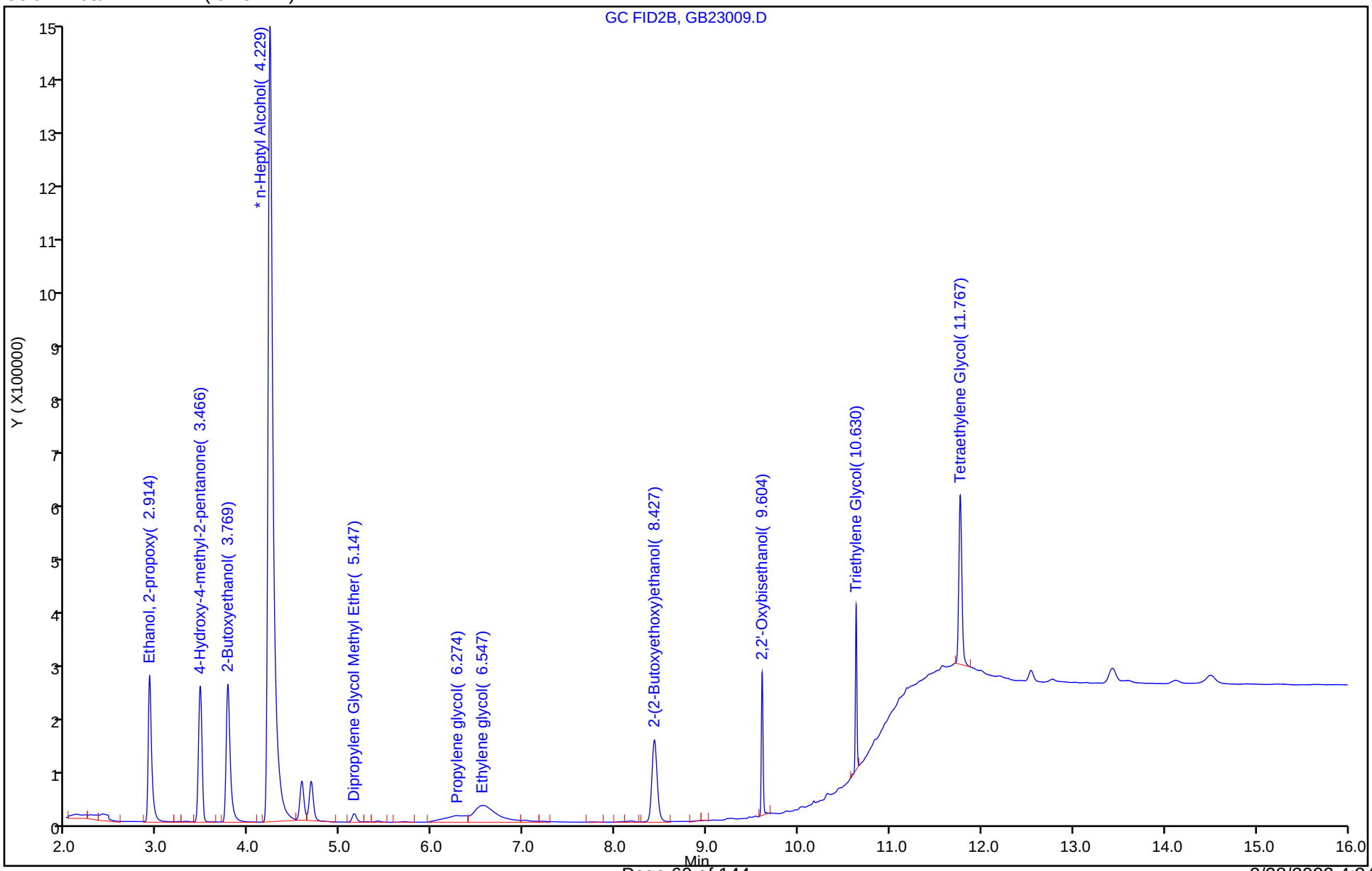
Report Date: 24-Feb-2023 13:23:53 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23009.D

Injection Date:	23-Feb-2023 19:39:01	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g3			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



2/28/2023 4:34 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

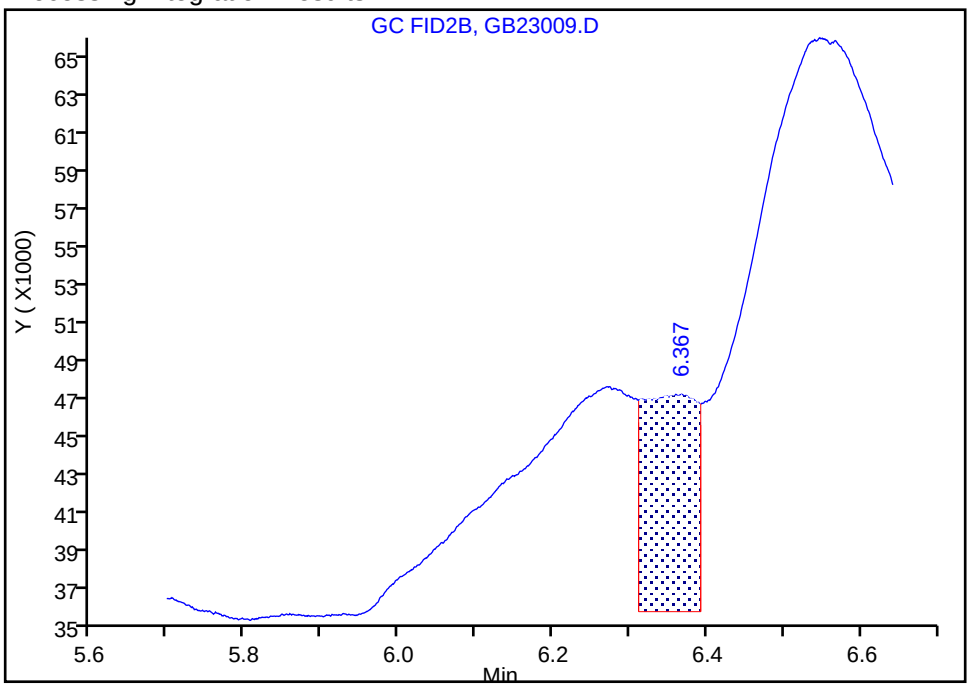
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23009.D
Injection Date: 23-Feb-2023 19:39:01 Instrument ID: CVGG2
Lims ID: ic g3
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

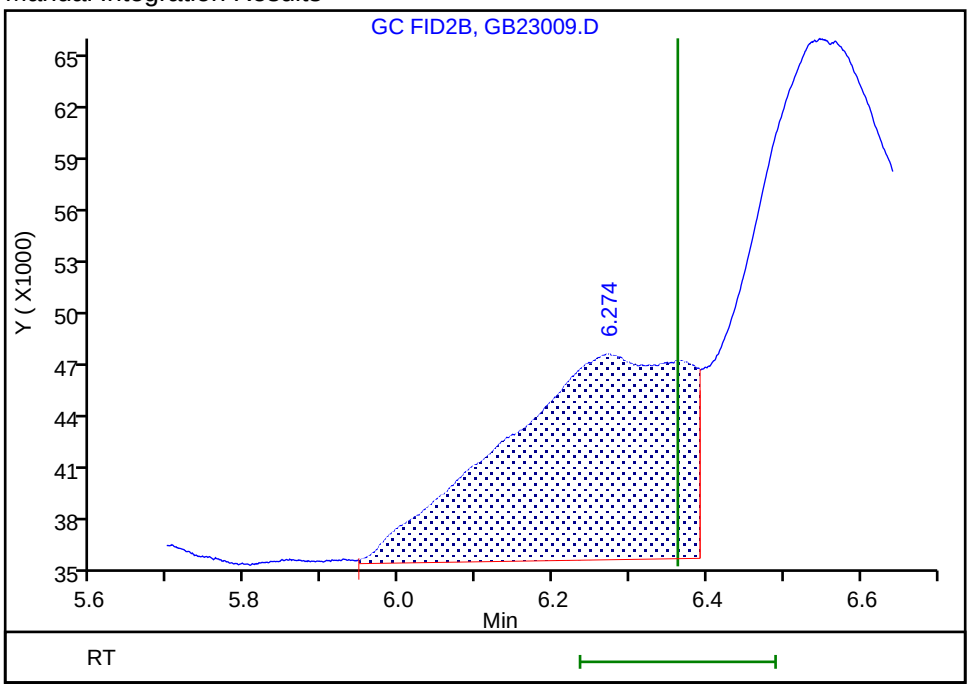
Processing Integration Results

RT: 6.37
Area: 52016
Amount: 2.673511
Amount Units: ug/ml



Manual Integration Results

RT: 6.27
Area: 188734
Amount: 8.355841
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:12:26
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

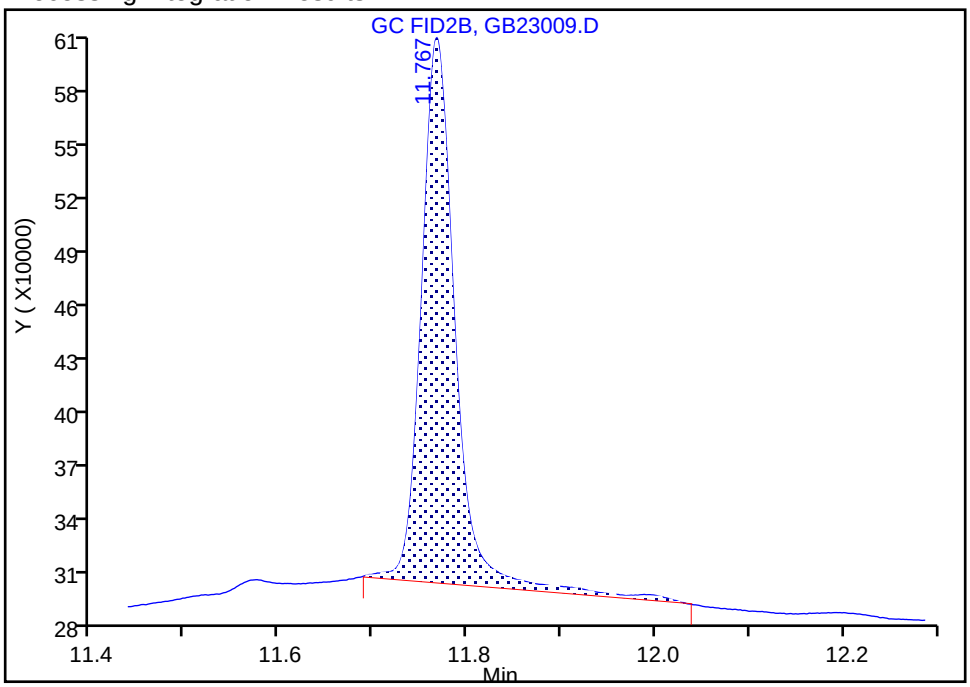
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23009.D				
Injection Date:	23-Feb-2023 19:39:01	Instrument ID:	CVGG2		
Lims ID:	ic g3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

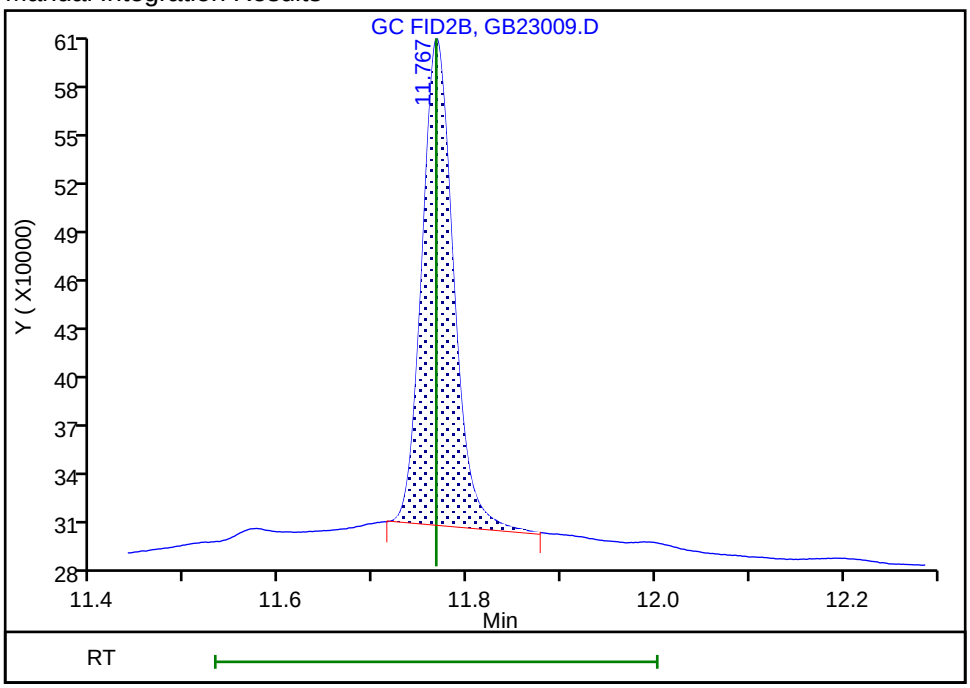
Processing Integration Results

RT: 11.77
Area: 741027
Amount: 18.553814
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 683040
Amount: 18.801645
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:15:18

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23010.D
Lims ID: ic g2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-Feb-2023 20:02:32 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084021-010
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 24-Feb-2023 13:23:54 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1637

First Level Reviewer: SK9U Date: 24-Feb-2023 11:03:08

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.911	2.912	-0.001	325093	5.00	4.93	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.461	3.461	0.000	312940	5.00	4.84	
	3 2-Butoxyethanol						
	3.767	3.767	0.000	367255	5.00	4.94	
*	4 n-Heptyl Alcohol						
	4.230	4.231	-0.001	4871171	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.147	5.144	0.003	25757	5.00	4.74	
	6 Propylene glycol						Ma
	6.261	6.362	-0.101	119218	5.00	5.51	Ma
	7 Ethylene glycol						Ma
	6.543	6.547	-0.004	284223	5.00	5.60	Ma
	8 2-(2-Butoxyethoxy)ethanol						
	8.425	8.426	-0.001	309195	5.00	4.82	
	9 2,2'-Oxybisethanol						
	9.603	9.602	0.001	167783	5.00	4.51	
	10 Triethylene Glycol						
	10.630	10.630	0.000	164825	5.00	5.26	
	11 Tetraethylene Glycol						M
	11.766	11.767	-0.001	356548	10.0	10.7	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00048	Amount Added:	2.50	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

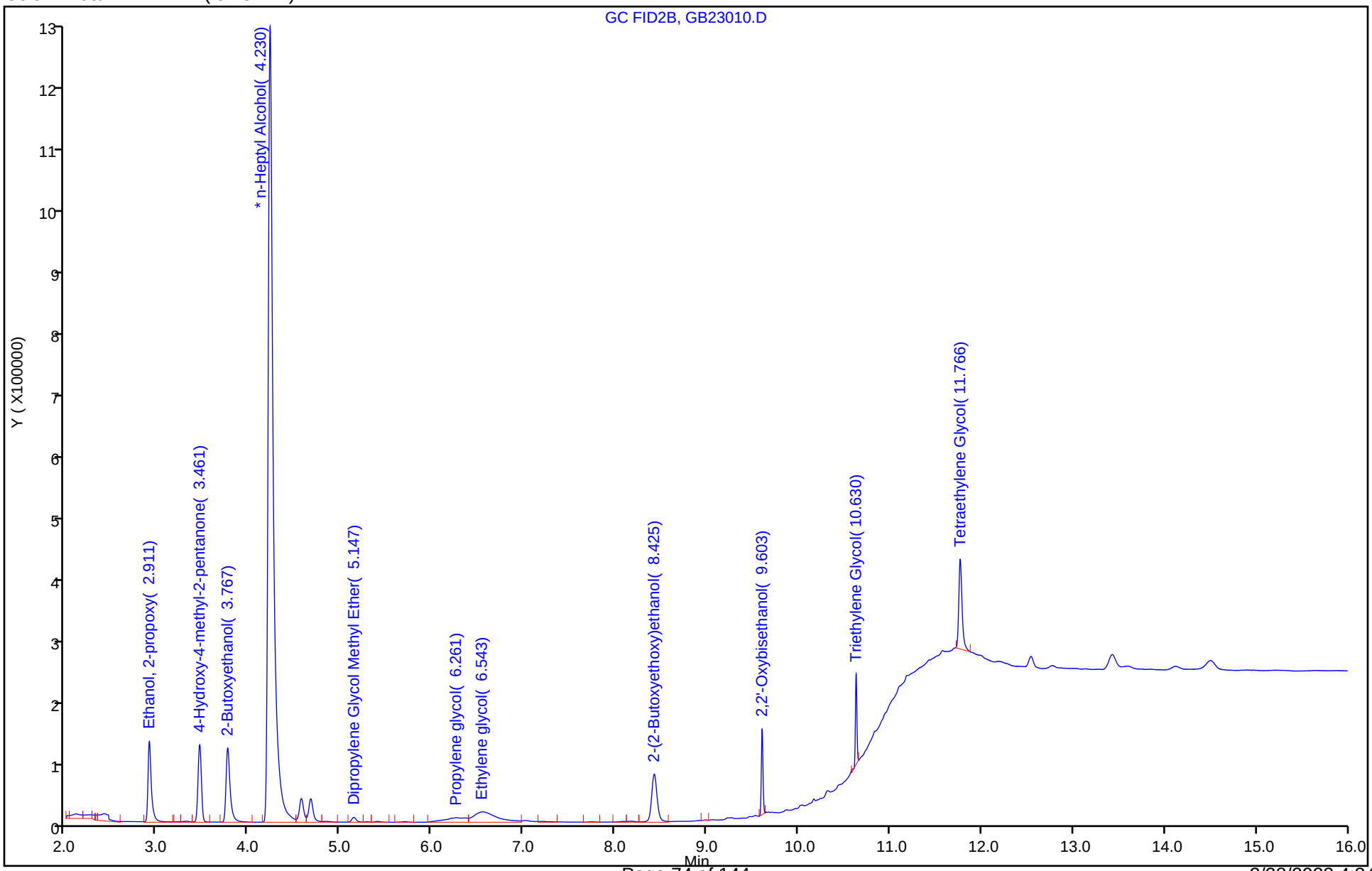
Report Date: 24-Feb-2023 13:23:54 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23010.D

Injection Date:	23-Feb-2023 20:02:32	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g2			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



2/28/2023 4:34 PM

Eurofins Savannah

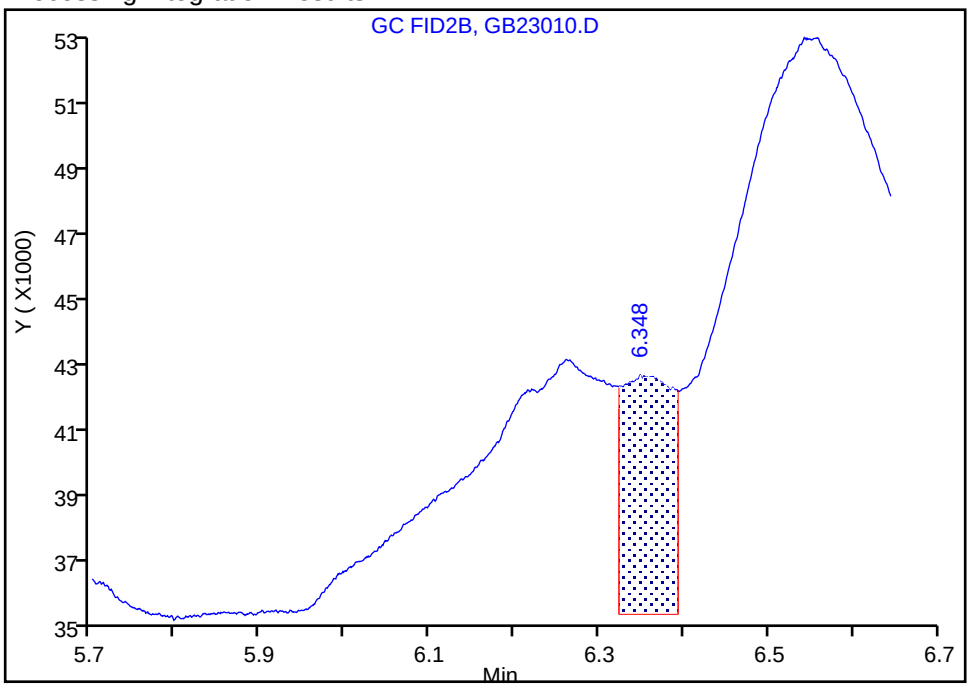
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23010.D
Injection Date: 23-Feb-2023 20:02:32 Instrument ID: CVGG2
Lims ID: ic g2
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

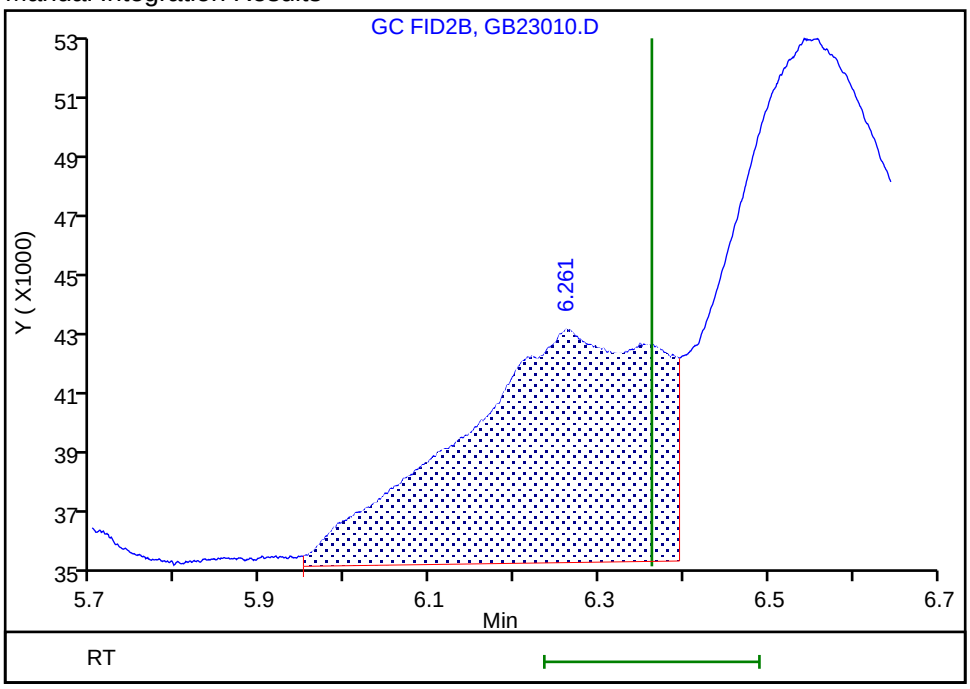
Processing Integration Results

RT: 6.35
Area: 27335
Amount: 1.539820
Amount Units: ug/ml



Manual Integration Results

RT: 6.26
Area: 119218
Amount: 5.513681
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:12:55
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Savannah

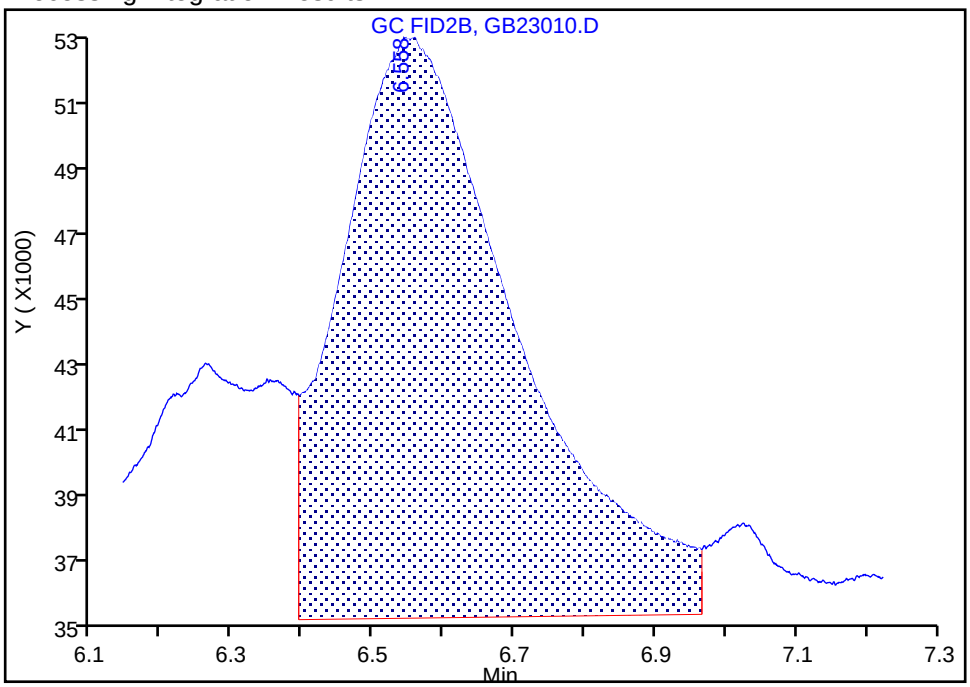
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23010.D				
Injection Date:	23-Feb-2023 20:02:32	Instrument ID:	CVGG2		
Lims ID:	ic g2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

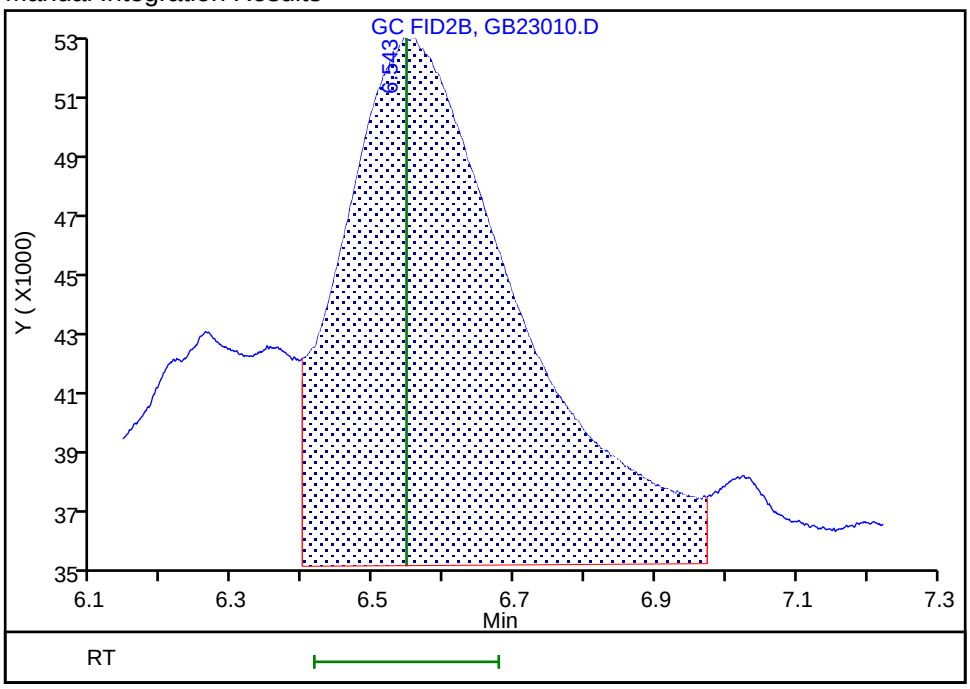
Processing Integration Results

RT: 6.56
Area: 280736
Amount: 5.350752
Amount Units: ug/ml



Manual Integration Results

RT: 6.54
Area: 284223
Amount: 5.595991
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:12:58
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

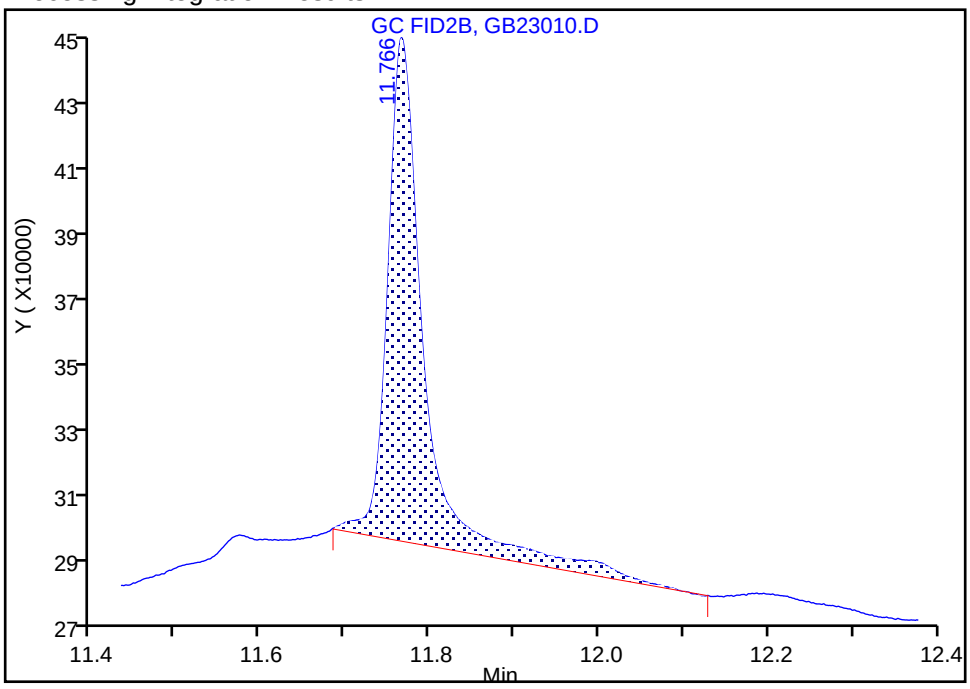
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23010.D
Injection Date: 23-Feb-2023 20:02:32 Instrument ID: CVGG2
Lims ID: ic g2
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

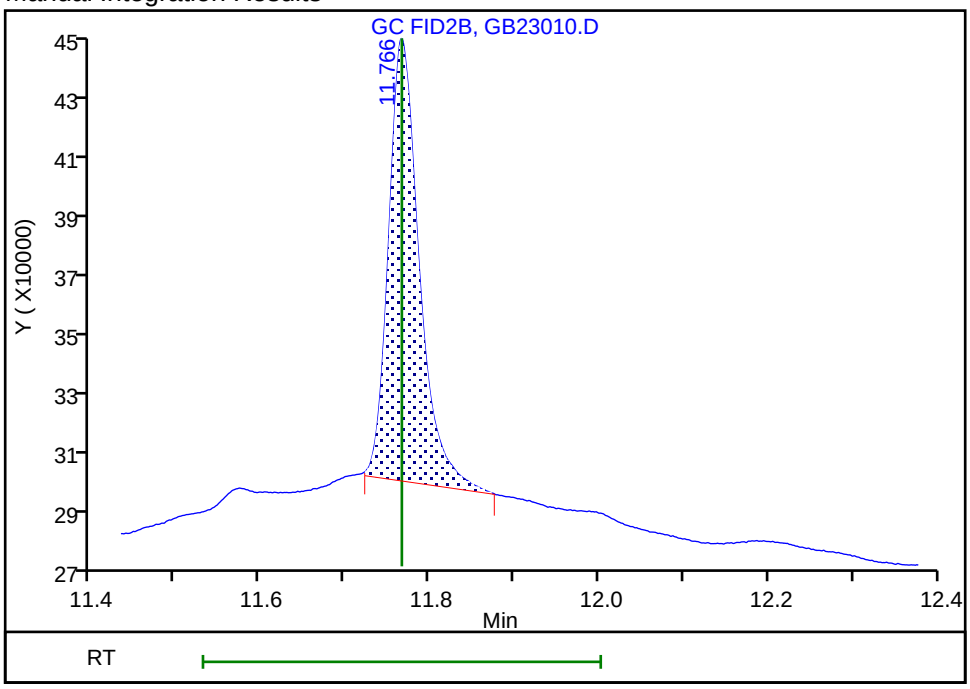
Processing Integration Results

RT: 11.77
Area: 436932
Amount: 10.552417
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 356548
Amount: 10.737446
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:15:04
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D
Lims ID: ic g1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 23-Feb-2023 20:25:53 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084021-011
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 24-Feb-2023 13:23:55 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1637

First Level Reviewer: SK9U Date: 24-Feb-2023 11:03:48

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.910	2.912	-0.002	170693	2.00	2.00	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.462	3.461	0.001	165584	2.00	2.03	
	3 2-Butoxyethanol						
	3.766	3.767	-0.001	197529	2.00	2.00	
*	4 n-Heptyl Alcohol						
	4.229	4.231	-0.002	4996789	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.146	5.144	0.002	14138	2.00	2.08	
	6 Propylene glycol						Ma
	6.259	6.362	-0.103	71503	2.00	2.87	Ma
	7 Ethylene glycol						Ma
	6.564	6.547	0.017	169197	2.00	3.25	Ma
	8 2-(2-Butoxyethoxy)ethanol						
	8.424	8.426	-0.002	174322	2.00	2.06	
	9 2,2'-Oxybisethanol						
	9.604	9.602	0.002	102648	2.00	2.40	
	10 Triethylene Glycol						
	10.630	10.630	0.000	104266	2.00	3.24	
	11 Tetraethylene Glycol						M
	11.769	11.767	0.002	228821	4.00	6.72	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00048	Amount Added:	1.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

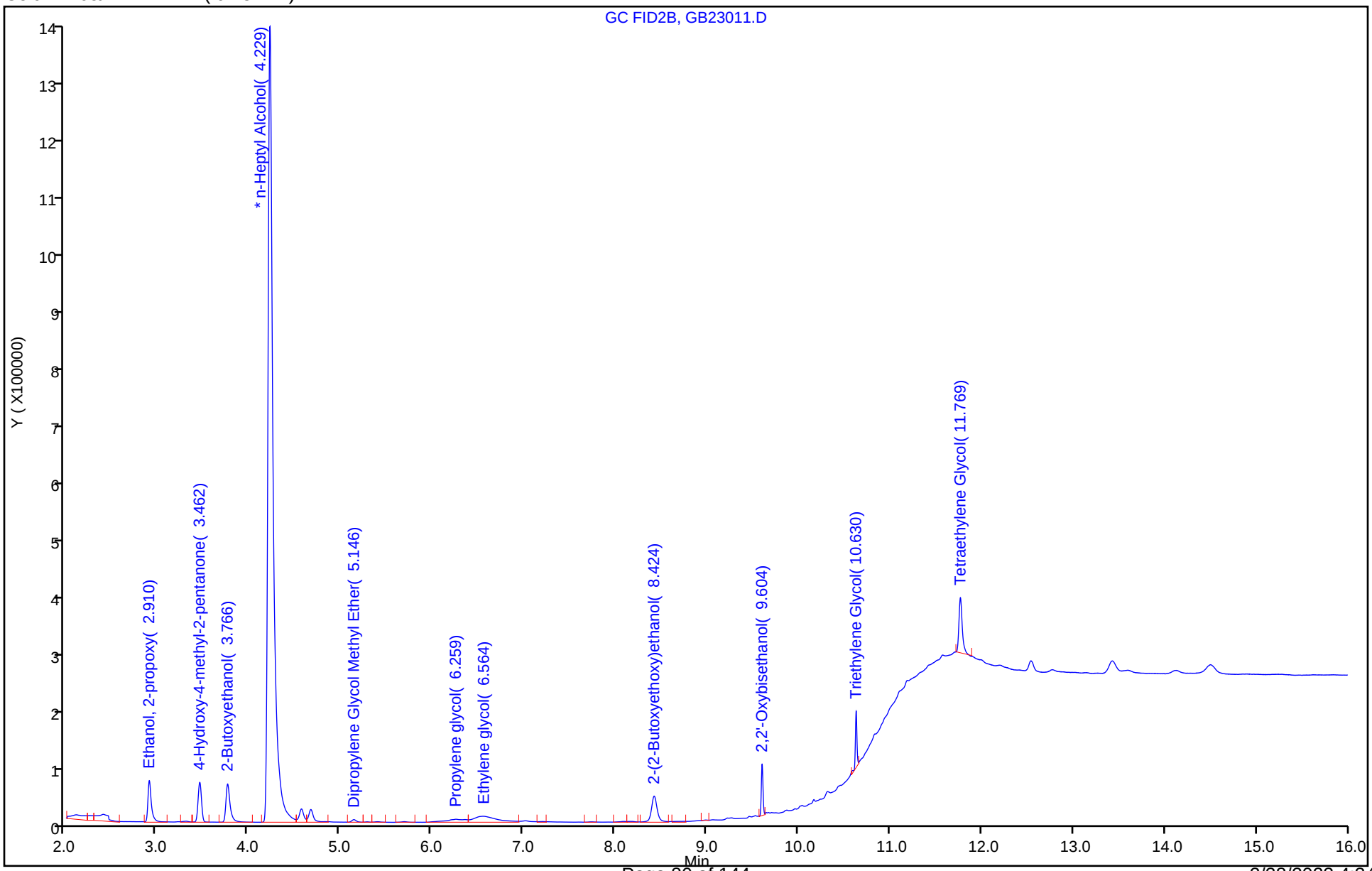
Report Date: 24-Feb-2023 13:23:55 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Injection Date:	23-Feb-2023 20:25:53	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g1			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



Manual Integration/User Assign Peak Report

Eurofins Savannah

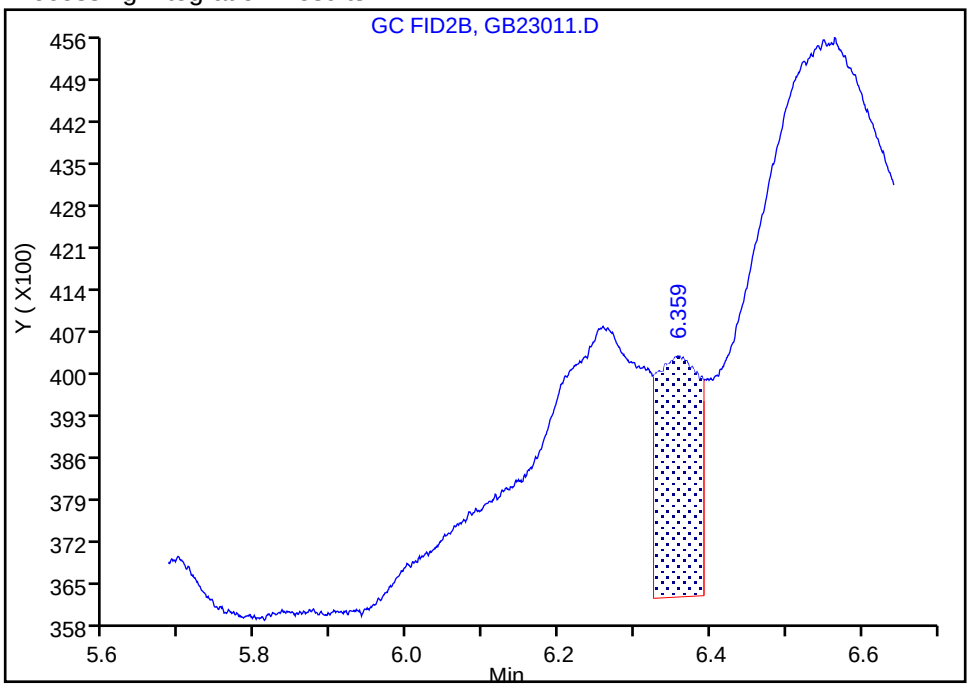
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D
Injection Date: 23-Feb-2023 20:25:53 Instrument ID: CVGG2
Lims ID: ic g1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

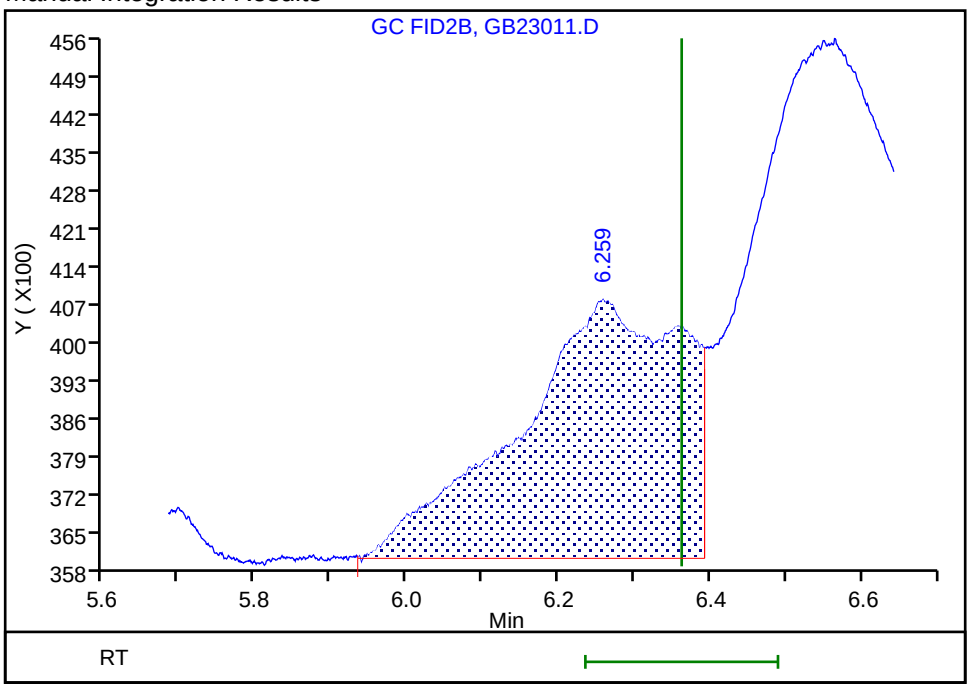
Processing Integration Results

RT: 6.36
Area: 15411
Amount: 1.264640
Amount Units: ug/ml



Manual Integration Results

RT: 6.26
Area: 71503
Amount: 2.868053
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:13:28
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

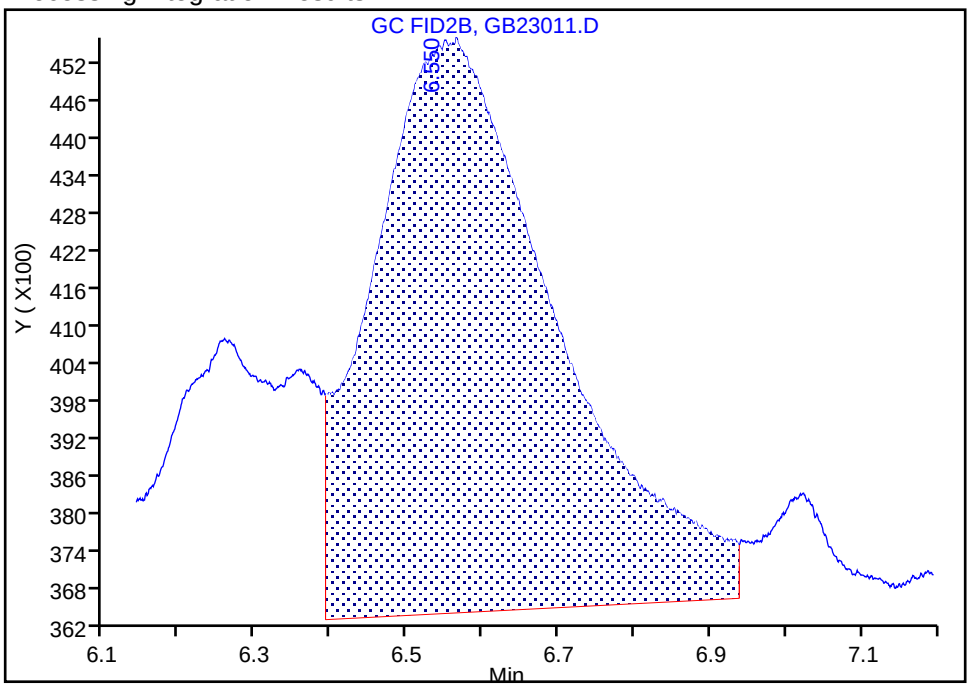
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D
Injection Date: 23-Feb-2023 20:25:53 Instrument ID: CVGG2
Lims ID: ic g1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

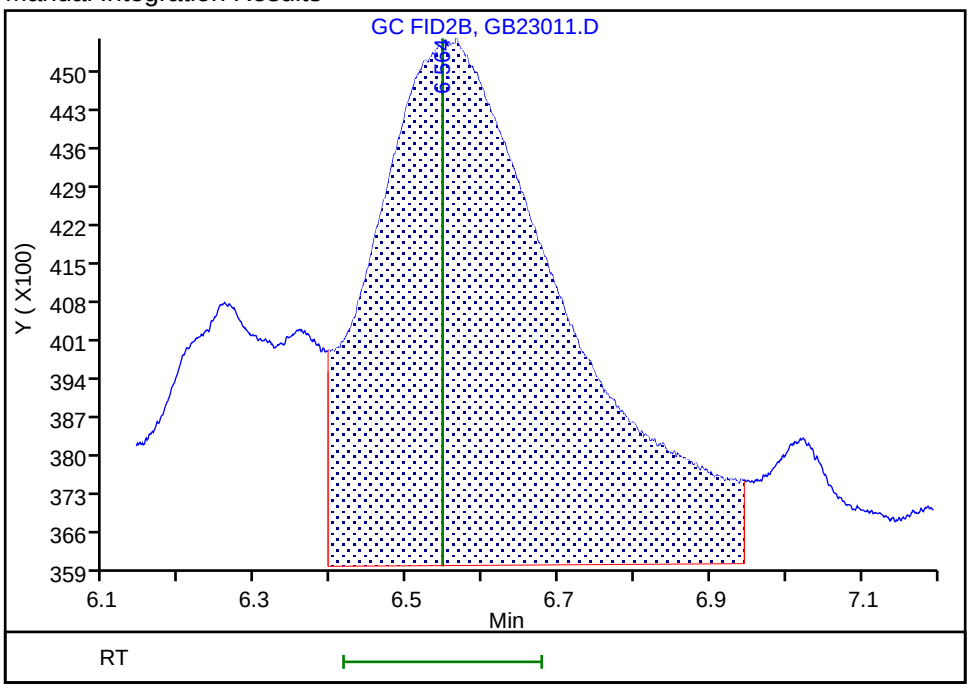
Processing Integration Results

RT: 6.55
Area: 154847
Amount: 2.408684
Amount Units: ug/ml



Manual Integration Results

RT: 6.56
Area: 169197
Amount: 3.247527
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:13:25
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Savannah

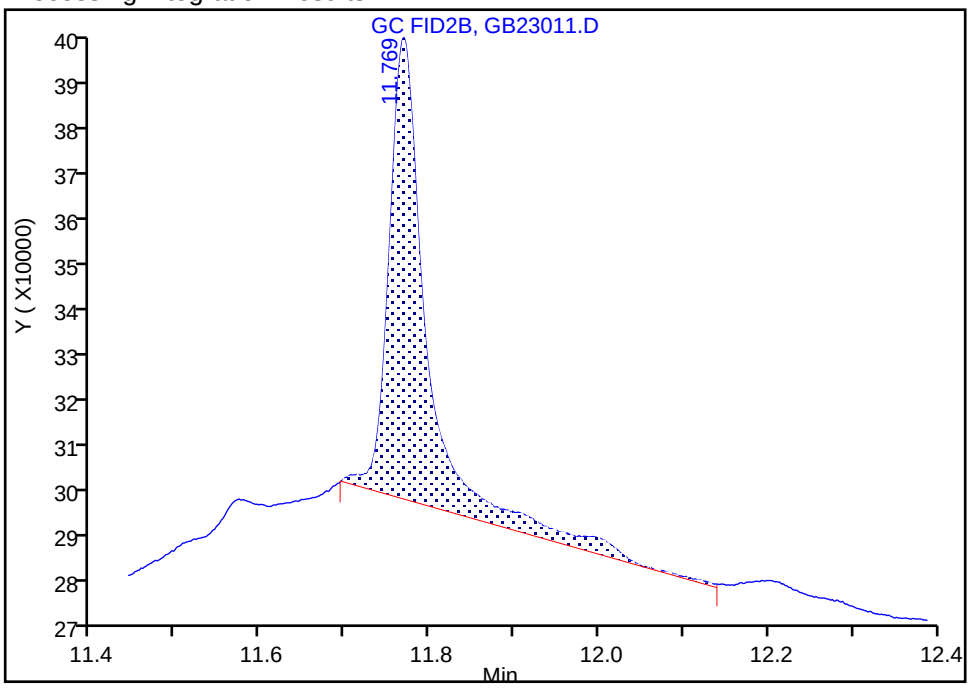
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D				
Injection Date:	23-Feb-2023 20:25:53	Instrument ID:	CVGG2		
Lims ID:	ic g1				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

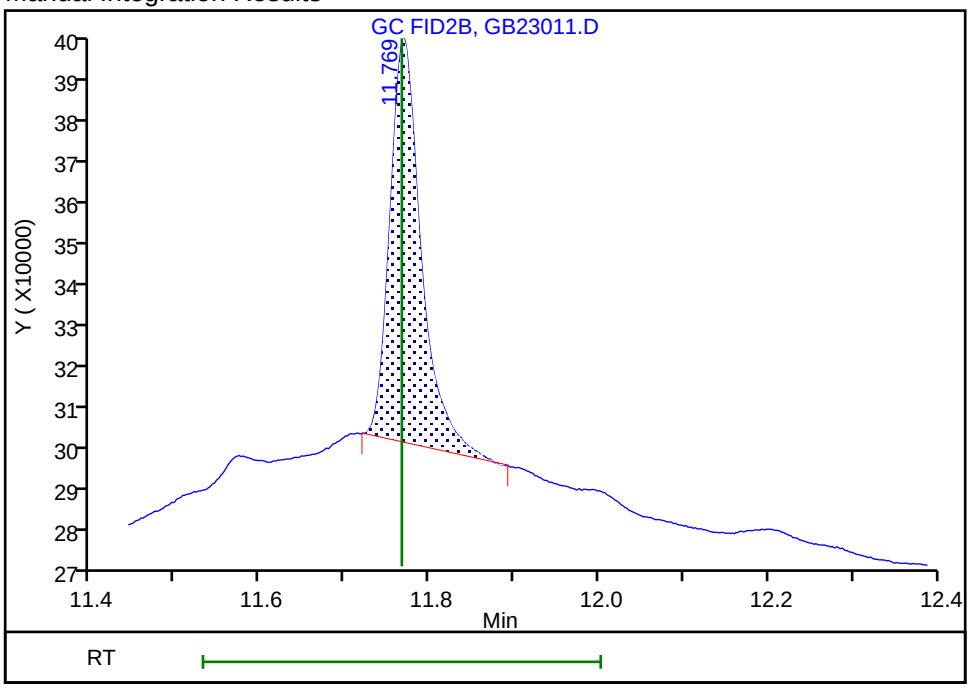
Processing Integration Results

RT: 11.77
Area: 291966
Amount: 4.232468
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 228821
Amount: 6.717710
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:14:51
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Calibration / Ethanol, 2-propoxy

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

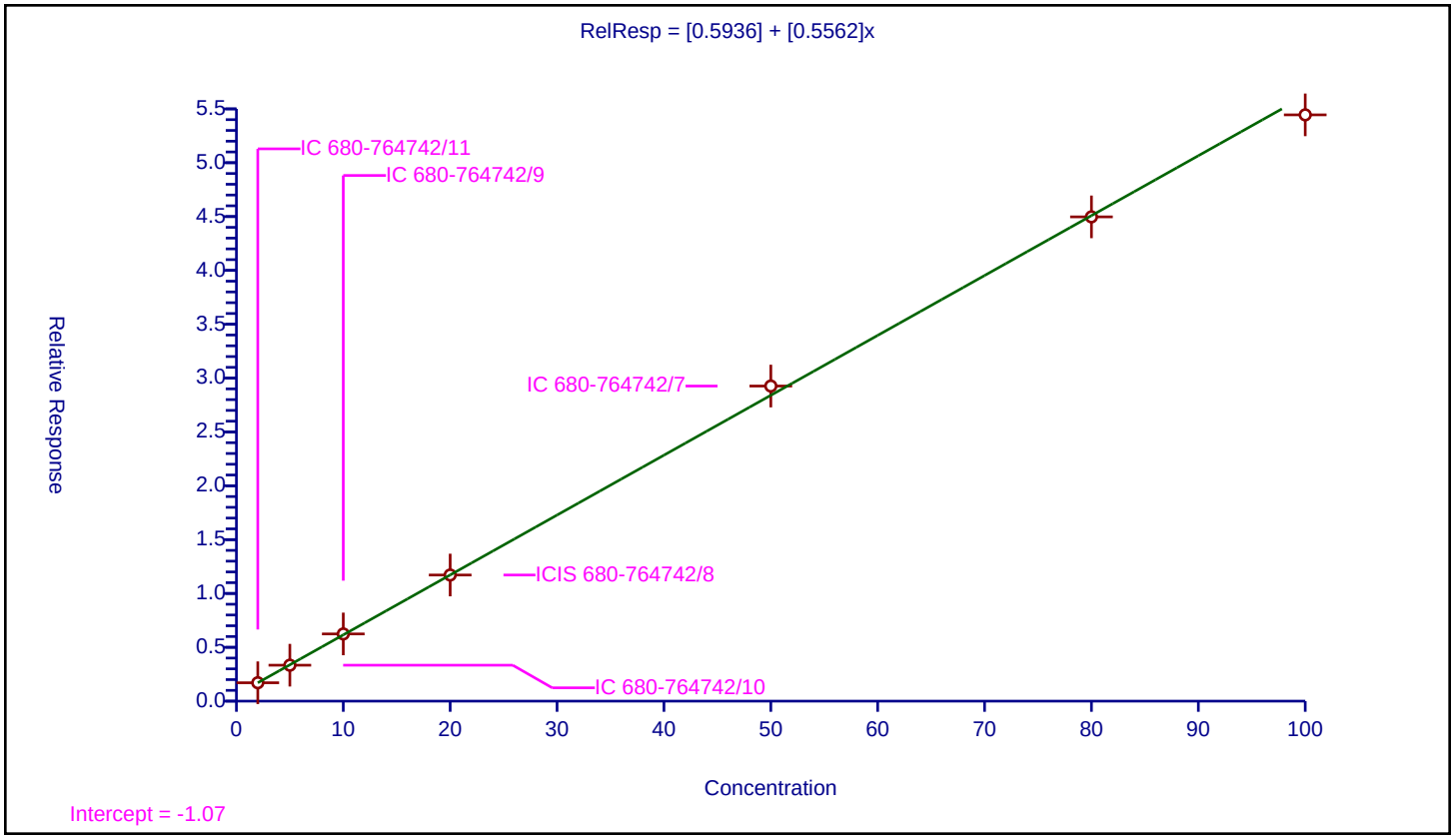
Curve Coefficients

Intercept:	0.5936
Slope:	0.5562

Error Coefficients

Standard Error:	3060000
Relative Standard Error:	2.2
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	1.708027	50.0	4996789.0	0.854013	Y
2	IC 680-764742/10	5.0	3.336908	50.0	4871171.0	0.667382	Y
3	IC 680-764742/9	10.0	6.241724	50.0	5329257.0	0.624172	Y
4	ICIS 680-764742/8	20.0	11.713943	50.0	4583875.0	0.585697	Y
5	IC 680-764742/7	50.0	29.262048	50.0	4290074.0	0.585241	Y
6	IC 680-764742/6	80.0	44.973599	50.0	4647729.0	0.56217	Y
7	IC 680-764742/5	100.0	54.44588	50.0	4234617.0	0.544459	Y



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

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

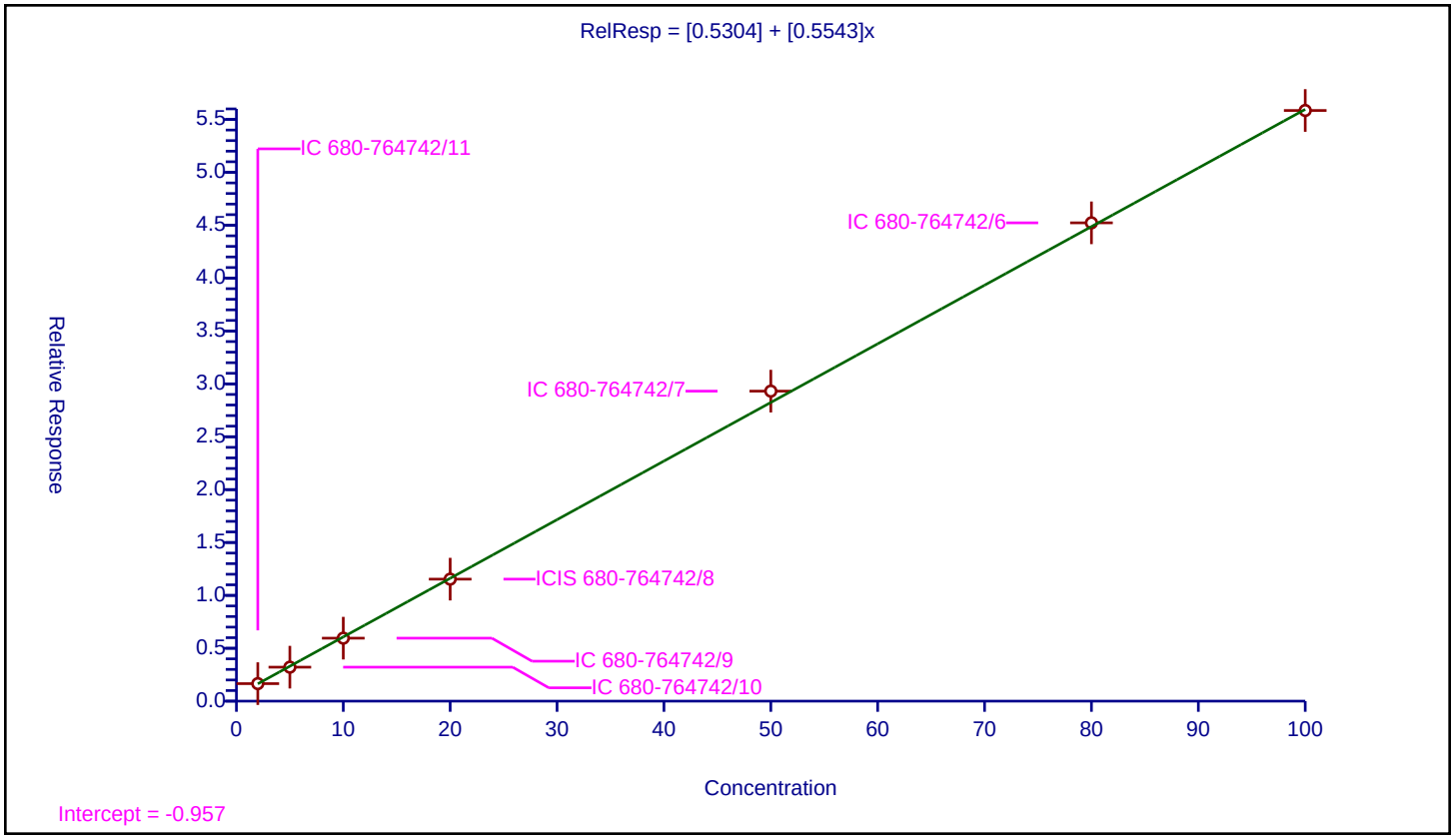
Curve Coefficients

Intercept:	0.5304
Slope:	0.5543

Error Coefficients

Standard Error:	3100000
Relative Standard Error:	2.6
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	1.656904	50.0	4996789.0	0.828452	Y
2	IC 680-764742/10	5.0	3.212164	50.0	4871171.0	0.642433	Y
3	IC 680-764742/9	10.0	5.955727	50.0	5329257.0	0.595573	Y
4	ICIS 680-764742/8	20.0	11.534357	50.0	4583875.0	0.576718	Y
5	IC 680-764742/7	50.0	29.313189	50.0	4290074.0	0.586264	Y
6	IC 680-764742/6	80.0	45.225206	50.0	4647729.0	0.565315	Y
7	IC 680-764742/5	100.0	55.848971	50.0	4234617.0	0.55849	Y



Calibration / 2-Butoxyethanol

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

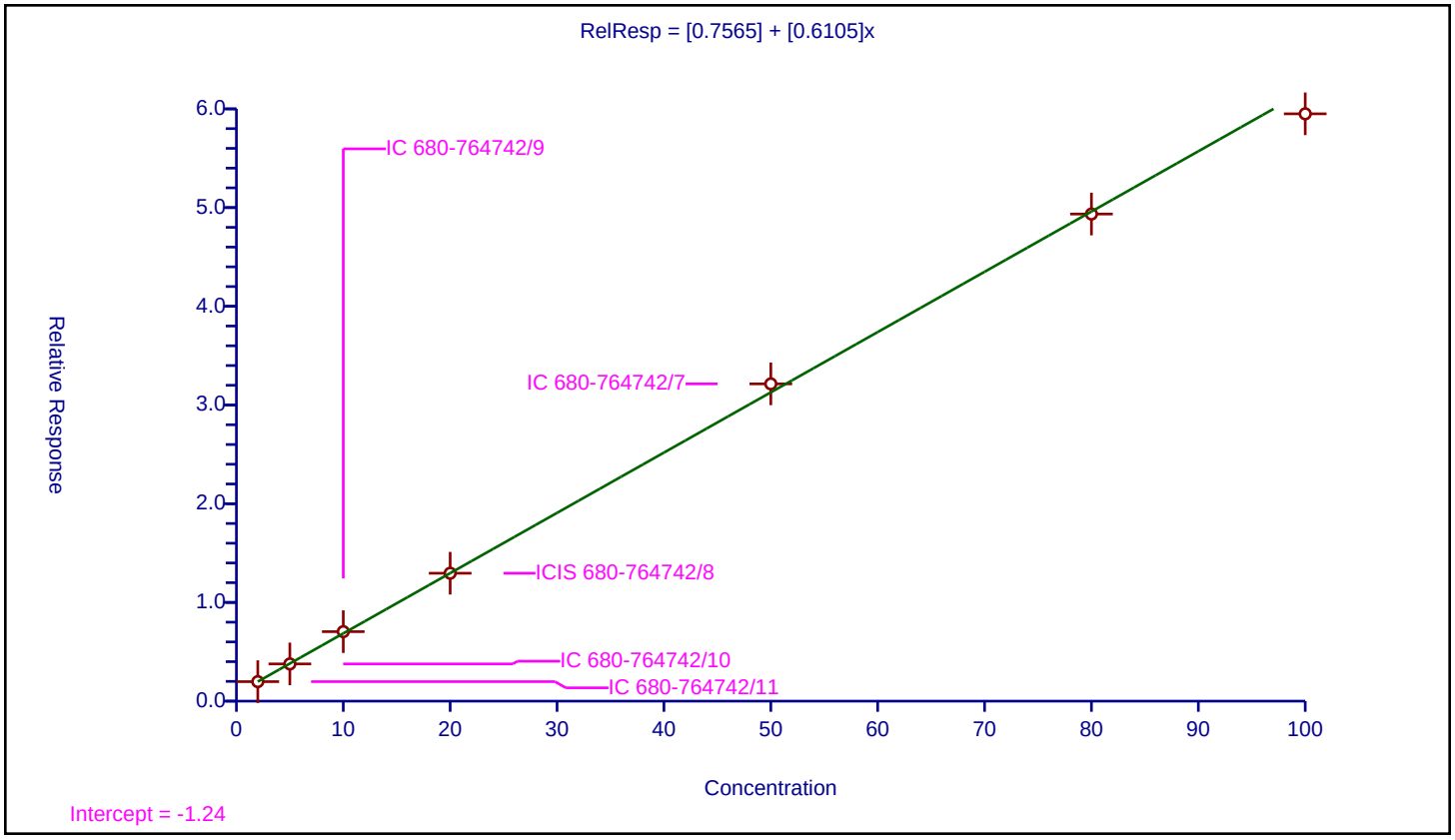
Curve Coefficients

Intercept:	0.7565
Slope:	0.6105

Error Coefficients

Standard Error:	3350000
Relative Standard Error:	2.6
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	1.976559	50.0	4996789.0	0.98828	Y
2	IC 680-764742/10	5.0	3.769679	50.0	4871171.0	0.753936	Y
3	IC 680-764742/9	10.0	7.041657	50.0	5329257.0	0.704166	Y
4	ICIS 680-764742/8	20.0	12.95897	50.0	4583875.0	0.647949	Y
5	IC 680-764742/7	50.0	32.142208	50.0	4290074.0	0.642844	Y
6	IC 680-764742/6	80.0	49.347628	50.0	4647729.0	0.616845	Y
7	IC 680-764742/5	100.0	59.50191	50.0	4234617.0	0.595019	Y



Calibration / Dipropylene Glycol Methyl Ether

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

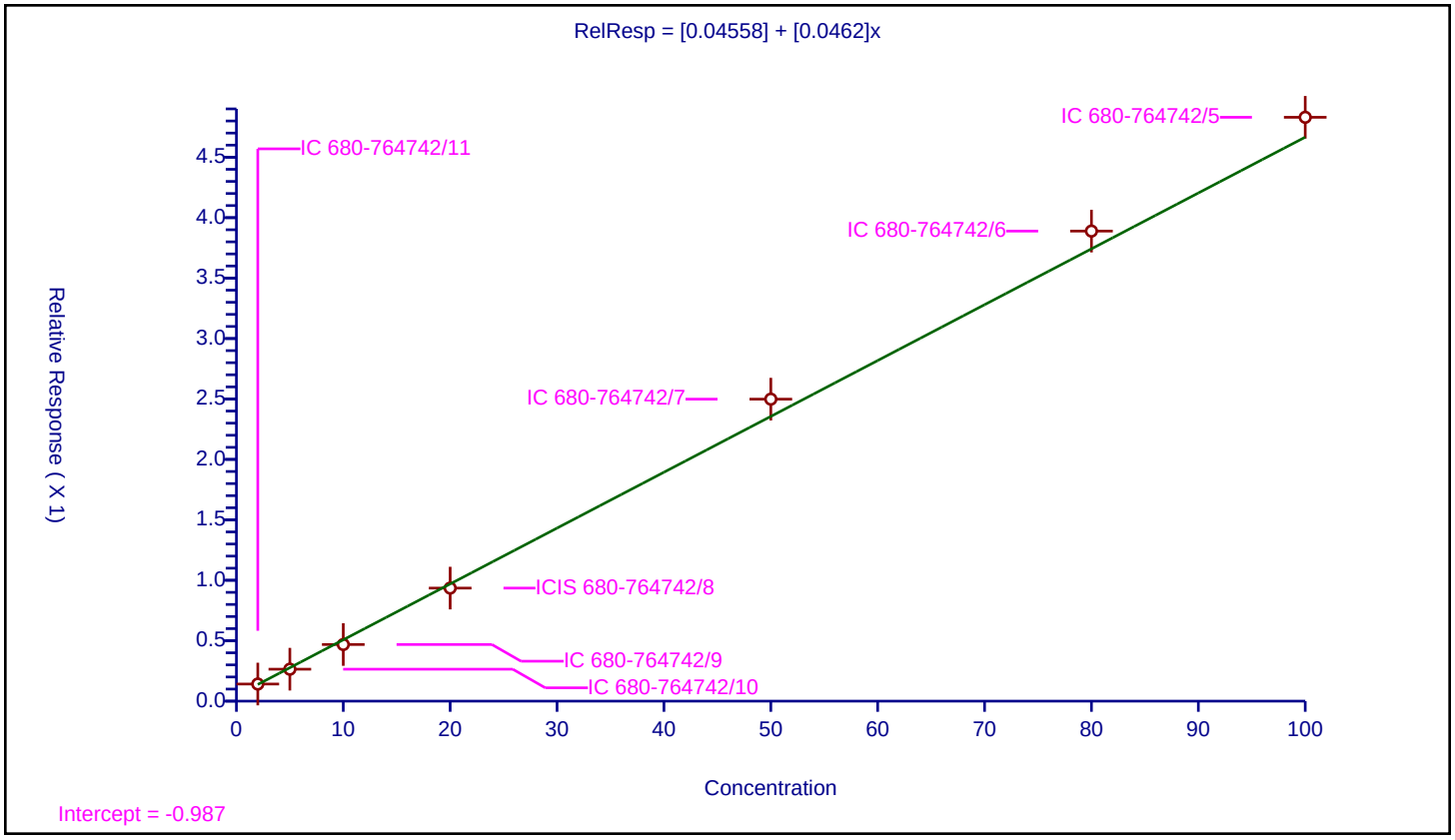
Curve Coefficients

Intercept:	0.04558
Slope:	0.0462

Error Coefficients

Standard Error:	266000
Relative Standard Error:	6.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	0.141471	50.0	4996789.0	0.070735	Y
2	IC 680-764742/10	5.0	0.264382	50.0	4871171.0	0.052876	Y
3	IC 680-764742/9	10.0	0.468517	50.0	5329257.0	0.046852	Y
4	ICIS 680-764742/8	20.0	0.935399	50.0	4583875.0	0.04677	Y
5	IC 680-764742/7	50.0	2.49843	50.0	4290074.0	0.049969	Y
6	IC 680-764742/6	80.0	3.888899	50.0	4647729.0	0.048611	Y
7	IC 680-764742/5	100.0	4.830437	50.0	4234617.0	0.048304	Y



Calibration / Propylene glycol

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

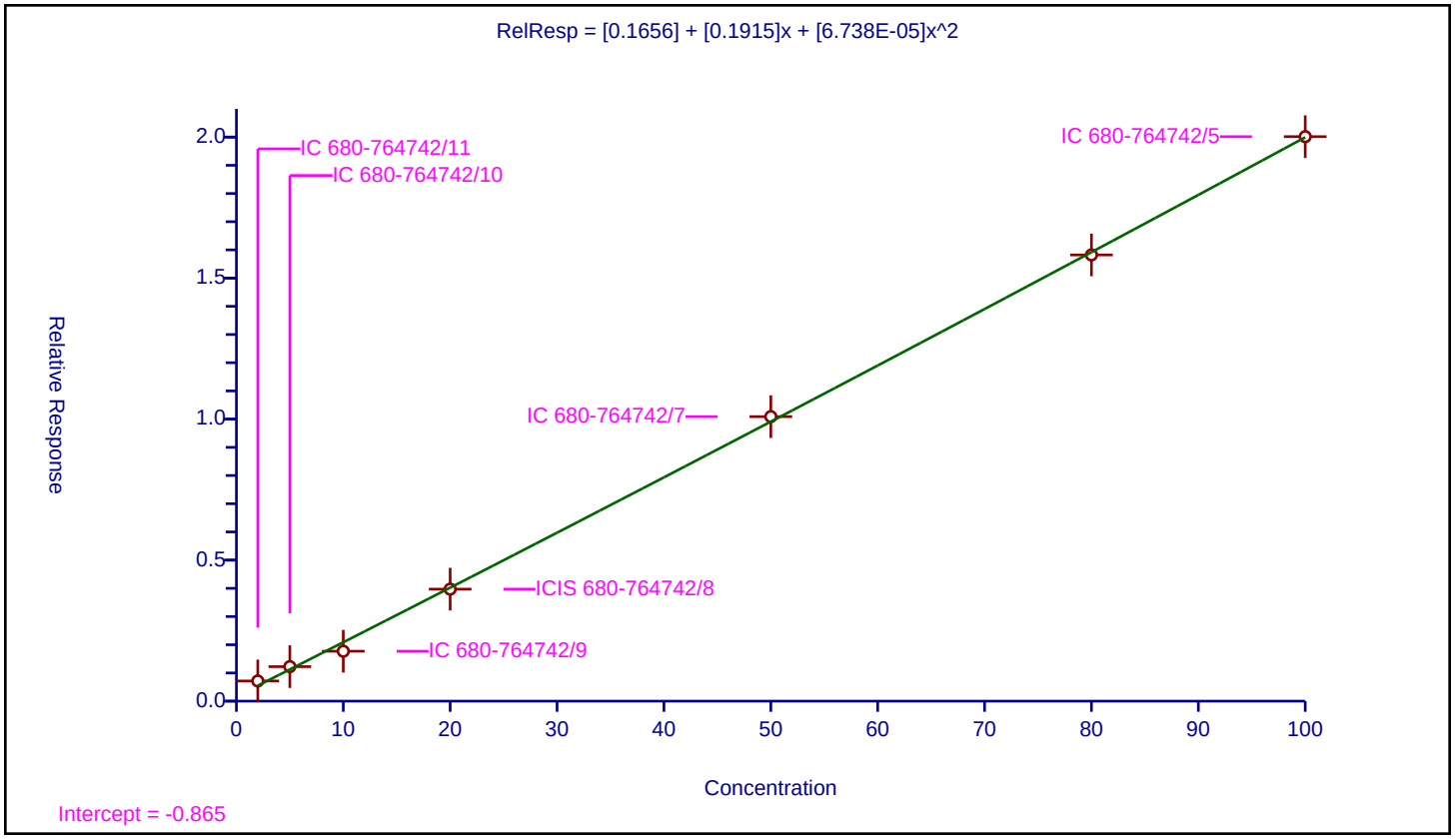
Curve Coefficients

Intercept:	0.1656
Slope:	0.1915
Second Order:	6.738E-05

Error Coefficients

Standard Error:	1220000
Relative Standard Error:	23.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	0.715489	50.0	4996789.0	0.357745	Y
2	IC 680-764742/10	5.0	1.22371	50.0	4871171.0	0.244742	Y
3	IC 680-764742/9	10.0	1.770735	50.0	5329257.0	0.177073	Y
4	ICIS 680-764742/8	20.0	3.971978	50.0	4583875.0	0.198599	Y
5	IC 680-764742/7	50.0	10.088124	50.0	4290074.0	0.201762	Y
6	IC 680-764742/6	80.0	15.822179	50.0	4647729.0	0.197777	Y
7	IC 680-764742/5	100.0	20.015647	50.0	4234617.0	0.200156	Y



Calibration / Ethylene glycol

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

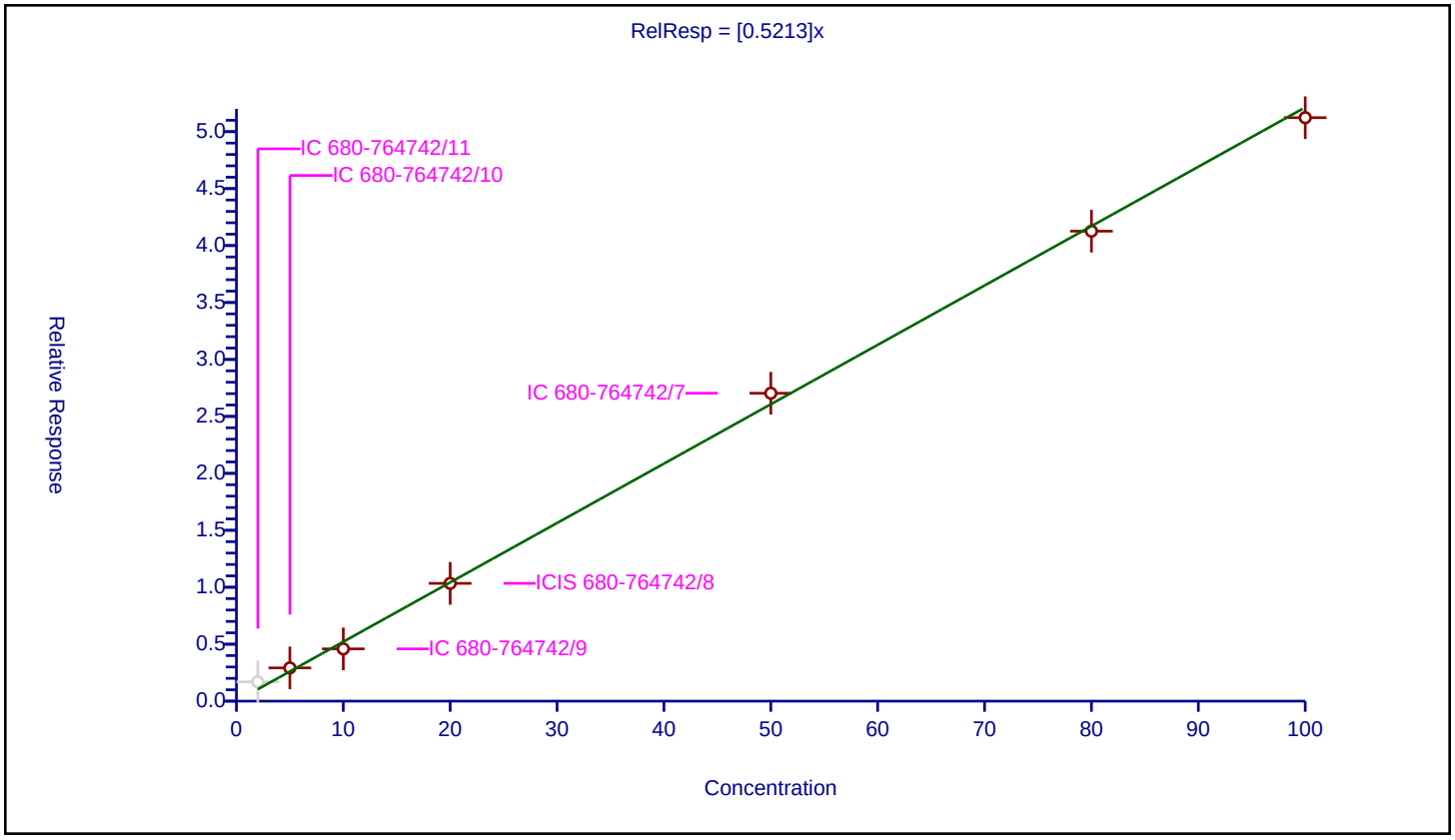
Curve Coefficients

Intercept:	0
Slope:	0.5213

Error Coefficients

Standard Error:	2830000
Relative Standard Error:	7.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	1.693057	50.0	4996789.0	0.846529	N
2	IC 680-764742/10	5.0	2.917399	50.0	4871171.0	0.58348	Y
3	IC 680-764742/9	10.0	4.587957	50.0	5329257.0	0.458796	Y
4	ICIS 680-764742/8	20.0	10.339974	50.0	4583875.0	0.516999	Y
5	IC 680-764742/7	50.0	27.033764	50.0	4290074.0	0.540675	Y
6	IC 680-764742/6	80.0	41.263819	50.0	4647729.0	0.515798	Y
7	IC 680-764742/5	100.0	51.227714	50.0	4234617.0	0.512277	Y



Calibration / 2-(2-Butoxyethoxy)ethanol

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

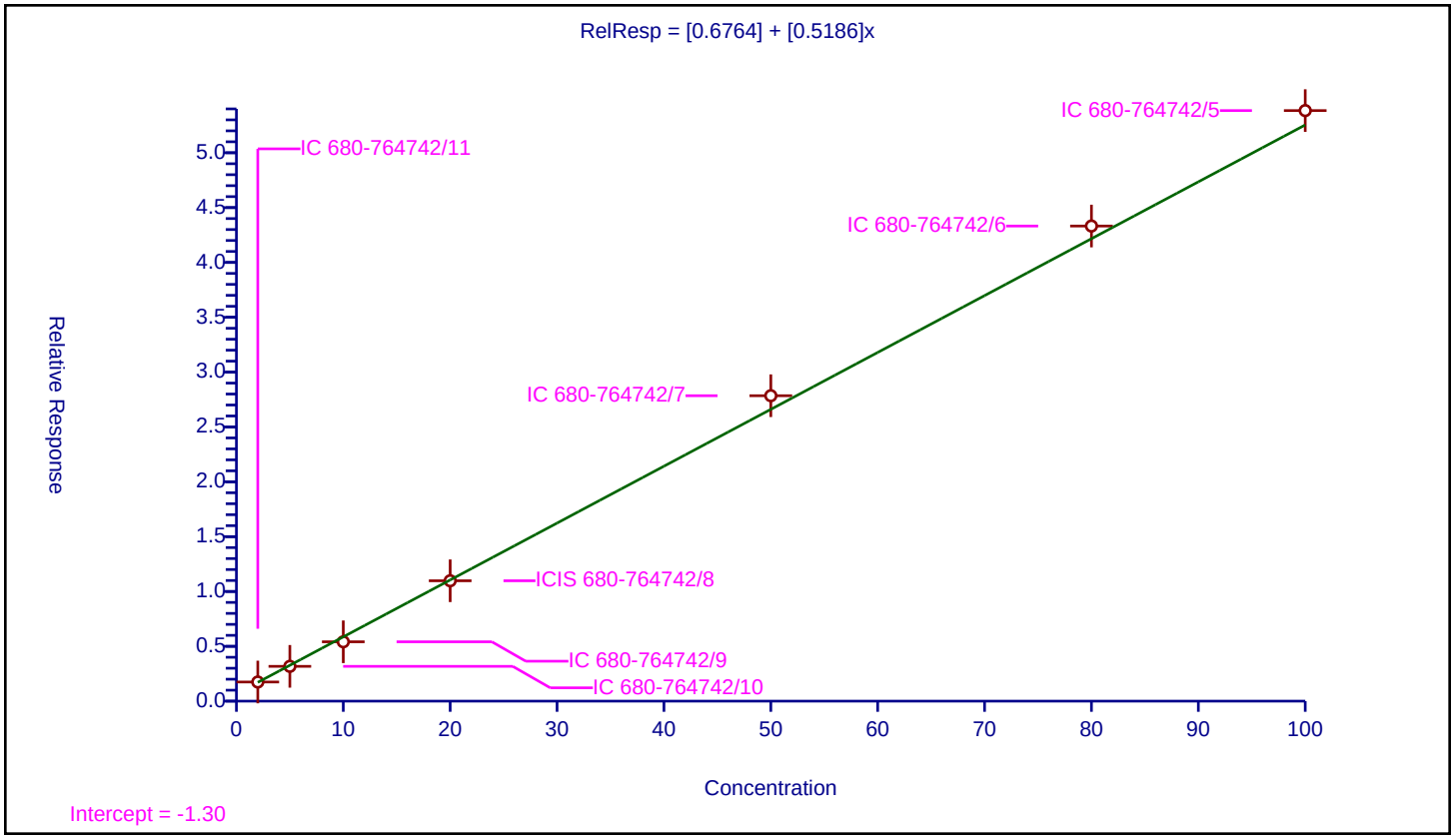
Curve Coefficients

Intercept:	0.6764
Slope:	0.5186

Error Coefficients

Standard Error:	2970000
Relative Standard Error:	5.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	1.74434	50.0	4996789.0	0.87217	Y
2	IC 680-764742/10	5.0	3.173724	50.0	4871171.0	0.634745	Y
3	IC 680-764742/9	10.0	5.41158	50.0	5329257.0	0.541158	Y
4	ICIS 680-764742/8	20.0	10.976401	50.0	4583875.0	0.54882	Y
5	IC 680-764742/7	50.0	27.847352	50.0	4290074.0	0.556947	Y
6	IC 680-764742/6	80.0	43.31878	50.0	4647729.0	0.541485	Y
7	IC 680-764742/5	100.0	53.843642	50.0	4234617.0	0.538436	Y



Calibration / 2,2'-Oxybisethanol

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

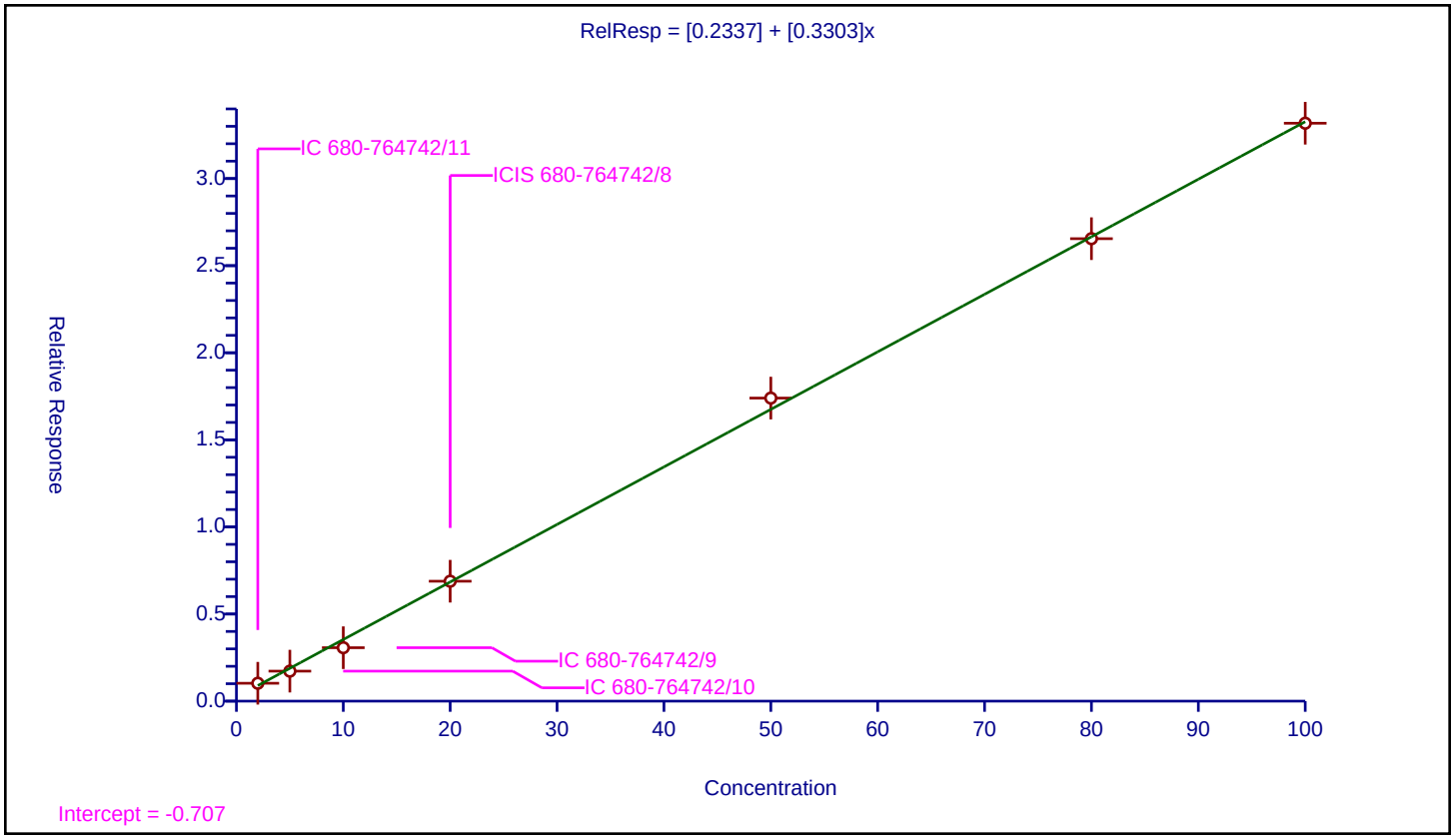
Curve Coefficients

Intercept:	0.2337
Slope:	0.3303

Error Coefficients

Standard Error:	1830000
Relative Standard Error:	12.0
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	1.02714	50.0	4996789.0	0.51357	Y
2	IC 680-764742/10	5.0	1.722204	50.0	4871171.0	0.344441	Y
3	IC 680-764742/9	10.0	3.068308	50.0	5329257.0	0.306831	Y
4	ICIS 680-764742/8	20.0	6.884961	50.0	4583875.0	0.344248	Y
5	IC 680-764742/7	50.0	17.398115	50.0	4290074.0	0.347962	Y
6	IC 680-764742/6	80.0	26.548493	50.0	4647729.0	0.331856	Y
7	IC 680-764742/5	100.0	33.177983	50.0	4234617.0	0.33178	Y



Calibration / Triethylene Glycol

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

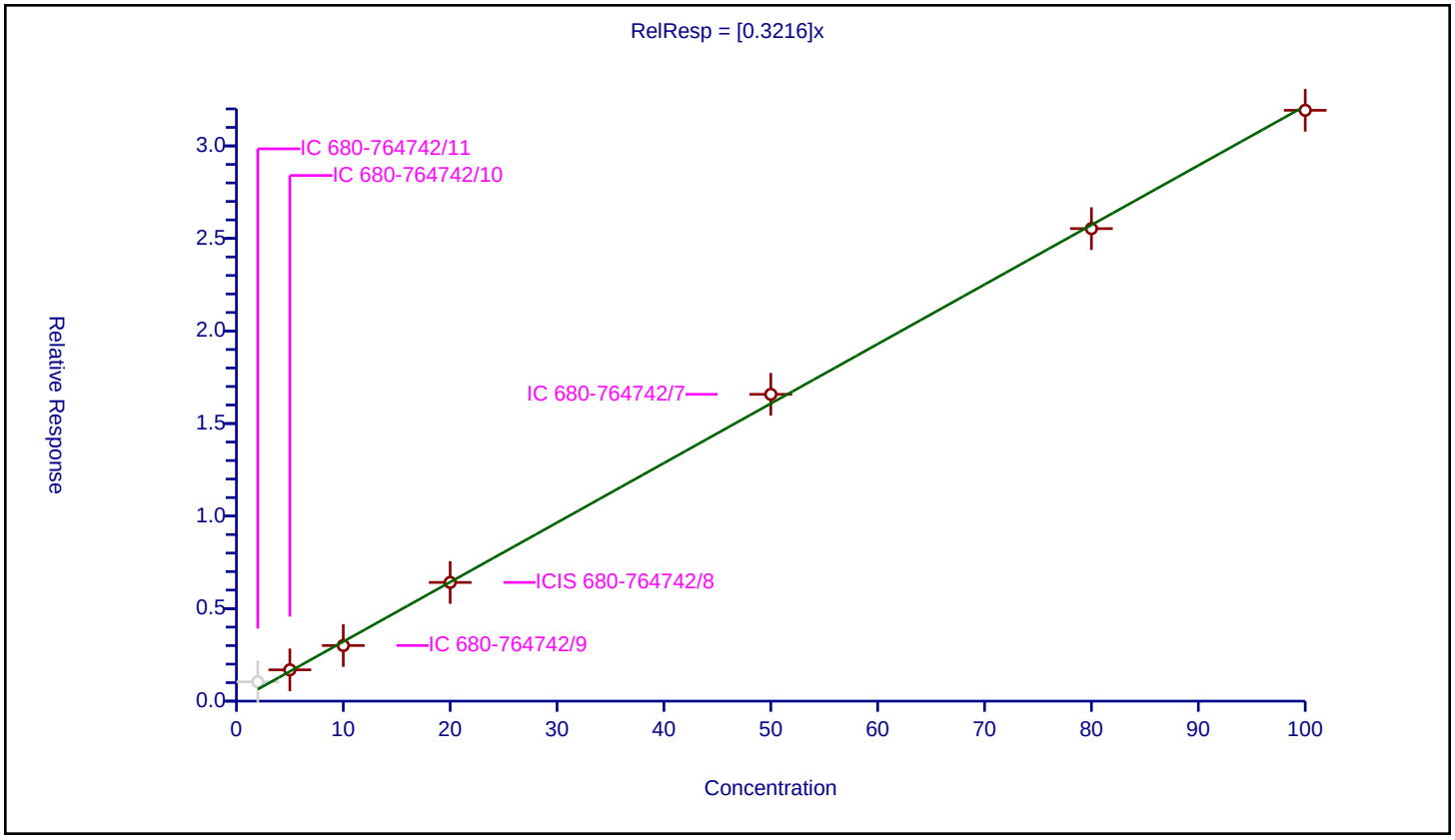
Curve Coefficients

Intercept:	0
Slope:	0.3216

Error Coefficients

Standard Error:	1760000
Relative Standard Error:	4.0
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	2.0	1.04333	50.0	4996789.0	0.521665	N
2	IC 680-764742/10	5.0	1.691842	50.0	4871171.0	0.338368	Y
3	IC 680-764742/9	10.0	3.004781	50.0	5329257.0	0.300478	Y
4	ICIS 680-764742/8	20.0	6.41454	50.0	4583875.0	0.320727	Y
5	IC 680-764742/7	50.0	16.576952	50.0	4290074.0	0.331539	Y
6	IC 680-764742/6	80.0	25.530964	50.0	4647729.0	0.319137	Y
7	IC 680-764742/5	100.0	31.923359	50.0	4234617.0	0.319234	Y



Calibration / Tetraethylene Glycol

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

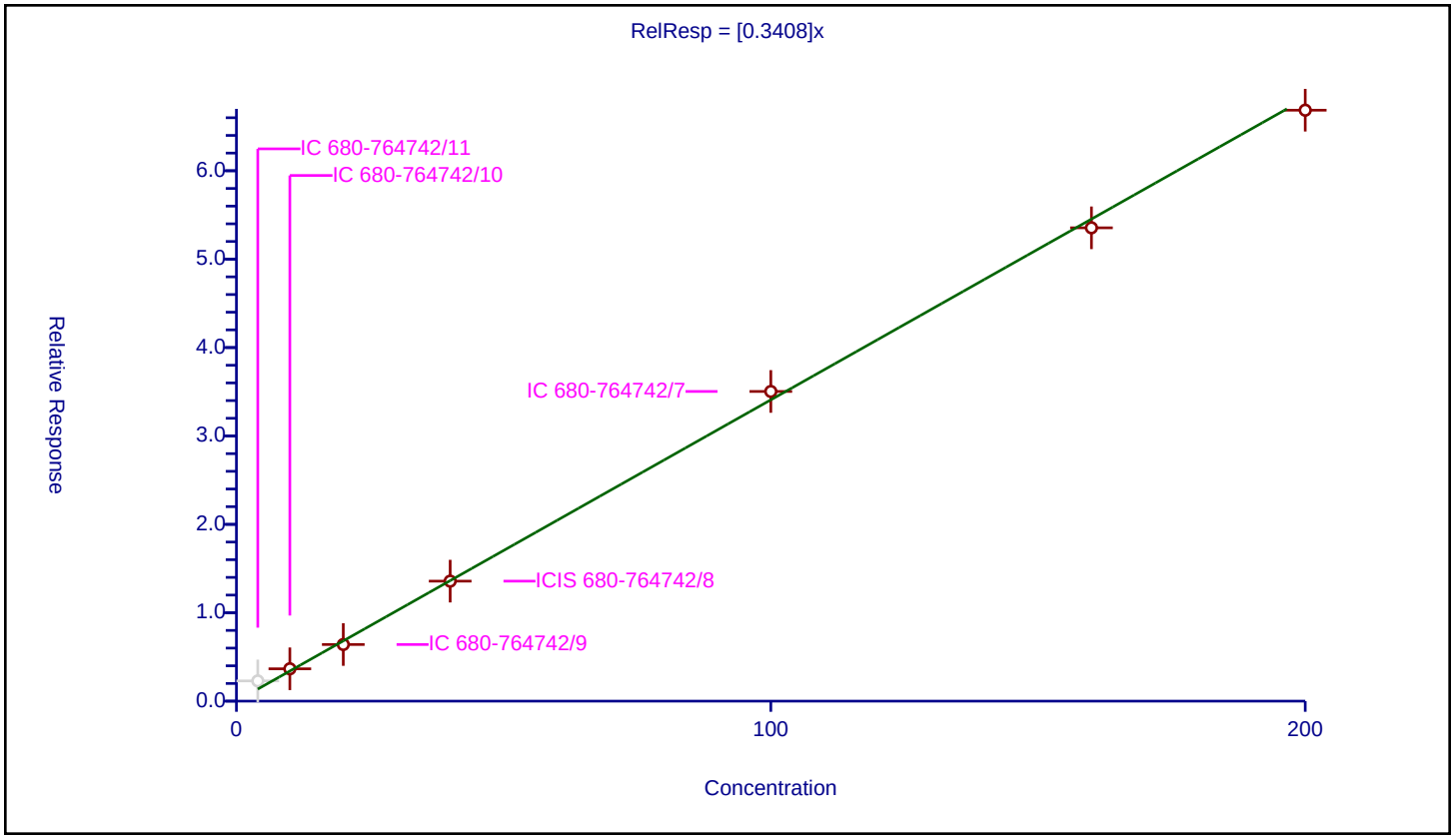
Curve Coefficients

Intercept:	0
Slope:	0.3408

Error Coefficients

Standard Error:	3690000
Relative Standard Error:	4.6
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-764742/11	4.0	2.28968	50.0	4996789.0	0.57242	N
2	IC 680-764742/10	10.0	3.659777	50.0	4871171.0	0.365978	Y
3	IC 680-764742/9	20.0	6.408398	50.0	5329257.0	0.32042	Y
4	ICIS 680-764742/8	40.0	13.576014	50.0	4583875.0	0.3394	Y
5	IC 680-764742/7	100.0	35.033463	50.0	4290074.0	0.350335	Y
6	IC 680-764742/6	160.0	53.545667	50.0	4647729.0	0.33466	Y
7	IC 680-764742/5	200.0	66.852291	50.0	4234617.0	0.334261	Y



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Lab Sample ID: ICV 680-764742/12 Calibration Date: 02/23/2023 20:49

Instrument ID: CVGG2 Calib Start Date: 02/23/2023 18:06

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 02/23/2023 20:25

Lab File ID: GB23012.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.6287		21.5	20.0	7.7	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.6237		21.5	20.0	7.7	20.0
2-Butoxyethanol	Lin2		0.7200		22.3	20.0	11.7	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0491		20.2	20.0	1.2	20.0
Propylene glycol	Qua		0.1654		16.3	20.0	-18.4	20.0
Ethylene glycol	Ave	0.5213	0.4913		18.8	20.0	-5.8	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.5671		20.6	20.0	2.8	20.0
2,2'-Oxybisethanol	Lin1		0.3168		18.5	20.0	-7.6	20.0
Triethylene Glycol	Ave	0.3216	0.3248		20.2	20.0	1.0	20.0
Tetraethylene Glycol	Ave	0.3408	0.3504		41.1	40.0	2.8	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Lab Sample ID: ICV 680-764742/12 Calibration Date: 02/23/2023 20:49

Instrument ID: CVGG2 Calib Start Date: 02/23/2023 18:06

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 02/23/2023 20:25

Lab File ID: GB23012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.91	2.86	2.98
4-Hydroxy-4-methyl-2-pentanone	3.46	3.41	3.55
2-Butoxyethanol	3.77	3.70	3.85
Dipropylene Glycol Methyl Ether	5.15	5.05	5.26
Propylene glycol	6.26	6.15	6.40
Ethylene glycol	6.54	6.42	6.69
2-(2-Butoxyethoxy)ethanol	8.43	8.26	8.59
2,2'-Oxybisethanol	9.60	9.42	9.80
Triethylene Glycol	10.63	10.42	10.85
Tetraethylene Glycol	11.77	11.54	12.01

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23012.D
Lims ID: icv gly
Client ID:
Sample Type: CCV
Inject. Date: 23-Feb-2023 20:49:13 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084021-012
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 24-Feb-2023 13:24:57 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1637

First Level Reviewer: SK9U Date: 24-Feb-2023 11:04:43

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.912	2.920	-0.008	1180335	20.0	21.5	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.463	3.477	-0.014	1170903	20.0	21.5	
	3 2-Butoxyethanol						
	3.767	3.770	-0.003	1351679	20.0	22.3	
*	4 n-Heptyl Alcohol						
	4.228	4.222	0.006	4693584	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.146	5.152	-0.006	92106	20.0	20.2	
	6 Propylene glycol						M
	6.261	6.271	-0.010	310509	20.0	16.3	M
	7 Ethylene glycol						M
	6.542	6.555	-0.013	922349	20.0	18.8	M
	8 2-(2-Butoxyethoxy)ethanol						
	8.425	8.425	0.000	1064778	20.0	20.6	
	9 2,2'-Oxybisethanol						
	9.602	9.607	-0.005	594694	20.0	18.5	
	10 Triethylene Glycol						
	10.629	10.633	-0.004	609814	20.0	20.2	
	11 Tetraethylene Glycol						M
	11.766	11.777	-0.011	1315729	40.0	41.1	M

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated

Reagents:

SG_GlyICV_00055	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

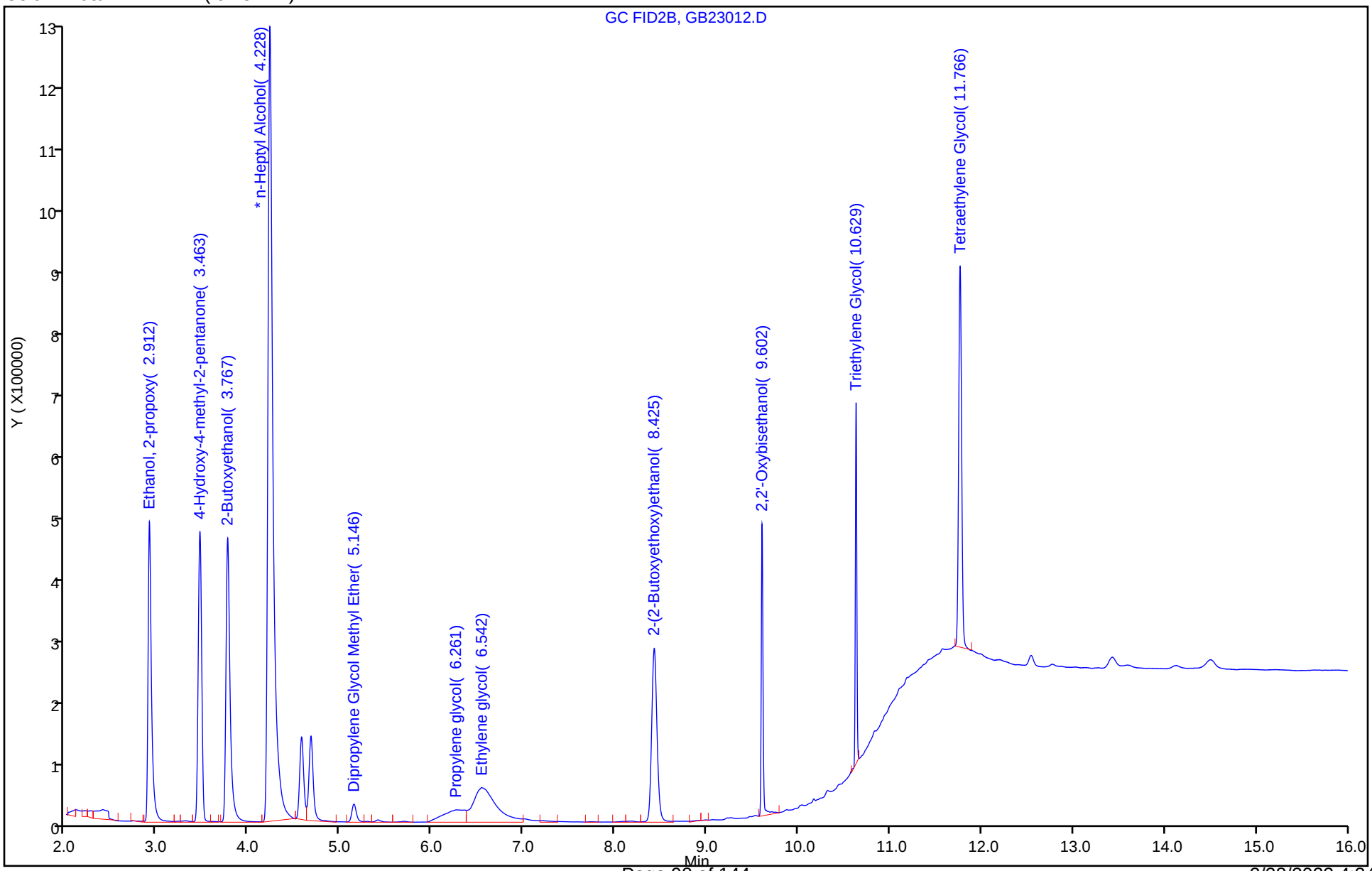
Report Date: 24-Feb-2023 13:24:57 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23012.D

Injection Date:	23-Feb-2023 20:49:13	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	icv gly			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



2/28/2023 4:34 PM

Eurofins Savannah

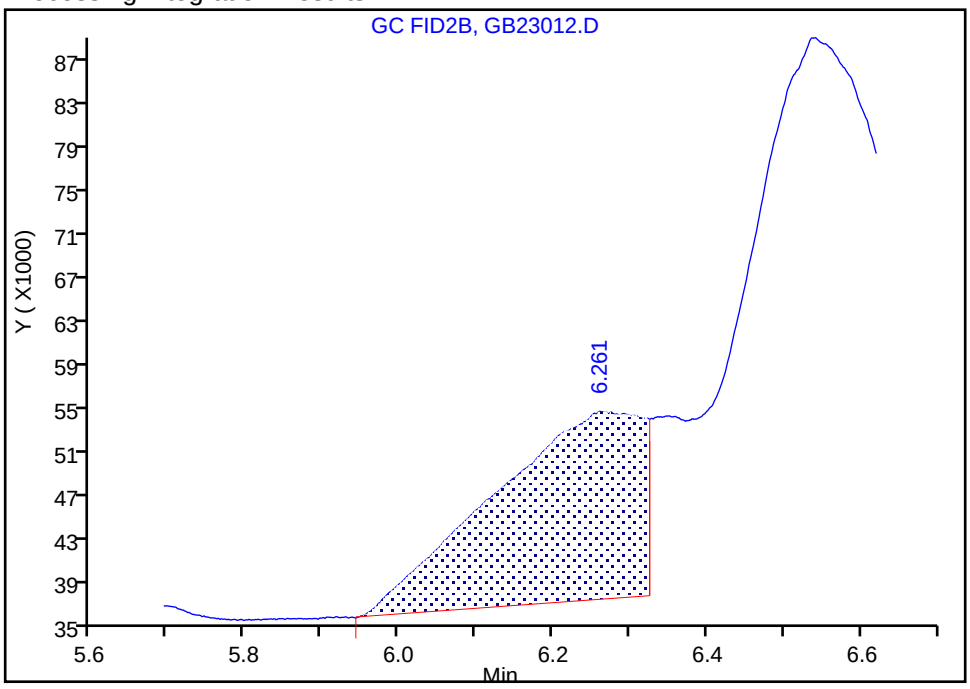
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23012.D				
Injection Date:	23-Feb-2023 20:49:13	Instrument ID:	CVGG2		
Lims ID:	icv gly				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

6 Propylene glycol, CAS: 57-55-6

Signal: 1

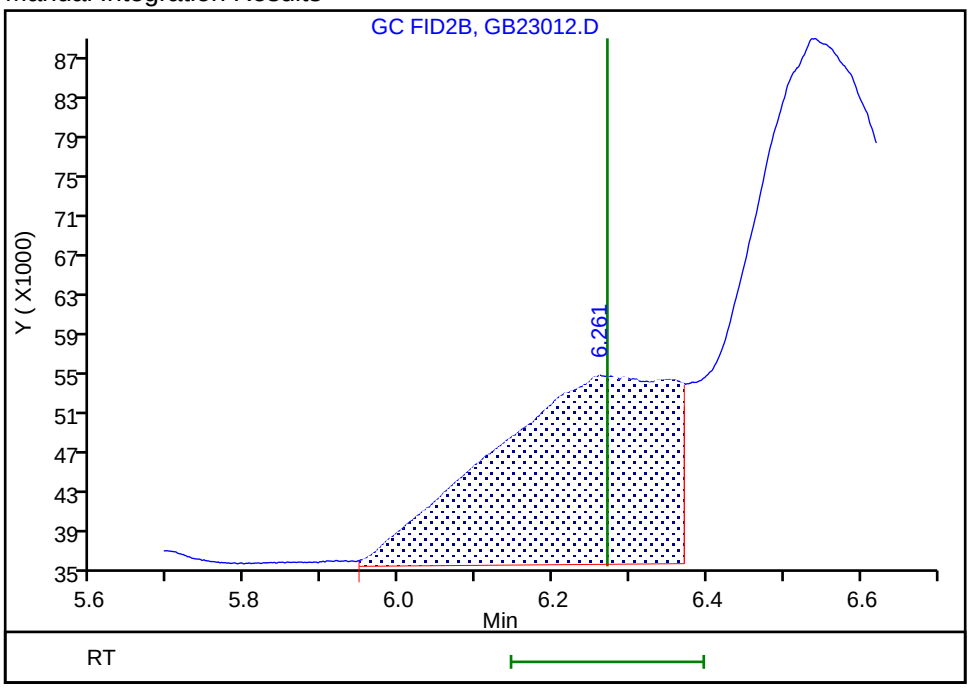
Processing Integration Results

RT: 6.26
Area: 230594
Amount: 11.910790
Amount Units: ug/ml



Manual Integration Results

RT: 6.26
Area: 310509
Amount: 16.311860
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:14:02
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

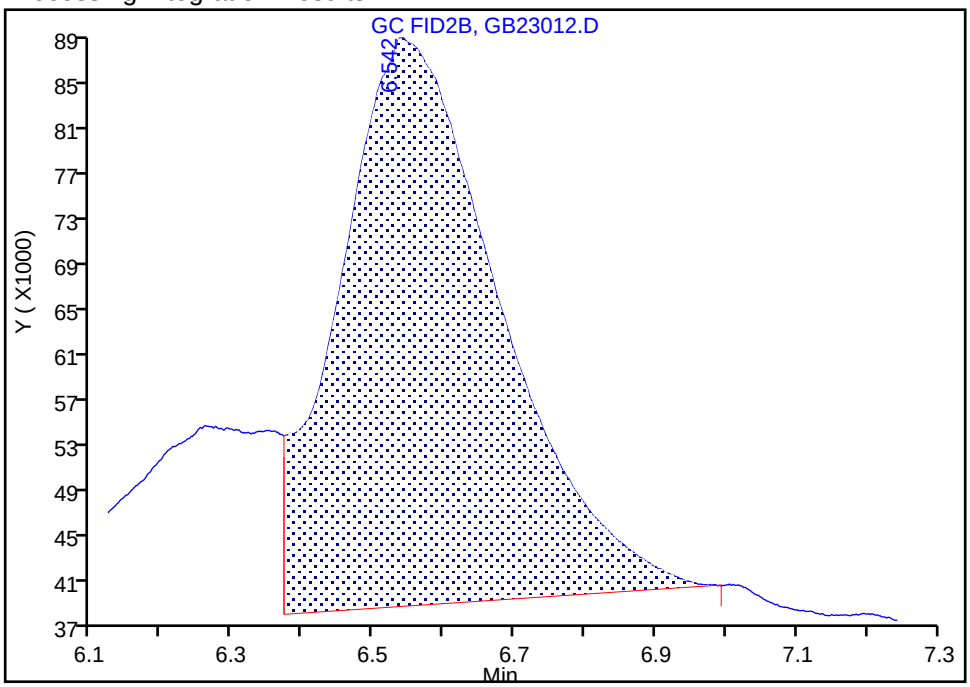
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23012.D				
Injection Date:	23-Feb-2023 20:49:13	Instrument ID:	CVGG2		
Lims ID:	icv gly				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

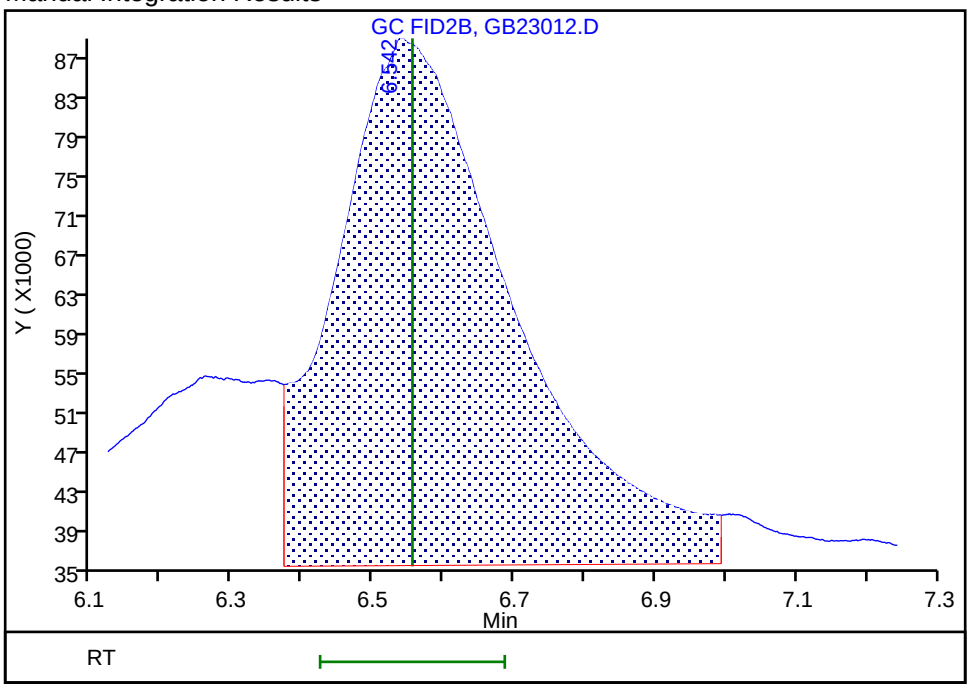
Processing Integration Results

RT: 6.54
Area: 786628
Amount: 15.544293
Amount Units: ug/ml



Manual Integration Results

RT: 6.54
Area: 922349
Amount: 18.846982
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:13:43
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

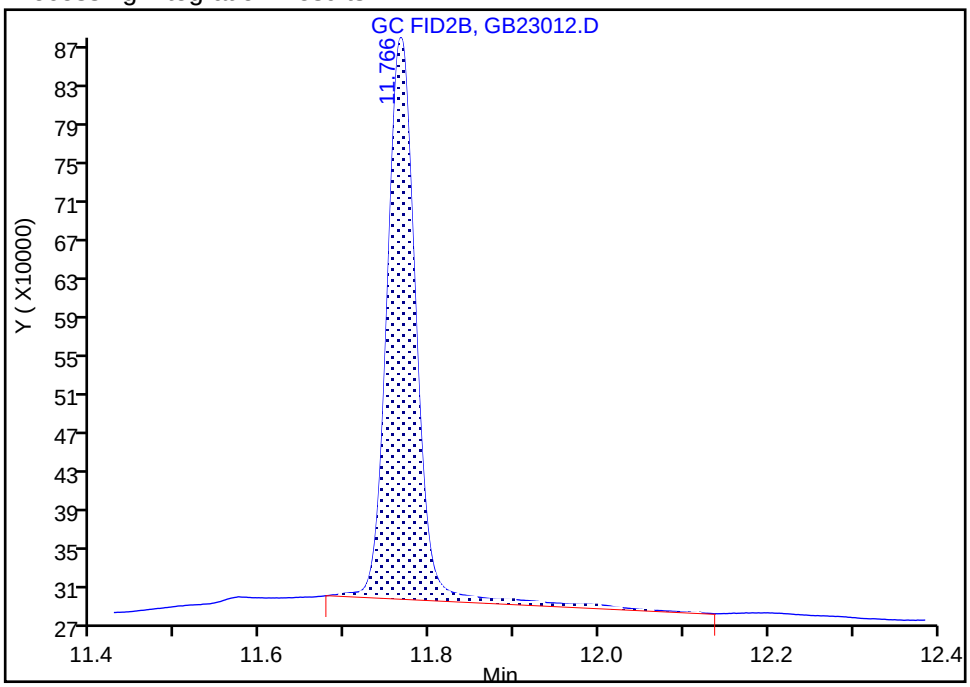
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23012.D
Injection Date: 23-Feb-2023 20:49:13 Instrument ID: CVGG2
Lims ID: icv gly
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

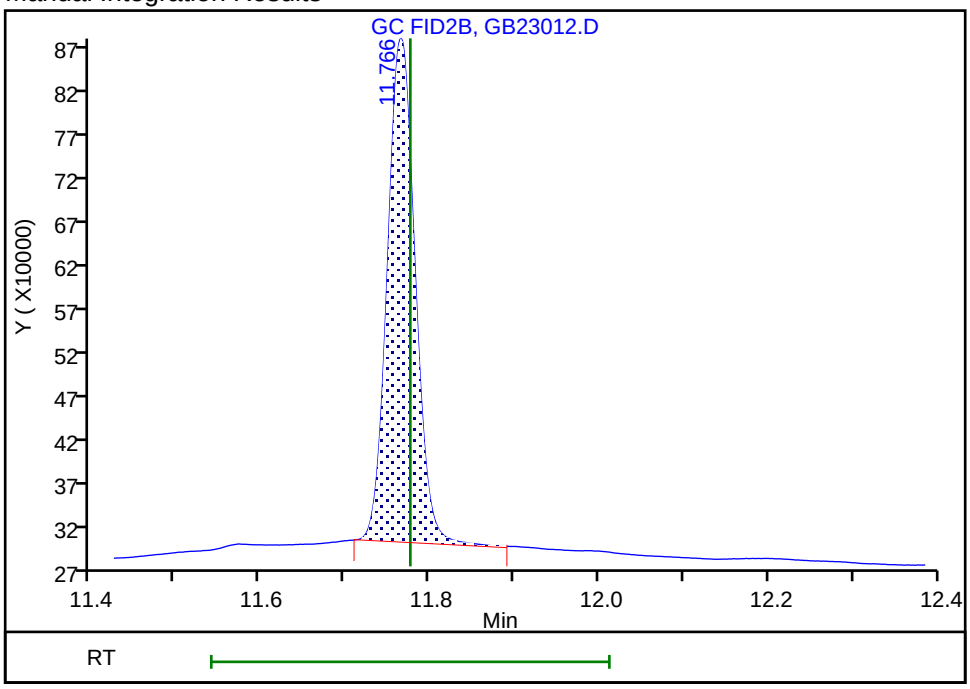
Processing Integration Results

RT: 11.77
Area: 1402705
Amount: 43.840765
Amount Units: ug/ml



Manual Integration Results

RT: 11.77
Area: 1315729
Amount: 41.122379
Amount Units: ug/ml



Reviewer: SK9U, 24-Feb-2023 11:17:17
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Lab Sample ID: CCVIS 680-765165/6 Calibration Date: 02/27/2023 14:32

Instrument ID: CVGG2 Calib Start Date: 02/23/2023 18:06

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 02/23/2023 20:25

Lab File ID: GB27006.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.6708		23.1	20.0	15.3	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.6484		22.4	20.0	12.2	20.0
2-Butoxyethanol	Lin2		0.7616		23.7	20.0	18.6	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0504		20.8	20.0	4.2	20.0
Propylene glycol	Qua		0.1377		13.4	20.0	-32.8*	20.0
Ethylene glycol	Ave	0.5213	0.4323		16.6	20.0	-17.1	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.5806		21.1	20.0	5.4	20.0
2,2'-Oxybisethanol	Lin1		0.2286		13.1	20.0	-34.3*	20.0
Triethylene Glycol	Ave	0.3216	0.2318		14.4	20.0	-27.9*	20.0
Tetraethylene Glycol	Ave	0.3408	0.2407		28.2	40.0	-29.4*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Lab Sample ID: CCVIS 680-765165/6 Calibration Date: 02/27/2023 14:32

Instrument ID: CVGG2 Calib Start Date: 02/23/2023 18:06

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 02/23/2023 20:25

Lab File ID: GB27006.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.92	2.86	2.98
4-Hydroxy-4-methyl-2-pentanone	3.48	3.41	3.55
2-Butoxyethanol	3.77	3.69	3.84
Dipropylene Glycol Methyl Ether	5.15	5.05	5.26
Propylene glycol	6.36	6.23	6.48
Ethylene glycol	6.55	6.42	6.68
2-(2-Butoxyethoxy)ethanol	8.42	8.25	8.59
2,2'-Oxybisethanol	9.60	9.41	9.80
Triethylene Glycol	10.63	10.42	10.84
Tetraethylene Glycol	11.77	11.53	12.00

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27006.D
Lims ID: ccvis g4
Client ID:
Sample Type: CCVIS
Inject. Date: 27-Feb-2023 14:32:23 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084081-006
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 27-Feb-2023 15:21:27 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1668

First Level Reviewer: SWK1 Date: 27-Feb-2023 15:04:21

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.920	2.920	0.000	1404321	20.0	23.1	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.480	3.480	0.000	1357336	20.0	22.4	
	3 2-Butoxyethanol						
	3.768	3.768	0.000	1594512	20.0	23.7	
*	4 n-Heptyl Alcohol						
	4.214	4.214	0.000	5233747	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.152	5.152	0.000	105567	20.0	20.8	
	6 Propylene glycol						M
	6.357	6.357	0.000	288263	20.0	13.4	M
	7 Ethylene glycol						M
	6.548	6.548	0.000	905097	20.0	16.6	M
	8 2-(2-Butoxyethoxy)ethanol						M
	8.421	8.421	0.000	1215568	20.0	21.1	M
	9 2,2'-Oxybisethanol						
	9.603	9.603	0.000	478473	20.0	13.1	
	10 Triethylene Glycol						
	10.630	10.630	0.000	485227	20.0	14.4	
	11 Tetraethylene Glycol						
	11.768	11.768	0.000	1007765	40.0	28.2	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated

Reagents:

SG_Gly_CAL_00048	Amount Added:	0.01	Units: mL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

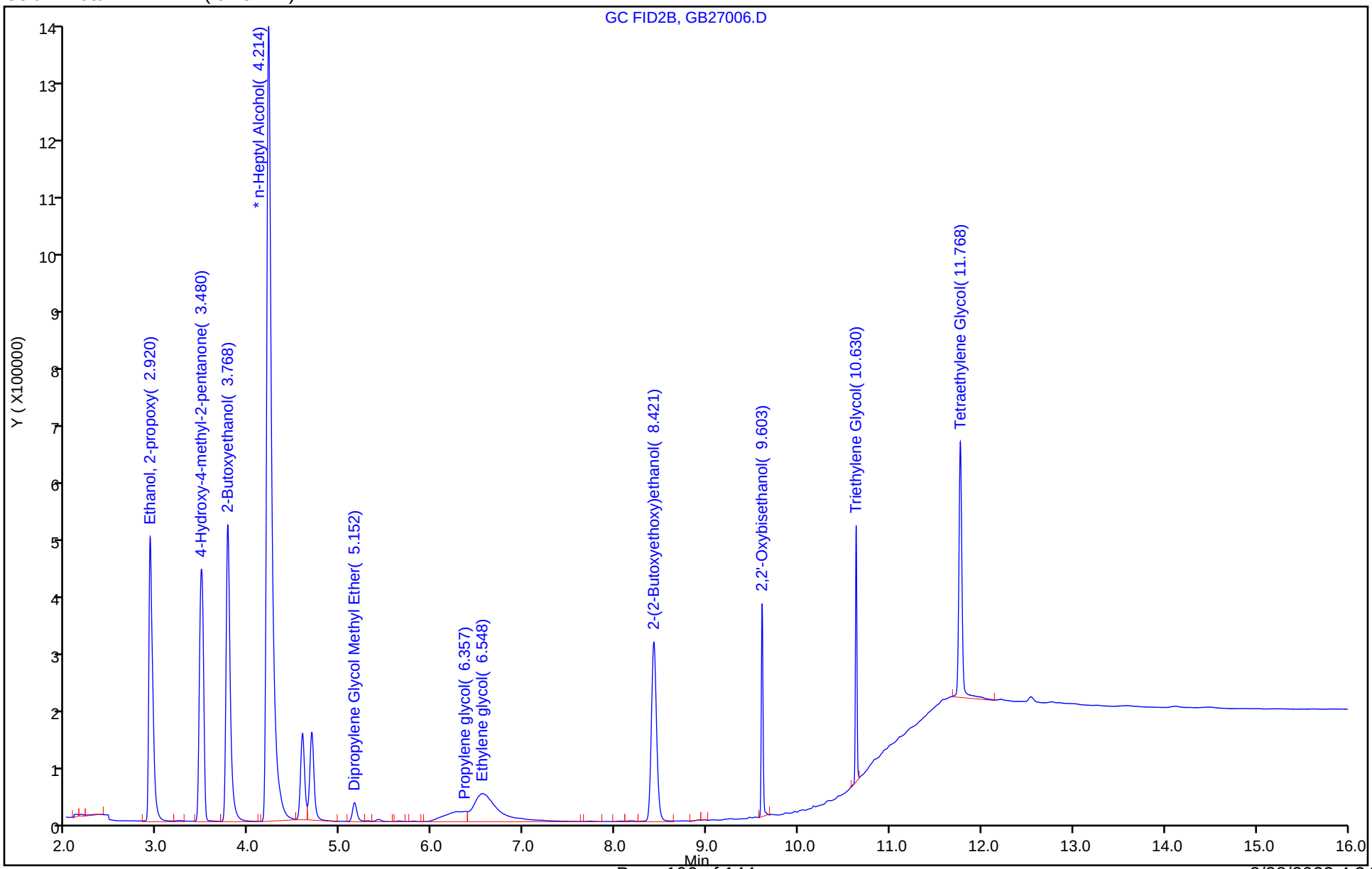
Report Date: 27-Feb-2023 15:21:27 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27006.D

Injection Date:	27-Feb-2023 14:32:23	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ccvis g4			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)



2/28/2023 4:34 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

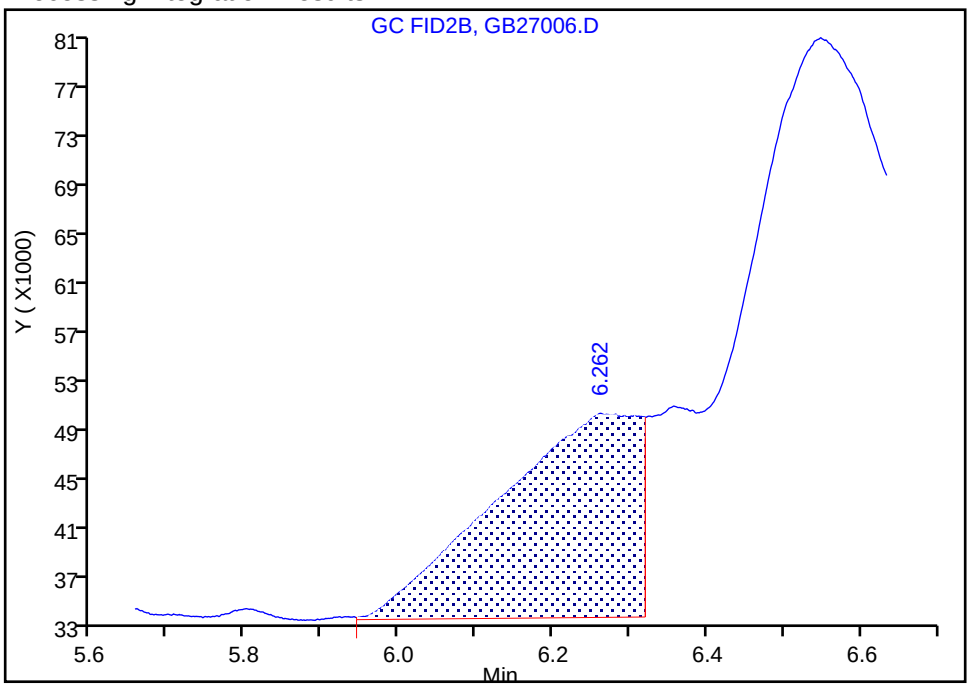
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27006.D
Injection Date: 27-Feb-2023 14:32:23 Instrument ID: CVGG2
Lims ID: ccvis g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

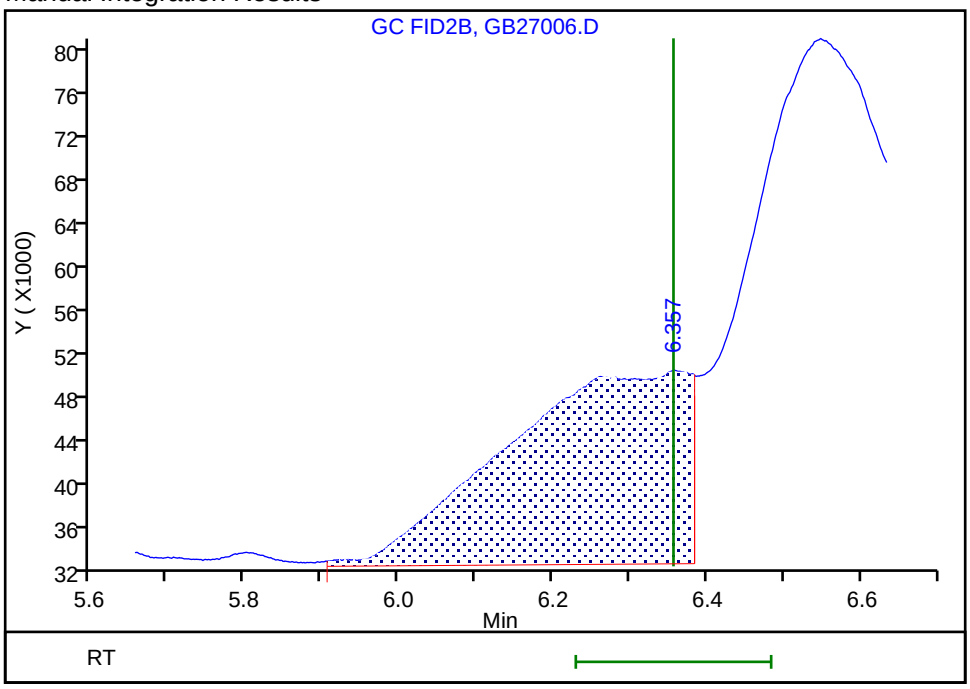
Processing Integration Results

RT: 6.26
Area: 212540
Amount: 9.703396
Amount Units: ug/ml



Manual Integration Results

RT: 6.36
Area: 288263
Amount: 13.449823
Amount Units: ug/ml



Reviewer: SWK1, 27-Feb-2023 15:04:18
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

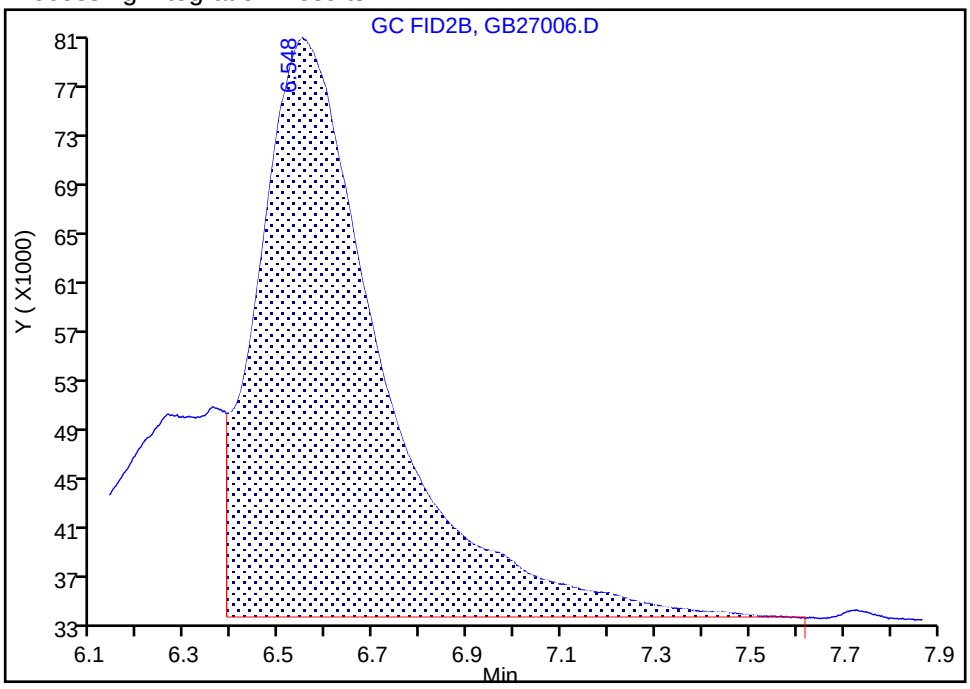
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27006.D				
Injection Date:	27-Feb-2023 14:32:23	Instrument ID:	CVGG2		
Lims ID:	ccvis g4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

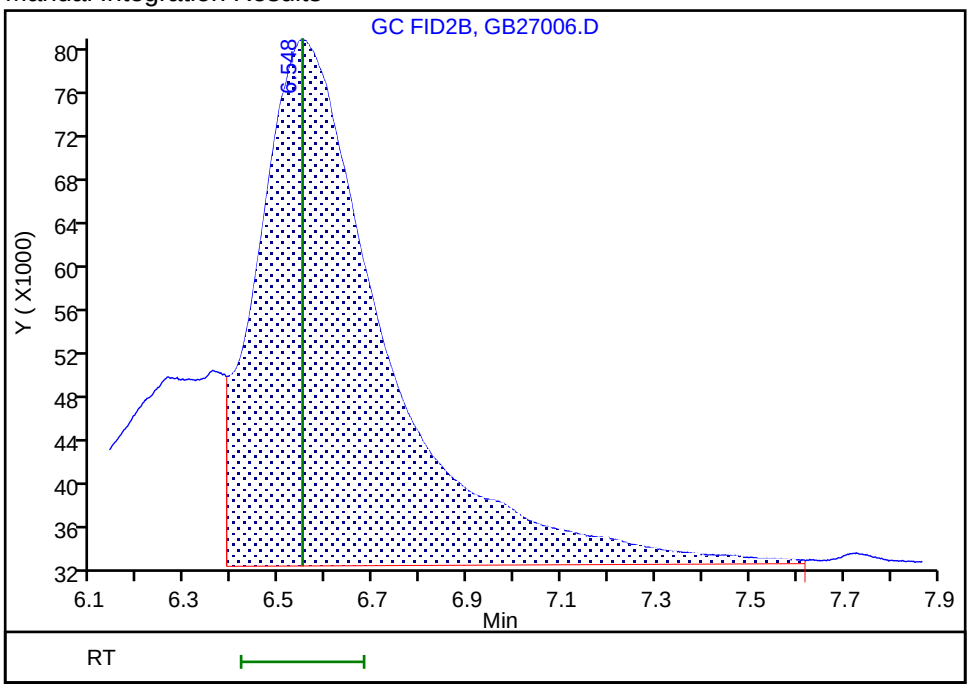
Processing Integration Results

RT: 6.55
Area: 873246
Amount: 16.002027
Amount Units: ug/ml



Manual Integration Results

RT: 6.55
Area: 905097
Amount: 16.585689
Amount Units: ug/ml



Reviewer: SWK1, 27-Feb-2023 15:04:18
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

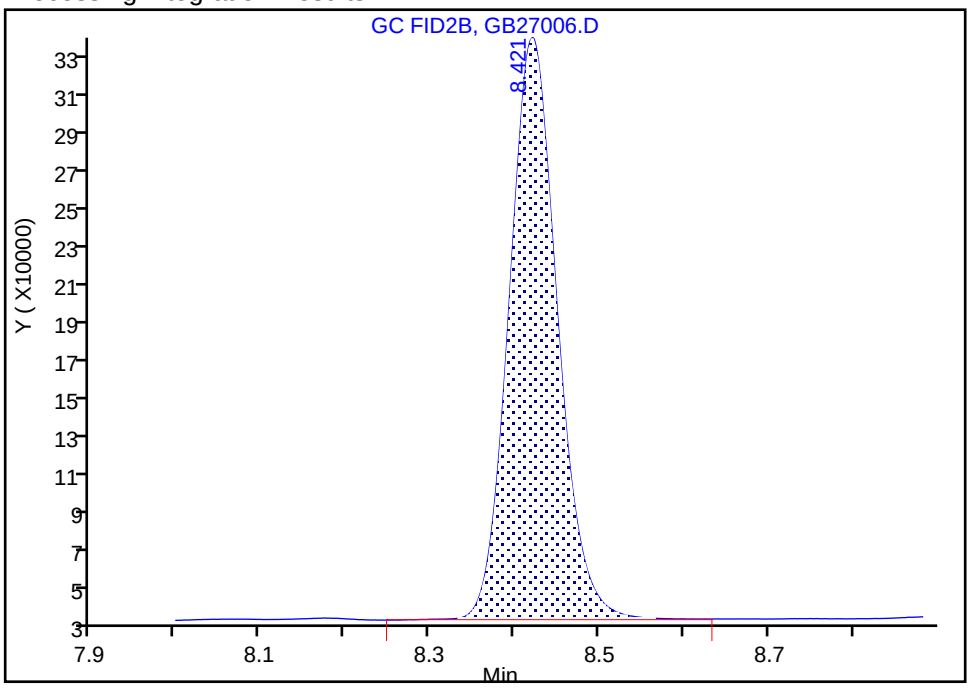
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27006.D
Injection Date: 27-Feb-2023 14:32:23 Instrument ID: CVGG2
Lims ID: ccvis g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

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

Signal: 1

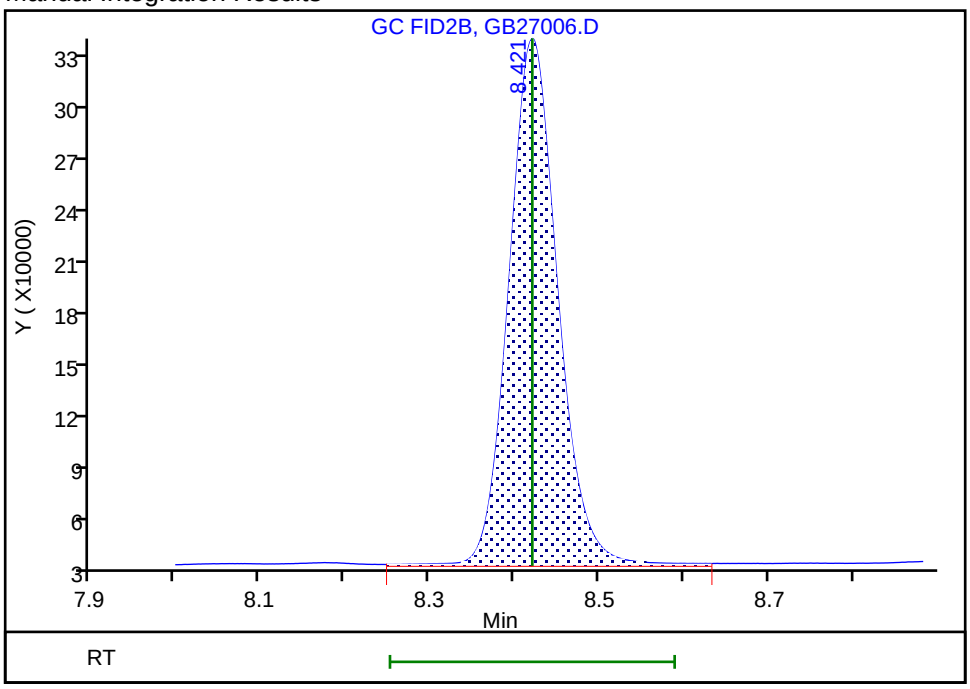
Processing Integration Results

RT: 8.42
Area: 1199825
Amount: 20.798894
Amount Units: ug/ml



Manual Integration Results

RT: 8.42
Area: 1215568
Amount: 21.088911
Amount Units: ug/ml



Reviewer: SWK1, 27-Feb-2023 15:04:18
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Lab Sample ID: CCV 680-765165/18 Calibration Date: 02/27/2023 19:13

Instrument ID: CVGG2 Calib Start Date: 02/23/2023 18:06

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 02/23/2023 20:25

Lab File ID: GB27018.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.7204		24.8	20.0	24.2*	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.6841		23.7	20.0	18.6	20.0
2-Butoxyethanol	Lin2		0.8171		25.5	20.0	27.6*	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0551		22.9	20.0	14.3	20.0
Propylene glycol	Qua		0.1413		13.8	20.0	-30.9*	20.0
Ethylene glycol	Ave	0.5213	0.4342		16.7	20.0	-16.7	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.6114		22.3	20.0	11.4	20.0
2,2'-Oxybisethanol	Lin1		0.2305		13.3	20.0	-33.7*	20.0
Triethylene Glycol	Ave	0.3216	0.2220		13.8	20.0	-31.0*	20.0
Tetraethylene Glycol	Ave	0.3408	0.1789		21.0	40.0	-47.5*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Lab Sample ID: CCV 680-765165/18 Calibration Date: 02/27/2023 19:13

Instrument ID: CVGG2 Calib Start Date: 02/23/2023 18:06

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 02/23/2023 20:25

Lab File ID: GB27018.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.92	2.86	2.97
4-Hydroxy-4-methyl-2-pentanone	3.47	3.41	3.54
2-Butoxyethanol	3.76	3.69	3.84
Dipropylene Glycol Methyl Ether	5.15	5.04	5.25
Propylene glycol	6.36	6.23	6.49
Ethylene glycol	6.55	6.42	6.68
2-(2-Butoxyethoxy)ethanol	8.42	8.25	8.59
2,2'-Oxybisethanol	9.60	9.41	9.80
Triethylene Glycol	10.63	10.42	10.84
Tetraethylene Glycol	11.77	11.54	12.01

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27018.D
Lims ID: ccv g4
Client ID:
Sample Type: CCV
Inject. Date: 27-Feb-2023 19:13:43 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084081-018
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Feb-2023 10:29:57 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

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

First Level Reviewer: SWK1 Date: 28-Feb-2023 10:29:45

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.915	2.915	0.000	1430715	20.0	24.8	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.474	3.474	0.000	1358527	20.0	23.7	
	3 2-Butoxyethanol						
	3.763	3.763	0.000	1622782	20.0	25.5	
*	4 n-Heptyl Alcohol						
	4.209	4.209	0.000	4964793	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.146	5.146	0.000	109374	20.0	22.9	
	6 Propylene glycol						M
	6.360	6.360	0.000	280590	20.0	13.8	M
	7 Ethylene glycol						M
	6.548	6.548	0.000	862318	20.0	16.7	M
	8 2-(2-Butoxyethoxy)ethanol						
	8.417	8.417	0.000	1214217	20.0	22.3	
	9 2,2'-Oxybisethanol						
	9.604	9.604	0.000	457838	20.0	13.3	
	10 Triethylene Glycol						
	10.631	10.631	0.000	440825	20.0	13.8	
	11 Tetraethylene Glycol						
	11.770	11.770	0.000	710465	40.0	21.0	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated

Reagents:

SG_Gly_CAL_00048	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

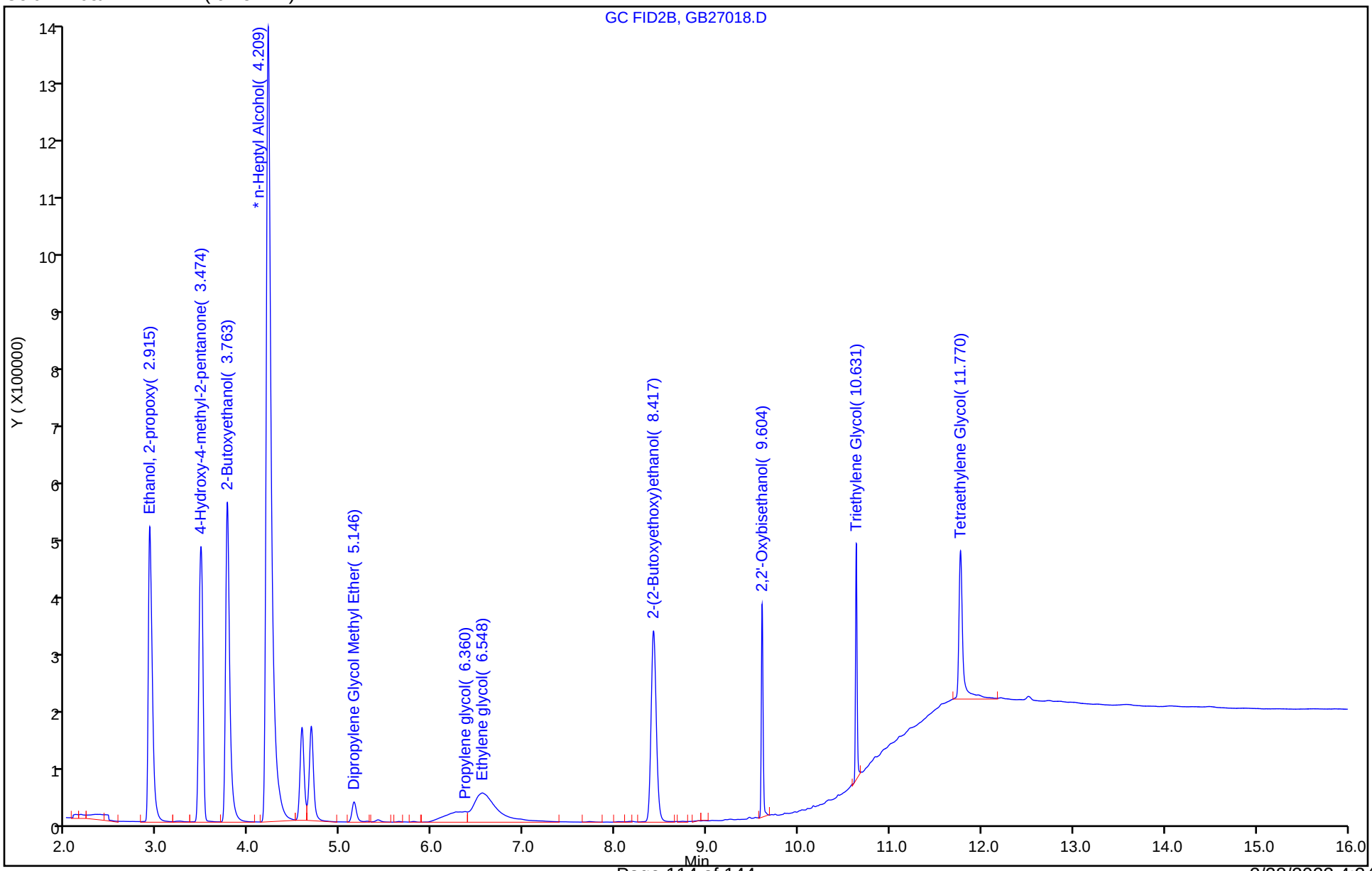
Report Date: 28-Feb-2023 10:29:57 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27018.D

Injection Date:	27-Feb-2023 19:13:43	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ccv g4			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)



2/28/2023 4:34 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

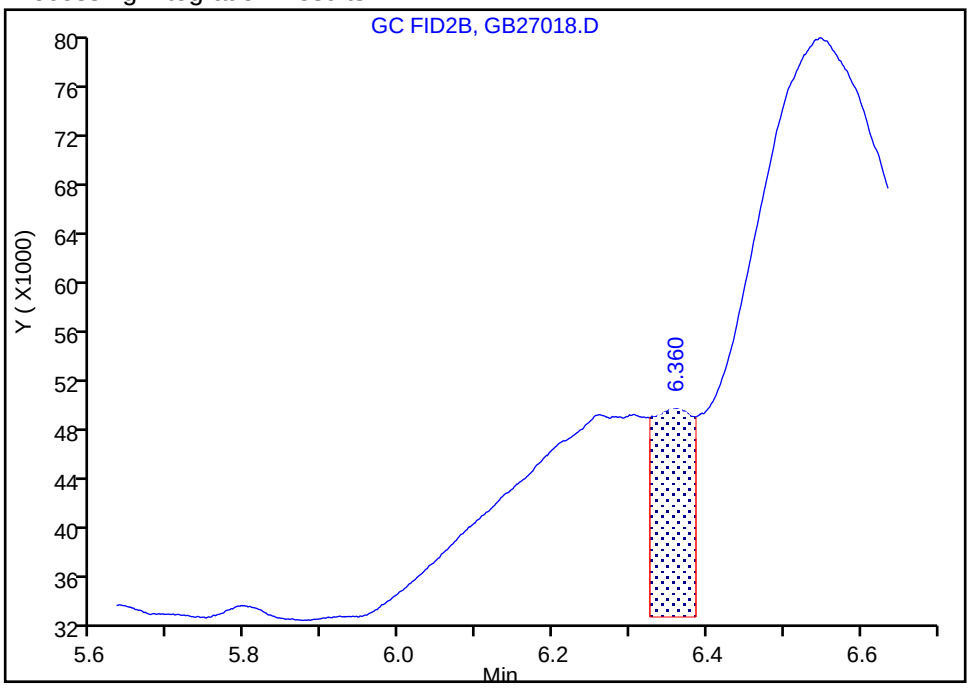
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27018.D
Injection Date: 27-Feb-2023 19:13:43 Instrument ID: CVGG2
Lims ID: ccv g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

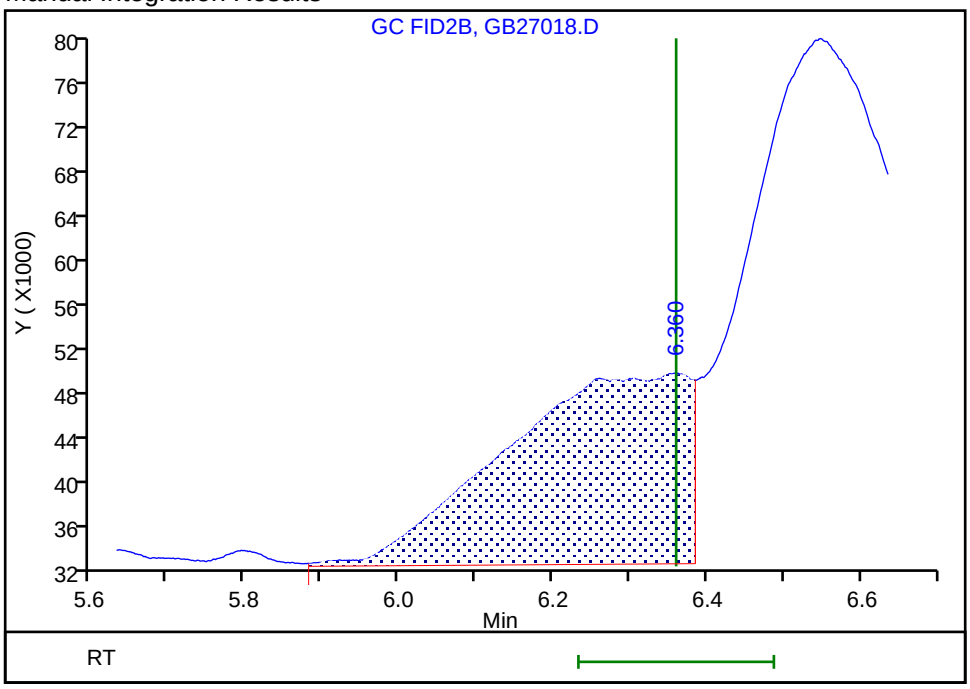
Processing Integration Results

RT: 6.36
Area: 59098
Amount: 2.983526
Amount Units: ug/ml



Manual Integration Results

RT: 6.36
Area: 280590
Amount: 13.821700
Amount Units: ug/ml



Reviewer: SWK1, 28-Feb-2023 10:29:43
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

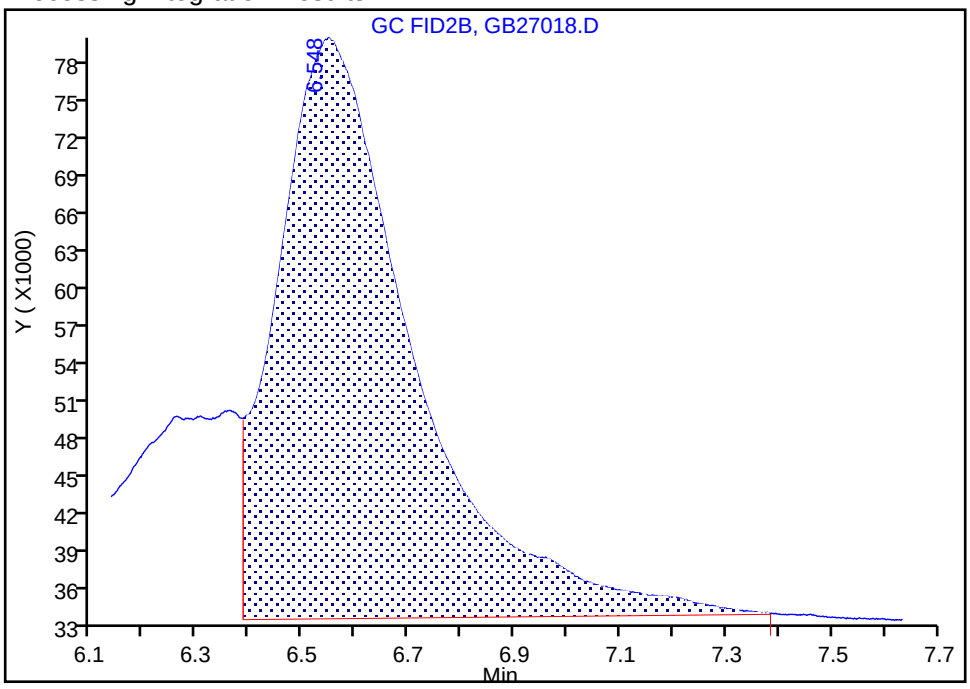
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27018.D				
Injection Date:	27-Feb-2023 19:13:43	Instrument ID:	CVGG2		
Lims ID:	ccv g4				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

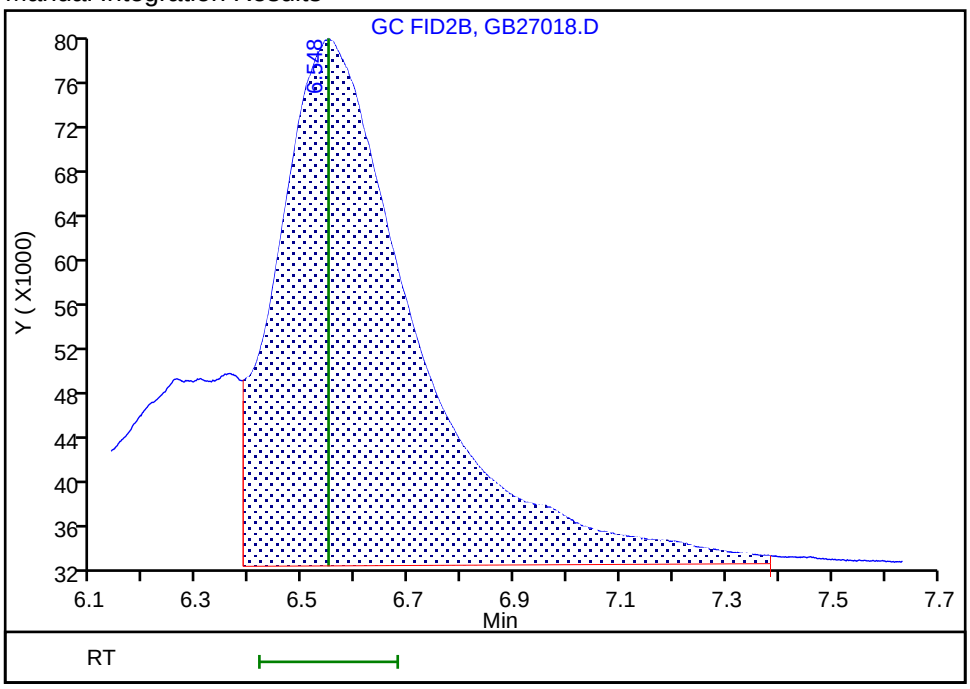
Processing Integration Results

RT: 6.55
Area: 831769
Amount: 15.555978
Amount Units: ug/ml



Manual Integration Results

RT: 6.55
Area: 862318
Amount: 16.657792
Amount Units: ug/ml



Reviewer: SWK1, 28-Feb-2023 10:29:43
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 680-765165/10

Matrix: Water Lab File ID: GB27010.D

Analysis Method: 8015C GLY Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/27/2023 16:06

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.: 765165 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\20230227-84081.b\GB27010.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	27-Feb-2023 16:06:15	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0084081-010				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	27-Feb-2023 16:29:56	Calib Date:	23-Feb-2023 20:25:53		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1668				

First Level Reviewer: SWK1 Date: 27-Feb-2023 16:29:56

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
4.210	4.214	-0.004	5046573	50.0	50.0	

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

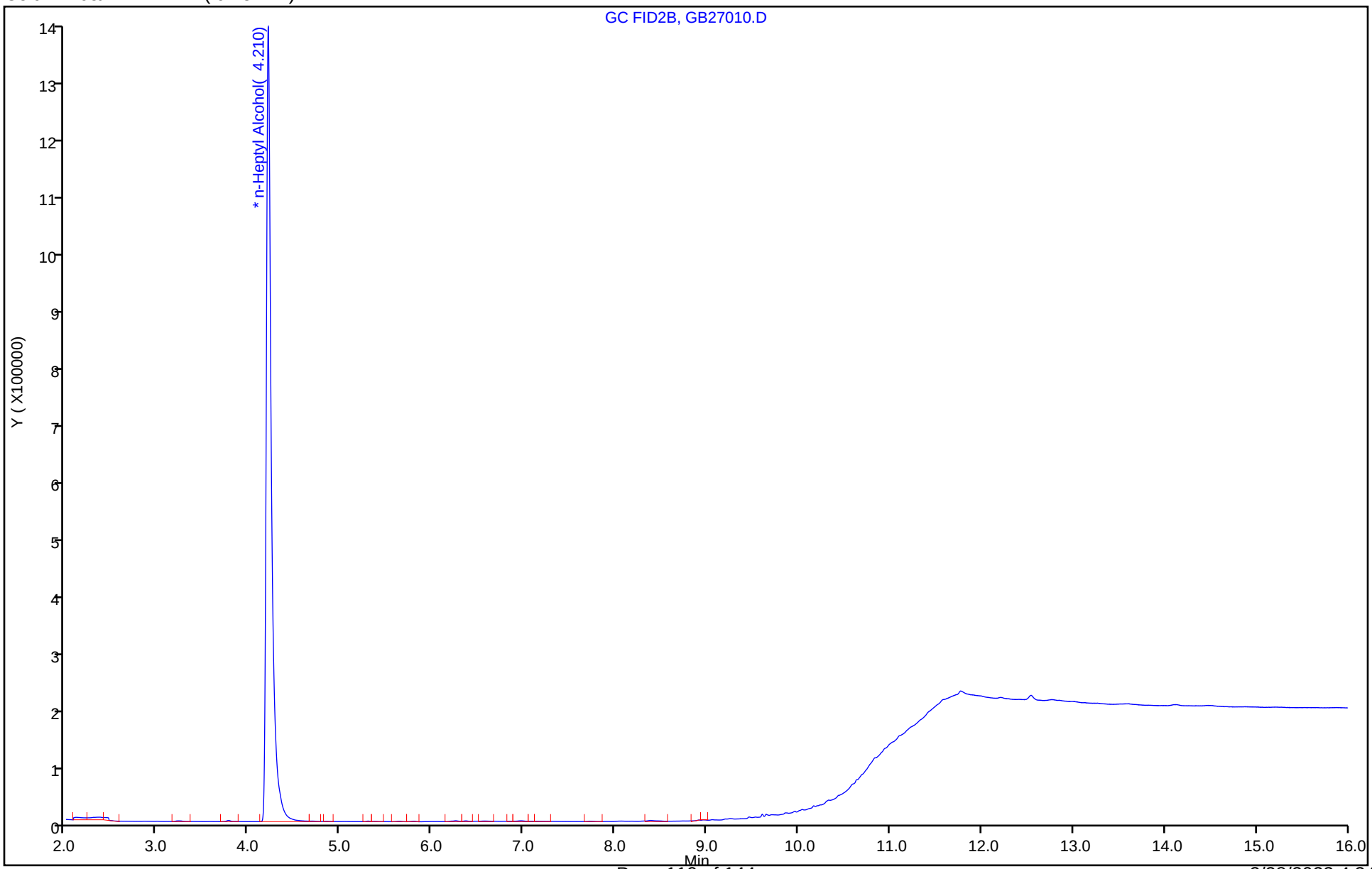
Report Date: 27-Feb-2023 16:29:56 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27010.D

Injection Date:	27-Feb-2023 16:06:15	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)



2/28/2023 4:34 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 680-765165/1006

Matrix: Water Lab File ID: -GB27006-LCS.d

Analysis Method: 8015C GLY Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/27/2023 14:32

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.: 765165 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	21.1	M	5.0	3.0	1.1

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\-GB27006-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 27-Feb-2023 14:32:23 ALS Bottle#: 0 Worklist Smp#: 1006
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084081-006
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 27-Feb-2023 15:21:27 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1668

First Level Reviewer: SWK1 Date: 27-Feb-2023 15:04:21

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.920	2.920	0.000	1404321	20.0	23.1	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.480	3.480	0.000	1357336	20.0	22.4	
	3 2-Butoxyethanol						
	3.768	3.768	0.000	1594512	20.0	23.7	
*	4 n-Heptyl Alcohol						
	4.214	4.214	0.000	5233747	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.152	5.152	0.000	105567	20.0	20.8	
	6 Propylene glycol						M
	6.357	6.357	0.000	288263	20.0	13.4	M
	7 Ethylene glycol						M
	6.548	6.548	0.000	905097	20.0	16.6	M
	8 2-(2-Butoxyethoxy)ethanol						M
	8.421	8.421	0.000	1215568	20.0	21.1	M
	9 2,2'-Oxybisethanol						
	9.603	9.603	0.000	478473	20.0	13.1	
	10 Triethylene Glycol						
	10.630	10.630	0.000	485227	20.0	14.4	
	11 Tetraethylene Glycol						
	11.768	11.768	0.000	1007765	40.0	28.2	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00048	Amount Added:	0.01	Units: mL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

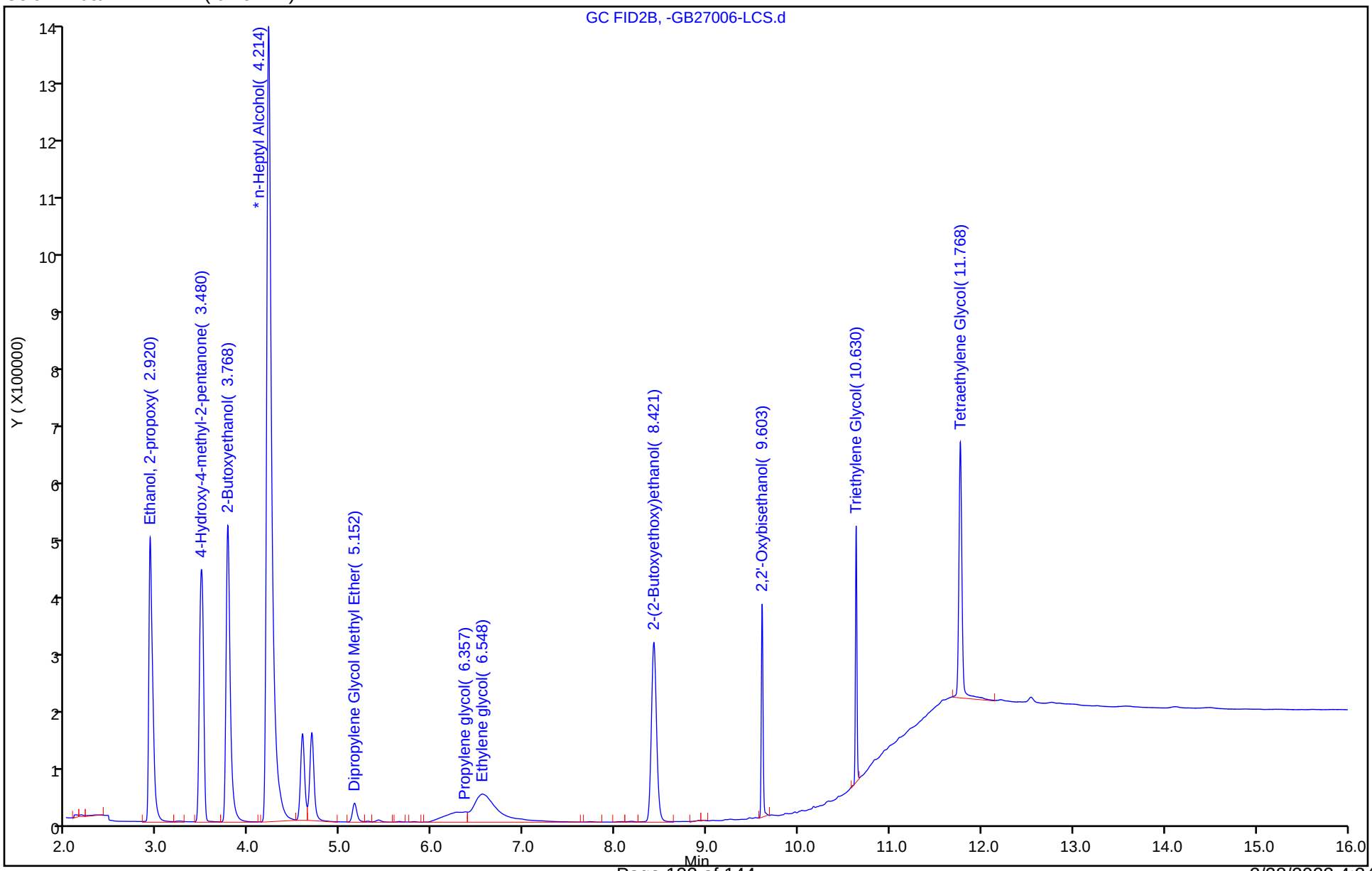
Report Date: 27-Feb-2023 15:21:27 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Environment Testing America

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\-GB27006-LCS.d

Injection Date:	27-Feb-2023 14:32:23	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1006
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)



2/28/2023 4:34 PM

Manual Integration/User Assign Peak Report

Eurofins Environment Testing America

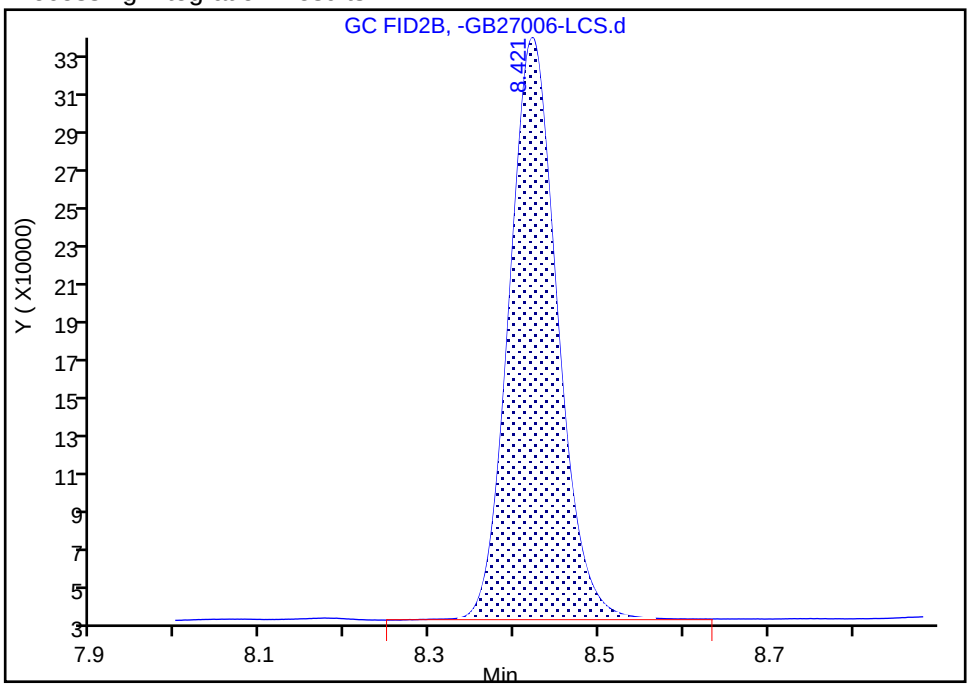
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\-GB27006-LCS.d
Injection Date: 27-Feb-2023 14:32:23 Instrument ID: CVGG2
Lims ID: LCS
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1006
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

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

Signal: 1

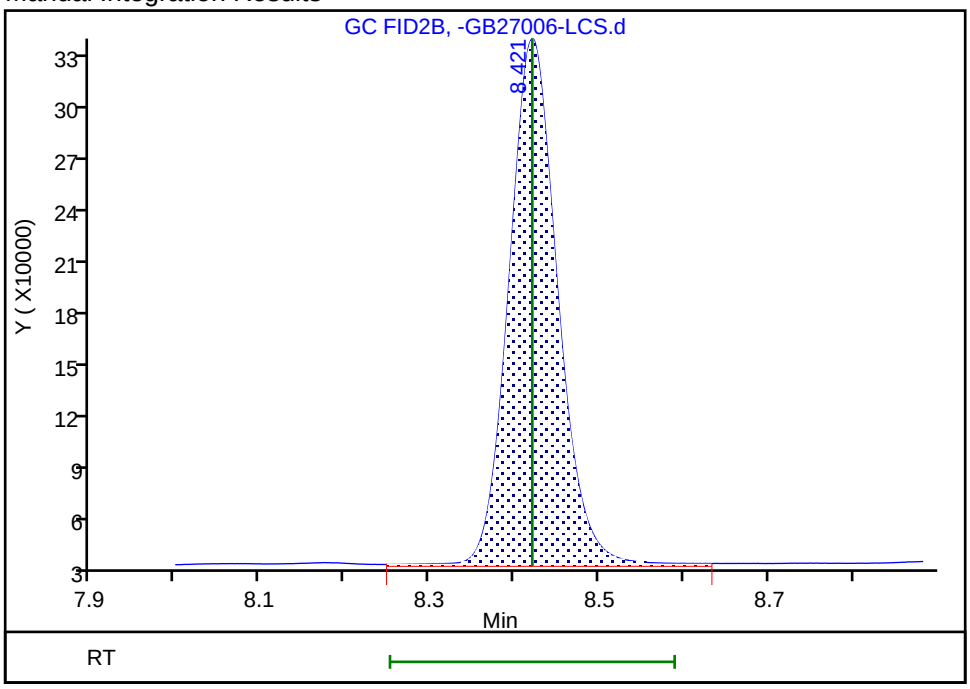
Processing Integration Results

RT: 8.42
Area: 1199825
Amount: 20.798894
Amount Units: ug/ml



Manual Integration Results

RT: 8.42
Area: 1215568
Amount: 21.088911
Amount Units: ug/ml



Reviewer: SWK1, 27-Feb-2023 15:04:18
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 680-765165/7

Matrix: Water Lab File ID: GB27007.D

Analysis Method: 8015C GLY Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/27/2023 14:55

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.: 765165 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	24.3		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27007.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 27-Feb-2023 14:55:54 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084081-007
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 27-Feb-2023 15:21:27 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1668

First Level Reviewer: SWK1 Date: 27-Feb-2023 15:21:23

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Ethanol, 2-propoxy						
	2.922	2.920	0.002	1510124	20.0	26.3	
2	4-Hydroxy-4-methyl-2-pentanone						
	3.484	3.480	0.004	1502299	20.0	26.3	
3	2-Butoxyethanol						
	3.768	3.768	0.000	1641143	20.0	25.8	
*	4 n-Heptyl Alcohol						
	4.209	4.214	-0.005	4967770	50.0	50.0	
5	Dipropylene Glycol Methyl Ether						
	5.155	5.152	0.003	116033	20.0	24.3	
6	Propylene glycol						Ma
	6.365	6.357	0.008	288311	20.0	14.2	Ma
7	Ethylene glycol						Ma
	6.557	6.548	0.009	858341	20.0	16.6	Ma
8	2-(2-Butoxyethoxy)ethanol						
	8.421	8.421	0.000	1317167	20.0	24.3	
9	2,2'-Oxybisethanol						
	9.603	9.603	0.000	464678	20.0	13.5	
10	Triethylene Glycol						
	10.631	10.630	0.001	442563	20.0	13.9	
11	Tetraethylene Glycol						
	11.767	11.768	-0.001	962658	40.0	28.4	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00048	Amount Added:	0.01	Units: mL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

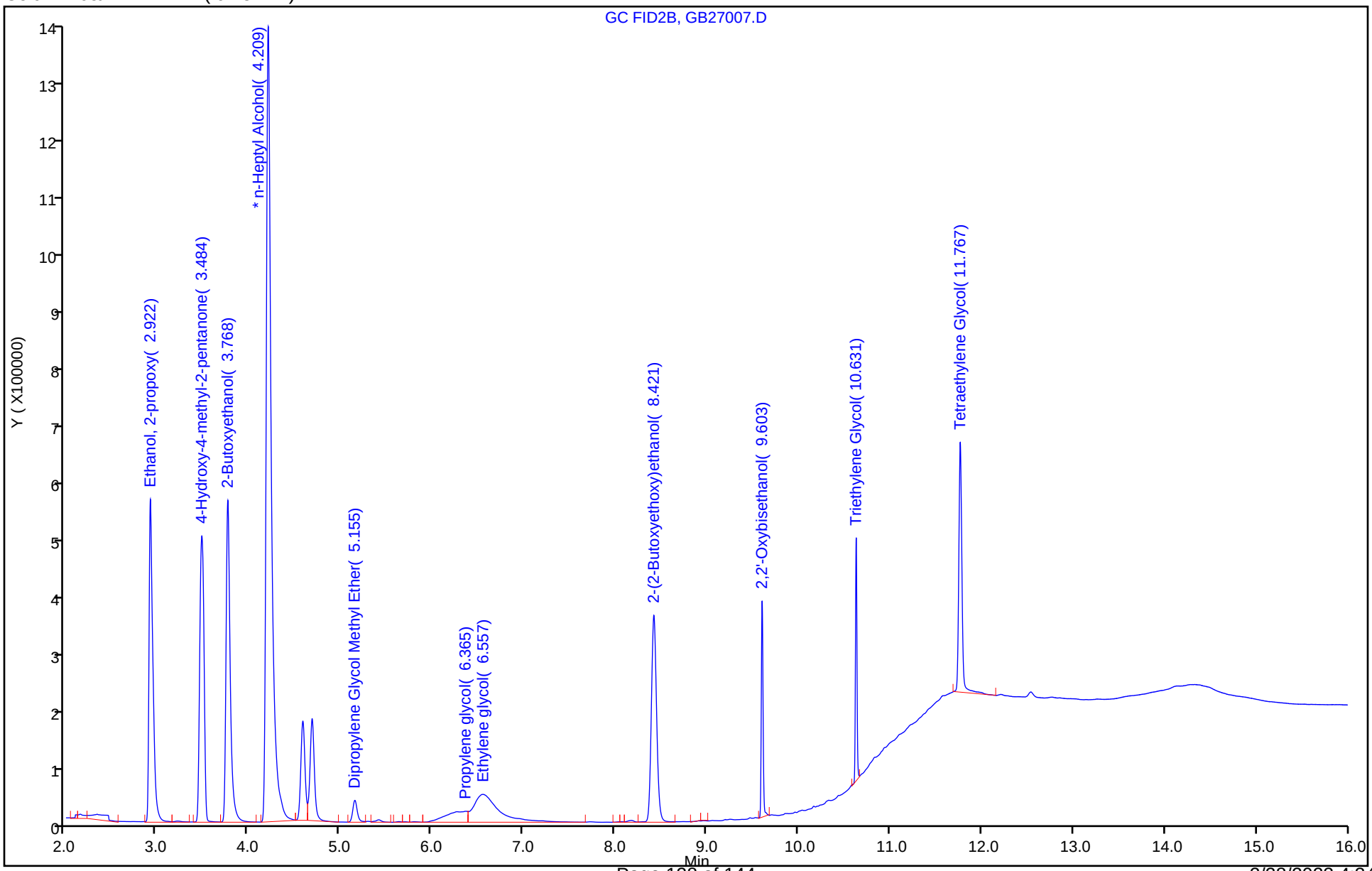
Report Date: 27-Feb-2023 15:21:28 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27007.D

Injection Date:	27-Feb-2023 14:55:54	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)



2/28/2023 4:34 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah | Job No.: 580-123711-1

SDG No.:

Client Sample ID: AF-RHMW225401-WGN01B-2302 W2 MS | Lab Sample ID: 580-123711-1 MS

Matrix: Water | Lab File ID: GB27015.D

Analysis Method: 8015C GLY | Date Collected: 02/15/2023 12:10

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 02/27/2023 18:03

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.: 765165 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.2		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27015.D
Lims ID: 580-123711-C-1 MS
Client ID:
Sample Type: MS
Inject. Date: 27-Feb-2023 18:03:25 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084081-015
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Feb-2023 10:29:45 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

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

First Level Reviewer: SWK1 Date: 28-Feb-2023 10:29:13

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.915	2.915	0.000	1466223	20.0	22.5	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.476	3.474	0.002	1402941	20.0	21.7	
	3 2-Butoxyethanol						
	3.762	3.763	-0.001	1607856	20.0	22.3	
*	4 n-Heptyl Alcohol						
	4.210	4.209	0.001	5597533	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.149	5.146	0.003	117441	20.0	21.7	
	6 Propylene glycol						
	6.299	6.360	-0.061	330915	20.0	14.5	
	7 Ethylene glycol						
	6.542	6.548	-0.006	857316	20.0	14.7	
	8 2-(2-Butoxyethoxy)ethanol						
	8.419	8.417	0.002	1188607	20.0	19.2	
	9 2,2'-Oxybisethanol						
	9.603	9.604	-0.001	320688	20.0	7.96	
	10 Triethylene Glycol						
	10.631	10.631	0.000	211739	20.0	5.88	
	11 Tetraethylene Glycol						
	11.767	11.770	-0.003	176434	40.0	4.62	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00048	Amount Added:	0.01	Units: mL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

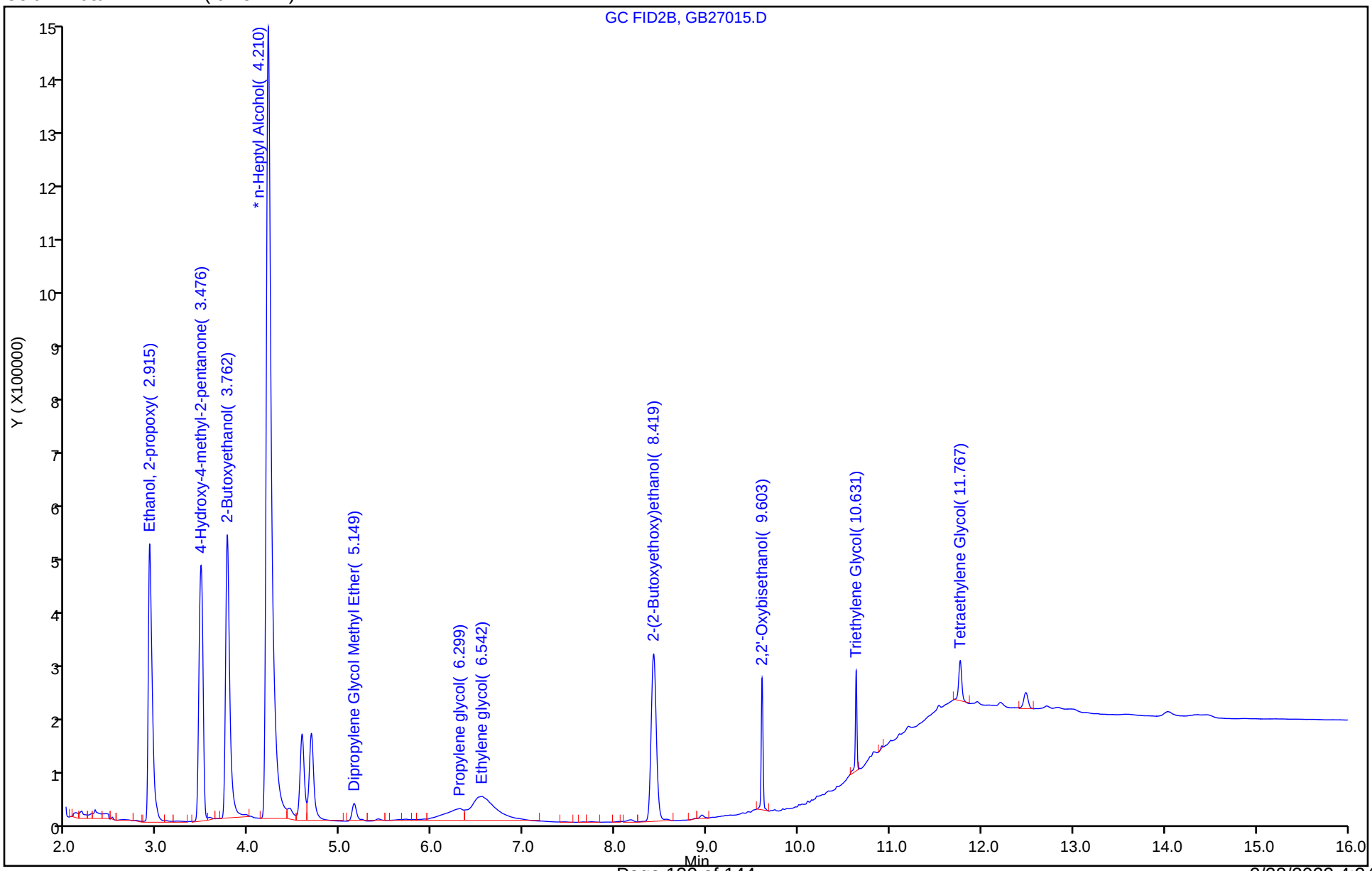
Report Date: 28-Feb-2023 10:29:56 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27015.D

Injection Date:	27-Feb-2023 18:03:25	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-123711-C-1 MS			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)



2/28/2023 4:34 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Client Sample ID: AF-RHMW225401-WGN01B-2302 W2 MSD Lab Sample ID: 580-123711-1 MSD

Matrix: Water Lab File ID: GB27016.D

Analysis Method: 8015C GLY Date Collected: 02/15/2023 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/27/2023 18:26

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.: 765165 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\20230227-84081.b\GB27016.D
Lims ID: 580-123711-C-1 MSD
Client ID:
Sample Type: MSD
Inject. Date: 27-Feb-2023 18:26:55 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084081-016
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Feb-2023 10:29:45 Calib Date: 23-Feb-2023 20:25:53
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23011.D

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

First Level Reviewer: SWK1 Date: 28-Feb-2023 10:29:17

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.914	2.915	-0.001	1432644	20.0	22.1	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.472	3.474	-0.002	1436945	20.0	22.4	
	3 2-Butoxyethanol						
	3.762	3.763	-0.001	1694392	20.0	23.8	
*	4 n-Heptyl Alcohol						
	4.211	4.209	0.002	5549430	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.147	5.146	0.001	122043	20.0	22.8	
	6 Propylene glycol						
	6.301	6.360	-0.059	349973	20.0	15.5	
	7 Ethylene glycol						
	6.525	6.548	-0.023	1006872	20.0	17.4	
	8 2-(2-Butoxyethoxy)ethanol						
	8.418	8.417	0.001	1222330	20.0	19.9	
	9 2,2'-Oxybisethanol						
	9.603	9.604	-0.001	503538	20.0	13.0	
	10 Triethylene Glycol						
	10.630	10.631	-0.001	387561	20.0	10.9	
	11 Tetraethylene Glycol						
	11.768	11.770	-0.002	368284	40.0	9.74	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00048	Amount Added:	0.01	Units: mL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

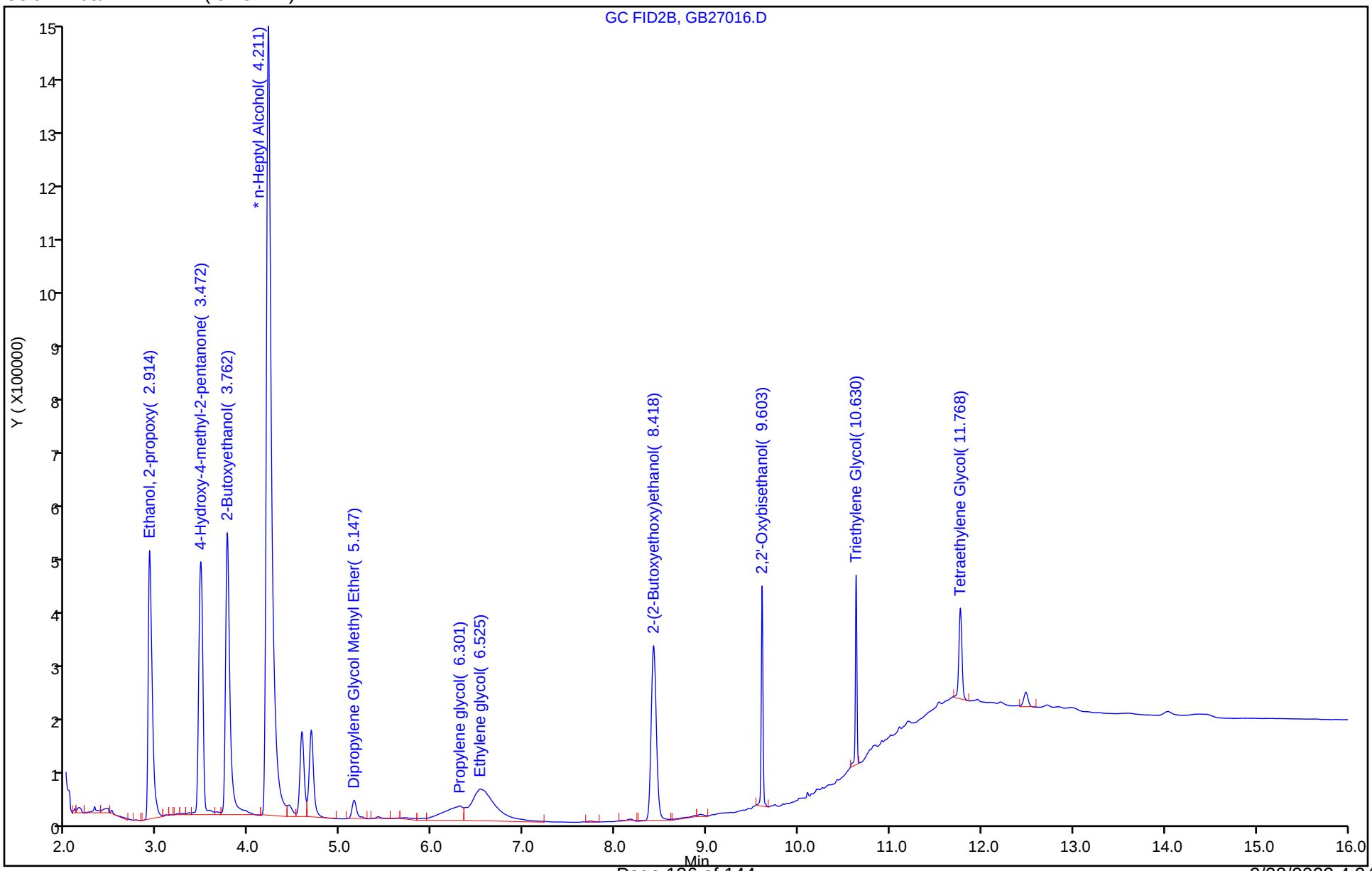
Report Date: 28-Feb-2023 10:29:56 Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230227-84081.b\GB27016.D

Injection Date:	27-Feb-2023 18:26:55	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-123711-C-1 MSD			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)



2/28/2023 4:34 PM

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Instrument ID: CVGG2 Start Date: 02/23/2023 18:06

Analysis Batch Number: 764742 End Date: 02/24/2023 02:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-764742/5		02/23/2023 18:06	1	GB23005.D	J&W DB WAX 0.45(mm)
IC 680-764742/6		02/23/2023 18:29	1	GB23006.D	J&W DB WAX 0.45(mm)
IC 680-764742/7		02/23/2023 18:53	1	GB23007.D	J&W DB WAX 0.45(mm)
ICIS 680-764742/8		02/23/2023 19:16	1	GB23008.D	J&W DB WAX 0.45(mm)
IC 680-764742/9		02/23/2023 19:39	1	GB23009.D	J&W DB WAX 0.45(mm)
IC 680-764742/10		02/23/2023 20:02	1	GB23010.D	J&W DB WAX 0.45(mm)
IC 680-764742/11		02/23/2023 20:25	1	GB23011.D	J&W DB WAX 0.45(mm)
ICV 680-764742/12 CCV		02/23/2023 20:49	1	GB23012.D	J&W DB WAX 0.45(mm)
ZZZZZ		02/23/2023 21:12	1		J&W DB WAX 0.45(mm)
ZZZZZ		02/23/2023 21:35	1		J&W DB WAX 0.45(mm)
ZZZZZ		02/23/2023 22:46	1		J&W DB WAX 0.45(mm)
ZZZZZ		02/23/2023 23:09	20		J&W DB WAX 0.45(mm)
ZZZZZ		02/23/2023 23:32	100		J&W DB WAX 0.45(mm)
ZZZZZ		02/23/2023 23:56	5		J&W DB WAX 0.45(mm)
ZZZZZ		02/24/2023 00:19	4		J&W DB WAX 0.45(mm)
ZZZZZ		02/24/2023 00:42	1		J&W DB WAX 0.45(mm)
ZZZZZ		02/24/2023 01:06	1		J&W DB WAX 0.45(mm)
ZZZZZ		02/24/2023 01:29	1		J&W DB WAX 0.45(mm)
ZZZZZ		02/24/2023 01:52	1		J&W DB WAX 0.45(mm)
CCV 680-764742/27		02/24/2023 02:39	1		J&W DB WAX 0.45(mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Instrument ID: CVGG2 Start Date: 02/27/2023 14:32

Analysis Batch Number: 765165 End Date: 02/27/2023 19:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-765165/6		02/27/2023 14:32	1	GB27006.D	J&W DB WAX 0.45(mm)
LCS 680-765165/1006		02/27/2023 14:32	1	-GB27006-LCS.d	J&W DB WAX 0.45(mm)
LCSD 680-765165/7		02/27/2023 14:55	1	GB27007.D	J&W DB WAX 0.45(mm)
MB 680-765165/10		02/27/2023 16:06	1	GB27010.D	J&W DB WAX 0.45(mm)
ZZZZZ		02/27/2023 16:53	100		J&W DB WAX 0.45(mm)
580-123711-1	AF-RHMW225401-WGN01B-2302W2	02/27/2023 17:40	1	GB27014.D	J&W DB WAX 0.45(mm)
580-123711-1 MS	AF-RHMW225401-WGN01B-2302W2 MS	02/27/2023 18:03	1	GB27015.D	J&W DB WAX 0.45(mm)
580-123711-1 MSD	AF-RHMW225401-WGN01B-2302W2 MSD	02/27/2023 18:26	1	GB27016.D	J&W DB WAX 0.45(mm)
CCV 680-765165/18		02/27/2023 19:13	1	GB27018.D	J&W DB WAX 0.45(mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Batch Number: 764742 Batch Start Date: 02/23/23 18:06 Batch Analyst: Meincke, Griffin E

Batch Method: 8015C GLY Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00048	SG_GLY_ISTD 00106	SG_GlyICV 00055		
IC 680-764742/5		8015C GLY		1 mL	50 uL	10 uL			
IC 680-764742/6		8015C GLY		1 mL	40 uL	10 uL			
IC 680-764742/7		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-764742/8		8015C GLY		1 mL	10 uL	10 uL			
IC 680-764742/9		8015C GLY		1 mL	5 uL	10 uL			
IC 680-764742/10		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-764742/11		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-764742/12 CCV		8015C GLY		1 mL		10 uL	10 uL		

Batch Notes	

Basis	Basis Description

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

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-123711-1

SDG No.:

Batch Number: 765165 Batch Start Date: 02/27/23 14:32 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 00048	SG_GLY_ISTD 00106			
CCVIS 680-765165/6		8015C GLY		1 mL	0.01 mL	10 uL			
LCSD 680-765165/7		8015C GLY		1 mL	0.01 mL	10 uL			
MB 680-765165/10		8015C GLY		1 mL		10 uL			
580-123711-C-1	AF-RHMW225401-WG N01B-2302W2	8015C GLY	T	1 mL		10 uL			
580-123711-C-1 MS	AF-RHMW225401-WG N01B-2302W2	8015C GLY	T	1 mL	0.01 mL	10 uL			
580-123711-C-1 MSD	AF-RHMW225401-WG N01B-2302W2	8015C GLY	T	1 mL	0.01 mL	10 uL			
CCV 680-765165/18		8015C GLY		1 mL	10 uL	10 uL			
LCS 680-765165/1006		8015C GLY		1 mL	0.01 mL	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: Oliver Shivery	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2302W2AFEA07
Client Contact:	Phone: 856-338-7710	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:	Analysis Requested		Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			Preservation Codes: A - HCL, 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)
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#:			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-~~HDM~~W225401-WGN01B-2302W2 (RH, DoD)	2/15/23	1210	G	W	N	N	X	3	

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

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

Special Instructions/QC Requirements: DOD QSM project.

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Oliver Shivery / AECOM	2/15/23 1610	AECOM	Miranda DeGarmo	2/15/23 1610	AECOM
Relinquished by: Miranda DeGarmo	Date/Time: 2/16/23 1405	Company AECOM	Received by:	Date/Time: 2/18/23 1830	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.4/5.4

Ver: 01/16/2019

2/28/2023 4:34 PM

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-123711-1

Login Number: 123711
List Number: 2
Creator: Johnson, Corey M

List Source: Eurofins Savannah
List Creation: 02/20/23 04:41 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	