eurofins

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy
AECOM
1001 Bishop Street
Honolulu HI 96813
Generated 11/17/2023 9:46 AM

JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-133711-1

Eurofins Seattle
5755 8th Street East
Tacoma WA 98424

See page two for job notes and contact information.

Page 1 of 133

my EOL

Eurofins Seattle

Job Notes

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

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

Authorization

Generated
11/17/2023 9:46 AM

Authorized for release by
Tracy L Dutton, Client Relations Manager
Tracy.Dutton@et.eurofinsus.com
253 248-4970

Table of Contents

Table of Contents

11/17/2023
9:46 AM

Definitions/Glossary

Qualifiers

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Receipt
The samples were received on 11/10/2023 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C

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

Method 8015C GLY - Glycols- Direct Injection (GC/FID)
Samples AF-RHMW12A-WGFD01LF-2311 (133711-7), AF-RHMW12A-WGN01LF-2311 (133711-6), AF-RHMW17D-WGN01LF-2311 (133711-2), AF-RHMW17D-WQFB01-2311 (133711-3), AF-RHMW17S-WGN01LF-2311 (133711-4), AF-RHMW17S-WQEB01-2311 (133711-5) and AF-RHMW17-WGN01LF-2311 (133711-1) were analyzed for Glycols- Direct Injection (GC/FID). The samples were analyzed on 11/17/2023.

The continuing calibration verification (CCV) associated with batch 680-808697 recovered above the upper control limit for 2-(2-Butoxyethoxy)ethanol. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data has been reported.

Detection Summary

Client Sample ID: AF-RHMW17-WGN01LF-2311   Lab Sample ID: 580-133711-1

No Detections.

Client Sample ID: AF-RHMW17D-WGN01LF-2311   Lab Sample ID: 580-133711-2

No Detections.

Client Sample ID: AF-RHMW17D-WQFB01-2311   Lab Sample ID: 580-133711-3

No Detections.

Client Sample ID: AF-RHMW17S-WGN01LF-2311   Lab Sample ID: 580-133711-4

No Detections.

Client Sample ID: AF-RHMW17S-WQEB01-2311   Lab Sample ID: 580-133711-5

No Detections.

Client Sample ID: AF-RHMW12A-WGN01LF-2311   Lab Sample ID: 580-133711-6

No Detections.

Client Sample ID: AF-RHMW12A-WGFD01LF-2311   Lab Sample ID: 580-133711-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client Sample ID: AF-RHMW17-WGN01LF-2311
Date Collected: 11/08/23 09:05
Date Received: 11/10/23 17:00

Lab Sample ID: 580-133711-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			11/17/23 01:35	1

Client Sample ID: AF-RHMW17D-WGN01LF-2311
Date Collected: 11/08/23 11:35
Date Received: 11/10/23 17:00

Lab Sample ID: 580-133711-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			11/17/23 01:58	1

Client Sample ID: AF-RHMW17D-WQFB01-2311
Date Collected: 11/08/23 10:05
Date Received: 11/10/23 17:00

Lab Sample ID: 580-133711-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			11/17/23 02:21	1

Client Sample ID: AF-RHMW17S-WGN01LF-2311
Date Collected: 11/08/23 12:35
Date Received: 11/10/23 17:00

Lab Sample ID: 580-133711-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			11/17/23 02:45	1

Client Sample ID: AF-RHMW17S-WQEB01-2311
Date Collected: 11/08/23 11:20
Date Received: 11/10/23 17:00

Lab Sample ID: 580-133711-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			11/17/23 03:08	1

Client Sample ID: AF-RHMW12A-WGN01LF-2311
Date Collected: 11/09/23 09:20
Date Received: 11/10/23 17:00

Lab Sample ID: 580-133711-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			11/17/23 03:32	1

Client Sample ID: AF-RHMW12A-WGFD01LF-2311
Date Collected: 11/09/23 09:20
Date Received: 11/10/23 17:00

Lab Sample ID: 580-133711-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			11/17/23 03:55	1

Default Detection Limits

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

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

QC Sample Results

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

Lab Sample ID: MB 680-808697/11
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 808697

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			11/16/23 20:07	1

Lab Sample ID: LCS 680-808697/1007
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 808697

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol			20.0	23.2		mg/L		116	50 - 150

Lab Sample ID: LCSD 680-808697/8
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 808697

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol			20.0	23.6		mg/L		118	50 - 150	2	50

Lab Sample ID: 580-133711-1 MS
Client Sample ID: AF-RHMW17-WGN01LF-2311
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 808697

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	3.0	U Q	20.0	22.2		mg/L		111	50 - 150

Lab Sample ID: 580-133711-1 MSD
Client Sample ID: AF-RHMW17-WGN01LF-2311
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 808697

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	3.0	U Q	20.0	24.8		mg/L		124	50 - 150	11	50

QC Association Summary

GC Semi VOA

Analysis Batch: 808697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-133711-1	AF-RHMW17-WGN01LF-2311	Total/NA	Water	8015C GLY	
580-133711-2	AF-RHMW17D-WGN01LF-2311	Total/NA	Water	8015C GLY	
580-133711-3	AF-RHMW17D-WQFB01-2311	Total/NA	Water	8015C GLY	
580-133711-4	AF-RHMW17S-WGN01LF-2311	Total/NA	Water	8015C GLY	
580-133711-5	AF-RHMW17S-WQEB01-2311	Total/NA	Water	8015C GLY	
580-133711-6	AF-RHMW12A-WGN01LF-2311	Total/NA	Water	8015C GLY	
580-133711-7	AF-RHMW12A-WGFD01LF-2311	Total/NA	Water	8015C GLY	
MB 680-808697/11	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-808697/1007	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-808697/8	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-133711-1 MS	AF-RHMW17-WGN01LF-2311	Total/NA	Water	8015C GLY	
580-133711-1 MSD	AF-RHMW17-WGN01LF-2311	Total/NA	Water	8015C GLY	

Lab Chronicle

Client Sample ID: AF-RHMW17-WGN01LF-2311

Lab Sample ID: 580-133711-1

Date Collected: 11/08/23 09:05
Date Received: 11/10/23 17:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	808697	DBM	EET SAV	11/17/23 01:35

Client Sample ID: AF-RHMW17D-WGN01LF-2311

Lab Sample ID: 580-133711-2

Date Collected: 11/08/23 11:35
Date Received: 11/10/23 17:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	808697	DBM	EET SAV	11/17/23 01:58

Client Sample ID: AF-RHMW17D-WQFB01-2311

Lab Sample ID: 580-133711-3

Date Collected: 11/08/23 10:05
Date Received: 11/10/23 17:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	808697	DBM	EET SAV	11/17/23 02:21

Client Sample ID: AF-RHMW17S-WGN01LF-2311

Lab Sample ID: 580-133711-4

Date Collected: 11/08/23 12:35
Date Received: 11/10/23 17:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	808697	DBM	EET SAV	11/17/23 02:45

Client Sample ID: AF-RHMW17S-WQEB01-2311

Lab Sample ID: 580-133711-5

Date Collected: 11/08/23 11:20
Date Received: 11/10/23 17:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	808697	DBM	EET SAV	11/17/23 03:08

Client Sample ID: AF-RHMW12A-WGN01LF-2311

Lab Sample ID: 580-133711-6

Date Collected: 11/09/23 09:20
Date Received: 11/10/23 17:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	808697	DBM	EET SAV	11/17/23 03:32

Client Sample ID: AF-RHMW12A-WGFD01LF-2311

Lab Sample ID: 580-133711-7

Date Collected: 11/09/23 09:20
Date Received: 11/10/23 17:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	808697	DBM	EET SAV	11/17/23 03:55

Laboratory References:

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

Eurofins Seattle

11/17/2023
9:46 AM

Accreditation/Certification Summary

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

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-133711-1	AF-RHMW17-WGN01LF-2311	Water	11/08/23 09:05	11/10/23 17:00
580-133711-2	AF-RHMW17D-WGN01LF-2311	Water	11/08/23 11:35	11/10/23 17:00
580-133711-3	AF-RHMW17D-WQFB01-2311	Water	11/08/23 10:05	11/10/23 17:00
580-133711-4	AF-RHMW17S-WGN01LF-2311	Water	11/08/23 12:35	11/10/23 17:00
580-133711-5	AF-RHMW17S-WQEB01-2311	Water	11/08/23 11:20	11/10/23 17:00
580-133711-6	AF-RHMW12A-WGN01LF-2311	Water	11/09/23 09:20	11/10/23 17:00
580-133711-7	AF-RHMW12A-WGFD01LF-2311	Water	11/09/23 09:20	11/10/23 17:00

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent Reagent ID	Volume Added	Analyte	Concentration
SG_Gly_CAL_00053	12/27/23		o2si, Lot 480919		(Purchased Reagent)		2,2'-Oxybisethanol	2000 ug/mL
							2-(2-Butoxyethoxy)ethanol	2000 ug/mL
							2-Butoxyethanol	2000 ug/mL
							4-Hydroxy-4-methyl-2-pentanone	2000 ug/mL
							Dipropylene Glycol Methyl Ether	2000 ug/mL
							Ethanol, 2-propoxy	2000 ug/mL
							Ethylene glycol	2000 ug/mL
							Propylene glycol	2000 ug/mL
							Tetraethylene Glycol	4000 ug/mL
							Triethylene Glycol	2000 ug/mL
SG_Gly_CAL_00056	01/17/24		o2si, Lot 500821		(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL
SG_GLY_ISTD_00129	02/09/24		Agilent, Lot 0006738806		(Purchased Reagent)		n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00062	05/02/24		o2si, Lot 454407		(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

SG_Gly_CAL_00053

o2si
smart solutions®

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

ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02

Certificate of Analysis

Catalog No.	Lot No.	Storage	Solvent	Date Received	Exp. Date
G34-120070-04	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:

11/17/2023
9:46 AM

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

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	*signature*	*Susan M*
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**

11/17/2023
9:46 AM

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

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

Expiration Information:

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

Quality Standard Documentation:

- ISO/IEC 17025:2017 "General Requirements for the Competence of Testing and Calibration" - Chemical Testing - Accredited A2LA Certificate Number 3031.01

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

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

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

Reagent

SG_Gly_CAL_00056

11/17/2023
9:46 AM

![o2si smart solutions logo]

Certificate of Analysis

Catalog No.	Lot No.	Storage	Solvent	Date Received	Exp. Date
G34-120070-04-SS	507036	≤ -10 °C	P/T Methanol	_____	31-Jul-2025

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

Container:
1 ml Ampule, Amber Glass

Certified Values:

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

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
2-butoxyethanol	111-76-2	99.5	311.7.1.1S	2006 ± 25	mg/L
diethylene glycol butyl ether	112-34-5	99.8	2323.7.2.1S	2000 ± 25	mg/L
propyl cellosolve	2807-30-9	99.9	1570.7.2.1S	1994 ± 25	mg/L
dipropylene glycol monomethyl ether	34590-94-8	99.7	2333.7.2.1S	2018 ± 25	mg/L
ethylene glycol	107-21-1	99.9	307.1.5.1S	2002 ± 24	mg/L
di(ethylene glycol)	111-46-6	99.5	309.7.2.1S	2006 ± 25	mg/L
tri(ethylene glycol)	112-27-6	100	310.7.4.1S	2004 ± 25	mg/L
4-Hydroxy-4-methyl-2-pentanone	123-42-2	98	2334.286.1.1S	2003 ± 47	mg/L
1,2-propanediol	57-55-6	99.9	306.9.4.1S	2010 ± 25	mg/L
tetraethylene glycol	112-60-7	98	3754.7.1.1S	3998 ± 47	mg/L

Intended Uses:

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

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

11/17/2023
9:46 AM

Catalog No. G34-120070-04-SS   **Lot No.** 507036   **Expiration Date** 31 -Jul-2025

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

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

This model assumes the container is stored at -10 °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 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:**
Andrea Schaible (signature)	*J Ball* (signature)	*Susan Mathews* (signature)
Andrea Schaible	Jared Ball	Susan Mathews
1 -Aug-2023	14 -Aug-2023	14 -Aug-2023
Production Chemist I	**Quality Control Chemist II**	**Quality Control Team Lead**

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

Catalog No. G34-120070-04-SS   **Lot No.** 507036   **Expiration Date** 31-Jul-2025

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

Expiration Information:

The stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. Studies on the short term instability have determined no contribution to instability as observed on the concentration under controlled transportation conditions. This standard is guaranteed until 31-Jul-2025

Quality Standard Documentation:

- ISO/IEC 17025:2017 "General Requirements for the Competence of Testing and Calibration" - Chemical Testing - Accredited A2LA Certificate Number 3031.01

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

Manufactured By:	Certified By:	Released By:
Andrea Schaible	*JBall*	*Susan Mathews*
Andrea Schaible	Jared Ball	Susan Mathews
1-Aug-2023	14-Aug-2023	14-Aug-2023
Production Chemist I	Quality Control Chemist II	Quality Control Team Lead

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

11/17/2023
9:46 AM

Reagent

SG_GLY_ISTD_00129

Agilent

Trusted Answers

ISO 17034

Reference Material Certificate
Product Information Sheet

Product Name: Custom Standard

Product Number: CUS-6046

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

Lot Number: 0006759266

Lot Issue Date: 24-Aug-2023

Expiration Date: 30-Sep-2025

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
n-heptanol	5018 ±	25 µg/mL	000111-70-6	RM04540

Matrix: methanol (methyl alcohol)

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

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

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

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

Safety:
Refer to the Safety Data Sheet on www.agilent.com 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.

CSD-QA-015.2

ISO 17025
Cert No. AT-1937

11/17/2023
9:46 AM

Reagent

SG_GlyICV_00062

o2si
smart solutions®

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 ± 100	mg/L
di(ethylene glycol)	111-46-6	99.5	309.7.2P	1994 ± 100	mg/L
tri(ethylene glycol)	112-27-6	99.9	310.7.2.1.1P	1974 ± 110	mg/L
4-Hydroxy-4-methyl-2-pentanone	123-42-2	98	2334.286.1P	1991 ± 110	mg/L
1,2-propanediol	57-55-6	99.5	306.9.3P	1998 ± 100	mg/L
tetraethylene glycol	112-60-7	98	3754.7.1P	3959 ± 200	mg/L

Intended Uses:

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

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:

11/17/2023
9:46 AM

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 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 (signature)	(signature)	*Susan Math* (signature)
Brian Stokes	Tyler Sherman	Susan Mathews
3 -May-2022	14 -Jun-2022	14 -Jun-2022
Production Chemist I	Quality Control Chemist I	Quality Control Team Lead

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

11/17/2023
9:46 AM

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 Matt*
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**

Method 8015C - DAI Glycols

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

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Matrix: Water   Level: Low   Lab File ID: -1IK16007-LCS.d

Lab ID: LCS 680-808697/1007   Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	23.2	116	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.: 580-133711-1

SDG No.:

Matrix: Water   Level: Low   Lab File ID: 1IK16008.D

Lab ID: LCSD 680-808697/8   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	23.6	118	2	50	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

11/17/2023
9:46 AM

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Matrix: Water   Level: Low   Lab File ID: 1IK16034.D

Lab ID: 580-133711-1 MS   Client ID: AF-RHMW17-WGN01LF-2311 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	3.0 U	22.2	111	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Matrix: Water   Level: Low   Lab File ID: 1IK16035.D

Lab ID: 580-133711-1 MSD   Client ID: AF-RHMW17-WGN01LF-2311 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	24.8	124	11	50	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

11/17/2023
                                                    9:46 AM

```
                              FORM IV
                 GC SEMI VOA METHOD BLANK SUMMARY


Lab Name: Eurofins Savannah              Job No.: 580-133711-1

SDG No.:

Lab Sample ID: MB 680-808697/11

Matrix: Water                            Date Extracted:

Lab File ID:(1) 1IK16011.D               Lab File ID:(2)

Date Analyzed:(1) 11/16/2023  20:07      Date Analyzed:(2)

Instrument ID:(1) CVGG2                  Instrument ID:(2)

GC Column:(1) J&W DB WAX    ID: 0.45(mm) GC Column:(2)              ID:
```

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-808697/1007	11/16/2023 18:33	
	LCSD 680-808697/8	11/16/2023 18:57	
AF-RHMW17-WGN01LF-2311	580-133711-1	11/17/2023 01:35	
AF-RHMW17D-WGN01LF-2311	580-133711-2	11/17/2023 01:58	
AF-RHMW17D-WQFB01-2311	580-133711-3	11/17/2023 02:21	
AF-RHMW17S-WGN01LF-2311	580-133711-4	11/17/2023 02:45	
AF-RHMW17S-WQEB01-2311	580-133711-5	11/17/2023 03:08	
AF-RHMW12A-WGN01LF-2311	580-133711-6	11/17/2023 03:32	
AF-RHMW12A-WGFD01LF-2311	580-133711-7	11/17/2023 03:55	
AF-RHMW17-WGN01LF-2311 MS	580-133711-1 MS	11/17/2023 05:05	
AF-RHMW17-WGN01LF-2311 MSD	580-133711-1 MSD	11/17/2023 05:29	

FORM IV 8015C GLY

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.: _____

Sample No.: ICIS 680-808404/9   Date Analyzed: 11/15/2023 16:34

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

Lab File ID (Standard): 1IK15009.D   Heated Purge: (Y/N) N

Calibration ID: 92674

		nHPA					
		AREA #	RT #		#	RT #		#	RT #
INITIAL CALIBRATION MID-POINT		2506763	6.28					
UPPER LIMIT		5013526	6.78					
LOWER LIMIT		1253382	5.78					
LAB SAMPLE ID	CLIENT SAMPLE ID							
ICV 680-808404/14		2248055	6.28					

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

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Sample No.: CCVIS 680-808697/7   Date Analyzed: 11/16/2023 18:33

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

Lab File ID (Standard): 1IK16007.D   Heated Purge: (Y/N) N

Calibration ID: 92674

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		1929389	6.29				
UPPER LIMIT		3858778	6.79				
LOWER LIMIT		964695	5.79				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-808697/1007		1929389	6.29				
LCSD 680-808697/8		1674537	6.29				
MB 680-808697/11		2126199	6.28				
CCV 680-808697/22		3263016	6.28				
580-133711-1	AF-RHMW17-WGN01LF-2311	2087947	6.28				
580-133711-2	AF-RHMW17D-WGN01LF-2311	1772638	6.28				
580-133711-3	AF-RHMW17D-WQFB01-2311	3017350	6.28				
580-133711-4	AF-RHMW17S-WGN01LF-2311	2142307	6.28				
580-133711-5	AF-RHMW17S-WQEB01-2311	2582526	6.28				
580-133711-6	AF-RHMW12A-WGN01LF-2311	2218007	6.28				
580-133711-7	AF-RHMW12A-WGFD01LF-2311	2417679	6.28				
580-133711-1 MS	AF-RHMW17-WGN01LF-2311 MS	2128808	6.28				
580-133711-1 MSD	AF-RHMW17-WGN01LF-2311 MSD	1987567	6.28				
CCV 680-808697/37		2134707	6.28				

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.: 580-133711-1
SDG No.:
Client Sample ID: AF-RHMW17-WGN01LF-2311   Lab Sample ID: 580-133711-1
Matrix: Water   Lab File ID: 1IK16025.D
Analysis Method: 8015C GLY   Date Collected: 11/08/2023 09:05
Extraction Method: Date Extracted:
Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 01:35
Con. Extract Vol.: 1(mL)   Dilution Factor: 1
Injection Volume: 1(uL)   GC Column: J&W DB WAX   ID: 0.45(mm)
% Moisture: % Solids: GPC Cleanup:(Y/N) N
Cleanup Factor:
Analysis Batch No.: 808697   Units: mg/L

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

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16025.D		
Lims ID:	580-133711-B-1		
Client ID:	AF-RHMW17-WGN01LF-2311		
Sample Type:	Client		
Inject. Date:	17-Nov-2023 01:35:10	ALS Bottle#: 0	Worklist Smp#: 25
Injection Vol:	1.0 ul	Dil. Factor: 1.0000	
Sample Info:	680-0090833-025		
Operator ID:		Instrument ID: CVGG2	

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	17-Nov-2023 10:39:48	Calib Date: 15-Nov-2023 17:44:20	
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By: Initial Calibration	
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B	
Process Host:	CTX1618		

First Level Reviewer: AR8P   Date: 17-Nov-2023 10:39:48

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					
6.284	6.284	0.000	2087947	50.0	
7 Ethylene glycol					
8.699	8.708	-0.009	58607	2.29	

QC Flag Legend
Processing Flags
Reagents:
SG_GLY_ISTD_00129   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16025.D
Injection Date: 17-Nov-2023 01:35:10   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-133711-B-1   Lab Sample ID: 680-133711-1   Worklist Smp#:   25
Client ID: AF-RHMW17-WGN01LF-2311
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16025.D

11/17/2023
9:46 AM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: AF-RHMW17D-WGN01LF-2311   Lab Sample ID: 580-133711-2

Matrix: Water   Lab File ID: 1IK16026.D

Analysis Method: 8015C GLY   Date Collected: 11/08/2023 11:35

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 01:58

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.: 808697   Units: mg/L

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

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16026.D		
Lims ID:	580-133711-A-2		
Client ID:	AF-RHMW17D-WGN01LF-2311		
Sample Type:	Client		
Inject. Date:	17-Nov-2023 01:58:31	ALS Bottle#: 0	Worklist Smp#: 26
Injection Vol:	1.0 ul	Dil. Factor: 1.0000	
Sample Info:	680-0090833-026		
Operator ID:		Instrument ID: CVGG2	

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	17-Nov-2023 10:39:48	Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

First Level Reviewer: AR8P   Date: 17-Nov-2023 10:39:53

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

*   4 n-Heptyl Alcohol

| 6.282 | 6.284 | -0.002 | 1772638 | 50.0 | |

Reagents:

SG_GLY_ISTD_00129   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16026.D
Injection Date: 17-Nov-2023 01:58:31   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-133711-A-2   Lab Sample ID: 680-133711-2   Worklist Smp#:   26
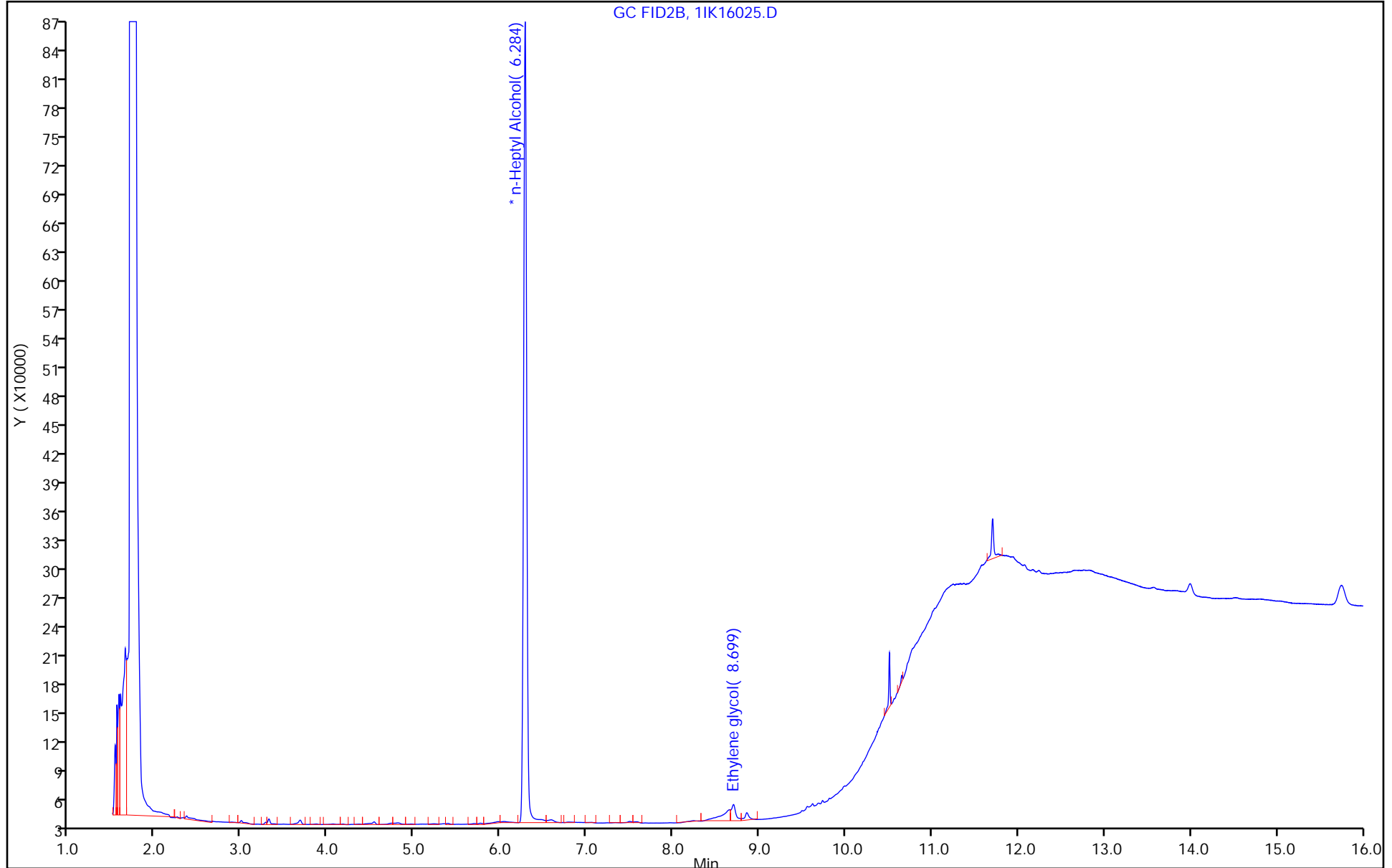Client ID: AF-RHMW17D-WGN01LF-2311
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16026.D

11/17/2023
9:46 AM
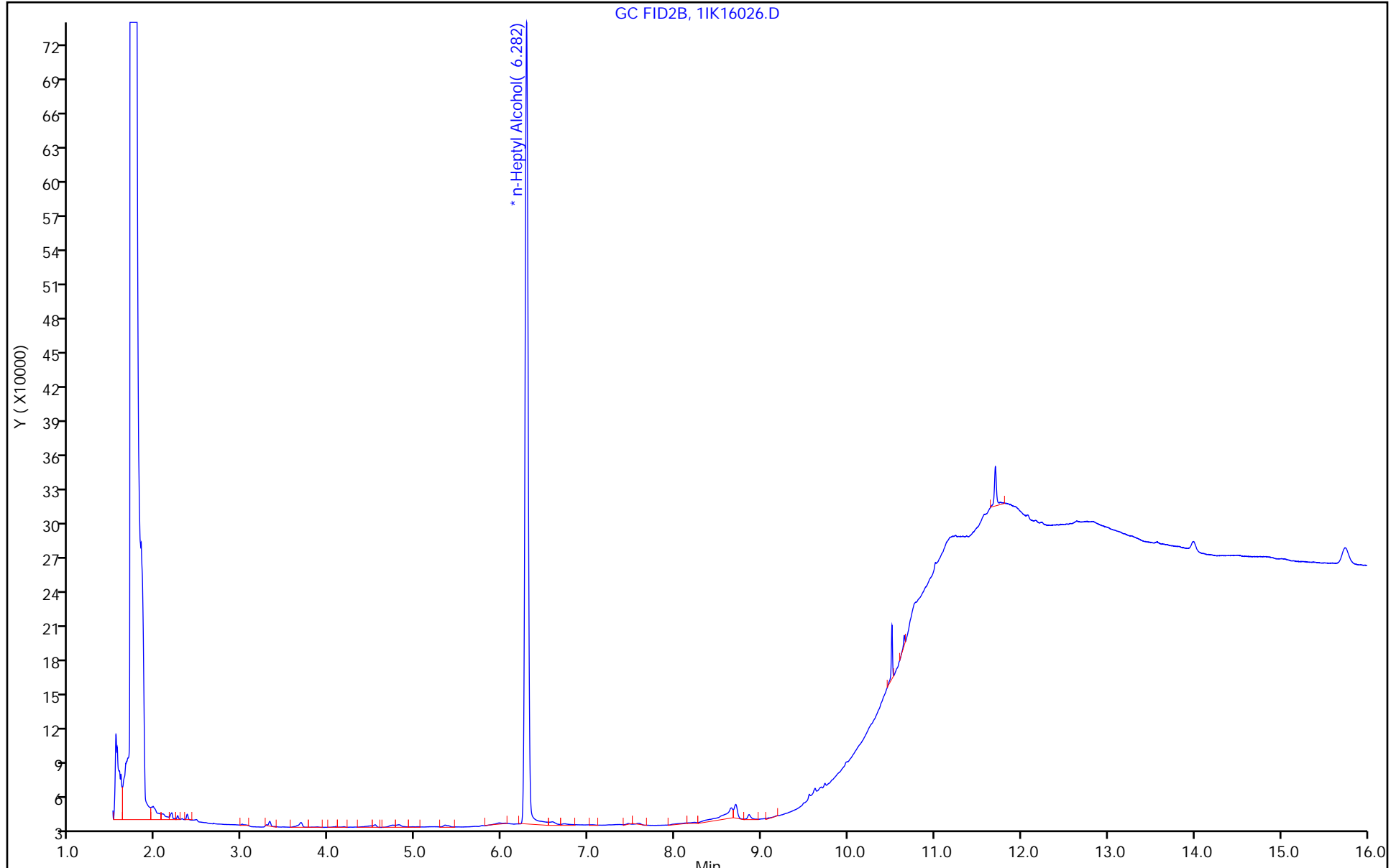
FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1
SDG No.:
Client Sample ID: AF-RHMW17D-WQFB01-2311   Lab Sample ID: 580-133711-3
Matrix: Water   Lab File ID: 1IK16027.D
Analysis Method: 8015C GLY   Date Collected: 11/08/2023 10:05
Extraction Method: Date Extracted:
Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 02:21
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.: 808697   Units: mg/L

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

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16027.D		
Lims ID:	580-133711-C-3		
Client ID:	AF-RHMW17D-WQFB01-2311		
Sample Type:	Client		
Inject. Date:	17-Nov-2023 02:21:52	ALS Bottle#: 0	Worklist Smp#: 27
Injection Vol:	1.0 ul	Dil. Factor: 1.0000	
Sample Info:	680-0090833-027		
Operator ID:		Instrument ID: CVGG2	

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	17-Nov-2023 10:39:48	Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol					s
6.282	6.284	-0.002	3017350	50.0	

QC Flag Legend
Processing Flags
 s - Failed ISTD Recovery Test

Reagents:

SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16027.D

Injection Date:	17-Nov-2023 02:21:52	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	580-133711-C-3	Lab Sample ID:	680-133711-3	Worklist Smp#:	27
Client ID:	AF-RHMW17D-WQFB01-2311				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16027.D

* n-Heptyl Alcohol(6.282)

11/17/2023
9:46 AM

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: AF-RHMW17S-WGN01LF-2311   Lab Sample ID: 580-133711-4

Matrix: Water   Lab File ID: 1IK16028.D

Analysis Method: 8015C GLY   Date Collected: 11/08/2023 12:35

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 02:45

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.: 808697   Units: mg/L

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

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16028.D	
Lims ID:	580-133711-C-4	
Client ID:	AF-RHMW17S-WGN01LF-2311	
Sample Type:	Client	

Inject. Date:	17-Nov-2023 02:45:22	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0090833-028				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	17-Nov-2023 10:39:48	Calib Date:	15-Nov-2023 17:44:20
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

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

* 4 n-Heptyl Alcohol

6.282	6.284	-0.002	2142307	50.0	

Reagents:

SG_GLY_ISTD_00129		Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16028.D
Injection Date: 17-Nov-2023 02:45:22   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-133711-C-4   Lab Sample ID: 680-133711-4   Worklist Smp#:   28
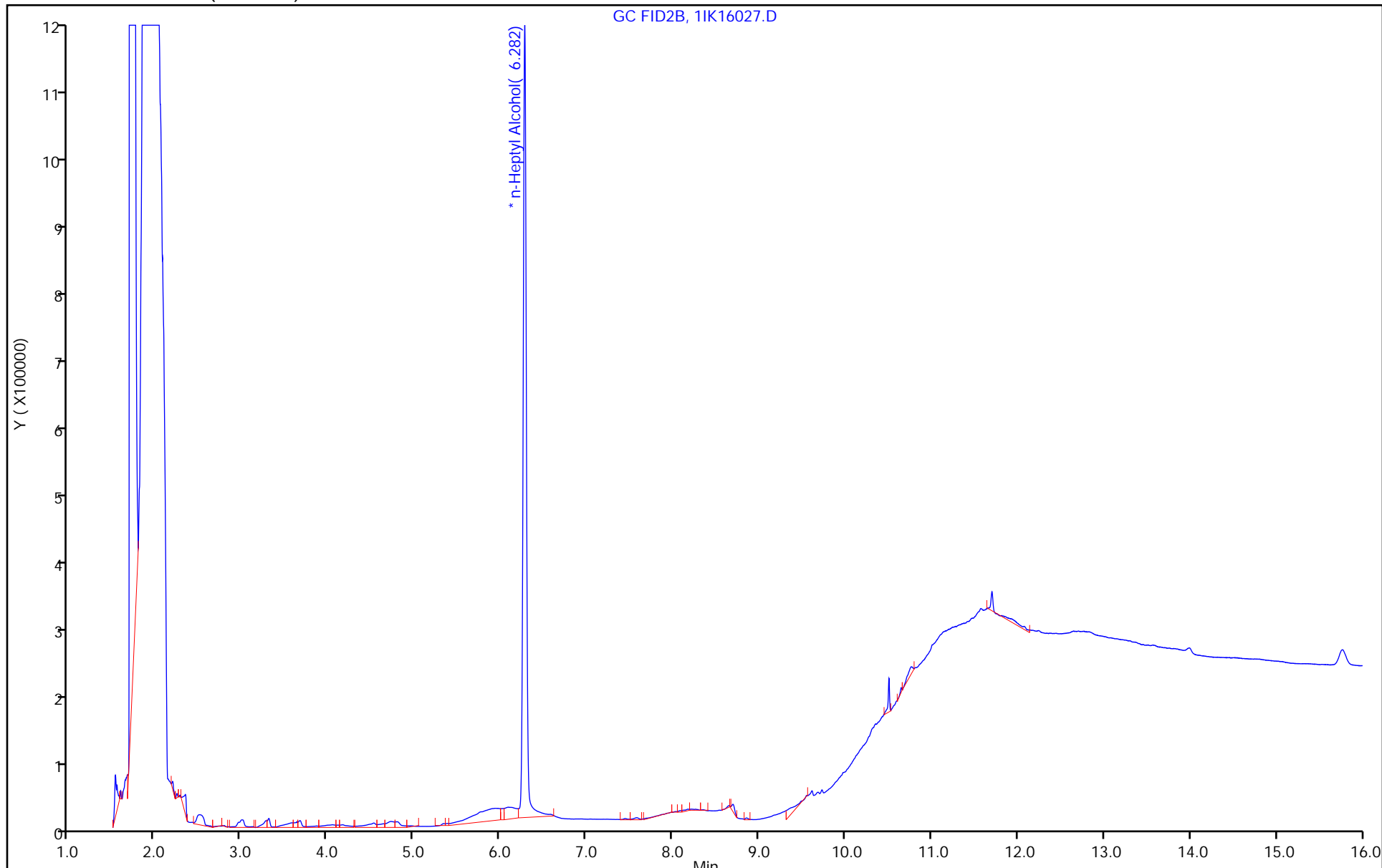Client ID: AF-RHMW17S-WGN01LF-2311
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

11/17/2023
9:46 AM
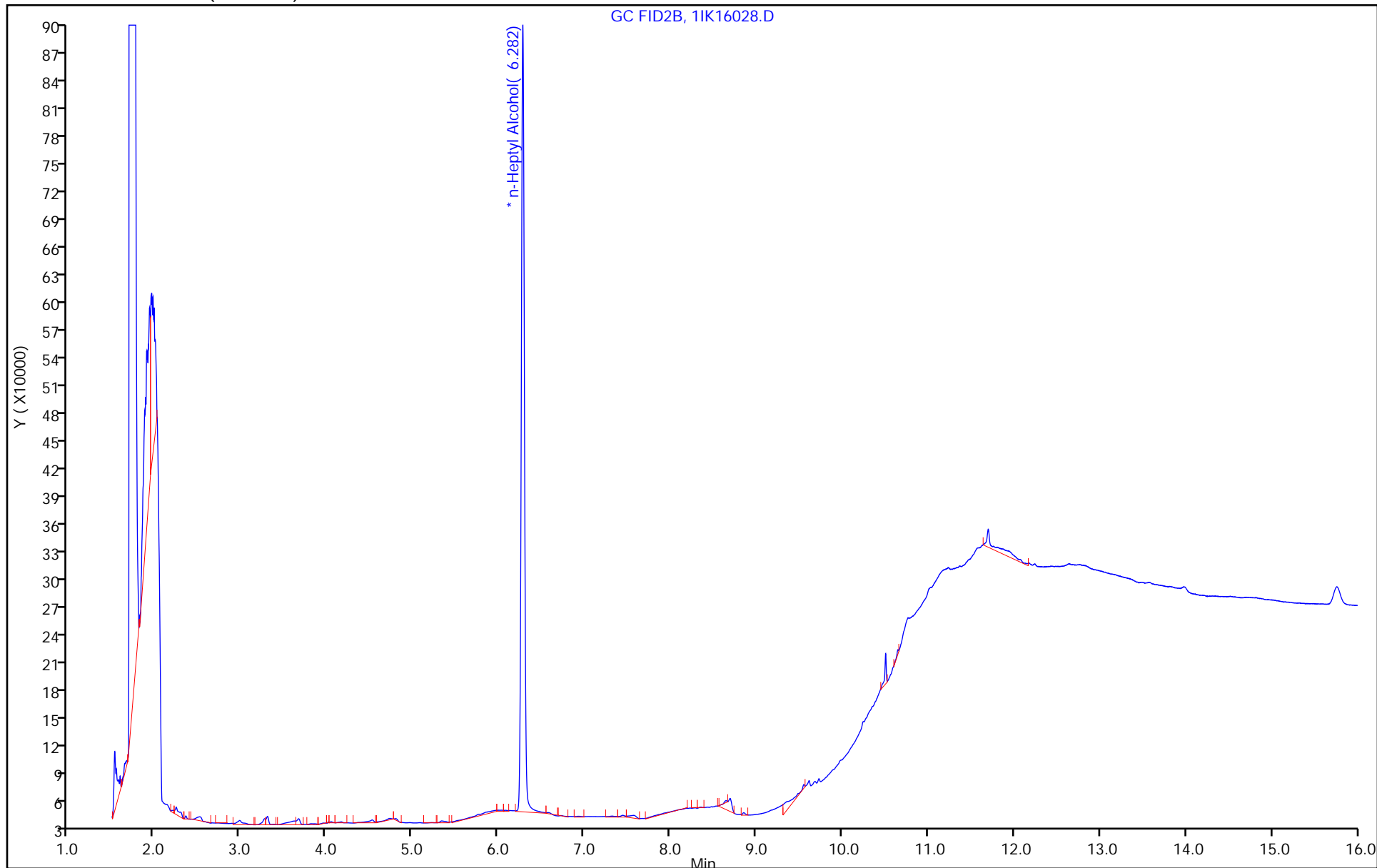
FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: AF-RHMW17S-WQEB01-2311   Lab Sample ID: 580-133711-5

Matrix: Water   Lab File ID: 1IK16029.D

Analysis Method: 8015C GLY   Date Collected: 11/08/2023 11:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 03:08

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.: 808697   Units: mg/L

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

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16029.D				
Lims ID:	580-133711-B-5				
Client ID:	AF-RHMW17S-WQEB01-2311				
Sample Type:	Client				
Inject. Date:	17-Nov-2023 03:08:45	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0090833-029				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	17-Nov-2023 10:39:48	Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

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

* 4 n-Heptyl Alcohol

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml
6.279	6.284	-0.005	2582526	50.0

Reagents:

SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16029.D			
Injection Date:	17-Nov-2023 03:08:45	Instrument ID:	CVGG2	Operator ID:
Lims ID:	580-133711-B-5	Lab Sample ID:	680-133711-5	Worklist Smp#: 29
Client ID:	AF-RHMW17S-WQEB01-2311			
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#: 0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI	

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16029.D

* n-Heptyl Alcohol(6.279)

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: AF-RHMW12A-WGN01LF-2311   Lab Sample ID: 580-133711-6

Matrix: Water   Lab File ID: 1IK16030.D

Analysis Method: 8015C GLY   Date Collected: 11/09/2023 09:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 03:32

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.: 808697   Units: mg/L

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

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16030.D	
Lims ID:	580-133711-C-6	
Client ID:	AF-RHMW12A-WGN01LF-2311	
Sample Type:	Client	

Inject. Date:	17-Nov-2023 03:32:10	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0090833-030				
Operator ID:		Instrument ID:	CVGG2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	17-Nov-2023 10:39:48	Calib Date:	15-Nov-2023 17:44:20
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det:	GC FID2B
Process Host:	CTX1618		

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

* 4 n-Heptyl Alcohol

6.278	6.284	-0.006	2218007	50.0	

Reagents:

SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16030.D
Injection Date: 17-Nov-2023 03:32:10   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-133711-C-6   Lab Sample ID: 680-133711-6   Worklist Smp#:   30
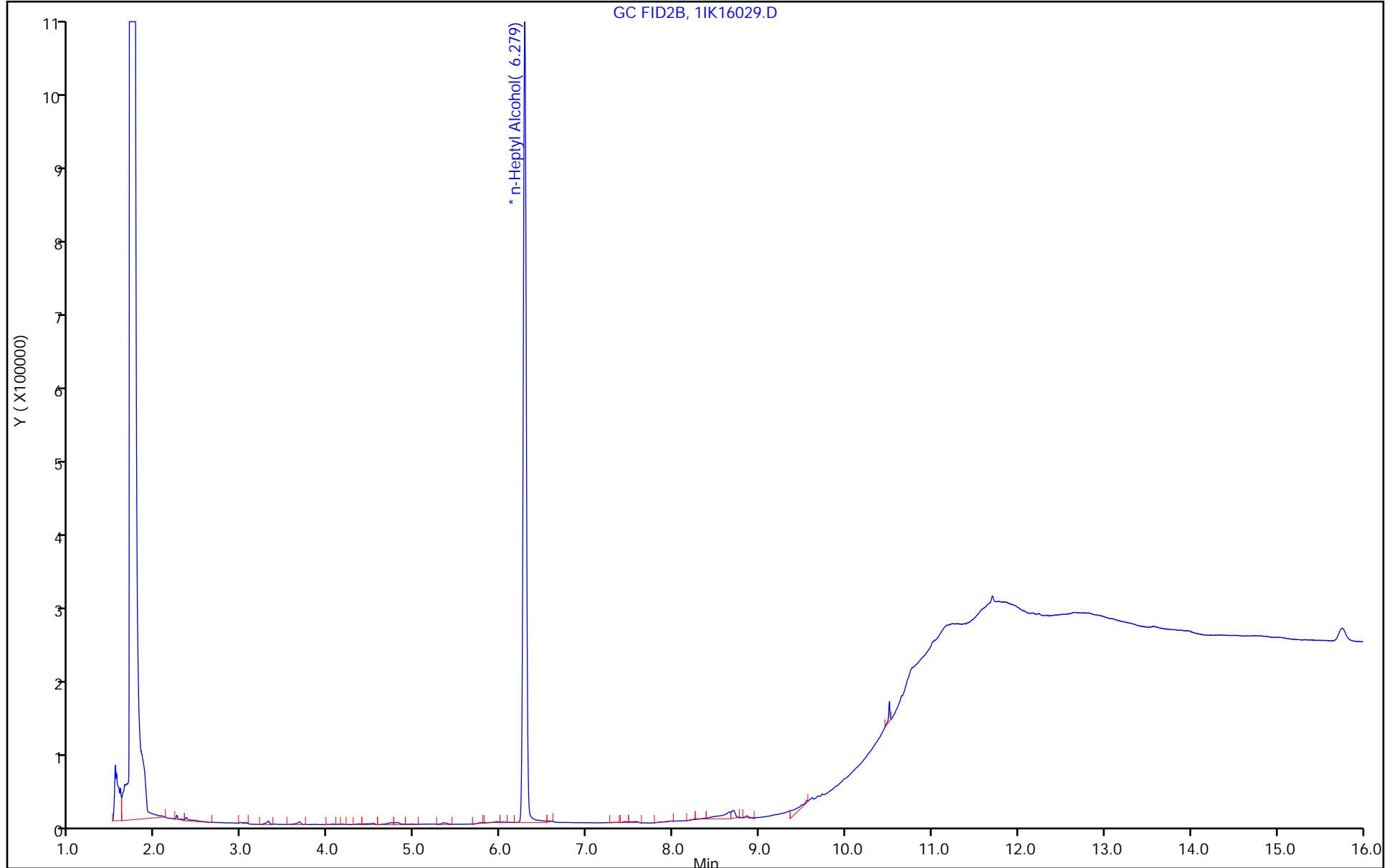Client ID: AF-RHMW12A-WGN01LF-2311
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

11/17/2023
9:46 AM
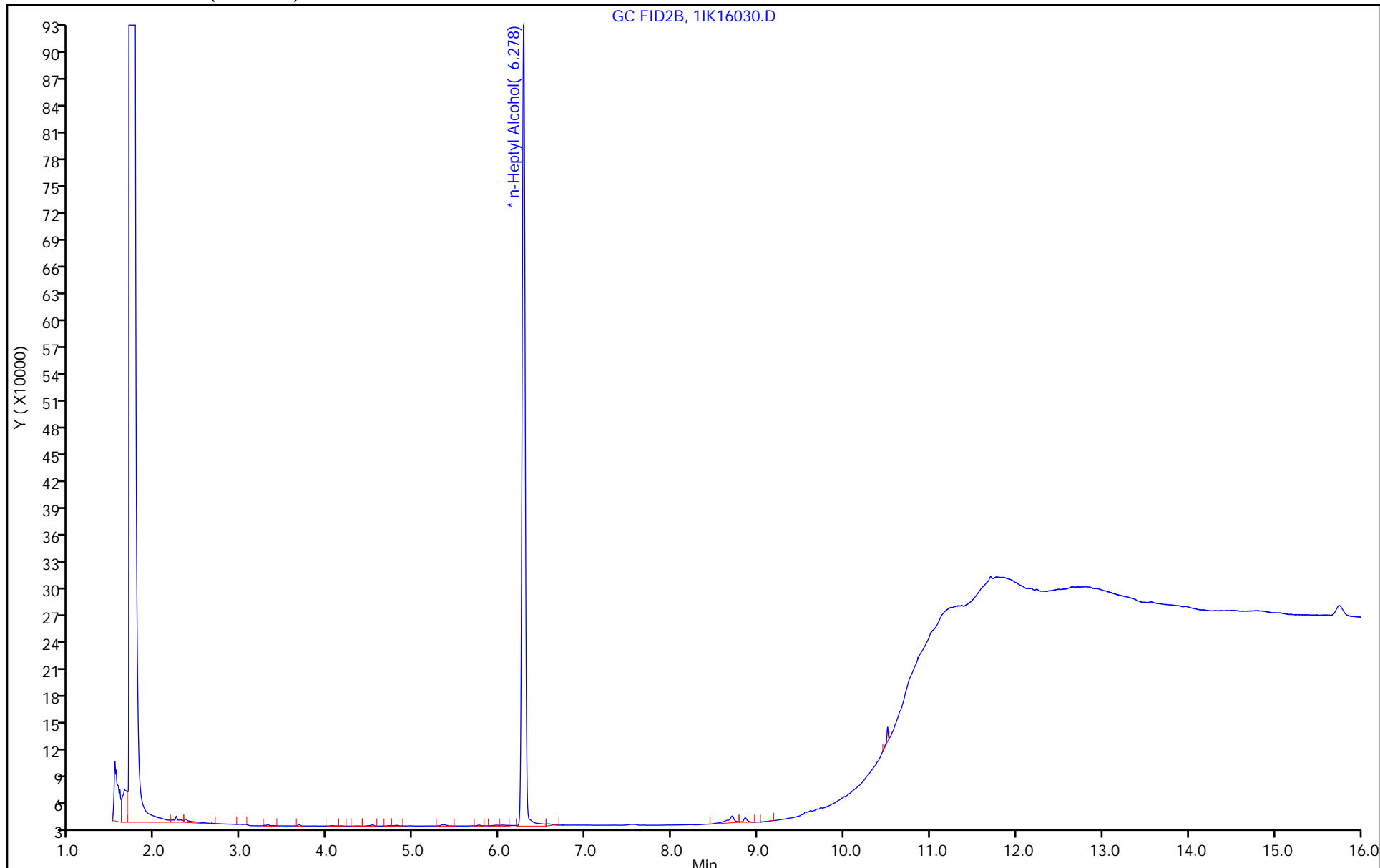
FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: AF-RHMW12A-WGFD01LF-2311   Lab Sample ID: 580-133711-7

Matrix: Water   Lab File ID: 1IK16031.D

Analysis Method: 8015C GLY   Date Collected: 11/09/2023 09:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 03:55

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.: 808697   Units: mg/L

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

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16031.D	
Lims ID:	580-133711-B-7	
Client ID:	AF-RHMW12A-WGFD01LF-2311	
Sample Type:	Client	

Inject. Date:	17-Nov-2023 03:55:40	ALS Bottle#:	0	Worklist Smp#: 31
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	
Sample Info:	680-0090833-031			
Operator ID:		Instrument ID:	CVGG2	

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	17-Nov-2023 10:39:48	Calib Date:	15-Nov-2023 17:44:20
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

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

*   4 n-Heptyl Alcohol

6.278	6.284	-0.006	2417679	50.0	

Reagents:

SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16031.D
Injection Date: 17-Nov-2023 03:55:40   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-133711-B-7   Lab Sample ID: 680-133711-7   Worklist Smp#:   31
Client ID: AF-RHMW12A-WGFD01LF-2311
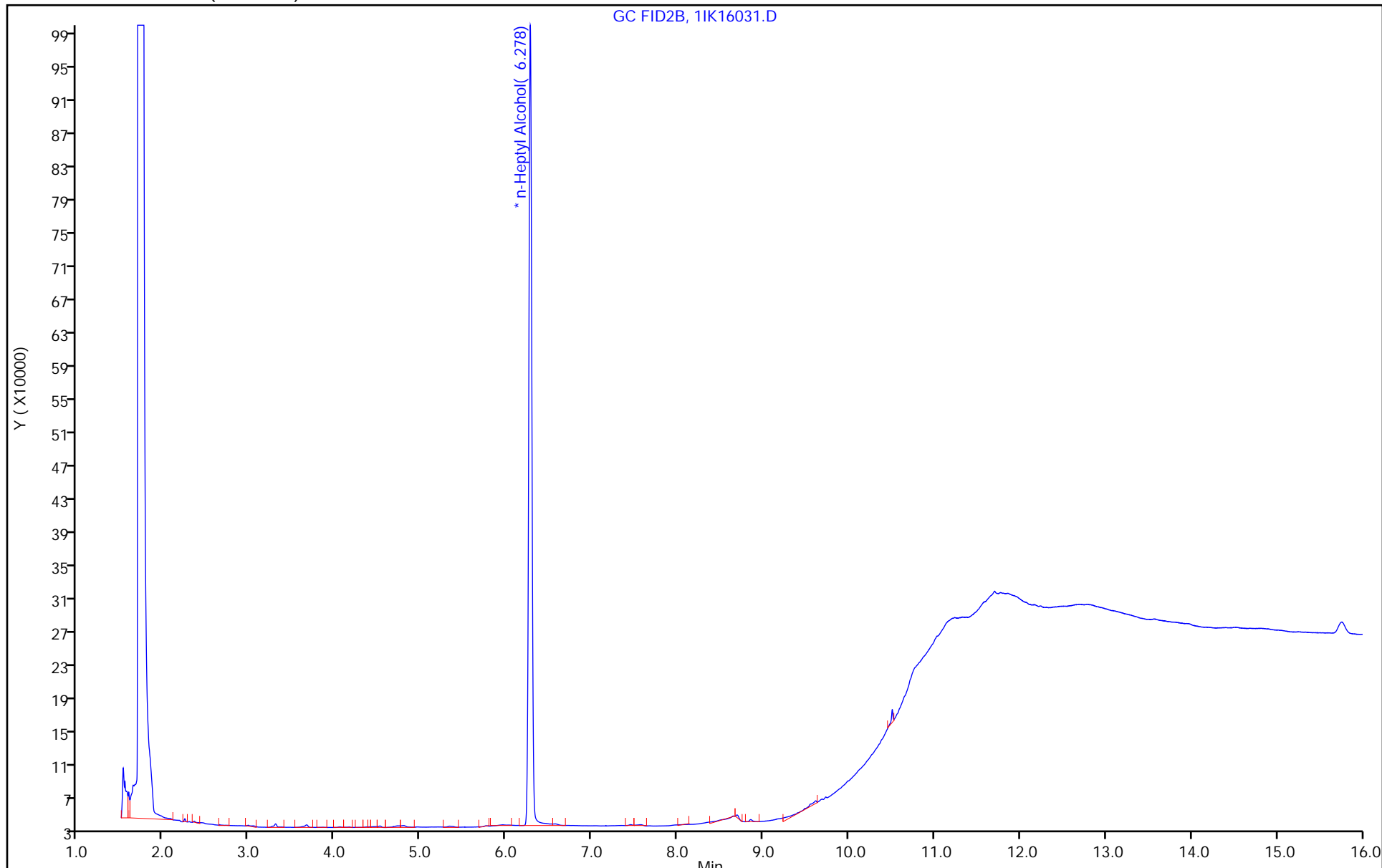Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16031.D

* n-Heptyl Alcohol(6.278)

11/17/2023
9:46 AM

Lab Name: Eurofins Savannah   Job No.: 580-133711-1   Analy Batch No.: 808404

SDG No.: _____

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

Calibration Start Date: 11/15/2023 15:23   Calibration End Date: 11/15/2023 17:44   Calibration ID: 92674

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-808404/12	1IK15012.D
Level 2	IC 680-808404/11	1IK15011.D
Level 3	IC 680-808404/10	1IK15010.D
Level 4	ICIS 680-808404/9	1IK15009.D
Level 5	IC 680-808404/8	1IK15008.D
Level 6	IC 680-808404/7	1IK15007.D
Level 7	IC 680-808404/6	1IK15006.D

ANALYTE	RRF LVL 1 / LVL 6	LVL 2 / LVL 7	LVL 3	LVL 4	LVL 5	CURVE TYPE	B	M1	M2	#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
Ethanol, 2-propoxy	1.1302 +++++	0.7908 0.5926	+++++	0.6956	0.6816	Lin2	0.9959	0.6228							0.9960		0.9900
4-Hydroxy-4-methyl-2-pentanone	1.1112 +++++	0.7643 0.5781	+++++	0.6600	0.6461	Lin2	1.0136	0.5938							0.9970		0.9900
2-Butoxyethanol	1.2800 +++++	0.8884 0.6678	+++++	0.7869	0.7698	Lin2	1.1312	0.7021							0.9950		0.9900
Dipropylene Glycol Methyl Ether	0.1210 +++++	0.0739 0.0492	+++++	0.0570	0.0529	Lin2	0.1428	0.0485							0.9980		0.9900
Propylene glycol	0.8828 +++++	0.5811 0.4192	+++++	0.4821	0.4062	Lin2	0.9439	0.4070							0.9970		0.9900
Ethylene glycol	0.6653 +++++	0.4183 0.3134	+++++	0.3652	0.3000	Lin2	0.7120	0.3014							0.9930		0.9900
2-(2-Butoxyethoxy)ethanol	1.1471 +++++	0.7679 0.5480	+++++	0.6196	0.5767	Lin2	1.1924	0.5459							0.9990		0.9900
2,2'-Oxybisethanol	0.7807 +++++	0.4897 0.3378	+++++	0.4078	0.3226	Lin2	0.8971	0.3278							0.9930		0.9900
Triethylene Glycol	1.2266 +++++	0.6725 0.3849	+++++	0.4728	0.3668	Lin2	1.7239	0.3558							0.9930		0.9900
Tetraethylene Glycol	0.7840 +++++	0.4933 0.3409	+++++	0.4186	0.3306	Lin2	1.7780	0.3348							0.9930		0.9900

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

FORM VI 8015C GLY

11/17/2023
9:46 AM

Lab Name: Eurofins Savannah   Job No.: 580-133711-1   Analy Batch No.: 808404

SDG No.:

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

Calibration Start Date: 11/15/2023 15:23   Calibration End Date: 11/15/2023 17:44   Calibration ID: 92674

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-808404/12	1IK15012.D
Level 2	IC 680-808404/11	1IK15011.D
Level 3	IC 680-808404/10	1IK15010.D
Level 4	ICIS 680-808404/9	1IK15009.D
Level 5	IC 680-808404/8	1IK15008.D
Level 6	IC 680-808404/7	1IK15007.D
Level 7	IC 680-808404/6	1IK15006.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 / LVL 6	LVL 2 / LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 / LVL 6	LVL 2 / LVL 7	LVL 3	LVL 4	LVL 5
Ethanol, 2-propoxy	nHPA	Lin2	89414 / +++++	175351 / 3100269	+++++	697507	1795383	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
4-Hydroxy-4-methyl-2-pentanone	nHPA	Lin2	87911 / +++++	169482 / 3024238	+++++	661829	1701776	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
2-Butoxyethanol	nHPA	Lin2	101265 / +++++	197005 / 3493941	+++++	789027	2027645	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
Dipropylene Glycol Methyl Ether	nHPA	Lin2	9574 / +++++	16390 / 257340	+++++	57169	139230	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
Propylene glycol	nHPA	Lin2	69847 / +++++	128858 / 2193222	+++++	483381	1070046	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
Ethylene glycol	nHPA	Lin2	52632 / +++++	92757 / 1639426	+++++	366220	790234	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
2-(2-Butoxyethoxy)ethanol	nHPA	Lin2	90755 / +++++	170281 / 2866855	+++++	621252	1519207	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
2,2'-Oxybisethanol	nHPA	Lin2	61764 / +++++	108584 / 1767042	+++++	408918	849792	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
Triethylene Glycol	nHPA	Lin2	97042 / +++++	149118 / 2013907	+++++	474118	966093	2.00 / +++++	5.00 / 100	+++++	20.0	50.0
Tetraethylene Glycol	nHPA	Lin2	124057 / +++++	218792 / 3567157	+++++	839423	1741870	4.00 / +++++	10.0 / 200	+++++	40.0	100

Curve Type Legend:

Lin2 = Linear 1/conc^2 ISTD

Lab Name: Eurofins Savannah   Job No.: 580-133711-1   Analy Batch No.: 808404

SDG No.:

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

Calibration Start Date: 11/15/2023 15:23   Calibration End Date: 11/15/2023 17:44   Calibration ID: 92674

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-808404/12	1IK15012.D
Level 2	IC 680-808404/11	1IK15011.D
Level 3	IC 680-808404/10	1IK15010.D
Level 4	ICIS 680-808404/9	1IK15009.D
Level 5	IC 680-808404/8	1IK15008.D
Level 6	IC 680-808404/7	1IK15007.D
Level 7	IC 680-808404/6	1IK15006.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Ethanol, 2-propoxy	1.5 -6.4	-5.0	+++++	3.7	6.2	+++++	20 20	20		20	20	
4-Hydroxy-4-methyl-2-pentanone	1.8 -4.4	-5.4	+++++	2.6	5.4	+++++	20 20	20		20	20	
2-Butoxyethanol	1.7 -6.5	-5.7	+++++	4.0	6.4	+++++	20 20	20		20	20	
Dipropylene Glycol Methyl Ether	2.2 -1.6	-6.5	+++++	2.8	3.1	+++++	20 20	20		20	20	
Propylene glycol	0.9 0.7	-3.6	+++++	6.8	-4.8	+++++	20 20	20		20	20	
Ethylene glycol	2.6 1.6	-8.4	+++++	9.4	-5.2	+++++	20 20	20		20	20	
2-(2-Butoxyethoxy)ethanol	0.9 -1.8	-3.0	+++++	2.6	1.3	+++++	20 20	20		20	20	
2,2'-Oxybisethanol	1.3 0.3	-5.3	+++++	10.7	-7.0	+++++	20 20	20		20	20	
Triethylene Glycol	2.5 3.3	-7.9	+++++	8.7	-6.6	+++++	20 20	20		20	20	
Tetraethylene Glycol	1.4 -0.8	-5.8	+++++	11.7	-6.6	+++++	20 20	20		20	20	

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15006.D		
Lims ID:	ic g7		
Client ID:			
Sample Type:	IC	Calib Level:	7
Inject. Date:	15-Nov-2023 15:23:43	ALS Bottle#:	0 Worklist Smp#: 6
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Sample Info:	680-0090783-006		
Operator ID:		Instrument ID:	CVGG2
Sublist:	chrom-8015_GLY_VGG*sub2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	16-Nov-2023 11:39:04	Calib Date:	15-Nov-2023 17:44:20
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B	
Process Host:	CTX1640		

First Level Reviewer: AR8P   Date: 15-Nov-2023 17:21:23

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
4.471	4.471	0.000	3100269	100.0	93.6	
2 4-Hydroxy-4-methyl-2-pentanone						
5.258	5.258	0.000	3024238	100.0	95.6	
3 2-Butoxyethanol						
5.689	5.689	0.000	3493941	100.0	93.5	
* 4 n-Heptyl Alcohol						
6.278	6.278	0.000	2615890	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
7.326	7.326	0.000	257340	100.0	98.4	
6 Propylene glycol						
8.250	8.250	0.000	2193222	100.0	100.7	
7 Ethylene glycol						
8.700	8.700	0.000	1639426	100.0	101.6	
8 2-(2-Butoxyethoxy)ethanol						
9.808	9.808	0.000	2866855	100.0	98.2	
9 2,2'-Oxybisethanol						
10.504	10.504	0.000	1767042	100.0	100.3	
10 Triethylene Glycol						
11.697	11.697	0.000	2013907	100.0	103.3	
11 Tetraethylene Glycol						
13.989	13.989	0.000	3567157	200.0	198.3	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00053	Amount Added: 50.00	Units: uL	
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15006.D
Injection Date: 15-Nov-2023 15:23:43   Instrument ID: CVGG2   Operator ID:
Lims ID: ic g7   Worklist Smp#:   6
Client ID:
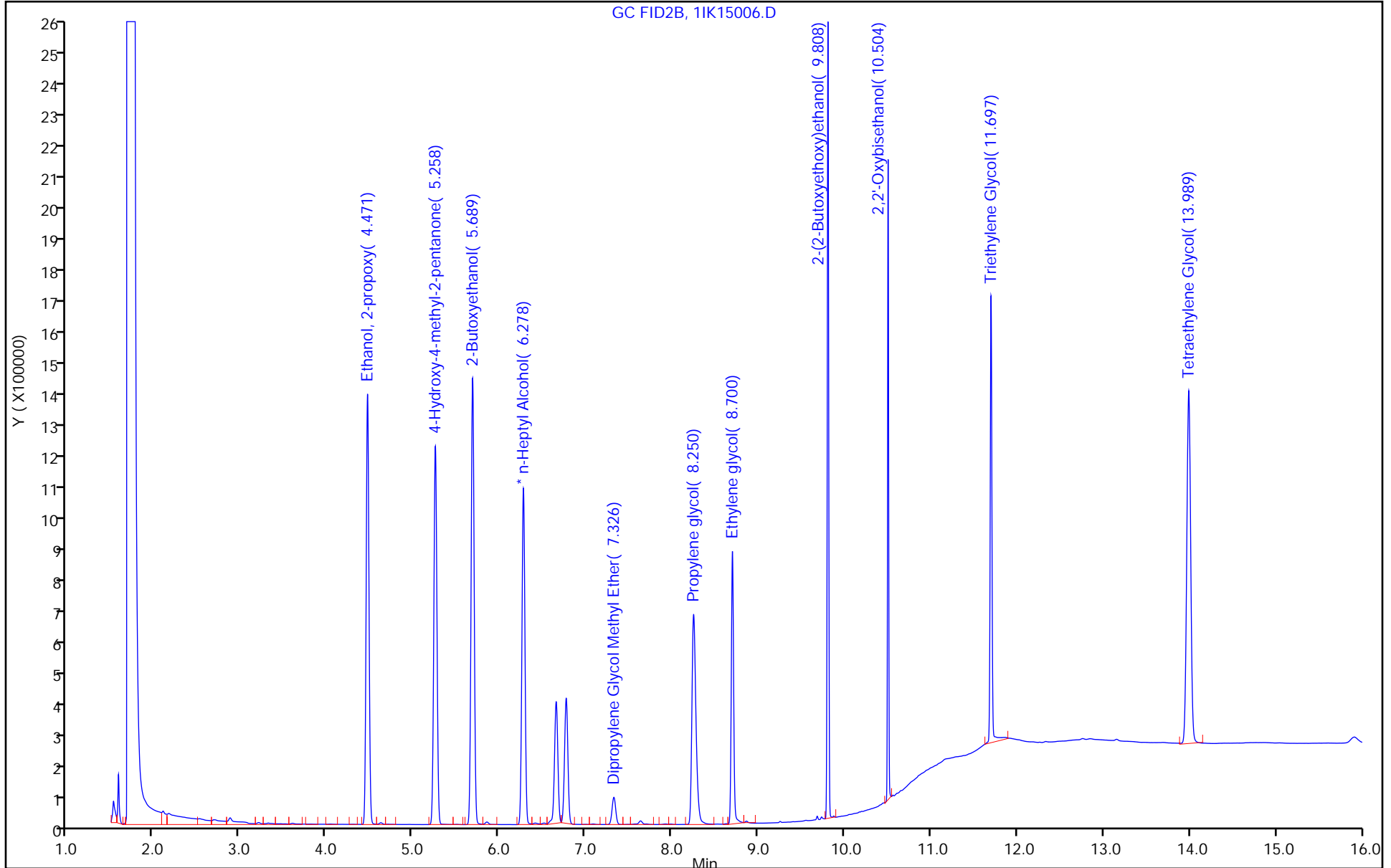Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK15006.D

11/17/2023
9:46 AM

Eurofins Savannah
Target Compound Quantitation Report

Data File:　　　　　\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15007.D
Lims ID:　　　　　　ic g6
Client ID:
Sample Type:　　　IC　　　　　　　　　　Calib Level:　　　6
Inject. Date:　　　　15-Nov-2023 15:47:13　　ALS Bottle#:　　0　　　Worklist Smp#:　　7
Injection Vol:　　　1.0 ul　　　　　　　　　Dil. Factor:　　　1.0000
Sample Info:　　　　680-0090783-007
Operator ID:　　　　　　　　　　　　　　Instrument ID:　　CVGG2
Sublist:　　　　　　　chrom-8015_GLY_VGG*sub2

Method:　　　　　　\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\8015_GLY_VGG.m
Limit Group:　　　　8015C_DAI
Last Update:　　　　16-Nov-2023 11:39:05　　Calib Date:　　　15-Nov-2023 17:44:20
Integrator:　　　　　Falcon
Quant Method:　　　Internal Standard　　　　　Quant By:　　　　Initial Calibration
Last ICal File:　　　\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D

Column 1 :　　　　J&W DB WAX (0.45 mm)　　　　　　　Det: GC FID2B
Process Host:　　　CTX1640

First Level Reviewer: AR8P　　　　　　　　Date:　　　　　16-Nov-2023 11:09:45

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
4.472	4.471	0.001	2511726	80.0	106.2	
2 4-Hydroxy-4-methyl-2-pentanone						
5.259	5.258	0.001	2406799	80.0	106.6	
3 2-Butoxyethanol						
5.689	5.689	0.000	2829474	80.0	106.1	
* 4 n-Heptyl Alcohol						
6.277	6.278	-0.001	1870888	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
7.327	7.326	0.001	199119	80.0	106.7	
6 Propylene glycol						
8.254	8.250	0.004	1598739	80.0	102.7	
7 Ethylene glycol						
8.701	8.700	0.001	1187415	80.0	102.9	
8 2-(2-Butoxyethoxy)ethanol						
9.808	9.808	0.000	2188973	80.0	105.0	
9 2,2'-Oxybisethanol						
10.504	10.504	0.000	1241858	80.0	98.5	
10 Triethylene Glycol						
11.698	11.697	0.001	1362169	80.0	97.5	
11 Tetraethylene Glycol						
13.988	13.989	-0.001	2497176	160.0	194.0	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00053	Amount Added: 40.00	Units: uL
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15007.D
Injection Date: 15-Nov-2023 15:47:13   Instrument ID: CVGG2   Operator ID:
Lims ID: ic g6   Worklist Smp#:   7
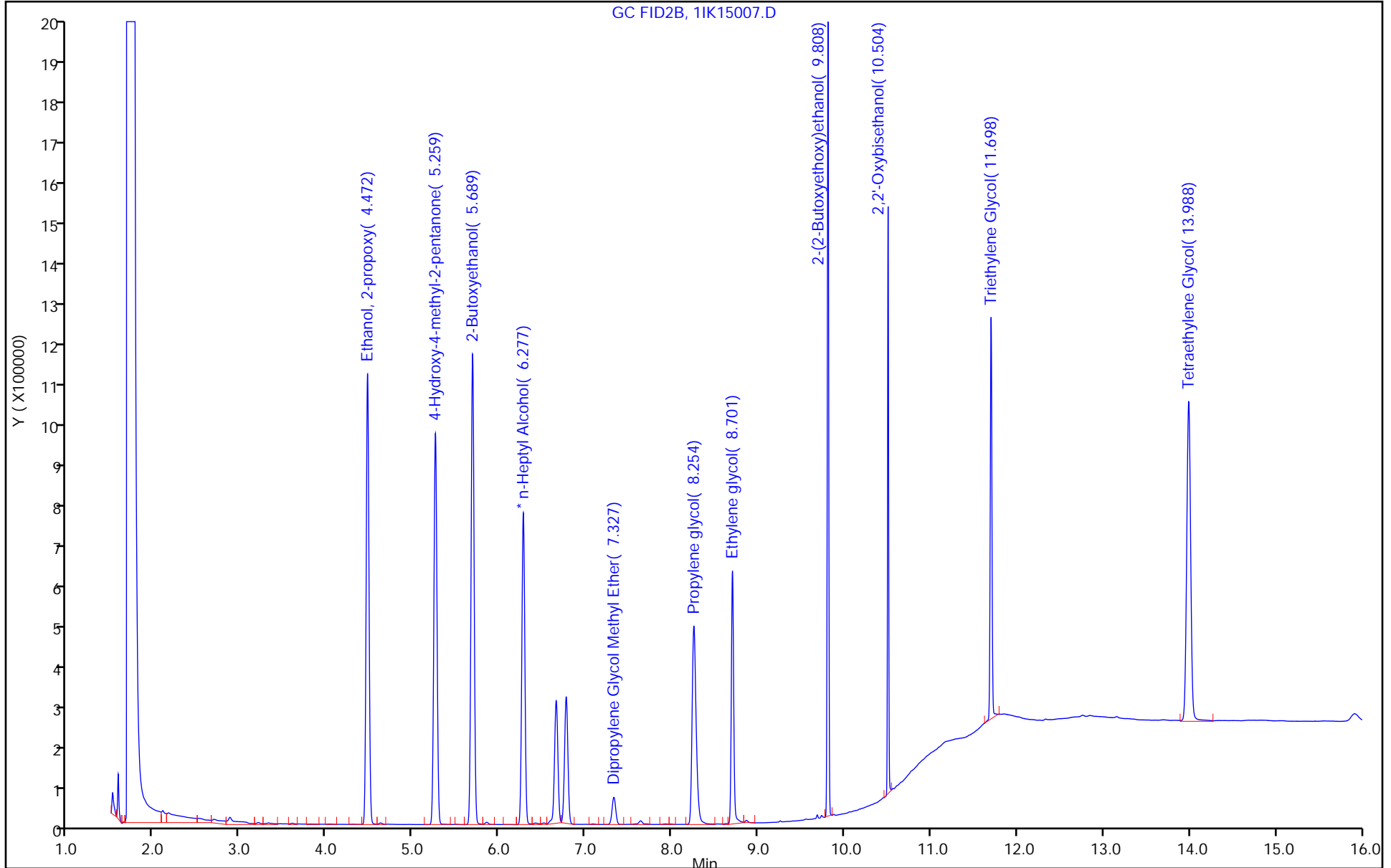Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK15007.D

Peaks labeled:
- Ethanol, 2-propoxy(4.472)
- 4-Hydroxy-4-methyl-2-pentanone(5.259)
- 2-Butoxyethanol(5.689)
- *n-Heptyl Alcohol(6.277)
- Dipropylene Glycol Methyl Ether(7.327)
- Propylene glycol(8.254)
- Ethylene glycol(8.701)
- 2-(2-Butoxyethoxy)ethanol(9.808)
- 2,2'-Oxybisethanol(10.504)
- Triethylene Glycol(11.698)
- Tetraethylene Glycol(13.988)

Y (X100000)
Min

11/17/2023
9:46 AM

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15008.D
Lims ID: ic g5
Client ID:

Sample Type:	IC	Calib Level:	5
Inject. Date:	15-Nov-2023 16:10:37	ALS Bottle#:	0

Worklist Smp#:   8

Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0090783-008

Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 16-Nov-2023 11:39:07   Calib Date: 15-Nov-2023 17:44:20
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1640

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	4.475	4.471	0.004	1795383	50.0	53.1	
2 4-Hydroxy-4-methyl-2-pentanone							
	5.262	5.258	0.004	1701776	50.0	52.7	
3 2-Butoxyethanol							
	5.689	5.689	0.000	2027645	50.0	53.2	
* 4 n-Heptyl Alcohol							
	6.275	6.278	-0.003	2634100	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	7.329	7.326	0.003	139230	50.0	51.5	
6 Propylene glycol							
	8.256	8.250	0.006	1070046	50.0	47.6	
7 Ethylene glycol							
	8.703	8.700	0.003	790234	50.0	47.4	
8 2-(2-Butoxyethoxy)ethanol							
	9.808	9.808	0.000	1519207	50.0	50.6	
9 2,2'-Oxybisethanol							
	10.505	10.504	0.001	849792	50.0	46.5	
10 Triethylene Glycol							
	11.698	11.697	0.001	966093	50.0	46.7	
11 Tetraethylene Glycol							
	13.990	13.989	0.001	1741870	100.0	93.4	

Reagents:

SG_Gly_CAL_00053	Amount Added: 25.00	Units: uL	
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Chrom Revision: 2.3 13-Nov-2023 16:16:38

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15008.D
Injection Date: 15-Nov-2023 16:10:37   Instrument ID: CVGG2   Operator ID:
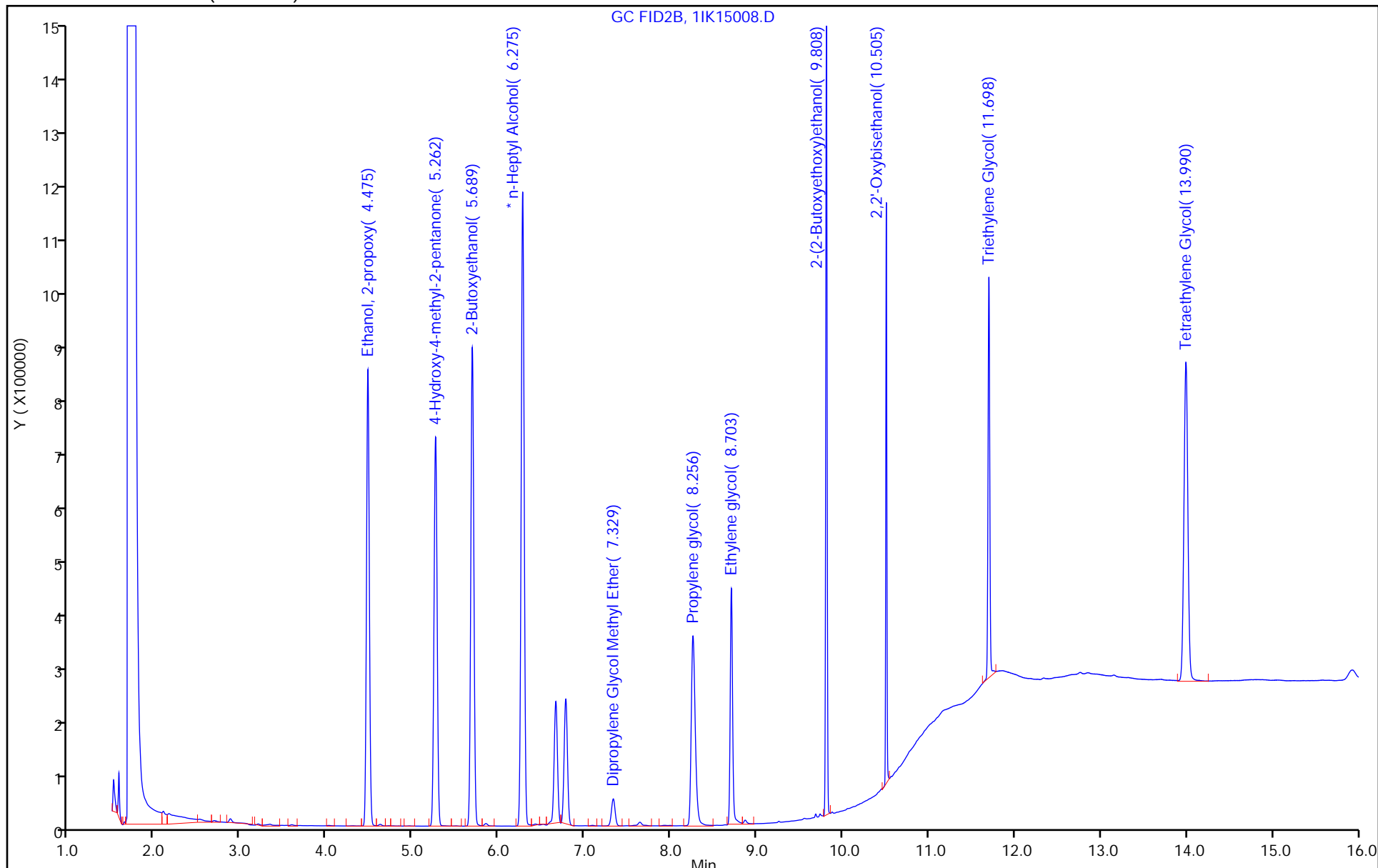Lims ID: ic g5   Worklist Smp#:   8
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK15008.D

11/17/2023
9:46 AM

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15009.D
Lims ID:	icis g4
Client ID:	

Sample Type:	ICIS	Calib Level:	4		
Inject. Date:	15-Nov-2023 16:34:03	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0090783-009				
Operator ID:		Instrument ID:	CVGG2		
Sublist:	chrom-8015_GLY_VGG*sub2				

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	16-Nov-2023 11:39:08	Calib Date:	15-Nov-2023 17:44:20
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B
Process Host:	CTX1640		

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy	4.474	4.474	0.000	697507	20.0	20.7	
2 4-Hydroxy-4-methyl-2-pentanone	5.260	5.260	0.000	661829	20.0	20.5	
3 2-Butoxyethanol	5.690	5.690	0.000	789027	20.0	20.8	
* 4 n-Heptyl Alcohol	6.278	6.278	0.000	2506763	50.0	50.0	
5 Dipropylene Glycol Methyl Ether	7.328	7.328	0.000	57169	20.0	20.6	
6 Propylene glycol	8.258	8.258	0.000	483381	20.0	21.4	
7 Ethylene glycol	8.703	8.703	0.000	366220	20.0	21.9	
8 2-(2-Butoxyethoxy)ethanol	9.807	9.807	0.000	621252	20.0	20.5	
9 2,2'-Oxybisethanol	10.504	10.504	0.000	408918	20.0	22.1	
10 Triethylene Glycol	11.698	11.698	0.000	474118	20.0	21.7	
11 Tetraethylene Glycol	13.988	13.988	0.000	839423	40.0	44.7	

Reagents:

SG_Gly_CAL_00053	Amount Added: 10.00	Units: uL	
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Chrom Revision: 2.3 13-Nov-2023 16:16:38

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15009.D
Injection Date: 15-Nov-2023 16:34:03   Instrument ID: CVGG2   Operator ID:
Lims ID: icis g4   Worklist Smp#: 9
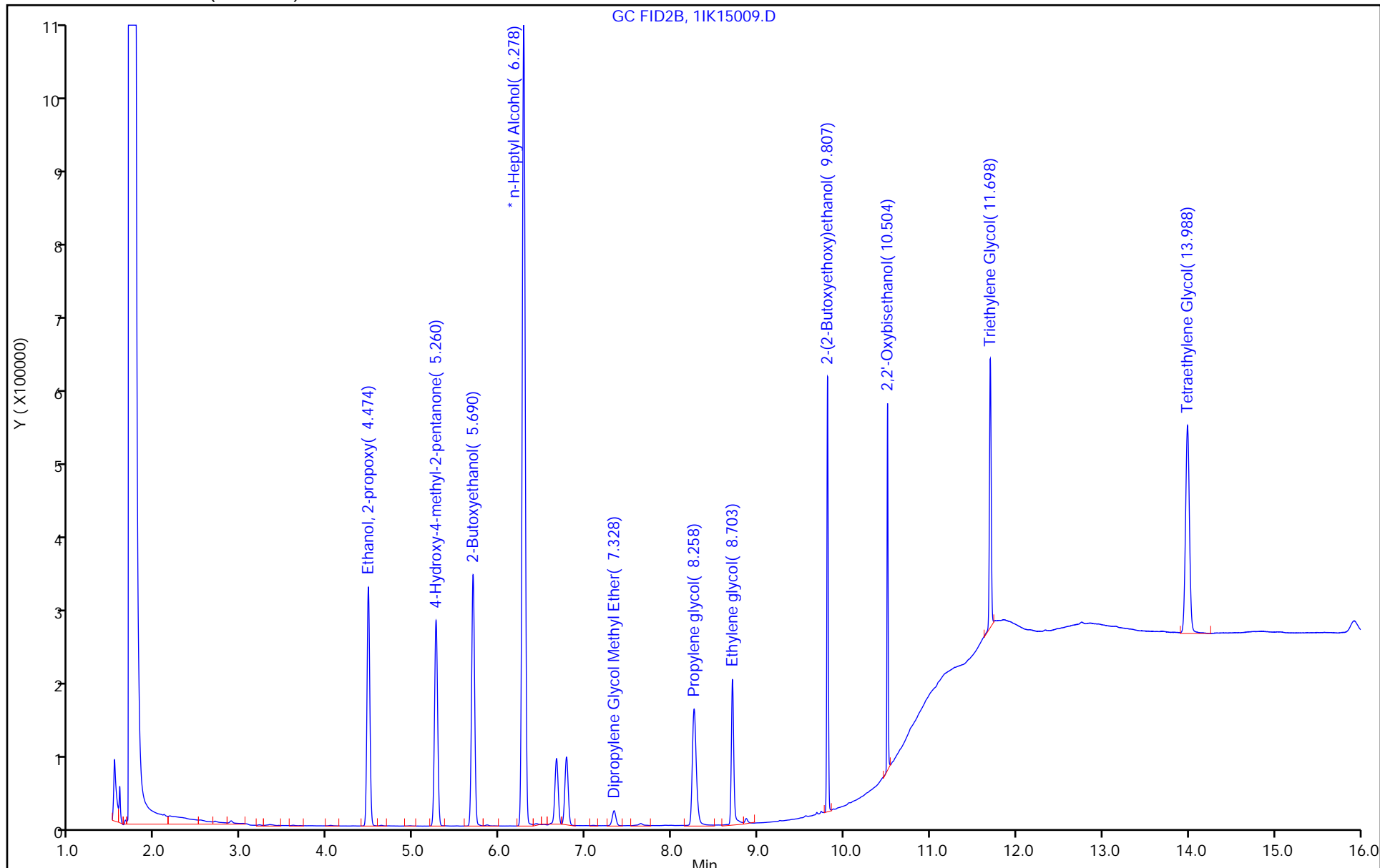Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#: 0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK15009.D

11/17/2023
9:46 AM

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15010.D
Lims ID: ic g3
Client ID:
Sample Type: IC   Calib Level: 3
Inject. Date: 15-Nov-2023 16:57:34   ALS Bottle#:   0   Worklist Smp#:   10
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0090783-010
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 16-Nov-2023 11:39:09   Calib Date: 15-Nov-2023 17:44:20
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1640

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	4.473	4.474	-0.001	316326	10.0	11.3	
2 4-Hydroxy-4-methyl-2-pentanone							
	5.259	5.260	-0.001	315601	10.0	11.8	
3 2-Butoxyethanol							
	5.691	5.690	0.001	352337	10.0	11.1	
* 4 n-Heptyl Alcohol							
	6.279	6.278	0.001	1966905	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	7.326	7.328	-0.002	30938	10.0	13.3	
6 Propylene glycol							
	8.256	8.258	-0.002	284510	10.0	15.4	
7 Ethylene glycol							
	8.703	8.703	0.000	213013	10.0	15.6	
8 2-(2-Butoxyethoxy)ethanol							
	9.807	9.807	0.000	333376	10.0	13.3	
9 2,2'-Oxybisethanol							
	10.504	10.504	0.000	250607	10.0	16.7	
10 Triethylene Glycol							
	11.697	11.698	-0.001	302489	10.0	16.8	
11 Tetraethylene Glycol							
	13.986	13.988	-0.002	526705	20.0	34.7	

Reagents:

SG_Gly_CAL_00053   Amount Added: 5.00   Units: uL
SG_GLY_ISTD_00129   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15010.D
Injection Date: 15-Nov-2023 16:57:34   Instrument ID: CVGG2   Operator ID:
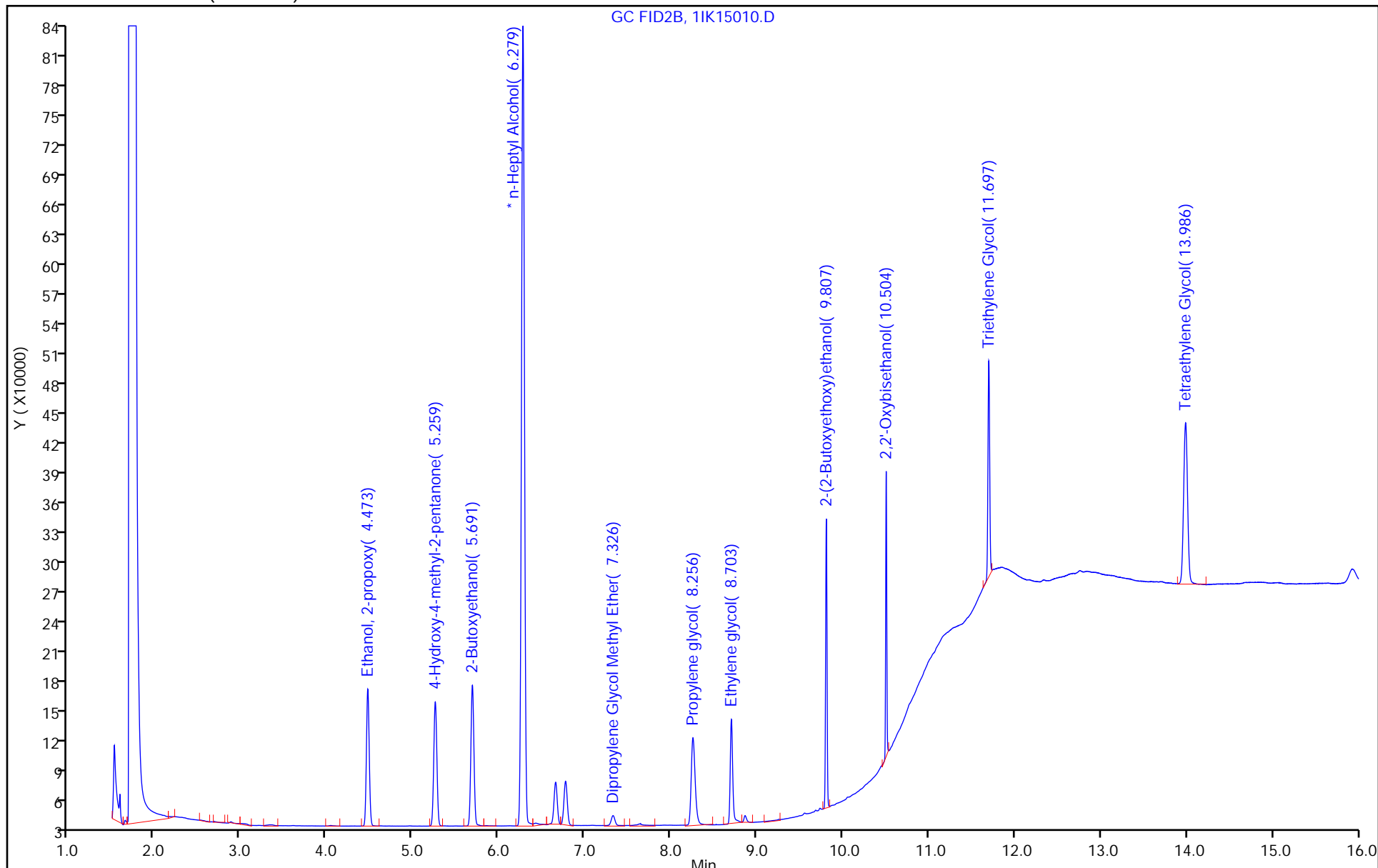Lims ID: ic g3   Worklist Smp#:   10
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK15010.D

11/17/2023
9:46 AM

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15011.D
Lims ID:	ic g2
Client ID:	

Sample Type:	IC	Calib Level:	2		
Inject. Date:	15-Nov-2023 17:20:58	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0090783-011				
Operator ID:		Instrument ID:	CVGG2		
Sublist:	chrom-8015_GLY_VGG*sub2				

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	16-Nov-2023 11:39:11	Calib Date:	15-Nov-2023 17:44:20
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :	J&W DB WAX (0.45 mm)		Det: GC FID2B
Process Host:	CTX1640		

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	4.472	4.474	-0.002	175351	5.00	4.75	
2 4-Hydroxy-4-methyl-2-pentanone							
	5.257	5.260	-0.003	169482	5.00	4.73	
3 2-Butoxyethanol							
	5.688	5.690	-0.002	197005	5.00	4.72	
* 4 n-Heptyl Alcohol							
	6.277	6.278	-0.001	2217440	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	7.325	7.328	-0.003	16390	5.00	4.67	
6 Propylene glycol							
	8.257	8.258	-0.001	128858	5.00	4.82	
7 Ethylene glycol							
	8.704	8.703	0.001	92757	5.00	4.58	
8 2-(2-Butoxyethoxy)ethanol							
	9.807	9.807	0.000	170281	5.00	4.85	
9 2,2'-Oxybisethanol							
	10.503	10.504	-0.001	108584	5.00	4.73	
10 Triethylene Glycol							
	11.697	11.698	-0.001	149118	5.00	4.61	
11 Tetraethylene Glycol							
	13.987	13.988	-0.001	218792	10.0	9.42	

Reagents:

SG_Gly_CAL_00053	Amount Added: 2.50	Units: uL	
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15011.D
Injection Date: 15-Nov-2023 17:20:58   Instrument ID: CVGG2   Operator ID:
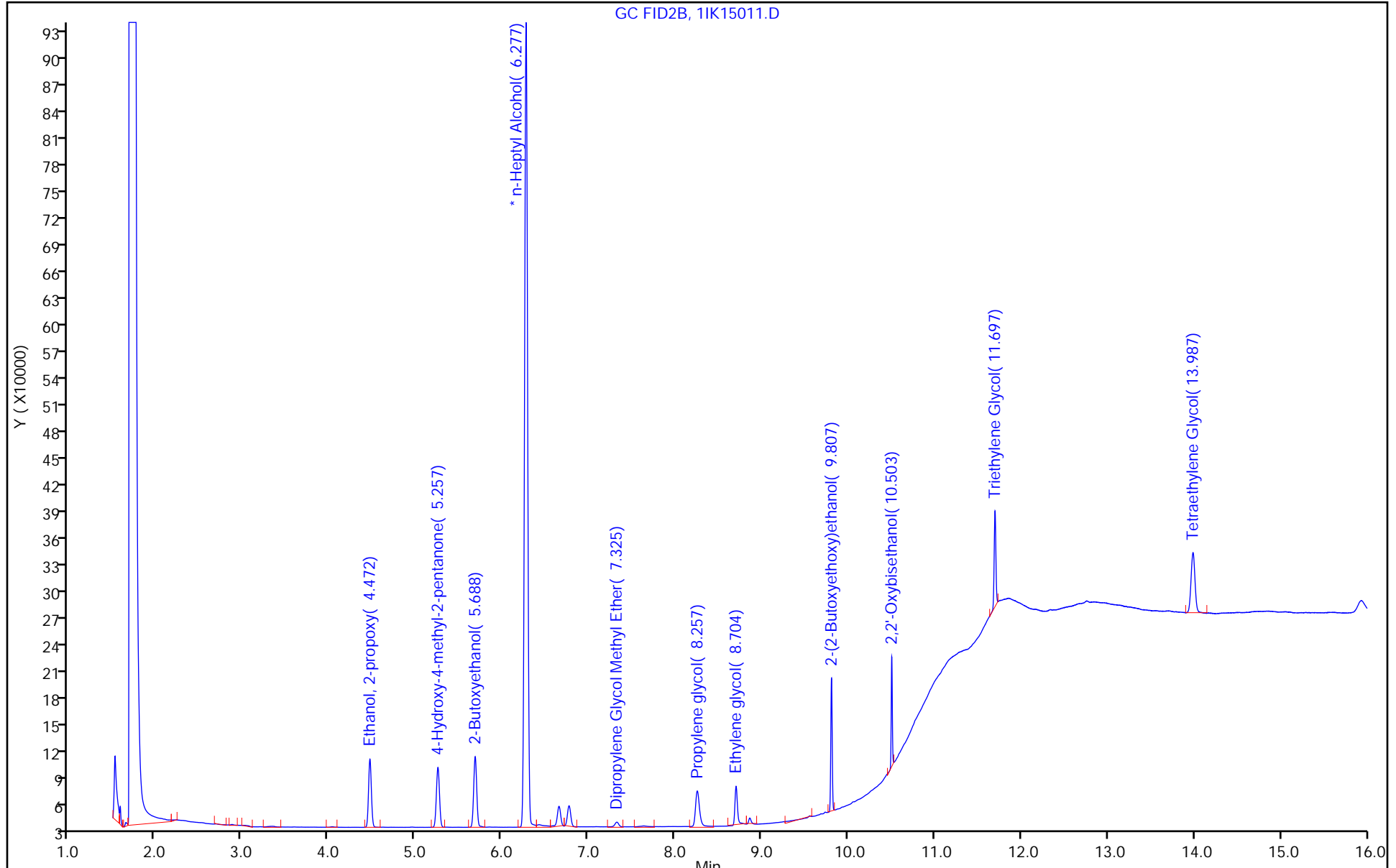Lims ID: ic g2   Worklist Smp#:   11
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK15011.D

11/17/2023
9:46 AM

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		
Lims ID:	ic g1		
Client ID:			
Sample Type:	IC	Calib Level:	1
Inject. Date:	15-Nov-2023 17:44:20	ALS Bottle#:	0 Worklist Smp#: 12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Sample Info:	680-0090783-012		
Operator ID:		Instrument ID:	CVGG2
Sublist:	chrom-8015_GLY_VGG*sub2		

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	16-Nov-2023 11:39:12	Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1640	

First Level Reviewer: AR8P   Date: 15-Nov-2023 19:05:07

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
4.474	4.474	0.000	89414	2.00	2.03	
2 4-Hydroxy-4-methyl-2-pentanone						
5.261	5.260	0.001	87911	2.00	2.04	
3 2-Butoxyethanol						
5.691	5.690	0.001	101265	2.00	2.03	
* 4 n-Heptyl Alcohol						
6.279	6.278	0.001	1977887	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
7.329	7.328	0.001	9574	2.00	2.04	
6 Propylene glycol						
8.258	8.258	0.000	69847	2.00	2.02	
7 Ethylene glycol						
8.708	8.703	0.005	52632	2.00	2.05	
8 2-(2-Butoxyethoxy)ethanol						
9.809	9.807	0.002	90755	2.00	2.02	
9 2,2'-Oxybisethanol						
10.505	10.504	0.001	61764	2.00	2.03	
10 Triethylene Glycol						
11.699	11.698	0.001	97042	2.00	2.05	
11 Tetraethylene Glycol						
13.989	13.988	0.001	124057	4.00	4.06	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00053   Amount Added: 1.00   Units: uL
SG_GLY_ISTD_00129   Amount Added: 10.00   Units: uL   Run Reagent

11/17/2023
                                                                          9:46 AM

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D
Injection Date: 15-Nov-2023 17:44:20   Instrument ID: CVGG2   Operator ID:
Lims ID: ic g1   Worklist Smp#:   12
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK15012.D

11/17/2023
9:46 AM
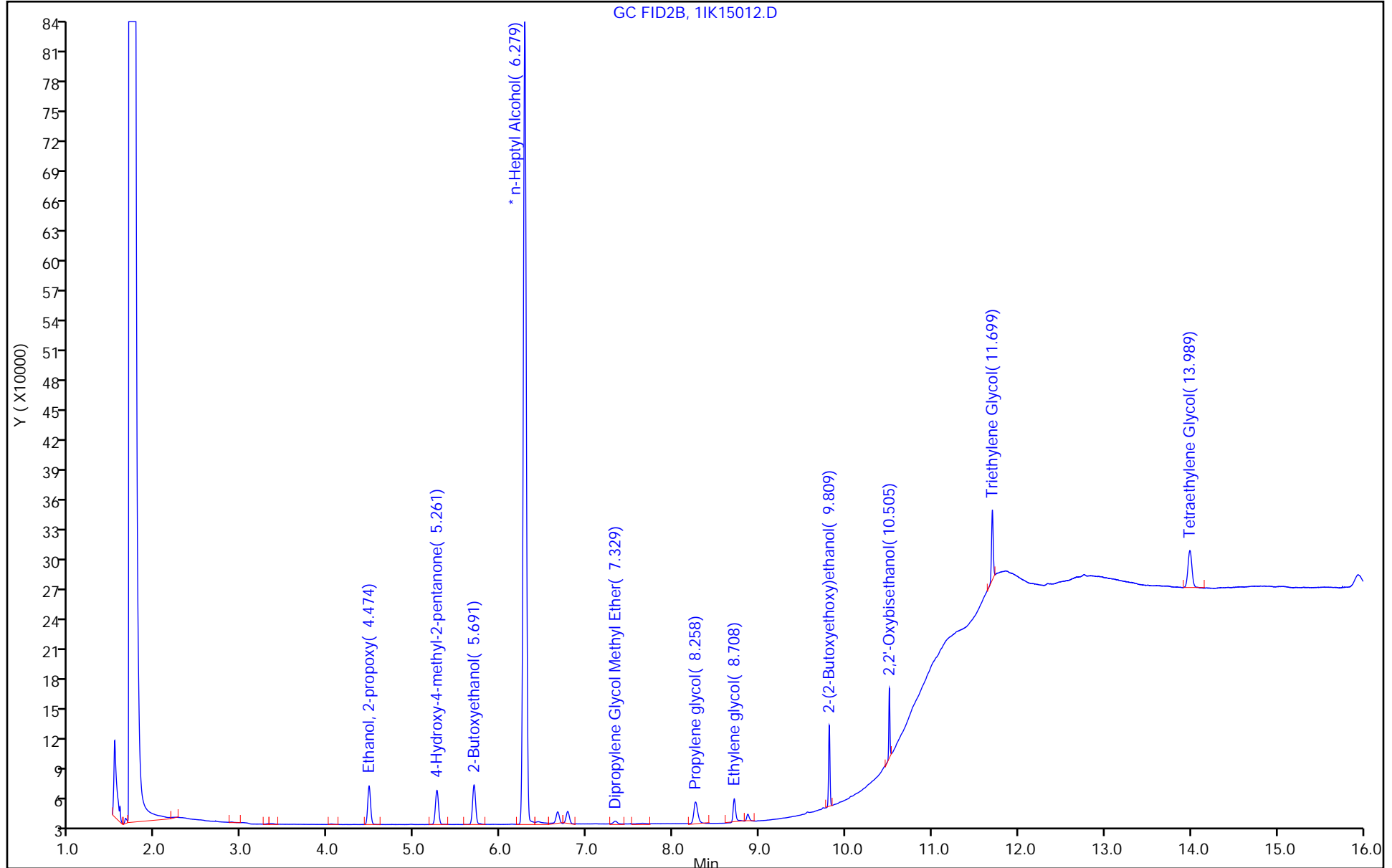
Curve Type:	Linear	
Weighting:	Conc_Sq	
Origin:	None	
Dependency:	Response	
Calib Mode:	ISTD	
Response Base:	AREA	
RF Rounding:	0	

Curve Coefficients

Intercept:	0.9959
Slope:	0.6228

Error Coefficients

Standard Error:	2110000
Relative Standard Error:	6.4
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	2.260341	50.0	1977887.0	1.130171	Y
2	IC 680-808404/11	5.0	3.953906	50.0	2217440.0	0.790781	Y
3	IC 680-808404/10	10.0	8.041212	50.0	1966905.0	0.804121	N
4	ICIS 680-808404/9	20.0	13.912504	50.0	2506763.0	0.695625	Y
5	IC 680-808404/8	50.0	34.079629	50.0	2634100.0	0.681593	Y
6	IC 680-808404/7	80.0	67.126573	50.0	1870888.0	0.839082	N
7	IC 680-808404/6	100.0	59.258398	50.0	2615890.0	0.592584	Y
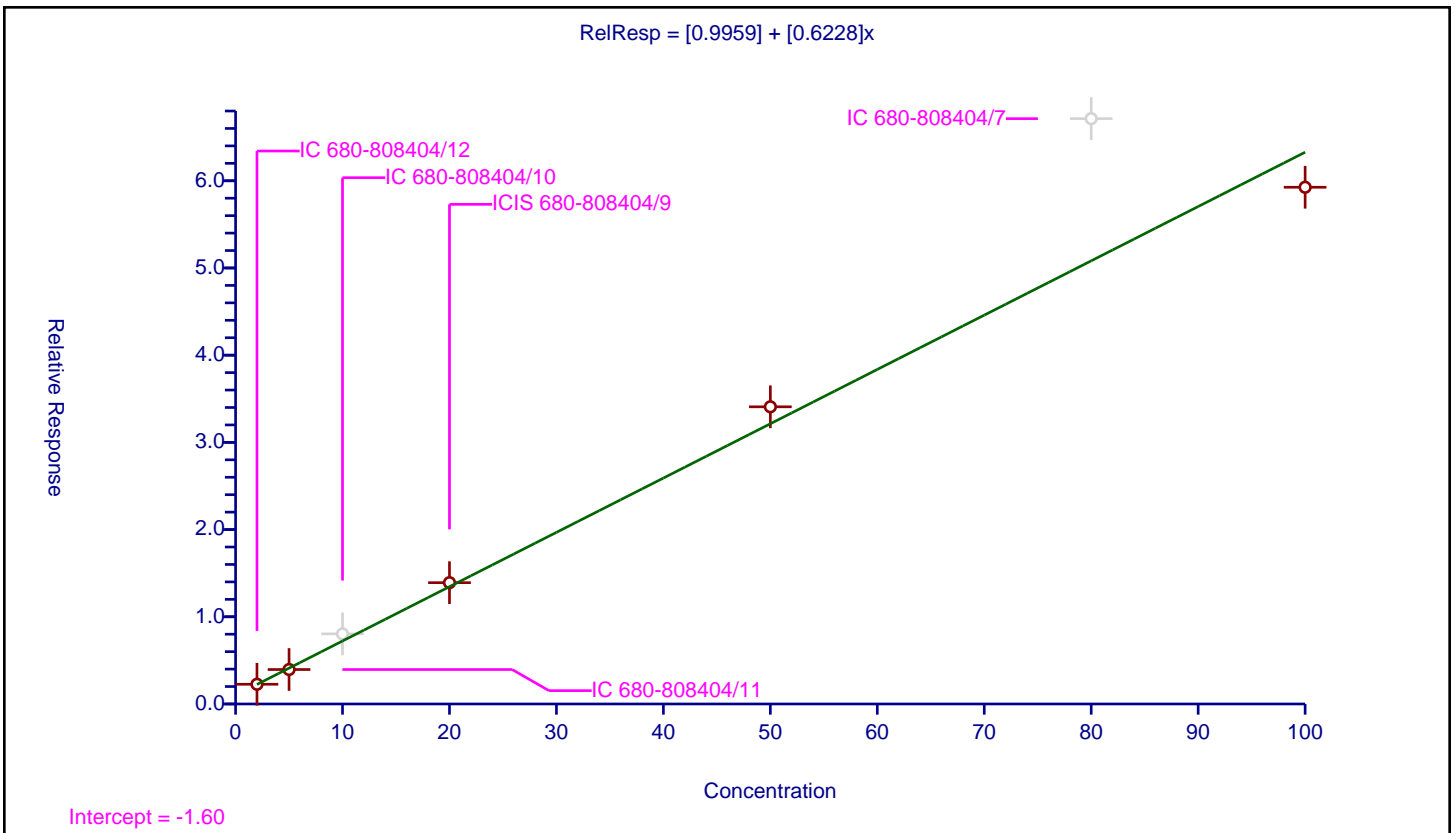
$$RelResp = [0.9959] + [0.6228]x$$

Intercept = -1.60

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

Curve Coefficients

Intercept:	1.014
Slope:	0.5938

Error Coefficients

Standard Error:	2040000
Relative Standard Error:	5.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	2.222346	50.0	1977887.0	1.111173	Y
2	IC 680-808404/11	5.0	3.821569	50.0	2217440.0	0.764314	Y
3	IC 680-808404/10	10.0	8.022782	50.0	1966905.0	0.802278	N
4	ICIS 680-808404/9	20.0	13.200869	50.0	2506763.0	0.660043	Y
5	IC 680-808404/8	50.0	32.302798	50.0	2634100.0	0.646056	Y
6	IC 680-808404/7	80.0	64.32237	50.0	1870888.0	0.80403	N
7	IC 680-808404/6	100.0	57.805145	50.0	2615890.0	0.578051	Y
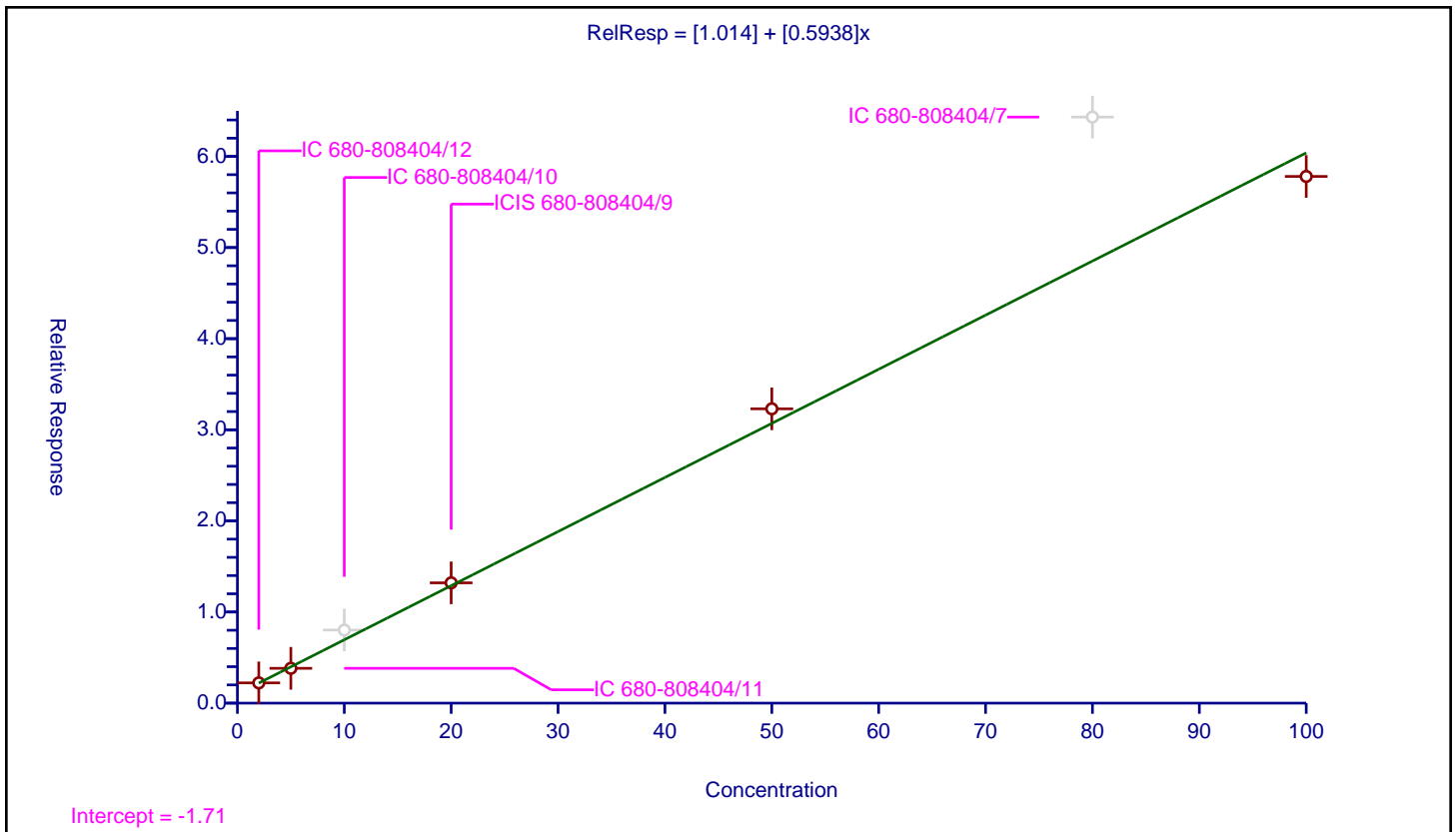
RelResp = [1.014] + [0.5938]x

Intercept = -1.71

11/17/2023
9:46 AM

Calibration

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

Curve Coefficients

Intercept:	1.131
Slope:	0.7021

Error Coefficients

Standard Error:	2380000
Relative Standard Error:	6.7
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	2.559929	50.0	1977887.0	1.279964	Y
2	IC 680-808404/11	5.0	4.442172	50.0	2217440.0	0.888434	Y
3	IC 680-808404/10	10.0	8.956635	50.0	1966905.0	0.895663	N
4	ICIS 680-808404/9	20.0	15.737966	50.0	2506763.0	0.786898	Y
5	IC 680-808404/8	50.0	38.488383	50.0	2634100.0	0.769768	Y
6	IC 680-808404/7	80.0	75.618476	50.0	1870888.0	0.945231	N
7	IC 680-808404/6	100.0	66.783026	50.0	2615890.0	0.66783	Y
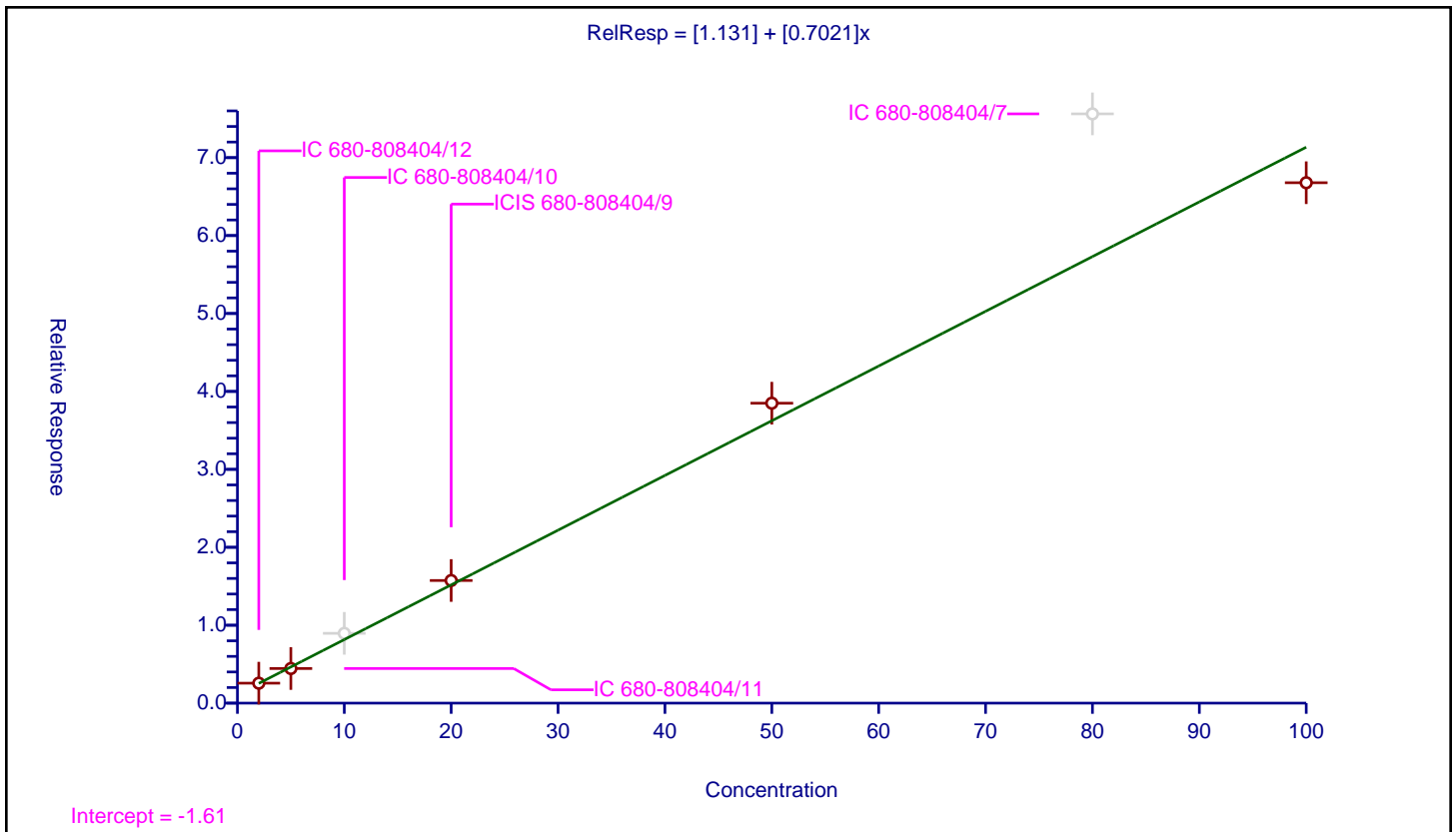
$RelResp = [1.131] + [0.7021]x$

Intercept = -1.61

Curve Type:	Linear		**Curve Coefficients**	
Weighting:	Conc_Sq			
Origin:	None		**Intercept:**	0.1428
Dependency:	Response		**Slope:**	0.04852
Calib Mode:	ISTD			
Response Base:	AREA		**Error Coefficients**	
RF Rounding:	0			

Error Coefficients

Standard Error:	172000
Relative Standard Error:	4.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	0.242026	50.0	1977887.0	0.121013	Y
2	IC 680-808404/11	5.0	0.36957	50.0	2217440.0	0.073914	Y
3	IC 680-808404/10	10.0	0.786464	50.0	1966905.0	0.078646	N
4	ICIS 680-808404/9	20.0	1.140295	50.0	2506763.0	0.057015	Y
5	IC 680-808404/8	50.0	2.642838	50.0	2634100.0	0.052857	Y
6	IC 680-808404/7	80.0	5.32151	50.0	1870888.0	0.066519	N
7	IC 680-808404/6	100.0	4.918785	50.0	2615890.0	0.049188	Y

RelResp = [0.1428] + [0.04852]x
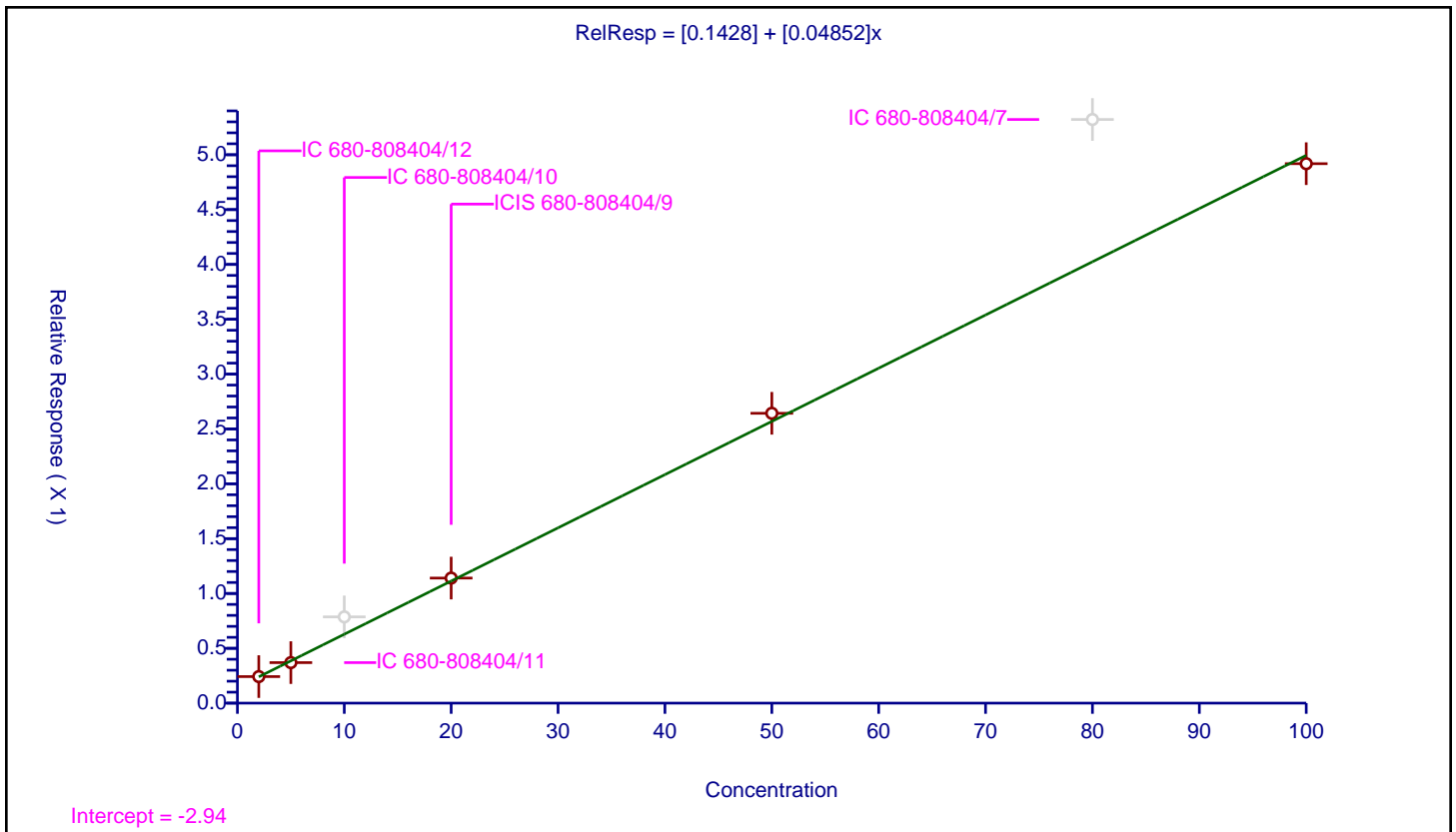
Intercept = -2.94

Calibration

/ Propylene glycol

			Curve Coefficients	
Curve Type:	Linear			
Weighting:	Conc_Sq	**Intercept:**		0.9439
Origin:	None	**Slope:**		0.407
Dependency:	Response			
Calib Mode:	ISTD			
Response Base:	AREA		Error Coefficients	
RF Rounding:	0			
		Standard Error:		1440000
		Relative Standard Error:		5.3
		Correlation Coefficient:		0.999
		Coefficient of Determination (Adjusted):		0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	1.765697	50.0	1977887.0	0.882849	Y
2	IC 680-808404/11	5.0	2.905558	50.0	2217440.0	0.581112	Y
3	IC 680-808404/10	10.0	7.232429	50.0	1966905.0	0.723243	N
4	ICIS 680-808404/9	20.0	9.641538	50.0	2506763.0	0.482077	Y
5	IC 680-808404/8	50.0	20.311416	50.0	2634100.0	0.406228	Y
6	IC 680-808404/7	80.0	42.726743	50.0	1870888.0	0.534084	N
7	IC 680-808404/6	100.0	41.921143	50.0	2615890.0	0.419211	Y
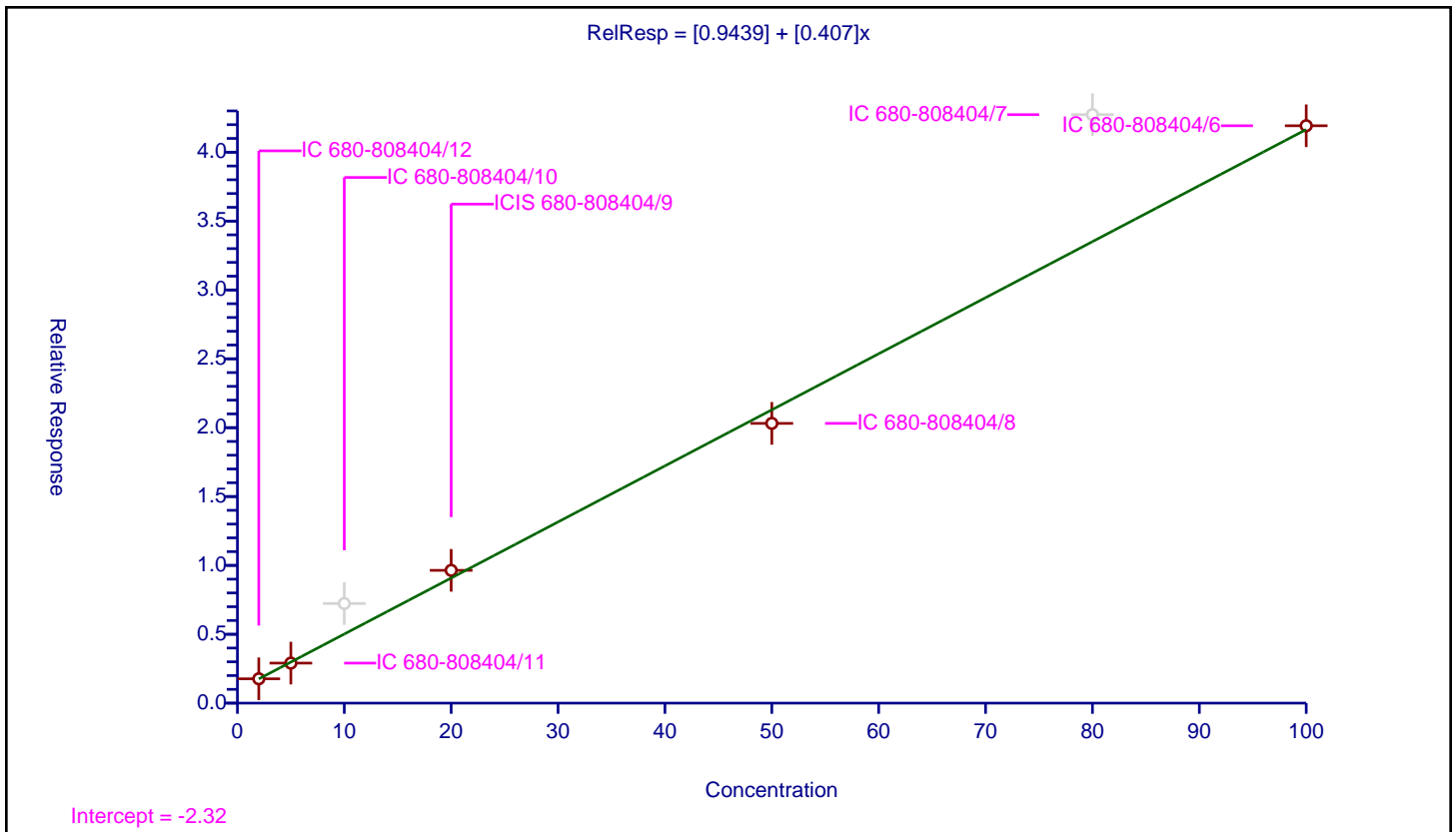
RelResp = [0.9439] + [0.407]x

Intercept = -2.32

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

Curve Coefficients

Intercept:	0.712
Slope:	0.3014

Error Coefficients

Standard Error:	1070000
Relative Standard Error:	8.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	1.330511	50.0	1977887.0	0.665255	Y
2	IC 680-808404/11	5.0	2.091533	50.0	2217440.0	0.418307	Y
3	IC 680-808404/10	10.0	5.414929	50.0	1966905.0	0.541493	N
4	ICIS 680-808404/9	20.0	7.304639	50.0	2506763.0	0.365232	Y
5	IC 680-808404/8	50.0	15.000076	50.0	2634100.0	0.300002	Y
6	IC 680-808404/7	80.0	31.733995	50.0	1870888.0	0.396675	N
7	IC 680-808404/6	100.0	31.335912	50.0	2615890.0	0.313359	Y
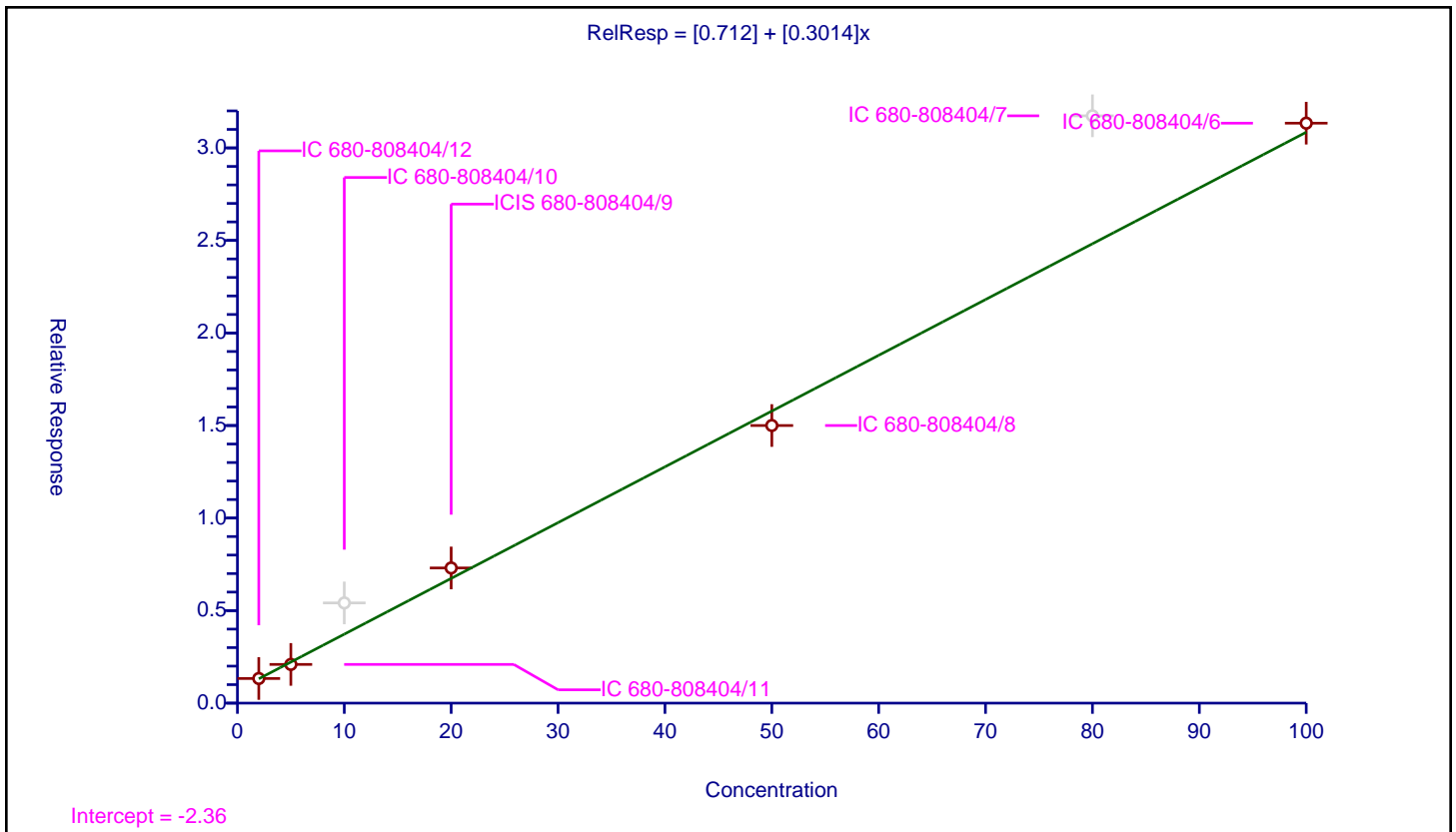
RelResp = [0.712] + [0.3014]x

Intercept = -2.36

Calibration

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

Curve Coefficients

Intercept:	1.192
Slope:	0.5459

Error Coefficients

Standard Error:	1910000
Relative Standard Error:	2.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	2.294241	50.0	1977887.0	1.147121	Y
2	IC 680-808404/11	5.0	3.839585	50.0	2217440.0	0.767917	Y
3	IC 680-808404/10	10.0	8.474634	50.0	1966905.0	0.847463	N
4	ICIS 680-808404/9	20.0	12.391518	50.0	2506763.0	0.619576	Y
5	IC 680-808404/8	50.0	28.837307	50.0	2634100.0	0.576746	Y
6	IC 680-808404/7	80.0	58.50091	50.0	1870888.0	0.731261	N
7	IC 680-808404/6	100.0	54.796933	50.0	2615890.0	0.547969	Y

RelResp = [1.192] + [0.5459]x

Intercept = -2.18

11/17/2023
9:46 AM
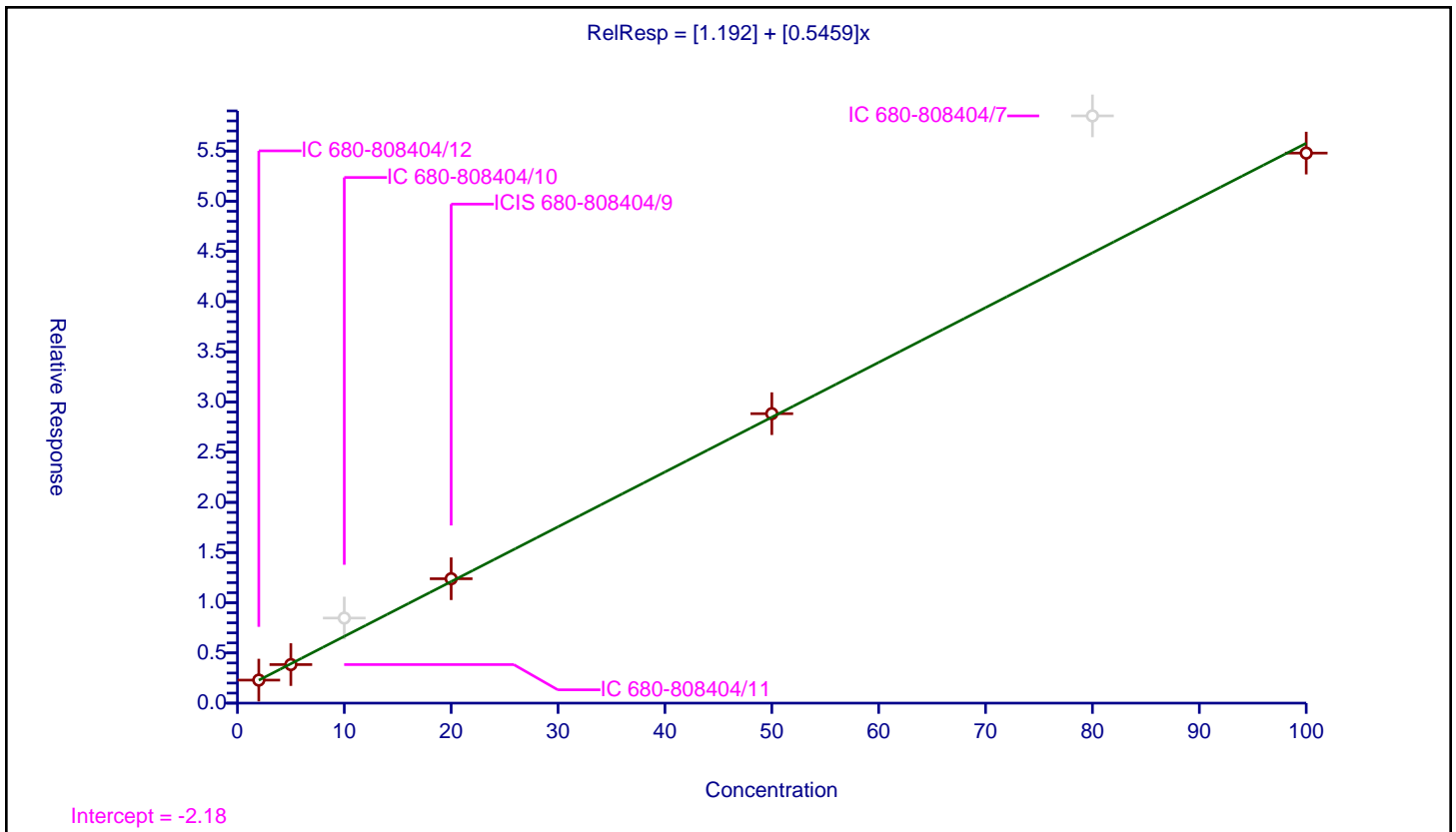
Calibration   **/ 2,2'-Oxybisethanol**

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

Curve Coefficients

Intercept:	0.8971
Slope:	0.3278

Error Coefficients

Standard Error:	1160000
Relative Standard Error:	8.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	1.561363	50.0	1977887.0	0.780682	Y
2	IC 680-808404/11	5.0	2.448409	50.0	2217440.0	0.489682	Y
3	IC 680-808404/10	10.0	6.370592	50.0	1966905.0	0.637059	N
4	ICIS 680-808404/9	20.0	8.156296	50.0	2506763.0	0.407815	Y
5	IC 680-808404/8	50.0	16.130595	50.0	2634100.0	0.322612	Y
6	IC 680-808404/7	80.0	33.188999	50.0	1870888.0	0.414862	N
7	IC 680-808404/6	100.0	33.775159	50.0	2615890.0	0.337752	Y

RelResp = [0.8971] + [0.3278]x

Intercept = -2.74

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

Curve Coefficients

Intercept:	1.724
Slope:	0.3558

Error Coefficients

Standard Error:	1320000
Relative Standard Error:	8.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	2.0	2.453174	50.0	1977887.0	1.226587	Y
2	IC 680-808404/11	5.0	3.362391	50.0	2217440.0	0.672478	Y
3	IC 680-808404/10	10.0	7.689466	50.0	1966905.0	0.768947	N
4	ICIS 680-808404/9	20.0	9.456778	50.0	2506763.0	0.472839	Y
5	IC 680-808404/8	50.0	18.338199	50.0	2634100.0	0.366764	Y
6	IC 680-808404/7	80.0	36.404344	50.0	1870888.0	0.455054	N
7	IC 680-808404/6	100.0	38.493725	50.0	2615890.0	0.384937	Y

RelResp = [1.724] + [0.3558]x
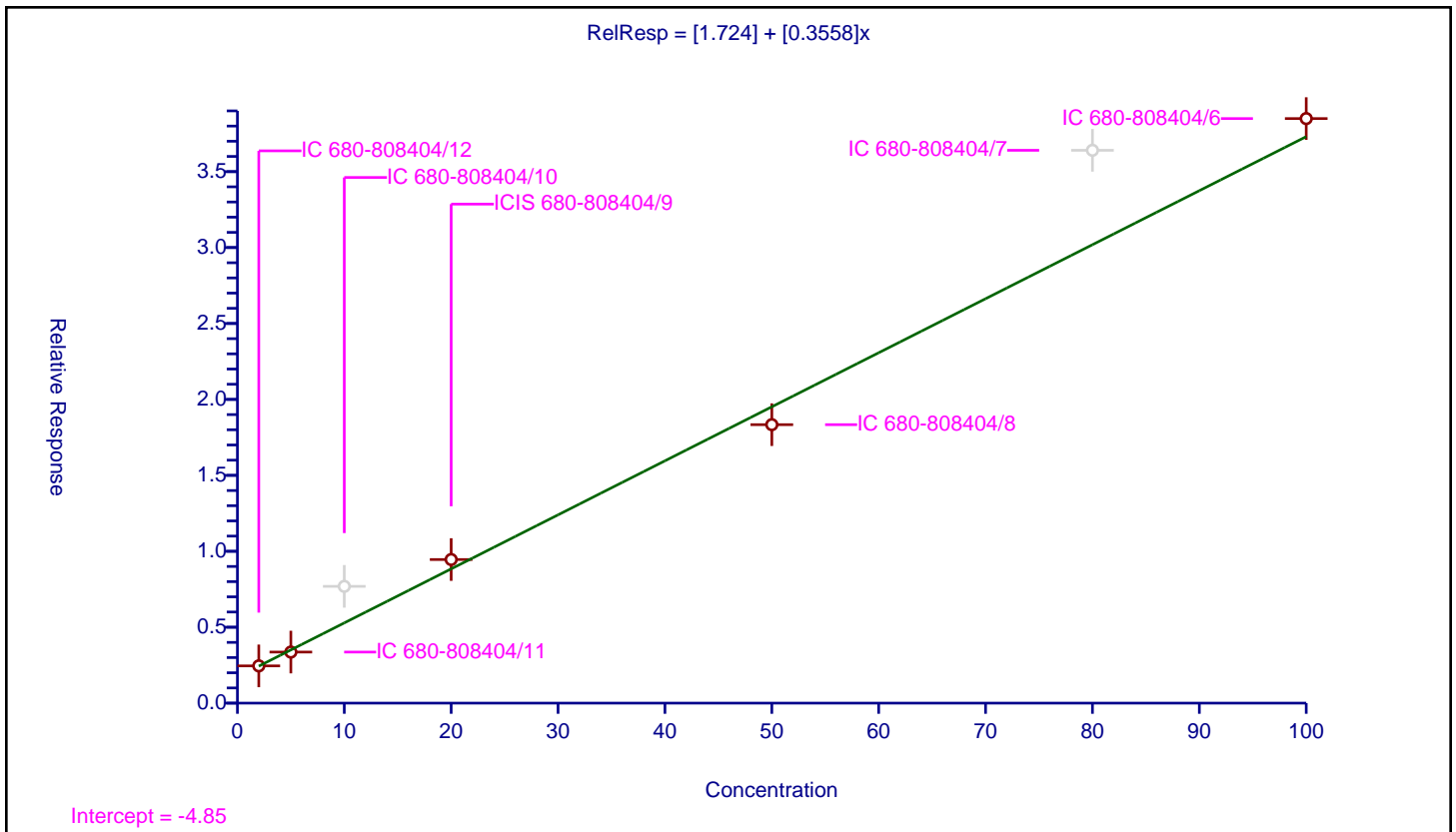
Intercept = -4.85

Calibration

/ Tetraethylene Glycol

Curve Type:	Linear		**Curve Coefficients**		
Weighting:	Conc_Sq				
Origin:	None		**Intercept:**		1.778
Dependency:	Response		**Slope:**		0.3348
Calib Mode:	ISTD				
Response Base:	AREA		**Error Coefficients**		
RF Rounding:	0		**Standard Error:**		2350000
			Relative Standard Error:		8.5
			Correlation Coefficient:		0.999
			Coefficient of Determination (Adjusted):		0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808404/12	4.0	3.136099	50.0	1977887.0	0.784025	Y
2	IC 680-808404/11	10.0	4.933437	50.0	2217440.0	0.493344	Y
3	IC 680-808404/10	20.0	13.389182	50.0	1966905.0	0.669459	N
4	ICIS 680-808404/9	40.0	16.743166	50.0	2506763.0	0.418579	Y
5	IC 680-808404/8	100.0	33.063855	50.0	2634100.0	0.330639	Y
6	IC 680-808404/7	160.0	66.73772	50.0	1870888.0	0.417111	N
7	IC 680-808404/6	200.0	68.182473	50.0	2615890.0	0.340912	Y
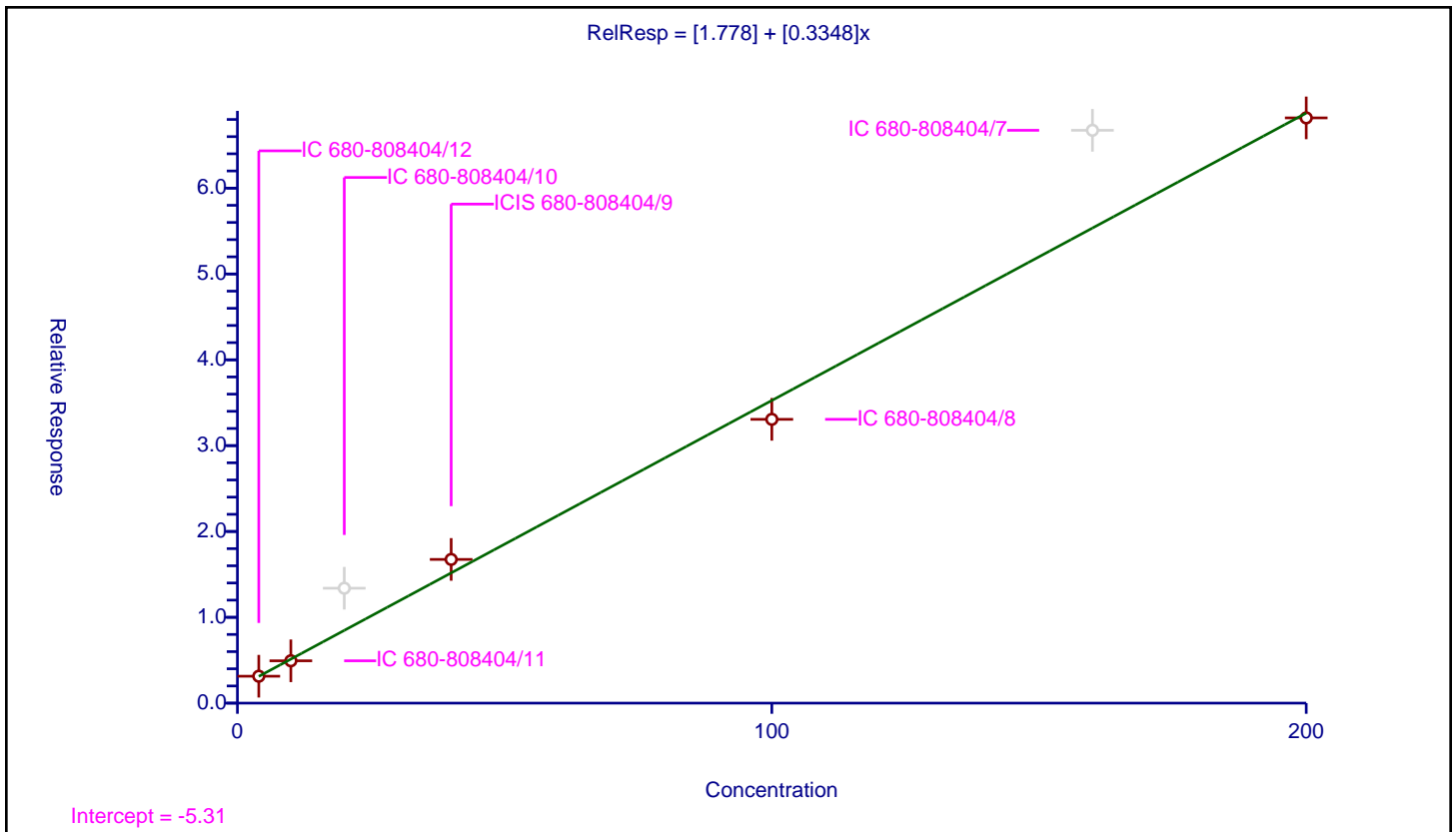
RelResp = [1.778] + [0.3348]x

Intercept = -5.31

```
                          FORM VII
            GC SEMI VOA CONTINUING CALIBRATION DATA
```

Lab Name: Eurofins Savannah_____   Job No.: 580-133711-1_____

SDG No.: _____

Lab Sample ID: ICV 680-808404/14_____   Calibration Date: 11/15/2023 18:31____

Instrument ID: CVGG2_____   Calib Start Date: 11/15/2023 15:23____

GC Column: J&W DB WAX_____ ID: 0.45(mm)__   Calib End Date: 11/15/2023 17:44____

Lab File ID: 1IK15014.D_____   Conc. Units: mg/L_____

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.7102		21.2	20.0	6.0	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.6926		21.6	20.0	8.1	20.0
2-Butoxyethanol	Lin2		0.7889		20.9	20.0	4.3	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0630		23.0	20.0	15.0	20.0
Propylene glycol	Lin2		0.5517		24.8	20.0	24.0*	20.0
Ethylene glycol	Lin2		0.4160		25.2	20.0	26.2*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.6852		22.9	20.0	14.6	20.0
2,2'-Oxybisethanol	Lin2		0.4579		25.2	20.0	26.0*	20.0
Triethylene Glycol	Lin2		0.5216		24.5	20.0	22.4*	20.0
Tetraethylene Glycol	Lin2		0.4596		49.6	40.0	24.0*	20.0

FORM VII 8015C GLY

```
                              FORM VII
          GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY
```

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Lab Sample ID: ICV 680-808404/14   Calibration Date: 11/15/2023 18:31

Instrument ID: CVGG2   Calib Start Date: 11/15/2023 15:23

GC Column: J&W DB WAX   ID: 0.45(mm)   Calib End Date: 11/15/2023 17:44

Lab File ID: 1IK15014.D

| Analyte | RT | RT WINDOW | |
		FROM	TO
Ethanol, 2-propoxy	4.48	4.39	4.56
4-Hydroxy-4-methyl-2-pentanone	5.27	5.16	5.37
2-Butoxyethanol	5.70	5.58	5.80
Dipropylene Glycol Methyl Ether	7.33	7.18	7.48
Propylene glycol	8.26	8.09	8.42
Ethylene glycol	8.71	8.53	8.88
2-(2-Butoxyethoxy)ethanol	9.81	9.61	10.00
2,2'-Oxybisethanol	10.51	10.29	10.71
Triethylene Glycol	11.70	11.46	11.93
Tetraethylene Glycol	13.99	13.71	14.27

Form VII 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15014.D
Lims ID:	icv gly
Client ID:	
Sample Type:	ICV

Inject. Date:	15-Nov-2023 18:31:10	ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	680-0090783-014				
Operator ID:		Instrument ID:	CVGG2		
Sublist:					

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\8015_GLY_VGG.m		
Limit Group:	8015C_DAI		
Last Update:	16-Nov-2023 11:39:12	Calib Date:	15-Nov-2023 17:44:20
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B	
Process Host:	CTX1640		

First Level Reviewer: AR8P   Date: 16-Nov-2023 11:15:03

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
4.479	4.474	0.005	638653	20.0	21.2	
2 4-Hydroxy-4-methyl-2-pentanone						
5.265	5.260	0.005	622810	20.0	21.6	
3 2-Butoxyethanol						
5.695	5.690	0.005	709392	20.0	20.9	
* 4 n-Heptyl Alcohol						
6.283	6.278	0.005	2248055	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
7.333	7.328	0.005	56613	20.0	23.0	
6 Propylene glycol						
8.262	8.258	0.004	496126	20.0	24.8	
7 Ethylene glycol						
8.705	8.703	0.002	374101	20.0	25.2	
8 2-(2-Butoxyethoxy)ethanol						
9.809	9.807	0.002	616120	20.0	22.9	
9 2,2'-Oxybisethanol						
10.505	10.504	0.001	411713	20.0	25.2	
10 Triethylene Glycol						
11.700	11.698	0.002	469063	20.0	24.5	
11 Tetraethylene Glycol						
13.992	13.988	0.004	826585	40.0	49.6	

QC Flag Legend
Processing Flags

Reagents:

SG_GlyICV_00062	Amount Added: 10.00	Units: uL	
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File:　　　　　\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15014.D
Injection Date:　　15-Nov-2023 18:31:10　　　Instrument ID:　　　CVGG2　　　　　Operator ID:
Lims ID:　　　　　icv gly　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Worklist Smp#:　　14
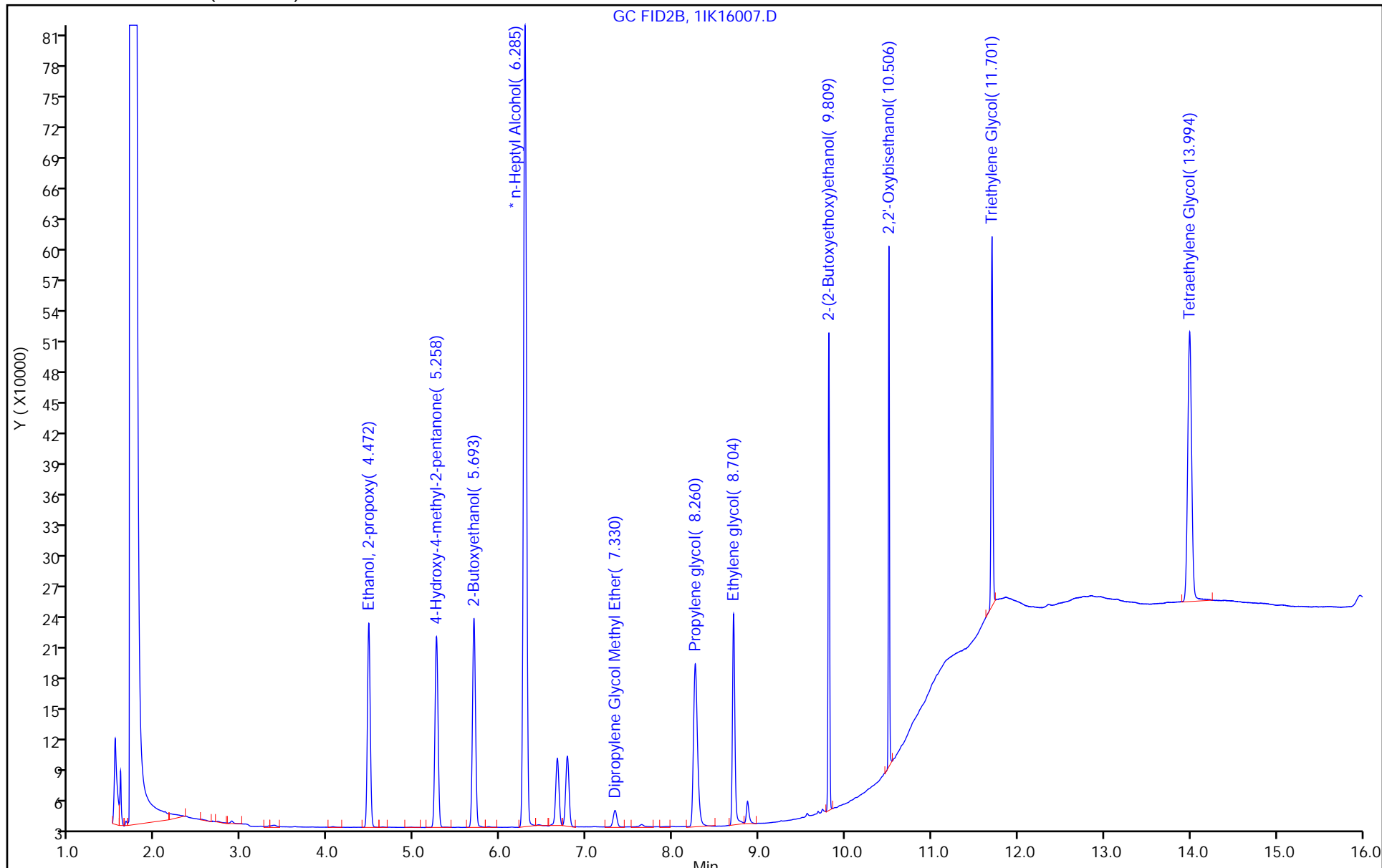Client ID:
Injection Vol:　　　1.0 ul　　　　　　　　　　　Dil. Factor:　　　　1.0000　　　　　ALS Bottle#:　　　0
Method:　　　　　8015_GLY_VGG　　　　　　Limit Group:　　　　8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK15014.D

11/17/2023
9:46 AM

```
                              FORM VII
                 GC SEMI VOA CONTINUING CALIBRATION DATA
```
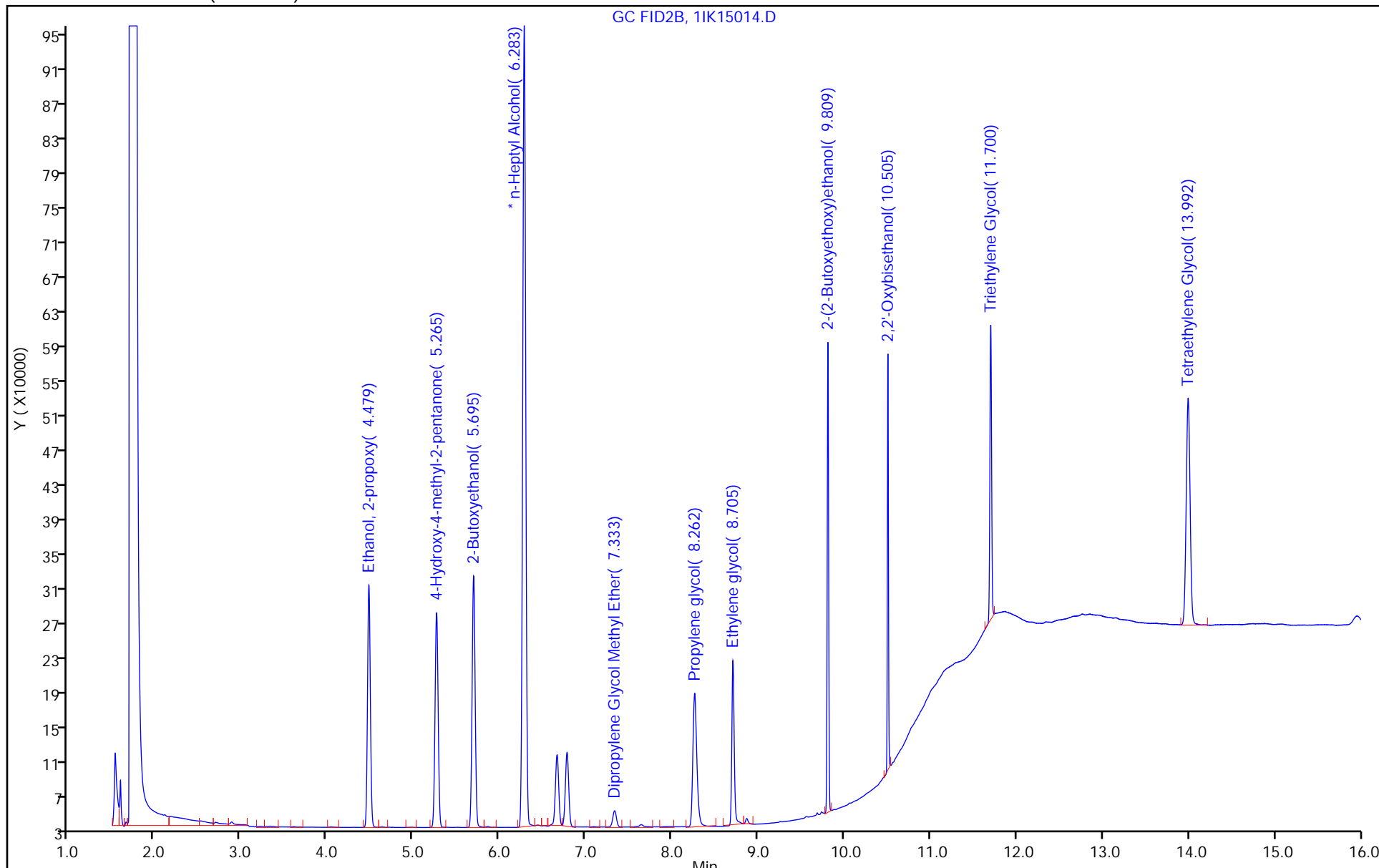
Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Lab Sample ID: CCVIS 680-808697/7   Calibration Date: 11/16/2023 18:33

Instrument ID: CVGG2   Calib Start Date: 11/15/2023 15:23

GC Column: J&W DB WAX   ID: 0.45(mm)   Calib End Date: 11/15/2023 17:44

Lab File ID: 1IK16007.D   Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.5891		17.3	20.0	-13.4	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.6074		18.8	20.0	-6.2	20.0
2-Butoxyethanol	Lin2		0.6519		17.0	20.0	-15.2	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0630		23.0	20.0	15.1	20.0
Propylene glycol	Lin2		0.6760		30.9	20.0	54.5*	20.0
Ethylene glycol	Lin2		0.5259		32.5	20.0	62.7*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.6936		23.2	20.0	16.1	20.0
2,2'-Oxybisethanol	Lin2		0.5785		32.6	20.0	62.8*	20.0
Triethylene Glycol	Lin2		0.6390		31.1	20.0	55.4*	20.0
Tetraethylene Glycol	Lin2		0.5530		60.8	40.0	51.9*	20.0

FORM VII 8015C GLY

```
                              FORM VII
          GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY
```

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Lab Sample ID: CCVIS 680-808697/7   Calibration Date: 11/16/2023 18:33

Instrument ID: CVGG2   Calib Start Date: 11/15/2023 15:23

GC Column: J&W DB WAX   ID: 0.45(mm) Calib End Date: 11/15/2023 17:44

Lab File ID: 1IK16007.D

| Analyte | RT | RT WINDOW | |
		FROM	TO
Ethanol, 2-propoxy	4.47	4.38	4.56
4-Hydroxy-4-methyl-2-pentanone	5.26	5.15	5.36
2-Butoxyethanol	5.69	5.58	5.81
Dipropylene Glycol Methyl Ether	7.33	7.18	7.48
Propylene glycol	8.26	8.10	8.43
Ethylene glycol	8.70	8.53	8.88
2-(2-Butoxyethoxy)ethanol	9.81	9.61	10.01
2,2'-Oxybisethanol	10.51	10.30	10.72
Triethylene Glycol	11.70	11.47	11.94
Tetraethylene Glycol	13.99	13.71	14.27

Form VII 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16007.D	
Lims ID:	ccvis	
Client ID:		
Sample Type:	CCVIS	
Inject. Date:	16-Nov-2023 18:33:37	ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol:	1.0 ul	Dil. Factor: 1.0000
Sample Info:	680-0090833-007	
Operator ID:		Instrument ID: CVGG2
Sublist:	chrom-8015_GLY_VGG*sub2	

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	17-Nov-2023 10:40:52	Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	4.472	4.472	0.000	454656	20.0	17.3	
2 4-Hydroxy-4-methyl-2-pentanone							
	5.258	5.258	0.000	468780	20.0	18.8	
3 2-Butoxyethanol							
	5.693	5.693	0.000	503085	20.0	17.0	
* 4 n-Heptyl Alcohol							
	6.285	6.285	0.000	1929389	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	7.330	7.330	0.000	48608	20.0	23.0	
6 Propylene glycol							
	8.260	8.260	0.000	521700	20.0	30.9	
7 Ethylene glycol							
	8.704	8.704	0.000	405883	20.0	32.5	
8 2-(2-Butoxyethoxy)ethanol							
	9.809	9.809	0.000	535260	20.0	23.2	
9 2,2'-Oxybisethanol							
	10.506	10.506	0.000	446453	20.0	32.6	
10 Triethylene Glycol							
	11.701	11.701	0.000	493133	20.0	31.1	
11 Tetraethylene Glycol							
	13.994	13.994	0.000	853630	40.0	60.8	

Reagents:

SG_GlyICV_00062	Amount Added: 10.00	Units: uL
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16007.D
Injection Date: 16-Nov-2023 18:33:37   Instrument ID: CVGG2   Operator ID:
Lims ID: ccvis   Worklist Smp#:   7
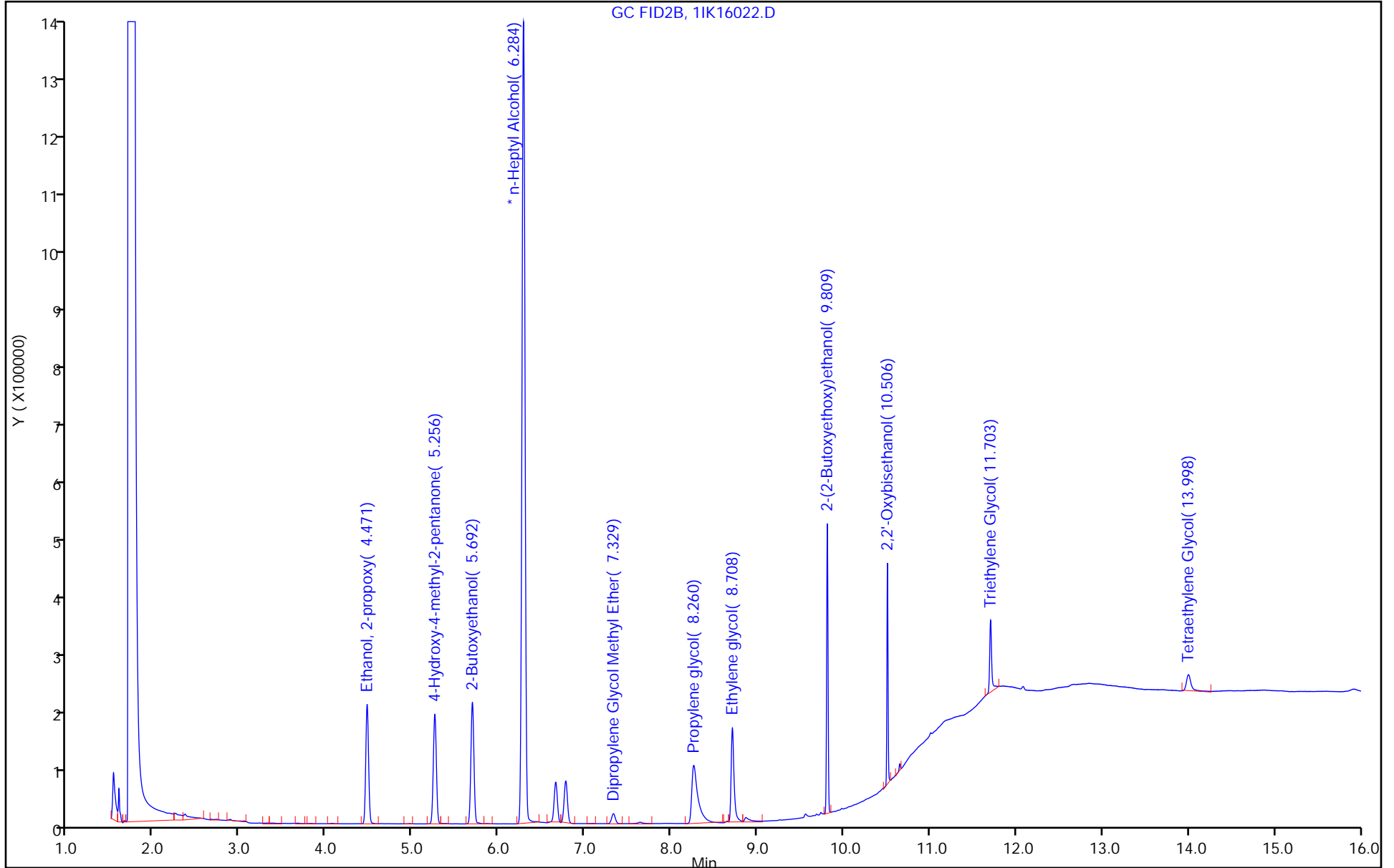Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16007.D

11/17/2023
9:46 AM

```
                              FORM VII
                GC SEMI VOA CONTINUING CALIBRATION DATA
```

Lab Name: Eurofins Savannah _____   Job No.: 580-133711-1 _____

SDG No.: _____

Lab Sample ID: CCV 680-808697/22 _____   Calibration Date: 11/17/2023 00:25 ____

Instrument ID: CVGG2 _____   Calib Start Date: 11/15/2023 15:23 ____

GC Column: J&W DB WAX _____ ID: 0.45(mm) ___   Calib End Date: 11/15/2023 17:44 ____

Lab File ID: 1IK16022.D _____   Conc. Units: mg/L _____

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.6911		9.50	10.0	-5.0	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.6905		9.92	10.0	-0.8	20.0
2-Butoxyethanol	Lin2		0.7629		9.25	10.0	-7.5	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0764		12.8	10.0	28.1*	20.0
Propylene glycol	Lin2		0.7530		16.2	10.0	61.8*	20.0
Ethylene glycol	Lin2		0.5557		16.1	10.0	60.8*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.8291		13.0	10.0	30.0*	20.0
2,2'-Oxybisethanol	Lin2		0.5041		12.6	10.0	26.4*	20.0
Triethylene Glycol	Lin2		0.3018		3.64	10.0	-63.6*	20.0
Tetraethylene Glycol	Lin2		0.0793		10.0	20.0	-102.9*	20.0

FORM VII 8015C GLY

```
                            FORM VII
        GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY
```

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Lab Sample ID: CCV 680-808697/22   Calibration Date: 11/17/2023 00:25

Instrument ID: CVGG2   Calib Start Date: 11/15/2023 15:23

GC Column: J&W DB WAX   ID: 0.45(mm)   Calib End Date: 11/15/2023 17:44

Lab File ID: 1IK16022.D

| Analyte | RT | RT WINDOW | |
		FROM	TO
Ethanol, 2-propoxy	4.47	4.38	4.56
4-Hydroxy-4-methyl-2-pentanone	5.26	5.15	5.36
2-Butoxyethanol	5.69	5.58	5.81
Dipropylene Glycol Methyl Ether	7.33	7.18	7.48
Propylene glycol	8.26	8.10	8.43
Ethylene glycol	8.71	8.53	8.88
2-(2-Butoxyethoxy)ethanol	9.81	9.61	10.01
2,2'-Oxybisethanol	10.51	10.30	10.72
Triethylene Glycol	11.70	11.47	11.94
Tetraethylene Glycol	14.00	13.72	14.28

Form VII 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16022.D			
Lims ID:	ccv g3			
Client ID:				
Sample Type:	CCV			
Inject. Date:	17-Nov-2023 00:25:02	ALS Bottle#:	0	Worklist Smp#: 22
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	
Sample Info:	680-0090833-022			
Operator ID:		Instrument ID:	CVGG2	
Sublist:	chrom-8015_GLY_VGG*sub2			

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	17-Nov-2023 10:40:53	Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

First Level Reviewer: AR8P   Date: 17-Nov-2023 10:34:42

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
4.471	4.471	0.000	450999	10.0	9.50	
2 4-Hydroxy-4-methyl-2-pentanone						
5.256	5.256	0.000	450642	10.0	9.92	
3 2-Butoxyethanol						
5.692	5.692	0.000	497877	10.0	9.25	
* 4 n-Heptyl Alcohol						
6.284	6.284	0.000	3263016	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
7.329	7.329	0.000	49873	10.0	12.8	
6 Propylene glycol						
8.260	8.260	0.000	491401	10.0	16.2	
7 Ethylene glycol						
8.708	8.708	0.000	362672	10.0	16.1	
8 2-(2-Butoxyethoxy)ethanol						
9.809	9.809	0.000	541085	10.0	13.0	
9 2,2'-Oxybisethanol						
10.506	10.506	0.000	329008	10.0	12.6	
10 Triethylene Glycol						
11.703	11.703	0.000	196965	10.0	3.64	
11 Tetraethylene Glycol						
13.998	13.998	0.000	103460	20.0	-0.5754	

QC Flag Legend
Processing Flags

Reagents:

SG_Gly_CAL_00053	Amount Added: 5.00	Units: uL
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL Run Reagent

Chrom Revision: 2.3 15-Nov-2023 20:54:34

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16022.D

Injection Date:	17-Nov-2023 00:25:02	Instrument ID: CVGG2	Operator ID:
Lims ID:	ccv g3		Worklist Smp#: 22
Client ID:			
Injection Vol:	1.0 ul	Dil. Factor: 1.0000	ALS Bottle#: 0
Method:	8015_GLY_VGG	Limit Group: 8015C_DAI	

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16022.D

11/17/2023
9:46 AM

```
                              FORM VII
                GC SEMI VOA CONTINUING CALIBRATION DATA
```

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Lab Sample ID: CCV 680-808697/37   Calibration Date: 11/17/2023 06:16

Instrument ID: CVGG2   Calib Start Date: 11/15/2023 15:23

GC Column: J&W DB WAX   ID: 0.45(mm)   Calib End Date: 11/15/2023 17:44

Lab File ID: 1IK16037.D   Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.6140		18.1	20.0	-9.4	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.5671		17.4	20.0	-13.0	20.0
2-Butoxyethanol	Lin2		0.6875		18.0	20.0	-10.1	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0606		22.0	20.0	10.2	20.0
Propylene glycol	Lin2		0.5418		24.3	20.0	21.5*	20.0
Ethylene glycol	Lin2		0.4403		26.9	20.0	34.3*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.6654		22.2	20.0	11.0	20.0
2,2'-Oxybisethanol	Lin2		0.3634		19.4	20.0	-2.8	20.0
Triethylene Glycol	Lin2		0.4223		18.9	20.0	-5.5	20.0
Tetraethylene Glycol	Lin2				10.0	40.0	-100.0*	20.0

FORM VII 8015C GLY

```
                              FORM VII
          GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY
```

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Lab Sample ID: CCV 680-808697/37   Calibration Date: 11/17/2023 06:16

Instrument ID: CVGG2   Calib Start Date: 11/15/2023 15:23

GC Column: J&W DB WAX   ID: 0.45(mm)   Calib End Date: 11/15/2023 17:44

Lab File ID: 1IK16037.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	4.47	4.38	4.55
4-Hydroxy-4-methyl-2-pentanone	5.25	5.15	5.36
2-Butoxyethanol	5.69	5.57	5.80
Dipropylene Glycol Methyl Ether	7.32	7.18	7.47
Propylene glycol	8.26	8.10	8.43
Ethylene glycol	8.71	8.54	8.89
2-(2-Butoxyethoxy)ethanol	9.81	9.61	10.00
2,2'-Oxybisethanol	10.51	10.30	10.72
Triethylene Glycol	11.71	11.47	11.94
Tetraethylene Glycol			

Form VII 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16037.D
Lims ID: ccv g4
Client ID:
Sample Type: CCV
Inject. Date: 17-Nov-2023 06:16:18   ALS Bottle#:   0   Worklist Smp#:   37
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0090833-037
Operator ID: Instrument ID: CVGG2
Sublist: chrom-8015_GLY_VGG*sub2

Method: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 17-Nov-2023 10:40:54   Calib Date: 15-Nov-2023 17:44:20
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1618

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	4.465	4.465	0.000	524306	20.0	18.1	
2 4-Hydroxy-4-methyl-2-pentanone							
	5.250	5.250	0.000	484214	20.0	17.4	
3 2-Butoxyethanol							
	5.685	5.685	0.000	587056	20.0	18.0	
* 4 n-Heptyl Alcohol							
	6.277	6.277	0.000	2134707	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	7.322	7.322	0.000	51740	20.0	22.0	
6 Propylene glycol							
	8.263	8.263	0.000	462598	20.0	24.3	
7 Ethylene glycol							
	8.710	8.710	0.000	375934	20.0	26.9	
8 2-(2-Butoxyethoxy)ethanol							
	9.808	9.808	0.000	568142	20.0	22.2	
9 2,2'-Oxybisethanol							
	10.507	10.507	0.000	310316	20.0	19.4	
10 Triethylene Glycol							
	11.705	11.705	0.000	360594	20.0	18.9	

Reagents:

SG_Gly_CAL_00053   Amount Added: 10.00   Units: uL
SG_GLY_ISTD_00129   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16037.D
Injection Date: 17-Nov-2023 06:16:18   Instrument ID: CVGG2   Operator ID:
Lims ID: ccv g4   Worklist Smp#:   37
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16037.D
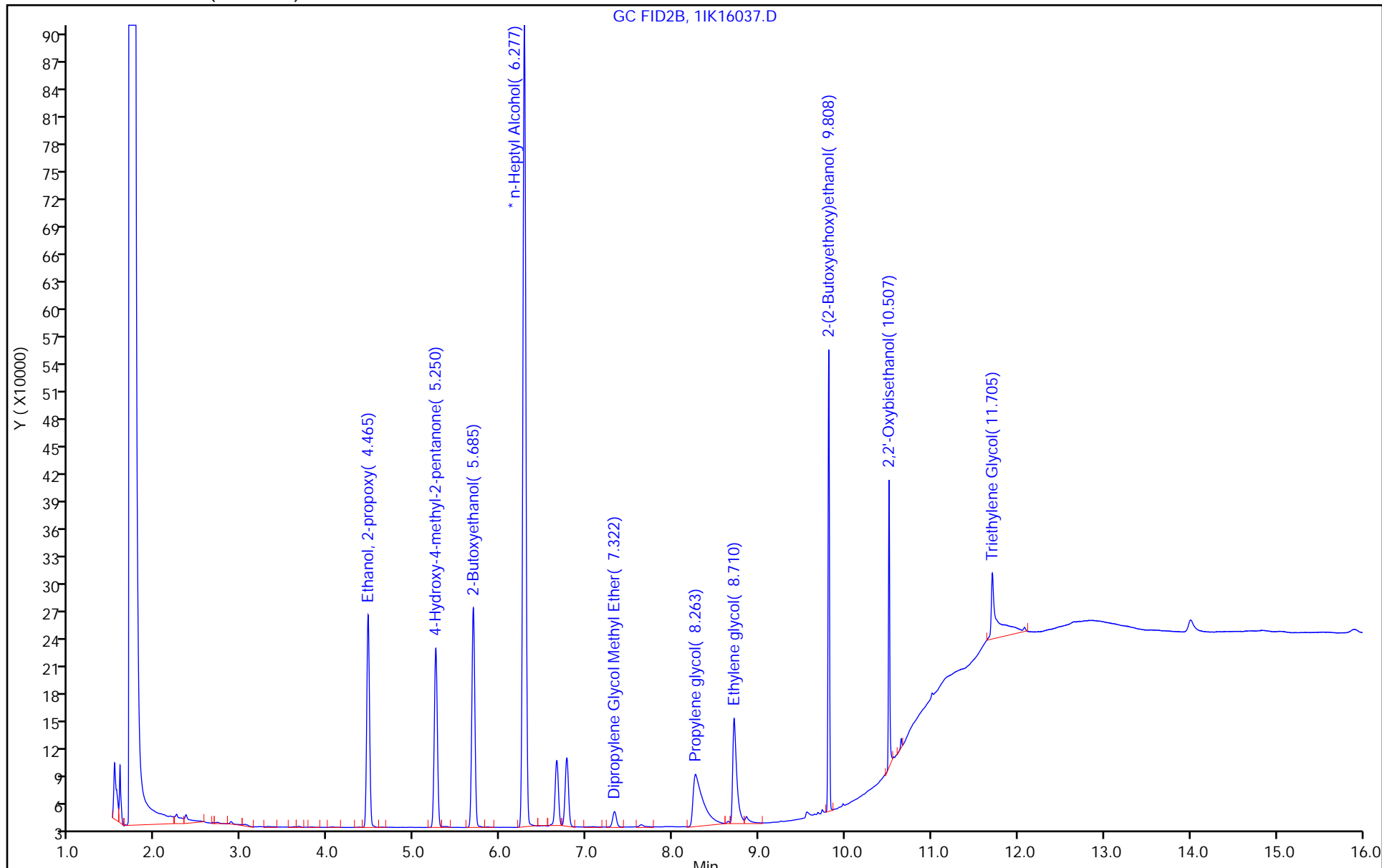
FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 680-808697/11

Matrix: Water   Lab File ID: 1IK16011.D

Analysis Method: 8015C GLY   Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/16/2023 20:07

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

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

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

Cleanup Factor:

Analysis Batch No.: 808697   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

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16011.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 16-Nov-2023 20:07:22   ALS Bottle#:   0   Worklist Smp#:   11
Injection Vol: 1.0 ul   Dil. Factor: 1.0000
Sample Info: 680-0090833-011
Operator ID: Instrument ID: CVGG2

Method: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI
Last Update: 17-Nov-2023 10:39:48   Calib Date: 15-Nov-2023 17:44:20
Integrator: Falcon
Quant Method: Internal Standard   Quant By: Initial Calibration
Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1618

First Level Reviewer: AR8P   Date: 17-Nov-2023 10:29:56

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

* 4 n-Heptyl Alcohol

| 6.284 | 6.284 | 0.000 | 2126199 | 50.0 | 50.0 | |

Reagents:

SG_GLY_ISTD_00129   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16011.D
Injection Date: 16-Nov-2023 20:07:22   Instrument ID: CVGG2   Operator ID:
Lims ID: mb   Worklist Smp#:   11
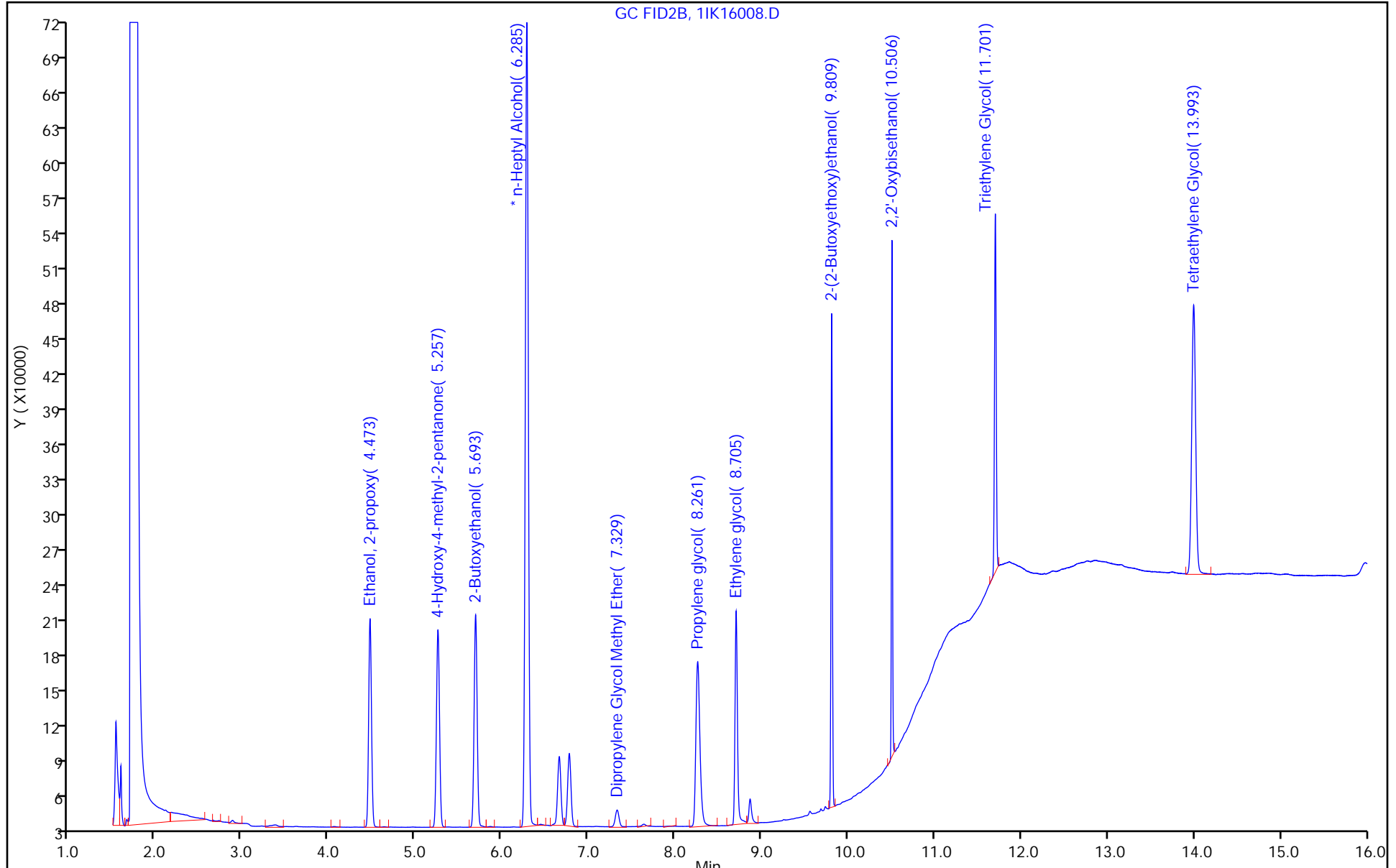Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16011.D

11/17/2023
9:46 AM
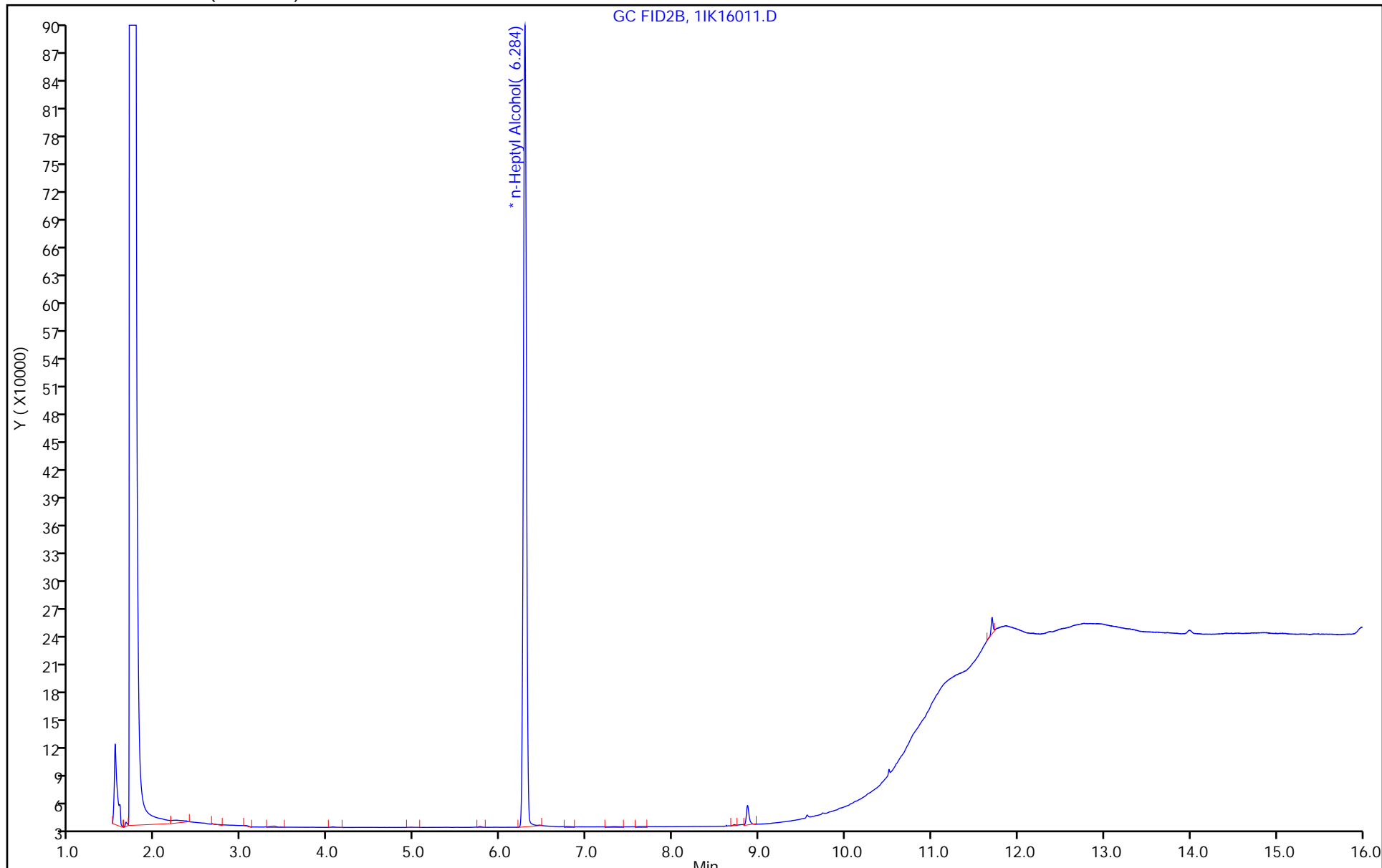
FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.: _____

Client Sample ID: _____   Lab Sample ID: LCS 680-808697/1007

Matrix: Water   Lab File ID: -1IK16007-LCS.d

Analysis Method: 8015C GLY   Date Collected: _____

Extraction Method: _____   Date Extracted: _____

Sample wt/vol: 1(mL)   Date Analyzed: 11/16/2023 18:33

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.: 808697   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	23.2		5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Environment Testing
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\-1IK16007-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS

Inject. Date:	16-Nov-2023 18:33:37	ALS Bottle#: 0	Worklist Smp#: 1007
Injection Vol:	1.0 ul	Dil. Factor: 1.0000	
Sample Info:	680-0090833-007		
Operator ID:		Instrument ID: CVGG2	

Method: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m
Limit Group: 8015C_DAI

Last Update:	17-Nov-2023 10:40:52	Calib Date:	15-Nov-2023 17:44:20
Integrator:	Falcon		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D		

Column 1 :   J&W DB WAX (0.45 mm)   Det: GC FID2B
Process Host: CTX1618

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
4.472	4.472	0.000	454656	20.0	17.3	
2 4-Hydroxy-4-methyl-2-pentanone						
5.258	5.258	0.000	468780	20.0	18.8	
3 2-Butoxyethanol						
5.693	5.693	0.000	503085	20.0	17.0	
* 4 n-Heptyl Alcohol						
6.285	6.285	0.000	1929389	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
7.330	7.330	0.000	48608	20.0	23.0	
6 Propylene glycol						
8.260	8.260	0.000	521700	20.0	30.9	
7 Ethylene glycol						
8.704	8.704	0.000	405883	20.0	32.5	
8 2-(2-Butoxyethoxy)ethanol						
9.809	9.809	0.000	535260	20.0	23.2	
9 2,2'-Oxybisethanol						
10.506	10.506	0.000	446453	20.0	32.6	
10 Triethylene Glycol						
11.701	11.701	0.000	493133	20.0	31.1	
11 Tetraethylene Glycol						
13.994	13.994	0.000	853630	40.0	60.8	

Reagents:

SG_GlyICV_00062   Amount Added: 10.00   Units: uL
SG_GLY_ISTD_00129   Amount Added: 10.00   Units: uL   Run Reagent

Eurofins Environment Testing

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\-1IK16007-LCS.d
Injection Date: 16-Nov-2023 18:33:37   Instrument ID: CVGG2   Operator ID:
Lims ID: LCS   Worklist Smp#:   1007
Client ID:
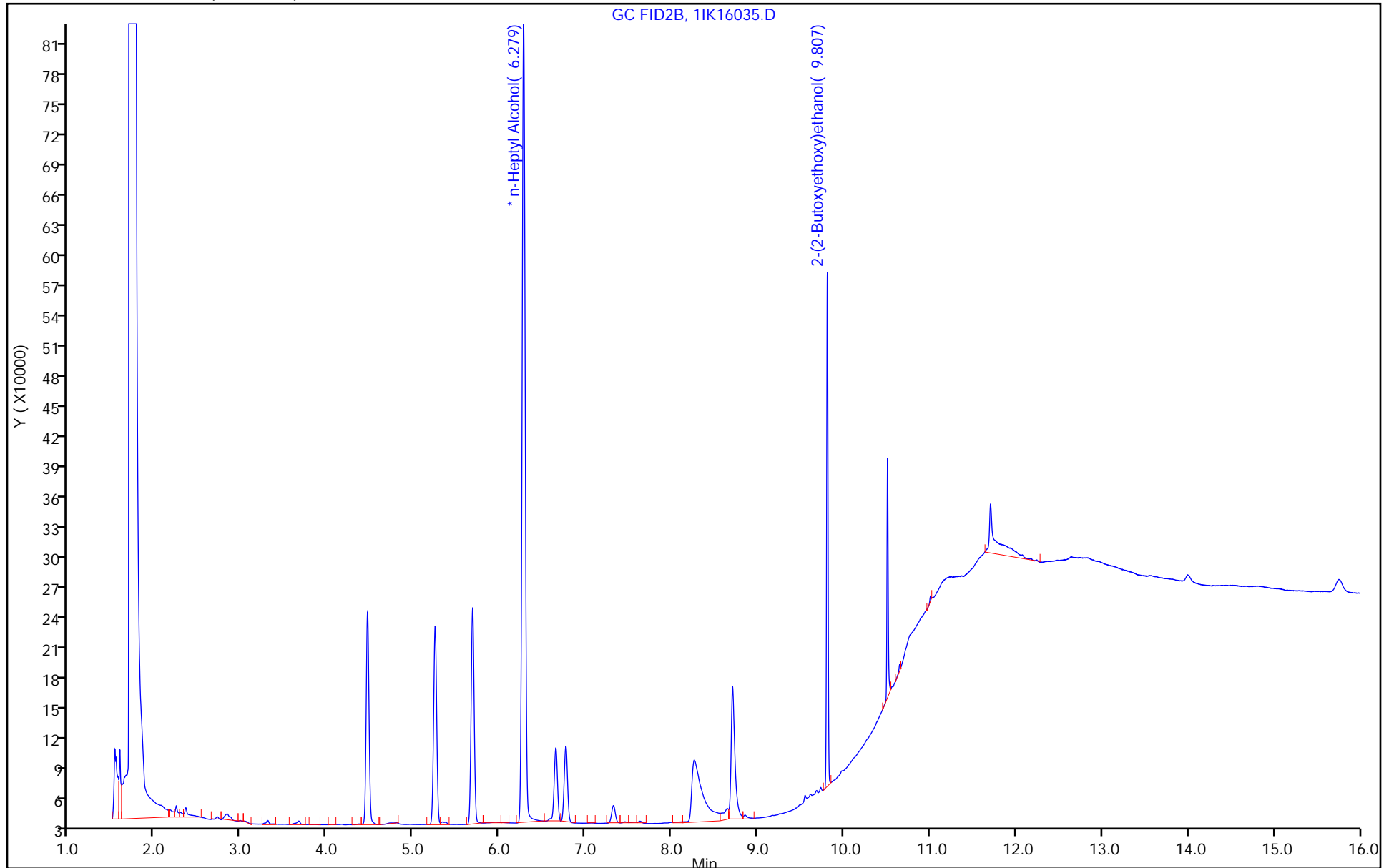Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, -1IK16007-LCS.d

11/17/2023
9:46 AM
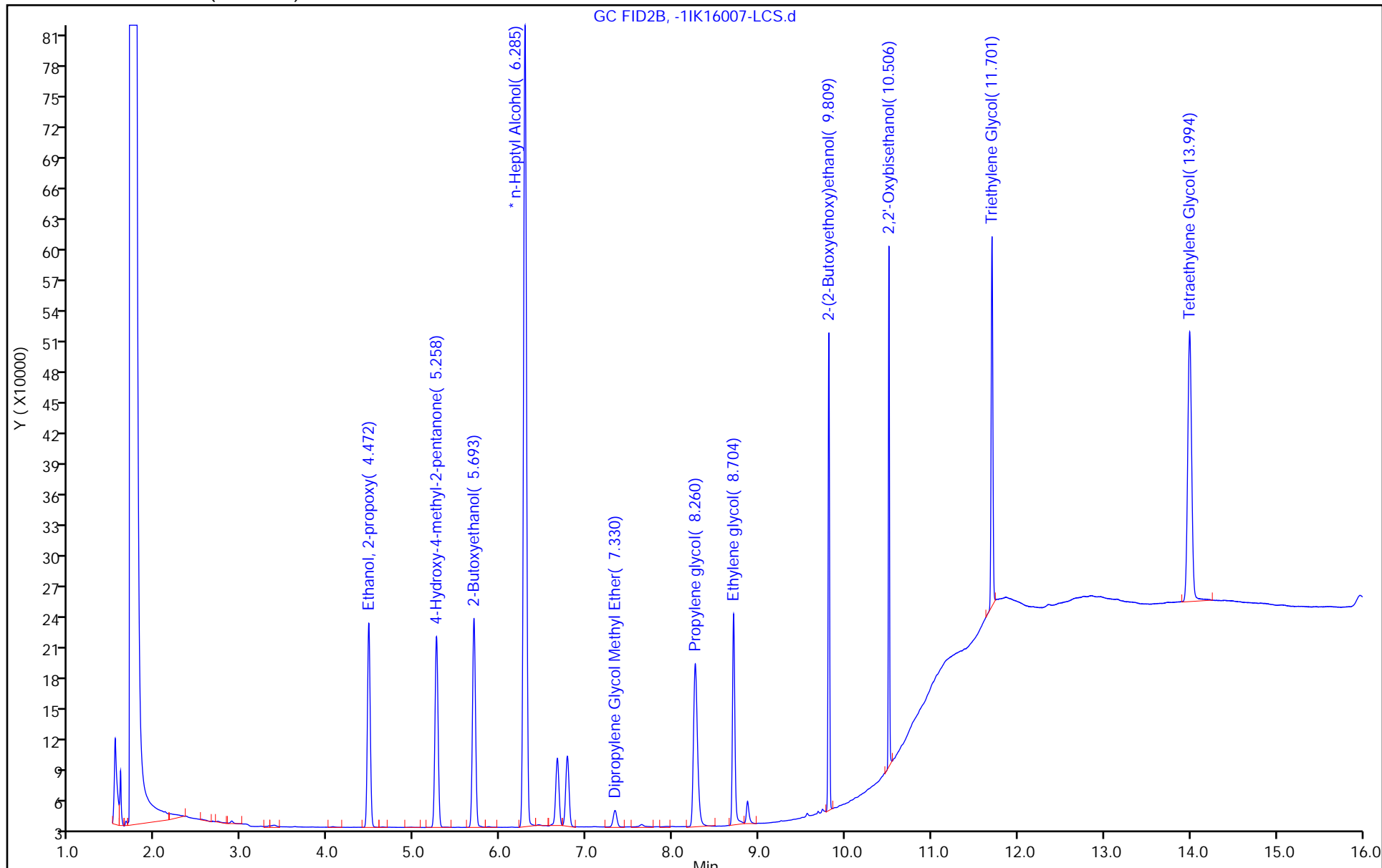
FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 680-808697/8

Matrix: Water   Lab File ID: 1IK16008.D

Analysis Method: 8015C GLY   Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/16/2023 18:57

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

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

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

Cleanup Factor:

Analysis Batch No.: 808697   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	23.6		5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16008.D	
Lims ID:	lcsd	
Client ID:		
Sample Type:	LCSD	
Inject. Date:	16-Nov-2023 18:57:01	ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol:	1.0 ul	Dil. Factor: 1.0000
Sample Info:	680-0090833-008	
Operator ID:		Instrument ID: CVGG2

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m
Limit Group:	8015C_DAI
Last Update:	17-Nov-2023 10:40:52 Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon
Quant Method:	Internal Standard Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D

Column 1 :	J&W DB WAX (0.45 mm) Det: GC FID2B
Process Host:	CTX1618

	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy							
	4.473	4.472	0.001	403294	20.0	17.7	
2 4-Hydroxy-4-methyl-2-pentanone							
	5.257	5.258	-0.001	417390	20.0	19.3	
3 2-Butoxyethanol							
	5.693	5.693	0.000	442330	20.0	17.2	
* 4 n-Heptyl Alcohol							
	6.285	6.285	0.000	1674537	50.0	50.0	
5 Dipropylene Glycol Methyl Ether							
	7.329	7.330	-0.001	42802	20.0	23.4	
6 Propylene glycol							
	8.261	8.260	0.001	460891	20.0	31.5	
7 Ethylene glycol							
	8.705	8.704	0.001	358819	20.0	33.2	
8 2-(2-Butoxyethoxy)ethanol							
	9.809	9.809	0.000	471013	20.0	23.6	
9 2,2'-Oxybisethanol							
	10.506	10.506	0.000	379914	20.0	31.9	
10 Triethylene Glycol							
	11.701	11.701	0.000	422012	20.0	30.6	
11 Tetraethylene Glycol							
	13.993	13.994	-0.001	727729	40.0	59.6	

Reagents:

SG_GlyICV_00062	Amount Added: 10.00	Units: uL
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16008.D

Injection Date:	16-Nov-2023 18:57:01	Instrument ID:	CVGG2	Operator ID:	
Lims ID:	lcsd			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8015_GLY_VGG	Limit Group:	8015C_DAI		

Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16008.D

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: AF-RHMW17-WGN01LF-2311 MS   Lab Sample ID: 580-133711-1 MS

Matrix: Water   Lab File ID: 1IK16034.D

Analysis Method: 8015C GLY   Date Collected: 11/08/2023 09:05

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 05:05

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.: 808697   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	22.2		5.0	3.0	1.1

FORM I 8015C GLY

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16034.D						
Lims ID:	580-133711-B-1 MS						
Client ID:							
Sample Type:	MS						
Inject. Date:	17-Nov-2023 05:05:53		ALS Bottle#:	0	Worklist Smp#:	34	
Injection Vol:	1.0 ul		Dil. Factor:	1.0000			
Sample Info:	680-0090833-034						
Operator ID:			Instrument ID:	CVGG2			

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m
Limit Group:	8015C_DAI
Last Update:	17-Nov-2023 10:39:48 Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon
Quant Method:	Internal Standard Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
6.279	6.284	-0.005	2128808	50.0	50.0	
8 2-(2-Butoxyethoxy)ethanol						
9.807	9.809	-0.002	565964	20.0	22.2	

Reagents:

SG_Gly_CAL_00056	Amount Added: 10.00	Units: uL
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16034.D
Injection Date: 17-Nov-2023 05:05:53   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-133711-B-1 MS   Worklist Smp#:   34
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16034.D

11/17/2023
9:46 AM

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Client Sample ID: AF-RHMW17-WGN01LF-2311   Lab Sample ID: 580-133711-1 MSD
                  MSD

Matrix: Water   Lab File ID: 1IK16035.D

Analysis Method: 8015C GLY   Date Collected: 11/08/2023 09:05

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL)   Date Analyzed: 11/17/2023 05:29

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.: 808697   Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	24.8		5.0	3.0	1.1

FORM I 8015C GLY

11/17/2023
9:46 AM

Eurofins Savannah
Target Compound Quantitation Report

Data File:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16035.D	
Lims ID:	580-133711-B-1 MSD	
Client ID:		
Sample Type:	MSD	
Inject. Date:	17-Nov-2023 05:29:18	ALS Bottle#: 0 Worklist Smp#: 35
Injection Vol:	1.0 ul	Dil. Factor: 1.0000
Sample Info:	680-0090833-035	
Operator ID:		Instrument ID: CVGG2

Method:	\\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\8015_GLY_VGG.m	
Limit Group:	8015C_DAI	
Last Update:	17-Nov-2023 10:39:48	Calib Date: 15-Nov-2023 17:44:20
Integrator:	Falcon	
Quant Method:	Internal Standard	Quant By: Initial Calibration
Last ICal File:	\\chromfs\Savannah\ChromData\CVGG2\20231115-90783.b\1IK15012.D	

Column 1 :	J&W DB WAX (0.45 mm)	Det: GC FID2B
Process Host:	CTX1618	

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 4 n-Heptyl Alcohol						
6.279	6.284	-0.005	1987567	50.0	50.0	
8 2-(2-Butoxyethoxy)ethanol						
9.807	9.809	-0.002	584733	20.0	24.8	

Reagents:

SG_Gly_CAL_00056	Amount Added: 10.00	Units: uL	
SG_GLY_ISTD_00129	Amount Added: 10.00	Units: uL	Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231116-90833.b\1IK16035.D
Injection Date: 17-Nov-2023 05:29:18   Instrument ID: CVGG2   Operator ID:
Lims ID: 580-133711-B-1 MSD   Worklist Smp#:   35
Client ID:
Injection Vol: 1.0 ul   Dil. Factor: 1.0000   ALS Bottle#:   0
Method: 8015_GLY_VGG   Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

GC FID2B, 1IK16035.D

11/17/2023
9:46 AM

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Instrument ID: CVGG2   Start Date: 11/15/2023 15:23

Analysis Batch Number: 808404   End Date: 11/15/2023 18:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-808404/6		11/15/2023 15:23	1	1IK15006.D	J&W DB WAX 0.45(mm)
IC 680-808404/7		11/15/2023 15:47	1	1IK15007.D	J&W DB WAX 0.45(mm)
IC 680-808404/8		11/15/2023 16:10	1	1IK15008.D	J&W DB WAX 0.45(mm)
ICIS 680-808404/9		11/15/2023 16:34	1	1IK15009.D	J&W DB WAX 0.45(mm)
IC 680-808404/10		11/15/2023 16:57	1	1IK15010.D	J&W DB WAX 0.45(mm)
IC 680-808404/11		11/15/2023 17:20	1	1IK15011.D	J&W DB WAX 0.45(mm)
IC 680-808404/12		11/15/2023 17:44	1	1IK15012.D	J&W DB WAX 0.45(mm)
ICV 680-808404/14		11/15/2023 18:31	1	1IK15014.D	J&W DB WAX 0.45(mm)

8015C GLY

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah

SDG No.:

Instrument ID: CVGG2

Analysis Batch Number: 808697

Job No.: 580-133711-1

Start Date: 11/16/2023 18:33

End Date: 11/17/2023 06:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-808697/7		11/16/2023 18:33	1	1IK16007.D	J&W DB WAX 0.45(mm)
LCS 680-808697/1007		11/16/2023 18:33	1	-1IK16007-LCS.d	J&W DB WAX 0.45(mm)
LCSD 680-808697/8		11/16/2023 18:57	1	1IK16008.D	J&W DB WAX 0.45(mm)
MB 680-808697/11		11/16/2023 20:07	1	1IK16011.D	J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 20:30	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 20:54	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 21:17	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 21:40	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 22:04	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 22:27	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 22:51	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 23:14	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/16/2023 23:38	1		J&W DB WAX 0.45(mm)
CCV 680-808697/22		11/17/2023 00:25	1	1IK16022.D	J&W DB WAX 0.45(mm)
580-133711-1	AF-RHMW17-WGN01LF-2311	11/17/2023 01:35	1	1IK16025.D	J&W DB WAX 0.45(mm)
580-133711-2	AF-RHMW17D-WGN01LF-2311	11/17/2023 01:58	1	1IK16026.D	J&W DB WAX 0.45(mm)
580-133711-3	AF-RHMW17D-WQFB01-2311	11/17/2023 02:21	1	1IK16027.D	J&W DB WAX 0.45(mm)
580-133711-4	AF-RHMW17S-WGN01LF-2311	11/17/2023 02:45	1	1IK16028.D	J&W DB WAX 0.45(mm)
580-133711-5	AF-RHMW17S-WQEB01-2311	11/17/2023 03:08	1	1IK16029.D	J&W DB WAX 0.45(mm)
580-133711-6	AF-RHMW12A-WGN01LF-2311	11/17/2023 03:32	1	1IK16030.D	J&W DB WAX 0.45(mm)
580-133711-7	AF-RHMW12A-WGFD01LF-2311	11/17/2023 03:55	1	1IK16031.D	J&W DB WAX 0.45(mm)
ZZZZZ		11/17/2023 04:19	1		J&W DB WAX 0.45(mm)
ZZZZZ		11/17/2023 04:42	1		J&W DB WAX 0.45(mm)
580-133711-1 MS	AF-RHMW17-WGN01LF-2311 MS	11/17/2023 05:05	1	1IK16034.D	J&W DB WAX 0.45(mm)
580-133711-1 MSD	AF-RHMW17-WGN01LF-2311 MSD	11/17/2023 05:29	1	1IK16035.D	J&W DB WAX 0.45(mm)
CCV 680-808697/37		11/17/2023 06:16	1	1IK16037.D	J&W DB WAX 0.45(mm)

8015C GLY

11/17/2023
9:46 AM

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Batch Number: 808404   Batch Start Date: 11/15/23 15:23   Batch Analyst: Mullis, David B

Batch Method: 8015C GLY   Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00053	SG_GLY_ISTD 00129	SG_GlyICV 00062		
IC 680-808404/6		8015C GLY		1 mL	50 uL	10 uL			
IC 680-808404/7		8015C GLY		1 mL	40 uL	10 uL			
IC 680-808404/8		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-808404/9		8015C GLY		1 mL	10 uL	10 uL			
IC 680-808404/10		8015C GLY		1 mL	5 uL	10 uL			
IC 680-808404/11		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-808404/12		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-808404/14		8015C GLY		1 mL		10 uL	10 uL		

Batch Notes

Basis	Basis Description

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

8015C GLY   Page 1 of 1

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah   Job No.: 580-133711-1

SDG No.:

Batch Number: 808697   Batch Start Date: 11/16/23 18:33   Batch Analyst: Mullis, David B

Batch Method: 8015C GLY   Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL 00053	SG_Gly_CAL 00056	SG_GLY_ISTD 00129	SG_GlyICV 00062	
CCVIS 680-808697/7		8015C GLY		1 mL			10 uL	10 uL	
LCSD 680-808697/8		8015C GLY		1 mL			10 uL	10 uL	
MB 680-808697/11		8015C GLY		1 mL			10 uL		
CCV 680-808697/22		8015C GLY		1 mL	5 uL		10 uL		
580-133711-B-1	AF-RHMW17-WGN01LF-2311	8015C GLY	T	1 mL			10 uL		
580-133711-A-2	AF-RHMW17D-WGN01LF-2311	8015C GLY	T	1 mL			10 uL		
580-133711-C-3	AF-RHMW17D-WQFB01-2311	8015C GLY	T	1 mL			10 uL		
580-133711-C-4	AF-RHMW17S-WGN01LF-2311	8015C GLY	T	1 mL			10 uL		
580-133711-B-5	AF-RHMW17S-WQEB01-2311	8015C GLY	T	1 mL			10 uL		
580-133711-C-6	AF-RHMW12A-WGN01LF-2311	8015C GLY	T	1 mL			10 uL		
580-133711-B-7	AF-RHMW12A-WGFD01LF-2311	8015C GLY	T	1 mL			10 uL		
580-133711-B-1 MS	AF-RHMW17-WGN01LF-2311	8015C GLY	T	1 mL		10 uL	10 uL		
580-133711-B-1 MSD	AF-RHMW17-WGN01LF-2311	8015C GLY	T	1 mL		10 uL	10 uL		
CCV 680-808697/37		8015C GLY		1 mL	10 uL		10 uL		
LCS 680-808697/1007		8015C GLY		1 mL			10 uL	10 uL	

Batch Notes

Basis	Basis Description
T	Total/NA

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

8015C GLY   Page 1 of 1

Subcontract Data

Shipping and Receiving Documents

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

Chain of Custody Record

eurofins
Environment Testing
America

Client Information		Sampler: Cristian Perez		Lab PM: Elaine Walker		Carrier Tracking No(s): FedEx		COC No: 2311AFEA10
Client Contact:		Phone: (909) 637·5600		E-Mail: M.Elaine.Walker@EurofinsET.com		State of Origin: Hawaii		Page: Page 1 of 1

| Company: AECOM | PWSID: | | Analysis Requested | | Job #: |

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:

Field	Value
Address:	1001 Bishop St. Suite 1600
Due Date Requested:	see subcontract
City:	Honolulu
TAT Requested (days):	**Rush - 5 Day**
State, Zip:	Hawaii 96813
Compliance Project: Δ Yes Δ No	
Phone:	808-954-4512 / 770-331-0794
PO #:	
Email:	Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)
WO #:	
Project Name:	CTO N6274223F0104
Project #:	60697810
Site:	RHSF
SSOW#:	

CP 11/8/23

Analysis column: 8015C_DAI_GL_D5/2-(2-butoxyethoxy)-ethanol

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	Total Number of containers	Special Instructions/Note:
Preservation Code:					X	X	A	X	
AF-RHMW17-WGN01LF-2311	11/8/23	0905	G	W	N	N	X	3	

580-133711 Chain of Custody

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

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

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

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

Special Instructions/QC Requirements: DOD QSM project.

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment: United AWB: D16 - 4566 3181		
Relinquished by: Cristian Perez	Date/Time: 11/8/23 1145		Company AECOM	Received by: Ellie Shimatsu	Date/Time: 11/8/23 1145		Company AECOM	
Relinquished by: Ellie Shimatsu	Date/Time: 11/9/23 1240		Company AECOM	Received by:	Date/Time:		Company	
Relinquished by:	Date/Time:		Company	Received by:	Date/Time: 11/10/23 1700		Company	

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.0 / 2·3 |

Ver: 01/16/2019

11/17/2023
9:46 AM

Eurofins FGS, Seattle

5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Gabrica Aila	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2311AFEA11
Client Contact:	Phone: 8026248434	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1

Client Information

Company: AECOM
Address: 1001 Bishop St. Suite 1600
City: Honolulu
State, Zip: Hawaii 96813
Phone: 808-954-4512 / 770-331-0794
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)
Project Name: CTO N6274223F0104
Site: RHSF

PWSID:
Due Date Requested: see subcontract
TAT Requested (days): **Rush - 5 Day**
Compliance Project: △ Yes △ No
PO #:
WO #:
Project #: 60697810
SSOW#:

Job #:

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-RHMW17D-WGN01LF-2311	11/8/23	1135	G	W	N	N	X						3	
AF-RHMW17D-WQFB01-2311		1005	G	W	N	N	X						3	

11/8/23

Possible Hazard Identification

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client   ☐ Disposal By Lab   ☐ Archive For _____ Months

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

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment: United AWB: 016 - 45663181		
Relinquished by:	AECOM	Date/Time: 11/8/23 / 1335	Company AECOM	Received by: Ellie Shimatsu	Date/Time: 11/8/23 1335	Company AECOM
Relinquished by: Ellie Shimatsu		Date/Time: 11/9/23 1240	Company AECOM	Received by:	Date/Time: 11/10/23 1700	Company
Relinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.0/2.3

Ver: 01/16/2019

11/17/2023
9:46 AM

Eurofins FGS, Seattle

5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins — Environment Testing America

Client Information	Sampler: GABRIEL ALLEN	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2311AFEA12
Client Contact:	Phone: 8086398434	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:	Analysis Requested		Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			Preservation Codes:
City: Honolulu	TAT Requested (days): **Rush - 5 Day**			A - HCL / M - Hexane
State, Zip: Hawaii 96813	Compliance Project: △ Yes △ No			B - NaOH / N - None
Phone: 808-954-4512 / 770-331-0794	PO #:			C - Zn Acetate / O - AsNaO2
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:			D - Nitric Acid / P - Na2O4S
Project Name: CTO N6274223F0104	Project #: 60697810			E - NaHSO4 / Q - Na2SO3
Site: RHSF	SSOW#:			F - MeOH / R - Na2S2O3

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, ST=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAI_GL_D5/2-(2-buloxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
Preservation Code:							A		
AF-RHMW17S-WGN01LF-2311	11/8/23	1235	G	W	N	N	X	3	
AF-RHMW17S-WQEB01-2311	″	1120	G	W	N	N	X	3	

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

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

Empty Kit Relinquished by:		Date:		Time:			Method of Shipment: United AWB: 016 - 45663181	
Relinquished by: GABRIEL ALLEN /AECOM	Date/Time: 11/8/23 / 1335	Company AECOM	Received by: Ellie Shimatsu	Date/Time: 11/8/23 1335	Company AECOM
Relinquished by: Ellie Shimatsu	Date/Time: 11/9/23 1240	Company AECOM	Received by:	Date/Time: 11/10/23 1700	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2·0 / 2·3

Ver: 01/16/2019

11/17/2023
9:46 AM

Chain of Custody Record

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

eurofins
Environment Testing
America

Client Information				
Client Contact:	Sampler: Miranda DeGarmo	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 2311AFEA05
	Phone: 330-205-9662	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	**Analysis Requested**
City: Honolulu	TAT Requested (days): **Rush - 5 Day**	
State, Zip: Hawaii 96813	Compliance Project: △ Yes △ No	
Phone: 808-954-4512 / 770-331-0794	PO #:	
Email: Watson Tanji (watson.tanji@aecom.com)/ Mark Kromis (mark.kromis@aecom.com)	WO #:	
Project Name: CTO N6274223F0104	Project #: 60697810	
Site: RHSF	SSOW#:	

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	Field Filtered Sample (Yes or No)	Perform MD/MSD (Yes or No)	8015C_DAI_GL_D5/ 2-(2-butoxyethoxy)-ethanol	MD 11/9/23	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A			
AF-RHMW12A-WGN01LF-2311	11/9/23	0920	G	W	N	N	X		3	
AF-RHMW12A-WGFD01LF-2311	11/9/23	0920	G	W	N	N	X		3	

MD 11/9/23

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

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

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

Empty Kit Relinquished by:		Date:				Time:		Method of Shipment: United AWB: D16-4566318!		
Relinquished by: Miranda DeGarmo		Date/Time: 11/9/23	1150	AECOM	Received by: Ellie Shimatsu			Date/Time: 11/9/23	1150	AECOM
Relinquished by: Ellie Shimatsu		Date/Time: 11/9/23	1240	Company AECOM	Received by:			Date/Time:		Company
Relinquished by:		Date/Time:		Company	Received by:			Date/Time: 11/10/23	1700	Company

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

2.0/2.3

Ver: 01/16/2019

Login Sample Receipt Checklist

Login Number: 133711
List Number: 1
Creator: Johnson, Corey M

List Source: Eurofins Seattle

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	