

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Terri Choy
AECOM

1001 Bishop Street
Honolulu HI 96813

Generated 4/21/2023 10:02 AM

JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-126083-1

Eurofins Seattle

Job Notes

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

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

Authorization



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Definitions/Glossary

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

Job ID: 580-126083-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
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: 580-126083-1

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

Three samples were received on 4/15/2023 8:45 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 5.3° 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-RHMW12A-WGN01LF-2304W2 (580-126083-1), AF-RHMW12A-WGFD01LF-2304W2 (580-126083-2) and AF-RHMW225401-WGN01B-2304W2 (580-126083-3) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 04/18/2023 and 04/19/2023.

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

Detection Summary

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

Job ID: 580-126083-1

Client Sample ID: AF-RHMW12A-WGN01LF-2304W2

Lab Sample ID: 580-126083-1

No Detections.

Client Sample ID: AF-RHMW12A-WGFD01LF-2304W2

Lab Sample ID: 580-126083-2

No Detections.

Client Sample ID: AF-RHMW225401-WGN01B-2304W2

Lab Sample ID: 580-126083-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

Job ID: 580-126083-1

Client Sample ID: AF-RHMW12A-WGN01LF-2304W2

Lab Sample ID: 580-126083-1

Date Collected: 04/13/23 12:30

Matrix: Water

Date Received: 04/15/23 08:45

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			04/18/23 23:31	1

Client Sample ID: AF-RHMW12A-WGFD01LF-2304W2

Lab Sample ID: 580-126083-2

Date Collected: 04/13/23 12:30

Matrix: Water

Date Received: 04/15/23 08:45

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			04/19/23 00:41	1

Client Sample ID: AF-RHMW225401-WGN01B-2304W2

Lab Sample ID: 580-126083-3

Date Collected: 04/13/23 09:00

Matrix: Water

Date Received: 04/15/23 08:45

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			04/19/23 01:04	1

Default Detection Limits

Client: AECOM

Job ID: 580-126083-1

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: 580-126083-1

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

Lab Sample ID: MB 680-774076/9
Matrix: Water
Analysis Batch: 774076

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			04/18/23 20:25	1

Lab Sample ID: LCS 680-774076/5
Matrix: Water
Analysis Batch: 774076

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	23.1		mg/L		115	50 - 150

Lab Sample ID: LCSD 680-774076/6
Matrix: Water
Analysis Batch: 774076

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	20.9		mg/L		105	50 - 150	10	50

Lab Sample ID: 580-126083-1 MS
Matrix: Water
Analysis Batch: 774076

Client Sample ID: AF-RHMW12A-WGN01LF-2304W2
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	20.0	18.2		mg/L		91	50 - 150

Lab Sample ID: 580-126083-1 MSD
Matrix: Water
Analysis Batch: 774076

Client Sample ID: AF-RHMW12A-WGN01LF-2304W2
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	20.0	21.2		mg/L		106	50 - 150	15	50

QC Association Summary

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

Job ID: 580-126083-1

GC Semi VOA

Analysis Batch: 774076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-126083-1	AF-RHMW12A-WGN01LF-2304W2	Total/NA	Water	8015C GLY	
580-126083-2	AF-RHMW12A-WGFD01LF-2304W2	Total/NA	Water	8015C GLY	
580-126083-3	AF-RHMW225401-WGN01B-2304W2	Total/NA	Water	8015C GLY	
MB 680-774076/9	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-774076/5	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-774076/6	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-126083-1 MS	AF-RHMW12A-WGN01LF-2304W2	Total/NA	Water	8015C GLY	
580-126083-1 MSD	AF-RHMW12A-WGN01LF-2304W2	Total/NA	Water	8015C GLY	

Lab Chronicle

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

Job ID: 580-126083-1

Client Sample ID: AF-RHMW12A-WGN01LF-2304W2

Lab Sample ID: 580-126083-1

Date Collected: 04/13/23 12:30

Matrix: Water

Date Received: 04/15/23 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	774076	GEM	EET SAV	04/18/23 23:31

Client Sample ID: AF-RHMW12A-WGFD01LF-2304W2

Lab Sample ID: 580-126083-2

Date Collected: 04/13/23 12:30

Matrix: Water

Date Received: 04/15/23 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	774076	GEM	EET SAV	04/19/23 00:41

Client Sample ID: AF-RHMW225401-WGN01B-2304W2

Lab Sample ID: 580-126083-3

Date Collected: 04/13/23 09:00

Matrix: Water

Date Received: 04/15/23 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	774076	GEM	EET SAV	04/19/23 01:04

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 580-126083-1

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: 580-126083-1

Project/Site: Red Hill - AFFF Assessment Sampling

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: AECOM

Job ID: 580-126083-1

Project/Site: Red Hill - AFFF Assessment Sampling

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
580-126083-1	AF-RHMW12A-WGN01LF-2304W2	Water	04/13/23 12:30	04/15/23 08:45
580-126083-2	AF-RHMW12A-WGFD01LF-2304W2	Water	04/13/23 12:30	04/15/23 08:45
580-126083-3	AF-RHMW225401-WGN01B-2304W2	Water	04/13/23 09:00	04/15/23 08:45

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Instrument ID: CVGG2 Analysis Batch Number: 773617

Lab Sample ID: IC 680-773617/4 Client Sample ID: _____

Date Analyzed: 04/16/23 19:56 Lab File ID: GD16011.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/17/23 10:11

Lab Sample ID: IC 680-773617/5 Client Sample ID: _____

Date Analyzed: 04/16/23 20:19 Lab File ID: GD16012.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/17/23 10:11

Lab Sample ID: IC 680-773617/6 Client Sample ID: _____

Date Analyzed: 04/16/23 20:42 Lab File ID: GD16013.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/17/23 10:12

Lab Sample ID: ICIS 680-773617/7 Client Sample ID: _____

Date Analyzed: 04/16/23 21:05 Lab File ID: GD16014.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/17/23 10:12

Lab Sample ID: IC 680-773617/8 Client Sample ID: _____

Date Analyzed: 04/16/23 21:29 Lab File ID: GD16015.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	4.82	Incomplete Integration	SK9U	04/17/23 10:13
Ethylene glycol	5.04	Incomplete Integration	SK9U	04/17/23 10:13
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/17/23 10:12

8015C GLY

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Instrument ID: CVGG2 Analysis Batch Number: 773617

Lab Sample ID: IC 680-773617/9 Client Sample ID: _____

Date Analyzed: 04/16/23 21:52 Lab File ID: GD16016.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	4.82	Incomplete Integration	SK9U	04/17/23 10:15
Ethylene glycol	5.04	Incomplete Integration	SK9U	04/17/23 10:15
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/17/23 10:14

Lab Sample ID: IC 680-773617/10 Client Sample ID: _____

Date Analyzed: 04/16/23 22:15 Lab File ID: GD16017.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	4.82	Incomplete Integration	SK9U	04/17/23 10:15
Ethylene glycol	5.04	Incomplete Integration	SK9U	04/17/23 10:15
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/17/23 10:16

Lab Sample ID: ICV 680-773617/11 CCV Client Sample ID: _____

Date Analyzed: 04/16/23 22:38 Lab File ID: GD16018.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/17/23 10:16

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Instrument ID: CVGG2 Analysis Batch Number: 774076

Lab Sample ID: CCVIS 680-774076/4 Client Sample ID: _____

Date Analyzed: 04/18/23 18:29 Lab File ID: GD18004.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dipropylene Glycol Methyl Ether	3.87	Baseline Smoothing	SK9U	04/18/23 19:07
Tetraethylene Glycol	10.91	Shouldering	SK9U	04/19/23 18:16

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG_Gly_CAL_00049	10/11/23		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
SG_GLY_ISTD_00110	10/11/23		Agilent, Lot 0006720623			(Purchased Reagent)	n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00052	06/30/23		o2si, Lot 454407			(Purchased Reagent)	2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

SG_Gly_CAL_00049



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

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

Description:

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

Container:

1 ml Ampule, Amber Glass

Certified Values:

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

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

Intended Uses:

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

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

Certificate of Analysis

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

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

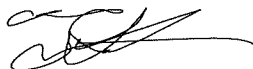


Brian Stokes

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

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.

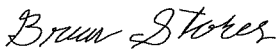
Expiration Information:

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

3 -May-2022

Production Chemist I

Certified By:



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

14 -Jun-2022

Quality Control Team Lead

Reagent

SG_GLY_ISTD_00110

**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



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 17034 Cert
No. AR-1936

ISO 17025

Reagent

SG_GlyICV_00052



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: ≤ -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:

$u = k u_c$ 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

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

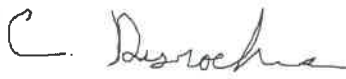
Manufactured By:



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.: 580-126083-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: GD18005.D
 Lab ID: LCS 680-774076/5 Client ID: _____

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy) ethanol	20.0	23.1	115	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.: 580-126083-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: GD18006.D
 Lab ID: LCSD 680-774076/6 Client ID: _____

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	20.9	105	10	50	50-150	

Column to be used to flag recovery and RPD values
 FORM III 8015C GLY

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: GD18018.D
 Lab ID: 580-126083-1 MS Client ID: AF-RHMW12A-WGN01LF-2304W2 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	18.2	91	50-150	

Column to be used to flag recovery and RPD values
 FORM III 8015C GLY

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: GD18019.D

Lab ID: 580-126083-1 MSD Client ID: AF-RHMW12A-WGN01LF-2304W2 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	21.2	106	15	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.: 580-126083-1
 SDG No.: _____
 Lab Sample ID: MB 680-774076/9
 Matrix: Water Date Extracted: _____
 Lab File ID: (1) GD18009.D Lab File ID: (2) _____
 Date Analyzed: (1) 04/18/2023 20:25 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 680-774076/5	04/18/2023 18:52	
	LCSD 680-774076/6	04/18/2023 19:15	
AF-RHMW12A-WGN01LF-2304W 2	580-126083-1	04/18/2023 23:31	
AF-RHMW12A-WGN01LF-2304W 2 MS	580-126083-1 MS	04/18/2023 23:54	
AF-RHMW12A-WGN01LF-2304W 2 MSD	580-126083-1 MSD	04/19/2023 00:17	
AF-RHMW12A-WGFD01LF-2304 W2	580-126083-2	04/19/2023 00:41	
AF-RHMW225401-WGN01B-230 4W2	580-126083-3	04/19/2023 01:04	

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

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Sample No.: ICIS 680-773617/7 Date Analyzed: 04/16/2023 21:05
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)
 Lab File ID (Standard): GD16014.D Heated Purge: (Y/N) N
 Calibration ID: 90759

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		5058415	3.11				
UPPER LIMIT		10116830	3.61				
LOWER LIMIT		2529208	2.61				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-773617/11 CCV		5161550	3.10				

nHPA = n-Heptyl Alcohol

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

Column used to flag values outside QC limits

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

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Sample No.: CCVIS 680-774076/4 Date Analyzed: 04/18/2023 18:29
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)
 Lab File ID (Standard): GD18004.D Heated Purge: (Y/N) N
 Calibration ID: 90759

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		4608767	3.10				
UPPER LIMIT		9217534	3.60				
LOWER LIMIT		2304384	2.60				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-774076/5		4774618	3.10				
LCSD 680-774076/6		4865094	3.10				
MB 680-774076/9		5238239	3.09				
580-126083-1	AF-RHMW12A-WGN01LF-2304W2	5053334	3.10				
580-126083-1 MS	AF-RHMW12A-WGN01LF-2304W2 MS	5559538	3.10				
580-126083-1 MSD	AF-RHMW12A-WGN01LF-2304W2 MSD	4593517	3.10				
580-126083-2	AF-RHMW12A-WGFD01LF-2304W2	5004999	3.10				
580-126083-3	AF-RHMW225401-WGN01B-2304W2	4921692	3.10				
CCV 680-774076/25		4986211	3.10				

nHPA = n-Heptyl Alcohol

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

Column used to flag values outside QC limits

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Client Sample ID: AF-RHMW12A-WGN01LF-2304W2 Lab Sample ID: 580-126083-1
 Matrix: Water Lab File ID: GD18017.D
 Analysis Method: 8015C GLY Date Collected: 04/13/2023 12:30
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1(mL) Date Analyzed: 04/18/2023 23:31
 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.: 774076 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\20230418-85376.b\GD18017.D
 Lims ID: 580-126083-C-1
 Client ID: AF-RHMW12A-WGN01LF-2304W2
 Sample Type: Client
 Inject. Date: 18-Apr-2023 23:31:22 ALS Bottle#: 0 Worklist Smp#: 17
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-017
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

First Level Reviewer: SK9U Date: 19-Apr-2023 18:21:08

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

3 2-Butoxyethanol					7
2.781	2.793	-0.012	7125	0.0909	7
LOD = 0.5000					
* 4 n-Heptyl Alcohol					
3.098	3.096	0.002	5053334	50.0	
6 Propylene glycol					7
4.821	4.823	-0.002	34996	0.3291	7
LOD = 0.5000					
7 Ethylene glycol					7
4.987	5.049	-0.062	67893	-1.64	7
LOD = 0.6600					
8 2-(2-Butoxyethoxy)ethanol					7
6.707	6.701	0.006	3611	0.0584	7
LOD = 0.5000					
9 2,2'-Oxybisethanol					7
8.824	8.830	-0.006	58854	-0.6088	7
LOD = 1.60					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG_GLY_ISTD_00110 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18017.D

Injection Date: 18-Apr-2023 23:31:22

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-126083-C-1

Lab Sample ID: 680-126083-1

Worklist Smp#: 17

Client ID: AF-RHMW12A-WGN01LF-2304W2

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

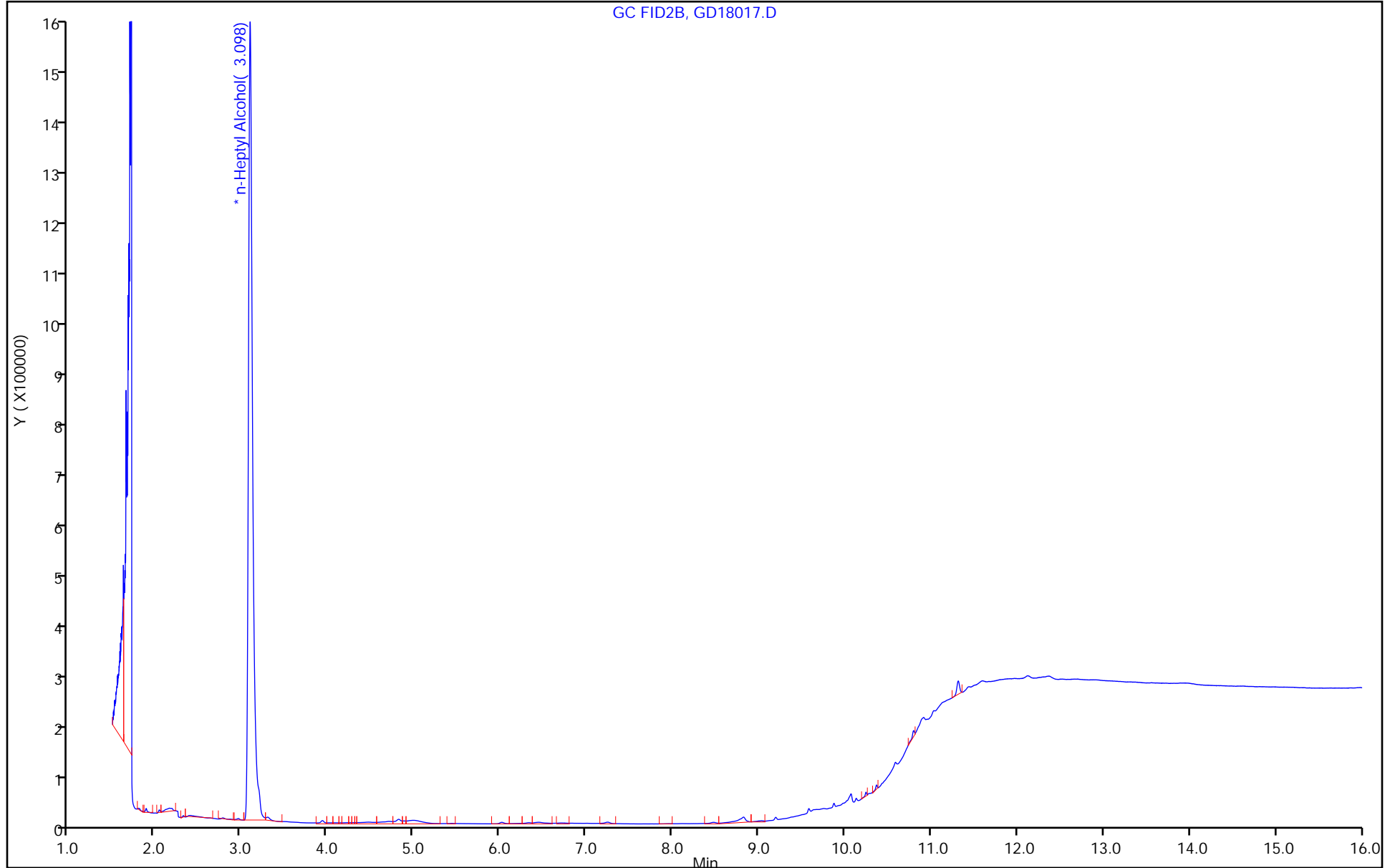
ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, GD18017.D



Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18020.D
 Lims ID: 580-126083-C-2
 Client ID: AF-RHMW12A-WGFD01LF-2304W2
 Sample Type: Client
 Inject. Date: 19-Apr-2023 00:41:05 ALS Bottle#: 0 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-020
 Operator ID: Instrument ID: CVGG2

 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D

 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

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

* 4 n-Heptyl Alcohol
 3.103 3.096 0.007 5004999 50.0
 8 2-(2-Butoxyethoxy)ethanol 7
 6.705 6.701 0.004 7489 0.1222 7
 LOD = 0.5000

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG_GLY_ISTD_00110 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18020.D

Injection Date: 19-Apr-2023 00:41:05

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-126083-C-2

Lab Sample ID: 680-126083-2

Worklist Smp#: 20

Client ID: AF-RHMW12A-WGFD01LF-2304W2

Injection Vol: 1.0 ul

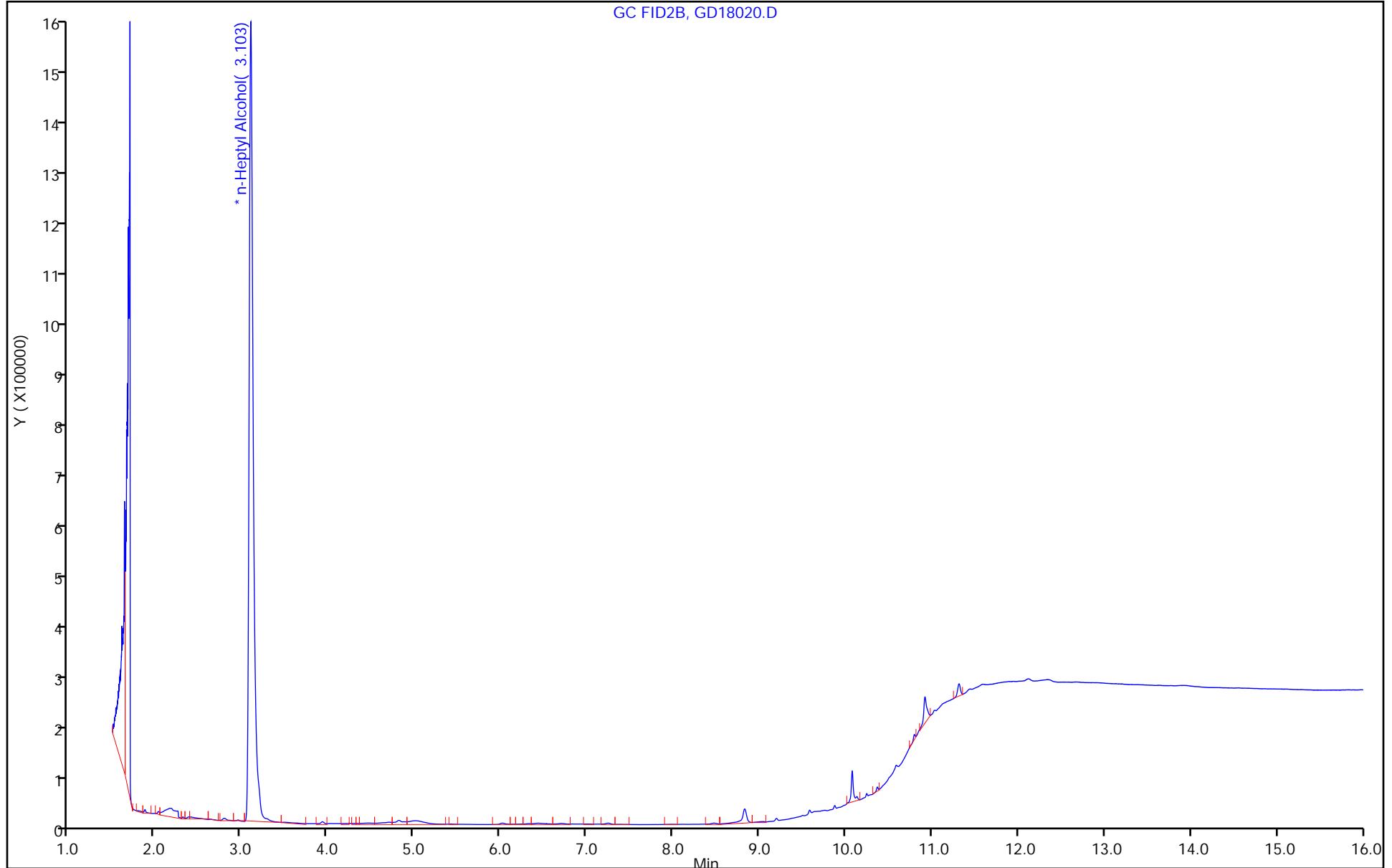
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18021.D
 Lims ID: 580-126083-C-3
 Client ID: AF-RHMW225401-WGN01B-2304W2
 Sample Type: Client
 Inject. Date: 19-Apr-2023 01:04:10 ALS Bottle#: 0 Worklist Smp#: 21
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-021
 Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

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

* 4 n-Heptyl Alcohol
 3.102 3.096 0.006 4921692 50.0
 8 2-(2-Butoxyethoxy)ethanol 7
 6.708 6.701 0.007 7788 0.1293 7
 LOD = 0.5000

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG_GLY_ISTD_00110 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18021.D

Injection Date: 19-Apr-2023 01:04:10

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-126083-C-3

Lab Sample ID: 680-126083-3

Worklist Smp#: 21

Client ID: AF-RHMW225401-WGN01B-2304W2

Injection Vol: 1.0 ul

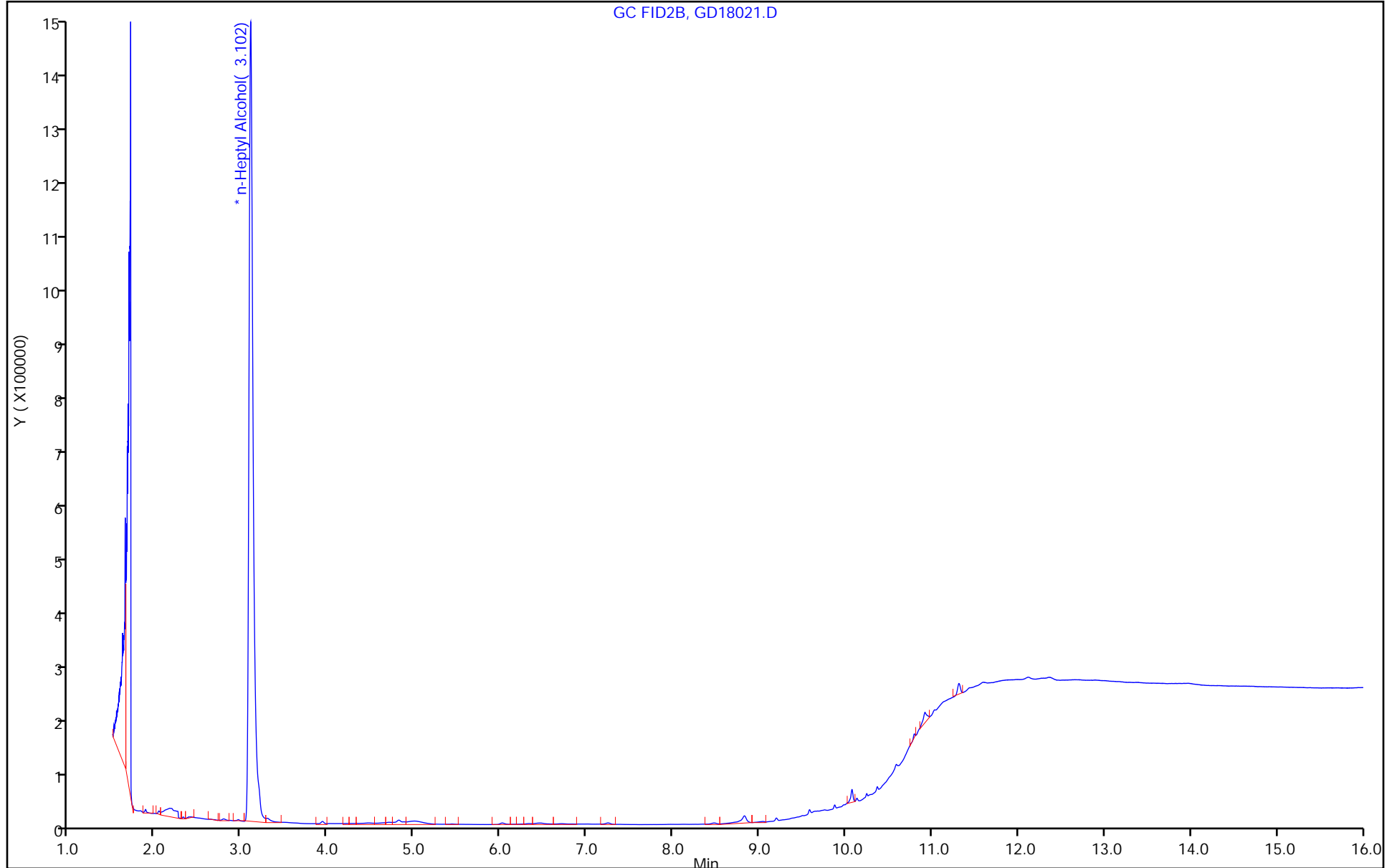
Dil. Factor: 1.0000

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.: 580-126083-1 Analy Batch No.: 773617

SDG No.: _____

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

Calibration Start Date: 04/16/2023 19:56 Calibration End Date: 04/16/2023 22:15 Calibration ID: 90759

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-773617/10	GD16017.D
Level 2	IC 680-773617/9	GD16016.D
Level 3	IC 680-773617/8	GD16015.D
Level 4	ICIS 680-773617/7	GD16014.D
Level 5	IC 680-773617/6	GD16013.D
Level 6	IC 680-773617/5	GD16012.D
Level 7	IC 680-773617/4	GD16011.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	0.8878 0.6777	0.8173 0.7265	0.8342	0.7571	0.7194	Ave		0.774 3			9.6		20.0				
4-Hydroxy-4-methyl-2-pentanone	0.7105 0.6270	0.7431 0.6867	0.7501	0.6856	0.6546	Ave		0.693 9			6.4		20.0				
2-Butoxyethanol	0.8254 0.7018	0.8203 0.7452	0.8272	0.7734	0.7377	Ave		0.775 9			6.4		20.0				
Dipropylene Glycol Methyl Ether	++++ 0.0524	0.0668 0.0574	0.0736	0.0630	0.0566	Ave		0.061 6			12.6		20.0				
Propylene glycol	++++ 0.1310	0.1905 0.1352	0.1776	0.1570	0.1466	Lin2	0.301 3	0.136 6						0.9950		0.9900	
Ethylene glycol	++++ 0.3372	0.5266 0.3562	0.4903	0.4468	0.3821	Lin1	1.232 9	0.342 5						0.9950		0.9900	
2-(2-Butoxyethoxy)ethanol	0.6368 0.5319	0.6702 0.5880	0.6781	0.6111	0.5683	Ave		0.612 1			8.8		20.0				
2,2'-Oxybisethanol	++++ 0.2069	0.3139 0.2165	0.3049	0.2577	0.2384	Lin1	0.710 1	0.209 9						0.9950		0.9900	
Triethylene Glycol	0.2762 0.1972	0.2870 0.2072	0.2840	0.2438	0.2253	Ave		0.245 8			15.2		20.0				
Tetraethylene Glycol	0.2854 0.2067	0.3002 0.2164	0.3025	0.2577	0.2359	Ave		0.257 8			15.3		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.: 580-126083-1 Analy Batch No.: 773617

SDG No.: _____

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

Calibration Start Date: 04/16/2023 19:56 Calibration End Date: 04/16/2023 22:15 Calibration ID: 90759

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-773617/10	GD16017.D
Level 2	IC 680-773617/9	GD16016.D
Level 3	IC 680-773617/8	GD16015.D
Level 4	ICIS 680-773617/7	GD16014.D
Level 5	IC 680-773617/6	GD16013.D
Level 6	IC 680-773617/5	GD16012.D
Level 7	IC 680-773617/4	GD16011.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7				LVL 6	LVL 7			
Ethanol, 2-propoxy	nHPA	Ave	182334 4752740	402644 6285677	792188	1531923	3177662	2.00 80.0	5.00 100	10.0	20.0	50.0
4-Hydroxy-4-methyl-2-pentanone	nHPA	Ave	145931 4397199	366098 5941325	712318	1387142	2891351	2.00 80.0	5.00 100	10.0	20.0	50.0
2-Butoxyethanol	nHPA	Ave	169523 4921640	404155 6447508	785503	1564931	3258279	2.00 80.0	5.00 100	10.0	20.0	50.0
Dipropylene Glycol Methyl Ether	nHPA	Ave	++++ 367503	32931 496321	69879	127534	249797	++++ 80.0	5.00 100	10.0	20.0	50.0
Propylene glycol	nHPA	Lin2	++++ 918595	93857 1169432	168632	317696	647518	++++ 80.0	5.00 100	10.0	20.0	50.0
Ethylene glycol	nHPA	Lin1	++++ 2364800	259464 3082086	465608	903954	1687550	++++ 80.0	5.00 100	10.0	20.0	50.0
2-(2-Butoxyethoxy)ethanol	nHPA	Ave	130789 3730637	330197 5087301	643924	1236575	2510369	2.00 80.0	5.00 100	10.0	20.0	50.0
2,2'-Oxybisethanol	nHPA	Lin1	++++ 1451128	154666 1872779	289511	521398	1052820	++++ 80.0	5.00 100	10.0	20.0	50.0
Triethylene Glycol	nHPA	Ave	56726 1382705	141391 1792893	269667	493325	995063	2.00 80.0	5.00 100	10.0	20.0	50.0
Tetraethylene Glycol	nHPA	Ave	117228 2898653	295754 3744899	574428	1042993	2084107	4.00 160	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

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

Lab Name: Eurofins Savannah Job No.: 580-126083-1 Analy Batch No.: 773617

SDG No.: _____

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

Calibration Start Date: 04/16/2023 19:56 Calibration End Date: 04/16/2023 22:15 Calibration ID: 90759

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-773617/10	GD16017.D
Level 2	IC 680-773617/9	GD16016.D
Level 3	IC 680-773617/8	GD16015.D
Level 4	ICIS 680-773617/7	GD16014.D
Level 5	IC 680-773617/6	GD16013.D
Level 6	IC 680-773617/5	GD16012.D
Level 7	IC 680-773617/4	GD16011.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	14.7 -6.2	5.6	7.7	-2.2	-7.1	-12.5	20 20	20	20	20	20	20
4-Hydroxy-4-methyl-2-pentanone	2.4 -1.0	7.1	8.1	-1.2	-5.7	-9.6	20 20	20	20	20	20	20
2-Butoxyethanol	6.4 -4.0	5.7	6.6	-0.3	-4.9	-9.6	20 20	20	20	20	20	20
Dipropylene Glycol Methyl Ether	++++ -6.9	8.5	19.4	2.3	-8.2	-15.0	20	20	20	20	20	20
Propylene glycol	++++ -3.3	-4.7	7.9	3.9	2.9	-6.9	20	20	20	20	20	20
Ethylene glycol	++++ 0.4	-18.2	7.1	12.4	4.3	-6.1	20	20	20	20	20	20
2-(2-Butoxyethoxy)ethanol	4.0 -3.9	9.5	10.8	-0.2	-7.1	-13.1	20 20	20	20	20	20	20
2,2'-Oxybisethanol	++++ -0.3	-18.1	11.4	5.8	6.8	-5.7	20	20	20	20	20	20
Triethylene Glycol	12.4 -15.7	16.8	15.5	-0.8	-8.3	-19.8	20 20	20	20	20	20	20
Tetraethylene Glycol	10.7 -16.1	16.4	17.3	0.0	-8.5	-19.8	20 20	20	20	20	20	20

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16011.D
 Lims ID: ic g7
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 16-Apr-2023 19:56:11 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085300-004
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 17-Apr-2023 10:22:32 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1620

First Level Reviewer: SK9U Date: 17-Apr-2023 10:11:36

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.247	2.249	-0.002	6285677	100.0	93.8	
2 4-Hydroxy-4-methyl-2-pentanone						
2.619	2.625	-0.006	5941325	100.0	99.0	
3 2-Butoxyethanol						
2.795	2.795	0.000	6447508	100.0	96.0	
* 4 n-Heptyl Alcohol						
3.111	3.106	0.005	4326023	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.868	3.869	-0.001	496321	100.0	93.1	
6 Propylene glycol						
4.811	4.817	-0.006	1169432	100.0	96.7	
7 Ethylene glycol						
5.046	5.043	0.003	3082086	100.0	100.4	
8 2-(2-Butoxyethoxy)ethanol						
6.709	6.708	0.001	5087301	100.0	96.1	
9 2,2'-Oxybisethanol						
8.822	8.820	0.002	1872779	100.0	99.7	
10 Triethylene Glycol						
10.071	10.071	0.000	1792893	100.0	84.3	
11 Tetraethylene Glycol						
10.913	10.912	0.001	3744899	200.0	167.9	M M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 50.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16011.D

Injection Date: 16-Apr-2023 19:56:11

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g7

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

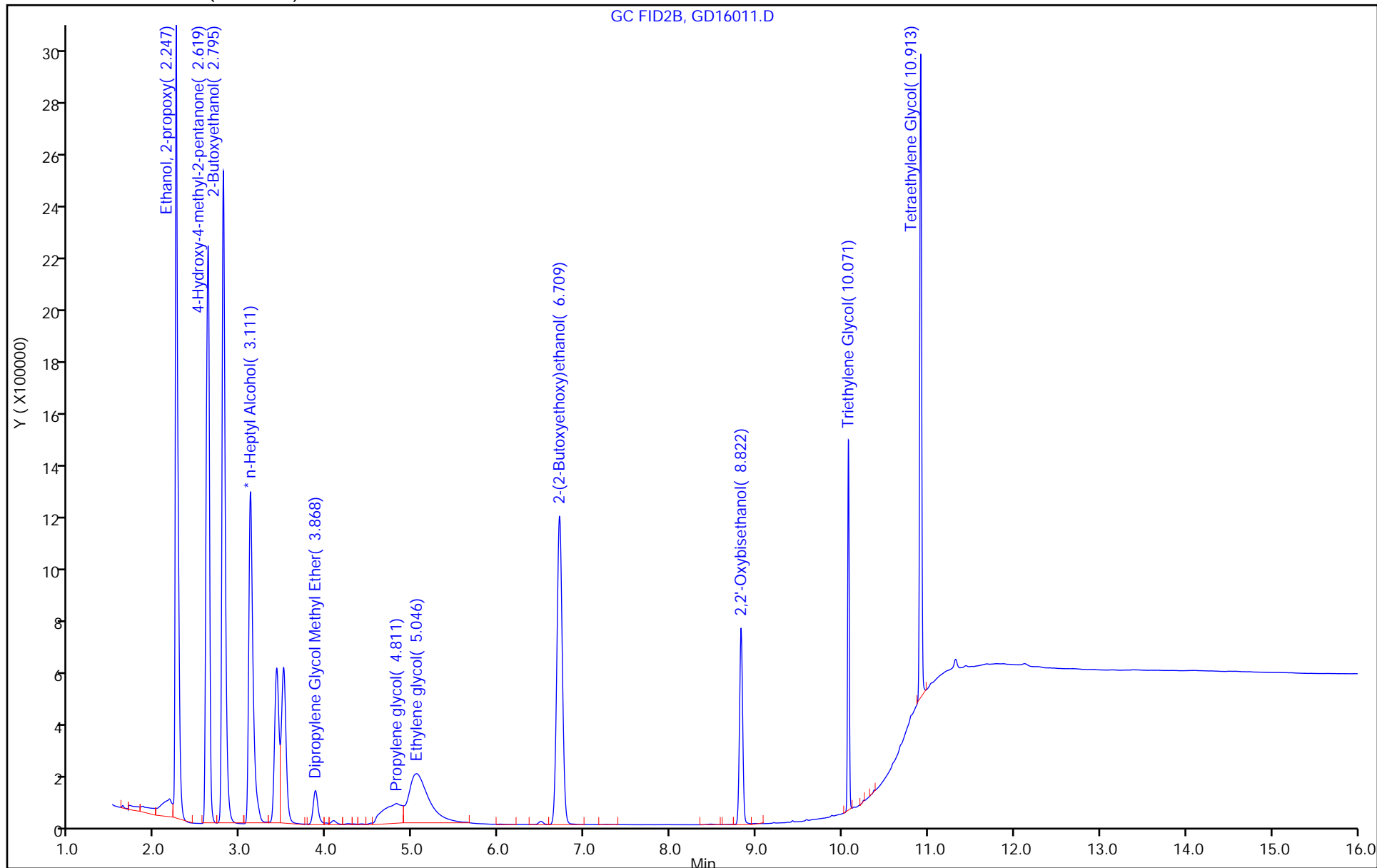
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

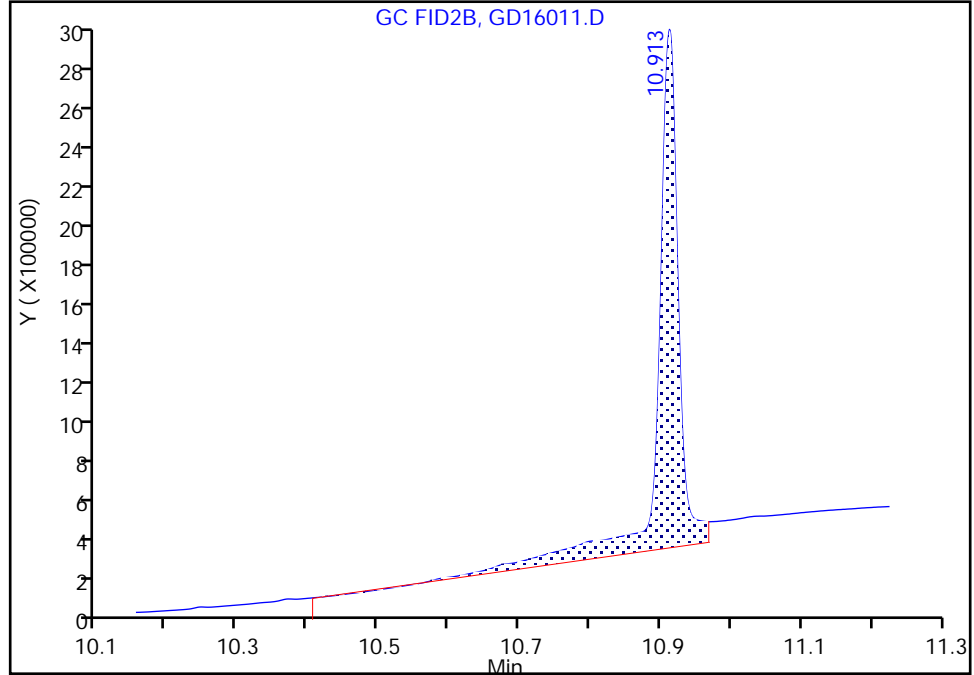
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16011.D
Injection Date: 16-Apr-2023 19:56:11 Instrument ID: CVGG2
Lims ID: ic g7
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

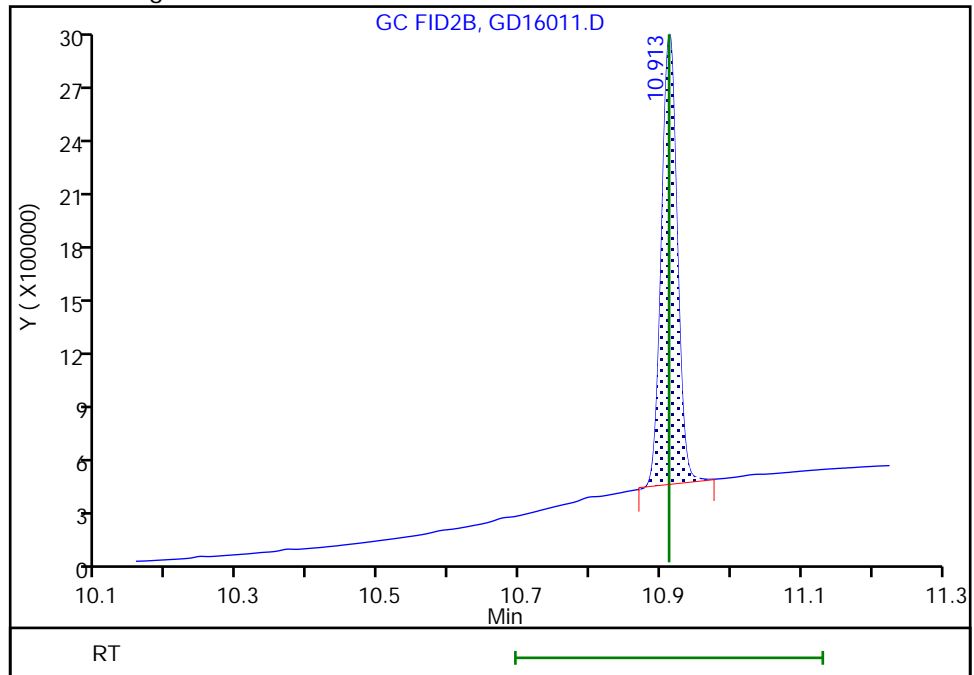
RT: 10.91
Area: 5221923
Amount: 204.7910
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 3744899
Amount: 167.8832
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:11:27
Audit Action: Manually Integrated

Audit Reason: Shouldering
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Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16012.D
 Lims ID: ic g6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 16-Apr-2023 20:19:25 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085300-005
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 17-Apr-2023 10:22:32 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1620

First Level Reviewer: SK9U Date: 17-Apr-2023 10:11:55

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.247	2.249	-0.002	4752740	80.0	70.0	
2 4-Hydroxy-4-methyl-2-pentanone						
2.618	2.625	-0.007	4397199	80.0	72.3	
3 2-Butoxyethanol						
2.795	2.795	0.000	4921640	80.0	72.4	
* 4 n-Heptyl Alcohol						
3.111	3.106	0.005	4383303	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.866	3.869	-0.003	367503	80.0	68.0	
6 Propylene glycol						
4.807	4.817	-0.010	918595	80.0	74.5	
7 Ethylene glycol						
5.035	5.043	-0.008	2364800	80.0	75.1	
8 2-(2-Butoxyethoxy)ethanol						
6.706	6.708	-0.002	3730637	80.0	69.5	
9 2,2'-Oxybisethanol						
8.821	8.820	0.001	1451128	80.0	75.5	
10 Triethylene Glycol						
10.072	10.071	0.001	1382705	80.0	64.2	
11 Tetraethylene Glycol						
10.914	10.912	0.002	2898653	160.0	128.2	M M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 40.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16012.D

Injection Date: 16-Apr-2023 20:19:25

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g6

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

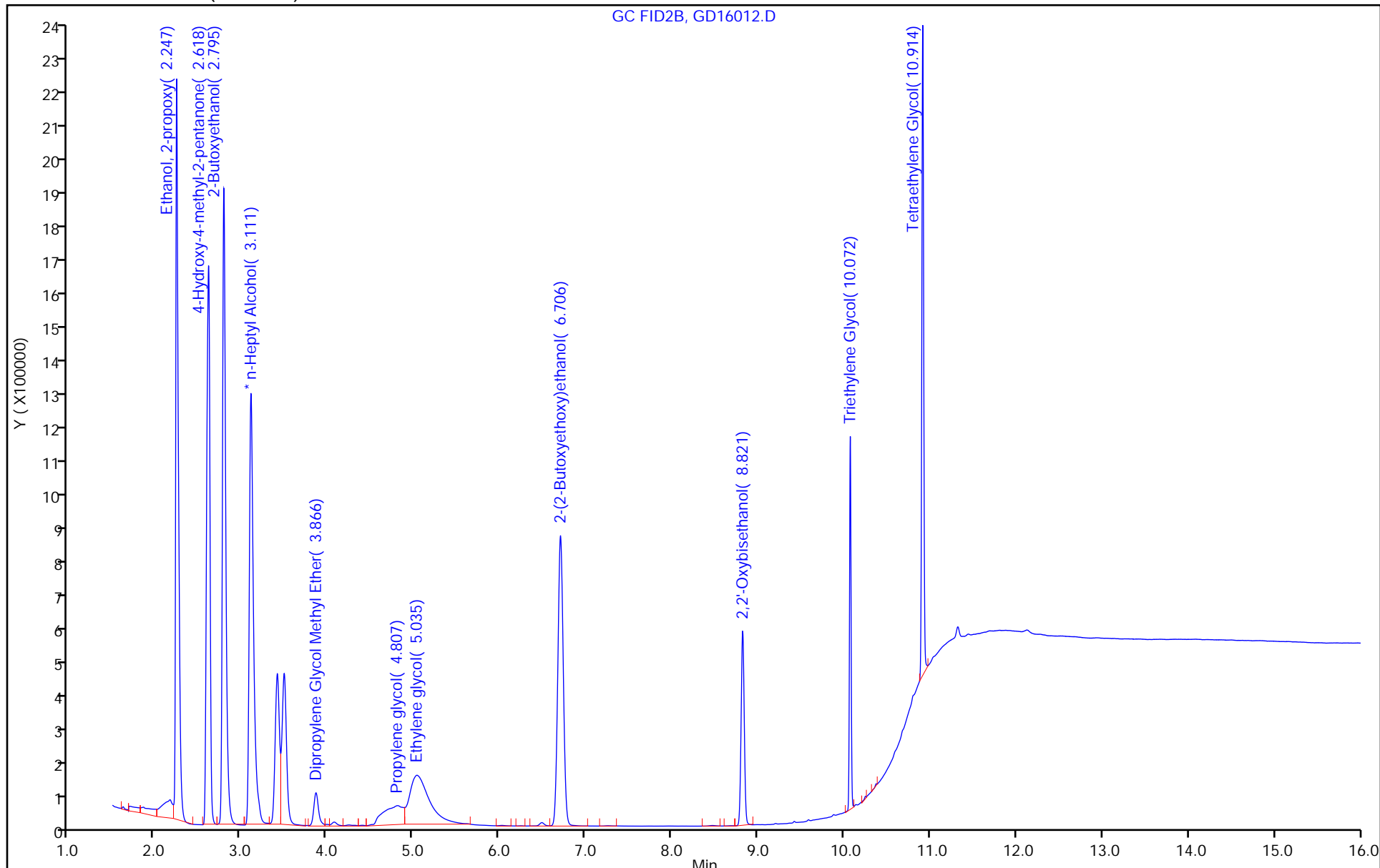
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

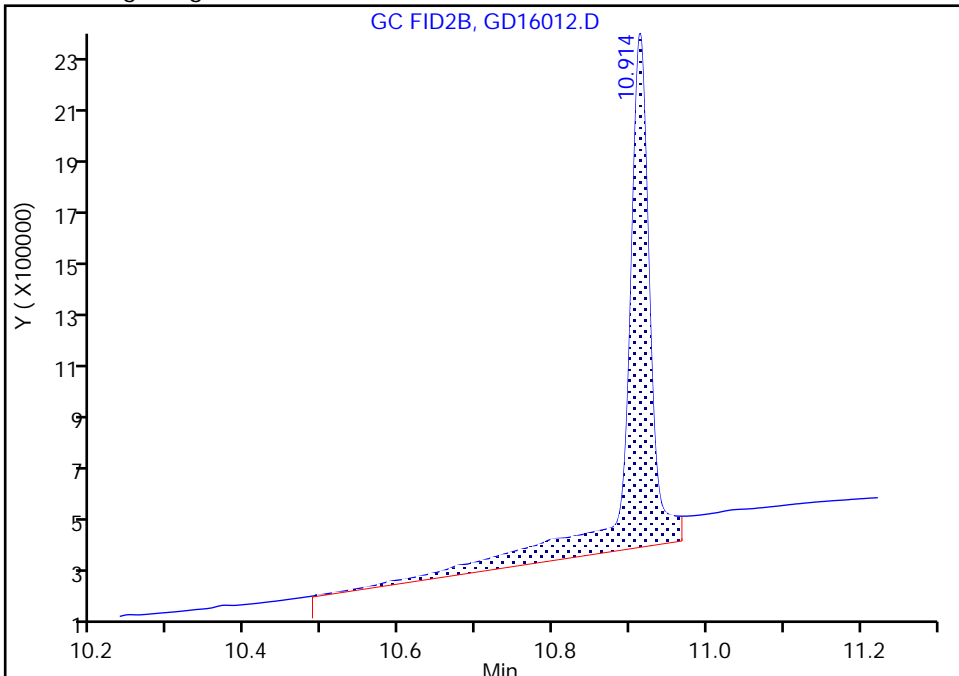
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16012.D
Injection Date: 16-Apr-2023 20:19:25 Instrument ID: CVGG2
Lims ID: ic g6
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

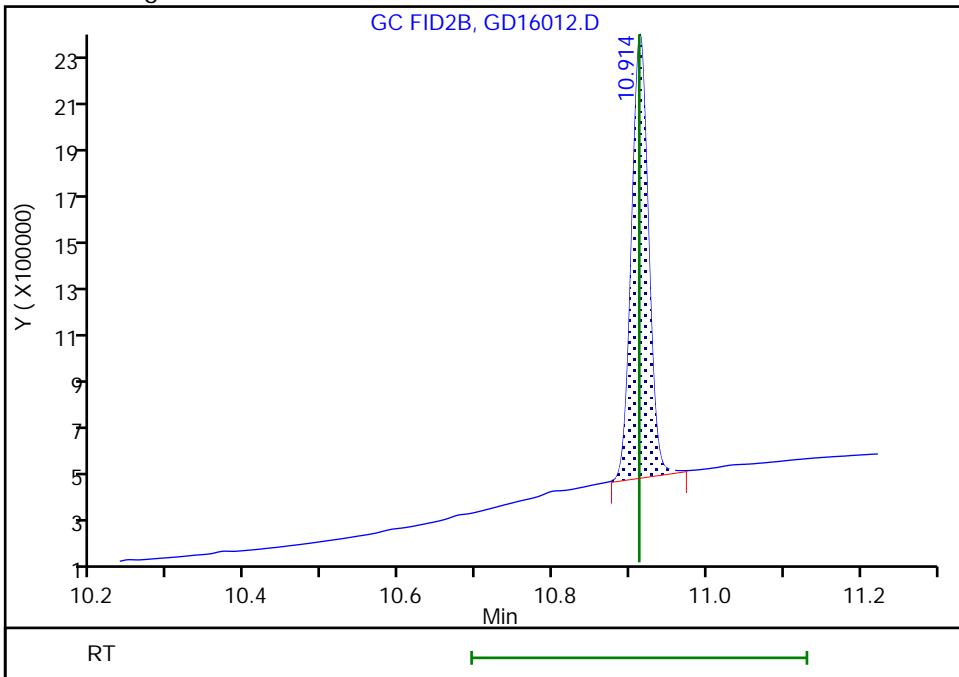
RT: 10.91
Area: 4277954
Amount: 60.326981
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 2898653
Amount: 128.2481
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:11:47
Audit Action: Manually Integrated

Audit Reason: Shouldering
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Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16013.D
 Lims ID: ic g5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 16-Apr-2023 20:42:43 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085300-006
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 17-Apr-2023 10:22:33 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1620

First Level Reviewer: SK9U Date: 17-Apr-2023 10:12:07

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.247	2.249	-0.002	3177662	50.0	46.5	
2 4-Hydroxy-4-methyl-2-pentanone						
2.611	2.625	-0.014	2891351	50.0	47.2	
3 2-Butoxyethanol						
2.795	2.795	0.000	3258279	50.0	47.5	
* 4 n-Heptyl Alcohol						
3.107	3.106	0.001	4416956	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.864	3.869	-0.005	249797	50.0	45.9	
6 Propylene glycol						
4.816	4.817	-0.001	647518	50.0	51.5	
7 Ethylene glycol						
5.038	5.043	-0.005	1687550	50.0	52.2	
8 2-(2-Butoxyethoxy)ethanol						
6.712	6.708	0.004	2510369	50.0	46.4	
9 2,2'-Oxybisethanol						
8.821	8.820	0.001	1052820	50.0	53.4	
10 Triethylene Glycol						
10.071	10.071	0.000	995063	50.0	45.8	
11 Tetraethylene Glycol						
10.912	10.912	0.000	2084107	100.0	91.5	M M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 25.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16013.D

Injection Date: 16-Apr-2023 20:42:43

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g5

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

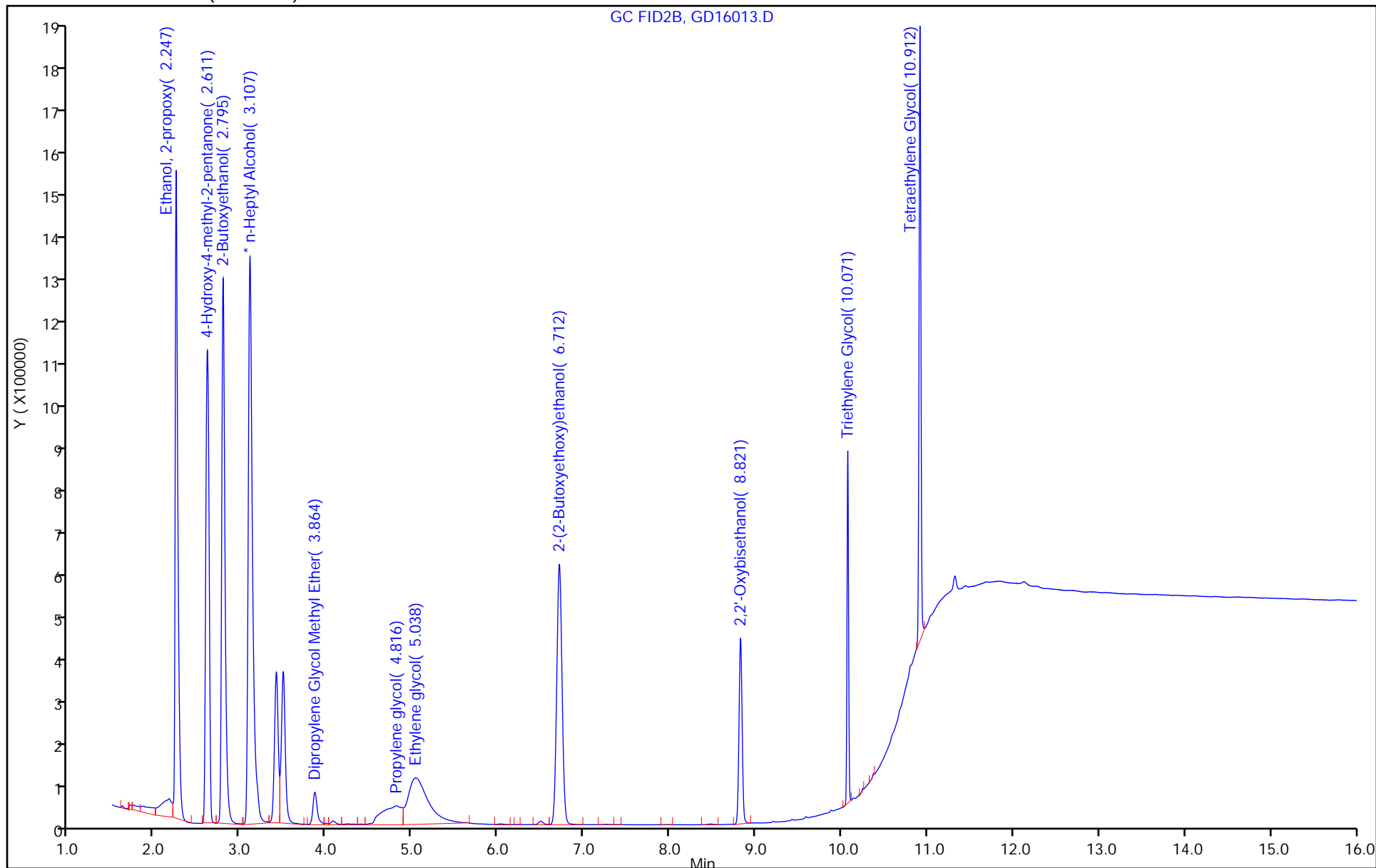
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

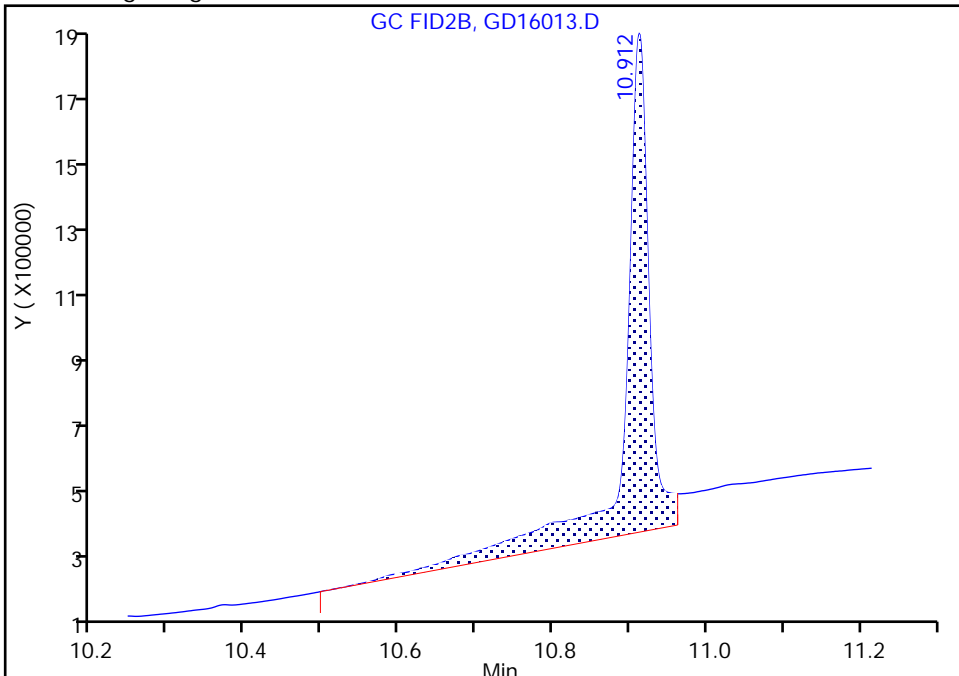
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16013.D
Injection Date: 16-Apr-2023 20:42:43 Instrument ID: CVGG2
Lims ID: ic g5
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

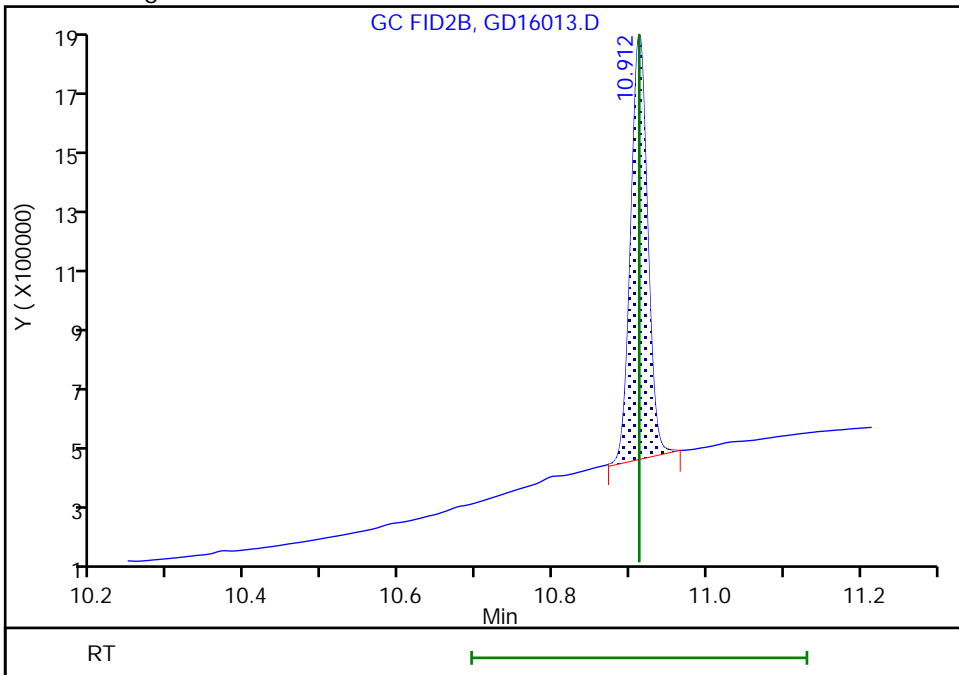
RT: 10.91
Area: 3279739
Amount: 46.709121
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 2084107
Amount: 91.506718
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:12:04
Audit Action: Manually Integrated

Audit Reason: Shouldering
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Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16014.D
 Lims ID: icis g4
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 16-Apr-2023 21:05:55 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085300-007
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 17-Apr-2023 10:22:34 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1620

First Level Reviewer: SK9U Date: 17-Apr-2023 10:12:28

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.249	2.249	0.000	1531923	20.0	19.6	
2 4-Hydroxy-4-methyl-2-pentanone						
2.625	2.625	0.000	1387142	20.0	19.8	
3 2-Butoxyethanol						
2.795	2.795	0.000	1564931	20.0	19.9	
* 4 n-Heptyl Alcohol						
3.106	3.106	0.000	5058415	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.869	3.869	0.000	127534	20.0	20.5	
6 Propylene glycol						
4.817	4.817	0.000	317696	20.0	20.8	
7 Ethylene glycol						
5.043	5.043	0.000	903954	20.0	22.5	
8 2-(2-Butoxyethoxy)ethanol						
6.708	6.708	0.000	1236575	20.0	20.0	
9 2,2'-Oxybisethanol						
8.820	8.820	0.000	521398	20.0	21.2	
10 Triethylene Glycol						
10.071	10.071	0.000	493325	20.0	19.8	
11 Tetraethylene Glycol						
10.912	10.912	0.000	1042993	40.0	40.0	M M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 10.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Euofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16014.D

Injection Date: 16-Apr-2023 21:05:55

Instrument ID: CVGG2

Operator ID:

Lims ID: icis g4

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

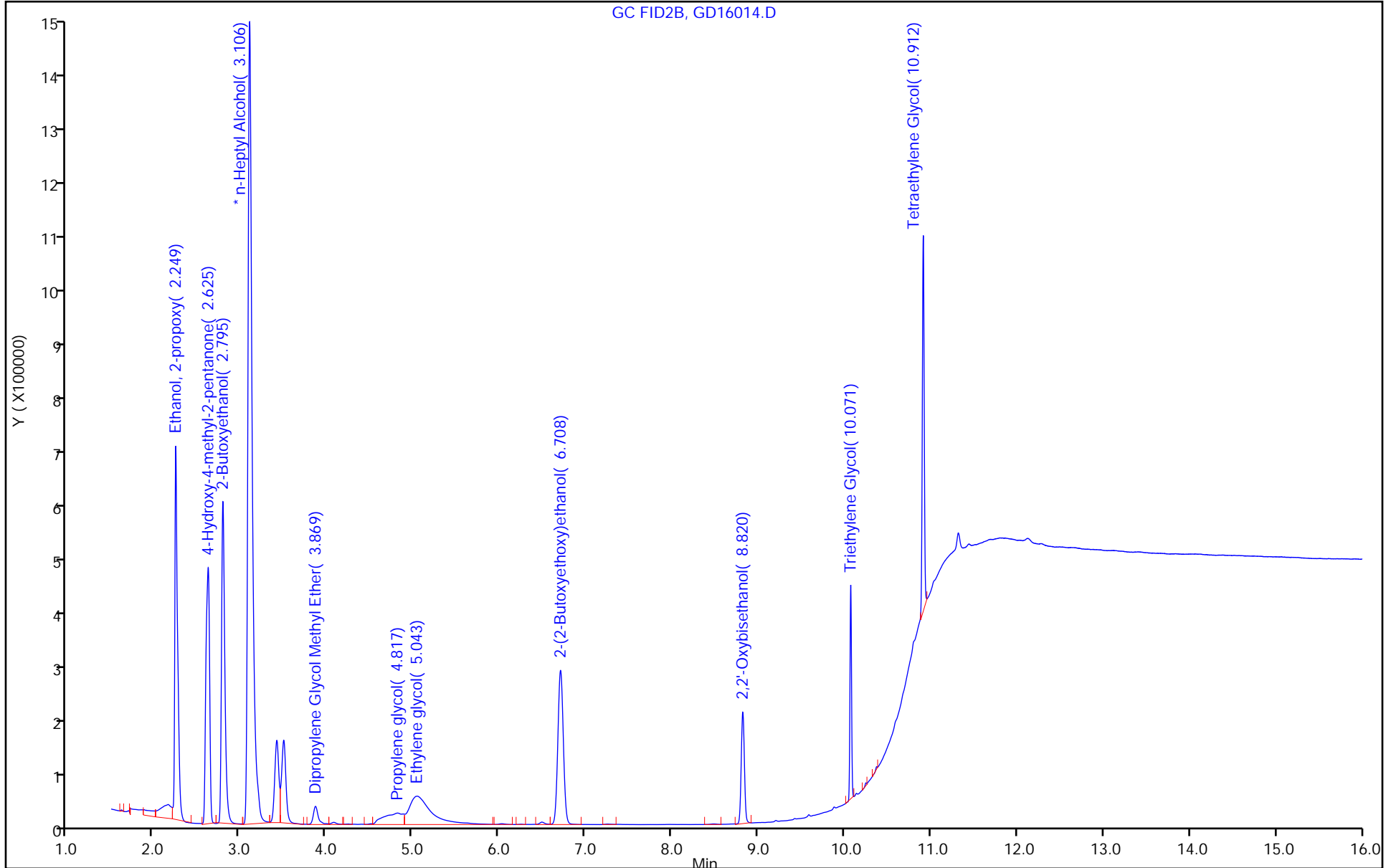
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

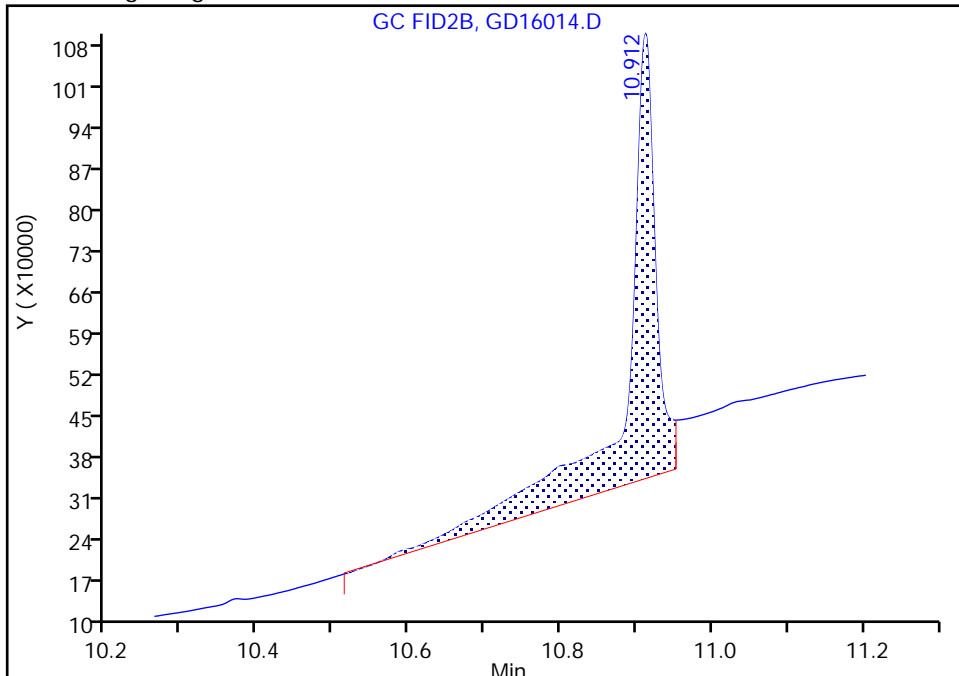
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16014.D
Injection Date: 16-Apr-2023 21:05:55 Instrument ID: CVGG2
Lims ID: icis g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

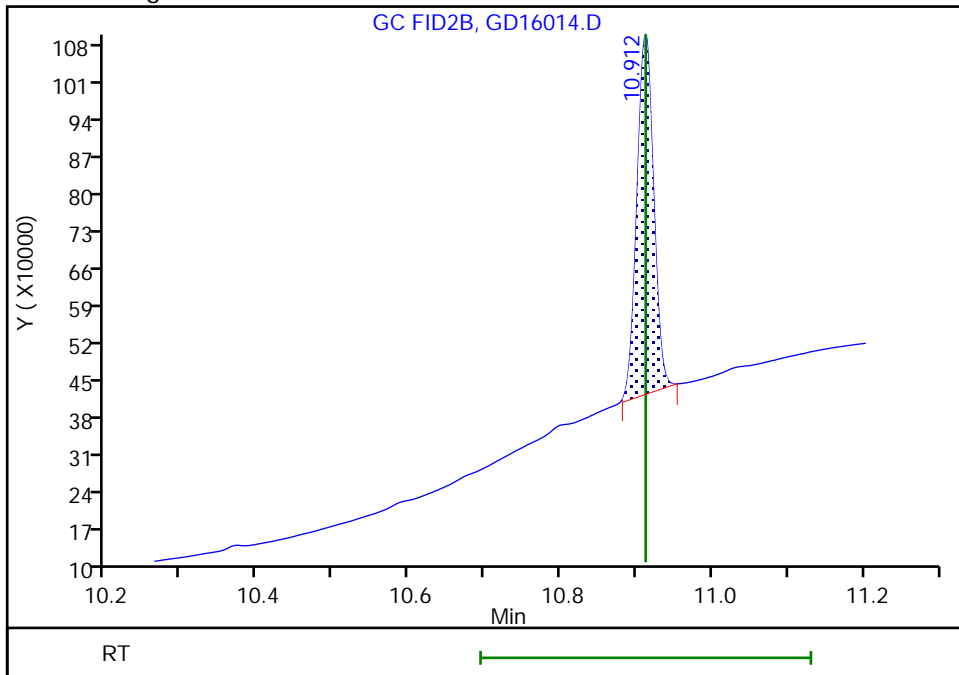
RT: 10.91
Area: 2088186
Amount: 26.615538
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 1042993
Amount: 39.987383
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:12:18
Audit Action: Manually Integrated

Audit Reason: Shouldering

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16015.D
 Lims ID: ic g3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 16-Apr-2023 21:29:06 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085300-008
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 17-Apr-2023 10:22:35 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1620

First Level Reviewer: SK9U Date: 17-Apr-2023 10:13:09

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.250	2.249	0.001	792188	10.0	10.8	
2 4-Hydroxy-4-methyl-2-pentanone						
2.616	2.625	-0.009	712318	10.0	10.8	
3 2-Butoxyethanol						
2.795	2.795	0.000	785503	10.0	10.7	
* 4 n-Heptyl Alcohol						
3.101	3.106	-0.005	4747950	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.871	3.869	0.002	69879	10.0	11.9	
6 Propylene glycol						
4.821	4.817	0.004	168632	10.0	10.8	M
7 Ethylene glycol						
5.036	5.043	-0.007	465608	10.0	10.7	M
8 2-(2-Butoxyethoxy)ethanol						
6.711	6.708	0.003	643924	10.0	11.1	
9 2,2'-Oxybisethanol						
8.821	8.820	0.001	289511	10.0	11.1	
10 Triethylene Glycol						
10.071	10.071	0.000	269667	10.0	11.6	
11 Tetraethylene Glycol						
10.911	10.912	-0.001	574428	20.0	23.5	M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 5.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16015.D

Injection Date: 16-Apr-2023 21:29:06

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g3

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

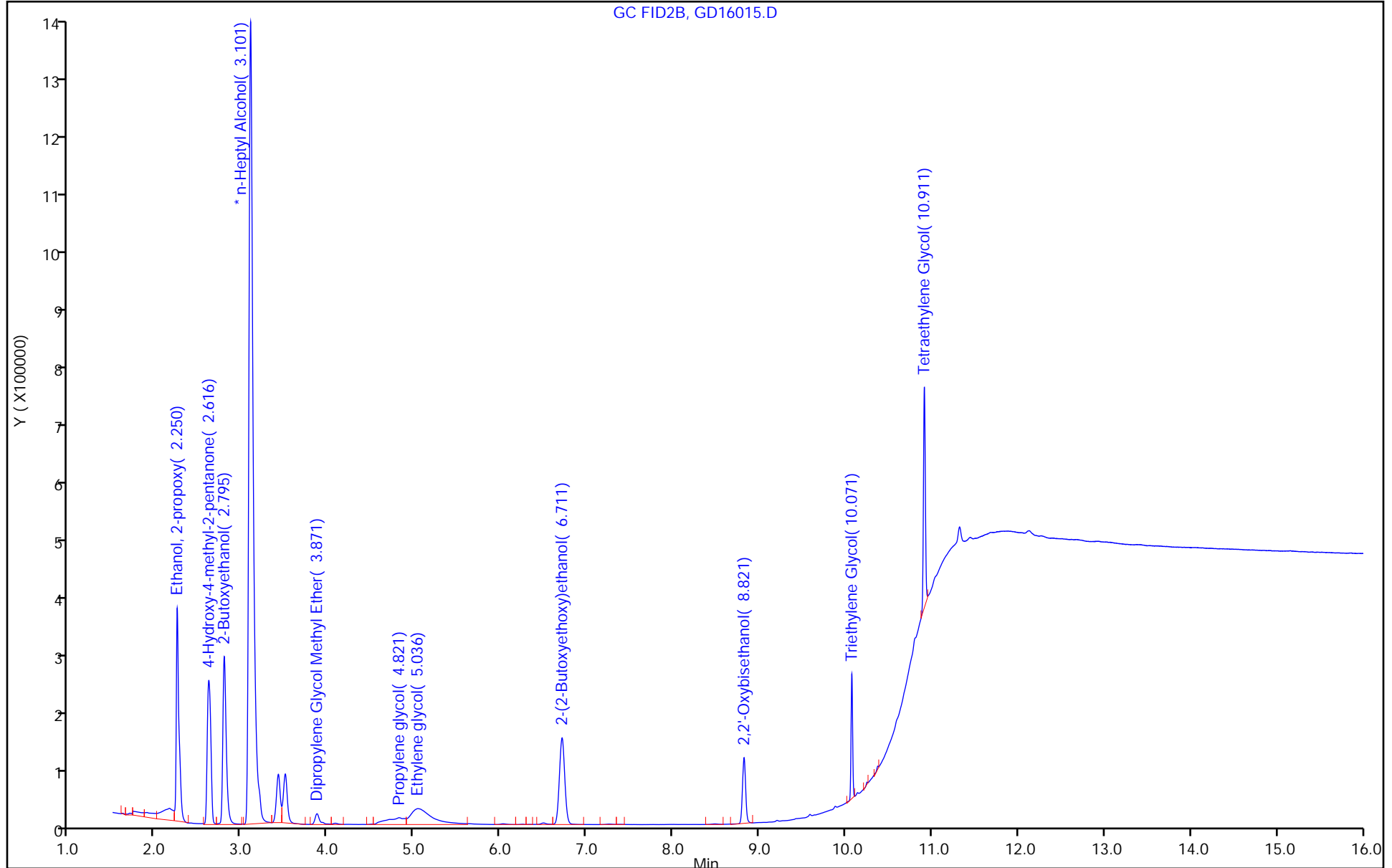
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

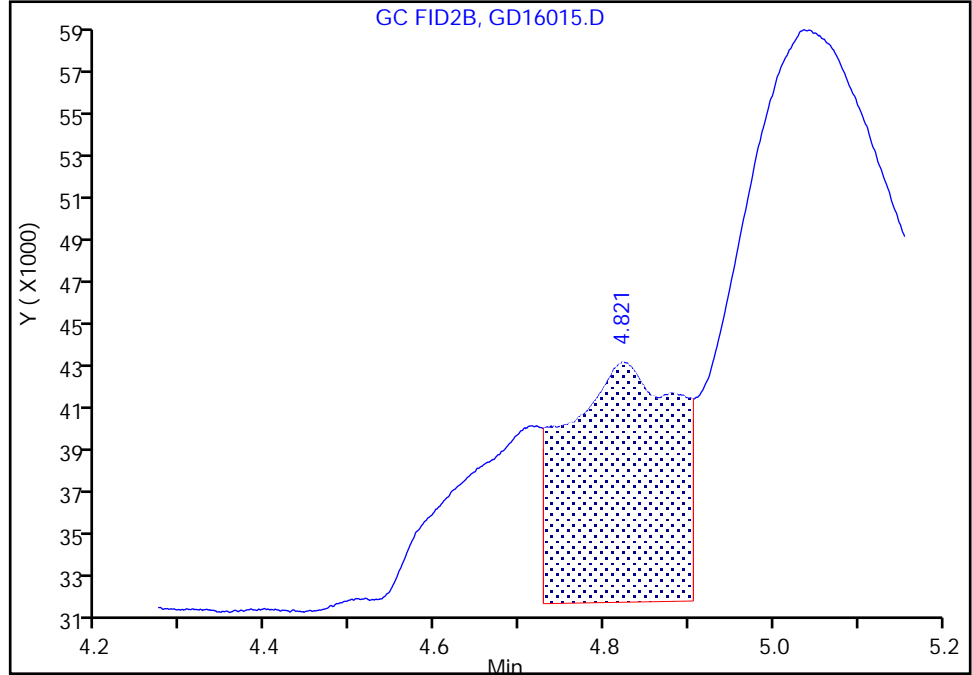
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16015.D
Injection Date: 16-Apr-2023 21:29:06 Instrument ID: CVGG2
Lims ID: ic g3
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

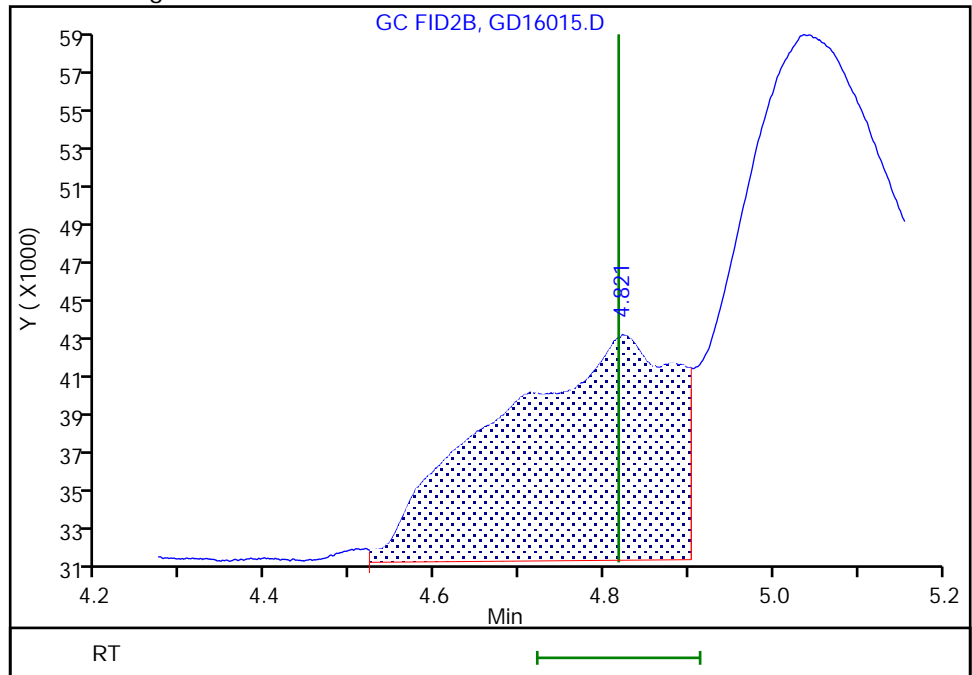
RT: 4.82
Area: 100839
Amount: 8.581265
Amount Units: ug/ml

Processing Integration Results



RT: 4.82
Area: 168632
Amount: 10.794780
Amount Units: ug/ml

Manual Integration Results



Eurofins Savannah

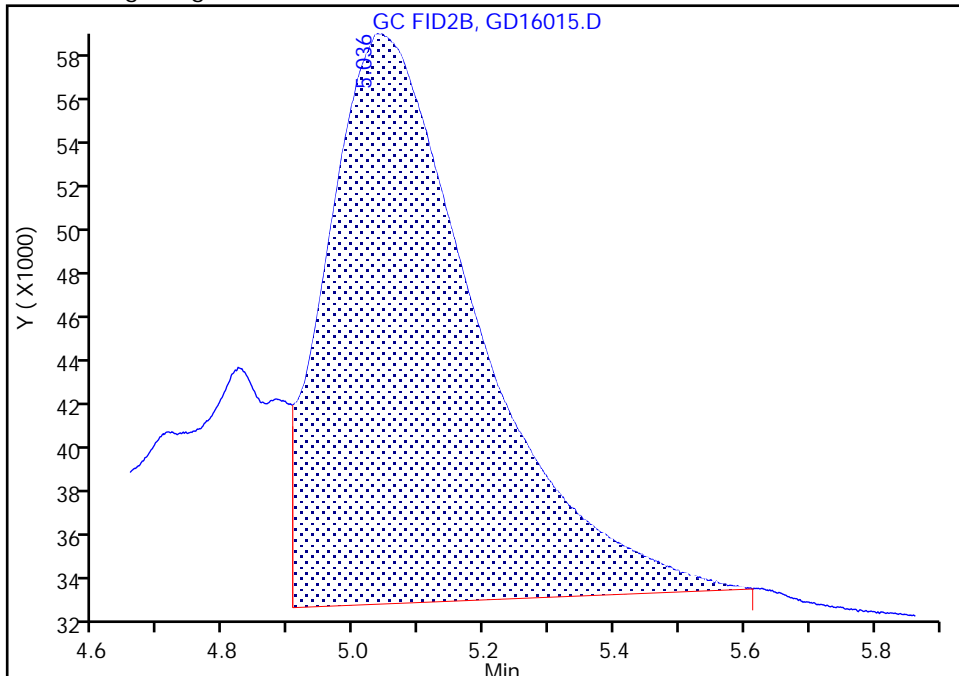
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16015.D		
Injection Date:	16-Apr-2023 21:29:06	Instrument ID:	CVGG2
Lims ID:	ic g3		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI
Column:	J&W DB WAX (0.45 mm)	Detector:	GC FID2B
		Worklist Smp#:	8

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

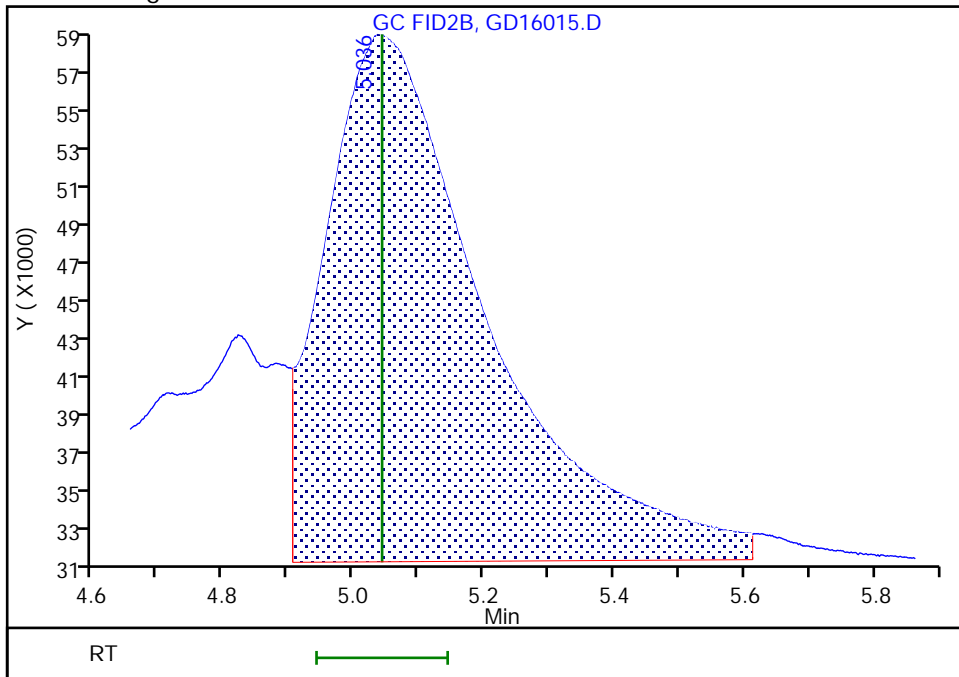
RT: 5.04
 Area: 425302
 Amount: 10.502845
 Amount Units: ug/ml

Processing Integration Results



RT: 5.04
 Area: 465608
 Amount: 10.714837
 Amount Units: ug/ml

Manual Integration Results



Eurofins Savannah

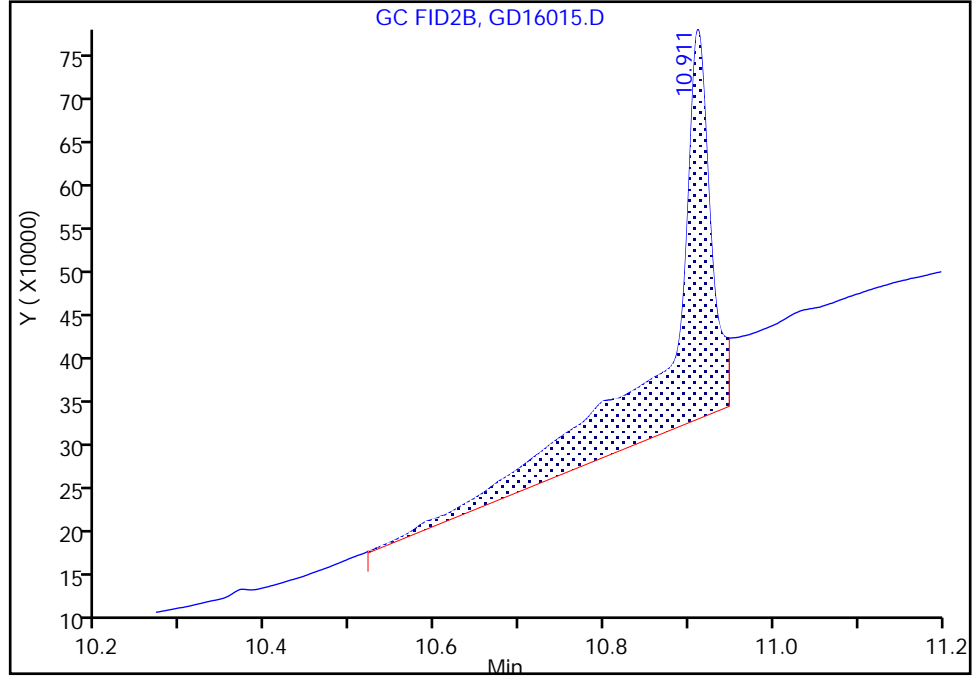
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16015.D
Injection Date: 16-Apr-2023 21:29:06 Instrument ID: CVGG2
Lims ID: ic g3
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

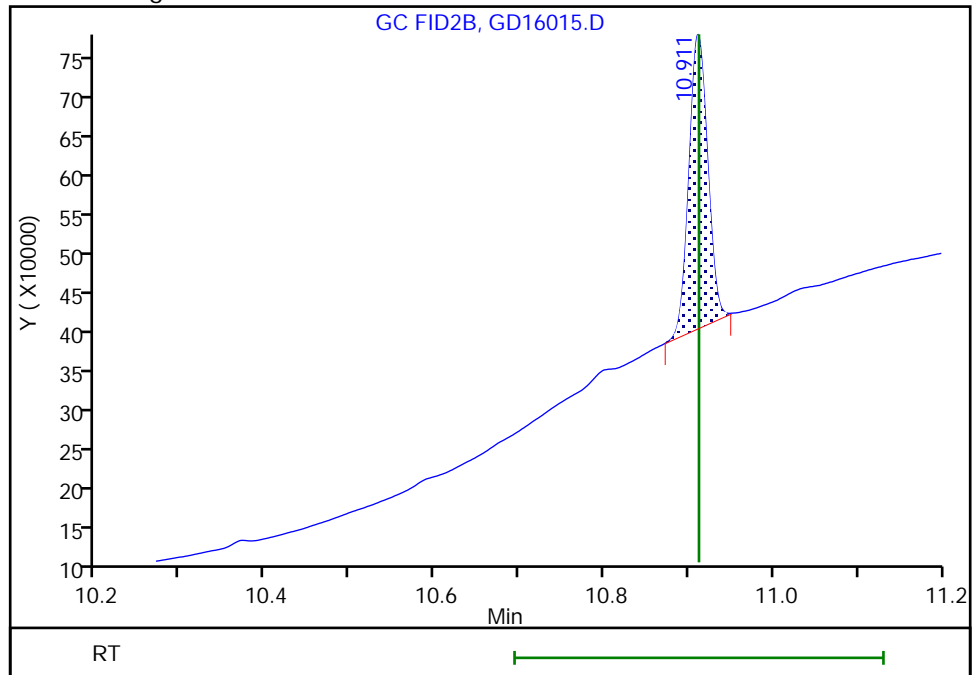
RT: 10.91
Area: 1527982
Amount: 21.785279
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 574428
Amount: 23.463106
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:12:39
Audit Action: Manually Integrated

Audit Reason: Shouldering
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Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16016.D
 Lims ID: ic g2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 16-Apr-2023 21:52:25 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085300-009
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 17-Apr-2023 10:22:36 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1620

First Level Reviewer: SK9U Date: 17-Apr-2023 10:15:28

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.248	2.249	-0.001	402644	5.00	5.28	
2 4-Hydroxy-4-methyl-2-pentanone						
2.612	2.625	-0.013	366098	5.00	5.35	
3 2-Butoxyethanol						
2.794	2.795	-0.001	404155	5.00	5.29	
* 4 n-Heptyl Alcohol						
3.103	3.106	-0.003	4926759	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.866	3.869	-0.003	32931	5.00	5.42	
6 Propylene glycol						
4.824	4.817	0.007	93857	5.00	4.77	M
7 Ethylene glycol						
5.041	5.043	-0.002	259464	5.00	4.09	M
8 2-(2-Butoxyethoxy)ethanol						
6.710	6.708	0.002	330197	5.00	5.47	
9 2,2'-Oxybisethanol						
8.820	8.820	0.000	154666	5.00	4.09	
10 Triethylene Glycol						
10.071	10.071	0.000	141391	5.00	5.84	
11 Tetraethylene Glycol						
10.912	10.912	0.000	295754	10.0	11.6	M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 2.50

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16016.D

Injection Date: 16-Apr-2023 21:52:25

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g2

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

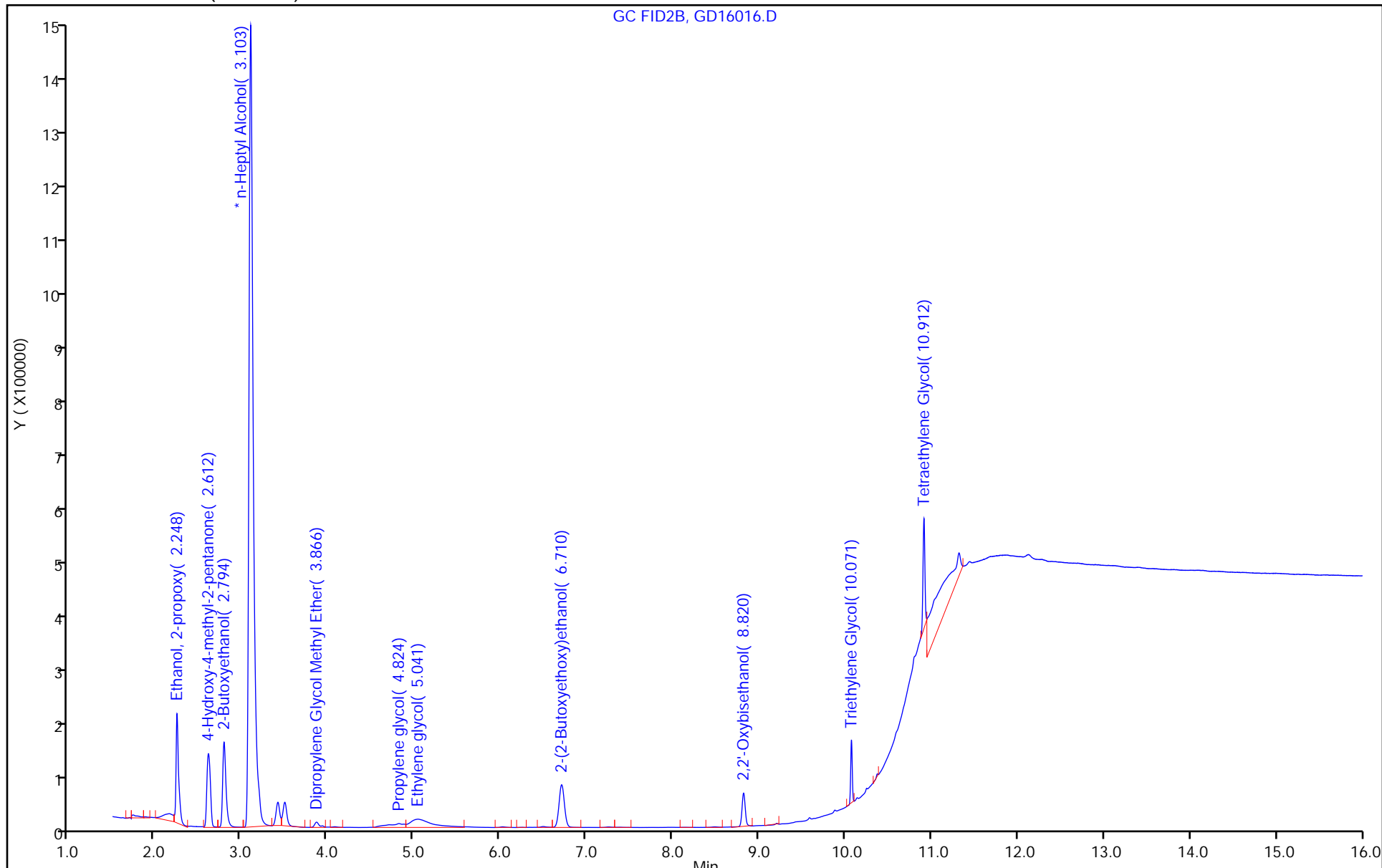
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



GC FID2B, GD16016.D

Eurofins Savannah

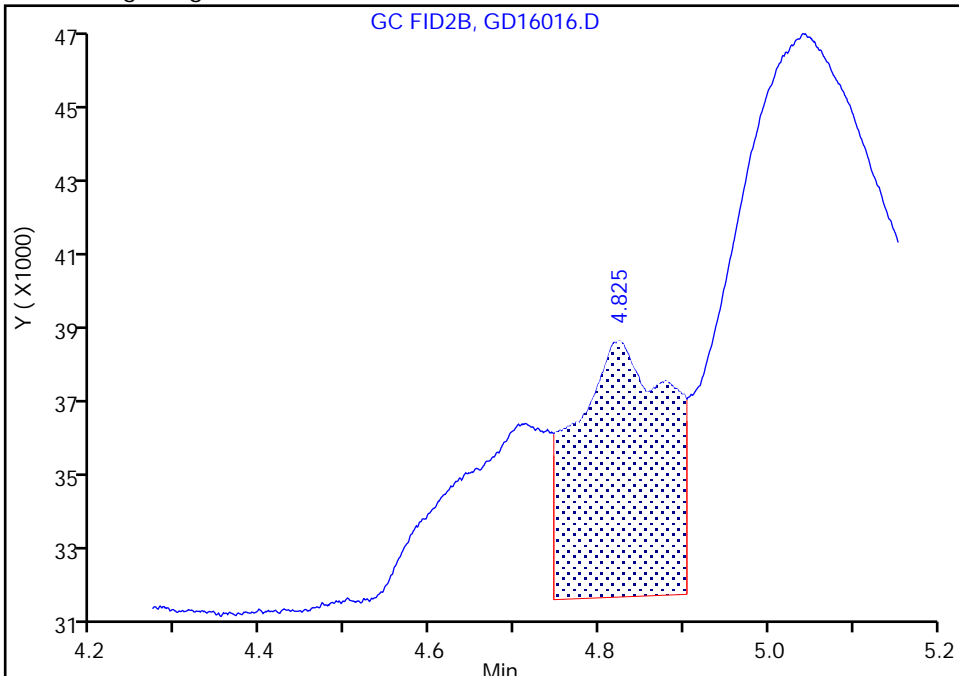
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16016.D
Injection Date: 16-Apr-2023 21:52:25 Instrument ID: CVGG2
Lims ID: ic g2
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

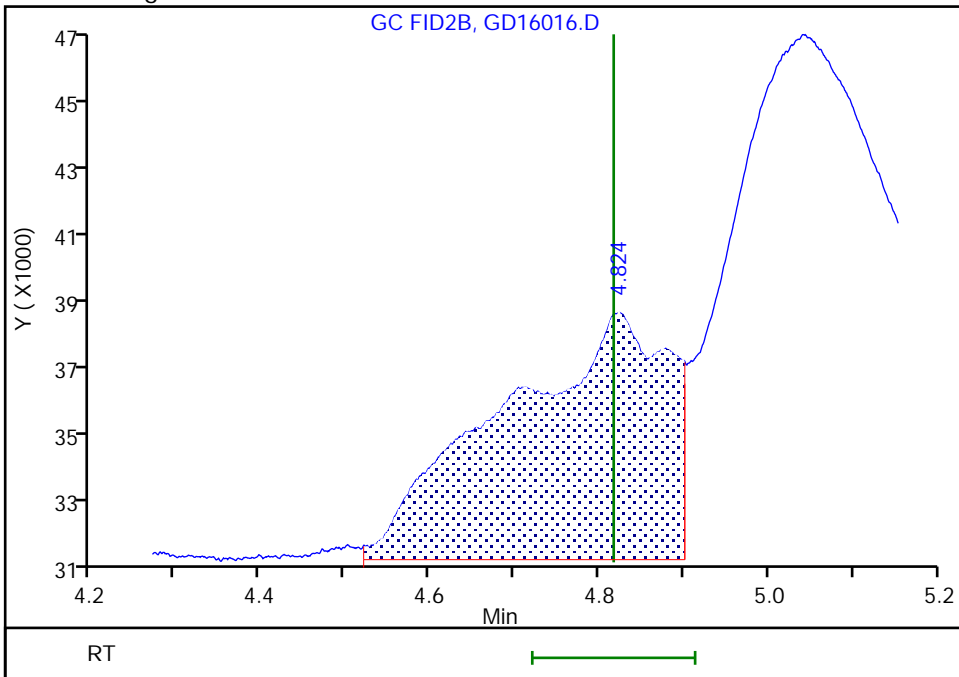
RT: 4.82
Area: 49572
Amount: 3.409050
Amount Units: ug/ml

Processing Integration Results



RT: 4.82
Area: 93857
Amount: 4.767379
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:15:24
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
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Eurofins Savannah

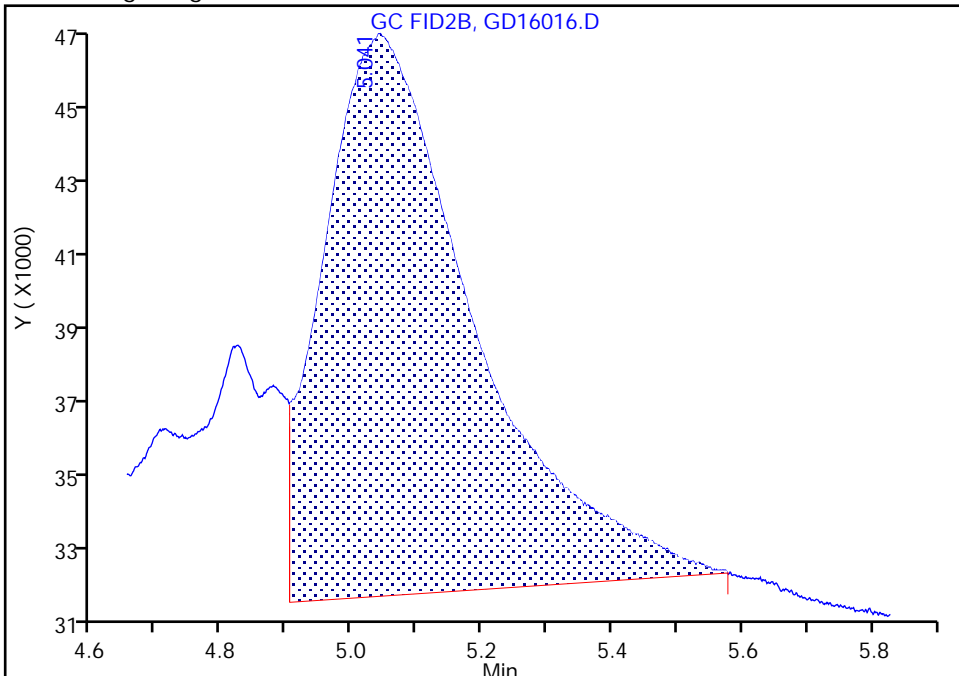
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16016.D
Injection Date: 16-Apr-2023 21:52:25 Instrument ID: CVGG2
Lims ID: ic g2
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

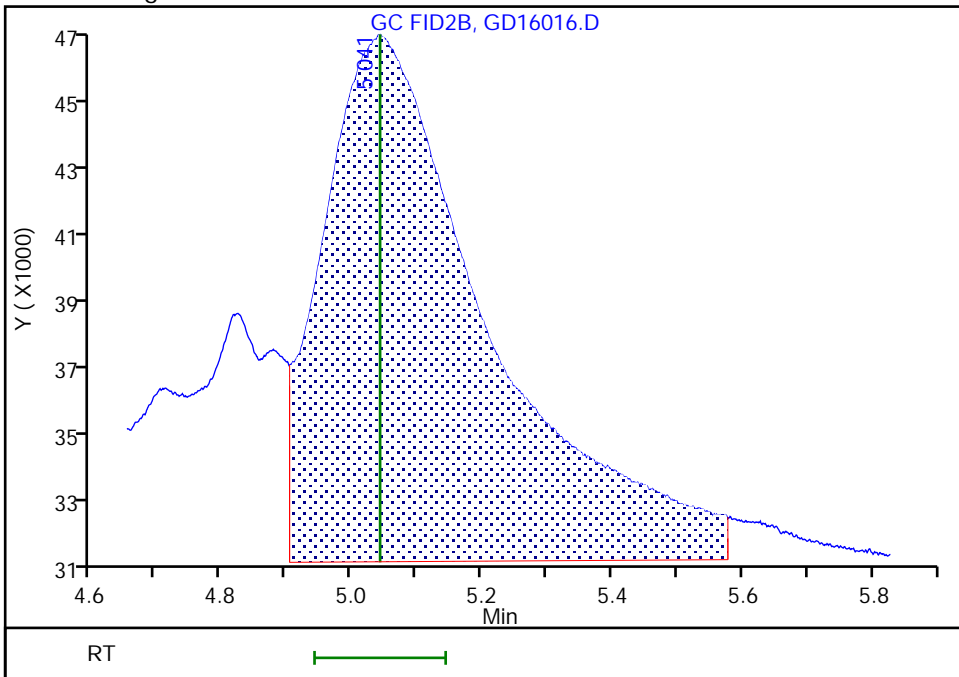
RT: 5.04
Area: 224900
Amount: 6.412326
Amount Units: ug/ml

Processing Integration Results



RT: 5.04
Area: 259464
Amount: 4.087885
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:15:15
Audit Action: Assigned New Baseline

Audit Reason: Incomplete Integration

Eurofins Savannah

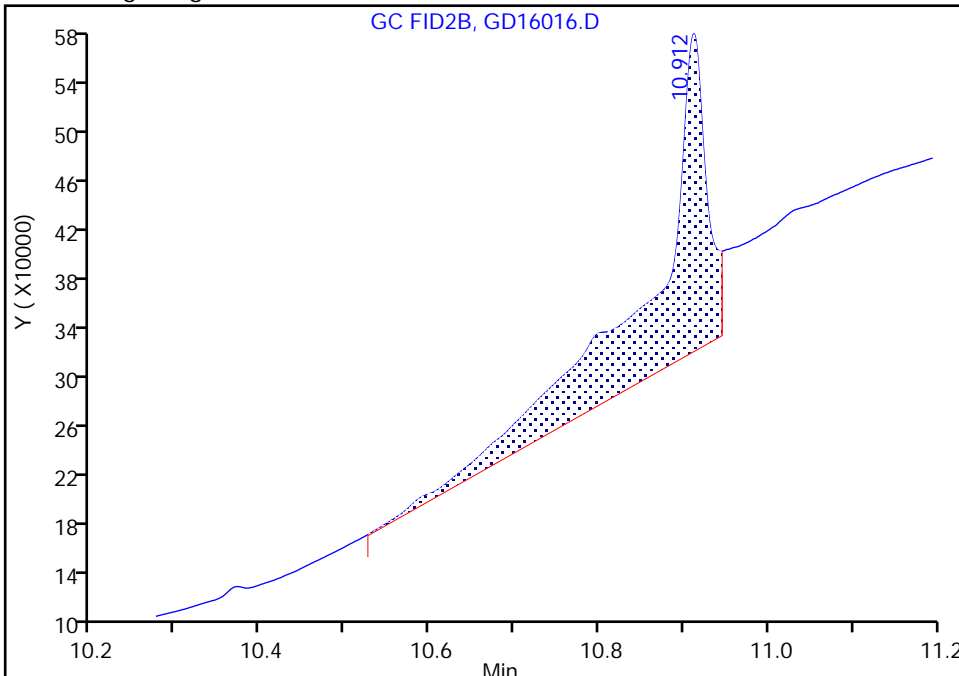
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16016.D
Injection Date: 16-Apr-2023 21:52:25 Instrument ID: CVGG2
Lims ID: ic g2
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

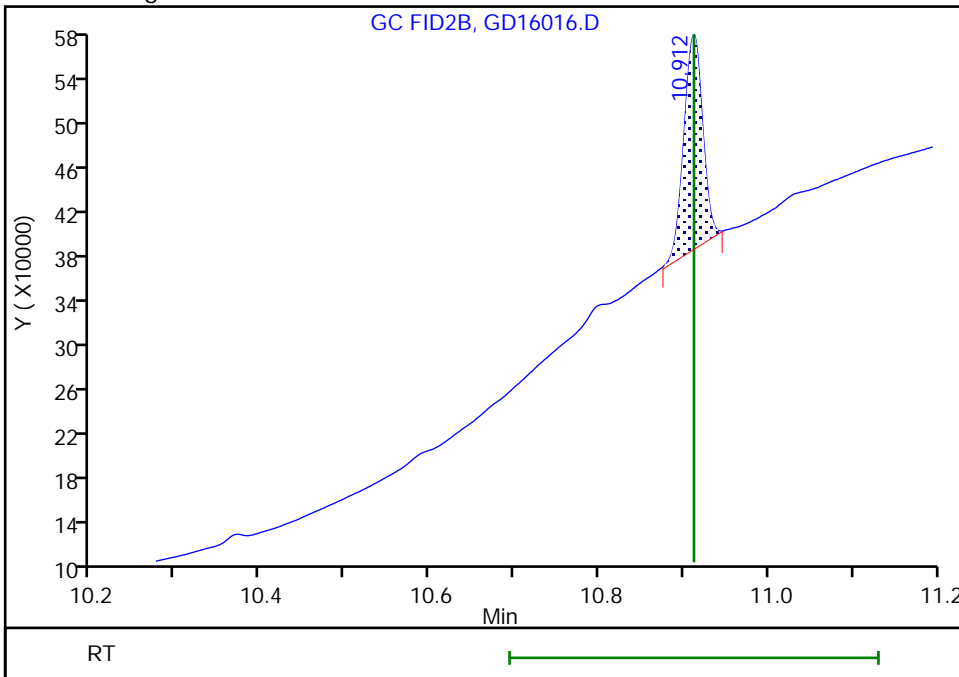
RT: 10.91
Area: 1151194
Amount: 17.518753
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 295754
Amount: 11.641940
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:14:54
Audit Action: Manually Integrated

Audit Reason: Shouldering
Page 79 of 147

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Lims ID: ic g1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 16-Apr-2023 22:15:38 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085300-010
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 17-Apr-2023 10:22:36 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1620

First Level Reviewer: SK9U Date: 17-Apr-2023 10:16:19

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.248	2.249	-0.001	182334	2.00	2.29	
2 4-Hydroxy-4-methyl-2-pentanone						
2.612	2.625	-0.013	145931	2.00	2.05	
3 2-Butoxyethanol						
2.794	2.795	-0.001	169523	2.00	2.13	
* 4 n-Heptyl Alcohol						
3.104	3.106	-0.002	5134596	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.864	3.869	-0.005	11357	2.00	1.79	
6 Propylene glycol						
4.822	4.817	0.005	33085	2.00	0.1527	M
7 Ethylene glycol						
5.044	5.043	0.001	85948	2.00	-1.16	M
8 2-(2-Butoxyethoxy)ethanol						
6.708	6.708	0.000	130789	2.00	2.08	
9 2,2'-Oxybisethanol						
8.821	8.820	0.001	64247	2.00	-0.4026	
10 Triethylene Glycol						
10.072	10.071	0.001	56726	2.00	2.25	
11 Tetraethylene Glycol						
10.913	10.912	0.001	117228	4.00	4.43	M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 1.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D

Injection Date: 16-Apr-2023 22:15:38

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g1

Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul

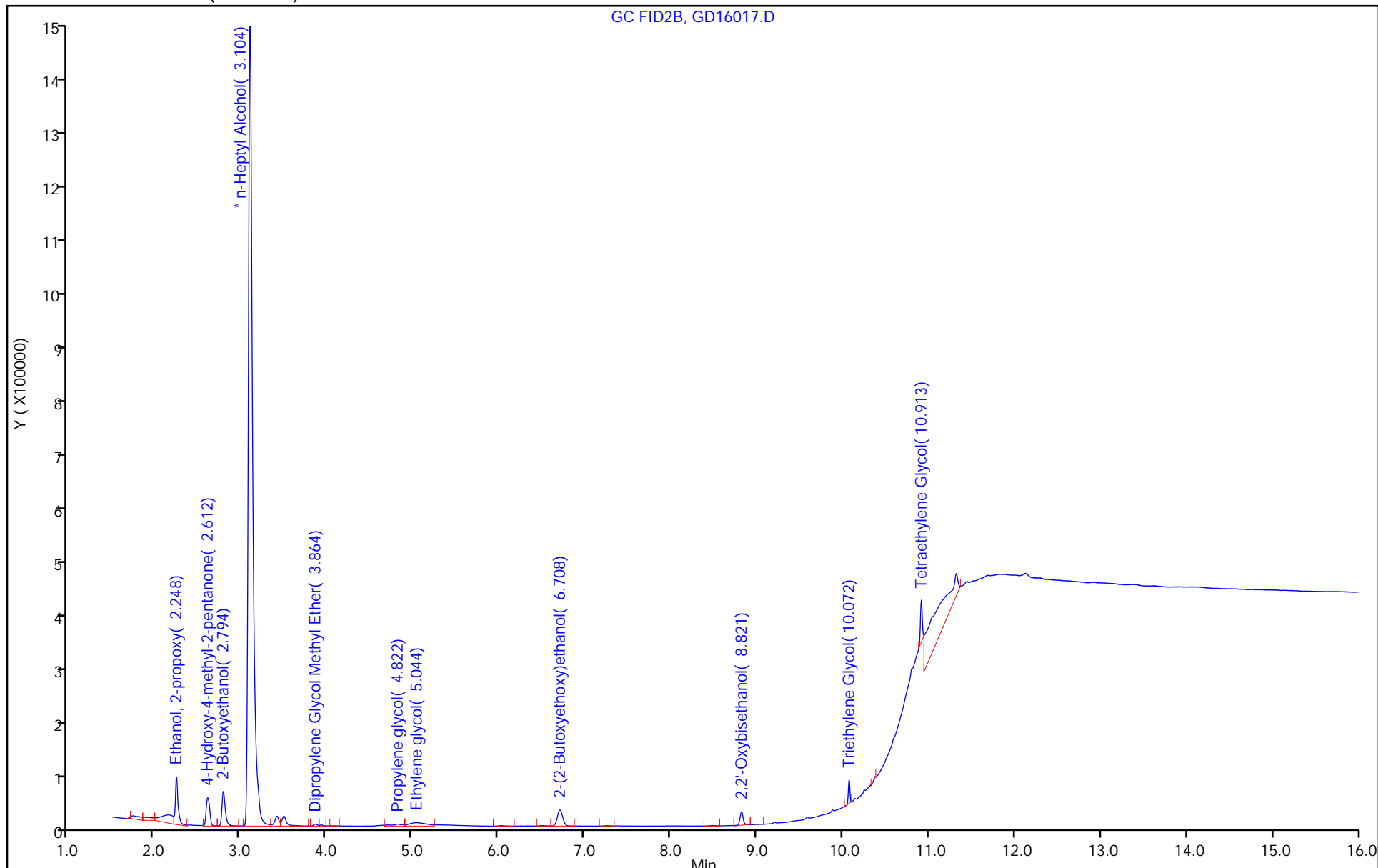
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



GC FID2B, GD16017.D

Eurofins Savannah

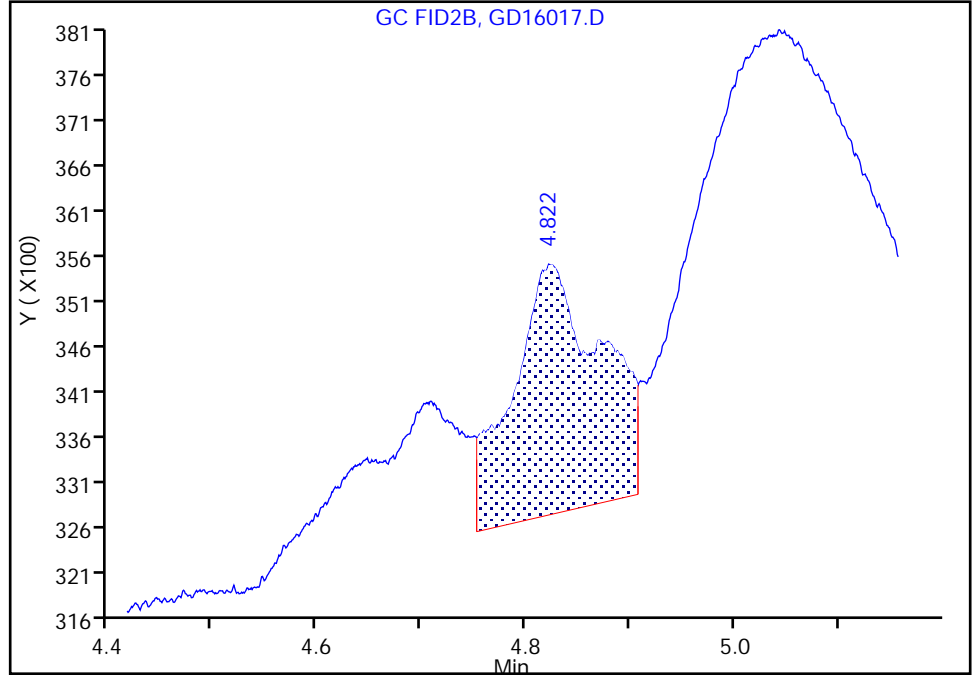
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
Injection Date: 16-Apr-2023 22:15:38 Instrument ID: CVGG2
Lims ID: ic g1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

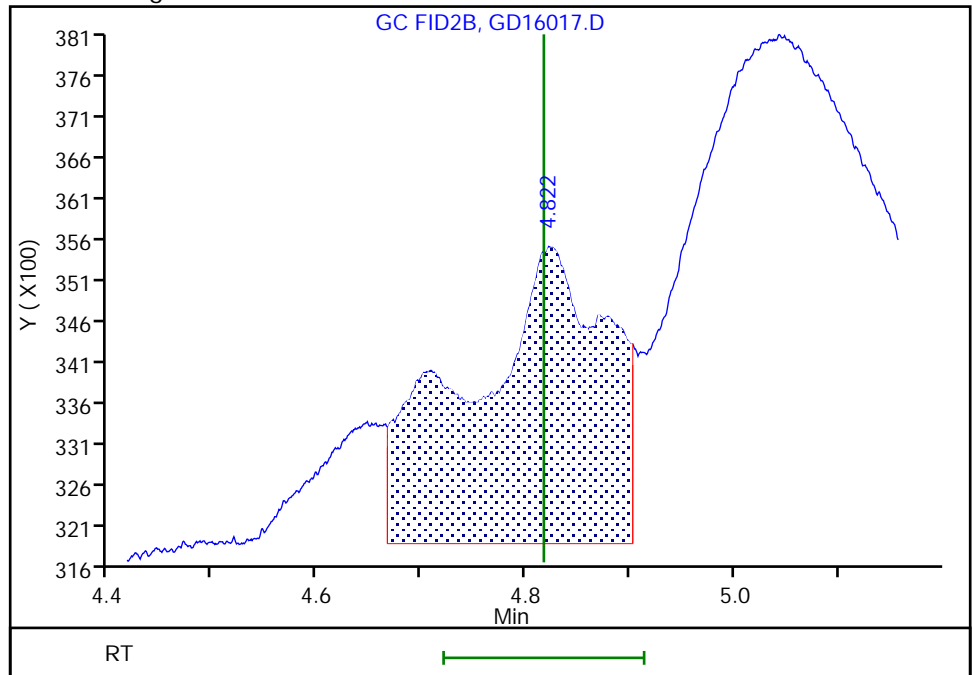
RT: 4.82
Area: 16360
Amount: 0.077734
Amount Units: ug/ml

Processing Integration Results



RT: 4.82
Area: 33085
Amount: 0.152699
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:15:47
Audit Action: Assigned New Baseline

Audit Reason: Incomplete Integration

Eurofins Savannah

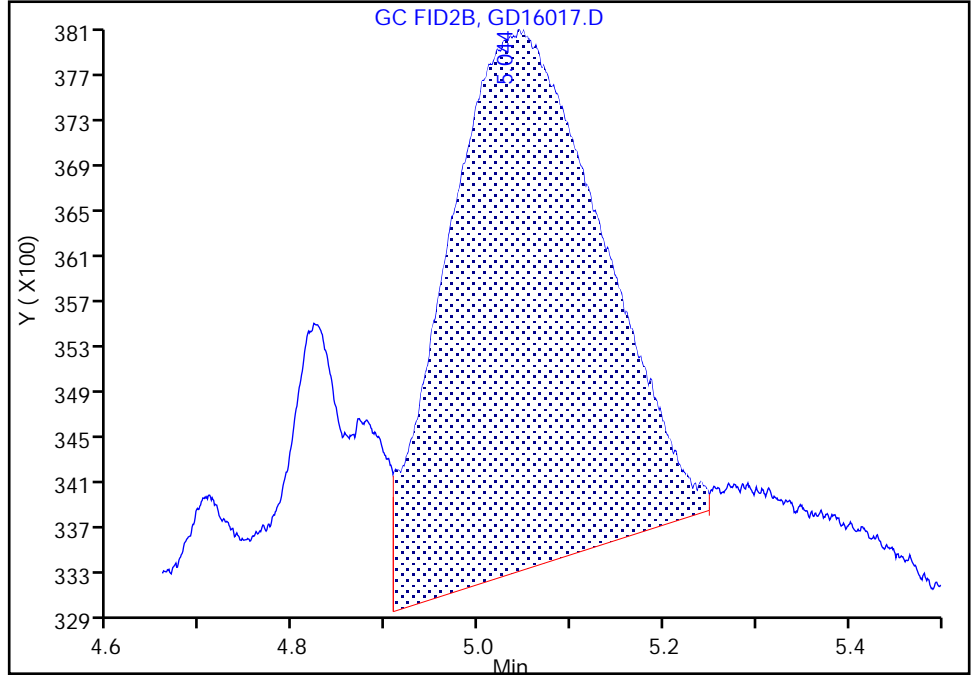
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
Injection Date: 16-Apr-2023 22:15:38 Instrument ID: CVGG2
Lims ID: ic g1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

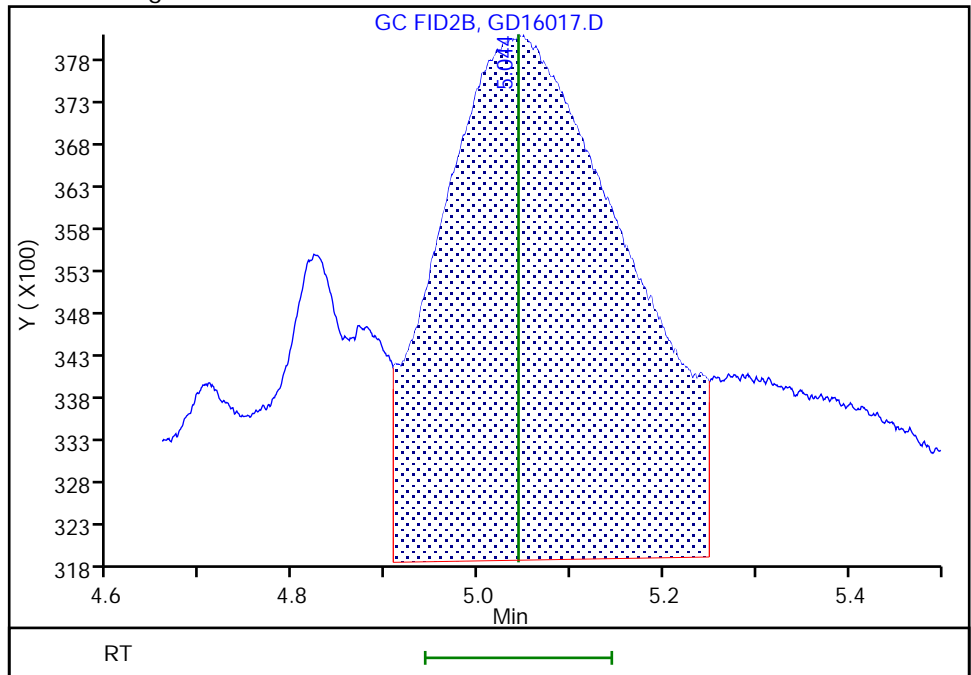
RT: 5.04
Area: 55342
Amount: 1.513652
Amount Units: ug/ml

Processing Integration Results



RT: 5.04
Area: 85948
Amount: -1.155959
Amount Units: ug/ml

Manual Integration Results



Eurofins Savannah

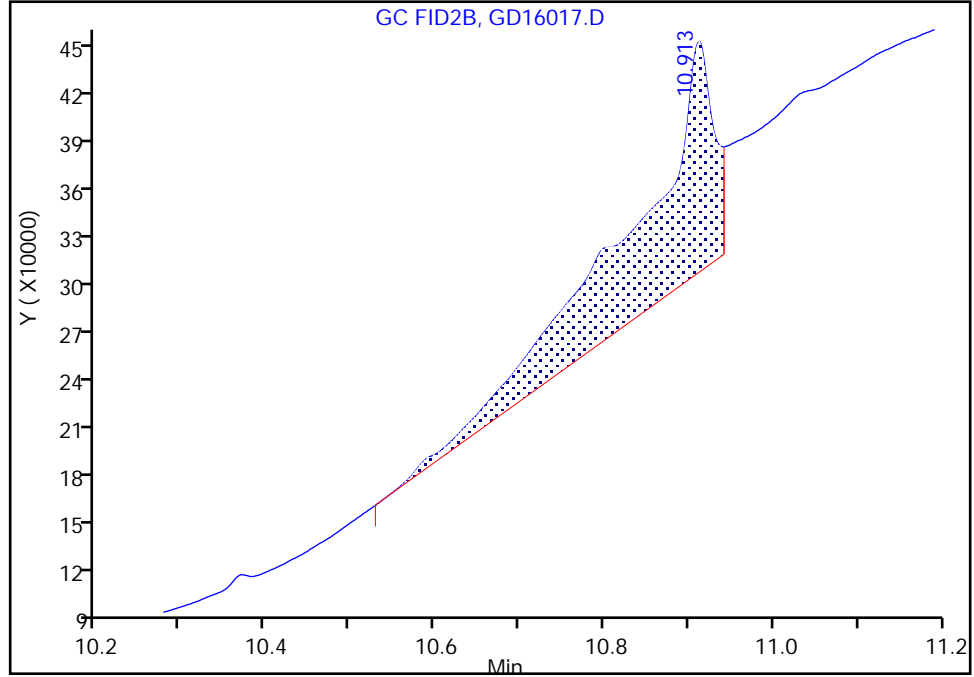
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
Injection Date: 16-Apr-2023 22:15:38 Instrument ID: CVGG2
Lims ID: ic g1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

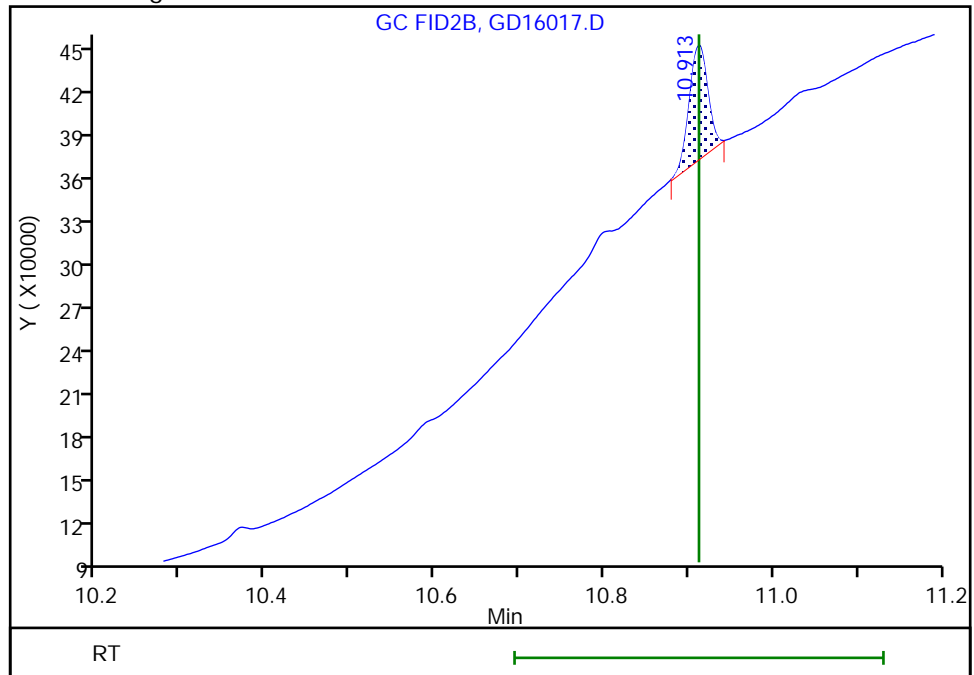
RT: 10.91
Area: 936850
Amount: 16.805062
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 117228
Amount: 4.427730
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:16:16
Audit Action: Manually Integrated

Audit Reason: Shouldering
Page 85 of 147

Calibration

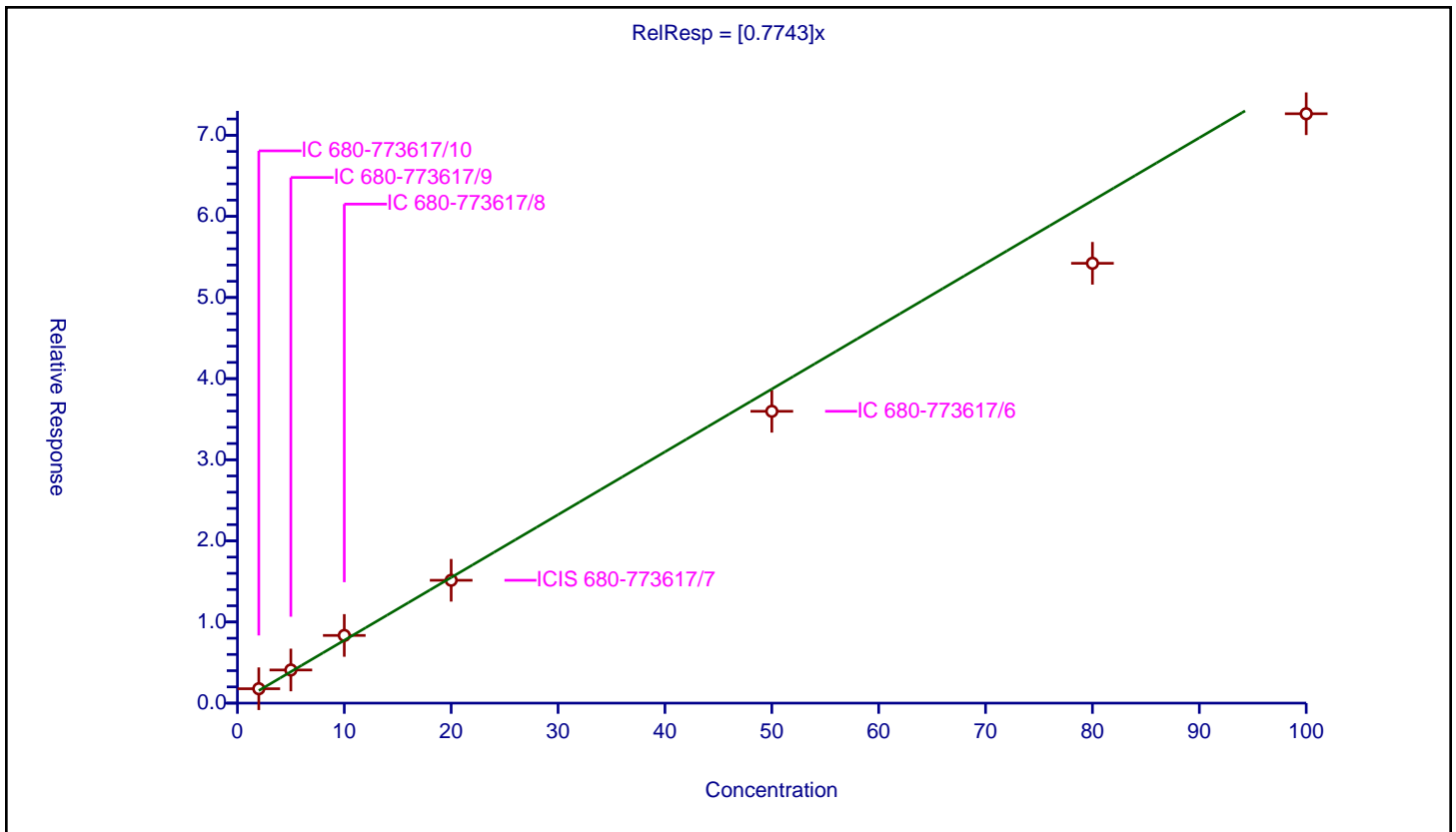
/ Ethanol, 2-propoxy

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

Curve Coefficients	
Intercept:	0
Slope:	0.7743

Error Coefficients	
Standard Error:	3540000
Relative Standard Error:	9.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	1.775544	50.0	5134596.0	0.887772	Y
2	IC 680-773617/9	5.0	4.086297	50.0	4926759.0	0.817259	Y
3	IC 680-773617/8	10.0	8.342421	50.0	4747950.0	0.834242	Y
4	ICIS 680-773617/7	20.0	15.142322	50.0	5058415.0	0.757116	Y
5	IC 680-773617/6	50.0	35.971176	50.0	4416956.0	0.719424	Y
6	IC 680-773617/5	80.0	54.214139	50.0	4383303.0	0.677677	Y
7	IC 680-773617/4	100.0	72.649602	50.0	4326023.0	0.726496	Y



Calibration

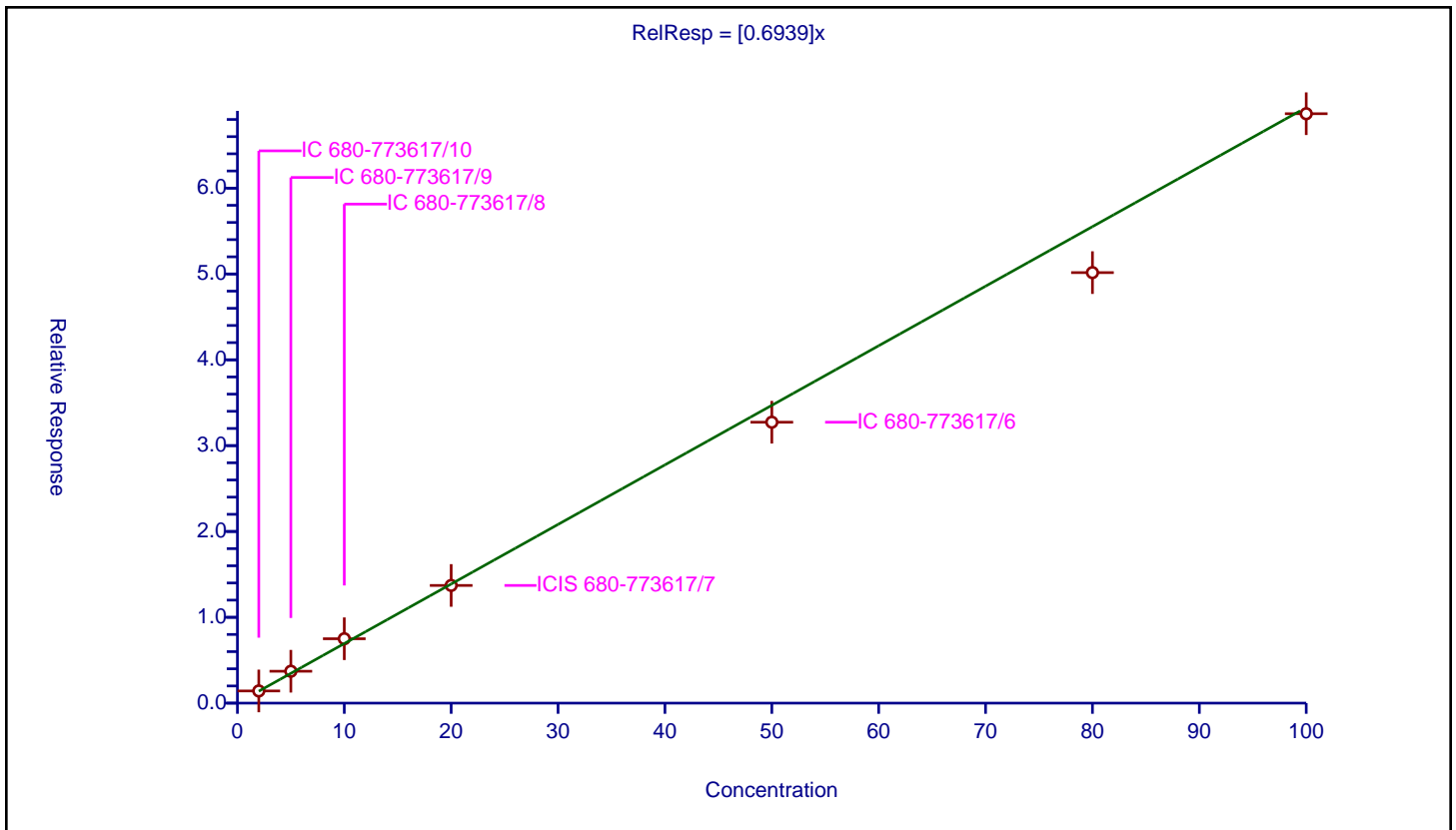
/ 4-Hydroxy-4-methyl-2-pentanone

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

Curve Coefficients	
Intercept:	0
Slope:	0.6939

Error Coefficients	
Standard Error:	3310000
Relative Standard Error:	6.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	1.421056	50.0	5134596.0	0.710528	Y
2	IC 680-773617/9	5.0	3.715404	50.0	4926759.0	0.743081	Y
3	IC 680-773617/8	10.0	7.501322	50.0	4747950.0	0.750132	Y
4	ICIS 680-773617/7	20.0	13.711232	50.0	5058415.0	0.685562	Y
5	IC 680-773617/6	50.0	32.730131	50.0	4416956.0	0.654603	Y
6	IC 680-773617/5	80.0	50.158511	50.0	4383303.0	0.626981	Y
7	IC 680-773617/4	100.0	68.669596	50.0	4326023.0	0.686696	Y



Calibration

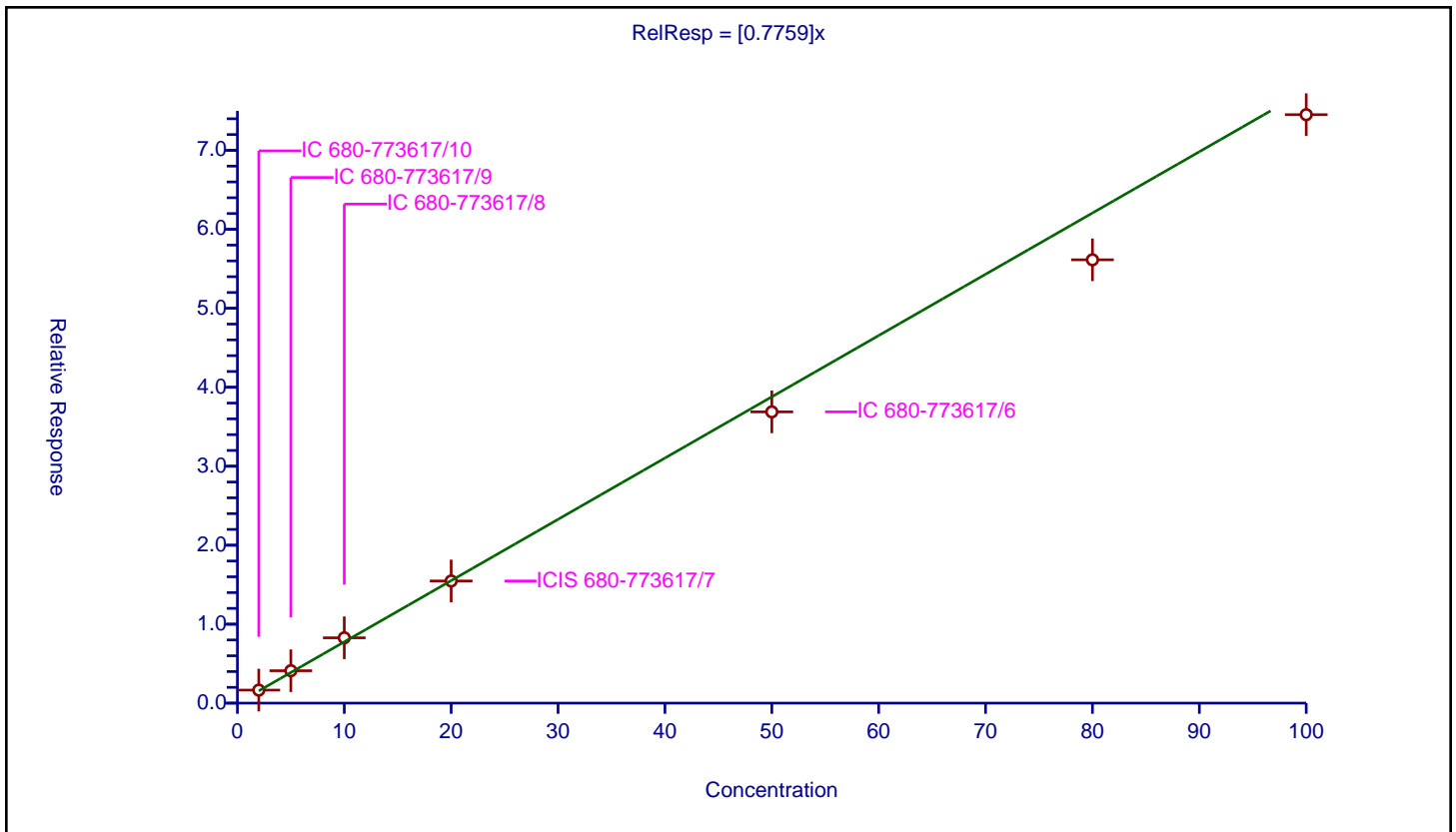
/ 2-Butoxyethanol

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

Curve Coefficients	
Intercept:	0
Slope:	0.7759

Error Coefficients	
Standard Error:	3640000
Relative Standard Error:	6.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	1.650792	50.0	5134596.0	0.825396	Y
2	IC 680-773617/9	5.0	4.101632	50.0	4926759.0	0.820326	Y
3	IC 680-773617/8	10.0	8.272023	50.0	4747950.0	0.827202	Y
4	ICIS 680-773617/7	20.0	15.46859	50.0	5058415.0	0.77343	Y
5	IC 680-773617/6	50.0	36.883761	50.0	4416956.0	0.737675	Y
6	IC 680-773617/5	80.0	56.140769	50.0	4383303.0	0.70176	Y
7	IC 680-773617/4	100.0	74.520038	50.0	4326023.0	0.7452	Y



Calibration

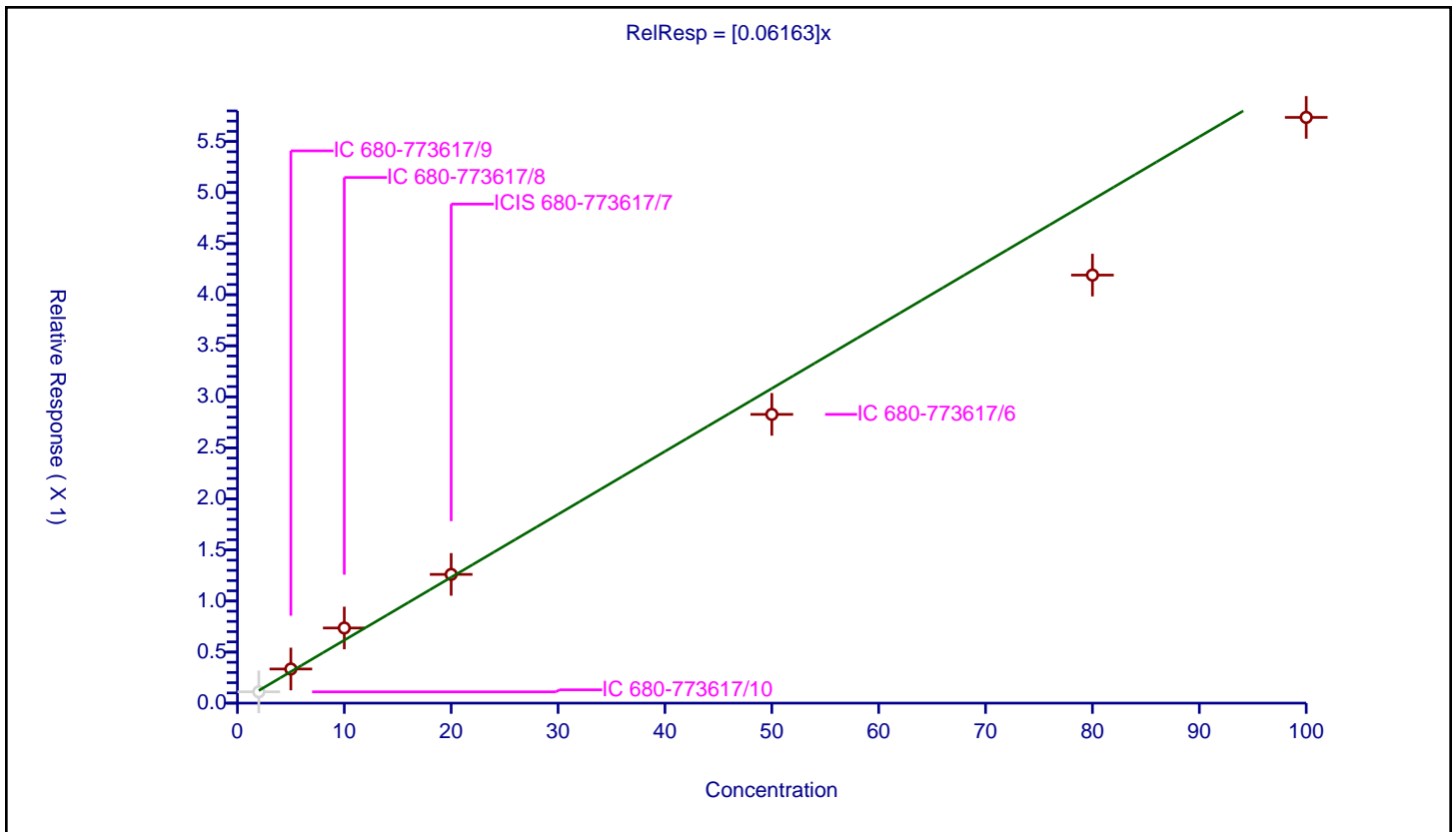
/ Dipropylene Glycol Methyl Ether

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

Curve Coefficients	
Intercept:	0
Slope:	0.06163

Error Coefficients	
Standard Error:	305000
Relative Standard Error:	12.6
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	0.110593	50.0	5134596.0	0.055296	N
2	IC 680-773617/9	5.0	0.334206	50.0	4926759.0	0.066841	Y
3	IC 680-773617/8	10.0	0.735886	50.0	4747950.0	0.073589	Y
4	ICIS 680-773617/7	20.0	1.260612	50.0	5058415.0	0.063031	Y
5	IC 680-773617/6	50.0	2.827705	50.0	4416956.0	0.056554	Y
6	IC 680-773617/5	80.0	4.192078	50.0	4383303.0	0.052401	Y
7	IC 680-773617/4	100.0	5.736458	50.0	4326023.0	0.057365	Y



Calibration

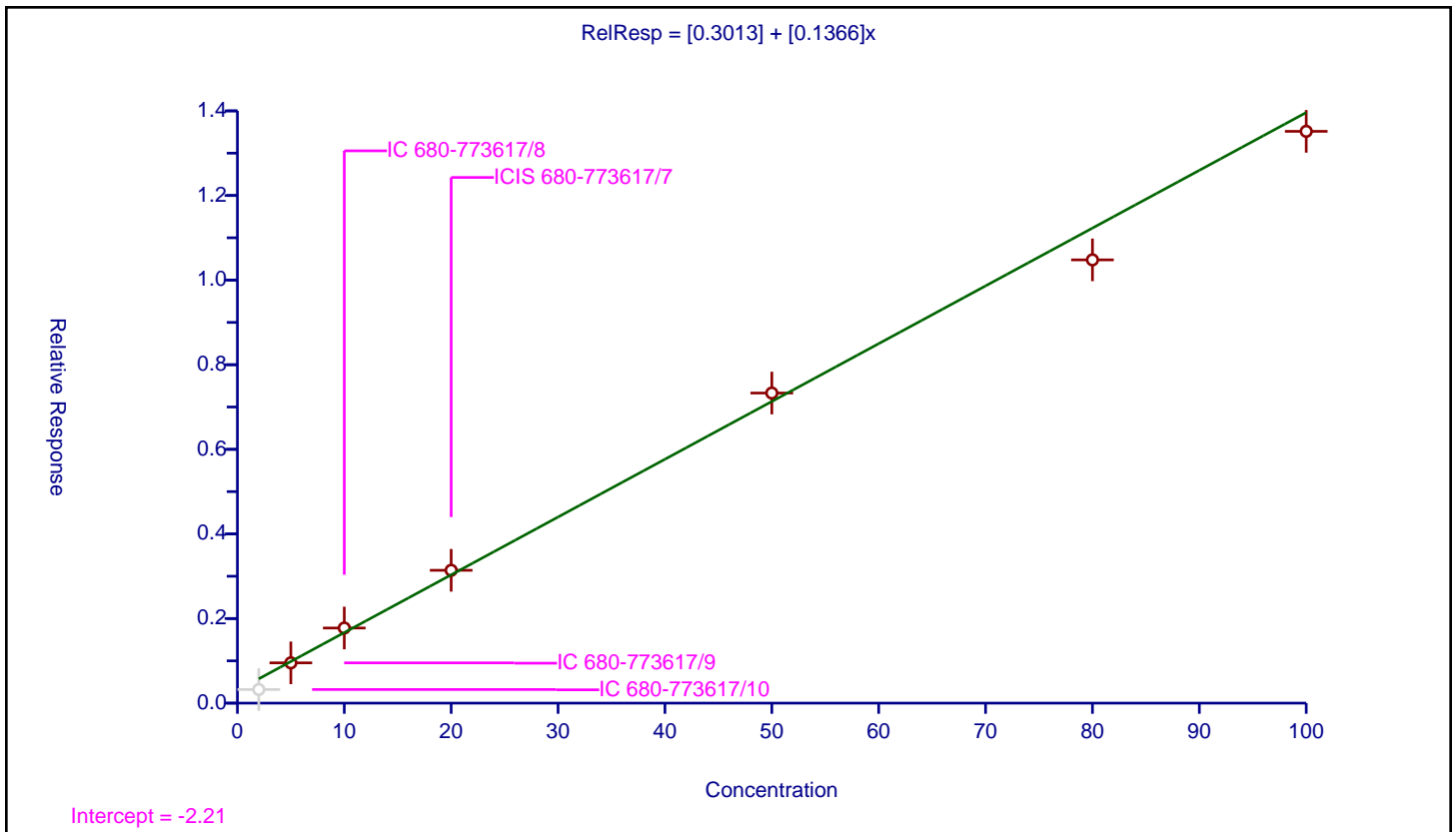
/ Propylene glycol

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

Curve Coefficients	
Intercept:	0.3013
Slope:	0.1366

Error Coefficients	
Standard Error:	832000
Relative Standard Error:	6.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	0.322177	50.0	5134596.0	0.161089	N
2	IC 680-773617/9	5.0	0.952523	50.0	4926759.0	0.190505	Y
3	IC 680-773617/8	10.0	1.77584	50.0	4747950.0	0.177584	Y
4	ICIS 680-773617/7	20.0	3.140272	50.0	5058415.0	0.157014	Y
5	IC 680-773617/6	50.0	7.329912	50.0	4416956.0	0.146598	Y
6	IC 680-773617/5	80.0	10.478342	50.0	4383303.0	0.130979	Y
7	IC 680-773617/4	100.0	13.516248	50.0	4326023.0	0.135162	Y



Calibration

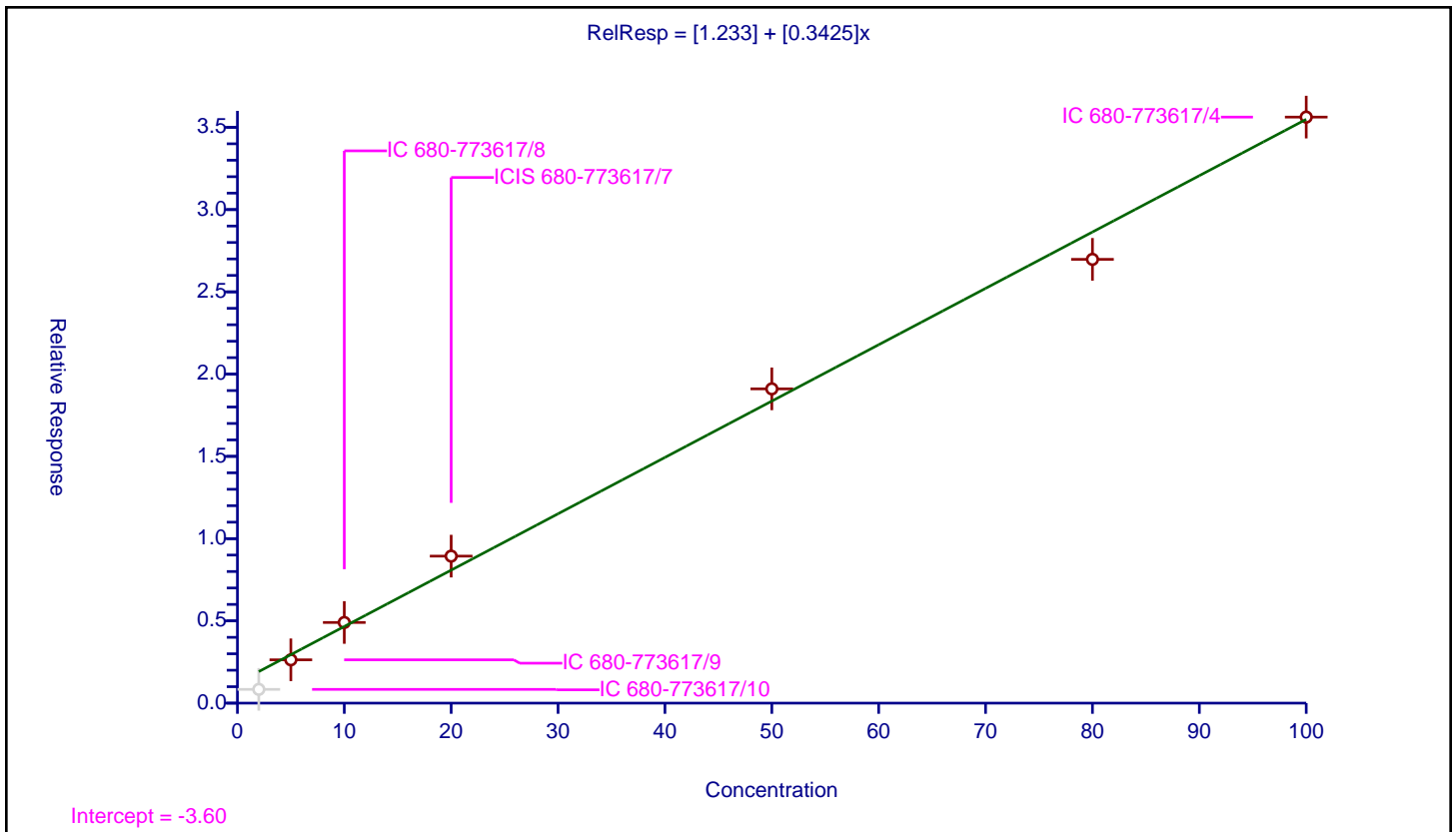
/ Ethylene glycol

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

Curve Coefficients	
Intercept:	1.233
Slope:	0.3425

Error Coefficients	
Standard Error:	2180000
Relative Standard Error:	12.2
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	0.83695	50.0	5134596.0	0.418475	N
2	IC 680-773617/9	5.0	2.633212	50.0	4926759.0	0.526642	Y
3	IC 680-773617/8	10.0	4.903253	50.0	4747950.0	0.490325	Y
4	ICIS 680-773617/7	20.0	8.935151	50.0	5058415.0	0.446758	Y
5	IC 680-773617/6	50.0	19.103088	50.0	4416956.0	0.382062	Y
6	IC 680-773617/5	80.0	26.975092	50.0	4383303.0	0.337189	Y
7	IC 680-773617/4	100.0	35.622626	50.0	4326023.0	0.356226	Y



Calibration

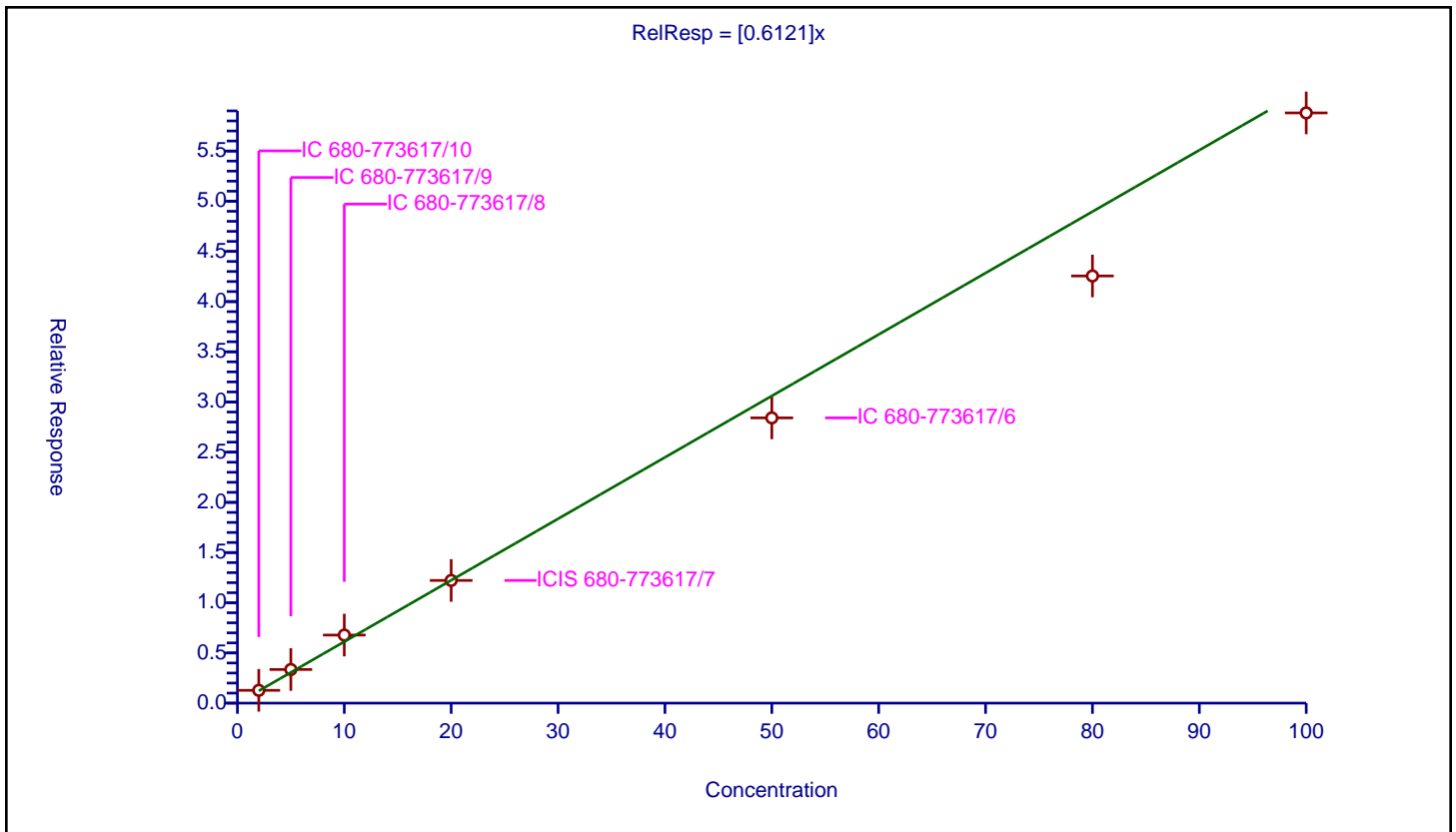
/ 2-(2-Butoxyethoxy)ethanol

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

Curve Coefficients	
Intercept:	0
Slope:	0.6121

Error Coefficients	
Standard Error:	2830000
Relative Standard Error:	8.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	1.273606	50.0	5134596.0	0.636803	Y
2	IC 680-773617/9	5.0	3.351057	50.0	4926759.0	0.670211	Y
3	IC 680-773617/8	10.0	6.781074	50.0	4747950.0	0.678107	Y
4	ICIS 680-773617/7	20.0	12.222949	50.0	5058415.0	0.611147	Y
5	IC 680-773617/6	50.0	28.41741	50.0	4416956.0	0.568348	Y
6	IC 680-773617/5	80.0	42.555089	50.0	4383303.0	0.531939	Y
7	IC 680-773617/4	100.0	58.798821	50.0	4326023.0	0.587988	Y



Calibration

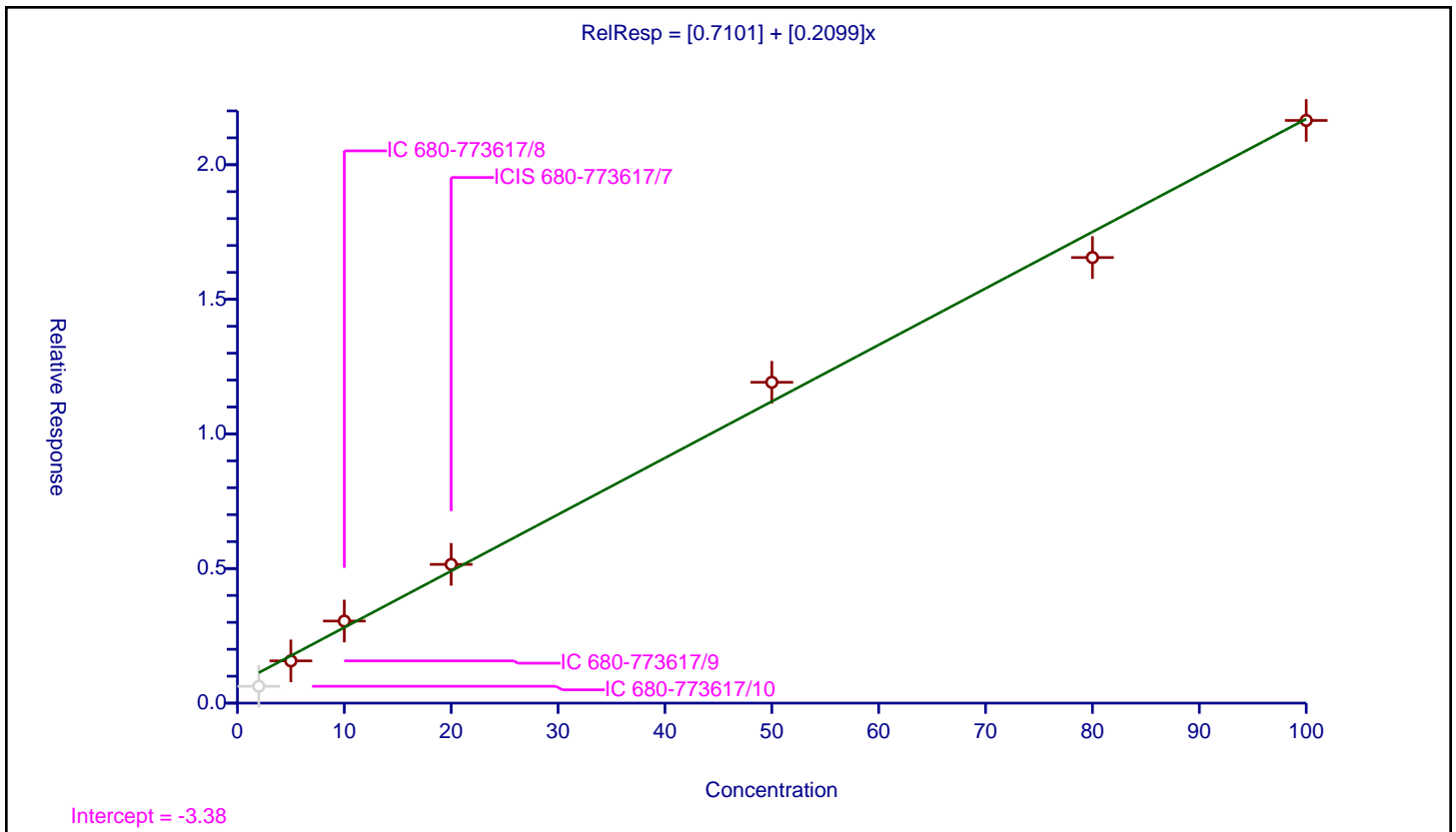
/ 2,2'-Oxybisethanol

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

Curve Coefficients	
Intercept:	0.7101
Slope:	0.2099

Error Coefficients	
Standard Error:	1330000
Relative Standard Error:	11.9
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	0.625629	50.0	5134596.0	0.312814	N
2	IC 680-773617/9	5.0	1.569653	50.0	4926759.0	0.313931	Y
3	IC 680-773617/8	10.0	3.0488	50.0	4747950.0	0.30488	Y
4	ICIS 680-773617/7	20.0	5.153769	50.0	5058415.0	0.257688	Y
5	IC 680-773617/6	50.0	11.917936	50.0	4416956.0	0.238359	Y
6	IC 680-773617/5	80.0	16.552905	50.0	4383303.0	0.206911	Y
7	IC 680-773617/4	100.0	21.645504	50.0	4326023.0	0.216455	Y



Calibration

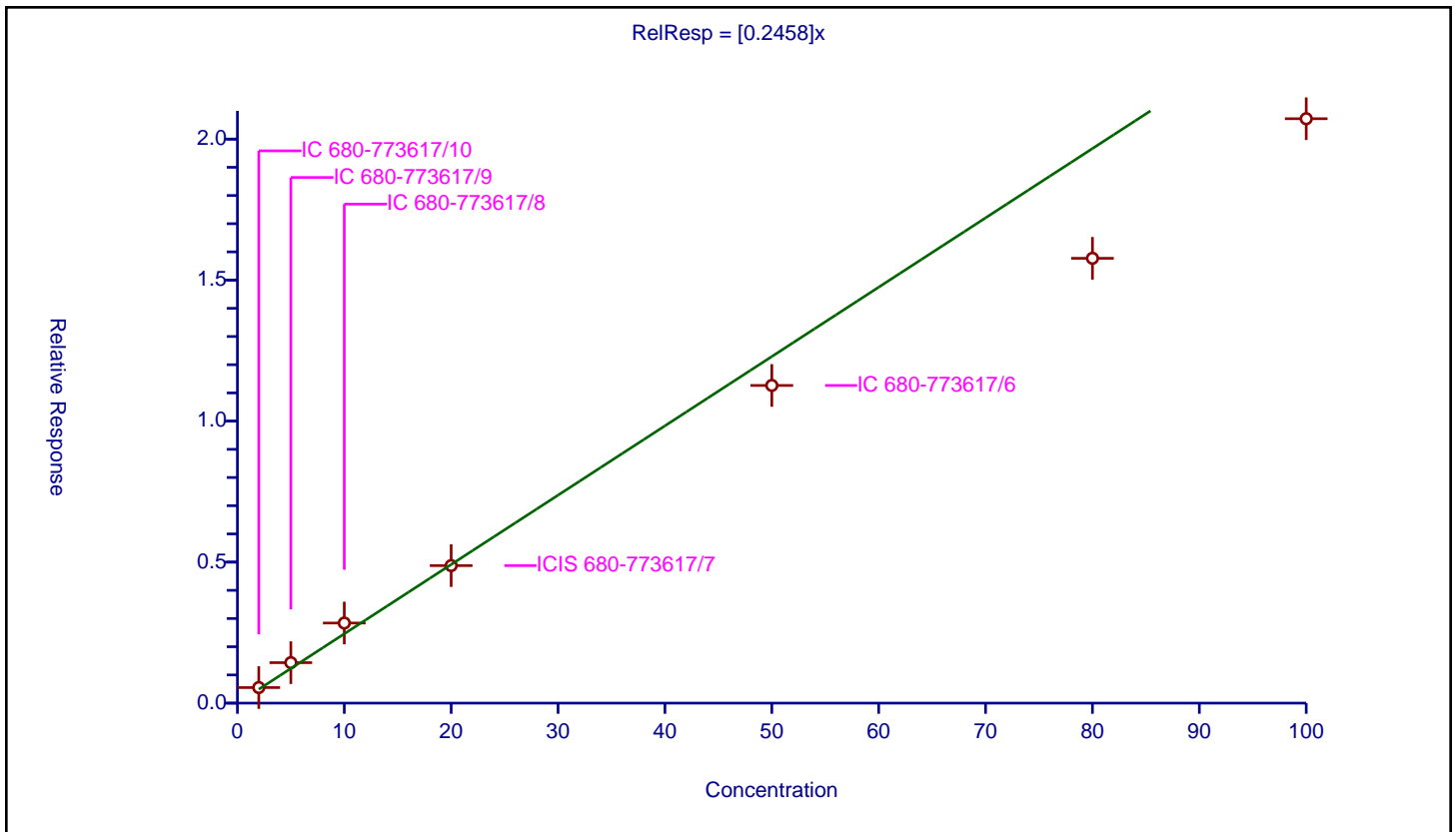
/ Triethylene Glycol

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

Curve Coefficients	
Intercept:	0
Slope:	0.2458

Error Coefficients	
Standard Error:	1040000
Relative Standard Error:	15.2
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.964

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	2.0	0.55239	50.0	5134596.0	0.276195	Y
2	IC 680-773617/9	5.0	1.434929	50.0	4926759.0	0.286986	Y
3	IC 680-773617/8	10.0	2.839826	50.0	4747950.0	0.283983	Y
4	ICIS 680-773617/7	20.0	4.87628	50.0	5058415.0	0.243814	Y
5	IC 680-773617/6	50.0	11.264126	50.0	4416956.0	0.225283	Y
6	IC 680-773617/5	80.0	15.77241	50.0	4383303.0	0.197155	Y
7	IC 680-773617/4	100.0	20.722185	50.0	4326023.0	0.207222	Y



Calibration

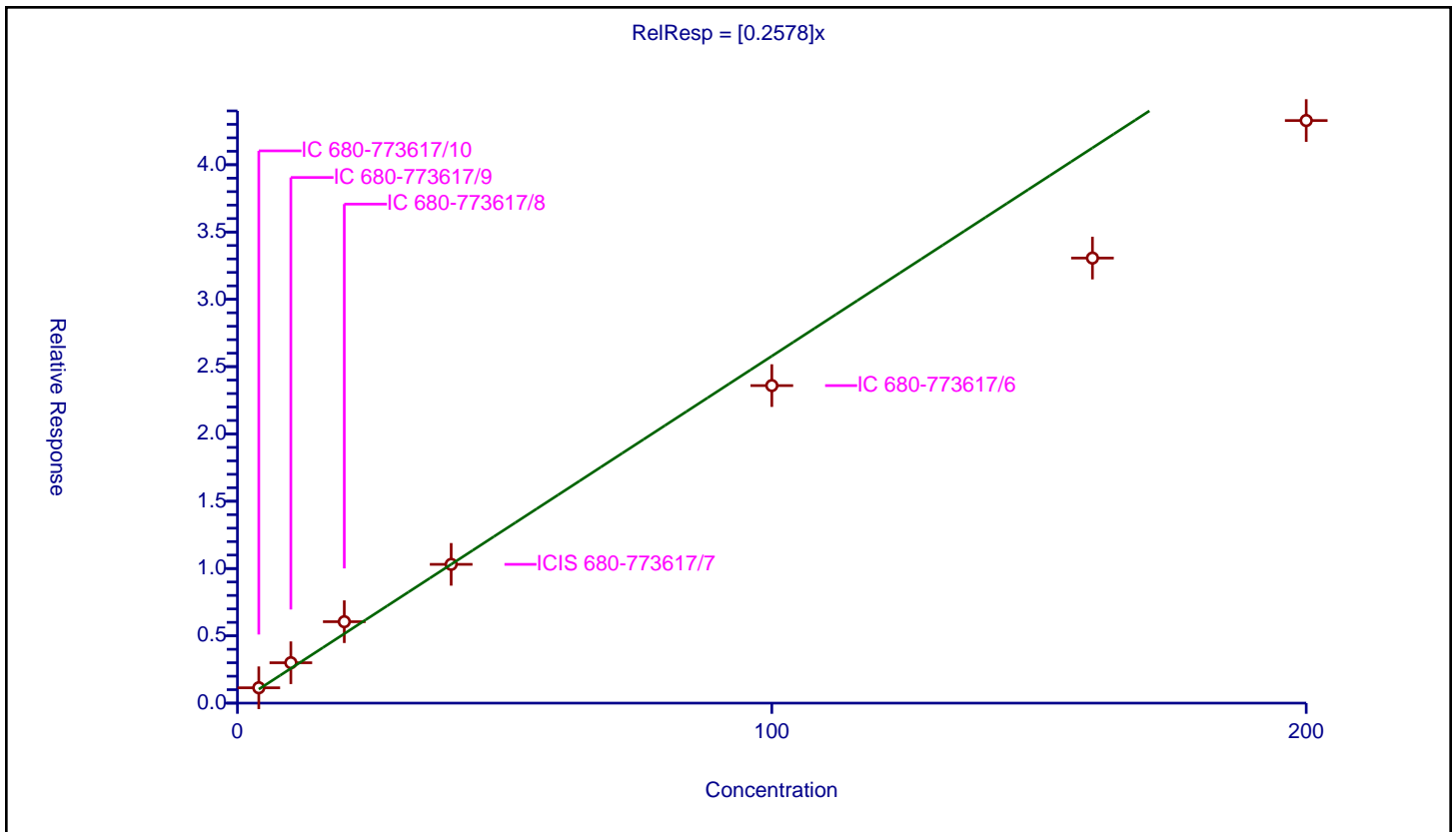
/ Tetraethylene Glycol

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

Curve Coefficients	
Intercept:	0
Slope:	0.2578

Error Coefficients	
Standard Error:	2170000
Relative Standard Error:	15.3
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.964

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-773617/10	4.0	1.14155	50.0	5134596.0	0.285388	Y
2	IC 680-773617/9	10.0	3.001507	50.0	4926759.0	0.300151	Y
3	IC 680-773617/8	20.0	6.049221	50.0	4747950.0	0.302461	Y
4	ICIS 680-773617/7	40.0	10.309484	50.0	5058415.0	0.257737	Y
5	IC 680-773617/6	100.0	23.592119	50.0	4416956.0	0.235921	Y
6	IC 680-773617/5	160.0	33.064712	50.0	4383303.0	0.206654	Y
7	IC 680-773617/4	200.0	43.283392	50.0	4326023.0	0.216417	Y



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Lab Sample ID: ICV 680-773617/11 Calibration Date: 04/16/2023 22:38
 Instrument ID: CVGG2 Calib Start Date: 04/16/2023 19:56
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 04/16/2023 22:15
 Lab File ID: GD16018.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.7743	0.7539		19.5	20.0	-2.6	20.0
4-Hydroxy-4-methyl-2-pentano ne	Ave	0.6939	0.7216		20.8	20.0	4.0	20.0
2-Butoxyethanol	Ave	0.7759	0.8075		20.8	20.0	4.1	20.0
Dipropylene Glycol Methyl Ether	Ave	0.0616	0.0624		20.2	20.0	1.2	20.0
Propylene glycol	Lin2		0.1371		17.9	20.0	-10.6	20.0
Ethylene glycol	Lin1		0.3981		19.6	20.0	-1.8	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.6121	0.6218		20.3	20.0	1.6	20.0
2,2'-Oxybisethanol	Lin1		0.2161		17.2	20.0	-14.0	20.0
Triethylene Glycol	Ave	0.2458	0.2222		18.1	20.0	-9.6	20.0
Tetraethylene Glycol	Ave	0.2578	0.2303		35.7	40.0	-10.7	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Lab Sample ID: ICV 680-773617/11 Calibration Date: 04/16/2023 22:38
 Instrument ID: CVGG2 Calib Start Date: 04/16/2023 19:56
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 04/16/2023 22:15
 Lab File ID: GD16018.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.25	2.21	2.30
4-Hydroxy-4-methyl-2-pentanone	2.61	2.57	2.67
2-Butoxyethanol	2.79	2.74	2.85
Dipropylene Glycol Methyl Ether	3.87	3.80	3.96
Propylene glycol	4.82	4.73	4.93
Ethylene glycol	5.04	4.95	5.15
2-(2-Butoxyethoxy)ethanol	6.71	6.58	6.84
2,2'-Oxybisethanol	8.82	8.65	9.00
Triethylene Glycol	10.07	9.87	10.28
Tetraethylene Glycol	10.91	10.70	11.13

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16018.D
 Lims ID: icv glycol
 Client ID:
 Sample Type: CCV
 Inject. Date: 16-Apr-2023 22:38:49 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085300-011
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 17-Apr-2023 13:09:50 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1630

First Level Reviewer: SK9U Date: 17-Apr-2023 10:16:35

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.248	2.252	-0.004	1556415	20.0	19.5	
2 4-Hydroxy-4-methyl-2-pentanone						
2.614	2.617	-0.003	1489874	20.0	20.8	
3 2-Butoxyethanol						
2.794	2.795	-0.001	1667191	20.0	20.8	
* 4 n-Heptyl Alcohol						
3.103	3.094	0.009	5161550	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.866	3.879	-0.013	128786	20.0	20.2	
6 Propylene glycol						
4.820	4.831	-0.011	283107	20.0	17.9	
7 Ethylene glycol						
5.042	5.049	-0.007	822022	20.0	19.6	
8 2-(2-Butoxyethoxy)ethanol						
6.709	6.709	0.000	1283800	20.0	20.3	
9 2,2'-Oxybisethanol						
8.819	8.828	-0.009	446111	20.0	17.2	
10 Triethylene Glycol						
10.070	10.074	-0.004	458670	20.0	18.1	
11 Tetraethylene Glycol						
10.911	10.915	-0.004	950896	40.0	35.7	M M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_GlyICV_00052

Amount Added: 10.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16018.D

Injection Date: 16-Apr-2023 22:38:49

Instrument ID: CVGG2

Operator ID:

Lims ID: icv glycol

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

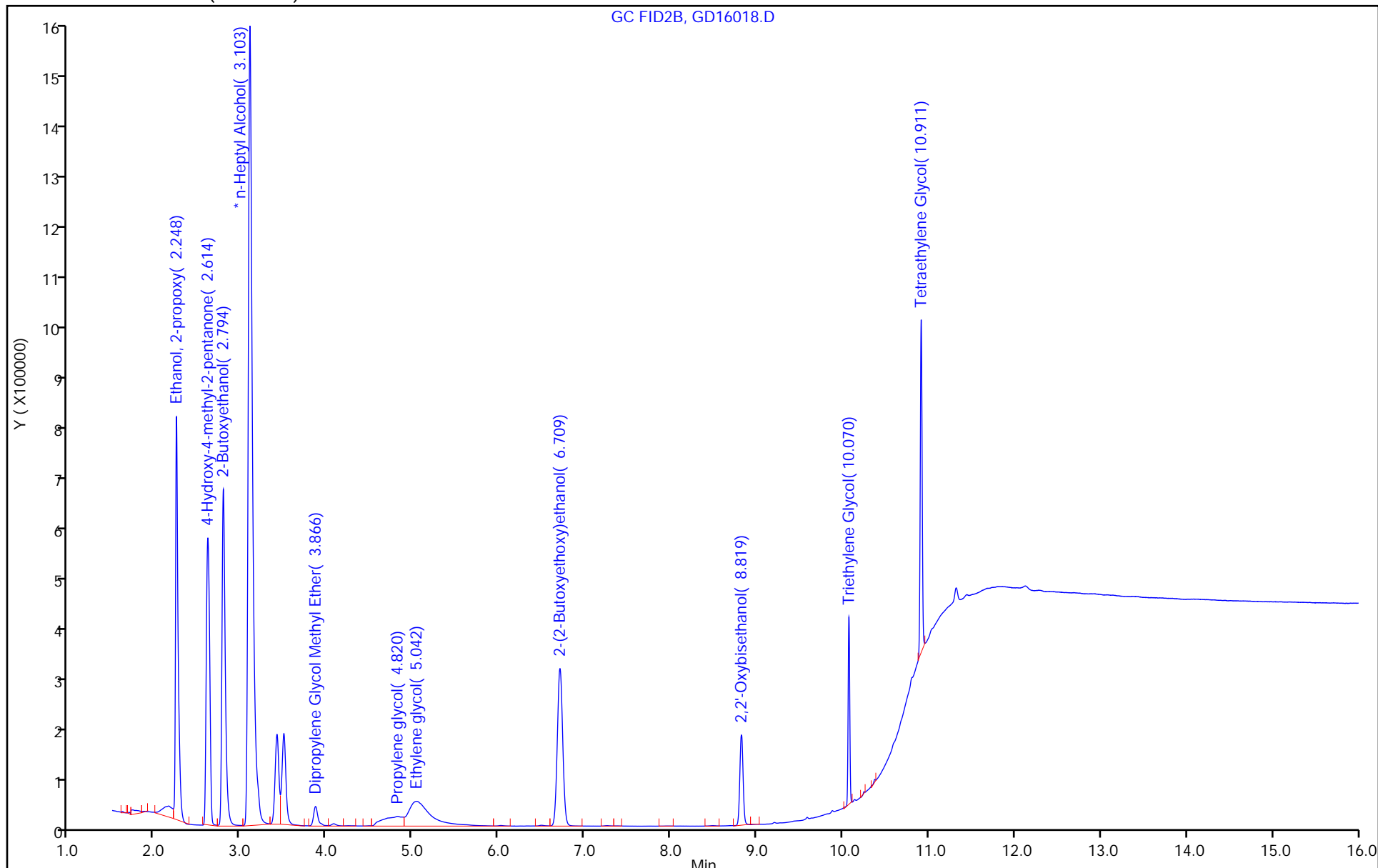
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

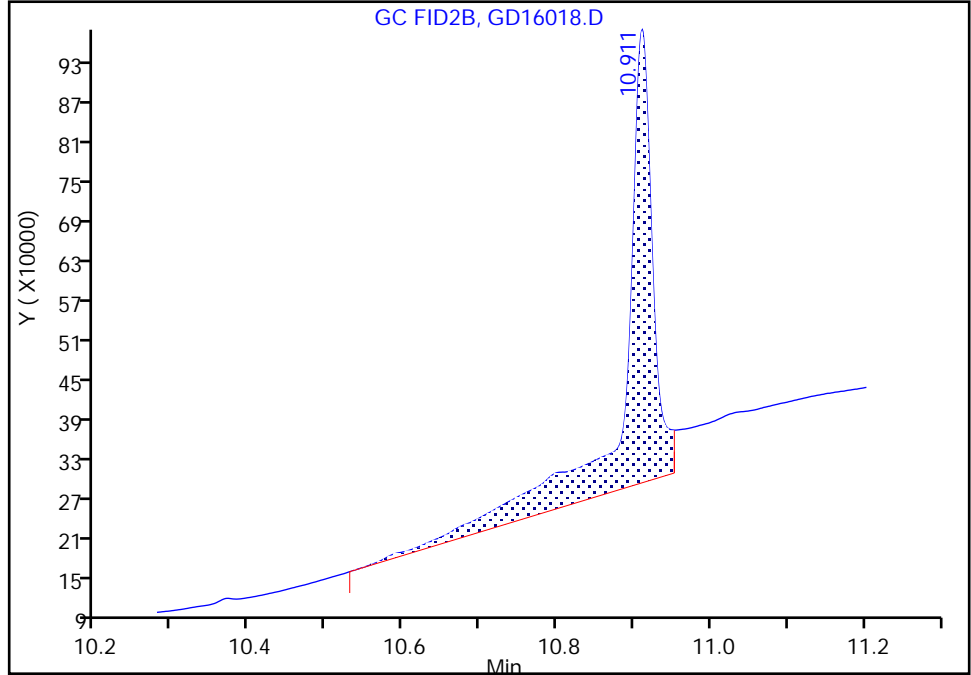
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16018.D
Injection Date: 16-Apr-2023 22:38:49 Instrument ID: CVGG2
Lims ID: icv glycol
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

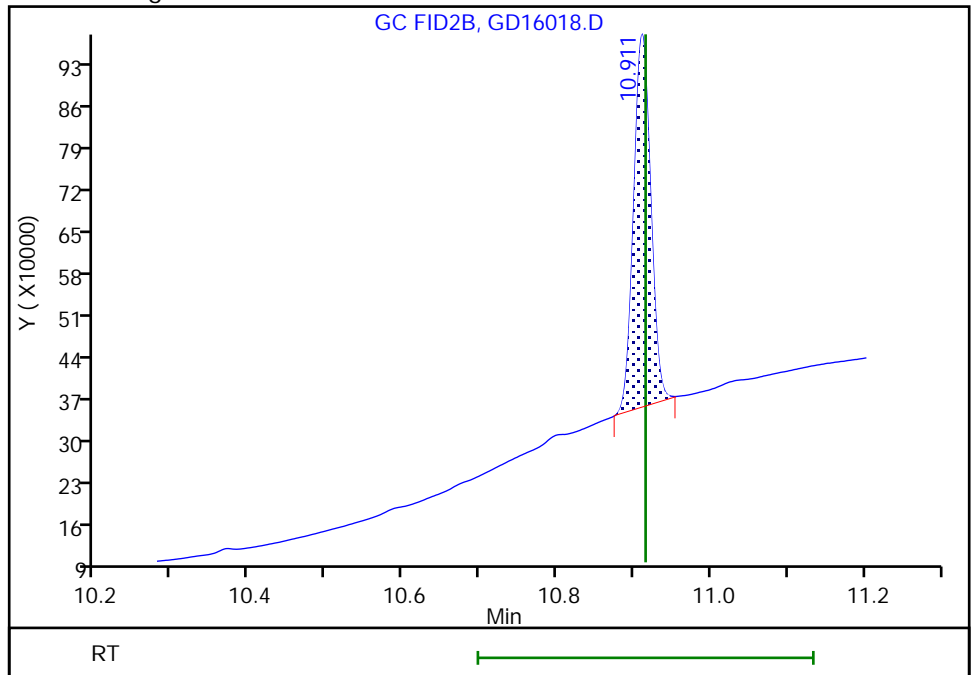
RT: 10.91
Area: 1776068
Amount: 66.732208
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 950896
Amount: 35.728018
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 17-Apr-2023 10:16:32
Audit Action: Manually Integrated

Audit Reason: Shouldering
Page 101 of 147

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Lab Sample ID: CCVIS 680-774076/4 Calibration Date: 04/18/2023 18:29
 Instrument ID: CVGG2 Calib Start Date: 04/16/2023 19:56
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 04/16/2023 22:15
 Lab File ID: GD18004.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.7743	0.8003		20.7	20.0	3.4	20.0
4-Hydroxy-4-methyl-2-pentano ne	Ave	0.6939	0.7272		21.0	20.0	4.8	20.0
2-Butoxyethanol	Ave	0.7759	0.8030		20.7	20.0	3.5	20.0
Dipropylene Glycol Methyl Ether	Ave	0.0616	0.0705		22.9	20.0	14.3	20.0
Propylene glycol	Lin2		0.1953		26.4	20.0	31.9*	20.0
Ethylene glycol	Lin1		0.5504		28.5	20.0	42.7*	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.6121	0.6760		22.1	20.0	10.4	20.0
2,2'-Oxybisethanol	Lin1		0.3180		26.9	20.0	34.6*	20.0
Triethylene Glycol	Ave	0.2458	0.3049		24.8	20.0	24.0*	20.0
Tetraethylene Glycol	Ave	0.2578	0.2667		41.4	40.0	3.4	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Lab Sample ID: CCVIS 680-774076/4 Calibration Date: 04/18/2023 18:29
 Instrument ID: CVGG2 Calib Start Date: 04/16/2023 19:56
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 04/16/2023 22:15
 Lab File ID: GD18004.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.25	2.21	2.30
4-Hydroxy-4-methyl-2-pentanone	2.61	2.56	2.67
2-Butoxyethanol	2.79	2.74	2.85
Dipropylene Glycol Methyl Ether	3.87	3.79	3.94
Propylene glycol	4.82	4.73	4.92
Ethylene glycol	5.04	4.94	5.14
2-(2-Butoxyethoxy)ethanol	6.71	6.57	6.84
2,2'-Oxybisethanol	8.83	8.65	9.00
Triethylene Glycol	10.07	9.87	10.27
Tetraethylene Glycol	10.91	10.70	11.13

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18004.D
 Lims ID: ccvis g4
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 18-Apr-2023 18:29:32 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-004
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:30 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

First Level Reviewer: SK9U Date: 18-Apr-2023 19:48:39

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.250	2.250	0.000	1475352	20.0	20.7	
2 4-Hydroxy-4-methyl-2-pentanone						
2.614	2.614	0.000	1340645	20.0	21.0	
3 2-Butoxyethanol						
2.794	2.794	0.000	1480315	20.0	20.7	
* 4 n-Heptyl Alcohol						
3.099	3.099	0.000	4608767	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether						
3.867	3.867	0.000	129884	20.0	22.9	M
6 Propylene glycol						
4.823	4.823	0.000	359960	20.0	26.4	
7 Ethylene glycol						
5.041	5.041	0.000	1014602	20.0	28.5	
8 2-(2-Butoxyethoxy)ethanol						
6.706	6.706	0.000	1246238	20.0	22.1	
9 2,2'-Oxybisethanol						
8.825	8.825	0.000	586311	20.0	26.9	
10 Triethylene Glycol						
10.073	10.073	0.000	561997	20.0	24.8	
11 Tetraethylene Glycol						
10.914	10.914	0.000	983286	40.0	41.4	M

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 10.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18004.D

Injection Date: 18-Apr-2023 18:29:32

Instrument ID: CVGG2

Operator ID:

Lims ID: ccvis g4

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

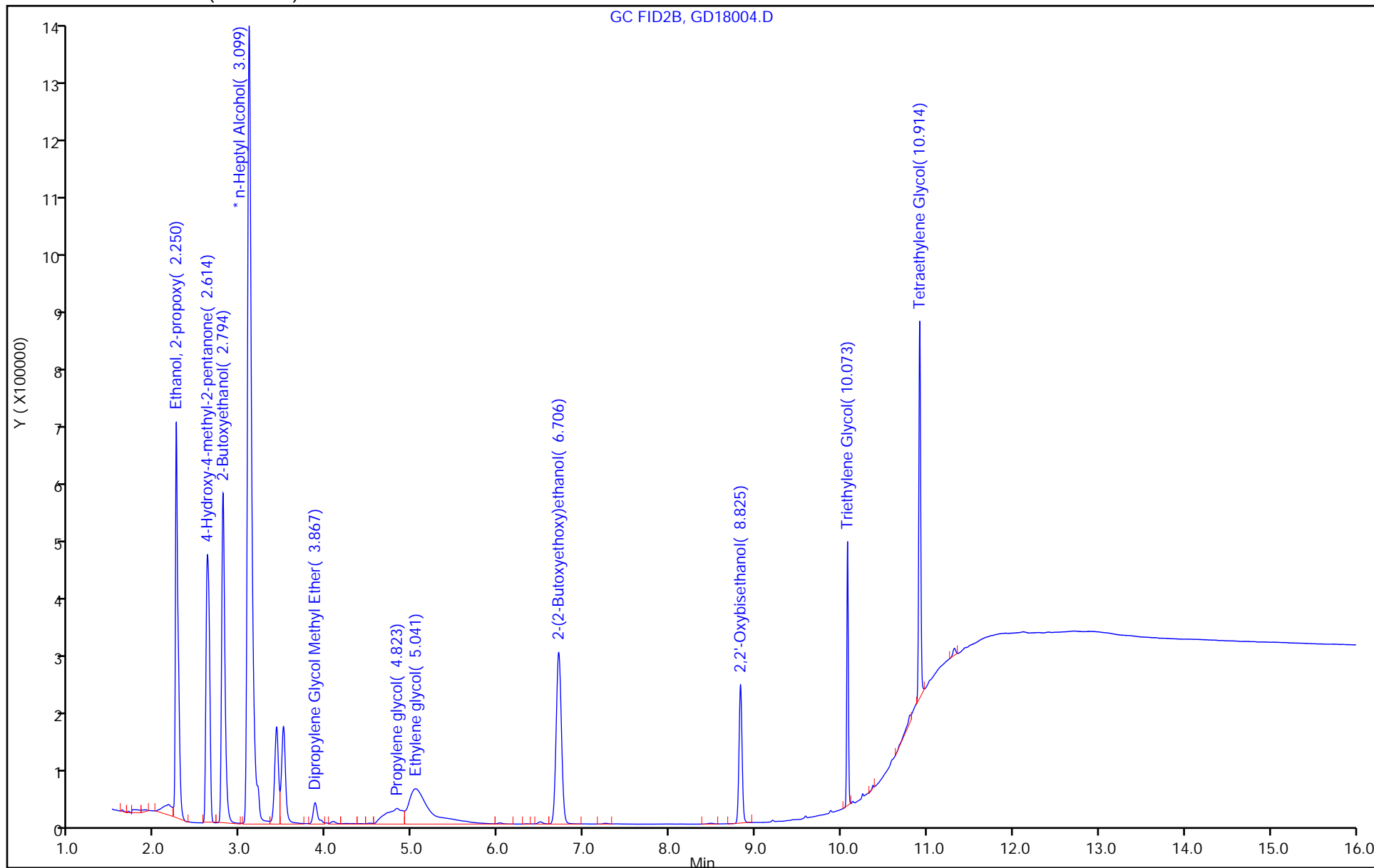
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18004.D
Injection Date: 18-Apr-2023 18:29:32 Instrument ID: CVGG2
Lims ID: ccvis g4
Client ID:
Operator ID:
Injection Vol: 1.0 ul
Method: 8015_GLY_VGG
Column: J&W DB WAX (0.45 mm)

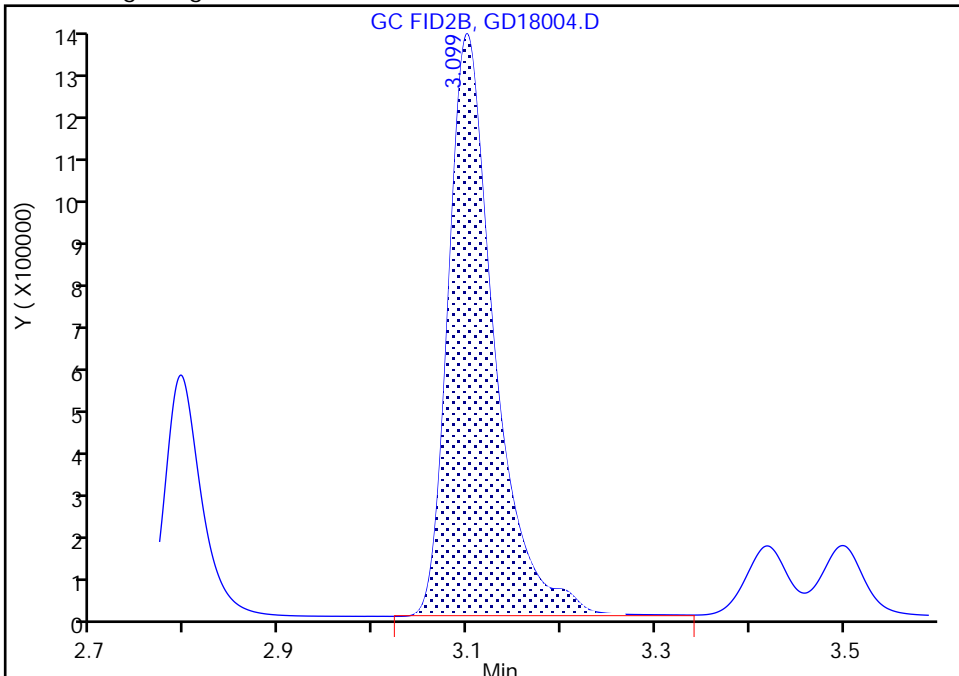
ALS Bottle#: 0 Worklist Smp#: 4
Dil. Factor: 1.0000
Limit Group: 8015C_DAI
Detector: GC FID2B

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

Signal: 1

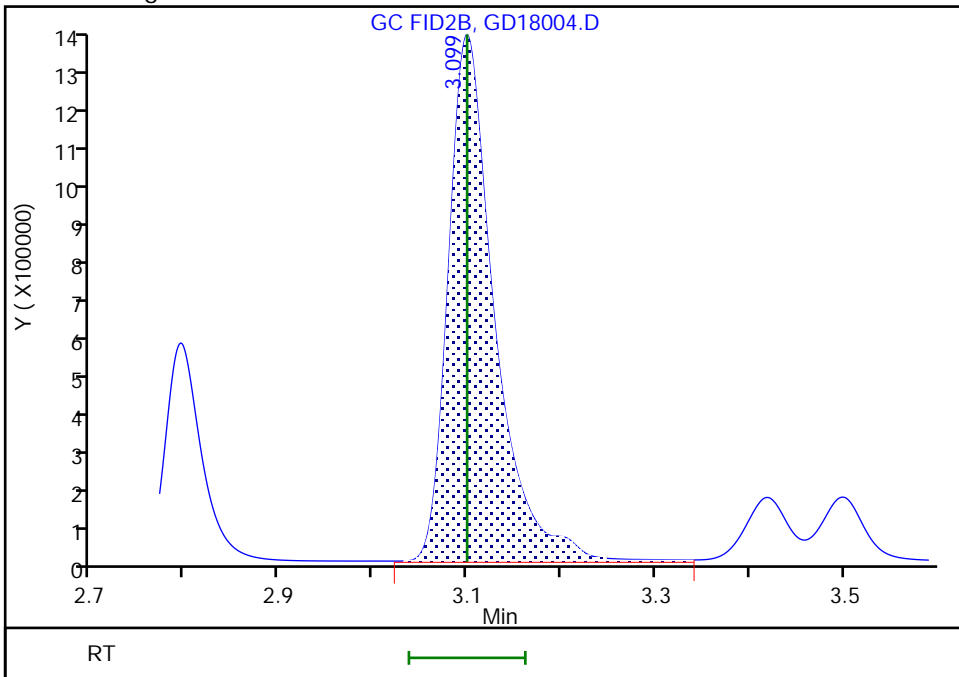
Processing Integration Results

RT: 3.10
Area: 4576279
Amount: 50.000000
Amount Units: ug/ml



Manual Integration Results

RT: 3.10
Area: 4608767
Amount: 50.000000
Amount Units: ug/ml



Reviewer: SK9U, 18-Apr-2023 19:07:49
Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

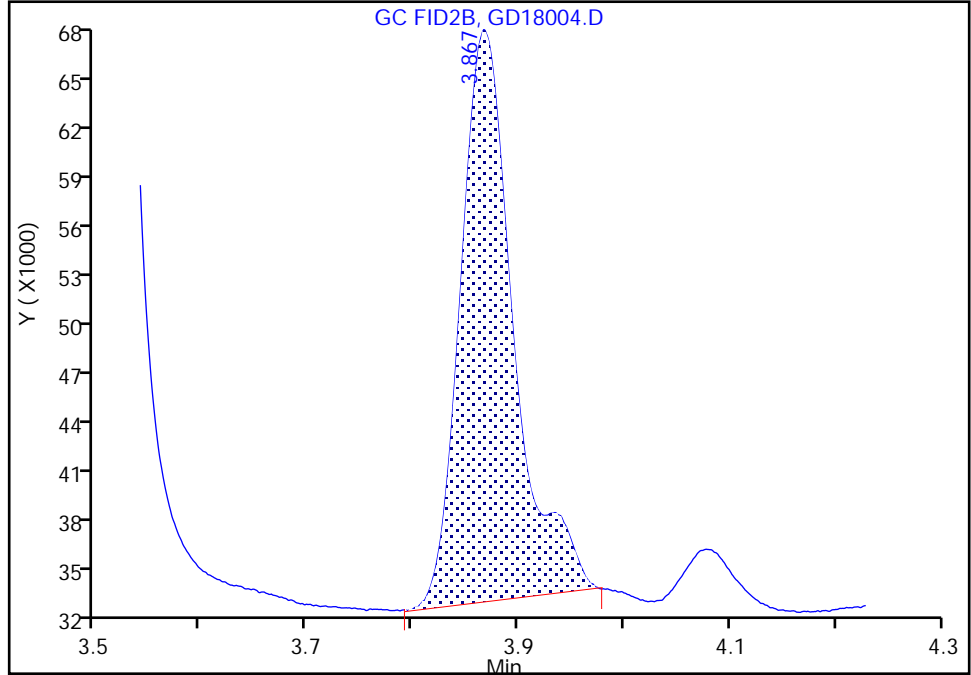
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18004.D
Injection Date: 18-Apr-2023 18:29:32 Instrument ID: CVGG2
Lims ID: ccvis g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

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

Signal: 1

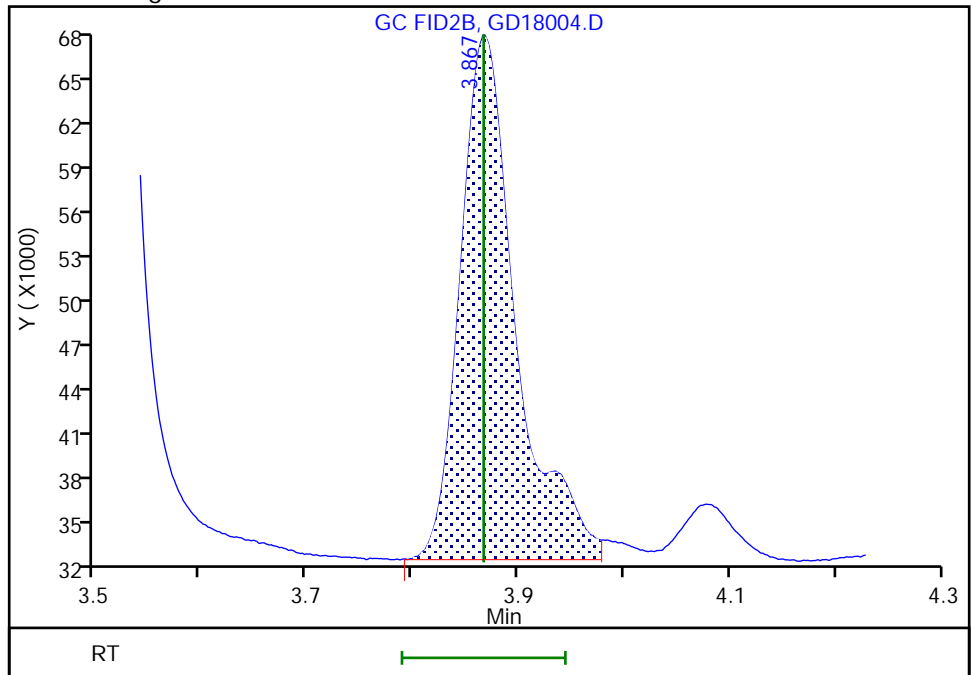
RT: 3.87
Area: 121955
Amount: 21.620462
Amount Units: ug/ml

Processing Integration Results



RT: 3.87
Area: 129884
Amount: 22.863818
Amount Units: ug/ml

Manual Integration Results



Eurofins Savannah

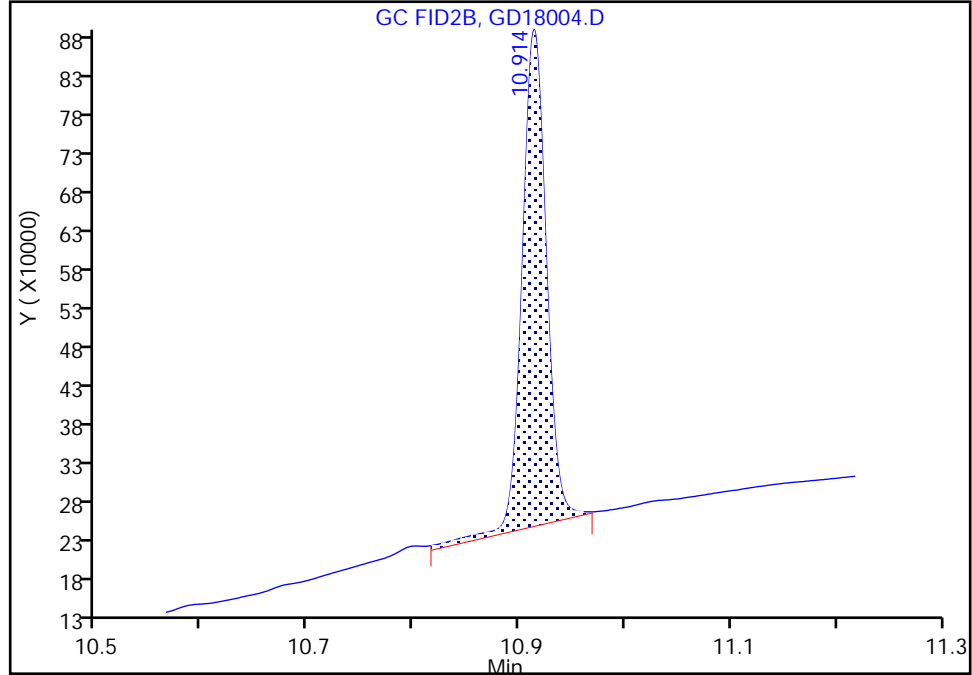
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18004.D
Injection Date: 18-Apr-2023 18:29:32 Instrument ID: CVGG2
Lims ID: ccvis g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

11 Tetraethylene Glycol, CAS: 112-60-7

Signal: 1

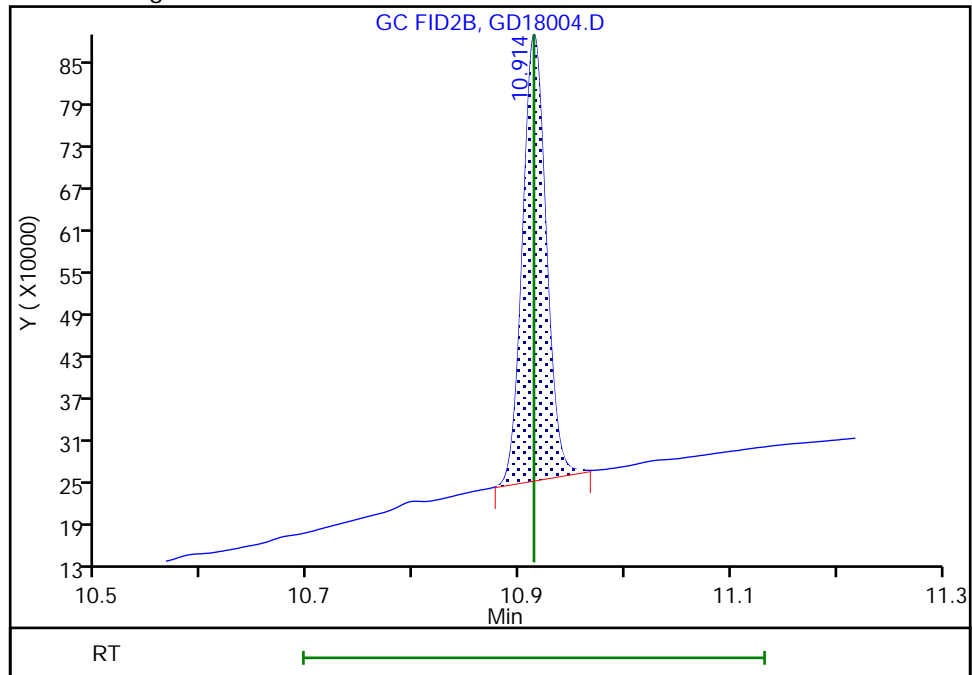
RT: 10.91
Area: 1023176
Amount: 43.054806
Amount Units: ug/ml

Processing Integration Results



RT: 10.91
Area: 983286
Amount: 41.376252
Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 19-Apr-2023 18:16:48
Audit Action: Manually Integrated

Audit Reason: Shouldering
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FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Lab Sample ID: CCV 680-774076/25 Calibration Date: 04/19/2023 02:36
 Instrument ID: CVGG2 Calib Start Date: 04/16/2023 19:56
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 04/16/2023 22:15
 Lab File ID: GD18025.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.7743	0.8229		21.3	20.0	6.3	20.0
4-Hydroxy-4-methyl-2-pentano ne	Ave	0.6939	0.7444		21.5	20.0	7.3	20.0
2-Butoxyethanol	Ave	0.7759	0.8317		21.4	20.0	7.2	20.0
Dipropylene Glycol Methyl Ether	Ave	0.0616	0.0699		22.7	20.0	13.4	20.0
Propylene glycol	Lin2		0.1467		19.3	20.0	-3.6	20.0
Ethylene glycol	Lin1		0.3982		19.6	20.0	-1.8	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.6121	0.6572		21.5	20.0	7.4	20.0
2,2'-Oxybisethanol	Lin1		0.2012		15.8	20.0	-21.1*	20.0
Triethylene Glycol	Ave	0.2458	0.0803		6.53	20.0	-67.3*	20.0
Tetraethylene Glycol	Ave	0.2578	0.0191		10.0	40.0	-92.6*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Lab Sample ID: CCV 680-774076/25 Calibration Date: 04/19/2023 02:36
 Instrument ID: CVGG2 Calib Start Date: 04/16/2023 19:56
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 04/16/2023 22:15
 Lab File ID: GD18025.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.25	2.21	2.30
4-Hydroxy-4-methyl-2-pentanone	2.62	2.56	2.67
2-Butoxyethanol	2.79	2.74	2.85
Dipropylene Glycol Methyl Ether	3.87	3.79	3.94
Propylene glycol	4.82	4.73	4.92
Ethylene glycol	5.05	4.95	5.15
2-(2-Butoxyethoxy)ethanol	6.70	6.57	6.84
2,2'-Oxybisethanol	8.83	8.65	9.01
Triethylene Glycol	10.08	9.87	10.28
Tetraethylene Glycol	10.92	10.70	11.14

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18025.D
 Lims ID: ccv g4
 Client ID:
 Sample Type: CCV
 Inject. Date: 19-Apr-2023 02:36:47 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-025
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

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

1 Ethanol, 2-propoxy	2.251	2.251	0.000	1641221	20.0	21.3
2 4-Hydroxy-4-methyl-2-pentanone	2.615	2.615	0.000	1484755	20.0	21.5
3 2-Butoxyethanol	2.793	2.793	0.000	1658891	20.0	21.4
* 4 n-Heptyl Alcohol	3.096	3.096	0.000	4986211	50.0	50.0
5 Dipropylene Glycol Methyl Ether	3.865	3.865	0.000	139370	20.0	22.7
6 Propylene glycol	4.823	4.823	0.000	292607	20.0	19.3
7 Ethylene glycol	5.049	5.049	0.000	794200	20.0	19.6
8 2-(2-Butoxyethoxy)ethanol	6.701	6.701	0.000	1310826	20.0	21.5
9 2,2'-Oxybisethanol	8.830	8.830	0.000	401257	20.0	15.8
10 Triethylene Glycol	10.075	10.075	0.000	160075	20.0	6.53
11 Tetraethylene Glycol	10.920	10.920	0.000	76086	40.0	2.96

Reagents:

SG_Gly_CAL_00049	Amount Added: 10.00	Units: uL
SG_GLY_ISTD_00110	Amount Added: 10.00	Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18025.D

Injection Date: 19-Apr-2023 02:36:47

Instrument ID: CVGG2

Operator ID:

Lims ID: ccv g4

Worklist Smp#: 25

Client ID:

Injection Vol: 1.0 ul

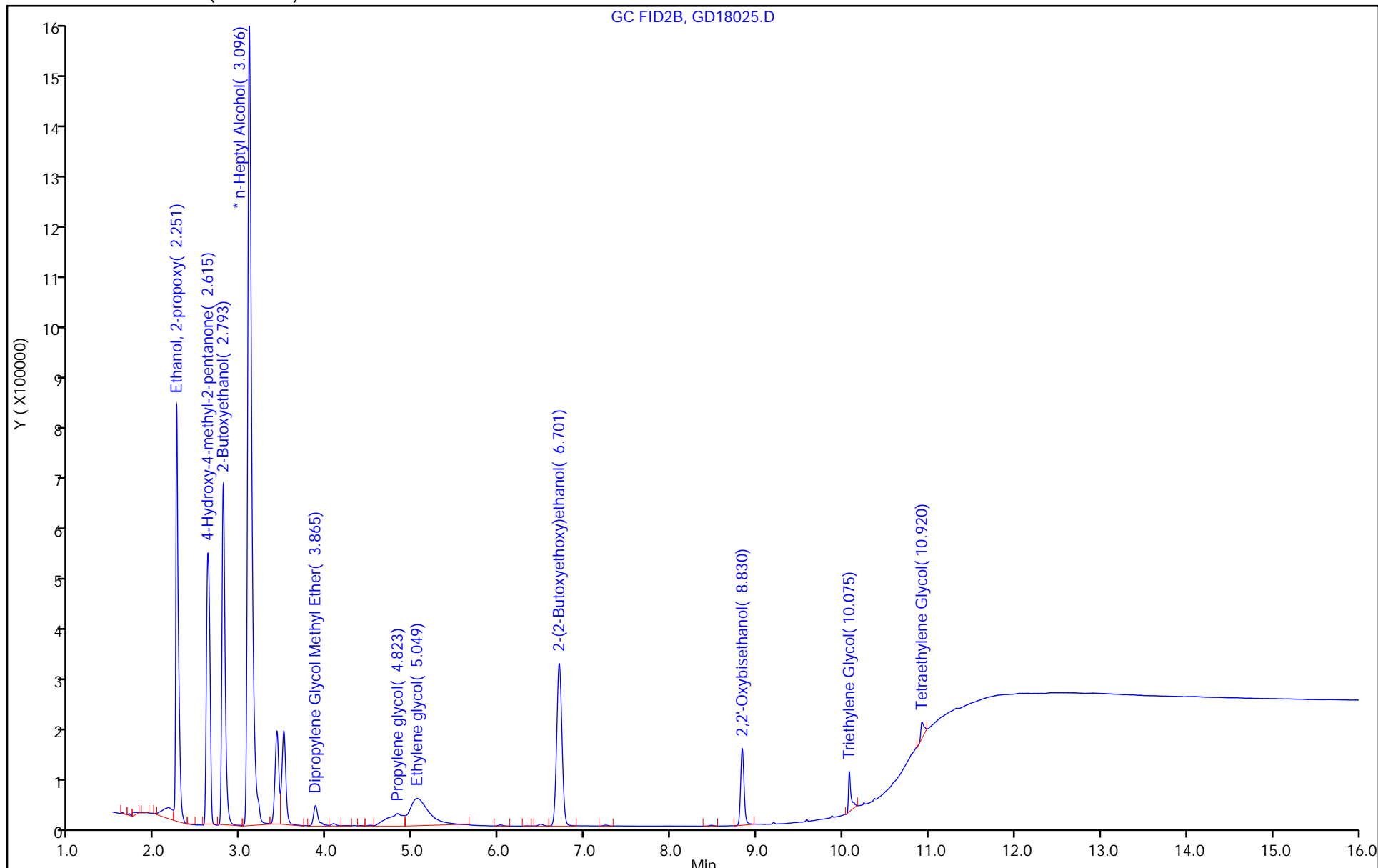
Dil. Factor: 1.0000

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.: 580-126083-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 680-774076/9
 Matrix: Water Lab File ID: GD18009.D
 Analysis Method: 8015C GLY Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1(mL) Date Analyzed: 04/18/2023 20:25
 Con. Extract Vol.: 1(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)
 % Moisture: _____ % Solids: _____ GPC Cleanup: (Y/N) N
 Cleanup Factor: _____
 Analysis Batch No.: 774076 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\20230418-85376.b\GD18009.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 18-Apr-2023 20:25:41 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-009
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

First Level Reviewer: SK9U Date: 19-Apr-2023 18:17:41

RT (min.)	Exp RT (min.)	Diff RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3 2-Butoxyethanol						
2.783	2.793	-0.010	9981		0.1228	7
LOD = 0.5000						
* 4 n-Heptyl Alcohol						
3.094	3.096	-0.002	5238239	50.0	50.0	
6 Propylene glycol						
4.822	4.823	-0.001	8321		-1.62	7
LOD = 0.5000						
7 Ethylene glycol						
5.027	5.049	-0.022	17485		-3.11	7
LOD = 0.6600						
9 2,2'-Oxybisethanol						
8.823	8.830	-0.007	18595		-2.54	7
LOD = 1.60						
10 Triethylene Glycol						
10.073	10.075	-0.002	13743		0.5337	7
LOD = 1.40						
11 Tetraethylene Glycol						
10.915	10.920	-0.005	28979		1.07	7M
LOD = 4.50						

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18009.D

Injection Date: 18-Apr-2023 20:25:41

Instrument ID: CVGG2

Operator ID:

Lims ID: mb

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

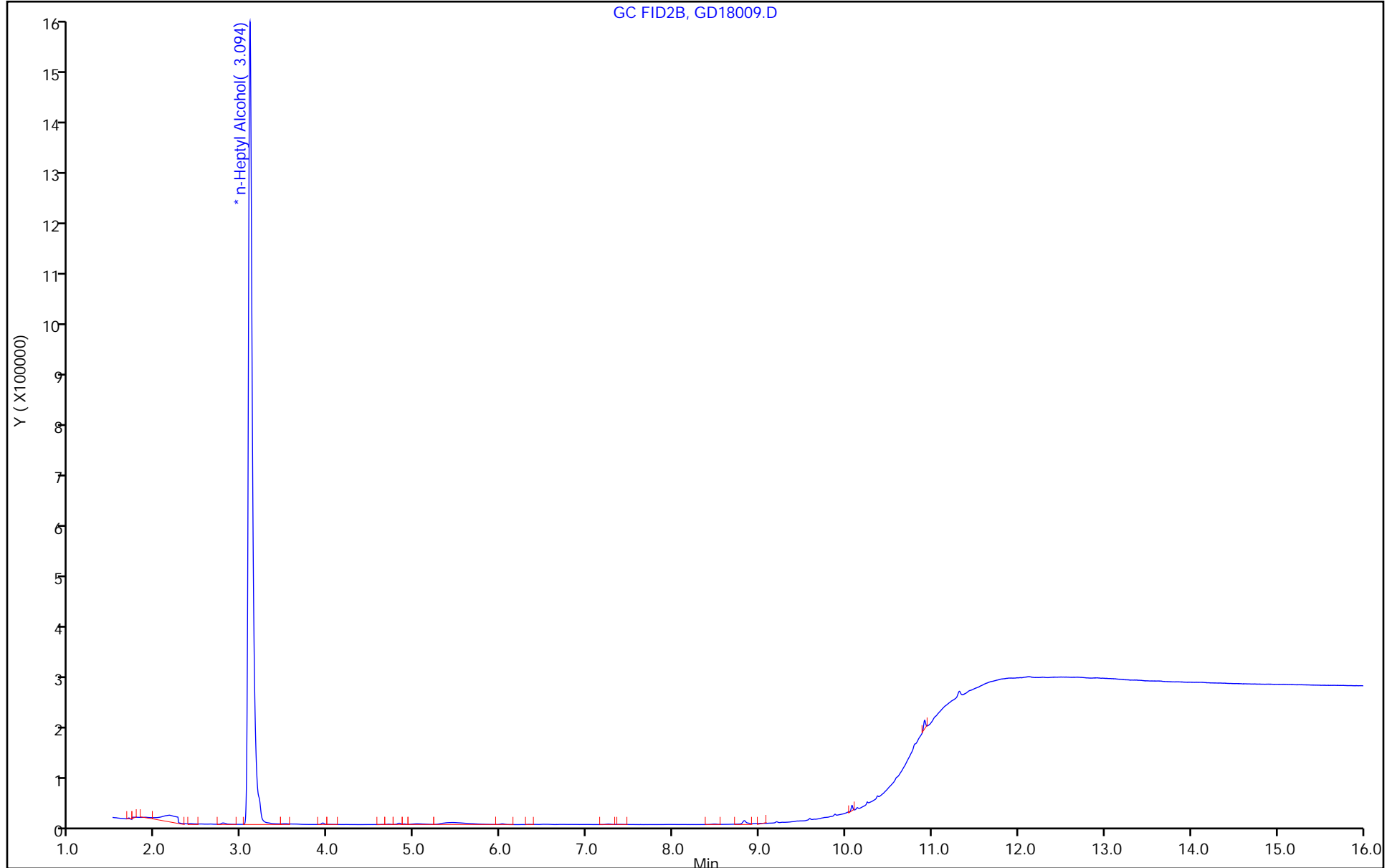
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 680-774076/5
 Matrix: Water Lab File ID: GD18005.D
 Analysis Method: 8015C GLY Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1(mL) Date Analyzed: 04/18/2023 18:52
 Con. Extract Vol.: 1(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)
 % Moisture: _____ % Solids: _____ GPC Cleanup: (Y/N) N
 Cleanup Factor: _____
 Analysis Batch No.: 774076 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	23.1		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18005.D
 Lims ID: lcs
 Client ID:
 Sample Type: LCS
 Inject. Date: 18-Apr-2023 18:52:46 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-005
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

First Level Reviewer: SK9U Date: 19-Apr-2023 18:16:40

RT (min.)	Exp RT (min.)	Diff RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.248	2.251	-0.003	1602245	20.0	21.7	
2 4-Hydroxy-4-methyl-2-pentanone						
2.612	2.615	-0.003	1403679	20.0	21.2	
3 2-Butoxyethanol						
2.794	2.793	0.001	1604527	20.0	21.7	
* 4 n-Heptyl Alcohol						
3.098	3.096	0.002	4774618	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.866	3.865	0.001	142218	20.0	24.2	
6 Propylene glycol						
4.819	4.823	-0.004	405506	20.0	28.9	
7 Ethylene glycol						
5.030	5.049	-0.019	1143405	20.0	31.4	
8 2-(2-Butoxyethoxy)ethanol						
6.705	6.701	0.004	1347761	20.0	23.1	
9 2,2'-Oxybisethanol						
8.825	8.830	-0.005	663415	20.0	29.7	
10 Triethylene Glycol						
10.073	10.075	-0.002	639960	20.0	27.3	
11 Tetraethylene Glycol						
10.913	10.920	-0.007	1215082	40.0	49.4	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 10.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18005.D

Injection Date: 18-Apr-2023 18:52:46

Instrument ID: CVGG2

Operator ID:

Lims ID: lcs

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

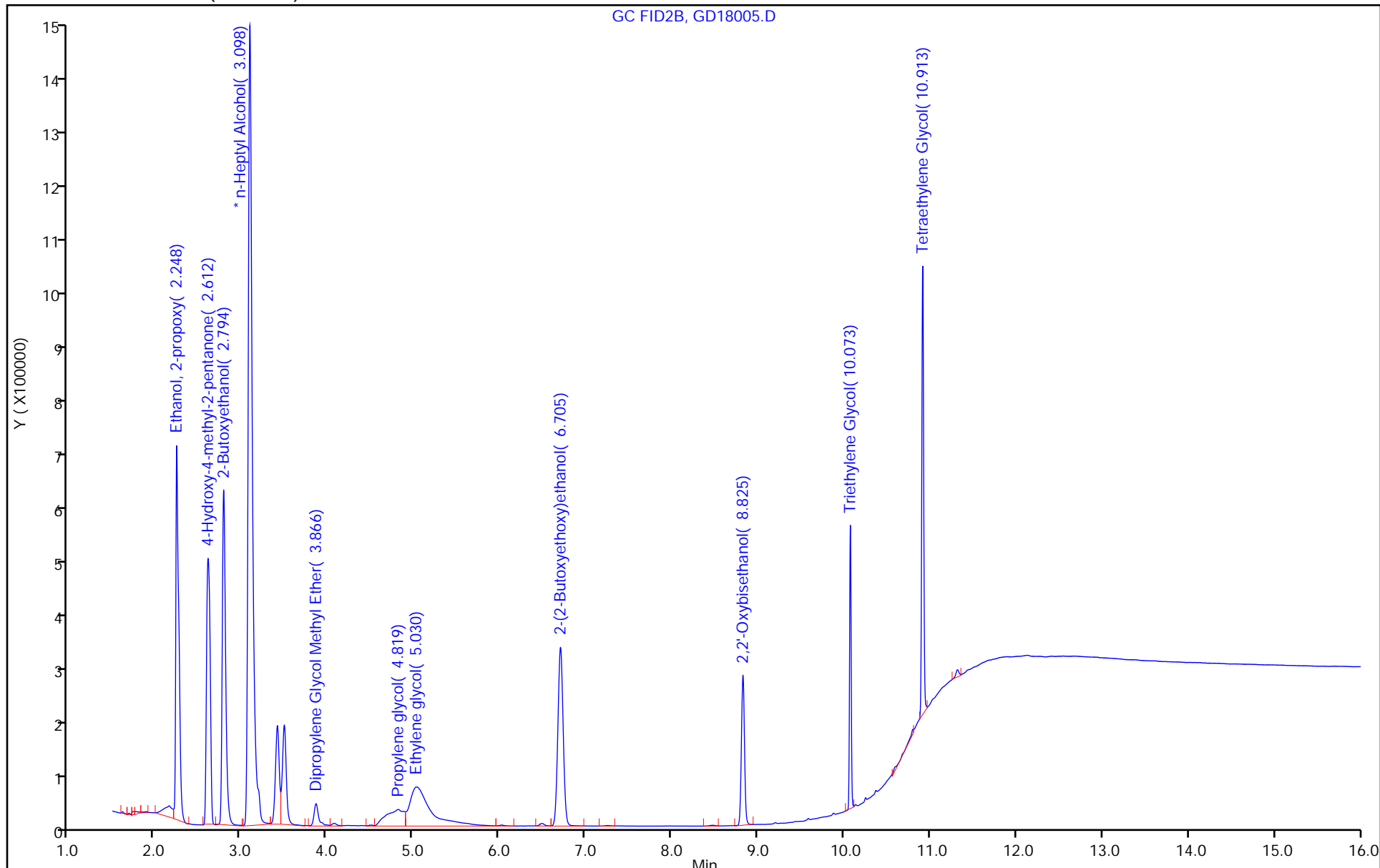
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-126083-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 680-774076/6
 Matrix: Water Lab File ID: GD18006.D
 Analysis Method: 8015C GLY Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1(mL) Date Analyzed: 04/18/2023 19:15
 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.: 774076 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	20.9		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18006.D
 Lims ID: lcsd
 Client ID:
 Sample Type: LCSD
 Inject. Date: 18-Apr-2023 19:15:59 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-006
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

First Level Reviewer: SK9U Date: 19-Apr-2023 18:16:26

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.246	2.251	-0.005	1613498	20.0	21.4	
2 4-Hydroxy-4-methyl-2-pentanone						
2.610	2.615	-0.005	1388519	20.0	20.6	
3 2-Butoxyethanol						
2.792	2.793	-0.001	1616700	20.0	21.4	
* 4 n-Heptyl Alcohol						
3.100	3.096	0.004	4865094	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.863	3.865	-0.002	132361	20.0	22.1	
6 Propylene glycol						
4.822	4.823	-0.001	362680	20.0	25.1	
7 Ethylene glycol						
5.035	5.049	-0.014	1001925	20.0	26.5	
8 2-(2-Butoxyethoxy)ethanol						
6.706	6.701	0.005	1246683	20.0	20.9	
9 2,2'-Oxybisethanol						
8.825	8.830	-0.005	574388	20.0	24.7	
10 Triethylene Glycol						
10.073	10.075	-0.002	555859	20.0	23.2	
11 Tetraethylene Glycol						
10.914	10.920	-0.006	1078656	40.0	43.0	M M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00049

Amount Added: 10.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18006.D

Injection Date: 18-Apr-2023 19:15:59

Instrument ID: CVGG2

Operator ID:

Lims ID: lcsd

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

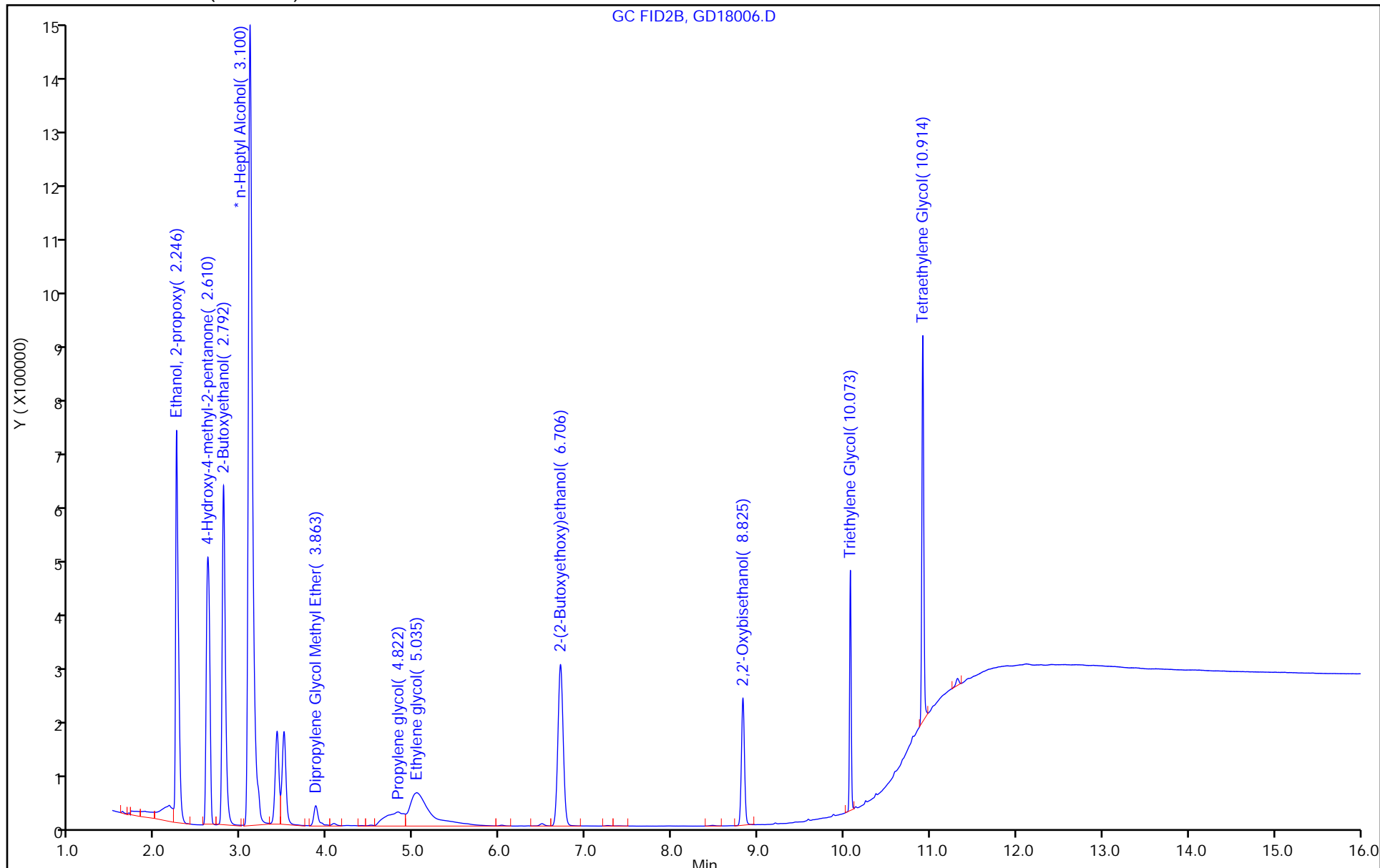
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18018.D
 Lims ID: 580-126083-C-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 18-Apr-2023 23:54:34 ALS Bottle#: 0 Worklist Smp#: 18
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-018
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy	2.248	2.251	-0.003	1562758	20.0	18.2
2 4-Hydroxy-4-methyl-2-pentanone	2.612	2.615	-0.003	1379942	20.0	17.9
3 2-Butoxyethanol	2.792	2.793	-0.001	1698247	20.0	19.7
* 4 n-Heptyl Alcohol	3.099	3.096	0.003	5559538	50.0	50.0
5 Dipropylene Glycol Methyl Ether	3.864	3.865	-0.001	124278	20.0	18.1
6 Propylene glycol	4.816	4.823	-0.007	352748	20.0	21.0
7 Ethylene glycol	5.029	5.049	-0.020	865245	20.0	19.1
8 2-(2-Butoxyethoxy)ethanol	6.702	6.701	0.001	1241381	20.0	18.2
9 2,2'-Oxybisethanol	8.826	8.830	-0.004	484403	20.0	17.4
10 Triethylene Glycol	10.073	10.075	-0.002	296208	20.0	10.8
11 Tetraethylene Glycol	10.915	10.920	-0.005	152473	40.0	5.32

Reagents:

SG_GlyICV_00052 Amount Added: 10.00 Units: uL
 SG_GLY_ISTD_00110 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18018.D

Injection Date: 18-Apr-2023 23:54:34

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-126083-C-1 MS

Worklist Smp#: 18

Client ID:

Injection Vol: 1.0 ul

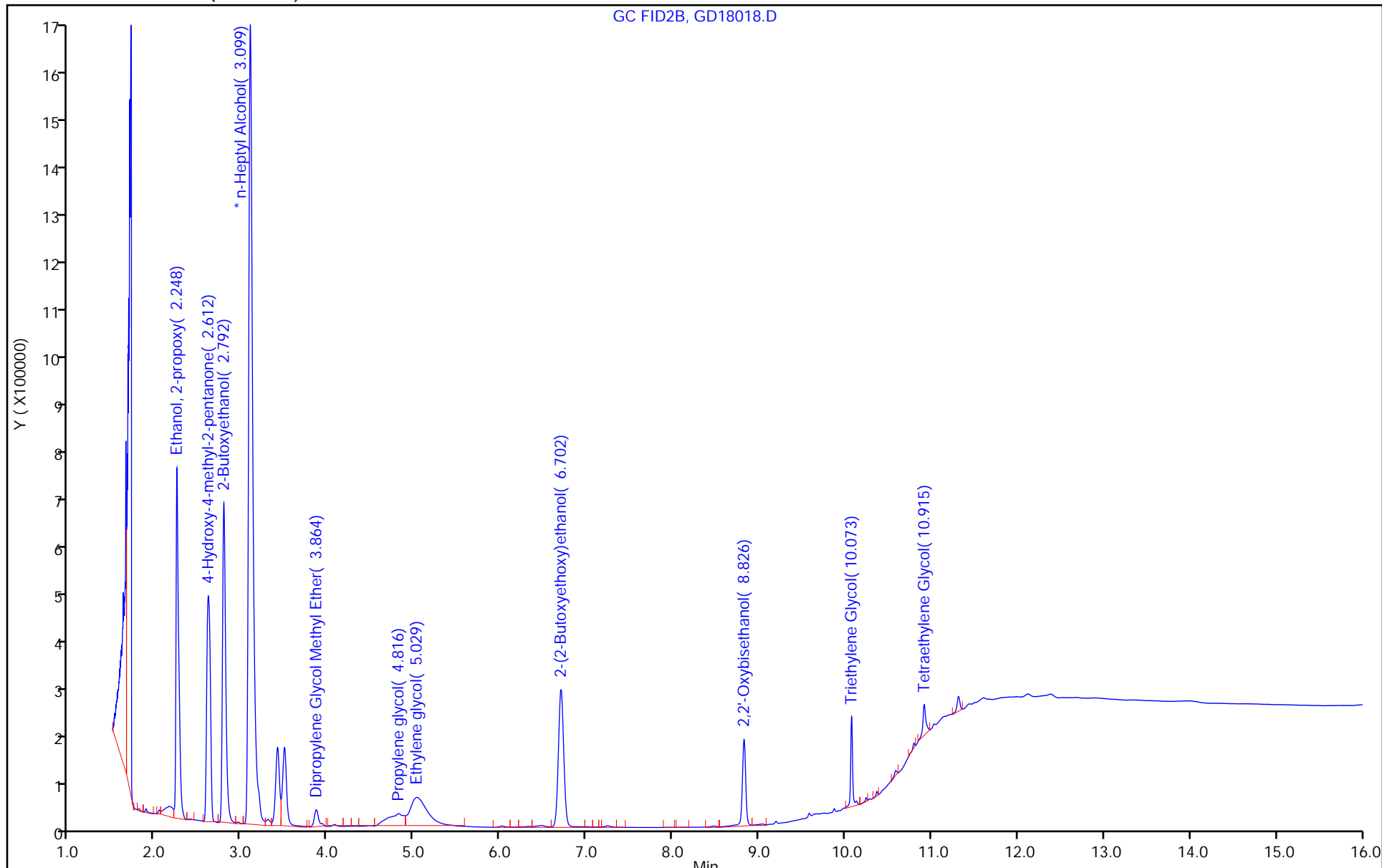
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18019.D
 Lims ID: 580-126083-C-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 19-Apr-2023 00:17:53 ALS Bottle#: 0 Worklist Smp#: 19
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0085376-019
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Apr-2023 18:26:22 Calib Date: 16-Apr-2023 22:15:38
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230416-85300.b\GD16017.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1610

First Level Reviewer: SK9U Date: 19-Apr-2023 18:21:42

RT (min.)	Exp RT (min.)	Diff RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.247	2.251	-0.004	1543712	20.0	21.7	
2 4-Hydroxy-4-methyl-2-pentanone						
2.610	2.615	-0.005	1366909	20.0	21.4	
3 2-Butoxyethanol						
2.791	2.793	-0.002	1637064	20.0	23.0	
* 4 n-Heptyl Alcohol						
3.101	3.096	0.005	4593517	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
3.861	3.865	-0.004	120739	20.0	21.3	
6 Propylene glycol						
4.821	4.823	-0.002	291423	20.0	21.0	
7 Ethylene glycol						
5.036	5.049	-0.013	730507	20.0	19.6	
8 2-(2-Butoxyethoxy)ethanol						
6.703	6.701	0.002	1193497	20.0	21.2	
9 2,2'-Oxybisethanol						
8.826	8.830	-0.004	492982	20.0	22.2	
10 Triethylene Glycol						
10.074	10.075	-0.001	406782	20.0	18.0	
11 Tetraethylene Glycol						
10.916	10.920	-0.004	258119	40.0	10.9	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_GlyICV_00052

Amount Added: 10.00

Units: uL

SG_GLY_ISTD_00110

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230418-85376.b\GD18019.D

Injection Date: 19-Apr-2023 00:17:53

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-126083-C-1 MSD

Worklist Smp#: 19

Client ID:

Injection Vol: 1.0 ul

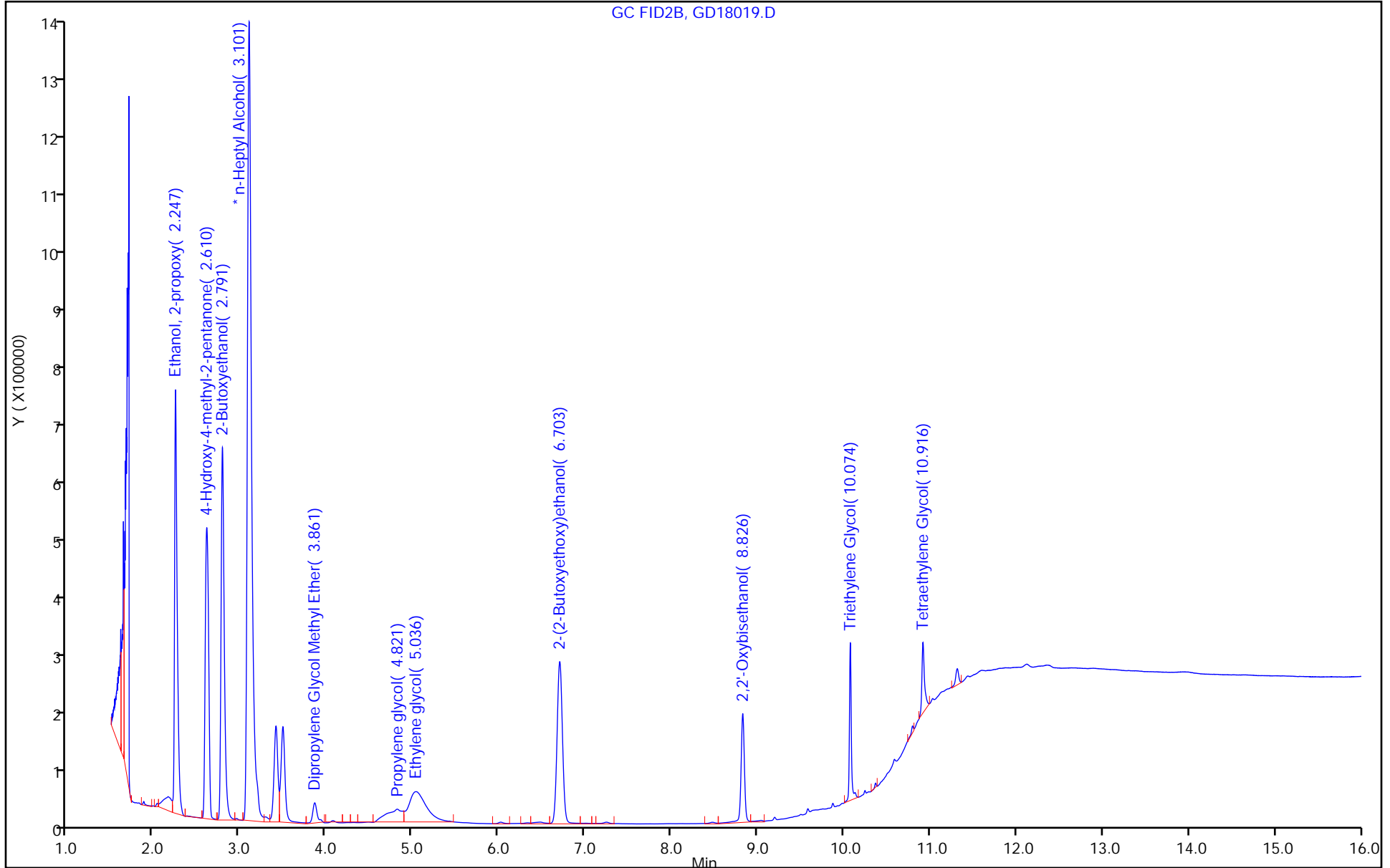
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



GC FID2B, GD18019.D

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Instrument ID: CVGG2 Start Date: 04/16/2023 19:56

Analysis Batch Number: 773617 End Date: 04/17/2023 05:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-773617/4		04/16/2023 19:56	1	GD16011.D	J&W DB WAX 0.45 (mm)
IC 680-773617/5		04/16/2023 20:19	1	GD16012.D	J&W DB WAX 0.45 (mm)
IC 680-773617/6		04/16/2023 20:42	1	GD16013.D	J&W DB WAX 0.45 (mm)
ICIS 680-773617/7		04/16/2023 21:05	1	GD16014.D	J&W DB WAX 0.45 (mm)
IC 680-773617/8		04/16/2023 21:29	1	GD16015.D	J&W DB WAX 0.45 (mm)
IC 680-773617/9		04/16/2023 21:52	1	GD16016.D	J&W DB WAX 0.45 (mm)
IC 680-773617/10		04/16/2023 22:15	1	GD16017.D	J&W DB WAX 0.45 (mm)
ICV 680-773617/11 CCV		04/16/2023 22:38	1	GD16018.D	J&W DB WAX 0.45 (mm)
ZZZZZ		04/16/2023 23:02	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/16/2023 23:25	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 00:34	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 00:58	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 01:21	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 01:44	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 02:07	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 02:30	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 02:54	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 03:17	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 03:40	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 04:03	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 04:27	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/17/2023 04:50	1		J&W DB WAX 0.45 (mm)
CCV 680-773617/29		04/17/2023 05:36	1		J&W DB WAX 0.45 (mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Instrument ID: CVGG2 Start Date: 04/18/2023 18:29

Analysis Batch Number: 774076 End Date: 04/19/2023 04:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-774076/4		04/18/2023 18:29	1	GD18004.D	J&W DB WAX 0.45 (mm)
LCS 680-774076/5		04/18/2023 18:52	1	GD18005.D	J&W DB WAX 0.45 (mm)
LCSD 680-774076/6		04/18/2023 19:15	1	GD18006.D	J&W DB WAX 0.45 (mm)
MB 680-774076/9		04/18/2023 20:25	1	GD18009.D	J&W DB WAX 0.45 (mm)
ZZZZZ		04/18/2023 20:48	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/18/2023 21:12	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/18/2023 21:35	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/18/2023 21:58	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/18/2023 22:21	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/18/2023 22:44	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/18/2023 23:08	1		J&W DB WAX 0.45 (mm)
580-126083-1	AF-RHMW12A-WGN01LF-23 04W2	04/18/2023 23:31	1	GD18017.D	J&W DB WAX 0.45 (mm)
580-126083-1 MS	AF-RHMW12A-WGN01LF-23 04W2 MS	04/18/2023 23:54	1	GD18018.D	J&W DB WAX 0.45 (mm)
580-126083-1 MSD	AF-RHMW12A-WGN01LF-23 04W2 MSD	04/19/2023 00:17	1	GD18019.D	J&W DB WAX 0.45 (mm)
580-126083-2	AF-RHMW12A-WGFD01LF-2 304W2	04/19/2023 00:41	1	GD18020.D	J&W DB WAX 0.45 (mm)
580-126083-3	AF-RHMW225401-WGN01B- 2304W2	04/19/2023 01:04	1	GD18021.D	J&W DB WAX 0.45 (mm)
ZZZZZ		04/19/2023 01:27	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/19/2023 01:50	1		J&W DB WAX 0.45 (mm)
CCV 680-774076/25		04/19/2023 02:36	1	GD18025.D	J&W DB WAX 0.45 (mm)
ZZZZZ		04/19/2023 03:46	1		J&W DB WAX 0.45 (mm)
ZZZZZ		04/19/2023 04:09	1		J&W DB WAX 0.45 (mm)
CCV 680-774076/31		04/19/2023 04:55	1		J&W DB WAX 0.45 (mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Batch Number: 773617 Batch Start Date: 04/16/23 19:56 Batch Analyst: Meincke, Griffin E

Batch Method: 8015C GLY Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00049	SG_GLY_ISTD 00110	SG_GlyICV 00052		
IC 680-773617/4		8015C GLY		1 mL	50 uL	10 uL			
IC 680-773617/5		8015C GLY		1 mL	40 uL	10 uL			
IC 680-773617/6		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-773617/7		8015C GLY		1 mL	10 uL	10 uL			
IC 680-773617/8		8015C GLY		1 mL	5 uL	10 uL			
IC 680-773617/9		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-773617/10		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-773617/11 CCV		8015C GLY		1 mL		10 uL	10 uL		

Batch Notes	

Basis	Basis Description

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

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-126083-1

SDG No.: _____

Batch Number: 774076 Batch Start Date: 04/18/23 18:29 Batch Analyst: Meincke, Griffin E

Batch Method: 8015C GLY Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00049	SG_GLY_ISTD 00110	SG_GlyICV 00052		
CCVIS 680-774076/4		8015C GLY		1 mL	10 uL	10 uL			
LCS 680-774076/5		8015C GLY		1 mL	10 uL	10 uL			
LCSD 680-774076/6		8015C GLY		1 mL	10 uL	10 uL			
MB 680-774076/9		8015C GLY		1 mL		10 uL			
580-126083-C-1	AF-RHMW12A-WGN01 LF-2304W2	8015C GLY	T	1 mL		10 uL			
580-126083-C-1 MS	AF-RHMW12A-WGN01 LF-2304W2	8015C GLY	T	1 mL		10 uL	10 uL		
580-126083-C-1 MSD	AF-RHMW12A-WGN01 LF-2304W2	8015C GLY	T	1 mL		10 uL	10 uL		
580-126083-C-2	AF-RHMW12A-WGFDO 1LF-2304W2	8015C GLY	T	1 mL		10 uL			
580-126083-C-3	AF-RHMW225401-WG N01B-2304W2	8015C GLY	T	1 mL		10 uL			
CCV 680-774076/25		8015C GLY		1 mL	10 uL	10 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

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

Subcontract Data

Shipping and Receiving Documents

Chain of Custody Record

Client Information		Sampler: <i>Note Hoagste</i>	Lab P/W: Elaine Walker	Carrier Tracking No(s):	COC No: 2304W2AFE07
Client Contact:		Phone: 804-973-8525	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page 1 of 1
Company: AECOM		PWSID:		Job #:	
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract		Analysis Requested	
City: Honolulu		TAT Requested (days): <i>04/13/23 GAT</i>		Total Number of Containers	
State, Zip: Hawaii 96813		Compliance Project: <i>Rush -ASAP 5-DAY</i>		Preservation Codes:	
Phone: 808-954-4512 / 770-331-0794		PO #:		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 Other:	
Email: Watson.Tanji@aeocom.com / Mark.Kromis@aeocom.com		WO #:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Z - other (specify)	
Project Name: CTO N6274223F0104		Project #: 60697810		Special Instructions/Note:	
Site: RH5F		SSOM#:		3	
Sample Identification		Sample Date: <i>4/13/23 0900</i>	Sample Time: <i>0900</i>	Sample Type (C=Comp, G=grab): <i>G</i>	Matrix (W=water, S=solid, O=organic, ST=stomach, A=air)
AF-RHMW225401-WGN01B-2304W2		Sample Date:	Sample Time:	Sample Type:	Matrix:
Possible Hazard Identification		<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Prelim data (Level 1 or 2)-see TAT above. DoD Stage 4-report standard.TAT_AECOM.EQUIS.EDD.		Special Instructions/QC Requirements: DOD QSM project.	
Empty Kit Relinquished by:		Date:		Time:	
Relinquished by: <i>AK AS</i>		Date/Time: <i>4/13/23 1330</i>		Company: AECOM	
Relinquished by: <i>Alex Edwards</i>		Date/Time: <i>4/13/23 1345</i>		Company: AECOM	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>5-9/59</i>	

Eurofins Savannah Triage Checklist

Date: 4/15/23

Time: 08:45 am

Checked By: _____

Number of Coolers: 1

Cooler Type: Hard Styrofoam Box

Ice Type: Wet Dry GelPack None Other

Received Via: Fed-Ex (SAT) UPS () Bus
Client Drop Off US Mail Courier
BlueStreak Dash Other

Courier Tracking Number: _____

Client: ARCOM

Thermometer ID: CUIR-32

Uncorrected Cooler Temps (°C): 5.3

Correction Factor: 0.6

Corrected Cooler Temps (°C): 5.9

Other/ Comments:

Foreign soil – Yes / No

Chain of Custody Record

Client Information		Sampler: <i>Elaine Walker</i>		Lab Piv: Elaine Walker		Carrier Tracking No(s): 2304W2AFE05	
Client Contact: <i>Elaine Walker</i>		Phone: <i>206-593-6607</i>		E-Mail: <i>M.Elaine.Walker@EurofinsET.com</i>		State of Origin: Hawaii	
Company: AECOM		PWSID:		Analysis Requested		Job #: Page 1 of 1	
Address: 1001 Bishop St. Suite 1600		Due Date Requested: <i>01/01/23</i>		8015C_DAL_GL_D5/2-(2-butoxyethoxy)-ethanol		Total Number of containers: 3	
City: Honolulu		TAT Requested (days): <i>5-DAY</i>		Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/>		Special Instructions/Note:	
State, Zip: Hawaii: 96813		Compliance Project: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/>		Preservation Codes:	
Phone: 808-954-4512 / 770-331-0794		PO #:		Sample Date: <i>4/13/23</i>		M - Hexane	
Email: <i>Watson.Tanji@aeacom.com</i> / Mark Kromis (mark.kromis@aeacom.com)		WO #:		Sample Time: <i>12:50</i>		N - None	
Project Name: CTO N6274223F0104		Project #:		Sample Type: <i>G</i>		O - AsNaO2	
Site: RHSF		SSOW#:		Preservation Code: <i>G</i>		P - Na2CO4S	
				Matrix: <i>W=water, S=solid, O=water/oil, BT=BTBASE, A=ALP</i>		Q - Na2SO3	
				Sample Date: <i>4/13/23</i>		R - H2SO4	
				Sample Time: <i>12:50</i>		S - H2SO4	
				Sample Type: <i>G</i>		T - TSP Dodecahydrate	
				Preservation Code: <i>G</i>		U - Acetone	
				Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/>		V - MCAA	
				Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/>		W - pH 4-5	
				Sample Date: <i>4/13/23</i>		X - EDTA	
				Sample Time: <i>12:50</i>		Y - other (specify)	
				Sample Type: <i>G</i>		Z - other (specify)	
				Preservation Code: <i>G</i>		Other	
				Matrix: <i>W=water, S=solid, O=water/oil, BT=BTBASE, A=ALP</i>			
				Sample Date: <i>4/13/23</i>			
				Sample Time: <i>12:50</i>			
				Sample Type: <i>G</i>			
				Preservation Code: <i>G</i>			
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				Sample Type: <i>G</i>			
				Preservation Code:			

Chain of Custody Record

Client Information		Sampler: <i>Lyann Skumate</i>		Lab Pk#: Elaine Walker	Carrier Tracking No(s): 2304W2AFEA05
Client Contact:		Phone: <i>808-393-6607</i>		E-Mail: M.Elaine.Walker@EurofinsET.com	Page: Page 1 of 1
Company: AECOM		PWSID		Job #:	
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract		Preservation Codes:	
City: Honolulu		TAT Requested (days): <i>Rush - APPROX 5-DAY</i>		M - Hexane	
State, Zip: Hawaii 96813		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		N - None	
Phone: 808-954-4512 / 770-331-0794		PO #:		O - ASNaO2	
Email: Watson.Tanji@eurofins.com / Mark.Kromis@aecom.com		WO #:		P - Na2CO3	
Project Name: CTO N6274223F0104		Project #:		Q - Na2SO3	
Site: RH5F		SSOW#:		R - MeOH	
		Sample Date		S - H2SO4	
		Sample Time		T - TSP Dodecahydrate	
		Sample Type (C=Comp, G=Grab)		U - Acetone	
		Matrix (Water, Solid, On-water, Oil, BT-Tissue, A&A)		V - MCAA	
		Preservation Code:		W - pH 4-5	
AF-RHMMW12A-WGN01LF-2304W2		G		X - EDTA	
AF-RHMMW12A-WGFD01LF-2304W2		G		Y - other (specify)	
				Z - other (specify)	
				Other	
				Total Number of Containers	
				3	
				3	
				Special Instructions/Note:	
				580-126083 Chain of Custody	
				Barcode	
				580-126083 Chain of Custody	
				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
				Special Instructions/QC Requirements DOD QSM project	
				Prelim data (Level 1 or 2) - see TAT above DOD Stage	
				4 report standard TAT - AECOM EQUIS EDD	
				Method of Shipment:	
				Date/Time: <i>4/13/23 1335</i>	
				Date/Time: <i>4/13/23 1345</i>	
				Date/Time: <i>4/13/23 0943</i>	
				Company: <i>AECOM</i>	
				Company: <i>AECOM</i>	
				Company: <i>AECOM</i>	
				Cooler Temperature(s) °C and Other Remarks:	
				<i>S.B./S.C.</i>	

