



ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy

AECOM

1001 Bishop Street

Honolulu HI 96813

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JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-124122-1

Eurofins Seattle

Job Notes

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

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

Authorization



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Table of Contents

Cover Title Page	1
Data Summaries	5
Definitions	5
Case Narrative	6
Detection Summary	7
Client Sample Results	8
Default Detection Limits	9
QC Sample Results	10
QC Association	11
Chronicle	12
Certification Summary	13
Method Summary	14
Sample Summary	15
Manual Integration Summary	16
Reagent Traceability	19
COAs	20
Organic Sample Data	32
GC Semi VOA	32
Method 8015C - DAI Glycols	32
Method 8015C - DAI Glycols QC Summary	33
Method 8015C - DAI Glycols Sample Data	40
Standards Data	46
Method 8015C - DAI Glycols ICAL Data	46
Method 8015C - DAI Glycols CCAL Data	98
Raw QC Data	117
Method 8015C - DAI Glycols Blank Data	117

Table of Contents

Method 8015C - DAI Glycols LCS/LCSD Data	120
Method 8015C - DAI Glycols MS/MSD Data	127
Method 8015C - DAI Glycols Run Logs	135
Method 8015C - DAI Glycols Prep Data	137
Subcontracted Data	139
Shipping and Receiving Documents	140
Client Chain of Custody	141
Sample Receipt Checklist	143

Definitions/Glossary

Client: AECOM

Job ID: 580-124122-1

Project/Site: Red Hill - AFFF Assessment Sampling

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: 580-124122-1

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

The samples were received on 3/1/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1° C.

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

GLYCOLS

Samples AF-RHMW04-WGN01LF-2302W4 (580-124122-1) and AF-RHMW06-WGN01LF-2302W4 (580-124122-2) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 03/03/2023.

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

Detection Summary

Client: AECOM

Job ID: 580-124122-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW04-WGN01LF-2302W4

Lab Sample ID: 580-124122-1

☐ No Detections.

Client Sample ID: AF-RHMW06-WGN01LF-2302W4

Lab Sample ID: 580-124122-2

☐ No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AECOM

Job ID: 580-124122-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW04-WGN01LF-2302W4

Lab Sample ID: 580-124122-1

Date Collected: 02/27/23 10:45

Matrix: Water

Date Received: 03/01/23 10:30

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			03/03/23 19:12	1

Client Sample ID: AF-RHMW06-WGN01LF-2302W4

Lab Sample ID: 580-124122-2

Date Collected: 02/27/23 12:35

Matrix: Water

Date Received: 03/01/23 10:30

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	5.0	1.1	mg/L			03/03/23 19:35	1

Default Detection Limits

Client: AECOM

Job ID: 580-124122-1

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

QC Sample Results

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

Job ID: 580-124122-1

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

Lab Sample ID: MB 680-765944/10
Matrix: Water
Analysis Batch: 765944

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			03/03/23 17:02	1

Lab Sample ID: LCS 680-765944/6
Matrix: Water
Analysis Batch: 765944

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	17.9		mg/L		90	50 - 150

Lab Sample ID: LCSD 680-765944/7
Matrix: Water
Analysis Batch: 765944

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	16.4		mg/L		82	50 - 150	9	50

Lab Sample ID: 580-124122-1 MS
Matrix: Water
Analysis Batch: 765944

Client Sample ID: AF-RHMW04-WGN01LF-2302W4
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	20.3		mg/L		102	50 - 150

Lab Sample ID: 580-124122-1 MSD
Matrix: Water
Analysis Batch: 765944

Client Sample ID: AF-RHMW04-WGN01LF-2302W4
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	19.1		mg/L		95	50 - 150	6	50

QC Association Summary

Client: AECOM

Job ID: 580-124122-1

Project/Site: Red Hill - AFFF Assessment Sampling

GC Semi VOA

Analysis Batch: 765944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-124122-1	AF-RHMMW04-WGN01LF-2302W4	Total/NA	Water	8015C GLY	
580-124122-2	AF-RHMMW06-WGN01LF-2302W4	Total/NA	Water	8015C GLY	
MB 680-765944/10	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-765944/6	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-765944/7	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-124122-1 MS	AF-RHMMW04-WGN01LF-2302W4	Total/NA	Water	8015C GLY	
580-124122-1 MSD	AF-RHMMW04-WGN01LF-2302W4	Total/NA	Water	8015C GLY	

Lab Chronicle

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

Job ID: 580-124122-1

Client Sample ID: AF-RHMW04-WGN01LF-2302W4

Lab Sample ID: 580-124122-1

Date Collected: 02/27/23 10:45

Matrix: Water

Date Received: 03/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	765944	JCK	EET SAV	03/03/23 19:12

Client Sample ID: AF-RHMW06-WGN01LF-2302W4

Lab Sample ID: 580-124122-2

Date Collected: 02/27/23 12:35

Matrix: Water

Date Received: 03/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	765944	JCK	EET SAV	03/03/23 19:35

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM

Job ID: 580-124122-1

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: 580-124122-1

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
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124122-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-124122-1	AF-RHMW04-WGN01LF-2302W4	Water	02/27/23 10:45	03/01/23 10:30
580-124122-2	AF-RHMW06-WGN01LF-2302W4	Water	02/27/23 12:35	03/01/23 10:30

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-124122-1

SDG No.: _____

Instrument ID: CVGG2 Analysis Batch Number: 764742Lab 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.: 580-124122-1

SDG No.: _____

Instrument ID: CVGG2 Analysis Batch Number: 764742Lab 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.: 580-124122-1

SDG No.: _____

Instrument ID: CVGG2 Analysis Batch Number: 765944Lab Sample ID: MB 680-765944/10 Client Sample ID: _____Date Analyzed: 03/03/23 17:02 Lab File ID: GC03010.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	03/05/23 12:03

Lab Sample ID: 580-124122-1 Client Sample ID: AF-RHMMW04-WGN01LF-2302W4Date Analyzed: 03/03/23 19:12 Lab File ID: GC03012.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	03/05/23 12:03

Lab Sample ID: CCV 680-765944/22 Client Sample ID: _____Date Analyzed: 03/03/23 23:06 Lab File ID: GC03022.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.34	Baseline Smoothing	SWK1	03/05/23 12:05
Ethylene glycol	6.57	Baseline Smoothing	SWK1	03/05/23 12:05

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-124122-1

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



ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02

Rev 0

Certificate of Analysis

Page 1 of 3

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

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

Intended Uses:

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

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

Certificate of Analysis

Page 2 of 3

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

$u_c = (u_{\text{char}}^2 + u_{\text{tran}}^2 + u_{\text{homo}}^2 + u_{\text{its}}^2)^{1/2}$ 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:

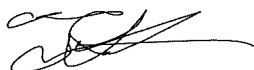


Brian Stokes

3 -May-2022

Production Chemist I

Certified By:



Tyler Sherman

14 -Jun-2022

Quality Control Chemist I

Released By:



Susan Mathews

14 -Jun-2022

Quality Control Team Lead

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

Certificate of Analysis

Page 3 of 3

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:

Brian Stokes

Brian Stokes

3 -May-2022

Production Chemist I

Certified By:

Tyler Sherman

Tyler Sherman

14 -Jun-2022

Quality Control Chemist I

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

Released By:

Susan Mathews

Susan Mathews

14 -Jun-2022

Quality Control Team Lead

Reagent

SG_GLY_ISTD_00106

Reference Material Certificate
Product Information Sheet

Product Name: Custom Standard

Lot Number: 0006720623

Product Number: CUS-6046

Lot Issue Date: 15-Dec-2022

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

Expiration Date: 31-Jan-2025

Component Name	CERTIFIED VALUES		CAS#	Analyte Lot
	Concentration	Expanded Uncertainty		
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:

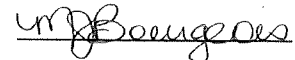
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise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



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



ISO 17034 Cert
No. AR-1936

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

Page: 2 of 2

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

ISO 17025

Reagent

SG_GlyICV_00055



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



ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02

Rev 0

Certificate of Analysis

Page 1 of 3

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

Description:

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

Container:

1 ml Ampule, Amber Glass

Certified Values:

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

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

Intended Uses:

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

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

Certificate of Analysis

Page 2 of 2

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: $\leq -10^{\circ}\text{C}$

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

$u_c = (u_{\text{char}}^2 + u_{\text{tran}}^2 + u_{\text{homo}}^2 + u_{\text{its}}^2)^{1/2}$ 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:



Jared Ball

1 -Jul-2021

Production Chemist I

Certified By:



Claire Desrochers

7 -Jul-2021

Quality Control Chemist I

Released By:



Susan Mathews

8 -Jul-2021

Quality Control Team Lead

7290B Investment Drive • North Charleston, SC 29418
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Certificate of Analysis

Page 3 of 3

Catalog No. G34-120070-04-SS

Lot No. 454407

Expiration Date 1-Jul-2023

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

Expiration Information:

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

Quality Standard Documentation:

- ISO/IEC 17025:2017 "General Requirements for the Competence of Testing and Calibration" - Chemical Testing - Accredited A2LA Certificate Number 3031.01
- ISO 17034:2016 "General Requirements for the Competence of Reference Material Producers" - Reference Material Production - Accredited A2LA Certificate Number 3031.02

Manufactured By:



Jared Ball

1-Jul-2021

Production Chemist I

Certified By:



Claire Desrochers

7-Jul-2021

Quality Control Chemist I

Released By:



Susan Mathews

8-Jul-2021

Quality Control Team Lead

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

Method 8015C – DAI Glycols

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

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: GC03006.D
Lab ID: LCS 680-765944/6 Client ID: _____

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy) ethanol	20.0	17.9	90	50-150	

Column to be used to flag recovery and RPD values

FORM III
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: GC03007.D
Lab ID: LCSD 680-765944/7 Client ID: _____

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	16.4	82	9	50	50-150	

Column to be used to flag recovery and RPD values

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: GC03019.D
Lab ID: 580-124122-1 MS Client ID: AF-RHMW04-WGN01LF-2302W4 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	20.3	102	50-150	

Column to be used to flag recovery and RPD values

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: GC03020.D
Lab ID: 580-124122-1 MSD Client ID: AF-RHWW04-WGN01LF-2302W4 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	19.1	95	6	50	50-150	

Column to be used to flag recovery and RPD values

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-124122-1
 SDG No.: _____
 Lab Sample ID: MB 680-765944/10
 Matrix: Water Date Extracted: _____
 Lab File ID: (1) GC03010.D Lab File ID: (2) _____
 Date Analyzed: (1) 03/03/2023 17:02 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 680-765944/6	03/03/2023 15:28	
	LCSD 680-765944/7	03/03/2023 15:51	
AF-RHMW04-WGN01LF-2302W4	580-124122-1	03/03/2023 19:12	
AF-RHMW06-WGN01LF-2302W4	580-124122-2	03/03/2023 19:35	
AF-RHMW04-WGN01LF-2302W4 MS	580-124122-1 MS	03/03/2023 21:56	
AF-RHMW04-WGN01LF-2302W4 MSD	580-124122-1 MSD	03/03/2023 22:19	

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

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Sample No.: ICIS 680-764742/8 Date Analyzed: 02/23/2023 19:16
Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)
Lab File ID (Standard): GB23008.D Heated Purge: (Y/N) N
Calibration ID: 89990

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		4583875	4.23				
UPPER LIMIT		9167750	4.73				
LOWER LIMIT		2291938	3.73				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-764742/12 CCV		4693584	4.23				

nHPA = n-Heptyl Alcohol

Area Limit = 50%-200% of internal standard area
RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

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

Lab Name: Eurofins Savannah Job No.: 580-124122-1
 SDG No.: _____
 Sample No.: CCVIS 680-765944/5 Date Analyzed: 03/03/2023 15:04
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)
 Lab File ID (Standard): GC03005.D Heated Purge: (Y/N) N
 Calibration ID: 89990

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		4405584	4.22				
UPPER LIMIT		8811168	4.72				
LOWER LIMIT		2202792	3.72				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-765944/6		5777664	4.22				
LCSD 680-765944/7		5128991	4.22				
MB 680-765944/10		6664411	4.21				
580-124122-1	AF-RHMW04-WGN01LF-2 302W4	6167109	4.22				
580-124122-2	AF-RHMW06-WGN01LF-2 302W4	4044181	4.22				
580-124122-1 MS	AF-RHMW04-WGN01LF-2 302W4 MS	4979565	4.20				
580-124122-1 MSD	AF-RHMW04-WGN01LF-2 302W4 MSD	6051385	4.20				
CCV 680-765944/22		6872603	4.20				

nHPA = n-Heptyl Alcohol

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 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.: 580-124122-1
SDG No.: _____
Client Sample ID: AF-RHMW04-WGN01LF-2302W4 Lab Sample ID: 580-124122-1
Matrix: Water Lab File ID: GC03012.D
Analysis Method: 8015C GLY Date Collected: 02/27/2023 10:45
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/03/2023 19:12
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.: 765944 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\20230303-84174.b\GC03012.D
 Lims ID: 580-124122-A-1
 Client ID: AF-RHWW04-WGN01LF-2302W4
 Sample Type: Client
 Inject. Date: 03-Mar-2023 19:12:06 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-012
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:05:43 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: CTX1660

First Level Reviewer: SWK1

Date: 05-Mar-2023 12:03:18

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

* 4 n-Heptyl Alcohol

4.218	4.199	0.019	6167109	50.0

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00106	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03012.D

Injection Date: 03-Mar-2023 19:12:06

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-124122-A-1

Lab Sample ID: 680-124122-1

Worklist Smp#: 12

Client ID: AF-RHMW04-WGN01LF-2302W4

Injection Vol: 1.0 ul

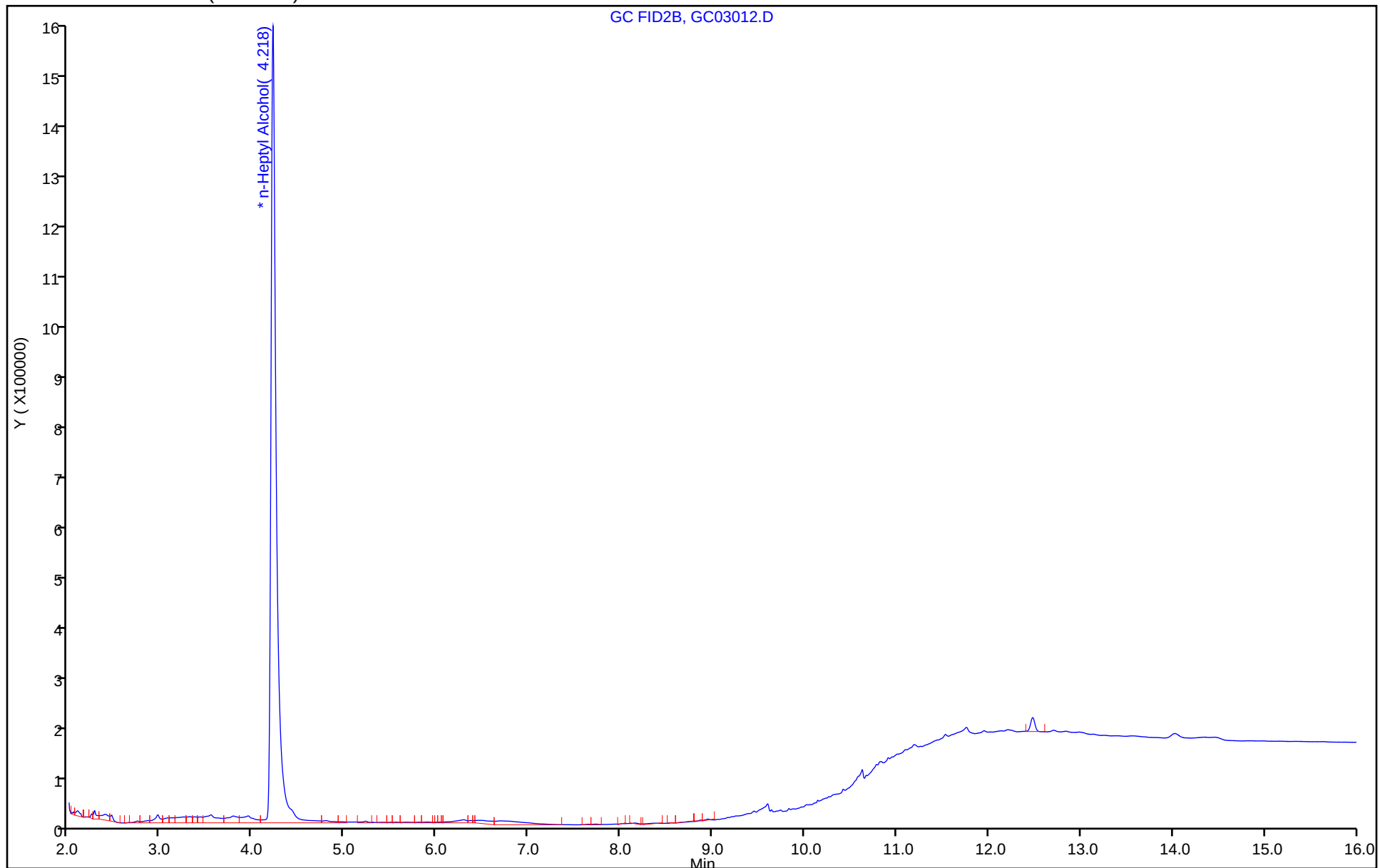
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Client Sample ID: AF-RHMW06-WGN01LF-2302W4 Lab Sample ID: 580-124122-2
Matrix: Water Lab File ID: GC03013.D
Analysis Method: 8015C GLY Date Collected: 02/27/2023 12:35
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/03/2023 19:35
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.: 765944 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03013.D
 Lims ID: 580-124122-A-2
 Client ID: AF-RHMW06-WGN01LF-2302W4
 Sample Type: Client
 Inject. Date: 03-Mar-2023 19:35:34 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-013
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:05:43 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: CTX1660

First Level Reviewer: SWK1

Date: 05-Mar-2023 12:04:05

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

* 4 n-Heptyl Alcohol

4.217	4.199	0.018	4044181	50.0

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00106	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03013.D

Injection Date: 03-Mar-2023 19:35:34

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-124122-A-2

Lab Sample ID: 680-124122-2

Worklist Smp#: 13

Client ID: AF-RHMW06-WGN01LF-2302W4

Injection Vol: 1.0 ul

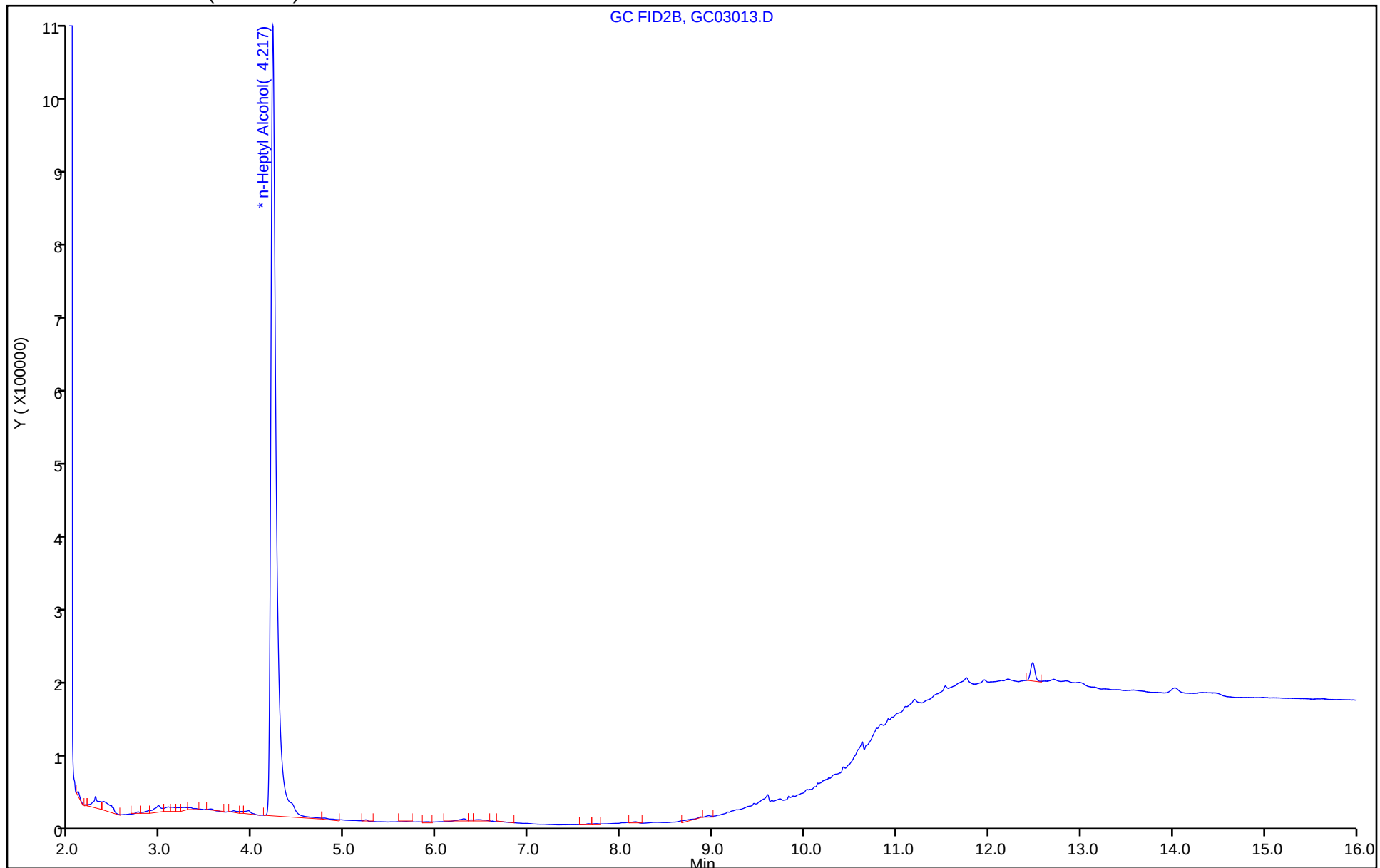
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



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

Lab Name: Eurofins Savannah Job No.: 580-124122-1 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	0.593 6	0.556 2							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	0.530 4	0.554 3							0.9990		0.9900
2-Butoxyethanol	0.9883 0.6168	0.7539 0.5950	0.7042	0.6479	0.6428	Lin2	0.756 5	0.610 5							0.9990		0.9900
Dipropylene Glycol Methyl Ether	0.0707 0.0486	0.0529 0.0483	0.0469	0.0468	0.0500	Lin2	0.045 6	0.046 2							0.9960		0.9900
Propylene glycol	0.3577 0.1978	0.2447 0.2002	0.1771	0.1986	0.2018	Qua	0.165 6	0.191 5	0.0000674						0.9990		0.9900
Ethylene glycol	++++ 0.5158	0.5835 0.5123	0.4588	0.5170	0.5407	Ave		0.521 3				7.8	20.0				
2-(2-Butoxyethoxy)ethanol	0.8722 0.5415	0.6347 0.5384	0.5412	0.5488	0.5569	Lin2	0.676 4	0.518 6							0.9970		0.9900
2,2'-Oxybisethanol	0.5136 0.3319	0.3444 0.3318	0.3068	0.3442	0.3480	Lin1	0.233 7	0.330 3							0.9980		0.9900
Triethylene Glycol	++++ 0.3191	0.3384 0.3192	0.3005	0.3207	0.3315	Ave		0.321 6				4.0	20.0				
Tetraethylene Glycol	++++ 0.3347	0.3660 0.3343	0.3204	0.3394	0.3503	Ave		0.340 8				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.: 580-124122-1 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.: 580-124122-1 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	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	20
Tetraethylene Glycol	++++ -1.9	7.4	-6.0	-0.4	2.8	-1.8	20 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	6.285	6.271	0.014	1695172	100.0	100.1
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	11.769	11.777	-0.008	5661877	200.0	196.1

Ma
M

M
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

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

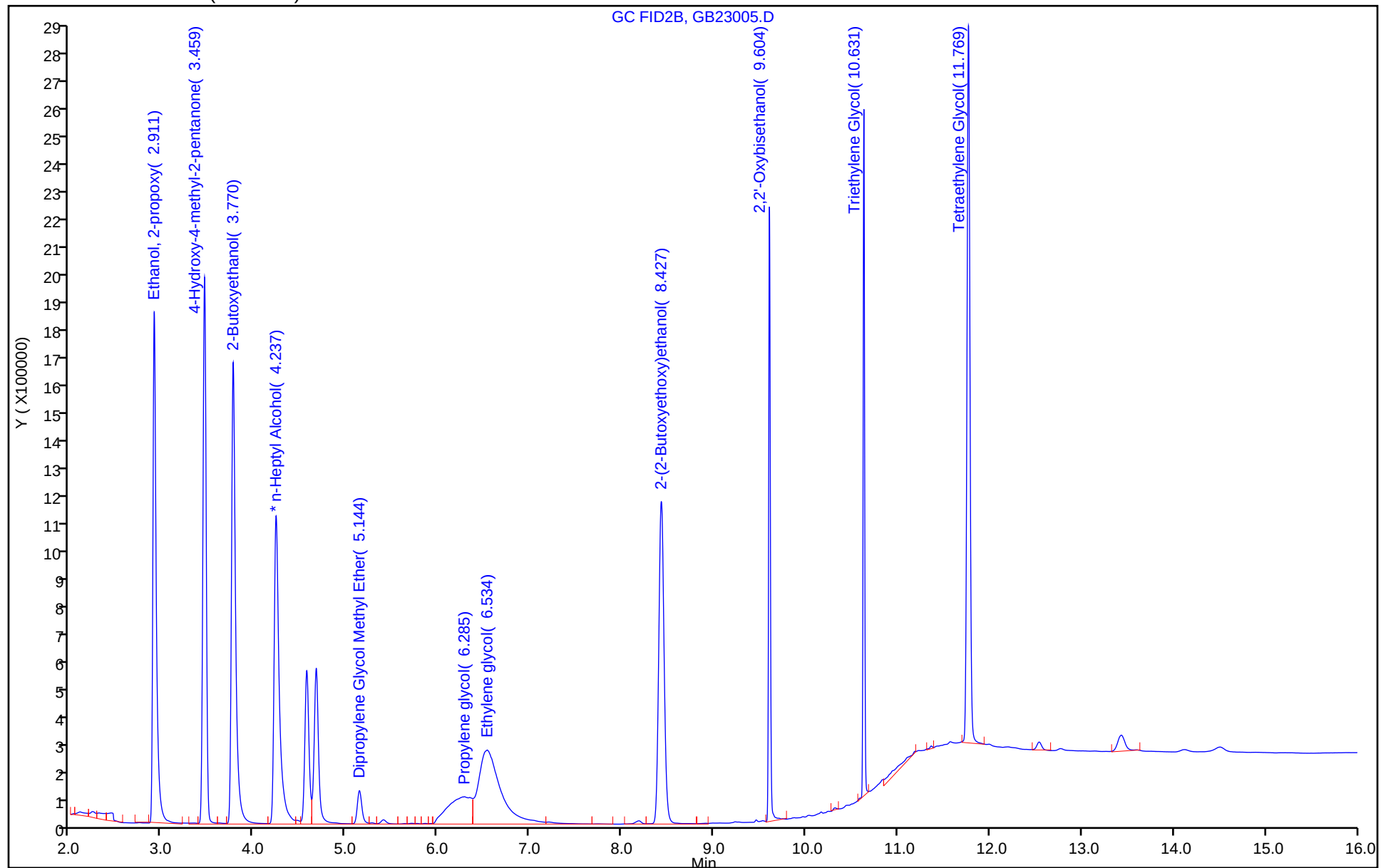
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

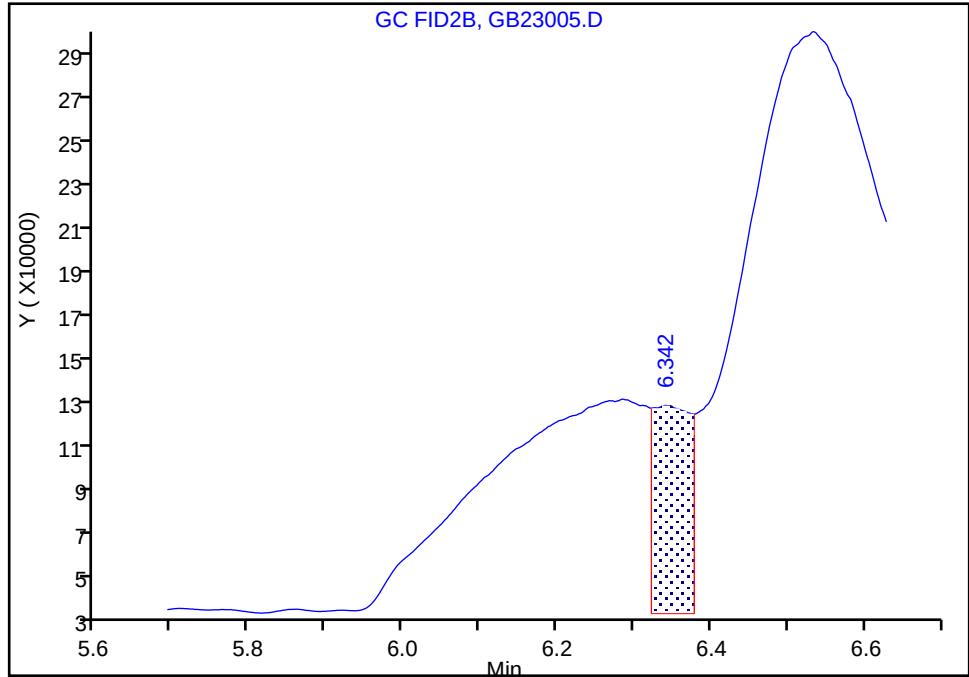
ALS Bottle#: 0 Worklist Smp#: 5
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

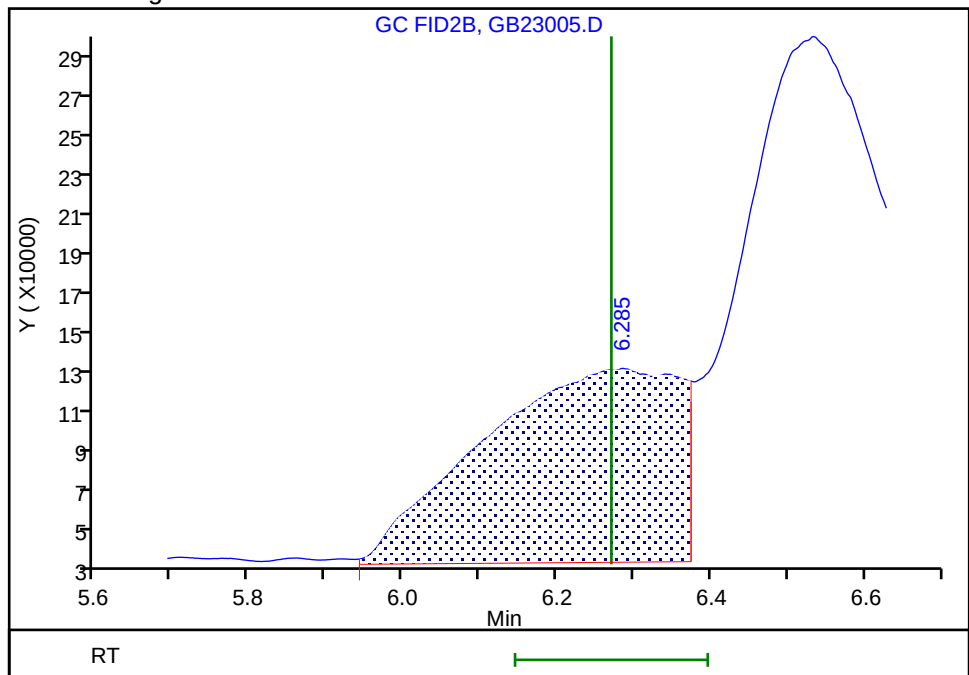
RT: 6.34
Area: 306574
Amount: 22.876952
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 52 of 143

3/7/2023 1:14
PM

Eurofins Savannah

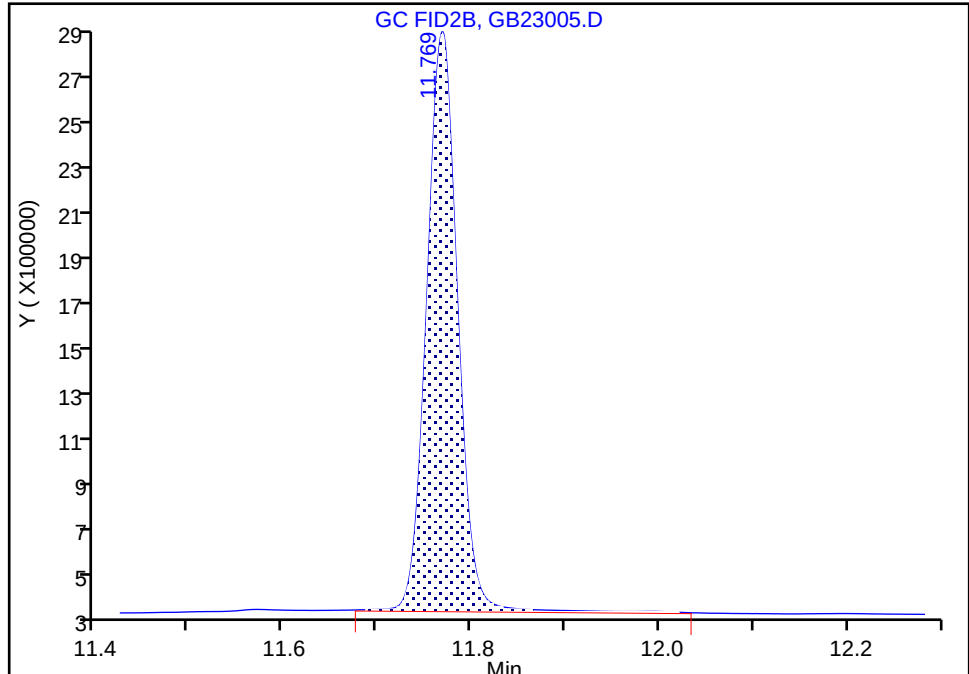
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23005.D
Injection Date: 23-Feb-2023 18:06:04 Instrument ID: CVGG2
Lims ID: ic g7
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB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

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

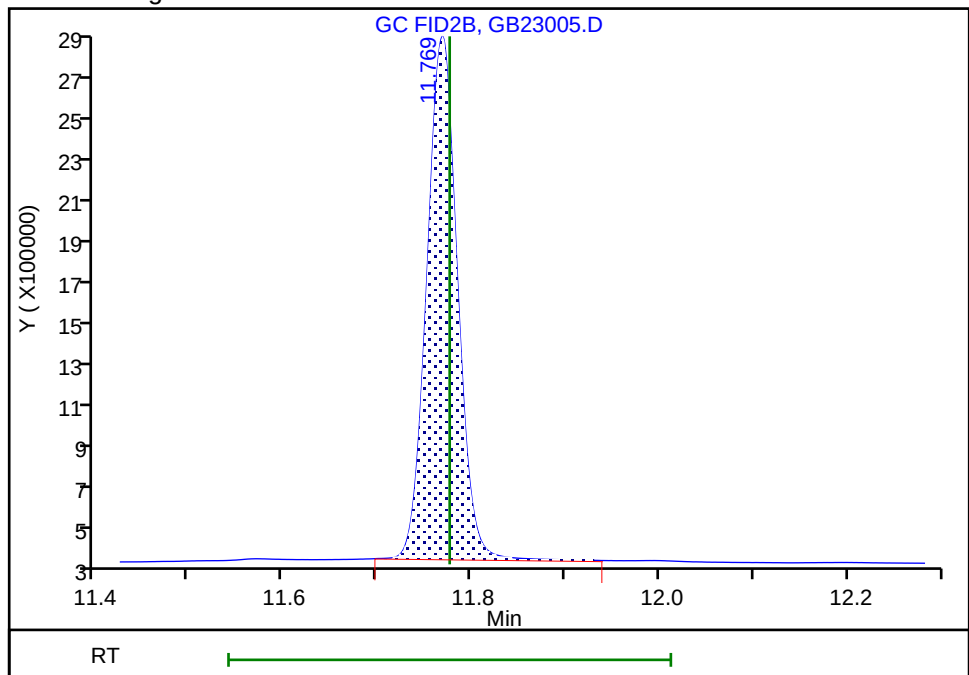
RT: 11.77
Area: 5725484
Amount: 200.6838
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 53 of 143

3/7/2023 1:14
PM

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

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

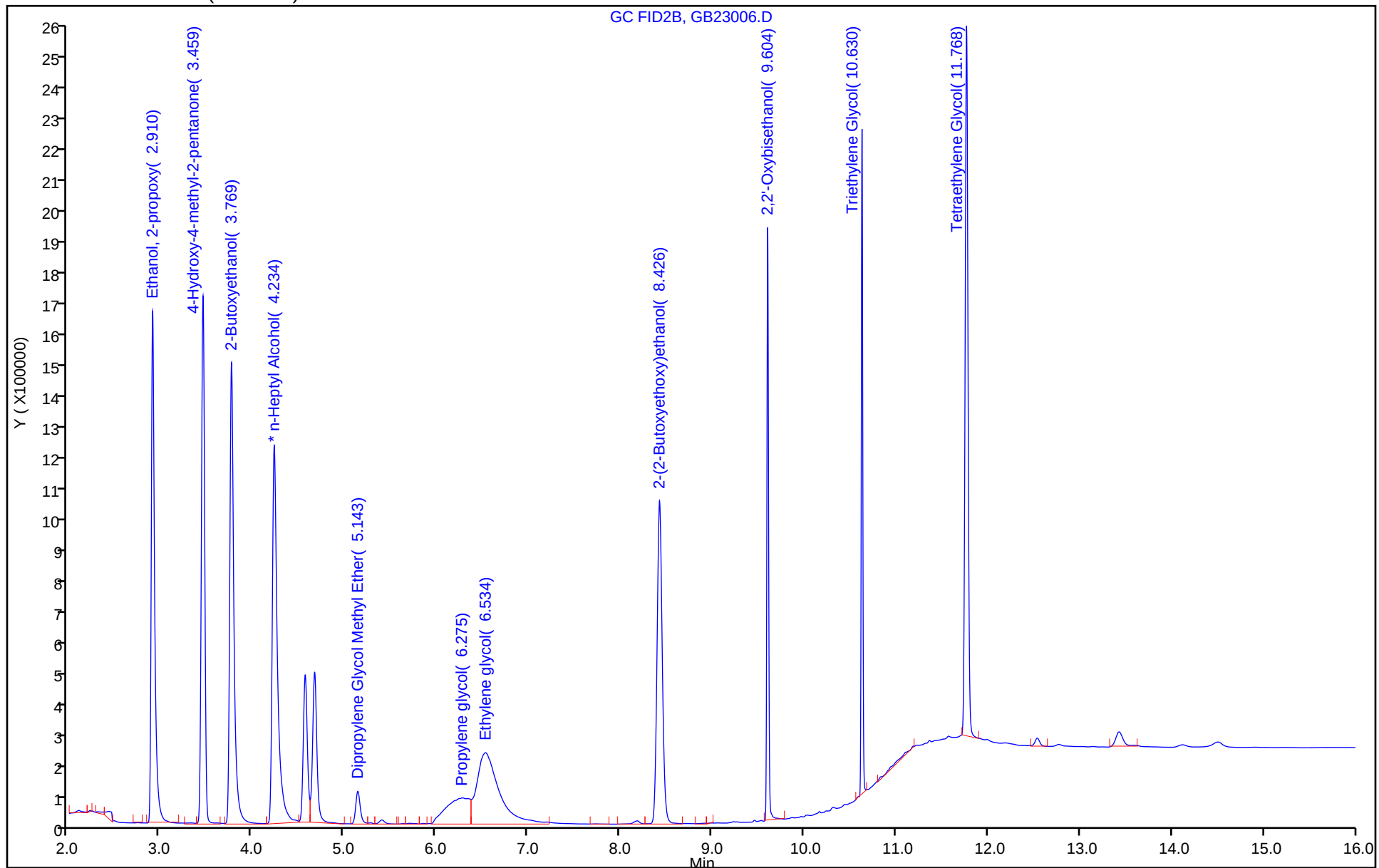
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

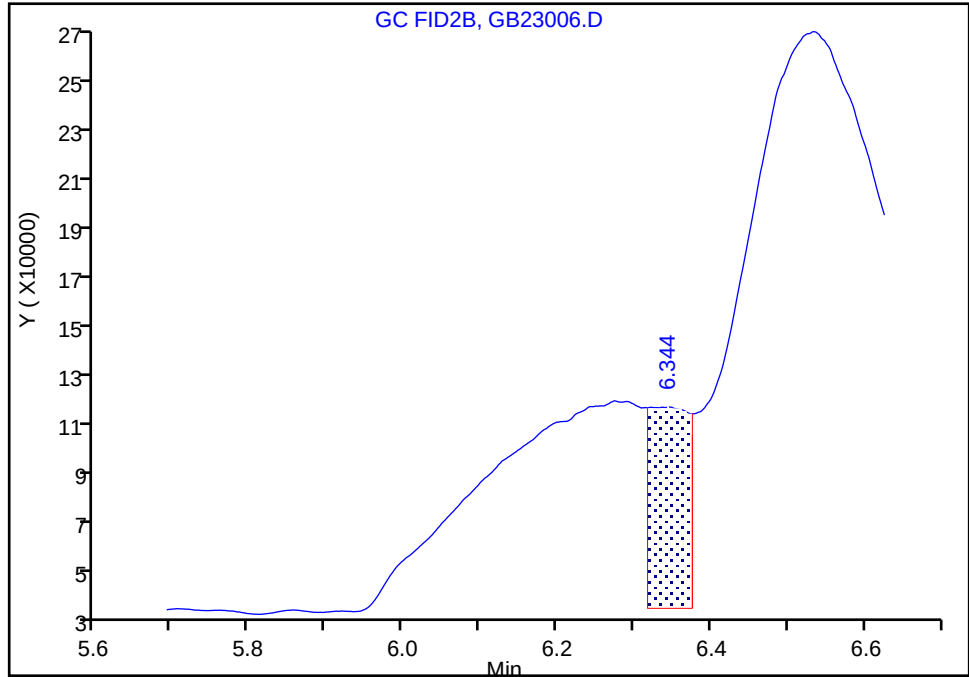
ALS Bottle#: 0 Worklist Smp#: 6
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

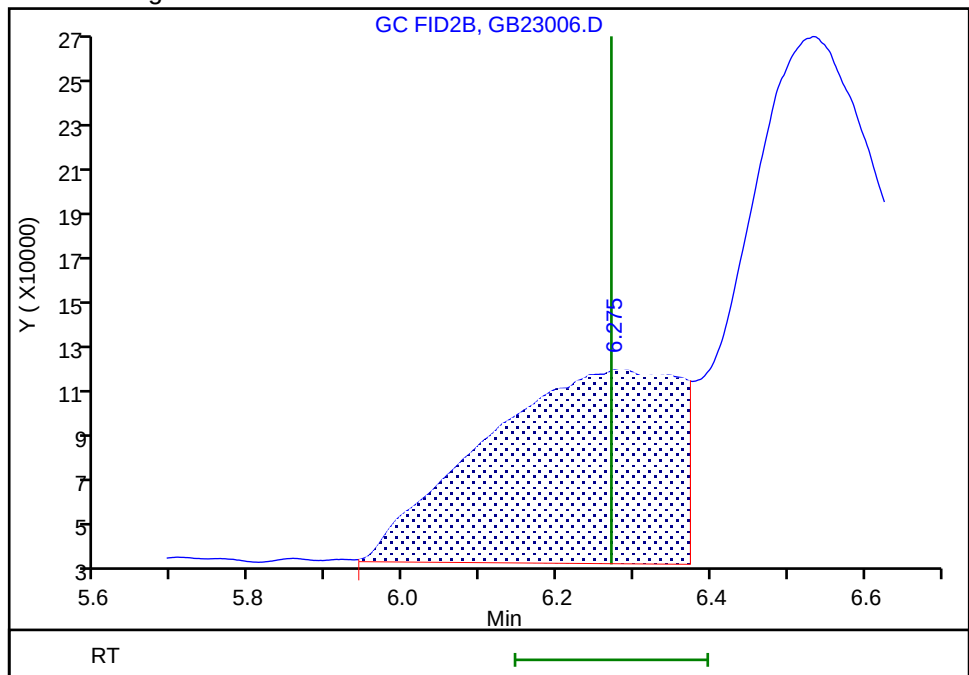
RT: 6.34
Area: 271622
Amount: 17.810733
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 57 of 143

3/7/2023 1:14
PM

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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

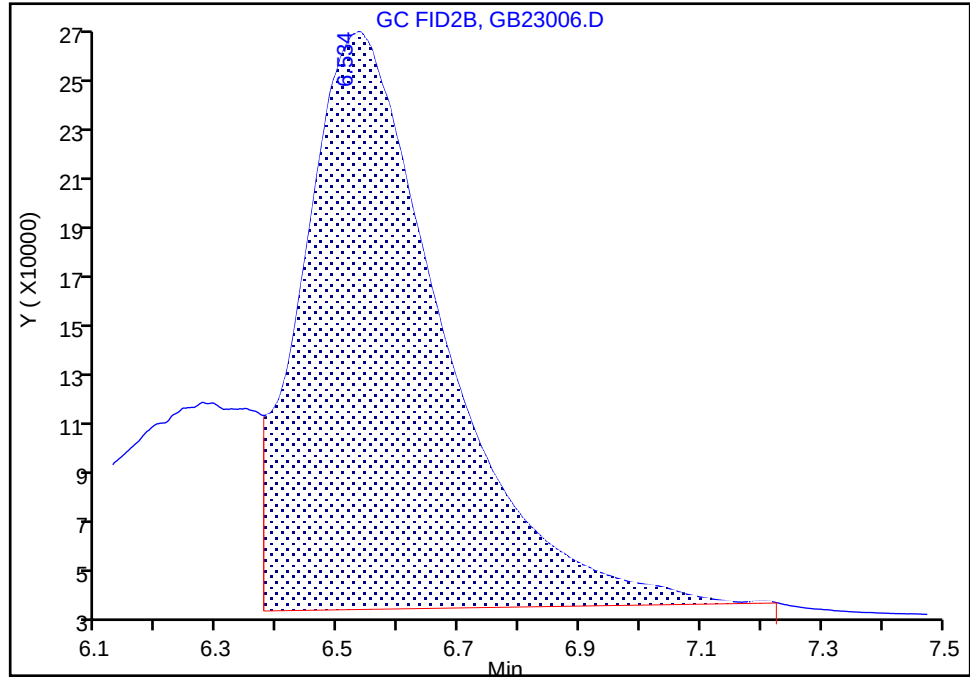
ALS Bottle#: 0 Worklist Smp#: 6
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

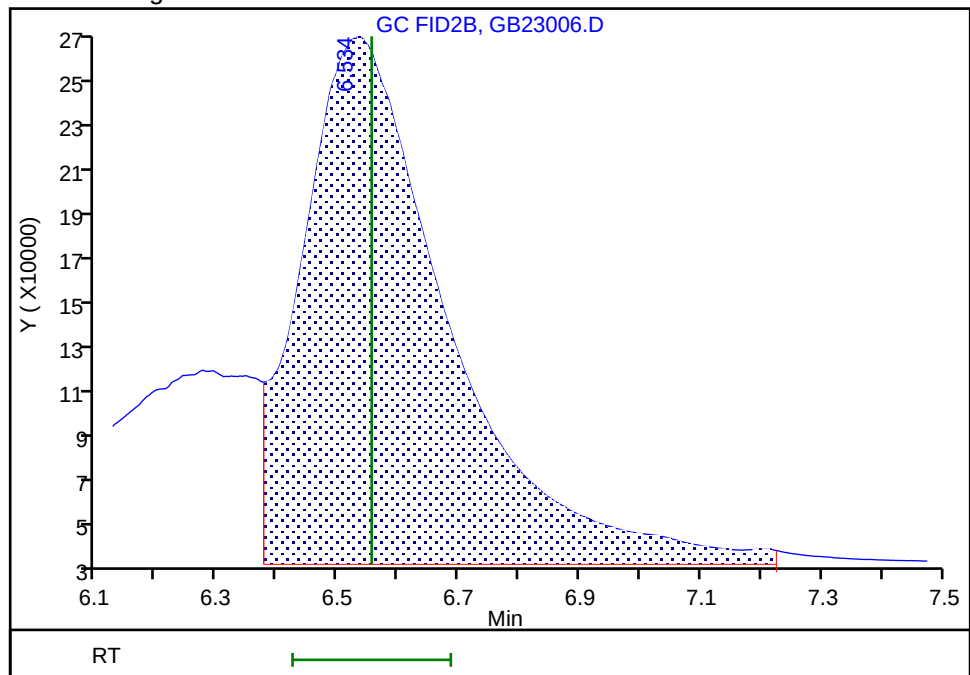
RT: 6.53
Area: 3632727
Amount: 77.239582
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 58 of 143

3/7/2023 1:14
PM

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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

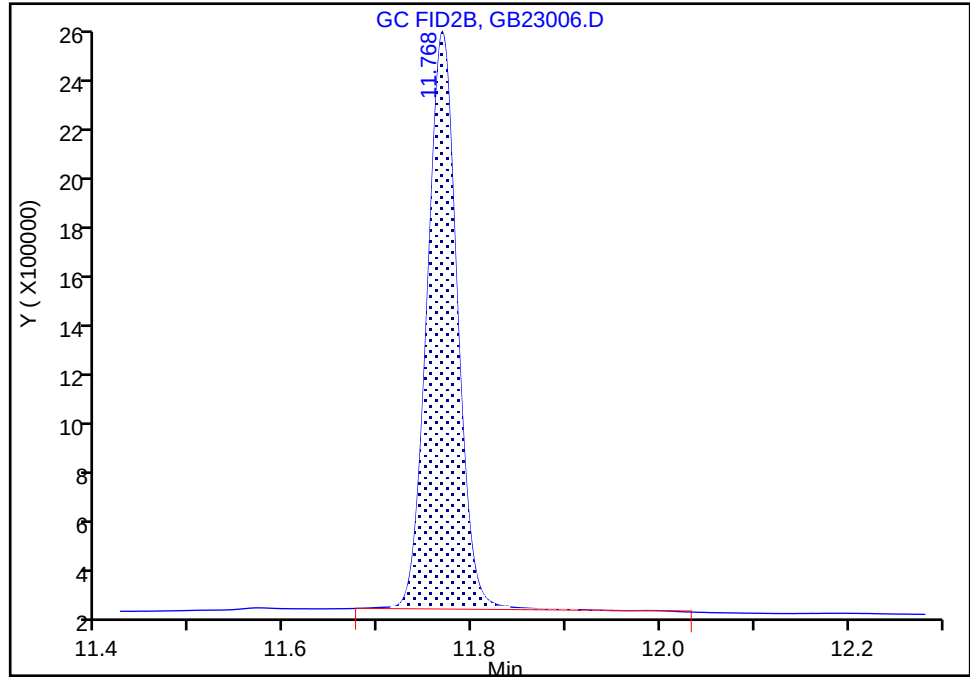
ALS Bottle#: 0 Worklist Smp#: 6
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

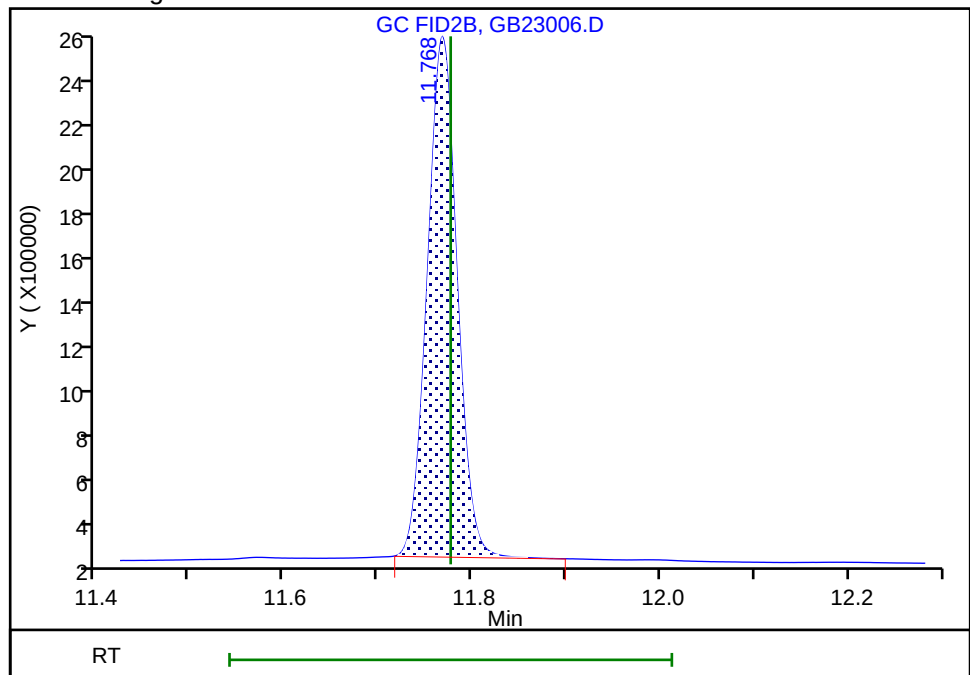
RT: 11.77
Area: 5071440
Amount: 159.9457
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



Reviewer: SK9U, 24-Feb-2023 11:16:01
Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing
Page 59 of 143

3/7/2023 1:14
PM

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

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

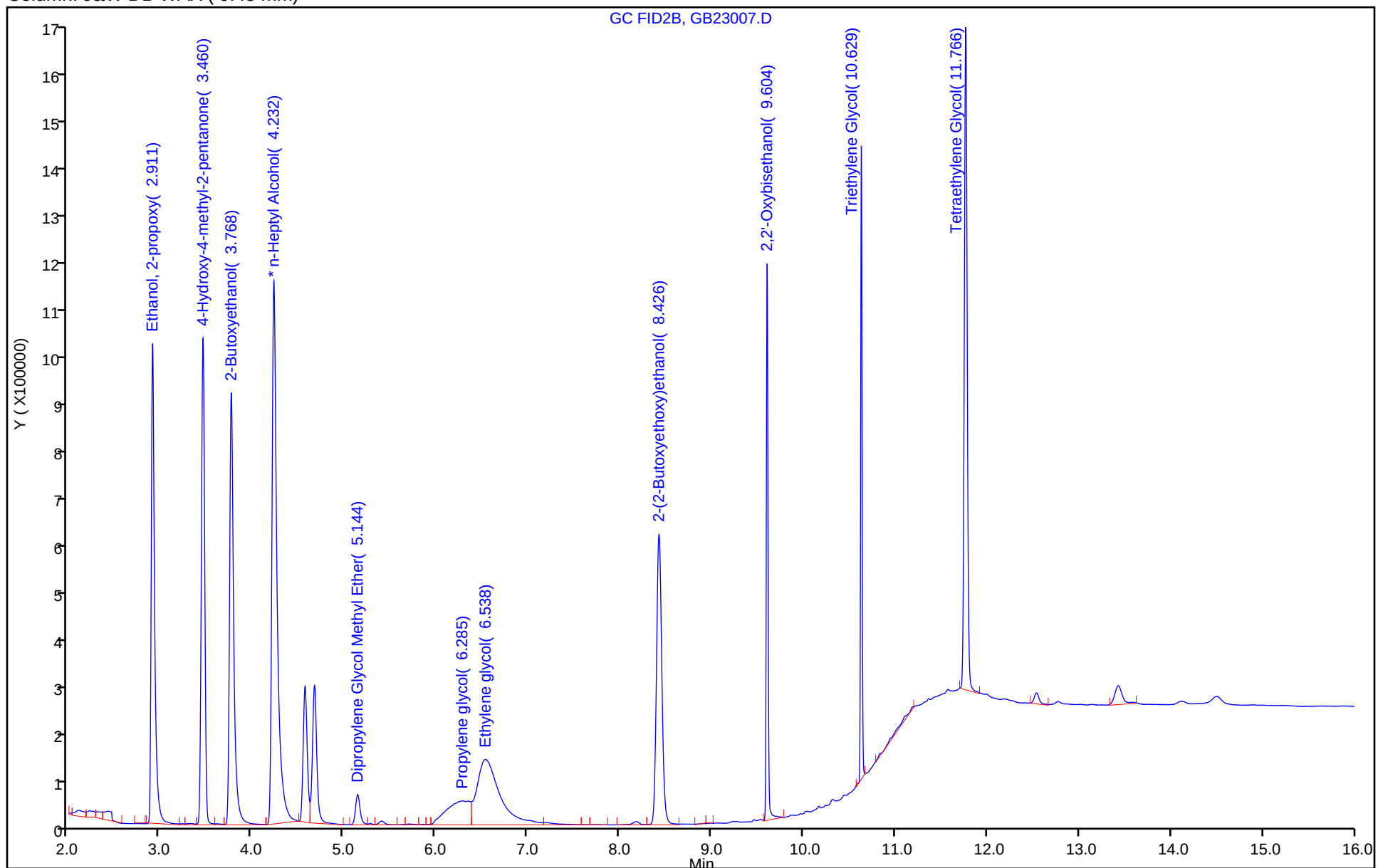
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015 GLY VGG

Limit Group: 8015C DAI

Column: J&W DB WAX (0.45 mm)



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

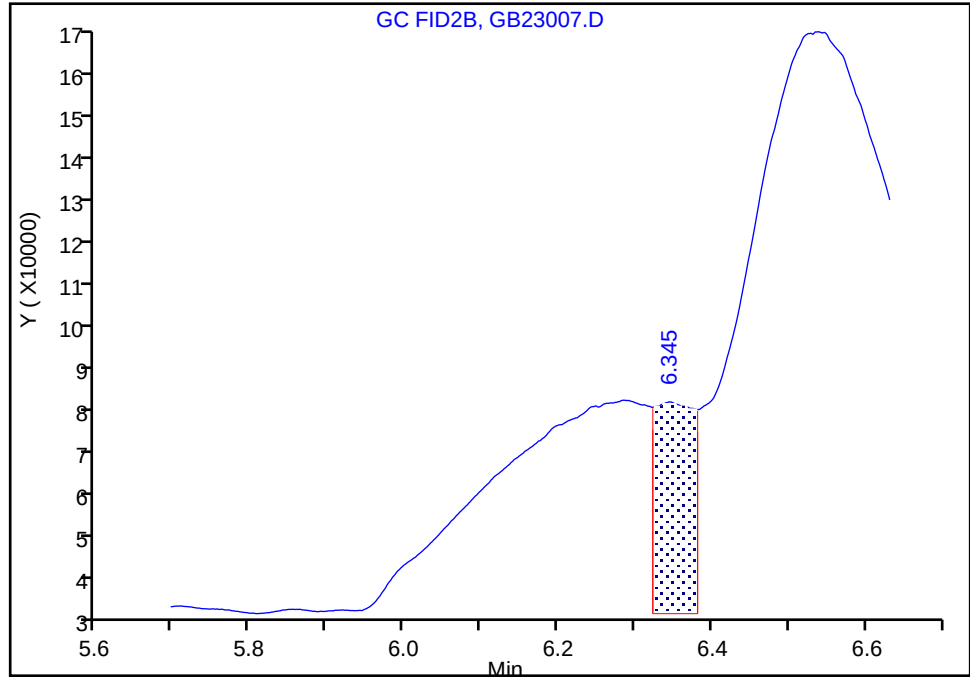
ALS Bottle#: 0 Worklist Smp#: 7
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

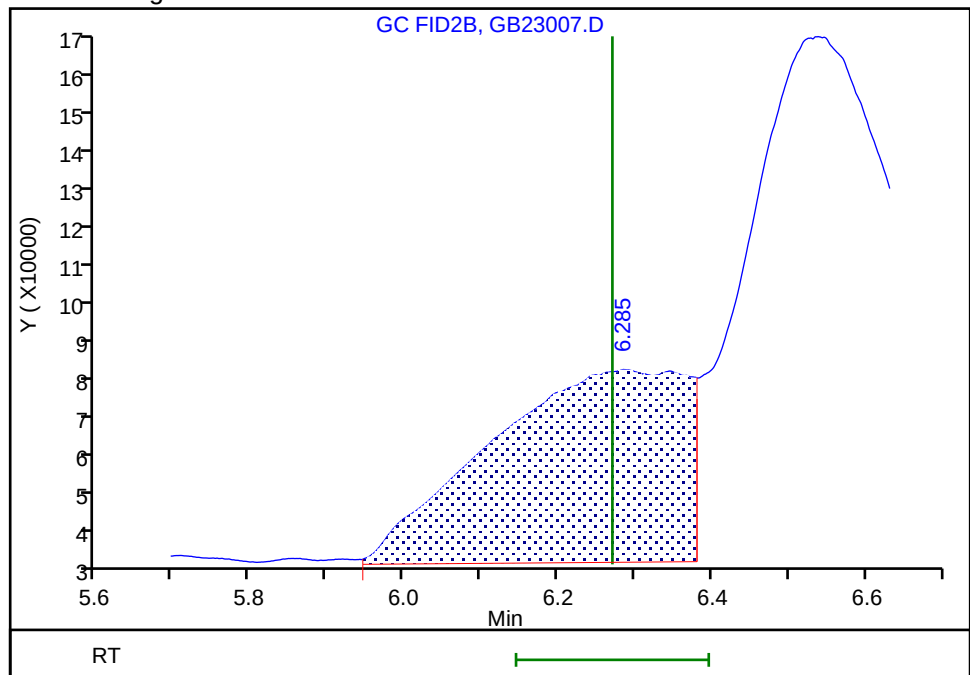
RT: 6.35
Area: 167178
Amount: 11.555034
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 63 of 143

3/7/2023 1:14
PM

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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

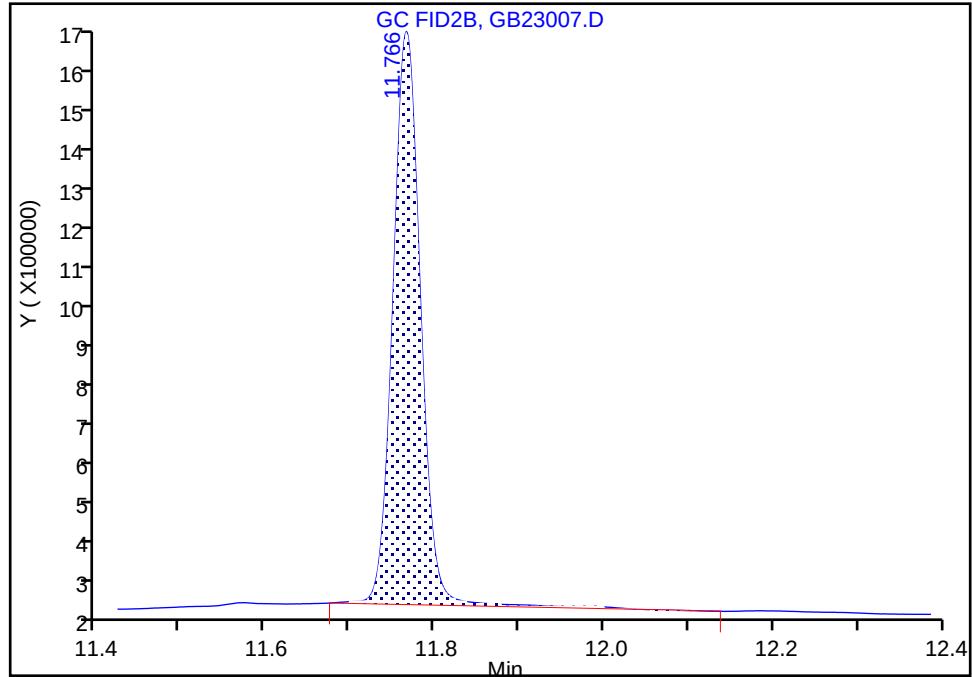
ALS Bottle#: 0 Worklist Smp#: 7
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

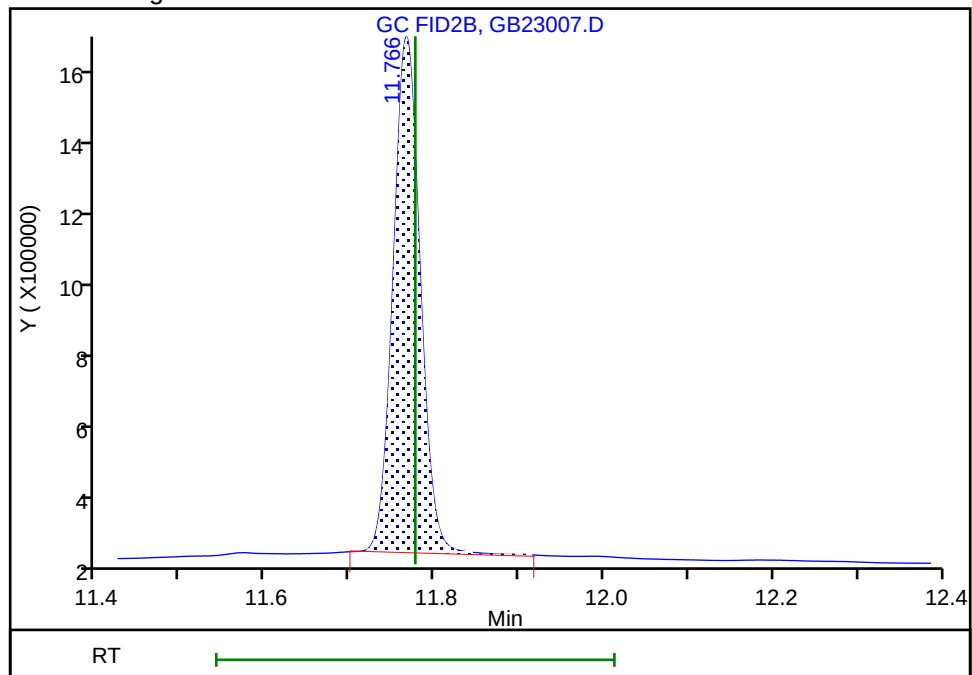
RT: 11.77
Area: 3096971
Amount: 102.7928
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 64 of 143

3/7/2023 1:14
PM

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

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: ics g4

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

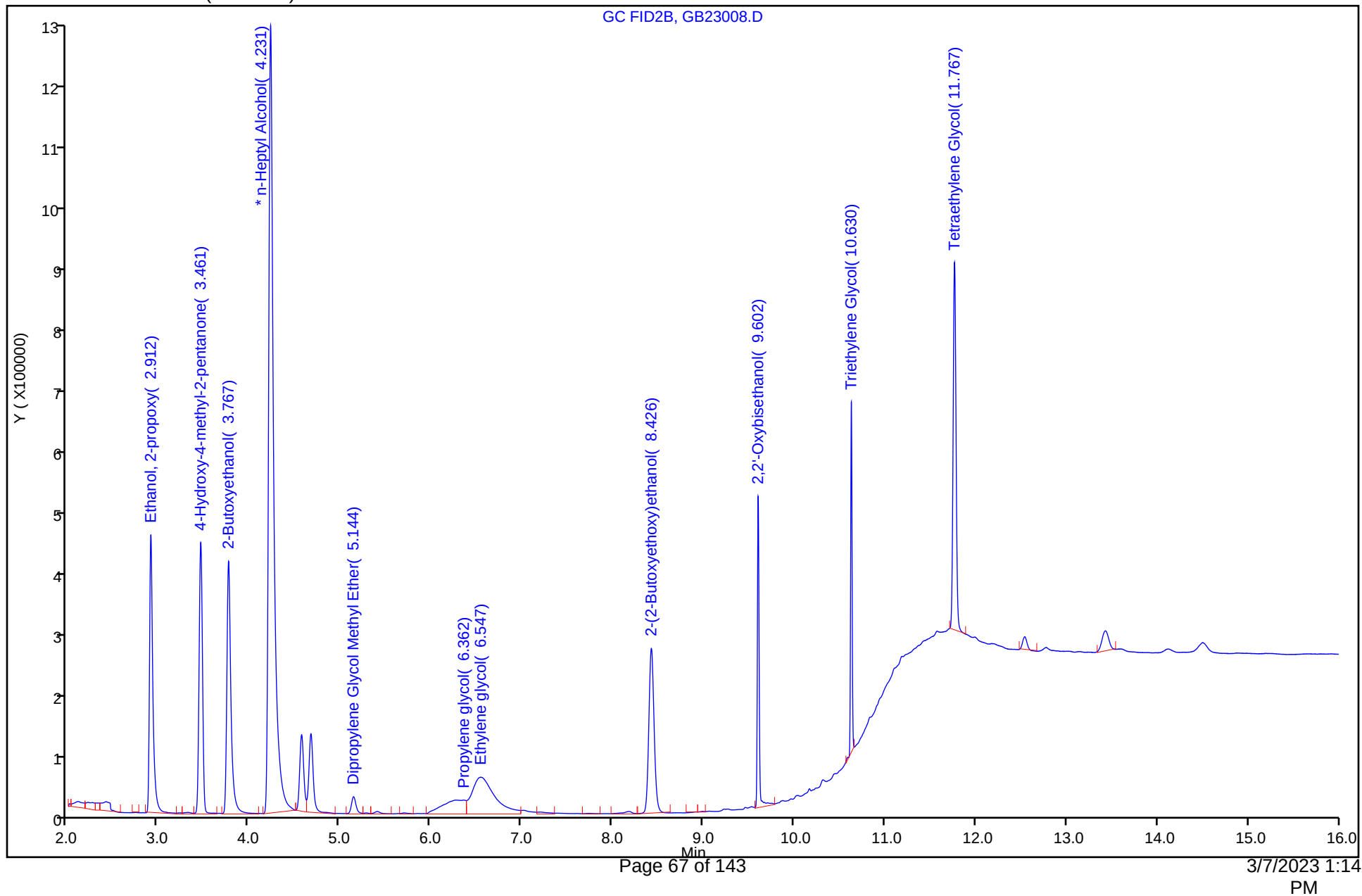
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

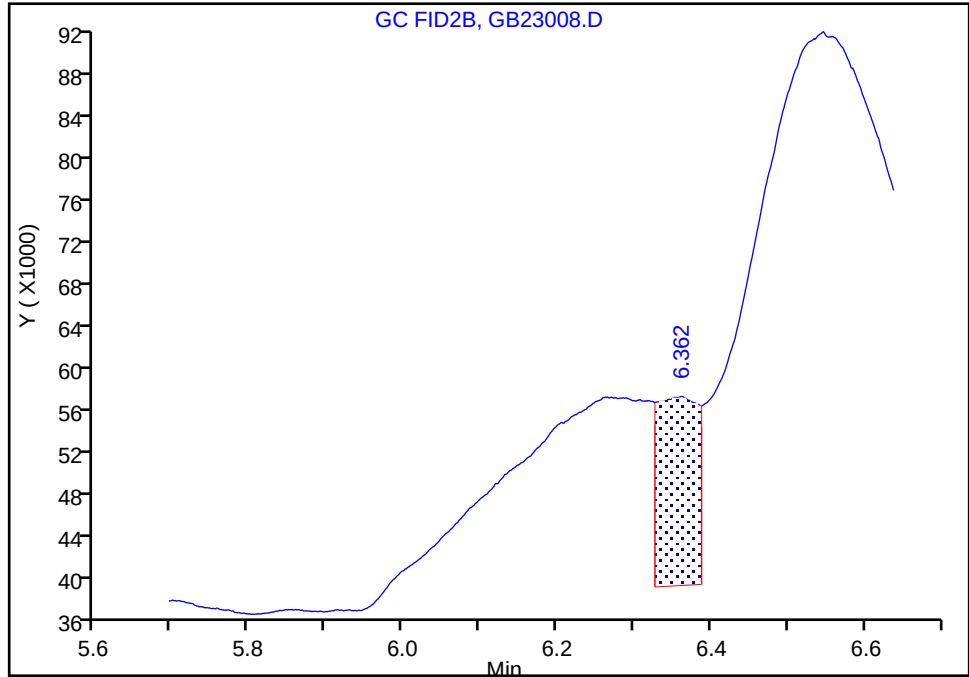
ALS Bottle#: 0 Worklist Smp#: 8
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

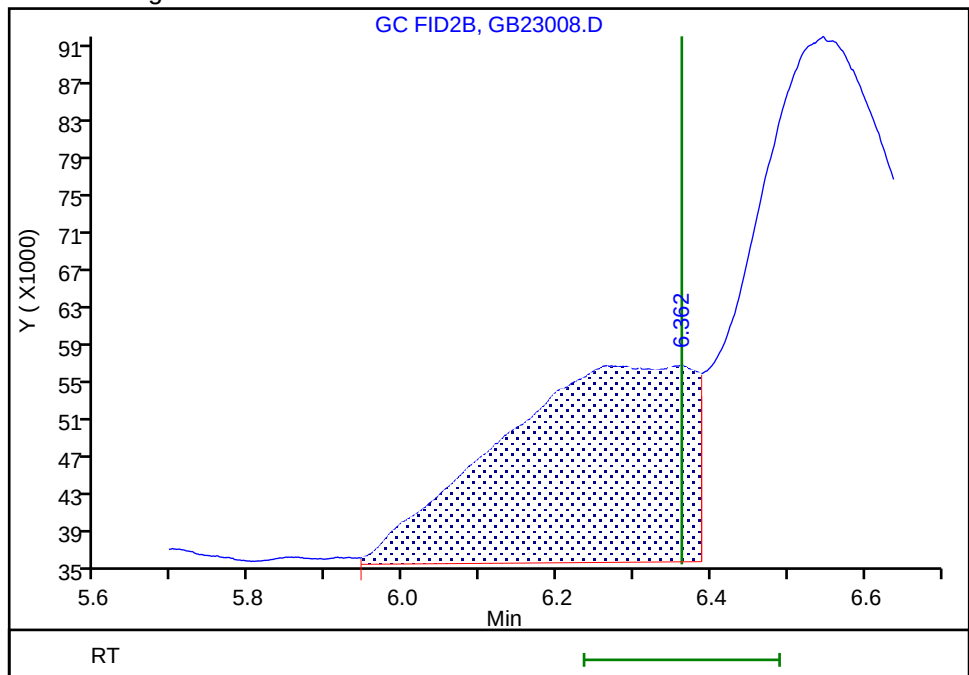
RT: 6.36
Area: 63987
Amount: 4.005166
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 68 of 143

3/7/2023 1:14
PM

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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

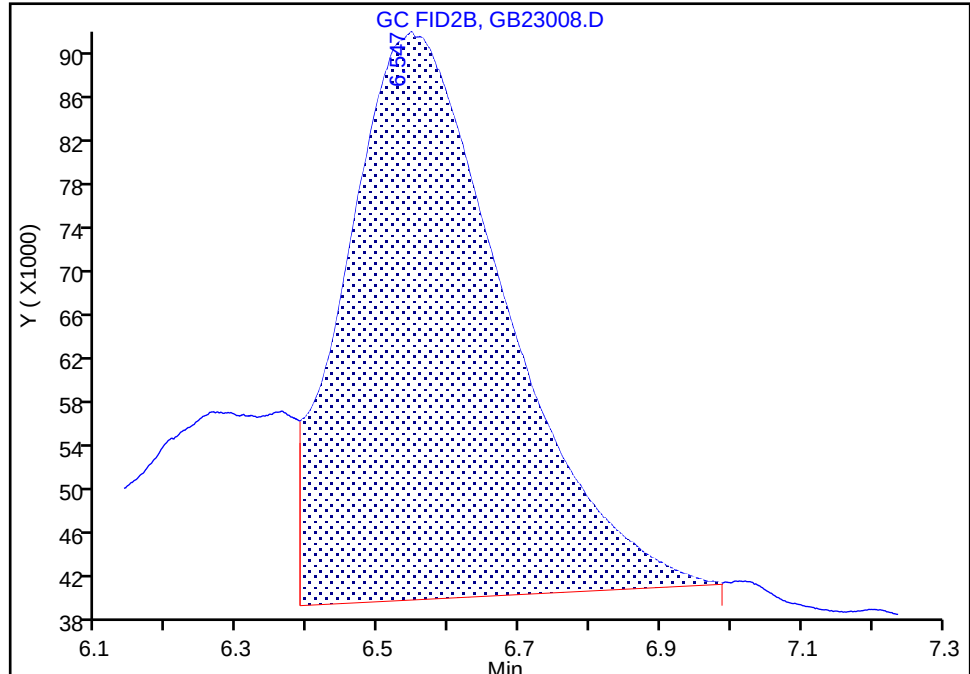
ALS Bottle#: 0 Worklist Smp#: 8
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

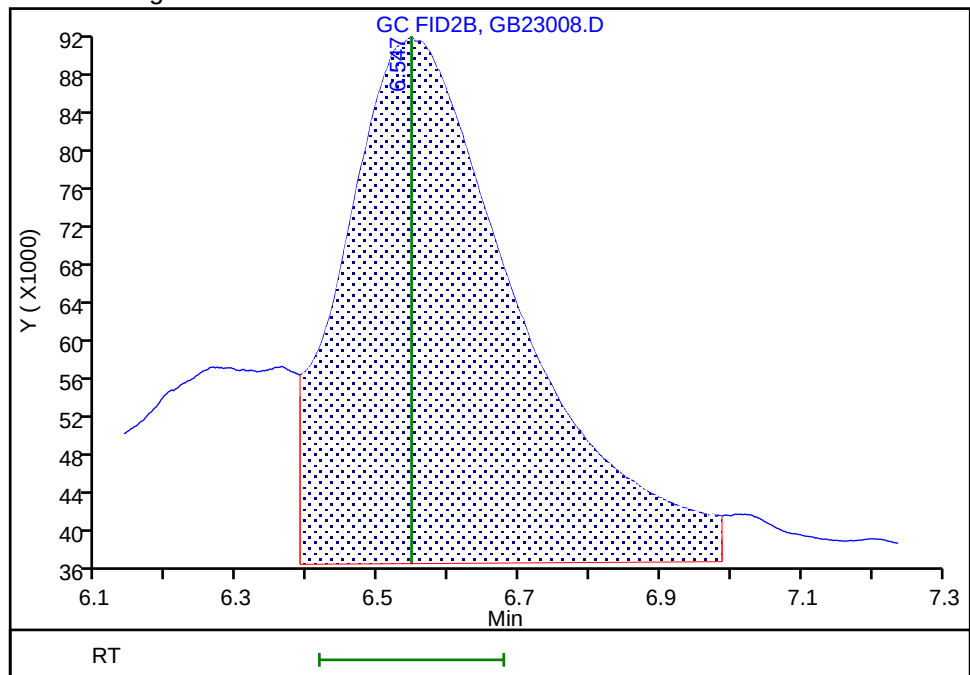
RT: 6.55
Area: 812987
Amount: 17.511168
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 69 of 143

3/7/2023 1:14
PM

Eurofins Savannah

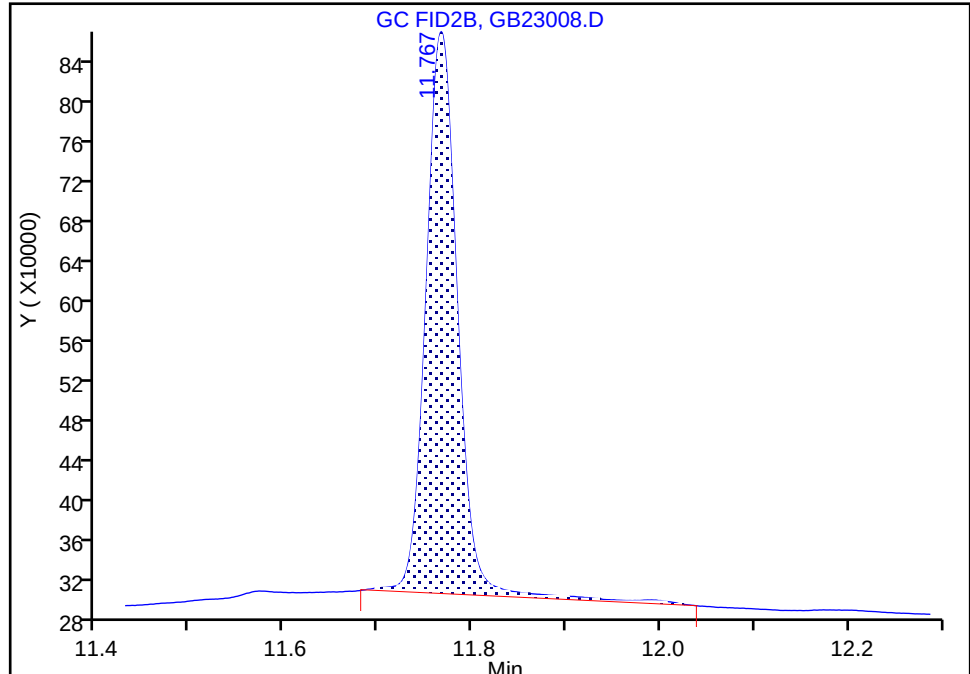
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23008.D
Injection Date: 23-Feb-2023 19:16:31 Instrument ID: CVGG2
Lims ID: icis g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W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

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

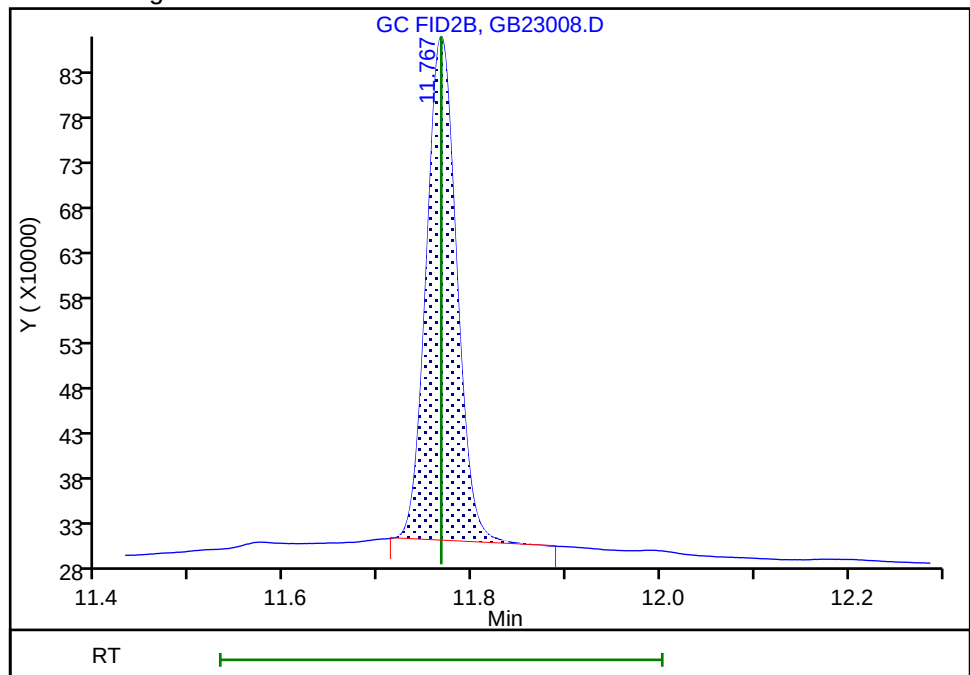
RT: 11.77
Area: 1315484
Amount: 39.425517
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 70 of 143

3/7/2023 1:14
PM

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

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

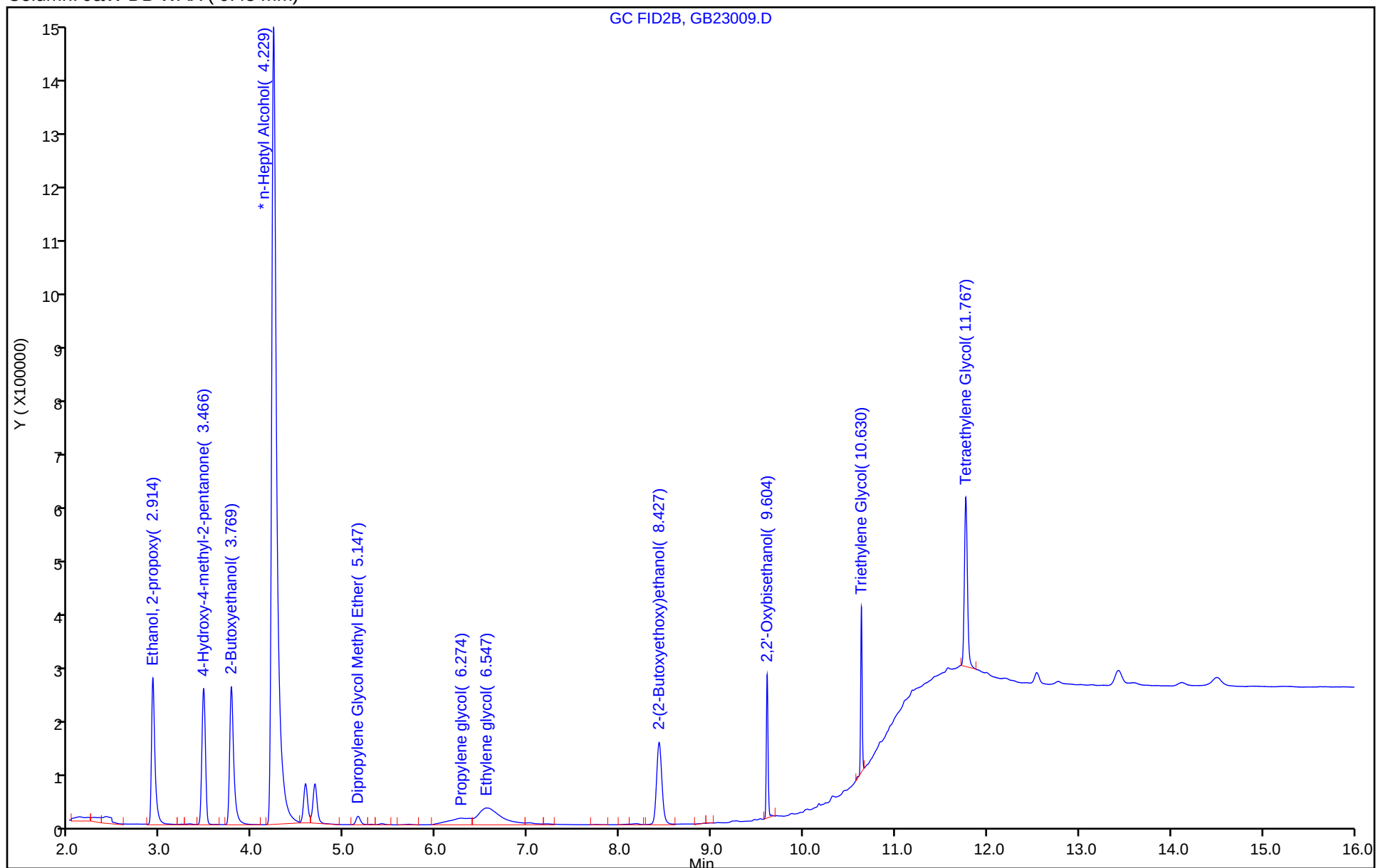
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015 GLY VGG

Limit Group: 8015C DAI

Column: J&W DB WAX (0.45 mm)



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

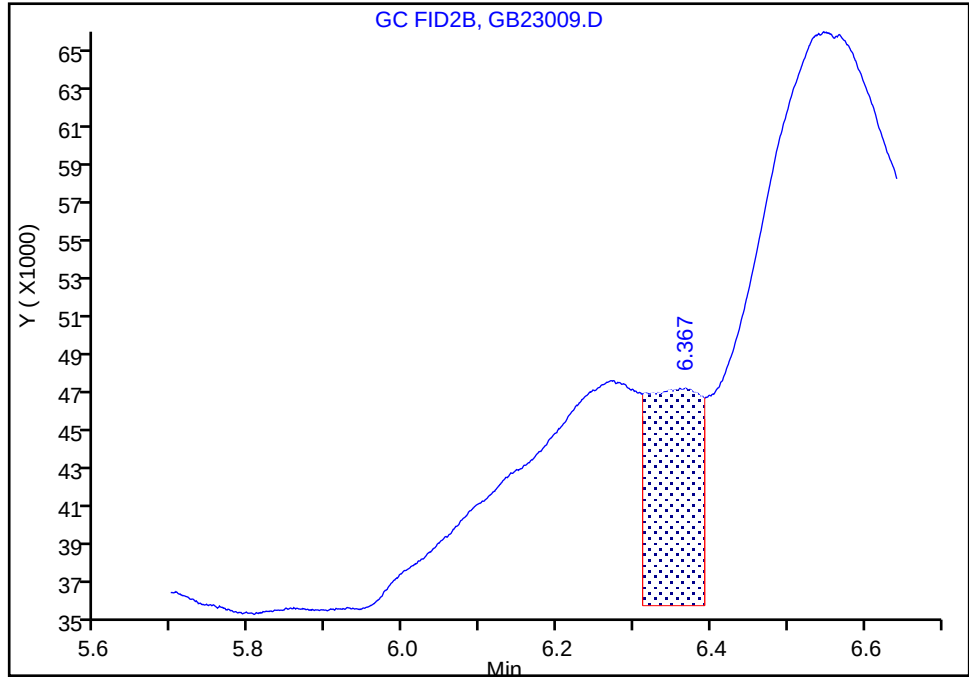
ALS Bottle#: 0 Worklist Smp#: 9
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

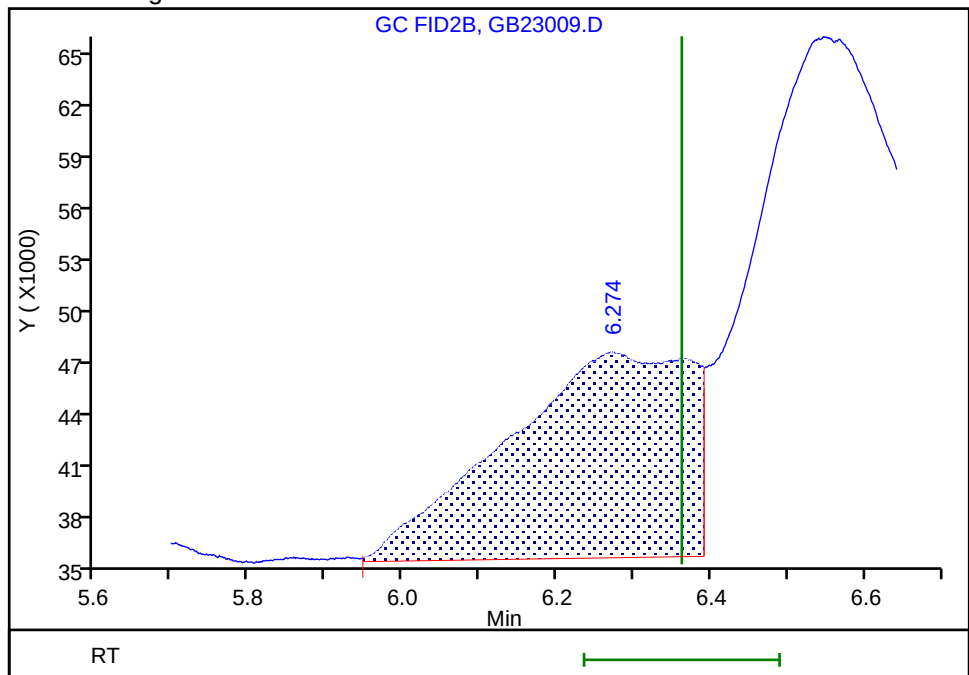
RT: 6.37
Area: 52016
Amount: 2.673511
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 74 of 143

3/7/2023 1:14
PM

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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

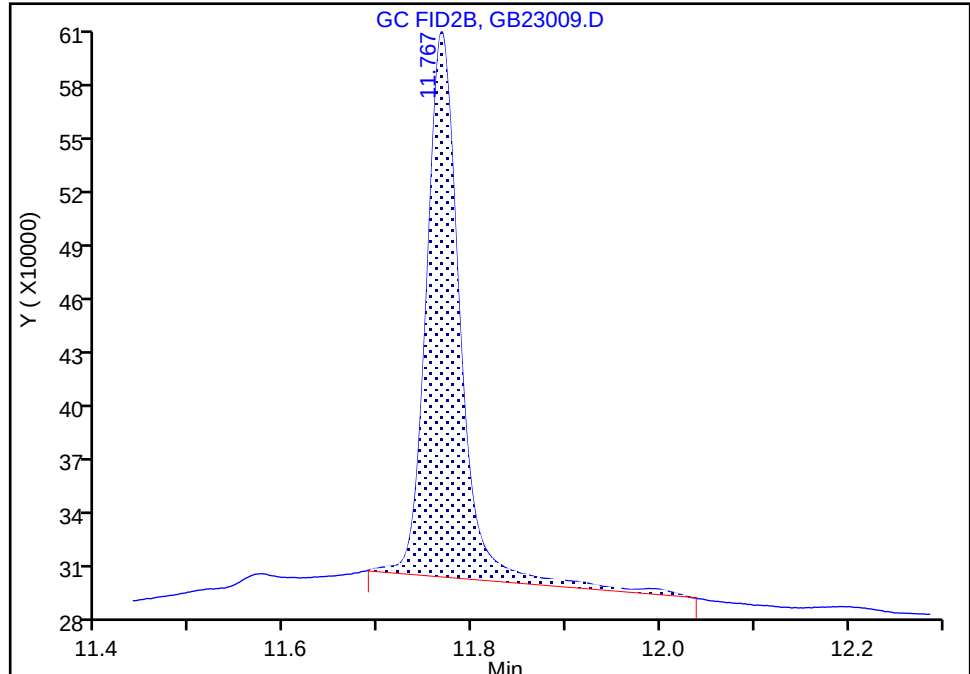
ALS Bottle#: 0 Worklist Smp#: 9
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

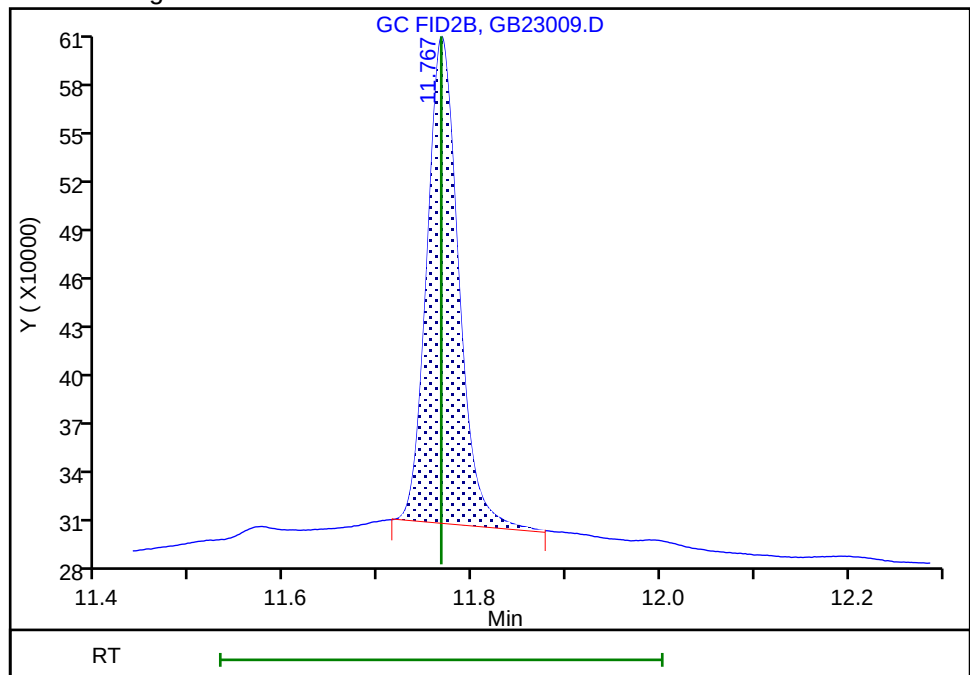
RT: 11.77
Area: 741027
Amount: 18.553814
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



Reviewer: SK9U, 24-Feb-2023 11:15:18
Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing
Page 75 of 143

3/7/2023 1:14
PM

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	6.261	6.362	-0.101	119218	5.00	5.51	Ma
7 Ethylene glycol	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	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

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

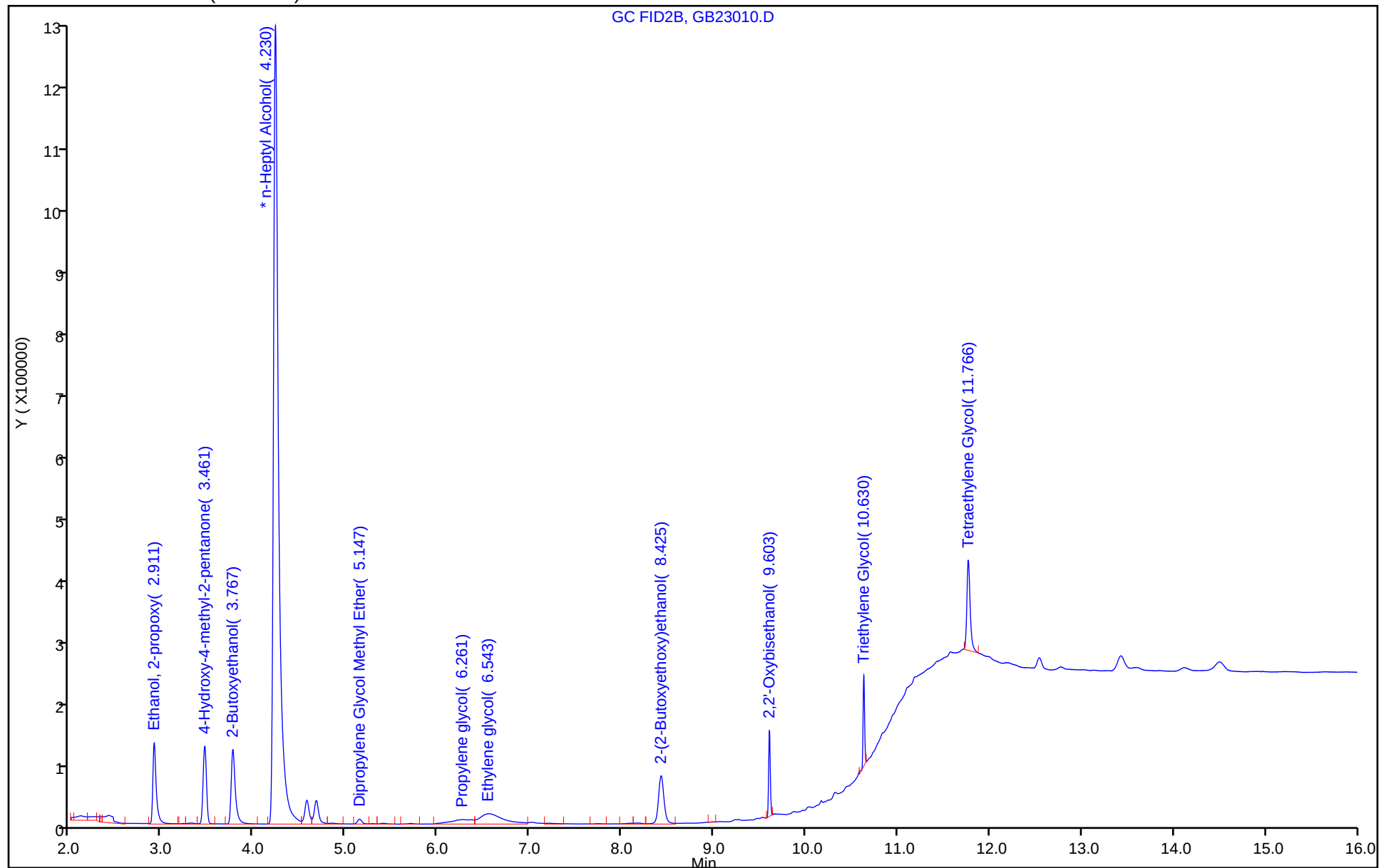
ALS Bottle#:

0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

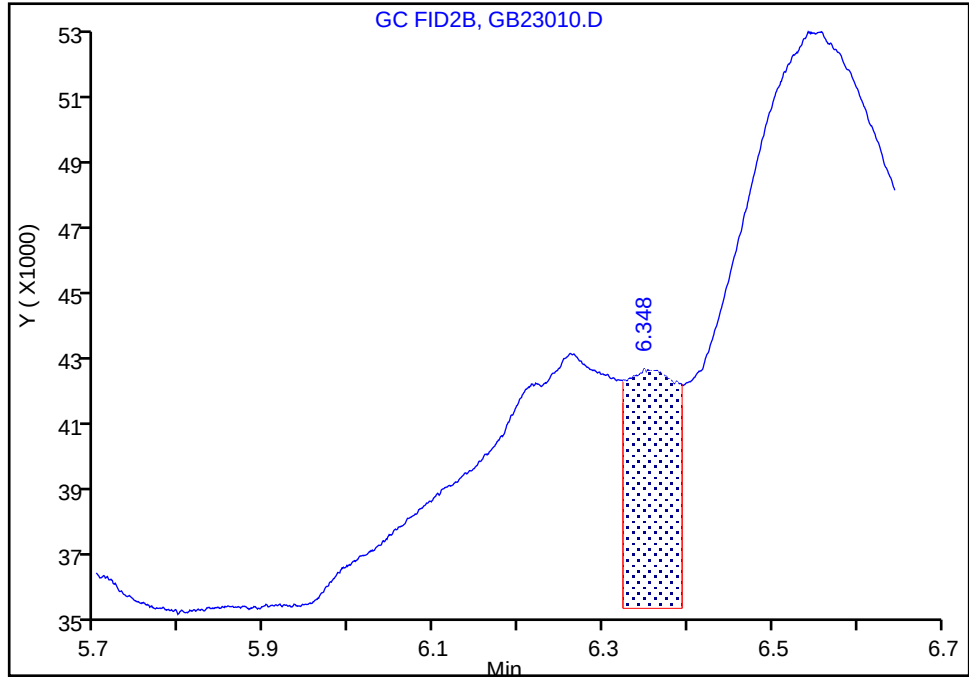
ALS Bottle#: 0 Worklist Smp#: 10
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

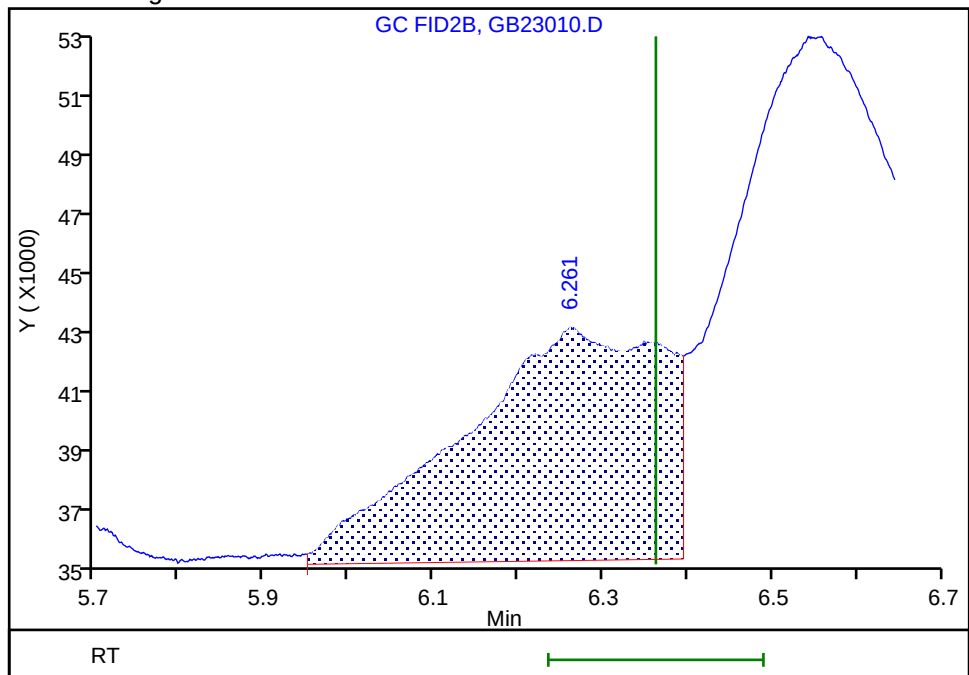
RT: 6.35
Area: 27335
Amount: 1.539820
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

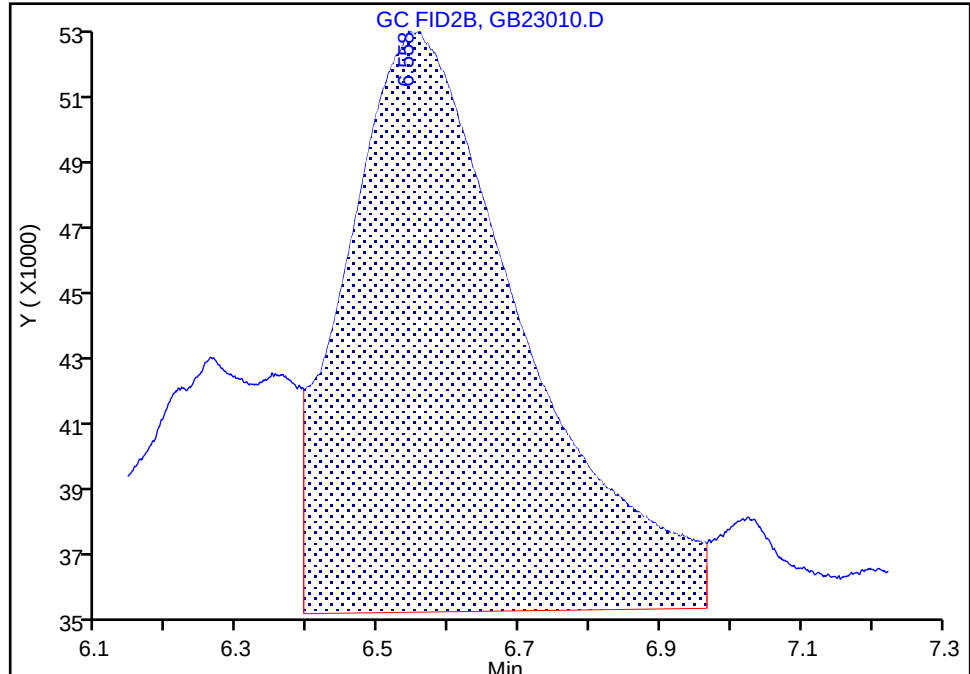
ALS Bottle#: 0 Worklist Smp#: 10
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

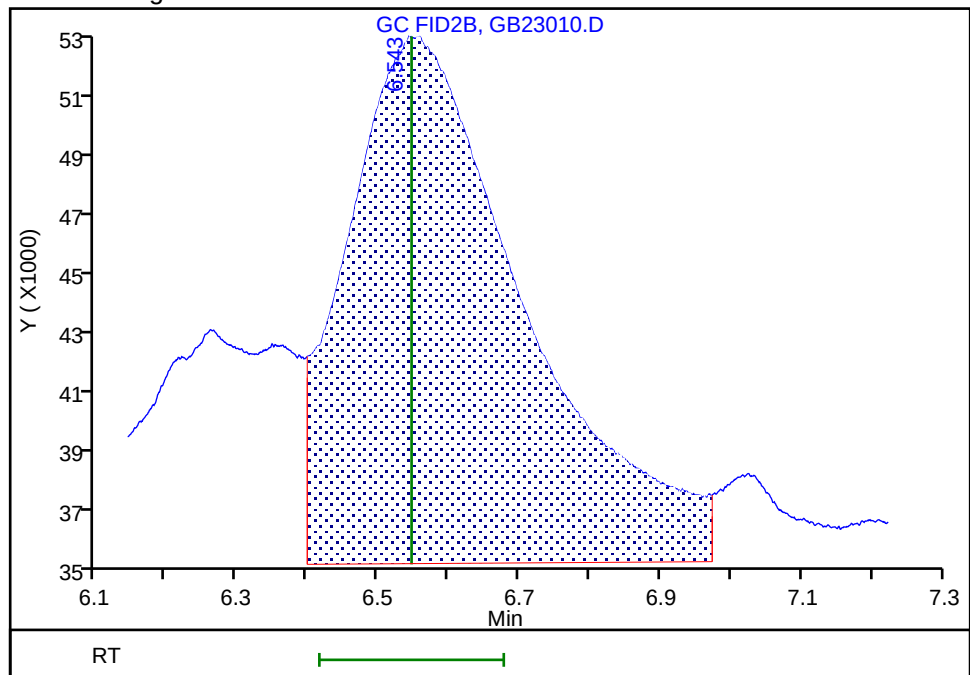
RT: 6.56
Area: 280736
Amount: 5.350752
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



Reviewer: SK9U, 24-Feb-2023 11:12:58

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins Savannah

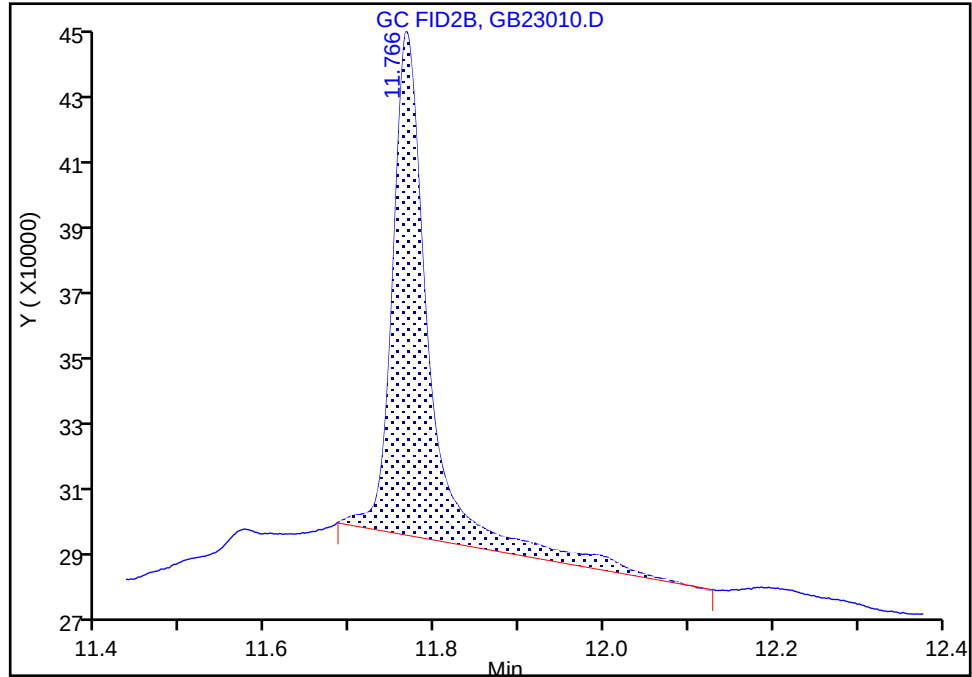
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23010.D
Injection Date: 23-Feb-2023 20:02:32 Instrument ID: CVGG2
Lims ID: ic g2
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W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

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

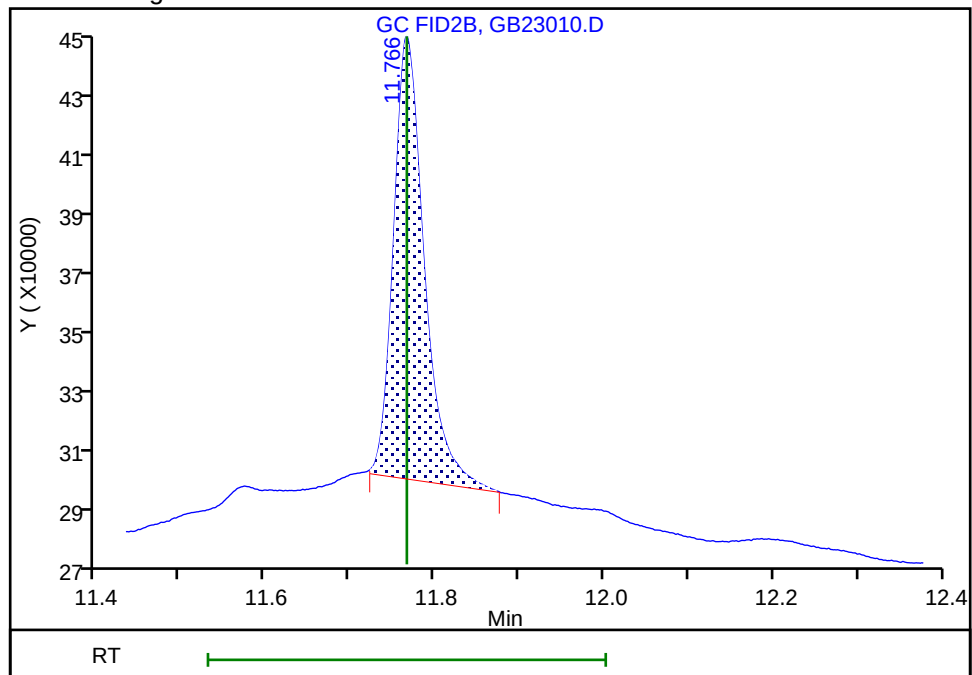
RT: 11.77
Area: 436932
Amount: 10.552417
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 81 of 143

3/7/2023 1:14
PM

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

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

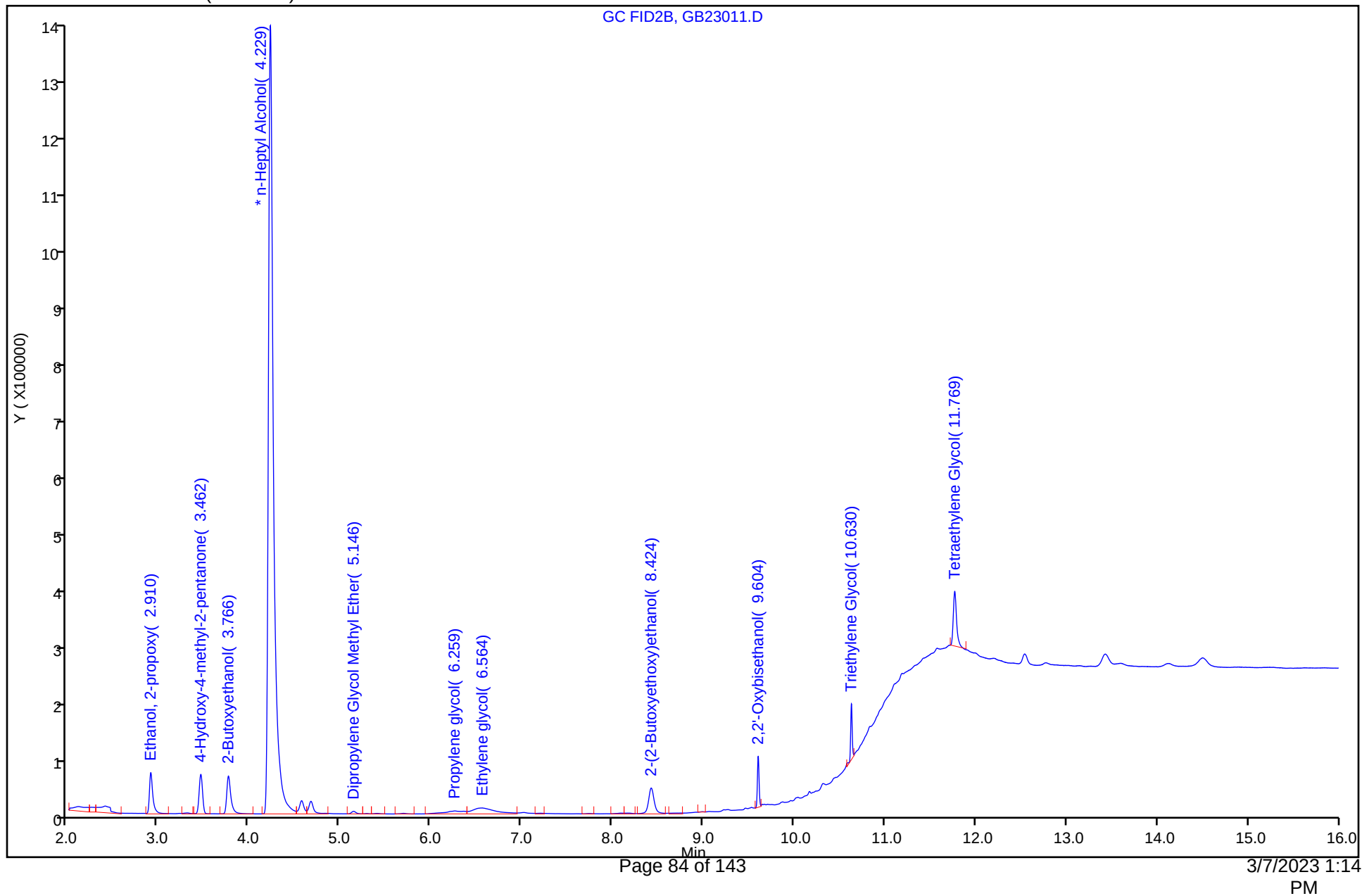
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

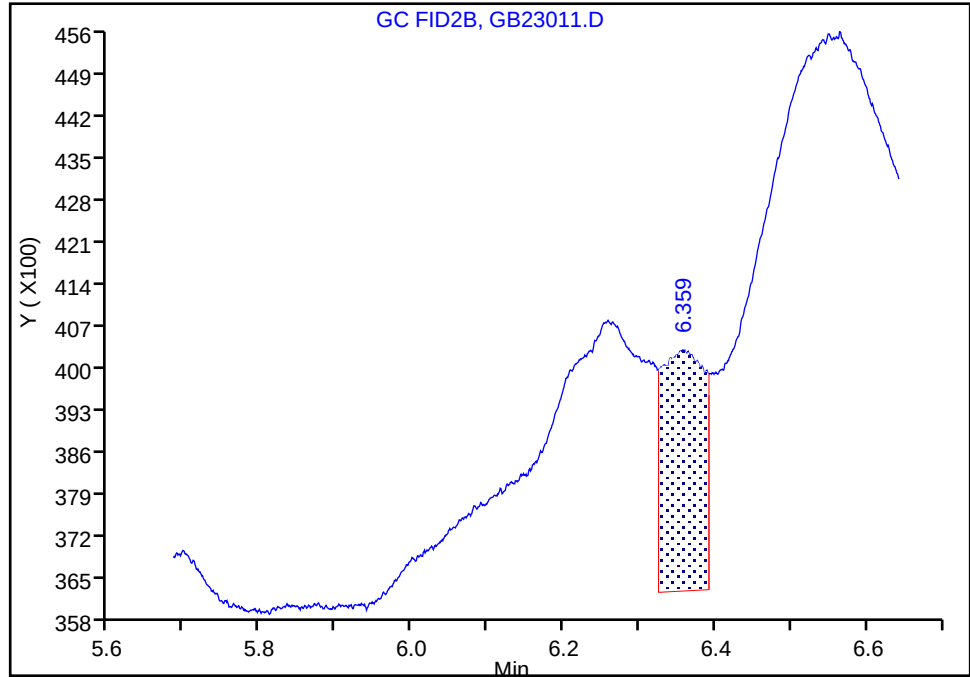
ALS Bottle#: 0 Worklist Smp#: 11
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

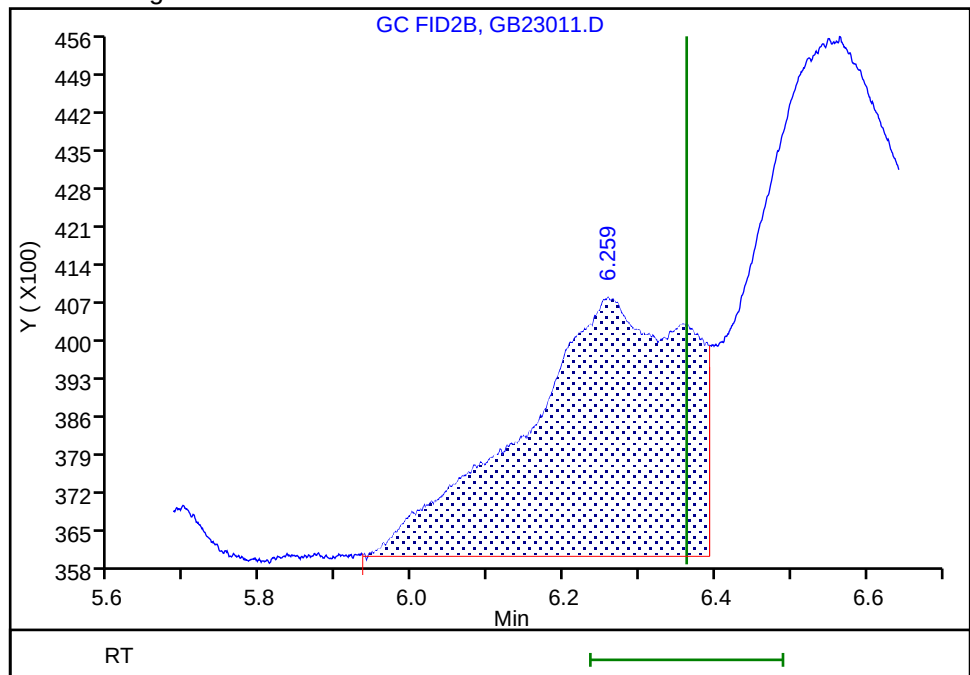
RT: 6.36
Area: 15411
Amount: 1.264640
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



Reviewer: SK9U, 24-Feb-2023 11:13:28

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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

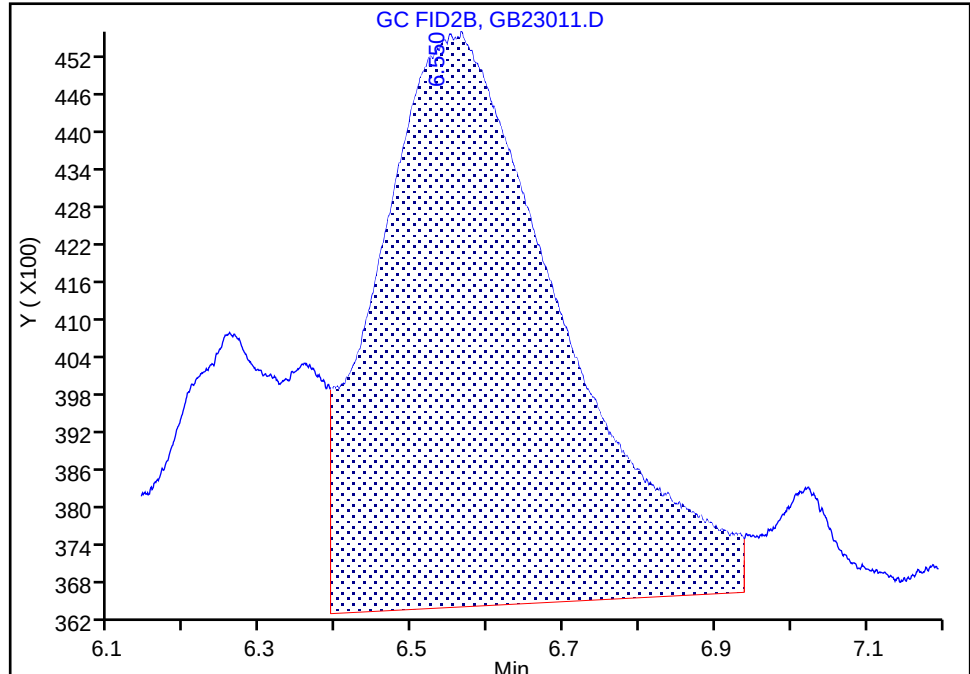
ALS Bottle#: 0 Worklist Smp#: 11
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

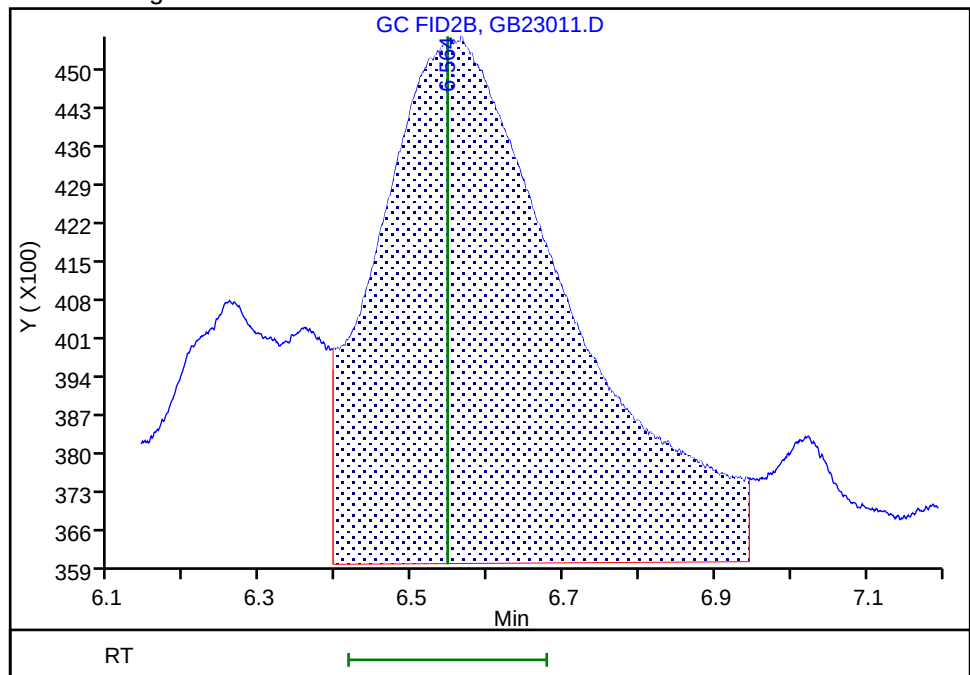
RT: 6.55
Area: 154847
Amount: 2.408684
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

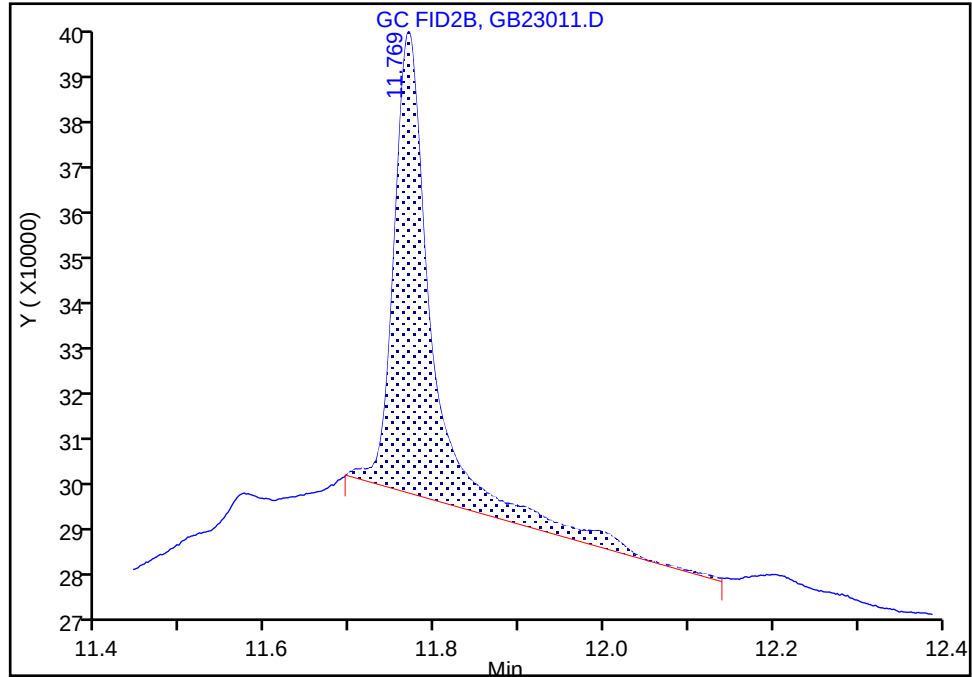
ALS Bottle#: 0 Worklist Smp#: 11
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

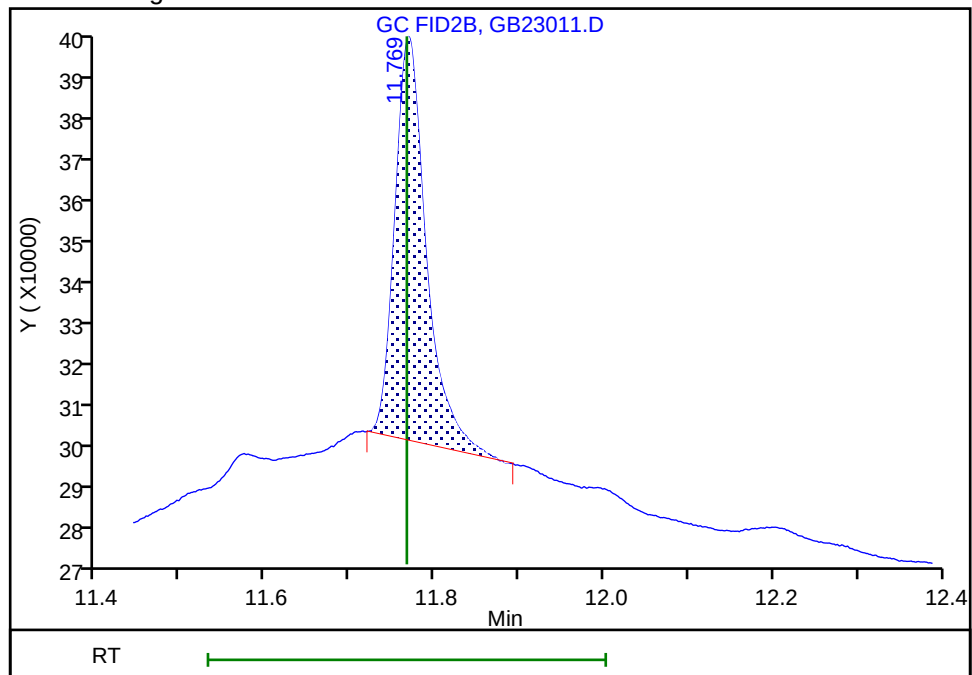
RT: 11.77
Area: 291966
Amount: 4.232468
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 87 of 143

3/7/2023 1:14
PM

Calibration

/ Ethanol, 2-propoxy

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

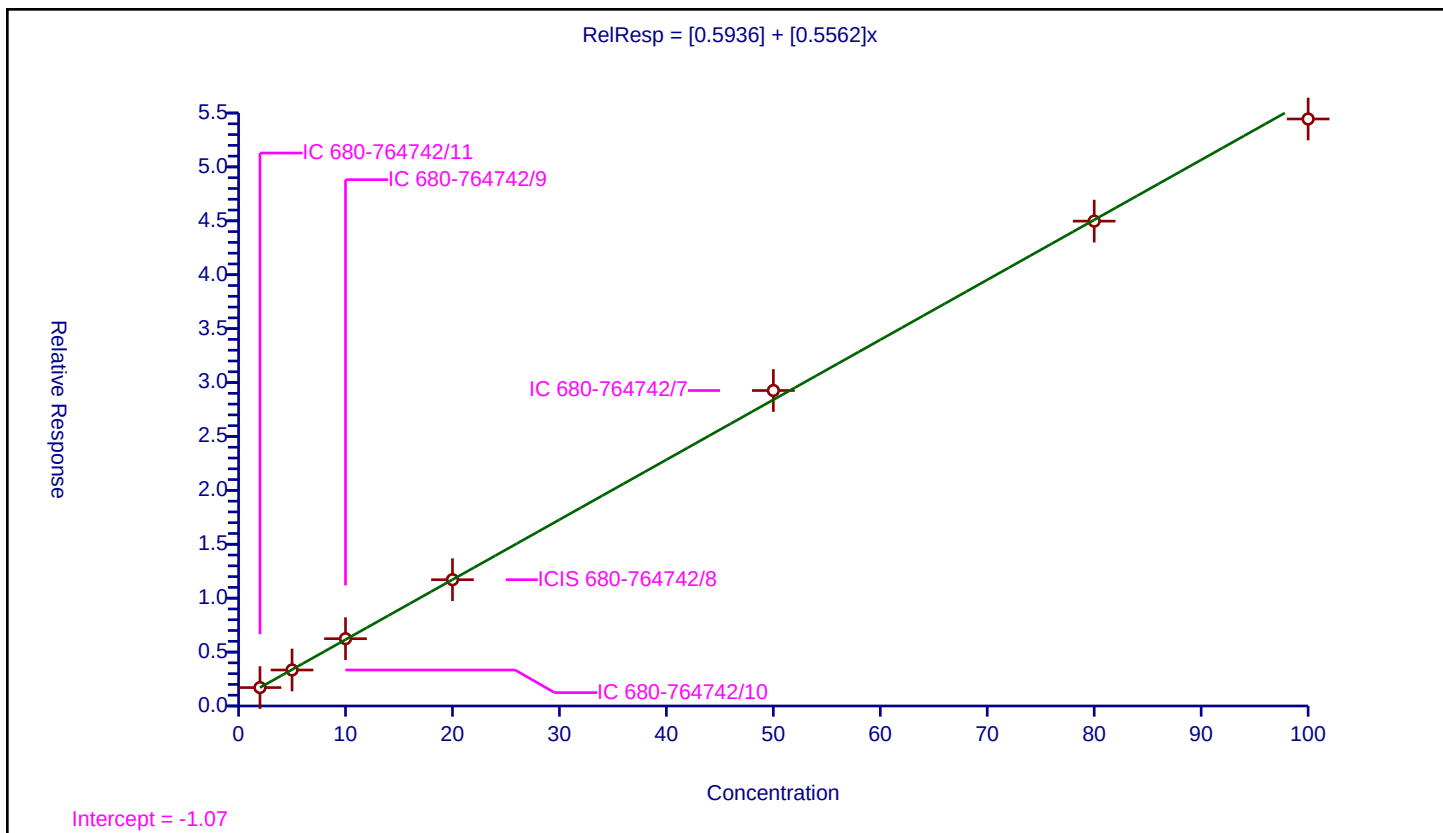
Curve Coefficients

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

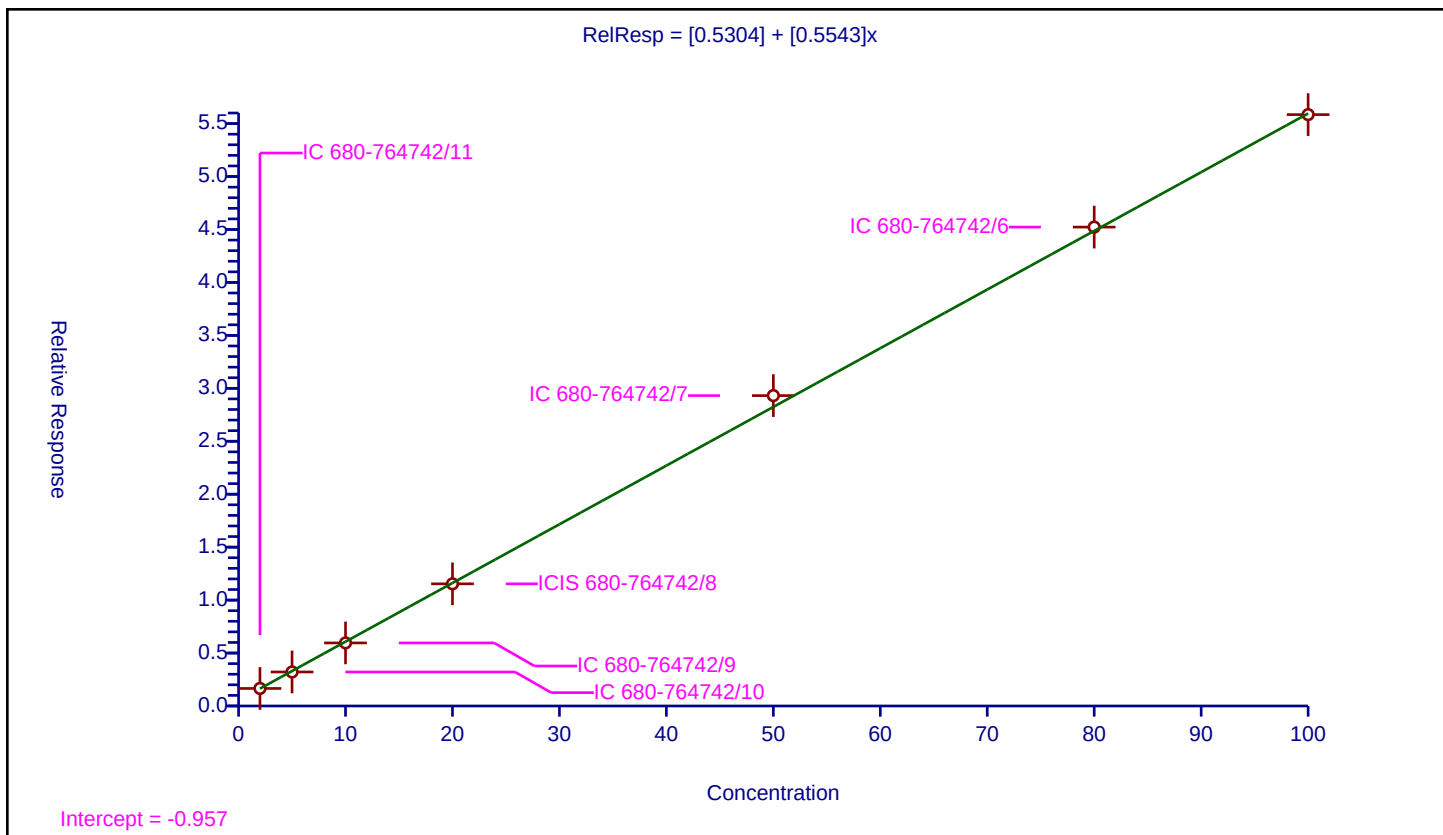
Curve Coefficients

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

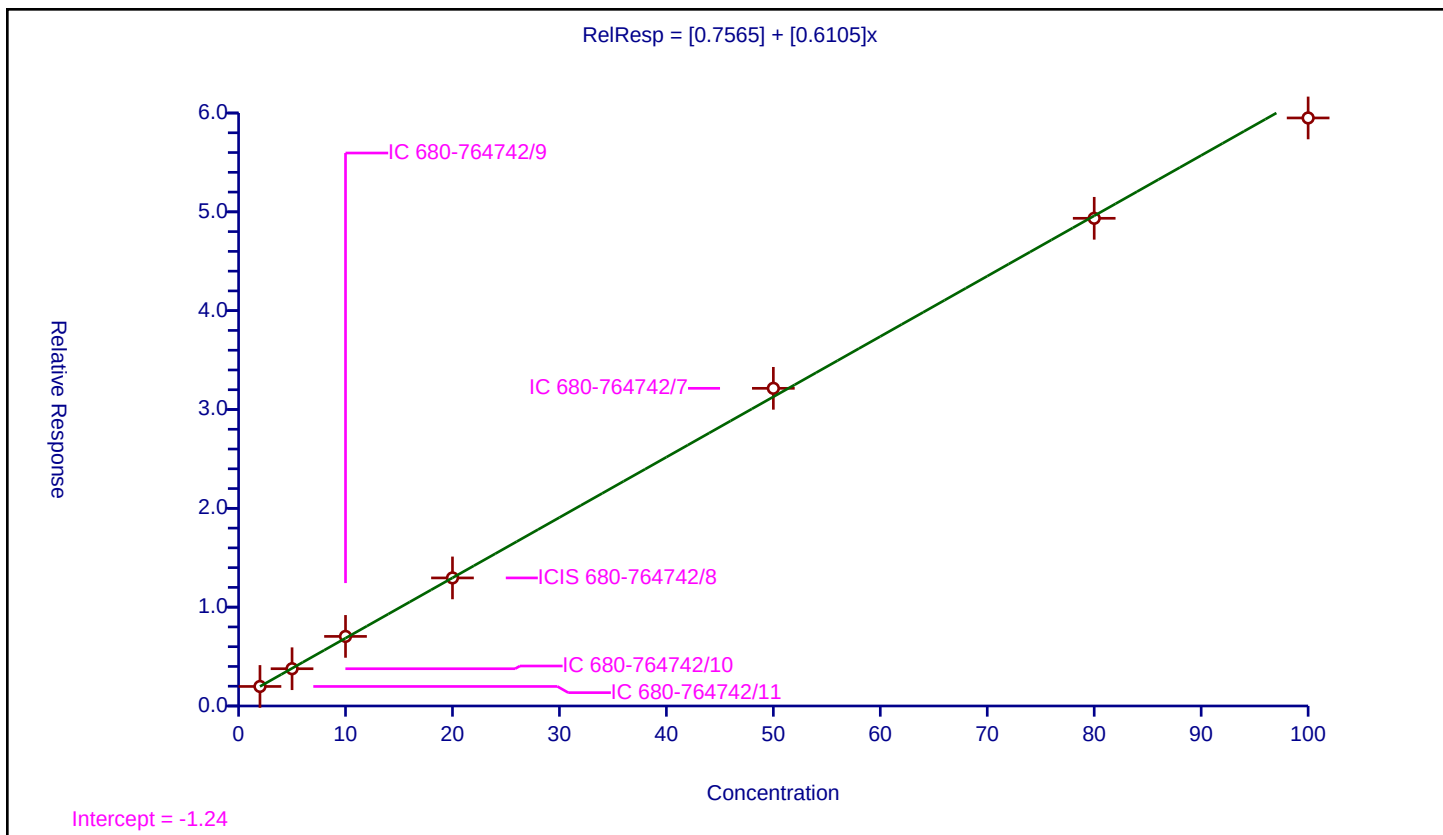
Curve Coefficients

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

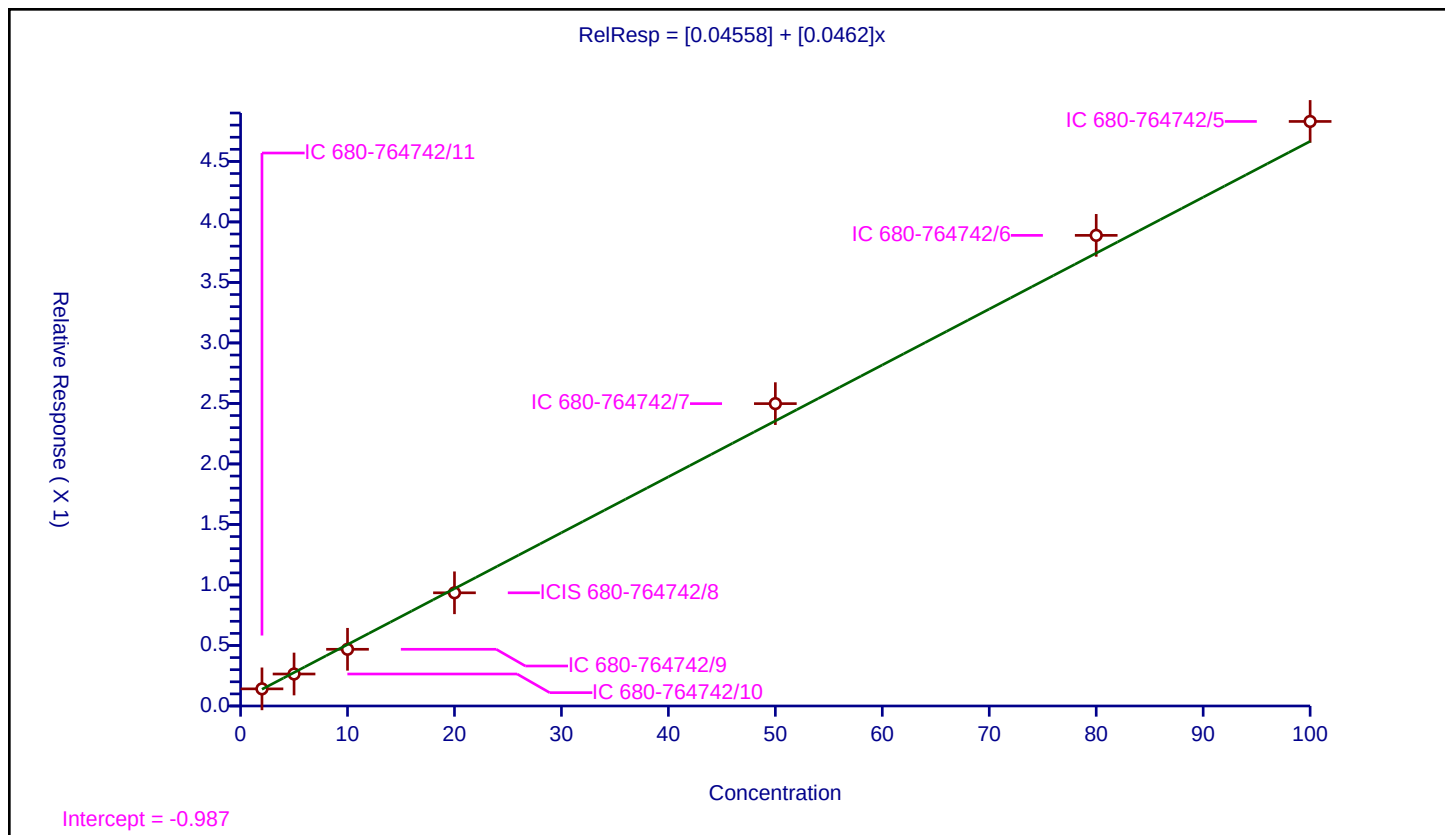
Curve Coefficients

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

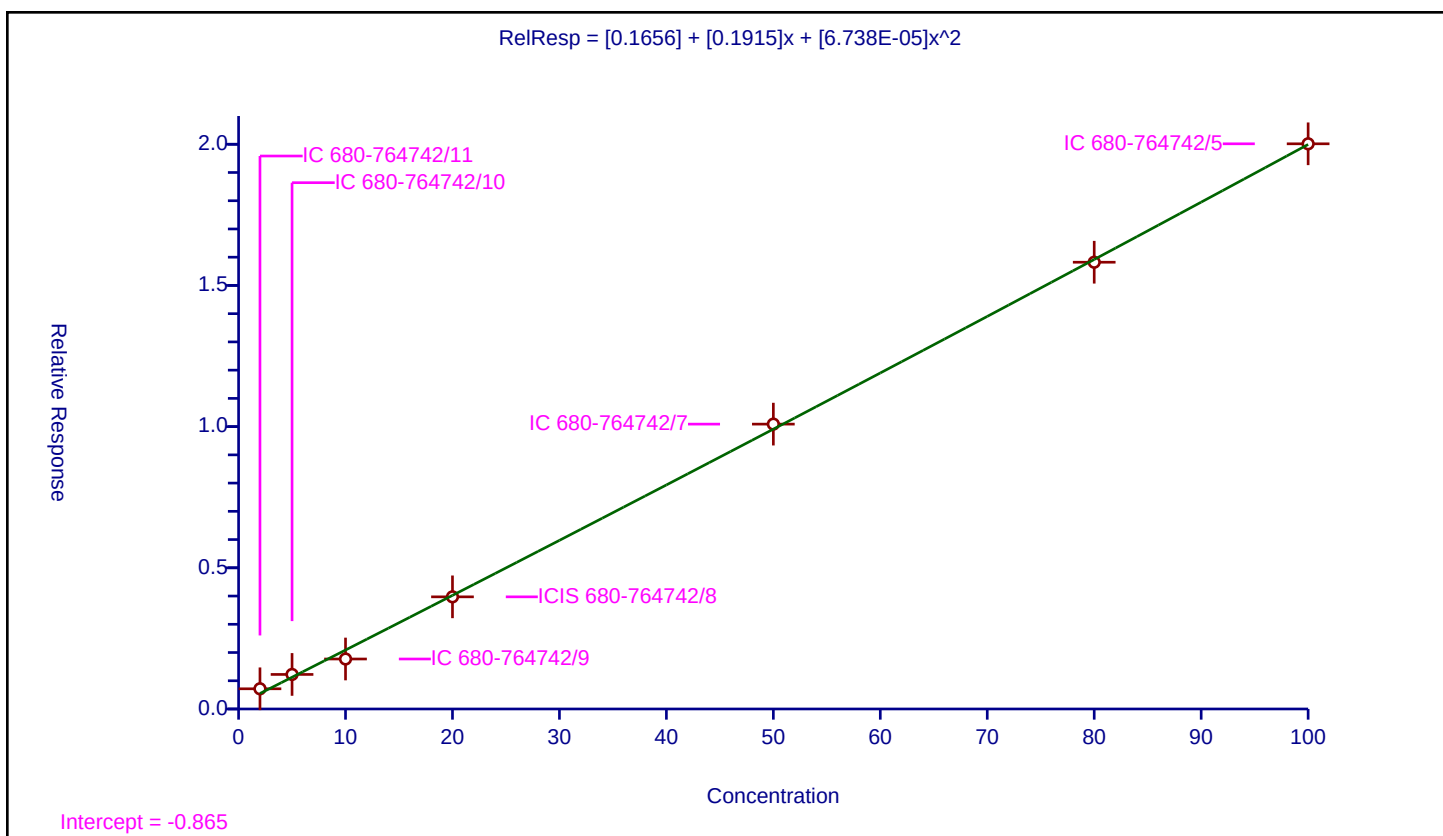
Curve Coefficients

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

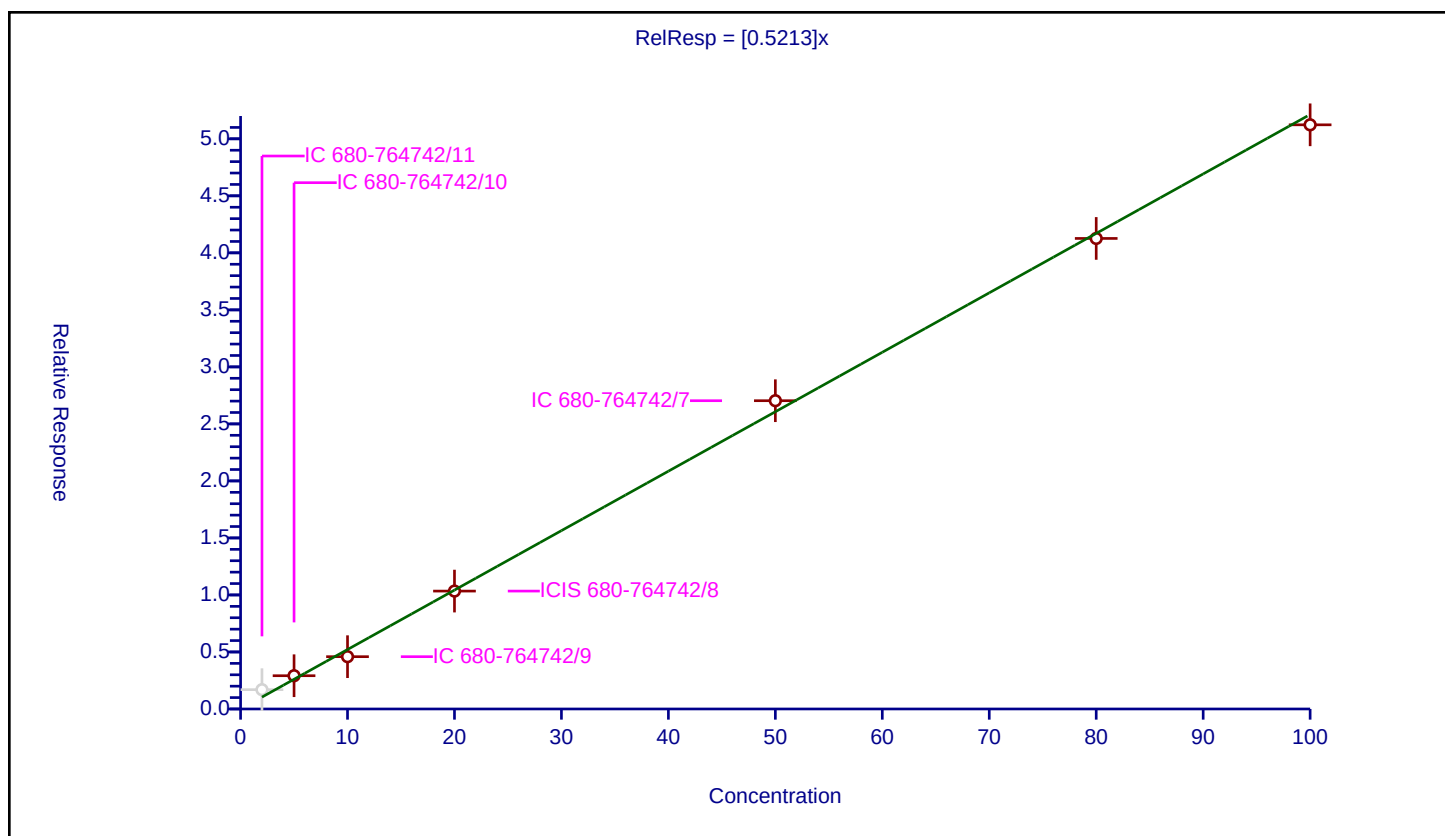
Curve Coefficients

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

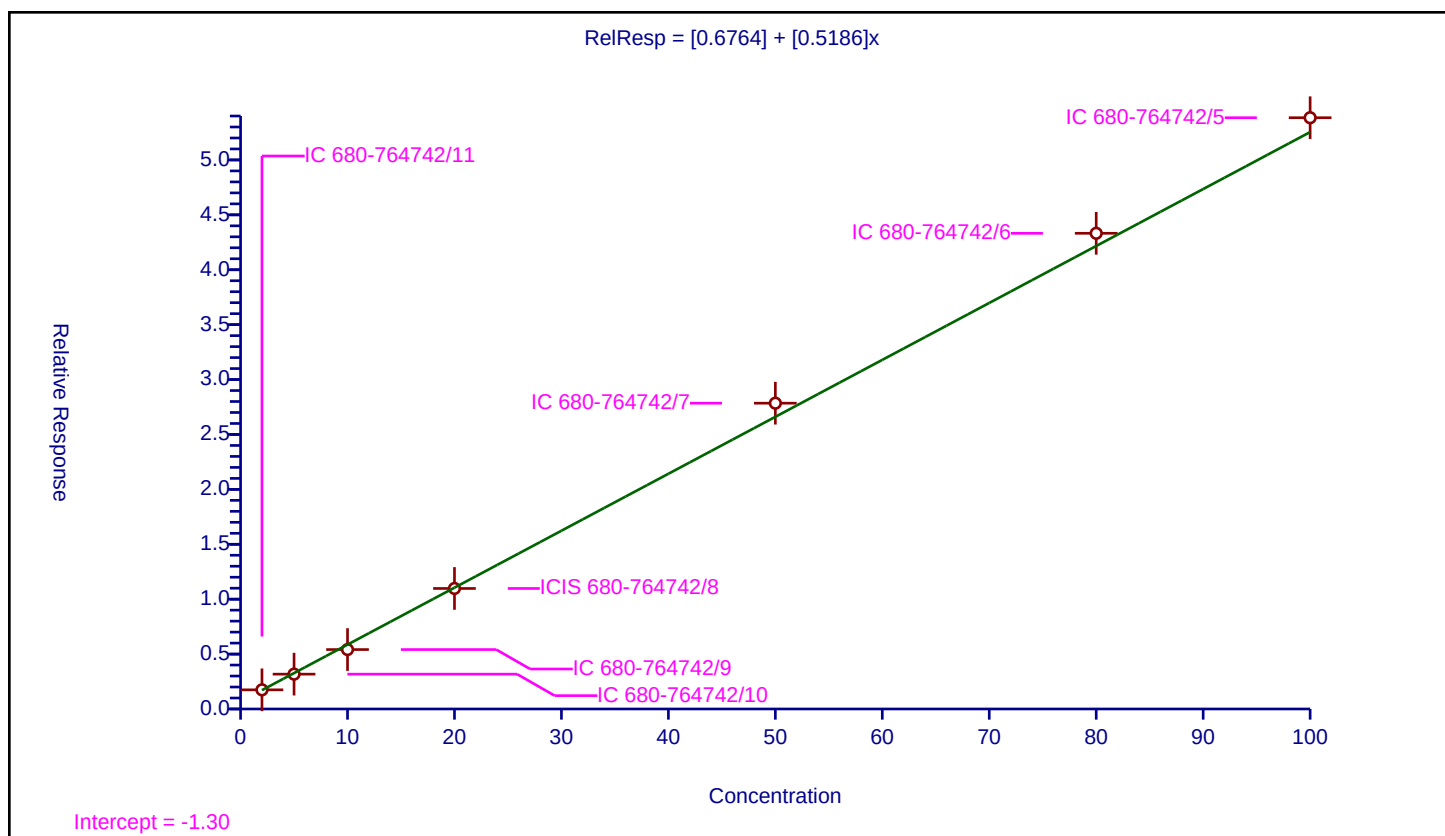
Curve Coefficients

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

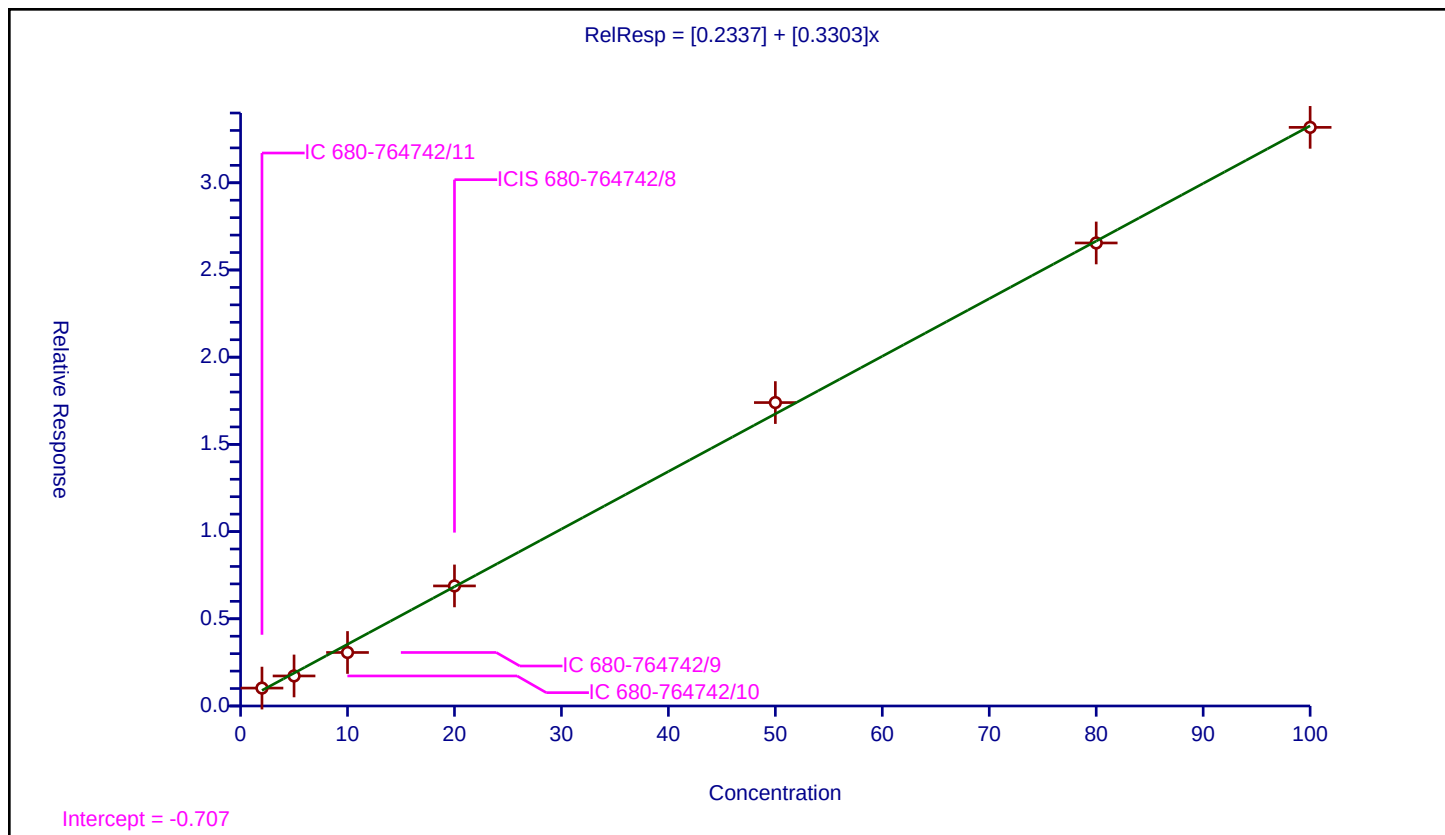
Curve Coefficients

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

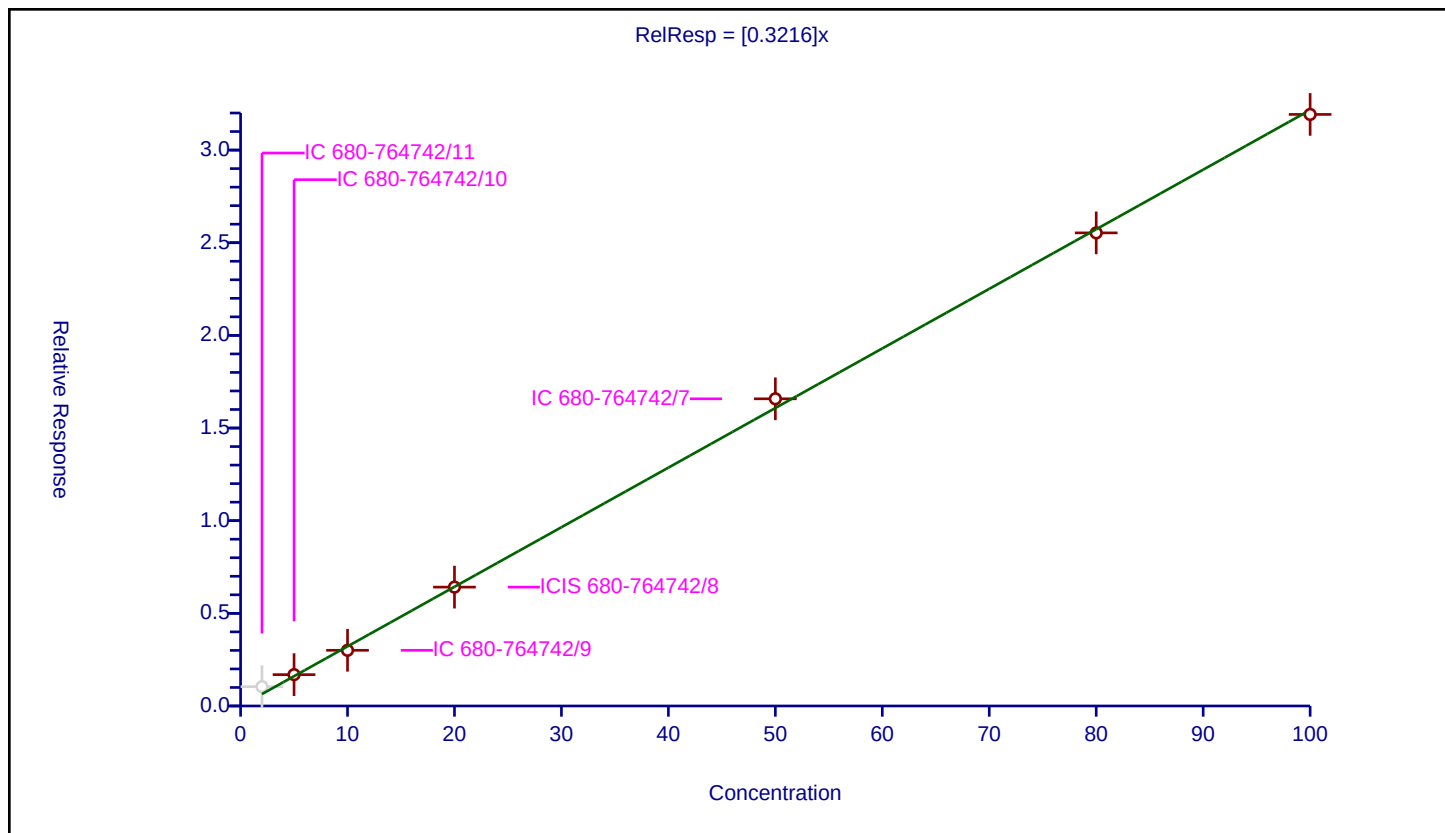
Curve Coefficients

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

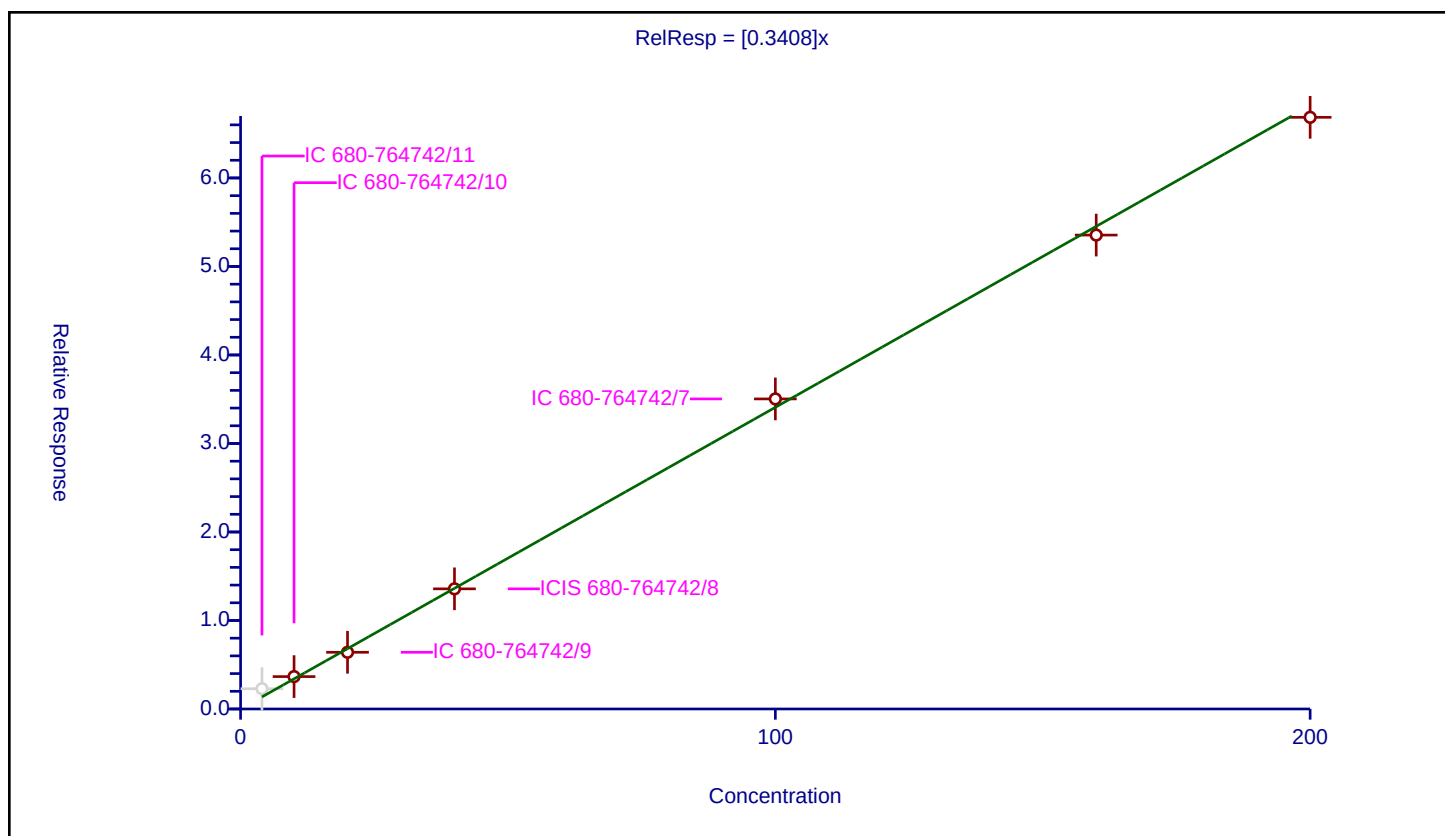
Curve Coefficients

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.: 580-124122-1
 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-pentano ne	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.: 580-124122-1
 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

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

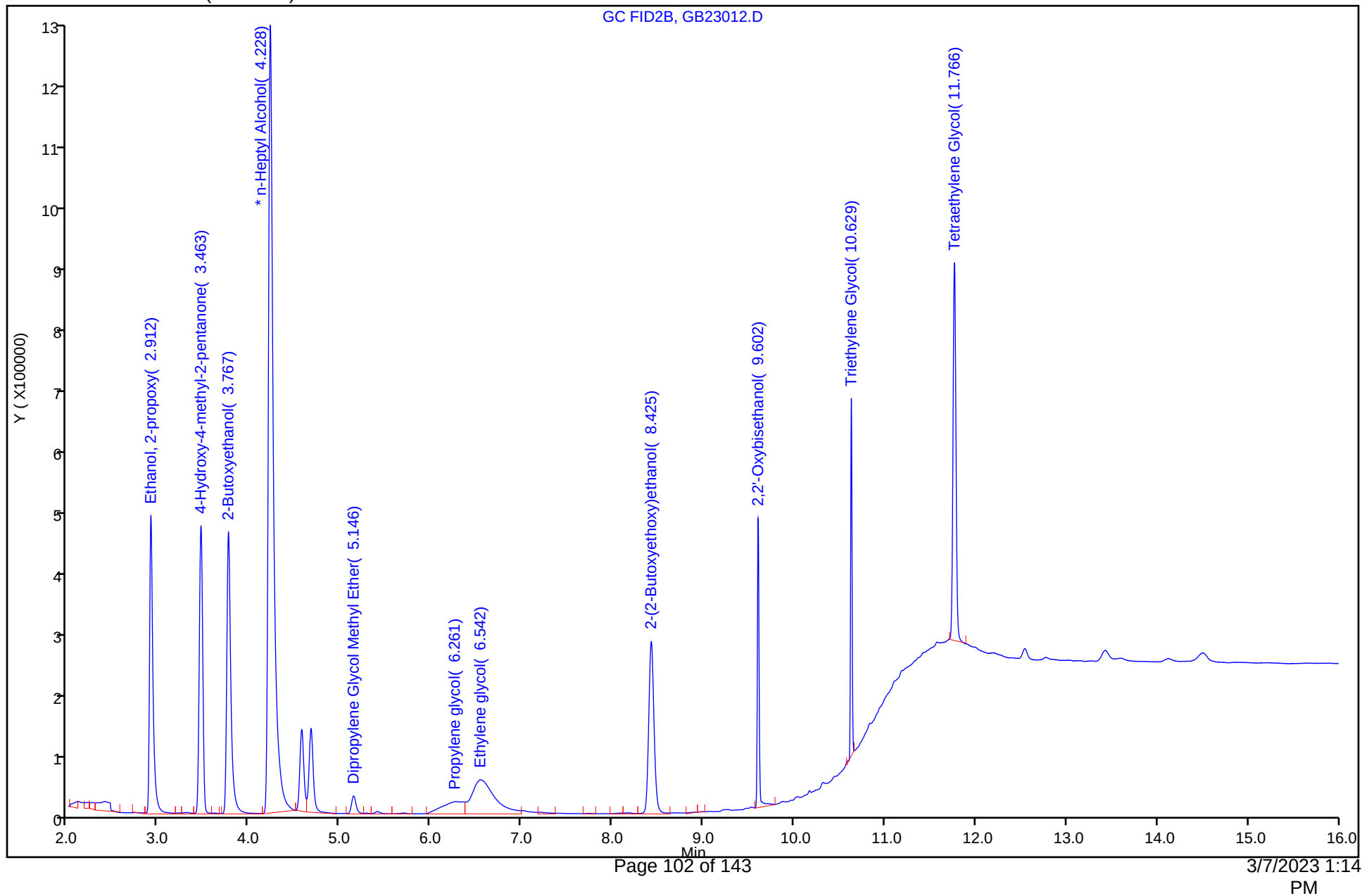
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

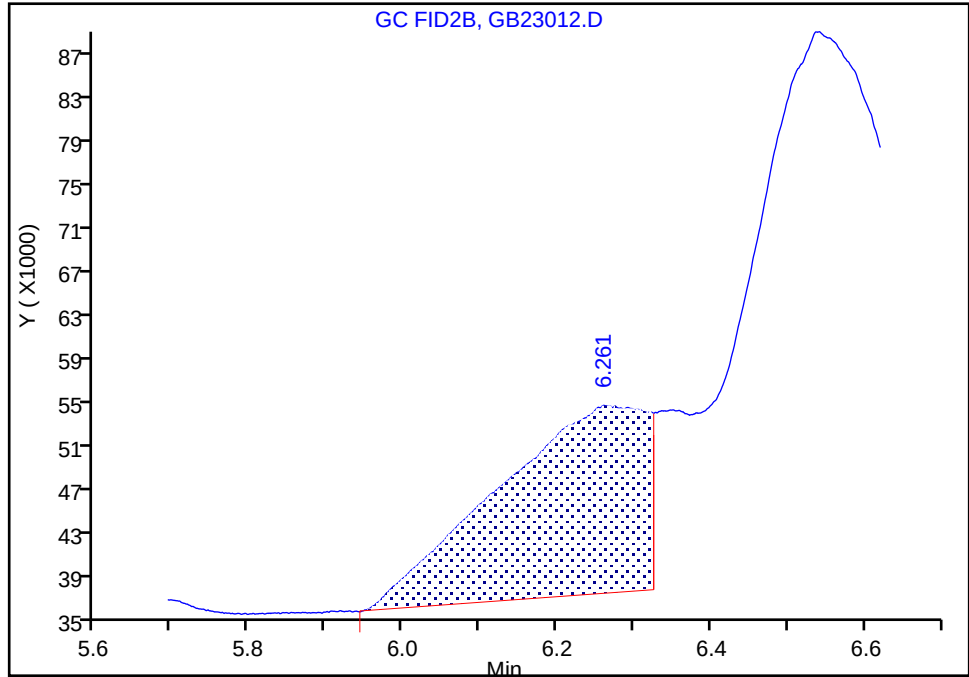
ALS Bottle#: 0 Worklist Smp#: 12
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

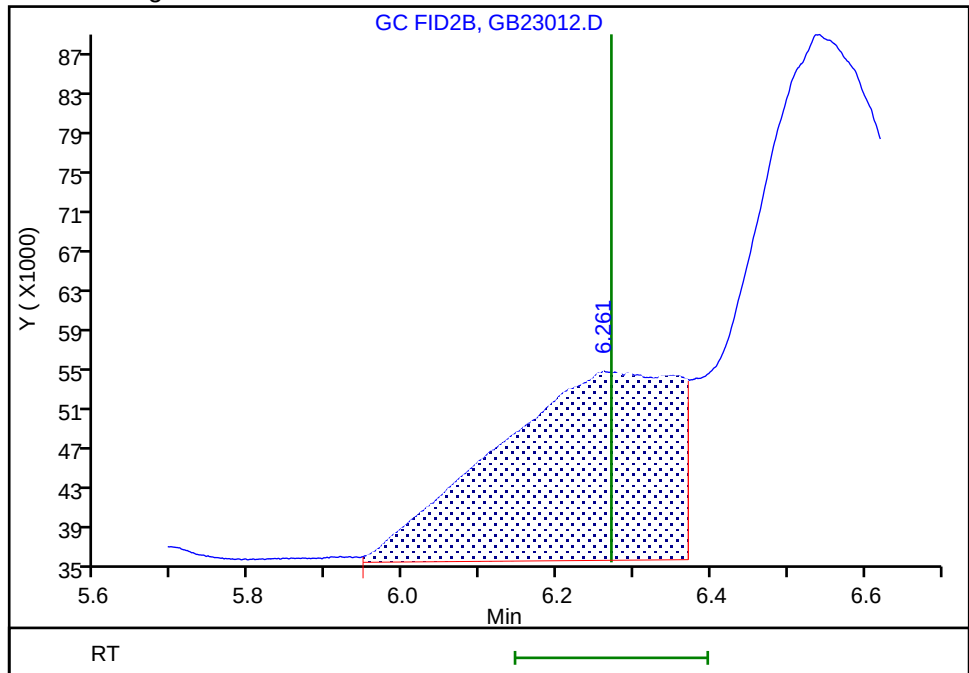
RT: 6.26
Area: 230594
Amount: 11.910790
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 103 of 143

3/7/2023 1:14
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:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

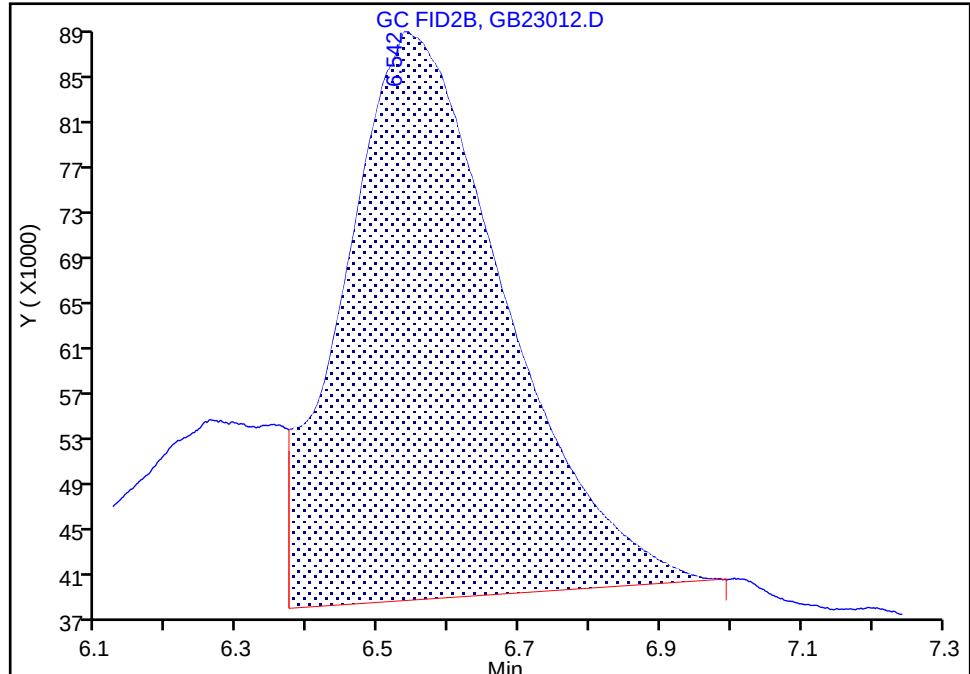
ALS Bottle#: 0 Worklist Smp#: 12
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

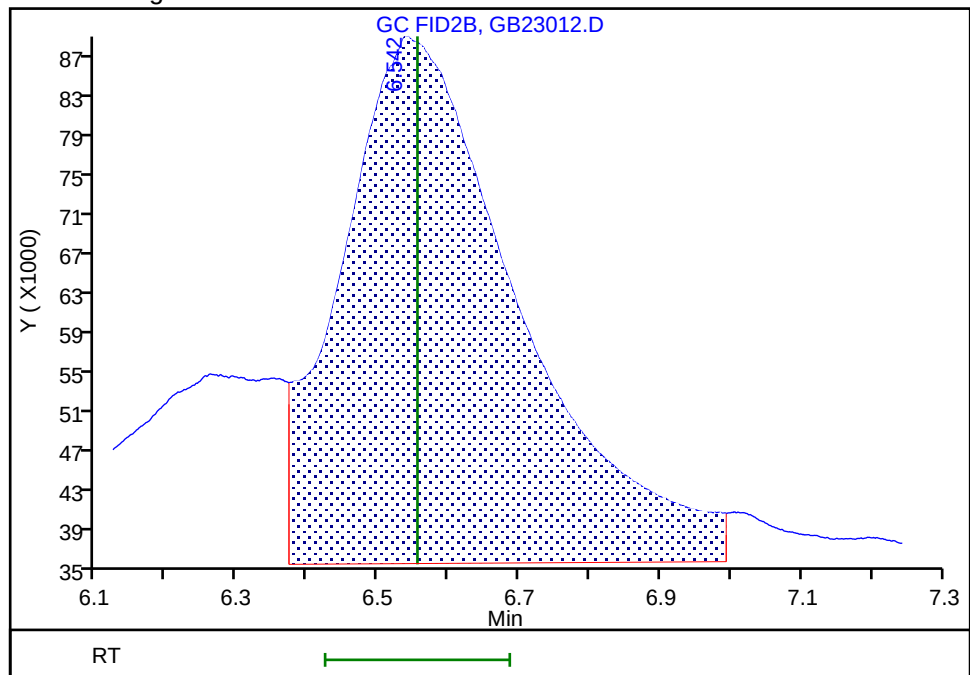
RT: 6.54
Area: 786628
Amount: 15.544293
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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

Audit Reason: Baseline Smoothing
Page 104 of 143

3/7/2023 1:14
PM

Eurofins Savannah

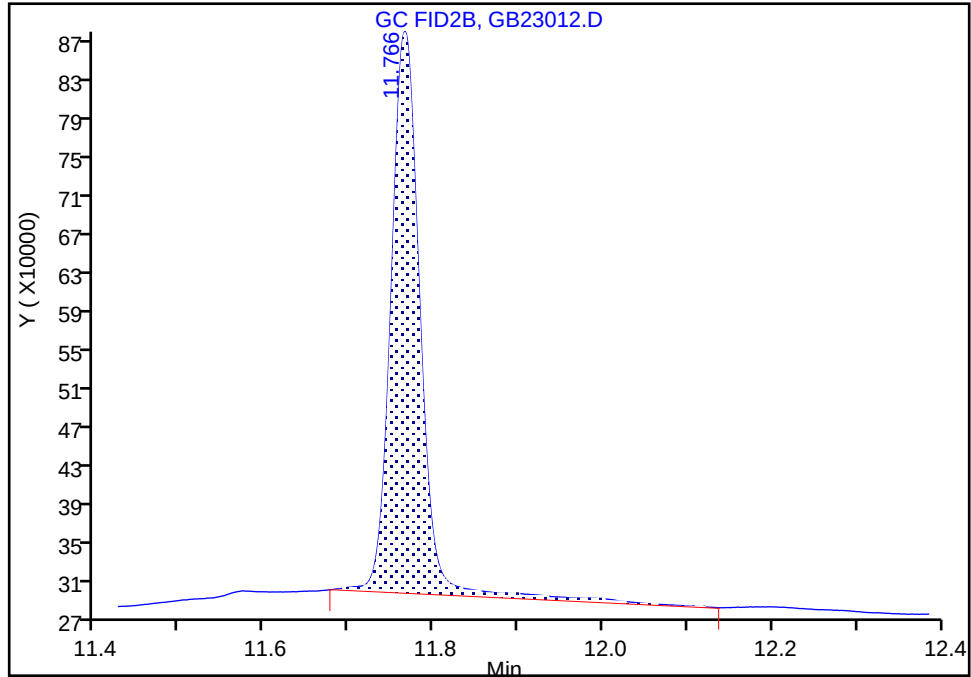
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230223-84021.b\GB23012.D
Injection Date: 23-Feb-2023 20:49:13 Instrument ID: CVGG2
Lims ID: icv gly
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W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

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

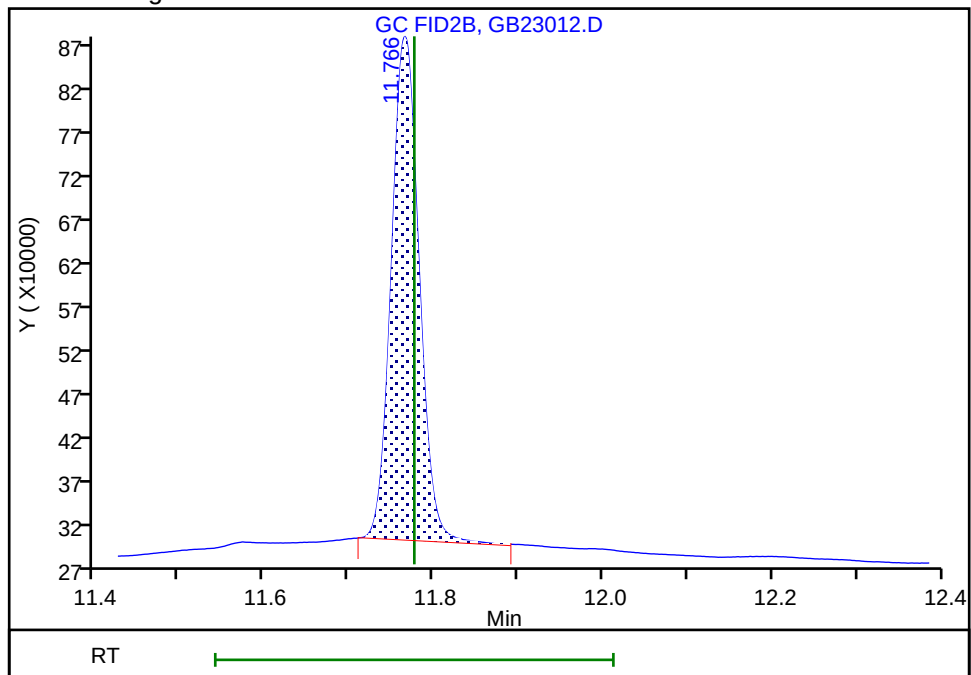
RT: 11.77
Area: 1402705
Amount: 43.840765
Amount Units: ug/ml

Processing Integration Results



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

Manual Integration Results



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.: 580-124122-1
 SDG No.: _____
 Lab Sample ID: CCVIS 680-765944/5 Calibration Date: 03/03/2023 15:04
 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: GC03005.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.5105		17.3	20.0	-13.6	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin2		0.4944		16.9	20.0	-15.6	20.0
2-Butoxyethanol	Lin2		0.5718		17.5	20.0	-12.5	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0411		16.8	20.0	-16.0	20.0
Propylene glycol	Qua		0.1282		12.5	20.0	-37.7*	20.0
Ethylene glycol	Ave	0.5213	0.4874		18.7	20.0	-6.5	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.4584		16.4	20.0	-18.1	20.0
2,2'-Oxybisethanol	Lin1		0.1975		11.3	20.0	-43.7*	20.0
Triethylene Glycol	Ave	0.3216	0.1932		12.0	20.0	-39.9*	20.0
Tetraethylene Glycol	Ave	0.3408	0.1829		21.5	40.0	-46.3*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-124122-1
 SDG No.: _____
 Lab Sample ID: CCVIS 680-765944/5 Calibration Date: 03/03/2023 15:04
 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: GC03005.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.91	2.85	2.97
4-Hydroxy-4-methyl-2-pentanone	3.46	3.39	3.53
2-Butoxyethanol	3.76	3.69	3.84
Dipropylene Glycol Methyl Ether	5.14	5.04	5.24
Propylene glycol	6.35	6.22	6.48
Ethylene glycol	6.57	6.44	6.70
2-(2-Butoxyethoxy)ethanol	8.42	8.25	8.58
2,2'-Oxybisethanol	9.61	9.41	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\20230303-84174.b\GC03005.D
 Lims ID: ccvis g4
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 03-Mar-2023 15:04:48 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-005
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:06:09 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: CTX1660

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

1 Ethanol, 2-propoxy	2.911	2.911	0.000	899551	20.0	17.3
2 4-Hydroxy-4-methyl-2-pentanone	3.460	3.460	0.000	871286	20.0	16.9
3 2-Butoxyethanol	3.762	3.762	0.000	1007564	20.0	17.5
* 4 n-Heptyl Alcohol	4.221	4.221	0.000	4405584	50.0	50.0
5 Dipropylene Glycol Methyl Ether	5.141	5.141	0.000	72428	20.0	16.8
6 Propylene glycol	6.351	6.351	0.000	225922	20.0	12.5
7 Ethylene glycol	6.570	6.570	0.000	858853	20.0	18.7
8 2-(2-Butoxyethoxy)ethanol	8.415	8.415	0.000	807836	20.0	16.4
9 2,2'-Oxybisethanol	9.605	9.605	0.000	348076	20.0	11.3
10 Triethylene Glycol	10.633	10.633	0.000	340524	20.0	12.0
11 Tetraethylene Glycol	11.772	11.772	0.000	644690	40.0	21.5

Reagents:

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03005.D

Injection Date: 03-Mar-2023 15:04:48

Instrument ID: CVGG2

Operator ID:

Lims ID: ccvis g4

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

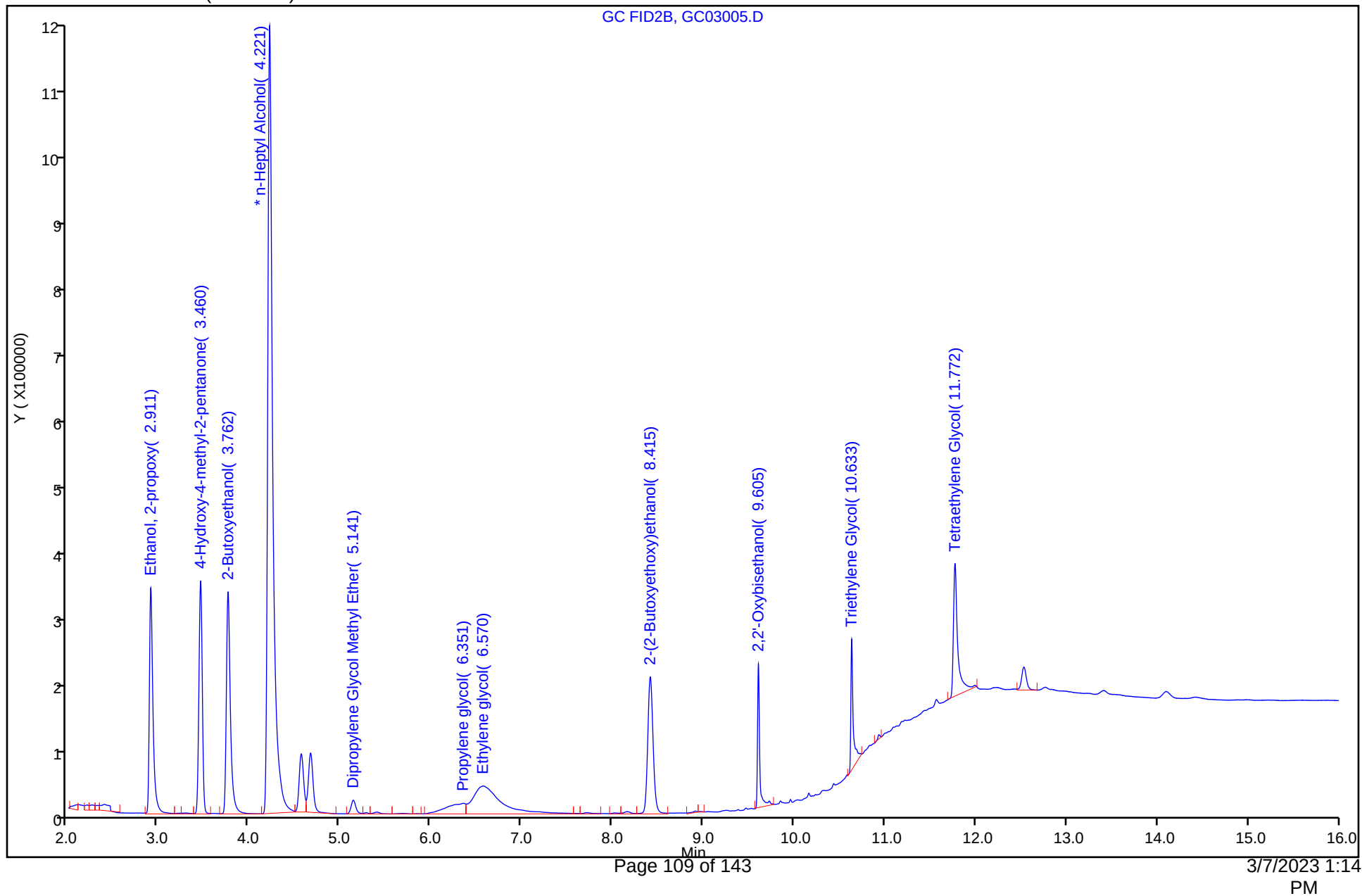
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-124122-1
 SDG No.: _____
 Lab Sample ID: CCV 680-765944/22 Calibration Date: 03/03/2023 23:06
 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: GC03022.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.5910		20.2	20.0	0.9	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin2		0.6064		20.9	20.0	4.6	20.0
2-Butoxyethanol	Lin2		0.6676		20.6	20.0	3.1	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0485		20.0	20.0	0.1	20.0
Propylene glycol	Qua		0.0963		9.16	20.0	-54.2*	20.0
Ethylene glycol	Ave	0.5213	0.3264		12.5	20.0	-37.4*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.5776		21.0	20.0	4.9	20.0
2,2'-Oxybisethanol	Lin1		0.1545		8.65	20.0	-56.7*	20.0
Triethylene Glycol	Ave	0.3216	0.2760		17.2	20.0	-14.2	20.0
Tetraethylene Glycol	Ave	0.3408	0.0632		7.42	40.0	-81.5*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-124122-1
 SDG No.: _____
 Lab Sample ID: CCV 680-765944/22 Calibration Date: 03/03/2023 23:06
 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: GC03022.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	3.76	3.69	3.84
Dipropylene Glycol Methyl Ether	5.15	5.05	5.25
Propylene glycol	6.34	6.22	6.47
Ethylene glycol	6.57	6.44	6.70
2-(2-Butoxyethoxy)ethanol	8.42	8.25	8.58
2,2'-Oxybisethanol	9.61	9.41	9.80
Triethylene Glycol	10.63	10.42	10.85
Tetraethylene Glycol	11.78	11.54	12.01

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03022.D
 Lims ID: ccv g4
 Client ID:
 Sample Type: CCV
 Inject. Date: 03-Mar-2023 23:06:38 ALS Bottle#: 0 Worklist Smp#: 22
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-022
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:06:10 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: CTX1660

First Level Reviewer: SWK1

Date: 05-Mar-2023 12:05:43

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

1 Ethanol, 2-propoxy						
2.919	2.919	0.000	1624672	20.0	20.2	
2 4-Hydroxy-4-methyl-2-pentanone						
3.481	3.481	0.000	1666904	20.0	20.9	
3 2-Butoxyethanol						
3.762	3.762	0.000	1835213	20.0	20.6	
* 4 n-Heptyl Alcohol						
4.199	4.199	0.000	6872603	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.151	5.151	0.000	133421	20.0	20.0	
6 Propylene glycol						M
6.344	6.344	0.000	264753	20.0	9.16	M
7 Ethylene glycol						M
6.571	6.571	0.000	897186	20.0	12.5	M
8 2-(2-Butoxyethoxy)ethanol						
8.415	8.415	0.000	1587781	20.0	21.0	
9 2,2'-Oxybisethanol						
9.605	9.605	0.000	424843	20.0	8.65	
10 Triethylene Glycol						
10.633	10.633	0.000	758813	20.0	17.2	
11 Tetraethylene Glycol						
11.776	11.776	0.000	347611	40.0	7.42	

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03022.D

Injection Date: 03-Mar-2023 23:06:38

Instrument ID: CVGG2

Operator ID:

Lims ID: ccv g4

Worklist Smp#: 22

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

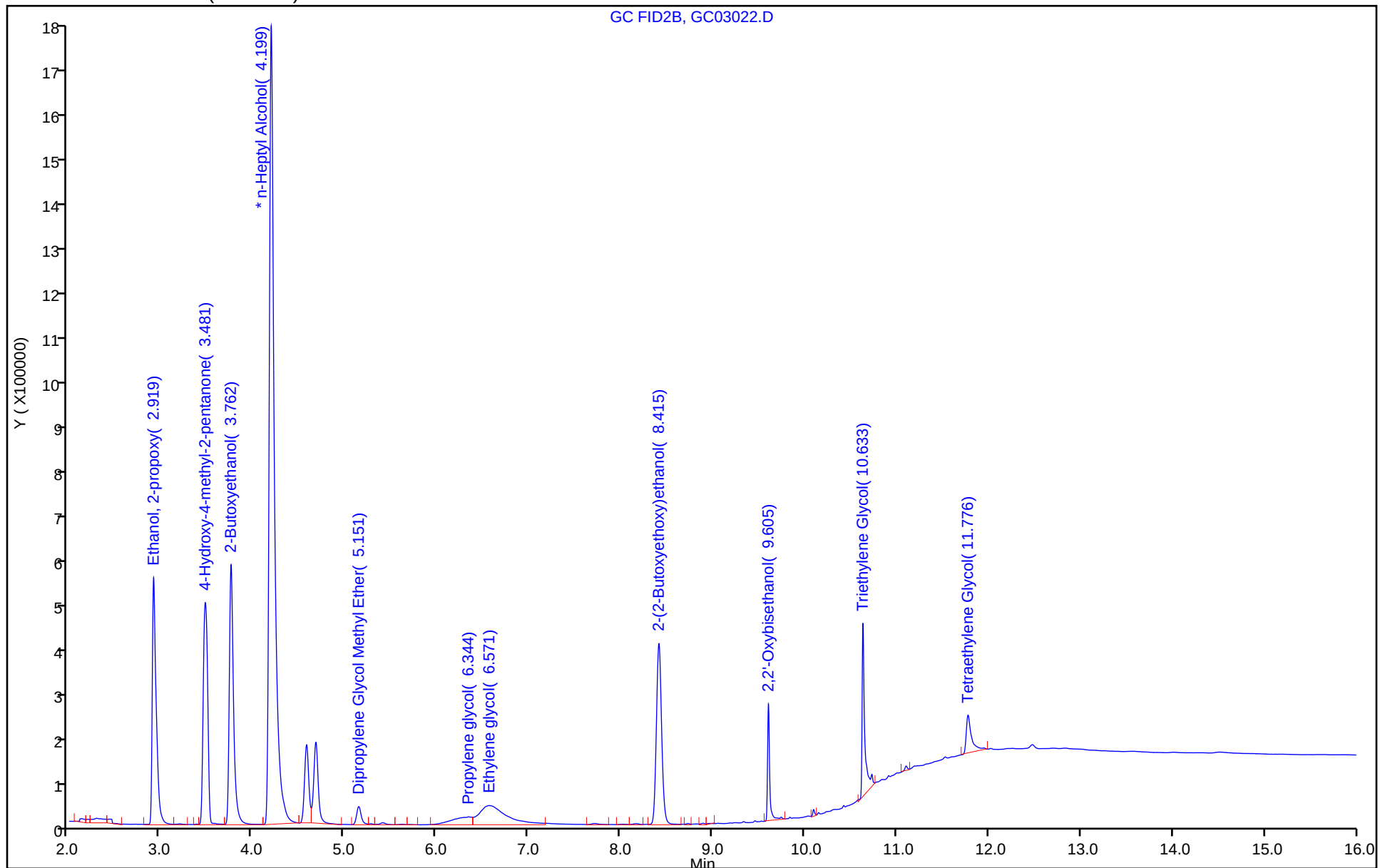
ALS Bottle#:

0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03022.D
Injection Date: 03-Mar-2023 23:06:38 Instrument ID: CVGG2
Lims ID: ccv g4
Client ID:
Operator ID:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

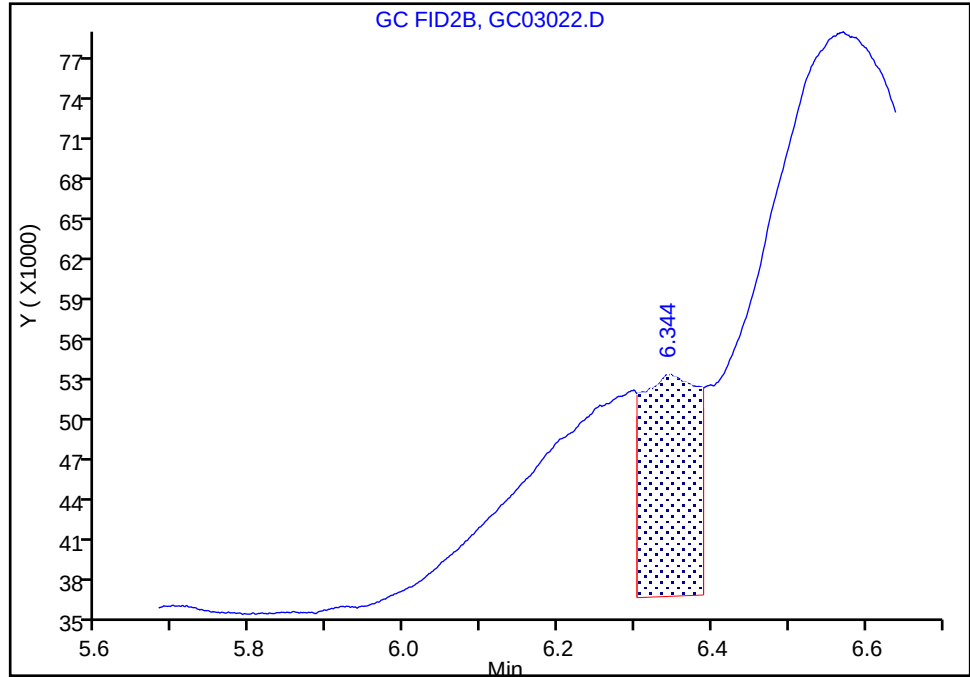
ALS Bottle#: 0 Worklist Smp#: 22
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

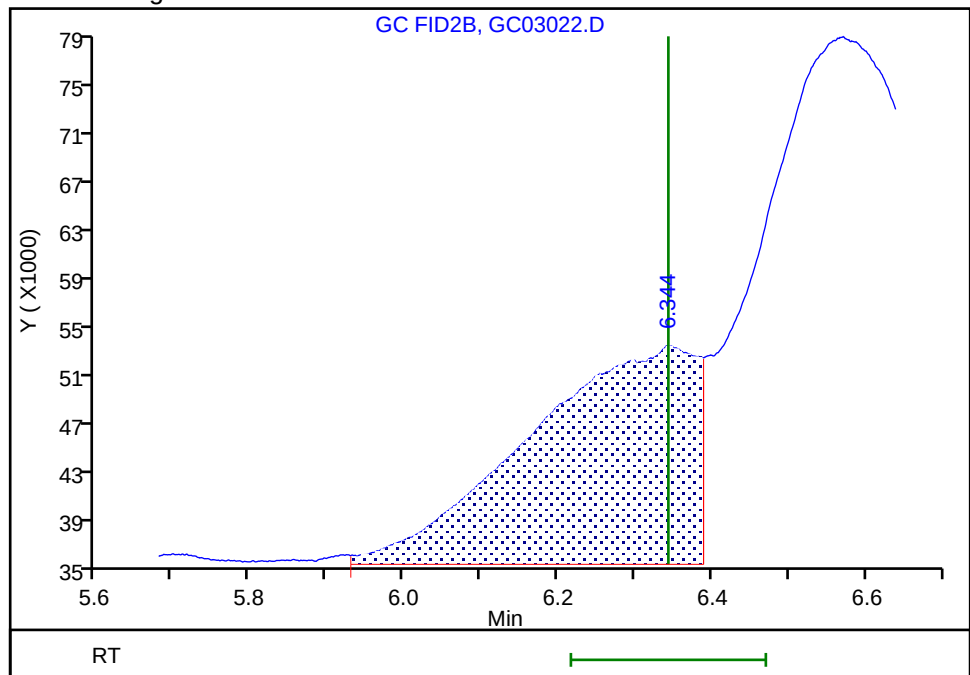
RT: 6.34
Area: 80741
Amount: 2.944632
Amount Units: ug/ml

Processing Integration Results



RT: 6.34
Area: 264753
Amount: 9.162286
Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 05-Mar-2023 12:05:39

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03022.D
Injection Date: 03-Mar-2023 23:06:38 Instrument ID: CVGG2
Lims ID: ccv g4
Client ID:
Operator ID:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

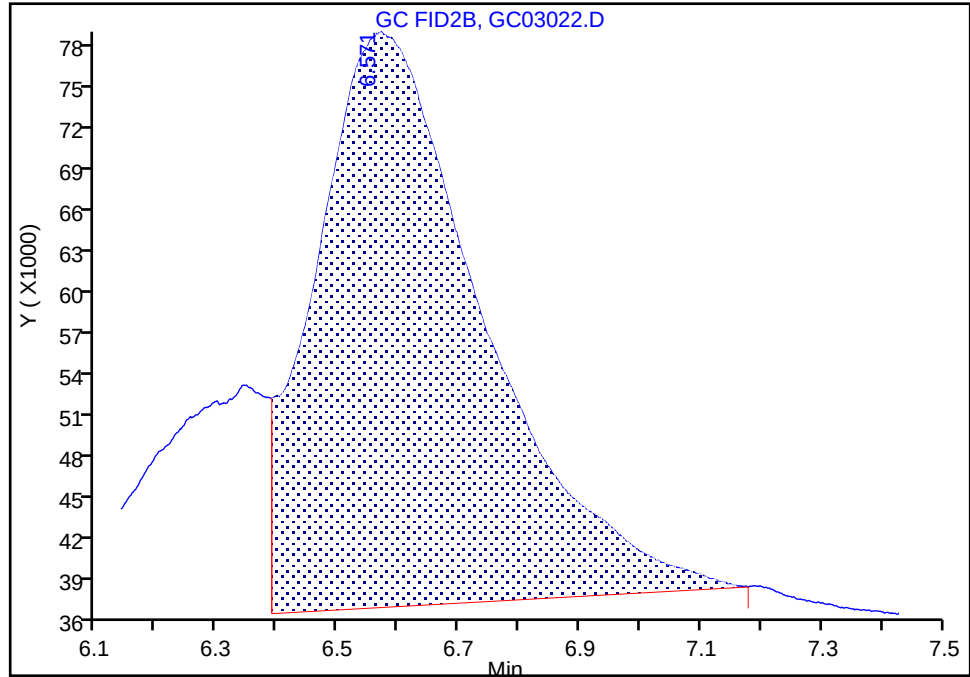
ALS Bottle#: 0 Worklist Smp#: 22
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

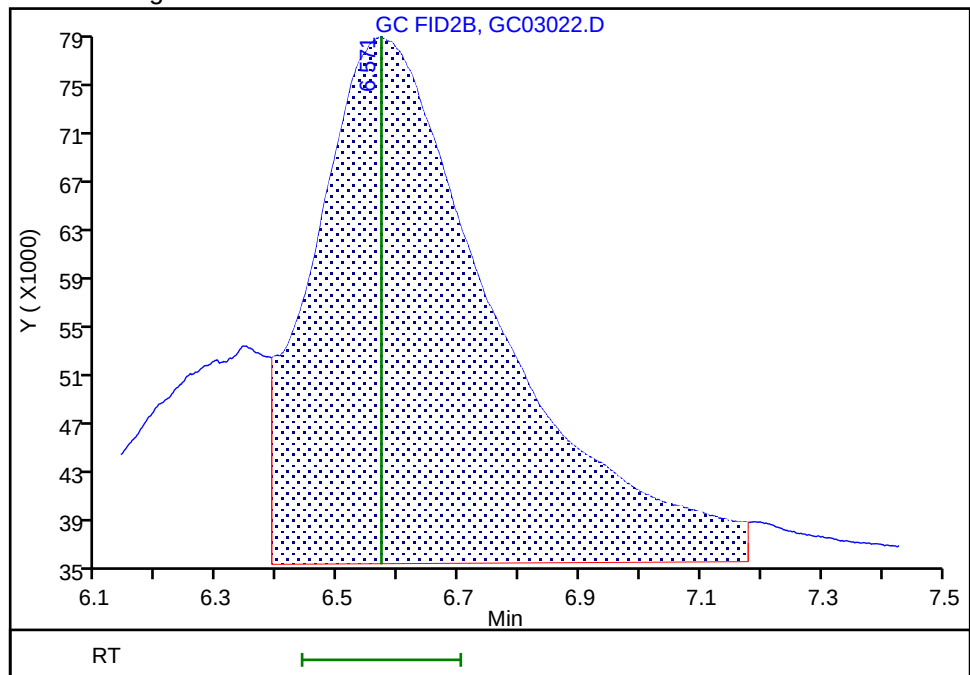
RT: 6.57
Area: 786009
Amount: 10.330229
Amount Units: ug/ml

Processing Integration Results



RT: 6.57
Area: 897186
Amount: 12.520231
Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 05-Mar-2023 12:05:39
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing
Page 116 of 143

3/7/2023 1:14
PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: MB 680-765944/10
Matrix: Water Lab File ID: GC03010.D
Analysis Method: 8015C GLY Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/03/2023 17:02
Con. Extract Vol.: 1 (mL) Dilution Factor: 1
Injection Volume: 1 (uL) GC Column: J&W DB WAX ID: 0.45 (mm)
% Moisture: _____ % Solids: _____ GPC Cleanup: (Y/N) N
Cleanup Factor: _____
Analysis Batch No.: 765944 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\20230303-84174.b\GC03010.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 03-Mar-2023 17:02:12 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-010
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:06:09 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: CTX1660

First Level Reviewer: SWK1

Date: 05-Mar-2023 12:03:05

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

* 4 n-Heptyl Alcohol

4.212	4.218	-0.006	6664411	50.0	50.0

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00106	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03010.D

Injection Date: 03-Mar-2023 17:02:12

Instrument ID: CVGG2

Operator ID:

Lims ID: mb

Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul

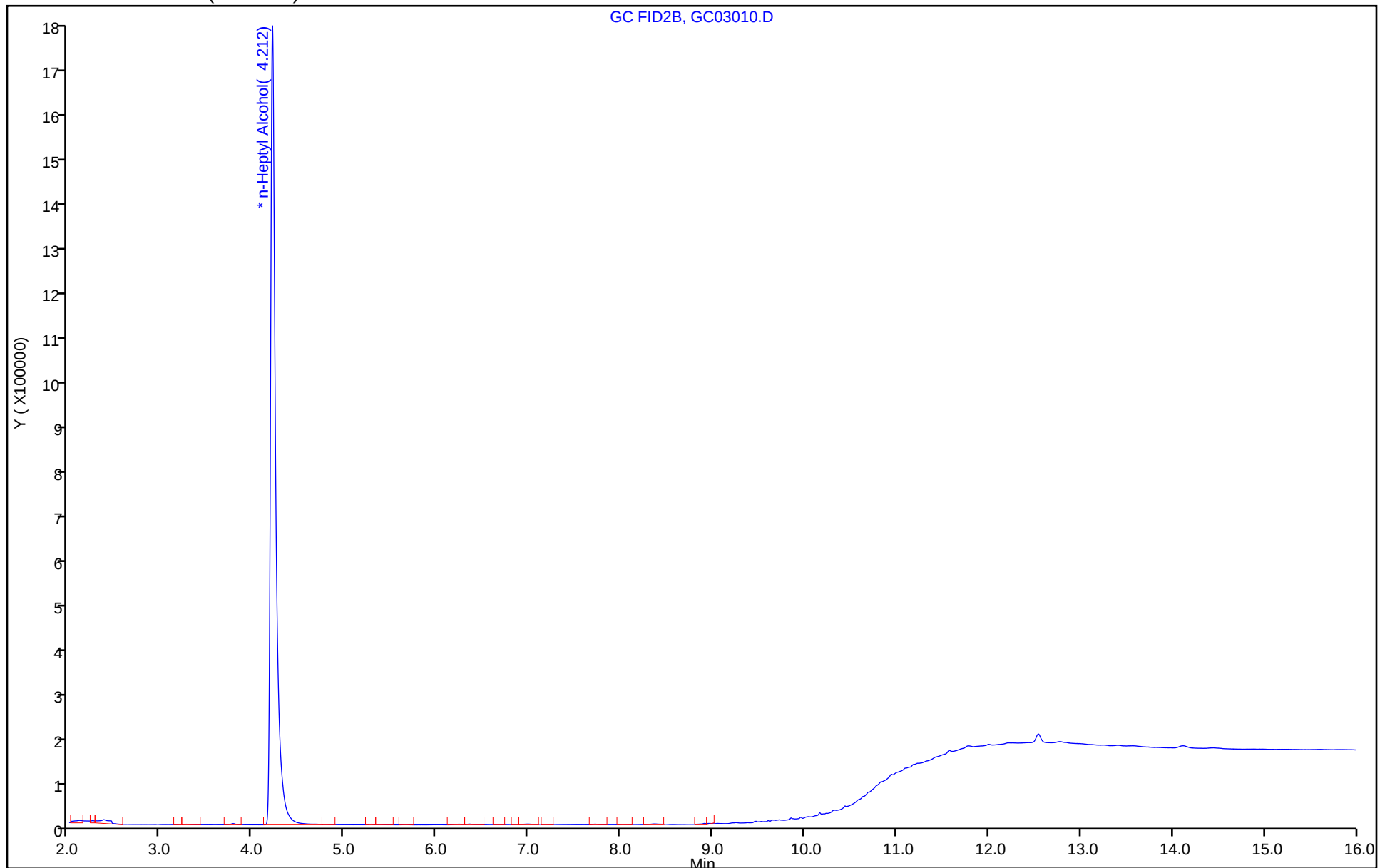
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: LCS 680-765944/6
Matrix: Water Lab File ID: GC03006.D
Analysis Method: 8015C GLY Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/03/2023 15:28
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.: 765944 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy) ethanol	17.9		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03006.D
 Lims ID: lcs
 Client ID:
 Sample Type: LCS
 Inject. Date: 03-Mar-2023 15:28:14 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-006
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:06:09 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: CTX1660

First Level Reviewer: SWK1

Date: 05-Mar-2023 12:02:55

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

1 Ethanol, 2-propoxy						
2.906	2.906	0.000	1269693	20.0	18.7	
2 4-Hydroxy-4-methyl-2-pentanone						
3.455	3.455	0.000	1226335	20.0	18.2	
3 2-Butoxyethanol						
3.758	3.758	0.000	1430201	20.0	19.0	
* 4 n-Heptyl Alcohol						
4.218	4.218	0.000	5777664	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.136	5.136	0.000	101593	20.0	18.0	
6 Propylene glycol						M
6.357	6.357	0.000	269901	20.0	11.3	M
7 Ethylene glycol						
6.575	6.575	0.000	1164907	20.0	19.3	
8 2-(2-Butoxyethoxy)ethanol						
8.415	8.415	0.000	1152005	20.0	17.9	
9 2,2'-Oxybisethanol						
9.604	9.604	0.000	684500	20.0	17.2	
10 Triethylene Glycol						
10.630	10.630	0.000	670045	20.0	18.0	
11 Tetraethylene Glycol						
11.768	11.768	0.000	1444264	40.0	36.7	

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03006.D

Injection Date: 03-Mar-2023 15:28:14

Instrument ID: CVGG2

Operator ID:

Lims ID: lcs

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

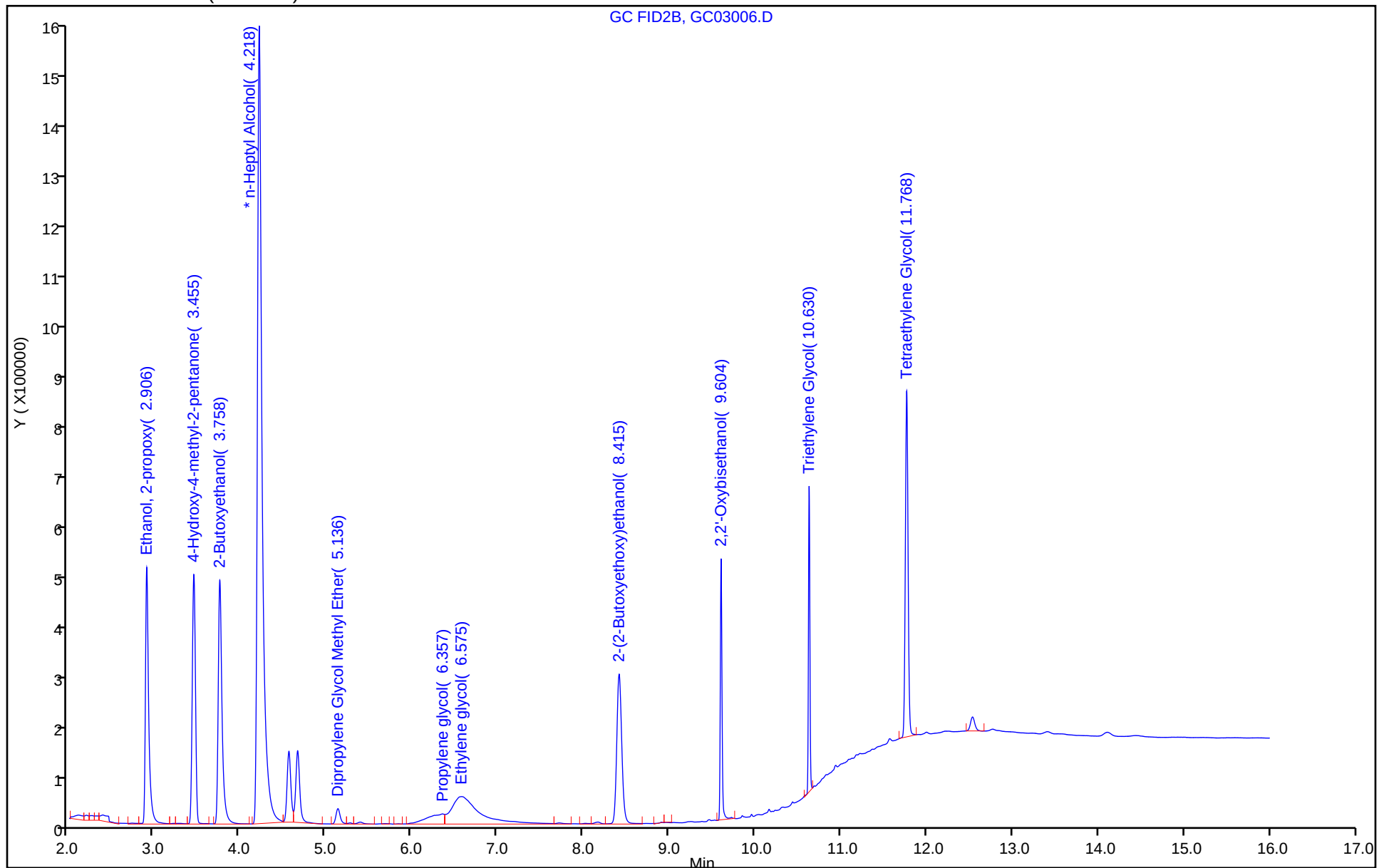
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: LCSD 680-765944/7
Matrix: Water Lab File ID: GC03007.D
Analysis Method: 8015C GLY Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/03/2023 15:51
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.: 765944 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy) ethanol	16.4		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03007.D
 Lims ID: lcsd
 Client ID:
 Sample Type: LCSD
 Inject. Date: 03-Mar-2023 15:51:47 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-007
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:06:09 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: CTX1660

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

1 Ethanol, 2-propoxy	2.904	2.906	-0.002	1060627	20.0	17.5
2 4-Hydroxy-4-methyl-2-pentanone	3.453	3.455	-0.002	996969	20.0	16.6
3 2-Butoxyethanol	3.756	3.758	-0.002	1196260	20.0	17.9
* 4 n-Heptyl Alcohol	4.217	4.218	-0.001	5128991	50.0	50.0
5 Dipropylene Glycol Methyl Ether	5.134	5.136	-0.002	82123	20.0	16.3
6 Propylene glycol	6.349	6.357	-0.008	222409	20.0	10.4
7 Ethylene glycol	6.572	6.575	-0.003	882947	20.0	16.5
8 2-(2-Butoxyethoxy)ethanol	8.412	8.415	-0.003	941793	20.0	16.4
9 2,2'-Oxybisethanol	9.603	9.604	-0.001	608902	20.0	17.3
10 Triethylene Glycol	10.629	10.630	-0.001	584127	20.0	17.7
11 Tetraethylene Glycol	11.767	11.768	-0.001	1238238	40.0	35.4

Reagents:

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

Operator ID:

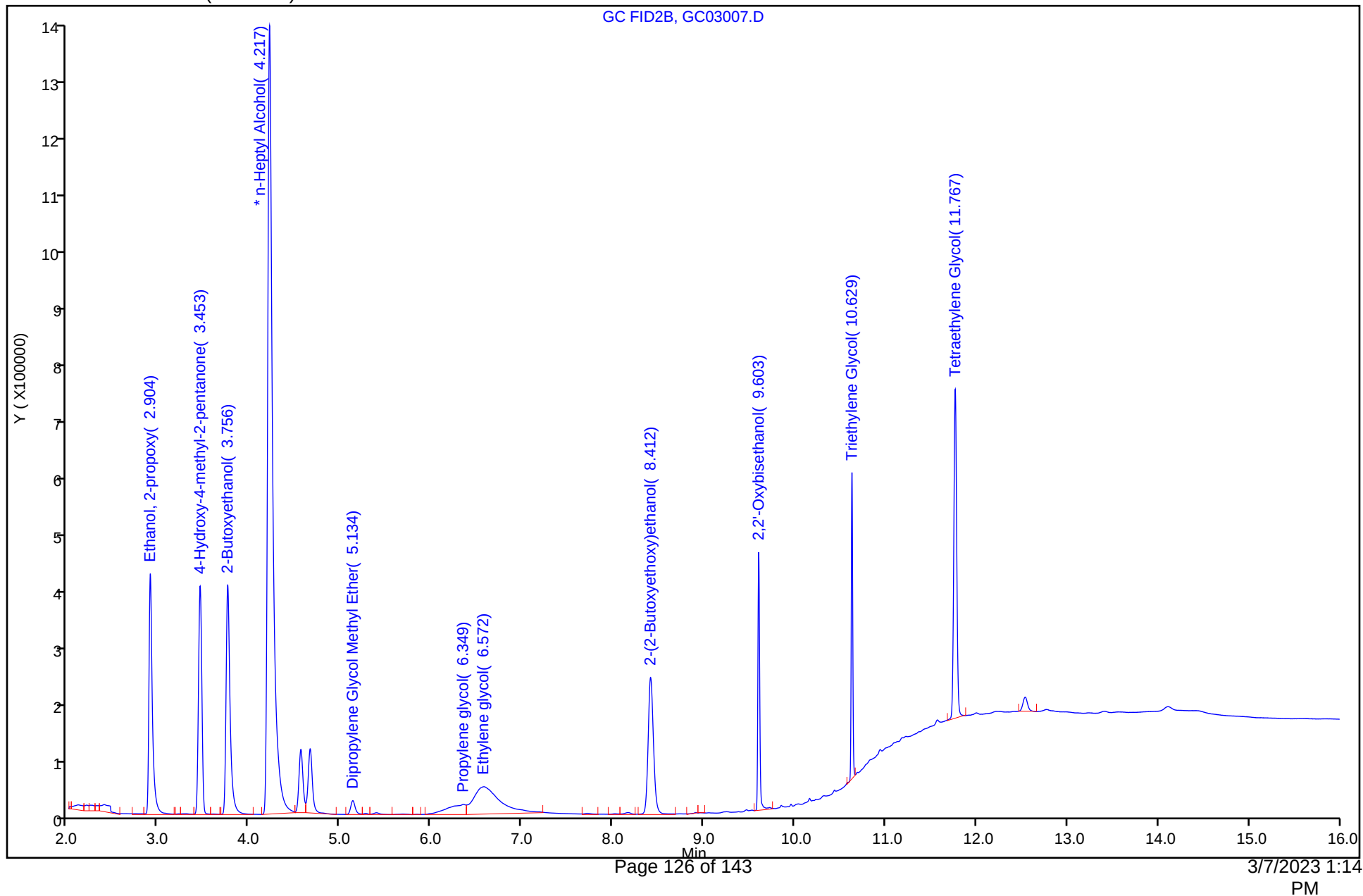
Worklist Smp#: 7

Client ID:

ALS Bottle#: 0

Limit Group: 8015C DAI

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Client Sample ID: AF-RHMW04-WGN01LF-2302W4 Lab Sample ID: 580-124122-1 MS
MS
Matrix: Water Lab File ID: GC03019.D
Analysis Method: 8015C GLY Date Collected: 02/27/2023 10:45
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/03/2023 21:56
Con. Extract Vol.: 1 (mL) Dilution Factor: 1
Injection Volume: 1 (uL) GC Column: J&W DB WAX ID: 0.45 (mm)
% Moisture: _____ % Solids: _____ GPC Cleanup: (Y/N) N
Cleanup Factor: _____
Analysis Batch No.: 765944 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	20.3		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03019.D
 Lims ID: 580-124122-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 03-Mar-2023 21:56:20 ALS Bottle#: 0 Worklist Smp#: 19
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-019
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:05:43 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: CTX1660

First Level Reviewer: SWK1

Date: 05-Mar-2023 12:05:06

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.912	2.919	-0.007	1287564		22.2	
2 4-Hydroxy-4-methyl-2-pentanone						
3.469	3.481	-0.012	1280420		22.2	
3 2-Butoxyethanol						
3.758	3.762	-0.004	1460633		22.8	
* 4 n-Heptyl Alcohol						
4.204	4.199	0.005	4979565	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.144	5.151	-0.007	99195		20.6	
6 Propylene glycol						
6.297	6.344	-0.047	224737		10.9	
7 Ethylene glycol						
6.561	6.571	-0.010	805284		15.5	
8 2-(2-Butoxyethoxy)ethanol						
8.413	8.415	-0.002	1118276		20.3	
9 2,2'-Oxybisethanol						
9.603	9.605	-0.002	1150329		34.3	
10 Triethylene Glycol						E
10.635	10.633	0.002	47396691		1479.9	E
11 Tetraethylene Glycol						
11.768	11.776	-0.008	1399765		41.2	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

SG_GLY_ISTD_00106

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03019.D

Injection Date: 03-Mar-2023 21:56:20

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-124122-A-1 MS

Worklist Smp#: 19

Client ID:

Injection Vol: 1.0 ul

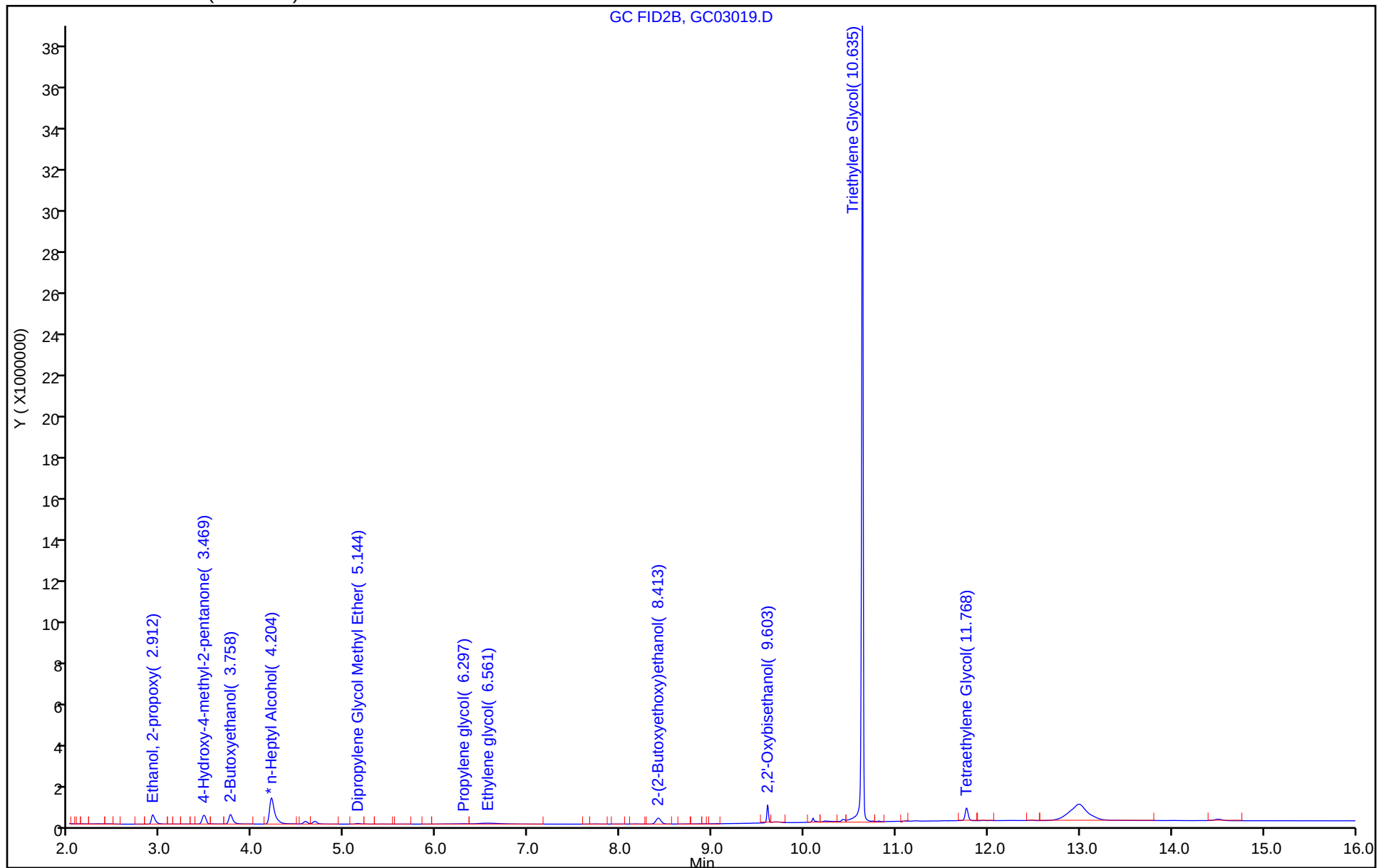
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124122-1
SDG No.: _____
Client Sample ID: AF-RHMW04-WGN01LF-2302W4 Lab Sample ID: 580-124122-1 MSD
MSD
Matrix: Water Lab File ID: GC03020.D
Analysis Method: 8015C GLY Date Collected: 02/27/2023 10:45
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/03/2023 22:19
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.: 765944 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.1		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03020.D
 Lims ID: 580-124122-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 03-Mar-2023 22:19:51 ALS Bottle#: 0 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084174-020
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 05-Mar-2023 12:05:43 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: CTX1660

First Level Reviewer: SWK1

Date: 05-Mar-2023 12:05:23

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.914	2.919	-0.005	1457901		20.6	
2 4-Hydroxy-4-methyl-2-pentanone						
3.471	3.481	-0.010	1434672		20.4	
3 2-Butoxyethanol						
3.759	3.762	-0.003	1678168		21.5	
* 4 n-Heptyl Alcohol						
4.204	4.199	0.005	6051385	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.144	5.151	-0.007	114551		19.5	
6 Propylene glycol						M
6.296	6.344	-0.048	217099		8.48	M
7 Ethylene glycol						
6.566	6.571	-0.005	678161		10.7	
8 2-(2-Butoxyethoxy)ethanol						
8.414	8.415	-0.001	1279517		19.1	
9 2,2'-Oxybisethanol						
9.604	9.605	-0.001	369773		8.54	
10 Triethylene Glycol						
10.631	10.633	-0.002	2002661		51.5	
11 Tetraethylene Glycol						
11.772	11.776	-0.004	344322		8.35	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_GLY_ISTD_00106

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230303-84174.b\GC03020.D

Injection Date: 03-Mar-2023 22:19:51

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-124122-A-1 MSD

Worklist Smp#: 20

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

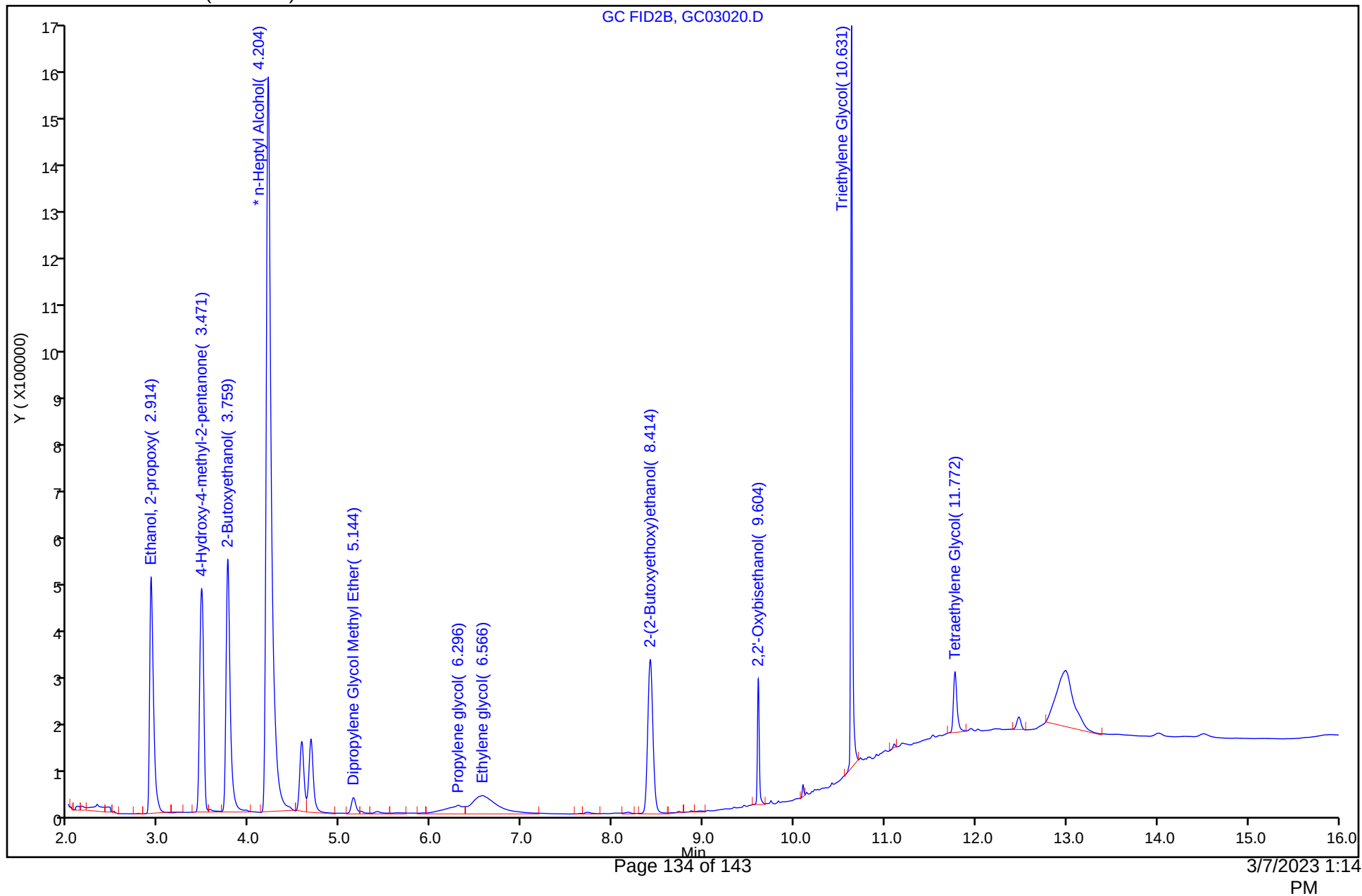
ALS Bottle#:

0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-124122-1

SDG No.: _____

Instrument ID: CVGG2 Start Date: 02/23/2023 18:06Analysis 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.: 580-124122-1

SDG No.: _____

Instrument ID: CVGG2 Start Date: 03/03/2023 15:04Analysis Batch Number: 765944 End Date: 03/03/2023 23:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-765944/5		03/03/2023 15:04	1	GC03005.D	J&W DB WAX 0.45 (mm)
LCS 680-765944/6		03/03/2023 15:28	1	GC03006.D	J&W DB WAX 0.45 (mm)
LCSD 680-765944/7		03/03/2023 15:51	1	GC03007.D	J&W DB WAX 0.45 (mm)
MB 680-765944/10		03/03/2023 17:02	1	GC03010.D	J&W DB WAX 0.45 (mm)
580-124122-1	AF-RHMW04-WGN01LF-230 2W4	03/03/2023 19:12	1	GC03012.D	J&W DB WAX 0.45 (mm)
580-124122-2	AF-RHMW06-WGN01LF-230 2W4	03/03/2023 19:35	1	GC03013.D	J&W DB WAX 0.45 (mm)
ZZZZZ		03/03/2023 19:59	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/03/2023 20:22	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/03/2023 20:46	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/03/2023 21:09	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/03/2023 21:32	1		J&W DB WAX 0.45 (mm)
580-124122-1 MS	AF-RHMW04-WGN01LF-230 2W4 MS	03/03/2023 21:56	1	GC03019.D	J&W DB WAX 0.45 (mm)
580-124122-1 MSD	AF-RHMW04-WGN01LF-230 2W4 MSD	03/03/2023 22:19	1	GC03020.D	J&W DB WAX 0.45 (mm)
CCV 680-765944/22		03/03/2023 23:06	1	GC03022.D	J&W DB WAX 0.45 (mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-124122-1

SDG No.: _____

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

8015C GLY

Page 1 of 1

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-124122-1

SDG No.: _____

Batch Number: 765944 Batch Start Date: 03/03/23 15:04 Batch Analyst: Kellar, Joshua CBatch 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 680-765944/5		8015C GLY		1 mL	10 uL	10 uL			
LCS 680-765944/6		8015C GLY		1 mL	0.01 mL	10 uL			
LCSD 680-765944/7		8015C GLY		1 mL	0.01 mL	10 uL			
MB 680-765944/10		8015C GLY		1 mL		10 uL			
580-124122-A-1	AF-RHMW04-WGN01L F-2302W4	8015C GLY	T	1 mL		10 uL			
580-124122-A-2	AF-RHMW06-WGN01L F-2302W4	8015C GLY	T	1 mL		10 uL			
580-124122-A-1 MS	AF-RHMW04-WGN01L F-2302W4	8015C GLY	T	1 mL	10 uL	10 uL			
580-124122-A-1 MSD	AF-RHMW04-WGN01L F-2302W4	8015C GLY	T	1 mL	10 uL	10 uL			
CCV 680-765944/22		8015C GLY		1 mL	10 uL	10 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

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

8015C GLY

Page 1 of 1

Subcontract Data

Shipping and Receiving Documents

Ver. 01/16/2019

Environment Testing
America

Client Information Client Contact:		Sample ID: Olina Shively Phone: 856-938-7710		Lab PM: Elaine Walker E-Mail: M.Elaine.Walker@EurofinsET.com		Carrier Tracking No(s): FedEx State of Origin: Hawaii		COC No: 2302W4AFE09 Page: Page 1 of 1 Job #:	
Company: AECOM Address: 1001 Bishop St. Suite 1600 City: Honolulu State, Zip: Hawaii 96813 Phone: 808-954-4512 / 770-331-0794 Email: Watson Tanji (watson.tanji@aecom.com) / Mark Kromis (mark.kromis@aecom.com)		Due Date Requested: see subcontract TAT Requested (days): Rush - ASAP Compliance Project: ☐ Yes ☒ No PO #:		PWSID:		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-6 Z - other (specify)	
Project Name: CTO N6274223F0104 Site: RHSP		Project #: 60697810 SOW#:		WO#:		Field Filtered Sample Not for Mo:		Total Number of Containers:	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=organic, A=air) Preservation Code:		Special Instructions/Note:	
AF-RHSPW06-WGN01LF-2302W4		2/27/23		1235		G W N N X		9	
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM/EQUS EDD		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months		Special Instructions/QC Requirements: DOD QSM project.		Empty Kit Relinquished by:	
Relinquished by: Olina Shively / AECOM		Date/Time: 2/27/23 1505		Company: AECOM		Received by: Avie Aspili		Date/Time: 2/27/23 @ 1535	
Relinquished by: Avie Aspili		Date/Time: 2/27/23 1545		Company: AECOM		Received by: Lynette Hancey		Date/Time: 06-21-23 18:30	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: ☒ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2.1 - 2.1		Relinquished by:		Date/Time:	

Ver. 01/16/2019

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-124122-1

Login Number: 124122
List Number: 2
Creator: Meincke, Griffin E

List Source: Eurofins Savannah
List Creation: 03/03/23 11:11 AM

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