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ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy
AECOM
1001 Bishop Street
Honolulu HI 96813

Generated 1/5/2023 3:10 PM

JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-121653-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

Job Notes

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

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

Authorization

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

Table of Contents

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Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
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: 580-121653-1

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 12/20/2022 10:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9º 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 - 2-(2-BUTOXYETHOXY)ETHANOL

Samples AF-RHMW16-WGN01B-2212W2 (580-121653-1), AF-RHMW17D-WGN01B-2212W2 (580-121653-2) and AF-RHMW17D-WGN02B-2212W2 (580-121653-3) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 12/31/2022.

Due to a FedEx delay in shipping during the Holiday season, the following samples were delayed several days and were received at the laboratory with less than 2 days remaining on the holding time. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: AF-RHMW16-WGN01B-2212W2 (580-121653-1), AF-RHMW17D-WGN01B-2212W2 (580-121653-2) and AF-RHMW17D-WGN02B-2212W2 (580-121653-3).

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

Detection Summary

Client: AECOM
Job ID: 580-121653-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW16-WGN01B-2212W2 — Lab Sample ID: 580-121653-1

No Detections.

Client Sample ID: AF-RHMW17D-WGN01B-2212W2 — Lab Sample ID: 580-121653-2

No Detections.

Client Sample ID: AF-RHMW17D-WGN02B-2212W2 — Lab Sample ID: 580-121653-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: AF-RHMW16-WGN01B-2212W2
Lab Sample ID: 580-121653-1
Date Collected: 12/16/22 18:40
Matrix: Water
Date Received: 12/20/22 10:45

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M H	5.0	1.1	mg/L			12/31/22 18:30	1

Client Sample ID: AF-RHMW17D-WGN01B-2212W2
Lab Sample ID: 580-121653-2
Date Collected: 12/16/22 11:05
Matrix: Water
Date Received: 12/20/22 10:45

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U H	5.0	1.1	mg/L			12/31/22 18:53	1

Client Sample ID: AF-RHMW17D-WGN02B-2212W2
Lab Sample ID: 580-121653-3
Date Collected: 12/16/22 13:35
Matrix: Water
Date Received: 12/20/22 10:45

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U H	5.0	1.1	mg/L			12/31/22 19:16	1

Default Detection Limits

Client: AECOM
Job ID: 580-121653-1
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 680-757531/16
Matrix: Water
Analysis Batch: 757531

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			12/31/22 18:08	1

Lab Sample ID: LCS 680-757531/12
Matrix: Water
Analysis Batch: 757531

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	20.7		mg/L		104	50 - 150		

Lab Sample ID: LCSD 680-757531/13
Matrix: Water
Analysis Batch: 757531

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	21.6		mg/L		108	50 - 150	4	50

QC Association Summary

Client: AECOM
Job ID: 580-121653-1
Project/Site: Red Hill - AFFF Assessment Sampling

GC Semi VOA

Analysis Batch: 757531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-121653-1	AF-RHMW16-WGN01B-2212W2	Total/NA	Water	8015C GLY	
580-121653-2	AF-RHMW17D-WGN01B-2212W2	Total/NA	Water	8015C GLY	
580-121653-3	AF-RHMW17D-WGN02B-2212W2	Total/NA	Water	8015C GLY	
MB 680-757531/16	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-757531/12	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-757531/13	Lab Control Sample Dup	Total/NA	Water	8015C GLY	

Lab Chronicle

Client: AECOM
Job ID: 580-121653-1
Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW16-WGN01B-2212W2
Lab Sample ID: 580-121653-1

Date Collected: 12/16/22 18:40
Matrix: Water
Date Received: 12/20/22 10:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	757531	JCK	EET SAV	12/31/22 18:30

Client Sample ID: AF-RHMW17D-WGN01B-2212W2
Lab Sample ID: 580-121653-2

Date Collected: 12/16/22 11:05
Matrix: Water
Date Received: 12/20/22 10:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	757531	JCK	EET SAV	12/31/22 18:53

Client Sample ID: AF-RHMW17D-WGN02B-2212W2
Lab Sample ID: 580-121653-3

Date Collected: 12/16/22 13:35
Matrix: Water
Date Received: 12/20/22 10:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	757531	JCK	EET SAV	12/31/22 19:16

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 580-121653-1
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: 580-121653-1
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: 580-121653-1
Project/Site: Red Hill - AFFF Assessment Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-121653-1	AF-RHMW16-WGN01B-2212W2	Water	12/16/22 18:40	12/20/22 10:45
580-121653-2	AF-RHMW17D-WGN01B-2212W2	Water	12/16/22 11:05	12/20/22 10:45
580-121653-3	AF-RHMW17D-WGN02B-2212W2	Water	12/16/22 13:35	12/20/22 10:45

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 757531

Lab Sample ID: IC 680-757531/8 Client Sample ID:

Date Analyzed: 12/31/22 15:06 Lab File ID: 22GL31008.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	7.55	Baseline Smoothing	SWK1	01/03/23 12:52
Ethylene glycol	8.00	Baseline Smoothing	SWK1	01/03/23 12:52

Lab Sample ID: IC 680-757531/9 Client Sample ID:

Date Analyzed: 12/31/22 15:29 Lab File ID: 22GL31009.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	7.54	Baseline Smoothing	SWK1	01/03/23 12:52
Ethylene glycol	8.00	Baseline Smoothing	SWK1	01/03/23 12:52

Lab Sample ID: IC 680-757531/10 Client Sample ID:

Date Analyzed: 12/31/22 15:52 Lab File ID: 22GL31010.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	7.53	Baseline Smoothing	SWK1	01/03/23 12:52
Ethylene glycol	8.00	Baseline Smoothing	SWK1	01/03/23 12:52

Lab Sample ID: ICV 680-757531/11 Client Sample ID:

Date Analyzed: 12/31/22 16:14 Lab File ID: 22GL31011.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	7.56	Baseline Smoothing	SWK1	01/03/23 12:53
Ethylene glycol	8.00	Baseline Smoothing	SWK1	01/03/23 12:53

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Instrument ID: CVGG2 Analysis Batch Number: 757531

Lab Sample ID: 580-121653-1 Client Sample ID: AF-RHMW16-WGN01B-2212W2

Date Analyzed: 12/31/22 18:30 Lab File ID: 22GL31017.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	01/03/23 13:01

Lab Sample ID: CCV 680-757531/38 Client Sample ID:

Date Analyzed: 01/01/23 02:26 Lab File ID: 22GL31038.D GC Column: J&W DB WAX ID: 0.45(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	7.58	Baseline Smoothing	SWK1	01/03/23 13:05
Ethylene glycol	8.01	Baseline Smoothing	SWK1	01/03/23 13:05

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-121653-1

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_00099	04/25/23	Agilent, Lot 0006670821			(Purchased Reagent)		n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00052	06/30/23	o2si, Lot 454407			(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

SG_Gly_CAL_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:

Certificate of Analysis

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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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**

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Reagent

SG_GLY_ISTD_00099

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name:	Custom Standard	**Lot Number:**	0006670821
Product Number:	CUS-6046	**Lot Issue Date:**	14-Mar-2022
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Apr-2024

	CERTIFIED VALUES			
Component Name	Concentration	Expanded Uncertainty	CAS#	Analyte Lot
n-heptanol	5024 ±	25 µg/mL	000111-70-6	RM04540

Matrix: methanol (methyl alcohol)

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

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

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

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

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

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

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

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

Sample lot approver:

Monica Bourgeois
QMS Representative

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

Reagent

SG_GlyICV_00052

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

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smart solutions®

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

Rev 0

Certificate of Analysis

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

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

Container:
1 ml Ampule, Amber Glass

Certified Values:

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

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

Intended Uses:

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

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

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

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

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

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

Method of Preparation:

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

Packaging and Storage:

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

Glassware Calibration:

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

Weights and Balance Calibration:

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

Homogeneity:

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

Hazardous Information:

Refer to MSDS.

Calculation of Uncertainty:

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

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

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

Expiration Information:

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

Quality Standard Documentation:

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

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

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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.: 580-121653-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 22GL31012.D

Lab ID: LCS 680-757531/12 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	20.7	104	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.: 580-121653-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 22GL31013.D

Lab ID: LCSD 680-757531/13 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	21.6	108	4	50	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Lab Sample ID: MB 680-757531/16

Matrix: Water Date Extracted:

Lab File ID:(1) 22GL31016.D Lab File ID:(2)

Date Analyzed:(1) 12/31/2022 18:08 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 680-757531/12	12/31/2022 16:37	
	LCSD 680-757531/13	12/31/2022 17:00	
AF-RHMW16-WGN01B-2212W2	580-121653-1	12/31/2022 18:30	
AF-RHMW17D-WGN01B-2212W2	580-121653-2	12/31/2022 18:53	
AF-RHMW17D-WGN02B-2212W2	580-121653-3	12/31/2022 19:16	

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

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Sample No.: ICIS 680-757531/7 Date Analyzed: 12/31/2022 14:44

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

Lab File ID (Standard): 22GL31007.D Heated Purge: (Y/N) N

Calibration ID: 88767

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		7355756	5.52				
UPPER LIMIT		14711512	6.02				
LOWER LIMIT		3677878	5.02				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-757531/11		7043943	5.52				
LCS 680-757531/12		7202300	5.53				
LCSD 680-757531/13		7169170	5.52				
MB 680-757531/16		7059155	5.53				
580-121653-1	AF-RHMW16-WGN01B-2212W2	7377119	5.53				
580-121653-2	AF-RHMW17D-WGN01B-2212W2	7348335	5.53				
580-121653-3	AF-RHMW17D-WGN02B-2212W2	7148597	5.53				
CCV 680-757531/28		7629121	5.53				
CCV 680-757531/38		7257216	5.53				

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.: 580-121653-1

SDG No.:

Client Sample ID: AF-RHMW16-WGN01B-2212W2 Lab Sample ID: 580-121653-1

Matrix: Water Lab File ID: 22GL31017.D

Analysis Method: 8015C GLY Date Collected: 12/16/2022 18:40

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/31/2022 18:30

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.: 757531 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31017.D				
Lims ID:	580-121653-C-1				
Client ID:	AF-RHMW16-WGN01B-2212W2				
Sample Type:	Client				
Inject. Date:	31-Dec-2022 18:30:43	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083061-017				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	03-Jan-2023 13:01:01	Calib Date:	31-Dec-2022 15:52:08		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1607				

First Level Reviewer: SWK1 Date: 03-Jan-2023 13:01:01

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
5.531	5.524	0.007	7377119	50.0	

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00099 Amount Added: 10.00 Units: uL Run Reagent

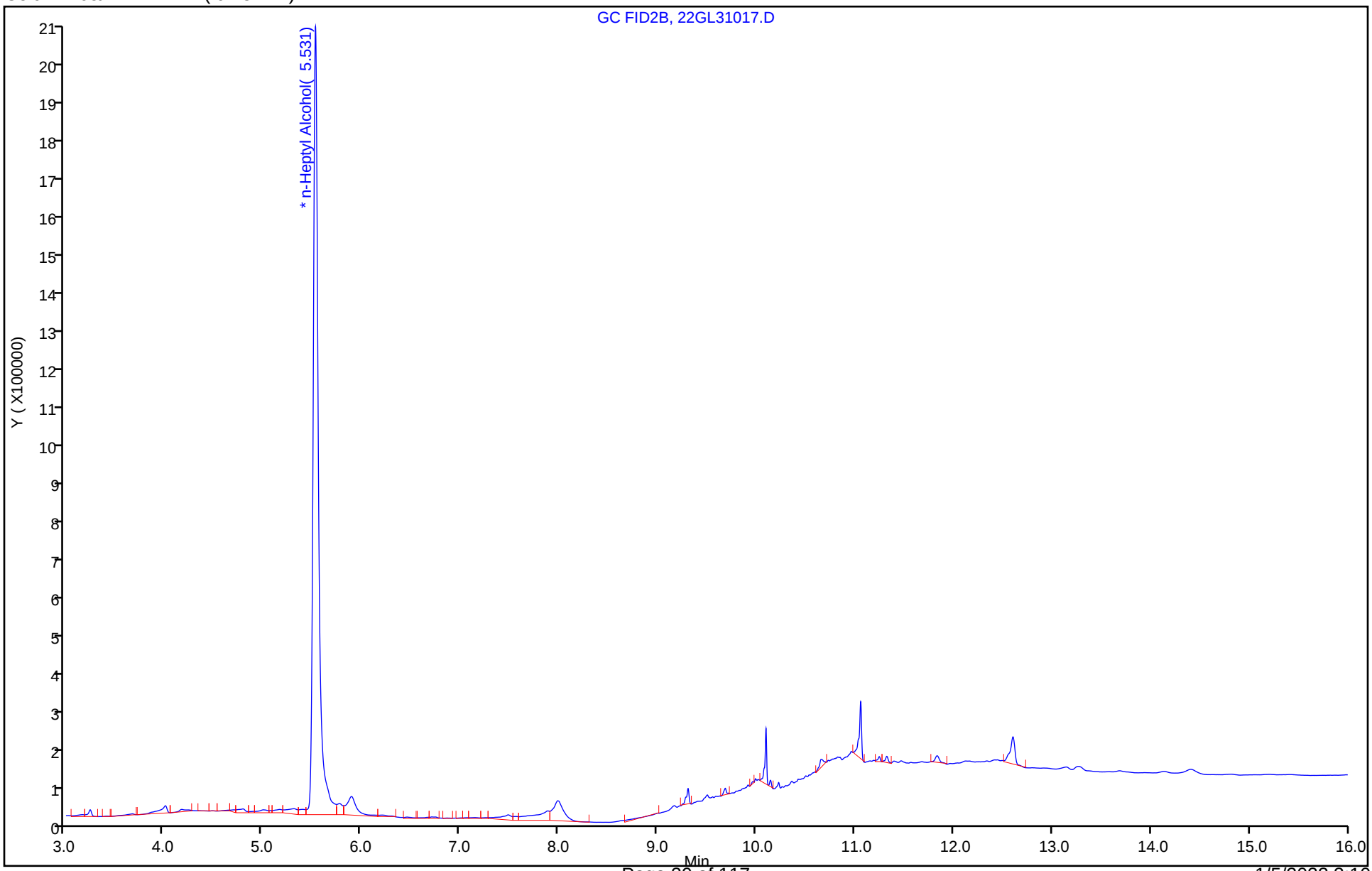
Report Date: 03-Jan-2023 13:01:41 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31017.D

Injection Date:	31-Dec-2022 18:30:43	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-121653-C-1	Lab Sample ID:	680-121653-1	Worklist Smp#:	17
Client ID:	AF-RHMW16-WGN01B-2212W2				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



1/5/2023 3:10 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Client Sample ID: AF-RHMW17D-WGN01B-2212W2 Lab Sample ID: 580-121653-2

Matrix: Water Lab File ID: 22GL31018.D

Analysis Method: 8015C GLY Date Collected: 12/16/2022 11:05

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/31/2022 18:53

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.: 757531 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31018.D				
Lims ID:	580-121653-A-2				
Client ID:	AF-RHMW17D-WGN01B-2212W2				
Sample Type:	Client				
Inject. Date:	31-Dec-2022 18:53:21	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083061-018				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	03-Jan-2023 13:01:01	Calib Date:	31-Dec-2022 15:52:08		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1607				

First Level Reviewer: SWK1 Date: 03-Jan-2023 13:01:05

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
5.530	5.524	0.006	7348335	50.0	

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00099 Amount Added: 10.00 Units: uL Run Reagent

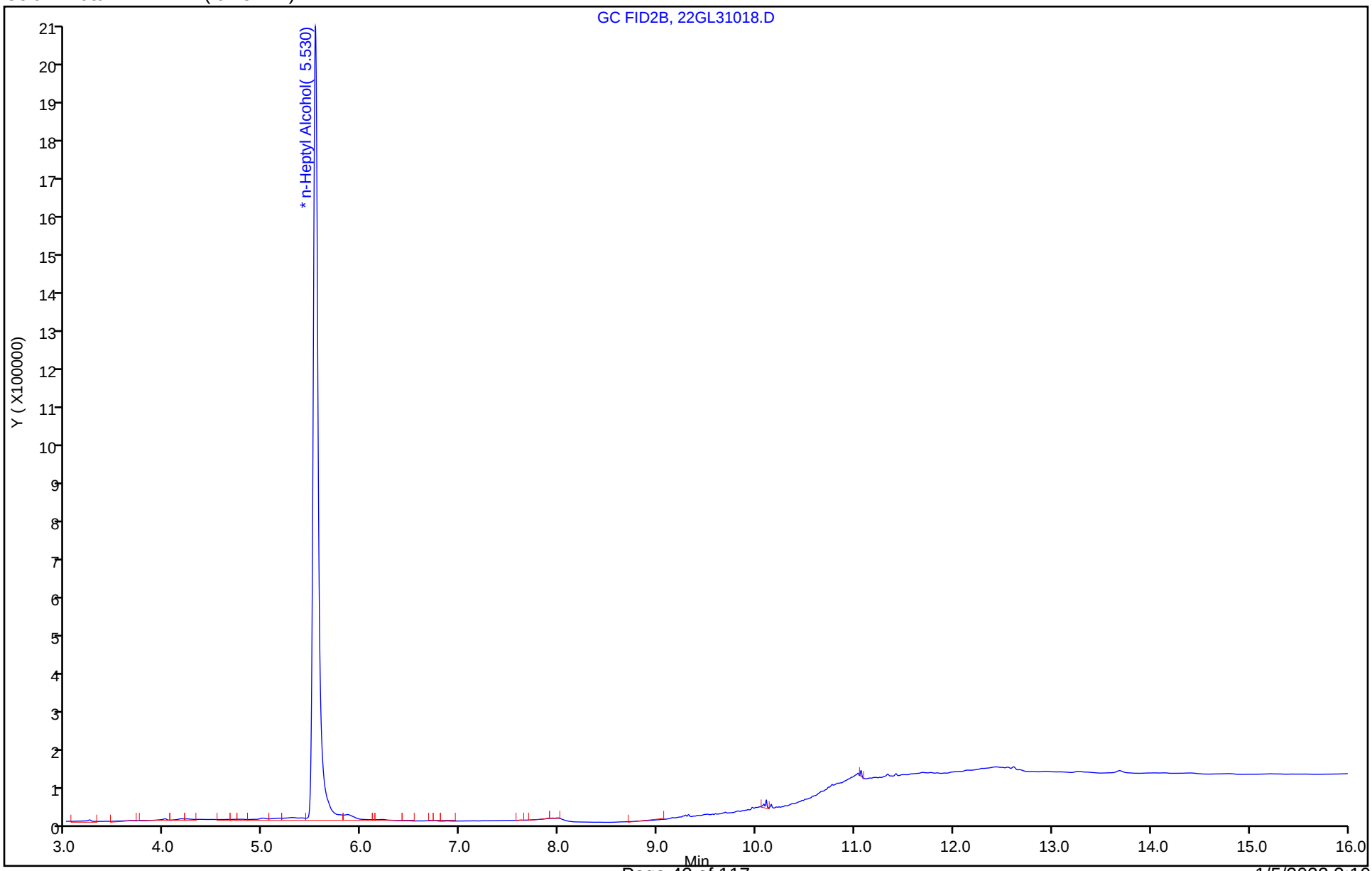
Report Date: 03-Jan-2023 13:01:42 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31018.D

Injection Date:	31-Dec-2022 18:53:21	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-121653-A-2	Lab Sample ID:	680-121653-2	Worklist Smp#:	18
Client ID:	AF-RHMW17D-WGN01B-2212W2				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Client Sample ID: AF-RHMW17D-WGN02B-2212W2 Lab Sample ID: 580-121653-3

Matrix: Water Lab File ID: 22GL31019.D

Analysis Method: 8015C GLY Date Collected: 12/16/2022 13:35

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/31/2022 19:16

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

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

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

Cleanup Factor:

Analysis Batch No.: 757531 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31019.D				
Lims ID:	580-121653-A-3				
Client ID:	AF-RHMW17D-WGN02B-2212W2				
Sample Type:	Client				
Inject. Date:	31-Dec-2022 19:16:07	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0083061-019				
Operator ID:		Instrument ID:	CVGG2		
Method:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m				
Limit Group:	8015C_DAI				
Last Update:	03-Jan-2023 13:01:01	Calib Date:	31-Dec-2022 15:52:08		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D				
Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B		
Process Host:	CTX1607				

First Level Reviewer: SWK1 Date: 03-Jan-2023 13:01:07

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
5.525	5.524	0.001	7148597	50.0	

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00099 Amount Added: 10.00 Units: uL Run Reagent

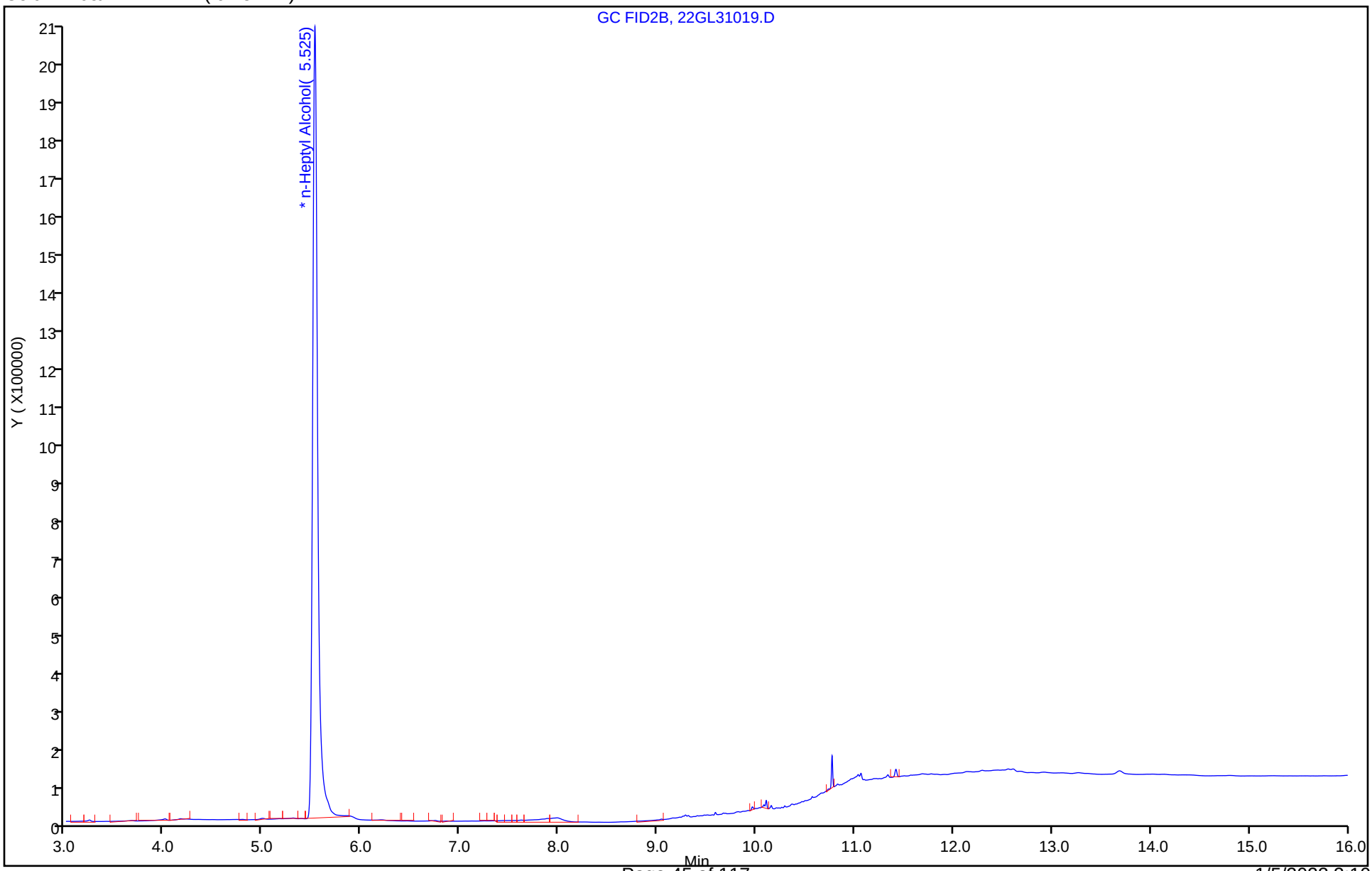
Report Date: 03-Jan-2023 13:01:42 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31019.D

Injection Date:	31-Dec-2022 19:16:07	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-121653-A-3	Lab Sample ID:	680-121653-3	Worklist Smp#:	19
Client ID:	AF-RHMW17D-WGN02B-2212W2				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



1/5/2023 3:10 PM

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

Lab Name: Eurofins Savannah Job No.: 580-121653-1 Analy Batch No.: 757531

SDG No.:

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

Calibration Start Date: 12/31/2022 13:58 Calibration End Date: 12/31/2022 15:52 Calibration ID: 88767

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-757531/5	22GL31005.D
Level 2	IC 680-757531/6	22GL31006.D
Level 3	ICIS 680-757531/7	22GL31007.D
Level 4	IC 680-757531/8	22GL31008.D
Level 5	IC 680-757531/9	22GL31009.D
Level 6	IC 680-757531/10	22GL31010.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 3	LVL 4	LVL 5		B	M1	M2								
Ethanol, 2-propoxy	0.5862 0.5626	0.5635	0.5620	0.5581	0.5562	Ave		0.5648				1.9		20.0			
4-Hydroxy-4-methyl-2-pentanone	0.6161 0.6019	0.6015	0.5969	0.5926	0.5943	Ave		0.6006				1.4		20.0			
2-Butoxyethanol	0.6407 0.6082	0.6158	0.6095	0.6037	0.6025	Ave		0.6134				2.3		20.0			
Dipropylene Glycol Methyl Ether	0.0455 0.0525	0.0516	0.0508	0.0509	0.0517	Ave		0.0505				5.1		20.0			
Propylene glycol	0.4082 0.4455	0.4298	0.4304	0.4231	0.4386	Ave		0.4293				3.0		20.0			
Ethylene glycol	0.3645 0.3649	0.3579	0.3642	0.3514	0.3612	Ave		0.3607				1.5		20.0			
2-(2-Butoxyethoxy)ethanol	0.5960 0.5789	0.5772	0.5684	0.5617	0.5713	Ave		0.5756				2.0		20.0			
2,2'-Oxybisethanol	0.3917 0.3701	0.3684	0.3645	0.3548	0.3667	Ave		0.3694				3.3		20.0			
Triethylene Glycol	0.3606 0.3539	0.3485	0.3499	0.3388	0.3517	Ave		0.3506				2.0		20.0			
Tetraethylene Glycol	0.3541 0.3620	0.3537	0.3579	0.3478	0.3622	Ave		0.3563				1.6		20.0			

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

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

Lab Name: Eurofins Savannah Job No.: 580-121653-1 Analy Batch No.: 757531

SDG No.:

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

Calibration Start Date: 12/31/2022 13:58 Calibration End Date: 12/31/2022 15:52 Calibration ID: 88767

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-757531/5	22GL31005.D
Level 2	IC 680-757531/6	22GL31006.D
Level 3	ICIS 680-757531/7	22GL31007.D
Level 4	IC 680-757531/8	22GL31008.D
Level 5	IC 680-757531/9	22GL31009.D
Level 6	IC 680-757531/10	22GL31010.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethanol, 2-propoxy	nHPA	Ave	385924 7756623	786791	1653614	4136966	6296632	5.00 100	10.0	20.0	50.0	80.0
4-Hydroxy-4-methyl-2-pentanone	nHPA	Ave	405601 8299722	839913	1756349	4393164	6728367	5.00 100	10.0	20.0	50.0	80.0
2-Butoxyethanol	nHPA	Ave	421814 8385924	859832	1793425	4475050	6820298	5.00 100	10.0	20.0	50.0	80.0
Dipropylene Glycol Methyl Ether	nHPA	Ave	29930 724394	72069	149471	377456	585703	5.00 100	10.0	20.0	50.0	80.0
Propylene glycol	nHPA	Ave	268725 6142798	600061	1266345	3136454	4965325	5.00 100	10.0	20.0	50.0	80.0
Ethylene glycol	nHPA	Ave	239946 5031863	499748	1071635	2605143	4089519	5.00 100	10.0	20.0	50.0	80.0
2-(2-Butoxyethoxy)ethanol	nHPA	Ave	392369 7982407	805992	1672402	4164185	6467596	5.00 100	10.0	20.0	50.0	80.0
2,2'-Oxybisethanol	nHPA	Ave	257871 5103471	514393	1072392	2630014	4151063	5.00 100	10.0	20.0	50.0	80.0
Triethylene Glycol	nHPA	Ave	237402 4879102	486543	1029507	2511228	3981926	5.00 100	10.0	20.0	50.0	80.0
Tetraethylene Glycol	nHPA	Ave	466208 9983332	987745	2106139	5156848	8201061	10.0 200	20.0	40.0	100	160

Curve Type Legend
Ave = Average ISTD

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

Lab Name: Eurofins Savannah Job No.: 580-121653-1 Analy Batch No.: 757531

SDG No.:

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

Calibration Start Date: 12/31/2022 13:58 Calibration End Date: 12/31/2022 15:52 Calibration ID: 88767

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-757531/5	22GL31005.D
Level 2	IC 680-757531/6	22GL31006.D
Level 3	ICIS 680-757531/7	22GL31007.D
Level 4	IC 680-757531/8	22GL31008.D
Level 5	IC 680-757531/9	22GL31009.D
Level 6	IC 680-757531/10	22GL31010.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Ethanol, 2-propoxy	3.8	-0.2	-0.5	-1.2	-1.5	-0.4	20	20	20	20	20	20
4-Hydroxy-4-methyl-2-pentanone	2.6	0.2	-0.6	-1.3	-1.0	0.2	20	20	20	20	20	20
2-Butoxyethanol	4.5	0.4	-0.6	-1.6	-1.8	-0.8	20	20	20	20	20	20
Dipropylene Glycol Methyl Ether	-10.0	2.2	0.6	0.8	2.4	4.0	20	20	20	20	20	20
Propylene glycol	-4.9	0.1	0.3	-1.4	2.2	3.8	20	20	20	20	20	20
Ethylene glycol	1.0	-0.8	1.0	-2.6	0.2	1.2	20	20	20	20	20	20
2-(2-Butoxyethoxy)ethanol	3.5	0.3	-1.3	-2.4	-0.7	0.6	20	20	20	20	20	20
2,2'-Oxybisethanol	6.0	-0.3	-1.3	-3.9	-0.7	0.2	20	20	20	20	20	20
Triethylene Glycol	2.9	-0.6	-0.2	-3.4	0.3	0.9	20	20	20	20	20	20
Tetraethylene Glycol	-0.6	-0.7	0.5	-2.4	1.7	1.6	20	20	20	20	20	20

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31005.D
Lims ID: ic g1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 31-Dec-2022 13:58:39 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-005
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 12:53:26 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 12:51:49

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.810	3.811	-0.001	385924	5.00	5.19	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.625	4.625	0.000	405601	5.00	5.13	
	3 2-Butoxyethanol						
	4.988	4.991	-0.003	421814	5.00	5.22	
*	4 n-Heptyl Alcohol						
	5.521	5.524	-0.003	6583345	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.634	6.637	-0.003	29930	5.00	4.50	
	6 Propylene glycol						
	7.568	7.545	0.023	268725	5.00	4.75	
	7 Ethylene glycol						
	8.006	7.997	0.009	239946	5.00	5.05	
	8 2-(2-Butoxyethoxy)ethanol						
	9.402	9.401	0.001	392369	5.00	5.18	
	9 2,2'-Oxybisethanol						
	10.102	10.102	0.000	257871	5.00	5.30	
	10 Triethylene Glycol						
	11.064	11.064	0.000	237402	5.00	5.14	
	11 Tetraethylene Glycol						
	12.614	12.614	0.000	466208	10.0	9.94	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00052	Amount Added:	2.50	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

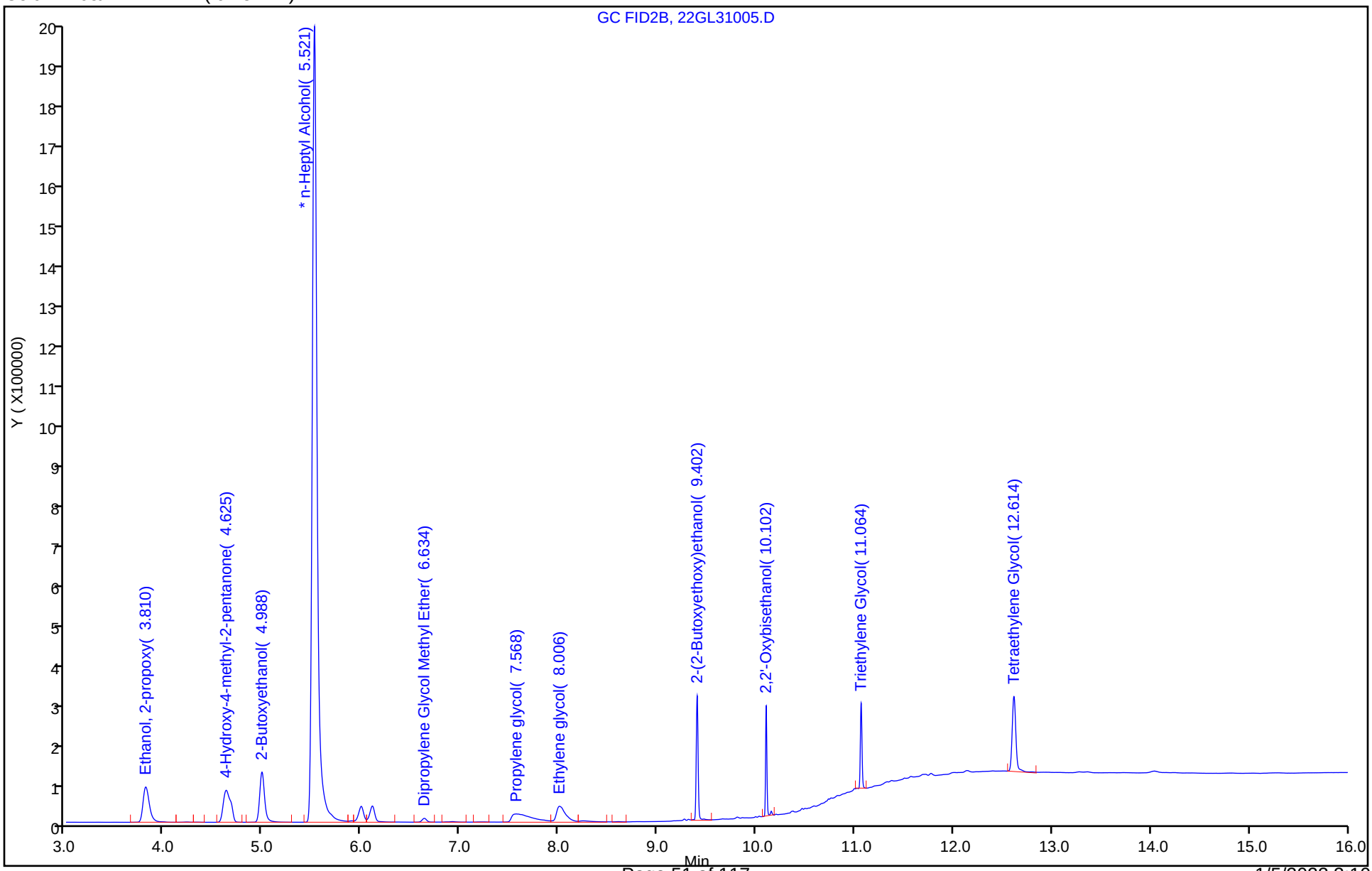
Report Date: 03-Jan-2023 12:53:26 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31005.D

Injection Date:	31-Dec-2022 13:58:39	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g1			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
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\20221231-83061.b\22GL31006.D
Lims ID: ic g2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 31-Dec-2022 14:21:17 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-006
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 12:53:26 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 12:51:55

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.819	3.811	0.008	786791	10.0	9.98	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.630	4.625	0.005	839913	10.0	10.0	
	3 2-Butoxyethanol						
	4.995	4.991	0.004	859832	10.0	10.0	
*	4 n-Heptyl Alcohol						
	5.525	5.524	0.001	6981355	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.639	6.637	0.002	72069	10.0	10.2	
	6 Propylene glycol						
	7.563	7.545	0.018	600061	10.0	10.0	
	7 Ethylene glycol						
	8.000	7.997	0.003	499748	10.0	9.92	
	8 2-(2-Butoxyethoxy)ethanol						
	9.401	9.401	0.000	805992	10.0	10.0	
	9 2,2'-Oxybisethanol						
	10.102	10.102	0.000	514393	10.0	9.97	
	10 Triethylene Glycol						
	11.065	11.064	0.001	486543	10.0	9.94	
	11 Tetraethylene Glycol						
	12.615	12.614	0.001	987745	20.0	19.9	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00052	Amount Added:	5.00	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

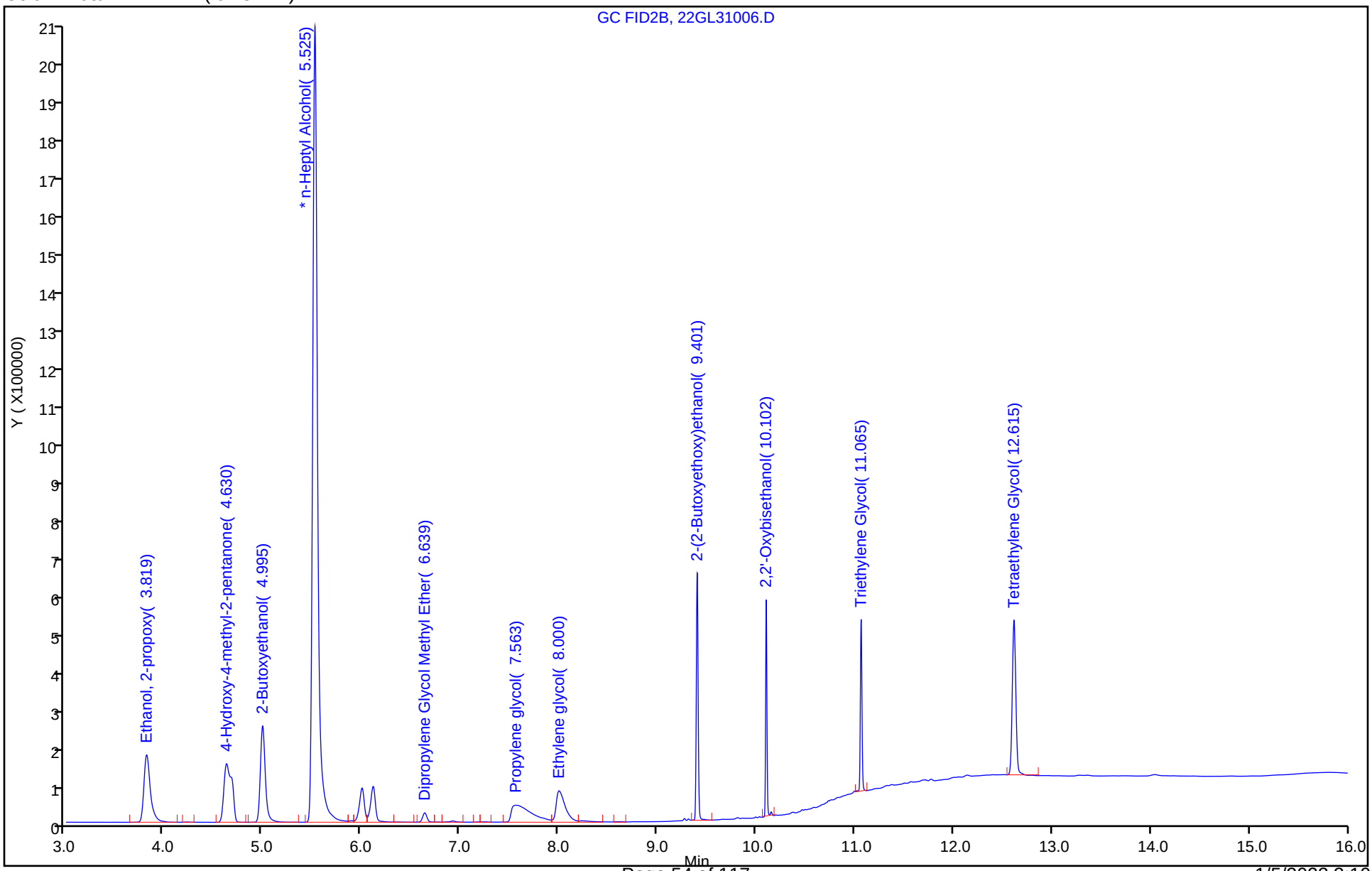
Report Date: 03-Jan-2023 12:53:26 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31006.D

Injection Date:	31-Dec-2022 14:21:17	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g2			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
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\20221231-83061.b\22GL31007.D
Lims ID: icis g3
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 31-Dec-2022 14:44:01 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-007
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 12:53:27 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 12:52:02

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.811	3.811	0.000	1653614	20.0	19.9	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.622	4.622	0.000	1756349	20.0	19.9	
	3 2-Butoxyethanol						
	4.989	4.989	0.000	1793425	20.0	19.9	
*	4 n-Heptyl Alcohol						
	5.520	5.520	0.000	7355756	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.634	6.634	0.000	149471	20.0	20.1	
	6 Propylene glycol						
	7.565	7.565	0.000	1266345	20.0	20.1	
	7 Ethylene glycol						
	7.999	7.999	0.000	1071635	20.0	20.2	
	8 2-(2-Butoxyethoxy)ethanol						
	9.401	9.401	0.000	1672402	20.0	19.7	
	9 2,2'-Oxybisethanol						
	10.102	10.102	0.000	1072392	20.0	19.7	
	10 Triethylene Glycol						
	11.064	11.064	0.000	1029507	20.0	20.0	
	11 Tetraethylene Glycol						
	12.614	12.614	0.000	2106139	40.0	40.2	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

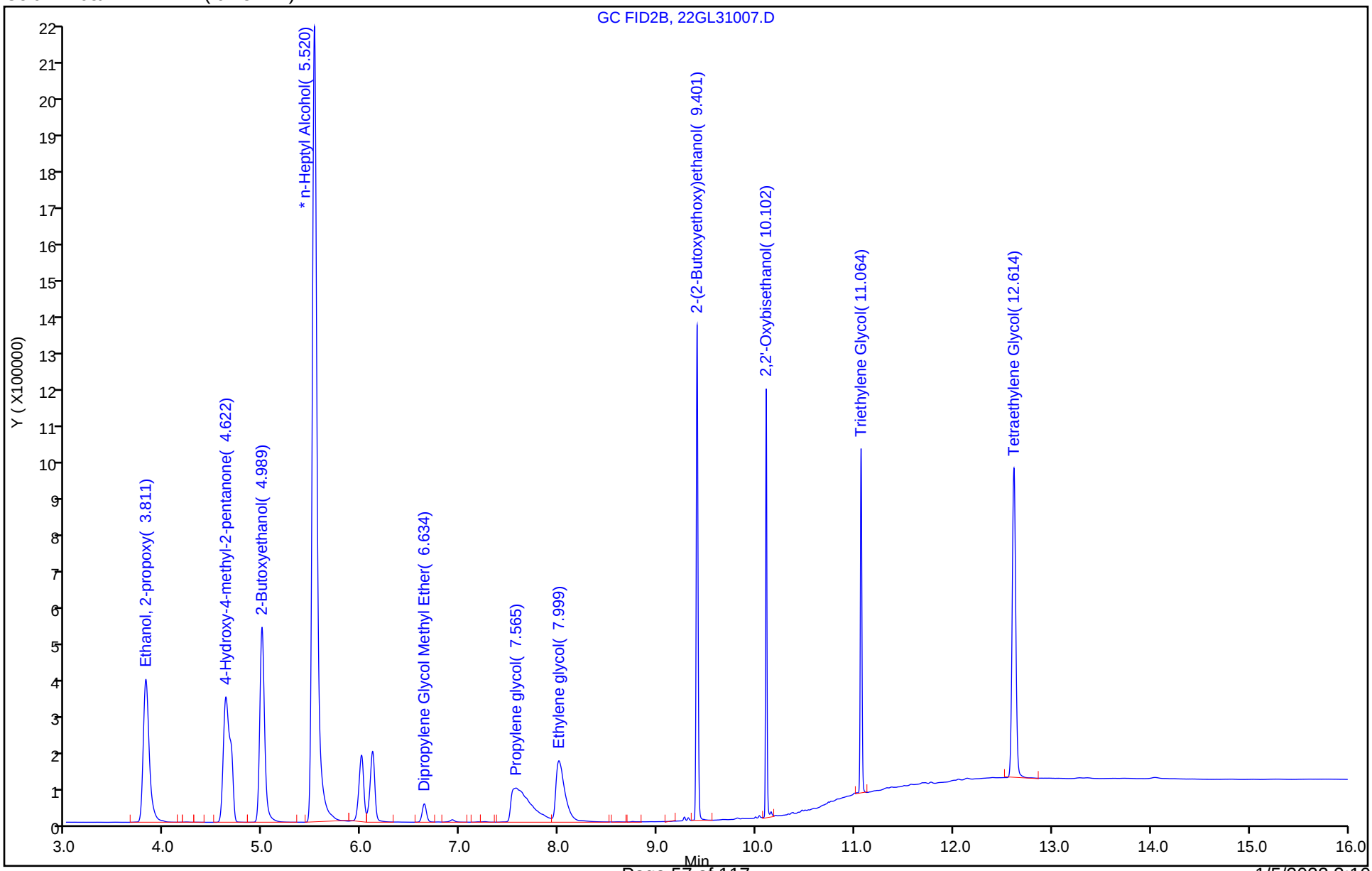
Report Date: 03-Jan-2023 12:53:27 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31007.D

Injection Date:	31-Dec-2022 14:44:01	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	icis g3			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



1/5/2023 3:10 PM

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31008.D
Lims ID: ic g4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 31-Dec-2022 15:06:40 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-008
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 12:53:28 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 12:52:17

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.811	3.811	0.000	4136966	50.0	49.4	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.625	4.625	0.000	4393164	50.0	49.3	
	3 2-Butoxyethanol						
	4.991	4.991	0.000	4475050	50.0	49.2	
*	4 n-Heptyl Alcohol						
	5.524	5.524	0.000	7413184	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.637	6.637	0.000	377456	50.0	50.4	
	6 Propylene glycol						M
	7.545	7.545	0.000	3136454	50.0	49.3	M
	7 Ethylene glycol						M
	7.997	7.997	0.000	2605143	50.0	48.7	M
	8 2-(2-Butoxyethoxy)ethanol						
	9.401	9.401	0.000	4164185	50.0	48.8	
	9 2,2'-Oxybisethanol						
	10.102	10.102	0.000	2630014	50.0	48.0	
	10 Triethylene Glycol						
	11.064	11.064	0.000	2511228	50.0	48.3	
	11 Tetraethylene Glycol						
	12.614	12.614	0.000	5156848	100.0	97.6	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added:	25.00	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

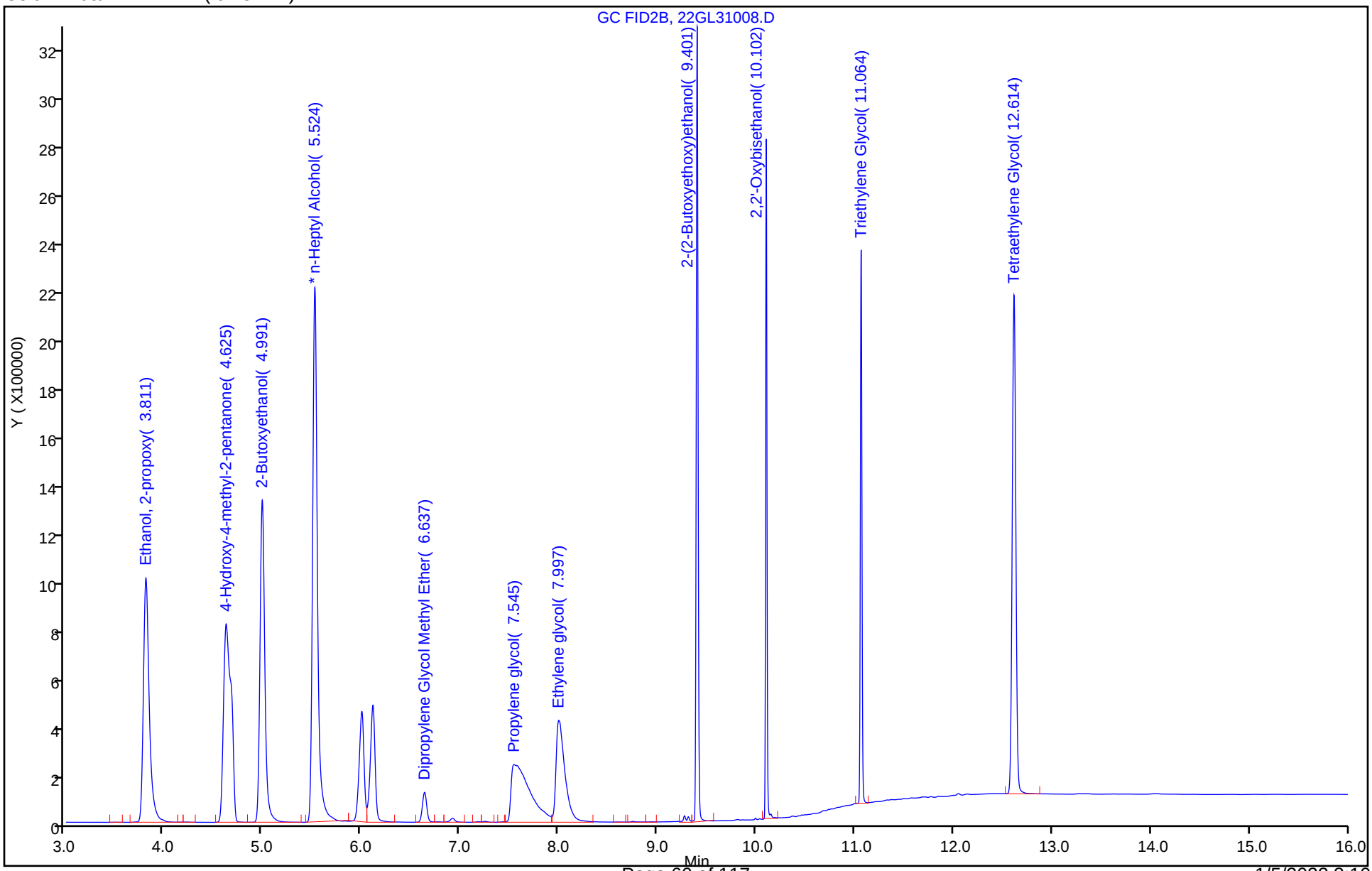
Report Date: 03-Jan-2023 12:53:28 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31008.D

Injection Date:	31-Dec-2022 15:06:40	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g4			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



Manual Integration/User Assign Peak Report

Eurofins Savannah

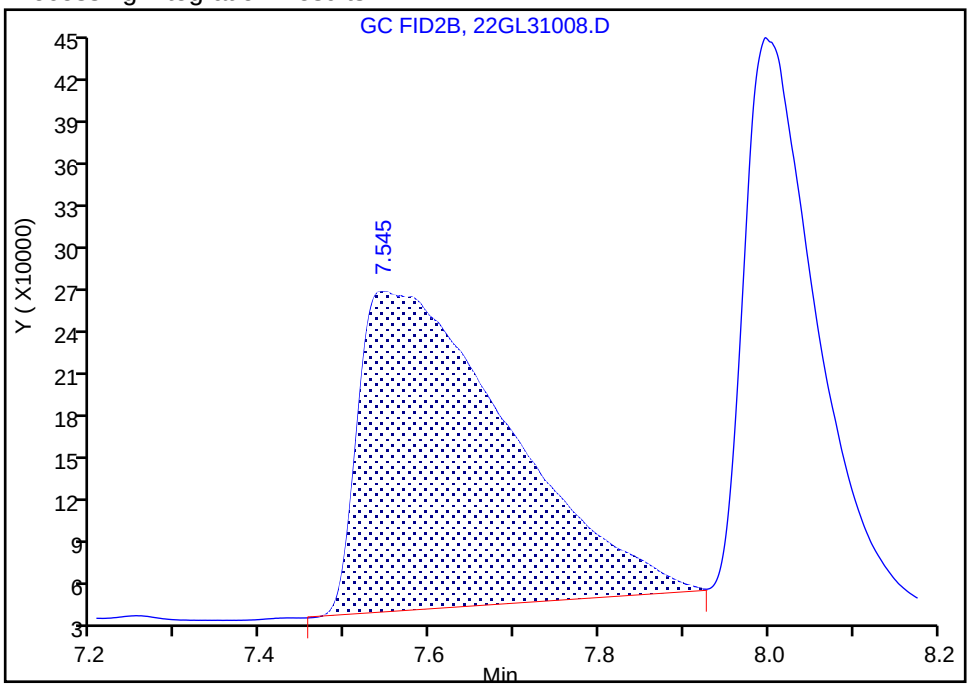
Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31008.D
Injection Date: 31-Dec-2022 15:06:40 Instrument ID: CVGG2
Lims ID: ic g4
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

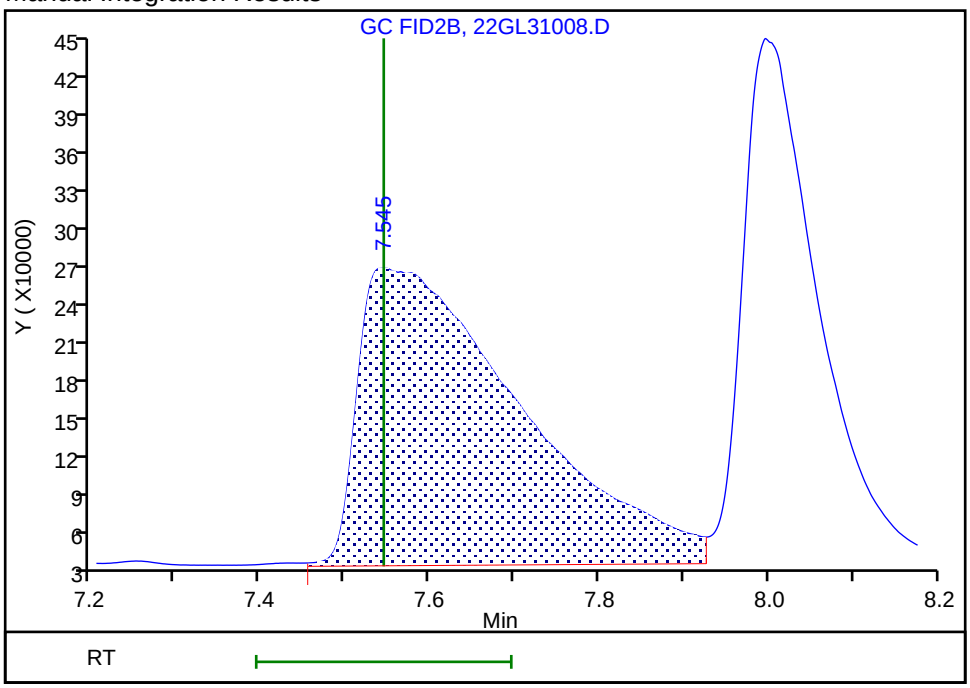
Processing Integration Results

RT: 7.55
Area: 2804382
Amount: 46.435503
Amount Units: ug/ml



Manual Integration Results

RT: 7.55
Area: 3136454
Amount: 49.281532
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 12:52:15
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

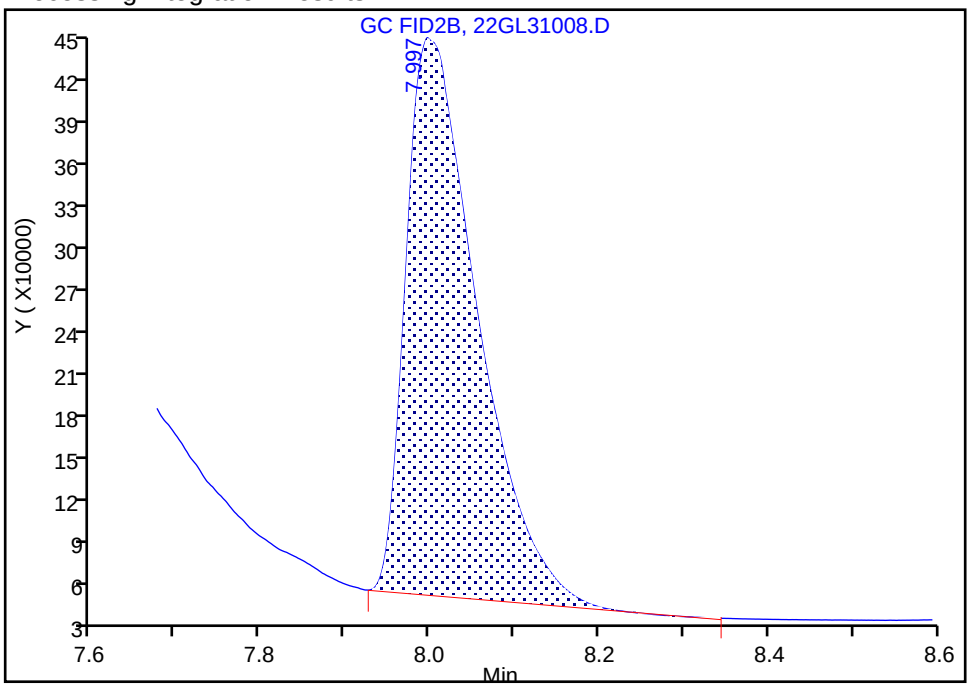
Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31008.D
Injection Date: 31-Dec-2022 15:06:40 Instrument ID: CVGG2
Lims ID: ic g4
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

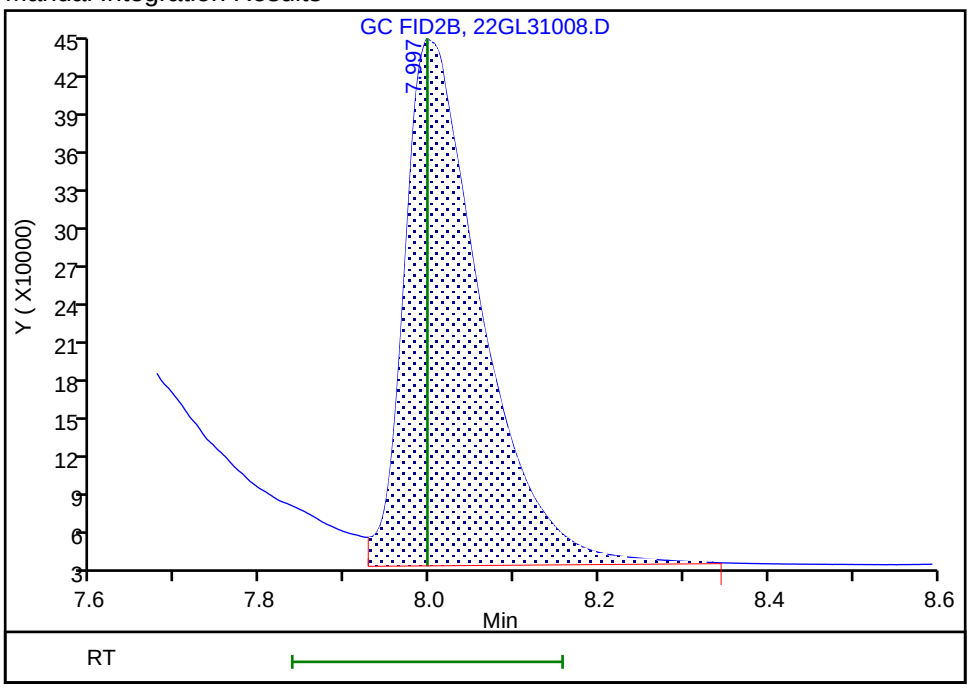
Processing Integration Results

RT: 8.00
Area: 2328767
Amount: 45.805637
Amount Units: ug/ml



Manual Integration Results

RT: 8.00
Area: 2605143
Amount: 48.713295
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 12:52:15
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31009.D
Lims ID: ic g5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 31-Dec-2022 15:29:20 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-009
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 12:53:29 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 12:52:31

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.815	3.811	0.004	6296632	80.0	78.8	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.624	4.625	-0.001	6728367	80.0	79.2	
	3 2-Butoxyethanol						
	4.991	4.991	0.000	6820298	80.0	78.6	
*	4 n-Heptyl Alcohol						
	5.524	5.524	0.000	7075353	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.633	6.637	-0.004	585703	80.0	81.9	
	6 Propylene glycol						M
	7.538	7.545	-0.007	4965325	80.0	81.7	M
	7 Ethylene glycol						M
	7.997	7.997	0.000	4089519	80.0	80.1	M
	8 2-(2-Butoxyethoxy)ethanol						
	9.400	9.401	-0.001	6467596	80.0	79.4	
	9 2,2'-Oxybisethanol						
	10.102	10.102	0.000	4151063	80.0	79.4	
	10 Triethylene Glycol						
	11.064	11.064	0.000	3981926	80.0	80.3	
	11 Tetraethylene Glycol						
	12.616	12.614	0.002	8201061	160.0	162.7	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added:	40.00	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

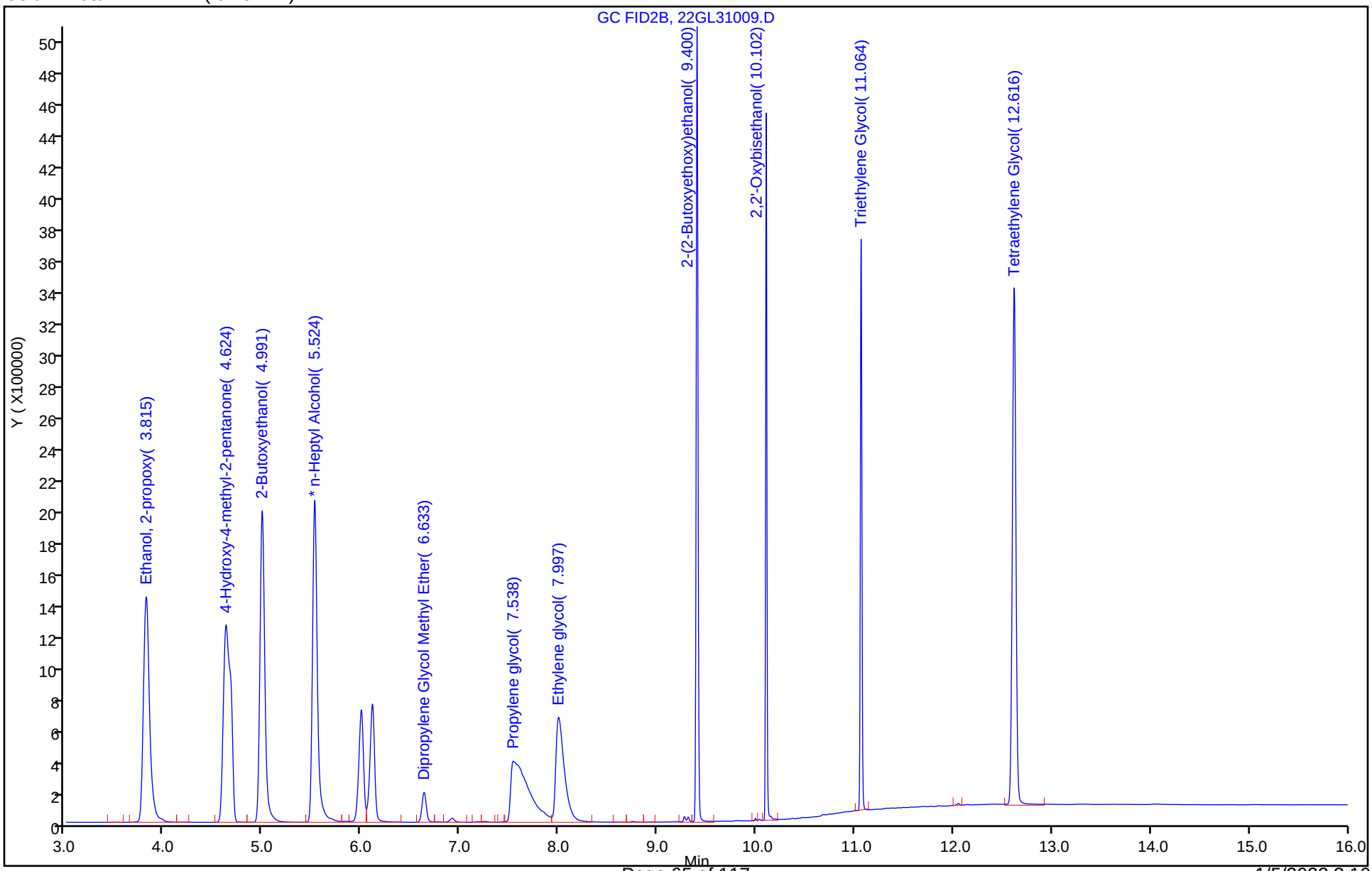
Report Date: 03-Jan-2023 12:53:29 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31009.D

Injection Date:	31-Dec-2022 15:29:20	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g5			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



1/5/2023 3:10 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

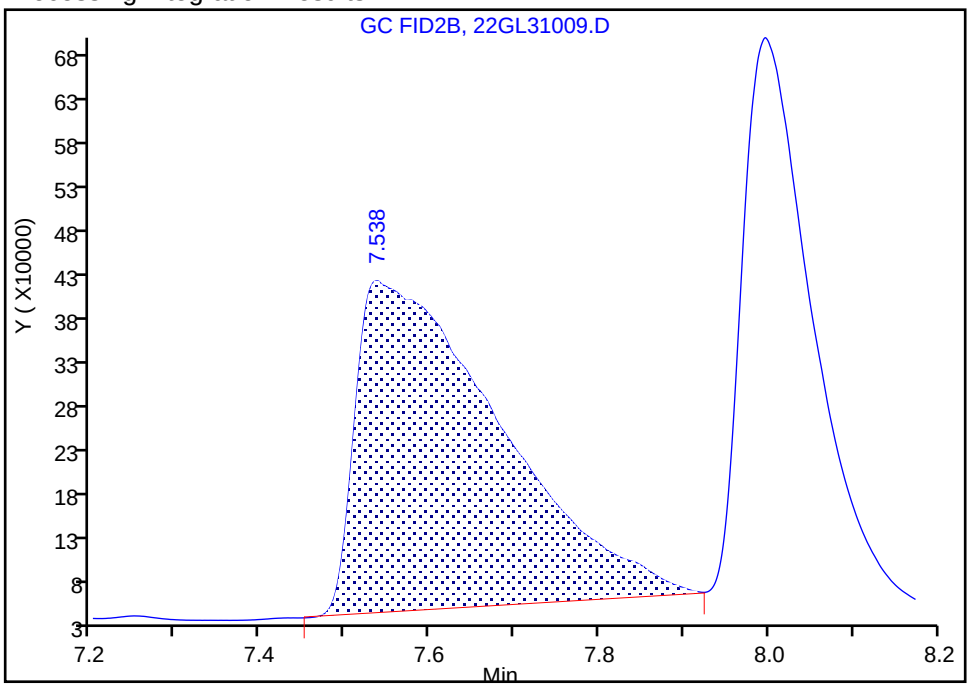
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31009.D				
Injection Date:	31-Dec-2022 15:29:20	Instrument ID:	CVGG2		
Lims ID:	ic g5				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

6 Propylene glycol, CAS: 57-55-6

Signal: 1

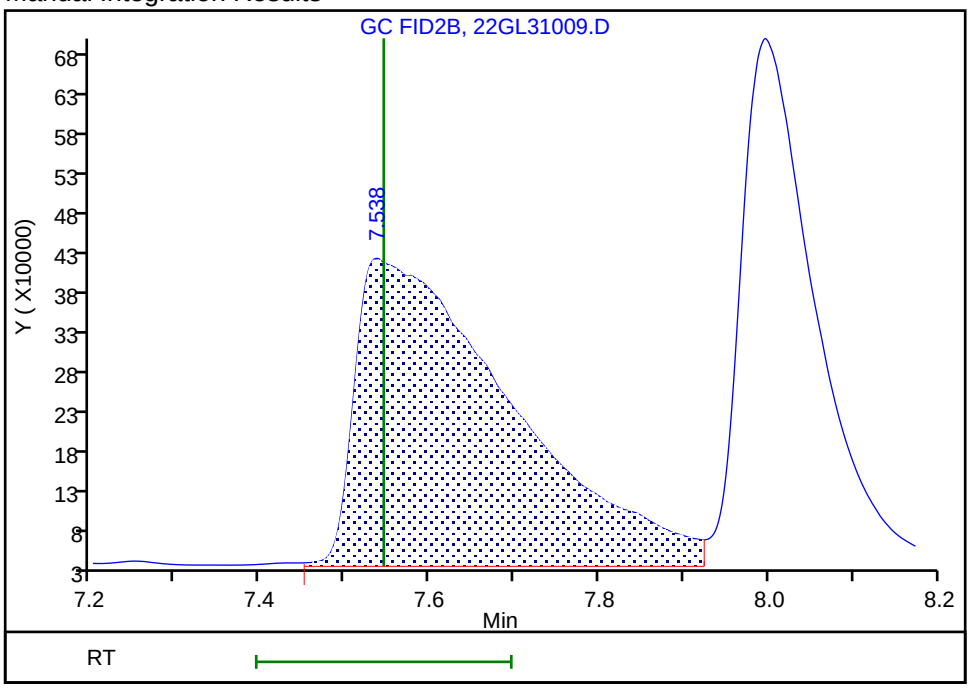
Processing Integration Results

RT: 7.54
Area: 4471492
Amount: 76.178825
Amount Units: ug/ml



Manual Integration Results

RT: 7.54
Area: 4965325
Amount: 81.742822
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 12:52:29
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

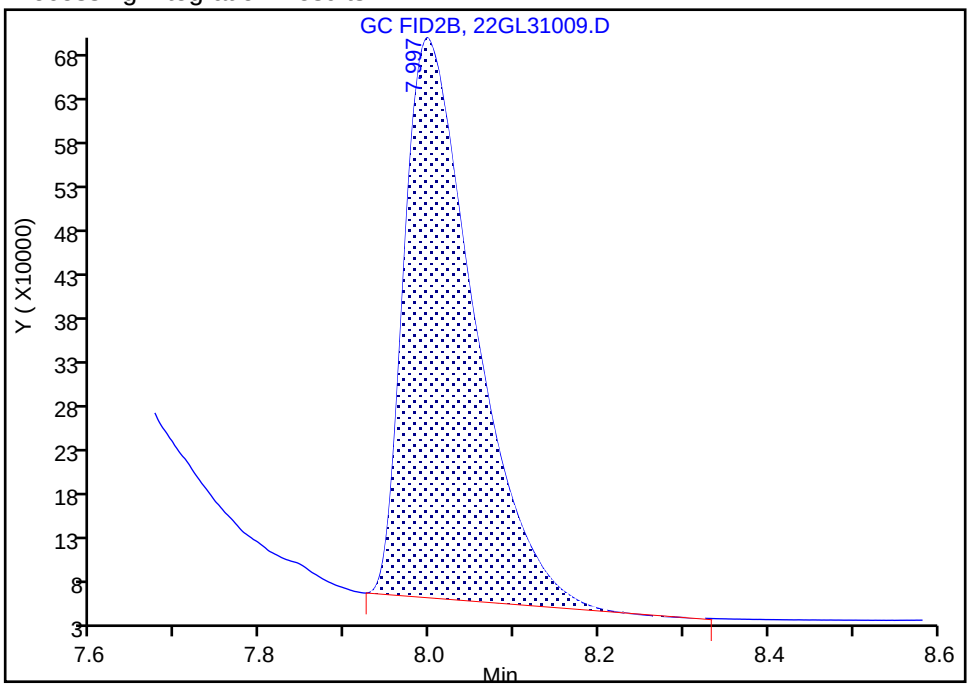
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31009.D				
Injection Date:	31-Dec-2022 15:29:20	Instrument ID:	CVGG2		
Lims ID:	ic g5				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

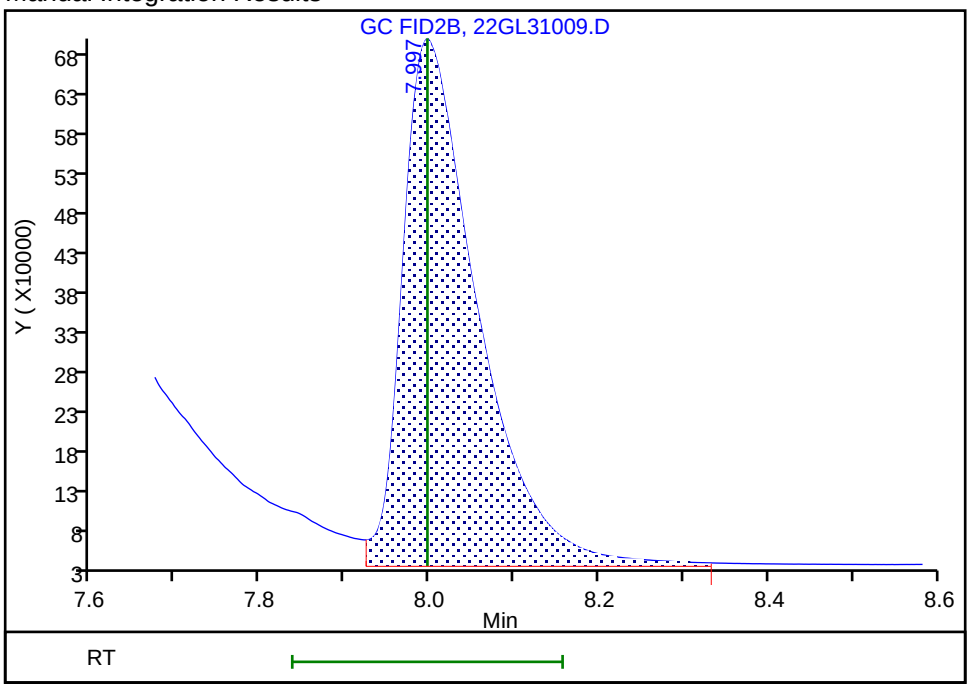
Processing Integration Results

RT: 8.00
Area: 3689642
Amount: 74.685204
Amount Units: ug/ml



Manual Integration Results

RT: 8.00
Area: 4089519
Amount: 80.120719
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 12:52:29

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D
Lims ID: ic g6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 31-Dec-2022 15:52:08 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-010
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 12:53:30 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 01-Jan-2023 11:56:34

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.815	3.811	0.004	7756623	100.0	99.6	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.626	4.625	0.001	8299722	100.0	100.2	
	3 2-Butoxyethanol						
	4.991	4.991	0.000	8385924	100.0	99.2	
*	4 n-Heptyl Alcohol						
	5.522	5.524	-0.002	6894067	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.630	6.637	-0.007	724394	100.0	104.0	
	6 Propylene glycol						M
	7.533	7.545	-0.012	6142798	100.0	103.8	M
	7 Ethylene glycol						M
	7.997	7.997	0.000	5031863	100.0	101.2	M
	8 2-(2-Butoxyethoxy)ethanol						
	9.401	9.401	0.000	7982407	100.0	100.6	
	9 2,2'-Oxybisethanol						
	10.103	10.102	0.001	5103471	100.0	100.2	
	10 Triethylene Glycol						
	11.065	11.064	0.001	4879102	100.0	100.9	
	11 Tetraethylene Glycol						
	12.616	12.614	0.002	9983332	200.0	203.2	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added:	50.00	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

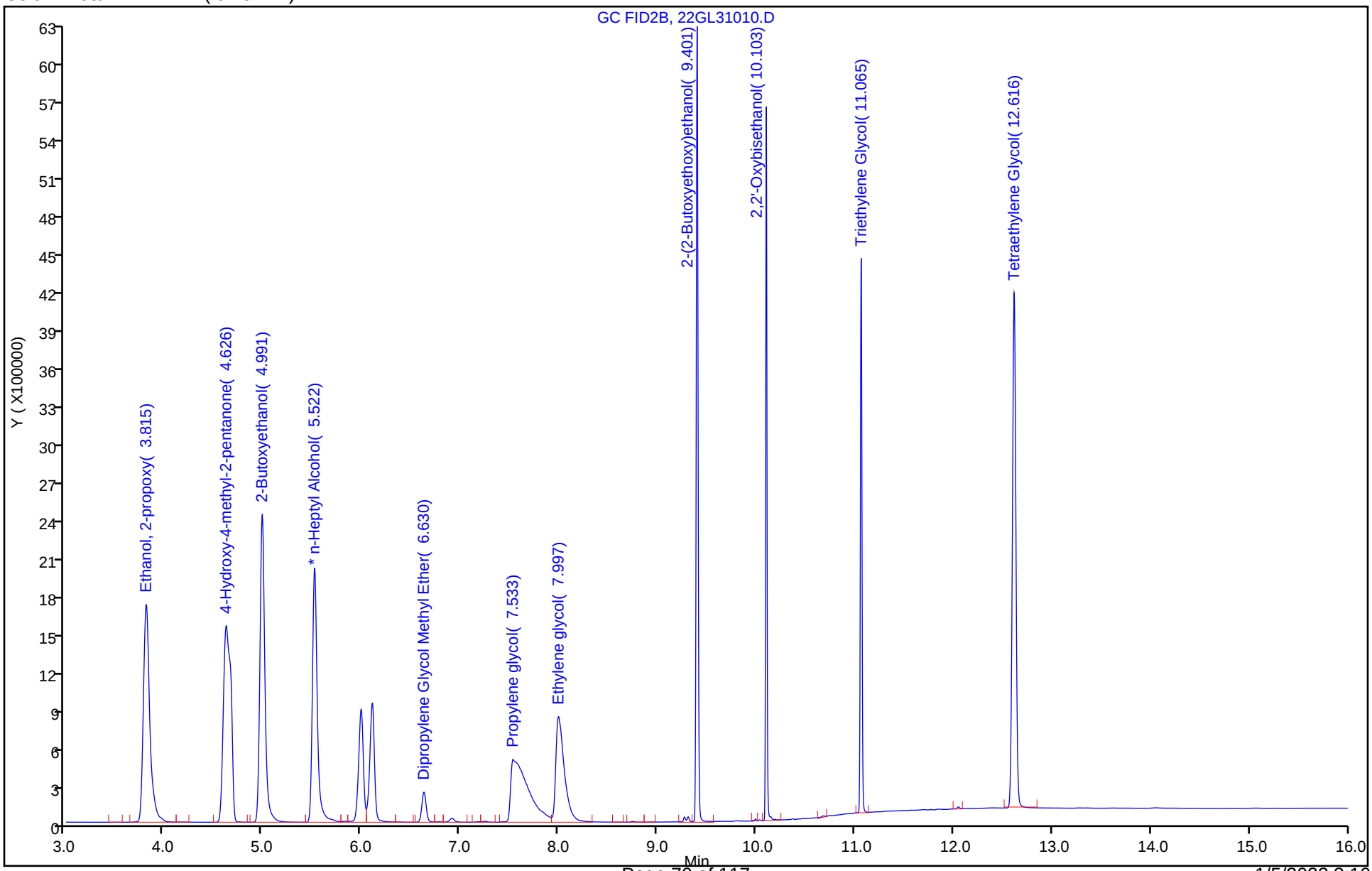
Report Date: 03-Jan-2023 12:53:30 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Injection Date:	31-Dec-2022 15:52:08	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ic g6			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



Manual Integration/User Assign Peak Report

Eurofins Savannah

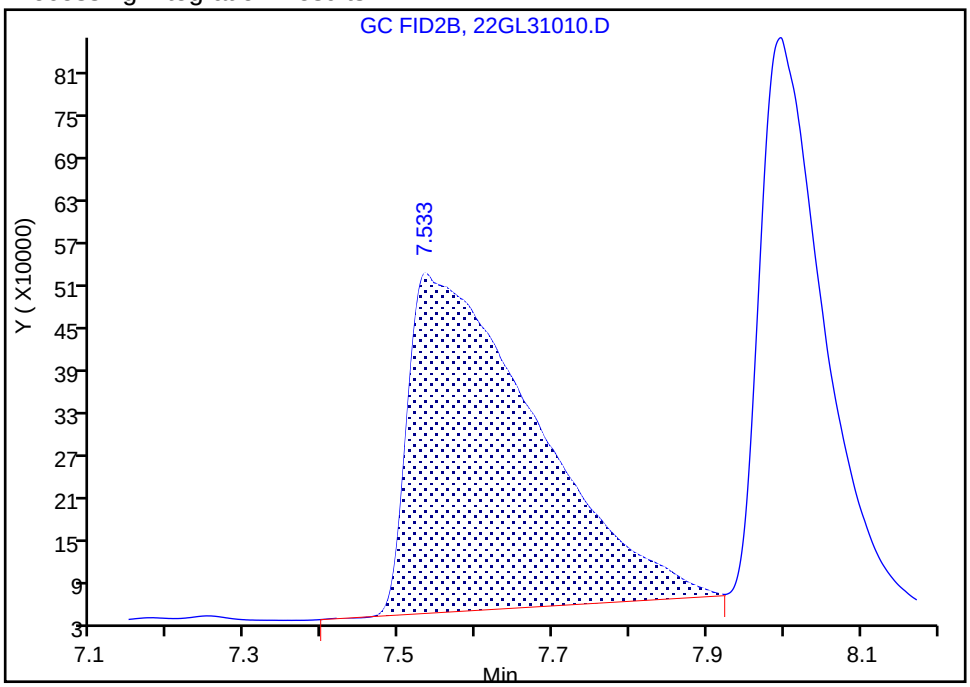
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D				
Injection Date:	31-Dec-2022 15:52:08	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

6 Propylene glycol, CAS: 57-55-6

Signal: 1

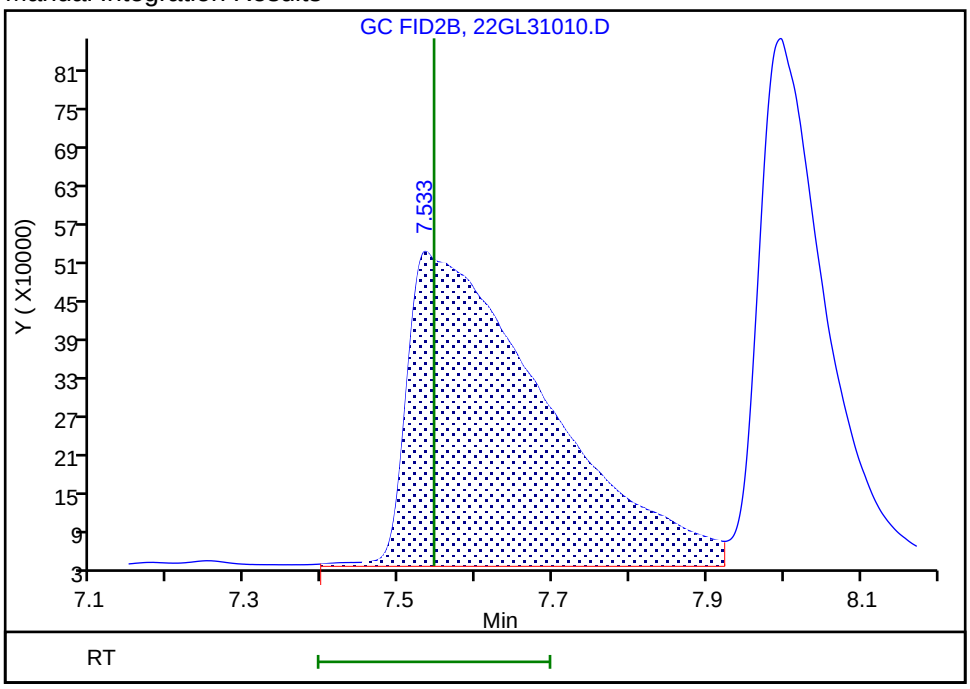
Processing Integration Results

RT: 7.53
Area: 5548159
Amount: 95.336050
Amount Units: ug/ml



Manual Integration Results

RT: 7.53
Area: 6142798
Amount: 103.7865
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 12:52:41

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

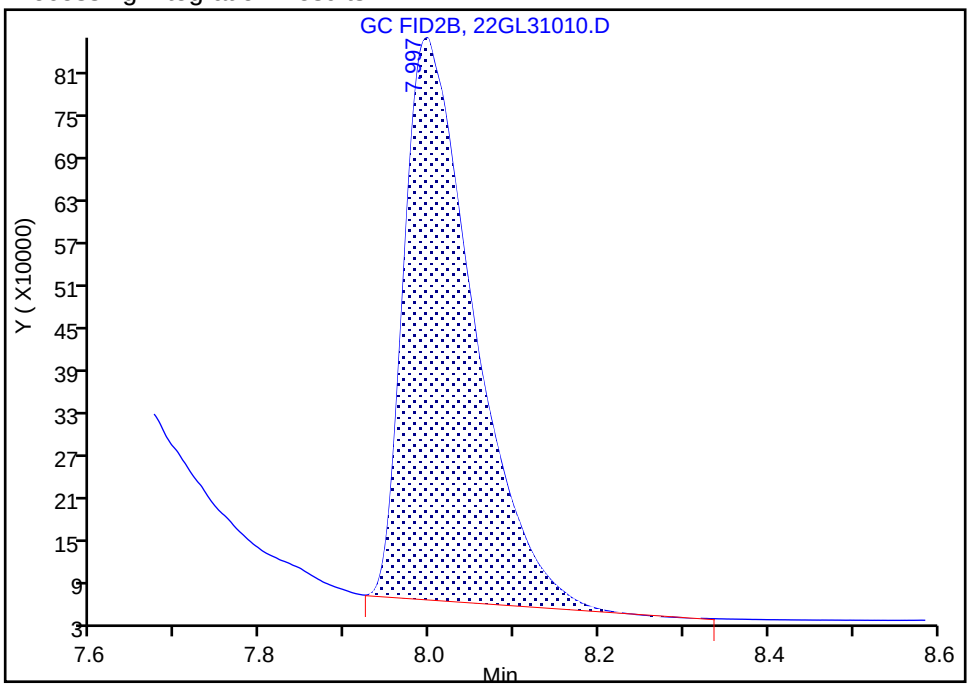
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D				
Injection Date:	31-Dec-2022 15:52:08	Instrument ID:	CVGG2		
Lims ID:	ic g6				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

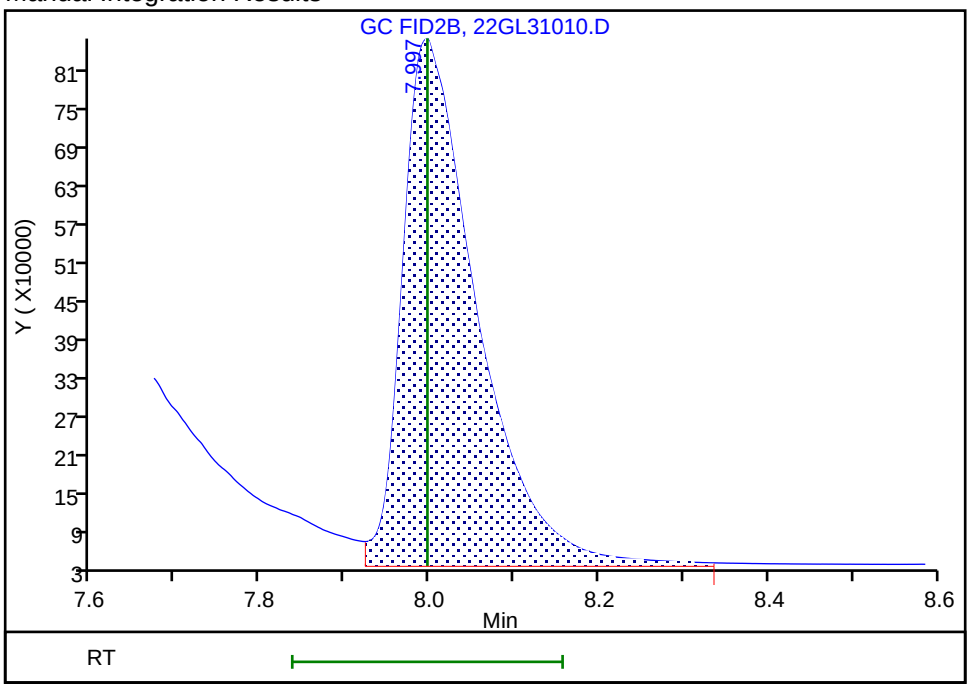
Processing Integration Results

RT: 8.00
Area: 4560475
Amount: 93.168817
Amount Units: ug/ml



Manual Integration Results

RT: 8.00
Area: 5031863
Amount: 101.1752
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 12:52:41
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

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

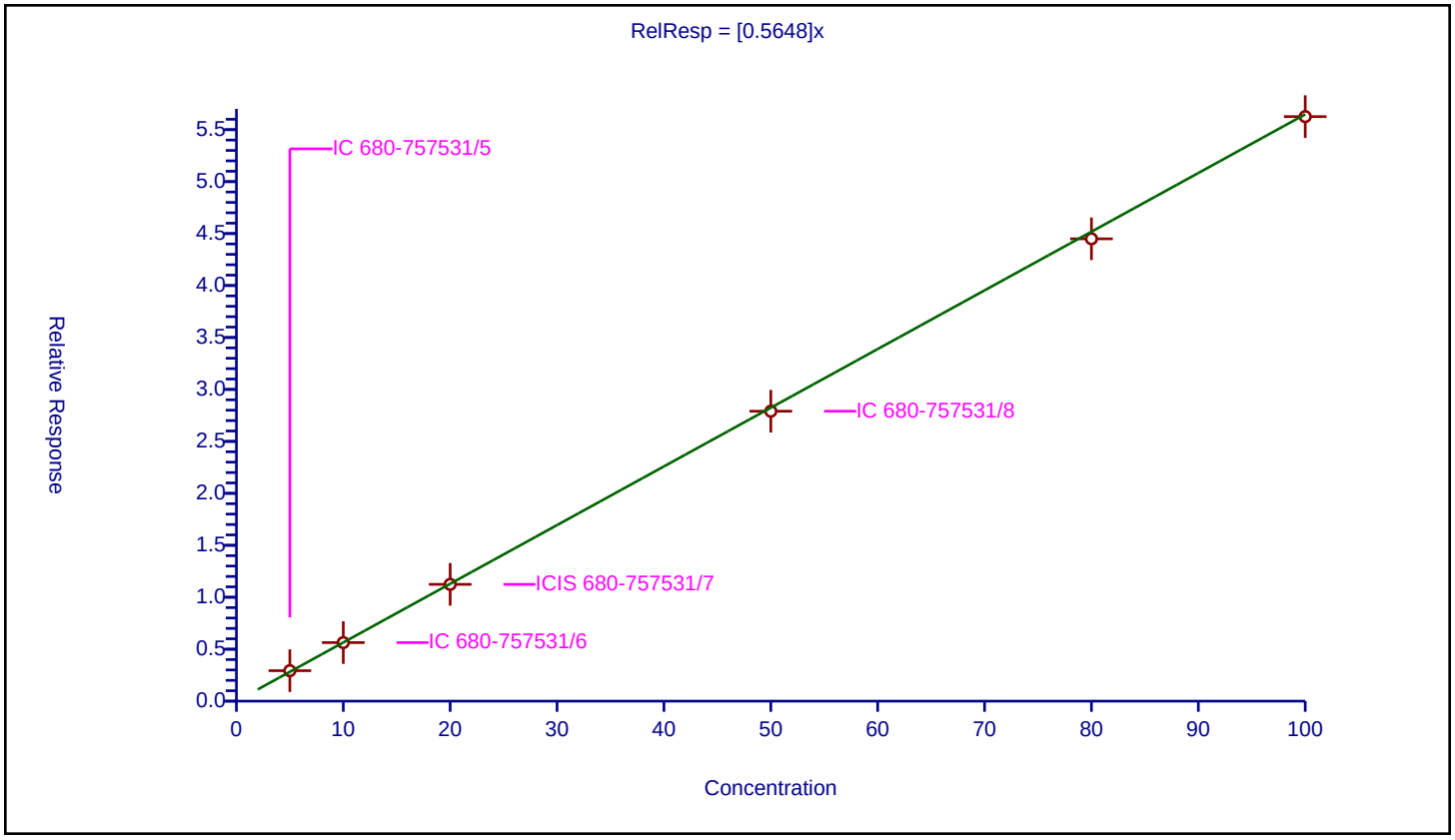
Curve Coefficients

Intercept:	0
Slope:	0.5648

Error Coefficients

Standard Error:	4910000
Relative Standard Error:	1.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	2.931063	50.0	6583345.0	0.586213	Y
2	IC 680-757531/6	10.0	5.634945	50.0	6981355.0	0.563494	Y
3	ICIS 680-757531/7	20.0	11.240272	50.0	7355756.0	0.562014	Y
4	IC 680-757531/8	50.0	27.902761	50.0	7413184.0	0.558055	Y
5	IC 680-757531/9	80.0	44.496946	50.0	7075353.0	0.556212	Y
6	IC 680-757531/10	100.0	56.255785	50.0	6894067.0	0.562558	Y



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

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

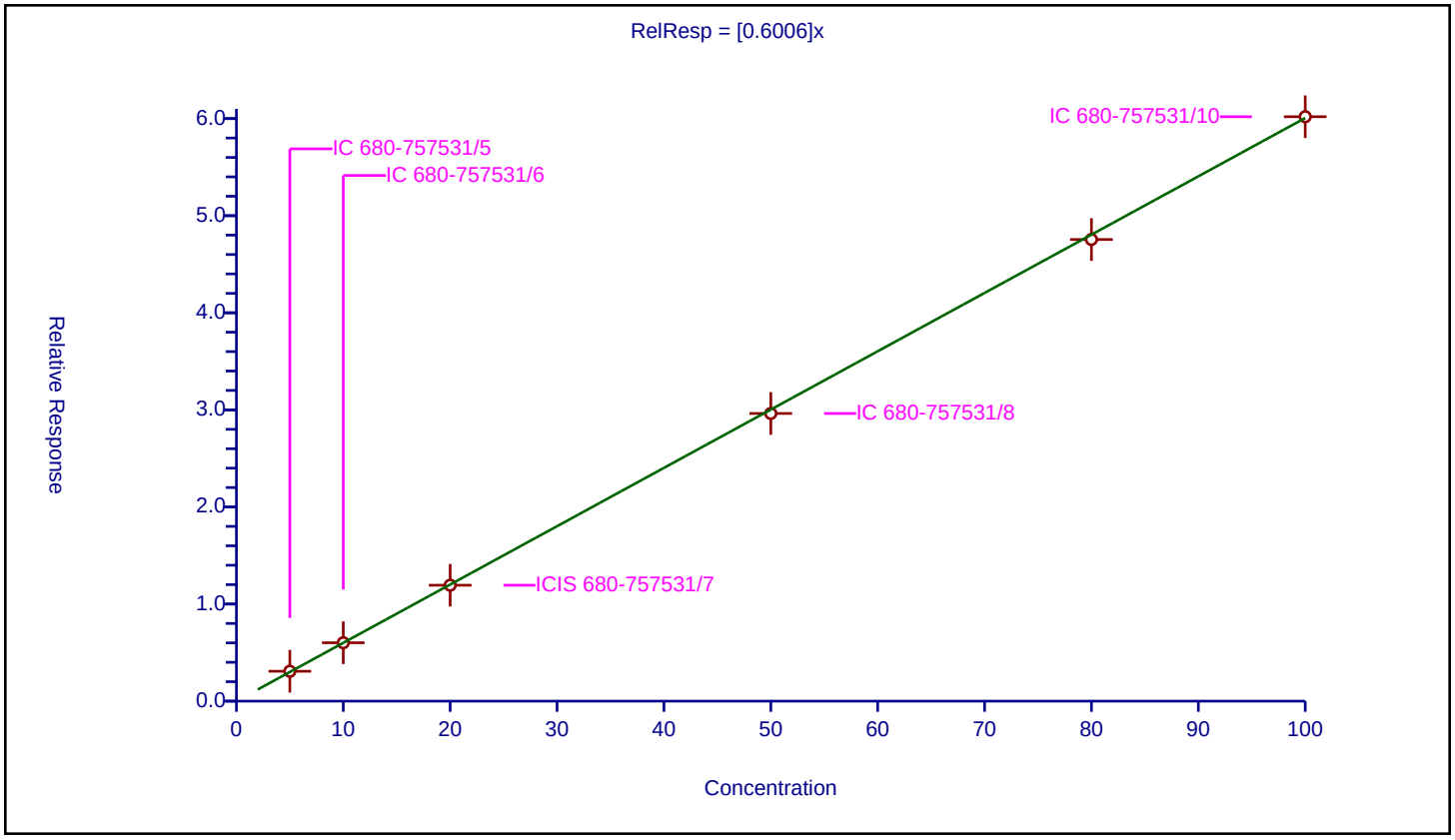
Curve Coefficients

Intercept:	0
Slope:	0.6006

Error Coefficients

Standard Error:	5240000
Relative Standard Error:	1.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	3.080508	50.0	6583345.0	0.616102	Y
2	IC 680-757531/6	10.0	6.015401	50.0	6981355.0	0.60154	Y
3	ICIS 680-757531/7	20.0	11.938603	50.0	7355756.0	0.59693	Y
4	IC 680-757531/8	50.0	29.63075	50.0	7413184.0	0.592615	Y
5	IC 680-757531/9	80.0	47.547924	50.0	7075353.0	0.594349	Y
6	IC 680-757531/10	100.0	60.194672	50.0	6894067.0	0.601947	Y



Calibration / 2-Butoxyethanol

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

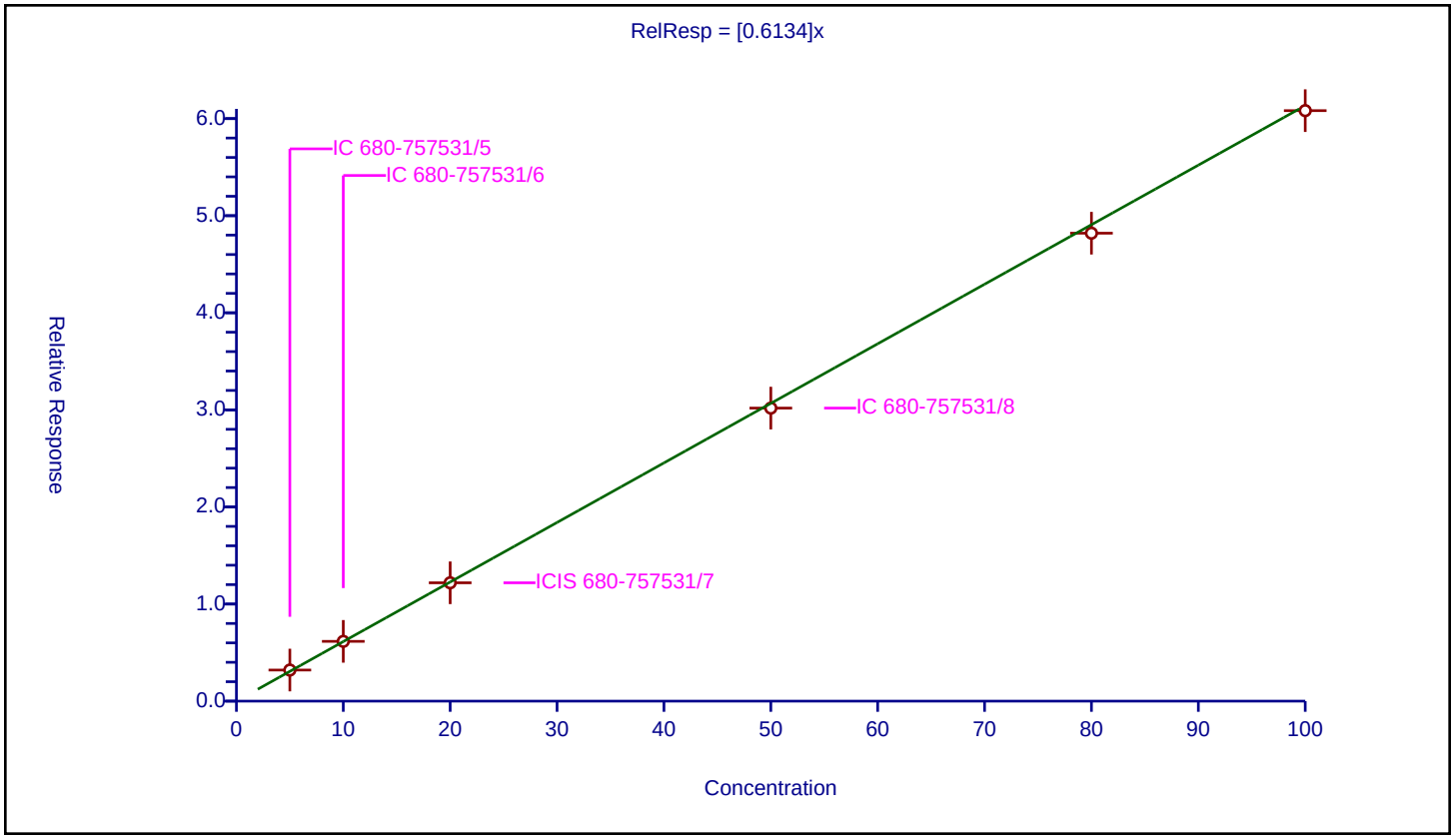
Curve Coefficients

Intercept:	0
Slope:	0.6134

Error Coefficients

Standard Error:	5310000
Relative Standard Error:	2.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	3.203645	50.0	6583345.0	0.640729	Y
2	IC 680-757531/6	10.0	6.15806	50.0	6981355.0	0.615806	Y
3	ICIS 680-757531/7	20.0	12.190623	50.0	7355756.0	0.609531	Y
4	IC 680-757531/8	50.0	30.18305	50.0	7413184.0	0.603661	Y
5	IC 680-757531/9	80.0	48.197581	50.0	7075353.0	0.60247	Y
6	IC 680-757531/10	100.0	60.819861	50.0	6894067.0	0.608199	Y



Calibration / Dipropylene Glycol Methyl Ether

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

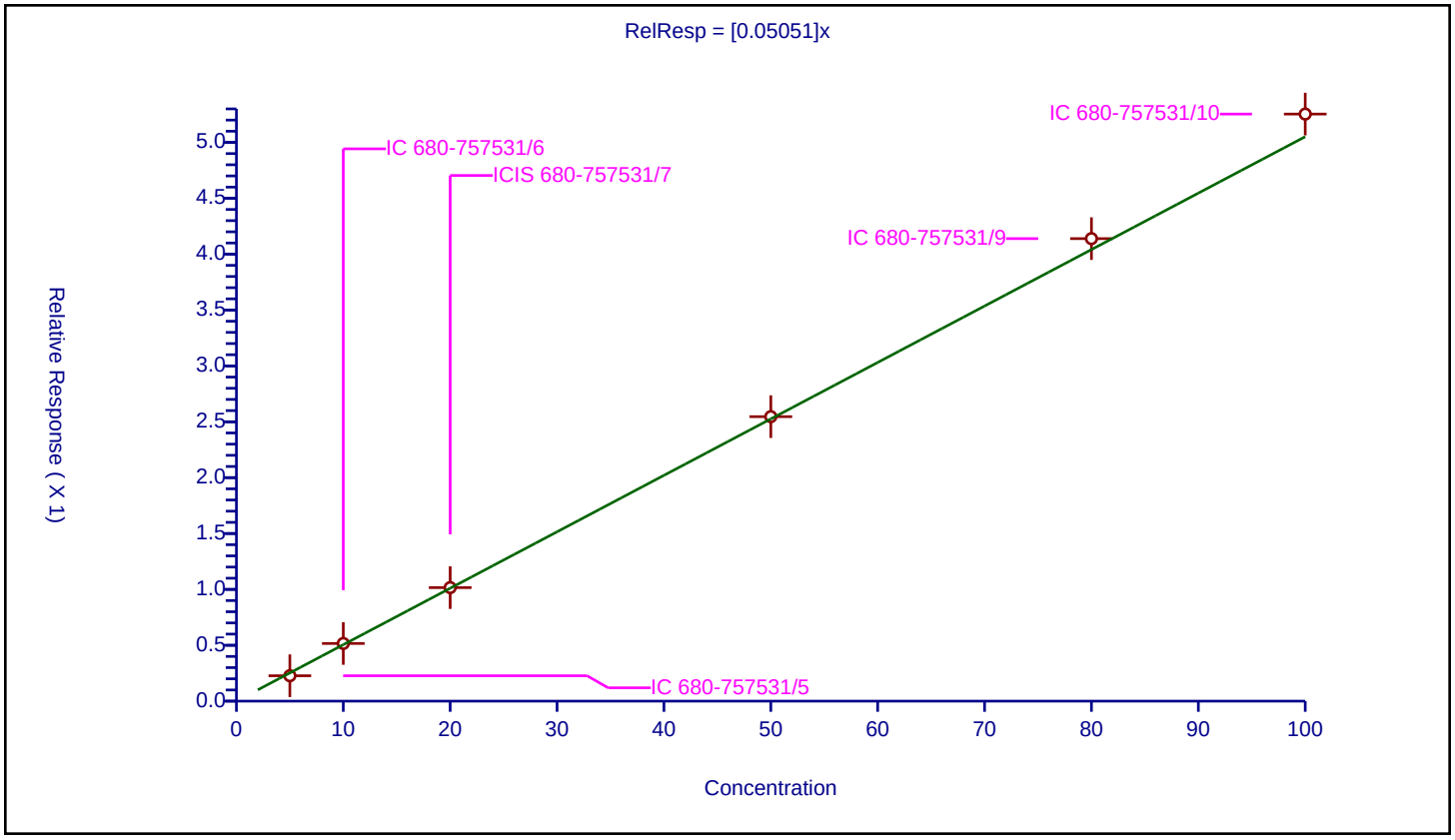
Curve Coefficients

Intercept:	0
Slope:	0.05051

Error Coefficients

Standard Error:	456000
Relative Standard Error:	5.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	0.227316	50.0	6583345.0	0.045463	Y
2	IC 680-757531/6	10.0	0.516153	50.0	6981355.0	0.051615	Y
3	ICIS 680-757531/7	20.0	1.016014	50.0	7355756.0	0.050801	Y
4	IC 680-757531/8	50.0	2.545843	50.0	7413184.0	0.050917	Y
5	IC 680-757531/9	80.0	4.139037	50.0	7075353.0	0.051738	Y
6	IC 680-757531/10	100.0	5.253749	50.0	6894067.0	0.052537	Y



Calibration / Propylene glycol

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

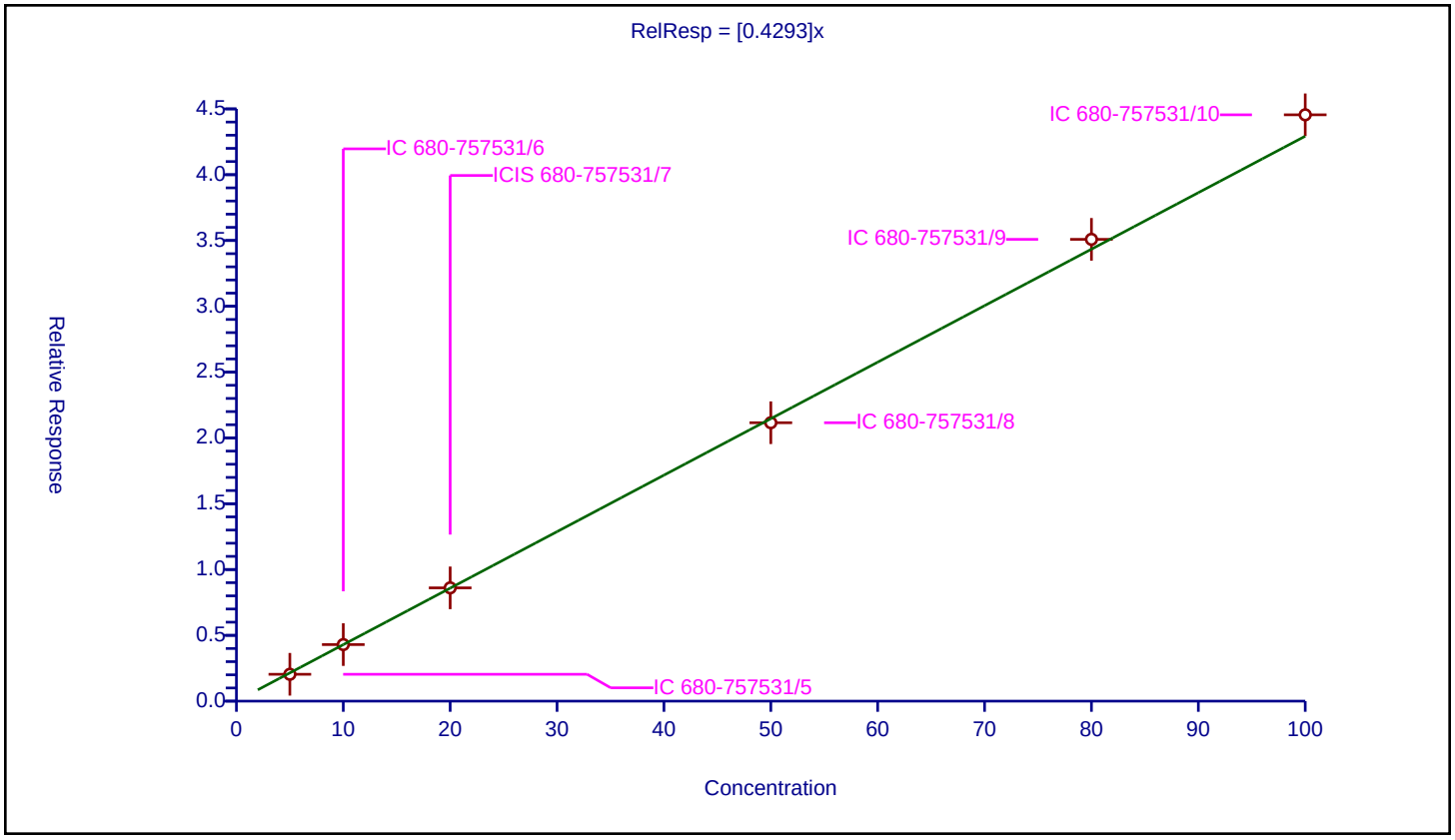
Curve Coefficients

Intercept:	0
Slope:	0.4293

Error Coefficients

Standard Error:	3850000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	2.040946	50.0	6583345.0	0.408189	Y
2	IC 680-757531/6	10.0	4.297597	50.0	6981355.0	0.42976	Y
3	ICIS 680-757531/7	20.0	8.607851	50.0	7355756.0	0.430393	Y
4	IC 680-757531/8	50.0	21.154567	50.0	7413184.0	0.423091	Y
5	IC 680-757531/9	80.0	35.088885	50.0	7075353.0	0.438611	Y
6	IC 680-757531/10	100.0	44.551337	50.0	6894067.0	0.445513	Y



1/5/2023 3:10 PM

Calibration / Ethylene glycol

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

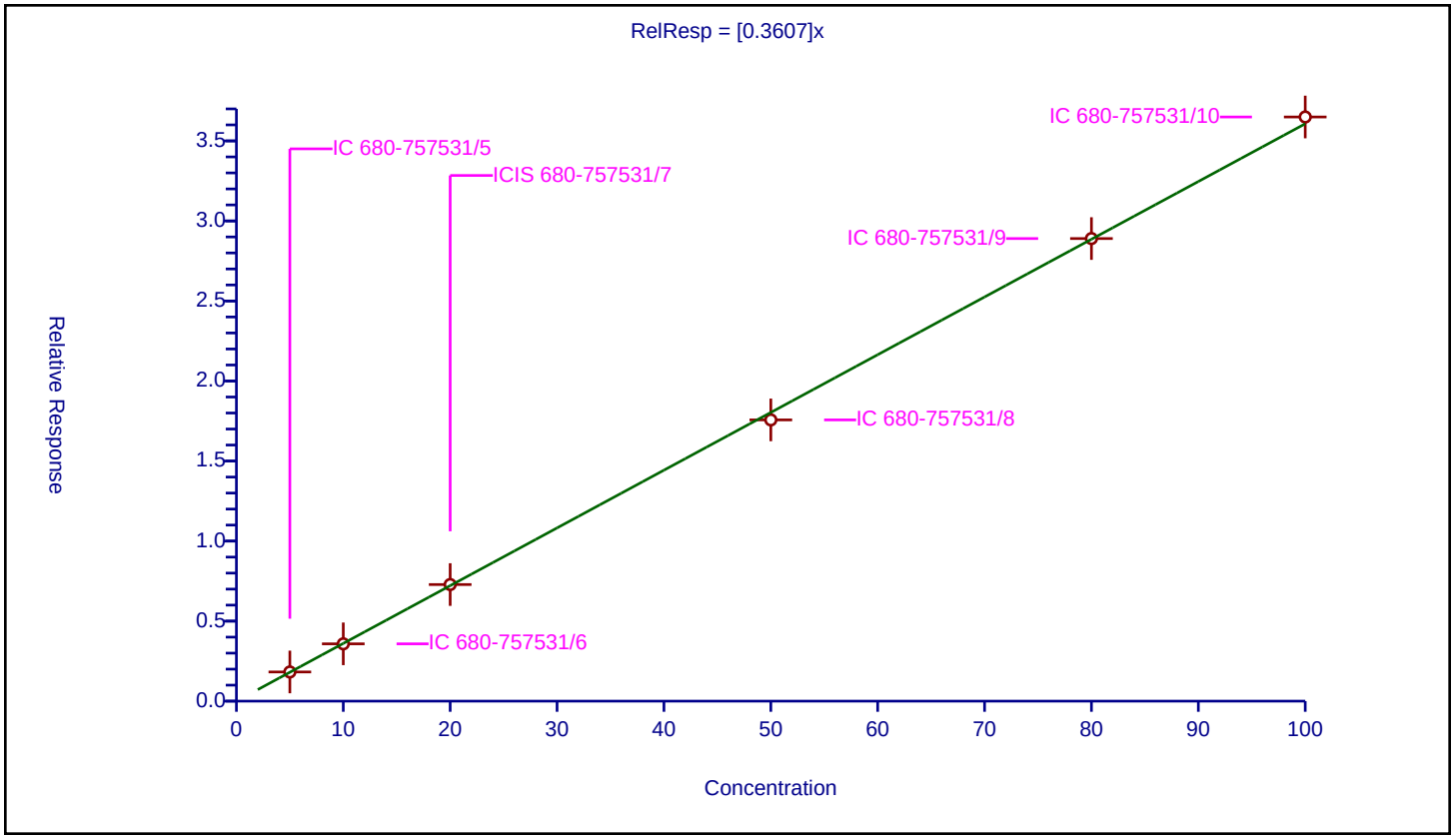
Curve Coefficients

Intercept:	0
Slope:	0.3607

Error Coefficients

Standard Error:	3170000
Relative Standard Error:	1.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	1.822371	50.0	6583345.0	0.364474	Y
2	IC 680-757531/6	10.0	3.579162	50.0	6981355.0	0.357916	Y
3	ICIS 680-757531/7	20.0	7.284329	50.0	7355756.0	0.364216	Y
4	IC 680-757531/8	50.0	17.571013	50.0	7413184.0	0.35142	Y
5	IC 680-757531/9	80.0	28.899752	50.0	7075353.0	0.361247	Y
6	IC 680-757531/10	100.0	36.494155	50.0	6894067.0	0.364942	Y



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

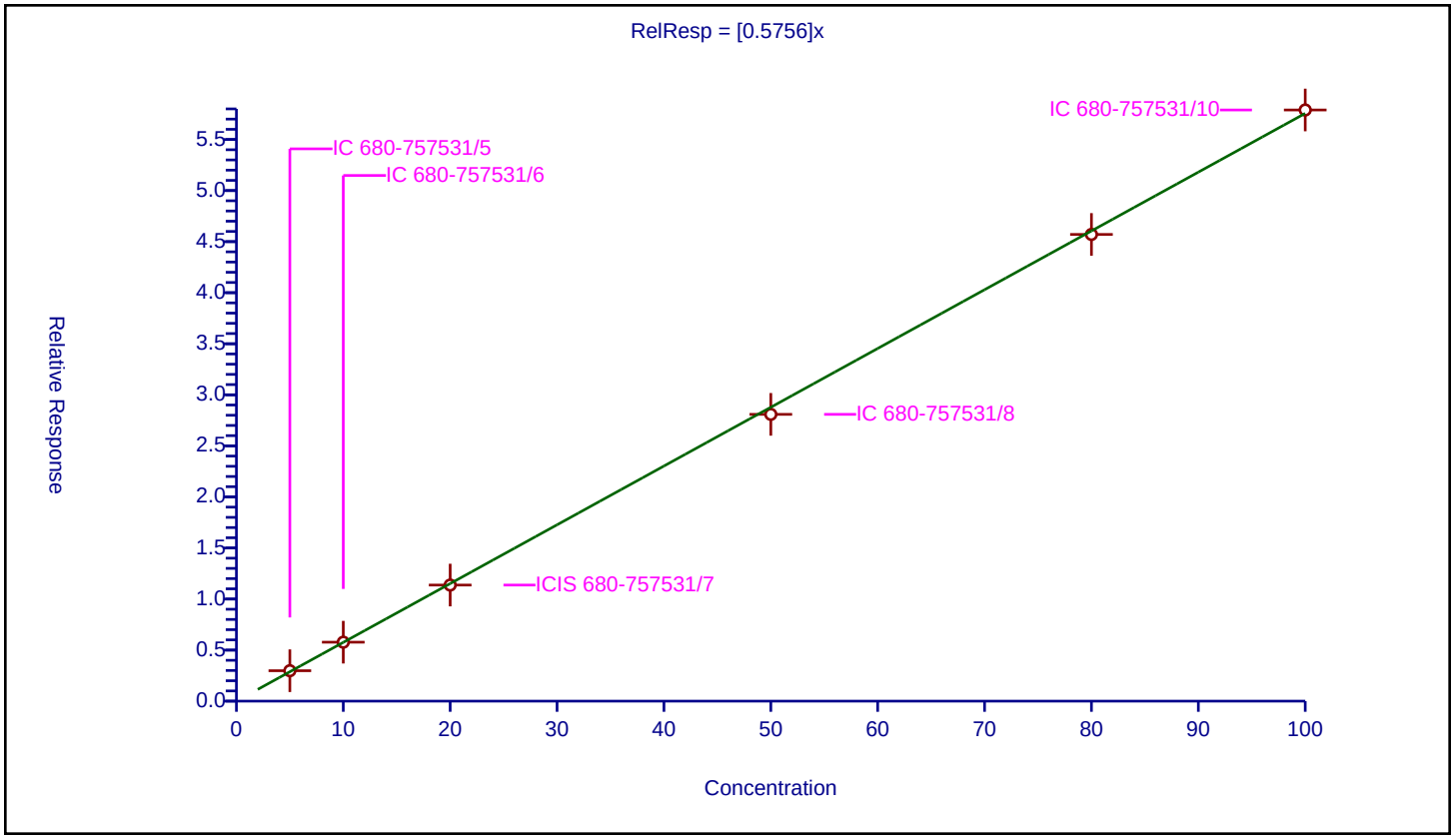
Curve Coefficients

Intercept:	0
Slope:	0.5756

Error Coefficients

Standard Error:	5030000
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	2.980012	50.0	6583345.0	0.596002	Y
2	IC 680-757531/6	10.0	5.772461	50.0	6981355.0	0.577246	Y
3	ICIS 680-757531/7	20.0	11.367982	50.0	7355756.0	0.568399	Y
4	IC 680-757531/8	50.0	28.086346	50.0	7413184.0	0.561727	Y
5	IC 680-757531/9	80.0	45.705112	50.0	7075353.0	0.571314	Y
6	IC 680-757531/10	100.0	57.893309	50.0	6894067.0	0.578933	Y



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

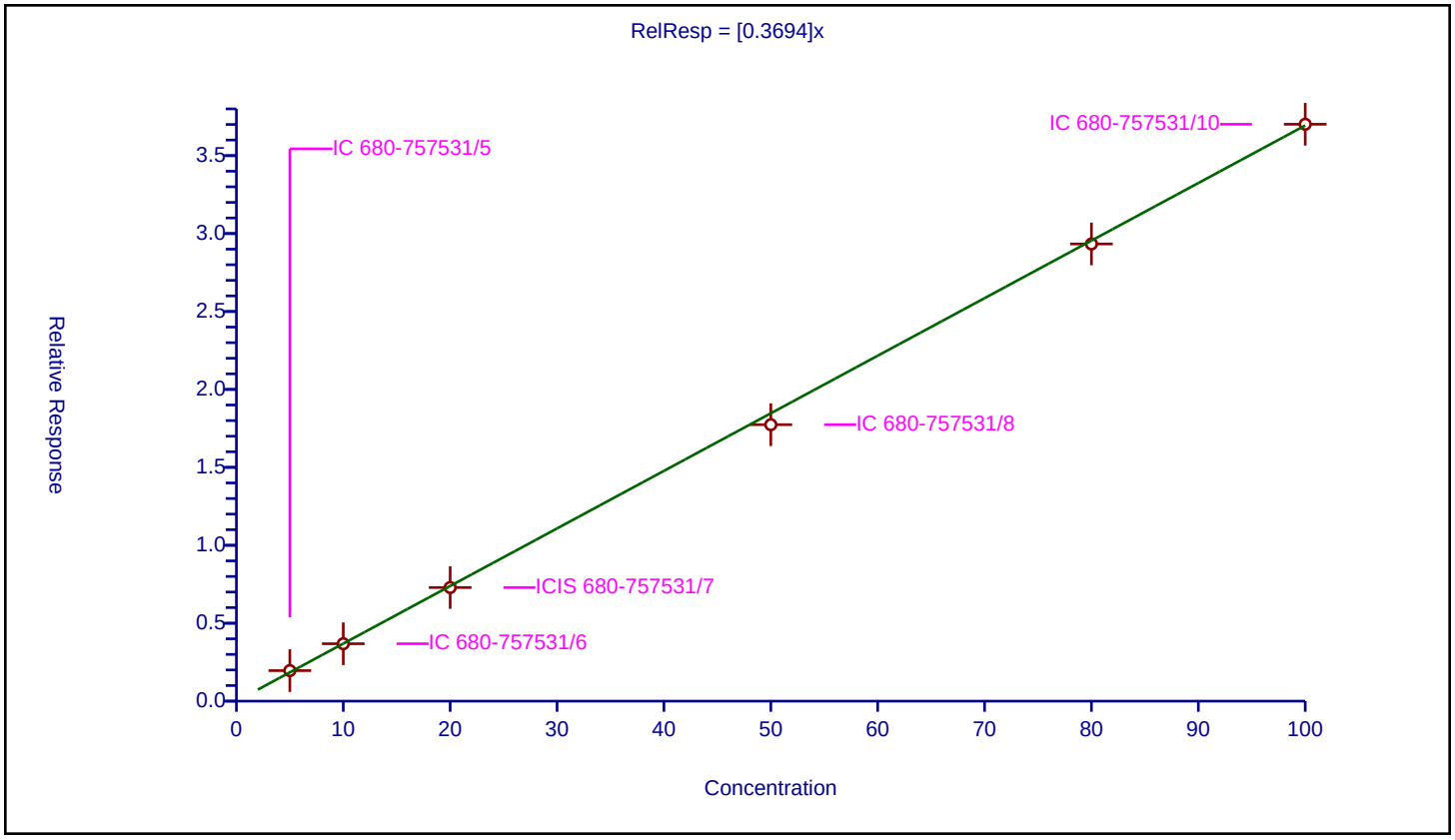
Curve Coefficients

Intercept:	0
Slope:	0.3694

Error Coefficients

Standard Error:	3210000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	1.95851	50.0	6583345.0	0.391702	Y
2	IC 680-757531/6	10.0	3.684048	50.0	6981355.0	0.368405	Y
3	ICIS 680-757531/7	20.0	7.289475	50.0	7355756.0	0.364474	Y
4	IC 680-757531/8	50.0	17.738761	50.0	7413184.0	0.354775	Y
5	IC 680-757531/9	80.0	29.334671	50.0	7075353.0	0.366683	Y
6	IC 680-757531/10	100.0	37.0135	50.0	6894067.0	0.370135	Y



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

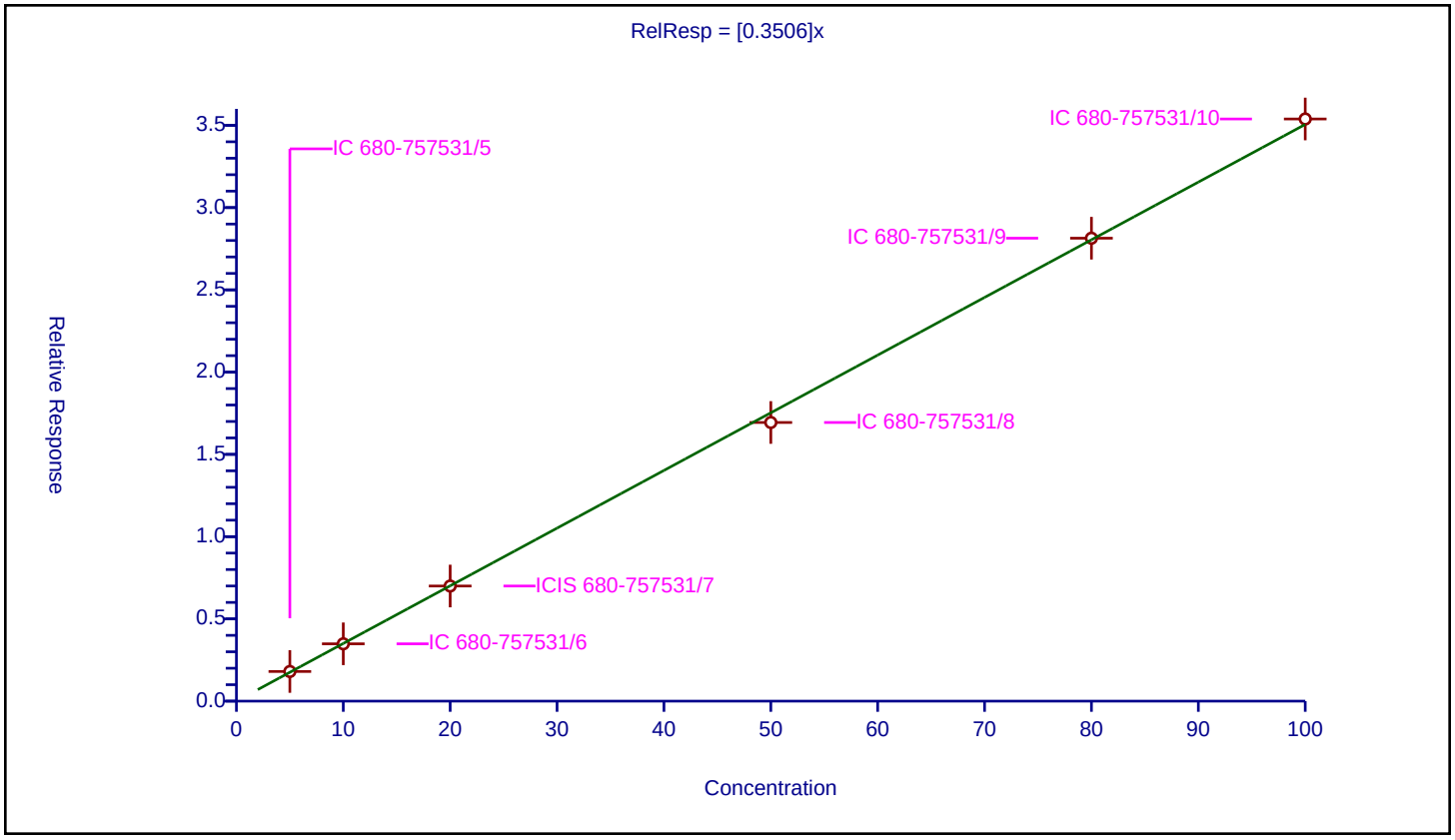
Curve Coefficients

Intercept:	0
Slope:	0.3506

Error Coefficients

Standard Error:	3080000
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	5.0	1.80305	50.0	6583345.0	0.36061	Y
2	IC 680-757531/6	10.0	3.484589	50.0	6981355.0	0.348459	Y
3	ICIS 680-757531/7	20.0	6.997969	50.0	7355756.0	0.349898	Y
4	IC 680-757531/8	50.0	16.93758	50.0	7413184.0	0.338752	Y
5	IC 680-757531/9	80.0	28.139416	50.0	7075353.0	0.351743	Y
6	IC 680-757531/10	100.0	35.386239	50.0	6894067.0	0.353862	Y



Calibration / Tetraethylene Glycol

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

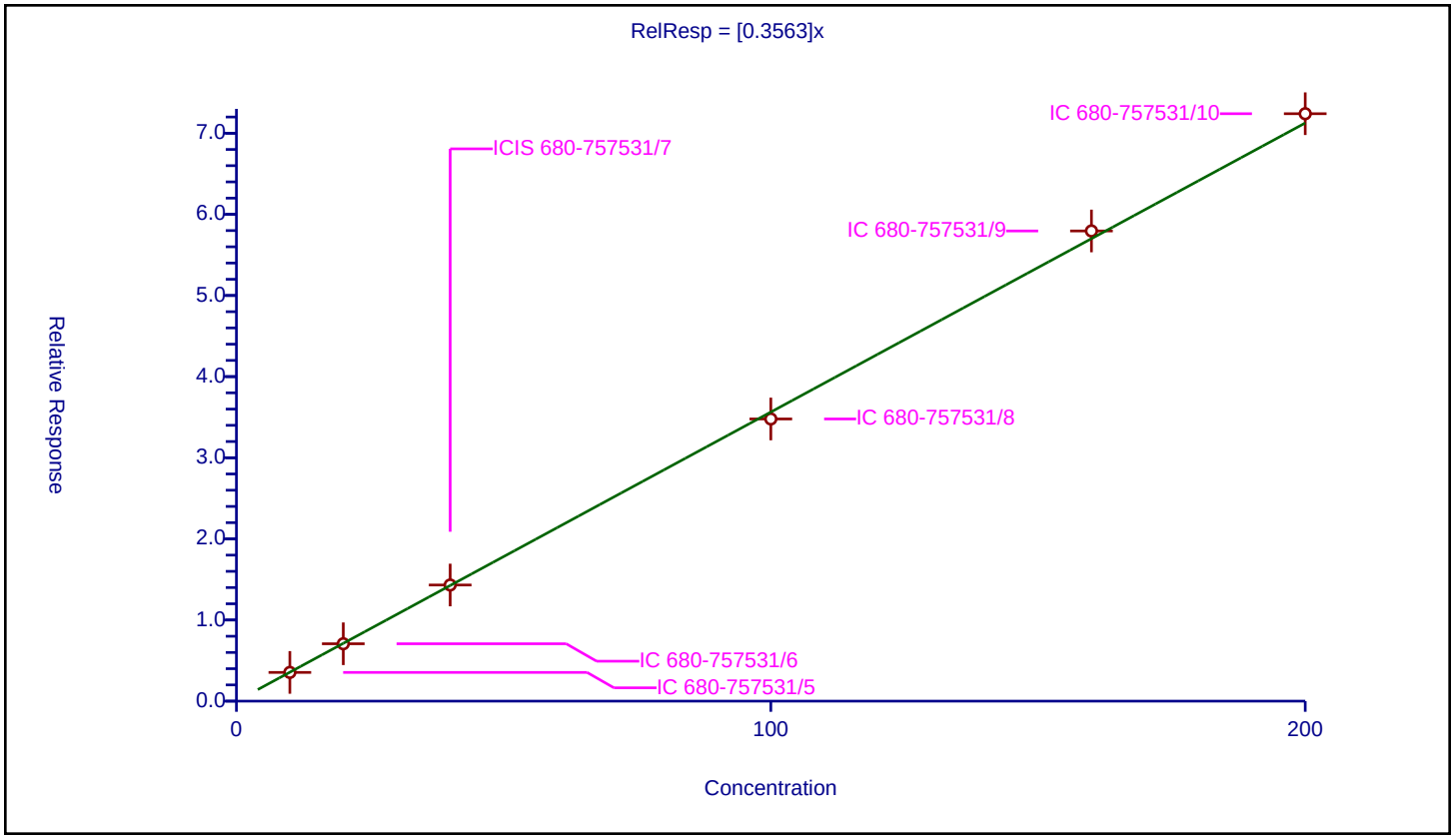
Curve Coefficients

Intercept:	0
Slope:	0.3563

Error Coefficients

Standard Error:	6310000
Relative Standard Error:	1.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-757531/5	10.0	3.540814	50.0	6583345.0	0.354081	Y
2	IC 680-757531/6	20.0	7.074164	50.0	6981355.0	0.353708	Y
3	ICIS 680-757531/7	40.0	14.316265	50.0	7355756.0	0.357907	Y
4	IC 680-757531/8	100.0	34.7816	50.0	7413184.0	0.347816	Y
5	IC 680-757531/9	160.0	57.955137	50.0	7075353.0	0.36222	Y
6	IC 680-757531/10	200.0	72.405244	50.0	6894067.0	0.362026	Y



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Lab Sample ID: ICV 680-757531/11 Calibration Date: 12/31/2022 16:14

Instrument ID: CVGG2 Calib Start Date: 12/31/2022 13:58

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 12/31/2022 15:52

Lab File ID: 22GL31011.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.5648	0.6324		22.4	20.0	12.0	20.0
4-Hydroxy-4-methyl-2-pentanone	Ave	0.6006	0.6714		22.4	20.0	11.8	20.0
2-Butoxyethanol	Ave	0.6134	0.7144		23.3	20.0	16.5	20.0
Dipropylene Glycol Methyl Ether	Ave	0.0505	0.0577		22.9	20.0	14.3	20.0
Propylene glycol	Ave	0.4293	0.4408		20.5	20.0	2.7	20.0
Ethylene glycol	Ave	0.3607	0.4104		22.8	20.0	13.8	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.5756	0.6355		22.1	20.0	10.4	20.0
2,2'-Oxybisethanol	Ave	0.3694	0.3922		21.2	20.0	6.2	20.0
Triethylene Glycol	Ave	0.3506	0.4012		22.9	20.0	14.5	20.0
Tetraethylene Glycol	Ave	0.3563	0.4134		46.4	40.0	16.0	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Lab Sample ID: ICV 680-757531/11 Calibration Date: 12/31/2022 16:14

Instrument ID: CVGG2 Calib Start Date: 12/31/2022 13:58

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 12/31/2022 15:52

Lab File ID: 22GL31011.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	3.82	3.74	3.89
4-Hydroxy-4-methyl-2-pentanone	4.63	4.53	4.72
2-Butoxyethanol	4.99	4.89	5.09
Dipropylene Glycol Methyl Ether	6.64	6.50	6.77
Propylene glycol	7.56	7.39	7.70
Ethylene glycol	8.00	7.84	8.16
2-(2-Butoxyethoxy)ethanol	9.40	9.21	9.59
2,2'-Oxybisethanol	10.10	9.90	10.30
Triethylene Glycol	11.06	10.84	11.29
Tetraethylene Glycol	12.62	12.36	12.87

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31011.D
Lims ID: icv gly
Client ID:
Sample Type: ICV
Inject. Date: 31-Dec-2022 16:14:47 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-011
Operator ID: Instrument ID: CVGG2
Sublist:

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 13:01:01 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 12:53:04

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.816	3.811	0.005	1781905	20.0	22.4	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.626	4.625	0.001	1891775	20.0	22.4	
	3 2-Butoxyethanol						
	4.991	4.991	0.000	2012939	20.0	23.3	
*	4 n-Heptyl Alcohol						
	5.524	5.524	0.000	7043943	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.637	6.637	0.000	162707	20.0	22.9	
	6 Propylene glycol						M
	7.561	7.545	0.016	1242083	20.0	20.5	M
	7 Ethylene glycol						M
	8.000	7.997	0.003	1156264	20.0	22.8	M
	8 2-(2-Butoxyethoxy)ethanol						
	9.401	9.401	0.000	1790515	20.0	22.1	
	9 2,2'-Oxybisethanol						
	10.102	10.102	0.000	1105060	20.0	21.2	
	10 Triethylene Glycol						
	11.064	11.064	0.000	1130505	20.0	22.9	
	11 Tetraethylene Glycol						
	12.615	12.614	0.001	2329419	40.0	46.4	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_GlyICV_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

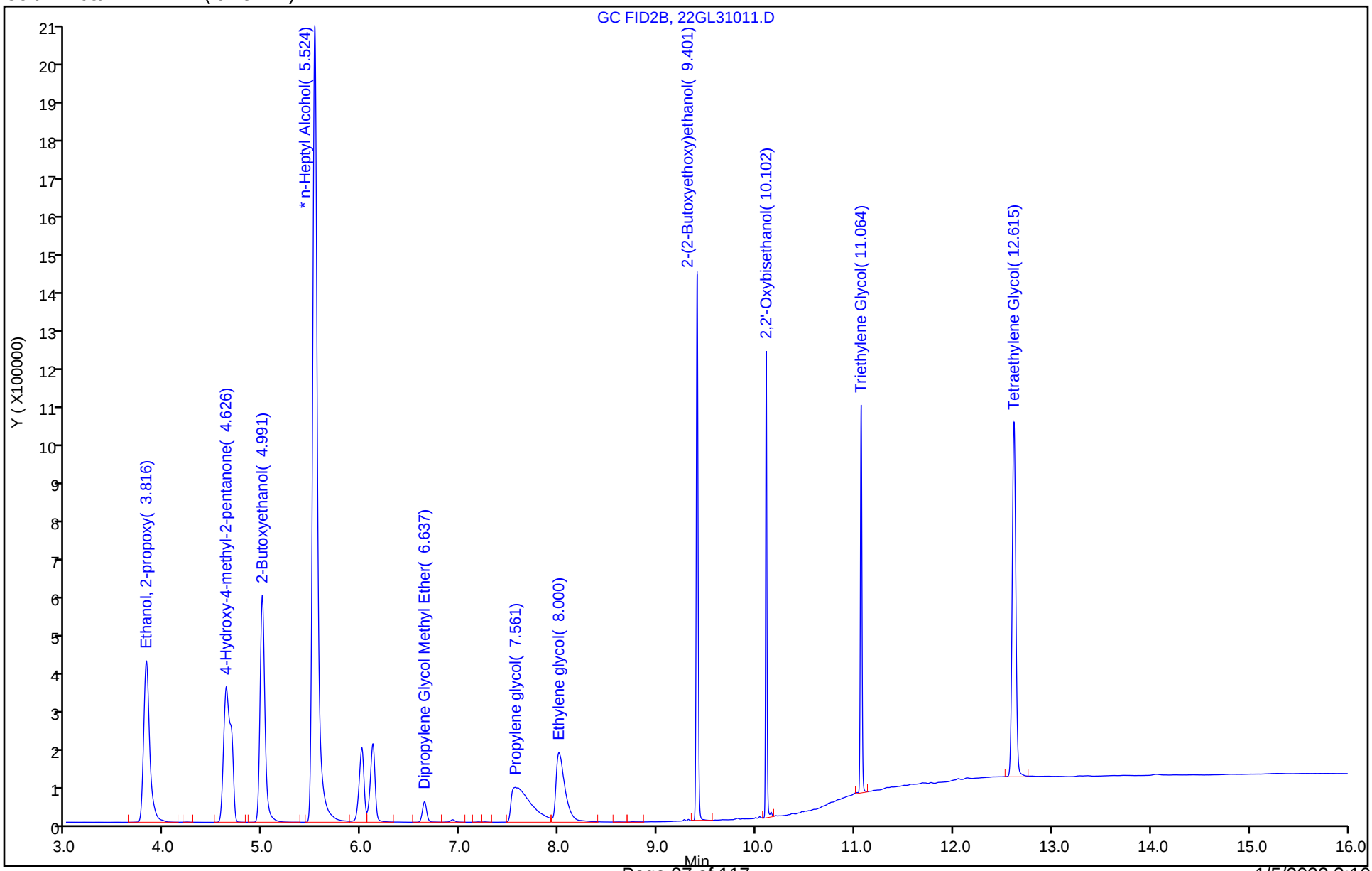
Report Date: 03-Jan-2023 13:01:50 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31011.D

Injection Date:	31-Dec-2022 16:14:47	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	icv gly			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



1/5/2023 3:10 PM

Manual Integration/User Assign Peak Report

Eurofins Savannah

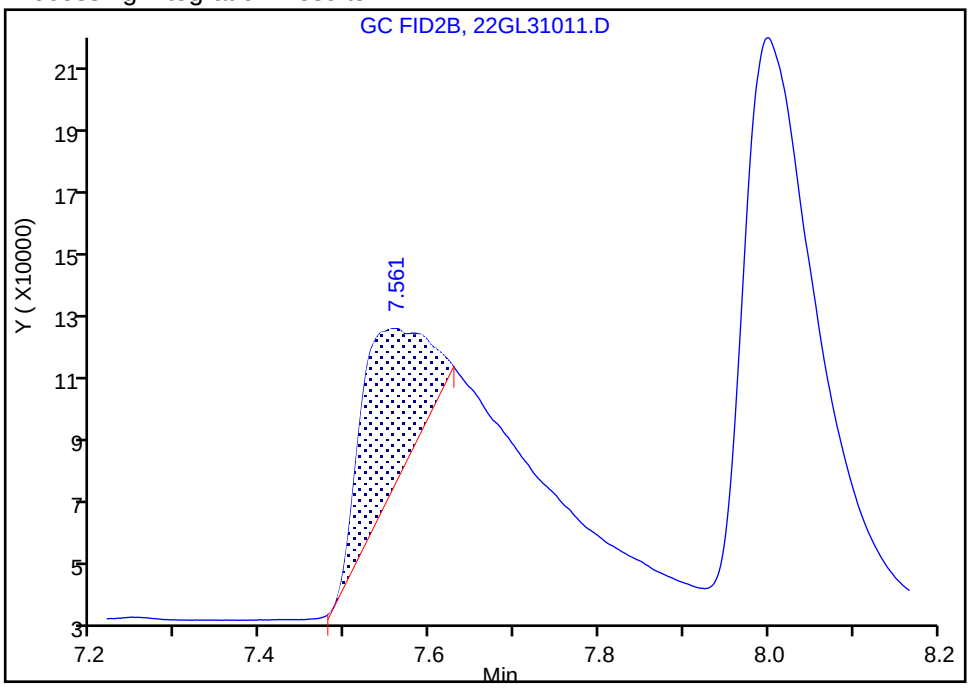
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31011.D				
Injection Date:	31-Dec-2022 16:14:47	Instrument ID:	CVGG2		
Lims ID:	icv gly				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

6 Propylene glycol, CAS: 57-55-6

Signal: 1

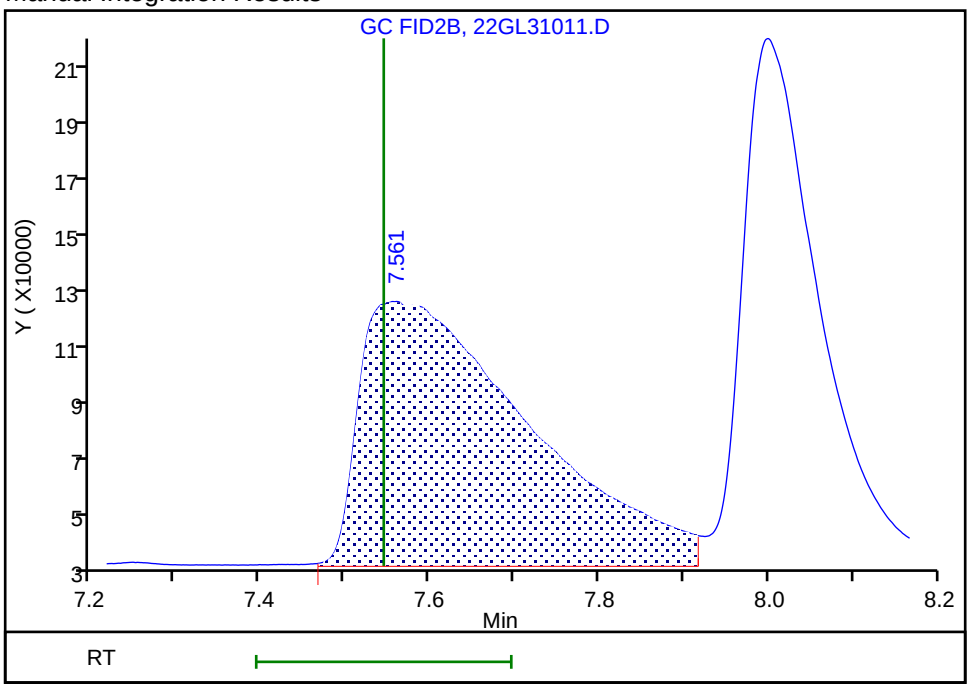
Processing Integration Results

RT: 7.56
Area: 265165
Amount: 4.384806
Amount Units: ug/ml



Manual Integration Results

RT: 7.56
Area: 1242083
Amount: 20.539263
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 12:53:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins Savannah

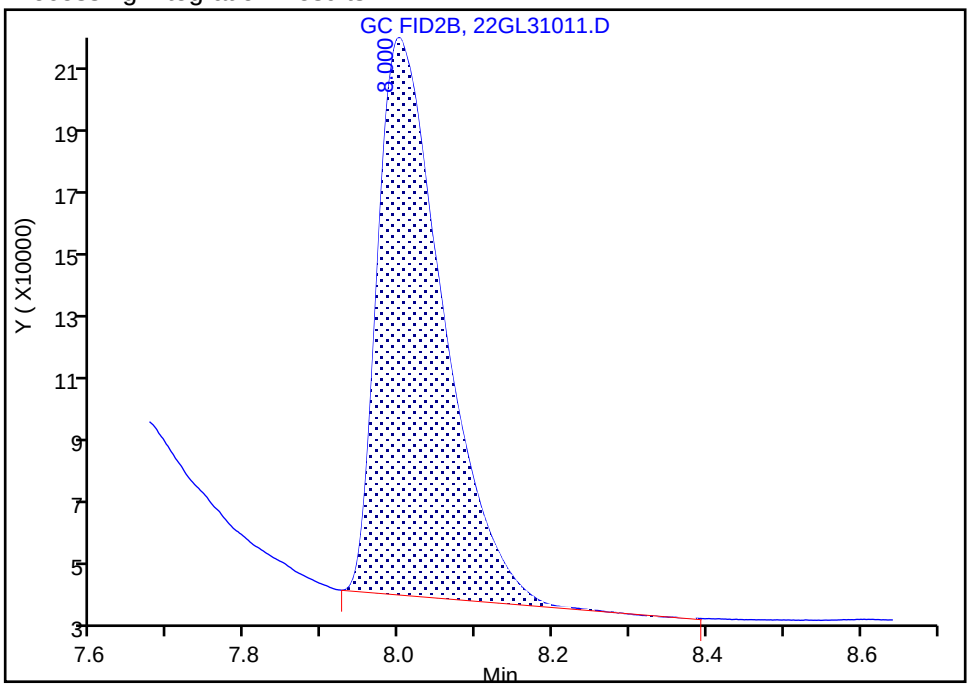
Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31011.D
Injection Date: 31-Dec-2022 16:14:47 Instrument ID: CVGG2
Lims ID: icv gly
Client ID:
Operator ID: ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

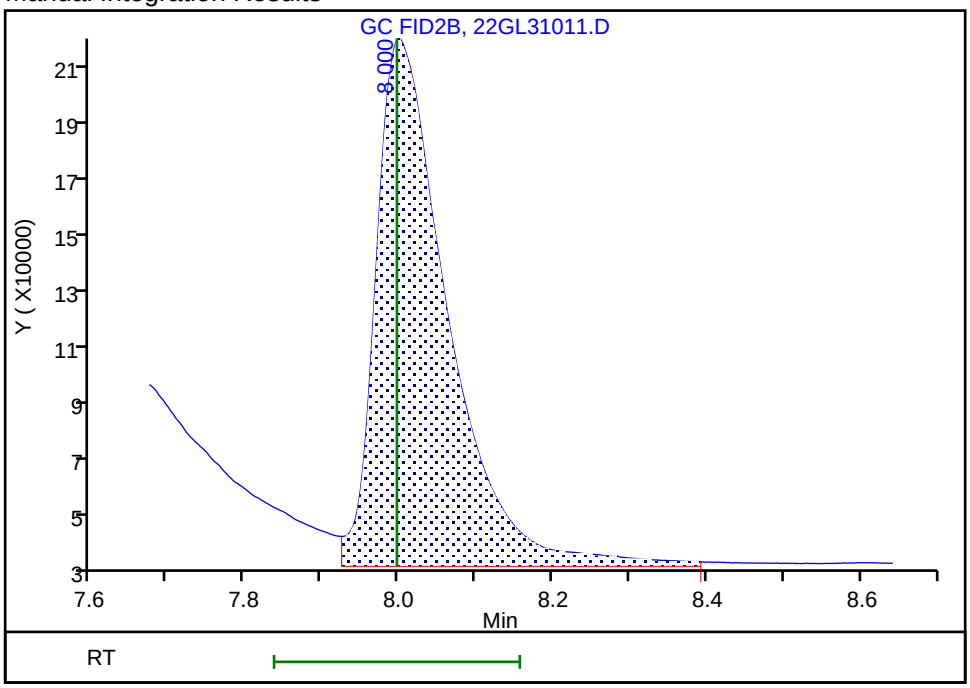
Processing Integration Results

RT: 8.00
Area: 1012312
Amount: 19.921373
Amount Units: ug/ml



Manual Integration Results

RT: 8.00
Area: 1156264
Amount: 22.754217
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 12:53:01
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Lab Sample ID: CCV 680-757531/28 Calibration Date: 12/31/2022 22:40

Instrument ID: CVGG2 Calib Start Date: 12/31/2022 13:58

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 12/31/2022 15:52

Lab File ID: 22GL31028.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.5648	0.5885		20.8	20.0	4.2	20.0
4-Hydroxy-4-methyl-2-pentanone	Ave	0.6006	0.6161		20.5	20.0	2.6	20.0
2-Butoxyethanol	Ave	0.6134	0.6658		21.7	20.0	8.5	20.0
Dipropylene Glycol Methyl Ether	Ave	0.0505	0.0531		21.0	20.0	5.2	20.0
Propylene glycol	Ave	0.4293	0.3774		17.6	20.0	-12.1	20.0
Ethylene glycol	Ave	0.3607	0.3213		17.8	20.0	-10.9	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.5756	0.5821		20.2	20.0	1.1	20.0
2,2'-Oxybisethanol	Ave	0.3694	0.2936		15.9	20.0	-20.5*	20.0
Triethylene Glycol	Ave	0.3506	0.2076		11.8	20.0	-40.8*	20.0
Tetraethylene Glycol	Ave	0.3563	0.1196		13.4	40.0	-66.4*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Lab Sample ID: CCV 680-757531/28 Calibration Date: 12/31/2022 22:40

Instrument ID: CVGG2 Calib Start Date: 12/31/2022 13:58

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 12/31/2022 15:52

Lab File ID: 22GL31028.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	3.82	3.74	3.90
4-Hydroxy-4-methyl-2-pentanone	4.63	4.54	4.72
2-Butoxyethanol	5.00	4.90	5.10
Dipropylene Glycol Methyl Ether	6.64	6.51	6.78
Propylene glycol	7.58	7.43	7.73
Ethylene glycol	8.01	7.85	8.17
2-(2-Butoxyethoxy)ethanol	9.40	9.22	9.59
2,2'-Oxybisethanol	10.10	9.90	10.31
Triethylene Glycol	11.07	10.84	11.29
Tetraethylene Glycol	12.62	12.36	12.87

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31028.D
Lims ID: ccv g3
Client ID:
Sample Type: CCV
Inject. Date: 31-Dec-2022 22:40:02 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-028
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 13:01:53 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.819	3.819	0.000	1795884	20.0	20.8	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.631	4.631	0.000	1880237	20.0	20.5	
	3 2-Butoxyethanol						
	4.998	4.998	0.000	2031638	20.0	21.7	
*	4 n-Heptyl Alcohol						
	5.528	5.528	0.000	7629121	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.643	6.643	0.000	162128	20.0	21.0	
	6 Propylene glycol						
	7.579	7.579	0.000	1151583	20.0	17.6	
	7 Ethylene glycol						
	8.009	8.009	0.000	980569	20.0	17.8	
	8 2-(2-Butoxyethoxy)ethanol						
	9.404	9.404	0.000	1776499	20.0	20.2	
	9 2,2'-Oxybisethanol						
	10.104	10.104	0.000	895964	20.0	15.9	
	10 Triethylene Glycol						
	11.065	11.065	0.000	633588	20.0	11.8	
	11 Tetraethylene Glycol						
	12.616	12.616	0.000	730014	40.0	13.4	

Reagents:

SG_Gly_CAL_00052 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00099 Amount Added: 10.00 Units: uL Run Reagent

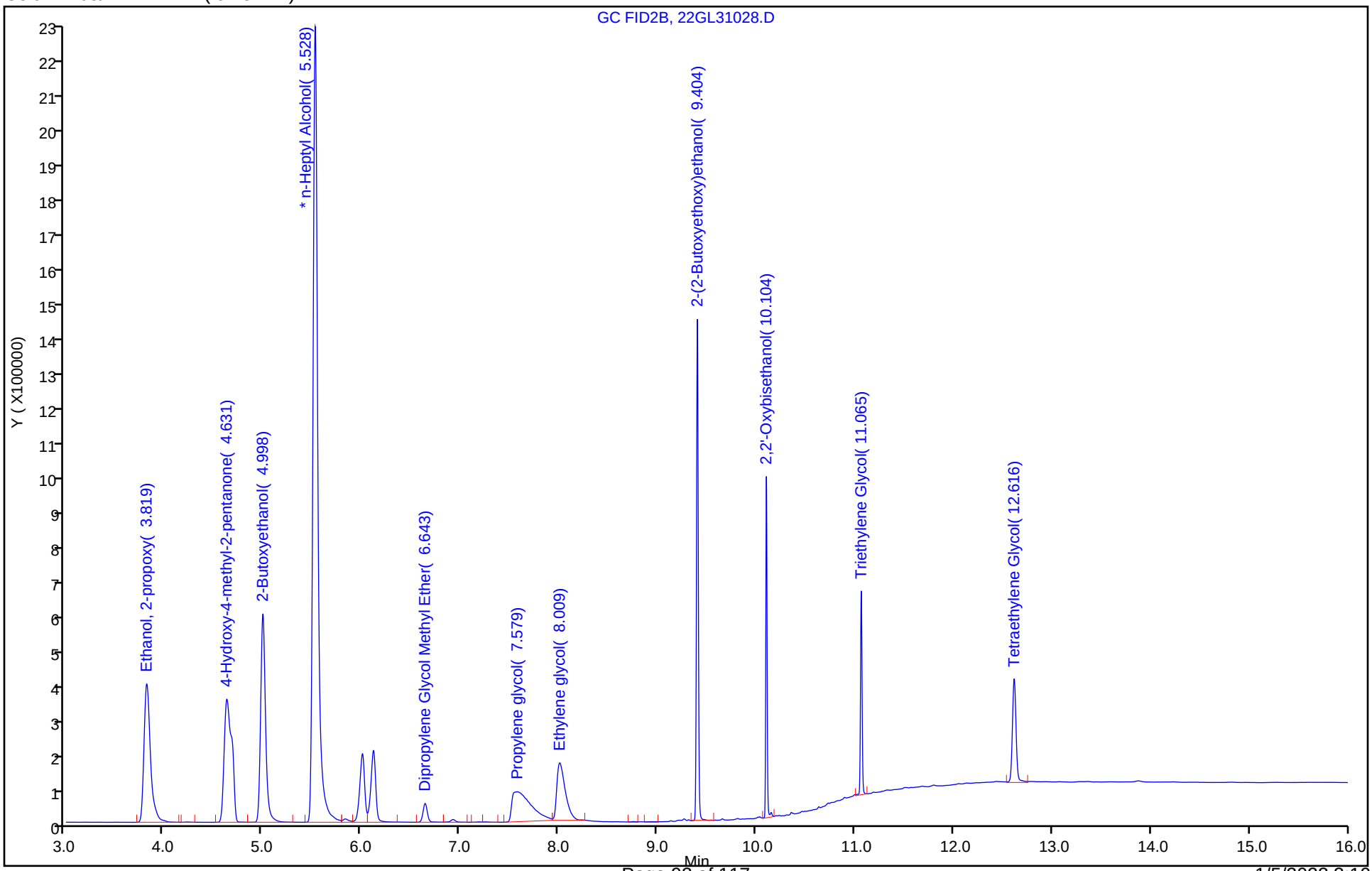
Report Date: 03-Jan-2023 13:01:53 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31028.D

Injection Date:	31-Dec-2022 22:40:02	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ccv g3			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Lab Sample ID: CCV 680-757531/38 Calibration Date: 01/01/2023 02:26

Instrument ID: CVGG2 Calib Start Date: 12/31/2022 13:58

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 12/31/2022 15:52

Lab File ID: 22GL31038.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Ave	0.5648	0.5811		20.6	20.0	2.9	20.0
4-Hydroxy-4-methyl-2-pentanone	Ave	0.6006	0.5973		19.9	20.0	-0.5	20.0
2-Butoxyethanol	Ave	0.6134	0.6556		21.4	20.0	6.9	20.0
Dipropylene Glycol Methyl Ether	Ave	0.0505	0.0453		17.9	20.0	-10.4	20.0
Propylene glycol	Ave	0.4293	0.3631		16.9	20.0	-15.4	20.0
Ethylene glycol	Ave	0.3607	0.3447		19.1	20.0	-4.4	20.0
2-(2-Butoxyethoxy)ethanol	Ave	0.5756	0.5775		20.1	20.0	0.3	20.0
2,2'-Oxybisethanol	Ave	0.3694	0.3330		18.0	20.0	-9.9	20.0
Triethylene Glycol	Ave	0.3506	0.3044		17.4	20.0	-13.2	20.0
Tetraethylene Glycol	Ave	0.3563	0.1891		21.2	40.0	-46.9*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Lab Sample ID: CCV 680-757531/38 Calibration Date: 01/01/2023 02:26

Instrument ID: CVGG2 Calib Start Date: 12/31/2022 13:58

GC Column: J&W DB WAX ID: 0.45(mm) Calib End Date: 12/31/2022 15:52

Lab File ID: 22GL31038.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	3.81	3.74	3.89
4-Hydroxy-4-methyl-2-pentanone	4.63	4.54	4.72
2-Butoxyethanol	5.00	4.90	5.10
Dipropylene Glycol Methyl Ether	6.64	6.51	6.78
Propylene glycol	7.58	7.42	7.73
Ethylene glycol	8.01	7.85	8.17
2-(2-Butoxyethoxy)ethanol	9.40	9.21	9.59
2,2'-Oxybisethanol	10.10	9.90	10.31
Triethylene Glycol	11.07	10.84	11.29
Tetraethylene Glycol	12.62	12.36	12.87

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31038.D
Lims ID: ccv g3
Client ID:
Sample Type: CCV
Inject. Date: 01-Jan-2023 02:26:35 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-038
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 13:06:17 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 13:06:01

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.813	3.813	0.000	1686879	20.0	20.6	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.630	4.630	0.000	1733925	20.0	19.9	
	3 2-Butoxyethanol						
	4.995	4.995	0.000	1903181	20.0	21.4	
*	4 n-Heptyl Alcohol						
	5.529	5.529	0.000	7257216	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.642	6.642	0.000	131422	20.0	17.9	
	6 Propylene glycol						M
	7.575	7.575	0.000	1053980	20.0	16.9	M
	7 Ethylene glycol						M
	8.007	8.007	0.000	1000598	20.0	19.1	M
	8 2-(2-Butoxyethoxy)ethanol						
	9.402	9.402	0.000	1676398	20.0	20.1	
	9 2,2'-Oxybisethanol						
	10.103	10.103	0.000	966519	20.0	18.0	
	10 Triethylene Glycol						
	11.066	11.066	0.000	883639	20.0	17.4	
	11 Tetraethylene Glycol						
	12.616	12.616	0.000	1098122	40.0	21.2	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

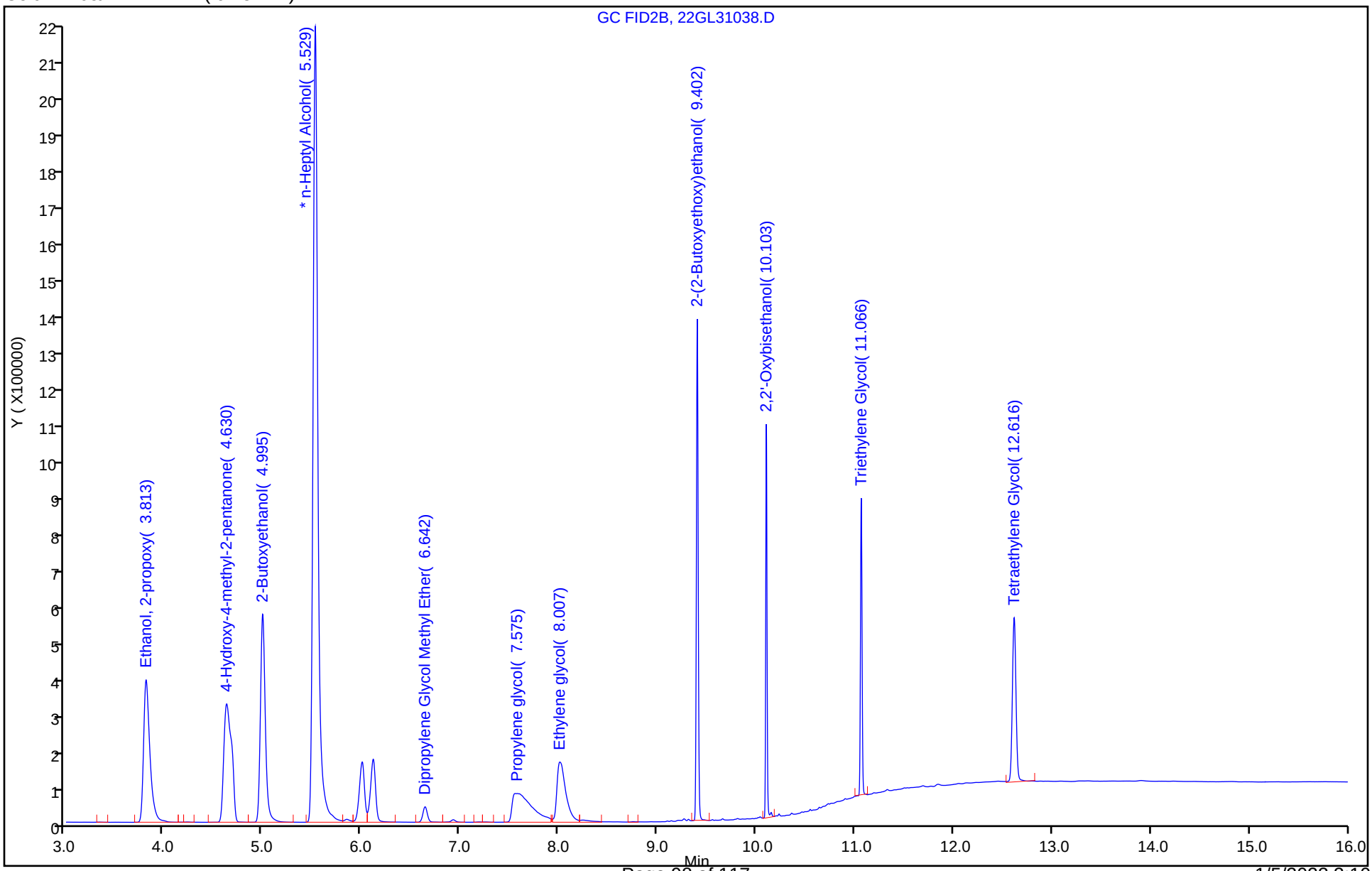
Report Date: 03-Jan-2023 13:06:17 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31038.D

Injection Date:	01-Jan-2023 02:26:35	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	ccv g3			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



1/5/2023 3:10 PM

Eurofins Savannah

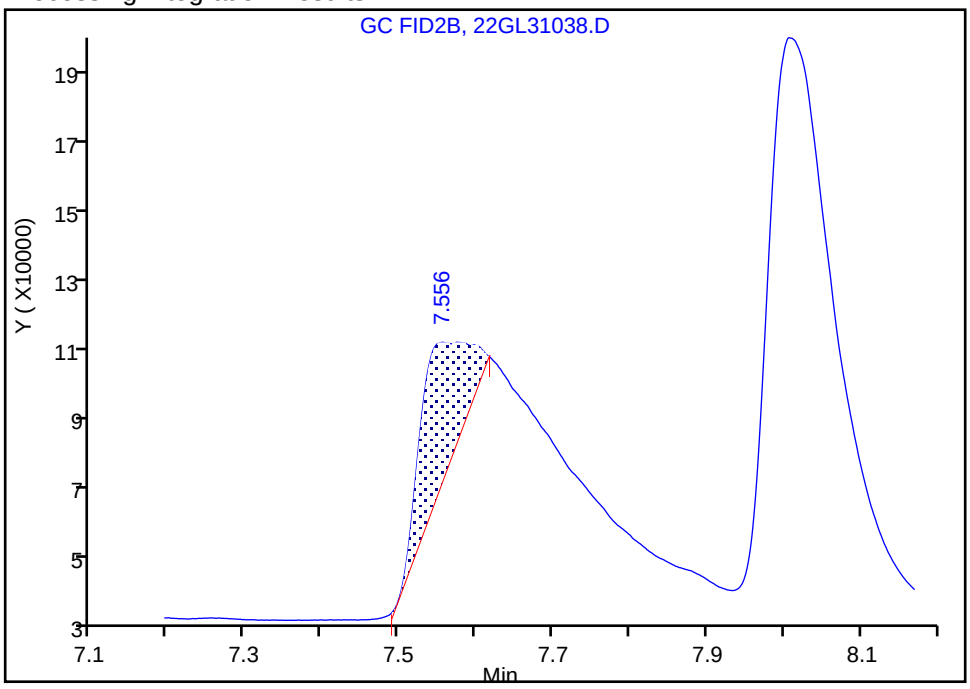
Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31038.D
Injection Date: 01-Jan-2023 02:26:35 Instrument ID: CVGG2
Lims ID: ccv g3
Client ID:
Operator ID: ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm) Detector GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

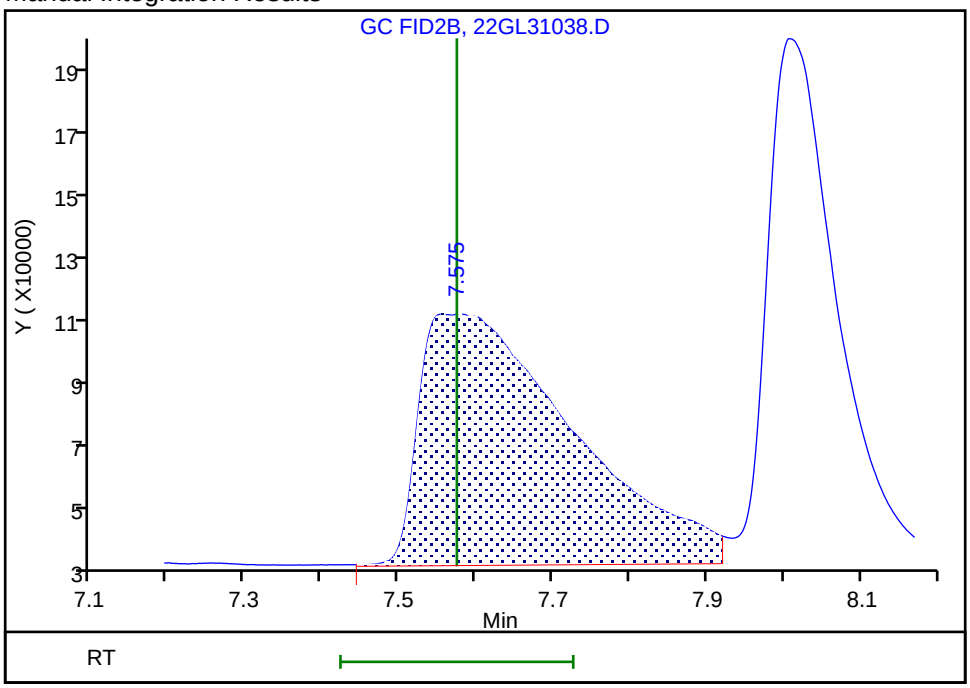
Processing Integration Results

RT: 7.56
Area: 163673
Amount: 2.626982
Amount Units: ug/ml



Manual Integration Results

RT: 7.57
Area: 1053980
Amount: 16.916573
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 13:05:57
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins Savannah

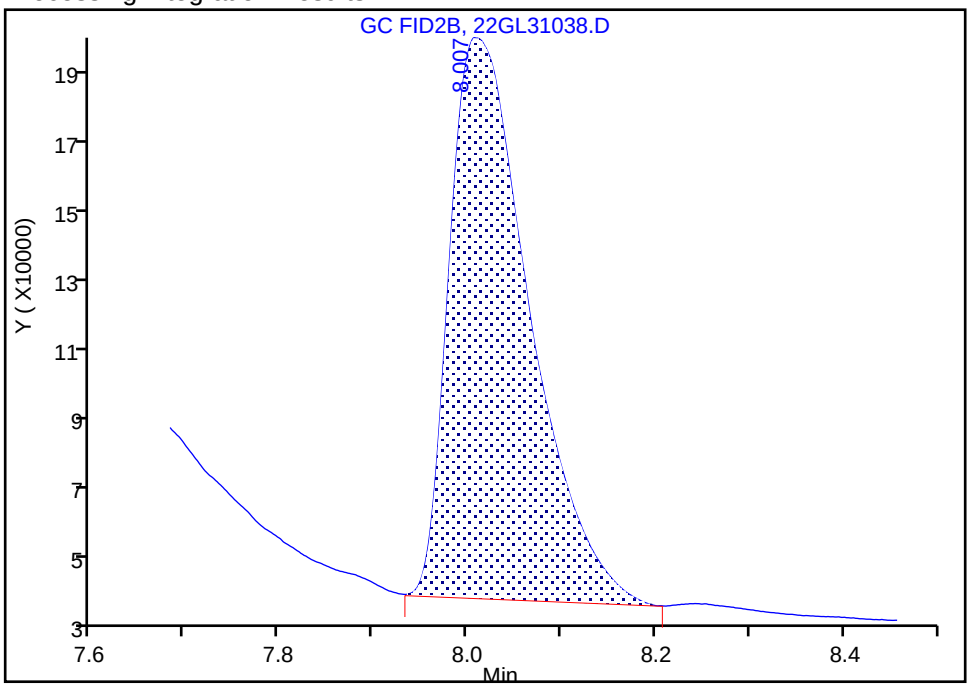
Data File:	\\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31038.D				
Injection Date:	01-Jan-2023 02:26:35	Instrument ID:	CVGG2		
Lims ID:	ccv g3				
Client ID:					
Operator ID:		ALS Bottle#:	38	Worklist Smp#:	38
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		
Column:	J&W DB WAX (0.45 mm)	Detector	GC FID2B		

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

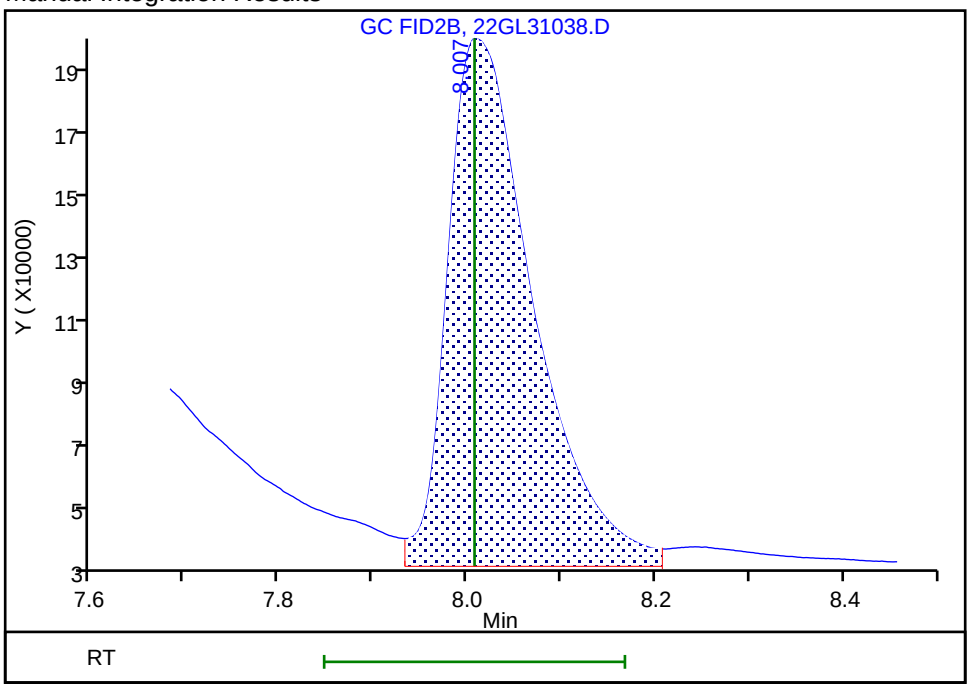
Processing Integration Results

RT: 8.01
Area: 895285
Amount: 17.100625
Amount Units: ug/ml



Manual Integration Results

RT: 8.01
Area: 1000598
Amount: 19.112183
Amount Units: ug/ml



Reviewer: SWK1, 03-Jan-2023 13:05:57
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah | Job No.: 580-121653-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-757531/16

Matrix: Water | Lab File ID: 22GL31016.D

Analysis Method: 8015C GLY | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 12/31/2022 18:08

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.: 757531 | 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\20221231-83061.b\22GL31016.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 31-Dec-2022 18:08:06 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-016
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 13:01:01 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 13:00:56

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
3	2-Butoxyethanol						7
	4.990	4.991	-0.001	8443		0.0975	7
	LOD =	0.5000					
*	4 n-Heptyl Alcohol						
	5.527	5.524	0.003	7059155	50.0	50.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

SG_GLY_ISTD_00099 Amount Added: 10.00 Units: uL Run Reagent

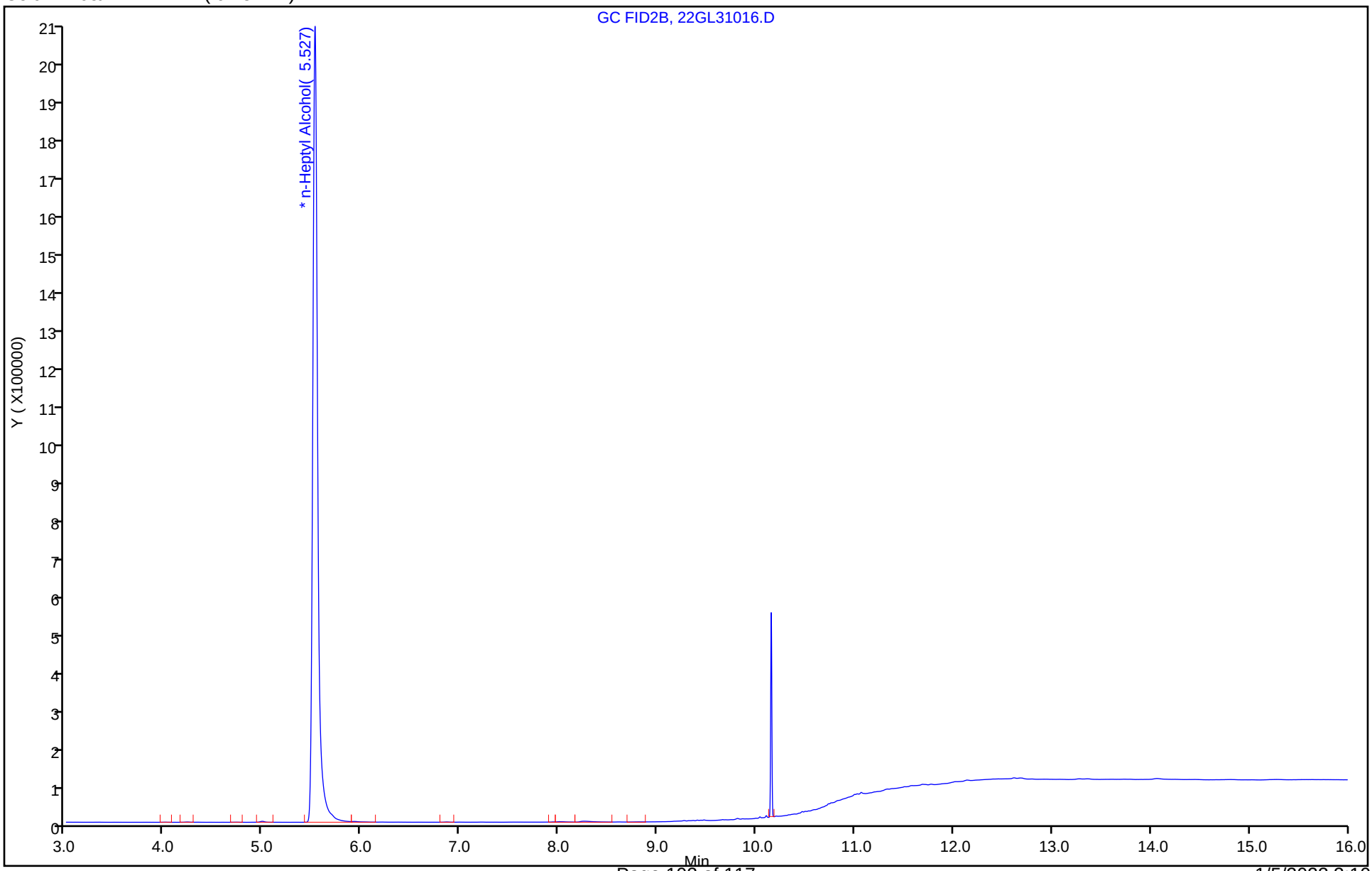
Report Date: 03-Jan-2023 13:01:40 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31016.D

Injection Date:	31-Dec-2022 18:08:06	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	mb			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 680-757531/12

Matrix: Water Lab File ID: 22GL31012.D

Analysis Method: 8015C GLY Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 12/31/2022 16:37

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.: 757531 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	20.7		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31012.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 31-Dec-2022 16:37:24 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-012
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 13:01:01 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
	1 Ethanol, 2-propoxy						
	3.815	3.811	0.004	1725642	20.0	21.2	
	2 4-Hydroxy-4-methyl-2-pentanone						
	4.626	4.625	0.001	1829569	20.0	21.1	
	3 2-Butoxyethanol						
	4.992	4.991	0.001	1955028	20.0	22.1	
*	4 n-Heptyl Alcohol						
	5.525	5.524	0.001	7202300	50.0	50.0	
	5 Dipropylene Glycol Methyl Ether						
	6.637	6.637	0.000	156056	20.0	21.4	
	6 Propylene glycol						
	7.570	7.545	0.025	1179531	20.0	19.1	
	7 Ethylene glycol						
	8.000	7.997	0.003	1104836	20.0	21.3	
	8 2-(2-Butoxyethoxy)ethanol						
	9.401	9.401	0.000	1718918	20.0	20.7	
	9 2,2'-Oxybisethanol						
	10.102	10.102	0.000	1061132	20.0	19.9	
	10 Triethylene Glycol						
	11.064	11.064	0.000	1103386	20.0	21.9	
	11 Tetraethylene Glycol						
	12.615	12.614	0.001	2229113	40.0	43.4	

Reagents:

SG_GlyICV_00052 Amount Added: 10.00 Units: uL
SG_GLY_ISTD_00099 Amount Added: 10.00 Units: uL Run Reagent

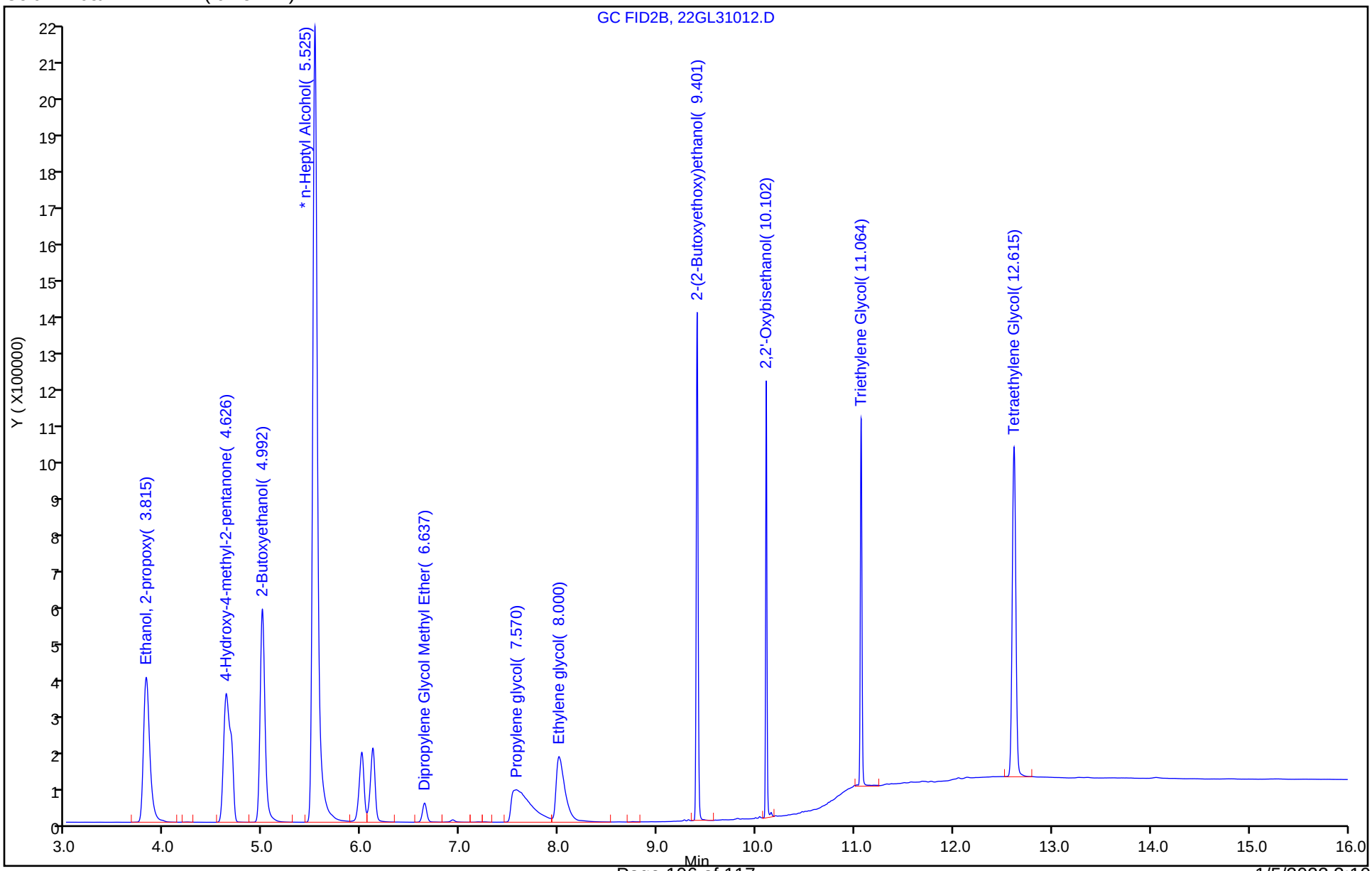
Report Date: 03-Jan-2023 13:01:51 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31012.D

Injection Date:	31-Dec-2022 16:37:24	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



1/5/2023 3:10 PM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah | Job No.: 580-121653-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 680-757531/13

Matrix: Water | Lab File ID: 22GL31013.D

Analysis Method: 8015C GLY | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 1(mL) | Date Analyzed: 12/31/2022 17:00

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.: 757531 | Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	21.6		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31013.D
Lims ID: lcsd
Client ID:
Sample Type: LCSD
Inject. Date: 31-Dec-2022 17:00:09 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 680-0083061-013
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 03-Jan-2023 13:01:01 Calib Date: 31-Dec-2022 15:52:08
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31010.D

Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host: CTX1607

First Level Reviewer: SWK1 Date: 03-Jan-2023 13:00:45

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1	Ethanol, 2-propoxy						
	3.809	3.811	-0.002	1800489	20.0	22.2	
2	4-Hydroxy-4-methyl-2-pentanone						
	4.626	4.625	0.001	1898023	20.0	22.0	
3	2-Butoxyethanol						
	4.990	4.991	-0.001	2037922	20.0	23.2	
*	4 n-Heptyl Alcohol						
	5.524	5.524	0.000	7169170	50.0	50.0	
5	Dipropylene Glycol Methyl Ether						
	6.638	6.637	0.001	152051	20.0	21.0	
6	Propylene glycol						M
	7.548	7.545	0.003	1142313	20.0	18.6	M
7	Ethylene glycol						
	8.005	7.997	0.008	1092557	20.0	21.1	
8	2-(2-Butoxyethoxy)ethanol						
	9.402	9.401	0.001	1779538	20.0	21.6	
9	2,2'-Oxybisethanol						
	10.102	10.102	0.000	1101427	20.0	20.8	
10	Triethylene Glycol						
	11.064	11.064	0.000	1142572	20.0	22.7	
11	Tetraethylene Glycol						
	12.615	12.614	0.001	2320573	40.0	45.4	

QC Flag Legend
Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_GlyICV_00052	Amount Added:	10.00	Units: uL	
SG_GLY_ISTD_00099	Amount Added:	10.00	Units: uL	Run Reagent

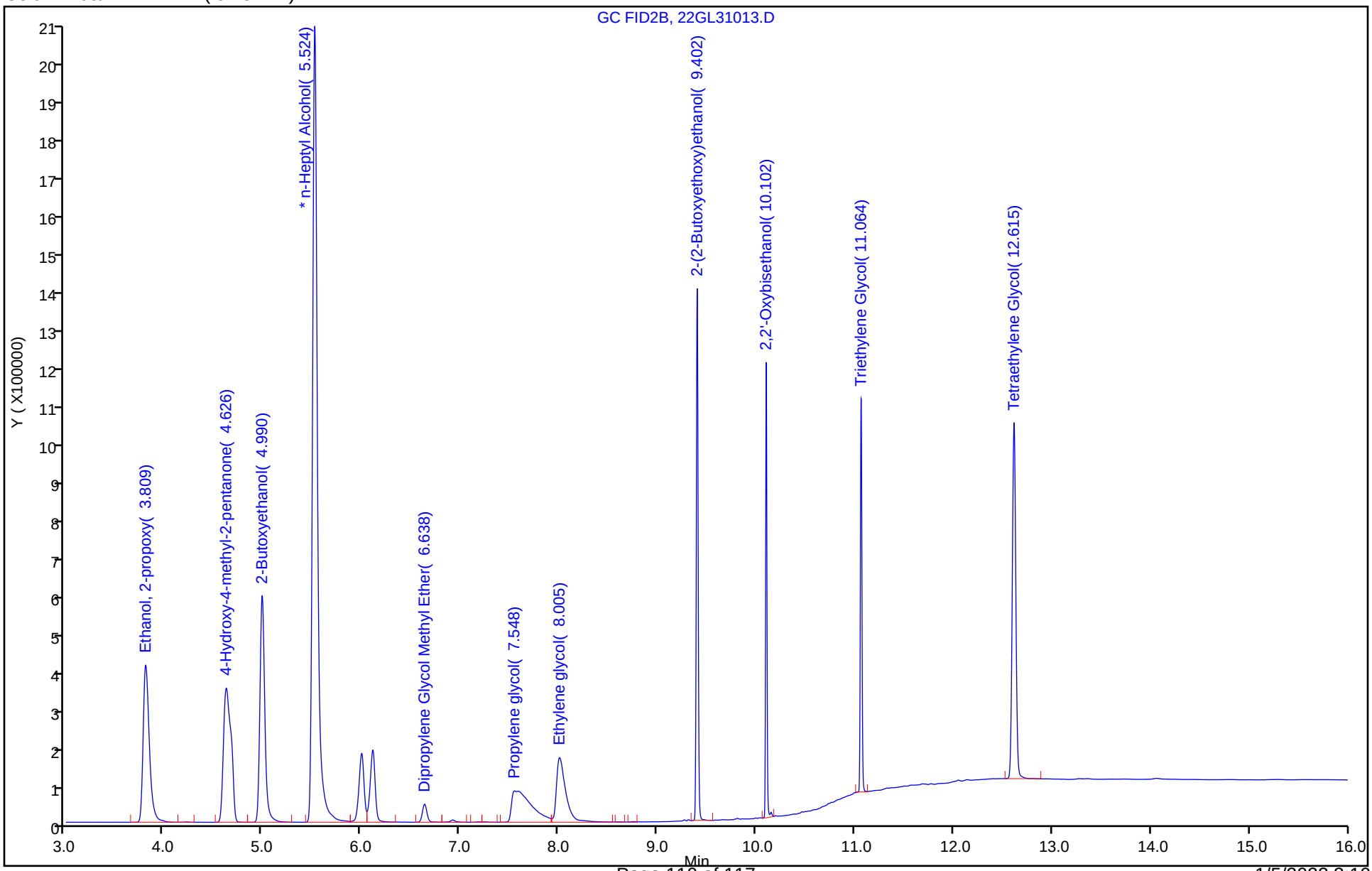
Report Date: 03-Jan-2023 13:01:52 Chrom Revision: 2.3 20-Dec-2022 14:14:06

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20221231-83061.b\22GL31013.D

Injection Date:	31-Dec-2022 17:00:09	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)



GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Instrument ID: CVGG2 Start Date: 12/31/2022 13:58

Analysis Batch Number: 757531 End Date: 01/01/2023 02:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-757531/5		12/31/2022 13:58	1	22GL31005.D	J&W DB WAX 0.45(mm)
IC 680-757531/6		12/31/2022 14:21	1	22GL31006.D	J&W DB WAX 0.45(mm)
ICIS 680-757531/7		12/31/2022 14:44	1	22GL31007.D	J&W DB WAX 0.45(mm)
IC 680-757531/8		12/31/2022 15:06	1	22GL31008.D	J&W DB WAX 0.45(mm)
IC 680-757531/9		12/31/2022 15:29	1	22GL31009.D	J&W DB WAX 0.45(mm)
IC 680-757531/10		12/31/2022 15:52	1	22GL31010.D	J&W DB WAX 0.45(mm)
ICV 680-757531/11		12/31/2022 16:14	1	22GL31011.D	J&W DB WAX 0.45(mm)
LCS 680-757531/12		12/31/2022 16:37	1	22GL31012.D	J&W DB WAX 0.45(mm)
LCSD 680-757531/13		12/31/2022 17:00	1	22GL31013.D	J&W DB WAX 0.45(mm)
MB 680-757531/16		12/31/2022 18:08	1	22GL31016.D	J&W DB WAX 0.45(mm)
580-121653-1	AF-RHMW16-WGN01B-2212 W2	12/31/2022 18:30	1	22GL31017.D	J&W DB WAX 0.45(mm)
580-121653-2	AF-RHMW17D-WGN01B-221 2W2	12/31/2022 18:53	1	22GL31018.D	J&W DB WAX 0.45(mm)
580-121653-3	AF-RHMW17D-WGN02B-221 2W2	12/31/2022 19:16	1	22GL31019.D	J&W DB WAX 0.45(mm)
ZZZZZ		12/31/2022 19:38	1		J&W DB WAX 0.45(mm)
ZZZZZ		12/31/2022 20:01	1		J&W DB WAX 0.45(mm)
ZZZZZ		12/31/2022 20:24	1		J&W DB WAX 0.45(mm)
ZZZZZ		12/31/2022 20:46	1		J&W DB WAX 0.45(mm)
ZZZZZ		12/31/2022 21:09	1		J&W DB WAX 0.45(mm)
ZZZZZ		12/31/2022 21:32	1		J&W DB WAX 0.45(mm)
ZZZZZ		12/31/2022 21:54	1		J&W DB WAX 0.45(mm)
CCV 680-757531/28		12/31/2022 22:40	1	22GL31028.D	J&W DB WAX 0.45(mm)
ZZZZZ		12/31/2022 23:47	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/01/2023 00:10	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/01/2023 00:33	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/01/2023 00:56	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/01/2023 01:18	1		J&W DB WAX 0.45(mm)
ZZZZZ		01/01/2023 01:41	1		J&W DB WAX 0.45(mm)
CCV 680-757531/38		01/01/2023 02:26	1	22GL31038.D	J&W DB WAX 0.45(mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-121653-1

SDG No.:

Batch Number: 757531 Batch Start Date: 12/31/22 13:58 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 00099	SG_GlyICV 00052		
IC 680-757531/5		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-757531/6		8015C GLY		1 mL	5 uL	10 uL			
ICIS 680-757531/7		8015C GLY		1 mL	10 uL	10 uL			
IC 680-757531/8		8015C GLY		1 mL	25 uL	10 uL			
IC 680-757531/9		8015C GLY		1 mL	40 uL	10 uL			
IC 680-757531/10		8015C GLY		1 mL	50 uL	10 uL			
ICV 680-757531/11		8015C GLY		1 mL		10 uL	10 uL		
LCS 680-757531/12		8015C GLY		1 mL		10 uL	10 uL		
LCSD 680-757531/13		8015C GLY		1 mL		10 uL	10 uL		
MB 680-757531/16		8015C GLY		1 mL		10 uL			
580-121653-C-1	AF-RHMW16-WGN01B-2212W2	8015C GLY	T	1 mL		10 uL			
580-121653-A-2	AF-RHMW17D-WGN01B-2212W2	8015C GLY	T	1 mL		10 uL			
580-121653-A-3	AF-RHMW17D-WGN02B-2212W2	8015C GLY	T	1 mL		10 uL			
CCV 680-757531/28		8015C GLY		1 mL	10 uL	10 uL			
CCV 680-757531/38		8015C GLY		1 mL	10 uL	10 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

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

Subcontract Data

Shipping and Receiving Documents

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Jacklyn Vo	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 02-221210-23F0104-EUSau
Client Contact:	Phone: 4084380688	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 / 808-356-5311	PO #:			
Email: Watson Tanji (watson.tanji@aecom.com)/ Brant Landers (brant.landers@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-RHMW16-WGN01B-2212W2	12/16/22	1840	G	W	N	N	X	3	~~Store ALL samples until notified by client to dispose~~ MD

12/16/22

12/16/22

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	Jacklyn Vo AECOM	12/16/22 1925	AECOM	Miranda DeSarno	12/16/22 1925 ~~1935~~	AECOM
2	Miranda DeSarno	12/17/22 0855	~~AECOM~~		12/20/22 1045	
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.9/2.9

Ver: 01/16/2019

1/5/2023 3:10 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Jacklyn Vo	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 01-221216-23F0104-EUSav
Client Contact:	Phone: 408-438-0688	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 / 808-356-5311	PO #:			
Email: Watson Tanji (watson.tanji@aecom.com)/ Brant Landers (brant.landers@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-RHMW17D-WGN01B-2212W2	12/16/22	1105	G	W	N	N	X	3	
AF-RHMW17D-WGN02B-2212W2	12/16/22	1335	G	W	N	N	X	3	

MD 12/16/22

MD 12/16/22

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
Jacklyn Vo	12/16/22 1630	AECOM	Miranda Defarmo	12/16/22 1630	AECOM
Miranda Defarmo	12/17/22 0855	AECOM		12/20/22 1045	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.9/2.9

Ver: 01/16/2019

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1/5/2023 3:10 PM

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-121653-1

Login Number: 121653
List Number: 2
Creator: Harley, Tynisha

List Source: Eurofins Savannah
List Creation: 12/29/22 01:27 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	