

ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy

AECOM

1001 Bishop Street
Honolulu HI 96813

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JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-124965-1

Eurofins Seattle

Job Notes

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

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

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Definitions/Glossary

Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

Qualifiers

GC Semi VOA

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

Glossary

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

CASE NARRATIVE

**Client: AECOM
Project: Red Hill - AFFF Assessment Sampling
Report Number: 580-124965-1**

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

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

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

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

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

RECEIPT

The samples were received on 03/16/2023; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.2 C.

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

GLYCOLS

Samples AF-RHMW10-WGN01LF-2303W2 (580-124965-1), AF-RHMW16-WGN01LF-2303W2 (580-124965-2), AF-HDMW225303-WGN01LF-2303W2 (580-124965-3), AF-HDMW12A-WGN01LF-2303W2 (580-124965-4) and AF-HDMW12A-WGFD01LF-2303W2 (580-124965-5) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 03/22/2023.

The closing continuing calibration verification (CCV) associated with batch 680-769036 recovered above the upper control limit for 2-(2-Butoxyethoxy)ethanol. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data has been reported. The associated samples are impacted: AF-RHMW10-WGN01LF-2303W2 (580-124965-1), AF-RHMW16-WGN01LF-2303W2 (580-124965-2), AF-HDMW225303-WGN01LF-2303W2 (580-124965-3), AF-HDMW12A-WGN01LF-2303W2 (580-124965-4), AF-HDMW12A-WGFD01LF-2303W2 (580-124965-5), (CCV 680-769036/27), (580-124965-A-2 MS) and (580-124965-A-2 MSD).

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

Detection Summary

Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

Client Sample ID: AF-RHMW10-WGN01LF-2303W2

Lab Sample ID: 580-124965-1

No Detections.

Client Sample ID: AF-RHMW16-WGN01LF-2303W2

Lab Sample ID: 580-124965-2

No Detections.

Client Sample ID: AF-HDMW225303-WGN01LF-2303W2

Lab Sample ID: 580-124965-3

No Detections.

Client Sample ID: AF-RHMW12A-WGN01LF-2303W2

Lab Sample ID: 580-124965-4

No Detections.

Client Sample ID: AF-RHMW12A-WGFD01LF-2303W2

Lab Sample ID: 580-124965-5

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

Client Sample ID: AF-RHMW10-WGN01LF-2303W2

Lab Sample ID: 580-124965-1

Matrix: Water

Date Collected: 03/14/23 12:55

Date Received: 03/16/23 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			03/22/23 17:51	1

Client Sample ID: AF-RHMW16-WGN01LF-2303W2

Lab Sample ID: 580-124965-2

Matrix: Water

Date Collected: 03/13/23 14:30

Date Received: 03/16/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			03/22/23 18:15	1

Client Sample ID: AF-HDMW225303-WGN01LF-2303W2

Lab Sample ID: 580-124965-3

Matrix: Water

Date Collected: 03/14/23 10:40

Date Received: 03/16/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			03/22/23 19:25	1

Client Sample ID: AF-RHMW12A-WGN01LF-2303W2

Lab Sample ID: 580-124965-4

Matrix: Water

Date Collected: 03/13/23 11:10

Date Received: 03/16/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			03/22/23 19:48	1

Client Sample ID: AF-RHMW12A-WGFD01LF-2303W2

Lab Sample ID: 580-124965-5

Matrix: Water

Date Collected: 03/13/23 11:10

Date Received: 03/16/23 13:00

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	5.0	1.1	mg/L			03/22/23 20:12	1

Default Detection Limits

Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

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

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

QC Sample Results

Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

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

Lab Sample ID: MB 680-769036/12

Matrix: Water

Analysis Batch: 769036

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M	5.0	1.1	mg/L			03/22/23 17:05	1

Lab Sample ID: LCS 680-769036/6

Matrix: Water

Analysis Batch: 769036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	20.0	19.8		mg/L		99	50 - 150

Lab Sample ID: LCSD 680-769036/7

Matrix: Water

Analysis Batch: 769036

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	20.0	19.1		mg/L		95	50 - 150	4	50

Lab Sample ID: 580-124965-2 MS

Matrix: Water

Analysis Batch: 769036

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	20.0	19.7		mg/L		98	50 - 150

Lab Sample ID: 580-124965-2 MSD

Matrix: Water

Analysis Batch: 769036

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	3.0	U M Q	20.0	18.7		mg/L		93	50 - 150	5	50

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

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

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

Client Sample ID: AF-RHMW16-WGN01LF-2303W2
Prep Type: Total/NA

Client Sample ID: AF-RHMW16-WGN01LF-2303W2
Prep Type: Total/NA

QC Association Summary

Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

GC Semi VOA

Analysis Batch: 769036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-124965-1	AF-RHMW10-WGN01LF-2303W2	Total/NA	Water	8015C GLY	
580-124965-2	AF-RHMW16-WGN01LF-2303W2	Total/NA	Water	8015C GLY	
580-124965-3	AF-HDMW225303-WGN01LF-2303W2	Total/NA	Water	8015C GLY	
580-124965-4	AF-RHMW12A-WGN01LF-2303W2	Total/NA	Water	8015C GLY	
580-124965-5	AF-RHMW12A-WGFD01LF-2303W2	Total/NA	Water	8015C GLY	
MB 680-769036/12	Method Blank	Total/NA	Water	8015C GLY	
LCS 680-769036/6	Lab Control Sample	Total/NA	Water	8015C GLY	
LCSD 680-769036/7	Lab Control Sample Dup	Total/NA	Water	8015C GLY	
580-124965-2 MS	AF-RHMW16-WGN01LF-2303W2	Total/NA	Water	8015C GLY	
580-124965-2 MSD	AF-RHMW16-WGN01LF-2303W2	Total/NA	Water	8015C GLY	

Lab Chronicle

Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

Client Sample ID: AF-RHMW10-WGN01LF-2303W2

Date Collected: 03/14/23 12:55

Date Received: 03/16/23 13:00

Lab Sample ID: 580-124965-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	769036	JCK	EET SAV	03/22/23 17:51

Client Sample ID: AF-RHMW16-WGN01LF-2303W2

Date Collected: 03/13/23 14:30

Date Received: 03/16/23 13:00

Lab Sample ID: 580-124965-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	769036	JCK	EET SAV	03/22/23 18:15

Client Sample ID: AF-HDMW225303-WGN01LF-2303W2

Date Collected: 03/14/23 10:40

Date Received: 03/16/23 13:00

Lab Sample ID: 580-124965-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	769036	JCK	EET SAV	03/22/23 19:25

Client Sample ID: AF-RHMW12A-WGN01LF-2303W2

Date Collected: 03/13/23 11:10

Date Received: 03/16/23 13:00

Lab Sample ID: 580-124965-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	769036	JCK	EET SAV	03/22/23 19:48

Client Sample ID: AF-RHMW12A-WGFD01LF-2303W2

Date Collected: 03/13/23 11:10

Date Received: 03/16/23 13:00

Lab Sample ID: 580-124965-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	769036	JCK	EET SAV	03/22/23 20:12

Laboratory References:

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

Eurofins Seattle

Accreditation/Certification Summary

Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

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

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-124965-1

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: AECOM

Job ID: 580-124965-1

Project/Site: Red Hill - AFFF Assessment Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-124965-1	AF-RHMW10-WGN01LF-2303W2	Water	03/14/23 12:55	03/16/23 13:00
580-124965-2	AF-RHMW16-WGN01LF-2303W2	Water	03/13/23 14:30	03/16/23 13:00
580-124965-3	AF-HDMW225303-WGN01LF-2303W2	Water	03/14/23 10:40	03/16/23 13:00
580-124965-4	AF-RHMW12A-WGN01LF-2303W2	Water	03/13/23 11:10	03/16/23 13:00
580-124965-5	AF-RHMW12A-WGFD01LF-2303W2	Water	03/13/23 11:10	03/16/23 13:00

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Instrument ID: CVGG2

Analysis Batch Number: 768387

Lab Sample ID: ICIS 680-768387/8

Client Sample ID: _____

Date Analyzed: 03/18/23 18:14

Lab File ID: GC18008.D

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

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.35	Baseline Smoothing	SWK1	03/19/23 17:24

Lab Sample ID: IC 680-768387/9

Client Sample ID: _____

Date Analyzed: 03/18/23 18:37

Lab File ID: GC18009.D

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

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.35	Baseline Smoothing	SWK1	03/19/23 17:24
Ethylene glycol	6.57	Baseline Smoothing	SWK1	03/19/23 17:24

Lab Sample ID: IC 680-768387/10

Client Sample ID: _____

Date Analyzed: 03/18/23 19:01

Lab File ID: GC18010.D

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

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.35	Baseline Smoothing	SWK1	03/19/23 17:25
Ethylene glycol	6.56	Baseline Smoothing	SWK1	03/19/23 17:24

Lab Sample ID: IC 680-768387/11

Client Sample ID: _____

Date Analyzed: 03/18/23 19:24

Lab File ID: GC18011.D

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

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Propylene glycol	6.35	Baseline Smoothing	SWK1	03/19/23 17:25
Ethylene glycol	6.56	Baseline Smoothing	SWK1	03/19/23 17:25

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins SavannahJob No.: 580-124965-1

SDG No.: _____

Instrument ID: CVGG2Analysis Batch Number: 768387Lab Sample ID: ICV 680-768387/12 CCV

Client Sample ID: _____

Date Analyzed: 03/18/23 19:47Lab File ID: GC18012.DGC Column: J&W DB WAXID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dipropylene Glycol Methyl Ether	5.13	Baseline Smoothing	SWK1	03/19/23 17:25

8015C GLY

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.:

Instrument ID: CVGG2

Analysis Batch Number: 769036

Lab Sample ID: MB 680-769036/12

Client Sample ID:

Date Analyzed: 03/22/23 17:05

Lab File ID: GC22012.D

GC Column: J&W DB WAX

ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	SWK1	03/23/23 11:09

Lab Sample ID: 580-124965-2

Client Sample ID: AF-RHMMW16-WGN01LF-2303W2

Date Analyzed: 03/22/23 18:15

Lab File ID: GC22015.D

GC Column: J&W DB WAX

ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	SWK1	03/23/23 11:10

Lab Sample ID: 580-124965-3

Client Sample ID: AF-HDMW225303-WGN01LF-2303W2

Date Analyzed: 03/22/23 19:25

Lab File ID: GC22018.D

GC Column: J&W DB WAX

ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	SWK1	03/23/23 11:10

Lab Sample ID: 580-124965-4

Client Sample ID: AF-RHMMW12A-WGN01LF-2303W2

Date Analyzed: 03/22/23 19:48

Lab File ID: GC22019.D

GC Column: J&W DB WAX

ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	SWK1	03/23/23 11:10

Lab Sample ID: 580-124965-5

Client Sample ID: AF-RHMMW12A-WGFD01LF-2303W2

Date Analyzed: 03/22/23 20:12

Lab File ID: GC22020.D

GC Column: J&W DB WAX

ID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-(2-Butoxyethoxy)ethanol		Invalid Compound ID	SWK1	03/23/23 11:10

GC SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins SavannahJob No.: 580-124965-1

SDG No.: _____

Instrument ID: CVGG2Analysis Batch Number: 769036Lab Sample ID: CCV 680-769036/27

Client Sample ID: _____

Date Analyzed: 03/22/23 22:55Lab File ID: GC22027.DGC Column: J&W DB WAXID: 0.45 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol, 2-propoxy	2.91	Baseline Smoothing	SWK1	03/23/23 11:10

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG_Gly_CAL_00048	05/21/23		o2si, Lot 480919		(Purchased Reagent)		2,2'-Oxybisethanol	2000 ug/mL
							2-(2-Butoxyethoxy)ethanol	2000 ug/mL
							2-Butoxyethanol	2000 ug/mL
							4-Hydroxy-4-methyl-2-pentanone	2000 ug/mL
							Dipropylene Glycol Methyl Ether	2000 ug/mL
							Ethanol, 2-propoxy	2000 ug/mL
							Ethylene glycol	2000 ug/mL
							Propylene glycol	2000 ug/mL
							Tetraethylene Glycol	4000 ug/mL
							Triethylene Glycol	2000 ug/mL
SG_GLY_ITSD_00106	05/22/23		Agilent, Lot 0006720623		(Purchased Reagent)		n-Heptyl Alcohol	5000 ug/mL
SG_GlyICV_00055	08/21/23		o2si, Lot 454407		(Purchased Reagent)		2-(2-Butoxyethoxy)ethanol	2000 ug/mL

Reagent

SG_Gly_CAL_00048



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



ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02

Rev 0

Certificate of Analysis

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

Description:

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

Container:

1 ml Ampule, Amber Glass

Certified Values:

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

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

Intended Uses:

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

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

Certificate of Analysis

Page 2 of 3

Catalog No. G34-120070-04

Lot No. 480919

Expiration Date 2 -May-2024

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

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

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

Method of Preparation:

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

Packaging and Storage:

The solution should be stored according to the following storage requirements: ≤ -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

$u_c = (\sum_{i=1}^4 u_i^2)^{1/2}$ 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

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

Certificate of Analysis

Page 3 of 3

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
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Released By:



Susan Mathews

14-Jun-2022

Quality Control Team Lead

Reagent

SG_GLY_ISTD_00106

Reference Material Certificate
Product Information Sheet

Product Name: Custom Standard

Lot Number: 0006720623

Product Number: CUS-6046

Lot Issue Date: 15-Dec-2022

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

Expiration Date: 31-Jan-2025

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

Matrix: methanol (methyl alcohol)

Description:

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

Traceability:

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

Homogeneity:

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

Instructions for Use:

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

Safety:

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

Intended Use:

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

Expiration of Certification:

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



Trusted Answers

Maintenance of Certification:

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

Sample lot approver:

A handwritten signature in black ink, appearing to read "M. Bourgeois".
Monica Bourgeois
QMS Representative



ISO 17034 Cert
No. AR-1936

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

Page: 2 of 2

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

ISO 17025

Reagent

SG_GlyICV_00055



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



ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02

Rev 0

Certificate of Analysis

Page 1 of 3

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

Description:

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

Container:
1 ml Ampule, Amber Glass

Certified Values:

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

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

Intended Uses:

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

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

Certificate of Analysis

Page 2 of 2

Catalog No. G34-120070-04-SS

Lot No. 454407

Expiration Date 1-Jul-2023

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

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

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

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

Method of Preparation:

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

Packaging and Storage:

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

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

Glassware Calibration:

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

Weights and Balance Calibration:

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

Homogeneity:

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

Hazardous Information:

Refer to MSDS.

Calculation of Uncertainty:

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

$u = ku_c$ u = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, k = 2, u_c = the combined uncertainty
 $u_c = (u_{\text{char}}^2 + u_{\text{tran}}^2 + u_{\text{homo}}^2 + u_{\text{ts}}^2)^{1/2}$ 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:

Jared Ball

1-Jul-2021

Production Chemist I

Certified By:

Claire Desrochers

7-Jul-2021

Quality Control Chemist I

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Released By:

Susan Mathews

8-Jul-2021

Quality Control Team Lead

Certificate of Analysis

Page 3 of 3

Catalog No. G34-120070-04-SS

Lot No. 454407

Expiration Date 1 -Jul-2023

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

Expiration Information:

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

Quality Standard Documentation:

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

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Released By:

Susan Mathews

8 -Jul-2021

Quality Control Team Lead

Method 8015C - DAI Glycols

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

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: GC22006.D

Lab ID: LCS 680-769036/6 Client ID: _____

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	19.8	99	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.: 580-124965-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: GC22007.D

Lab ID: LCSD 680-769036/7 Client ID: _____

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD %	REC	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy)ethanol	20.0	19.1	95	4	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.: 580-124965-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: GC22016.D

Lab ID: 580-124965-2 MS Client ID: AF-RHMW16-WGN01LF-2303W2 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
2-(2-Butoxyethoxy)ethanol	20.0	3.0 U	19.7	98	50-150	

Column to be used to flag recovery and RPD values

FORM III 8015C GLY

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Savannah Job No.: 580-124965-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: GC22017.D

Lab ID: 580-124965-2 MSD Client ID: AF-RHMW16-WGN01LF-2303W2 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD %	%	QC LIMITS		#
					RPD	REC	
2-(2-Butoxyethoxy)ethanol	20.0	18.7	93	5	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.: 580-124965-1
SDG No.: _____
Lab Sample ID: MB 680-769036/12
Matrix: Water Date Extracted: _____
Lab File ID: (1) GC22012.D Lab File ID: (2) _____
Date Analyzed: (1) 03/22/2023 17:05 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 680-769036/6	03/22/2023 14:45	
	LCSD 680-769036/7	03/22/2023 15:08	
AF-RHMW10-WGN01LF-2303W2	580-124965-1	03/22/2023 17:51	
AF-RHMW16-WGN01LF-2303W2	580-124965-2	03/22/2023 18:15	
AF-RHMW16-WGN01LF-2303W2 MS	580-124965-2 MS	03/22/2023 18:38	
AF-RHMW16-WGN01LF-2303W2 MSD	580-124965-2 MSD	03/22/2023 19:02	
AF-HDMW225303-WGN01LF-2303W2	580-124965-3	03/22/2023 19:25	
AF-RHMW12A-WGN01LF-2303W2	580-124965-4	03/22/2023 19:48	
AF-RHMW12A-WGFD01LF-2303W2	580-124965-5	03/22/2023 20:12	

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

Lab Name: Eurofins Savannah Job No.: 580-124965-1
 SDG No.: _____
 Sample No.: ICIS 680-768387/8 Date Analyzed: 03/18/2023 18:14
 Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)
 Lab File ID (Standard): GC18008.D Heated Purge: (Y/N) N
 Calibration ID: 90309

	nHPA		#	RT #	#	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	5093613	4.21				
UPPER LIMIT	10187226	4.71				
LOWER LIMIT	2546807	3.71				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 680-768387/12		5958489	4.21			
CCV						

nHPA = n-Heptyl Alcohol

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

Column used to flag values outside QC limits

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

Lab Name: Eurofins Savannah Job No.: 580-124965-1
SDG No.: _____
Sample No.: CCVIS 680-769036/5 Date Analyzed: 03/22/2023 14:21
Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm)
Lab File ID (Standard): GC22005.D Heated Purge: (Y/N) N
Calibration ID: 90309

	nHPA		#	RT #	#	RT #
	AREA #	RT #				
12/24 HOUR STD	3173939	4.21				
UPPER LIMIT	6347878	4.71				
LOWER LIMIT	1586970	3.71				
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 680-769036/6		4401122	4.21			
LCSD 680-769036/7		4256785	4.21			
MB 680-769036/12		5939401	4.20			
580-124965-1	AF-RHMW10-WGN01LF-2 303W2	4796324	4.20			
580-124965-2	AF-RHMW16-WGN01LF-2 303W2	5899712	4.20			
580-124965-2 MS	AF-RHMW16-WGN01LF-2 303W2 MS	4108804	4.20			
580-124965-2 MSD	AF-RHMW16-WGN01LF-2 303W2 MSD	4507118	4.20			
580-124965-3	AF-HDMW225303-WGN01 LF-2303W2	6233168	4.20			
580-124965-4	AF-RHMW12A-WGN01LF- 2303W2	5596231	4.21			
580-124965-5	AF-RHMW12A-WGFD01LF -2303W2	5930343	4.20			
CCV 680-769036/27		5818470	4.19			

nHPA = n-Heptyl Alcohol

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

Column used to flag values outside QC limits

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Client Sample ID: AF-RHMW10-WGN01LF-2303W2

Lab Sample ID: 580-124965-1

Matrix: Water

Lab File ID: GC22014.D

Analysis Method: 8015C GLY

Date Collected: 03/14/2023 12:55

Extraction Method: _____

Date Extracted: _____

Sample wt/vol: 1 (mL)

Date Analyzed: 03/22/2023 17:51

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: _____

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\20230322-84602.b\GC22014.D
 Lims ID: 580-124965-A-1
 Client ID: AF-RHMW10-WGN01LF-2303W2
 Sample Type: Client
 Inject. Date: 22-Mar-2023 17:51:53 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-014
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:10:45 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SWK1 Date: 23-Mar-2023 11:10:01

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

* 4 n-Heptyl Alcohol

4.201 4.189 0.012 4796324 50.0

8 2-(2-Butoxyethoxy)ethanol 7

8.396 8.392 0.004 2227 -1.62 7

LOD = 0.5000

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

SG_GLY_ITSD_00106 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Mar-2023 11:11:03

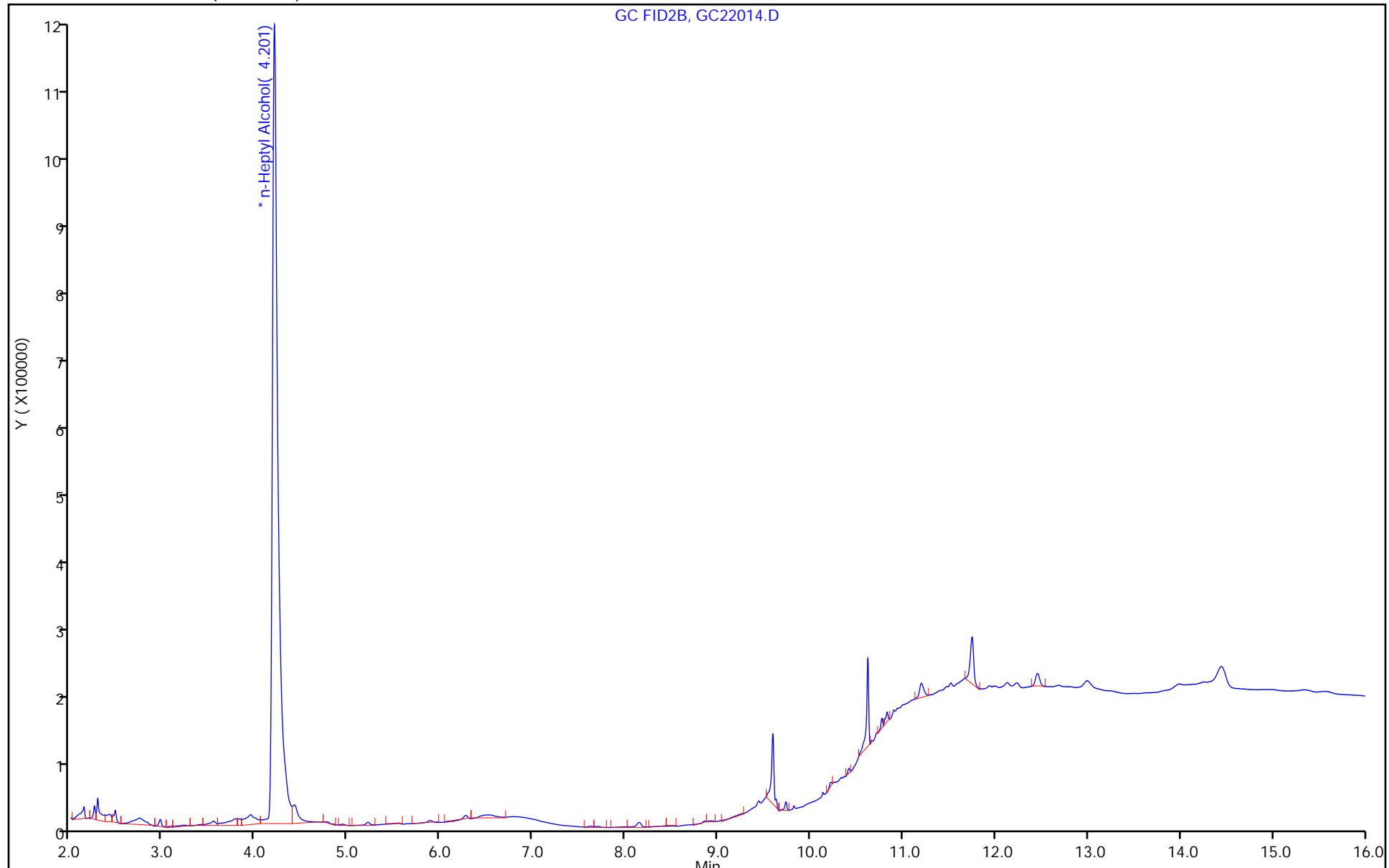
Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22014.D
Injection Date: 22-Mar-2023 17:51:53 Instrument ID: CVGG2
Lims ID: 580-124965-A-1 Lab Sample ID: 680-124965-1
Client ID: AF-RHMW10-WGN01LF-2303W2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Operator ID:
Worklist Smp#: 14

ALS Bottle#: 0



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Client Sample ID: AF-RHMW16-WGN01LF-2303W2 Lab Sample ID: 580-124965-2

Matrix: Water Lab File ID: GC22015.D

Analysis Method: 8015C GLY Date Collected: 03/13/2023 14:30

Extraction Method: _____ Date Extracted: _____

Sample wt/vol: 1 (mL) Date Analyzed: 03/22/2023 18:15

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.: 769036 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22015.D
 Lims ID: 580-124965-A-2
 Client ID: AF-RHMW16-WGN01LF-2303W2
 Sample Type: Client
 Inject. Date: 22-Mar-2023 18:15:15 ALS Bottle#: 0 Worklist Smp#: 15
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-015 Instrument ID: CVGG2
 Operator ID:
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:10:45 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SWK1 Date: 23-Mar-2023 11:10:04

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

4.204 4.189 0.015 5899712 50.0

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Mar-2023 11:11:04

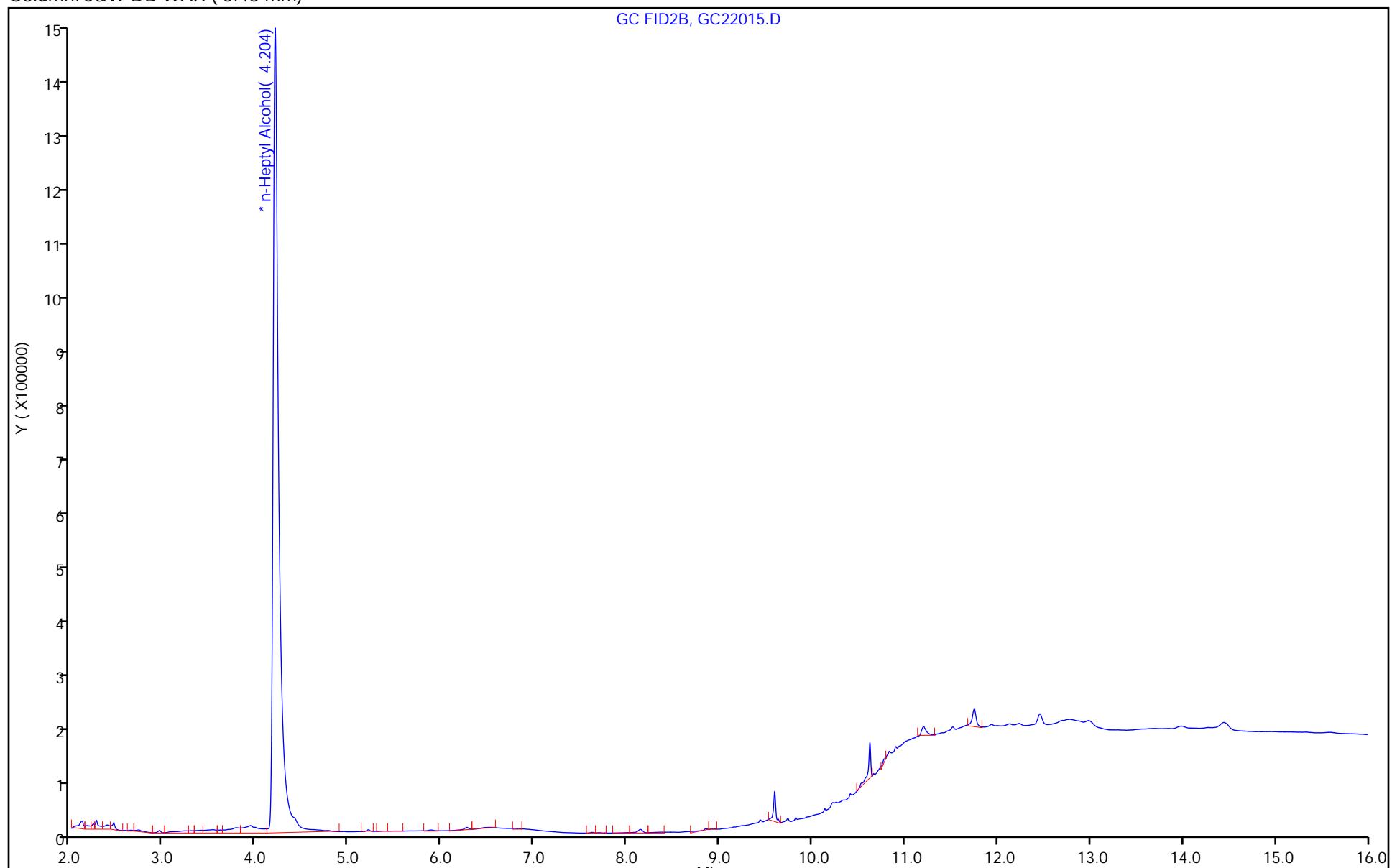
Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22015.D
Injection Date: 22-Mar-2023 18:15:15 Instrument ID: CVGG2
Lims ID: 580-124965-A-2 Lab Sample ID: 680-124965-2
Client ID: AF-RHMW16-WGN01LF-2303W2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Operator ID:
Worklist Smp#: 15

ALS Bottle#: 0



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124965-1
SDG No.:
Client Sample ID: AF-HDMW225303-WGN01LF-230 Lab Sample ID: 580-124965-3
3W2
Matrix: Water Lab File ID: GC22018.D
Analysis Method: 8015C GLY Date Collected: 03/14/2023 10:40
Extraction Method:
Sample wt/vol: 1 (mL) Date Extracted:
Con. Extract Vol.: 1 (mL) Date Analyzed: 03/22/2023 19:25
Injection Volume: 1 (uL) Dilution Factor: 1
% Moisture: _____ % Solids: _____ GC Column: J&W DB WAX ID: 0.45 (mm)
Cleanup Factor:
Analysis Batch No.: 769036 GPC Cleanup: (Y/N) N
Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22018.D
 Lims ID: 580-124965-A-3
 Client ID: AF-HDMW225303-WGN01LF-2303W2
 Sample Type: Client
 Inject. Date: 22-Mar-2023 19:25:18 ALS Bottle#: 0 Worklist Smp#: 18
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-018 Instrument ID: CVGG2
 Operator ID:
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:10:45 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SWK1 Date: 23-Mar-2023 11:10:09

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

4.200 4.189 0.011 6233168 50.0

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Mar-2023 11:11:05

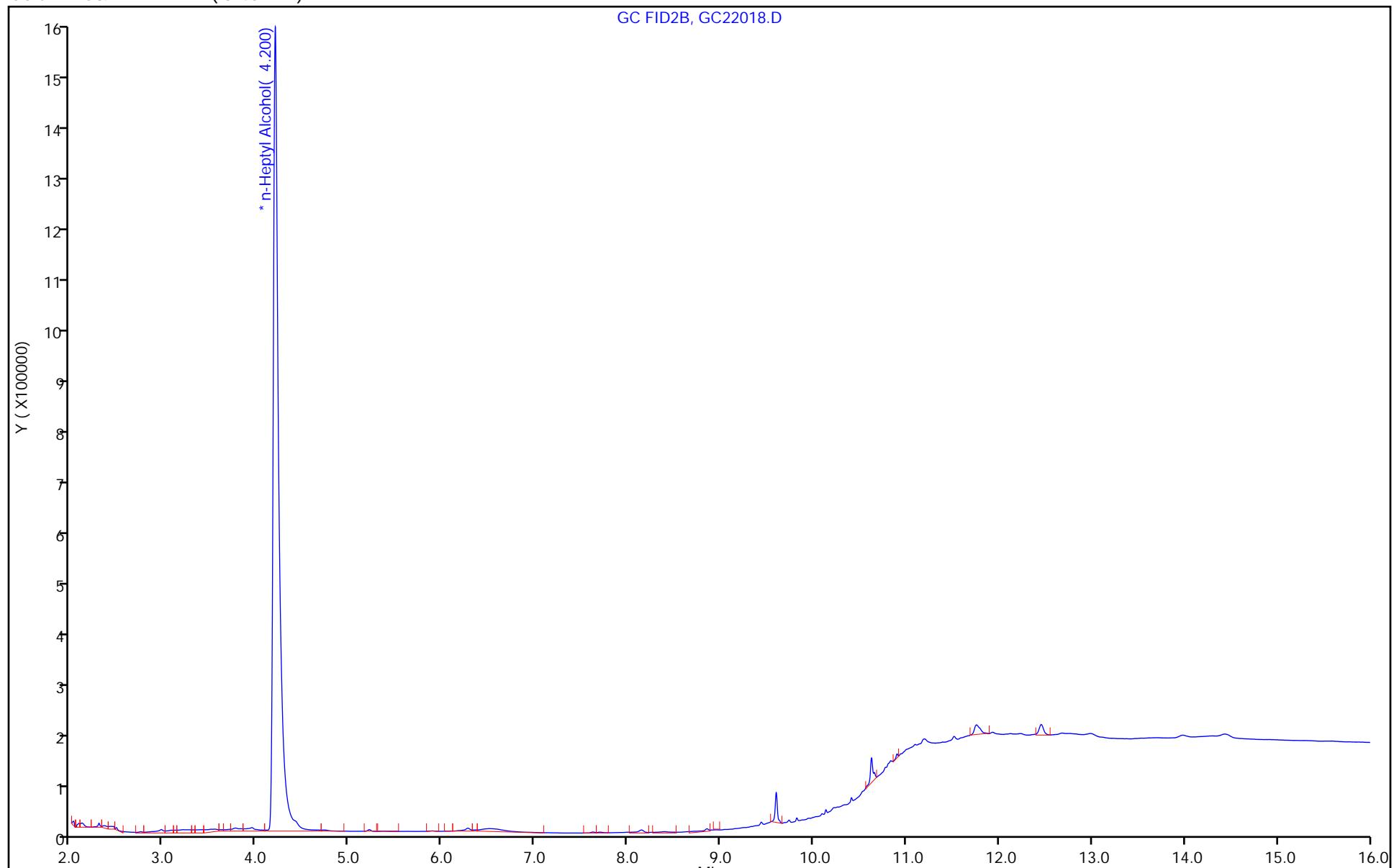
Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22018.D
Injection Date: 22-Mar-2023 19:25:18 Instrument ID: CVGG2
Lims ID: 580-124965-A-3 Lab Sample ID: 680-124965-3
Client ID: AF-HDMW225303-WGN01LF-2303W2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Operator ID:
Worklist Smp#: 18

ALS Bottle#: 0



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Client Sample ID: AF-RHMW12A-WGN01LF-2303W2 Lab Sample ID: 580-124965-4

Matrix: Water Lab File ID: GC22019.D

Analysis Method: 8015C GLY Date Collected: 03/13/2023 11:10

Extraction Method: _____ Date Extracted: _____

Sample wt/vol: 1 (mL) Date Analyzed: 03/22/2023 19:48

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.: 769036 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22019.D
 Lims ID: 580-124965-A-4
 Client ID: AF-HDMW12A-WGN01LF-2303W2
 Sample Type: Client
 Inject. Date: 22-Mar-2023 19:48:44 ALS Bottle#: 0 Worklist Smp#: 19
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-019 Instrument ID: CVGG2
 Operator ID:
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:10:45 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SWK1 Date: 23-Mar-2023 11:10:11

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

4.206 4.189 0.017 5596231 50.0

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Mar-2023 11:11:05

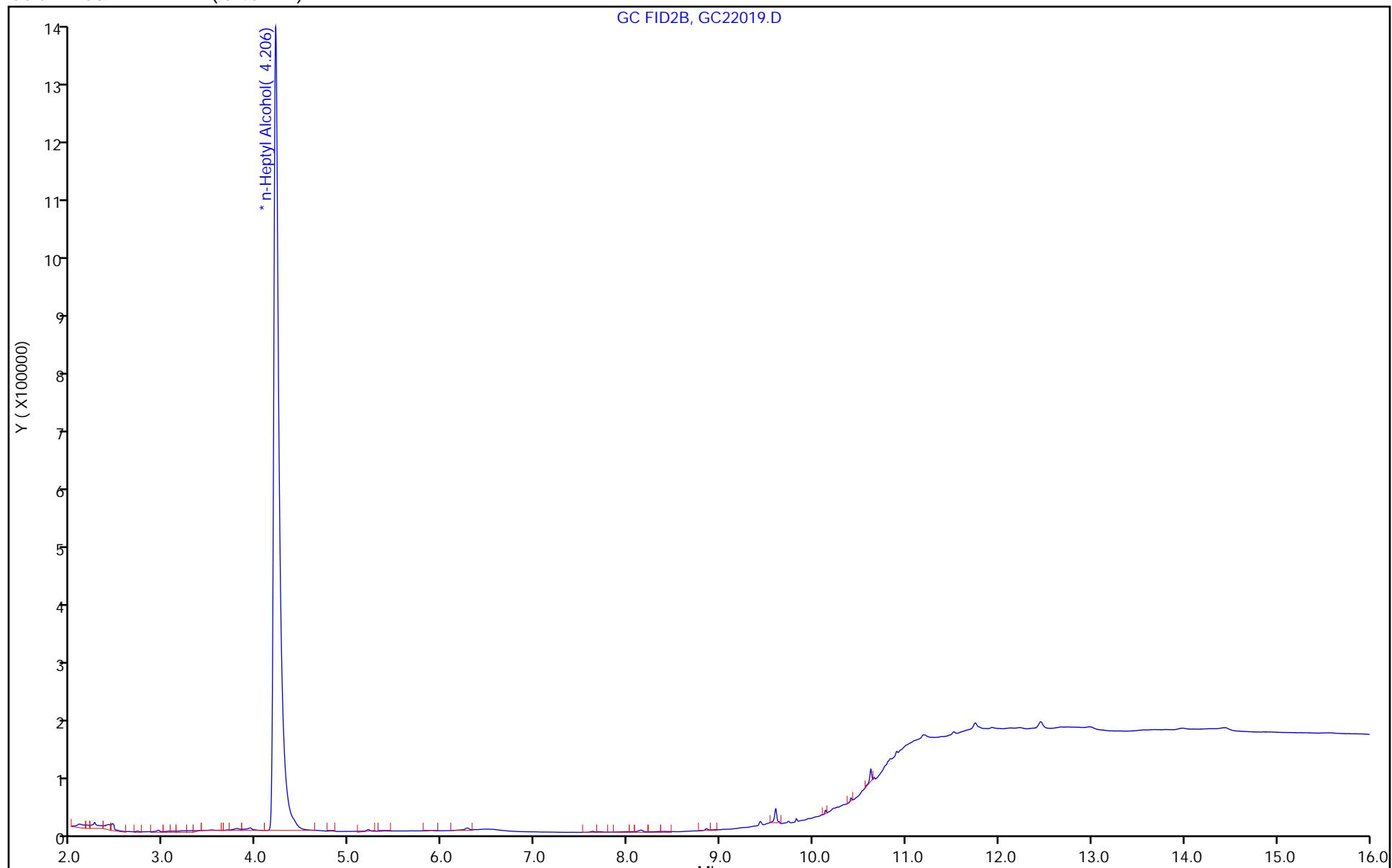
Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22019.D
Injection Date: 22-Mar-2023 19:48:44 Instrument ID: CVGG2
Lims ID: 580-124965-A-4 Lab Sample ID: 680-124965-4
Client ID: AF-HDMW12A-WGN01LF-2303W2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Operator ID:
Worklist Smp#: 19

ALS Bottle#: 0



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Client Sample ID: AF-RHMW12A-WGFD01LF-2303W
2

Lab Sample ID: 580-124965-5

Matrix: Water

Lab File ID: GC22020.D

Analysis Method: 8015C GLY

Date Collected: 03/13/2023 11:10

Extraction Method: _____

Date Extracted: _____

Sample wt/vol: 1 (mL)

Date Analyzed: 03/22/2023 20:12

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.: 769036

Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22020.D
 Lims ID: 580-124965-A-5
 Client ID: AF-HDMW12A-WGFD01LF-2303W2
 Sample Type: Client
 Inject. Date: 22-Mar-2023 20:12:03 ALS Bottle#: 0 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-020 Instrument ID: CVGG2
 Operator ID:
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:10:45 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SWK1 Date: 23-Mar-2023 11:10:13

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
4.201	4.189	0.012	5930343	50.0	

* 4 n-Heptyl Alcohol

4.201 4.189 0.012 5930343 50.0

Reagents:

SG_GLY_ISTD_00106 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Mar-2023 11:11:06

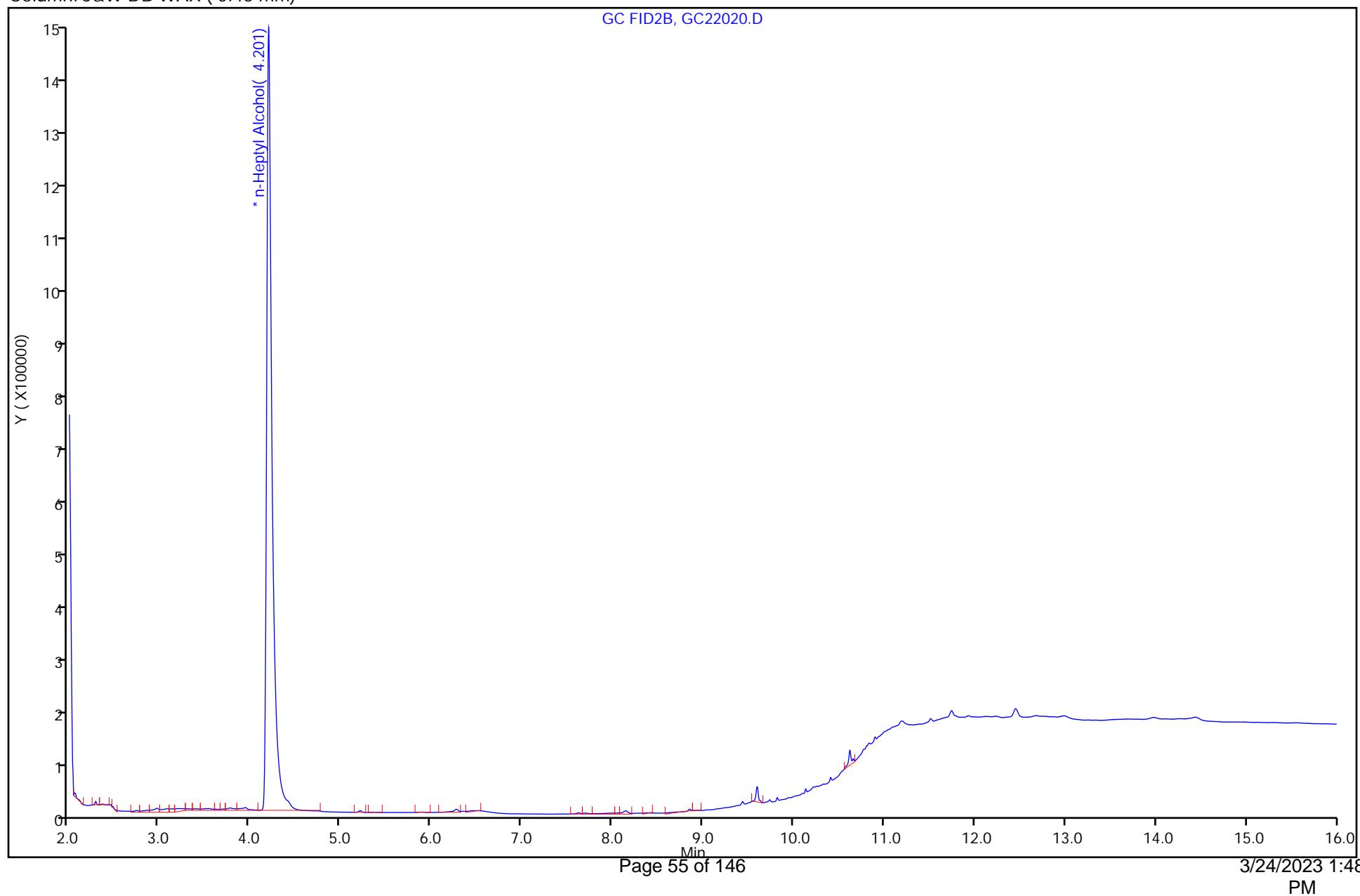
Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22020.D
Injection Date: 22-Mar-2023 20:12:03 Instrument ID: CVGG2
Lims ID: 580-124965-A-5 Lab Sample ID: 680-124965-5
Client ID: AF-HDMW12A-WGFD01LF-2303W2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Operator ID:
Worklist Smp#: 20

ALS Bottle#: 0



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

Lab Name: Eurofins Savannah Job No.: 580-124965-1 Analy Batch No.: 768387
SDG No.: _____

Instrument ID: CVGG2 GC Column: J&W DB WAX ID: 0.45 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 03/18/2023 17:04 Calibration End Date: 03/18/2023 19:24 Calibration ID: 90309

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-768387/11	GC18011.D
Level 2	IC 680-768387/10	GC18010.D
Level 3	IC 680-768387/9	GC18009.D
Level 4	ICIS 680-768387/8	GC18008.D
Level 5	IC 680-768387/7	GC18007.D
Level 6	IC 680-768387/6	GC18006.D
Level 7	IC 680-768387/5	GC18005.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol, 2-propoxy	0.9797 +++++	0.6753 0.5541	0.6451	0.6259	0.5698	Lin2	0.826 0	0.553 9							0.9970		0.9900
4-Hydroxy-4-methyl-2-pentanone	0.8959 +++++	0.6166 0.5112	0.5814	0.5947	0.5199	Lin2	0.742 3	0.511 1							0.9950		0.9900
2-Butoxyethanol	1.1329 +++++	0.7649 0.6289	0.7257	0.6919	0.6197	Lin2	1.011 2	0.612 4							0.9970		0.9900
Dipropylene Glycol Methyl Ether	0.0677 +++++	0.0460 0.0414	0.0444	0.0471	0.0353	Lin1	0.052 7	0.039 3							0.9910		0.9900
Propylene glycol	0.2329 +++++	0.1518 0.1204	0.1269	0.1201	0.0942	QuaF		0.089 7	0.0002968						0.9920		0.9900
Ethylene glycol	0.6982 +++++	0.4996 0.4625	0.4595	0.4908	0.4389	Lin2	0.492 3	0.436 0							0.9950		0.9900
2-(2-Butoxyethoxy)ethanol	0.8081 +++++	0.5436 0.4629	0.4944	0.5203	0.4079	Lin2	0.725 8	0.433 1							0.9910		0.9900
2,2'-Oxybisethanol	0.4242 +++++	0.2842 0.2690	0.2662	0.2584	0.2292	Lin2	0.355 6	0.236 4							0.9910		0.9900
Triethylene Glycol	0.2954 +++++	0.2299 0.2640	0.2485	0.2466	0.2103	Ave		0.249 1			11.7	20.0					
Tetraethylene Glycol	0.3281 +++++	0.2334 0.2712	0.2355	0.2550	0.2102	Ave		0.255 5			16.1	20.0					

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

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

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

Analy Batch No.: 768387

SDG No.: _____

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

Calibration Start Date: 03/18/2023 17:04 Calibration End Date: 03/18/2023 19:24 Calibration ID: 90309

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-768387/11	GC18011.D
Level 2	IC 680-768387/10	GC18010.D
Level 3	IC 680-768387/9	GC18009.D
Level 4	ICIS 680-768387/8	GC18008.D
Level 5	IC 680-768387/7	GC18007.D
Level 6	IC 680-768387/6	GC18006.D
Level 7	IC 680-768387/5	GC18005.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	222886 +++++	393646 5691872	623221	1275273	2157619	2.00 +++++	5.00 100	10.0	20.0	50.0
4-Hydroxy-4-methyl-2-pentanone	nHPA	Lin2	203822 +++++	359475 5251000	561636	1211619	1968767	2.00 +++++	5.00 100	10.0	20.0	50.0
2-Butoxyethanol	nHPA	Lin2	257721 +++++	445899 6460473	701048	1409738	2346417	2.00 +++++	5.00 100	10.0	20.0	50.0
Dipropylene Glycol Methyl Ether	nHPA	Lin1	15393 +++++	26829 425339	42940	95904	133778	2.00 +++++	5.00 100	10.0	20.0	50.0
Propylene glycol	nHPA	QuaF	52980 +++++	88495 1236652	122580	244697	356532	2.00 +++++	5.00 100	10.0	20.0	50.0
Ethylene glycol	nHPA	Lin2	158828 +++++	291250 4750731	443908	1000032	1662010	2.00 +++++	5.00 100	10.0	20.0	50.0
2-(2-Butoxyethoxy)ethanol	nHPA	Lin2	183850 +++++	316916 4754705	477636	1060164	1544400	2.00 +++++	5.00 100	10.0	20.0	50.0
2,2'-Oxybisethanol	nHPA	Lin2	96509 +++++	165658 2763044	257168	526527	867744	2.00 +++++	5.00 100	10.0	20.0	50.0
Triethylene Glycol	nHPA	Ave	67193 +++++	134028 2711975	240062	502431	796311	2.00 +++++	5.00 100	10.0	20.0	50.0
Tetraethylene Glycol	nHPA	Ave	149265 +++++	272086 5570856	454932	1039032	1591784	4.00 +++++	10.0 200	20.0	40.0	100

Curve Type Legend

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
QuaF = Quadratic ISTD forced zero

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

Lab Name: Eurofins Savannah Job No.: 580-124965-1 Analy Batch No.: 768387

SDG No.: _____

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

Calibration Start Date: 03/18/2023 17:04 Calibration End Date: 03/18/2023 19:24 Calibration ID: 90309

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-768387/11	GC18011.D
Level 2	IC 680-768387/10	GC18010.D
Level 3	IC 680-768387/9	GC18009.D
Level 4	ICIS 680-768387/8	GC18008.D
Level 5	IC 680-768387/7	GC18007.D
Level 6	IC 680-768387/6	GC18006.D
Level 7	IC 680-768387/5	GC18005.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Ethanol, 2-propoxy	2.3 -1.4	-7.9	1.6	5.6	-0.1	+++++	20 20	20	20	20	20	
4-Hydroxy-4-methyl-2-pentanone	2.7 -1.4	-8.4	-0.8	9.1	-1.2	+++++	20 20	20	20	20	20	
2-Butoxyethanol	2.4 1.1	-8.1	2.0	4.7	-2.1	+++++	20 20	20	20	20	20	
Dipropylene Glycol Methyl Ether	5.2 4.1	-9.6	-0.2	13.2	-12.7	+++++	20 20	20	20	20	20	
Ethylene glycol	3.7 4.9	-8.0	-5.9	6.9	-1.6	+++++	20 20	20	20	20	20	
2-(2-Butoxyethoxy)ethanol	2.8 5.2	-8.0	-2.6	11.8	-9.2	+++++	20 20	20	20	20	20	
2,2'-Oxybisethanol	4.2 12.3	-9.9	-2.4	1.8	-6.1	+++++	20 20	20	20	20	20	
Triethylene Glycol	18.6 6.0	-7.7	-0.2	-1.0	-15.6	+++++	20 20	20	20	20	20	
Tetraethylene Glycol	28.4 * 6.1	-8.7	-7.9	-0.2	-17.7	+++++	20 20	20	20	20	20	

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18005.D
 Lims ID: ic g7
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 18-Mar-2023 17:04:34 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084498-005
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Mar-2023 17:28:21 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1624

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						
2.915	2.915	0.000	5691872	100.0	98.6	
2 4-Hydroxy-4-methyl-2-pentanone						
3.460	3.466	-0.006	5251000	100.0	98.6	
3 2-Butoxyethanol						
3.762	3.758	0.004	6460473	100.0	101.1	
* 4 n-Heptyl Alcohol						
4.217	4.207	0.010	5135926	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.129	5.133	-0.004	425339	100.0	104.1	
6 Propylene glycol						
6.350	6.348	0.002	1236652	100.0	100.7	
7 Ethylene glycol						
6.552	6.563	-0.011	4750731	100.0	104.9	
8 2-(2-Butoxyethoxy)ethanol						
8.402	8.403	-0.001	4754705	100.0	105.2	
9 2,2'-Oxybisethanol						
9.599	9.599	0.000	2763044	100.0	112.3	
10 Triethylene Glycol						
10.627	10.627	0.000	2711975	100.0	106.0	
11 Tetraethylene Glycol						
11.762	11.762	0.000	5570856	200.0	212.2	

Reagents:

SG_Gly_CAL_00048	Amount Added: 50.00	Units: uL	
SG,GLY,ISTD,00106	Amount Added: 10.00	Units: uL	Run Reagent

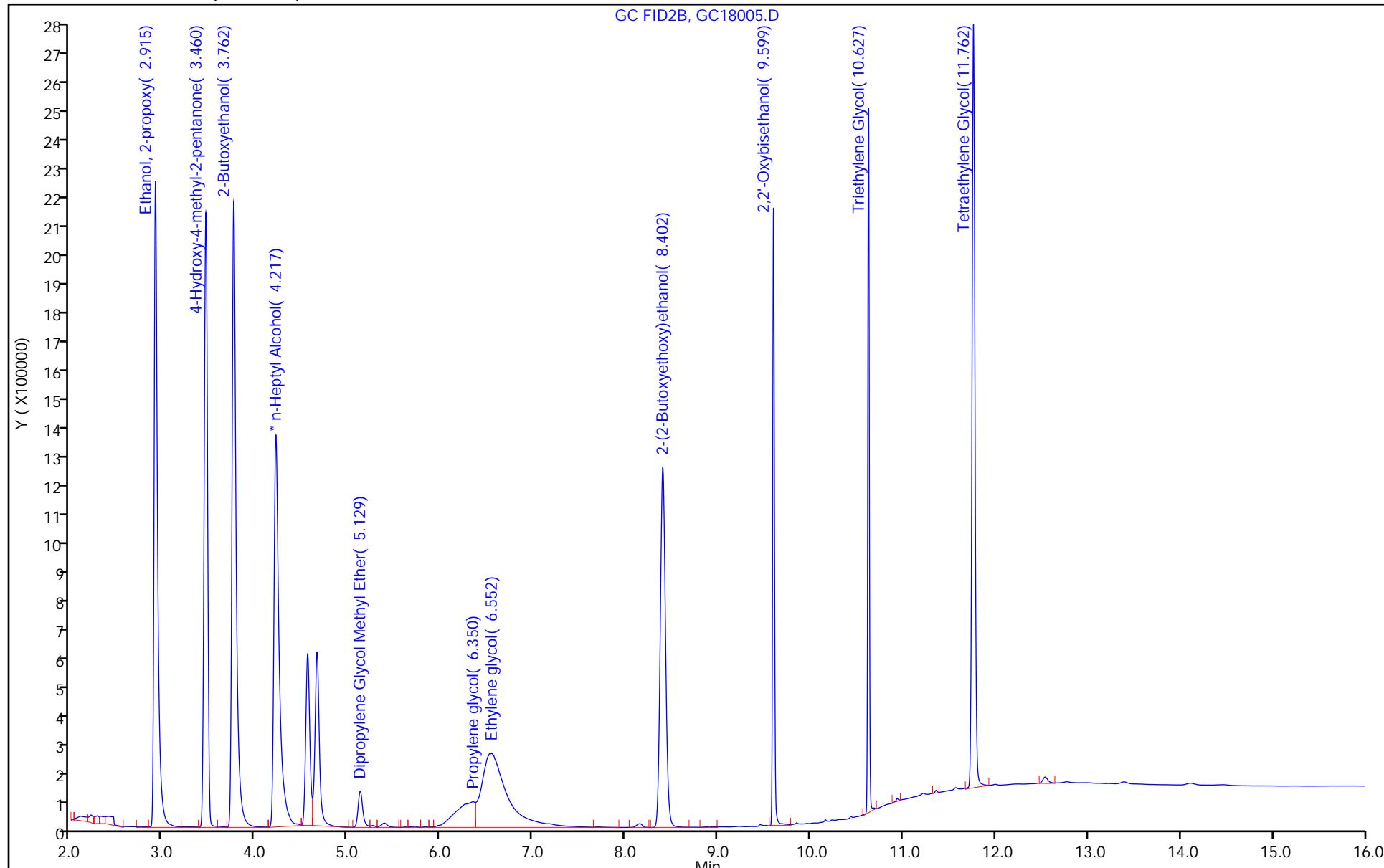
Report Date: 19-Mar-2023 17:28:21

Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230318-84498.b\\GC18005.D
Injection Date: 18-Mar-2023 17:04:34 Instrument ID: CVGG2
Lims ID: ic g7 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 5



Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18006.D
 Lims ID: ic g6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 18-Mar-2023 17:27:50 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084498-006
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Mar-2023 17:28:21 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1624

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						
2.914	2.915	-0.001	2856104	80.0	56.9	
2 4-Hydroxy-4-methyl-2-pentanone						
3.459	3.466	-0.007	2600506	80.0	56.2	
3 2-Butoxyethanol						
3.760	3.758	0.002	3191941	80.0	57.4	
* 4 n-Heptyl Alcohol						
4.216	4.207	0.009	4412500	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.129	5.133	-0.004	201352	80.0	56.8	
6 Propylene glycol						
6.344	6.348	-0.004	575827	80.0	60.6	
7 Ethylene glycol						
6.552	6.563	-0.011	2430100	80.0	62.0	
8 2-(2-Butoxyethoxy)ethanol						
8.402	8.403	-0.001	2212254	80.0	56.2	
9 2,2'-Oxybisethanol						
9.599	9.599	0.000	1269782	80.0	59.4	
10 Triethylene Glycol						
10.627	10.627	0.000	1180621	80.0	53.7	
11 Tetraethylene Glycol						
11.759	11.762	-0.003	2383178	160.0	105.7	

Reagents:

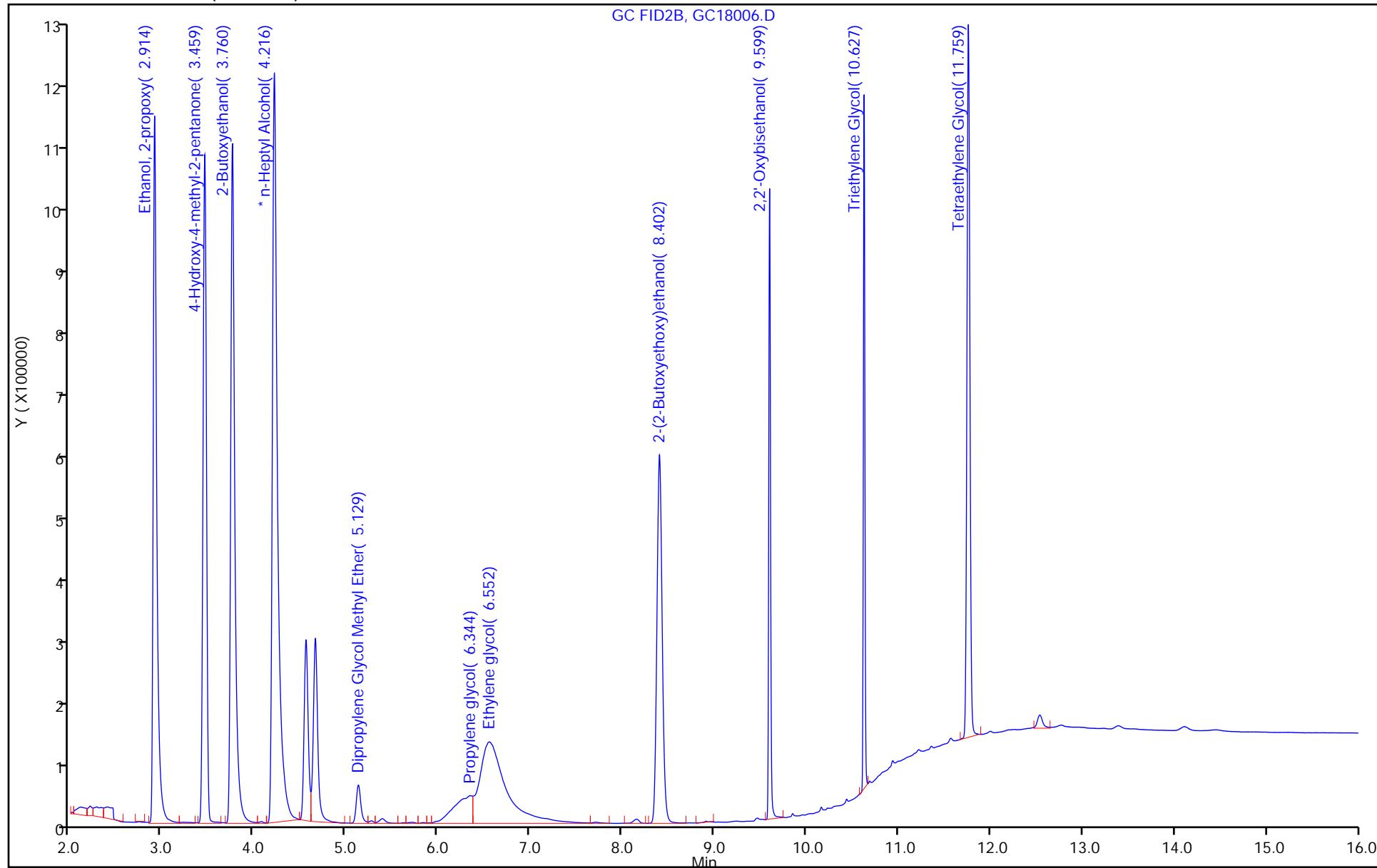
SG_Gly_CAL_00048	Amount Added: 40.00	Units: uL	
SG,GLY,ISTD,00106	Amount Added: 10.00	Units: uL	Run Reagent

Report Date: 19-Mar-2023 17:28:21

Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230318-84498.b\\GC18006.D
Injection Date: 18-Mar-2023 17:27:50 Instrument ID: CVGG2
Lims ID: ic g6 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)



Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18007.D
 Lims ID: ic g5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 18-Mar-2023 17:51:13 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084498-007
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Mar-2023 17:28:22 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1624

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						
2.916	2.915	0.001	2157619	50.0	49.9	
2 4-Hydroxy-4-methyl-2-pentanone						
3.468	3.466	0.002	1968767	50.0	49.4	
3 2-Butoxyethanol						
3.758	3.758	0.000	2346417	50.0	48.9	
* 4 n-Heptyl Alcohol						
4.207	4.207	0.000	3786538	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.133	5.133	0.000	133778	50.0	43.6	
6 Propylene glycol						
6.353	6.348	0.005	356532	50.0	45.6	
7 Ethylene glycol						
6.559	6.563	-0.004	1662010	50.0	49.2	
8 2-(2-Butoxyethoxy)ethanol						
8.401	8.403	-0.002	1544400	50.0	45.4	
9 2,2'-Oxybisethanol						
9.599	9.599	0.000	867744	50.0	47.0	
10 Triethylene Glycol						
10.627	10.627	0.000	796311	50.0	42.2	
11 Tetraethylene Glycol						
11.761	11.762	-0.001	1591784	100.0	82.3	

Reagents:

SG_Gly_CAL_00048	Amount Added: 25.00	Units: uL	
SG,GLY,ISTD_00106	Amount Added: 10.00	Units: uL	Run Reagent

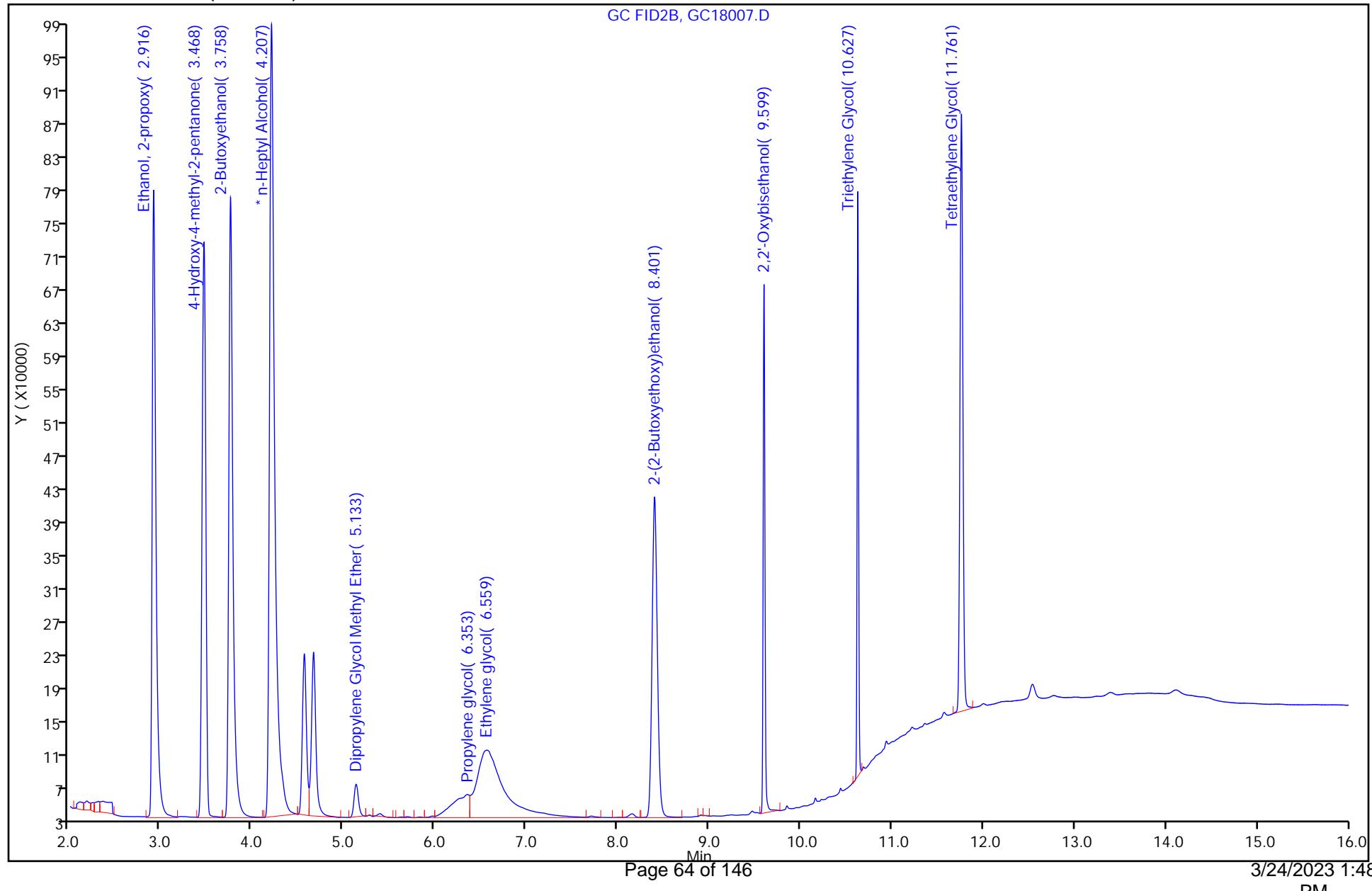
Report Date: 19-Mar-2023 17:28:22

Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230318-84498.b\\GC18007.D
Injection Date: 18-Mar-2023 17:51:13 Instrument ID: CVGG2
Lims ID: ic g5 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 7



Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18008.D
 Lims ID: icis g4
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 18-Mar-2023 18:14:28 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084498-008
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Mar-2023 17:28:23 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1624

First Level Reviewer: SWK1 Date: 19-Mar-2023 17:24:33

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.915	2.915	0.000	1275273	20.0	21.1	
2 4-Hydroxy-4-methyl-2-pentanone						
3.466	3.466	0.000	1211619	20.0	21.8	
3 2-Butoxyethanol						
3.758	3.758	0.000	1409738	20.0	20.9	
* 4 n-Heptyl Alcohol						
4.207	4.207	0.000	5093613	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.133	5.133	0.000	95904	20.0	22.6	
6 Propylene glycol					M	
6.348	6.348	0.000	244697	20.0	24.8	M
7 Ethylene glycol						
6.563	6.563	0.000	1000032	20.0	21.4	
8 2-(2-Butoxyethoxy)ethanol						
8.403	8.403	0.000	1060164	20.0	22.4	
9 2,2'-Oxybisethanol						
9.599	9.599	0.000	526527	20.0	20.4	
10 Triethylene Glycol						
10.627	10.627	0.000	502431	20.0	19.8	
11 Tetraethylene Glycol						
11.762	11.762	0.000	1039032	40.0	39.9	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00048

Amount Added: 10.00

Units: uL

SG,GLY,ISTD,00106

Amount Added: 10.00

Units: uL

Run Reagent

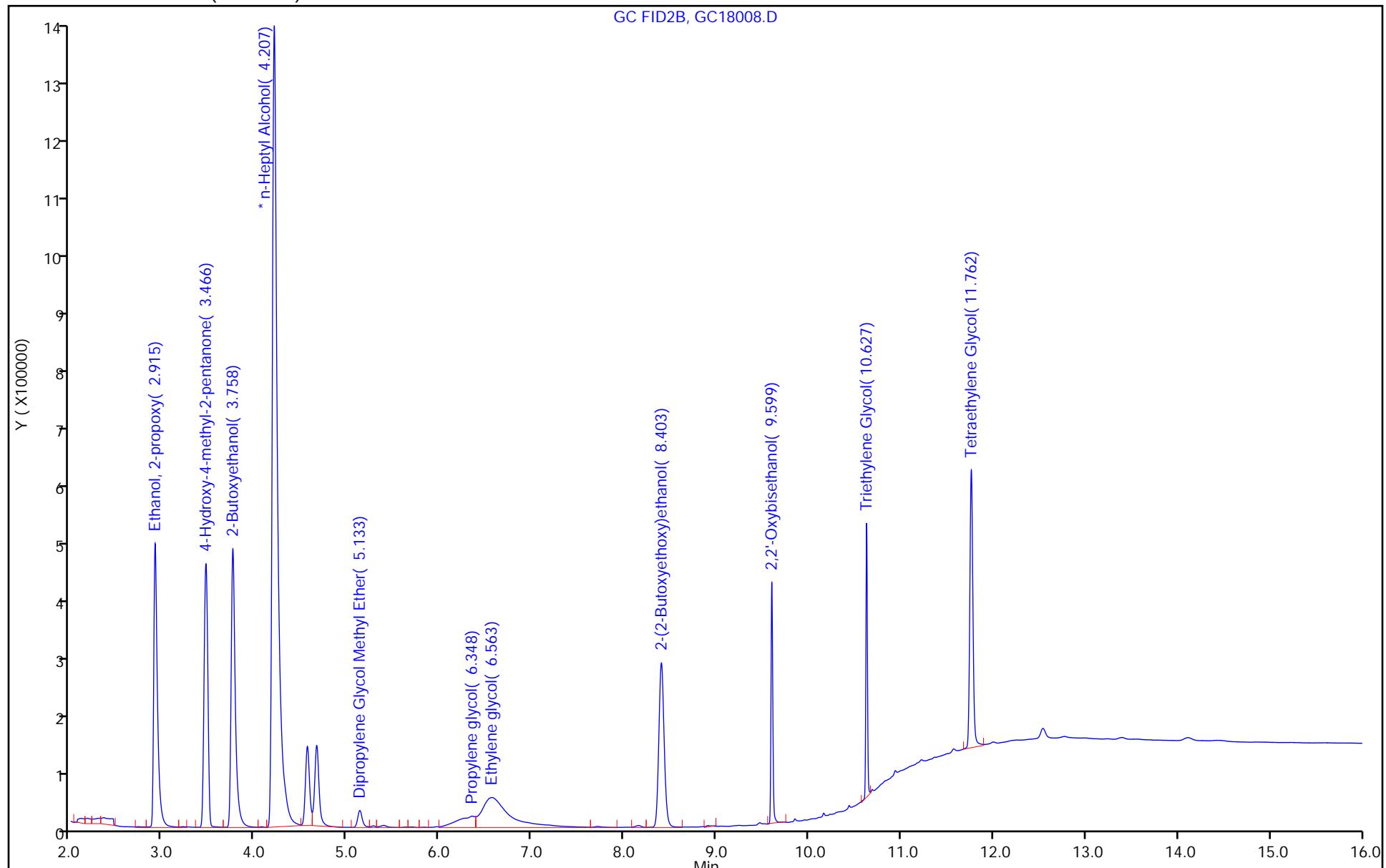
Report Date: 19-Mar-2023 17:28:23

Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230318-84498.b\\GC18008.D
Injection Date: 18-Mar-2023 18:14:28 Instrument ID: CVGG2
Lims ID: icis g4 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 8



Eurofins Savannah

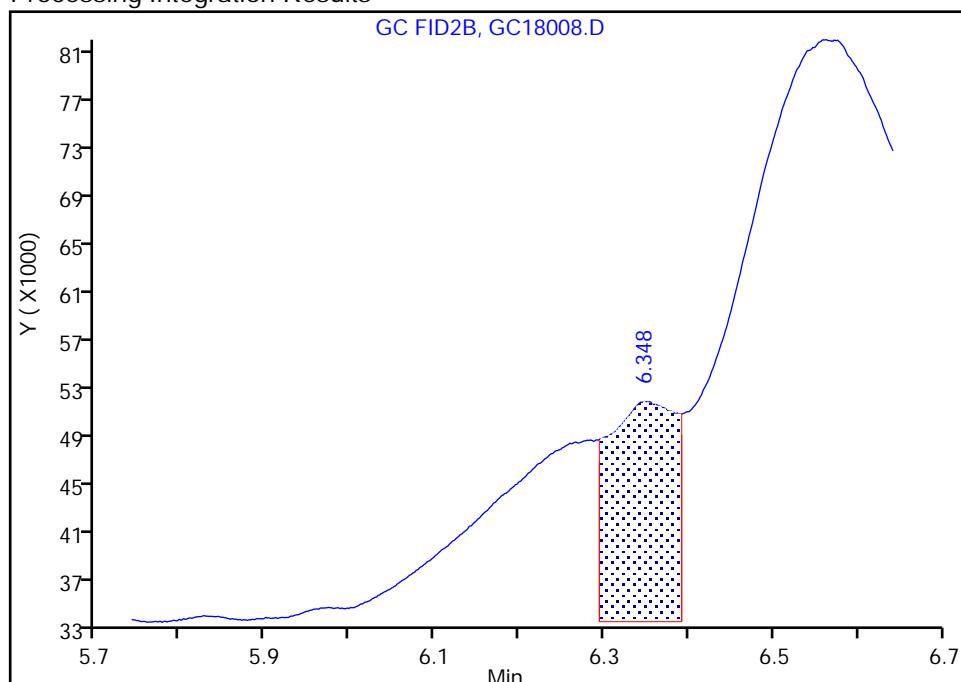
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18008.D
 Injection Date: 18-Mar-2023 18:14:28 Instrument ID: CVGG2
 Lims ID: icis g4
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

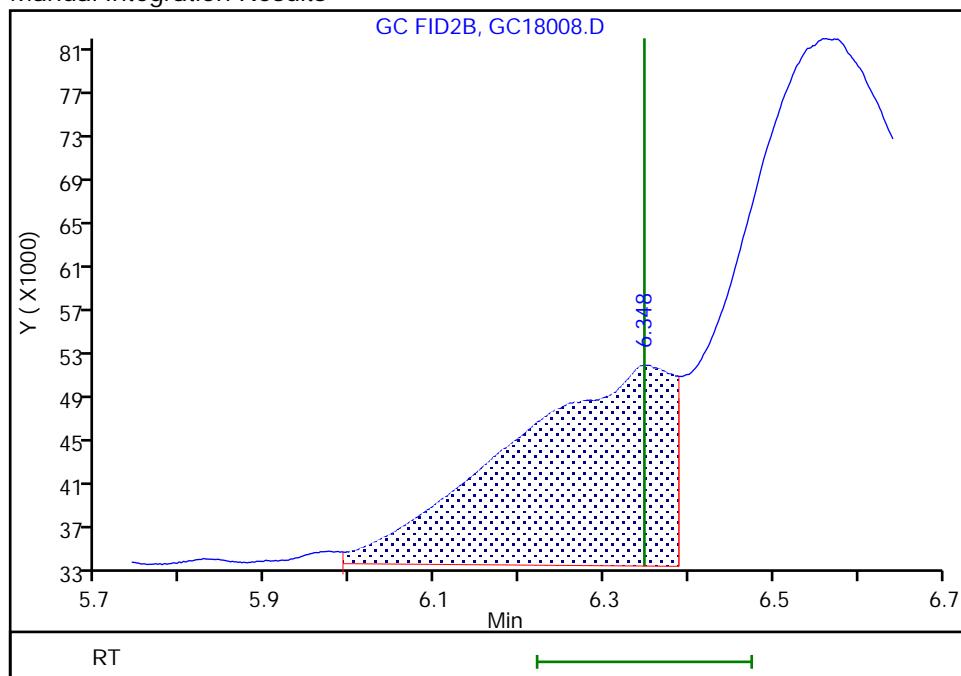
RT: 6.35
 Area: 99268
 Amount: 12.494177
 Amount Units: ug/ml

Processing Integration Results



RT: 6.35
 Area: 244697
 Amount: 24.761076
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:24:29

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18009.D
 Lims ID: ic g3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 18-Mar-2023 18:37:46 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084498-009
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Mar-2023 17:28:23 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1624

First Level Reviewer: SWK1 Date: 19-Mar-2023 17:24:49

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						
2.911	2.915	-0.004	623221	10.0	10.2	
2 4-Hydroxy-4-methyl-2-pentanone						
3.461	3.466	-0.005	561636	10.0	9.92	
3 2-Butoxyethanol						
3.756	3.758	-0.002	701048	10.0	10.2	
* 4 n-Heptyl Alcohol						
4.206	4.207	-0.001	4830177	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.130	5.133	-0.003	42940	10.0	9.98	
6 Propylene glycol					M	
6.345	6.348	-0.003	122580	10.0	13.5	M
7 Ethylene glycol					M	
6.566	6.563	0.003	443908	10.0	9.41	M
8 2-(2-Butoxyethoxy)ethanol						
8.401	8.403	-0.002	477636	10.0	9.74	
9 2,2'-Oxybisethanol						
9.600	9.599	0.001	257168	10.0	9.76	
10 Triethylene Glycol						
10.628	10.627	0.001	240062	10.0	9.98	
11 Tetraethylene Glycol						
11.765	11.762	0.003	454932	20.0	18.4	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00048

Amount Added: 5.00

Units: uL

SG,GLY,ISTD,00106

Amount Added: 10.00

Units: uL

Run Reagent

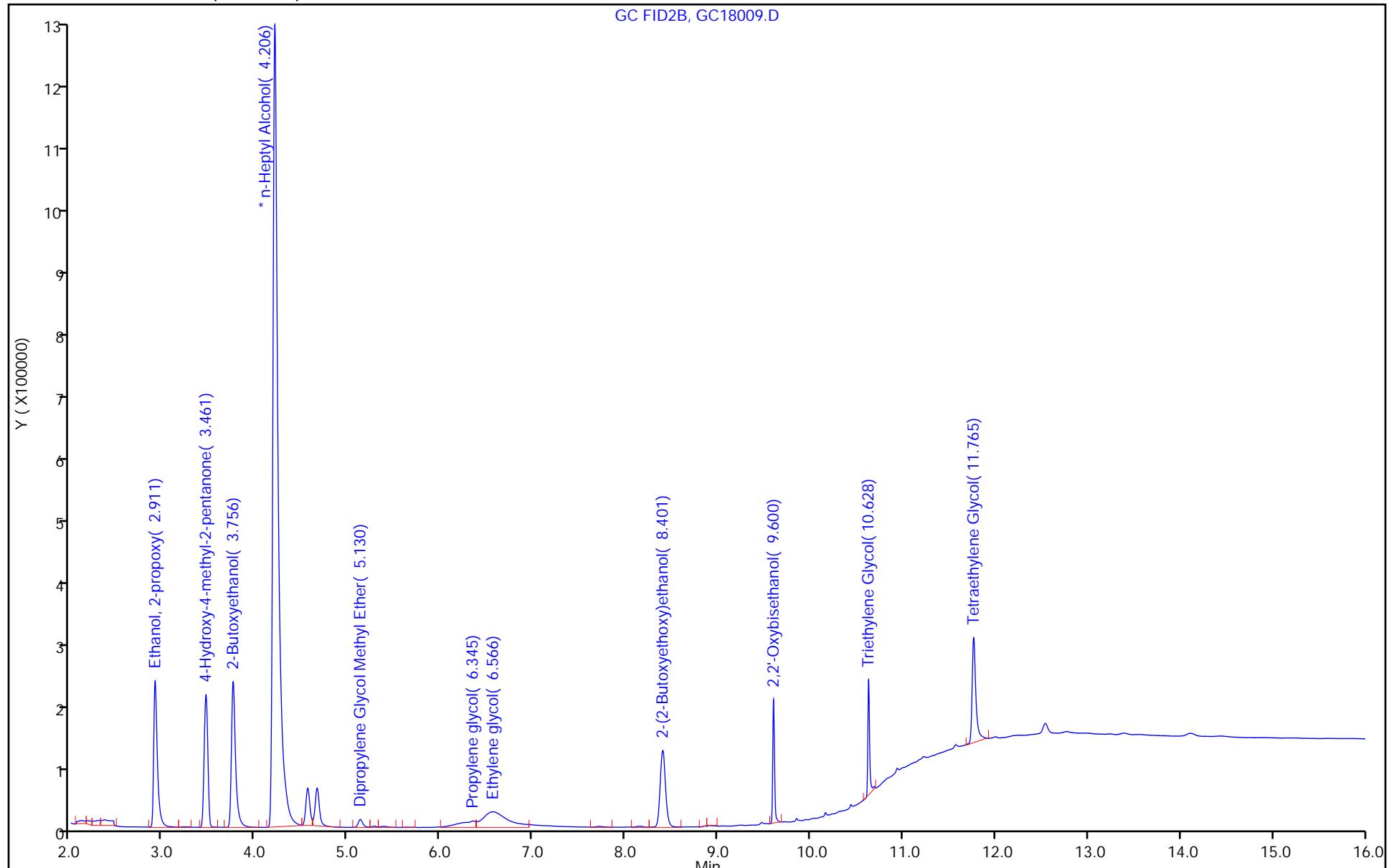
Report Date: 19-Mar-2023 17:28:23

Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230318-84498.b\\GC18009.D
Injection Date: 18-Mar-2023 18:37:46 Instrument ID: CVGG2
Lims ID: ic g3 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 9



Eurofins Savannah

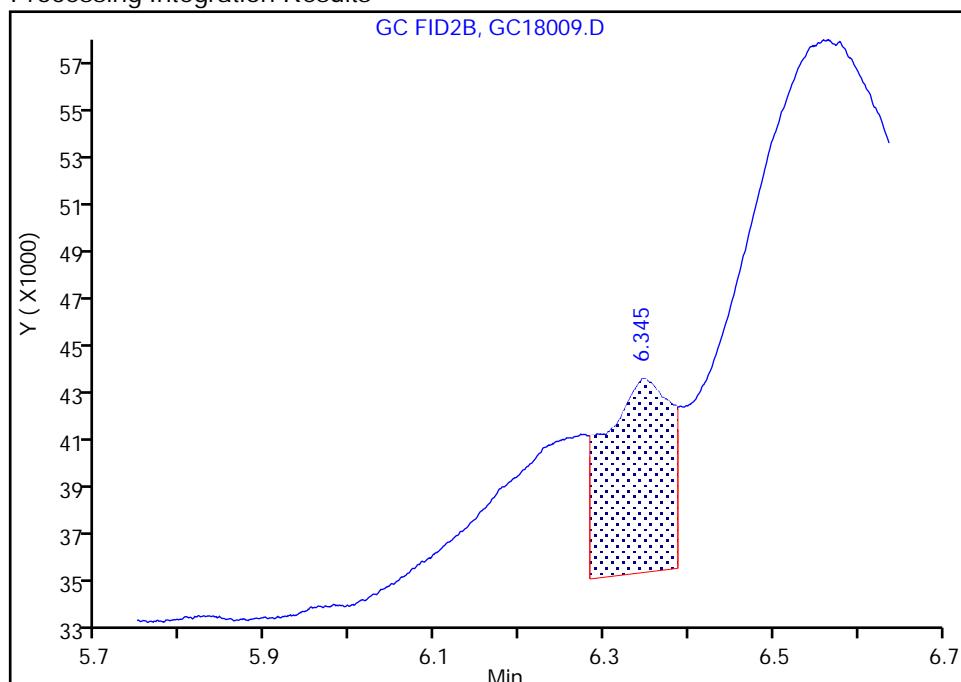
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18009.D
 Injection Date: 18-Mar-2023 18:37:46 Instrument ID: CVGG2
 Lims ID: ic g3
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

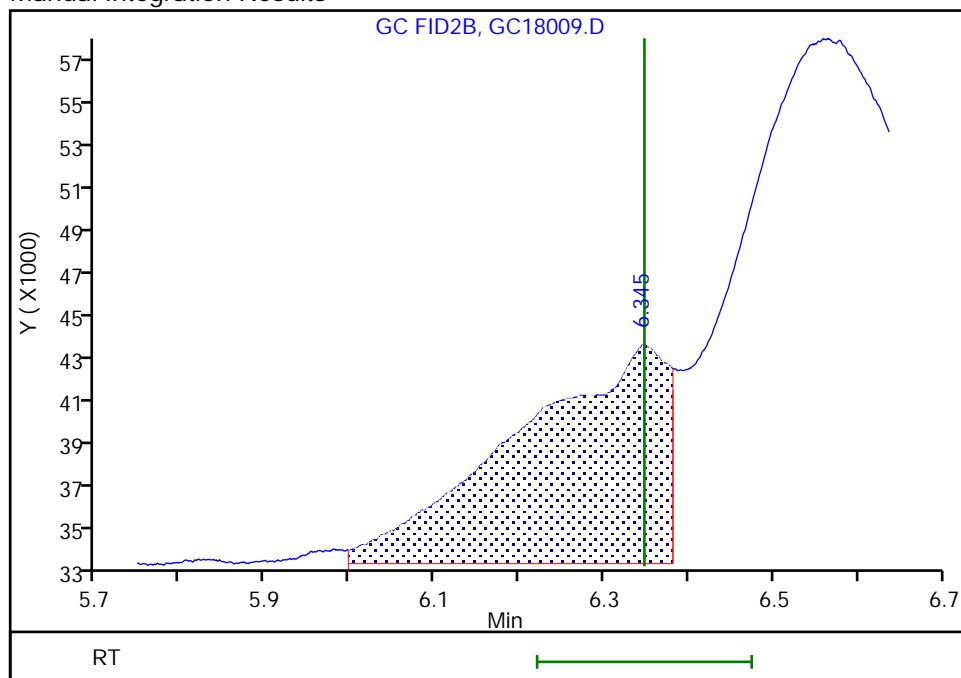
RT: 6.34
 Area: 42700
 Amount: 5.012160
 Amount Units: ug/ml

Processing Integration Results



RT: 6.34
 Area: 122580
 Amount: 13.545302
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:24:46

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

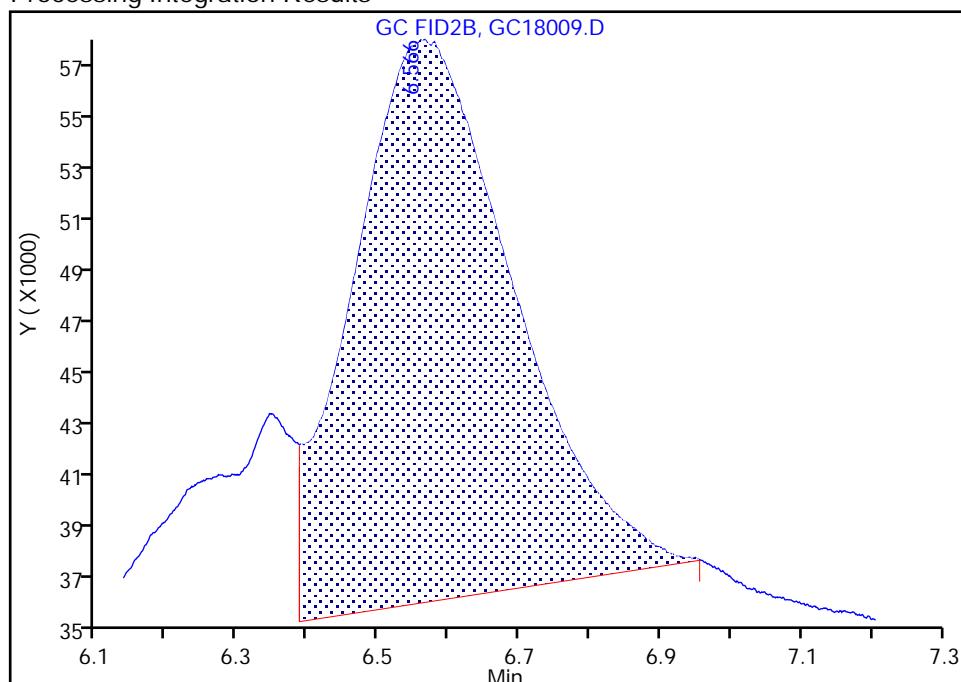
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18009.D
 Injection Date: 18-Mar-2023 18:37:46 Instrument ID: CVGG2
 Lims ID: ic g3
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

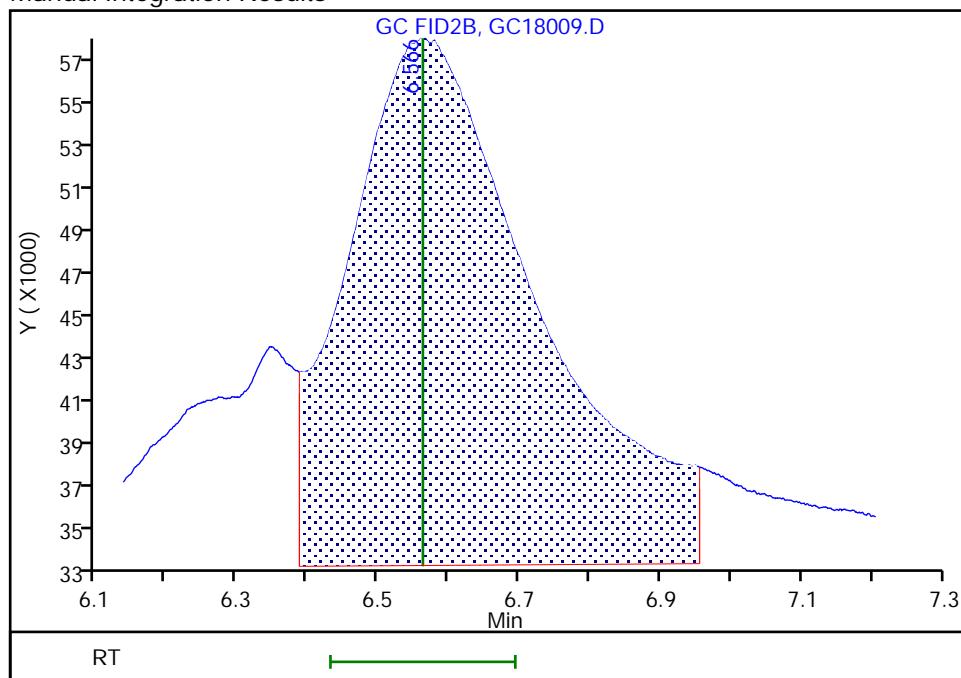
RT: 6.57
 Area: 333884
 Amount: 7.945997
 Amount Units: ug/ml

Processing Integration Results



RT: 6.57
 Area: 443908
 Amount: 9.409106
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:24:46

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18010.D
 Lims ID: ic g2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 18-Mar-2023 19:01:08 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084498-010
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Mar-2023 17:28:24 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1624

First Level Reviewer: SWK1 Date: 19-Mar-2023 17:25:04

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						
2.915	2.915	0.000	393646	5.00	4.60	
2 4-Hydroxy-4-methyl-2-pentanone						
3.465	3.466	-0.001	359475	5.00	4.58	
3 2-Butoxyethanol						
3.757	3.758	-0.001	445899	5.00	4.59	
* 4 n-Heptyl Alcohol						
4.207	4.207	0.000	5829521	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.135	5.133	0.002	26829	5.00	4.52	
6 Propylene glycol					M	
6.350	6.348	0.002	88495	5.00	8.24	M
7 Ethylene glycol					M	
6.560	6.563	-0.003	291250	5.00	4.60	M
8 2-(2-Butoxyethoxy)ethanol						
8.401	8.403	-0.002	316916	5.00	4.60	
9 2,2'-Oxybisethanol						
9.600	9.599	0.001	165658	5.00	4.51	
10 Triethylene Glycol						
10.629	10.627	0.002	134028	5.00	4.61	
11 Tetraethylene Glycol						
11.768	11.762	0.006	272086	10.0	9.13	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00048

Amount Added: 2.50

Units: uL

SG,GLY,ISTD,00106

Amount Added: 10.00

Units: uL

Run Reagent

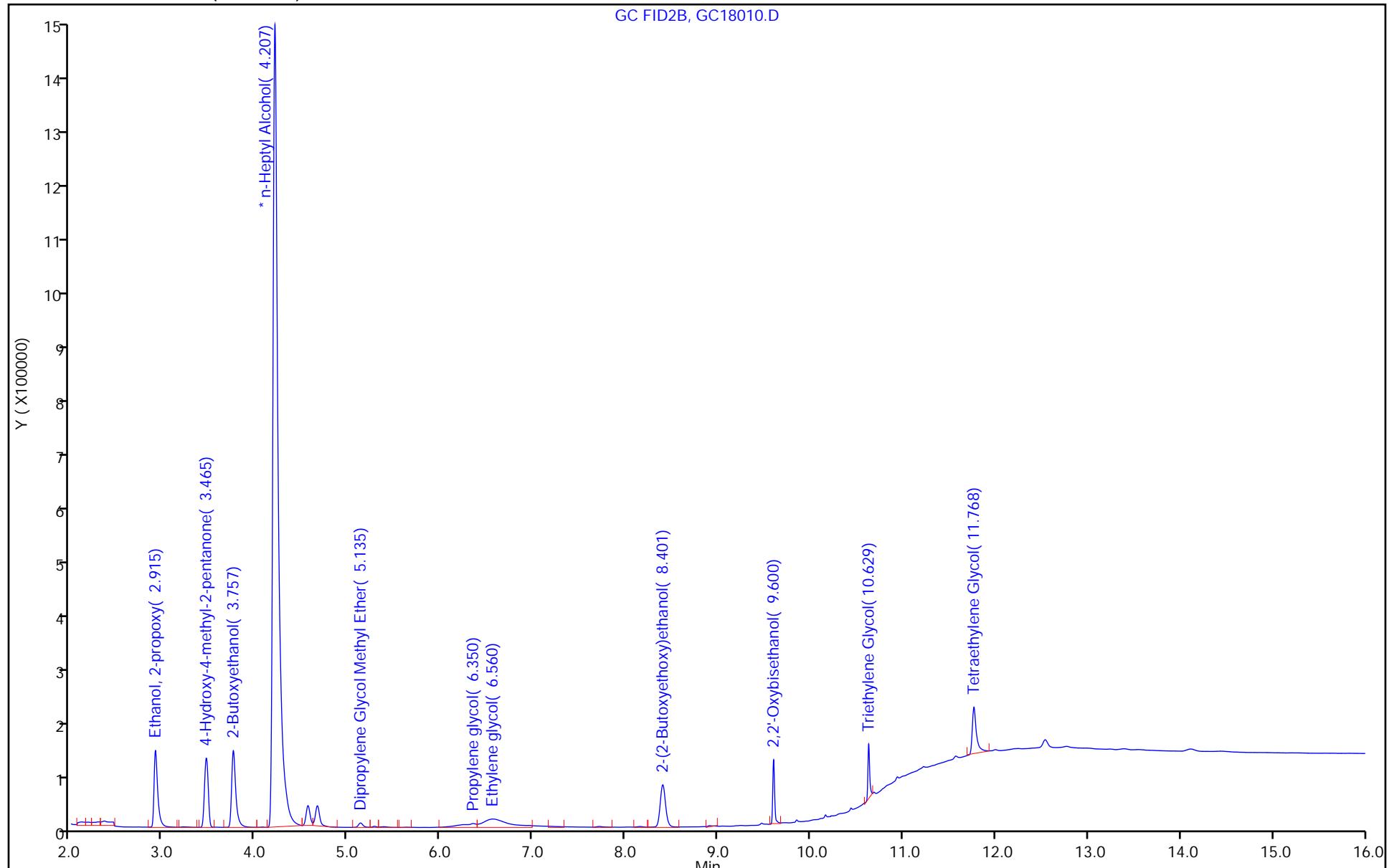
Report Date: 19-Mar-2023 17:28:24

Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230318-84498.b\\GC18010.D
Injection Date: 18-Mar-2023 19:01:08 Instrument ID: CVGG2
Lims ID: ic g2 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 10



Eurofins Savannah

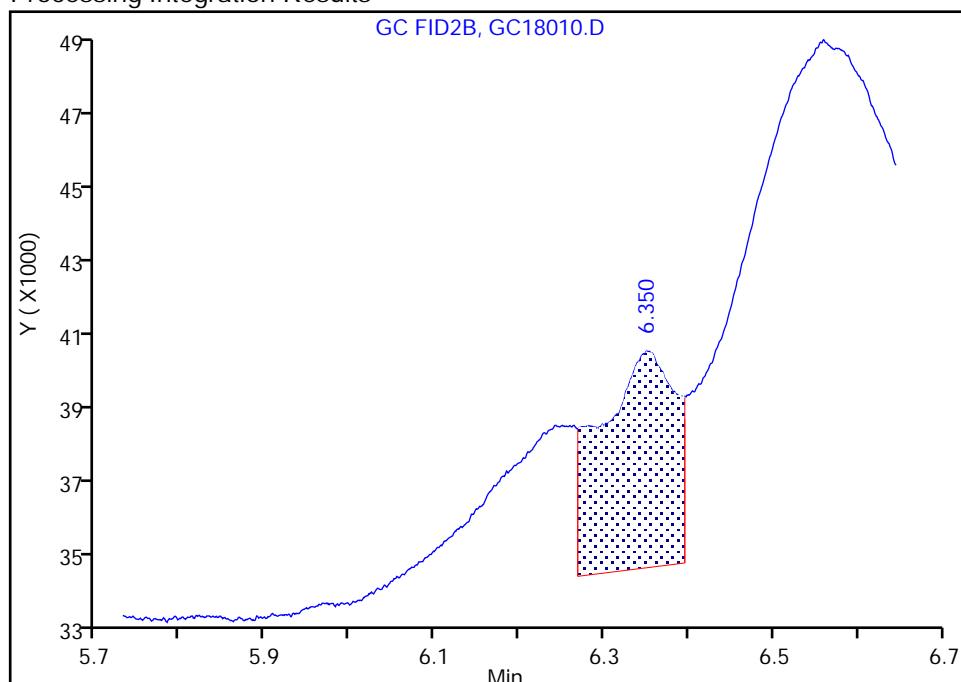
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18010.D
 Injection Date: 18-Mar-2023 19:01:08 Instrument ID: CVGG2
 Lims ID: ic g2
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

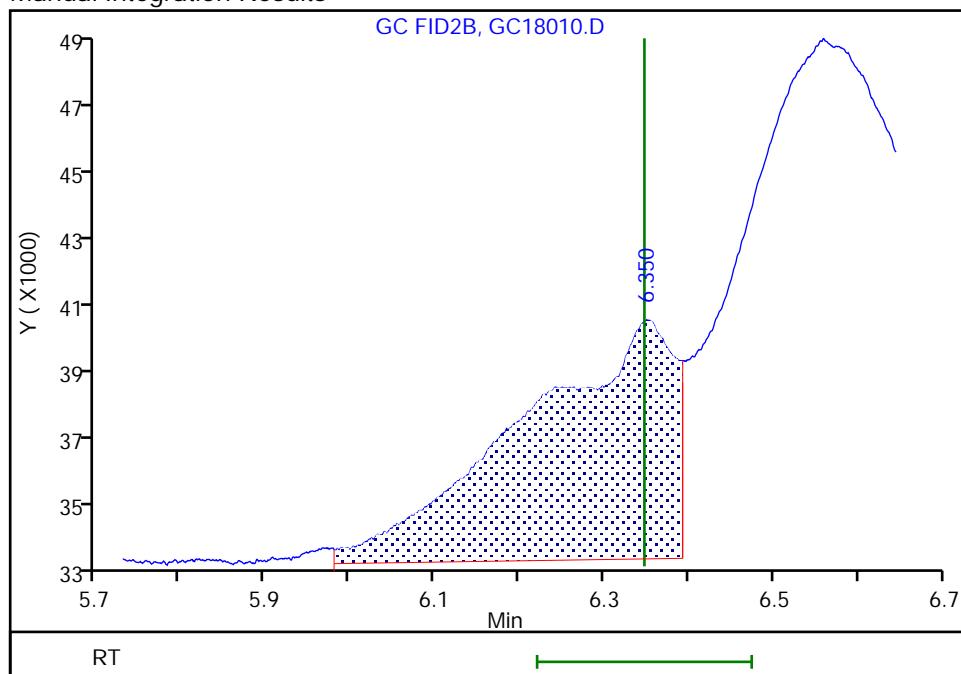
RT: 6.35
 Area: 35536
 Amount: 3.047913
 Amount Units: ug/ml

Processing Integration Results



RT: 6.35
 Area: 88495
 Amount: 8.240981
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:25:02

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Savannah

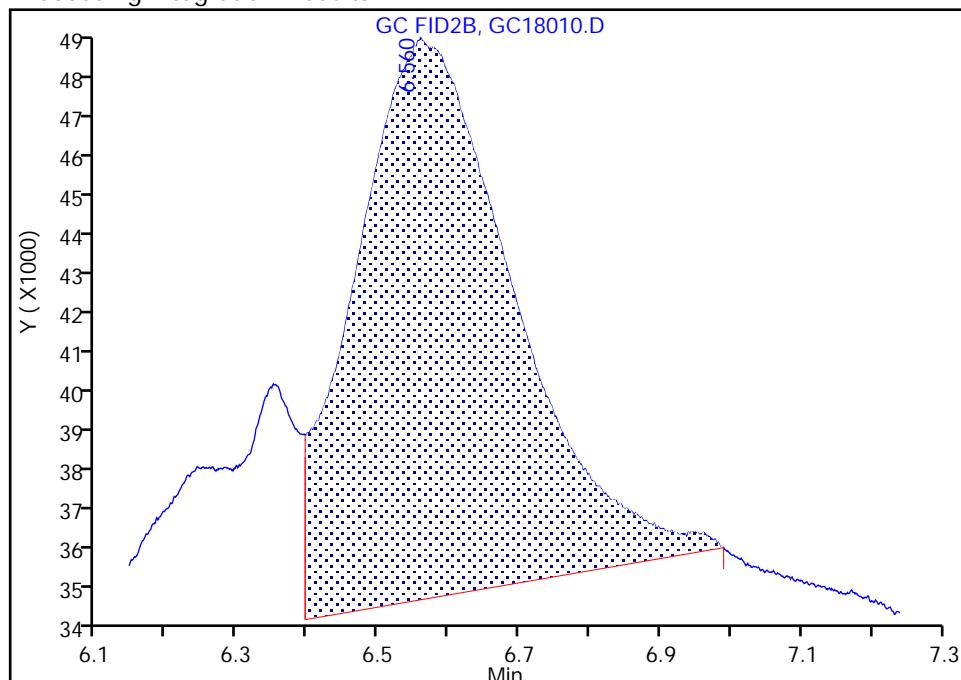
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18010.D
 Injection Date: 18-Mar-2023 19:01:08 Instrument ID: CVGG2
 Lims ID: ic g2
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

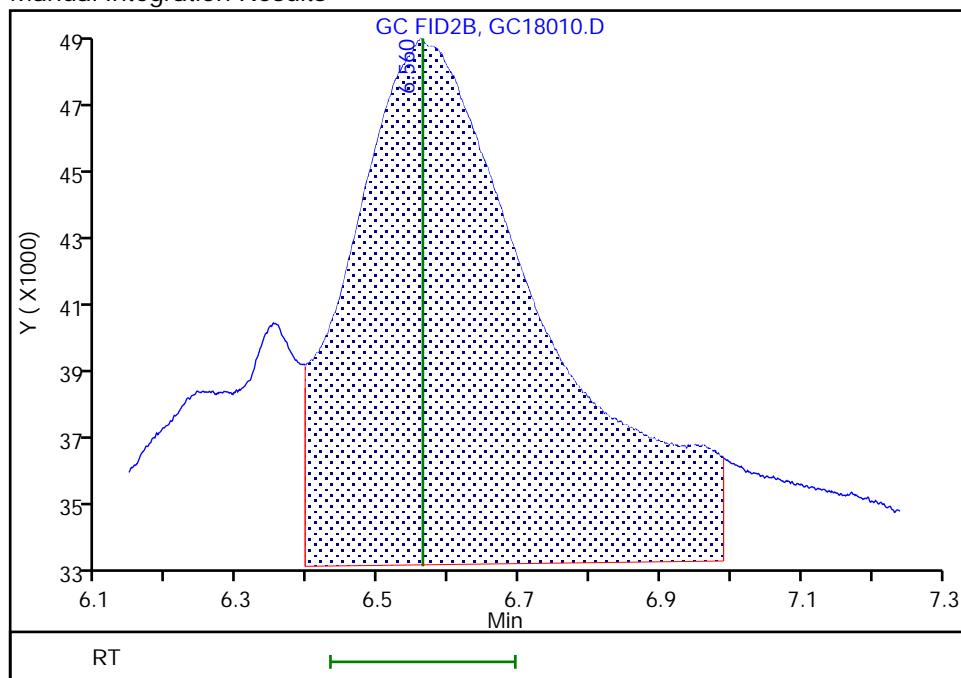
RT: 6.56
 Area: 212410
 Amount: 3.717153
 Amount Units: ug/ml

Processing Integration Results



RT: 6.56
 Area: 291250
 Amount: 4.599795
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:24:55

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Lims ID: ic g1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 18-Mar-2023 19:24:22 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084498-011
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Mar-2023 17:28:24 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1624

First Level Reviewer: SK9U Date: 19-Mar-2023 16:01:08

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

1 Ethanol, 2-propoxy						
2.911	2.915	-0.004	222886	2.00	2.05	
2 4-Hydroxy-4-methyl-2-pentanone						
3.463	3.466	-0.003	203822	2.00	2.05	
3 2-Butoxyethanol						
3.755	3.758	-0.003	257721	2.00	2.05	
* 4 n-Heptyl Alcohol						
4.205	4.207	-0.002	5687389	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.132	5.133	-0.001	15393	2.00	2.10	
6 Propylene glycol					M	
6.349	6.348	0.001	52980	2.00	5.11	M
7 Ethylene glycol					M	
6.562	6.563	-0.001	158828	2.00	2.07	M
8 2-(2-Butoxyethoxy)ethanol						
8.401	8.403	-0.002	183850	2.00	2.06	
9 2,2'-Oxybisethanol						
9.601	9.599	0.002	96509	2.00	2.08	
10 Triethylene Glycol						
10.629	10.627	0.002	67193	2.00	2.37	
11 Tetraethylene Glycol						
11.770	11.762	0.008	149265	4.00	5.14	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00048

Amount Added: 1.00

Units: uL

SG,GLY,ISTD,00106

Amount Added: 10.00

Units: uL

Run Reagent

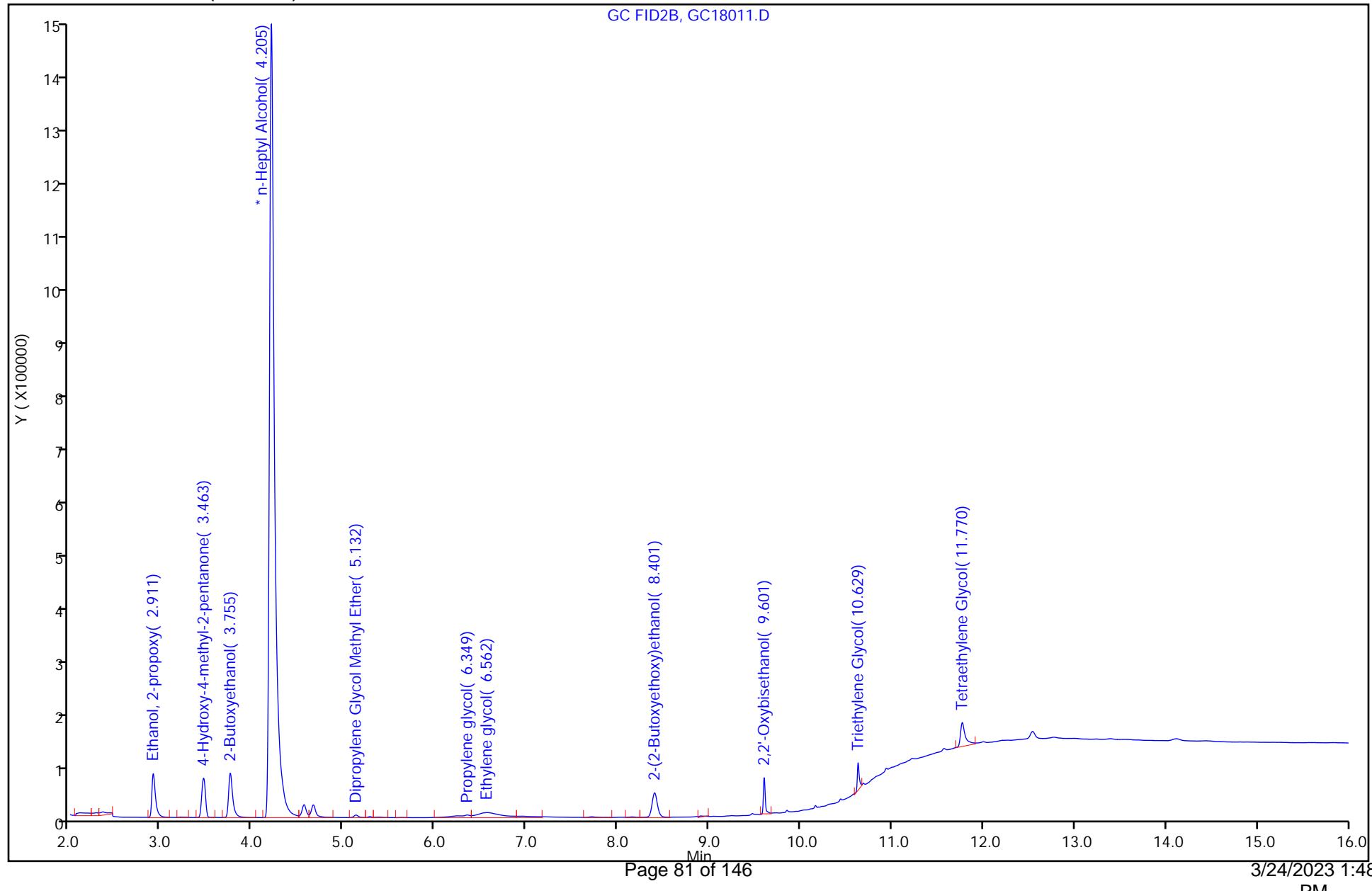
Report Date: 19-Mar-2023 17:28:25

Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230318-84498.b\\GC18011.D
Injection Date: 18-Mar-2023 19:24:22 Instrument ID: CVGG2
Lims ID: ic g1 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 11



Eurofins Savannah

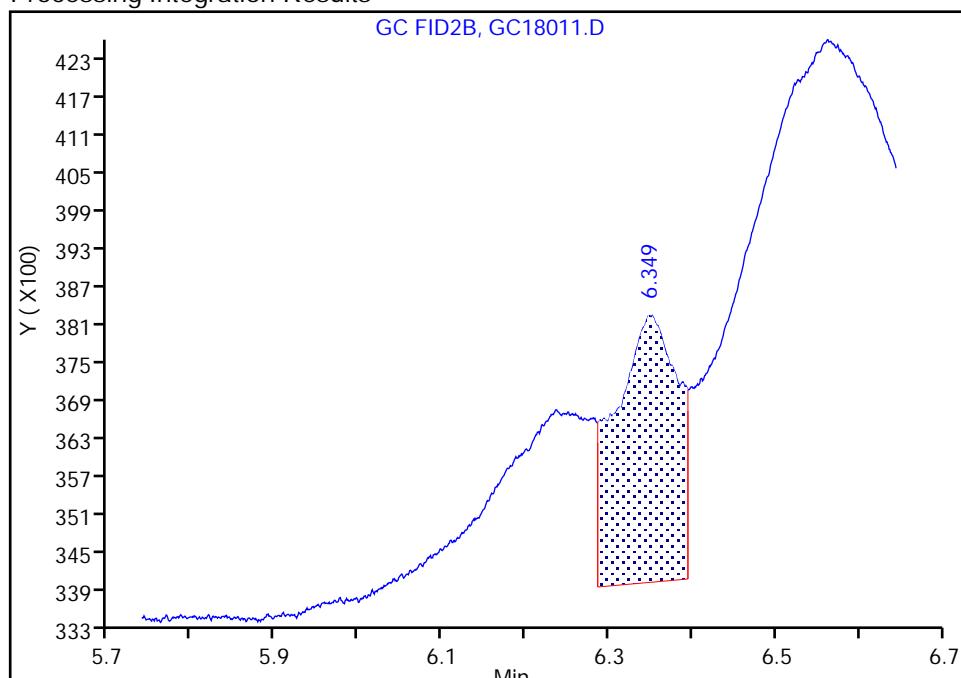
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 Injection Date: 18-Mar-2023 19:24:22 Instrument ID: CVGG2
 Lims ID: ic g1
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

6 Propylene glycol, CAS: 57-55-6

Signal: 1

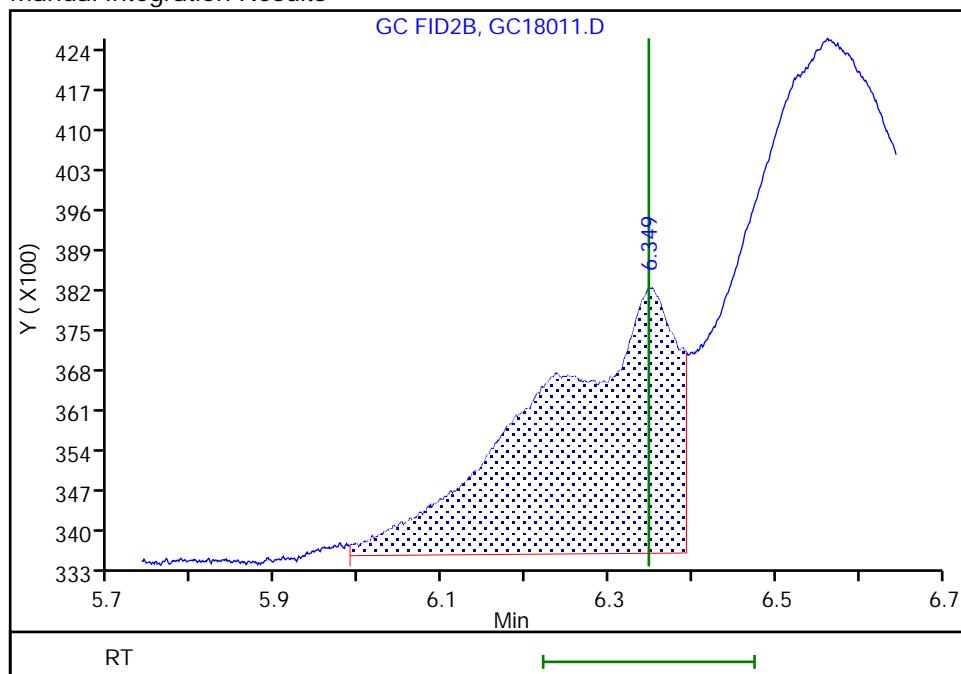
RT: 6.35
 Area: 21827
 Amount: 1.698456
 Amount Units: ug/ml

Processing Integration Results



RT: 6.35
 Area: 52980
 Amount: 5.108558
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:25:19

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Savannah

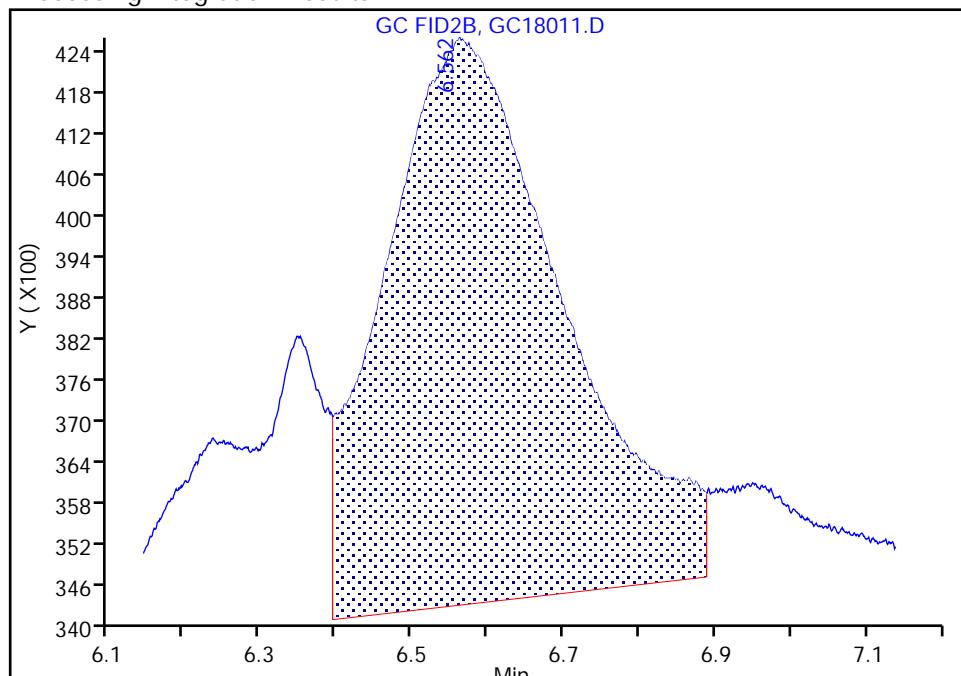
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Injection Date: 18-Mar-2023 19:24:22 Instrument ID: CVGG2
 Lims ID: ic g1
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

7 Ethylene glycol, CAS: 107-21-1

Signal: 1

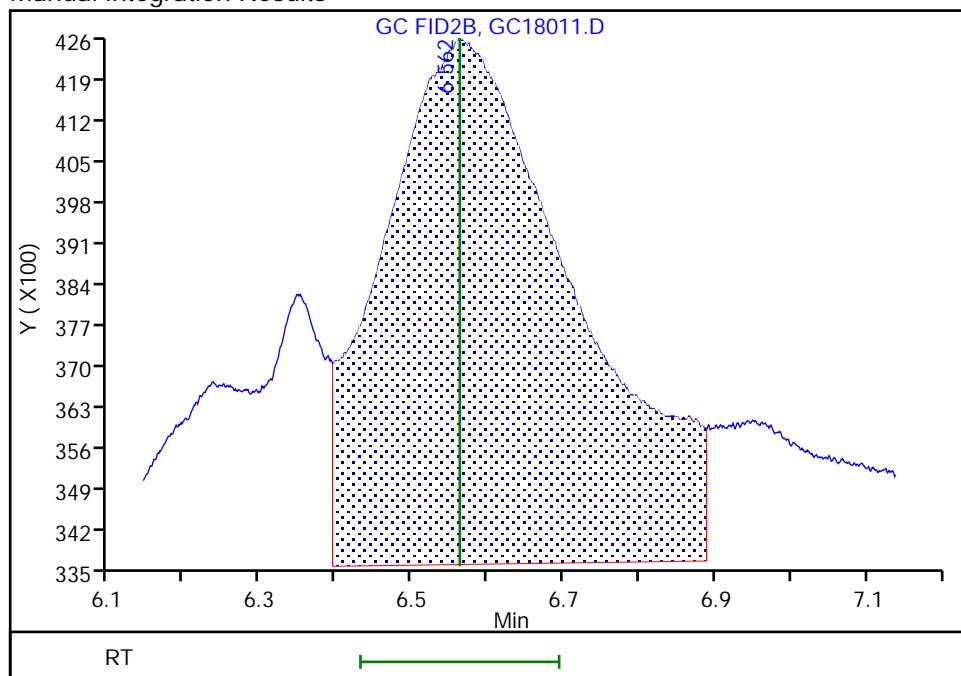
RT: 6.56
 Area: 136517
 Amount: 1.835416
 Amount Units: ug/ml

Processing Integration Results



RT: 6.56
 Area: 158828
 Amount: 2.073138
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:25:13

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

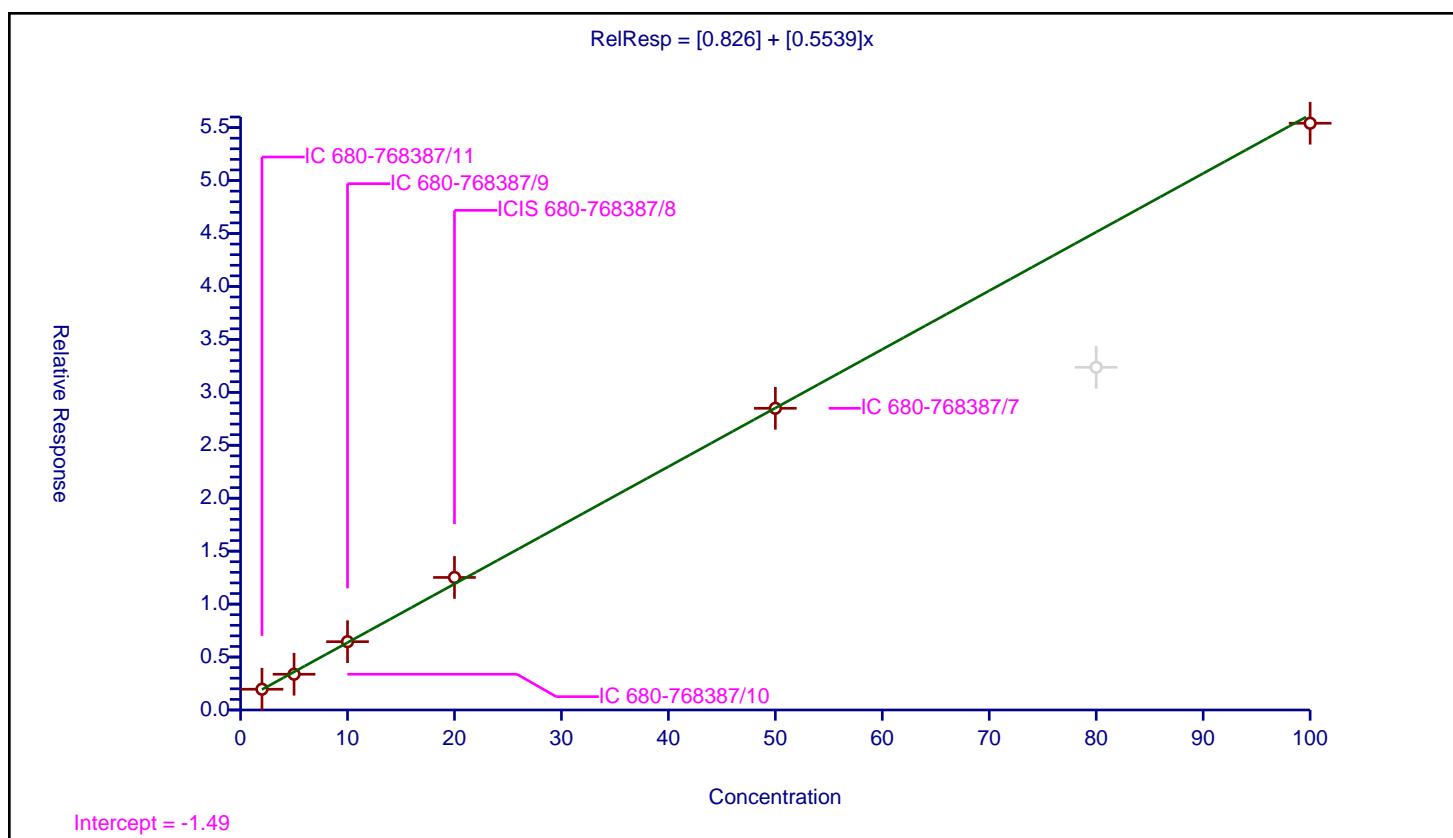
Calibration

/ 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:	0.826
Slope:	0.5539
Error Coefficients	
Standard Error:	3130000
Relative Standard Error:	5.1
Correlation Coefficient:	0.979
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	1.959476	50.0	5687389.0	0.979738	Y
2	IC 680-768387/10	5.0	3.376315	50.0	5829521.0	0.675263	Y
3	IC 680-768387/9	10.0	6.451327	50.0	4830177.0	0.645133	Y
4	ICIS 680-768387/8	20.0	12.518354	50.0	5093613.0	0.625918	Y
5	IC 680-768387/7	50.0	28.490656	50.0	3786538.0	0.569813	Y
6	IC 680-768387/6	80.0	32.363785	50.0	4412500.0	0.404547	N
7	IC 680-768387/5	100.0	55.412325	50.0	5135926.0	0.554123	Y



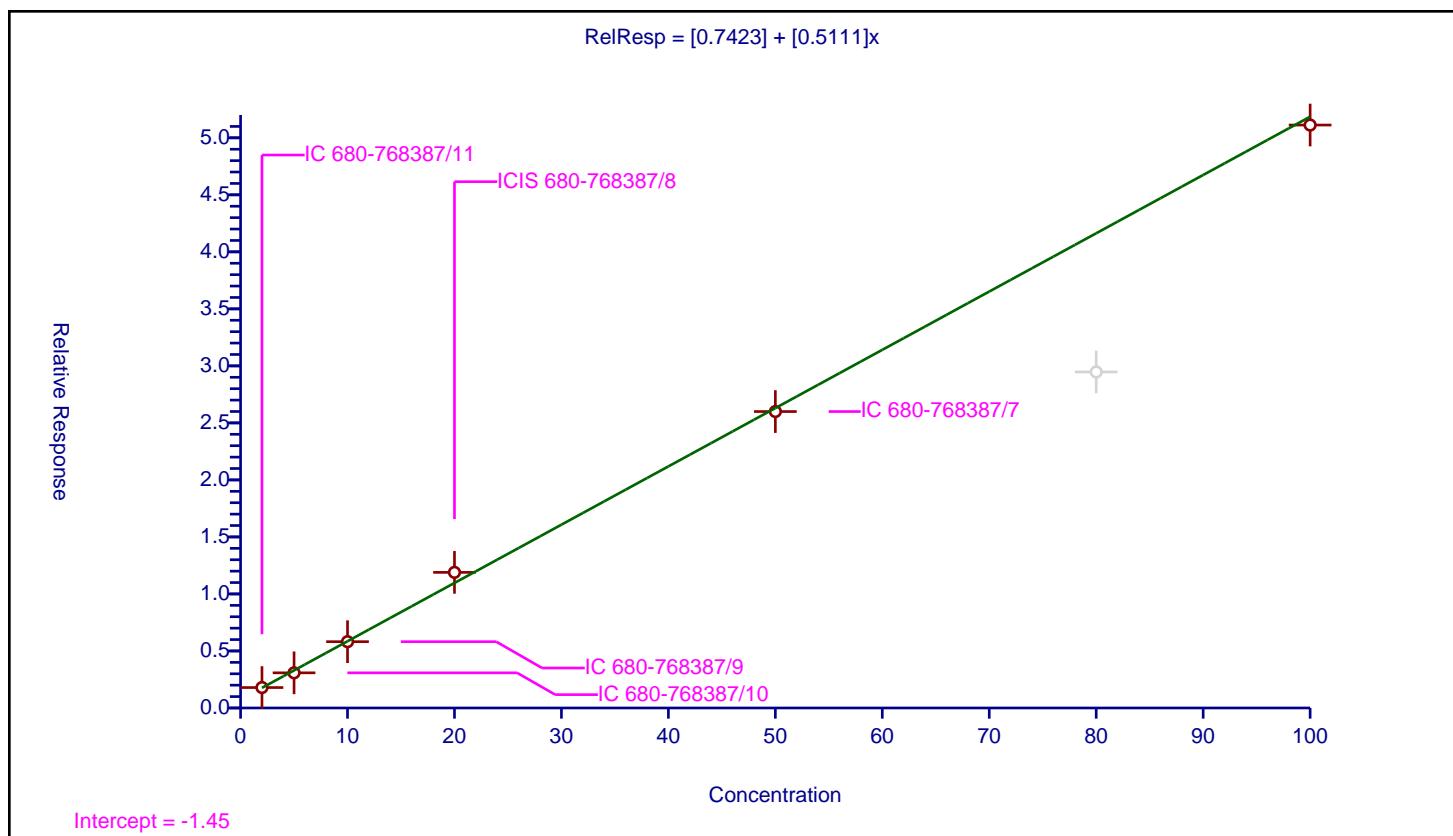
Calibration

/ 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:	0.7423
Slope:	0.5111
Error Coefficients	
Standard Error:	2890000
Relative Standard Error:	6.4
Correlation Coefficient:	0.978
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	1.791877	50.0	5687389.0	0.895938	Y
2	IC 680-768387/10	5.0	3.083229	50.0	5829521.0	0.616646	Y
3	IC 680-768387/9	10.0	5.813824	50.0	4830177.0	0.581382	Y
4	ICIS 680-768387/8	20.0	11.893513	50.0	5093613.0	0.594676	Y
5	IC 680-768387/7	50.0	25.996926	50.0	3786538.0	0.519939	Y
6	IC 680-768387/6	80.0	29.46749	50.0	4412500.0	0.368344	N
7	IC 680-768387/5	100.0	51.120285	50.0	5135926.0	0.511203	Y



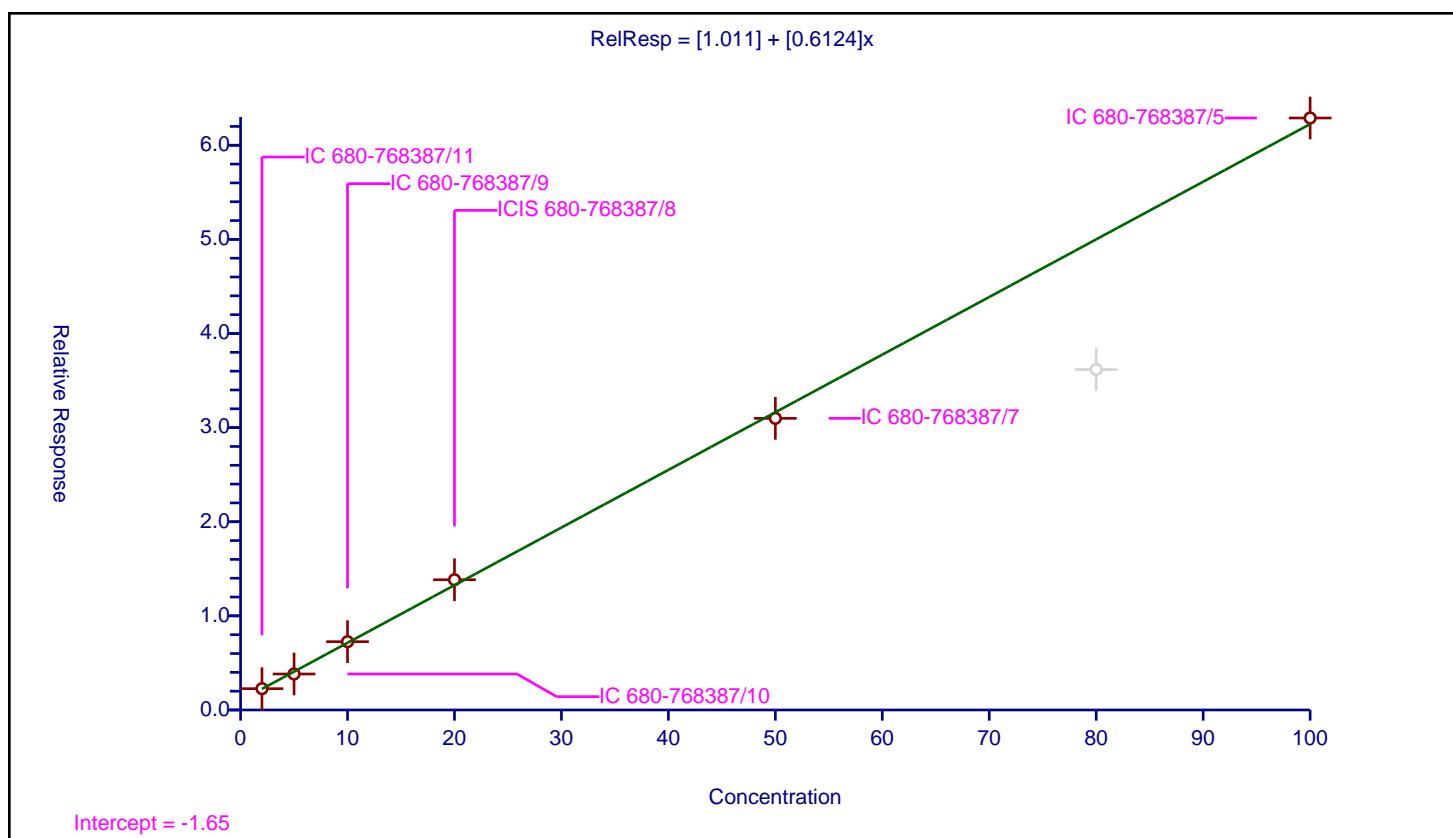
Calibration

/ 2-Butoxyethanol

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

Curve Coefficients	
Intercept:	1.011
Slope:	0.6124
Error Coefficients	
Standard Error:	3540000
Relative Standard Error:	5.1
Correlation Coefficient:	0.975
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	2.265723	50.0	5687389.0	1.132862	Y
2	IC 680-768387/10	5.0	3.824491	50.0	5829521.0	0.764898	Y
3	IC 680-768387/9	10.0	7.25696	50.0	4830177.0	0.725696	Y
4	ICIS 680-768387/8	20.0	13.838291	50.0	5093613.0	0.691915	Y
5	IC 680-768387/7	50.0	30.983672	50.0	3786538.0	0.619673	Y
6	IC 680-768387/6	80.0	36.169303	50.0	4412500.0	0.452116	N
7	IC 680-768387/5	100.0	62.894919	50.0	5135926.0	0.628949	Y



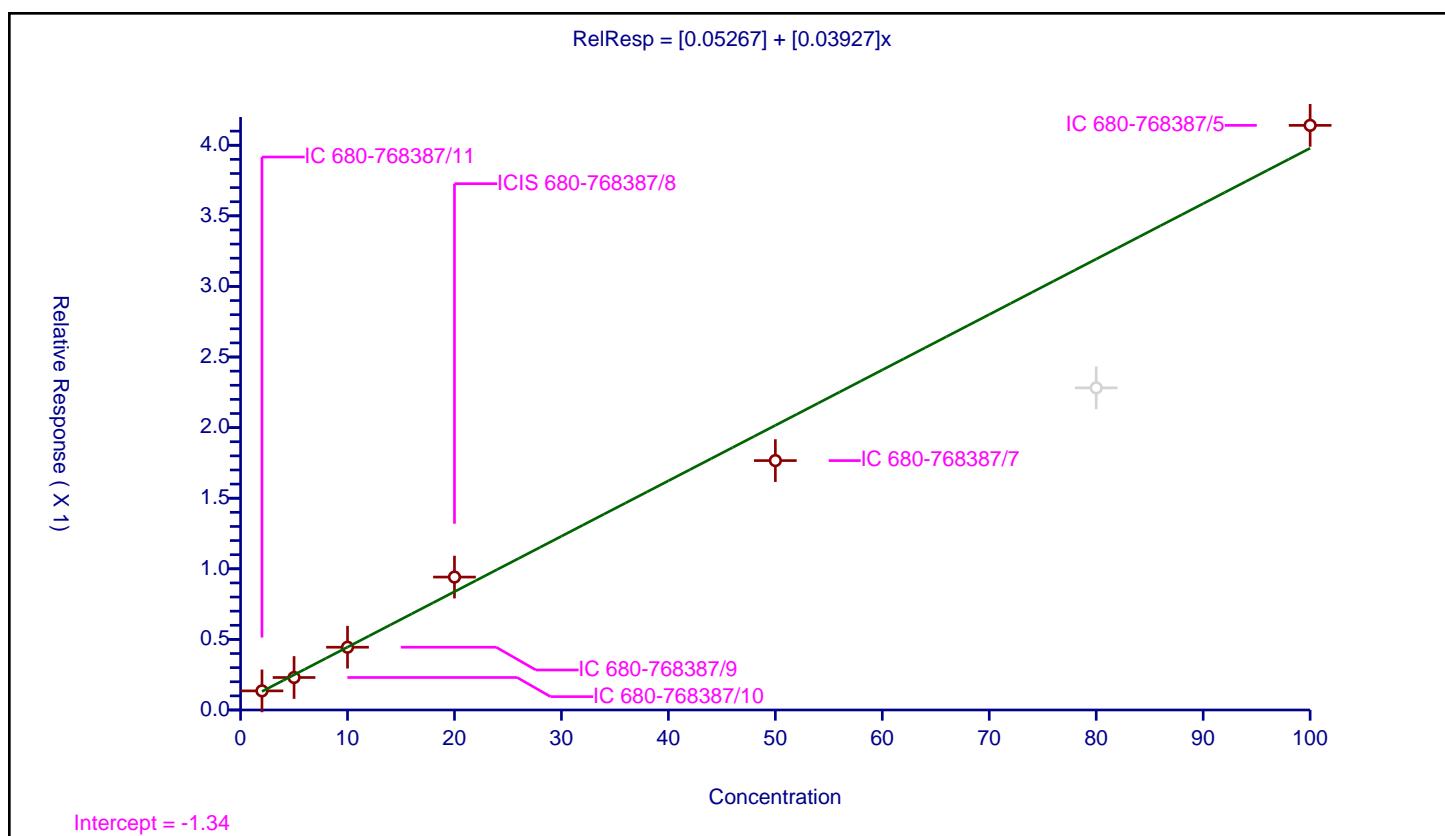
Calibration

/ Dipropylene Glycol Methyl Ether

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

Curve Coefficients	
Intercept:	0.05267
Slope:	0.03927
Error Coefficients	
Standard Error:	230000
Relative Standard Error:	10.9
Correlation Coefficient:	0.955
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	0.135326	50.0	5687389.0	0.067663	Y
2	IC 680-768387/10	5.0	0.230113	50.0	5829521.0	0.046023	Y
3	IC 680-768387/9	10.0	0.444497	50.0	4830177.0	0.04445	Y
4	ICIS 680-768387/8	20.0	0.941414	50.0	5093613.0	0.047071	Y
5	IC 680-768387/7	50.0	1.766495	50.0	3786538.0	0.03533	Y
6	IC 680-768387/6	80.0	2.281609	50.0	4412500.0	0.02852	N
7	IC 680-768387/5	100.0	4.140821	50.0	5135926.0	0.041408	Y



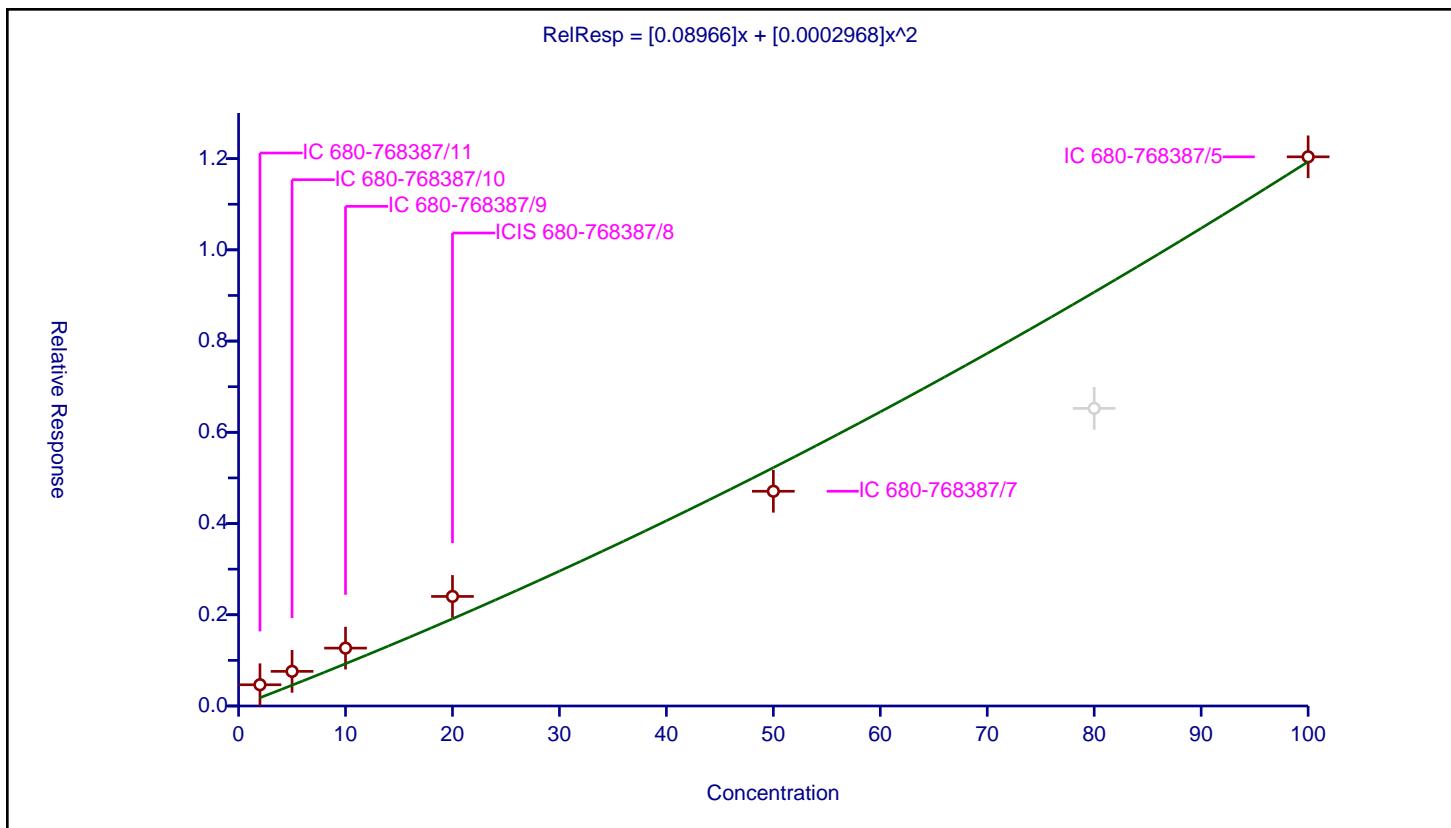
Calibration

/ Propylene glycol

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

Curve Coefficients	
Intercept:	0
Slope:	0.08966
Second Order:	0.0002968
Error Coefficients	
Standard Error:	660000
Relative Standard Error:	87.0
Correlation Coefficient:	0.965
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	0.465767	50.0	5687389.0	0.232884	Y
2	IC 680-768387/10	5.0	0.759025	50.0	5829521.0	0.151805	Y
3	IC 680-768387/9	10.0	1.268898	50.0	4830177.0	0.12689	Y
4	ICIS 680-768387/8	20.0	2.401998	50.0	5093613.0	0.1201	Y
5	IC 680-768387/7	50.0	4.707889	50.0	3786538.0	0.094158	Y
6	IC 680-768387/6	80.0	6.524952	50.0	4412500.0	0.081562	N
7	IC 680-768387/5	100.0	12.039231	50.0	5135926.0	0.120392	Y



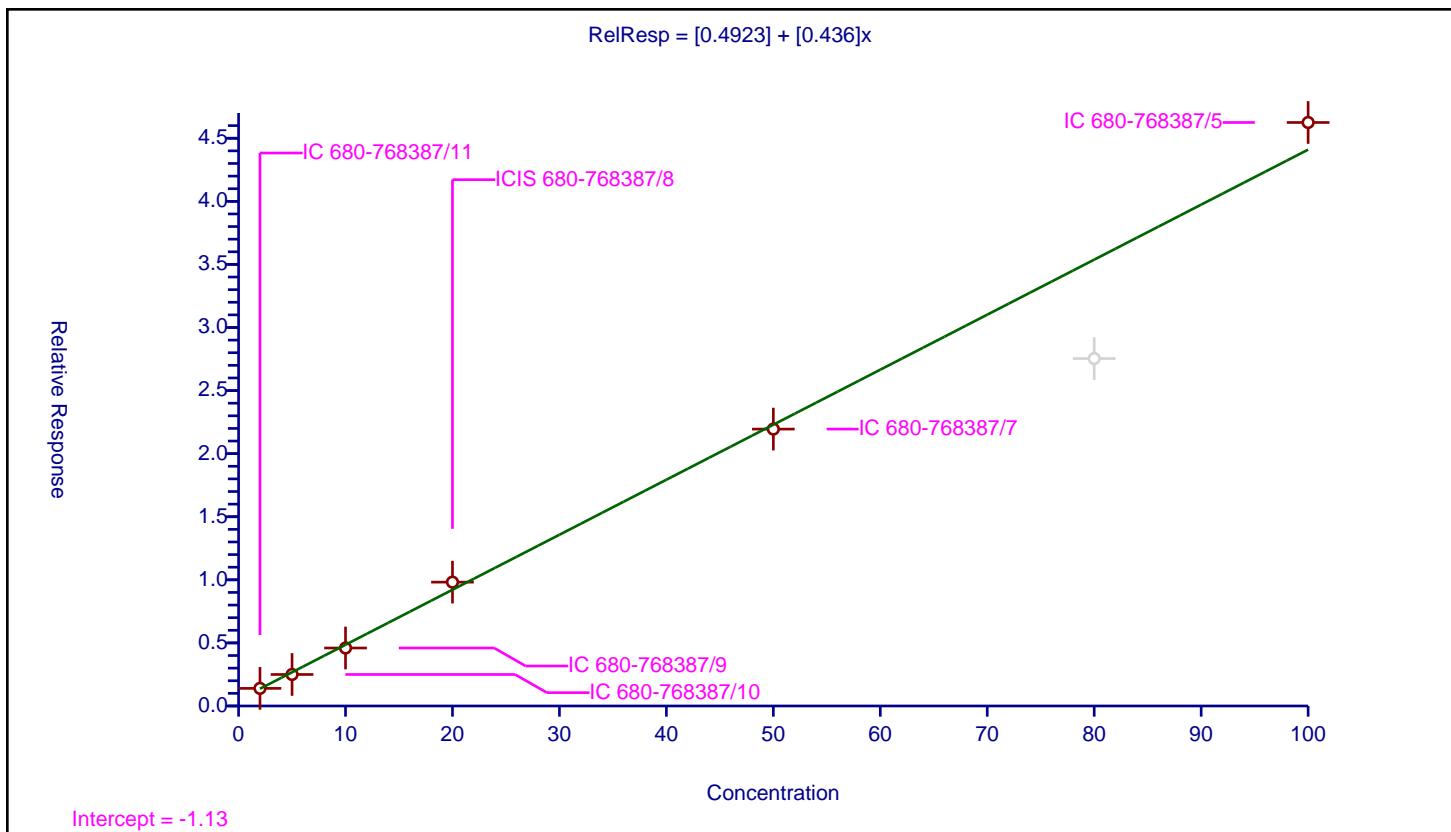
Calibration

/ Ethylene glycol

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

Curve Coefficients	
Intercept:	0.4923
Slope:	0.436
Error Coefficients	
Standard Error:	2580000
Relative Standard Error:	6.8
Correlation Coefficient:	0.972
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	1.396317	50.0	5687389.0	0.698159	Y
2	IC 680-768387/10	5.0	2.498061	50.0	5829521.0	0.499612	Y
3	IC 680-768387/9	10.0	4.595153	50.0	4830177.0	0.459515	Y
4	ICIS 680-768387/8	20.0	9.816529	50.0	5093613.0	0.490826	Y
5	IC 680-768387/7	50.0	21.9463	50.0	3786538.0	0.438926	Y
6	IC 680-768387/6	80.0	27.536544	50.0	4412500.0	0.344207	N
7	IC 680-768387/5	100.0	46.249995	50.0	5135926.0	0.4625	Y



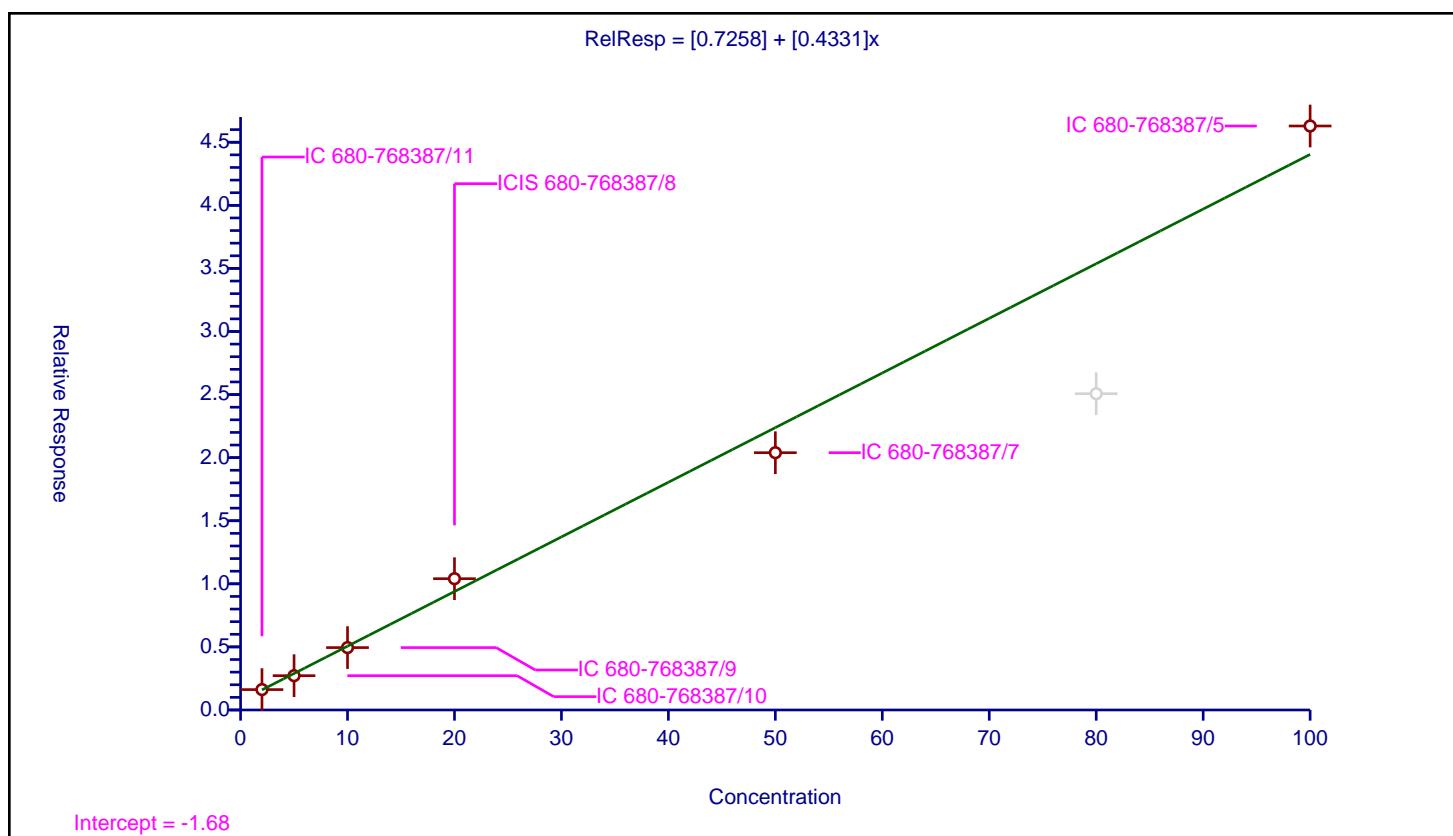
Calibration

/ 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:	0.7258
Slope:	0.4331
Error Coefficients	
Standard Error:	2570000
Relative Standard Error:	9.1
Correlation Coefficient:	0.959
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	1.616295	50.0	5687389.0	0.808148	Y
2	IC 680-768387/10	5.0	2.718199	50.0	5829521.0	0.54364	Y
3	IC 680-768387/9	10.0	4.944291	50.0	4830177.0	0.494429	Y
4	ICIS 680-768387/8	20.0	10.406798	50.0	5093613.0	0.52034	Y
5	IC 680-768387/7	50.0	20.393299	50.0	3786538.0	0.407866	Y
6	IC 680-768387/6	80.0	25.068034	50.0	4412500.0	0.31335	N
7	IC 680-768387/5	100.0	46.288683	50.0	5135926.0	0.462887	Y



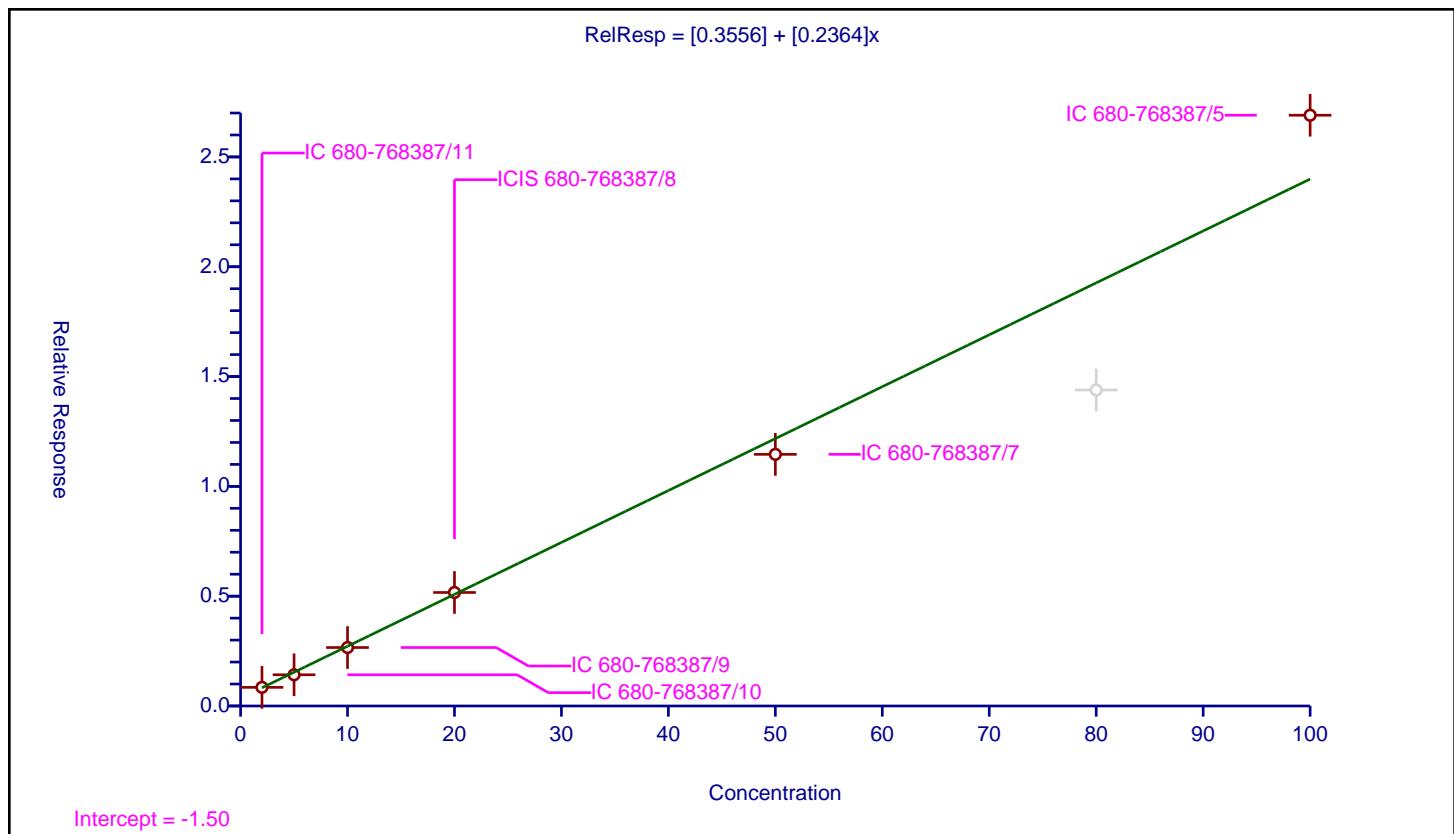
Calibration

/ 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:	0.3556
Slope:	0.2364
Error Coefficients	
Standard Error:	1480000
Relative Standard Error:	8.8
Correlation Coefficient:	0.959
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	0.848447	50.0	5687389.0	0.424224	Y
2	IC 680-768387/10	5.0	1.420854	50.0	5829521.0	0.284171	Y
3	IC 680-768387/9	10.0	2.662097	50.0	4830177.0	0.26621	Y
4	ICIS 680-768387/8	20.0	5.168502	50.0	5093613.0	0.258425	Y
5	IC 680-768387/7	50.0	11.458277	50.0	3786538.0	0.229166	Y
6	IC 680-768387/6	80.0	14.388465	50.0	4412500.0	0.179856	N
7	IC 680-768387/5	100.0	26.89918	50.0	5135926.0	0.268992	Y



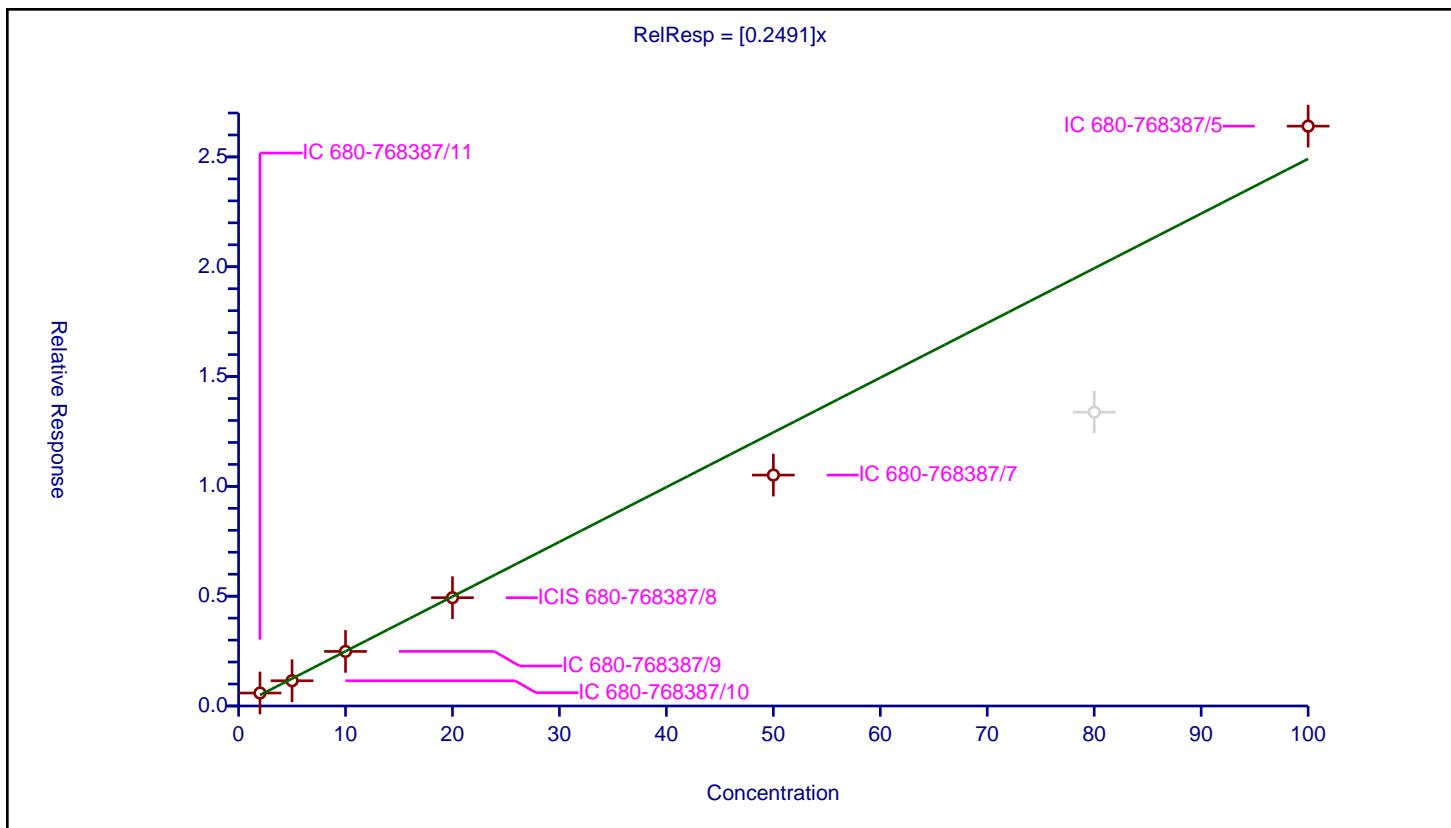
Calibration

/ Triethylene Glycol

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

Curve Coefficients	
Intercept:	0
Slope:	0.2491
Error Coefficients	
Standard Error:	1290000
Relative Standard Error:	11.7
Correlation Coefficient:	0.952
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	2.0	0.590719	50.0	5687389.0	0.29536	Y
2	IC 680-768387/10	5.0	1.149563	50.0	5829521.0	0.229913	Y
3	IC 680-768387/9	10.0	2.485023	50.0	4830177.0	0.248502	Y
4	ICIS 680-768387/8	20.0	4.931971	50.0	5093613.0	0.246599	Y
5	IC 680-768387/7	50.0	10.515027	50.0	3786538.0	0.210301	Y
6	IC 680-768387/6	80.0	13.378142	50.0	4412500.0	0.167227	N
7	IC 680-768387/5	100.0	26.402006	50.0	5135926.0	0.26402	Y



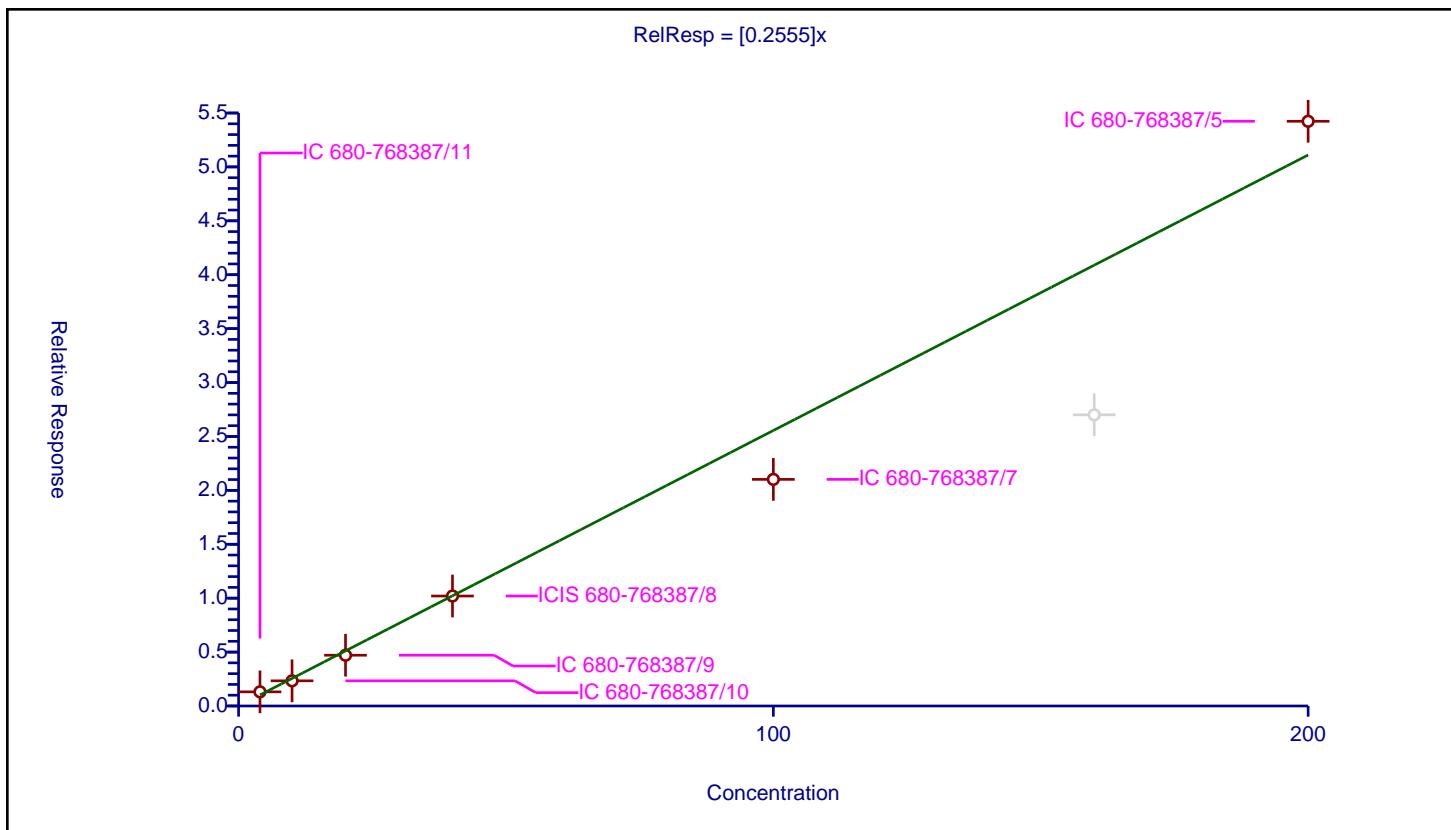
Calibration

/ Tetraethylene Glycol

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

Curve Coefficients	
Intercept:	0
Slope:	0.2555
Error Coefficients	
Standard Error:	2640000
Relative Standard Error:	16.1
Correlation Coefficient:	0.949
Coefficient of Determination (Adjusted):	0.955

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 680-768387/11	4.0	1.312245	50.0	5687389.0	0.328061	Y
2	IC 680-768387/10	10.0	2.333691	50.0	5829521.0	0.233369	Y
3	IC 680-768387/9	20.0	4.709268	50.0	4830177.0	0.235463	Y
4	ICIS 680-768387/8	40.0	10.199361	50.0	5093613.0	0.254984	Y
5	IC 680-768387/7	100.0	21.018989	50.0	3786538.0	0.21019	Y
6	IC 680-768387/6	160.0	27.00485	50.0	4412500.0	0.16878	N
7	IC 680-768387/5	200.0	54.234193	50.0	5135926.0	0.271171	Y



FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Lab Sample ID: ICV 680-768387/12 Calibration Date: 03/18/2023 19:47

Instrument ID: CVGG2 Calib Start Date: 03/18/2023 17:04

GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 03/18/2023 19:24

Lab File ID: GC18012.D Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.6485		21.9	20.0	9.6	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.5994		22.0	20.0	10.0	20.0
2-Butoxyethanol	Lin2		0.7604		23.2	20.0	15.9	20.0
Dipropylene Glycol Methyl Ether	Lin1		0.0492		23.7	20.0	18.7	20.0
Propylene glycol	QuaF		0.1153		23.8	20.0	19.2	20.0
Ethylene glycol	Lin2		0.4915		21.4	20.0	7.1	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.5183		22.3	20.0	11.3	20.0
2,2'-Oxybisethanol	Lin2		0.2533		19.9	20.0	-0.4	20.0
Triethylene Glycol	Ave	0.2491	0.2683		21.5	20.0	7.7	20.0
Tetraethylene Glycol	Ave	0.2555	0.2749		43.0	40.0	7.6	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-124965-1
SDG No.: _____
Lab Sample ID: ICV 680-768387/12 Calibration Date: 03/18/2023 19:47
Instrument ID: CVGG2 Calib Start Date: 03/18/2023 17:04
GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 03/18/2023 19:24
Lab File ID: GC18012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.91	2.87	2.99
4-Hydroxy-4-methyl-2-pentanone	3.46	3.42	3.56
2-Butoxyethanol	3.76	3.69	3.84
Dipropylene Glycol Methyl Ether	5.13	5.04	5.25
Propylene glycol	6.35	6.47	6.74
Ethylene glycol	6.56	6.22	6.47
2-(2-Butoxyethoxy)ethanol	8.40	8.23	8.57
2,2'-Oxybisethanol	9.60	9.41	9.80
Triethylene Glycol	10.63	10.43	10.86
Tetraethylene Glycol	11.76	11.53	12.00

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18012.D
 Lims ID: icv_gly
 Client ID:
 Sample Type: CCV
 Inject. Date: 18-Mar-2023 19:47:38 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084498-012
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 19-Mar-2023 18:12:51 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1624

First Level Reviewer: SWK1 Date: 19-Mar-2023 17:25:35

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.910	2.930	-0.020	1545573	20.0	21.9	
2 4-Hydroxy-4-methyl-2-pentanone						
3.461	3.492	-0.031	1428608	20.0	22.0	
3 2-Butoxyethanol						
3.755	3.762	-0.007	1812232	20.0	23.2	
* 4 n-Heptyl Alcohol						M
4.206	4.189	0.017	5958489	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether						M
5.131	5.147	-0.016	117334	20.0	23.7	M
7 Ethylene glycol						
6.555	6.345	0.210	1171446	20.0	21.4	
6 Propylene glycol						
6.346	6.604	-0.258	274708	20.0	23.8	
8 2-(2-Butoxyethoxy)ethanol						
8.400	8.398	0.002	1235420	20.0	22.3	
9 2,2'-Oxybisethanol						
9.599	9.605	-0.006	603773	20.0	19.9	
10 Triethylene Glycol						
10.626	10.647	-0.021	639411	20.0	21.5	
11 Tetraethylene Glycol						
11.760	11.762	-0.002	1310165	40.0	43.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_GlyICV_00055

Amount Added: 10.00

Units: uL

SG,GLY,ISTD,00106

Amount Added: 10.00

Units: uL

Run Reagent

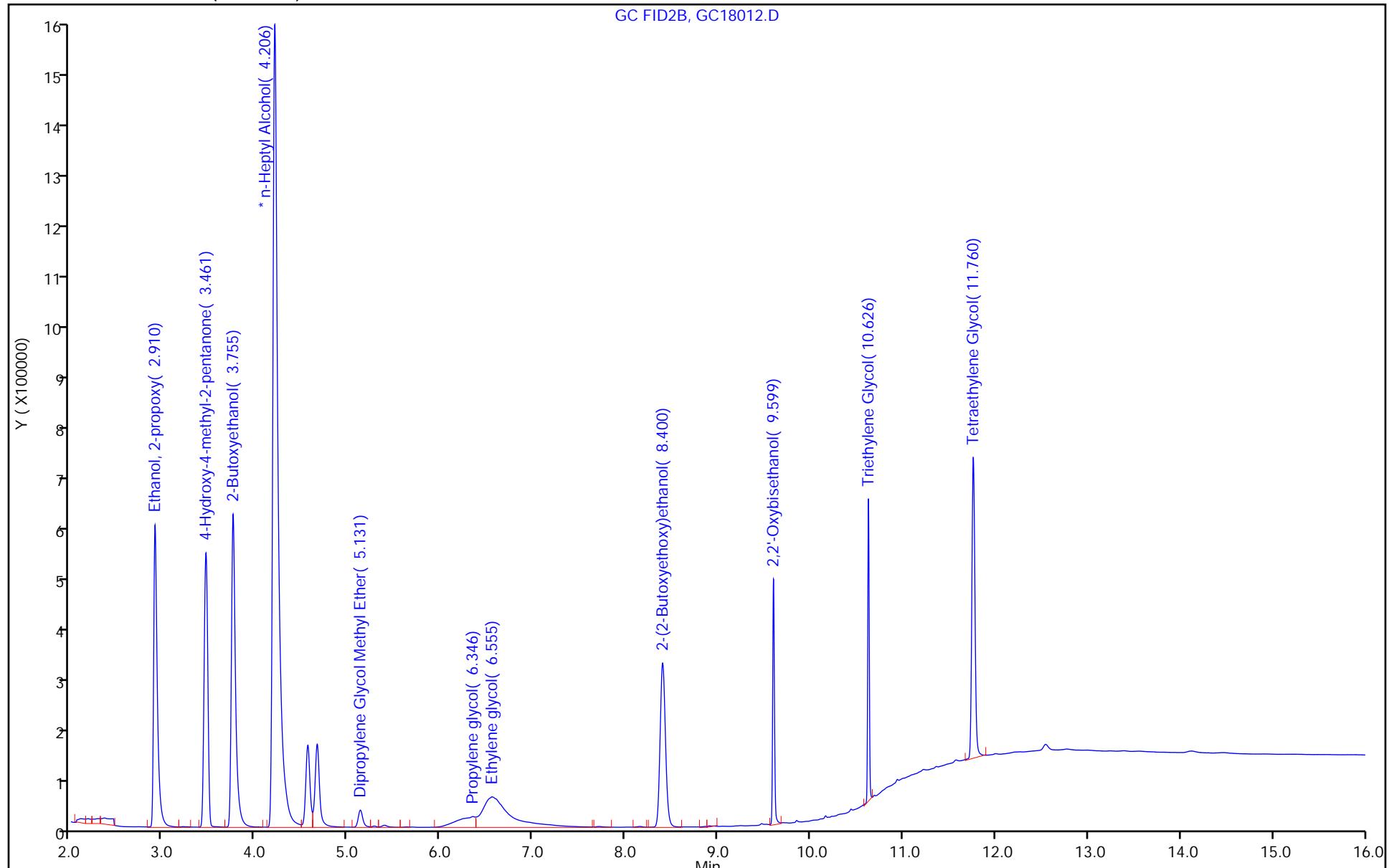
Report Date: 19-Mar-2023 18:12:51

Chrom Revision: 2.3 15-Feb-2023 20:44:50

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230318-84498.b\\GC18012.D
Injection Date: 18-Mar-2023 19:47:38 Instrument ID: CVGG2
Lims ID: icv gly Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 12



Eurofins Savannah

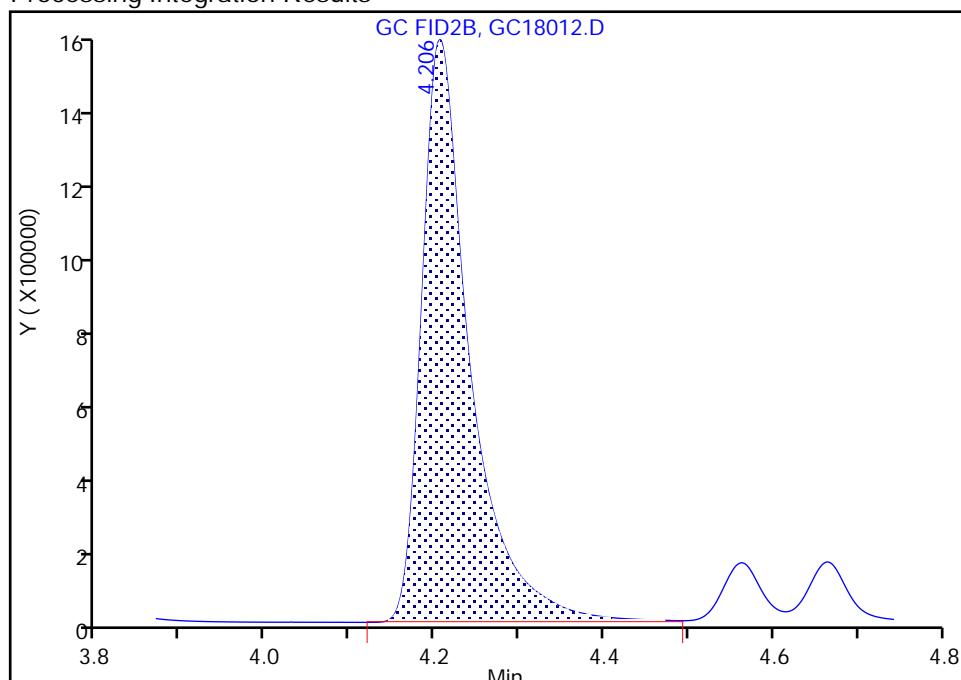
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18012.D
 Injection Date: 18-Mar-2023 19:47:38 Instrument ID: CVGG2
 Lims ID: icv gly
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

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

Signal: 1

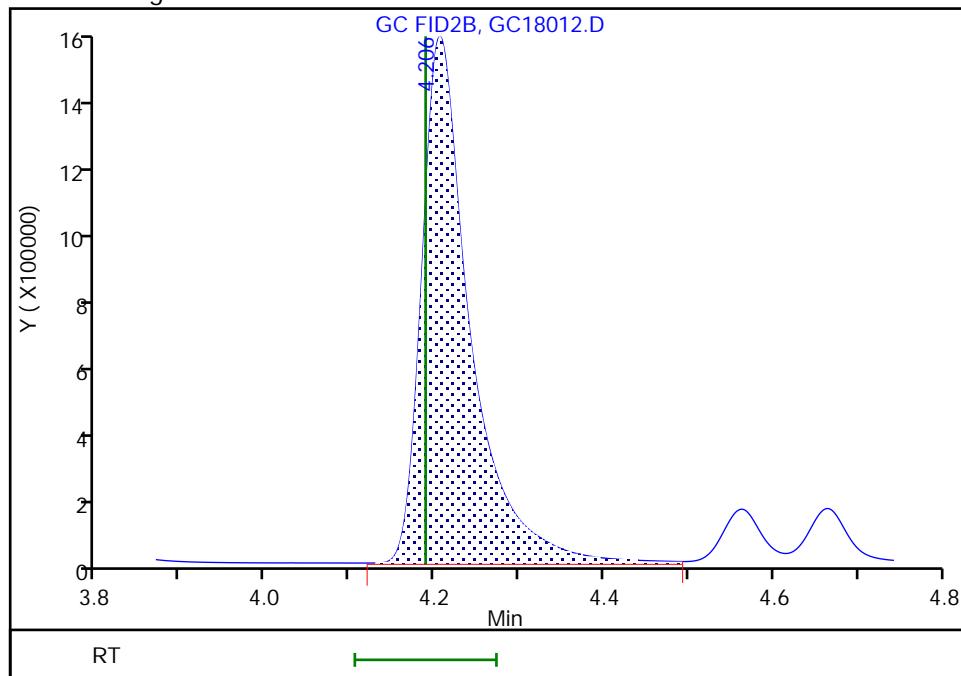
RT: 4.21
 Area: 5899756
 Amount: 50.000000
 Amount Units: ug/ml

Processing Integration Results



RT: 4.21
 Area: 5958489
 Amount: 50.000000
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:25:32

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

Eurofins Savannah

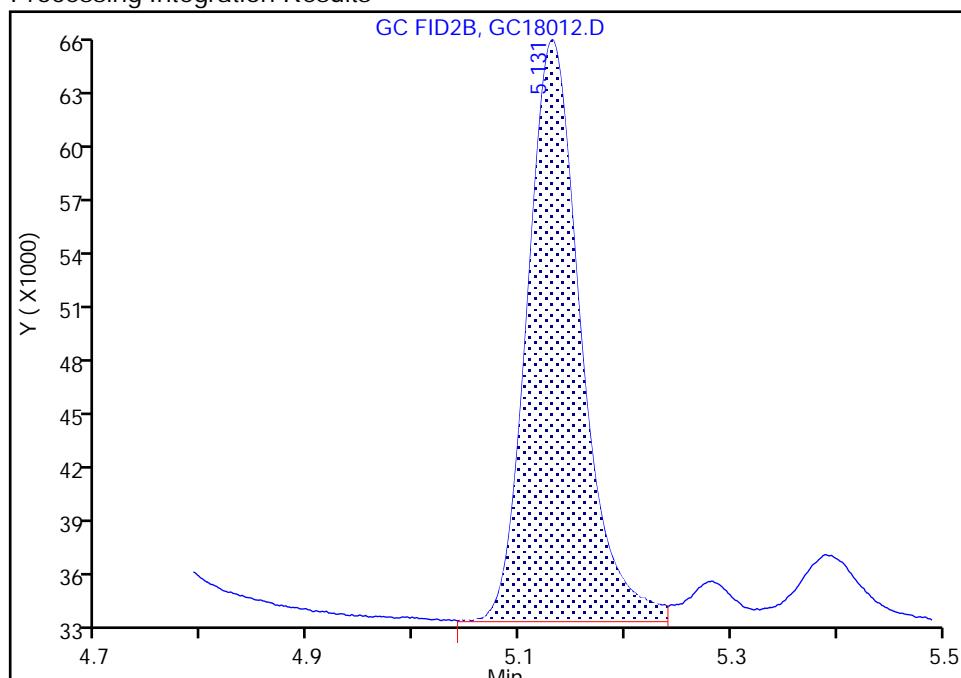
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18012.D
 Injection Date: 18-Mar-2023 19:47:38 Instrument ID: CVGG2
 Lims ID: icv gly
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

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

Signal: 1

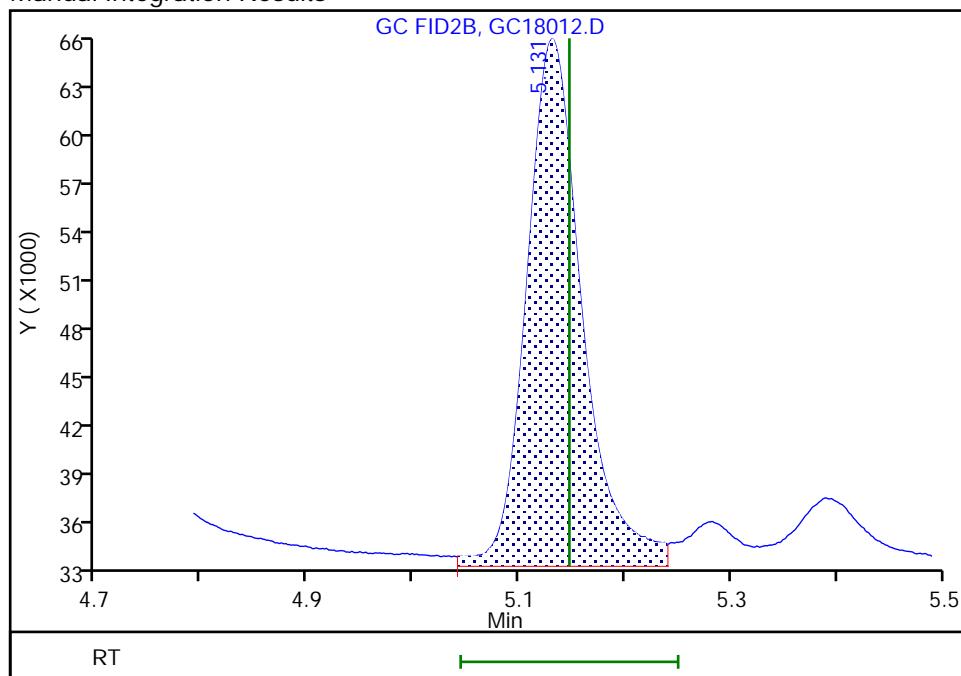
RT: 5.13
 Area: 111783
 Amount: 21.359854
 Amount Units: ug/ml

Processing Integration Results



RT: 5.13
 Area: 117334
 Amount: 23.733940
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 19-Mar-2023 17:25:32

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.:

Lab Sample ID: CCVIS 680-769036/5

Calibration Date: 03/22/2023 14:21

Instrument ID: CVGG2

Calib Start Date: 03/18/2023 17:04

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

Calib End Date: 03/18/2023 19:24

Lab File ID: GC22005.D

Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.4643		15.3	20.0	-23.6*	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.4349		15.6	20.0	-22.2*	20.0
2-Butoxyethanol	Lin2		0.5189		15.3	20.0	-23.5*	20.0
Dipropylene Glycol Methyl Ether	Lin1		0.0355		16.7	20.0	-16.3	20.0
Ethylene glycol	Lin2		0.0863		2.83	20.0	-85.9*	20.0
Propylene glycol	QuaF		0.4924		85.6	20.0	328.0*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.4091		17.2	20.0	-13.9	20.0
2,2'-Oxybisethanol	Lin2		0.2353		18.4	20.0	-8.0	20.0
Triethylene Glycol	Ave	0.2491	0.2266		18.2	20.0	-9.0	20.0
Tetraethylene Glycol	Ave	0.2555	0.2239		35.0	40.0	-12.4	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-124965-1
 SDG No.: _____
 Lab Sample ID: CCVIS 680-769036/5 Calibration Date: 03/22/2023 14:21
 Instrument ID: CVGG2 Calib Start Date: 03/18/2023 17:04
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 03/18/2023 19:24
 Lab File ID: GC22005.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.91	2.85	2.96
4-Hydroxy-4-methyl-2-pentanone	3.45	3.38	3.52
2-Butoxyethanol	3.75	3.68	3.83
Dipropylene Glycol Methyl Ether	5.12	5.02	5.22
Ethylene glycol	6.33	6.20	6.46
Propylene glycol	6.59	6.45	6.72
2-(2-Butoxyethoxy)ethanol	8.39	8.22	8.56
2,2'-Oxybisethanol	9.60	9.40	9.79
Triethylene Glycol	10.62	10.41	10.84
Tetraethylene Glycol	11.75	11.52	11.99

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22005.D
 Lims ID: ccv g4
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Mar-2023 14:21:57 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-005
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:11:08 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SK9U Date: 22-Mar-2023 16:25:00

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						
2.906	2.906	0.000	589455	20.0	15.3	
2 4-Hydroxy-4-methyl-2-pentanone						
3.448	3.448	0.000	552122	20.0	15.6	
3 2-Butoxyethanol						
3.754	3.754	0.000	658790	20.0	15.3	
* 4 n-Heptyl Alcohol					M	
4.212	4.212	0.000	3173939	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether						
5.118	5.118	0.000	45073	20.0	16.7	
7 Ethylene glycol						
6.330	6.330	0.000	109549	20.0	2.83	
6 Propylene glycol						
6.585	6.585	0.000	625149	20.0	85.6	
8 2-(2-Butoxyethoxy)ethanol						
8.390	8.390	0.000	519438	20.0	17.2	
9 2,2'-Oxybisethanol						
9.596	9.596	0.000	298745	20.0	18.4	
10 Triethylene Glycol						
10.624	10.624	0.000	287695	20.0	18.2	
11 Tetraethylene Glycol						
11.754	11.754	0.000	568408	40.0	35.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00048

Amount Added: 10.00

Units: uL

SG,GLY,ISTD,00106

Amount Added: 10.00

Units: uL

Run Reagent

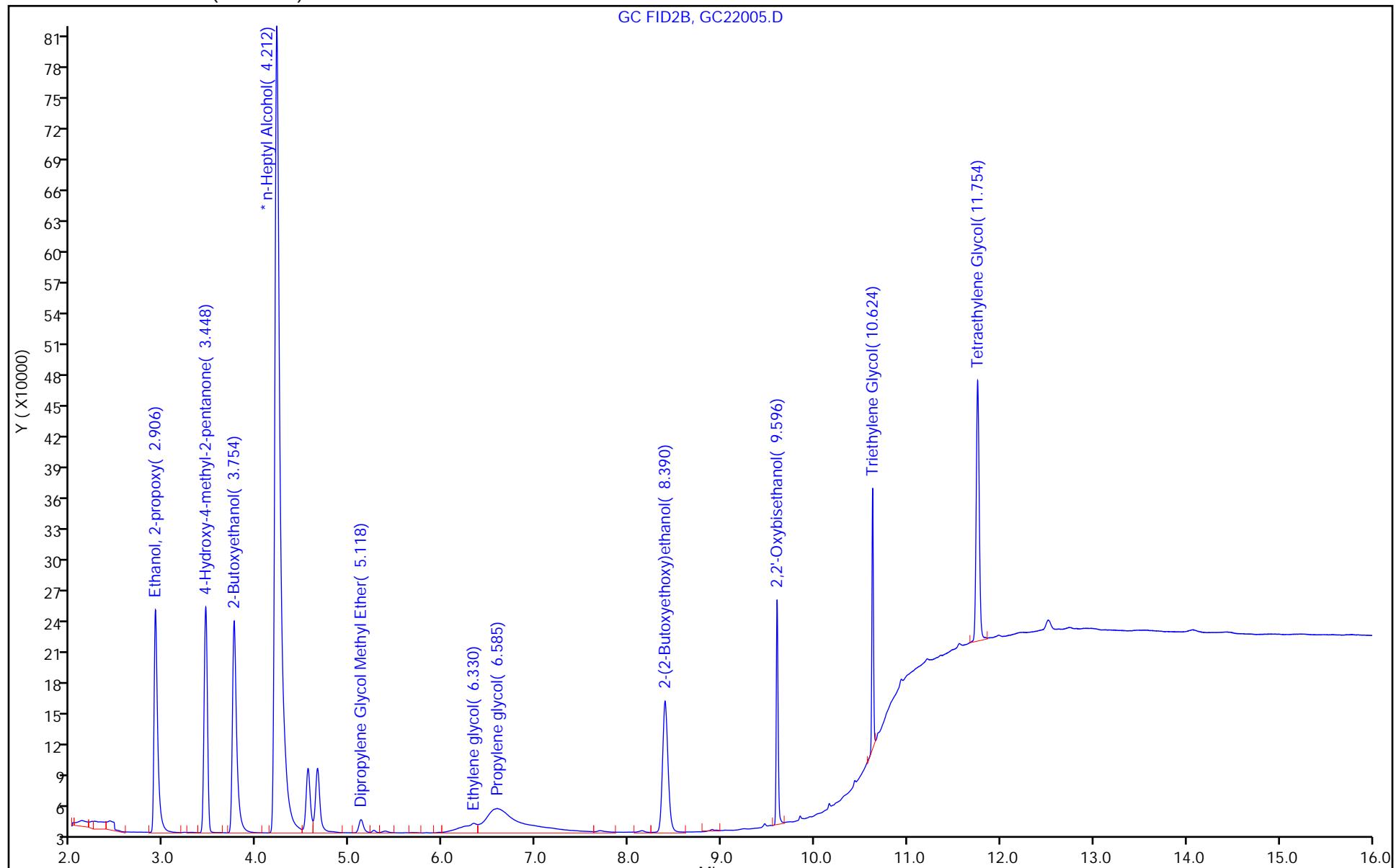
Report Date: 23-Mar-2023 11:11:08

Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22005.D
Injection Date: 22-Mar-2023 14:21:57 Instrument ID: CVGG2
Lims ID: ccv g4 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 5



Eurofins Savannah

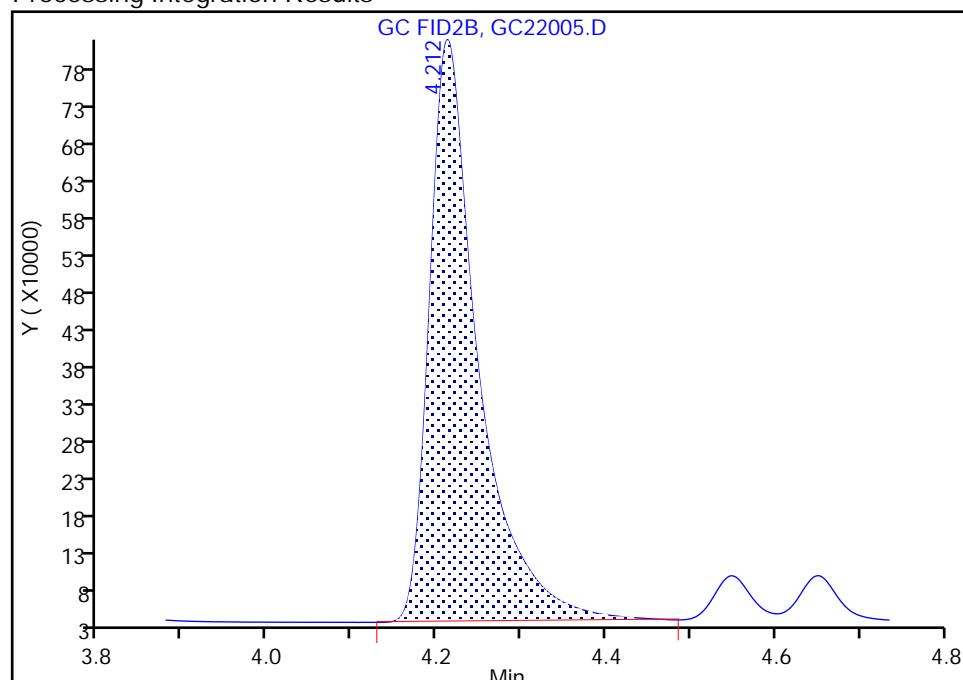
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22005.D
 Injection Date: 22-Mar-2023 14:21:57 Instrument ID: CVGG2
 Lims ID: ccv g4
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

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

Signal: 1

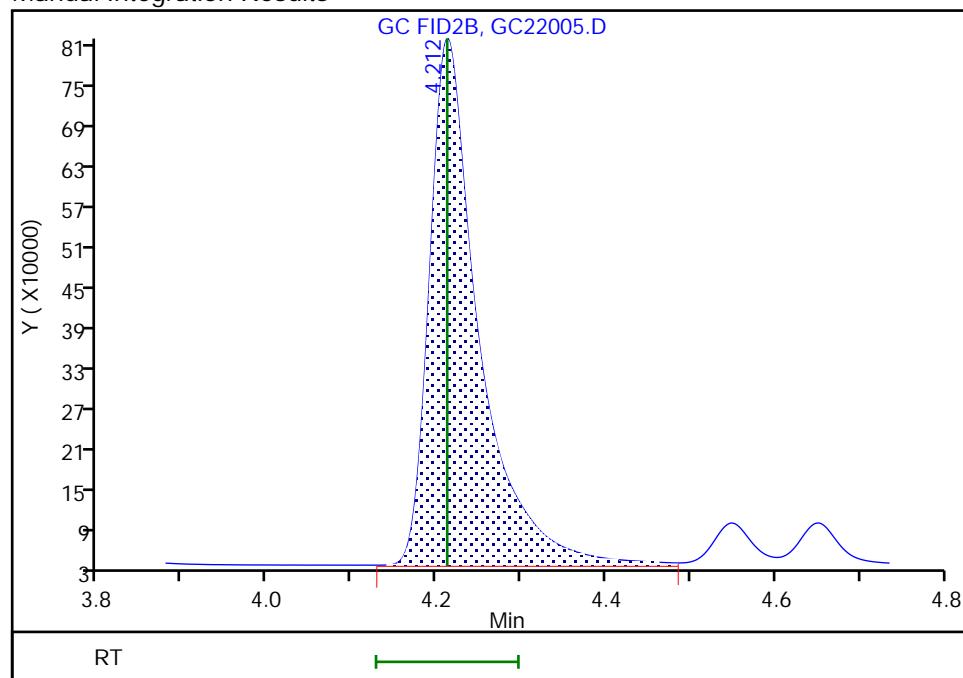
RT: 4.21
 Area: 3138201
 Amount: 50.000000
 Amount Units: ug/ml

Processing Integration Results



RT: 4.21
 Area: 3173939
 Amount: 50.000000
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 22-Mar-2023 16:24:41

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.:

Lab Sample ID: CCV 680-769036/27

Calibration Date: 03/22/2023 22:55

Instrument ID: CVGG2

Calib Start Date: 03/18/2023 17:04

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

Calib End Date: 03/18/2023 19:24

Lab File ID: GC22027.D

Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol, 2-propoxy	Lin2		0.6962		23.7	20.0	18.3	20.0
4-Hydroxy-4-methyl-2-pentanone	Lin2		0.6416		23.7	20.0	18.3	20.0
2-Butoxyethanol	Lin2		0.7592		23.1	20.0	15.7	20.0
Dipropylene Glycol Methyl Ether	Lin1		0.0533		25.8	20.0	28.9*	20.0
Ethylene glycol	Lin2		0.0880		2.91	20.0	-85.5*	20.0
Propylene glycol	QuaF		0.3696		67.4	20.0	237.1*	20.0
2-(2-Butoxyethoxy)ethanol	Lin2		0.5748		24.9	20.0	24.3*	20.0
2,2'-Oxybisethanol	Lin2		0.2073		16.0	20.0	-19.8	20.0
Triethylene Glycol	Ave	0.2491	0.1230		9.87	20.0	-50.6*	20.0
Tetraethylene Glycol	Ave	0.2555	0.0497		7.78	40.0	-80.5*	20.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Savannah Job No.: 580-124965-1
 SDG No.: _____
 Lab Sample ID: CCV 680-769036/27 Calibration Date: 03/22/2023 22:55
 Instrument ID: CVGG2 Calib Start Date: 03/18/2023 17:04
 GC Column: J&W DB WAX ID: 0.45 (mm) Calib End Date: 03/18/2023 19:24
 Lab File ID: GC22027.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethanol, 2-propoxy	2.91	2.85	2.97
4-Hydroxy-4-methyl-2-pentanone	3.46	3.39	3.53
2-Butoxyethanol	3.75	3.67	3.82
Dipropylene Glycol Methyl Ether	5.13	5.03	5.23
Ethylene glycol	6.33	6.20	6.46
Propylene glycol	6.58	6.45	6.71
2-(2-Butoxyethoxy)ethanol	8.39	8.22	8.56
2,2'-Oxybisethanol	9.60	9.41	9.79
Triethylene Glycol	10.63	10.42	10.85
Tetraethylene Glycol	11.78	11.55	12.02

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22027.D
 Lims ID: ccv g4
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Mar-2023 22:55:24 ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-027
 Operator ID: Instrument ID: CVGG2
 Sublist: chrom-8015_GLY_VGG*sub2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:11:11 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SWK1 Date: 23-Mar-2023 11:10:45

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Ethanol, 2-propoxy						M
2.908	2.908	0.000	1620405	20.0	23.7	M
2 4-Hydroxy-4-methyl-2-pentanone						
3.461	3.461	0.000	1493300	20.0	23.7	
3 2-Butoxyethanol						
3.747	3.747	0.000	1766929	20.0	23.1	
* 4 n-Heptyl Alcohol						M
4.189	4.189	0.000	5818470	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether						
5.128	5.128	0.000	123963	20.0	25.8	
7 Ethylene glycol						
6.329	6.329	0.000	204885	20.0	2.91	
6 Propylene glycol						
6.583	6.583	0.000	860318	20.0	67.4	
8 2-(2-Butoxyethoxy)ethanol						
8.392	8.392	0.000	1337852	20.0	24.9	
9 2,2'-Oxybisethanol						
9.601	9.601	0.000	482517	20.0	16.0	
10 Triethylene Glycol						
10.633	10.633	0.000	286187	20.0	9.87	
11 Tetraethylene Glycol						
11.784	11.784	0.000	231411	40.0	7.78	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_Gly_CAL_00048

Amount Added: 10.00

Units: uL

SG,GLY,ISTD,00106

Amount Added: 10.00

Units: uL

Run Reagent

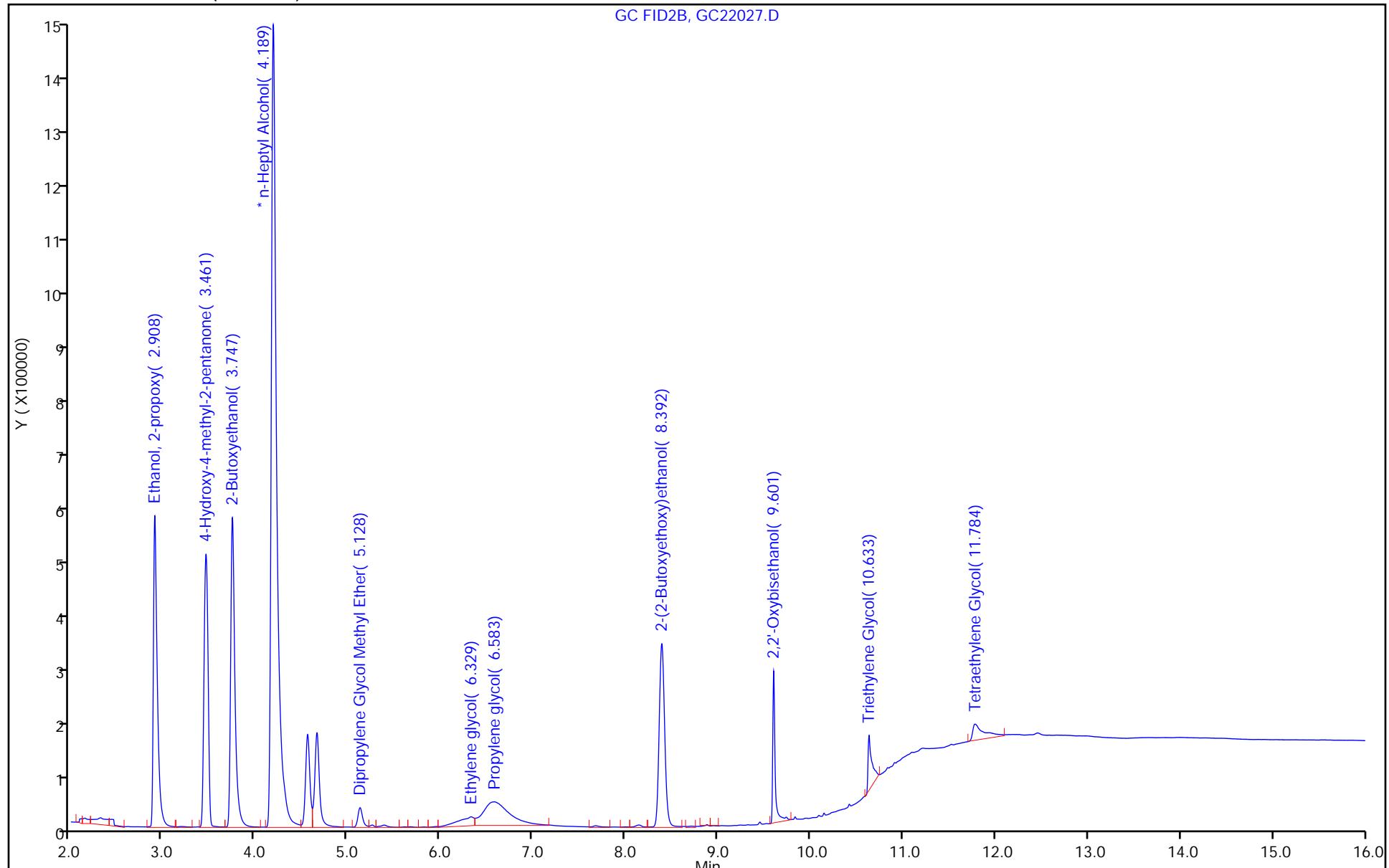
Report Date: 23-Mar-2023 11:11:11

Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22027.D
Injection Date: 22-Mar-2023 22:55:24 Instrument ID: CVGG2
Lims ID: ccv g4 Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 27



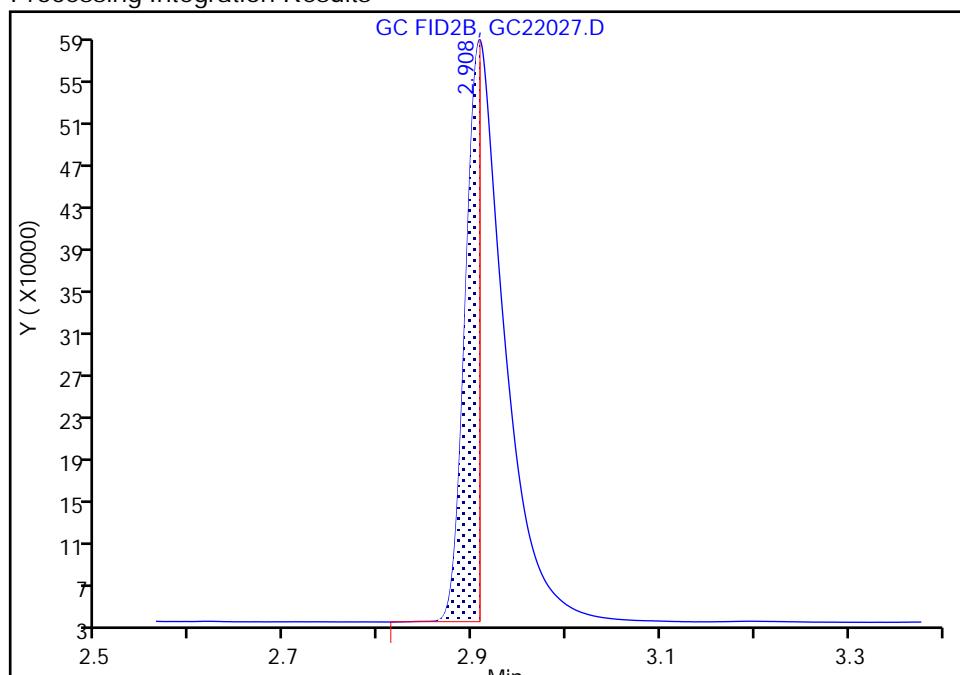
Eurofins Savannah

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22027.D
 Injection Date: 22-Mar-2023 22:55:24 Instrument ID: CVGG2
 Lims ID: ccv g4
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

1 Ethanol, 2-propoxy, CAS: 2807-30-9
 Signal: 1

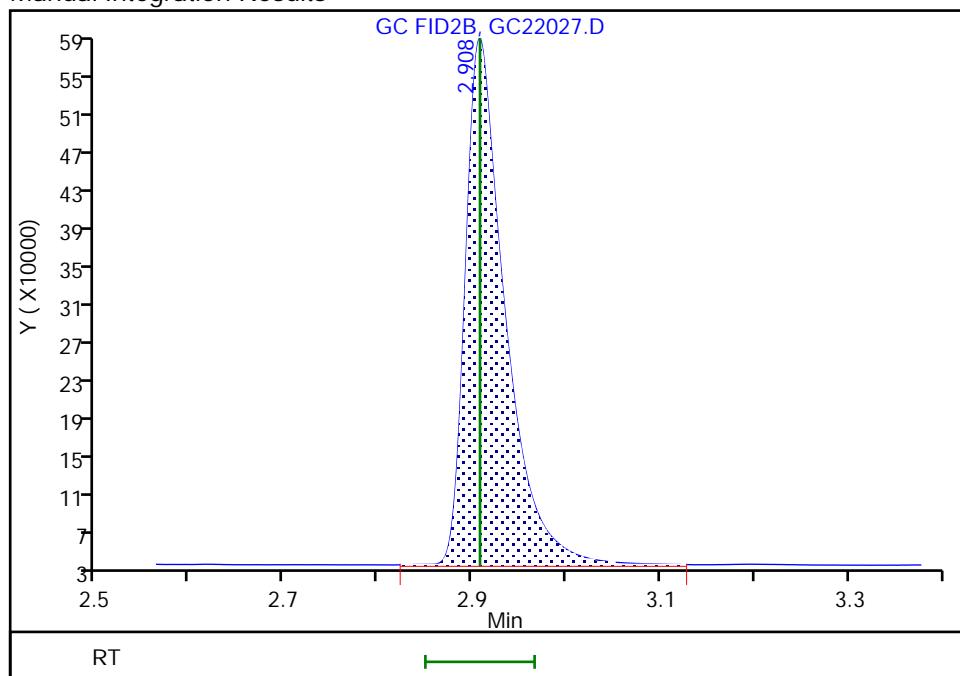
RT: 2.91
 Area: 577477
 Amount: 7.554606
 Amount Units: ug/ml

Processing Integration Results



RT: 2.91
 Area: 1620405
 Amount: 23.650178
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 23-Mar-2023 11:10:35

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

Eurofins Savannah

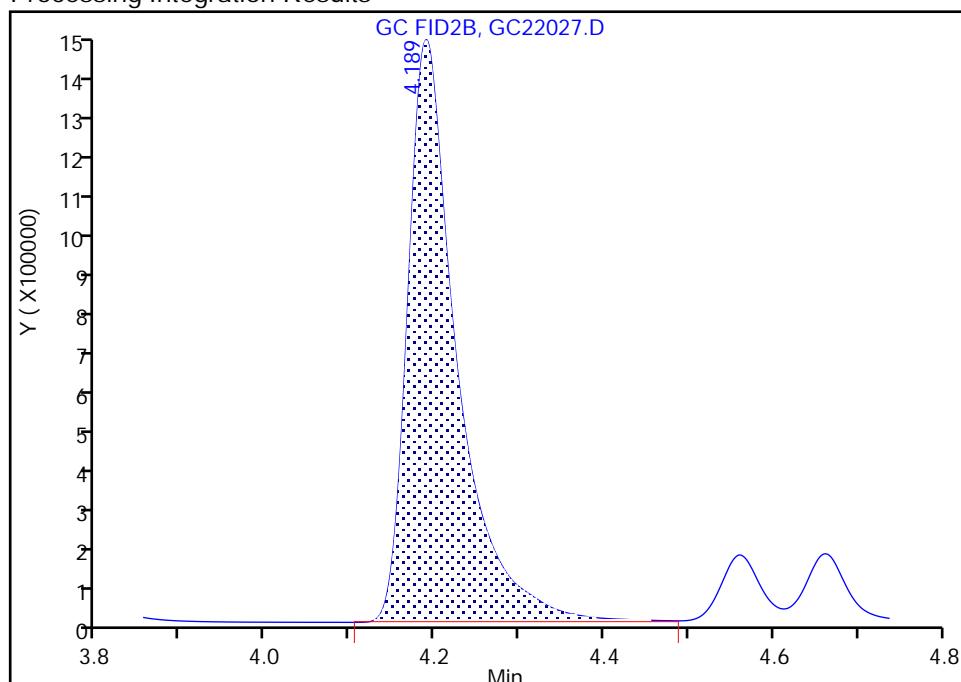
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22027.D
 Injection Date: 22-Mar-2023 22:55:24 Instrument ID: CVGG2
 Lims ID: ccv g4
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

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

Signal: 1

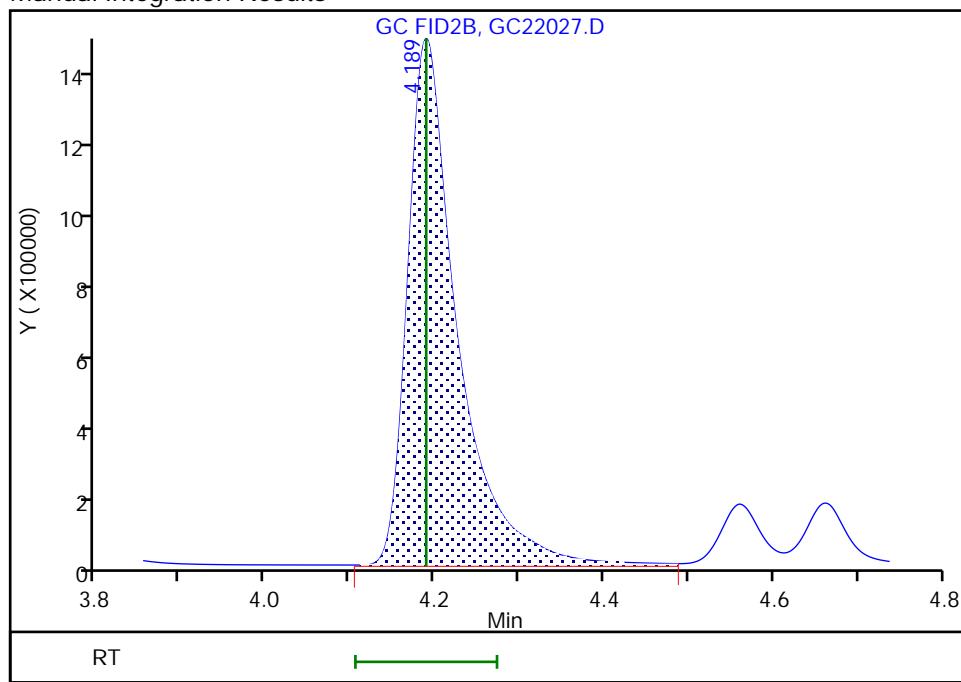
RT: 4.19
 Area: 5763097
 Amount: 50.000000
 Amount Units: ug/ml

Processing Integration Results



RT: 4.19
 Area: 5818470
 Amount: 50.000000
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SWK1, 23-Mar-2023 11:10:42

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124965-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: MB 680-769036/12
Matrix: Water Lab File ID: GC22012.D
Analysis Method: 8015C GLY Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/22/2023 17:05
Con. Extract Vol.: 1 (mL) Dilution Factor: 1
Injection Volume: 1 (uL) GC Column: J&W DB WAX ID: 0.45 (mm)
% Moisture: _____ % Solids: _____ GPC Cleanup: (Y/N) N
Cleanup Factor: _____
Analysis Batch No.: 769036 Units: mg/L

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

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22012.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 22-Mar-2023 17:05:07 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-012
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:10:45 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SWK1 Date: 23-Mar-2023 11:09:52

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
 4.200 4.189 0.011 5939401 50.0 50.0

QC Flag Legend

Processing Flags

Reagents:

SG_GLY_ISTD_00106	Amount Added: 10.00	Units: uL	Run Reagent
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Report Date: 23-Mar-2023 11:11:02

Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22012.D

Injection Date: 22-Mar-2023 17:05:07

Instrument ID: CVGG2

Operator ID:

Lims ID: mb

Worklist Smp#: 12

Client ID:

Injection Vol: 1.0 ul

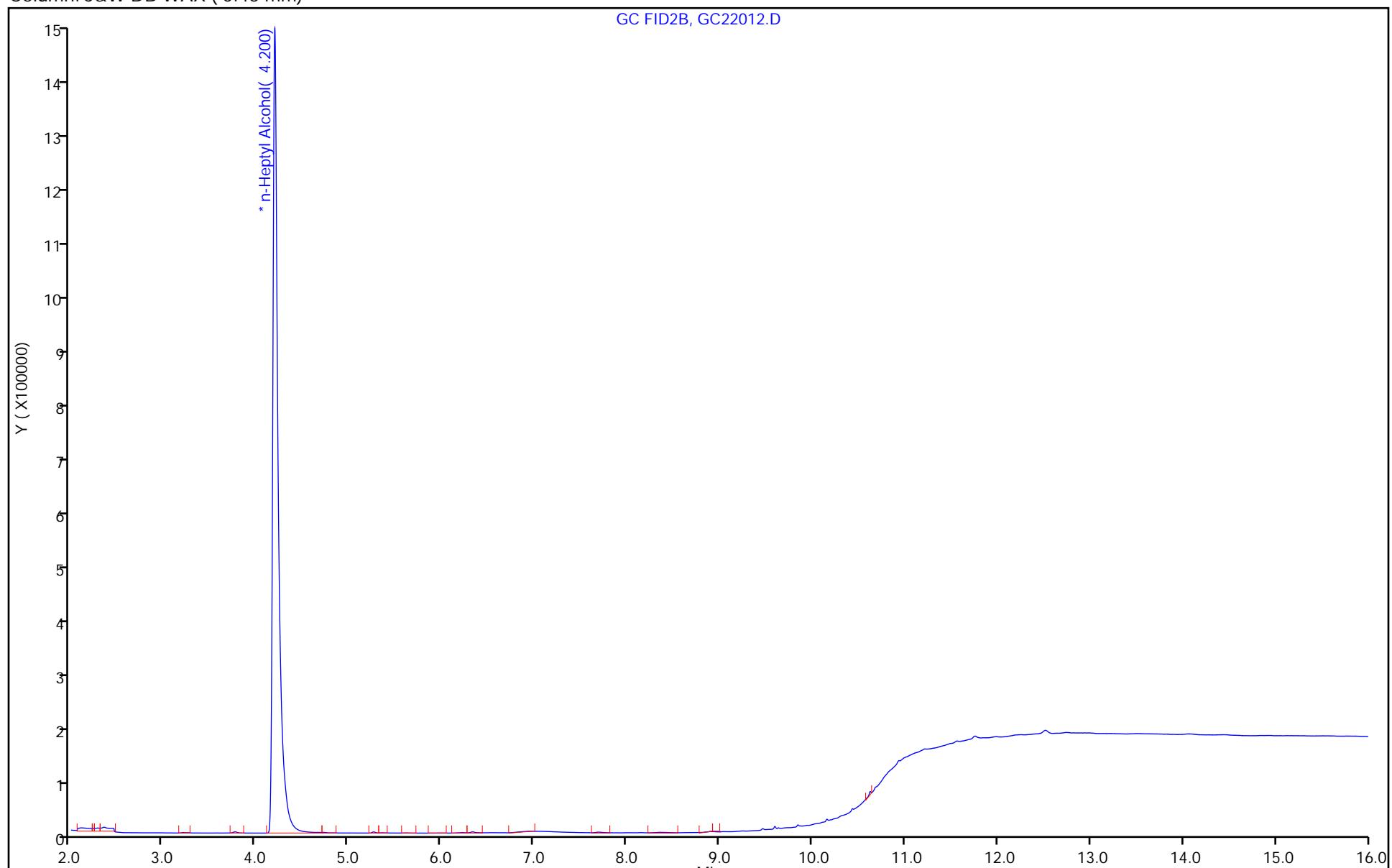
Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 8015_GLY_VGG

Limit Group: 8015C_DAI

Column: J&W DB WAX (0.45 mm)



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124965-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: LCS 680-769036/6
Matrix: Water Lab File ID: GC22006.D
Analysis Method: 8015C GLY Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1 (mL) Date Analyzed: 03/22/2023 14:45
Con. Extract Vol.: 1 (mL) Dilution Factor: 1
Injection Volume: 1 (uL) GC Column: J&W DB WAX ID: 0.45 (mm)
% Moisture: _____ % Solids: _____ GPC Cleanup: (Y/N) N
Cleanup Factor: _____
Analysis Batch No.: 769036 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.8		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22006.D
 Lims ID: lcs
 Client ID:
 Sample Type: LCS
 Inject. Date: 22-Mar-2023 14:45:13 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-006
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:11:08 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

First Level Reviewer: SK9U Date: 22-Mar-2023 16:25:20

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						
2.909	2.906	0.003	1064345	20.0	20.3	
2 4-Hydroxy-4-methyl-2-pentanone						M
3.455	3.448	0.007	947504	20.0	19.6	M
3 2-Butoxyethanol						M
3.752	3.754	-0.002	1203545	20.0	20.7	M
* 4 n-Heptyl Alcohol						M
4.205	4.212	-0.007	4401122	50.0	50.0	M
5 Dipropylene Glycol Methyl Ether						
5.123	5.118	0.005	73373	20.0	19.9	
7 Ethylene glycol						
6.336	6.330	0.006	153907	20.0	2.88	
6 Propylene glycol						
6.596	6.585	0.011	826654	20.0	82.3	
8 2-(2-Butoxyethoxy)ethanol						
8.390	8.390	0.000	818418	20.0	19.8	
9 2,2'-Oxybisethanol						
9.595	9.596	-0.001	418268	20.0	18.6	
10 Triethylene Glycol						
10.623	10.624	-0.001	403179	20.0	18.4	
11 Tetraethylene Glycol						
11.754	11.754	0.000	824688	40.0	36.7	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

SG_GlyICV_00055

Amount Added: 10.00

Units: uL

SG,GLY,ISTD,00106

Amount Added: 10.00

Units: uL

Run Reagent

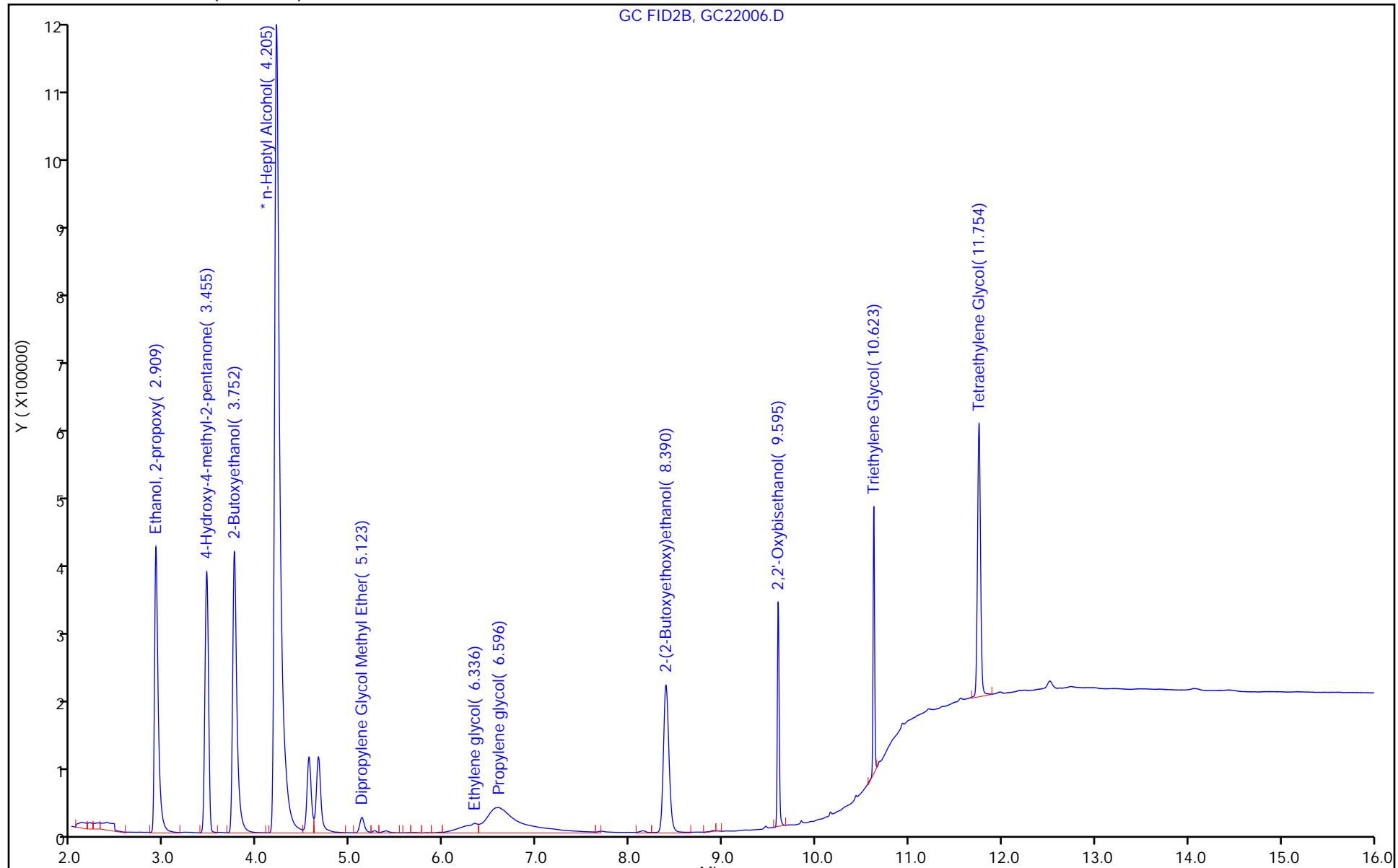
Report Date: 23-Mar-2023 11:11:09

Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22006.D
Injection Date: 22-Mar-2023 14:45:13 Instrument ID: CVGG2
Lims ID: lcs Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 6



Eurofins Savannah

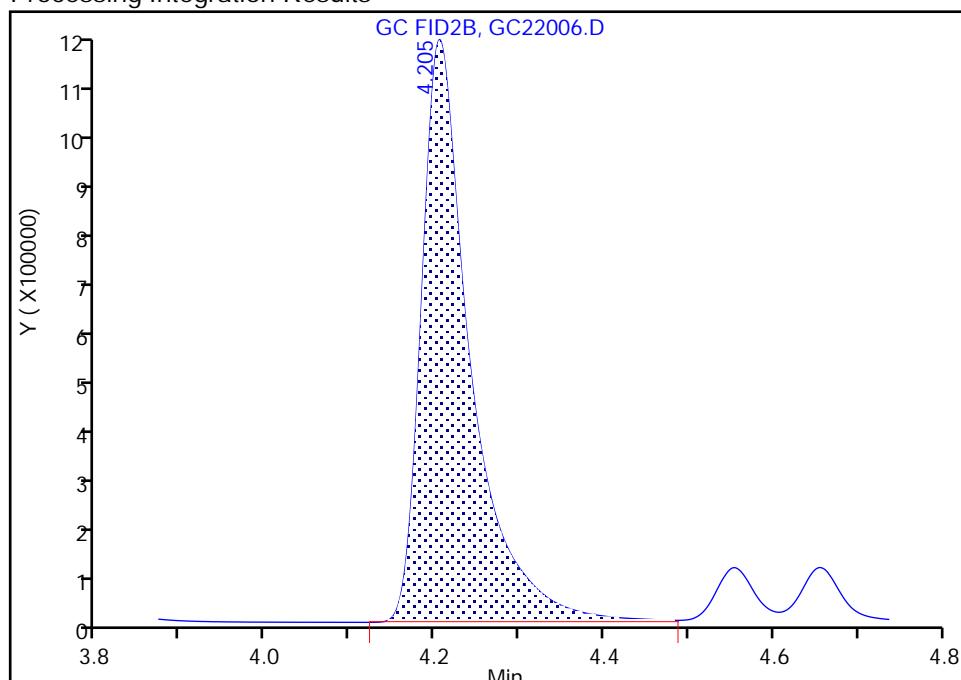
Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22006.D
 Injection Date: 22-Mar-2023 14:45:13 Instrument ID: CVGG2
 Lims ID: lcs
 Client ID:
 Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Method: 8015_GLY_VGG Limit Group: 8015C_DAI
 Column: J&W DB WAX (0.45 mm) Detector: GC FID2B

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

Signal: 1

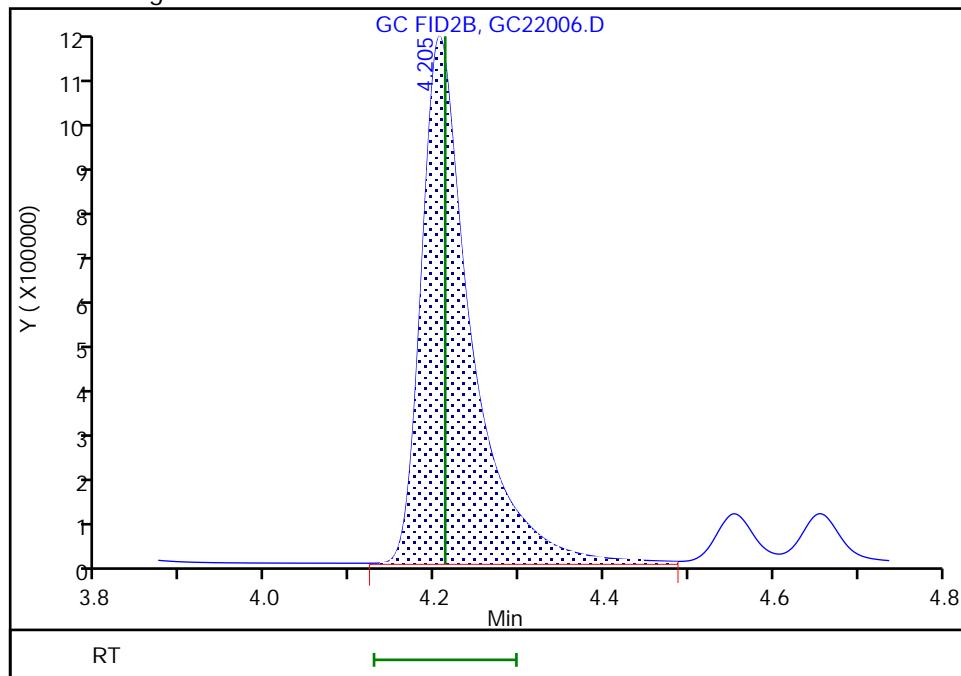
RT: 4.20
 Area: 4361330
 Amount: 50.000000
 Amount Units: ug/ml

Processing Integration Results



RT: 4.20
 Area: 4401122
 Amount: 50.000000
 Amount Units: ug/ml

Manual Integration Results



Reviewer: SK9U, 22-Mar-2023 16:25:13

Audit Action: Assigned New Baseline

Audit Reason: Baseline Smoothing

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah Job No.: 580-124965-1
SDG No.:
Client Sample ID: Lab Sample ID: LCSD 680-769036/7
Matrix: Water Lab File ID: GC22007.D
Analysis Method: 8015C GLY Date Collected:
Extraction Method: Date Extracted:
Sample wt/vol: 1 (mL) Date Analyzed: 03/22/2023 15:08
Con. Extract Vol.: 1 (mL) Dilution Factor: 1
Injection Volume: 1 (uL) GC Column: J&W DB WAX ID: 0.45 (mm)
% Moisture: % Solids: GPC Cleanup: (Y/N) N
Cleanup Factor:
Analysis Batch No.: 769036 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.1		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22007.D
 Lims ID: lcSD
 Client ID:
 Sample Type: LCSD
 Inject. Date: 22-Mar-2023 15:08:35 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Sample Info: 680-0084602-007
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:11:08 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

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						
2.909	2.906	0.003	890528	20.0	17.4	
2 4-Hydroxy-4-methyl-2-pentanone						
3.454	3.448	0.006	828335	20.0	17.6	
3 2-Butoxyethanol						
3.752	3.754	-0.002	997749	20.0	17.5	
* 4 n-Heptyl Alcohol						
4.205	4.212	-0.007	4256785	50.0	50.0	
5 Dipropylene Glycol Methyl Ether						
5.122	5.118	0.004	68227	20.0	19.1	
7 Ethylene glycol						
6.336	6.330	0.006	168826	20.0	3.42	
6 Propylene glycol						
6.579	6.585	-0.006	891338	20.0	90.0	
8 2-(2-Butoxyethoxy)ethanol						
8.392	8.390	0.002	764862	20.0	19.1	
9 2,2'-Oxybisethanol						
9.595	9.596	-0.001	454188	20.0	21.1	
10 Triethylene Glycol						
10.624	10.624	0.000	434283	20.0	20.5	
11 Tetraethylene Glycol						
11.753	11.754	-0.001	884265	40.0	40.6	

Reagents:

SG_GlyICV_00055	Amount Added: 10.00	Units: uL	
SG,GLY,ISTD_00106	Amount Added: 10.00	Units: uL	Run Reagent

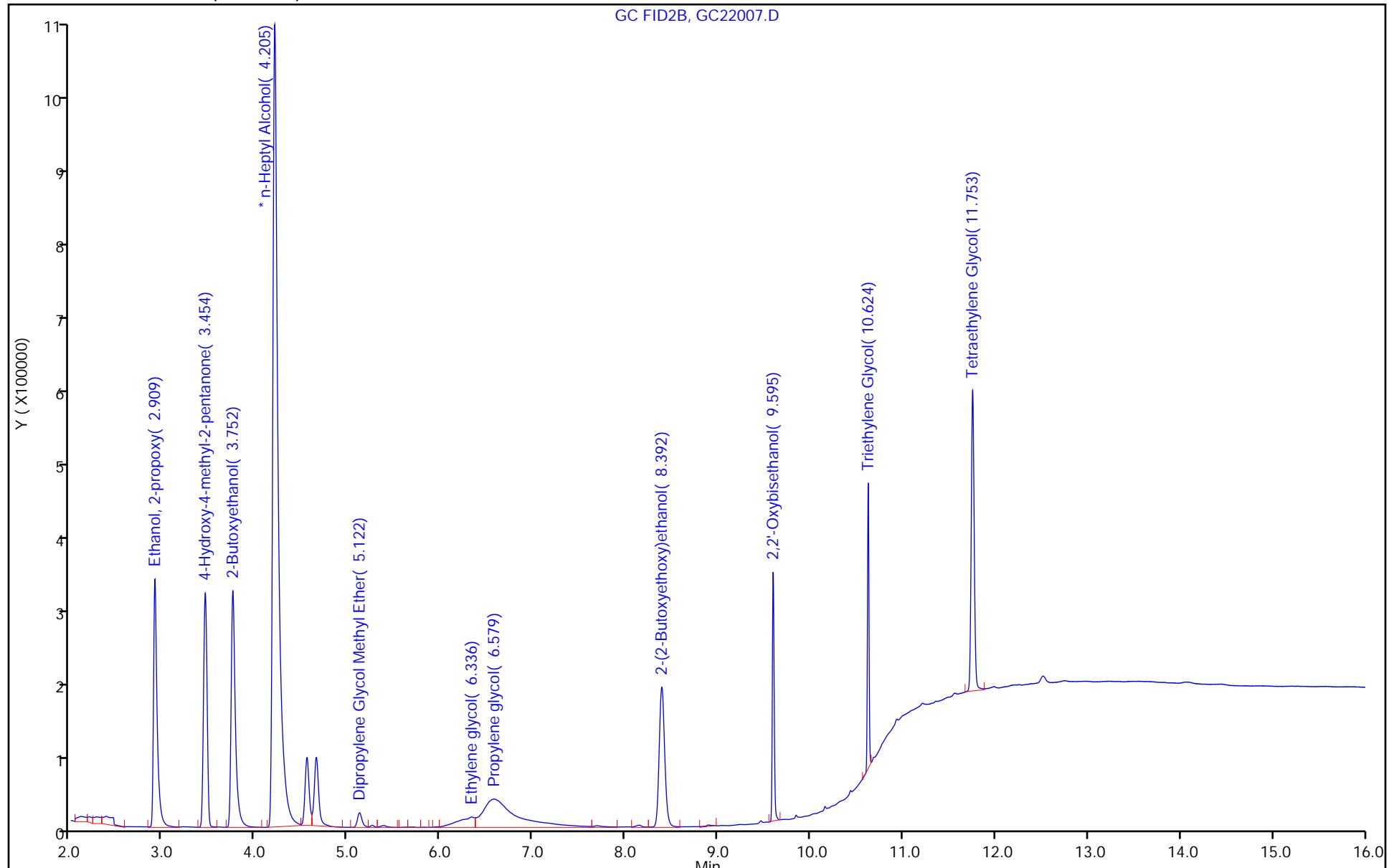
Report Date: 23-Mar-2023 11:11:10

Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22007.D
Injection Date: 22-Mar-2023 15:08:35 Instrument ID: CVGG2
Lims ID: lcsd Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 7



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Client Sample ID: AF-RHMW16-WGN01LF-2303W2
MS

Lab Sample ID: 580-124965-2 MS

Matrix: Water

Lab File ID: GC22016.D

Analysis Method: 8015C GLY

Date Collected: 03/13/2023 14:30

Extraction Method: _____

Date Extracted: _____

Sample wt/vol: 1 (mL)

Date Analyzed: 03/22/2023 18:38

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.: 769036

Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	19.7		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22016.D
 Lims ID: 580-124965-A-2 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 22-Mar-2023 18:38:42 ALS Bottle#: 0 Worklist Smp#: 16
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-016
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:10:45 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

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
 4.200 4.189 0.011 4108804 50.0 50.0
 8 2-(2-Butoxyethoxy)ethanol
 8.392 8.392 0.000 760228 20.0 19.7

Reagents:

SG_GlyICV_00055	Amount Added: 10.00	Units: uL
SG,GLY,ISTD_00106	Amount Added: 10.00	Units: uL Run Reagent

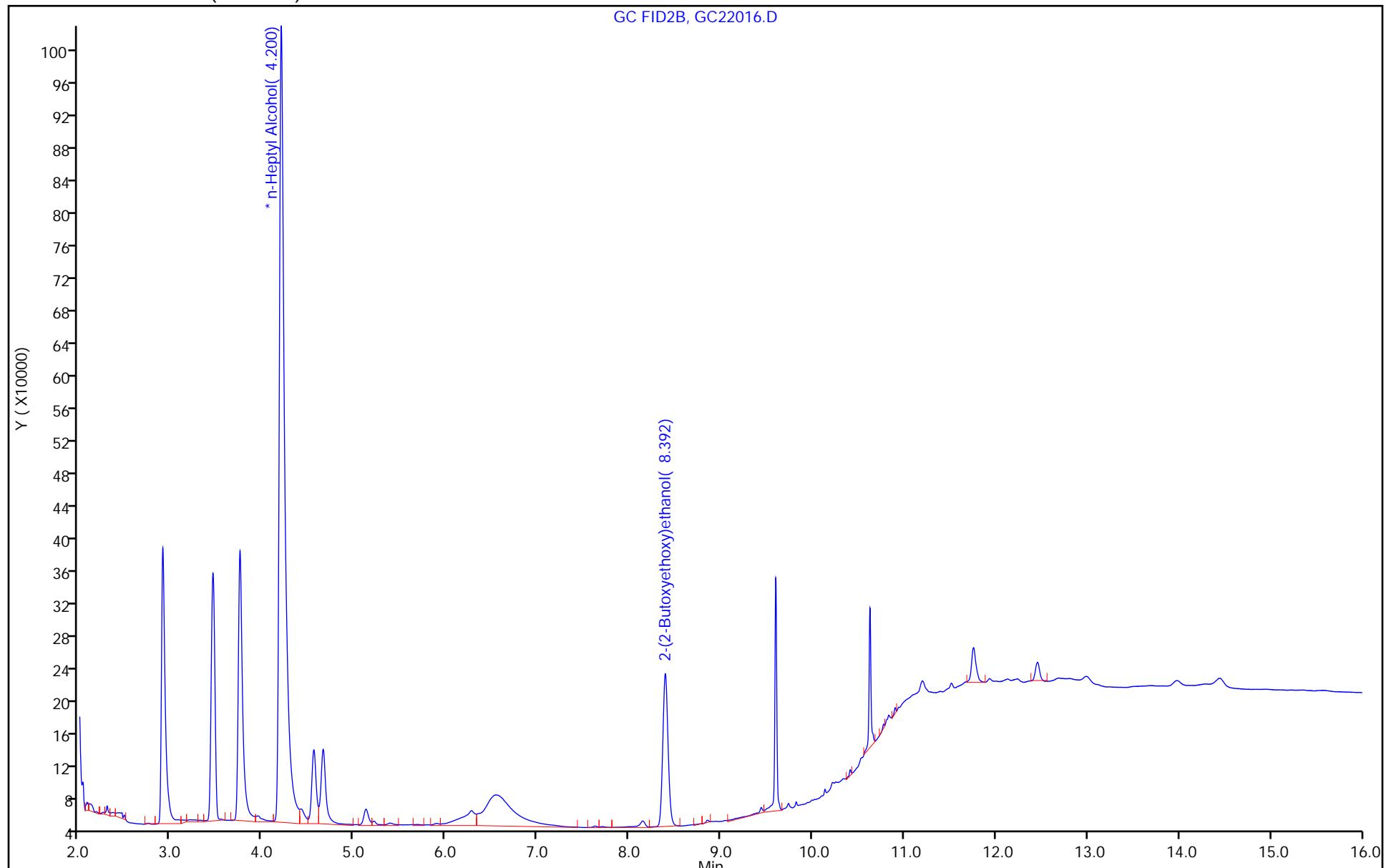
Report Date: 23-Mar-2023 11:11:04

Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22016.D
Injection Date: 22-Mar-2023 18:38:42 Instrument ID: CVGG2
Lims ID: 580-124965-A-2 MS Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 16



FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.: _____

Client Sample ID: AF-RHMW16-WGN01LF-2303W2
MSD

Lab Sample ID: 580-124965-2 MSD

Matrix: Water

Lab File ID: GC22017.D

Analysis Method: 8015C GLY

Date Collected: 03/13/2023 14:30

Extraction Method: _____

Date Extracted: _____

Sample wt/vol: 1 (mL)

Date Analyzed: 03/22/2023 19:02

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.: 769036

Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
112-34-5	2-(2-Butoxyethoxy)ethanol	18.7		5.0	3.0	1.1

Eurofins Savannah
Target Compound Quantitation Report

Data File: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\GC22017.D
 Lims ID: 580-124965-A-2 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 22-Mar-2023 19:02:00 ALS Bottle#: 0 Worklist Smp#: 17
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 680-0084602-017
 Operator ID: Instrument ID: CVGG2
 Method: \\chromfs\Savannah\ChromData\CVGG2\20230322-84602.b\8015_GLY_VGG.m
 Limit Group: 8015C_DAI
 Last Update: 23-Mar-2023 11:10:45 Calib Date: 18-Mar-2023 19:24:22
 Integrator: Falcon
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Savannah\ChromData\CVGG2\20230318-84498.b\GC18011.D
 Column 1 : J&W DB WAX (0.45 mm) Det: GC FID2B
 Process Host: CTX1631

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
 4.202 4.189 0.013 4507118 50.0 50.0
 8 2-(2-Butoxyethoxy)ethanol
 8.390 8.392 -0.002 793917 20.0 18.7

Reagents:

SG_GlyICV_00055	Amount Added: 10.00	Units: uL	
SG,GLY,ISTD_00106	Amount Added: 10.00	Units: uL	Run Reagent

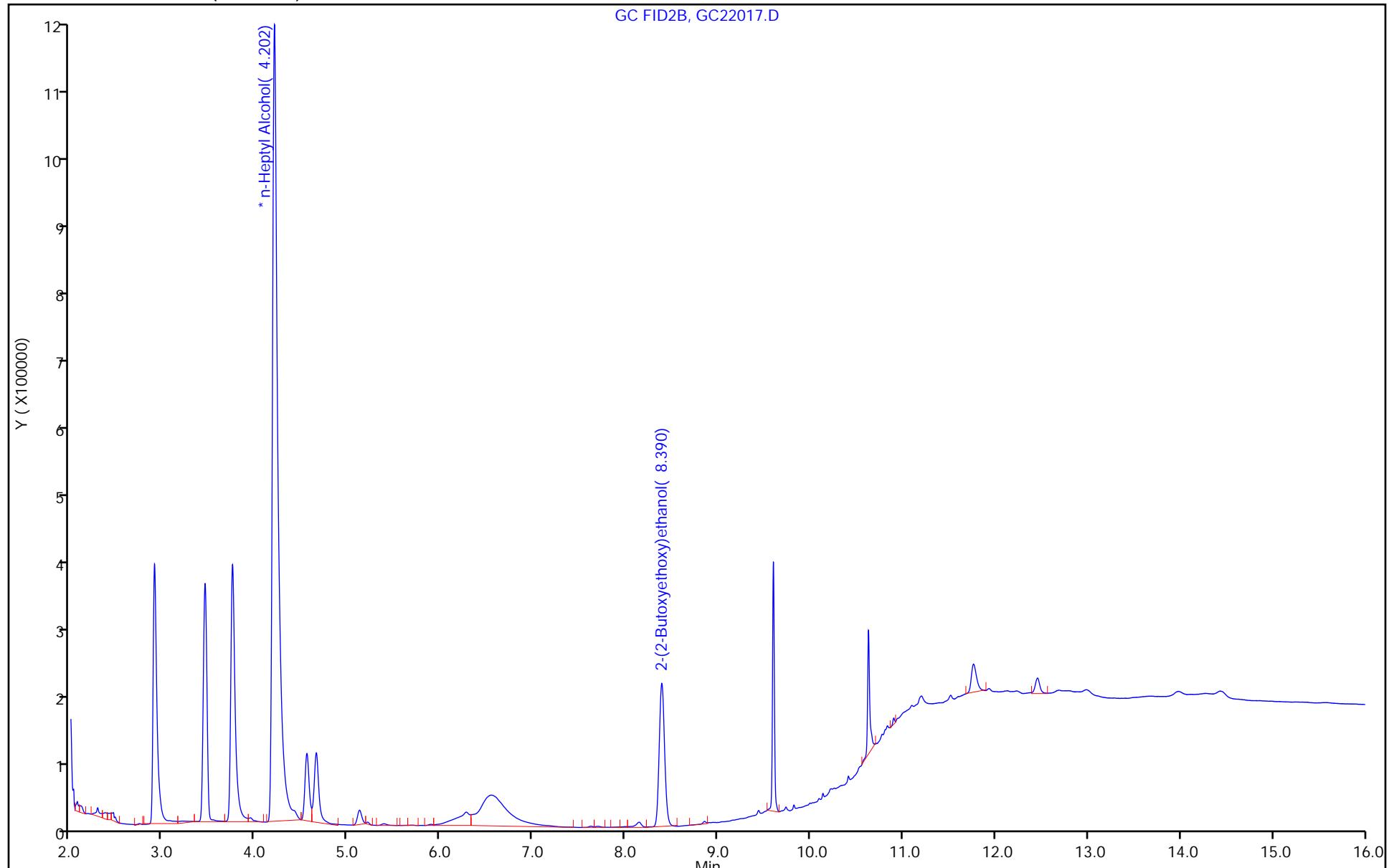
Report Date: 23-Mar-2023 11:11:05

Chrom Revision: 2.3 16-Mar-2023 15:40:40

Eurofins Savannah

Data File: \\chromfs\\Savannah\\ChromData\\CVGG2\\20230322-84602.b\\GC22017.D
Injection Date: 22-Mar-2023 19:02:00 Instrument ID: CVGG2
Lims ID: 580-124965-A-2 MSD Operator ID:
Client ID:
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 0
Method: 8015_GLY_VGG Limit Group: 8015C_DAI
Column: J&W DB WAX (0.45 mm)

Worklist Smp#: 17



GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-124965-1
SDG No.: _____
Instrument ID: CVGG2 Start Date: 03/18/2023 17:04
Analysis Batch Number: 768387 End Date: 03/19/2023 07:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-768387/5		03/18/2023 17:04	1	GC18005.D	J&W DB WAX 0.45 (mm)
IC 680-768387/6		03/18/2023 17:27	1	GC18006.D	J&W DB WAX 0.45 (mm)
IC 680-768387/7		03/18/2023 17:51	1	GC18007.D	J&W DB WAX 0.45 (mm)
ICIS 680-768387/8		03/18/2023 18:14	1	GC18008.D	J&W DB WAX 0.45 (mm)
IC 680-768387/9		03/18/2023 18:37	1	GC18009.D	J&W DB WAX 0.45 (mm)
IC 680-768387/10		03/18/2023 19:01	1	GC18010.D	J&W DB WAX 0.45 (mm)
IC 680-768387/11		03/18/2023 19:24	1	GC18011.D	J&W DB WAX 0.45 (mm)
ICV 680-768387/12 CCV		03/18/2023 19:47	1	GC18012.D	J&W DB WAX 0.45 (mm)
ZZZZZ		03/18/2023 20:11	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/18/2023 20:34	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/18/2023 21:44	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/18/2023 22:07	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/18/2023 22:30	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/18/2023 22:53	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/18/2023 23:17	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/18/2023 23:40	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 00:03	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 00:26	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 00:50	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 01:13	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 01:36	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 01:59	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 02:23	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 02:46	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 03:09	1		J&W DB WAX 0.45 (mm)
CCV 680-768387/33		03/19/2023 03:56	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 05:05	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 05:28	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 05:52	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/19/2023 06:15	1		J&W DB WAX 0.45 (mm)
CCV 680-768387/41		03/19/2023 07:01	1		J&W DB WAX 0.45 (mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Savannah Job No.: 580-124965-1
SDG No.: _____
Instrument ID: CVGG2 Start Date: 03/22/2023 14:21
Analysis Batch Number: 769036 End Date: 03/22/2023 22:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-769036/5		03/22/2023 14:21	1	GC22005.D	J&W DB WAX 0.45 (mm)
LCS 680-769036/6		03/22/2023 14:45	1	GC22006.D	J&W DB WAX 0.45 (mm)
LCSD 680-769036/7		03/22/2023 15:08	1	GC22007.D	J&W DB WAX 0.45 (mm)
ZZZZZ		03/22/2023 15:31	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/22/2023 15:55	1		J&W DB WAX 0.45 (mm)
MB 680-769036/12		03/22/2023 17:05	1	GC22012.D	J&W DB WAX 0.45 (mm)
ZZZZZ		03/22/2023 17:28	1		J&W DB WAX 0.45 (mm)
580-124965-1	AF-RHMW10-WGN01LF-230 3W2	03/22/2023 17:51	1	GC22014.D	J&W DB WAX 0.45 (mm)
580-124965-2	AF-RHMW16-WGN01LF-230 3W2	03/22/2023 18:15	1	GC22015.D	J&W DB WAX 0.45 (mm)
580-124965-2 MS	AF-RHMW16-WGN01LF-230 3W2 MS	03/22/2023 18:38	1	GC22016.D	J&W DB WAX 0.45 (mm)
580-124965-2 MSD	AF-RHMW16-WGN01LF-230 3W2 MSD	03/22/2023 19:02	1	GC22017.D	J&W DB WAX 0.45 (mm)
580-124965-3	AF-HDMW225303-WGN01LF -2303W2	03/22/2023 19:25	1	GC22018.D	J&W DB WAX 0.45 (mm)
580-124965-4	AF-RHMW12A-WGN01LF-23 03W2	03/22/2023 19:48	1	GC22019.D	J&W DB WAX 0.45 (mm)
580-124965-5	AF-RHMW12A-WGFD01LF-2 303W2	03/22/2023 20:12	1	GC22020.D	J&W DB WAX 0.45 (mm)
ZZZZZ		03/22/2023 20:35	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/22/2023 20:58	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/22/2023 21:22	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/22/2023 21:45	1		J&W DB WAX 0.45 (mm)
ZZZZZ		03/22/2023 22:08	1		J&W DB WAX 0.45 (mm)
CCV 680-769036/27		03/22/2023 22:55	1	GC22027.D	J&W DB WAX 0.45 (mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.:

Batch Number: 768387

Batch Start Date: 03/18/23 17:04

Batch Analyst: Kellar, Joshua C

Batch Method: 8015C GLY

Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	Final Amount	SG_Gly_CAL_00048	SG,GLY ISTD_00106	SG_GlyICV_00055		
IC 680-768387/5		8015C GLY		1 mL	50 uL	10 uL			
IC 680-768387/6		8015C GLY		1 mL	40 uL	10 uL			
IC 680-768387/7		8015C GLY		1 mL	25 uL	10 uL			
ICIS 680-768387/8		8015C GLY		1 mL	10 uL	10 uL			
IC 680-768387/9		8015C GLY		1 mL	5 uL	10 uL			
IC 680-768387/10		8015C GLY		1 mL	2.5 uL	10 uL			
IC 680-768387/11		8015C GLY		1 mL	1 uL	10 uL			
ICV 680-768387/12 CCV		8015C GLY		1 mL		10 uL	10 uL		

Batch Notes

Basis	Basis Description

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

8015C GLY

Page 1 of 1

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Savannah

Job No.: 580-124965-1

SDG No.:

Batch Number: 769036

Batch Start Date: 03/22/23 14:21

Batch Analyst: Kellar, Joshua C

Batch Method: 8015C GLY

Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	SG_Gly_CAL_00048	SG_GLY_ISTD_00106	SG_GlyICV_00055		
CCVIS 680-769036/5		8015C GLY		1 mL	10 uL	10 uL			
LCS 680-769036/6		8015C GLY		1 mL		10 uL	10 uL		
LCSD 680-769036/7		8015C GLY		1 mL		10 uL	10 uL		
MB 680-769036/12		8015C GLY		1 mL		10 uL			
580-124965-A-1	AF-RHMW10-WGN01L F-2303W2	8015C GLY	T	1 mL		10 uL			
580-124965-A-2	AF-RHMW16-WGN01L F-2303W2	8015C GLY	T	1 mL		10 uL			
580-124965-A-2	AF-RHMW16-WGN01L F-2303W2	8015C GLY	T	1 mL		10 uL	10 uL		
580-124965-A-2	AF-RHMW16-WGN01L MS F-2303W2	8015C GLY	T	1 mL		10 uL	10 uL		
580-124965-A-3	AF-HDMW25303-WG N01LF-2303W2	8015C GLY	T	1 mL		10 uL			
580-124965-A-4	AF-HDMW12A-WGN01 LF-2303W2	8015C GLY	T	1 mL		10 uL			
580-124965-A-5	AF-HDMW12A-WGFD0 1LF-2303W2	8015C GLY	T	1 mL		10 uL			
CCV 680-769036/27		8015C GLY		1 mL	10 uL	10 uL			

Batch Notes

Basis	Basis Description
T	Total/NA

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

8015C GLY

Page 1 of 1

Subcontract Data

Shipping and Receiving Documents

Chain of Custody Record

Client Information		Sample ID: 01/MU Shively	Lab P.M.: Elaine Walker	COC No.: 2303W2AFAE03
Client Contact		Phone: 856-938-7770	E-Mail: M.Elaine.Walker@EurofinsET.com	Carrier Tracking No(s): 2303W2AFAE03
Company: AECOM	Address: 1001 Bishop St, Suite 1600	TAT Requested (days): Rush ASAP	State of Origin: Hawaii	Page: Page 1 of 1
		Compliance Project: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	PO #:	Job #: 3
		Phone: 808-954-4512 / 770-331-0794	WO #:	
		Email: Watson.Tanji@aecom.com / Mark.Kromis@aecom.com	Project #: 60697810	
		Project Name: CTO N6274223F0104	SSOW #: Site: RHSF	
		Total Number of containers: 3		
		Perfomr MSMSD (Yes or No) <input checked="" type="checkbox"/>		
		Field Filled Sample (Yes or No) <input checked="" type="checkbox"/>		
		Special Instructions/Note: 3/13/23		
Analysis Requested		Preservation Codes: <input checked="" type="checkbox"/> A - HCl <input type="checkbox"/> M - Hexane <input type="checkbox"/> B - NaOH <input type="checkbox"/> N - None <input type="checkbox"/> C - Zn Acetate <input type="checkbox"/> O - AsNaO2 <input type="checkbox"/> D - Nitric Acid <input type="checkbox"/> P - Na2O4S <input type="checkbox"/> E - NaHSO4 <input type="checkbox"/> Q - Na2SO3 <input type="checkbox"/> F - MeOH <input type="checkbox"/> R - Na2S2O3 <input type="checkbox"/> G - Amchlor <input type="checkbox"/> S - H2SO4 <input type="checkbox"/> H - Ascorbic Acid <input type="checkbox"/> T - TSP Decahydrate <input type="checkbox"/> I - ice <input type="checkbox"/> U - Acetone <input type="checkbox"/> J - Di Water <input type="checkbox"/> V - MCAA <input type="checkbox"/> K - EDTA <input type="checkbox"/> W - H 4-5 <input type="checkbox"/> L - EDA <input type="checkbox"/> Z - other (specify) <input type="checkbox"/> Other:		
Sample Identification		Sample Date: 3/11/23	Sample Time: 1255	Sample Type (C=comp, G=grab): <input checked="" type="checkbox"/> G
		Preservation Code: <input checked="" type="checkbox"/> A	Matrix (Newater, Seawater, Oil/water, Oil/solid, Oil in tissue, AP40): <input checked="" type="checkbox"/> W	BT in tissue: <input checked="" type="checkbox"/> N N X
Possible Hazard Identification		<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	
Deliverable Requested: I, II, III, IV, Other (specify)		Prelim data (Level 1 or 2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQUIS EDD.		
Empty Kit Relinquished by: James Hason		Date/Time: 3/14/23 1500	Received by: James Hason	Method of Shipment: <input checked="" type="checkbox"/> Air
Relinquished by: James Hason		Date/Time: 3/15/23 1400	Received by: AECOM	Date/Time: 3/14/23 1500
Relinquished by: James Hason		Date/Time: 3/15/23 1400	Received by: AECOM	Date/Time: 3/14/23 1500
Custody Seals Intact: <input checked="" type="checkbox"/> Custody Seal No.: 3		Cooler Temperature(s): °C and Other Remarks: 1.2 / 1.2		

Chain of Custody Record

Univ. No. 257882



Client Information		Sample Ref:	Lab Pnt: Elaine Walker	Carrier Tracking No(s): FEEDER	COC No: 2303W2AEEA06
Company: AECOM	Client Contact: Project #: 6398434	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page:	Page 1 of 1
Analysis Requested <input checked="" type="checkbox"/> Preservation Codes: A - HCl M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2OAs E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Anchior 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:					
Total Number of Contaminants: <input checked="" type="checkbox"/> Special Instructions/Note: 3					
Petroleum MSDS (Yes or No) <input checked="" type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> 8015C-DAI-GL-65/2-butoxyethoxy-ethanol Project Name: CTO N6274223F0104 Site: RHSF					
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=organic, B=biomass, A=air)	Preservation Code:
Page 1 of 138 of 146	03/13/23	1430	G	W	N N X
Possible Hazard /Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)					
Prelim data (Level 1or2)-see TAT above. DoD Stage 4 report standard TAT AECOM EQuIS EDD Date: 03/13/23 Time: 15:04 Company: AECOM Date: 03/15/23 Time: 14:00 Company: AECOM					
Empty Kit Relinquished by: Relinquished by: Elaine Walker Received by: Alex Edmonds Relinquished by: Alex Edmonds Received by: Alex Edmonds Date/Time: 3/16/23 13:45 Date/Time: 3/16/23 13:45 Relinquished by: Received by: Date/Time: Date/Time:					
Cooler Temperature(s) °C and Other Remarks: 1-21.2 Ver. 01/16/2019					

Chain of Custody Record

016-6257043

Client Information		Sampled by:		Lab P.M.		Carrier Tracking No(s):	
		Olivia Shively Phone: 856-933-7710		Elaine Walker E-Mail: M.Elaine.Walker@EurofinsET.com		ExEL UNITE D	
Client Contact:						State of Origin: Hawaii	
Company: AECOM		PWSID:		Job #:		Page 1 of 1	
Address: 1001 Bishop St Suite 1600		Due Date Requested: see subcontract		TAT Requested (days): Rush - ASAP		COC No: 2303W2AFEAD4	
City: Honolulu, Hawaii 96813		Compliance Project: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		PO #:		Carrier Tracking No(s):	
State, Zip: 808-354-4512 / 770-331-0794		WO #:		Project #: 60697810		ExEL UNITE D	
Email: Watson.Tanji.watson.tanji@aecom.com/ Mark.Kromis (mark.kromis@aecom.com)		SSOW#:		Site: CTO N6274223F0104		State of Origin: Hawaii	
Project Name: RHSF		Sample Date:		Sample Time:		Total Number of containers:	
Site:		Preservation Code:		Sample Type (C=comp, G=grab):		Preservation Codes:	
Sample Identification		3/14/13 1040		G W N N X		A - HCl B - NaOH C - Zn Acetate D - Na2O4S E - NaHSO4 F - MeOH G - Anchor H - Ascorbic Acid I - Ce J - Di Water K - EDTA L - EDA Other:	
Possible Hazard Identification		Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B		Unknown <input type="checkbox"/> Radiological <input type="checkbox"/>		Preservation Codes:	
Deliverable Requested: I, II, III, IV, Other (specify)		Prelim data (Level 1 or 2) see TAT above. DoD Stage 4 report standard TAT. AECOM EQUIS EDD.		Time:		Carrier Tracking No(s):	
Empty Kit Relinquished by:		Date/Time: 3/14/13 1500		Company: AECOM		Received by: James Mason	
Relinquished by: Olivia Shively		Date/Time: 3/14/13 1400		Company: AECOM		Date/Time: 3/14/13 1500	
Relinquished by: James Mason		Date/Time:		Company:		Company: RECON	
Relinquished by:		Date/Time:		Company:		Company: ETAT	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: <input type="checkbox"/> A <input type="checkbox"/> B		Time:		Cooler Temperature(s) °C and Other Remarks:	
						1.21.2	

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Tacoma, WA 98424

Client Information		Sampled By:		Analysis Requested		Preservation Codes:		Special Instructions/Note:	
Company: AECOM	Address: 1001 Bishop St. Suite 1600 City: Honolulu State, Zip: Hawaii 96813 Phone: 808-954-4512 / 770-331-0794 Email: Watson.Tanji(watson.tanji@aecom.com)/ Mark.Kromis(mark.kromis@aecom.com)	Project #: CTO N6274223-F0104 Site: RHSE	Lab PM: Elaine Walker E-Mail: M.Elaine.Walker@EurofinsET.com	Carrier Tracking No(s): FEDEX UNITED State of Origin: Hawaii	Total Number of containers: 8015C-Dai-GL-D5/2-(Z-butoxyethoxy)-ethanol	A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	M - Hexane N - None O - Ash/o2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylamine U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Relinquished by: Date/Time: 3/13/23 1400 AECOM Company Relinquished by: Date/Time: 3/13/23 1300 AECOM Company Custody Seal intact: Custody Seal No: Ver: 01/16/2019	
Project Contact:		FW/SID:		Perform Sample (Yes or No)		Total Number of containers:			
Due Date Requested: See subcontract TRI Requested (days): Rush - ASAP		Compliance Project: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No PO #: VO #: Project #: 606397810 SSOW#:		Sample Date		Sample Time	Sample Type (C=comp, G=grab)	Matrix (Newwater, Seawater, Oil/Waste oil, Br/Tissue, Ash/Air)	
Project Name:		Sample Date		Preservation Code:	A				
Sample Identification		03/13/23	11:00	G	W	N	N	X	3
Possible Hazard Identification		03/13/23	11:00	G	W	N	N	X	3
Non-Hazard		03/13/23	11:00	G	W	N	N	X	3
Deliverable Requested: I, II, III, IV, Other (specify)		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
Prelim data (Level 1 or 2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
Radiological		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
Poison B		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
Unknown		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
Skin Irritant		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
Prelim data (Level 1 or 2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company
Special Instructions/QC Requirements: DOD QSM project		03/13/23		03/13/23		Date:	Time:	Received by: Alex Enright Company	Method of Shipment: Date/Time: 3/13/23 1606 AECOM Company Received by: Alex Enright Company

Chain of Custody Record

Unit# 406 Oil 625788P3

Client Information		Sample ID: 406-138-7770	Lab P.M.: Elaine Walker	Carrier Tracking No(s): 2303W2AFAE03
Company	Client Contact	Phone: 800-938-7770	E-Mail: M Elaine.Walker@EurofinsET.com	State of Origin: Hawaii
AECOM		PWSID		
Address:	1001 Bishop St. Suite 1600	Due Date Requested: see Subcontract		
City:	Honolulu	TAT Requested (days): Rush - ASAP		
State ZIP:	Hawaii 96813	Compliance Project: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Phone:	808-954-4512 / 770-331-0794	PO #:		
Email:	Watson.Tanji@aecom.com/ Mark.Kromis (mark.kromis@aecom.com)	WO #:		
Project Name:	CTO N6274223F0104	Project #: 60697810		
Site:	RHSF	SSOW#:		
Analysis Requested				
<input checked="" type="checkbox"/> Total Number of containers <input checked="" type="checkbox"/> Perform MSDS (yes or No) <input checked="" type="checkbox"/> Field Filtered Sample (yes or No)				
<input checked="" type="checkbox"/> Special Instructions/Note:  8015C-DAI-GL-D5/2-(2-butoxyethoxy)-ethanol				
Sample Identification	Sample Date: 5/14/23	Sample Time: 1255	Sample Type: G (grab)	Matrix (W=water, S=solid, O=water/oil, B=tissue, A=Air)
			Preservation Code: A	
AF-RHMW10-WGN01LF-2303W2				
<input checked="" type="checkbox"/> Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological <input checked="" type="checkbox"/> Deliverable Requested I, II III IV, Other (specify)				
Prelim data (Level 1or2)=see TAT above DoD Stage 4. report standard TAT. AECOM EQuIS EDD.				
Empty Kit Relinquished by	Relinquished by: DIVY SHIVELY DUN	Date/Time: 3/14/23 1500	Received by: James Faison	Method of Shipment:
Relinquished by	James Faison	Date/Time: 3/15/23 1400	Received by: John Kuehne	
Custody Seals intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cooler Temperature(s) °C and Other Remarks: 1.2 / 1.2		

Chain of Custody Record

Client Information		Sample# <i>50B212 Area</i>	Lab Pnt: Elaine Walker	Carrier Tracking No(s): <i>2303W2AFA06</i>
Client Contact:	Phone# <i>6398434</i>	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: <i>Hawaii</i>	FedEx Job #:
Company: AECOM	PWSID	Analysis Requested		
Address: 1001 Bishop St. Suite 1600	Due Date Requested see subcontract	TAT Requested (days): <i>Rush - ASAP</i>		
City: Honolulu	Compliance Project: △ Yes ▲ No	PO #:		
State, Zip: Hawaii 96813	Phone: 808-954-4512 / 770-331-0794	WO #:		
Email: Watson.Tanji(watson.tanji@aecom.com)/ Mark.Kromis(mark.kromis@aecom.com)	Project Name: CTO N6274223F0104	Project #: 60697810		
Site: RHSF	SSOW#:	Perfomr MSMSD (Yes or No) <i>No</i>		
Sample Identification		Sample Date <i>03/13/23</i>	Sample Time <i>1430</i>	Sample Type (C=comp, G=grab) <i>G</i>
				Matrix (Water, Soil, Oil, Residue, BT,Tissue, Ash) <i>W</i>
			Preservation Code: <i>A</i>	Preservation (Water, Soil, Oil, Residue, BT,Tissue, Ash) <i>N N X</i>
Possible Hazard/Identification		<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant
		<input type="checkbox"/> Poison A	<input type="checkbox"/> Poison B	<input type="checkbox"/> Radiological
Deliverable Requested I II III, IV Other (specify)		Prelim data (Level 1or2) see TAT above. DoD Stage 4 report standard TAT. AECOM EQUS EDD.		
Empty Kit Relinquished by		Date: <i>03/13/23</i>	Time: <i>15:15</i>	Method of Shipment:
Relinquished by <i>Elaine Walker</i>	Received by <i>AECOM Company</i>	Received by <i>AECOM Company</i>	Received by <i>AECOM Company</i>	Received by <i>AECOM Company</i>
Relinquished by <i>Elaine Walker</i>	Date/Time: <i>03/15/23 14:00</i>	Date/Time: <i>03/16/23 13:16</i>	Date/Time: <i>03/16/23 13:16</i>	Date/Time: <i>03/16/23 13:16</i>
Custody Seals Intact: △ Yes ▲ No	Custody Seal No. <i>1-211-2</i>			
Cooler Temperature(s) °C and Other Remarks: <i>Ver 01/16/2019</i>				

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-124965-1

Login Number: 124965

List Source: Eurofins Seattle

List Number: 1

Creator: Presley, Kim A

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

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-124965-1

Login Number: 124965

List Source: Eurofins Savannah

List Number: 2

List Creation: 03/22/23 12:09 PM

Creator: Meincke, Griffin E

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