

SDG NARRATIVE**LAB NAME: CHEMTECH CONSULTING GROUP****CASE: 50325****SDG: A42L3****CONTRACT: 68HERH20D0011****LAB CODE: CHM****CHEMTECH PROJECT: N4921****MODIFICATION REF. NUMBER: NA**

Sample ID	EPA Sample ID	pH
N4921-01	A42L3	
N4921-02MS	A42L3MS	
N4921-03MSD	A42L3MSD	
N4921-04	A42L6	
N4921-05	A42L1	
N4921-06	A42M8	
N4921-07	A42M9	
N4921-08	A42S3	
N4921-09	A42S5	
N4921-10	A42M5	
N4921-11	A42M6	
N4921-12	A42M7	
N4921-13	A42N0	

4 Water samples were delivered to the laboratory intact on 09/30/2022.

9 Water samples were delivered to the laboratory intact on 10/01/2022.

Test requested on the Chain of Custody was Aroclor by Method SFAM01.1.

The temperature of the samples was measured using an I R Gun. The samples temperature was 2.1 degree Celsius for the samples received on 09/30/2022, 2.1, 2.7 degree Celsius for the samples received on 10/01/2022.

Aroclors:

The analyses were performed on instrument GCECD_Q. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 µm; Catalogue # 7HM-G017-11.

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 where 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 ALCS01(1)/ALCS01(2) respectively.

Aroclor sample was extracted by Method SFAM01.1 on 10/04/2022 and analyzed on 10/05/2022. All the samples were subjected to a Sulfuric acid cleanup. The sample was extracted and analyzed within contractual holding time.

The Surrogate recoveries met the acceptable criteria except for A42M9 [Decachlorobiphenyl(2) - 27%] and A42M7 [Decachlorobiphenyl(1) - 26%, Decachlorobiphenyl(2) - 18%]. The SOW allows one surrogate to fail to meet the criteria per column. ((Please See Section 11.3.6 of Exhibit D Aroclor Analysis).

A42L3MS met the requirements except for AR1016 on both columns due to sample matrix interference. No corrective action is required for failure to meet the MS/MSD criteria by the SOW. (Section 12.2.5.5 of Exhibit D Aroclor Analysis).

A42L3MSD met the requirements except for AR1016 on both columns due to sample matrix interference. No corrective action is required for failure to meet the MS/MSD criteria by the SOW. (Section 12.2.5.5 of Exhibit D Aroclor Analysis).

The RPD met the requirements.

The Laboratory Control Sample met requirements.

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

The Initial Calibration met the requirements.

The Continuing Calibrations met the requirements.

The Retention Times were acceptable for all samples.

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

Calculation for Concentration in Water Samples:

$$\text{Concentration ug/L} = \frac{(A_x) (V_t) (DF) (GPC)}{(CF) (V_o) (V_i)}$$

Where,

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

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

V_o = Volume of water extracted in mL.

V_i = Volume of extract injected in uL.

V_t = Volume of the concentrated extract in uL

GPC = $\frac{V_{in}}{V_{out}}$ = GPC factor (If no GPC is performed, GPC=1)

V_{in} = Volume of extract loaded onto GPC column.

V_{out} = Volume of extract collected after GPC cleanup.

DF = Dilution Factor.

Example of AR1016 calculation for Peak 1

Calibration factor Peak 1 100ppb ISTD= $\frac{\text{peak area}}{\text{Mass injected ng}}$
Column1

$$= \frac{49809613}{0.100}$$

= 498096130 calibration factor for Peak 1 100ppb

Average of 5 peaks = 419387507

Sample **A42S5**

A_x = 397578450

CF = 419387507

V_t = 10000

V_o = 1.0

V_i = 1000

GPC = 1.0

DF = 1.0

$$\text{Concentration ug/L} = \frac{(A_x) (V_t) (DF) (GPC)}{(CF) (V_o) (V_i)}$$

$$= \frac{(397578450) (10000) (1.0) (1.0)}{(419387507) (1.0) (1000)}$$

Peak 1 = 9.48

Average of 5 peaks = 9.407

Reported results = 9.4 ug/L

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.