

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP CASE: 49787 SDG: EW5P7 CONTRACT: 68HERH20D0011 LAB CODE: CHM CHEMTECH PROJECT: M4985 MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pН
M4985-01	EW5P7	
M4985-02	EW5P8	
M4985-03	EW5P9	
M4985-04	EW5Q0	
M4985-05	EW5S3	
M4985-06	EW5M9	
M4985-07	EW5R9	
M4985-08	EW5S0	
M4985-09	EW5S1	
M4985-10	EW5S5	
M4985-11	EW5Q5	
M4985-12	EW5Q6	
M4985-13	EW5R8	
M4985-14MS	EW5R8MS	
M4985-15MSD	EW5R8MSD	
M4985-16	EW5S2	
M4985-17	EW5Q8	
M4985-18	EW5Q9	
M4985-19	EW5R0	
M4985-20	EW5R6	
M4985-21	EW5S6	

16 Water samples were delivered to the laboratory intact on 12/08/2021.

5 Water samples were delivered to the laboratory intact on 12/09/2021.

Test requested on the Chain of Custody was Semivolatile Organic, Semivolatile Organic-SIM by Method SFAM01.1.

Sample Tags were not received with the samples.

The temperature of the samples was measured using an I R Gun. The samples temperature was 1.7, 1.3, 1.1 degree Celsius for the samples received on 12/08/2021, 2.8 degree Celsius for the samples received on 12/09/2021.

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Shipping Discrepancies and/or QC issues:

Issue 1: Sample tags were not received with samples at the laboratory. Sample tag numbers may or may not be listed on the TR/COC.

Resolutions 1: The laboratory will note the samples with the missing tags in the SDG Narrative and proceed with the analysis of the samples. The resolution will be applied to all samples received for this Case.

Discrepancies with tags, jars, and/or COC

Issue 2: The COC for Case 49787 states 1,4-Dioxane, but the samples were scheduled for 1,4-Dioxane and 1,4-Dioxane SIM. Please advise if the laboratory should analyze for 1,4-Dioxane SIM, if required.

Resolution 2: Per Region 5, the laboratory should analyze the samples for 1,4-Dioxne and 1,4-Dioxane SIM as scheduled. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Insufficient volume

Issue 3: The laboratory only received 5 containers for sample EW5R8, which is designated for laboratory QC on the COC. The laboratory will need to use all 5 containers for the analysis and laboratory QC, and there will be no sample volume remaining if re-extraction is required.

Resolution 3: Per Region 5, the laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.

Semivolatiles :

The samples were analyzed on instrument BNA_G using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

The samples were analyzed on instrument BNA_M using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

Semis volatile Organic sample for water sample was extracted by Method SFAM01.1 on 12/09/2021 and 12/10/2021. The analysis of SVOC-SFAM was based on method SFAM01.1_SVOC.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The Blank Spike for { PB141293BS} recoveries met the requirements for all compounds.

The Blank Spike for { PB141295BS} recoveries met the requirements for all compounds.

The Blank Spike for { PB141311BS} recoveries met the requirements for all compounds.

The Blank Spike for { PB141276BS} recoveries met the requirements for all compounds.

The Blank Spike for { PB141278BS} recoveries met the requirements for all compounds. The MS recoveries met the requirements for all compounds .

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The MSD recoveries met the acceptable requirements . The RPD met criteria . The Blank analysis did not indicate the presence of lab contamination. The Tuning criteria met requirements. The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

See **Manual Integration report** for the manual integration information at the end of the case narrative.

Concentration of Water Sample:

Concentration ug/L = (Ax) (Is) (Vt) (DF) (GPC)

(Ais) (RRF) (Vo) (Vi)

Where,

Ax = Area of the characteristic ion for the compound to be measured.
Ais = Area of the characteristic ion for the internal standard.
Is = Amount of internal standard injected in ng.
Vo = Volume of water extracted in mL.
Vi = Volume of extract injected in uL.
Vt = Volume of the concentrated extract in uL
RRF = Mean Relative Response Factor determined from the initial calibration standard.
GPC = Vin = GPC factor (If no GPC is performed, GPC=1)
Vout = Volume of extract collected after GPC cleanup.

Example calculation of EW5M9 for 1,4-Dioxane:

Ax = 4006Ais = 59209Is = 20Vo = 1000Vi = 1Vt = 1000RRF = 0.592GPC = 1

Concentration ug/L = (4006) (20) (1000) (1) (1)(59209) (0.592 (1000) (1)

Reported Result = 2.3 ug/L

RRF Calculation of standard 20 ppb 1,4-Dioxane with instrument M for method 12/09/2021.

RRF=	Area of compound /	Х	Conc. of Internal Standard /
	Area of Internal Standard	l	Conc. of Compound



= 9556/ 43237 X 20/8

= 0.553 (Reported RRF)

Semivolatiles SIM:

The samples were analyzed on instrument BNA_M using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA.

The samples were analyzed on instrument BNA_N using GC Column ZB-GR Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA

Semis volatile Organic samples for Water were extracted by Method SFAM01.1 on 12/09/21 and 12/10/2021 the analysis of SVOC-SIM-SFAM was based on Method SFAM01.1 SVOC-SIM.

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The Blank Spike for { PB141277BS} recoveries met the requirements for all compounds.

The Blank Spike for { PB141279BS} recoveries met the requirements for all compounds.

The Blank Spike for { PB141291BS} recoveries met the requirements for all compounds.

The Blank Spike for { PB141294BS} recoveries met the requirements for all compounds.

The Blank Spike for { PB141312BS} recoveries met the requirements for all compounds.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

The Tuning criteria met requirements.

According to SOW SIM analysis is not required for the target analyze 1,4-Dioxane when it is detected at or above the sample-adjusted Contract Required Quantitation Limit (CRQL) in the full scan analysis. Analysis of the full suite of target analyze, as listed in Exhibit C, includes 1,4-Dioxane. Therefore Samples EW5P9, EW5M9, and EW5Q9 were not analyzed for SIM analysis

See **Manual Integration report** for the manual integration information at the end of the case Narrative.



Concentration of Water Sample:

Concentration ug/L = (Ax) (Is) (Vt) (DF) (GPC)

(Ais) (RRF) (Vo) (Vi)

Where,

Ax = Area of the characteristic ion for the compound to be measured.

Ais = Area of the characteristic ion for the internal standard.

Is = Amount of internal standard injected in ng.

Vo = Volume of water extracted in mL.

Vi = Volume of extract injected in uL.

Vt = Volume of the concentrated extract in uL

RRF = Mean Relative Response Factor determined from the initial calibration standard. GPC = $\frac{\text{Vin}}{\text{Vo}}$ = GPC factor (If no GPC is performed, GPC=1)

Example calculation of EW5P7 for 1,4-Dioxane :

Ax = 391 Ais = 662 Is = 0.4 Vo = 1000 Vi = 1 Vt = 1000 RRF = 0.424GPC = 1

Concentration ug/L = (391)(0.4)(1000)(1)(1)(662)(0.424)(1000)(1)

= 0.56 ug/L

RRF Calculation of standard 0.4 ppb 1,4-Dioxane with instrument M for method 12/14/2021.

RRF= Area of compound / X Conc. of Internal Standard /

Area of Internal Standard Conc. of Compound

= 236/544 X 0.4/0.4

= 0.434 (Reported RRF)

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The



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laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature ______ Name: Nimisha Pandya.

Date: _____ Title: Document Control Officer.