

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

Attn: Terri Choy  
AECOM

1001 Bishop Street  
Honolulu HI 96813

Generated 12/19/2023 3:10 PM

**JOB DESCRIPTION**

Red Hill - AFFF Assessment Sampling

**JOB NUMBER**

580-134883-1

# Eurofins Seattle

## Job Notes

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

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

## Authorization



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Authorized for release by  
Tracy L Dutton, Client Relations Manager  
[Tracy.Dutton@et.eurofinsus.com](mailto:Tracy.Dutton@et.eurofinsus.com)  
253 248-4970

# Table of Contents

Cover Title Page . . . . .	1
Data Summaries . . . . .	5
Definitions . . . . .	5
Case Narrative . . . . .	6
Detection Summary . . . . .	7
Client Sample Results . . . . .	8
Default Detection Limits . . . . .	9
QC Sample Results . . . . .	10
QC Association . . . . .	11
Chronicle . . . . .	12
Certification Summary . . . . .	13
Method Summary . . . . .	14
Sample Summary . . . . .	15
Reagent Traceability . . . . .	16
COAs . . . . .	17
Organic Sample Data . . . . .	27
GC Semi VOA . . . . .	27
Method 8015C - DAI Glycols . . . . .	27
Method 8015C - DAI Glycols QC Summary . . . . .	28
Method 8015C - DAI Glycols Sample Data . . . . .	34
Standards Data . . . . .	46
Method 8015C - DAI Glycols ICAL Data . . . . .	46
Method 8015C - DAI Glycols CCAL Data . . . . .	75
Raw QC Data . . . . .	88
Method 8015C - DAI Glycols Blank Data . . . . .	88
Method 8015C - DAI Glycols LCS/LCSD Data . . . . .	91

# Table of Contents

Method 8015C - DAI Glycols MS/MSD Data .....	97
Method 8015C - DAI Glycols Run Logs .....	104
Method 8015C - DAI Glycols Prep Data .....	106
Subcontracted Data .....	108
Shipping and Receiving Documents .....	109
Client Chain of Custody .....	110
Sample Receipt Checklist .....	113

# Definitions/Glossary

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

Job ID: 580-134883-1

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

**Job Narrative  
580-134883-1**

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 12/12/2023 1:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.1°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-HDMW225303-WGN01LF-2312 (134883-1), AF-RHMW02-WGFD01LF-2312 (134883-4), AF-RHMW02-WGN01LF-2312 (134883-3) and AF-RHMW03-WGN01LF-2312 (134883-2) were analyzed for Glycols- Direct Injection (GC/FID). The samples were analyzed on 12/18/2023.

The closing continuing calibration verification (CCV) associated with batch 680-814101 recovered outside acceptance criteria, low biased, for 2-(2-Butoxyethoxy)ethanol. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte, the data has been reported.

# Detection Summary

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

Job ID: 580-134883-1

**Client Sample ID: AF-HDMW225303-WGN01LF-2312**

**Lab Sample ID: 580-134883-1**

No Detections.

**Client Sample ID: AF-RHMW03-WGN01LF-2312**

**Lab Sample ID: 580-134883-2**

No Detections.

**Client Sample ID: AF-RHMW02-WGN01LF-2312**

**Lab Sample ID: 580-134883-3**

No Detections.

**Client Sample ID: AF-RHMW02-WGFD01LF-2312**

**Lab Sample ID: 580-134883-4**

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

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

Job ID: 580-134883-1

**Client Sample ID: AF-HDMW225303-WGN01LF-2312**

**Lab Sample ID: 580-134883-1**

Date Collected: 12/08/23 09:55

Matrix: Water

Date Received: 12/12/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			12/18/23 22:10	1

**Client Sample ID: AF-RHMW03-WGN01LF-2312**

**Lab Sample ID: 580-134883-2**

Date Collected: 12/08/23 12:45

Matrix: Water

Date Received: 12/12/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			12/18/23 22:34	1

**Client Sample ID: AF-RHMW02-WGN01LF-2312**

**Lab Sample ID: 580-134883-3**

Date Collected: 12/08/23 11:05

Matrix: Water

Date Received: 12/12/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			12/18/23 22:57	1

**Client Sample ID: AF-RHMW02-WGFD01LF-2312**

**Lab Sample ID: 580-134883-4**

Date Collected: 12/08/23 11:05

Matrix: Water

Date Received: 12/12/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U Q	5.0	1.1	mg/L			12/18/23 23:21	1



# Default Detection Limits

Client: AECOM

Job ID: 580-134883-1

Project/Site: Red Hill - AFFF Assessment Sampling

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

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

# QC Sample Results

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

Job ID: 580-134883-1

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

**Lab Sample ID: MB 680-814101/11**  
**Matrix: Water**  
**Analysis Batch: 814101**

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			12/18/23 20:13	1

**Lab Sample ID: LCS 680-814101/1006**  
**Matrix: Water**  
**Analysis Batch: 814101**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	20.0	17.2		mg/L		86	50 - 150

**Lab Sample ID: LCSD 680-814101/7**  
**Matrix: Water**  
**Analysis Batch: 814101**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	20.0	15.4		mg/L		77	50 - 150	11	50

**Lab Sample ID: 580-134883-1 MS**  
**Matrix: Water**  
**Analysis Batch: 814101**

**Client Sample ID: AF-HDMW225303-WGN01LF-2312**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	3.0	U Q	20.0	18.4		mg/L		92	50 - 150

**Lab Sample ID: 580-134883-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 814101**

**Client Sample ID: AF-HDMW225303-WGN01LF-2312**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	3.0	U Q	20.0	16.5		mg/L		83	50 - 150	11	50

# QC Association Summary

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

Job ID: 580-134883-1

## GC Semi VOA

### Analysis Batch: 814101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-134883-1	AF-HDMW225303-WGN01LF-2312	Total/NA	Water	8015C GLY	
580-134883-2	AF-RHMMW03-WGN01LF-2312	Total/NA	Water	8015C GLY	
580-134883-3	AF-RHMMW02-WGN01LF-2312	Total/NA	Water	8015C GLY	
580-134883-4	AF-RHMMW02-WGFD01LF-2312	Total/NA	Water	8015C GLY	
MB 680-814101/11	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-814101/1006	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-814101/7	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-134883-1 MS	AF-HDMW225303-WGN01LF-2312	Total/NA	Water	8015C GLY	
580-134883-1 MSD	AF-HDMW225303-WGN01LF-2312	Total/NA	Water	8015C GLY	

# Lab Chronicle

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

Job ID: 580-134883-1

**Client Sample ID: AF-HDMW225303-WGN01LF-2312**

**Lab Sample ID: 580-134883-1**

Date Collected: 12/08/23 09:55

Matrix: Water

Date Received: 12/12/23 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	814101	DBM	EET SAV	12/18/23 22:10

**Client Sample ID: AF-RHMW03-WGN01LF-2312**

**Lab Sample ID: 580-134883-2**

Date Collected: 12/08/23 12:45

Matrix: Water

Date Received: 12/12/23 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	814101	DBM	EET SAV	12/18/23 22:34

**Client Sample ID: AF-RHMW02-WGN01LF-2312**

**Lab Sample ID: 580-134883-3**

Date Collected: 12/08/23 11:05

Matrix: Water

Date Received: 12/12/23 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	814101	DBM	EET SAV	12/18/23 22:57

**Client Sample ID: AF-RHMW02-WGFD01LF-2312**

**Lab Sample ID: 580-134883-4**

Date Collected: 12/08/23 11:05

Matrix: Water

Date Received: 12/12/23 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	814101	DBM	EET SAV	12/18/23 23:21

**Laboratory References:**

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

# Accreditation/Certification Summary

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

Job ID: 580-134883-1

## Laboratory: Eurofins Savannah

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

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

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

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

# Method Summary

Client: AECOM

Job ID: 580-134883-1

Project/Site: Red Hill - AFFF Assessment Sampling

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

**Protocol References:**

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

**Laboratory References:**

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

# Sample Summary

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

Job ID: 580-134883-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-134883-1	AF-HDMW225303-WGN01LF-2312	Water	12/08/23 09:55	12/12/23 13:00
580-134883-2	AF-RHMW03-WGN01LF-2312	Water	12/08/23 12:45	12/12/23 13:00
580-134883-3	AF-RHMW02-WGN01LF-2312	Water	12/08/23 11:05	12/12/23 13:00
580-134883-4	AF-RHMW02-WGFD01LF-2312	Water	12/08/23 11:05	12/12/23 13:00

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah

Job No.: 580-134883-1

SDG No.:

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



Reagent

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**SG\_Gly\_CAL\_00053**



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



ISO 17034 Accredited  
Reference Material Producer  
Cert. No. 3031.02

Rev 0

## Certificate of Analysis

Page 1 of 3

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

### Description:

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

### Container:

1 ml Ampule, Amber Glass

### Certified Values:

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

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

### Intended Uses:

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

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

# Certificate of Analysis

Page 2 of 3

Catalog No. G34-120070-04

Lot No. 480919

Expiration Date 2 -May-2024

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

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

y = boiling point of the solvent (in degrees K)

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

## Method of Preparation:

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

## Packaging and Storage:

The solution should be stored according to the following storage requirements:  $\leq -10$  °C

Once the product is opened, it should be transferred to a vial with minimum head space if the product was received in a sealed ampule.

## Glassware Calibration:

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

## Weights and Balance Calibration:

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

## Homogeneity:

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

## Hazardous Information:

Refer to MSDS.

## Calculation of Uncertainty:

The following equations are used to calculate the value of the expanded uncertainty:

$u = ku_c$  u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2,  $u_c$  = the combined uncertainty

$u_c = (u_{\text{char}}^2 + u_{\text{tran}}^2 + u_{\text{homo}}^2 + u_{\text{its}}^2)^{1/2}$  where  $u_i$  are the individual uncertainty components for manufacturing, transportation, homogeneity, and shelf life. While no significant uncertainty was detected in the replicates, a minimum contribution to

Manufactured By:



Brian Stokes

3 -May-2022

Production Chemist I

Certified By:



Tyler Sherman

14 -Jun-2022

Quality Control Chemist I

Released By:



Susan Mathews

14 -Jun-2022

Quality Control Team Lead

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

# Certificate of Analysis

Catalog No. G34-120070-04

Lot No. 480919

Expiration Date 2 -May-2024

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

## Expiration Information:

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

## Quality Standard Documentation:

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

**Manufactured By:**



Brian Stokes

3 -May-2022

**Production Chemist I**

**Certified By:**



Tyler Sherman

14 -Jun-2022

**Quality Control Chemist I**

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

**Released By:**



Susan Mathews

14 -Jun-2022

**Quality Control Team Lead**

Reagent

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**SG\_GLY\_ISTD\_00129**

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

**Product Name:** Custom Standard

**Lot Number:** 0006759266

**Product Number:** CUS-6046

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

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

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

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

**Matrix:** methanol (methyl alcohol)

**Description:**

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

**Traceability:**

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

**Homogeneity:**

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

**Instructions for Use:**

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

**Safety:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this analytical reference material.

**Intended Use:**

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

**Expiration of Certification:**

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

Reagent

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**SG\_GlyICV\_00062**



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



ISO 17034 Accredited  
Reference Material Producer  
Cert. No. 3031.02

Rev 0

## Certificate of Analysis

Page 1 of 3

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

### Description:

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

### Container:

1 ml Ampule, Amber Glass

### Certified Values:

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

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

### Intended Uses:

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

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



# Certificate of Analysis

Page 2 of 3

Catalog No. G34-120070-04

Lot No. 480919

Expiration Date 2 -May-2024

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

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

y = boiling point of the solvent (in degrees K)

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

## Method of Preparation:

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

## Packaging and Storage:

The solution should be stored according to the following storage requirements:  $\leq -10$  °C

Once the product is opened, it should be transferred to a vial with minimum head space if the product was received in a sealed ampule.

## Glassware Calibration:

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

## Weights and Balance Calibration:

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

## Homogeneity:

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

## Hazardous Information:

Refer to MSDS.

## Calculation of Uncertainty:

The following equations are used to calculate the value of the expanded uncertainty:

$u = k u_c$  u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2,  $u_c$  = the combined uncertainty

$u_c = (u_{\text{char}}^2 + u_{\text{tran}}^2 + u_{\text{homo}}^2 + u_{\text{lis}}^2)^{1/2}$  where  $u_i$  are the individual uncertainty components for manufacturing, transportation, homogeneity, and shelf life. While no significant uncertainty was detected in the replicates, a minimum contribution to

Manufactured By:

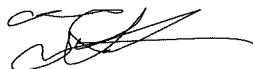


Brian Stokes

3 -May-2022

Production Chemist I

Certified By:



Tyler Sherman

14 -Jun-2022

Quality Control Chemist I

Released By:



Susan Mathews

14 -Jun-2022

Quality Control Team Lead

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

# Certificate of Analysis

Catalog No. G34-120070-04

Lot No. 480919

Expiration Date 2 -May-2024

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

## Expiration Information:

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

## Quality Standard Documentation:

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

### Manufactured By:

*Brian Stokes*

Brian Stokes  
3 -May-2022

**Production Chemist I**

### Certified By:

*Tyler Sherman*

Tyler Sherman  
14 -Jun-2022

**Quality Control Chemist I**

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

### Released By:

*Susan Mathews*

Susan Mathews  
14 -Jun-2022

**Quality Control Team Lead**

# Method 8015C - DAI Glycols

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

FORM III  
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: -1IL18006-LCS.d  
 Lab ID: LCS 680-814101/1006 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy) ethanol	20.0	17.2	86	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.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 11L18007.D  
 Lab ID: LCSD 680-814101/7 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	15.4	77	11	50	50-150	

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

FORM III  
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 11L18020.D  
 Lab ID: 580-134883-1 MS Client ID: AF-HDMW225303-WGN01LF-2312 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy) ethanol	20.0	3.0 U	18.4	92	50-150	

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

FORM III  
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 11L18021.D  
 Lab ID: 580-134883-1 MSD Client ID: AF-HDMW225303-WGN01LF-2312 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy) ethanol	20.0	16.5	83	11	50	50-150	

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

FORM IV  
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: MB 680-814101/11  
 Matrix: Water Date Extracted: \_\_\_\_\_  
 Lab File ID: (1) 1IL18011.D Lab File ID: (2) \_\_\_\_\_  
 Date Analyzed: (1) 12/18/2023 20:13 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 680-814101/1006	12/18/2023 18:16	
	LCSD 680-814101/7	12/18/2023 18:39	
AF-HDMW225303-WGN01LF-23 12	580-134883-1	12/18/2023 22:10	
AF-RHMW03-WGN01LF-2312	580-134883-2	12/18/2023 22:34	
AF-RHMW02-WGN01LF-2312	580-134883-3	12/18/2023 22:57	
AF-RHMW02-WGFD01LF-2312	580-134883-4	12/18/2023 23:21	
AF-HDMW225303-WGN01LF-23 12 MS	580-134883-1 MS	12/18/2023 23:44	
AF-HDMW225303-WGN01LF-23 12 MSD	580-134883-1 MSD	12/19/2023 00:07	



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

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 680-814101/6 Date Analyzed: 12/18/2023 18:16  
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)  
 Lab File ID (Standard): 1IL18006.D Heated Purge: (Y/N) N  
 Calibration ID: 92675

		nHPA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		3615008	6.25				
UPPER LIMIT		7230016	6.75				
LOWER LIMIT		1807504	5.75				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 680-814101/1006		3615008	6.25				
LCSD 680-814101/7		3334467	6.25				
MB 680-814101/11		2429423	6.26				
580-134883-1	AF-HDMW225303-WGN01 LF-2312	2938868	6.25				
580-134883-2	AF-RHMW03-WGN01LF-2 312	2501449	6.25				
580-134883-3	AF-RHMW02-WGN01LF-2 312	3064144	6.25				
580-134883-4	AF-RHMW02-WGFD01LF- 2312	2478984	6.25				
580-134883-1 MS	AF-HDMW225303-WGN01 LF-2312 MS	2454383	6.26				
580-134883-1 MSD	AF-HDMW225303-WGN01 LF-2312 MSD	2836080	6.25				
CCV 680-814101/24		3716499	6.25				

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



Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18016.D  
 Lims ID: 580-134883-C-1  
 Client ID: AF-HDMW225303-WGN01LF-2312  
 Sample Type: Client  
 Inject. Date: 18-Dec-2023 22:10:49      ALS Bottle#: 0      Worklist Smp#: 16  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0091713-016  
 Operator ID:      Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:54:51      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: CTX1651

First Level Reviewer: AR8P      Date: 19-Dec-2023 15:51:34

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
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\* 4 n-Heptyl Alcohol  
 6.254    6.245    0.009    2938868    50.0

**QC Flag Legend**

Processing Flags

**Reagents:**

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18016.D

Injection Date: 18-Dec-2023 22:10:49

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-134883-C-1

Lab Sample ID: 680-134883-1

Worklist Smp#: 16

Client ID: AF-HDMW225303-WGN01LF-2312

Injection Vol: 1.0 ul

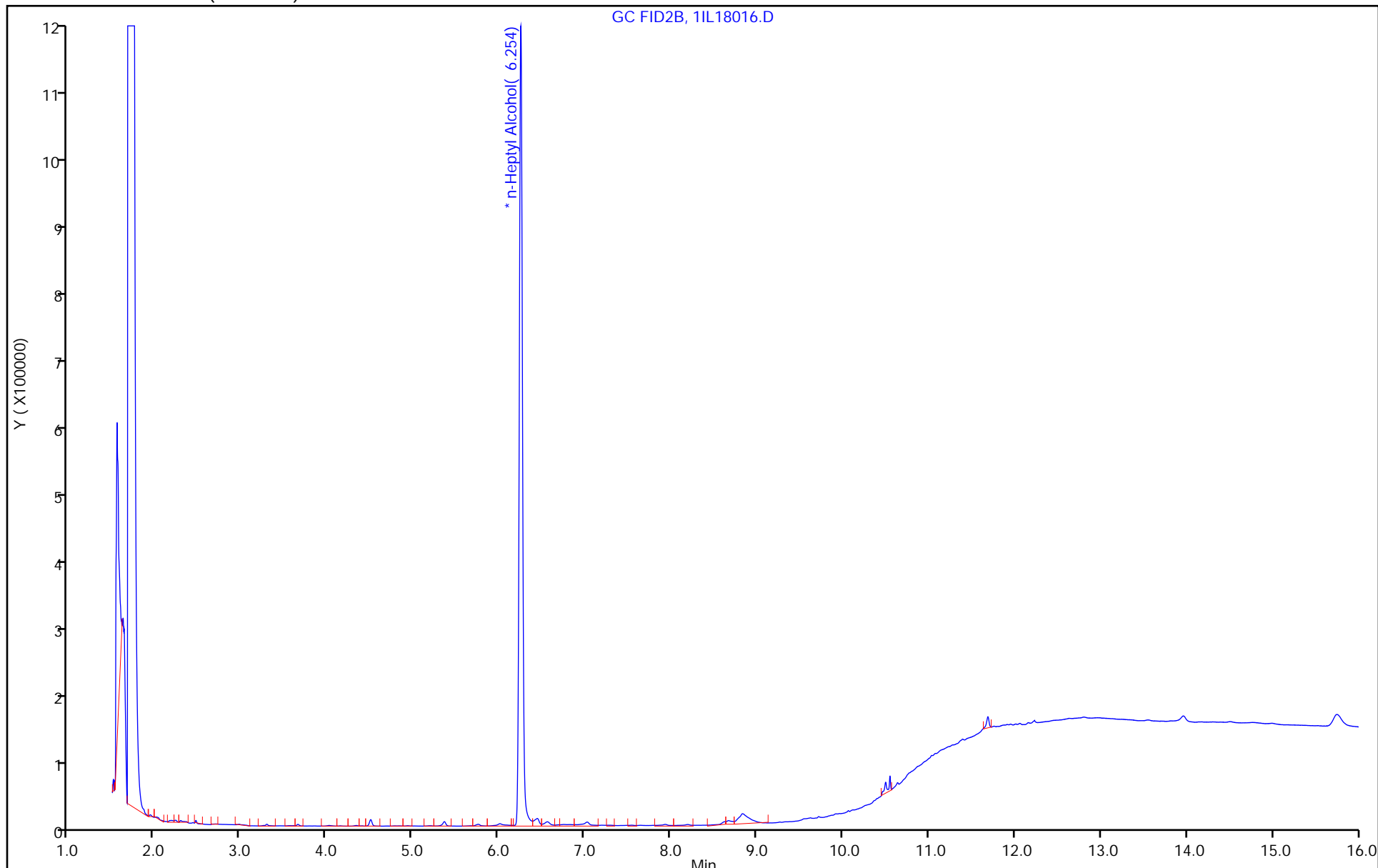
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHWW03-WGN01LF-2312 Lab Sample ID: 580-134883-2  
 Matrix: Water Lab File ID: 1IL18017.D  
 Analysis Method: 8015C GLY Date Collected: 12/08/2023 12:45  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 12/18/2023 22:34  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 814101 Units: mg/L

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

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18017.D  
 Lims ID: 580-134883-B-2  
 Client ID: AF-RHMW03-WGN01LF-2312  
 Sample Type: Client  
 Inject. Date: 18-Dec-2023 22:34:12      ALS Bottle#: 0      Worklist Smp#: 17  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0091713-017  
 Operator ID:      Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:54:51      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: CTX1651

First Level Reviewer: AR8P      Date: 19-Dec-2023 15:51:41

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
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\* 4 n-Heptyl Alcohol  
 6.254    6.245    0.009    2501449    50.0

**QC Flag Legend**

Processing Flags

**Reagents:**

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1L18017.D

Injection Date: 18-Dec-2023 22:34:12

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-134883-B-2

Lab Sample ID: 680-134883-2

Worklist Smp#: 17

Client ID: AF-RHMW03-WGN01LF-2312

Injection Vol: 1.0 ul

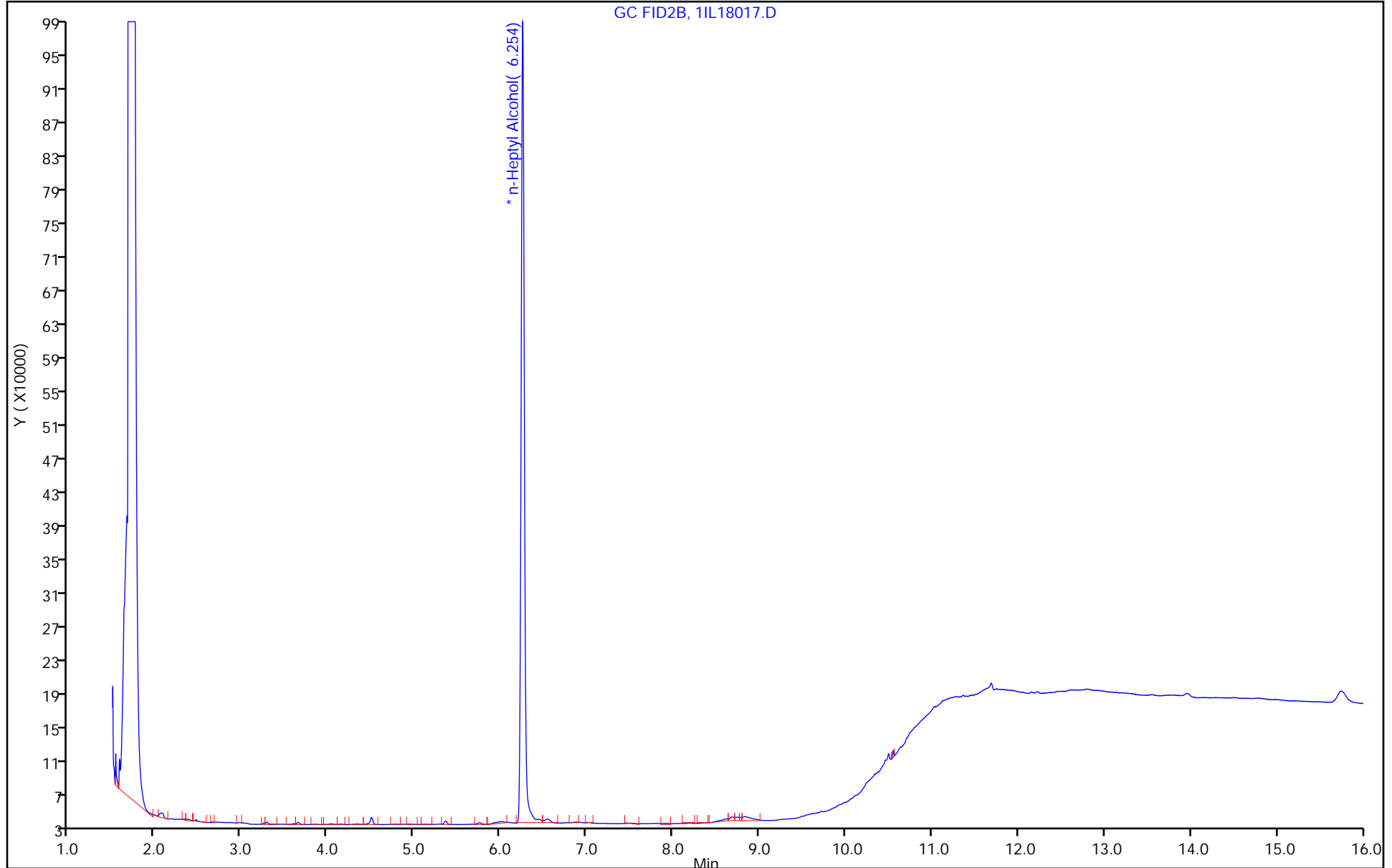
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHMMW02-WGN01LF-2312 Lab Sample ID: 580-134883-3  
 Matrix: Water Lab File ID: 1IL18018.D  
 Analysis Method: 8015C GLY Date Collected: 12/08/2023 11:05  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 12/18/2023 22:57  
 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.: 814101 Units: mg/L

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



Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18018.D  
 Lims ID: 580-134883-C-3  
 Client ID: AF-RHMW02-WGN01LF-2312  
 Sample Type: Client  
 Inject. Date: 18-Dec-2023 22:57:35      ALS Bottle#: 0      Worklist Smp#: 18  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0091713-018  
 Operator ID:      Instrument ID: CVGG2  
  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:54:51      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: CTX1651

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
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\* 4 n-Heptyl Alcohol  
 6.253    6.245    0.008    3064144    50.0

**Reagents:**

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18018.D

Injection Date: 18-Dec-2023 22:57:35

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-134883-C-3

Lab Sample ID: 680-134883-3

Worklist Smp#: 18

Client ID: AF-RHMW02-WGN01LF-2312

Injection Vol: 1.0 ul

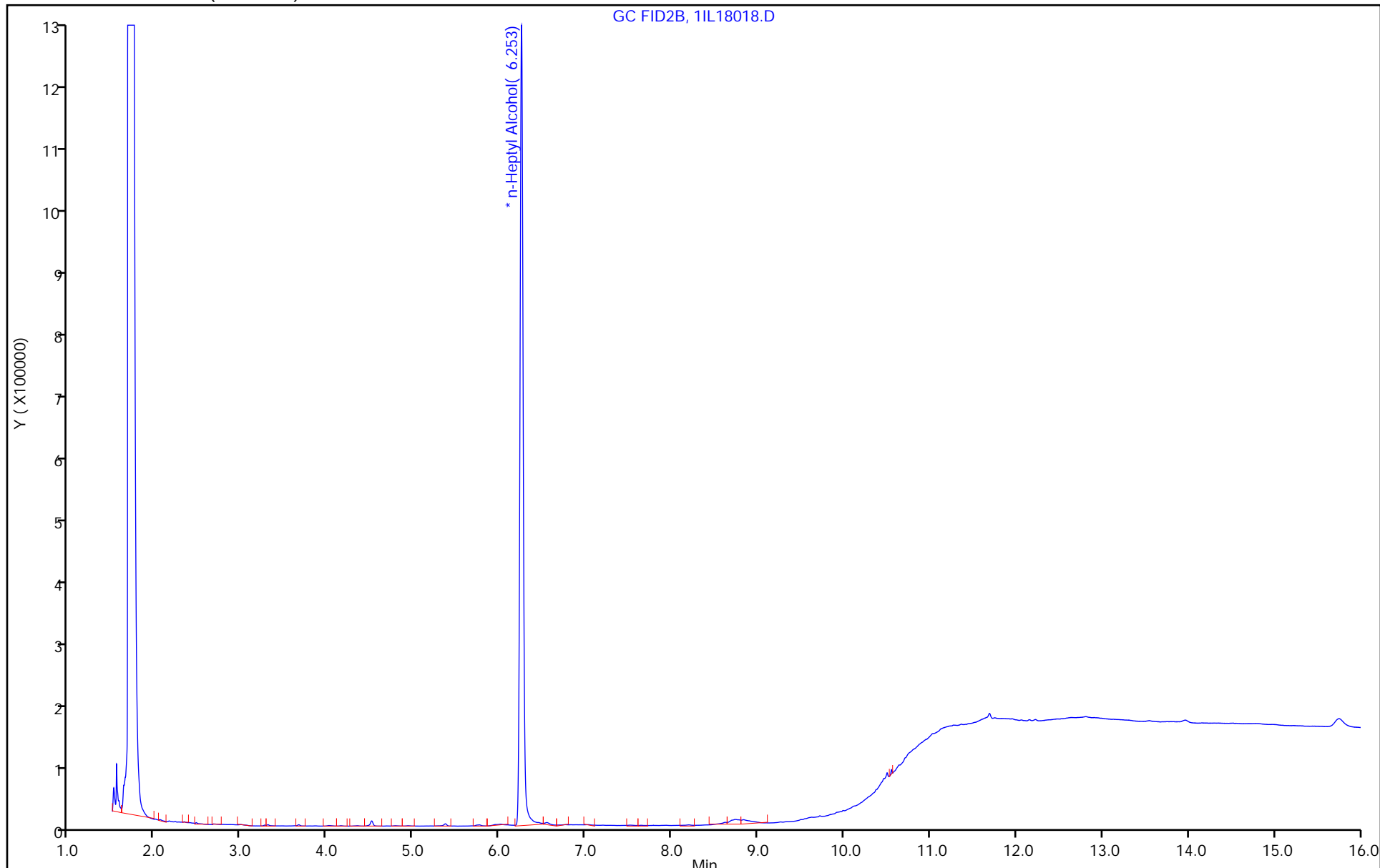
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AF-RHWW02-WGFD01LF-2312 Lab Sample ID: 580-134883-4  
 Matrix: Water Lab File ID: 1IL18019.D  
 Analysis Method: 8015C GLY Date Collected: 12/08/2023 11:05  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 12/18/2023 23:21  
 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.: 814101 Units: mg/L

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

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18019.D  
 Lims ID: 580-134883-B-4  
 Client ID: AF-RHMW02-WGFD01LF-2312  
 Sample Type: Client  
 Inject. Date: 18-Dec-2023 23:21:06      ALS Bottle#: 0      Worklist Smp#: 19  
 Injection Vol: 1.0 ul      Dil. Factor: 1.0000  
 Sample Info: 680-0091713-019  
 Operator ID:      Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:54:51      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: CTX1651

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

\* 4 n-Heptyl Alcohol  
 6.254    6.245    0.009    2478984    50.0

**Reagents:**

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1L18019.D

Injection Date: 18-Dec-2023 23:21:06

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-134883-B-4

Lab Sample ID: 680-134883-4

Worklist Smp#: 19

Client ID: AF-RHMW02-WGFD01LF-2312

Injection Vol: 1.0 ul

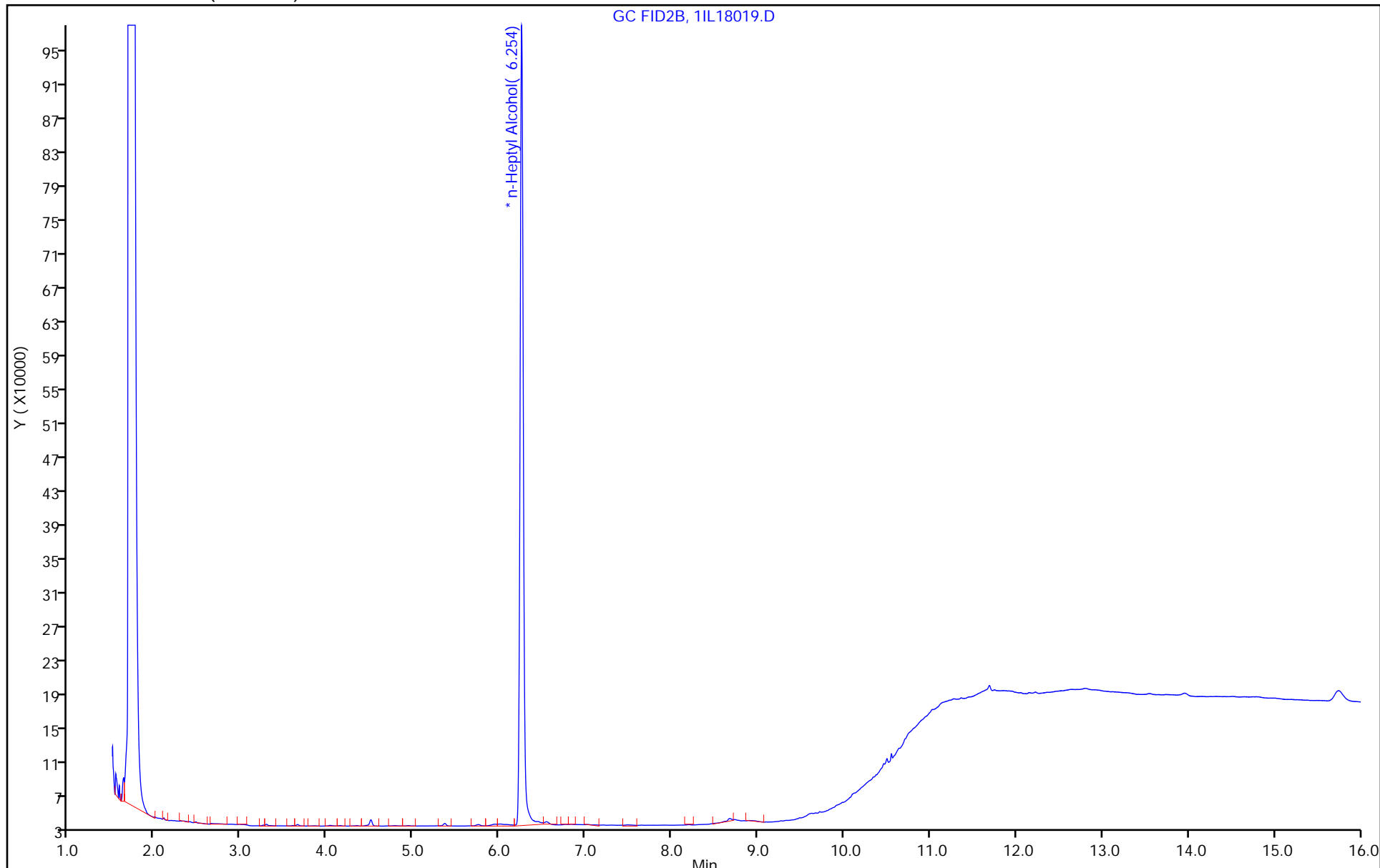
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



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

Lab Name: Eurofins Savannah Job No.: 580-134883-1 Analy Batch No.: 808405  
 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: 92675

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-808405/12	1IK15012.D
Level 2	IC 680-808405/11	1IK15011.D
Level 3	IC 680-808405/10	1IK15010.D
Level 4	ICIS 680-808405/9	1IK15009.D
Level 5	IC 680-808405/8	1IK15008.D
Level 6	IC 680-808405/7	1IK15007.D
Level 7	IC 680-808405/6	1IK15006.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol, 2-propoxy	1.1302 ++++	0.7908 0.5926	++++	0.6956	0.6816	Lin2	0.995 9	0.622 8						0.9960		0.9900	
4-Hydroxy-4-methyl-2-pentanone	1.1112 ++++	0.7643 0.5781	++++	0.6600	0.6461	Lin2	1.013 6	0.593 8						0.9970		0.9900	
2-Butoxyethanol	1.2800 ++++	0.8884 0.6678	++++	0.7869	0.7698	Lin2	1.131 2	0.702 1						0.9950		0.9900	
Dipropylene Glycol Methyl Ether	0.1210 ++++	0.0739 0.0492	++++	0.0570	0.0529	Lin2	0.142 8	0.048 5						0.9980		0.9900	
Propylene glycol	0.8828 ++++	0.5811 0.4192	++++	0.4821	0.4062	Lin2	0.943 9	0.407 0						0.9970		0.9900	
Ethylene glycol	0.6653 ++++	0.4183 0.3134	++++	0.3652	0.3000	Lin1	0.704 8	0.302 5						0.9970		0.9900	
2-(2-Butoxyethoxy)ethanol	1.1471 ++++	0.7679 0.5480	++++	0.6196	0.5767	Lin2	1.192 4	0.545 9						0.9990		0.9900	
2,2'-Oxybisethanol	0.7807 ++++	0.4897 0.3378	++++	0.4078	0.3226	Lin2	0.897 1	0.327 8						0.9930		0.9900	
Triethylene Glycol	1.2266 ++++	0.6725 0.3849	++++	0.4728	0.3668	Lin2	1.723 9	0.355 8						0.9930		0.9900	
Tetraethylene Glycol	0.7840 ++++	0.4933 0.3409	++++	0.4186	0.3306	Lin1	1.838 0	0.330 1						0.9970		0.9900	

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

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

Lab Name: Eurofins Savannah Job No.: 580-134883-1 Analy Batch No.: 808405

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: 92675

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-808405/12	1IK15012.D
Level 2	IC 680-808405/11	1IK15011.D
Level 3	IC 680-808405/10	1IK15010.D
Level 4	ICIS 680-808405/9	1IK15009.D
Level 5	IC 680-808405/8	1IK15008.D
Level 6	IC 680-808405/7	1IK15007.D
Level 7	IC 680-808405/6	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	Lin1	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	Lin1	124057 ++++	218792 3567157	++++	839423	1741870	4.00 ++++	10.0 200	++++	40.0	100

Curve Type Legend:

Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

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: 8015B\_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
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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	101.3
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	201.0

## 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

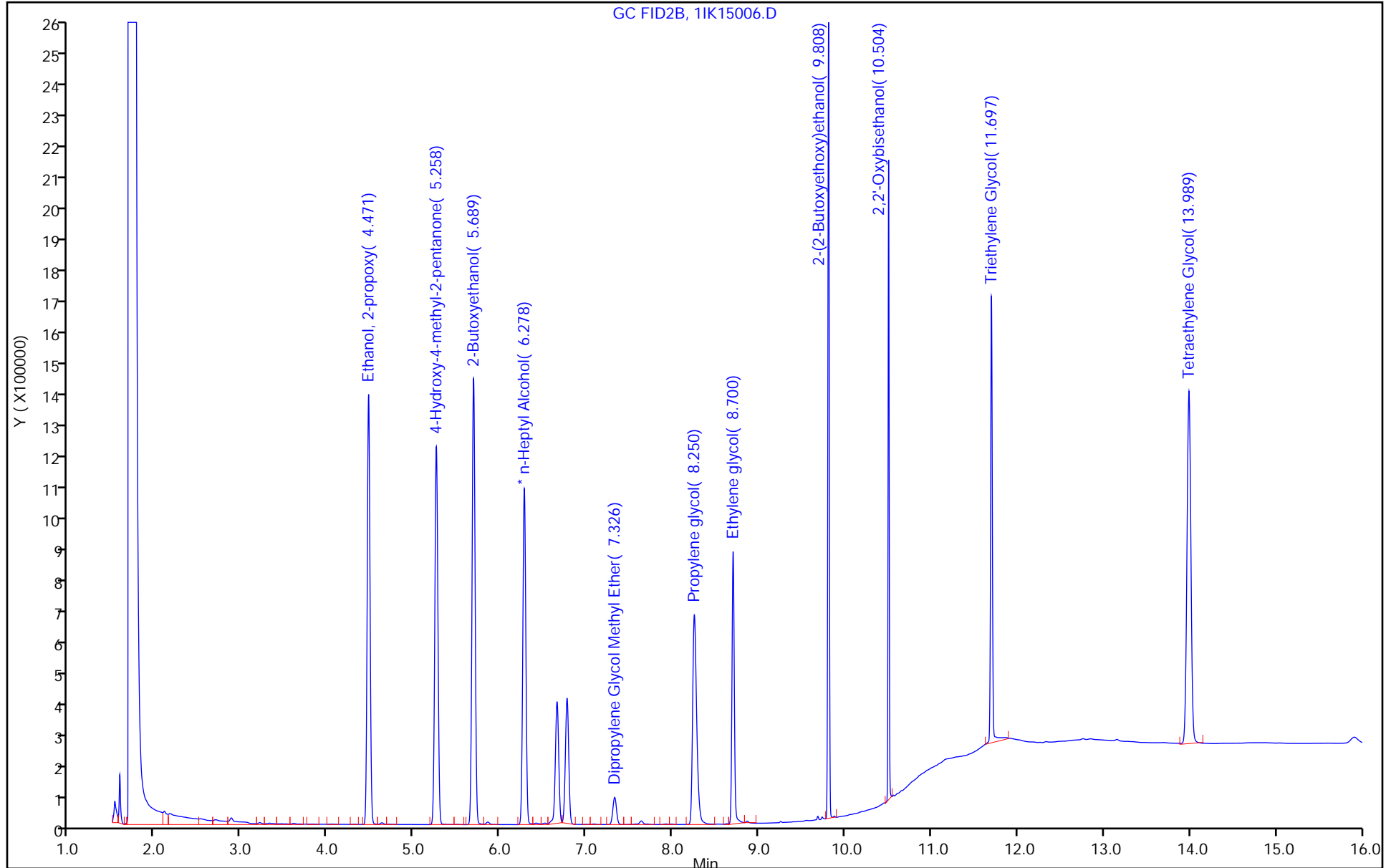
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



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: 8015B\_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
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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	102.6
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	196.6

### 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

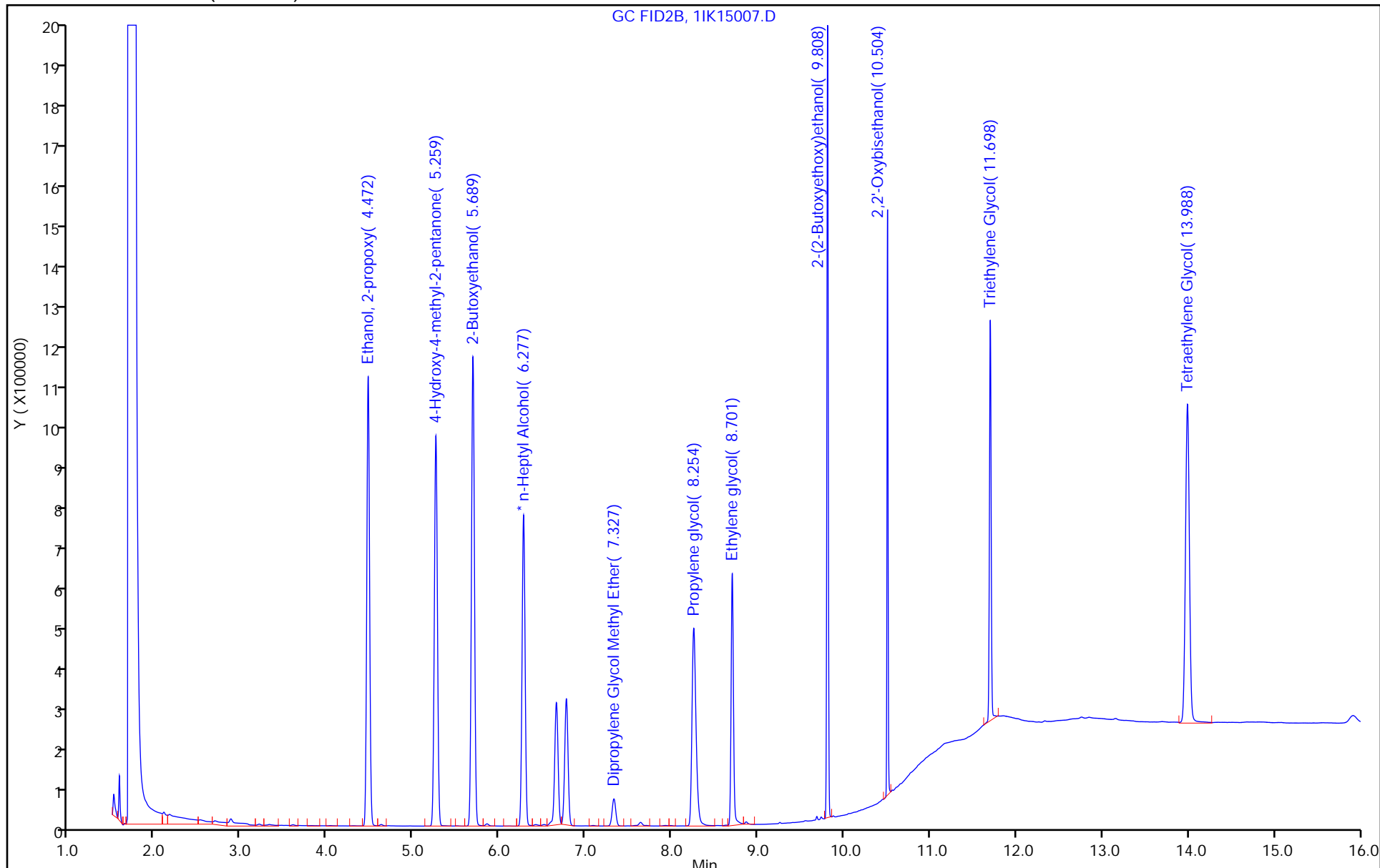
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



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: 8015B\_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
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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	47.3
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	94.6

Reagents:

SG\_Gly\_CAL\_00053 Amount Added: 25.00 Units: uL  
 SG\_GLY\_ISTD\_00129 Amount Added: 10.00 Units: uL Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\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

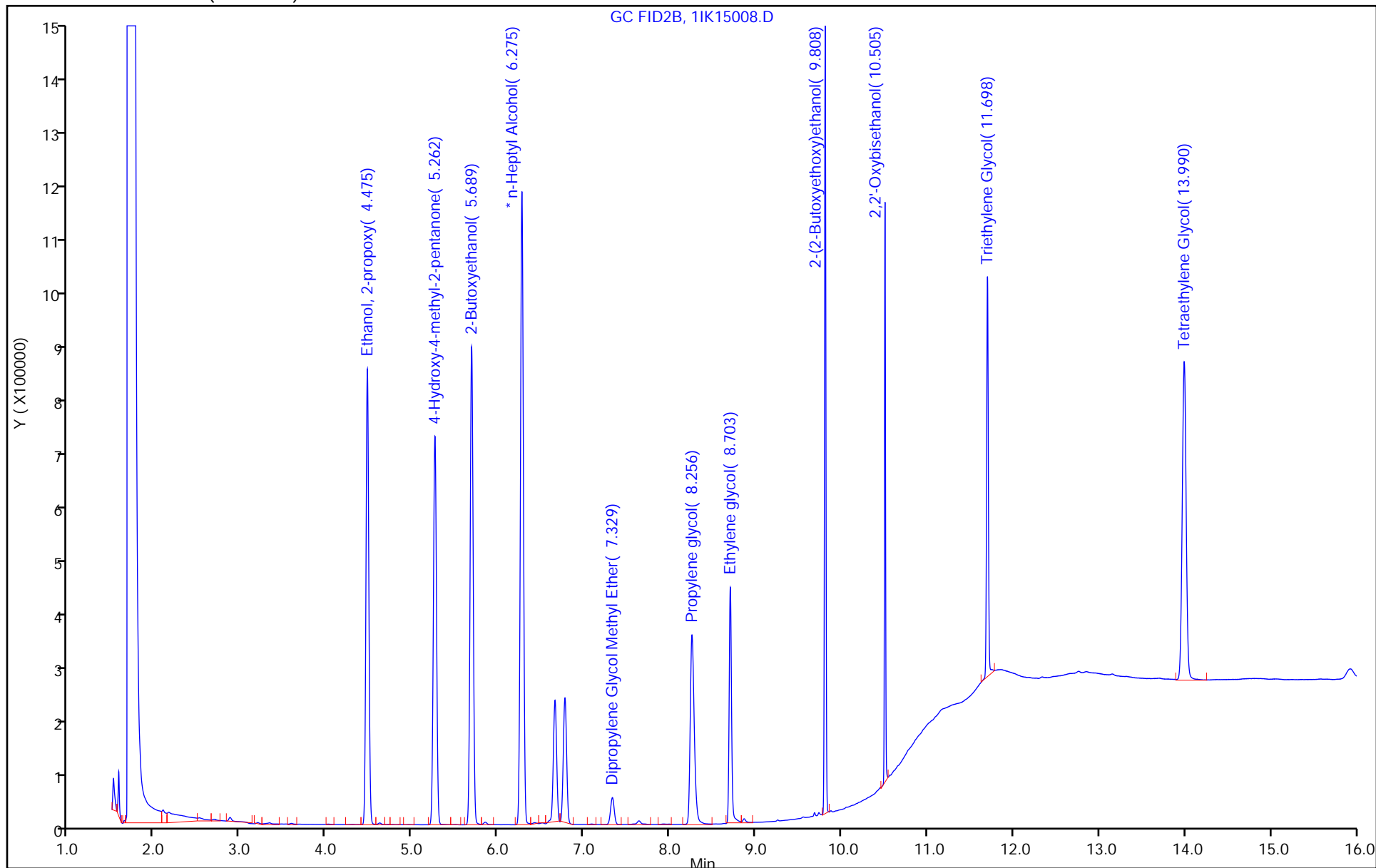
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



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: 8015B\_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
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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	21.8
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	45.1

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\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

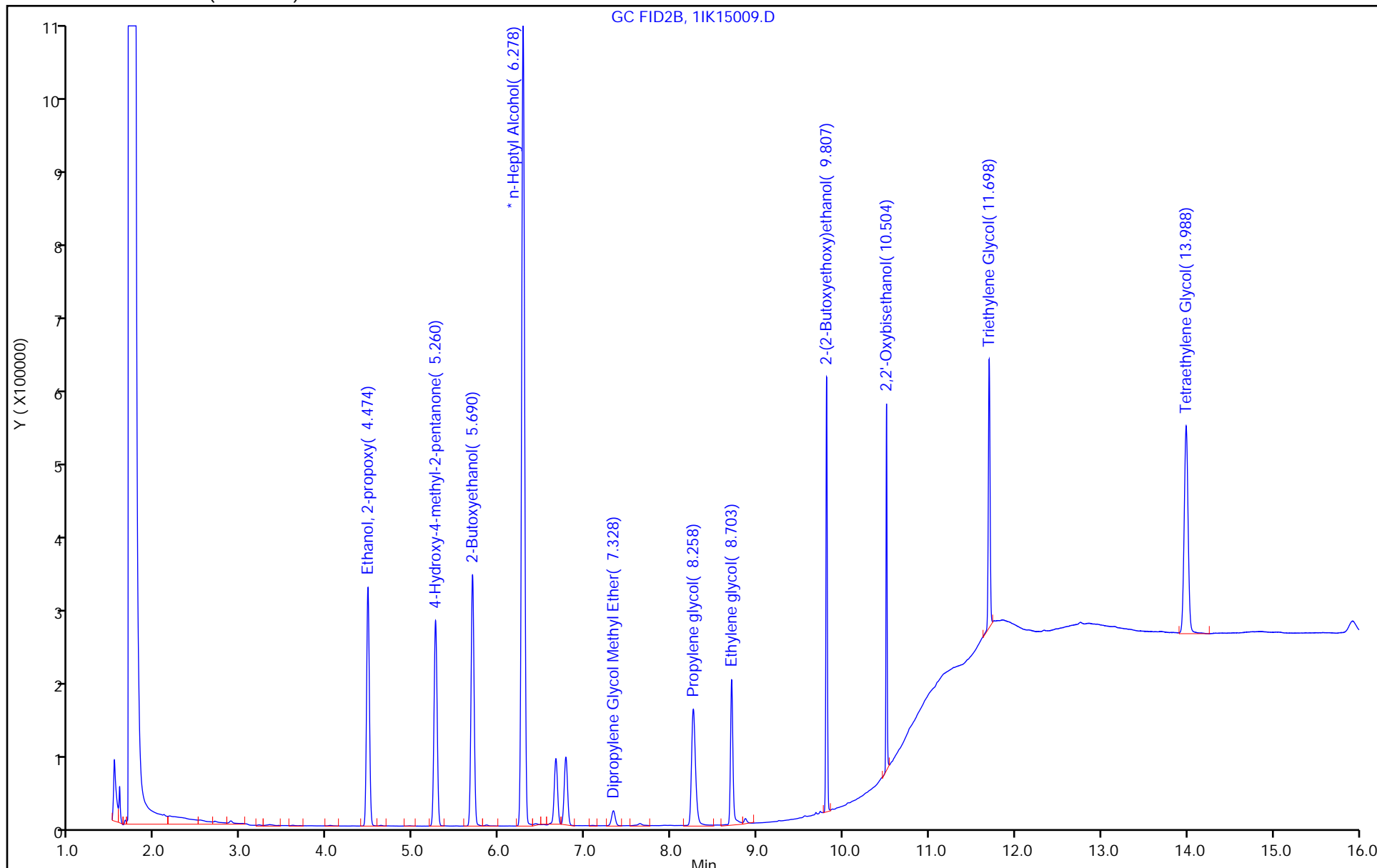
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



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: 8015B\_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
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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	35.0

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

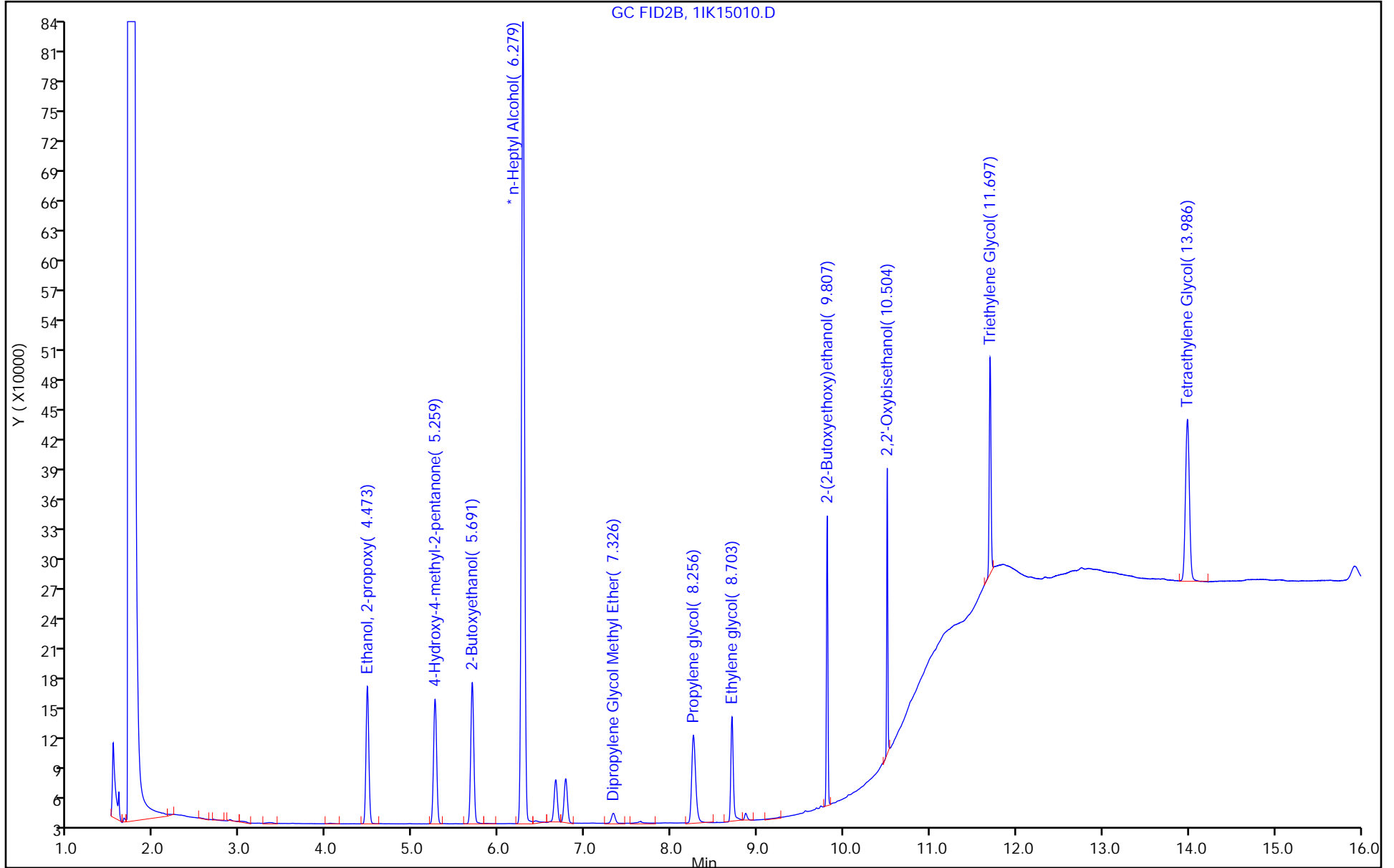
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



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: 8015B\_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
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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	9.38

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

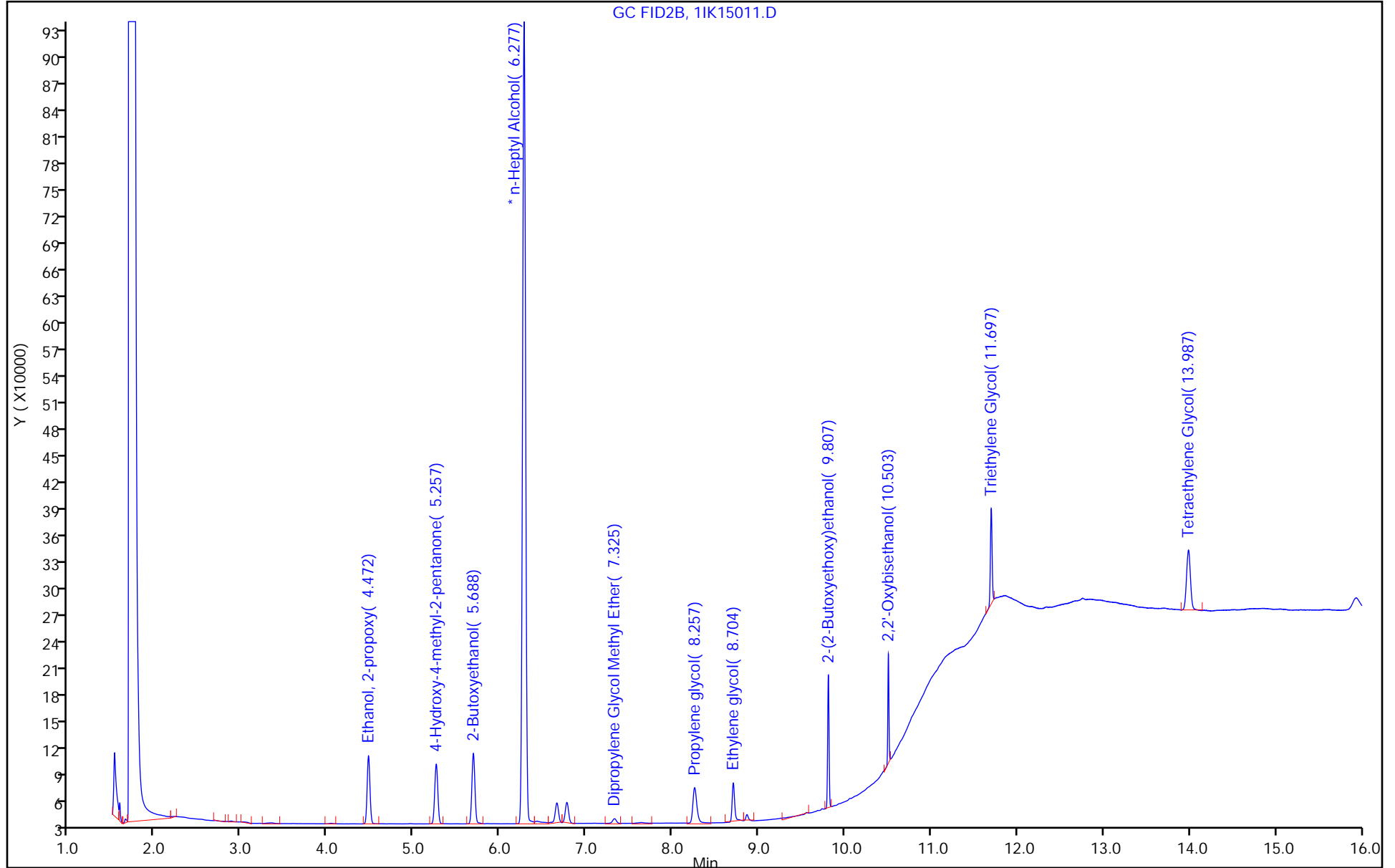
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



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: 8015B\_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	2.07
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	3.93

**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

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

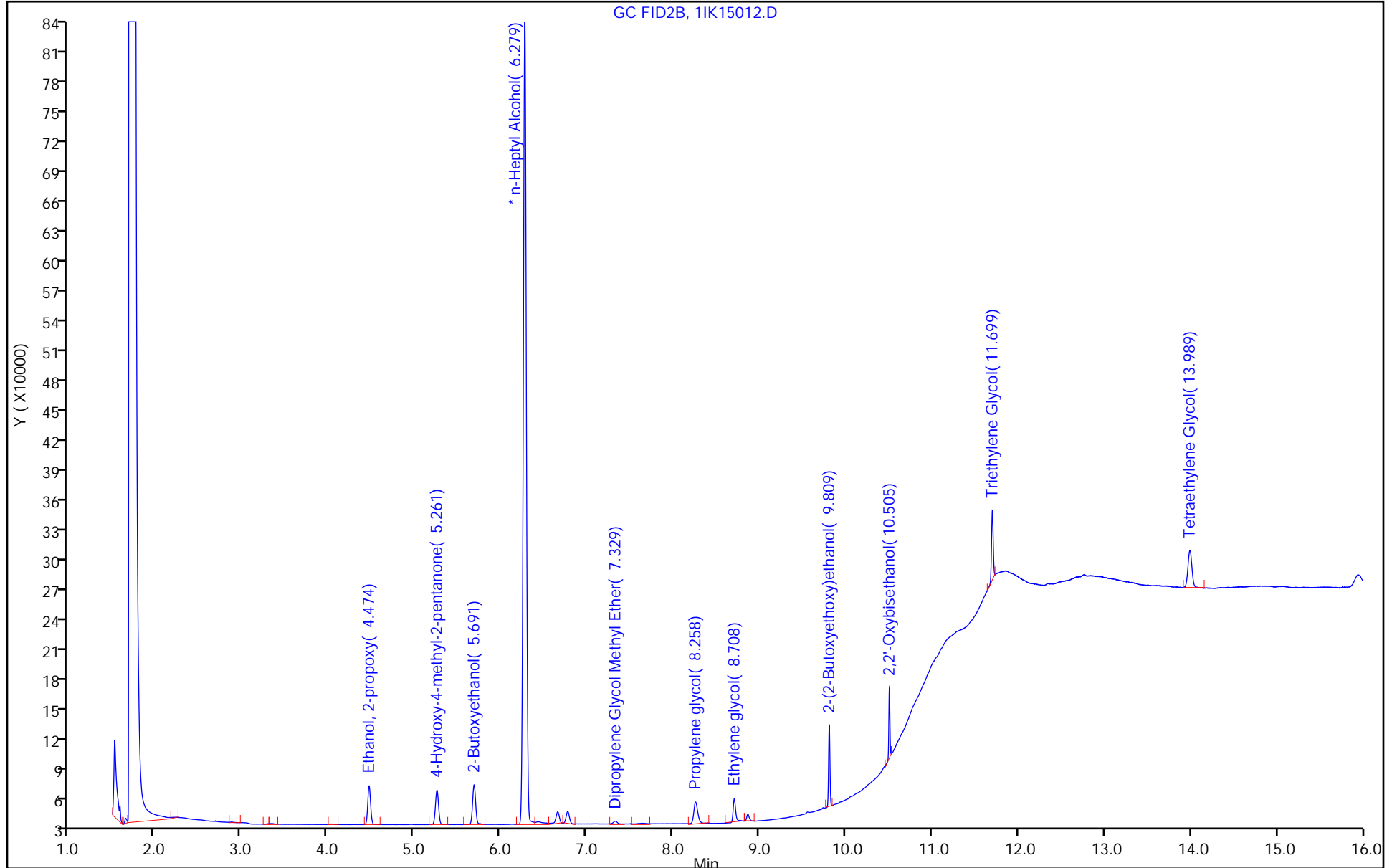
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)





Calibration

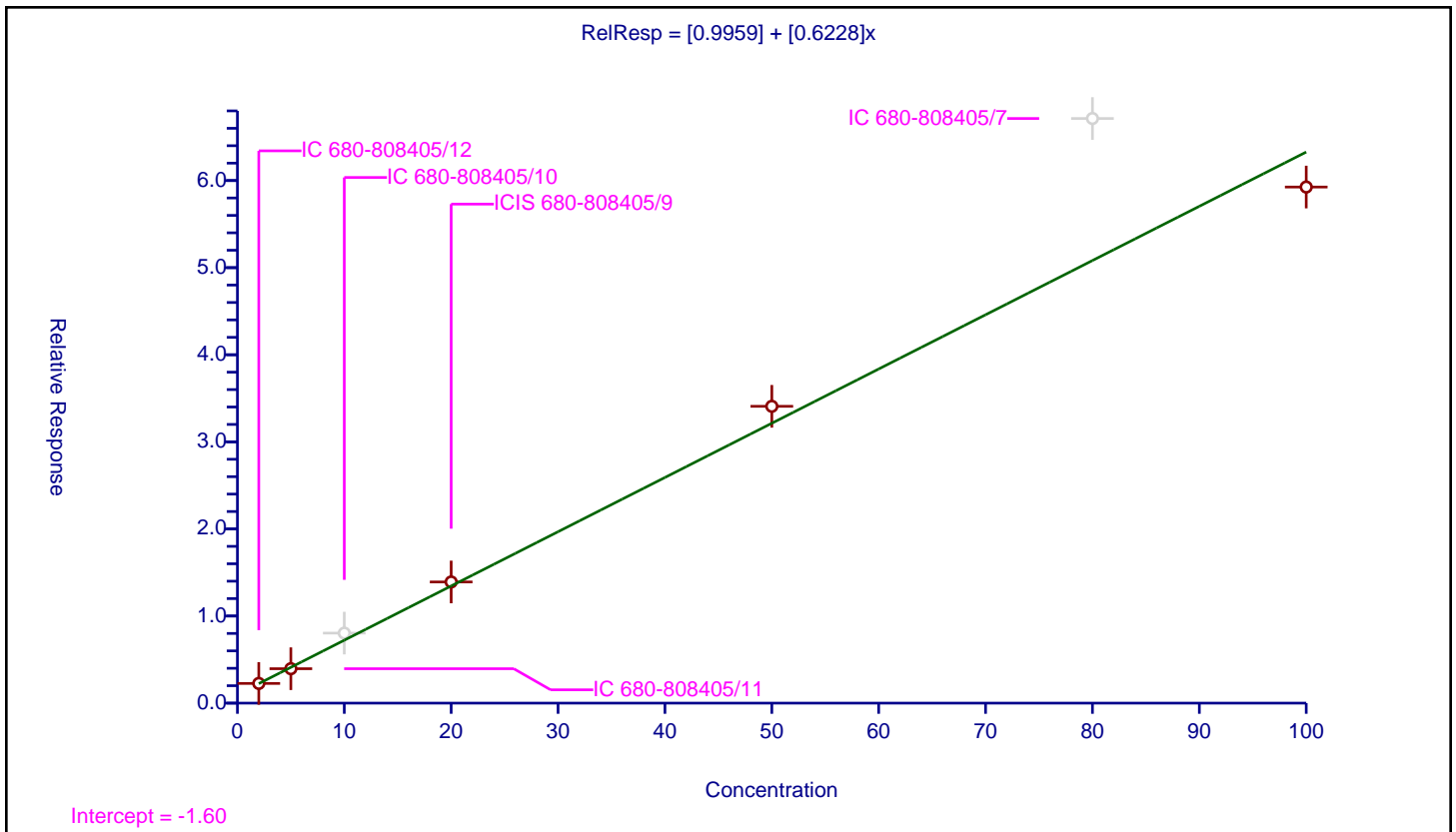
/ Ethanol, 2-propoxy

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 680-808405/12	2.0	2.260341	50.0	1977887.0	1.130171	Y
2	IC 680-808405/11	5.0	3.953906	50.0	2217440.0	0.790781	Y
3	IC 680-808405/10	10.0	8.041212	50.0	1966905.0	0.804121	N
4	ICIS 680-808405/9	20.0	13.912504	50.0	2506763.0	0.695625	Y
5	IC 680-808405/8	50.0	34.079629	50.0	2634100.0	0.681593	Y
6	IC 680-808405/7	80.0	67.126573	50.0	1870888.0	0.839082	N
7	IC 680-808405/6	100.0	59.258398	50.0	2615890.0	0.592584	Y



Calibration

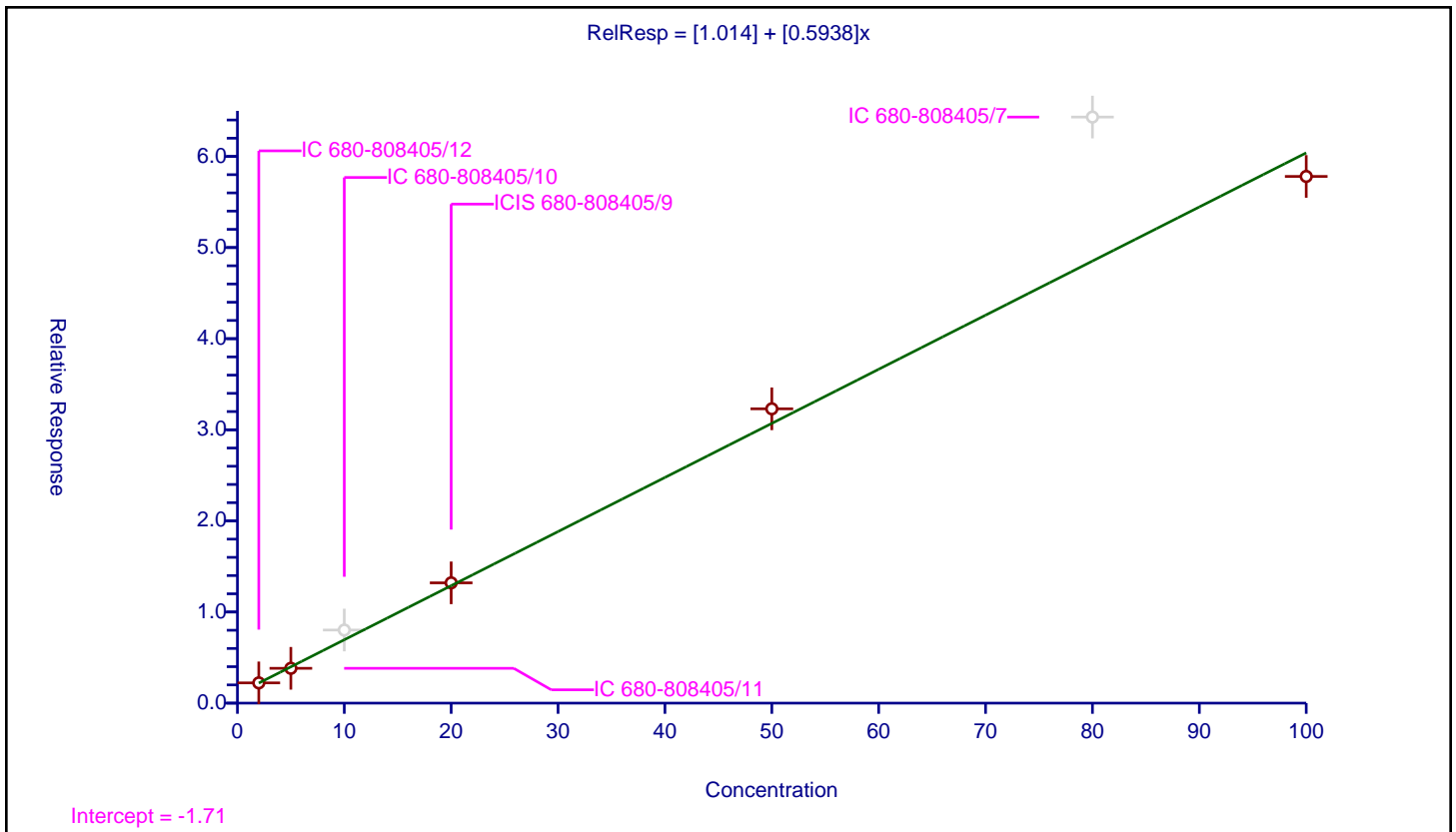
/ 4-Hydroxy-4-methyl-2-pentanone

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 680-808405/12	2.0	2.222346	50.0	1977887.0	1.111173	Y
2	IC 680-808405/11	5.0	3.821569	50.0	2217440.0	0.764314	Y
3	IC 680-808405/10	10.0	8.022782	50.0	1966905.0	0.802278	N
4	ICIS 680-808405/9	20.0	13.200869	50.0	2506763.0	0.660043	Y
5	IC 680-808405/8	50.0	32.302798	50.0	2634100.0	0.646056	Y
6	IC 680-808405/7	80.0	64.32237	50.0	1870888.0	0.80403	N
7	IC 680-808405/6	100.0	57.805145	50.0	2615890.0	0.578051	Y



Calibration

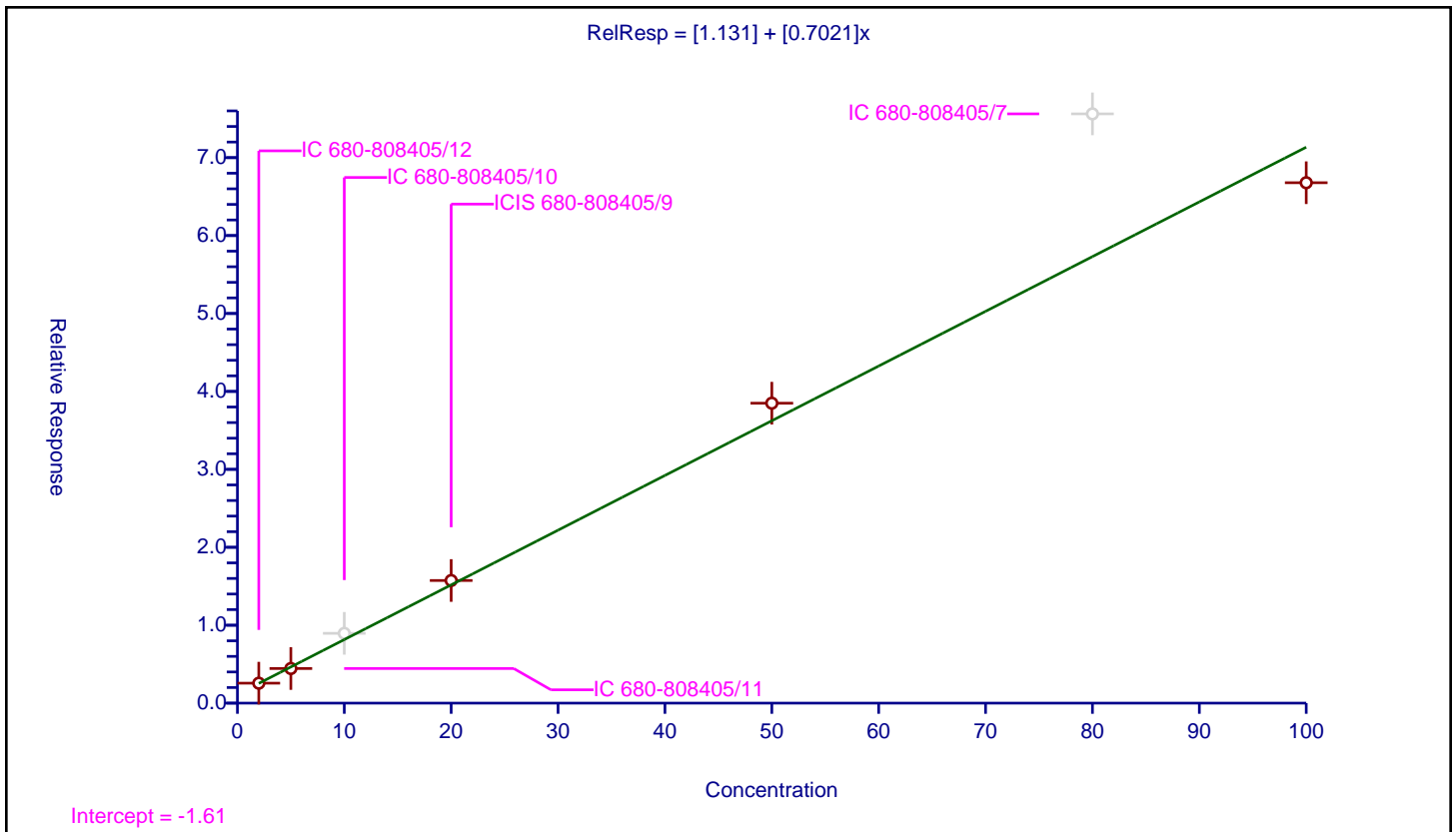
/ 2-Butoxyethanol

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 680-808405/12	2.0	2.559929	50.0	1977887.0	1.279964	Y
2	IC 680-808405/11	5.0	4.442172	50.0	2217440.0	0.888434	Y
3	IC 680-808405/10	10.0	8.956635	50.0	1966905.0	0.895663	N
4	ICIS 680-808405/9	20.0	15.737966	50.0	2506763.0	0.786898	Y
5	IC 680-808405/8	50.0	38.488383	50.0	2634100.0	0.769768	Y
6	IC 680-808405/7	80.0	75.618476	50.0	1870888.0	0.945231	N
7	IC 680-808405/6	100.0	66.783026	50.0	2615890.0	0.66783	Y



Calibration

/ Dipropylene Glycol Methyl Ether

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

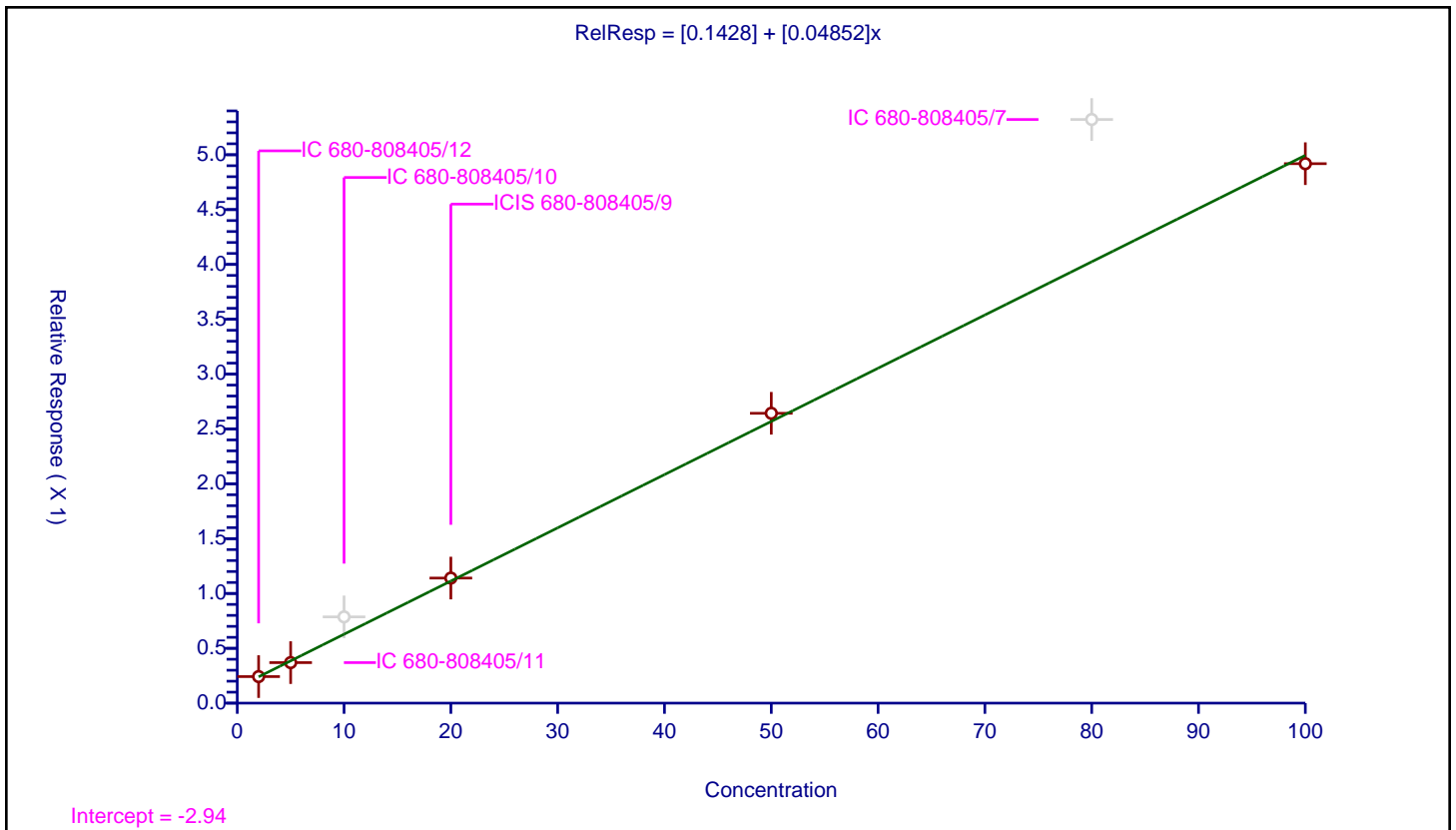
Curve Coefficients

Intercept: 0.1428  
 Slope: 0.04852

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 680-808405/12	2.0	0.242026	50.0	1977887.0	0.121013	Y
2	IC 680-808405/11	5.0	0.36957	50.0	2217440.0	0.073914	Y
3	IC 680-808405/10	10.0	0.786464	50.0	1966905.0	0.078646	N
4	ICIS 680-808405/9	20.0	1.140295	50.0	2506763.0	0.057015	Y
5	IC 680-808405/8	50.0	2.642838	50.0	2634100.0	0.052857	Y
6	IC 680-808405/7	80.0	5.32151	50.0	1870888.0	0.066519	N
7	IC 680-808405/6	100.0	4.918785	50.0	2615890.0	0.049188	Y



**Calibration**

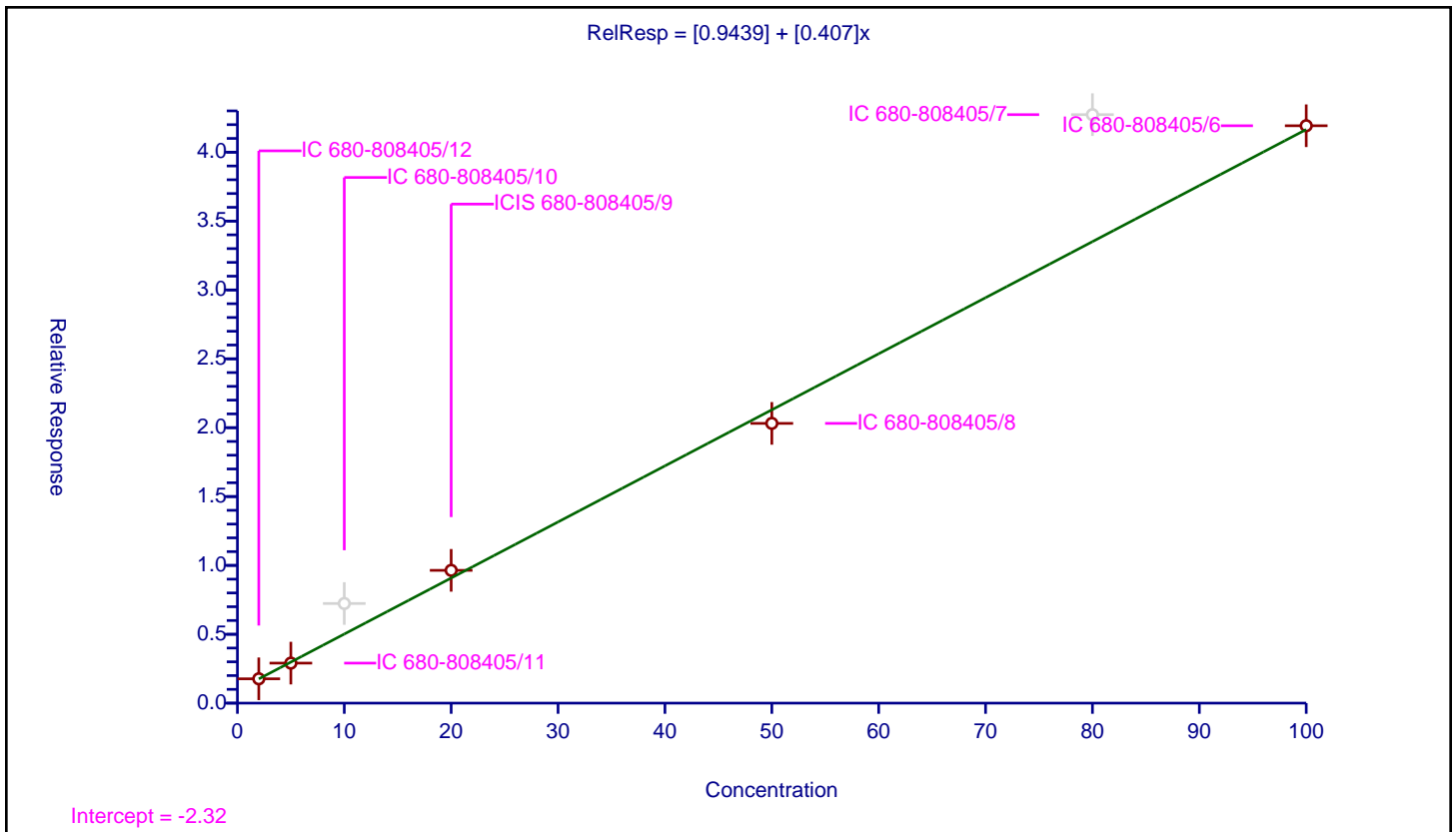
/ Propylene glycol

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

Curve Coefficients	
Intercept:	0.9439
Slope:	0.407

Error Coefficients	
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 680-808405/12	2.0	1.765697	50.0	1977887.0	0.882849	Y
2	IC 680-808405/11	5.0	2.905558	50.0	2217440.0	0.581112	Y
3	IC 680-808405/10	10.0	7.232429	50.0	1966905.0	0.723243	N
4	ICIS 680-808405/9	20.0	9.641538	50.0	2506763.0	0.482077	Y
5	IC 680-808405/8	50.0	20.311416	50.0	2634100.0	0.406228	Y
6	IC 680-808405/7	80.0	42.726743	50.0	1870888.0	0.534084	N
7	IC 680-808405/6	100.0	41.921143	50.0	2615890.0	0.419211	Y



Calibration

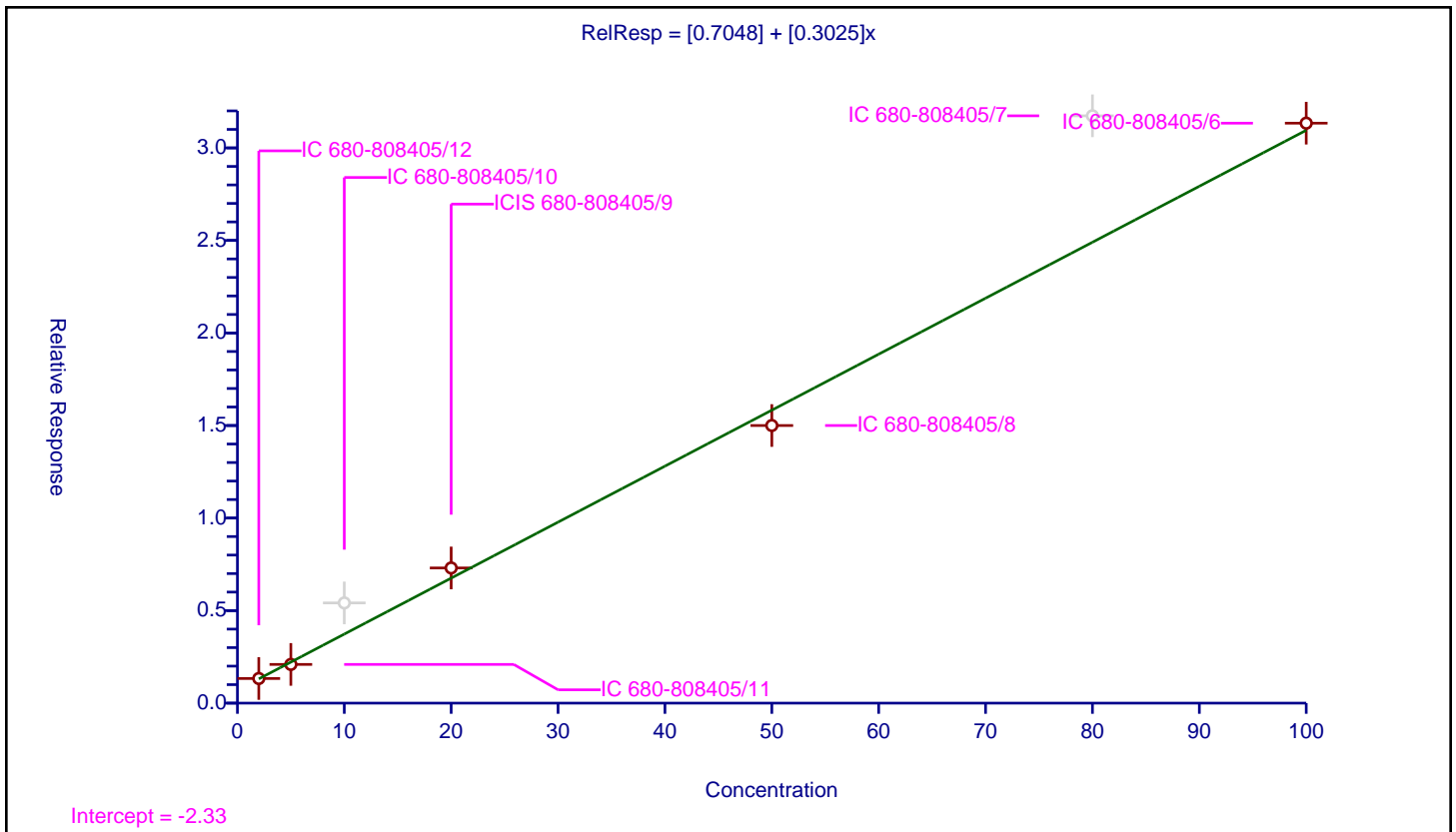
/ Ethylene glycol

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

Curve Coefficients	
Intercept:	0.7048
Slope:	0.3025

Error Coefficients	
Standard Error:	1070000
Relative Standard Error:	8.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808405/12	2.0	1.330511	50.0	1977887.0	0.665255	Y
2	IC 680-808405/11	5.0	2.091533	50.0	2217440.0	0.418307	Y
3	IC 680-808405/10	10.0	5.414929	50.0	1966905.0	0.541493	N
4	ICIS 680-808405/9	20.0	7.304639	50.0	2506763.0	0.365232	Y
5	IC 680-808405/8	50.0	15.000076	50.0	2634100.0	0.300002	Y
6	IC 680-808405/7	80.0	31.733995	50.0	1870888.0	0.396675	N
7	IC 680-808405/6	100.0	31.335912	50.0	2615890.0	0.313359	Y



Calibration

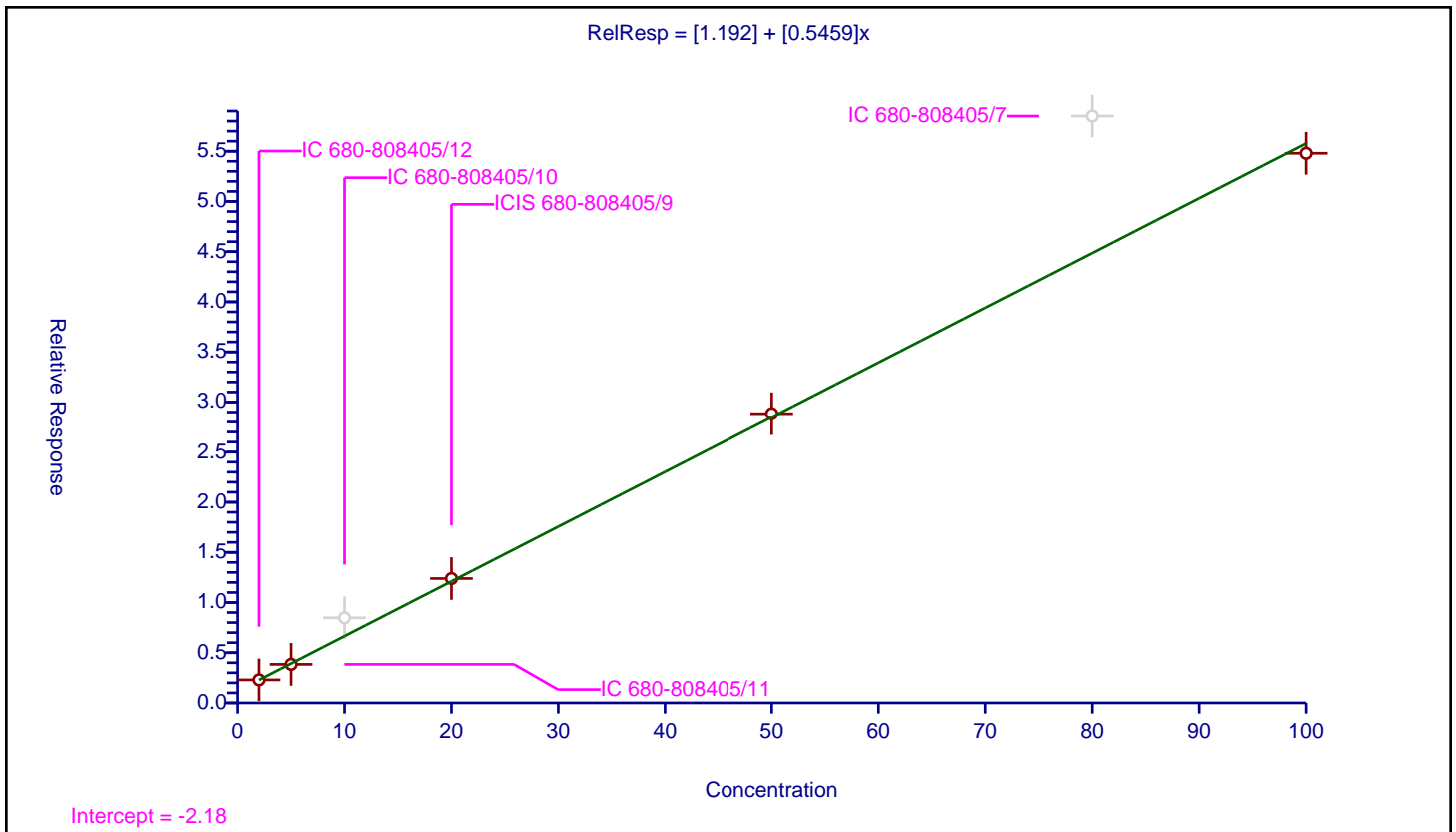
/ 2-(2-Butoxyethoxy)ethanol

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 680-808405/12	2.0	2.294241	50.0	1977887.0	1.147121	Y
2	IC 680-808405/11	5.0	3.839585	50.0	2217440.0	0.767917	Y
3	IC 680-808405/10	10.0	8.474634	50.0	1966905.0	0.847463	N
4	ICIS 680-808405/9	20.0	12.391518	50.0	2506763.0	0.619576	Y
5	IC 680-808405/8	50.0	28.837307	50.0	2634100.0	0.576746	Y
6	IC 680-808405/7	80.0	58.50091	50.0	1870888.0	0.731261	N
7	IC 680-808405/6	100.0	54.796933	50.0	2615890.0	0.547969	Y



**Calibration**

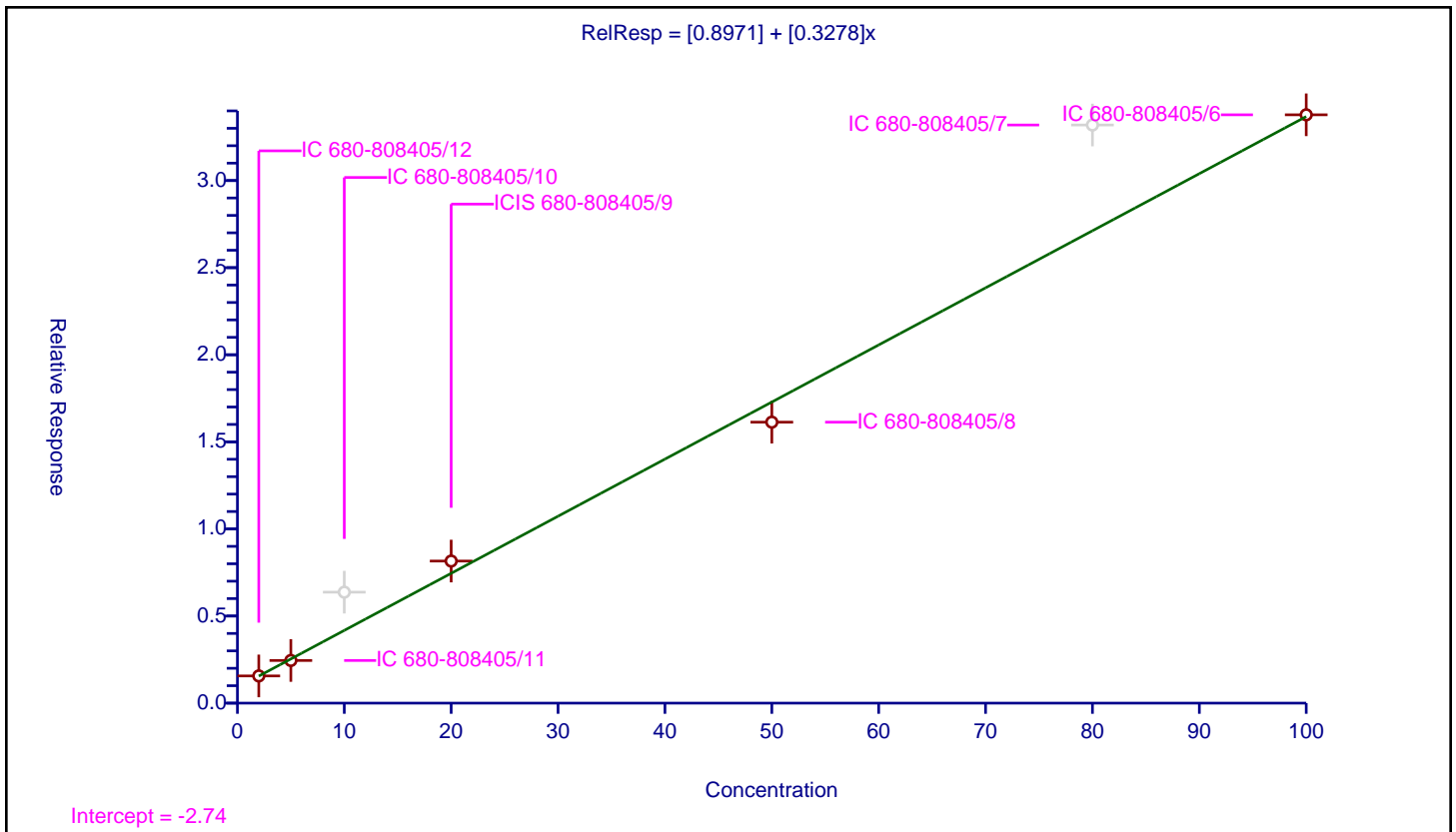
**/ 2,2'-Oxybisethanol**

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 680-808405/12	2.0	1.561363	50.0	1977887.0	0.780682	Y
2	IC 680-808405/11	5.0	2.448409	50.0	2217440.0	0.489682	Y
3	IC 680-808405/10	10.0	6.370592	50.0	1966905.0	0.637059	N
4	ICIS 680-808405/9	20.0	8.156296	50.0	2506763.0	0.407815	Y
5	IC 680-808405/8	50.0	16.130595	50.0	2634100.0	0.322612	Y
6	IC 680-808405/7	80.0	33.188999	50.0	1870888.0	0.414862	N
7	IC 680-808405/6	100.0	33.775159	50.0	2615890.0	0.337752	Y





**Calibration**

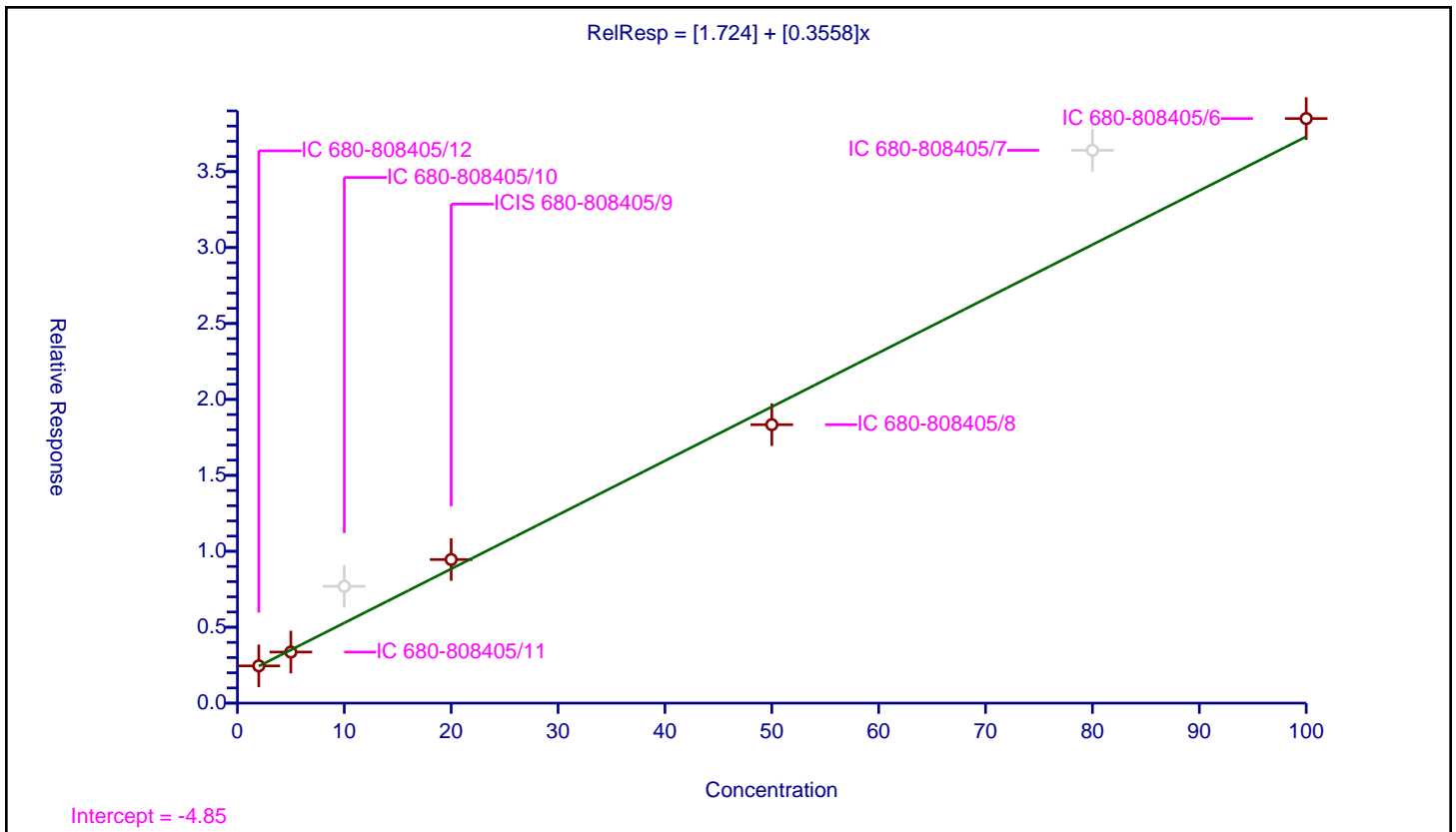
/ Triethylene Glycol

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 680-808405/12	2.0	2.453174	50.0	1977887.0	1.226587	Y
2	IC 680-808405/11	5.0	3.362391	50.0	2217440.0	0.672478	Y
3	IC 680-808405/10	10.0	7.689466	50.0	1966905.0	0.768947	N
4	ICIS 680-808405/9	20.0	9.456778	50.0	2506763.0	0.472839	Y
5	IC 680-808405/8	50.0	18.338199	50.0	2634100.0	0.366764	Y
6	IC 680-808405/7	80.0	36.404344	50.0	1870888.0	0.455054	N
7	IC 680-808405/6	100.0	38.493725	50.0	2615890.0	0.384937	Y



Calibration

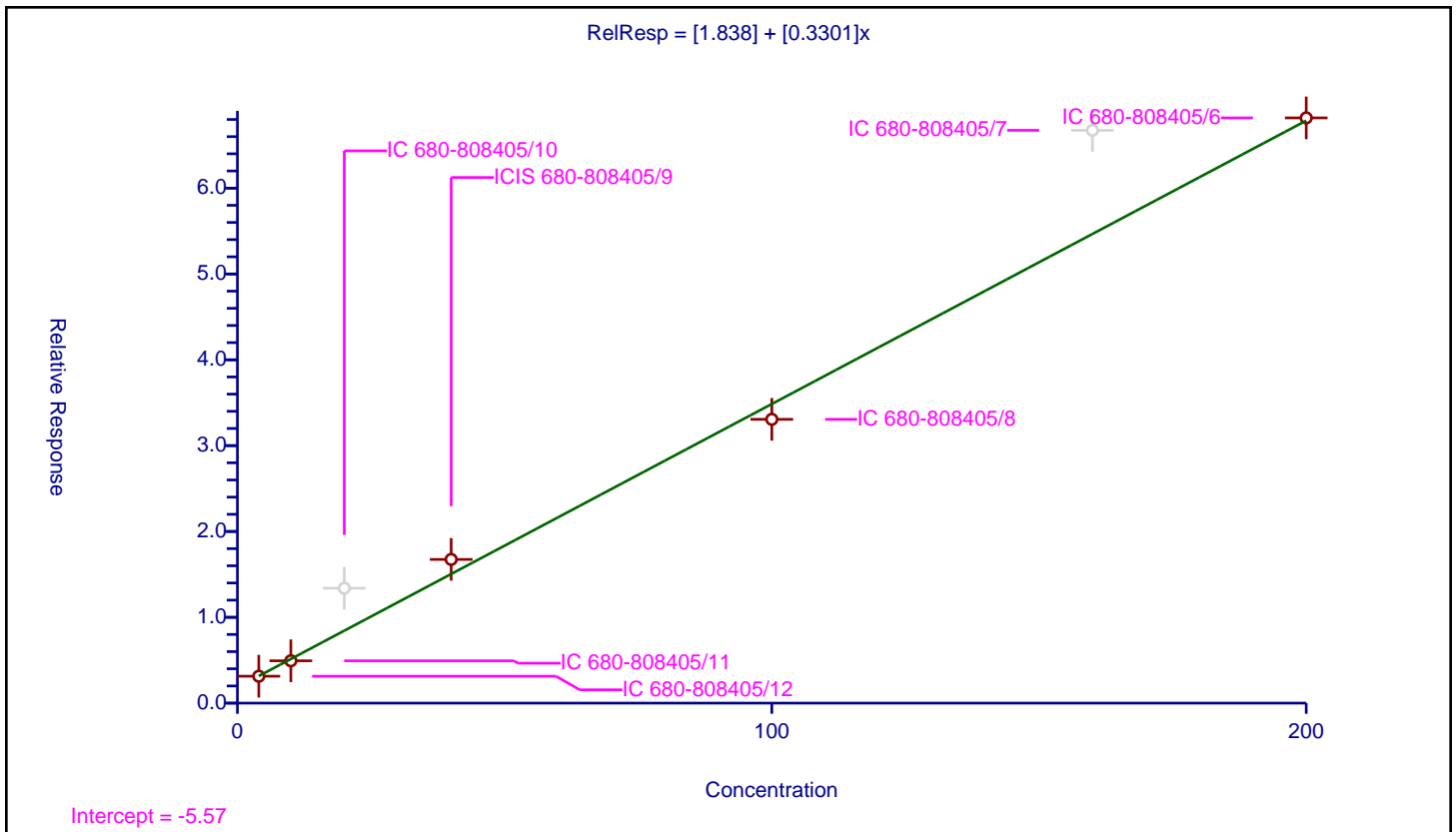
/ Tetraethylene Glycol

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

Curve Coefficients	
Intercept:	1.838
Slope:	0.3301

Error Coefficients	
Standard Error:	2350000
Relative Standard Error:	8.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-808405/12	4.0	3.136099	50.0	1977887.0	0.784025	Y
2	IC 680-808405/11	10.0	4.933437	50.0	2217440.0	0.493344	Y
3	IC 680-808405/10	20.0	13.389182	50.0	1966905.0	0.669459	N
4	ICIS 680-808405/9	40.0	16.743166	50.0	2506763.0	0.418579	Y
5	IC 680-808405/8	100.0	33.063855	50.0	2634100.0	0.330639	Y
6	IC 680-808405/7	160.0	66.73772	50.0	1870888.0	0.417111	N
7	IC 680-808405/6	200.0	68.182473	50.0	2615890.0	0.340912	Y



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 680-808405/14 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-pentano ne	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	Lin1		0.4160		25.2	20.0	25.9*	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	Lin1		0.4596		50.1	40.0	25.3*	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 680-808405/14 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

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: 8015B\_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
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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	50.1

### 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

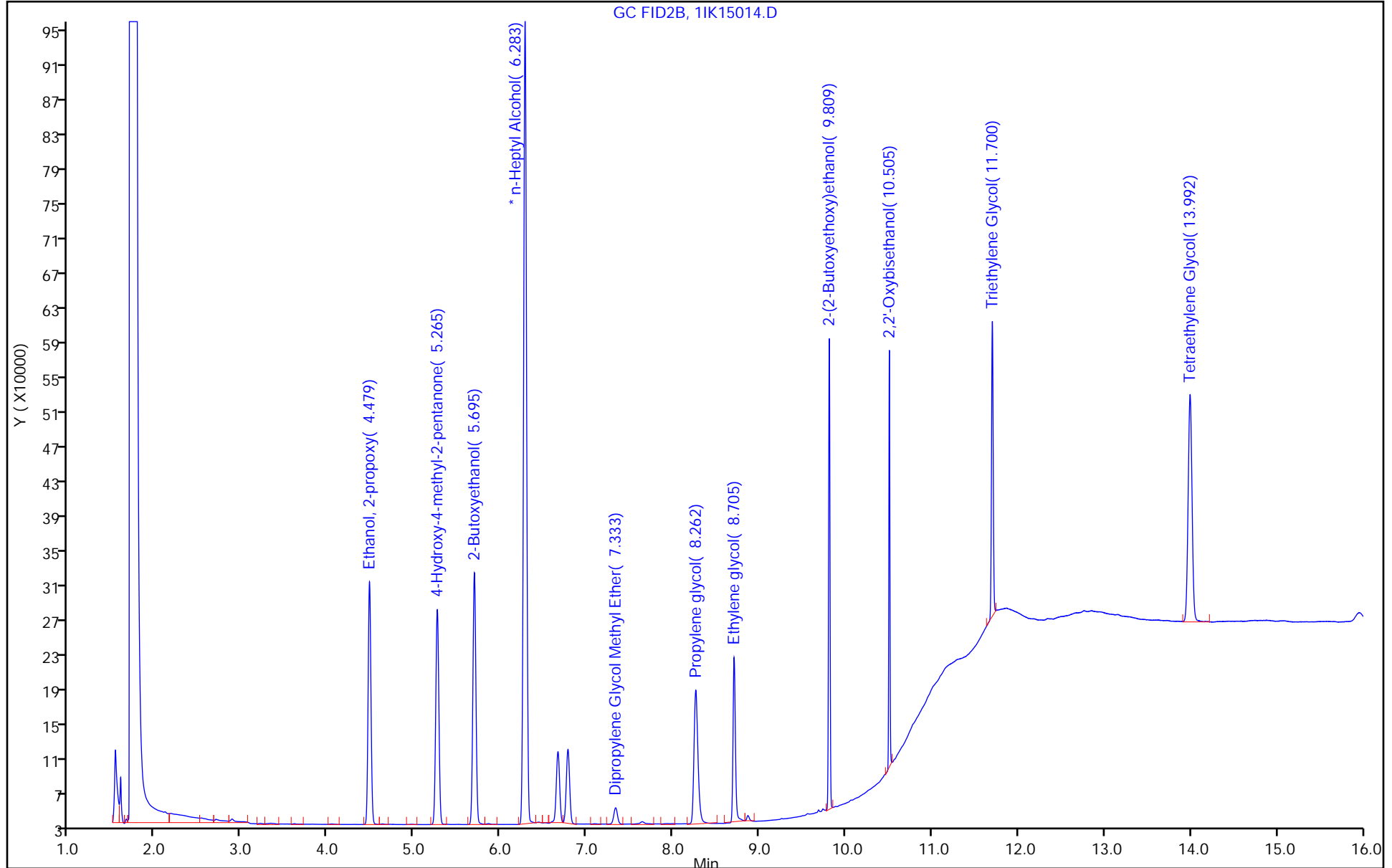
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 680-814101/6 Calibration Date: 12/18/2023 18:16  
 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: 1IL18006.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.6951		20.7	20.0	3.6	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin2		0.6475		20.1	20.0	0.5	20.0
2-Butoxyethanol	Lin2		0.7721		20.4	20.0	1.9	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0490		17.3	20.0	-13.6	20.0
Propylene glycol	Lin2		0.2977		12.3	20.0	-38.5*	20.0
Ethylene glycol	Lin1		0.1856		9.94	20.0	-50.3*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.5294		17.2	20.0	-13.9	20.0
2,2'-Oxybisethanol	Lin2		0.2037		9.69	20.0	-51.5*	20.0
Triethylene Glycol	Lin2		0.2738		10.5	20.0	-47.3*	20.0
Tetraethylene Glycol	Lin1		0.2472		24.4	40.0	-39.0*	20.0



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 680-814101/6 Calibration Date: 12/18/2023 18:16  
 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: 1IL18006.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	4.46	4.37	4.55
4-Hydroxy-4-methyl-2-pentanone	5.24	5.14	5.35
2-Butoxyethanol	5.67	5.55	5.78
Dipropylene Glycol Methyl Ether	7.31	7.16	7.45
Propylene glycol	8.30	8.13	8.46
Ethylene glycol	8.70	8.53	8.88
2-(2-Butoxyethoxy)ethanol	9.80	9.60	9.99
2,2'-Oxybisethanol	10.50	10.29	10.71
Triethylene Glycol	11.69	11.45	11.92
Tetraethylene Glycol	13.96	13.68	14.24

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18006.D  
 Lims ID: ccvis  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 18-Dec-2023 18:16:15 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0091713-006  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:55:44 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: CTX1651

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	4.460	4.460	0.000	1005045	20.0	20.7
2 4-Hydroxy-4-methyl-2-pentanone	5.244	5.244	0.000	936285	20.0	20.1
3 2-Butoxyethanol	5.667	5.667	0.000	1116407	20.0	20.4
* 4 n-Heptyl Alcohol	6.250	6.250	0.000	3615008	50.0	50.0
5 Dipropylene Glycol Methyl Ether	7.306	7.306	0.000	70924	20.0	17.3
6 Propylene glycol	8.295	8.295	0.000	430447	20.0	12.3
7 Ethylene glycol	8.704	8.704	0.000	268341	20.0	9.94
8 2-(2-Butoxyethoxy)ethanol	9.798	9.798	0.000	765490	20.0	17.2
9 2,2'-Oxybisethanol	10.498	10.498	0.000	294539	20.0	9.69
10 Triethylene Glycol	11.688	11.688	0.000	395884	20.0	10.5
11 Tetraethylene Glycol	13.960	13.960	0.000	714847	40.0	24.4

**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\20231218-91713.b\1IL18006.D

Injection Date: 18-Dec-2023 18:16:15

Instrument ID: CVGG2

Operator ID:

Lims ID: ccvis

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

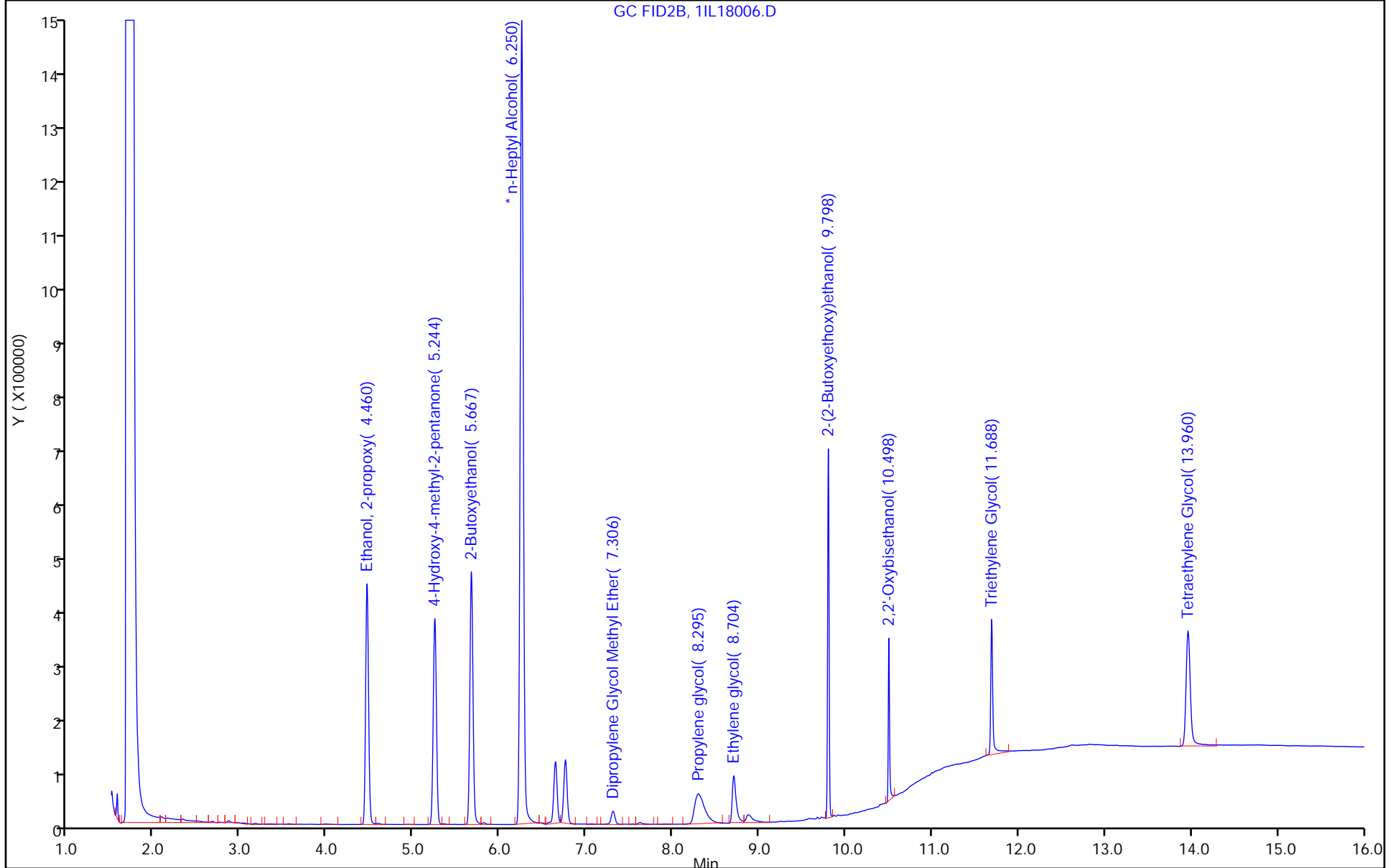
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



FORM VII  
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 680-814101/24 Calibration Date: 12/19/2023 00:54  
 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: 1IL18023.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.6801		20.2	20.0	1.2	20.0
4-Hydroxy-4-methyl-2-pentano ne	Lin2		0.6018		18.6	20.0	-7.2	20.0
2-Butoxyethanol	Lin2		0.7638		20.1	20.0	0.7	20.0
Dipropylene Glycol Methyl Ether	Lin2		0.0431		14.8	20.0	-25.8*	20.0
Propylene glycol	Lin2		0.2537		10.1	20.0	-49.3*	20.0
Ethylene glycol	Lin1		0.1762		9.32	20.0	-53.4*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.4616		14.7	20.0	-26.4*	20.0
2,2'-Oxybisethanol	Lin2		0.1685		7.55	20.0	-62.3*	20.0
Triethylene Glycol	Lin2		0.1911		5.90	20.0	-70.5*	20.0
Tetraethylene Glycol	Lin1		0.0963		6.10	40.0	-84.7*	20.0

FORM VII  
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 680-814101/24 Calibration Date: 12/19/2023 00:54  
 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: 1IL18023.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	4.46	4.37	4.55
4-Hydroxy-4-methyl-2-pentanone	5.24	5.14	5.35
2-Butoxyethanol	5.67	5.55	5.78
Dipropylene Glycol Methyl Ether	7.30	7.16	7.45
Propylene glycol	8.31	8.15	8.48
Ethylene glycol	8.71	8.53	8.88
2-(2-Butoxyethoxy)ethanol	9.80	9.60	9.99
2,2'-Oxybisethanol	10.50	10.29	10.71
Triethylene Glycol	11.69	11.45	11.92
Tetraethylene Glycol	13.96	13.68	14.24

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18023.D  
 Lims ID: ccv g4  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 19-Dec-2023 00:54:49 ALS Bottle#: 0 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0091713-024  
 Operator ID: Instrument ID: CVGG2  
 Sublist: chrom-8015\_GLY\_VGG\*sub2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:55:46 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: CTX1651

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	4.459	4.459	0.000	1011106	20.0	20.2
2 4-Hydroxy-4-methyl-2-pentanone	5.243	5.243	0.000	894590	20.0	18.6
3 2-Butoxyethanol	5.665	5.665	0.000	1135407	20.0	20.1
* 4 n-Heptyl Alcohol	6.247	6.247	0.000	3716499	50.0	50.0
5 Dipropylene Glycol Methyl Ether	7.303	7.303	0.000	64138	20.0	14.8
6 Propylene glycol	8.312	8.312	0.000	377220	20.0	10.1
7 Ethylene glycol	8.708	8.708	0.000	261865	20.0	9.32
8 2-(2-Butoxyethoxy)ethanol	9.797	9.797	0.000	686199	20.0	14.7
9 2,2'-Oxybisethanol	10.498	10.498	0.000	250526	20.0	7.55
10 Triethylene Glycol	11.688	11.688	0.000	284047	20.0	5.90
11 Tetraethylene Glycol	13.963	13.963	0.000	286389	40.0	6.10

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\20231218-91713.b\1IL18023.D

Injection Date: 19-Dec-2023 00:54:49

Instrument ID: CVGG2

Operator ID:

Lims ID: ccv g4

Worklist Smp#: 24

Client ID:

Injection Vol: 1.0 ul

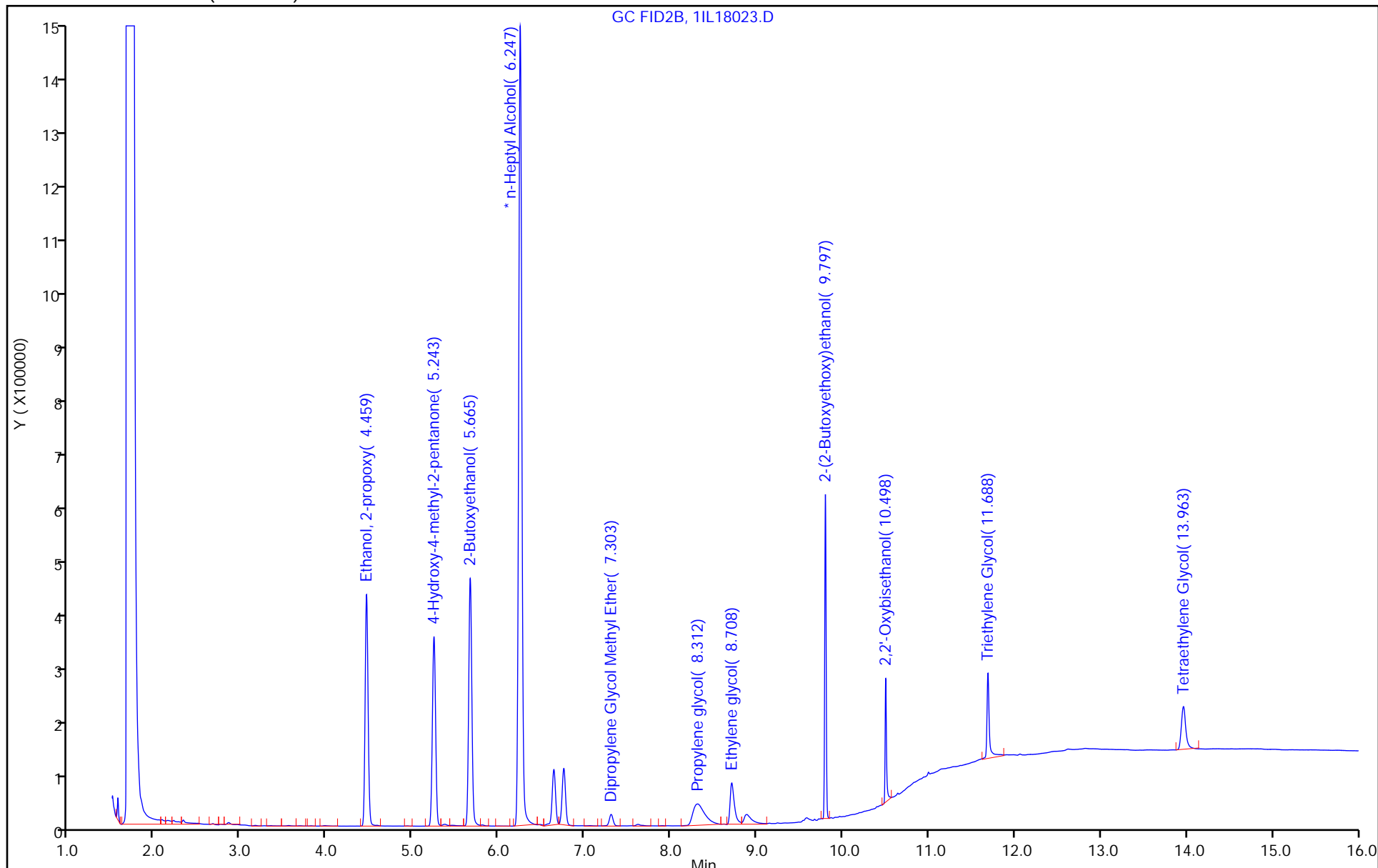
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 680-814101/11  
 Matrix: Water Lab File ID: 1IL18011.D  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 12/18/2023 20:13  
 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.: 814101 Units: mg/L

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



Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18011.D  
 Lims ID: mb  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 18-Dec-2023 20:13:31 ALS Bottle#: 0 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0091713-011  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 16:21:58 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: CTX1651

First Level Reviewer: AR8P Date: 19-Dec-2023 15:51:21

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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\* 4 n-Heptyl Alcohol  
 6.256 6.247 0.009 2429423 50.0 50.0

**QC Flag Legend**

Processing Flags

**Reagents:**

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1L18011.D

Injection Date: 18-Dec-2023 20:13:31

Instrument ID: CVGG2

Operator ID:

Lims ID: mb

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

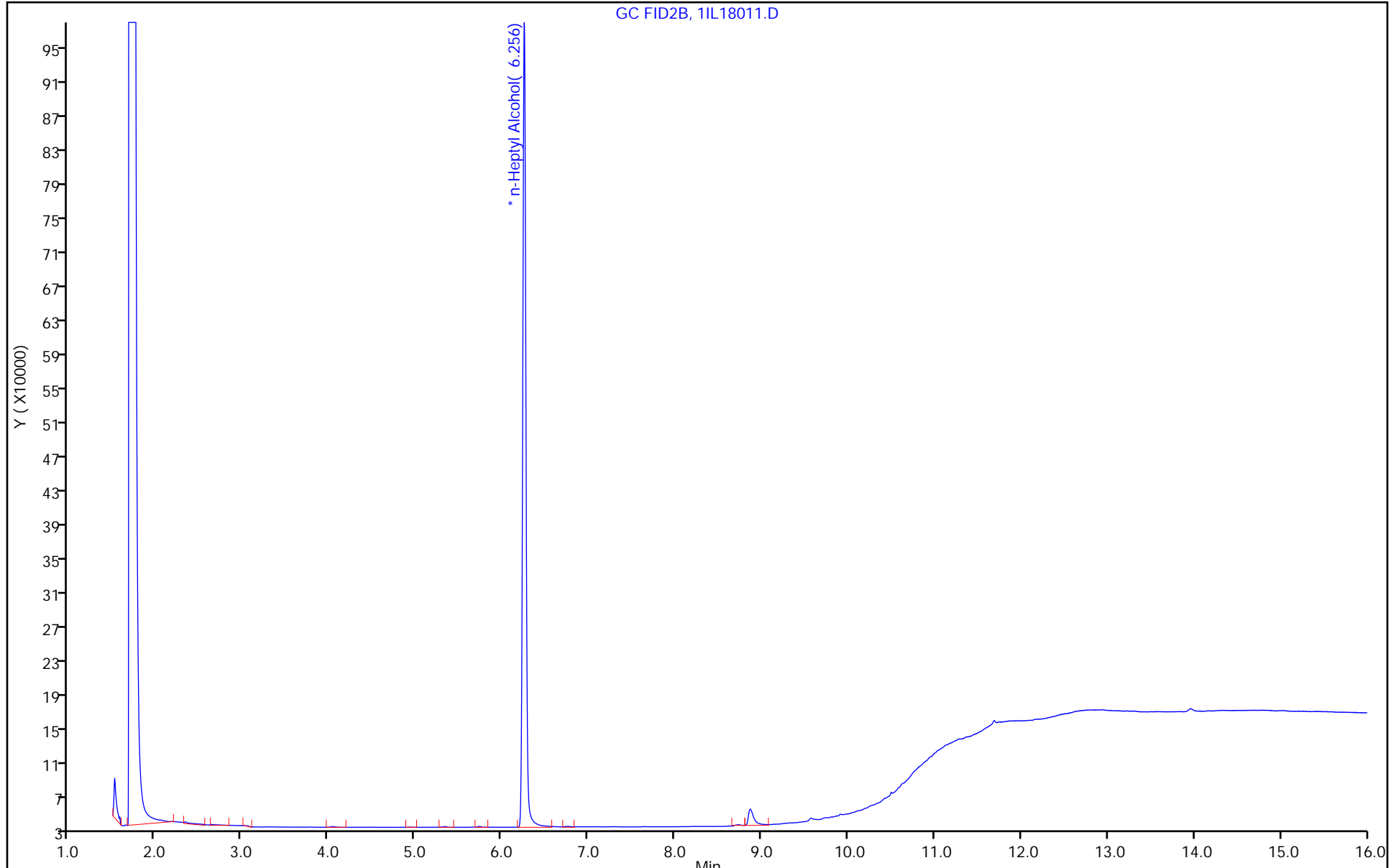
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 680-814101/1006  
 Matrix: Water Lab File ID: -1IL18006-LCS.d  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 12/18/2023 18:16  
 Con. Extract Vol.: 1(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: J&W DB WAX ID: 0.45(mm)  
 % Moisture: \_\_\_\_\_ % Solids: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Cleanup Factor: \_\_\_\_\_  
 Analysis Batch No.: 814101 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	17.2		5.0	3.0	1.1

Eurofins Environment Testing  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18006-LCS.d  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 18-Dec-2023 18:16:15 ALS Bottle#: 0 Worklist Smp#: 1006  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0091713-006  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:55:44 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: CTX1651

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	4.460	4.460	0.000	1005045	20.0	20.7
2 4-Hydroxy-4-methyl-2-pentanone	5.244	5.244	0.000	936285	20.0	20.1
3 2-Butoxyethanol	5.667	5.667	0.000	1116407	20.0	20.4
* 4 n-Heptyl Alcohol	6.250	6.250	0.000	3615008	50.0	50.0
5 Dipropylene Glycol Methyl Ether	7.306	7.306	0.000	70924	20.0	17.3
6 Propylene glycol	8.295	8.295	0.000	430447	20.0	12.3
7 Ethylene glycol	8.704	8.704	0.000	268341	20.0	9.94
8 2-(2-Butoxyethoxy)ethanol	9.798	9.798	0.000	765490	20.0	17.2
9 2,2'-Oxybisethanol	10.498	10.498	0.000	294539	20.0	9.69
10 Triethylene Glycol	11.688	11.688	0.000	395884	20.0	10.5
11 Tetraethylene Glycol	13.960	13.960	0.000	714847	40.0	24.4

## Reagents:

SG\_Gly\_CAL\_00053 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\20231218-91713.b\11L18006-LCS.d

Injection Date: 18-Dec-2023 18:16:15

Instrument ID: CVGG2

Operator ID:

Lims ID: LCS

Worklist Smp#: 1006

Client ID:

Injection Vol: 1.0 ul

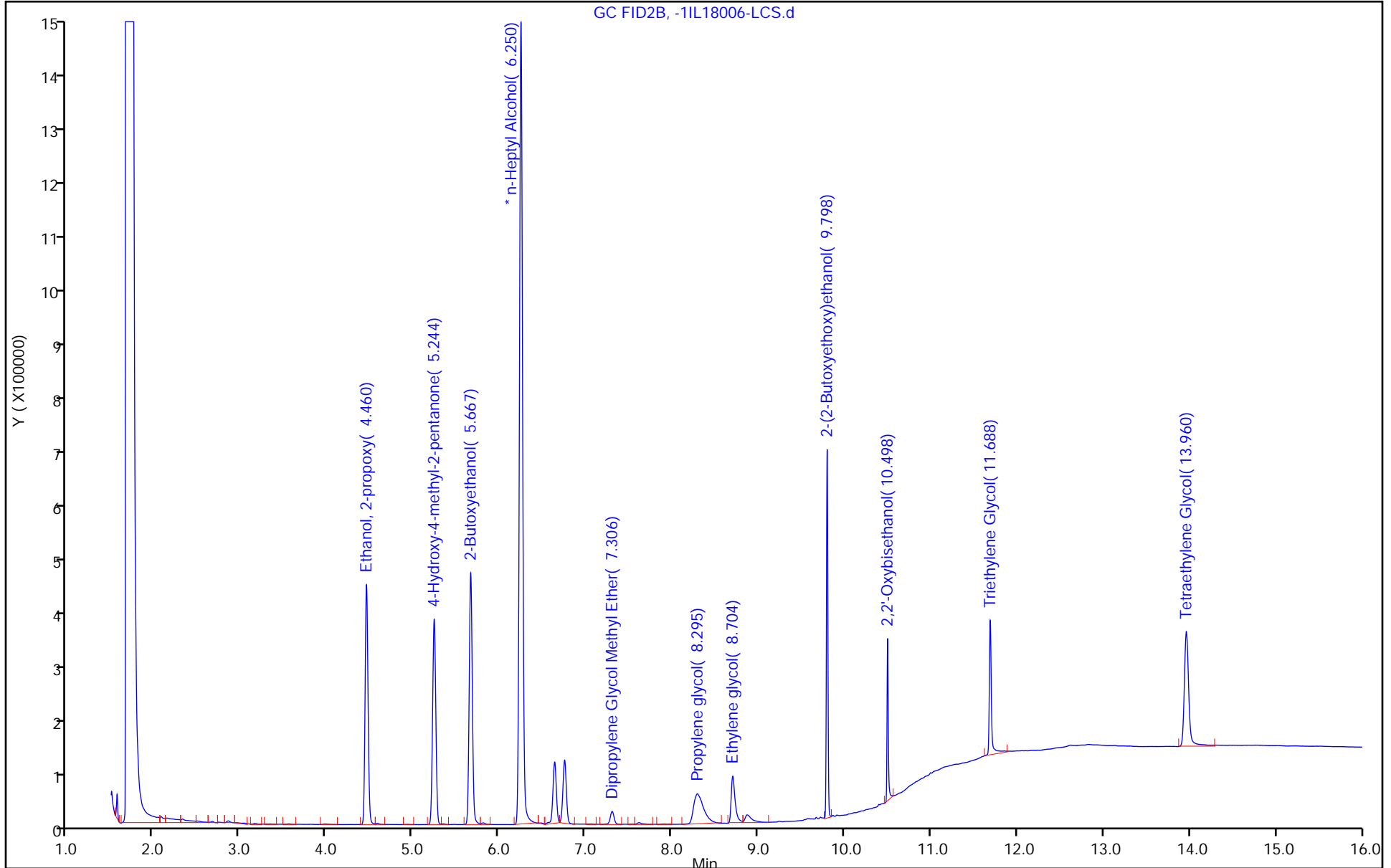
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



FORM I  
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-134883-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 680-814101/7  
 Matrix: Water Lab File ID: 1IL18007.D  
 Analysis Method: 8015C GLY Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 12/18/2023 18:39  
 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.: 814101 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	15.4		5.0	3.0	1.1

Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18007.D  
 Lims ID: lcsd  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 18-Dec-2023 18:39:48 ALS Bottle#: 0 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0091713-007  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 16:21:58 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: CTX1651

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
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1 Ethanol, 2-propoxy	4.464	4.464	0.000	956449	20.0	21.4
2 4-Hydroxy-4-methyl-2-pentanone	5.249	5.249	0.000	856608	20.0	19.9
3 2-Butoxyethanol	5.668	5.668	0.000	1075994	20.0	21.4
* 4 n-Heptyl Alcohol	6.247	6.247	0.000	3334467	50.0	50.0
5 Dipropylene Glycol Methyl Ether	7.307	7.307	0.000	59293	20.0	15.4
6 Propylene glycol	8.293	8.293	0.000	365749	20.0	11.2
7 Ethylene glycol	8.705	8.705	0.000	240586	20.0	9.60
8 2-(2-Butoxyethoxy)ethanol	9.798	9.798	0.000	639923	20.0	15.4
9 2,2'-Oxybisethanol	10.498	10.498	0.000	254956	20.0	8.93
10 Triethylene Glycol	11.688	11.688	0.000	329919	20.0	9.06
11 Tetraethylene Glycol	13.963	13.963	0.000	594434	40.0	21.4

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\20231218-91713.b\1IL18007.D

Injection Date: 18-Dec-2023 18:39:48

Instrument ID: CVGG2

Operator ID:

Lims ID: lcsd

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

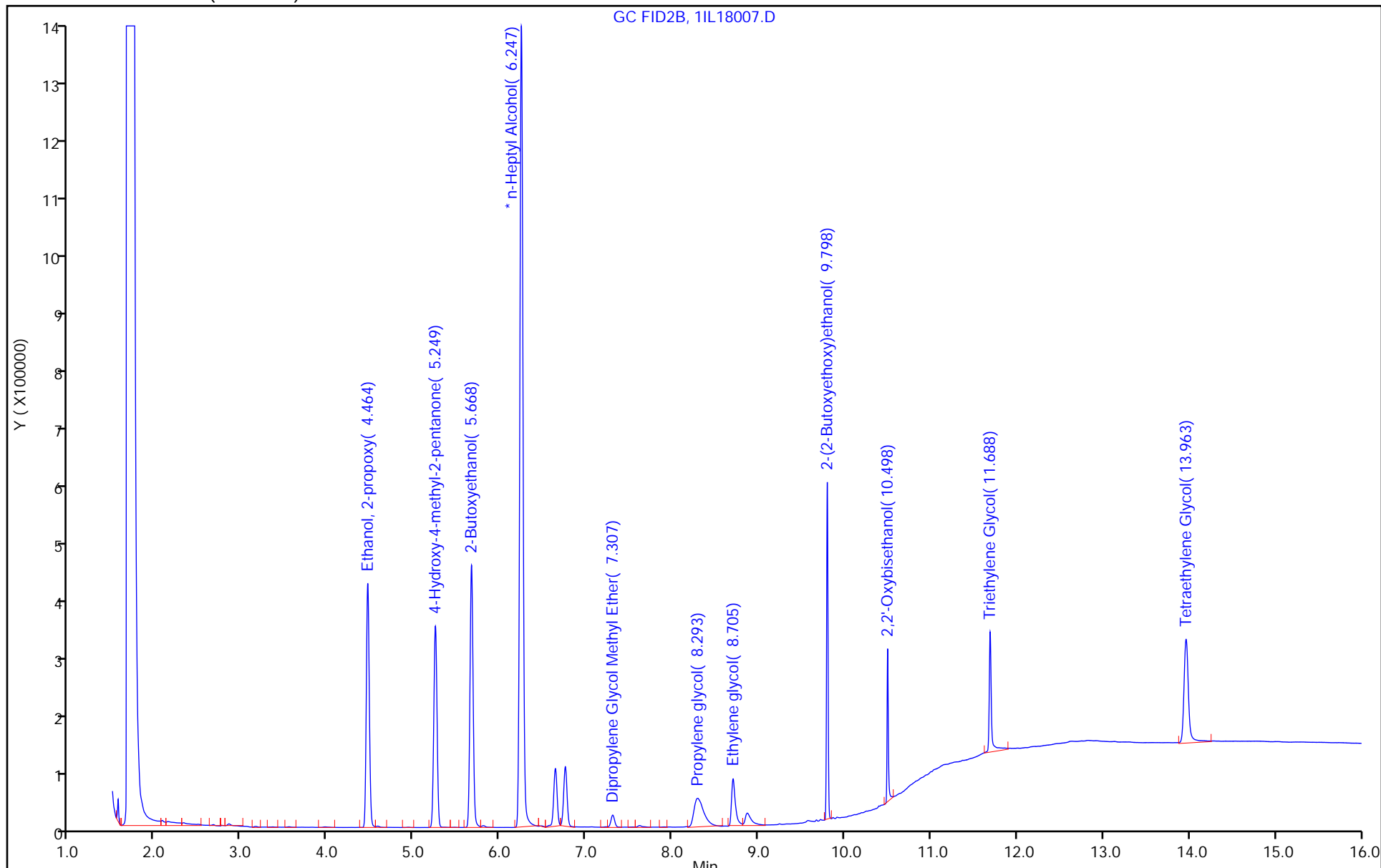
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)







Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18020.D  
 Lims ID: 580-134883-C-1 MS  
 Client ID:  
 Sample Type: MS  
 Inject. Date: 18-Dec-2023 23:44:31 ALS Bottle#: 0 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0091713-020  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:54:51 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: CTX1651

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

1 Ethanol, 2-propoxy	4.442	4.464	-0.022	528146		15.7
2 4-Hydroxy-4-methyl-2-pentanone	5.223	5.249	-0.026	507850		15.7
3 2-Butoxyethanol	5.661	5.668	-0.007	566295		14.8
* 4 n-Heptyl Alcohol	6.255	6.245	0.010	2454383	50.0	50.0
5 Dipropylene Glycol Methyl Ether	7.295	7.306	-0.011	49821		18.0
6 Propylene glycol	8.336	8.318	0.018	137765		4.58
7 Ethylene glycol	8.719	8.711	0.008	262587		15.4
8 2-(2-Butoxyethoxy)ethanol	9.797	9.797	0.000	550797		18.4
9 2,2'-Oxybisethanol	10.498	10.498	0.000	72741		1.78
10 Triethylene Glycol	11.688	11.687	0.001	68170		7
					-0.9419	7
LOD =	1.40					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

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

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18020.D

Injection Date: 18-Dec-2023 23:44:31

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-134883-C-1 MS

Worklist Smp#: 20

Client ID:

Injection Vol: 1.0 ul

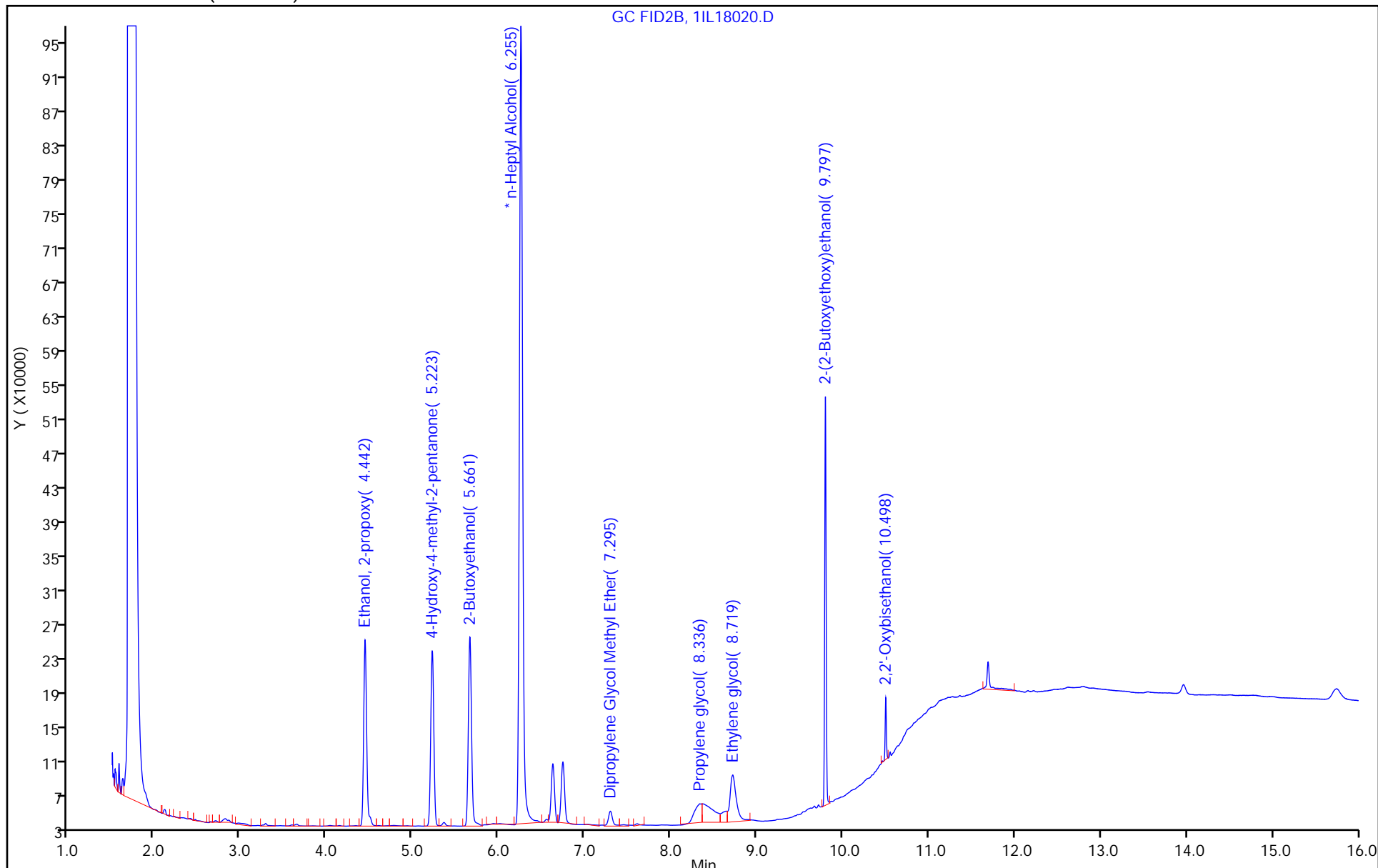
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)





Eurofins Savannah  
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18021.D  
 Lims ID: 580-134883-C-1 MSD  
 Client ID:  
 Sample Type: MSD  
 Inject. Date: 19-Dec-2023 00:07:54 ALS Bottle#: 0 Worklist Smp#: 21  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 680-0091713-021  
 Operator ID: Instrument ID: CVGG2  
 Method: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\8015\_GLY\_VGG.m  
 Limit Group: 8015B\_DAI  
 Last Update: 19-Dec-2023 15:54:51 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: CTX1651

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
4.443	4.464	-0.021	644682		16.7	
2 4-Hydroxy-4-methyl-2-pentanone						
5.226	5.249	-0.023	598262		16.1	
3 2-Butoxyethanol						
5.661	5.668	-0.007	707739		16.2	
* 4 n-Heptyl Alcohol						
6.253	6.245	0.008	2836080	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
7.296	7.306	-0.010	52147		16.0	
6 Propylene glycol						
8.352	8.318	0.034	74399		0.9034	
7 Ethylene glycol						
8.720	8.711	0.009	339885		17.5	
8 2-(2-Butoxyethoxy)ethanol						
9.797	9.797	0.000	578781		16.5	
9 2,2'-Oxybisethanol						
10.499	10.498	0.001	147190		5.18	
10 Triethylene Glycol						7
11.689	11.687	0.002	113676		0.7876	7
LOD = 1.40						
11 Tetraethylene Glycol						7
13.964	13.963	0.001	82859		-1.14	7
LOD = 4.50						

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG\_GLY\_ISTD\_00129

Amount Added: 10.00

Units: uL

Run Reagent

Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20231218-91713.b\1IL18021.D

Injection Date: 19-Dec-2023 00:07:54

Instrument ID: CVGG2

Operator ID:

Lims ID: 580-134883-C-1 MSD

Worklist Smp#: 21

Client ID:

Injection Vol: 1.0 ul

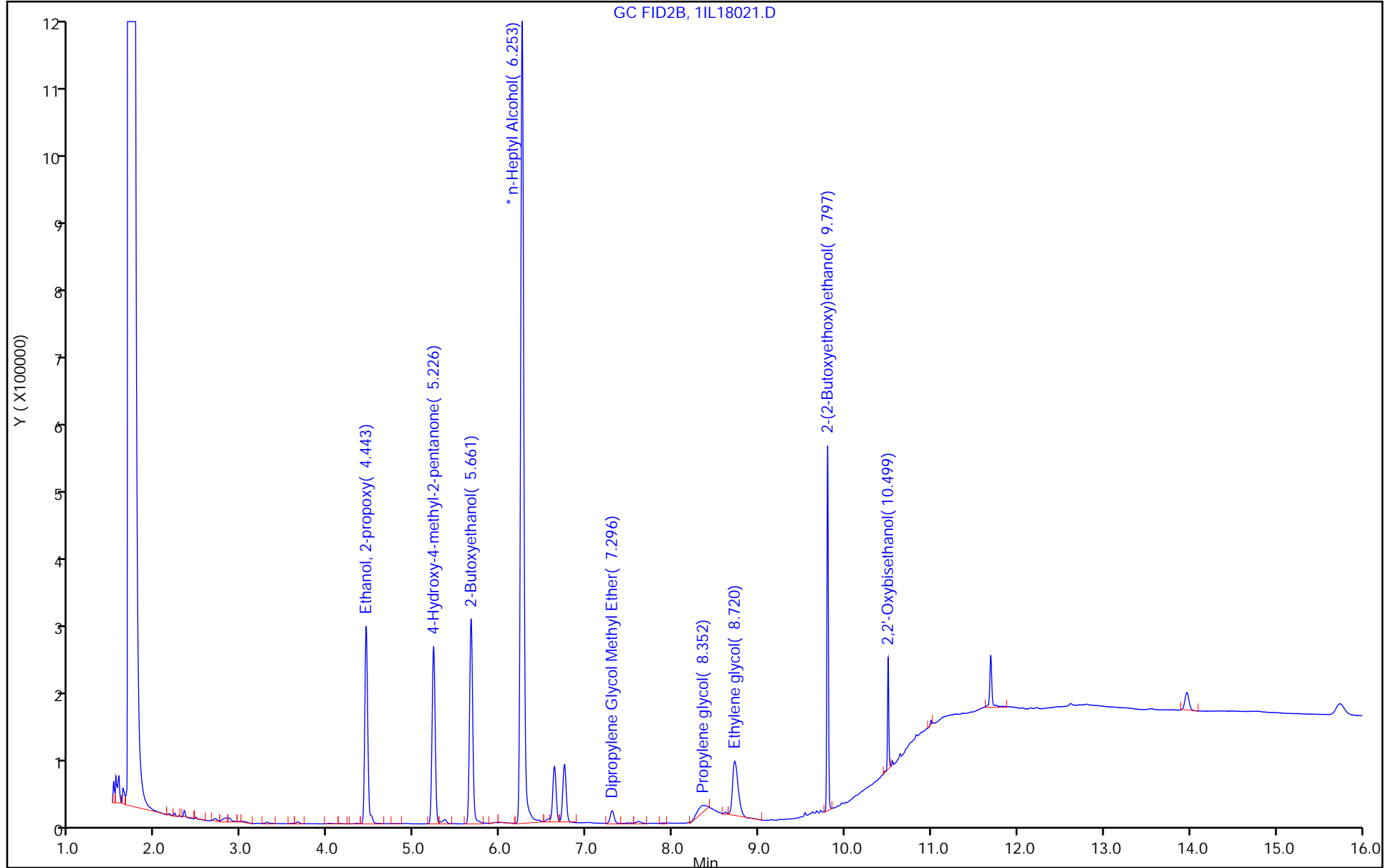
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015\_GLY\_VGG

Limit Group: 8015B\_DAI

Column: J&W DB WAX (0.45 mm)



GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-134883-1

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

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

Analysis Batch Number: 808405 End Date: 11/15/2023 18:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-808405/6		11/15/2023 15:23	1	1IK15006.D	J&W DB WAX 0.45 (mm)
IC 680-808405/7		11/15/2023 15:47	1	1IK15007.D	J&W DB WAX 0.45 (mm)
IC 680-808405/8		11/15/2023 16:10	1	1IK15008.D	J&W DB WAX 0.45 (mm)
ICIS 680-808405/9		11/15/2023 16:34	1	1IK15009.D	J&W DB WAX 0.45 (mm)
IC 680-808405/10		11/15/2023 16:57	1	1IK15010.D	J&W DB WAX 0.45 (mm)
IC 680-808405/11		11/15/2023 17:20	1	1IK15011.D	J&W DB WAX 0.45 (mm)
IC 680-808405/12		11/15/2023 17:44	1	1IK15012.D	J&W DB WAX 0.45 (mm)
ICV 680-808405/14		11/15/2023 18:31	1	1IK15014.D	J&W DB WAX 0.45 (mm)



GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-134883-1

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

Instrument ID: CVGG2 Start Date: 12/18/2023 18:16

Analysis Batch Number: 814101 End Date: 12/19/2023 01:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-814101/6		12/18/2023 18:16	1	1IL18006.D	J&W DB WAX 0.45 (mm)
LCS 680-814101/1006		12/18/2023 18:16	1	-1IL18006-LCS.d	J&W DB WAX 0.45 (mm)
LCSD 680-814101/7		12/18/2023 18:39	1	1IL18007.D	J&W DB WAX 0.45 (mm)
MB 680-814101/11		12/18/2023 20:13	1	1IL18011.D	J&W DB WAX 0.45 (mm)
580-134883-1	AF-HDMW225303-WGN01LF-2312	12/18/2023 22:10	1	1IL18016.D	J&W DB WAX 0.45 (mm)
580-134883-2	AF-RHMW03-WGN01LF-2312	12/18/2023 22:34	1	1IL18017.D	J&W DB WAX 0.45 (mm)
580-134883-3	AF-RHMW02-WGN01LF-2312	12/18/2023 22:57	1	1IL18018.D	J&W DB WAX 0.45 (mm)
580-134883-4	AF-RHMW02-WGFD01LF-2312	12/18/2023 23:21	1	1IL18019.D	J&W DB WAX 0.45 (mm)
580-134883-1 MS	AF-HDMW225303-WGN01LF-2312 MS	12/18/2023 23:44	1	1IL18020.D	J&W DB WAX 0.45 (mm)
580-134883-1 MSD	AF-HDMW225303-WGN01LF-2312 MSD	12/19/2023 00:07	1	1IL18021.D	J&W DB WAX 0.45 (mm)
CCV 680-814101/24		12/19/2023 00:54	1	1IL18023.D	J&W DB WAX 0.45 (mm)
RL 680-814101/25		12/19/2023 01:18	1		J&W DB WAX 0.45 (mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-134883-1

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

Batch Number: 808405 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 680-808405/6		8015C GLY		1 mL	50 uL	10 uL			
IC 680-808405/7		8015C GLY		1 mL	40 uL	10 uL			
IC 680-808405/8		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-808405/9		8015C GLY		1 mL	10 uL	10 uL			
IC 680-808405/10		8015C GLY		1 mL	5 uL	10 uL			
IC 680-808405/11		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-808405/12		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-808405/14		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.

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah Job No.: 580-134883-1

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

Batch Number: 814101 Batch Start Date: 12/18/23 18:16 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		
CCVIS 680-814101/6		8015C GLY		1 mL	10 uL	10 uL			
LCSD 680-814101/7		8015C GLY		1 mL		10 uL	10 uL		
MB 680-814101/11		8015C GLY		1 mL		10 uL			
580-134883-C-1	AF-HDMW225303-WG N01LF-2312	8015C GLY	T	1 mL		10 uL			
580-134883-B-2	AF-RHMW03-WGN01L F-2312	8015C GLY	T	1 mL		10 uL			
580-134883-C-3	AF-RHMW02-WGN01L F-2312	8015C GLY	T	1 mL		10 uL			
580-134883-B-4	AF-RHMW02-WGFD01 LF-2312	8015C GLY	T	1 mL		10 uL			
580-134883-C-1 MS	AF-HDMW225303-WG N01LF-2312	8015C GLY	T	1 mL		10 uL	10 uL		
580-134883-C-1 MSD	AF-HDMW225303-WG N01LF-2312	8015C GLY	T	1 mL		10 uL	10 uL		
CCV 680-814101/24		8015C GLY		1 mL	10 uL	10 uL			
LCS 680-814101/1006		8015C GLY		1 mL	10 uL	10 uL			

Batch Notes	

Basis	Basis Description
T	Total/NA

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

# Subcontract Data

# Shipping and Receiving Documents

### Chain of Custody Record

AWB: 016-96783083

<b>Client Information</b>		Sampler: <i>Laine Sakai</i>	Lab PM: Elaine Walker <i>12/14/23</i>	Carrier Tracking No(s): <i>FedEx United Cargo</i>	COC No: 2312AFEA04																												
Client Contact:		Phone:	E-Mail: <i>M.Elaine.Walker@EurofinsET.com</i>	State of Origin: Hawaii	Page: Page 1 of 1																												
Company: AECOM		PWSID:		<b>Analysis Requested</b>																													
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract		<table border="1"> <tr> <td colspan="2"><b>Preservation Codes:</b></td> </tr> <tr> <td>A - HCL</td> <td>M - Hexane</td> </tr> <tr> <td>B - NaOH</td> <td>N - None</td> </tr> <tr> <td>C - Zn Acetate</td> <td>O - AsNaO2</td> </tr> <tr> <td>D - Nitric Acid</td> <td>P - Na2O4S</td> </tr> <tr> <td>E - NaHSO4</td> <td>Q - Na2SO3</td> </tr> <tr> <td>F - MeOH</td> <td>R - Na2S2O3</td> </tr> <tr> <td>G - Amchlor</td> <td>S - H2SO4</td> </tr> <tr> <td>H - Ascorbic Acid</td> <td>T - TSP Dodecahydrate</td> </tr> <tr> <td>I - Ice</td> <td>U - Acetone</td> </tr> <tr> <td>J - DI Water</td> <td>V - MCAA</td> </tr> <tr> <td>K - EDTA</td> <td>W - pH 4-5</td> </tr> <tr> <td>L - EDA</td> <td>Z - other (specify)</td> </tr> <tr> <td colspan="2">Other:</td> </tr> </table>		<b>Preservation Codes:</b>		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:	
<b>Preservation Codes:</b>																																	
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																																
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H - Ascorbic Acid	T - TSP Dodecahydrate																																
I - Ice	U - Acetone																																
J - DI Water	V - MCAA																																
K - EDTA	W - pH 4-5																																
L - EDA	Z - other (specify)																																
Other:																																	
City: Honolulu		TAT Requested (days): <b>Rush - 5 Day</b>																															
State, Zip: Hawaii 96813		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> 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#:																															
<b>Sample Identification</b>		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)	8018C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:																							
<del>AF-HDMW225303-WGN01LF-2312</del>		<del>12.09.23</del>	<del>0959</del>	<del>G</del>	<del>W</del>	<del>N</del>	<del>N</del>	<del>X</del>	<del>3</del>																								
<b>Possible Hazard Identification</b>		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>																															
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																															
Deliverable Requested: I, II, III, IV, Other (specify)		Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQUIS FDD.		Special Instructions/QC Requirements: DOD QSM project.																													
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:																													
Relinquished by: <i>Laine Sakai</i>		Date/Time: <i>12.09.23 1320</i>	Company: AECOM	Received by: <i>Alex Edmonds</i>																													
Relinquished by: <i>Brittany Tominez for Alex Edmonds</i>		Date/Time: <i>12/14/23 1310</i>	Company: AECOM	Received by: <i>[Signature]</i>																													
Relinquished by:		Date/Time:	Company:	Received by:																													
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>12/17/23 4.8/5.1</i>																													





### Chain of Custody Record

AWB: 016-96783183

<b>Client Information</b>			Sampler: <i>Maxt Yin</i>		Lab PM: Elaine Walker		Carrier Tracking No(s): <i>FedEx United Cargo</i>		COC No: 2312AFEA01																																														
Client Contact:			Phone: <i>808-349-4338</i>		E-Mail: <i>M.Elaine.Walker@EurofinsET.com</i>		State of Origin: Hawaii		Page: Page 1 of 1																																														
Company: AECOM			PWSID:		<b>Analysis Requested</b>																																																		
Address: 1001 Bishop St. Suite 1600			Due Date Requested: see subcontract		<table border="1"> <tr> <td rowspan="5">Field Filtered Sample (Yes or No)</td> <td rowspan="5">Perform M8/M8D (Yes or No)</td> <td rowspan="5">8016C_DAL_GL_DS/2-(2-butoxyethoxy) ethanol</td> <td colspan="6" rowspan="5"> </td> <td rowspan="5">Total Number of containers</td> </tr> <tr> <td colspan="6">TAT Requested (days): <b>Rush - 5 Day</b></td> </tr> <tr> <td colspan="6">Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td colspan="6">PO #:</td> </tr> <tr> <td colspan="6">WO #:</td> </tr> </table>						Field Filtered Sample (Yes or No)	Perform M8/M8D (Yes or No)	8016C_DAL_GL_DS/2-(2-butoxyethoxy) ethanol							Total Number of containers	TAT Requested (days): <b>Rush - 5 Day</b>						Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No						PO #:						WO #:																
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																						PO #:																																	
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City: Honolulu			Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Preservation Codes:																																																		
State, Zip: Hawaii 96813			PO #:		<table border="0"> <tr> <td>A - HCL</td> <td>M - Hexane</td> </tr> <tr> <td>B - NaOH</td> <td>N - None</td> </tr> <tr> <td>C - Zn Acetate</td> <td>O - AsNaO2</td> </tr> <tr> <td>D - Nitric Acid</td> <td>P - Na2O4S</td> </tr> <tr> <td>E - NaHSO4</td> <td>Q - Na2SO3</td> </tr> <tr> <td>F - MeOH</td> <td>R - Na2S2O3</td> </tr> <tr> <td>G - Amchlor</td> <td>S - H2SO4</td> </tr> <tr> <td>H - Ascorbic Acid</td> <td>T - TSP Dodecahydrate</td> </tr> <tr> <td>I - Ice</td> <td>U - Acetone</td> </tr> <tr> <td>J - DI Water</td> <td>V - MCAA</td> </tr> <tr> <td>K - EDTA</td> <td>W - pH 4-5</td> </tr> <tr> <td>L - EDA</td> <td>Z - other (specify)</td> </tr> </table>						A - HCL	M - Hexane	B - NaOH	N - None	C - Zn Acetate	O - AsNaO2	D - Nitric Acid	P - Na2O4S	E - NaHSO4	Q - Na2SO3	F - MeOH	R - Na2S2O3	G - Amchlor	S - H2SO4	H - Ascorbic Acid	T - TSP Dodecahydrate	I - Ice	U - Acetone	J - DI Water	V - MCAA	K - EDTA	W - pH 4-5	L - EDA	Z - other (specify)																					
A - HCL	M - Hexane																																																						
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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)																																																						
Phone: 808-954-4512 / 770-331-0794			Project #:		Other:																																																		
Email: Watson Tanji (watson.tanji@aecom.com) / Mark Kromis (mark.kromis@aecom.com)			SSOW#:		Special Instructions/Note:																																																		
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**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 IAT. AECOM EQUS FDD. Special Instructions/QC Requirements: DOD QSM project.

**Empty Kit Relinquished by:**

Relinquished by: <i>Maxt Yin</i>	Date/Time: <i>12/8/23 1437</i>	Company: AECOM	Received by: <i>Brittany Tominez</i>	Date/Time: <i>12/8/23 1437</i>	Company: AECOM
Relinquished by: <i>Brittany Tominez</i>	Date/Time: <i>12/11/23 1310</i>	Company: AECOM	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time: <i>12/12/23 1300</i>	Company:

Custody Seals Intact:  Yes  No Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: *4.8/5.1*



# Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-134883-1

**Login Number: 134883**  
**List Number: 1**  
**Creator: Johnson, Corey M**

**List Source: Eurofins Seattle**

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