

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

Attn: Terri Choy  
AECOM

1001 Bishop Street  
Honolulu HI 96813

Generated 10/13/2023 11:54 AM

**JOB DESCRIPTION**

Red Hill - AFFF Assessment Sampling

**JOB NUMBER**

580-132503-1

# 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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Authorized for release by  
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# Definitions/Glossary

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

Job ID: 580-132503-1

## Qualifiers

### GC Semi VOA

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 580-132503-1

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.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

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

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

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

### RECEIPT

The samples were received on 10/06/2023; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.4 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.

### 2-(2-Butoxyethoxy)ethanol

Samples AF-RHMW10-WGN01LF-2310 (580-132503-1) and AF-RHMW225401-WGN01B-2310 (580-132503-2) were analyzed for 2-(2-Butoxyethoxy)ethanol in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 10/12/2023.

The continuing calibration verification (CCV) associated with batch 680-802272 recovered outside acceptance criteria, low biased, for 2-(2-Butoxyethoxy)ethanol. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for the analyte, the data has been qualified and reported.

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: 580-132503-1

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**Client Sample ID: AF-RHMW10-WGN01LF-2310**

**Lab Sample ID: 580-132503-1**

No Detections.

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**Client Sample ID: AF-RHMW225401-WGN01B-2310**

**Lab Sample ID: 580-132503-2**

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: 580-132503-1

**Client Sample ID: AF-RHMW10-WGN01LF-2310**

**Lab Sample ID: 580-132503-1**

Date Collected: 10/05/23 10:15

Matrix: Water

Date Received: 10/06/23 12:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			10/12/23 21:03	1

**Client Sample ID: AF-RHMW225401-WGN01B-2310**

**Lab Sample ID: 580-132503-2**

Date Collected: 10/05/23 12:20

Matrix: Water

Date Received: 10/06/23 12:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			10/12/23 21:26	1



# Default Detection Limits

Client: AECOM

Job ID: 580-132503-1

Project/Site: Red Hill - AFFF Assessment Sampling

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

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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: 580-132503-1

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

**Lab Sample ID: MB 680-802272/8**  
**Matrix: Water**  
**Analysis Batch: 802272**

**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			10/12/23 13:16	1

**Lab Sample ID: LCS 680-802272/5**  
**Matrix: Water**  
**Analysis Batch: 802272**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	20.0	21.1		mg/L		106	50 - 150

**Lab Sample ID: LCSD 680-802272/6**  
**Matrix: Water**  
**Analysis Batch: 802272**

**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	17.9		mg/L		89	50 - 150	17	50

**Lab Sample ID: 580-132503-1 MS**  
**Matrix: Water**  
**Analysis Batch: 802272**

**Client Sample ID: AF-RHMW10-WGN01LF-2310**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	20.0	19.5		mg/L		98	50 - 150

**Lab Sample ID: 580-132503-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 802272**

**Client Sample ID: AF-RHMW10-WGN01LF-2310**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	20.0	19.6		mg/L		98	50 - 150	0	50

# QC Association Summary

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

Job ID: 580-132503-1

## GC Semi VOA

### Analysis Batch: 802272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-132503-1	AF-RHMW10-WGN01LF-2310	Total/NA	Water	8015C GLY	
580-132503-2	AF-RHMW225401-WGN01B-2310	Total/NA	Water	8015C GLY	
MB 680-802272/8	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-802272/5	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-802272/6	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-132503-1 MS	AF-RHMW10-WGN01LF-2310	Total/NA	Water	8015C GLY	
580-132503-1 MSD	AF-RHMW10-WGN01LF-2310	Total/NA	Water	8015C GLY	

# Lab Chronicle

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

Job ID: 580-132503-1

**Client Sample ID: AF-RHMW10-WGN01LF-2310**

**Lab Sample ID: 580-132503-1**

**Date Collected: 10/05/23 10:15**

**Matrix: Water**

**Date Received: 10/06/23 12:40**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	802272	DBM	EET SAV	10/12/23 21:03

**Client Sample ID: AF-RHMW225401-WGN01B-2310**

**Lab Sample ID: 580-132503-2**

**Date Collected: 10/05/23 12:20**

**Matrix: Water**

**Date Received: 10/06/23 12:40**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	802272	DBM	EET SAV	10/12/23 21:26

**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: 580-132503-1

## 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: 580-132503-1

Project/Site: Red Hill - AFFF Assessment Sampling

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
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: 580-132503-1

Project/Site: Red Hill - AFFF Assessment Sampling

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Matrix</b>	<b>Collected</b>	<b>Received</b>
580-132503-1	AF-RHMW10-WGN01LF-2310	Water	10/05/23 10:15	10/06/23 12:40
580-132503-2	AF-RHMW225401-WGN01B-2310	Water	10/05/23 12:20	10/06/23 12:40

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-132503-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Analysis Batch Number: 797719

Lab Sample ID: IC 680-797719/6 Client Sample ID: \_\_\_\_\_

Date Analyzed: 09/13/23 13:17 Lab File ID: 1GI12006.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Hydroxy-4-methyl-2-pentanone	2.06	Baseline Smoothing	AR8P	09/13/23 16:02
2-Butoxyethanol	2.17	Baseline Smoothing	AR8P	09/13/23 16:02
n-Heptyl Alcohol	2.34	Baseline Smoothing	AR8P	09/13/23 16:02

Lab Sample ID: IC 680-797719/7 Client Sample ID: \_\_\_\_\_

Date Analyzed: 09/13/23 13:40 Lab File ID: 1GI12007.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Hydroxy-4-methyl-2-pentanone	2.05	Baseline Smoothing	AR8P	09/13/23 16:02
2-Butoxyethanol	2.17	Baseline Smoothing	AR8P	09/13/23 16:02
n-Heptyl Alcohol	2.34	Baseline Smoothing	AR8P	09/13/23 16:02

Lab Sample ID: IC 680-797719/8 Client Sample ID: \_\_\_\_\_

Date Analyzed: 09/13/23 14:03 Lab File ID: 1GI12008.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Hydroxy-4-methyl-2-pentanone	2.06	Baseline Smoothing	AR8P	09/13/23 16:02
2-Butoxyethanol	2.17	Baseline Smoothing	AR8P	09/13/23 16:02
n-Heptyl Alcohol	2.33	Baseline Smoothing	AR8P	09/13/23 16:02

Lab Sample ID: IC 680-797719/11 Client Sample ID: \_\_\_\_\_

Date Analyzed: 09/13/23 15:12 Lab File ID: 1GI12011.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Hydroxy-4-methyl-2-pentanone	2.05	Baseline Smoothing	AR8P	09/13/23 16:06
2-Butoxyethanol	2.17	Baseline Smoothing	AR8P	09/13/23 16:06
n-Heptyl Alcohol	2.33	Baseline Smoothing	AR8P	09/13/23 16:06



GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: CVGG2 Analysis Batch Number: 797719  
 Lab Sample ID: IC 680-797719/12 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 09/13/23 15:35 Lab File ID: 1GI12012.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Hydroxy-4-methyl-2-pentanone	2.06	Baseline Smoothing	AR8P	09/13/23 16:06
2-Butoxyethanol	2.17	Baseline Smoothing	AR8P	09/13/23 16:06

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-132503-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Analysis Batch Number: 802272

Lab Sample ID: CCVIS 680-802272/4 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/12/23 11:44 Lab File ID: 1IJ12004.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	3.37	Peak assignment corrected	AR8P	10/12/23 13:54
Ethylene glycol	3.55	Peak assignment corrected	AR8P	10/12/23 13:54

Lab Sample ID: 580-132503-1 Client Sample ID: AF-RHMW10-WGN01LF-2310

Date Analyzed: 10/12/23 21:03 Lab File ID: 1IJ12027.D GC Column: J&W DB WAX ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	AR8P	10/12/23 23:10

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah

Job No.: 580-132503-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG_Gly_CAL_00053	12/27/23		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_CAL_00056	01/17/24		o2si, Lot 500821			(Purchased Reagent)	2-(2-Butoxyethoxy)ethanol	2000 ug/mL
SG_GLY_ISTD_00129	02/09/24		Agilent, Lot 0006738806			(Purchased Reagent)	n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00062	05/02/24		o2si, Lot 454407			(Purchased Reagent)	2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

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**SG\_Gly\_CAL\_00053**



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:  $\leq -10$  °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:

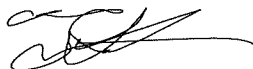


Brian Stokes

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.

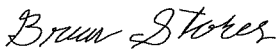
## Expiration Information:

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

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Released By:



Susan Mathews

14 -Jun-2022

Quality Control Team Lead

Reagent

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**SG\_Gly\_CAL\_00056**





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	507036	≤ -10 °C	P/T Methanol		31-Jul-2025

### 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	2006 ± 25 mg/L
diethylene glycol butyl ether	112-34-5	99.8	2323.7.2.1S	2000 ± 25 mg/L
propyl cellosolve	2807-30-9	99.9	1570.7.2.1S	1994 ± 25 mg/L
dipropylene glycol monomethyl ether	34590-94-8	99.7	2333.7.2.1S	2018 ± 25 mg/L
ethylene glycol	107-21-1	99.9	307.1.5.1S	2002 ± 24 mg/L
di(ethylene glycol)	111-46-6	99.5	309.7.2.1S	2006 ± 25 mg/L
tri(ethylene glycol)	112-27-6	100	310.7.4.1S	2004 ± 25 mg/L
4-Hydroxy-4-methyl-2-pentanone	123-42-2	98	2334.286.1.1S	2003 ± 47 mg/L
1,2-propanediol	57-55-6	99.9	306.9.4.1S	2010 ± 25 mg/L
tetraethylene glycol	112-60-7	98	3754.7.1.1S	3998 ± 47 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-SS

Lot No. 507036

Expiration Date 31-Jul-2025

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

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  $-10\text{ }^{\circ}\text{C}$  and is unopened during storage. The user should determine what the acceptable error for their process is and calculate the maximum number of days the opened ampule should be stored.

## Method of Preparation:

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

## Packaging and Storage:

The solution should be stored according to the following storage requirements:  $\leq -10\text{ }^{\circ}\text{C}$   
Once the product is opened, it should be transferred to a vial with minimum head space if the product was received in a sealed ampule.

## Glassware Calibration:

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

## Weights and Balance Calibration:

Weights used to perform daily checks on balances are calibrated annually 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  
 $u_c = (u_{\text{char}}^2 + u_{\text{tran}}^2 + u_{\text{homo}}^2 + u_{\text{sls}}^2)^{1/2}$  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:



Andrea Schaible  
1-Aug-2023  
Production Chemist I

Certified By:



Jared Ball  
14-Aug-2023  
Quality Control Chemist II

Released By:



Susan Mathews  
14-Aug-2023  
Quality Control Team Lead

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# Certificate of Analysis

Catalog No. G34-120070-04-SS

Lot No. 507036

Expiration Date 31-Jul-2025

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 31-Jul-2025

## 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:



Andrea Schaible

1-Aug-2023

Production Chemist I

Certified By:



Jared Ball

14-Aug-2023

Quality Control Chemist II

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Released By:



Susan Mathews

14-Aug-2023

Quality Control Team Lead

Reagent

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**SG\_GLY\_ISTD\_00129**

**Reference Material Certificate**  
**Product Information Sheet**

**Product Name:** Custom Standard

**Lot Number:** 0006759266

**Product Number:** CUS-6046

**Lot Issue Date:** 24-Aug-2023

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

**Expiration Date:** 30-Sep-2025

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
n-heptanol	5018	± 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](http://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.

Reagent

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**SG\_GlyICV\_00062**



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



ISO 17034 Accredited  
Reference Material Producer  
Cert. No. 3031.02

Rev 0

## Certificate of Analysis

Page 1 of 3

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

**Description:**

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

**Container:**

1 ml Ampule, Amber Glass

### Certified Values:

The certified value is based on gravimetric and volumetric preparation of this Certified Reference Material (CRM). This CRM has been confirmed by GC/MS, GC, HPLC, UPLC/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 ± 100 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.

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# 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.

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

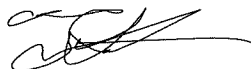


Brian Stokes

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

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# 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.

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

### Manufactured By:

*Brian Stokes*

---

Brian Stokes  
3 -May-2022

**Production Chemist I**

### Certified By:

*Tyler Sherman*

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Tyler Sherman  
14 -Jun-2022

**Quality Control Chemist I**

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### Released By:

*Susan Mathews*

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Susan Mathews  
14 -Jun-2022

**Quality Control Team Lead**

# Method 8015C - DAI Glycols

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

FORM III  
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 1IJ12005.D  
 Lab ID: LCS 680-802272/5 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy) ethanol	20.0	21.1	106	50-150	

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

FORM III  
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 1IJ12006.D  
 Lab ID: LCSD 680-802272/6 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	17.9	89	17	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.: 580-132503-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low Lab File ID: 1IJ12035.D

Lab ID: 580-132503-1 MS Client ID: AF-RHWW10-WGN01LF-2310 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy) ethanol	20.0	3.0 U	19.5	98	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.: 580-132503-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low Lab File ID: 1IJ12036.D

Lab ID: 580-132503-1 MSD Client ID: AF-RHMW10-WGN01LF-2310 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	19.6	98	0	50	50-150	

# Column to be used to flag recovery and RPD values

FORM III 8015C GLY

FORM IV  
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: MB 680-802272/8  
 Matrix: Water Date Extracted: \_\_\_\_\_  
 Lab File ID: (1) 1IJ12008.D Lab File ID: (2) \_\_\_\_\_  
 Date Analyzed: (1) 10/12/2023 13:16 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 680-802272/5	10/12/2023 12:07	
	LCSD 680-802272/6	10/12/2023 12:30	
AF-RHMW10-WGN01LF-2310	580-132503-1	10/12/2023 21:03	
AF-RHMW225401-WGN01B-2310	580-132503-2	10/12/2023 21:26	
AF-RHMW10-WGN01LF-2310 MS	580-132503-1 MS	10/13/2023 00:07	
AF-RHMW10-WGN01LF-2310 MSD	580-132503-1 MSD	10/13/2023 00:30	

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

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 680-802272/4 Date Analyzed: 10/12/2023 11:44  
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)  
 Lab File ID (Standard): 1IJ12004.D Heated Purge: (Y/N) N  
 Calibration ID: 91959

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		4498279	2.28				
UPPER LIMIT		8996558	2.78				
LOWER LIMIT		2249140	1.78				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-802272/5		4221875	2.28				
LCSD 680-802272/6		4664559	2.28				
MB 680-802272/8		4536628	2.28				
CCV 680-802272/23		4827513	2.28				
580-132503-1	AF-RHMW10-WGN01LF-2 310	4758187	2.27				
580-132503-2	AF-RHMW225401-WGN01 B-2310	4946282	2.27				
580-132503-1 MS	AF-RHMW10-WGN01LF-2 310 MS	4594972	2.27				
580-132503-1 MSD	AF-RHMW10-WGN01LF-2 310 MSD	4616632	2.27				
CCV 680-802272/38		4771903	2.27				

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.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW10-WGN01LF-2310 Lab Sample ID: 580-132503-1  
 Matrix: Water Lab File ID: 1IJ12027.D  
 Analysis Method: 8015C GLY Date Collected: 10/05/2023 10:15  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 10/12/2023 21:03  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 802272 Units: mg/L

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

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1I12027.D  
 Lims ID: 580-132503-C-1  
 Client ID: AF-RHMW10-WGN01LF-2310  
 Sample Type: Client  
 Inject. Date: 12-Oct-2023 21:03:12      ALS Bottle#: 0      Worklist Smp#: 25  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0089781-025  
 Operator ID:      Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 12-Oct-2023 23:12:30      Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112012.D  
 Column 1 : J&W DB WAX ( 0.45 mm)      Det: GC FID2B  
 Process Host: CTX1689

First Level Reviewer: AR8P      Date: 12-Oct-2023 23:10:13

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

\* 4 n-Heptyl Alcohol  
 2.270    2.279    -0.009    4758187    50.0

**QC Flag Legend**

Processing Flags

**Reagents:**

SG\_GLY\_ISTD\_00129      Amount Added: 10.00      Units: uL      Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12027.D

Injection Date: 12-Oct-2023 21:03:12

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-132503-C-1

Lab Sample ID: 680-132503-1

Worklist Smp#: 25

Client ID: AF-RHMW10-WGN01LF-2310

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

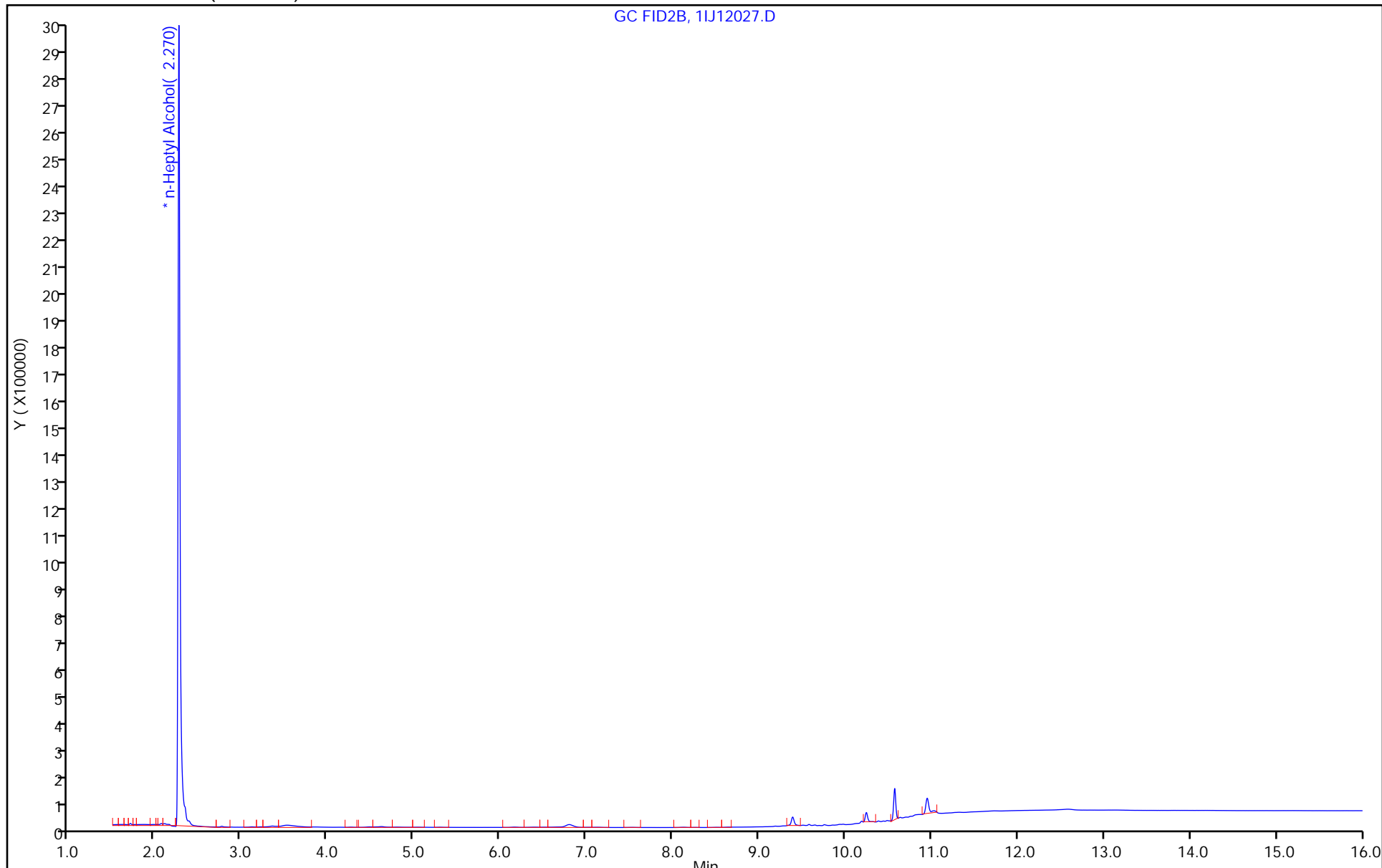
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IJ12027.D



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW225401-WGN01B-2310 Lab Sample ID: 580-132503-2  
 Matrix: Water Lab File ID: 1IJ12028.D  
 Analysis Method: 8015C GLY Date Collected: 10/05/2023 12:20  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 10/12/2023 21:26  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 802272 Units: mg/L

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

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12028.D  
 Lims ID: 580-132503-B-2  
 Client ID: AF-RHMW225401-WGN01B-2310  
 Sample Type: Client  
 Inject. Date: 12-Oct-2023 21:26:09      ALS Bottle#: 0      Worklist Smp#: 26  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0089781-026  
 Operator ID:      Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 12-Oct-2023 23:12:30      Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm)      Det: GC FID2B  
 Process Host: CTX1689

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

\* 4 n-Heptyl Alcohol  
 2.274    2.279    -0.005    4946282    50.0

**Reagents:**

SG\_GLY\_ISTD\_00129      Amount Added: 10.00      Units: uL      Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12028.D

Injection Date: 12-Oct-2023 21:26:09

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-132503-B-2

Lab Sample ID: 680-132503-2

Worklist Smp#: 26

Client ID: AF-RHMW225401-WGN01B-2310

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

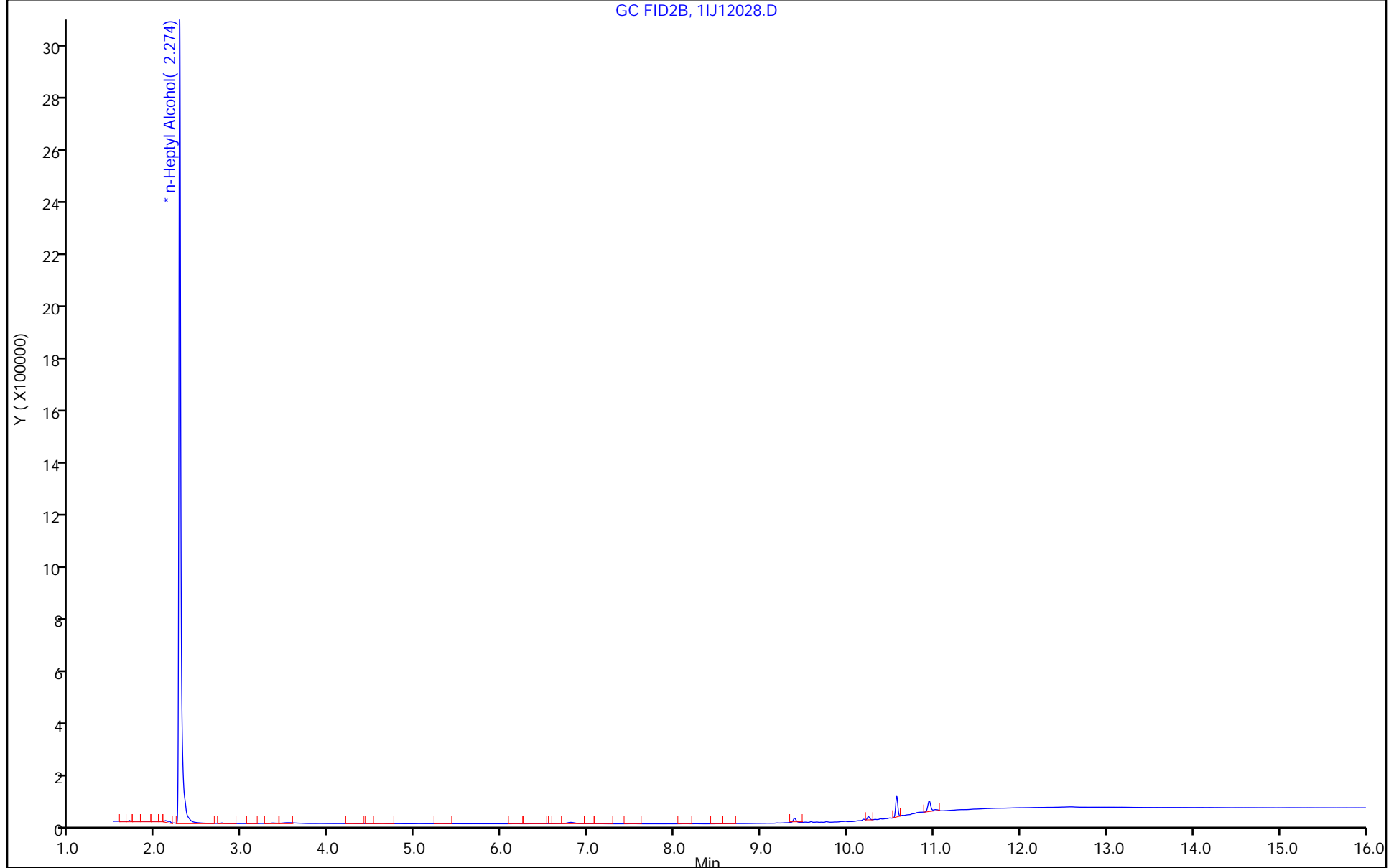
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IJ12028.D



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

Lab Name: Eurofins Savannah Job No.: 580-132503-1 Analy Batch No.: 797719

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 09/13/2023 13:17 Calibration End Date: 09/13/2023 15:35 Calibration ID: 91959

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-797719/12	1GI12012.D
Level 2	IC 680-797719/11	1GI12011.D
Level 3	IC 680-797719/10	1GI12010.D
Level 4	ICIS 680-797719/9	1GI12009.D
Level 5	IC 680-797719/8	1GI12008.D
Level 6	IC 680-797719/7	1GI12007.D
Level 7	IC 680-797719/6	1GI12006.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 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
Ethanol, 2-propoxy	++++ 0.5384	0.7958 0.5586	0.6446	0.7129	++++	Lin1	1.466 1	0.540 9						0.9940		0.9900	
4-Hydroxy-4-methyl-2-pentanone	0.9648 0.5044	0.7637 0.5265	0.5773	0.6626	++++	Lin1	1.051 3	0.513 7						0.9940		0.9900	
2-Butoxyethanol	1.1059 0.6003	0.8956 0.6233	0.6690	0.7728	++++	Lin1	1.158 1	0.609 4						0.9950		0.9900	
Dipropylene Glycol Methyl Ether	0.0655 0.0427	0.0570 0.0444	0.0459	0.0517	++++	Lin2	0.043 4	0.044 9						0.9920		0.9900	
Propylene glycol	0.2823 0.1721	0.2383 0.1821	0.1763	0.2073	++++	Lin1	0.229 5	0.176 3						0.9960		0.9900	
Ethylene glycol	0.6083 0.4161	0.5462 0.4283	0.5034	0.5782	++++	Ave		0.513 4			15.4		20.0				
2-(2-Butoxyethoxy)ethanol	0.8736 0.4979	0.7275 0.5165	0.5716	0.6387	++++	Lin1	0.900 2	0.506 7						0.9950		0.9900	
2,2'-Oxybisethanol	0.5032 0.2609	0.4015 0.2766	0.2895	0.3441	++++	Lin1	0.538 2	0.267 7						0.9940		0.9900	
Triethylene Glycol	++++ 0.2764	0.5072 0.2932	0.3418	0.3784	++++	Lin1	1.118 1	0.276 1						0.9930		0.9900	
Tetraethylene Glycol	++++ 0.2674	0.4158 0.2850	0.3122	0.3618	++++	Lin1	1.504 1	0.272 4						0.9920		0.9900	

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

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

Lab Name: Eurofins Savannah Job No.: 580-132503-1 Analy Batch No.: 797719

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 09/13/2023 13:17 Calibration End Date: 09/13/2023 15:35 Calibration ID: 91959

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-797719/12	1GI12012.D
Level 2	IC 680-797719/11	1GI12011.D
Level 3	IC 680-797719/10	1GI12010.D
Level 4	ICIS 680-797719/9	1GI12009.D
Level 5	IC 680-797719/8	1GI12008.D
Level 6	IC 680-797719/7	1GI12007.D
Level 7	IC 680-797719/6	1GI12006.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethanol, 2-propoxy	nHPA	Lin1	++++ 4046822	322395 5329779	660199	1126811	++++	++++ 80.0	5.00 100	10.0	20.0	++++
4-Hydroxy-4-methyl-2-pentanone	nHPA	Lin1	184449 3791300	309390 5024382	591297	1047306	++++	2.00 80.0	5.00 100	10.0	20.0	++++
2-Butoxyethanol	nHPA	Lin1	211417 4511969	362830 5947881	685174	1221430	++++	2.00 80.0	5.00 100	10.0	20.0	++++
Dipropylene Glycol Methyl Ether	nHPA	Lin2	12520 320712	23086 423364	46973	81686	++++	2.00 80.0	5.00 100	10.0	20.0	++++
Propylene glycol	nHPA	Lin1	53976 1293324	96518 1737981	180516	327588	++++	2.00 80.0	5.00 100	10.0	20.0	++++
Ethylene glycol	nHPA	Ave	116294 3127646	221287 4087109	515612	913870	++++	2.00 80.0	5.00 100	10.0	20.0	++++
2-(2-Butoxyethoxy)ethanol	nHPA	Lin1	167009 3742575	294698 4928818	585442	1009465	++++	2.00 80.0	5.00 100	10.0	20.0	++++
2,2'-Oxybisethanol	nHPA	Lin1	96197 1960719	162655 2639532	296552	543808	++++	2.00 80.0	5.00 100	10.0	20.0	++++
Triethylene Glycol	nHPA	Lin1	++++ 2077518	205483 2798041	350111	598116	++++	++++ 80.0	5.00 100	10.0	20.0	++++
Tetraethylene Glycol	nHPA	Lin1	++++ 4019208	336907 5439873	639551	1143610	++++	++++ 160	10.0 200	20.0	40.0	++++

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.: 580-132503-1 Analy Batch No.: 797719

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 09/13/2023 13:17 Calibration End Date: 09/13/2023 15:35 Calibration ID: 91959

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-797719/12	1GI12012.D
Level 2	IC 680-797719/11	1GI12011.D
Level 3	IC 680-797719/10	1GI12010.D
Level 4	ICIS 680-797719/9	1GI12009.D
Level 5	IC 680-797719/8	1GI12008.D
Level 6	IC 680-797719/7	1GI12007.D
Level 7	IC 680-797719/6	1GI12006.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Ethanol, 2-propoxy	++++ 0.6	-7.1	-7.9	18.3	++++	-3.8	20	20	20			20
4-Hydroxy-4-methyl-2-pentanone	-14.5 0.5	7.7	-8.1	18.8	++++	-4.4	20 20	20	20	20		20
2-Butoxyethanol	-13.5 0.4	9.0	-9.2	17.3	++++	-3.9	20 20	20	20	20		20
Dipropylene Glycol Methyl Ether	-2.4 -2.1	7.7	-7.4	10.4	++++	-6.1	20 20	20	20	20		20
Propylene glycol	-5.0 2.0	9.1	-13.1	11.0	++++	-4.0	20 20	20	20	20		20
Ethylene glycol	18.5 -16.6	6.4	-1.9	12.6	++++	-19.0	20 20	20	20	20		20
2-(2-Butoxyethoxy)ethanol	-16.4 0.2	8.0	-5.0	17.2	++++	-4.0	20 20	20	20	20		20
2,2'-Oxybisethanol	-12.6 1.3	9.8	-11.9	18.5	++++	-5.1	20 20	20	20	20		20
Triethylene Glycol	++++ 2.1	2.7	-16.7	16.8	++++	-5.0	20	20	20	20		20
Tetraethylene Glycol	++++ 1.9	-2.6	-13.0	19.0	++++	-5.3	20	20	20	20		20

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112006.D  
 Lims ID: ic g7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 13-Sep-2023 13:17:42 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089041-006  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 14-Sep-2023 10:59:28 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1643

First Level Reviewer: AR8P Date: 13-Sep-2023 14:56:54

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.674	1.674	0.000	5329779	100.0	100.6	
2 4-Hydroxy-4-methyl-2-pentanone	2.055	2.055	0.000	5024382	100.0	100.5	M
3 2-Butoxyethanol	2.172	2.172	0.000	5947881	100.0	100.4	M
* 4 n-Heptyl Alcohol	2.337	2.337	0.000	4771049	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether	2.801	2.801	0.000	423364	100.0	97.9	
6 Propylene glycol	3.362	3.362	0.000	1737981	100.0	102.0	
7 Ethylene glycol	3.619	3.619	0.000	4087109	100.0	83.4	
8 2-(2-Butoxyethoxy)ethanol	4.984	4.984	0.000	4928818	100.0	100.2	
9 2,2'-Oxybisethanol	6.989	6.989	0.000	2639532	100.0	101.3	
10 Triethylene Glycol	9.460	9.460	0.000	2798041	100.0	102.1	
11 Tetraethylene Glycol	10.305	10.305	0.000	5439873	200.0	203.7	

QC Flag Legend  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 50.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Euofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12006.D

Injection Date: 13-Sep-2023 13:17:42

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g7

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

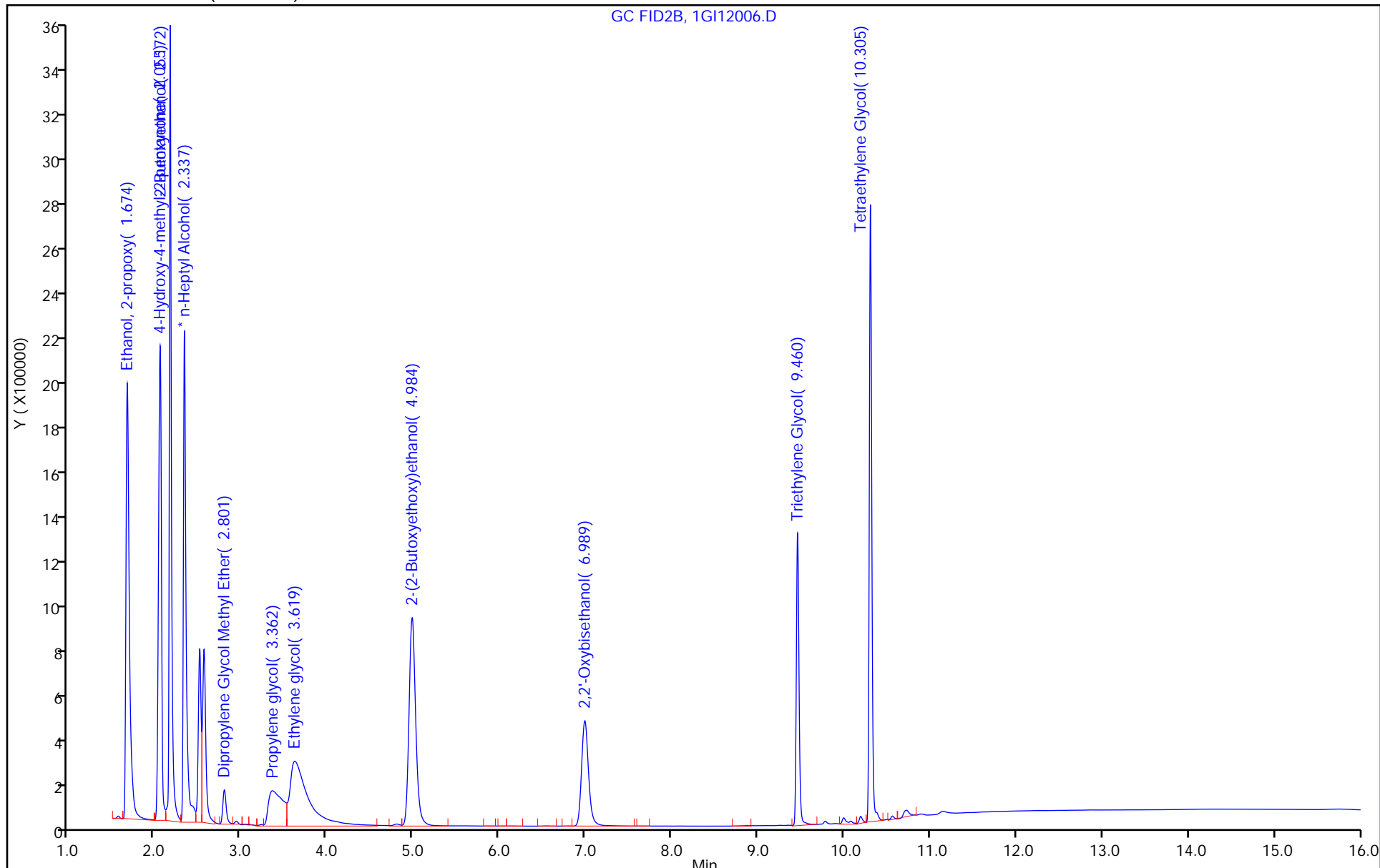
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

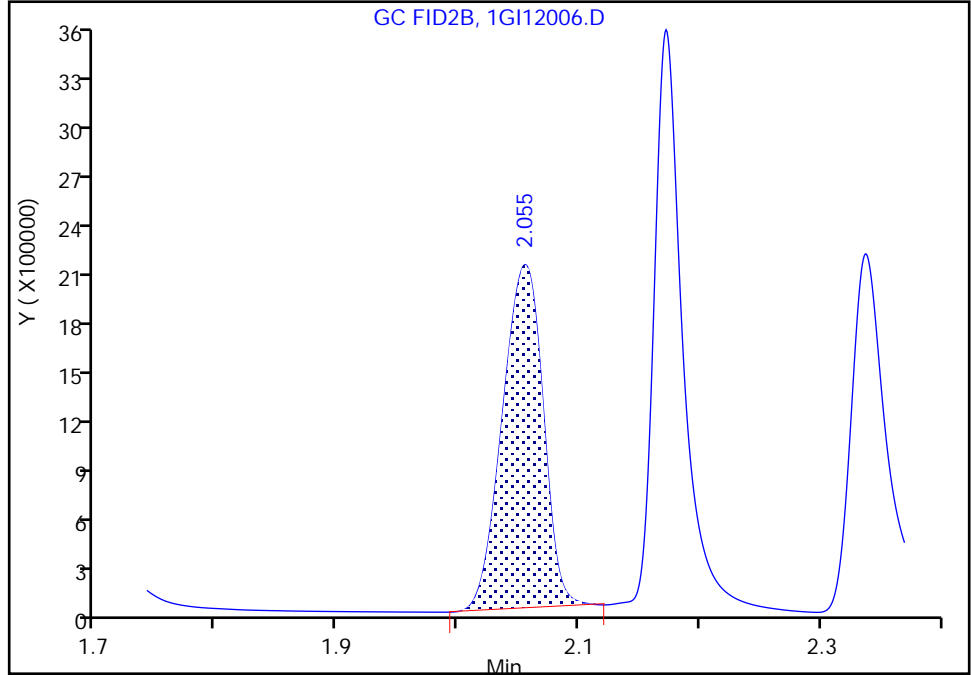
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112006.D  
Injection Date: 13-Sep-2023 13:17:42 Instrument ID: CVGG2  
Lims ID: ic g7  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

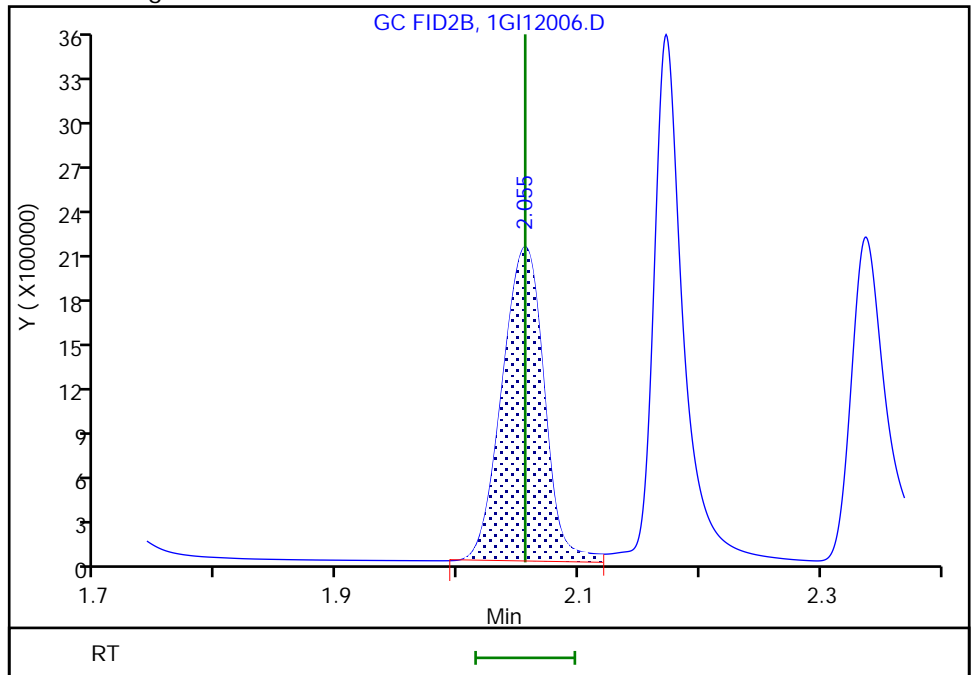
RT: 2.06  
Area: 4845411  
Amount: 101.4329  
Amount Units: ug/ml

Processing Integration Results



RT: 2.06  
Area: 5024382  
Amount: 100.4518  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:30 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

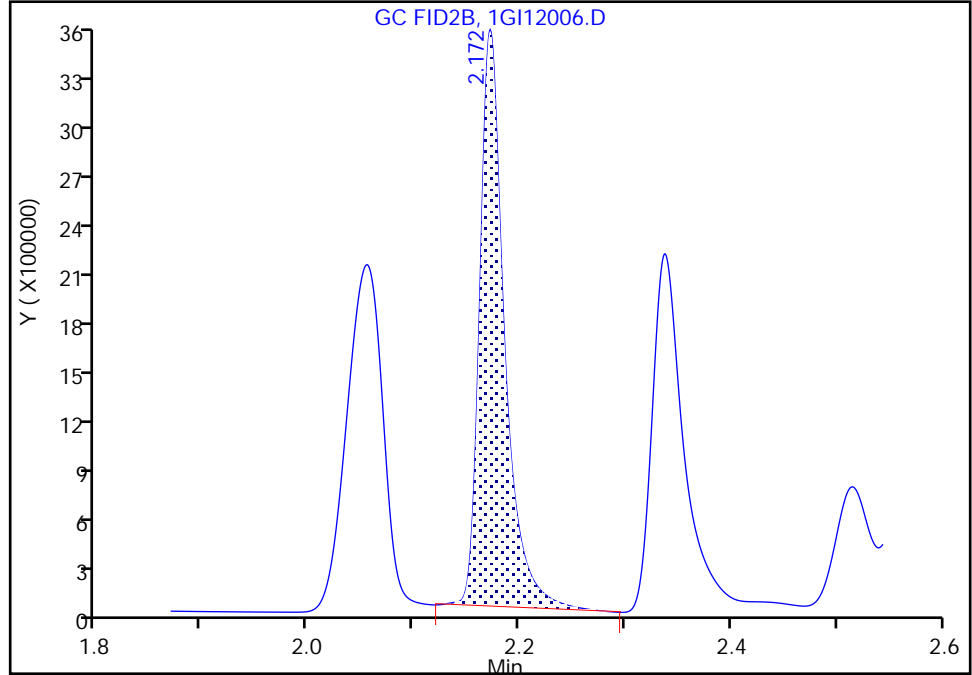
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12006.D  
Injection Date: 13-Sep-2023 13:17:42 Instrument ID: CVGG2  
Lims ID: ic g7  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

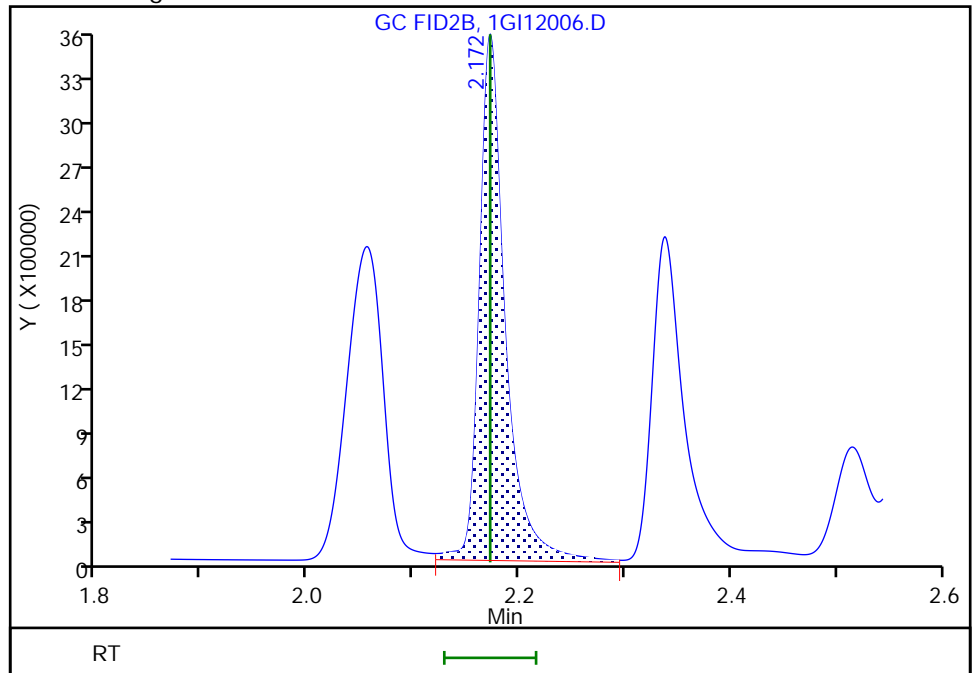
RT: 2.17  
Area: 5671395  
Amount: 103.2564  
Amount Units: ug/ml

Processing Integration Results



RT: 2.17  
Area: 5947881  
Amount: 100.3809  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:30 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

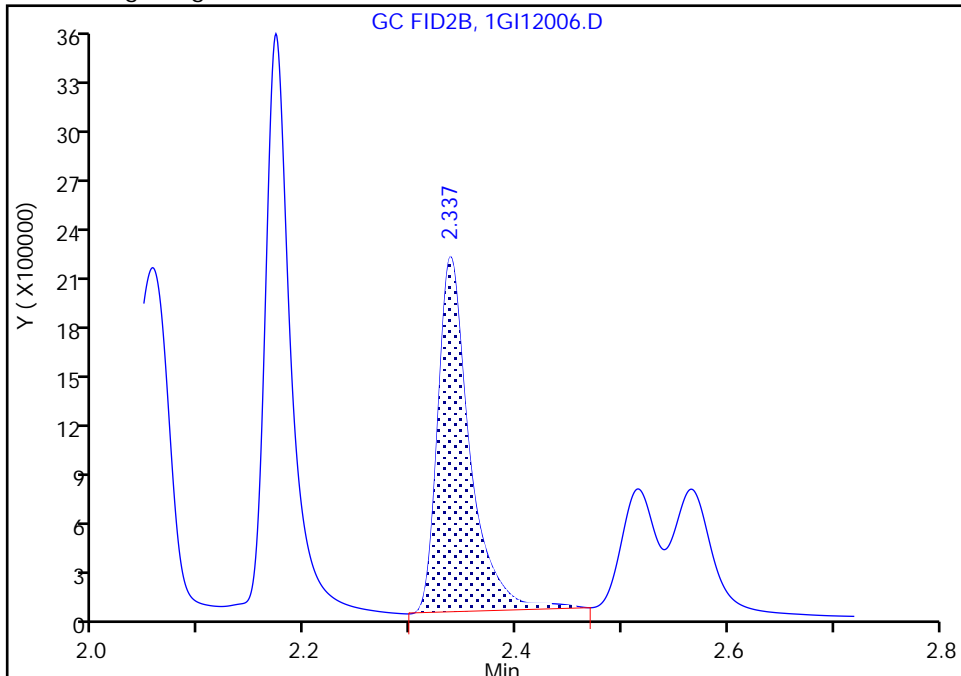
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12006.D  
Injection Date: 13-Sep-2023 13:17:42 Instrument ID: CVGG2  
Lims ID: ic g7  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

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

Signal: 1

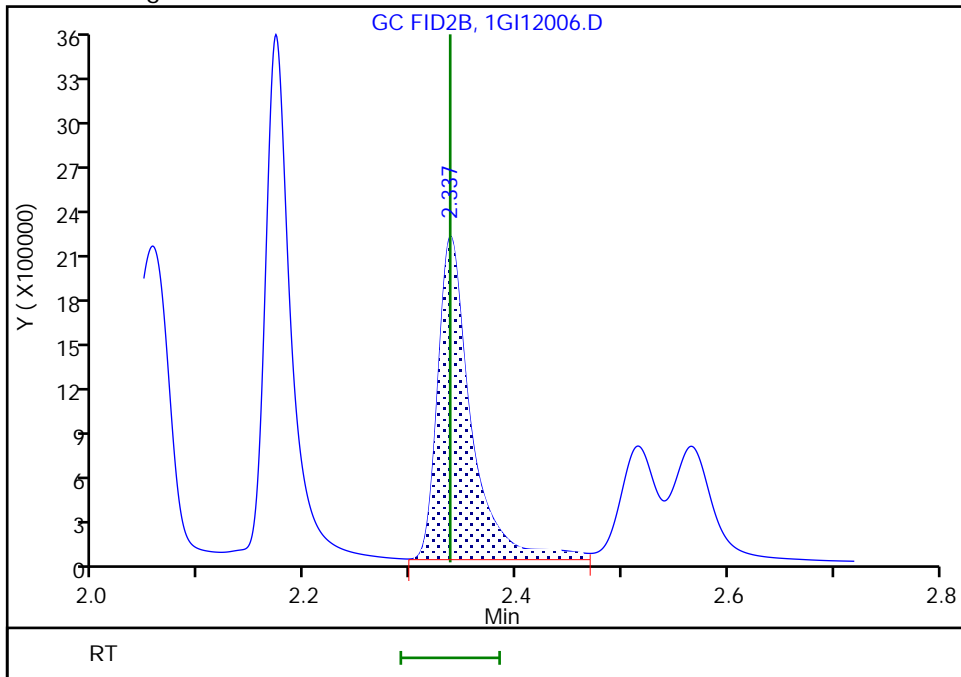
RT: 2.34  
Area: 4493361  
Amount: 50.000000  
Amount Units: ug/ml

Processing Integration Results



RT: 2.34  
Area: 4771049  
Amount: 50.000000  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:30 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112007.D  
 Lims ID: ic g6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 13-Sep-2023 13:40:50 ALS Bottle#: 0 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089041-007  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 14-Sep-2023 10:59:29 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1643

First Level Reviewer: AR8P Date: 13-Sep-2023 14:58:50

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.672	1.674	-0.002	4046822	80.0	76.9	
2 4-Hydroxy-4-methyl-2-pentanone	2.054	2.055	-0.001	3791300	80.0	76.5	M
3 2-Butoxyethanol	2.170	2.172	-0.002	4511969	80.0	76.9	M
* 4 n-Heptyl Alcohol	2.335	2.337	-0.002	4697511	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether	2.801	2.801	0.000	320712	80.0	75.1	
6 Propylene glycol	3.365	3.362	0.003	1293324	80.0	76.8	
7 Ethylene glycol	3.623	3.619	0.004	3127646	80.0	64.8	
8 2-(2-Butoxyethoxy)ethanol	4.983	4.984	-0.001	3742575	80.0	76.8	
9 2,2'-Oxybisethanol	6.988	6.989	-0.001	1960719	80.0	75.9	
10 Triethylene Glycol	9.460	9.460	0.000	2077518	80.0	76.0	
11 Tetraethylene Glycol	10.305	10.305	0.000	4019208	160.0	151.5	

QC Flag Legend  
Processing Flags



Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 40.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12007.D

Injection Date: 13-Sep-2023 13:40:50

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g6

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

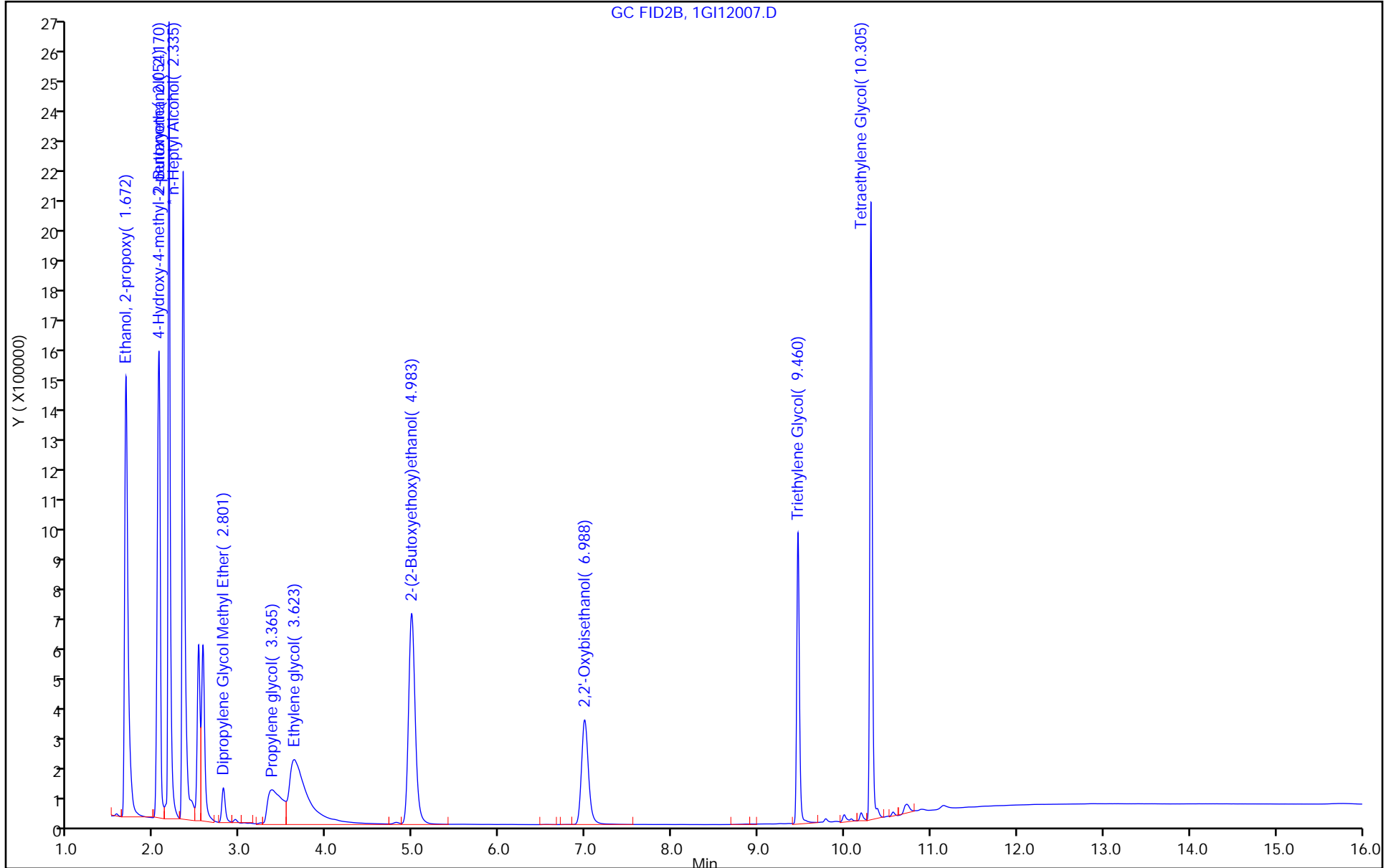
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

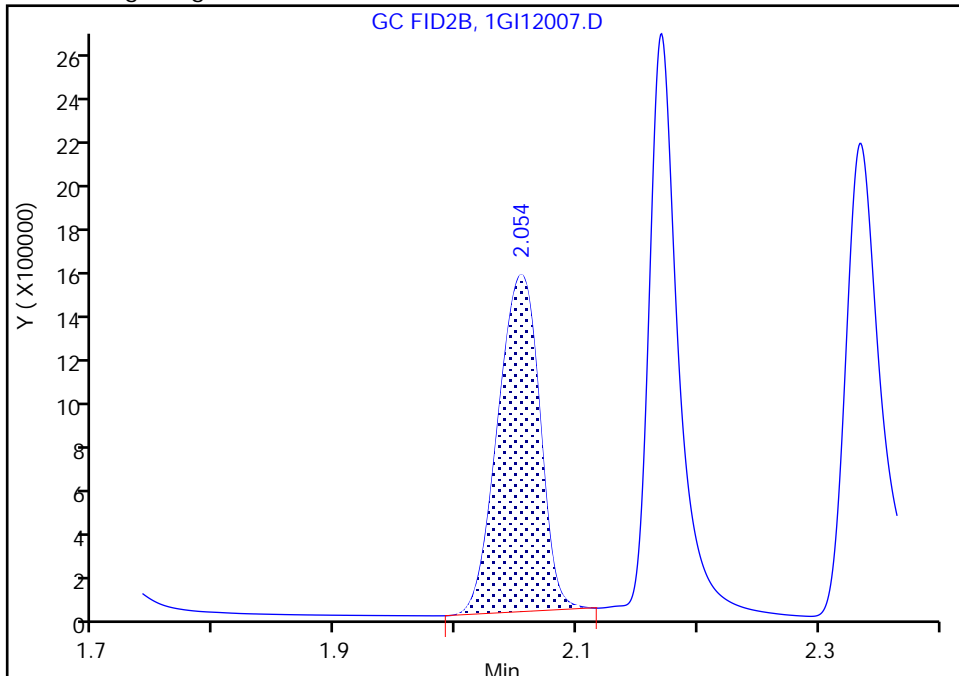
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112007.D  
Injection Date: 13-Sep-2023 13:40:50 Instrument ID: CVGG2  
Lims ID: ic g6  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

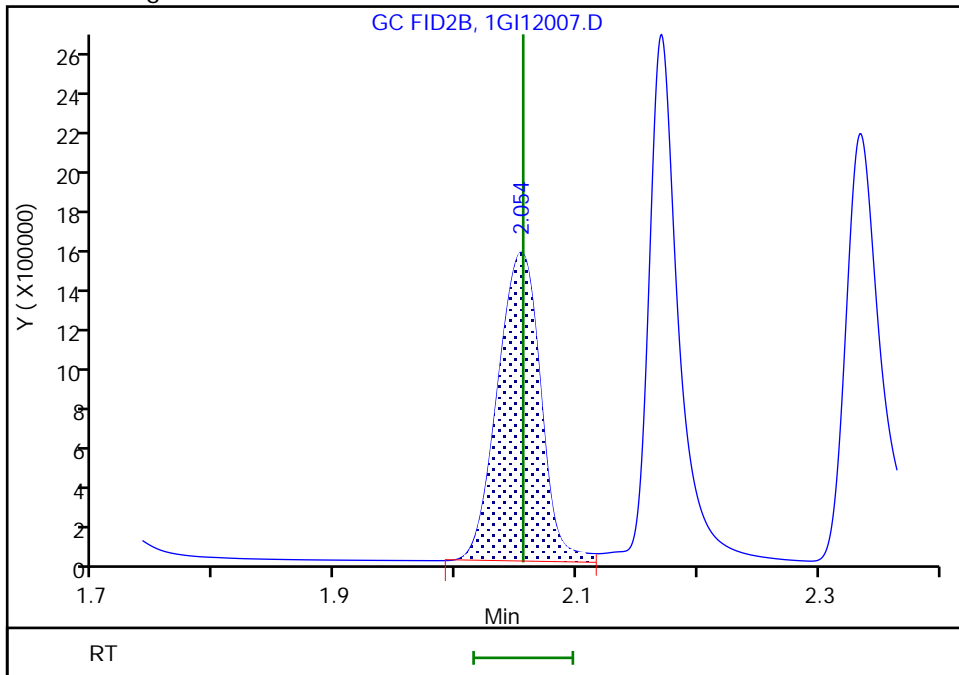
RT: 2.05  
Area: 3649493  
Amount: 79.638530  
Amount Units: ug/ml

Processing Integration Results



RT: 2.05  
Area: 3791300  
Amount: 76.507538  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:40 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

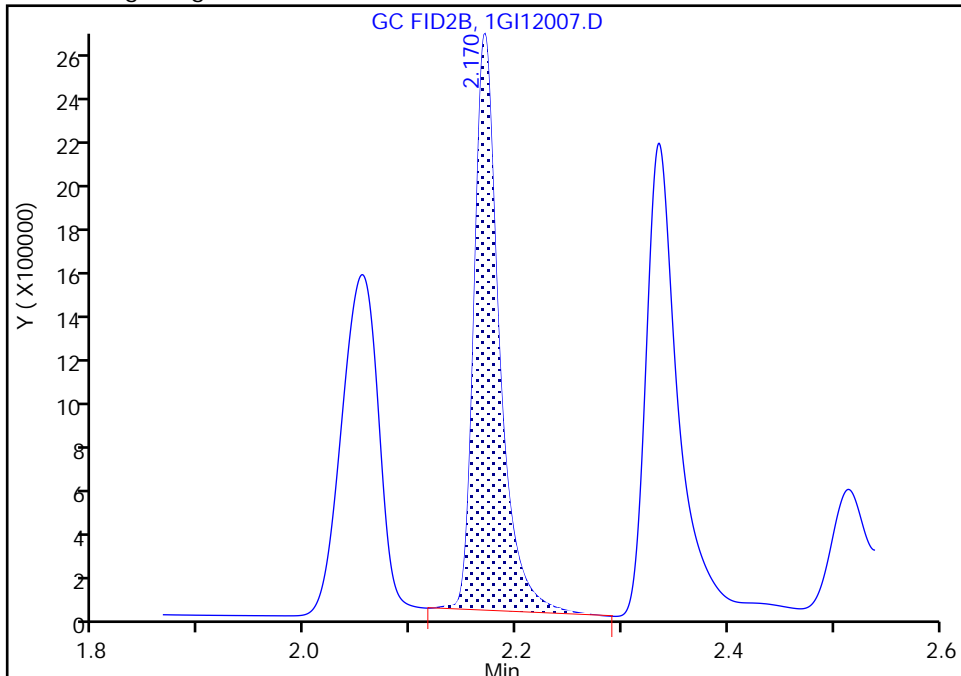
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112007.D  
Injection Date: 13-Sep-2023 13:40:50 Instrument ID: CVGG2  
Lims ID: ic g6  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

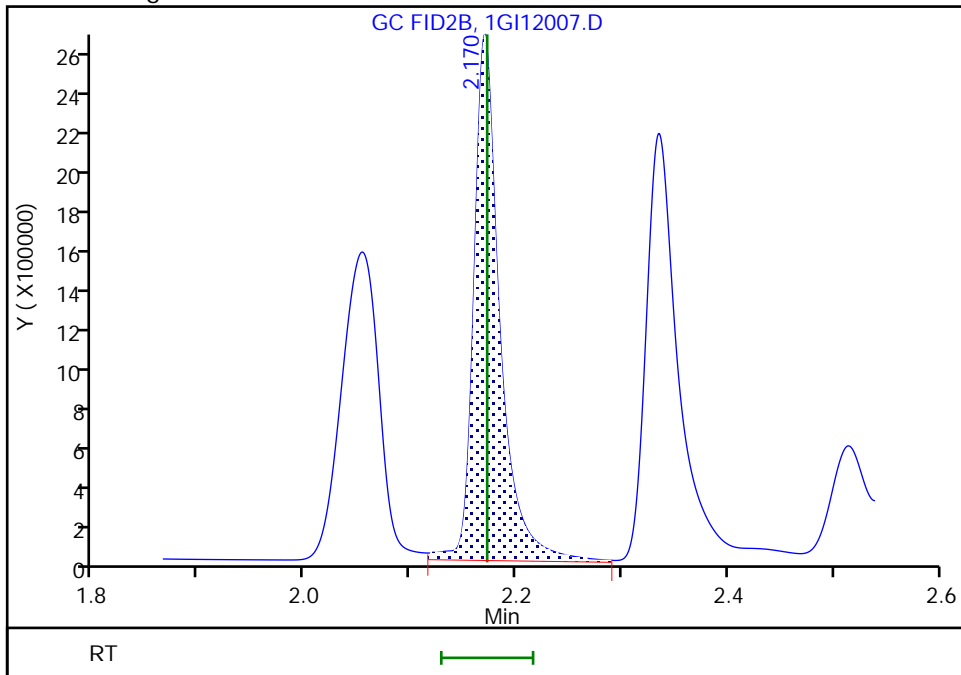
RT: 2.17  
Area: 4296255  
Amount: 79.797441  
Amount Units: ug/ml

Processing Integration Results



RT: 2.17  
Area: 4511969  
Amount: 76.903273  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:40 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

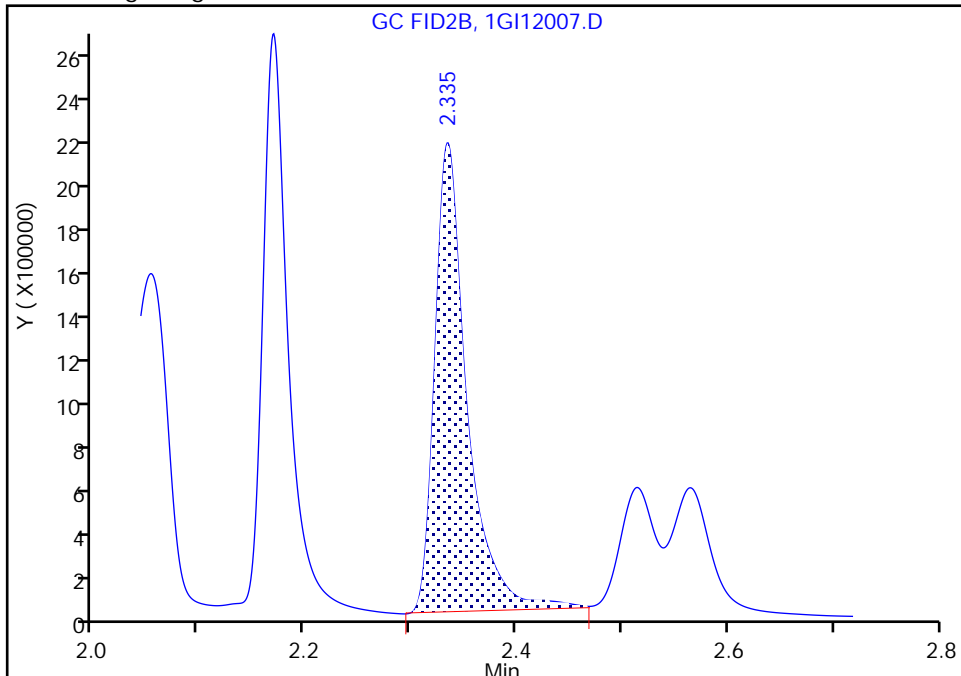
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12007.D  
Injection Date: 13-Sep-2023 13:40:50 Instrument ID: CVGG2  
Lims ID: ic g6  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

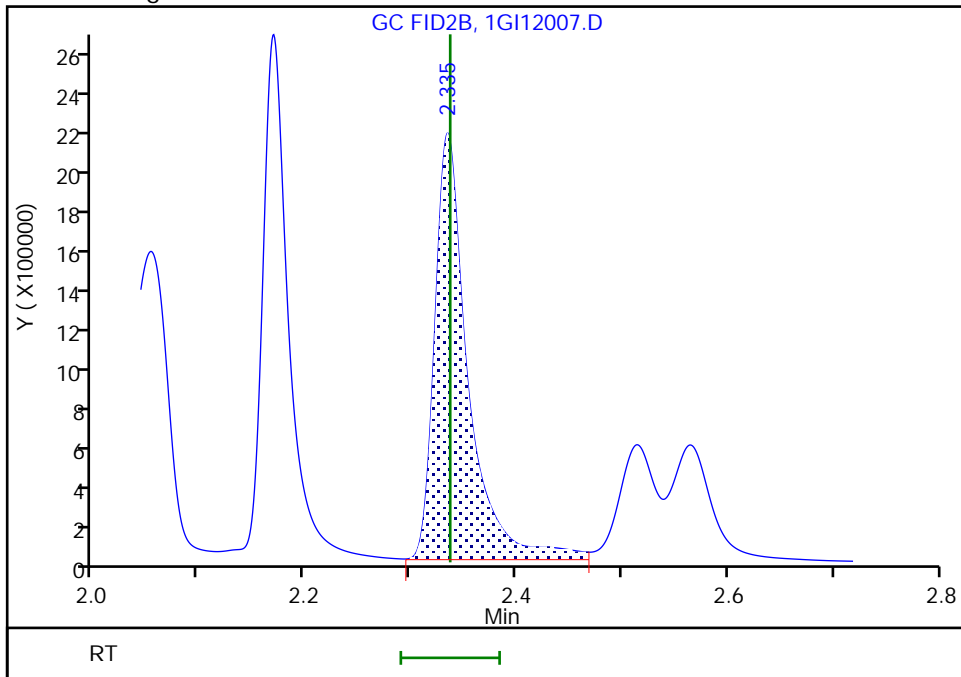
RT: 2.34  
Area: 4462050  
Amount: 50.000000  
Amount Units: ug/ml

Processing Integration Results



RT: 2.34  
Area: 4697511  
Amount: 50.000000  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:40 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12008.D  
 Lims ID: ic g5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 13-Sep-2023 14:03:49 ALS Bottle#: 0 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089041-008  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 14-Sep-2023 10:59:31 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1643

First Level Reviewer: AR8P Date: 13-Sep-2023 15:01:43

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.671	1.674	-0.003	2500139	50.0	43.0	
2 4-Hydroxy-4-methyl-2-pentanone	2.056	2.055	0.001	2245269	50.0	41.2	M
3 2-Butoxyethanol	2.170	2.172	-0.002	2809834	50.0	43.7	M
* 4 n-Heptyl Alcohol	2.334	2.337	-0.003	5051194	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether	2.801	2.801	0.000	176037	50.0	37.9	
6 Propylene glycol	3.360	3.362	-0.002	692771	50.0	37.6	
7 Ethylene glycol	3.620	3.619	0.001	1807646	50.0	34.8	
8 2-(2-Butoxyethoxy)ethanol	4.983	4.984	-0.001	2139552	50.0	40.0	
9 2,2'-Oxybisethanol	6.989	6.989	0.000	1124219	50.0	39.6	
10 Triethylene Glycol	9.460	9.460	0.000	1206636	50.0	39.2	
11 Tetraethylene Glycol	10.306	10.305	0.001	2355449	100.0	80.1	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 25.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12008.D

Injection Date: 13-Sep-2023 14:03:49

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g5

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

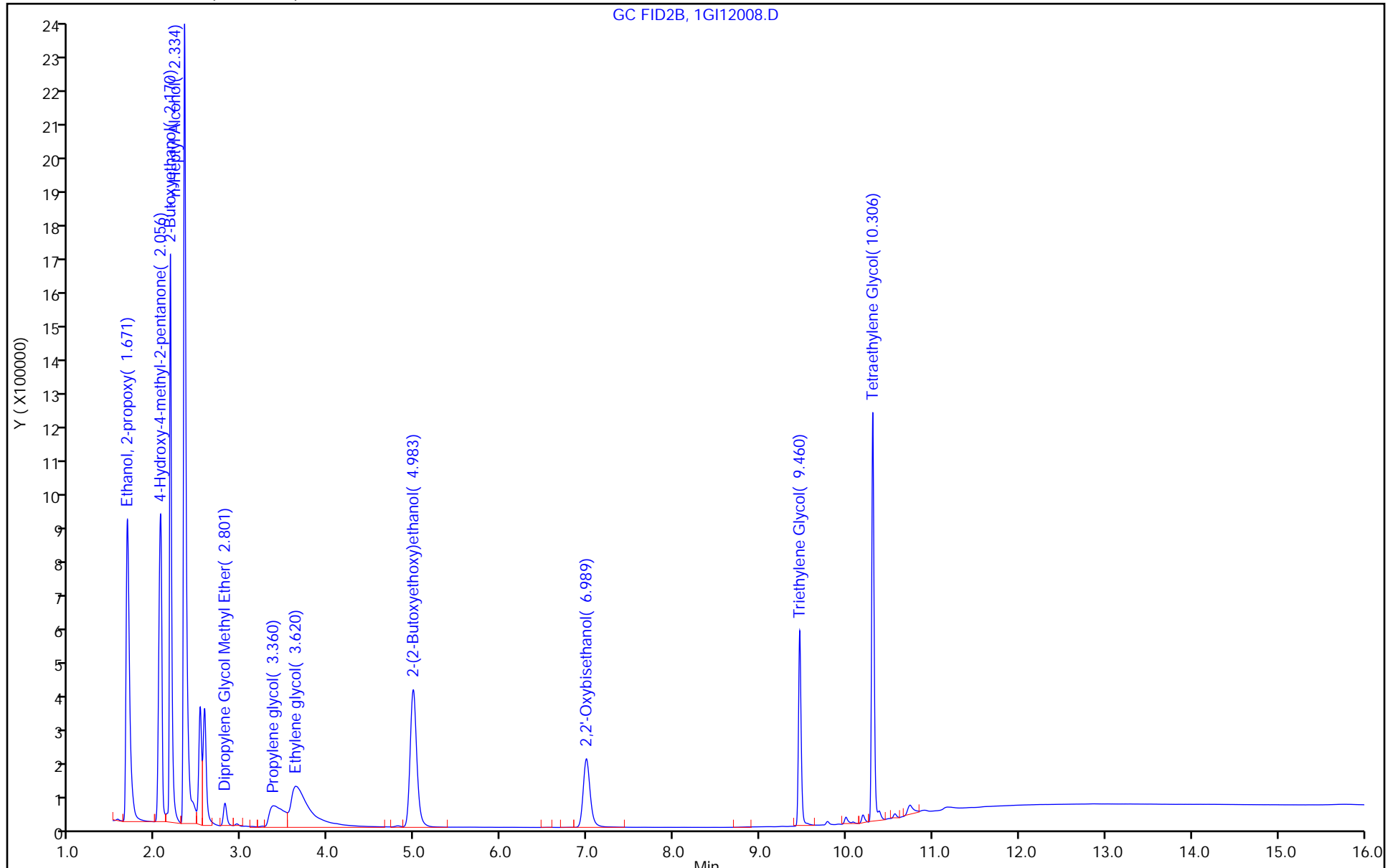
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)





Eurofins Savannah

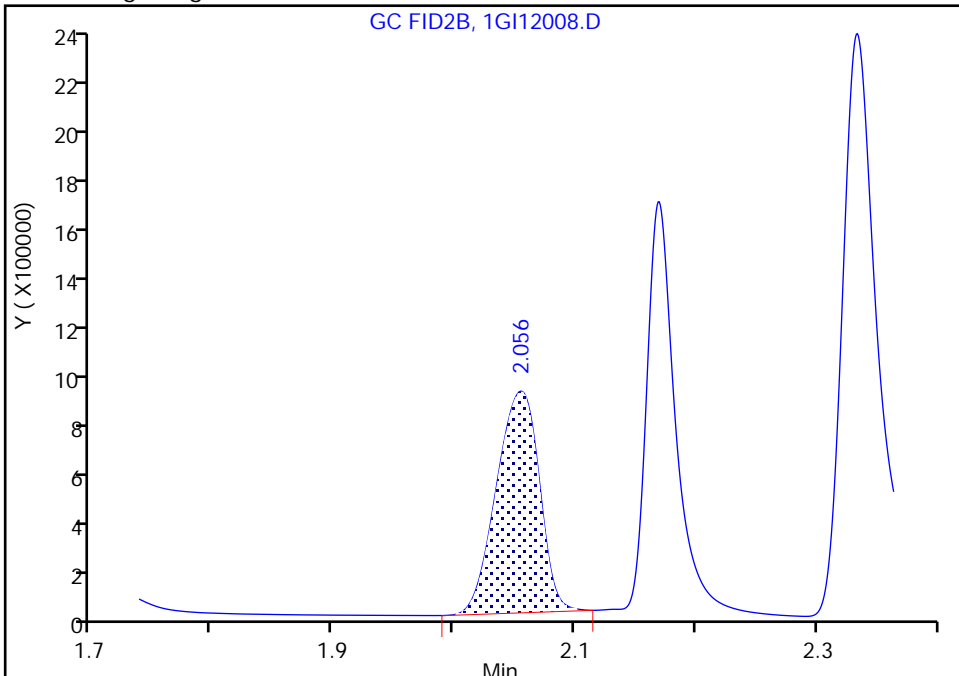
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112008.D  
Injection Date: 13-Sep-2023 14:03:49 Instrument ID: CVGG2  
Lims ID: ic g5  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

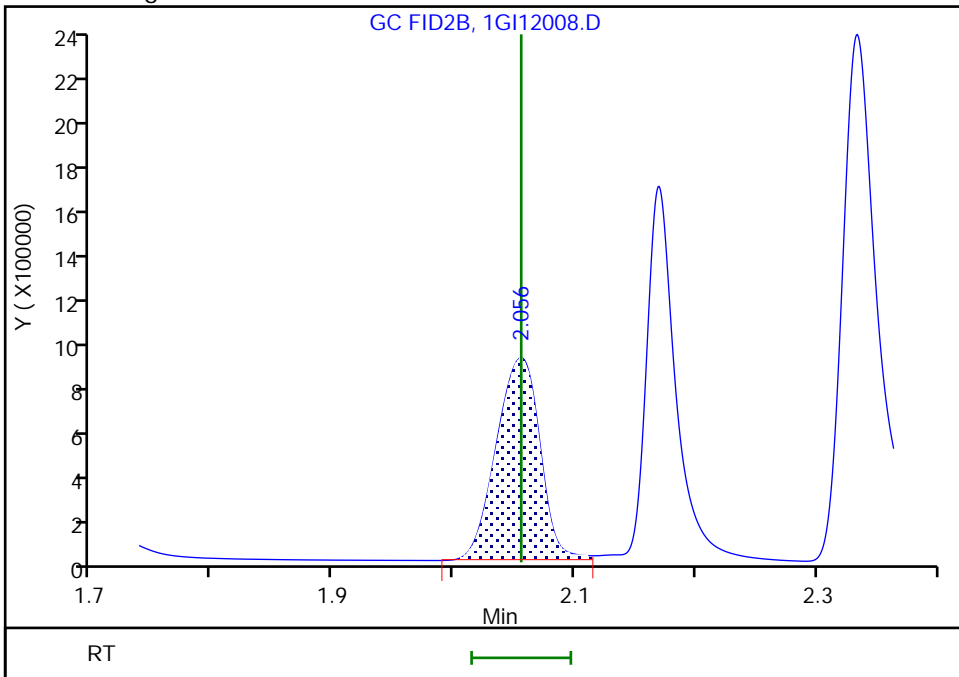
RT: 2.06  
Area: 2160046  
Amount: 42.850484  
Amount Units: ug/ml

Processing Integration Results



RT: 2.06  
Area: 2245269  
Amount: 41.217127  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:48 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

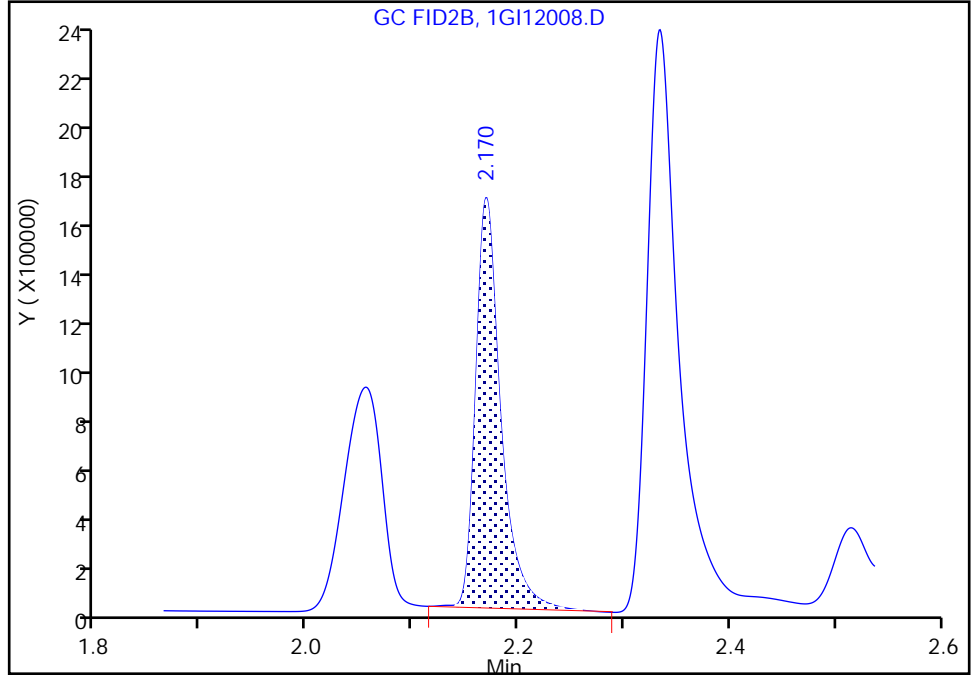
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112008.D  
Injection Date: 13-Sep-2023 14:03:49 Instrument ID: CVGG2  
Lims ID: ic g5  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

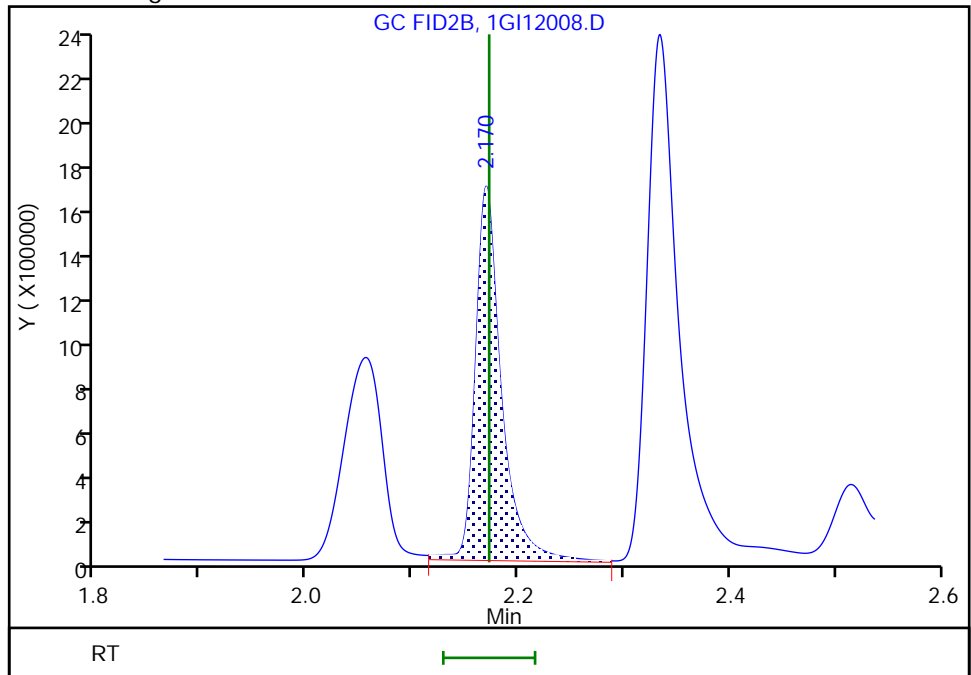
RT: 2.17  
Area: 2684878  
Amount: 44.748482  
Amount Units: ug/ml

Processing Integration Results



RT: 2.17  
Area: 2809834  
Amount: 43.738503  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:48 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

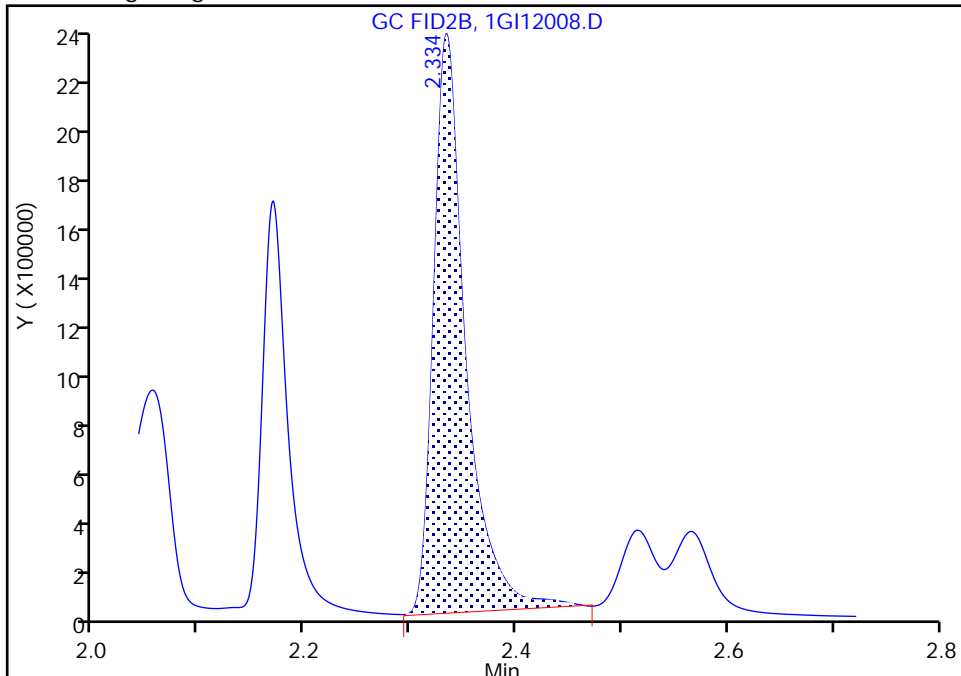
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112008.D  
Injection Date: 13-Sep-2023 14:03:49 Instrument ID: CVGG2  
Lims ID: ic g5  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

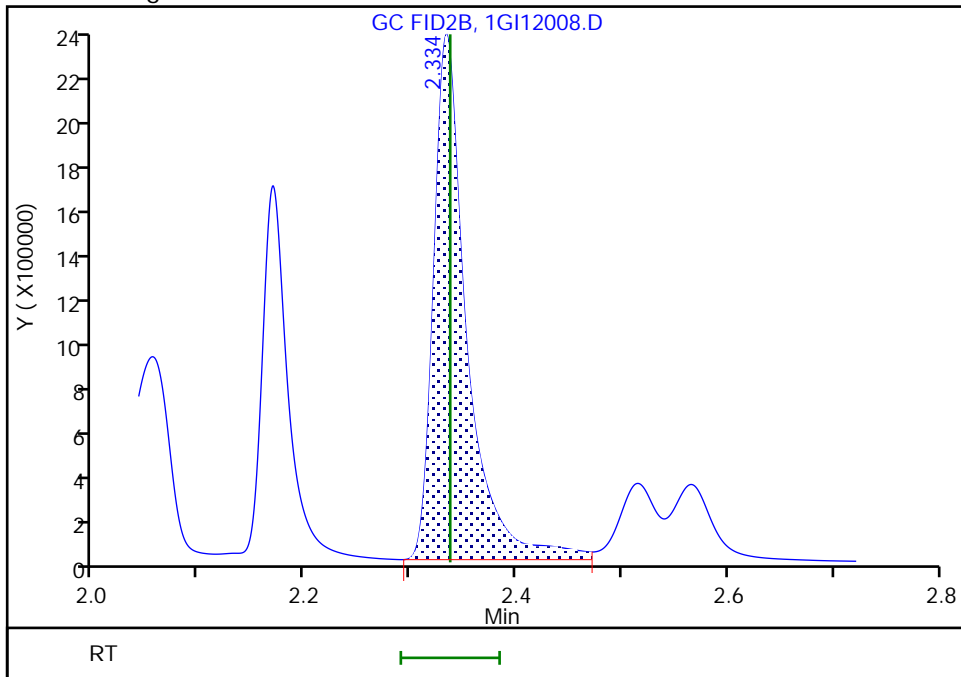
RT: 2.33  
Area: 4842614  
Amount: 50.000000  
Amount Units: ug/ml

Processing Integration Results



RT: 2.33  
Area: 5051194  
Amount: 50.000000  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:02:48 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12009.D  
 Lims ID: icis g4  
 Client ID:  
 Sample Type: ICIS Calib Level: 4  
 Inject. Date: 13-Sep-2023 14:26:50 ALS Bottle#: 0 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089041-009  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 14-Sep-2023 10:59:32 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1643

First Level Reviewer: AR8P Date: 13-Sep-2023 14:59:00

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.671	1.671	0.000	1126811	20.0	23.7
2 4-Hydroxy-4-methyl-2-pentanone	2.056	2.056	0.000	1047306	20.0	23.8
3 2-Butoxyethanol	2.169	2.169	0.000	1221430	20.0	23.5
* 4 n-Heptyl Alcohol	2.333	2.333	0.000	3951237	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.803	2.803	0.000	81686	20.0	22.1
6 Propylene glycol	3.367	3.367	0.000	327588	20.0	22.2
7 Ethylene glycol	3.629	3.629	0.000	913870	20.0	22.5
8 2-(2-Butoxyethoxy)ethanol	4.983	4.983	0.000	1009465	20.0	23.4
9 2,2'-Oxybisethanol	6.988	6.988	0.000	543808	20.0	23.7
10 Triethylene Glycol	9.460	9.460	0.000	598116	20.0	23.4
11 Tetraethylene Glycol	10.306	10.306	0.000	1143610	40.0	47.6

QC Flag Legend  
Processing Flags

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112009.D

Injection Date: 13-Sep-2023 14:26:50

Instrument ID: CVGG2

Operator ID:

Lims ID: icis g4

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

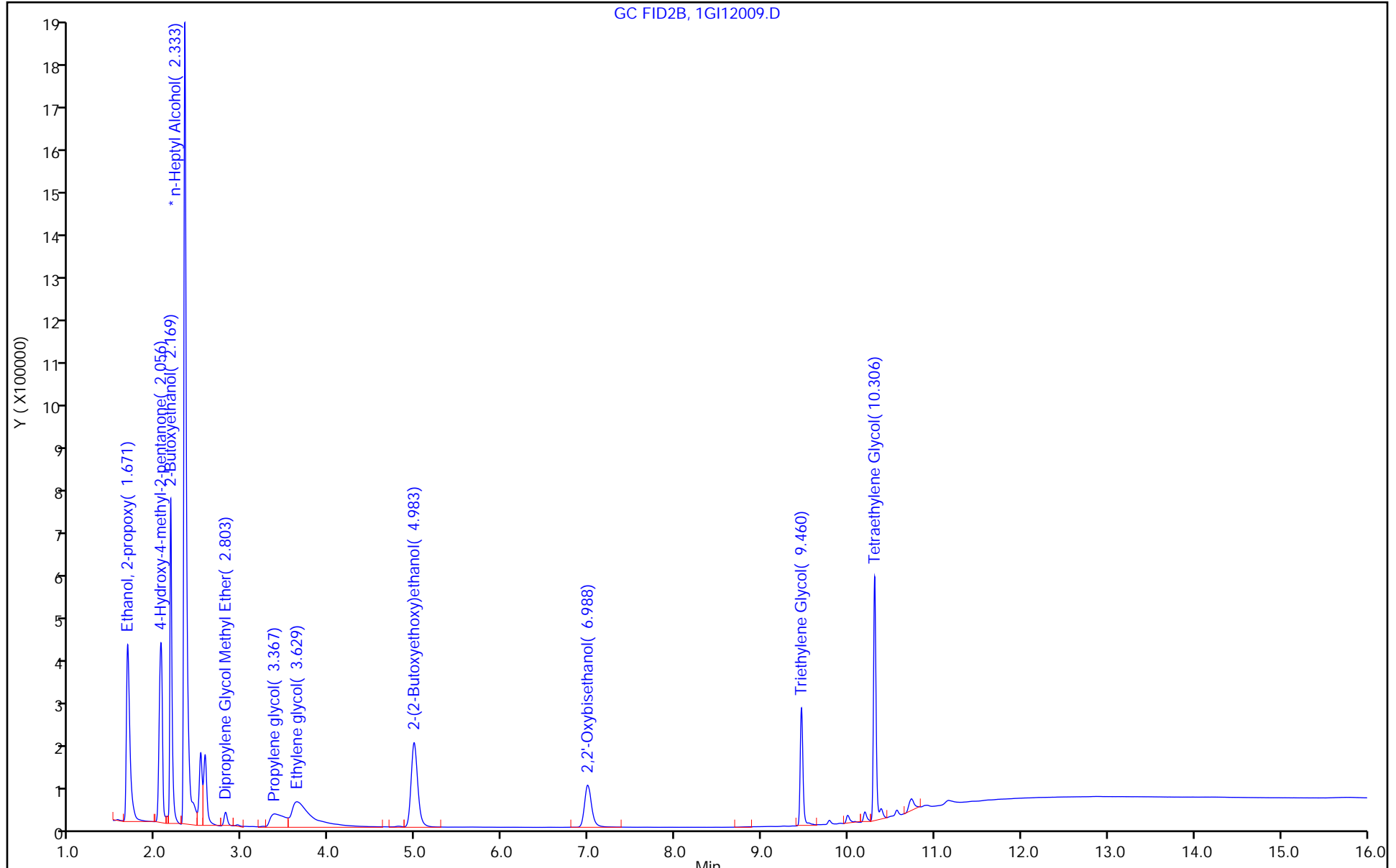
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12010.D  
 Lims ID: ic g3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 13-Sep-2023 14:49:58 ALS Bottle#: 0 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089041-010  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 14-Sep-2023 10:59:33 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1643

First Level Reviewer: AR8P Date: 13-Sep-2023 16:19:31

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.670	1.671	-0.001	660199	10.0	9.21	
2 4-Hydroxy-4-methyl-2-pentanone						
2.058	2.056	0.002	591297	10.0	9.19	
3 2-Butoxyethanol						
2.167	2.169	-0.002	685174	10.0	9.08	
* 4 n-Heptyl Alcohol						
2.329	2.333	-0.004	5120933	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.804	2.803	0.001	46973	10.0	9.26	
6 Propylene glycol						
3.376	3.367	0.009	180516	10.0	8.69	
7 Ethylene glycol						
3.631	3.629	0.002	515612	10.0	9.81	
8 2-(2-Butoxyethoxy)ethanol						
4.983	4.983	0.000	585442	10.0	9.50	
9 2,2'-Oxybisethanol						
6.992	6.988	0.004	296552	10.0	8.81	
10 Triethylene Glycol						
9.460	9.460	0.000	350111	10.0	8.33	
11 Tetraethylene Glycol						
10.306	10.306	0.000	639551	20.0	17.4	

**QC Flag Legend**  
Processing Flags

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 5.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent



Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12010.D

Injection Date: 13-Sep-2023 14:49:58

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g3

Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul

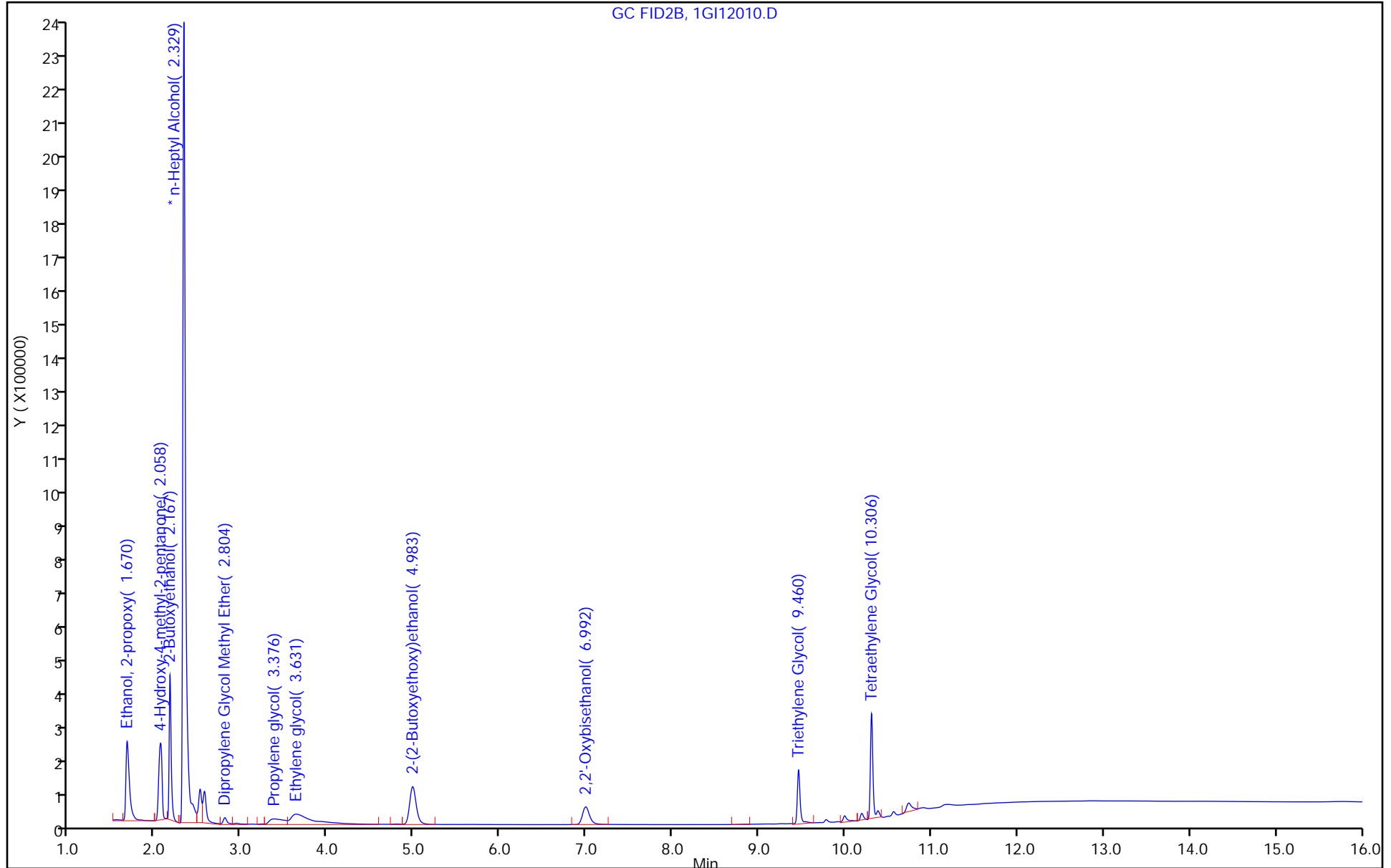
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12011.D  
 Lims ID: ic g2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 13-Sep-2023 15:12:59 ALS Bottle#: 0 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089041-011  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 14-Sep-2023 10:59:34 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1643

First Level Reviewer: AR8P Date: 13-Sep-2023 16:06:37

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.672	1.671	0.001	322395	5.00	4.65	
2 4-Hydroxy-4-methyl-2-pentanone						
2.054	2.056	-0.002	309390	5.00	5.39	M
3 2-Butoxyethanol						
2.169	2.169	0.000	362830	5.00	5.45	M
* 4 n-Heptyl Alcohol						
2.333	2.333	0.000	4051026	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether						
2.802	2.803	-0.001	23086	5.00	5.38	
6 Propylene glycol						
3.370	3.367	0.003	96518	5.00	5.45	
7 Ethylene glycol						
3.630	3.629	0.001	221287	5.00	5.32	
8 2-(2-Butoxyethoxy)ethanol						
4.983	4.983	0.000	294698	5.00	5.40	
9 2,2'-Oxybisethanol						
6.993	6.988	0.005	162655	5.00	5.49	
10 Triethylene Glycol						
9.461	9.460	0.001	205483	5.00	5.14	
11 Tetraethylene Glycol						
10.305	10.306	-0.001	336907	10.0	9.74	

QC Flag Legend  
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 2.50

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Euofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12011.D

Injection Date: 13-Sep-2023 15:12:59

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g2

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

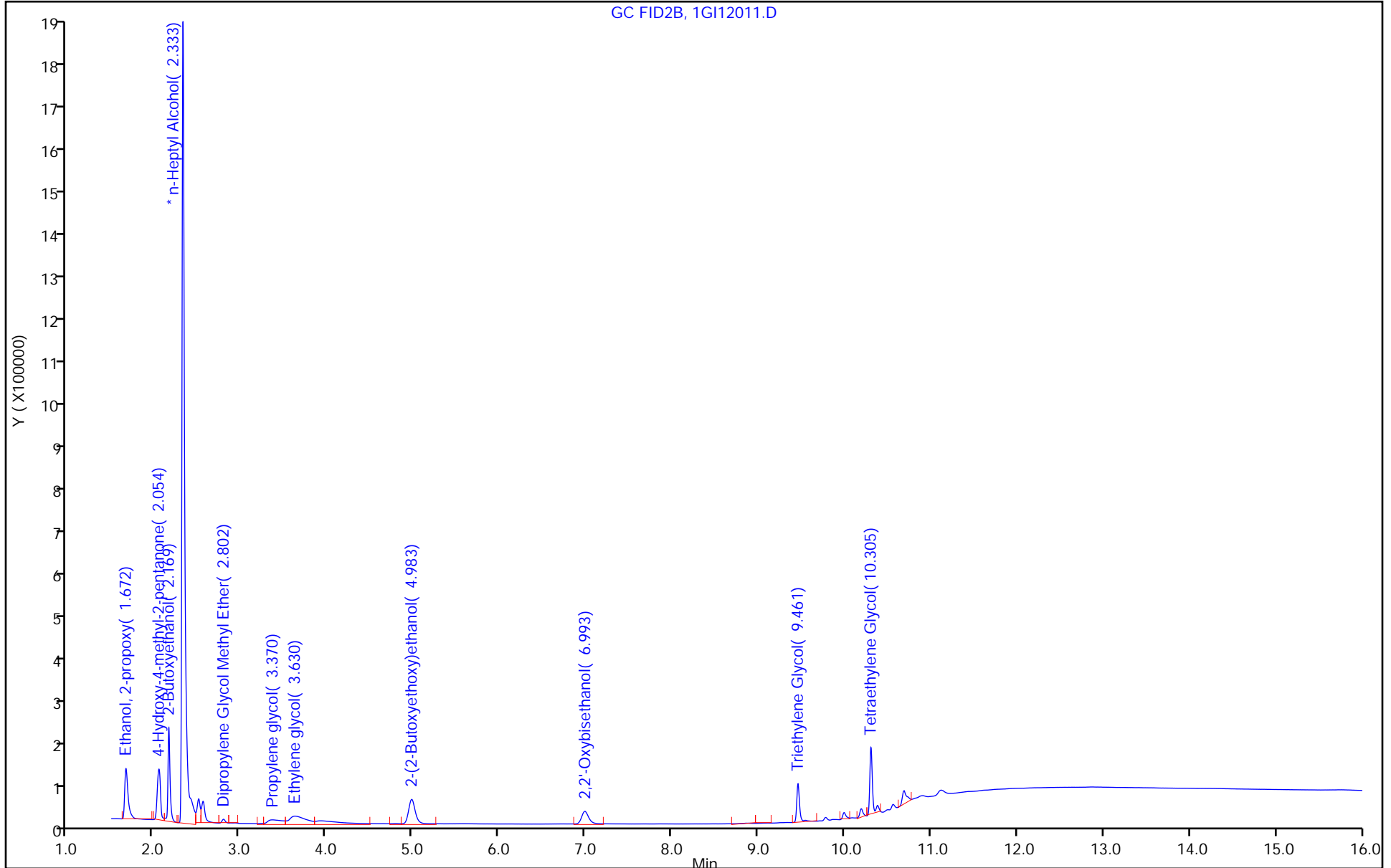
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

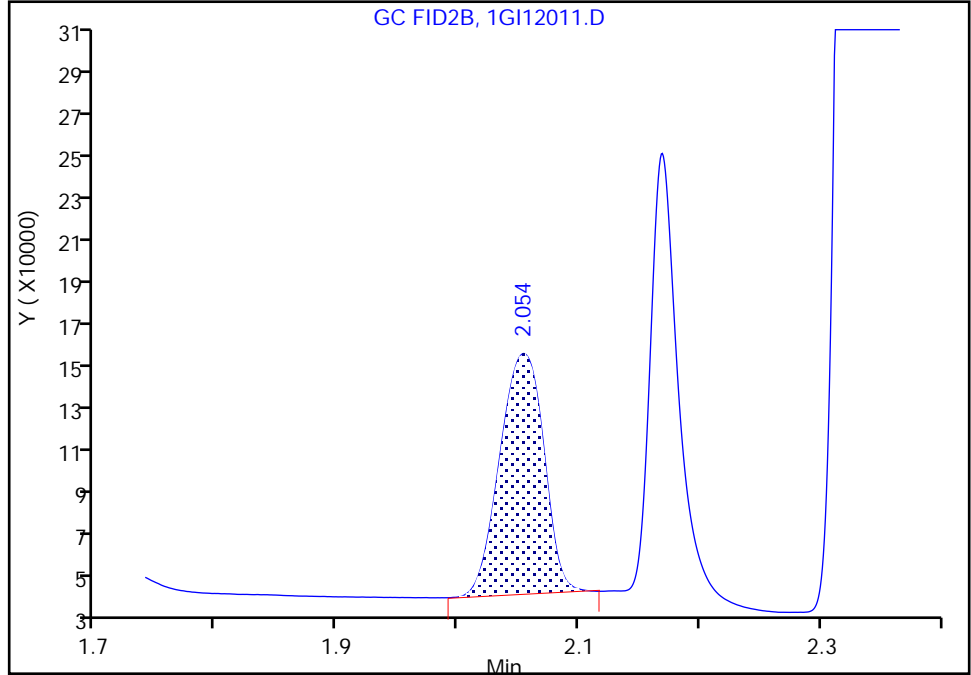
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12011.D  
Injection Date: 13-Sep-2023 15:12:59 Instrument ID: CVGG2  
Lims ID: ic g2  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

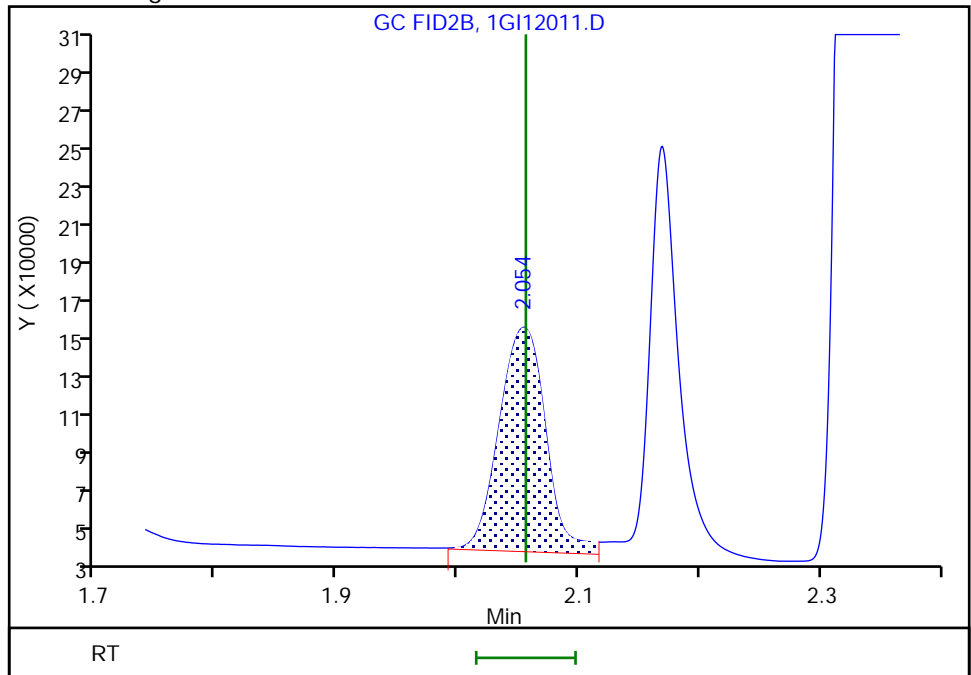
RT: 2.05  
Area: 285784  
Amount: 5.293027  
Amount Units: ug/ml

Processing Integration Results



RT: 2.05  
Area: 309390  
Amount: 5.387018  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:06:34 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

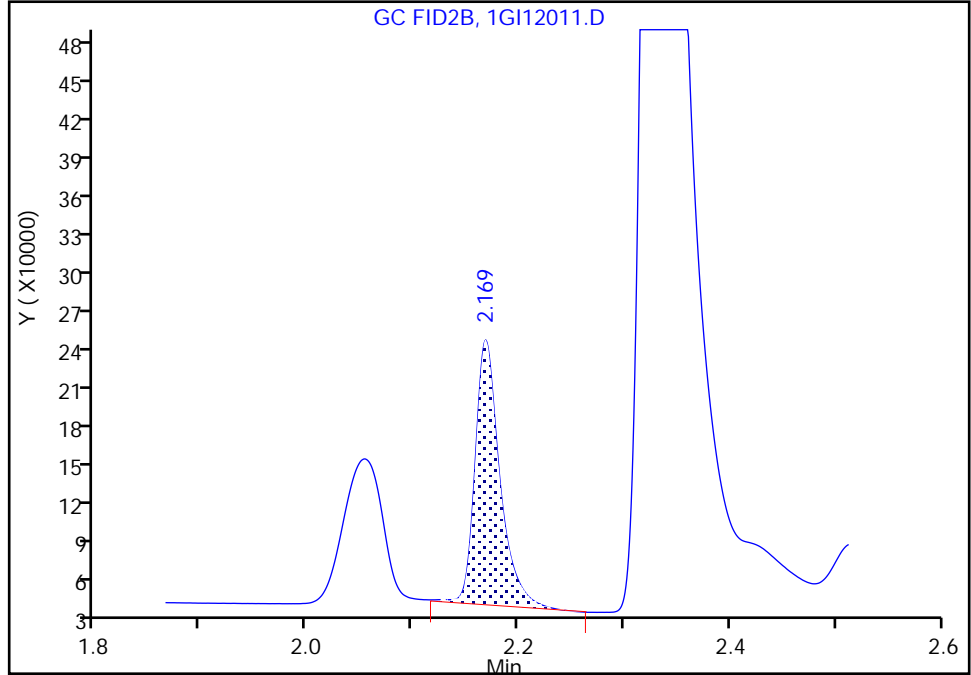
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12011.D  
Injection Date: 13-Sep-2023 15:12:59 Instrument ID: CVGG2  
Lims ID: ic g2  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

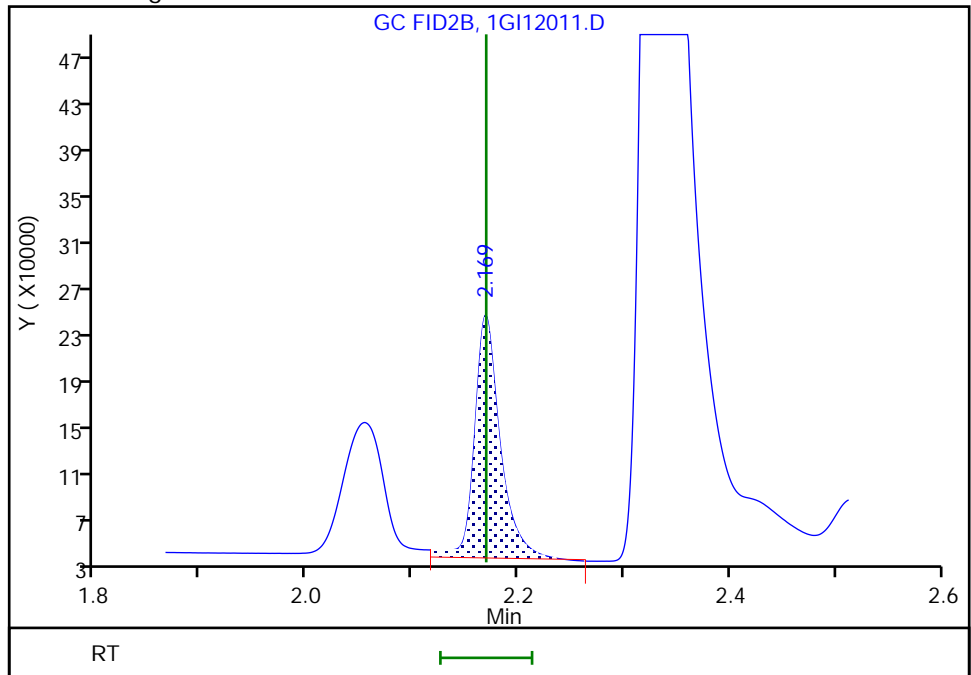
RT: 2.17  
Area: 337882  
Amount: 4.188148  
Amount Units: ug/ml

Processing Integration Results



RT: 2.17  
Area: 362830  
Amount: 5.447986  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:06:34 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

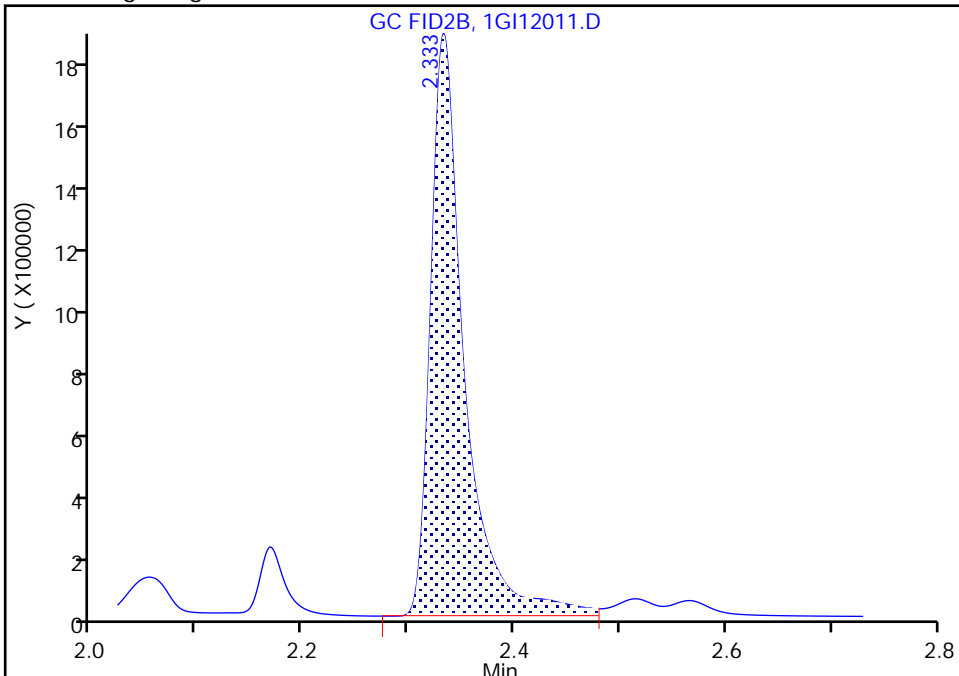
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12011.D  
Injection Date: 13-Sep-2023 15:12:59 Instrument ID: CVGG2  
Lims ID: ic g2  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

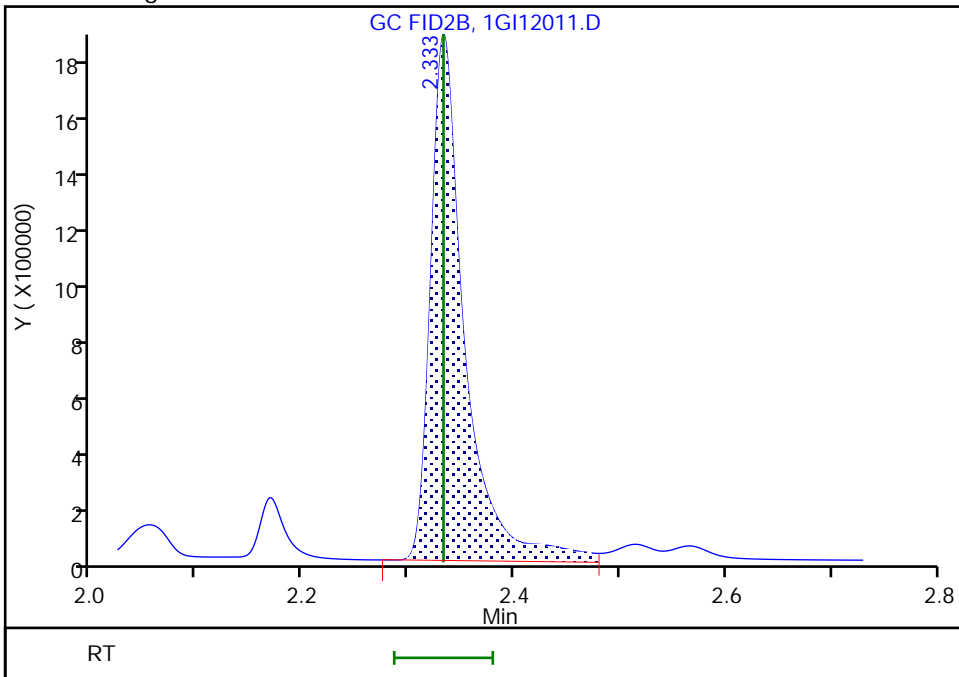
Processing Integration Results

RT: 2.33  
Area: 4027066  
Amount: 50.000000  
Amount Units: ug/ml



Manual Integration Results

RT: 2.33  
Area: 4051026  
Amount: 50.000000  
Amount Units: ug/ml



Reviewer: AR8P, 13-Sep-2023 16:06:34 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Lims ID: ic g1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 13-Sep-2023 15:35:58 ALS Bottle#: 0 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089041-012  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 14-Sep-2023 10:59:35 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1643

First Level Reviewer: AR8P Date: 13-Sep-2023 16:06:24

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.673	1.671	0.002	185609	2.00	0.8796	
2 4-Hydroxy-4-methyl-2-pentanone						
2.059	2.056	0.003	184449	2.00	1.71	M
3 2-Butoxyethanol						
2.168	2.169	-0.001	211417	2.00	1.73	M
* 4 n-Heptyl Alcohol						
2.329	2.333	-0.004	4779288	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.805	2.803	0.002	12520	2.00	1.95	
6 Propylene glycol						
3.370	3.367	0.003	53976	2.00	1.90	
7 Ethylene glycol						
3.638	3.629	0.009	116294	2.00	2.37	
8 2-(2-Butoxyethoxy)ethanol						
4.983	4.983	0.000	167009	2.00	1.67	
9 2,2'-Oxybisethanol						
6.991	6.988	0.003	96197	2.00	1.75	
10 Triethylene Glycol						
9.460	9.460	0.000	119511	2.00	0.4788	
11 Tetraethylene Glycol						
10.307	10.306	0.001	197899	4.00	2.08	

QC Flag Legend  
Processing Flags



Review Flags

M - Manually Integrated

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 1.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D

Injection Date: 13-Sep-2023 15:35:58

Instrument ID: CVGG2

Operator ID:

Lims ID: ic g1

Worklist Smp#: 12

Client ID:

Injection Vol: 1.0 ul

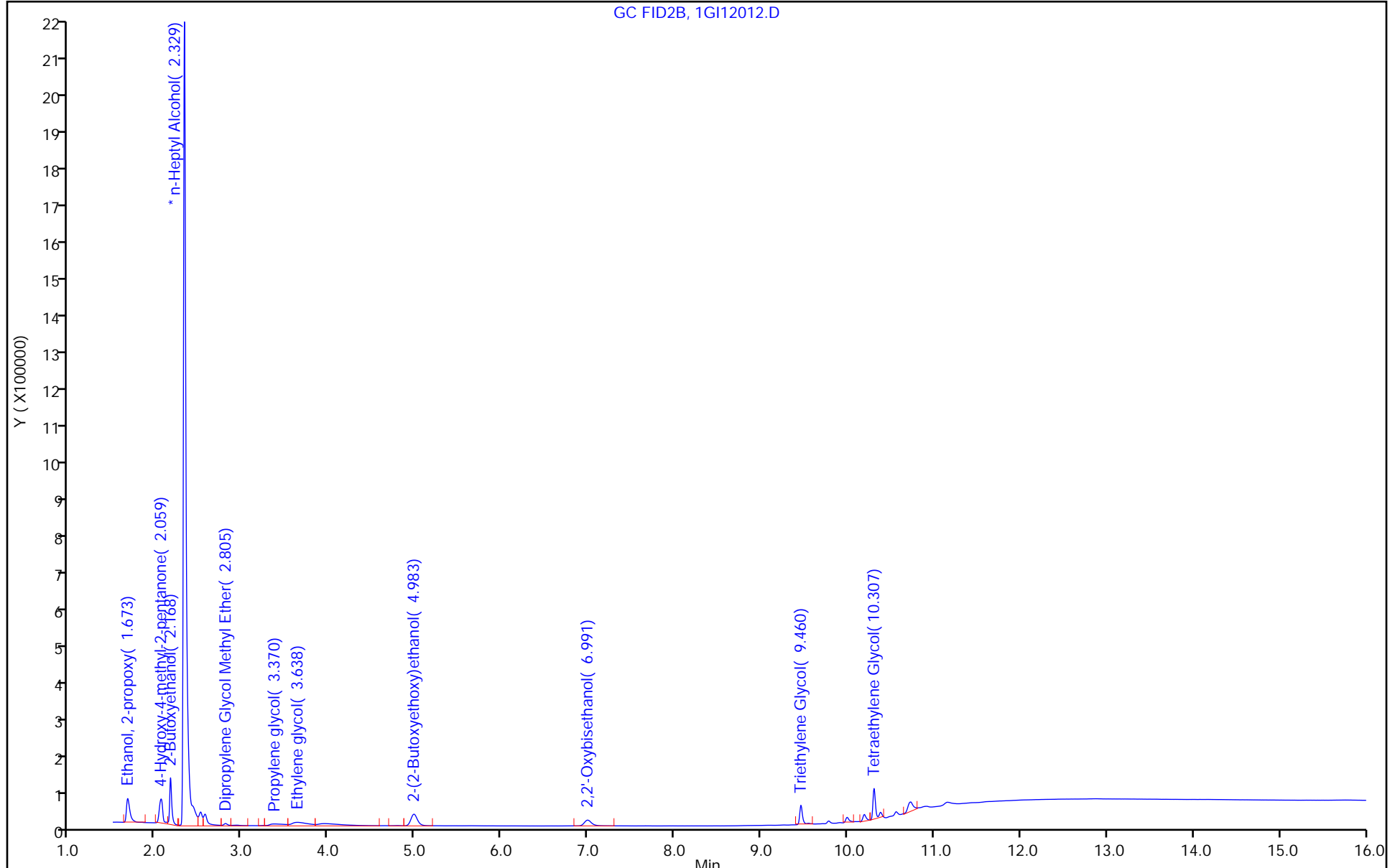
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

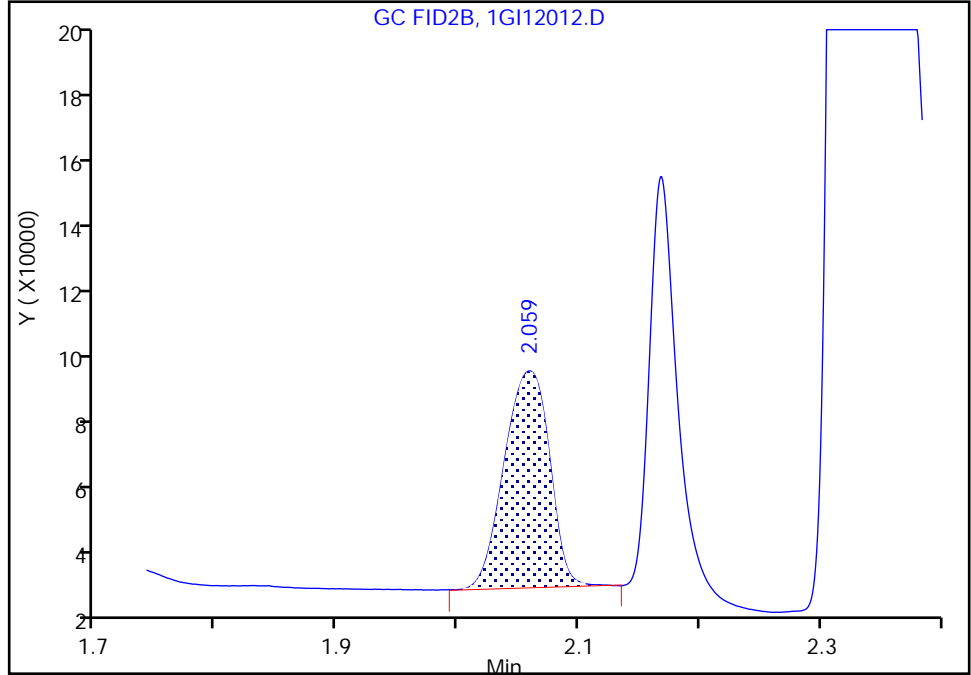
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G112012.D  
Injection Date: 13-Sep-2023 15:35:58 Instrument ID: CVGG2  
Lims ID: ic g1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

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

Signal: 1

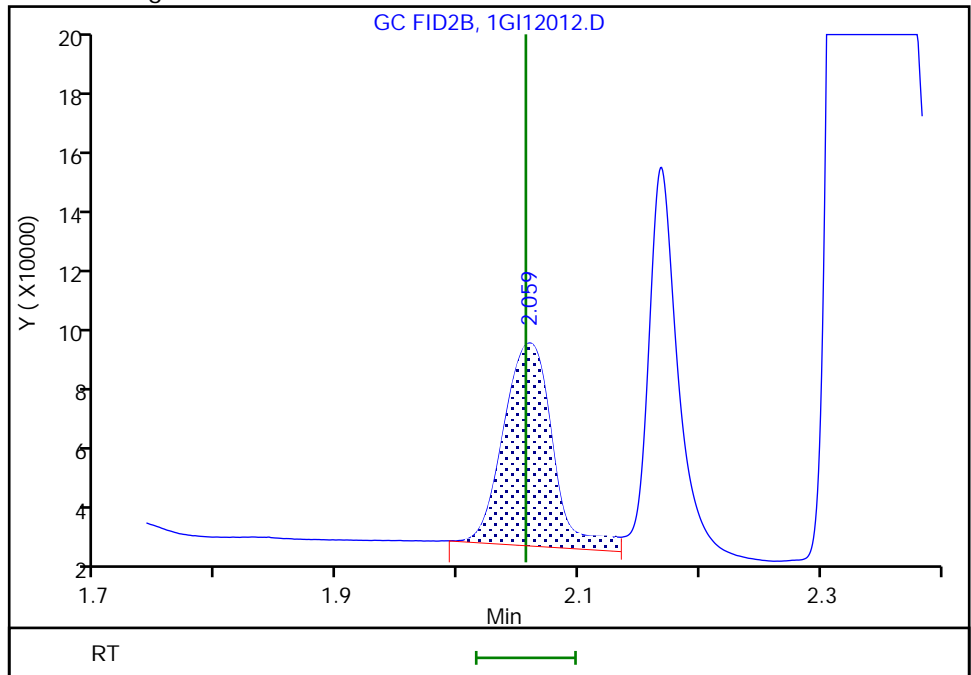
RT: 2.06  
Area: 166024  
Amount: 1.777892  
Amount Units: ug/ml

Processing Integration Results



RT: 2.06  
Area: 184449  
Amount: 1.709898  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:06:20 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

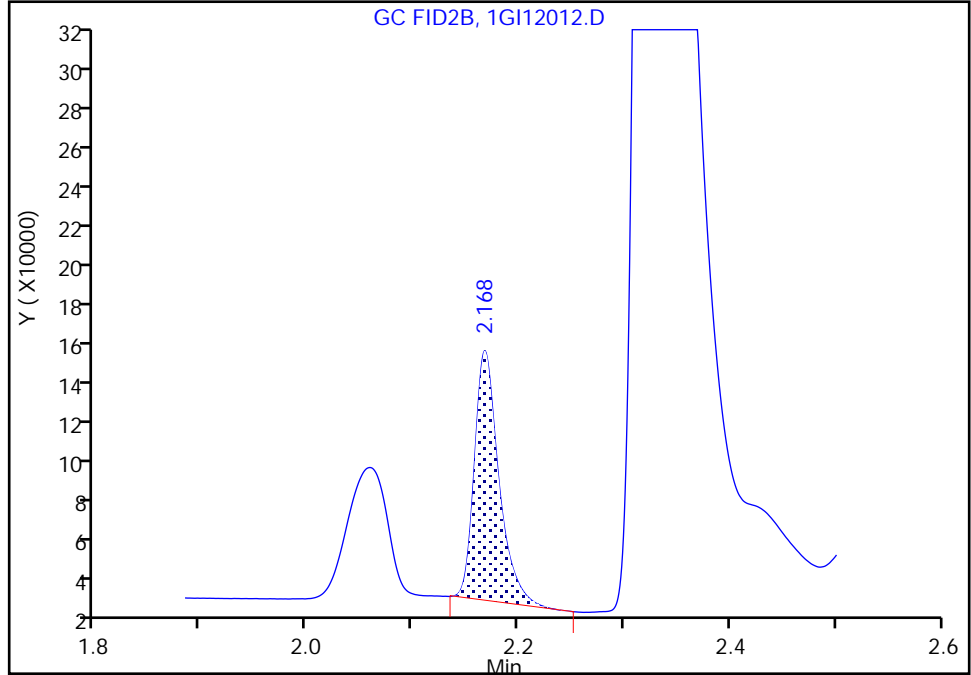
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
Injection Date: 13-Sep-2023 15:35:58 Instrument ID: CVGG2  
Lims ID: ic g1  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

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

Signal: 1

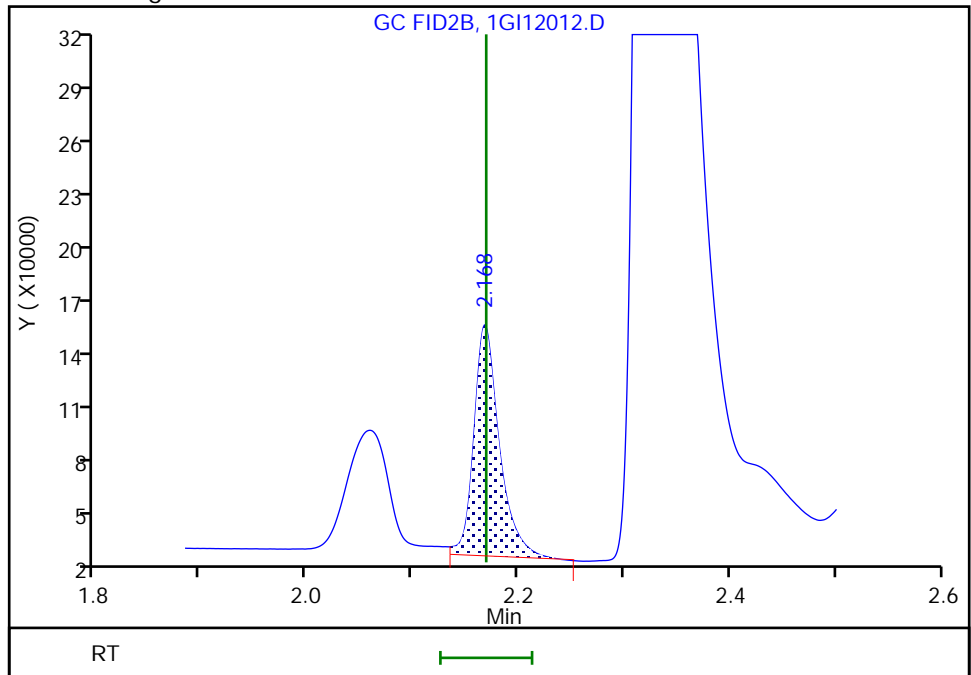
RT: 2.17  
Area: 196612  
Amount: 0.009394  
Amount Units: ug/ml

Processing Integration Results



RT: 2.17  
Area: 211417  
Amount: 1.729017  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 13-Sep-2023 16:06:20 -04:00:00 (UTC)

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Calibration

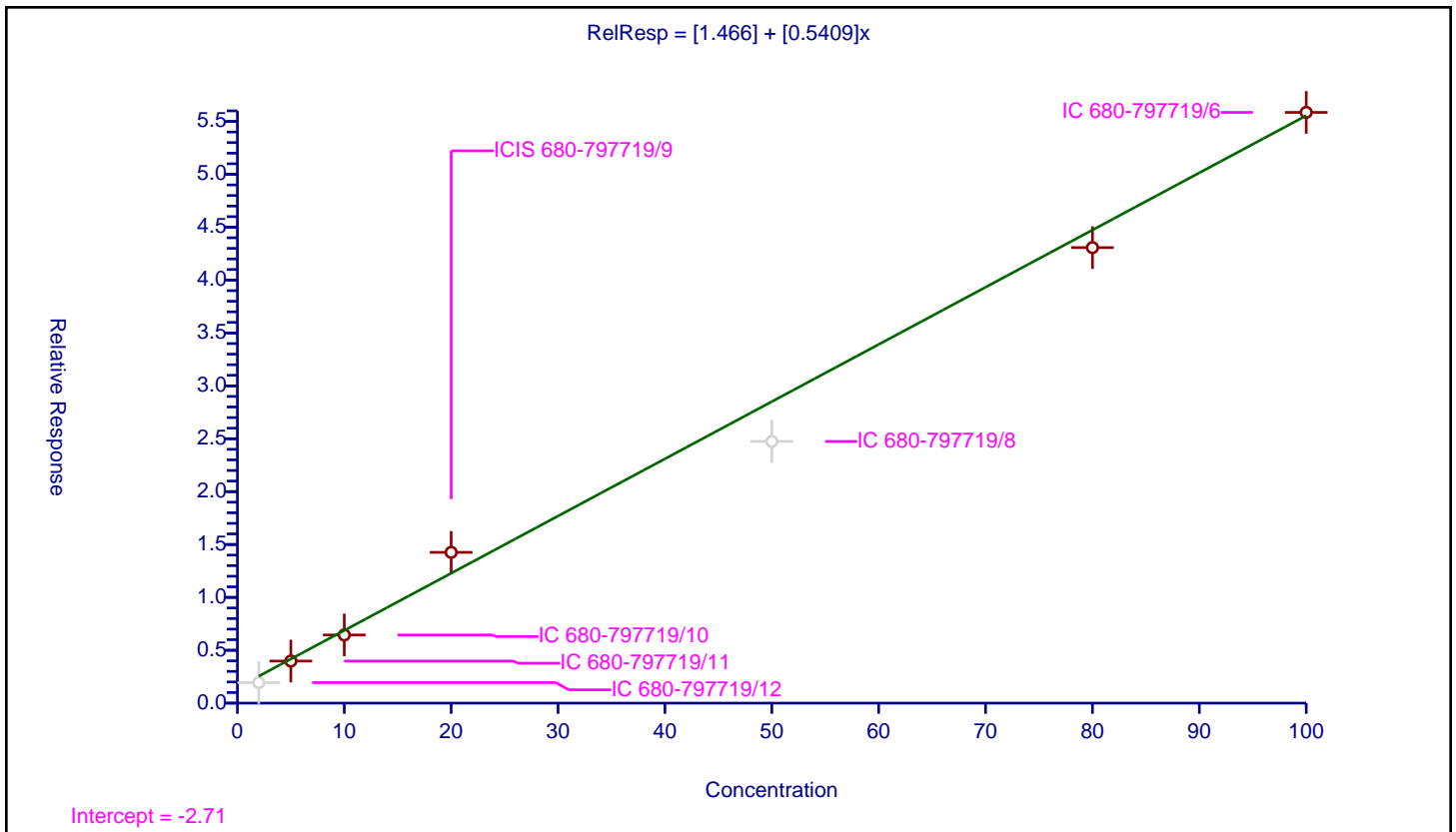
/ Ethanol, 2-propoxy

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

Curve Coefficients	
Intercept:	1.466
Slope:	0.5409

Error Coefficients	
Standard Error:	3940000
Relative Standard Error:	12.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	1.941806	50.0	4779288.0	0.970903	N
2	IC 680-797719/11	5.0	3.979177	50.0	4051026.0	0.795835	Y
3	IC 680-797719/10	10.0	6.446081	50.0	5120933.0	0.644608	Y
4	ICIS 680-797719/9	20.0	14.258965	50.0	3951237.0	0.712948	Y
5	IC 680-797719/8	50.0	24.748	50.0	5051194.0	0.49496	N
6	IC 680-797719/7	80.0	43.074109	50.0	4697511.0	0.538426	Y
7	IC 680-797719/6	100.0	55.855421	50.0	4771049.0	0.558554	Y



Calibration

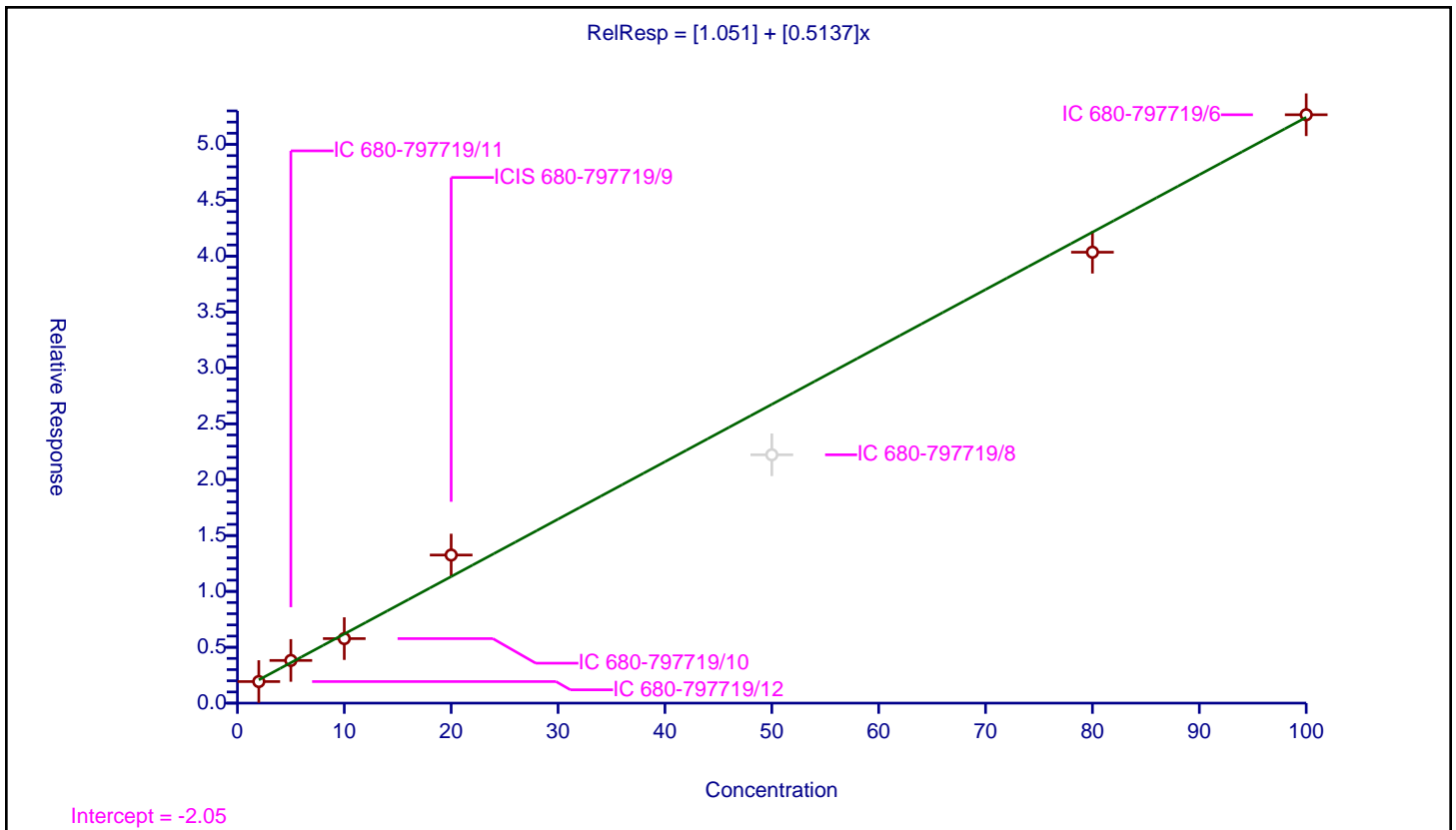
/ 4-Hydroxy-4-methyl-2-pentanone

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

Curve Coefficients	
Intercept:	1.051
Slope:	0.5137

Error Coefficients	
Standard Error:	3210000
Relative Standard Error:	13.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	1.92967	50.0	4779288.0	0.964835	Y
2	IC 680-797719/11	5.0	3.818662	50.0	4051026.0	0.763732	Y
3	IC 680-797719/10	10.0	5.773333	50.0	5120933.0	0.577333	Y
4	ICIS 680-797719/9	20.0	13.252888	50.0	3951237.0	0.662644	Y
5	IC 680-797719/8	50.0	22.225131	50.0	5051194.0	0.444503	N
6	IC 680-797719/7	80.0	40.354349	50.0	4697511.0	0.504429	Y
7	IC 680-797719/6	100.0	52.654898	50.0	4771049.0	0.526549	Y



Calibration

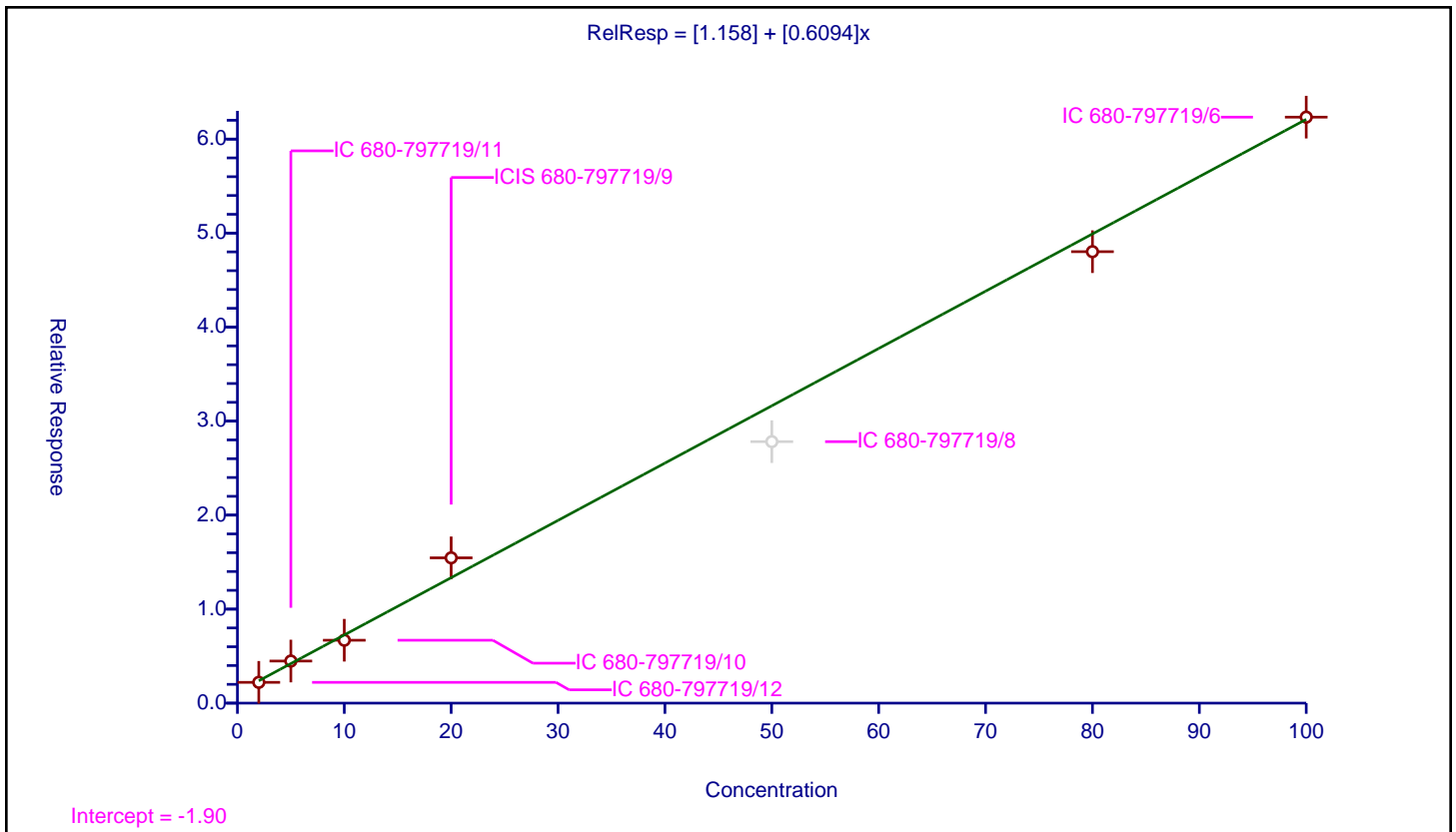
/ 2-Butoxyethanol

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

Curve Coefficients	
Intercept:	1.158
Slope:	0.6094

Error Coefficients	
Standard Error:	3800000
Relative Standard Error:	12.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	2.211804	50.0	4779288.0	1.105902	Y
2	IC 680-797719/11	5.0	4.478248	50.0	4051026.0	0.89565	Y
3	IC 680-797719/10	10.0	6.689933	50.0	5120933.0	0.668993	Y
4	ICIS 680-797719/9	20.0	15.456299	50.0	3951237.0	0.772815	Y
5	IC 680-797719/8	50.0	27.813562	50.0	5051194.0	0.556271	N
6	IC 680-797719/7	80.0	48.025103	50.0	4697511.0	0.600314	Y
7	IC 680-797719/6	100.0	62.333053	50.0	4771049.0	0.623331	Y



**Calibration**

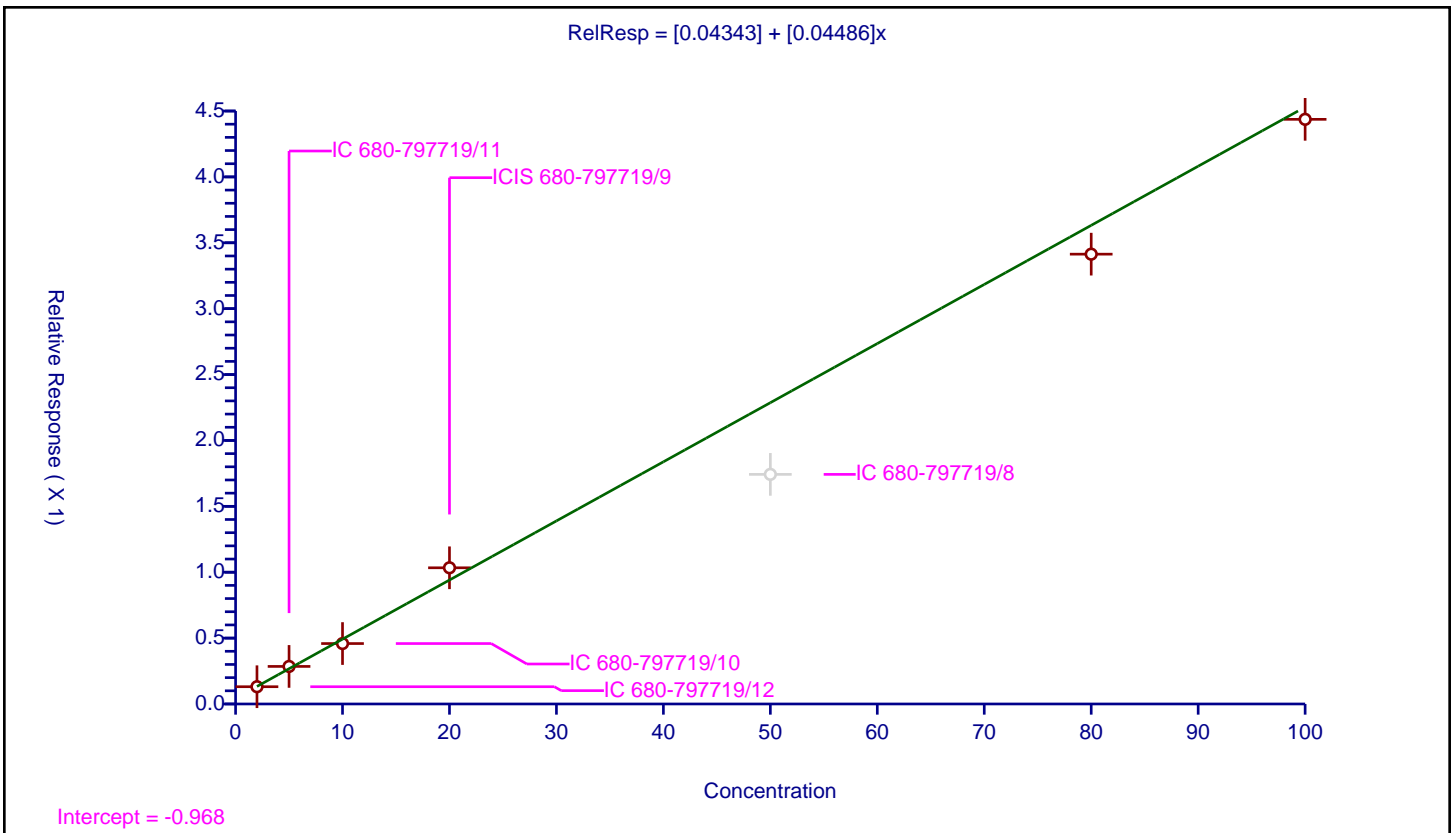
**/ Dipropylene Glycol Methyl Ether**

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

Curve Coefficients	
<b>Intercept:</b>	0.04343
<b>Slope:</b>	0.04486

Error Coefficients	
<b>Standard Error:</b>	270000
<b>Relative Standard Error:</b>	8.2
<b>Correlation Coefficient:</b>	0.998
<b>Coefficient of Determination (Adjusted):</b>	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	0.130982	50.0	4779288.0	0.065491	Y
2	IC 680-797719/11	5.0	0.28494	50.0	4051026.0	0.056988	Y
3	IC 680-797719/10	10.0	0.458637	50.0	5120933.0	0.045864	Y
4	ICIS 680-797719/9	20.0	1.033676	50.0	3951237.0	0.051684	Y
5	IC 680-797719/8	50.0	1.742529	50.0	5051194.0	0.034851	N
6	IC 680-797719/7	80.0	3.413638	50.0	4697511.0	0.04267	Y
7	IC 680-797719/6	100.0	4.436802	50.0	4771049.0	0.044368	Y





**Calibration**

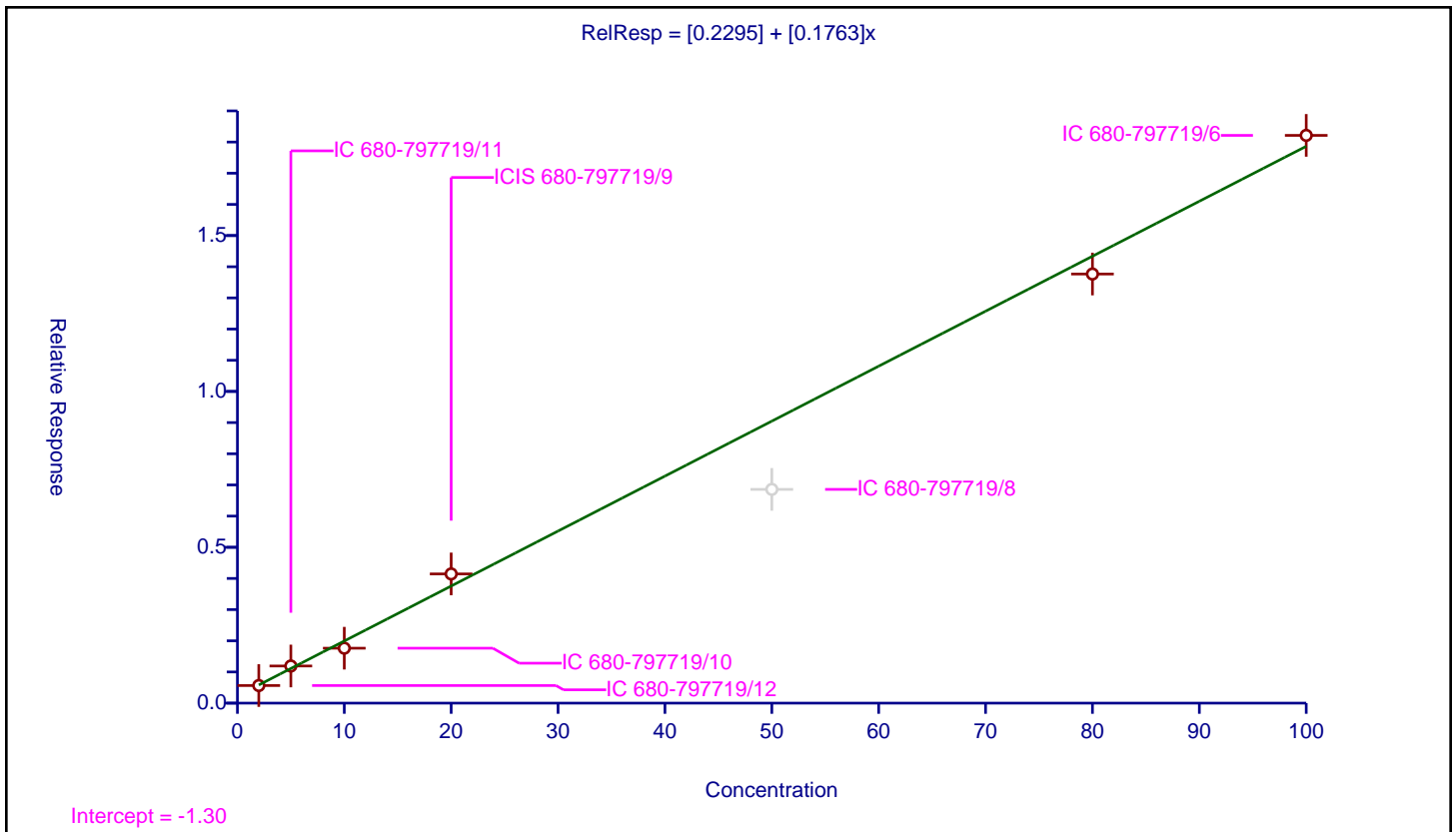
**/ Propylene glycol**

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

Curve Coefficients	
Intercept:	0.2295
Slope:	0.1763

Error Coefficients	
Standard Error:	1100000
Relative Standard Error:	10.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	0.564687	50.0	4779288.0	0.282343	Y
2	IC 680-797719/11	5.0	1.191278	50.0	4051026.0	0.238256	Y
3	IC 680-797719/10	10.0	1.76253	50.0	5120933.0	0.176253	Y
4	ICIS 680-797719/9	20.0	4.145385	50.0	3951237.0	0.207269	Y
5	IC 680-797719/8	50.0	6.857497	50.0	5051194.0	0.13715	N
6	IC 680-797719/7	80.0	13.766056	50.0	4697511.0	0.172076	Y
7	IC 680-797719/6	100.0	18.213825	50.0	4771049.0	0.182138	Y



Calibration

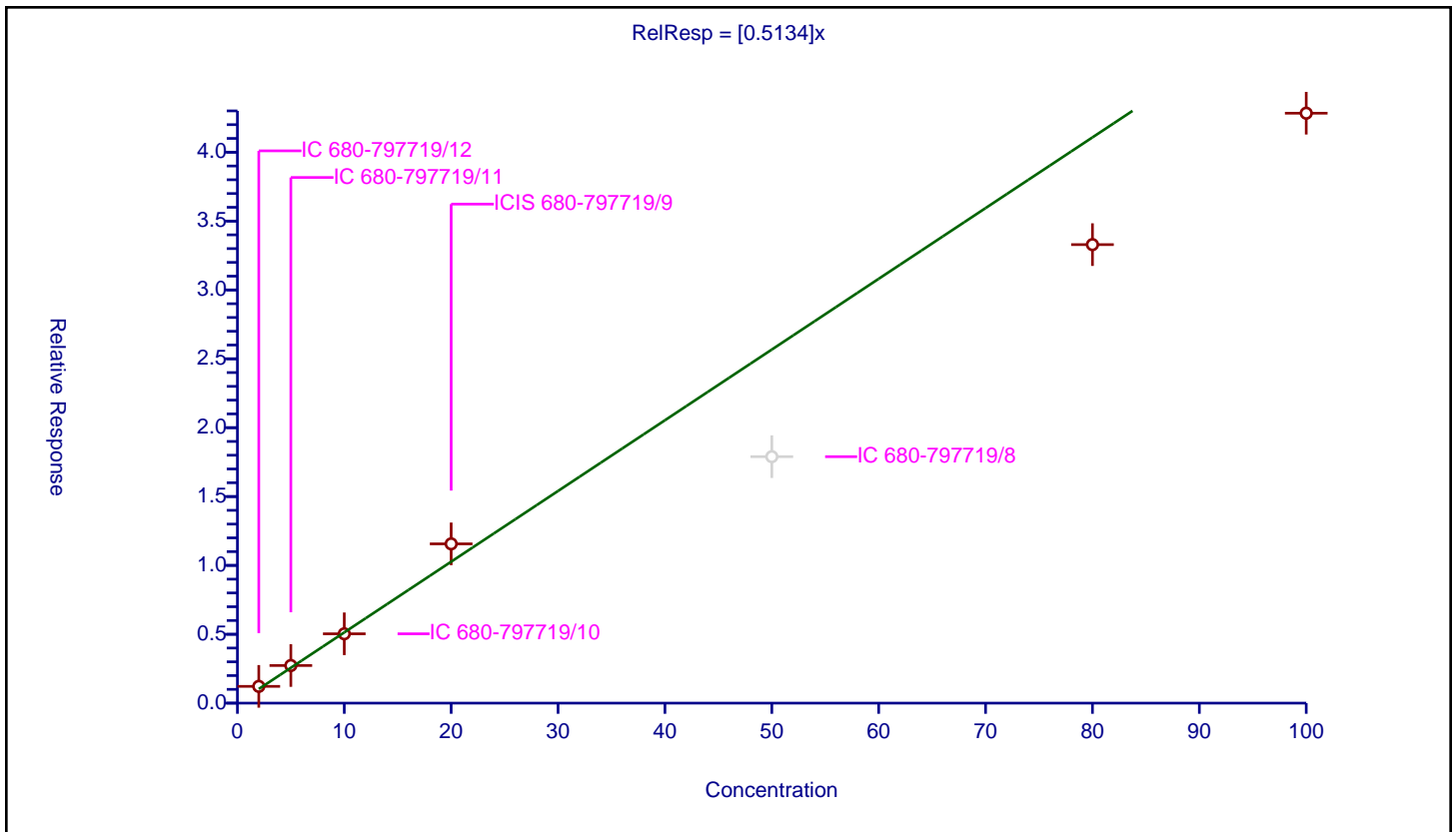
/ Ethylene glycol

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

Curve Coefficients	
Intercept:	0
Slope:	0.5134

Error Coefficients	
Standard Error:	2350000
Relative Standard Error:	15.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.960

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	1.216646	50.0	4779288.0	0.608323	Y
2	IC 680-797719/11	5.0	2.731246	50.0	4051026.0	0.546249	Y
3	IC 680-797719/10	10.0	5.034356	50.0	5120933.0	0.503436	Y
4	ICIS 680-797719/9	20.0	11.564353	50.0	3951237.0	0.578218	Y
5	IC 680-797719/8	50.0	17.893255	50.0	5051194.0	0.357865	N
6	IC 680-797719/7	80.0	33.29046	50.0	4697511.0	0.416131	Y
7	IC 680-797719/6	100.0	42.832394	50.0	4771049.0	0.428324	Y



Calibration

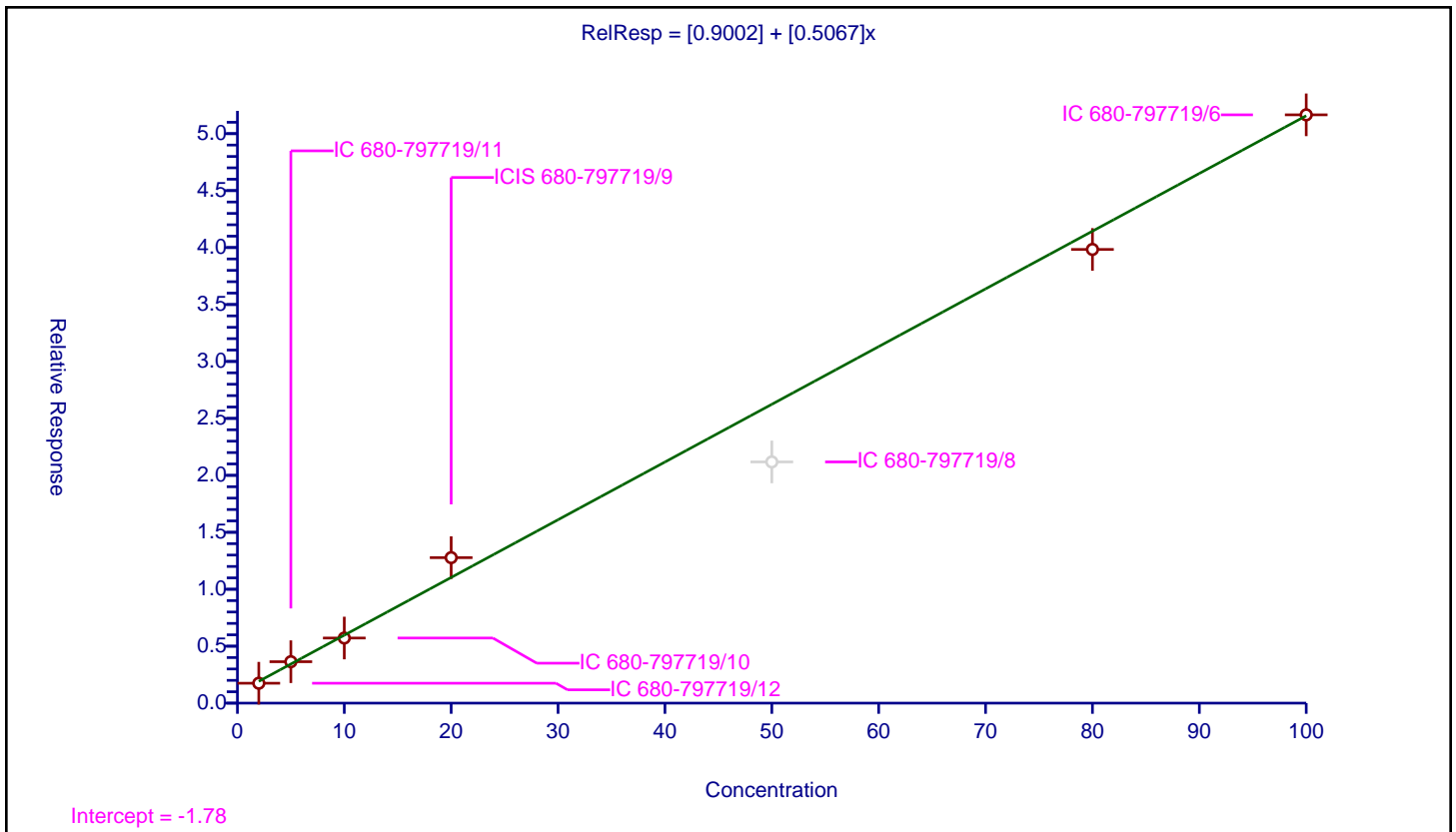
/ 2-(2-Butoxyethoxy)ethanol

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

Curve Coefficients	
Intercept:	0.9002
Slope:	0.5067

Error Coefficients	
Standard Error:	3150000
Relative Standard Error:	12.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	1.747216	50.0	4779288.0	0.873608	Y
2	IC 680-797719/11	5.0	3.637325	50.0	4051026.0	0.727465	Y
3	IC 680-797719/10	10.0	5.716165	50.0	5120933.0	0.571617	Y
4	ICIS 680-797719/9	20.0	12.774038	50.0	3951237.0	0.638702	Y
5	IC 680-797719/8	50.0	21.178676	50.0	5051194.0	0.423574	N
6	IC 680-797719/7	80.0	39.835724	50.0	4697511.0	0.497947	Y
7	IC 680-797719/6	100.0	51.653399	50.0	4771049.0	0.516534	Y



Calibration

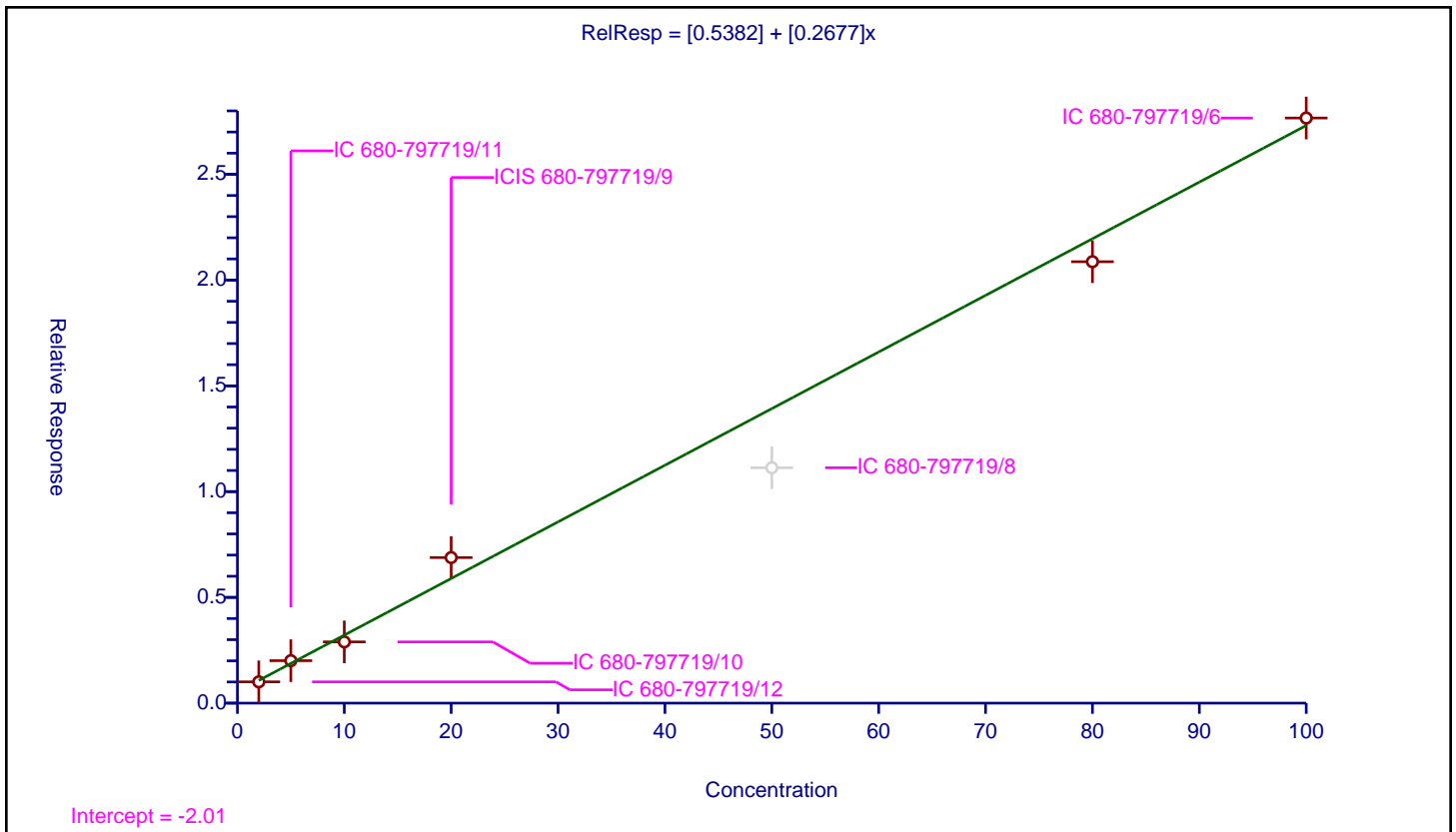
/ 2,2'-Oxybisethanol

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

Curve Coefficients	
Intercept:	0.5382
Slope:	0.2677

Error Coefficients	
Standard Error:	1680000
Relative Standard Error:	13.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	1.006395	50.0	4779288.0	0.503197	Y
2	IC 680-797719/11	5.0	2.007578	50.0	4051026.0	0.401516	Y
3	IC 680-797719/10	10.0	2.895488	50.0	5120933.0	0.289549	Y
4	ICIS 680-797719/9	20.0	6.881491	50.0	3951237.0	0.344075	Y
5	IC 680-797719/8	50.0	11.12825	50.0	5051194.0	0.222565	N
6	IC 680-797719/7	80.0	20.869765	50.0	4697511.0	0.260872	Y
7	IC 680-797719/6	100.0	27.661967	50.0	4771049.0	0.27662	Y



Calibration

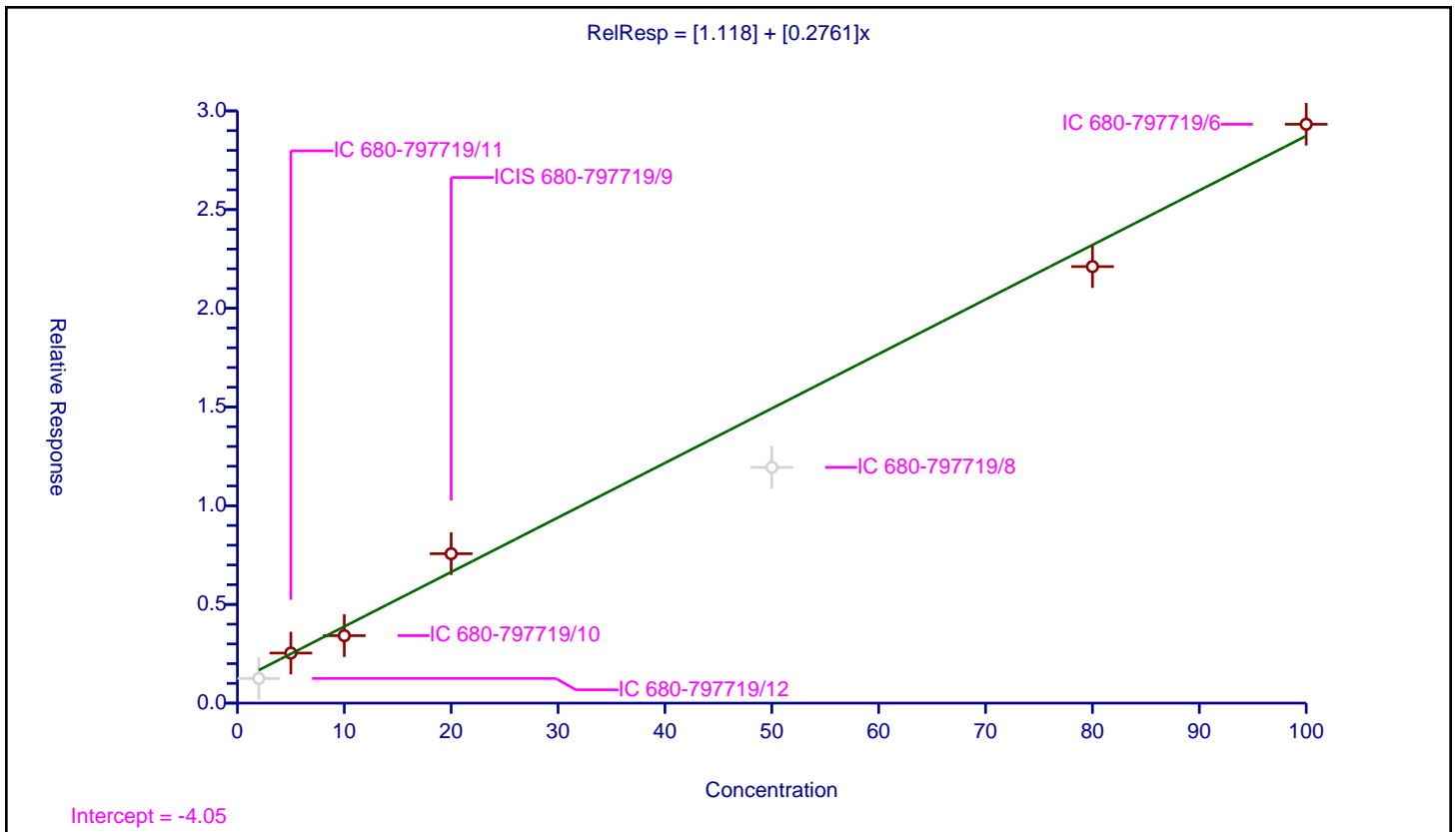
/ Triethylene Glycol

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

Curve Coefficients	
Intercept:	1.118
Slope:	0.2761

Error Coefficients	
Standard Error:	2050000
Relative Standard Error:	14.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	2.0	1.250301	50.0	4779288.0	0.625151	N
2	IC 680-797719/11	5.0	2.536185	50.0	4051026.0	0.507237	Y
3	IC 680-797719/10	10.0	3.41843	50.0	5120933.0	0.341843	Y
4	ICIS 680-797719/9	20.0	7.568718	50.0	3951237.0	0.378436	Y
5	IC 680-797719/8	50.0	11.944067	50.0	5051194.0	0.238881	N
6	IC 680-797719/7	80.0	22.112966	50.0	4697511.0	0.276412	Y
7	IC 680-797719/6	100.0	29.323122	50.0	4771049.0	0.293231	Y



**Calibration**

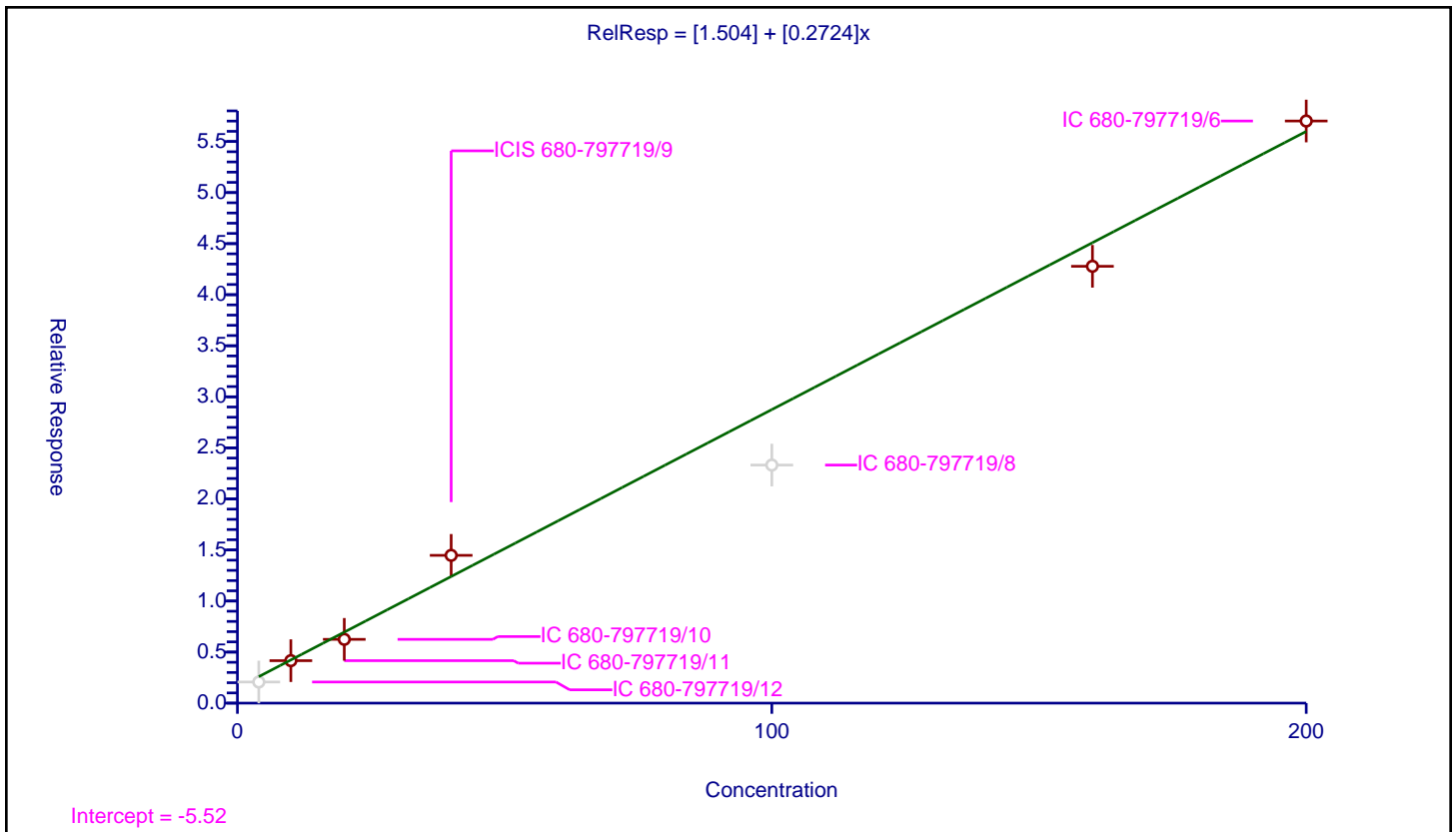
**/ Tetraethylene Glycol**

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

Curve Coefficients	
<b>Intercept:</b>	1.504
<b>Slope:</b>	0.2724

Error Coefficients	
<b>Standard Error:</b>	3980000
<b>Relative Standard Error:</b>	13.8
<b>Correlation Coefficient:</b>	0.996
<b>Coefficient of Determination (Adjusted):</b>	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-797719/12	4.0	2.070382	50.0	4779288.0	0.517595	N
2	IC 680-797719/11	10.0	4.158292	50.0	4051026.0	0.415829	Y
3	IC 680-797719/10	20.0	6.244477	50.0	5120933.0	0.312224	Y
4	ICIS 680-797719/9	40.0	14.471544	50.0	3951237.0	0.361789	Y
5	IC 680-797719/8	100.0	23.315765	50.0	5051194.0	0.233158	N
6	IC 680-797719/7	160.0	42.780187	50.0	4697511.0	0.267376	Y
7	IC 680-797719/6	200.0	57.009192	50.0	4771049.0	0.285046	Y



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 680-797719/13 Calibration Date: 09/13/2023 15:59  
 Instrument ID: CVGG2 Calib Start Date: 09/13/2023 13:17  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 09/13/2023 15:35  
 Lab File ID: 1GI12013.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin1		0.6445		21.1	20.0	5.6	20.0
4-Hydroxy-4-methyl-2-pentane	Lin1		0.5755		20.4	20.0	1.8	20.0
2-Butoxyethanol	Lin1		0.6872		20.7	20.0	3.3	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0499		21.3	20.0	6.5	20.0
Propylene glycol	Lin1		0.1901		20.3	20.0	1.3	20.0
Ethylene glycol	Ave	0.5134	0.5019		19.5	20.0	-2.3	20.0
2-(2-Butoxyethoxy)ethanol	Lin1		0.5882		21.4	20.0	7.2	20.0
2,2'-Oxybisethanol	Lin1		0.2946		20.0	20.0	0.0	20.0
Triethylene Glycol	Lin1		0.3348		20.2	20.0	1.0	20.0
Tetraethylene Glycol	Lin1		0.3115		40.2	40.0	0.6	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 680-797719/13 Calibration Date: 09/13/2023 15:59  
 Instrument ID: CVGG2 Calib Start Date: 09/13/2023 13:17  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 09/13/2023 15:35  
 Lab File ID: 1GI12013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.67	1.64	1.70
4-Hydroxy-4-methyl-2-pentanone	2.05	2.02	2.10
2-Butoxyethanol	2.17	2.13	2.21
Dipropylene Glycol Methyl Ether	2.80	2.75	2.86
Propylene glycol	3.36	3.30	3.43
Ethylene glycol	3.63	3.56	3.70
2-(2-Butoxyethoxy)ethanol	4.98	4.88	5.08
2,2'-Oxybisethanol	6.99	6.85	7.13
Triethylene Glycol	9.46	9.27	9.65
Tetraethylene Glycol	10.31	10.10	10.51



Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12013.D  
 Lims ID: icv gly  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 13-Sep-2023 15:59:04 ALS Bottle#: 0 Worklist Smp#: 13  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089041-013  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 14-Sep-2023 11:00:20 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1643

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

1 Ethanol, 2-propoxy	1.671	1.671	0.000	1148672	20.0	21.1
2 4-Hydroxy-4-methyl-2-pentanone	2.054	2.056	-0.002	1025716	20.0	20.4
3 2-Butoxyethanol	2.168	2.169	-0.001	1224720	20.0	20.7
* 4 n-Heptyl Alcohol	2.332	2.333	-0.001	4455751	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.802	2.803	-0.001	89017	20.0	21.3
6 Propylene glycol	3.364	3.367	-0.003	338813	20.0	20.3
7 Ethylene glycol	3.627	3.629	-0.002	894452	20.0	19.5
8 2-(2-Butoxyethoxy)ethanol	4.982	4.983	-0.001	1048327	20.0	21.4
9 2,2'-Oxybisethanol	6.987	6.988	-0.001	525116	20.0	20.0
10 Triethylene Glycol	9.460	9.460	0.000	596784	20.0	20.2
11 Tetraethylene Glycol	10.306	10.306	0.000	1110534	40.0	40.2

Reagents:

SG\_GlyICV\_00062 Amount Added: 10.00 Units: uL  
 SG\_GLY\_ISTD\_00129 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12013.D

Injection Date: 13-Sep-2023 15:59:04

Instrument ID: CVGG2

Operator ID:

Lims ID: icv gly

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

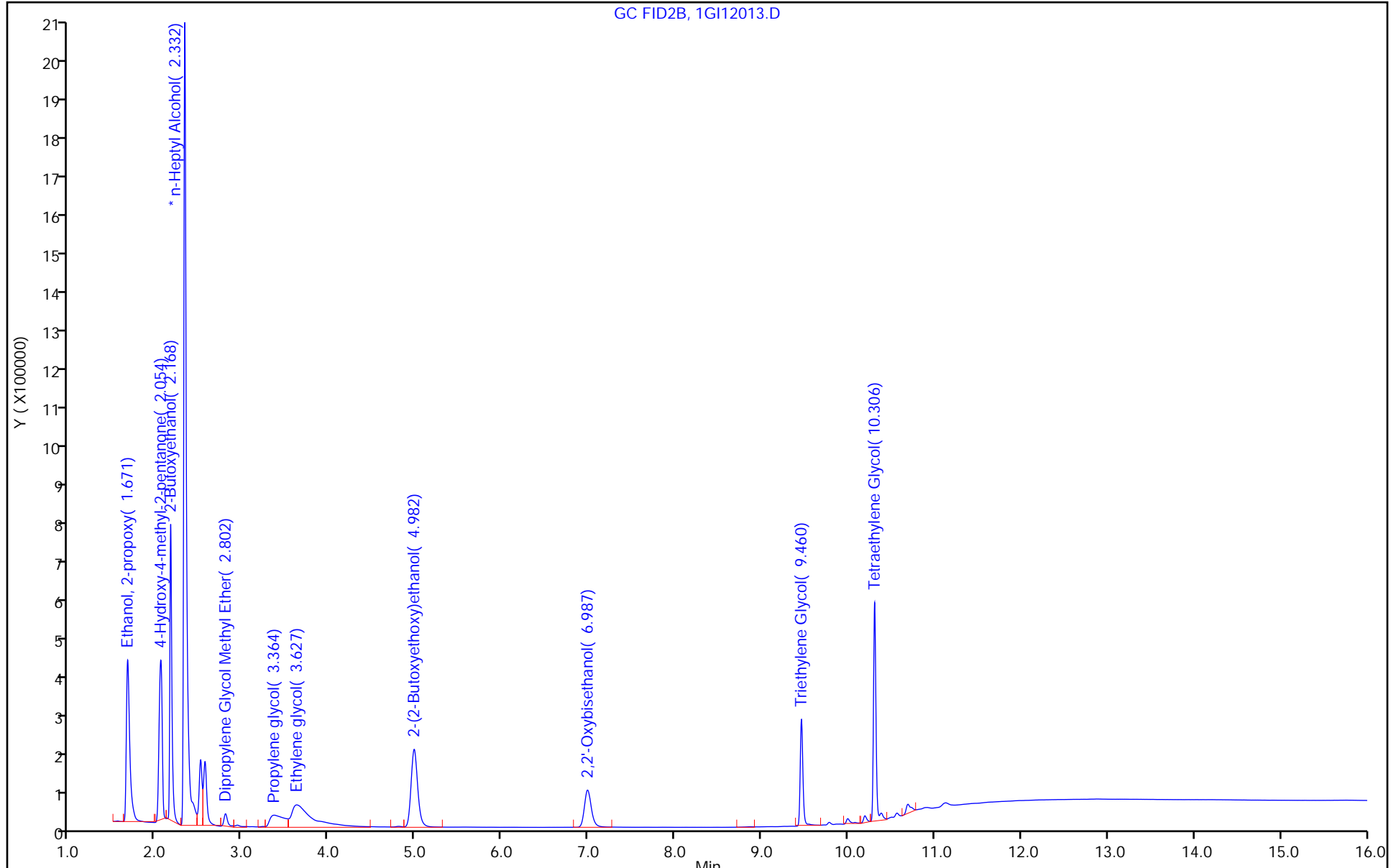
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 680-802272/4 Calibration Date: 10/12/2023 11:44  
 Instrument ID: CVGG2 Calib Start Date: 09/13/2023 13:17  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 09/13/2023 15:35  
 Lab File ID: 1IJ12004.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin1		0.6953		23.0	20.0	15.0	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin1		0.6658		23.9	20.0	19.4	20.0
2-Butoxyethanol	Lin1		0.7637		23.2	20.0	15.8	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0530		22.6	20.0	13.2	20.0
Propylene glycol	Lin1		0.0934		9.30	20.0	-53.5*	20.0
Ethylene glycol	Ave	0.5134	0.7254		28.3	20.0	41.3*	20.0
2-(2-Butoxyethoxy)ethanol	Lin1		0.5572		20.2	20.0	1.1	20.0
2,2'-Oxybisethanol	Lin1		0.2613		17.5	20.0	-12.5	20.0
Triethylene Glycol	Lin1		0.3773		23.3	20.0	16.4	20.0
Tetraethylene Glycol	Lin1		0.3438		45.0	40.0	12.4	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 680-802272/4 Calibration Date: 10/12/2023 11:44  
 Instrument ID: CVGG2 Calib Start Date: 09/13/2023 13:17  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 09/13/2023 15:35  
 Lab File ID: 1IJ12004.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.61	1.58	1.65
4-Hydroxy-4-methyl-2-pentanone	2.00	1.96	2.04
2-Butoxyethanol	2.12	2.08	2.17
Dipropylene Glycol Methyl Ether	2.73	2.67	2.78
Propylene glycol	3.37	3.30	3.44
Ethylene glycol	3.55	3.48	3.62
2-(2-Butoxyethoxy)ethanol	4.81	4.72	4.91
2,2'-Oxybisethanol	6.79	6.65	6.93
Triethylene Glycol	9.39	9.20	9.58
Tetraethylene Glycol	10.25	10.04	10.45

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1I12004.D  
 Lims ID: ccvis g4  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 12-Oct-2023 11:44:28 ALS Bottle#: 0 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089781-004  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 12-Oct-2023 16:06:46 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1637

First Level Reviewer: AR8P Date: 12-Oct-2023 13:55:01

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.613	1.613	0.000	1251019	20.0	23.0	
2 4-Hydroxy-4-methyl-2-pentanone						
1.997	1.997	0.000	1197982	20.0	23.9	
3 2-Butoxyethanol						
2.124	2.124	0.000	1374169	20.0	23.2	
* 4 n-Heptyl Alcohol						
2.276	2.276	0.000	4498279	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.727	2.727	0.000	95308	20.0	22.6	
6 Propylene glycol						
3.371	3.371	0.000	168141	20.0	9.30	a
7 Ethylene glycol						
3.547	3.547	0.000	1305243	20.0	28.3	a
8 2-(2-Butoxyethoxy)ethanol						
4.812	4.812	0.000	1002540	20.0	20.2	
9 2,2'-Oxybisethanol						
6.790	6.790	0.000	470129	20.0	17.5	
10 Triethylene Glycol						
9.388	9.388	0.000	678927	20.0	23.3	
11 Tetraethylene Glycol						
10.246	10.246	0.000	1237360	40.0	45.0	

QC Flag Legend  
Processing Flags

Review Flags

a - User Assigned ID

**Reagents:**

SG\_Gly\_CAL\_00053

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12004.D

Injection Date: 12-Oct-2023 11:44:28

Instrument ID: CVGG2

Operator ID:

Lims ID: ccvis g4

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

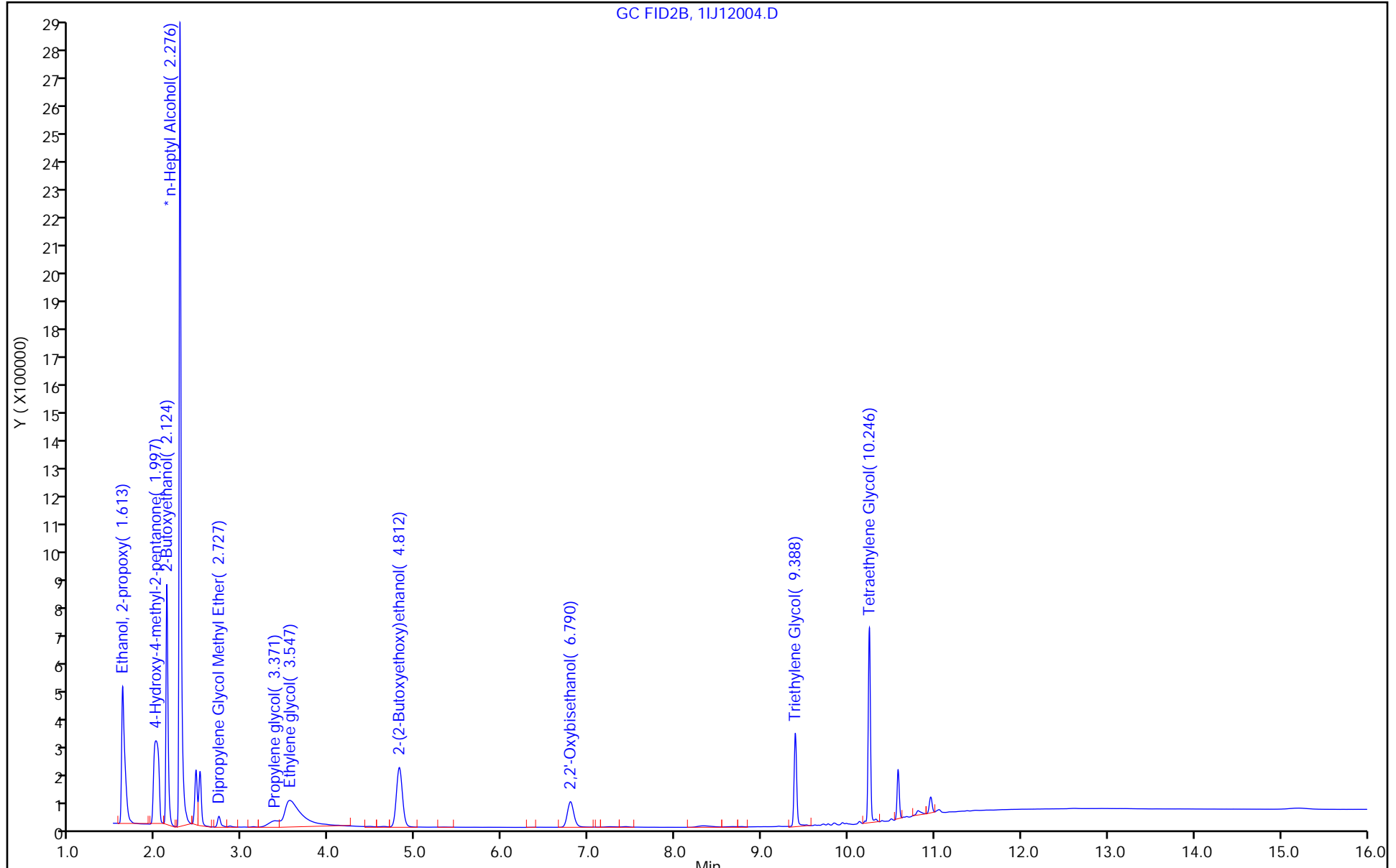
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah

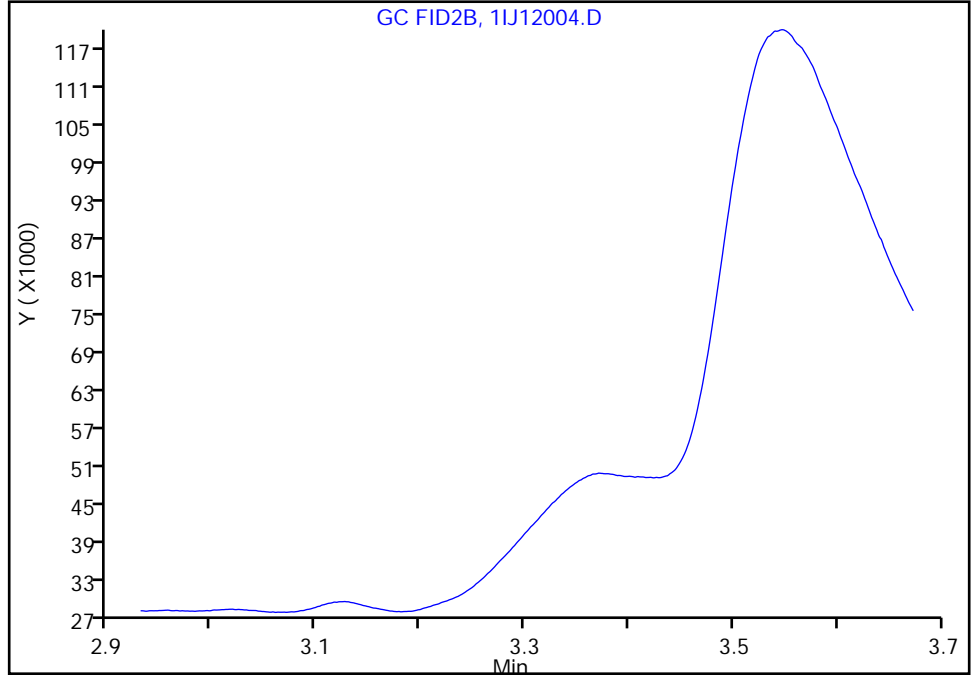
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Injection Date: 12-Oct-2023 11:44:28 Instrument ID: CVGG2  
Lims ID: ccvis g4  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

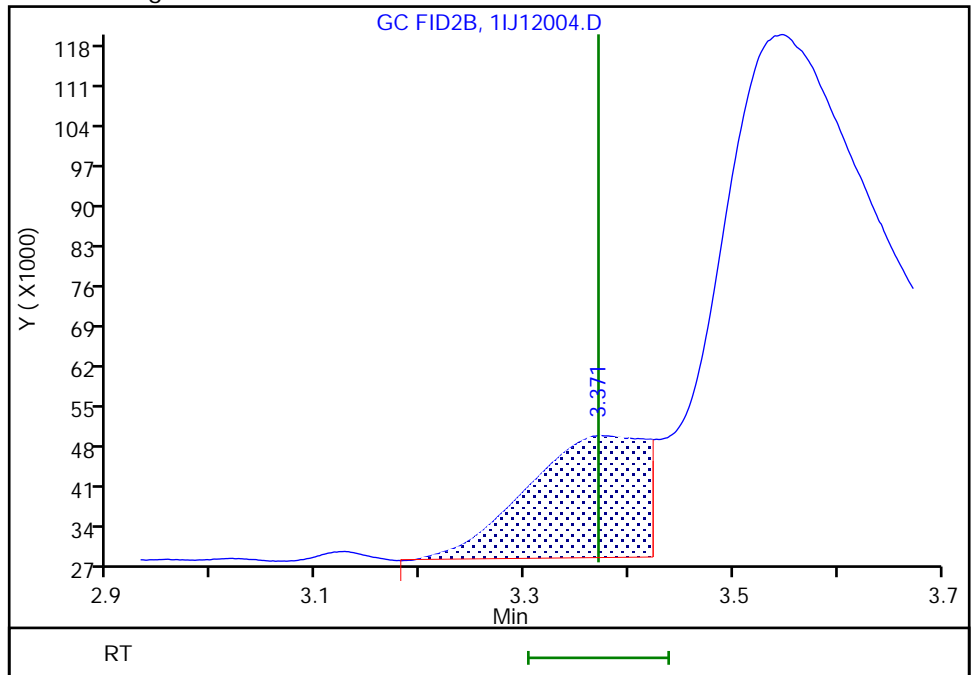
Not Detected  
Expected RT: 3.37

Processing Integration Results



RT: 3.37  
Area: 168141  
Amount: 9.296672  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 12-Oct-2023 13:54:51 -04:00:00 (UTC)

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected



Eurofins Savannah

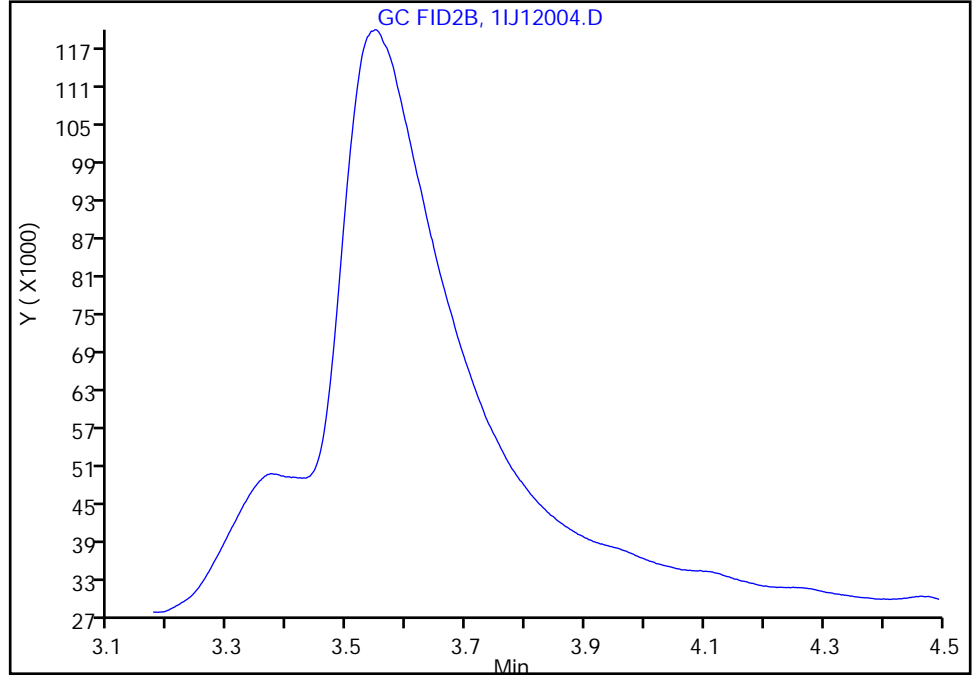
Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12004.D  
Injection Date: 12-Oct-2023 11:44:28 Instrument ID: CVGG2  
Lims ID: ccvis g4  
Client ID:  
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 8015\_GLY\_VGG Limit Group: 8015C\_DAI  
Column: J&W DB WAX ( 0.45 mm) Detector: GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

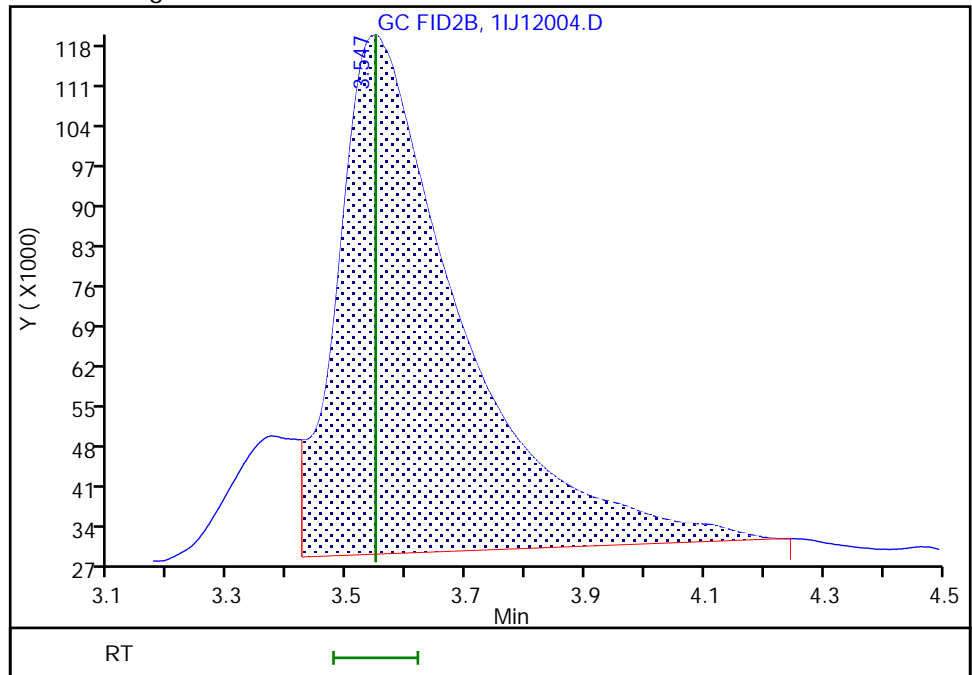
Not Detected  
Expected RT: 3.55

Processing Integration Results



RT: 3.55  
Area: 1305243  
Amount: 28.256583  
Amount Units: ug/ml

Manual Integration Results



Reviewer: AR8P, 12-Oct-2023 13:54:54 -04:00:00 (UTC)

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 680-802272/23 Calibration Date: 10/12/2023 19:31  
 Instrument ID: CVGG2 Calib Start Date: 09/13/2023 13:17  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 09/13/2023 15:35  
 Lab File ID: 1IJ12023.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin1		0.5784		18.7	20.0	-6.6	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin1		0.4898		17.0	20.0	-14.9	20.0
2-Butoxyethanol	Lin1		0.6651		19.9	20.0	-0.4	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0413		17.5	20.0	-12.7	20.0
Propylene glycol	Lin1		0.0974		9.74	20.0	-51.3*	20.0
Ethylene glycol	Ave	0.5134	0.4312		16.8	20.0	-16.0	20.0
2-(2-Butoxyethoxy)ethanol	Lin1		0.4415		15.6	20.0	-21.8*	20.0
2,2'-Oxybisethanol	Lin1		0.2184		14.3	20.0	-28.5*	20.0
Triethylene Glycol	Lin1		0.2493		14.0	20.0	-30.0*	20.0
Tetraethylene Glycol	Lin1		0.1531		17.0	40.0	-57.6*	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 680-802272/23 Calibration Date: 10/12/2023 19:31  
 Instrument ID: CVGG2 Calib Start Date: 09/13/2023 13:17  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 09/13/2023 15:35  
 Lab File ID: 1IJ12023.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.60	1.57	1.63
4-Hydroxy-4-methyl-2-pentanone	1.98	1.94	2.02
2-Butoxyethanol	2.12	2.07	2.16
Dipropylene Glycol Methyl Ether	2.71	2.66	2.77
Propylene glycol	3.35	3.29	3.42
Ethylene glycol	3.53	3.46	3.60
2-(2-Butoxyethoxy)ethanol	4.81	4.71	4.90
2,2'-Oxybisethanol	6.79	6.65	6.93
Triethylene Glycol	9.39	9.20	9.58
Tetraethylene Glycol	10.24	10.04	10.45

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1I12023.D  
 Lims ID: ccv g4  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-Oct-2023 19:31:11 ALS Bottle#: 0 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089781-023  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Oct-2023 09:54:04 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1642

First Level Reviewer: AR8P Date: 12-Oct-2023 19:53:07

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.600	1.600	0.000	1116816	20.0	18.7
2 4-Hydroxy-4-methyl-2-pentanone	1.978	1.978	0.000	945864	20.0	17.0
3 2-Butoxyethanol	2.117	2.117	0.000	1284293	20.0	19.9
* 4 n-Heptyl Alcohol	2.275	2.275	0.000	4827513	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.713	2.713	0.000	79836	20.0	17.5
6 Propylene glycol	3.352	3.352	0.000	188064	20.0	9.74
7 Ethylene glycol	3.527	3.527	0.000	832615	20.0	16.8
8 2-(2-Butoxyethoxy)ethanol	4.805	4.805	0.000	852465	20.0	15.6
9 2,2'-Oxybisethanol	6.789	6.789	0.000	421814	20.0	14.3
10 Triethylene Glycol	9.388	9.388	0.000	481320	20.0	14.0
11 Tetraethylene Glycol	10.243	10.243	0.000	591290	40.0	17.0

QC Flag Legend  
Processing Flags

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12023.D

Injection Date: 12-Oct-2023 19:31:11

Instrument ID: CVGG2

Operator ID:

Lims ID: ccv g4

Worklist Smp#: 23

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

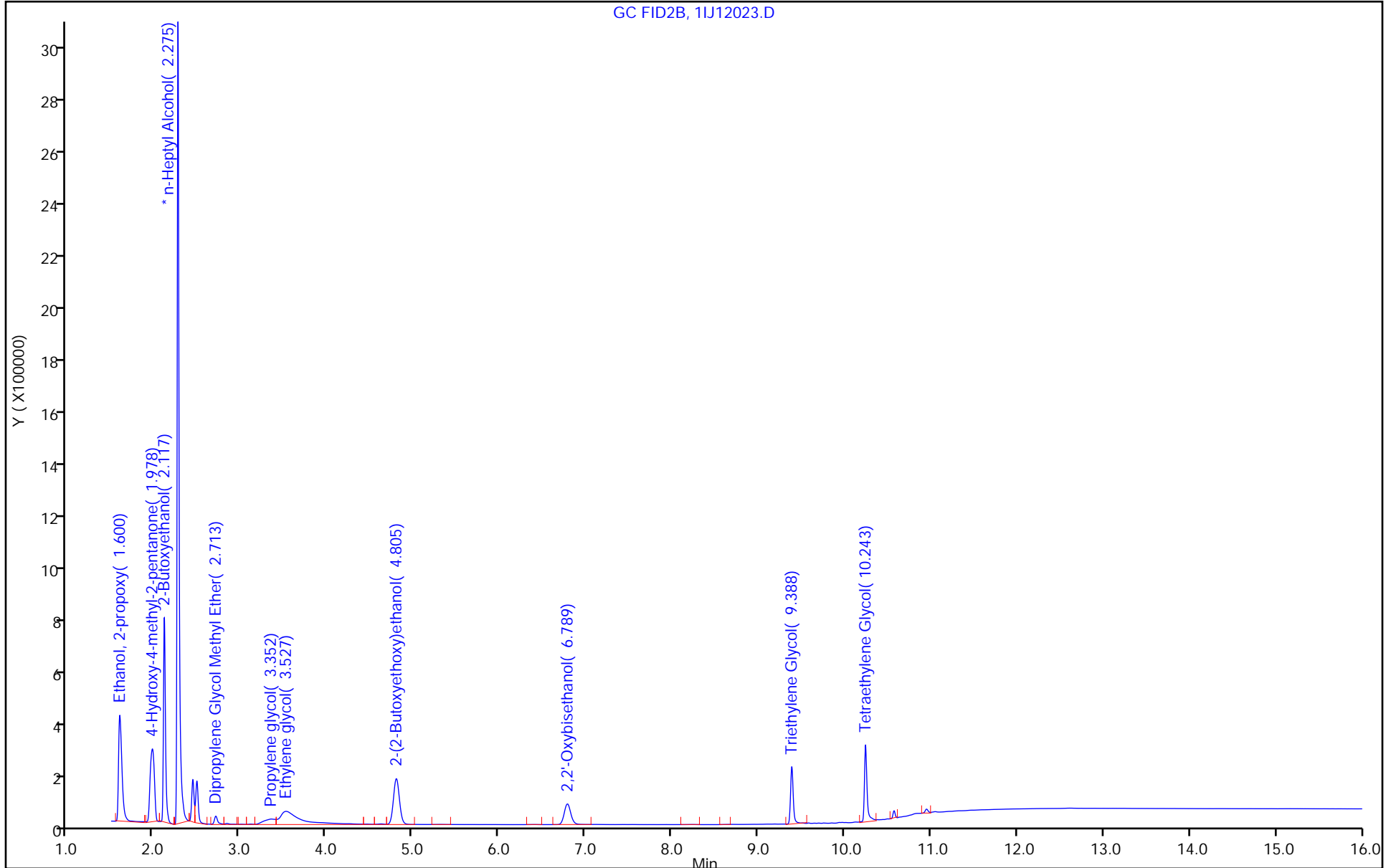
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IJ12023.D



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 680-802272/38 Calibration Date: 10/13/2023 02:01  
 Instrument ID: CVGG2 Calib Start Date: 09/13/2023 13:17  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 09/13/2023 15:35  
 Lab File ID: 1IJ12040.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin1		0.6463		21.2	20.0	6.0	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin1		0.5514		19.4	20.0	-2.9	20.0
2-Butoxyethanol	Lin1		0.7286		22.0	20.0	10.1	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0490		20.9	20.0	4.4	20.0
Propylene glycol	Lin1		0.1169		12.0	20.0	-40.2*	20.0
Ethylene glycol	Ave	0.5134	0.4779		18.6	20.0	-6.9	20.0
2-(2-Butoxyethoxy)ethanol	Lin1		0.5209		18.8	20.0	-6.1	20.0
2,2'-Oxybisethanol	Lin1		0.2397		15.9	20.0	-20.5*	20.0
Triethylene Glycol	Lin1		0.2280		12.5	20.0	-37.7*	20.0
Tetraethylene Glycol	Lin1		0.0938		8.25	40.0	-79.4*	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 680-802272/38 Calibration Date: 10/13/2023 02:01  
 Instrument ID: CVGG2 Calib Start Date: 09/13/2023 13:17  
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 09/13/2023 15:35  
 Lab File ID: 1IJ12040.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	1.60	1.57	1.64
4-Hydroxy-4-methyl-2-pentanone	1.98	1.94	2.02
2-Butoxyethanol	2.12	2.08	2.16
Dipropylene Glycol Methyl Ether	2.72	2.66	2.77
Propylene glycol	3.35	3.29	3.42
Ethylene glycol	3.53	3.46	3.61
2-(2-Butoxyethoxy)ethanol	4.81	4.71	4.90
2,2'-Oxybisethanol	6.79	6.65	6.92
Triethylene Glycol	9.39	9.20	9.58
Tetraethylene Glycol	10.24	10.04	10.45



Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12040.D  
 Lims ID: ccv g4  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 13-Oct-2023 02:01:57 ALS Bottle#: 0 Worklist Smp#: 38  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089781-038  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Oct-2023 09:49:57 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1642

First Level Reviewer: AR8P Date: 13-Oct-2023 09:49:57

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

1 Ethanol, 2-propoxy						
1.603	1.603	0.000	1233727	20.0	21.2	
2 4-Hydroxy-4-methyl-2-pentanone						
1.980	1.980	0.000	1052448	20.0	19.4	
3 2-Butoxyethanol						
2.118	2.118	0.000	1390718	20.0	22.0	
* 4 n-Heptyl Alcohol						
2.273	2.273	0.000	4771903	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.718	2.718	0.000	93508	20.0	20.9	
6 Propylene glycol						
3.353	3.353	0.000	223137	20.0	12.0	
7 Ethylene glycol						
3.534	3.534	0.000	912106	20.0	18.6	
8 2-(2-Butoxyethoxy)ethanol						
4.806	4.806	0.000	994210	20.0	18.8	
9 2,2'-Oxybisethanol						
6.787	6.787	0.000	457579	20.0	15.9	
10 Triethylene Glycol						
9.388	9.388	0.000	435104	20.0	12.5	
11 Tetraethylene Glycol						
10.243	10.243	0.000	357980	40.0	8.25	

**QC Flag Legend**  
Processing Flags

Reagents:

SG\_Gly\_CAL\_00053

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1I12040.D

Injection Date: 13-Oct-2023 02:01:57

Instrument ID: CVGG2

Operator ID:

Lims ID: ccv g4

Worklist Smp#: 38

Client ID:

Injection Vol: 1.0 ul

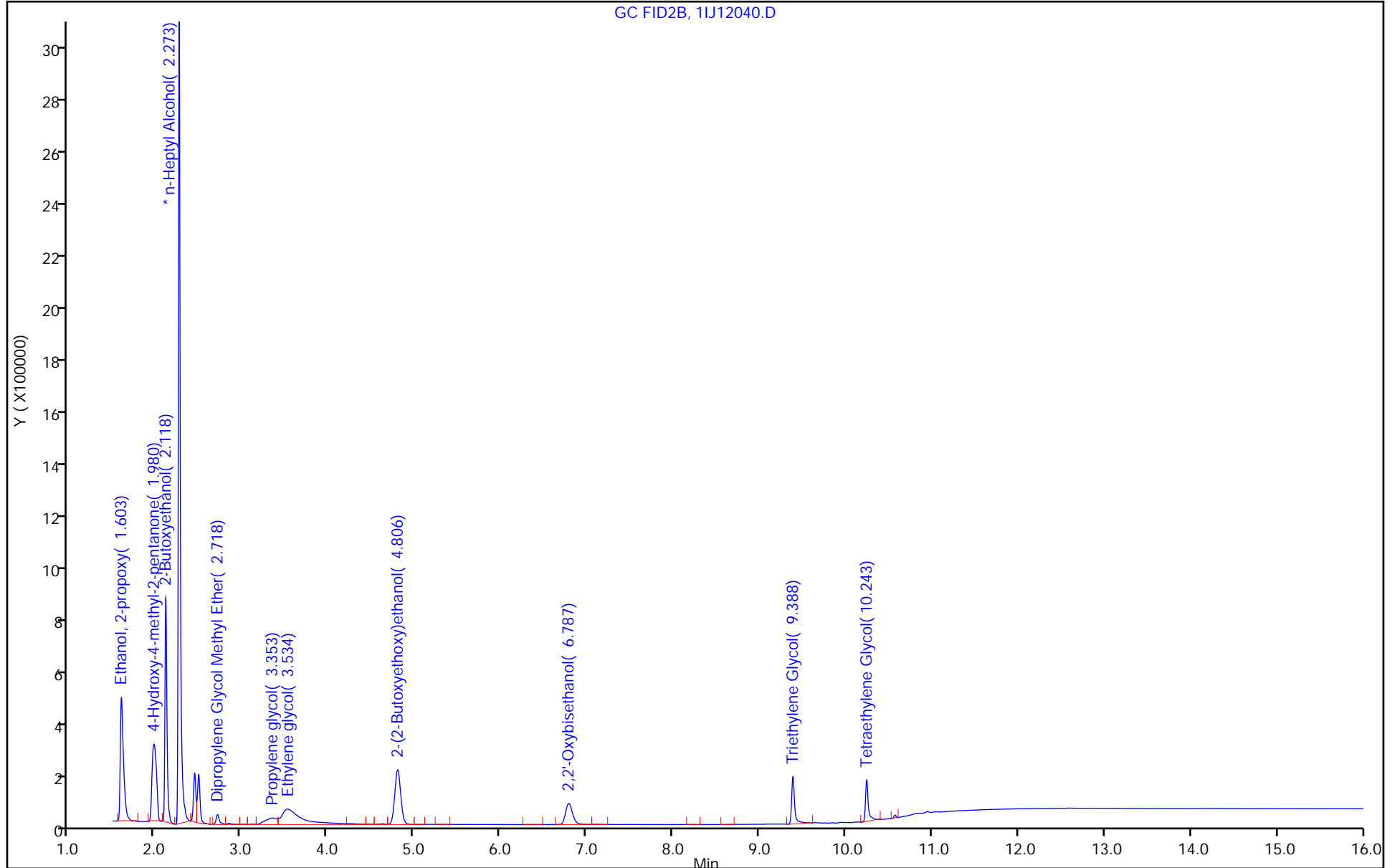
Dil. Factor: 1.0000

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.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 680-802272/8  
 Matrix: Water Lab File ID: 1IJ12008.D  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 10/12/2023 13:16  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 802272 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\20231012-89781.b\1I12008.D  
 Lims ID: mb  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-Oct-2023 13:16:30 ALS Bottle#: 0 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089781-008  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 12-Oct-2023 16:06:20 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1G12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1637

First Level Reviewer: AR8P Date: 12-Oct-2023 13:55:38

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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\* 4 n-Heptyl Alcohol  
 2.275 2.276 -0.001 4536628 50.0 50.0

**Reagents:**

SG\_GLY\_ISTD\_00129 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12008.D

Injection Date: 12-Oct-2023 13:16:30

Instrument ID: CVGG2

Operator ID:

Lims ID: mb

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

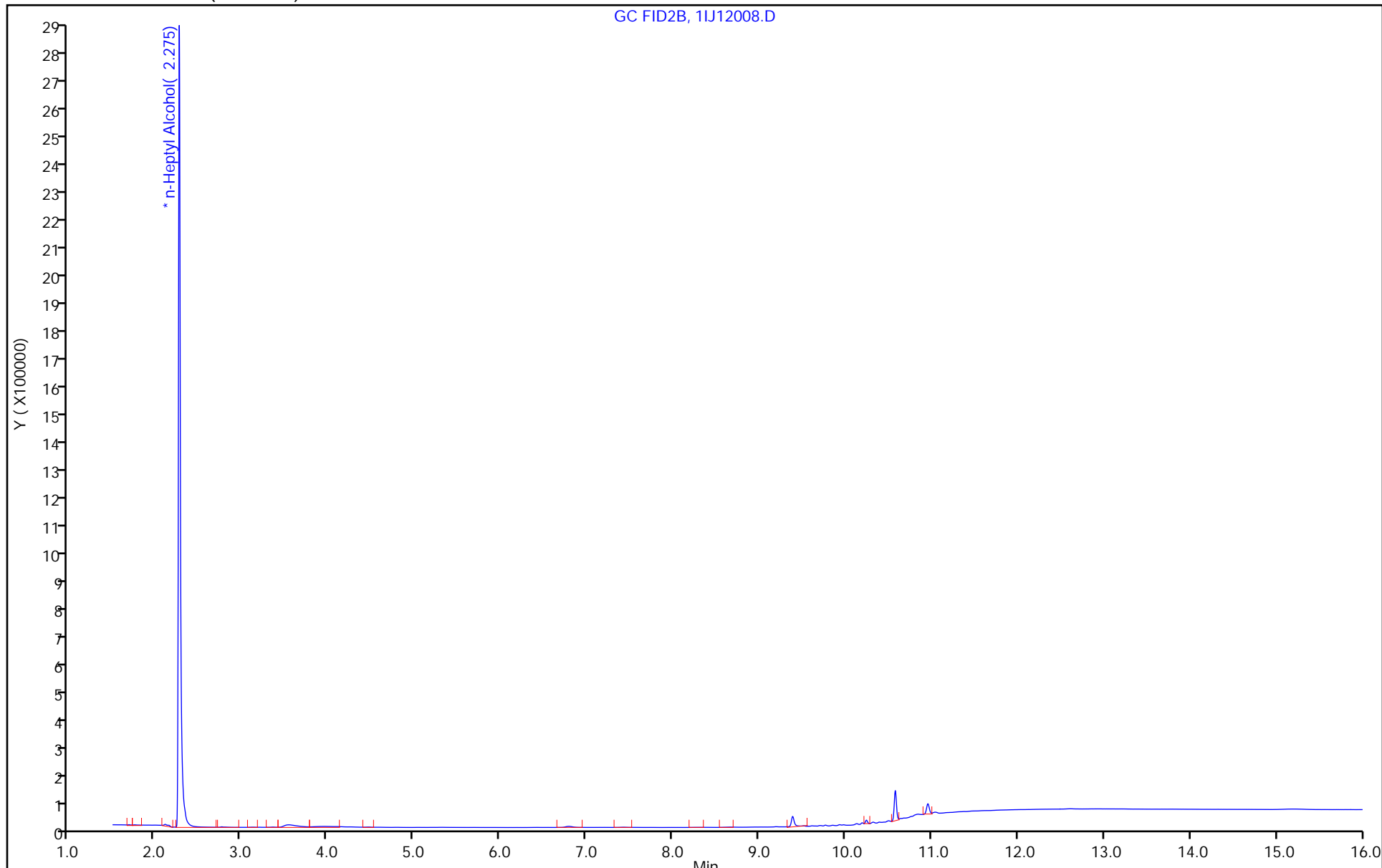
ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IJ12008.D



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 680-802272/5  
 Matrix: Water Lab File ID: 1IJ12005.D  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 10/12/2023 12:07  
 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.: 802272 Units: mg/L

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

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12005.D  
 Lims ID: lcs  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 12-Oct-2023 12:07:27      ALS Bottle#: 0      Worklist Smp#: 5  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0089781-005  
 Operator ID:      Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 12-Oct-2023 16:06:44      Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard      Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm)      Det: GC FID2B  
 Process Host: CTX1637

First Level Reviewer: AR8P      Date: 12-Oct-2023 13:55:13

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.608	1.608	0.000	1156343	20.0	22.6	
2 4-Hydroxy-4-methyl-2-pentanone						
1.995	1.995	0.000	1106502	20.0	23.5	
3 2-Butoxyethanol						
2.122	2.122	0.000	1271024	20.0	22.8	
* 4 n-Heptyl Alcohol						
2.276	2.276	0.000	4221875	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.721	2.721	0.000	91452	20.0	23.2	
6 Propylene glycol						
3.368	3.368	0.000	187463	20.0	11.3	a
7 Ethylene glycol						
3.540	3.540	0.000	1276129	20.0	29.4	a
8 2-(2-Butoxyethoxy)ethanol						
4.810	4.810	0.000	979913	20.0	21.1	
9 2,2'-Oxybisethanol						
6.789	6.789	0.000	475691	20.0	19.0	
10 Triethylene Glycol						
9.389	9.389	0.000	590798	20.0	21.3	
11 Tetraethylene Glycol						
10.244	10.244	0.000	1072006	40.0	41.1	

**QC Flag Legend**

Processing Flags



Review Flags

a - User Assigned ID

**Reagents:**

SG\_GlyICV\_00062

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12005.D

Injection Date: 12-Oct-2023 12:07:27

Instrument ID: CVGG2

Operator ID:

Lims ID: lcs

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

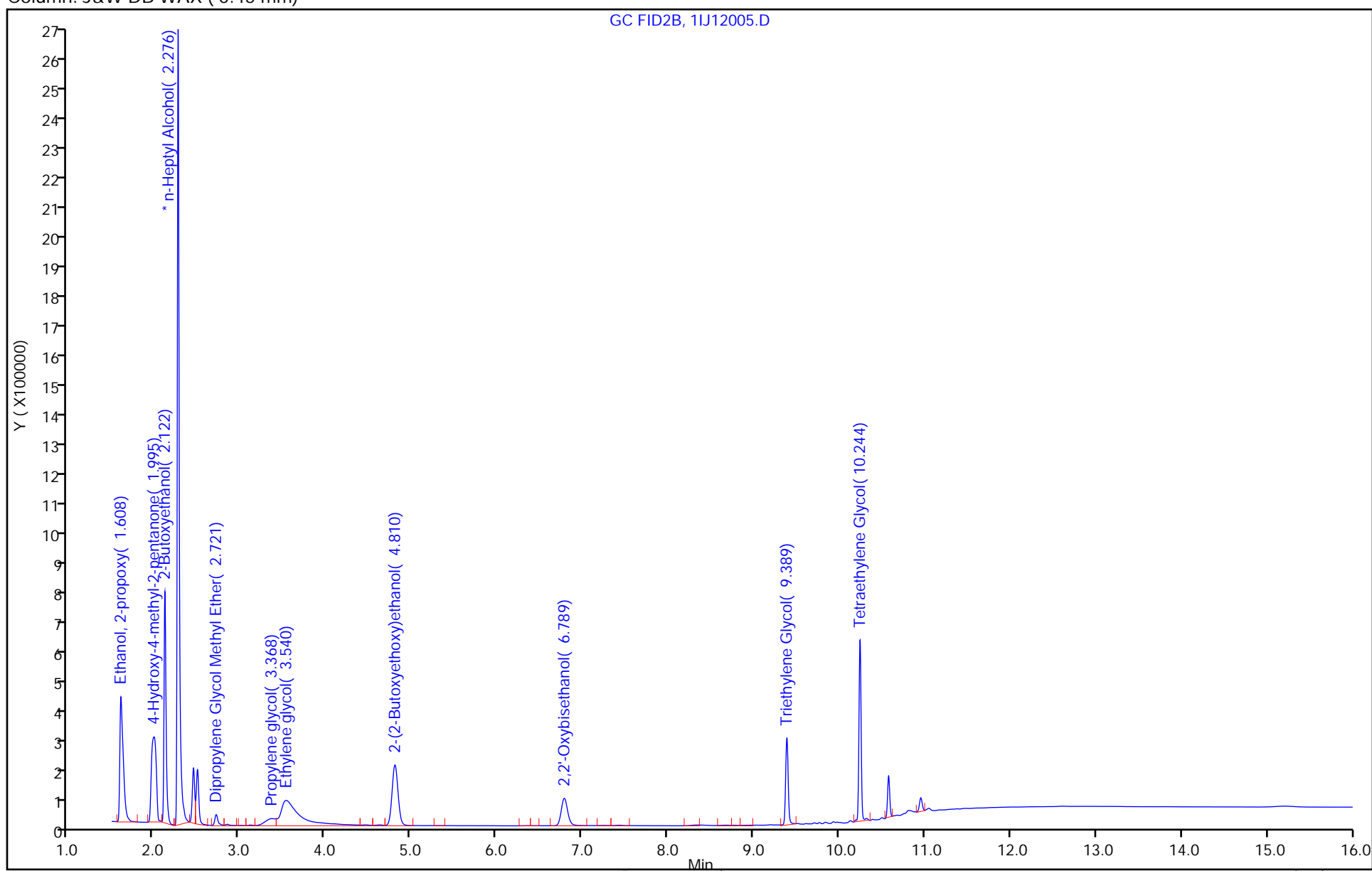
Dil. Factor: 1.0000

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.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 680-802272/6  
 Matrix: Water Lab File ID: 1IJ12006.D  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 10/12/2023 12:30  
 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.: 802272 Units: mg/L

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

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12006.D  
 Lims ID: lcsd  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 12-Oct-2023 12:30:26 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089781-006  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 12-Oct-2023 16:06:20 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1637

First Level Reviewer: AR8P Date: 12-Oct-2023 13:55:30

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
1.606	1.608	-0.002	1096341	20.0	19.0	
2 4-Hydroxy-4-methyl-2-pentanone						
1.982	1.995	-0.013	1044399	20.0	19.7	
3 2-Butoxyethanol						
2.120	2.122	-0.002	1255432	20.0	20.2	
* 4 n-Heptyl Alcohol						
2.276	2.276	0.000	4664559	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
2.718	2.721	-0.003	86918	20.0	19.8	
6 Propylene glycol						
3.361	3.368	-0.007	197701	20.0	10.7	a
7 Ethylene glycol						
3.532	3.540	-0.008	1136178	20.0	23.7	
8 2-(2-Butoxyethoxy)ethanol						
4.809	4.810	-0.001	928777	20.0	17.9	
9 2,2'-Oxybisethanol						
6.785	6.789	-0.004	474826	20.0	17.0	
10 Triethylene Glycol						
9.387	9.389	-0.002	597904	20.0	19.2	
11 Tetraethylene Glycol						
10.243	10.244	-0.001	1007096	40.0	34.1	

**QC Flag Legend**

Processing Flags

Review Flags

a - User Assigned ID

**Reagents:**

SG\_GlyICV\_00062

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12006.D

Injection Date: 12-Oct-2023 12:30:26

Instrument ID: CVGG2

Operator ID:

Lims ID: lcsd

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

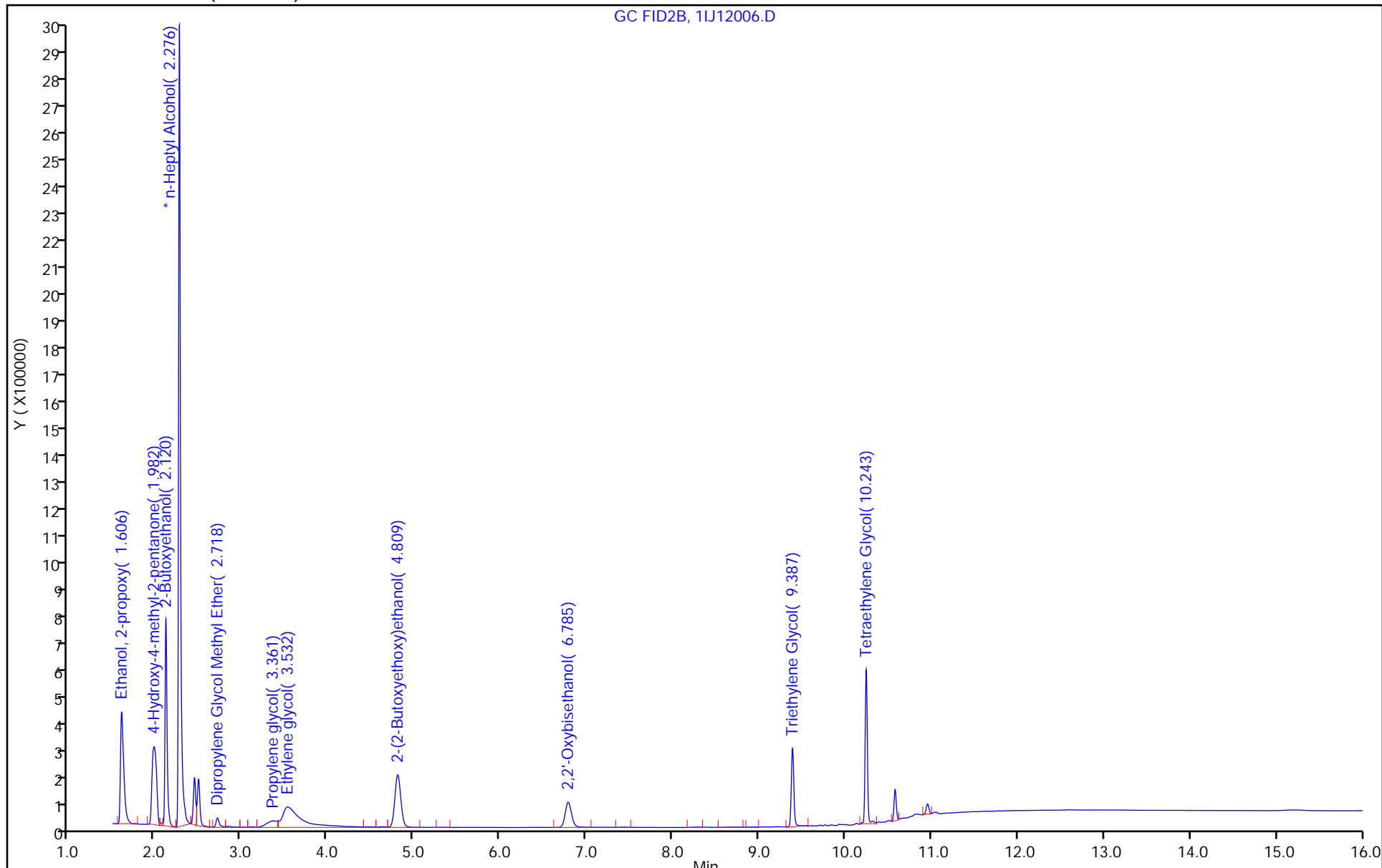
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-132503-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMW10-WGN01LF-2310 MS Lab Sample ID: 580-132503-1 MS  
 Matrix: Water Lab File ID: 1IJ12035.D  
 Analysis Method: 8015C GLY Date Collected: 10/05/2023 10:15  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 10/13/2023 00:07  
 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.: 802272 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.5		5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12035.D  
 Lims ID: 580-132503-C-1 MS  
 Client ID:  
 Sample Type: MS  
 Inject. Date: 13-Oct-2023 00:07:00 ALS Bottle#: 0 Worklist Smp#: 33  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089781-033  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Oct-2023 03:26:10 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1642

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	1.604	1.603	0.001	1237597	20.0	22.2
2 4-Hydroxy-4-methyl-2-pentanone	1.991	1.980	0.011	1119196	20.0	21.7
3 2-Butoxyethanol	2.119	2.118	0.001	1374418	20.0	22.6
* 4 n-Heptyl Alcohol	2.274	2.273	0.001	4594972	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.720	2.718	0.002	89906	20.0	20.8
6 Propylene glycol	3.359	3.353	0.006	228301	20.0	12.8
7 Ethylene glycol	3.534	3.534	0.000	840169	20.0	17.8
8 2-(2-Butoxyethoxy)ethanol	4.808	4.806	0.002	993069	20.0	19.5
9 2,2'-Oxybisethanol	6.794	6.787	0.007	336078	20.0	11.6
10 Triethylene Glycol	9.390	9.388	0.002	209937	20.0	4.22
11 Tetraethylene Glycol	10.245	10.243	0.002	79785	40.0	-2.33 7
LOD =	4.50					

**QC Flag Legend**

Processing Flags

7 - Failed Limit of Detection



Reagents:

SG\_Gly\_CAL\_00056

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12035.D

Injection Date: 13-Oct-2023 00:07:00

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-132503-C-1 MS

Worklist Smp#: 33

Client ID:

Injection Vol: 1.0 ul

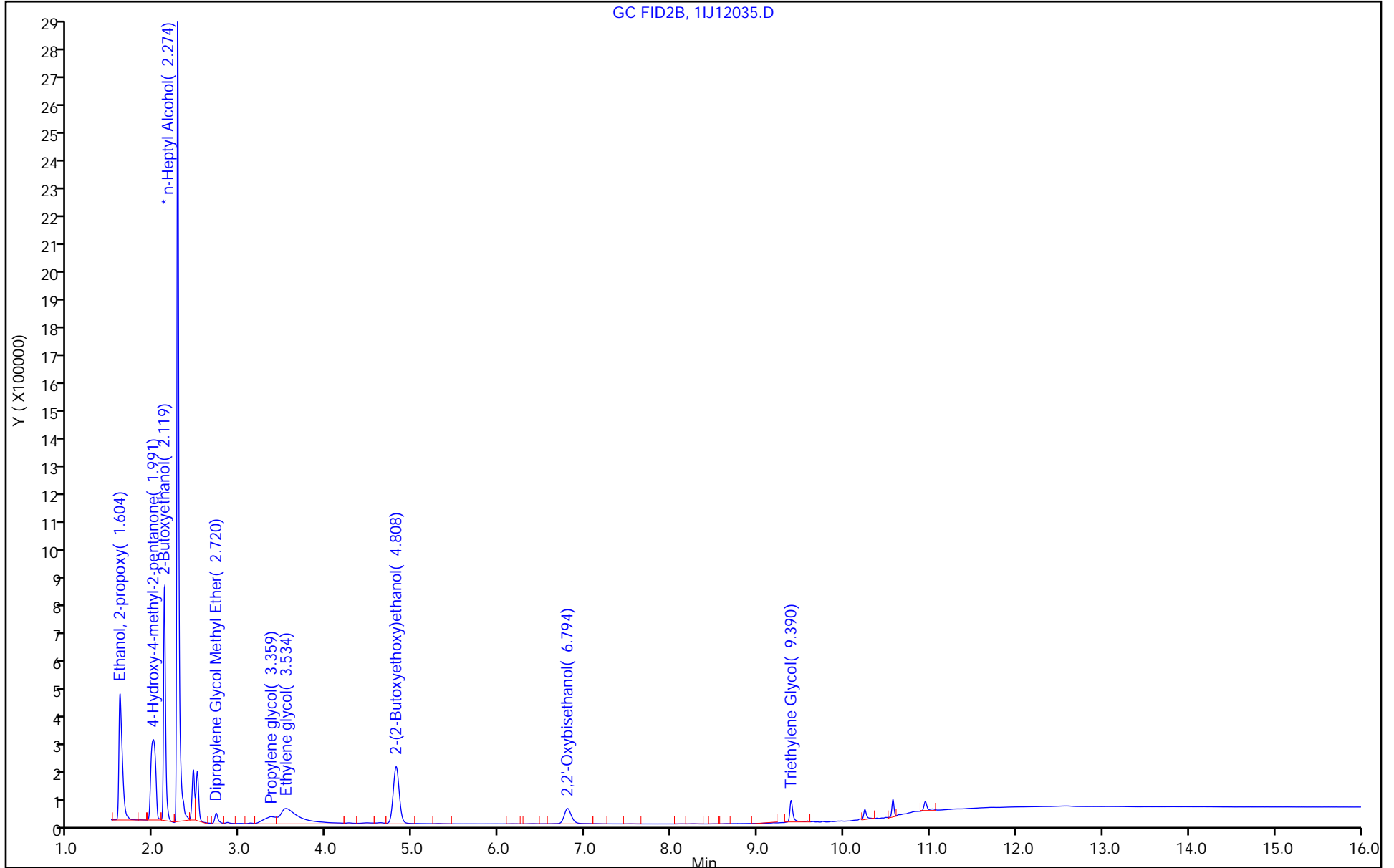
Dil. Factor: 1.0000

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: <u>Eurofins Savannah</u>	Job No.: <u>580-132503-1</u>
SDG No.: _____	
Client Sample ID: <u>AF-RHMW10-WGN01LF-2310</u> MSD	Lab Sample ID: <u>580-132503-1 MSD</u>
Matrix: <u>Water</u>	Lab File ID: <u>1IJ12036.D</u>
Analysis Method: <u>8015C GLY</u>	Date Collected: <u>10/05/2023 10:15</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1(mL)</u>	Date Analyzed: <u>10/13/2023 00:30</u>
Con. Extract Vol.: <u>1(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>J&amp;W DB WAX</u> ID: <u>0.45(mm)</u>
% Moisture: _____ % Solids: _____	GPC Cleanup: (Y/N) <u>N</u>
Cleanup Factor: _____	
Analysis Batch No.: <u>802272</u>	Units: <u>mg/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.6		5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12036.D  
 Lims ID: 580-132503-C-1 MSD  
 Client ID:  
 Sample Type: MSD  
 Inject. Date: 13-Oct-2023 00:30:03 ALS Bottle#: 0 Worklist Smp#: 34  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0089781-034  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\8015\_GLY\_VGG.m  
 Limit Group: 8015C\_DAI  
 Last Update: 13-Oct-2023 03:26:10 Calib Date: 13-Sep-2023 15:35:58  
 Integrator: Falcon  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230913-89041.b\1GI12012.D  
 Column 1 : J&W DB WAX ( 0.45 mm) Det: GC FID2B  
 Process Host: CTX1642

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

1 Ethanol, 2-propoxy	1.604	1.603	0.001	1196144	20.0	21.2
2 4-Hydroxy-4-methyl-2-pentanone	1.989	1.980	0.009	1108210	20.0	21.3
3 2-Butoxyethanol	2.119	2.118	0.001	1321900	20.0	21.6
* 4 n-Heptyl Alcohol	2.273	2.273	0.000	4616632	50.0	50.0
5 Dipropylene Glycol Methyl Ether	2.720	2.718	0.002	89584	20.0	20.7
6 Propylene glycol	3.354	3.353	0.001	233860	20.0	13.1
7 Ethylene glycol	3.535	3.534	0.001	883211	20.0	18.6
8 2-(2-Butoxyethoxy)ethanol	4.807	4.806	0.001	1000643	20.0	19.6
9 2,2'-Oxybisethanol	6.794	6.787	0.007	427251	20.0	15.3
10 Triethylene Glycol	9.389	9.388	0.001	334084	20.0	9.05
11 Tetraethylene Glycol	10.244	10.243	0.001	204160	40.0	2.60
LOD =	4.50					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG\_Gly\_CAL\_00056

Amount Added: 10.00

Units: uL

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Euofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231012-89781.b\1IJ12036.D

Injection Date: 13-Oct-2023 00:30:03

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-132503-C-1 MSD

Worklist Smp#: 34

Client ID:

Injection Vol: 1.0 ul

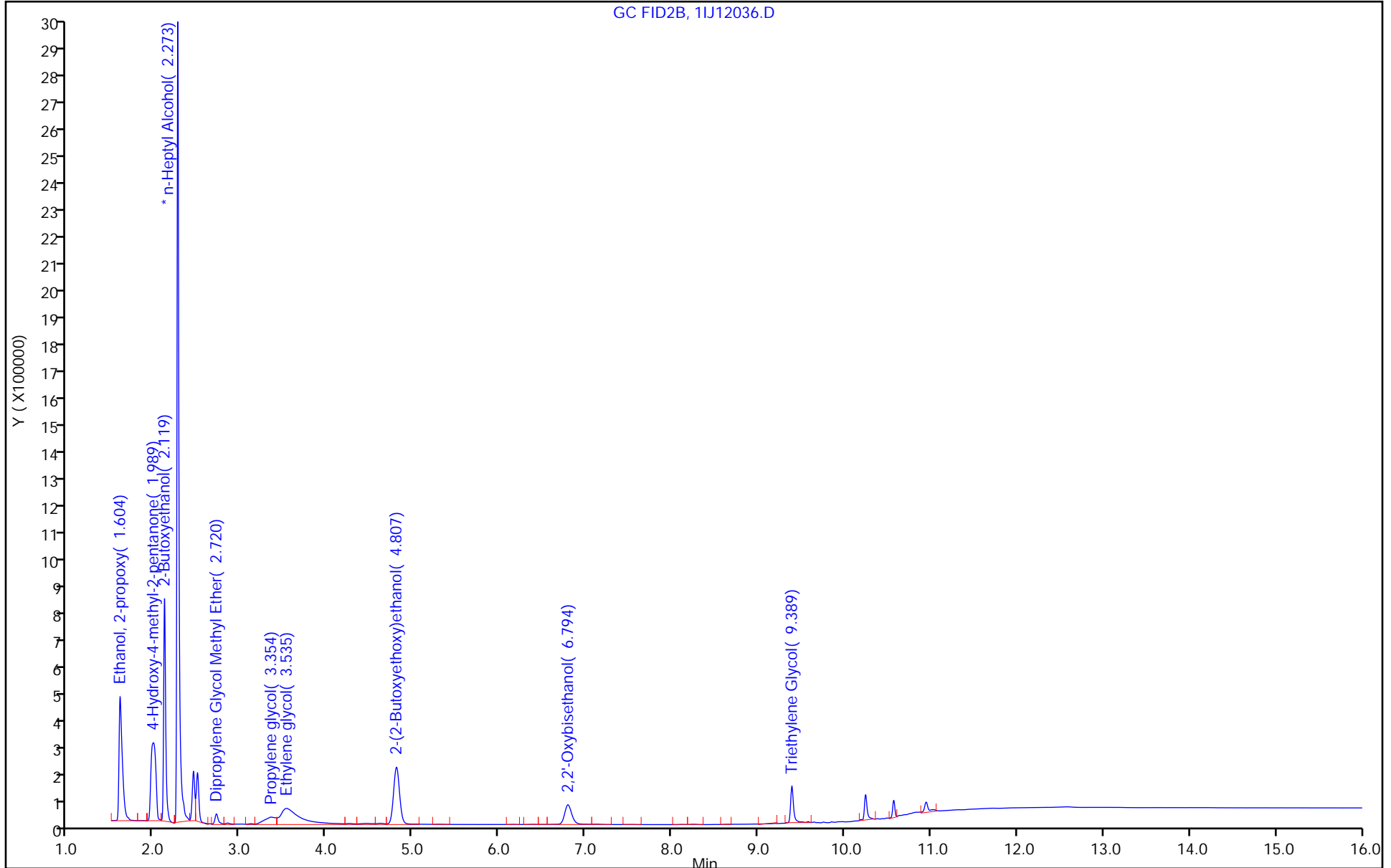
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015C\_DAI

Column: J&W DB WAX (0.45 mm)



GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-132503-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Start Date: 09/13/2023 13:17

Analysis Batch Number: 797719 End Date: 09/14/2023 04:02

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-797719/6		09/13/2023 13:17	1	1GI12006.D	J&W DB WAX 0.45 (mm)
IC 680-797719/7		09/13/2023 13:40	1	1GI12007.D	J&W DB WAX 0.45 (mm)
IC 680-797719/8		09/13/2023 14:03	1	1GI12008.D	J&W DB WAX 0.45 (mm)
ICIS 680-797719/9		09/13/2023 14:26	1	1GI12009.D	J&W DB WAX 0.45 (mm)
IC 680-797719/10		09/13/2023 14:49	1	1GI12010.D	J&W DB WAX 0.45 (mm)
IC 680-797719/11		09/13/2023 15:12	1	1GI12011.D	J&W DB WAX 0.45 (mm)
IC 680-797719/12		09/13/2023 15:35	1	1GI12012.D	J&W DB WAX 0.45 (mm)
ICV 680-797719/13 CCV		09/13/2023 15:59	1	1GI12013.D	J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 16:22	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 16:45	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 17:54	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 18:27	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 18:50	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 19:13	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 19:36	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 19:59	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 20:22	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 20:45	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 21:08	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 21:31	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 21:54	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/13/2023 22:17	1		J&W DB WAX 0.45 (mm)
CCV 680-797719/31		09/13/2023 23:03	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 00:12	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 00:35	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 00:58	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 01:21	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 01:44	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 02:07	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 02:30	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 02:53	1		J&W DB WAX 0.45 (mm)
ZZZZZ		09/14/2023 03:16	1		J&W DB WAX 0.45 (mm)
CCV 680-797719/44		09/14/2023 04:02	1		J&W DB WAX 0.45 (mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-132503-1

SDG No.: \_\_\_\_\_

Instrument ID: CVGG2 Start Date: 10/12/2023 11:44

Analysis Batch Number: 802272 End Date: 10/13/2023 02:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-802272/4		10/12/2023 11:44	1	1IJ12004.D	J&W DB WAX 0.45 (mm)
LCS 680-802272/5		10/12/2023 12:07	1	1IJ12005.D	J&W DB WAX 0.45 (mm)
LCSD 680-802272/6		10/12/2023 12:30	1	1IJ12006.D	J&W DB WAX 0.45 (mm)
MB 680-802272/8		10/12/2023 13:16	1	1IJ12008.D	J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 14:32	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 14:55	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 15:18	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 15:41	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 16:04	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 16:27	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 16:50	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 17:13	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 17:36	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 17:59	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 18:22	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 18:45	1		J&W DB WAX 0.45 (mm)
CCV 680-802272/23		10/12/2023 19:31	1	1IJ12023.D	J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 19:31	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 20:17	1		J&W DB WAX 0.45 (mm)
RL 680-802272/48		10/12/2023 20:40	1		J&W DB WAX 0.45 (mm)
580-132503-1	AF-RHMW10-WGN01LF-2310	10/12/2023 21:03	1	1IJ12027.D	J&W DB WAX 0.45 (mm)
580-132503-2	AF-RHMW225401-WGN01B-2310	10/12/2023 21:26	1	1IJ12028.D	J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 21:49	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 22:12	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 22:35	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 22:58	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 23:21	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/12/2023 23:44	1		J&W DB WAX 0.45 (mm)
580-132503-1 MS	AF-RHMW10-WGN01LF-2310 MS	10/13/2023 00:07	1	1IJ12035.D	J&W DB WAX 0.45 (mm)
580-132503-1 MSD	AF-RHMW10-WGN01LF-2310 MSD	10/13/2023 00:30	1	1IJ12036.D	J&W DB WAX 0.45 (mm)
ZZZZZ		10/13/2023 00:52	1		J&W DB WAX 0.45 (mm)
ZZZZZ		10/13/2023 01:15	1		J&W DB WAX 0.45 (mm)
CCV 680-802272/38		10/13/2023 02:01	1	1IJ12040.D	J&W DB WAX 0.45 (mm)
ZZZZZ		10/13/2023 02:01	1		J&W DB WAX 0.45 (mm)



GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-132503-1

SDG No.: \_\_\_\_\_

Batch Number: 797719 Batch Start Date: 09/13/23 13:17 Batch Analyst: Mullis, David B

Batch Method: 8015C GLY Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00053	SG_GLY_ISTD 00129	SG_GlyICV 00062		
IC 680-797719/6		8015C GLY		1 mL	50 uL	10 uL			
IC 680-797719/7		8015C GLY		1 mL	40 uL	10 uL			
IC 680-797719/8		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-797719/9		8015C GLY		1 mL	10 uL	10 uL			
IC 680-797719/10		8015C GLY		1 mL	5 uL	10 uL			
IC 680-797719/11		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-797719/12		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-797719/13 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.: 580-132503-1

SDG No.: \_\_\_\_\_

Batch Number: 802272 Batch Start Date: 10/12/23 11:44 Batch Analyst: Mullis, David B

Batch Method: 8015C GLY Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00053	SG_Gly_CAL 00056	SG_GLY_ISTD 00129	SG_GlyICV 00062	
CCVIS 680-802272/4		8015C GLY		1 mL	10 uL		10 uL		
LCS 680-802272/5		8015C GLY		1 mL			10 uL	10 uL	
LCSD 680-802272/6		8015C GLY		1 mL			10 uL	10 uL	
MB 680-802272/8		8015C GLY		1 mL			10 uL		
CCV 680-802272/23		8015C GLY		1 mL	10 uL		10 uL		
580-132503-C-1	AF-RHMW10-WGN01L F-2310	8015C GLY	T	1 mL			10 uL		
580-132503-B-2	AF-RHMW225401-WG N01B-2310	8015C GLY	T	1 mL			10 uL		
580-132503-C-1 MS	AF-RHMW10-WGN01L F-2310	8015C GLY	T	1 mL		10 uL	10 uL		
580-132503-C-1 MSD	AF-RHMW10-WGN01L F-2310	8015C GLY	T	1 mL		10 uL	10 uL		
CCV 680-802272/38		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

<b>Client Information</b>		Sampler: <b>Anie Aspili</b>		Lab PM: <b>Elaine Walker</b>		Carrier Tracking No(s): <b>FedEx</b>		COC No.: <b>2310AFE03</b>																									
Client Contact:		Phone: <b>732-799-9957</b>		E-Mail: <b>M.Elaine.Walker@EurofinsET.com</b>		State of Origin: <b>Hawaii</b>		Page: <b>Page 1 of 1</b>																									
Company: <b>AECOM</b>		PWSID:		<b>Analysis Requested</b>		Job #:		Preservation Codes:																									
Address: <b>1001 Bishop St. Suite 1600</b>		Due Date Requested: <b>see subcontract</b>		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> AECOM 4011345 (G) (S) (N) <input checked="" type="checkbox"/> #019C_DAI_GL_DS1 2(2-butylthioxyethyl)ethanol <span style="font-size: 2em; transform: rotate(-45deg); opacity: 0.5;">CUSTODY RECORD</span>		Total Number of Containers:		<table style="font-size: 8pt;"> <tr><td>A - HCL</td><td>M - Hexane</td></tr> <tr><td>B - NaOH</td><td>N - None</td></tr> <tr><td>C - Zn Acetate</td><td>O - AsNaO2</td></tr> <tr><td>D - Nitric Acid</td><td>P - Na2O4S</td></tr> <tr><td>E - NaHSO4</td><td>Q - Na2SO3</td></tr> <tr><td>F - MeOH</td><td>R - Na2S2O3</td></tr> <tr><td>G - Amchlor</td><td>S - H2SO4</td></tr> <tr><td>H - Ascorbic Acid</td><td>T - TSP Dodecahydrate</td></tr> <tr><td>I - Ice</td><td>U - Acetone</td></tr> <tr><td>J - DI Water</td><td>V - MCAA</td></tr> <tr><td>K - EDTA</td><td>W - pH 4-5</td></tr> <tr><td>L - EDA</td><td>Z - other (specify)</td></tr> </table>		A - HCL	M - Hexane	B - NaOH	N - None	C - Zn Acetate	O - AsNaO2	D - Nitric Acid	P - Na2O4S	E - NaHSO4	Q - Na2SO3	F - MeOH	R - Na2S2O3	G - Amchlor	S - H2SO4	H - Ascorbic Acid	T - TSP Dodecahydrate	I - Ice	U - Acetone	J - DI Water	V - MCAA	K - EDTA	W - pH 4-5	L - EDA	Z - other (specify)
A - HCL	M - Hexane																																
B - NaOH	N - None																																
C - Zn Acetate	O - AsNaO2																																
D - Nitric Acid	P - Na2O4S																																
E - NaHSO4	Q - Na2SO3																																
F - MeOH	R - Na2S2O3																																
G - Amchlor	S - H2SO4																																
H - Ascorbic Acid	T - TSP Dodecahydrate																																
I - Ice	U - Acetone																																
J - DI Water	V - MCAA																																
K - EDTA	W - pH 4-5																																
L - EDA	Z - other (specify)																																
City: <b>Honolulu</b>		TAT Requested (days): <b>Rush - 5 Day</b>		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Other:		Special Instructions/Note:																									
State, Zip: <b>Hawaii 96813</b>		PO #:		WO #:		Project Name: <b>CTO N6274223F0104</b>		Project #: <b>60697810</b>																									
Phone: <b>808-954-4512 / 770-331-0794</b>		SSOW#:		Site: <b>RHSF</b>		Project Name: <b>CTO N6274223F0104</b>		Project #: <b>60697810</b>																									
Email: <b>Watson Tanji (watson.tanji@aecom.com) / Mark Kromis (mark.kromis@aecom.com)</b>																																	
<b>Sample Identification</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>	<b>Matrix (W=Water, S=Solid, O=Waste/Oil, BT=Tissue, AA=Air)</b>	<b>Field Filtered Sample (Yes or No)</b>		<b>Total Number of Containers</b>	<b>Special Instructions/Note</b>																								
<b>AF-RHWW10-WGN01LF-2310</b>		<b>10/05/23</b>	<b>1615</b>	<b>G</b>	<b>W</b>	<b>N N X</b>		<b>3</b>																									
<div style="border: 1px solid black; padding: 5px; display: inline-block;">   580-132503 Chain of Custody </div>																																	
<b>Possible Hazard Identification</b> <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					<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																												
Deliverable Requested: I, II, III, IV, Other (specify)			Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM Equi\$ EDD.			Special Instructions/QC Requirements: DOD QSM project.																											
Empty Kit Relinquished by:			Date:	Time:	Method of Shipment: <b>United AFB/DL-9741836</b>																												
Relinquished by: <b>Anie Aspili</b>		Date/Time: <b>10/15/23 1345</b>	Company: <b>AECOM</b>		Received by: <b>Eli Martin</b>		Date/Time: <b>10/15/23 1345</b>	Company: <b>AECOM</b>																									
Relinquished by: <b>Eli Martin</b>		Date/Time: <b>10/15/23 1245</b>	Company: <b>AECOM</b>		Received by:		Date/Time:	Company:																									
Relinquished by:		Date/Time:	Company:		Received by:		Date/Time: <b>10/6/23 1240</b>	Company:																									
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks: <b>5.1/5.1</b>																												

**Chain of Custody Record**

<b>Client Information</b>		Sampler: <i>Christina Nordt</i>		Lab PM: Elaine Walker		Carrier Tracking No(s): FedEx		COC No: 2310AFE07					
Client Contact:		Phone: <i>867-5309</i>		E-Mail: <i>M.Elaine.Walker@EurofinsET.com</i>		State of Origin: Hawaii		Page: Page 1 of 1					
Company: AECOM		PWSID:		Analysis Requested  Field Filtered Sample (Yes or No) 8016C_DAL_GL_DS7242-butyltinethoxyethanol		Total Number of containers 3		Job #:					
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract						Preservation Codes: A - HCL                      M - Hexane B - NaOH                    N - None C - Zn Acetate              O - AsNaO2 D - Nitric Acid              P - Na2O4S E - NaHSO4                 Q - Na2SO3 F - MeOH                    R - Na2S2O3 G - Amchlor                S - H2SO4 H - Ascorbic Acid         T - TSP Dodecahydrate I - Ice                         U - Acetone J - DI Water                V - MCAA K - EDTA                    W - pH 4-5 L - EDA                      Z - other (specify)		Other:			
City: Honolulu		TAT Requested (days): <b>Rush - 5 Day</b>								Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		PO #:	
State, Zip: Hawaii 96813		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No								PO #:		WO #:	
Phone: 808-954-4512 / 770-331-0794		Project Name: CTO N6274223F0104								Project #: 60697810		SSOW#:	
Email: Watson Tanji (watson.tanji@aecom.com) / Mark Kromis (mark.kromis@aecom.com)		Site: RH5F		Sample Date: <i>10/5/23</i>		Sample Time: <i>1220</i>		Sample Type (C=Comp, G=grab): <i>G</i>					
Matrix (W=water, S=solid, O=soil, BT=base, AA=air): <i>W</i>		Preservation Code: <i>A</i>		Field Filtered Sample (Yes or No): <i>N</i>		Field Filtered Sample (Yes or No): <i>N</i>		Field Filtered Sample (Yes or No): <i>X</i>					
Special Instructions/Note:													
<b>Possible Hazard Identification</b>		<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		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>		<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Deliverable Requested: I, II, III, IV, Other (specify)					
Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQUS EDD.		Special Instructions/QC Requirements: DOD QSM project.		Empty Kit Relinquished by: <i>[Signature]</i>		Date: _____		Time: _____					
Method of Shipment: <i>UNITED AWB 06-9741876</i>		Relinquished by: <i>[Signature]</i>		Date/Time: <i>10/5/23 1430</i>		Company: AECOM		Received by: <i>Eli Mustin</i>					
Relinquished by: <i>Eli Mustin</i>		Date/Time: <i>10/5/23 1405</i>		Company: _____		Received by: <i>[Signature]</i>		Date/Time: <i>10/6/23 1240</i>					
Relinquished by: _____		Date/Time: _____		Company: _____		Received by: _____		Date/Time: _____					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: _____		Cooler Temperature(s) °C and Other Remarks: <i>5.1/5.4</i>		Cooler Temperature(s) °C and Other Remarks: _____		Cooler Temperature(s) °C and Other Remarks: _____					

# Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-132503-1

**Login Number: 132503**  
**List Number: 1**  
**Creator: Johnson, Corey M**

**List Source: Eurofins Seattle**

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