From: Harvey, Christopher <CHarvey@trccompanies.com>

Sent: Tuesday, July 11, 2023 12:41 PM

To: Krueger, Sarah E - DNR

Cc: Webb, Carrie A - DNR; Smith, Jason; Wachholz, Benjamin

Subject: RE: [EXTERNAL] Notice to Proceed: HARP Site Long Term Monitoring (02-08-

587669) and HARP Downstream of Hayton Millpond Dam (02-08-587108)

Attachments: 40262368_frc.pdf; 10654073_1668C_L2_R3_dfr.pdf;

TableX_Surface_Water_Sampling_Results_071123.pdf

CAUTION: This email originated from outside the organization.

Do not click links or open attachments unless you recognize the sender and know the content is safe.

Sarah,

Good afternoon. I am providing you with the surface water sample results from the May surface water sampling event. I have also included a summary table of the results.

Please let me know if you have any questions or comments.

Thank you, Chris

Chris Harvey, PE C 312-909-0043

From: Harvey, Christopher

Sent: Wednesday, May 3, 2023 1:25 PM

To: Krueger, Sarah E - DNR < sarah.krueger@wisconsin.gov>

Cc: Webb, Carrie A - DNR <CarrieA.Webb@wisconsin.gov>; Smith, Jason <jason.smith@tecumseh.com>;

Wachholz, Benjamin < BWachholz@trccompanies.com>

Subject: RE: [EXTERNAL] Notice to Proceed: HARP Site Long Term Monitoring (02-08-587669) and HARP

Downstream of Hayton Millpond Dam (02-08-587108)

Sarah,

Good afternoon. I am providing notice to you that on Tuesday, May 16, TRC will be conducting the May 2023 surface water sampling activities in accordance with the Long-Term Monitoring Plan for Surface Water and Sediment associated with HARP.

If you have any questions, please contact me at 312-909-0043.

Chris

Chris Harvey, PE C 312-909-0043

From: Krueger, Sarah E - DNR < sarah.krueger@wisconsin.gov>

Sent: Monday, April 24, 2023 11:44 AM

To: Harvey, Christopher < CHarvey@trccompanies.com>

Cc: Webb, Carrie A - DNR < CarrieA. Webb@wisconsin.gov >; Smith, Jason < jason.smith@tecumseh.com >;

Wachholz, Benjamin < BWachholz@trccompanies.com>

Subject: RE: [EXTERNAL] Notice to Proceed: HARP Site Long Term Monitoring (02-08-587669) and HARP

Downstream of Hayton Millpond Dam (02-08-587108)

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Thank you for the clarification Chris.

Just to clarify, the minimum completeness goal should read "Five-Three individual samples of three fish each for common carp, i.e., each sample will be comprised of three fish each."? Apologies for the confusion related to my comment I missed changing the Five to Three. We assume the information in Table 4-1 is the correct information and only need clarification between the text and table since they seem to indicate two different minimum completeness goals.

Feel free to call if there is still confusion or questions related to the minimum completeness goal.

Thank you, Sarah

We are committed to service excellence.

Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Sarah Krueger, P.G. Phone: (920) 510-8277

Sarah.Krueger@wisconsin.gov

From: Harvey, Christopher < CHarvey@trccompanies.com >

Sent: Monday, April 24, 2023 11:30 AM

To: Krueger, Sarah E - DNR < <u>sarah.krueger@wisconsin.gov</u>>

Cc: Webb, Carrie A - DNR < CarrieA. Webb@wisconsin.gov >; Smith, Jason < jason.smith@tecumseh.com >;

Wachholz, Benjamin < BWachholz@trccompanies.com>

Subject: RE: [EXTERNAL] Notice to Proceed: HARP Site Long Term Monitoring (02-08-587669) and HARP

Downstream of Hayton Millpond Dam (02-08-587108)

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Sarah,

Thank you. We had a little confusion on the correct wording from your last comment. We confirm that "Five individual fish each for common carp." As presented on Table 4-1, the minimum completeness goal for common carp is three fish from a location.

We would anticipate that Figure 2 from the Site Investigation Work Plan Revision 5 and Figure 2 from the Natural Recovery Monitoring Plan for Surface Water and Sediment Revision 4 will be updated following the finalization of sampling locations and geomorphic evaluation. Thank you for the note regarding the TRC sediment sampling/transect location (August 2015); we will ensure they are visible in our Site Investigation Report figures.

Thank you. Chris

Chris Harvey, PE C 312-909-0043

From: Krueger, Sarah E - DNR < sarah.krueger@wisconsin.gov>

Sent: Thursday, April 20, 2023 8:02 AM

To: Smith, Jason < <u>jason.smith@tecumseh.com</u>>; Harvey, Christopher < <u>CHarvey@trccompanies.com</u>>

Cc: Webb, Carrie A - DNR < Carrie A. Webb@wisconsin.gov>

Subject: [EXTERNAL] Notice to Proceed: HARP Site Long Term Monitoring (02-08-587669) and HARP

Downstream of Hayton Millpond Dam (02-08-587108)

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Jason and Chris,

DNR has reviewed the Natural Recovery Monitoring Plan for Fish Tissue Monitoring Revision 2, the Natural Recovery Monitoring Plan for Surface Water and Sediment Revision 4, the Site Investigation Work Plan Revision 5, and the Quality Assurance Project Plan Revision 4, all dated January 27, 2023. The comments and conditions from the November 28, 2022 Letters for each associated document have been addressed with one exception.

The Natural Recovery Monitoring Plan for Fish Tissue Monitoring Revision 2, section 4.1, the minimum completeness goal still indicates that there will be 3 individual fish making up each sample for common carp. The word "composite" was removed in the revision for the minimum completeness goal but the remainder of the language should be updated we assume to state, "Five individual samples of three fish each for common carp, i.e., each sample will be comprised of three fish each." Please confirm what the minimum completeness goal is for common carp before implementing the fish tissue sampling.

We anticipate that Figure 2 from the Site Investigation Work Plan Revision 5 will be updated following the finalization of sampling locations and geomorphic evaluation, please note that the symbol for the TRC sediment sampling/transect location (August 2015) is not visible on the figure outside of the legend.

We also anticipate a finalized Figure 2 from the Natural Recovery Monitoring Plan for Surface Water and Sediment Revision 4 may be necessary following the geomorphic evaluation.

Please note that I will be on leave (expected to start in June) and unable to participate in the field effort this spring and summer. Meanwhile, please copy Carrie Webb (copied) on communications as she will be the main point of contact in my absence.

If you have any questions or concerns, please reach out to us. Thank you, Sarah

We are committed to service excellence.

Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Sarah Krueger, P.G.

Contaminated Sediment Specialist Wisconsin Department of Natural Resources 2984 Shawano Avenue, Green Bay WI 54313-6727

Phone: (920) 510-8277

Sarah.Krueger@wisconsin.gov





Pace Analytical Services, Inc.

1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700

Fax: 612.607.6444

Report Prepared for:

Tod Noltemeyer **PACE Wisconsin** 6409 Odana Road Madison WI 53719

> REPORT OF LABORATORY **ANALYSIS FOR PCBs**

Report Information:

Pace Project #: 10654073

Sample Receipt Date: 05/20/2023

Client Project #: 40262368 TRC Madison

Client Sub PO #: N/A State Cert #: 999407970

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCB Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

slyne haut

Carolynne Trout, Project Manager (612) 607-6351

(612) 607-6444 (fax)

Carolynne.Trout@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

July 7, 2023



Pace Analytical Services, Inc.

1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700

Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on eleven samples submitted by a representative of Pace Analytical Services, Inc. The samples were analyzed for the presence or absence of selected polychlorinated biphenyl (PCB) congeners using USEPA Method 1668C. Reporting limits were based on the the statistically derived MDLs and adjusted for the amount of sample extracted. Levels below the calibration range flagged "J" as estimated concentrations. Results based on the the quantitation limits were also included (as Additional Results). For the MDL based data set, the "A" flags for reporting limits determined based on the signal to noise ratio were removed per client request. This report was revised to correct issues with flags on the MDL results provided as additional data. A second revision was prepared to remove "A" flags from the results tables and move the MDL based results to the bookmarked section of the report. A third revision of this report was prepared to change the method reference from 1668A to 1668C and to correct the laboratory spike duplicate table.

Sample "NR-SW-DUP1-202305" was expected to be a duplicate of sample "NR-SW-DS2-202305" but had significant differences between the determined concentrations. It should be noted that one bottle of each sample was provided to the Minnesota laboratory, therefore, no additional information relating the the laboratory duplicate bottle identification was available. However, the extracts in question were reanalyzed to verify the vial identification. The results were in agreement and were included in this revision as "informational" results. Informational results are excluded from electronic deliverables.

The isotopically-labeled PCB internal standards in the sample extracts were recovered within the target ranges specified in the method. Since the quantification of the native PCB congeners was based on internal standard and isotope dilution methodology, the data were automatically corrected for variation in recovery and accurate values were obtained. Incorrect isotope ratios were obtained for selected PCB congeners. The affected congeners were flagged "I" on the results tables. Any associated target analyte detections were provided under the estimated maximum possible concentration (EMPC) column on the results table.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blanks to be free of PCB congeners to the reporting limits. However, a trace signal at the retention time of congener 5 was present in the method blank associated with sample NR-SW-BKG2-202305. This congener was not detected in the sample extract. This indicates that the sample preparation procedures did not significantly impact the PCB

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700

Fax: 612.607.6444

DISCUSSION

content determined for the sample material.

Laboratory spike samples were also prepared with the sample batch using reference material that had been fortified with native standards. The results show that the spiked native compounds were recovered at 80-117%, with relative percent differences of 0.0-17.0%. These values were within method limits. Matrix spikes were not prepared with the sample batch.

REPORT OF LABORATORY ANALYSIS

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Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Missouri	10100
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska-DW	MN00064	Nevada	MN00064
Alaska-UST	17-009	New Hampshire	2081
Arizona	AZ0014	New Jersey	MN002
Arkansas - WW	88-0680	New York	11647
Arkansas-DW	MN00064	North Carolina-	27700
California	2929	North Carolina-	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio-DW	41244
Florida	E87605	Ohio-VAP (170	CL101
Georgia	959	Ohio-VAP (180	CL110
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon-Primary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Michigan	9909	West Virginia-D	382
Minnesota	027-053-137	West Virginia-D	9952C
Minnesota-Ag	via MN 027-053	Wisconsin	999407970
Minnesota-Petr	1240	Wyoming-UST	via A2LA 2926.
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Report No....10654073



Pace Analytical Services, LLC

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Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

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Samples Intact

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

DC#_Title: ENV-FRM-MIN4-0150 v13_Sample Condition Upon Receipt (SCUR)

Effective Date: 4/14/2023

Client Name: Project #:	
Sample Condition	110# · 10654070
Upon Receipt PACE Green Bay	WO#:10654073
	PM: SCU Due Date: 06/12/23
Courier: FedEx UPS USBS Client Pace SpeeDee Commercial	CLIENT: PASI-WI
Tracking Number: See Exceptions ENV-FRM-MIN4-0142	 :
Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes	No Biological Tissue Frozen? Yes No N/A
Packing Material: Bubble Wrap Bubble Bags None	Other Temp Blank? Yes No
	75 (0178) Type of Ice: Wet Blue Dry None 01339252/1710 Melted
Did Samples Originate in West Virginia? Yes No We	re All Container Temps Taken? Yes No N/A
Temp should be above freezing to 6°C Cooler temp Read w/Temp Blank: 3.7 °C	
Correction Factor: +0.2 Cooler Temp Corrected w/temp blank: 3,9	(no temp blank only): °C
	See Exceptions ENV-FRM-MIN4-0142 1 Container
USDA Regulated Soil: N/A water ample/other:)	Date/Initials of Person Examining Contents: 5:20
Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL,	Did samples originate from a foreign source (internationally,
GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)?	including Hawaii and Puerto Rico)?
If Yes to either question, fill out a Begulated Soil Checklist (ENV-FRM	1-MIN4-0154) and include with SCUR/COC paperwork.
Location (Check one): Duluth Minneapolis, Virginia	COMMENTS
Chain of Custody Present and Filled Out? Yes No	1.
Chain of Custody Relinquished? Yes No	2.
Company Andrew Andrews 1 (1) 1 (1) 11 (1) 12 (1)	N/A 3.
Samples Arrived within Hold Time? Yes No	4. If fecal: <8 hrs >8 hr, <24 No
Short Hold Time Analysis (<72 hr)?	5. Fecal Coliform HPC Total Coliform/E.coli
·	BOD/cBOD Hex Chrom Turbidity Nitrate
	Nitrite Orthophos Other
Rush Turn Around Time Requested? Yes No	6.
Sufficient Sample Volume? Yes No	7.
Correct Containers Used?	N/A 8.
-Pace Containers Used? Yes No	
Containers Intact? Yes No	9.
Field Filtered Volume Received for Dissolved Tests? Yes No	N/A 10. Is sediment visible in the dissolved container? Yes No
Is sufficient information available to reconcile the samples to the Yes No	11. If no, write ID/Date/Time of container below:
	1 ACIU/sample See Exceptions
in the second se	ENV-FRIVI-IVIIN4-0142
All containers needing acid/base preservation have been Yes No checked?	N/A 12. Sample #
All containers needing preservation are found to be in Yes No	Z N/A □ NaOH □ HNO3 .
compliance with EPA recommendation?	H2SO4 Zinc Acetate
(HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 Yes No	S
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 Yes No /(water) and Dioxins/PFAS	N/A Positive for Residual Yes See Exceptions
(*If adding preservative to a container, it must be added to	Chlorine? No ENV-FRM-MIN4-0142
associated field and equipment blanksverify with PM first.)	pH Paper Lot #
associated field and equipment blanksverify with Fivi hist.)	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	N/A 13.
Extra labels present on soil VOA or WIDRO containers?	N/A 14. See Exceptions
Headspace in VOA Vials (greater than 6mm)?	N/A ENV-FRM-MIN4-0142
3 Trip Blanks Present? Yes No	N/A 15.
Trip Blank Custody Seals Present?	N/A Pace Trip Blank Lot # (if purchased):
CLIENT NOTIFICATION/RESOLUTION	Field Data Required? Yes No
Person Contacted:	Date/Time:
Comments/Resolution:	
Project Manager Review: Syn (. Wrug	Date: 05/22/23
NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the sen	the North Carolina DEHNR Certification Office the pout of hold, incorrect preservative number
temp, incorrect containers).	
	Labeled By: Line:

Qualtrax ID: 52742

Pace® Analytical Services, LLC Revision 3

Report No.....10654073_1668C_L2_R3_dfr

Page 7 of 215

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Collected By (signature)	Turnaround Da	te Requir			Immediati	ely Packed [] No			*		1.				23		ø.	VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA
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[] Archive:	[] 2 Day [] 3 Day				dissol	jed of	ganic	Congeners						3			Sample pH Acceptable Y N NA pH Strips:
* Matrix Codes (Insert in Matrix bo	x below): Drinki	ng Water	(DW), Grou					011	ર્જી				esima		~	1.6		Sulfide Presentan, Y NA Lead Acetate Strips:
Product (P), Soil/Solid (SL), Oil (Ol		Comp/		ted (or	I	osite End	Res	# of	CB	SS	2	δC			400	7		LAB USE ONLY: Lab Sample # // Comments:
Customer Sample ID	Matrix *	Grab	Compos	ite Start) Time	Date	Time	CI	Ctns	6	1	1	0	*.5		in the second			and the second of the second o
NR-SW-BK62-202	805 W	6	5/16/23	17:40				5	×	Χ	X	X						011
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Customer Remarks / Special Condit	inna (Dansible)		Typhofic	llend.	Mati. 1	Plus D	11. 110	200		leur	207.110	1000	DECCAL	T-1-77 b			1	V/A Lab Sample Temperature Info:
PCB Congeners an	alyzed b	razaros:	Packing M	aterial Use	ð	Side () ·	in the second	<u> </u>	1		***********	***********	~,		************		Temp Blank Received: Y N NA
Minneapolis and oth	oclaralys	25	· Mark of All		.:	~ #	·. ×*	ndejh v	٠					8,5	5. 0.	8.2.	1844. Z	They ID#: Cooler Temp Upon Receipt Oc
PCB congeners and other performed by Great	en Bay		Radchem	sample(s) s	creened (<	500 cpm):	YN	NA		Sam		ceived		Client	' Cou	urler	Pace	Cooler 1 Therm Corr. Factor oC Cooler 1 Corrected Temp: oC
Relinquished by/Company (Signatu	TRC)		Time: /17/2	3 18:	Received b	y/Company	y: (Signat	ure)			Date/	Time:			Table	#is	B US	SE UNLY COMMENTS.
Relinquished by/Company: (Signatu	ire)		/Time:		Received b			ure)			Date/	Time:	۷ کر	175	Acctni Templ	late:	(Trif Blank Received Y N NA
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Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature)						u10)			Date/	· iiiic.			PM: PB:		/ · ·	Non Conformanco(s): Page: of:		

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		nt Na ners r		_'	RC servati		ive be	een ch				below paper:		Sam □Ye	Pro	Pres ect #	‡,		·U	G	105	12	(eg Hadju	sted).		*				ial wh			Date/	
				Glass] "	_	R.R.	2-18-5	Plas			N	0		Via	ıls				Ja	ars			Gen	eral]	OA Vials (>6mm) *	12SO4 pH ≤2	laOH+Zn Act pH ≥9	VaOH pH≥12	5H ≤2	oH after adjusted	Volume (mL)
Pace Lab#	AG10	BG1U	AG1H	AG4S	AGSU	AG2S	BG3U	BP 11	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	У С9Н	VG9M	VG9D	JGFU	JG9D	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2	VOA Vis	H2SO4	NaOH+Z	NaOH p	HNO3 pH <2	pH afte	******
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G1U	1 lite	er am	ber al	ass	-	1 - 10	В	P1U	11 lite	er plas	stic un	pres				VG	9C	40 m	L clea	er asc	orbic	w/ HC	CI .	Jo	FU	4 oz	ambe	riari	unpres				1	
G1U							0.550	P3U				unpre	s			503050	9T	G108 (VC)	L ami				ed.	54998	9U	STATE OF STREET		10 E 10 10 10 10 10 10 10 10 10 10 10 10 10	unpres					
G1H						٠,	1011390	РЗВ				NaOH				9.000.00	9U	400.00000000000000000000000000000000000	L clea		A CANADA STATE	es		277-05	GFU	4 oz	200							
G4S								P3N				HNO3					9H	250	L clea						PFU				unpres		10.000		1	
G5U G2S	500	mL a	mber	glass	unpr H2S	es O4		P3S P2Z				H2SO NaOH				100	9M 9D		L clea			H			P5T PLC		mL pla c bag		Na Thi	osulfa	ate			
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							4																		N 2								P	age <u>1</u> of

DC#_Title: ENV-FRM-GBAY-0014 v03_SCUR

Effective Date: 8/17/2022

Sample Condition Upon Receipt Form (SCUR)

	Project #:
Client Name: TRC	W0#:40262368
Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐	Waltco
☐ Client ☐ Pace Other:	
Tracking #: 7721 7851 3973	40262368
Custody Seal on Cooler/Box Present: Vyes no Seals inta-	ct: Vyes 🛘 no
Custody Seal on Samples Present: Lyes Kno Seals intak	ct: 🛘 yes 🕱 ho
Packing Material: Bubble Wrap Bubble Bags D	
	Blue Dry None Meltwater Only
Cooler Temperature Uncorr: d.O /Corr. 2.0	Person examining contents:
/3.	Tissue is Frozen: yes no Date: 5-18-23 //nitials:
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.	Labeled By Initials:
Chain of Custody Present: XYes □No □N/	A 1.
Chain of Custody Filled Out:	A 2.
Chain of Custody Relinquished:	A 3.
Sampler Name & Signature on COC: Ares DNo DNA	A 4.
Samples Arrived within Hold Time: → → → → → → → → →	5.
- DI VOA Samples frozen upon receipt ☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	6.
Rush Turn Around Time Requested:	7.
Sufficient Volume:	8.
For Analysis: Ores Ono MS/MSD: Oyes No On//	
Correct Containers Used: Yes □No	9.
Correct Type: Pace Green Bay Pace IR, Non-Pace	
Containers Intact: Yes □No	10.
Filtered volume received for Dissolved tests Ves DNo DN/	11.
Sample Labels match COC:	12.
-Includes date/time/ID/Analysis Matrix: W	
Trip Blank Present: □Yes □No ANIA	13.
Trip Blank Custody Seals Present □Yes □No □N/A	
Pace Trip Blank Lot # (if purchased): /	
Client Notification/ Resolution:	If checked, see attached form for additional comments
Person Contacted: Date: Comments/ Resolution:	Time:
PM Review is documented electronically in LIMs. By releasing the	project, the PM acknowledges they have reviewed the sample logic

Qualtrax ID: 41292

Pace® Analytical Services, LLC

Page 1 of 2



Pace Analytical Services, LLC

1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444

Fax: 612.607.6444 www.pacelabs.com

Reporting Flags

A = Reporting Limit based on signal to noise (EDL)

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

H2 = Extracted outside of holding time

I = Isotope ratio out of specification

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



Pace Analytical Services, LLC 1700 Elm Street, Suite 200 Minneapolis, MN 55414

Phone: 612.607.1700 Fax: 612.607.6444 www.pacelabs.com

Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-DS2-202305
Lab Sample ID 40262368001
Filename P230529A_11
Injected By BAL
Total Amount Extracted 960 ml

Total Amount Extracted960 mLMatrixWater% MoistureNADilutionNADry Weight ExtractedNACollected05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 11:15

 ICAL ID
 P230529A02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529A_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023 12:56

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.171	2.95	2.0	1.42	71
13C-4-MoCB	3	12.986	3.09	2.0	1.69	84
13C-2,2'-DiCB	4	13.292	1.53	2.0	2.22	111
13C-4,4'-DiCB	15	20.415	1.58	2.0	1.85	92
13C-2,2',6-TrCB	19	17.143	1.04	2.0	2.26	113
13C-3,4,4'-TrCB	37	28.223	1.04	2.0	1.37	69
13C-2,2 ¹ ,6,6'-TeCB	54	20.767	0.79	2.0	1.49	74
13C-3,4,4',5-TeCB	81	35.377	0.79	2.0	1.49	75
13C-3,3',4,4'-TeCB	77	35.950	0.81	2.0	1.46	73
13C-2,2',4,6,6'-PeCB	104	26.909	1.57	2.0	1.77	89
13C-2,3,3',4,4'-PeCB	105	39.573	1.56	2.0	1.23	62
13C-2,3,4,4',5-PeCB	114	38.919	1.58	2.0	1.25	62
13C-2,3',4,4',5-PeCB	118	38.365	1.58	2.0	1.27	63
13C-2,3',4,4',5'-PeCB	123	38.030	1.53	2.0	1.23	62
13C-3,3',4,4',5-PeCB	126	42.742	1.54	2.0	1.08	54
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.32	2.0	2.30	115
13C-HxCB(156/157)	156/157	45.816	1.26	4.0	2.42	61
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.23	2.0	1.27	63
13C-3,3',4,4',5,5'-HxCB	169	49.119	1.23	2.0	1.41	71
13C-2,2',3,4',5,6,6'-HpCB	188	38.919	1.03	2.0	2.35	118
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.05	2.0	1.52	76
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.424	0.88	2.0	1.78	89
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.90	2.0	1.91	96
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.80	2.0	2.10	105
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.202	0.79	2.0	2.22	111
13C-DeCB	209	57.689	0.71	2.0	2.17	108
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.03	2.0	1.28	64
13C-2,3,3',5,5'-PeCB	111	35.996	1.55	2.0	1.58	79
13C-2,2 ¹ ,3,3 ¹ ,5,5 ¹ ,6-HpCB	178	42.038	1.03	2.0	1.79	89
Recovery Standards						
13C-2,5-DiCB	9	15.773	1.55	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.54	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.26	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.90	2.0	NA	NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00581
2				ND		0.00529
3				ND		0.00458
4				ND		0.00783
5				ND		0.00191
6				ND		0.00977
7				ND		0.00969
8				ND		0.0128
9				ND		0.00256
10				ND		0.00304
11				ND		0.151
12	12/13			ND		0.00548
13	12/13			ND		0.00548
14	12/10			ND		0.00183
15				ND		0.00629
16				ND		0.00642
17				ND		0.00537
18	18/30			ND		0.0119
19	10/30			ND		0.00869
20	20/28			ND		0.0190
21	21/33			ND		0.0137
22	21/33			ND		0.00789
23				ND		0.00769
24				ND		0.00103
25				ND ND		0.00199
26	26/29			ND ND		0.00298
27	20/29			ND ND		0.00477
28	20/28			ND		0.0190
29	26/29			ND ND		0.0190
30	18/30			ND ND		0.00477
31	10/30			ND		0.0119
32				ND		0.0164
33	21/33			ND ND		0.00762
33 34	21/33			ND		0.00169
3 4 35				ND		0.00333
36				ND		0.00333
36 37				ND ND		0.00210
3 <i>1</i> 38						0.00440
				ND ND		0.00155
39	40/44/74			ND		0.00171
40	40/41/71			ND		0.00846
41	40/41/71			ND		0.00846
42	40/70			ND		0.00458
43	43/73			ND ND		0.00408
44	44/47/65			ND		0.0195
45	45/51			ND		0.00600
46	44/47/05			ND		0.00237
47	44/47/65			ND		0.0195
48				ND		0.00304

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EMPC = Estimated Maximum Possible Concentration
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B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

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* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
		17.1	itatio		119/	
49	49/69			ND		0.00704
50	50/53			ND		0.00396
51	45/51			ND		0.00600
52				ND		0.0173
53	50/53			ND		0.00396
54				ND		0.00168
55				ND		0.00225
56				ND		0.0106
57				ND		0.00157
58				ND		0.00199
59	59/62/75			ND		0.00433
60				ND		0.00358
61	61/70/74/76			ND		0.0335
62	59/62/75			ND		0.00433
63				ND		0.00182
64				ND		0.00585
65	44/47/65			ND		0.0195
66	, , 55			ND		0.0229
67				ND		0.00235
68				ND		0.00262
69	49/69			ND		0.00704
70	61/70/74/76			ND		0.0335
71 71	40/41/71			ND		0.00846
72	40/41/11			ND		0.00185
73	43/73			ND		0.00408
73 74	61/70/74/76			ND		0.0335
7 5	59/62/75			ND		0.00433
76	61/70/74/76			ND		0.0335
70 77	01/10/14/10			ND		0.00277
7 <i>1</i> 78				ND ND		0.00277
78 79				ND ND		0.00242
80				ND ND		0.00244
81				ND ND		0.00223
82				ND ND		0.00166
83				ND ND		0.00269
84						0.00230
85	85/116/117			ND		
				ND		0.00544
86	86/87/97/108/119/125			ND		0.0159
87	86/87/97/108/119/125			ND		0.0159
88	88/91			ND		0.00517
89	00/404/440			ND		0.00327
90	90/101/113			ND		0.0125
91	88/91			ND		0.00517
92	00/00/400/400			ND		0.00410
93	93/98/100/102			ND		0.00592
94				ND		0.00198
95				ND		0.00910
96				ND		0.00329

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits Nn = Value obtained from additional analyses

RT = Retention Time I = Interference ng's = Nanograms

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X = Outside QC Limits



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125			ND		0.0159
98	93/98/100/102			ND		0.00592
99	30,00,100,100			ND		0.00619
100	93/98/100/102			ND		0.00592
101	90/101/113			ND		0.0125
102	93/98/100/102			ND		0.00592
103				ND		0.00205
104				ND		0.00160
105				ND		0.00594
106				ND		0.00186
107	107/124			ND		0.00275
108	86/87/97/108/119/125			ND		0.0159
109				ND		0.00208
110	110/115			ND		0.0135
111				ND		0.00215
112				ND		0.00185
113	90/101/113			ND		0.0125
114	00/101/110			ND		0.00240
115	110/115			ND		0.0135
116	85/116/117			ND		0.00544
117	85/116/117			ND		0.00544
118	33/113/11/			ND		0.00937
119	86/87/97/108/119/125			ND		0.0159
120	00/07/37/100/110/120			ND		0.00178
121				ND		0.00176
122				ND		0.00204
123				ND		0.00204
124	107/124			ND		0.00251
125	86/87/97/108/119/125			ND		0.0159
126	00/07/97/100/119/125			ND		0.00233
127				ND		0.00233
128	128/166			ND		0.00456
129	129/138/163			ND		0.0115
130	129/130/103			ND ND		0.00229
131				ND		0.00229
132				ND ND		0.00290
133				ND		0.00279
134	134/143			ND ND		0.00279
135	135/151			ND ND		0.00544
136	135/131			ND ND		0.00344
130				ND ND		0.00300
137	129/138/163			ND ND		0.00269
139	139/140			ND ND		0.00460
140	139/140			ND ND		0.00460
141				ND ND		0.00258
142	10.4/4.40			ND		0.00202
143	134/143			ND		0.00419
144				ND		0.00219

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145				ND		0.00210
146				ND		0.00267
147	147/149			ND		0.00941
148	,			ND		0.00246
149	147/149			ND		0.00941
150	,			ND		0.00136
151	135/151			ND		0.00544
152				ND		0.00223
153	153/168			ND		0.00808
154	. 55/ . 55			ND		0.00184
155				ND		0.00161
156	156/157			ND		0.00467
157	156/157			ND		0.00467
158	100/101			ND		0.00271
159				ND		0.00294
160				ND		0.00271
161				ND		0.00195
162				ND		0.00244
163	129/138/163			ND		0.0115
164	120/100/100			ND		0.00254
165				ND		0.00217
166	128/166			ND		0.00456
167	120/100			ND		0.00225
168	153/168			ND		0.00223
169	199/100			ND		0.00168
170				ND		0.00521
171	171/173			ND		0.00637
172	17 17 17 3			ND		0.0148
173	171/173			ND		0.00637
174	17 17 17 3			ND		0.00335
175				ND		0.00353
176				ND		0.00235
177				ND		0.00255
178				ND		0.00237
179				ND		0.00254
180	180/193			ND		0.00602
181	100/100			ND		0.00287
182				ND		0.00271
183	183/185			ND		0.00596
184	103/103			ND		0.00330
185	183/185			ND		0.00596
186	100/100			ND		0.00165
187				ND		0.00344
188				ND		0.00344
189				ND ND		0.00200
190				ND ND		0.00227
191				ND		0.00207
192				ND		0.00229
102				ND		0.00200

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise
B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits
Nn = Value obtained from additional analyses

NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time

ND = Not Detected

I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.00602
194				ND		0.00197
195				ND		0.00181
196				ND		0.00183
197	197/200			ND		0.00496
198	198/199			ND		0.00298
199	198/199			ND		0.00298
200	197/200			ND		0.00496
201				ND		0.00152
202				ND		0.00244
203				ND		0.00191
204				ND		0.00177
205				ND		0.00208
206				ND		0.00404
207				ND		0.00242
208				ND		0.00235
209				ND		0.0181

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS2-202305 40262368001 P230529A_11

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID
Lab Sample ID
Filename
Injected By
Total Amount Extracted

% Moisture

Dry Weight Extracted ICAL ID

CCal Filename(s) Method Blank ID NR-SW-DS2-202305 40262368001 P230706A_10 CVS 960 mL NA NA

P230706A02 P230706A_01 BLANK-106282 <mark>Matr</mark>ix Water Dilution NA

 Collected
 05/16/2023
 11:15

 Received
 05/20/2023
 18:45

 Extracted
 05/23/2023
 12:15

 Analyzed
 07/06/2023
 18:05

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1 ,	10.6 <mark>2</mark> 3	3.15	2.0	1.21	61
13C-4-MoCB	3	13.257	3.12	2.0	1.58	79
13C-2,2'-DiCB	4	13.552	1.54	2.0	1.54	77
13C-4,4'-DiCB	15	20.403	1.56	2.0	1.75	88
13C-2,2',6-TrCB	19	17.231	1.07	2.0	1.74	87
13C-3,4,4'-TrCB	37	28.111	1.05	2.0	1.98	99
13C-2,2',6,6'-TeCB	54	20.748	0.80	2.0	1.32	66
13C-3,4,4',5-TeCB	81	35.264	0.80	2.0	2.08	104
13C-3,3',4,4'-TeCB	77	35.836	0.78	2.0	2.04	102
13C-2,2',4,6,6'-PeCB	104	26.796	1.56	2.0	1.55	78
13C-2,3,3',4,4'-PeCB	105	39.443	1.58	2.0	1.92	96
13C-2,3,4,4',5-Pe <mark>CB</mark>	114	38.789	1.58	2.0	1.88	94
13C-2,3',4,4',5-PeCB	118	38.236	1.59	2.0	1.88	94
13C-2,3',4,4',5' <mark>-PeCB</mark>	123	37.901	1.61	2.0	1.95	97
13C-3,3',4,4',5-PeCB	126	42.629	1.60	2.0	1.89	94
13C-2,2',4, <mark>4',6,6'-</mark> HxCB	155	32.851	1.24	2.0	1.72	86
13C-HxCB (156/157)	156/157	45.703	1.27	4.0	3.77	94
13C-2,3',4,4', <mark>5,</mark> 5'-HxCB	167	44.529	1.27	2.0	1.98	99
13C-3,3',4,4',5,5'-HxCB	169	49.006	1.29	2.0	1.87	94
13C-2,2',3,4',5,6,6'-HpCB	188	38.789	1.03	2.0	1.94	97
13C-2,3,3',4,4',5,5'-HpCB	189	51.548	1.06	2.0	2.25	113
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.278	0.91	2.0	1.91	96
13C-2,3,3',4,4',5,5',6-OcCB	205	54.156	0.90	2.0	1.92	96
13C-2,2',3,3',4,4',5,5',6-NoCB	206	55.901	0.80	2.0	1.76	88
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.074	0.80	2.0	1.97	99
13C-DeCB	209	57.540	0.69	2.0	1.69	85
CleanupStandards						
13C-2,4,4'-TrCB	28	23.780	1.04	2.0	1.68	84
13C-2,3,3',5,5'-PeCB	111	35.882	1.62	2.0	1.51	76
13C-2,2',3,3',5,5',6-HpCB	178	41.891	1.06	2.0	1.46	73
Recovery Standards						
13C-2,5-DiCB	9	15.905	1.60	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.760	0.79	2.0	NA	NA NA
13C-2,2',4,5,5'-PeCB	101	33.067	1.61	2.0	NA	NA NA
13C-2,2',3,4,4',5'-HxCB	138	41.439	1.28	2.0	NA NA	NA NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.681	0.90	2.0	NA NA	NA NA
100 2,2,0,0,7,7,0,0-0000	107	33.001	0.50	2.0	I W/\	I N/A

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230706A_10

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1			🛆	ND		0.00581
2				ND		0.00529
3				ND		0.00458
4				ND		0.00783
5				ND		0.00191
6				ND		0.00131
7			<u></u>	ND		0.00969
8				ND		0.0128
9		<u> </u>		ND		0.00256
10		A.J		ND		0.00200
11				ND		0.151
12	12/13			ND		0.00548
13	12/13			ND		0.00548
14	12/13			ND		0.00183
15				ND ND		0.00103
16				ND		0.00642
17				ND ND		0.00537
18	18/30			ND ND		0.0119
19	10/30			ND ND		0.00869
20	20/28			ND		0.0190
21	21/33			ND ND		0.0137
22	21/33			ND ND		0.0137
23				ND ND		0.00769
24				ND ND		0.00165
2 4 25				ND ND		0.00199
26 26	2 <mark>6</mark> /29			ND ND		0.00296
20 27	20/29			ND ND		0.00477
28	20/28			ND ND		0.00210
29	26/29			ND ND		0.00477
30	18/30			ND ND		0.00477
31	16/30			ND ND		0.0119
32				ND ND		0.0164
33	21/33			ND ND		0.00762
33 34	21/33			ND ND		0.0137
3 4 35				ND ND		0.00169
36				ND ND		0.00333
36 37				ND ND		
37 38				ND ND		0.00440
36 39				ND ND		0.00155 0.00171
39 40	40/41/71			ND ND		0.00171
40 41				ND ND		
42	40/41/71			ND ND		0.00846 0.00458
	42/72					0.00456
43	43/73			ND ND		0.00408
44 45	44/47/65			ND ND		0.0195
45 46	45/51			ND ND		0.00600
46	44/47/05			ND		0.00237
47	44/47/65			ND		0.0195
48				ND		0.00304

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230706A_10

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	n <mark>g</mark> /L	ng/L	ng/L
49	49/69		🛆	ND		0.00704
50	50/53			ND		0.00396
51	45/51			ND		0.00600
52	.0,0.		<u></u> 2	ND		0.0173
53	50/53			ND		0.00396
54	55,55			ND		0.00168
55			<u></u>	ND		0.00225
56				ND		0.0106
57		2_		ND		0.00157
58		4-2		ND		0.00199
59	59/62/75			ND		0.00433
60	00,02,10	<u></u>		ND		0.00358
61	61/70/74/76			ND		0.0335
62	59/62/75	<u></u>		ND		0.00433
63	33.32.13			ND		0.00182
64				ND		0.00585
65	44/47/65			ND		0.0195
66				ND		0.0229
67				ND		0.00235
68				ND		0.00262
69	49/69			ND		0.00704
70	61 <mark>/70</mark> /7 <mark>4/</mark> 76			ND		0.0335
71	40/41/71			ND		0.00846
72				ND		0.00185
73	43/73			ND		0.00408
74	6 <mark>1</mark> /70/74/76			ND		0.0335
75	59/62/75			ND		0.00433
76	61/70/74/76			ND		0.0335
77				ND		0.00277
78				ND		0.00242
79				ND		0.00244
80				ND		0.00223
81				ND		0.00186
82				ND		0.00269
83				ND		0.00250
84				ND		0.0139
85	85/116/117			ND		0.00544
86	86/87/97/108/119/125			ND		0.0159
87	86/87/97/108/119/125			ND		0.0159
88	88/91			ND		0.00517
89				ND		0.00327
90	90/101/113			ND		0.0125
91	88/91			ND		0.00517
92	00/00/400/400			ND		0.00410
93	93/98/100/102			ND		0.00592
94				ND		0.00198
95				ND		0.00910
96				ND		0.00329

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230706A_10

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	n <mark>g/L</mark>	ng/L	ng/L
97	86/87/97/108/119/125		🔥	ND		0.0159
98	93/98/100/102			ND		0.00592
99				ND		0.00619
100	93/98/100/102		<u></u>	ND		0.00592
101	90/101/113			ND		0.0125
102	93/98/100/102			ND		0.00592
103				ND		0.00205
104				ND		0.00160
105		22		ND		0.00594
106		4-2		ND		0.00186
107	107/124			ND		0.00275
108	86/87/97/108/119/125	<u></u>		ND		0.0159
109	00,01,01,100,110,120			ND		0.00208
110	110/115	<u></u>		ND		0.0135
111	116,116			ND		0.00215
112				ND		0.00185
113	90/101/113			ND		0.0125
114	33,131,113			ND		0.00240
115	110/115			ND		0.0135
116	85/11 <mark>6/117</mark>			ND		0.00544
117	85/11 <mark>6/1</mark> 17			ND		0.00544
118	03/110/11/			ND		0.00937
119	<u>86/87/97/1</u> 08/119/125			ND		0.0159
120	00/01/01/100/119/120			ND		0.00178
121				ND		0.00176
122				ND		0.00130
123				ND		0.00204
124	107/124			ND		0.00275
125	86/87/97/108/119/125			ND		0.0159
126	00/07/97/100/119/120			ND		0.00233
127				ND		0.00233
128	128/166			ND		0.00456
129	129/138/163			ND		0.0115
130	129/130/103			ND		0.00229
131				ND		0.00223
132				ND		0.00230
133				ND		0.00431
134	134/143			ND		0.00279
135	135/151			ND		0.00544
136	133/131			ND		0.00344
137				ND ND		0.00369
138	129/138/163			ND		0.0115
139	139/140			ND		0.00460
140	139/140			ND ND		0.00460
140	100/170			ND ND		0.00258
141				ND ND		0.00238
142	134/143			ND ND		0.00202
143	107/140			ND ND		0.00419
144				ND		0.00213

Conc = Concentration

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230706A_10

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	n <mark>g</mark> /L	ng/L	ng/L
145			🔥	ND		0.00210
146				ND		0.00267
147	147/149			ND		0.00941
148			<u></u>	ND		0.00246
149	147/149		- 	ND		0.00941
150				ND		0.00136
151	135/151		 -	ND		0.00544
152				ND		0.00223
153	153/168			ND		0.00808
154		4-1		ND		0.00184
155				ND		0.00161
156	156/157			ND		0.00467
157	156/157			ND		0.00467
158				ND		0.00271
159				ND		0.00294
160				ND		0.00271
161				ND		0.00195
162				ND		0.00244
163	129/1 <mark>3</mark> 8/1 <mark>63</mark>			ND		0.0115
164				ND		0.00254
165				ND		0.00217
166	12 <mark>8/16</mark> 6			ND		0.00456
167				ND		0.00225
168	1 <mark>53/168</mark>			ND		0.00808
169				ND		0.00168
170				ND		0.00521
171	171/173			ND		0.00637
172				ND		0.0148
173	171/173			ND		0.00637
174				ND		0.00335
175				ND		0.00159
176				ND		0.00235
177				ND		0.00352
178				ND		0.00237
179				ND		0.00254
180	180/193			ND		0.00602
181				ND		0.00287
182				ND		0.00271
183	183/185			ND		0.00596
184				ND		0.00219
185	183/185			ND		0.00596
186				ND		0.00165
187				ND		0.00344
188				ND		0.00260
189				ND		0.00227
190				ND		0.00267
191				ND		0.00229
192				ND		0.00260

Conc = Concentration

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230706A 10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193		🔨	ND		0.00602
194				ND		0.00197
195				ND		0.00181
196				ND		0.00183
197	197/200		- 	ND		0.00496
198	198/199			ND		0.00298
199	198/199		 -	ND		0.00298
200	197/200			ND		0.00496
201				ND		0.00152
202		4		ND		0.00244
203		 _		ND		0.00191
204				ND		0.00177
205				ND		0.00208
206		<u> </u>		ND		0.00404
207				ND		0.00242
208	_			ND		0.00235
209				ND		0.0181

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS2-202305 40262368001 P230706A_10

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphen <mark>yls</mark>	ND	
Total Hexachloro Biph <mark>enyls</mark>	ND	
Total Heptachlor <mark>o B</mark> iph <mark>e</mark> nyls	ND	
Total Octachlo <mark>ro</mark> Biphenyls	ND	
Total <mark>Non<mark>a</mark>chl<mark>or</mark>o Biphenyls</mark>	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-DUP1-202305 Lab Sample ID 40262368002

Filename P230529A_12 Injected By BAL

Total Amount Extracted 1040 mL Matrix Water % Moisture NA Dilution NA Collected 05/16/2023

 ICAL ID
 P230529A02
 Received
 05/20/2023
 18:45

 CCal Filename(s)
 P230529A_01
 Extracted
 05/23/2023
 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023
 13:59

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.159	2.95	2.0	1.44	72
13C-4-MoCB	3	12.975	3.04	2.0	1.62	81
13C-2,2'-DiCB	4	13.292	1.56	2.0	2.22	111
13C-4,4'-DiCB	15	20.404	1.55	2.0	1.78	89
13C-2,2',6-TrCB	19	17.121	1.02	2.0	2.31	115
13C-3,4,4'-TrCB	37	28.208	1.04	2.0	1.30	65
13C-2,2',6,6'-TeCB	54	20.751	0.77	2.0	1.50	75
13C-3,4,4',5-TeCB	81	35.362	0.76	2.0	1.38	69
13C-3,3',4,4'-TeCB	77	35.950	0.79	2.0	1.33	67
13C-2,2',4,6,6'-PeCB	104	26.908	1.73	2.0	1.72	86
13C-2,3,3',4,4'-PeCB	105	39.573	1.61	2.0	1.06	53
13C-2,3,4,4',5-PeCB	114	38.918	1.62	2.0	1.06	53
13C-2,3',4,4',5-PeCB	118	38.365	1.59	2.0	1.09	55
13C-2,3',4,4',5'-PeCB	123	38.013	1.53	2.0	1.09	54
13C-3,3',4,4',5-PeCB	126	42.742	1.55	2.0	0.936	47
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.24	2.0	2.27	113
13C-HxCB (156/157)	156/157	45.816	1.27	4.0	2.19	55 57
13C-2,3',4,4',5,5'-HxCB	167 169	44.642 49.103	1.28 1.27	2.0 2.0	1.14 1.30	57 65
13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.05	2.0	2.21	111
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.05	2.0	1.46	73
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.91	2.0	1.73	87
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.89	2.0	1.79	89
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.81	2.0	1.99	99
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.202	0.77	2.0	2.14	107
13C-DeCB	209	57.690	0.70	2.0	2.30	115
100 2002	200	07.000	0.70	2.0	2.00	1.0
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.04	2.0	1.29	65
13C-2,3,3',5,5'-PeCB	111	35.996	1.55	2.0	1.53	76
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.04	2.0	1.82	91
Recovery Standards						
13C-2,5-DiCB	9	15.762	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.76	2.0	ŇA	NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.55	2.0	ŇA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.90	2.0	NA	NA

Conc = Concentration

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R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference

ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
		40.400	0.74			
1		10.182	2.71	0.0290 J		0.00535
2				ND		0.00487
3		40.044	4.40	ND 0.440		0.00422
4		13.314	1.48	0.148		0.00720
5				ND		0.00176
6		16.270	1.51	0.0717		0.00899
7		15.983	1.57	0.0139 J		0.00891
8		16.812	1.33	0.0239 J		0.0117
9		15.784	1.44	0.0134 J		0.00236
10				ND		0.00280
11				ND		0.139
12	12/13			ND		0.00504
13	12/13			ND		0.00504
14				ND		0.00168
15		20.437	1.33	0.0150 J		0.00579
16		20.371	1.02	0.0113 J		0.00590
17		19.851	1.05	0.154		0.00494
18	18/30	19.365	1.05	0.0975		0.0109
19	10,00	17.143	0.90	0.0925		0.00799
20	20/28	23.876	0.98	0.145 J		0.0174
21	21/33	24.123	0.91	0.0496 J		0.0126
22	21/33	24.556	0.96	0.0490 J 0.0114 J		0.00726
23		24.550	0.90	0.0114 J ND		0.00720
24				ND ND		0.00132
		23.180				
25	00/00		0.95	0.140		0.00274
26	26/29	22.917	1.10	0.260		0.00439
27	00/00	20.094	1.10	0.0223 J		0.00194
28	20/28	23.876	0.98	(0.145) J		0.0174
29	26/29	22.917	1.10	(0.260)		0.00439
30	18/30	19.365	1.05	(0.0975)		0.0109
31		23.520	1.04	0.0742 J		0.0169
32		20.983	1.01	0.0626		0.00701
33	21/33	24.123	0.91	(0.0496) J		0.0126
34		22.437	0.88	0.0114 J		0.00156
35				ND		0.00307
36				ND		0.00194
37		28.223	1.10	0.0164 J		0.00404
38				ND		0.00142
39				ND		0.00158
40	40/41/71	28.068	0.76	0.306		0.00778
41	40/41/71	28.068	0.76	(0.306)		0.00778
42		27.527	0.76	0.206		0.00422
43	43/73	26.042	0.83	0.0337 J		0.00376
44	44/47/65	27.032	0.75	0.917		0.0179
45	45/51	24.061	0.77	0.152		0.00552
46	10,01	24.309	0.71	0.0796		0.00332
47	44/47/65	27.032	0.75	(0.917)		0.00210
48	TT/T1/00	26.753	0.73	0.00975 J		0.00280
40		20.755	0.02	0.00973 3		0.00200

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69	26.413	0.78	1.34		0.00648
50	50/53	23.211	0.79	0.288		0.00364
51	45/51	24.061	0.77	(0.152)		0.00552
52		25.872	0.76	1.88		0.0159
53	50/53	23.211	0.79	(0.288)		0.00364
54		20.766	0.74	0.0146 J		0.00154
55				ND		0.00207
56		32.082	0.69	0.0568		0.00971
57		29.962	0.85	0.0356 J		0.00144
58		30.210	0.67	0.00949 J		0.00183
59	59/62/75	27.388	0.77	0.0494 J		0.00399
60	33, 32, 13	32.329	0.88	0.00913 J		0.00330
61	61/70/74/76	31.030	0.76	0.411		0.0308
62	59/62/75	27.388	0.77	(0.0494) J		0.00399
63	00,02,10	30.674	0.66	0.0290 J		0.00167
64		28.300	0.78	0.150		0.00538
65	44/47/65	27.032	0.75	(0.917)		0.0179
66	11, 11,00	31.386	0.77	0.330		0.0211
67		30.411	0.77	0.0248 J		0.00217
68		29.514	0.73	0.0329 J		0.00241
69	49/69	26.413	0.78	(1.34)		0.00648
70	61/70/74/76	31.030	0.76	(0.411)		0.0308
71	40/41/71	28.068	0.76	(0.306)		0.00778
72	10/ 11// 1	29.204	0.71	0.0473		0.00170
73	43/73	26.042	0.83	(0.0337) J		0.00376
74	61/70/74/76	31.030	0.76	(0.411)		0.0308
75	59/62/75	27.388	0.77	(0.0494) J		0.00399
76	61/70/74/76	31.030	0.76	(0.411)		0.0308
77	01/10/11/10	35.965	0.77	0.0257 J		0.00255
78				ND		0.00222
79		34.325	0.65	0.00885 J		0.00224
80				ND		0.00205
81				ND		0.00171
82		35.594	1.56	0.110		0.00247
83		33.706	1.56	0.144		0.00230
84		31.246	1.46	0.489		0.0128
85	85/116/117	35.114	1.65	0.319		0.00500
86	86/87/97/108/119/125	34.356	1.59	1.03		0.0146
87	86/87/97/108/119/125	34.356	1.59	(1.03)		0.0146
88	88/91	31.030	1.56	0.382		0.00475
89	33/31	31.772	1.18	IJ	0.0103	0.00301
90	90/101/113	33.227	1.54	1.89		0.0115
91	88/91	31.030	1.56	(0.382)		0.00475
92		32.608	1.54	0.679		0.00377
93	93/98/100/102	30.488	1.46	0.124 J		0.00544
94		29.637	1.40	0.0353 J		0.00182
95		30.101	1.57	1.61		0.00837
96		27.295	1.51	0.0188 J		0.00303

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125	34.356	1.59	(1.03)		0.0146
98	93/98/100/102	30.488	1.46	(0̀.124)́ J		0.00544
99		33.846	1.56	`0.959		0.00569
100	93/98/100/102	30.488	1.46	(0.124) J		0.00544
101	90/101/113	33.227	1.54	`(1.89)		0.0115
102	93/98/100/102	30.488	1.46	(0.124) J		0.00544
103		29.421	1.47	0.0423		0.00189
104				ND		0.00147
105		39.590	1.53	0.320		0.00546
106				ND		0.00171
107	107/124	37.678	1.52	0.0369 J		0.00253
108	86/87/97/108/119/125	34.356	1.59	(1.03)		0.0146
109	00/01/31/100/113/129	37.912	1.52	0.112		0.00192
110	110/115	35.269	1.53	2.64		0.0125
111	110/113	36.027	1.67	0.00489 J		0.00123
112				ND		0.00137
113	90/101/113	33.227	1.54	(1.89)		0.0115
114	30/101/113	38.935	1.77	0.00872 J		0.00220
115	110/115	35.269	1.53	(2.64)		0.00220
116	85/116/117	35.114	1.65	(0.319)		0.00500
117	85/116/117	35.114	1.65	(0.319)		0.00500
118	03/110/117	38.382	1.46	1.04		0.00360
119	86/87/97/108/119/125	34.356	1.59	(1.03)		0.00802
120	00/07/97/100/119/125	36.507	1.15	(1.03) JJ	0.0148	0.00164
120		36.307	1.15	ND		0.00164
121			1.63	0.00952 J		
		38.734				0.00187
123 124	107/124	38.063 37.678	1.66 1.52			0.00213 0.00253
				(0.0369) J		
125	86/87/97/108/119/125	34.356	1.59	(1.03)		0.0146
126		42.759	1.32	0.00344 J		0.00215
127	400/400	40.070	4.00	ND 0.055		0.00129
128	128/166	42.876	1.23	0.255		0.00420
129	129/138/163	41.602	1.22	1.35		0.0105
130		40.914	1.21	0.114		0.00211
131		38.047	1.33	0.0222 J		0.00272
132		38.499	1.18	0.533		0.00397
133	404/440	39.019	1.24	0.0352 J		0.00257
134	134/143	37.409	1.12	0.118		0.00385
135	135/151	36.259	1.23	0.693		0.00500
136		33.722	1.20	0.247		0.00276
137	100/100/100	41.166	1.28	0.0724		0.00247
138	129/138/163	41.602	1.22	(1.35)		0.0105
139	139/140	37.812	1.07	0.0364 J		0.00423
140	139/140	37.812	1.07	(0.0364) J		0.00423
141		40.512	1.16	0.166		0.00238
142				ND		0.00186
143	134/143	37.409	1.12	(0.118)		0.00385
144		36.832	1.27	0.0628		0.00201

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145				ND		0.00194
146		39.690	1.24	0.215		0.00245
147	147/149	37.208	1.22	1.16		0.00866
148	,	35.640	1.46	IJ	0.00561	0.00226
149	147/149	37.208	1.22	(1.16)		0.00866
150	,	33.366	1.37	0.00502 J		0.00126
151	135/151	36.259	1.23	(0.693)		0.00500
152		33.180	0.80	IJ	0.00322	0.00205
153	153/168	40.311	1.20	1.00		0.00743
154		36.522	1.22	0.0390		0.00169
155				ND		0.00148
156	156/157	45.816	1.29	0.171		0.00429
157	156/157	45.816	1.29	(0.171)		0.00429
158		42.004	1.20	0.123		0.00249
159				ND		0.00270
160				ND		0.00249
161				ND		0.00180
162		44.173	1.42	0.00385 J		0.00224
163	129/138/163	41.602	1.22	(1.35)		0.0105
164	,	41.266	1.13	0.0877		0.00234
165		39.405	1.04	IJ	0.00322	0.00199
166	128/166	42.876	1.23	(0.255)		0.00420
167	0, .00	44.659	1.14	0.0598		0.00207
168	153/168	40.311	1.20	(1.00)		0.00743
169	100/100			ND		0.00155
170		48.533	1.09	0.122		0.00479
171	171/173	44.961	0.98	0.0465 J		0.00586
172	,	46.570	1.00	0.0216 J		0.0136
173	171/173	44.961	0.98	(0.0465) J		0.00586
174	,	43.837	1.05	0.113		0.00308
175		42.725	1.13	0.00701 J		0.00146
176		40.193	1.03	0.0205 J		0.00217
177		44.306	0.98	0.0861		0.00324
178		42.038	0.99	0.0391		0.00218
179		39.271	1.06	0.0779		0.00234
180	180/193	47.258	1.06	0.188		0.00554
181		44.709	0.93	0.00403 J		0.00264
182				ND		0.00249
183	183/185	43.619	0.96	0.0754 J		0.00548
184				ND		0.00201
185	183/185	43.619	0.96	(0.0754) J		0.00548
186				` NĎ		0.00151
187		42.993	1.06	0.178		0.00316
188				ND		0.00240
189		51.676	1.33	IJ	0.00912	0.00209
190		49.086	0.94	0.0252 J		0.00245
191		47.611	1.04	0.00428 J		0.00211
192				ND		0.00240

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.258	1.06	(0.188)		0.00554
194		53.853	0.91	0.0333 J		0.00181
195		51.482	0.88	0.0142 J		0.00167
196		49.924	0.89	0.0185 J		0.00169
197	197/200	46.386	1.03	IJ	0.00676	0.00456
198	198/199	49.254	0.76	0.0502 J		0.00274
199	198/199	49.254	0.76	(0.0502) J		0.00274
200	197/200	46.386	1.03	` IJ	(0.00676)	0.00456
201		45.397	1.16	IJ	0.00391	0.00139
202		44.458	0.71	IJ	0.00788	0.00224
203		50.109	0.84	0.0232 J		0.00176
204				ND		0.00163
205		54.284	1.07	IJ	0.00229	0.00192
206		56.051	0.77	0.0117 J		0.00372
207				ND		0.00222
208		51.245	0.98	IJ	0.00220	0.00217
209				ND		0.0167

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R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230529A_12

Congener Group	Concentrat ng/L	ion
Total Monochloro Biphenyls	0.0290	J
Total Dichloro Biphenyls	0.286	J
Total Trichloro Biphenyls	1.15	J
Total Tetrachloro Biphenyls	6.45	J
Total Pentachloro Biphenyls	12.0	J
Total Hexachloro Biphenyls	6.57	J
Total Heptachloro Biphenyls	1.01	J
Total Octachloro Biphenyls	0.139	J
Total Nonachloro Biphenyls	0.0117	J
DecachloroBiphenyls	ND	
Total PCBs	27.7	J

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

Total Amount Extracted % Moisture

Dry Weight Extracted

ICAL ID

CCal Filename(s) Method Blank ID

NR-SW-DUP1-202305 40262368002 P230706A 11 **CVS** 1040 mL

NA NA P230706A02 P230706A 01

BLANK-106282

Matrix Water Dilution 1 3 2 1 NA Collected 1 4 1

Analyzed

05/16/2023 Received 05/20/2023 18:45 05/23/2023 12:15 Extracted 07/06/2023 19:08

PCB Isomer **IUPAC** Ratio ng's Found % Recovery RT ng's Added Labeled Analytes 13C-2-MoCB 13C-4-MoCB 10.6<mark>3</mark>4 2.0 3.02 57 1.15 2.0 75 3 13.269 3.14 1.50 13C-2,2'-DiCB 13C-4,4'-DiCB 73 13.563 1.52 2.0 1.46 2.0 67 20.404 1.57 1.35 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-2,2',6,6'-TeCB 19 17.253 1.05 2.0 1.70 85 2.0 **37** 90 28.127 1.06 1.80 54 20.779 0.79 2.0 1.32 66 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3,3',4,4'-PeCB 35.264 91 81 0.80 2.0 1.82 1.82 77 35.852 0.80 2.0 91 104 26.812 2.0 1.47 74 1.57 105 39.460 1.58 2.0 1.63 82 13C-2,3,4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5'-PeCB 81 81 114 38.806 1.63 2.0 1.61 2.0 38.253 118 1.59 1.61 123 37.918 1.60 2.0 1.68 84 13C-3,3',4<mark>,4</mark>',<mark>5-PeC</mark>B 126 80 42.630 1.59 2.0 1.59 13C-2,2',4,4',6,6'-HxCB 13C-HxCB (156/157) 155 1.27 2.0 81 32.867 1.62 156/157 45.721 4.0 81 1.30 3.23 13C-2,3',4,4',5,5'-HxCB 167 44.547 1.27 2.0 1.70 85 13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB 169 49.007 1.29 2.0 1.65 82 2.0 92 188 38.790 1.04 1.84 13C-2,3,3',4,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 51.570 102 189 1.09 2.0 2.05 202 44.295 0.89 2.0 1.79 89 13C-2,3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,5,5',6,6'-NoCB 205 54.179 0.90 2.0 1.78 89 206 55.924 0.80 2.0 1.69 84 208 51.096 0.79 2.0 1.88 94 13C-DeCB 209 57.563 0.70 2.0 1.61 80 CleanupStandards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 28 1.06 2.0 82 23.795 1.64 35.883 1.60 2.0 73 111 1.46 13C-2,2',3,3',5,5',6-HpCB 178 41.909 1.03 2.0 1.45 72 Recovery Standards 13C-2,5-DiCB 9 15.927 1.57 2.0 NA NA 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 52 25.775 2.0 0.79 NA NA 33.083 1.57 2.0 NA 101 NA 13C-2,2',3,4,4',5'-HxCB 2.0 138 41.456 1.25 NA NA 13C-2,2',3,3',4,4',5,5'-OcCB 2.0 NA 194 53.683 0.91 NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

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ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230706A_11

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1		10.645	2.72	0.0349 J		0.00535
2			2.12	ND		0.00333
3				ND		0.00422
4		13.574	1.49	0.162		0.00720
5		13.374	1.43	ND		0.00720
6		16.413	1.59	0.0990		0.00899
6 7		16.137	1.44	0.0390 0.0207 J		0.00891
8		16.137 16.933	1.52	0.0207 J		0.0031
9		15.949	1.51	0.0309 J 0.0222 J		0.00236
10		13.789	1.43			
11		13.709	1.43			0.00280
12	12/13	20.127	1.69	ND 0.00635 J		0.139 0.00504
13	12/13	20. 127	1.69	(0.00635) J		0.00504
14		20.445	4.00	NĎ		0.00168
15		20.415	1.38	0.00841 J		0.00579
16		20.392	1.07	0.00825 J		0.00590
17	40/00	19.884	1.00	0.129		0.00494
18	18/30	19.409	1.05	0.0832		0.0109
19	00/00	17.275	1.04	0.0970		0.00799
20	20/28	23.826	1.06	0.182 J		0.0174
21	21/33	24.089	1.02	0.0620 J		0.0126
22		24.507	1.01	0.0141 J		0.00726
23				ND		0.00152
24				ND		0.00183
25		23.146	1.09	0.190		0.00274
26	2 <mark>6</mark> /29	22.883	1.05	0.329		0.00439
27		20.116	1.03	0.0198 J		0.00194
28	20/28	23.826	1.06	(0.182) J		0.0174
29	26/29	22.883	1.05	(0.329)		0.00439
30	18/30	19.409	1.05	(0.0832)		0.0109
31		23.502	1.05	0.0922 J		0.0169
32		20.996	1.02	0.0787		0.00701
33	21/33	24.089	1.02	(0.0620) J		0.0126
34		22.372	1.06	0.0148 J		0.00156
35				ND		0.00307
36				ND		0.00194
37		28.142	1.08	0.0188 J		0.00404
38				ND		0.00142
39				ND		0.00158
40	40/41/71	27.972	0.80	0.279		0.00778
41	40/41/71	27.972	0.80	(0.279)		0.00778
42		27.431	0.80	0.188		0.00422
43	43/73	25.961	0.78	0.0351 J		0.00376
44	44/47/65	26.920	0.79	0.888		0.0179
45	45/51	24.012	0.79	0.135		0.00552
46		24.260	0.76	0.0672		0.00218
47	44/47/65	26.920	0.79	(0.888)		0.0179
48		26.642	0.80	0.00922 J		0.00280

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EMPC = Estimated Maximum Possible Concentration
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* = See Discussion
X = Outside QC Limits
RT = Retention Time
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ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230706A_11

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69	26.332	0.78	1.27		0.00648
50	50/53	23.177	0.78	0.266		0.00364
51	45/51	24.012	0.79	(0.135)		0.00552
52		25.791	0.79	1.73		0.0159
53	50/53	23.177	0.78	(0.266)		0.00364
54		20.810	0.83	0.0147 J		0.00154
55				ND		0.00207
56		31,985	0.79	0.0648		0.00971
57		29.850	0.72	0.0417		0.00144
58		30.113	0.76	0.00992 J		0.00183
59	59/62/75	27.291	0.76	0.0488 J		0.00399
60		32.217	0.72	0.00918 J		0.00330
61	61/70/74/76	30.917	0.79	0.482		0.0308
62	59/62/75	2 7.291	0.76	(0.0488) J		0.00399
63		30.577	0.78	0.0333 J		0.00167
64		28.204	0.74	0.132		0.00538
65	44/47/65	26.920	0.79	(0.888)		0.0179
66		31.273	0.78	`0.37Ó		0.0211
67		30.299	0.81	0.0289 J		0.00217
68		29.417	0.81	0.0373 J		0.00241
69	49/69	26.332	0.78	(1.27)		0.00648
70	61 <mark>/70</mark> /7 <mark>4/</mark> 76	30.917	0.79	(0.482)		0.0308
71	4 <mark>0/</mark> 41/71	27.972	0.80	(0.279)		0.00778
72		29.092	0.80	0.0559		0.00170
73	43/73	25.961	0.78	(0.0351) J		0.00376
74	61/70/74/76	30.917	0.79	(0.482)		0.0308
75	59/62/75	27.291	0.76	(0.0488) J		0.00399
76	61/70/74/76	30.917	0.79	(0.482)		0.0308
77		35.898	0.77	Ò.029Ź J		0.00255
78				ND		0.00222
79		34.228	0.70	0.0107 J		0.00224
80				ND		0.00205
81				ND		0.00171
82		35.481	1.55	0.0864		0.00247
83		33.593	1.56	0.150		0.00230
84		31.149	1.53	0.350		0.0128
85	85/116/117	34.955	1.56	0.248		0.00500
86	86/87/97/108/119/125	34.259	1.58	0.860		0.0146
87	86/87/97/108/119/125	34.259	1.58	(0.860)		0.0146
88	88/91	30.917	1.51	0.328		0.00475
89		31.675	1.33	0.00968 J		0.00301
90	90/101/113	33.114	1.57	1.67		0.0115
91	88/91	30.917	1.51	(0.328)		0.00475
92		32.495	1.57	0.569		0.00377
93	93/98/100/102	30.376	1.58	0.113 J		0.00544
94		29.510	1.65	0.0327 J		0.00182
95		29.989	1.56	1.26		0.00837
96		27.214	1.52	0.0140 J		0.00303

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230706A_11

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	n <mark>g</mark> /L	ng/L	ng/L
97	86/87/97/108/119/125	34.259	1.58	(0.860)		0.0146
98	93/98/100/102	30.376	1.58	(0.113) J		0.00544
99		33.733	1.58	`0.78 8		0.00569
100	93/98/100/102	30.376	1.58	(0.113) J		0.00544
101	90/101/113	33.114	1.57	`(1.67)		0.0115
102	93/98/100/102	30.376	1.58	(0̀.113)́ J		0.00544
103		29.293	1.50	0.0389		0.00189
104				ND		0.00147
105		39.477	1.53	0.383		0.00546
106		4-1		ND		0.00171
107	107/124	37.549	1.60	0.0444 J		0.00253
108	86/87/97/108/119/125	34.259	1.58	(0.860)		0.0146
109	55,51,51,155,15	37.800	1.60	0.127		0.00192
110	110/115	3 5.156	1.57	2.08		0.0125
111		35.914	1.43	0.00497 J		0.00197
112				ND		0.00170
113	90/101/113	33.114	1.57	(1.67)		0.0115
114	33,131,113	38.840	1.53	0.0129 J		0.00220
115	110/115	35.156	1.57	(2.08)		0.0125
116	85/11 <mark>6/1</mark> 17	34.955	1.56	(0.248)		0.00500
117	85/11 <mark>6/1</mark> 17	34.955	1.56	(0.248)		0.00500
118	33,1.3.	38.270	1.59	1.28		0.00862
119	8 <mark>6/</mark> 87/97/108/119/125	34.259	1.58	(0.860)		0.0146
120	30,01,01,133,113,112	36.409	1.69	0.0131 J		0.00164
121		32.093	1.71	0.00184 J		0.00125
122		38.622	1.40	0.0124 J		0.00187
123		37.934	1.64	0.0174 J		0.00213
124	107/124	37.549	1.60	(0.0444) J		0.00253
125	86/87/97/108/119/125	34.259	1.58	(0.860)		0.0146
126		42.664	1.54	0.00652 J		0.00215
127				ND		0.00129
128	128/166	42.781	1.26	0.258		0.00420
129	129/138/163	41.490	1.24	1.59		0.0105
130	,,	40.819	1.17	0.117		0.00211
131		37.918	1.26	0.0176 J		0.00272
132		38.387	1.24	0.496		0.00397
133		38.907	1.17	0.0344 J		0.00257
134	134/143	37.297	1.25	0.0943		0.00385
135	135/151	36.130	1.24	0.417		0.00500
136		33.625	1.28	0.176		0.00276
137		41.054	1.23	0.101		0.00247
138	129/138/163	41.490	1.24	(1.59)		0.0105
139	139/140	37.700	1.31	0.0324 J		0.00423
140	139/140	37.700	1.31	(0.0324) J		0.00423
141		40.400	1.29	0.144		0.00238
142				ND		0.00186
143	134/143	37.297	1.25	(0.0943)		0.00385
144		36.718	1.25	0.0385		0.00201
				0.000		0.00=0.

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230706A_11

145	IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
146 39,561 1.24 0.204 0,00245 147 147/149 37,079 1.24 0.990 0,00866 148 35,512 1.16 0,00451 J 0,00226 150 33,284 1.24 0,09371 J 0,0126 151 135/151 36,130 1.24 1,0417 0,00500 152 33,098 1.21 0,00286 J 0,00205 153 153/168 40,199 1,26 0,982 0,00743 154 36,157 45,721 1.29 0,186 0,00429 155 156/157 45,721 1.29 0,186 0,00429 158 43,742 1.43 0,00448 J 0,00249 159 43,742 1.43 0,00448 J 0,00249 161 ND 0,00249 162 44,061 1.0 0,00420	IUFAC	CO-eiulions	N I	Natio	IIg/L	iig/L	IIg/L
147 147/149 37.079 1.24 0.990	145						0.00194
148 35.512 1.16 0.00451 J 0.00226 149 147/149 37.079 1.24 (0.990) 0.00366 150 33.284 1.24 (0.00371 J 0.00126 151 135/151 36.130 1.24 (0.0417) 0.00205 153 153/168 401/99 1.26 0.982 0.00743 154 36.333 1.14 0.0236 J 0.00743 155	146		39.561	1.24	0.204		0.00245
149	147	147/149	37.079	1,24	0.990		0.00866
150				1.16	0.00451 J		0.00226
151	149	147/149	37.079	1.24	(0.990)		0.00866
152			33.284	1.21	0.00371 J		0.00126
153		135/151			(0.417)		0.00500
154			33,098	1.21			
155	153	153/168	40.199				
156	154		36.3 <mark>9</mark> 3	1.14	0.0236 J		0.00169
157 156/157 45,721 1.29 (0.186) 0.00429 158 41.892 1.29 0.128 0.00249 159 43.742 1.43 0.00448 J 0.00270 160 ND 0.00249 161 ND 0.00249 162 44.061 1.10 0.00642 J 0.00180 163 129/138/163 41.490 1.24 (1.59) 0.0015 164 44.061 1.10 0.00642 J 0.00224 165 39.310 1.41 0.00245 J 0.00234 166 128/166 42.781 1.26 (0.258) 0.00420 167 44.564 1.23 0.0658 0.00207 168 153/168 40.199 1.26 (0.982) 0.00743	155				ND		0.00148
158	156	156/157		1.29	0.186		0.00429
159		156/157	45.721	1.29	(0.186)		
160	158			1.29			
161	159		43.742	1.43	0.00448 J		
162 44,061 1.10 0.00642 J 0.00224 163 129/138/163 41.490 1.24 (1.59) 0.0105 164 41.154 1.26 0.0746 0.00234 165 39.310 1.41 0.00245 J 0.00199 166 128/166 42.781 1.26 (0.258) 0.00207 168 153/168 40.199 1.26 (0.982) 0.00207 168 153/168 40.199 1.26 (0.982) 0.00743 169 ND 0.00743 169 ND 0.00743 170 48.420 1.01 0.121 0.00479 171 171/173 44.832 1.05 0.0492 J 0.00586 172 46.475 1.08 0.0234 J 0.00586 174 43.742 1.01 0.115 0.00388	160	_					
163 129/138/163 41.490 1.24 (1.59) 0.0105 164 41.154 1.26 0.0746 0.00234 165 39.310 1.41 0.00245 J 0.00199 166 128/166 42.781 1.26 (0.258) 0.00420 167 44.564 1.23 0.0658 0.00207 168 153/168 40.199 1.26 (0.982) 0.00743 169 ND 0.00743 169 ND 0.00743 169 ND 0.00743 170 48.420 1.01 0.121 0.00479 171 171/173 44.832 1.05 0.0492 J 0.00586 172 46.475 1.08 0.0234 J 0.00586 173 171/173 44.832 1.05 (0.0492) 0.00586							
164 41.154 1.26 0.0746 0.00234 165 39.310 1.41 0.00245 J 0.00199 166 128/166 42.781 1.26 (0.258) 0.00420 167 44.564 1.23 0.0658 0.00207 168 153/168 40.199 1.26 (0.982) 0.00743 169 ND 0.00743 169 ND 0.00479 171 171/173 44.832 1.05 0.0492 J 0.00586 172 46.475 1.08 0.0234 J 0.0136 173 171/173 44.832 1.05 (0.0492) J 0.00586 174 43.742 1.01 0.115 0.00388 175 42.597 1.32 I 0.00516 0.00146 176 40.081 1.00 0.0165 J 0.0							
165		129/1 <mark>3</mark> 8/163	41.490		(1.59)		0.0105
166 128/168 42.781 1.26 (0.258) 0.00420 167 44.564 1.23 0.0658 0.00207 168 153/168 40.199 1.26 (0.982) 0.00743 169 ND 0.00155 170 48.420 1.01 0.121 0.00479 171 171/173 44.832 1.05 0.0492 J 0.00586 172 46.475 1.08 0.0234 J 0.00586 173 171/173 44.832 1.05 (0.0492) J 0.00586 174 43.742 1.01 0.115 0.00586 175 42.597 1.32 J 0.00516 0.00146 176 40.081 1.00 0.0165 J 0.00217 177 44.195 1.06 0.0897 0.00214 189 39.159 1.12 0.0584 0.0024				1.26			
167 44.564 1.23 0.0658 0.00207 168 453/168 40.199 1.26 (0.982) 0.00743 169 ND 0.00155 170 48.420 1.01 0.121 0.00479 171 171/173 44.832 1.05 0.0492 J 0.00586 172 46.475 1.08 0.0234 J 0.00586 173 171/173 44.832 1.05 (0.0492) J 0.00586 174 43.742 1.01 0.115 0.00308 175 42.597 1.32 IJ 0.00516 0.00146 176 40.081 1.00 0.0165 J 0.00217 177 44.195 1.06 0.0897 0.00224 178 41.943 0.97 0.0334 J 0.00234 180 180/193 47.146 1.06 0.211 0.00244 181							
168 153/168 40.199 1.26 (0.982) 0.00743 169 ND 0.00155 170 48.420 1.01 0.121 0.00479 171 171/173 44.832 1.05 0.0492 J 0.00586 172 46.475 1.08 0.0234 J 0.0136 173 171/173 44.832 1.05 (0.0492) J 0.00586 174 43.742 1.01 0.115 0.00386 175 42.597 1.32 J 0.00586 176 40.081 1.00 0.0165 J 0.00217 177 44.195 1.06 0.0897 0.00324 178 41.943 0.97 0.0334 0.0024 180 180/193 47.146 1.06 0.211 0.0024 181 ND 0.0024 182	166	12 <mark>8/16</mark> 6		1.26			0.00420
169				1.23			
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188 ND 0.00240 189 51.570 1.02 0.00742 J 0.00209 190 48.973 1.07 0.0267 J 0.00245 191 47.515 0.99 0.00478 J 0.00211							
189 51.570 1.02 0.00742 J 0.00209 190 48.973 1.07 0.0267 J 0.00245 191 47.515 0.99 0.00478 J 0.00211	188						
190 48.973 1.07 0.0267 J 0.00245 191 47.515 0.99 0.00478 J 0.00211							
191 47.515 0.99 0.00478 J 0.00211							
	192				ND		0.00240

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230706A 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.146	1.06	(0.211)		0.00554
194		53.726	0.98	0.0366 J		0.00181
195		51.333	0.83	0.0164 J		0.00167
196		49.812	0.99	0.0183 J		0.00169
197	197/200	46.274	0.92	0.00646 J		0.00456
198	198/199	49.141	0.88	0.0472 J		0.00274
199	198/199	49.141	0.88	(0.0472) J		0.00274
200	197/200	46.274	0.92	(0.00646) J		0.00456
201		45.28 <mark>5</mark>	0.87	`0.0052Ó J		0.00139
202		44.329	0.86	0.00889 J		0.00224
203		5 <mark>0.013</mark>	0.84	0.0233 J		0.00176
204		- -		ND		0.00163
205		54.179	0.82	0.00234 J		0.00192
206		5 5.946	0.71	0.0127 J		0.00372
207				ND		0.00222
208		51.139	0.78	0.00225 J		0.00217
209				ND		0.0167

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A = Limit of Detection based on signal to noise

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230706A_11

Congener Group	Concentrati ng/L	ion
Congener Group	lig/L	
Total Monochloro Biphenyls	0.0349	J
Total Dichloro Biphenyls	0.359	J
Total Trichloro Biphenyls	1.32	J
Total Tetrachloro Biphenyls	6.23	J
Total Pentachloro Biphen <mark>y</mark> ls	10.5	J
Total Hexachloro Bi <mark>phenyls</mark>	6.20	J
Total Heptachlo <mark>ro B</mark> iph <mark>e</mark> nyls	0.961	J
Total Octachlo <mark>ro</mark> Biphenyls	0.165	J
Total <mark>Nona</mark> chl <mark>or</mark> o Biphenyls	0.0149	J
DecachloroBiphenyls	ND	
Total PCBs	25.8	J

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-EB-202305
Lab Sample ID 40262368003
Filename P230529B_04
Injected By BAL

Total Amount Extracted 1040 mL Matrix Water % Moisture NA Dilution NA

Dry Weight Extracted NA Collected 05/16/2023 11:30 ICAL ID P230529B02 Received 05/20/2023 18:45 P230529B 01 CCal Filename(s) Extracted 05/23/2023 12:15 Method Blank ID BLANK-106282 Analyzed 05/29/2023 19:14

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.148	2.98	2.0	1.47	74
13C-4-MoCB	3	12.975	3.09	2.0	1.78	89
13C-2,2'-DiCB	4	13.280	1.62	2.0	2.41	120
13C-4,4'-DiCB	15	20.415	1.57	2.0	1.87	94
13C-2,2',6-TrCB	19	17.132	1.00	2.0	2.38	119
13C-3,4,4'-TrCB	37	28.223	1.02	2.0	1.32	66
13C-2,2',6,6'-TeCB	54	20.766	0.79	2.0	1.57	78
13C-3,4,4',5-TeCB	81	35.377	0.76	2.0	1.40	70
13C-3,3',4,4'-TeCB	77	35.950	0.76	2.0	1.34	67
13C-2,2',4,6,6'-PeCB	104	26.908	1.55	2.0	1.92	96
13C-2,3,3',4,4'-PeCB	105	39.572	1.60	2.0	1.24	62
13C-2,3,4,4',5-PeCB	114	38.918	1.55	2.0	1.22	61
13C-2,3',4,4',5-PeCB	118	38.365	1.54	2.0	1.21	60
13C-2,3',4,4',5'-PeCB	123	38.030	1.57	2.0	1.22	61
13C-3,3',4,4',5-PeCB	126	42.742	1.54	2.0	1.10	55
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.24	2.0	2.31	115
13C-HxCB(156/157)	156/157	45.833	1.25	4.0	2.39	60
13C-2,3',4,4',5,5'-HxCB	167	44.659	1.24	2.0	1.26	63
13C-3,3',4,4',5,5'-HxCB	169	49.119	1.30	2.0	1.35	67
13C-2,2',3,4',5,6,6'-HpCB	188	38.935	1.04	2.0	2.48	124
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.02	2.0	1.53	77
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.408	0.86	2.0	1.88	94
13C-2,3,3',4,4',5,5',6-OcCB	205	54.305	0.86	2.0	1.87	93
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.81	2.0	2.10	105
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.223	0.79	2.0	2.29	114
13C-DeCB	209	57.689	0.69	2.0	2.20	110
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.03	2.0	1.22	61
13C-2,3,3',5,5'-PeCB	111	35.996	1.57	2.0	1.53	77
13C-2,2',3,3',5,5',6-HpCB	178	42.037	1.06	2.0	1.78	89
Recovery Standards						
13C-2,5-DiCB	9	15.762	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.74	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.211	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.585	1.23	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.87	2.0	NA	NA

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1				ND		0.00537
2				ND		0.00489
3				ND		0.00403
4				ND		0.00724
5				ND		0.00724
6				ND ND		0.00176
7				ND ND		0.00895
8				ND ND		0.00895
9				ND ND		
10				ND ND		0.00237 0.00281
11	40/40			ND		0.140
12	12/13			ND		0.00506
13	12/13			ND		0.00506
14				ND		0.00169
15				ND		0.00581
16				ND		0.00593
17				ND		0.00496
18	18/30			ND		0.0110
19				ND		0.00802
20	20/28			ND		0.0175
21	21/33			ND		0.0126
22				ND		0.00729
23				ND		0.00153
24				ND		0.00184
25				ND		0.00275
26	26/29			ND		0.00441
27				ND		0.00194
28	20/28			ND		0.0175
29	26/29			ND		0.00441
30	18/30			ND		0.0110
31				ND		0.0170
32				ND		0.00704
33	21/33			ND		0.0126
34				ND		0.00156
35				ND		0.00308
36				ND		0.00194
37				ND		0.00406
38				ND		0.00143
39				ND		0.00158
40	40/41/71			ND		0.00781
41	40/41/71			ND		0.00781
42	10/11//1			ND		0.00423
43	43/73			ND		0.00377
44	44/47/65			ND		0.0180
45	45/51			ND		0.00554
46	7 0/0 I			ND ND		0.00334
46 47	44/47/65			ND		0.00219
48	44/47/00			ND		0.00281
40				ND		0.00∠61

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69			ND		0.00650
50	50/53			ND		0.00366
51	45/51			ND		0.00554
52	43/31			ND		0.0160
53	50/53			ND		0.00366
54	30/33			ND		0.00155
55				ND		0.00208
56				ND		0.00200
57				ND		0.00145
58				ND		0.00118
59	59/62/75			ND		0.00400
60	00/02/10			ND		0.00331
61	61/70/74/76			ND		0.0310
62	59/62/75			ND		0.00400
63	00/02/10			ND		0.00168
64				ND		0.00541
65	44/47/65			ND		0.0180
66	11/11/00			ND		0.0212
67				ND		0.00217
68				ND		0.00242
69	49/69			ND		0.00650
70	61/70/74/76			ND		0.0310
71	40/41/71			ND		0.00781
72	10/ 11// 1			ND		0.00171
73	43/73			ND		0.00377
74	61/70/74/76			ND		0.0310
75	59/62/75			ND		0.00400
76	61/70/74/76			ND		0.0310
77				ND		0.00256
78				ND		0.00223
79				ND		0.00225
80				ND		0.00206
81				ND		0.00172
82				ND		0.00248
83				ND		0.00231
84				ND		0.0128
85	85/116/117			ND		0.00502
86	86/87/97/108/119/125			ND		0.0147
87	86/87/97/108/119/125			ND		0.0147
88	88/91			ND		0.00477
89				ND		0.00302
90	90/101/113			ND		0.0115
91	88/91			ND		0.00477
92				ND		0.00379
93	93/98/100/102			ND		0.00547
94				ND		0.00183
95				ND		0.00841
96				ND		0.00304

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
		17.1	italio		ng/L	
97	86/87/97/108/119/125			ND		0.0147
98	93/98/100/102			ND		0.00547
99				ND		0.00572
100	93/98/100/102			ND		0.00547
101	90/101/113			ND		0.0115
102	93/98/100/102			ND		0.00547
103				ND		0.00189
104				ND		0.00148
105				ND		0.00548
106				ND		0.00172
107	107/124			ND		0.00254
108	86/87/97/108/119/125			ND		0.0147
109				ND		0.00192
110	110/115			ND		0.0125
111				ND		0.00198
112				ND		0.00171
113	90/101/113			ND		0.0115
114				ND		0.00221
115	110/115			ND		0.0125
116	85/116/117			ND		0.00502
117	85/116/117			ND		0.00502
118				ND		0.00866
119	86/87/97/108/119/125			ND		0.0147
120				ND		0.00165
121				ND		0.00126
122				ND		0.00188
123				ND		0.00214
124	107/124			ND		0.00254
125	86/87/97/108/119/125			ND		0.0147
126				ND		0.00216
127				ND		0.00129
128	128/166			ND		0.00421
129	129/138/163			ND		0.0106
130				ND		0.00212
131				ND		0.00273
132				ND		0.00398
133				ND		0.00258
134	134/143			ND		0.00387
135	135/151			ND		0.00502
136				ND		0.00277
137				ND		0.00248
138	129/138/163			ND		0.0106
139	139/140			ND		0.00425
140	139/140			ND		0.00425
141				ND		0.00239
142				ND		0.00187
143	134/143			ND		0.00387
144				ND		0.00202

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise
B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits
Nn = Value obtained from additional analyses

NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

ng's = Nanograms

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-EB-202305 40262368003 P230529B 04

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.00194
146				ND		0.00246
147	147/149			ND		0.00870
148				ND		0.00227
149	147/149			ND		0.00870
150				ND		0.00126
151	135/151			ND		0.00502
152				ND		0.00206
153	153/168			ND		0.00747
154				ND		0.00170
155				ND		0.00149
156	156/157			ND		0.00431
157	156/157			ND		0.00431
158				ND		0.00250
159				ND		0.00271
160				ND		0.00250
161				ND		0.00181
162				ND		0.00225
163	129/138/163			ND		0.0106
164	120/100/100			ND		0.00235
165				ND		0.00200
166	128/166			ND		0.00421
167	120/100			ND		0.00208
168	153/168			ND		0.00200
169	133/100			ND		0.00155
170				ND		0.00481
171	171/173			ND		0.00589
172	17 1/173			ND		0.0136
173	171/173			ND		0.00589
173	17 1/173			ND		0.00309
175				ND ND		0.00310
175				ND ND		0.00147
177				ND ND		0.00217
177				ND ND		0.00323
179				ND ND		0.00219
180	180/193			ND ND		0.00255
181	100/193			ND ND		0.00366
182				ND ND		0.00250
183	183/185			ND ND		
184	103/105			ND ND		0.00550
	183/185			ND ND		0.00202
185	103/103					0.00550
186 187				ND ND		0.00152
						0.00318
188				ND ND		0.00241
189				ND ND		0.00210
190				ND ND		0.00246
191				ND		0.00212
192				ND		0.00241

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits Nn = Value obtained from additional analyses

NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference

ng's = Nanograms

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.00556
194				ND		0.00182
195				ND		0.00167
196				ND		0.00169
197	197/200			ND		0.00458
198	198/199			ND		0.00275
199	198/199			ND		0.00275
200	197/200			ND		0.00458
201				ND		0.00140
202				ND		0.00225
203				ND		0.00176
204				ND		0.00164
205				ND		0.00192
206				ND		0.00373
207				ND		0.00223
208				ND		0.00217
209				ND		0.0167

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-EB-202305 40262368003 P230529B_04

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-FB-202305 Lab Sample ID 40262368004 Filename P230529B_05 Injected By BAL

Total Amount Extracted 1050 mL Matrix Water % Moisture NA Dilution NA Collected 05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 11:45

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023 20:17

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.170	3.03	2.0	1.42	71
13C-4-MoCB	3	12.986	3.08	2.0	1.57	79
13C-2,2'-DiCB	4	13.303	1.53	2.0	2.14	107
13C-4,4'-DiCB	15	20.415	1.56	2.0	1.67	84
13C-2,2',6-TrCB	19	17.143	1.02	2.0	2.05	103
13C-3,4,4'-TrCB	37	28.223	1.03	2.0	1.21	60
13C-2,2',6,6'-TeCB	54	20.751	0.79	2.0	1.34	67
13C-3,4,4',5-TeCB	81	35.362	0.79	2.0	1.28	64
13C-3,3',4,4'-TeCB	77	35.950	0.80	2.0	1.23	61
13C-2,2',4,6,6'-PeCB	104	26.923	1.62	2.0	1.70	85
13C-2,3,3',4,4'-PeCB	105	39.573	1.59	2.0	1.07	53
13C-2,3,4,4',5-PeCB	114	38.918	1.61	2.0	1.07	53
13C-2,3',4,4',5-PeCB	118	38.365	1.62	2.0	1.11	55
13C-2,3',4,4',5'-PeCB	123	38.030	1.58	2.0	1.13	56
13C-3,3',4,4',5-PeCB	126	42.742	1.60	2.0	0.995	50
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.23	2.0	2.11	106
13C-HxCB (156/157)	156/157	45.816	1.26	4.0	2.23	56
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.27	2.0	1.14	57
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.30	2.0	1.28	64
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.04	2.0	2.07	103
13C-2,3,3',4,4',5,5'-HpCB	189	51.675	1.09	2.0	1.38	69
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.88	2.0	1.58 1.70	79
13C-2,3,3',4,4',5,5',6-OcCB	205 206	54.283 56.051	0.88 0.79	2.0 2.0	1.70	85 94
13C-2,2',3,3',4,4',5,5',6-NoCB	208	51.201	0.79	2.0 2.0	1.96	94 98
13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	209	57.689	0.79	2.0 2.0	2.07	104
13C-DeCB	209	37.009	0.71	2.0	2.07	104
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.02	2.0	1.09	54
13C-2,3,3',5,5'-PeCB	111	35.996	1.54	2.0	1.37	69
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.02	2.0	1.56	78
Recovery Standards						
13C-2,5-DiCB	9	15.773	1.52	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.76	2.0	ŇÄ	NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.57	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.809	0.91	2.0	NA	NA
100 2,2,0,0,1,1,0,0 0000	101	55.555	0.01	2.0	1 10 1	1 1/1

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ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B 05

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1				ND		0.00533
2				ND		0.00333
3				ND		0.00400
4				ND		0.00719
5				ND		0.00719
6				ND ND		0.00175
7				ND ND		0.00889
8				ND ND		0.00669
9				ND ND		
10				ND ND		0.00235 0.00279
11	40/40			ND		0.139
12	12/13			ND		0.00503
13	12/13			ND		0.00503
14				ND		0.00168
15				ND		0.00577
16				ND		0.00589
17				ND		0.00493
18	18/30			ND		0.0109
19				ND		0.00797
20	20/28			ND		0.0174
21	21/33			ND		0.0126
22				ND		0.00724
23				ND		0.00152
24				ND		0.00183
25				ND		0.00273
26	26/29			ND		0.00438
27				ND		0.00193
28	20/28			ND		0.0174
29	26/29			ND		0.00438
30	18/30			ND		0.0109
31				ND		0.0168
32				ND		0.00700
33	21/33			ND		0.0126
34				ND		0.00155
35				ND		0.00306
36				ND		0.00193
37				ND		0.00403
38				ND		0.00142
39				ND		0.00157
40	40/41/71			ND		0.00776
41	40/41/71			ND		0.00776
42	40/41/11			ND		0.00421
43	43/73			ND		0.00375
44	44/47/65			ND		0.00373
44 45	45/51			ND ND		0.00551
45 46	1 0/01			ND ND		0.0031
46 47	44/47/65			ND		0.00218
47 48	44/47/00			ND		
4ŏ				ND		0.00279

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69			ND		0.00646
50	50/53			ND		0.00363
51	45/51			ND		0.00551
52	16,61			ND		0.0159
53	50/53			ND		0.00363
54	00/00			ND		0.00154
55				ND		0.00206
56				ND		0.00260
57				ND		0.00144
58				ND		0.00144
59	59/62/75			ND		0.00102
60	39/02/13			ND		0.00390
61	61/70/74/76			ND ND		0.0329
62				ND ND		0.0308
63	59/62/75			ND ND		
						0.00167
64	44/47/05			ND		0.00537
65	44/47/65			ND		0.0179
66				ND		0.0210
67				ND		0.00216
68	40/00			ND		0.00241
69	49/69			ND		0.00646
70	61/70/74/76			ND		0.0308
71	40/41/71			ND		0.00776
72				ND		0.00169
73	43/73			ND		0.00375
74	61/70/74/76			ND		0.0308
75	59/62/75			ND		0.00398
76	61/70/74/76			ND		0.0308
77				ND		0.00254
78				ND		0.00222
79				ND		0.00224
80				ND		0.00205
81				ND		0.00171
82				ND		0.00247
83				ND		0.00229
84				ND		0.0127
85	85/116/117			ND		0.00499
86	86/87/97/108/119/125			ND		0.0146
87	86/87/97/108/119/125			ND		0.0146
88	88/91			ND		0.00474
89	33,31			ND		0.00300
90	90/101/113			ND		0.0115
91	88/91			ND		0.00474
92	55/51			ND		0.00377
93	93/98/100/102			ND		0.00543
94	00/00/100/102			ND		0.00343
95				ND		0.00101
96				ND		0.00333
50				ND		3.00002

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B 05

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125			ND		0.0146
98	93/98/100/102			ND		0.00543
99	33, 33, 133, 132			ND		0.00568
100	93/98/100/102			ND		0.00543
101	90/101/113			ND		0.0115
102	93/98/100/102			ND		0.00543
103				ND		0.00188
104				ND		0.00147
105				ND		0.00545
106				ND		0.00171
107	107/124			ND		0.00252
108	86/87/97/108/119/125			ND		0.0146
109	00,01,01,100,110,120			ND		0.00191
110	110/115			ND		0.0124
111	110,110			ND		0.00197
112				ND		0.00170
113	90/101/113			ND		0.0115
114	00/101/110			ND		0.00220
115	110/115			ND		0.0124
116	85/116/117			ND		0.00499
117	85/116/117			ND		0.00499
118	00/110/117			ND		0.00455
119	86/87/97/108/119/125			ND		0.0146
120	00/07/97/100/119/125			ND		0.00164
121				ND		0.00104
122				ND		0.00123
123				ND		0.00107
124	107/124			ND		0.00212
125	86/87/97/108/119/125			ND		0.0146
126	00/07/97/100/119/125			ND		0.00214
127				ND ND		0.00214
127	128/166			ND ND		0.00128
129	129/138/163			ND ND		0.0105
130	129/136/103			ND ND		0.0103
131				ND ND		0.00270
132				ND ND		0.00271
132				ND ND		0.00396
134	134/143			ND ND		0.00236
134				ND ND		
	135/151					0.00499
136 137				ND ND		0.00275
	100/100/160			ND ND		0.00247
138	129/138/163					0.0105
139	139/140			ND ND		0.00422
140	139/140			ND ND		0.00422
141				ND ND		0.00237
142	424/442			ND		0.00185
143	134/143			ND		0.00384
144				ND		0.00201

Conc = Concentration

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.00193
146				ND		0.00245
147	147/149			ND		0.00864
148	,			ND		0.00226
149	147/149			ND		0.00864
150				ND		0.00125
151	135/151			ND		0.00499
152				ND		0.00205
153	153/168			ND		0.00742
154				ND		0.00169
155				ND		0.00148
156	156/157			ND		0.00428
157	156/157			ND		0.00428
158				ND		0.00249
159				ND		0.00270
160				ND		0.00249
161				ND		0.00179
162				ND		0.00224
163	129/138/163			ND		0.0105
164	0, .00, .00			ND		0.00233
165				ND		0.00199
166	128/166			ND		0.00419
167	126, 100			ND		0.00206
168	153/168			ND		0.00742
169	100, 100			ND		0.00154
170				ND		0.00478
171	171/173			ND		0.00585
172	,			ND		0.0136
173	171/173			ND		0.00585
174	,			ND		0.00308
175				ND		0.00146
176				ND		0.00216
177				ND		0.00323
178				ND		0.00218
179				ND		0.00233
180	180/193			ND		0.00552
181				ND		0.00264
182				ND		0.00249
183	183/185			ND		0.00547
184				ND		0.00201
185	183/185			ND		0.00547
186				ND		0.00151
187				ND		0.00315
188				ND		0.00239
189				ND		0.00208
190				ND		0.00245
191				ND		0.00210
192				ND		0.00239

Conc = Concentration

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B 05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.00552
194				ND		0.00180
195				ND		0.00166
196				ND		0.00168
197	197/200			ND		0.00455
198	198/199			ND		0.00273
199	198/199			ND		0.00273
200	197/200			ND		0.00455
201				ND		0.00139
202				ND		0.00224
203				ND		0.00175
204				ND		0.00162
205				ND		0.00191
206				ND		0.00371
207				ND		0.00222
208				ND		0.00216
209				ND		0.0166

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

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R = Recovery outside of Method 1668C control limits

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ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-FB-202305 40262368004 P230529B_05

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-DS1-202305
Lab Sample ID 40262368005
Filename P230529B_06
Injected By BAL

Total Amount Extracted 1050 mL Matrix Water % Moisture NA Dilution NA

Dry Weight Extracted NA Collected 05/16/2023 12:45 ICAL ID P230529B02 Received 05/20/2023 18:45 CCal Filename(s) P230529B 01 Extracted 05/23/2023 12:15 Method Blank ID BLANK-106282 Analyzed 05/29/2023 21:20

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.205	2.84	2.0	1.43	72
13C-4-MoCB	3	13.009	3.01	2.0	1.73	87
13C-2,2'-DiCB	4	13.325	1.62	2.0	2.39	120
13C-4,4'-DiCB	15	20.426	1.56	2.0	1.80	90
13C-2,2',6-TrCB	19	17.154	1.04	2.0	2.24	112
13C-3,4,4'-TrCB	37	28.223	1.02	2.0	1.30	65
13C-2,2',6,6'-TeCB	54	20.766	0.76	2.0	1.53	77
13C-3,4,4',5-TeCB	81	35.361	0.80	2.0	1.34	67
13C-3,3',4,4'-TeCB	77	35.949	0.78	2.0	1.30	65
13C-2,2',4,6,6'-PeCB	104	26.908	1.60	2.0	1.81	91
13C-2,3,3',4,4'-PeCB	105	39.572	1.60	2.0	1.05	52
13C-2,3,4,4',5-PeCB	114	38.918	1.62	2.0	1.05	53
13C-2,3',4,4',5-PeCB	118	38.365	1.61	2.0	1.09	54
13C-2,3',4,4',5'-PeCB	123	38.029	1.49	2.0	1.07	53
13C-3,3',4,4',5-PeCB	126	42.725	1.52	2.0	0.883	44
13C-2,2',4,4',6,6'-HxCB	155	32.994	1.30	2.0	2.37	118
13C-HxCB (156/157)	156/157	45.815	1.26	4.0	2.13	53
13C-2,3',4,4',5,5'-HxCB	167	44.641	1.24	2.0	1.11	56
13C-3,3',4,4',5,5'-HxCB	169	49.102	1.27	2.0	1.22	61
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.01	2.0	2.16	108
13C-2,3,3',4,4',5,5'-HpCB	189	51.675	1.05	2.0	1.39	70
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.91	2.0	1.61	81
13C-2,3,3',4,4',5,5',6-OcCB	205	54.283	0.91	2.0	1.73	86
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.050	0.76	2.0	1.98	99
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201	0.77	2.0	2.07	104
13C-DeCB	209	57.688	0.69	2.0	2.11	106
CleanupStandards						
13C-2,4,4'-TrCB	28	23.860	1.03	2.0	1.21	60
13C-2,3,3',5,5'-PeCB	111	35.996	1.59	2.0	1.51	76
13C-2,2',3,3',5,5',6-HpCB	178	42.037	1.04	2.0	1.75	87
Recovery Standards						
13C-2,5-DiCB	9	15.795	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.77	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.195	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.809	0.89	2.0	NA	NA

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R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1		10.227	2.58	IJ	0.0285	0.00534
2				ND		0.00486
3				ND		0.00421
4		13.337	1.34	0.154		0.00719
5				ND		0.00175
4 5 6 7		16.303	1.43	0.0811		0.00897
7		16.005	1.46	0.0173 J		0.00889
8		16.823	1.55	0.0264 J		0.0117
9		15.806	1.38	0.0161 J		0.00235
10				ND		0.00279
11				ND		0.139
12	12/13			ND		0.00503
13	12/13			ND		0.00503
14	. 27 . 0			ND		0.00168
15		20.448	1.44	0.0124 J		0.00578
16		20.404	1.03	0.00908 J		0.00589
17		19.873	1.04	0.130		0.00493
18	18/30	19.387	0.93	0.0817		0.0109
19		17.176	1.08	0.100		0.00798
20	20/28	23.875	1.03	0.146 J		0.0174
21	21/33	24.139	1.01	0.0428 J		0.0126
22		24.556	1.25	IJ	0.00952	0.00725
23				ND		0.00152
24				ND		0.00183
25		23.195	1.11	0.161		0.00274
26	26/29	22.932	1.01	0.284		0.00438
27		20.116	1.05	0.0218 J		0.00193
28	20/28	23.875	1.03	(0.146) J		0.0174
29	26/29	22.932	1.01	(0.284)		0.00438
30	18/30	19.387	0.93	(0.0817)		0.0109
31		23.535	0.98	`0.0668´ J		0.0169
32		20.998	1.10	0.0699		0.00700
33	21/33	24.139	1.01	(0.0428) J		0.0126
34		22.421	1.21	IJ	0.0134	0.00155
35				ND		0.00306
36				ND		0.00193
37		28.254	0.95	0.0115 J		0.00404
38				ND		0.00142
39				ND		0.00157
40	40/41/71	28.084	0.79	0.260		0.00777
41	40/41/71	28.084	0.79	(0.260)		0.00777
42		27.542	0.74	0.158		0.00421
43	43/73	26.041	0.80	0.0337 J		0.00375
44	44/47/65	27.031	0.78	0.769		0.0179
45	45/51	24.077	0.73	0.131		0.00551
46		24.309	0.79	0.0634		0.00218
47	44/47/65	27.031	0.78	(0.769)		0.0179
48		26.753	0.59	IJ	0.00660	0.00279

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X = Outside QC Limits
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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

		_		Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69	26.428	0.77	1.10		0.00647
50	50/53	23.226	0.77	0.249		0.00363
51	45/51	24.077	0.73	(0.131)		0.00551
52		25.887	0.76	` 1.41		0.0159
53	50/53	23.226	0.77	(0.249)		0.00363
54		20.797	0.79	0.013Ó J		0.00154
55				ND		0.00207
56		32.066	0.85	0.0386		0.00970
57		29.993	0.76	0.0399		0.00144
58		30.210	0.81	0.00777 J		0.00182
59	59/62/75	27.387	0.77	0.0418 J		0.00398
60		32.314	0.85	0.00456 J		0.00329
61	61/70/74/76	31.030	0.80	0.270		0.0308
62	59/62/75	27.387	0.77	(0.0418) J		0.00398
63		30.689	0.78	0.0264 J		0.00167
64		28.316	0.77	0.0957		0.00537
65	44/47/65	27.031	0.78	(0.769)		0.0179
66		31.385	0.78	`0.229́		0.0210
67		30.411	0.69	0.0226 J		0.00216
68		29.514	0.82	0.0319 J		0.00241
69	49/69	26.428	0.77	(1.10)		0.00647
70	61/70/74/76	31.030	0.80	(0.270)		0.0308
71	40/41/71	28.084	0.79	(0.260)		0.00777
72		29.220	0.77	0.0415		0.00169
73	43/73	26.041	0.80	(0.0337) J		0.00375
74	61/70/74/76	31.030	0.80	(0.270)		0.0308
75	59/62/75	27.387	0.77	(0.0418) J		0.00398
76	61/70/74/76	31.030	0.80	(0.270)		0.0308
77		35.996	0.83	Ò.013Ź J		0.00254
78				ND		0.00222
79		34.340	0.67	0.00759 J		0.00224
80				ND		0.00205
81				ND		0.00171
82		35.593	1.64	0.0472		0.00247
83		33.691	1.57	0.0910		0.00230
84		31.246	1.49	0.252		0.0127
85	85/116/117	35.068	1.40	0.136		0.00499
86	86/87/97/108/119/125	34.356	1.48	0.504		0.0146
87	86/87/97/108/119/125	34.356	1.48	(0.504)		0.0146
88	88/91	31.045	1.53	0.255		0.00474
89		31.757	1.61	0.00622 J		0.00300
90	90/101/113	33.227	1.54	0.912		0.0115
91	88/91	31.045	1.53	(0.255)		0.00474
92		32.608	1.53	`0.431		0.00377
93	93/98/100/102	30.519	1.65	0.0959 J		0.00543
94		29.637	1.57	0.0306 J		0.00182
95		30.101	1.48	0.844		0.00836
96		27.310	1.41	0.0125 J		0.00302

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID NR-SW-DS1-202305 Lab Sample ID 40262368005 Filename P230529B 06

		5.	5 4	Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125	34.356	1.48	(0.504)		0.0146
98	93/98/100/102	30.519	1.65	(0.0959) J		0.00543
99		33.845	1.53	` 0.473		0.00568
100	93/98/100/102	30.519	1.65	(0.0959) J		0.00543
101	90/101/113	33.227	1.54	(0.912)		0.0115
102	93/98/100/102	30.519	1.65	(0.0959) J		0.00543
103		29.421	1.74	0.0351 J		0.00188
104				ND		0.00147
105		39.589	1.46	0.136		0.00545
106				ND		0.00171
107	107/124	37.677	1.48	0.0193 J		0.00252
108	86/87/97/108/119/125	34.356	1.48	(0.504)		0.0146
109	00/01/01/100/110/120	37.929	1.50	0.0728		0.00191
110	110/115	35.269	1.58	1.37		0.0124
111	110/110	36.011	1.69	0.00362 J		0.00124
112			1.03	ND		0.00170
113	90/101/113	33.227	1.54	(0.912)		0.0115
114	30/101/113	38.918	1.93	IJ	0.00366	0.00220
115	110/115	35.269	1.58	(1.37)	0.00300	0.0124
116	85/116/117	35.068	1.40	(0.136)		0.00499
117	85/116/117	35.068	1.40	(0.136)		0.00499
117	03/110/117	38.398	1.52	0.534		0.00499
119	86/87/97/108/119/125	34.356	1.48	(0.504)		0.00861
120	00/07/97/100/119/125	36.522	1.46	0.00901 J		0.00164
120		30.322	1.55			0.00164
		38.750	1.34	ND 0.00642 J		
122 123						0.00187
123	107/124	38.046	1.74 1.48	0.00801 J		0.00212
		37.677		(0.0193) J		0.00252
125	86/87/97/108/119/125	34.356	1.48	(0.504)		0.0146
126		42.775	1.32	0.00259 J		0.00214
127	400/400	40.075	4.04	ND		0.00128
128	128/166	42.875	1.24	0.122		0.00419
129	129/138/163	41.601	1.18	0.638		0.0105
130		40.930	1.16	0.0605		0.00210
131		38.046	1.26	0.0101 J		0.00272
132		38.499	1.29	0.282		0.00396
133	10.1/1.10	39.019	1.43	0.0253 J		0.00256
134	134/143	37.426	1.20	0.0612 J		0.00384
135	135/151	36.228	1.27	0.311		0.00499
136		33.722	1.25	0.125		0.00275
137	100/100/100	41.165	1.18	0.0286 J		0.00247
138	129/138/163	41.601	1.18	(0.638)		0.0105
139	139/140	37.845	1.30	0.0166 J		0.00423
140	139/140	37.845	1.30	(0.0166) J		0.00423
141		40.511	1.23	0.0744		0.00237
142				ND (2.22(2))		0.00186
143	134/143	37.426	1.20	(0.0612) J		0.00384
144		36.831	1.20	0.0233 J		0.00201

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.00193
146		39.689	1.26	0.120		0.00245
147	147/149	37.208	1.19	0.657		0.00865
148		35.640	1.41	0.00389 J		0.00226
149	147/149	37.208	1.19	(0.657)		0.00865
150		33.381	1.25	0.00407 J		0.00125
151	135/151	36.228	1.27	(0.311)		0.00499
152		33.211	1.26	0.00281 J		0.00205
153	153/168	40.327	1.24	0.469		0.00742
154	100/100	36.522	1.22	0.0226 J		0.00169
155				ND		0.00148
156	156/157	45.832	1.20	0.0824		0.00428
157	156/157	45.832	1.20	(0.0824)		0.00428
158	130/137	42.020	1.18	0.0533		0.00249
159		42.020	1.10	0.0333 ND		0.00249
160				ND ND		0.00270
161				ND ND		0.00249
162				ND ND		0.00179
163	120/129/162					
	129/138/163	41.601	1.18	(0.638)		0.0105
164		41.266	1.22	0.0464	0.00040	0.00233
165	400/400	39.438	0.89	JJ	0.00218	0.00199
166	128/166	42.875	1.24	(0.122)		0.00419
167	450/400	44.675	1.41	0.0291 J		0.00207
168	153/168	40.327	1.24	(0.469)		0.00742
169				ND		0.00155
170	474/470	48.549	1.02	0.0782		0.00478
171	171/173	44.960	0.94	0.0282 J		0.00585
172				ND		0.0136
173	171/173	44.960	0.94	(0.0282) J		0.00585
174		43.853	1.03	0.0634		0.00308
175		42.708	1.33	IJ	0.00236	0.00146
176		40.193	1.05	0.0116 J		0.00216
177		44.306	1.08	0.0540		0.00323
178		42.054	1.01	0.0214 J		0.00218
179		39.287	0.98	0.0425		0.00233
180	180/193	47.257	1.01	0.124		0.00553
181				ND		0.00264
182				ND		0.00249
183	183/185	43.635	1.18	0.0460 J		0.00547
184				ND		0.00201
185	183/185	43.635	1.18	(0.0460) J		0.00547
186				ND		0.00151
187		42.993	1.14	0.0922		0.00316
188				ND		0.00239
189		51.718	1.13	0.00304 J		0.00208
190		49.102	1.17	0.0152 J		0.00245
191		47.610	1.76	IJ	0.00262	0.00210
192				ND		0.00239

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.257	1.01	(0.124)		0.00553
194		53.852	0.98	0.0225 J		0.00181
195		51.459	0.96	0.00956 J		0.00166
196		49.940	0.86	0.0119 J		0.00168
197	197/200			ND		0.00455
198	198/199	49.270	0.87	0.0312 J		0.00274
199	198/199	49.270	0.87	(0.0312) J		0.00274
200	197/200			` NĎ		0.00455
201		45.379	0.67	IJ	0.00307	0.00139
202		44.424	0.91	0.00582 J		0.00224
203		50.125	0.68	IJ	0.0117	0.00175
204				ND		0.00163
205				ND		0.00191
206		56.072	0.89	0.00682 J		0.00371
207				ND		0.00222
208				ND		0.00216
209				ND		0.0166

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B = Less than 10 times higher than method blank level

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS1-202305 40262368005 P230529B_06

	Congener Group	Concentrat ng/L	ion
-	Fotal Monochloro Biphenyls	ND	
-	Fotal Dichloro Biphenyls	0.307	J
7	Fotal Trichloro Biphenyls	1.12	J
-	Fotal Tetrachloro Biphenyls	5.06	J
-	Total Pentachloro Biphenyls	6.29	J
-	Total Hexachloro Biphenyls	3.27	J
-	Total Heptachloro Biphenyls	0.580	J
-	Total Octachloro Biphenyls	0.0809	J
-	Total Nonachloro Biphenyls	0.00682	J
I	DecachloroBiphenyls	ND	
-	Fotal PCBs	16.7	J

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-OU4-202305
Lab Sample ID 40262368006
Filename P230529B_07
Injected By BAL
Total Amount Extracted 1040 ml

Total Amount Extracted1040 mLMatrixWater% MoistureNADilutionNADry Weight ExtractedNACollected05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 13:15

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023 22:22

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.137	2.95	2.0	1.53	76
13C-4-MoCB	3	12.953	2.99	2.0	1.65	82
13C-2,2'-DiCB	4	13.258	1.55	2.0	2.30	115
13C-4,4'-DiCB	15	20.393	1.56	2.0	1.72	86
13C-2,2',6-TrCB	19	17.121	1.05	2.0	2.35	117
13C-3,4,4'-TrCB	37	28.208	1.03	2.0	1.20	60
13C-2,2',6,6'-TeCB	54	20.736	0.77	2.0	1.52	76
13C-3,4,4',5-TeCB	81	35.362	0.76	2.0	1.29	64
13C-3,3',4,4'-TeCB	77	35.935	0.78	2.0	1.28	64
13C-2,2',4,6,6'-PeCB	104	26.909	1.54	2.0	1.75	87
13C-2,3,3',4,4'-PeCB	105	39.556	1.61	2.0	1.04	52
13C-2,3,4,4',5-PeCB	114	38.919	1.58	2.0	1.05	52
13C-2,3',4,4',5-PeCB	118	38.349	1.54	2.0	1.03	51
13C-2,3',4,4',5'-PeCB	123	38.030	1.53	2.0	1.08	54
13C-3,3',4,4',5-PeCB	126	42.726	1.61	2.0	0.852	43
13C-2,2',4,4',6,6'-HxCB	155	32.980	1.25	2.0	2.30	115
13C-HxCB (156/157)	156/157	45.816	1.27	4.0	2.05	51
13C-2,3',4,4',5,5'-HxCB	167	44.643	1.26	2.0	1.10	55
13C-3,3',4,4',5,5'-HxCB	169 188	49.103	1.25 1.04	2.0 2.0	1.18 2.19	59 110
13C-2,2',3,4',5,6,6'-HpCB		38.919				
13C-2,3,3',4,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB	189 202	51.676 44.408	1.05 0.91	2.0 2.0	1.38 1.59	69 79
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.89	2.0	1.68	79 84
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.03	2.0	1.94	97
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.202	0.76	2.0	2.06	103
13C-DeCB	209	57.689	0.72	2.0	2.04	102
100 0000	200	07.000	0.72	2.0	2.04	102
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.03	2.0	1.14	57
13C-2,3,3',5,5'-PeCB	111	35.981	1.56	2.0	1.48	74
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.06	2.0	1.73	86
Recovery Standards						
13C-2,5-DiCB	9	15.751	1.51	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.841	0.77	2.0	NA NA	NA NA
13C-2,2',4,5,5'-PeCB	101	33.181	1.54	2.0	NA	NA NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.27	2.0	NA	NA NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.91	2.0	NA	NA NA
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Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1				ND		0.00535
2				ND		0.00487
3				ND		0.00422
4				ND		0.00721
5				ND		0.00176
6				ND		0.00900
7				ND		0.00892
8				ND		0.0118
9				ND		0.00236
10				ND		0.00280
11				ND		0.139
12	12/13			ND		0.00505
13	12/13			ND		0.00505
14				ND		0.00168
15				ND		0.00579
16				ND		0.00591
17		19.840	0.90	0.0183 J		0.00495
18	18/30	19.343	1.09	0.0158 J		0.0109
19				ND		0.00800
20	20/28	23.861	1.04	0.0603 J		0.0175
21	21/33	24.124	1.13	0.0141 J		0.0126
22				ND		0.00727
23				ND		0.00152
24				ND		0.00183
25		23.180	0.96	0.0177 J		0.00274
26	26/29	22.902	1.19	0.0274 J		0.00439
27				ND		0.00194
28	20/28	23.861	1.04	(0.0603) J		0.0175
29	26/29	22.902	1.19	(0.0274) J		0.00439
30	18/30	19.343	1.09	(0.0158) J		0.0109
31		23.505	1.14	0.0206 J		0.0169
32		20.968	0.99	0.0274 J		0.00702
33	21/33	24.124	1.13	(0.0141) J		0.0126
34		22.391	1.29	IJ	0.00223	0.00156
35				ND		0.00307
36				ND		0.00194
37				ND		0.00405
38				ND		0.00143
39				ND		0.00158
40	40/41/71	28.053	0.82	0.0728 J		0.00779
41	40/41/71	28.053	0.82	(0.0728) J		0.00779
42		27.527	0.82	0.0514		0.00422
43	43/73	26.042	0.87	0.00793 J		0.00376
44	44/47/65	27.017	0.78	0.240		0.0179
45	45/51	24.046	0.82	0.0496 J		0.00553
46		24.294	0.72	0.0243 J		0.00219
47	44/47/65	27.017	0.78	(0.240)		0.0179
48				ND		0.00280

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B 07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69	26.413	0.77	0.264		0.00649
50	50/53	23.195	0.77	0.0807		0.00365
51	45/51	24.046	0.82	(0.0496) J		0.00553
52		25.872	0.76	` 0.27Ź		0.0160
53	50/53	23.195	0.77	(0.0807)		0.00365
54		20.767	0.73	Ò.00445 J		0.00154
55				ND		0.00207
56		32.067	0.87	0.0148 J		0.00973
57		29.963	0.69	0.00426 J		0.00144
58		30.210	0.66	0.00280 J		0.00183
59	59/62/75	27.373	0.70	0.0104 J		0.00399
60				ND		0.00330
61	61/70/74/76	31.015	0.82	0.0969 J		0.0309
62	59/62/75	27.373	0.70	(0.0104) J		0.00399
63		30.674	0.85	0.00879 J		0.00168
64		28.285	0.82	0.0249 J		0.00539
65	44/47/65	27.017	0.78	(0.240)		0.0179
66		31.386	0.79	0.0827 J		0.0211
67		30.412	0.99	J	0.00263	0.00217
68		29.483	0.57	ÎJ	0.00551	0.00242
69	49/69	26.413	0.77	(0.264)		0.00649
70	61/70/74/76	31.015	0.82	(0.0969) J		0.0309
71	40/41/71	28.053	0.82	(0.0728) J		0.00779
72		29.189	0.76	0.00962 J		0.00170
73	43/73	26.042	0.87	(0.00793) J		0.00376
74	61/70/74/76	31.015	0.82	(0.0969) J		0.0309
75	59/62/75	27.373	0.70	(0.0104) J		0.00399
76	61/70/74/76	31.015	0.82	(0.0969) J		0.0309
77	0.7.1.07.1.7.10	35.950	0.99	IJ	0.00396	0.00255
78				ND		0.00223
79				ND		0.00225
80				ND		0.00205
81				ND		0.00172
82		35.594	1.50	0.0214 J		0.00248
83		33.691	1.64	0.0258 J		0.00230
84		31.247	1.69	0.0812		0.0128
85	85/116/117	35.114	1.57	0.0547 J		0.00501
86	86/87/97/108/119/125	34.434	1.62	0.192 J		0.0146
87	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
88	88/91	31.030	1.58	0.0677 J		0.00476
89				ND		0.00301
90	90/101/113	33.212	1.49	0.328		0.0115
91	88/91	31.030	1.58	(0.0677) J		0.00476
92		32.608	1.42	0.0989		0.00378
93	93/98/100/102	30.365	1.35	0.0213 J		0.00545
94	- -	29.622	1.94	J	0.00509	0.00182
95		30.087	1.48	0.255		0.00839
96		27.295	1.15	IJ	0.00362	0.00303

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

		_		Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
98	93/98/100/102	30.365	1.35	(0.0213) J		0.00545
99		33.831	1.65	0.164		0.00570
100	93/98/100/102	30.365	1.35	(0.0213) J		0.00545
101	90/101/113	33.212	1.49	(0.328)		0.0115
102	93/98/100/102	30.365	1.35	(0.0213) J		0.00545
103		29.406	1.57	Ò.00837 J		0.00189
104				ND		0.00147
105		39.590	1.51	0.0623		0.00547
106				ND		0.00171
107	107/124	37.678	1.92	IJ	0.00770	0.00253
108	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
109		37.930	1.62	Ò.025Ó J		0.00192
110	110/115	35.269	1.53	0.422		0.0125
111				ND		0.00198
112				ND		0.00171
113	90/101/113	33.212	1.49	(0.328)		0.0115
114				` NĎ		0.00221
115	110/115	35.269	1.53	(0.422)		0.0125
116	85/116/117	35.114	1.57	(0.0547) J		0.00501
117	85/116/117	35.114	1.57	(0.0547) J		0.00501
118		38.382	1.59	0.203		0.00863
119	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
120		36.492	1.35	0.00265 J		0.00164
121				ND		0.00125
122				ND		0.00187
123		38.014	1.40	0.00303 J		0.00213
124	107/124	37.678	1.92	IJ	(0.00770)	0.00253
125	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
126				ND		0.00215
127				ND		0.00129
128	128/166	42.877	1.21	0.0482 J		0.00420
129	129/138/163	41.602	1.25	0.230		0.0106
130		40.948	1.23	0.0190 J		0.00211
131		38.030	1.16	0.00415 J		0.00272
132		38.483	1.19	0.0851		0.00397
133		39.003	1.22	0.00437 J		0.00257
134	134/143	37.410	1.31	0.0197 J		0.00386
135	135/151	36.229	1.20	0.0868		0.00501
136		33.707	1.29	0.0356 J		0.00276
137	400/400/400	41.149	1.51	JJ	0.0117	0.00248
138	129/138/163	41.602	1.25	(0.230)		0.0106
139	139/140	37.829	1.23	0.00563 J		0.00424
140	139/140	37.829	1.23	(0.00563) J		0.00424
141		40.529	1.32	0.0319 J		0.00238
142	40.4/4.40			ND		0.00186
143	134/143	37.410	1.31	(0.0197) J		0.00386
144		36.801	1.23	0.0103 J		0.00201

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

IUPAC Co-elutions RT Ratio ng/L ng/L ng/L 145 ND 0.00194 146 39.674 1.11 0.0331 J 0.00246 147 147/149 37.192 1.31 0.183 0.00867 149 147/149 37.192 1.31 (0.183) 0.00867 150 ND 0.00126 151 135/151 36.229 1.20 (0.0868) 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 <					Concentration	EMPC	EML	
146 39.674 1.11 0.0331 J 0.00246 147 147/149 37.192 1.31 0.183 0.00867 148 ND 0.00226 149 147/149 37.192 1.31 (0.183) 0.00867 150 ND 0.00126 151 135/151 36.229 1.20 (0.0868) 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430	IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L	
146 39.674 1.11 0.0331 J 0.00246 147 147/149 37.192 1.31 0.183 0.00867 148 ND 0.00226 149 147/149 37.192 1.31 (0.183) 0.00867 150 ND 0.00126 151 135/151 36.229 1.20 (0.0868) 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430	145				ND		0.00194	
147 147/149 37.192 1.31 0.183 0.00226 148 ND 0.00226 149 147/149 37.192 1.31 (0.183) 0.00867 150 ND 0.00126 151 135/151 36.229 1.20 (0.0868) 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430			39.674	1.11				
148 ND 0.00226 149 147/149 37.192 1.31 (0.183) 0.00867 150 ND 0.00126 151 135/151 36.229 1.20 (0.0868) 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430	147	147/149						
149 147/149 37.192 1.31 (0.183) 0.00867 150 ND 0.00126 151 135/151 36.229 1.20 (0.0868) 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430	148				ND			
150 ND 0.00126 151 135/151 36.229 1.20 (0.0868) 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430		147/149	37.192	1.31				
151 135/151 36.229 1.20 (0.0868) 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430								
152 ND 0.00205 153 153/168 40.328 1.23 0.175 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430	151	135/151	36.229	1.20	(0.0868)		0.00501	
154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430	152				` NĎ			
155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430	153	153/168	40.328	1.23	0.175		0.00745	
156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430			36.553		IJ	0.00392		
157 156/157 45.850 1.34 (0.0321) J 0.00430	155				ND		0.00148	
	156	156/157	45.850	1.34	0.0321 J		0.00430	
		156/157		1.34	(0.0321) J			
158 42.005 1.20 0.0223 J 0.00249			42.005	1.20				
159 ND 0.00271	159				ND			
160 ND 0.00249	160							
161 ND 0.00180								
162 ND 0.00225								
163 129/138/163 41.602 1.25 (0.230) 0.0106		129/138/163						
164 41.283 1.06 0.0163 J 0.00234			41.283	1.06				
165 ND 0.00200		-						
166 128/166 42.877 1.21 (0.0482) J 0.00420		128/166	42.877				0.00420	
167 44.659 1.68 IJ 0.00862 0.00207	167	/						
168 153/168 40.328 1.23 (0.175) 0.00745		153/168						
169 ND 0.00155								
170 48.550 1.34 IJ 0.0189 0.00480		474/470						
171 171/173 44.961 1.43 IJ 0.00609 0.00587	1/1	171/173						
172 ND 0.0136		474/470						
173 171/173 44.961 1.43 IJ (0.00609) 0.00587		171/173				(0.00609)		
174 43.854 1.17 0.0197 J 0.00309								
175 ND 0.00146								
176 ND 0.00217 177 44.290 1.39 IJ 0.00976 0.00324								
177 44.290 1.39 IJ 0.00976 0.00324 178 42.038 1.13 0.00474 J 0.00219								
179 39.271 1.18 0.00902 J 0.00219								
180 180/193 47.258 1.00 0.0344 J 0.00555		180/193	47 258					
181 ND 0.00265		100/193						
182 ND 0.00249								
183 183/185 43.637 1.11 0.0116 J 0.00549		183/185						
184 ND 0.00201		103/103						
185 183/185 43.637 1.11 (0.0116) J 0.00549		183/185						
186 ND 0.00152	186	. 50/ 100			ND			
187 42.977 1.12 0.0205 J 0.00317					0.0205 J			
188 ND 0.00240								
189 ND 0.00209								
190 49.086 1.35 IJ 0.00356 0.00246								
191 ND 0.00211					-			
192 ND 0.00240								

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.258	1.00	(0.0344) J		0.00555
194		53.853	1.22	IJ	0.00359	0.00181
195		51.482	0.89	0.00271 J		0.00167
196		49.975	0.95	0.00276 J		0.00169
197	197/200			ND		0.00457
198	198/199	49.237	0.96	0.00638 J		0.00274
199	198/199	49.237	0.96	(0.00638) J		0.00274
200	197/200			` NĎ		0.00457
201				ND		0.00140
202				ND		0.00225
203		50.109	0.57	IJ	0.00326	0.00176
204				ND		0.00163
205				ND		0.00192
206				ND		0.00372
207				ND		0.00223
208				ND		0.00217
209				ND		0.0167

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU4-202305 40262368006 P230529B_07

 Congener Group	Concentrat ng/L	tion	
Total Monochloro Biphenyls	ND		
Total Dichloro Biphenyls	ND		
Total Trichloro Biphenyls	0.202	J	
Total Tetrachloro Biphenyls	1.33	J	
Total Pentachloro Biphenyls	2.04	J	
Total Hexachloro Biphenyls	1.04	J	
Total Heptachloro Biphenyls	0.0999	J	
Total Octachloro Biphenyls	0.0118	J	
Total Nonachloro Biphenyls	ND		
DecachloroBiphenyls	ND		
Total PCBs	4.72	J	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-BKG1-202305 Lab Sample ID 40262368007 Filename P230529B_08

Injected By BAL Total Amount Extracted 1030

% Moisture
Dry Weight Extracted

ICAL ID

CCal Filename(s) Method Blank ID BAL
1030 mL Matrix Water
NA Dilution NA

 NA
 Collected
 05/16/2023
 14:10

 P230529B02
 Received
 05/20/2023
 18:45

 P230529B_01
 Extracted
 05/23/2023
 12:15

 BLANK-106282
 Analyzed
 05/29/2023
 23:25

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.182	2.99	2.0	1.67	84
13C-4-MoCB	3	12.998	2.96	2.0	1.80	90
13C-2,2'-DiCB	4	13.303	1.48	2.0	2.48	124
13C-4,4'-DiCB	15	20.404	1.57	2.0	1.85	93
13C-2,2',6-TrCB	19	17.143	1.03	2.0	2.54	127
13C-3,4,4'-TrCB	37	28.223	1.07	2.0	1.29	65
13C-2,2',6,6'-TeCB	54	20.766	0.78	2.0	1.65	82
13C-3,4,4',5-TeCB	81	35.377	0.78	2.0	1.40	70
13C-3,3',4,4'-TeCB	77	35.950	0.75	2.0	1.34	67
13C-2,2',4,6,6'-PeCB	104	26.908	1.52	2.0	1.77	88
13C-2,3,3',4,4'-PeCB	105	39.572	1.55	2.0	1.15	57
13C-2,3,4,4',5-PeCB	114	38.918	1.51	2.0	1.11	55
13C-2,3',4,4',5-PeCB	118	38.365	1.59	2.0	1.15	57
13C-2,3',4,4',5'-PeCB	123	38.030	1.54	2.0	1.14	57
13C-3,3',4,4',5-PeCB	126	42.742	1.58	2.0	0.973	49
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.25	2.0	2.32	116
13C-HxCB (156/157)	156/157	45.816	1.27	4.0	2.24	56
13C-2,3',4,4',5,5'-HxCB	167	44.659	1.26	2.0	1.16	58
13C-3,3',4,4',5,5'-HxCB	169	49.119	1.26	2.0	1.25	63
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.03	2.0	2.49	125
13C-2,3,3',4,4',5,5'-HpCB	189	51.697	1.04	2.0	1.51	75
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.89	2.0	1.91	95
13C-2,3,3',4,4',5,5',6-OcCB	205	54.305	0.88	2.0	1.81	90
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.79	2.0	2.02	101
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.223	0.78	2.0	2.27	113
13C-DeCB	209	57.689	0.71	2.0	2.08	104
CleanupStandards						
13C-2,4,4'-TrCB	28	23.860	1.04	2.0	1.32	66
13C-2,3,3',5,5'-PeCB	111	35.996	1.55	2.0	1.60	80
13C-2,2',3,3',5,5',6-HpCB	178	42.037	1.07	2.0	1.90	95
Recovery Standards						
13C-2,5-DiCB	9	15.773	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.79	2.0	NA NA	NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.56	2.0	ŇÄ	NA NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.22	2.0	NA	NA NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.88	2.0	ŇA	NA NA
		00.0.0	0.00	0		

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1				ND		0.00540
2				ND		0.00491
3				ND		0.00426
4				ND		0.00727
5				ND		0.00177
6				ND		0.00907
7				ND		0.00900
8				ND		0.0119
9				ND		0.00238
10				ND		0.00282
11				ND		0.140
12	12/13			ND		0.00509
13	12/13			ND		0.00509
14				ND		0.00170
15				ND		0.00584
16				ND		0.00596
17		19.851	1.37	IJ	0.00985	0.00499
18	18/30			ND		0.0110
19				ND		0.00807
20	20/28	23.891	1.11	0.0378 J		0.0176
21	21/33			ND		0.0127
22				ND		0.00733
23				ND		0.00154
24				ND		0.00185
25		23.180	1.10	0.00576 J		0.00277
26	26/29	22.948	1.10	0.00809 J		0.00443
27				ND		0.00195
28	20/28	23.891	1.11	(0.0378) J		0.0176
29	26/29	22.948	1.10	(0.00809) J		0.00443
30	18/30			NĎ		0.0110
31				ND		0.0170
32		20.983	0.90	0.0212 J		0.00708
33	21/33			ND		0.0127
34				ND		0.00157
35				ND		0.00310
36				ND		0.00195
37				ND		0.00408
38				ND		0.00144
39				ND		0.00159
40	40/41/71	28.084	0.74	0.0355 J		0.00785
41	40/41/71	28.084	0.74	(0.0355) J		0.00785
42		27.558	0.75	`0.0234´ J		0.00426
43	43/73			ND		0.00379
44	44/47/65	27.032	0.81	0.117		0.0181
45	45/51	24.077	0.84	0.0314 J		0.00557
46		24.324	0.74	0.0137 J		0.00221
47	44/47/65	27.032	0.81	(0.117)		0.0181
48				NĎ		0.00282

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NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69	26.428	0.79	0.111		0.00654
50	50/53	23.226	0.76	0.0488 J		0.00368
51	45/51	24.077	0.84	(0.0314) J		0.00557
52	10/01	25.872	0.79	0.0942 J		0.0161
53	50/53	23.226	0.76	(0.0488) J		0.00368
54	30,00	20.797	0.78	0.00256 J		0.00156
55				ND		0.00209
56				ND		0.00981
57				ND		0.00145
58				ND		0.00184
59	59/62/75	27.357	0.87	0.00423 J		0.00402
60				ND		0.00333
61	61/70/74/76	31.014	0.70	0.0363 J		0.0311
62	59/62/75	27.357	0.87	(0.00423) J		0.00402
63		30.674	0.79	0.00407 J		0.00169
64		28.316	0.93	IJ	0.00744	0.00544
65	44/47/65	27.032	0.81	(0.117)		0.0181
66		31.401	0.69	0.0346 J		0.0213
67				ND		0.00219
68		29.529	0.63	IJ	0.00297	0.00244
69	49/69	26.428	0.79	(0.111)		0.00654
70	61/70/74/76	31.014	0.70	(0.0363) J		0.0311
71	40/41/71	28.084	0.74	(0.0355) J		0.00785
72		29.220	1.07	IJ	0.00280	0.00171
73	43/73			ND		0.00379
74	61/70/74/76	31.014	0.70	(0.0363) J		0.0311
75	59/62/75	27.357	0.87	(0.00423) J		0.00402
76	61/70/74/76	31.014	0.70	(0.0363) J		0.0311
77				ND		0.00257
78				ND		0.00224
79				ND		0.00226
80				ND		0.00207
81				ND		0.00173
82		35.625	1.32	0.00884 J		0.00250
83		33.707	1.08	JJ	0.00668	0.00232
84	05/116/117	31.247	1.72	0.0318 J		0.0129
85	85/116/117	35.114	1.43	0.0237 J		0.00505
86 87	86/87/97/108/119/125	34.372 34.372	1.49 1.49	0.0753 J (0.0753) J		0.0148 0.0148
88	86/87/97/108/119/125	34.372	1.49			
89	88/91	31.030	1.32	0.0289 J ND		0.00480 0.00304
90	90/101/113	33.227	1.46	0.124		0.00304
91	88/91	31.030	1.32	(0.0289) J		0.00480
92	00/3 I	32.592	1.50	0.0378 J		0.00480
93	93/98/100/102	30.488	1.56	0.00904 J		0.00549
94	00/00/100/102	29.638	1.27	0.00904 J JJ	0.00302	0.00349
95		30.101	1.52	0.101 J	0.00302	0.00104
96				ND		0.00306
						0.0000

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Nn = Value obtained from additional analyses

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ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

IUPAC Co-elutions RT Ratio ng/L n	g/L ng/L
	9/2 119/2
97 86/87/97/108/119/125 34.372 1.49 (0.0753) J	0.0148
98 93/98/100/102 30.488 1.56 (0.00904) J	0.00549
99 33.830 1.43 0.0663	0.00575
100 93/98/100/102 30.488 1.56 (0.00904) J	0.00549
101 90/101/113 33.227 1.46 (0.124)	0.0116
102 93/98/100/102 30.488 1.56 (0.00904) J	0.00549
103 29.405 1.47 `0.00253´ J	0.00190
ND	0.00148
105 39.606 1.49 0.0307 J	0.00551
ND	0.00173
107 107/124 37.678 1.04 IJ 0.003	308 0.00255
108 86/87/97/108/119/125 34.372 1.49 (0.0753) J	0.0148
109 37.929 1.55 0.00902 J	0.00193
110 110/115 35.269 1.53 0.161	0.0126
111 ND	0.00199
112 ND	0.00172
113 90/101/113 33.227 1.46 (0.124)	0.0116
NĎ	0.00222
115 110/115 35.269 1.53 (0.161)	0.0126
116 85/116/117 35.114 1.43 (0.0237) J	0.00505
117 85/116/117 35.114 1.43 (0.0237) J	0.00505
118 38.382 1.46 0.0871	0.00871
119 86/87/97/108/119/125 34.372 1.49 (0.0753) J	0.0148
120 ND	0.00166
121 ND	0.00127
122 ND	0.00189
123 38.013 1.70 0.00277 J	0.00215
124 107/124 37.678 1.04 IJ (0.003	
125 86/87/97/108/119/125 34.372 1.49 (0.0753) J	0.0148
126 ND	0.00217
127 ND	0.00130
128 128/166 42.876 1.19 0.0208 J	0.00424
129 129/138/163 41.602 1.15 0.111 J	0.0106
40.914 1.17 0.00948 J	0.00213
ND	0.00275
132 38.466 1.20 0.0363 J	0.00400
ND	0.00259
134 134/143 37.443 1.14 0.00796 J	0.00389
135 135/151 36.259 1.28 0.0329 J	0.00505
136 33.737 1.34 0.0130 J	0.00279
137 41.166 1.48 IJ 0.00'	
138 129/138/163 41.602 1.15 (0.111) J	0.0106
139 139/140 ND	0.00428
140 139/140 ND	0.00428
141 40.545 1.15 0.0157 J	0.00240
142 ND	0.00188
143 134/143 37.443 1.14 (0.00796) J	0.00389
144 36.847 1.50 IJ 0.003	

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.00195
146		39.690	1.31	0.0135 J		0.00248
147	147/149	37.208	1.31	0.0795		0.00874
148				ND		0.00228
149	147/149	37.208	1.31	(0.0795)		0.00874
150				NĎ		0.00127
151	135/151	36.259	1.28	(0.0329) J		0.00505
152				ND		0.00207
153	153/168	40.327	1.17	0.0729 J		0.00751
154				ND		0.00171
155				ND		0.00150
156	156/157	45.783	1.17	0.0156 J		0.00433
157	156/157	45.783	1.17	(0.0156) J		0.00433
158	100,101	42.004	1.17	0.0113 J		0.00252
159				ND		0.00273
160				ND		0.00270
161				ND		0.00181
162				ND		0.00226
163	129/138/163	41.602	1.15	(0.111) J		0.0106
164	123/130/103	41.266	1.42	0.00687 J		0.00236
165				ND		0.00201
166	128/166	42.876	1.19	(0.0208) J		0.00424
167	120/100	44.692	1.17	0.00555 J		0.00209
168	153/168	40.327	1.17	(0.0729) J		0.00203
169	133/100	40.327		(0.0729) 3 ND		0.00751
170		48.533	1.31	IJ	0.00954	0.00484
170	171/173	40.555	1.31	ND	0.00954	0.00592
172	171/173			ND		0.00392
173	171/173			ND ND		0.00592
173	171/173	43.871	1.08	0.00958 J		0.00392
175		45.071	1.00	0.00938 3 ND		0.00311
176				ND ND		0.00140
177		44.340	0.93	0.00544 J		0.00219
178			0.93	0.00344 3 ND		0.00327
179		39.271	0.93	0.00398 J		0.00221
180	180/193	47.258	0.99	0.00390 J		0.00559
181	100/193	47.230	0.99	0.0173 3 ND		0.00359
182				ND ND		0.00257
183	183/185	43.636	0.89	0.00567 J		0.00252
184	103/103	45.050	0.09	0.00307 3 ND		0.00333
185	183/185	43.636	0.89	(0.00567) J		0.00203
186	103/103	43.030	0.09	(0.00307) 3 ND		0.00353
187		43.010	0.96	0.00883 J		0.00133
188		43.010	0.96	0.00863 J ND		0.00319
189				ND ND		0.00242
190				ND ND		0.00211
190				ND ND		0.00248
191				ND ND		
192				ND		0.00242

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ND = Not Detected

RT = Retention Time
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ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.258	0.99	(0.0175) J		0.00559
194				ND		0.00183
195				ND		0.00168
196				ND		0.00170
197	197/200			ND		0.00460
198	198/199	49.237	0.97	0.00315 J		0.00277
199	198/199	49.237	0.97	(0.00315) J		0.00277
200	197/200			` NĎ		0.00460
201				ND		0.00141
202				ND		0.00226
203		50.125	0.96	0.00196 J		0.00177
204				ND		0.00164
205				ND		0.00193
206				ND		0.00375
207				ND		0.00224
208				ND		0.00219
209				ND		0.0168

Conc = Concentration

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EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-BKG1-202305 40262368007 P230529B_08

Congener	Group	Concentrati ng/L	tion
Total Mono	chloro Biphenyls	ND	
Total Dichlo	oro Biphenyls	ND	
Total Trichle	oro Biphenyls	0.0729	J
TotalTetrac	chloro Biphenyls	0.557	J
TotalPenta	chloro Biphenyls	0.799	J
TotalHexad	chloro Biphenyls	0.453	J
TotalHepta	chloro Biphenyls	0.0510	J
Total Octac	hloro Biphenyls	0.00510	J
TotalNonac	chloro Biphenyls	ND	
Decachloro	Biphenyls	ND	
Total PCBs		1.94	J

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-OU3-202305
Lab Sample ID 40262368008
Filename P230529B_09
Injected By BAL

Total Amount Extracted1030 mLMatrixWater% MoistureNADilutionNADry Weight ExtractedNACollected05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 15:10

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/30/2023 00:28

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.137	2.99	2.0	1.48	74
13C-4-MoCB	3	12.964	3.09	2.0	1.61	80
13C-2,2'-DiCB	4	13.269	1.56	2.0	2.23	112
13C-4,4'-DiCB	15	20.404	1.56	2.0	1.80	90
13C-2,2',6-TrCB	19	17.122	1.02	2.0	2.23	112
13C-3,4,4'-TrCB	37	28.208	1.01	2.0	1.32	66
13C-2,2 ¹ ,6,6'-TeCB	54	20.751	0.78	2.0	1.52	76
13C-3,4,4',5-TeCB	81	35.362	0.79	2.0	1.38	69
13C-3,3',4,4'-TeCB	77	35.934	0.80	2.0	1.32	66
13C-2,2',4,6,6'-PeCB	104	26.909	1.58	2.0	1.82	91
13C-2,3,3',4,4'-PeCB	105	39.556	1.62	2.0	1.09	55
13C-2,3,4,4',5-PeCB	114	38.918	1.57	2.0	1.11	56
13C-2,3',4,4',5-PeCB	118	38.348	1.58	2.0	1.12	56
13C-2,3',4,4',5'-PeCB	123	38.013	1.56	2.0	1.11	55
13C-3,3',4,4',5-PeCB	126	42.725	1.50	2.0	0.910	46
13C-2,2',4,4',6,6'-HxCB	155	32.979	1.23	2.0	2.47	124
13C-HxCB (156/157)	156/157	45.816	1.23	4.0	2.22	55
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.27	2.0	1.17	58
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.24	2.0	1.25	62
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.02	2.0	2.33	116
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.04	2.0	1.49	74
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.91	2.0	1.71	85
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.90	2.0	1.80	90
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.80	2.0	2.04	102
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201	0.80	2.0	2.18	109
13C-DeCB	209	57.689	0.74	2.0	2.11	105
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.04	2.0	1.28	64
13C-2,3,3',5,5'-PeCB	111	35.981	1.53	2.0	1.57	78
13C-2,2 ¹ ,3,3 ¹ ,5,5 ¹ ,6-HpCB	178	42.021	1.06	2.0	1.94	97
Recovery Standards						
13C-2,5-DiCB	9	15.751	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.841	0.78	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.181	1.53	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.90	2.0	NA	NA

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

	• • •		5	Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1		10.159	2.89	0.225		0.00540
2				ND		0.00492
3		12.986	1.30	IJ	0.0184	0.00426
4		13.292	1.43	1.24		0.00728
5		16.635	0.50	IJ	0.00349	0.00177
6		16.259	1.51	0.175		0.00908
7		15.983	1.53	0.0738		0.00900
8		16.790	1.40	0.0883		0.0119
9		15.773	1.45	0.0300 J		0.00238
10		13.529	1.63	0.0195 J		0.00283
11				ND		0.141
12	12/13	20.017	1.48	0.0108 J		0.00509
13	12/13	20.017	1.48	(0.0108) J		0.00509
14				` NĎ		0.00170
15		20.404	1.50	0.108		0.00585
16		20.360	0.96	0.0436		0.00596
17		19.851	0.99	1.08		0.00500
18	18/30	19.365	1.01	0.275		0.0110
19		17.143	1.03	0.935		0.00807
20	20/28	23.861	0.99	0.450		0.0176
21	21/33	24.124	1.00	0.0328 J		0.0127
22		24.573	1.03	0.0295 J		0.00734
23				ND		0.00154
24				ND		0.00185
25		23.180	1.03	0.641		0.00277
26	26/29	22.917	1.05	1.22		0.00443
27		20.084	1.00	0.130		0.00196
28	20/28	23.861	0.99	(0.450)		0.0176
29	26/29	22.917	1.05	(1.22)		0.00443
30	18/30	19.365	1.01	(0̀.275)́		0.0110
31		23.536	1.02	`0.23Ó		0.0171
32		20.968	1.02	0.444		0.00709
33	21/33	24.124	1.00	(0.0328) J		0.0127
34		22.422	1.14	0.0264 J		0.00157
35		27.790	0.92	0.00465 J		0.00310
36				ND		0.00196
37		28.254	1.19	0.0224 J		0.00409
38				ND		0.00144
39				ND		0.00159
40	40/41/71	28.069	0.77	0.913		0.00786
41	40/41/71	28.069	0.77	(0.913)		0.00786
42		27.527	0.79	` 0.509́		0.00426
43	43/73	26.042	0.74	0.172		0.00379
44	44/47/65	27.017	0.77	2.73		0.0181
45	45/51	24.046	0.75	0.725		0.00558
46		24.294	0.74	0.224		0.00221
47	44/47/65	27.017	0.77	(2.73)		0.0181
48		26.723	0.85	0.0166 J		0.00283

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69	26.413	0.78	3.84		0.00654
50	50/53	23.211	0.77	0.982		0.00368
51	45/51	24.046	0.75	(0.725)		0.00558
52		25.872	0.78	5.1 0		0.0161
53	50/53	23.211	0.77	(0.982)		0.00368
54		20.767	0.79	Ò.0849		0.00156
55				ND		0.00209
56		32.097	0.73	0.0926		0.00982
57		29.978	0.77	0.173		0.00146
58		30.226	0.81	0.0216 J		0.00185
59	59/62/75	27.388	0.75	0.163		0.00403
60		32.330	0.71	0.0113 J		0.00333
61	61/70/74/76	30.999	0.77	0.865		0.0312
62	59/62/75	27.388	0.75	(0.163)		0.00403
63		30.690	0.84	0.0958		0.00169
64		28.301	0.78	0.323		0.00544
65	44/47/65	27.017	0.77	(2.73)		0.0181
66		31.386	0.73	0.636		0.0213
67		30.396	0.80	0.0627		0.00219
68		29.514	0.87	0.128		0.00244
69	49/69	26.413	0.78	(3.84)		0.00654
70	61/70/74/76	30.999	0.77	(0.865)		0.0312
71	40/41/71	28.069	0.77	(0.913)		0.00786
72		29.205	0.76	0.178		0.00172
73	43/73	26.042	0.74	(0.172)		0.00379
74	61/70/74/76	30.999	0.77	(0.865)		0.0312
75	59/62/75	27.388	0.75	(0.163)		0.00403
76	61/70/74/76	30.999	0.77	(0.865)		0.0312
77		35.950	0.72	0.0351 J		0.00258
78				ND		0.00225
79		34.341	0.67	0.0276 J		0.00227
80				ND		0.00207
81		35.347	0.80	0.00194 J		0.00173
82		35.594	1.55	0.126		0.00250
83		33.691	1.51	0.345		0.00232
84		31.247	1.50	0.864		0.0129
85	85/116/117	35.099	1.60	0.446		0.00505
86	86/87/97/108/119/125	34.341	1.51	1.57		0.0148
87	86/87/97/108/119/125	34.341	1.51	(1.57)		0.0148
88	88/91	31.030	1.56	0.832		0.00480
89		31.742	1.79	IJ	0.0127	0.00304
90	90/101/113	33.211	1.53	2.85		0.0116
91	88/91	31.030	1.56	(0.832)		0.00480
92		32.593	1.50	1.52		0.00381
93	93/98/100/102	30.365	1.52	0.315		0.00550
94		29.622	1.56	0.158		0.00184
95		30.086	1.53	2.86		0.00846
96		27.311	1.41	0.0529		0.00306

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID NR-SW-OU3-202305
Lab Sample ID 40262368008
Filename P230529B_09

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125	34.341	1.51	(1.57)		0.0148
98	93/98/100/102	30.365	1.52	(0.315)		0.00550
99		33.830	1.56	` 1.31		0.00575
100	93/98/100/102	30.365	1.52	(0.315)		0.00550
101	90/101/113	33.211	1.53	(2.85)		0.0116
102	93/98/100/102	30.365	1.52	(0̀.315)́		0.00550
103		29.406	1.56	0.122		0.00191
104		26.924	1.49	0.00532 J		0.00149
105		39.590	1.51	0.472		0.00552
106				ND		0.00173
107	107/124	37.678	1.50	0.0611 J		0.00256
108	86/87/97/108/119/125	34.341	1.51	(1.57)		0.0148
109		37.929	1.51	Ò.24Ś		0.00194
110	110/115	35.269	1.55	4.27		0.0126
111		35.996	1.63	0.0146 J		0.00199
112				ND		0.00172
113	90/101/113	33.211	1.53	(2.85)		0.0116
114		38.918	1.76	0.0122 J		0.00223
115	110/115	35.269	1.55	(4.27)		0.0126
116	85/116/117	35.099	1.60	(0.446)		0.00505
117	85/116/117	35.099	1.60	(0.446)		0.00505
118		38.382	1.51	1.58		0.00871
119	86/87/97/108/119/125	34.341	1.51	(1.57)		0.0148
120		36.491	1.56	0.0306 J		0.00166
121		32.221	1.30	IJ	0.00721	0.00127
122		38.734	1.51	0.0152 J		0.00189
123	107/101	38.047	1.49	0.0236 J		0.00215
124	107/124	37.678	1.50	(0.0611) J		0.00256
125	86/87/97/108/119/125	34.341	1.51	(1.57)		0.0148
126		42.742	1.33	0.00696 J		0.00217
127 128	128/166	 42.876	 1.31	ND 0.353		0.00130 0.00424
128	129/138/163	42.876	1.25	0.353 1.97		0.00424
130	129/130/103	40.914	1.23	0.186		0.00213
131		38.030	0.95	0.100 JJ	0.0240	0.00213
132		38.483	1.18	0.912	0.0240	0.00273
133		39.002	1.37	0.0813		0.00401
134	134/143	37.410	1.27	0.205		0.00233
135	135/151	36.228	1.28	1.02		0.00505
136	133/131	33.722	1.18	0.401		0.00303
137		41.149	1.17	0.0997		0.00273
138	129/138/163	41.585	1.25	(1.97)		0.0106
139	139/140	37.828	1.24	0.0578 J		0.00428
140	139/140	37.828	1.24	(0.0578) J		0.00428
141		40.512	1.25	0.226		0.00240
142				ND		0.00188
143	134/143	37.410	1.27	(0.205)		0.00389
144		36.832	1.17	0.0565		0.00203

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ngo nanogran



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.00196
146		39.673	1.29	0.368		0.00248
147	147/149	37.191	1.22	2.06		0.00875
148		35.656	1.27	0.0176 J		0.00228
149	147/149	37.191	1.22	(2.06)		0.00875
150	,	33.351	1.23	0.0146 J		0.00127
151	135/151	36.228	1.28	(1.02)		0.00505
152	100/101	33.211	1.32	0.00960 J		0.00207
153	153/168	40.311	1.27	1.35		0.00751
154	100/100	36.538	1.34	0.0743		0.00171
155			1.54	ND		0.00171
156	156/157	45.833	1.22	0.263		0.00434
157	156/157	45.833	1.22	(0.263)		0.00434
158	130/137	42.004	1.26	0.165		0.00454
150		43.837	1.26	0.00890 J		0.00252
160		43.037	1.07	0.00890 J ND		0.00273
161				ND ND		0.00252
		44.156	1.16			0.00182
162	400/400/400					
163	129/138/163	41.585	1.25	(1.97)		0.0106
164		41.266	1.27	0.136		0.00236
165	100/100	39.388	1.55	IJ	0.00686	0.00201
166	128/166	42.876	1.31	(0.353)		0.00424
167	/ /	44.659	1.14	0.0842		0.00209
168	153/168	40.311	1.27	(1.35)		0.00751
169				ND		0.00156
170		48.533	1.03	0.249		0.00484
171	171/173	44.961	1.04	0.0829		0.00592
172		46.587	0.99	0.0473		0.0137
173	171/173	44.961	1.04	(0.0829)		0.00592
174		43.837	1.07	0.227		0.00312
175		42.708	1.18	0.0116 J		0.00148
176		40.160	1.03	0.0392		0.00219
177		44.290	1.08	0.194		0.00327
178		42.038	0.93	0.0913		0.00221
179		39.254	1.01	0.153		0.00236
180	180/193	47.258	1.01	0.423		0.00560
181		44.726	1.03	0.00509 J		0.00267
182		43.195	1.05	0.00306 J		0.00252
183	183/185	43.636	1.05	0.144		0.00554
184				ND		0.00203
185	183/185	43.636	1.05	(0.144)		0.00554
186				` NĎ		0.00153
187		42.977	1.04	0.349		0.00319
188				ND		0.00242
189		51.697	1.02	0.0109 J		0.00211
190		49.069	0.98	0.0539		0.00248
191		47.593	1.08	0.00974 J		0.00213
192				ND		0.00242

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.258	1.01	(0.423)		0.00560
194		53.831	0.86	0.0966		0.00183
195		51.482	1.01	0.0410		0.00168
196		49.924	0.89	0.0510		0.00170
197	197/200	46.419	1.10	IJ	0.0183	0.00461
198	198/199	49.237	0.82	0.135		0.00277
199	198/199	49.237	0.82	(0.135)		0.00277
200	197/200	46.419	1.10	` IJ	(0.0183)	0.00461
201		45.380	0.70	IJ	0.0113	0.00141
202		44.441	0.88	0.0260 J		0.00227
203		50.125	0.94	0.0699		0.00178
204				ND		0.00165
205		54.284	0.97	0.00525 J		0.00194
206		56.073	0.93	IJ	0.0302	0.00376
207		52.193	0.70	0.00517 J		0.00225
208		51.201	0.56	IJ	0.00559	0.00219
209				ND		0.0168

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU3-202305 40262368008 P230529B_09

Congener Group	Concentrat ng/L	ion
Total Monochloro Biphenyls	0.225	
Total Dichloro Biphenyls	1.74	J
Total Trichloro Biphenyls	5.57	J
Total Tetrachloro Biphenyls	18.1	J
Total Pentachloro Biphenyls	20.1	J
Total Hexachloro Biphenyls	10.1	J
Total Heptachloro Biphenyls	2.09	J
Total Octachloro Biphenyls	0.425	J
Total Nonachloro Biphenyls	0.00517	J
DecachloroBiphenyls	ND	
Total PCBs	58.4	J

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-OU2-202305
Lab Sample ID 40262368009
Filename P230529B_10
Injected By BAL

Total Amount Extracted1040 mLMatrixWater% MoistureNADilutionNADry Weight ExtractedNACollected05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 16:15

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/30/2023 01:31

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.159	2.87	2.0	1.58	79
13C-4-MoCB	3	12.975	3.04	2.0	1.67	84
13C-2,2'-DiCB	4	13.280	1.49	2.0	2.31	115
13C-4,4'-DiCB	15	20.404	1.52	2.0	1.75	87
13C-2,2',6-TrCB	19	17.132	0.98	2.0	2.39	120
13C-3,4,4'-TrCB	37	28.207	1.05	2.0	1.25	63
13C-2,2',6,6'-TeCB	54	20.750	0.80	2.0	1.50	75
13C-3,4,4',5-TeCB	81	35.361	0.77	2.0	1.35	68
13C-3,3',4,4'-TeCB	77	35.934	0.81	2.0	1.28	64
13C-2,2',4,6,6'-PeCB	104	26.908	1.57	2.0	1.82	91
13C-2,3,3',4,4'-PeCB	105	39.572	1.61	2.0	1.07	53
13C-2,3,4,4',5-PeCB	114	38.918	1.56	2.0	1.02	51
13C-2,3',4,4',5-PeCB	118	38.365	1.58	2.0	1.09	54
13C-2,3',4,4',5'-PeCB	123	38.029	1.61	2.0	1.08	54
13C-3,3',4,4',5-PeCB	126	42.742	1.49	2.0	0.901	45
13C-2,2',4,4',6,6'-HxCB	155	32.994	1.28	2.0	2.42	121
13C-HxCB (156/157)	156/157	45.816	1.29	4.0	2.10	52 56
13C-2,3',4,4',5,5'-HxCB	167 169	44.642 49.102	1.28 1.27	2.0 2.0	1.13 1.21	60
13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.04	2.0	2.28	114
13C-2,3,3',4,4',5,5'-HpCB	189	51.697	1.04	2.0	1.37	69
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.91	2.0	1.64	82
13C-2,3,3',4,4',5,5',6-OcCB	205	54.283	0.89	2.0	1.74	87
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.050	0.78	2.0	1.96	98
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201	0.79	2.0	2.04	102
13C-DeCB	209	57.689	0.68	2.0	2.13	106
100 2002	200	07.000	0.00	2.0	2.10	100
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.03	2.0	1.16	58
13C-2,3,3',5,5'-PeCB	111	35.996	1.55	2.0	1.50	75
13C-2,2',3,3',5,5',6-HpCB	178	42.020	1.04	2.0	1.75	87
Recovery Standards						
13C-2,5-DiCB	9	15.762	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.80	2.0	ŇA	NA
13C-2,2',4,5,5'-PeCB	101	33.195	1.58	2.0	ŇA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.809	0.87	2.0	NA	NA

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Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1		10.170	2.90	0.290		0.00535
2				ND		0.00487
3		12.986	2.04	IJ	0.0228	0.00422
4		13.303	1.47	1.81		0.00721
5		16.657	0.93	IJ	0.00604	0.00176
6		16.270	1.47	0.194		0.00899
7		15.993	1.58	0.0941		0.00891
8		16.800	1.53	0.161		0.0117
9		15.762	1.32	IJ	0.00919	0.00236
10		13.529	0.97	IJ	0.0106	0.00280
11				ND		0.139
12	12/13	20.017	1.61	0.0171 J		0.00504
13	12/13	20.017	1.61	(0.0171) J		0.00504
14				` NĎ		0.00168
15		20.426	1.60	0.244		0.00579
16		20.360	1.08	0.0798		0.00590
17		19.840	1.03	1.88		0.00495
18	18/30	19.365	1.02	0.323		0.0109
19		17.154	0.99	1.56		0.00799
20	20/28	23.860	1.02	0.753		0.0174
21	21/33	24.061	1.08	0.0369 J		0.0126
22		24.556	0.93	0.0574 J		0.00726
23				ND		0.00152
24				ND		0.00183
25		23.195	1.01	0.638		0.00274
26	26/29	22.916	0.99	1.24		0.00439
27		20.094	1.01	0.103		0.00194
28	20/28	23.860	1.02	(0.753)		0.0174
29	26/29	22.916	0.99	(1.24)		0.00439
30	18/30	19.365	1.02	(0.323)		0.0109
31		23.535	1.04	0.288		0.0169
32		20.983	1.01	0.784		0.00702
33	21/33	24.061	1.08	(0.0369) J		0.0126
34		22.421	1.02	0.0220 J		0.00156
35		27.805	1.31	IJ	0.00479	0.00307
36				ND		0.00194
37		28.223	1.11	0.0443 J		0.00404
38				ND		0.00142
39	40/44/74			ND		0.00158
40	40/41/71	28.068	0.78	1.41		0.00778
41	40/41/71	28.068	0.78	(1.41)		0.00778
42	40/70	27.527	0.76	0.748		0.00422
43	43/73	26.042	0.74	0.237		0.00376
44	44/47/65	27.031	0.76	4.27		0.0179
45	45/51	24.061	0.78	1.25		0.00552
46	44/47/65	24.309	0.79	0.337		0.00219
47 49	44/47/65	27.031	0.76	(4.27)		0.0179
48		26.722	0.81	0.0395		0.00280

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ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69	26.413	0.76	4.71		0.00648
50	50/53	23.210	0.77	1.32		0.00364
51	45/51	24.061	0.78	(1.25)		0.00552
52	10/01	25.871	0.77	6.03		0.0159
53	50/53	23.210	0.77	(1.32)		0.00364
54	00/00	20.766	0.74	0.144		0.00154
55				ND		0.00207
56		32.082	0.79	0.139		0.00207
57		29.962	0.74	0.158		0.00144
58		30.209	0.81	0.130 0.0373 J		0.00183
59	59/62/75	27.387	0.79	0.216		0.00399
60	39/02/13	32.298	1.02	IJ	0.0150	0.00333
61	61/70/74/76	31.014	0.79	1.44	0.0130	0.0330
62	59/62/75	27.387	0.79	(0.216)		0.00399
63	59/62/75	30.689	0.79	0.142		0.00399
64		28.300	0.79	0.142		0.00188
65	44/47/65	27.031	0.76	(4.27)		0.00539
66	44/47/65	31.385	0.76			0.0179
				1.11		
67		30.411	0.79	0.0753		0.00217
68	40/00	29.529	0.78	0.163		0.00242
69	49/69	26.413	0.76	(4.71)		0.00648
70	61/70/74/76	31.014	0.79	(1.44)		0.0309
71	40/41/71	28.068	0.78	(1.41)		0.00778
72	40/70	29.204	0.77	0.204		0.00170
73	43/73	26.042	0.74	(0.237)		0.00376
74	61/70/74/76	31.014	0.79	(1.44)		0.0309
75	59/62/75	27.387	0.79	(0.216)		0.00399
76	61/70/74/76	31.014	0.79	(1.44)		0.0309
77		35.965	0.83	0.0601		0.00255
78				ND		0.00222
79		34.371	0.79	0.0621		0.00224
80				ND		0.00205
81		35.346	0.84	0.00429 J		0.00171
82		35.609	1.61	0.184		0.00247
83		33.706	1.60	0.434		0.00230
84		31.246	1.54	1.17		0.0128
85	85/116/117	35.114	1.63	0.645		0.00500
86	86/87/97/108/119/125	34.356	1.57	2.45		0.0146
87	86/87/97/108/119/125	34.356	1.57	(2.45)		0.0146
88	88/91	31.029	1.52	1.16		0.00475
89		31.772	1.50	0.0216 J		0.00301
90	90/101/113	33.211	1.57	4.55		0.0115
91	88/91	31.029	1.52	(1.16)		0.00475
92		32.592	1.56	1.89		0.00378
93	93/98/100/102	30.349	1.54	0.444		0.00544
94		29.622	1.56	0.206		0.00182
95		30.101	1.50	3.99		0.00838
96		27.310	1.51	0.0758		0.00303

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ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

 Client Sample ID
 NR-SW-OU2-202305

 Lab Sample ID
 40262368009

 Filename
 P230529B_10

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125	34.356	1.57	(2.45)		0.0146
98	93/98/100/102	30.349	1.54	(0.444)		0.00544
99		33.845	1.58	2.19		0.00569
100	93/98/100/102	30.349	1.54	(0.444)		0.00544
101	90/101/113	33.211	1.57	(4.55)		0.0115
102	93/98/100/102	30.349	1.54	(0.444)		0.00544
103		29.405	1.54	0.147		0.00189
104		26.939	1.24	IJ	0.00731	0.00147
105		39.589	1.48	0.765		0.00546
106				ND		0.00171
107	107/124	37.677	1.46	0.107		0.00253
108	86/87/97/108/119/125	34.356	1.57	(2.45)		0.0146
109		37.929	1.58	Ò.37Ś		0.00192
110	110/115	35.269	1.57	6.01		0.0125
111		36.011	1.69	0.0172 J		0.00197
112				ND		0.00170
113	90/101/113	33.211	1.57	(4.55)		0.0115
114		38.951	1.51	0.028Ó J		0.00220
115	110/115	35.269	1.57	(6.01)		0.0125
116	85/116/117	35.114	1.63	(0̀.645)́		0.00500
117	85/116/117	35.114	1.63	(0.645)		0.00500
118		38.381	1.46	2.85		0.00863
119	86/87/97/108/119/125	34.356	1.57	(2.45)		0.0146
120		36.506	1.48	0.0420		0.00164
121		32.236	1.65	0.0103 J		0.00125
122		38.717	1.51	0.0233 J		0.00187
123		38.063	1.50	0.0373 J		0.00213
124	107/124	37.677	1.46	(0.107)		0.00253
125	86/87/97/108/119/125	34.356	1.57	`(2.45)		0.0146
126		42.742	1.46	0.00824 J		0.00215
127				ND		0.00129
128	128/166	42.893	1.21	0.546		0.00420
129	129/138/163	41.601	1.23	2.99		0.0105
130		40.931	1.22	0.263		0.00211
131		38.029	1.31	0.0461		0.00272
132		38.499	1.22	1.33		0.00397
133		39.019	1.28	0.103		0.00257
134	134/143	37.409	1.11	0.285		0.00385
135	135/151	36.228	1.24	1.40		0.00500
136		33.722	1.27	0.565		0.00276
137		41.148	1.21	0.148		0.00247
138	129/138/163	41.601	1.23	(2.99)		0.0105
139	139/140	37.828	1.18	0.0844		0.00424
140	139/140	37.828	1.18	(0.0844)		0.00424
141		40.511	1.33	0.382		0.00238
142				ND		0.00186
143	134/143	37.409	1.11	(0.285)		0.00385
144		36.831	1.27	0.104		0.00201
						-

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
IOFAC	CO-ciutions	IX I	Natio	ilg/L	iig/L	iig/L
145				ND		0.00194
146		39.689	1.22	0.531		0.00245
147	147/149	37.208	1.23	2.92		0.00866
148		35.640	1.14	0.0235 J		0.00226
149	147/149	37.208	1.23	(2.92)		0.00866
150		33.396	1.17	0.0200 J		0.00126
151	135/151	36.228	1.24	(1.40)		0.00500
152		33.180	1.40	0.0135 J		0.00205
153	153/168	40.327	1.28	2.25		0.00744
154		36.521	1.28	0.0944		0.00169
155				ND		0.00148
156	156/157	45.816	1.26	0.413		0.00429
157	156/157	45.816	1.26	(0.413)		0.00429
158		42.004	1.22	`0.25 4		0.00249
159		43.870	1.34	0.0107 J		0.00270
160				ND		0.00249
161				ND		0.00180
162		44.172	1.40	0.0117 J		0.00224
163	129/138/163	41.601	1.23	(2.99)		0.0105
164		41.266	1.26	Ò.22Ś		0.00234
165		39.421	1.56	IJ	0.00710	0.00199
166	128/166	42.893	1.21	(0.546)		0.00420
167		44.659	1.23	0.130		0.00207
168	153/168	40.327	1.28	(2.25)		0.00744
169		49.102	1.95	IJ	0.00277	0.00155
170		48.532	1.02	0.370		0.00479
171	171/173	44.960	1.01	0.128		0.00587
172		46.604	1.14	0.0670		0.0136
173	171/173	44.960	1.01	(0.128)		0.00587
174		43.854	1.05	0.355		0.00309
175		42.708	1.00	0.0161 J		0.00146
176		40.193	0.95	0.0563		0.00217
177		44.306	1.05	0.273		0.00324
178		42.054	1.08	0.121		0.00219
179		39.287	0.97	0.209		0.00234
180	180/193	47.257	0.99	0.669		0.00554
181	100/100	44.725	0.88	0.0107 J		0.00265
182		43.194	1.37	IJ	0.00370	0.00249
183	183/185	43.619	1.06	0.217		0.00548
184	100/100			ND		0.00201
185	183/185	43.619	1.06	(0.217)		0.00548
186	100/100			ND		0.00151
187		42.993	1.06	0.504		0.00316
188				ND		0.00240
189		51.718	1.19	0.0165 J		0.00209
190		49.085	1.08	0.0833		0.00245
191		47.626	0.85	J	0.0124	0.00243
192				ND IO	0.012-	0.00240
				.,,,		0.002.0

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.257	0.99	(0.669)		0.00554
194		53.831	0.90	0.140		0.00181
195		51.460	0.85	0.0643		0.00167
196		49.924	0.93	0.0697		0.00169
197	197/200	46.402	1.02	0.0301 J		0.00456
198	198/199	49.270	0.85	0.190		0.00274
199	198/199	49.270	0.85	(0.190)		0.00274
200	197/200	46.402	1.02	(0.0301) J		0.00456
201		45.380	0.85	`0.022Ź J		0.00140
202		44.424	0.88	0.0350 J		0.00224
203		50.125	0.86	0.0965		0.00176
204				ND		0.00163
205		54.326	1.00	0.00845 J		0.00192
206		56.094	0.82	0.0396		0.00372
207		52.193	0.85	0.00673 J		0.00222
208		51.223	0.98	IJ	0.00804	0.00217
209				ND		0.0167

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU2-202305 40262368009 P230529B_10

Congener Group	Concentrati ng/L	ion
Total Monochloro Biphenyls	0.290	
Total Dichloro Biphenyls	2.52	J
Total Trichloro Biphenyls	7.81	J
Total Tetrachloro Biphenyls	24.7	J
Total Pentachloro Biphenyls	29.8	J
Total Hexachloro Biphenyls	15.2	J
Total Heptachloro Biphenyls	3.09	J
Total Octachloro Biphenyls	0.655	J
Total Nonachloro Biphenyls	0.0463	J
DecachloroBiphenyls	ND	
Total PCBs	84.1	J

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-OU1-202305 Lab Sample ID 40262368010 Filename P230529B_11 Injected By BAL

Total Amount Extracted 1040 mL Matrix Water % Moisture NA Dilution NA Collected 05/16/2023 17:00

 ICÁL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/30/2023 02:34

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.103	3.07	2.0	1.54	77
13C-4-MoCB	3	12.941	3.04	2.0	1.71	86
13C-2,2'-DiCB	4	13.247	1.64	2.0	2.36	118
13C-4,4'-DiCB	15	20.382	1.55	2.0	1.85	92
13C-2,2',6-TrCB	19	17.110	1.02	2.0	2.43	121
13C-3,4,4'-TrCB	37	28.208	1.05	2.0	1.24	62
13C-2,2',6,6'-TeCB	54	20.736	0.80	2.0	1.54	77
13C-3,4,4',5-TeCB	81	35.347	0.78	2.0	1.37	69
13C-3,3',4,4'-TeCB	77	35.935	0.76	2.0	1.36	68
13C-2,2',4,6,6'-PeCB	104	26.893	1.66	2.0	1.69	85
13C-2,3,3',4,4'-PeCB	105	39.573	1.58	2.0	1.05	52
13C-2,3,4,4',5-PeCB	114	38.902	1.55	2.0	1.03	52
13C-2,3',4,4',5-PeCB	118	38.366	1.61	2.0	1.05	53
13C-2,3',4,4',5'-PeCB	123	38.013	1.55	2.0	1.04	52
13C-3,3',4,4',5-PeCB	126	42.726	1.56	2.0	0.871	44
13C-2,2',4,4',6,6'-HxCB	155	32.979	1.24	2.0	2.49	124
13C-HxCB (156/157)	156/157	45.816	1.27	4.0	2.15	54
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.22	2.0	1.13	57
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.26	2.0	1.21	61
13C-2,2',3,4',5,6,6'-HpCB	188	38.919	1.04	2.0	2.40	120
13C-2,3,3',4,4',5,5'-HpCB	189	51.654	1.03	2.0	1.43	72
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.391	0.87	2.0	1.83	91
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.89	2.0	1.73	87
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.76	2.0	1.99 2.17	99
13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	208 209	51.202 57.689	0.78 0.69	2.0 2.0	2.17 2.17	109 108
13C-DeCB	209	57.009	0.69	2.0	2.17	100
CleanupStandards						
13C-2,4,4'-TrCB	28	23.830	1.05	2.0	1.18	59
13C-2,3,3',5,5'-PeCB	111	35.981	1.54	2.0	1.45	72
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.04	2.0	1.80	90
Recovery Standards						
13C-2,5-DiCB	9	15.740	1.59	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.841	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.181	1.54	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.552	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.89	2.0	NA	NA
. , , , , ,			_			

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1		10.125	2.69	0.0110 J		0.00536
2				ND		0.00488
3				ND		0.00423
4		13.269	1.34	0.125		0.00723
5				ND		0.00176
6		16.237	1.42	0.0120 J		0.00901
7				ND		0.00894
8		16.779	1.54	0.0171 J		0.0118
9				ND		0.00236
10				ND		0.00281
11				ND		0.140
12	12/13			ND		0.00505
13	12/13			ND		0.00505
14	.2, .0			ND		0.00169
15		20.415	1.38	0.0574		0.00580
16		20.349	0.98	0.0131 J		0.00592
17		19.840	1.00	0.151		0.00496
18	18/30	19.332	1.05	0.0602 J		0.0110
19	10/00	17.132	1.00	0.152		0.00801
20	20/28	23.861	1.01	0.132 0.116 J		0.0175
21	21/33	20.001		ND		0.0126
22	21/33	24.541	1.14	0.0118 J		0.00728
23		24.541		ND		0.00153
24				ND		0.00184
25		23.180	1.03	0.0671		0.00104
26	26/29	22.902	1.03	0.130		0.00273
27	20/29	20.084	1.01	0.130 0.0156 J		0.00440
28	20/28	23.861	1.01	(0.116) J		0.00194
29	26/29	22.902	1.01	(0.110) 3		0.00440
30	18/30	19.332	1.05	(0.130) (0.0602) J		0.00440
31	16/30	23.520	1.03	0.0544 J		0.0110
32		20.968	1.02	0.0344 3		0.00703
33	21/33	20.900	1.07	0.0737 ND		0.00703
34	21/33			ND ND		0.00156
35				ND ND		0.00130
36				ND ND		0.00307
37				ND ND		0.00194
38				ND ND		0.00408
				ND ND		
39 40	40/41/71	28.053	0.77	0.188		0.00158 0.00780
40 41						
	40/41/71	28.053	0.77	(0.188)		0.00780
42 43	43/73	27.527 26.027	0.77	0.133		0.00423 0.00377
43 44		26.027 27.017	0.71	0.0240 J		0.00377
	44/47/65		0.76	0.792		
45 46	45/51	24.046	0.74	0.146		0.00553
46 47	11/17/CE	24.294	0.74	0.0536		0.00219
47	44/47/65	27.017	0.76	(0.792)		0.0179
48		26.723	0.84	0.0131 J		0.00281

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69	26.398	0.77	0.842		0.00650
50	50/53	23.195	0.74	0.214		0.00365
51	45/51	24.046	0.74	(0.146)		0.00553
52		25.872	0.77	` 1.5Ź		0.0160
53	50/53	23.195	0.74	(0.214)		0.00365
54		20.767	0.72	0.0162 J		0.00155
55				ND		0.00208
56		32.082	0.69	0.0377 J		0.00974
57		29.962	0.75	0.0106 J		0.00145
58		30.194	1.07	J	0.00370	0.00183
59	59/62/75	27.388	0.75	0.0287 J		0.00400
60	00,02,10	32.314	0.85	0.00702 J		0.00331
61	61/70/74/76	31.014	0.77	0.340		0.0309
62	59/62/75	27.388	0.75	(0.0287) J		0.00400
63	00/02/10	30.659	0.82	0.0147 J		0.00168
64		28.285	0.77	0.126		0.00540
65	44/47/65	27.017	0.76	(0.792)		0.0179
66	44/41/00	31.370	0.66	0.204		0.0211
67		30.396	0.82	0.00631 J		0.00217
68		29.499	0.79	0.00031 J		0.00217
69	49/69	26.398	0.77	(0.842)		0.00650
70	61/70/74/76	31.014	0.77	(0.340)		0.0309
71	40/41/71	28.053	0.77	(0.188)		0.00780
72	40/41/71	29.205	0.67	0.0202 J		0.00780
73	43/73	26.027	0.71	(0.0240) J		0.00170
73 74	61/70/74/76	31.014	0.77	(0.340)		0.0377
7 4 75	59/62/75	27.388	0.77	(0.0287) J		0.0309
75 76		31.014	0.73			0.0309
	61/70/74/76	35.996	0.77	(0.340)		
77 78		35.996	0.62	0.00839 J		0.00256
76 79		34.341	0.80	ND 0.0113 J		0.00223
79 80		34.341	0.80			0.00225
80 81				ND ND		0.00206
01		35.594	4.00			0.00172
82 83		33.676	1.68	0.0862		0.00248
83		33.676	1.38	0.0986		0.00231
84	05/440/447	31.231	1.43	0.309		0.0128
85	85/116/117	35.099	1.57	0.284		0.00502
86	86/87/97/108/119/125	34.434	1.52	0.829		0.0147
87	86/87/97/108/119/125	34.434	1.52	(0.829)		0.0147
88	88/91	31.030	1.49	0.270	0.00447	0.00477
89	00/404/440	31.788	1.07	IJ	0.00417	0.00302
90	90/101/113	33.211	1.49	1.60		0.0115
91	88/91	31.030	1.49	(0.270)		0.00477
92	00/00/400/400	32.593	1.49	0.430		0.00379
93	93/98/100/102	30.349	1.63	0.0641 J		0.00546
94		29.622	1.62	0.0219 J		0.00182
95		30.086	1.57	1.33		0.00840
96		27.295	1.67	0.0108 J		0.00304

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID NR-SW-OU1-202305 Lab Sample ID 40262368010 Filename P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
IUFAC	Co-elutions	N I	Natio		IIg/L	iig/L
97	86/87/97/108/119/125	34.434	1.52	(0.829)		0.0147
98	93/98/100/102	30.349	1.63	(0.0641) J		0.00546
99		33.830	1.50	1.06		0.00571
100	93/98/100/102	30.349	1.63	(0.0641) J		0.00546
101	90/101/113	33.211	1.49	(1.60)		0.0115
102	93/98/100/102	30.349	1.63	(0.0641) J		0.00546
103		29.421	1.50	`0.0226´ J		0.00189
104				ND		0.00147
105		39.590	1.44	0.159		0.00548
106				ND		0.00172
107	107/124	37.678	1.54	0.0260 J		0.00254
108	86/87/97/108/119/125	34.434	1.52	(0.829)		0.0147
109		37.913	1.58	0.0553		0.00192
110	110/115	35.269	1.53	1.65		0.0125
111				ND		0.00198
112				ND		0.00171
113	90/101/113	33.211	1.49	(1.60)		0.0115
114		38.919	1.10	IJ	0.00575	0.00221
115	110/115	35.269	1.53	(1.65)		0.0125
116	85/116/117	35.099	1.57	(0.284)		0.00502
117	85/116/117	35.099	1.57	(0.284)		0.00502
118		38.382	1.46	0.510		0.00865
119	86/87/97/108/119/125	34.434	1.52	(0.829)		0.0147
120		36.492	1.22	IJ	0.00442	0.00165
121				ND		0.00126
122		38.717	1.44	0.00652 J		0.00188
123	107/124	38.030	1.67	0.0116 J		0.00213
124 125	86/87/97/108/119/125	37.678 34.434	1.54 1.52	(0.0260) J (0.829)		0.00254 0.0147
125	00/07/97/100/119/125	34.434	1.52	(0.829) ND		0.0147
120				ND ND		0.00213
127	128/166	42.877	1.21	0.117		0.00129
129	129/138/163	41.585	1.30	0.732		0.0106
130	129/190/109	40.915	1.25	0.0552		0.00211
131		38.013	1.36	0.0146 J		0.00277
132		38.483	1.21	0.254		0.00398
133		38.986	1.22	0.0161 J		0.00258
134	134/143	37.410	1.17	0.0582 J		0.00386
135	135/151	36.228	1.28	0.342		0.00502
136	100,101	33.722	1.18	0.117		0.00277
137		41.149	1.15	0.0478		0.00248
138	129/138/163	41.585	1.30	(0.732)		0.0106
139	139/140	37.812	1.31	0.0263 J		0.00425
140	139/140	37.812	1.31	(0.0263) J		0.00425
141		40.495	1.24	0.116		0.00238
142				ND		0.00186
143	134/143	37.410	1.17	(0.0582) J		0.00386
144		36.832	1.09	0.0298 J		0.00202

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

		_		Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.00194
146		39.674	1.20	0.114		0.00246
147	147/149	37.192	1.23	0.650		0.00869
148		35.625	1.27	0.00230 J		0.00227
149	147/149	37.192	1.23	(0.650)		0.00869
150		33.382	1.84	IJ	0.00249	0.00126
151	135/151	36.228	1.28	(0.342)		0.00502
152				ND		0.00206
153	153/168	40.311	1.19	0.638		0.00746
154		36.522	1.14	0.0175 J		0.00170
155				ND		0.00149
156	156/157	45.833	1.18	0.0680 J		0.00430
157	156/157	45.833	1.18	(0.0680) J		0.00430
158	100/10/	41.988	1.23	0.0585		0.00250
159				ND		0.00271
160				ND		0.00271
161				ND		0.00180
162				ND		0.00225
163	129/138/163	41.585	1.30	(0.732)		0.0106
164	120/100/100	41.250	1.27	0.0468		0.00234
165				ND		0.00200
166	128/166	42.877	1.21	(0.117)		0.00421
167	120/100	44.659	1.21	0.0214 J		0.00208
168	153/168	40.311	1.19	(0.638)		0.00746
169	133/100			ND		0.00155
170		48.533	1.13	0.0513		0.00480
171	171/173	44.944	1.12	0.0315 0.0215 J		0.00588
172	1717173			0.0213 3 ND		0.0136
173	171/173	44.944	1.12	(0.0215) J		0.00588
173	17 1/173	43.838	1.02	0.0552		0.00309
175		42.659	2.13	IJ	0.00229	0.00303
176		40.143	1.22	IJ	0.00229	0.00147
177		44.307	1.05	0.0385	0.00396	0.00217
178		42.038	0.95	0.0383 0.0181 J		0.00323
179		39.271	0.89	0.0161 J		0.00219
180	180/193	47.258	1.09	0.0899		0.00254
181	160/193	47.250	1.09	0.0699 ND		0.00355
182				ND ND		0.00250
183	183/185	43.620	1.16	0.0429 J		0.00250
184	103/103	43.020		0.0429 J ND		0.00330
185	183/185	43.620	1.16	(0.0429) J		0.00202
186	100/100	43.020		(0.0429) J ND		0.00350
187		42.977	0.97	0.0878		0.00132
188		42.911	0.97	0.0676 ND		0.00317
189				ND ND		0.00240
190		49.069	0.90	0.0114 J		0.00209
190		43.003	0.90	0.0114 J ND		0.00246
191				ND ND		0.00211
134				ND		0.00240

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.258	1.09	(0.0899)		0.00555
194		53.853	0.79	`0.0163´ J		0.00181
195		51.460	1.82	IJ	0.00447	0.00167
196		49.924	0.82	0.00871 J		0.00169
197	197/200			ND		0.00457
198	198/199	49.254	0.83	0.0221 J		0.00275
199	198/199	49.254	0.83	(0.0221) J		0.00275
200	197/200			` NĎ		0.00457
201		45.380	1.08	IJ	0.00208	0.00140
202		44.424	0.88	0.00440 J		0.00225
203		50.109	1.16	IJ	0.0106	0.00176
204				ND		0.00163
205				ND		0.00192
206		56.073	0.70	0.00567 J		0.00373
207				ND		0.00223
208				ND		0.00217
209				ND		0.0167

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU1-202305 40262368010 P230529B_11

Congener Group	Concentrat ng/L	ion
Total Monochloro Biphenyls	0.0110	J
Total Dichloro Biphenyls	0.211	J
Total Trichloro Biphenyls	0.845	J
Total Tetrachloro Biphenyls	4.82	J
Total Pentachloro Biphenyls	8.84	J
Total Hexachloro Biphenyls	3.54	J
Total Heptachloro Biphenyls	0.451	J
Total Octachloro Biphenyls	0.0514	J
Total Nonachloro Biphenyls	0.00567	J
DecachloroBiphenyls	ND	
Total PCBs	18.8	J

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-BKG2-202305 Lab Sample ID 40262368011 Filename P230531B_08

Injected By CVS
Total Amount Extracted 1040

% Moisture

Dry Weight Extracted ICAL ID

CCal Filename(s)
Method Blank ID

1040 mL Matrix Water NA Dilution NA

NA Collected 05/16/2023 17:40
P230531B02 Received 05/20/2023 18:45
P230531B_01 Extracted 05/26/2023 11:40
BLANK-106448 Analyzed 06/01/2023 04:43

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.114	3.20	2.0	1.09	55
13C-4-MoCB	3	12.941	3.14	2.0	1.35	67
13C-2,2'-DiCB	4	13.246	1.53	2.0	1.33	66
13C-4,4'-DiCB	15	20.359	1.57	2.0	1.53	76
13C-2,2',6-TrCB	19	17.087	1.02	2.0	1.43	72
13C-3,4,4'-TrCB	37	28.175	1.09	2.0	1.39	70
13C-2,2',6,6'-TeCB	54	20.719	0.79	2.0	1.13	57
13C-3,4,4',5-TeCB	81	35.328	0.81	2.0	1.44	72
13C-3,3',4,4'-TeCB	77	35.900	0.78	2.0	1.39	70
13C-2,2',4,6,6'-PeCB	104	26.860	1.55	2.0	1.31	66
13C-2,3,3',4,4'-PeCB	105	39.517	1.61	2.0	1.39	70
13C-2,3,4,4',5-PeCB	114	38.880	1.58	2.0	1.37	68
13C-2,3',4,4',5-PeCB	118	38.327	1.60	2.0	1.35	68
13C-2,3',4,4',5'-PeCB	123	37.975	1.56	2.0	1.38	69
13C-3,3',4,4',5-PeCB	126	42.686	1.56	2.0	1.29	64
13C-2,2',4,4',6,6'-HxCB	155	32.945	1.24	2.0	1.33	66
13C-HxCB (156/157)	156/157	45.777	1.27	4.0	2.57	64
13C-2,3',4,4',5,5'-HxCB	167	44.603	1.28	2.0	1.34	67
13C-3,3',4,4',5,5'-HxCB	169	49.063	1.25	2.0	1.21	61
13C-2,2',3,4',5,6,6'-HpCB	188	38.863	1.04	2.0	1.46	73
13C-2,3,3',4,4',5,5'-HpCB	189	51.626	1.05	2.0	1.52	76
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.351	0.89	2.0	1.41	71
13C-2,3,3',4,4',5,5',6-OcCB	205	54.234	0.91	2.0	1.33	67
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.001	0.80	2.0	1.25	62
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.152	0.79	2.0	1.38	69
13C-DeCB	209	57.639	0.70	2.0	1.20	60
CleanupStandards						
13C-2,4,4'-TrCB	28	23.797	1.04	2.0	1.22	61
13C-2,3,3',5,5'-PeCB	111	35.946	1.57	2.0	1.08	54
13C-2,2',3,3',5,5',6-HpCB	178	41.982	1.04	2.0	1.04	52
Recovery Standards						
13C-2,5-DiCB	9	15.728	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.808	0.80	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.146	1.58	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.529	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.759	0.91	2.0	NA	NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00535
2				ND		0.00487
3				ND		0.00422
4				ND		0.00721
5		16.767	1.08	IJ	0.00489	0.00176
6				ND IS	0.00-05	0.00899
7				ND		0.00891
8				ND		0.0117
9				ND		0.00236
10				ND		0.00280
11				ND ND		0.139
12	12/13			ND ND		0.00504
13	12/13			ND ND		0.00504
14	12/13			ND ND		0.00304
15				ND ND		0.00168
16				ND ND		0.00579
17				ND ND		0.00390
18	18/30			ND ND		
	16/30					0.0109
19	20/20			ND		0.00799
20	20/28			ND ND		0.0174
21	21/33			ND		0.0126
22				ND		0.00726
23				ND		0.00152
24				ND		0.00183
25	00/00			ND		0.00274
26	26/29			ND		0.00439
27	/			ND		0.00194
28	20/28			ND		0.0174
29	26/29			ND		0.00439
30	18/30			ND		0.0109
31				ND		0.0169
32				ND		0.00702
33	21/33			ND		0.0126
34				ND		0.00156
35				ND		0.00307
36				ND		0.00194
37				ND		0.00404
38				ND		0.00142
39				ND		0.00158
40	40/41/71			ND		0.00778
41	40/41/71			ND		0.00778
42				ND		0.00422
43	43/73			ND		0.00376
44	44/47/65			ND		0.0179
45	45/51			ND		0.00552
46				ND		0.00219
47	44/47/65			ND		0.0179
48				ND		0.00280

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69	26.380	0.83	0.0102 J		0.00648
50	50/53			ND		0.00364
51	45/51			ND		0.00552
52				ND		0.0159
53	50/53			ND		0.00364
54				ND		0.00154
55				ND		0.00207
56				ND		0.00972
57				ND		0.00144
58				ND		0.00183
59	59/62/75			ND		0.00399
60				ND		0.00330
61	61/70/74/76			ND		0.0309
62	59/62/75			ND		0.00399
63				ND		0.00168
64				ND		0.00539
65	44/47/65			ND		0.0179
66				ND		0.0211
67				ND		0.00217
68				ND		0.00242
69	49/69	26.380	0.83	(0.0102) J		0.00648
70	61/70/74/76			ND		0.0309
71	40/41/71			ND		0.00778
72				ND		0.00170
73	43/73			ND		0.00376
74	61/70/74/76			ND		0.0309
75	59/62/75			ND		0.00399
76	61/70/74/76			ND		0.0309
77				ND		0.00255
78				ND		0.00222
79				ND		0.00224
80				ND		0.00205
81				ND		0.00171
82				ND		0.00247
83				ND		0.00230
84				ND		0.0128
85	85/116/117			ND		0.00500
86	86/87/97/108/119/125			ND		0.0146
87	86/87/97/108/119/125			ND		0.0146
88	88/91			ND		0.00475
89				ND		0.00301
90	90/101/113	33.178	1.51	0.0130 J		0.0115
91	88/91			ND		0.00475
92		32.528	1.16	IJ	0.00479	0.00378
93	93/98/100/102			ND		0.00544
94	-			ND		0.00182
95				ND		0.00838
96				ND		0.00303

Conc = Concentration

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* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

ng's = Nanograms

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
97	86/87/97/108/119/125			ND		0.0146
98	93/98/100/102			ND		0.00544
99	00/00/100/102	33.796	1.53	0.00682 J		0.00569
100	93/98/100/102			ND		0.00544
101	90/101/113	33.178	1.51	(0.0130) J		0.00344
102	93/98/100/102			(0.0130) 3 ND		0.00544
103	93/90/100/102			ND		0.00189
103				ND		0.00147
105				ND		0.00546
106				ND		0.00340
107	107/124			ND ND		0.00171
107	86/87/97/108/119/125			ND ND		0.00255
108	86/87/97/108/119/123			ND ND		0.00192
110	110/115	35.219	1.59	0.0138 J		0.0192
110	110/115					0.0123
111				ND ND		0.00197
113	90/101/113	33.178	1.51	(0.0130) J		
	90/101/113	33.176	1.51	(0.0130) J		0.0115
114	440/445			NĎ (0.0138) J		0.00220
115	110/115	35.219	1.59			0.0125
116	85/116/117			ND		0.00500
117	85/116/117		4.00	ND		0.00500
118	00/07/07/400/440/405	38.343	1.63	0.0113 J		0.00863
119	86/87/97/108/119/125			ND		0.0146
120				ND		0.00164
121				ND		0.00125
122				ND		0.00187
123				ND		0.00213
124	107/124			ND		0.00253
125	86/87/97/108/119/125			ND		0.0146
126				ND		0.00215
127				ND		0.00129
128	128/166			ND		0.00420
129	129/138/163			ND		0.0105
130				ND		0.00211
131				ND		0.00272
132				ND		0.00397
133				ND		0.00257
134	134/143			ND		0.00385
135	135/151			ND		0.00500
136				ND		0.00276
137				ND		0.00247
138	129/138/163			ND		0.0105
139	139/140			ND		0.00424
140	139/140			ND		0.00424
141				ND		0.00238
142				ND		0.00186
143	134/143			ND		0.00385
144				ND		0.00201

Conc = Concentration

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.00194
146				ND		0.00245
147	147/149			ND		0.00866
148	,			ND		0.00226
149	147/149			ND		0.00866
150	1 1171 10			ND		0.00126
151	135/151			ND		0.00500
152	100/101			ND		0.00205
153	153/168	40.272	1.22	0.00967 J		0.00744
154	133/100			0.00307 3 ND		0.00169
155				ND		0.00148
156	156/157			ND		0.00429
157	156/157			ND ND		0.00429
157	130/137			ND ND		0.00429
150				ND ND		0.00249
				ND ND		
160						0.00249
161				ND		0.00180
162	400/400/400			ND		0.00224
163	129/138/163			ND		0.0105
164				ND		0.00234
165				ND		0.00199
166	128/166			ND		0.00420
167				ND		0.00207
168	153/168	40.272	1.22	(0.00967) J		0.00744
169				ND		0.00155
170				ND		0.00479
171	171/173			ND		0.00587
172				ND		0.0136
173	171/173			ND		0.00587
174				ND		0.00309
175				ND		0.00146
176				ND		0.00217
177				ND		0.00324
178				ND		0.00219
179				ND		0.00234
180	180/193			ND		0.00554
181				ND		0.00265
182				ND		0.00249
183	183/185			ND		0.00548
184				ND		0.00201
185	183/185			ND		0.00548
186				ND		0.00151
187				ND		0.00316
188				ND		0.00240
189				ND		0.00209
190				ND		0.00245
191				ND		0.00211
192				ND		0.00240

Conc = Concentration

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EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits Nn = Value obtained from additional analyses NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference

ng's = Nanograms

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.00554
194				ND		0.00181
195				ND		0.00167
196				ND		0.00169
197	197/200			ND		0.00456
198	198/199			ND		0.00274
199	198/199			ND		0.00274
200	197/200			ND		0.00456
201				ND		0.00140
202				ND		0.00224
203				ND		0.00176
204				ND		0.00163
205				ND		0.00192
206				ND		0.00372
207				ND		0.00222
208				ND		0.00217
209				ND		0.0167

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-BKG2-202305 40262368011 P230531B_08

Congener Group	Concentrati ng/L	ion
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	0.0102	J
Total Pentachloro Biphenyls	0.0450	J
Total Hexachloro Biphenyls	0.00967	J
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	0.0648	J

ND = Not Detected



Method 1668C Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID BLANK-106282 Filename P230528A_06 Injected By BAL**Total Amount Extracted**

1000 mL ICAL ID P230528A02

Matrix Water

Extracted 05/23/2023 12:15 Analyzed 05/28/2023 18:02

CCal Filename(s)	P230528A	_01		Dilution	NA	
PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.238	3.07	2.0	1.04	52
13C-4-MoCB	3	13.020	3.23	2.0	1.29	65
13C-2,2'-DiCB	4	13.326	1.54	2.0	1.33	66
13C-4,4'-DiCB	15	20.415	1.60	2.0	1.42	71
13C-2,2',6-TrCB	19	17.154	1.06	2.0	1.33	67
13C-3,4,4'-TrCB	37	28.192	1.08	2.0	1.53	77
13C-2,2',6,6'-TeCB	54	20.766	0.80	2.0	1.22	61
13C-3,4,4',5-TeCB	81	35.346	0.80	2.0	1.62	81
13C-3,3',4,4'-TeCB	77	35.934	0.79	2.0	1.60	80
13C-2,2',4,6,6'-PeCB	104	26.893	1.63	2.0	1.27	63
13C-2,3,3',4,4'-PeCB	105	39.556	1.59	2.0	1.53	76
13C-2,3,4,4',5-PeCB	114	38.902	1.62	2.0	1.53	76
13C-2,3',4,4',5-PeCB	118	38.348	1.57	2.0	1.57	78
13C-2,3',4,4',5'-PeCB	123	38.013	1.60	2.0	1.50	75
13C-3,3',4,4',5-PeCB	126	42.725	1.63	2.0	1.33	67
13C-2,2',4,4',6,6'-HxCB	155	32.979	1.24	2.0	1.45	73
13C-HxCB (156/157)	156/157	45.816	1.28	4.0	2.69	67
13C-2,3',4,4',5,5'-HxĆB	167	44.642	1.27	2.0	1.40	70
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.28	2.0	1.55	77
13C-2,2',3,4',5,6,6'-HpCB	188	38.902	1.01	2.0	1.65	82
13C-2,3,3',4,4',5,5'-HpCB	189	51.675	1.07	2.0	1.71	86
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.90	2.0	1.46	73
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.89	2.0	1.71	86
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.80	2.0	1.68	84
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201	0.79	2.0	1.76	88
13C-DeCB	209	57.689	0.72	2.0	1.71	85
Cleanup Standards						
13C-2,4,4'-TrCB	28	23.845	1.04	2.0	1.60	80
13C-2,3,3',5,5'-PeCB	111	35.980	1.53	2.0	1.51	75
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.06	2.0	1.45	73
Recovery Standards						
13C-2,5-DiCB	9	15.795	1.60	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.841	0.77	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.180	1.59	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.551	1.27	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.809	0.89	2.0	NA	NA
	.01	00.000	0.00	2.0	100	

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time I = Interference

ng's = Nanograms



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00558
2				ND		0.00508
3				ND		0.00440
4				ND		0.00752
5				ND		0.00183
5 6 7				ND		0.00938
7				ND		0.00930
8				ND		0.0123
9				ND		0.00246
10				ND		0.00292
11				ND		0.145
12	12/13			ND		0.00526
13	12/13			ND		0.00526
14				ND		0.00175
15				ND		0.00604
16				ND		0.00616
17				ND		0.00516
18	18/30			ND		0.0114
19				ND		0.00834
20	20/28			ND		0.0182
21	21/33			ND		0.0131
22				ND		0.00758
23				ND		0.00159
24				ND		0.00191
25				ND		0.00286
26	26/29			ND		0.00458
27				ND		0.00202
28	20/28			ND		0.0182
29	26/29			ND		0.00458
30	18/30			ND		0.0114
31				ND		0.0176
32				ND		0.00732
33	21/33			ND		0.0131
34				ND		0.00162
34 35				ND		0.00320
36				ND		0.00202
37				ND		0.00422
38				ND		0.00149
39				ND		0.00164
40	40/41/71			ND		0.00812
41	40/41/71			ND		0.00812
42				ND		0.00440
43	43/73			ND		0.00392
44	44/47/65			ND		0.0187
45	45/51			ND		0.00576
						0.000.0

Conc = Concentration

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EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

NA = Not Applicable NC = Not Calculated * = See Discussion

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I = Interference



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
46				ND		0.00228
47	44/47/65			ND		0.0187
48	,, 66			ND		0.00292
49	49/69			ND		0.00676
50	50/53			ND		0.00380
51	45/51			ND		0.00576
52				ND		0.0166
53	50/53			ND		0.00380
54				ND		0.00161
55				ND		0.00216
56				ND		0.0101
57				ND		0.00150
58				ND		0.00191
59	59/62/75			ND		0.00416
60				ND		0.00344
61	61/70/74/76			ND		0.0322
62	59/62/75			ND		0.00416
63				ND		0.00175
64				ND		0.00562
65	44/47/65			ND		0.0187
66				ND		0.0220
67				ND		0.00226
68				ND		0.00252
69	49/69			ND		0.00676
70	61/70/74/76			ND		0.0322
71	40/41/71			ND		0.00812
72				ND		0.00177
73	43/73			ND		0.00392
74	61/70/74/76			ND		0.0322
75	59/62/75			ND		0.00416
76	61/70/74/76			ND		0.0322
77				ND		0.00266
78				ND		0.00232
79				ND		0.00234
80				ND		0.00214
81				ND		0.00179
82				ND		0.00258
83				ND		0.00240
84				ND		0.0133
85	85/116/117			ND		0.00522
86	86/87/97/108/119/125			ND		0.0153
87	86/87/97/108/119/125			ND		0.0153
88	88/91			ND		0.00496
89	00/101/110			ND		0.00314
90	90/101/113			ND		0.0120

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time

I = Interference



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
91	88/91			ND		0.00496
92				ND		0.00394
93	93/98/100/102			ND		0.00568
94				ND		0.00190
95				ND		0.00874
96				ND		0.00316
97	86/87/97/108/119/125			ND		0.0153
98	93/98/100/102			ND		0.00568
99				ND		0.00594
100	93/98/100/102			ND		0.00568
101	90/101/113			ND		0.0120
102	93/98/100/102			ND		0.00568
103				ND		0.00197
104				ND		0.00153
105				ND		0.00570
106				ND		0.00179
107	107/124			ND		0.00264
108	86/87/97/108/119/125			ND		0.0153
109				ND		0.00200
110	110/115			ND		0.0130
111				ND		0.00206
112				ND		0.00178
113	90/101/113			ND		0.0120
114				ND		0.00230
115	110/115			ND		0.0130
116	85/116/117			ND		0.00522
117	85/116/117			ND		0.00522
118				ND		0.00900
119	86/87/97/108/119/125			ND		0.0153
120				ND		0.00171
121				ND		0.00131
122				ND		0.00195
123				ND		0.00222
124	107/124			ND		0.00264
125	86/87/97/108/119/125			ND		0.0153
126				ND		0.00224
127				ND		0.00134
128	128/166			ND		0.00438
129	129/138/163			ND		0.0110
130				ND		0.00220
131				ND		0.00284
132				ND		0.00414
133				ND		0.00268
134	134/143			ND		0.00402
135	135/151			ND		0.00522

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits

RT = Retention Time I = Interference

Page 108 of 215



Method 1668C Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename

BLANK-106282 P230528A 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
136				ND		0.00288
137				ND		0.00258
138	129/138/163			ND		0.0110
139	139/140			ND		0.00442
140	139/140			ND		0.00442
141	100/110			ND		0.00248
142				ND		0.00194
143	134/143			ND		0.00402
144				ND		0.00210
145				ND		0.00202
146				ND		0.00256
147	147/149			ND		0.00904
148				ND		0.00236
149	147/149			ND		0.00904
150				ND		0.00131
151	135/151			ND		0.00522
152				ND		0.00214
153	153/168			ND		0.00776
154				ND		0.00177
155				ND		0.00155
156	156/157			ND		0.00448
157	156/157			ND		0.00448
158				ND		0.00260
159				ND		0.00282
160				ND		0.00260
161				ND		0.00188
162				ND		0.00234
163	129/138/163			ND		0.0110
164				ND		0.00244
165				ND		0.00208
166	128/166			ND		0.00438
167				ND		0.00216
168	153/168			ND		0.00776
169				ND		0.00162
170				ND		0.00500
171	171/173			ND		0.00612
172				ND		0.0142
173	171/173			ND		0.00612
174				ND		0.00322
175				ND		0.00153
176				ND		0.00226
177				ND		0.00338
178				ND		0.00228
179				ND		0.00244
180	180/193			ND		0.00578

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
181				ND		0.00276
182				ND		0.00270
183	183/185			ND		0.00572
184	100/100			ND		0.00210
185	183/185			ND		0.00572
186	100/100			ND		0.00158
187				ND		0.00330
188				ND		0.00250
189				ND		0.00218
190				ND		0.00216
191				ND		0.00220
192				ND		0.00250
193	180/193			ND		0.00578
194	100/100			ND		0.00189
195				ND		0.00174
196				ND		0.00176
197	197/200			ND		0.00476
198	198/199			ND		0.00286
199	198/199			ND		0.00286
200	197/200			ND		0.00476
201	1077200			ND		0.00146
202				ND		0.00234
203				ND		0.00183
204				ND		0.00170
205				ND		0.00200
206				ND		0.00200
207				ND		0.00232
208				ND		0.00232
209				ND		0.0174

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

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R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time

I = Interference

ND = Not Detected



Method 1668C Polychlorobiphenyl Blank Analysis Results

Client Sample ID Lab Sample ID Filename CBLKQM BLANK-106282 P230528A_06

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668C Polychlorobiphenyl **Blank Analysis Results**

Matrix

Water

Lab Sample ID BLANK-106448 Filename P230531B 07 Injected By CVS **Total Amount Extracted** 1000 mL

Extracted 05/26/2023 11:40 **ICAL ID** P230531B02 Analyzed 06/01/2023 03:40

CCal Filename(s) P230531B 01 Dilution

CCai Filename(s)	P230531B	_01		Dilution	NA	
PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.204	3.04	2.0	0.926	46
13C-4-MoCB	3 4	12.997	3.09	2.0	1.09	55
13C-2,2'-DiCB	4	13.302	1.55	2.0	1.09	55
13C-4,4'-DiCB	15	20.392	1.60	2.0	1.27	63
13C-2,2',6-TrCB	19	17.132	1.03	2.0	1.13	57
13C-3,4,4'-TrCB	37	28.175	1.06	2.0	1.15	57
13C-2,2',6,6'-TeCB	54	20.734	0.79	2.0	0.873	44
13C-3,4,4',5-TeCB	81	35.328	0.80	2.0	1.33	67
13C-3,3',4,4'-TeCB	77	35.900	0.79	2.0	1.27	64
13C-2,2',4,6,6'-PeCB	104	26.875	1.57	2.0	0.926	46
13C-2,3,3',4,4'-PeCB	105	39.534	1.62	2.0	1.45	73
13C-2,3,4,4',5-PeCB	114	38.880	1.56	2.0	1.40	70
13C-2,3',4,4',5-PeCB	118	38.326	1.56	2.0	1.40	70
13C-2,3',4,4',5'-PeCB	123	37.991	1.59	2.0	1.42	71
13C-3,3',4,4',5-PeCB	126	42.703	1.59	2.0	1.24	62
13C-2,2',4,4',6,6'-HxCB	155	32.945	1.29	2.0	1.05	52
13C-HxCB (156/157)	156/157	45.793	1.27	4.0	2.76	69
13C-2,3',4,4',5,5'-HxĆB	167	44.602	1.27	2.0	1.39	69
13C-3,3',4,4',5,5'-HxCB	169	49.079	1.29	2.0	1.20	60
13C-2,2',3,4',5,6,6'-HpCB	188	38.880	1.03	2.0	1.47	73
13C-2,3,3',4,4',5,5'-HpCB	189 202	51.647 44.368	1.08 0.90	2.0 2.0	1.68 1.52	84 76
13C-2,2',3,3',5,5',6,6'-OcCB	202 205	54.233	0.90	2.0 2.0	1.52 1.50	76 75
13C-2,3,3',4,4',5,5',6-OcCB	205	54.233 56.000	0.89	2.0	1.38	69
13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.173	0.79	2.0	1.52	76
13C-DeCB	209	57.638	0.79	2.0	1.29	64
ISC-DeCB	209	37.030	0.71	2.0	1.29	04
Cleanup Standards						
13C-2,4,4'-TrCB	28	23.813	1.04	2.0	1.28	64
13C-2,3,3',5,5'-PeCB	111	35.946	1.55	2.0	1.17	58
13C-2,2',3,3',5,5',6-HpCB	178	41.982	1.06	2.0	1.11	56
Recovery Standards						
13C-2,5-DiCB	9	15.772	1.62	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.823	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.146	1.59	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.529	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.759	0.90	2.0	NA	NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time I = Interference

ng's = Nanograms



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B 07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00558
2				ND		0.00508
3				ND		0.00440
4				ND		0.00752
5		16.789	1.11		0.00578	0.00183
5 6 7				ND		0.00938
7				ND		0.00930
8				ND		0.0123
9				ND		0.00246
10				ND		0.00292
11				ND		0.145
12	12/13			ND		0.00526
13	12/13			ND		0.00526
14				ND		0.00175
15				ND		0.00604
16				ND		0.00616
17				ND		0.00516
18	18/30			ND		0.0114
19				ND		0.00834
20	20/28			ND		0.0182
21	21/33			ND		0.0131
22				ND		0.00758
23				ND		0.00159
24				ND		0.00191
25				ND		0.00286
26	26/29			ND		0.00458
27				ND		0.00202
28	20/28			ND		0.0182
29	26/29			ND		0.00458
30	18/30			ND		0.0114
31				ND		0.0176
32				ND		0.00732
33	21/33			ND		0.0131
34 35				ND		0.00162
35				ND		0.00320
36				ND		0.00202
37				ND		0.00422
38				ND		0.00149
39				ND		0.00164
40	40/41/71			ND		0.00812
41	40/41/71			ND		0.00812
42				ND		0.00440
43	43/73			ND		0.00392
44	44/47/65			ND		0.0187
45	45/51			ND		0.00576

Conc = Concentration

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ng/L = Nanograms per liter

ND = Not Detected NA = Not Applicable NC = Not Calculated

* = See Discussion X = Outside QC Limits

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Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B 07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
46				ND		0.00228
47	44/47/65			ND		0.0187
48	,, 66			ND		0.00292
49	49/69			ND		0.00676
50	50/53			ND		0.00380
51	45/51			ND		0.00576
52				ND		0.0166
53	50/53			ND		0.00380
54				ND		0.00161
55				ND		0.00216
56				ND		0.0101
57				ND		0.00150
58				ND		0.00191
59	59/62/75			ND		0.00416
60				ND		0.00344
61	61/70/74/76			ND		0.0322
62	59/62/75			ND		0.00416
63				ND		0.00175
64				ND		0.00562
65	44/47/65			ND		0.0187
66				ND		0.0220
67				ND		0.00226
68				ND		0.00252
69	49/69			ND		0.00676
70	61/70/74/76			ND		0.0322
71	40/41/71			ND		0.00812
72				ND		0.00177
73	43/73			ND		0.00392
74	61/70/74/76			ND		0.0322
75	59/62/75			ND		0.00416
76	61/70/74/76			ND		0.0322
77				ND		0.00266
78				ND		0.00232
79				ND		0.00234
80				ND		0.00214
81				ND		0.00179
82				ND		0.00258
83				ND		0.00240
84				ND		0.0133
85	85/116/117			ND		0.00522
86	86/87/97/108/119/125			ND		0.0153
87	86/87/97/108/119/125			ND		0.0153
88	88/91			ND		0.00496
89	00/101/110			ND		0.00314
90	90/101/113			ND		0.0120

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

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Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B 07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
91	88/91			ND		0.00496
92				ND		0.00394
93	93/98/100/102			ND		0.00568
94				ND		0.00190
95				ND		0.00874
96				ND		0.00316
97	86/87/97/108/119/125			ND		0.0153
98	93/98/100/102			ND		0.00568
99				ND		0.00594
100	93/98/100/102			ND		0.00568
101	90/101/113			ND		0.0120
102	93/98/100/102			ND		0.00568
103				ND		0.00197
104				ND		0.00153
105				ND		0.00570
106				ND		0.00179
107	107/124			ND		0.00264
108	86/87/97/108/119/125			ND		0.0153
109				ND		0.00200
110	110/115			ND		0.0130
111				ND		0.00206
112				ND		0.00178
113	90/101/113			ND		0.0120
114				ND		0.00230
115	110/115			ND		0.0130
116	85/116/117			ND		0.00522
117	85/116/117			ND		0.00522
118				ND		0.00900
119	86/87/97/108/119/125			ND		0.0153
120				ND		0.00171
121				ND		0.00131
122				ND		0.00195
123				ND		0.00222
124	107/124			ND		0.00264
125	86/87/97/108/119/125			ND		0.0153
126				ND		0.00224
127				ND		0.00134
128	128/166			ND		0.00438
129	129/138/163			ND		0.0110
130				ND		0.00220
131				ND		0.00284
132				ND		0.00414
133				ND		0.00268
134	134/143			ND		0.00402
135	135/151			ND		0.00522

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

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R = Recovery outside of Method 1668C control limits

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Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B 07

	0 1 4		5 4	Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
136				ND		0.00288
137				ND		0.00258
138	129/138/163			ND		0.0110
139	139/140			ND		0.00442
140	139/140			ND		0.00442
141				ND		0.00248
142				ND		0.00194
143	134/143			ND		0.00402
144				ND		0.00210
145				ND		0.00202
146				ND		0.00256
147	147/149			ND		0.00904
148				ND		0.00236
149	147/149			ND		0.00904
150				ND		0.00131
151	135/151			ND		0.00522
152				ND		0.00214
153	153/168			ND		0.00776
154				ND		0.00177
155				ND		0.00155
156	156/157			ND		0.00448
157	156/157			ND		0.00448
158				ND		0.00260
159				ND		0.00282
160				ND		0.00260
161				ND		0.00188
162				ND		0.00234
163	129/138/163			ND		0.0110
164				ND		0.00244
165				ND		0.00208
166	128/166			ND		0.00438
167				ND		0.00216
168	153/168			ND		0.00776
169				ND		0.00162
170				ND		0.00500
171	171/173			ND		0.00612
172				ND		0.0142
173	171/173			ND		0.00612
174				ND		0.00322
175				ND		0.00153
176				ND		0.00226
177				ND		0.00338
178				ND		0.00228
179				ND		0.00244
180	180/193			ND		0.00578

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

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R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits

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Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B 07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
181				ND		0.00276
182				ND		0.00260
183	183/185			ND		0.00572
184				ND		0.00210
185	183/185			ND		0.00572
186				ND		0.00158
187				ND		0.00330
188				ND		0.00250
189				ND		0.00218
190				ND		0.00256
191				ND		0.00220
192				ND		0.00250
193	180/193			ND		0.00578
194				ND		0.00189
195				ND		0.00174
196				ND		0.00176
197	197/200			ND		0.00476
198	198/199			ND		0.00286
199	198/199			ND		0.00286
200	197/200			ND		0.00476
201				ND		0.00146
202				ND		0.00234
203				ND		0.00183
204				ND		0.00170
205				ND		0.00200
206				ND		0.00388
207				ND		0.00232
208				ND		0.00226
209				ND		0.0174

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits

ND = Not Detected

RT = Retention Time I = Interference



Method 1668C Polychlorobiphenyl Blank Analysis Results

Client Sample ID Lab Sample ID Filename

CBLKSL BLANK-106448 P230531B_07

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected





Method 1668C Polychlorobiphenyls Laboratory Control Spike Analysis Results

Lab Sample ID Filename

Total Amount Extracted

ICAL ID

CCal Filename(s) Method Blank ID LCS-106283 P230529A_03

1000 mL P230529A02

P230529A_01 BLANK-106282 Matrix Water Dilution NA

Extracted 05/23/2023 12:15 Analyzed 05/29/2023 04:32

Injected By BAL

	N	Native Analyt	tes	Lai	beled Analyte	es
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.04	104	2.0	1.20	60
3	1.0	0.966	97	2.0	1.44	72
4	1.0	0.996	100	2.0	1.41	71
15	1.0	1.00	100	2.0	1.60	80
19	1.0	1.03	103	2.0	1.50	75
37	1.0	0.892	89	2.0	1.54	77
54	1.0	0.983	98	2.0	1.34	67
81	1.0	0.838	84	2.0	1.65	82
77	1.0	0.832	83	2.0	1.62	81
104	1.0	0.912	91	2.0	1.37	69
105	1.0	0.842	84	2.0	1.52	76
114	1.0	0.801	80	2.0	1.48	74
118	1.0	0.823	82	2.0	1.48	74
123	1.0	0.838	84	2.0	1.47	73
126	1.0	0.860	86	2.0	1.39	70
155	1.0	0.853	85	2.0	1.51	76
156/157	2.0	1.84	92	4.0	2.70	67
167	1.0	0.909	91	2.0	1.39	69
169	1.0	0.913	91	2.0	1.61	80
188	1.0	0.897	90	2.0	1.62	81
189	1.0	0.911	91	2.0	1.64	82
202	1.0	0.945	95	2.0	1.40	70
205	1.0	0.920	92	2.0	1.71	85
206	1.0	0.904	90	2.0	1.64	82
208	1.0	0.949	95	2.0	1.77	88
209	1.0	0.918	92	2.0	1.57	78

R = Recovery outside of method 1668C control limits

Nn = Result obtained from alternate analysis

ND = Not Detected

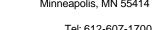
NA = Not Applicable

NC = Not Calculated

* = See Discussion

ng = Nanograms

I = Interference





Method 1668C Polychlorobiphenyls Laboratory Control Spike Analysis Results

Lab Sample ID Filename

Total Amount Extracted

ICAL ID

CCal Filename(s) Method Blank ID

LCS-106449 P230531B_03 1000 mL

P230531B02 P230531B_01 BLANK-106448 Matrix Water Dilution NA

Extracted 05/26/2023 11:40 Analyzed 05/31/2023 23:28

Injected By CVS

	N	lative Analy	tes	Labeled Analytes			
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery	
1	1.0	1.06	106	2.0	1.05	52	
3	1.0	1.02	102	2.0	1.23	61	
4	1.0	1.01	101	2.0	1.17	59	
15	1.0	1.02	102	2.0	1.35	67	
19	1.0	0.981	98	2.0	1.22	61	
37	1.0	0.935	94	2.0	1.32	66	
54	1.0	0.975	97	2.0	0.968	48	
81	1.0	0.902	90	2.0	1.40	70	
77	1.0	0.861	86	2.0	1.38	69	
104	1.0	0.854	85	2.0	1.13	56	
105	1.0	0.918	92	2.0	1.43	71	
114	1.0	0.853	85	2.0	1.39	70	
118	1.0	0.875	87	2.0	1.38	69	
123	1.0	0.889	89	2.0	1.40	70	
126	1.0	0.947	95	2.0	1.26	63	
155	1.0	0.797	80	2.0	1.25	63	
156/157	2.0	1.89	94	4.0	2.69	67	
167	1.0	0.926	93	2.0	1.40	70	
169	1.0	0.968	97	2.0	1.22	61	
188	1.0	0.907	91	2.0	1.44	72	
189	1.0	0.915	92	2.0	1.59	79	
202	1.0	0.941	94	2.0	1.43	72	
205	1.0	0.937	94	2.0	1.43	72	
206	1.0	0.899	90	2.0	1.31	66	
208	1.0	0.936	94	2.0	1.46	73	
209	1.0	0.858	86	2.0	1.27	64	

R = Recovery outside of method 1668C control limits

Nn = Result obtained from alternate analysis

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

ng = Nanograms I = Interference



Fax: 612-607-6444



Method 1668C Polychlorobiphenyls Laboratory Control Spike Analysis Results

Lab Sample ID Filename

Total Amount Extracted

ICAL ID

CCal Filename(s) Method Blank ID

LCSD-106284 P230529A_04

1000 mL P230529A02

P230529A_01 BLANK-106282 Matrix Water Dilution NA

Extracted 05/23/2023 12:15 Analyzed 05/29/2023 05:35

Injected By BAL

Native Analytes		Lab	eled Analytes
Egund	0/	Spiked	Found

PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.06	106	2.0	1.29	64
3	1.0	0.978	98	2.0	1.58	79
4	1.0	0.975	98	2.0	1.55	77
15	1.0	1.02	102	2.0	1.81	90
19	1.0	1.05	105	2.0	1.66	83
37	1.0	0.931	93	2.0	1.73	87
54	1.0	1.00	100	2.0	1.49	74
81	1.0	0.887	89	2.0	1.78	89
77	1.0	0.884	88	2.0	1.75	88
104	1.0	0.950	95	2.0	1.58	79
105	1.0	0.941	94	2.0	1.63	82
114	1.0	0.846	85	2.0	1.66	83
118	1.0	0.863	86	2.0	1.65	83
123	1.0	0.947	95	2.0	1.60	80
126	1.0	0.907	91	2.0	1.55	77
155	1.0	0.928	93	2.0	1.74	87
156/157	2.0	1.91	95	4.0	3.13	78
167	1.0	0.953	95	2.0	1.58	79
169	1.0	0.953	95	2.0	1.80	90
188	1.0	0.940	94	2.0	1.82	91
189	1.0	0.927	93	2.0	1.86	93
202	1.0	1.03	103	2.0	1.53	77
205	1.0	0.932	93	2.0	1.92	96
206	1.0	0.906	91	2.0	1.87	94
208	1.0	0.966	97	2.0	1.95	97
209	1.0	0.935	93	2.0	1.79	89

R = Recovery outside of method 1668C control limits

Nn = Result obtained from alternate analysis

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

ng = Nanograms

I = Interference





Method 1668C Polychlorobiphenyls Laboratory Control Spike Analysis Results

Lab Sample ID Filename

Total Amount Extracted

<u> Pace Analytical</u>

ICAL ID

CCal Filename(s) Method Blank ID LCSD-106450 P230531B_04 1000 mL

P230531B02 P230531B_01 BLANK-106448 Matrix Water Dilution NA

Extracted 05/26/2023 11:40 Analyzed 06/01/2023 00:31

Injected By CVS

	N	lative Analy	tes	Lal	peled Analyte	es
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.06	106	2.0	1.16	58
3	1.0	1.02	102	2.0	1.40	70
4	1.0	1.01	101	2.0	1.35	67
15	1.0	1.01	101	2.0	1.59	79
19	1.0	0.986	99	2.0	1.44	72
37	1.0	0.955	96	2.0	1.48	74
54	1.0	0.971	97	2.0	1.11	55
81	1.0	0.925	93	2.0	1.62	81
77	1.0	0.908	91	2.0	1.53	76
104	1.0	0.864	86	2.0	1.26	63
105	1.0	0.934	93	2.0	1.68	84
114	1.0	0.873	87	2.0	1.64	82
118	1.0	0.925	92	2.0	1.60	80
123	1.0	0.915	92	2.0	1.67	84
126	1.0	0.965	96	2.0	1.42	71
155	1.0	0.823	82	2.0	1.37	68
156/157	2.0	1.95	98	4.0	3.09	77
167	1.0	0.950	95	2.0	1.60	80
169	1.0	0.961	96	2.0	1.37	68
188	1.0	0.900	90	2.0	1.62	81
189	1.0	0.954	95	2.0	1.77	89
202	1.0	0.973	97	2.0	1.61	81
205	1.0	0.939	94	2.0	1.60	80
206	1.0	0.917	92	2.0	1.47	74
208	1.0	0.946	95	2.0	1.64	82
209	1.0	0.835	84	2.0	1.47	73

R = Recovery outside of method 1668C control limits

Nn = Result obtained from alternate analysis

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

ng = Nanograms

I = Interference



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Method 1668C Spike Recovery Relative Percent Difference (RPD) Results

Client PACE Wisconsin

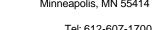
 Spike 1 ID
 LCS-106283
 Spike 2 ID
 LCSD-106284

 Spike 1 Filename
 P230529A_03
 Spike 2 Filename
 P230529A_04

Compound	IUPAC	Spike 1 %REC	Spike 2 %REC	%RPD	
2-MoCB	1	104	106	1.9	
4-MoCB	3	97	98	1.0	
2,2'-DiCB	4	100	98	2.0	
4,4'-DiCB	15	100	102	2.0	
2,2',6-TrCB	19	103	105	1.9	
3,4,4'-TrCB	37	89	93	4.4	
2,2',6,6'-TeCB	54	98	100	2.0	
3,3',4,4'-TeCB	77	83	88	5.8	
3,4,4',5-TeCB	81	84	89	5.8	
2,2',4,6,6'-PeCB	104	91	95	4.3	
2,3,3',4,4'-PeCB	105	84	94	11.2	
2,3,4,4',5-PeCB	114	80	85	6.1	
2,3',4,4',5-PeCB	118	82	86	4.8	
2,3',4,4',5'-PeCB	123	84	95	12.3	
3,3',4,4',5-PeCB	126	86	91	5.6	
2,2',4,4',6,6'-HxCB	155	85	93	9.0	
(156/157)	156/157	92	95	3.2	
2,3',4,4',5,5'-HxCB	167	91	95	4.3	
3,3',4,4',5,5'-HxCB	169	91	95	4.3	
2,2',3,4',5,6,6'-HpCB	188	90	94	4.3	
2,3,3',4,4',5,5'-HpCB	189	91	93	2.2	
2,2',3,3',5,5',6,6'-OcCB	202	95	103	8.1	
2,3,3',4,4',5,5',6-OcCB	205	92	93	1.1	
2,2',3,3',4,4',5,5',6-NoCB	206	90	91	1.1	
2,2',3,3',4,5,5',6,6'-NoCB	208	95	97	2.1	
Decachlorobiphenyl	209	92	93	1.1	

[%]REC = Percent Recovered

RPD = The difference between the two values divided by the mean value





Method 1668C Spike Recovery Relative Percent Difference (RPD) Results

Client PACE Wisconsin

 Spike 1 ID
 LCS-106449
 Spike 2 ID
 LCSD-106450

 Spike 1 Filename
 P230531B_03
 Spike 2 Filename
 P230531B_04

Compound	IUPAC	Spike 1 %REC	Spike 2 %REC	%RPD
2-MoCB	1	106	106	0.0
4-MoCB	3	102	102	0.0
2,2'-DiCB	4	101	101	0.0
4,4'-DiCB	15 10	102	101	1.0
2,2',6-TrCB	19 27	98	99	1.0
3,4,4'-TrCB	37 54	94 97	96 97	2.1
2,2',6,6'-TeCB	54 77	97 86	97 91	0.0 5.6
3,3',4,4'-TeCB	81	90	93	3.3
3,4,4',5-TeCB 2,2',4,6,6'-PeCB	104	90 85	93 86	3.3 1.2
2,3,3',4,4'-PeCB	104	92	93	1.2
2,3,4,4',5-PeCB	114	85	95 87	2.3
2,3',4,4',5-PeCB	118	87	92	5.6
2,3',4,4',5'-PeCB	123	89	92	3.3
3,3',4,4',5-PeCB	126	95	96	1.0
2,2',4,4',6,6'-HxCB	155	80	82	2.5
(156/157)	156/157	94	98	4.2
2,3',4,4',5,5'-HxCB	167	93	95	2.1
3,3',4,4',5,5'-HxCB	169	97	96	1.0
2,2',3,4',5,6,6'-HpCB	188	91	90	1.1
2,3,3',4,4',5,5'-HpCB	189	92	95	3.2
2,2',3,3',5,5',6,6'-OcCB	202	94	97	3.1
2,3,3',4,4',5,5',6-OcCB	205	94	94	0.0
2,2',3,3',4,4',5,5',6-NoCB	206	90	92	2.2
2,2',3,3',4,5,5',6,6'-NoCB	208	94	95	1.1
Decachlorobiphenyl	209	86	84	2.4

[%]REC = Percent Recovered

RPD = The difference between the two values divided by the mean value

Pace Analytical

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668C Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename Injected By **Total Amount Extracted**

ICAL ID

CCal Filename(s)

BLANK-106282 P230528A_06

BAL 1000 mL P230528A02 P230528A_01 Matrix Extracted Analyzed

Water

05/23/2023 12:15 05/28/2023 18:02

Dilution NA

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4,4'-DiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-TrCB 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,3',4,4',5,5'-HpCB 13C-2,3',3',4,4',5,5'-HpCB 13C-2,3',3',4,4',5,5'-HpCB 13C-2,3',3',4,4',5,5'-6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCE 13C-2,2',3,3',4,5,5',6,6'-NoCE 13C-2,2',3,3',4,5,5',6,6'-NoCE		10.238 13.020 13.326 20.415 17.154 28.192 20.766 35.346 35.934 26.893 39.556 38.902 38.348 38.013 42.725 32.979 45.816 44.642 49.103 38.902 51.675 44.407 54.284 56.051 57.689	3.07 3.23 1.54 1.60 1.06 1.08 0.80 0.79 1.63 1.57 1.62 1.57 1.63 1.24 1.28 1.27 1.28 1.01 1.07 0.90 0.89 0.80 0.79	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.04 1.29 1.33 1.42 1.33 1.53 1.52 1.60 1.27 1.53 1.57 1.53 1.57 1.50 1.33 1.45 2.69 1.40 1.55 1.65 1.71 1.68 1.71	52 65 66 71 67 77 61 81 80 63 76 78 75 67 73 67 70 77 82 86 73 86 84 88 85
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.980 42.021	1.04 1.53 1.06	2.0 2.0 2.0	1.60 1.51 1.45	80 75 73
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.795 25.841 33.180 41.551 53.809	1.60 0.77 1.59 1.27 0.89	2.0 2.0 2.0 2.0 2.0	NA NA NA NA NA	NA NA NA NA NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0400
				ND		0.0400
2 3 4 5 6 7				ND		0.0400
4				ND		0.0400
5				ND		0.0400
6				ND		0.0400
7				ND		0.0400
8 9				ND		0.0400
9				ND		0.0400
10				ND		0.0400
11				ND		0.392
12	12/13			ND		0.0800
13	12/13			ND		0.0800
14				ND		0.0400
15				ND		0.0528
16				ND		0.0400
17				ND		0.0400
18	18/30			ND		0.0800
19				ND		0.0400
20	20/28			ND		0.206
21	21/33			ND		0.216
22				ND		0.152
23				ND		0.0400
24				ND		0.0400
25				ND		0.0400
26	26/29			ND		0.0800
27	20122			ND		0.0400
28	20/28			ND		0.206
29	26/29			ND		0.0800
30	18/30			ND		0.0800
31				ND		0.208
32	04/00			ND		0.0400
33	21/33			ND		0.216
34				ND		0.0400
35				ND		0.0400
36				ND		0.0400
37				ND		0.0848
38				ND		0.0400
39	40/44/74			ND		0.0400
40	40/41/71			ND		0.120
41	40/41/71			ND ND		0.120
42	40/70			ND		0.0400
43	43/73			ND		0.0800
44	44/47/65			ND		0.120
45	45/51			ND		0.0800

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
46				ND		0.0400
47	44/47/65			ND		0.120
48				ND		0.0400
49	49/69			ND		0.0800
50	50/53			ND		0.0800
51	45/51			ND		0.0800
52				ND		0.206
53	50/53			ND		0.0800
54				ND		0.0400
55				ND		0.0400
56				ND		0.0400
57				ND		0.0400
58				ND		0.0400
59	59/62/75			ND		0.120
60				ND		0.0400
61	61/70/74/76			ND		0.160
62	59/62/75			ND		0.120
63				ND		0.0400
64				ND		0.0400
65	44/47/65			ND		0.120
66				ND		0.0944
67				ND		0.0400
68				ND		0.0400
69	49/69			ND		0.0800
70	61/70/74/76			ND		0.160
71	40/41/71			ND		0.120
72				ND		0.0400
73	43/73			ND		0.0800
74	61/70/74/76			ND		0.160
75	59/62/75			ND		0.120
76	61/70/74/76			ND		0.160
77				ND		0.0400
78				ND		0.0400
79				ND		0.0400
80				ND		0.0400
81				ND		0.0400
82				ND		0.0400
83				ND		0.0400
84				ND		0.0400
85	85/116/117			ND		0.120
86	86/87/97/108/119/125			ND		0.240
87	86/87/97/108/119/125			ND		0.240
88	88/91			ND		0.0800
89	00/10/1/10			ND		0.0400
90	90/101/113			ND		0.120

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

REPORT OF LABORATORY ANALYSIS

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Report No....10654073

1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612-607-6444

Method 1668C Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename

<u> Pace Analytical</u>

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
91	88/91			ND		0.0800
92				ND		0.0400
93	93/98/100/102			ND		0.160
94				ND		0.0400
95				ND		0.112
96				ND		0.0400
97	86/87/97/108/119/125			ND ·		0.240
98	93/98/100/102			ND		0.160
99				ND		0.0400
100	93/98/100/102			ND	B7 80 90	0.160
101	90/101/113			ND		0.120
102	93/98/100/102			ND		0.160
103				ND		0.0400
104				ND		0.0400
105				ND		0.0400
106				ND		0.0400
107	107/124			ND		0.0800
108	86/87/97/108/119/125			ND		0.240
109				ND		0.0400
110	110/115			ND		0.0800
111				ND		0.0400
112				ND		0.0400
113	90/101/113			ND		0.120
114				ND		0.0400
115	110/115			ND		0.0800
116	85/116/117			ND		0.120
117	85/116/117			ND		0.120
118	00/07/07/100/140/105			ND		0.0624
119	86/87/97/108/119/125		~~~	ND		0.240
120				ND		0.0400
121				ND		0.0400
122				ND		0.0400
123	407/404			ND		0.0400
124	107/124			ND		0.0800
125	86/87/97/108/119/125			ND		0.240
126 127				ND		0.0400
127	100/100			ND		0.0400
	128/166			ND		0.0800
129	129/138/163			ND ND		0.120
130				ND		0.0400
131				ND		0.0400
132				ND ND		0.0400
133	124/142			ND		0.0400
134	134/143			ND		0.0800
135	135/151			ND		0.0800

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

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REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename

BLANK-106282 P230528A 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
136				ND		0.0400
137				ND		0.0400
138	129/138/163			ND		0.120
139	139/140			ND		0.0800
140	139/140			ND		0.0800
141				ND		0.0400
142				ND		0.0400
143	134/143			ND		0.0800
144				ND		0.0400
145				ND		0.0400
146				ND		0.0400
147	147/149			ND		0.0800
148				ND		0.0400
149	147/149			ND		0.0800
150				ND		0.0400
151	135/151			ND		0.0800
152				ND		0.0400
153	153/168			ND		0.0800
154				ND		0.0400
155				ND		0.0400
156	156/157			ND		0.0800
157	156/157			ND		0.0800
158				ND		0.0400
159				ND		0.0400
160				ND		0.0400
161				ND		0.0400
162				ND		0.0400
163	129/138/163			ND		0.120
164				ND		0.0400
165				ND		0.0400
166	128/166			ND		0.0800
167				ND		0.0400
168	153/168			ND		0.0800
169				ND		0.0400
170				ND		0.0400
171	171/173			ND		0.0800
172				ND		0.0400
173	171/173			ND		0.0800
174				ND		0.0400
175				ND		0.0400
176				ND		0.0400
177				ND		0.0400
178				ND		0.0400
179	400/400			ND		0.0400
180	180/193			ND		0.0800

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

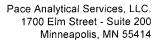
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Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
181				ND	===	0.0400
182				ND		0.0400
183	183/185			ND		0.0800
184				ND		0.0400
185	183/185			ND		0.0800
186				ND		0.0400
187				ND		0.0400
188				ND		0.0400
189				NÐ		0.0400
190				ND		0.0400
191				ND		0.0400
192				ND		0.0400
193	180/193			ND		0.0800
194				ND		0.0400
195				ND		0.0400
196				ND		0.0400
197	197/200			ND		0.0800
198	198/199			ND		0.0800
199	198/199			ND		0.0800
200	197/200			ND		0.0800
201				ND		0.0400
202				ND		0.0400
203				ND		0.0400
204				ND		0.0400
205				ND		0.0400
206				ND		0.0400
207				ND		0.0400
208				ND		0.0400
209				ND		0.0400

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

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REPORT OF LABORATORY ANALYSIS

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Report No.....10654073



Method 1668C Polychlorobiphenyl Blank Analysis Results

Client Sample ID Lab Sample ID Filename CBLKQM BLANK-106282 P230528A_06

Congener G	iroup	Concentration ng/L	
Total Monoch	loro Biphenyls	ND	
Total Dichloro	Biphenyls	ND	
Total Trichloro	Biphenyls	ND	
Total Tetrachl	oro Biphenyls	ND	
Total Pentach	loro Biphenyls	ND	
Total Hexachle	oro Biphenyls	ND	
Total Heptach	loro Biphenyls	ND	
Total Octachic	oro Biphenyls	ND	
Total Nonachl	oro Biphenyls	ND	
Decachloro Bi	phenyls	ND	
Total PCBs		ND	

ND = Not Detected

Pace Analytical[™]

Tel: 612-607-1700 Fax: 612-607-6444

Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID
Filename
Injected By
Total Amount Extracted
ICAL ID

BLANK-106448 P230531B_07 CVS

1000 mL P230531B02 P230531B_01 Matrix Extracted Analyzed

Water 05/26/2023 11:40 06/01/2023 03:40

ilution NA

CCal Filename(s)	P230531E	3_01		Dilution	NA	
PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-3,4,4'-TrCB 13C-3,3',4,4'-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155/157 169 188 189 202 205 206 208 209	10.204 12.997 13.302 20.392 17.132 28.175 20.734 35.328 35.900 26.875 39.534 38.880 38.326 37.991 42.703 32.945 45.793 44.602 49.079 38.880 51.647 44.368 54.233 56.000 51.173 57.638	3.04 3.09 1.55 1.60 1.03 1.06 0.79 0.80 0.79 1.57 1.62 1.56 1.59 1.29 1.27 1.27 1.29 1.03 1.08 0.89 0.79 0.79	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	0.926 1.09 1.09 1.27 1.13 1.15 0.873 1.33 1.27 0.926 1.45 1.40 1.40 1.42 1.24 1.05 2.76 1.39 1.20 1.47 1.68 1.52 1.50 1.38 1.52	46 55 55 63 57 57 44 67 64 46 73 70 71 62 52 69 60 73 84 76 75 69 76 64
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.813 35.946 41.982	1.04 1.55 1.06	2.0 2.0 2.0	1.28 1.17 1.11	64 58 56
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.772 25.823 33.146 41.529 53.759	1.62 0.79 1.59 1.25 0.90	2.0 2.0 2.0 2.0 2.0	NA NA NA NA NA	NA NA NA NA NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Report No.....10654073



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1		20 M 24		ND		0.0400
2				ND		0.0400
3				ND		0.0400
2 3 4 5 6 7				ND		0.0400
5				ND		0.0400
6				ND		0.0400
7				ND		0.0400
8				ND		0.0400
8 9				ND		0.0400
10				ND		0.0400
11				ND		0.392
12	12/13			ND		0.0800
13	12/13			ND		0.0800
14				ND		0.0400
15				ND		0.0528
16				ND		0.0400
17				ND		0.0400
18	18/30			ND		0.0800
19	10100			ND		0.0400
20	20/28			ND		0.206
21	21/33			ND		0.216
22	21700			ND		0.152
23				ND		0.0400
24				ND ND		0.0400
25				ND		0.0400
26	26/29			ND		0.0400
27	20123			ND ND		0.0400
28	20/28			ND		0.206
29	26/29			ND		0.200
30	18/30			ND		0.0800
31	10/00			ND		0.208
32				ND		0.0400
33	21/33			ND		0.216
34	21/00			ND ND		0.0400
35				ND ND		0.0400
36				ND		0.0400
37				ND ND		0.0400
38				ND ND		0.0400
39				ND ND		0.0400
40	40/41/71			ND ND		0.0400
41	40/41/71			ND ND		0.120 0.120
42	TU/# 1/ / 1			ND ND		0.120
43	43/73			ND ND		0.0400
43 44	44/47/65					0.0800
44 45	45/51			ND ND		0.120
	40/0 I			ND		0.0800

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND ≈ Not Detected

NA = Not Applicable

NC = Not Calculated

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Report No....10654073



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
46				ND		0.0400
47	44/47/65			ND		0.120
48				ND		0.0400
49	49/69			ND		0.0800
50	50/53			ND		0.0800
51	45/51			ND		0.0800
52				ND		0.206
53	50/53			ND		0.0800
54				ND		0.0400
55				ND		0.0400
56				ND		0.0400
57				ND		0.0400
58				ND		0.0400
59	59/62/75			ND		0.120
60				ND		0.0400
61	61/70/74/76			ND		0.160
62	59/62/75			ND		0.120
63				ND		0.0400
64				ND		0.0400
65	44/47/65			ND		0.120
66				ND		0.0944
67		600 MB		ND		0.0400
68				ND		0.0400
69	49/69			ND		0.0800
70	61/70/74/76			ND		0.160
71	40/41/71			ND		0.120
72	10.770			ND		0.0400
73	43/73			ND		0.0800
74 75	61/70/74/76			ND		0.160
75 70	59/62/75			ND		0.120
<u>76</u>	61/70/74/76			ND		0.160
77 70				ND		0.0400
78 70				ND		0.0400
79 80				ND		0.0400
80 81				ND		0.0400
82				ND		0.0400
83			~~~	ND		0.0400
84				ND		0.0400
85	85/116/117			ND ND		0.0400
86	86/87/97/108/119/125			ND ND		0.120
87	86/87/97/108/119/125			ND		0.240
88	88/91			ND ND		0.240
89	00/81					0.0800
90	90/101/113			ND ND		0.0400 0.120
	30/101/113			טאו		0.120

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

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ND = Not Detected NA = Not Applicable

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REPORT OF LABORATORY ANALYSIS

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Report No.....10654073



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
91	88/91			ND		0.0800
92				ND		0.0400
93	93/98/100/102			ND		0.160
94				ND		0.0400
95				ND		0.112
96				ND		0.0400
97	86/87/97/108/119/125			ND		0.240
98	93/98/100/102			ND		0.160
99				ND		0.0400
100	93/98/100/102			ND		0.160
101	90/101/113			ND		0.120
102	93/98/100/102			ND		0.160
103				ND		0.0400
104				ND		0.0400
105				ND		0.0400
106				ND		0.0400
107	107/124			ND		0.0800
108	86/87/97/108/119/125			ND		0.240
109				ND		0.0400
110	110/115			ND		0.0800
111				ND		0.0400
112				ND		0.0400
113	90/101/113			ND		0.120
114				ND		0.0400
115	110/115			ND		0.0800
116	85/116/117			ND		0.120
117	85/116/117			ND		0.120
118	00/07/07/400/440/40			ND		0.0624
119	86/87/97/108/119/125			ND		0.240
120				ND		0.0400
121				ND		0.0400
122				ND		0.0400
123	407/404			ND		0.0400
124	107/124			ND		0.0800
125	86/87/97/108/119/125			ND		0.240
126				ND		0.0400
127	400/400			ND		0.0400
128	128/166			ND		0.0800
129	129/138/163			ND		0.120
130				ND		0.0400
131				ND		0.0400
132				ND		0.0400
133	404/440			ND		0.0400
134	134/143			ND		0.0800
135	135/151			ND		0.0800

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

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Report No....10654073



Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
136				ND		0.0400
137				ND		0.0400
138	129/138/163			ND		0.120
139	139/140			ND		0.0800
140	139/140			ND		0.0800
141				ND		0.0400
142				ND		0.0400
143	134/143			ND		0.0800
144				ND		0.0400
145				ND		0.0400
146				ND		0.0400
147	147/149			ND		0.0800
148				ND		0.0400
149	147/149			ND		0.0800
150				ND		0.0400
151	135/151			ND		0.0800
152				ND		0.0400
153	153/168			ND		0.0800
154	100, 100			ND		0.0400
155				ND		0.0400
156	156/157			ND		0.0800
157	156/157			ND		0.0800
158	100, 107			ND		0.0400
159				ND		0.0400
160				ND		0.0400
161				ND		0.0400
162				ND		0.0400
163	129/138/163			ND		0.120
164	120/100/100			ND		0.0400
165				ND		0.0400
166	128/166			ND		0.0800
167	1207100			ND		0.0400
168	153/168			ND		0.0800
169	1001100			ND		0.0400
170				ND		0.0400
171	171/173			ND		0.0800
172	17 17 17 0			ND		0.0400
173	171/173			ND		0.0800
174	17 17 17 0			ND		0.0400
175				ND ND		0.0400
176				ND		0.0400
177				ND ND		0.0400
178			_ 	ND ND		0.0400
179				ND		0.0400
180	180/193			ND ND		0.0400
	100/100			ND		0.0000

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected NA = Not Applicable NC = Not Calculated

* = See Discussion
X = Outside QC Limits

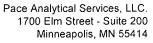
RT = Retention Time

I = Interference

REPORT OF LABORATORY ANALYSIS

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Report No....10654073





Method 1668C Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
181				ND		0.0400
182				ND		0.0400
183	183/185			ND		0.0800
184				ND		0.0400
185	183/185			ND		0.0800
186				ND		0.0400
187				ND		0.0400
188				ND		0.0400
189				ND		0.0400
190				ND		0.0400
191				ND		0.0400
192				ND		0.0400
193	180/193			ND		0.0800
194				ND		0.0400
195				ND		0.0400
196	407/000			ND		0.0400
197	197/200			ND		0.0800
198	198/199			ND		0.0800
199	198/199			ND		0.080.0
200	197/200			ND		0.0800
201				ND		0.0400
202				ND		0.0400
203				ND		0.0400
204				ND		0.0400
205				ND		0.0400
206				ND		0.0400
207				ND		0.0400
208				ND		0.0400
209				ND		0.0400

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

ng/L = Nanograms per liter

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Blank Analysis Results

Client Sample ID Lab Sample ID Filename

CBLKSL BLANK-106448 P230531B_07

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

Report No.....10654073

Pace Analytical[™]

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-DS2-202305
Lab Sample ID 40262368001
Filename P230529A_11
Injected By BAL
Total Amount Extracted 960 mL

Total Amount Extracted 960 mL Matrix Water
% Moisture NA Dilution NA
Dry Weight Extracted NA Collected 05/16/2023 11:15

 ICAL ID
 P230529A02
 Received
 05/20/2023
 18:45

 CCal Filename(s)
 P230529A_01
 Extracted
 05/23/2023
 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023
 12:56

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',6,6'-PeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HyCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205	10.171 12.986 13.292 20.415 17.143 28.223 20.767 35.377 35.950 26.909 39.573 38.365 38.030 42.742 32.995 45.816 44.642 49.119 38.919 51.676 44.424 54.284	2.95 3.09 1.53 1.58 1.04 1.04 0.79 0.79 0.81 1.57 1.56 1.58 1.58 1.53 1.23 1.26 1.23 1.23 1.03 1.05 0.88 0.90	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.42 1.69 2.22 1.85 2.26 1.37 1.49 1.49 1.46 1.77 1.23 1.25 1.27 1.23 1.27 1.23 1.08 2.30 2.42 1.27 1.41 2.35 1.52 1.78 1.91	71 84 111 92 113 69 74 75 73 89 62 62 63 62 54 115 61 63 71 118 76 89 96
13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	206 208 209	56.051 51.202 57.689	0.80 0.79 0.71	2.0 2.0 2.0	2.10 2.22 2.17	105 111 108
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.996 42.038	1.03 1.55 1.03	2.0 2.0 2.0	1.28 1.58 1.79	64 79 89
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.773 25.856 33.196 41.568 53.810	1.55 0.79 1.54 1.26 0.90	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

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NC = Not Calculated

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REPORT OF LABORATORY ANALYSIS

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Report No.....10654073



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0417
2			***	ND		0.0417
3				ND		0.0417
4				ND		0.0417
5				ND ND		0.0417
4 5 6 7				ND		0.0417
7				ND		0.0417
8				ND ND		0.0417
9				ND		0.0417
10				ND		0.0417
10						
12	12/13			ND		0.408
13	12/13			ND		0.0833
	12/13			ND		0.0833
14				ND		0.0417
15				ND		0.0550
16				ND		0.0417
17	10100			ND		0.0417
18	18/30			ND		0.0833
19				ND		0.0417
20	20/28			ND		0.215
21	21/33			ND		0.225
22				ND		0.158
23				ND		0.0417
24				ND		0.0417
25				ND		0.0417
26	26/29			ND		0.0833
27				ND		0.0417
28	20/28			ND		0.215
29	26/29			ND		0.0833
30	18/30			ND		0.0833
31				ND		0.217
32				ND		0.0417
33	21/33			ND		0.225
34				ND		0.0417
35		M 40 E		ND		0.0417
36				ND		0.0417
37				ND		0.0883
38				ND		0.0417
39				ND		0.0417
40	40/41/71			ND		0.125
41	40/41/71			ND		0.125
42	10/11/11			ND		0.0417
43	43/73			ND		0.0833
44	44/47/65			ND		0.0033
45	45/51			ND		0.0833
46 46	-TO/O I	***		ND ND		0.0633
47	44/47/65			ND ND	***	0.0417
48	7771100			ND ND		
70			***	IND		0.0417

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69			ND		0.0833
50	50/53			ND		0.0833
51	45/51			ND		0.0833
52	10/01			ND		0.215
53	50/53			ND		0.0833
54	30/33			ND ND		0.0417
5 4 55		***				0.0417
56				ND		
50				ND		0.0417
57				ND	***	0.0417
58				ND		0.0417
59	59/62/75			ND		0.125
60			~	ND		0.0417
61	61/70/74/76			ND		0.167
62	59/62/75			ND		0.125
63				ND		0.0417
64				ND	***	0.0417
65	44/47/65			ND		0.125
66	44/41/00			ND		0.0983
67				ND ND		0.0903
68						
66	40/00			ND		0.0417
69	49/69			ND		0.0833
70	61/70/74/76			ND		0.167
71	40/41/71			ND		0.125
72				ND		0.0417
73	43/73			ND		0.0833
74	61/70/74/76			ND		0.167
75	59/62/75			ND		0.125
76	61/70/74/76	,		ND		0.167
77				ND		0.0417
78				ND		0.0417
79				ND		0.0417
80				ND		0.0417
81				ND		0.0417
82		***				
				ND		0.0417
83				ND		0.0417
84	0.544.044.5			ND		0.0417
85	85/116/117			ND		0.125
86	86/87/97/108/119/125			ND		0.250
87	86/87/97/108/119/125			ND		0.250
88	88/91			ND		0.0833
89				ND		0.0417
90	90/101/113			ND		0.125
91	88/91			ND		0.0833
92		***		ND		0.0417
93	93/98/100/102			ND		0.167
94	33,53,100,102			ND		0.0417
95				ND		0.117
96						
90				ND		0.0417

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
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X = Outside QC Limits
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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
97	86/87/97/108/119/125			ND		0.250
98	93/98/100/102			ND		0.167
99				ND	***	0.0417
100	93/98/100/102	~~~		ND		0.167
101	90/101/113			ND		0.125
102	93/98/100/102			ND	***	0.167
103				ND		0.0417
104				ND		0.0417
105				ND		0.0417
106				ND		0.0417
107	107/124			ND		0.0833
108	86/87/97/108/119/125			ND		0.250
109				ND		0.0417
110	110/115			ND		0.0833
111				ND		0.0417
112				ND		0.0417
113	90/101/113			ND		0.125
114	00/10//170			ND		0.0417
115	110/115			ND		0.0833
116	85/116/117			ND		0.125
117	85/116/117			ND		0.125
118	33,710,717		***	ND		0.0650
119	86/87/97/108/119/125			ND		0.250
120	33/31/31/133/110/123			ND		0.0417
121				ND		0.0417
122				ND		0.0417
123			***	ND		0.0417
124	107/124			ND	***	0.0833
125	86/87/97/108/119/125	~~~		ND		0.250
126				ND		0.0417
127				ND		0.0417
128	128/166			ND		0.0833
129	129/138/163			ND		0.125
130				ND		0.0417
131		***		ND		0.0417
132				ND		0.0417
133				ND		0.0417
134	134/143			ND		0.0833
135	135/151			ND		0.0833
136				ND		0.0417
137				ND		0.0417
138	129/138/163			ND		0.125
139	139/140			ND		0.0833
140	139/140			ND		0.0833
141				ND		0.0417
142				ND	~~~	0.0417
143	134/143			ND		0.0833
144				ND		0.0417

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I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145				ND		0.0417
146				ND		0.0417
147	147/149			ND		0.0833
148	1477140			ND		0.0417
149	147/149			ND		0.0833
150	1117710			ND		0.0417
151	135/151	****		ND	***	0.0833
152	100,101			ND		0.0417
153	153/168			ND		0.0833
154	100,100			ND		0.0417
155				ND		0.0417
156	156/157			ND		0.0833
157	156/157			ND		0.0833
158	100,101			ND		0.0417
159				ND		0.0417
160				ND		0.0417
161				ND		0.0417
162				ND		0.0417
163	129/138/163			ND		0.125
164	. 20, 100, 100			ND		0.0417
165				ND		0.0417
166	128/166			ND	***	0.0833
167	120,100			ND		0.0417
168	153/168	~~~		ND		0.0833
169				ND		0.0417
170				ND		0.0417
171	171/173			ND		0.0833
172				ND		0.0417
173	171/173			ND		0.0833
174				ND	***	0.0417
175				ND		0.0417
176				ND		0.0417
177				ND		0.0417
178				ND		0.0417
179				ND		0.0417
180	180/193			ND		0.0833
181		***		ND		0.0417
182		***		ND		0.0417
183	183/185	~ * *		ND		0.0833
184				ND		0.0417
185	183/185			ND		0.0833
186				ND		0.0417
187				ND		0.0417
188			***	ND		0.0417
189				. ND		0.0417
190				ND		0.0417
191				ND		0.0417
192				ND		0.0417

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

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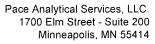
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REPORT OF LABORATORY ANALYSIS





Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND	***	0.0833
194				ND		0.0417
195				ND		0.0417
196				ND		0.0417
197	197/200			ND		0.0833
198	198/199			ND		0.0833
199	198/199			ND	w	0.0833
200	197/200			ND		0.0833
201				ND		0.0417
202				ND		0.0417
203				ND		0.0417
204				ND		0.0417
205				ND		0.0417
206				ND		0.0417
207				ND		0.0417
208				ND		0.0417
209				ND		0.0417

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

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REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected

1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample İD

Filename Injected By

Total Amount Extracted % Moisture

Dry Weight Extracted

ICAL ID

CCal Filename(s) Method Blank ID

NR-SW-DUP1-202305

40262368002 P230529A_12

BAL 1040 mL NA

NA P230529A02 P230529A_01 BLANK-106282 Matrix Dilution Water NA

Collected 05/16/2023 Received 05/20/2023 18:45

Extracted 05/23/2023 12:15 Analyzed 05/29/2023 13:59

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-2,2',6,6'-TeCB 13C-3,3',4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HpCB 13C-2,3,3',4,4',5,5'-HpCB 13C-2,3,3',4,4',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.159 12.975 13.292 20.404 17.121 28.208 20.751 35.362 35.950 26.908 39.573 38.918 38.365 38.013 42.742 32.995 45.816 44.642 49.103 38.918 51.676 44.407 54.284 56.051 51.202 57.690	2.95 3.04 1.56 1.55 1.02 1.04 0.77 0.76 0.79 1.73 1.61 1.62 1.59 1.53 1.55 1.24 1.27 1.28 1.27 1.05 0.91 0.89 0.81 0.77 0.70	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.44 1.62 2.22 1.78 2.31 1.30 1.50 1.38 1.33 1.72 1.06 1.09 1.09 0.936 2.27 2.19 1.14 1.30 2.21 1.46 1.73 1.79 1.99 2.14 2.30	72 81 111 89 115 65 75 69 67 86 53 53 55 54 47 113 55 65 111 73 87 89 99 107
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.996 42.021	1.04 1.55 1.04	2.0 2.0 2.0	1.29 1.53 1.82	65 76 91
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.762 25.856 33.196 41.568 53.810	1.56 0.76 1.55 1.24 0.90	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

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X = Outside QC Limits RT = Retention Time

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ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration	EMPC	EML
IUPAC	Co-elutions		Ratio	ng/L	ng/L	ng/L
1				ND		0.0383
2				ND		0.0383
3		***		ND		0.0383
4		13.314	1.48	0.148		0.0383
5				ND		0.0383
6		16.270	1.51	0.0717		0.0383
7				ND		0.0383
8				ND		0.0383
9				ND		0.0383
10				ND		0.0383
11				ND		0.376
12	12/13			ND		0.0766
13	12/13			ND		0.0766
14				ND		0.0383
15				ND		0.0506
16				ND		0.0383
17		19.851	1.05	0.154		0.0383
18	18/30	19.365	1.05	0.0975		0.0766
19		17.143	0.90	0.0925		0.0383
20	20/28			ND		0.198
21	21/33			ND		0.207
22	3 3			ND		0.146
23				ND		0.0383
24				ND		0.0383
25		23.180	0.95	0.140		0.0383
26	26/29	22.917	1.10	0.260		0.0766
27	_55			ND		0.0383
28	20/28			ND		0.198
29	26/29	22.917	1.10	(0.260)		0.0766
30	18/30	19.365	1.05	(0.0975)		0.0766
31	.0,00			ND		0.199
32		20.983	1.01	0.0626		0.0383
33	21/33			ND		0.207
34	21100			ND		0.0383
35				ND		0.0383
36				ND		0.0383
37				ND	***	0.0812
38				ND		0.0383
39				ND		0.0383
40	40/41/71	28.068	0.76	0.306		0.115
41	40/41/71	28.068	0.76	(0.306)		0.115
42	IVETILL	27.527	0.76	0.206		0.0383
43	43/73	21.521	0.70	0.200 ND		0.0363
44	44/47/65	27.032	0.75	0.917		0.0700
45	45/51	24.061	0.73	0.152		0.0766
46	TUIU I	24.309	0.77	0.152		0.0383
40 47	44/47/65	27.032	0.71	(0.917)		0.0363
48	771 7 1100	27.032	0.75	(0.917) ND		0.0383
70				NU		0.0303

Conc = Concentration

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Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69	26.413	0.78	1.34		0.0766
50	50/53	23.211	0.79	0.288		0.0766
51	45/51	24.061	0.77	(0.152)		0.0766
52	40/01	25.872	0.76	1.88		0.198
53	50/53	23.211	0.79	(0.288)		0.0766
5 4	30/33		0.73	(0.200) ND		0.0383
55				ND ND		0.0383
56		32.082	0.69	0.0568	***	0.0383
57		32.002	0.03	ND	402	0.0383
58				ND ND		0.0383
59	59/62/75			ND ND		0.115
60	59/02/75			ND ND		0.0383
61	61/70/74/76	31.030	0.76	0.411		0.0363
62			0.76			
	59/62/75			ND		0.115
63				ND 0.450		0.0383
64	A A I A 7 I O E	28.300	0.78	0.150		0.0383
65	44/47/65	27.032	0.75	(0.917)		0.115
66		31.386	0.77	0.330		0.0904
67				ND		0.0383
68	40/00		0.70	ND (4.04)		0.0383
69	49/69	26.413	0.78	(1.34)		0.0766
70	61/70/74/76	31.030	0.76	(0.411)		0.153
71	40/41/71	28.068	0.76	(0.306)		0.115
72	40/70	29.204	0.71	0.0473		0.0383
73	43/73			ND (2.444)		0.0766
74	61/70/74/76	31.030	0.76	(0.411)		0.153
75 70	59/62/75			ND		0.115
76	61/70/74/76	31.030	0.76	(0.411)		0.153
77				ND		0.0383
78 70				ND		0.0383
79				ND	~~~	0.0383
80				ND		0.0383
81				ND		0.0383
82		35.594	1.56	0.110		0.0383
83		33.706	1.56	0.144		0.0383
84		31.246	1.46	0.489		0.0383
85	85/116/117	35.114	1.65	0.319		0.115
86	86/87/97/108/119/125	34.356	1.59	1.03		0.230
87	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
88	88/91	31.030	1.56	0.382		0.0766
89				ND		0.0383
90	90/101/113	33.227	1.54	1.89		0.115
91	88/91	31.030	1.56	(0.382)	*	0.0766
92		32.608	1.54	0.679		0.0383
93	93/98/100/102			ND	***	0.153
94				ND		0.0383
95		30.101	1.57	1.61		0.107
96				ND		0.0383

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X = Outside QC Limits

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002

P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
97	86/87/97/108/119/125	34.356	1 FO			
98	93/98/100/102	34.330	1.59	(1.03) ND		0.230 0.153
99	93/96/100/102	33.846	1.56	0.959		0.153
100	93/98/100/102	33.040	1.56	0.959 ND		0.0363
100	90/101/113	33.227	1.54	(1.89)		0.153 0.115
102	93/98/100/102	33.221	1.54	(1.69) ND		0.113
103	93/90/100/102	29.421	1.47	0.0423		0.0383
104		23.421	1.47	0.0423 ND		0.0383
105		39.590	1.53	0.320		0.0383
106		39.390	1.55	0.320 ND		0.0383
107	107/124			ND		0.0766
108	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
109	00/07/37/100/113/123	37.912	1.52	0.112		0.0383
110	110/115	35.269	1.53	2.64		0.0766
111	110/113		1.55	ND		0.0383
112				ND		0.0383
113	90/101/113	33.227	1.54	(1.89)		0.0303
114	30/10//113	00.227	1.04	(1.09) ND		0.0383
115	110/115	35.269	1.53	(2.64)		0.0363
116	85/116/117	35.114	1.65	(0.319)		0.0700
117	85/116/117	35.114	1.65	(0.319)		0.115
118	03/110/11/	38.382	1.46	1.04		0.0598
119	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
120	00/07/97/100/119/125		1.00	(1.03) ND		0.0383
121				ND ND		0.0383
122				ND		0.0383
123				ND ND		0.0383
124	107/124			ND ND		0.0363
125	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
126	00/07/97/100/119/129	34.330	1.59	(1.03) ND		0.0383
127				ND		0.0383
128	128/166	42.876	1.23	0.255		0.0363
129	129/138/163	41.602	1.22	1.35		0.115
130	120/100/100	40.914	1.21	0.114		0.0383
131				ND		0.0383
132		38.499	1.18	0.533		0.0383
133				ND		0.0383
134	134/143	37,409	1.12	0.118		0.0766
135	135/151	36.259	1.23	0.693		0.0766
136	100, 101	33.722	1.20	0.247		0.0383
137		41.166	1.28	0.0724		0.0383
138	129/138/163	41.602	1.22	(1.35)		0.115
139	139/140		1 . Zu Zu	ND	AM 400 Mg	0.0766
140	139/140			ND		0.0766
141		40.512	1.16	0.166		0.0383
142			7.10	0.100 ND		0.0383
143	134/143	37.409	1.12	(0.118)		0.0363
144	10 17 1 10	36.832	1.27	0.0628		0.0760
		00.002	1.6.1	0.0020		0.0000

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145		***		ND		0.0383
146		39.690	1,24	0.215		0.0383
147	147/149	37.208	1.22	1.16		0.0766
148	1477149	37.200		ND		0.0383
149	147/149	37.208	1.22	(1.16)		0.0766
150	1477149	37.200	1.22	ND		0.0383
151	135/151	36.259	1.23	(0.693)		0.0766
152	133/131	30.239	1.23	(0.093) ND		0.0383
153	153/168	40.311	1.20	1.00		0.0363
	100/100		1.20			0.0383
154		36.522		0.0390		0.0383
155	1501157	45.040	4.00	ND		0.0363
156	156/157	45.816	1.29	0.171		
157	156/157	45.816	1.29	(0.171)		0.0766
158		42.004	1.20	0.123		0.0383
159		,		ND		0.0383
160				ND		0.0383
161				ND		0.0383
162				ND		0.0383
163	129/138/163	41.602	1.22	(1.35)		0.115
164		41.266	1.13	0.0877		0.0383
165				ND		0.0383
166	128/166	42.876	1.23	(0.255)		0.0766
167		44.659	1.14	0.0598	***	0.0383
168	153/168	40.311	1.20	(1.00)		0.0766
169				ND		0.0383
170		48.533	1.09	0.122		0.0383
171	171/173			ND		0.0766
172				ND		0.0383
173	171/173			ND		0.0766
174		43.837	1.05	0.113		0.0383
175		***		ND		0.0383
176				ND		0.0383
177		44.306	0.98	0.0861		0.0383
178		42.038	0.99	0.0391		0.0383
179		39.271	1.06	0.0779		0.0383
180	180/193	47.258	1.06	0.188		0.0766
181				ND		0.0383
182				ND		0.0383
183	183/185			ND		0.0766
184				ND		0.0383
185	183/185			ND		0.0766
186				ND		0.0383
187		42.993	1.06	0.178		0.0383
188				ND		0.0383
189				ND	***	0.0383
190				ND		0.0383
191				ND		0.0383
192				ND		0.0383

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.258	1.06	(0.188)		0.0766
194				` NĎ		0.0383
195				ND		0.0383
196				ND		0.0383
197	197/200			ND		0.0766
198	198/199			ND		0.0766
199	198/199			ND		0.0766
200	197/200			ND		0.0766
201				ND		0.0383
202				ND		0.0383
203				ND		0.0383
204				ND		0.0383
205				ND		0.0383
206				ND		0.0383
207				ND		0.0383
208				ND		0.0383
209				ND		0.0383

Conc = Concentration

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EMPC = Estimated Maximum Possible Concentration

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

Congener Group	ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	0.219	
Total Trichloro Biphenyls	0.807	
Total Tetrachloro Biphenyls	6.16	
Total Pentachloro Biphenyls	11.8	
Total Hexachloro Biphenyls	6.46	
Total Heptachloro Biphenyls	0.805	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total DCDa	26.2	
_	Total Heptachloro Biphenyls Total Octachloro Biphenyls Total Nonachloro Biphenyls	Total Heptachloro Biphenyls Total Octachloro Biphenyls ND Total Nonachloro Biphenyls Decachloro Biphenyls ND

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

Dry Weight Extracted

Injected By
Total Amount Extracted
% Moisture

ICAL ID CCal Filename(s) Method Blank ID NR-SW-EB-202305 40262368003 P230529B_04 BAL

1040 mL NA NA P230529B02 P230529B_01 BLANK-106282 Matrix Dilution Collected

Water NA

 Collected
 05/16/2023
 11:30

 Received
 05/20/2023
 18:45

 Extracted
 05/23/2023
 12:15

 Analyzed
 05/29/2023
 19:14

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4,4'-DICB 13C-2,2'-BICB 13C-2,2',6,6'-TrCB 13C-3,4,4'-TrCB 13C-3,4,4'-5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-3,3',4,4',5-PeCB 13C-3,3',4,4',5-PeCB 13C-3,3',4,4',5-PeCB 13C-3,3',4,4',5,5'-HxCB 13C-3,3',4,4',5,5'-HxCB 13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB 13C-2,3,3',4,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202	10.148 12.975 13.280 20.415 17.132 28.223 20.766 35.377 35.950 26.908 39.572 38.918 38.365 38.030 42.742 32.995 45.833 44.659 49.119 38.935 51.676 44.408	2.98 3.09 1.62 1.57 1.00 1.02 0.79 0.76 0.76 1.55 1.60 1.55 1.54 1.24 1.24 1.25 1.24 1.26 1.04 1.02	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.47 1.78 2.41 1.87 2.38 1.32 1.57 1.40 1.34 1.92 1.24 1.22 1.21 1.22 1.10 2.31 2.39 1.26 1.35 2.48 1.53 1.88	74 89 120 94 119 66 78 70 67 96 62 61 60 61 55 115 60 63 67 124 77
13C-2,3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	205 206 208 209	54.305 56.051 51.223 57.689	0.86 0.81 0.79 0.69	2.0 2.0 2.0 2.0	1.87 2.10 2.29 2.20	93 105 114 110
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.996 42.037	1.03 1.57 1.06	2.0 2.0 2.0	1.22 1.53 1.78	61 77 89
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.762 25.856 33.211 41.585 53.810	1.54 0.74 1.55 1.23 0.87	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0385
2				ND ND		0.0385
3				ND ND		0.0385
J 1						0.0303
4 5 6 7				ND		0.0385
5				ND		0.0385
0				ND		0.0385
				ND		0.0385
8				ND		0.0385
9 10				ND		0.0385
				ND		0.0385
11	40/40			ND		0.377
12	12/13			ND		0.0770
13	12/13			ND		0.0770
14				ND		0.0385
15				ND		0.0508
16		***		ND		0.0385
17				ND		0.0385
18	18/30			ND		0.0770
19				ND		0.0385
20	20/28			ND		0.199
21	21/33			ND		0.208
22				ND		0.146
23				ND		0.0385
24				ND		0.0385
25				ND		0.0385
26	26/29			ND		0.0770
27				ND		0.0385
28	20/28			ND		0.199
29	26/29			ND		0.0770
30	18/30			ND		0.0770
31				ND		0.200
32		~~~		ND		0.0385
33	21/33			ND		0.208
34				ND		0.0385
35				ND		0.0385
36				ND		0.0385
37				ND		0.0816
38				ND		0.0385
39				ND		0.0385
40	40/41/71			ND		0.115
41	40/41/71			ND		0.115
42	10/ 11// 1			ND ND		0.0385
43	43/73			ND ND		0.0365
44	44/47/65			ND ND		0.0770
45	45/51			ND ND		
46 46	T0/01			ND ND	***	0.0770 0.0385
47	44/47/65			ND ND		0.0300
48	44/4//00					0.115
40				ND		0.0385

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
. 49	49/69			ND		0.0770
50	50/53			ND		0.0770
51	45/51			ND		0.0770
52				ND		0.199
53	50/53			ND		0.0770
54				ND		0.0385
55				ND		0.0385
56				ND		0.0385
57				ND		0.0385
58				ND		0.0385
59	59/62/75	****		ND		0.115
60				ND		0.0385
61	61/70/74/76			ND		0.154
62	59/62/75			ND		0.115
63				ND		0.0385
64				ND		0.0385
65	44/47/65			ND		0.115
66				ND		0.0908
67				ND		0.0385
68				ND		0.0385
69	49/69			ND		0.0770
70	61/70/74/76			ND		0.154
71	40/41/71			ND		0.115
72				ND		0.0385
73	43/73			ND		0.0770
74	61/70/74/76			ND		0.154
75	59/62/75			ND		0.115
76	61/70/74/76			ND		0.154
77				ND		0.0385
78				ND		0.0385
79				ND		0.0385
80				ND		0.0385
81				ND		0.0385
82				ND		0.0385
83				ND		0.0385
84				ND		0.0385
85	85/116/117			ND	**-	0.115
86	86/87/97/108/119/125			ND	-+-	0.231
87	86/87/97/108/119/125			ND		0.231
88	88/91			ND		0.0770
89				ND		0.0385
90	90/101/113			ND		0.115
91	88/91			ND		0.0770
92				ND		0.0385
93	93/98/100/102			ND		0.154
94				ND		0.0385
95				ND		0.108
96		~		ND	***	0.0385

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-EB-202305 40262368003 P230529B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
97	86/87/97/108/119/125			ND		0.231
98	93/98/100/102			ND		0.154
99				ND		0.0385
100	93/98/100/102			ND		0.154
101	90/101/113			ND		0.115
102	93/98/100/102			ND		0.154
103				ND		0.0385
104				ND		0.0385
105				ND		0.0385
106				ND		0.0385
107	107/124			ND		0.0770
108	86/87/97/108/119/125			ND		0.231
109				ND		0.0385
110	110/115			ND	**-	0.0770
111				ND		0.0385
112				ND		0.0385
113	90/101/113			ND		0.115
114				ND		0.0385
115	110/115			ND		0.0770
116	85/116/117			ND		0.115
117	85/116/117			ND		0.115
118				ND		0.0600
119	86/87/97/108/119/125			ND		0.231
120				ND		0.0385
121				ND		0.0385
122				ND		0.0385
123	1071101			ND		0.0385
124	107/124			ND		0.0770
125	86/87/97/108/119/125			ND		0.231
126				ND		0.0385
127	400/400			ND		0.0385
128	128/166			ND		0.0770
129	129/138/163			ND ND		0.115
130 131				ND ND		0.0385
131				ND		0.0385 0.0385
132				ND ND		
133	134/143			ND		0.0385 0.0770
135	135/151			ND ND		0.0770
136	130/101			ND ND	~	0.0770
137				ND ND		0.0385
138	129/138/163	~~~		ND		0.0365
139	139/140			ND ND		0.113
140	139/140			ND ND		0.0770
141	100/140			ND ND	***	0.0770
142				ND ND		0.0385
142	134/143			ND ND		0.0363
144	10-11-10			ND		0.0770
				,,,,		0.0000

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145				ND		0.0385
146				ND		0.0385
147	147/149	****		ND	·	0.0770
148	1477149			ND		0.0385
149	147/149			ND ND		0.0333
150	1477149			ND		0.0385
151	135/151			ND		0.0303
152	133/131			ND ND		0.0385
153	153/168			ND ND		0.0383
154	155/106			ND ND		0.0770
155				ND ND		0.0385
155	450/457			ND		
156	156/157			ND		0.0770
157	156/157			ND		0.0770
158				ND		0.0385
159				ND		0.0385
160				ND		0.0385
161				ND		0.0385
162				ND		0.0385
163	129/138/163			ND		0.115
164				ND		0.0385
165				ND		0.0385
166	128/166			ND		0.0770
167				ND		0.0385
168	153/168			ND		0.0770
169				ND		0.0385
170				ND		0.0385
171	171/173			ND		0.0770
172				ND		0.0385
173	171/173			ND		0.0770
174				ND		0.0385
175				ND		0.0385
176				ND		0.0385
177				ND		0.0385
178				ND		0.0385
179				ND		0.0385
180	180/193			ND		0.0770
181				ND		0.0385
182				ND		0.0385
183	183/185			ND		0.0770
184	100/100			ND		0.0385
185	183/185			ND		0.0770
186	. 50/ 100			ND		0.0385
187				ND		0.0385
188				ND		0.0385
189				ND		0.0385
190				ND ND		0.0385
190				ND ND		0.0385
191				ND ND		0.0385
192				IND		0.0300

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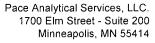
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REPORT OF LABORATORY ANALYSIS





Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.0770
194				ND	****	0.0385
195				ND		0.0385
196				ND		0.0385
197	197/200			ND		0.0770
198	198/199			ND		0.0770
199	198/199			ND		0.0770
200	197/200			ND		0.0770
201				. ND		0.0385
202				ND		0.0385
203				ND		0.0385
204				ND		0.0385
205				ND		0.0385
206				ND		0.0385
207				ND		0.0385
208				ND		0.0385
209				ND		0.0385

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By NR-SW-FB-202305 40262368004 P230529B_05 BAL

Total Amount Extracted % Moisture
Dry Weight Extracted

CCal Filename(s)

Method Blank ID

ICAL ID

1050 mL NA NA P230529B02 P230529B 01 Matrix Water Dilution NA

Collected 05/16/2023 11:45
Received 05/20/2023 18:45
Extracted 05/23/2023 12:15

P230529B02 Received 05/20/2023 18:45
P230529B_01 Extracted 05/23/2023 12:15
BLANK-106282 Analyzed 05/29/2023 20:17

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.170	3.03	2.0	1.42	71
13C-4-MoCB	3 4	12.986	3.08	2.0	1.57	79
13C-2,2'-DiCB	4	13.303	1.53	2.0	2.14	107
13C-4,4'-DICB	15	20.415	1.56	2.0	1.67	84
13C-2,2',6-TrCB	19	17.143	1.02	2.0	2.05	103
13C-3,4,4'-TrCB	37	28.223	1.03	2.0	1.21	60
13C-2,2',6,6'-TeCB	54	20.751	0.79	2.0	1.34	67
13C-3,4,4',5-TeCB	<u>81</u>	35.362	0.79	2.0	1.28	64
13C-3,3',4,4'-TeCB	77	35.950	0.80	2.0	1.23	61
13C-2,2',4,6,6'-PeCB	104	26.923	1.62	2.0	1.70	85 53
13C-2,3,3',4,4'-PeCB 13C-2,3,4,4',5-PeCB	105	39.573	1.59	2.0	1.07 1.07	53 53
13C-2,3',4,4',5-PeCB	114 118	38.918 38.365	1.61 1.62	2.0 2.0	1.07	55 55
13C-2,3',4,4',5'-PeCB	123	38.030	1.58	2.0	1.13	56 56
13C-3,3',4,4',5-PeCB	126	42.742	1.60	2.0	0.995	50 50
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.23	2.0	2.11	106
13C-HxCB (156/157)	156/157	45.816	1.26	4.0	2.23	56
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.27	2.0	1.14	57
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.30	2.0	1.28	64
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.04	2.0	2.07	103
13C-2,3,3',4,4',5,5'-HpCB	189	51.675	1.09	2.0	1.38	69
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.88	2.0	1.58	79
13C-2,3,3',4,4',5,5',6-OcCB	205	54.283	0.88	2.0	1.70	85
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.79	2.0	1.88	94
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201	0.79	2.0	1.96	98
13C-DeCB	209	57.689	0.71	2.0	2.07	104
Cleanup Standards						
13C-2,4,4'-TrCB	28	23.845	1.02	2.0	1.09	54
13C-2,3,3',5,5'-PeCB	111	35.996	1.54	2.0	1.37	69
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.02	2.0	1.56	78
Recovery Standards						
13C-2,5-DICB	9	15.773	1.52	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.76	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.57	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.809	0.91	2.0	NA	NA

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

1	IUPAC	Co-elutions	DT.	Detie	Concentration	EMPC	EML
2	IUPAC	Co-elutions	K I	Ratio	ng/L	ng/L	ng/L
2	1				ND		0.0382
4	2						0.0302
4	3				ND		0.0002
5	1						0.0302
7	5						
7	6						
8	7				ND		0.0302
9	ģ				ND		0.0302
10	9						0.0302
11	10				ND		0.0302
12							0.0362
13	11	10/10					
14	12						
15	13	12/13					
16	14						
17	15						0.0505
18 18/30	16						0.0382
19					ND		0.0382
20 20/28	18	18/30			ND		
21 21/33	19						0.0382
ND	20	20/28			ND		
23 24	21	21/33					
24 ND 0.0382 25 ND 0.0382 26 26/29 ND 0.0382 28 20/28 ND 0.197 29 26/29 ND 0.0765 30 18/30 ND 0.0765 31 ND 0.199 32 ND 0.0382 33 21/33 ND 0.0382 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0382 39	22						0.145
25 ND 0.0382 26 26/29 ND 0.0765 27 ND 0.0382 28 20/28 ND 0.0785 30 18/30 ND 0.0765 31 ND 0.0765 31 ND 0.0765 31 ND 0.0382 32 ND 0.0382 33 21/33 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 40 40/41/71	23						0.0382
26 26/29 ND 0.0765 27 ND 0.0382 28 20/28 ND 0.197 29 26/29 ND 0.0765 30 18/30 ND 0.0765 31 ND 0.199 32 ND 0.199 32 ND 0.0382 33 21/33 ND 0.0382 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0382 39 ND 0.115 40 40/41/71	24						
27 ND 0.0382 28 20/28 ND 0.197 29 26/29 ND 0.0765 30 18/30 ND 0.0765 31 ND 0.199 32 ND 0.0382 33 21/33 ND 0.0382 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.0382 43 43/73 ND 0.0765 <tr< td=""><td>25</td><td></td><td></td><td></td><td>ND</td><td></td><td></td></tr<>	25				ND		
28 20/28 ND 0.197 29 26/29 ND 0.0765 30 18/30 ND 0.0765 31 ND 0.199 32 ND 0.0382 33 21/33 ND 0.0382 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.0382 43 43/73 ND 0.115 45 45/51	26	26/29			ND		0.0765
29 26/29 ND 0.0765 30 18/30 ND 0.0765 31 ND 0.199 32 ND 0.0382 33 21/33 ND 0.206 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 <td>27</td> <td></td> <td></td> <td></td> <td>ND</td> <td></td> <td>0.0382</td>	27				ND		0.0382
30	28	20/28					0.197
31 ND 0.199 32 ND 0.0382 33 21/33 ND 0.206 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 46	29	26/29					0.0765
32 ND 0.0382 33 21/33 ND 0.206 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 46 ND 0.0382 47 44/47/65 ND 0.015	30	18/30			ND		0.0765
33 21/33 ND 0.206 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 46 ND 0.0382 47 44/47/65 ND 0.0115	31				ND		0.199
33 21/33 ND 0.206 34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 46 ND 0.0382 47 44/47/65 ND 0.0115	32				ND		0.0382
34 ND 0.0382 35 ND 0.0382 36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 46 ND 0.0382 47 44/47/65 ND 0.115	33	21/33					
35 ND 0.0382 36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 45 45/51 ND 0.0382 47 44/47/65 ND 0.015					ND		
36 ND 0.0382 37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 45 45/51 ND 0.0382 47 44/47/65 ND 0.0382 47 44/47/65 ND 0.115	35						
37 ND 0.0811 38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 45 45/51 ND 0.0382 47 44/47/65 ND 0.0382 47 44/47/65 ND 0.115	36						0.0382
38 ND 0.0382 39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 45 45/51 ND 0.0382 47 44/47/65 ND 0.0382 47 44/47/65 ND 0.115	37						0.0811
39 ND 0.0382 40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 45 45/51 ND 0.0382 47 44/47/65 ND 0.115	38						0.0382
40 40/41/71 ND 0.115 41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.0765 45 45/51 ND 0.0382 47 44/47/65 ND 0.115	39				ND		0.0382
41 40/41/71 ND 0.115 42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.115 45 45/51 ND 0.0765 46 ND 0.0382 47 44/47/65 ND 0.115	40	40/41/71					0.115
42 ND 0.0382 43 43/73 ND 0.0765 44 44/47/65 ND 0.115 45 45/51 ND 0.0765 46 ND 0.0382 47 44/47/65 ND 0.115	41						0.115
43 43/73 ND 0.0765 44 44/47/65 ND 0.115 45 45/51 ND 0.0765 46 ND 0.0382 47 44/47/65 ND 0.115	42	· • · · · · · ·					
44 44/47/65 ND 0.115 45 45/51 ND 0.0765 46 ND 0.0382 47 44/47/65 ND 0.115	43	43/73					0.0302
45							
46 ND 0.0382 47 44/47/65 ND 0.115							
47 44/47/65 ND 0.115	46	10.01			ND		
	47	44/47/65					0.0002
	48				ND		0.0382

Conc = Concentration

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EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
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RT = Retention Time
I = Interference
ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-FB-202305 40262368004 P230529B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69			ND		0.0765
50	50/53			ND		0.0765
51	45/51			ND		0.0765
52				ND		0.197
53	50/53			ND		0.0765
54				ND		0.0382
55				ND		0.0382
56				ND		0.0382
57				ND		0.0382
58				ND		0.0382
59	59/62/75			ND		0.115
60				ND		0.0382
61	61/70/74/76			ND		0.153
62	59/62/75			ND		0.115
63				ND		0.0382
64				ND		0.0382
65	44/47/65			ND		0.115
66				ND		0.0902
67				ND		0.0382
68				ND		0.0382
69	49/69			ND		0.0765
70	61/70/74/76			ND		0.153
71	40/41/71			ND		0.115
72				ND		0.0382
73	43/73			ND		0.0765
74	61/70/74/76			ND		0.153
75	59/62/75			ND		0.115
76	61/70/74/76			ND		0.153
77				ND		0.0382
78				ND		0.0382
79			~~~	ND		0.0382
80				ND		0.0382
81				ND		0.0382
82				ND		0.0382
83				ND		0.0382
84				ND		0.0382
85	85/116/117			ND		0.115
86	86/87/97/108/119/125			ND		0.229
87	86/87/97/108/119/125			ND		0.229
88	88/91			ND		0.0765
89				ND		0.0382
90	90/101/113			ND		0.115
91	88/91		****	ND		0.0765
92	· - ·			ND		0.0382
93	93/98/100/102	T. D		ND		0.153
94	00.00/100/102			ND		0.0382
95				ND		0.107
96				ND		0.0382
~~				110		0.0002

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ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

UPAC Co-elutions					Concentration	EMPC	EML
98 93/98/100/102	IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
99	97	86/87/97/108/119/125			ND		0.229
99	98	93/98/100/102	***		ND		0.153
100 93/98/100/102 ND 0.153 101 90/101/113 ND 0.115 102 93/98/100/102 ND 0.1382 103 ND 0.0382 104 ND 0.0382 105 ND 0.0382 106 ND 0.0382 107 107/124 ND 0.0382 108 86/87/97/108/119/125 ND 0.0229 109 ND 0.0382 110 110/115 ND 0.0382 111 ND 0.0382 112 ND 0.0382 113 90/101/113 ND 0.0382 114 ND 0.0382 115 110/115 ND 0.0382 116 85/116/117 ND 0.0382 117 85/116/117 ND 0.0382 118 86/87/97/108/119/125 ND 0.115 119 86/87/97/108/119/125 ND 0.0382 120 ND 0.0382 121 ND 0.0382 122 ND 0.0382 124 107/124 ND 0.0382 125 86/87/97/108/119/125 ND 0.0382 126 128/166 ND 0.0382 127 ND 0.0382 128 128/166 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 129/138/163 ND 0.0382 134 134/143 ND 0.0382 135 135/151 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.0382 139 139/140 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0382 144 ND 0.0382 145 136/143 ND 0.0382 145 136/1	99				ND		0.0382
102 93/98/100/102 ND 0.153 103 ND 0.0382 104 ND 0.0382 105 ND 0.0382 106 ND 0.0382 107 107/124 ND 0.0382 107 107/124 ND 0.0382 108 86/87/97/108/119/125 ND 0.0382 109 ND 0.0382 110 110/115 ND 0.0382 111 ND 0.0382 112 ND 0.0382 113 90/101/113 ND 0.0382 114 ND 0.0382 115 110/115 ND 0.0382 116 85/116/117 ND 0.0382 117 85/116/117 ND 0.0382 118 86/87/97/108/119/125 ND 0.115 118 ND 0.0382 120 ND 0.0382 121 ND 0.0382 122 ND 0.0382 123 ND 0.0382 124 107/124 ND 0.0382 125 86/87/97/108/119/125 ND 0.0382 126 ND 0.0382 127 ND 0.0382 128 128/166 ND 0.0382 129 129/138/163 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0382 135 136/151 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.0382 139 139/140 ND 0.0382 139 139/140 ND 0.0382 139 139/140 ND 0.0382 143 134/143 ND 0.0382 143 134/143 ND 0.0382 143 134/143 ND 0.0382 144 ND 0.0382 145 139/140 ND 0.0382 146 ND 0.0382 147 ND 0.0382 148 134/143 ND 0.0382 149 ND 0.0382 140 ND 0.0382 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0382 144 107/124 ND 0.0382 139 ND 0.0382 139 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0382 135 139/140 ND 0.0382 136 129/138/163 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.0382 139 139/140 ND 0.0382 144 107/124 ND 0.0382 145 125 138/163 ND 0.0382 139 139/140 ND 0.0382 139 139/140 ND 0.0382 139 139/140 ND 0.0382 139 139/140 ND 0.0382 140 ND 0.0382 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0382	100	93/98/100/102			ND		
103	101	90/101/113			ND		0.115
103	102	93/98/100/102			ND		0.153
104	103						
105							
106	105				ND		
107							
108	107	107/124			ND		0.0765
109	108	86/87/97/108/119/125					
110							
111	110	110/115					
112					ND		
113							
114	113	90/101/113					
115 110/115	114				ND		
116 85/116/117	115	110/115					
118	116				ND		
119	117	85/116/117			ND		0.115
119	118				ND		0.0596
120	119	86/87/97/108/119/125			ND		
122	120				ND		
123					ND		0.0382
124 107/124 ND 0.0765 125 86/87/97/108/119/125 ND 0.229 126 ND 0.0382 127 ND 0.0382 128 128/166 ND 0.0765 129 129/138/163 ND 0.015 130 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0382 137 ND 0.0382 138 129/138/163 ND </td <td></td> <td></td> <td></td> <td></td> <td>ND</td> <td></td> <td>0.0382</td>					ND		0.0382
125 86/87/97/108/119/125 ND 0.229 126 ND 0.0382 127 ND 0.0382 128 128/166 ND 0.0765 129 129/138/163 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.0765 140 139/140 ND 0.0765 141 N	123				ND		0.0382
126 ND 0.0382 127 ND 0.0382 128 128/166 ND 0.0765 129 129/138/163 ND 0.115 130 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.0765 140 139/140 ND 0.0765							
127 ND 0.0382 128 128/166 ND 0.0765 129 129/138/163 ND 0.115 130 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.0382 140 139/140 ND 0.0765 140 139/140 ND 0.0382 142 ND <t< td=""><td></td><td>86/87/97/108/119/125</td><td></td><td></td><td></td><td></td><td></td></t<>		86/87/97/108/119/125					
128 128/166 ND 0.0765 129 129/138/163 ND 0.115 130 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 141 ND 0.0382 142 ND 0.0382 143							0.0382
129 129/138/163 ND 0.115 130 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765					ND		
130 ND 0.0382 131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765					ND		
131 ND 0.0382 132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0382 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765		129/138/163			ND		
132 ND 0.0382 133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0382 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765							0.0382
133 ND 0.0382 134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0765 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765	131						0.0382
134 134/143 ND 0.0765 135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0765 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765							
135 135/151 ND 0.0765 136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0382 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765							
136 ND 0.0382 137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0382 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765		134/143					0.0765
137 ND 0.0382 138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0765 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765		135/151					
138 129/138/163 ND 0.115 139 139/140 ND 0.0765 140 139/140 ND 0.0765 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765							
139 139/140 ND 0.0765 140 139/140 ND 0.0765 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765							
140 139/140 ND 0.0765 141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765							
141 ND 0.0382 142 ND 0.0382 143 134/143 ND 0.0765						***	
142 ND 0.0382 143 134/143 ND 0.0765		139/140					
143 134/143 ND 0.0765							0.0382
							0.0382
144 ND 0.0382		134/143					
	144	•			ND		0.0382

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

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Nn = Value obtained from additional analyses

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145				ND		0.0382
146				ND		0.0382
147	147/149			ND		0.0765
148	11171-10			ND		0.0382
149	147/149			ND		0.0765
150	1477148			ND		0.0382
151	135/151			ND		0.0765
152	100/101			ND		0.0382
153	153/168			ND		0.0362
154	199/100			ND		0.0763
155				ND		0.0382
156	156/157			ND		0.0362
157	156/157			ND		0.0765
158	130/137			ND ND		0.0763
159				ND ND		0.0382
160				ND ND		0.0382
161		en (m. de)		ND ND		0.0382
162				ND ND		0.0382
163	129/138/163			ND	***	0.0382
164	129/138/163			ND		0.115
				ND		0.0382
165	400/400			ND		0.0382
166	128/166			ND		0.0765
167	450/400			ND		0.0382
168	153/168			ND		0.0765
169				ND		0.0382
170	474470	•••		ND		0.0382
171	171/173			ND		0.0765
172	474/470			ND		0.0382
173	171/173	~~		ND	***	0.0765
174				ND		0.0382
175			***	ND		0.0382
176				ND		0.0382
177				ND	****	0.0382
178			-~-	ND		0.0382
179	100/100			ND		0.0382
180	180/193			ND		0.0765
181				ND		0.0382
182				ND		0.0382
183	183/185			ND		0.0765
184				ND		0.0382
185	183/185			ND		0.0765
186				ND		0.0382
187				ND		0.0382
188				ND		0.0382
189				ND		0.0382
190				ND	****	0.0382
191				ND		0.0382
192				ND		0.0382

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ng's = Nanograms



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.0765
194				ND	~~~	0.0382
195				ND		0.0382
196				ND		0.0382
197	197/200			ND		0.0765
198	198/199			ND		0.0765
199	198/199			ND		0.0765
200	197/200			ND		0.0765
201				ND		0.0382
202				ND		0.0382
203				ND		0.0382
204				ND		0.0382
205				ND		0.0382
206				ND		0.0382
207				ND		0.0382
208				ND		0.0382
209				ND		0.0382

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	•
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

Total Amount Extracted % Moisture

Dry Weight Extracted ICAL ID CCal Filename(s)

Method Blank ID

NR-SW-DS1-202305

40262368005 P230529B_06

BAL 1050 mL NA NA P230529B02 P230529B 01 BLANK-106282

Matrix Water Dilution NA

Collected Received Extracted Analyzed

05/16/2023 12:45

05/20/2023 18:45 05/23/2023 12:15 05/29/2023 21:20

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-G-TrCB 13C-3,4,4'-TrCB 13C-3,4,4'-TrCB 13C-3,4,4'-5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4'-5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-DeCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.205 13.009 13.325 20.426 17.154 28.223 20.766 35.361 35.949 26.908 39.572 38.918 38.365 38.029 42.725 32.994 45.815 44.641 49.102 38.918 51.675 44.407 54.283 56.050 51.201 57.688	2.84 3.01 1.62 1.56 1.04 1.02 0.76 0.80 0.78 1.60 1.62 1.61 1.49 1.52 1.30 1.26 1.24 1.27 1.01 1.05 0.91 0.91 0.77 0.69	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.43 1.73 2.39 1.80 2.24 1.30 1.53 1.34 1.30 1.81 1.05 1.05 1.09 1.07 0.883 2.37 2.13 1.11 1.22 2.16 1.39 1.61 1.73 1.98 2.07 2.11	72 87 120 90 112 65 77 65 91 52 53 54 53 44 118 53 56 61 108 70 81 86 99 104
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.860 35.996 42.037	1.03 1.59 1.04	2.0 2.0 2.0	1.21 1.51 1.75	60 76 87
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.795 25.856 33.195 41.568 53.809	1.54 0.77 1.55 1.24 0.89	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

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ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS1-202305 40262368005 P230529B_06

		. 2000202_00				
IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0383
				ND		0.0383
2 3 4				ND		0.0383
4		13.337	1.34	0.154		0.0383
		13.331	1.54	ND		0.0383
6		16.303	1.43	0.0811		0.0383
5 6 7						0.0383
8		***		ND ND		0.0383
9				ND ND		0.0383
9 10						0.0383
				ND		0.0383
11	40440			ND		0.375
12	12/13			ND		0.0765
13	12/13			ND	~~	0.0765
14				ND		0.0383
15				ND		0.0505
16				ND		0.0383
17		19.873	1.04	0.130		0.0383
18	18/30	19.387	0.93	0.0817		0.0765
19		17.176	1.08	0.100		0.0383
20	20/28		***	ND		0.197
21	21/33			ND		0.207
22				ND		0.145
23				ND		0.0383
24				ND		0.0383
25		23.195	1.11	0.161	40 20 00	0.0383
26	26/29	22.932	1.01	0.284		0.0765
27				ND		0.0383
28	20/28			ND		0.197
29	26/29	22.932	1.01	(0.284)		0.0765
30	18/30	19.387	0.93	(0.0817)		0.0765
31				ND		0.199
32		20.998	1.10	0.0699		0.0383
33	21/33			ND		0.207
34				ND		0.0383
35				ND		0.0383
36				ND		0.0383
37				ND		0.0811
38				ND		0.0383
39				ND		0.0383
40	40/41/71	28.084	0.79	0.260		0.115
41	40/41/71	28.084	0.79	(0.260)		0.115
42	70/41/11	27.542	0.79	0.158		0.0383
42	43/73					0.0303
		 27 021	 0.70	ND 0.760		0.0765
44 45	44/47/65	27.031	0.78	0.769		0.115
45 46	45/51	24.077	0.73	0.131		0.0765
46	44/47/05	24.309	0.79	0.0634		0.0383
47	44/47/65	27.031	0.78	(0.769)		0.115
48				ND		0.0383

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B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits

RT = Retention Time I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
			**	<u> </u>		
49	49/69	26.428	0.77	1.10		0.0765
50	50/53	23.226	0.77	0.249		0.0765
51	45/51	24.077	0.73	(0.131)		0.0765
52		25.887	0.76	1.41		0.197
53	50/53	23.226	0.77	(0.249)		0.0765
54				ND		0.0383
55		***		ND		0.0383
56		32.066	0.85	0.0386		0.0383
57		29.993	0.76	0.0399		0.0383
58	,			ND		0.0383
59	59/62/75			ND		0.115
60				ND		0.0383
61	61/70/74/76	31.030	0.80	0.270		0.153
62	59/62/75			ND		0.115
63				ND		0.0383
64		28.316	0.77	0.0957		0.0383
65	44/47/65	27.031	0.78	(0.769)		0.115
66		31.385	0.78	0.229		0.0903
67				ND		0.0383
68				ND		0.0383
69	49/69	26.428	0.77	(1.10)		0.0765
70	61/70/74/76	31.030	0.80	(0̀.270)́		0.153
71	40/41/71	28.084	0.79	(0.260)		0.115
72		29.220	0.77	Ò.041Ś	~~~	0.0383
73	43/73			ND		0.0765
74	61/70/74/76	31.030	0.80	(0.270)		0.153
75	59/62/75			` NĎ	***	0.115
76	61/70/74/76	31.030	0.80	(0.270)		0.153
77				` NĎ		0.0383
78				ND		0.0383
79				ND		0.0383
80				ND		0.0383
81				ND		0.0383
82		35.593	1.64	0.0472		0.0383
83		33.691	1.57	0.0910		0.0383
84		31.246	1.49	0.252		0.0383
85	85/116/117	35.068	1.40	0.136		0.115
86	86/87/97/108/119/125	34.356	1.48	0.504		0.230
87	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
88	88/91	31.045	1.53	0.255		0.0765
89				ND		0.0383
90	90/101/113	33.227	1.54	0.912		0.115
91	88/91	31.045	1.53	(0.255)		0.0765
92		32.608	1.53	0.431		0.0383
93	93/98/100/102			ND		0.153
94				ND		0.0383
95		30.101	1.48	0.844		0.107
96				ND		0.0383

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
97	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
98	93/98/100/102			ND		0.153
99	00/00/100/102	33.845	1.53	0.473		0.0383
100	93/98/100/102		1.00	ND		0.153
101	90/101/113	33.227	1.54	(0.912)		0.115
102	93/98/100/102		1.54	(0.912) ND		0.113
103	33/30/100/102			ND ND		0.0383
103				ND ND		0.0383
105		39.589	1.46	0.136		0.0383
106		39.309	1.40	0.136 ND		0.0383
100	107/124			ND ND		0.0365
107	86/87/97/108/119/125	34.356				
	00/07/97/100/119/125		1.48	(0.504)		0.230
109	440445	37.929	1.50	0.0728		0.0383
110	110/115	35.269	1.58	1.37		0.0765
111				ND		0.0383
112	00/404/440			ND	***	0.0383
113	90/101/113	33.227	1.54	(0.912)		0.115
114				ND		0.0383
115	110/115	35.269	1.58	(1.37)		0.0765
116	85/116/117	35.068	1.40	(0.136)		0.115
117	85/116/117	35.068	1.40	(0.136)		0.115
118		38.398	1.52	0.534		0.0597
119	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
120				ND		0.0383
121				ND		0.0383
122				ND		0.0383
123				ND		0.0383
124	107/124			ND		0.0765
125	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
126				ND		0.0383
127				ND		0.0383
128	128/166	42.875	1.24	0.122		0.0765
129	129/138/163	41.601	1.18	0.638		0.115
130		40.930	1.16	0.0605		0.0383
131				ND		0.0383
132		38.499	1.29	0.282		0.0383
133				ND		0.0383
134	134/143			ND		0.0765
135	135/151	36.228	1.27	0.311		0.0765
136		33.722	1.25	0.125		0.0383
137				ND		0.0383
138	129/138/163	41.601	1.18	(0.638)		0.115
139	139/140			ND		0.0765
140	139/140			ND		0.0765
141		40.511	1.23	0.0744		0.0383
142			1.20	ND		0.0383
143	134/143		***	ND		0.0365
144				ND		0.0383
				140		0.0000

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.0383
146		39.689	1.26	0.120		0.0383
147	147/149	37.208	1.19	0.657		0.0765
148	1477149	37.200		ND		0.0763
149	147/149					
	147/149	37.208	1.19	(0.657)		0.0765
150	4051454	20.000	4.07	ND		0.0383
151	135/151	36.228	1.27	(0.311)		0.0765
152	4504400	10.007		ND		0.0383
153	153/168	40.327	1.24	0.469		0.0765
154				ND		0.0383
155				ND		0.0383
156	156/157	45.832	1.20	0.0824		0.0765
157	156/157	45.832	1.20	(0.0824)		0.0765
158		42.020	1.18	0.0533		0.0383
159				ND		0.0383
160				ND		0.0383
161				ND		0.0383
162				ND		0.0383
163	129/138/163	41.601	1.18	(0.638)		0.115
164		41.266	1.22	0.0464		0.0383
165				ND		0.0383
166	128/166	42.875	1.24	(0.122)		0.0765
167	120/100			ND		0.0383
168	153/168	40.327	1.24	(0.469)		0.0765
169	100/100		1.27	(0.400) ND		0.0383
170		48.549	1.02	0.0782		0.0383
171	171/173		1.02	0.0702 ND		0.0365
172	17 1/173			ND ND		0.0783
172	171/173					0.0365
173	171/1/3		4.00	ND 0.0004		
174		43.853	1.03	0.0634		0.0383
				ND		0.0383
176		44.000	4.00	ND		0.0383
177		44.306	1.08	0.0540		0.0383
178				ND		0.0383
179	4004400	39.287	0.98	0.0425		0.0383
180	180/193	47.257	1.01	0.124		0.0765
181				ND		0.0383
182				ND		0.0383
183	183/185			ND		0.0765
184				ND		0.0383
185	183/185			ND		0.0765
186				ND		0.0383
187		42.993	1.14	0.0922		0.0383
188			***	ND		0.0383
189				ND		0.0383
190				ND		0.0383
191				ND		0.0383
192				ND		0.0383

Conc = Concentration

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS1-202305 40262368005 P230529B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.257	1.01	(0.124)		0.0765
194				NĎ		0.0383
195				ND		0.0383
196				ND		0.0383
197	197/200			ND		0.0765
198	198/199			ND		0.0765
199	198/199			ND		0.0765
200	197/200			ND		0.0765
201				ND		0.0383
202				ND		0.0383
203				ND		0.0383
204				ND		0.0383
205		~~~		ND		0.0383
206				ND		0.0383
207		***		ND		0.0383
208				ND		0.0383
209				ND		0.0383

Conc = Concentration EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	0.235	
Total Trichloro Biphenyls	0.827	
Total Tetrachloro Biphenyls	4.86	
Total Pentachloro Biphenyls	6.06	
Total Hexachloro Biphenyls	3.04	
Total Heptachloro Biphenyls	0.455	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	15.5	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

Total Amount Extracted % Moisture Dry Weight Extracted

ICAL ID CCal Filename(s) Method Blank ID

NR-SW-OU4-202305 40262368006

P230529B_07

BAL 1040 mL NA NA P230529B02 P230529B 01 BLANK-106282

Water Matrix Dilution NA

Collected Received Extracted Analyzed 05/16/2023 13:15

05/20/2023 18:45 05/23/2023 12:15 05/29/2023 22:22

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4,4'-DiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-3,4,4'-TrCB 13C-3,3',4,4'-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-G-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.137 12.953 13.258 20.393 17.121 28.208 20.736 35.362 35.935 26.909 39.556 38.919 38.349 38.030 42.726 32.980 45.816 44.643 49.103 38.919 51.676 44.408 54.284 56.051 51.202 57.689	2.95 2.99 1.55 1.56 1.05 1.03 0.77 0.76 0.78 1.54 1.61 1.58 1.54 1.53 1.61 1.25 1.27 1.26 1.25 1.04 1.05 0.91 0.89 0.77 0.76	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.53 1.65 2.30 1.72 2.35 1.20 1.52 1.29 1.28 1.75 1.04 1.05 1.03 1.08 0.852 2.30 2.05 1.10 1.18 2.19 1.38 1.59 1.68 1.59	76 82 115 86 117 60 76 64 64 87 52 51 54 43 115 51 55 59 110 69 79 84 97 103 102
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.981 42.021	1.03 1.56 1.06	2.0 2.0 2.0	1.14 1.48 1.73	57 74 86
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.751 25.841 33.181 41.568 53.810	1.51 0.77 1.54 1.27 0.91	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

				Concentration	EMPC	EML.
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1				ND		0.0384
2				ND		0.0384
3				ND		0.0384
4				ND		0.0384
5				ND		0.0384
6				ND		0.0384
7				ND		0.0384
8				ND		0.0384
9				ND		0.0384
10				ND		0.0384
11				ND		0.376
12	12/13			ND		0.0768
13	12/13			ND		0.0768
14	12,10			ND		0.0384
15				ND		0.0507
16				ND		0.0384
17				ND		0.0384
18	18/30			ND		0.0768
19	10/30			ND		0.0384
20	20/28			ND		0.198
21	21/33			ND		0.207
22	21/33			ND		0.146
23				ND		0.0384
24				ND		0.0384
25				ND ND		0.0384
26	26/29			ND ND		0.0364
27	20129			ND		0.0788
28	20/28			ND ND		0.0384
29	26/29			ND ND		0.0768
30	18/30			ND ND		0.0768
31	10/30			ND		0.200
32				ND		0.200
33	21/33			ND ND		0.207
34	2 1/33			ND		0.0384
35				ND		0.0384
36				ND ND		0.0384
37				ND ND		0.0814
38				ND ND		0.0384
39				ND ND		0.0384
40	40/41/71			ND ND		0.0304
41	40/41/71			ND		0.115
42	₩U/# 1/ / 1	27.527	0.82	0.0514		0.115
42 43	43/73		0.82			0.0384
43 44	43/73 44/47/65	27.017	0.78	ND 0.240		
44 45	44/47/05 45/51			0.240		0.115
40 46	40/01			ND		0.0768
46 47	, 4.4.4.7.IGE		 0.70	ND	-~-	0.0384
47 48	44/47/65	27.017	0.78	(0.240)		0.115
48		~~~		ND		0.0384

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

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ND = Not Detected
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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU4-202305 40262368006 P230529B_07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
49	49/69	26.413	0.77	0.264		0.0768
50	50/53	23,195	0.77	0.0807		0.0768
51	45/51			ND		0.0768
52		25.872	0.76	0.277		0.198
53	50/53	23.195	0.77	(0.0807)		0.0768
54				` NĎ		0.0384
55				ND		0.0384
56				ND		0.0384
57				ND		0.0384
58				ND		0.0384
59	59/62/75			ND		0.115
60				ND		0.0384
61	61/70/74/76			ND		0.154
62	59/62/75			ND		0.115
63	-			ND		0.0384
64				ND		0.0384
65	44/47/65	27.017	0.78	(0.240)		0.115
66				ND		0.0906
67				ND		0.0384
68		===		ND		0.0384
69	49/69	26.413	0.77	(0.264)		0.0768
70	61/70/74/76			ND	***	0.154
71	40/41/71			ND		0.115
72				ND		0.0384
73	43/73			ND		0.0768
74	61/70/74/76			ND		0.154
75	59/62/75			ND		0.115
76	61/70/74/76			ND		0.154
77	01170171170	***		ND		0.0384
78				ND		0.0384
79				ND		0.0384
80				ND		0.0384
81				ND		0.0384
82				ND		0.0384
83				ND		0.0384
84		31.247	1.69	0.0812		0.0384
85	85/116/117			ND		0.115
86	86/87/97/108/119/125			ND		0.230
87	86/87/97/108/119/125			ND		0.230
88	88/91			ND		0.0768
89	30.01			ND		0.0384
90	90/101/113	33.212	1.49	0.328		0.115
91	88/91	33.212	1.43	0.320 ND		0.0768
92	00.01	32.608	1.42	0.0989	,	0.0788
93	93/98/100/102	32.000	1.42	0.0989 ND		0.0364
94	00,00,100,102			ND ND		0.134
95		30.087	1.48	0.255		0.0364
96		30.00 <i>1</i>	1.40	0.233 ND		0.107
00		===		IND		0.0304

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

IUPAC	Co-elutions	DT	Datia	Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125	~~~		ND		0.230
98	93/98/100/102			ND		0.154
99		33.831	1.65	0.164		0.0384
100	93/98/100/102			ND		0.154
101	90/101/113	33.212	1.49	(0.328)	***	0.115
102	93/98/100/102			ND		0.154
103				ND	~~~	0.0384
104				ND		0.0384
105		39.590	1.51	0.0623		0.0384
106				ND		0.0384
107	107/124			ND		0.0768
108	86/87/97/108/119/125			ND		0.230
109				ND		0.0384
110	110/115	35.269	1.53	0.422		0.0768
111				ND		0.0384
112				ND		0.0384
113	90/101/113	33.212	1.49	(0.328)		0.115
114				ND		0.0384
115	110/115	35.269	1.53	(0.422)		0.0768
116	85/116/117			ND		0.115
117	85/116/117			ND		0.115
118	00107107110011101107	38.382	1.59	0.203		0.0599
119	86/87/97/108/119/125			ND		0.230
120				ND		0.0384
121				ND		0.0384
122				ND		0.0384
123	107/101			ND		0.0384
124	107/124			ND		0.0768
125	86/87/97/108/119/125			ND		0.230
126 127				ND ND		0.0384
127	128/166			ND		0.0384
120	129/138/163	 41.602	1.25	ND 0.230		0.0768 0.115
130	129/130/103	41.002	1.25	0.230 ND		0.115
131				ND		0.0384
132		38.483	1.19	0.0851		0.0384
133		30.403	1.19	0.0651 ND		0.0384
134	134/143			ND ND		0.0364
135	135/151	36.229	1.20	0.0868		0.0768
136	133/131	30.22 9	1.20	0.0000 ND		0.0788
137				ND		0.0384
138	129/138/163	41.602	1.25	(0.230)		0.0384
139	139/140	41.002	1.23	(0.230) ND		0.0768
140	139/140			ND ND		0.0768
141	100/170			ND ND		0.0384
142				ND ND		0.0384
143	134/143			ND ND		0.0364
144	10 11 7 10			ND		0.0384
				.,.		0.000.

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU4-202305 40262368006 P230529B_07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.0384
146				ND		0.0384
147	147/149	37.192	1.31	0.183		0.0768
148				ND		0.0384
149	147/149	37.192	1.31	(0.183)		0.0768
150				ND		0.0384
151	135/151	36.229	1.20	(0.0868)		0.0768
152	100/101		1.20	ND		0.0384
153	153/168	40.328	1.23	0.175		0.0768
154	700/100			ND		0.0384
155				ND		0.0384
156	156/157			ND		0.0768
157	156/157			ND		0.0768
158	130/197			ND		0.0384
159				ND		0.0384
160				ND		0.0384
161				ND		0.0384
162				ND		0.0384
163	129/138/163	41.602	1.25	(0.230)		0.115
164	129/130/103	41.002	1.25	(0.230) ND		0.0384
165				ND ND		0.0384
166	128/166			ND		0.0364
167	120/100					0.0768
168	153/168	40.328	1.22	ND (0.175)		0.0364
169	103/100		1.23			0.0788
				ND		0.0384
170 171	171/173			ND		
171	1717173		~==	ND		0.0768
173	171/173			ND ND		0.038 4 0.0768
	171/1/3					0.0768
174 175				ND		0.0384
175			·	ND		0.0384
				ND		0.0304
177 178				ND		0.0384
				ND		0.0384
179	180/193			ND		0.0384
180	180/193			ND ND		0.0768
181				ND		0.0384
182	400/405			ND		0.0384
183	183/185			ND		0.0768
184	4004405			ND		0.0384
185	183/185			ND		0.0768
186				ND		0.0384
187				ND		0.0384
188				ND		0.0384
189				ND		0.0384
190				ND		0.0384
191				ND		0.0384
192				ND		0.0384

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.0768
194				ND		0.0384
195				ND		0.0384
196				ND		0.0384
197	197/200			ND		0.0768
198	198/199			ND		0.0768
199	198/199			ND	****	0.0768
200	197/200			ND		0.0768
201				ND		0.0384
202				ND		0.0384
203				ND		0.0384
204				ND		0.0384
205				ND		0.0384
206				ND		0.0384
207				ND		0.0384
208				ND		0.0384
209				ND		0.0384

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

Congener Group	Concentration ng/L	
 Total Manachlara Pinhanyla	ND	
Total Monochloro Biphenyls Total Dichloro Biphenyls	ND ND	
Total Trichloro Biphenyls	ND ND	
Total Tetrachloro Biphenyls	0.914	
Total Pentachloro Biphenyls	1.62	
Total Hexachloro Biphenyls	0.760	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	3.29	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename

NR-SW-BKG1-202305 40262368007 P230529B_08 Injected By BAL 1030 mL

Total Amount Extracted % Moisture Dry Weight Extracted **ICAL ID**

NA P230529B02 CCal Filename(s) P230529B 01 Method Blank ID BLANK-106282

NA

Water Matrix Dilution NA

Collected 05/16/2023 14:10 05/20/2023 18:45 Received Extracted 05/23/2023 12:15 Analyzed 05/29/2023 23:25

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2-C-DICB 13C-2,2'-DICB 13C-2,2',6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-TrCB 13C-3,4,4'-TrCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3,3',4,4'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB 13C-2,2',3,4',5,6,6'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,3,3',4,4',5,5',6,6'-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205	10.182 12.998 13.303 20.404 17.143 28.223 20.766 35.377 35.950 26.908 39.572 38.918 38.365 38.030 42.742 32.995 45.816 44.659 49.119 38.918 51.697 44.407 54.305	2.99 2.96 1.48 1.57 1.03 1.07 0.78 0.75 1.52 1.55 1.55 1.55 1.54 1.58 1.25 1.27 1.26 1.26 1.03 1.04 0.89 0.88	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.67 1.80 2.48 1.85 2.54 1.29 1.65 1.40 1.34 1.77 1.15 1.11 1.15 2.14 0.973 2.32 2.24 1.16 1.25 2.49 1.51 1.91	84 90 124 93 127 65 82 70 67 88 57 55 57 49 116 56 58 63 125 75 95
13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	206 208 209	56.051 51.223 57.689	0.79 0.78 0.71	2.0 2.0 2.0	2.02 2.27 2.08	101 113 104
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.860 35.996 42.037	1.04 1.55 1.07	2.0 2.0 2.0	1.32 1.60 1.90	66 80 95
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.773 25.856 33.196 41.568 53.810	1.54 0.79 1.56 1.22 0.88	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

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REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0387
2				ND		0.0387
3				ND		0.0387
4				ND		0.0387
5			****	ND		0.0387
5				ND	***	0.0387
7				ND		0.0387
8		~~~		ND		0.0387
9				ND		0.0387
10				ND		0.0387
11				ND		0.379
12	12/13			ND		0.0774
13	12/13			ND		0.0774
14	12,10			ND		0.0387
15				ND		0.0511
16				ND		0.0387
17				ND		0.0387
18	18/30			ND		0.0337
19	10/30	***		ND		0.0387
20	20/28			ND		0.200
21	21/33			ND ND		0.209
22	21/33	~~		ND		0.209
23				ND		0.0387
23 24		•==		ND ND		0.0387
25						
26	26/29			ND ND		0.0387 0.0774
27	20/29	•=-		ND		0.0774
28	20/28			ND ND		0.200
29	26/29			ND ND		0.200
30	18/30			ND		0.0774
31	10/30			ND ND		0.201
32						
33	21/33			ND ND	~~~	0.0387 0.209
34	21/33					0.209
3 4 35				ND ND		
36						0.0387
36 37				ND ND		0.0387
3 <i>1</i> 38		w = w		ND ND		0.0820
36 39				ND ND		0.0387
39	40/44/74			ND		0.0387
40	40/41/71			ND		0.116
41	40/41/71			ND		0.116
42	40/70			ND		0.0387
43	43/73	07.000		ND		0.0774
44	44/47/65	27.032	0.81	0.117		0.116
45	45/51			ND		0.0774
46	4.4.47.105			ND		0.0387
47	44/47/65	27.032	0.81	(0.117)		0.116
48				ND		0.0387

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

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IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69	26.428	0.79	0.111	~~~	0.0774
50	50/53			ND		0.0774
51	45/51			ND		0.0774
52				ND		0.200
53	50/53			ND		0.0774
54				ND		0.0387
55				ND		0.0387
56				ND		0.0387
57				ND		0.0387
58				ND		0.0387
59	59/62/75			ND		0.116
60	30.0			ND		0.0387
61	61/70/74/76			ND		0.155
62	59/62/75		~~~	ND		0.116
63	00/02/10			ND		0.0387
64				ND		0.0387
65	44/47/65	27.032	0.81	(0.117)		0.116
66	1 17 17700	27.002		ND		0.0913
67				ND		0.0387
68			***	ND		0.0387
69	49/69	26.428	0.79	(0.111)		0.0774
70	61/70/74/76	20.720	0.73	ND		0.155
71	40/41/71			ND ND		0.116
72	40/41//1			ND		0.0387
73	43/73			ND		0.0774
74	61/70/74/76			ND		0.155
75	59/62/75			ND		0.116
76	61/70/74/76			ND		0.155
77	01110114110			ND		0.0387
78				ND		0.0387
79				ND		0.0387
80				ND ND		0.0387
81				ND		0.0387
82				ND		0.0387
83				ND		0.0387
84				ND		0.0387
85	85/116/117			ND		0.0367
86	86/87/97/108/119/125			ND		0.110
87	86/87/97/108/119/125			ND ND		0.232
88	88/91					
89	00/91			ND ND		0.0774
90	90/101/113		4.40	ND 0.424		0.0387
		33.227	1.46	0.124		0.116
91	88/91			ND		0.0774
92	02/02/400/402			ND		0.0387
93	93/98/100/102			ND		0.155
94				ND		0.0387
95 06				ND		0.108
96				ND		0.0387

Conc = Concentration

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-BKG1-202305 40262368007 P230529B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
97	86/87/97/108/119/125			ND		0.232
98	93/98/100/102			ND		0.155
99		33.830	1.43	0.0663		0.0387
100	93/98/100/102			ND		0.155
101	90/101/113	33.227	1.46	(0.124)		0.116
102	93/98/100/102			` NĎ		0.155
103				ND		0.0387
104				ND		0.0387
105				ND		0.0387
106				ND		0.0387
107	107/124			ND		0.0774
108	86/87/97/108/119/125			ND		0.232
109				ND		0.0387
110	110/115	35.269	1.53	0.161		0.0774
111				ND		0.0387
112				ND		0.0387
113	90/101/113	33.227	1.46	(0.124)		0.116
114				` NĎ		0.0387
115	110/115	35.269	1.53	(0.161)		0.0774
116	85/116/117			NĎ		0.116
117	85/116/117			ND		0.116
118		38.382	1.46	0.0871		0.0604
119	86/87/97/108/119/125			ND		0.232
120				ND		0.0387
121				ND		0.0387
122				ND		0.0387
123				ND		0.0387
124	107/124			ND		0.0774
125	86/87/97/108/119/125			ND	•	0.232
126				ND		0.0387
127				ND		0.0387
128	128/166			ND		0.0774
129	129/138/163			ND		0.116
130				ND		0.0387
131		~==		ND		0.0387
132				ND		0.0387
133				ND		0.0387
134	134/143			ND		0.0774
135	135/151			ND		0.0774
136				ND		0.0387
137				ND		0.0387
138	129/138/163			ND		0.116
139	139/140			ND		0.0774
140	139/140			ND	***	0.0774
141				ND		0.0387
142				ND		0.0387
143	134/143			ND		0.0774
144				ND		0.0387

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145				ND		0.0387
146				ND		0.0387
147	147/149	37.208	1.31	0.0795		0.0774
148				ND		0.0387
149	147/149	37.208	1.31	(0.0795)		0.0774
150				ND		0.0387
151	135/151			ND		0.0774
152				ND		0.0387
153	153/168			ND		0.0774
154				ND		0.0387
155				ND		0.0387
156	156/157			ND		0.0774
157	156/157		***	ND		0.0774
158	100/101			ND		0.0387
159				ND		0.0387
160				ND		0.0387
161				ND		0.0387
162		444		ND		0.0387
163	129/138/163			ND ND		0.0367
164	129/130/103	***		ND ND		0.0387
165				ND ND		0.0387
166	128/166					
167	120/100			ND		0.0774
168	153/168			ND		0.0387
	100/100	•••		ND		0.0774
169				ND		0.0387
170 171	171/173			ND		0.0387
171	171/1/3			ND		0.0774
172	171/173		~~-	ND		0.0387
	171/1/3			ND		0.0774
174 175				ND		0.0387
175			~~~	ND		0.0387
176				ND		0.0387
177				ND		0.0387
178				ND		0.0387
179	400/400			ND		0.0387
180	180/193			ND		0.0774
181				ND		0.0387
182	100/10#			ND		0.0387
183	183/185			ND		0.0774
184				ND		0.0387
185	183/185			ND		0.0774
186				ND		0.0387
187				ND		0.0387
188				ND		0.0387
189				ND		0.0387
190				ND		0.0387
191				ND		0.0387
192				ND	***	0.0387

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-BKG1-202305 40262368007 P230529B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.0774
194				ND		0.0387
195				ND		0.0387
196			4	ND	***	0.0387
197	197/200		****	ND		0.0774
198	198/199			ND		0.0774
199	198/199			ND		0.0774
200	197/200			ND		0.0774
201				ND		0.0387
202				ND		0.0387
203				ND		0.0387
204				ND		0.0387
205				ND		0.0387
206				ND		0.0387
207				ND		0.0387
208				ND		0.0387
209				ND		0.0387

Conc = Concentration EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits Nn = Value obtained from additional analyses

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	0.228	
Total Pentachloro Biphenyls	0.439	
Total Hexachloro Biphenyls	0.0795	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	0.746	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

NR-SW-OU3-202305 40262368008 P230529B_09 BAL

Total Amount Extracted % Moisture

1030 mL NA NA

Matrix Water Dilution NA Collected

Received

05/16/2023 15:10

Dry Weight Extracted ICAL ID CCal Filename(s) Method Blank ID

P230529B02 P230529B 01 BLANK-106282

05/20/2023 18:45 Extracted 05/23/2023 12:15 05/30/2023 00:28 Analyzed

PCB Isomer	IUPAC	RT.	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4',5-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4'-FeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',5-PeCB 13C-2,2',4,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.137 12.964 13.269 20.404 17.122 28.208 20.751 35.362 35.934 26.909 39.556 38.918 38.013 42.725 32.979 45.816 44.642 49.103 38.918 51.676 44.407 54.284 56.051 57.689	2.99 3.09 1.56 1.56 1.56 1.02 1.01 0.78 0.79 0.80 1.58 1.62 1.57 1.58 1.56 1.50 1.23 1.23 1.27 1.24 1.02 1.04 0.91 0.90 0.80 0.80 0.74	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.48 1.61 2.23 1.80 2.23 1.32 1.52 1.38 1.32 1.82 1.09 1.11 1.12 1.11 0.910 2.47 2.22 1.17 1.25 2.33 1.49 1.71 1.80 2.04 2.18 2.11	74 80 112 90 112 66 76 69 69 55 56 55 46 124 55 58 62 116 74 85 90 102 109 105
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.981 42.021	1.04 1.53 1.06	2.0 2.0 2.0	1.28 1.57 1.94	64 78 97
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.751 25.841 33.181 41.568 53.810	1.56 0.78 1.53 1.25 0.90	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU3-202305 40262368008 P230529B 09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1		10.159	2.89	0.225		0.0387
2				ND		0.0387
3				ND		0.0387
4		13.292	1.43	1.24		0.0387
5				ND		0.0387
4 5 6 7		16.259	1.51	0.175		0.0387
7		15.983	1.53	0.0738		0.0387
8		16.790	1.40	0.0883		0.0387
9		10.100		ND		0.0387
10				ND		0.0387
11				ND		0.379
12	12/13			ND	•••	0.0774
13	12/13			ND		0.0774
14	12/13			ND		0.0387
15		20.404	1.50	0.108		0.0511
16		20.360	0.96	0.0436		0.0387
17		19.851	0.99	1.08		0.0387
18	18/30	19.365	1.01	0.275		0.0387
19	10/30	17.143	1.03	0.935		0.0387
20	20/28	23.861	0.99	0.450		0.200
21		23.001				
22	21/33			ND ND		0.209 0.147
23				ND ND		0.0387
23 24				ND ND		0.0387
24 25		23.180	1.03	0.641		0.0387
25 26	26/29	23.160	1.03	1.22		0.0367
27	20/29	20.084	1.00	0.130		0.0774
28	20/28	23.861	0.99	(0.450)		0.200
20 29	26/29	23.001				0.200
30		22.917	1.05	(1.22)		
30 31	18/30	19.365	1.01	(0.275)		0.0774
32		23.536	1.02	0.230		0.201
ა∠ ვვ	21/33	20.968	1.02	0.444		0.0387 0.209
33	21/33			ND ND		
34 35				ND		0.0387
30 36				ND		0.0387
36				ND		0.0387
37				ND		0.0821
38				ND		0.0387
39	40/44/74			ND		0.0387
40	40/41/71	28.069	0.77	0.913		0.116
41	40/41/71	28.069	0.77	(0.913)		0.116
42	10.50	27.527	0.79	0.509		0.0387
43	43/73	26.042	0.74	0.172		0.0774
44	44/47/65	27.017	0.77	2.73		0.116
45	45/51	24.046	0.75	0.725		0.0774
46		24.294	0.74	0.224		0.0387
47	44/47/65	27.017	0.77	(2.73)		0.116
48				ND		0.0387

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Client Sample ID Lab Sample ID Filename

NR-SW-OU3-202305 40262368008 P230529B 09

	· -	000202_00				
IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69	26.413	0.78	3.84		0.0774
50	50/53	23.211	0.77	0.982		0.0774
51	45/51	24.046	0.75	(0.725)		0.0774
52	16761	25.872	0.78	5.10		0.200
53	50/53	23.211	0.77	(0.982)		0.0774
54	30/33	20.767	0.77	0.0849		0.0387
55		20.707	0.79	0.0049 ND		0.0387
56		32.097	0.73	0.0926		0.0387
57						0.0387
5/		29.978	0.77	0.173		0.0387
58				ND		0.0387
59	59/62/75	27.388	0.75	0.163		0.116
60				ND		0.0387
61	61/70/74/76	30.999	0.77	0.865		0.155
62	59/62/75	27.388	0.75	(0.163)		0.116
63		30.690	0.84	0.0958		0.0387
64		28.301	0.78	0.323		0.0387
65	44/47/65	27.017	0.77	(2.73)		0.116
66		31.386	0.73	0.636		0.0914
67		30.396	0.80	0.0627		0.0387
68		29.514	0.87	0.128		0.0387
69	49/69	26.413	0.78	(3.84)		0.0774
70	61/70/74/76	30.999	0.77	(0.865)		0.155
71	40/41/71	28.069	0.77	(0.913)		0.116
71 72	40/41/71	29.205	0.76	0.178		0.0387
	43/73	29.203 26.042	0.76			0.0367
73		20.042		(0.172)		
74	61/70/74/76	30.999	0.77	(0.865)		0.155
75	59/62/75	27.388	0.75	(0.163)		0.116
76	61/70/74/76	30.999	0.77	(0.865)		0.155
77				ND		0.0387
78				ND		0.0387
79				ND		0.0387
30				ND		0.0387
31				ND		0.0387
32		35.594	1.55	0.126		0.0387
33		33.691	1.51	0.345		0.0387
34		31.247	1.50	0.864		0.0387
35	85/116/117	35.099	1.60	0.446		0.116
36	86/87/97/108/119/125	34.341	1.51	1.57		0.232
37	86/87/97/108/119/125	34.341	1.51	(1.57)		0.232
38	88/91	31.030	1.56	0.832		0.0774
39	00/01			ND		0.0387
90	90/101/113	33.211	1.53	2.85		0.116
90 91	88/91	31.030	1.55	(0.832)		0.0774
91 92	00/8/	31.030	1.50			
	02/09/400/400	32.593	1.50	1.52		0.0387
93	93/98/100/102	30.365	1.52	0.315		0.155
94		29.622	1.56	0.158		0.0387
95		30.086	1.53	2.86		0.108
96		27.311	1.41	0.0529		0.0387
50		21.311	1.41	0.0028		0.0307

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

97 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 98 93/98/100/102 30.365 1.52 (0.315) 0.155 99 93/98/100/102 30.365 1.52 (0.315) 0.155 100 93/98/100/102 30.365 1.52 (0.315) 0.155 101 90/101/113 33.211 1.53 (2.85) 0.116 102 93/98/100/102 30.365 1.52 (0.315) 0.155 103 32.94 0 ND 0.155 103 29.406 1.56 0 ND 0.0387 104	IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
98 93/98/100/102 30.365 1.52 (0.315) 0.155 99 33.830 1.56 1.52 (0.315) 0.0387 100 93/98/100/102 30.365 1.52 (0.315) 0.155 101 90/101/113 33.211 1.53 (2.85) 0.116 102 93/98/100/102 30.385 1.52 (0.315) 0.155 103 29.406 1.56 0.122 0.0387 104	07	06/07/07/400/440/405	24 244	1 51			
99			34.341	1.51	(1.57)		0.232
100 93/98/100/102 30.365 1.52 (0.315)		93/96/100/102	30.303	1.52	(0.315)		
101 90/101/113 33.211 1.53 (2.85) 0.116 102 93/98/100/102 30.385 1.52 (0.315) 0.155 103 29.406 1.56 0.122 0.0387 104 ND 0.0387 105 39.590 1.51 0.472 0.0387 106 ND 0.0387 107 107/124 ND 0.0387 108 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 109 37.929 1.51 0.245 0.0387 110 110/115 35.269 1.55 4.27 0.0774 111 ND 0.0387 112 ND 0.0387 113 90/101/113 33.211 1.53 (2.85) 0.116 114 ND 0.0387 115 110/115 35.269 1.55 (4.27) 0.0774 116 85/116/117 35.099 1.60 (0.446) 0.116 117 85/116/117 35.099 1.60 (0.446) 0.116 118 85/116/117 35.099 1.60 (0.446) 0.116 119 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 120 ND 0.0387 121 ND 0.0387 122 ND 0.0387 123 107/124 ND 0.0387 124 107/124 ND 0.0387 125 88/87/97/108/119/125 34.341 1.51 (1.57) 0.232 120 ND 0.0387 121 ND 0.0387 122 ND 0.0387 123 124 15.1 1.58 1.25 1.97 0.116 130 ND 0.0387 127 ND 0.0387 128 128/166 42.876 1.31 0.353 0.0774 129 129/138/163 41.585 1.25 1.97 0.116 130 ND 0.0387 131 ND 0.0387 132 ND 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 140 139/140 ND 0.0387 131 ND 0.0387 142 ND 0.0387		02/02/400/402	33.830	1.50	1.31		
102 93/98/100/102 30.365 1.52 (0.315) 0.155 103 29.406 1.56 0.122 0.0387 104 ND 0.0387 105 39.590 1.51 0.472 0.0387 106 ND 0.0387 107 107/124 ND 0.0774 108 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 109 37.929 1.51 0.245 0.0387 110 110/115 35.269 1.55 4.27 0.0774 111 ND 0.0387 113 90/101/113 33.211 1.53 (2.85) 0.116 114 ND 0.0387 115 110/115 35.269 1.55 (4.27) 0.0387 116 85/116/117 35.099 1.60 (0.446) 0.116 117 85/116/117 35.099 1.60 (0.446) 0.116 118 85/116/117 35.099 1.60 (0.446) 0.116 119 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 120 ND 0.0387 121 ND 0.0387 122 ND 0.0387 124 107/124 ND 0.0387 125 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 126 ND 0.0387 127 ND 0.0387 128 128/166 42.876 1.31 0.353 ND 0.0387 130 129/138/163 41.585 1.25 1.97 0.0387 131 ND 0.0387 132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 140 139/140 ND 0.0387 139 139/140 ND 0.0387 143 134/143 37.410 1.25 0.226 0.00774 141 ND 0.0387 143 134/143 37.410 1.27 0.205 0.0774 141 ND 0.0387 144 ND 0.0387 145 1.29/138/163 41.585 1.25 (1.97) 0.0387 144 ND 0.0387 139 140 ND 0.0387 139 140 ND 0.0387 139 140 ND 0.0387 140 129/138/163 41.585 1.25 (1.97) 0.016 139 139/140 ND 0.0387 144 1.449 1.17 0.0997 0.0387 145 1.25 0.226 0.0387 146 1.29/138/163 41.585 1.25 (1.97) 0.016 149 1.29/138/163 41.585 1.25 (1.97) 0.016 140 1.39/140 ND 0.0387 131 ND 0.0387 132 ND 0.00387 133 129/140 ND 0.00387 134 1.29/138/163 41.585 1.25 (1.97) 0.016 139 1.39/140 ND 0.0387 131 ND 0.00387 132 ND 0.00387 133 1.29/138/163 41.585 1.25 (1.				1.52			
103			33.211	1.53			
104		93/98/100/102					
106	103						
106						***	0.0387
107					0.472		0.0387
108 86/87/97/108/119/125 34,341 1,51 (1,57)					ND		0.0387
109							
110		86/87/97/108/119/125			(1.57)		0.232
111					0.245		
112	110	110/115	35.269	1.55	4.27		0.0774
112	111						0.0387
113 90/101/113 33.211 1.53 (2.85) 0.116 114 ND 0.0387 115 110/115 35.269 1.55 (4.27) 0.0774 116 85/116/117 35.099 1.60 (0.446) 0.116 117 85/116/117 35.099 1.60 (0.446) 0.116 118 86/87/97/108/119/125 34.341 1.51 (1.57) 0.0604 119 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 120 ND 0.0387 121 ND 0.0387 122 ND 0.0387 123 107/124 ND 0.0774 125 86/87/97/108/119/125 34.341 1.51 (1.57)	112				ND		0.0387
114		90/101/113	33.211	1.53			
115 110/115 35,269 1,55 (4,27) 0,0774 116 85/116/117 35,099 1,60 (0,446) 0,116 118 38,116/117 35,099 1,60 (0,446) 0,116 118 38,382 1,51 1,58 0,0604 119 86/87/97/108/119/125 34,341 1,51 (1,57) 0,232 120 ND 0,0387 121 ND 0,0387 122 ND 0,0387 123 107/124 ND 0,0387 124 107/124 ND 0,0387 124 107/124 ND 0,0387 125 86/87/97/108/119/125 34,341 1,51 (1,57) 0,0387							
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117 85/116/117 35.099 1.60 (0.446) 0.116 118 38.382 1.51 1.58 0.0604 119 86/87/97/108/119/125 34.341 1.51 (1.57) 0.0387 121 ND 0.0387 122 ND 0.0387 123 ND 0.0387 124 107/124 ND 0.0387 125 86/87/97/108/119/125 34.341 1.51 (1.57) 0.0387 126 ND 0.0387 127 ND 0.0387 128 128/166 42.876 1.31 0.353 0.0774 129 129/138/163 41.585 1.25 1.97 0.0387 131 ND 0.0387 133 39.002 1.37<							
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119 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 120 ND 0.0387 121 ND 0.0387 122 ND 0.0387 123 ND 0.0387 124 107/124 ND 0.0774 125 86/87/97/108/119/125 34.341 1.51 (1.57) 0.0774 125 86/87/97/108/119/125 34.341 1.51 (1.57) 0.0374 126 ND 0.0387 127 ND 0.0387 128 128/166 42.876 1.31 0.353 0.0774 129 129/138/163 41.585 1.25 1.97 0.116 130 40.914 1.24 0.186 0.0387 131 134/143		03/110/11/	38.383	1.00			
120		96/97/07/109/110/125					
121		60/6//9//100/119/125					
122							0.0367
123	121						0.0307
124 107/124 ND 0.0774 125 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 126 ND 0.0387 127 ND 0.0387 128 128/166 42.876 1.31 0.353 0.0774 129 129/138/163 41.585 1.25 1.97 0.116 130 40.914 1.24 0.186 0.0387 131 ND 0.0387 132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 138 129/138/163 41.585							
125 86/87/97/108/119/125 34.341 1.51 (1.57) 0.232 126 ND 0.0387 127 ND 0.0387 128 128/166 42.876 1.31 0.353 0.0774 129 129/138/163 41.585 1.25 1.97 0.116 130 40.914 1.24 0.186 0.0387 131 ND 0.0387 132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0387		107/101					
126 ND 0.0387 127 ND 0.0387 128 128/166 42.876 1.31 0.353 0.0774 129 129/138/163 41.585 1.25 1.97 0.116 130 40.914 1.24 0.186 0.0387 131 ND 0.0387 132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97)							
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128 128/166 42.876 1.31 0.353 0.0774 129 129/138/163 41.585 1.25 1.97 0.116 130 40.914 1.24 0.186 0.0387 131 ND 0.0387 132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.016 139 139/140 ND 0.0774 141 40.512 1.25 0.226 0.0387 143 134/143							
129 129/138/163 41.585 1.25 1.97 0.116 130 40.914 1.24 0.186 0.0387 131 ND 0.0387 132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27		100/100					0.0387
130 40.914 1.24 0.186 0.0387 131 ND 0.0387 132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774				1.31	0.353		
131 ND 0.0387 132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774		129/138/163		1.25			
132 38.483 1.18 0.912 0.0387 133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0387 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774							0.0387
133 39.002 1.37 0.0813 0.0387 134 134/143 37.410 1.27 0.205 0.0774 135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0387 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774							
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135 135/151 36.228 1.28 1.02 0.0774 136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0387 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774			39.002	1.37			
136 33.722 1.18 0.401 0.0387 137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0774 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774							
137 41.149 1.17 0.0997 0.0387 138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0774 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774	135	135/151	36.228	1.28	1.02		0.0774
138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0774 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774	136		33.722	1.18	0.401		0.0387
138 129/138/163 41.585 1.25 (1.97) 0.116 139 139/140 ND 0.0774 140 139/140 ND 0.0774 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774	137		41.149				0.0387
139 139/140 ND 0.0774 140 139/140 ND 0.0774 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774		129/138/163					0.116
140 139/140 ND 0.0774 141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774							
141 40.512 1.25 0.226 0.0387 142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774							
142 ND 0.0387 143 134/143 37.410 1.27 (0.205) 0.0774		. 55. 1 10					
143 134/143 37.410 1.27 (0.205) 0.0774							0.0007
		134/143					0.0307
	144	10 1/1 10	36.832	1.17	0.0565		0.0387

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU3-202305 40262368008 P230529B 09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145				ND		0.0387
146		39.673	1.29	0.368		0.0387
147	147/149	37.191	1.22	2.06		0.0774
148				ND		0.0387
149	147/149	37.191	1.22	(2.06)		0.0774
150				NĎ		0.0387
151	135/151	36.228	1.28	(1.02)		0.0774
152				` NĎ		0.0387
153	153/168	40.311	1.27	1.35		0.0774
154		36.538	1.34	0.0743		0.0387
155				ND		0.0387
156	156/157	45.833	1.22	0.263		0.0774
157	156/157	45.833	1.22	(0.263)		0.0774
158	100/10/	42.004	1.26	0.165		0.0387
159				ND		0.0387
160				ND		0.0387
161				ND		0.0387
162				ND ND		0.0387
163	129/138/163	41.585	1.25	(1.97)		0.116
164	129/130/103	41.266	1.23			0.0387
				0.136		
165	400/400	40.070	4.04	ND (0.050)		0.0387
166	128/166	42.876	1.31	(0.353)		0.0774
167	450/400	44.659	1.14	0.0842		0.0387
168	153/168	40.311	1.27	(1.35)		0.0774
169				ND		0.0387
170		48.533	1.03	0.249		0.0387
171	171/173	44.961	1.04	0.0829		0.0774
172		46.587	0.99	0.0473		0.0387
173	171/173	44.961	1.04	(0.0829)		0.0774
174		43.837	1.07	0.227		0.0387
175				ND		0.0387
176		40.160	1.03	0.0392		0.0387
177		44.290	1.08	0.194		0.0387
178		42.038	0.93	0.0913		0.0387
179		39.254	1.01	0.153		0.0387
180	180/193	47.258	1.01	0.423		0.0774
181				ND		0.0387
182				ND		0.0387
183	183/185	43.636	1.05	0.144		0.0774
184				ND		0.0387
185	183/185	43.636	1.05	(0.144)		0.0774
186				ND		0.0387
187		42.977	1.04	0.349		0.0387
188		42.011	1.04	ND		0.0387
189				ND		0.0387
190		49.069	0.98	0.0539		0.0387
190		49.009	0.96	0.0559 ND		0.0387
192				ND		0.0387

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ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

Pace Analytical[™]

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.258	1.01	(0.423)		0.0774
194		53.831	0.86	Ò.0966		0.0387
195		51.482	1.01	0.0410		0.0387
196		49.924	0.89	0.0510		0.0387
197	197/200			ND		0.0774
198	198/199	49.237	0.82	0.135		0.0774
199	198/199	49.237	0.82	(0.135)		0.0774
200	197/200			` NĎ		0.0774
201				ND		0.0387
202				ND		0.0387
203		50.125	0.94	0.0699	***	0.0387
204				ND		0.0387
205				ND		0.0387
206				ND	***	0.0387
207				ND		0.0387
208				ND		0.0387
209				ND		0.0387

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008

P230529B_09

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	0.225	
Total Dichloro Biphenyls	1.68	
Total Trichloro Biphenyls	5.45	
Total Tetrachloro Biphenyls	18.0	
Total Pentachloro Biphenyls	19.9	
Total Hexachloro Biphenyls	10.0	
Total Heptachloro Biphenyls	2.05	
Total Octachloro Biphenyls	0.394	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	57.8	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By **Total Amount Extracted**

% Moisture Dry Weight Extracted ICAL ID CCal Filename(s)

Method Blank ID

P230529B_10 BAL 1040 mL NA NA P230529B02 P230529B 01 BLANK-106282

40262368009

NR-SW-OU2-202305

Matrix Water Dilution NA

Collected 05/16/2023 16:15 05/20/2023 18:45 Received 05/23/2023 12:15 Extracted 05/30/2023 01:31 Analyzed

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-TrCB 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-3,3',4,4',5,5'-HxCB 13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB 13C-2,2',3,4',5,6,6'-HpCB 13C-2,2',3,4',5,6,6'-DeCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6-NoCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208	10.159 12.975 13.280 20.404 17.132 28.207 20.750 35.361 35.934 26.908 39.572 38.918 38.365 38.029 42.742 32.994 45.816 44.642 49.102 38.918 51.697 44.407 54.283 56.050 51.201	2.87 3.04 1.49 1.52 0.98 1.05 0.80 0.77 0.81 1.57 1.61 1.58 1.61 1.49 1.28 1.29 1.28 1.27 1.04 1.06 0.91 0.89 0.78	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.58 1.67 2.31 1.75 2.39 1.25 1.50 1.35 1.28 1.82 1.07 1.02 1.09 1.08 0.901 2.42 2.10 1.13 1.21 2.28 1.37 1.64 1.74 1.96 2.04	79 84 115 87 120 63 75 68 64 91 53 51 54 45 121 52 56 60 114 69 82 87 98 102
13C-DeCB Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB	209 28 111	57.689 23.845 35.996	0.68 1.03 1.55	2.0 2.0 2.0	2.13 1.16 1.50	106 58 75
13C-2,2',3,3',5,5',6-HpCB Recovery Standards	178	42.020	1.04	2.0	1.75	87
13C-2,5-DICB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.762 25.856 33.195 41.568 53.809	1.54 0.80 1.58 1.24 0.87	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

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B = Less than 10 times higher than method blank level

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

		_		Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1	*	10.170	2.90	0.290		0.0383
2				ND		0.0383
3				ND		0.0383
4		13.303	1.47	1.81		0.0383
5				ND		0.0383
6		16.270	1.47	0.194		0.0383
7		15.993	1.58	0.0941		0.0383
8		16.800	1.53	0.161		0.0383
9				ND		0.0383
10				ND		0.0383
11				ND		0.376
12	12/13			ND		0.0767
13	12/13			ND		0.0767
14				ND		0.0383
15		20.426	1.60	0.244		0.0506
16		20.360	1.08	0.0798		0.0383
17		19.840	1.03	1.88		0.0383
18	18/30	19.365	1.02	0.323		0.0767
19		17.154	0.99	1.56		0.0383
20	20/28	23.860	1.02	0.753		0.198
21	21/33			ND		0.207
22				ND		0.146
23		 _		ND		0.0383
24				ND		0.0383
25		23.195	1.01	0.638		0.0383
26	26/29	22.916	0.99	1.24		0.0767
27		20.094	1.01	0.103		0.0383
28	20/28	23.860	1.02	(0.753)		0.198
29	26/29	22.916	0.99	(1.24)		0.0767
30	18/30	19.365	1.02	(0.323)		0.0767
31		23.535	1.04	0.288		0.199
32		20.983	1.01	0.784		0.0383
33	21/33			ND		0.207
34		***		ND		0.0383
35				ND		0.0383
36		*		ND		0.0383
37				ND		0.0813
38				ND		0.0383
39				ND		0.0383
40	40/41/71	28.068	0.78	1.41		0.115
41	40/41/71	28.068	0.78	(1.41)		0.115
42		27.527	0.76	0.748		0.0383
43	43/73	26.042	0.74	0.237		0.0767
44	44/47/65	27.031	0.76	4.27		0.115
45	45/51	24.061	0.78	1.25		0.0767
46		24.309	0.79	0.337		0.0383
47	44/47/65	27.031	0.76	(4.27)		0.115
48	.,,==	26.722	0.81	0.0395		0.0383
			J. J.	0.000		

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69	26.413	0.76	4.71		0.0767
50	50/53	23.210	0.77	1.32		0.0767
51	45/51	24.061	0.78	(1.25)		0.0767
52		25.871	0.77	6.03		0.198
53	50/53	23.210	0.77	(1.32)		0.0767
54	33.33	20.766	0.74	0.144		0.0383
55				ND		0.0383
56		32.082	0.79	0.139		0.0383
57		29.962	0.74	0.158		0.0383
58		20.002		ND		0.0383
59	59/62/75	27.387	0.79	0.216		0.000
60	33/02/13	27.507	0.79	ND		0.0383
61	61/70/74/76	31.014	0.79	1.44		0.0363
62	59/62/75	27.387	0.79	(0.216)		0.115
63	59/02/75	30.689				
		30.089	0.79	0.142		0.0383
64 65	44147105	28.300	0.78	0.444		0.0383
65	44/47/65	27.031	0.76	(4.27)		0.115
66		31.385	0.76	1.11		0.0905
67		30.411	0.79	0.0753		0.0383
68		29.529	0.78	0.163		0.0383
69	49/69	26.413	0.76	(4.71)		0.0767
70	61/70/74/76	31.014	0.79	(1.44)		0.153
71	40/41/71	28.068	0.78	(1.41)	'	0.115
72		29.204	0.77	0.204		0.0383
73	43/73	26.042	0.74	(0.237)		0.0767
74	61/70/74/76	31.014	0.79	(1.44)		0.153
75	59/62/75	27.387	0.79	(0.216)		0.115
76	61/70/74/76	31.014	0.79	`(1.44)		0.153
77		35.965	0.83	0.0601		0.0383
78				ND		0.0383
79		34.371	0.79	0.0621		0.0383
80				ND		0.0383
81				ND		0.0383
82		35.609	1.61	0.184		0.0383
83		33.706	1.60	0.434		0.0383
84		31.246	1.54	1.17		0.0383
85	85/116/117	35.114	1.63	0.645		0.115
86	86/87/97/108/119/125	34.356	1.57	2.45		0.230
87	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
88	88/91	31.029	1.52	1.16		0.0767
89	00/31	31.029	1.52	ND		0.0383
90	90/101/113	33.211	1.57	4.55	•••	0.0363
91	88/91	33.211	1.07			
92	00/81	31.029	1.52	(1.16)		0.0767
	03/09/400/403	32.592	1.56	1.89		0.0383
93	93/98/100/102	30.349	1.54	0.444		0.153
94		29.622	1.56	0.206		0.0383
95		30.101	1.50	3.99		0.107
96		27.310	1.51	0.0758		0.0383

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
97	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
98	93/98/100/102	30.349	1.54	(0.444)		0.153
99		33.845	1.58	2.19		0.0383
100	93/98/100/102	30.349	1.54	(0.444)		0.153
101	90/101/113	33.211	1.57	(4.55)		0.115
102	93/98/100/102	30.349	1.54	(0.444)		0.153
103	00,00,100,102	29.405	1.54	0.147		0.0383
104				ND		0.0383
105		39.589	1.48	0.765		0.0383
106			1.40	ND		0.0383
107	107/124	37.677	1.46	0.107		0.0767
108	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
109	00/07/37/100/119/120	37.929	1.58	0.375		0.0383
110	110/115	35.269	1.57	6.01		0.0767
111	110/115	33.209	1.57	ND		0.0383
112				ND		0.0383
113	00/404/442					0.0363
	90/101/113	33.211	1.57	(4.55)		
114	440/445		4.57	ND (C. O.1)		0.0383
115	110/115	35.269	1.57	(6.01)		0.0767
116	85/116/117	35.114	1.63	(0.645)		0.115
117	85/116/117	35.114	1.63	(0.645)		0.115
118	00/05/05/100/1/06/105	38.381	1.46	2.85		0.0598
119	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
120		36.506	1.48	0.0420		0.0383
121				ND		0.0383
122				ND		0.0383
123				ND		0.0383
124	107/124	37.677	1.46	(0.107)		0.0767
125	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
126				ND		0.0383
127				ND		0.0383
128	128/166	42.893	1.21	0.546		0.0767
129	129/138/163	41.601	1.23	2.99		0.115
130		40.931	1.22	0.263		0.0383
131		38.029	1.31	0.0461		0.0383
132		38.499	1.22	1.33		0.0383
133		39.019	1.28	0.103		0.0383
134	134/143	37.409	1.11	0.285		0.0767
135	135/151	36.228	1.24	1.40		0.0767
136		33.722	1.27	0.565		0.0383
137		41.148	1.21	0.148		0.0383
138	129/138/163	41.601	1.23	(2.99)		0.115
139	139/140	37.828	1.18	0.0844		0.0767
140	139/140	37.828	1.18	(0.0844)		0.0767
141		40.511	1.33	0.382		0.0383
142				ND		0.0383
143	134/143	37.409	1,11	(0.285)		0.0767
144		36.831	1.27	0.104		0.0383
		33.301		0.107		0.0000

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

		_		Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.0383
146		39.689	1.22	0.531		0.0383
147	147/149	37.208	1.23	2.92		0.0767
148				ND		0.0383
149	147/149	37.208	1.23	(2.92)		0.0767
150				` NĎ		0.0383
151	135/151	36.228	1.24	(1.40)		0.0767
152				NĎ		0.0383
153	153/168	40.327	1.28	2.25		0.0767
154		36.521	1.28	0.0944		0.0383
155				ND		0.0383
156	156/157	45.816	1.26	0.413		0.0767
157	156/157	45.816	1.26	(0.413)		0.0767
158		42.004	1.22	0.254		0.0383
159				ND	~~~	0.0383
160				ND		0.0383
161				ND		0.0383
162				ND		0.0383
163	129/138/163	41.601	1.23	(2.99)		0.115
164	120, 100, 100	41.266	1.26	0.225		0.0383
165				ND		0.0383
166	128/166	42.893	1.21	(0.546)		0.0767
167	120, 100	44.659	1.23	0.130		0.0383
168	153/168	40.327	1.28	(2.25)		0.0767
169	100, 100			ND		0.0383
170		48.532	1.02	0.370		0.0383
171	171/173	44.960	1.01	0.128		0.0767
172	17 17 17 0	46,604	1.14	0.0670	***	0.0383
173	171/173	44.960	1.01	(0.128)		0.0767
174	11 11 11 0	43.854	1.05	0.355	***	0.0383
175		10.001		ND		0.0383
176		40.193	0.95	0.0563		0.0383
177		44.306	1.05	0.273		0.0383
178		42.054	1.08	0.121		0.0383
179		39.287	0.97	0.209		0.0383
180	180/193	47.257	0.99	0.669		0.0767
181				ND		0.0383
182				ND		0.0383
183	183/185	43.619	1.06	0.217		0.0767
184	100,100			ND		0.0383
185	183/185	43.619	1.06	(0.217)		0.0767
186	100/100	40.010		ND		0.0383
187		42.993	1.06	0.504		0.0383
188			1.00	ND		0.0383
189				ND		0.0383
190		49.085	1.08	0.0833		0.0383
191			1.00	0.0033 ND		0.0383
192				ND		0.0383
102				140	* *	0.0000

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.257	0.99	(0.669)		0.0767
194		53.831	0.90	`0.14Ó		0.0383
195		51.460	0.85	0.0643		0.0383
196		49.924	0.93	0.0697		0.0383
197	197/200			ND		0.0767
198	198/199	49.270	0.85	0.190		0.0767
199	198/199	49.270	0.85	(0.190)		0.0767
200	197/200		~	` NĎ		0.0767
201				ND		0.0383
202				ND		0.0383
203		50.125	0.86	0.0965		0.0383
204				ND	***	0.0383
205				ND		0.0383
206		56.094	0.82	0.0396		0.0383
207				ND		0.0383
208				ND		0.0383
209				ND		0.0383

Conc = Concentration EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits Nn = Value obtained from additional analyses

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REPORT OF LABORATORY ANALYSIS

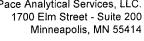


Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

 Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	0.290	
Total Dichloro Biphenyls	2.50	
Total Trichloro Biphenyls	7.65	
Total Tetrachloro Biphenyls	24.7	
Total Pentachloro Biphenyls	29.7	
Total Hexachloro Biphenyls	15.1	
Total Heptachloro Biphenyls	3.05	
Total Octachloro Biphenyls	0.560	
Total Nonachloro Biphenyls	0.0396	
Decachloro Biphenyls	ND	
Total PCBs	83.6	

ND = Not Detected



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

Total Amount Extracted % Moisture Dry Weight Extracted

ICAL ID CCal Filename(s) Method Blank ID

NR-SW-OU1-202305 40262368010 P230529B_11 BAL 1040 mL

NA NA P230529B02 P230529B_01 BLANK-106282 Matrix Dilution NA Collected 05/16/2023 17:00

Water

05/20/2023 18:45 Received 05/23/2023 12:15 Extracted Analyzed 05/30/2023 02:34

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-2,2',6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-4,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,3',3',4,5,5'-HyCB 13C-2,3',3',4,5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,3,3',4,4',5,5'-G-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205	10.103 12.941 13.247 20.382 17.110 28.208 20.736 35.347 35.935 26.893 39.573 38.902 38.366 38.013 42.726 32.979 45.816 44.642 49.103 38.919 51.654 44.391 54.284	3.07 3.04 1.64 1.55 1.02 1.05 0.80 0.78 0.76 1.66 1.55 1.61 1.55 1.56 1.24 1.27 1.22 1.26 1.04 1.03 0.87 0.89	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.54 1.71 2.36 1.85 2.43 1.24 1.54 1.37 1.36 1.05 1.05 1.03 1.05 1.04 0.871 2.49 2.15 1.13 1.21 2.40 1.43 1.83 1.73	77 86 118 92 121 62 77 69 68 85 52 52 52 52 52 54 44 124 54 57 61 120 72 91 87
13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	206 208 209	56.051 51.202 57.689	0.76 0.78 0.69	2.0 2.0 2.0	1.99 2.17 2.17	99 109 108
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.830 35.981 42.021	1.05 1.54 1.04	2.0 2.0 2.0	1.18 1.45 1.80	59 72 90
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.740 25.841 33.181 41.552 53.810	1.59 0.79 1.54 1.25 0.89	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated * = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0384
2				ND		0.0384
3				ND		0.0384
4		13.269	1.34	0.125		0.0384
5		13.209	1.54	0.123 ND		0.0384
5 6				ND ND		0.0384
7				ND ND		0.0384
8				ND ND		0.0384
9				ND ND		0.0384
10				ND ND		0.0384
11						0.0364
12	10/10			ND		0.377
	12/13			ND		0.0769
13	12/13			ND		0.0769
14		00.445		ND		0.0384
15		20.415	1.38	0.0574		0.0507
16				ND		0.0384
17	10100	19.840	1.00	0.151		0.0384
18	18/30			ND		0.0769
19		17.132	1.00	0.152		0.0384
20	20/28			ND		0.198
21	21/33			ND		0.208
22				ND		0.146
23				ND		0.0384
24				ND		0.0384
25		23.180	1.03	0.0671		0.0384
26	26/29	22.902	1.01	0.130		0,0769
27				ND		0.0384
28	20/28	***		ND		0.198
29	26/29	22.902	1.01	(0.130)		0.0769
30	18/30			` NĎ		0.0769
31				ND		0.200
32		20.968	1.07	0.0737		0.0384
33	21/33			ND		0.208
34				ND		0.0384
35				ND		0.0384
36				ND		0.0384
37		~~~		ND		0.0815
38				ND		0.0384
39				ND		0.0384
40	40/41/71	28.053	0.77	0.188		0.115
41	40/41/71	28.053	0.77	(0.188)		0.115
42	40/4///	27.527	0.77	0.133		0.0384
43	43/73	21.321	0.77 	0.133 ND	***	0.0364
44	44/47/65	27.017	0.76	0.792		0.0769
45	45/51	27.017 24.046	0.76	0.792 0.146		0.0769
45 46	4 0/01					
	AAIAZIGE	24.294	0.74	0.0536		0.0384
47	44/47/65	27.017	0.76	(0.792)		0.115
48				ND		0.0384

Conc = Concentration

EML =Method Specified Reporting Limit (1668C) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion

X = Outside QC Limits

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU1-202305 40262368010 P230529B 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69	26.398	0.77	0.842		0.0769
50	50/53	23.195	0.74	0.214		0.0769
51	45/51	24.046	0.74	(0.146)		0.0769
52		25.872	0.77	1.57		0.198
53	50/53	23.195	0.74	(0.214)		0.0769
54				` NĎ		0.0384
55				ND		0.0384
56				ND		0.0384
57				ND		0.0384
58				ND		0.0384
59	59/62/75			ND		0.115
60				ND		0.0384
61	61/70/74/76	31.014	0.77	0.340		0.154
62	59/62/75			ND		0.115
63				ND		0.0384
64		28.285	0.77	0.126		0.0384
65	44/47/65	27.017	0.76	(0.792)	#	0.115
66		31.370	0.66	0.204		0.0907
67				ND		0.0384
68				ND		0.0384
69	49/69	26.398	0.77	(0.842)	w 10 to	0.0769
70	61/70/74/76	31.014	0.77	(0.340)		0.154
71	40/41/71	28.053	0.77	(0.188)		0.115
72				ND		0.0384
73	43/73			ND		0.0769
74	61/70/74/76	31.014	0.77	(0.340)		0.154
75 70	59/62/75	04.044		ND (2.2.12)		0.115
76 77	61/70/74/76	31.014	0.77	(0.340)		0.154
77 70				ND		0.0384
78 70				ND		0.0384
79 80				ND		0.0384
80 81				ND ND		0.0384
82		35.594	1.60	ND 0.0000		0.0384 0.0384
83		33.676	1.68	0.0862		0.0384
84		31.231	1.38	0.0986		0.0384
85	85/116/117	35.099	1.43 1.57	0.309 0.284		0.0364
86	86/87/97/108/119/125	34.434	1.57	0.264		0.115
87	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
88	88/91	31.030	1.49	0.270		0.0769
89	00/91	31.030	1.48	0.270 ND		0.0769
90	90/101/113	33.211	1.49	1.60		0.115
91	88/91	31.030	1.49	(0.270)		0.0769
92	00/01	32.593	1.49	0.430		0.0769
93	93/98/100/102	32.593	1.49	0.430 ND		0.0364
93 94	00/00/100/102	~~~		ND		0.0384
95		30.086	1.57	1.33		0.0304
96			1.57	ND		0.0384

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Detie	Concentration	EMPC	EML
IUPAC	Co-elutions	K I	Ratio	ng/L	ng/L	ng/L
97	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
98	93/98/100/102			ND		0.154
99		33.830	1.50	1.06		0.0384
100	93/98/100/102			ND		0.154
101	90/101/113	33.211	1.49	(1.60)		0.115
102	93/98/100/102			NĎ		0.154
103				ND		0.0384
104				ND		0.0384
105		39.590	1.44	0.159		0.0384
106				ND		0.0384
107	107/124			ND		0.0769
108	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
109		37.913	1.58	0.0553		0.0384
110	110/115	35.269	1.53	1.65		0.0769
111				ND		0.0384
112				ND		0.0384
113	90/101/113	33.211	1.49	(1.60)		0.115
114				` NĎ		0.0384
115	110/115	35.269	1.53	(1.65)		0.0769
116	85/116/117	35.099	1.57	(0.284)		0.115
117	85/116/117	35.099	1.57	(0.284)		0.115
118		38.382	1.46	`0.51Ó		0.0600
119	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
120				` NĎ		0.0384
121				ND		0.0384
122				ND		0.0384
123				ND		0.0384
124	107/124			ND		0.0769
125	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
126				NĎ		0.0384
127				ND		0.0384
128	128/166	42.877	1.21	0.117		0.0769
129	129/138/163	41.585	1.30	0.732		0.115
130		40.915	1.25	0.0552		0.0384
131				ND		0.0384
132		38.483	1.21	0.254		0.0384
133				ND		0.0384
134	134/143			ND		0.0769
135	135/151	36.228	1.28	0.342		0.0769
136		33.722	1.18	0.117		0.0384
137		41.149	1.15	0.0478		0.0384
138	129/138/163	41.585	1.30	(0.732)		0.115
139	139/140			` NĎ		0.0769
140	139/140			ND		0.0769
141		40.495	1.24	0.116		0.0384
142				ND		0.0384
143	134/143			ND		0.0769
144				ND		0.0384

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
145				ND		0.0384
146		39.674	1.20	0.114		0.0384
147	147/149	37.192	1.23	0.650		0.0769
148	1477149	37.182	1.23	0.050 ND		0.0769
149	147/149	37.192	1.23	(0.650)		0.0364
150	147/149	37.192	1.23	(0.630) ND		0.0769
150	135/151	36.228	1.28			0.0364
152	133/131	30.220	1.20	(0.342) ND		0.0769
152	153/168	40.311	1.19	0.638		0.0364
153	153/166					0.0769
154				ND		0.0384
155	450457			ND		
156	156/157			ND		0.0769
157	156/157	44.000	4.00	ND		0.0769
158		41.988	1.23	0.0585		0.0384
159				ND		0.0384
160				ND		0.0384
161			***	ND		0.0384
162	10011001100			ND		0.0384
163	129/138/163	41.585	1.30	(0.732)		0.115
164		41.250	1.27	0.0468		0.0384
165				ND		0.0384
166	128/166	42.877	1.21	(0.117)		0.0769
167				ND		0.0384
168	153/168	40.311	1.19	(0.638)		0.0769
169				ND		0.0384
170		48.533	1.13	0.0513		0.0384
171	171/173			ND		0.0769
172				ND		0.0384
173	171/173			ND		0.0769
174		43.838	1.02	0.0552		0.0384
175				ND		0.0384
176				ND		0.0384
177		44.307	1.05	0.0385		0.0384
178				ND		0.0384
179				ND		0.0384
180	180/193	47.258	1.09	0.0899		0.0769
181				ND		0.0384
182				ND		0.0384
183	183/185			ND		0.0769
184				ND		0.0384
185	183/185			ND		0.0769
186				ND		0.0384
187		42.977	0.97	0.0878		0.0384
188				ND		0.0384
189				ND		0.0384
190			~==	ND		0.0384
191				ND		0.0384
192				ND		0.0384

Conc = Concentration

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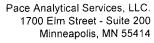
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REPORT OF LABORATORY ANALYSIS





Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193	47.258	1.09	(0.0899)		0.0769
194				` NĎ		0.0384
195				ND		0.0384
196				ND		0.0384
197	197/200			ND		0.0769
198	198/199			ND		0.0769
199	198/199		***	ND		0.0769
200	197/200			ND		0.0769
201				ND		0.0384
202				ND		0.0384
203				ND		0.0384
204				ND		0.0384
205				ND		0.0384
206				ND		0.0384
207				ND		0.0384
208				ND		0.0384
209				ND		0.0384

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU1-202305 40262368010 P230529B_11

Conge	ner Group	Concentration ng/L	
Total M	onochloro Biphenyls	ND	
Total D	chloro Biphenyls	0.182	
Total Ti	ichloro Biphenyls	0.574	
Total Te	etrachloro Biphenyls	4.61	
Total Pe	entachloro Biphenyls	8.68	
Total H	exachloro Biphenyls	3.29	
Total H	eptachloro Biphenyls	0.323	
Total O	ctachloro Biphenyls	ND	
Total No	onachloro Biphenyls	ND	
Decach	loro Biphenyls	ND	
Total Po	CBs	17.7	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

CVS

Total Amount Extracted % Moisture

Dry Weight Extracted ICAL ID

CCal Filename(s) Method Blank ID

40262368011 P230531B 08 1040 mL

NR-SW-BKG2-202305

NA NA P230531B02 P230531B 01 BLANK-106448 Matrix Water Dilution NA Collected 05/16/2023 17:40

05/20/2023 18:45 Received Extracted 05/26/2023 11:40 Analyzed 06/01/2023 04:43

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-4,4'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4',5-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4'-FeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',5-PeCB 13C-2,2',4,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-G-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.114 12.941 13.246 20.359 17.087 28.175 20.719 35.328 35.900 26.860 39.517 38.880 38.327 37.975 42.686 32.945 45.777 44.603 49.063 38.863 51.626 44.351 54.234 56.001 51.152 57.639	3.20 3.14 1.53 1.57 1.02 1.09 0.79 0.81 0.78 1.55 1.61 1.58 1.60 1.56 1.24 1.27 1.28 1.25 1.04 1.05 0.89 0.91 0.80 0.79	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.09 1.35 1.33 1.53 1.43 1.39 1.13 1.39 1.37 1.35 1.38 1.29 1.33 2.57 1.34 1.21 1.46 1.52 1.41 1.33 1.25 1.38 1.20	55 67 66 76 72 70 57 72 70 66 70 68 69 64 66 67 61 73 76 71 67 62 69 60
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.797 35.946 41.982	1.04 1.57 1.04	2.0 2.0 2.0	1.22 1.08 1.04	61 54 52
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.728 25.808 33.146 41.529 53.759	1.56 0.80 1.58 1.25 0.91	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

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REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
4				NB		0.0000
1				ND		0.0383
2				ND		0.0383
3				ND		0.0383
4				ND		0.0383
5				ND		0.0383
6				ND		0.0383
7				ND		0.0383
8				ND		0.0383
9				ND		0.0383
10				ND		0.0383
11			~~~	ND		0.376
12	12/13			ND		0.0767
13	12/13			ND		0.0767
14	,			ND		0.0383
15				ND	***	0.0506
16				ND		0.0383
17				ND		0.0383
18	18/30			ND		0.0363
19	10/30	222		ND ND		0.0767
20	20/28					
21	20/20			ND		0.198
21	21/33	***		ND		0.207
22				ND		0.146
23				ND		0.0383
24				ND		0.0383
25				ND		0.0383
26	26/29			ND		0.0767
27				ND		0.0383
28	20/28			ND	***	0.198
29	26/29			ND		0.0767
30	18/30			ND		0.0767
31				ND		0.199
32				ND		0.0383
33	21/33			ND		0.207
34				ND		0.0383
35				ND		0.0383
36				ND		0.0383
37				ND		0.0813
38				ND		0.0383
39				ND		0.0383
40	40/41/71			ND		0.115
41	40/41/71			ND		0.115
42	40/41//1			ND		0.0383
43	43/73			ND ND		0.0303 0.0767
43 44						0.0767
	44/47/65 45/51	** ** **		ND		0.115
45 46	45/51			ND		0.0767
46	4447105			ND		0.0383
47	44/47/65			ND		0.115
48		~ ~ ~		ND		0.0383

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
49	49/69			ND		0.0767
50	50/53			ND		0.0767
51	45/51			ND		0.0767
52	10/01			ND		0.198
53	50/53			ND		0.0767
54	00,00	10 Mg Mg		ND		0.0383
55				ND		0.0383
56				ND		0.0383
57				ND		0.0383
58				ND		0.0383
59	59/62/75			ND		0.115
60	00/02/10			ND		0.0383
61	61/70/74/76			ND		0.153
62	59/62/75			ND		0.115
63	00/02/10			ND		0.0383
64				ND		0.0383
65	44/47/65			ND		0.115
66	44/4/100			ND		0.0905
67				ND		0.0383
68				ND		0.0383
69	49/69			ND		0.0363
70	61/70/74/76			ND		0.153
70 71	40/41/71			ND		0.133
72	40/41/71			ND		0.0383
73	43/73			ND		0.0363
74 74	61/70/74/76	***		ND ND		0.0767
7 5	59/62/75			ND		0.133
76	61/70/74/76			ND		0.153
70 77	01/10/14/10			ND		0.0383
78				ND ND		0.0383
70 79				ND		0.0383
80				ND ND		0.0383
81				ND ND		0.0383
82				ND ND		0.0383
83				ND	***	0.0383
84				ND	~~~	0.0383
85	85/116/117			ND		0.0303
86	86/87/97/108/119/125			ND ND		0.113
87	86/87/97/108/119/125			ND ND		0.230
88	88/91			ND ND		0.230
89	00/91			ND ND		0.0787
90	90/101/113			ND ND		
91	88/91					0.115
92	00/91			ND ND		0.0767
92 93	93/98/100/102			ND ND		0.0383
	93/96/100/102			· ND		0.153
94				ND		0.0383
95 06				ND		0.107
96			~~~	ND		0.0383

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

i = interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011

P230531B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
97	86/87/97/108/119/125			ND	** ***	0.230
98	93/98/100/102			ND		0.153
99				ND		0.0383
100	93/98/100/102			ND		0.153
101	90/101/113			ND		0.115
102	93/98/100/102			ND		0.153
103				ND		0.0383
104				ND	***	0.0383
105				ND		0.0383
106				ND	***	0.0383
107	107/124			ND		0.0767
108	86/87/97/108/119/125			ND		0.230
109	33/3//3//133/113/123			ND		0.0383
110	110/115			ND		0.0767
111	110/110			ND	~~~	0.0383
112				ND		0.0383
113	90/101/113			ND		0.115
114	30/101/113			ND		0.0383
115	110/115			ND		0.0767
116	85/116/117			ND		0.115
117	85/116/117			ND		0.115
118	03/110/11/			ND		0.0598
119	86/87/97/108/119/125			ND ND		0.230
120	80/8//9//100/119/123			ND ND		0.0383
120				ND ND		0.0383
122				ND ND		0.0383
123				ND ND		0.0383
123	107/124			ND ND		0.0363
125	86/87/97/108/119/125			ND ND		0.230
126	00/07/97/100/119/125			ND ND		0.0383
120				ND ND		0.0383
127	128/166					
120	129/138/163			ND ND		0.0767
130	129/130/103					0.115
				ND ND		0.0383
131 132				ND ND		0.0383
132				ND		0.0383
	4044440			ND ND		0.0383
134	134/143			ND		0.0767
135	135/151			ND		0.0767
136				ND		0.0383
137	420420462			ND		0.0383
138	129/138/163			ND		0.115
139	139/140			ND		0.0767
140	139/140			ND		0.0767
141				ND		0.0383
142	101/110			ND		0.0383
143	134/143			ND		0.0767
144				ND		0.0383

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits

ND = Not Detected

RT = Retention Time

I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

					E1100	
				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
145				ND		0.0383
146				ND		0.0383
140	147/149			ND ND		0.0363
148	1477149			ND ND		
140	147/149					0.0383
149	147/149			ND		0.0767
150	405/454			ND		0.0383
151	135/151			ND		0.0767
152	450400			ND		0.0383
153	153/168			ND		0.0767
154				ND		0.0383
155	4504457			ND		0.0383
156	156/157			ND		0.0767
157	156/157			ND		0.0767
158				ND		0.0383
159				ND		0.0383
160				ND		0.0383
161				ND		0.0383
162				ND		0.0383
163	129/138/163			ND		0.115
164				ND		0.0383
165				ND		0.0383
166	128/166	****		ND		0.0767
167				ND		0.0383
168	153/168	***	***	ND		0.0767
169				ND		0.0383
170				ND		0.0383
171	171/173			ND		0.0767
172				ND		0.0383
173	171/173			ND		0.0767
174	., ., ., .			ND		0.0383
175				ND		0.0383
176				ND		0.0383
177				ND		0.0383
178				ND		0.0383
179				ND		0.0383
180	180/193			ND		0.0363
181	100/193	***		ND		0.0383
182			~~~	ND ND		0.0383
183	183/185		~~~	ND ND		0.0363
184	103/103			ND ND		0.0707
104	100/105			ND		0.0383
185	183/185			ND ND		0.0767
186				ND		0.0383
187				ND		0.0383
188				ND		0.0383
189				ND		0.0383
190				ND		0.0383
191				ND		0.0383
192				ND		0.0383

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

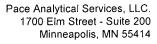
X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Tel: 612-607-1700 Fax: 612-607-6444



Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
193	180/193			ND		0.0767
194				ND		0.0383
195				ND		0.0383
196				ND		0.0383
197	197/200			ND		0.0767
198	198/199	60 mg 101		ND		0.0767
199	198/199	***	***	ND		0.0767
200	197/200		****	ND		0.0767
201				ND		0.0383
202				ND		0.0383
203				ND		0.0383
204				· ND		0.0383
205				ND		0.0383
206				ND		0.0383
207				ND		0.0383
208				ND		0.0383
209				ND		0.0383

Conc = Concentration

EML =Method Specified Reporting Limit (1668C)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668C control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT ≈ Retention Time

I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS



Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS





June 06, 2023

Ben Wachholz TRC Madison 708 Heartland Trail Suite 3000 Madison, WI 53717

RE: Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Dear Ben Wachholz:

Enclosed are the analytical results for sample(s) received by the laboratory on May 18, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tod Noltemeyer

tod.noltemeyer@pacelabs.com (920)469-2436

Tod noltemeyor

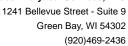
Project Manager

Enclosures

cc: Maddie Holicky, TRC

Peggy Popp, TRC - Madison







CERTIFICATIONS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky UST Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 12064 North Dakota Certification #: R-150

South Carolina Certification #: 83006001 Texas Certification #: T104704529-21-8 Virginia VELAP Certification ID: 11873 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-21-00008 Federal Fish & Wildlife Permit #: 51774A



SAMPLE SUMMARY

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40262368001	NR-SW-DS2-202305	Water	05/16/23 11:15	05/18/23 09:25
40262368002	NR-SW-DUP1-202305	Water	05/16/23 00:00	05/18/23 09:25
40262368003	NR-SW-EB-202305	Water	05/16/23 11:30	05/18/23 09:25
40262368004	NR-SW-FB-202305	Water	05/16/23 11:45	05/18/23 09:25
40262368005	NR-SW-DS1-202305	Water	05/16/23 12:45	05/18/23 09:25
40262368006	NR-SW-OU4-202305	Water	05/16/23 13:15	05/18/23 09:25
40262368007	NR-SW-BKG1-202305	Water	05/16/23 14:10	05/18/23 09:25
40262368008	NR-SW-OU3-202305	Water	05/16/23 15:10	05/18/23 09:25
40262368009	NR-SW-OU2-202305	Water	05/16/23 16:15	05/18/23 09:25
40262368010	NR-SW-OU1-202305	Water	05/16/23 17:00	05/18/23 09:25
40262368011	NR-SW-BKG2-202305	Water	05/16/23 17:40	05/18/23 09:25



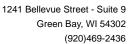
SAMPLE ANALYTE COUNT

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40262368001	NR-SW-DS2-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40262368002	NR-SW-DUP1-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40262368005	NR-SW-DS1-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40262368006	NR-SW-OU4-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40262368007	NR-SW-BKG1-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40262368008	NR-SW-OU3-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40262368009	NR-SW-OU2-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40262368010	NR-SW-OU1-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
40262368011	NR-SW-BKG2-202305	SM 2540D	HNT	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay





PROJECT NARRATIVE

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Method: SM 2540D

Description: 2540D Total Suspended Solids

Client: TRC - MADISON

Date: June 06, 2023

General Information:

9 samples were analyzed for SM 2540D by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

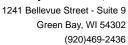
Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:





PROJECT NARRATIVE

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

 Method:
 SM 5310C

 Description:
 5310C TOC

 Client:
 TRC - MADISON

 Date:
 June 06, 2023

General Information:

9 samples were analyzed for SM 5310C by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:



Green Bay, WI 54302 (920)469-2436

PROJECT NARRATIVE

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Method: SM 5310C

Description: 5310C Dissolved Organic Carbon

Client: TRC - MADISON

Date: June 06, 2023

General Information:

9 samples were analyzed for SM 5310C by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Sample: NR-SW-DS2-202305	Lab ID:	40262368001	Collected	d: 05/16/23	3 11:15	Received: 05/	18/23 09:25 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	•	Method: SM 25 lytical Services		y					
Total Suspended Solids	71.4	mg/L	2.9	1.4	1		05/23/23 15:07		
5310C TOC	•	Method: SM 53 lytical Services		y					
Total Organic Carbon	9.4	mg/L	0.50	0.14	1		05/31/23 06:21	7440-44-0	
5310C Dissolved Organic Carbon	,	Method: SM 53 lytical Services		y					
Dissolved Organic Carbon	10.1	mg/L	0.50	0.14	1		06/01/23 07:54		D9





ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Date: 06/06/2023 01:32 PM

Sample: NR-SW-DUP1-202305	Lab ID:	40262368002	Collected	d: 05/16/23	3 00:00	Received: 05/	18/23 09:25 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	,	Method: SM 25 lytical Services		y					
Total Suspended Solids	57.4	mg/L	2.9	1.4	1		05/23/23 15:07		
5310C TOC	•	Method: SM 53 lytical Services		y					
Total Organic Carbon	9.6	mg/L	0.50	0.14	1		05/31/23 06:39	7440-44-0	
5310C Dissolved Organic Carbon	•	Method: SM 53 lytical Services		y					
Dissolved Organic Carbon	10.6	mg/L	0.50	0.14	1		06/01/23 08:11		D9





ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Date: 06/06/2023 01:32 PM

Sample: NR-SW-DS1-202305	Lab ID:	40262368005	Collecte	d: 05/16/23	3 12:45	Received: 05/	18/23 09:25 Ma	trix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	,	Method: SM 25 lytical Services		y					
Total Suspended Solids	20.2	mg/L	1.2	0.59	1		05/23/23 15:07		
5310C TOC	•	Method: SM 53 lytical Services		y					
Total Organic Carbon	9.3	mg/L	0.50	0.14	1		05/31/23 06:57	7440-44-0	
5310C Dissolved Organic Carbon	•	Method: SM 53 lytical Services		y					
Dissolved Organic Carbon	10.2	mg/L	0.50	0.14	1		06/01/23 08:26		D9



ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Sample: NR-SW-OU4-202305	Lab ID:	40262368006	Collecte	d: 05/16/23	3 13:15	Received: 05/	18/23 09:25 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	•	Method: SM 25 lytical Services		у					
Total Suspended Solids	14.5	mg/L	1.5	0.73	1		05/23/23 15:08		
5310C TOC	•	Method: SM 53 lytical Services		y					
Total Organic Carbon	10.4	mg/L	0.50	0.14	1		05/31/23 07:48	7440-44-0	
5310C Dissolved Organic Carbon	•	Method: SM 53 lytical Services		y					
Dissolved Organic Carbon	11.3	mg/L	0.50	0.14	1		06/01/23 08:43		D9



ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Sample: NR-SW-BKG1-202305	Lab ID:	40262368007	Collecte	d: 05/16/2	3 14:10	Received: 05/	18/23 09:25 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	•	Method: SM 25 lytical Services		у					
Total Suspended Solids	9.6	mg/L	1.1	0.51	1		05/23/23 15:08		
5310C TOC	•	Method: SM 53 lytical Services		y					
Total Organic Carbon	10.5	mg/L	0.50	0.14	1		05/30/23 15:36	7440-44-0	
5310C Dissolved Organic Carbon	•	Method: SM 53 lytical Services		y					
Dissolved Organic Carbon	10.8	mg/L	0.50	0.14	1		06/01/23 08:59		D9



ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Sample: NR-SW-OU3-202305	Lab ID: 40262368008		Collecte	Collected: 05/16/23 15:10		Received: 05/	18/23 09:25 Ma	trix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	,	Method: SM 25 lytical Services		y					
Total Suspended Solids	12.2	mg/L	1.0	0.49	1		05/23/23 15:08		
5310C TOC	•	Method: SM 53 lytical Services		y					
Total Organic Carbon	5.6	mg/L	0.50	0.14	1		05/31/23 08:40	7440-44-0	
5310C Dissolved Organic Carbon	•	Method: SM 53 lytical Services		y					
Dissolved Organic Carbon	6.3	mg/L	0.50	0.14	1		06/01/23 09:17		D9



ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Sample: NR-SW-OU2-202305	Lab ID:	40262368009	Collecte	d: 05/16/23	3 16:15	Received: 05/	/18/23 09:25 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	,	Method: SM 25 lytical Services		y					
Total Suspended Solids	7.9	mg/L	1.1	0.50	1		05/23/23 15:08		
5310C TOC	•	Method: SM 53 lytical Services		y					
Total Organic Carbon	5.0	mg/L	0.50	0.14	1		05/30/23 16:10	7440-44-0	
5310C Dissolved Organic Carbon	•	Method: SM 53 lytical Services		у					
Dissolved Organic Carbon	5.9	mg/L	0.50	0.14	1		06/01/23 09:32		D9



ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Sample: NR-SW-OU1-202305	Lab ID:	40262368010	Collecte	d: 05/16/23	3 17:00	Received: 05/	18/23 09:25 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	•	Method: SM 25 lytical Services		у					
Total Suspended Solids	4.9	mg/L	1.1	0.50	1		05/23/23 15:08		
5310C TOC	•	Method: SM 53 lytical Services		y					
Total Organic Carbon	4.5	mg/L	0.50	0.14	1		05/31/23 08:56	7440-44-0	
5310C Dissolved Organic Carbon	•	Method: SM 53 lytical Services		у					
Dissolved Organic Carbon	5.3	mg/L	0.50	0.14	1		06/01/23 09:49		D9



ANALYTICAL RESULTS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Sample: NR-SW-BKG2-202305	Lab ID:	40262368011	Collecte	d: 05/16/2	3 17:40	Received: 05/	/18/23 09:25 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
2540D Total Suspended Solids	,	Method: SM 25		у					
Total Suspended Solids	3.1	mg/L	1.1	0.51	1		05/23/23 15:08		
5310C TOC	•	Method: SM 53 lytical Services		у					
Total Organic Carbon	7.0	mg/L	0.50	0.14	1		05/31/23 09:34	7440-44-0	
5310C Dissolved Organic Carbon	•	Method: SM 53 lytical Services		у					
Dissolved Organic Carbon	8.0	mg/L	0.50	0.14	1		06/01/23 10:06		D9



Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

QC Batch: 445571 Analysis Method: SM 2540D

QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40262368001, 40262368002, 40262368005, 40262368006, 40262368007, 40262368008, 40262368009,

40262368010, 40262368011

METHOD BLANK: 2558006 Matrix: Water

Associated Lab Samples: 40262368001, 40262368002, 40262368005, 40262368006, 40262368007, 40262368008, 40262368009,

40262368010, 40262368011

Parameter Units Result Limit Analyzed Qualifiers

Total Suspended Solids mg/L <0.48 1.0 05/23/23 15:05

LABORATORY CONTROL SAMPLE: 2558007

Spike LCS LCS % Rec Parameter Units Result % Rec Limits Qualifiers Conc. 98 **Total Suspended Solids** mg/L 100 98.0 80-120

SAMPLE DUPLICATE: 2558008

Date: 06/06/2023 01:32 PM

40262362001 Dup Max RPD **RPD** Parameter Units Result Result Qualifiers Total Suspended Solids 325 345 6 10 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Date: 06/06/2023 01:32 PM

QC Batch: 446007 Analysis Method: SM 5310C

QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40262368001

METHOD BLANK: 2560738 Matrix: Water

Associated Lab Samples: 40262368001

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Total Organic Carbon mg/L <0.14 0.50 05/30/23 06:04

LABORATORY CONTROL SAMPLE: 2560739

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Organic Carbon** 12.5 12.8 103 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2560740

MS MSD

40262314009 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Result **RPD** RPD Result Conc. Conc. % Rec % Rec Limits Qual **Total Organic Carbon** mg/L 63.8J 900 900 907 878 94 90 80-120 3 10

2560741

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2560742 2560743

MS MSD 40262315002 MS MSD MS MSD % Rec Spike Spike Max **RPD** RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Total Organic Carbon 0.90 6 6 6.7 6.7 97 97 80-120 0 10 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Date: 06/06/2023 01:32 PM

QC Batch: 446008 Analysis Method: SM 5310C

QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40262368002, 40262368005, 40262368006, 40262368007, 40262368008, 40262368009, 40262368010,

40262368011

METHOD BLANK: 2560744 Matrix: Water

Associated Lab Samples: 40262368002, 40262368005, 40262368006, 40262368007, 40262368008, 40262368009, 40262368010,

40262368011

ParameterUnitsBlank ResultReporting LimitAnalyzedQualifiersTotal Organic Carbonmg/L<0.14</td>0.5005/30/23 12:43

LABORATORY CONTROL SAMPLE: 2560745

Spike LCS LCS % Rec Units Result % Rec Limits Qualifiers Parameter Conc. Total Organic Carbon mg/L 12.5 12.8 103 80-120

MS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2560746 2560747

MS MSD 40262368005 Spike Spike MS MSD

MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Total Organic Carbon 9.3 6 6 2 15.4 15.6 101 105 80-120 10 mg/L

MSD

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2560748 2560749

MSD MS MSD % Rec 40262368006 Spike Spike MS Max Units Parameter Conc. Conc. Result % Rec % Rec **RPD** RPD Qual Result Result Limits **Total Organic Carbon** 10.4 6 6 17.0 16.9 109 109 80-120 0 10 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Date: 06/06/2023 01:32 PM

QC Batch: 446134 Analysis Method: SM 5310C

QC Batch Method: SM 5310C Analysis Description: 5310C Dissolved Organic Carbon

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40262368001, 40262368002, 40262368005, 40262368006, 40262368007, 40262368008, 40262368009,

40262368010, 40262368011

METHOD BLANK: 2561121 Matrix: Water

Associated Lab Samples: 40262368001, 40262368002, 40262368005, 40262368006, 40262368007, 40262368008, 40262368009,

40262368010, 40262368011

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Dissolved Organic Carbon mg/L <0.14 0.50 06/01/23 04:51

LABORATORY CONTROL SAMPLE: 2561122

Spike LCS LCS % Rec Parameter Units % Rec Limits Qualifiers Conc. Result Dissolved Organic Carbon mg/L 12.5 13.4 107 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2561123 2561124

MS MSD

40262675001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Dissolved Organic Carbon 20 0.78J 18 18 18.1 17.8 96 95 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2561125 2561126

MS MSD

MSD MSD 40262675002 Spike Spike MS MS % Rec Max Parameter Units % Rec Conc. Conc. Result % Rec **RPD** RPD Qual Result Result Limits Dissolved Organic Carbon 0.69 6 6 6.5 6.6 97 98 80-120 20 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 06/06/2023 01:32 PM

D9 Dissolved result is greater than the total. Data is within laboratory control limits.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TASK 9300 HARP 471202 PHASE100

Pace Project No.: 40262368

Date: 06/06/2023 01:32 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40262368001	NR-SW-DS2-202305	SM 2540D	445571		
40262368002	NR-SW-DUP1-202305	SM 2540D	445571		
40262368005	NR-SW-DS1-202305	SM 2540D	445571		
40262368006	NR-SW-OU4-202305	SM 2540D	445571		
40262368007	NR-SW-BKG1-202305	SM 2540D	445571		
40262368008	NR-SW-OU3-202305	SM 2540D	445571		
40262368009	NR-SW-OU2-202305	SM 2540D	445571		
40262368010	NR-SW-OU1-202305	SM 2540D	445571		
40262368011	NR-SW-BKG2-202305	SM 2540D	445571		
40262368001	NR-SW-DS2-202305	SM 5310C	446007		
10262368002	NR-SW-DUP1-202305	SM 5310C	446008		
40262368005	NR-SW-DS1-202305	SM 5310C	446008		
40262368006	NR-SW-OU4-202305	SM 5310C	446008		
40262368007	NR-SW-BKG1-202305	SM 5310C	446008		
40262368008	NR-SW-OU3-202305	SM 5310C	446008		
40262368009	NR-SW-OU2-202305	SM 5310C	446008		
40262368010	NR-SW-OU1-202305	SM 5310C	446008		
40262368011	NR-SW-BKG2-202305	SM 5310C	446008		
40262368001	NR-SW-DS2-202305	SM 5310C	446134		
40262368002	NR-SW-DUP1-202305	SM 5310C	446134		
40262368005	NR-SW-DS1-202305	SM 5310C	446134		
40262368006	NR-SW-OU4-202305	SM 5310C	446134		
40262368007	NR-SW-BKG1-202305	SM 5310C	446134		
40262368008	NR-SW-OU3-202305	SM 5310C	446134		
10262368009	NR-SW-OU2-202305	SM 5310C	446134		
40262368010	NR-SW-OU1-202305	SM 5310C	446134		
40262368011	NR-SW-BKG2-202305	SM 5310C	446134		

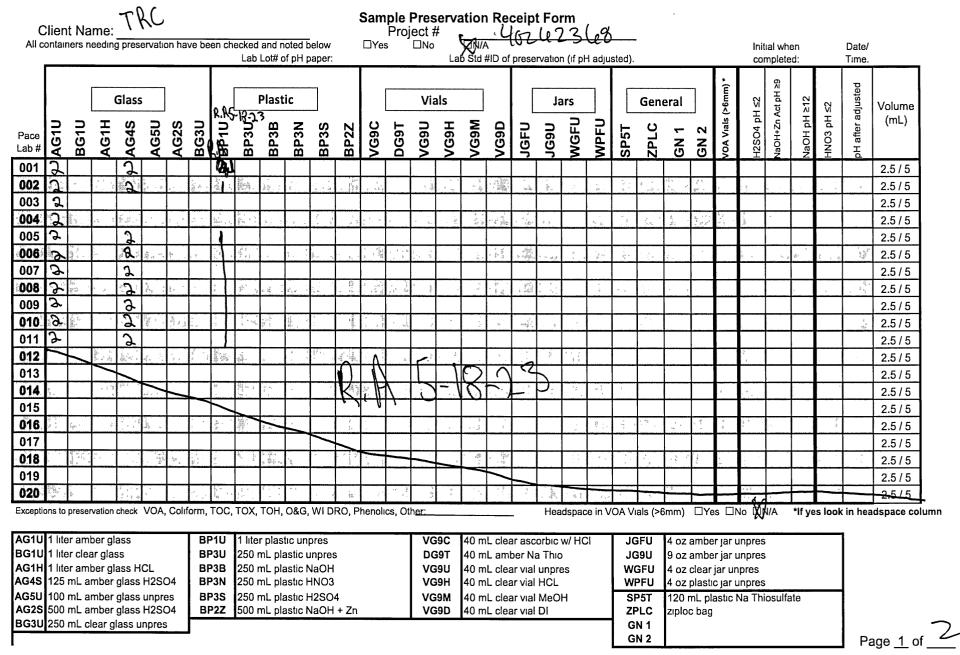
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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or CHAIN-OF-CUSTODY Analytical Request Document MTJL Log-in Number Here ·Pace Analytical* 40262368 Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields Company: Billing Information: ALL SHADED AREAS are for LAB USE ONLY Container Preservative Type ** Lab Project Manager: クリク Émail To: ** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, bwachholz@trccompanies.com (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, Copy To: Site Collection Info/Address: (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other **Analyses** Lab Profile/Line: Customer Project Name/Number: Time Zone Collected: State: County/City; Lab Sample Receipt Checklist: HARP 471202 Phase 100 []PT[]MT[X]CT[]ET Custody Seals Present Intact Y N NA Custody signatures Present Y N NA Compliance Monitoring? Collector Signature Present averaticomodnies.com [] Yes [] No Bottles Intact Purchase Order #: 20060 DW PWS ID #: Correct Bottles Sufficient Volume Quote #: DW Location Code: Samples Received on Ice Immediately Packed on Ice: Turnaround Date Required: VOA - Headspace Acceptable USDA Regulated Soils standard **⋈** Yes []No Samples in Holding Time Y N NA Congerers Sample Disposal: Field Filtered (if applicable): Residual Chlorine Present Y N NA Cl Strips:] Dispose as appropriate Return [] Same Day [] Next Day **★**TYes Sample pH Acceptable Y N NA] Archive: [] 2 Day [] 3 Day [] 4 Day [] 5 Day Analysis: dissolved or ganic pH Strips: (Expedite Charges Apply) Sulfide Present Lead Acetate Strips: Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT) LAB USE ONLY: Collected (or # of Lab Sample # / Comments: Comp / ŏ **DØ** Composite End **Customer Sample ID** Matrix * Composite Start) Ctns Grab Date Time Time NP-SW-BK62-202805 5/16/23 17:40 Lab Sample Temperature Info: Type of Ice Used: Customer Remarks / Special Conditions / Possible Hazards: Wet Blue None SHORT HOLDS PRESENT (<72 hours): Y N N/A Temp Blank Received: Y N NA congeners analyzed by Packing Material Used Lab Tracking # 2896882 Minneapolis and other analyses performed by Green Bay Therm ID#: Cooler Temp Upon Receip Cooler 1 Therm Corr. Facto Samples received via: Radchem sample(s) screened (<500 cpm): **FEDEX** UPS Client Courier Pace Courier Cooler 1 Corrected Temp: Comments: Relinquished by/Company (Signature) MTJL LAB USE ONLY Date/Time: Received by/Company: (Signature) Date/Time: Table #: Acctnum Relinquished by/Company: (Signature) Received by/Company: (Signature) Trif Blank Received Template: MeOH Other Prelogin: Relinquished by/Company: (Signature) Date/Time: page: 24 of 226 Received by/Company: (Signature) PM:-Non Conformance(s): YES / NO

PB:

Effective Date: 8/16/2022



DC#_Title: ENV-FRM-GBAY-0014 v03_SCUR

Effective Date: 8/17/2022

Sample Condition Upon Receipt Form (SCUR)

Project #:
Client Name: 1 KC W0#: 40262368
Courier: CS Logistics Fed Ex Speedee UPS Waltco
☐ Client ☐ Pace Other:
Tracking #: 772178513073 40262368
Custody Seal on Cooler/Box Present: yes □ no Seals intact: yes □ no □
Custody Seal on Samples Present: yes no Seals intact: yes no
Packing Material: Bubble Wrap Bubble Bags Done Other
Thermometer Used SR - 1 Type of Ice: Wet Blue Dry None Meltwater Only Person examining contents;
Cooler Temperature Unicon. W.O. Acon. 2.0
Temp Blank Present: yes □ no Biological Tissue is Frozen: □ yes □ no □ Date: 510 # /Initials: 1/1
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C if shipped on Dry Ice. Labeled By Initials:
Chain of Custody Present: No DN/A 1.
Chain of Custody Filled Out:
Chain of Custody Relinquished: □N/A 3.
Sampler Name & Signature on COC: Ves □No □N/A 4.
Samples Arrived within Hold Time: 5.
- DI VOA Samples frozen upon receipt
Short Hold Time Analysis (<72hr):
Rush Turn Around Time Requested:
Sufficient Volume: 8.
For Analysis: □No MS/MSD: □Yes □No □N/A
Correct Containers Used: 9.
Correct Type: Pace Green Bay Pace IR, Non-Pace
Containers Intact: 10.
Filtered volume received for Dissolved tests Wes DNo DN/A 11.
Sample Labels match COC:
-Includes date/time/ID/Analysis Matrix: W
Trip Blank Present:
Trip Blank Custody Seals Present
Pace Trip Blank Lot # (if purchased):
Client Notification/ Resolution: Person Contacted: Date/Time:
Person Contacted: Date/Time: Date/Time: Comments/ Resolution:
PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample to
Page 4 of 1



Pace Analytical Services, Inc.

1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700

Fax: 612.607.6444

Report Prepared for:

Tod Noltemeyer PACE Wisconsin 6409 Odana Road Madison WI 53719

> REPORT OF LABORATORY ANALYSIS FOR PCBs

Report Information:

Pace Project #: 10654073

Sample Receipt Date: 05/20/2023

Client Project #: 40262368 TRC Madison

Client Sub PO #: N/A State Cert #: 999407970

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCB Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

June 05, 2023

Scott Unze, Project Manager

(612) 607-6383

(612) 607-6444 (fax)

scott.unze@pacelabs.com



Report of Laboratory Analysis

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The results relate only to the samples included in this report.

June 5, 2023

Report Prepared Date:



Pace Analytical Services, Inc.

1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700

Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on eleven samples submitted by a representative of Pace Analytical Services, Inc. The samples were analyzed for the presence or absence of selected polychlorinated biphenyl (PCB) congeners using USEPA Method 1668A. Reporting limits were set to 0.04-0.40 ppt and adjusted for the amount of sample extracted. Results based on the statistically derived MDLs were also included (Additional Results). For the MDL based data set, reporting limits determined based on the signal to noise ratio were flagged "A", with levels below the calibration range flagged "J" as estimated concentrations.

The isotopically-labeled PCB internal standards in the sample extracts were recovered within the target ranges specified in the method. Since the quantification of the native PCB congeners was based on internal standard and isotope dilution methodology, the data were automatically corrected for variation in recovery and accurate values were obtained. Incorrect isotope ratios were obtained for selected PCB congeners. The affected congeners were flagged "I" on the results tables. Any associated target analyte detections were provided under the estimated maximum possible concentration (EMPC) column on the results table.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blanks to be free of PCB congeners to the reporting limits. However, a trace signal at the retention time of congener 5 was present in the method blank associated with sample NR-SW-BKG2-202305. This congener was not detected in the sample extract. This indicates that the sample preparation procedures did not significantly impact the PCB content determined for the sample material.

Laboratory spike samples were also prepared with the sample batch using reference material that had been fortified with native standards. The results show that the spiked native compounds were recovered at 80-117%, with relative percent differences of 0.0-17.0%. These values were within method limits. Matrix spikes were not prepared with the sample batch.



Tel: 612-607-1700 Fax: 612-607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Missouri	10100
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska-DW	MN00064	Nevada	MN00064
Alaska-UST	17-009	New Hampshire	2081
Arizona	AZ0014	New Jersey	MN002
Arkansas - WW	88-0680	New York	11647
Arkansas-DW	MN00064	North Carolina-	27700
California	2929	North Carolina-	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio-DW	41244
Florida	E87605	Ohio-VAP (170	CL101
Georgia	959	Ohio-VAP (180	CL110
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon-Primary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Michigan	9909	West Virginia-D	382
Minnesota	027-053-137	West Virginia-D	9952C
Minnesota-Ag	via MN 027-053	Wisconsin	999407970
Minnesota-Petr	1240	Wyoming-UST	via A2LA 2926.
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC

1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444 www.pacelabs.com

Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.

Š	Internal Transfer Chain of Custody	hain	of Circto	ا ج						234	6	
		y.	Sample	re-Lo	igged into eCOC.		State Of Origin: W	gin: Wl			Pace	Pace Analytical
Noi	Workorder: 40262368 Wo	Workorder Name:		TASK 9300 HARP 47	RP 471202 PHASE100		Owner Received Date:	u. 🗴 res sived Date:	5/18/2023	ر Results Reguested Bv:	uested Bv:	6/9/2023
Rep	Report To		Subcontract To	act To					Requestor	Analysis		
Tod	Tod Noltemeyer Pace Analytical Green Bay		Pace 1700	Pace Analytical Minnesota 1700 Elm Street SE	sota				#0M	10654073	073	
1241 Be Suite 9 Green E	1241 Bellevue Street Suite 9 Green Bay, WI 54302		Suite Minn Phon	Suite 200 Minneapolis, MN 55414 Phone (612)607-1700	4			tsí∐ llu∃ :) -	
or -	hone (920)469-2436							teners	10654073		:	
								gnoD 8				
					j podes	Pevies	Market And Control of Highest	Od 8991				
Ű.	Sample ID	Type	Type Date/Time	Lab D	N N	serdino		rij				LAB USE ONLY
	NR-SW-DS2-202305	PS	5/16/2023 11:15	40262368001	Water	-		×				(00)
	NR-SW-DUP1-202305	PS	5/16/2023 00:00	40262368002	Water	-		×				3
_	NR-SW-EB-202305	PS	5/16/2023 11:30	40262368003	Water	1		×				533
	NR-SW-FB-202305	PS	5/16/2023 11:45	40262368004	Water	1		×				23
	NR-SW-DS1-202305	PS	5/16/2023 12:45	40262368005	Water	1		×				3
	NR-SW-OU4-202305	PS	5/16/2023 13:15	40262368006	Water	1		×				504
	NR-SW-BKG1-202305	PS	5/16/2023 14:10	40262368007	Water	1		×				8
	NR-SW-OU3-202305	PS	5/16/2023 15:10	40262368008	Water	1		×				8
	NR-SW-OU2-202305	PS	5/16/2023 16:15	40262368009	Water	1	-	×				E
0	NR-SW-OU1-202305	PS	5/16/2023 17:00	40262368010	Water	1		×				0/0
-	NR-SW-BKG2-202305	PS	5/16/2023 17:40	40262368011	Water	1		×				ŝ
										Comments		
rans	ransfers Released By	,	Date/Time	Received By	,		Date/Time	пе				
	Moter unsombalage pale psychial	Meka	105/19/2013	SKid CZ	JQ/-	33	5.20.23	3 9:45				

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

Custody Seal (Y)or N

3. 16 8

Cooler Temperature on Receipt

Samples Intact Y

Received on Ice (V) or N

This chain of custody is considered complete as is since this information is available in the owner laboratory.

DC#_Title: ENV-FRM-MIN4-0150 v13_Sample Condition Upon Receipt (SCUR)

Effective Date: 4/14/2023

Sample Condition Upon Receipt Client Name: PACE GYEEN F	30 V	Project i		J0#:10654073
Courier: FedEx UPS USBS Client	219		P	M: SCU Due Date: 06/12/23
Pace SpeeDee Commercial	□ See	Exceptions		LIENT: PASI-WI
Tracking Number:		M-MIN4-014		a -
Custody Seal on Cooler/Box Present? Yes No	Seals Intaci	t? Yes	□No	Biological Tissue Frozen? Yes No
Packing Material: Bubble Wrap Bubble Bags	☐ Non	ne .	Othe	_, _ 7
	159)		T5 (0178 0133925	, July Liver
Did Samples Originate in West Virginia? Yes No			Were All Co	ontainer Temps Taken? Yes No N/A
Temp should be above freezing to 6 °C Cooler temp Read w/	Temp Blank	k: 3.7	_°C	Average Corrected Temp
Correction Factor: +0.2 Cooler Temp Corrected w/	temp blani	. 39	°C	(no temp blank only): °C
	temp blam	K /]		See Exceptions ENV-FRM-MIN4-0142 1 Containe
USDA Regulated Soil: N/A water ample/other:	NY 1903 034	_)		Date/Initials of Person Examining Contents: 5:2
Did samples originate in a quarantine zone within the United St				Did samples originate from a foreign source (internationally,
GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check ma				including Hawaii and Puerto Rico)?
				0154) and include with SCUR/COC paperwork.
Location (Check one): Duluth Minnea		Virginia		COMMENTS
Chain of Custody Present and Filled Out? Chain of Custody Relinquished?	Yes	No		1.
	Yes	-	1	2.
Sampler Name and/or Signature on COC?	Yes		N/A	3.
Samples Arrived within Hold Time?	Yes		<u> </u>	4. If fecal: < 8 hrs > 8 hr, < 24 No
Short Hold Time Analysis (<72 hr)?	Yes Yes	No		5. Fecal Coliform HPC Total Coliform/E.coli BOD/cBOD Hex Chrom Turbidity Nitrate Nitrite Orthophos Other
Rush Turn Around Time Requested?	Yes	No		6.
Sufficient Sample Volume?	Yes	No		7.
Correct Containers Used?	Yes	☐ No	N/A	8.
-Pace Containers Used?	Yes	No		
Containers Intact?	Yes	No	,	9.
Field Filtered Volume Received for Dissolved Tests?	Yes	No	N/A	10. Is sediment visible in the dissolved container? Yes No
Is sufficient information available to reconcile the samples to the	Yes	□ No		11. If no, write ID/Date/Time of container below:
COC? Matrix: Water Soil Oil Other		975.5.29# 91	,	1 ACIU /Sample See Exception ENV-FRM-MIN4-014
All containers needing acid/base preservation have been checked?	Yes	☐ No	N/A	12. Sample #
All containers needing preservation are found to be in	Yes	☐ No	N/A	□ NaOH □ HNO3
compliance with EPA recommendation?		· ·	J	H2SO4 Zinc Acetate
HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)			2	
Eventions: VOA Colliform TOS/DOS Oil I G DDG/GOAT	TT v		A	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS	Yes	LI INO	N/A	Positive for Residual Yes See Exception
*If adding preservative to a container, it must be added to				Chlorine? No ENV-FRM-MIN4-014
associated field and equipment blanksverify with PM first.)				pH Paper Lot #
issociated field and equipment blanksverify with Pivi first.)				Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
leadspace in Methyl Mercury Container?	Yes	Thi-	I NIZA	12
extra labels present on soil VOA or WIDRO containers?	Yes	No No		13.
leadspace in VOA Vials (greater than 6mm)?	Yes	H No		14. See Exceptions
Trip Blanks Present?	Yes	No '	N/A	ENV-FRM-MIN4-014 15.
rip Blank Custody Seals Present?	Yes	HNo	N/A	Pace Trip Blank Lot # (if purchased):
LIENT NOTIFICATION/RESOLUTION	toronal .		1.47 K	Field Data Required? Yes No
Person Contacted:				Date/Time:
Comments/Resolution:				
Project Manager Review:	lh	ex		Date: 05/22/23
IOTE: Whenever there is a discrepancy affecting North Carolina compliance samples,	a copy of this fo	orm will he sent	to the North C	
emp, incorrect containers).		J De Jein		
			La	abeled By: Line: L
altray ID: 527/2	@ A			Rage 32 0

Qualtrax ID: 52742

Report No.....10654073_1668_L2_dfr

Pace® Analytical Services, LLC

Page 1 of 1 Page 6 of 200

Treids ALL SHADED AREAS are Container Preservative Type** (a) methanol (1) intro acid, (3) sulfure acid, (3) hydrochlor (3) methanol (1) of the first (3) and the first (4) and the first	OF-CUSTODY Analytical Request Document OF-Custody is a LEGAL DOCUMENT - Complete all relevent fields Billing Information:	ere or List Pace Workorder Number or Liber Here Liber Here	for LAB USE ONLY	Lab Project Manager:	a acid, (4) sodium hydroxide, (5) zinc acetate, (A) ascorbic acid, (8) ammonium sulfate,	lab Profile/Line:	Receipt Checklist:	Custody Seals are sent I in the Custody Signature Present I in the Collector Present I in the Collect	Sufficient Volume Sufficient Volume Y N NA Sufficient Volume Y N NA Y N N NA Y N NA N N NA N N NA N N N N N N N N N	sadspace Acceptable Y N	ena K N	Sulfide Present Lead Acetate Strips:	Lab Sample # // Comments:	1000	002- 4-00	603	OCH		200	\$ 1 · · · · · · · · · · · · · · · · · ·		info:	N N	Cooler 1 Corrected Temp:	Comments:	Arip Blank Received: Y N NA	Non Conformance(s): Page:
Iment fields Annie; On the State of the fields on the fiel	CHAIN-OF-CUSTODY Analytical Request Document Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields Billing information: Anadesh, Email To budg(NN/CN/CS m. panies. Complete all relevent fields Site collection info/Address: Al. 1 Ph. 1 Jut. Site collection info/Address: Al. 1 Ph. 1 Jut. Site collection info/Address: Al. 1 Ph. 1 Jut. Capulation of 1 Pres 1 Into Into Into Into Into Into Into Into	LAB USE ONLY- Affix Workorder/Login Label 1 M71L Log-in Nur	ALL SHADED AREAS are	Container Preservative Type	Preservative Types: (1) nitric acid, (2) sulfunc acid, (3) hydrochlor of methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexan.	C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other	(S)	oiles	ded cal	vage Dina	ns lato evlosil	的 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	000 001 05L		XXX	7		×,	-		×,	Z,	-	Clent Courier	īme: Table#:	2000	
		Analytical Request Document DOCUMENT - Complete all relevent fields	ormation:)	bwachholz@trccompanies.com	Chillen, WI	Time Zone Collected:	npliance Monitoring? Yes [] No	Sode:		Field Filtered (if applicable): Myes [] No Analysis: 4) 550 ved oven		Res # of Cl Ctns	Date Time	~	11:30	4	W	5	5	16:15	Wet (Aug. Dry		' Z	Received	CO.D.S. Received	

													/)	
300ler 1 of 3 Page 2 of 2	LAB USE ONLY-Affix Workorder/Login Label Here or List Pace Workorder Number or M71L Log-In Number Here	Gale2368.	ALL SHADED AREAS are for LAB USE ONLY	Lab Project Manager:	Types: (1) ntric acid, (2) sulfuric acid, (3) hydrothloric acid, (4) sodium hydroxide, (5) zinc acetate, 3 sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate,	(C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other II-sh Droffle/Jine-	ple Receipt Che	Custody Mignatures Present I N.N. Collector Inna	Correct Bottles . YR NR Sufficient Volume Y NR. NR. Sumficient Volume Y N. NR.	yok _ Headspace Ackeptable IN NA	K K K K K K K K K K K K K K K K K K K		Lab Sample #4/ Commentes:	costs of the distribution of the distribution of the distribution of			in the one and the second of t		the state of the s	and the second s		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Lab,Sample Temperature.info	Them Diank Received: Y N Them ID#:)	Comments:	Trip Blank Received Y N NA HCL MeOH / TSP. Other	Non Conformantarist: Page:
Ç	gin Label Log-in Nu	•	EAS ar	$\ \cdot\ $) hydrochic e, (9) hexa	Other				and:		(z '	ş.,	- No	1	3, .	- 100	-		. · ·		347	N/A	1	Pace C	MTIL LAB USE ONLY		(3.
	order/Lo		ED ARI	* -	rric acid, (3 n thiosulfat	served, (O)			·						1		E .;		Ļ				-	2896882	Courier	Table #:	Acctnum Template: Prelogin:	PM:
	ffix Work		SHAD	vative Typ	d, (2) sulfu (8) sodiun	(U) Unpre	_		:	64.		9	\$,	*	+	<u>.</u>	-	-	Ç.	.8**		3	(<72 hou	396	Client		2003 1 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u> </u>
	ONLY- A		ALL	Container Preservative Type **	1) nitric aci n bisulfate,	le, (D) TSP, (U)			Sange of the	,	· .	1	,,	455		ş.,	.:		× ×	,		, a	PRESENT	28	ed via:		25.00	
	LAB USE			2 Contain	ve Types: (m hydroxic	-	····	₹		ş ·	- ',	70C	2 7	<u> </u>	37.	\$ @	7.	and the same of		+		SHORT HOLDS PRESENT (<72 hours)	Lab Tracking #:	Samples received via: FEDEX UPS	Ë	$\begin{array}{c} \text{Date/Time:} \\ 5\text{-}(8\text{-}\text{J}\text{3}) \end{array}$	Date/Time:
					** Preservative (6) methanol, (7	аттопи					siaval	5	SI	7	×								SHOR "	+	Samp			
					L		1	ľ	<u> </u>	*	30,000		SCE E E		<u>ハ</u>	8}.	+	7	*,			-5			¥	(e)	(a)	(e)
	CHAIN-OF-CUSTODY Analytical Request Document	t fields			rccompanies.com	MI		g ₂		n ice:	able):	CACDS)	Res	1	1	\dagger	T						None of	1 %	Z >	Received by/Company: (Signature)	Received by/Company: (Signature)	by/Company: (Signature)
	st Doc	il releven			OMP	dillon,		Monitorin [] No	t: Code:	Packed o	iered (if applicable) [1] No [4] A SSS Ned	ater (WW	e End	Time									Åå,		Cpm):	Company:	Sompany:	Company:
	Reque	Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields			20 Fre	sss: Ch)	Time	Compliance Monitoring?	DW PWS ID #: DW Location Code:	Immediately Packed on Ice	Field Filtered (if applicable): KTYes I I No Analysis: AESONURA &), Wastew	Composite End	Date	1	1					+	+	Wet in Blue	1	Radchem sample(s) screened (<500 cpm):	eived by/0	eived by/	Received by/0
	lytical	MENT - C	:	2	Email Toil buach of 2004	nfo/Addre	County/City;	<u>3 </u>	88	<u>E</u> X		ater (GW)	L E	L	1.40	-	+	-			1	+	T.	It Used:	e(s) scree	7.3 (8:30)		Rec
	Y Ana	AL DOCU	Billing Information:	٤	DENA	lection l					t Day ay []5	round W. Bioassa	Collected (or Composite Start)	1	श्री	+	-	_	_			+	Type of Ice Used:	Packing Material Used	em sampl	23	5-(8-13 M)5	
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	-OF-CL	of-Custoc		4 0 4	laner)		10sP 930	# 4	er #: 20	ate Regu	ime Day	sing Wate	Comp/ Grab	,	D			L					Hazards:	1 K		Date N	80,	<u>a</u>
	CHAIN	Chain-		Site.	Mad		١,	Site/Facility ID#:	Purchase Order #: 20060 Quote #:	Turnaround Date Required:	ush: [] Same Day [] Next Day [] 2 Day [] 5 Day [] 5 Day	ow): Drink	Matrix *	-	3								Possible	ons analyzed by	Bay	20		-
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	<u> </u>	сенпа	4	Fourier	Sort	ST.	oject Nan 471	250 200 200 200 200 200 200 200 200 200	Sale Line	(Signalis)	osal: approprie	les (Inser), Soil/Sol	ample ID	70	-5W-BK6								marks / §	1. 200 is	300	DA/Con	Federy/Comp	by/com
	P	4	Company:	Address:	Report To:	Copy To:	Customer Project Name/Number JARP 471262 P	Phone: 608-354-3925 Site/Facility ID#	Collected By (print)	Collected By	Sample Disposal: [] Dispose as appropriate [] Archive:	Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Soild (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)	Customer Sample ID	,	NK -50								Customer Remarks / Special Conditions / Possible Hazards:	PCB congrue	Ministral Particular	Relinquished by/Co	Relinquished by/Compa	Relinquished by/Company: (Signature)
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Page 1 of

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120 mL plastic Na Thiosulfate 9 oz amber jar unpres 4 oz amber jar unpres 4 oz plastic jar unpres 4 oz clear jar unpres ziploc bag WGFU WPFU SP5T ZPLC GN 1 GN 2 JG9U 40 mL clear ascorbic w/ HCl 40 mL clear vial unpres 40 mL clear vial HCL 40 mL clear vial MeOH 40 mL clear vial DI 40 mL amber Na Thio DG9T VG9U VG9H VG9M VG9D 250 mL plastic H2SO4 500 mL plastic NaOH + Zn 250 mL plastic unpres 250 mL plastic NaOH 250 mL plastic HNO3 liter plastic unpres BP3B BP3N BP3S BP2Z BP1U BP3U AG1H 1 liter amber glass HCL AG4S 125 mL amber glass H2SO4 AG5U 100 mL amber glass unpres AG2S 500 mL amber glass H2SO4 BG3U 250 mL clear glass unpres 1 liter amber glass BG1U 1 liter clear glass

LL.

DC#_Title: ENV-FRM-GBAY-0035 v03_Sample Preservation Receipt Form

Effective Date: 8/16/2022

DC#_Title: ENV-FRM-GBAY-0014 v03_SCUR

Effective Date: 8/17/2022

Sample Condition Upon Receipt Form (SCUR)

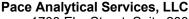
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Client Name: TRC			Project #:	MO#:	40262368
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☐ Client ☐ Pace Other:					(B) ((B)B) B()
Tracking #: 772 7841 3973				40262368	**: '***** *!*
Custody Seal on Cooler/Box Present: Ves	no Sea	als intac	t: Vyes 🖂 no		1
Custody Seal on Samples Present: 🗀 yes 🔀		als intact	t: 🛘 yes 🕅 ho		
Packing Material: Bubble Wrap Bubb	ole Bags	☐ Nor	e 🗖 Other		
Thermometer Used SR - V	Type of Ic	e: (Wet	Blue Dry None	Meltwater C	
Cooler Temperature Uncorr: Q.O /Corr. 7	L.U	.			Person examining contents; Date: //Initials: //Initia
Temp Blank Present: yes no	Bio	logical	Tissue is Frozen:	j yes∏ no	Date: Silv
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C if shipped on Di	y Ice.				Labeled By Initials:
Chain of Custody Present:	XYes □N		1.		
Chain of Custody Filled Out:	Yes DN	o □N/A	2.		
Chain of Custody Relinquished:	Mes □N	o □N/A	3.		
Sampler Name & Signature on COC:	Ves □N	o 🗆 N/A	4.		`
Samples Arrived within Hold Time:	Der □N	0	5.		
- DI VOA Samples frozen upon receipt	☐Yes ☐No	0	Date/Time:		
Short Hold Time Analysis (<72hr):	□Yes Mo)	6.		
Rush Turn Around Time Requested:	□Yes No)	7.		
Sufficient Volume:	٠.		8.		
For Analysis: Wes □No MS/MSD:	Yes No	□N/A			
Correct Containers Used:	Yes DNo)	9.		
Correct Type: Pace Green Bay Pace IR, Non-Pace	1				
Containers Intact:	Yes □No)	10.		
Filtered volume received for Dissolved tests	X yes □No	□N/A	11.		
Sample Labels match COC:	10 (Va)	□N/A	12.		
-Includes date/time/ID/Analysis Matrix: W	FITT	2-14-T			
Trip Blank Present:	□Yes □No	ANIA	13.		
Trip Blank Custody Seals Present	□Yes □No	PINIA			
Pace Trip Blank Lot # (if purchased):		۷			
Client Notification/ Resolution: Person Contacted:		Deta		-	ed form for additional comments
Comments/ Resolution:		_Date/1	ilme:		
PM Review is documented electronically in LIMs	By releasi	na the	project the DM seks	owladges the	have reviewed the comple lesi-
15 decamented electronically in LIMS	. Dy reitasi	ng tile	project, the PM ackn	owiedges triey	(λf)
					Page of

Qualtrax ID: 41292

Pace® Analytical Services, LLC

Page 1 of 2

Page 36 of 226



Pace Analytical ®

1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444

www.pacelabs.com

Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- H2 = Extracted outside of holding time
- I = Isotope ratio out of specification
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC 1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444

www.pacelabs.com

Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-DS2-202305
Lab Sample ID 40262368001
Filename P230529A_11
Injected By BAL
Total Amount Extracted 960 ml

Total Amount Extracted960 mLMatrixWater% MoistureNADilutionNADry Weight ExtractedNACollected05/16/2023 11:15

 ICAL ID
 P230529A02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529A_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023 12:56

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.171	2.95	2.0	1.42	71
13C-4-MoCB	3	12.986	3.09	2.0	1.69	84
13C-2,2'-DiCB	4	13.292	1.53	2.0	2.22	111
13C-4,4'-DiCB	15	20.415	1.58	2.0	1.85	92
13C-2,2',6-TrCB	19	17.143	1.04	2.0	2.26	113
13C-3,4,4'-TrCB	37	28.223	1.04	2.0	1.37	69
13C-2,2',6,6'-TeCB	54	20.767	0.79	2.0	1.49	74
13C-3,4,4',5-TeCB	81	35.377	0.79	2.0	1.49	75
13C-3,3',4,4'-TeCB	77	35.950	0.81	2.0	1.46	73
13C-2,2',4,6,6'-PeCB	104	26.909	1.57	2.0	1.77	89
13C-2,3,3',4,4'-PeCB	105	39.573	1.56	2.0	1.23	62
13C-2,3,4,4',5-PeCB	114	38.919	1.58	2.0	1.25	62
13C-2,3',4,4',5-PeCB	118	38.365	1.58	2.0	1.27	63
13C-2,3',4,4',5'-PeCB	123	38.030	1.53	2.0	1.23	62
13C-3,3',4,4',5-PeCB	126	42.742	1.54	2.0	1.08	54
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.32	2.0	2.30	115
13C-HxCB (156/157)	156/157	45.816	1.26	4.0	2.42	61
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.23	2.0	1.27	63
13C-3,3',4,4',5,5'-HxCB	169	49.119	1.23	2.0	1.41	71
13C-2,2',3,4',5,6,6'-HpCB	188	38.919	1.03	2.0	2.35	118
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.05	2.0	1.52	76
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.424	0.88	2.0	1.78	89
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.90	2.0	1.91	96
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.80	2.0	2.10	105
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.202	0.79	2.0	2.22	111
13C-DeCB	209	57.689	0.71	2.0	2.17	108
ClassusCtandards						
CleanupStandards 13C-2,4,4'-TrCB	28	23.845	1.03	2.0	1.28	64
13C-2,3,3',5,5'-PeCB	20 111	35.996	1.55	2.0	1.58	79
	178	42.038	1.03	2.0	1.79	79 89
13C-2,2',3,3',5,5',6-HpCB	170	42.036	1.03	2.0	1.79	09
Recovery Standards						
13C-2,5-DiCB	9	15.773	1.55	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.54	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.26	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.90	2.0	NA	NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0417
2				ND		0.0417
3				ND		0.0417
4				ND		0.0417
5				ND		0.0417
6				ND		0.0417
7				ND		0.0417
8				ND		0.0417
9				ND		0.0417
10				ND		0.0417
11				ND		0.408
12	12/13			ND		0.0833
13	12/13			ND		0.0833
14				ND		0.0417
15				ND		0.0550
16				ND		0.0417
17				ND		0.0417
18	18/30			ND		0.0833
19				ND		0.0417
20	20/28			ND		0.215
21	21/33			ND		0.225
22				ND		0.158
23				ND		0.0417
24				ND		0.0417
25	00/00			ND		0.0417
26	26/29			ND		0.0833
27	00/00			ND		0.0417
28	20/28			ND ND		0.215
29	26/29			ND		0.0833
30 31	18/30			ND ND		0.0833
32				ND ND		0.217 0.0417
32 33	21/33			ND ND		0.0417
33 34	21/33			ND		0.225
3 4 35				ND		0.0417
36				ND		0.0417
36 37				ND		0.0883
38				ND		0.0663
39				ND ND		0.0417
39 40	40/41/71			ND		0.0417
41	40/41/71			ND ND		0.125
42	70/ 7 1/ <i>1</i> 1			ND ND		0.0417
43	43/73			ND		0.0833
44	44/47/65			ND		0.125

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.0833
46				ND		0.0417
47	44/47/65			ND		0.125
48				ND		0.0417
49	49/69			ND		0.0833
50	50/53			ND		0.0833
51	45/51			ND		0.0833
52				ND		0.215
53	50/53			ND		0.0833
54				ND		0.0417
55				ND		0.0417
56				ND		0.0417
57				ND		0.0417
58				ND		0.0417
59	59/62/75			ND		0.125
60				ND		0.0417
61	61/70/74/76			ND		0.167
62	59/62/75			ND		0.125
63				ND		0.0417
64				ND		0.0417
65	44/47/65			ND		0.125
66				ND		0.0983
67				ND		0.0417
68				ND		0.0417
69	49/69			ND		0.0833
70	61/70/74/76			ND		0.167
71	40/41/71			ND		0.125
72				ND		0.0417
73	43/73			ND		0.0833
74	61/70/74/76			ND		0.167
75	59/62/75			ND		0.125
76	61/70/74/76			ND		0.167
77				ND		0.0417
78				ND		0.0417
79				ND		0.0417
80				ND		0.0417
81				ND		0.0417
82				ND		0.0417
83				ND		0.0417
84				ND		0.0417
85	85/116/117			ND		0.125
86	86/87/97/108/119/125			ND		0.250
87	86/87/97/108/119/125			ND		0.250
88	88/91			ND		0.0833

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0417
90	90/101/113			ND		0.125
91	88/91			ND		0.0833
92				ND		0.0417
93	93/98/100/102			ND		0.167
94				ND		0.0417
95				ND		0.117
96				ND		0.0417
97	86/87/97/108/119/125			ND		0.250
98	93/98/100/102			ND		0.167
99				ND		0.0417
100	93/98/100/102			ND		0.167
101	90/101/113			ND		0.125
102	93/98/100/102			ND		0.167
103				ND		0.0417
104				ND		0.0417
105				ND		0.0417
106				ND		0.0417
107	107/124			ND		0.0833
108	86/87/97/108/119/125			ND		0.250
109				ND		0.0417
110	110/115			ND		0.0833
111				ND		0.0417
112				ND		0.0417
113	90/101/113			ND		0.125
114				ND		0.0417
115	110/115			ND		0.0833
116	85/116/117			ND		0.125
117	85/116/117			ND		0.125
118				ND		0.0650
119	86/87/97/108/119/125			ND		0.250
120				ND		0.0417
121				ND		0.0417
122				ND		0.0417
123				ND		0.0417
124	107/124			ND		0.0833
125	86/87/97/108/119/125			ND		0.250
126				ND		0.0417
127				ND		0.0417
128	128/166			ND		0.0833
129	129/138/163			ND		0.125
130				ND		0.0417
131				ND		0.0417
132				ND		0.0417

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EMPC = Estimated Maximum Possible Concentration

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NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0417
134	134/143			ND		0.0833
135	135/151			ND		0.0833
136				ND		0.0417
137				ND		0.0417
138	129/138/163			ND		0.125
139	139/140			ND		0.0833
140	139/140			ND		0.0833
141				ND		0.0417
142				ND		0.0417
143	134/143			ND		0.0833
144				ND		0.0417
145				ND		0.0417
146				ND		0.0417
147	147/149			ND		0.0833
148				ND		0.0417
149	147/149			ND		0.0833
150				ND		0.0417
151	135/151			ND		0.0833
152				ND		0.0417
153	153/168			ND		0.0833
154				ND		0.0417
155				ND		0.0417
156	156/157			ND		0.0833
157	156/157			ND		0.0833
158				ND		0.0417
159				ND		0.0417
160				ND		0.0417
161				ND		0.0417
162	400/400/400			ND		0.0417
163	129/138/163			ND		0.125
164				ND		0.0417
165	400/400			ND		0.0417
166	128/166			ND		0.0833
167 168	152/169			ND ND		0.0417 0.0833
169	153/168			ND ND		0.0633
170				ND ND		0.0417
170	171/173			ND ND		0.0417
171	171/173			ND ND		0.0633
172	171/173			ND ND		0.0417
173	11 1/113			ND ND		0.0833
175				ND ND		0.0417
176				ND ND		0.0417
170				140		0.0417

Conc = Concentration

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EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion X = Outside QC Limits

RT = Retention Time

I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A 11

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177				ND		0.0417
178				ND		0.0417
179				ND		0.0417
180	180/193			ND		0.0833
181				ND		0.0417
182				ND		0.0417
183	183/185			ND		0.0833
184				ND		0.0417
185	183/185			ND		0.0833
186				ND		0.0417
187				ND		0.0417
188				ND		0.0417
189				ND		0.0417
190				ND		0.0417
191				ND		0.0417
192				ND		0.0417
193	180/193			ND		0.0833
194				ND		0.0417
195				ND		0.0417
196				ND		0.0417
197	197/200			ND		0.0833
198	198/199			ND		0.0833
199	198/199			ND		0.0833
200	197/200			ND		0.0833
201				ND		0.0417
202				ND		0.0417
203				ND		0.0417
204				ND		0.0417
205				ND		0.0417
206				ND		0.0417
207				ND		0.0417
208				ND		0.0417
209				ND		0.0417

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

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A = Limit of Detection based on signal to noise (EDL)

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* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename

Injected By

Total Amount Extracted % Moisture Dry Weight Extracted

ICAL ID

CCal Filename(s) Method Blank ID

NR-SW-DUP1-202305

40262368002 P230529A_12

P230529A 01

BLANK-106282

BAL

1040 mL NA NA P230529A02 Matrix Water Dilution NA

Collected 05/16/2023 Received 05/20/2023 18:45

Extracted 05/23/2023 12:15 Analyzed 05/29/2023 13:59

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.159	2.95	2.0	1.44	72
13C-4-MoCB	3	12.975	3.04	2.0	1.62	81
13C-2,2'-DiCB	4	13.292	1.56	2.0	2.22	111
13C-4,4'-DiCB	15	20.404	1.55	2.0	1.78	89
13C-2,2',6-TrCB	19	17.121	1.02	2.0	2.31	115
13C-3,4,4'-TrCB	37	28.208	1.04	2.0	1.30	65
13C-2,2',6,6'-TeCB	54	20.751	0.77	2.0	1.50	75
13C-3,4,4',5-TeCB	81	35.362	0.76	2.0	1.38	69
13C-3,3',4,4'-TeCB	77	35.950	0.79	2.0	1.33	67
13C-2,2',4,6,6'-PeCB	104	26.908	1.73	2.0	1.72	86
13C-2,3,3',4,4'-PeCB	105	39.573	1.61	2.0	1.06	53
13C-2,3,4,4',5-PeCB	114	38.918	1.62	2.0	1.06	53
13C-2,3',4,4',5-PeCB	118	38.365	1.59	2.0	1.09	55
13C-2,3',4,4',5'-PeCB	123	38.013	1.53	2.0	1.09	54
13C-3,3',4,4',5-PeCB	126	42.742	1.55	2.0	0.936	47
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.24	2.0	2.27	113
13C-HxCB(156/157)	156/157	45.816	1.27	4.0	2.19	55
13C-2,3',4,À',5,5'-HxĈB	167	44.642	1.28	2.0	1.14	57
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.27	2.0	1.30	65
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.05	2.0	2.21	111
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.05	2.0	1.46	73
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.91	2.0	1.73	87
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.89	2.0	1.79	89
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.81	2.0	1.99	99
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.202	0.77	2.0	2.14	107
13C-DeCB	209	57.690	0.70	2.0	2.30	115
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.04	2.0	1.29	65
13C-2,3,3',5,5'-PeCB	111	35.996	1.55	2.0	1.53	76
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.04	2.0	1.82	91
·						
Recovery Standards		4.5.000	4.50	0.0		
13C-2,5-DICB	9	15.762	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.76	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.90	2.0	NA	NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230529A 12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0383
2				ND		0.0383
3				ND		0.0383
4		13.314	1.48	0.148		0.0383
				ND		0.0383
5 6		16.270	1.51	0.0717		0.0383
7				ND		0.0383
8				ND		0.0383
9				ND		0.0383
10				ND		0.0383
11				ND		0.376
12	12/13			ND		0.0766
13	12/13			ND		0.0766
14				ND		0.0383
15				ND		0.0506
16				ND		0.0383
17		19.851	1.05	0.154		0.0383
18	18/30	19.365	1.05	0.0975		0.0766
19		17.143	0.90	0.0925		0.0383
20	20/28			ND		0.198
21	21/33			ND		0.207
22				ND		0.146
23				ND		0.0383
24				ND		0.0383
25	00/00	23.180	0.95	0.140		0.0383
26	26/29	22.917	1.10	0.260		0.0766
27	20/20			ND ND		0.0383
28	20/28					0.198
29 30	26/29 18/30	22.917 19.365	1.10 1.05	(0.260)		0.0766 0.0766
31	16/30	19.303	1.05	(0.0975) ND		0.199
32		20.983	1.01	0.0626		0.0383
33	21/33	20.903		0.0020 ND		0.207
34	21/33			ND ND		0.0383
35				ND		0.0383
36				ND		0.0383
37				ND		0.0812
38				ND		0.0383
39				ND		0.0383
40	40/41/71	28.068	0.76	0.306		0.115
41	40/41/71	28.068	0.76	(0.306)		0.115
42		27.527	0.76	0.206		0.0383
43	43/73			ND		0.0766
44	44/47/65	27.032	0.75	0.917		0.115

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230529A 12

		_				
IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.061	0.77	0.152		0.0766
46		24.309	0.71	0.0796		0.0383
47	44/47/65	27.032	0.75	(0.917)		0.115
48				NĎ		0.0383
49	49/69	26.413	0.78	1.34		0.0766
50	50/53	23.211	0.79	0.288		0.0766
51	45/51	24.061	0.77	(0.152)		0.0766
52	10/01	25.872	0.76	1.88		0.198
53	50/53	23.211	0.79	(0.288)		0.0766
54	30/33		0.73	(0.200) ND		0.0383
55				ND ND		0.0383
56		32.082	0.69	0.0568		0.0383
57				ND		0.0383
58	50/00/75			ND		0.0383
59	59/62/75			ND		0.115
60				ND		0.0383
61	61/70/74/76	31.030	0.76	0.411		0.153
62	59/62/75			ND		0.115
63				ND		0.0383
64		28.300	0.78	0.150		0.0383
65	44/47/65	27.032	0.75	(0.917)		0.115
66		31.386	0.77	0.330		0.0904
67				ND		0.0383
68				ND		0.0383
69	49/69	26.413	0.78	(1.34)		0.0766
70	61/70/74/76	31.030	0.76	(0.411)		0.153
71	40/41/71	28.068	0.76	(0.306)		0.115
72		29.204	0.71	0.0473		0.0383
73	43/73			ND		0.0766
74	61/70/74/76	31.030	0.76	(0.411)		0.153
75	59/62/75			ND		0.115
76	61/70/74/76	31.030	0.76	(0.411)		0.153
77	01/70/71/70			ND		0.0383
78				ND		0.0383
76 79				ND ND		0.0383
80				ND ND		0.0383
81				ND ND		0.0383
			4.50			
82		35.594	1.56	0.110		0.0383
83		33.706	1.56	0.144		0.0383
84	05/440/445	31.246	1.46	0.489		0.0383
85	85/116/117	35.114	1.65	0.319		0.115
86	86/87/97/108/119/125	34.356	1.59	1.03		0.230
87	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
88	88/91	31.030	1.56	0.382		0.0766

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ng's = Nanograms

EML



Tel: 612-607-1700 Fax: 612-607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Concentration

EMPC

Client Sample ID Lab Sample ID

NR-SW-DUP1-202305 40262368002

Filename P230529A_12

				Oon centration		
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
89				ND		0.0383
90	90/101/113	33.227	1.54	1.89		0.115
91	88/91	31.030	1.56	(0.382)		0.0766
92		32.608	1.54	0.679		0.0383
93	93/98/100/102			ND		0.153
94				ND		0.0383
95		30.101	1.57	1.61		0.107
96				ND		0.0383
97	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
98	93/98/100/102			` NĎ		0.153
99		33.846	1.56	0.959		0.0383
100	93/98/100/102			ND		0.153
101	90/101/113	33.227	1.54	(1.89)		0.115
102	93/98/100/102			` NĎ		0.153
103		29.421	1.47	0.0423		0.0383
104				ND		0.0383
105		39.590	1.53	0.320		0.0383
106				ND		0.0383
107	107/124			ND		0.0766
108	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
109		37.912	1.52	0.112		0.0383
110	110/115	35.269	1.53	2.64		0.0766
111				ND		0.0383
112				ND		0.0383
113	90/101/113	33.227	1.54	(1.89)		0.115
114				ND		0.0383
115	110/115	35.269	1.53	(2.64)		0.0766
116	85/116/117	35.114	1.65	(0.319)		0.115
117	85/116/117	35.114	1.65	(0.319)		0.115
118		38.382	1.46	1.04		0.0598
119	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
120				ND		0.0383
121				ND		0.0383
122				ND		0.0383
123				ND		0.0383
124	107/124			ND		0.0766
125	86/87/97/108/119/125	34.356	1.59	(1.03)		0.230
126				ND		0.0383
127				ND		0.0383
128	128/166	42.876	1.23	0.255		0.0766
129	129/138/163	41.602	1.22	1.35		0.115
130		40.914	1.21	0.114		0.0383
131				ND		0.0383
132		38.499	1.18	0.533		0.0383

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NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0383
134	134/143	37.409	1.12	0.118		0.0766
135	135/151	36.259	1.23	0.693		0.0766
136		33.722	1.20	0.247		0.0383
137		41.166	1.28	0.0724		0.0383
138	129/138/163	41.602	1.22	(1.35)		0.115
139	139/140			ND		0.0766
140	139/140			ND		0.0766
141		40.512	1.16	0.166		0.0383
142				ND		0.0383
143	134/143	37.409	1.12	(0.118)		0.0766
144		36.832	1.27	0.0628		0.0383
145				ND		0.0383
146		39.690	1.24	0.215		0.0383
147	147/149	37.208	1.22	1.16		0.0766
148				ND		0.0383
149	147/149	37.208	1.22	(1.16)		0.0766
150				ND		0.0383
151	135/151	36.259	1.23	(0.693)		0.0766
152				ND		0.0383
153	153/168	40.311	1.20	1.00		0.0766
154		36.522	1.22	0.0390		0.0383
155				ND		0.0383
156	156/157	45.816	1.29	0.171		0.0766
157	156/157	45.816	1.29	(0.171)		0.0766
158		42.004	1.20	0.123		0.0383
159				ND		0.0383
160				ND		0.0383
161				ND		0.0383
162	400/400/400	44.000	4.00	ND (4.25)		0.0383
163	129/138/163	41.602	1.22	(1.35)		0.115
164		41.266 	1.13 	0.0877		0.0383
165 166	100/166		1.23	ND (0.355)		0.0383
167	128/166	42.876		(0.255)		0.0766
168	153/168	44.659 40.311	1.14 1.20	0.0598		0.0383 0.0766
169	155/100	40.311	1.20	(1.00) ND		0.0788
170		48.533	1.09	0.122		0.0383
170	171/173		1.09	0.122 ND		0.0363
171	171/173			ND ND		0.0383
172	171/173			ND ND		0.0363
173	111/113	43.837	1.05	0.113		0.0788
174		43.037	1.05	ND		0.0383
176				ND ND		0.0383
						0.0000

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A 12

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177		44.306	0.98	0.0861		0.0383
178		42.038	0.99	0.0391		0.0383
179		39.271	1.06	0.0779		0.0383
180	180/193	47.258	1.06	0.188		0.0766
181				ND		0.0383
182				ND		0.0383
183	183/185			ND		0.0766
184				ND		0.0383
185	183/185			ND		0.0766
186				ND		0.0383
187		42.993	1.06	0.178		0.0383
188				ND		0.0383
189				ND		0.0383
190				ND		0.0383
191				ND		0.0383
192				ND		0.0383
193	180/193	47.258	1.06	(0.188)		0.0766
194				ND		0.0383
195				ND		0.0383
196				ND		0.0383
197	197/200			ND		0.0766
198	198/199			ND		0.0766
199	198/199			ND		0.0766
200	197/200			ND		0.0766
201				ND		0.0383
202				ND		0.0383
203				ND		0.0383
204				ND		0.0383
205				ND		0.0383
206				ND		0.0383
207				ND		0.0383
208				ND		0.0383
209				ND		0.0383

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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Nn = Value obtained from additional analyses

ND = Not Detected
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RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	0.219	
Total Trichloro Biphenyls	0.807	
Total Tetrachloro Biphenyls	6.16	
Total Pentachloro Biphenyls	11.8	
Total Hexachloro Biphenyls	6.46	
Total Heptachloro Biphenyls	0.805	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	26.2	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-EB-202305
Lab Sample ID 40262368003
Filename P230529B_04
Injected By BAL

Total Amount Extracted 1040 mL Matrix Water % Moisture NA Dilution NA Collected 05/16/2023 11:30

 ICÁL ID
 P230529B02
 Received
 05/20/2023
 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023
 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023
 19:14

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.148	2.98	2.0	1.47	74
13C-4-MoCB	3	12.975	3.09	2.0	1.78	89
13C-2,2'-DiCB	4	13.280	1.62	2.0	2.41	120
13C-4,4'-DiCB	15	20.415	1.57	2.0	1.87	94
13C-2,2',6-TrCB	19	17.132	1.00	2.0	2.38	119
13C-3,4,4'-TrCB	37	28.223	1.02	2.0	1.32	66
13C-2,2',6,6'-TeCB	54	20.766	0.79	2.0	1.57	78
13C-3,4,4',5-TeCB	81	35.377	0.76	2.0	1.40	70
13C-3,3',4,4'-TeCB	77	35.950	0.76	2.0	1.34	67
13C-2,2',4,6,6'-PeCB	104	26.908	1.55	2.0	1.92	96
13C-2,3,3',4,4'-PeCB	105	39.572	1.60	2.0	1.24	62
13C-2,3,4,4',5-PeCB	114	38.918	1.55	2.0	1.22	61
13C-2,3',4,4',5-PeCB	118	38.365	1.54	2.0	1.21	60
13C-2,3',4,4',5'-PeCB	123	38.030	1.57	2.0	1.22	61
13C-3,3',4,4',5-PeCB	126	42.742	1.54	2.0	1.10	55
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.24	2.0	2.31	115
13C-HxCB (156/157)	156/157	45.833	1.25	4.0	2.39	60
13C-2,3',4,4',5,5'-HxCB	167	44.659	1.24	2.0	1.26	63
13C-3,3',4,4',5,5'-HxCB	169	49.119	1.30	2.0	1.35	67
13C-2,2',3,4',5,6,6'-HpCB	188	38.935	1.04	2.0	2.48	124
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.02	2.0	1.53	77
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.408	0.86	2.0	1.88	94
13C-2,3,3',4,4',5,5',6-OcCB	205	54.305	0.86	2.0	1.87	93
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.81	2.0	2.10	105
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.223	0.79	2.0	2.29	114
13C-DeCB	209	57.689	0.69	2.0	2.20	110
ClaanunCtandarda						
CleanupStandards 13C-2,4,4'-TrCB	20	23.845	1.03	2.0	1.22	64
	28 111	23.645 35.996	1.03	2.0		61 77
13C-2,3,3',5,5'-PeCB	178	42.037	1.06	2.0 2.0	1.53 1.78	7 7 89
13C-2,2',3,3',5,5',6-HpCB	170	42.037	1.06	2.0	1.70	69
Recovery Standards						
13C-2,5-DiCB	9	15.762	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.74	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.211	1.55	2.0	ŇA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.585	1.23	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.87	2.0	ŇA	ŇA
		55.5.5	0.07		• • •	• • •

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-EB-202305 40262368003 P230529B 04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0385
2				ND		0.0385
3				ND		0.0385
4				ND		0.0385
5				ND		0.0385
6				ND		0.0385
7				ND		0.0385
8				ND		0.0385
9				ND		0.0385
10				ND		0.0385
11				ND		0.377
12	12/13			ND		0.0770
13	12/13			ND		0.0770
14	,			ND		0.0385
15				ND		0.0508
16				ND		0.0385
17				ND		0.0385
18	18/30			ND		0.0770
19				ND		0.0385
20	20/28			ND		0.199
21	21/33			ND		0.208
22				ND		0.146
23				ND		0.0385
24				ND		0.0385
25				ND		0.0385
26	26/29			ND		0.0770
27				ND		0.0385
28	20/28			ND		0.199
29	26/29			ND		0.0770
30	18/30			ND		0.0770
31				ND		0.200
32				ND		0.0385
33	21/33			ND		0.208
34				ND		0.0385
35				ND		0.0385
36				ND		0.0385
37				ND		0.0816
38				ND		0.0385
39				ND		0.0385
40	40/41/71			ND		0.115
41	40/41/71			ND		0.115
42				ND		0.0385
43	43/73			ND		0.0770
44	44/47/65			ND		0.115

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.0770
46				ND		0.0385
47	44/47/65			ND		0.115
48				ND		0.0385
49	49/69			ND		0.0770
50	50/53			ND		0.0770
51	45/51			ND		0.0770
52				ND		0.199
53	50/53			ND		0.0770
54				ND		0.0385
55				ND		0.0385
56				ND		0.0385
57				ND		0.0385
58				ND		0.0385
59	59/62/75			ND		0.115
60	33/32/13			ND		0.0385
61	61/70/74/76			ND		0.154
62	59/62/75			ND		0.115
63	00/02/10			ND		0.0385
64				ND		0.0385
65	44/47/65			ND		0.115
66	44/47/03			ND		0.0908
67				ND ND		0.0385
68				ND		0.0385
69	49/69			ND		0.0770
70	61/70/74/76			ND		0.154
71	40/41/71			ND ND		0.115
72	40/41/71			ND ND		0.0385
73	43/73			ND ND		0.0383
73 74	61/70/74/76			ND ND		0.0770
7 4 75	59/62/75			ND ND		0.134
75 76	61/70/74/76			ND ND		0.113
70 77	01/70/74/70			ND ND		0.134
7 <i>1</i> 78				ND ND		
						0.0385
79				ND		0.0385
80				ND		0.0385
81				ND		0.0385
82				ND		0.0385
83				ND		0.0385
84	05/440/445			ND		0.0385
85	85/116/117			ND		0.115
86	86/87/97/108/119/125			ND		0.231
87	86/87/97/108/119/125			ND		0.231
88	88/91			ND		0.0770

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R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0385
90	90/101/113			ND		0.115
91	88/91			ND		0.0770
92				ND		0.0385
93	93/98/100/102			ND		0.154
94				ND		0.0385
95				ND		0.108
96				ND		0.0385
97	86/87/97/108/119/125			ND		0.231
98	93/98/100/102			ND		0.154
99				ND		0.0385
100	93/98/100/102			ND		0.154
101	90/101/113			ND		0.115
102	93/98/100/102			ND		0.154
103				ND		0.0385
104				ND		0.0385
105				ND		0.0385
106				ND		0.0385
107	107/124			ND		0.0770
108	86/87/97/108/119/125			ND		0.231
109				ND		0.0385
110	110/115			ND		0.0770
111				ND		0.0385
112				ND		0.0385
113	90/101/113			ND		0.115
114				ND		0.0385
115	110/115			ND		0.0770
116	85/116/117			ND		0.115
117	85/116/117			ND		0.115
118	00/07/07/100/1100			ND		0.0600
119	86/87/97/108/119/125			ND		0.231
120				ND		0.0385
121				ND		0.0385
122				ND		0.0385
123	407/404			ND		0.0385
124	107/124			ND		0.0770
125	86/87/97/108/119/125			ND		0.231
126				ND		0.0385
127	400/400			ND		0.0385
128 129	128/166			ND ND		0.0770
	129/138/163			ND ND		0.115
130				ND ND		0.0385
131				ND ND		0.0385
132				ND		0.0385

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable

NC = Not Calculated

* = See Discussion X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0385
134	134/143			ND		0.0770
135	135/151			ND		0.0770
136				ND		0.0385
137				ND		0.0385
138	129/138/163			ND		0.115
139	139/140			ND		0.0770
140	139/140			ND		0.0770
141				ND		0.0385
142				ND		0.0385
143	134/143			ND		0.0770
144				ND		0.0385
145				ND		0.0385
146				ND		0.0385
147	147/149			ND		0.0770
148				ND		0.0385
149	147/149			ND		0.0770
150				ND		0.0385
151	135/151			ND		0.0770
152				ND		0.0385
153	153/168			ND		0.0770
154				ND		0.0385
155				ND		0.0385
156	156/157			ND		0.0770
157	156/157			ND		0.0770
158				ND		0.0385
159				ND		0.0385
160				ND		0.0385
161				ND		0.0385
162				ND		0.0385
163	129/138/163			ND		0.115
164				ND		0.0385
165				ND		0.0385
166	128/166			ND		0.0770
167				ND		0.0385
168	153/168			ND		0.0770
169				ND		0.0385
170				ND		0.0385
171	171/173			ND		0.0770
172	474/470			ND		0.0385
173	171/173			ND		0.0770
174				ND		0.0385
175				ND		0.0385
176				ND		0.0385

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time

ND = Not Detected

I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B 04

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177				ND		0.0385
178				ND		0.0385
179				ND		0.0385
180	180/193			ND		0.0770
181				ND		0.0385
182				ND		0.0385
183	183/185			ND		0.0770
184				ND		0.0385
185	183/185			ND		0.0770
186				ND		0.0385
187				ND		0.0385
188				ND		0.0385
189				ND		0.0385
190				ND		0.0385
191				ND		0.0385
192				ND		0.0385
193	180/193			ND		0.0770
194				ND		0.0385
195				ND		0.0385
196				ND		0.0385
197	197/200			ND		0.0770
198	198/199			ND		0.0770
199	198/199			ND		0.0770
200	197/200			ND		0.0770
201				ND		0.0385
202				ND		0.0385
203				ND		0.0385
204				ND		0.0385
205				ND		0.0385
206				ND		0.0385
207				ND		0.0385
208				ND		0.0385
209				ND		0.0385

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-FB-202305 Lab Sample ID 40262368004 Filename P230529B_05 Injected By BAL

Total Amount Extracted 1050 mL Matrix Water % Moisture NA Dilution NA Collected 05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 11:45

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023 20:17

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.170	3.03	2.0	1.42	71
13C-4-MoCB	3	12.986	3.08	2.0	1.57	79
13C-2,2'-DiCB	4	13.303	1.53	2.0	2.14	107
13C-4,4'-DiCB	15	20.415	1.56	2.0	1.67	84
13C-2,2',6-TrCB	19	17.143	1.02	2.0	2.05	103
13C-3,4,4'-TrCB	37	28.223	1.03	2.0	1.21	60
13C-2,2',6,6'-TeCB	54	20.751	0.79	2.0	1.34	67
13C-3,4,4',5-TeCB	81	35.362	0.79	2.0	1.28	64
13C-3,3',4,4'-TeCB	77	35.950	0.80	2.0	1.23	61
13C-2,2',4,6,6'-PeCB	104	26.923	1.62	2.0	1.70	85
13C-2,3,3',4,4'-PeCB	105	39.573	1.59	2.0	1.07	53
13C-2,3,4,4',5-PeCB	114	38.918	1.61	2.0	1.07	53
13C-2,3',4,4',5-PeCB	118	38.365	1.62	2.0	1.11	55
13C-2,3',4,4',5'-PeCB	123	38.030	1.58	2.0	1.13	56
13C-3,3',4,4',5-PeCB	126	42.742	1.60	2.0	0.995	50
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.23	2.0	2.11	106
13C-HxCB (156/157)	156/157	45.816	1.26	4.0	2.23	56
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.27	2.0	1.14	57
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.30	2.0	1.28	64
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.04	2.0	2.07	103
13C-2,3,3',4,4',5,5'-HpCB	189	51.675	1.09	2.0	1.38	69
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.88	2.0	1.58	79
13C-2,3,3',4,4',5,5',6-OcCB	205	54.283	0.88	2.0	1.70	85
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.79	2.0	1.88	94
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201	0.79	2.0	1.96	98
13C-DeCB	209	57.689	0.71	2.0	2.07	104
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.02	2.0	1.09	54
13C-2,3,3',5,5'-PeCB	111	35.996	1.54	2.0	1.37	69
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.02	2.0	1.56	78
Recovery Standards						
13C-2,5-DiCB	9	15.773	1.52	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.76	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.57	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.809	0.91	2.0	NA	NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-FB-202305 40262368004 P230529B 05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0382
2				ND ND		0.0382
3				ND ND		0.0382
4				ND ND		0.0382
5				ND		0.0382
6				ND		0.0382
7				ND		0.0382
8				ND		0.0382
9				ND		0.0382
10				ND		0.0382
11				ND		0.375
12	12/13			ND		0.0765
13	12/13			ND		0.0765
14				ND		0.0382
15				ND		0.0505
16				ND		0.0382
17				ND		0.0382
18	18/30			ND		0.0765
19				ND		0.0382
20	20/28			ND		0.197
21	21/33			ND		0.206
22				ND		0.145
23				ND		0.0382
24				ND		0.0382
25				ND		0.0382
26	26/29			ND		0.0765
27				ND		0.0382
28	20/28			ND		0.197
29	26/29			ND		0.0765
30	18/30			ND		0.0765
31				ND		0.199
32				ND		0.0382
33	21/33			ND		0.206
34				ND		0.0382
35				ND		0.0382
36				ND		0.0382
37				ND		0.0811
38				ND		0.0382
39	40/44/74			ND		0.0382
40	40/41/71			ND		0.115
41	40/41/71			ND		0.115
42	40/70			ND		0.0382
43	43/73			ND		0.0765
44	44/47/65			ND		0.115

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B 05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.0765
46				ND		0.0382
47	44/47/65			ND		0.115
48	11, 11,00			ND		0.0382
49	49/69			ND		0.0765
50	50/53			ND		0.0765
51	45/51			ND		0.0765
52	10/01			ND		0.197
53	50/53			ND		0.0765
54	30/33			ND		0.0382
5 5				ND		0.0382
56				ND		0.0382
57				ND ND		0.0382
57 58				ND ND		0.0382
56 59	59/62/75			ND ND		0.0362
60	59/62/75			ND ND		0.115
	C4 /70/74/70					
61	61/70/74/76			ND		0.153
62	59/62/75			ND		0.115
63				ND		0.0382
64	4.447.05			ND		0.0382
65	44/47/65			ND		0.115
66				ND		0.0902
67				ND		0.0382
68				ND		0.0382
69	49/69			ND		0.0765
70	61/70/74/76			ND		0.153
71	40/41/71			ND		0.115
72				ND		0.0382
73	43/73			ND		0.0765
74	61/70/74/76			ND		0.153
75	59/62/75			ND		0.115
76	61/70/74/76			ND		0.153
77				ND		0.0382
78				ND		0.0382
79				ND		0.0382
80				ND		0.0382
81				ND		0.0382
82				ND		0.0382
83				ND		0.0382
84				ND		0.0382
85	85/116/117			ND		0.115
86	86/87/97/108/119/125			ND		0.229
87	86/87/97/108/119/125			ND		0.229
88	88/91			ND		0.0765
-						

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B 05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0382
90	90/101/113			ND		0.115
91	88/91			ND		0.0765
92				ND		0.0382
93	93/98/100/102			ND		0.153
94				ND		0.0382
95				ND		0.107
96				ND		0.0382
97	86/87/97/108/119/125			ND		0.229
98	93/98/100/102			ND		0.153
99				ND		0.0382
100	93/98/100/102			ND		0.153
101	90/101/113			ND		0.115
102	93/98/100/102			ND		0.153
103				ND		0.0382
104				ND		0.0382
105				ND		0.0382
106				ND		0.0382
107	107/124			ND		0.0765
108	86/87/97/108/119/125			ND		0.229
109				ND		0.0382
110	110/115			ND		0.0765
111				ND		0.0382
112				ND		0.0382
113	90/101/113			ND		0.115
114				ND		0.0382
115	110/115			ND		0.0765
116	85/116/117			ND		0.115
117	85/116/117			ND		0.115
118	00/07/07/100/1100			ND		0.0596
119	86/87/97/108/119/125			ND		0.229
120				ND		0.0382
121				ND		0.0382
122				ND		0.0382
123	407/404			ND		0.0382
124	107/124			ND		0.0765
125	86/87/97/108/119/125			ND		0.229
126				ND		0.0382
127	129/166			ND		0.0382
128 129	128/166 129/138/163			ND ND		0.0765 0.115
130	129/130/103			ND ND		0.115
130				ND ND		0.0382
131				ND ND		
132				טא		0.0382

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B 05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0382
134	134/143			ND		0.0765
135	135/151			ND		0.0765
136				ND		0.0382
137				ND		0.0382
138	129/138/163			ND		0.115
139	139/140			ND		0.0765
140	139/140			ND		0.0765
141				ND		0.0382
142				ND		0.0382
143	134/143			ND		0.0765
144				ND		0.0382
145				ND		0.0382
146				ND		0.0382
147	147/149			ND		0.0765
148				ND		0.0382
149	147/149			ND		0.0765
150				ND		0.0382
151	135/151			ND		0.0765
152				ND		0.0382
153	153/168			ND		0.0765
154				ND		0.0382
155				ND		0.0382
156	156/157			ND		0.0765
157	156/157			ND		0.0765
158				ND		0.0382
159				ND		0.0382
160				ND		0.0382
161				ND		0.0382
162				ND		0.0382
163	129/138/163			ND		0.115
164				ND		0.0382
165				ND		0.0382
166	128/166			ND		0.0765
167				ND		0.0382
168	153/168			ND		0.0765
169				ND		0.0382
170				ND		0.0382
171	171/173			ND		0.0765
172				ND		0.0382
173	171/173			ND		0.0765
174				ND		0.0382
175				ND		0.0382
176				ND		0.0382
-						

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B 05

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177				ND		0.0382
178				ND		0.0382
179				ND		0.0382
180	180/193			ND		0.0765
181				ND		0.0382
182				ND		0.0382
183	183/185			ND		0.0765
184				ND		0.0382
185	183/185			ND		0.0765
186				ND		0.0382
187				ND		0.0382
188				ND		0.0382
189				ND		0.0382
190				ND		0.0382
191				ND		0.0382
192				ND		0.0382
193	180/193			ND		0.0765
194				ND		0.0382
195				ND		0.0382
196				ND		0.0382
197	197/200			ND		0.0765
198	198/199			ND		0.0765
199	198/199			ND		0.0765
200	197/200			ND		0.0765
201				ND		0.0382
202				ND		0.0382
203				ND		0.0382
204				ND		0.0382
205				ND		0.0382
206				ND		0.0382
207				ND		0.0382
208				ND		0.0382
209				ND		0.0382

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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Nn = Value obtained from additional analyses

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-DS1-202305
Lab Sample ID 40262368005
Filename P230529B_06
Injected By BAL
Total Amount Extracted 1050 ml

Total Amount Extracted 1050 mL Matrix Water % Moisture NA Dilution NA

Dry Weight Extracted NA Collected 05/16/2023 12:45 ICAL ID P230529B02 Received 05/20/2023 18:45 CCal Filename(s) P230529B 01 Extracted 05/23/2023 12:15 Method Blank ID BLANK-106282 Analyzed 05/29/2023 21:20

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.205	2.84	2.0	1.43	72
13C-4-MoCB	3	13.009	3.01	2.0	1.73	87
13C-2,2'-DiCB	4	13.325	1.62	2.0	2.39	120
13C-4,4'-DiCB	15	20.426	1.56	2.0	1.80	90
13C-2,2',6-TrCB	19	17.154	1.04	2.0	2.24	112
13C-3,4,4'-TrCB	37	28.223	1.02	2.0	1.30	65
13C-2,2',6,6'-TeCB	54	20.766	0.76	2.0	1.53	77
13C-3,4,4',5-TeCB	81	35.361	0.80	2.0	1.34	67
13C-3,3',4,4'-TeCB	77	35.949	0.78	2.0	1.30	65
13C-2,2',4,6,6'-PeCB	104	26.908	1.60	2.0	1.81	91
13C-2,3,3',4,4'-PeCB	105	39.572	1.60	2.0	1.05	52
13C-2,3,4,4',5-PeCB	114	38.918	1.62	2.0	1.05	53
13C-2,3',4,4',5-PeCB	118	38.365	1.61	2.0	1.09	54
13C-2,3',4,4',5'-PeCB	123	38.029	1.49	2.0	1.07	53
13C-3,3',4,4',5-PeCB	126	42.725	1.52	2.0	0.883	44
13C-2,2',4,4',6,6'-HxCB	155	32.994	1.30	2.0	2.37	118
13C-HxCB (156/157)	156/157	45.815	1.26	4.0	2.13	53
13C-2,3',4,4',5,5'-HxCB	167	44.641	1.24	2.0	1.11	56
13C-3,3',4,4',5,5'-HxCB	169	49.102	1.27	2.0	1.22	61
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.01	2.0	2.16	108
13C-2,3,3',4,4',5,5'-HpCB	189	51.675	1.05	2.0	1.39	70
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.91	2.0	1.61	81
13C-2,3,3',4,4',5,5',6-OcCB	205	54.283	0.91	2.0	1.73	86
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.050	0.76	2.0	1.98	99
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201	0.77	2.0	2.07	104
13C-DeCB	209	57.688	0.69	2.0	2.11	106
CleanupStandards						
13C-2,4,4'-TrCB	28	23.860	1.03	2.0	1.21	60
13C-2,3,3',5,5'-PeCB	111	35.996	1.59	2.0	1.51	76
13C-2,2',3,3',5,5',6-HpCB	178	42.037	1.04	2.0	1.75	87
Recovery Standards						
13C-2,5-DiCB	9	15.795	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.77	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.195	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.809	0.89	2.0	NA	NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0383
2				ND		0.0383
3				ND		0.0383
4		13.337	1.34	0.154		0.0383
5				ND		0.0383
6		16.303	1.43	0.0811		0.0383
7				ND		0.0383
8				ND		0.0383
9				ND		0.0383
10				ND		0.0383
11				ND		0.375
12	12/13			ND		0.0765
13	12/13			ND		0.0765
14				ND		0.0383
15				ND		0.0505
16				ND		0.0383
17		19.873	1.04	0.130		0.0383
18	18/30	19.387	0.93	0.0817		0.0765
19		17.176	1.08	0.100		0.0383
20	20/28			ND		0.197
21	21/33			ND		0.207
22				ND		0.145
23				ND		0.0383
24				ND		0.0383
25		23.195	1.11	0.161		0.0383
26	26/29	22.932	1.01	0.284		0.0765
27				ND		0.0383
28	20/28			ND		0.197
29	26/29	22.932	1.01	(0.284)		0.0765
30	18/30	19.387	0.93	(0.0817)		0.0765
31				ND		0.199
32		20.998	1.10	0.0699		0.0383
33	21/33			ND		0.207
34				ND		0.0383
35				ND		0.0383
36				ND		0.0383
37				ND		0.0811
38				ND		0.0383
39				ND		0.0383
40	40/41/71	28.084	0.79	0.260		0.115
41	40/41/71	28.084	0.79	(0.260)		0.115
42	40/70	27.542	0.74	0.158		0.0383
43	43/73			ND		0.0765
44	44/47/65	27.031	0.78	0.769		0.115

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DS1-202305 40262368005 P230529B 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.077	0.73	0.131		0.0765
46		24.309	0.79	0.0634		0.0383
47	44/47/65	27.031	0.78	(0.769)		0.115
48				` NĎ		0.0383
49	49/69	26.428	0.77	1.10		0.0765
50	50/53	23.226	0.77	0.249		0.0765
51	45/51	24.077	0.73	(0.131)		0.0765
52		25.887	0.76	` 1.41		0.197
53	50/53	23.226	0.77	(0.249)		0.0765
54				` NĎ		0.0383
55				ND		0.0383
56		32.066	0.85	0.0386		0.0383
57		29.993	0.76	0.0399		0.0383
58				ND		0.0383
59	59/62/75			ND		0.115
60				ND		0.0383
61	61/70/74/76	31.030	0.80	0.270		0.153
62	59/62/75			ND		0.115
63				ND		0.0383
64		28.316	0.77	0.0957		0.0383
65	44/47/65	27.031	0.78	(0.769)		0.115
66		31.385	0.78	0.229		0.0903
67				ND		0.0383
68				ND		0.0383
69	49/69	26.428	0.77	(1.10)		0.0765
70	61/70/74/76	31.030	0.80	(0.270)		0.153
71	40/41/71	28.084	0.79	(0.260)		0.115
72		29.220	0.77	0.0415		0.0383
73	43/73			ND		0.0765
74	61/70/74/76	31.030	0.80	(0.270)		0.153
75	59/62/75			ΝĎ		0.115
76	61/70/74/76	31.030	0.80	(0.270)		0.153
77				` NĎ		0.0383
78				ND		0.0383
79				ND		0.0383
80				ND		0.0383
81				ND		0.0383
82		35.593	1.64	0.0472		0.0383
83		33.691	1.57	0.0910		0.0383
84		31.246	1.49	0.252		0.0383
85	85/116/117	35.068	1.40	0.136		0.115
86	86/87/97/108/119/125	34.356	1.48	0.504		0.230
87	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
88	88/91	31.045	1.53	0.255		0.0765

Conc = Concentration

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0383
90	90/101/113	33.227	1.54	0.912		0.115
91	88/91	31.045	1.53	(0.255)		0.0765
92		32.608	1.53	0.431		0.0383
93	93/98/100/102			ND		0.153
94				ND		0.0383
95		30.101	1.48	0.844		0.107
96				ND		0.0383
97	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
98	93/98/100/102			` NĎ		0.153
99		33.845	1.53	0.473		0.0383
100	93/98/100/102			ND		0.153
101	90/101/113	33.227	1.54	(0.912)		0.115
102	93/98/100/102			NĎ		0.153
103				ND		0.0383
104				ND		0.0383
105		39.589	1.46	0.136		0.0383
106				ND		0.0383
107	107/124			ND		0.0765
108	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
109	30,01,01,130,110,120	37.929	1.50	0.0728		0.0383
110	110/115	35.269	1.58	1.37		0.0765
111				ND		0.0383
112				ND		0.0383
113	90/101/113	33.227	1.54	(0.912)		0.115
114	30, 101, 110			ND		0.0383
115	110/115	35.269	1.58	(1.37)		0.0765
116	85/116/117	35.068	1.40	(0.136)		0.115
117	85/116/117	35.068	1.40	(0.136)		0.115
118	30/110/11/	38.398	1.52	0.534		0.0597
119	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
120	00/01/01/100/110/120			ND		0.0383
121				ND		0.0383
122				ND		0.0383
123				ND		0.0383
124	107/124			ND		0.0765
125	86/87/97/108/119/125	34.356	1.48	(0.504)		0.230
126	00/01/91/100/119/129			(0.30 4) ND		0.0383
127				ND		0.0383
128	128/166	42.875	1.24	0.122		0.0765
129	129/138/163	41.601	1.18	0.638		0.0765
130	129/130/103	40.930	1.16	0.0605		0.0383
131		40.930	1.10	0.0605 ND		0.0383
132		38.499	1.29	0.282		0.0383
132		30.499	1.29	0.202		0.0363

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0383
134	134/143			ND		0.0765
135	135/151	36.228	1.27	0.311		0.0765
136		33.722	1.25	0.125		0.0383
137				ND		0.0383
138	129/138/163	41.601	1.18	(0.638)		0.115
139	139/140			` NĎ		0.0765
140	139/140			ND		0.0765
141		40.511	1.23	0.0744		0.0383
142				ND		0.0383
143	134/143			ND		0.0765
144				ND		0.0383
145				ND		0.0383
146		39.689	1.26	0.120		0.0383
147	147/149	37.208	1.19	0.657		0.0765
148				ND		0.0383
149	147/149	37.208	1.19	(0.657)		0.0765
150				ND		0.0383
151	135/151	36.228	1.27	(0.311)		0.0765
152				ND		0.0383
153	153/168	40.327	1.24	0.469		0.0765
154				ND		0.0383
155				ND		0.0383
156	156/157	45.832	1.20	0.0824		0.0765
157	156/157	45.832	1.20	(0.0824)		0.0765
158		42.020	1.18	0.0533		0.0383
159				ND		0.0383
160				ND		0.0383
161				ND		0.0383
162	100/100/100			ND (2.222)		0.0383
163	129/138/163	41.601	1.18	(0.638)		0.115
164		41.266	1.22	0.0464		0.0383
165	400/400	40.075		ND (2.100)		0.0383
166	128/166	42.875	1.24	(0.122)		0.0765
167	450/400	40.007		ND (0.400)		0.0383
168	153/168	40.327	1.24	(0.469)		0.0765
169		40.540	4.00	ND		0.0383
170	474/470	48.549	1.02	0.0782		0.0383
171	171/173			ND		0.0765
172 173	171/173			ND ND		0.0383 0.0765
173	1/1/1/3	43.853	1.03	0.0634		0.0765
174		43.003	1.03	0.0034 ND		0.0383
176				ND ND		0.0383
170				ND		0.0000

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B 06

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177		44.306	1.08	0.0540		0.0383
178				ND		0.0383
179		39.287	0.98	0.0425		0.0383
180	180/193	47.257	1.01	0.124		0.0765
181				ND		0.0383
182				ND		0.0383
183	183/185			ND		0.0765
184				ND		0.0383
185	183/185			ND		0.0765
186				ND		0.0383
187		42.993	1.14	0.0922		0.0383
188				ND		0.0383
189				ND		0.0383
190				ND		0.0383
191				ND		0.0383
192				ND		0.0383
193	180/193	47.257	1.01	(0.124)		0.0765
194				ND		0.0383
195				ND		0.0383
196				ND		0.0383
197	197/200			ND		0.0765
198	198/199			ND		0.0765
199	198/199			ND		0.0765
200	197/200			ND		0.0765
201				ND		0.0383
202				ND		0.0383
203				ND		0.0383
204				ND		0.0383
205				ND		0.0383
206				ND		0.0383
207				ND		0.0383
208				ND		0.0383
209				ND		0.0383

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
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ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	0.235	
Total Trichloro Biphenyls	0.827	
Total Tetrachloro Biphenyls	4.86	
Total Pentachloro Biphenyls	6.06	
Total Hexachloro Biphenyls	3.04	
Total Heptachloro Biphenyls	0.455	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	15.5	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-OU4-202305
Lab Sample ID 40262368006
Filename P230529B_07
Injected By BAL
Tatal Amount Extracted 1040 ml

Total Amount Extracted1040 mLMatrixWater% MoistureNADilutionNADry Weight ExtractedNACollected05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 13:15

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/29/2023 22:22

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.137	2.95	2.0	1.53	76
13C-4-MoCB	3	12.953	2.99	2.0	1.65	82
13C-2,2'-DiCB	4	13.258	1.55	2.0	2.30	115
13C-4,4'-DiCB	15	20.393	1.56	2.0	1.72	86
13C-2,2',6-TrCB	19	17.121	1.05	2.0	2.35	117
13C-3,4,4'-TrCB	37	28.208	1.03	2.0	1.20	60
13C-2,2',6,6'-TeCB	54	20.736	0.77	2.0	1.52	76
13C-3,4,4',5-TeCB	81	35.362	0.76	2.0	1.29	64
13C-3,3',4,4'-TeCB	77	35.935	0.78	2.0	1.28	64
13C-2,2',4,6,6'-PeCB	104	26.909	1.54	2.0	1.75	87
13C-2,3,3',4,4'-PeCB	105	39.556	1.61	2.0	1.04	52
13C-2,3,4,4',5-PeCB	114	38.919	1.58	2.0	1.05	52
13C-2,3',4,4',5-PeCB	118	38.349	1.54	2.0	1.03	51
13C-2,3',4,4',5'-PeCB	123	38.030	1.53	2.0	1.08	54
13C-3,3',4,4',5-PeCB	126	42.726	1.61	2.0	0.852	43
13C-2,2',4,4',6,6'-HxCB	155	32.980	1.25	2.0	2.30	115
13C-HxCB (156/157)	156/157	45.816	1.27	4.0	2.05	51 55
13C-2,3',4,4',5,5'-HxCB	167 169	44.643 49.103	1.26 1.25	2.0 2.0	1.10 1.18	59
13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB	188	38.919	1.04	2.0	2.19	110
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.05	2.0	1.38	69
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.408	0.91	2.0	1.59	79
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.89	2.0	1.68	84
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.77	2.0	1.94	97
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.202	0.76	2.0	2.06	103
13C-DeCB	209	57.689	0.72	2.0	2.04	102
	_00	0000	J			. • =
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.03	2.0	1.14	57
13C-2,3,3',5,5'-PeCB	111	35.981	1.56	2.0	1.48	74
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.06	2.0	1.73	86
Recovery Standards						
13C-2,5-DiCB	9	15.751	1.51	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.841	0.77	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.181	1.54	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.27	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.91	2.0	NA	NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B 07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
	OO CIGUIOTIS	17.1	rtatio		119/12	
1				ND		0.0384
2				ND		0.0384
3				ND		0.0384
4				ND		0.0384
5				ND		0.0384
6				ND		0.0384
7				ND		0.0384
8				ND		0.0384
9				ND		0.0384
10				ND		0.0384
11				ND		0.376
12	12/13			ND		0.0768
13	12/13			ND		0.0768
14				ND		0.0384
15				ND		0.0507
16				ND		0.0384
17				ND		0.0384
18	18/30			ND		0.0768
19				ND		0.0384
20	20/28			ND		0.198
21	21/33			ND		0.207
22				ND		0.146
23				ND		0.0384
24				ND		0.0384
25				ND		0.0384
26	26/29			ND		0.0768
27				ND		0.0384
28	20/28			ND		0.198
29	26/29			ND		0.0768
30	18/30			ND		0.0768
31				ND		0.200
32				ND		0.0384
33	21/33			ND		0.207
34				ND		0.0384
35				ND		0.0384
36				ND		0.0384
37				ND		0.0814
38				ND		0.0384
39				ND		0.0384
40	40/41/71			ND		0.115
41	40/41/71			ND		0.115
42		27.527	0.82	0.0514		0.0384
43	43/73			ND		0.0768
44	44/47/65	27.017	0.78	0.240		0.115

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B 07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.0768
46				ND		0.0384
47	44/47/65	27.017	0.78	(0.240)		0.115
48				NĎ		0.0384
49	49/69	26.413	0.77	0.264		0.0768
50	50/53	23.195	0.77	0.0807		0.0768
51	45/51			ND		0.0768
52		25.872	0.76	0.277		0.198
53	50/53	23.195	0.77	(0.0807)		0.0768
54				` NĎ		0.0384
55				ND		0.0384
56				ND		0.0384
57				ND		0.0384
58				ND		0.0384
59	59/62/75			ND		0.115
60				ND		0.0384
61	61/70/74/76			ND		0.154
62	59/62/75			ND		0.115
63				ND		0.0384
64				ND		0.0384
65	44/47/65	27.017	0.78	(0.240)		0.115
66				` NĎ		0.0906
67				ND		0.0384
68				ND		0.0384
69	49/69	26.413	0.77	(0.264)		0.0768
70	61/70/74/76			` NĎ		0.154
71	40/41/71			ND		0.115
72				ND		0.0384
73	43/73			ND		0.0768
74	61/70/74/76			ND		0.154
75	59/62/75			ND		0.115
76	61/70/74/76			ND		0.154
77				ND		0.0384
78				ND		0.0384
79				ND		0.0384
80				ND		0.0384
81				ND		0.0384
82				ND		0.0384
83				ND		0.0384
84		31.247	1.69	0.0812		0.0384
85	85/116/117			ND		0.115
86	86/87/97/108/119/125			ND		0.230
87	86/87/97/108/119/125			ND		0.230
88	88/91			ND		0.0768

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU4-202305 40262368006 P230529B 07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0384
90	90/101/113	33.212	1.49	0.328		0.115
91	88/91			ND		0.0768
92		32.608	1.42	0.0989		0.0384
93	93/98/100/102			ND		0.154
94				ND		0.0384
95		30.087	1.48	0.255		0.107
96				ND		0.0384
97	86/87/97/108/119/125			ND		0.230
98	93/98/100/102			ND		0.154
99		33.831	1.65	0.164		0.0384
100	93/98/100/102			ND		0.154
101	90/101/113	33.212	1.49	(0.328)		0.115
102	93/98/100/102			ND		0.154
103				ND		0.0384
104				ND		0.0384
105		39.590	1.51	0.0623		0.0384
106				ND		0.0384
107	107/124			ND		0.0768
108	86/87/97/108/119/125			ND		0.230
109				ND		0.0384
110	110/115	35.269	1.53	0.422		0.0768
111				ND		0.0384
112				ND		0.0384
113	90/101/113	33.212	1.49	(0.328)		0.115
114				ND		0.0384
115	110/115	35.269	1.53	(0.422)		0.0768
116	85/116/117			ND		0.115
117	85/116/117			ND		0.115
118		38.382	1.59	0.203		0.0599
119	86/87/97/108/119/125			ND		0.230
120				ND		0.0384
121				ND		0.0384
122				ND		0.0384
123	407/404			ND		0.0384
124	107/124			ND		0.0768
125	86/87/97/108/119/125			ND		0.230
126				ND		0.0384
127	400/400			ND		0.0384
128	128/166	44.602	 1 0E	ND		0.0768
129	129/138/163	41.602	1.25	0.230		0.115
130				ND ND		0.0384
131		20.402	1.10	ND		0.0384
132		38.483	1.19	0.0851		0.0384

Conc = Concentration

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NA = Not Applicable

NC = Not Calculated

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X = Outside QC Limits

RT = Retention Time I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0384
134	134/143			ND		0.0768
135	135/151	36.229	1.20	0.0868		0.0768
136				ND		0.0384
137				ND		0.0384
138	129/138/163	41.602	1.25	(0.230)		0.115
139	139/140			ND		0.0768
140	139/140			ND		0.0768
141				ND		0.0384
142				ND		0.0384
143	134/143			ND		0.0768
144				ND		0.0384
145				ND		0.0384
146				ND		0.0384
147	147/149	37.192	1.31	0.183		0.0768
148				ND		0.0384
149	147/149	37.192	1.31	(0.183)		0.0768
150				ND		0.0384
151	135/151	36.229	1.20	(0.0868)		0.0768
152				ND		0.0384
153	153/168	40.328	1.23	0.175		0.0768
154				ND		0.0384
155				ND		0.0384
156	156/157			ND		0.0768
157	156/157			ND		0.0768
158				ND		0.0384
159				ND		0.0384
160				ND		0.0384
161				ND		0.0384
162				ND		0.0384
163	129/138/163	41.602	1.25	(0.230)		0.115
164				ND		0.0384
165				ND		0.0384
166	128/166			ND		0.0768
167				ND		0.0384
168	153/168	40.328	1.23	(0.175)		0.0768
169				ND		0.0384
170				ND		0.0384
171	171/173			ND		0.0768
172				ND		0.0384
173	171/173			ND		0.0768
174				ND		0.0384
175				ND		0.0384
176				ND		0.0384

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B 07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177				ND		0.0384
178				ND		0.0384
179				ND		0.0384
180	180/193			ND		0.0768
181				ND		0.0384
182				ND		0.0384
183	183/185			ND		0.0768
184				ND		0.0384
185	183/185			ND		0.0768
186				ND		0.0384
187				ND		0.0384
188				ND		0.0384
189				ND		0.0384
190				ND		0.0384
191				ND		0.0384
192				ND		0.0384
193	180/193			ND		0.0768
194				ND		0.0384
195				ND		0.0384
196				ND		0.0384
197	197/200			ND		0.0768
198	198/199			ND		0.0768
199	198/199			ND		0.0768
200	197/200			ND		0.0768
201				ND		0.0384
202				ND		0.0384
203				ND		0.0384
204				ND		0.0384
205				ND		0.0384
206				ND		0.0384
207				ND		0.0384
208				ND		0.0384
209				ND		0.0384

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	0.914	
Total Pentachloro Biphenyls	1.62	
Total Hexachloro Biphenyls	0.760	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	3.29	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-BKG1-202305
Lab Sample ID 40262368007
Filename P230529B_08

Injected By
Total Amount Extracted

BA
103

% Moisture
Dry Weight Extracted

Dry Weight Extracted ICAL ID

CCal Filename(s)
Method Blank ID

BAL
1030 mL Matrix Water
NA Dilution NA

NA Collected 05/16/2023 14:10 P230529B02 Received 05/20/2023 18:45 P230529B_01 Extracted 05/23/2023 12:15 BLANK-106282 Analyzed 05/29/2023 23:25

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.182	2.99	2.0	1.67	84
13C-4-MoCB	3	12.998	2.96	2.0	1.80	90
13C-2,2'-DiCB	4	13.303	1.48	2.0	2.48	124
13C-4,4'-DiCB	15	20.404	1.57	2.0	1.85	93
13C-2,2',6-TrCB	19	17.143	1.03	2.0	2.54	127
13C-3,4,4'-TrCB	37	28.223	1.07	2.0	1.29	65
13C-2,2',6,6'-TeCB	54	20.766	0.78	2.0	1.65	82
13C-3,4,4',5-TeCB	81	35.377	0.78	2.0	1.40	70
13C-3,3',4,4'-TeCB	77	35.950	0.75	2.0	1.34	67
13C-2,2',4,6,6'-PeCB	104	26.908	1.52	2.0	1.77	88
13C-2,3,3',4,4'-PeCB	105	39.572	1.55	2.0	1.15	57
13C-2,3,4,4',5-PeCB	114	38.918	1.51	2.0	1.11	55
13C-2,3',4,4',5-PeCB	118	38.365	1.59	2.0	1.15	57
13C-2,3',4,4',5'-PeCB	123	38.030	1.54	2.0	1.14	57
13C-3,3',4,4',5-PeCB	126	42.742	1.58	2.0	0.973	49
13C-2,2',4,4',6,6'-HxCB	155	32.995	1.25	2.0	2.32	116
13C-HxCB (156/157)	156/157	45.816	1.27	4.0	2.24	56
13C-2,3',4,4',5,5'-HxCB	167	44.659	1.26	2.0	1.16	58
13C-3,3',4,4',5,5'-HxCB	169	49.119	1.26	2.0	1.25	63
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.03	2.0	2.49	125
13C-2,3,3',4,4',5,5'-HpCB	189	51.697	1.04	2.0	1.51	75
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.89	2.0	1.91	95
13C-2,3,3',4,4',5,5',6-OcCB	205	54.305	0.88	2.0	1.81	90
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.79	2.0	2.02 2.27	101 113
13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	208 209	51.223 57.689	0.78 0.71	2.0 2.0	2.27	104
13C-DeCB	209	57.009	0.71	2.0	2.06	104
CleanupStandards						
13C-2,4,4'-TrCB	28	23.860	1.04	2.0	1.32	66
13C-2,3,3',5,5'-PeCB	111	35.996	1.55	2.0	1.60	80
13C-2,2',3,3',5,5',6-HpCB	178	42.037	1.07	2.0	1.90	95
Recovery Standards						
13C-2,5-DiCB	9	15.773	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.79	2.0	NA NA	NA NA
13C-2,2',4,5,5'-PeCB	101	33.196	1.56	2.0	NA NA	NA NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.22	2.0	NA NA	NA NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.88	2.0	ŇÁ	NA NA
		55.5.5	0.00	2.0		

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0387
2				ND		0.0387
3				ND		0.0387
4				ND		0.0387
5				ND		0.0387
6				ND		0.0387
7				ND		0.0387
8				ND		0.0387
9				ND		0.0387
10				ND		0.0387
11				ND		0.379
12	12/13			ND		0.0774
13	12/13			ND		0.0774
14				ND		0.0387
15				ND		0.0511
16				ND		0.0387
17				ND		0.0387
18	18/30			ND		0.0774
19	/			ND		0.0387
20	20/28			ND		0.200
21	21/33			ND		0.209
22				ND		0.147
23				ND		0.0387
24				ND		0.0387
25 26	26/29			ND ND		0.0387 0.0774
26 27	20/29			ND		0.0774
28	20/28			ND		0.0367
26 29	26/29			ND ND		0.200
30	18/30			ND		0.0774
31	10/30			ND ND		0.201
32				ND		0.0387
33	21/33			ND		0.209
34	21/00			ND		0.0387
35				ND		0.0387
36				ND		0.0387
37				ND		0.0820
38				ND		0.0387
39				ND		0.0387
40	40/41/71			ND		0.116
41	40/41/71			ND		0.116
42	·			ND		0.0387
43	43/73			ND		0.0774
44	44/47/65	27.032	0.81	0.117		0.116

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.0774
46				ND		0.0387
47	44/47/65	27.032	0.81	(0.117)		0.116
48				NĎ		0.0387
49	49/69	26.428	0.79	0.111		0.0774
50	50/53			ND		0.0774
51	45/51			ND		0.0774
52				ND		0.200
53	50/53			ND		0.0774
54				ND		0.0387
55				ND		0.0387
56				ND		0.0387
57				ND		0.0387
58				ND		0.0387
59	59/62/75			ND		0.116
60				ND		0.0387
61	61/70/74/76			ND		0.155
62	59/62/75			ND		0.116
63				ND		0.0387
64				ND		0.0387
65	44/47/65	27.032	0.81	(0.117)		0.116
66				ND		0.0913
67				ND		0.0387
68				ND		0.0387
69	49/69	26.428	0.79	(0.111)		0.0774
70	61/70/74/76			` NĎ		0.155
71	40/41/71			ND		0.116
72				ND		0.0387
73	43/73			ND		0.0774
74	61/70/74/76			ND		0.155
75	59/62/75			ND		0.116
76	61/70/74/76			ND		0.155
77				ND		0.0387
78				ND		0.0387
79				ND		0.0387
80				ND		0.0387
81				ND		0.0387
82				ND		0.0387
83				ND		0.0387
84				ND		0.0387
85	85/116/117			ND		0.116
86	86/87/97/108/119/125			ND		0.232
87	86/87/97/108/119/125			ND		0.232
88	88/91			ND		0.0774

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion

* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
89				ND		0.0387
90	90/101/113	33.227	1.46	0.124		0.116
91	88/91			ND		0.0774
92				ND		0.0387
93	93/98/100/102			ND		0.155
94				ND		0.0387
95				ND		0.108
96				ND		0.0387
97	86/87/97/108/119/125			ND		0.232
98	93/98/100/102			ND		0.155
99		33.830	1.43	0.0663		0.0387
100	93/98/100/102			ND		0.155
101	90/101/113	33.227	1.46	(0.124)		0.116
102	93/98/100/102			NĎ		0.155
103				ND		0.0387
104				ND		0.0387
105				ND		0.0387
106				ND		0.0387
107	107/124			ND		0.0774
108	86/87/97/108/119/125			ND		0.232
109	00,01,01,100,110,120			ND		0.0387
110	110/115	35.269	1.53	0.161		0.0774
111				ND		0.0387
112				ND		0.0387
113	90/101/113	33.227	1.46	(0.124)		0.116
114	33, 13 1, 113			ND		0.0387
115	110/115	35.269	1.53	(0.161)		0.0774
116	85/116/117			ND		0.116
117	85/116/117			ND		0.116
118	30,110,111	38.382	1.46	0.0871		0.0604
119	86/87/97/108/119/125			ND		0.232
120	00,01,01,100,110,120			ND		0.0387
121				ND		0.0387
122				ND		0.0387
123				ND		0.0387
124	107/124			ND		0.0774
125	86/87/97/108/119/125			ND		0.232
126	55/51/51/100/115/125			ND		0.0387
127				ND		0.0387
128	128/166			ND		0.0774
129	129/138/163			ND		0.116
130	120/100/100			ND ND		0.0387
131				ND		0.0387
132				ND ND		0.0387
102				שאו		0.0307

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0387
134	134/143			ND		0.0774
135	135/151			ND		0.0774
136				ND		0.0387
137				ND		0.0387
138	129/138/163			ND		0.116
139	139/140			ND		0.0774
140	139/140			ND		0.0774
141				ND		0.0387
142				ND		0.0387
143	134/143			ND		0.0774
144				ND		0.0387
145				ND		0.0387
146				ND		0.0387
147	147/149	37.208	1.31	0.0795		0.0774
148				ND		0.0387
149	147/149	37.208	1.31	(0.0795)		0.0774
150				ND		0.0387
151	135/151			ND		0.0774
152				ND		0.0387
153	153/168			ND		0.0774
154				ND		0.0387
155				ND		0.0387
156	156/157			ND		0.0774
157	156/157			ND		0.0774
158				ND		0.0387
159				ND		0.0387
160				ND		0.0387
161				ND		0.0387
162	400/400/400			ND		0.0387
163	129/138/163			ND		0.116
164				ND		0.0387
165	400/400			ND		0.0387
166	128/166			ND		0.0774
167	450/400			ND		0.0387
168	153/168			ND		0.0774
169				ND		0.0387
170	474/470			ND		0.0387
171	171/173			ND ND		0.0774
172 173	171/173			ND ND		0.0387 0.0774
173	1/1/1/3			ND ND		0.0774
174				ND ND		0.0387
175				ND ND		
110				טא		0.0387

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
					<u> </u>	
177				ND		0.0387
178				ND		0.0387
179				ND		0.0387
180	180/193			ND		0.0774
181				ND		0.0387
182				ND		0.0387
183	183/185			ND		0.0774
184				ND		0.0387
185	183/185			ND		0.0774
186				ND		0.0387
187				ND		0.0387
188				ND		0.0387
189				ND		0.0387
190				ND		0.0387
191				ND		0.0387
192				ND		0.0387
193	180/193			ND		0.0774
194				ND		0.0387
195				ND		0.0387
196				ND		0.0387
197	197/200			ND		0.0774
198	198/199			ND		0.0774
199	198/199			ND		0.0774
200	197/200			ND		0.0774
201				ND		0.0387
202				ND		0.0387
203				ND		0.0387
204				ND		0.0387
205				ND		0.0387
206				ND		0.0387
207				ND		0.0387
208				ND		0.0387
209				ND		0.0387

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	0.228	
Total Pentachloro Biphenyls	0.439	
Total Hexachloro Biphenyls	0.0795	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	0.746	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-OU3-202305
Lab Sample ID 40262368008
Filename P230529B_09
Injected By BAL
Total Amount Extracted

Total Amount Extracted 1030 mL Matrix Water % Moisture NA Dilution NA Collected 05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 15:10

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/30/2023 00:28

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.137	2.99	2.0	1.48	74
13C-4-MoCB	3	12.964	3.09	2.0	1.61	80
13C-2,2'-DiCB	4	13.269	1.56	2.0	2.23	112
13C-4,4'-DiCB	15	20.404	1.56	2.0	1.80	90
13C-2,2',6-TrCB	19	17.122	1.02	2.0	2.23	112
13C-3,4,4'-TrCB	37	28.208	1.01	2.0	1.32	66
13C-2,2',6,6'-TeCB	54	20.751	0.78	2.0	1.52	76
13C-3,4,4',5-TeCB	81	35.362	0.79	2.0	1.38	69
13C-3,3',4,4'-TeCB	77	35.934	0.80	2.0	1.32	66
13C-2,2',4,6,6'-PeCB	104	26.909	1.58	2.0	1.82	91
13C-2,3,3',4,4'-PeCB	105	39.556	1.62	2.0	1.09	55
13C-2,3,4,4',5-PeCB	114	38.918	1.57	2.0	1.11	56
13C-2,3',4,4',5-PeCB	118	38.348	1.58	2.0	1.12	56
13C-2,3',4,4',5'-PeCB	123	38.013	1.56	2.0	1.11	55
13C-3,3',4,4',5-PeCB	126	42.725	1.50	2.0	0.910	46
13C-2,2',4,4',6,6'-HxCB	155	32.979	1.23	2.0	2.47	124
13C-HxCB (156/157)	156/157	45.816	1.23	4.0	2.22	55
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.27	2.0	1.17	58
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.24	2.0	1.25	62
13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.02	2.0	2.33	116
13C-2,3,3',4,4',5,5'-HpCB	189	51.676	1.04	2.0	1.49	74
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.91	2.0	1.71	85
13C-2,3,3',4,4',5,5',6-OcCB	205	54.284	0.90	2.0	1.80	90
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.051	0.80	2.0	2.04	102
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201 57.689	0.80	2.0	2.18	109 105
13C-DeCB	209	57.069	0.74	2.0	2.11	105
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.04	2.0	1.28	64
13C-2,3,3',5,5'-PeCB	111	35.981	1.53	2.0	1.57	78
13C-2,2 ['] ,3,3 ['] ,5,5 ['] ,6-HpCB	178	42.021	1.06	2.0	1.94	97
Recovery Standards						
13C-2,5-DiCB	9	15.751	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.841	0.78	2.0	ŇA	NA
13C-2,2',4,5,5'-PeCB	101	33.181	1.53	2.0	ŇA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.90	2.0	ŇA	NA
,= ,-,- , ., . ,-,- 3002				=: -		

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B 09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1		10.159	2.89	0.225		0.0387
2				ND		0.0387
3				ND		0.0387
4		13.292	1.43	1.24		0.0387
5				ND		0.0387
6		16.259	1.51	0.175		0.0387
7		15.983	1.53	0.0738		0.0387
8		16.790	1.40	0.0883		0.0387
9				ND		0.0387
10				ND		0.0387
11				ND		0.379
12	12/13			ND		0.0774
13	12/13			ND		0.0774
14				ND		0.0387
15		20.404	1.50	0.108		0.0511
16		20.360	0.96	0.0436		0.0387
17		19.851	0.99	1.08		0.0387
18	18/30	19.365	1.01	0.275		0.0774
19		17.143	1.03	0.935		0.0387
20	20/28	23.861	0.99	0.450		0.200
21	21/33			ND		0.209
22				ND		0.147
23				ND		0.0387
24				ND		0.0387
25		23.180	1.03	0.641		0.0387
26	26/29	22.917	1.05	1.22		0.0774
27		20.084	1.00	0.130		0.0387
28	20/28	23.861	0.99	(0.450)		0.200
29	26/29	22.917	1.05	(1.22)		0.0774
30	18/30	19.365	1.01	(0.275)		0.0774
31		23.536	1.02	0.230		0.201
32		20.968	1.02	0.444		0.0387
33	21/33			ND		0.209
34				ND		0.0387
35				ND		0.0387
36				ND		0.0387
37				ND		0.0821
38				ND		0.0387
39				ND		0.0387
40	40/41/71	28.069	0.77	0.913		0.116
41	40/41/71	28.069	0.77	(0.913)		0.116
42		27.527	0.79	0.509		0.0387
43	43/73	26.042	0.74	0.172		0.0774
44	44/47/65	27.017	0.77	2.73		0.116

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

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R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

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* = See Discussion

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.046	0.75	0.725		0.0774
46		24.294	0.74	0.224		0.0387
47	44/47/65	27.017	0.77	(2.73)		0.116
48				` NĎ		0.0387
49	49/69	26.413	0.78	3.84		0.0774
50	50/53	23.211	0.77	0.982		0.0774
51	45/51	24.046	0.75	(0.725)		0.0774
52		25.872	0.78	` 5.1Ó		0.200
53	50/53	23.211	0.77	(0.982)		0.0774
54		20.767	0.79	0.0849		0.0387
55				ND		0.0387
56		32.097	0.73	0.0926		0.0387
57		29.978	0.77	0.173		0.0387
58				ND		0.0387
59	59/62/75	27.388	0.75	0.163		0.116
60				ND		0.0387
61	61/70/74/76	30.999	0.77	0.865		0.155
62	59/62/75	27.388	0.75	(0.163)		0.116
63		30.690	0.84	0.0958		0.0387
64		28.301	0.78	0.323		0.0387
65	44/47/65	27.017	0.77	(2.73)		0.116
66		31.386	0.73	0.636		0.0914
67		30.396	0.80	0.0627		0.0387
68		29.514	0.87	0.128		0.0387
69	49/69	26.413	0.78	(3.84)		0.0774
70	61/70/74/76	30.999	0.77	(0.865)		0.155
71	40/41/71	28.069	0.77	(0.913)		0.116
72		29.205	0.76	0.178		0.0387
73	43/73	26.042	0.74	(0.172)		0.0774
74	61/70/74/76	30.999	0.77	(0.865)		0.155
75	59/62/75	27.388	0.75	(0.163)		0.116
76	61/70/74/76	30.999	0.77	(0.865)		0.155
77				` NĎ		0.0387
78				ND		0.0387
79				ND		0.0387
80				ND		0.0387
81				ND		0.0387
82		35.594	1.55	0.126		0.0387
83		33.691	1.51	0.345		0.0387
84		31.247	1.50	0.864		0.0387
85	85/116/117	35.099	1.60	0.446		0.116
86	86/87/97/108/119/125	34.341	1.51	1.57		0.232
87	86/87/97/108/119/125	34.341	1.51	(1.57)		0.232
88	88/91	31.030	1.56	0.832		0.0774

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B 09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0387
90	90/101/113	33.211	1.53	2.85		0.116
91	88/91	31.030	1.56	(0.832)		0.0774
92	33.3.	32.593	1.50	1.52		0.0387
93	93/98/100/102	30.365	1.52	0.315		0.155
94		29.622	1.56	0.158		0.0387
95		30.086	1.53	2.86		0.108
96		27.311	1.41	0.0529		0.0387
97	86/87/97/108/119/125	34.341	1.51	(1.57)		0.232
98	93/98/100/102	30.365	1.52	(0.315)		0.155
99		33.830	1.56	1.31		0.0387
100	93/98/100/102	30.365	1.52	(0.315)		0.155
101	90/101/113	33.211	1.53	(2.85)		0.116
102	93/98/100/102	30.365	1.52	(0.315)		0.155
103		29.406	1.56	0.122		0.0387
104				ND		0.0387
105		39.590	1.51	0.472		0.0387
106				ND		0.0387
107	107/124			ND		0.0774
108	86/87/97/108/119/125	34.341	1.51	(1.57)		0.232
109		37.929	1.51	0.245		0.0387
110	110/115	35.269	1.55	4.27		0.0774
111				ND		0.0387
112				ND		0.0387
113	90/101/113	33.211	1.53	(2.85)		0.116
114				ND (1.85)		0.0387
115	110/115	35.269	1.55	(4.27)		0.0774
116	85/116/117	35.099	1.60	(0.446)		0.116
117	85/116/117	35.099	1.60	(0.446)		0.116
118	00/07/07/400/440/405	38.382	1.51	1.58		0.0604
119	86/87/97/108/119/125	34.341	1.51	(1.57)		0.232
120				ND		0.0387
121				ND		0.0387
122 123				ND ND		0.0387 0.0387
123	107/124			ND ND		
124	86/87/97/108/119/125	34.341	1.51			0.0774 0.232
125	00/07/97/100/119/125	34.341	1.51	(1.57)		0.232
120				ND ND		0.0387
127	128/166	42.876	1.31	0.353		0.0367
120	129/138/163	41.585	1.25	1.97		0.0774
130	123/130/103	40.914	1.23	0.186		0.116
131		40.914	1.24	0.166 ND		0.0387
131		38.483	1.18	0.912		0.0387
132		30.403	1.10	0.312		0.0307

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU3-202305 40262368008 P230529B 09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133		39.002	1.37	0.0813		0.0387
134	134/143	37.410	1.27	0.205		0.0387
135	135/151	36.228	1.28	1.02		0.0774
136	133/131	33.722	1.18	0.401		0.0387
137		41.149	1.17	0.0997		0.0387
138	129/138/163	41.585	1.25	(1.97)		0.116
139	139/140			ND		0.0774
140	139/140			ND		0.0774
141	100/110	40.512	1.25	0.226		0.0387
142				ND		0.0387
143	134/143	37.410	1.27	(0.205)		0.0774
144	10 1/1 10	36.832	1.17	0.0565		0.0387
145				ND		0.0387
146		39.673	1.29	0.368		0.0387
147	147/149	37.191	1.22	2.06		0.0774
148	,			ND		0.0387
149	147/149	37.191	1.22	(2.06)		0.0774
150				ND		0.0387
151	135/151	36.228	1.28	(1.02)		0.0774
152				` NĎ		0.0387
153	153/168	40.311	1.27	1.35		0.0774
154		36.538	1.34	0.0743		0.0387
155				ND		0.0387
156	156/157	45.833	1.22	0.263		0.0774
157	156/157	45.833	1.22	(0.263)		0.0774
158		42.004	1.26	0.165		0.0387
159				ND		0.0387
160				ND		0.0387
161				ND		0.0387
162				ND		0.0387
163	129/138/163	41.585	1.25	(1.97)		0.116
164		41.266	1.27	0.136		0.0387
165				ND		0.0387
166	128/166	42.876	1.31	(0.353)		0.0774
167		44.659	1.14	0.0842		0.0387
168	153/168	40.311	1.27	(1.35)		0.0774
169				ND		0.0387
170		48.533	1.03	0.249		0.0387
171	171/173	44.961	1.04	0.0829		0.0774
172		46.587	0.99	0.0473		0.0387
173	171/173	44.961	1.04	(0.0829)		0.0774
174		43.837	1.07	0.227		0.0387
175				ND		0.0387
176		40.160	1.03	0.0392		0.0387

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B 09

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177		44.290	1.08	0.194		0.0387
178		42.038	0.93	0.0913		0.0387
179		39.254	1.01	0.153		0.0387
180	180/193	47.258	1.01	0.423		0.0774
181				ND		0.0387
182				ND		0.0387
183	183/185	43.636	1.05	0.144		0.0774
184				ND		0.0387
185	183/185	43.636	1.05	(0.144)		0.0774
186				ND		0.0387
187		42.977	1.04	0.349		0.0387
188				ND		0.0387
189				ND		0.0387
190		49.069	0.98	0.0539		0.0387
191				ND		0.0387
192				ND		0.0387
193	180/193	47.258	1.01	(0.423)		0.0774
194		53.831	0.86	0.0966		0.0387
195		51.482	1.01	0.0410		0.0387
196		49.924	0.89	0.0510		0.0387
197	197/200			ND		0.0774
198	198/199	49.237	0.82	0.135		0.0774
199	198/199	49.237	0.82	(0.135)		0.0774
200	197/200			ND		0.0774
201				ND		0.0387
202				ND		0.0387
203		50.125	0.94	0.0699		0.0387
204				ND		0.0387
205				ND		0.0387
206				ND		0.0387
207				ND		0.0387
208				ND		0.0387
209				ND		0.0387

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	0.225	
Total Dichloro Biphenyls	1.68	
Total Trichloro Biphenyls	5.45	
Total Tetrachloro Biphenyls	18.0	
Total Pentachloro Biphenyls	19.9	
Total Hexachloro Biphenyls	10.0	
Total Heptachloro Biphenyls	2.05	
Total Octachloro Biphenyls	0.394	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	57.8	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-OU2-202305
Lab Sample ID 40262368009
Filename P230529B_10
Injected By BAL
Total Amount Extracted 1040 ml

Total Amount Extracted 1040 mL Matrix Water % Moisture NA Dilution NA Collected 05/16/

 Dry Weight Extracted
 NA
 Collected
 05/16/2023 16:15

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/30/2023 01:31

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.159	2.87	2.0	1.58	79
13C-4-MoCB	3	12.975	3.04	2.0	1.67	84
13C-2,2'-DiCB	4	13.280	1.49	2.0	2.31	115
13C-4,4'-DiCB	15	20.404	1.52	2.0	1.75	87
13C-2,2',6-TrCB	19	17.132	0.98	2.0	2.39	120
13C-3,4,4'-TrCB	37	28.207	1.05	2.0	1.25	63
13C-2,2',6,6'-TeCB	54	20.750	0.80	2.0	1.50	75
13C-3,4,4',5-TeCB	81	35.361	0.77	2.0	1.35	68
13C-3,3',4,4'-TeCB	77	35.934	0.81	2.0	1.28	64
13C-2,2',4,6,6'-PeCB	104	26.908	1.57	2.0	1.82	91
13C-2,3,3',4,4'-PeCB	105	39.572	1.61	2.0	1.07	53
13C-2,3,4,4',5-PeCB	114	38.918	1.56	2.0	1.02	51
13C-2,3',4,4',5-PeCB	118	38.365	1.58	2.0	1.09	54
13C-2,3',4,4',5'-PeCB	123	38.029	1.61	2.0	1.08	54
13C-3,3',4,4',5-PeCB	126	42.742	1.49	2.0	0.901	45
13C-2,2',4,4',6,6'-HxCB	155	32.994	1.28	2.0	2.42	121
13C-HxCB (156/157)	156/157	45.816	1.29	4.0	2.10	52 56
13C-2,3',4,4',5,5'-HxCB	167 169	44.642 49.102	1.28 1.27	2.0 2.0	1.13 1.21	60
13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB	188	38.918	1.04	2.0	2.28	114
13C-2,3,3',4,4',5,5'-HpCB	189	51.697	1.04	2.0	1.37	69
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.407	0.91	2.0	1.64	82
13C-2,3,3',4,4',5,5',6-OcCB	205	54.283	0.89	2.0	1.74	87
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.050	0.78	2.0	1.96	98
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.201	0.79	2.0	2.04	102
13C-DeCB	209	57.689	0.68	2.0	2.13	106
100 2002	200	07.000	0.00	2.0	2.10	100
CleanupStandards						
13C-2,4,4'-TrCB	28	23.845	1.03	2.0	1.16	58
13C-2,3,3',5,5'-PeCB	111	35.996	1.55	2.0	1.50	75
13C-2,2',3,3',5,5',6-HpCB	178	42.020	1.04	2.0	1.75	87
Recovery Standards						
13C-2,5-DiCB	9	15.762	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.856	0.80	2.0	ŇA	NA
13C-2,2',4,5,5'-PeCB	101	33.195	1.58	2.0	ŇA	NA
13C-2,2',3,4,4',5'-HxCB	138	41.568	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.809	0.87	2.0	NA	NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU2-202305 40262368009 P230529B 10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1		10.170	2.90	0.290		0.0383
2				ND		0.0383
3				ND		0.0383
4		13.303	1.47	1.81		0.0383
5				ND		0.0383
6		16.270	1.47	0.194		0.0383
7		15.993	1.58	0.0941		0.0383
8		16.800	1.53	0.161		0.0383
9				ND		0.0383
10				ND		0.0383
11				ND		0.376
12	12/13			ND		0.0767
13	12/13			ND		0.0767
14			4.00	ND 0.244		0.0383
15		20.426	1.60	0.244		0.0506
16 17		20.360	1.08	0.0798		0.0383
17	18/30	19.840 19.365	1.03 1.02	1.88 0.323		0.0383 0.0767
19	10/30	17.154	0.99	1.56		0.0787
20	20/28	23.860	1.02	0.753		0.0363
21	21/33	23.660	1.02	0.753 ND		0.207
22	21/00			ND		0.146
23				ND		0.0383
24				ND		0.0383
25		23.195	1.01	0.638		0.0383
26	26/29	22.916	0.99	1.24		0.0767
27		20.094	1.01	0.103		0.0383
28	20/28	23.860	1.02	(0.753)		0.198
29	26/29	22.916	0.99	`(1.24)		0.0767
30	18/30	19.365	1.02	(0.323)		0.0767
31		23.535	1.04	0.288		0.199
32		20.983	1.01	0.784		0.0383
33	21/33			ND		0.207
34				ND		0.0383
35				ND		0.0383
36				ND		0.0383
37				ND		0.0813
38				ND		0.0383
39	40/44/74			ND		0.0383
40	40/41/71	28.068	0.78	1.41		0.115
41	40/41/71	28.068	0.78	(1.41)		0.115
42 43	43/73	27.527 26.042	0.76 0.74	0.748 0.237		0.0383 0.0767
43 44	43/73 44/47/65	26.042 27.031	0.74	4.27		0.0767
74	 /+1/0J	21.031	0.70	4.41		0.113

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R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-OU2-202305 40262368009 P230529B 10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.061	0.78	1.25		0.0767
46		24.309	0.79	0.337		0.0383
47	44/47/65	27.031	0.76	(4.27)		0.115
48		26.722	0.81	0.0395		0.0383
49	49/69	26.413	0.76	4.71		0.0767
50	50/53	23.210	0.77	1.32		0.0767
51	45/51	24.061	0.78	(1.25)		0.0767
52		25.871	0.77	`6.03		0.198
53	50/53	23.210	0.77	(1.32)		0.0767
54		20.766	0.74	0.144		0.0383
55				ND		0.0383
56		32.082	0.79	0.139		0.0383
57		29.962	0.74	0.158		0.0383
58				ND		0.0383
59	59/62/75	27.387	0.79	0.216		0.115
60				ND		0.0383
61	61/70/74/76	31.014	0.79	1.44		0.153
62	59/62/75	27.387	0.79	(0.216)		0.115
63		30.689	0.79	0.142		0.0383
64		28.300	0.78	0.444		0.0383
65	44/47/65	27.031	0.76	(4.27)		0.115
66		31.385	0.76	1.11		0.0905
67		30.411	0.79	0.0753		0.0383
68		29.529	0.78	0.163		0.0383
69	49/69	26.413	0.76	(4.71)		0.0767
70	61/70/74/76	31.014	0.79	(1.44)		0.153
71	40/41/71	28.068	0.78	(1.41)		0.115
72		29.204	0.77	0.20 4		0.0383
73	43/73	26.042	0.74	(0.237)		0.0767
74	61/70/74/76	31.014	0.79	`(1.44)		0.153
75	59/62/75	27.387	0.79	(0.216)		0.115
76	61/70/74/76	31.014	0.79	`(1.44)		0.153
77		35.965	0.83	0.0601		0.0383
78				ND		0.0383
79		34.371	0.79	0.0621		0.0383
80				ND		0.0383
81				ND		0.0383
82		35.609	1.61	0.184		0.0383
83		33.706	1.60	0.434		0.0383
84		31.246	1.54	1.17		0.0383
85	85/116/117	35.114	1.63	0.645		0.115
86	86/87/97/108/119/125	34.356	1.57	2.45		0.230
87	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
88	88/91	31.029	1.52	1.16		0.0767

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B 10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0383
90	90/101/113	33.211	1.57	4.55		0.115
91	88/91	31.029	1.52	(1.16)		0.0767
92	33/31	32.592	1.56	1.89		0.0383
93	93/98/100/102	30.349	1.54	0.444		0.153
94	00/00/100/102	29.622	1.56	0.206		0.0383
95		30.101	1.50	3.99		0.107
96		27.310	1.51	0.0758		0.0383
97	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
98	93/98/100/102	30.349	1.54	(0.444)		0.153
99	00,00,100,10	33.845	1.58	2.19		0.0383
100	93/98/100/102	30.349	1.54	(0.444)		0.153
101	90/101/113	33.211	1.57	(4.55)		0.115
102	93/98/100/102	30.349	1.54	(0.444)		0.153
103		29.405	1.54	0.147		0.0383
104				ND		0.0383
105		39.589	1.48	0.765		0.0383
106				ND		0.0383
107	107/124	37.677	1.46	0.107		0.0767
108	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
109		37.929	1.58	0.375		0.0383
110	110/115	35.269	1.57	6.01		0.0767
111				ND		0.0383
112				ND		0.0383
113	90/101/113	33.211	1.57	(4.55)		0.115
114				ND		0.0383
115	110/115	35.269	1.57	(6.01)		0.0767
116	85/116/117	35.114	1.63	(0.645)		0.115
117	85/116/117	35.114	1.63	(0.645)		0.115
118		38.381	1.46	2.85		0.0598
119	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
120		36.506	1.48	0.0420		0.0383
121				ND		0.0383
122				ND		0.0383
123				ND		0.0383
124	107/124	37.677	1.46	(0.107)		0.0767
125	86/87/97/108/119/125	34.356	1.57	(2.45)		0.230
126				ND		0.0383
127				ND		0.0383
128	128/166	42.893	1.21	0.546		0.0767
129	129/138/163	41.601	1.23	2.99		0.115
130		40.931	1.22	0.263		0.0383
131		38.029	1.31	0.0461		0.0383
132		38.499	1.22	1.33		0.0383

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B 10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133		39.019	1.28	0.103		0.0383
134	134/143	37.409	1.11	0.285		0.0767
135	135/151	36.228	1.24	1.40		0.0767
136		33.722	1.27	0.565		0.0383
137		41.148	1.21	0.148		0.0383
138	129/138/163	41.601	1.23	(2.99)		0.115
139	139/140	37.828	1.18	0.0844		0.0767
140	139/140	37.828	1.18	(0.0844)		0.0767
141	100/110	40.511	1.33	0.382		0.0383
142				ND		0.0383
143	134/143	37.409	1.11	(0.285)		0.0767
144	104/140	36.831	1.27	0.104		0.0383
145				ND		0.0383
145		39.689	1.22	0.531		0.0383
140	147/149	37.208	1.22	2.92		0.0363
147	147/149			2.92 ND		0.0787
146	147/149	 37.208	1.23			0.0363
	147/149	37.200		(2.92)		
150	405/454			ND		0.0383
151	135/151	36.228	1.24	(1.40)		0.0767
152	450/400	40.007		ND		0.0383
153	153/168	40.327	1.28	2.25		0.0767
154		36.521	1.28	0.0944		0.0383
155	150/157	45.040		ND		0.0383
156	156/157	45.816	1.26	0.413		0.0767
157	156/157	45.816	1.26	(0.413)		0.0767
158		42.004	1.22	0.254		0.0383
159				ND		0.0383
160				ND		0.0383
161				ND		0.0383
162				ND		0.0383
163	129/138/163	41.601	1.23	(2.99)		0.115
164		41.266	1.26	0.225		0.0383
165				ND		0.0383
166	128/166	42.893	1.21	(0.546)		0.0767
167		44.659	1.23	0.130		0.0383
168	153/168	40.327	1.28	(2.25)		0.0767
169				ND		0.0383
170		48.532	1.02	0.370		0.0383
171	171/173	44.960	1.01	0.128		0.0767
172		46.604	1.14	0.0670		0.0383
173	171/173	44.960	1.01	(0.128)		0.0767
174		43.854	1.05	0.355		0.0383
175				ND		0.0383
176		40.193	0.95	0.0563		0.0383

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B 10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
177		44.306	1.05	0.273		0.0383
178		42.054	1.08	0.121		0.0383
179		39.287	0.97	0.209		0.0383
180	180/193	47.257	0.99	0.669		0.0767
181				ND		0.0383
182				ND		0.0383
183	183/185	43.619	1.06	0.217		0.0767
184				ND		0.0383
185	183/185	43.619	1.06	(0.217)		0.0767
186				NĎ		0.0383
187		42.993	1.06	0.504		0.0383
188				ND		0.0383
189				ND		0.0383
190		49.085	1.08	0.0833		0.0383
191				ND		0.0383
192				ND		0.0383
193	180/193	47.257	0.99	(0.669)		0.0767
194		53.831	0.90	`0.14Ó		0.0383
195		51.460	0.85	0.0643		0.0383
196		49.924	0.93	0.0697		0.0383
197	197/200			ND		0.0767
198	198/199	49.270	0.85	0.190		0.0767
199	198/199	49.270	0.85	(0.190)		0.0767
200	197/200			` NĎ		0.0767
201				ND		0.0383
202				ND		0.0383
203		50.125	0.86	0.0965		0.0383
204				ND		0.0383
205				ND		0.0383
206		56.094	0.82	0.0396		0.0383
207				ND		0.0383
208				ND		0.0383
209				ND		0.0383

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

Congener Group	Concentration ng/L	
Total Monochloro Bip	phenyls 0.290	
Total Dichloro Bipher	enyls 2.50	
Total Trichloro Biphe	enyls 7.65	
Total Tetrachloro Bip	phenyls 24.7	
Total Pentachloro Bip	iphenyls 29.7	
Total Hexachloro Bip	phenyls 15.1	
Total Heptachloro Bi _l	iphenyls 3.05	
Total Octachloro Bipl	phenyls 0.560	
Total Nonachloro Bip	phenyls 0.0396	
DecachloroBiphenyl	vls ND	
TotalPCBs	83.6	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID NR-SW-OU1-202305
Lab Sample ID 40262368010
Filename P230529B_11
Injected By BAL
Total Amount Extracted 1040 mL

Total Amount Extracted1040 mLMatrixWater% MoistureNADilutionNADry Weight ExtractedNACollected05/16/2023 17:00

 ICAL ID
 P230529B02
 Received
 05/20/2023 18:45

 CCal Filename(s)
 P230529B_01
 Extracted
 05/23/2023 12:15

 Method Blank ID
 BLANK-106282
 Analyzed
 05/30/2023 02:34

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.103	3.07	2.0	1.54	77
13C-4-MoCB	3	12.941	3.04	2.0	1.71	86
13C-2,2'-DiCB	4	13.247	1.64	2.0	2.36	118
13C-4,4'-DiCB	15	20.382	1.55	2.0	1.85	92
13C-2,2',6-TrCB	19	17.110	1.02	2.0	2.43	121
13C-3,4,4'-TrCB	37	28.208	1.05	2.0	1.24	62
13C-2,2',6,6'-TeCB	54	20.736	0.80	2.0	1.54	77
13C-3,4,4',5-TeCB	81	35.347	0.78	2.0	1.37	69
13C-3,3',4,4'-TeCB	77	35.935	0.76	2.0	1.36	68
13C-2,2',4,6,6'-PeCB	104	26.893	1.66	2.0	1.69	85
13C-2,3,3',4,4'-PeCB	105	39.573	1.58	2.0	1.05	52
13C-2,3,4,4',5-PeCB	114	38.902	1.55	2.0	1.03	52
13C-2,3',4,4',5-PeCB	118	38.366	1.61	2.0	1.05	53
13C-2,3',4,4',5'-PeCB	123	38.013	1.55	2.0	1.04	52
13C-3,3',4,4',5-PeCB	126	42.726	1.56	2.0	0.871	44
13C-2,2',4,4',6,6'-HxCB	155	32.979	1.24	2.0	2.49	124
13C-HxCB (156/157)	156/157	45.816	1.27	4.0	2.15	54
13C-2,3',4,4',5,5'-HxCB	167	44.642	1.22	2.0	1.13	57
13C-3,3',4,4',5,5'-HxCB	169	49.103	1.26	2.0	1.21	61
13C-2,2',3,4',5,6,6'-HpCB	188	38.919	1.04	2.0	2.40	120
13C-2,3,3',4,4',5,5'-HpCB	189	51.654	1.03	2.0	1.43	72 01
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.391	0.87	2.0	1.83	91 87
13C-2,3,3',4,4',5,5',6-OcCB	205 206	54.284 56.051	0.89 0.76	2.0 2.0	1.73 1.99	99
13C-2,2',3,3',4,4',5,5',6-NoCB	208	51.202	0.78	2.0	2.17	109
13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	209	57.689	0.78	2.0	2.17	108
13C-DeCB	209	37.009	0.09	2.0	2.17	100
CleanupStandards						
13C-2,4,4'-TrCB	28	23.830	1.05	2.0	1.18	59
13C-2,3,3',5,5'-PeCB	111	35.981	1.54	2.0	1.45	72
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.04	2.0	1.80	90
Recovery Standards						
13C-2,5-DiCB	9	15.740	1.59	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.841	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.181	1.54	2.0	NA	NA NA
13C-2,2',3,4,4',5'-HxCB	138	41.552	1.25	2.0	NA	NA NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.810	0.89	2.0	NA	NA
100 2,2,0,0,1,1,0,0 0000	101	55.515	0.00	2.0	1 1/1	1 4/ 1

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0384
2				ND		0.0384
3				ND		0.0384
4		13.269	1.34	0.125		0.0384
5				ND		0.0384
6				ND		0.0384
7				ND		0.0384
8				ND		0.0384
9				ND		0.0384
10				ND		0.0384
11				ND		0.377
12	12/13			ND		0.0769
13	12/13			ND		0.0769
14				ND		0.0384
15		20.415	1.38	0.0574		0.0507
16				ND		0.0384
17		19.840	1.00	0.151		0.0384
18	18/30			ND		0.0769
19		17.132	1.00	0.152		0.0384
20	20/28			ND		0.198
21	21/33			ND		0.208
22				ND		0.146
23				ND		0.0384
24				ND		0.0384
25		23.180	1.03	0.0671		0.0384
26	26/29	22.902	1.01	0.130		0.0769
27				ND		0.0384
28	20/28			ND		0.198
29	26/29	22.902	1.01	(0.130)		0.0769
30	18/30			ND		0.0769
31				ND		0.200
32		20.968	1.07	0.0737		0.0384
33	21/33			ND		0.208
34				ND		0.0384
35				ND		0.0384
36				ND		0.0384
37				ND		0.0815
38				ND		0.0384
39	40/44/74			ND		0.0384
40	40/41/71	28.053	0.77	0.188		0.115
41	40/41/71	28.053	0.77	(0.188)		0.115
42	40/70	27.527	0.77	0.133		0.0384
43	43/73			ND 0.700		0.0769
44	44/47/65	27.017	0.76	0.792		0.115

Conc = Concentration

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.046	0.74	0.146		0.0769
46		24.294	0.74	0.0536		0.0384
47	44/47/65	27.017	0.76	(0.792)		0.115
48				` NĎ		0.0384
49	49/69	26.398	0.77	0.842		0.0769
50	50/53	23.195	0.74	0.214		0.0769
51	45/51	24.046	0.74	(0.146)		0.0769
52		25.872	0.77	` 1.57		0.198
53	50/53	23.195	0.74	(0.214)		0.0769
54				NĎ		0.0384
55				ND		0.0384
56				ND		0.0384
57				ND		0.0384
58				ND		0.0384
59	59/62/75			ND		0.115
60				ND		0.0384
61	61/70/74/76	31.014	0.77	0.340		0.154
62	59/62/75			ND		0.115
63				ND		0.0384
64		28.285	0.77	0.126		0.0384
65	44/47/65	27.017	0.76	(0.792)		0.115
66	,, 66	31.370	0.66	0.204		0.0907
67				ND		0.0384
68				ND		0.0384
69	49/69	26.398	0.77	(0.842)		0.0769
70	61/70/74/76	31.014	0.77	(0.340)		0.154
71	40/41/71	28.053	0.77	(0.188)		0.115
72				ND		0.0384
73	43/73			ND		0.0769
74	61/70/74/76	31.014	0.77	(0.340)		0.154
75	59/62/75			ND		0.115
76	61/70/74/76	31.014	0.77	(0.340)		0.154
77				ND		0.0384
78				ND		0.0384
79				ND		0.0384
80				ND		0.0384
81				ND		0.0384
82		35.594	1.68	0.0862		0.0384
83		33.676	1.38	0.0986		0.0384
84		31.231	1.43	0.309		0.0384
85	85/116/117	35.099	1.57	0.284		0.115
86	86/87/97/108/119/125	34.434	1.52	0.829		0.231
87	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
88	88/91	31.030	1.49	0.270		0.0769

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0384
90	90/101/113	33.211	1.49	1.60		0.115
91	88/91	31.030	1.49	(0.270)		0.0769
92		32.593	1.49	0.430		0.0384
93	93/98/100/102			ND		0.154
94				ND		0.0384
95		30.086	1.57	1.33		0.108
96				ND		0.0384
97	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
98	93/98/100/102			` NĎ		0.154
99		33.830	1.50	1.06		0.0384
100	93/98/100/102			ND		0.154
101	90/101/113	33.211	1.49	(1.60)		0.115
102	93/98/100/102			` NĎ		0.154
103				ND		0.0384
104				ND		0.0384
105		39.590	1.44	0.159		0.0384
106				ND		0.0384
107	107/124			ND		0.0769
108	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
109		37.913	1.58	0.0553		0.0384
110	110/115	35.269	1.53	1.65		0.0769
111				ND		0.0384
112				ND		0.0384
113	90/101/113	33.211	1.49	(1.60)		0.115
114				ND		0.0384
115	110/115	35.269	1.53	(1.65)		0.0769
116	85/116/117	35.099	1.57	(0.284)		0.115
117	85/116/117	35.099	1.57	(0.284)		0.115
118		38.382	1.46	0.510		0.0600
119	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
120				ND		0.0384
121				ND		0.0384
122				ND		0.0384
123				ND		0.0384
124	107/124			ND		0.0769
125	86/87/97/108/119/125	34.434	1.52	(0.829)		0.231
126				ND		0.0384
127				ND		0.0384
128	128/166	42.877	1.21	0.117		0.0769
129	129/138/163	41.585	1.30	0.732		0.115
130		40.915	1.25	0.0552		0.0384
131				ND		0.0384
132		38.483	1.21	0.254		0.0384

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NA = Not Applicable

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ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0384
134	134/143			ND		0.0769
135	135/151	36.228	1.28	0.342		0.0769
136		33.722	1.18	0.117		0.0384
137		41.149	1.15	0.0478		0.0384
138	129/138/163	41.585	1.30	(0.732)		0.115
139	139/140			` NĎ		0.0769
140	139/140			ND		0.0769
141		40.495	1.24	0.116		0.0384
142				ND		0.0384
143	134/143			ND		0.0769
144				ND		0.0384
145				ND		0.0384
146		39.674	1.20	0.114		0.0384
147	147/149	37.192	1.23	0.650		0.0769
148				ND		0.0384
149	147/149	37.192	1.23	(0.650)		0.0769
150				ND		0.0384
151	135/151	36.228	1.28	(0.342)		0.0769
152				ND		0.0384
153	153/168	40.311	1.19	0.638		0.0769
154				ND		0.0384
155	/			ND		0.0384
156	156/157			ND		0.0769
157	156/157			ND		0.0769
158		41.988	1.23	0.0585		0.0384
159				ND		0.0384
160				ND		0.0384
161				ND		0.0384
162 163	420/420/462	44.505	4.20	ND (0.733)		0.0384
164	129/138/163	41.585	1.30 1.27	(0.732)		0.115 0.0384
165		41.250 	1.27	0.0468		
166	128/166	42.877	1.21	ND (0.117)		0.0384 0.0769
167	120/100	42.077	1.21	(0.117) ND		0.0384
168	153/168	40.311	1.19	(0.638)		0.0364
169	133/100	40.511	1.19	(0.038) ND		0.0384
170		48.533	1.13	0.0513		0.0384
171	171/173			ND		0.0769
172	17 1/17 3			ND		0.0384
173	171/173			ND		0.0769
174	, ., .	43.838	1.02	0.0552		0.0384
175				ND		0.0384
176				ND		0.0384

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B 11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
101 70	OO CIULIONS	111	ratio	g, E	119/1	
177		44.307	1.05	0.0385		0.0384
178				ND		0.0384
179				ND		0.0384
180	180/193	47.258	1.09	0.0899		0.0769
181				ND		0.0384
182				ND		0.0384
183	183/185			ND		0.0769
184				ND		0.0384
185	183/185			ND		0.0769
186				ND		0.0384
187		42.977	0.97	0.0878		0.0384
188				ND		0.0384
189				ND		0.0384
190				ND		0.0384
191				ND		0.0384
192				ND		0.0384
193	180/193	47.258	1.09	(0.0899)		0.0769
194				ND		0.0384
195				ND		0.0384
196				ND		0.0384
197	197/200			ND		0.0769
198	198/199			ND		0.0769
199	198/199			ND		0.0769
200	197/200			ND		0.0769
201				ND		0.0384
202				ND		0.0384
203				ND		0.0384
204				ND		0.0384
205				ND		0.0384
206				ND		0.0384
207				ND		0.0384
208				ND		0.0384
209				ND		0.0384

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	0.182	
Total Trichloro Biphenyls	0.574	
Total Tetrachloro Biphenyls	4.61	
Total Pentachloro Biphenyls	8.68	
Total Hexachloro Biphenyls	3.29	
Total Heptachloro Biphenyls	0.323	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	17.7	

ND = Not Detected



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename

Injected By **Total Amount Extracted**

Dry Weight Extracted ICAL ID

CCal Filename(s) Method Blank ID

% Moisture

NR-SW-BKG2-202305

40262368011 P230531B_08

CVS 1040 mL

NA NA P230531B02 P230531B_01 BLANK-106448 Matrix Water Dilution NA

Collected 05/16/2023 17:40 Received 05/20/2023 18:45 Extracted 05/26/2023 11:40 Analyzed 06/01/2023 04:43

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.114	3.20	2.0	1.09	55
13C-4-MoCB	3	12.941	3.14	2.0	1.35	67
13C-2,2'-DiCB	4	13.246	1.53	2.0	1.33	66
13C-4,4'-DiCB	15	20.359	1.57	2.0	1.53	76
13C-2,2',6-TrCB	19	17.087	1.02	2.0	1.43	72
13C-3,4,4'-TrCB	37	28.175	1.09	2.0	1.39	70
13C-2,2',6,6'-TeCB	54	20.719	0.79	2.0	1.13	57
13C-3,4,4',5-TeCB	81	35.328	0.81	2.0	1.44	72
13C-3,3',4,4'-TeCB	77	35.900	0.78	2.0	1.39	70
13C-2,2',4,6,6'-PeCB	104	26.860	1.55	2.0	1.31	66
13C-2,3,3',4,4'-PeCB	105	39.517	1.61	2.0	1.39	70
13C-2,3,4,4',5-PeCB	114	38.880	1.58	2.0	1.37	68
13C-2,3',4,4',5-PeCB	118	38.327	1.60	2.0	1.35	68
13C-2,3',4,4',5'-PeCB	123	37.975	1.56	2.0	1.38	69
13C-3,3',4,4',5-PeCB	126	42.686	1.56	2.0	1.29	64
13C-2,2',4,4',6,6'-HxCB	155	32.945	1.24	2.0	1.33	66
13C-HxCB(156/157)	156/157	45.777	1.27	4.0	2.57	64
13C-2,3',4,4',5,5'-HxCB	167	44.603	1.28	2.0	1.34	67
13C-3,3',4,4',5,5'-HxCB	169	49.063	1.25	2.0	1.21	61
13C-2,2',3,4',5,6,6'-HpCB	188	38.863	1.04	2.0	1.46	73
13C-2,3,3',4,4',5,5'-HpCB	189	51.626	1.05	2.0	1.52	76
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.351	0.89	2.0	1.41	71
13C-2,3,3',4,4',5,5',6-OcCB	205	54.234	0.91	2.0	1.33	67
13C-2,2',3,3',4,4',5,5',6-NoCB	206	56.001	0.80	2.0	1.25	62
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	51.152	0.79	2.0	1.38	69
13C-DeCB	209	57.639	0.70	2.0	1.20	60
CleanupStandards						
13C-2,4,4'-TrCB	28	23.797	1.04	2.0	1.22	61
13C-2,3,3',5,5'-PeCB	111	35.946	1.57	2.0	1.08	54
13C-2,2 ['] ,3,3 ['] ,5,5 ['] ,6-HpCB	178	41.982	1.04	2.0	1.04	52
Recovery Standards						
13C-2,5-DiCB	9	15.728	1.56	2.0	NA	NA
13C-2,3-DICB 13C-2,2',5,5'-TeCB	52	25.808	0.80	2.0	NA NA	NA NA
13C-2,2',4,5,5'-PeCB	101	33.146	1.58	2.0	NA NA	NA NA
13C-2,2',3,4,4',5'-HxCB	138	41.529	1.25	2.0	NA NA	NA NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.759	0.91	2.0	NA NA	NA NA
100 2,2,0,0,7,7,0,0-0000	137	55.755	0.31	2.0	I W	I N/A

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0383
2				ND		0.0383
3				ND		0.0383
4				ND		0.0383
5				ND		0.0383
6				ND		0.0383
7				ND		0.0383
8				ND		0.0383
9				ND		0.0383
10				ND		0.0383
11				ND		0.376
12	12/13			ND		0.0767
13	12/13			ND		0.0767
14				ND		0.0383
15				ND		0.0506
16				ND		0.0383
17				ND		0.0383
18	18/30			ND		0.0767
19				ND		0.0383
20	20/28			ND		0.198
21	21/33			ND		0.207
22				ND		0.146
23				ND		0.0383
24				ND		0.0383
25				ND		0.0383
26	26/29			ND		0.0767
27	00/00			ND		0.0383
28	20/28			ND		0.198
29	26/29			ND		0.0767
30	18/30			ND ND		0.0767
31				ND ND		0.199
32	04/00			ND ND		0.0383
33 34	21/33			ND ND		0.207 0.0383
3 4 35				ND ND		0.0383
36				ND ND		0.0383
37				ND ND		0.0363
38				ND ND		0.0383
36 39				ND ND		0.0383
39 40	40/41/71			ND ND		0.0363
41	40/41/71			ND		0.115
42	10/71/11			ND		0.0383
43	43/73			ND		0.0767
44	44/47/65			ND		0.115

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.0767
46				ND		0.0383
47	44/47/65			ND		0.115
48				ND		0.0383
49	49/69			ND		0.0767
50	50/53			ND		0.0767
51	45/51			ND		0.0767
52				ND		0.198
53	50/53			ND		0.0767
54				ND		0.0383
55				ND		0.0383
56				ND		0.0383
57				ND		0.0383
58				ND		0.0383
59	59/62/75			ND		0.115
60				ND		0.0383
61	61/70/74/76			ND		0.153
62	59/62/75			ND		0.115
63				ND		0.0383
64				ND		0.0383
65	44/47/65			ND		0.115
66				ND		0.0905
67				ND		0.0383
68				ND		0.0383
69	49/69			ND		0.0767
70	61/70/74/76			ND		0.153
71	40/41/71			ND		0.115
72				ND		0.0383
73	43/73			ND		0.0767
74	61/70/74/76			ND		0.153
75	59/62/75			ND		0.115
76	61/70/74/76			ND		0.153
77				ND		0.0383
78				ND		0.0383
79				ND		0.0383
80				ND		0.0383
81				ND		0.0383
82				ND		0.0383
83				ND		0.0383
84	05/440/447			ND		0.0383
85	85/116/117			ND		0.115
86	86/87/97/108/119/125			ND		0.230
87	86/87/97/108/119/125			ND		0.230
88	88/91			ND		0.0767

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.0383
90	90/101/113			ND		0.115
91	88/91			ND		0.0767
92				ND		0.0383
93	93/98/100/102			ND		0.153
94				ND		0.0383
95				ND		0.107
96				ND		0.0383
97	86/87/97/108/119/125			ND		0.230
98	93/98/100/102			ND		0.153
99				ND		0.0383
100	93/98/100/102			ND		0.153
101	90/101/113			ND		0.115
102	93/98/100/102			ND		0.153
103	30,00,100,100			ND		0.0383
104				ND		0.0383
105				ND		0.0383
106				ND		0.0383
107	107/124			ND		0.0767
108	86/87/97/108/119/125			ND		0.230
109	00/01/01/100/110/120			ND		0.0383
110	110/115			ND		0.0767
111	110/110			ND		0.0383
112				ND		0.0383
113	90/101/113			ND		0.115
114	30/101/110			ND		0.0383
115	110/115			ND		0.0767
116	85/116/117			ND		0.115
117	85/116/117			ND		0.115
118	09/110/117			ND		0.0598
119	86/87/97/108/119/125			ND		0.230
120	00/01/01/100/110/120			ND		0.0383
121				ND		0.0383
122				ND		0.0383
123				ND		0.0383
124	107/124			ND		0.0767
125	86/87/97/108/119/125			ND		0.230
126	00/01/91/100/119/120			ND ND		0.0383
127				ND ND		0.0383
127	128/166			ND		0.0363
129	129/138/163			ND ND		0.0767
130	129/100/100			ND ND		0.0383
131				ND ND		0.0383
132				ND		0.0383
132				טוו		0.0363

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.0383
134	134/143			ND		0.0767
135	135/151			ND		0.0767
136	. 557 . 5 .			ND		0.0383
137				ND		0.0383
138	129/138/163			ND		0.115
139	139/140			ND		0.0767
140	139/140			ND		0.0767
141	100/110			ND		0.0383
142				ND		0.0383
143	134/143			ND		0.0363
144	134/143			ND		0.0383
144				ND ND		0.0383
146				ND ND		
146	147/149			ND ND		0.0383
	147/149					0.0767
148	4.47/4.40			ND		0.0383
149	147/149			ND		0.0767
150	105/151			ND		0.0383
151	135/151			ND		0.0767
152				ND		0.0383
153	153/168			ND		0.0767
154				ND		0.0383
155				ND		0.0383
156	156/157			ND		0.0767
157	156/157			ND		0.0767
158				ND		0.0383
159				ND		0.0383
160				ND		0.0383
161				ND		0.0383
162				ND		0.0383
163	129/138/163			ND		0.115
164				ND		0.0383
165				ND		0.0383
166	128/166			ND		0.0767
167				ND		0.0383
168	153/168			ND		0.0767
169				ND		0.0383
170				ND		0.0383
171	171/173			ND		0.0767
172				ND		0.0383
173	171/173			ND		0.0767
174	1/ 1/ 0			ND		0.0383
175				ND		0.0383
176				ND		0.0383
170				ואט		0.0000

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

* = See Discussion X = Outside QC Limits RT = Retention Time

I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
101 70	00-010110113	111	itatio	ng/E	119/1	119/1
177				ND		0.0383
178				ND		0.0383
179				ND		0.0383
180	180/193			ND		0.0767
181				ND		0.0383
182				ND		0.0383
183	183/185			ND		0.0767
184				ND		0.0383
185	183/185			ND		0.0767
186				ND		0.0383
187				ND		0.0383
188				ND		0.0383
189				ND		0.0383
190				ND		0.0383
191				ND		0.0383
192				ND		0.0383
193	180/193			ND		0.0767
194				ND		0.0383
195				ND		0.0383
196				ND		0.0383
197	197/200			ND		0.0767
198	198/199			ND		0.0767
199	198/199			ND		0.0767
200	197/200			ND		0.0767
201				ND		0.0383
202				ND		0.0383
203				ND		0.0383
204				ND		0.0383
205				ND		0.0383
206				ND		0.0383
207				ND		0.0383
208				ND		0.0383
209				ND		0.0383

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

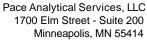


Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected



Method 1668A Polychlorobiphenyl Blank Analysis Results

BLANK-106282 Lab Sample ID Filename Injected By **Total Amount Extracted**

ICAL ID

<u> Pace Analytical</u>

P230528A_06 BAL 1000 mL P230528A02

Matrix Extracted Analyzed

Water 05/23/2023 12:15 05/28/2023 18:02

CCal Filename(s)	P230528A	_01		Dilution	NA	
PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-4,4'-DiCB 13C-2,2',6-TrCB 13C-2,2',6,6'-TeCB 13C-2,2',4,4',5-TeCB 13C-3,4,4',5-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,6,6'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HoCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.238 13.020 13.326 20.415 17.154 28.192 20.766 35.346 35.346 35.934 26.893 39.556 38.902 38.348 38.013 42.725 32.979 45.816 44.642 49.103 38.902 51.675 44.407 54.284 56.051 51.201 57.689	3.07 3.23 1.54 1.60 1.06 1.08 0.80 0.79 1.63 1.59 1.62 1.57 1.60 1.63 1.24 1.28 1.27 1.28 1.01 1.07 0.90 0.89 0.80 0.79	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.04 1.29 1.33 1.42 1.33 1.53 1.52 1.62 1.60 1.27 1.53 1.57 1.50 1.33 1.45 2.69 1.40 1.55 1.65 1.71 1.46 1.71 1.68 1.71	52 65 66 71 67 77 61 81 80 63 76 78 75 67 73 67 70 77 82 86 73 86 84 88 88 88
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.980 42.021	1.04 1.53 1.06	2.0 2.0 2.0	1.60 1.51 1.45	80 75 73
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.795 25.841 33.180 41.551 53.809	1.60 0.77 1.59 1.27 0.89	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

^{* =} See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0400
2				ND		0.0400
3				ND		0.0400
4				ND		0.0400
5				ND		0.0400
6				ND		0.0400
7				ND		0.0400
8				ND		0.0400
9				ND		0.0400
10				ND		0.0400
11				ND		0.392
12	12/13			ND		0.0800
13	12/13			ND		0.0800
14				ND		0.0400
15				ND		0.0528
16				ND		0.0400
17				ND		0.0400
18	18/30			ND		0.0800
19				ND		0.0400
20	20/28			ND		0.206
21	21/33			ND		0.216
22				ND		0.152
23				ND		0.0400
24				ND		0.0400
25				ND		0.0400
26	26/29			ND		0.0800
27				ND		0.0400
28	20/28			ND		0.206
29	26/29			ND		0.0800
30	18/30			ND		0.0800
31				ND		0.208
32				ND		0.0400
33	21/33			ND		0.216
34				ND		0.0400
35				ND		0.0400
36				ND		0.0400
37				ND		0.0848
38				ND		0.0400
39				ND		0.0400
40	40/41/71			ND		0.120
41	40/41/71			ND		0.120
42				ND		0.0400
43	43/73			ND		0.0800
44	44/47/65			ND		0.120
45	45/51			ND		0.0800

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise (EDL) B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits

RT = Retention Time I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
46				ND		0.0400
47	44/47/65			ND		0.120
48				ND		0.0400
49	49/69			ND		0.0800
50	50/53			ND		0.0800
51	45/51			ND		0.0800
52				ND		0.206
53	50/53			ND		0.0800
54				ND		0.0400
55				ND		0.0400
56				ND		0.0400
57				ND		0.0400
58				ND		0.0400
59	59/62/75			ND		0.120
60	30,32,13			ND		0.0400
61	61/70/74/76			ND		0.160
62	59/62/75			ND		0.120
63	00/02/10			ND		0.0400
64				ND		0.0400
65	44/47/65			ND		0.120
66	11/1//00			ND		0.0944
67				ND		0.0400
68				ND		0.0400
69	49/69			ND		0.0800
70	61/70/74/76			ND		0.160
71	40/41/71			ND		0.120
72	10/11//1			ND		0.0400
73	43/73			ND		0.0800
74	61/70/74/76			ND		0.160
7 5	59/62/75			ND		0.120
76	61/70/74/76			ND		0.160
77	01/10/14/10			ND		0.0400
78				ND		0.0400
70 79				ND		0.0400
80				ND		0.0400
81				ND		0.0400
82				ND		0.0400
83				ND		0.0400
84				ND ND		0.0400
85	85/116/117			ND ND		0.0400
86	86/87/97/108/119/125			ND ND		0.120
86 87	86/87/97/108/119/125			ND ND		0.240
88 89	88/91			ND ND		0.0800
89 90	90/101/113			ND ND		0.0400
90	90/101/113			שוו		0.120

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

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I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

91 88/91	IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
92	91	88/91			ND		0.0800
93 93/98/100/102	92				ND		
94	93	93/98/100/102			ND		
96					ND		
97 86/87/97/108/119/125 ND 0.240 98 93/98/100/102 ND 0.160 99 ND 0.160 101 93/98/100/102 ND 0.160 101 93/98/100/102 ND ND 0.160 101 93/98/100/102 ND ND 0.160 103 ND 0.160 103 ND 0.160 104 ND 0.0400 105 ND 0.0400 106 ND 0.0400 107 107/124 ND 0.0400 108 86/87/97/108/119/125 ND 0.0400 109 ND 0.0400 110 110/115 ND 0.0400 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.0400 114 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.0400 117 85/116/117 ND 0.0400 118 86/87/97/108/119/125 ND 0.0400 119 86/87/97/108/119/125 ND 0.0400 110 110 ND 0.0400 111 85/116/117 ND 0.0400 112 ND 0.0400 115 10/124 ND 0.0400 116 86/87/97/108/119/125 ND 0.0400 117 85/116/117 ND 0.0400 118 86/87/97/108/119/125 ND 0.0400 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0400 125 86/87/97/108/119/125 ND 0.0400 126 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0400 129 129/138/163 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 135 ND 0.0400 136 ND 0.0400 137 ND 0.0400 138 134/143 ND 0.0400 139 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 135 ND 0.0400 136 ND 0.0400 137 ND 0.0400 138 134/143 ND 0.0400 139 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400	95				ND		0.112
98 93/98/100/102 ND 0.160 100 93/98/100/102 ND 0.160 101 90/101/113 ND 0.120 102 93/98/100/102 ND 0.120 103 ND 0.0400 104 ND 0.0400 105 ND 0.0400 106 ND 0.0400 107 107/124 ND 0.0400 108 86/87/97/108/119/125 ND 0.0400 110 110/115 ND 0.0800 111 ND 0.0400 112 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.0400 117 88/116/117 ND 0.0400 118 86/87/97/108/119/125 ND 0.0400 119 9 ND 0.0400 111 ND 0.0800 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.0400 114 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.0400 117 85/116/117 ND 0.0400 118 86/87/97/108/119/125 ND 0.120 119 86/87/97/108/119/125 ND 0.0400 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0400 125 86/87/97/108/119/125 ND 0.0400 126 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0400 129 129/138/163 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 135 ND 0.0400 136 ND 0.0400 137 ND 0.0400 138 134/143 ND 0.0400 139 ND 0.0400 130 ND 0.0400 131 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400	96				ND		0.0400
99	97	86/87/97/108/119/125			ND		0.240
100	98	93/98/100/102			ND		0.160
101 90/101/113	99				ND		0.0400
102 93/98/100/102	100	93/98/100/102			ND		0.160
103	101	90/101/113			ND		0.120
104	102	93/98/100/102			ND		0.160
105	103				ND		0.0400
106	104				ND		0.0400
107 107/124	105				ND		0.0400
108 86/87/97/108/119/125 ND 0.240 109 ND 0.0400 110 110/115 ND 0.0800 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.0400 114 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.120 118 ND 0.120 119 86/87/97/108/119/125 ND 0.0400 121 ND 0.0400 122 ND	106				ND		0.0400
108 86/87/97/108/119/125 ND 0.240 109 ND 0.0400 110 110/115 ND 0.0800 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.0400 114 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.120 117 85/116/117 ND 0.0800 118 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.0400 121 ND 0.0400 122 ND		107/124			ND		0.0800
110 110/115 ND 0.0800 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.120 114 ND 0.0400 115 110/115 ND 0.0800 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.120 118 ND 0.120 118 ND 0.120 118 ND 0.120 119 86/87/97/108/119/125 ND 0.0400 122 ND 0.0400	108	86/87/97/108/119/125			ND		
111	109				ND		0.0400
112	110	110/115			ND		0.0800
113 90/101/113 ND 0.120 114 ND 0.0400 115 110/115 ND 0.0800 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.0400 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 127 ND	111				ND		0.0400
114 ND 0.0400 115 110/115 ND 0.0800 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0400	112				ND		0.0400
115 110/115 ND 0.0800 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0400 130 ND	113	90/101/113			ND		0.120
116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 126 ND 0.0400 127 ND 0.0400 128 128/166	114				ND		0.0400
117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 131 ND <	115	110/115			ND		0.0800
118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 132 ND 0.0400	116				ND		
119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400	117	85/116/117			ND		
120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800 </td <td>118</td> <td></td> <td></td> <td></td> <td>ND</td> <td></td> <td></td>	118				ND		
121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800 </td <td></td> <td>86/87/97/108/119/125</td> <td></td> <td></td> <td></td> <td></td> <td>0.240</td>		86/87/97/108/119/125					0.240
122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800							0.0400
124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800	123				ND		0.0400
126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.120 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800	124				ND		0.0800
127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.120 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800		86/87/97/108/119/125			ND		0.240
128 128/166 ND 0.0800 129 129/138/163 ND 0.120 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800	126				ND		0.0400
129 129/138/163 ND 0.120 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800		129/138/163			ND		
132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800							0.0400
132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
134 134/143 ND 0.0800							0.0400
40E 40E/4E4 0.0000					ND		
135 135/151 ND 0.0800	135	135/151			ND		0.0800

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL) B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated

* = See Discussion
X = Outside OC Lim

X = Outside QC Limits RT = Retention Time

I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
136				ND		0.0400
137				ND		0.0400
138	129/138/163			ND		0.120
139	139/140			ND		0.0800
140	139/140			ND		0.0800
141				ND		0.0400
142				ND		0.0400
143	134/143			ND		0.0800
144				ND		0.0400
145				ND		0.0400
146				ND		0.0400
147	147/149			ND		0.0800
148				ND		0.0400
149	147/149			ND		0.0800
150				ND		0.0400
151	135/151			ND		0.0800
152				ND		0.0400
153	153/168			ND		0.0800
154				ND		0.0400
155				ND		0.0400
156	156/157			ND		0.0800
157	156/157			ND		0.0800
158				ND		0.0400
159				ND		0.0400
160				ND		0.0400
161				ND		0.0400
162				ND		0.0400
163	129/138/163			ND		0.120
164				ND		0.0400
165				ND		0.0400
166	128/166			ND		0.0800
167				ND		0.0400
168	153/168			ND		0.0800
169				ND		0.0400
170				ND		0.0400
171	171/173			ND		0.0800
172				ND		0.0400
173	171/173			ND		0.0800
174				ND		0.0400
175				ND		0.0400
176				ND		0.0400
177				ND		0.0400
178				ND		0.0400
179				ND		0.0400
180	180/193			ND		0.0800

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time

I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A 06

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
181				ND		0.0400
182				ND		0.0400
183	183/185			ND		0.0800
184				ND		0.0400
185	183/185			ND		0.0800
186				ND		0.0400
187				ND		0.0400
188				ND		0.0400
189				ND		0.0400
190				ND		0.0400
191				ND		0.0400
192				ND		0.0400
193	180/193			ND		0.0800
194				ND		0.0400
195				ND		0.0400
196				ND		0.0400
197	197/200			ND		0.0800
198	198/199			ND		0.0800
199	198/199			ND		0.0800
200	197/200			ND		0.0800
201				ND		0.0400
202				ND		0.0400
203				ND		0.0400
204				ND		0.0400
205				ND		0.0400
206				ND		0.0400
207				ND		0.0400
208				ND		0.0400
209				ND		0.0400

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses ND = Not Detected

NA = Not Applicable

NC = Not Calculated
* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Client Sample ID Lab Sample ID Filename CBLKQM BLANK-106282 P230528A_06

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
TotalPCBs	ND	

ND = Not Detected



Method 1668A Polychlorobiphenyl Blank Analysis Results

Matrix

Water

Lab Sample ID BLANK-106448
Filename P230531B_07
Injected By CVS
Total Amount Extracted 1000 mL

 Total Amount Extracted
 1000 mL
 Extracted
 05/26/2023 11:40

 ICAL ID
 P230531B02
 Analyzed
 06/01/2023 03:40

 Coal Filances (a)
 P320531B, 04
 Dilution
 NA

CCal Filename(s) P230531B_01 Dilution NA

CCai Filename(s)	P230531B	_01		Dilution	NA	
PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	10.204	3.04	2.0	0.926	46
13C-4-MoCB	3 4	12.997	3.09	2.0	1.09	55
13C-2,2'-DiCB	4	13.302	1.55	2.0	1.09	55
13C-4,4'-DiCB	15	20.392	1.60	2.0	1.27	63
13C-2,2',6-TrCB	19	17.132	1.03	2.0	1.13	57
13C-3,4,4'-TrCB	37	28.175	1.06	2.0	1.15	57
13C-2,2',6,6'-TeCB	54	20.734	0.79	2.0	0.873	44
13C-3,4,4',5-TeCB	81	35.328	0.80	2.0	1.33	67
13C-3,3',4,4'-TeCB	77	35.900	0.79	2.0	1.27	64
13C-2,2',4,6,6'-PeCB	104	26.875	1.57	2.0	0.926	46
13C-2,3,3',4,4'-PeCB	105	39.534	1.62	2.0	1.45	73
13C-2,3,4,4',5-PeCB	114	38.880	1.56	2.0	1.40	70
13C-2,3',4,4',5-PeCB	118	38.326	1.56	2.0	1.40	70
13C-2,3',4,4',5'-PeCB	123	37.991	1.59	2.0	1.42	71
13C-3,3',4,4',5-PeCB	126	42.703	1.59	2.0	1.24	62
13C-2,2',4,4',6,6'-HxCB	155	32.945	1.29	2.0	1.05	52
13C-HxCB (156/157)	156/157	45.793	1.27	4.0	2.76	69
13C-2,3',4,4',5,5'-HxCB	167	44.602	1.27	2.0	1.39	69
13C-3,3',4,4',5,5'-HxCB	169	49.079	1.29	2.0	1.20	60
13C-2,2',3,4',5,6,6'-HpCB	188	38.880	1.03	2.0	1.47	73
13C-2,3,3',4,4',5,5'-HpCB	189	51.647	1.08	2.0	1.68	84
13C-2,2',3,3',5,5',6,6'-OcCB	202	44.368	0.90	2.0	1.52	76 75
13C-2,3,3',4,4',5,5',6-OcCB	205	54.233	0.89 0.79	2.0	1.50	75 69
13C-2,2',3,3',4,4',5,5',6-NoCB	206 208	56.000 51.173	0.79	2.0 2.0	1.38 1.52	76
13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	208	57.638	0.79	2.0	1.29	76 64
ISC-DeCB	209	37.030	0.71	2.0	1.29	04
Cleanup Standards						
13C-2,4,4'-TrCB	28	23.813	1.04	2.0	1.28	64
13C-2,3,3',5,5'-PeCB	111	35.946	1.55	2.0	1.17	58
13C-2,2',3,3',5,5',6-HpCB	178	41.982	1.06	2.0	1.11	56
Recovery Standards						
13C-2,5-DiCB	9	15.772	1.62	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.823	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	33.146	1.59	2.0	NA	ŇA
13C-2,2',3,4,4',5'-HxCB	138	41.529	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	53.759	0.90	2.0	NA	NA
	-			-		

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.0400
2				ND		0.0400
3				ND		0.0400
4				ND		0.0400
5				ND		0.0400
6				ND		0.0400
7				ND		0.0400
8				ND		0.0400
9				ND		0.0400
10				ND		0.0400
11				ND		0.392
12	12/13			ND		0.0800
13	12/13			ND		0.0800
14				ND		0.0400
15				ND		0.0528
16				ND		0.0400
17				ND		0.0400
18	18/30			ND		0.0800
19				ND		0.0400
20	20/28			ND		0.206
21	21/33			ND		0.216
22				ND		0.152
23				ND		0.0400
24				ND		0.0400
25				ND		0.0400
26	26/29			ND		0.0800
27				ND		0.0400
28	20/28			ND		0.206
29	26/29			ND		0.0800
30	18/30			ND		0.0800
31				ND		0.208
32				ND		0.0400
33	21/33			ND		0.216
34				ND		0.0400
35				ND		0.0400
36				ND		0.0400
37				ND		0.0848
38				ND		0.0400
39				ND		0.0400
40	40/41/71			ND		0.120
41	40/41/71			ND		0.120
42				ND		0.0400
43	43/73			ND		0.0800
44	44/47/65			ND		0.120
45	45/51			ND		0.0800

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
46				ND		0.0400
47	44/47/65			ND		0.120
48				ND		0.0400
49	49/69			ND		0.0800
50	50/53			ND		0.0800
51	45/51			ND		0.0800
52				ND		0.206
53	50/53			ND		0.0800
54				ND		0.0400
55				ND		0.0400
56				ND		0.0400
57				ND		0.0400
58				ND		0.0400
59	59/62/75			ND		0.120
60				ND		0.0400
61	61/70/74/76			ND		0.160
62	59/62/75			ND		0.120
63				ND		0.0400
64				ND		0.0400
65	44/47/65			ND		0.120
66				ND		0.0944
67				ND		0.0400
68				ND		0.0400
69	49/69			ND		0.0800
70	61/70/74/76			ND		0.160
71	40/41/71			ND		0.120
72				ND		0.0400
73	43/73			ND		0.0800
74	61/70/74/76			ND		0.160
75	59/62/75			ND		0.120
76	61/70/74/76			ND		0.160
77				ND		0.0400
78				ND		0.0400
79				ND		0.0400
80				ND		0.0400
81				ND		0.0400
82				ND		0.0400
83				ND		0.0400
84				ND		0.0400
85	85/116/117			ND		0.120
86	86/87/97/108/119/125			ND		0.240
87	86/87/97/108/119/125			ND		0.240
88	88/91			ND		0.0800
89				ND		0.0400
90	90/101/113			ND		0.120
				-		

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated

* = See Discussion X = Outside QC Limits RT = Retention Time

I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B 07

91 88/91	IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
92	91	88/91			ND		0.0800
93 93/98/100/102	92				ND		
94	93	93/98/100/102			ND		
96					ND		
97 86/87/97/108/119/125 ND 0.240 98 93/98/100/102 ND 0.160 99 ND 0.160 101 93/98/100/102 ND 0.160 101 93/98/100/102 ND ND 0.160 101 93/98/100/102 ND ND 0.160 103 ND 0.160 103 ND 0.160 104 ND 0.0400 105 ND 0.0400 106 ND 0.0400 107 107/124 ND 0.0400 108 86/87/97/108/119/125 ND 0.0400 109 ND 0.0400 110 110/115 ND 0.0400 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.0400 114 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.0400 117 85/116/117 ND 0.0400 118 86/87/97/108/119/125 ND 0.0400 119 86/87/97/108/119/125 ND 0.0400 110 110 ND 0.0400 111 85/116/117 ND 0.0400 112 ND 0.0400 115 10/124 ND 0.0400 116 86/87/97/108/119/125 ND 0.0400 117 85/116/117 ND 0.0400 118 86/87/97/108/119/125 ND 0.0400 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0400 125 86/87/97/108/119/125 ND 0.0400 126 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0400 129 129/138/163 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 135 ND 0.0400 136 ND 0.0400 137 ND 0.0400 138 134/143 ND 0.0400 139 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 135 ND 0.0400 136 ND 0.0400 137 ND 0.0400 138 134/143 ND 0.0400 139 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400	95				ND		0.112
98 93/98/100/102 ND 0.160 100 93/98/100/102 ND 0.160 101 90/101/113 ND 0.120 102 93/98/100/102 ND 0.120 103 ND 0.0400 104 ND 0.0400 105 ND 0.0400 106 ND 0.0400 107 107/124 ND 0.0400 108 86/87/97/108/119/125 ND 0.0400 110 110/115 ND 0.0800 111 ND 0.0400 112 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.0400 117 88/116/117 ND 0.0400 118 86/87/97/108/119/125 ND 0.0400 119 9 ND 0.0400 111 ND 0.0800 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.0400 114 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.0400 117 85/116/117 ND 0.0400 118 86/87/97/108/119/125 ND 0.120 119 86/87/97/108/119/125 ND 0.0400 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0400 125 86/87/97/108/119/125 ND 0.0400 126 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0400 129 129/138/163 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400 135 ND 0.0400 136 ND 0.0400 137 ND 0.0400 138 134/143 ND 0.0400 139 ND 0.0400 130 ND 0.0400 131 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0400	96				ND		0.0400
99	97	86/87/97/108/119/125			ND		0.240
100	98	93/98/100/102			ND		0.160
101 90/101/113	99				ND		0.0400
102 93/98/100/102	100	93/98/100/102			ND		0.160
103	101	90/101/113			ND		0.120
104	102	93/98/100/102			ND		0.160
105	103				ND		0.0400
106	104				ND		0.0400
107 107/124	105				ND		0.0400
108 86/87/97/108/119/125 ND 0.240 109 ND 0.0400 110 110/115 ND 0.0800 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.0400 114 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.120 118 ND 0.120 119 86/87/97/108/119/125 ND 0.0400 121 ND 0.0400 122 ND	106				ND		0.0400
108 86/87/97/108/119/125 ND 0.240 109 ND 0.0400 110 110/115 ND 0.0800 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.0400 114 ND 0.0400 115 110/115 ND 0.0400 116 85/116/117 ND 0.120 117 85/116/117 ND 0.0800 118 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.0400 121 ND 0.0400 122 ND		107/124			ND		0.0800
110 110/115 ND 0.0800 111 ND 0.0400 112 ND 0.0400 113 90/101/113 ND 0.120 114 ND 0.0400 115 110/115 ND 0.0800 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.120 118 ND 0.120 118 ND 0.120 118 ND 0.120 119 86/87/97/108/119/125 ND 0.0400 122 ND 0.0400	108	86/87/97/108/119/125			ND		
111	109				ND		0.0400
112	110	110/115			ND		0.0800
113 90/101/113 ND 0.120 114 ND 0.0400 115 110/115 ND 0.0800 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.0400 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 127 ND	111				ND		0.0400
114 ND 0.0400 115 110/115 ND 0.0800 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0400	112				ND		0.0400
115 110/115 ND 0.0800 116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0400 130 ND	113	90/101/113			ND		0.120
116 85/116/117 ND 0.120 117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 126 ND 0.0400 127 ND 0.0400 128 128/166	114				ND		0.0400
117 85/116/117 ND 0.120 118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.0400 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 131 ND <	115	110/115			ND		0.0800
118 ND 0.0624 119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 132 ND 0.0400	116				ND		
119 86/87/97/108/119/125 ND 0.240 120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400	117	85/116/117			ND		
120 ND 0.0400 121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800 </td <td>118</td> <td></td> <td></td> <td></td> <td>ND</td> <td></td> <td></td>	118				ND		
121 ND 0.0400 122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800 </td <td></td> <td>86/87/97/108/119/125</td> <td></td> <td></td> <td></td> <td></td> <td>0.240</td>		86/87/97/108/119/125					0.240
122 ND 0.0400 123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
123 ND 0.0400 124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800							0.0400
124 107/124 ND 0.0800 125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
125 86/87/97/108/119/125 ND 0.240 126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.0400 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800	123				ND		0.0400
126 ND 0.0400 127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.120 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800	124				ND		0.0800
127 ND 0.0400 128 128/166 ND 0.0800 129 129/138/163 ND 0.120 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800		86/87/97/108/119/125			ND		0.240
128 128/166 ND 0.0800 129 129/138/163 ND 0.120 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800	126				ND		0.0400
129 129/138/163 ND 0.120 130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
130 ND 0.0400 131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
131 ND 0.0400 132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800		129/138/163			ND		
132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800							0.0400
132 ND 0.0400 133 ND 0.0400 134 134/143 ND 0.0800					ND		
134 134/143 ND 0.0800							0.0400
40E 40E/4E4 0.0000					ND		
135 135/151 ND 0.0800	135	135/151			ND		0.0800

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
136				ND		0.0400
137				ND		0.0400
138	129/138/163			ND		0.120
139	139/140			ND		0.0800
140	139/140			ND		0.0800
141				ND		0.0400
142				ND		0.0400
143	134/143			ND		0.0800
144				ND		0.0400
145				ND		0.0400
146				ND		0.0400
147	147/149			ND		0.0800
148				ND		0.0400
149	147/149			ND		0.0800
150				ND		0.0400
151	135/151			ND		0.0800
152				ND		0.0400
153	153/168			ND		0.0800
154				ND		0.0400
155				ND		0.0400
156	156/157			ND		0.0800
157	156/157			ND		0.0800
158				ND		0.0400
159				ND		0.0400
160				ND		0.0400
161				ND		0.0400
162				ND		0.0400
163	129/138/163			ND		0.120
164				ND		0.0400
165				ND		0.0400
166	128/166			ND		0.0800
167				ND		0.0400
168	153/168			ND		0.0800
169				ND		0.0400
170				ND		0.0400
171	171/173			ND		0.0800
172				ND		0.0400
173	171/173			ND		0.0800
174				ND		0.0400
175				ND		0.0400
176				ND		0.0400
177				ND		0.0400
178				ND		0.0400
179				ND		0.0400
180	180/193			ND		0.0800

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected NA = Not Applicable NC = Not Calculated * = See Discussion X = Outside QC Limits

RT = Retention Time I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
181				ND		0.0400
182				ND		0.0400
183	183/185			ND		0.0800
184				ND		0.0400
185	183/185			ND		0.0800
186				ND		0.0400
187				ND		0.0400
188				ND		0.0400
189				ND		0.0400
190				ND		0.0400
191				ND		0.0400
192				ND		0.0400
193	180/193			ND		0.0800
194				ND		0.0400
195				ND		0.0400
196				ND		0.0400
197	197/200			ND		0.0800
198	198/199			ND		0.0800
199	198/199			ND		0.0800
200	197/200			ND		0.0800
201				ND		0.0400
202				ND		0.0400
203				ND		0.0400
204				ND		0.0400
205				ND		0.0400
206				ND		0.0400
207				ND		0.0400
208				ND		0.0400
209				ND		0.0400

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference



Method 1668A Polychlorobiphenyl Blank Analysis Results

Client Sample ID Lab Sample ID Filename CBLKSL BLANK-106448 P230531B_07

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
DecachloroBiphenyls	ND	
Total PCBs	ND	

ND = Not Detected





Method 1668A Polychlorobiphenyls Laboratory Control Spike Analysis Results

Lab Sample ID Filename

Total Amount Extracted

ICAL ID

CCal Filename(s) Method Blank ID LCS-106283 P230529A_03

1000 mL P230529A02 P230529A_01 BLANK-106282 Matrix Dilution Water NA

Extracted 05/23/2023 12:15 Analyzed 05/29/2023 04:32

Injected By BAL

	Native Analytes		tes	Labeled Analytes		
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.04	104	2.0	1.20	60
3	1.0	0.966	97	2.0	1.44	72
4	1.0	0.996	100	2.0	1.41	71
15	1.0	1.00	100	2.0	1.60	80
19	1.0	1.03	103	2.0	1.50	75
37	1.0	0.892	89	2.0	1.54	77
54	1.0	0.983	98	2.0	1.34	67
81	1.0	0.838	84	2.0	1.65	82
77	1.0	0.832	83	2.0	1.62	81
104	1.0	0.912	91	2.0	1.37	69
105	1.0	0.842	84	2.0	1.52	76
114	1.0	0.801	80	2.0	1.48	74
118	1.0	0.823	82	2.0	1.48	74
123	1.0	0.838	84	2.0	1.47	73
126	1.0	0.860	86	2.0	1.39	70
155	1.0	0.853	85	2.0	1.51	76
156/157	2.0	1.84	92	4.0	2.70	67
167	1.0	0.909	91	2.0	1.39	69
169	1.0	0.913	91	2.0	1.61	80
188	1.0	0.897	90	2.0	1.62	81
189	1.0	0.911	91	2.0	1.64	82
202	1.0	0.945	95	2.0	1.40	70
205	1.0	0.920	92	2.0	1.71	85
206	1.0	0.904	90	2.0	1.64	82
208	1.0	0.949	95	2.0	1.77	88
209	1.0	0.918	92	2.0	1.57	78

R = Recovery outside of method 1668A control limits

Nn = Result obtained from alternate analysis

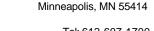
ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

ng = Nanograms I = Interference





Method 1668A Polychlorobiphenyls **Laboratory Control Spike Analysis Results**

Lab Sample ID Filename

Total Amount Extracted ICAL ID

CCal Filename(s)

Method Blank ID

LCS-106449 P230531B_03 1000 mL

P230531B02 P230531B_01 BLANK-106448 Matrix Water Dilution NA

Extracted 05/26/2023 11:40 Analyzed 05/31/2023 23:28

Injected By **CVS**

	N	Native Analyt	tes	Lal	beled Analyte	es
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.06	106	2.0	1.05	52
3	1.0	1.02	102	2.0	1.23	61
4	1.0	1.01	101	2.0	1.17	59
15	1.0	1.02	102	2.0	1.35	67
19	1.0	0.981	98	2.0	1.22	61
37	1.0	0.935	94	2.0	1.32	66
54	1.0	0.975	97	2.0	0.968	48
81	1.0	0.902	90	2.0	1.40	70
77	1.0	0.861	86	2.0	1.38	69
104	1.0	0.854	85	2.0	1.13	56
105	1.0	0.918	92	2.0	1.43	71
114	1.0	0.853	85	2.0	1.39	70
118	1.0	0.875	87	2.0	1.38	69
123	1.0	0.889	89	2.0	1.40	70
126	1.0	0.947	95	2.0	1.26	63
155	1.0	0.797	80	2.0	1.25	63
156/157	2.0	1.89	94	4.0	2.69	67
167	1.0	0.926	93	2.0	1.40	70
169	1.0	0.968	97	2.0	1.22	61
188	1.0	0.907	91	2.0	1.44	72
189	1.0	0.915	92	2.0	1.59	79
202	1.0	0.941	94	2.0	1.43	72
205	1.0	0.937	94	2.0	1.43	72
206	1.0	0.899	90	2.0	1.31	66
208	1.0	0.936	94	2.0	1.46	73
209	1.0	0.858	86	2.0	1.27	64

R = Recovery outside of method 1668A control limits

Nn = Result obtained from alternate analysis

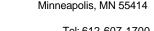
ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion ng = Nanograms

I = Interference





Lab Sample ID Filename

Total Amount Extracted

ICAL ID

CCal Filename(s) Method Blank ID LCSD-106284 P230529A_04

1000 mL P230529A02 P230529A_01 BLANK-106282 Matrix Dilution Water NA

Extracted 05/23/2023 12:15 Analyzed 05/29/2023 05:35

Injected By BAL

2.0

1.79

	1	Native Analy	tes	La	beled Analyte	es
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.06	106	2.0	1.29	64
3	1.0	0.978	98	2.0	1.58	79
4	1.0	0.975	98	2.0	1.55	77
15	1.0	1.02	102	2.0	1.81	90
19	1.0	1.05	105	2.0	1.66	83
37	1.0	0.931	93	2.0	1.73	87
54	1.0	1.00	100	2.0	1.49	74
81	1.0	0.887	89	2.0	1.78	89
77	1.0	0.884	88	2.0	1.75	88
104	1.0	0.950	95	2.0	1.58	79
105	1.0	0.941	94	2.0	1.63	82
114	1.0	0.846	85	2.0	1.66	83
118	1.0	0.863	86	2.0	1.65	83
123	1.0	0.947	95	2.0	1.60	80
126	1.0	0.907	91	2.0	1.55	77
155	1.0	0.928	93	2.0	1.74	87
156/157	2.0	1.91	95	4.0	3.13	78
167	1.0	0.953	95	2.0	1.58	79
169	1.0	0.953	95	2.0	1.80	90
188	1.0	0.940	94	2.0	1.82	91
189	1.0	0.927	93	2.0	1.86	93
202	1.0	1.03	103	2.0	1.53	77
205	1.0	0.932	93	2.0	1.92	96
206	1.0	0.906	91	2.0	1.87	94
208	1.0	0.966	97	2.0	1.95	97

R = Recovery outside of method 1668A control limits

1.0

0.935

Nn = Result obtained from alternate analysis

ND = Not Detected

209

NA = Not Applicable

NC = Not Calculated

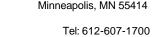
* = See Discussion

ng = Nanograms I = Interference

REPORT OF LABORATORY ANALYSIS

93

89



Fax: 612-607-6444



Method 1668A Polychlorobiphenyls Laboratory Control Spike Analysis Results

Lab Sample ID Filename

Total Amount Extracted

ICAL ID

CCal Filename(s) Method Blank ID LCSD-106450 P230531B_04 1000 mL

P230531B02 P230531B_01 BLANK-106448 Matrix Water Dilution NA

Extracted 05/26/2023 11:40 Analyzed 06/01/2023 00:31

Injected By CVS

	N	lative Analyt	tes	Lal	peled Analyt	es
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.06	106	2.0	1.16	58
3	1.0	1.02	102	2.0	1.40	70
4	1.0	1.01	101	2.0	1.35	67
15	1.0	1.01	101	2.0	1.59	79
19	1.0	0.986	99	2.0	1.44	72
37	1.0	0.955	96	2.0	1.48	74
54	1.0	0.971	97	2.0	1.11	55
81	1.0	0.925	93	2.0	1.62	81
77	1.0	0.908	91	2.0	1.53	76
104	1.0	0.864	86	2.0	1.26	63
105	1.0	0.934	93	2.0	1.68	84
114	1.0	0.873	87	2.0	1.64	82
118	1.0	0.925	92	2.0	1.60	80
123	1.0	0.915	92	2.0	1.67	84
126	1.0	0.965	96	2.0	1.42	71
155	1.0	0.823	82	2.0	1.37	68
156/157	2.0	1.95	98	4.0	3.09	77
167	1.0	0.950	95	2.0	1.60	80
169	1.0	0.961	96	2.0	1.37	68
188	1.0	0.900	90	2.0	1.62	81
189	1.0	0.954	95	2.0	1.77	89
202	1.0	0.973	97	2.0	1.61	81
205	1.0	0.939	94	2.0	1.60	80
206	1.0	0.917	92	2.0	1.47	74
208	1.0	0.946	95	2.0	1.64	82
209	1.0	0.835	84	2.0	1.47	73

R = Recovery outside of method 1668A control limits

Nn = Result obtained from alternate analysis

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion ng = Nanograms

I = Interference



Method 1668A Spike Recovery Relative Percent Difference (RPD) Results

Client PACE Wisconsin

 Spike 1 ID
 LCS-106283
 Spike 2 ID
 LCSD-106272

 Spike 1 Filename
 P230529A_03
 Spike 2 Filename
 P230524A_09

Compound	IUPAC	Spike 1 %REC	Spike 2 %REC	%RPD	
2-MoCB	1	104	111	6.5	
4-MoCB	3	97	106	8.9	
2,2'-DiCB	4	100	109	8.6	
4,4'-DiCB	15	100	109	8.6	
2,2',6-TrCB	19	103	112	8.4	
3,4,4'-TrCB	37	89	104	15.5	
2,2',6,6'-TeCB	54	98	107	8.8	
3,3',4,4'-TeCB	77	83	94	12.4	
3,4,4',5-TeCB	81	84	97	14.4	
2,2',4,6,6'-PeCB	104	91	96	5.3	
2,3,3',4,4'-PeCB	105	84	98	15.4	
2,3,4,4',5-PeCB	114	80	90	11.8	
2,3',4,4',5-PeCB	118	82	93	12.6	
2,3',4,4',5'-PeCB	123	84	92	9.1	
3,3',4,4',5-PeCB	126	86	102	17.0	
2,2',4,4',6,6'-HxCB	155	85	83	2.4	
(156/157)	156/157	92	98	6.3	
2,3',4,4',5,5'-HxCB	167	91	95	4.3	
3,3',4,4',5,5'-HxCB	169	91	103	12.4	
2,2',3,4',5,6,6'-HpCB	188	90	87	3.4	
2,3,3',4,4',5,5'-HpCB	189	91	98	7.4	
2,2',3,3',5,5',6,6'-OcCB	202	95	101	6.1	
2,3,3',4,4',5,5',6-OcCB	205	92	99	7.3	
2,2',3,3',4,4',5,5',6-NoCB	206	90	102	12.5	
2,2',3,3',4,5,5',6,6'-NoCB	208	95	101	6.1	
Decachlorobiphenyl	209	92	92	0.0	

[%]REC = Percent Recovered

RPD = The difference between the two values divided by the mean value



Method 1668A Spike Recovery Relative Percent Difference (RPD) Results

Client PACE Wisconsin

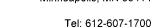
 Spike 1 ID
 LCS-106449
 Spike 2 ID
 LCSD-106450

 Spike 1 Filename
 P230531B_03
 Spike 2 Filename
 P230531B_04

Compound	IUPAC	Spike 1 %REC	Spike 2 %REC	%RPD
2-MoCB	1	106	106	0.0
4-MoCB	3	102	102	0.0
2,2'-DiCB	4	101	101	0.0
4,4'-DiCB	15	102	101	1.0
2,2',6-TrCB	19	98	99	1.0
3,4,4'-TrCB	37	94	96	2.1
2,2',6,6'-TeCB	54	97	97	0.0
3,3',4,4'-TeCB	77	86	91	5.6
3,4,4',5-TeCB	81	90	93	3.3
2,2',4,6,6'-PeCB	104	85	86	1.2
2,3,3',4,4'-PeCB	105	92	93	1.1
2,3,4,4',5-PeCB	114	85	87	2.3
2,3',4,4',5-PeCB	118	87	92	5.6
2,3',4,4',5'-PeCB	123	89	92	3.3
3,3',4,4',5-PeCB	126	95	96	1.0
2,2',4,4',6,6'-HxCB	155	80	82	2.5
(156/157)	156/157	94	98	4.2
2,3',4,4',5,5'-HxCB	167	93	95	2.1
3,3',4,4',5,5'-HxCB	169	97	96	1.0
2,2',3,4',5,6,6'-HpCB	188	91	90	1.1
2,3,3',4,4',5,5'-HpCB	189	92	95	3.2
2,2',3,3',5,5',6,6'-OcCB	202	94	97	3.1
2,3,3',4,4',5,5',6-OcCB	205	94	94	0.0
2,2',3,3',4,4',5,5',6-NoCB	206	90	92	2.2
2,2',3,3',4,5,5',6,6'-NoCB	208	94	95	1.1
Decachlorobiphenyl	209	86	84	2.4

%REC = Percent Recovered

RPD = The difference between the two values divided by the mean value



Fax: 612- 607-6444

Pace Analytical

Method 1668A Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename Injected By

Total Amount Extracted ICAL ID CCal Filename(s)

BLANK-106282 P230528A_06 BAL 1000 mL

P230528A02 P230528A 01 Matrix Extracted Analyzed Dilution

Water 05/23/2023 12:15 05/28/2023 18:02

CCal Filename(s)	P230528A	_01		Dilution	NA	
PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-3,4,4'-TrCB 13C-3,3',4,4'-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-3,3',4,4',5-PeCB 13C-3,3',4,4',5,5'-HxCB 13C-4,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-DeCB		10.238 13.020 13.326 20.415 17.154 28.192 20.766 35.346 35.934 26.893 39.556 38.902 38.348 38.013 42.725 32.979 45.816 44.642 49.103 38.902 51.675 44.407 54.284 56.051 51.201 57.689	3.07 3.23 1.54 1.60 1.06 1.08 0.80 0.79 1.63 1.59 1.62 1.57 1.60 1.63 1.24 1.28 1.27 1.28 1.01 1.07 0.90 0.80 0.79 0.80	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.04 1.29 1.33 1.42 1.33 1.53 1.22 1.60 1.27 1.53 1.57 1.50 1.33 1.45 2.69 1.40 1.55 1.65 1.71 1.68 1.71	52 65 66 71 67 77 61 81 80 63 76 78 75 67 73 67 70 77 82 86 73 86 84 88 88 85
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.980 42.021	1.04 1.53 1.06	2.0 2.0 2.0	1.60 1.51 1.45	80 75 73
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.795 25.841 33.180 41.551 53.809	1.60 0.77 1.59 1.27 0.89	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

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Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A 06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00558
2				ND		0.00508
3				ND		0.00440
4				ND		0.00752
5				ND		0.00183
6				ND	***	0.00938
7				ND		0.00930
8				ND		0.0123
9				ND		0.00246
10				ND		0.00292
11				ND		0.145
12	12/13			ND		0.00526
13	12/13		~~~	ND		0.00526
14	12/13			ND ND		0.00328
15				ND ND		0.00175
16				ND ND		
17						0.00616
18	19/20			ND		0.00516
	18/30			ND		0.0114
19	00/00			ND		0.00834
20	20/28			ND		0.0182
21	21/33			ND		0.0131
22				ND		0.00758
23				ND		0.00159
24				ND		0.00191
25				ND		0.00286
26	26/29			ND		0.00458
27				ND		0.00202
28	20/28			ND		0.0182
29	26/29			NÐ		0.00458
30	18/30			ND		0.0114
31				ND		0.0176
32				ND		0.00732
33	21/33			ND		0.0131
34				ND		0.00162
35				ND		0.00320
36				ND		0.00202
37				ND		0.00422
38				ND		0.00149
39				ND		0.00164
40	40/41/71			ND		0.00812
41	40/41/71			ND		0.00812
42	. 37 1 17 1			ND		0.00440
43	43/73			ND		0.00392
44	44/47/65			ND ND		0.00392
45	45/51			ND ND		
75 Cana - Can	43/3 I					0.00576

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
46				ND		0.00228
47	44/47/65			ND		0.0187
48				ND		0.00292
49	49/69			ND		0.00676
50	50/53			ND		0.00380
51	45/51			ND		0.00576
52				ND		0.0166
53	50/53			ND		0.00380
54				ND		0.00161
55				ND		0.00216
56				ND		0.0101
57				ND		0.00150
58				ND		0.00191
59	59/62/75			ND		0.00416
60				ND		0.00344
61	61/70/74/76			ND		0.0322
62	59/62/75			ND		0.00416
63	33.32.73	***		ND		0.00175
64				ND		0.00562
65	44/47/65			ND		0.0187
66				ND		0.0220
67				ND		0.00226
68				ND		0.00252
69	49/69			ND		0.00676
70	61/70/74/76			ND		0.0322
71	40/41/71			ND		0.00812
72				ND		0.00177
73	43/73			ND		0.00392
74	61/70/74/76			ND		0.0322
75	59/62/75			ND		0.00416
76	61/70/74/76			ND		0.0322
77	0117-017-117-0			ND		0.00266
78				ND		0.00232
79				ND		0.00234
80				ND		0.00214
81				ND		0.00179
82				ND		0.00258
83				ND		0.00240
84				ND		0.0133
85	85/116/117			ND ND		0.00522
86	86/87/97/108/119/125			ND		0.00322
87	86/87/97/108/119/125			ND		0.0153
88	88/91			ND		0.00496
89	30,01			ND ND		0.00490
90	90/101/113			ND		0.0120
				IND		0.0120

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

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Report No....10654073



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
91	88/91			ND	***	0.00496
92				ND		0.00394
93	93/98/100/102			ND		0.00568
94				ND		0.00190
95				ND		0.00874
96				ND		0.00316
97	86/87/97/108/119/125			ND		0.0153
98	93/98/100/102			ND		0.00568
99				ND		0.00594
100	93/98/100/102			ND		0.00568
101	90/101/113			ND		0.0120
102	93/98/100/102			ND		0.00568
103				ND		0.00197
104				ND		0.00153
105				ND		0.00570
106				ND		0.00179
107	107/124			ND		0.00264
108	86/87/97/108/119/125			ND		0.0153
109				ND		0.00200
110	110/115			ND		0.0130
111				ND		0.00206
112				ND		0.00178
113	90/101/113			ND		0.0120
114				ND		0.00230
115	110/115			ND		0.0130
116	85/116/117			ND		0.00522
117	85/116/117			ND		0.00522
118				ND		0.00900
119	86/87/97/108/119/125			ND		0.0153
120				ND		0.00171
121				ND		0.00131
122				ND		0.00195
123				ND		0.00222
124	107/124			ND		0.00264
125	86/87/97/108/119/125			ND		0.0153
126				ND		0.00224
127				ND		0.00134
128	128/166			ND		0.00438
129	129/138/163			ND		0.0110
130				ND		0.00220
131				ND		0.00284
132				ND		0.00414
133				ND		0.00268
134	134/143			ND		0.00402
135	135/151			ND		0.00522
<u></u>						

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

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Report No.....10654073



Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
136				ND		0.00288
137				ND		0.00258
138	129/138/163			ND		0.0110
139	139/140	***		ND		0.00442
140	139/140			ND		0.00442
141				ND		0.00248
142				ND		0.00194
143	134/143			ND		0.00402
144				ND		0.00210
145				ND		0.00202
146				ND		0.00256
147	147/149			ND		0.00904
148				ND		0.00236
149	147/149			ND		0.00904
150				ND		0.00131
151	135/151			ND		0.00522
152				ND		0.00214
153	153/168			ND		0.00776
154				ND		0.00177
155				ND		0.00155
156	156/157			ND		0.00448
157	156/157			ND		0.00448
158				ND		0.00260
159				ND		0.00282
160				ND		0.00260
161				ND		0.00188
162				ND		0.00234
163	129/138/163			ND		0.0110
164				ND		0.00244
165				ND		0.00208
166	128/166			ND		0.00438
167				ND		0.00216
168	153/168	788		ND		0.00776
169				ND		0.00162
170				ND		0.00500
171	171/173			ND		0.00612
172				ND		0.0142
173	171/173			ND		0.00612
174				ND		0.00322
175				ND		0.00153
176				ND		0.00226
177				ND		0.00338
178				ND		0.00228
179				ND		0.00244
180	180/193			ND		0.00578
Conc = Conc	contration					

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

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Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106282 P230528A_06

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
181				ND		0.00276
182				ND		0.00260
183	183/185			ND		0.00572
184				ND		0.00210
185	183/185			ND		0.00572
186				ND		0.00158
187				ND		0.00330
188				ND		0.00250
189				ND		0.00218
190				ND		0.00256
191				ND		0.00220
192				ND		0.00250
193	180/193			ND		0.00578
194				ND		0.00189
195				ND		0.00174
196				ND		0.00176
197	197/200			ND		0.00476
198	198/199			ND		0.00286
199	198/199			ND		0.00286
200	197/200			ND		0.00476
201				ND		0.00146
202				ND		0.00234
203				ND .		0.00183
204				ND	***	0.00170
205				ND		0.00200
206				ND		0.00388
207				ND		0.00232
208				ND		0.00226
209				ND		0.0174

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time I = Interference

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Method 1668A Polychlorobiphenyl Blank Analysis Results

Client Sample ID Lab Sample ID Filename CBLKQM BLANK-106282 P230528A_06

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename Injected By **Total Amount Extracted** ICAL ID CCal Filename(s)

^gace Analytical

BLANK-106448 P230531B_07 **CVS** 1000 mL P230531B02

Matrix Extracted Analyzed Dilution

Water 05/26/2023 11:40 06/01/2023 03:40

CCal Filename(s)	P230531E			Dilution	NA	J3.40
PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-2,2',6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-,5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-4,2',4,4',5,5'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-G-OcCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB	1 3 4 15 19 37 54 81 77 104 105 114 123 126 155 156/157 169 188 189 202 205 206 208 209	10.204 12.997 13.302 20.392 17.132 28.175 20.734 35.328 35.900 26.875 39.534 38.880 38.326 37.991 42.703 32.945 45.793 44.602 49.079 38.880 51.647 44.368 54.233 56.000 51.173 57.638	3.04 3.09 1.55 1.60 1.03 1.06 0.79 0.80 0.79 1.57 1.62 1.56 1.56 1.59 1.29 1.27 1.27 1.29 1.03 1.08 0.90 0.89 0.79 0.79	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	0.926 1.09 1.09 1.27 1.13 1.15 0.873 1.33 1.27 0.926 1.45 1.40 1.42 1.24 1.05 2.76 1.39 1.20 1.47 1.68 1.52 1.50 1.38 1.52 1.29	46 55 55 63 57 57 44 67 64 46 73 70 71 62 52 69 69 60 73 84 76 75 69 69 69
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.813 35.946 41.982	1.04 1.55 1.06	2.0 2.0 2.0	1.28 1.17 1.11	64 58 56
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.772 25.823 33.146 41.529 53.759	1.62 0.79 1.59 1.25 0.90	2.0 2.0 2.0 2.0 2.0	NA NA NA NA NA	NA NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00558
2				ND		0.00508
3				ND		0.00440
4				ND A		0.00935
5		16.789	1.11	IJA	0.00578	0.00491
6				ND		0.00938
7				ND		0.00930
8				ND		0.0123
9				ND A		0.00429
10				ND A		0.00572
11				ND		0.145
12	12/13			ND		0.00526
13	12/13			ND		0.00526
14			~~~	ND A		0.00440
15				ND		0.00604
16				ND		0.00616
17				ND		0.00516
18	18/30			ND		0.0114
19				ND		0.00834
20	20/28			ND		0.0182
21	21/33			ND		0.0131
22				ND		0.00758
23				ND A		0.00171
24				ND /		0.00191
25				ND		0.00286
26	26/29			ND		0.00458
27				ND		0.00202
28	20/28			ND		0.0182
29	26/29			ND		0.00458
30	18/30			ND		0.0114
31				ND		0.0176
32				ND		0.00732
33	21/33			ND		0.0131
34		77.F		ND A		0.00168
35				ND		0.00320
36				ND		0.00202
37				ND		0.00422
38				ND A		0.00162
39				ND /		0.00164
40	40/41/71			ND		0.00812
41	40/41/71			ND		0.00812
42				ND		0.00440
43	43/73	***		ND		0.00392
44	44/47/65			ND		0.00392
45	45/51			ND ND		0.00576
Conc = Conc				110		

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
46				ND		0.00228
47	44/47/65			ND		0.0187
48				ND		0.00292
49	49/69			ND		0.00676
50	50/53			ND		0.00380
51	45/51			ND		0.00576
52				ND		0.0166
53	50/53			ND		0.00380
54				ND		0.00161
55				ND		0.00216
56				ND		0.0101
57				ND		0.00150
58				ND		0.00191
59	59/62/75			ND		0.00416
60				ND		0.00344
61	61/70/74/76			ND		0.0322
62	59/62/75			ND		0.00416
63	33.32.73			ND		0.00175
64				ND		0.00562
65	44/47/65			ND		0.0187
66	1111100			ND		0.0220
67				ND		0.00226
68				ND		0.00252
69	49/69			ND		0.00232
70	61/70/74/76			ND		0.0322
71	40/41/71			ND		0.00812
72	40/41/11			ND ND		0.00312
73	43/73			ND		0.00392
74	61/70/74/76			ND ND		0.0392
75	59/62/75			ND ND		0.0322
76	61/70/74/76			ND ND	•••	0.0322
77	01/10/14/10			ND ND		0.0322
78				ND		0.00232
79				ND ND		0.00232
80				ND ND		
81				ND ND		0.00214
82						0.00179
83				ND		0.00258
				ND ND		0.00240
84 85	95/116/117			ND		0.0133
85 86	85/116/117			ND		0.00522
	86/87/97/108/119/125			ND		0.0153
87	86/87/97/108/119/125			ND		0.0153
88	88/91			ND		0.00496
89	00/404/440			ND		0.00314
90	90/101/113			ND		0.0120

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

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Method 1668A Polychlorobiphenyl **Blank Analysis Results**

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
91	88/91			ND		0.00496
92				ND		0.00394
93	93/98/100/102			ND		0.00568
94				ND		0.00190
95				ND		0.00874
96				ND		0.00316
97	86/87/97/108/119/125			ND		0.0153
98	93/98/100/102			ND		0.00568
99				ND		0.00594
100	93/98/100/102			ND	===	0.00568
101	90/101/113			ND		0.0120
102	93/98/100/102			ND		0.00568
103				ND		0.00197
104				ND	~~~	0.00153
105		***		ND		0.00570
106				ND		0.00370
107	107/124			ND		0.00264
108	86/87/97/108/119/125			ND		0.0153
109	00/01/01/100/11/0/120			ND		0.00200
110	110/115			ND		0.0130
111	110/110			ND		0.00206
112				ND		0.00200
113	90/101/113			ND		0.00178
114	90/101/113			ND		0.00230
115	110/115			ND ND		0.00230
116	85/116/117			ND		0.0130
117	85/116/117			ND ND		0.00522
118	03/110/11/					
119	86/87/97/108/119/125			ND		0.00900
120	00/07/97/100/119/125			ND ND		0.0153
120				ND		0.00171
121				ND		0.00131
123				ND		0.00195
123	107/124			ND		0.00222
124				ND		0.00264
125	86/87/97/108/119/125			ND		0.0153
126				ND		0.00224
	400/400			ND		0.00134
128	128/166			ND		0.00438
129	129/138/163			ND		0.0110
130				ND		0.00220
131				ND		0.00284
132				ND		0.00414
133				ND		0.00268
134	134/143			ND		0.00402
135	135/151			ND		0.00522

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

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Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
136				ND		0.00288
137				ND		0.00258
138	129/138/163			ND		0.0110
139	139/140			ND		0.00442
140	139/140			ND		0.00442
141				ND		0.00248
142				ND A		0.00195
143	134/143			ND		0.00402
144				ND		0.00210
145				ND		0.00202
146				ND		0.00256
147	147/149			ND		0.00904
148				ND		0.00236
149	147/149			ND		0.00904
150				ND		0.00131
151	135/151			ND		0.00522
152				ND		0.00214
153	153/168			ND		0.00776
154	, , , , , , ,		***	ND		0.00177
155				ND	***	0.00177
156	156/157			ND		0.00448
157	156/157			ND		0.00448
158	, , , , , ,			ND		0.00260
159				ND		0.00282
160				ND		0.00260
161				ND		0.00200
162				ND		0.00234
163	129/138/163			ND		0.0110
164	120, 100, 100			ND		0.00244
165		7		ND		0.00244
166	128/166			ND		0.00208
167	120/100			ND		0.00438
168	153/168			ND ND		0.00216
169	100/100			ND		0.00162
170				ND		0.00102
171	171/173			ND ND		0.00500
172	17 17 17 3			ND ND		0.00312
173	171/173			ND		0.00612
174	17 17 17 3			ND ND		0.00322
175				ND ND		0.00322
176				ND ND		
170				ND ND		0.00226
177						0.00338
179				ND		0.00228
180	180/193			ND		0.00244
100	100/183			ND		0.00578

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

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Method 1668A Polychlorobiphenyl Blank Analysis Results

Lab Sample ID Filename

BLANK-106448 P230531B_07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
181				ND		0.00276
182				ND		0.00260
183	183/185			ND		0.00572
184				ND		0.00210
185	183/185			ND		0.00572
186				ND		0.00158
187				ND		0.00330
188				ND		0.00250
189				ND		0.00218
190		~		ND		0.00256
191				ND		0.00220
192				ND		0.00250
193	180/193			ND		0.00578
194				ND		0.00189
195				ND		0.00174
196				ND		0.00176
197	197/200			ND		0.00476
198	198/199			ND		0.00286
199	198/199			ND		0.00286
200	197/200			ND		0.00476
201				ND		0.00146
202				ND		0.00234
203				ND		0.00183
204				ND		0.00170
205				ND		0.00200
206				ND		0.00388
207				ND		0.00232
208				ND		0.00226
209				ND		0.0174

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

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Method 1668A Polychlorobiphenyl Blank Analysis Results

Client Sample ID Lab Sample ID Filename

CBLKSL BLANK-106448 P230531B_07

 Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected

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1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444



Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename

NR-SW-DS2-202305 40262368001 P230529A_11 BAL

Injected By **Total Amount Extracted** % Moisture

960 mL NA NA

Matrix Water Dilution NA

Dry Weight Extracted ICAL ID CCal Filename(s) Method Blank ID

P230529A02 P230529A_01 BLANK-106282

Collected 05/16/2023 11:15 Received 05/20/2023 18:45 Extracted 05/23/2023 12:15 Analyzed 05/29/2023 12:56

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4'-5-PeCB 13C-2,3',4,4',5-PeCB	1UPAC 1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169	10.171 12.986 13.292 20.415 17.143 28.223 20.767 35.377 35.950 26.909 39.573 38.919 38.365 38.030 42.742 32.995 45.816 44.642 49.119	2.95 3.09 1.53 1.58 1.04 1.04 0.79 0.79 0.81 1.57 1.56 1.58 1.58 1.53 1.54 1.32 1.23	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.42 1.69 2.22 1.85 2.26 1.37 1.49 1.49 1.46 1.77 1.23 1.25 1.27 1.23 1.08 2.30 2.42 1.27 1.41	% Recovery 71 84 111 92 113 69 74 75 73 89 62 62 62 63 62 54 115 61 63 71
13C-3,3,4,4,5,5'-HXCB 13C-2,2,3',4,4',5,6'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	169 188 189 202 205 206 208 209	49.119 38.919 51.676 44.424 54.284 56.051 51.202 57.689	1.23 1.03 1.05 0.88 0.90 0.80 0.79 0.71	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.41 2.35 1.52 1.78 1.91 2.10 2.22 2.17	71 118 76 89 96 105 111
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.996 42.038	1.03 1.55 1.03	2.0 2.0 2.0	1.28 1.58 1.79	64 79 89
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5,5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.773 25.856 33.196 41.568 53.810	1.55 0.79 1.54 1.26 0.90	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612-607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00581
2				ND		0.00529
3				ND		0.00458
4				ND A		0.0104
5				ND A		0.00455
6				ND		0.00977
7				ND		0.00969
8				ND	***	0.0128
9				ND A		0.00383
10				ND A		0.00783
11				ND		0.151
12	12/13			ND		0.00548
13	12/13			ND		0.00548
14				ND A		0.00401
15				ND		0.00629
16				ND		0.00642
17				ND		0.00537
18	18/30			ND		0.0119
19				ND		0.00869
20	20/28			ND		0.0190
21	21/33			ND		0.0137
22				ND		0.00789
23				ND		0.00165
24				ND		0.00199
25				ND		0.00298
26	26/29			ND		0.00477
27				ND		0.00210
28	20/28			ND		0.0190
29	26/29			ND		0.00477
30	18/30	***		ND		0.0119
31				ND		0.0184
32				ND		0.00762
33	21/33			ND		0.0137
34				ND		0.00169
35				ND		0.00333
36				ND		0.00210
37				ND		0.00440
38				ND		0.00155
39				ND		0.00171
40	40/41/71			ND		0.00846
41	40/41/71			ND		0.00846
42				ND		0.00458
43	43/73			ND		0.00408
44	44/47/65			ND		0.0195

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.00600
46				ND		0.00237
47	44/47/65			ND		0.0195
48				ND		0.00304
49	49/69			ND		0.00704
50	50/53			ND		0.00396
51	45/51			ND		0.00600
52				ND		0.0173
53	50/53			ND		0.00396
54				ND		0.00168
55				ND		0.00225
56				ND		0.0106
57				ND		0.00157
58				ND		0.00199
59	59/62/75			ND		0.00433
60				ND		0.00358
61	61/70/74/76			ND		0.0335
62	59/62/75			ND		0.00433
63	00/02/10			ND		0.00182
64				ND		0.00585
65	44/47/65			ND		0.0195
66	1111100			ND		0.0229
67				ND		0.00235
68				ND		0.00262
69	49/69			ND		0.00704
70	61/70/74/76			ND		0.0335
71	40/41/71			ND		0.00846
72	10/11//			ND		0.00185
73	43/73			ND		0.00408
74	61/70/74/76			ND	***	0.0335
75	59/62/75			ND		0.00433
76	61/70/74/76			ND		0.0335
77	317 077 477 0			ND		0.00277
78				ND		0.00277
79				ND		0.00242
80				ND		0.00244
81				ND		0.00223
82				ND		0.00188
83				ND ND		0.00269
84				ND		
85	85/116/117			ND		0.0139 0.00544
86	86/87/97/108/119/125			ND ND		
87	86/87/97/108/119/125			ND ND		0.0159 0.0159
88	88/91					
00	00/91			ND		0.00517

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

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ng's = Nanograms

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.00327
90	90/101/113			ND		0.0125
91	88/91			ND		0.00517
92				ND		0.00410
93	93/98/100/102			ND		0.00592
94				ND		0.00198
95				ND		0.00910
96				ND		0.00329
97	86/87/97/108/119/125			ND		0.0159
98	93/98/100/102			ND		0.00592
99				ND		0.00619
100	93/98/100/102			ND		0.00592
101	90/101/113			ND		0.0125
102	93/98/100/102			ND		0.00592
103				ND		0.00205
104				ND		0.00160
105				ND		0.00594
106				ND		0.00186
107	107/124			ND		0.00275
108	86/87/97/108/119/125			ND		0.0159
109				ND		0.00208
110	110/115			ND		0.0135
111				ND		0.00215
112				ND		0.00185
113	90/101/113			ND		0.0125
114				ND		0.00240
115	110/115			ND		0.0135
116	85/116/117			ND		0.00544
117	85/116/117			ND		0.00544
118				ND		0.00937
119	86/87/97/108/119/125			ND		0.0159
120				ND		0.00178
121				ND		0.00136
122				ND		0.00204
123				ND		0.00231
124	107/124			ND		0.00275
125	86/87/97/108/119/125			ND		0.0159
126				ND		0.00233
127				ND		0.00140
128	128/166			ND		0.00456
129	129/138/163			ND		0.0115
130				ND		0.00229
131				ND		0.00296
132				ND		0.00431

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

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ng's = Nanograms

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.00279
134	134/143			ND		0.00419
135	135/151			ND		0.00544
136				ND		0.00300
137				ND		0.00269
138	129/138/163			ND		0.0115
139	139/140			ND		0.00460
140	139/140			ND		0.00460
141				ND		0.00258
142				ND A		0.00202
143	134/143			ND		0.00419
144				ND		0.00219
145				ND		0.00210
146				ND		0.00210
147	147/149			ND		0.00207
148	1177110			ND		0.00246
149	147/149			ND		0.00240
150	7 177 1 10			ND		0.00341
151	135/151			ND		0.00130
152	100/101			ND		0.00344
153	153/168			ND		0.00223
154	100/100			ND		0.00308
155				ND		0.00164
156	156/157			ND		0.00467
157	156/157			ND		0.00467
158	150/15/			ND		0.00271
159				ND		0.00271
160				ND ND		0.00294
161				ND ND		0.00271
162				ND ND		0.00193
163	129/138/163			ND ND		0.00244
164	129/130/103			ND ND		0.00254
165				ND ND		0.00234
166	128/166					
167	120/100			ND ND		0.00456
168	153/168			ND ND		0.00225
169	155/106			ND		0.00808
170				ND ND		0.00168
	171/172			ND ND		0.00521
171	171/173			ND		0.00637
172	474/470			ND		0.0148
173	171/173			ND		0.00637
174				ND		0.00335
175				ND		0.00159
176				ND		0.00235

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Report No.....10654073

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
477		· ·				0.00050
177				ND		0.00352
178				ND ND		0.00237
179	100/102			ND		0.00254
180	180/193			ND ND		0.00602
181				ND		0.00287
182 183	182/185			ND		0.00271
	183/185			ND ND		0.00596
184	102/105			ND ND		0.00219
185	183/185			ND		0.00596
186				ND		0.00165
187				ND		0.00344
188				ND		0.00260
189				ND		0.00227
190				ND		0.00267
191				ND		0.00229
192	400/400			ND		0.00260
193	180/193	***		ND		0.00602
194		***		ND ND		0.00197
195				ND A		0.00194
196	407/000			ND		0.00183
197	197/200			ND		0.00496
198	198/199			ND		0.00298
199	198/199			ND		0.00298
200	197/200			ND		0.00496
201				ND		0.00152
202				ND		0.00244
203				ND		0.00191
204				ND		0.00177
205				ND		0.00208
206				ND		0.00404
207				ND		0.00242
208				ND		0.00235
209				ND		0.0181

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS2-202305 40262368001 P230529A_11

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected

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ace Analy

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230529A_12 BAL

Injected By **Total Amount Extracted** % Moisture

1040 mL NA NA

Matrix Water Dilution NΑ Collected

05/16/2023

Dry Weight Extracted **ICAL ID** CCal Filename(s)

Method Blank ID

P230529A02 P230529A_01 BLANK-106282

Received Extracted Analyzed

05/20/2023 18:45 05/23/2023 12:15 05/29/2023 13:59

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-2-MoCB 13C-2-PicB 13C-2,2'-DiCB 13C-4,4'-DiCB 13C-2,2',6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',5-PeCB 13C-2,2',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,3',4,4',5,5'-HxCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157	10.159 12.975 13.292 20.404 17.121 28.208 20.751 35.362 35.950 26.908 39.573 38.918 38.365 38.013 42.742 32.995 44.642	2.95 3.04 1.56 1.55 1.02 1.04 0.77 0.76 0.79 1.73 1.61 1.62 1.59 1.53 1.55 1.24 1.27	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.44 1.62 2.22 1.78 2.31 1.30 1.50 1.38 1.33 1.72 1.06 1.09 1.09 0.936 2.27 2.19 1.14	72 81 111 89 115 65 75 69 67 86 53 53 55 54 47 113 55
13C-2,3',4,4',5,5'-HXCB 13C-2,2',3,4',5,5'-HXCB 13C-2,2',3,4',5,6'-HpCB 13C-2,3',3',4,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,5,5',6,6'-NoCB 13C-DeCB	167 169 188 189 202 205 206 208 209	44.642 49.103 38.918 51.676 44.407 54.284 56.051 51.202 57.690	1.28 1.27 1.05 1.05 0.91 0.89 0.81 0.77 0.70	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.14 1.30 2.21 1.46 1.73 1.79 1.99 2.14 2.30	57 65 111 73 87 89 99 107
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.996 42.021	1.04 1.55 1.04	2.0 2.0 2.0	1.29 1.53 1.82	65 76 91
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.762 25.856 33.196 41.568 53.810	1.56 0.76 1.55 1.24 0.90	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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<u> ^gace Analytical</u>

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305 40262368002 P230529A_12

		- · · ·				
	0 1 "		5	Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1		10.182	2.71	0.0290 J		0.00535
2		10.102	2.7 1	0.0230 U		0.00487
3				ND		0.00422
4		13.314	1.48	0.148 JA		0.0180
5		10.014	1.40	ND A		0.00460
6		16.270				
7			1.51	0.0717 J		0.00899
		15.983	1.57	0.0139 J		0.00891
8		16.812	1.33	0.0239 J		0.0117
9		15.784	1.44	0.0134 JA		0.00387
10				ND A		0.0140
11				ND		0.139
12	12/13			ND		0.00504
13	12/13			ND		0.00504
14				ND A		0.00406
15		20.437	1.33	0.0150 J		0.00579
16		20.371	1.02	0.0113 J		0.00590
17		19.851	1.05	0.154 J		0.00494
18	18/30	19.365	1.05	0.0975 J		0.0109
19	10.00	17.143	0.90	0.0925 J		0.00799
20	20/28	23.876	0.98	0.145 J		0.0174
21	21/33	24.123	0.91	0.0496 J		0.0174
22	21/33	24.556	0.96	0.0490 J 0.0114 J		0.00726
23		24.550	0.90	0.0114 3 ND		0.00720
23		***		ND ND		
						0.00183
25	00100	23.180	0.95	0.140 J		0.00274
26	26/29	22.917	1.10	0.260 J		0.00439
27	00/00	20.094	1.10	0.0223 J		0.00194
28	20/28	23.876	0.98	(0.145) J		0.0174
29	26/29	22.917	1.10	(0.260) J		0.00439
30	18/30	19.365	1.05	(0.0975) J		0.0109
31		23.520	1.04	0.0742 J		0.0169
32		20.983	1.01	0.0626 J		0.00701
33	21/33	24.123	0.91	(0.0496) J		0.0126
34		22.437	0.88	`0.0114 J		0.00156
35				ND		0.00307
36				ND		0.00194
37		28.223	1.10	0.0164 J		0.00404
38				ND	~=-	0.00142
39				ND		0.00158
40	40/41/71	28.068	0.76	0.306 J		0.00778
41	40/41/71	28.068	0.76	(0.306) J		0.00778
42	70171111	27.527	0.76	0.206 J		0.00778
43	12/72					
	43/73	26.042	0.83	0.0337 J		0.00376
44	44/47/65	27.032	0.75	0.917 J		0.0179

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

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* = See Discussion

X = Outside QC Limits RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.061	0.77	0.152 J		0.00552
46		24.309	0.71	0.0796 J		0.00218
47	44/47/65	27.032	0.75	(0.917) J		0.0179
4 8		26.753	0.82	0.00975 J		0.00280
49	49/69	26.413	0.78	1.34		0.00648
50	50/53	23.211	0.79	0.288 J		0.00364
51	45/51	24.061	0.77	(0.152) J		0.00552
52	10.01	25.872	0.76	1.88		0.0159
53	50/53	23.211	0.79	(0.288) J		0.00364
54	00,00	20.766	0.74	0.0146 J		0.00304
55		20.700		0.0140 3 ND A		0.00134
56		32.082	0.69	0.0568 J		0.00273
57		29.962	0.85	0.0356 JA		0.00371
58		30.210	0.67	0.00949 JA		0.00251
59	59/62/75	27.388	0.07	0.00949 JA 0.0494 J		0.00201
60	33/02/13	32.329	0.77	0.00913 J		0.00399
61	61/70/74/76	31.030	0.88	0.00913 J 0.411 J		0.0330
62	59/62/75	27.388	0.76	(0.0494) J		0.0308
63	59/02/75	27.366 30.674	0.77			
64		28.300	0.66			0.00245
65	44/47/65					0.00538
66	44/47/00	27.032	0.75	(0.917) J		0.0179
67		31.386	0.77	0.330 J		0.0211
68		30.411	0.77	0.0248 JA		0.00229
	40/00	29.514	0.73	0.0329 JA		0.00243
69 70	49/69	26.413	0.78	(1.34)		0.00648
70 71	61/70/74/76	31.030	0.76	(0.411) J		0.0308
71 72	40/41/71	28.068	0.76	(0.306) J		0.00778
72	40.770	29.204	0.71	0.0473 JA		0.00245
73	43/73	26.042	0.83	(0.0337) J		0.00376
74 75	61/70/74/76	31.030	0.76	(0.411) J		0.0308
75 70	59/62/75	27.388	0.77	(0.0494) J		0.00399
76 77	61/70/74/76	31.030	0.76	(0.411) J		0.0308
77 70		35.965	0.77	0.0257 JA		0.00290
78 70				ND A	~~~	0.00255
79		34.325	0.65	0.00885 J		0.00224
80				ND A		0.00229
81				ND A		0.00274
82		35.594	1.56	0.110 J		0.00247
83		33.706	1.56	0.144 J		0.00230
84		31.246	1.46	0.489		0.0128
85	85/116/117	35.114	1.65	0.319 J		0.00500
86	86/87/97/108/119/125	34.356	1.59	1.03 J		0.0146
87	86/87/97/108/119/125	34.356	1.59	(1.03) J		0.0146
88	88/91	31.030	1.56	0.382 J		0.00475

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

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REPORT OF LABORATORY ANALYSIS

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Report No.....10654073

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002

P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89		31.772	1.18	IJ	0.0103	0.00301
90	90/101/113	33.227	1.54	1.89		0.0115
91	88/91	31.030	1.56	(0.382) J		0.00475
92		32.608	1.54	`0.679		0.00377
93	93/98/100/102	30.488	1.46	0.124 J		0.00544
94		29.637	1.40	0.0353 JA		0.00188
95		30.101	1.57	1.61		0.00837
96		27.295	1.51	0.0188 J		0.00303
97	86/87/97/108/119/125	34.356	1.59	(1.03) J		0.0146
98	93/98/100/102	30.488	1.46	(0.124) J		0.00544
99		33.846	1.56	`0.959		0.00569
100	93/98/100/102	30.488	1. 4 6	(0.124) J		0.00544
101	90/101/113	33.227	1.54	(1.89)		0.0115
102	93/98/100/102	30.488	1.46	(0.124) J		0.00544
103		29.421	1.47	0.0423 J		0.00189
104				ND		0.00147
105		39.590	1.53	0.320 J		0.00546
106				ND A		0.00185
107	107/124	37.678	1.52	0.0369 J		0.00253
108	86/87/97/108/119/125	34.356	1.59	(1.03) J		0.0146
109		37.912	1.52	Ò.11Ź J		0.00192
110	110/115	35.269	1.53	2.64		0.0125
111		36.027	1.67	0.00489 J		0.00197
112				ND		0.00170
113	90/101/113	33.227	1.54	(1.89)		0.0115
114		38.935	1.77	0.00872 J		0.00220
115	110/115	35.269	1.53	(2.64)		0.0125
116	85/116/117	35.114	1.65	(0.319) J		0.00500
117	85/116/117	35.114	1.65	(0.319) J		0.00500
118		38.382	1.46	` 1.0 4	***	0.00862
119	86/87/97/108/119/125	34.356	1.59	(1.03) J		0.0146
120		36.507	1.15	IJ	0.0148	0.00164
121				ND A		0.00128
122		38.734	1.63	0.00952 JA		0.00203
123		38.063	1.66	0.0166 JA		0.00225
124	107/124	37.678	1.52	(0.0369) J		0.00253
125	86/87/97/108/119/125	34.356	1.59	(1.03) J		0.0146
126		42.759	1.32	0.00344 JA		0.00225
127				ND A		0.00182
128	128/166	42.876	1.23	0.255 J		0.00420
129	129/138/163	41.602	1.22	1.35 J	***	0.0105
130		40.914	1.21	0.114 JA		0.00367
131		38.047	1.33	0.0222 JA		0.00417
132		38.499	1.18	0.533		0.00397

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

133	IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
135	133		39.019	1.24	0.0352 JA		0.00356
135	134	134/143	37.409	1.12	0.118 JA		0.00408
136	135	135/151					
137							
138 129/138/163 41.602 1.22 (1.35) J 0.0105 139 139/140 37.812 1.07 0.0364 J 0.00423 141 40.512 1.16 0.166 JA 0.00338 142 ND A 0.00388 143 134/143 37.409 1.12 (0.118) JA 0.00488 144 36.832 1.27 0.0628 JA 0.00262 145 ND 0.00261 146 39.690 1.24 0.215 JA 0.00306 148 35.640 1.46 JA 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.0025 153 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
139 139/140 37.812 1.07 0.0364 J 0.00423 140 139/140 37.812 1.07 (0.0364) J 0.00423 141 40.512 1.16 0.166 JA 0.00385 142 ND A 0.00388 143 134/143 37.409 1.12 (0.118) JA 0.00408 144 36.832 1.27 0.0628 JA 0.00252 145 ND 0.0036 147 147/149 37.208 1.22 1.16 0.00866 148 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/161 36.259 1.23 (0.693) J 0.00190 152 33.180 0.80 IJ 0.00224		129/138/163					
140 139/140 37.812 1.07 (0.0364) J 0.00423 141 40.512 1.16 0.166 JA 0.00335 142 ND A 0.00408 143 134/143 37.409 1.12 (0.118) JA 0.00408 145 ND 0.00194 146 39.690 1.24 0.215 JA 0.00306 147 147/149 37.208 1.22 1.16 0.00866 148 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 J 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154							0.00423
141 40.512 1.16 0.166 JA 0.00335 142 ND A 0.00368 143 134/143 37.409 1.12 (0.118) JA 0.00408 144 36.832 1.27 0.0628 JA 0.00262 145 ND 0.00194 146 39.690 1.24 0.215 JA 0.00306 147 147/149 37.208 1.22 1.16 0.00866 148 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.0050 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311	140	139/140					
142 ND A 0.00368 143 134/143 37.409 1.12 (0.118) JA 0.00408 145 ND 0.00194 146 39.690 1.24 0.215 JA 0.00306 147 147/149 37.208 1.22 1.16 0.00366 148 35.640 1.46 IJA 0.00561 0.0086 150 33.366 1.37 0.00502 JA 0.00866 150 33.386 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00190 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.399	141						
144 36.832 1.27 0.0628 JA 0.00252 145 ND 0.00194 146 39.690 1.24 0.215 JA 0.00366 147 147/149 37.208 1.22 1.16 0.00561 0.00261 148 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.390 JA 0.00220 155 ND 0.00429 157 156/157 45.816	142						
144 36.832 1.27 0.0628 JA 0.00252 145 ND 0.00194 146 39.690 1.24 0.215 JA 0.00366 147 147/149 37.208 1.22 1.16 0.00866 148 35.640 1.46 IJA 0.00561 0.00261 149 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 156/157 45.816 1.29 </td <td>143</td> <td>134/143</td> <td>37.409</td> <td>1.12</td> <td>(0.118) JA</td> <td></td> <td>0.00408</td>	143	134/143	37.409	1.12	(0.118) JA		0.00408
145 ND 0.00194 146 39.690 1.24 0.215 JA 0.00306 147 147/149 37.208 1.22 1.16 0.00866 148 35.640 1.46 IJA 0.00561 0.00261 149 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 IJ 0.00322 0.0020 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 ND 0.00429 157 156/157 45.816 1.29 (0.171	144		36.832	1.27			0.00252
147 147/149 37.208 1.22 1.16 0.00866 148 35.640 1.46 IJA 0.00561 0.00261 149 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 ND 0.00229 157 156/157 45.816 1.29 0.171 J 0.00429 158 42.004 1.20 0.123 J 0.00249 158 42.004 1.20 0.123 J 0.00270 160 <	145						
147 147/149 37.208 1.22 1.16 0.00866 148 35.640 1.46 IJA 0.00561 0.00261 149 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 ND 0.00229 157 156/157 45.816 1.29 0.171 J 0.00429 158 42.004 1.20 0.123 J 0.00249 158 42.004 1.20 0.123 J 0.00270 160 <	146		39.690	1.24	0.215 JA		0.00306
148 35,640 1.46 IJA 0.00561 0.00261 149 147/149 37.208 1.22 (1.16) 0.00866 150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 ND ND 0.00220 155 ND ND 0.00429 157 156/157 45.816 1.29 0.171 J 0.00429 158 42.004 1.20 0.123 J 0.00249 159 ND ND 0.00249 160 ND ND 0.00249 161 ND ND 0.00249 162 44.173 1.42 0.0385 J 0.00224	147	147/149	37.208	1.22	1.16		0.00866
150 33.366 1.37 0.00502 JA 0.00190 151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 ND 0.00220 155 45.816 1.29 0.171 J 0.00429 157 156/157 45.816 1.29 (0.171) J 0.00429 158 42.004 1.20 0.123 J 0.00249 159 ND 0.00249 161 ND 0.00249 161 ND 0.00256	148		35.640	1.46		0.00561	0.00261
150	149	147/149	37.208	1.22			0.00866
151 135/151 36.259 1.23 (0.693) J 0.00500 152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 ND 0.00220 155 ND 0.00429 157 156/157 45.816 1.29 0.171 J 0.00429 158 42.004 1.20 0.123 J 0.00249 159 ND 0.00249 159 ND 0.00249 160 ND 0.00249 161 ND 0.00270 162 44.173 1.42 0.0385 J 0.00224 163 1	150		33.366	1.37			0.00190
152 33.180 0.80 IJ 0.00322 0.00205 153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 ND 0.00148 156 156/157 45.816 1.29 0.171 J 0.00429 157 156/157 45.816 1.29 (0.171) J 0.00429 158 42.004 1.20 0.123 J 0.00249 159 ND 0.00249 160 ND 0.00249 161 ND 0.00249 162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 164 41.266 1.13 0.0877 JA 0.0023 165 39.405 1.04 IJA 0.00322 0.00278 166 128/166 42.876	151	135/151					0.00500
153 153/168 40.311 1.20 1.00 0.00743 154 36.522 1.22 0.0390 JA 0.00220 155 ND 0.00148 156 156/157 45.816 1.29 0.171 J 0.00429 158 42.004 1.20 0.123 J 0.00249 159 ND 0.00249 159 ND 0.00249 160 ND 0.00249 161 ND 0.00249 162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 163 128/166 42.876 1.23 (0.255) J	152		33.180	0.80		0.00322	0.00205
154 36.522 1.22 0.0390 JA 0.00220 155 ND 0.00148 156 156/157 45.816 1.29 0.171 J 0.00429 157 156/157 45.816 1.29 (0.171) J 0.00429 158 42.004 1.20 0.123 J 0.00249 159 ND 0.00270 160 ND 0.00270 161 ND 0.00249 162 44.173 1.42 0.00385 J 0.00256 162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00256 164 41.266 1.13 0.0877 JA 0.00239 165 39.405 1.04 IJA 0.00322<	153	153/168	40.311	1.20	1.00		0.00743
155	154		36.522		0.0390 JA		0.00220
156 156/157 45.816 1.29 0.171 J 0.00429 157 156/157 45.816 1.29 (0.171) J 0.00429 158 42.004 1.20 0.123 J 0.00249 159 ND 0.00270 160 ND 0.00224 161 ND 0.00224 162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 164 42.876 1.23 (0.255) J 0.00239 165 39.405 1.04 IJA 0.00322 0.00278 166 128/166<	155						0.00148
157 156/157 45.816 1.29 (0.171) J 0.00429 158 42.004 1.20 0.123 J 0.00249 159 ND 0.00270 160 ND 0.00249 161 ND A 0.00249 161 ND A 0.00249 161 ND A 0.00249 161 ND A 0.00226 162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00239 164 41.266 1.13 0.0877 JA 0.00239 165 39.405 1.04 IJA <td>156</td> <td>156/157</td> <td>45.816</td> <td>1.29</td> <td></td> <td></td> <td>0.00429</td>	156	156/157	45.816	1.29			0.00429
159 ND 0.00270 160 ND 0.00249 161 ND A 0.00256 162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.0105 164 41.266 1.13 0.0877 JA 0.00239 165 39.405 1.04 IJA 0.00322 0.00278 166 128/166 42.876 1.23 (0.255) J 0.00420 167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND<		156/157	45.816	1.29	(0.171) J		0.00429
160 ND 0.00249 161 ND A 0.00256 162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.0105 164 41.266 1.13 0.0877 JA 0.00239 165 39.405 1.04 IJA 0.00322 0.00278 166 128/166 42.876 1.23 (0.255) J 0.00420 167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00156 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.0136 173 171/173			42.004	1.20	0.123 J		0.00249
161 ND A 0.00256 162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.0105 164 41.266 1.13 0.0877 JA 0.00239 165 39.405 1.04 IJA 0.00322 0.00278 166 128/166 42.876 1.23 (0.255) J 0.00420 167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00743 169 ND A 0.00479 171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.00586 173 171/173 44.961 0.98 (0.0465) J 0.00308 17	159						0.00270
162 44.173 1.42 0.00385 J 0.00224 163 129/138/163 41.602 1.22 (1.35) J 0.0105 164 41.266 1.13 0.0877 JA 0.00239 165 39.405 1.04 IJA 0.00322 0.00278 166 128/166 42.876 1.23 (0.255) J 0.00420 167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00743 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.00586 173 171/173 44.961 0.98 (0.0465) J 0.00308	160				ND		0.00249
163 129/138/163 41.602 1.22 (1.35) J 0.0105 164 41.266 1.13 0.0877 JA 0.00239 165 39.405 1.04 IJA 0.00322 0.00278 166 128/166 42.876 1.23 (0.255) J 0.00420 167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00743 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.00586 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308	161		~~~		ND A		0.00256
164 41.266 1.13 0.0877 JA 0.00239 165 39.405 1.04 IJA 0.00322 0.00278 166 128/166 42.876 1.23 (0.255) J 0.00420 167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00156 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.00586 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192			44.173	1.42	0.00385 J		0.00224
165 39.405 1.04 IJA 0.00322 0.00278 166 128/166 42.876 1.23 (0.255) J 0.00420 167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00156 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.0136 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192		129/138/163		1.22	(1.35) J		
166 128/166 42.876 1.23 (0.255) J 0.00420 167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00156 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.0136 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192	164		41.266	1.13	0.0877 JA		0.00239
167 44.659 1.14 0.0598 J 0.00207 168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00156 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.0136 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192	165			1.04	IJA	0.00322	0.00278
168 153/168 40.311 1.20 (1.00) 0.00743 169 ND A 0.00156 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.0136 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192		128/166	42.876	1.23	(0.255) J		0.00420
169 ND A 0.00156 170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.0136 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192	167		44.659	1.14	0.0598 J		0.00207
170 48.533 1.09 0.122 J 0.00479 171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.0136 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192	168	153/168	40.311	1.20	(1.00)		0.00743
171 171/173 44.961 0.98 0.0465 J 0.00586 172 46.570 1.00 0.0216 J 0.0136 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192					ND A		0.00156
172 46.570 1.00 0.0216 J 0.0136 173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192	170		48.533	1.09	0.122 J		0.00479
173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192		171/173	44.961	0.98			0.00586
173 171/173 44.961 0.98 (0.0465) J 0.00586 174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192			46.570	1.00	0.0216 J		0.0136
174 43.837 1.05 0.113 J 0.00308 175 42.725 1.13 0.00701 JA 0.00192	173	171/173	44.961		(0.0465) J		0.00586
175 42.725 1.13 0.00701 JA 0.00192							
	176		40.193	1.03	0.0205 J		0.00217

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DUP1-202305 40262368002 P230529A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
4 7 7			· · · · ·			
177		44.306	0.98	0.0861 J		0.00324
178		42.038	0.99	0.0391 J		0.00218
179		39.271	1.06	0.0779 J		0.00234
180	180/193	47.258	1.06	0.188 J		0.00554
181		44.709	0.93	0.00403 J		0.00264
182				ND		0.00249
183	183/185	43.619	0.96	0.0754 J		0.00548
184				ND		0.00201
185	183/185	43.619	0.96	(0.0754) J		0.00548
186				ND A		0.00160
187		42.993	1.06	0.178 J		0.00316
188				ND		0.00240
189		51.676	1.33	IJ	0.00912	0.00209
190		49.086	0.94	0.0252 J		0.00245
191		47.611	1.04	0.00428 J		0.00211
192				ND		0.00240
193	180/193	47.258	1.06	(0.188) J		0.00554
194		53.853	0.91	0.0333 J		0.00181
195		51.482	0.88	0.0142 J		0.00167
196		49.924	0.89	0.0185 J		0.00169
197	197/200	46.386	1.03	IJ	0.00676	0.00456
198	198/199	49.254	0.76	0.0502 J		0.00274
199	198/199	49.254	0.76	(0.0502) J		0.00274
200	197/200	46.386	1.03	` IJ	(0.00676)	0.00456
201		45.397	1.16	IJ	0.00391	0.00139
202		44.458	0.71	IJ	0.00788	0.00224
203		50.109	0.84	0.0232 J		0.00176
204				ND		0.00163
205		54.284	1.07	IJ	0.00229	0.00192
206		56.051	0.77	0.0117 J		0.00372
207				ND		0.00222
208		51.245	0.98	IJ	0.00220	0.00217
209				ND		0.0167

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

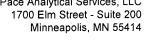
ng's = Nanograms

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Pace Analytical[™] Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-DUP1-202305

402623680	02
P230529A_	_12

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	0.0290	
Total Dichloro Biphenyls	0.286	
Total Trichloro Biphenyls	1.15	
Total Tetrachloro Biphenyls	6.45	
Total Pentachloro Biphenyls	12.0	
Total Hexachloro Biphenyls	6.57	
Total Heptachloro Biphenyls	1.01	
Total Octachloro Biphenyls	0.139	
Total Nonachloro Biphenyls	0.0117	
Decachloro Biphenyls	ND	
Total PCBs	27.7	

ND = Not Detected

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Fax: 612-607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By Total Amount Extracted

NR-SW-EB-202305 40262368003 P230529B_04 BAL

Total Amount Extracted % Moisture
Dry Weight Extracted

CCal Filename(s)

Method Blank ID

ICAL ID

1040 mL NA NA P230529B02 P230529B 01

BLANK-106282

Matrix Water Dilution NA

Collected 05/16/2023 11:30 Received 05/20/2023 18:45 Extracted 05/23/2023 12:15 Analyzed 05/29/2023 19:14

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,3',4,4'-FeCB 13C-2,3',4,4'-FeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HyCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.148 12.975 13.280 20.415 17.132 28.223 20.766 35.377 35.950 26.908 39.572 38.918 38.365 38.030 42.742 32.995 45.833 44.659 49.119 38.935 51.676 44.408 54.305 56.051 51.223 57.689	2.98 3.09 1.62 1.57 1.00 1.02 0.79 0.76 1.55 1.60 1.55 1.54 1.57 1.54 1.24 1.25 1.24 1.30 1.04 1.02 0.86 0.86 0.86 0.89 0.79	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.47 1.78 2.41 1.87 2.38 1.32 1.57 1.40 1.34 1.92 1.24 1.22 1.21 1.22 1.10 2.31 2.39 1.26 1.35 2.48 1.53 1.88 1.87 2.10 2.29 2.20	74 89 120 94 119 66 78 70 67 96 62 61 60 61 55 115 60 63 67 124 77 94 93 105 114
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.996 42.037	1.03 1.57 1.06	2.0 2.0 2.0	1.22 1.53 1.78	61 77 89
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.762 25.856 33.211 41.585 53.810	1.54 0.74 1.55 1.23 0.87	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00537
2				ND		0.00489
3				ND		0.00423
4				ND A		0.0120
5				ND A		0.00677
6				ND /		0.00903
7				ND	***	0.00895
8				ND		0.0118
9				ND A		0.00590
10				ND A		0.00833
11				ND /		0.140
12	12/13			ND A		0.00634
13	12/13			ND A		0.00634
14	12/10			ND A		0.00610
15				ND A		0.00608
16				ND /		0.00593
17				ND		0.00496
18	18/30			ND		0.0110
19	10/30			ND		0.00802
20	20/28			ND		0.0175
21	21/33			ND		0.0126
22	21/00			ND		0.00729
23				ND A		0.00170
24				ND /		0.00184
25				ND		0.00275
26	26/29			ND		0.00441
27	20/20			ND		0.00194
28	20/28			ND		0.0175
29	26/29			ND		0.00441
30	18/30			ND		0.0110
31	10/50			ND		0.0170
32				ND		0.00704
33	21/33			ND		0.0126
34	21/00			ND A		0.00170
35				ND /		0.00308
36				ND		0.00194
37				ND		0.00406
38				ND A		0.00160
39				ND A		0.00158
40	40/41/71			ND		0.00781
41	40/41/71			ND ND		0.00781
42	70/7///			ND		0.00423
43	43/73			ND		0.00377
43 44	44/47/65			ND		0.0180
44	77/7//00			140		0.0100

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

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Report No.....10654073

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.00554
46				ND		0.00219
47	44/47/65			ND		0.0180
48	11, 11,00			ND		0.00281
49	49/69			ND		0.00650
5 0	50/53			ND		0.00366
50 51	45/51			ND ND		0.00554
	45/51					0.00554
52	50/50			ND		
53	50/53			ND		0.00366
54				ND		0.00155
55				ND		0.00208
56				ND		0.00976
57				ND A		0.00159
58				ND		0.00183
59	59/62/75			ND		0.00400
60				ND		0.00331
61	61/70/74/76			ND		0.0310
62	59/62/75			ND		0.00400
63	00/02//0			ND		0.00168
64				ND		0.00541
65	44/47/65			ND		0.0180
	44/47/00					0.0212
66				ND		
67				ND		0.00217
68				ND		0.00242
69	49/69			ND		0.00650
70	61/70/74/76			ND		0.0310
71	40/41/71			ND		0.00781
72				ND		0.00171
73	43/73			ND		0.00377
74	61/70/74/76			ND		0.0310
75	59/62/75			ND		0.00400
76	61/70/74/76			ND		0.0310
77				ND		0.00256
78				ND		0.00223
79				ND		0.00225
80				ND		0.00226
81				ND		0.00200
82				ND		0.00248
83				ND		0.00231
84				ND		0.0128
85	85/116/117			ND		0.00502
86	86/87/97/108/119/125			ND		0.0147
87	86/87/97/108/119/125			ND		0.0147
88	88/91			ND		0.00477

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.00302
90	90/101/113			ND		0.0115
91	88/91			ND		0.00477
92				ND		0.00379
93	93/98/100/102			ND		0.00547
94				ND		0.00183
95				ND		0.00841
96				ND		0.00304
97	86/87/97/108/119/125			ND		0.0147
98	93/98/100/102			ND		0.00547
99	00.00, 100, 102			ND		0.00572
100	93/98/100/102			ND		0.00547
101	90/101/113			ND		0.0115
102	93/98/100/102			ND		0.00547
103	00/00/100/102			ND		0.00189
104				ND		0.00148
105				ND		0.00548
106				ND A		0.00348
107	107/124			ND A		0.00102
108	86/87/97/108/119/125			ND		0.00234
109	00/07/31/100/113/123			ND		0.00192
110	110/115			ND		0.0125
111	110/119			ND		0.00123
112				ND		0.00130
113	90/101/113			ND		0.0115
114	90/101/113			ND		0.00221
115	110/115			ND		0.0125
116	85/116/117			ND		0.00502
117	85/116/117			ND		0.00502
118	03/110/11/			ND		0.00302
119	86/87/97/108/119/125			ND		0.0147
120	00/07/91/100/119/125			ND ND		0.00165
121	-			ND ND		0.00103
121				ND A		0.00120
123				ND A		0.00212
123	107/124					
				ND ND		0.00254
125	86/87/97/108/119/125			ND		0.0147
126				ND ND		0.00216
127	100/100			ND A		0.00187
128	128/166			ND ND		0.00421
129	129/138/163			ND		0.0106
130				ND		0.00212
131				ND		0.00273
132				ND		0.00398

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

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* = See Discussion

X = Outside QC Limits

RT = Retention Time

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Report No....10654073

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.00258
134	134/143			ND		0.00387
135	135/151			ND		0.00502
136				ND		0.00277
137				ND		0.00248
138	129/138/163			ND		0.0106
139	139/140			ND		0.00425
140	139/140			ND		0.00425
141				ND		0.00239
142				ND		0.00187
143	134/143			ND		0.00387
144				ND		0.00202
145				ND		0.00194
146				ND		0.00246
147	147/149			ND		0.00870
148				ND		0.00227
149	147/149			ND		0.00870
150				ND A		0.00135
151	135/151			ND		0.00502
152	100, 101			ND		0.00206
153	153/168			ND		0.00747
154	100/100		No. 40 Au	ND		0.00170
155				ND		0.00149
156	156/157			, ND		0.00431
157	156/157			ND		0.00431
158	100, 10.			ND		0.00250
159				ND		0.00271
160		•		ND		0.00250
161		***		ND		0.00181
162				ND		0.00225
163	129/138/163			ND		0.0106
164	120, 100, 100			ND		0.00235
165				ND		0.00200
166	128/166			ND		0.00421
167	120, 100			ND		0.00208
168	153/168	***		ND		0.00747
169	100/100			ND		0.00155
170				ND		0.00481
171	171/173			ND		0.00589
172	11 17 17 0			ND		0.0136
173	171/173			ND		0.00589
173				ND		0.00303
175				ND		0.00310
176				ND		0.00217
1.70			- 	IND		0.00211

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

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Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

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<u> Pace Analytical</u>

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-EB-202305 40262368003 P230529B_04

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177				ND		0.00325
178				ND		0.00219
179				ND		0.00235
180	180/193			ND		0.00556
181				ND		0.00266
182				ND		0.00250
183	183/185			ND		0.00550
184				ND		0.00202
185	183/185			ND		0.00550
186				ND		0.00152
187				ND		0.00318
188				ND		0.00241
189				ND		0.00210
190				ND		0.00246
191				ND		0.00212
192				ND		0.00241
193	180/193			ND		0.00556
194				ND		0.00182
195				ND A		0.00191
196				ND		0.00169
197	197/200			ND		0.00458
198	198/199			ND		0.00275
199	198/199			ND		0.00275
200	197/200			ND		0.00458
201				ND		0.00140
202				ND		0.00225
203				ND		0.00176
204				ND		0.00164
205				ND		0.00192
206				ND		0.00373
207				ND		0.00223
208				ND		0.00217
209				ND		0.0167

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

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* = See Discussion X = Outside QC Limits

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Method 1668A Polychlorobiphenyl Sample Analysis Results

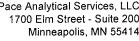
Client Sample ID Lab Sample ID Filename NR-SW-EB-202305 40262368003 P230529B_04

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

NR-SW-FB-202305 40262368004 P230529B 05 BAL

Total Amount Extracted % Moisture Dry Weight Extracted

CCal Filename(s)

Method Blank ID

ICAL ID

1050 mL NA NA P230529B02 P230529B 01

BLANK-106282

Matrix Water Dilution NA

Collected 05/16/2023 11:45 Received 05/20/2023 18:45 05/23/2023 12:15 Extracted 05/29/2023 20:17 Analyzed

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2',6,6'-TcCB 13C-3,4,4'-TrCB 13C-3,4,4'-5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4'-FeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HxCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-DeCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 169 188 189 202 205 206 208 209	10.170 12.986 13.303 20.415 17.143 28.223 20.751 35.362 35.950 26.923 39.573 38.918 38.365 38.030 42.742 32.995 45.816 44.642 49.103 38.918 51.675 44.407 54.283 56.051 57.689	3.03 3.08 1.53 1.56 1.02 1.03 0.79 0.80 1.62 1.59 1.61 1.62 1.58 1.60 1.23 1.26 1.27 1.30 1.04 1.09 0.88 0.88 0.88 0.79 0.79	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.42 1.57 2.14 1.67 2.05 1.21 1.34 1.28 1.23 1.70 1.07 1.07 1.11 2.23 1.14 1.28 2.07 1.38 1.58 1.58 1.70	71 79 107 84 103 60 67 64 61 85 53 55 56 50 106 56 57 64 103 69 79 85 94 98
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.996 42.021	1.02 1.54 1.02	2.0 2.0 2.0	1.09 1.37 1.56	54 69 78
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.773 25.856 33.196 41.568 53.809	1.52 0.76 1.57 1.24 0.91	2.0 2.0 2.0 2.0 2.0	NA NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

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Tel: 612-607-1700 Fax: 612-607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-FB-202305 40262368004 P230529B_05

1	IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
2	1				ND		0.00533
3							
4	3						
5							
6							
7	6						
8			eriu u				
9							
10							
11							
12 12/13 ND A 0.00633 13 12/13 ND A 0.00633 14 ND A 0.00610 15 ND A 0.00611 16 ND 0.00589 17 ND 0.00493 18 18/30 ND 0.00493 18 18/30 ND 0.00797 20 20/28 ND 0.00797 21 21/33 ND 0.0174 21 21/33 ND 0.0174 21 21/33 ND 0.0174 22 ND 0.00724 23 ND A 0.00235 24 ND A 0.00235 24 ND 0.00235 25 ND 0.00438 27 ND 0.00438 27 ND 0.00438 27 ND 0.00438 27 ND 0.00438 28 20/28 ND 0.00438 30 18/30 ND 0.00438 30 18/30 ND 0.00438 31 ND 0.00438 32 ND 0.00438 33 21/33 ND 0.00438 34 ND 0.00438 35 ND 0.00438 36 ND 0.00438 37 ND 0.00438 38 ND 0.00403 38 ND 0.00403 38 ND 0.00220 37 ND 0.00220 37 ND 0.00220 37 ND 0.00222 39 ND 0.00421 40 40/41/71 ND 0.00421 41 40/41/71 ND 0.00421 43 43/73 ND 0.00421 43 43/73 ND 0.00421 43 43/73 ND 0.00421 43 43/73 ND 0.00375							
13		12/13					
14							
15		. =, . 0					
16							
17							
18 18/30 ND 0.0109 19 ND 0.00797 20 20/28 ND 0.0126 21 21/33 ND 0.00126 22 ND 0.00724 23 ND 0.00235 24 ND 0.00235 24 ND 0.00273 26 26/29 ND 0.00438 27 ND 0.0174 29 26/29 ND 0.0109 30 18/30 ND 0.0108 31 ND 0.0108 32 ND 0.00700 33 21/33 ND 0.00220 3							
19		18/30					
20 20/28 ND 0.0174 21 21/33 ND 0.0126 22 ND 0.00724 23 ND 0.00235 24 ND 0.00183 25 ND 0.00273 26 26/29 ND 0.00438 27 ND 0.00193 28 20/28 ND 0.0193 28 20/29 ND 0.0174 29 26/29 ND 0.0193 31 ND 0.0109 31 ND 0.0168 32 ND 0.00700 33 21/33 ND 0.00280		10/00					
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ND							
23		0					
24 ND 0.00183 25 ND 0.00273 26 26/29 ND 0.00438 27 ND 0.00174 28 20/28 ND 0.0174 29 26/29 ND 0.00438 30 18/30 ND 0.0109 31 ND 0.0109 31 ND 0.0109 32 ND 0.00700 33 21/33 ND 0.00226 34 ND 0.00280 35 ND 0.00220 37 ND 0.00222 39 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
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38 ND A 0.00222 39 ND A 0.00215 40 40/41/71 ND 0.00776 41 40/41/71 ND 0.00776 42 ND 0.00421 43 43/73 ND 0.00375							
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42 ND 0.00421 43 43/73 ND 0.00375							
43 43/73 ND 0.00375							
		43/73					

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

NA = Not Applicable

ND = Not Detected

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename

NR-SW-FB-202305 40262368004 P230529B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.00551
46	45/51			ND A		0.00268
47	44/47/65			ND A		0.0179
48	44/47/03			ND ND		0.00279
49	49/69			ND ND		0.00279
4 9 50				ND		0.00363
	50/53			ND ND		0.00551
51 50	45/51					0.00551
52	50/50			ND ND		0.00363
53	50/53			ND ND A		
54				ND A		0.00160
55				ND		0.00206
56				ND		0.00969
57				ND A		0.00177
58				ND A		0.00196
59	59/62/75			ND		0.00398
60				ND		0.00329
61	61/70/74/76			ND		0.0308
62	59/62/75			ND		0.00398
63				ND A		0.00186
64				ND		0.00537
65	44/47/65			ND		0.0179
66				ND		0.0210
67				ND		0.00216
68				ND		0.00241
69	49/69			ND		0.00646
70	61/70/74/76			ND		0.0308
71	40/41/71			ND		0.00776
72				ND A		0.00185
73	43/73			ND		0.00375
74	61/ 7 0/7 4 /76			ND		0.0308
75	59/62/75			ND		0.00398
76	61/70/74/76			ND		0.0308
77				ND		0.00254
78				ND		0.00222
79				ND		0.00224
80				ND		0.00205
81				ND		0.00171
82			***	ND		0.00247
83				ND		0.00229
84				ND		0.0127
85	85/116/117			ND		0.00499
86	86/87/97/108/119/125			ND		0.0146
87	86/87/97/108/119/125			ND		0.0146
88	88/91			ND		0.00474
	00.01			110		0.00171

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

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ND = Not Detected

NA = Not Applicable

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* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.00300
90	90/101/113			ND		0.0115
91	88/91			ND		0.00474
92	33,31			ND		0.00377
93	93/98/100/102			ND		0.00543
94	00/00/100/102			ND A		0.00202
95				ND		0.00835
96				ND		0.00302
97	86/87/97/108/119/125			ND		0.0146
98	93/98/100/102			ND		0.00543
99	00/00/100/102			ND		0.00568
100	93/98/100/102			ND		0.00543
101	90/101/113			ND		0.0115
102	93/98/100/102			ND		0.00543
103	00/00/100/102			ND		0.00188
104				ND	***	0.00147
105				ND		0.00545
106				ND A		0.00189
107	107/124			ND /		0.00252
108	86/87/97/108/119/125			ND		0.0146
109	00/07/07/100/110/120			ND A		0.00195
110	110/115			ND /		0.0124
111	110/110		***	ND		0.00197
112				ND		0.00170
113	90/101/113			ND		0.0115
114	00/10//10			ND		0.00220
115	110/115			ND		0.0124
116	85/116/117			ND		0.00499
117	85/116/117			ND		0.00499
118	3371737177			ND		0.00860
119	86/87/97/108/119/125			ND		0.0146
120	00/01/10//100/110/120			ND		0.00164
121				ND A		0.00139
122				ND A		0.00221
123				ND		0.00212
124	107/124			ND		0.00252
125	86/87/97/108/119/125			ND		0.0146
126	00/01/01/100/110/120			ND		0.00214
127				ND A		0.00195
128	128/166			ND A		0.00419
129	129/138/163			ND		0.0105
130	120/100/100			ND A		0.00263
131				ND A		0.00279
132				ND A		0.00396
102				IND		0.00000

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND	***	0.00256
134	134/143	~~~		ND		0.00384
135	135/151			ND		0.00499
136				ND		0.00275
137				ND		0.00247
138	129/138/163			ND		0.0105
139	139/140			ND		0.00422
140	139/140			ND		0.00422
141				ND A		0.00238
142				ND A		0.00244
143	134/143			ND		0.00384
144		~~~		ND		0.00201
145				ND		0.00193
146				ND		0.00245
147	147/149			ND		0.00864
148				ND		0.00226
149	147/149			ND		0.00864
150				ND		0.00125
151	135/151			ND		0.00499
152				ND		0.00205
153	153/168			ND		0.00742
154				ND		0.00169
155				ND		0.00148
156	156/157			ND		0.00428
157	156/157			ND		0.00428
158				ND		0.00249
159				ND		0.00270
160				ND		0.00249
161				ND		0.00179
162	400/400/400			ND		0.00224
163	129/138/163			ND		0.0105
164 165				ND ND		0.00233 0.00199
166	128/166			ND ND		0.00199
167	120/100			ND ND		0.00419
168	153/168			ND ND		0.00208
169	153/166			ND A		0.00742
170				ND A		0.00133
170	171/173			ND		0.00478
172	1717173			ND		0.0136
172	171/173			ND ND		0.00585
173	11 1/110			ND		0.00308
175				ND A		0.00308
176				ND A		0.00177
1.0		===	==	140		0.00210

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

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* = See Discussion

X = Outside QC Limits

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I = Interference

ng's = Nanograms

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B 05

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177				ND		0.00323
178				ND		0.00218
179				ND		0.00233
180	180/193			ND		0.00552
181				ND A		0.00265
182				ND		0.00249
183	183/185			ND		0.00547
184				ND		0.00201
185	183/185			ND		0.00547
186				ND		0.00151
187				ND		0.00315
188				ND		0.00239
189				ND		0.00208
190				ND		0.00245
191				ND		0.00210
192				ND		0.00239
193	180/193			ND		0.00552
194				ND A		0.00211
195				ND A		0.00232
196				ND		0.00168
197	197/200			ND		0.00455
198	198/199			ND		0.00273
199	198/199			ND		0.00273
200	197/200			ND		0.00455
201				ND A		0.00142
202				ND		0.00224
203				ND		0.00175
204				ND		0.00162
205				ND		0.00191
206				ND		0.00371
207				ND		0.00222
208				ND		0.00216
209				ND		0.0166

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

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* = See Discussion

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-FB-202305 40262368004 P230529B_05

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	ND	
Total Pentachloro Biphenyls	ND	
Total Hexachloro Biphenyls	ND	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	ND	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

ace Analytical

Tel: 612-607-1700 Fax: 612-607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

NR-SW-DS1-202305 40262368005 P230529B 06 BAL

Total Amount Extracted % Moisture Dry Weight Extracted

CCal Filename(s)

Method Blank ID

ICAL ID

1050 mL NA NA P230529B02 P230529B_01

BLANK-106282

Matrix Water Dilution NA

Collected 05/16/2023 12:45 Received 05/20/2023 18:45 Extracted 05/23/2023 12:15 Analyzed 05/29/2023 21:20

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2-PiCB 13C-2,2'-DiCB 13C-2,2'-6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-TrCB 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,3',5,5'-6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.205 13.009 13.325 20.426 17.154 28.223 20.766 35.361 35.949 26.908 39.572 38.918 38.365 38.029 42.725 32.994 45.815 44.641 49.102 38.918 51.675 44.407 54.283 56.050 51.201 57.688	2.84 3.01 1.62 1.56 1.04 1.02 0.76 0.80 0.78 1.60 1.62 1.61 1.49 1.52 1.30 1.26 1.24 1.27 1.01 1.05 0.91 0.91 0.77 0.69	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.43 1.73 2.39 1.80 2.24 1.30 1.53 1.34 1.30 1.81 1.05 1.05 1.09 1.07 0.883 2.37 2.13 1.11 1.22 2.16 1.39 1.61 1.73 1.98 2.07 2.11	72 87 120 90 112 65 77 65 91 52 53 54 53 44 118 53 56 61 108 70 81 86 99 104
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.860 35.996 42.037	1.03 1.59 1.04	2.0 2.0 2.0	1.21 1.51 1.75	60 76 87
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.795 25.856 33.195 41.568 53.809	1.54 0.77 1.55 1.24 0.89	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Mathe

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1		10.227	2.58	IJ	0.0285	0.00534
2				ND		0.00486
3				ND		0.00421
4		13.337	1.34	0.154 JA		0.0140
5				ND A		0.00481
6		16.303	1.43	0.0811 J		0.00897
7		16.005	1.46	0.0173 J		0.00889
8		16.823	1.55	0.0264 J		0.0117
9		15.806	1.38	0.0161 JA		0.00419
10				ND A		0.00985
11				ND		0.139
12	12/13			ND		0.00503
13	12/13			ND		0.00503
14				ND A		0.00433
15		20.448	1.44	0.0124 J		0.00578
16		20.404	1.03	0.00908 J		0.00589
17		19.873	1.04	0.130 J		0.00493
18	18/30	19.387	0.93	0.0817 J		0.0109
19		17.176	1.08	0.100 J		0.00798
20	20/28	23.875	1.03	0.146 J		0.0174
21	21/33	24.139	1.01	0.0428 J		0.0126
22		24.556	1.25	IJ	0.00952	0.00725
23				ND A		0.00174
24				ND		0.00183
25		23.195	1.11	0. 1 61 J		0.00274
26	26/29	22.932	1.01	0.284 J		0.00438
27		20.116	1.05	0.0218 J		0.00193
28	20/28	23.875	1.03	(0.146) J		0.017 4
29	26/29	22.932	1.01	(0.284) J		0.00438
30	18/30	19.387	0.93	(0.0817) J		0.0109
31		23.535	0.98	0.0668 J		0.0169
32		20.998	1.10	0.0699 J		0.00700
33	21/33	24.139	1.01	(0.0428) J		0.0126
34		22.421	1.21	IJA	0.0134	0.00174
35				ND		0.00306
36				ND		0.00193
37		28.254	0.95	0.0115 J		0.00404
38				ND A		0.00165
39				ND A		0.00160
40	40/41/71	28.084	0.79	0.260 J		0.00777
41	40/41/71	28.084	0.79	(0.260) J		0.00777
42		27.542	0.74	0.158 J		0.00421
43	43/73	26.041	0.80	0.0337 J		0.00375
44	44/47/65	27.031	0.78	0.769 J		0.0179

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses ND = Not Detected

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REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.077	0.73	0.131 J		0.00551
46		24.309	0.79	0.0634 J		0.00218
4 7	44/47/65	27.031	0.78	(0.769) J		0.0179
48		26.753	0.59	IJ	0.00660	0.00279
49	49/69	26.428	0.77	1.10		0.00647
50	50/53	23.226	0.77	0.249 J		0.00363
51	45/51	24.077	0.73	(0.131) J		0.00551
52		25.887	0.76	1.41 J		0.0159
53	50/53	23.226	0.77	(0.249) J		0.00363
54		20.797	0.79	0.0130 J		0.00154
55				ND		0.00207
56		32.066	0.85	0.0386 J		0.00970
57		29.993	0.76	0.0399 JA		0.00151
58		30.210	0.81	0.00777 J		0.00182
59	59/62/75	27.387	0.77	0.0418 J		0.00398
60		32.314	0.85	0.00456 J		0.00329
61	61/70/74/76	31.030	0.80	0.270 J		0.0308
62	59/62/75	27.387	0.77	(0.0418) J		0.00398
63		30.689	0.78	0.0264 J		0.00167
64		28.316	0.77	0.0957 J		0.00537
65	44/47/65	27.031	0.78	(0.769) J		0.0179
66		31.385	0.78	`0.229´ J		0.0210
67		30.411	0.69	0.0226 J		0.00216
68		29.514	0.82	0.0319 J		0.00241
69	49/69	26.428	0.77	(1.10)		0.00647
70	61/70/74/76	31.030	0.80	(0.270) J		0.0308
71	40/41/71	28.084	0.79	(0.260) J		0.00777
72		29.220	0.77	0.0415 J		0.00169
73	43/73	26.041	0.80	(0.0337) J		0.00375
74	61/70/74/76	31.030	0.80	(0.270) J		0.0308
75	59/62/75	27.387	0.77	(0.0418) J		0.00398
76	61/70/74/76	31.030	0.80	(0.270) J		0.0308
77		35.996	0.83	0.0132 J		0.00254
78				ND		0.00222
79		34.340	0.67	0.00759 J		0.00224
80				ND		0.00205
81				ND		0.00171
82		35.593	1.64	0.0472 J		0.00247
83		33.691	1.57	0.0910 J		0.00230
84		31.246	1. 4 9	0.252 J		0.0127
85	85/116/117	35.068	1.40	0.136 J		0.00499
86	86/87/97/108/119/125	34.356	1.48	0.504 J		0.0146
87	86/87/97/108/119/125	34.356	1.48	(0.504) J		0.0146
88	88/91	31.045	1.53	0.255 J		0.00474

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89		31.757	1.61	0.00622 J		0.00300
90	90/101/113	33.227	1.54	0.912 J		0.0115
91	88/91	31.045	1.53	(0.255) J		0.00474
92		32.608	1.53	`0.431´ J		0.00377
93	93/98/100/102	30.519	1.65	0.0959 J		0.00543
94		29.637	1.57	0.0306 J		0.00182
95		30.101	1.48	0.844 J		0.00836
96		27.310	1.41	0.0125 J		0.00302
97	86/87/97/108/119/125	34.356	1.48	(0.504) J	***	0.0146
98	93/98/100/102	30.519	1.65	(0.0959) J	***	0.00543
99		33.845	1.53	0.473 J		0.00568
100	93/98/100/102	30.519	1.65	(0.0959) J		0.00543
101	90/101/113	33.227	1.54	(0.912) J	225	0.0115
102	93/98/100/102	30.519	1.65	(0.0959) J		0.00543
103	20/00/100/102	29.421	1.74	0.0351 J		0.00188
104				ND		0.00147
105		39.589	1.46	0.136 J		0.00545
106				ND A		0.00271
107	107/124	37.677	1.48	0.0193 JA		0.00297
108	86/87/97/108/119/125	34.356	1.48	(0.504) J		0.0146
109	00/01/01/100/110/120	37.929	1.50	0.0728 JA		0.00279
110	110/115	35.269	1.58	1.37		0.0124
111	110/110	36.011	1.69	0.00362 J		0.00124
112				0.00302 3 ND		0.00170
113	90/101/113	33.227	1.54	(0.912) J		0.0115
114	30/101/113	38.918	1.93	(0.912) 3 IJA	0.00366	0.00271
115	110/115	35.269	1.58	(1.37)	0.00000	0.0124
116	85/116/117	35.068	1.40	(0.136) J		0.00499
117	85/116/117	35.068	1.40	(0.136) J		0.00499
118	03/110/11/	38.398	1.52	0.534 J		0.00499
119	86/87/97/108/119/125	34.356	1.48	(0.504) J		0.0146
120	00/07/31/100/119/125	36.522	1.55	0.00901 J		0.00164
121		30.322	1.55	0.00901 3 ND		0.00104
122		38.750	1.34	0.00642 JA		0.00125
123		38.046	1.74	0.00801 JA		
123	107/124	37.677				0.00299
125	86/87/97/108/119/125		1.48	(0.0193) JA		0.00297
	00/07/97/100/119/125	34.356	1.48	(0.504) J		0.0146
126 127				ND A		0.00296
	100/166	40.075	4.04	ND A		0.00279
128	128/166	42.875	1.24	0.122 J		0.00419
129	129/138/163	41.601	1.18	0.638 J		0.0105
130		40.930	1.16	0.0605 JA		0.00272
131		38.046	1.26	0.0101 JA		0.00288
132		38.499	1.29	0.282 J		0.00396

Conc = Concentration

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
						
133	4044440	39.019	1.43	0.0253 J		0.00256
134	134/143	37.426	1.20	0.0612 J		0.00384
135	135/151	36.228	1.27	0.311 J		0.00499
136		33.722	1.25	0.125 J		0.00275
137	40044004400	41.165	1.18	0.0286 JA		0.00254
138	129/138/163	41.601	1.18	(0.638) J		0.0105
139	139/140	37.845	1.30	0.0166 J		0.00423
140	139/140	37.845	1.30	(0.0166) J		0.00423
141		40.511	1.23	0.0744 JA		0.00246
142				ND A		0.00252
143	134/143	37.426	1.20	(0.0612) J		0.00384
144		36.831	1.20	0.0233 J		0.00201
145				ND		0.00193
146		39.689	1.26	0.120 J		0.00245
147	147/149	37.208	1.19	0.657 J		0.00865
148		35.640	1.41	0.00389 J		0.00226
149	147/149	37.208	1.19	(0.657) J		0.00865
150		33.381	1.25	0.00407 J		0.00125
151	135/151	36.228	1.27	(0.311) J		0.00499
152		33.211	1.26	0.00281 J		0.00205
153	153/168	40.327	1.24	0. 4 69 J		0.00742
154		36.522	1.22	0.0226 J		0.00169
155				ND		0.00148
156	156/157	45.832	1.20	0.0824 J		0.00428
157	156/157	45.832	1.20	(0.0824) J		0.00428
158		42.020	1.18	0.0533 J		0.00249
159				ND		0.00270
160				ND		0.00249
161				ND A		0.00180
162				ND /		0.00224
163	129/138/163	41.601	1.18	(0.638) J		0.0105
164	120/100/100	41.266	1.22	0.0464 J		0.00233
165		39.438	0.89	IJ	0.00218	0.00199
166	128/166	42.875	1.24	(0.122) J	0.00210	0.00419
167	120/100	44.675	1.41	0.0291 J		0.00207
168	153/168	40.327	1.41	(0.469) J		0.00207
169	133/100	40.327	1.24	(0.409) J ND	•••	0.00742
170		48.549	1.02	0.0782 J		0.00133
170	171/173					
171	11 1/1/3	44.960	0.94	0.0282 J		0.00585
172	474/470			ND (0.000)		0.0136
	171/173	44.960	0.94	(0.0282) J		0.00585
174 175		43.853	1.03	0.0634 J		0.00308
175		42.708	1.33	J	0.00236	0.00146
176		40.193	1.05	0.0116 J		0.00216

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

				Concentration		EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
177		44.306	1.08	0.0540 J		0.00323
178		42.054	1.01	0.0214 J		0.00218
179		39.287	0.98	0.0425 J		0.00233
180	180/193	47.257	1.01	0.124 J		0.00553
181		,		ND		0.00264
182				ND		0.00249
183	183/185	43.635	1.18	0.0460 J		0.00547
184				ND		0.00201
185	183/185	43.635	1.18	(0.0460) J		0.00547
186				ND		0.00151
187		42.993	1.14	0.0922 J		0.00316
188				ND		0.00239
189		51.718	1.13	0.00304 JA		0.00267
190		49.102	1.17	0.0152 J		0.00245
191		47.610	1.76	IJ	0.00262	0.00210
192				ND		0.00239
193	180/193	47.257	1.01	(0.124) J		0.00553
194		53.852	0.98	0.0225 JA		0.00246
195		51.459	0.96	0.00956 JA		0.00270
196		49.940	0.86	0.0119 J		0.00168
197	197/200			ND		0.00455
198	198/199	49.270	0.87	0.0312 J		0.00274
199	198/199	49.270	0.87	(0.0312) J		0.00274
200	197/200			ND		0.00455
201		45.379	0.67	IJ	0.00307	0.00139
202		44.424	0.91	0.00582 J		0.00224
203		50.125	0.68	IJ	0.0117	0.00175
204				ND		0.00163
205				ND A		0.00202
206		56.072	0.89	0.00682 J		0.00371
207				ND		0.00222
208				ND		0.00216
209				ND		0.0166

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-DS1-202305 40262368005 P230529B_06

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	0.307	
Total Trichloro Biphenyls	1.12	
Total Tetrachloro Biphenyls	5.06	
Total Pentachloro Biphenyls	6.29	
Total Hexachloro Biphenyls	3.27	
Total Heptachloro Biphenyls	0.580	
Total Octachloro Biphenyls	0.0809	
Total Nonachloro Biphenyls	0.00682	
Decachloro Biphenyls	ND	
Total PCBs	16.7	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename

<u> ^race Analytical</u>

NR-SW-OU4-202305 40262368006 P230529B_07

Injected By Total Amount Extracted BAL 1040 mL

Water Matrix Dilution NA

% Moisture Dry Weight Extracted ICAL ID

NA NA P230529B02

Collected 05/16/2023 13:15 Received 05/20/2023 18:45 05/23/2023 12:15 Extracted

CCal Filename(s) Method Blank ID

P230529B 01 BLANK-106282

Analyzed 05/29/2023 22:22

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2'-6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3,3',4,4'-PeCB 13C-2,3,4,4',5-PeCB 13C-2,3,4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5,5'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-NoCB 13C-2,2',3,3',4,4',5,5',6-NoCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208	10.137 12.953 13.258 20.393 17.121 28.208 20.736 35.362 35.935 26.909 39.556 38.919 38.349 38.030 42.726 32.980 45.816 44.643 49.103 38.919 51.676 44.408 54.284 56.051 51.202	2.95 2.99 1.55 1.56 1.05 1.03 0.77 0.76 0.78 1.54 1.54 1.53 1.61 1.25 1.27 1.26 1.25 1.04 1.05 0.91 0.89 0.77 0.76	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.53 1.65 2.30 1.72 2.35 1.20 1.52 1.29 1.28 1.75 1.04 1.05 1.03 1.08 0.852 2.30 2.05 1.10 1.18 2.19 1.38 1.59 1.68 1.59 1.68 1.94 2.06	76 82 115 86 117 60 76 64 64 87 52 52 51 54 43 115 55 59 110 69 79 84 97
13C-DeCB Cleanup Standards 13C-2,4,4'-TrCB	209 28 111	57.689 23.845 35.981	0.72 1.03 1.56	2.0 2.0 2.0	2.04 1.14 1.48	102 57 74
13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.06	2.0	1.73	86
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.751 25.841 33.181 41.568 53.810	1.51 0.77 1.54 1.27 0.91	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

LLDAG	Co alutions	_ DT	Datia	Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1				ND		0.00535
2				ND		0.00487
3				ND		0.00422
4				ND A		0.0100
5				ND A		0.00473
6				ND		0.00900
7				ND		0.00892
8				ND		0.0118
9				ND A		0.00412
10				ND A		0.00713
11				ND		0.139
12	12/13			ND		0.00505
13	12/13			ND		0.00505
14	, . 0			ND A		0.00426
15				ND		0.00579
16				ND		0.00591
17		19.840	0.90	0.0183 J		0.00495
18	18/30	19.343	1.09	0.0158 J		0.0109
19	. 0, 0 0			ND		0.00800
20	20/28	23.861	1.04	0.0603 J		0.0175
21	21/33	24.124	1.13	0.0141 J		0.0126
22				ND		0.00727
23				ND A		0.00180
24				ND		0.00183
25		23.180	0.96	0.0177 J		0.00274
26	26/29	22.902	1.19	0.0274 J		0.00439
27				ND		0.00194
28	20/28	23.861	1.04	(0.0603) J		0.0175
29	26/29	22.902	1.19	(0.0274) J		0.00439
30	18/30	19.343	1.09	(0.0158) J		0.0109
31		23.505	1.14	`0.0206´ J		0.0169
32		20.968	0.99	0.0274 J		0.00702
33	21/33	24.124	1.13	(0.0141) J		0.0126
34		22.391	1.29	` IJA	0.00223	0.00179
35				ND		0.00307
36				ND		0.00194
37				ND		0.00405
38				ND A		0.00170
39				ND A		0.00164
40	40/41/71	28.053	0.82	0.0728 J		0.00779
41	40/41/71	28.053	0.82	(0.0728) J		0.00779
42		27.527	0.82	0.0514 J		0.00422
43	43/73	26.042	0.87	0.00793 J		0.00376
44	44/47/65	27.017	0.78	0.240 J		0.0179

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)
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ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

				Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
45	45/51	24.046	0.82	0.0496 J		0.00553
46		24.294	0.72	0.0243 J		0.00219
47	44/47/65	27.017	0.78	(0.240) J		0.0179
48				` NĎ		0.00280
49	49/69	26.413	0.77	0.264 J		0.00649
50	50/53	23.195	0.77	0.0807 J		0.00365
51	45/51	24.046	0.82	(0.0496) J		0.00553
52		25.872	0.76	0.277 J		0.0160
53	50/53	23.195	0.77	(0.0807) J		0.00365
54		20.767	0.73	0.00445 J		0.00154
55				ND A		0.00208
56		32.067	0.87	0.0148 J		0.00973
5 7		29.963	0.69	0.00426 JA		0.00186
58		30.210	0.66	0.00420 JA		0.00206
59	59/62/75	27.373	0.70	0.0104 J		0.00399
60	00/02/10			0.0104 5 ND		0.00330
61	61/70/74/76	31.015	0.82	0.0969 J		0.0309
62	59/62/75	27.373	0.02	(0.0104) J		0.00399
63	39/02/13	30.674	0.76	0.00879 JA		0.00399
64		28.285	0.82	0.00879 JA 0.0249 J		0.00193
65	44/47/65	27.017	0.82	(0.249 J		0.00339
66	44/47/05	31.386	0.78	0.240) J 0.0827 J		0.0211
67		30.412	0.79			0.00217
68		29.483	0.99	IJ IJ	0.00263 0.00551	0.00217
69	49/69					0.00242
70		26.413	0.77			
70 71	61/70/74/76	31.015	0.82	(0.0969) J		0.0309
	40/41/71	28.053	0.82	(0.0728) J		0.00779
72	40.170	29.189	0.76	0.00962 JA		0.00195
73	43/73	26.042	0.87	(0.00793) J		0.00376
74 75	61/70/74/76	31.015	0.82	(0.0969) J		0.0309
75 70	59/62/75	27.373	0.70	(0.0104) J		0.00399
76	61/70/74/76	31.015	0.82	(0.0969) J		0.0309
77 7 0		35.950	0.99	IJ	0.00396	0.00255
78 70				ND		0.00223
79				ND		0.00225
80				ND		0.00205
81				ND A		0.00193
82		35.594	1.50	0.0214 J		0.00248
83		33.691	1.64	0.0258 J		0.00230
84		31.247	1.69	0.0812 J		0.0128
85	85/116/117	35.114	1.57	0.0547 J		0.00501
86	86/87/97/108/119/125	34.434	1.62	0.192 J		0.0146
87	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
88	88/91	31.030	1.58	0.0677 J		0.00476

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.00301
90	90/101/113	33.212	1.49	0.328 J		0.0115
91	88/91	31.030	1.58	(0.0677) J		0.00476
92		32.608	1.42	0.0989 J		0.00378
93	93/98/100/102	30.365	1.35	0.0213 J		0.00545
94		29.622	1.94	J	0.00509	0.00182
95		30.087	1.48	0.255 J		0.00839
96		27.295	1.15	IJ	0.00362	0.00303
97	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
98	93/98/100/102	30.365	1.35	(0.0213) J		0.00545
99		33.831	1.65	0.164 J		0.00570
100	93/98/100/102	30.365	1.35	(0.0213) J		0.00545
101	90/101/113	33.212	1.49	(0.328) J		0.0115
102	93/98/100/102	30.365	1.35	(0.0213) J		0.00545
103		29.406	1.57	0.00837 J		0.00189
104				ND		0.00147
105		39.590	1.51	0.0623 J		0.00547
106				ND A		0.00287
107	107/124	37.678	1.92	IJA	0.00770	0.00315
108	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
109		37.930	1.62	0.0250 JA		0.00296
110	110/115	35.269	1.53	0.422 J		0.0125
111				ND		0.00198
112				ND		0.00171
113	90/101/113	33.212	1.49	(0.328) J		0.0115
114				ND A		0.00289
115	110/115	35.269	1.53	(0.422) J		0.0125
116	85/116/117	35.114	1.57	(0.0547) J		0.00501
117	85/116/117	35.114	1.57	(0.0547) J		0.00501
118		38.382	1.59	0.203 J		0.00863
119	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
120		36.492	1.35	0.00265 J		0.00164
121				ND		0.00125
122				ND A		0.00335
123		38.014	1.40	0.00303 JA		0.00295
124	107/124	37.678	1.92	IJA	(0.00770)	0.00315
125	86/87/97/108/119/125	34.434	1.62	(0.192) J		0.0146
126				` NĎ A		0.00328
127				ND A		0.00296
128	128/166	42.877	1.21	0.0482 J		0.00420
129	129/138/163	41.602	1.25	0.230 J		0.0106
130		40.948	1.23	0.0190 JA	•••	0.00253
131		38.030	1.16	0.00415 J		0.00272
132		38.483	1.19	0.0851 J		0.00397

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

133	IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
134	133		39 003	1 22	0.00437 J		0.00257
135		134/143					
136							
137		100/101				***	
138							
139		129/138/163					
140							
141 40.529 1.32 0.0319 J 0.00238 142 ND A 0.00235 143 134/143 37.410 1.31 (0.0197) J 0.00236 144 36.801 1.23 (0.0103 J 0.00201 145 ND 0.00246 146 39.674 1.11 (0.0331 J) 0.00246 147 147/149 37.192 1.31 (0.183 J) 0.00867 148 ND 0.00226 149 147/149 37.192 1.31 (0.183) J 0.00266 150 ND 0.00266 151 135/151 36.229 1.20 (0.0868) J 0.00126 153 153/168 40.328 1.23 (0.175 J 0.00245 154 ND <							
142 ND A 0.00235 143 134/143 37.410 1.31 (0.0197) J 0.00386 144 36.801 1.23 0.0103 J 0.00201 145 ND 0.00194 146 39.674 1.11 0.0331 J 0.00246 147 147/149 37.192 1.31 0.183 J 0.00266 148 ND 0.00226 148 147/149 37.192 1.31 (0.183) J 0.00226 150 ND 0.00126 0.00226 0.00126 0.00126 0.00223 0.00226 0.00225 0.00239 0.00168 0.00235 0.00249 1.5		100/140					
143 134/143 37,410 1.31 (0.0197) J 0.0036 144 36,801 1.23 0.0103 J 0.00219 146 39,674 1.11 0.0331 J 0.00246 147 147/149 37,192 1.31 0.183 J 0.00867 148 ND 0.00226 149 147/149 37.192 1.31 (0.183) J 0.00226 150 ND 0.0026 151 135/151 36.229 1.20 (0.8668) J 0.00126 151 135/151 36.229 1.20 (0.8688) J 0.00205 153 153/168 40.328 1.23 0.175 J 0.00205 153 153/168 40.328 1.23 0.175 J 0.00249 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
144 36.801 1.23 0.0103 J 0.00201 145 ND 0.00194 146 39.674 1.11 0.0331 J 0.00246 147 147/149 37.192 1.31 0.183 J 0.0026 148 147/149 37.192 1.31 0.183 J 0.00226 150 ND 0.00867 0.00867 0.00867 0.00867 0.00867 0.00867 0.00867 0.00867 0.00867 0.00867 0.00126		134/143					
145		154/145					
146 39.674 1.11 0.0331 J 0.00246 147 147/149 37.192 1.31 0.183 J 0.00226 149 147/149 37.192 1.31 (0.183) J 0.00867 150 ND 0.00126 151 135/151 36.229 1.20 (0.0868) J 0.00501 152 ND 0.00501 153 153/168 40.328 1.23 0.175 J 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00745 155 ND 0.00745 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00449 159							
147 147/149 37.192 1.31 0.183 J 0.00867 148 ND 0.00226 149 147/149 37.192 1.31 (0.183) J 0.00867 150 ND 0.00501 151 135/151 36.229 1.20 (0.0868) J 0.00501 152 ND 0.00205 153 153/168 40.328 1.23 0.175 J 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00430 157 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430 158 42.005 1.20 0.0223 J 0.00249 159							
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150		147/140					
151		1477149	37.192				
152		105/151	26.220				
153 153/168 40.328 1.23 0.175 J 0.00745 154 36.553 1.04 IJ 0.00392 0.00169 155 ND 0.00148 156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00430 158 42.005 1.20 0.0223 J 0.00249 159 ND 0.00229 160 ND 0.00229 161 ND 0.00229 162 ND 0.00225 163 129/138/163 41.602 1.25 (0.230) J 0.00225 163 128/166 42.877 1.21 (0.0482) J 0.00226 166 128/166 42.877 1.21 (0.0482)		135/151					
154		452/460					
155		153/168					
156 156/157 45.850 1.34 0.0321 J 0.00430 157 156/157 45.850 1.34 (0.0321) J 0.00249 158 42.005 1.20 0.0223 J 0.00249 159 ND 0.00271 160 ND 0.00249 161 ND 0.00249 162 ND 0.00180 162 ND 0.00225 163 129/138/163 41.602 1.25 (0.230) J 0.00225 163 129/138/163 41.602 1.25 (0.230) J 0.0106 164 42.83 1.06 0.0163 J 0.00234 165 ND 0.00225 166 128/166 42.877 1.21 (0.0482) J 0.0042							
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158 42.005 1.20 0.0223 J 0.00249 159 ND 0.00271 160 ND 0.00249 161 ND 0.00180 162 ND 0.00225 163 129/138/163 41.602 1.25 (0.230) J 0.0106 164 41.283 1.06 0.0163 J 0.00234 165 ND 0.00234 166 128/166 42.877 1.21 (0.0482) J 0.00200 168 153/168 40.328 1.23 (0.175) J 0.00745 169 ND 0.00155 170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 174 43.854 1.17							
159		156/157					
160 ND 0.00249 161 ND 0.00180 162 ND 0.00225 163 129/138/163 41.602 1.25 (0.230) J 0.0106 164 41.283 1.06 0.0163 J 0.00234 165 ND 0.00234 166 128/166 42.877 1.21 (0.0482) J 0.00420 167 44.659 1.68 IJ 0.00862 0.00207 168 153/168 40.328 1.23 (0.175) J 0.00745 169 ND 0.00155 170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 174 43.854 1.17 0.0197 J 0.00							
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162 ND 0.00225 163 129/138/163 41.602 1.25 (0.230) J 0.0106 164 41.283 1.06 0.0163 J 0.00234 165 ND 0.00200 166 128/166 42.877 1.21 (0.0482) J 0.00420 167 44.659 1.68 IJ 0.00862 0.00207 168 153/168 40.328 1.23 (0.175) J 0.00745 169 ND 0.00155 170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146							
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164 41.283 1.06 0.0163 J 0.00234 165 ND 0.00200 166 128/166 42.877 1.21 (0.0482) J 0.00420 167 44.659 1.68 IJ 0.00862 0.00207 168 153/168 40.328 1.23 (0.175) J 0.00745 169 ND 0.00155 170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 172 ND 0.0136 173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146		100/100/100					
165 ND 0.00200 166 128/166 42.877 1.21 (0.0482) J 0.00420 167 44.659 1.68 IJ 0.00862 0.00207 168 153/168 40.328 1.23 (0.175) J 0.00745 169 ND 0.00155 170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146		129/138/163			(0.230) J		
166 128/166 42.877 1.21 (0.0482) J 0.00420 167 44.659 1.68 IJ 0.00862 0.00207 168 153/168 40.328 1.23 (0.175) J 0.00745 169 ND 0.00155 170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 172 ND 0.0136 173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146							
167 44.659 1.68 IJ 0.00862 0.00207 168 153/168 40.328 1.23 (0.175) J 0.00745 169 ND 0.00155 170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 172 ND 0.0136 173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146							
168 153/168 40.328 1.23 (0.175) J 0.00745 169 ND 0.00155 170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 172 ND 0.0136 173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146		128/166					
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170 48.550 1.34 IJ 0.0189 0.00480 171 171/173 44.961 1.43 IJ 0.00609 0.00587 172 IJ ND 0.0136 173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 IJ ND 0.00146		153/168					
171 171/173 44.961 1.43 IJ 0.00609 0.00587 172 IJ 0.0136 173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 IJ ND 0.00146							
172 ND 0.0136 173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146							
173 171/173 44.961 1.43 IJ (0.00609) 0.00587 174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146		171/173	44.961	1.43		0.00609	
174 43.854 1.17 0.0197 J 0.00309 175 ND 0.00146							
175 ND 0.00146		171/173				(0.00609)	
			43.854	1.17			0.00309
176 ND 0.00217	176				ND		0.00217

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
177		44.290	1.39	IJ	0.00976	0.00324
178		42.038	1.13	0.00474 J		0.00219
179		39.271	1.18	0.00902 J		0.00234
180	180/193	47.258	1.00	0.0344 J		0.00555
181				ND		0.00265
182				ND	•	0.00249
183	183/185	43.637	1.11	0.0116 J		0.00549
184				ND		0.00201
185	183/185	43.637	1.11	(0.0116) J		0.00549
186				ND		0.00152
187		42.977	1.12	0.0205 J		0.00317
188				ND		0.00240
189				ND A		0.00268
190		49.086	1.35	IJ	0.00356	0.00246
191				ND		0.00211
192				ND		0.00240
193	180/193	47.258	1.00	(0.0344) J		0.00555
194		53.853	1.22	IJ	0.00359	0.00181
195		51.482	0.89	0.00271 JA		0.00195
196		49.975	0.95	0.00276 J		0.00169
197	197/200			ND		0.00457
198	198/199	49.237	0.96	0.00638 J		0.00274
199	198/199	49.237	0.96	(0.00638) J		0.00274
200	197/200			ND		0.00457
201				ND		0.00140
202				ND		0.00225
203		50.109	0.57	IJ	0.00326	0.00176
204				ND		0.00163
205				ND		0.00192
206				ND	,	0.00372
207				ND		0.00223
208				ND		0.00217
209				ND		0.0167

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU4-202305 40262368006 P230529B_07

(Congener Group	Concentration ng/L	
	Total Manachiava Dinhamida	ND.	
	Total Monochloro Biphenyls	ND	
	Total Dichloro Biphenyls	ND	
=	Total Trichloro Biphenyls	0.202	
-	Total Tetrachloro Biphenyls	1.33	
-	Total Pentachloro Biphenyls	2.04	
-	Total Hexachloro Biphenyls	1.04	
-	Total Heptachloro Biphenyls	0.0999	
-	Total Octachloro Biphenyls	0.0118	
-	Total Nonachloro Biphenyls	ND	
]	Decachloro Biphenyls	ND	
-	Total PCBs	4.72	

ND = Not Detected

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

NR-SW-BKG1-202305 40262368007 P230529B_08 BAL

Total Amount Extracted % Moisture Dry Weight Extracted

CCal Filename(s)

Method Blank ID

ICAL ID

1030 mL NA NA P230529B02 P230529B_01 BLANK-106282

Water Matrix Dilution NA

Collected 05/16/2023 14:10 Received 05/20/2023 18:45 Extracted 05/23/2023 12:15 Analyzed 05/29/2023 23:25

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-DiCB 13C-2,2'-,6-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-TrCB 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,6,6'-PpCB 13C-2,2',3,4',5,6,6'-PpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 169 188 189 202 205 206 208	10.182 12.998 13.303 20.404 17.143 28.223 20.766 35.377 35.950 26.908 39.572 38.918 38.365 38.365 38.365 38.030 42.742 32.995 45.816 44.659 49.119 38.918 51.697 44.407 54.305 56.051 51.223	2.99 2.96 1.48 1.57 1.03 1.07 0.78 0.75 1.52 1.55 1.51 1.59 1.54 1.58 1.25 1.27 1.26 1.03 1.04 0.89 0.88 0.79 0.78	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.67 1.80 2.48 1.85 2.54 1.29 1.65 1.40 1.34 1.77 1.15 1.11 1.15 2.32 2.32 2.24 1.16 1.25 2.49 1.51 1.91 1.81 2.02 2.27	84 90 124 93 127 65 82 70 67 88 57 55 57 57 49 116 56 58 63 125 75 95 90 101
13C-DeCB Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	209 28 111 178	57.689 23.860 35.996 42.037	0.71 1.04 1.55 1.07	2.0 2.0 2.0 2.0	2.08 1.32 1.60 1.90	104 66 80 95
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.773 25.856 33.196 41.568 53.810	1.54 0.79 1.56 1.22 0.88	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00540
2				ND		0.00491
3				ND		0.00426
4				ND A		0.0132
5				ND A		0.00493
6				ND /		0.00907
7				ND ND		0.00900
8				ND ND		0.0119
9				ND A		0.00430
10				ND A		0.00945
11				ND		0.140
12	12/13			ND		0.00509
13	12/13			ND		0.00509
14	12/10			ND A		0.00445
15				ND /		0.00584
16				ND		0.00596
17		19.851	1.37	IJ	0.00985	0.00499
18	18/30			ND		0.0110
19	10/00			ND		0.00807
20	20/28	23.891	1.11	0.0378 J		0.0176
21	21/33			ND ND		0.0127
22	- // -			ND		0.00733
23				ND A		0.00258
24				ND A		0.00198
25		23.180	1.10	0.00576 J		0.00277
26	26/29	22.948	1.10	0.00809 J		0.00443
27				ND		0.00195
28	20/28	23.891	1.11	(0.0378) J		0.0176
29	26/29	22.948	1.10	(0.00809) J		0.00443
30	18/30			` NĎ		0.0110
31				ND		0.0170
32		20.983	0.90	0.0212 J		0.00708
33	21/33			ND		0.0127
34				ND A		0.00257
35		***		ND		0.00310
36				ND A		0.00241
37				ND		0.00408
38				ND A		0.00243
39				ND A		0.00236
40	40/41/71	28.084	0.74	0.0355 J		0.00785
41	40/41/71	28.084	0.74	(0.0355) J		0.00785
42		27.558	0.75	`0.0234´ J		0.00426
43	43/73			ND		0.00379
44	44/47/65	27.032	0.81	0.117 J		0.0181

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

	· -					
IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.077	0.84	0.0314 J		0.00557
46		24.324	0.74	0.0137 J		0.00221
47	44/47/65	27.032	0.81	(0.117) J		0.0181
48	, ,,,,,			ND		0.00282
49	49/69	26.428	0.79	0.111 J		0.00654
50	50/53	23.226	0.76	0.0488 J		0.00368
51	45/51	24.077	0.84	(0.0314) J		0.00557
52	16761	25.872	0.79	0.0942 J		0.0161
53	50/53	23.226	0.76	(0.0488) J		0.00368
54	00/00	20.797	0.78	0.00256 J		0.00156
55		20.707	0.70	ND A		0.00262
56				ND A		0.00981
57				ND A		0.00234
58				ND A		0.00260
59	59/62/75	27.357	0.87	0.00423 J		0.00200
60	39/02/73	27.557	0.07	0.00423 3 ND		0.00333
61	61/70/74/76	31.014	0.70	0.0363 J		0.0333
62	59/62/75	27.357	0.70	(0.00423) J		0.00402
63	39/02/13	30.674	0.87	0.00423) J 0.00407 JA		0.00402
64		28.316	0.79	0.00407 JA IJ	0.00744	0.00246
65	44/47/65	27.032	0.93		0.00744	0.00344
66	44/47/03	31.401	0.69	(0.117) J 0.0346 J		0.0213
67						0.0213
68		 29.529	0.63	ND A IJA	0.00297	0.00233
69	49/69	29.529 26.428				0.00245
			0.79	(0.111) J		
70	61/70/74/76	31.014	0.70	(0.0363) J		0.0311
71	40/41/71	28.084	0.74	(0.0355) J	0.00000	0.00785
72 70	10/70	29.220	1.07	IJA	0.00280	0.00245
73	43/73			ND		0.00379
74 75	61/70/74/76	31.014	0.70	(0.0363) J		0.0311
75 70	59/62/75	27.357	0.87	(0.00423) J		0.00402
76	61/70/74/76	31.014	0.70	(0.0363) J		0.0311
77				ND		0.00257
78				ND A		0.00254
79				ND		0.00226
80				ND A		0.00235
81				ND A		0.00238
82		35.625	1.32	0.00884 J		0.00250
83		33.707	1.08	IJA	0.00668	0.00254
84		31.247	1.72	0.0318 J		0.0129
85	85/116/117	35.114	1.43	0.0237 J		0.00505
86	86/87/97/108/119/125	34.372	1.49	0.0753 J		0.0148
87	86/87/97/108/119/125	34.372	1.49	(0.0753) J		0.0148
88	88/91	31.030	1.32	0.0289 J		0.00480

Conc ≈ Concentration

EML =Method Reporting/Quantitation Limit (1668A)

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A = Limit of Detection based on signal to noise (EDL)

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.00304
90	90/101/113	33.227	1.46	0.124 J		0.0116
91	88/91	31.030	1.32	(0.0289) J		0.00480
92		32.592	1.50	`0.0378´ J		0.00381
93	93/98/100/102	30.488	1.56	0.00904 J		0.00549
94		29.638	1.27	IJA	0.00302	0.00236
95		30.101	1.52	0.101 J		0.00845
96				ND		0.00306
97	86/87/97/108/119/125	34.372	1.49	(0.0753) J		0.0148
98	93/98/100/102	30.488	1.56	(0.00904) J		0.00549
99		33.830	1.43	` 0.0663´ J		0.00575
100	93/98/100/102	30.488	1.56	(0.00904) J		0.00549
101	90/101/113	33.227	1.46	(0.124) J		0.0116
102	93/98/100/102	30.488	1.56	(0.00904) J		0.00549
103		29.405	1.47	`0.00253´ JA		0.00199
104				ND		0.00148
105		39.606	1.49	0.0307 J		0.00551
106				ND A		0.00246
107	107/124	37.678	1.04	IJA	0.00308	0.00269
108	86/87/97/108/119/125	34.372	1.49	(0.0753) J		0.0148
109		37.929	1.55	Ò.0090Ź JA		0.00253
110	110/115	35.269	1.53	0.161 J		0.0126
111				ND		0.00199
112				ND		0.00172
113	90/101/113	33.227	1.46	(0.124) J		0.0116
114				` NĎ A		0.00252
115	110/115	35.269	1.53	(0.161) J		0.0126
116	85/116/117	35.114	1.43	(0.0237) J		0.00505
117	85/116/117	35.114	1.43	(0.0237) J		0.00505
118		38.382	1.46	`0.0871 J		0.00871
119	86/87/97/108/119/125	34.372	1.49	(0.0753) J		0.0148
120				` NĎ		0.00166
121				ND A		0.00163
122				ND A		0.00287
123		38.013	1.70	0.00277 JA		0.00241
124	107/124	37.678	1.04	IJA	(0.00308)	0.00269
125	86/87/97/108/119/125	34.372	1.49	(0.0753) J		0.0148
126				` NĎ A		0.00259
127				ND A		0.00253
128	128/166	42.876	1.19	0.0208 J		0.00424
129	129/138/163	41.602	1.15	0.111 J		0.0106
130		40.914	1.17	0.00948 JA		0.00332
131				ND A		0.00351
132		38.466	1.20	0.0363 J		0.00400

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

133	IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
135	133				ND A		0.00299
135	134	134/143	37.443	1.14	0.00796 J		0.00389
136	135	135/151	36.259	1.28			
137	136						
138 129/138/163 41.602 1.15 (0.111) J 0.0106 139 139/140 ND 0.00428 140 139/140 ND 0.00428 141 40.545 1.15 0.0157 JA 0.00300 142 ND A 0.00307 143 134/143 37.443 1.14 (0.00796) J 0.00389 144 36.847 1.50 J 0.00297 0.00203 145 ND 0.00195 146 39.690 1.31 0.0135 JA 0.00195 147 147/149 37.208 1.31 0.0795 J 0.00874 148 ND 0.00281 149 147/149 37.208 1.31 (0.0795) J 0.00874 150 ND 0.0027 151 135/151 36.259 1.28 (0.0329) J 0.00574 152 ND 0.00575 154 ND 0.00207 153 153/168 40.327 1.17 0.0729 J 0.00751 154 ND 0.00751 155 ND 0.00711 155 ND 0.00171 156 156/157 45.783 1.17 0.0156 J 0.00171 157 156/157 45.783 1.17 0.0156 J 0.00433 158 42.004 1.17 0.0113 J 0.00252 161 ND 0.00252 161 ND 0.00252 163 129/138/163 41.602 1.15 (0.111) J 0.00252 163 129/138/163 41.602 1.15 (0.111) J 0.00251 166 128/166 42.876 1.19 (0.0028) J 0.00241 166 128/166 42.876 1.19 (0.0028) J 0.00241 167 ND 0.00251 168 153/168 40.327 1.17 (0.0759) J 0.00251 169 ND 0.00252 161 ND 0.00252 163 129/138/163 41.602 1.15 (0.111) J 0.00252 165 ND 0.00252 166 ND 0.00252 167 ND 0.00252 168 153/168 40.327 1.17 (0.0759) J 0.00254 169 ND 0.00255 174 43.871 1.08 0.00958 J						0.00715	
139 139/140		129/138/163					
140							
141 40.545 1.15 0.0157 JA 0.00300 142 134/143 37.443 1.14 (0.00796) J 0.00387 144 36.847 1.50 IJ 0.00297 0.00203 145 ND 0.00195 146 39.690 1.31 0.0135 JA 0.00261 147 147/149 37.208 1.31 0.0795 J 0.00287 148 147/149 37.208 1.31 (0.0795) J 0.00287 150 ND 0.00287 151 135/151 36.259 1.28 (0.0329) J 0.00273 153 153/168 40.327 1.17 0.0729 J 0.00207 154 ND 0.00171 155 ND							
142							
143 134/143 37.443 1.14 (0.00796) J — 0.00297 0.00203 144 36.847 1.50 — IJ 0.00297 0.00293 146 39.690 1.31 0.0135 JA — 0.00261 147 147/149 37.208 1.31 0.0795 J — 0.00228 149 147/149 37.208 1.31 (0.0795) J — 0.00274 150 — — ND — 0.00127 151 135/151 36.259 1.28 (0.0329) J — 0.00207 153 153/168 40.327 1.17 0.0729 J — 0.00207 155 — — ND — 0.00171 — 0.00171 — 0.00173 156 156/1							
144 36.847 1.50 — IJ 0.00297 0.00203 145 — — — ND — ND — 0.00195 146 39.690 1.31 0.0135 JA — 0.00261 147 147/149 37.208 1.31 0.0795 J — 0.00228 148 — — ND — ND — 0.00274 — 0.0028 149 147/149 37.208 1.31 (0.0795) J — 0.00278 150 — — — ND — 0.00874 — 0.00874 — 0.00874 — 0.00874 150 — — — ND — 0.00874 — 0.00874 — 0.00874 — 0.00874 — 0.00874 — 0.00874 — 0.00155 — 0.00874 — 0.00207 — 0.00207 — 0.0055 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00207 — 0.00202 — 0.00202 — 0.00202 — 0.00		134/143					
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146 39.690 1.31 0.0135 JA 0.00261 147 147/149 37.208 1.31 0.0795 J 0.00874 148 147/149 37.208 1.31 (0.0795) J 0.00874 150 ND 0.00127 151 135/151 36.259 1.28 (0.0329) J 0.00505 152 ND 0.00505 152 ND 0.00505 152 ND 0.00505 152 ND 0.00207 153 153/168 40.327 1.17 0.0729 J 0.00171 156 156/157 45.783 1.17 0.0156 J 0.00433 157 156/157 45.783 1.17 0.0156						0.00257	
147 147/149 37.208 1.31 0.0795 J 0.00274 148 147/149 37.208 1.31 (0.0795) J 0.00228 149 147/149 37.208 1.31 (0.0795) J 0.00874 150 ND 0.00127 151 135/151 36.259 1.28 (0.0329) J 0.00505 152 ND 0.00207 153 153/168 40.327 1.17 0.0729 J 0.00751 154 ND 0.00751 154 ND 0.00751 154 ND 0.00751 155 ND 0.00173 156 156/157 45.783 1.17 0.0156 J 0.00433 158 42.004 1.17 0.0113 J 0.00252							
148 ND 0.00228 149 147/149 37.208 1.31 (0.0795) J 0.00874 150 ND 0.00127 151 135/151 36.259 1.28 (0.0329) J 0.00505 152 ND 0.00207 153 153/168 40.327 1.17 0.0729 J 0.00751 154 ND 0.00751 154 ND 0.00751 155 ND 0.00150 156 156/157 45.783 1.17 0.0156 J 0.00433 158 42.004 1.17 0.0113 J 0.00433 159 ND 0.00252 161		147/140					
149 147/149 37.208 1.31 (0.0795) J 0.00874 150 ND 0.00127 151 135/151 36.259 1.28 (0.0329) J 0.00505 152 ND 0.00207 153 153/168 40.327 1.17 0.0729 J 0.00751 154 ND 0.00171 155 ND 0.00175 156 156/157 45.783 1.17 0.0156 J 0.00433 157 156/157 45.783 1.17 (0.0156) J 0.00433 158 42.004 1.17 0.0113 J 0.00252 159 ND 0.00252 161 ND 0.00252 161 ND 0.00226 <		1477140					
150		1/7/1/0					
151 135/151 36.259 1.28 (0.0329) J 0.00505 152 ND 0.00207 153 153/168 40.327 1.17 0.0729 J 0.00751 154 ND 0.00171 155 ND 0.00150 156 156/157 45.783 1.17 0.0156 J 0.00433 157 156/157 45.783 1.17 (0.0156) J 0.00433 158 42.004 1.17 0.0113 J 0.00433 159 ND 0.00252 159 ND 0.00252 160 ND 0.00252 161 ND 0.00252 163		1477143					
152		125/151					
153		133/131					
154		150/160					
155		155/166					
156 156/157 45.783 1.17 0.0156 J 0.00433 157 156/157 45.783 1.17 (0.0156) J 0.00433 158 42.004 1.17 0.0113 J 0.00252 159 ND 0.00273 160 ND 0.00252 161 ND 0.00252 161 ND 0.00219 162 ND 0.00226 163 129/138/163 41.602 1.15 (0.111) J 0.00226 163 129/138/163 41.602 1.15 (0.111) J 0.0106 164 42.876 1.42 0.00687 J 0.00236 165 ND A 0.00424 166 128/166 42.876 1.19 (0.0208) J <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
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172 ND 0.0137 173 171/173 ND 0.00592 174 43.871 1.08 0.00958 J 0.00311 175 ND 0.00148	170		48.533	1.31	IJ	0.00954	0.00484
173 171/173 ND 0.00592 174 43.871 1.08 0.00958 J 0.00311 175 ND 0.00148		171/173					0.00592
174 43.871 1.08 0.00958 J 0.00311 175 ND 0.00148							
174 43.871 1.08 0.00958 J 0.00311 175 ND 0.00148	173	171/173			ND		0.00592
175 ND 0.00148			43.871	1.08			
	175				ND		0.00148
	176				ND		0.00219

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

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REPORT OF LABORATORY ANALYSIS

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Report No.... 10654073

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Pace Analytical Mother

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
177		44.340	0.93	0.00544 J		0.00327
178				ND		0.00221
179		39.271	0.93	0.00398 J		0.00236
180	180/193	47.258	0.99	0.0175 J		0.00559
181				ND A		0.00268
182				ND		0.00252
183	183/185	43.636	0.89	0.00567 J		0.00553
184				ND		0.00203
185	183/185	43.636	0.89	(0.00567) J		0.00553
186				ND		0.00153
187		43.010	0.96	0.00883 J		0.00319
188				ND		0.00242
189				ND		0.00211
190				ND		0.00248
191				ND		0.00213
192				ND		0.00242
193	180/193	47.258	0.99	(0.0175) J		0.00559
194				ND		0.00183
195				ND		0.00168
196				ND		0.00170
197	197/200			ND		0.00460
198	198/199	49.237	0.97	0.00315 J		0.00277
199	198/199	49.237	0.97	(0.00315) J		0.00277
200	197/200			ND		0.00460
201				ND		0.00141
202				ND		0.00226
203		50.125	0.96	0.00196 J		0.00177
204				ND		0.00164
205				ND		0.00193
206				ND		0.00375
207				ND		0.00224
208				ND		0.00219
209				ND	~~~	0.0168

Conc ≈ Concentration

EML =Method Reporting/Quantitation Limit (1668A)

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A = Limit of Detection based on signal to noise (EDL)

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG1-202305 40262368007 P230529B_08

 Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	0.0729	
Total Tetrachloro Biphenyls	0.557	
Total Pentachloro Biphenyls	0.799	
Total Hexachloro Biphenyls	0.453	
Total Heptachloro Biphenyls	0.0510	
Total Octachloro Biphenyls	0.00510	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	1.94	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

Injected By Total Amount Extracted % Moisture BAL 1030 mL NA

Matrix Water
Dilution NA
Collected 05/16/2023 15:10

Dry Weight Extracted ICAL ID CCal Filename(s)

Method Blank ID

NA P230529B02 P230529B_01 BLANK-106282

Received 05/20/2023 18:45 Extracted 05/23/2023 12:15 Analyzed 05/30/2023 00:28

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-6-TrCB 13C-3,4,4'-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4',5-TeCB 13C-3,4,4',5-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',5-PeCB 13C-2,2',4,4',5,5'-HxCB 13C-3,3',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 169 188 189 202 205 206 208 209	10.137 12.964 13.269 20.404 17.122 28.208 20.751 35.362 35.934 26.909 39.556 38.918 38.013 42.725 32.979 45.816 44.642 49.103 38.918 51.676 44.407 54.284 56.051 57.689	2.99 3.09 1.56 1.56 1.02 1.01 0.78 0.79 0.80 1.58 1.62 1.57 1.58 1.56 1.50 1.23 1.23 1.27 1.24 1.02 1.04 0.91 0.90 0.80 0.80 0.74	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.48 1.61 2.23 1.80 2.23 1.32 1.52 1.38 1.32 1.82 1.09 1.11 1.12 1.11 0.910 2.47 2.22 1.17 1.25 2.33 1.49 1.71 1.80 2.04 2.18 2.11	74 80 112 90 112 66 76 69 66 91 55 56 55 46 124 55 58 62 116 74 85 90 102 109 105
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.981 42.021	1.04 1.53 1.06	2.0 2.0 2.0	1.28 1.57 1.94	64 78 97
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.751 25.841 33.181 41.568 53.810	1.56 0.78 1.53 1.25 0.90	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses * = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

		_		Concentration	EMPC	EML
IUPAC	Co-elutions	RT	Ratio	ng/L	ng/L	ng/L
1		10.159	2.89	0.225 J		0.00540
2				ND		0.00492
3		12.986	1.30	IJ	0.0184	0.00426
4		13.292	1.43	1.24 A		0.0186
5				ND A		0.00550
6		16.259	1.51	0.175 J		0.00908
7		15.983	1.53	0.0738 J		0.00900
8		16.790	1.40	0.0883 J		0.0119
9		15.773	1.45	0.0300 JA		0.00479
10		13.529	1.63	0.0195 JA		0.0125
11		•==		ND		0.141
12	12/13	20.017	1.48	0.0108 JA		0.00514
13	12/13	20.017	1.48	(0.0108) JA		0.00514
14				` NĎ A		0.00495
15		20.404	1.50	0.108 J		0.00585
16		20.360	0.96	0.0436 J		0.00596
17		19.851	0.99	1.08		0.00500
18	18/30	19.365	1.01	0.275 J		0.0110
19		17.143	1.03	0.935		0.00807
20	20/28	23.861	0.99	0.450 J		0.0176
21	21/33	24.124	1.00	0.0328 J		0.0127
22		24.573	1.03	0.0295 J		0.00734
23				ND A		0.00240
24				ND A		0.00192
25		23.180	1.03	0.641		0.00277
26	26/29	22.917	1.05	1.22		0.00443
27		20.084	1.00	0.130 J		0.00196
28	20/28	23.861	0.99	(0.450) J		0.0176
29	26/29	22.917	1.05	`(1.22)		0.00443
30	18/30	19.365	1.01	(0.275) J		0.0110
31		23.536	1.02	`0.23Ó J		0.0171
32		20.968	1.02	0.444		0.00709
33	21/33	24.124	1.00	(0.0328) J		0.0127
34		22.422	1.14	`0.0264´ JA		0.00239
35		27.790	0.92	0.00465 J		0.00310
36				ND A		0.00224
37		28.254	1.19	0.0224 J		0.00409
38				ND A		0.00226
39				ND A		0.00219
40	40/41/71	28.069	0.77	0.913 J		0.00786
41	40/41/71	28.069	0.77	(0.913) J		0.00786
42		27.527	0.79	0.509		0.00426
43	43/73	26.042	0.74	0.172 J		0.00379
44	44/47/65	27.017	0.77	2.73		0.0181
				-		

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

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REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

IUPAC	Co-elutions	- RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.046	0.75	0.725 J		0.00558
46		24.294	0.74	0.224 J		0.00221
47	44/47/65	27.017	0.77	(2.73)		0.0181
48	44/47/00	26.723	0.85	0.0166 J		0.00283
49	49/69	26.413	0.78	3.84		0.00654
50	50/53	23.211	0.73	0.982		0.00368
50 51	45/51	24.046	0.77	(0.725) J		0.00558
52	45/51					
	50/50	25.872	0.78	5.10	***	0.0161
53	50/53	23.211	0.77	(0.982)		0.00368
54		20.767	0.79	0.0849 J		0.00156
55				ND	*	0.00209
56		32.097	0.73	0.0926 J		0.00982
57		29.978	0.77	0.173 JA		0.00183
58		30.226	0.81	0.0216 JA		0.00203
59	59/62/75	27.388	0.75	0.163 J		0.00403
60		32.330	0.71	0.0113 J		0.00333
61	61/70/74/76	30.999	0.77	0.865 J		0.0312
62	59/62/75	27.388	0.75	(0.163) J		0.00403
63		30.690	0.84	0.0958 JA		0.00192
64		28.301	0.78	0.323 J		0.00544
65	44/47/65	27.017	0.77	(2.73)		0.0181
66	7.11.71.00	31.386	0.73	0.636 J		0.0213
67		30.396	0.80	0.0627 J		0.00219
68		29.514	0.87	0.128 J		0.00244
69	49/69	26.413	0.78	(3.84)		0.00654
70	61/70/74/76	30.999	0.78	(0.865) J		0.0034
71	40/41/71	28.069	0.77	(0.803) J		0.00786
72	40/4 1// 1	29.205	0.77	0.913) J 0.178 JA		0.00780
73	40/70					
	43/73	26.042	0.74	(0.172) J		0.00379
74 75	61/70/74/76	30.999	0.77	(0.865) J		0.0312
75 75	59/62/75	27.388	0.75	(0.163) J		0.00403
76	61/70/74/76	30.999	0.77	(0.865) J		0.0312
77		35.950	0.72	0.0351 J		0.00258
78				ND		0.00225
79		34.341	0.67	0.0276 J		0.00227
80				ND		0.00207
81		35.347	0.80	0.00194 JA		0.00175
82		35.594	1.55	0.126 J		0.00250
83		33.691	1.51	0.345 JA		0.00251
84		31.247	1.50	0.864		0.0129
85	85/116/117	35.099	1.60	0.446 J		0.00505
86	86/87/97/108/119/125	34.341	1.51	1.57 J		0.0148
87	86/87/97/108/119/125	34.341	1.51	(1.57) J		0.0148
88	88/91	31.030	1.56	0.832 J		0.00480
	00.01	01.000	1.00	0.002 0		0.00100

Conc = Concentration

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008

40262368008 P230529B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89		31.742	1.79	IJ	0.0127	0.00304
90	90/101/113	33.211	1.53	2.85		0.0116
91	88/91	31.030	1.56	(0.832) J		0.00480
92		32.593	1.50	1.52		0.00381
93	93/98/100/102	30.365	1.52	0.315 J		0.00550
94		29.622	1.56	0.158 JA		0.00233
95		30.086	1.53	2.86		0.00846
96		27.311	1.41	0.0529 J		0.00306
97	86/87/97/108/119/125	34.341	1.51	(1.57) J		0.0148
98	93/98/100/102	30.365	1.52	(0.315) J		0.00550
99		33.830	1.56	1.31		0.00575
100	93/98/100/102	30.365	1.52	(0.315) J		0.00550
101	90/101/113	33.211	1.53	(2.85)		0.0116
102	93/98/100/102	30.365	1.52	(0.315) J		0.00550
103		29.406	1.56	0.122 JA		0.00197
104		26.924	1.49	0.00532 J		0.00149
105		39.590	1.51	0.472 J		0.00552
106				ND A		0.00290
107	107/124	37.678	1.50	0.0611 JA		0.00318
108	86/87/97/108/119/125	34.341	1.51	(1.57) J		0.0148
109	55.57,677,100.1107.120	37.929	1.51	0.245 JA		0.00299
110	110/115	35.269	1.55	4.27		0.0126
111		35.996	1.63	0.0146 J		0.00199
112				ND		0.00172
113	90/101/113	33.211	1.53	(2.85)		0.0116
114	00.101.110	38.918	1.76	0.0122 JA		0.00290
115	110/115	35.269	1.55	(4.27)		0.0126
116	85/116/117	35.099	1.60	(0.446) J		0.00505
117	85/116/117	35.099	1.60	(0.446) J		0.00505
118	00/110/111	38.382	1.51	1.58		0.00871
119	86/87/97/108/119/125	34.341	1.51	(1.57) J		0.0148
120	00/01/01/100/110/120	36.491	1.56	0.0306 J		0.00166
121		32.221	1.30	IJA	0.00721	0.00161
122		38.734	1.51	0.0152 JA	0.00721	0.00338
123		38.047	1.49	0.0132 JA 0.0236 JA		0.00330
124	107/124	37.678	1.50	(0.0611) JA		0.00317
125	86/87/97/108/119/125	34.341	1.51	(0.0011) JA (1.57) J		0.00318
126	33/3//3//130/119/123	42.742	1.33	0.00696 JA		0.00295
127		42.742	1.55	ND A		0.00299
128	128/166	42.876	1.31	0.353 J		0.00299
129	129/138/163	41.585	1.25	1.97		0.00424
130	120/100/100	40.914	1.23	0.186 JA		0.00562
131		38.030	0.95	0.166 JA IJA	0.0240	0.00502
132		38.483	1.18	0.912 A	0.0240	0.00535
132		30.403	1.10	U.912 A		0.00000

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

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RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133		39.002	1.37	0.0813 JA		0.00506
134	134/143	37.410	1.27	0.205 JA		0.00578
135	135/151	36.228	1.28	1.02		0.00505
136		33.722	1.18	0.401 J		0.00279
137		41.149	1.17	0.0997 JA		0.00525
138	129/138/163	41.585	1.25	(1.97)		0.0106
139	139/140	37.828	1.24	0.0578 JA		0.00487
140	139/140	37.828	1.24	(0.0578) JA		0.00487
141		40.512	1.25	` 0.226 JA		0.00508
142				ND A		0.00520
143	134/143	37.410	1.27	(0.205) JA		0.00578
144		36.832	1.17	0.0565 J		0.00203
145				ND		0.00196
146		39.673	1.29	0.368 JA		0.00441
147	147/149	37.191	1.22	2.06		0.00875
148		35.656	1.27	0.0176 J		0.00228
149	147/149	37.191	1.22	(2.06)		0.00875
150		33.351	1.23	0.0146 J		0.00127
151	135/151	36.228	1.28	(1.02)		0.00505
152		33.211	1.32	0.00960 J		0.00207
153	153/168	40.311	1.27	1.35		0.00751
154		36.538	1.34	0.0743 J		0.00171
155				ND		0.00150
156	156/157	45.833	1.22	0.263 J		0.00434
157	156/157	45.833	1.22	(0.263) J		0.00434
158		42.004	1.26	0.165 JA		0.00295
159		43.837	1.07	0.00890 J		0.00273
160				ND A		0.00346
161				ND A		0.00372
162		44.156	1.16	0.00766 JA		0.00257
163	129/138/163	41.585	1.25	(1.97)		0.0106
164		41.266	1.27	Ò.136 JA		0.00338
165		39.388	1.55	IJA	0.00686	0.00409
166	128/166	42.876	1.31	(0.353) J	***	0.00424
167		44.659	1.14	0.084Ź JA		0.00262
168	153/168	40.311	1.27	(1.35)		0.00751
169				NĎ A		0.00272
170		48.533	1.03	0.249 J		0.00484
171	171/173	44.961	1.04	0.0829 J		0.00592
172		46.587	0.99	0.0473 J		0.0137
173	171/173	44.961	1.04	(0.0829) J		0.00592
174		43.837	1.07	0.227 J		0.00312
175		42.708	1.18	0.0116 J		0.00148
176		40.160	1.03	0.0392 J		0.00219
17.0		70.100	1.00	0.0002		0.00213

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REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

IUPAC	Cookutions	RT	Detie	Concentration	EMPC	EML
IUPAC	Co-elutions	K I	Ratio	ng/L	ng/L	ng/L
177		44.290	1.08	0.194 J		0.00327
178		42.038	0.93	0.0913 J		0.00221
179		39.254	1.01	0.153 J		0.00236
180	180/193	47.258	1.01	0.423 J		0.00560
181		44.726	1.03	0.00509 J		0.00267
182		43.195	1.05	0.00306 J		0.00252
183	183/185	43.636	1.05	0. 144 J		0.00554
184				ND		0.00203
185	183/185	43.636	1.05	(0.144) J		0.00554
186				ND		0.00153
187		42.977	1.04	0.3 4 9 J		0.00319
188				ND	***	0.00242
189		51.697	1.02	0.0109 J		0.00211
190		49.069	0.98	0.0539 J		0.00248
191		47.593	1.08	0.00974 J		0.00213
192				ND		0.00242
193	180/193	47.258	1.01	(0.423) J		0.00560
194		53.831	0.86	0.0966 J		0.00183
195		51. 4 82	1.01	0.0410 J		0.00168
196		49.924	0.89	0.0510 J		0.00170
197	197/200	46.419	1.10	IJ	0.0183	0.00461
198	198/199	49.237	0.82	0.135 J		0.00277
199	198/199	49.237	0.82	(0.135) J		0.00277
200	197/200	46.419	1.10	IJ	(0.0183)	0.00461
201		45.380	0.70	IJ	0.0113	0.00141
202		44.441	0.88	0.0260 J		0.00227
203		50.125	0.94	0.0699 J		0.00178
204				ND		0.00165
205		54.284	0.97	0.00525 J		0.00194
206		56.073	0.93	IJ	0.0302	0.00376
207		52.193	0.70	0.00517 J		0.00225
208		51.201	0.56	IJ	0.00559	0.00219
209				ND		0.0168

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU3-202305 40262368008 P230529B_09

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	0.225	
Total Dichloro Biphenyls	1.74	
Total Trichloro Biphenyls	5.57	
Total Tetrachloro Biphenyls	18.1	
Total Pentachloro Biphenyls	20.1	
Total Hexachloro Biphenyls	10.1	
Total Heptachloro Biphenyls	2.09	
Total Octachloro Biphenyls	0.425	
Total Nonachloro Biphenyls	0.00517	
Decachloro Biphenyls	ND	
Total PCBs	58.4	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612-607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

ace Analytical

NR-SW-OU2-202305 40262368009 P230529B_10 BAL

Total Amount Extracted % Moisture

1040 mL Matrix NA Dilution NA Collected

Dry Weight Extracted **ICAL ID** CCal Filename(s)

Method Blank ID

05/16/2023 16:15 05/20/2023 18:45 P230529B02 Received P230529B_01 Extracted 05/23/2023 12:15 BLANK-106282 Analyzed 05/30/2023 01:31

Water

NA

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-6-TrCB 13C-3,4,4'-TrCB 13C-2,2',6,6'-TeCB 13C-3,3',4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-4,3',4,4',5,5'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HyCB 13C-2,2',3,4',5,5'-HpCB 13C-2,3',4,4',5,5'-HpCB 13C-2,3',3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB 13C-2,2',3,3',4,4',5,5',6,6'-NoCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 167 169 188 189 202 205 206 208 209	10.159 12.975 13.280 20.404 17.132 28.207 20.750 35.361 35.934 26.908 39.572 38.918 38.365 38.029 42.742 32.994 45.816 44.642 49.102 38.918 51.697 44.407 54.283 56.050 51.201 57.689	2.87 3.04 1.49 1.52 0.98 1.05 0.80 0.77 0.81 1.57 1.61 1.58 1.61 1.49 1.28 1.29 1.28 1.27 1.04 1.06 0.91 0.89 0.78 0.79 0.68	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.58 1.67 2.31 1.75 2.39 1.25 1.50 1.35 1.28 1.82 1.07 1.02 1.09 1.08 0.901 2.42 2.10 1.13 1.21 2.28 1.37 1.64 1.74 1.96 2.04 2.13	79 84 115 87 120 63 75 68 64 91 53 51 54 45 121 52 56 60 114 69 82 87 98 102 106
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.845 35.996 42.020	1.03 1.55 1.04	2.0 2.0 2.0	1.16 1.50 1.75	58 75 87
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.762 25.856 33.195 41.568 53.809	1.54 0.80 1.58 1.24 0.87	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1		10.170	2.90	0.290		0.00535
2				ND		0.00487
3		12.986	2.04	IJ	0.0228	0.00422
4		13.303	1.47	1.81 A		0.0178
5		16.657	0.93	IJA	0.00604	0.00574
6		16.270	1.47	0.194 J		0.00899
7		15.993	1.58	0.0941 J		0.00891
8		16.800	1.53	0.161 J		0.0117
9		15.762	1.32	IJA	0.00919	0.00500
10				ND A		0.0125
11				ND /		0.139
12	12/13	20.017	1.61	0.0171 JA		0.00537
13	12/13	20.017	1.61	(0.0171) JA		0.00537
14	127.10	20.017		ND A		0.00517
15		20.426	1.60	0.244 J		0.00579
16		20.360	1.08	0.0798 J		0.00579
17		19.840	1.03	1.88		0.00390
18	18/30	19.365	1.02	0.323 J		0.0109
19	10/30	17.154	0.99	1.56		0.00799
20	20/28	23.860	1.02	0.753 J		0.00799
21	21/33	24.061	1.02	0.753 J 0.0369 J		0.0174
22	21/33	24.556	0.93			
23		24.000				0.00726
23 24				ND A ND		0.00206
2 4 25		23.195	1.01			0.00183
26	26/29			0.638		0.00274
27	20/29	22.916 20.094	0.99	1.24		0.00439
	20/20		1.01	0.103 J		0.00194
28	20/28	23.860	1.02	(0.753) J		0.0174
29	26/29	22.916	0.99	(1.24)		0.00439
30	18/30	19.365	1.02	(0.323) J		0.0109
31		23.535	1.04	0.288 J		0.0169
32	04/00	20.983	1.01	0.784		0.00702
33	21/33	24.061	1.08	(0.0369) J		0.0126
34		22.421	1.02	0.0220 JA		0.00205
35		27.805	1.31	IJ	0.00479	0.00307
36				ND		0.00194
37		28.223	1.11	0.0443 J		0.00404
38				ND A		0.00194
39				ND A		0.00188
40	40/41/71	28.068	0.78	1.41 J		0.00778
41	40/41/71	28.068	0.78	(1.41) J		0.00778
42		27.527	0.76	0.748		0.00422
43	43/73	26.042	0.74	0.237 J		0.00376
44	44/47/65	27.031	0.76	4.27	***	0.0179

Conc = Concentration

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REPORT OF LABORATORY ANALYSIS

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Report No.....10654073

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

45 45/51 24.061 0.78 1.25 0.005 46 24.309 0.79 0.337 J 0.002 47 44/47/65 27.031 0.76 (4.27) 0.01 48 26.722 0.81 0.0395 J 0.002 49 49/69 26.413 0.76 4.71 0.006 50 50/53 23.210 0.77 1.32 0.003 51 45/51 24.061 0.78 (1.25) 0.005 52 25.871 0.77 6.03 0.01 53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	/L
46 24.309 0.79 0.337 J 0.002 47 44/47/65 27.031 0.76 (4.27) 0.01 48 26.722 0.81 0.0395 J 0.002 49 49/69 26.413 0.76 4.71 0.006 50 50/53 23.210 0.77 1.32 0.003 51 45/51 24.061 0.78 (1.25) 0.005 52 25.871 0.77 6.03 0.01 53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	52
47 44/47/65 27.031 0.76 (4.27) 0.01 48 26.722 0.81 0.0395 J 0.002 49 49/69 26.413 0.76 4.71 0.006 50 50/53 23.210 0.77 1.32 0.003 51 45/51 24.061 0.78 (1.25) 0.005 52 25.871 0.77 6.03 0.01 53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	19
48 26.722 0.81 0.0395 J 0.002 49 49/69 26.413 0.76 4.71 0.006 50 50/53 23.210 0.77 1.32 0.003 51 45/51 24.061 0.78 (1.25) 0.005 52 25.871 0.77 6.03 0.01 53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	
49 49/69 26.413 0.76 4.71 0.006 50 50/53 23.210 0.77 1.32 0.003 51 45/51 24.061 0.78 (1.25) 0.01 52 25.871 0.77 6.03 0.01 53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	
50 50/53 23.210 0.77 1.32 0.003 51 45/51 24.061 0.78 (1.25) 0.005 52 25.871 0.77 6.03 0.01 53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	
51 45/51 24.061 0.78 (1.25) 0.005 52 25.871 0.77 6.03 0.01 53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	
52 25.871 0.77 6.03 0.01 53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	
53 50/53 23.210 0.77 (1.32) 0.003 54 20.766 0.74 0.144 J 0.001	
54 20.766 0.74 0.144 J 0.001	
55 ND A 0.002	
56 32.082 0.79 0.139 J 0.009	
57 29.962 0.74 0.158 JA 0.002	
58 30.209 0.81 0.0373 JA 0.002	
59 59/62/75 27.387 0.79 0.216 J 0.003	
60 32.298 1.02 IJ 0.0150 0.003	
61 61/70/74/76 31.014 0.79 1.44 J 0.03	
62 59/62/75 27.387 0.79 (0.216) J 0.003	
63 30.689 0.79 0.142 JA 0.002	
64 28.300 0.78 0.444 J 0.005	
65 44/47/65 27.031 0.76 (4.27) 0.01	
66 31.385 0.76 1.11 0.02	
67 30.411 0.79 0.0753 JA 0.002	
68 29.529 0.78 0.163 JA 0.002	
69 49/69 26.413 0.76 (4.71) 0.006	
70 61/70/74/76 31.014 0.79 (1.44) J 0.03	
71 40/41/71 28.068 0.78 (1.41) J 0.007	
72 29.204 0.77 0.204 JA 0.002	
73 43/73 26.042 0.74 (0.237) J 0.003	
74 61/70/74/76 31.014 0.79 (1.44) J 0.03	
75 59/62/75 27.387 0.79 (0.216) J 0.003	
76 61/70/74/76 31.014 0.79 (1.44) J 0.03	
77 35.965 0.83 0.0601 JA 0.002	
78 ND A 0.002	
79 34.371 0.79 0.0621 JA 0.002	
80 ND A 0.002	
81 35.346 0.84 0.00429 JA 0.002	
82 35.609 1.61 0.184 J 0.002	
83 33.706 1.60 0.434 J 0.002	
84 31.246 1.54 1.17 0.01	
85 85/116/117 35.114 1.63 0.645 J 0.005	
86 86/87/97/108/119/125 34.356 1.57 2.45 J 0.01	
87 86/87/97/108/119/125 34.356 1.57 (2.45) J 0.01	
88 88/91 31.029 1.52 1.16 0.004	

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits

RT = Retention Time

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009

40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89		31.772	1.50	0.0216 J		0.00301
90	90/101/113	33.211	1.57	4.55		0.0115
91	88/91	31.029	1.52	(1.16)		0.00475
92		32.592	1.56	`1.89́		0.00378
93	93/98/100/102	30.349	1.54	0.444 J		0.00544
94		29.622	1.56	0.206 J		0.00182
95		30.101	1.50	3.99		0.00838
96		27.310	1.51	0.0758 J		0.00303
97	86/87/97/108/119/125	34.356	1.57	(2.45) J		0.0146
98	93/98/100/102	30.349	1.54	(0.444) J		0.00544
99		33.845	1.58	2.19		0.00569
100	93/98/100/102	30.349	1.54	(0.444) J		0.00544
101	90/101/113	33.211	1.57	(4.55)		0.0115
102	93/98/100/102	30.349	1.54	(0.444) J		0.00544
103		29.405	1.54	0.147 J		0.00189
104		26.939	1.24	IJ	0.00731	0.00147
105		39.589	1.48	0.765		0.00546
106				ND A		0.00231
107	107/124	37.677	1.46	0.107 JA		0.00253
108	86/87/97/108/119/125	34.356	1.57	(2.45) J		0.0146
109		37.929	1.58	0.375 JA		0.00238
110	110/115	35.269	1.57	6.01		0.0125
111		36.011	1.69	0.0172 J		0.00197
112				ND		0.00170
113	90/101/113	33.211	1.57	(4.55)		0.0115
114		38.951	1.51	0.0280 JA		0.00242
115	110/115	35.269	1.57	(6.01)		0.0125
116	85/116/117	35.114	1.63	(0.645) J		0.00500
117	85/116/117	35.114	1.63	(0.645) J		0.00500
118		38.381	1.46	2.85		0.00863
119	86/87/97/108/119/125	34.356	1.57	(2.45) J		0.0146
120		36.506	1.48	0.0420 J		0.00164
121		32.236	1.65	0.0103 J		0.00125
122		38.717	1.51	0.0233 JA		0.00270
123		38.063	1.50	0.0373 JA		0.00250
124	107/124	37.677	1.46	(0.107) JA		0.00253
125	86/87/97/108/119/125	34.356	1.57	(2.45) J		0.0146
126		42.742	1.46	0.00824 JA		0.00260
127				ND A	***	0.00238
128	128/166	42.893	1.21	0.546 J		0.00420
129	129/138/163	41.601	1.23	2.99		0.0105
130	,	40.931	1.22	0.263 JA		0.00480
131		38.029	1.31	0.0461 JA		0.00509
132		38.499	1.22	1.33 A		0.00457

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A)

EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133		39.019	1.28	0.103 JA		0.00433
134	134/143	37.409	1.11	0.285 JA		0.00494
135	135/151	36.228	1.24	1.40		0.00500
136		33.722	1.27	0.565		0.00276
137		41.148	1.21	0.148 JA		0.00449
138	129/138/163	41.601	1.23	(2.99)		0.0105
139	139/140	37.828	1.18	0.0844 J		0.00424
140	139/140	37.828	1.18	(0.0844) J		0.00424
141	100,110	40.511	1.33	0.382 JA		0.00434
142				ND A		0.00445
143	134/143	37.409	1.11	(0.285) JA		0.00494
144	104/140	36.831	1.27	0.104 J		0.00201
145				ND		0.00194
146		39.689	1.22	0.531 A		0.00377
147	147/149	37.208	1.23	2.92		0.00866
148	1477140	35.640	1.14	0.0235 J		0.00226
149	147/149	37.208	1.14	(2.92)		0.00226
150	1417143	33.396	1.23	0.0200 J		0.00000
150	135/151	36.228	1.17	(1.40)		0.00128
152	133/131		1.40			0.00300
153	153/168	33.180				
	133/100	40.327	1.28	2.25		0.00744
154		36.521	1.28	0.0944 J		0.00169
155	450/457	45.040	4.00	ND		0.00148
156	156/157	45.816	1.26	0.413 J	~~~	0.00429
157	156/157	45.816	1.26	(0.413) J		0.00429
158		42.004	1.22	0.254 JA		0.00252
159		43.870	1.34	0.0107 J		0.00270
160				ND A		0.00296
161				ND A		0.00318
162		44.172	1.40	0.0117 J		0.00224
163	129/138/163	41.601	1.23	(2.99)		0.0105
164		41.266	1.26	0.225 JA		0.00289
165		39.421	1.56	IJA	0.00710	0.00350
166	128/166	42.893	1.21	(0.546) J		0.00420
167		44.659	1.23	0.130 J		0.00207
168	153/168	40.327	1.28	(2.25)		0.00744
169		49.102	1.95	IJA	0.00277	0.00193
170		48.532	1.02	0.370 J		0.00479
171	171/173	44.960	1.01	0.128 J		0.00587
172		46.604	1.14	0.0670 J		0.0136
173	171/173	44.960	1.01	(0.128) J		0.00587
174		43.854	1.05	`0.355´ J		0.00309
175		42.708	1.00	0.0161 J		0.00146
176		40.193	0.95	0.0563 J		0.00217

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
			 			
177		44.306	1.05	0.273 J		0.00324
178		42.054	1.08	0.121 J		0.00219
179	100/100	39.287	0.97	0.209 J		0.00234
180	180/193	47.257	0.99	0.669 J		0.00554
181		44.725	0.88	0.0107 J		0.00265
182		43.194	1.37	IJ	0.00370	0.00249
183	183/185	43.619	1.06	0.217 J		0.00548
184	400440#			ND		0.00201
185	183/185	43.619	1.06	(0.217) J		0.00548
186				ND		0.00151
187		42.993	1.06	0.504		0.00316
188				ND		0.00240
189		51.718	1.19	0.0165 JA		0.00268
190		49.085	1.08	0.0833 J		0.00245
191		47.626	0.85	JJ	0.0124	0.00211
192				ND		0.00240
193	180/193	47.257	0.99	(0.669) J		0.00554
194		53.831	0.90	0.140 J		0.00181
195		51.460	0.85	0.0643 JA		0.00180
196		49.924	0.93	0.0697 J		0.00169
197	197/200	46.402	1.02	0.0301 J		0.00456
198	198/199	49.270	0.85	0.190 J		0.00274
199	198/199	49.270	0.85	(0.190) J		0.00274
200	197/200	46.402	1.02	(0.0301) J		0.00456
201		45.380	0.85	0.0222 J		0.00140
202		44.424	0.88	0.0350 J		0.00224
203		50.125	0.86	0.0965 J		0.00176
204				ND		0.00163
205		54.326	1.00	0.00845 J		0.00192
206		56.094	0.82	0.0396 J		0.00372
207		52.193	0.85	0.00673 J		0.00222
208		51.223	0.98	IJ	0.00804	0.00217
209				ND		0.0167

Conc = Concentration

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU2-202305 40262368009 P230529B_10

Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	0.290	
Total Dichloro Biphenyls	2.52	
Total Trichloro Biphenyls	7.81	
Total Tetrachloro Biphenyls	24.7	
Total Pentachloro Biphenyls	29.8	
Total Hexachloro Biphenyls	15.2	
Total Heptachloro Biphenyls	3.09	
Total Octachloro Biphenyls	0.655	
Total Nonachloro Biphenyls	0.0463	
Decachloro Biphenyls	ND	
Total PCBs	84.1	

ND = Not Detected

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Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 ace Analytica Tel: 612-607-1700

Matrix

Dilution

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

NR-SW-OU1-202305 40262368010 P230529B_11 BAL

Total Amount Extracted % Moisture

1040 mL NA

Water NA

Fax: 612-607-6444

Dry Weight Extracted ICAL ID CCal Filename(s) Method Blank ID

NA P230529B02 P230529B_01 BLANK-106282

Collected 05/16/2023 17:00 Received 05/20/2023 18:45 Extracted 05/23/2023 12:15 Analyzed 05/30/2023 02:34

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-4-MoCB 13C-2,2'-DiCB 13C-2,2'-B-TrCB 13C-2,2',6,6'-TeCB 13C-3,4,4'-TrCB 13C-3,4,4',5-TeCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HyCB 13C-2,2',3,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5'-HpCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 169 188 189 202 205 206 208	10.103 12.941 13.247 20.382 17.110 28.208 20.736 35.347 35.935 26.893 39.573 38.902 38.366 38.013 42.726 32.979 45.816 44.642 49.103 38.919 51.654 44.391 54.284 56.051 51.202	3.07 3.04 1.64 1.55 1.02 1.05 0.80 0.78 0.76 1.66 1.55 1.61 1.55 1.24 1.27 1.22 1.26 1.04 1.03 0.87 0.89 0.76	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.54 1.71 2.36 1.85 2.43 1.24 1.54 1.37 1.36 1.69 1.05 1.03 1.05 1.04 0.871 2.49 2.15 1.13 1.21 2.40 1.43 1.83 1.73 1.99 2.17	77 86 118 92 121 62 77 69 68 85 52 52 53 52 54 124 54 57 61 120 72 91 87 99 109
13C-DeCB Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB	209 28 111	57.689 23.830 35.981	0.69 1.05 1.54	2.0 2.0 2.0	2.17 1.18 1.45	108 59 72
13C-2,2',3,3',5,5',6-HpCB	178	42.021	1.04	2.0	1.80	90
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.740 25.841 33.181 41.552 53.810	1.59 0.79 1.54 1.25 0.89	2.0 2.0 2.0 2.0 2.0	NA NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

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Pace Analytical Metho

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1		10.125	2.69	0.0110 J		0.00536
2				ND		0.00488
3				ND		0.00423
4		13.269	1.34	0.125 JA		0.0158
5				ND A		0.00468
6		16.237	1.42	0.0120 J		0.00901
7				ND		0.00894
8		16.779	1.54	0.0171 J		0.0118
9				ND A		0.00408
10				ND A		0.0111
11				ND		0.140
12	12/13			ND		0.00505
13	12/13			ND		0.00505
14				ND A		0.00422
15		20.415	1.38	0.0574 J		0.00580
16		20.349	0.98	0.0131 J		0.00592
17		19.840	1.00	0.151 J		0.00496
18	18/30	19.332	1.05	0.0602 J		0.0110
19		17.132	1.00	0.152 J		0.00801
20	20/28	23.861	1.01	0.116 J		0.0175
21	21/33			ND		0.0126
22		24.541	1.14	0.0118 J		0.00728
23				ND A		0.00194
24				ND		0.00184
25		23.180	1.03	0.0671 J		0.00275
26	26/29	22.902	1.01	0.130 J		0.00440
27		20.084	1.01	0.0156 J		0.00194
28	20/28	23.861	1.01	(0.116) J		0.0175
29	26/29	22.902	1.01	(0.130) J		0.00440
30	18/30	19.332	1.05	(0.0602) J		0.0110
31		23.520	1.02	0.0544 J		0.0169
32	04/00	20.968	1.07	0.0737 J		0.00703
33	21/33			ND		0.0126
34				ND A		0.00194
35				ND		0.00307
36				ND		0.00194
37				ND		0.00406
38				ND A		0.00183
39	40144/74			ND A		0.00178
40	40/41/71	28.053	0.77	0.188 J	***	0.00780
41	40/41/71	28.053	0.77	(0.188) J		0.00780
42	40/70	27.527	0.77	0.133 J		0.00423
43	43/73	26.027	0.71	0.0240 J		0.00377
44	44/47/65	27.017	0.76	0.792 J	***	0.0179

Conc = Concentration

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Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51	24.046	0.74	0.146 J		0.00553
46		24.294	0.74	0.0536 J		0.00219
47	44/47/65	27.017	0.76	(0.792) J		0.0179
48		26.723	0.84	0.0131 J		0.00281
49	49/69	26.398	0.77	0.842 J		0.00650
50	50/53	23.195	0.74	0.214 J		0.00365
51	45/51	24.046	0.74	(0.146) J		0.00553
52		25.872	0.77	1.57		0.0160
53	50/53	23.195	0.74	(0.214) J		0.00365
54		20.767	0.72	0.0162 J		0.00155
55				ND		0.00208
56		32.082	0.69	0.0377 J		0.00974
57		29.962	0.75	0.0106 JA		0.00179
58		30.194	1.07	IJA	0.00370	0.00199
59	59/62/75	27.388	0.75	0.0287 J		0.00400
60		32.314	0.85	0.00702 J		0.00331
61	61/70/74/76	31.014	0.77	0.340 J		0.0309
62	59/62/75	27.388	0.75	(0.0287) J		0.00400
63	33.32.13	30.659	0.82	0.0147 JA		0.00188
64		28.285	0.77	0.126 J		0.00540
65	44/47/65	27.017	0.76	(0.792) J		0.0179
66		31.370	0.66	0.204 J		0.0211
67		30.396	0.82	0.00631 J		0.00217
68		29.499	0.79	0.0163 J		0.00242
69	49/69	26.398	0.77	(0.842) J	7-7	0.00650
70	61/70/74/76	31.014	0.77	(0.340) J		0.0309
71	40/41/71	28.053	0.77	(0.188) J		0.00780
72		29.205	0.67	0.0202 JA		0.00188
73	43/73	26.027	0.71	(0.0240) J		0.00377
74	61/70/74/76	31.014	0.77	(0.340) J		0.0309
75	59/62/75	27.388	0.75	(0.0287) J		0.00400
76	61/70/74/76	31.014	0.77	(0.340) J		0.0309
77		35.996	0.82	0.00839 J		0.00256
78				ND		0.00223
79		34.341	0.80	0.0113 J		0.00225
80				ND V		0.00206
81				ND A		0.00182
82		35.594	1.68	0.0862 J		0.00248
83		33.676	1.38	0.0986 J		0.00240
84		31.231	1.43	0.309 J		0.0128
85	85/116/117	35.099	1.57	0.284 J		0.00502
86	86/87/97/108/119/125	34.434	1.52	0.829 J		0.0147
87	86/87/97/108/119/125	34.434	1.52	(0.829) J		0.0147
88	88/91	31.030	1.49	0.270 J		0.00477

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Report No.....10654073

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89		31.788	1.07	IJ	0.00417	0.00302
90	90/101/113	33.211	1.49	1.60		0.0115
91	88/91	31.030	1.49	(0.270) J		0.00477
92		32.593	1,49	`0.43Ó J		0.00379
93	93/98/100/102	30.349	1.63	0.0641 J		0.00546
94		29.622	1.62	0.0219 J		0.00182
95		30.086	1.57	1.33		0.00840
96		27.295	1.67	0.0108 J		0.00304
97	86/87/97/108/119/125	34.434	1.52	(0.829) J		0.0147
98	93/98/100/102	30.349	1.63	(0.0641) J		0.00546
99		33.830	1.50	1.06		0.00571
100	93/98/100/102	30.349	1.63	(0.0641) J		0.00546
101	90/101/113	33.211	1.49	(1.60)		0.0115
102	93/98/100/102	30.349	1.63	(0.0641) J		0.00546
103		29.421	1.50	0.0226 J		0.00189
104				ND		0.00147
105		39.590	1.44	0.159 J		0.00548
106				ND A		0.00265
107	107/124	37.678	1.54	0.0260 JA		0.00290
108	86/87/97/108/119/125	34.434	1.52	(0.829) J		0.0147
109	00,01,01,100,1101,120	37.913	1.58	0.0553 JA		0.00273
110	110/115	35.269	1.53	1.65		0.0125
111				ND		0.00198
112				ND		0.00171
113	90/101/113	33.211	1.49	(1.60)		0.0115
114	00.70.7770	38.919	1.10	IJA	0.00575	0.00270
115	110/115	35.269	1.53	(1.65)		0.0125
116	85/116/117	35.099	1.57	(0.284) J		0.00502
117	85/116/117	35.099	1.57	(0.284) J		0.00502
118	33.1.3.1.1	38.382	1.46	0.510 J		0.00865
119	86/87/97/108/119/125	34.434	1.52	(0.829) J		0.0147
120	33.3.1.31.7.33.1.13.7.23	36.492	1.22	J	0.00442	0.00165
121				ND	0.00112	0.00126
122		38.717	1.44	0.00652 JA		0.00309
123		38.030	1.67	0.0116 JA		0.00269
124	107/124	37.678	1.54	(0.0260) JA		0.00290
125	86/87/97/108/119/125	34.434	1.52	(0.829) J		0.0147
126	00/07/01/100/110/120			ND A		0.00275
127				ND A		0.00273
128	128/166	42.877	1.21	0.117 J		0.00273
129	129/138/163	41.585	1.30	0.732 J		0.0106
130	120/100/100	40.915	1.25	0.752 JA		0.00254
131		38.013	1.36	0.0332 3A 0.0146 J		0.00234
132		38.483	1.21	0.254 J		0.00273
102		30.403	1.41	0.234 3		0.00000

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical[™]

Tel: 612-607-1700 Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133		38.986	1.22	0.0161 J		0.00258
134	134/143	37.410	1.17	0.0582 J		0.00386
135	135/151	36.228	1.28	0.342 J		0.00502
136		33.722	1.18	0.117 J		0.00277
137		41.149	1.15	0.0478 J	***	0.00248
138	129/138/163	41.585	1.30	(0.732) J		0.0106
139	139/140	37.812	1.31	0.0263 J		0.00425
140	139/140	37.812	1.31	(0.0263) J		0.00425
141		40.495	1.24	0.116 J		0.00238
142			1.27	ND A		0.00235
143	134/143	37.410	1.17	(0.0582) J		0.00233
144	104/140	36.832	1.09	0.0298 J		0.00300
145		30.032	1.09	0.0298 3 ND		0.00202
146		39.674	1.20	0.114 J		
147	147/149					0.00246
	1477149	37.192	1.23	0.650 J		0.00869
148	4.47.44.40	35.625	1.27	0.00230 J		0.00227
149	147/149	37.192	1.23	(0.650) J		0.00869
150	4054454	33.382	1.84	IJ	0.00249	0.00126
151	135/151	36.228	1.28	(0.342) J		0.00502
152				ND		0.00206
153	153/168	40.311	1.19	0.638 J		0.00746
154		36.522	1.14	0.0175 J		0.00170
155				ND		0.00149
156	156/157	45.833	1.18	0.0680 J		0.00430
157	156/157	45.833	1.18	(0.0680) J		0.00430
158		41.988	1.23	0.0585 J		0.00250
159				ND		0.00271
160				ND		0.00250
161				ND		0.00180
162				ND		0.00225
163	129/138/163	41.585	1.30	(0.732) J		0.0106
164		41.250	1.27	Ò.0468 J		0.00234
165				ND		0.00200
166	128/166	42.877	1.21	(0.117) J		0.00421
167		44.659	1.21	0.0214 J		0.00208
168	153/168	40.311	1.19	(0.638) J		0.00746
169				ND A		0.00197
170		48.533	1.13	0.0513 J		0.00480
171	171/173	44.944	1.12	0.0315 J		0.00588
172	1. 1.110		1.12	0.0213 3 ND		0.0136
173	171/173	44.944	1.12	(0.0215) J		0.00588
174	17 17 17 0	43.838	1.02	0.0552 J		0.00309
175		43.656 42.659	2.13	0.0552 J J	0.00220	
176					0.00229	0.00147
170		40.143	1.22	IJ	0.00598	0.00217

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

IUPAÇ	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
	- CO GIGHTONIO		Itatio	ng/L	119/L	ng/L
177		44.307	1.05	0.0385 J		0.00325
178		42.038	0.95	0.0181 J		0.00219
179		39.271	0.89	0.0344 J		0.00234
180	180/193	47.258	1.09	0.0899 J		0.00555
181				ND		0.00265
182				ND		0.00250
183	183/185	43.620	1.16	0.0429 J		0.00550
184				ND		0.00202
185	183/185	43.620	1.16	(0.0429) J		0.00550
186				ND		0.00152
187		42.977	0.97	0.0878 J		0.00317
188				ND		0.00240
189				ND		0.00209
190		49.069	0.90	0.0114 J		0.00246
191				ND		0.00211
192				ND		0.00240
193	180/193	47.258	1.09	(0.0899) J		0.00555
194		53.853	0.79	0.0163 J		0.00181
195		51. 4 60	1.82	IJ	0.00447	0.00167
196		49.924	0.82	0.00871 J		0.00169
197	197/200			ND		0.00457
198	198/199	49.254	0.83	0.0221 J		0.00275
199	198/199	49.254	0.83	(0.0221) J		0.00275
200	197/200			ND		0.00457
201		45.380	1.08	IJ	0.00208	0.00140
202		44.424	0.88	0.00440 J		0.00225
203		50.109	1.16	IJ	0.0106	0.00176
204				ND		0.00163
205				ND		0.00192
206		56.073	0.70	0.00567 J		0.00373
207				ND		0.00223
208				ND		0.00217
209				ND		0.0167

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-OU1-202305 40262368010 P230529B_11

 Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	0.0110	
Total Dichloro Biphenyls	0.211	
Total Trichloro Biphenyls	0.845	
Total Tetrachloro Biphenyls	4.82	
Total Pentachloro Biphenyls	8.84	
Total Hexachloro Biphenyls	3.54	
Total Heptachloro Biphenyls	0.451	
Total Octachloro Biphenyls	0.0514	
Total Nonachloro Biphenyls	0.00567	
Decachloro Biphenyls	ND	
Total PCBs	18.8	

ND = Not Detected

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID Lab Sample ID Filename Injected By

NR-SW-BKG2-202305 40262368011 **CVS Total Amount Extracted** 1040 mL

% Moisture Dry Weight Extracted ICAL ID

CCal Filename(s) Method Blank ID

P230531B_08 NA NA P230531B02 P230531B_01 BLANK-106448

Matrix Water Dilution NA Collected

Received Extracted Analyzed

05/16/2023 17:40

05/20/2023 18:45 05/26/2023 11:40 06/01/2023 04:43

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes 13C-2-MoCB 13C-2-MoCB 13C-2-MoCB 13C-2-PoiCB 13C-2,2'-DiCB 13C-2,2',6-TrCB 13C-3,4,4'-TrCB 13C-3,4,4'-TrCB 13C-3,3',4,4'-TeCB 13C-2,2',4,6,6'-PeCB 13C-2,3',4,4'-PeCB 13C-2,3,4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,3',4,4',5-PeCB 13C-2,2',4,6,6'-HxCB 13C-2,2',4,4',6,6'-HxCB 13C-2,2',4,4',5,5'-HxCB 13C-2,2',3,4',5,5'-HxCB 13C-2,3',4,4',5,5'-HyCB 13C-2,3',3',4,4',5,5'-HpCB 13C-2,2',3,3',5,5',6,6'-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB 13C-2,2',3,3',4,4',5,5',6-OcCB	1 3 4 15 19 37 54 81 77 104 105 114 118 123 126 155 156/157 169 188 189 202 205 206 208 209	10.114 12.941 13.246 20.359 17.087 28.175 20.719 35.328 35.900 26.860 39.517 38.880 38.327 37.975 42.686 32.945 45.777 44.603 49.063 38.863 51.626 44.351 54.234 56.001 51.152 57.639	3.20 3.14 1.53 1.57 1.02 1.09 0.79 0.81 0.78 1.55 1.61 1.58 1.56 1.56 1.24 1.27 1.28 1.25 1.04 1.05 0.89 0.91 0.80 0.79	2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.09 1.35 1.33 1.53 1.43 1.39 1.13 1.44 1.39 1.37 1.35 1.38 1.29 1.33 2.57 1.34 1.21 1.46 1.52 1.41 1.33 1.25 1.38 1.20	55 67 66 76 72 70 57 72 70 66 70 68 68 69 64 66 64 67 61 73 76 71 67 62 69 60
Cleanup Standards 13C-2,4,4'-TrCB 13C-2,3,3',5,5'-PeCB 13C-2,2',3,3',5,5',6-HpCB	28 111 178	23.797 35.946 41.982	1.04 1.57 1.04	2.0 2.0 2.0	1.22 1.08 1.04	61 54 52
Recovery Standards 13C-2,5-DiCB 13C-2,2',5,5'-TeCB 13C-2,2',4,5,5'-PeCB 13C-2,2',3,4,4',5'-HxCB 13C-2,2',3,3',4,4',5,5'-OcCB	9 52 101 138 194	15.728 25.808 33.146 41.529 53.759	1.56 0.80 1.58 1.25 0.91	2.0 2.0 2.0 2.0 2.0	NA NA NA NA	NA NA NA NA

R = Recovery outside of Method 1668A control limits Nn = Value obtained from additional analyses

* = See Discussion X = Outside QC Limits RT = Retention Time I = Interference ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
1				ND		0.00535
2				ND		0.00487
3				ND		0.00422
4				ND		0.00721
5		16.767	1.08	IJA	0.00489	0.00442
6				ND		0.00899
7				ND		0.00891
8				ND		0.0117
9				ND A		0.00386
10				ND A		0.00389
11				ND		0.139
12	12/13			ND		0.00504
13	12/13	~~~		ND		0.00504
14				ND A		0.00395
15				ND		0.00579
16				ND		0.00590
17				ND		0.00495
18	18/30			ND		0.0109
19				ND		0.00799
20	20/28			ND		0.0174
21	21/33			ND		0.0126
22				ND		0.00726
23				ND		0.00152
24				ND		0.00183
25				ND		0.00274
26	26/29			ND		0.00439
27				ND		0.00194
28	20/28			ND		0.0174
29	26/29			ND		0.00439
30	18/30			ND		0.0109
31				ND		0.0169
32		•••		ND		0.00702
33	21/33			ND		0.0126
34				ND		0.00156
35				ND		0.00307
36				ND		0.00194
37				ND		0.00404
38				ND		0.00142
39	404445			ND		0.00158
40	40/41/71			ND		0.00778
41	40/41/71			ND		0.00778
42	40.50			ND		0.00422
43	43/73			ND		0.00376
44	44/47/65			ND		0.0179

Conc = Concentration

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
45	45/51			ND		0.00552
46				ND		0.00219
47	44/47/65			ND		0.0179
48				ND		0.00280
49	49/69	26.380	0.83	0.0102 J		0.00648
50	50/53			ND		0.00364
51	45/51			ND		0.00552
52				ND	~- -	0.0159
53	50/53			ND		0.00364
54				ND		0.00154
55				ND		0.00207
56				ND		0.00972
57				ND		0.00144
58				ND		0.00183
59	59/62/75			ND		0.00399
60				ND		0.00330
61	61/70/74/76			ND		0.0309
62	59/62/75			ND		0.00399
63				ND		0.00168
64				ND		0.00539
65	44/47/65			ND		0.0179
66				ND		0.0211
67				ND		0.00217
68				ND		0.00242
69	49/69	26.380	0.83	(0.0102) J		0.00648
70	61/70/74/76			ND		0.0309
71	40/41/71			ND		0.00778
72				ND		0.00170
73	43/73			ND		0.00376
74	61/70/74/76			ND		0.0309
75	59/62/75			ND		0.00399
76	61/70/74/76			ND		0.0309
77				ND		0.00255
78				ND		0.00222
79				ND		0.00224
80				ND		0.00205
81				ND		0.00171
82				ND		0.00247
83				ND		0.00230
84				ND		0.0128
85	85/116/117			ND		0.00500
86	86/87/97/108/119/125			ND		0.0146
87	86/87/97/108/119/125			ND		0.0146
88	88/91			ND		0.00475

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
89				ND		0.00301
90	90/101/113	33.178	1.51	0.0130 J		0.0115
91	88/91			ND		0.00475
92		32.528	1.16	IJ	0.00479	0.00378
93	93/98/100/102			ND		0.00544
94		***		ND		0.00182
95		~~~		ND		0.00838
96				ND		0.00303
97	86/87/97/108/119/125			ND		0.0146
98	93/98/100/102			ND		0.00544
99		33.796	1.53	0.00682 J		0.00569
100	93/98/100/102			ND		0.00544
101	90/101/113	33.178	1.51	(0.0130) J		0.0115
102	93/98/100/102			` NĎ		0.00544
103				ND		0.00189
104				ND		0.00147
105				ND		0.00546
106				ND		0.00171
107	107/124			ND		0.00253
108	86/87/97/108/119/125			ND		0.0146
109				ND		0.00192
110	110/115	35.219	1.59	0.0138 J		0.0125
111				ND		0.00197
112				ND		0.00170
113	90/101/113	33.178	1.51	(0.0130) J		0.0115
114				ND		0.00220
115	110/115	35.219	1.59	(0.0138) J		0.0125
116	85/116/117			ND		0.00500
117	85/116/117			ND		0.00500
118		38.343	1.63	0.0113 J		0.00863
119	86/87/97/108/119/125			ND		0.0146
120				ND		0.00164
121				ND		0.00125
122				ND		0.00187
123				ND		0.00213
124	107/124			ND		0.00253
125	86/87/97/108/119/125			ND		0.0146
126				ND		0.00215
127				ND		0.00129
128	128/166			ND		0.00420
129	129/138/163			ND	~==	0.0105
130				ND A		0.00215
131				ND		0.00272
132				ND		0.00397

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A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

Nn = Value obtained from additional analyses

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

X = Outside QC Limits RT = Retention Time

KI - Ketention IIII

I = Interference

ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
133				ND		0.00257
134	134/143			ND		0.00385
135	135/151			ND		0.00500
136				ND		0.00276
137				ND		0.00247
138	129/138/163			ND		0.0105
139	139/140			ND		0.00424
140	139/140			ND		0.00424
141				ND		0.00238
142				ND A		0.00195
143	134/143			ND		0.00385
144				ND		0.00201
1 4 5				ND		0.00194
1 4 6				ND		0.00245
147	147/149			ND		0.00866
148				ND		0.00226
149	147/149			ND		0.00866
150				ND		0.00126
151	135/151		~~~	ND		0.00500
152				ND		0.00205
153	153/168	40.272	1.22	0.00967 J		0.00744
154				ND		0.00169
155				ND		0.00148
156	156/157			ND		0.00429
157	156/157			ND		0.00429
158				ND		0.00249
159				ND		0.00270
160				ND		0.00249
161				ND		0.00180
162				ND		0.00224
163	129/138/163			ND		0.0105
164				ND		0.00234
165				ND		0.00199
166	128/166			ND		0.00420
167				ND		0.00207
168	153/168	40.272	1.22	(0.00967) J		0.00744
169				ND		0.00155
170				ND		0.00479
171	171/173			ND		0.00587
172				ND		0.0136
173	171/173			ND		0.00587
174				ND		0.00309
175				ND		0.00146
176				ND		0.00217

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

B = Less than 10 times higher than method blank level

R = Recovery outside of Method 1668A control limits

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ND = Not Detected

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* = See Discussion

X = Outside QC Limits

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I = Interference

ng's = Nanograms

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/L	EMPC ng/L	EML ng/L
177	· <u></u>			ND		0.00324
178				ND		0.00219
179				ND		0.00234
180	180/193			ND		0.00554
181				ND		0.00265
182				ND		0.00249
183	183/185			ND		0.00548
184				ND		0.00201
185	183/185			ND		0.00548
186				ND		0.00151
187			220	ND		0.00316
188			***	ND		0.00240
189				ND		0.00209
190				ND		0.00245
191				ND		0.00211
192				ND		0.00240
193	180/193			ND		0.00554
194				ND		0.00181
195				ND		0.00167
196				ND		0.00169
197	197/200			ND		0.00456
198	198/199			ND		0.00274
199	198/199			ND		0.00274
200	197/200			ND		0.00456
201				ND		0.00140
202				ND		0.00224
203				ND		0.00176
204				ND		0.00163
205				ND		0.00192
206				ND		0.00372
207				ND		0.00222
208				ND		0.00217
209				ND		0.0167

Conc = Concentration

EML =Method Reporting/Quantitation Limit (1668A) EMPC = Estimated Maximum Possible Concentration

A = Limit of Detection based on signal to noise (EDL)

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ND = Not Detected

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client Sample ID Lab Sample ID Filename NR-SW-BKG2-202305 40262368011 P230531B 08

 Congener Group	Concentration ng/L	
Total Monochloro Biphenyls	ND	
Total Dichloro Biphenyls	ND	
Total Trichloro Biphenyls	ND	
Total Tetrachloro Biphenyls	0.0102	
Total Pentachloro Biphenyls	0.0450	
Total Hexachloro Biphenyls	0.00967	
Total Heptachloro Biphenyls	ND	
Total Octachloro Biphenyls	ND	
Total Nonachloro Biphenyls	ND	
Decachloro Biphenyls	ND	
Total PCBs	0.0648	

ND = Not Detected

REPORT OF LABORATORY ANALYSIS

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		Sample ID	NR-SW-BKG1	NR-SW-BKG2	NR-SW-DS1	NR-SW-DS2 **	NR-SW-DS2 **	NR-SW-EB	NR-SW-FB	NR-SW-OU1	NR-SW-OU2	NR-SW-OU3	NR-SW-OU4
		Туре	N N	N N	N N	N N	FD FD	EB	FB	N N	N	N N	N N
		Sample Date SYS SAMPLE CODE	05/16/2023 NR-SW-RKG1-20230	05/16/2023	05/16/2023 NR-SW-DS1-202305	05/16/2023 NR-SW-DS2-20230	05/16/2023	05/16/2023 NR-SW-EB-202305	05/16/2023 NR-SW-FR-202305	05/16/2023 NR-SW-OLI1-202305	05/16/2023 NR-SW-OU2-20230	05/16/2023 5 NR-SW-OU3-202305	05/16/2023 NR-SW-OLI4-202305
Method	Parameter	Units	WK-5W-DKG1-20250	34K-34V-DKG2-20230.	14K-3W-D31-202303	NIC-5W-D32-20230.	W 2W -DOI 1 20230	NK-5W-LD-202505	14IC-3W-I D-202303	WK-3W-001-202303	WK-3W-002-20230	NK-5W-003-202303	NIC 3W-00+ 202303
SM2540D	Total Suspended Solids (TSS)	3/ -	9.6	3.1	20.2	71.4	57.4			4.9	7.9	12.2	14.5
SM5310C	Dissolved Organic Carbon		10.8	8.0	10.2	10.1	10.6			5.3	5.9	6.3	11.3
SM5310C E1668C	Total Organic Carbon PCB-1 (2-MoCB)	mg/L ng/L	10.5 < 0.00540	7.0 < 0.00535	9.3 0.0285 J	9.4 < 0.00581	9.6 0.0290 J	 < 0.00537	 < 0.00533	4.5 0.0110 J	5.0 0.290	5.6 0.225	10.4
E1668C	PCB-2 (3-MoCB)	ng/L	< 0.00340	< 0.00333	< 0.00486	< 0.00529	< 0.0290 3	< 0.00537	< 0.00333	< 0.00488	< 0.00487	< 0.00492	< 0.00333
E1668C	PCB-3 (4-MoCB)	ng/L	< 0.00431	< 0.00407	< 0.00400	< 0.00323	< 0.00422	< 0.00423	< 0.00400	< 0.00400	0.0228 J	0.0184 J	< 0.00422
E1668C	PCB-4 (2,2'-DiCB)	ng/L	< 0.00727	< 0.00721	0.154	< 0.00783	0.148	< 0.00724	< 0.00719	0.125	1.81	1.24	< 0.00721
E1668C	PCB-5 (2,3-DiCB)	ng/L	< 0.00177	< 0.00489 UJ	< 0.00175	< 0.00191	< 0.00176	< 0.00176	< 0.00175	< 0.00176	0.00604 J	0.00349 J	< 0.00176
E1668C	PCB-6 (2,3'-DiCB)	ng/L	< 0.00907	< 0.00899	0.0811	< 0.00977	0.0717	< 0.00903	< 0.00897	0.0120 J < 0.00894	0.194	0.175	< 0.00900
E1668C E1668C	PCB-7 (2,4-DiCB) PCB-8 (2,4'-DiCB)	ng/L ng/L	< 0.00900 < 0.0119	< 0.00891 < 0.0117	0.0173 J 0.0264 J	< 0.00969 < 0.0128	0.0139 J 0.0239 J	< 0.00895 < 0.0118	< 0.00889 < 0.0117	< 0.00894 0.0171 J	0.0941 0.161	0.0738 0.0883	< 0.00892 < 0.0118
E1668C	PCB-9 (2,5-DiCB)	ng/L	< 0.00238	< 0.0017	0.0161 J	< 0.0126	0.0134 J	< 0.0110	< 0.0017	< 0.00236	0.00919 J	0.0300 J	< 0.00136
E1668C	PCB-10 (2,6-DiCB)	ng/L	< 0.00282	< 0.00280	< 0.00279	< 0.00304	< 0.00280	< 0.00281	< 0.00279	< 0.00281	0.0106 J	0.0195 J	< 0.00280
E1668C	PCB-11 (3,3'-DiCB)	ng/L	< 0.140	< 0.139	< 0.139	< 0.151	< 0.139	< 0.140	< 0.139	< 0.140	< 0.139	< 0.141	< 0.139
E1668C	PCB-12/13 (3,4-DiCB and/or 3,4'-DiCB)		< 0.00509	< 0.00504	< 0.00503	< 0.00548	< 0.00504	< 0.00506	< 0.00503	< 0.00505	0.0171 J	0.0108 J	< 0.00505
E1668C E1668C	PCB-14 (3,5-DiCB) PCB-15 (4,4'-DiCB)	ng/L ng/L	< 0.00170 < 0.00584	< 0.00168 < 0.00579	< 0.00168 0.0124 J	< 0.00183 < 0.00629	< 0.00168 0.0150 J	< 0.00169 < 0.00581	< 0.00168 < 0.00577	< 0.00169 0.0574	< 0.00168 0.244	< 0.00170 0.108	< 0.00168 < 0.00579
E1668C	PCB-16 (2,2',3-TrCB)	ng/L ng/L	< 0.00584 < 0.00596	< 0.00579	0.0124 J 0.00908 J	< 0.00629	0.0150 J	< 0.00581	< 0.00577	0.0574 0.0131 J	0.0798	0.108	< 0.00579
E1668C	PCB-17 (2,2',4-TrCB)	ng/L	0.00985 J	< 0.00390	0.130	< 0.00537	0.154	< 0.00395	< 0.00493	0.151	1.88	1.08	0.0183 J
E1668C	PCB-18/30 (2,2',5-TrCB and/or 2,4,6-TrC	ng/L	< 0.0110	< 0.0109	0.0817	< 0.0119	0.0975	< 0.0110	< 0.0109	0.0602 J	0.323	0.275	0.0158 J
E1668C	PCB-19 (2,2',6-TrCB)	ng/L	< 0.00807	< 0.00799	0.100	< 0.00869	0.0925	< 0.00802	< 0.00797	0.152	1.56	0.935	< 0.00800
E1668C	PCB-20/28 (2,3,3'-TrCB and/or 2,4,4'-Tr PCB-21/33 (2,3,4-TrCB and/or 2,3',4'-Tr		0.0378 J < 0.0127	< 0.0174 < 0.0126	0.146 J 0.0428 J	< 0.0190 < 0.0137	0.145 J 0.0496 J	< 0.0175 < 0.0126	< 0.0174	0.116 J	0.753 0.0369 J	0.450 0.0328 J	0.0603 J 0.0141 J
E1668C E1668C	PCB-21/33 (2,3,4-1rCB and/or 2,3,4-1r PCB-22 (2,3,4'-TrCB)	ng/L ng/L	< 0.0127	< 0.0126	0.0428 J 0.00952 J	< 0.0137	0.0496 J 0.0114 J	< 0.0126	< 0.0126 < 0.00724	< 0.0126 0.0118 J	0.0369 J	0.0328 J 0.0295 J	< 0.00727
E1668C	PCB-23 (2,3,5-TrCB)	ng/L	< 0.00755	< 0.00720	< 0.00352 3	< 0.00765	< 0.00152	< 0.00723	< 0.00724	< 0.00153	< 0.00152	< 0.00154	< 0.00727
E1668C	PCB-24 (2,3,6-TrCB)	ng/L	< 0.00185	< 0.00183	< 0.00183	< 0.00199	< 0.00183	< 0.00184	< 0.00183	< 0.00184	< 0.00183	< 0.00185	< 0.00183
E1668C	PCB-25 (2,3',4-TrCB)	ng/L	0.00576 J	< 0.00274	0.161	< 0.00298	0.140	< 0.00275	< 0.00273	0.0671	0.638	0.641	0.0177 J
E1668C	PCB-26/29 (2,3',5-TrCB and/or 2,4,5-TrC		0.00809 J	< 0.00439	0.284	< 0.00477	0.260	< 0.00441	< 0.00438	0.130	1.24	1.22	0.0274 J
E1668C E1668C	PCB-27 (2,3',6-TrCB) PCB-31 (2,4',5-TrCB)	ng/L ng/L	< 0.00195 < 0.0170	< 0.00194 < 0.0169	0.0218 J 0.0668 J	< 0.00210 < 0.0184	0.0223 J 0.0742 J	< 0.00194 < 0.0170	< 0.00193 < 0.0168	0.0156 J 0.0544 J	0.103 0.288	0.130	< 0.00194 0.0206 J
E1668C	PCB-31 (2,4',5-11CB) PCB-32 (2,4',6-TrCB)	ng/L	0.0212 J	< 0.0169	0.0699	< 0.0164	0.0626	< 0.0170	< 0.0100	0.0737	0.784	0.444	0.0274 1
E1668C	PCB-34 (2,3',5'-TrCB)	ng/L	< 0.00157	< 0.00156	0.0134 J	< 0.00169	0.0114 J	< 0.00156	< 0.00155	< 0.00156	0.0220 J	0.0264 J	0.00223 J
E1668C	PCB-35 (3,3',4-TrCB)	ng/L	< 0.00310	< 0.00307	< 0.00306	< 0.00333	< 0.00307	< 0.00308	< 0.00306	< 0.00307	0.00479 J	0.00465 J	< 0.00307
E1668C	PCB-36 (3,3',5-TrCB)	ng/L	< 0.00195	< 0.00194	< 0.00193	< 0.00210	< 0.00194	< 0.00194	< 0.00193	< 0.00194	< 0.00194	< 0.00196	< 0.00194
E1668C E1668C	PCB-37 (3,4,4'-TrCB) PCB-38 (3.4,5-TrCB)	ng/L na/L	< 0.00408 < 0.00144	< 0.00404 < 0.00142	0.0115 J < 0.00142	< 0.00440 < 0.00155	0.0164 J < 0.00142	< 0.00406 < 0.00143	< 0.00403 < 0.00142	< 0.00406 < 0.00143	0.0443 J < 0.00142	0.0224 J < 0.00144	< 0.00405 < 0.00143
E1668C	PCB-38 (3,4,5-11CB) PCB-39 (3,4',5-TrCB)	ng/L	< 0.00144	< 0.00142	< 0.00142	< 0.00133	< 0.00142	< 0.00143	< 0.00142	< 0.00143	< 0.00142	< 0.00144	< 0.00143
E1668C	PCB-40/41/71 (2,2',3,3'-TeCB and/or 2,2		0.0355 J	< 0.00778	0.260	< 0.00846	0.306	< 0.00781	< 0.00776	0.188	1.41	0.913	0.0728 J
E1668C	PCB-42 (2,2',3,4'-TeCB)	ng/L	0.0234 J	< 0.00422	0.158	< 0.00458	0.206	< 0.00423	< 0.00421	0.133	0.748	0.509	0.0514
E1668C		ng/L	< 0.00379	< 0.00376	0.0337 J	< 0.00408	0.0337 J	< 0.00377	< 0.00375	0.0240 J	0.237	0.172	0.00793 J
E1668C	PCB-44/47/65 (2,2',3,5'-TeCB and/or 2,4		0.117	< 0.0179	0.769	< 0.0195	0.917	< 0.0180	< 0.0179	0.792 0.146	4.27	2.73 0.725	0.240 0.0496 J
E1668C E1668C	PCB-45/51 (2,2',3,6-TeCB and/or 2,2',4, PCB-46 (2,2',3,6'-TeCB)		0.0314 J 0.0137 J	< 0.00552 < 0.00219	0.131 0.0634	< 0.00600 < 0.00237	0.152 0.0796	< 0.00554 < 0.00219	< 0.00551 < 0.00218	0.0536	1.25 0.337	0.224	0.0496 J 0.0243 J
E1668C	PCB-48 (2,2',4,5-TeCB)	ng/L	< 0.00282	< 0.00219	0.00660 J	< 0.00237	0.00975 J	< 0.00213	< 0.00279	0.0131 J	0.0395	0.0166 J	< 0.00280
E1668C	PCB-49/69 (2,2',4,5'-TeCB and/or 2,3',4,		0.111	0.0102 J	1.10	< 0.00704	1.34	< 0.00650	< 0.00646	0.842	4.71	3.84	0.264
E1668C	PCB-50/53 (2,2',4,6-TeCB and/or 2,2',5,	,	0.0488 J	< 0.00364	0.249	< 0.00396	0.288	< 0.00366	< 0.00363	0.214	1.32	0.982	0.0807
E1668C E1668C	PCB-52 (2,2',5,5'-TeCB)	ng/L	0.0942 J 0.00256 J	< 0.0159 < 0.00154	1.41 0.0130 J	< 0.0173 < 0.00168	1.88 0.0146 J	< 0.0160 < 0.00155	< 0.0159 < 0.00154	1.57 0.0162 J	6.03 0.144	5.10 0.0849	0.277 0.00445 J
E1668C	PCB-54 (2,2',6,6'-TeCB) PCB-55 (2,3,3',4-TeCB)	ng/L ng/L	< 0.00256 J < 0.00209	< 0.00154 < 0.00207	< 0.00207	< 0.00168 < 0.00225	< 0.00207	< 0.00155 < 0.00208	< 0.00154 < 0.00206	< 0.0162 J < 0.00208	< 0.00207	< 0.00209	< 0.00445 J < 0.00207
E1668C	PCB-56 (2,3,3',4'-TeCB)	ng/L	< 0.00203	< 0.00207	0.0386	< 0.00223	0.0568	< 0.00200	< 0.00200	0.0377 J	0.139	0.0926	0.0148 J
E1668C	PCB-57 (2,3,3',5-TeCB)	ng/L	< 0.00145	< 0.00144	0.0399	< 0.00157	0.0356 J	< 0.00145	< 0.00144	0.0106 J	0.158	0.173	0.00426 J
E1668C	PCB-58 (2,3,3',5'-TeCB)	ng/L	< 0.00184	< 0.00183	0.00777 J	< 0.00199	0.00949 J	< 0.00183	< 0.00182	0.00370 J	0.0373 J	0.0216 J	0.00280 J
E1668C	PCB-59/62/75 (2,3,3',6-TeCB and/or 2,3		0.00423 J < 0.00333	< 0.00399 < 0.00330	0.0418 J 0.00456 J	< 0.00433 < 0.00358	0.0494 J 0.00913 J	< 0.00400 < 0.00331	< 0.00398 < 0.00329	0.0287 J 0.00702 J	0.216	0.163 0.0113 J	0.0104 J
E1668C E1668C	PCB-60 (2,3,4,4'-TeCB) PCB-61/70/74/76 (2,3,4,5-TeCB and/or	ng/L	< 0.00333 0.0363 1	< 0.00330	0.00456 J 0.270	< 0.00358 < 0.0335	0.00913 J 0.411	< 0.00331	< 0.00329 < 0.0308	0.00702 J 0.340	0.0150 J 1.44	0.0113 J	< 0.00330 0.0969 1
E1668C	PCB-63 (2,3,4',5-TeCB)	ng/L	0.00407 J	< 0.00168	0.0264 J	< 0.00182	0.0290 J	< 0.00168	< 0.00167	0.0147 J	0.142	0.0958	0.00879 J
E1668C	PCB-64 (2,3,4',6-TeCB)		0.00744 J	< 0.00539	0.0957	< 0.00585	0.150	< 0.00541	< 0.00537	0.126	0.444	0.323	0.0249 J
E1668C	PCB-66 (2,3',4,4'-TeCB)		0.0346 J	< 0.0211	0.229	< 0.0229	0.330	< 0.0212	< 0.0210	0.204	1.11	0.636	0.0827 J
E1668C	PCB-67 (2,3',4,5-TeCB)	ng/L	< 0.00219	< 0.00217	0.0226 J	< 0.00235	0.0248 J	< 0.00217	< 0.00216	0.00631 J	0.0753	0.0627	0.00263 J
E1668C E1668C	PCB-68 (2,3',4,5'-TeCB) PCB-72 (2,3',5,5'-TeCB)		0.00297 J 0.00280 J	< 0.00242 < 0.00170	0.0319 J 0.0415	< 0.00262 < 0.00185	0.0329 J 0.0473	< 0.00242 < 0.00171	< 0.00241 < 0.00169	0.0163 J 0.0202 J	0.163 0.204	0.128 0.178	0.00551 J 0.00962 J
E1668C	PCB-72 (2,3,3,5-1eCB) PCB-77 (3,3',4,4'-TeCB)	ng/L	< 0.00250	< 0.00170	0.0415 0.0132 J	< 0.00165	0.0473 0.0257 J	< 0.00171	< 0.00169	0.0202 J	0.0601	0.0351 J	0.00396 J
E1668C	PCB-78 (3,3',4,5-TeCB)	ng/L	< 0.00224	< 0.00222	< 0.00222	< 0.00247	< 0.00222	< 0.00233	< 0.00222	< 0.00223	< 0.00222	< 0.00225	< 0.00223
E1668C	PCB-79 (3,3',4,5'-TeCB)	ng/L	< 0.00226	< 0.00224	0.00759 J	< 0.00244	0.00885 J	< 0.00225	< 0.00224	0.0113 J	0.0621	0.0276 J	< 0.00225
E1668C	PCB-80 (3,3',5,5'-TeCB)	ng/L	< 0.00207	< 0.00205	< 0.00205	< 0.00223	< 0.00205	< 0.00206	< 0.00205	< 0.00206	< 0.00205	< 0.00207	< 0.00205
E1668C	PCB-81 (3,4,4',5-TeCB)	ng/L	< 0.00173	< 0.00171	< 0.00171	< 0.00186	< 0.00171	< 0.00172	< 0.00171	< 0.00172	0.00429 J	0.00194 J	< 0.00172

		Sample ID	NR-SW-BKG1	NR-SW-BKG2	NR-SW-DS1	NR-SW-DS2 **	NR-SW-DS2 **	NR-SW-EB	NR-SW-FB	NR-SW-OU1	NR-SW-OU2	NR-SW-OU3	NR-SW-OU4
		Туре	N	N	N	N	FD	EB	FB	N	N	N	N
		Sample Date	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023 5NR-SW-DUP1-202305	05/16/2023 NR-SW-EB-202305	05/16/2023 NR-SW-FB-202305	05/16/2023 NR-SW-OU1-202305	05/16/2023	05/16/2023	05/16/2023
Method	Parameter	Units	NK-5W-DNG1-202303	NK-5W-DNG2-202303	NK-5W-D51-202303	NK-5W-D52-202303	NK-5W-DUP1-202303	NR-5W-ED-202303	NK-5W-FD-202303	NK-5W-001-202303	INK-5W-002-202303	NK-5W-003-202303	NR-5W-004-202303
E1668C	PCB-82 (2,2',3,3',4-PeCB)	ng/L	0.00884 J	< 0.00247	0.0472	< 0.00269	0.110	< 0.00248	< 0.00247	0.0862	0.184	0.126	0.0214 J
E1668C	PCB-83 (2,2',3,3',5-PeCB)	ng/L	0.00668 J	< 0.00230	0.0910	< 0.00250	0.144	< 0.00231	< 0.00229	0.0986	0.434	0.345	0.0258 J
E1668C	PCB-84 (2,2',3,3',6-PeCB)	ng/L	0.0318 J	< 0.0128	0.252	< 0.0139	0.489	< 0.0128	< 0.0127	0.309	1.17	0.864	0.0812
E1668C E1668C	PCB-85/116/117 (2,2',3,4,4'-PeCB and/c PCB-86/87/97/108/119/125 (2,2',3,4,5-		0.0237 J 0.0753 J	< 0.00500 < 0.0146	0.136 0.504	< 0.00544 < 0.0159	0.319 1.03	< 0.00502 < 0.0147	< 0.00499 < 0.0146	0.284 0.829	0.645 2.45	0.446 1.57	0.0547 J 0.192 J
E1668C	PCB-88/91 (2,2',3,4,6-PeCB and/or 2,2',	ng/L	0.0289 J	< 0.00475	0.255	< 0.0155	0.382	< 0.00477	< 0.00474	0.270	1.16	0.832	0.0677 J
E1668C	PCB-89 (2,2',3,4,6'-PeCB)	ng/L	< 0.00304	< 0.00301	0.00622 J	< 0.00327	0.0103 J	< 0.00302	< 0.00300	0.00417 J	0.0216 J	0.0127 J	< 0.00301
E1668C	PCB-90/101/113 (2,2',3,4',5-PeCB and/c		0.124	0.0130 J	0.912	< 0.0125	1.89	< 0.0115	< 0.0115	1.60	4.55	2.85	0.328
E1668C E1668C	PCB-92 (2,2',3,5,5'-PeCB) PCB-93/98/100/102 (2,2',3,5,6-PeCB an	ng/L	0.0378 J 0.00904 J	0.00479 J < 0.00544	0.431	< 0.00410 < 0.00592	0.679 0.124 J	< 0.00379 < 0.00547	< 0.00377 < 0.00543	0.430 0.0641 J	1.89 0.444	1.52 0.315	0.0989 0.0213 J
E1668C	PCB-93/96/100/102 (2,2,3,5,6-PeCB all PCB-94 (2,2',3,5,6'-PeCB)	ng/L	0.00302 J	< 0.00344	0.0306 J	< 0.00392	0.0353 J	< 0.00347	< 0.00343	0.0219 J	0.206	0.158	0.00509 J
E1668C	PCB-95 (2,2',3,5',6-PeCB)	ng/L	0.101 J	< 0.00838	0.844	< 0.00910	1.61	< 0.00841	< 0.00835	1.33	3.99	2.86	0.255
E1668C	PCB-96 (2,2',3,6,6'-PeCB)	ng/L	< 0.00306	< 0.00303	0.0125 J	< 0.00329	0.0188 J	< 0.00304	< 0.00302	0.0108 J	0.0758	0.0529	0.00362 J
E1668C	PCB-99 (2,2',4,4',5-PeCB)	ng/L	0.0663	0.00682 J	0.473	< 0.00619	0.959	< 0.00572	< 0.00568	1.06	2.19	1.31	0.164
E1668C E1668C	PCB-103 (2,2',4,5',6-PeCB) PCB-104 (2,2',4,6,6'-PeCB)	ng/L ng/L	0.00253 J < 0.00148	< 0.00189 < 0.00147	0.0351 J < 0.00147	< 0.00205 < 0.00160	0.0423 < 0.00147	< 0.00189 < 0.00148	< 0.00188 < 0.00147	0.0226 J < 0.00147	0.147 0.00731 J	0.122 0.00532 J	0.00837 J < 0.00147
E1668C	PCB-104 (2,2,4,6,6-PeCB) PCB-105 (2,3,3',4,4'-PeCB)	ng/L	< 0.00148 0.0307 J	< 0.00147 < 0.00546	0.136	< 0.00160	0.320	< 0.00148	< 0.00147	0.159	0.765	0.472	0.0623
E1668C	PCB-106 (2,3,3',4,5-PeCB)	ng/L	< 0.00173	< 0.00340	< 0.00171	< 0.00394	< 0.00171	< 0.00172	< 0.00343	< 0.00172	< 0.00171	< 0.00173	< 0.00171
E1668C	PCB-107/124 (2,3,3',4',5-PeCB and/or 2	ng/L	0.00308 J	< 0.00253	0.0193 J	< 0.00275	0.0369 J	< 0.00254	< 0.00252	0.0260 J	0.107	0.0611 J	0.00770 J
E1668C	PCB-109 (2,3,3',4,6-PeCB)	ng/L	0.00902 J	< 0.00192	0.0728	< 0.00208	0.112	< 0.00192	< 0.00191	0.0553		0.245	0.0250 J
E1668C E1668C	PCB-110/115 (2,3,3',4',6-PeCB and/or 2 PCB-111 (2,3,3',5,5'-PeCB)	ng/L ng/L	0.161 < 0.00199	0.0138 J < 0.00197	1.37 0.00362 J	< 0.0135 < 0.00215	2.64 0.00489 J	< 0.0125 < 0.00198	< 0.0124 < 0.00197	1.65 < 0.00198	6.01 0.0172 J	4.27 0.0146 J	0.422 < 0.00198
E1668C	PCB-111 (2,3,3',5,5'-PeCB) PCB-112 (2,3,3',5,6-PeCB)	ng/L ng/L	< 0.00199 < 0.00172	< 0.00197 < 0.00170	< 0.00362 J < 0.00170	< 0.00215 < 0.00185	< 0.00489 J < 0.00170	< 0.00198 < 0.00171	< 0.00197 < 0.00170	< 0.00198 < 0.00171	< 0.0172 J < 0.00170	< 0.0146 J < 0.00172	< 0.00198 < 0.00171
E1668C	PCB-114 (2,3,4,4',5-PeCB)	ng/L	< 0.00222	< 0.00220	0.00366 J	< 0.00240	0.00872 J	< 0.00221	< 0.00220	0.00575 J	0.0280 J	0.0122 J	< 0.00221
E1668C	PCB-118 (2,3',4,4',5-PeCB)	ng/L	0.0871	0.0113 J	0.534	< 0.00937	1.04	< 0.00866	< 0.00860	0.510	2.85	1.58	0.203
E1668C	PCB-120 (2,3',4,5,5'-PeCB)	ng/L	< 0.00166	< 0.00164	0.00901 J	< 0.00178	0.0148 J	< 0.00165	< 0.00164	0.00442 J		0.0306 J	0.00265 J
E1668C	PCB-121 (2,3',4,5',6-PeCB)	ng/L	< 0.00127	< 0.00125	< 0.00125	< 0.00136	< 0.00125	< 0.00126	< 0.00125	< 0.00126	0.0103 J	0.00721 J	< 0.00125
E1668C E1668C	PCB-122 (2,3,3',4',5'-PeCB) PCB-123 (2,3',4,4',5'-PeCB)	ng/L ng/L	< 0.00189 0.00277 J	< 0.00187 < 0.00213	0.00642 J 0.00801 J	< 0.00204 < 0.00231	0.00952 J 0.0166 J	< 0.00188 < 0.00214	< 0.00187 < 0.00212	0.00652 J 0.0116 J	0.0233 J 0.0373 J	0.0152 J 0.0236 J	< 0.00187 0.00303 J
E1668C	PCB-126 (3,3',4,4',5-PeCB)	ng/L	< 0.00277 3	< 0.00215	0.00259 J	< 0.00231	0.00344 J	< 0.00214	< 0.00212	< 0.00215	0.00824 J	0.00696 J	< 0.00215
E1668C	PCB-127 (3,3',4,5,5'-PeCB)	ng/L	< 0.00130	< 0.00129	< 0.00128	< 0.00140	< 0.00129	< 0.00129	< 0.00128	< 0.00129	< 0.00129	< 0.00130	< 0.00129
E1668C	PCB-128/166 (2,2',3,3',4,4'-HxCB and/or		0.0208 J	< 0.00420	0.122	< 0.00456	0.255	< 0.00421	< 0.00419	0.117	0.546	0.353	0.0482 J
E1668C	PCB-129/138/163 (2,2',3,3',4,5-HxCB ar		0.111 J	< 0.0105	0.638	< 0.0115	1.35	< 0.0106	< 0.0105	0.732	2.99	1.97	0.230
E1668C E1668C	PCB-130 (2,2',3,3',4,5'-HxCB) PCB-131 (2,2',3,3',4,6-HxCB)	ng/L ng/L	0.00948 J < 0.00275	< 0.00211 < 0.00272	0.0605 0.0101 J	< 0.00229 < 0.00296	0.114 0.0222 J	< 0.00212 < 0.00273	< 0.00210 < 0.00271	0.0552 0.0146 J	0.263 0.0461	0.186 0.0240 J	0.0190 J 0.00415 J
E1668C	PCB-131 (2,2,3,3,4,6+1xCB)	ng/L	0.0363 J	< 0.00272	0.282	< 0.00230	0.533	< 0.00273	< 0.00271	0.254		0.912	0.0851
E1668C	PCB-133 (2,2',3,3',5,5'-HxCB)	ng/L	< 0.00259	< 0.00257	0.0253 J	< 0.00279	0.0352 J	< 0.00258	< 0.00256	0.0161 J		0.0813	0.00437 J
E1668C			0.00796 J	< 0.00385	0.0612 J	< 0.00419	0.118	< 0.00387	< 0.00384	0.0582 J	0.285	0.205	0.0197 J
E1668C	PCB-135/151 (2,2',3,3',6-PeCB and/or 2		0.0329 J	< 0.00500	0.311	< 0.00544	0.693	< 0.00502	< 0.00499	0.342	1.40	1.02	0.0868
E1668C E1668C	PCB-136 (2,2',3,3',6,6'-HxCB) PCB-137 (2,2',3,4,4',5-HxCB)	ng/L ng/L	0.0130 J 0.00715 J	< 0.00276 < 0.00247	0.125 0.0286 J	< 0.00300 < 0.00269	0.247 0.0724	< 0.00277 < 0.00248	< 0.00275 < 0.00247	0.117 0.0478	0.565 0.148	0.401 0.0997	0.0356 J 0.0117 J
E1668C	PCB-137 (2,2,3,4,4,5-fixCB) PCB-139/140 (2,2',3,4,4',6-HxCB and/or		< 0.00428	< 0.00247	0.0166 J	< 0.00269	0.0724 0.0364 J	< 0.00246	< 0.00247	0.0263 J	0.0844	0.0578 J	0.00563 J
E1668C	PCB-141 (2,2',3,4,5,5'-HxCB)	ng/L	0.0157 J	< 0.00238	0.0744	< 0.00258	0.166	< 0.00239	< 0.00237	0.116	0.382	0.226	0.0319 J
E1668C	PCB-142 (2,2',3,4,5,6-HxCB)	ng/L	< 0.00188	< 0.00186	< 0.00186	< 0.00202	< 0.00186	< 0.00187	< 0.00185	< 0.00186	< 0.00186	< 0.00188	< 0.00186
E1668C	PCB-144 (2,2',3,4,5',6-HxCB)	ng/L	0.00297 J	< 0.00201	0.0233 J	< 0.00219	0.0628	< 0.00202	< 0.00201	0.0298 J	0.104	0.0565	0.0103 J
E1668C E1668C	PCB-145 (2,2',3,4,6,6'-HxCB)	ng/L ng/L	< 0.00195 0.0135 J	< 0.00194 < 0.00245	< 0.00193 0.120	< 0.00210 < 0.00267	< 0.00194 0.215	< 0.00194 < 0.00246	< 0.00193 < 0.00245	< 0.00194 0.114	< 0.00194 0.531	< 0.00196 0.368	< 0.00194 0.0331 J
E1668C	PCB-146 (2,2',3,4',5,5'-HxCB) PCB-147/149 (2,2',3,4',5,6-HxCB and/or		0.0135 J 0.0795	< 0.00245 < 0.00866	0.120	< 0.00267 < 0.00941	1.16	< 0.00246 < 0.00870	< 0.00245 < 0.00864	0.114	0.531 2.92	2.06	0.0331 J 0.183
E1668C	PCB-147/149 (2,2,3,4,5,61-HxCB)	ng/L	< 0.00228	< 0.00226	0.00389 J	< 0.00341	0.00561 J	< 0.00227	< 0.00226	0.00230 J	0.0235 J	0.0176 J	< 0.00226
E1668C	PCB-150 (2,2',3,4',6,6'-HxCB)	ng/L	< 0.00127	< 0.00126	0.00407 J	< 0.00136	0.00502 J	< 0.00126	< 0.00125	0.00249 J	0.0200 J	0.0146 J	< 0.00126
E1668C	PCB-152 (2,2',3,5,6,6'-HxCB)	ng/L	< 0.00207	< 0.00205	0.00281 J	< 0.00223	0.00322 J	< 0.00206	< 0.00205	< 0.00206		0.00960 J	< 0.00205
E1668C	PCB-153/168 (2,2',4,4',5,5'-HxCB and/o		0.0729 J	0.00967 J	0.469	< 0.00808	1.00	< 0.00747	< 0.00742	0.638	2.25	1.35	0.175
E1668C E1668C	PCB-154 (2,2',4,4',5,6'-HxCB) PCB-155 (2,2',4,4',6,6'-HxCB)	ng/L ng/L	< 0.00171 < 0.00150	< 0.00169 < 0.00148	0.0226 J < 0.00148	< 0.00184 < 0.00161	0.0390 < 0.00148	< 0.00170 < 0.00149	< 0.00169 < 0.00148	0.0175 J < 0.00149	0.0944 < 0.00148	0.0743 < 0.00150	0.00392 J < 0.00148
E1668C	PCB-155 (2,2,4,4,6,6-fixCb) PCB-156/157 (2,3,3',4,4',5-HxCB and/or		0.0156 J	< 0.00148	0.0824	< 0.00161	0.171	< 0.00149	< 0.00148	0.0680 J	0.413	0.263	0.0321 J
E1668C	PCB-158 (2,3,3',4,4',6-HxCB)	ng/L	0.0130 J	< 0.00249	0.0533	< 0.00271	0.123	< 0.00250	< 0.00249	0.0585	0.254	0.165	0.0223 J
E1668C	PCB-159 (2,3,3',4,5,5'-HxCB)	ng/L	< 0.00273	< 0.00270	< 0.00270	< 0.00294	< 0.00270	< 0.00271	< 0.00270	< 0.00271	0.0107 J	0.00890 J	< 0.00271
E1668C	PCB-160 (2,3,3',4,5,6-HxCB)	ng/L	< 0.00252	< 0.00249	< 0.00249	< 0.00271	< 0.00249	< 0.00250	< 0.00249	< 0.00250	< 0.00249	< 0.00252	< 0.00249
E1668C		ng/L	< 0.00181	< 0.00180	< 0.00179	< 0.00195	< 0.00180	< 0.00181	< 0.00179	< 0.00180	< 0.00180	< 0.00182	< 0.00180
E1668C E1668C	PCB-162 (2,3,3',4',5,5'-HxCB) PCB-164 (2,3,3',4',5',6-HxCB)	ng/L ng/L	< 0.00226 0.00687 J	< 0.00224 < 0.00234	< 0.00224 0.0464	< 0.00244 < 0.00254	0.00385 J 0.0877	< 0.00225 < 0.00235	< 0.00224 < 0.00233	< 0.00225 0.0468	0.0117 J 0.225	0.00766 J 0.136	< 0.00225 0.0163 J
E1668C		ng/L	< 0.00201	< 0.00234	0.00218 J	< 0.00234	0.0077 0.00322 J	< 0.00233	< 0.00233	< 0.00200	0.00710 J	0.00686 J	< 0.00200
E1668C	PCB-167 (2,3',4,4',5,5'-HxCB)	ng/L	0.00555 J	< 0.00207	0.0291 J	< 0.00225	0.0598	< 0.00208	< 0.00206	0.0214 J	0.130	0.0842	0.00862 J
E1668C	PCB-169 (3,3',4,4',5,5'-HxCB)	ng/L	< 0.00156	< 0.00155	< 0.00155	< 0.00168	< 0.00155	< 0.00155	< 0.00154	< 0.00155	0.00277 J	< 0.00156	< 0.00155
E1668C	PCB-170 (2,2',3,3',4,4',5-HpCB)	ng/L	0.00954 J	< 0.00479	0.0782	< 0.00521	0.122	< 0.00481	< 0.00478	0.0513	0.370	0.249	0.0189 J
E1668C	PCB-171/173 (2,2',3,3',4,4',6-HpCB and,	/ng/L	< 0.00592	< 0.00587	0.0282 J	< 0.00637	0.0465 J	< 0.00589	< 0.00585	0.0215 J	0.128	0.0829	0.00609 J

		Sample ID	NR-SW-BKG1	NR-SW-BKG2	NR-SW-DS1	NR-SW-DS2 **	NR-SW-DS2 **	NR-SW-EB	NR-SW-FB	NR-SW-OU1	NR-SW-OU2	NR-SW-OU3	NR-SW-OU4
		Type	N	N	N	N	FD	EB	FB	N	N	N	N
		Sample Date	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023
		SYS_SAMPLE_CODE	NR-SW-BKG1-20230	5NR-SW-BKG2-202305	NR-SW-DS1-202305	NR-SW-DS2-202305	NR-SW-DUP1-20230	NR-SW-EB-202305	NR-SW-FB-202305	NR-SW-OU1-202305	NR-SW-OU2-202305	NR-SW-OU3-20230	5 NR-SW-OU4-202305
Method	Parameter	Units											
E1668C	PCB-172 (2,2',3,3',4,5,5'-HpCB)	ng/L	< 0.0137	< 0.0136	< 0.0136	< 0.0148	0.0216 J	< 0.0136	< 0.0136	< 0.0136	0.0670	0.0473	< 0.0136
E1668C	PCB-174 (2,2',3,3',4,5,6'-HpCB)	ng/L	0.00958 J	< 0.00309	0.0634	< 0.00335	0.113	< 0.00310	< 0.00308	0.0552	0.355	0.227	0.0197 J
E1668C	PCB-175 (2,2',3,3',4,5',6-HpCB)	ng/L	< 0.00148	< 0.00146	0.00236 J	< 0.00159	0.00701 J	< 0.00147	< 0.00146	0.00229 J	0.0161 J	0.0116 J	< 0.00146
E1668C	PCB-176 (2,2',3,3',4,6,6'-HpCB)	ng/L	< 0.00219	< 0.00217	0.0116 J	< 0.00235	0.0205 J	< 0.00217	< 0.00216	0.00598 J	0.0563	0.0392	< 0.00217
E1668C	PCB-177 (2,2',3,3',4,5',6'-HpCB)	ng/L	0.00544 J	< 0.00324	0.0540	< 0.00352	0.0861	< 0.00325	< 0.00323	0.0385	0.273	0.194	0.00976 J
E1668C	PCB-178 (2,2',3,3',5,5',6-HpCB)		< 0.00221	< 0.00219	0.0214 J	< 0.00237	0.0391	< 0.00219	< 0.00218	0.0181 J	0.121	0.0913	0.00474 J
E1668C	PCB-179 (2,2',3,3',5,6,6'-HpCB)	ng/L	0.00398 J	< 0.00234	0.0425	< 0.00254	0.0779	< 0.00235		0.0344 J	0.209	0.153	0.00902 J
E1668C	PCB-180/193 (2,2',3,4,4',5,5'-HpCB and/		0.0175 J	< 0.00554	0.124	< 0.00602	0.188	< 0.00556		0.0899	0.669	0.423	0.0344 J
E1668C	PCB-181 (2,2',3,4,4',5,6-HpCB)		< 0.00267	< 0.00265	< 0.00264	< 0.00287	0.00403 J	< 0.00266	< 0.00264	< 0.00265	0.0107 J	0.00509 J	< 0.00265
E1668C			< 0.00252	< 0.00249	< 0.00249	< 0.00271	< 0.00249	< 0.00250	< 0.00249	< 0.00250	0.00370 J	0.00306 J	< 0.00249
E1668C	PCB-183/185 (2,2',3,4,4',5',6-HpCB and/		0.00567 J	< 0.00548	0.0460 J	< 0.00596	0.0754 J	< 0.00550		0.0429 J	0.217	0.144	0.0116 J
E1668C			< 0.00203	< 0.00201	< 0.00201	< 0.00219	< 0.00201	< 0.00202	< 0.00201	< 0.00202	< 0.00201	< 0.00203	< 0.00201
E1668C			< 0.00153	< 0.00151	< 0.00151	< 0.00165	< 0.00151	< 0.00152	< 0.00151	< 0.00152	< 0.00151	< 0.00153	< 0.00152
E1668C			0.00883 J	< 0.00316	0.0922	< 0.00344	0.178	< 0.00318		0.0878	0.504	0.349	0.0205 J
E1668C			< 0.00242	< 0.00240	< 0.00239	< 0.00260	< 0.00240	< 0.00241	< 0.00239	< 0.00240	< 0.00240	< 0.00242	< 0.00240
E1668C			< 0.00211	< 0.00209	0.00304 J	< 0.00227	0.00912 J	< 0.00210	< 0.00208	< 0.00209	0.0165 J	0.0109 J	< 0.00209
E1668C			< 0.00248	< 0.00245	0.0152 J	< 0.00267	0.0252 J	< 0.00246		0.0114 J	0.0833	0.0539	0.00356 J
E1668C			< 0.00213	< 0.00211	0.00262 J	< 0.00229	0.00428 J	< 0.00212	< 0.00210	< 0.00211	0.0124 J	0.00974 J	< 0.00211
E1668C			< 0.00242	< 0.00240	< 0.00239	< 0.00260	< 0.00240	< 0.00241	< 0.00239	< 0.00240	< 0.00240	< 0.00242	< 0.00240
E1668C			< 0.00183	< 0.00181	0.0225 J	< 0.00197	0.0333 J	< 0.00182		0.0163 J	0.140	0.0966	0.00359 J
E1668C		ng/L	< 0.00168	< 0.00167	0.00956 J	< 0.00181	0.0142 J	< 0.00167		0.00447 J	0.0643	0.0410	0.00271 J
E1668C			< 0.00170	< 0.00169	0.0119 J	< 0.00183	0.0185 J	< 0.00169		0.00871 J	0.0697	0.0510	0.00276 J
E1668C	PCB-197/200 (2,2',3,3',4,4',6,6'-OcCB an		< 0.00460	< 0.00456	< 0.00455	< 0.00496	0.00676 J	< 0.00458	< 0.00455	< 0.00457	0.0301 J	0.0183 J	< 0.00457
E1668C	PCB-198/199 (2,2',3,3',4,5,5',6-OcCB an		0.00315 J	< 0.00274	0.0312 J	< 0.00298	0.0502 J	< 0.00275		0.0221 J	0.190	0.135	0.00638 J
E1668C			< 0.00141	< 0.00140	0.00307 J	< 0.00152	0.00391 J	< 0.00140		0.00208 J	0.0222 J	0.0113 J	< 0.00140
E1668C			< 0.00226	< 0.00224	0.00582 J	< 0.00244	0.00788 J	< 0.00225		0.00440 J	0.0350 J	0.0260 J	< 0.00225
E1668C			0.00196 J	< 0.00176	0.0117 J	< 0.00191	0.0232 J	< 0.00176		0.0106 J	0.0965	0.0699	0.00326 J
E1668C			< 0.00164	< 0.00163	< 0.00163	< 0.00177	< 0.00163	< 0.00164	< 0.00162	< 0.00163	< 0.00163	< 0.00165	< 0.00163
E1668C			< 0.00193	< 0.00192	< 0.00191	< 0.00208	0.00229 J	< 0.00192	< 0.00191	< 0.00192	0.00845 J	0.00525 J	< 0.00192
E1668C			< 0.00375	< 0.00372	0.00682 J	< 0.00404	0.0117 J	< 0.00373		0.00567 J	0.0396	0.0302 J	< 0.00372
E1668C			< 0.00224	< 0.00222	< 0.00222	< 0.00242	< 0.00222	< 0.00223	< 0.00222	< 0.00223	0.00673 J	0.00517 J	< 0.00223
E1668C			< 0.00219	< 0.00217	< 0.00216	< 0.00235	0.00220 J	< 0.00217	< 0.00216	< 0.00217	0.00804 J	0.00559 J	< 0.00217
E1668C	PCB-209 (DeCB) (Decachlorobiphenyl)	ng/L	< 0.0168	< 0.0167	< 0.0166	< 0.0181	< 0.0167	< 0.0167	< 0.0166	< 0.0167	< 0.0167	< 0.0168	< 0.0167

		Sample ID	NR-SW-BKG1	NR-SW-BKG2	NR-SW-DS1	NR-SW-DS2 **	NR-SW-DS2 **	NR-SW-EB	NR-SW-FB	NR-SW-OU1	NR-SW-OU2	NR-SW-OU3	NR-SW-OU4
		Туре	N	N	N	N	FD	EB	FB	N	N	N	N
		Sample Date	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023	05/16/2023
		SYS_SAMPLE_CODE	NR-SW-BKG1-202305	SNR-SW-BKG2-202305	NR-SW-DS1-202305	NR-SW-DS2-202305	NR-SW-DUP1-202305	NR-SW-EB-202305	NR-SW-FB-202305	NR-SW-OU1-202305	NR-SW-OU2-202305	NR-SW-OU3-202305	NR-SW-OU4-202305
Method	Parameter	Units											
E1668C	Total Monochloro Biphenyls	ng/L	< 0.00540	< 0.00535	< 0.00534	< 0.00581	0.0290 J	< 0.00537	< 0.00533	0.0110 J	0.290	0.225	< 0.00535
E1668C	Total Dichloro Biphenyls	ng/L	< 0.140	< 0.139	0.307 J	< 0.151	0.286 J	< 0.140	< 0.139	0.211 J	2.52 J	1.74 J	< 0.139
E1668C	Total Trichloro Biphenyls	ng/L	0.0729 J	< 0.0174	1.12 J	< 0.0190	1.15 J	< 0.0175	< 0.0174	0.845 J	7.81 J	5.57 J	0.202 J
E1668C	Total Tetrachloro Biphenyls	ng/L	0.557 J	0.0102 J	5.06 J	< 0.0335	6.45 J	< 0.0310	< 0.0308	4.82 J	24.7 J	18.1 J	1.33 J
E1668C	Total Pentachloro Biphenyls	ng/L	0.799 J	0.0450 J	6.29 J	< 0.0159	12.0 J	< 0.0147	< 0.0146	8.84 J	29.8 J	20.1 J	2.04 J
E1668C	Total Hexachloro Biphenyls	ng/L	0.453 J	0.00967 J	3.27 J	< 0.0115	6.57 J	< 0.0106	< 0.0105	3.54 J	15.2 J	10.1 J	1.04 J
E1668C	Total Heptachloro Biphenyls	ng/L	0.0510 J	< 0.0136	0.580 J	< 0.0148	1.01 J	< 0.0136	< 0.0136	0.451 J	3.09 J	2.09 J	0.0999 J
E1668C	Total Octachloro Biphenyls	ng/L	0.00510 J	< 0.00456	0.0809 J	< 0.00496	0.139 J	< 0.00458	< 0.00455	0.0514 J	0.655 J	0.425 J	0.0118 J
E1668C	Total Nonachloro Biphenyls	ng/L	< 0.00375	< 0.00372	0.00682 J	< 0.00404	0.0117 J	< 0.00373	< 0.00371	0.00567 J	0.0463 J	0.00517 J	< 0.00372
E1668C	Polychlorinated biphenyls (Total PCBs)	ng/L	1.94 J	0.0648 J	16.7 J	< 0.151	27.7 J	< 0.140	< 0.139	18.8 J	84.1 J	58.4 J	4.72 J

- Footnotes:
 1. -- = Not analyzed
 2. J = Estimated value
- 3. UJ = Estimated non-detect
 4. ** = Potential sample labeling/switching issue