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ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy
AECOM
1001 Bishop Street
Honolulu HI 96813

Generated 3/30/2023 12:32 PM

JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-125177-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

Job Notes

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

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

Authorization

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Authorized for release by
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Definitions/Glossary

Client: AECOM
Job ID: 580-125177-1
Project/Site: Red Hill - AFFF Assessment Sampling

Qualifiers

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE
Client: AECOM
Project: Red Hill - AFFF Assessment Sampling
Report Number: 580-125177-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

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

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

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

RECEIPT

Three samples were received on 3/23/2023 1:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.9º C.

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

GLYCOLS

Samples AF-HDMW225303-WGN01LF-2303W3 (580-125177-1), AF-RHMW10-WGN01LF-2303W3 (580-125177-2) and AF-RHMW225401-WGN01B-2303W3 (580-125177-3) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 03/28/2023.

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

Detection Summary

Client: AECOM
Job ID: 580-125177-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-HDMW225303-WGN01LF-2303W3 — Lab Sample ID: 580-125177-1

No Detections.

Client Sample ID: AF-RHMW10-WGN01LF-2303W3 — Lab Sample ID: 580-125177-2

No Detections.

Client Sample ID: AF-RHMW225401-WGN01B-2303W3 — Lab Sample ID: 580-125177-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: AF-HDMW225303-WGN01LF-2303W3
Lab Sample ID: 580-125177-1
Date Collected: 03/21/23 10:00
Matrix: Water
Date Received: 03/23/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M	5.0	1.1	mg/L			03/28/23 20:30	1

Client Sample ID: AF-RHMW10-WGN01LF-2303W3
Lab Sample ID: 580-125177-2
Date Collected: 03/21/23 12:55
Matrix: Water
Date Received: 03/23/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			03/28/23 20:54	1

Client Sample ID: AF-RHMW225401-WGN01B-2303W3
Lab Sample ID: 580-125177-3
Date Collected: 03/22/23 10:15
Matrix: Water
Date Received: 03/23/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			03/28/23 21:17	1

Default Detection Limits

Client: AECOM
Job ID: 580-125177-1
Project/Site: Red Hill - AFFF Assessment Sampling

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

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

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

Lab Sample ID: MB 680-770129/10
Matrix: Water
Analysis Batch: 770129

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M	5.0	1.1	mg/L			03/28/23 20:07	1

Lab Sample ID: LCS 680-770129/1006
Matrix: Water
Analysis Batch: 770129

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	20.1		mg/L		101	50 - 150		

Lab Sample ID: LCSD 680-770129/7
Matrix: Water
Analysis Batch: 770129

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	22.4		mg/L		112	50 - 150	11	50

Lab Sample ID: 580-125177-3 MS
Matrix: Water
Analysis Batch: 770129

Client Sample ID: AF-RHMW225401-WGN01B-2303W3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
2-(2-Butoxyethoxy)ethanol	3.0	U	20.0	29.8		mg/L		149	50 - 150		

Lab Sample ID: 580-125177-3 MSD
Matrix: Water
Analysis Batch: 770129

Client Sample ID: AF-RHMW225401-WGN01B-2303W3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	3.0	U	20.0	23.5		mg/L		117	50 - 150	24	50

QC Association Summary

Client: AECOM
Job ID: 580-125177-1
Project/Site: Red Hill - AFFF Assessment Sampling

GC Semi VOA

Analysis Batch: 770129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-125177-1	AF-HDMW225303-WGN01LF-2303W3	Total/NA	Water	8015C GLY	
580-125177-2	AF-RHMW10-WGN01LF-2303W3	Total/NA	Water	8015C GLY	
580-125177-3	AF-RHMW225401-WGN01B-2303W3	Total/NA	Water	8015C GLY	
MB 680-770129/10	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-770129/1006	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-770129/7	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-125177-3 MS	AF-RHMW225401-WGN01B-2303W3	Total/NA	Water	8015C GLY	
580-125177-3 MSD	AF-RHMW225401-WGN01B-2303W3	Total/NA	Water	8015C GLY	

Lab Chronicle

Client: AECOM
Job ID: 580-125177-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-HDMW225303-WGN01LF-2303W3
Lab Sample ID: 580-125177-1

Date Collected: 03/21/23 10:00
Matrix: Water
Date Received: 03/23/23 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	770129	JCK	EET SAV	03/28/23 20:30

Client Sample ID: AF-RHMW10-WGN01LF-2303W3
Lab Sample ID: 580-125177-2

Date Collected: 03/21/23 12:55
Matrix: Water
Date Received: 03/23/23 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	770129	JCK	EET SAV	03/28/23 20:54

Client Sample ID: AF-RHMW225401-WGN01B-2303W3
Lab Sample ID: 580-125177-3

Date Collected: 03/22/23 10:15
Matrix: Water
Date Received: 03/23/23 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	770129	JCK	EET SAV	03/28/23 21:17

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 580-125177-1
Project/Site: Red Hill - AFFF Assessment Sampling

Laboratory: Eurofins Savannah

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015C GLY		Water	2-(2-Butoxyethoxy)ethanol

Method Summary

Client: AECOM
Job ID: 580-125177-1
Project/Site: Red Hill - AFFF Assessment Sampling

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: AECOM
Job ID: 580-125177-1
Project/Site: Red Hill - AFFF Assessment Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-125177-1	AF-HDMW225303-WGN01LF-2303W3	Water	03/21/23 10:00	03/23/23 13:00
580-125177-2	AF-RHMW10-WGN01LF-2303W3	Water	03/21/23 12:55	03/23/23 13:00
580-125177-3	AF-RHMW225401-WGN01B-2303W3	Water	03/22/23 10:15	03/23/23 13:00

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 769946

Lab Sample ID: IC 680-769946/9 Client Sample ID:

Date Analyzed: 03/27/23 22:18 Lab File ID: GC27016.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.34	Baseline Smoothing	SWK1	03/28/23 11:01
Ethylene glycol	6.55	Baseline Smoothing	SWK1	03/28/23 11:01

Lab Sample ID: IC 680-769946/11 Client Sample ID:

Date Analyzed: 03/27/23 23:05 Lab File ID: GC27018.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.34	Baseline Smoothing	SWK1	03/28/23 11:01
Ethylene glycol	6.55	Baseline Smoothing	SWK1	03/28/23 11:01

Lab Sample ID: ICV 680-769946/12 CCV Client Sample ID:

Date Analyzed: 03/27/23 23:28 Lab File ID: GC27019.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dipropylene Glycol Methyl Ether	5.11	Baseline Smoothing	SWK1	03/28/23 11:03

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 770129

Lab Sample ID: CCVIS 680-770129/6 Client Sample ID:

Date Analyzed: 03/28/23 18:34 Lab File ID: GC28006.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.34	Baseline Smoothing	SWK1	03/29/23 10:49

Lab Sample ID: MB 680-770129/10 Client Sample ID:

Date Analyzed: 03/28/23 20:07 Lab File ID: GC28010.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	SWK1	03/29/23 10:49

Lab Sample ID: 580-125177-1 Client Sample ID: AF-HDMW225303-WGN01LF-2303W3

Date Analyzed: 03/28/23 20:30 Lab File ID: GC28011.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	SWK1	03/29/23 10:49

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG_Gly_CAL_00052	06/30/23	o2si, Lot 480919			(Purchased Reagent)		2,2'-Oxybisethanol	2000 ug/mL
							2-(2-Butoxyethoxy)ethanol	2000 ug/mL
							2-Butoxyethanol	2000 ug/mL
							4-Hydroxy-4-methyl-2-pentanone	2000 ug/mL
							Dipropylene Glycol Methyl Ether	2000 ug/mL
							Ethanol, 2-propoxy	2000 ug/mL
							Ethylene glycol	2000 ug/mL
							Propylene glycol	2000 ug/mL
							Tetraethylene Glycol	4000 ug/mL
							Triethylene Glycol	2000 ug/mL
SG_GLY_ISTD_00106	05/22/23	Agilent, Lot 0006720623			(Purchased Reagent)		n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00059	06/27/23	o2si, Lot 454407			(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

SG_Gly_CAL_00052

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

o2si
smart solutions®

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02

Rev 0

Certificate of Analysis

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

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

Container:
1 ml Ampule, Amber Glass

Certified Values:

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

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

Intended Uses:

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

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

Catalog No. G34-120070-04 **Lot No.** 480919 **Expiration Date** 2 -May-2024

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

where x = boiling point of the most volatile analyte in the mix (in degrees K)
y = boiling point of the solvent (in degrees K)

This model assumes the container is stored at -10 °C and is unopened during storage. The user should determine what the acceptable error for their process is and calculate the maximum number of days the opened ampule should be stored.

Method of Preparation:

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

Packaging and Storage:

The solution should be stored according to the following storage requirements: ≤ -10 °C
Once the product is opened, it should be transferred to a vial with minimum head space if the product was received in a sealed ampule.

Glassware Calibration:

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

Weights and Balance Calibration:

Weights used to perform daily checks on balances are calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to NIST. Balances are checked daily in accordance to procedure O2-LB-G-002. Balances are calibrated annually by an ISO/IEC 17025:2017 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-011 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC 17025:2017 and ISO 17034:2016. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous Information:

Refer to MSDS.

Calculation of Uncertainty:

The following equations are used to calculate the value of the expanded uncertainty:
$u = ku_c$ u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2, u_c = the combined uncertainty
$u_c = (u_{char}^2 + u_{tran}^2 + u_{homo}^2 + u_{lts}^2)^{1/2}$ where u_i are the individual uncertainty components for manufacturing, transportation, homogeneity, and shelf life. While no significant uncertainty was detected in the replicates, a minimum contribution to

Manufactured By:	**Certified By:**	**Released By:**
Brian Stokes	Tyler Sherman	Susan Mathews
3 -May-2022	14 -Jun-2022	14 -Jun-2022
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

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Catalog No. G34-120070-04 **Lot No.** 480919 **Expiration Date** 2 -May-2024

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

Expiration Information:

The stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. Studies on the short term instability have determined no contribution to instability as observed on the concentration under controlled transportation conditions. This standard is guaranteed until 2-May-2024

Quality Standard Documentation:

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

Manufactured By:	**Certified By:**	**Released By:**
Brian Stokes	Tyler Sherman	Susan Mathews
3 -May-2022	14 -Jun-2022	14 -Jun-2022
Production Chemist I	**Quality Control Chemist I**	**Quality Control Team Lead**

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

Reagent

SG_GLY_ISTD_00106

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate

Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-6046

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

Lot Number: 0006720623

Lot Issue Date: 15-Dec-2022

Expiration Date: 31-Jan-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
n-heptanol	5001	±	25 µg/mL	000111-70-6	RM04540

Matrix: methanol (methyl alcohol)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

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

Agilent

Trusted Answers

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

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

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

ISO 17025

Reagent

SG_GlyICV_00059

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

o2si smart solutions®

ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02

Certificate of Analysis

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

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

Container:
1 ml Ampule, Amber Glass

Certified Values:

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

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

Intended Uses:

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

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

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

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

where x = boiling point of the most volatile analyte in the mix (in degrees K)
y = boiling point of the solvent (in degrees K)

This model assumes the container is stored at -10 °C and is unopened during storage. The user should determine what the acceptable error for their process is and calculate the maximum number of days the opened ampule should be stored.

Method of Preparation:

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

Packaging and Storage:

The solution should be stored according to the following storage requirements: ≤ -10 °C
Once the product is opened, it should be transferred to a vial with minimum head space if the product was received in a sealed ampule.

Glassware Calibration:

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

Weights and Balance Calibration:

Weights used to perform daily checks on balances are calibrated annually by the State of South Carolina Department of Agriculture Metrology Laboratory and are traceable to NIST. Balances are checked daily in accordance to procedure O2-LB-G-002. Balances are calibrated annually by an ISO/IEC 17025:2017 accredited metrology service.

Homogeneity:

Homogeneity has been established in accordance with internal procedure O2-QS-011 and has a maximum uncertainty of 0.1%. This is consistent with the intended use of this CRM. The homogeneity of this product has been confirmed by procedures consistent with ISO/IEC 17025:2017 and ISO 17034:2016. The homogeneity of this CRM is valid for sample sub-sizes that the end user can quantitatively reproduce.

Hazardous Information:

Refer to MSDS.

Calculation of Uncertainty:

The following equations are used to calculate the value of the expanded uncertainty:
$u = ku_c$ u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2, u_c = the combined uncertainty
$u_c = (u_{char}^2 + u_{tran}^2 + u_{homo}^2 + u_{lts}^2)^{1/2}$ where u_i are the individual uncertainty components for manufacturing, transportation, homogeneity, and shelf life. While no significant uncertainty was detected in the replicates, a minimum contribution to

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

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

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

Expiration Information:

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

Quality Standard Documentation:

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

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

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Method 8015C - DAI Glycols

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

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Matrix: Water Level: Low Lab File ID: -GC28006-Client.d

Lab ID: LCS 680-770129/1006 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	20.1	101	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.: 580-125177-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GC28007.D

Lab ID: LCSD 680-770129/7 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	22.4	112	11	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.: 580-125177-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GC28014.D

Lab ID: 580-125177-3 MS Client ID: AF-RHMW225401-WGN01B-2303W3 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	29.8	149	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.: 580-125177-1

SDG No.:

Matrix: Water Level: Low Lab File ID: GC28015.D

Lab ID: 580-125177-3 MSD Client ID: AF-RHMW225401-WGN01B-2303W3 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	23.5	117	24	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.: 580-125177-1

SDG No.:

Lab Sample ID: MB 680-770129/10

Matrix: Water Date Extracted:

Lab File ID:(1) GC28010.D Lab File ID:(2)

Date Analyzed:(1) 03/28/2023 20:07 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 680-770129/1006	03/28/2023 18:34	
	LCSD 680-770129/7	03/28/2023 18:57	
AF-HDMW225303-WGN01LF-2303W3	580-125177-1	03/28/2023 20:30	
AF-RHMW10-WGN01LF-2303W3	580-125177-2	03/28/2023 20:54	
AF-RHMW225401-WGN01B-2303W3	580-125177-3	03/28/2023 21:17	
AF-RHMW225401-WGN01B-2303W3 MS	580-125177-3 MS	03/28/2023 21:41	
AF-RHMW225401-WGN01B-2303W3 MSD	580-125177-3 MSD	03/28/2023 22:04	

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

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Sample No.: ICIS 680-769946/8 Date Analyzed: 03/27/2023 21:55

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

Lab File ID (Standard): GC27015.D Heated Purge: (Y/N) N

Calibration ID: 90402

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		5332847	4.19				
UPPER LIMIT		10665694	4.69				
LOWER LIMIT		2666424	3.69				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-769946/12 CCV		5635313	4.19				

nHPA = n-Heptyl Alcohol

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

Column used to flag values outside QC limits

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

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Sample No.: CCVIS 680-770129/6 Date Analyzed: 03/28/2023 18:34

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

Lab File ID (Standard): GC28006.D Heated Purge: (Y/N) N

Calibration ID: 90402

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		4575536	4.20				
UPPER LIMIT		9151072	4.70				
LOWER LIMIT		2287768	3.70				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-770129/1006		4575536	4.20				
LCSD 680-770129/7		5243268	4.19				
MB 680-770129/10		5829847	4.20				
580-125177-1	AF-HDMW225303-WGN01 LF-2303W3	4755006	4.18				
580-125177-2	AF-RHMW10-WGN01LF-2 303W3	3676349	4.18				
580-125177-3	AF-RHMW225401-WGN01 B-2303W3	4275620	4.18				
580-125177-3 MS	AF-RHMW225401-WGN01 B-2303W3 MS	3739033	4.18				
580-125177-3 MSD	AF-RHMW225401-WGN01 B-2303W3 MSD	5603667	4.18				
CCV 680-770129/17		5519959	4.18				

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.: 580-125177-1

SDG No.:

Client Sample ID: AF-HDMW225303-WGN01LF-2303W3 Lab Sample ID: 580-125177-1

Matrix: Water Lab File ID: GC28011.D

Analysis Method: 8015C GLY Date Collected: 03/21/2023 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/28/2023 20:30

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.: 770129 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28011.D				
Lims ID:	580-125177-A-1				
Client ID:	AF-HDMW225303-WGN01LF-2303W3				
Sample Type:	Client				
Inject. Date:	28-Mar-2023 20:30:56	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0084763-011				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	29-Mar-2023 10:49:46	Calib Date:	27-Mar-2023 23:05:21		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1608				

First Level Reviewer: SWK1 Date: 29-Mar-2023 10:49:46

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
4.183	4.196	-0.013	4755006	50.0	

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

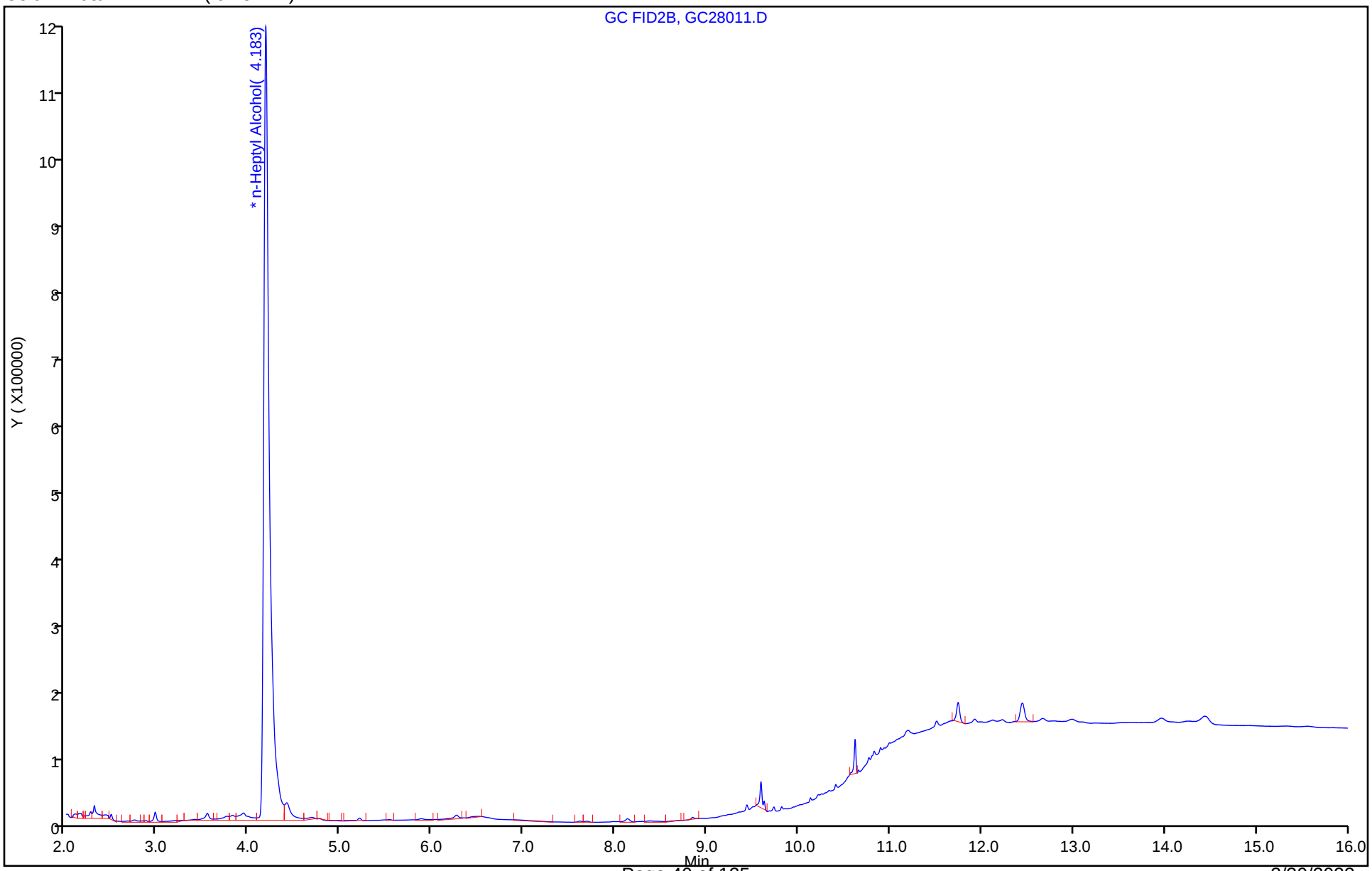
Report Date: 29-Mar-2023 10:50:02 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28011.D

Injection Date:	28-Mar-2023 20:30:56	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-125177-A-1	Lab Sample ID:	680-125177-1	Worklist Smp#:	11
Client ID:	AF-HDMW225303-WGN01LF-2303W3				
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)



3/30/2023
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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Client Sample ID: AF-RHMW10-WGN01LF-2303W3 Lab Sample ID: 580-125177-2

Matrix: Water Lab File ID: GC28012.D

Analysis Method: 8015C GLY Date Collected: 03/21/2023 12:55

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/28/2023 20:54

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.: 770129 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\20230328-84763.b\GC28012.D				
Lims ID:	580-125177-A-2				
Client ID:	AF-RHMW10-WGN01LF-2303W3				
Sample Type:	Client				
Inject. Date:	28-Mar-2023 20:54:16	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0084763-012				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	29-Mar-2023 10:49:46	Calib Date:	27-Mar-2023 23:05:21		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1608				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
4.183	4.196	-0.013	3676349	50.0	

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

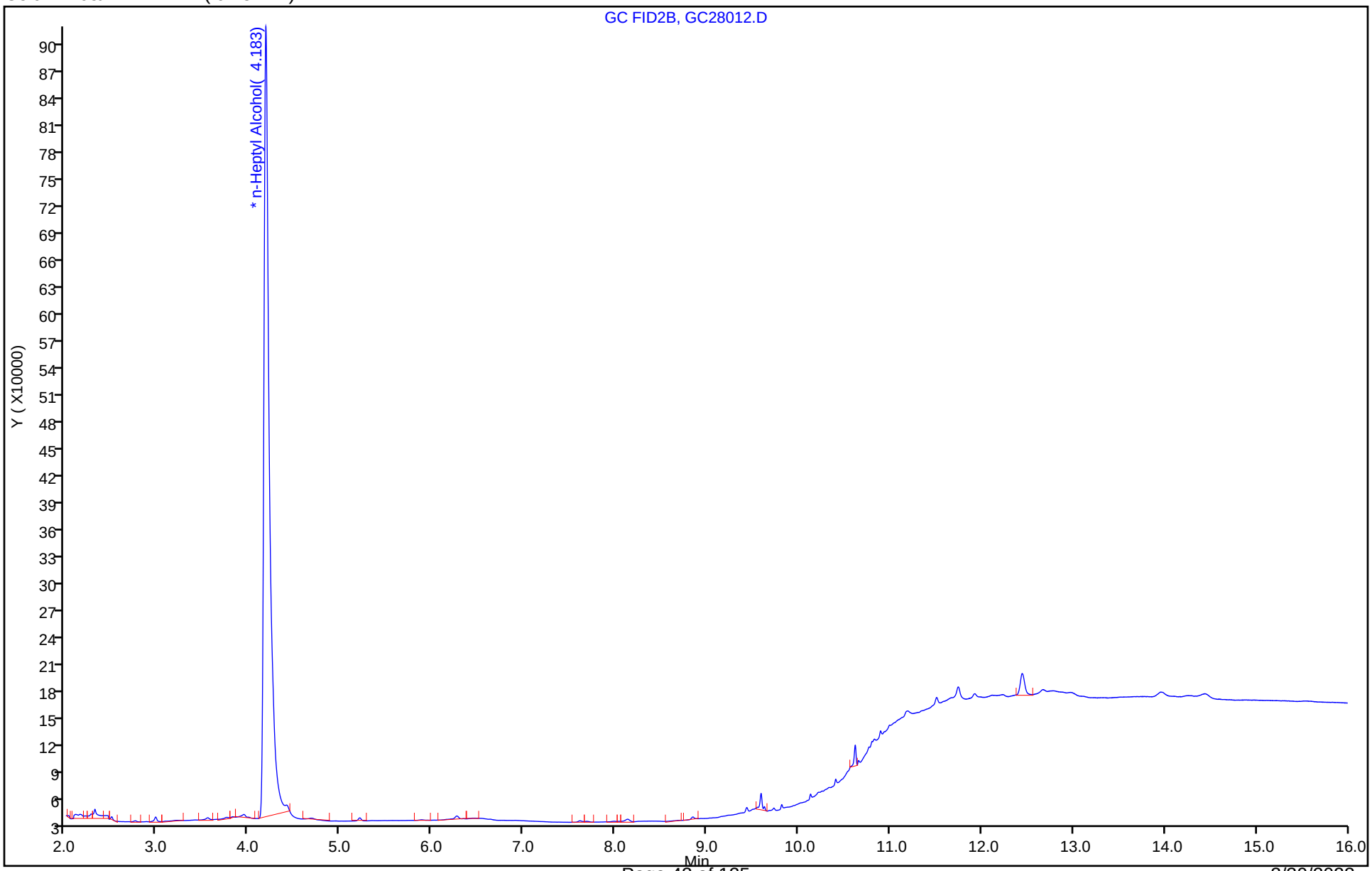
Report Date: 29-Mar-2023 10:50:03 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28012.D

Injection Date:	28-Mar-2023 20:54:16	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-125177-A-2	Lab Sample ID:	680-125177-2	Worklist Smp#:	12
Client ID:	AF-RHMW10-WGN01LF-2303W3				
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)



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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah | Job No.: 580-125177-1

SDG No.:

Client Sample ID: AF-RHMW225401-WGN01B-2303 W3 | Lab Sample ID: 580-125177-3

Matrix: Water | Lab File ID: GC28013.D

Analysis Method: 8015C GLY | Date Collected: 03/22/2023 10:15

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 03/28/2023 21:17

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.: 770129 | 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\20230328-84763.b\GC28013.D				
Lims ID:	580-125177-A-3				
Client ID:	AF-RHMW225401-WGN01B-2303W3				
Sample Type:	Client				
Inject. Date:	28-Mar-2023 21:17:41	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0084763-013				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	29-Mar-2023 10:49:46	Calib Date:	27-Mar-2023 23:05:21		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1608				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
4.184	4.196	-0.012	4275620	50.0	

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

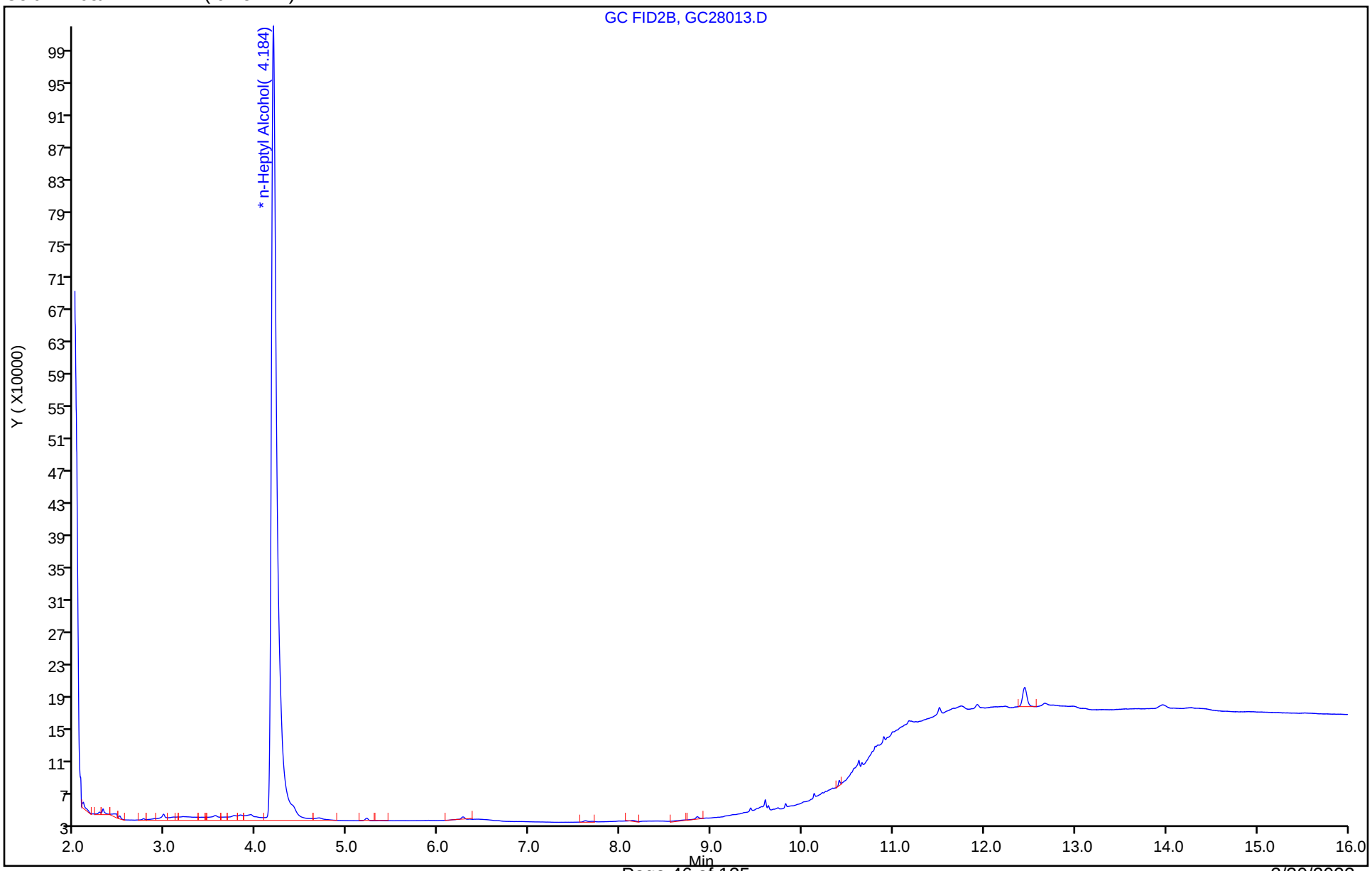
Report Date: 29-Mar-2023 10:50:03 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28013.D

Injection Date:	28-Mar-2023 21:17:41	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-125177-A-3	Lab Sample ID:	680-125177-3	Worklist Smp#:	13
Client ID:	AF-RHMW225401-WGN01B-2303W3				
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)



3/30/2023
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FORM VI
GC SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Savannah Job No.: 580-125177-1 Analy Batch No.: 769946

SDG No.:

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

Calibration Start Date: 03/27/2023 20:45 Calibration End Date: 03/27/2023 23:05 Calibration ID: 90402

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-769946/11	GC27018.D
Level 2	IC 680-769946/10	GC27017.D
Level 3	IC 680-769946/9	GC27016.D
Level 4	ICIS 680-769946/8	GC27015.D
Level 5	IC 680-769946/7	GC27014.D
Level 6	IC 680-769946/6	GC27013.D
Level 7	IC 680-769946/5	GC27012.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol, 2-propoxy	1.2291 0.5636	0.6587 0.5369	0.6430	0.4785	+++++	Qua	0.6407	0.5335	0.0000546						0.9980		0.9900
4-Hydroxy-4-methyl-2-pentanone	1.1466 0.5329	0.5950 0.5049	0.5955	0.4309	+++++	Qua	0.4726	0.5009	0.0000844						0.9970		0.9900
2-Butoxyethanol	1.3663 0.6197	0.7508 0.5937	0.7086	0.5372	+++++	Qua	0.8280	0.5816	0.0001226						0.9980		0.9900
Dipropylene Glycol Methyl Ether	0.0929 0.0455	0.0494 0.0428	0.0450	0.0348	+++++	Qua	0.0151	0.0426	0.0000099						0.9960		0.9900
Propylene glycol	0.2458 0.1148	0.1457 0.1055	0.1245	0.0963	+++++	Qua	0.0674	0.1170	-0.000099						0.9960		0.9900
Ethylene glycol	0.6950 0.4727	0.6372 0.4413	0.5247	0.3939	+++++	Lin1	0.5796	0.4432							0.9940		0.9900
2-(2-Butoxyethoxy)ethanol	1.0311 0.4815	0.5473 0.4496	0.5224	0.3810	+++++	Qua	0.2938	0.4638	-0.000076						0.9960		0.9900
2,2'-Oxybisethanol	0.4560 0.2624	0.2848 0.2472	0.2548	0.2168	+++++	Qua	-0.013	0.2598	-0.000081						0.9970		0.9900
Triethylene Glycol	+++++ 0.2541	0.2687 0.2378	0.2381	0.2026	+++++	Lin1	-0.021	0.2418							0.9940		0.9900
Tetraethylene Glycol	0.4207 0.2652	0.2711 0.2472	0.2494	0.2085	+++++	Lin1	0.4162	0.2468							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.: 580-125177-1 Analy Batch No.: 769946

SDG No.:

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

Calibration Start Date: 03/27/2023 20:45 Calibration End Date: 03/27/2023 23:05 Calibration ID: 90402

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-769946/11	GC27018.D
Level 2	IC 680-769946/10	GC27017.D
Level 3	IC 680-769946/9	GC27016.D
Level 4	ICIS 680-769946/8	GC27015.D
Level 5	IC 680-769946/7	GC27014.D
Level 6	IC 680-769946/6	GC27013.D
Level 7	IC 680-769946/5	GC27012.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	Qua	281897 4671417	417010 5626487	647672	1020782	+++++	2.00 80.0	5.00 100	10.0	20.0	+++++
4-Hydroxy-4-methyl-2-pentanone	nHPA	Qua	262976 4417030	376697 5291268	599806	919158	+++++	2.00 80.0	5.00 100	10.0	20.0	+++++
2-Butoxyethanol	nHPA	Qua	313361 5135913	475312 6221751	713694	1146022	+++++	2.00 80.0	5.00 100	10.0	20.0	+++++
Dipropylene Glycol Methyl Ether	nHPA	Qua	21296 377000	31305 448477	45355	74139	+++++	2.00 80.0	5.00 100	10.0	20.0	+++++
Propylene glycol	nHPA	Qua	56377 951294	92226 1105628	125378	205323	+++++	2.00 80.0	5.00 100	10.0	20.0	+++++
Ethylene glycol	nHPA	Lin1	159395 3917838	403388 4624441	528452	840187	+++++	2.00 80.0	5.00 100	10.0	20.0	+++++
2-(2-Butoxyethoxy)ethanol	nHPA	Qua	236474 3991263	346490 4711690	526129	812797	+++++	2.00 80.0	5.00 100	10.0	20.0	+++++
2,2'-Oxybisethanol	nHPA	Qua	104588 2174839	180276 2590128	256599	462462	+++++	2.00 80.0	5.00 100	10.0	20.0	+++++
Triethylene Glycol	nHPA	Lin1	+++++ 2105689	170126 2492441	239793	432271	+++++	+++++ 80.0	5.00 100	10.0	20.0	+++++
Tetraethylene Glycol	nHPA	Lin1	192981 4396410	343227 5180328	502454	889425	+++++	4.00 160	10.0 200	20.0	40.0	+++++

Curve Type Legend

Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

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

Lab Name: Eurofins Savannah Job No.: 580-125177-1 Analy Batch No.: 769946

SDG No.:

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

Calibration Start Date: 03/27/2023 20:45 Calibration End Date: 03/27/2023 23:05 Calibration ID: 90402

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-769946/11	GC27018.D
Level 2	IC 680-769946/10	GC27017.D
Level 3	IC 680-769946/9	GC27016.D
Level 4	ICIS 680-769946/8	GC27015.D
Level 5	IC 680-769946/7	GC27014.D
Level 6	IC 680-769946/6	GC27013.D
Level 7	IC 680-769946/5	GC27012.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
Ethylene glycol	-8.6 -1.7	17.6	5.3	-17.7	+++++	5.0	20 20	20	20	20		20
Triethylene Glycol	+++++ -1.6	12.8	-0.7	-15.8	+++++	5.2	 20	20	20	20		20
Tetraethylene Glycol	28.3 * -0.7	-7.0	-7.3	-19.7	+++++	6.4	20 20	20	20	20		20

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27012.D
Lims ID: ic g7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 27-Mar-2023 20:45:11 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084740-005
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Mar-2023 11:06:15 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1678

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.894	2.906	-0.012	5626487	100.0	98.4	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.437	3.463	-0.026	5291268	100.0	98.2	
	3 2-Butoxyethanol						
	3.738	3.741	-0.003	6221751	100.0	98.6	
*	4 n-Heptyl Alcohol						
	4.194	4.176	0.018	5239828	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.107	5.121	-0.014	448477	100.0	97.9	
	6 Propylene glycol						
	6.323	6.347	-0.024	1105628	100.0	97.6	
	7 Ethylene glycol						
	6.533	6.556	-0.023	4624441	100.0	98.3	
	8 2-(2-Butoxyethoxy)ethanol						
	8.379	8.379	0.000	4711690	100.0	97.9	
	9 2,2'-Oxybisethanol						
	9.594	9.596	-0.002	2590128	100.0	98.2	
	10 Triethylene Glycol						
	10.622	10.628	-0.006	2492441	100.0	98.4	
	11 Tetraethylene Glycol						
	11.750	11.771	-0.021	5180328	200.0	198.6	

Reagents:

SG_Gly_CAL_00052 Amount Added: 50.00 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

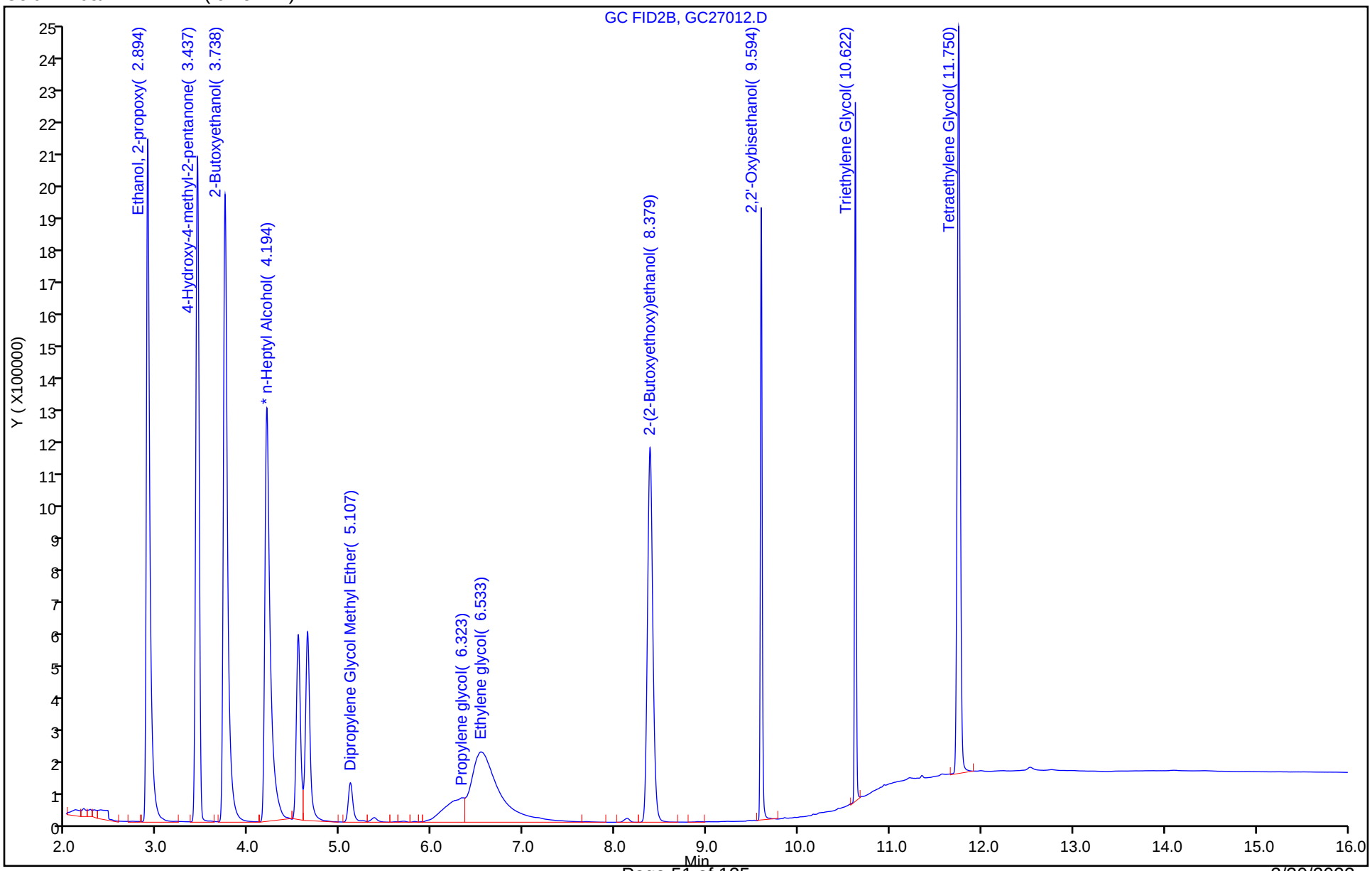
Report Date: 28-Mar-2023 11:06:15 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27012.D

Injection Date:	27-Mar-2023 20:45:11	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g7			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



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Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27013.D
Lims ID: ic g6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 27-Mar-2023 21:08:30 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084740-006
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Mar-2023 11:06:15 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1678

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.893	2.906	-0.013	4671417	80.0	82.6	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.438	3.463	-0.025	4417030	80.0	83.0	
	3 2-Butoxyethanol						
	3.738	3.741	-0.003	5135913	80.0	82.4	
*	4 n-Heptyl Alcohol						
	4.192	4.176	0.016	5180233	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.108	5.121	-0.013	377000	80.0	83.5	
	6 Propylene glycol						
	6.330	6.347	-0.017	951294	80.0	83.8	
	7 Ethylene glycol						
	6.533	6.556	-0.023	3917838	80.0	84.0	
	8 2-(2-Butoxyethoxy)ethanol						
	8.379	8.379	0.000	3991263	80.0	83.6	
	9 2,2'-Oxybisethanol						
	9.593	9.596	-0.003	2174839	80.0	83.0	
	10 Triethylene Glycol						
	10.622	10.628	-0.006	2105689	80.0	84.1	
	11 Tetraethylene Glycol						
	11.751	11.771	-0.020	4396410	160.0	170.3	

Reagents:

SG_Gly_CAL_00052 Amount Added: 40.00 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

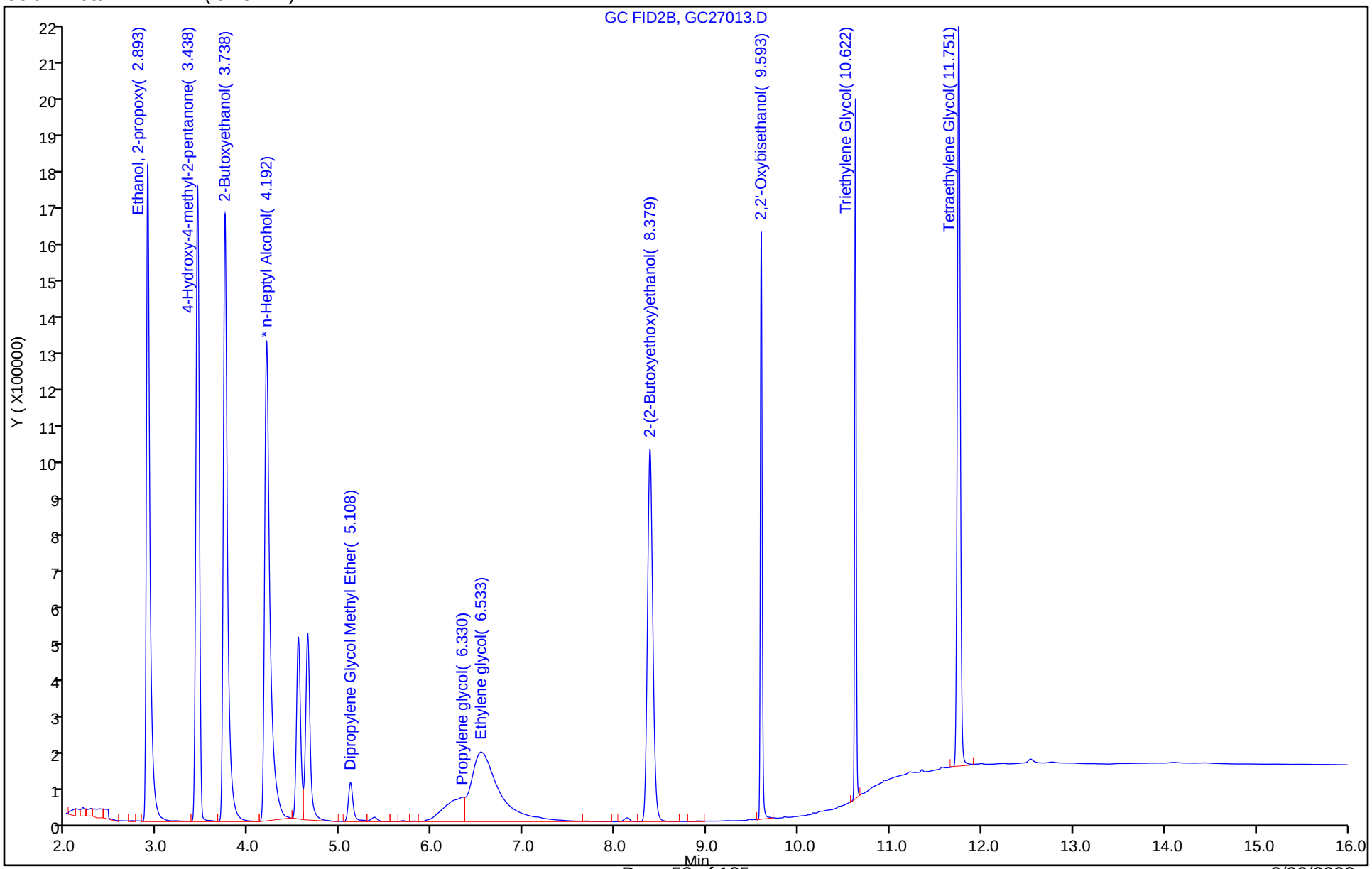
Report Date: 28-Mar-2023 11:06:15 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27013.D

Injection Date:	27-Mar-2023 21:08:30	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g6			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



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Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27014.D
Lims ID: ic g5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 27-Mar-2023 21:31:57 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084740-007
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Mar-2023 11:06:16 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1678

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.896	2.906	-0.010	2129167	50.0	43.2	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.444	3.463	-0.019	2001442	50.0	43.4	
	3 2-Butoxyethanol						
	3.737	3.741	-0.004	2274221	50.0	41.9	
*	4 n-Heptyl Alcohol						
	4.186	4.176	0.010	4476654	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.112	5.121	-0.009	162662	50.0	41.9	
	6 Propylene glycol						
	6.340	6.347	-0.007	403330	50.0	39.2	
	7 Ethylene glycol						
	6.556	6.556	0.000	1737789	50.0	42.5	
	8 2-(2-Butoxyethoxy)ethanol						
	8.378	8.379	-0.001	1665908	50.0	39.7	
	9 2,2'-Oxybisethanol						
	9.593	9.596	-0.003	886108	50.0	38.6	
	10 Triethylene Glycol						
	10.622	10.628	-0.006	802959	50.0	37.2	
	11 Tetraethylene Glycol						
	11.751	11.771	-0.020	1619901	100.0	71.6	

Reagents:

SG_Gly_CAL_00052 Amount Added: 25.00 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

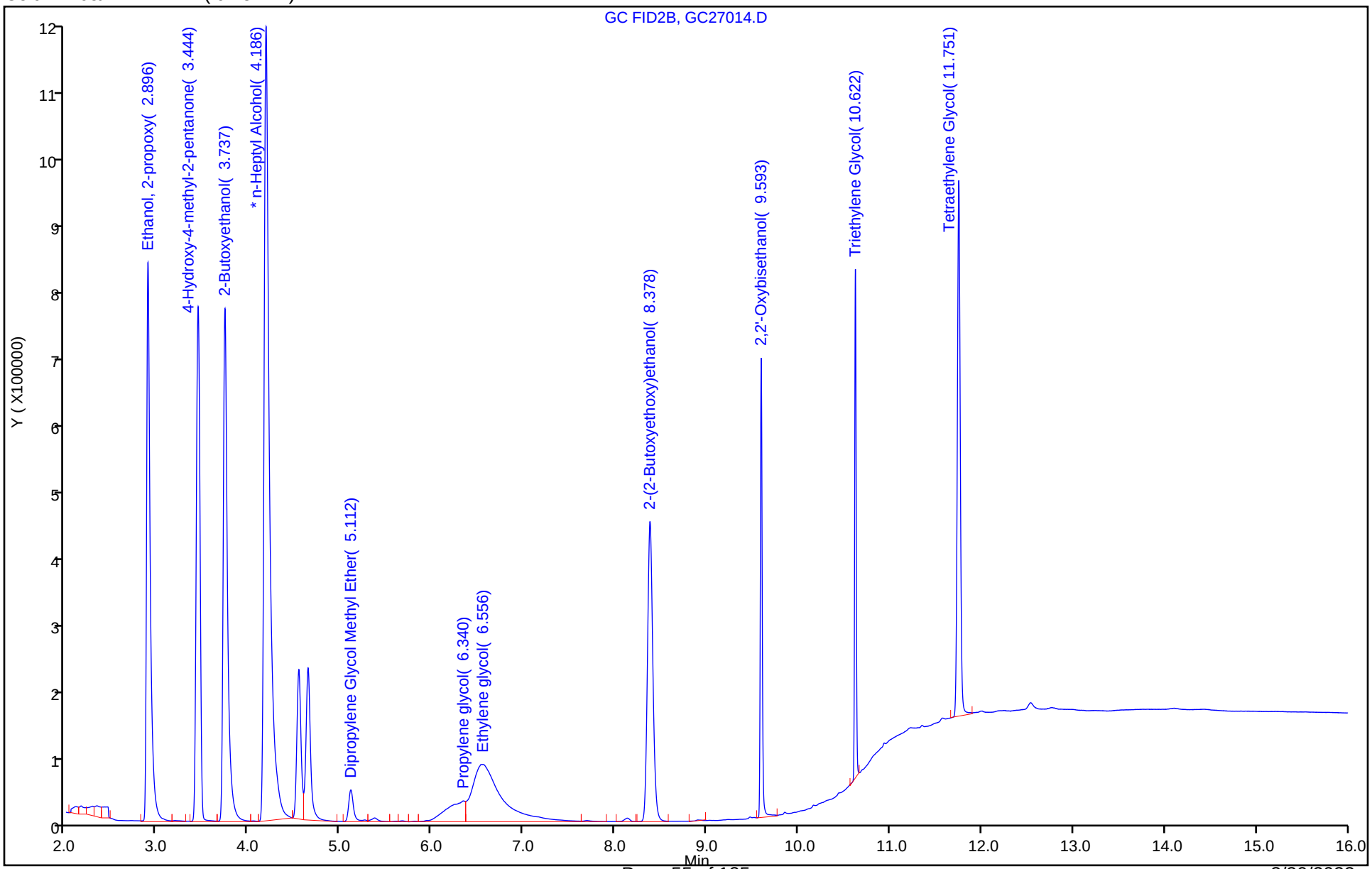
Report Date: 28-Mar-2023 11:06:16 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27014.D

Injection Date:	27-Mar-2023 21:31:57	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g5			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



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Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27015.D
Lims ID: icis g4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 27-Mar-2023 21:55:16 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084740-008
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Mar-2023 11:06:17 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1678

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.895	2.895	0.000	1020782	20.0	16.7	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.439	3.439	0.000	919158	20.0	16.2	
	3 2-Butoxyethanol						
	3.738	3.738	0.000	1146022	20.0	17.0	
*	4 n-Heptyl Alcohol						
	4.193	4.193	0.000	5332847	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.109	5.109	0.000	74139	20.0	15.9	
	6 Propylene glycol						
	6.341	6.341	0.000	205323	20.0	16.1	
	7 Ethylene glycol						
	6.552	6.552	0.000	840187	20.0	16.5	
	8 2-(2-Butoxyethoxy)ethanol						
	8.379	8.379	0.000	812797	20.0	15.8	
	9 2,2'-Oxybisethanol						
	9.593	9.593	0.000	462462	20.0	16.8	
	10 Triethylene Glycol						
	10.621	10.621	0.000	432271	20.0	16.8	
	11 Tetraethylene Glycol						
	11.750	11.750	0.000	889425	40.0	32.1	

Reagents:

SG_Gly_CAL_00052 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

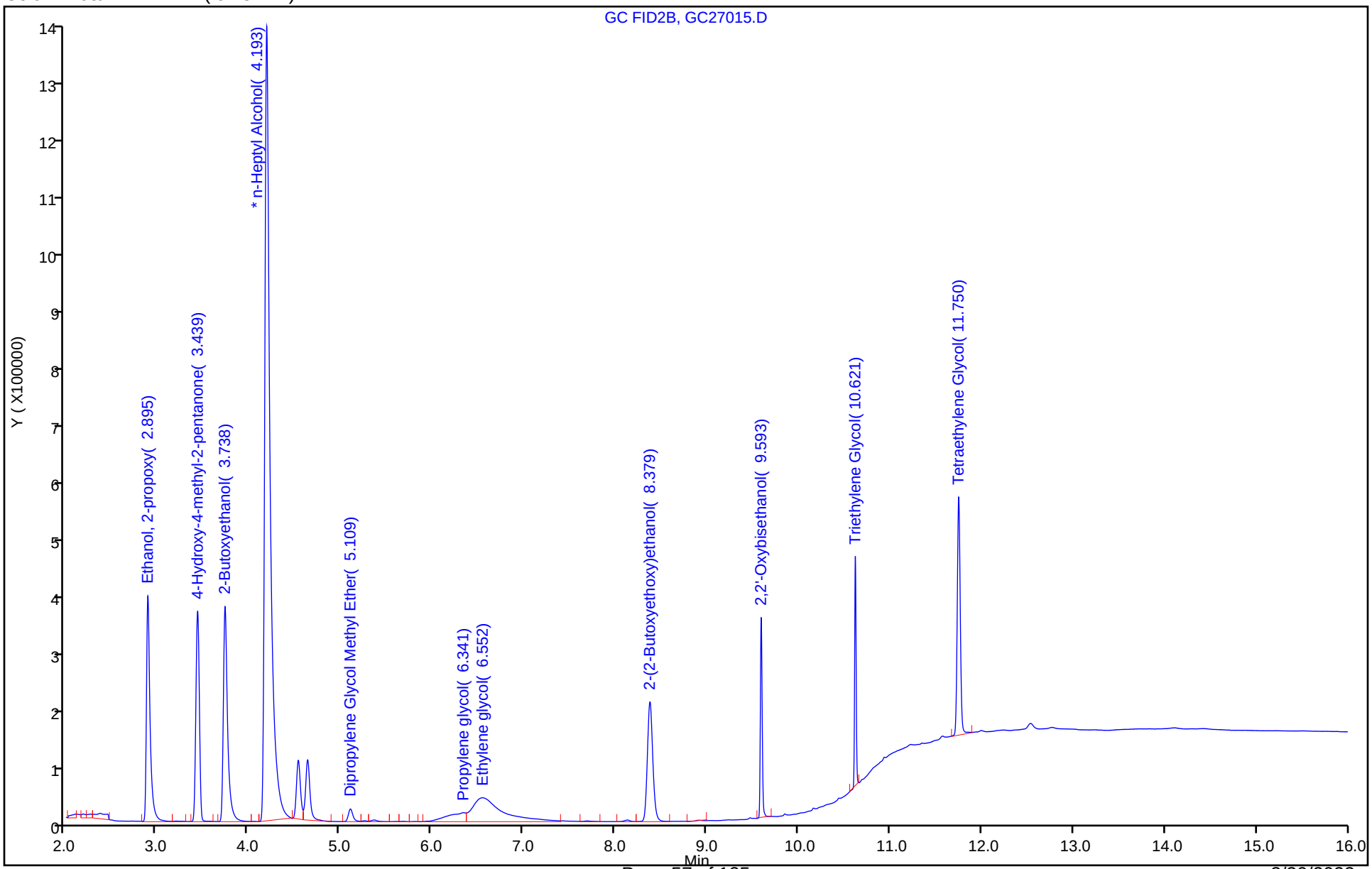
Report Date: 28-Mar-2023 11:06:17 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27015.D

Injection Date:	27-Mar-2023 21:55:16	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	icis g4			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



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Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27016.D
Lims ID: ic g3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 27-Mar-2023 22:18:36 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084740-009
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Mar-2023 11:06:18 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1678

First Level Reviewer: SWK1 Date: 28-Mar-2023 11:01:09

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.898	2.895	0.003	647672	10.0	10.8	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.445	3.439	0.006	599806	10.0	10.9	
	3 2-Butoxyethanol						
	3.738	3.738	0.000	713694	10.0	10.7	
*	4 n-Heptyl Alcohol						
	4.188	4.193	-0.005	5036080	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.111	5.109	0.002	45355	10.0	10.2	
	6 Propylene glycol						Ma
	6.343	6.341	0.002	125378	10.0	10.2	Ma
	7 Ethylene glycol						M
	6.550	6.552	-0.002	528452	10.0	10.5	M
	8 2-(2-Butoxyethoxy)ethanol						
	8.379	8.379	0.000	526129	10.0	10.6	
	9 2,2'-Oxybisethanol						
	9.593	9.593	0.000	256599	10.0	9.89	
	10 Triethylene Glycol						
	10.622	10.621	0.001	239793	10.0	9.93	
	11 Tetraethylene Glycol						
	11.752	11.750	0.002	502454	20.0	18.5	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00052	Amount Added:	5.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

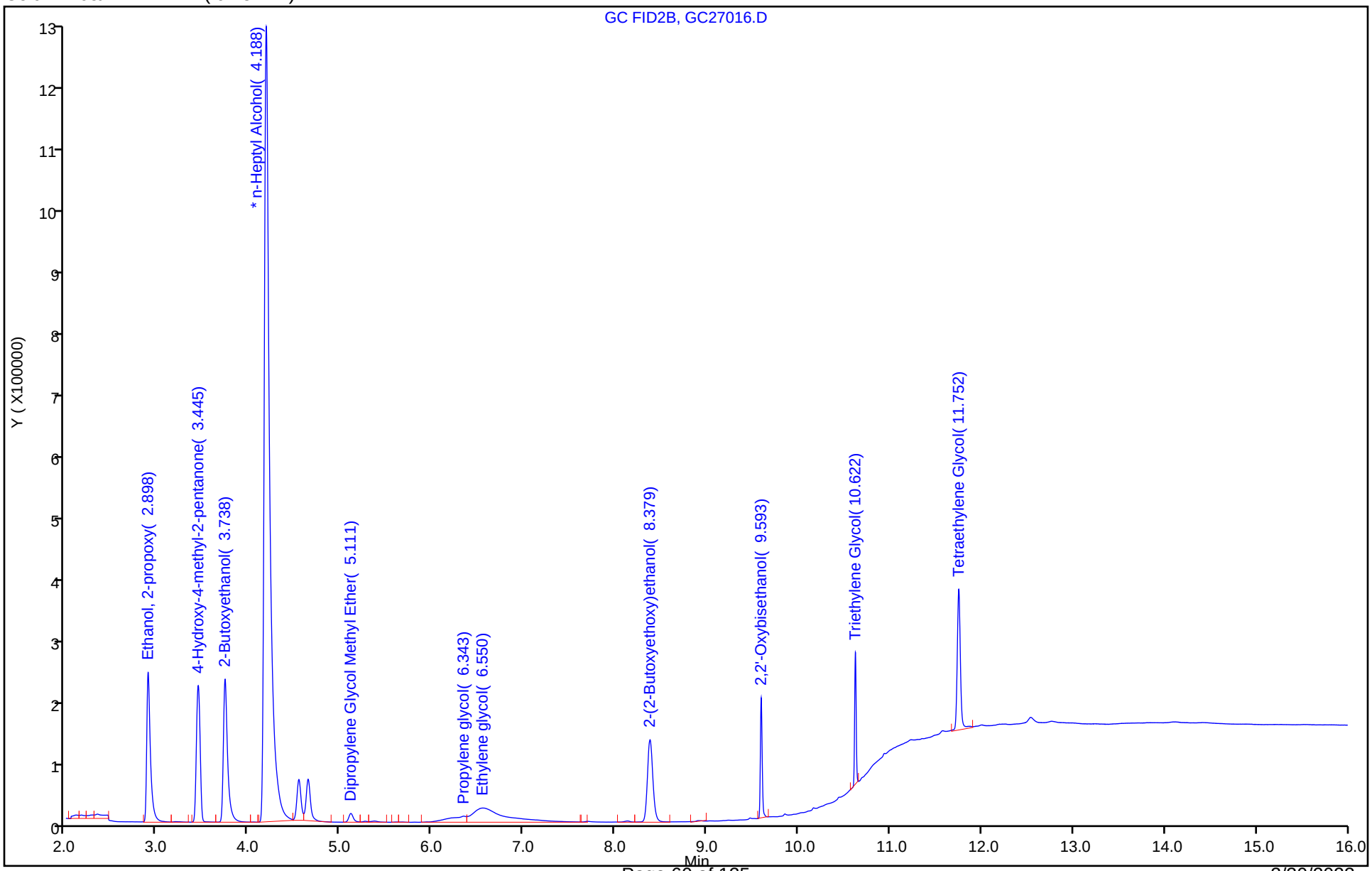
Report Date: 28-Mar-2023 11:06:18 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27016.D

Injection Date:	27-Mar-2023 22:18:36	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g3			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



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Manual Integration/User Assign Peak Report

Eurofins Savannah

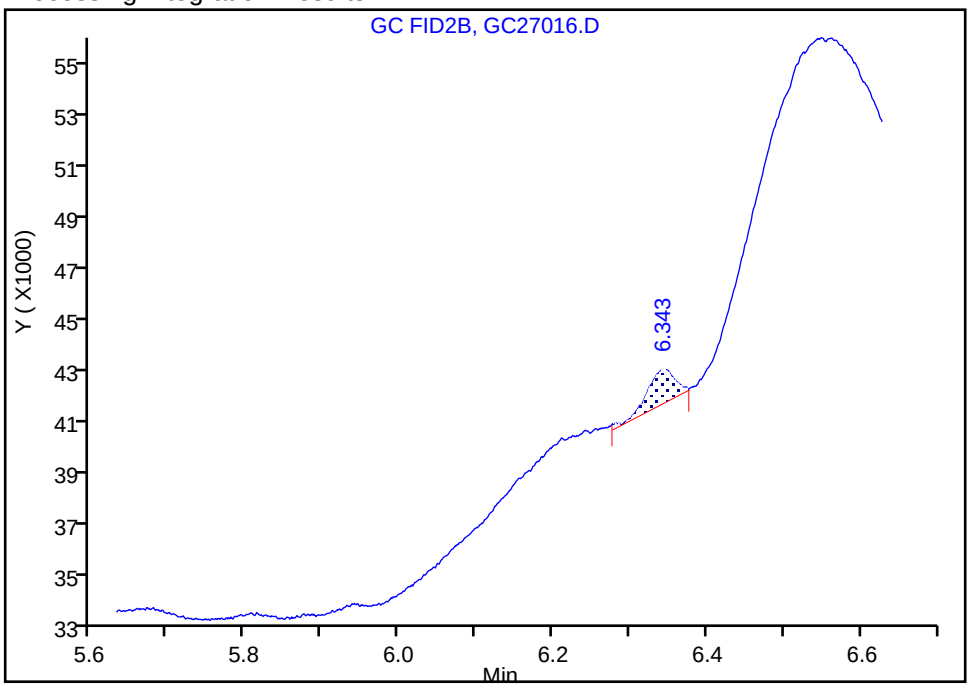
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27016.D
Injection Date: 27-Mar-2023 22:18:36 Instrument ID: CVGG2
Lims ID: ic g3
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

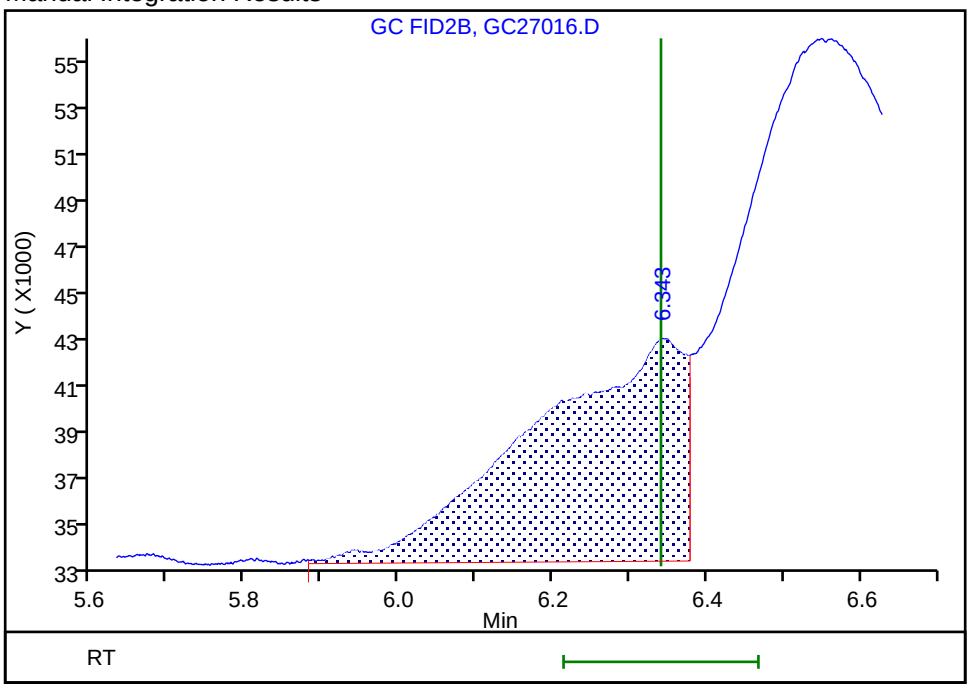
Processing Integration Results

RT: 6.34
Area: 3187
Amount: 0.389629
Amount Units: ug/ml



Manual Integration Results

RT: 6.34
Area: 125378
Amount: 10.150469
Amount Units: ug/ml



Reviewer: SWK1, 28-Mar-2023 11:01:07
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

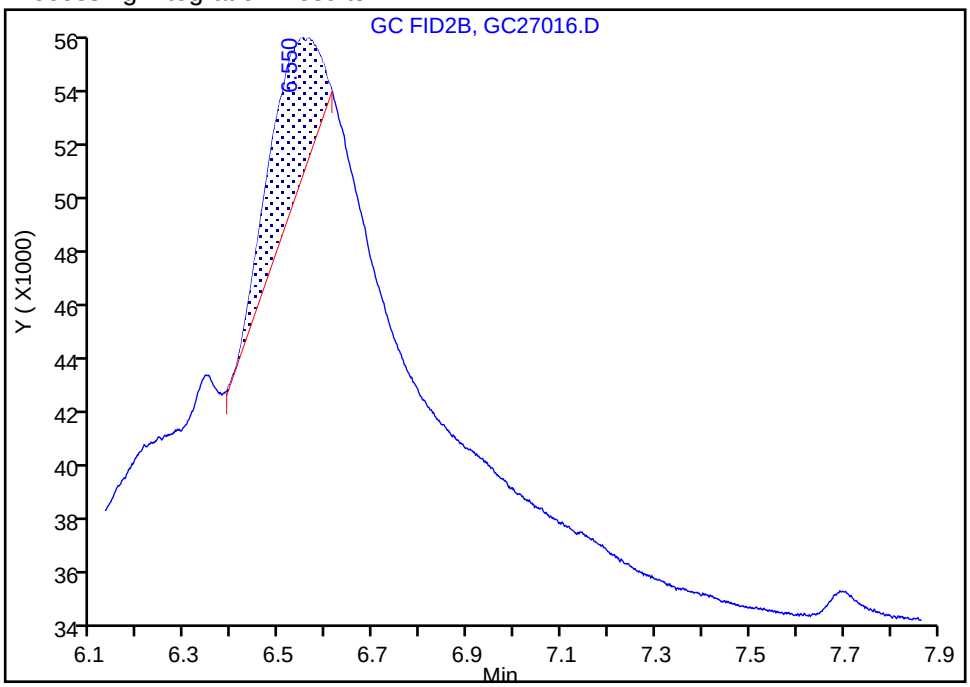
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27016.D
Injection Date: 27-Mar-2023 22:18:36 Instrument ID: CVGG2
Lims ID: ic g3
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

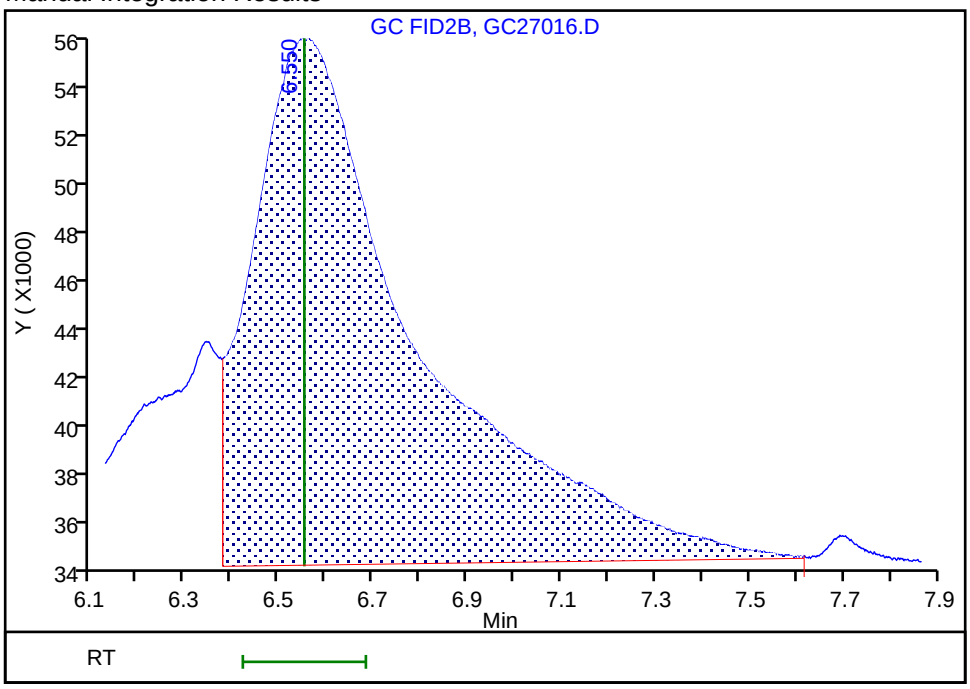
Processing Integration Results

RT: 6.55
Area: 40601
Amount: 1.155034
Amount Units: ug/ml



Manual Integration Results

RT: 6.55
Area: 528452
Amount: 10.531302
Amount Units: ug/ml



Reviewer: SWK1, 28-Mar-2023 11:01:04
Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27017.D
Lims ID: ic g2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 27-Mar-2023 22:42:02 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084740-010
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Mar-2023 11:06:18 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1678

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.897	2.895	0.002	417010	5.00	4.97	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.441	3.439	0.002	376697	5.00	4.99	
	3 2-Butoxyethanol						
	3.738	3.738	0.000	475312	5.00	5.03	
*	4 n-Heptyl Alcohol						
	4.193	4.193	0.000	6330924	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.108	5.109	-0.001	31305	5.00	5.45	
	6 Propylene glycol						
	6.345	6.341	0.004	92226	5.00	5.68	
	7 Ethylene glycol						
	6.558	6.552	0.006	403388	5.00	5.88	
	8 2-(2-Butoxyethoxy)ethanol						
	8.378	8.379	-0.001	346490	5.00	5.27	
	9 2,2'-Oxybisethanol						
	9.593	9.593	0.000	180276	5.00	5.54	
	10 Triethylene Glycol						
	10.623	10.621	0.002	170126	5.00	5.64	
	11 Tetraethylene Glycol						
	11.751	11.750	0.001	343227	10.0	9.30	

Reagents:

SG_Gly_CAL_00052 Amount Added: 2.50 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

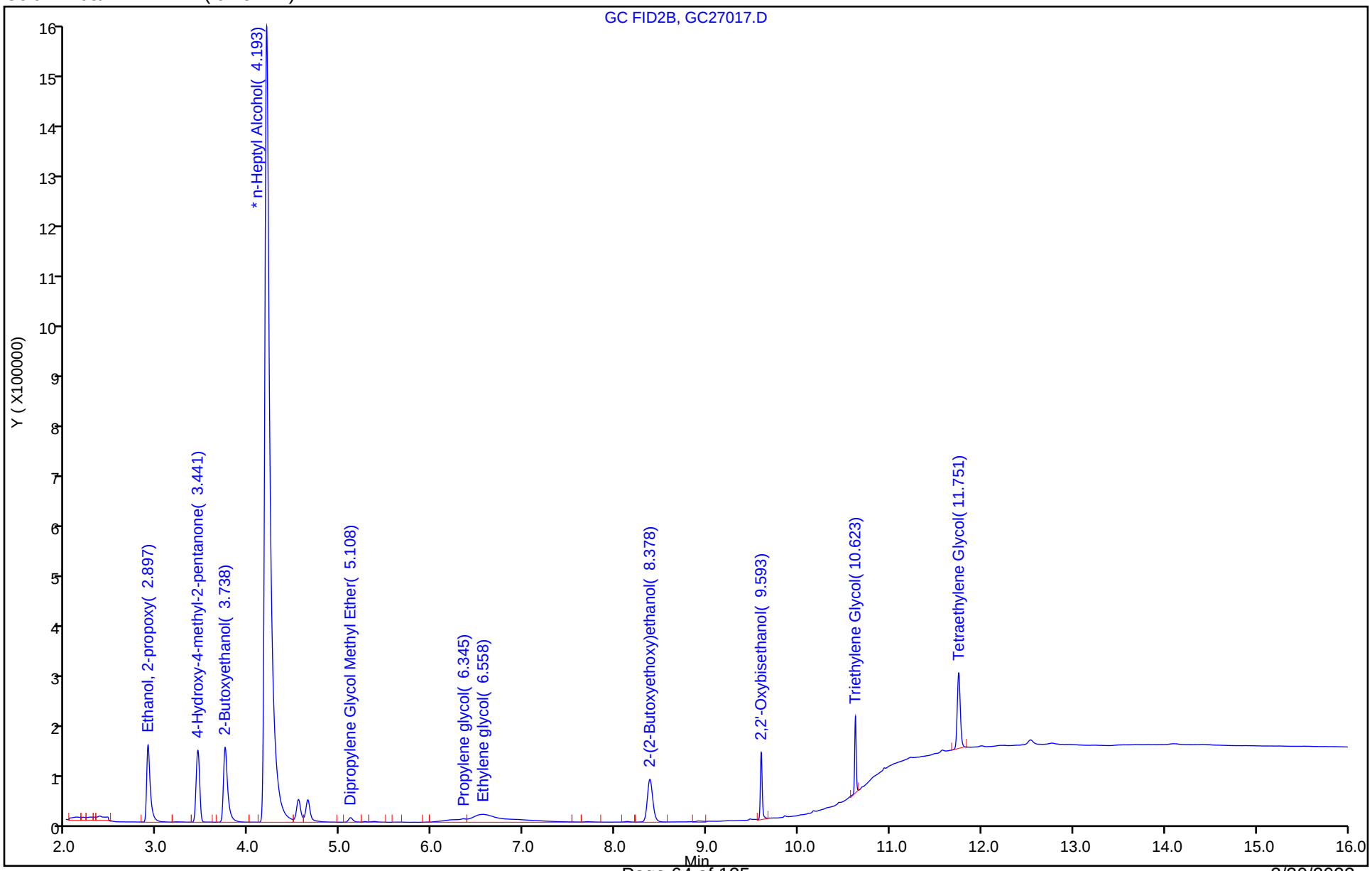
Report Date: 28-Mar-2023 11:06:18 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27017.D

Injection Date:	27-Mar-2023 22:42:02	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g2			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D
Lims ID: ic g1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 27-Mar-2023 23:05:21 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084740-011
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Mar-2023 11:06:19 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1678

First Level Reviewer: SWK1 Date: 28-Mar-2023 11:01:30

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.900	2.895	0.005	281897	2.00	3.41	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.449	3.439	0.010	262976	2.00	3.63	
	3 2-Butoxyethanol						
	3.739	3.738	0.001	313361	2.00	3.27	
*	4 n-Heptyl Alcohol						
	4.185	4.193	-0.008	5733666	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.114	5.109	0.005	21296	2.00	4.00	
	6 Propylene glycol						M
	6.342	6.341	0.001	56377	2.00	3.64	M
	7 Ethylene glycol						Ma
	6.546	6.552	-0.006	159395	2.00	1.83	Ma
	8 2-(2-Butoxyethoxy)ethanol						
	8.379	8.379	0.000	236474	2.00	3.82	
	9 2,2'-Oxybisethanol						
	9.593	9.593	0.000	104588	2.00	3.56	
	10 Triethylene Glycol						
	10.622	10.621	0.001	95963	2.00	3.55	
	11 Tetraethylene Glycol						
	11.752	11.750	0.002	192981	4.00	5.13	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

SG_Gly_CAL_00052	Amount Added:	1.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

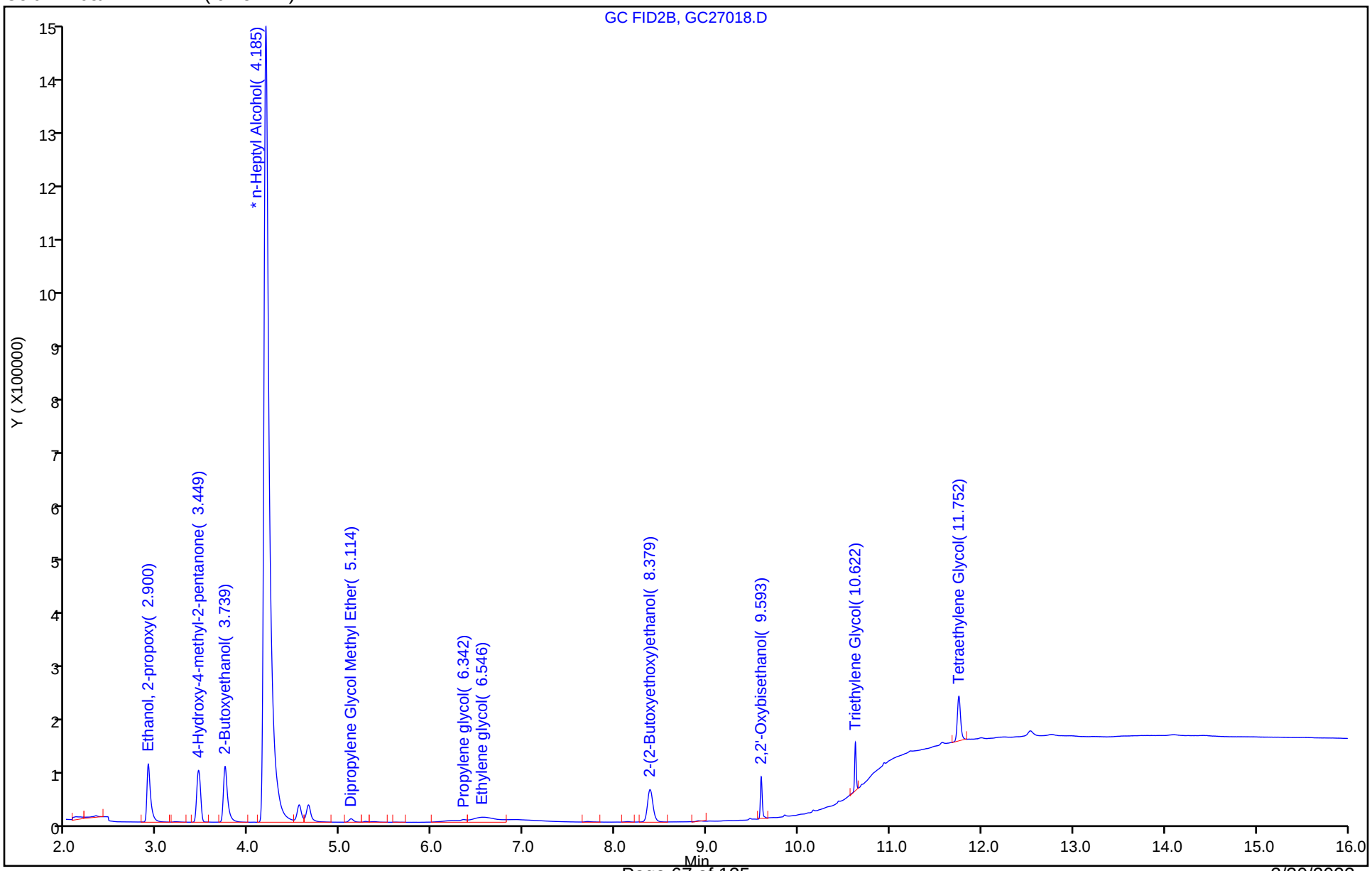
Report Date: 28-Mar-2023 11:06:19 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Injection Date:	27-Mar-2023 23:05:21	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g1			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



3/30/2023
12:32 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

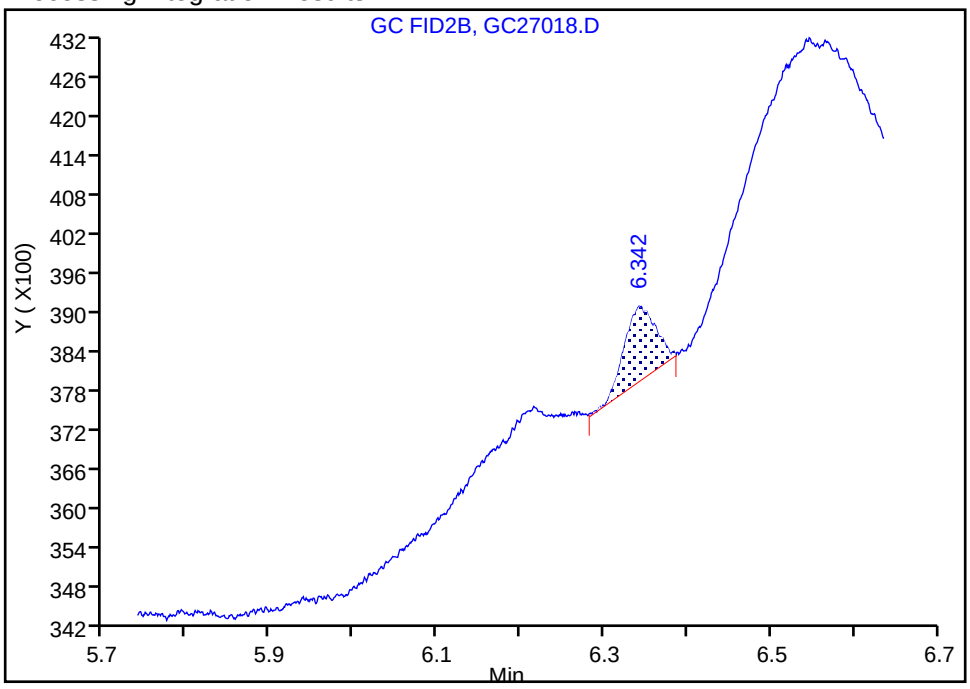
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D
Injection Date: 27-Mar-2023 23:05:21 Instrument ID: CVGG2
Lims ID: ic g1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

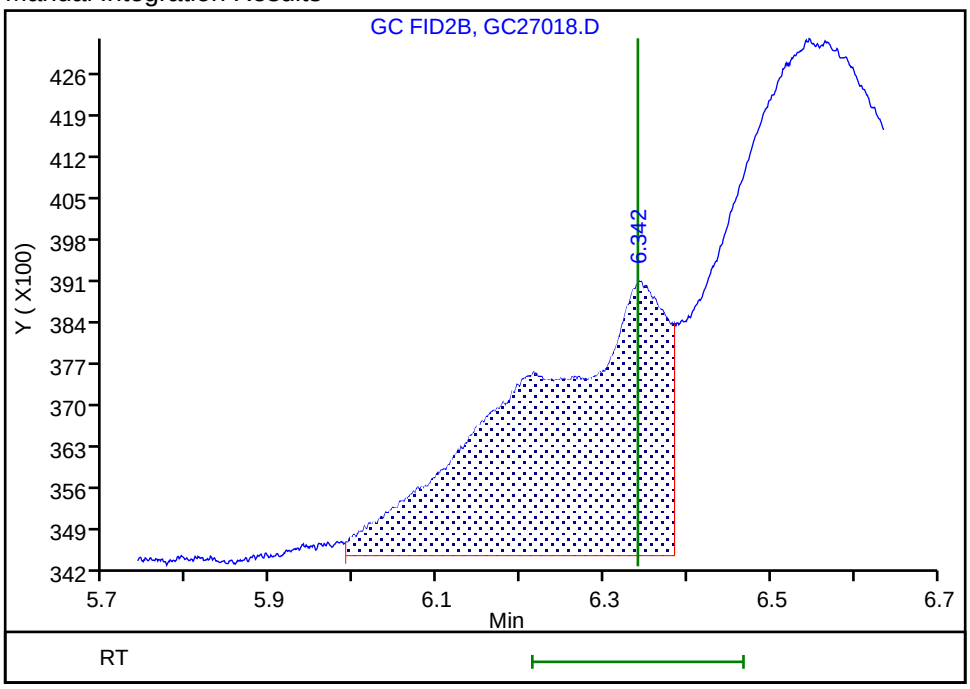
Processing Integration Results

RT: 6.34
Area: 2982
Amount: 0.274550
Amount Units: ug/ml



Manual Integration Results

RT: 6.34
Area: 56377
Amount: 3.637208
Amount Units: ug/ml



Reviewer: SWK1, 28-Mar-2023 11:01:24
Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

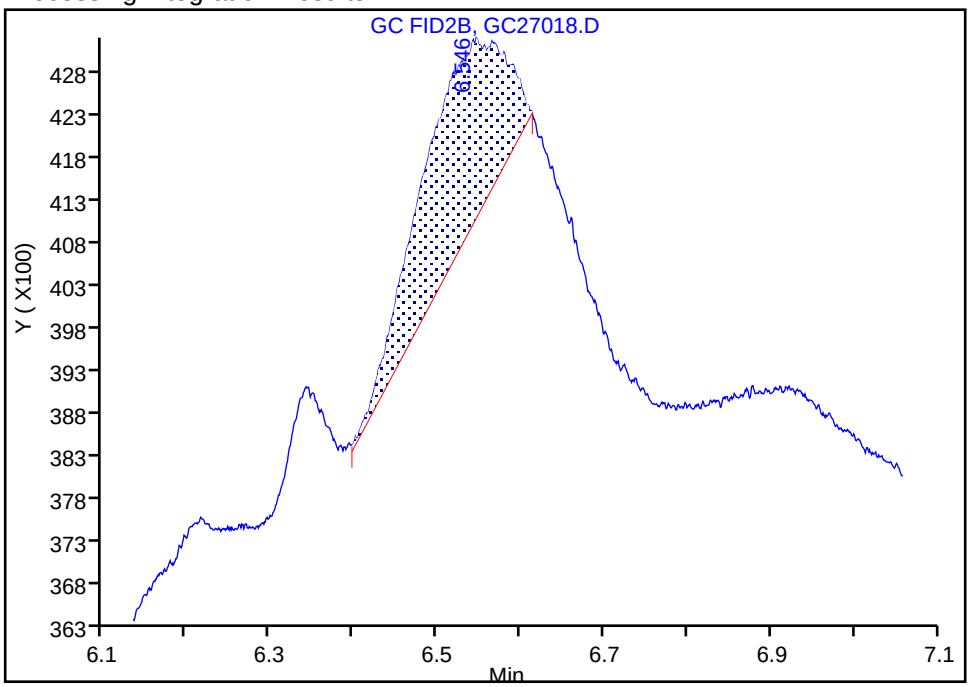
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D
Injection Date: 27-Mar-2023 23:05:21 Instrument ID: CVGG2
Lims ID: ic g1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

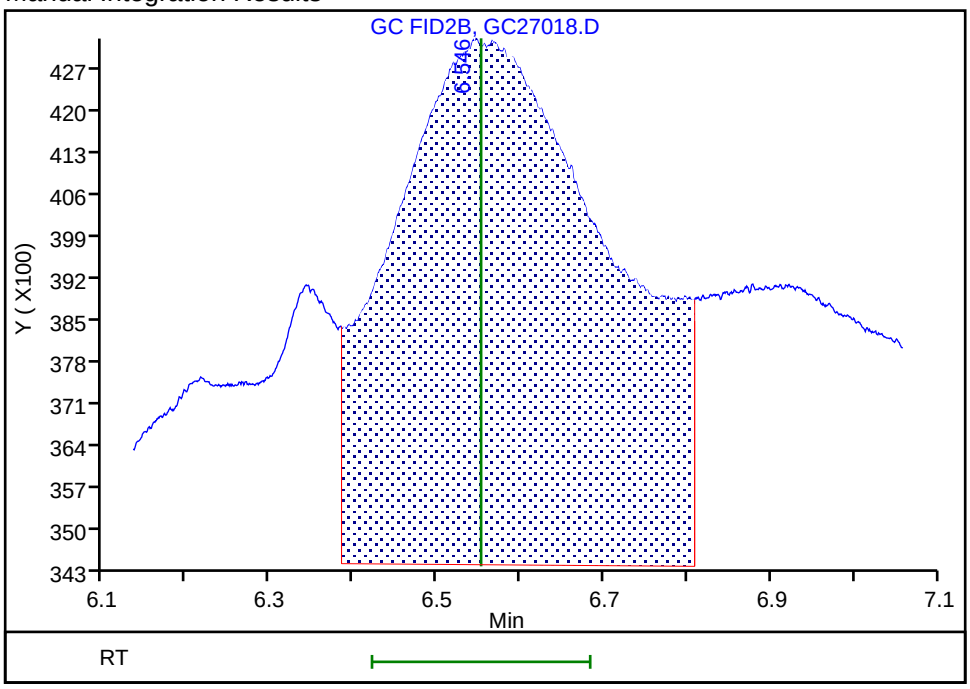
Processing Integration Results

RT: 6.55
Area: 15929
Amount: 0.886158
Amount Units: ug/ml



Manual Integration Results

RT: 6.55
Area: 159395
Amount: 1.828606
Amount Units: ug/ml



Reviewer: SWK1, 28-Mar-2023 11:01:26
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Calibration / Ethanol, 2-propoxy

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

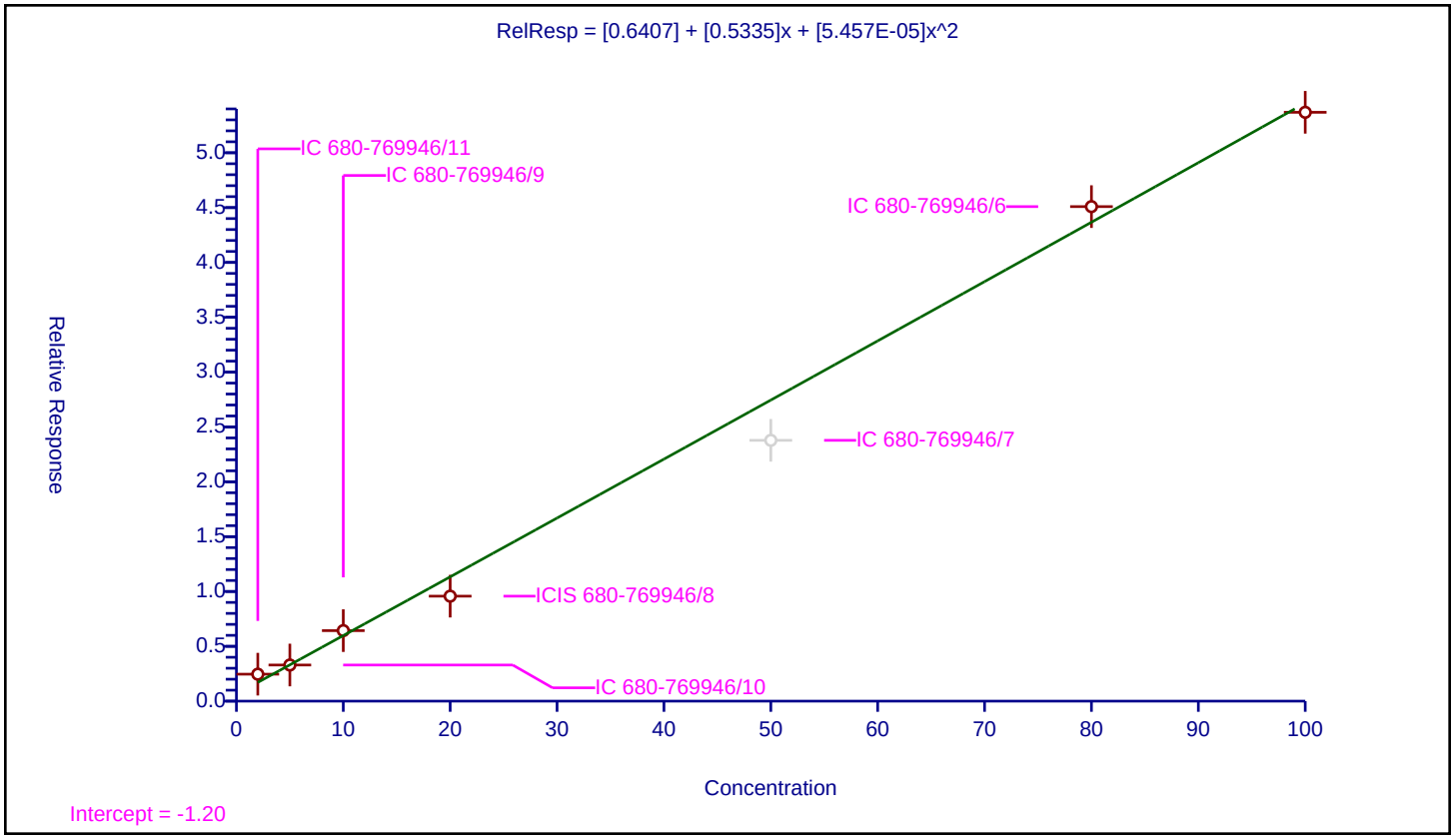
Curve Coefficients

Intercept:	0.6407
Slope:	0.5335
Second Order:	5.457E-05

Error Coefficients

Standard Error:	4290000
Relative Standard Error:	42.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	2.458261	50.0	5733666.0	1.229131	Y
2	IC 680-769946/10	5.0	3.293437	50.0	6330924.0	0.658687	Y
3	IC 680-769946/9	10.0	6.430319	50.0	5036080.0	0.643032	Y
4	ICIS 680-769946/8	20.0	9.570704	50.0	5332847.0	0.478535	Y
5	IC 680-769946/7	50.0	23.780786	50.0	4476654.0	0.475616	N
6	IC 680-769946/6	80.0	45.08887	50.0	5180233.0	0.563611	Y
7	IC 680-769946/5	100.0	53.689615	50.0	5239828.0	0.536896	Y



3/30/2023
12:32 PM

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

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

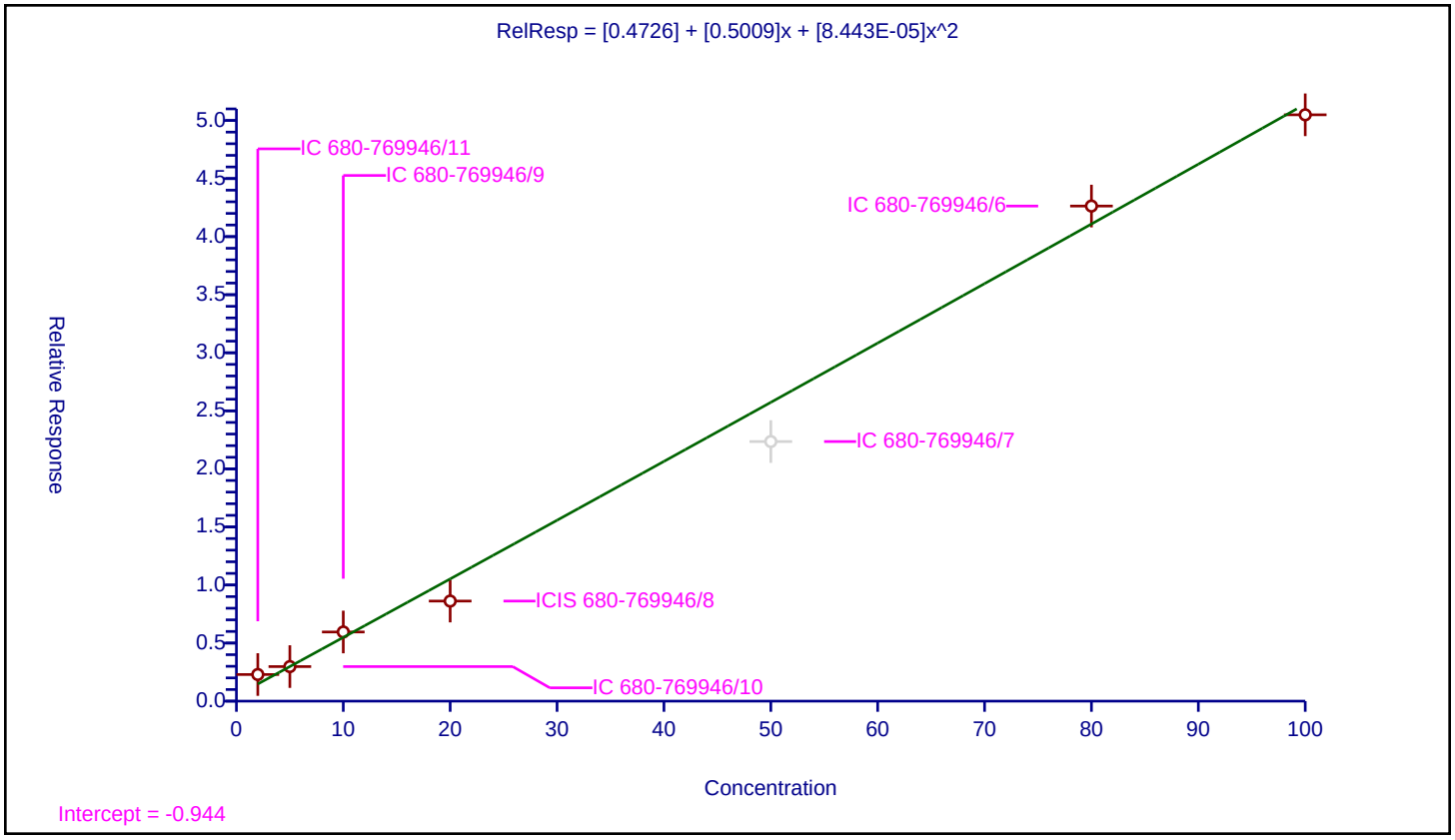
Curve Coefficients

Intercept:	0.4726
Slope:	0.5009
Second Order:	8.443E-05

Error Coefficients

Standard Error:	4040000
Relative Standard Error:	48.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	2.293262	50.0	5733666.0	1.146631	Y
2	IC 680-769946/10	5.0	2.975055	50.0	6330924.0	0.595011	Y
3	IC 680-769946/9	10.0	5.955088	50.0	5036080.0	0.595509	Y
4	ICIS 680-769946/8	20.0	8.617892	50.0	5332847.0	0.430895	Y
5	IC 680-769946/7	50.0	22.354218	50.0	4476654.0	0.447084	N
6	IC 680-769946/6	80.0	42.633507	50.0	5180233.0	0.532919	Y
7	IC 680-769946/5	100.0	50.490856	50.0	5239828.0	0.504909	Y



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Calibration / 2-Butoxyethanol

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

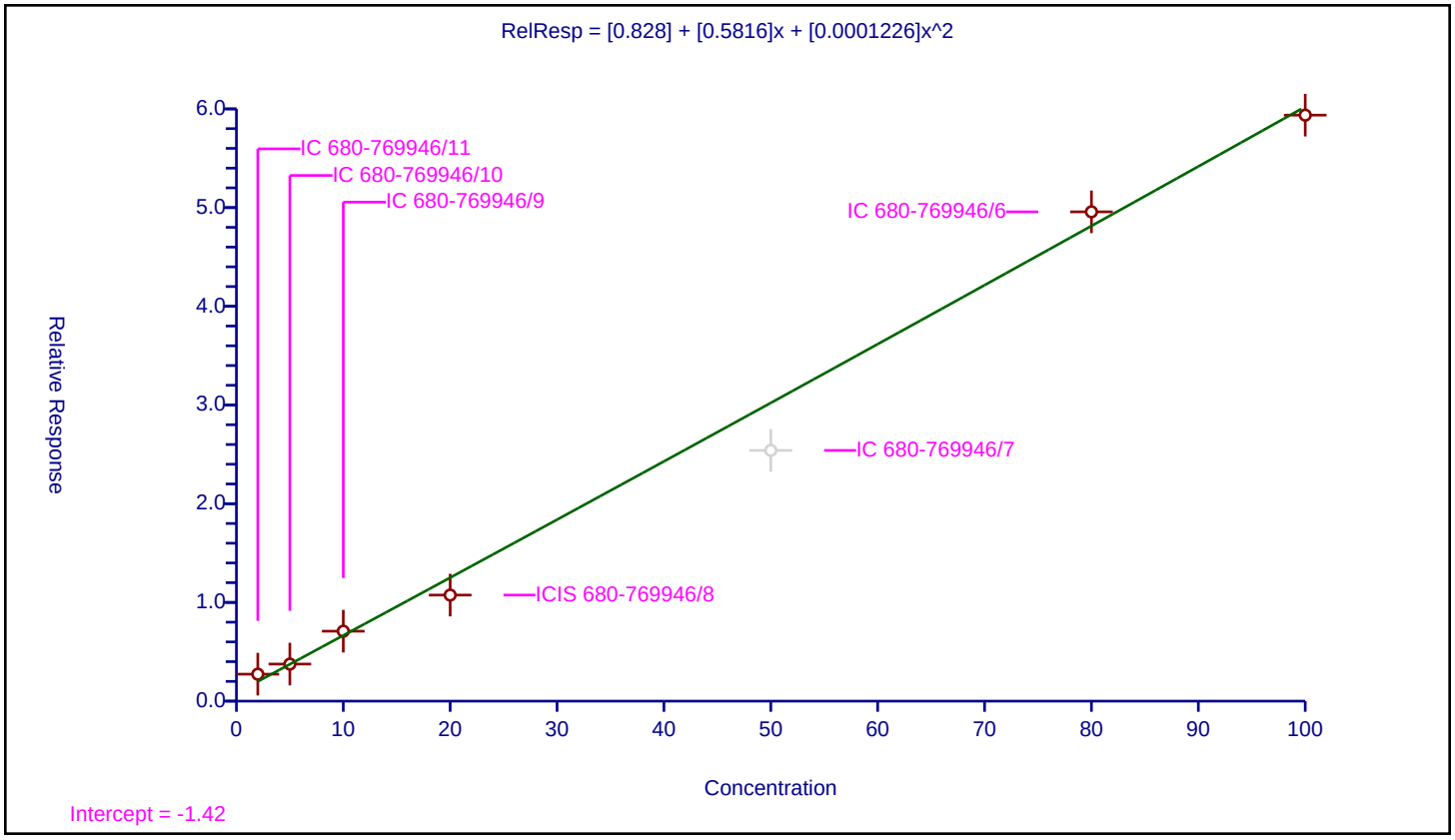
Curve Coefficients

Intercept:	0.828
Slope:	0.5816
Second Order:	0.0001226

Error Coefficients

Standard Error:	4730000
Relative Standard Error:	38.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	2.732641	50.0	5733666.0	1.36632	Y
2	IC 680-769946/10	5.0	3.753891	50.0	6330924.0	0.750778	Y
3	IC 680-769946/9	10.0	7.085809	50.0	5036080.0	0.708581	Y
4	ICIS 680-769946/8	20.0	10.744936	50.0	5332847.0	0.537247	Y
5	IC 680-769946/7	50.0	25.400902	50.0	4476654.0	0.508018	N
6	IC 680-769946/6	80.0	49.57222	50.0	5180233.0	0.619653	Y
7	IC 680-769946/5	100.0	59.369802	50.0	5239828.0	0.593698	Y



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Calibration / Dipropylene Glycol Methyl Ether

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

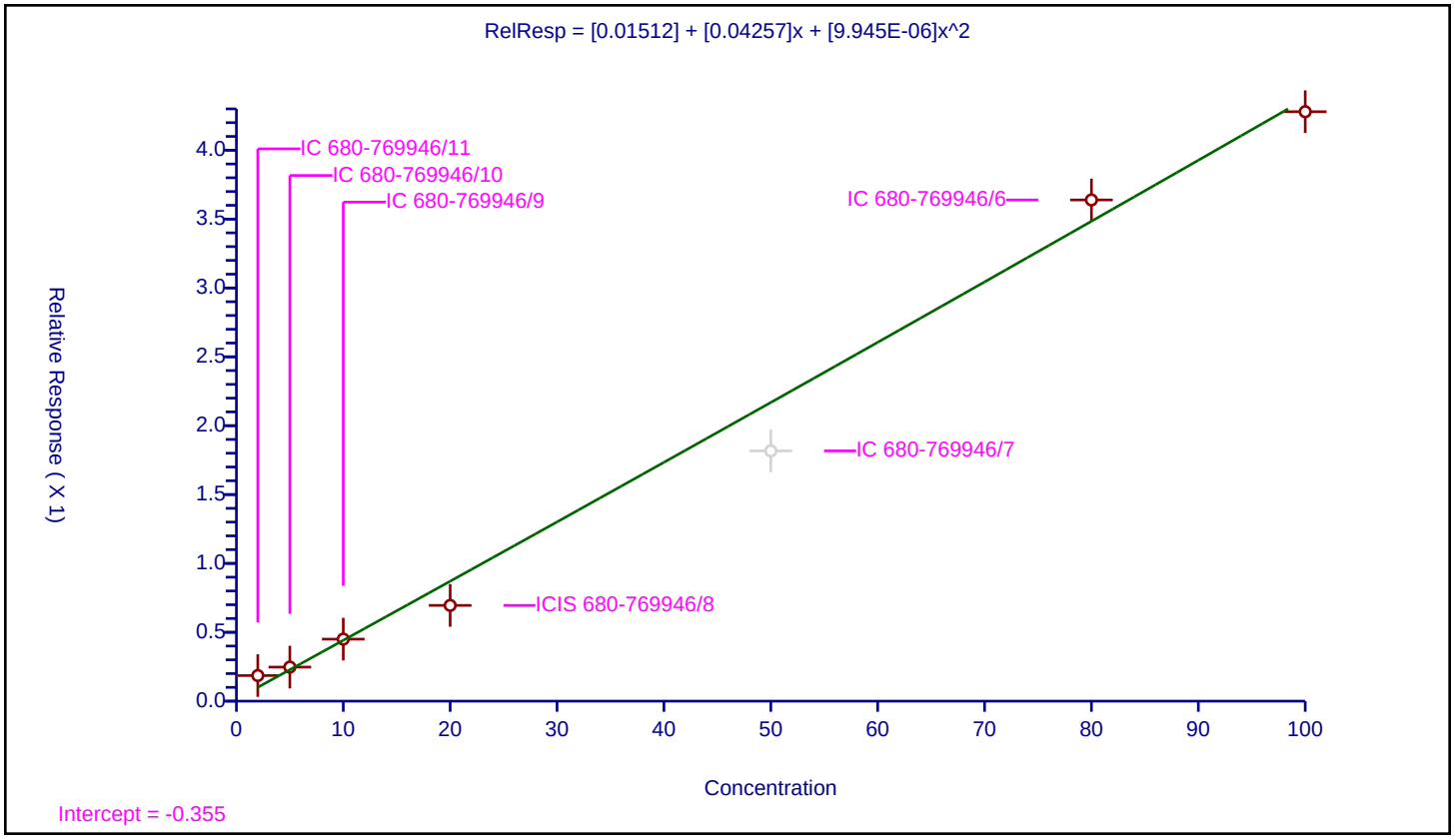
Curve Coefficients

Intercept:	0.01512
Slope:	0.04257
Second Order:	9.945E-06

Error Coefficients

Standard Error:	343000
Relative Standard Error:	59.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	0.18571	50.0	5733666.0	0.092855	Y
2	IC 680-769946/10	5.0	0.247239	50.0	6330924.0	0.049448	Y
3	IC 680-769946/9	10.0	0.450301	50.0	5036080.0	0.04503	Y
4	ICIS 680-769946/8	20.0	0.695117	50.0	5332847.0	0.034756	Y
5	IC 680-769946/7	50.0	1.816781	50.0	4476654.0	0.036336	N
6	IC 680-769946/6	80.0	3.638832	50.0	5180233.0	0.045485	Y
7	IC 680-769946/5	100.0	4.279501	50.0	5239828.0	0.042795	Y



3/30/2023
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Calibration / Propylene glycol

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

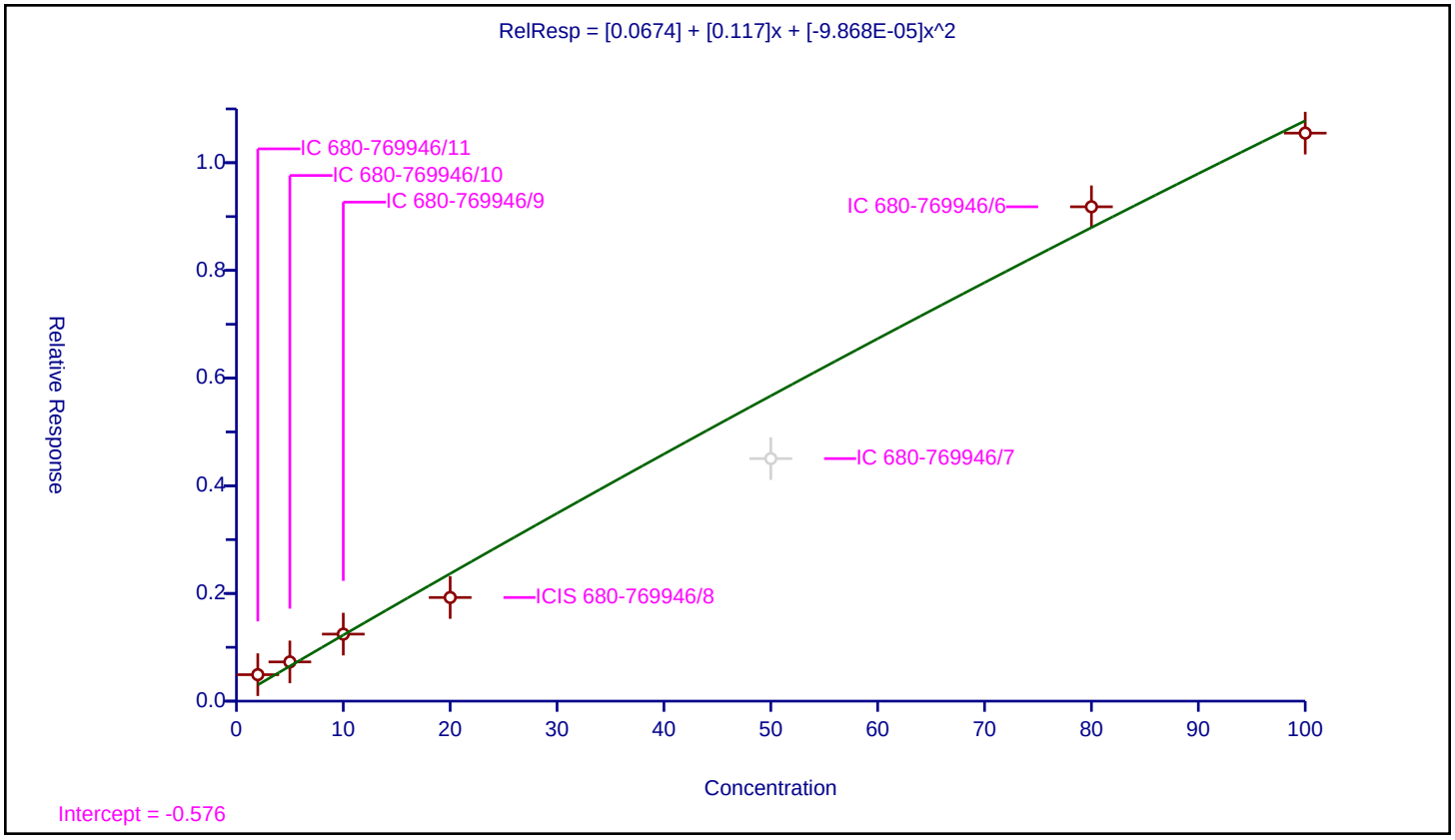
Curve Coefficients

Intercept:	0.0674
Slope:	0.117
Second Order:	-9.868E-05

Error Coefficients

Standard Error:	856000
Relative Standard Error:	49.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	0.491631	50.0	5733666.0	0.245816	Y
2	IC 680-769946/10	5.0	0.728377	50.0	6330924.0	0.145675	Y
3	IC 680-769946/9	10.0	1.244798	50.0	5036080.0	0.12448	Y
4	ICIS 680-769946/8	20.0	1.925079	50.0	5332847.0	0.096254	Y
5	IC 680-769946/7	50.0	4.504815	50.0	4476654.0	0.090096	N
6	IC 680-769946/6	80.0	9.181962	50.0	5180233.0	0.114775	Y
7	IC 680-769946/5	100.0	10.550232	50.0	5239828.0	0.105502	Y



3/30/2023
12:32 PM

Calibration / Ethylene glycol

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

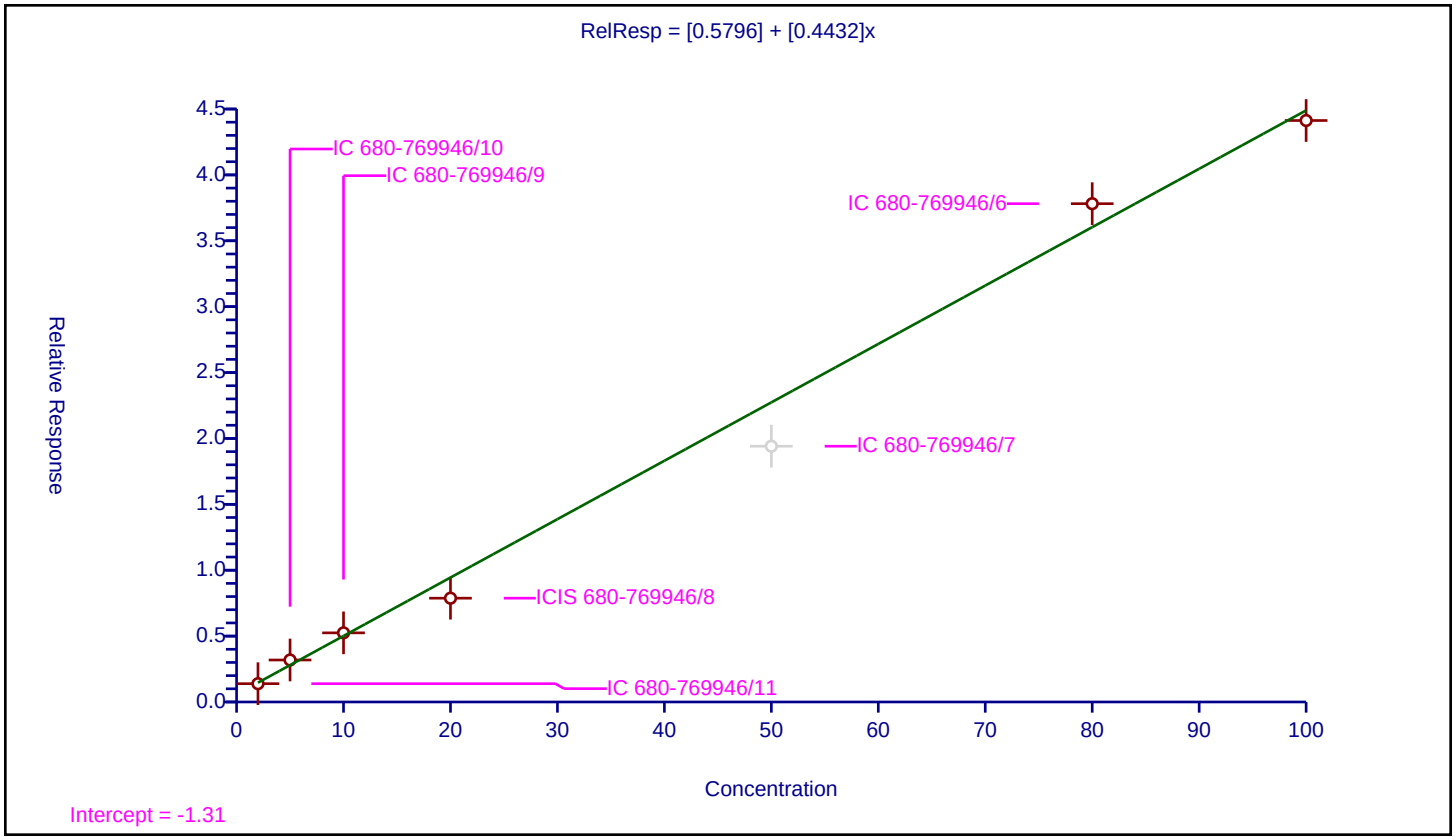
Curve Coefficients

Intercept:	0.5796
Slope:	0.4432

Error Coefficients

Standard Error:	3080000
Relative Standard Error:	13.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	1.389992	50.0	5733666.0	0.694996	Y
2	IC 680-769946/10	5.0	3.185854	50.0	6330924.0	0.637171	Y
3	IC 680-769946/9	10.0	5.24666	50.0	5036080.0	0.524666	Y
4	ICIS 680-769946/8	20.0	7.877471	50.0	5332847.0	0.393874	Y
5	IC 680-769946/7	50.0	19.409463	50.0	4476654.0	0.388189	N
6	IC 680-769946/6	80.0	37.815268	50.0	5180233.0	0.472691	Y
7	IC 680-769946/5	100.0	44.127794	50.0	5239828.0	0.441278	Y



3/30/2023
12:32 PM

Calibration / 2-(2-Butoxyethoxy)ethanol

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

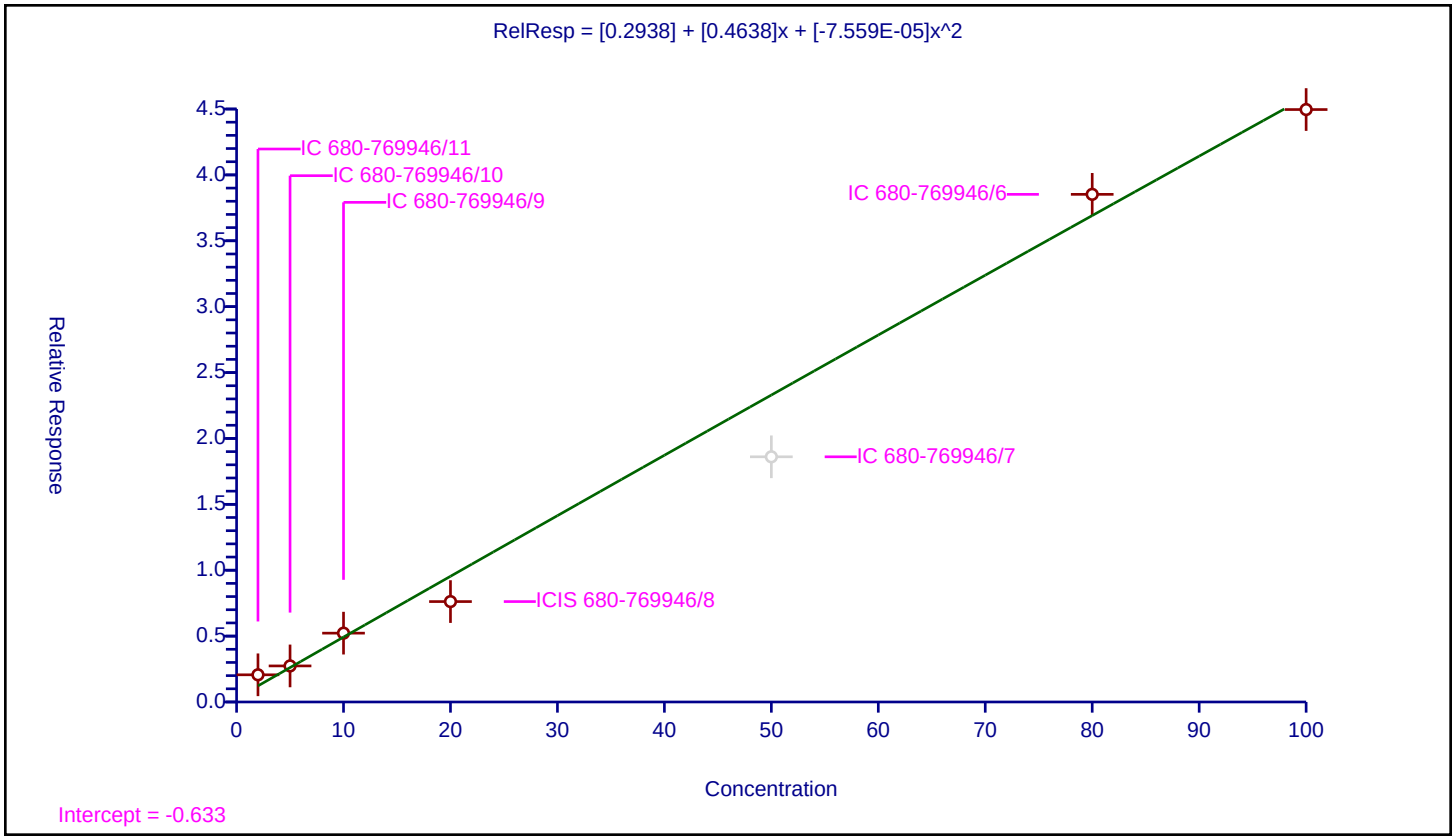
Curve Coefficients

Intercept:	0.2938
Slope:	0.4638
Second Order:	-7.559E-05

Error Coefficients

Standard Error:	3620000
Relative Standard Error:	54.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	2.062154	50.0	5733666.0	1.031077	Y
2	IC 680-769946/10	5.0	2.736488	50.0	6330924.0	0.547298	Y
3	IC 680-769946/9	10.0	5.223597	50.0	5036080.0	0.52236	Y
4	ICIS 680-769946/8	20.0	7.620667	50.0	5332847.0	0.381033	Y
5	IC 680-769946/7	50.0	18.60662	50.0	4476654.0	0.372132	N
6	IC 680-769946/6	80.0	38.523972	50.0	5180233.0	0.48155	Y
7	IC 680-769946/5	100.0	44.96035	50.0	5239828.0	0.449603	Y



3/30/2023
12:32 PM

Calibration / 2,2'-Oxybisethanol

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

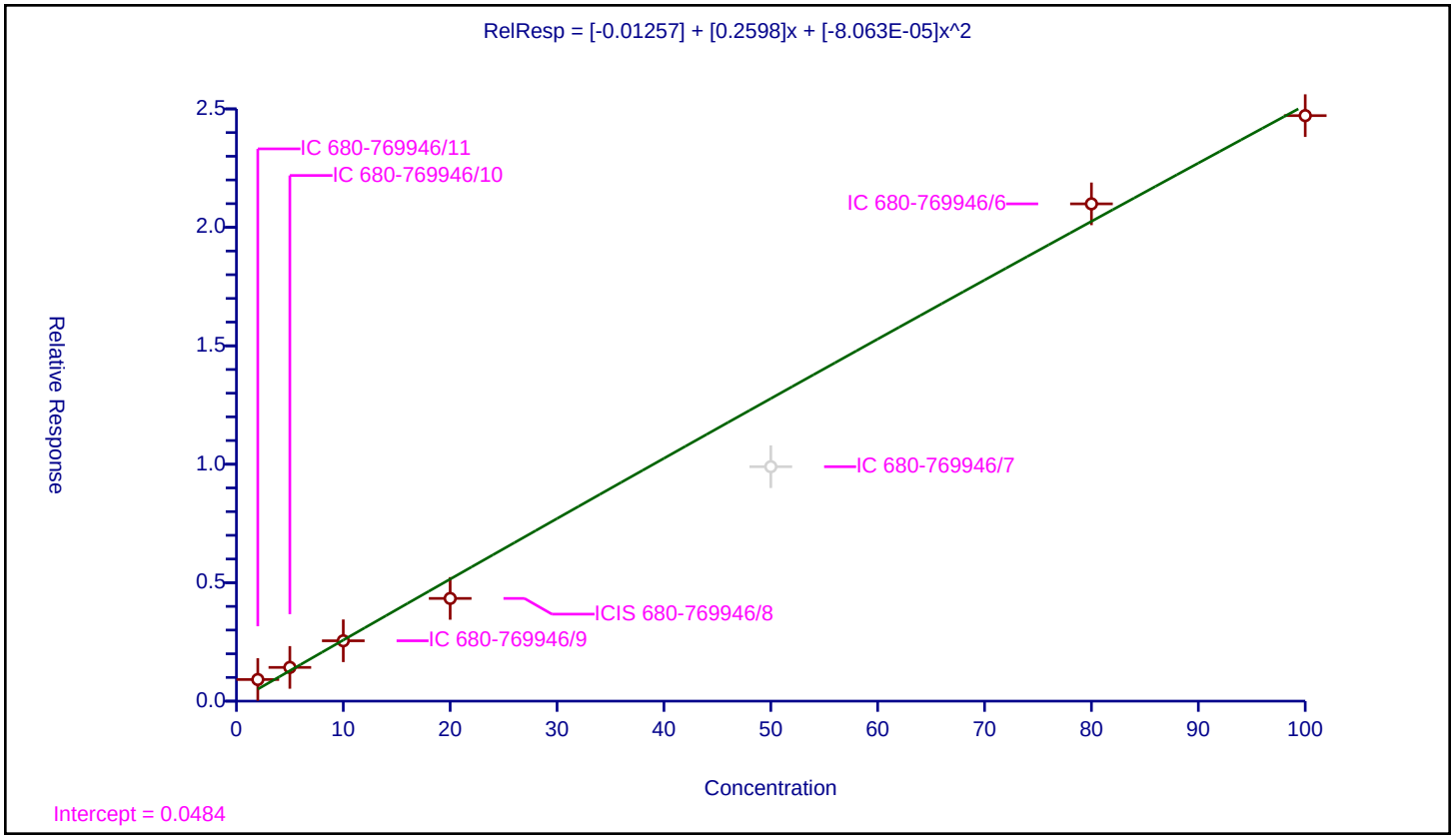
Curve Coefficients

Intercept:	-0.01257
Slope:	0.2598
Second Order:	-8.063E-05

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	46.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	0.912052	50.0	5733666.0	0.456026	Y
2	IC 680-769946/10	5.0	1.423773	50.0	6330924.0	0.284755	Y
3	IC 680-769946/9	10.0	2.547606	50.0	5036080.0	0.254761	Y
4	ICIS 680-769946/8	20.0	4.335977	50.0	5332847.0	0.216799	Y
5	IC 680-769946/7	50.0	9.89699	50.0	4476654.0	0.19794	N
6	IC 680-769946/6	80.0	20.99171	50.0	5180233.0	0.262396	Y
7	IC 680-769946/5	100.0	24.715773	50.0	5239828.0	0.247158	Y



3/30/2023
12:32 PM

Calibration / Triethylene Glycol

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

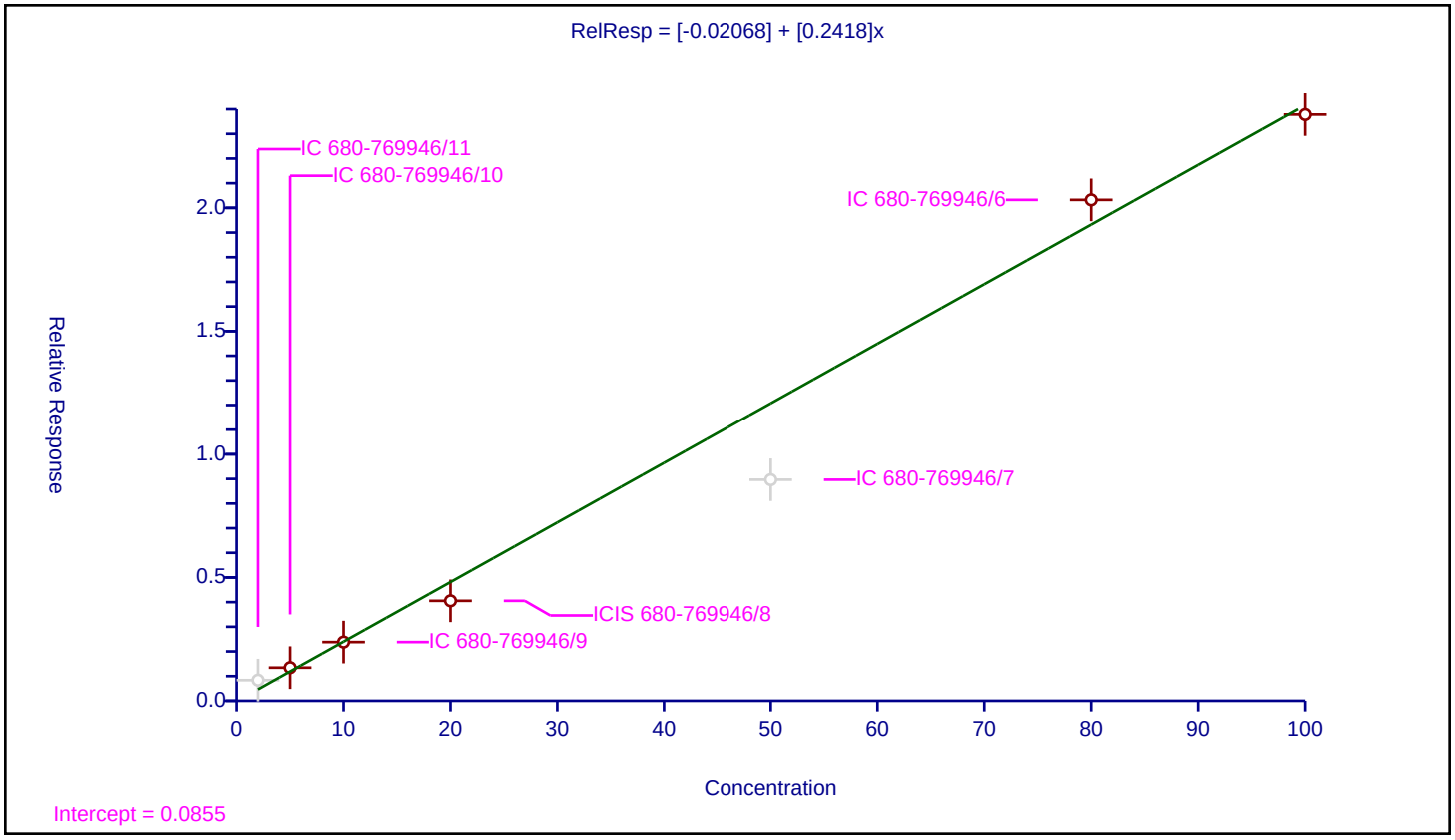
Curve Coefficients

Intercept:	-0.02068
Slope:	0.2418

Error Coefficients

Standard Error:	1910000
Relative Standard Error:	12.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	2.0	0.836838	50.0	5733666.0	0.418419	N
2	IC 680-769946/10	5.0	1.343611	50.0	6330924.0	0.268722	Y
3	IC 680-769946/9	10.0	2.380751	50.0	5036080.0	0.238075	Y
4	ICIS 680-769946/8	20.0	4.05291	50.0	5332847.0	0.202646	Y
5	IC 680-769946/7	50.0	8.968294	50.0	4476654.0	0.179366	N
6	IC 680-769946/6	80.0	20.324269	50.0	5180233.0	0.254053	Y
7	IC 680-769946/5	100.0	23.783615	50.0	5239828.0	0.237836	Y



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Calibration / Tetraethylene Glycol

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

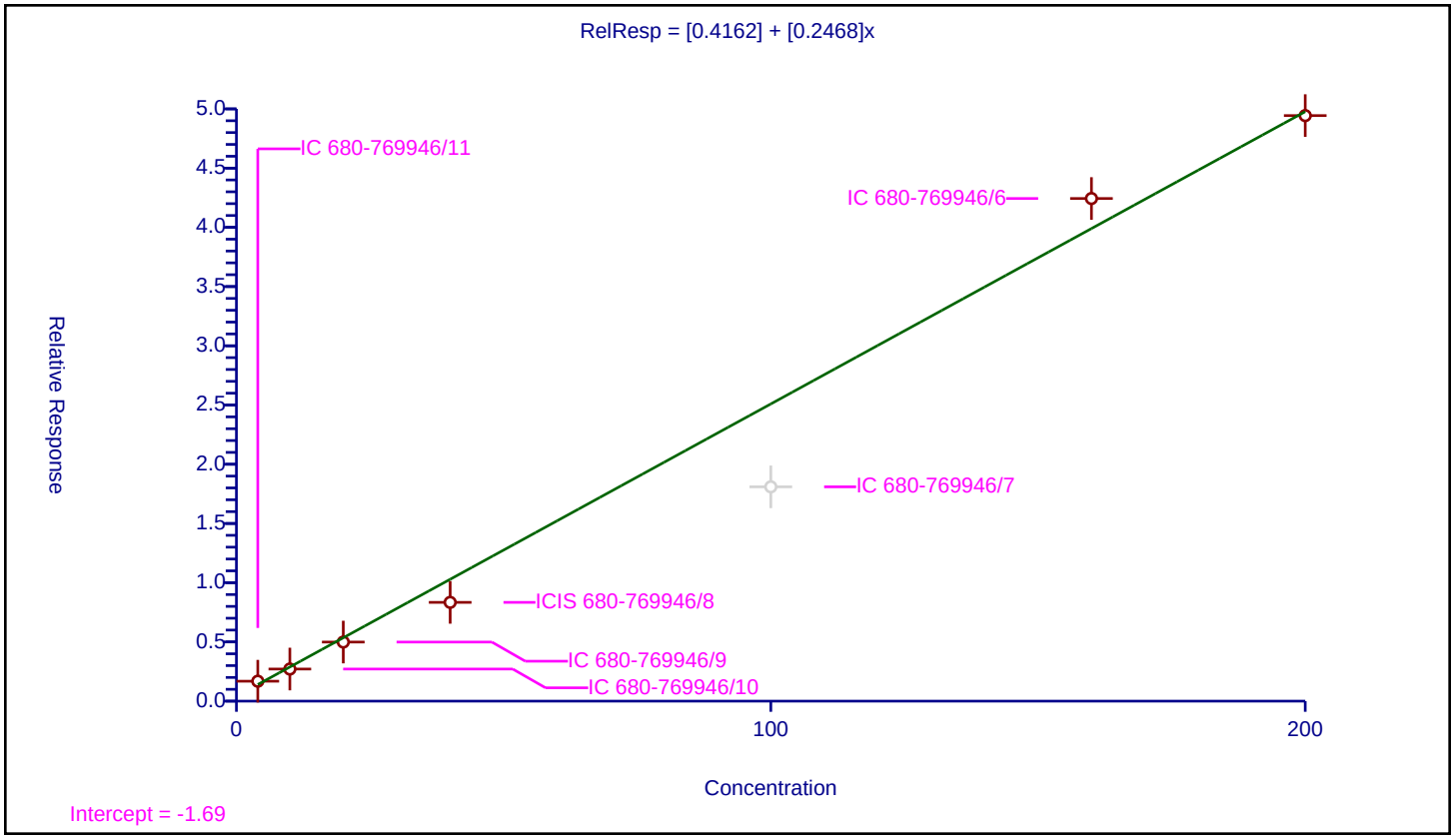
Curve Coefficients

Intercept:	0.4162
Slope:	0.2468

Error Coefficients

Standard Error:	3440000
Relative Standard Error:	18.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-769946/11	4.0	1.682876	50.0	5733666.0	0.420719	Y
2	IC 680-769946/10	10.0	2.710718	50.0	6330924.0	0.271072	Y
3	IC 680-769946/9	20.0	4.988543	50.0	5036080.0	0.249427	Y
4	ICIS 680-769946/8	40.0	8.33912	50.0	5332847.0	0.208478	Y
5	IC 680-769946/7	100.0	18.092765	50.0	4476654.0	0.180928	N
6	IC 680-769946/6	160.0	42.434481	50.0	5180233.0	0.265216	Y
7	IC 680-769946/5	200.0	49.432233	50.0	5239828.0	0.247161	Y



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FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Lab Sample ID: ICV 680-769946/12 Calibration Date: 03/27/2023 23:28

Instrument ID: CVGG2 Calib Start Date: 03/27/2023 20:45

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 03/27/2023 23:05

Lab File ID: GC27019.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.5774		20.4	20.0	2.0	20.0
4-Hydroxy-4-methyl-2-pentanone	Qua		0.5372		20.4	20.0	2.2	20.0
2-Butoxyethanol	Qua		0.6657		21.4	20.0	6.8	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0435		20.0	20.0	-0.0	20.0
Propylene glycol	Qua		0.1103		18.6	20.0	-7.2	20.0
Ethylene glycol	Lin1		0.4523		19.1	20.0	-4.5	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.4706		19.7	20.0	-1.4	20.0
2,2'-Oxybisethanol	Qua		0.2333		18.1	20.0	-9.4	20.0
Triethylene Glycol	Lin1		0.2414		20.1	20.0	0.3	20.0
Tetraethylene Glycol	Lin1		0.2484		38.6	40.0	-3.5	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Lab Sample ID: ICV 680-769946/12 Calibration Date: 03/27/2023 23:28

Instrument ID: CVGG2 Calib Start Date: 03/27/2023 20:45

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 03/27/2023 23:05

Lab File ID: GC27019.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.90	2.84	2.95
4-Hydroxy-4-methyl-2-pentanone	3.44	3.37	3.51
2-Butoxyethanol	3.74	3.66	3.81
Dipropylene Glycol Methyl Ether	5.11	5.01	5.21
Propylene glycol	6.34	6.21	6.47
Ethylene glycol	6.54	6.42	6.68
2-(2-Butoxyethoxy)ethanol	8.38	8.21	8.55
2,2'-Oxybisethanol	9.59	9.40	9.79
Triethylene Glycol	10.62	10.41	10.83
Tetraethylene Glycol	11.75	11.52	11.99

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27019.D
Lims ID: icv gly
Client ID:
Sample Type: CCV
Inject. Date: 27-Mar-2023 23:28:39 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084740-012
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 28-Mar-2023 15:13:15 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1678

First Level Reviewer: SWK1 Date: 28-Mar-2023 11:01:39

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.895	2.895	0.000	1301575	20.0	20.4	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.440	3.439	0.001	1210929	20.0	20.4	
	3 2-Butoxyethanol						
	3.737	3.738	-0.001	1500503	20.0	21.4	
*	4 n-Heptyl Alcohol						M
	4.190	4.193	-0.003	5635313	50.0	50.0	M
	5 Dipropylene Glycol Methyl Ether						M
	5.108	5.109	-0.001	98048	20.0	20.0	M
	6 Propylene glycol						
	6.335	6.341	-0.006	248603	20.0	18.6	
	7 Ethylene glycol						
	6.544	6.552	-0.008	1019552	20.0	19.1	
	8 2-(2-Butoxyethoxy)ethanol						
	8.378	8.379	-0.001	1060886	20.0	19.7	
	9 2,2'-Oxybisethanol						
	9.593	9.593	0.000	525841	20.0	18.1	
	10 Triethylene Glycol						
	10.621	10.621	0.000	544191	20.0	20.1	
	11 Tetraethylene Glycol						
	11.750	11.750	0.000	1119871	40.0	38.6	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated

Reagents:

SG_GlyICV_00059	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

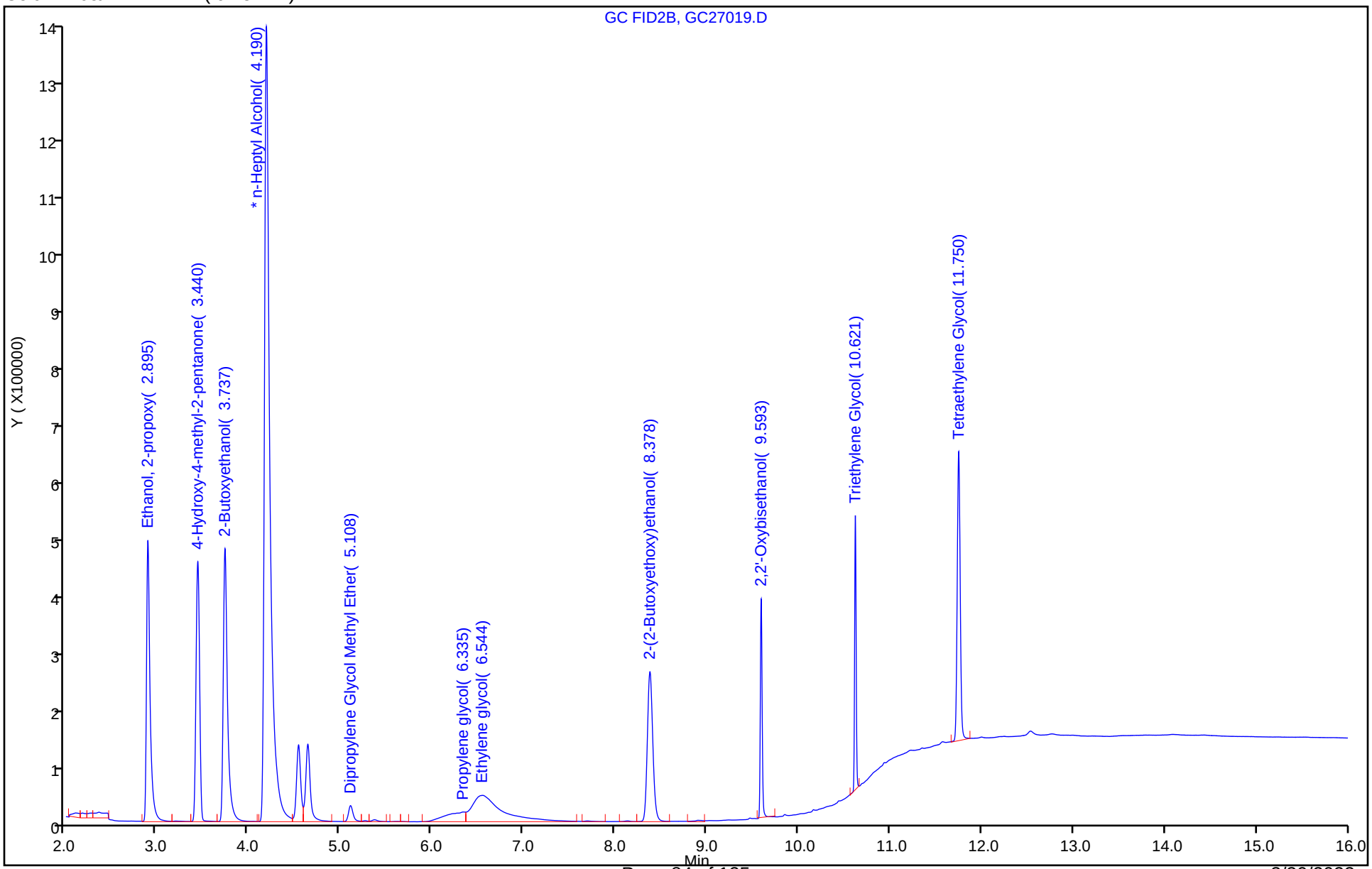
Report Date: 28-Mar-2023 15:13:15 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27019.D

Injection Date:	27-Mar-2023 23:28:39	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	icv gly			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



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Manual Integration/User Assign Peak Report

Eurofins Savannah

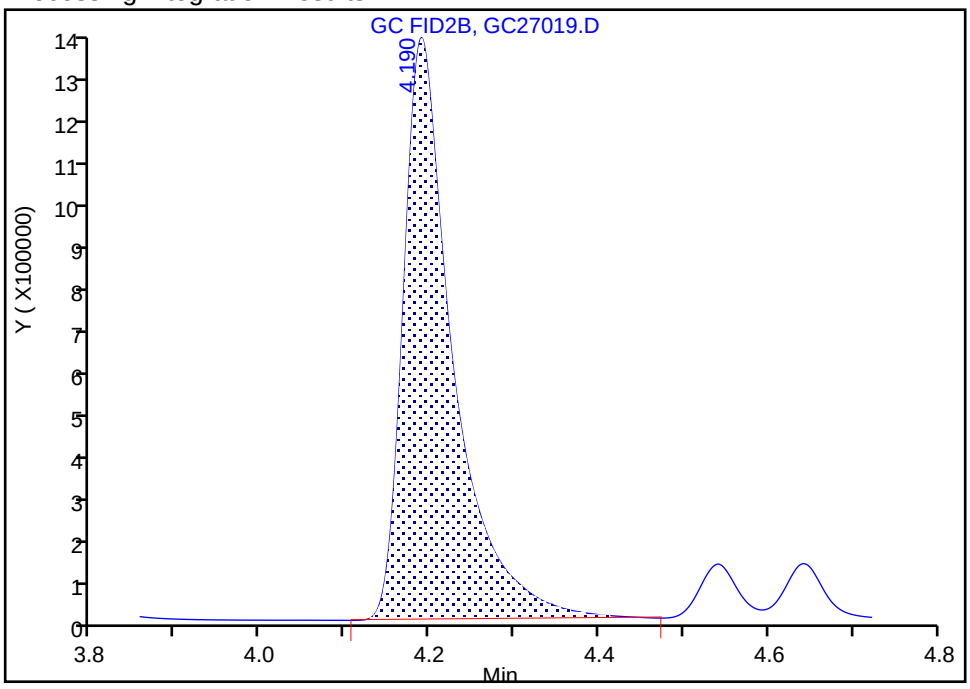
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27019.D
Injection Date: 27-Mar-2023 23:28:39 Instrument ID: CVGG2
Lims ID: icv gly
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

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

Signal: 1

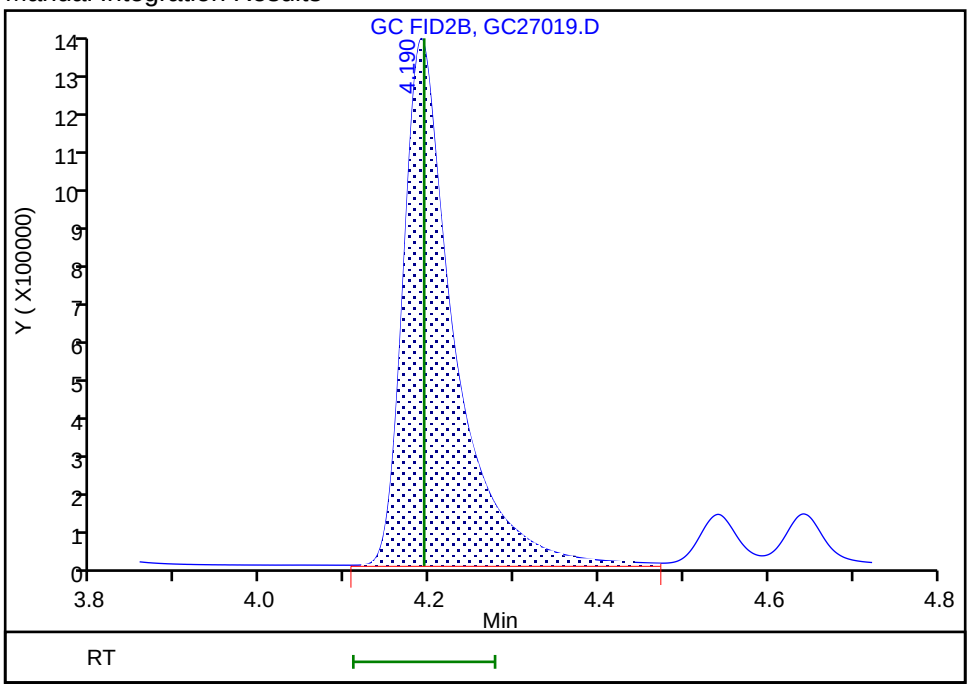
Processing Integration Results

RT: 4.19
Area: 5577464
Amount: 50.000000
Amount Units: ug/ml



Manual Integration Results

RT: 4.19
Area: 5635313
Amount: 50.000000
Amount Units: ug/ml



Reviewer: SWK1, 28-Mar-2023 11:03:54
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

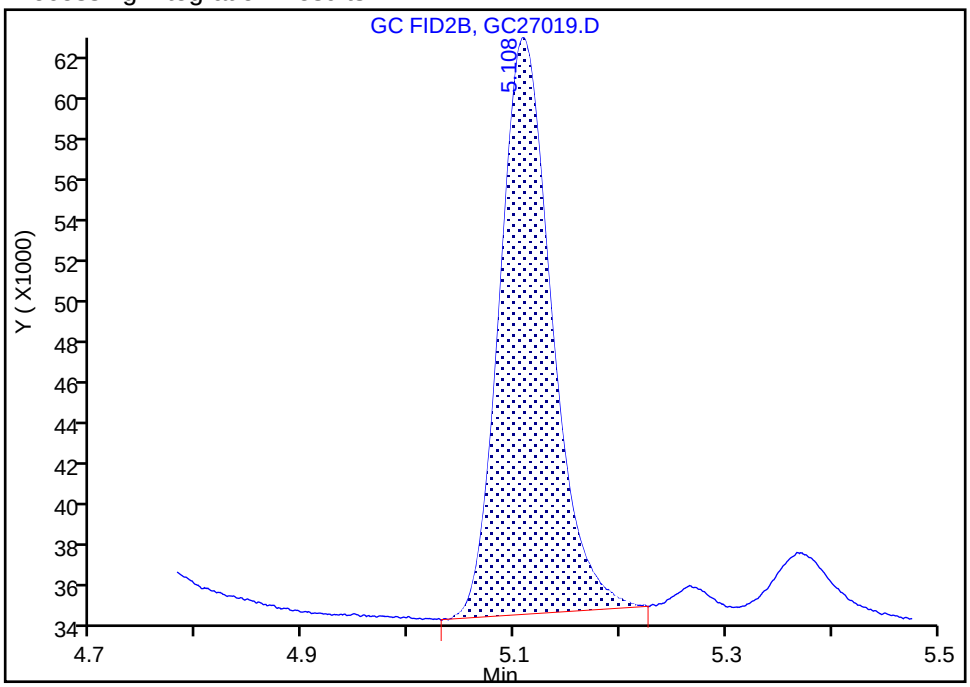
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27019.D				
Injection Date:	27-Mar-2023 23:28:39	Instrument ID:	CVGG2		
Lims ID:	icv gly				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

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

Signal: 1

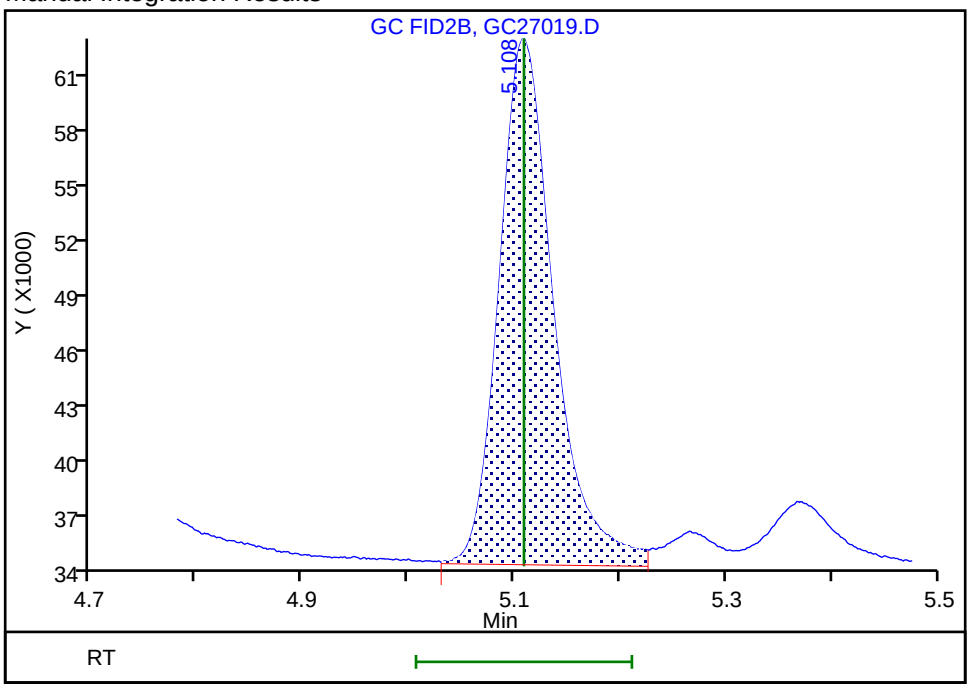
Processing Integration Results

RT: 5.11
Area: 92819
Amount: 19.667300
Amount Units: ug/ml



Manual Integration Results

RT: 5.11
Area: 98048
Amount: 19.987179
Amount Units: ug/ml



Reviewer: SWK1, 28-Mar-2023 11:03:54
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Lab Sample ID: CCVIS 680-770129/6 Calibration Date: 03/28/2023 18:34

Instrument ID: CVGG2 Calib Start Date: 03/27/2023 20:45

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 03/27/2023 23:05

Lab File ID: GC28006.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.5564		19.6	20.0	-1.9	20.0
4-Hydroxy-4-methyl-2-pentanone	Qua		0.5206		19.8	20.0	-1.1	20.0
2-Butoxyethanol	Qua		0.6235		19.9	20.0	-0.3	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0435		20.0	20.0	-0.2	20.0
Propylene glycol	Qua		0.1435		24.5	20.0	22.3*	20.0
Ethylene glycol	Lin1		0.5024		21.4	20.0	6.8	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.4796		20.1	20.0	0.6	20.0
2,2'-Oxybisethanol	Qua		0.2241		17.4	20.0	-13.0	20.0
Triethylene Glycol	Lin1		0.2426		20.1	20.0	0.7	20.0
Tetraethylene Glycol	Lin1		0.2397		37.2	40.0	-7.1	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Lab Sample ID: CCVIS 680-770129/6 Calibration Date: 03/28/2023 18:34

Instrument ID: CVGG2 Calib Start Date: 03/27/2023 20:45

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 03/27/2023 23:05

Lab File ID: GC28006.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.90	2.84	2.96
4-Hydroxy-4-methyl-2-pentanone	3.44	3.37	3.51
2-Butoxyethanol	3.74	3.67	3.82
Dipropylene Glycol Methyl Ether	5.11	5.01	5.21
Propylene glycol	6.34	6.21	6.47
Ethylene glycol	6.53	6.40	6.66
2-(2-Butoxyethoxy)ethanol	8.38	8.21	8.54
2,2'-Oxybisethanol	9.60	9.40	9.79
Triethylene Glycol	10.62	10.41	10.84
Tetraethylene Glycol	11.75	11.52	11.99

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28006.D
Lims ID: ccvis g4
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Mar-2023 18:34:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084763-006
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 29-Mar-2023 10:50:04 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1608

First Level Reviewer: SWK1 Date: 29-Mar-2023 10:49:29

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.897	2.897	0.000	1018287	20.0	19.6	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.442	3.442	0.000	952776	20.0	19.8	
	3 2-Butoxyethanol						
	3.741	3.741	0.000	1141210	20.0	19.9	
*	4 n-Heptyl Alcohol						
	4.196	4.196	0.000	4575536	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.112	5.112	0.000	79534	20.0	20.0	
	6 Propylene glycol						M
	6.339	6.339	0.000	262722	20.0	24.5	M
	7 Ethylene glycol						
	6.529	6.529	0.000	919539	20.0	21.4	
	8 2-(2-Butoxyethoxy)ethanol						
	8.377	8.377	0.000	877779	20.0	20.1	
	9 2,2'-Oxybisethanol						
	9.595	9.595	0.000	410066	20.0	17.4	
	10 Triethylene Glycol						
	10.623	10.623	0.000	443968	20.0	20.1	
	11 Tetraethylene Glycol						
	11.754	11.754	0.000	877534	40.0	37.2	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

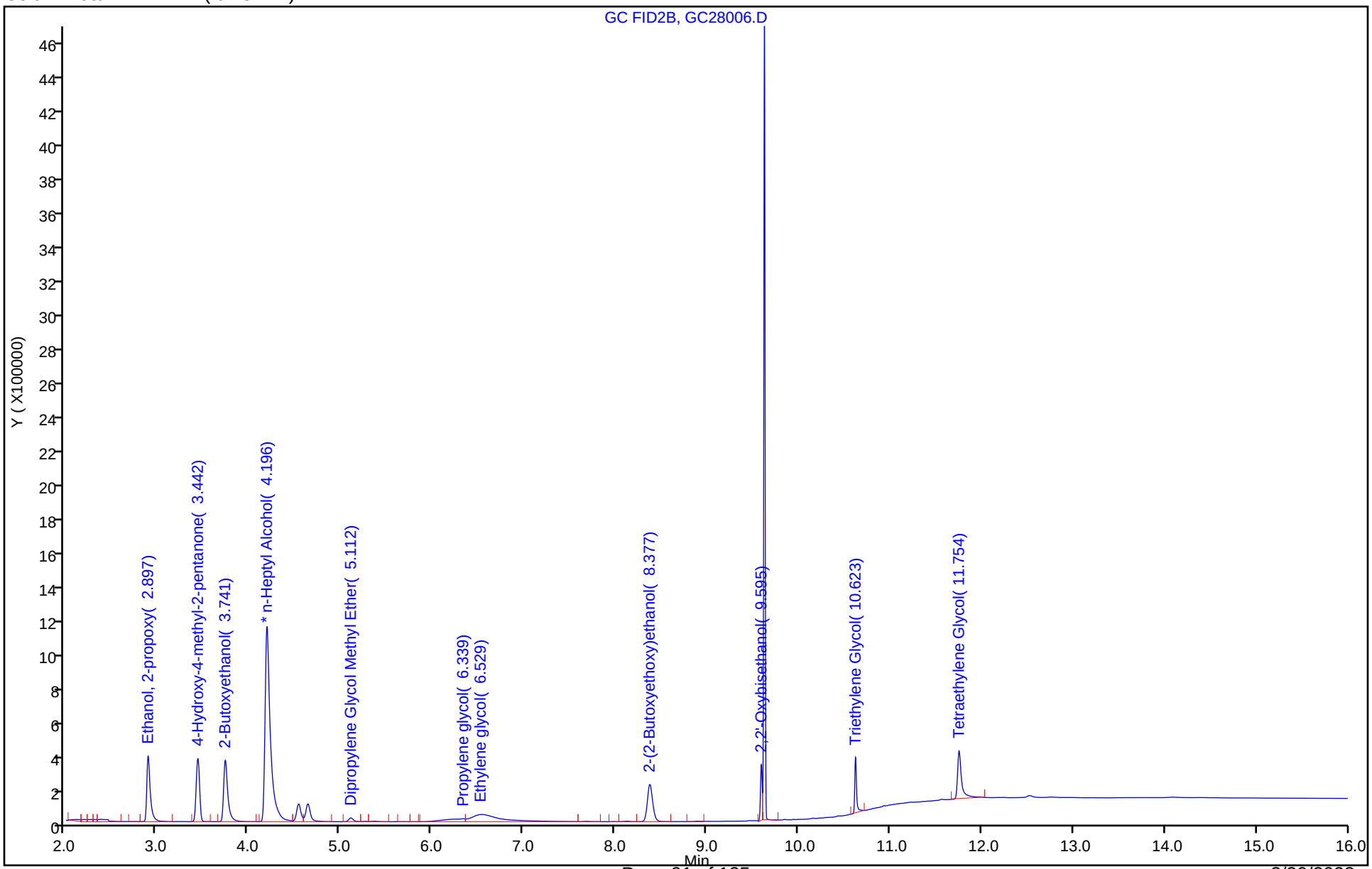
Report Date: 29-Mar-2023 10:50:04 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28006.D

Injection Date:	28-Mar-2023 18:34:01	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ccvis g4			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



3/30/2023
12:32 PM

Eurofins Savannah

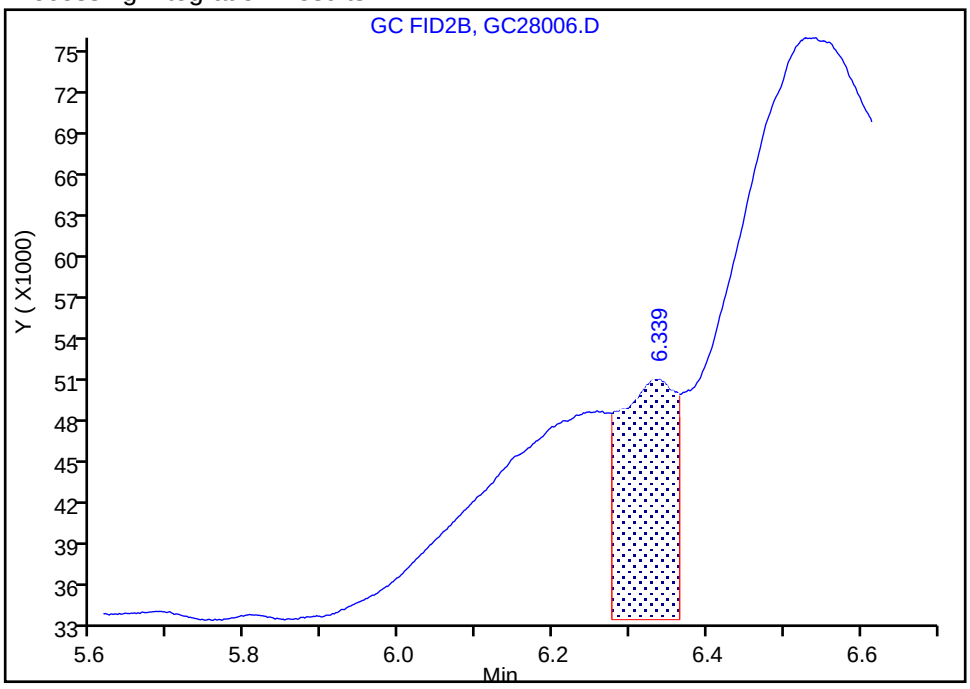
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28006.D
Injection Date: 28-Mar-2023 18:34:01 Instrument ID: CVGG2
Lims ID: ccvis g4
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

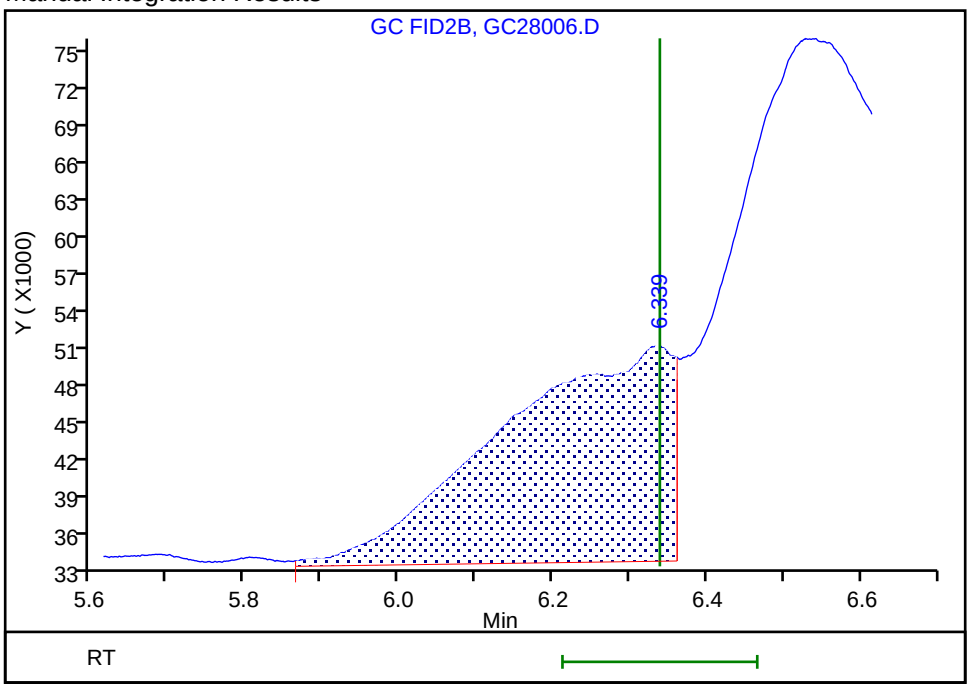
Processing Integration Results

RT: 6.34
Area: 84311
Amount: 7.344242
Amount Units: ug/ml



Manual Integration Results

RT: 6.34
Area: 262722
Amount: 24.467604
Amount Units: ug/ml



Reviewer: SWK1, 29-Mar-2023 10:49:25
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Lab Sample ID: CCV 680-770129/17 Calibration Date: 03/28/2023 22:51

Instrument ID: CVGG2 Calib Start Date: 03/27/2023 20:45

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 03/27/2023 23:05

Lab File ID: GC28017.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Qua		0.6346		22.5	20.0	12.7	20.0
4-Hydroxy-4-methyl-2-pentanone	Qua		0.5594		21.3	20.0	6.6	20.0
2-Butoxyethanol	Qua		0.7261		23.4	20.0	17.1	20.0
Dipropylene Glycol Methyl Ether	Qua		0.0400		18.3	20.0	-8.3	20.0
Propylene glycol	Qua		0.0307		4.69	20.0	-76.5*	20.0
Ethylene glycol	Lin1		0.3354		13.8	20.0	-30.9*	20.0
2-(2-Butoxyethoxy)ethanol	Qua		0.4485		18.8	20.0	-6.2	20.0
2,2'-Oxybisethanol	Qua		0.1719		13.3	20.0	-33.3*	20.0
Triethylene Glycol	Lin1		0.1738		14.5	20.0	-27.7*	20.0
Tetraethylene Glycol	Lin1		0.1143		16.8	40.0	-57.9*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Lab Sample ID: CCV 680-770129/17 Calibration Date: 03/28/2023 22:51

Instrument ID: CVGG2 Calib Start Date: 03/27/2023 20:45

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 03/27/2023 23:05

Lab File ID: GC28017.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.90	2.84	2.96
4-Hydroxy-4-methyl-2-pentanone	3.45	3.38	3.52
2-Butoxyethanol	3.74	3.66	3.81
Dipropylene Glycol Methyl Ether	5.11	5.01	5.22
Propylene glycol	6.35	6.23	6.48
Ethylene glycol	6.55	6.42	6.68
2-(2-Butoxyethoxy)ethanol	8.38	8.21	8.55
2,2'-Oxybisethanol	9.59	9.40	9.79
Triethylene Glycol	10.62	10.41	10.84
Tetraethylene Glycol	11.76	11.52	11.99

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28017.D
Lims ID: ccv g4
Client ID:
Sample Type: CCV
Inject. Date: 28-Mar-2023 22:51:12 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084763-017
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 29-Mar-2023 10:50:06 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1608

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.898	2.898	0.000	1401237	20.0	22.5	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.448	3.448	0.000	1235076	20.0	21.3	
	3 2-Butoxyethanol						
	3.736	3.736	0.000	1603232	20.0	23.4	
*	4 n-Heptyl Alcohol						
	4.181	4.181	0.000	5519959	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.114	5.114	0.000	88256	20.0	18.3	
	6 Propylene glycol						
	6.353	6.353	0.000	67815	20.0	4.69	
	7 Ethylene glycol						
	6.552	6.552	0.000	740606	20.0	13.8	
	8 2-(2-Butoxyethoxy)ethanol						
	8.380	8.380	0.000	990198	20.0	18.8	
	9 2,2'-Oxybisethanol						
	9.594	9.594	0.000	379596	20.0	13.3	
	10 Triethylene Glycol						
	10.623	10.623	0.000	383788	20.0	14.5	
	11 Tetraethylene Glycol						
	11.756	11.756	0.000	504824	40.0	16.8	

Reagents:

SG_GlyICV_00059 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

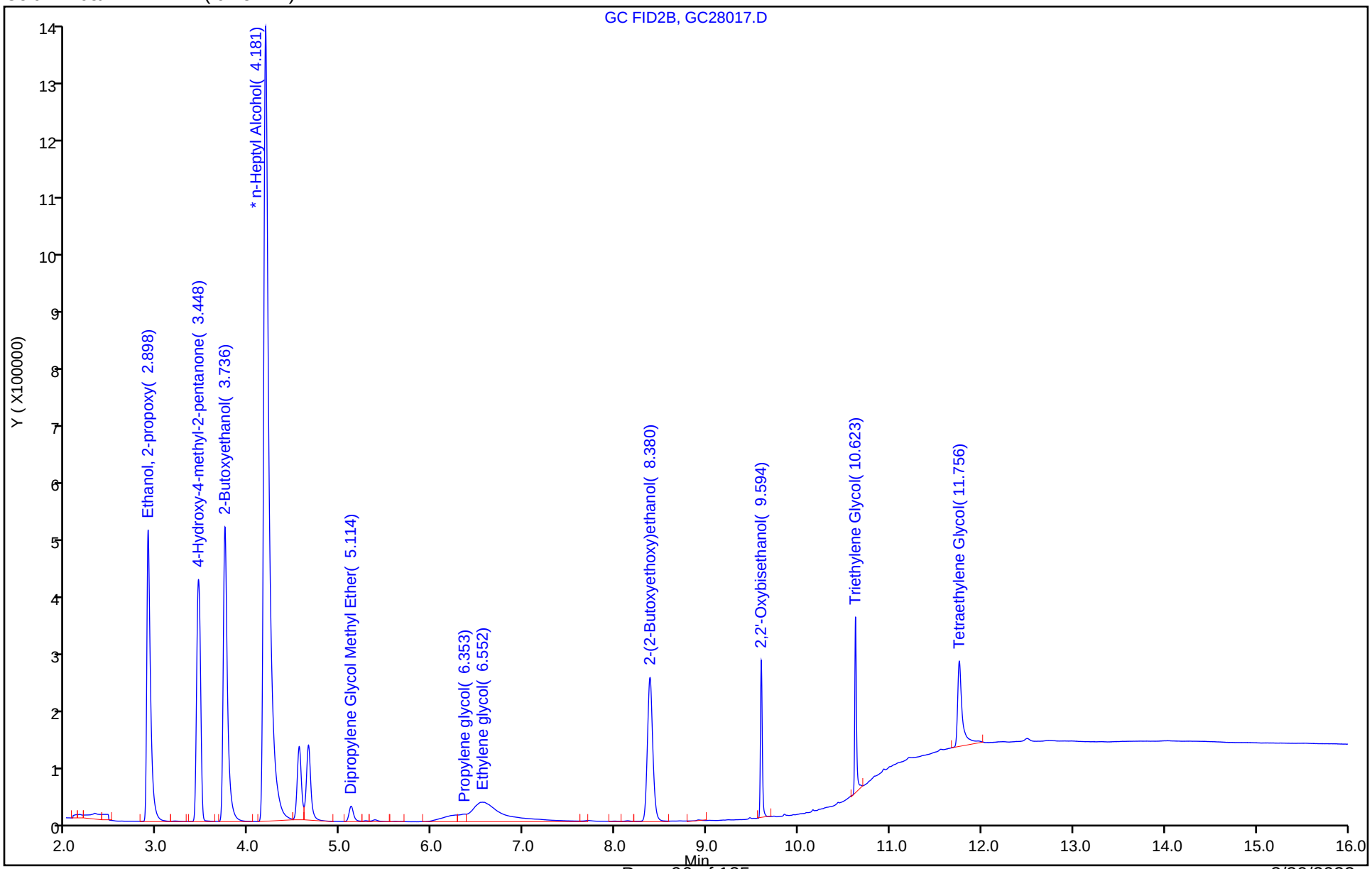
Report Date: 29-Mar-2023 10:50:06 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28017.D

Injection Date:	28-Mar-2023 22:51:12	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ccv g4			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



3/30/2023
12:32 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 680-770129/10

Matrix: Water Lab File ID: GC28010.D

Analysis Method: 8015C GLY Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/28/2023 20:07

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.: 770129 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28010.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	28-Mar-2023 20:07:36	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0084763-010				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	29-Mar-2023 10:49:46	Calib Date:	27-Mar-2023 23:05:21		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1608				
First Level Reviewer: SWK1		Date:	29-Mar-2023 10:49:42		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
4.195	4.196	-0.001	5829847	50.0	50.0	

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

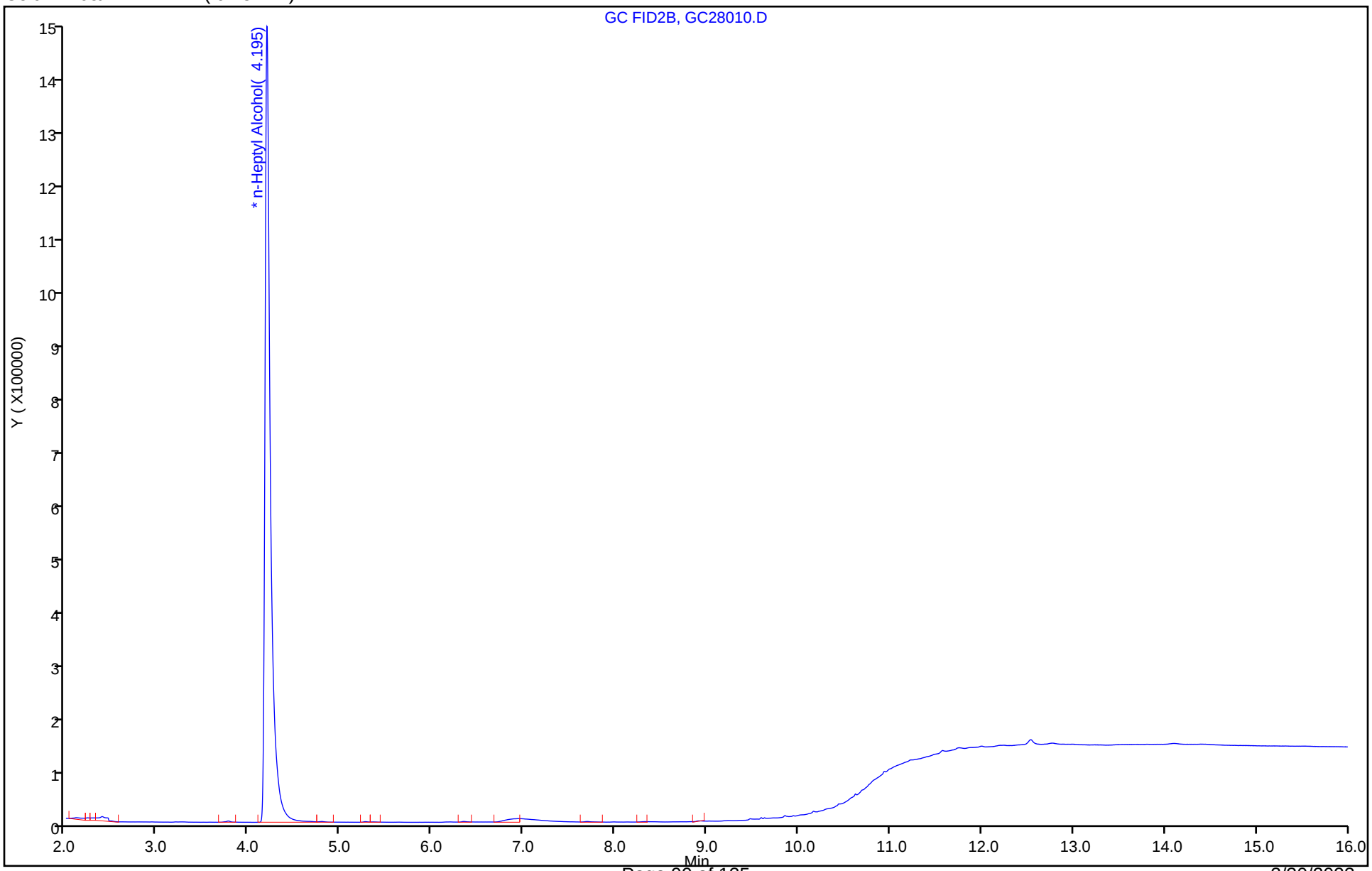
Report Date: 29-Mar-2023 10:50:02 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28010.D

Injection Date:	28-Mar-2023 20:07:36	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	mb			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



3/30/2023
12:32 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 680-770129/1006

Matrix: Water Lab File ID: -GC28006-Client.d

Analysis Method: 8015C GLY Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/28/2023 18:34

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 770129 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	20.1		5.0	3.0	1.1

Eurofins Environment Testing America
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\-GC28006-Client.d
Lims ID: Client
Client ID:
Sample Type: Client
Inject. Date: 28-Mar-2023 18:34:01 ALS Bottle#: 0 Worklist Smp#: 1006
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084763-006
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 29-Mar-2023 10:50:04 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1608

First Level Reviewer: SWK1 Date: 29-Mar-2023 10:49:29

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy					
	2.897	2.897	0.000	1018287	19.6	
	2 4-Hydroxy-4-methyl-2-pentanone					
	3.442	3.442	0.000	952776	19.8	
	3 2-Butoxyethanol					
	3.741	3.741	0.000	1141210	19.9	
*	4 n-Heptyl Alcohol					
	4.196	4.196	0.000	4575536	50.0	
	5 Dipropylene Glycol Methyl Ether					
	5.112	5.112	0.000	79534	20.0	
	6 Propylene glycol					M
	6.339	6.339	0.000	262722	24.5	M
	7 Ethylene glycol					
	6.529	6.529	0.000	919539	21.4	
	8 2-(2-Butoxyethoxy)ethanol					
	8.377	8.377	0.000	877779	20.1	
	9 2,2'-Oxybisethanol					
	9.595	9.595	0.000	410066	17.4	
	10 Triethylene Glycol					
	10.623	10.623	0.000	443968	20.1	
	11 Tetraethylene Glycol					
	11.754	11.754	0.000	877534	37.2	

QC Flag Legend
Processing Flags

Review Flags
M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00106	Amount Added:	10.00	Units: uL	Run Reagent

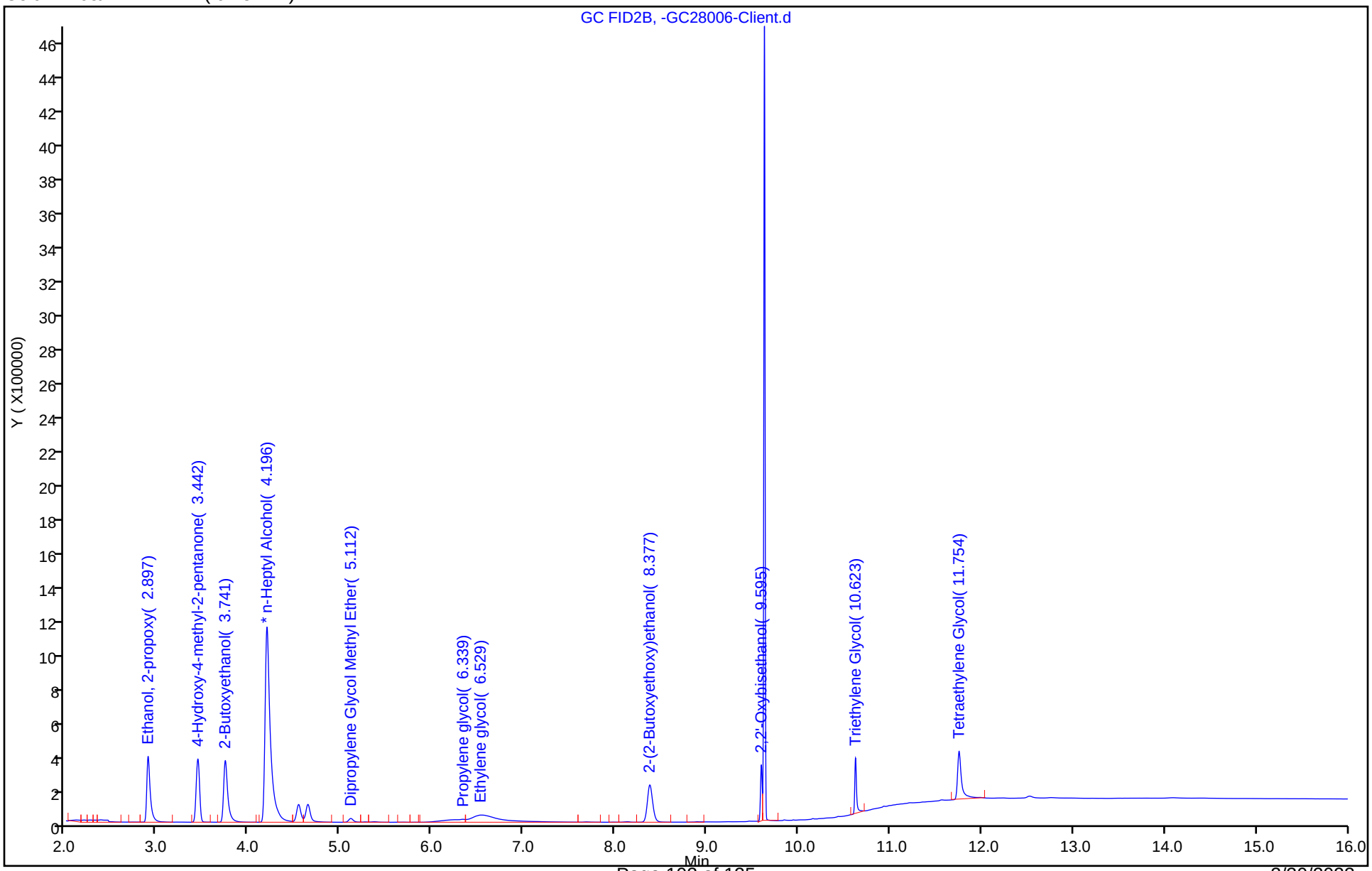
Report Date: 29-Mar-2023 10:50:05 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Environment Testing America

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\-GC28006-Client.d

Injection Date:	28-Mar-2023 18:34:01	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	Client	Lab Sample ID:		Worklist Smp#:	1006
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



3/30/2023
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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 680-770129/7

Matrix: Water Lab File ID: GC28007.D

Analysis Method: 8015C GLY Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/28/2023 18:57

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.: 770129 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	22.4		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28007.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 28-Mar-2023 18:57:26 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084763-007
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 29-Mar-2023 10:50:04 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1608

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	2.904	2.897	0.007	1364654	20.0	23.1	
	2 4-Hydroxy-4-methyl-2-pentanone						
	3.454	3.442	0.012	1342109	20.0	24.5	
	3 2-Butoxyethanol						
	3.741	3.741	0.000	1484742	20.0	22.8	
*	4 n-Heptyl Alcohol						
	4.185	4.196	-0.011	5243268	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	5.116	5.112	0.004	99403	20.0	21.8	
	6 Propylene glycol						
	6.345	6.339	0.006	213355	20.0	17.1	
	7 Ethylene glycol						
	6.547	6.529	0.018	791847	20.0	15.7	
	8 2-(2-Butoxyethoxy)ethanol						
	8.380	8.377	0.003	1116215	20.0	22.4	
	9 2,2'-Oxybisethanol						
	9.595	9.595	0.000	393976	20.0	14.6	
	10 Triethylene Glycol						
	10.622	10.623	-0.001	353638	20.0	14.0	
	11 Tetraethylene Glycol						
	11.752	11.754	-0.002	731884	40.0	26.6	

Reagents:

SG_Gly_CAL_00052 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

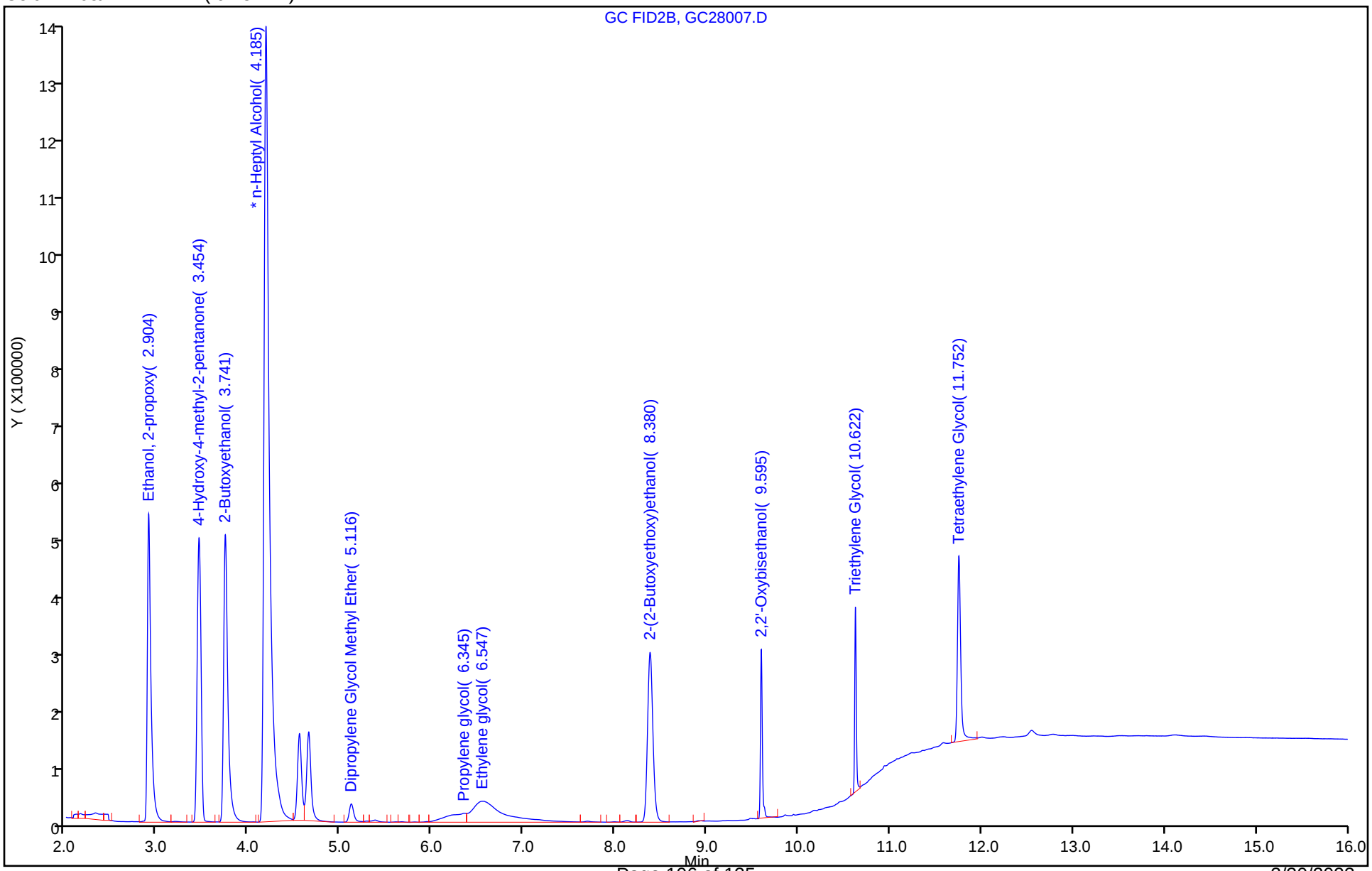
Report Date: 29-Mar-2023 10:50:05 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28007.D

Injection Date:	28-Mar-2023 18:57:26	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



3/30/2023
12:32 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah | Job No.: 580-125177-1

SDG No.:

Client Sample ID: AF-RHMW225401-WGN01B-2303 W3 MS | Lab Sample ID: 580-125177-3 MS

Matrix: Water | Lab File ID: GC28014.D

Analysis Method: 8015C GLY | Date Collected: 03/22/2023 10:15

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 03/28/2023 21:41

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.: 770129 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	29.8		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28014.D
Lims ID: 580-125177-A-3 MS
Client ID:
Sample Type: MS
Inject. Date: 28-Mar-2023 21:41:00 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084763-014
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 29-Mar-2023 10:49:46 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1608

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
4.183	4.196	-0.013	3739033	50.0	50.0	
8 2-(2-Butoxyethoxy)ethanol						
8.381	8.377	0.004	1050936	20.0	29.8	

Reagents:

SG_GlyICV_00059 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

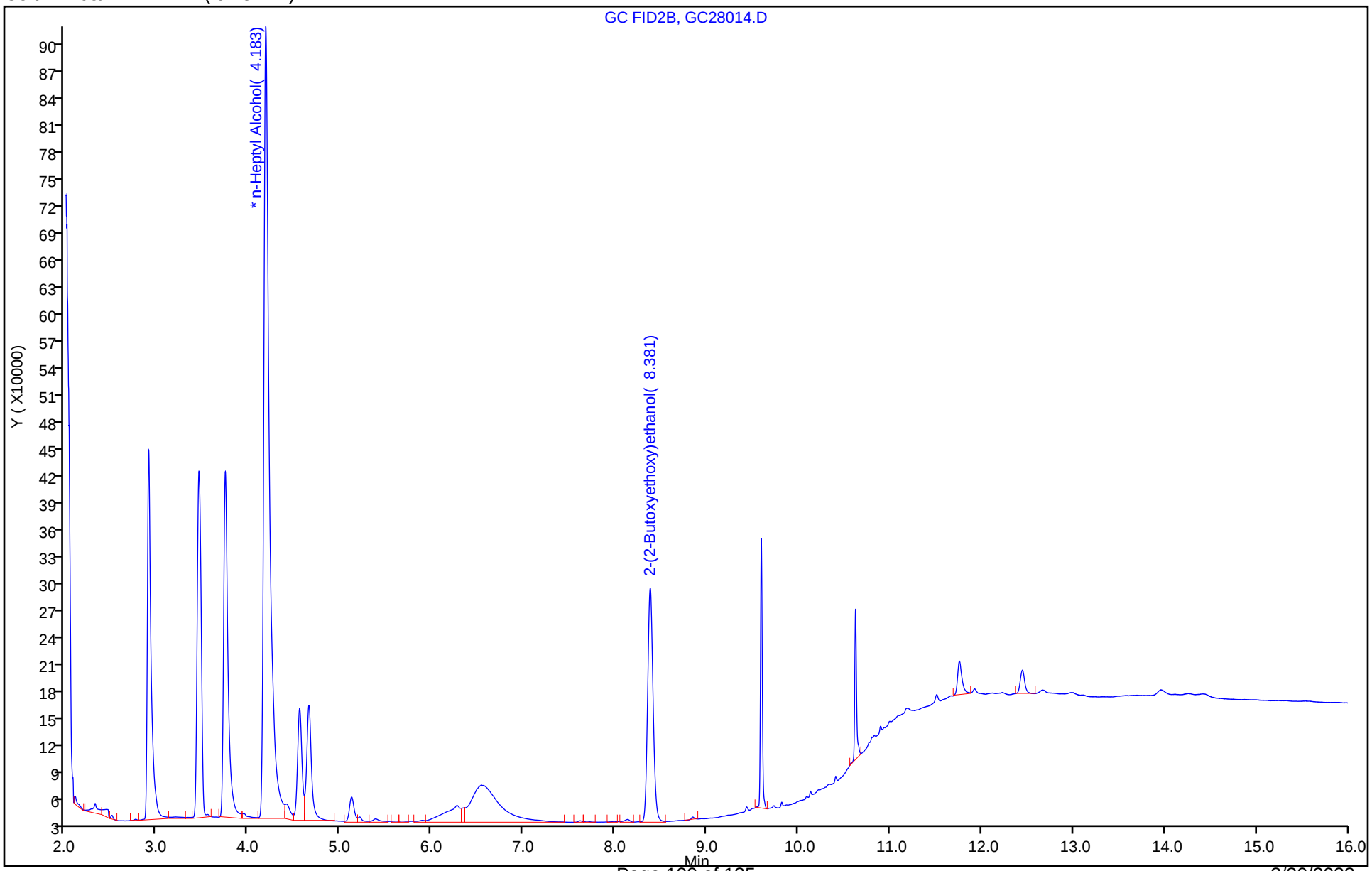
Report Date: 29-Mar-2023 10:50:03 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28014.D

Injection Date:	28-Mar-2023 21:41:00	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-125177-A-3 MS			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



3/30/2023
12:32 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah | Job No.: 580-125177-1

SDG No.:

Client Sample ID: AF-RHMW225401-WGN01B-2303 W3 MSD | Lab Sample ID: 580-125177-3 MSD

Matrix: Water | Lab File ID: GC28015.D

Analysis Method: 8015C GLY | Date Collected: 03/22/2023 10:15

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 03/28/2023 22:04

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.: 770129 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	23.5		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28015.D
Lims ID: 580-125177-A-3 MSD
Client ID:
Sample Type: MSD
Inject. Date: 28-Mar-2023 22:04:23 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0084763-015
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 29-Mar-2023 10:49:46 Calib Date: 27-Mar-2023 23:05:21
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230327-84740.b\GC27018.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1608

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
4.182	4.196	-0.014	5603667	50.0	50.0	
8 2-(2-Butoxyethoxy)ethanol						
8.382	8.377	0.005	1249668	20.0	23.5	

Reagents:

SG_GlyICV_00059 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

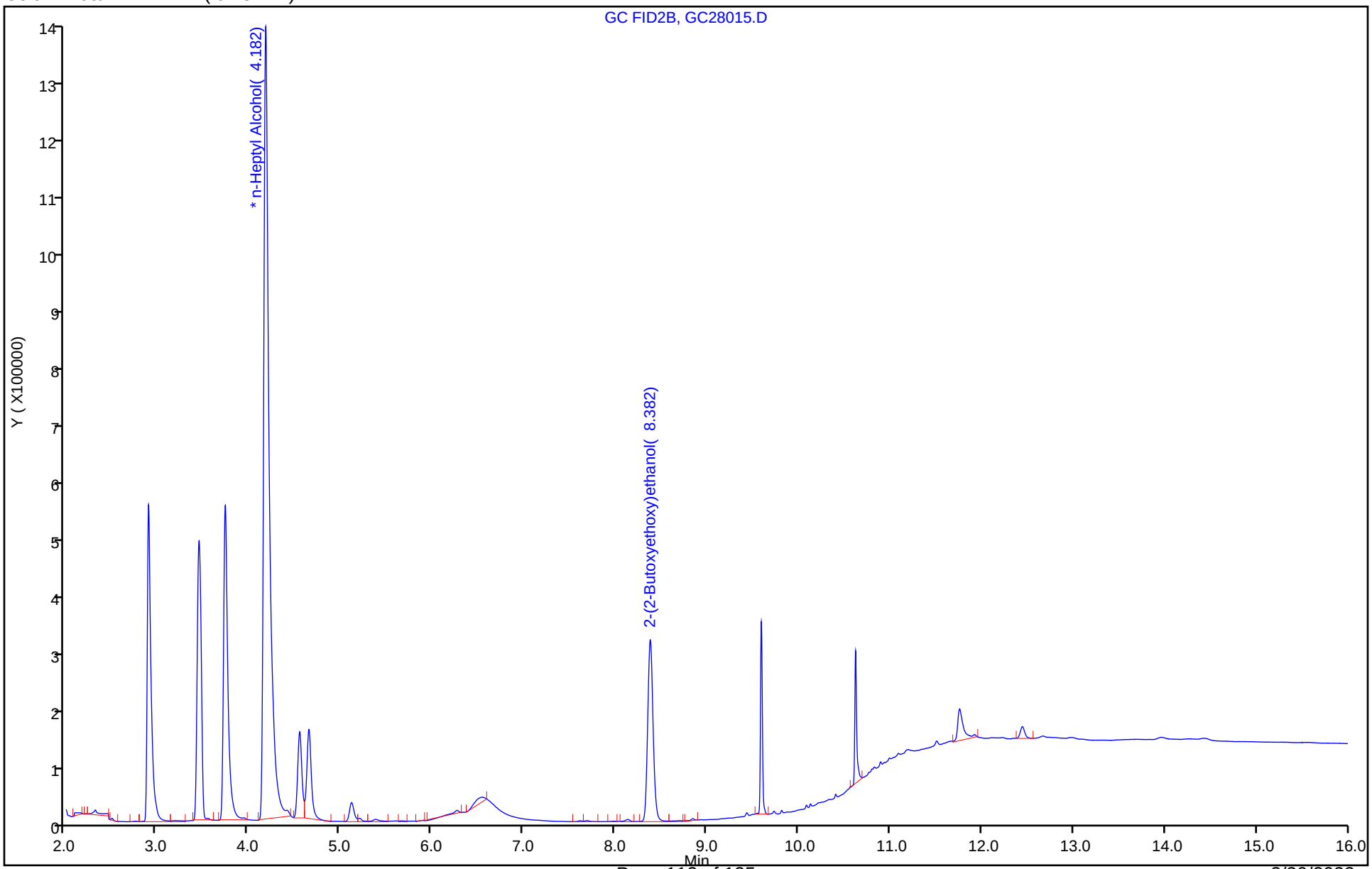
Report Date: 29-Mar-2023 10:50:04 Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230328-84763.b\GC28015.D

Injection Date:	28-Mar-2023 22:04:23	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-125177-A-3 MSD			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



3/30/2023
12:32 PM

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Instrument ID: CVGG2 Start Date: 03/27/2023 20:45

Analysis Batch Number: 769946 End Date: 03/28/2023 05:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-769946/5		03/27/2023 20:45	1	GC27012.D	J&W DB WAX 0.45(mm)
IC 680-769946/6		03/27/2023 21:08	1	GC27013.D	J&W DB WAX 0.45(mm)
IC 680-769946/7		03/27/2023 21:31	1	GC27014.D	J&W DB WAX 0.45(mm)
ICIS 680-769946/8		03/27/2023 21:55	1	GC27015.D	J&W DB WAX 0.45(mm)
IC 680-769946/9		03/27/2023 22:18	1	GC27016.D	J&W DB WAX 0.45(mm)
IC 680-769946/10		03/27/2023 22:42	1	GC27017.D	J&W DB WAX 0.45(mm)
IC 680-769946/11		03/27/2023 23:05	1	GC27018.D	J&W DB WAX 0.45(mm)
ICV 680-769946/12 CCV		03/27/2023 23:28	1	GC27019.D	J&W DB WAX 0.45(mm)
ZZZZZ		03/27/2023 23:52	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 00:15	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 01:25	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 01:48	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 02:12	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 02:35	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 02:59	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 03:22	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 03:45	1		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 04:09	20		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 04:32	20		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 04:55	20		J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 05:42	1		J&W DB WAX 0.45(mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Instrument ID: CVGG2 Start Date: 03/28/2023 18:34

Analysis Batch Number: 770129 End Date: 03/28/2023 22:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-770129/6		03/28/2023 18:34	1	GC28006.D	J&W DB WAX 0.45(mm)
LCS 680-770129/1006		03/28/2023 18:34	1	-GC28006-Client .d	J&W DB WAX 0.45(mm)
LCSD 680-770129/7		03/28/2023 18:57	1	GC28007.D	J&W DB WAX 0.45(mm)
MB 680-770129/10		03/28/2023 20:07	1	GC28010.D	J&W DB WAX 0.45(mm)
580-125177-1	AF-HDMW225303-WGN01LF -2303W3	03/28/2023 20:30	1	GC28011.D	J&W DB WAX 0.45(mm)
580-125177-2	AF-RHMW10-WGN01LF-230 3W3	03/28/2023 20:54	1	GC28012.D	J&W DB WAX 0.45(mm)
580-125177-3	AF-RHMW225401-WGN01B- 2303W3	03/28/2023 21:17	1	GC28013.D	J&W DB WAX 0.45(mm)
580-125177-3 MS	AF-RHMW225401-WGN01B- 2303W3 MS	03/28/2023 21:41	1	GC28014.D	J&W DB WAX 0.45(mm)
580-125177-3 MSD	AF-RHMW225401-WGN01B- 2303W3 MSD	03/28/2023 22:04	1	GC28015.D	J&W DB WAX 0.45(mm)
CCV 680-770129/17		03/28/2023 22:51	1	GC28017.D	J&W DB WAX 0.45(mm)
ZZZZZ		03/28/2023 22:51	1		J&W DB WAX 0.45(mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Batch Number: 769946 Batch Start Date: 03/27/23 20:45 Batch Analyst: Kellar, Joshua C

Batch Method: 8015C GLY Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00052	SG_GLY_ISTD 00106	SG_GlyICV 00059		
IC 680-769946/5		8015C GLY		1 mL	50 uL	10 uL			
IC 680-769946/6		8015C GLY		1 mL	40 uL	10 uL			
IC 680-769946/7		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-769946/8		8015C GLY		1 mL	10 uL	10 uL			
IC 680-769946/9		8015C GLY		1 mL	5 uL	10 uL			
IC 680-769946/10		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-769946/11		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-769946/12 CCV		8015C GLY		1 mL		10 uL	10 uL		

Batch Notes	

Basis	Basis Description

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

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-125177-1

SDG No.:

Batch Number: 770129 Batch Start Date: 03/28/23 18:34 Batch Analyst: Kellar, Joshua C

Batch Method: 8015C GLY Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00052	SG_GLY_ISTD 00106	SG_GlyICV 00059		
CCVIS 680-770129/6		8015C GLY		1 mL	10 uL	10 uL			
LCSD 680-770129/7		8015C GLY		1 mL	10 uL	10 uL			
MB 680-770129/10		8015C GLY		1 mL		10 uL			
580-125177-A-1	AF-HDMW225303-WGN01LF-2303W3	8015C GLY	T	1 mL		10 uL			
580-125177-A-2	AF-RHMW10-WGN01LF-2303W3	8015C GLY	T	1 mL		10 uL			
580-125177-A-3	AF-RHMW225401-WGN01B-2303W3	8015C GLY	T	1 mL		10 uL			
580-125177-A-3 MS	AF-RHMW225401-WGN01B-2303W3	8015C GLY	T	1 mL		10 uL	10 uL		
580-125177-A-3 MSD	AF-RHMW225401-WGN01B-2303W3	8015C GLY	T	1 mL		10 uL	10 uL		
CCV 680-770129/17		8015C GLY		1 mL		10 uL	10 uL		
LCS 680-770129/1006		8015C GLY		1 mL	10 uL	10 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

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

Subcontract Data

Shipping and Receiving Documents

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Andy Young	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2303W3AFEA04
Client Contact:	Phone: 402-871-5712	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:			Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			
City: Honolulu	TAT Requested (days): Rush - ASAP			
State, Zip: Hawaii 96813	Compliance Project: Δ Yes Δ No			
Phone: 808-954-4512 / 770-331-0794	PO #:			
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:			
Project Name: CTO N6274223F0104	Project #: 60697810			
Site: RHSF	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wwater, Ssolid, Owaste/oil, BT=Tissue, AA=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_DS/ 2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
AF-HDMW225303-WGN01LF-2303W3	3/21/23	1000	G	W	N	N	X	3	

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

580-125177 Chain of Custody

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

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

Deliverable Requested: I, II, III, IV, Other (specify)
Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD
Special Instructions/QC Requirements: DOD QSM project.

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Andy Young	3/21/23 1354	AECOM	Alex Edmonds	3/21/23 1354	AECOM
Alex Edmonds	3/22/23 1315	AECOM		3/23/23 1300	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 5.9/5.9

Ver: 01/16/2019

3/30/2023
12:32 PM

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: TESSA MURPHY	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2303W3AFEA03
Client Contact:	Phone: 978-382-5209	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:			Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			
City: Honolulu	TAT Requested (days): Rush - ASAP			
State, Zip: Hawaii 96813	Compliance Project: Δ Yes Δ No			
Phone: 808-954-4512 / 770-331-0794	PO #:			
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:			
Project Name: CTO N6274223F0104	Project #: 60697810			
Site: RHSF	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
AF-RHMW10-WGN01LF-2303W3	3/21/23	1255	G	W	N	N	X	3	

TM 3/21/23

TM 3/21/23

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.
Special Instructions/QC Requirements: DOD QSM project.

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Tessa Murphy TESSA MURPHY	3/21/23 1354	AECOM	Alex Edmonds	3/21/23 1354	AECOM
Alex Edmonds	3/22/23 1315	AECOM		3/22/23	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 1300	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.9/5.9

Ver: 01/16/2019

3/30/2023
12:32 PM

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Andy Young	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2303W3AFEA07
Client Contact:	Phone: 402-871-5712	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:	Analysis Requested		Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:
City: Honolulu	TAT Requested (days): Rush - ASAP			
State, Zip: Hawaii 96813	Compliance Project: ∧ Yes ∧ No			
Phone: 808-954-4512 / 770-331-0794	PO #:			
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:			
Project Name: CTO N6274223F0104	Project #: 60697810			
Site: RHSF	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_DS/ 2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
AF-RHMW225401-WGN01B-2303W3	3/22/23	1015	G	W	N	N	X	3	

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

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

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

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

Special Instructions/QC Requirements: DOD QSM project.

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Andy Young	3/22/23 1250	AECOM	James Mason	3/22/23 1250	AECOM
James Mason	3/22/23 1815	AECOM		3/23/23 1300	

Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.9/5.9

Ver: 01/16/2019

3/30/2023
12:32 PM

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Andy Tanji	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2303W3AFEA04
Client Contact:	Phone: 808-954-4512	E-Mail: M Elaine Walker@EurofinsET com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID	Analysis Requested		Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			Preservation Codes. A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
City: Honolulu	TAT Requested (days): Rush - ASAP			
State Zip: Hawaii 96813	Compliance Project: Δ Yes Δ No			
Phone: 808-954-4512 / 770-331-0794	PO #:			
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:			
Project Name: CTO N6274223F0104	Project #: 60697810			
Site: RHSF	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note.
			Preservation Code:				A		
AF-HDMW225303-WGN01LF-2303W3	3/21/23	1100	G	W	N	N	X	3	

580-125177 Chain of Custody

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

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

Deliverable Requested I II III IV Other (specify)

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

Special Instructions/QC Requirements DOD QSM project.

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Andy Tanji	3/21/23 1354	AECOM	Alex Edmonds	3/21/23 1354	AECOM
Relinquished by: Alex Edmonds	Date/Time: 3/22/23 1315	Company AECOM	Received by:	Date/Time: 3/23/23 1300	Company
Relinquished by:	Date/Time:	Company	Received by:		

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks. 5.9/5.9

Ver 01/16/2019

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: TESSA MURPHY	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2303W3AFEA03
Client Contact:	Phone: 978-382-5209	E-Mail: M Elaine Walker@EurofinsET com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID			Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			
City: Honolulu	TAT Requested (days): Rush - ASAP			
State, Zip: Hawaii 96813	Compliance Project: Δ Yes Δ No			
Phone: 808-954-4512 / 770-331-0794	PO #:			
Email: Watson Tanji (watson.tanji@aecom com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:			
Project Name: CTO N6274223F0104	Project #: 60697810			
Site: RHSF	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	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:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
			Preservation Code.				A		
AF-RHMW10-WGN01LF-2303W3	3/21/23	1255	G	W	N	N	X	3	

TM 3/21/23

TM 3/21/23

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

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

Deliverable Requested I II III IV Other (specify)

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

Special Instructions/QC Requirements DOD QSM project.

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

Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company
Tessa Murphy TESSA MURPHY	3/21/23 1354	AECOM	Alex Edmonds	3/21/23 1354	AECOM
Relinquished by: Alex Edmonds	Date/Time: 3/22/23 1315	Company AECOM	Received by:	Date/Time: 3/23/23	Company
Relinquished by:	Date/Time.	Company	Received by:	Date/Time: 1300	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:
		5.9/5.9

Ver 01/16/2019

3/30/2023 12:32 PM

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Tracy Tanning	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2303W3AFEA07
Client Contact:	Phone: 402 871-5712	E-Mail: M Elaine Walker@EurofinsET com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:	Analysis Requested		Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			Preservation Codes. A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
City: Honolulu	TAT Requested (days): Rush - ASAP			
State, Zip: Hawaii 96813	Compliance Project: ∧ Yes ∧ No			
Phone: 808-954-4512 / 770-331-0794	PO #:			
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom com)	WO #:			
Project Name: CTO N6274223F0104	Project #: 60697810			
Site: RHSF	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
AF-RHMW225401-WGN01B-2303W3	3/22/23	1015	G	W	N	N	X	3	

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

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

Deliverable Requested I II III IV Other (specify)

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

Special Instructions/QC Requirements DOD QSM project.

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Tracy Tanning	3/22/23 1250	AECOM	James Mason	3/22/23 1250	AECOM
2	James Mason	3/22/23 1315	AECOM		3/23/23	
3					1300	

Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 5.9/5.9

Ver 01/16/2019

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-125177-1

Login Number: 125177
List Number: 2
Creator: Johnson, Corey M

List Source: Eurofins Savannah
List Creation: 03/27/23 04:45 PM

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