

SDG NARRATIVE

LAB NAME: Alliance Technical Group, LLC CASE: 51898 SDG: BHAA9 CONTRACT: 68HERH20D0011 LAB CODE: ACE LAB ORDER ID: Q1137 MODIFICATION REF. NUMBER: NA

Sample ID	EPA Sample ID	Test	pН
Q1137-01	BHAA9		1.0
Q1137-01DL	BHAA9DL	TVOA	1.0
Q1137-02	BHAB0		1.0
Q1137-03	BHAB2		1.0
Q1137-03DL	BHAB2DL	TVOA	1.0
Q1137-04	BHAB3		1.0
Q1137-04DL	BHAB3DL	TVOA	1.0
Q1137-05	BHAB8		1.0
Q1137-05DL	BHAB8DL	TVOA	1.0
Q1137-07	BHAA4		1.0
Q1137-08	BHAB4		1.0
Q1137-08DL	BHAB4DL	TVOA	1.0
Q1137-09	BHAA5		1.0
Q1137-10	BHAB5		1.0

05 Water samples were delivered to the laboratory intact on 01/18/2025. 04 Water samples were delivered to the laboratory intact on 01/23/2025.

Test requested on the Chain of Custody was Trace Volatile Organic, Volatile Organic SIM 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 01/18/2025, 1.3, 1.5 degree Celsius for the samples received on 01/23/2025,

Trace Volatiles:

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

The analysis of VOC-SFAM was based on method SFAM01.1_Trace. Holding Times were met requirement.

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The Surrogate recoveries met the acceptable criteria Except for, BHAB2DL [Toluene-d8 - 67%], BHAB3 [Toluene-d8 - 69%], BHAB3DL [Toluene-d8 - 69%], BHAB8 [Toluene-d8 - 68%], BHAB8DL [Toluene-d8 - 69%], 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 (VSTD005330) file ID VV038474.D met the requirements except for 4-Methyl-2-pentanone (34.1%). 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 Continuing Calibration (VSTD005332) file ID VV038496.D met the requirements except for Toluene (20.3%) and Tetrachloroethene (21.2%). 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 Continuing Calibration (VSTD005334) file ID VV038510.D met the requirements except for Vinyl Chloride-d3 (-33.9%) and 1,1-Dichloroethene-d2 (-26.9%). 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 Continuing Calibration (VSTD005336) file ID VV038524.D met the requirements except for Vinyl Chloride-d3 (-32%) and 1,1-Dichloroethene-d2 (-28.1%). 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 BHAA9, BHAB2, BHAB3, BHAB8 and BHAB4 were diluted due to high concentrations.

The sample BHAB8 was analyzed following the analysis of BHAB3. Both samples had common hit of compound with concentration above calibration levels for Chloromethane, It was reanalyzed at a diluted. As per method, no instrument blank was required and not analyzed.



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 **BHAA4** for **Chloromethane**:

Ax=378073 Is = 125 RRF= 0.573 DF= 1 Ais= 185987 Vo. = 25 Concentration in ug/L = (378073)(125)(1)(185987)(0.573)(25)

Reported Result = 17.74 ug/L

Final Reported Result = 18 ug/L

Relative Response Factor = **Dichlorodifluoromethane**: RUN **VV011725** for **0.5** ppb

- RRF= <u>Area of compound</u> X <u>Conc. of Internal Standard</u> Area of Internal Standard Conc. of Compound
- $RRF = \frac{11771}{194122} X \frac{5.0}{0.5}$

RRF= 0.606



Trace Volatiles SIM:

The analysis performed on instrument MSVOA_U were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UI. The analysis of VOC-SIM was based on method SFAM01.1_VOCSIM .

The Holding Times were met for all analysis.

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

The Initial Calibration met requirements.

Trichloroethene fails to meet criteria for the minimum RRF for RRF0.3 the calibration standards in the run dated 01/23/2025 with U instrument. As per the method up to two Compounds are allowed to fail to meet the minimum criteria for the RRF as long as the compound meets the maximum of 40% RSD. No further corrective action was taken.

The Continuing Calibration met the requirements.

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

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

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.Is = 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.



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Example Calculation for sample **BHAB0** for **Vinyl chloride**:

Ax = 1004 Is = 12.5 RRF= 0.360 DF = 1 Ais = 11187 Vo. = 25 Concentration in ug/L = (1004)(12.5)(1)(11187) (0.360) (25)

= 0.12 ug/L

Reported Result = 0.13 ug/L

Relative Response Factor = Vinyl chloride: RUN VU012325 for 0.05 ppb

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

 $RRF = \frac{416}{8693} X \frac{0.5}{0.05}$

RRF= 0.479

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.