

SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC CASE: 51837 SDG: BG450 CONTRACT: 68HERH20D0011 LAB CODE: ACE Lab Order ID : P5111 MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	Test	pН
P5111-01	BG450		1.0
P5111-01DL	BG450DL	TVOA	1.0
P5111-02	BG451		1.0
P5111-03	BG452		1.0
P5111-04	BG453		1.0
P5111-05	BG454		1.0
P5111-06	BG455		1.0
P5111-07	BG456		1.0
P5111-08	BG457		1.0
P5111-09	BG458		1.0
P5111-10	BG459		1.0
P5111-11	BG460		1.0
P5111-11DL	BG460DL	TVOA	1.0
P5111-12	BG461		1.0
P5111-13	BG462		1.0

13 Water samples were delivered to the laboratory intact on 12/04/2024.

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

The temperature of the samples was measured using an I R Gun. The samples temperature was 1.7 degree Celsius for the samples received on 12/04/2024.

Trace Volatiles:

The analysis performed on instrument MSVOA_U were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UI.



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The analysis of VOC-SFAM was based on method SFAM01.1_Trace.

Holding Times were met requirement.

The Surrogate recoveries met the acceptable criteria except for BG454 [1,2-Dichlorobenzene-d4 - 125%], BG455 [1,1-Dichloroethene-d2 - 127%, 1 and2-Dichlorobenzene-d4 - 124%], As per method, up to three surrogates are allowed to fail. No corrective action was taken.

The Internal Standards Areas met the acceptable requirements. Instrument Performance Check met requirements. The Retention Times met requirements. The Tuning criteria met requirements.

The initial Calibration criteria met requirements.

The Continuing Calibration (VSTD005324) file ID VV038419.D met the requirements except for Vinyl Chloride-d3 (-39.5%) and 1,1-Dichloroethene-d2 (-31.4%). As per method, up to two target analyte in opening and closing CCV are allowed to exceed the %D values. Therefore no further corrective action was taken.

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

Samples BG450, BG460 were diluted due to high concentrations.

The sample BG451 was analyzed following the analysis of BG450. Samples BG450 had hit of compounds Trichloroethene and Tetrachloroethene with concentration above calibration levels. Sample BG451 have not detected of the compounds Trichloroethene and Tetrachloroethene. Therefore, as per method no instrument blank was required.

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

Calculation:

Low/Med Water Level Calculation

Concentration in ug/L = (Ax) (Is) (DF)(Ais) (RRF) (Vo)



Where,
Ax = Area of the characteristic ion (EICP) for the compound to be measured.
Ais = Area of the characteristic ion (EICP) for the internal standard.
Amount of internal standard added in ng.
RRF = Mean Relative Response Factor from the initial calibration standard.
Vo = Total volume of water purged, in mL.
DF = Dilution Factor

Example calculation of **BG450** for **Dichlorodifluoromethane**:

Ax= 96021 Is = 125 RRF= 0.473 DF= 1 Ais= 218320 Vo. = 25 Concentration in ug/L = (96021)(125)(1)(218320)(0.473)(25)

Reported Result = 4.65 ug/L

Final Reported Result = 4.6 ug/L

Relative Response Factor = Dichlorodifluoromethane: RUN VV111924 for 0.5 ppb

RRF= <u>Area of compound</u> X <u>Conc. of Internal Standard</u> Area of Internal Standard Conc. of Compound

 $RRF = \frac{11660}{259388} X \frac{5.0}{0.5}$

RRF= 0.450

Semivolatiles:

The samples were analyzed on instrument BNA_P 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 12/09/2024, The analysis of SVOCMS Group4 was based on method SFAM01.1_SVOC.

The Holding Times were met for all analysis. The Surrogate recoveries met the acceptable except criteria. The Internal Standards Areas met the acceptable requirements. The Retention Times were acceptable for all samples. 3 of 5



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The Blank Spike for {PB165476BS} recoveries met the requirements for all compounds. The Blank analysis did not indicate the presence of lab contamination.

The Tuning criteria met the requirements.

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

Concentration of Water Sample:

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

(Ais) $(R\overline{RF})$ (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.

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

Vout = Volume of extract collected after GPC cleanup.

Example calculation of BG450 for 1,4-Dioxane:

Ax = 2652Ais = 73151 Is = 20 DF = 1 Vo = 1000 Vi = 1 Vt = 1000 RRF = 0.601 GPC = 1

Concentration ug/L = (2652)(20)(1000)(1)(1)(73151)(0.601)(1000)(1)

= 1.2 ug/L

RRF Calculation of standard 20 ppb for 1,4-Dioxane with P instrument for method 11/26/2024.

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

= 20698/88649 X 20/8



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= 0.584 (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 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.