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LAB CHRONICLE

OrderID:	Q1242	**OrderDate:**	1/30/2025 3:02:00 PM
Client:	RU2 Engineering, LLC	**Project:**	NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Contact:	Rutu Manani	**Location:**	E11,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1242-04	**JPP-6.2-013025**	**TCLP**			**01/30/25**			**01/30/25**
			TCLP BNA	8270E		02/03/25	02/04/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1242

Client: RU2 Engineering, LLC

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :								
				0.000				
			Total Svoc :			**0.00**		
			Total Concentration:			**0.00**		

SAMPLE DATA

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	02/03/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	02/03/25
Client Sample ID:	PB166423TB	SDG No.:	Q1242
Lab Sample ID:	PB166423TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141401.D	1	02/03/25 08:36	02/04/25 12:02	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	50.0	U	15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	50.0	U	8.40	50.0	ug/L
95-48-7	2-Methylphenol	50.0	U	11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	100	U	11.5	100	ug/L
67-72-1	Hexachloroethane	50.0	U	10.1	50.0	ug/L
98-95-3	Nitrobenzene	50.0	U	12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	50.0	U	12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	50.0	U	8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	50.0	U	10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	50.0	U	15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	50.0	U	11.4	50.0	ug/L
87-86-5	Pentachlorophenol	100	U	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	137		10 - 139	92%	SPK: 150
13127-88-3	Phenol-d6	134		10 - 134	89%	SPK: 150
4165-60-0	Nitrobenzene-d5	95.6		49 - 133	96%	SPK: 100
321-60-8	2-Fluorobiphenyl	95.3		52 - 132	95%	SPK: 100
118-79-6	2,4,6-Tribromophenol	149		44 - 137	100%	SPK: 150
1718-51-0	Terphenyl-d14	84.4		48 - 125	84%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	79600	6.787			
1146-65-2	Naphthalene-d8	321000	8.069			
15067-26-2	Acenaphthene-d10	179000	9.828			
1517-22-2	Phenanthrene-d10	312000	11.31			
1719-03-5	Chrysene-d12	245000	13.957			
1520-96-3	Perylene-d12	193000	15.41			

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Report of Analysis

Client:	RU2 Engineering, LLC			Date Collected:	02/03/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR			Date Received:	02/03/25
Client Sample ID:	PB166423TB			SDG No.:	Q1242
Lab Sample ID:	PB166423TB			Matrix:	TCLP
Analytical Method:	SW8270			% Solid:	0
Sample Wt/Vol:	100	Units:	mL	Final Vol:	1000 uL
Soil Aliquot Vol:			uL	Test:	TCLP BNA
Extraction Type :			Decanted : N	Level :	LOW
Injection Volume :			GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141401.D	1	02/03/25 08:36	02/04/25 12:02	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/30/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-6.2-013025	SDG No.:	Q1242
Lab Sample ID:	Q1242-04	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141419.D	1	02/03/25 08:36	02/04/25 20:00	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	50.0	U	15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	50.0	U	8.40	50.0	ug/L
95-48-7	2-Methylphenol	50.0	U	11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	100	U	11.5	100	ug/L
67-72-1	Hexachloroethane	50.0	U	10.1	50.0	ug/L
98-95-3	Nitrobenzene	50.0	U	12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	50.0	U	12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	50.0	U	8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	50.0	U	10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	50.0	U	15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	50.0	U	11.4	50.0	ug/L
87-86-5	Pentachlorophenol	100	U	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	120		10 - 139	80%	SPK: 150
13127-88-3	Phenol-d6	107		10 - 134	71%	SPK: 150
4165-60-0	Nitrobenzene-d5	94.8		49 - 133	95%	SPK: 100
321-60-8	2-Fluorobiphenyl	94.0		52 - 132	94%	SPK: 100
118-79-6	2,4,6-Tribromophenol	157		44 - 137	105%	SPK: 150
1718-51-0	Terphenyl-d14	75.8		48 - 125	76%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	81500	6.787			
1146-65-2	Naphthalene-d8	321000	8.069			
15067-26-2	Acenaphthene-d10	180000	9.822			
1517-22-2	Phenanthrene-d10	323000	11.31			
1719-03-5	Chrysene-d12	287000	13.951			
1520-96-3	Perylene-d12	237000	15.41			

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/30/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-6.2-013025	SDG No.:	Q1242
Lab Sample ID:	Q1242-04	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141419.D	1	02/03/25 08:36	02/04/25 20:00	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

QC SUMMARY

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Surrogate Summary

SW-846

SDG No.: Q1242

Client: RU2 Engineering, LLC

Analytical Method: 8270E

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%) Low	Limits (%) High
PB166423TB	PB166423TB	2-Fluorophenol	150	137	92		10	139
		Phenol-d6	150	134	89		10	134
		Nitrobenzene-d5	100	95.6	96		49	133
		2-Fluorobiphenyl	100	95.3	95		52	132
		2,4,6-Tribromophenol	150	149	100		44	137
		Terphenyl-d14	100	84.4	84		48	125
PB166483BL	PB166483BL	2-Fluorophenol	150	142	95		10	139
		Phenol-d6	150	136	91		10	134
		Nitrobenzene-d5	100	96.4	96		49	133
		2-Fluorobiphenyl	100	98.2	98		52	132
		2,4,6-Tribromophenol	150	150	100		44	137
		Terphenyl-d14	100	85.6	86		48	125
PB166483BS	PB166483BS	2-Fluorophenol	150	145	97		10	139
		Phenol-d6	150	136	91		10	134
		Nitrobenzene-d5	100	100	100		49	133
		2-Fluorobiphenyl	100	100	100		52	132
		2,4,6-Tribromophenol	150	160	107		44	137
		Terphenyl-d14	100	91.8	92		48	125
Q1239-02MS	286MS	2-Fluorophenol	150	133	89		10	139
		Phenol-d6	150	122	81		10	134
		Nitrobenzene-d5	100	102	102		49	133
		2-Fluorobiphenyl	100	102	102		52	132
		2,4,6-Tribromophenol	150	174	116		44	137
		Terphenyl-d14	100	88.5	89		48	125
Q1239-02MSD	286MSD	2-Fluorophenol	150	140	94		10	139
		Phenol-d6	150	129	86		10	134
		Nitrobenzene-d5	100	107	107		49	133
		2-Fluorobiphenyl	100	105	105		52	132
		2,4,6-Tribromophenol	150	176	118		44	137
		Terphenyl-d14	100	89.1	89		48	125
Q1242-04	JPP-6.2-013025	2-Fluorophenol	150	120	80		10	139
		Phenol-d6	150	107	71		10	134
		Nitrobenzene-d5	100	94.8	95		49	133
		2-Fluorobiphenyl	100	94.0	94		52	132
		2,4,6-Tribromophenol	150	157	105		44	137
		Terphenyl-d14	100	75.8	76		48	125

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Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: Q1242

Client: RU2 Engineering, LLC

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Limits Low	Limits High	RPD
Lab Sample ID: Q1239-02MS		**Client Sample ID: 286MS**						**DataFile: BF141413.D**			
Pyridine	500	0	300	ug/L	60				10	109	
1,4-Dichlorobenzene	500	0	450	ug/L	90				55	125	
2-Methylphenol	500	0	450	ug/L	90				37	126	
3+4-Methylphenols	500	0	470	ug/L	94				31	127	
Hexachloroethane	500	0	470	ug/L	94				49	110	
Nitrobenzene	500	0	460	ug/L	92				62	112	
Hexachlorobutadiene	500	0	490	ug/L	98				52	125	
2,4,6-Trichlorophenol	500	0	480	ug/L	96				78	112	
2,4,5-Trichlorophenol	500	0	490	ug/L	98				71	111	
2,4-Dinitrotoluene	500	0	510	ug/L	102				50	142	
Hexachlorobenzene	500	0	480	ug/L	96				72	115	
Pentachlorophenol	1000	0	1100	ug/L	110				25	139	

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Matrix Spike/Matrix Spike Duplicate Summary

SW-846

SDG No.: Q1242

Client: RU2 Engineering, LLC

Analytical Method: SW8270E

Parameter	Spike	Sample Result	Result	Units	Rec	Rec Qual	RPD	RPD Qual	Limits Low	Limits High	RPD
Lab Sample ID: Q1239-02MSD		**Client Sample ID: 286MSD**						**DataFile: BF141414.D**			
Pyridine	500	0	330	ug/L	66		10		10	109	20
1,4-Dichlorobenzene	500	0	480	ug/L	96		6		55	125	20
2-Methylphenol	500	0	480	ug/L	96		6		37	126	20
3+4-Methylphenols	500	0	500	ug/L	100		6		31	127	20
Hexachloroethane	500	0	500	ug/L	100		6		49	110	20
Nitrobenzene	500	0	470	ug/L	94		2		62	112	20
Hexachlorobutadiene	500	0	500	ug/L	100		2		52	125	20
2,4,6-Trichlorophenol	500	0	500	ug/L	100		4		78	112	20
2,4,5-Trichlorophenol	500	0	510	ug/L	102		4		71	111	20
2,4-Dinitrotoluene	500	0	540	ug/L	108		6		50	142	20
Hexachlorobenzene	500	0	500	ug/L	100		4		72	115	20
Pentachlorophenol	1000	0	1200	ug/L	120		9		25	139	20

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1242

Client: RU2 Engineering, LLC

Analytical Method: 8270E **DataFile:** BF141400.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	RPD Qual	Limits Low	Limits High	RPD
PB166483BS	Pyridine	50	39.3	ug/L	79				29	97	
	1,4-Dichlorobenzene	50	44.7	ug/L	89				76	103	
	2-Methylphenol	50	43.6	ug/L	87				69	109	
	3+4-Methylphenols	50	46.4	ug/L	93				67	106	
	Hexachloroethane	50	45.0	ug/L	90				76	118	
	Nitrobenzene	50	43.8	ug/L	88				58	106	
	Hexachlorobutadiene	50	46.6	ug/L	93				69	101	
	2,4,6-Trichlorophenol	50	47.5	ug/L	95				61	110	
	2,4,5-Trichlorophenol	50	45.8	ug/L	92				70	106	
	2,4-Dinitrotoluene	50	47.5	ug/L	95				60	115	
	Hexachlorobenzene	50	47.0	ug/L	94				73	106	
	Pentachlorophenol	100	110	ug/L	110				47	114	

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4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB166483BL

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1242 SAS No.: Q1242 SDG NO.: Q1242

Lab File ID: BF141399.D Lab Sample ID: PB166483BL

Instrument ID: BNA_F Date Extracted: 02/03/2025

Matrix: (soil/water) water Date Analyzed: 02/04/2025

Level: (low/med) LOW Time Analyzed: 11:08

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB166483BS	PB166483BS	BF141400.D	02/04/2025
286MS	Q1239-02MS	BF141413.D	02/04/2025
286MSD	Q1239-02MSD	BF141414.D	02/04/2025
JPP-6.2-013025	Q1242-04	BF141419.D	02/04/2025
PB166423TB	PB166423TB	BF141401.D	02/04/2025

COMMENTS:

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM SAS No.: Q1242 SDG NO.: Q1242

Lab File ID: BF141289.D DFTPP Injection Date: 01/29/2025

Instrument ID: BNA_F DFTPP Injection Time: 10:03

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	41.1
68	Less than 2.0% of mass 69	0.6 (1.7) 1
69	Mass 69 relative abundance	35.1
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	47.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	13.5
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	16.2 (19.4) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDICC2.5	SSTDICC2.5	BF141290.D	01/29/2025	10:30
SSTDICC005	SSTDICC005	BF141291.D	01/29/2025	10:56
SSTDICC010	SSTDICC010	BF141292.D	01/29/2025	11:49
SSTDICC020	SSTDICC020	BF141293.D	01/29/2025	15:17
SSTDICCC040	SSTDICCC040	BF141294.D	01/29/2025	15:45
SSTDICC050	SSTDICC050	BF141295.D	01/29/2025	16:11
SSTDICC060	SSTDICC060	BF141296.D	01/29/2025	16:38
SSTDICC080	SSTDICC080	BF141297.D	01/29/2025	17:05

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM SAS No.: Q1242 SDG NO.: Q1242

Lab File ID: BF141397.D DFTPP Injection Date: 02/04/2025

Instrument ID: BNA_F DFTPP Injection Time: 10:16

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	43.3
68	Less than 2.0% of mass 69	0.7 (1.9) 1
69	Mass 69 relative abundance	38.1
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	49.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1% of mass 198	3
441	Present, but less than mass 443	12.2
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	14.4 (19.7) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC040	SSTDCCC040	BF141398.D	02/04/2025	10:42
PB166483BL	PB166483BL	BF141399.D	02/04/2025	11:08
PB166483BS	PB166483BS	BF141400.D	02/04/2025	11:35
PB166423TB	PB166423TB	BF141401.D	02/04/2025	12:02

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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM SAS No.: Q1242 SDG NO.: Q1242

Lab File ID: BF141409.D DFTPP Injection Date: 02/04/2025

Instrument ID: BNA_F DFTPP Injection Time: 15:32

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	41.7
68	Less than 2.0% of mass 69	0.6 (1.7) 1
69	Mass 69 relative abundance	36.7
70	Less than 2.0% of mass 69	0.2 (0.6) 1
127	10.0 - 80.0% of mass 198	48.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	27.1
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	12.5
442	Greater than 50% of mass 198	100
443	15.0 - 24.0% of mass 442	15.1 (18.5) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
SSTDCCC040	SSTDCCC040	BF141410.D	02/04/2025	15:58
286MS	Q1239-02MS	BF141413.D	02/04/2025	17:22
286MSD	Q1239-02MSD	BF141414.D	02/04/2025	17:49
JPP-6.2-013025	Q1242-04	BF141419.D	02/04/2025	20:00

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1242 SAS No.: Q1242 SDG NO.: Q1242

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/04/2025

Lab File ID: BF141398.D Time Analyzed: 10:42

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	87552	6.793	331835	8.08	180473	9.83
	UPPER LIMIT	175104	7.293	663670	8.575	360946	10.328
	LOWER LIMIT	43776	6.293	165918	7.575	90236.5	9.328
	EPA SAMPLE NO.						
01	PB166483BL	74401	6.79	304159	8.07	164089	9.83
02	PB166483BS	76563	6.79	300075	8.08	160616	9.83
03	PB166423TB	79603	6.79	321231	8.07	179300	9.83

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1242 SAS No.: Q1242 SDG NO.: Q1242

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/04/2025

Lab File ID: BF141398.D Time Analyzed: 10:42

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	318826	11.316	235294	13.963	201713	15.421
	UPPER LIMIT	637652	11.816	470588	14.463	403426	15.921
	LOWER LIMIT	159413	10.816	117647	13.463	100857	14.921
	EPA SAMPLE NO.						
01	PB166483BL	292057	11.32	229065	13.96	190566	15.42
02	PB166483BS	270383	11.32	215739	13.96	184626	15.42
03	PB166423TB	311828	11.31	245488	13.96	193327	15.41

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1242 SAS No.: Q1242 SDG NO.: Q1242

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/04/2025

Lab File ID: BF141410.D Time Analyzed: 15:58

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	89972	6.792	349697	8.08	187729	9.83
	UPPER LIMIT	179944	7.292	699394	8.575	375458	10.328
	LOWER LIMIT	44986	6.292	174849	7.575	93864.5	9.328
	EPA SAMPLE NO.						
01	286MS	71735	6.79	282983	8.08	159062	9.83
02	286MSD	70255	6.79	281307	8.08	157470	9.83
03	JPP-6.2-013025	81543	6.79	321007	8.07	180364	9.82

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH

Lab Code: CHEM Case No.: Q1242 SAS No.: Q1242 SDG NO.: Q1242

EPA Sample No.: SSTDCCC040 Date Analyzed: 02/04/2025

Lab File ID: BF141410.D Time Analyzed: 15:58

Instrument ID: BNA_F GC Column: DB-UI ID: 0.18 (mm)

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	325046	11.316	235785	13.963	203742	15.421
	UPPER LIMIT	650092	11.816	471570	14.463	407484	15.921
	LOWER LIMIT	162523	10.816	117893	13.463	101871	14.921
	EPA SAMPLE NO.						
01	286MS	284462	11.32	237860	13.96	195020	15.43
02	286MSD	281416	11.32	237517	13.96	188623	15.43
03	JPP-6.2-013025	322847	11.31	286651	13.95	237306	15.41

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT UPPER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

QC SAMPLE DATA

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	
Client Sample ID:	PB166483BL	SDG No.:	Q1242
Lab Sample ID:	PB166483BL	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141399.D	1	02/03/25 08:36	02/04/25 11:08	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	5.00	U	1.60	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	5.00	U	0.84	5.00	ug/L
95-48-7	2-Methylphenol	5.00	U	1.10	5.00	ug/L
65794-96-9	3+4-Methylphenols	10.0	U	1.20	10.0	ug/L
67-72-1	Hexachloroethane	5.00	U	1.00	5.00	ug/L
98-95-3	Nitrobenzene	5.00	U	1.30	5.00	ug/L
87-68-3	Hexachlorobutadiene	5.00	U	1.30	5.00	ug/L
88-06-2	2,4,6-Trichlorophenol	5.00	U	0.89	5.00	ug/L
95-95-4	2,4,5-Trichlorophenol	5.00	U	1.00	5.00	ug/L
121-14-2	2,4-Dinitrotoluene	5.00	U	1.50	5.00	ug/L
118-74-1	Hexachlorobenzene	5.00	U	1.10	5.00	ug/L
87-86-5	Pentachlorophenol	10.0	U	1.90	10.0	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	142		10 - 139	95%	SPK: 150
13127-88-3	Phenol-d6	136		10 - 134	91%	SPK: 150
4165-60-0	Nitrobenzene-d5	96.4		49 - 133	96%	SPK: 100
321-60-8	2-Fluorobiphenyl	98.2		52 - 132	98%	SPK: 100
118-79-6	2,4,6-Tribromophenol	150		44 - 137	100%	SPK: 150
1718-51-0	Terphenyl-d14	85.6		48 - 125	86%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	74400	6.786			
1146-65-2	Naphthalene-d8	304000	8.069			
15067-26-2	Acenaphthene-d10	164000	9.827			
1517-22-2	Phenanthrene-d10	292000	11.316			
1719-03-5	Chrysene-d12	229000	13.957			
1520-96-3	Perylene-d12	191000	15.415			

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Report of Analysis

Client:	RU2 Engineering, LLC			Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR			Date Received:	
Client Sample ID:	PB166483BL			SDG No.:	Q1242
Lab Sample ID:	PB166483BL			Matrix:	TCLP
Analytical Method:	SW8270			% Solid:	0
Sample Wt/Vol:	1000	Units:	mL	Final Vol:	1000 uL
Soil Aliquot Vol:			uL	Test:	TCLP BNA
Extraction Type :			Decanted : N	Level :	LOW
Injection Volume :			GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	SW3510C				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141399.D	1	02/03/25 08:36	02/04/25 11:08	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	
Client Sample ID:	PB166483BS	SDG No.:	Q1242
Lab Sample ID:	PB166483BS	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141400.D	1	02/03/25 08:36	02/04/25 11:35	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	39.3		1.60	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	44.7		0.84	5.00	ug/L
95-48-7	2-Methylphenol	43.6		1.10	5.00	ug/L
65794-96-9	3+4-Methylphenols	46.4		1.20	10.0	ug/L
67-72-1	Hexachloroethane	45.0		1.00	5.00	ug/L
98-95-3	Nitrobenzene	43.8		1.30	5.00	ug/L
87-68-3	Hexachlorobutadiene	46.6		1.30	5.00	ug/L
88-06-2	2,4,6-Trichlorophenol	47.5		0.89	5.00	ug/L
95-95-4	2,4,5-Trichlorophenol	45.8		1.00	5.00	ug/L
121-14-2	2,4-Dinitrotoluene	47.5		1.50	5.00	ug/L
118-74-1	Hexachlorobenzene	47.0		1.10	5.00	ug/L
87-86-5	Pentachlorophenol	110	E	1.90	10.0	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	145		10 - 139	97%	SPK: 150
13127-88-3	Phenol-d6	136		10 - 134	91%	SPK: 150
4165-60-0	Nitrobenzene-d5	100		49 - 133	100%	SPK: 100
321-60-8	2-Fluorobiphenyl	100		52 - 132	100%	SPK: 100
118-79-6	2,4,6-Tribromophenol	160		44 - 137	107%	SPK: 150
1718-51-0	Terphenyl-d14	91.8		48 - 125	92%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	76600	6.787			
1146-65-2	Naphthalene-d8	300000	8.075			
15067-26-2	Acenaphthene-d10	161000	9.828			
1517-22-2	Phenanthrene-d10	270000	11.316			
1719-03-5	Chrysene-d12	216000	13.963			
1520-96-3	Perylene-d12	185000	15.415			

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Report of Analysis

Client:	RU2 Engineering, LLC			Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR			Date Received:	
Client Sample ID:	PB166483BS			SDG No.:	Q1242
Lab Sample ID:	PB166483BS			Matrix:	TCLP
Analytical Method:	SW8270			% Solid:	0
Sample Wt/Vol:	1000	Units:	mL	Final Vol:	1000 uL
Soil Aliquot Vol:			uL	Test:	TCLP BNA
Extraction Type :			Decanted : N	Level :	LOW
Injection Volume :			GPC Factor : 1.0	GPC Cleanup : N	PH :
Prep Method :	SW3510C				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141400.D	1	02/03/25 08:36	02/04/25 11:35	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/30/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	286MS	SDG No.:	Q1242
Lab Sample ID:	Q1239-02MS	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141413.D	1	02/03/25 08:36	02/04/25 17:22	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	300		15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	450		8.40	50.0	ug/L
95-48-7	2-Methylphenol	450		11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	470		11.5	100	ug/L
67-72-1	Hexachloroethane	470		10.1	50.0	ug/L
98-95-3	Nitrobenzene	460		12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	490		12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	480		8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	490		10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	510		15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	480		11.4	50.0	ug/L
87-86-5	Pentachlorophenol	1100	E	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	133		10 - 139	89%	SPK: 150
13127-88-3	Phenol-d6	122		10 - 134	81%	SPK: 150
4165-60-0	Nitrobenzene-d5	102		49 - 133	102%	SPK: 100
321-60-8	2-Fluorobiphenyl	102		52 - 132	102%	SPK: 100
118-79-6	2,4,6-Tribromophenol	174		44 - 137	116%	SPK: 150
1718-51-0	Terphenyl-d14	88.5		48 - 125	89%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	71700	6.792			
1146-65-2	Naphthalene-d8	283000	8.075			
15067-26-2	Acenaphthene-d10	159000	9.828			
1517-22-2	Phenanthrene-d10	284000	11.316			
1719-03-5	Chrysene-d12	238000	13.963			
1520-96-3	Perylene-d12	195000	15.427			

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/30/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	286MS	SDG No.:	Q1242
Lab Sample ID:	Q1239-02MS	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141413.D	1	02/03/25 08:36	02/04/25 17:22	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/30/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	286MSD	SDG No.:	Q1242
Lab Sample ID:	Q1239-02MSD	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141414.D	1	02/03/25 08:36	02/04/25 17:49	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	330		15.5	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	480		8.40	50.0	ug/L
95-48-7	2-Methylphenol	480		11.3	50.0	ug/L
65794-96-9	3+4-Methylphenols	500		11.5	100	ug/L
67-72-1	Hexachloroethane	500		10.1	50.0	ug/L
98-95-3	Nitrobenzene	470		12.7	50.0	ug/L
87-68-3	Hexachlorobutadiene	500		12.7	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	500		8.90	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	510		10.1	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	540		15.2	50.0	ug/L
118-74-1	Hexachlorobenzene	500		11.4	50.0	ug/L
87-86-5	Pentachlorophenol	1200	E	18.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	140		10 - 139	94%	SPK: 150
13127-88-3	Phenol-d6	129		10 - 134	86%	SPK: 150
4165-60-0	Nitrobenzene-d5	107		49 - 133	107%	SPK: 100
321-60-8	2-Fluorobiphenyl	105		52 - 132	105%	SPK: 100
118-79-6	2,4,6-Tribromophenol	176		44 - 137	118%	SPK: 150
1718-51-0	Terphenyl-d14	89.1		48 - 125	89%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	70300	6.793			
1146-65-2	Naphthalene-d8	281000	8.075			
15067-26-2	Acenaphthene-d10	157000	9.828			
1517-22-2	Phenanthrene-d10	281000	11.316			
1719-03-5	Chrysene-d12	238000	13.963			
1520-96-3	Perylene-d12	189000	15.427			

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/30/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	286MSD	SDG No.:	Q1242
Lab Sample ID:	Q1239-02MSD	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3510C		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF141414.D	1	02/03/25 08:36	02/04/25 17:49	PB166483

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

CALIBRATION SUMMARY

Response Factor Report BNA_F

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF012925.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
Last Update : Wed Jan 29 17:41:25 2025
Response Via : Initial Calibration

Calibration Files
2.5 =BF141290.D 5 =BF141291.D 10 =BF141292.D 20 =BF141293.D 40 =BF141294.D 50 =BF141295.D 60 =BF141296.D 80 =BF1412
97.D

		Compound	2.5	5	10	20	40	50	60	80	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------									
2)		1,4-Dioxane		0.600	0.603	0.597	0.538	0.574	0.569	0.530	0.573	5.19
3)		Pyridine		1.364	1.410	1.450	1.320	1.394	1.404	1.322	1.380	3.46
4)		n-Nitrosodimet...		0.770	0.789	0.824	0.751	0.803	0.813	0.771	0.789	3.32
5)	S	2-Fluorophenol		1.428	1.391	1.402	1.201	1.267	1.268	1.163	1.303	8.03
6)		Aniline		1.480	1.511	1.542	1.359	1.404	1.350	1.174	1.403	8.93
7)	S	Phenol-d6		1.841	1.800	1.743	1.520	1.611	1.611	1.475	1.657	8.47
8)		2-Chlorophenol		1.535	1.510	1.487	1.297	1.353	1.355	1.237	1.396	8.24
9)		Benzaldehyde		1.166	1.130	1.104	0.895	0.861	0.837	0.727	0.960	17.81
10)	C	Phenol		1.938	1.879	1.884	1.643	1.696	1.704	1.554	1.757	8.22
11)		bis(2-Chloroet...		1.478	1.413	1.426	1.232	1.299	1.329	1.253	1.347	6.93
12)		1,3-Dichlorobe...		1.697	1.668	1.648	1.429	1.499	1.474	1.362	1.540	8.49
13)	C	1,4-Dichlorobe...		1.719	1.663	1.659	1.432	1.502	1.487	1.365	1.547	8.66
14)		1,2-Dichlorobe...		1.629	1.609	1.565	1.338	1.392	1.366	1.240	1.448	10.46
15)		Benzyl Alcohol		1.138	1.201	1.216	1.082	1.137	1.125	1.028	1.133	5.72
16)		2,2'-oxybis(1-...		2.533	2.484	2.495	2.189	2.296	2.287	2.112	2.342	7.01
17)		2-Methylphenol		1.237	1.175	1.210	1.042	1.107	1.120	1.053	1.135	6.62
18)		Hexachloroethane		0.609	0.612	0.610	0.530	0.560	0.561	0.513	0.571	7.09
19)	P	n-Nitroso-di-n...	1.084	1.052	1.060	1.032	0.895	0.936	0.945	0.874	0.985	8.27
20)		3+4-Methylphenols		1.561	1.564	1.502	1.287	1.331	1.323	1.186	1.393	10.65
21)	I	Naphthalene-d8	----------ISTD----------									
22)		Acetophenone		0.547	0.523	0.517	0.436	0.449	0.443	0.412	0.475	11.06
23)	S	Nitrobenzene-d5		0.405	0.396	0.406	0.354	0.373	0.373	0.349	0.379	6.14
24)		Nitrobenzene		0.418	0.411	0.420	0.371	0.385	0.389	0.358	0.393	6.14
25)		Isophorone		0.698	0.685	0.694	0.611	0.640	0.648	0.615	0.656	5.62
26)	C	2-Nitrophenol		0.176	0.187	0.199	0.177	0.189	0.191	0.179	0.185	4.66
27)		2,4-Dimethylph...		0.244	0.239	0.249	0.224	0.235	0.238	0.223	0.236	4.12
28)		bis(2-Chloroet...		0.454	0.440	0.445	0.389	0.405	0.411	0.384	0.418	6.70
29)	C	2,4-Dichloroph...		0.307	0.300	0.312	0.271	0.284	0.286	0.262	0.289	6.39
30)		1,2,4-Trichlor...		0.372	0.354	0.354	0.304	0.318	0.316	0.292	0.330	9.11
31)		Naphthalene		1.193	1.145	1.140	0.976	1.020	1.002	0.919	1.057	9.72
32)		Benzoic acid		0.140	0.178	0.238	0.221	0.241	0.259	0.242	0.217	19.59
33)		4-Chloroaniline		0.382	0.378	0.391	0.338	0.351	0.349	0.318	0.358	7.38
34)	C	Hexachlorobuta...		0.209	0.207	0.209	0.179	0.190	0.187	0.174	0.194	7.52
35)		Caprolactam		0.097	0.095	0.102	0.089	0.094	0.096	0.089	0.094	4.89
36)	C	4-Chloro-3-met...		0.328	0.328	0.334	0.287	0.301	0.307	0.283	0.310	6.71
37)		2-Methylnaphth...		0.755	0.732	0.724	0.624	0.643	0.639	0.583	0.672	9.68
38)		1-Methylnaphth...		0.757	0.723	0.711	0.606	0.625	0.623	0.573	0.660	10.56

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF012925.M

39)	I	Acenaphthene-d10	----------ISTD----------								
40)		1,2,4,5-Tetrac...	0.615	0.613	0.603	0.534	0.555	0.551	0.512	0.569	7.25
41)	P	Hexachlorocycl...	0.136	0.157	0.174	0.172	0.182	0.181	0.174	0.168	9.69
42)	S	2,4,6-Tribromo...	0.198	0.198	0.198	0.173	0.175	0.179	0.163	0.183	7.98
43)	C	2,4,6-Trichlor...	0.381	0.380	0.390	0.364	0.375	0.369	0.347	0.372	3.79
44)		2,4,5-Trichlor...	0.429	0.425	0.429	0.377	0.391	0.403	0.383	0.405	5.50
45)	S	2-Fluorobiphenyl	1.597	1.464	1.398	1.184	1.202	1.168	1.083	1.299	14.48
46)		1,1'-Biphenyl	1.810	1.692	1.650	1.454	1.492	1.460	1.360	1.560	10.27
47)		2-Chloronaphth...	1.396	1.310	1.290	1.122	1.159	1.156	1.077	1.216	9.59
48)		2-Nitroaniline	0.386	0.389	0.407	0.364	0.382	0.385	0.364	0.382	3.91
49)		Acenaphthylene	1.921	1.854	1.815	1.595	1.620	1.612	1.495	1.702	9.38
50)		Dimethylphthalate	1.498	1.456	1.445	1.239	1.299	1.296	1.223	1.351	8.34
51)		2,6-Dinitrotol...	0.333	0.331	0.333	0.296	0.304	0.309	0.290	0.314	5.90
52)	C	Acenaphthene	1.361	1.300	1.291	1.128	1.170	1.180	1.079	1.216	8.46
53)		3-Nitroaniline	0.321	0.330	0.341	0.303	0.293	0.298	0.264	0.307	8.44
54)	P	2,4-Dinitrophenol		0.102	0.136	0.147	0.156	0.169	0.164	0.146	16.81
55)		Dibenzofuran	1.869	1.788	1.755	1.518	1.525	1.539	1.398	1.627	10.72
56)	P	4-Nitrophenol	0.187	0.215	0.251	0.224	0.231	0.244	0.222	0.225	9.21
57)		2,4-Dinitrotol...	0.424	0.431	0.443	0.386	0.392	0.404	0.362	0.406	7.03
58)		Fluorene	1.512	1.410	1.353	1.167	1.164	1.172	1.059	1.262	12.96
59)		2,3,4,6-Tetrac...	0.325	0.343	0.341	0.304	0.305	0.324	0.291	0.319	6.11
60)		Diethylphthalate	1.470	1.417	1.412	1.225	1.238	1.260	1.146	1.310	9.32
61)		4-Chlorophenyl...	0.738	0.694	0.659	0.567	0.565	0.571	0.522	0.617	13.04
62)		4-Nitroaniline	0.297	0.312	0.330	0.290	0.294	0.311	0.281	0.302	5.45
63)		Azobenzene	1.464	1.411	1.390	1.224	1.249	1.276	1.162	1.311	8.51
64)	I	Phenanthrene-d10	----------ISTD----------								
65)		4,6-Dinitro-2-...	0.080	0.105	0.122	0.125	0.131	0.134	0.131	0.118	16.29
66)	c	n-Nitrosodiphe...	0.716	0.684	0.674	0.626	0.622	0.614	0.593	0.647	6.89
67)		4-Bromophenyl-...	0.235	0.234	0.234	0.217	0.218	0.220	0.210	0.224	4.57
68)		Hexachlorobenzene	0.257	0.250	0.248	0.229	0.229	0.232	0.217	0.238	6.07
69)		Atrazine	0.211	0.202	0.213	0.213	0.215	0.235	0.224	0.216	4.86
70)	C	Pentachlorophenol	0.112	0.136	0.146	0.143	0.146	0.149	0.141	0.139	9.08
71)		Phenanthrene	1.233	1.170	1.142	1.025	1.008	1.010	0.937	1.075	9.96
72)		Anthracene	1.179	1.146	1.120	1.009	0.999	0.996	0.924	1.053	9.00
73)		Carbazole	1.019	1.014	1.021	0.899	0.878	0.900	0.807	0.934	9.04
74)		Di-n-butylphth...	1.244	1.239	1.245	1.086	1.051	1.081	0.978	1.132	9.65
75)	C	Fluoranthene	1.195	1.202	1.196	1.013	0.963	0.982	0.880	1.062	12.57
76)	I	Chrysene-d12	----------ISTD----------								
77)		Benzidine	0.882	0.480	0.210	0.730	0.906	0.724	0.556	0.641	38.34
78)		Pyrene	2.178	2.063	2.002	1.754	1.870	1.898	1.674	1.920	9.14
79)	S	Terphenyl-d14	1.543	1.411	1.370	1.183	1.238	1.230	1.103	1.297	11.68
80)		Butylbenzylpht...	0.686	0.690	0.739	0.626	0.657	0.688	0.610	0.671	6.49
81)		Benzo(a)anthra...	1.532	1.410	1.453	1.270	1.375	1.355	1.265	1.380	6.96
82)		3,3'-Dichlorob...	0.412	0.422	0.427	0.418	0.478	0.466	0.449	0.439	5.82
83)		Chrysene	1.332	1.325	1.342	1.136	1.267	1.243	1.210	1.265	5.98
84)		Bis(2-ethylhex...	0.882	0.903	0.956	0.785	0.831	0.834	0.764	0.851	7.93
85)	c	Di-n-octyl pht...	1.194	1.267	1.438	1.230	1.365	1.406	1.352	1.321	6.98

Method Path : Z:\svoasrv\HPCHEM1\BNA_F\Methods\
Method File : 8270-BF012925.M

86)	I	Perylene-d12	----------ISTD----------							
87)		Indeno(1,2,3-c...	1.217	1.268	1.337	1.257	1.348	1.322	1.287	1.291	3.67
88)		Benzo(b)fluora...	1.358	1.382	1.328	1.120	1.265	1.218	1.136	1.258	8.33
89)		Benzo(k)fluora...	1.167	1.114	1.274	1.083	1.049	1.060	1.054	1.114	7.32
90)	C	Benzo(a)pyrene	1.118	1.059	1.131	1.011	1.061	1.051	1.010	1.063	4.44
91)		Dibenzo(a,h)an...	0.966	1.001	1.101	1.016	1.087	1.071	1.028	1.039	4.73
92)		Benzo(g,h,i)pe...	1.011	1.075	1.139	1.043	1.123	1.105	1.063	1.080	4.22

(#) = Out of Range

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1242 SAS No.: Q1242 SDG No.: Q1242

Instrument ID: BNA_F Calibration Date/Time: 02/04/2025 10:42

Lab File ID: BF141398.D Init. Calib. Date(s): 01/29/2025 01/29/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 10:30 17:05

GC Column: DB-UI ID: 0.18 (mm)

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Pyridine	1.380	1.270		-8.0	
2-Fluorophenol	1.303	1.302		-0.1	
Phenol-d6	1.657	1.560		-5.9	
1,4-Dichlorobenzene	1.547	1.539		-0.5	20.0
2-Methylphenol	1.135	1.074		-5.4	
3+4-Methylphenols	1.393	1.375		-1.3	
Nitrobenzene-d5	0.379	0.391		3.2	
Hexachloroethane	0.571	0.583		2.1	
Nitrobenzene	0.393	0.398		1.3	
Hexachlorobutadiene	0.194	0.208		7.2	20.0
2,4,6-Trichlorophenol	0.372	0.382		2.7	20.0
2-Fluorobiphenyl	1.299	1.328		2.2	
2,4,5-Trichlorophenol	0.405	0.421		4.0	
2,4-Dinitrotoluene	0.406	0.441		8.6	
2,4,6-Tribromophenol	0.183	0.202		10.4	
Hexachlorobenzene	0.238	0.243		2.1	
Pentachlorophenol	0.139	0.161		15.8	20.0
Terphenyl-d14	1.297	1.200		-7.5	

All other compounds must meet a minimum RRF of 0.010.

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1242 SAS No.: Q1242 SDG No.: Q1242

Instrument ID: BNA_F Calibration Date/Time: 02/04/2025 15:58

Lab File ID: BF141410.D Init. Calib. Date(s): 01/29/2025 01/29/2025

EPA Sample No.: SSTDCCC040 Init. Calib. Time(s): 10:30 17:05

GC Column: DB-UI ID: 0.18 (mm)

COMPOUND	RRF	RRF040	MIN RRF	%D	MAX%D
Pyridine	1.380	1.264		-8.4	
2-Fluorophenol	1.303	1.284		-1.5	
Phenol-d6	1.657	1.572		-5.1	
1,4-Dichlorobenzene	1.547	1.553		0.4	20.0
2-Methylphenol	1.135	1.080		-4.8	
3+4-Methylphenols	1.393	1.396		0.2	
Nitrobenzene-d5	0.379	0.388		2.4	
Hexachloroethane	0.571	0.577		1.1	
Nitrobenzene	0.393	0.393		0.0	
Hexachlorobutadiene	0.194	0.208		7.2	20.0
2,4,6-Trichlorophenol	0.372	0.385		3.5	20.0
2-Fluorobiphenyl	1.299	1.327		2.2	
2,4,5-Trichlorophenol	0.405	0.420		3.7	
2,4-Dinitrotoluene	0.406	0.439		8.1	
2,4,6-Tribromophenol	0.183	0.206		12.6	
Hexachlorobenzene	0.238	0.248		4.2	
Pentachlorophenol	0.139	0.158		13.7	20.0
Terphenyl-d14	1.297	1.228		-5.3	

All other compounds must meet a minimum RRF of 0.010.