

SDG NARRATIVE

LAB NAME: CHEMTECH CONSULTING GROUP CASE: 49415 SDG: C0AQ1 CONTRACT: 68HERH20D0011 LAB CODE: CHM CHEMTECH PROJECT: M2161 MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	pН
M2161-01	C0AQ1	
M2161-02	C0AQ2	
M2161-03	C0AQ3	
M2161-04MS	C0AQ3MS	
M2161-05MSD	C0AQ3MSD	
M2161-06	C0AQ4	
M2161-07	C0AQ5	
M2161-08	C0AQ7	

08 Water samples were delivered to the laboratory intact on 04/23/2021.

Test requested on the Chain of Custody was Semivolatile Organic and Pesticide 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 2.2, 2.5, 2.7, 2.4 degree Celsius for the samples received on 04/23/2021.

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.

Semivolatiles:

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 04/27/2021. The analysis of SVOC-SFAM was based on method SFAM01.1.

The Holding Times were met for all analysis.

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The Surrogate recoveries met the acceptable criteria except for

COAQ1 [4-Nitrophenol-d4 - 8%,],

COAQ5 [4,6-Dinitro-2-methylphenol-d2% - 157%],

COAQ7 [4-Nitrophenol-d4 - 8%,], As per method four surrogates are allowed to fail. Therefore no further corrective action was taken.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The Blank Spike for {PB136016BS} recoveries met the requirements for all compounds.

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

The %RSD met requirement for initial Calibration except for Nitrobenzene (20.5%), 2-Nitroaniline (35.1%), Nitrobenzene-d5 (23.3%), 2,4-Dichlorophenol-d3 (21.4%) for the initial calibration with dated 05/07/2021 with instrument M. As per method, the %RSD of 4 compounds can be failed within 40% Therefore no corrective action was required.

The Tuning criteria met requirements. The Continuous Calibration met the requirement.

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)

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.

 $GPC = \underline{Vin} = GPC$ factor (If no GPC is performed, GPC=1)

Vout = Volume of extract collected after GPC cleanup.

Example calculation of C0AQ2 for Phenol:

Ax = 13650 Ais = 138743 Is = 20 Vo = 1000 Vi = 1 Vt = 1000 RRF = 1.899 GPC = 1



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Concentration ug/L = (13650) (20) (1000) (1) (1)(138743) (1.899) (1000) (1)

Reported Result = 1.0 ug/L

RRF Calculation of standard 20 ppb for Naphthalene with M instrument for method 05/07/2021

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

= 684064/ 646228 X 20/20

= 1.059 (Reported RRF)

Pesticides:

The analyses for Pesticides were performed on instrument ECD D. The front column is ZB-Multi-Residue-2 which is 30 meters, 0.32 mm ID, 0.2 um df. The rear column ZB-Multi-Residue-1 which is 30 meters, 0.32 mm ID, 0.50 um df.

The sample was analyzed on a single injection dual column system. To distinguish the second column analysis from the first column a -2 suffix was added to the file id on the form 1. These refer to forms were both columns are reported. Form 1s for the IBLK and ALCS are referenced as IBLK(1)/IBLK(2), MS(1)/MS(2), MSD(1)/MSD(2) and PLCS01(1)/PLCS01(2) respectively.

Pesticide sample was extracted by method SFAM01.1 on 04/27/2021 and analyzed on 04/29, 04/30/2021. The sample was extracted and analyzed within contractual holding time.

The Surrogate recoveries met the acceptable criteria except for

C0AQ5 [Tetrachloro-m-xylene(1) - 30018%, Tetrachloro-m-xylene(2) - 14011%].The SOW allows one surrogate to fail to meet the criteria per column. ((Please See Section 11.3.6 of Exhibit D Pesticide Analysis).

COAQ3MS met the requirements. COAQ3MSD met the requirements. The RPD met the requirements. The Blank analysis did not indicate the presence of lab contamination. Blank and Laboratory Control Sample met the requirements. Retention Times met the requirements. Florisil check met the requirements. Resolution Check met the requirements. The Retention Times were acceptable for all samples. The Initial Calibration met the requirements. The Individual Mix A met the requirements. The Individual Mix B met the requirements. The PEM met the requirement.

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Samples C0AQ1, C0AQ2, C0AQ5 and C0AQ7 failed to meet the %D for the results between the two columns Criteria.

Sample C0AQ5 has "f" flag in second column for TCMX due to presence of some interference at the same Retention time of Surrogate. However other surrogates are within retention time window. DCB is still in acceptance window as per SOW limits.

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

Calculation for the Concentration in Water Samples

Concentration ug/L = (Ax) (Vt) (DF) (GPC)(CF) (Vo) (Vi)

Where,

Ax = Response (peak area or height) of the compound to be measured.

CF = Mean Calibration Factor from the initial calibration (area/ng).

Vo = Volume of water extracted in mL.

Vi = Volume of extract injected in uL.

Vt = Volume of the concentrated extract in uL

 $GPC = \frac{Vin}{Vout} = GPC$ factor (If no GPC is performed, GPC=1) Vout

Vin = Volume of extract loaded onto GPC column.

Vout = Volume of extract collected after GPC cleanup.

Example of Dieldrin calculation

Calibration Factor Calculation Dieldrin in the first column

Calibration factor (CF) = peak area Mass injected in ng

Mean Calibration Factor = average of 5 point calibration factor

Sample **C0AQ1** Ax = 43858315CF = 1260520Ws = 1000Vi = 1Vt = 10000 4 of 5



DF = 1GPC = 1

Concentration ug/L (Dry weight basis) = (Ax) (Vt) (DF) (GPC)(CF) (Vi) (Ws)

$= (\underline{43858315}) (10000) (1.0) (1.0) (1.0) (1.0) (1260520) (1.0) (1000)$

= 0.3479

Reported Results (ug/L) = 0.35

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 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.