



1435 Norjohn Court, Unit 1, Burlington, ON, Canada L7L 0E6

## SVOC DATA PACKAGE

### Client Project Information

Project ID: 1466-004 SEATTLE IRON & METALS  
Project Description:  
Contact: Molly Alar

### ALSE Project Information

Project ID: FAR100  
Contact: Breanne Dusureault  
Submission ID(s): L2602390

A handwritten signature in black ink, appearing to read "R.A. Myer".

Final Package Review by: \_\_\_\_\_  
Date Reviewed: 28-Jul-21

## SVOC DATA PACKAGE

### SECTION 1: PROJECT NARRATIVE

**ALSE Project Information**

 Project ID: FAR100  
 Contact: Breanne Dusureault  
 Submission ID(s): L2602390

**Client Project Information**

 Project ID: 1466-004 SEATTLE IRON & METALS  
 Project Description:  
 Contact: Molly Alar

**Analytical Method:** PCB Congeners by EPA 1668C

ALS Sample ID	Client Sample Descriptions	Matrix	Date Sampled	Date Received	Date Extracted	Date Analyzed
L2602390-1	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Puf	Composite	Composite	23-Jun-21	28-Jun-21
L2602390-2	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Puf	Composite	Composite	23-Jun-21	25-Jun-21
L2602390-3	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Puf	Composite	Composite	23-Jun-21	25-Jun-21
L2602390-4	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Puf	Composite	Composite	23-Jun-21	25-Jun-21
L2602390-5	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Puf	Composite	Composite	23-Jun-21	25-Jun-21
L2577435-1 to -5	April Individual Samples	PUFs	15-Apr-21	16-Apr-21	23-Jun-21	composited
L2588195-1 to -5	May Individual Samples	PUFs	13-May-21	14-May-21	23-Jun-21	composited
L2602387-1 to -5	June Individual Samples	PUFs	15-Jun-21	16-Jun-21	23-Jun-21	composited
WG3559668-1	Media Blank	Qc	n/a	n/a	23-Jun-21	25-Jun-21
WG3559668-4	Method Blank	Qc	n/a	n/a	23-Jun-21	25-Jun-21
WG3559668-2	Laboratory Control Sample	Qc	n/a	n/a	23-Jun-21	25-Jun-21

**Comments and Notes:**
**a) Sample Integrity:**

Samples sets L2577435, L2588195 &amp; L2602387 were received in good condition at temperatures of 7.3, 6.0 and 15.8 deg C respectively

**b) Prep & Instrumental Analysis:**

Samples were co-extracted for PCB and PCDD/F targets. The raw extracts were split prior to cleanups for the respective analyses.

No criteria failures or exceedences.

I certify that this data package is in compliance with the terms and condition of the contract , both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package (hardcopy and/or electronic version) has been authorized by the Laboratory Manager or his designee, as verified by the following signature.



Ron McLeod, Ph.D.: Technical Director

28-Jul-21

Date

# **SVOC DATA PACKAGE**

## **SECTION 2: DATA SUMMARY REPORT**



1435 Norjohn Court, Unit 1, Burlington, ON, Canada L7L 0E6  
Phone: 905-331-3111, FAX: 905-331-4567

## Certificate of Analysis

<b>ALS Project Contact:</b>	Breanne Dusureault	<b>Client Name:</b>	Farallon Consulting, L.L.C.
<b>ALS Project ID:</b>	FAR100	<b>Client Address:</b>	975 5th Avenue Northwest
<b>ALS WO#:</b>	L2602390		Issaquah
<b>Date of Report</b>	28-Jul-21		WA 98027
<b>Date of Sample Receipt</b>	16-Jun-21	<b>Client Contact:</b>	Molly Alar
		<b>Client Project ID:</b>	1466-004 SEATTLE IRON & METALS

**COMMENTS:** PCB Congeners by EPA 1668C

PCB Congener Group Totals and Total PCB are a sum of detected values, including EMPC values, consistent with USEPA CLP SOW CBC1.2

Certified by:

A handwritten signature in black ink, appearing to read "R. A. McLeod", is written over a horizontal line.

Ron McLeod, PhD  
Director, Air Toxics & Special Chemistries, Life Sciences

Results in this certificate relate only to the samples as submitted to the laboratory.  
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## Sample Analysis Summary Report

Sample Name	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)
ALS Sample ID	L2602390-1	L2602390-2	L2602390-3	L2602390-4	L2602390-5
Sample Size	1	1	1	1	1
Sample size units	Sample	Sample	Sample	Sample	Sample
Percent Moisture	n/a	n/a	n/a	n/a	n/a
Sample Matrix	PUF	PUF	PUF	PUF	PUF
Sampling Date	n/a	n/a	n/a	n/a	n/a
Extraction Date	23-Jun-21	23-Jun-21	23-Jun-21	23-Jun-21	23-Jun-21
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>
PCB-001	96500	1040000	268000	347000	928000
PCB-002	5690	47600	11900	15200	44000
PCB-003	18400	155000	43900	60200	144000
PCB-004	399000	3910000	1090000	1880000	4120000
PCB-010	11900	120000	33900	61400	124000
PCB-009	27600	312000	79600	133000	349000
PCB-007	14800	139000	40900	67600	157000
PCB-006	71400	813000	191000	383000	919000
PCB-005	5850	45400	10800	17600	45100
PCB-008	342000	3180000	919000	1550000	3580000
PCB-014	52.3	293	87.5	119	252
PCB-011	15100	26100	21700	27200	38600
PCB-012/013	10200	81500	28100	48100	102000
PCB-015	56900	493000	142000	309000	581000
PCB-019	57500	439000	161000	242000	546000
PCB-018/030	263000	2240000	705000	1290000	2930000
PCB-017	92800	947000	314000	566000	1270000
PCB-027	13200	116000	40700	80200	133000
PCB-024	2620	23700	8320	15600	32600
PCB-016	83900	878000	278000	512000	1110000
PCB-032	47300	467000	148000	285000	614000
PCB-034	670	6200	2130	4050	7510
PCB-023	299	2710	902	1670	3090
PCB-026/029	29800	257000	94500	180000	340000
PCB-025	12100	101000	36400	70300	123000
PCB-031	132000	1180000	383000	713000	1560000
PCB-020/028	137000	1160000	386000	730000	1570000
PCB-021/033	87500	772000	262000	468000	1020000
PCB-022	48500	383000	135000	240000	497000
PCB-036	66.3	384	214	354	890
PCB-039	427	2930	1220	2130	3870
PCB-038	70.9	444	152	268	467
PCB-035	1630	9530	4200	7360	13000
PCB-037	15300	92300	39500	75400	127000
PCB-054	611	5040	1690	3290	6200
PCB-050/053	15800	119000	49200	94500	151000
PCB-045/051	21900	163000	67400	130000	272000
PCB-046	6510	49000	19200	36800	58400
PCB-052	78400	629000	244000	466000	878000
PCB-073	<1.9	<3.8	<4.8	<7.3	<7.3
PCB-043	4440	30700	13200	24300	40500
PCB-049/069	42300	348000	125000	259000	477000
PCB-048	20000	138000	58400	108000	182000
PCB-044/047/065	61600	488000	179000	371000	671000
PCB-059/062/075	6460	42500	18300	33500	57300
PCB-042	18600	116000	51000	93300	158000
PCB-040/041/071	34400	259000	96600	176000	356000
PCB-064	24000	156000	72200	128000	263000
PCB-072	232	1450	665	1260	2270
PCB-068	138	656	339	612	940
PCB-057	228	1560	642	1210	2110
PCB-058	66.2	366	288	541	734
PCB-067	1060	7050	3250	6020	10500
PCB-063	1030	6950	3230	5840	10300
PCB-061/070/074/076	34400	223000	112000	195000	359000
PCB-066	15200	92600	47600	85400	144000
PCB-055	517	3310	1830	3310	5150
PCB-056	6340	38800	20000	36300	61200
PCB-060	3840	24200	12400	22300	38100
PCB-080	<3.1	<15	<9.4	<17	<14
PCB-079	95.8	494	329	432	1000
PCB-078	6.75	24.7	<16	<21	48.6
PCB-081	36.0	165	108	205	307
PCB-077	741	3250	2330	3940	6410
PCB-104	6.52	43.1	17.7	36.4	60.8
PCB-096	418	2540	1200	2110	3550
PCB-103	170	993	506	872	1550
PCB-094	169	1030	490	853	1540
PCB-095	19000	93700	53100	86800	153000
PCB-093/098/100/102	1130	6740	3400	5840	10300

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Sample Name	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)
ALS Sample ID	L2602390-1	L2602390-2	L2602390-3	L2602390-4	L2602390-5
Sample Size	1	1	1	1	1
Sample size units	Sample	Sample	Sample	Sample	Sample
Percent Moisture	n/a	n/a	n/a	n/a	n/a
Sample Matrix	PUF	PUF	PUF	PUF	PUF
Sampling Date	n/a	n/a	n/a	n/a	n/a
Extraction Date	23-Jun-21	23-Jun-21	23-Jun-21	23-Jun-21	23-Jun-21
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>
PCB-088/091	2960	15900	8940	14800	26700
PCB-084	4840	25700	14200	23100	42600
PCB-089	241	1410	724	1260	2220
PCB-121	<2.7	11.7	<5.1	<18	<6.1
PCB-092	2710	13200	8250	12500	24200
PCB-090/101/113	13000	64100	41300	61700	121000
PCB-083/099	7270	35000	22000	33900	65100
PCB-112	106	593	153	261	298
PCB-086/087/097/109/119/125	8240	39500	26100	39300	77300
PCB-085/110/115/116/117	14300	65200	44300	65500	134000
PCB-082	1410	6980	4540	6970	13700
PCB-111	12.8	46.8	29.4	63.5	136
PCB-120	9.13	48.0	40.4	63.4	118
PCB-108/124	304	1330	1010	1480	3230
PCB-107	434	1790	1460	2030	4580
PCB-123	110	595	406	600	1250
PCB-106	<2.7	<3.6	<6.4	<9.8	<10
PCB-118	6740	29900	24100	33500	75300
PCB-122	101	428	341	504	1100
PCB-114	181	838	656	895	1990
PCB-105	2420	10800	9270	12200	28700
PCB-127	<5.3	35.7	22.9	39.5	96.8
PCB-126	38.2	92.5	98.7	127	271
PCB-155	6.02	10.4	13.0	9.61	14.6
PCB-152	11.2	51.6	41.2	47.4	95.5
PCB-150	18.1	56.3	40.0	66.8	99.5
PCB-136	1230	4850	3420	4670	9050
PCB-145	7.19	31.7	18.2	28.0	52.1
PCB-148	6.88	23.7	23.7	<25	45.7
PCB-135/151	2370	7840	6110	8180	15900
PCB-154	93.1	191	118	285	532
PCB-144	331	1300	960	1300	2750
PCB-147/149	5090	19400	15600	21200	43300
PCB-134/143	383	1830	1430	1760	3950
PCB-139/140	137	588	458	646	1450
PCB-131	106	483	377	547	1160
PCB-142	<3.9	<7.0	<14	<13	<11
PCB-132	2310	9360	7670	10300	23100
PCB-133	70.1	294	252	359	718
PCB-165	5.39	<12	14.1	<10	36.2
PCB-146	666	2480	2220	2980	6560
PCB-161	<2.4	<4.5	<9.0	<8.1	<7.3
PCB-153/168	3800	15000	13300	17800	40100
PCB-141	993	3660	3170	4330	9700
PCB-130	367	1540	1380	1850	4330
PCB-137/164	603	2480	2310	3180	7620
PCB-129/138/163	5500	23100	21900	29000	70300
PCB-160	<2.2	<4.1	<8.2	<7.3	<6.6
PCB-158	491	2150	1960	2620	6500
PCB-128/166	671	2950	2960	3850	10100
PCB-159	21.6	57.2	52.2	64.8	148
PCB-162	12.3	44.1	<45	<55	171
PCB-167	146	604	727	817	2390
PCB-156/157	466	2010	2420	2780	8300
PCB-169	9.86	22.6	24.5	19.2	55.0
PCB-188	7.51	15.5	14.1	20.6	24.1
PCB-179	464	1080	884	1090	2300
PCB-184	6.19	8.24	13.3	10.4	18.2
PCB-176	112	297	239	311	689
PCB-186	<1.2	<2.2	<2.7	<2.1	<2.7
PCB-178	147	380	338	404	921
PCB-175	32.1	83.3	77.9	98.0	221
PCB-187	855	2140	2010	2460	5380
PCB-182	<1.5	<2.7	<3.4	<2.6	<3.2
PCB-183	406	1090	1020	1240	3030
PCB-185	58.7	105	129	139	364
PCB-174	546	1520	1420	1710	4230
PCB-177	297	822	754	927	2360
PCB-181	<5.5	<30	24.7	39.2	99.7
PCB-171/173	157	487	482	590	1610
PCB-172	85.4	243	249	291	778

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## Sample Analysis Summary Report

Sample Name	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)
ALS Sample ID	L2602390-1	L2602390-2	L2602390-3	L2602390-4	L2602390-5
Sample Size	1	1	1	1	1
Sample size units	Sample	Sample	Sample	Sample	Sample
Percent Moisture	n/a	n/a	n/a	n/a	n/a
Sample Matrix	PUF	PUF	PUF	PUF	PUF
Sampling Date	n/a	n/a	n/a	n/a	n/a
Extraction Date	23-Jun-21	23-Jun-21	23-Jun-21	23-Jun-21	23-Jun-21
<b>Target Analytes</b>	<b>P9</b>	<b>P9</b>	<b>P9</b>	<b>P9</b>	<b>P9</b>
PCB-192	<1.3	<2.4	<3.0	<2.3	<2.9
PCB-180/193	1030	2950	3020	3600	9460
PCB-191	23.7	69.4	64.1	77.8	208
PCB-170	420	1310	1500	1800	5160
PCB-190	84.3	243	270	314	868
PCB-189	17.7	50.2	69.2	76.2	226
PCB-202	180	361	398	484	859
PCB-201	74.0	151	160	186	375
PCB-204	0.836	<0.91	<1.1	<1.5	1.65
PCB-197	12.3	30.4	29.8	33.7	73.2
PCB-200	51.2	116	109	135	288
PCB-198/199	361	889	949	1070	2470
PCB-196	134	338	349	413	924
PCB-203	212	529	582	627	1450
PCB-195	74.1	207	240	242	621
PCB-194	194	606	712	762	1820
PCB-205	10.6	28.8	28.2	28.7	71.3
PCB-208	59.5	142	183	195	391
PCB-207	24.4	66.0	75.4	85.4	175
PCB-206	134	443	524	557	1240
PCB-209	544	229	142	115	246
<b>Extraction Standards</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>
13C12-PCB-001	50	45	48	45	50
13C12-PCB-003	58	41	54	47	44
13C12-PCB-004	56	47	50	44	50
13C12-PCB-015	91	76	82	68	76
13C12-PCB-019	52	42	46	39	47
13C12-PCB-037	97	78	82	67	82
13C12-PCB-054	45	36	40	35	37
13C12-PCB-081	86	70	73	65	72
13C12-PCB-077	87	69	74	65	72
13C12-PCB-104	48	41	49	41	42
13C12-PCB-123	88	75	80	70	75
13C12-PCB-118	85	72	75	65	73
13C12-PCB-114	93	76	80	71	77
13C12-PCB-105	90	75	77	70	77
13C12-PCB-126	96	78	77	73	81
13C12-PCB-155	62	53	59	40	52
13C12-PCB-167	91	75	80	66	74
13C12-PCB-156/157	91	74	79	66	75
13C12-PCB-169	108	80	90	73	84
13C12-PCB-188	74	60	65	52	60
13C12-PCB-189	101	83	93	73	83
13C12-PCB-202	74	60	61	49	58
13C12-PCB-205	89	74	77	62	73
13C12-PCB-208	87	71	73	57	68
13C12-PCB-206	95	74	77	62	72
13C12-PCB-209	83	69	77	57	69
<b>Field Spike Standards</b>					
13C12-PCB-031	102	115	116	124	111
13C12-PCB-095	95	93	102	95	97
13C12-PCB-153	101	106	106	109	106
<b>Cleanup Standards</b>					
13C12-PCB-028	79	75	84	78	84
13C12-PCB-111	87	84	85	80	86
13C12-PCB-178	91	82	85	77	85

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## Sample Analysis Summary Report

Sample Name	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)
ALS Sample ID	L2602390-1	L2602390-2	L2602390-3	L2602390-4	L2602390-5
Sample Size	1	1	1	1	1
Sample size units	Sample	Sample	Sample	Sample	Sample
Percent Moisture	n/a	n/a	n/a	n/a	n/a
Sample Matrix	PUF	PUF	PUF	PUF	PUF
Sampling Date	n/a	n/a	n/a	n/a	n/a
Extraction Date	23-Jun-21	23-Jun-21	23-Jun-21	23-Jun-21	23-Jun-21
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>	<b>pg</b>
<b>Homologue Group Totals</b>					
Total MonoCB	121000	1240000	324000	422000	1120000
Total DiCB	955000	9120000	2560000	4480000	10000000
Total TriCB	1030000	9080000	3000000	5480000	11900000
Total TetraCB	399000	2950000	1200000	2290000	4210000
Total PentaCB	86300	419000	267000	407000	794000
Total HexaCB	25900	102000	89000	119000	269000
Total HeptaCB	4760	12900	12600	15200	37900
Total OctaCB	1300	3260	3560	3980	8950
Total NonaCB	218	651	782	837	1810
DecaCB	544	229	142	115	246
Total PCB	2620000	22900000	7450000	13200000	28400000
<b>Toxic Equivalency - (WHO 2005)</b>					
Lower Bound PCB TEQ	4.50	11.6	12.0	15.3	33.0
Mid Point PCB TEQ	4.50	11.6	12.0	15.3	33.0
Upper Bound PCB TEQ	4.50	11.6	12.0	15.3	33.0



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## Quality Control Summary Report

Sample Name	Method Blank	Method Blank
ALS Sample ID	WG3559668-1	WG3559668-4
Sample Size	1	1
Sample size units	Sample	Sample
Percent Moisture	n/a	n/a
Sample Matrix	QC	QC
Sampling Date	n/a	n/a
Extraction Date	23-Jun-21	23-Jun-21
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>
PCB-001	10.0	17.8
PCB-002	6.46	11.7
PCB-003	<10	<19
PCB-004	<13	<45
PCB-010	<8.5	<9.0
PCB-009	<8.8	<9.3
PCB-007	<8.0	34.9
PCB-006	<8.4	<14
PCB-005	<9.1	<9.7
PCB-008	<7.8	62.7
PCB-014	<9.1	<5.7
PCB-011	396	830
PCB-012/013	<9.4	<5.9
PCB-015	<13	<32
PCB-019	<4.2	<7.7
PCB-018/030	<13	<33
PCB-017	8.10	<17
PCB-027	<2.4	<1.7
PCB-024	<2.4	<1.6
PCB-016	<6.4	15.3
PCB-032	5.29	15.3
PCB-034	<3.4	<3.5
PCB-023	<3.0	<3.0
PCB-026/029	<3.2	13.7
PCB-025	<2.9	<3.7
PCB-031	28.7	77.6
PCB-020/028	44.2	122
PCB-021/033	<18	61.5
PCB-022	<16	38.3
PCB-036	<3.1	<3.2
PCB-039	<3.2	<3.3
PCB-038	<3.7	<3.7
PCB-035	<7.6	23.3
PCB-037	17.2	51.1
PCB-054	<2.2	<1.2
PCB-050/053	<2.0	<3.6
PCB-045/051	<4.3	16.2
PCB-046	<2.4	<2.2
PCB-052	<12	63.0
PCB-073	<1.6	<1.5
PCB-043	<2.8	<2.6
PCB-049/069	<5.3	<26
PCB-048	<2.2	<11
PCB-044/047/065	26.2	94.9
PCB-059/062/075	<1.7	5.67
PCB-042	<3.8	17.6
PCB-040/041/071	<5.9	<35
PCB-064	<4.8	29.9
PCB-072	<2.5	<2.4
PCB-068	<3.2	13.7
PCB-057	<2.6	<2.5
PCB-058	<2.4	<2.3
PCB-067	<2.1	<2.0
PCB-063	<2.4	<3.2
PCB-061/070/074/076	23.3	119
PCB-066	<7.3	74.7
PCB-055	<2.4	<2.3
PCB-056	<6.2	48.7
PCB-060	<2.4	30.7
PCB-080	<2.0	<2.0
PCB-079	<2.2	<2.1
PCB-078	<2.5	<2.5
PCB-081	<2.4	<2.2
PCB-077	<2.6	13.1
PCB-104	<1.9	<1.5
PCB-096	<1.8	<1.3
PCB-103	<3.0	<3.4
PCB-094	<3.4	<3.8
PCB-095	<3.2	31.4
PCB-093/098/100/102	<3.1	<3.6

# ALS Life Sciences

## Quality Control Summary Report

Sample Name	Method Blank	Method Blank
ALS Sample ID	WG3559668-1	WG3559668-4
Sample Size	1	1
Sample size units	Sample	Sample
Percent Moisture	n/a	n/a
Sample Matrix	QC	QC
Sampling Date	n/a	n/a
Extraction Date	23-Jun-21	23-Jun-21
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>
PCB-088/091	<3.1	<5.6
PCB-084	<3.5	<7.2
PCB-089	<3.5	<4.0
PCB-121	<2.2	<2.5
PCB-092	<3.3	5.97
PCB-090/101/113	<2.6	33.9
PCB-083/099	<3.2	24.2
PCB-112	<2.2	<2.6
PCB-086/087/097/109/119/125	<2.7	26.3
PCB-085/110/115/116/117	<2.5	51.1
PCB-082	<4.1	<4.7
PCB-111	<2.1	<2.4
PCB-120	<2.1	<2.4
PCB-108/124	<1.8	<1.7
PCB-107	<1.5	<1.4
PCB-123	<1.9	<1.8
PCB-106	<1.8	<1.7
PCB-118	6.70	30.9
PCB-122	<2.0	<1.8
PCB-114	<1.8	<1.7
PCB-105	<1.9	<1.3
PCB-127	<1.8	<1.7
PCB-126	<2.1	<1.9
PCB-155	<1.0	<7.5
PCB-152	<1.1	<0.87
PCB-150	<0.97	<0.78
PCB-136	<1.1	<2.6
PCB-145	<1.0	<0.84
PCB-148	<1.4	<1.2
PCB-135/151	<1.5	11.6
PCB-154	<1.1	<0.90
PCB-144	<1.5	<1.2
PCB-147/149	<3.3	21.0
PCB-134/143	<1.7	<2.3
PCB-139/140	<1.3	<1.7
PCB-131	<1.7	<2.1
PCB-142	<1.7	<2.1
PCB-132	<1.6	<8.7
PCB-133	<1.6	<2.0
PCB-165	<1.1	<1.4
PCB-146	<1.3	3.96
PCB-161	<1.1	<1.4
PCB-153/168	3.62	20.8
PCB-141	<1.5	<6.0
PCB-130	<1.8	<2.4
PCB-137/164	<1.3	4.07
PCB-129/138/163	<5.3	<28
PCB-160	<1.0	<1.3
PCB-158	<0.95	<1.6
PCB-128/166	<1.3	<1.8
PCB-159	<1.1	<1.4
PCB-162	<1.1	<1.4
PCB-167	<1.0	<1.3
PCB-156/157	<1.4	<1.8
PCB-169	<1.1	<1.4
PCB-188	<1.2	<1.1
PCB-179	<1.1	<2.3
PCB-184	<0.96	6.26
PCB-176	<1.1	<1.1
PCB-186	<1.1	<1.1
PCB-178	<1.6	<1.5
PCB-175	<1.6	<1.5
PCB-187	<1.3	<3.8
PCB-182	<1.4	<1.3
PCB-183	<1.5	2.30
PCB-185	<1.5	<1.5
PCB-174	<1.4	2.68
PCB-177	<1.6	<1.9
PCB-181	<1.5	<1.4
PCB-171/173	<1.6	<1.6
PCB-172	<1.7	<1.6

# ALS Life Sciences

## Quality Control Summary Report

Sample Name	Method Blank	Method Blank
ALS Sample ID	WG3559668-1	WG3559668-4
Sample Size	1	1
Sample size units	Sample	Sample
Percent Moisture	n/a	n/a
Sample Matrix	QC	QC
Sampling Date	n/a	n/a
Extraction Date	23-Jun-21	23-Jun-21
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>
PCB-192	<1.2	<1.2
PCB-180/193	<1.3	6.82
PCB-191	<1.2	<1.2
PCB-170	<1.7	3.11
PCB-190	<1.1	<1.0
PCB-189	<0.71	<0.79
PCB-202	<0.75	<0.61
PCB-201	<0.68	<0.55
PCB-204	<0.66	<0.54
PCB-197	<0.62	<0.51
PCB-200	<0.70	<0.57
PCB-198/199	<0.93	<0.76
PCB-196	<0.96	<0.79
PCB-203	<0.83	<0.68
PCB-195	<0.95	<0.82
PCB-194	<0.87	<2.1
PCB-205	<0.73	<0.62
PCB-208	<1.2	<1.3
PCB-207	<1.4	<1.4
PCB-206	<2.2	<2.1
PCB-209	<0.48	<0.46
<b>Extraction Standards</b>	<b>% Rec</b>	<b>% Rec</b>
13C12-PCB-001	54	47
13C12-PCB-003	56	50
13C12-PCB-004	57	49
13C12-PCB-015	64	58
13C12-PCB-019	45	40
13C12-PCB-037	68	68
13C12-PCB-054	39	37
13C12-PCB-081	74	75
13C12-PCB-077	76	76
13C12-PCB-104	50	45
13C12-PCB-123	84	80
13C12-PCB-118	79	78
13C12-PCB-114	84	87
13C12-PCB-105	86	84
13C12-PCB-126	90	88
13C12-PCB-155	62	58
13C12-PCB-167	90	86
13C12-PCB-156/157	89	84
13C12-PCB-169	102	97
13C12-PCB-188	74	73
13C12-PCB-189	99	96
13C12-PCB-202	75	71
13C12-PCB-205	91	86
13C12-PCB-208	89	83
13C12-PCB-206	91	85
13C12-PCB-209	86	77
<b>Field Spike Standards</b>		
13C12-PCB-031	NS	NS
13C12-PCB-095	NS	NS
13C12-PCB-153	NS	NS
<b>Cleanup Standards</b>		
13C12-PCB-028	64	68
13C12-PCB-111	85	89
13C12-PCB-178	93	103

# ALS Life Sciences

## Quality Control Summary Report

Sample Name	Method Blank	Method Blank
ALS Sample ID	WG3559668-1	WG3559668-4
Sample Size	1	1
Sample size units	Sample	Sample
Percent Moisture	n/a	n/a
Sample Matrix	QC	QC
Sampling Date	n/a	n/a
Extraction Date	23-Jun-21	23-Jun-21
<b>Target Analytes</b>	<b>pg</b>	<b>pg</b>
<b>Homologue Group Totals</b>		
Total MonoCB	26.5	48.5
Total DiCB	396	1020
Total TriCB	164	481
Total TetraCB	105	606
Total PentaCB	6.70	231
Total HexaCB	12.2	122
Total HeptaCB	<0.71	29.2
Total OctaCB	<0.62	2.10
Total NonaCB	<1.2	<1.3
DecaCB	<0.48	<0.46
Total PCB	711	2540
<b>Toxic Equivalency - (WHO 2005)</b>		
Lower Bound PCB TEQ	0.000201	0.00224
Mid Point PCB TEQ	0.122	0.119
Upper Bound PCB TEQ	0.244	0.236

# ALS Life Sciences

## Sample Analysis Summary Report

Sample Name	Laboratory Control Sample
ALS Sample ID	WG3559668-2
Sample Size	1
Sample size units	n/a
Percent Moisture	n/a
Sample Matrix	QC
Sampling Date	n/a
Extraction Date	23-Jun-21
<b>Target Analytes</b>	
	<b>% Rec</b>
PCB-001	102
PCB-003	92
PCB-004	112
PCB-015	103
PCB-019	107
PCB-037	102
PCB-054	109
PCB-081	96
PCB-077	96
PCB-104	101
PCB-123	100
PCB-118	101
PCB-114	96
PCB-105	94
PCB-126	95
PCB-155	103
PCB-167	100
PCB-156/157	97
PCB-169	101
PCB-188	103
PCB-189	99
PCB-202	111
PCB-205	97
PCB-208	93
PCB-206	91
PCB-209	103
<b>Extraction Standards</b>	
	<b>% Rec</b>
13C12-PCB-001	33
13C12-PCB-003	33
13C12-PCB-004	35
13C12-PCB-015	37
13C12-PCB-019	28
13C12-PCB-037	47
13C12-PCB-054	24
13C12-PCB-081	59
13C12-PCB-077	61
13C12-PCB-104	31
13C12-PCB-123	67
13C12-PCB-118	64
13C12-PCB-114	70
13C12-PCB-105	70
13C12-PCB-126	74
13C12-PCB-155	43
13C12-PCB-167	70
13C12-PCB-156/157	69
13C12-PCB-169	78
13C12-PCB-188	57
13C12-PCB-189	79
13C12-PCB-202	57
13C12-PCB-205	69
13C12-PCB-208	69
13C12-PCB-206	70
13C12-PCB-209	64
<b>Field Spike Standards</b>	
13C12-PCB-031	NS
13C12-PCB-095	NS
13C12-PCB-153	NS
<b>Cleanup Standards</b>	
13C12-PCB-028	38
13C12-PCB-111	61
13C12-PCB-178	74

# ALS Life Sciences

## Sample Analysis Summary Report

Sample Name	CVS	CCV	CCV	CCV	CCV
ALS Sample ID	H5-20-RS1-1035	H5-21-CCV-498	H5-21-CCV-500	H5-21-CCV-503	H5-21-CCV-505
Sample Size	1	1	1	1	1
Sample size units	n/a	n/a	n/a	n/a	n/a
Percent Moisture	n/a	n/a	n/a	n/a	n/a
Sample Matrix	QC	QC	QC	QC	QC
Sampling Date	n/a	n/a	n/a	n/a	n/a
Extraction Date	n/a	n/a	n/a	n/a	n/a
<b>Target Analytes</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>
PCB-001	104	95	97	94	97
PCB-003	101	89	91	92	95
PCB-004	107	99	105	101	105
PCB-015	109	97	100	96	99
PCB-019	111	105	106	103	106
PCB-037	107	97	100	96	99
PCB-054	108	101	103	101	104
PCB-081	103	97	99	96	98
PCB-077	103	98	100	97	99
PCB-104	98	101	104	101	102
PCB-123	104	99	98	97	98
PCB-118	103	101	102	101	101
PCB-114	104	95	95	93	94
PCB-105	101	97	97	95	95
PCB-126	101	100	98	97	99
PCB-155	100	102	103	102	103
PCB-167	100	97	100	98	100
PCB-156/157	103	97	101	99	100
PCB-169	106	100	103	101	102
PCB-188	103	103	105	104	103
PCB-189	103	100	102	100	100
PCB-202	105	104	105	104	105
PCB-205	99	100	101	100	100
PCB-208	98	94	96	95	95
PCB-206	95	95	96	94	95
PCB-209	105	92	92	92	92
<b>Extraction Standards</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>	<b>% Rec</b>
13C12-PCB-001	97	90	99	92	98
13C12-PCB-003	97	95	109	95	105
13C12-PCB-004	94	96	93	95	94
13C12-PCB-015	98	94	114	97	109
13C12-PCB-019	92	80	76	83	78
13C12-PCB-037	94	95	104	92	97
13C12-PCB-054	92	85	74	89	79
13C12-PCB-081	94	94	101	92	95
13C12-PCB-077	93	96	103	93	96
13C12-PCB-104	92	77	67	76	69
13C12-PCB-123	93	98	106	98	100
13C12-PCB-118	94	95	100	93	97
13C12-PCB-114	92	103	109	103	105
13C12-PCB-105	93	105	111	107	106
13C12-PCB-126	92	114	120	114	109
13C12-PCB-155	91	91	81	91	84
13C12-PCB-167	98	103	100	105	97
13C12-PCB-156/157	97	105	99	106	99
13C12-PCB-169	101	119	104	117	105
13C12-PCB-188	92	93	83	91	88
13C12-PCB-189	104	120	109	118	107
13C12-PCB-202	94	99	84	99	87
13C12-PCB-205	97	97	95	96	96
13C12-PCB-208	94	99	94	97	97
13C12-PCB-206	97	104	97	101	101
13C12-PCB-209	99	97	93	93	95
<b>Field Spike Standards</b>					
13C12-PCB-031	109	110	117	111	119
13C12-PCB-095	106	103	99	104	103
13C12-PCB-153	102	100	107	100	108
<b>Cleanup Standards</b>					
13C12-PCB-028	101	96	102	98	104
13C12-PCB-111	99	107	109	109	106
13C12-PCB-178	99	106	100	106	101

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-1	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210628A08	5-210628A09
Run Date	28-Jun-21 12:21	28-Jun-21 13:03
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	Run 1						Run 2						
	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-001		8.99	96500	3.1			100						
PCB-002		10.37	5690	3.2			100						
PCB-003		10.49	18400	3.1			100						
PCB-004								10.63	399000	110			2000
PCB-010		10.76	11900	1.9			100						
PCB-009		11.90	27600	1.9			100						
PCB-007		12.01	14800	1.8			100						
PCB-006		12.16	71400	1.9			100						
PCB-005		12.37	5850	2.1	M		100						
PCB-008								12.41	342000	46	M		2000
PCB-014		13.40	52.3	7.8	J		100						
PCB-011		13.92	15100	8.1	M		100						
PCB-012/013		14.10	10200	7.9			100						
PCB-015		14.31	56900	7.8			100						
PCB-019		12.64	57500	1.1			100						
PCB-018/030								13.72	263000	79			2000
PCB-017		13.97	92800	2.1			100						
PCB-027		14.10	13200	1.6			100						
PCB-024		14.19	2620	1.6			100						
PCB-016		14.27	83900	2.6			100						
PCB-032		14.55	47300	1.5			100						
PCB-034		15.23	670	8.6			100						
PCB-023		15.33	299	7.7			100						
PCB-026/029		15.50	29800	7.8			100						
PCB-025		15.64	12100	7.2			100						
PCB-031		15.82	132000	7.5			100						
PCB-020/028		15.99	137000	7.8			100						
PCB-021/033		16.13	87500	7.9			100						
PCB-022		16.37	48500	8.2			100						
PCB-036		17.20	66.3	8.2	M,J		100						
PCB-039		17.41	427	8.6			100						
PCB-038		17.73	70.9	9.5	J		100						
PCB-035		18.00	1630	10			100						
PCB-037		18.23	15300	9.0			100						
PCB-054		14.48	611	1.6			100						
PCB-050/053		15.66	15800	2.3			100						
PCB-045/051		16.07	21900	2.4			100						
PCB-046		16.25	6510	2.8			100						
PCB-052		16.98	78400	2.6			100						
PCB-073		NotFnd	<1.9	1.9	U		100						
PCB-043		17.11	4440	3.4			100						
PCB-049/069		17.24	42300	2.4			100						
PCB-048		17.40	20000	2.6			100						
PCB-044/047/065		17.54	61600	2.4			100						
PCB-059/062/075		17.72	6460	2.0			100						
PCB-042		17.84	18600	3.1			100						
PCB-040/041/071		18.10	34400	2.7			100						
PCB-064		18.23	24000	2.0			100						
PCB-072		18.62	232	3.9			100						
PCB-068		18.77	138	3.4			100						
PCB-057		19.02	228	4.0			100						
PCB-058		19.14	66.2	3.5	M,J		100						
PCB-067		19.24	1060	3.2			100						
PCB-063		19.39	1030	3.6			100						
PCB-061/070/074/076		19.57	34400	3.6			100						
PCB-066		19.75	15200	3.6			100						
PCB-055		19.86	517	3.7			100						
PCB-056		20.13	6340	4.0			100						
PCB-060		20.25	3840	3.6			100						
PCB-080		NotFnd	<3.1	3.1	U		100						
PCB-079		21.23	95.8	3.3	J		100						
PCB-078		21.55	6.75	3.8	M,J		100						
PCB-081	0.0003	21.81	36.0	3.5	M,J		100						
PCB-077	0.0001	22.11	741	3.7			100						
PCB-104		17.50	6.52	0.59	M,J		100						
PCB-096		17.75	418	0.52			100						
PCB-103		18.71	170	3.7			100						
PCB-094		18.86	169	4.1			100						
PCB-095		19.11	19000	4.2			100						
PCB-093/098/100/102		19.28	1130	3.7			100						

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-1	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210628A08	5-210628A09
Run Date	28-Jun-21 12:21	28-Jun-21 13:03
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	Run 1						Run 2					
	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	
PCB-088/091		19.57	2960	3.8		100						
PCB-084		19.72	4840	4.3		100						
PCB-089		19.97	241	4.4		100						
PCB-121		20.07	<2.7	2.7	U	2.1						
PCB-092		20.31	2710	4.2		100						
PCB-090/101/113		20.62	13000	3.2		100						
PCB-083/099		20.93	7270	4.1	M	100						
PCB-112		21.02	106	2.7	M	100						
PCB-086/087/097/109/119/125		21.29	8240	3.3	M	100						
PCB-085/110/115/116/117		21.71	14300	3.1	M	100						
PCB-082		21.90	1410	5.0	M	100						
PCB-111		21.98	12.8	2.6	M,J	100						
PCB-120		22.24	9.13	2.6	J	100						
PCB-108/124		22.88	304	2.7		100						
PCB-107		23.01	434	2.4	M	100						
PCB-123	0.00003	23.06	110	2.9	M	100						
PCB-106		NotFnd	<2.7	2.7	U	100						
PCB-118	0.00003	23.24	6740	2.8		100						
PCB-122		23.45	101	2.9		100						
PCB-114	0.00003	23.54	181	2.7		100						
PCB-105	0.00003	23.91	2420	2.8		100						
PCB-127		24.63	<5.3	2.6	M,J,R	5.3						
PCB-126	0.1	25.51	38.2	3.1	M,J	100						
PCB-155		20.47	6.02	0.73	J	100						
PCB-152		20.65	11.2	0.75	M,J	100						
PCB-150		20.71	18.1	0.75	M,J	100						
PCB-136		20.95	1230	0.80		100						
PCB-145		21.09	7.19	0.76	M,J	100						
PCB-148		21.79	6.88	1.0	J	100						
PCB-135/151		22.15	2370	1.2	M	100						
PCB-154		22.22	93.1	0.74	M,J	100						
PCB-144		22.45	331	1.1		100						
PCB-147/149		22.64	5090	3.2		100						
PCB-134/143		22.77	383	4.0		100						
PCB-139/140		22.94	137	3.1		100						
PCB-131		23.08	106	3.9		100						
PCB-142		NotFnd	<3.9	3.9	U	100						
PCB-132		23.34	2310	3.7		100						
PCB-133		23.51	70.1	3.5	J	100						
PCB-165		23.69	5.39	2.6	J	100						
PCB-146		23.83	666	3.0		100						
PCB-161		NotFnd	<2.4	2.4	U	100						
PCB-153/168		24.15	3800	2.5		100						
PCB-141		24.29	993	3.3		100						
PCB-130		24.52	367	4.0		100						
PCB-137/164		24.69	603	2.8	M	100						
PCB-129/138/163		24.85	5500	3.3		100						
PCB-160		NotFnd	<2.2	2.2	U	100						
PCB-158		25.05	491	2.0		100						
PCB-128/166		25.55	671	2.8		100						
PCB-159		25.98	21.6	2.4	J	100						
PCB-162		26.12	12.3	2.4	J	100						
PCB-167	0.00003	26.37	146	2.4		100						
PCB-156/157	0.00003	26.99	466	3.2		200						
PCB-169	0.03	28.68	9.86	2.5	M,J	100						
PCB-188		23.46	7.51	1.3	J	100						
PCB-179		23.69	464	1.2		100						
PCB-184		23.91	6.19	1.0	J	100						
PCB-176		24.14	112	1.2		100						
PCB-186		NotFnd	<1.2	1.2	U	100						
PCB-178		25.04	147	1.6		100						
PCB-175		25.37	32.1	1.7	J	100						
PCB-187		25.50	855	1.3		100						
PCB-182		NotFnd	<1.5	1.5	U	100						
PCB-183		25.81	406	1.6		100						
PCB-185		25.92	58.7	1.6	M,J	100						
PCB-174		25.98	546	1.5	M	100						
PCB-177		26.21	297	1.7		100						
PCB-181		26.40	<5.5	1.5	J,R	5.5						
PCB-171/173		26.54	157	1.7		100						
PCB-172		27.31	85.4	1.7	J	100						



# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a		
ALS Sample ID	L2602390-1	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Sample	Percent Moisture	n/a		
Sample Matrix	PUF	Split Ratio	4		

Run Information	Run 1	Run 2
Filename	5-210628A08	5-210628A09
Run Date	28-Jun-21 12:21	28-Jun-21 13:03
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF	Ret.	Conc.	EDL	EMPC	LQL	Ret.	Conc.	EDL	EMPC	LQL	
	(WHO 2005)	Time	pg	pg	Flags			pg	Time	pg		pg
PCB-192		NotFnd	<1.3	1.3	U	100						
PCB-180/193		27.65	1030	1.4		100						
PCB-191		27.85	23.7	1.3	J	100						
PCB-170		28.35	420	1.8		100						
PCB-190		28.63	84.3	1.1	J	100						
PCB-189	0.00003	29.94	17.7	1.1	J	100						
PCB-202		26.24	180	0.35		100						
PCB-201		26.71	74.0	0.33	J	100						
PCB-204		27.05	0.836	0.32	J	100						
PCB-197		27.17	12.3	0.30	J	100						
PCB-200		27.28	51.2	0.34	J	100						
PCB-198/199		28.67	361	0.44		100						
PCB-196		28.99	134	0.46		100						
PCB-203		29.10	212	0.39		100						
PCB-195		29.84	74.1	0.88	J	100						
PCB-194		31.04	194	0.80	M	100						
PCB-205		31.32	10.6	0.70	M,J	100						
PCB-208		29.66	59.5	0.55	J	100						
PCB-207		30.13	24.4	0.62	J	100						
PCB-206		32.38	134	0.90		100						
PCB-209		33.49	544	0.27		100						
<b>Extraction Standards</b>	<b>pg</b>	<b>Time</b>	<b>% Rec</b>	<b>Limits</b>			<b>Time</b>	<b>% Rec</b>	<b>Limits</b>			
13C12-PCB-001	4000	8.98	50	5-145								
13C12-PCB-003	4000	10.49	58	5-145								
13C12-PCB-004	4000	10.65	56	5-145								
13C12-PCB-015	4000	14.30	91	5-145								
13C12-PCB-019	4000	12.62	52	5-145								
13C12-PCB-037	4000	18.22	97	5-145								
13C12-PCB-054	4000	14.46	45	5-145								
13C12-PCB-081	4000	21.79	86	10-145								
13C12-PCB-077	4000	22.10	87	10-145								
13C12-PCB-104	4000	17.49	48	10-145								
13C12-PCB-123	4000	23.06	88	10-145								
13C12-PCB-118	4000	23.23	85	10-145								
13C12-PCB-114	4000	23.53	93	10-145								
13C12-PCB-105	4000	23.89	90	10-145								
13C12-PCB-126	4000	25.49	96	10-145								
13C12-PCB-155	4000	20.46	62	10-145								
13C12-PCB-167	4000	26.36	91	10-145								
13C12-PCB-156/157	8000	27.00	91	10-145								
13C12-PCB-169	4000	28.67	108	10-145								
13C12-PCB-188	4000	23.45	74	10-145								
13C12-PCB-189	4000	29.92	101	10-145								
13C12-PCB-202	4000	26.23	74	10-145								
13C12-PCB-205	4000	31.30	89	10-145								
13C12-PCB-208	4000	29.64	87	10-145								
13C12-PCB-206	4000	32.35	95	10-145								
13C12-PCB-209	4000	33.46	83	10-145								
<b>Field Spike Standards</b>												
13C12-PCB-031	18000	15.80	102	70-130								
13C12-PCB-095	18000	19.10	95	70-130								
13C12-PCB-153	18000	24.14	101	70-130								
<b>Cleanup Standards</b>												
13C12-PCB-028	4000	15.98	79	5-145								
13C12-PCB-111	4000	21.98	87	10-145								
13C12-PCB-178	4000	25.03	91	10-145								

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 1 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a		
ALS Sample ID	L2602390-1	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Sample	Percent Moisture	n/a		
Sample Matrix	PUF	Split Ratio	4		

Run Information	Run 1	Run 2
Filename	5-210628A08	5-210628A09
Run Date	28-Jun-21 12:21	28-Jun-21 13:03
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
<b>Homologue Group Totals</b>													
Total MonoCB			121000	3.1	J	400							
Total DiCB			955000	1.8	J	800							
Total TriCB			1030000	1.1	J	800							
Total TetraCB			399000	1.6	J	1600							
Total PentaCB			86300	0.52	J	1600							
Total HexaCB			25900	0.73	J	1600							
Total HeptaCB			4760	1.0	J	800							
Total OctaCB			1300	0.30	J	800							
Total NonaCB			218	0.55	J	400							
DecaCB			544	0.27	J	400							
Total PCB			2620000		J	3200							
<b>Toxic Equivalency - (WHO 2005)</b>													
Lower Bound PCB TEQ			4.50										
Mid Point PCB TEQ			4.50										
Upper Bound PCB TEQ			4.50										

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.

TEF Indicates the Toxic Equivalency Factor      TEQ Indicates the Toxic Equivalency

LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.

M Indicates that a peak has been manually integrated.

U Indicates that this compound was not detected above the EDL.

J Indicates that the analyte was positively identified. The associated numerical result is an estimate.

R Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-2	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210625A10	5-210628A10
Run Date	25-Jun-21 20:08	28-Jun-21 13:45
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	Run 1						Run 2						
	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-001		10.37	47600	9.8			100	8.97	1040000	76			2000
PCB-002		10.49	155000	10			100						
PCB-003		10.77	120000	5.6			100	10.63	3910000	250			2000
PCB-004		12.01	139000	5.2			100	11.90	312000	120			2000
PCB-010		12.01	139000	5.2			100	12.16	813000	120			2000
PCB-009		12.37	45400	6.0	M		100	12.43	3180000	100	M		2000
PCB-007		13.40	293	33			100	13.92	26100	34			100
PCB-006		13.92	26100	34		M	100	14.10	81500	33			100
PCB-005		14.10	81500	33			100						
PCB-008		14.32	493000	350			2000	14.32	493000	350			2000
PCB-014		14.62	439000	45			2000	12.62	439000	45			2000
PCB-011		13.72	2240000	110			2000	13.72	2240000	110			2000
PCB-012/013		13.97	947000	120			2000	13.97	947000	120			2000
PCB-015		14.10	116000	9.1			100						
PCB-019		14.20	23700	8.8			100						
PCB-018/030		14.26	878000	150			2000	14.26	878000	150			2000
PCB-017		14.55	467000	85			2000	14.55	467000	85			2000
PCB-027		15.23	6200	27			100						
PCB-024		15.32	2710	24			100						
PCB-016		15.51	257000	420			2000	15.51	257000	420			2000
PCB-032		15.64	101000	23			100						
PCB-034		15.82	1180000	400			2000	15.82	1180000	400			2000
PCB-023		15.99	1160000	420			2000	15.99	1160000	420			2000
PCB-026/029		16.13	772000	430			2000	16.13	772000	430			2000
PCB-025		16.37	383000	440			2000	16.37	383000	440			2000
PCB-031		17.21	384	25	M		100						
PCB-020/028		17.41	2930	26			100						
PCB-021/033		17.73	444	29			100						
PCB-022		17.99	9530	30			100						
PCB-036		18.23	92300	27			100						
PCB-039		14.48	5040	2.2			100						
PCB-038		15.66	119000	4.8			100						
PCB-035		16.07	163000	5.1			100						
PCB-037		16.25	49000	5.7			100						
PCB-054		16.98	629000	70			2000	16.98	629000	70			2000
PCB-050/053		NotFnd	<3.8	3.8	U		100						
PCB-045/051		17.11	30700	6.8			100						
PCB-046		17.40	138000	5.3			100	17.24	348000	62			2000
PCB-052		17.72	42500	4.0			100	17.54	488000	64			2000
PCB-073		17.83	116000	6.1			100						
PCB-049/069		18.10	259000	72			2000	18.10	259000	72			2000
PCB-048		18.22	156000	4.2			100						
PCB-044/047/065		18.61	1450	19			100						
PCB-059/062/075		18.77	656	17			100						
PCB-042		18.77	656	17			100						
PCB-040/041/071		19.02	1560	20			100						
PCB-064		19.02	1560	20			100						
PCB-066		19.14	366	18	M		100						
PCB-064		19.24	7050	16			100						
PCB-067		19.24	7050	16			100						
PCB-063		19.39	6950	18			100						
PCB-061/070/074/076		19.58	223000	170			2000	19.58	223000	170			2000
PCB-066		19.75	92600	18			100						
PCB-066		19.86	3310	18			100						
PCB-055		20.13	38800	20			100						
PCB-056		20.25	24200	19			100						
PCB-060		NotFnd	<15	15	U		100						
PCB-080		21.23	494	17			100						
PCB-079		21.56	24.7	19	M,J		100						
PCB-078		21.80	165	17			100						
PCB-081	0.0003	22.10	3250	18			100						
PCB-077	0.0001	22.10	3250	18			100						
PCB-104		21.80	165	17			100						
PCB-096		17.49	43.1	6.0	M,J		100						
PCB-103		17.75	2540	5.0			100						
PCB-094		18.71	993	8.6			100						
PCB-103		18.86	1030	9.6			100						
PCB-094		19.11	93700	9.1			100						
PCB-095		19.27	6740	9.0			100						
PCB-093/098/100/102		19.27	6740	9.0			100						

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-2	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210625A10	5-210628A10
Run Date	25-Jun-21 20:08	28-Jun-21 13:45
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	Run 1						Run 2					
	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	
PCB-088/091		19.57	15900	8.9		100						
PCB-084		19.72	25700	10		100						
PCB-089		19.97	1410	10		100						
PCB-121		20.07	11.7	6.3	J	100						
PCB-092		20.31	13200	9.6		100						
PCB-090/101/113		20.62	64100	7.6		100						
PCB-083/099		20.92	35000	9.2	M	100						
PCB-112		21.01	593	6.4	M	100						
PCB-086/087/097/109/119/125		21.28	39500	7.6	M	100						
PCB-085/110/115/116/117		21.70	65200	7.1	M	100						
PCB-082		21.90	6980	12	M	100						
PCB-111		21.98	46.8	5.9	M,J	100						
PCB-120		22.22	48.0	5.9	M,J	100						
PCB-108/124		22.88	1330	3.5		100						
PCB-107		23.00	1790	3.0	M	100						
PCB-123	0.00003	23.05	595	3.8	M	100						
PCB-106		NotFnd	<3.6	3.6	U	100						
PCB-118	0.00003	23.24	29900	3.6		100						
PCB-122		23.45	428	3.9		100						
PCB-114	0.00003	23.54	838	3.5		100						
PCB-105	0.00003	23.89	10800	3.7		100						
PCB-127		24.63	35.7	3.6	M,J	100						
PCB-126	0.1	25.51	92.5	4.3	M,J	100						
PCB-155		20.46	10.4	1.4	M,J	100						
PCB-152		20.64	51.6	1.6	J	100						
PCB-150		20.71	56.3	1.4	J	100						
PCB-136		20.95	4850	1.6		100						
PCB-145		21.08	31.7	1.5	J	100						
PCB-148		21.79	23.7	2.1	J	100						
PCB-135/151		22.15	7840	2.2	M	100						
PCB-154		22.22	191	1.6	M	100						
PCB-144		22.44	1300	2.2		100						
PCB-147/149		22.62	19400	5.6	M	100						
PCB-134/143		22.77	1830	7.1	M	100						
PCB-139/140		22.94	588	5.5		100						
PCB-131		23.08	483	7.0		100						
PCB-142		NotFnd	<7.0	7.0	U	100						
PCB-132		23.33	9360	6.6		100						
PCB-133		23.51	294	6.5		100						
PCB-165		23.69	<12	4.7	J,R 12	100						
PCB-146		23.83	2480	5.4		100						
PCB-161		NotFnd	<4.5	4.5	U	100						
PCB-153/168		24.15	15000	4.7		100						
PCB-141		24.29	3660	6.0		100						
PCB-130		24.51	1540	7.5		100						
PCB-137/164		24.68	2480	5.2	M	100						
PCB-129/138/163		24.85	23100	6.4		100						
PCB-160		NotFnd	<4.1	4.1	U	100						
PCB-158		25.04	2150	3.9		100						
PCB-128/166		25.55	2950	5.3		100						
PCB-159		25.97	57.2	4.5	J	100						
PCB-162		26.12	44.1	4.5	J	100						
PCB-167	0.00003	26.37	604	4.2		100						
PCB-156/157	0.00003	26.99	2010	5.8		200						
PCB-169	0.03	28.65	22.6	5.1	M,J	100						
PCB-188		23.46	15.5	2.3	J	100						
PCB-179		23.69	1080	2.2		100						
PCB-184		23.92	8.24	1.9	M,J	100						
PCB-176		24.14	297	2.2		100						
PCB-186		NotFnd	<2.2	2.2	U	100						
PCB-178		25.04	380	3.1		100						
PCB-175		25.36	83.3	3.1	J	100						
PCB-187		25.50	2140	2.6		100						
PCB-182		NotFnd	<2.7	2.7	U	100						
PCB-183		25.80	1090	2.9	M	100						
PCB-185		25.91	105	3.0	M	100						
PCB-174		25.97	1520	2.8	M	100						
PCB-177		26.21	822	3.2		100						
PCB-181		26.39	<30	2.9	J,R 30	100						
PCB-171/173		26.53	487	3.2		100						
PCB-172		27.31	243	3.3		100						

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-2	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210625A10	5-210628A10
Run Date	25-Jun-21 20:08	28-Jun-21 13:45
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)						EMPC					
	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-192	NotFnd	<2.4	2.4		U	100						
PCB-180/193	27.65	2950	2.6			100						
PCB-191	27.85	69.4	2.4		J	100						
PCB-170	28.35	1310	3.4			100						
PCB-190	28.63	243	2.1			100						
PCB-189	0.00003	29.94	50.2	1.7	J	100						
PCB-202	26.24	361	1.0			100						
PCB-201	26.70	151	0.93			100						
PCB-204	NotFnd	<0.91	0.91		U	100						
PCB-197	27.17	30.4	0.86		J	100						
PCB-200	27.26	116	0.97			100						
PCB-198/199	28.65	889	1.3			100						
PCB-196	28.99	338	1.3			100						
PCB-203	29.09	529	1.1			100						
PCB-195	29.82	207	2.4			100						
PCB-194	31.04	606	2.2			100						
PCB-205	31.32	28.8	1.8		J	100						
PCB-208	29.66	142	1.4			100						
PCB-207	30.13	66.0	1.6		J	100						
PCB-206	32.38	443	2.4			100						
PCB-209	33.49	229	0.61			100						

<b>Extraction Standards</b>	<b>pg</b>	<b>Time</b>	<b>% Rec</b>	<b>Limits</b>		<b>Time</b>	<b>% Rec</b>	<b>Limits</b>
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13C12-PCB-001	4000	8.97	45	5-145				
13C12-PCB-003	4000	10.48	41	5-145				
13C12-PCB-004	4000	10.66	47	5-145				
13C12-PCB-015	4000	14.30	76	5-145				
13C12-PCB-019	4000	12.64	42	5-145				
13C12-PCB-037	4000	18.22	78	5-145				
13C12-PCB-054	4000	14.46	36	5-145				
13C12-PCB-081	4000	21.79	70	10-145				
13C12-PCB-077	4000	22.10	69	10-145				
13C12-PCB-104	4000	17.49	41	10-145				
13C12-PCB-123	4000	23.06	75	10-145				
13C12-PCB-118	4000	23.23	72	10-145				
13C12-PCB-114	4000	23.53	76	10-145				
13C12-PCB-105	4000	23.88	75	10-145				
13C12-PCB-126	4000	25.49	78	10-145				
13C12-PCB-155	4000	20.45	53	10-145				
13C12-PCB-167	4000	26.35	75	10-145				
13C12-PCB-156/157	8000	27.00	74	10-145				
13C12-PCB-169	4000	28.67	80	10-145				
13C12-PCB-188	4000	23.45	60	10-145				
13C12-PCB-189	4000	29.92	83	10-145				
13C12-PCB-202	4000	26.23	60	10-145				
13C12-PCB-205	4000	31.30	74	10-145				
13C12-PCB-208	4000	29.64	71	10-145				
13C12-PCB-206	4000	32.35	74	10-145				
13C12-PCB-209	4000	33.46	69	10-145				

**Field Spike Standards**

13C12-PCB-031	18000	15.80	115	70-130
13C12-PCB-095	18000	19.10	93	70-130
13C12-PCB-153	18000	24.14	106	70-130

**Cleanup Standards**

13C12-PCB-028	4000	15.98	75	5-145
13C12-PCB-111	4000	21.98	84	10-145
13C12-PCB-178	4000	25.02	82	10-145

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 2 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a		
ALS Sample ID	L2602390-2	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Sample	Percent Moisture	n/a		
Sample Matrix	PUF	Split Ratio	4		

Run Information	Run 1	Run 2
Filename	5-210625A10	5-210628A10
Run Date	25-Jun-21 20:08	28-Jun-21 13:45
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
<b>Homologue Group Totals</b>													
Total MonoCB			1240000	9.8	J					400			
Total DiCB			9120000	5.2	J					800			
Total TriCB			9080000	8.8	J					800			
Total TetraCB			2950000	2.2	J					1600			
Total PentaCB			419000	3.0	J					1600			
Total HexaCB			102000	1.4	J					1600			
Total HeptaCB			12900	1.7	J					800			
Total OctaCB			3260	0.86	J					800			
Total NonaCB			651	1.4	J					400			
DecaCB			229	0.61	J					400			
Total PCB			22900000		J					3200			
<b>Toxic Equivalency - (WHO 2005)</b>													
Lower Bound PCB TEQ			11.6										
Mid Point PCB TEQ			11.6										
Upper Bound PCB TEQ			11.6										

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.

TEF Indicates the Toxic Equivalency Factor      TEQ Indicates the Toxic Equivalency

LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.

M Indicates that a peak has been manually integrated.

U Indicates that this compound was not detected above the EDL.

J Indicates that the analyte was positively identified. The associated numerical result is an estimate.

R Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a		
ALS Sample ID	L2602390-3	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Sample	Percent Moisture	n/a		
Sample Matrix	PUF	Split Ratio	4		

Run Information	Run 1	Run 2
Filename	5-210625A11	5-210628A11
Run Date	25-Jun-21 20:50	28-Jun-21 14:27
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	Run 1						Run 2					
	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	EMPC pg	LQL	
PCB-001		10.35	11900	7.5		100	8.97	268000	54		2000	
PCB-002		10.48	43900	6.9		100						
PCB-003		10.75	33900	6.4		100	10.63	1090000	180		2000	
PCB-004		11.88	79600	6.6		100						
PCB-010		11.98	40900	6.0		100						
PCB-009		12.15	191000	6.3		100						
PCB-007		12.34	10800	6.9	M	100						
PCB-006		12.41	919000	81	M	2000						
PCB-005		13.38	87.5	24	J	100						
PCB-008		13.90	21700	25	M	100						
PCB-014		14.08	28100	25		100						
PCB-011		14.29	142000	23		100						
PCB-012/013		14.29	142000	23		100						
PCB-015		14.29	142000	23		100						
PCB-019		12.61	161000	5.7		100						
PCB-018/030		13.71	705000	74		2000						
PCB-017		13.96	314000	85		2000						
PCB-027		14.08	40700	4.6		100						
PCB-024		14.17	8320	4.5		100						
PCB-016		14.25	278000	100		2000						
PCB-032		14.53	148000	4.3		100						
PCB-034		15.22	2130	24		100						
PCB-023		15.31	902	21		100						
PCB-026/029		15.49	94500	22		100						
PCB-025		15.63	36400	20		100						
PCB-031		15.81	383000	290		2000						
PCB-020/028		15.98	386000	300		2000						
PCB-021/033		16.12	262000	300		2000						
PCB-022		16.35	135000	22		100						
PCB-036		17.20	214	22	M	100						
PCB-039		17.39	1220	22		100						
PCB-038		17.71	152	26		100						
PCB-035		17.99	4200	27		100						
PCB-037		18.22	39500	24		100						
PCB-054		14.46	1690	2.7		100						
PCB-050/053		15.65	49200	6.0		100						
PCB-045/051		16.06	67400	6.4		100						
PCB-046		16.23	19200	7.2		100						
PCB-052		16.97	244000	77		2000						
PCB-073		NotFnd	<4.8	4.8	U	100						
PCB-043		17.10	13200	8.6		100						
PCB-049/069		17.23	125000	6.0		100						
PCB-048		17.39	58400	6.6		100						
PCB-044/047/065		17.52	179000	6.2		100						
PCB-059/062/075		17.71	18300	5.1		100						
PCB-042		17.82	51000	7.6		100						
PCB-040/041/071		18.09	96600	7.1		100						
PCB-064		18.21	72200	5.3		100						
PCB-072		18.60	665	11		100						
PCB-068		18.77	339	10		100						
PCB-057		19.01	642	12		100						
PCB-058		19.13	288	11	M	100						
PCB-067		19.23	3250	9.6		100						
PCB-063		19.38	3230	11		100						
PCB-061/070/074/076		19.55	112000	11		100						
PCB-066		19.74	47600	11		100						
PCB-055		19.85	1830	11		100						
PCB-056		20.12	20000	12		100						
PCB-060		20.25	12400	11		100						
PCB-080		NotFnd	<9.4	9.4	U	100						
PCB-079		21.22	329	10	M	100						
PCB-078		21.56	<16	12	M,J,R	16						
PCB-081	0.0003	21.79	108	11		100						
PCB-077	0.0001	22.10	2330	11		100						
PCB-104		17.49	17.7	2.0	J	100						
PCB-096		17.74	1200	1.9		100						
PCB-103		18.70	506	6.9		100						
PCB-094		18.85	490	7.8		100						
PCB-095		19.10	53100	7.3		100						
PCB-093/098/100/102		19.26	3400	7.2		100						

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-3	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210625A11	5-210628A11
Run Date	25-Jun-21 20:50	28-Jun-21 14:27
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	Run 1						Run 2					
	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	
PCB-088/091		19.56	8940	7.2		100						
PCB-084		19.71	14200	8.0		100						
PCB-089		19.96	724	8.2		100						
PCB-121		NotFnd	<5.1	5.1	U	100						
PCB-092		20.30	8250	7.7		100						
PCB-090/101/113		20.61	41300	6.1		100						
PCB-083/099		20.91	22000	7.4	M	100						
PCB-112		20.99	153	5.2	M	100						
PCB-086/087/097/109/119/125		21.27	26100	6.2	M	100						
PCB-085/110/115/116/117		21.69	44300	5.7	M	100						
PCB-082		21.89	4540	9.4	M	100						
PCB-111		21.98	29.4	4.8	M,J	100						
PCB-120		22.23	40.4	4.8	J	100						
PCB-108/124		22.87	1010	6.3		100						
PCB-107		23.00	1460	5.4	M	100						
PCB-123	0.00003	23.05	406	7.0	M	100						
PCB-106		NotFnd	<6.4	6.4	U	100						
PCB-118	0.00003	23.23	24100	6.5		100						
PCB-122		23.43	341	6.9		100						
PCB-114	0.00003	23.53	656	6.8		100						
PCB-105	0.00003	23.89	9270	7.0		100						
PCB-127		24.62	22.9	6.4	J	100						
PCB-126	0.1	25.51	98.7	8.3	M,J	100						
PCB-155		20.46	13.0	2.1	M,J	100						
PCB-152		20.64	41.2	2.5	M,J	100						
PCB-150		20.69	40.0	2.3	M,J	100						
PCB-136		20.94	3420	2.6	M	100						
PCB-145		21.07	18.2	2.5	M,J	100						
PCB-148		21.79	23.7	3.4	J	100						
PCB-135/151		22.14	6110	3.6	M	100						
PCB-154		22.22	118	2.6	M	100						
PCB-144		22.43	960	3.6		100						
PCB-147/149		22.62	15600	11	M	100						
PCB-134/143		22.77	1430	14	M	100						
PCB-139/140		22.93	458	11		100						
PCB-131		23.07	377	14		100						
PCB-142		NotFnd	<14	14	U	100						
PCB-132		23.33	7670	13		100						
PCB-133		23.49	252	13		100						
PCB-165		23.69	14.1	9.4	M,J	100						
PCB-146		23.83	2220	11		100						
PCB-161		NotFnd	<9.0	9.0	U	100						
PCB-153/168		24.15	13300	9.4		100						
PCB-141		24.28	3170	12		100						
PCB-130		24.51	1380	15		100						
PCB-137/164		24.68	2310	10	M	100						
PCB-129/138/163		24.84	21900	13		100						
PCB-160		NotFnd	<8.2	8.2	U	100						
PCB-158		25.04	1960	7.8		100						
PCB-128/166		25.54	2960	10		100						
PCB-159		25.97	52.2	9.0	M,J	100						
PCB-162		26.10	<45	8.9	M,J,R	45						
PCB-167	0.00003	26.36	727	8.7		100						
PCB-156/157	0.00003	26.99	2420	12		200						
PCB-169	0.03	28.65	24.5	9.8	J	100						
PCB-188		23.46	14.1	3.0	J	100						
PCB-179		23.68	884	2.8		100						
PCB-184		23.91	13.3	2.4	J	100						
PCB-176		24.14	239	2.7		100						
PCB-186		NotFnd	<2.7	2.7	U	100						
PCB-178		25.03	338	3.9		100						
PCB-175		25.36	77.9	3.9	J	100						
PCB-187		25.49	2010	3.2		100						
PCB-182		NotFnd	<3.4	3.4	U	100						
PCB-183		25.80	1020	3.6		100						
PCB-185		25.91	129	3.8	M	100						
PCB-174		25.97	1420	3.6	M	100						
PCB-177		26.20	754	4.0		100						
PCB-181		26.40	24.7	3.6	J	100						
PCB-171/173		26.53	482	4.1		100						
PCB-172		27.31	249	4.2		100						



# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a		
ALS Sample ID	L2602390-3	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Sample	Percent Moisture	n/a		
Sample Matrix	PUF	Split Ratio	4		

Run Information	Run 1	Run 2
Filename	5-210625A11	5-210628A11
Run Date	25-Jun-21 20:50	28-Jun-21 14:27
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)						EMPC					
	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-192	NotFnd	<3.0	3.0		U	100						
PCB-180/193	27.65	3020	3.2			100						
PCB-191	27.83	64.1	3.0		J	100						
PCB-170	28.34	1500	4.3			100						
PCB-190	28.62	270	2.7			100						
PCB-189	0.00003	29.92	69.2	1.3	J	100						
PCB-202	26.23	398	1.3			100						
PCB-201	26.70	160	1.1			100						
PCB-204	NotFnd	<1.1	1.1		U	100						
PCB-197	27.16	29.8	0.99		J	100						
PCB-200	27.26	109	1.1			100						
PCB-198/199	28.65	949	1.5			100						
PCB-196	28.98	349	1.5			100						
PCB-203	29.09	582	1.3			100						
PCB-195	29.82	240	1.9			100						
PCB-194	31.02	712	1.8			100						
PCB-205	31.30	28.2	1.4		J	100						
PCB-208	29.64	183	1.5			100						
PCB-207	30.13	75.4	1.6		J	100						
PCB-206	32.36	524	2.3			100						
PCB-209	33.47	142	0.67			100						

Extraction Standards	pg	Time	% Rec	Limits	Time	% Rec	Limits
13C12-PCB-001	4000	8.95	48	5-145			
13C12-PCB-003	4000	10.47	54	5-145			
13C12-PCB-004	4000	10.62	50	5-145			
13C12-PCB-015	4000	14.28	82	5-145			
13C12-PCB-019	4000	12.60	46	5-145			
13C12-PCB-037	4000	18.21	82	5-145			
13C12-PCB-054	4000	14.44	40	5-145			
13C12-PCB-081	4000	21.78	73	10-145			
13C12-PCB-077	4000	22.09	74	10-145			
13C12-PCB-104	4000	17.48	49	10-145			
13C12-PCB-123	4000	23.05	80	10-145			
13C12-PCB-118	4000	23.22	75	10-145			
13C12-PCB-114	4000	23.52	80	10-145			
13C12-PCB-105	4000	23.88	77	10-145			
13C12-PCB-126	4000	25.48	77	10-145			
13C12-PCB-155	4000	20.44	59	10-145			
13C12-PCB-167	4000	26.35	80	10-145			
13C12-PCB-156/157	8000	26.99	79	10-145			
13C12-PCB-169	4000	28.65	90	10-145			
13C12-PCB-188	4000	23.43	65	10-145			
13C12-PCB-189	4000	29.91	93	10-145			
13C12-PCB-202	4000	26.21	61	10-145			
13C12-PCB-205	4000	31.29	77	10-145			
13C12-PCB-208	4000	29.64	73	10-145			
13C12-PCB-206	4000	32.35	77	10-145			
13C12-PCB-209	4000	33.46	77	10-145			

Field Spike Standards	pg	Time	% Rec	Limits
13C12-PCB-031	18000	15.79	116	70-130
13C12-PCB-095	18000	19.08	102	70-130
13C12-PCB-153	18000	24.14	106	70-130

Cleanup Standards	pg	Time	% Rec	Limits
13C12-PCB-028	4000	15.96	84	5-145
13C12-PCB-111	4000	21.98	85	10-145
13C12-PCB-178	4000	25.02	85	10-145

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 3 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-3	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	
				Approved: S. Jin --e-signature-- 15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210625A11	5-210628A11
Run Date	25-Jun-21 20:50	28-Jun-21 14:27
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
<b>Homologue Group Totals</b>													
Total MonoCB			324000	6.9	J		400						
Total DiCB			2560000	6.0	J		800						
Total TriCB			3000000	4.3	J		800						
Total TetraCB			1200000	2.7	J		1600						
Total PentaCB			267000	1.9	J		1600						
Total HexaCB			89000	2.1	J		1600						
Total HeptaCB			12600	1.3	J		800						
Total OctaCB			3560	0.99	J		800						
Total NonaCB			782	1.5	J		400						
DecaCB			142	0.67	J		400						
Total PCB			7450000		J		3200						
<b>Toxic Equivalency - (WHO 2005)</b>													
Lower Bound PCB TEQ			12.0										
Mid Point PCB TEQ			12.0										
Upper Bound PCB TEQ			12.0										

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.

TEF Indicates the Toxic Equivalency Factor      TEQ Indicates the Toxic Equivalency

LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.

M Indicates that a peak has been manually integrated.

U Indicates that this compound was not detected above the EDL.

J Indicates that the analyte was positively identified. The associated numerical result is an estimate.

R Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-4	Extraction Date	23-Jun-21	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Run Information	Run 1	Run 2
Filename	5-210625A12	5-210628A12
Run Date	25-Jun-21 21:32	28-Jun-21 15:09
Final Volume	25 uL	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)					EMPC				
	Ret. Time	Conc. pg	EDL pg	Flags	LQL	Ret. Time	Conc. pg	EDL pg	Flags	LQL
PCB-001						8.95	347000	75		2000
PCB-002	10.35	15200	5.5		100					
PCB-003	10.48	60200	5.1		100					
PCB-004						10.63	1880000	200		2000
PCB-010	10.75	61400	6.0		100					
PCB-009	11.88	133000	6.3		100					
PCB-007	11.98	67600	5.7		100					
PCB-006						12.15	383000	100		2000
PCB-005	12.34	17600	6.5	M	100					
PCB-008						12.41	1550000	91	M	2000
PCB-014	13.39	119	24	M	100					
PCB-011	13.90	27200	25		100					
PCB-012/013	14.08	48100	24		100					
PCB-015						14.31	309000	400		2000
PCB-019						12.61	242000	44		2000
PCB-018/030						13.71	1290000	88	M	2000
PCB-017						13.96	566000	100	M	2000
PCB-027	14.08	80200	9.8		100					
PCB-024	14.18	15600	9.5		100					
PCB-016						14.25	512000	120	M	2000
PCB-032						14.54	285000	70		2000
PCB-034	15.22	4050	52		100					
PCB-023	15.31	1670	45		100					
PCB-026/029	15.49	180000	48		100					
PCB-025	15.63	70300	43		100					
PCB-031						15.81	713000	260		2000
PCB-020/028						15.98	730000	270		2000
PCB-021/033						16.12	468000	270		2000
PCB-022						16.36	240000	280		2000
PCB-036	17.20	354	47	M	100					
PCB-039	17.39	2130	49		100					
PCB-038	17.71	268	56		100					
PCB-035	17.99	7360	58		100					
PCB-037	18.22	75400	53		100					
PCB-054	14.46	3290	3.9		100					
PCB-050/053	15.65	94500	9.1		100					
PCB-045/051	16.06	130000	9.8		100					
PCB-046	16.23	36800	11		100					
PCB-052						16.97	466000	100		2000
PCB-073	NotFnd	<7.3	7.3	U	100					
PCB-043	17.10	24300	13		100					
PCB-049/069						17.23	259000	91		2000
PCB-048	17.39	108000	10		100					
PCB-044/047/065						17.53	371000	94		2000
PCB-059/062/075	17.71	33500	7.8		100					
PCB-042	17.83	93300	12		100					
PCB-040/041/071	18.09	176000	11		100					
PCB-064	18.21	128000	8.1		100					
PCB-072	18.61	1260	20		100					
PCB-068	18.77	612	18		100					
PCB-057	19.01	1210	21		100					
PCB-058	19.13	541	20	M	100					
PCB-067	19.23	6020	17		100					
PCB-063	19.38	5840	20		100					
PCB-061/070/074/076	19.56	195000	19		100					
PCB-066	19.74	85400	19		100					
PCB-055	19.85	3310	19		100					
PCB-056	20.13	36300	21		100					
PCB-060	20.25	22300	20		100					
PCB-080	NotFnd	<17	17	U	100					
PCB-079	21.23	432	18		100					
PCB-078	21.56	<21	21	M,U	18					
PCB-081	0.0003	21.80	205	20	100					
PCB-077	0.0001	22.10	3940	20	100					
PCB-104		17.49	36.4	2.8	100					
PCB-096		17.74	2110	2.6	100					
PCB-103		18.70	872	24	100					
PCB-094		18.85	853	27	100					
PCB-095		19.10	86800	26	100					
PCB-093/098/100/102		19.27	5840	25	100					

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-4	Extraction Date	23-Jun-21	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Run Information	Run 1	Run 2
Filename	5-210625A12	5-210628A12
Run Date	25-Jun-21 21:32	28-Jun-21 15:09
Final Volume	25 uL	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)						EMPC					
	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-088/091	19.56	14800	25			100						
PCB-084	19.71	23100	28			100						
PCB-089	19.96	1260	29			100						
PCB-121	NotFnd	<18	18		U	100						
PCB-092	20.30	12500	27			100						
PCB-090/101/113	20.61	61700	21			100						
PCB-083/099	20.92	33900	26		M	100						
PCB-112	20.99	261	18		M	100						
PCB-086/087/097/109/119/125	21.28	39300	22		M	100						
PCB-085/110/115/116/117	21.70	65500	20		M	100						
PCB-082	21.89	6970	33		M	100						
PCB-111	21.98	63.5	17		M,J	100						
PCB-120	22.23	63.4	17		M,J	100						
PCB-108/124	22.87	1480	9.7			100						
PCB-107	23.00	2030	8.3		M	100						
PCB-123	0.00003	23.05	600		M	100						
PCB-106	NotFnd	<9.8	9.8		U	100						
PCB-118	0.00003	23.23	33500			100						
PCB-122		23.43	504			100						
PCB-114	0.00003	23.54	895			100						
PCB-105	0.00003	23.89	12200			100						
PCB-127		24.62	39.5		M,J	100						
PCB-126	0.1	25.50	127			100						
PCB-155		20.47	9.61		M,J	100						
PCB-152		20.64	47.4		J	100						
PCB-150		20.70	66.8		J	100						
PCB-136		20.94	4670			100						
PCB-145		21.07	28.0		M,J	100						
PCB-148		21.79	<25		M,J,R	25						
PCB-135/151		22.14	8180		M	100						
PCB-154		22.22	285		M	100						
PCB-144		22.44	1300			100						
PCB-147/149		22.62	21200		M	100						
PCB-134/143		22.77	1760			100						
PCB-139/140		22.93	646			100						
PCB-131		23.07	547			100						
PCB-142		NotFnd	<13		U	100						
PCB-132		23.33	10300			100						
PCB-133		23.49	359			100						
PCB-165		23.69	<10		J,R	10						
PCB-146		23.83	2980			100						
PCB-161		NotFnd	<8.1		U	100						
PCB-153/168		24.15	17800			100						
PCB-141		24.28	4330			100						
PCB-130		24.51	1850			100						
PCB-137/164		24.68	3180		M	100						
PCB-129/138/163		24.84	29000			100						
PCB-160		NotFnd	<7.3		U	100						
PCB-158		25.04	2620			100						
PCB-128/166		25.54	3850			100						
PCB-159		25.98	64.8		J	100						
PCB-162		26.12	<55		J,R	55						
PCB-167	0.00003	26.36	817			100						
PCB-156/157	0.00003	26.99	2780			200						
PCB-169	0.03	28.65	19.2		J	100						
PCB-188		23.46	20.6		J	100						
PCB-179		23.69	1090			100						
PCB-184		23.91	10.4		J	100						
PCB-176		24.14	311			100						
PCB-186		NotFnd	<2.1		U	100						
PCB-178		25.04	404			100						
PCB-175		25.36	98.0		J	100						
PCB-187		25.49	2460			100						
PCB-182		NotFnd	<2.6		U	100						
PCB-183		25.80	1240			100						
PCB-185		25.90	139		M	100						
PCB-174		25.97	1710		M	100						
PCB-177		26.21	927			100						
PCB-181		26.41	39.2		J	100						
PCB-171/173		26.53	590			100						
PCB-172		27.31	291			100						

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-4	Extraction Date	23-Jun-21	Approved: <i>S. Jin</i> --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Run Information	Run 1	Run 2
Filename	5-210625A12	5-210628A12
Run Date	25-Jun-21 21:32	28-Jun-21 15:09
Final Volume	25 uL	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-192		NotFnd	<2.3	2.3		U	100						
PCB-180/193		27.65	3600	2.5			100						
PCB-191		27.85	77.8	2.3		J	100						
PCB-170		28.34	1800	3.3			100						
PCB-190		28.62	314	2.0			100						
PCB-189	0.00003	29.94	76.2	1.7		J	100						
PCB-202		26.23	484	1.8			100						
PCB-201		26.70	186	1.6			100						
PCB-204		NotFnd	<1.5	1.5		U	100						
PCB-197		27.16	33.7	1.5		J	100						
PCB-200		27.26	135	1.6			100						
PCB-198/199		28.65	1070	2.2			100						
PCB-196		28.99	413	2.3			100						
PCB-203		29.09	627	1.9			100						
PCB-195		29.82	242	2.6			100						
PCB-194		31.02	762	2.4			100						
PCB-205		31.32	28.7	2.0		J	100						
PCB-208		29.66	195	2.0			100						
PCB-207		30.12	85.4	2.2		J	100						
PCB-206		32.36	557	3.1			100						
PCB-209		33.47	115	0.88			100						
<b>Extraction Standards</b>	<b>pg</b>	<b>Time</b>	<b>% Rec</b>	<b>Limits</b>				<b>Time</b>	<b>% Rec</b>	<b>Limits</b>			
13C12-PCB-001	4000	8.95	45	5-145									
13C12-PCB-003	4000	10.47	47	5-145									
13C12-PCB-004	4000	10.62	44	5-145									
13C12-PCB-015	4000	14.28	68	5-145									
13C12-PCB-019	4000	12.60	39	5-145									
13C12-PCB-037	4000	18.21	67	5-145									
13C12-PCB-054	4000	14.45	35	5-145									
13C12-PCB-081	4000	21.78	65	10-145									
13C12-PCB-077	4000	22.10	65	10-145									
13C12-PCB-104	4000	17.48	41	10-145									
13C12-PCB-123	4000	23.05	70	10-145									
13C12-PCB-118	4000	23.22	65	10-145									
13C12-PCB-114	4000	23.53	71	10-145									
13C12-PCB-105	4000	23.88	70	10-145									
13C12-PCB-126	4000	25.49	73	10-145									
13C12-PCB-155	4000	20.45	40	10-145									
13C12-PCB-167	4000	26.35	66	10-145									
13C12-PCB-156/157	8000	26.99	66	10-145									
13C12-PCB-169	4000	28.65	73	10-145									
13C12-PCB-188	4000	23.45	52	10-145									
13C12-PCB-189	4000	29.92	73	10-145									
13C12-PCB-202	4000	26.21	49	10-145									
13C12-PCB-205	4000	31.29	62	10-145									
13C12-PCB-208	4000	29.64	57	10-145									
13C12-PCB-206	4000	32.35	62	10-145									
13C12-PCB-209	4000	33.46	57	10-145									
<b>Field Spike Standards</b>													
13C12-PCB-031	18000	15.79	124	70-130									
13C12-PCB-095	18000	19.09	95	70-130									
13C12-PCB-153	18000	24.14	109	70-130									
<b>Cleanup Standards</b>													
13C12-PCB-028	4000	15.96	78	5-145									
13C12-PCB-111	4000	21.98	80	10-145									
13C12-PCB-178	4000	25.02	77	10-145									

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 4 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a		
ALS Sample ID	L2602390-4	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Sample	Percent Moisture	n/a		
Sample Matrix	PUF	Split Ratio	4		

Run Information	Run 1	Run 2
Filename	5-210625A12	5-210628A12
Run Date	25-Jun-21 21:32	28-Jun-21 15:09
Final Volume	25 uL	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg Flags	EMPC pg	LQL
<b>Homologue Group Totals</b>											
Total MonoCB			422000	5.1	J					400	
Total DiCB			4480000	5.7	J					800	
Total TriCB			5480000	9.5	J					800	
Total TetraCB			2290000	3.9	J					1600	
Total PentaCB			407000	2.6	J					1600	
Total HexaCB			119000	2.3	J					1600	
Total HeptaCB			15200	1.7	J					800	
Total OctaCB			3980	1.5	J					800	
Total NonaCB			837	2.0	J					400	
DecaCB			115	0.88	J					400	
Total PCB			13200000		J					3200	
<b>Toxic Equivalency - (WHO 2005)</b>											
Lower Bound PCB TEQ			15.3								
Mid Point PCB TEQ			15.3								
Upper Bound PCB TEQ			15.3								

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.

TEF Indicates the Toxic Equivalency Factor      TEQ Indicates the Toxic Equivalency

LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.

M Indicates that a peak has been manually integrated.

U Indicates that this compound was not detected above the EDL.

J Indicates that the analyte was positively identified. The associated numerical result is an estimate.

R Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

EMPC Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-5	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210625A13	5-210628A13
Run Date	25-Jun-21 22:14	28-Jun-21 15:51
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)						EMPC					
	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-001							8.97	928000	85			2000
PCB-002	10.37	44000	17			100						
PCB-003	10.49	144000	19			100						
PCB-004							10.63	4120000	200			2000
PCB-010	10.77	124000	5.9			100						
PCB-009							11.90	349000	100			2000
PCB-007	12.01	157000	5.6			100						
PCB-006							12.15	919000	100			2000
PCB-005	12.37	45100	6.4	M		100						
PCB-008							12.41	3580000	89	M		2000
PCB-014	13.41	252	34			100						
PCB-011	13.93	38600	36			100						
PCB-012/013	14.10	102000	35			100						
PCB-015							14.31	581000	370			2000
PCB-019							12.62	546000	44			2000
PCB-018/030							13.72	2930000	93			2000
PCB-017							13.96	1270000	110			2000
PCB-027	14.10	133000	11			100						
PCB-024	14.20	32600	11			100						
PCB-016							14.25	1110000	130			2000
PCB-032							14.54	614000	74			2000
PCB-034	15.23	7510	0.0027			100						
PCB-023	15.33	3090	0.0023			100						
PCB-026/029							15.50	340000	350			2000
PCB-025	15.64	123000	0.0022			100						
PCB-031							15.81	1560000	340			2000
PCB-020/028							15.98	1570000	350			2000
PCB-021/033							16.12	1020000	350			2000
PCB-022							16.37	497000	370			2000
PCB-036	17.22	890	0.0025	M		100						
PCB-039	17.41	3870	0.0025			100						
PCB-038	17.73	467	0.0029			100						
PCB-035	18.00	13000	0.0030			100						
PCB-037	18.23	127000	0.0026			100						
PCB-054	14.48	6200	4.4			100						
PCB-050/053	15.67	151000	9.1			100						
PCB-045/051							16.07	272000	92			2000
PCB-046	16.25	58400	11			100						
PCB-052							16.97	878000	100			2000
PCB-073	NotFnd	<7.3	7.3	U		100						
PCB-043	17.11	40500	13			100						
PCB-049/069							17.24	477000	89			2000
PCB-048	17.41	182000	10			100						
PCB-044/047/065							17.54	671000	92			2000
PCB-059/062/075	17.72	57300	7.7			100						
PCB-042	17.84	158000	12			100						
PCB-040/041/071							18.10	356000	100			2000
PCB-064							18.23	263000	74			2000
PCB-072	18.62	2270	17			100						
PCB-068	18.78	940	15			100						
PCB-057	19.02	2110	18			100						
PCB-058	19.14	734	16	M		100						
PCB-067	19.24	10500	14			100						
PCB-063	19.39	10300	16			100						
PCB-061/070/074/076							19.58	359000	220			2000
PCB-066	19.75	144000	16			100						
PCB-055	19.87	5150	16			100						
PCB-056	20.13	61200	18			100						
PCB-060	20.25	38100	17			100						
PCB-080	NotFnd	<14	14	U		100						
PCB-079	21.24	1000	15			100						
PCB-078	21.57	48.6	17	M,J		100						
PCB-081	0.0003	21.81	307	16		100						
PCB-077	0.0001	22.11	6410	16		100						
PCB-104		17.50	60.8	2.3	J	100						
PCB-096		17.75	3550	1.9		100						
PCB-103		18.71	1550	8.3		100						
PCB-094		18.86	1540	9.3		100						
PCB-095		19.11	153000	8.8		100						
PCB-093/098/100/102		19.28	10300	8.7		100						

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a	
ALS Sample ID	L2602390-5	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Sample	Percent Moisture	n/a	
Sample Matrix	PUF	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

Run Information	Run 1	Run 2
Filename	5-210625A13	5-210628A13
Run Date	25-Jun-21 22:14	28-Jun-21 15:51
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)						EMPC					
	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	LQL	
PCB-088/091	19.57	26700	8.6			100						
PCB-084	19.73	42600	9.6			100						
PCB-089	19.97	2220	9.8			100						
PCB-121	NotFnd	<6.1	6.1		U	100						
PCB-092	20.31	24200	9.3			100						
PCB-090/101/113	20.62	121000	7.3			100						
PCB-083/099	20.93	65100	8.9		M	100						
PCB-112	21.01	298	6.2		M	100						
PCB-086/087/097/109/119/125	21.29	77300	7.4		M	100						
PCB-085/110/115/116/117	21.71	134000	6.8		M	100						
PCB-082	21.90	13700	11		M	100						
PCB-111	21.98	136	5.7		M	100						
PCB-120	22.23	118	5.7		M	100						
PCB-108/124	22.88	3230	10			100						
PCB-107	23.01	4580	8.6		M	100						
PCB-123	0.00003	23.06	1250	11	M	100						
PCB-106	NotFnd	<10	10		U	100						
PCB-118	0.00003	23.24	75300	9.8		100						
PCB-122		23.45	1100	11		100						
PCB-114	0.00003	23.54	1990	10		100						
PCB-105	0.00003	23.91	28700	10		100						
PCB-127		24.63	96.8	10	M,J	100						
PCB-126	0.1	25.52	271	12	M	100						
PCB-155		20.47	14.6	1.8	J	100						
PCB-152		20.65	95.5	1.9	J	100						
PCB-150		20.71	99.5	1.8	J	100						
PCB-136		20.95	9050	2.0	M	100						
PCB-145		21.08	52.1	1.9	M,J	100						
PCB-148		21.80	45.7	2.6	M,J	100						
PCB-135/151		22.15	15900	2.8	M	100						
PCB-154		22.22	532	2.0	M	100						
PCB-144		22.45	2750	2.7		100						
PCB-147/149		22.64	43300	9.0	M	100						
PCB-134/143		22.77	3950	11		100						
PCB-139/140		22.94	1450	8.7		100						
PCB-131		23.08	1160	11		100						
PCB-142		NotFnd	<11	11	U	100						
PCB-132		23.34	23100	10		100						
PCB-133		23.51	718	10		100						
PCB-165		23.70	36.2	7.6	J	100						
PCB-146		23.84	6560	8.6		100						
PCB-161		NotFnd	<7.3	7.3	U	100						
PCB-153/168		24.16	40100	7.5		100						
PCB-141		24.29	9700	9.6		100						
PCB-130		24.52	4330	12		100						
PCB-137/164		24.69	7620	8.3	M	100						
PCB-129/138/163		24.85	70300	10		100						
PCB-160		NotFnd	<6.6	6.6	U	100						
PCB-158		25.05	6500	6.3		100						
PCB-128/166		25.55	10100	8.4		100						
PCB-159		25.98	148	7.3		100						
PCB-162		26.12	171	7.2		100						
PCB-167	0.00003	26.37	2390	6.9		100						
PCB-156/157	0.00003	27.00	8300	9.3		200						
PCB-169	0.03	28.67	55.0	7.7	J	100						
PCB-188		23.47	24.1	2.9	J	100						
PCB-179		23.69	2300	2.6	M	100						
PCB-184		23.91	18.2	2.3	M,J	100						
PCB-176		24.15	689	2.6		100						
PCB-186		24.40	<2.7	2.6	J,R 2.7	100						
PCB-178		25.04	921	3.7		100						
PCB-175		25.37	221	3.7		100						
PCB-187		25.50	5380	3.1		100						
PCB-182		NotFnd	<3.2	3.2	U	100						
PCB-183		25.81	3030	3.5		100						
PCB-185		25.92	364	3.6	M	100						
PCB-174		25.98	4230	3.4	M	100						
PCB-177		26.21	2360	3.8		100						
PCB-181		26.41	99.7	3.4	J	100						
PCB-171/173		26.54	1610	3.9		100						
PCB-172		27.33	778	4.0		100						



# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a		
ALS Sample ID	L2602390-5	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Sample	Percent Moisture	n/a		
Sample Matrix	PUF	Split Ratio	4		

Run Information	Run 1	Run 2
Filename	5-210625A13	5-210628A13
Run Date	25-Jun-21 22:14	28-Jun-21 15:51
Final Volume	25 uL	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)						EMPC					
	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-192	NotFnd	<2.9	2.9		U	100						
PCB-180/193	27.65	9460	3.1			100						
PCB-191	27.85	208	2.9			100						
PCB-170	28.35	5160	4.1			100						
PCB-190	28.63	868	2.6			100						
PCB-189	0.00003	29.94	226	2.2		100						
PCB-202	26.24	859	1.6			100						
PCB-201	26.71	375	1.4			100						
PCB-204	27.08	1.65	1.3		J	100						
PCB-197	27.17	73.2	1.3		J	100						
PCB-200	27.28	288	1.4			100						
PCB-198/199	28.67	2470	1.9			100						
PCB-196	29.01	924	2.0			100						
PCB-203	29.10	1450	1.7			100						
PCB-195	29.84	621	2.5			100						
PCB-194	31.04	1820	2.3			100						
PCB-205	31.33	71.3	1.9		J	100						
PCB-208	29.66	391	1.6			100						
PCB-207	30.13	175	1.8			100						
PCB-206	32.38	1240	2.7			100						
PCB-209	33.49	246	1.0			100						

Extraction Standards	pg	Time	% Rec	Limits	Time	% Rec	Limits
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13C12-PCB-001	4000	8.97	50	5-145			
13C12-PCB-003	4000	10.49	44	5-145			
13C12-PCB-004	4000	10.68	50	5-145			
13C12-PCB-015	4000	14.30	76	5-145			
13C12-PCB-019	4000	12.62	47	5-145			
13C12-PCB-037	4000	18.22	82	5-145			
13C12-PCB-054	4000	14.47	37	5-145			
13C12-PCB-081	4000	21.80	72	10-145			
13C12-PCB-077	4000	22.10	72	10-145			
13C12-PCB-104	4000	17.49	42	10-145			
13C12-PCB-123	4000	23.06	75	10-145			
13C12-PCB-118	4000	23.23	73	10-145			
13C12-PCB-114	4000	23.53	77	10-145			
13C12-PCB-105	4000	23.89	77	10-145			
13C12-PCB-126	4000	25.49	81	10-145			
13C12-PCB-155	4000	20.46	52	10-145			
13C12-PCB-167	4000	26.36	74	10-145			
13C12-PCB-156/157	8000	27.00	75	10-145			
13C12-PCB-169	4000	28.67	84	10-145			
13C12-PCB-188	4000	23.45	60	10-145			
13C12-PCB-189	4000	29.92	83	10-145			
13C12-PCB-202	4000	26.23	58	10-145			
13C12-PCB-205	4000	31.30	73	10-145			
13C12-PCB-208	4000	29.64	68	10-145			
13C12-PCB-206	4000	32.36	72	10-145			
13C12-PCB-209	4000	33.46	69	10-145			

**Field Spike Standards**

13C12-PCB-031	18000	15.81	111	70-130
13C12-PCB-095	18000	19.10	97	70-130
13C12-PCB-153	18000	24.15	106	70-130

**Cleanup Standards**

13C12-PCB-028	4000	15.98	84	5-145
13C12-PCB-111	4000	21.99	86	10-145
13C12-PCB-178	4000	25.03	85	10-145

# ALS Life Sciences

## Sample Analysis Report

<b>Sample Name</b>	SITE 5 - COMPOSITE 6 (WET SEASON - APR, MAY, JUN)	Sampling Date	n/a		
ALS Sample ID	L2602390-5	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Sample	Percent Moisture	n/a		
Sample Matrix	PUF	Split Ratio	4		

Run Information	Run 1	Run 2
Filename	5-210625A13	5-210628A13
Run Date	25-Jun-21 22:14	28-Jun-21 15:51
Final Volume	25 ul	25 uL
Dilution Factor	1	20
Analysis Units	pg	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
<b>Homologue Group Totals</b>													
Total MonoCB			1120000	17	J	400							
Total DiCB			1000000	5.6	J	800							
Total TriCB			1190000	0.0022	J	800							
Total TetraCB			4210000	4.4	J	1600							
Total PentaCB			794000	1.9	J	1600							
Total HexaCB			269000	1.8	J	1600							
Total HeptaCB			37900	2.2	J	800							
Total OctaCB			8950	1.3	J	800							
Total NonaCB			1810	1.6	J	400							
DecaCB			246	1.0	J	400							
Total PCB			28400000		J	3200							
<b>Toxic Equivalency - (WHO 2005)</b>													
Lower Bound PCB TEQ			33.0										
Mid Point PCB TEQ			33.0										
Upper Bound PCB TEQ			33.0										

EDL Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.

TEF Indicates the Toxic Equivalency Factor      TEQ Indicates the Toxic Equivalency

LQL Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.

M Indicates that a peak has been manually integrated.

U Indicates that this compound was not detected above the EDL.

J Indicates that the analyte was positively identified. The associated numerical result is an estimate.

R Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

EMPC Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criterion failure

# **SVOC DATA PACKAGE**

## **SECTION 3: METHOD SUMMARY**

**PCB METHOD SUMMARY  
Method 1668**

**Introduction:**

This summary is to provide ALSE Burlington PCB method details in order to provide persons reviewing or validating this data package sufficient information to re-construct the sample calculation, data verification and review. It incorporates the analysis of PCBs via the following reference methods:

US EPA Office of Water, Method 1668A  
US EPA Office of Water, Method 1668C

Any deviations to what is listed herein would be listed in the project narrative.

To avoid the confusion and conflicting nomenclature within the methods, we have defined the labeled standards in terms relating to the time of addition to the sample or extract. Therefore;

The Field or Sampling Standards are added prior to field sampling  
The Extraction Standards are added prior to extraction  
The Clean-up Standards are added prior to extract clean-up  
The Injection Standards are added prior to extract injection.

**Calibration Standard Levels:**

Six levels of standard are available for calibration as listed in Table 1. The low point (the CS0) is below method requirements and therefore is optional.

**Table 1. Concentration of CB congeners in calibration and calibration verification standards**

Solution concentration (ng/mL)

CB congener	IUPAC <sup>1</sup>	CS-0.2 (Hi sens)2	CS-1	CS-2	CS-3 (VER)	CS-4	CS-5
<b>Native Toxics/LOC</b>							
2-MoCB	1	0.2	1	5	50	400	2000
4-MoCB	3	0.2	1	5	50	400	2000
2,2'-DiCB	4	0.2	1	5	50	400	2000
4,4'-DiCB	15	0.2	1	5	50	400	2000
2,2',6'-TriCB	19	0.2	1	5	50	400	2000
3,4,4'-TriCB	37	0.2	1	5	50	400	2000
2,2',6,6'-TeCB	54	0.2	1	5	50	400	2000
3,3',4,4'-TeCB	77	0.2	1	5	50	400	2000
3,4,4',5'-TeCB	81	0.2	1	5	50	400	2000
2,2',4,6,6'-PeCB	104	0.2	1	5	50	400	2000
2,3,3',4,4'-PeCB	105	0.2	1	5	50	400	2000
2,3,4,4',5'-PeCB	114	0.2	1	5	50	400	2000
2,3',4,4',5'-PeCB	118	0.2	1	5	50	400	2000
2',3,4,4',5'-PeCB	123	0.2	1	5	50	400	2000
3,3',4,4',5'-PeCB	126	0.2	1	5	50	400	2000
2,2',4,4',6,6'-HxCB	155	0.2	1	5	50	400	2000
2,3,3',4,4',5'-HxCB	156	0.2	1	5	50	400	2000
2,3,3',4,4',5'-HxCB	157	0.2	1	5	50	400	2000
2,3',4,4',5,5'-HxCB	167	0.2	1	5	50	400	2000
3,3',4,4',5,5'-HxCB	169	0.2	1	5	50	400	2000
2,2',3,4',5,6,6'-HpCB	188	0.2	1	5	50	400	2000
2,3,3',4,4',5,5'-HpCB	189	0.2	1	5	50	400	2000
2,2',3,3',5,5',6,6'-OxCB	202	0.2	1	5	50	400	2000
2,3,3',4,4',5,5',6-OxCB	205	0.2	1	5	50	400	2000
2,2',3,3',4,4',5,5',6-NoCB	206	0.2	1	5	50	400	2000
2,2',3,3',4,4',5,5',6,6'-NoCB	208	0.2	1	5	50	400	2000
DeCB 209	209	0.2	1	5	50	400	2000
<b>Labeled Toxics/LOC/window-defining</b>							
13C12-2-MoCB	1L	100	100	100	100	100	100
13C12-4-MoCB	3L	100	100	100	100	100	100
13C12-2,2'-DiCB	4L	100	100	100	100	100	100
13C12-4,4'-DiCB	15L	100	100	100	100	100	100
13C12-2,2',6'-TriCB	19L	100	100	100	100	100	100
13C12-3,4,4'-TriCB	37L	100	100	100	100	100	100
13C12-2,2',6,6'-TeCB	54L	100	100	100	100	100	100
13C12-3,3',4,4'-TeCB	77L	100	100	100	100	100	100
13C12-3,4,4',5'-TeCB	81L	100	100	100	100	100	100
13C12-2,2',4,6,6'-PeCB	104L	100	100	100	100	100	100
13C12-2,3,3',4,4'-PeCB	105L	100	100	100	100	100	100
13C12-2,3,4,4',5'-PeCB	114L	100	100	100	100	100	100
13C12-2,3',4,4',5'-PeCB	118L	100	100	100	100	100	100
13C12-2',3,4,4',5'-PeCB	123L	100	100	100	100	100	100
13C12-3,3',4,4',5'-PeCB	126L	100	100	100	100	100	100
13C12-2,2',4,4',6,6'-HxCB	155L	100	100	100	100	100	100
13C12-2,3,3',4,4',5'-HxCB	156L	100	100	100	100	100	100
13C12-2,3,3',4,4',5'-HxCB	157L	100	100	100	100	100	100
13C12-2,3',4,4',5,5'-HxCB	167L	100	100	100	100	100	100
13C12-3,3',4,4',5,5'-HxCB	169L	100	100	100	100	100	100
13C12-2,2',3,4',5,6,6'-HpCB	188L	100	100	100	100	100	100
13C12-2,3,3',4,4',5,5'-HpCB	189L	100	100	100	100	100	100
13C12-2,2',3,3',5,5',6,6'-OxCB	202L	100	100	100	100	100	100
13C12-2,3,3',4,4',5,5',6-OxCB	205L	100	100	100	100	100	100
13C12-2,2',3,3',4,4',5,5',6-NoCB	206L	100	100	100	100	100	100
13C12-2,2',3,3',4,4',5,5',6,6'-NoCB	208L	100	100	100	100	100	100
13C12-DeCB 209L	209L	100	100	100	100	100	100
<b>Labeled clean-up</b>							
13C12-2,4,4'-TriCB	28L	100	100	100	100	100	100
13C12-2,3,3',5,5'-PeCB	111L	100	100	100	100	100	100
13C12-2,2',3,3',5,5',6-HpCB	178L	100	100	100	100	100	100
<b>Labeled injection internal</b>							
13C12-2,5-DiCB	9L	100	100	100	100	100	100
13C12-2,2',5,5'-TeCB	52L	100	100	100	100	100	100
13C12-2,2',4,4',5,5'-PeCB	101L	100	100	100	100	100	100
13C12-2,2',3,4,4',5'-HxCB	138L	100	100	100	100	100	100
13C12-2,2',3,3',4,4',5,5'-OxCB	194L	100	100	100	100	100	100

**Method Control Limits for 1668A**

The initial and continuing calibration control limits for both methods are presented in Table 2 below. For the initial calibration CS1 and for each calibration verification CS3, the signal to noise ratio for each quantification ion for labelled and non-labelled analytes must be greater than or equal to 10:1

**Table 2A. QC acceptance criteria for chlorinated biphenyls in VER, IPR, OPR, and samples <sup>1</sup>**

Congener	IUPAC Number <sup>2</sup>	Test conc (ng/mL)	VER (%)	IPR		OPR (%)	Labelled compound recovery in samples (%)
				RSD (%)	X (%)		
2-MoCB	1	50	70-130	40	60-140	50-150	
4-MoCB	3	50	70-130	40	60-140	50-150	
2,2'-DiCB	4	50	70-130	40	60-140	50-150	
4,4'-DiCB	15	50	70-130	40	60-140	50-150	
2,2',6-TrCB	19	50	70-130	40	60-140	50-150	
3,4,4'-TrCB	37	50	70-130	40	60-140	50-150	
2,2',6,6'-TeCB	54	50	70-130	40	60-140	50-150	
3,3',4,4'-TeCB	77	50	70-130	40	60-140	50-150	
3,4,4',5-TeCB	81	50	70-130	40	60-140	50-150	
2,2',4,6,6'-PeCB	104	50	70-130	40	60-140	50-150	
2,3,3',4,4'-PeCB	105	50	70-130	40	60-140	50-150	
2,3,4,4',5-PeCB	114	50	70-130	40	60-140	50-150	
2,3',4,4',5-PeCB	118	50	70-130	40	60-140	50-150	
2',3,4,4',5-PeCB	123	50	70-130	40	60-140	50-150	
3,3',4,4',5-PeCB	126	50	70-130	40	60-140	50-150	
2,2',4,4',6,6'-HxCB	155	50	70-130	40	60-140	50-150	
2,3,3',4,4',5-HxCB <sup>3</sup>	156	50	70-130	40	60-140	50-150	
2,3,3',4,4',5'-HxCB <sup>3</sup>	157	50	70-130	40	60-140	50-150	
2,3',4,4',5,5'-HxCB	167	50	70-130	40	60-140	50-150	
3,3',4,4',5,5'-HxCB	169	50	70-130	40	60-140	50-150	
2,2',3,4',5,6,6'-HpCB	188	50	70-130	40	60-140	50-150	
2,3,3',4,4',5,5'-HpCB	189	50	70-130	40	60-140	50-150	
2,2',3,3',5,5',6,6'-OcCB	202	50	70-130	40	60-140	50-150	
2,3,3',4,4',5,5',6-OcCB	205	50	70-130	40	60-140	50-150	
2,2',3,3',4,4',5,5',6-NoCB	206	50	70-130	40	60-140	50-150	
2,2',3,3',4,4',5,5',6,6'-NoCB	208	50	70-130	40	60-140	50-150	
DeCB	209	50	70-130	40	60-140	50-150	
13C12-2-MoCB	1L	100	50-150	50	35-135	30-140	25-150
13C12-4-MoCB	3L	100	50-150	50	35-135	30-140	25-150
13C12-2,2'-DiCB	4L	100	50-150	50	35-135	30-140	25-150
13C12-4,4'-DiCB	15L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',6-TrCB	19L	100	50-150	50	35-135	30-140	25-150
13C12-3,4,4'-TrCB	37L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',6,6'-TeCB	54L	100	50-150	50	35-135	30-140	25-150
13C12-3,3',4,4'-TCB	77L	100	50-150	50	35-135	30-140	25-150
13C12-3,4,4',5-TeCB	81L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',4,6,6'-PeCB	104L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,3',4,4'-PeCB	105L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,4,4',5-PeCB	114L	100	50-150	50	35-135	30-140	25-150
13C12-2,3',4,4',5-PeCB	118L	100	50-150	50	35-135	30-140	25-150
13C12-2',3,4,4',5-PeCB	123L	100	50-150	50	35-135	30-140	25-150
13C12-3,3',4,4',5-PeCB	126L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',4,4',6,6'-HxCB	155L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,3',4,4',5-HxCB <sup>3</sup>	156L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,3',4,4',5'-HxCB <sup>3</sup>	157L	100	50-150	50	35-135	30-140	25-150
13C12-2,3',4,4',5,5'-HxCB	167L	100	50-150	50	35-135	30-140	25-150
13C12-3,3',4,4',5,5'-HxCB	169L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,4',5,6,6'-HpCB	188L	100	50-150	50	35-135	30-140	25-150
13C12-2',3,3',4,4',5,5'-HpCB	189L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,3',5,5',6,6'-OcCB	202L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,3',4,4',5,5',6-OcCB	205L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,3',4,4',5,5',6-NoCB	206L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,3',4,4',5,5',6,6'-NoCB	208L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,3',4,4',5,5',6,6'-DeCB	209L	100	50-150	50	35-135	30-140	25-150
<b>Cleanup standard</b>							
13C12-2,4,4'-TrCB	28L	100	60-130	45	45-120	40-125	30-135
13C12-2,3,3',5,5'-PeCB	111L	100	60-130	45	45-120	40-125	30-135
13C12-2,2',3,3',5,5',6-HpCB	178L	100	60-130	45	45-120	40-125	30-135

1. QC acceptance criteria for IPR, OPR, and samples based on a 20 ul extract final volume

2. Suffix "L" indicates labelled compound.

3. PCBs 156 and 157 are tested as the sum of two concentrations

**Method Control Limits for 1668C**

The initial and continuing calibration control limits for both methods are presented in Table 2 below. For the initial calibration CS1 and for each calibration verification CS3, the signal to noise ratio for each quantification ion for labelled and non-labelled analytes must be greater than or equal to 10:1

**Table 2A. QC acceptance criteria for chlorinated biphenyls in VER, IPR, OPR, and samples <sup>1</sup>**

Congener	IUPAC Number <sup>2</sup>	Test conc (ng/mL)	VER (%)	IPR		OPR (%)	Labelled compound recovery in samples (%)
				RSD (%)	X (%)		
2-MoCB	1	50	75 - 125	25	70 - 130	60 - 135	
4-MoCB	3	50	75 - 125	25	70 - 130	60 - 135	
2,2'-DiCB	4	50	75 - 125	25	70 - 130	60 - 135	
4,4'-DiCB	15	50	75 - 125	25	70 - 130	60 - 135	
2,2',6-TrCB	19	50	75 - 125	25	70 - 130	60 - 135	
3,4,4'-TrCB	37	50	75 - 125	25	70 - 130	60 - 135	
2,2',6,6'-TeCB	54	50	75 - 125	25	70 - 130	60 - 135	
3,3',4,4'-TeCB	77	50	75 - 125	25	70 - 130	60 - 135	
3,4,4',5-TeCB	81	50	75 - 125	25	70 - 130	60 - 135	
2,2',4,6,6'-PeCB	104	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4'-PeCB	105	50	75 - 125	25	70 - 130	60 - 135	
2,3,4,4',5-PeCB	114	50	75 - 125	25	70 - 130	60 - 135	
2,3',4,4',5-PeCB	118	50	75 - 125	25	70 - 130	60 - 135	
2',3,4,4',5-PeCB	123	50	75 - 125	25	70 - 130	60 - 135	
3,3',4,4',5-PeCB	126	50	75 - 125	25	70 - 130	60 - 135	
2,2',4,4',6,6'-HxCB	155	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4',5-HxCB <sup>3</sup>	156	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4',5'-HxCB <sup>3</sup>	157	50	75 - 125	25	70 - 130	60 - 135	
2,3',4,4',5,5'-HxCB	167	50	75 - 125	25	70 - 130	60 - 135	
3,3',4,4',5,5'-HxCB	169	50	75 - 125	25	70 - 130	60 - 135	
2,2',3,4',5,6,6'-HpCB	188	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4',5,5'-HpCB	189	50	75 - 125	25	70 - 130	60 - 135	
2,2',3,3',5,5',6,6'-OcCB	202	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4',5,5',6-OcCB	205	50	75 - 125	25	70 - 130	60 - 135	
2,2',3,3',4,4',5,5',6-NoCB	206	50	75 - 125	25	70 - 130	60 - 135	
2,2',3,3',4,5,5',6,6'-NoCB	208	50	75 - 125	25	70 - 130	60 - 135	
DeCB	209	50	75 - 125	25	70 - 130	60 - 135	
13C12-2-MoCB	1L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-4-MoCB	3L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-2,2'-DiCB	4L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-4,4'-DiCB	15L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-2,2',6-TrCB	19L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-3,4,4'-TrCB	37L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-2,2',6,6'-TeCB	54L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-3,3',4,4'-TeCB	77L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-3,4,4',5-TeCB	81L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',4,6,6'-PeCB	104L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,3',4,4'-PeCB	105L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,4,4',5-PeCB	114L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3',4,4',5-PeCB	118L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2',3,4,4',5-PeCB	123L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-3,3',4,4',5-PeCB	126L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',4,4',6,6'-HxCB	155L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,3',4,4',5-HxCB <sup>3</sup>	156L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,3',4,4',5'-HxCB <sup>3</sup>	157L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3',4,4',5,5'-HxCB	167L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-3,3',4,4',5,5'-HxCB	169L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,4',5,6,6'-HpCB	188L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2',3,3',4,4',5,5'-HpCB	189L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',5,5',6,6'-OcCB	202L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,3',4,4',5,5',6-OcCB	205L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',4,4',5,5',6-NoCB	206L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',4,5,5',6,6'-NoCB	208L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',4,4',5,5',6,6'-DeCB	209L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
<b>Cleanup standards</b>							
13C12-2,4,4'-TrCB	28L	100	65 - 135	70	20 - 135	5 - 145	5 - 145
13C12-2,3,3',5,5'-PeCB	111L	100	75 - 125	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',5,5',6-HpCB	178L	100	75 - 125	50	45 - 135	10 - 145	10 - 145

1. QC acceptance criteria for IPR, OPR, and samples based on a 20-µL extract final volume

2. Suffix "L" indicates labeled compound.

3. CBs 156/157 and 156L/157L are tested as the sum of the two congeners

**Reporting Limits:**

Unless indicated in the otherwise, the PCB results are reported down to 2.5:1 signal to noise for each isomer grouping for each extract injection. This is consistent to SW846 8290 defined protocols (i.e. EDL or Estimated Detection Limit) and is commonly applied throughout the industry to any or all the HRMS performance based methods applicable to this method summary.

**Method Blank:**

The Method Blank must be below the EMLs published in the required method, 1668A or 1668C.

**MS/MSD:**

The % relative difference between the MS and MSD spike recoveries should be less than or equal to 20%.

**Instrument/Run Performance Criteria:**

- 1 Elution windows must be defined by a 'Window Performance Mix' at the beginning of each 12-hour run sequence
- 2 GC performance criteria of 40% maximum valley between PCB-34/PCB-23, and PCB-187/PCB-182 (Octyl Column).
- 3 At the beginning of and just following the end of each 12 hour run sequence, the instrument must be checked to demonstrate a resolution of 10,000 within each quantification window (8,000 minimum across the window).
- 4 The relative retention times (RRT) of the compounds in the daily 209 congener mix must fall into the ranges presented in Table 4.
- 5 The RT in the daily CS3 verification standards must be within 15 seconds of the CS3 in the initial calibration run.
- 6 The maximum time between scans within a descriptor is 1 second.
- 7 Lock mass deviations to the average response must be less than or equal 20%.

**Laboratory Duplicates:**

The % relative difference between duplicates should be less than or equal to 25% but only where the response is greater than the low calibration standard.

**Analyte Identification Criteria:**

- 1 Ion ratio must be within 15% of theoretical or within 10% of the most recent CS3.
- 2 The retention time (RT) of the peak maxima for each pair of quantification ions must be no more than 2 seconds (i.e. 2 scans) difference.
- 3 The retention time (RT) of the peak maxima of all native analytes for which a labeled analogue is used must be within -1 to +3 seconds of the RT of corresponding <sup>13</sup>C<sub>12</sub>-labelled isomer of that injection run.
- 4 For those native analytes without a corresponding labelled isomer, the relative retention time (RRT) must be within 0.005 of the relative retention time observed in the daily 209 congener run.

## **DEVIATIONS AND CLARIFICATIONS FROM THE PRIMARY REFERENCES**

The reference methods applicable to this document are:

US EPA Office of Water, Method 1668A  
US EPA Office of Water, Method 1668C

These methods are referred-to herein as Method 1668

The following changes and clarifications apply:

1) As stated in method 1668, alternate columns and column systems are allowable changes to the method. In the context of the method, it is clear that Table 2 of this method (including retention times, relative retention times, and quantitation references) is specific to the Octyl GC column if used exactly as suggested in the method.

As a performance based method, changes in the internal standard references could be considered an improvement even when using the SPB-Octyl column. However when using an alternate column system (which may or may not include use of the Octyl column), optimization of the quantitation references can be an important part of optimizing the method. Consider that the MS acquisition method must be divided into mass descriptors or 'functions', each one defining the masses that are monitored during that time range. When monitoring for all 209 PCB congeners, there are large chromatographic regions where elution of target compounds is nearly continuous with little separation between peaks. In addition, there is a slight acquisition "gap" that occurs at each function change (for Water's instruments 1-2 seconds, for Thermo instruments 6-8 seconds), and also the likelihood of slight retention time shifts from one run to another. Consequently, choosing the exact location of each function boundary can be challenging. For a 1668 method, there are typically between 5 and 8 functions dependent upon the column, the GC conditions, the instrument and the choice of the function boundaries by the laboratory. Each function can have 1 to as many as 4 chlorination levels. When optimizing the quantification model in the case where RT and elution patterns have changed – even slightly - the best choice of internal standard references can and should change dependent upon target retention times and placement of function boundaries. For example, the best quantification is achieved using an internal standard reference that elutes at close to the same retention time. Another consideration is that it is best practice where possible (i.e. generally allows for more accurate target determinations) to have the internal standard reference within the same function rather than quantify a target relative to an internal standard from an outside function.

The quantification references used in this analysis are detailed in Table 3.

2) The absolute retention time criterion for decachlorobiphenyl of 55 minutes is not generally followed and is an unnecessary restriction since method 1668 was developed without the use of electronic pressure control on the GC injection system, and there are GC performance criteria that can be met without this restriction. As a result, the RRT criteria of 1668 may not be applicable.

3) Although not clearly stated in method 1668, we maintain that each and every individual clean-up procedure is, by definition, performance-based and optional. There is not an expectation within the industry to follow exactly the descriptions of clean-ups in reference methods. Adaptations which meet or exceed the required performance criteria are therefore acceptable within the scope of each reference method. The reference method descriptions are intended as guidelines or templates available to help the laboratory to define effective in-house clean-up methods. The objective within the laboratory is to provide quality clean extracts to the instrument for analysis. Each individual clean-up is part of the laboratory's available tools in order to achieve this objective.

4) There are differences within the individual reference methods as to the precise spiking protocols for adding extraction standards and native spikes (for LCS, MS and MSD). To ensure consistency within the laboratory between HRMS methods, the PCB preparative method requires solid samples (including stack and ambient sorbants/filters) to be spiked in the soxhlet extractor from a nonane solution and waters are spiked before filtering from an acetone solution. .

5) Sub-sampling of solids and pre-extraction processing is done in a manner that minimizes potential for cross-contamination. These processes are designed around SW846 protocols rather than 1668 protocols. Solids are sub-sampled directly from the bottle as submitted to the laboratory wherever practical. If the sample is submitted such that homogenization in the bottle is impractical (eg. the bottle is too full or lumps cannot be broken down), then transferring the sample to a tray or another bottle maybe in order.

6) The concentration of labelled and native spiking solutions are not consistent with those listed in all of the reference methods. These concentrations are prepared at levels convenient and expedient for accurate laboratory processing.

7) Extraction and injection standard concentrations differ from 1668, in order to aid precise measurement and standardise volumes with other reference methods such as PCDD/F by 1613B.

8) Method 1668C recognizes the option to use the 209 congener mix as the daily calibration verification solution rather than the CS3. This document acknowledges and allows either calibration option for both 1668A and 1668C analytical approaches.

9) For method 1668C analysis, the OPR labelled recovery limits are the same as for the sample recovery limits in method 1668C. This represents a broader acceptance range for the OPR than is currently listed in method 1668C. However, the control of the native (i.e. non-labelled) recovery limits is the key item to demonstrate/monitor in the OPR. Furthermore, in the OPR performance, it is important to demonstrate these native controls are maintained within the same range of labelled recoveries as is observed in the sample data.



**Table 3: Quantitation References for Native and Labeled CBs**

CI No. <sup>1</sup>	Congener No. <sup>2,3</sup>	RT Ref <sup>4</sup>	Quantitation Reference <sup>5</sup>
<b>Native Compounds</b>			
1	1	1L	1L
1	2	3L	1L/3L
1	3	3L	3L
2	4	4L	4L
2	10	4L	4L/15L
2	9	4L	4L/15L
2	7	4L	4L/15L
2	6	4L	4L/15L
2	5	4L	4L/15L
2	8	4L	4L/15L
2	14	15L	4L/15L
2	11	15L	4L/15L
2	13/12	15L	4L/15L
2	15	15L	15L
3	19	19L	19L
3	30/18	19L	19L/37L
3	17	19L	19L/37L
3	27	19L	19L/37L
3	24	19L	19L/37L
3	16	19L	19L/37L
3	32	19L	19L/37L
3	34	19L	19L/37L
3	23	19L	19L/37L
3	26/29	19L	19L/37L
3	25	37L	19L/37L
3	31	37L	19L/37L
3	28/20	37L	19L/37L
3	21/33	37L	19L/37L
3	22	37L	19L/37L
3	36	37L	19L/37L
3	39	37L	19L/37L
3	38	37L	19L/37L
3	35	37L	19L/37L
3	37	37L	37L
4	54	54L	54L
4	50/53	54L	54L/81L/77L
4	45/51	54L	54L/81L/77L
4	46	54L	54L/81L/77L
4	52	54L	54L/81L/77L
4	73	54L	54L/81L/77L
4	43	54L	54L/81L/77L
4	69/49	54L	54L/81L/77L
4	48	54L	54L/81L/77L
4	44/47/65	54L	54L/81L/77L
4	59/62/75	54L	54L/81L/77L
4	42	54L	54L/81L/77L
4	41/40/71	54L	54L/81L/77L
4	64	54L	54L/81L/77L
4	72	81L	54L/81L/77L
4	68	81L	54L/81L/77L

CI No. <sup>1</sup>	Congener No. <sup>2,3</sup>	RT Ref <sup>4</sup>	Quantitation Reference <sup>5</sup>
4	57	81L	54L/81L/77L
4	58	81L	54L/81L/77L
4	67	81L	54L/81L/77L
4	63	81L	54L/81L/77L
4	61/70/74/76	81L	54L/81L/77L
4	66	81L	54L/81L/77L
4	55	81L	54L/81L/77L
4	56	81L	54L/81L/77L
4	60	81L	54L/81L/77L
4	80	81L	54L/81L/77L
4	79	81L	54L/81L/77L
4	78	81L	54L/81L/77L
4	81	81L	81L
4	77	77L	77L
5	104	104L	104L
5	96	104L	104L/123L/114L/118L
5	103	104L	104L/123L/114L/118L
5	94	104L	104L/123L/114L/118L
5	95	104L	104L/123L/114L/118L
5	95/100/93/102/98	104L	104L/123L/114L/118L
5	88/91	104L	104L/123L/114L/118L
5	84	104L	104L/123L/114L/118L
5	89	104L	104L/123L/114L/118L
5	121	104L	104L/123L/114L/118L
5	92	123L	104L/123L/114L/118L
5	113/90/101	104L	104L/123L/114L/118L
5	83/99	104L	104L/123L/114L/118L
5	112	104L	104L/123L/114L/118L
5	108/119/86/97/125/87	104L	104L/123L/114L/118L
5	117/116/85/110/115	104L	104L/123L/114L/118L
5	82	104L	104L/123L/114L/118L
5	111	104L	104L/123L/114L/118L
5	120	104L	104L/123L/114L/118L
5	107/124	104L	104L/123L/114L/118L
5	109	104L	104L/123L/114L/118L
5	123	123L	123L
5	106	123L	104L/123L/114L/118L
5	118	118L	118L
5	122	118L	104L/123L/114L/118L
5	114	114L	114L
5	105	105L	105L
5	127	105L	104L/123L/114L/118L
5	126	126L	126L
6	155	155L	155L
6	152	155L	155L/156L/157L/167L
6	150	155L	155L/156L/157L/167L
6	136	155L	155L/156L/157L/167L
6	145	155L	155L/156L/157L/167L
6	148	155L	155L/156L/157L/167L
6	151/135	135L	155L/156L/157L/167L
6	154	155L	155L/156L/157L/167L
6	144	155L	155L/156L/157L/167L
6	147/149	155L	155L/156L/157L/167L
6	134/143	155L	155L/156L/157L/167L

CI No. <sup>1</sup>	Congener No. <sup>2,3</sup>	RT Ref <sup>4</sup>	Quantitation Reference <sup>5</sup>
6	139/140	155L	155L/156L/157L/167L
6	131	155L	155L/156L/157L/167L
6	142	155L	155L/156L/157L/167L
6	132	155L	155L/156L/157L/167L
6	133	155L	155L/156L/157L/167L
6	165	167L	155L/156L/157L/167L
6	146	167L	155L/156L/157L/167L
6	161	167L	155L/156L/157L/167L
6	153/168	167L	155L/156L/157L/167L
6	141	167L	155L/156L/157L/167L
6	130	167L	155L/156L/157L/167L
6	137/164	167L	155L/156L/157L/167L
6	138/163/129	167L	155L/156L/157L/167L
6	160	167L	155L/156L/157L/167L
6	158	167L	155L/156L/157L/167L
6	128/166	167L	155L/156L/157L/167L
6	159	167L	155L/156L/157L/167L
6	162	167L	155L/156L/157L/167L
6	167	167L	155L/156L/157L/167L
6	156/157	156L/157L	156L/157L
6	169	169L	169L
7	188	188L	188L
7	179	188L	188L/189L
7	184	188L	188L/189L
7	176	188L	188L/189L
7	186	188L	188L/189L
7	178	188L	188L/189L
7	175	188L	188L/189L
7	187	188L	188L/189L
7	182	188L	188L/189L
7	183	188L	188L/189L
7	185	188L	188L/189L
7	174	188L	188L/189L
7	177	188L	188L/189L
7	181	188L	188L/189L
7	171/173	188L	188L/189L
7	172	189L	188L/189L
7	192	189L	188L/189L
7	180/193	189L	188L/189L
7	191	189L	188L/189L
7	170	189L	188L/189L
7	190	189L	188L/189L
7	189	189L	189L
8	202	202L	202L
8	201	202L	202L/205L
8	204	202L	202L/205L
8	197	202L	202L/205L
8	200	202L	202L/205L
8	198/199	202L	202L/205L
8	196	205L	202L/205L
8	203	205L	202L/205L
8	195	205L	202L/205L
8	194	205L	202L/205L
8	205	205L	205L
9	208	208L	208L
9	207	208L	208L/206L
9	206	206L	206L
10	209	209L	209L

CI No. <sup>1</sup>	Congener No. <sup>2,3</sup>	RT Ref <sup>4</sup>	Quantitation Reference <sup>5</sup>
<b>Labelled Extraction Standards</b>			
1	1L	9L	9L
1	3L	9L	9L
2	4L	9L	9L
2	15L	9L	9L
3	19L	9L	9L
3	37L	52L	52L
4	54L	52L	52L
4	81L	101L	101L
4	77L	101L	101L
5	104L	101L	101L
5	123L	101L	101L
5	118L	101L	101L
5	114L	101L	101L
5	105L	101L	101L
5	126L	101L	101L
6	155L	101L	101L
6	167L	138L	138L
6	156L/157L	157L	138L
6	169L	138L	138L
7	188L	138L	138L
7	189L	138L	138L
8	202L	138L	138L
8	205L	194L	194L
9	208L	194L	194L
9	206L	194L	194L
10	209L	194L	194L
<b>Labelled clean-up standards</b>			
3	28L	52L	52L
5	111L	101L	101L
7	178L	138L	138L
<b>Labelled injection internal standards</b>			
2	9L	138L	138L
4	52L	138L	138L
5	101L	138L	138L
6	138L	138L	138L
8	194L	138L	138L

1. Number of chlorines on congener.
2. Suffix "L" indicates labelled compound.
3. Multiple congeners in a box indicates a group of congeners that co-elute or may not be adequately resolved on a 30-m SPB-Octyl column. Congeners included in the group are listed as the last entry in the box.
4. Retention time reference that is used to locate target congener.
5. Labelled congeners that form the quantitation reference. Areas from the exact m/z's of the congeners listed in the quantitation

Table 5: HRMS Instrumental Descriptor Parameters

Function and chlorine level	m/z	m/z type	m/z formula	Substance
Fn-1; Cl-1	180.9888	QC	C4F7	PFK
	188.0393	M	12C12 H9 35Cl	Cl-1 CB
	190.0363	M+2	12C12 H9 37Cl	Cl-1 CB
	200.0795	M	13C12 H9 35Cl	13C12 Cl-1 CB
	202.0766	M+2	13C12 H9 37Cl	13C12 Cl-1 CB
	204.9983	QC	C6F7	PFK
	218.9856	lock	C4 F9	PFK
	230.9850	QC	C5F9	PFK
Fn-2; Cl-2,3	204.9883	QC	C6F7	PFK
	218.9856	QC	C4F9	PFK
	222.0003	M	12C12 H8 35Cl2	Cl-2 PCB
	223.9974	M+2	12C12 H8 35Cl 37Cl	Cl-2 PCB
	225.9944	M+4	12C12 H8 37Cl2	Cl-2 PCB
	234.0406	M	13C12 H8 35Cl2	13C12 Cl-2 PCB
	236.0376	M+2	13C12 H8 35Cl 37 Cl	13C12 Cl-2 PCB
	242.9856	lock	C6 F9	PFK
	255.9613	M	12C12 H7 35Cl3	Cl-3 PCB
	257.9584	M+2	12C12 H7 35Cl2 37Cl	Cl-3 PCB
	268.0016	M	13C12 H7 35Cl3	13C12 Cl-3 PCB
	269.9986	M+2	13C12 H7 35Cl2 37Cl 13C12	13C12 Cl-3 PCB
Fn-3 Cl-3,4,5	255.9613	M	12C12 H7 35Cl3	Cl-3 PCB
	257.9584	M+2	12C12 H7 35Cl2 37Cl	Cl-3 PCB
	268.0016	M	13C12 H7 35Cl3	13C12 Cl-3 PCB
	269.9986	M+2	13C12 H7 35Cl2 37Cl 13C12	13C12 Cl-3 PCB
	280.9825	lock	C6 F11	PFK
	289.9224	M	12C12 H6 35Cl4	Cl-4 PCB
	291.9194	M+2	12C12 H6 35Cl3 37Cl	Cl-4 PCB
	301.9626	M	13C12 H6 35Cl4	13C12 Cl-4 PCB
	303.9597	M+2	13C12 H6 35Cl3 37Cl	13C12 Cl-4 PCB
	323.8834	M	12C12 H5 35Cl5	Cl-5 PCB
	325.8804	M+2 1	2C12 H5 35Cl4 37Cl	Cl-5 PCB
	327.8775	M+4	12C12 H5 35Cl3 37Cl2	Cl-5 PCB
	337.9207	M+2	13C12 H5 35Cl4 37Cl	13C12 Cl-5 PCB
	339.9178	M+4	13C12 H5 35Cl3 37Cl2	13C12 Cl-5 PCB
	Fn-4 Cl-4,5,6	280.9824		C6 F11
289.9224		M	12C12 H6 35Cl4	Cl-4 PCB
291.9194		M+2	12C12 H6 35Cl3 37Cl	Cl-4 PCB
293.9165		M+4	12C12 H6 35Cl2 37Cl2	Cl-4 PCB
301.9626		M+2	13C12 H6 35Cl3 37Cl	13C12 Cl-4 PCB
303.9597		M+4	13C12 H6 35Cl2	13C12 Cl-4 PCB
323.8834		M	12C12 H5 35Cl5	Cl-5 PCB
325.8804		M+2	12C12 H5 35Cl4 37Cl	Cl-5 PCB
327.8775		M+4	12C12 H5 35Cl3 37Cl2	Cl-5 PCB
330.9792		lock	C7 F15	PFK
337.9207		M+2	13C12 H5 35Cl4 37Cl 13C12	Cl-5 PCB
339.9178		M+4	13C12 H5 35Cl3 37Cl2	13C12 Cl-5 PCB
359.8415		M+2	13C12 H4 35Cl5 37Cl	Cl-6 PCB
361.8385		M+4	13C12 H4 35Cl4 37Cl2	Cl-6 PCB
363.8356		M+6	13C12 H4 35Cl3 37Cl2	Cl-6 PCB
371.8817		M+2	13C12 H4 35Cl5 37Cl	13C12 Cl-6 PCB
373.8788		M+4	13C12 H4 35Cl4 37Cl2	13C12 Cl-6 PCB

Function and chlorine level	m/z	m/z type	m/z formula	Substance
Fn-5 Cl-5,6,7	323.8834	M	12C12 H5 35Cl5	Cl-5 PCB
	325.8804	M+2	12C12 H5 35Cl4 37Cl	Cl-5 PCB
	327.8775	M+4	12C12 H5 35Cl3 37Cl2	Cl-5 PCB
	337.9207	M+2	13C12 H5 35Cl4 37Cl	13C12 Cl-5 PCB
	339.9178	M+4	13C12 H5 35Cl3 37Cl2	13C12 Cl-5 PCB
	354.9792	lock	C9 F13	PFK
	359.8415	M+2	12C12 H4 35Cl5 37Cl	Cl-6 PCB
	361.8385	M+4	12C12 H4 35Cl4 37Cl2	Cl-6 PCB
	363.8356	M+6	12C12 H4 35Cl3 37Cl3	Cl-6 PCB
	371.8817	M+2	13C12 H4 35Cl5 37Cl	13C12 Cl-6 PCB
	373.8788	M+4	13C12 H4 35Cl4 37Cl2	13C12 Cl-6 PCB
	393.8025	M+2	12C12 H3 35Cl6 37Cl	Cl-7 PCB
	395.7995	M+4	12C12 H3 35Cl5 37Cl2	Cl-7 PCB
	397.7966	M+6	12C12 H3 35Cl4 37Cl3	Cl-7 PCB
	405.8428	M+2	13C12 H3 35Cl6 37Cl	13C12 Cl-7 PCB
	407.8398	M+4	13C12 H3 35Cl5 37Cl2	13C12 Cl-7 PCB
	427.7635	M+2	12C12 H2 35Cl7 37Cl	Cl-8 PCB
	429.7606	M+4	12C12 H2 35Cl6 37Cl2	Cl-8 PCB
	431.7576	M+6	12C12 H2 35Cl5 37Cl3	Cl-8 PCB
	439.8038	M+2	13C12 H2 35Cl7 37Cl	13C12 Cl-8 PCB
441.8008	M+4	13C12 H2 35Cl6 37Cl2	13C12 Cl-8 PCB	
Fn-6 Cl-7,8,9,10	393.8025	M+2	12C12 H3 35Cl6 37Cl	Cl-7 PCB
	395.7995	M+4	12C12 H3 35Cl5 37Cl2	Cl-7 PCB
	397.7966	M+6	12C12 H3 35Cl4 37Cl3	Cl-7 PCB
	405.8428	M+2	13C12 H3 35Cl6 37Cl 13C12	Cl-7 PCB
	407.8398	M+4	13C12 H3 35Cl5 37Cl2	13C12 Cl-7 PCB
	427.7635	M+2	12C12 H2 35Cl7 37Cl	Cl-8 PCB
	429.7606	M+4	12C12 H2 35Cl6 37Cl2	Cl-8 PCB
	431.7576	M+6	12C12 H2 35Cl5 37Cl3	Cl-8 PCB
	439.8038	M+2	13C12 H2 35Cl7 37Cl	13C12 Cl-8 PCB
	441.8008	M+4	13C12 H2 35Cl6 37Cl2	13C12 Cl-8 PCB
	442.9728	QC	C10 F13	PFK
	454.9728	lock	C11 F13	PFK
	461.7246	M+2	12C12 H1 35Cl8 37Cl	Cl-9 PCB
	463.7216	M+4	12C12 H1 35Cl7 37Cl2	Cl-9 PCB
	465.7187	M+6	12C12 H1 35Cl6 37Cl3	Cl-9 PCB
	473.7648	M+2	13C12 H1 35Cl8 37Cl	13C12 Cl-9 PCB
475.7619	M+4	13C12 H1 35Cl7 37Cl2	13C12 Cl-9 PCB	
495.6856	M+2	13C12 H4 35Cl9 37Cl	Cl-10 PCB	
Fn-7	497.6826	M+4	12C12 35Cl8 37Cl2	Cl-10 PCB
	499.6797	M+6	12C12 35Cl7 37Cl3	Cl-10 PCB
	509.7229	M+4	13C12 H4 35Cl8 37Cl2	13C12 Cl-10 PCB
	511.7199	M+6	13C12 H4 35Cl8 37Cl4	13C12 Cl-10 PCB
	516.9697	lock	C13F19	PFK

### Data Calculations:

#### a) Analyte Concentrations:

The relative response factor of each target relative to the standard against which it is to be calculated is determined using the area responses of both quantification ions via equation 9.1.

In cases where a native target is calculated against an exact labelled analogue, the quantification will be considered to be by isotope dilution. In other cases, the quantification will be considered to be by internal standard.

$$\text{RRF} = \frac{(A1_t + A2_t) C_s}{(A1_s + A2_s) C_t} \quad \text{Equ. 9.1}$$

Where,

$A1_t + A2_t$  = The areas of the two quantification ions for the target analyte

$A1_s + A2_s$  = The areas of the two quantification ions for the labelled compound against which the target analyte will be calculated.

$C_t$  = The concentration in the calibration standard of the target analyte.

$C_s$  = The concentration in the calibration standard of the labelled compound against which the target will be calculated.

For all analytes to be quantified and from the initial calibration series of standard injections, a table of RRFs is prepared. The relative standard deviation (%RSD, or the coefficient of variance) is checked to confirm that the appropriate method criteria has been met as listed in Table 3. The average of the five or six levels of standard for each analyte,  $\text{RRF}_{av}$  is applied for quantification of samples according to Equations 9.2 and 9.3 below.

$$\text{Amount in sample (pg)} = \frac{(A1_n + A2_n) Q_i}{(A1_t + A2_t) (\text{RRF}_{av})} \quad \text{Equ. 9.2}$$

$$\text{Concentration in sample (pg/g or pg/l)} = \frac{(A1_n + A2_n) Q_i}{(A1_t + A2_t) (\text{RRF}_{av}) (W_s)} \quad \text{Equ. 9.3}$$

Where,

$Q_i$  = The amount (pg) of labelled compound added to the sample

$W_s$  = The weight (g) or volume (l) of sample

#### b) Extraction, Clean-up, and Sampling Standard Recovery Calculation:

The extraction, clean-up, and sampling standard recoveries are determined by Equation 9.4 below.

$$\% \text{ Recovery} = (\text{Amount in sample}) / (\text{Amount added to sample}) \times 100 \quad \text{Equ. 9.4}$$

#### c) Estimated Detection Limit

$$\text{EDL} = \frac{2.5 \times H_x \times Q_{es}}{H_{es} \times W \times \text{RRF}_{av}} \quad \text{Equ. 9.5}$$

Where,

EDL = estimated detection limit for homologous PCB

$H_x$  = sum of the height of the noise level for each quantification ions for the unlabelled PCB.

$H_{es}$  = Sum of the heights of responses of both quantification ions for the labelled extraction standard.

$W$  = weight of volume of sample

$\text{RRF}_{av}$  = average relative response factor

$Q_{es}$  = Amount of extraction standard added

## Chromatogram Annotation Codes

All manually integrated peaks are expanded and reprinted with the following annotations:

\* Analyst Initials                    AA  
 \* Date                                    YYMMDD  
 \* integration code                    CC

The Syntax is:

AAYYMMDDCC

Example:

SK111220MB

Code	Mnemonic	Description
MB	Manual Baseline	The peak was manually integrated because the initial baseline was determined incorrectly by the software
MS	Manual Split	The peak was manually integrated because the peak was incorrectly or not split by the software
MJ/MC	Manual Join/Manual Combine	The peak was manually integrated because the peak was split by the software and the peak should be integrated as a single peak
MA	Manual Add	The peak was manually integrated because the signal:noise ratio was judged to be >2.5
MD	Manual Delete	The peak was excluded because the signal:noise ratio was judged to be <2.5
MX	Manual Exclude	The peak was excluded due to an interference
NH	Noise Height	The noise height for Estimated Detection Limit calculation was chosen by the analyst (automated noise height not appropriate)
MT	Manual Time	The peak retention time was manually chosen

The following explanatory annotation codes may appear on the chromatograms of peaks that have been reviewed:

Code	Mnemonic	Description
+	Detected Peak	A peak was detected at this mass and retention time that was above 2.5:1 signal to noise
<	Below Detection Limit	The signal at this mass and retention time was below 2.5:1 signal to noise
EMPC	Estimated Maximum Possible Concentration	The signal at this mass and retention time is an interference such that the target compound could not be confirmed
X-RT	Not Detected due to Retention Time non-conformance	The signal at this retention time could not be used to positively identify the target compound because of retention time non-conformance (apex of quantification and confirmation ions do not maximize within the same two seconds, or the retention time of the peak does not fall within the expected range with respect to its labeled analogue)
X-LOC	Not Detected due to interference from a higher level of chlorination	The signal at this retention time is attributable to a fragment from a co-eluting compound at a higher level of chlorination, and cannot be used to positively identify the target. The result is expressed as an Estimated Maximum Possible Concentration (EMPC)
X-DPE	Not Detected due to diphenyl ether interference	The signal at this retention time is attributable to interference from a chlorinated diphenyl ether, and cannot be used to positively identify the target. The result is expressed as an Estimated Maximum Possible Concentration (EMPC)
X-IF	Not Detected due to interference	The signal at this retention time is attributable to a co-eluting interference, and cannot be used to positively identify the target. The result is expressed as an Estimated Maximum Possible Concentration (EMPC)



## **SVOC DATA PACKAGE**

### **SECTION 4: CALIBRATION DATA**

Including:

for Multi-Point Calibration(s)

- Multi-Point Calibration Tables
- Individual Quantitation Reports

for Continuing Calibration(s)

- Individual Quantitation Reports

# ALS Life Sciences

## Calibration Summary Report

Calibration Level	Filename	Run Date
CS-1	5-201202A03	02-Dec-2020 11:14
CS-2	5-201202A02	02-Dec-2020 10:34
CS-3	5-201202A01	02-Dec-2020 09:37
CS-4	5-201202A07	02-Dec-2020 12:39
CS-5	5-201202A08	02-Dec-2020 13:21

Approved: S. Jin  
--e-signature--  
15-Jul-2021

Target Analytes	Relative Response Factors					Mean	% RSD
	CS-1	CS-2	CS-3	CS-4	CS-5		
<b>PCB-001</b>	1.081	1.118	1.192	1.206	1.122	1.144	5%
<b>PCB-003</b>	1.143	1.149	1.201	1.234	1.251	1.196	4%
<b>PCB-004</b>	0.842	0.905	0.893	0.897	0.916	0.891	3%
<b>PCB-015</b>	0.977	1.048	1.108	1.166	1.187	1.097	8%
<b>PCB-019</b>	1.050	1.149	1.197	1.208	1.211	1.163	6%
<b>PCB-037</b>	1.042	1.037	1.139	1.158	1.193	1.114	6%
<b>PCB-054</b>	1.002	1.031	1.085	1.106	1.115	1.068	5%
<b>PCB-081</b>	1.079	1.132	1.262	1.280	1.306	1.212	8%
<b>PCB-077</b>	1.012	1.066	1.229	1.239	1.261	1.161	10%
<b>PCB-104</b>	1.053	1.109	1.176	1.197	1.230	1.153	6%
<b>PCB-123</b>	0.979	1.055	1.145	1.148	1.182	1.102	8%
<b>PCB-118</b>	1.075	1.084	1.208	1.237	1.251	1.171	7%
<b>PCB-114</b>	1.176	1.173	1.254	1.281	1.265	1.230	4%
<b>PCB-105</b>	1.089	1.151	1.229	1.255	1.302	1.205	7%
<b>PCB-126</b>	1.058	1.115	1.258	1.283	1.345	1.212	10%
<b>PCB-155</b>	1.006	1.006	1.057	1.089	1.130	1.058	5%
<b>PCB-167</b>	0.985	1.057	1.147	1.163	1.166	1.104	7%
<b>PCB-156/157</b>	1.038	1.084	1.179	1.199	1.209	1.142	7%
<b>PCB-169</b>	0.915	1.054	1.145	1.167	1.176	1.091	10%
<b>PCB-188</b>	0.830	0.874	0.984	1.010	1.019	0.943	9%
<b>PCB-189</b>	0.925	0.957	1.032	1.056	1.075	1.009	6%
<b>PCB-202</b>	1.020	1.050	1.078	1.115	1.125	1.078	4%
<b>PCB-205</b>	0.875	0.843	0.939	0.958	0.962	0.915	6%
<b>PCB-208</b>	1.170	1.154	1.251	1.269	1.262	1.221	4%
<b>PCB-206</b>	1.173	1.174	1.212	1.240	1.253	1.210	3%
<b>PCB-209</b>	1.169	0.976	0.968	0.970	0.978	1.012	9%
<b>Extraction Standards</b>							
<b>13C12-PCB-001</b>	0.981	1.007	0.979	1.074	1.335	1.075	14%
<b>13C12-PCB-003</b>	0.893	0.889	0.882	0.937	1.178	0.956	13%
<b>13C12-PCB-004</b>	0.631	0.632	0.635	0.659	0.806	0.673	11%
<b>13C12-PCB-015</b>	0.736	0.782	0.771	0.833	1.076	0.840	16%
<b>13C12-PCB-019</b>	0.456	0.476	0.480	0.494	0.610	0.503	12%
<b>13C12-PCB-037</b>	1.311	1.289	1.277	1.467	1.908	1.450	18%
<b>13C12-PCB-054</b>	1.533	1.598	1.595	1.691	2.114	1.706	14%
<b>13C12-PCB-081</b>	1.437	1.430	1.433	1.530	1.916	1.549	14%
<b>13C12-PCB-077</b>	1.472	1.453	1.455	1.558	1.941	1.576	13%
<b>13C12-PCB-104</b>	1.797	1.815	1.904	1.928	2.271	1.943	10%
<b>13C12-PCB-123</b>	1.263	1.247	1.259	1.323	1.691	1.357	14%
<b>13C12-PCB-118</b>	1.322	1.314	1.329	1.382	1.773	1.424	14%
<b>13C12-PCB-114</b>	1.188	1.190	1.199	1.247	1.667	1.298	16%
<b>13C12-PCB-105</b>	1.193	1.201	1.219	1.254	1.557	1.285	12%
<b>13C12-PCB-126</b>	1.067	1.079	1.058	1.129	1.494	1.165	16%
<b>13C12-PCB-155</b>	1.684	1.727	1.753	1.813	2.252	1.846	13%
<b>13C12-PCB-167</b>	1.195	1.173	1.177	1.243	1.550	1.268	13%
<b>13C12-PCB-156/157</b>	1.122	1.105	1.118	1.197	1.570	1.222	16%
<b>13C12-PCB-169</b>	1.114	1.070	1.053	1.099	1.405	1.148	13%
<b>13C12-PCB-188</b>	1.386	1.361	1.397	1.461	1.833	1.488	13%
<b>13C12-PCB-189</b>	1.127	1.121	1.066	1.112	1.382	1.162	11%
<b>13C12-PCB-202</b>	1.064	1.051	1.098	1.118	1.418	1.150	13%
<b>13C12-PCB-205</b>	1.417	1.429	1.421	1.482	1.695	1.489	8%
<b>13C12-PCB-208</b>	1.127	1.118	1.136	1.162	1.393	1.187	10%
<b>13C12-PCB-206</b>	0.797	0.799	0.793	0.825	0.944	0.832	8%
<b>13C12-PCB-209</b>	1.292	1.272	1.267	1.319	1.486	1.327	7%
<b>Field Spike Standards</b>							
<b>13C12-PCB-031</b>	1.316	1.365	1.317	1.259	1.028	1.257	11%
<b>13C12-PCB-095</b>	0.689	0.692	0.676	0.645	0.493	0.639	13%
<b>13C12-PCB-153</b>	0.911	0.915	0.911	0.855	0.682	0.855	12%
<b>Cleanup Standards</b>							
<b>13C12-PCB-028</b>	1.735	1.765	1.711	1.778	1.829	1.764	3%
<b>13C12-PCB-111</b>	1.122	1.138	1.140	1.124	1.164	1.138	1%
<b>13C12-PCB-178</b>	0.833	0.841	0.843	0.830	0.834	0.836	1%

# ALS Life Sciences

## Calibration Report

ALS Sample ID **H5-20-CS1-1035**  
 Analysis Method EPA 1668C  
 Analysis Type Calibration

Filename 5-201202A03 Inst # HRMS-5 Column SPBOctyl 256001-01 Run Date 02-Dec-2020 11:14

Approved: *S. Jin*  
 --e-signature--  
 15-Jul-2021

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.95	3.27	1.00	2.29E+04	1.081
PCB-003	10.48	3.32	1.00	2.21E+04	1.143
PCB-004	10.63	1.71	1.00	1.15E+04	0.842
PCB-015	14.32	1.50	1.00	1.55E+04	0.977
PCB-019	12.62	1.06	1.00	1.04E+04	1.050
PCB-037	18.24	1.15	1.00	1.14E+04	1.042
PCB-054	14.46	0.81	1.00	1.28E+04	1.002
PCB-081	21.81	0.83	1.00	8.50E+03	1.079
PCB-077	22.11	0.71	1.00	8.17E+03	1.012
PCB-104	17.5	1.49	1.00	1.04E+04	1.053
PCB-123	23.08	1.78	1.00	6.78E+03	0.979
PCB-118	23.25	1.46	1.00	7.79E+03	1.075
PCB-114	23.55	1.49	1.00	7.67E+03	1.176
PCB-105	23.91	1.53	1.00	7.13E+03	1.089
PCB-126	25.51	1.64	1.00	6.19E+03	1.058
PCB-155	20.48	1.24	1.00	9.29E+03	1.006
PCB-167	26.38	1.20	1.00	6.07E+03	0.985
PCB-156/157	27.02	1.17	2.00	1.20E+04	1.038
PCB-169	28.69	1.19	1.00	5.26E+03	0.915
PCB-188	23.48	1.01	1.00	5.94E+03	0.830
PCB-189	29.95	1.13	1.00	5.38E+03	0.925
PCB-202	26.26	0.86	1.00	5.60E+03	1.020
PCB-205	31.33	0.86	1.00	4.37E+03	0.875
PCB-208	29.67	0.87	1.00	4.64E+03	1.170
PCB-206	32.37	0.70	1.00	3.29E+03	1.173
PCB-209	33.5	1.21	1.00	5.32E+03	1.169

**Extraction Standards**

13C12-PCB-001	8.95	3.01	100.00	2.12E+06	0.981
13C12-PCB-003	10.47	3.05	100.00	1.93E+06	0.893
13C12-PCB-004	10.62	1.59	100.00	1.37E+06	0.631
13C12-PCB-015	14.3	1.63	100.00	1.59E+06	0.736
13C12-PCB-019	12.61	1.03	100.00	9.86E+05	0.456
13C12-PCB-037	18.24	1.06	100.00	1.10E+06	1.311
13C12-PCB-054	14.45	0.78	100.00	1.28E+06	1.533
13C12-PCB-081	21.8	0.80	100.00	7.88E+05	1.437
13C12-PCB-077	22.1	0.81	100.00	8.07E+05	1.472
13C12-PCB-104	17.49	1.57	100.00	9.86E+05	1.797
13C12-PCB-123	23.07	1.58	100.00	6.93E+05	1.263
13C12-PCB-118	23.24	1.65	100.00	7.25E+05	1.322
13C12-PCB-114	23.54	1.67	100.00	6.52E+05	1.188
13C12-PCB-105	23.9	1.66	100.00	6.54E+05	1.193
13C12-PCB-126	25.5	1.65	100.00	5.85E+05	1.067
13C12-PCB-155	20.48	1.24	100.00	9.24E+05	1.684
13C12-PCB-167	26.37	1.29	100.00	6.16E+05	1.195
13C12-PCB-156/157	27.01	1.31	200.00	1.16E+06	1.122
13C12-PCB-169	28.67	1.30	100.00	5.75E+05	1.114
13C12-PCB-188	23.47	1.04	100.00	7.15E+05	1.386
13C12-PCB-189	29.92	1.07	100.00	5.82E+05	1.127
13C12-PCB-202	26.23	0.89	100.00	5.49E+05	1.064
13C12-PCB-205	31.3	0.89	100.00	4.99E+05	1.417
13C12-PCB-208	29.65	0.79	100.00	3.97E+05	1.127
13C12-PCB-206	32.36	0.81	100.00	2.81E+05	0.797
13C12-PCB-209	33.48	1.21	100.00	4.55E+05	1.292

**Field Spike Standards**

13C12-PCB-031	15.81	1.05	100.00	1.37E+06	1.316
13C12-PCB-095	19.1	1.61	100.00	5.26E+05	0.689
13C12-PCB-153	24.16	1.31	100.00	6.14E+05	0.911

**Cleanup Standards**

13C12-PCB-028	15.98	1.06	100.00	1.45E+06	1.735
13C12-PCB-111	22	1.62	100.00	6.15E+05	1.122
13C12-PCB-178	25.04	1.04	100.00	4.30E+05	0.833

**Injection Standards**

13C12-PCB-9	11.88	1.56	100.00	2.16E+06	-
13C12-PCB-52	16.97	0.82	100.00	8.36E+05	-
13C12-PCB-101	20.61	1.64	100.00	5.49E+05	-
13C12-PCB-138	24.84	1.32	100.00	5.16E+05	-
13C12-PCB-194	31.02	0.89	100.00	3.52E+05	-

# ALS Life Sciences

## Calibration Report

ALS Sample ID **H5-20-CS2-1035**  
 Analysis Method EPA 1668C  
 Analysis Type Calibration

Filename 5-201202A02 Inst # HRMS-5 Column SPBOctyl 256001-01 Run Date 02-Dec-2020 10:34

Approved: *S. Jin*  
 --e-signature--  
 15-Jul-2021

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.97	3.23	5.00	1.14E+05	1.118
PCB-003	10.49	3.32	5.00	1.03E+05	1.149
PCB-004	10.65	1.26	5.00	5.78E+04	0.905
PCB-015	14.32	1.58	5.00	8.30E+04	1.048
PCB-019	12.64	1.07	5.00	5.53E+04	1.149
PCB-037	18.27	1.08	5.00	5.48E+04	1.037
PCB-054	14.49	0.80	5.00	6.76E+04	1.031
PCB-081	21.83	0.80	5.00	4.42E+04	1.132
PCB-077	22.13	0.79	5.00	4.23E+04	1.066
PCB-104	17.52	1.61	5.00	5.50E+04	1.109
PCB-123	23.1	1.64	5.00	3.59E+04	1.055
PCB-118	23.27	1.68	5.00	3.89E+04	1.084
PCB-114	23.58	1.58	5.00	3.81E+04	1.173
PCB-105	23.93	1.64	5.00	3.78E+04	1.151
PCB-126	25.52	1.63	5.00	3.29E+04	1.115
PCB-155	20.5	1.22	5.00	4.75E+04	1.006
PCB-167	26.4	1.19	5.00	3.27E+04	1.057
PCB-156/157	27.03	1.19	10.00	6.32E+04	1.084
PCB-169	28.7	1.18	5.00	2.98E+04	1.054
PCB-188	23.5	1.04	5.00	3.14E+04	0.874
PCB-189	29.96	1.00	5.00	2.83E+04	0.957
PCB-202	26.27	0.85	5.00	2.91E+04	1.050
PCB-205	31.34	0.93	5.00	2.16E+04	0.843
PCB-208	29.68	0.79	5.00	2.31E+04	1.154
PCB-206	32.4	0.82	5.00	1.68E+04	1.174
PCB-209	33.53	1.18	5.00	2.22E+04	0.976

**Extraction Standards**

13C12-PCB-001	8.97	3.01	100.00	2.04E+06	1.007
13C12-PCB-003	10.49	3.07	100.00	1.80E+06	0.889
13C12-PCB-004	10.63	1.58	100.00	1.28E+06	0.632
13C12-PCB-015	14.32	1.61	100.00	1.58E+06	0.782
13C12-PCB-019	12.62	1.04	100.00	9.63E+05	0.476
13C12-PCB-037	18.26	1.06	100.00	1.06E+06	1.289
13C12-PCB-054	14.47	0.79	100.00	1.31E+06	1.598
13C12-PCB-081	21.82	0.80	100.00	7.81E+05	1.430
13C12-PCB-077	22.12	0.80	100.00	7.94E+05	1.453
13C12-PCB-104	17.51	1.58	100.00	9.92E+05	1.815
13C12-PCB-123	23.09	1.58	100.00	6.81E+05	1.247
13C12-PCB-118	23.26	1.59	100.00	7.18E+05	1.314
13C12-PCB-114	23.56	1.58	100.00	6.50E+05	1.190
13C12-PCB-105	23.91	1.61	100.00	6.56E+05	1.201
13C12-PCB-126	25.52	1.64	100.00	5.90E+05	1.079
13C12-PCB-155	20.49	1.24	100.00	9.44E+05	1.727
13C12-PCB-167	26.39	1.30	100.00	6.19E+05	1.173
13C12-PCB-156/157	27.02	1.29	200.00	1.17E+06	1.105
13C12-PCB-169	28.69	1.33	100.00	5.65E+05	1.070
13C12-PCB-188	23.49	1.03	100.00	7.19E+05	1.361
13C12-PCB-189	29.95	1.06	100.00	5.92E+05	1.121
13C12-PCB-202	26.26	0.91	100.00	5.55E+05	1.051
13C12-PCB-205	31.33	0.88	100.00	5.11E+05	1.429
13C12-PCB-208	29.67	0.80	100.00	4.00E+05	1.118
13C12-PCB-206	32.39	0.80	100.00	2.86E+05	0.799
13C12-PCB-209	33.5	1.21	100.00	4.55E+05	1.272

**Field Spike Standards**

13C12-PCB-031	15.83	1.07	100.00	1.38E+06	1.365
13C12-PCB-095	19.13	1.62	100.00	5.26E+05	0.692
13C12-PCB-153	24.18	1.29	100.00	6.20E+05	0.915

**Cleanup Standards**

13C12-PCB-028	16	1.04	100.00	1.45E+06	1.765
13C12-PCB-111	22.02	1.65	100.00	6.22E+05	1.138
13C12-PCB-178	25.06	1.04	100.00	4.44E+05	0.841

**Injection Standards**

13C12-PCB-9	11.9	1.55	100.00	2.02E+06	-
13C12-PCB-52	16.99	0.82	100.00	8.21E+05	-
13C12-PCB-101	20.64	1.63	100.00	5.46E+05	-
13C12-PCB-138	24.87	1.31	100.00	5.28E+05	-
13C12-PCB-194	31.05	0.88	100.00	3.58E+05	-

# ALS Life Sciences

## Calibration Report

ALS Sample ID **H5-20-CS3-1035**  
 Analysis Method EPA 1668C  
 Analysis Type Calibration

Filename 5-201202A01 Inst # HRMS-5 Column SPBOctyl 256001-01 Run Date 02-Dec-2020 09:37

Approved: *S. Jin*  
 --e-signature--  
 15-Jul-2021

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.97	3.24	50.00	1.18E+06	1.192
PCB-003	10.49	3.25	50.00	1.08E+06	1.201
PCB-004	10.65	1.46	50.00	5.76E+05	0.893
PCB-015	14.32	1.55	50.00	8.66E+05	1.108
PCB-019	12.64	1.06	50.00	5.83E+05	1.197
PCB-037	18.26	1.06	50.00	5.88E+05	1.139
PCB-054	14.48	0.80	50.00	7.00E+05	1.085
PCB-081	21.83	0.79	50.00	4.64E+05	1.262
PCB-077	22.13	0.79	50.00	4.59E+05	1.229
PCB-104	17.52	1.56	50.00	5.75E+05	1.176
PCB-123	23.1	1.57	50.00	3.70E+05	1.145
PCB-118	23.27	1.61	50.00	4.12E+05	1.208
PCB-114	23.58	1.61	50.00	3.86E+05	1.254
PCB-105	23.93	1.61	50.00	3.85E+05	1.229
PCB-126	25.52	1.57	50.00	3.42E+05	1.258
PCB-155	20.5	1.25	50.00	4.76E+05	1.057
PCB-167	26.4	1.24	50.00	3.31E+05	1.147
PCB-156/157	27.03	1.23	100.00	6.46E+05	1.179
PCB-169	28.7	1.24	50.00	2.96E+05	1.145
PCB-188	23.5	1.02	50.00	3.37E+05	0.984
PCB-189	29.95	1.03	50.00	2.70E+05	1.032
PCB-202	26.27	0.90	50.00	2.90E+05	1.078
PCB-205	31.34	0.92	50.00	2.11E+05	0.939
PCB-208	29.68	0.81	50.00	2.25E+05	1.251
PCB-206	32.4	0.80	50.00	1.52E+05	1.212
PCB-209	33.53	1.21	50.00	1.94E+05	0.968

**Extraction Standards**

13C12-PCB-001	8.95	3.06	100.00	1.99E+06	0.979
13C12-PCB-003	10.48	3.01	100.00	1.79E+06	0.882
13C12-PCB-004	10.63	1.57	100.00	1.29E+06	0.635
13C12-PCB-015	14.32	1.66	100.00	1.56E+06	0.771
13C12-PCB-019	12.62	1.06	100.00	9.74E+05	0.480
13C12-PCB-037	18.25	1.09	100.00	1.03E+06	1.277
13C12-PCB-054	14.47	0.80	100.00	1.29E+06	1.595
13C12-PCB-081	21.82	0.83	100.00	7.36E+05	1.433
13C12-PCB-077	22.12	0.80	100.00	7.47E+05	1.455
13C12-PCB-104	17.51	1.55	100.00	9.77E+05	1.904
13C12-PCB-123	23.09	1.65	100.00	6.47E+05	1.259
13C12-PCB-118	23.26	1.63	100.00	6.83E+05	1.329
13C12-PCB-114	23.56	1.65	100.00	6.16E+05	1.199
13C12-PCB-105	23.91	1.64	100.00	6.26E+05	1.219
13C12-PCB-126	25.51	1.59	100.00	5.43E+05	1.058
13C12-PCB-155	20.49	1.24	100.00	9.00E+05	1.753
13C12-PCB-167	26.39	1.31	100.00	5.77E+05	1.177
13C12-PCB-156/157	27.02	1.31	200.00	1.10E+06	1.118
13C12-PCB-169	28.69	1.31	100.00	5.17E+05	1.053
13C12-PCB-188	23.49	1.03	100.00	6.85E+05	1.397
13C12-PCB-189	29.95	1.07	100.00	5.23E+05	1.066
13C12-PCB-202	26.26	0.90	100.00	5.39E+05	1.098
13C12-PCB-205	31.33	0.88	100.00	4.50E+05	1.421
13C12-PCB-208	29.67	0.80	100.00	3.60E+05	1.136
13C12-PCB-206	32.39	0.78	100.00	2.51E+05	0.793
13C12-PCB-209	33.5	1.21	100.00	4.01E+05	1.267

**Field Spike Standards**

13C12-PCB-031	15.83	1.08	100.00	1.32E+06	1.317
13C12-PCB-095	19.13	1.61	100.00	4.94E+05	0.676
13C12-PCB-153	24.18	1.30	100.00	5.79E+05	0.911

**Cleanup Standards**

13C12-PCB-028	16	1.05	100.00	1.38E+06	1.711
13C12-PCB-111	22.02	1.64	100.00	5.85E+05	1.140
13C12-PCB-178	25.06	1.03	100.00	4.14E+05	0.843

**Injection Standards**

13C12-PCB-9	11.9	1.55	100.00	2.03E+06	-
13C12-PCB-52	16.99	0.82	100.00	8.09E+05	-
13C12-PCB-101	20.64	1.64	100.00	5.13E+05	-
13C12-PCB-138	24.87	1.29	100.00	4.90E+05	-
13C12-PCB-194	31.05	0.86	100.00	3.17E+05	-

# ALS Life Sciences

## Calibration Report

ALS Sample ID **H5-20-CS4-1035**  
 Analysis Method EPA 1668C  
 Analysis Type Calibration

Filename 5-201202A07	Inst # HRMS-5	Column SPB0ctyl 256001-01	Run Date 02-Dec-2020 12:39	Approved: <i>S. Jin</i> --e-signature-- 15-Jul-2021
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Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
<b>PCB-001</b>	8.95	3.24	400.00	1.04E+07	1.206
<b>PCB-003</b>	10.47	3.25	400.00	9.32E+06	1.234
<b>PCB-004</b>	10.63	1.49	400.00	4.77E+06	0.897
<b>PCB-015</b>	14.3	1.56	400.00	7.84E+06	1.166
<b>PCB-019</b>	12.62	1.05	400.00	4.81E+06	1.208
<b>PCB-037</b>	18.23	1.06	400.00	5.36E+06	1.158
<b>PCB-054</b>	14.47	0.79	400.00	5.90E+06	1.106
<b>PCB-081</b>	21.8	0.79	400.00	4.07E+06	1.280
<b>PCB-077</b>	22.1	0.79	400.00	4.02E+06	1.239
<b>PCB-104</b>	17.51	1.55	400.00	4.80E+06	1.197
<b>PCB-123</b>	23.08	1.57	400.00	3.16E+06	1.148
<b>PCB-118</b>	23.25	1.58	400.00	3.55E+06	1.237
<b>PCB-114</b>	23.55	1.57	400.00	3.32E+06	1.281
<b>PCB-105</b>	23.91	1.56	400.00	3.27E+06	1.255
<b>PCB-126</b>	25.5	1.59	400.00	3.01E+06	1.283
<b>PCB-155</b>	20.49	1.25	400.00	4.11E+06	1.089
<b>PCB-167</b>	26.38	1.22	400.00	2.77E+06	1.163
<b>PCB-156/157</b>	27.02	1.24	800.00	5.51E+06	1.199
<b>PCB-169</b>	28.67	1.23	400.00	2.46E+06	1.167
<b>PCB-188</b>	23.49	1.02	400.00	2.83E+06	1.010
<b>PCB-189</b>	29.95	1.03	400.00	2.25E+06	1.056
<b>PCB-202</b>	26.26	0.89	400.00	2.39E+06	1.115
<b>PCB-205</b>	31.33	0.90	400.00	1.75E+06	0.958
<b>PCB-208</b>	29.68	0.81	400.00	1.81E+06	1.269
<b>PCB-206</b>	32.4	0.81	400.00	1.26E+06	1.240
<b>PCB-209</b>	33.51	1.19	400.00	1.57E+06	0.970

**Extraction Standards**

<b>13C12-PCB-001</b>	8.94	2.99	100.00	2.17E+06	1.074
<b>13C12-PCB-003</b>	10.47	3.05	100.00	1.89E+06	0.937
<b>13C12-PCB-004</b>	10.62	1.58	100.00	1.33E+06	0.659
<b>13C12-PCB-015</b>	14.29	1.59	100.00	1.68E+06	0.833
<b>13C12-PCB-019</b>	12.61	1.04	100.00	9.96E+05	0.494
<b>13C12-PCB-037</b>	18.22	1.08	100.00	1.16E+06	1.467
<b>13C12-PCB-054</b>	14.45	0.79	100.00	1.33E+06	1.691
<b>13C12-PCB-081</b>	21.79	0.82	100.00	7.95E+05	1.530
<b>13C12-PCB-077</b>	22.09	0.81	100.00	8.10E+05	1.558
<b>13C12-PCB-104</b>	17.49	1.57	100.00	1.00E+06	1.928
<b>13C12-PCB-123</b>	23.07	1.59	100.00	6.88E+05	1.323
<b>13C12-PCB-118</b>	23.24	1.62	100.00	7.19E+05	1.382
<b>13C12-PCB-114</b>	23.54	1.64	100.00	6.49E+05	1.247
<b>13C12-PCB-105</b>	23.9	1.64	100.00	6.52E+05	1.254
<b>13C12-PCB-126</b>	25.48	1.64	100.00	5.87E+05	1.129
<b>13C12-PCB-155</b>	20.48	1.25	100.00	9.43E+05	1.813
<b>13C12-PCB-167</b>	26.37	1.31	100.00	5.96E+05	1.243
<b>13C12-PCB-156/157</b>	27.01	1.31	200.00	1.15E+06	1.197
<b>13C12-PCB-169</b>	28.67	1.31	100.00	5.27E+05	1.099
<b>13C12-PCB-188</b>	23.48	1.03	100.00	7.01E+05	1.461
<b>13C12-PCB-189</b>	29.93	1.06	100.00	5.34E+05	1.112
<b>13C12-PCB-202</b>	26.25	0.90	100.00	5.36E+05	1.118
<b>13C12-PCB-205</b>	31.31	0.88	100.00	4.56E+05	1.482
<b>13C12-PCB-208</b>	29.67	0.80	100.00	3.57E+05	1.162
<b>13C12-PCB-206</b>	32.37	0.79	100.00	2.54E+05	0.825
<b>13C12-PCB-209</b>	33.5	1.21	100.00	4.06E+05	1.319

**Field Spike Standards**

<b>13C12-PCB-031</b>	15.81	1.06	100.00	1.35E+06	1.259
<b>13C12-PCB-095</b>	19.11	1.61	100.00	4.93E+05	0.645
<b>13C12-PCB-153</b>	24.17	1.30	100.00	5.65E+05	0.855

**Cleanup Standards**

<b>13C12-PCB-028</b>	15.99	1.05	100.00	1.40E+06	1.778
<b>13C12-PCB-111</b>	22	1.63	100.00	5.85E+05	1.124
<b>13C12-PCB-178</b>	25.05	1.02	100.00	3.98E+05	0.830

**Injection Standards**

<b>13C12-PCB-9</b>	11.88	1.56	100.00	2.02E+06	-
<b>13C12-PCB-52</b>	16.97	0.83	100.00	7.89E+05	-
<b>13C12-PCB-101</b>	20.62	1.62	100.00	5.20E+05	-
<b>13C12-PCB-138</b>	24.86	1.26	100.00	4.80E+05	-
<b>13C12-PCB-194</b>	31.03	0.87	100.00	3.08E+05	-

# ALS Life Sciences

## Calibration Report

ALS Sample ID **H5-20-CS5-1035**  
 Analysis Method EPA 1668C  
 Analysis Type Calibration

Filename 5-201202A08    Inst # HRMS-5    Column SPBOctyl 256001-01    Run Date 02-Dec-2020 13:21

Approved: *S. Jin*  
 --e-signature--  
 15-Jul-2021

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
<b>PCB-001</b>	8.95	2.91	2000.00	5.31E+07	1.122
<b>PCB-003</b>	10.47	3.15	2000.00	5.23E+07	1.251
<b>PCB-004</b>	10.63	1.50	2000.00	2.62E+07	0.916
<b>PCB-015</b>	14.29	1.57	2000.00	4.52E+07	1.187
<b>PCB-019</b>	12.62	1.05	2000.00	2.62E+07	1.211
<b>PCB-037</b>	18.23	1.06	2000.00	3.18E+07	1.193
<b>PCB-054</b>	14.47	0.78	2000.00	3.29E+07	1.115
<b>PCB-081</b>	21.8	0.78	2000.00	2.48E+07	1.306
<b>PCB-077</b>	22.1	0.79	2000.00	2.43E+07	1.261
<b>PCB-104</b>	17.51	1.55	2000.00	2.77E+07	1.230
<b>PCB-123</b>	23.08	1.58	2000.00	1.98E+07	1.182
<b>PCB-118</b>	23.25	1.57	2000.00	2.20E+07	1.251
<b>PCB-114</b>	23.55	1.56	2000.00	2.09E+07	1.265
<b>PCB-105</b>	23.91	1.56	2000.00	2.01E+07	1.302
<b>PCB-126</b>	25.5	1.58	2000.00	1.99E+07	1.345
<b>PCB-155</b>	20.49	1.26	2000.00	2.52E+07	1.130
<b>PCB-167</b>	26.39	1.22	2000.00	1.75E+07	1.166
<b>PCB-156/157</b>	27.02	1.22	4000.00	3.68E+07	1.209
<b>PCB-169</b>	28.67	1.23	2000.00	1.60E+07	1.176
<b>PCB-188</b>	23.49	1.01	2000.00	1.81E+07	1.019
<b>PCB-189</b>	29.95	1.05	2000.00	1.44E+07	1.075
<b>PCB-202</b>	26.27	0.88	2000.00	1.55E+07	1.125
<b>PCB-205</b>	31.34	0.91	2000.00	1.10E+07	0.962
<b>PCB-208</b>	29.68	0.80	2000.00	1.19E+07	1.262
<b>PCB-206</b>	32.4	0.80	2000.00	7.99E+06	1.253
<b>PCB-209</b>	33.53	1.18	2000.00	9.81E+06	0.978

**Extraction Standards**

<b>13C12-PCB-001</b>	8.94	3.03	100.00	2.36E+06	1.335
<b>13C12-PCB-003</b>	10.47	2.99	100.00	2.09E+06	1.178
<b>13C12-PCB-004</b>	10.62	1.58	100.00	1.43E+06	0.806
<b>13C12-PCB-015</b>	14.28	1.64	100.00	1.91E+06	1.076
<b>13C12-PCB-019</b>	12.61	1.03	100.00	1.08E+06	0.610
<b>13C12-PCB-037</b>	18.22	1.07	100.00	1.33E+06	1.908
<b>13C12-PCB-054</b>	14.46	0.79	100.00	1.48E+06	2.114
<b>13C12-PCB-081</b>	21.79	0.82	100.00	9.50E+05	1.916
<b>13C12-PCB-077</b>	22.08	0.83	100.00	9.62E+05	1.941
<b>13C12-PCB-104</b>	17.5	1.54	100.00	1.13E+06	2.271
<b>13C12-PCB-123</b>	23.08	1.57	100.00	8.38E+05	1.691
<b>13C12-PCB-118</b>	23.25	1.61	100.00	8.79E+05	1.773
<b>13C12-PCB-114</b>	23.55	1.63	100.00	8.27E+05	1.667
<b>13C12-PCB-105</b>	23.9	1.62	100.00	7.72E+05	1.557
<b>13C12-PCB-126</b>	25.48	1.61	100.00	7.41E+05	1.494
<b>13C12-PCB-155</b>	20.48	1.24	100.00	1.12E+06	2.252
<b>13C12-PCB-167</b>	26.38	1.30	100.00	7.51E+05	1.550
<b>13C12-PCB-156/157</b>	27.01	1.31	200.00	1.52E+06	1.570
<b>13C12-PCB-169</b>	28.66	1.30	100.00	6.81E+05	1.405
<b>13C12-PCB-188</b>	23.48	1.02	100.00	8.89E+05	1.833
<b>13C12-PCB-189</b>	29.93	1.06	100.00	6.70E+05	1.382
<b>13C12-PCB-202</b>	26.26	0.90	100.00	6.88E+05	1.418
<b>13C12-PCB-205</b>	31.31	0.88	100.00	5.72E+05	1.695
<b>13C12-PCB-208</b>	29.67	0.80	100.00	4.70E+05	1.393
<b>13C12-PCB-206</b>	32.39	0.80	100.00	3.19E+05	0.944
<b>13C12-PCB-209</b>	33.5	1.20	100.00	5.01E+05	1.486

**Field Spike Standards**

<b>13C12-PCB-031</b>	15.82	1.07	100.00	1.24E+06	1.028
<b>13C12-PCB-095</b>	19.12	1.63	100.00	4.53E+05	0.493
<b>13C12-PCB-153</b>	24.17	1.32	100.00	5.64E+05	0.682

**Cleanup Standards**

<b>13C12-PCB-028</b>	15.99	1.06	100.00	1.28E+06	1.829
<b>13C12-PCB-111</b>	22.01	1.63	100.00	5.77E+05	1.164
<b>13C12-PCB-178</b>	25.05	1.04	100.00	4.05E+05	0.834

**Injection Standards**

<b>13C12-PCB-9</b>	11.88	1.57	100.00	1.77E+06	-
<b>13C12-PCB-52</b>	16.98	0.83	100.00	6.98E+05	-
<b>13C12-PCB-101</b>	20.62	1.61	100.00	4.96E+05	-
<b>13C12-PCB-138</b>	24.86	1.30	100.00	4.85E+05	-
<b>13C12-PCB-194</b>	31.03	0.88	100.00	3.38E+05	-

Table with columns: #, Target Analyte, #HOM, Reso, Ra, Ra fail/YE RT, Conc., H/A, ical RRF, User RF, %Rec, Mod.Date, Mod.Cmn, Com.No, Cnse, 1, Noise 2, Ion1 H, Ion2 H, Ion1 S/n, Ion2 S/n, Ion1 Area, Ion2 Area, RRT, RT, LCL, RT, UCL, Acc.Date, Acc.Time, ID, Spt, Size. The table contains 162 rows of data, each representing a different target analyte and its corresponding measurement results across various parameters.



163	13C-PCB-31	1648863.2	1.061	NO	15.81	113.3684	17.98	1.257	113.4	15356	7471	15259124	14277231	993.7	1911	848650.4	800212.8	0.8674	15.78	15.84	44372	14.32.05	H5-21-WD	1	
164	13C-PCB-95	731103.9	1.6	NO	19.1	101.1729	18.519	0.839	101.2	1748	1752	8332106	5224649	4766.4	2982.8	449879.8	281224.1	1.0923	19.06	19.13	44372	14.32.05	H5-21-WD	1	
165	13C-PCB-153	1037571.2	1.26	NO	24.15	104.2266	17.569	0.855	104.2	2082	1016417	7942830	5186	3815.7	678640.9	490030.3	1.1803	24.11	24.18	44372	14.32.05	H5-21-WD	1		
166	13C-PCB-28	172959.4	1.072	NO	15.98	92.1587	17.34	1.763	92.1	15356	7471	15516534	14476772	1010.4	1937.7	894833.1	835026.4	0.9423	15.94	16.01	44372	14.32.05	H5-21-WD	1	
167	13C-PCB-111	1019626.5	1.609	NO	21.98	102.4033	17.983	1.138	102.4	1748	1752	11286943	7098874	6462.7	4052.9	628145.8	390480.8	1.0669	21.95	22.02	44372	14.32.05	H5-21-WD	1	
168	13C-PCB-178	802600.3	1.033	NO	25.03	105.5993	17.523	0.836	105.9	820	595	7146430	7039234	8711.7	11778	407833.3	394767.1	1.0078	25	25.06	44372	14.32.05	H5-21-WD	1	
169	13C-PCB-1	2290881.7	3.085	NO	9.02	90.33576	18.364	1.075	90.3	2368	3766	31770104	10232095	13416.2	2717.3	1730058	860823.8	0.7585	8.99	9.06	44372	14.32.05	H5-21-WD	1	
170	13C-PCB-3	2148457.5	3.018	NO	10.51	95.2622	16.366	0.956	95.3	2368	3766	26409940	8784732	11152.7	2327.6	1613732	534725.4	0.8833	10.47	10.54	44372	14.32.05	H5-21-WD	1	
171	13C-PCB-4	1490163.2	1.631	NO	10.66	93.8608	18.102	0.673	93.9	15172	1563	16722563	10455876	10375.2	6603.4	623792.4	566570.8	0.8963	10.63	10.7	44372	14.32.05	H5-21-WD	1	
172	13C-PCB-15	1897790.4	1.585	NO	14.31	95.7711	15.951	0.84	95.8	3488	4055	18551420	11774051	5322.1	2903.9	1162947	734143.7	1.2026	14.27	14.34	44372	14.32.05	H5-21-WD	1	
173	13C-PCB-19	921160	1.051	NO	12.62	77.63053	17.834	0.503	77.6	16179	10147	8420018	7946531	554.7	783.2	472130.6	449029.4	1.0613	12.59	12.66	44372	14.32.05	H5-21-WD	1	
174	13C-PCB-37	1392967.8	1.059	NO	18.23	90.20764	15.588	1.45	90.2	15356	7471	11165885	10575654	727.1	1415.5	716314.9	676652.9	1.075	18.2	18.26	44372	14.32.05	H5-21-WD	1	
175	13C-PCB-54	1450415.3	0.802	NO	14.46	79.83321	19.558	1.706	79.8	3862	2441	12625398	15682777	3252.5	6424.9	845544.4	804870.6	0.8529	14.43	14.5	44372	14.32.05	H5-21-WD	1	
176	13C-PCB-81	1294961.1	0.789	NO	21.79	89.35034	16.721	1.549	89.4	2714	2030	8922018	11289001	3287	5550.9	633071.4	678889.8	1.0876	21.76	21.82	44372	14.32.05	H5-21-WD	1	
177	13C-PCB-7	1238222.3	0.788	NO	22.1	89.37063	15.891	1.576	89.4	2714	2030	8922018	10925781	3175.9	5383.3	642468.8	688353.4	1.0723	22.06	22.13	44372	14.32.05	H5-21-WD	1	
178	13C-PCB-104	1256260.9	1.595	NO	17.49	73.98825	18.749	1.943	74	751	964	14476386	9015750	19299.6	9353.6	772122.3	484138.6	1.0312	17.45	17.52	44372	14.32.05	H5-21-WD	1	
179	13C-PCB-123	1112226.8	1.579	NO	23.06	93.8117	16.891	1.357	93.8	2568	1734	11485102	7403656	4475.9	4287.1	680988.2	431586.7	1.1191	23.03	23.09	44372	14.32.05	H5-21-WD	1	
180	13C-PCB-118	1081904.1	1.577	NO	23.53	86.94297	16.567	1.424	86.9	2568	1734	10989952	7017287	4271	4046	662077.8	419826.3	1.1273	23.2	23.26	44372	14.32.05	H5-21-WD	1	
181	13C-PCB-114	1073002.3	1.624	NO	23.53	94.59794	16.308	1.298	94.6	2568	1734	10829497	6789429	4216.7	3903.1	664068.1	408934.2	1.09474	23.5	23.56	44372	14.32.05	H5-21-WD	1	
182	13C-PCB-105	1078883	1.591	NO	23.89	96.07866	16.648	1.285	96.1	2568	1734	11039498	8995332	4294.6	4033.4	6622626	416356.1	0.962	23.86	23.93	44372	14.32.05	H5-21-WD	1	
183	13C-PCB-126	1003890.7	1.565	NO	25.49	98.01095	15.949	1.165	98.6	2598	1734	9585021	6989794	3732.1	3510.7	612468.1	391523.6	1.0263	25.46	25.52	44372	14.32.05	H5-21-WD	1	
184	13C-PCB-155	1340179.6	1.278	NO	20.46	83.07818	18.504	1.846	83.1	704	649	13909919	10980450	19756	16918	751737.3	588442.3	0.9828	20.42	20.49	44372	14.32.05	H5-21-WD	1	
185	13C-PCB-167	1123774	1.278	NO	26.36	97.82234	17.134	1.267	97.8	1960	2082	10801099	8515934	5511	4091	630995.8	483318.2	1.0613	26.33	26.39	44372	14.32.05	H5-21-WD	1	
186	13C-PCB-158/157	2167399.4	1.293	NO	27	195.526	12.248	1.222	97.8	1960	2082	14970987	11715862	7638.6	5628.2	1222272	945127.1	1.0871	26.97	27.03	44372	14.32.05	H5-21-WD	1	
187	13C-PCB-169	1109247.2	1.289	NO	28.67	106.5725	15.703	1.148	106.6	1960	2082	9800494	7656272	5005	3678	624703.2	484544	1.1542	28.63	28.7	44372	14.32.05	H5-21-WD	1	
188	13C-PCB-188	1226704.8	1.043	NO	23.46	90.92766	17.304	1.488	90.9	802	595	10835769	10419867	13209.1	17509.1	626209.2	600495.6	0.9445	23.42	23.49	44372	14.32.05	H5-21-WD	1	
189	13C-PCB-189	1075498.2	1.06	NO	29.92	102.0851	15.838	1.162	102.1	1072	1081	8765859	8334296	8178.4	7707.3	553458.1	522040.1	0.9645	29.89	29.96	44372	14.32.05	H5-21-WD	1	
190	13C-PCB-202	109757.9	0.916	NO	28.23	95.88165	17.155	1.15	95.9	1960	2082	14970987	11715862	7638.6	5628.2	1222272	945127.1	1.0871	28.97	29.03	44372	14.32.05	H5-21-WD	1	
191	13C-PCB-205	1004123.2	0.891	NO	31.3	92.62805	14.589	1.489	92.2	788	1016	6903165	7870410	8984.2	7747.6	473179.5	453064.7	1.009	31.27	31.34	44372	14.32.05	H5-21-WD	1	
192	13C-PCB-208	865890.8	0.797	NO	29.66	101.1988	16.409	1.187	100.2	392	699	630070	7867186	16087.7	11282	383933.9	481956.9	0.9559	29.62	29.69	44372	14.32.05	H5-21-WD	1	
193	13C-PCB-206	613727.9	0.786	NO	32.36	101.3218	14.107	0.832	101.3	392	699	3810836	4809648	9731.3	6885.1	270444.2	243853.8	1.0432	32.33	32.4	44372	14.32.05	H5-21-WD	1	
194	13C-PCB-209	895526.9	1.184	NO	33.47	92.67455	12.851	1.327	92.7	203	192	6237569	5277990	30774.4	27511	485379.4	409946.5	0.9789	33.44	33.5	44372	14.32.05	H5-21-WD	1	
195	13C-PCB-2	2359035.7	1.599	NO	11.9	100	16.739	23590.36	100	1012	1612	1583	2240800	15345277	15072.8	9691.3	1451372	907663.7	0.479	11.86	11.93	44372	14.32.05	H5-21-WD	1
196	13C-PCB-52	1064951.4	0.809	NO	16.96	100	18.457	10649.51	100	2791	1459	8793588	10794008	3150.3	7400.5	476426.6	588524.8	0.8827	16.92	16.99	44372	14.32.05	H5-21-WD	1	
197	13C-PCB-101	873864.9	1.59	NO	20.61	100	18.725	8738.649	100	1748	1752	10045885	6351163	5747.4	3626	536489.4	437375.5	0.8297	20.57	20.64	44372	14.32.05	H5-21-WD	1	
198	13C-PCB-138	906653	1.274	NO	24.84	100	17.346	9066.53	100	1960	2082	8811553	6885068	4495.9	3307.5	5079696	398666.1	0	24.8	24.87	44372	14.32.05	H5-21-WD	1	
199	13C-PCB-194	728030.8	0.878	NO	31.02	100	15.299	7280.308	100	768	1016	5284474	6021036	6877.5	5927	340301.2	387729.7	1.2491	30.99	31.06	44372	14.32.05	H5-21-WD	1	
200	Total McCB-F1	10			118281.3		20.538	1254		1254		25965228				1521015					44372	14.32.05	H5-21-WD	1	
201	Total DiCB-F1	10			28824.76		4.743	704		704		39501462				2370459					44372	14.32.05	H5-21-WD	1	
202	Total DiCB-F2	5			14414.71		9.239	5817		5817		27150039				1808397					44372	14.32.05	H5-21-WD	1	
203	Total TrCB-F1	1			29.00178		4.80	2884358		480		2884358				16292.62					44372	14.32.05	H5-21-WD	1	
204	Total TrCB-F2	8			2127.211		1.602	823		823		27632372				1701358					44372	14.32.05	H5-21-WD	1	
205	Total TrCB-F3	18			129134.3		3.913	3095		3095		64546011				4162054					44372	14.32.05	H5-21-WD	1	
206	Total TeCB-F2	1			58.02755		2.078	7570938		2078		7570938				399331.4					44372	14.32.05	H5-21-WD	1	
207	Total TeCB-F3	14			2087.973		1.073	915		915		1.1E+08				6763230					44372	14.32.05	H5-21-WD	1	
208	Total TeCB-F4	19			89453.79		8.597	9437		9437		1.04E+08				8660364					44372	14.32.05	H5-21-WD	1	
209	Total PeCB-F3	3			352.5109		30.408	541		541		16537452				894688.6					44372	14.32.05	H5-21-WD	1	
210	Total PeCB-F4	20			26256.52		1.027	205		205		1.48E+08				11960162					44372	14.32.05	H5-21-WD	1	
211	Total PeCB-F5	34			379995.5		32.962	1360		1360		27891035				4898980					44372	14.32.05	H5-21-WD	1	
212	Total HxCB-F4	9			503.4007		7.226	6109216		905		6109216				3453424					44372	14.32.05	H5-21-WD	1	
213	Total HxCB-F5	38			310794.5		11.294																		

Table with columns: Target Analyte, #Hom, Resp, Ra, Ra fail/YE RT, Conc, H/A, ical RRF, User RF, %Rec, Mod.Date, Mod.Cmn, Com.No, Cms.1, Noise 2, Ion1 H, Ion2 H, Ion1 S, Ion2 S, Ion1 Area, Ion2 Area, RRT, RT, LCL, RT, UCL, Acc.Date, Acc.Time, ID, Spl.Size. The table contains 162 rows of data for various PCB congeners.

163	13C-PCB-31	3240347.5	1.072	NO	15.79	116.0158	17.439	1.257	116	17940	7037	29237306	27088542	1629.7	3846.7	1676576	1563772	0.8677	15.76	15.82	44375	8.08.29	H5.21-WD	1
164	13C-PCB-95	1519983.6	1.627	NO	19.08	104.3441	18.09	0.839	104.9	2262	1659	17030064	10391525	7527.5	6262.7	941397.4	578586.3	1.0924	19.05	19.11	44375	8.08.29	H5.21-WD	1
165	13C-PCB-153	2283245.1	1.248	NO	24.12	107.6022	17.44	0.855	107.6	2529	2339	21909652	17655660	8963.5	7548.8	525290	1000957	1.1807	24.09	24.16	44375	8.08.29	H5.21-WD	1
166	13C-PCB-28	3358370.4	1.065	NO	15.96	94.01674	17.668	1.763	94	17940	7037	30602294	28251706	1705.8	4053.2	1732089	1626281	0.9422	15.92	15.99	44375	8.08.29	H5.21-WD	1
167	13C-PCB-111	2107729.3	1.605	NO	21.97	100.5335	18.553	1.138	100.5	2262	1659	24029258	15150903	10649.3	9131.1	1296932	809097.4	1.0699	21.93	22	44375	8.08.29	H5.21-WD	1
168	13C-PCB-178	1710505.6	1.022	NO	25.01	102.7198	17.562	0.836	102.9	1440	1077	15255308	14989894	10594.6	13824.9	869676.2	850129.4	1.0078	24.97	25.04	44375	8.08.29	H5.21-WD	1
169	13C-PCB-1	4223166.5	3.023	NO	8.99	90.27142	18.659	1.075	90.3	2988	5737	59213444	19569330	19814.6	3415.9	3173482	1049684	0.757	8.96	9.03	44375	8.08.29	H5.21-WD	1
170	13C-PCB-3	4057815.8	3.038	NO	10.49	97.53376	16.974	0.956	97.5	2988	5737	51820528	17299100	17340.7	2999.9	3052867	1004949	0.8832	10.46	10.53	44375	8.08.29	H5.21-WD	1
171	13C-PCB-4	2707923.2	1.613	NO	10.68	92.45743	18.044	0.673	92.5	2970	1054	30159340	18792208	10156	17836	1671453	1036471	0.8962	10.62	10.68	44375	8.08.29	H5.21-WD	1
172	13C-PCB-15	3688327.9	1.578	NO	14.28	100.8953	16.596	0.84	100.9	4711	5207	37488456	23842432	7853.3	4578.6	2257229	1430599	1.2017	14.24	14.31	44375	8.08.29	H5.21-WD	1
173	13C-PCB-19	1770369.9	1.055	NO	12.61	80.87543	17.236	0.503	80.9	10912	8967	15662705	14814975	1435.3	1652.1	908727.6	861642.4	1.0613	12.58	12.64	44375	8.08.29	H5.21-WD	1
174	13C-PCB-37	2673580.4	1.071	NO	18.2	91.00267	16.037	1.45	91	17940	7037	22167994	20714276	1235.7	2943.7	1382320	1291261	1.0746	18.17	18.23	44375	8.08.29	H5.21-WD	1
175	13C-PCB-54	2741862.9	0.795	NO	14.44	79.32236	18.398	1.706	79.3	3040	1455	23050516	28890128	7582.4	20563.2	1214459	1527404	0.8528	14.41	14.48	44375	8.08.29	H5.21-WD	1
176	13C-PCB-81	2502987.6	0.789	NO	21.76	87.92932	16.889	1.549	87.9	2629	2726	18694100	23835362	7111	8781.6	1108983	1402385	1.0571	21.73	21.8	44375	8.08.29	H5.21-WD	1
177	13C-PCB-7	2523565.9	0.789	NO	22.07	86.91537	16.367	1.576	86.9	2929	2726	18222114	22914766	6931.5	8406.2	1113318	1410248	1.0719	22.03	22.1	44375	8.08.29	H5.21-WD	1
178	13C-PCB-104	2374170.8	1.576	NO	17.47	66.32501	18.546	1.943	66.3	968	857	20941160	17225292	27336.9	20093.1	1452672	921498.9	1.0312	17.43	17.5	44375	8.08.29	H5.21-WD	1
179	13C-PCB-123	2277820	1.593	NO	23.04	91.11244	17.087	1.357	91.1	2599	1820	23913522	15091597	9201.1	8290.4	1399481	878338.9	1.1189	23	23.07	44375	8.08.29	H5.21-WD	1
180	13C-PCB-118	2181763.7	1.607	NO	23.2	83.16409	16.769	1.424	83.2	2599	1820	22553636	13978586	8677.8	7679	1344992	836771.4	1.1271	23.17	23.24	44375	8.08.29	H5.21-WD	1
181	13C-PCB-114	2323756.2	1.609	NO	23.51	93.36944	16.675	1.298	93.4	2599	1820	22961418	14228586	8834.7	7815.2	1377000	855756.3	0.9474	23.47	23.54	44375	8.08.29	H5.21-WD	1
182	13C-PCB-105	2280216.8	1.58	NO	23.87	96.31882	16.757	1.285	96.3	2599	1820	23397776	14987378	9002.6	8233.1	1396311	86396.3	0.962	23.84	23.9	44375	8.08.29	H5.21-WD	1
183	13C-PCB-126	2161081	1.59	NO	25.46	100.6933	16.918	1.165	100.7	2599	1820	21232442	13369863	8177.2	7392.3	1320769	834322.3	1.0293	25.43	25.5	44375	8.08.29	H5.21-WD	1
184	13C-PCB-155	2699880	1.255	NO	20.43	79.3814	18.656	1.846	79.4	869	1020	28031766	22415048	32240.5	21980.6	1502557	1197123	0.9924	20.46	20.46	44375	8.08.29	H5.21-WD	1
185	13C-PCB-167	2431989.8	1.268	NO	26.33	96.95603	17.261	1.267	96	2529	2339	23467338	18483290	9279.5	7902.7	1359951	1072439	1.0614	26.3	26.37	44375	8.08.29	H5.21-WD	1
186	13C-PCB-156/157	4656452.5	1.259	NO	26.98	190.4995	12.59	1.222	95.2	2529	2339	32677308	25738088	12921.3	11004.6	2959398	2061054	1.0872	26.94	27.01	44375	8.08.29	H5.21-WD	1
187	13C-PCB-169	2380310.5	1.268	NO	28.64	103.6523	16.036	1.148	103.7	2529	2339	21338424	16888094	8437.7	7217.6	1330633	1049678	1.1544	28.68	28.68	44375	8.08.29	H5.21-WD	1
188	13C-PCB-188	2580156.5	1.039	NO	23.43	86.68227	17.403	1.488	86.7	1166	1077	2984452	21909004	15892.2	20340.1	1314949	1262088	0.9445	23.4	23.47	44375	8.08.29	H5.21-WD	1
189	13C-PCB-189	2342491.3	1.059	NO	29.91	100.7764	15.677	1.162	100.8	1166	1000	18885888	17777830	16201.3	17784.7	1204709	113782	0.9649	29.87	29.94	44375	8.08.29	H5.21-WD	1
190	13C-PCB-202	2042124.9	0.902	NO	8.2	88.7111	17.415	1.15	88.8	455	702	18989178	18740066	37101	26696.4	969604.4	1078521	1.056	26.17	26.23	44375	8.08.29	H5.21-WD	1
191	13C-PCB-205	2240192.6	0.886	NO	31.07	92.39158	14.795	1.489	92.4	1196	1055	15573140	17667976	13026.1	16752.1	1056222	1187571	1.0309	31.24	31.31	44375	8.08.29	H5.21-WD	1
192	13C-PCB-208	1843357.9	0.782	NO	29.63	96.36756	16.912	1.187	95.4	724	697	13684229	17379660	18911.5	24939	809135.9	1034222	0.9559	29.6	29.66	44375	8.08.29	H5.21-WD	1
193	13C-PCB-206	1321619.3	0.791	NO	32.33	97.54944	13.923	0.832	97.5	611	697	8134539	10223437	11226.1	14683	38342.4	78976.9	1.0432	32.3	32.37	44375	8.08.29	H5.21-WD	1
194	13C-PCB-209	1930978.3	1.196	NO	33.44	89.36103	12.737	1.327	89.4	327	166	13392525	11445115	41661.1	67050.9	1051458	879520.1	1.0789	33.41	33.48	44375	8.08.29	H5.21-WD	1
195	13C-PCB-9	4351905.5	1.614	NO	11.88	100	17.288	43519.0	100	2910	1054	46458072	28975130	15644.4	27500.8	2687257	1664469	1.1189	11.85	11.92	44375	8.08.29	H5.21-WD	1
196	13C-PCB-52	2026147.6	0.809	NO	16.94	100	18.339	20261.48	100	2727	2323	194519244	20558092	6095.3	8765.5	906200.8	1119947	0.8826	16.9	16.97	44375	8.08.29	H5.21-WD	1
197	13C-PCB-101	1942356.4	1.589	NO	20.59	100	18.526	19423.06	100	2262	1659	20950042	13022768	9260.1	7848.5	1130646	711460	0.8297	20.55	20.62	44375	8.08.29	H5.21-WD	1
198	13C-PCB-138	2000381.6	1.261	NO	24.81	100	17.467	20003.82	100	2529	2339	19498818	15591368	7706.3	6666.2	1115760	884621.4	0	24.78	24.85	44375	8.08.29	H5.21-WD	1
199	13C-PCB-194	1628389.4	0.879	NO	31	100	15.482	16283.89	100	1156	1055	11797564	13331805	8968	12640.7	167998.8	866390.6	1.2492	30.96	31.03	44375	8.08.29	H5.21-WD	1
200	Total MeCB-F1					247849.1		20.648		1435	50049244						2959599							
201	Total DiCB-F1					51189.37		4.82		899	75279679						4461473							
202	Total DiCB-F2					26928.44		9.11		3166	54265821						3540865							
203	Total TriCB-F1					29.01477		1.635		384	5391879						311771.5							
204	Total TriCB-F2					888.3797		6.35		1352	55099174						3547914							
205	Total TriCB-F3					263305.7		3.994		4180	1.27E+08						8124622							
206	Total TeCB-F2					59.93553		1.02		1005	14793405						771437.3							
207	Total TeCB-F3					1100		8.77		2340	2.1E+08						12874446							
208	Total TeCB-F4					953.1966		8.77		8115	1.61E+08						13278669							
209	Total PeCB-F3					4.118.547		30.853		539	31061255						1692746							
210	Total PeCB-F4					2225.402		1.044		1	3.03E+08						24444501							
211	Total PeCB-F5					648641.8		32.766		1911	1.61E+08						9909988							
212	Total HxCB-F4					2668.218		7.274		548	1.24E+08						7056715							
213	Total HxCB-F5					716739.7		11.587		2818	3.32E+08						21674962							
214	Total HpCB-F5					224028.8		3.23		1557	2.12E+08						12486220							
215	Total HpCB-F6					54.63483		1038		1038	12203870						781814.6							

# ALS Life Sciences

## Continuing Calibration Report

**Sample Name** CVS  
 ALS Sample ID H5-20-RS1-1035  
 Analysis Method EPA 1668C  
 Analysis Type CCV  
 Sample Matrix QC

Sampling Date n/a  
 Extraction Date n/a  
 Sample Size 1 n/a  
 Percent Moisture n/a  
 Split Ratio 1

Approved:  
 S. Jin  
 --e-signature--  
 15-Jul-2021

**Run Information** **Run 1**  
 Filename 5-201202A09  
 Run Date 02-Dec-20 14:03  
 Final Volume 25 ul  
 Dilution Factor 1  
 Analysis Units %  
 Instrument - Column HRMS-5 SPBOctyl 256001-01

Target Analytes	pg/uL	Ret.		Limits		Flags
		Time	% Rec			
PCB-001	50	8.97	104	75-125		
PCB-003	50	10.49	101	75-125		
PCB-004	50	10.65	107	75-125		
PCB-015	50	14.32	109	75-125		
PCB-019	50	12.64	111	75-125		
PCB-037	50	18.27	107	75-125		
PCB-054	50	14.49	108	75-125		
PCB-081	50	21.83	103	75-125		
PCB-077	50	22.13	103	75-125		
PCB-104	50	17.52	98	75-125		
PCB-123	50	23.10	104	75-125		
PCB-118	50	23.27	103	75-125		
PCB-114	50	23.58	104	75-125		
PCB-105	50	23.93	101	75-125		
PCB-126	50	25.52	101	75-125		
PCB-155	50	20.51	100	75-125		
PCB-167	50	26.40	100	75-125		
PCB-156/157	100	27.04	103	75-125		
PCB-169	50	28.70	106	75-125		
PCB-188	50	23.50	103	75-125		
PCB-189	50	29.96	103	75-125		
PCB-202	50	26.28	105	75-125		
PCB-205	50	31.34	99	75-125		
PCB-208	50	29.69	98	75-125		
PCB-206	50	32.41	95	75-125		
PCB-209	50	33.53	105	75-125		
<b>Extraction Standards</b>						
		Time	% Rec	Limits		
13C12-PCB-001	100	8.97	97	50-145		
13C12-PCB-003	100	10.48	97	50-145		
13C12-PCB-004	100	10.63	94	50-145		
13C12-PCB-015	100	14.32	98	50-145		
13C12-PCB-019	100	12.62	92	50-145		
13C12-PCB-037	100	18.25	94	50-145		
13C12-PCB-054	100	14.47	92	50-145		
13C12-PCB-081	100	21.82	94	50-145		
13C12-PCB-077	100	22.12	93	50-145		
13C12-PCB-104	100	17.51	92	50-145		
13C12-PCB-123	100	23.09	93	50-145		
13C12-PCB-118	100	23.26	94	50-145		
13C12-PCB-114	100	23.56	92	50-145		
13C12-PCB-105	100	23.91	93	50-145		
13C12-PCB-126	100	25.52	92	50-145		
13C12-PCB-155	100	20.49	91	50-145		
13C12-PCB-167	100	26.39	98	50-145		
13C12-PCB-156/157	200	27.03	97	50-145		
13C12-PCB-169	100	28.69	101	50-145		
13C12-PCB-188	100	23.49	92	50-145		
13C12-PCB-189	100	29.95	104	50-145		
13C12-PCB-202	100	26.26	94	50-145		
13C12-PCB-205	100	31.33	97	50-145		
13C12-PCB-208	100	29.68	94	50-145		
13C12-PCB-206	100	32.40	97	50-145		
13C12-PCB-209	100	33.51	99	50-145		
<b>Field Spike Standards</b>						
13C12-PCB-031	100	15.83	109	70-130		
13C12-PCB-095	100	19.13	106	70-130		
13C12-PCB-153	100	24.18	102	70-130		
<b>Cleanup Standards</b>						
13C12-PCB-028	100	16.00	101	65-135		
13C12-PCB-111	100	22.02	99	75-125		
13C12-PCB-178	100	25.06	99	75-125		

# ALS Life Sciences

## Continuing Calibration Report

**Sample Name**            **CCV**  
 ALS Sample ID        H5-21-CCV-498  
 Analysis Method       EPA 1668C  
 Analysis Type         CCV  
 Sample Matrix         QC

Sampling Date         n/a  
 Extraction Date        n/a  
 Sample Size            1            n/a  
 Percent Moisture       n/a  
 Split Ratio             1

Approved:  
 S. Jin  
 --e-signature--  
 15-Jul-2021

**Run Information**                               **Run 1**  
 Filename                                       5-210625A01  
 Run Date                                       25-Jun-21 13:51  
 Final Volume                                 25   ul  
 Dilution Factor                             1  
 Analysis Units                               %  
 Instrument - Column                         HRMS-5 SPBOctyl 256608-05

Target Analytes	pg/uL	Ret. Limits		
		Time	% Rec	Flags
PCB-001	50	9.05	95	75-125
PCB-003	50	10.55	89	75-125
PCB-004	50	10.70	99	75-125
PCB-015	50	14.34	97	75-125
PCB-019	50	12.67	105	75-125
PCB-037	50	18.27	97	75-125
PCB-054	50	14.50	101	75-125
PCB-081	50	21.82	97	75-125
PCB-077	50	22.13	98	75-125
PCB-104	50	17.52	101	75-125
PCB-123	50	23.10	99	75-125
PCB-118	50	23.26	101	75-125
PCB-114	50	23.57	95	75-125
PCB-105	50	23.93	97	75-125
PCB-126	50	25.51	100	75-125
PCB-155	50	20.50	102	75-125
PCB-167	50	26.40	97	75-125
PCB-156/157	100	27.04	97	75-125
PCB-169	50	28.69	100	75-125
PCB-188	50	23.48	103	75-125
PCB-189	50	29.95	100	75-125
PCB-202	50	26.26	104	75-125
PCB-205	50	31.34	100	75-125
PCB-208	50	29.68	94	75-125
PCB-206	50	32.39	95	75-125
PCB-209	50	33.52	92	75-125

Extraction Standards		Time	% Rec	Limits
13C12-PCB-001	100	9.04	90	50-145
13C12-PCB-003	100	10.54	95	50-145
13C12-PCB-004	100	10.69	96	50-145
13C12-PCB-015	100	14.33	94	50-145
13C12-PCB-019	100	12.65	80	50-145
13C12-PCB-037	100	18.25	95	50-145
13C12-PCB-054	100	14.49	85	50-145
13C12-PCB-081	100	21.81	94	50-145
13C12-PCB-077	100	22.11	96	50-145
13C12-PCB-104	100	17.51	77	50-145
13C12-PCB-123	100	23.08	98	50-145
13C12-PCB-118	100	23.25	95	50-145
13C12-PCB-114	100	23.56	103	50-145
13C12-PCB-105	100	23.92	105	50-145
13C12-PCB-126	100	25.51	114	50-145
13C12-PCB-155	100	20.48	91	50-145
13C12-PCB-167	100	26.38	103	50-145
13C12-PCB-156/157	200	27.02	105	50-145
13C12-PCB-169	100	28.69	119	50-145
13C12-PCB-188	100	23.47	93	50-145
13C12-PCB-189	100	29.95	120	50-145
13C12-PCB-202	100	26.25	99	50-145
13C12-PCB-205	100	31.33	97	50-145
13C12-PCB-208	100	29.67	99	50-145
13C12-PCB-206	100	32.38	104	50-145
13C12-PCB-209	100	33.49	97	50-145

Field Spike Standards		Time	% Rec	Limits
13C12-PCB-031	100	15.84	110	70-130
13C12-PCB-095	100	19.13	103	70-130
13C12-PCB-153	100	24.16	100	70-130

Cleanup Standards		Time	% Rec	Limits
13C12-PCB-028	100	16.01	96	65-135
13C12-PCB-111	100	22.01	107	75-125
13C12-PCB-178	100	25.05	106	75-125

# ALS Life Sciences

## Continuing Calibration Report

**Sample Name**                **CCV**  
 ALS Sample ID                H5-21-CCV-500  
 Analysis Method               EPA 1668C  
 Analysis Type                 CCV  
 Sample Matrix                QC

Sampling Date                n/a  
 Extraction Date               n/a  
 Sample Size                    1            n/a  
 Percent Moisture               n/a  
 Split Ratio                     1

Approved:  
 S. Jin  
 --e-signature--  
 15-Jul-2021

**Run Information**

**Run 1**

Filename                      5-210625A15  
 Run Date                      25-Jun-21 23:39  
 Final Volume                 25    ul  
 Dilution Factor              1  
 Analysis Units                %  
 Instrument - Column         HRMS-5 SPBOctyl 256608-05

Target Analytes	pg/uL	Ret.		Limits		Flags
		Time	% Rec			
PCB-001	50	9.02	97	75-125		
PCB-003	50	10.51	91	75-125		
PCB-004	50	10.66	105	75-125		
PCB-015	50	14.31	100	75-125		
PCB-019	50	12.62	106	75-125		
PCB-037	50	18.23	100	75-125		
PCB-054	50	14.46	103	75-125		
PCB-081	50	21.79	99	75-125		
PCB-077	50	22.10	100	75-125		
PCB-104	50	17.49	104	75-125		
PCB-123	50	23.06	98	75-125		
PCB-118	50	23.23	102	75-125		
PCB-114	50	23.54	95	75-125		
PCB-105	50	23.89	97	75-125		
PCB-126	50	25.49	98	75-125		
PCB-155	50	20.46	103	75-125		
PCB-167	50	26.36	100	75-125		
PCB-156/157	100	27.00	101	75-125		
PCB-169	50	28.67	103	75-125		
PCB-188	50	23.46	105	75-125		
PCB-189	50	29.92	102	75-125		
PCB-202	50	26.24	105	75-125		
PCB-205	50	31.32	101	75-125		
PCB-208	50	29.66	96	75-125		
PCB-206	50	32.36	96	75-125		
PCB-209	50	33.49	92	75-125		
<b>Extraction Standards</b>						
		Time	% Rec	Limits		
13C12-PCB-001	100	9.01	99	50-145		
13C12-PCB-003	100	10.51	109	50-145		
13C12-PCB-004	100	10.65	93	50-145		
13C12-PCB-015	100	14.30	114	50-145		
13C12-PCB-019	100	12.61	76	50-145		
13C12-PCB-037	100	18.22	104	50-145		
13C12-PCB-054	100	14.45	74	50-145		
13C12-PCB-081	100	21.78	101	50-145		
13C12-PCB-077	100	22.09	103	50-145		
13C12-PCB-104	100	17.48	67	50-145		
13C12-PCB-123	100	23.05	106	50-145		
13C12-PCB-118	100	23.22	100	50-145		
13C12-PCB-114	100	23.53	109	50-145		
13C12-PCB-105	100	23.88	111	50-145		
13C12-PCB-126	100	25.48	120	50-145		
13C12-PCB-155	100	20.44	81	50-145		
13C12-PCB-167	100	26.35	100	50-145		
13C12-PCB-156/157	200	26.99	99	50-145		
13C12-PCB-169	100	28.65	104	50-145		
13C12-PCB-188	100	23.45	83	50-145		
13C12-PCB-189	100	29.92	109	50-145		
13C12-PCB-202	100	26.23	84	50-145		
13C12-PCB-205	100	31.29	95	50-145		
13C12-PCB-208	100	29.64	94	50-145		
13C12-PCB-206	100	32.35	97	50-145		
13C12-PCB-209	100	33.46	93	50-145		
<b>Field Spike Standards</b>						
13C12-PCB-031	100	15.80	117	70-130		
13C12-PCB-095	100	19.09	99	70-130		
13C12-PCB-153	100	24.14	107	70-130		
<b>Cleanup Standards</b>						
13C12-PCB-028	100	15.97	102	65-135		
13C12-PCB-111	100	21.98	109	75-125		
13C12-PCB-178	100	25.02	100	75-125		

# ALS Life Sciences

## Continuing Calibration Report

**Sample Name** CCV  
 ALS Sample ID H5-21-CCV-503  
 Analysis Method EPA 1668C  
 Analysis Type CCV  
 Sample Matrix QC

Sampling Date n/a  
 Extraction Date n/a  
 Sample Size 1 n/a  
 Percent Moisture n/a  
 Split Ratio 1

Approved:  
 S. Jin  
 --e-signature--  
 15-Jul-2021

**Run Information** **Run 1**  
 Filename 5-210628A01  
 Run Date 28-Jun-21 07:28  
 Final Volume 25 ul  
 Dilution Factor 1  
 Analysis Units %  
 Instrument - Column HRMS-5 SPBOctyl 256608-05

Target Analytes	pg/uL	Ret. Limits			Flags
		Time	% Rec		
PCB-001	50	9.05	94	75-125	
PCB-003	50	10.54	92	75-125	M
PCB-004	50	10.69	101	75-125	
PCB-015	50	14.33	96	75-125	
PCB-019	50	12.65	103	75-125	
PCB-037	50	18.26	96	75-125	
PCB-054	50	14.49	101	75-125	
PCB-081	50	21.82	96	75-125	
PCB-077	50	22.12	97	75-125	
PCB-104	50	17.51	101	75-125	
PCB-123	50	23.08	97	75-125	
PCB-118	50	23.25	101	75-125	
PCB-114	50	23.56	93	75-125	
PCB-105	50	23.92	95	75-125	
PCB-126	50	25.51	97	75-125	
PCB-155	50	20.48	102	75-125	
PCB-167	50	26.38	98	75-125	
PCB-156/157	100	27.02	99	75-125	
PCB-169	50	28.68	101	75-125	
PCB-188	50	23.47	104	75-125	
PCB-189	50	29.94	100	75-125	
PCB-202	50	26.25	104	75-125	
PCB-205	50	31.33	100	75-125	
PCB-208	50	29.67	95	75-125	
PCB-206	50	32.38	94	75-125	
PCB-209	50	33.49	92	75-125	
<b>Extraction Standards</b>					
		Time	% Rec	Limits	
13C12-PCB-001	100	9.04	92	50-145	
13C12-PCB-003	100	10.54	95	50-145	
13C12-PCB-004	100	10.68	95	50-145	
13C12-PCB-015	100	14.32	97	50-145	
13C12-PCB-019	100	12.64	83	50-145	
13C12-PCB-037	100	18.25	92	50-145	
13C12-PCB-054	100	14.48	89	50-145	
13C12-PCB-081	100	21.80	92	50-145	
13C12-PCB-077	100	22.10	93	50-145	
13C12-PCB-104	100	17.49	76	50-145	
13C12-PCB-123	100	23.07	98	50-145	
13C12-PCB-118	100	23.24	93	50-145	
13C12-PCB-114	100	23.54	103	50-145	
13C12-PCB-105	100	23.91	107	50-145	
13C12-PCB-126	100	25.50	114	50-145	
13C12-PCB-155	100	20.47	91	50-145	
13C12-PCB-167	100	26.37	105	50-145	
13C12-PCB-156/157	200	27.01	106	50-145	
13C12-PCB-169	100	28.68	117	50-145	
13C12-PCB-188	100	23.46	91	50-145	
13C12-PCB-189	100	29.92	118	50-145	
13C12-PCB-202	100	26.24	99	50-145	
13C12-PCB-205	100	31.30	96	50-145	
13C12-PCB-208	100	29.66	97	50-145	
13C12-PCB-206	100	32.36	101	50-145	
13C12-PCB-209	100	33.47	93	50-145	
<b>Field Spike Standards</b>					
13C12-PCB-031	100	15.83	111	70-130	
13C12-PCB-095	100	19.11	104	70-130	
13C12-PCB-153	100	24.15	100	70-130	
<b>Cleanup Standards</b>					
13C12-PCB-028	100	16.00	98	65-135	
13C12-PCB-111	100	22.00	109	75-125	
13C12-PCB-178	100	25.04	106	75-125	

M Indicates that a peak has been manually integrated.





## **SVOC DATA PACKAGE**

### **SECTION 5: QC SAMPLE DATA**

Including:

- Laboratory Method Blank Analysis Reports
- Laboratory Control Sample Analysis Reports
- Matrix Spike Analysis Reports
- Other QC Sample Analysis Reports (where applicable)

# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	<b>Media Blank</b>	Sampling Date	n/a	
ALS Sample ID	WG3559668-1	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Blank	Percent Moisture	n/a	
Sample Matrix	QC	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

<b>Run Information</b>		<b>Run 1</b>	
Filename	5-210625A07	Run Date	25-Jun-21 18:02
Final Volume	25 ul	Dilution Factor	1
Analysis Units	pg	Instrument - Column	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-001		8.98	10.0	1.4	J		100
PCB-002		10.38	6.46	1.7	M,J		100
PCB-003		10.48	<10	1.9	M,J,R	10	100
PCB-004		NotFnd	<13	13	U		100
PCB-010		NotFnd	<8.5	8.5	U		100
PCB-009		NotFnd	<8.8	8.8	U		100
PCB-007		NotFnd	<8.0	8.0	U		100
PCB-006		NotFnd	<8.4	8.4	U		100
PCB-005		NotFnd	<9.1	9.1	U		100
PCB-008		NotFnd	<7.8	7.8	U		100
PCB-014		NotFnd	<9.1	9.1	U		100
PCB-011		13.95	396	9.7	M		100
PCB-012/013		NotFnd	<9.4	9.4	U		100
PCB-015		NotFnd	<13	13	U		100
PCB-019		NotFnd	<4.2	4.2	U		100
PCB-018/030		13.73	<13	2.7	J,R	13	100
PCB-017		13.96	8.10	3.2	J		100
PCB-027		NotFnd	<2.4	2.4	U		100
PCB-024		NotFnd	<2.4	2.4	U		100
PCB-016		14.25	<6.4	3.7	M,J,R	6.4	100
PCB-032		14.54	5.29	2.2	J		100
PCB-034		NotFnd	<3.4	3.4	U		100
PCB-023		NotFnd	<3.0	3.0	U		100
PCB-026/029		NotFnd	<3.2	3.2	U		100
PCB-025		NotFnd	<2.9	2.9	U		100
PCB-031		15.83	28.7	3.0	J		100
PCB-020/028		15.99	44.2	3.1	J		100
PCB-021/033		16.14	<18	3.1	J,R	18	100
PCB-022		16.38	<16	3.2	J,R	16	100
PCB-036		NotFnd	<3.1	3.1	U		100
PCB-039		NotFnd	<3.2	3.2	U		100
PCB-038		NotFnd	<3.7	3.7	U		100
PCB-035		18.02	<7.6	3.8	J,R	7.6	100
PCB-037		18.26	17.2	4.3	M,J		100
PCB-054		NotFnd	<2.2	2.2	U		100
PCB-050/053		NotFnd	<2.0	2.0	U		100
PCB-045/051		16.08	<4.3	2.1	J,R	4.3	100
PCB-046		NotFnd	<2.4	2.4	U		100
PCB-052		16.97	<12	2.3	J,R	12	100
PCB-073		NotFnd	<1.6	1.6	U		100
PCB-043		NotFnd	<2.8	2.8	U		100
PCB-049/069		17.24	<5.3	2.0	M,J,R	5.3	100
PCB-048		NotFnd	<2.2	2.2	U		100
PCB-044/047/065		17.54	26.2	2.1	J		100
PCB-059/062/075		NotFnd	<1.7	1.7	U		100
PCB-042		17.85	<3.8	2.5	J,R	3.8	100
PCB-040/041/071		18.08	<5.9	2.3	M,J,R	5.9	100
PCB-064		18.26	<4.8	1.7	J,R	4.8	100
PCB-072		NotFnd	<2.5	2.5	U		100
PCB-068		18.78	<3.2	2.2	M,J,R	3.2	100
PCB-057		NotFnd	<2.6	2.6	U		100
PCB-058		NotFnd	<2.4	2.4	U		100
PCB-067		NotFnd	<2.1	2.1	U		100
PCB-063		NotFnd	<2.4	2.4	U		100
PCB-061/070/074/076		19.59	23.3	2.4	J		100
PCB-066		19.78	<7.3	2.3	M,J,R	7.3	100
PCB-055		NotFnd	<2.4	2.4	U		100
PCB-056		20.15	<6.2	2.6	J,R	6.2	100
PCB-060		NotFnd	<2.4	2.4	U		100
PCB-080		NotFnd	<2.0	2.0	U		100
PCB-079		NotFnd	<2.2	2.2	U		100
PCB-078		NotFnd	<2.5	2.5	U		100
PCB-081	0.0003	NotFnd	<2.4	2.4	U		100
PCB-077	0.0001	22.11	<2.6	2.5	J,R	2.6	100
PCB-104		NotFnd	<1.9	1.9	U		100
PCB-096		NotFnd	<1.8	1.8	U		100
PCB-103		NotFnd	<3.0	3.0	U		100
PCB-094		NotFnd	<3.4	3.4	U		100
PCB-095		NotFnd	<3.2	3.2	U		100
PCB-093/098/100/102		NotFnd	<3.1	3.1	U		100

# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	<b>Media Blank</b>	Sampling Date	n/a	
ALS Sample ID	WG3559668-1	Extraction Date	23-Jun-21	
Analysis Method	EPA 1668C	Sample Size	1	Sample
Analysis Type	Blank	Percent Moisture	n/a	
Sample Matrix	QC	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

<b>Run Information</b>	<b>Run 1</b>
Filename	5-210625A07
Run Date	25-Jun-21 18:02
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-088/091		NotFnd	<3.1	3.1	U		100
PCB-084		NotFnd	<3.5	3.5	U		100
PCB-089		NotFnd	<3.5	3.5	U		100
PCB-121		NotFnd	<2.2	2.2	U		100
PCB-092		NotFnd	<3.3	3.3	U		100
PCB-090/101/113		NotFnd	<2.6	2.6	U		100
PCB-083/099		NotFnd	<3.2	3.2	U		100
PCB-112		NotFnd	<2.2	2.2	U		100
PCB-086/087/097/109/119/125		NotFnd	<2.7	2.7	U		100
PCB-085/110/115/116/117		NotFnd	<2.5	2.5	U		100
PCB-082		NotFnd	<4.1	4.1	U		100
PCB-111		NotFnd	<2.1	2.1	U		100
PCB-120		NotFnd	<2.1	2.1	U		100
PCB-108/124		NotFnd	<1.8	1.8	U		100
PCB-107		NotFnd	<1.5	1.5	U		100
PCB-123	0.00003	NotFnd	<1.9	1.9	U		100
PCB-106		NotFnd	<1.8	1.8	U		100
PCB-118	0.00003	23.24	6.70	1.9	J		100
PCB-122		NotFnd	<2.0	2.0	U		100
PCB-114	0.00003	NotFnd	<1.8	1.8	U		100
PCB-105	0.00003	NotFnd	<1.9	1.9	U		100
PCB-127		NotFnd	<1.8	1.8	U		100
PCB-126	0.1	NotFnd	<2.1	2.1	U		100
PCB-155		NotFnd	<1.0	1.0	U		100
PCB-152		NotFnd	<1.1	1.1	U		100
PCB-150		NotFnd	<0.97	0.97	U		100
PCB-136		NotFnd	<1.1	1.1	U		100
PCB-145		NotFnd	<1.0	1.0	U		100
PCB-148		NotFnd	<1.4	1.4	U		100
PCB-135/151		NotFnd	<1.5	1.5	U		100
PCB-154		NotFnd	<1.1	1.1	U		100
PCB-144		NotFnd	<1.5	1.5	U		100
PCB-147/149		22.62	<3.3	1.4	J,R	3.3	100
PCB-134/143		NotFnd	<1.7	1.7	U		100
PCB-139/140		NotFnd	<1.3	1.3	U		100
PCB-131		NotFnd	<1.7	1.7	U		100
PCB-142		NotFnd	<1.7	1.7	U		100
PCB-132		NotFnd	<1.6	1.6	U		100
PCB-133		NotFnd	<1.6	1.6	U		100
PCB-165		NotFnd	<1.1	1.1	U		100
PCB-146		NotFnd	<1.3	1.3	U		100
PCB-161		NotFnd	<1.1	1.1	U		100
PCB-153/168		24.16	3.62	1.1	J		100
PCB-141		NotFnd	<1.5	1.5	U		100
PCB-130		NotFnd	<1.8	1.8	U		100
PCB-137/164		NotFnd	<1.3	1.3	U		100
PCB-129/138/163		24.85	<5.3	1.6	J,R	5.3	100
PCB-160		NotFnd	<1.0	1.0	U		100
PCB-158		NotFnd	<0.95	0.95	U		100
PCB-128/166		NotFnd	<1.3	1.3	U		100
PCB-159		NotFnd	<1.1	1.1	U		100
PCB-162		NotFnd	<1.1	1.1	U		100
PCB-167	0.00003	NotFnd	<1.0	1.0	U		100
PCB-156/157	0.00003	NotFnd	<1.4	1.4	U		200
PCB-169	0.03	NotFnd	<1.1	1.1	U		100
PCB-188		NotFnd	<1.2	1.2	U		100
PCB-179		NotFnd	<1.1	1.1	U		100
PCB-184		NotFnd	<0.96	0.96	U		100
PCB-176		NotFnd	<1.1	1.1	U		100
PCB-186		NotFnd	<1.1	1.1	U		100
PCB-178		NotFnd	<1.6	1.6	U		100
PCB-175		NotFnd	<1.6	1.6	U		100
PCB-187		NotFnd	<1.3	1.3	U		100
PCB-182		NotFnd	<1.4	1.4	U		100
PCB-183		NotFnd	<1.5	1.5	U		100
PCB-185		NotFnd	<1.5	1.5	U		100
PCB-174		NotFnd	<1.4	1.4	U		100
PCB-177		NotFnd	<1.6	1.6	U		100
PCB-181		NotFnd	<1.5	1.5	U		100
PCB-171/173		NotFnd	<1.6	1.6	U		100
PCB-172		NotFnd	<1.7	1.7	U		100

# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	<b>Media Blank</b>	Sampling Date	n/a	
ALS Sample ID	WG3559668-1	Extraction Date	23-Jun-21	Sample
Analysis Method	EPA 1668C	Sample Size	1	
Analysis Type	Blank	Percent Moisture	n/a	
Sample Matrix	QC	Split Ratio	4	

Approved:  
S. Jin  
--e-signature--  
15-Jul-2021

<b>Run Information</b>		<b>Run 1</b>	
Filename	5-210625A07	Run Date	25-Jun-21 18:02
Final Volume	25 ul	Dilution Factor	1
Analysis Units	pg	Instrument - Column	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-192		NotFnd	<1.2	1.2	U	100	
PCB-180/193		NotFnd	<1.3	1.3	U	100	
PCB-191		NotFnd	<1.2	1.2	U	100	
PCB-170		NotFnd	<1.7	1.7	U	100	
PCB-190		NotFnd	<1.1	1.1	U	100	
PCB-189	0.00003	NotFnd	<0.71	0.71	U	100	
PCB-202		NotFnd	<0.75	0.75	U	100	
PCB-201		NotFnd	<0.68	0.68	U	100	
PCB-204		NotFnd	<0.66	0.66	U	100	
PCB-197		NotFnd	<0.62	0.62	U	100	
PCB-200		NotFnd	<0.70	0.70	U	100	
PCB-198/199		NotFnd	<0.93	0.93	U	100	
PCB-196		NotFnd	<0.96	0.96	U	100	
PCB-203		NotFnd	<0.83	0.83	U	100	
PCB-195		NotFnd	<0.95	0.95	U	100	
PCB-194		NotFnd	<0.87	0.87	U	100	
PCB-205		NotFnd	<0.73	0.73	U	100	
PCB-208		NotFnd	<1.2	1.2	U	100	
PCB-207		NotFnd	<1.4	1.4	U	100	
PCB-206		NotFnd	<2.2	2.2	U	100	
PCB-209		NotFnd	<0.48	0.48	U	100	

**Extraction Standards**

	pg	Time	% Rec	Limits
13C12-PCB-001	4000	8.97	54	5-145
13C12-PCB-003	4000	10.49	56	5-145
13C12-PCB-004	4000	10.63	57	5-145
13C12-PCB-015	4000	14.32	64	5-145
13C12-PCB-019	4000	12.61	45	5-145
13C12-PCB-037	4000	18.25	68	5-145
13C12-PCB-054	4000	14.45	39	5-145
13C12-PCB-081	4000	21.80	74	10-145
13C12-PCB-077	4000	22.11	76	10-145
13C12-PCB-104	4000	17.48	50	10-145
13C12-PCB-123	4000	23.06	84	10-145
13C12-PCB-118	4000	23.23	79	10-145
13C12-PCB-114	4000	23.53	84	10-145
13C12-PCB-105	4000	23.89	86	10-145
13C12-PCB-126	4000	25.49	90	10-145
13C12-PCB-155	4000	20.45	62	10-145
13C12-PCB-167	4000	26.36	90	10-145
13C12-PCB-156/157	8000	27.00	89	10-145
13C12-PCB-169	4000	28.67	102	10-145
13C12-PCB-188	4000	23.45	74	10-145
13C12-PCB-189	4000	29.92	99	10-145
13C12-PCB-202	4000	26.23	75	10-145
13C12-PCB-205	4000	31.30	91	10-145
13C12-PCB-208	4000	29.64	89	10-145
13C12-PCB-206	4000	32.35	91	10-145
13C12-PCB-209	4000	33.46	86	10-145

**Field Spike Standards**

13C12-PCB-031			NS	70-130
13C12-PCB-095			NS	70-130
13C12-PCB-153			NS	70-130

**Cleanup Standards**

13C12-PCB-028	4000	15.98	64	5-145
13C12-PCB-111	4000	21.98	85	10-145
13C12-PCB-178	4000	25.03	93	10-145

# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	<b>Media Blank</b>	Sampling Date	n/a		
ALS Sample ID	WG3559668-1	Extraction Date	23-Jun-21	Sample	Approved: S. Jin --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1		
Analysis Type	Blank	Percent Moisture	n/a		
Sample Matrix	QC	Split Ratio	4		

<b>Run Information</b>		<b>Run 1</b>	
Filename	5-210625A07	Run Date	25-Jun-21 18:02
Final Volume	25 ul	Dilution Factor	1
Analysis Units	pg	Instrument - Column	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg Flags	EMPC pg	LQL
<b>Homologue Group Totals</b>						
Total MonoCB			26.5	1.4 J	400	
Total DiCB			396	7.8 J	800	
Total TriCB			164	2.2 J	800	
Total TetraCB			105	1.6 J	1600	
Total PentaCB			6.70	1.5 J	1600	
Total HexaCB			12.2	0.95 J	1600	
Total HeptaCB			<0.71	0.71 U	800	
Total OctaCB			<0.62	0.62 U	800	
Total NonaCB			<1.2	1.2 U	400	
DecaCB			<0.48	0.48 U	400	
Total PCB			711	J	3200	
<b>Toxic Equivalency - (WHO 2005)</b>						
Lower Bound PCB TEQ			0.000201			
Mid Point PCB TEQ			0.122			
Upper Bound PCB TEQ			0.244			

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor      TEQ      Indicates the Toxic Equivalency
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
U	Indicates that this compound was not detected above the EDL.
J	Indicates that the analyte was positively identified. The associated numerical result is an estimate.
R	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
NS	Indicates that this compound was not added.
EMPC	Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	<b>Method Blank</b>	Sampling Date	n/a		
ALS Sample ID	WG3559668-4	Extraction Date	23-Jun-21		
Analysis Method	EPA 1668C	Sample Size	1	Sample	
Analysis Type	Blank	Percent Moisture	n/a		Approved: S. Jin
Sample Matrix	QC	Split Ratio	4		--e-signature-- 15-Jul-2021

<b>Run Information</b>	<b>Run 1</b>
Filename	5-210625A08
Run Date	25-Jun-21 18:44
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-001		8.97	17.8	1.5	J		100
PCB-002		10.37	11.7	1.7	J		100
PCB-003		10.49	<19	1.7	M,J,R	19	100
PCB-004		10.63	<45	15	J,R	45	100
PCB-010		NotFnd	<9.0	9.0	U		100
PCB-009		NotFnd	<9.3	9.3	U		100
PCB-007		11.99	34.9	8.5	J		100
PCB-006		12.16	<14	8.9	J,R	14	100
PCB-005		NotFnd	<9.7	9.7	U		100
PCB-008		12.43	62.7	8.2	J		100
PCB-014		NotFnd	<5.7	5.7	U		100
PCB-011		13.93	830	6.1			100
PCB-012/013		NotFnd	<5.9	5.9	U		100
PCB-015		14.32	<32	7.3	J,R	32	100
PCB-019		12.61	<7.7	3.4	M,J,R	7.7	100
PCB-018/030		13.72	<33	1.8	J,R	33	100
PCB-017		13.96	<17	2.1	J,R	17	100
PCB-027		14.08	<1.7	1.6	J,R	1.7	100
PCB-024		NotFnd	<1.6	1.6	U		100
PCB-016		14.26	15.3	2.4	J		100
PCB-032		14.54	15.3	1.5	M,J		100
PCB-034		NotFnd	<3.5	3.5	U		100
PCB-023		NotFnd	<3.0	3.0	U		100
PCB-026/029		15.50	13.7	3.2	J		100
PCB-025		15.64	<3.7	2.9	J,R	3.7	100
PCB-031		15.82	77.6	3.0	J		100
PCB-020/028		15.98	122	3.1			100
PCB-021/033		16.13	61.5	3.2	J		100
PCB-022		16.36	38.3	3.2	J		100
PCB-036		NotFnd	<3.2	3.2	U		100
PCB-039		NotFnd	<3.3	3.3	U		100
PCB-038		NotFnd	<3.7	3.7	U		100
PCB-035		18.01	23.3	3.9	J		100
PCB-037		18.24	51.1	4.0	J		100
PCB-054		NotFnd	<1.2	1.2	U		100
PCB-050/053		15.64	<3.6	1.8	J,R	3.6	100
PCB-045/051		16.07	16.2	1.9	J		100
PCB-046		16.23	<2.2	2.2	U	1.9	100
PCB-052		16.96	63.0	2.1	J		100
PCB-073		NotFnd	<1.5	1.5	U		100
PCB-043		NotFnd	<2.6	2.6	U		100
PCB-049/069		17.24	<26	1.8	J,R	26	100
PCB-048		17.39	<11	2.0	J,R	11	100
PCB-044/047/065		17.53	94.9	1.9	J		100
PCB-059/062/075		17.73	5.67	1.5	M,J		100
PCB-042		17.82	17.6	2.3	J		100
PCB-040/041/071		18.09	<35	2.2	J,R	35	100
PCB-064		18.22	29.9	1.6	J		100
PCB-072		NotFnd	<2.4	2.4	U		100
PCB-068		18.77	13.7	2.1	J		100
PCB-057		NotFnd	<2.5	2.5	U		100
PCB-058		NotFnd	<2.3	2.3	U		100
PCB-067		NotFnd	<2.0	2.0	U		100
PCB-063		19.39	<3.2	2.3	J,R	3.2	100
PCB-061/070/074/076		19.57	119	2.3			100
PCB-066		19.76	74.7	2.3	J		100
PCB-055		NotFnd	<2.3	2.3	U		100
PCB-056		20.13	48.7	2.5	J		100
PCB-060		20.26	30.7	2.4	J		100
PCB-080		NotFnd	<2.0	2.0	U		100
PCB-079		NotFnd	<2.1	2.1	U		100
PCB-078		NotFnd	<2.5	2.5	U		100
PCB-081	0.0003	NotFnd	<2.2	2.2	U		100
PCB-077	0.0001	22.10	13.1	2.4	J		100
PCB-104		NotFnd	<1.5	1.5	U		100
PCB-096		NotFnd	<1.3	1.3	U		100
PCB-103		NotFnd	<3.4	3.4	U		100
PCB-094		NotFnd	<3.8	3.8	U		100
PCB-095		19.10	31.4	3.6	J		100
PCB-093/098/100/102		19.26	<3.6	3.6	U	1.3	100

# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	<b>Method Blank</b>	Sampling Date	n/a		
ALS Sample ID	WG3559668-4	Extraction Date	23-Jun-21		
Analysis Method	EPA 1668C	Sample Size	1	Sample	
Analysis Type	Blank	Percent Moisture	n/a		Approved: S. Jin
Sample Matrix	QC	Split Ratio	4		--e-signature-- 15-Jul-2021

<b>Run Information</b>	<b>Run 1</b>
Filename	5-210625A08
Run Date	25-Jun-21 18:44
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-088/091		19.56	<5.6	3.6	J,R	5.6	100
PCB-084		19.73	<7.2	4.0	M,J,R	7.2	100
PCB-089		NotFnd	<4.0	4.0	U		100
PCB-121		NotFnd	<2.5	2.5	U		100
PCB-092		20.31	5.97	3.8	J		100
PCB-090/101/113		20.61	33.9	3.0	J		100
PCB-083/099		20.92	24.2	3.7	J		100
PCB-112		NotFnd	<2.6	2.6	U		100
PCB-086/087/097/109/119/125		21.28	26.3	3.0	M,J		100
PCB-085/110/115/116/117		21.70	51.1	2.8	M,J		100
PCB-082		NotFnd	<4.7	4.7	U		100
PCB-111		NotFnd	<2.4	2.4	U		100
PCB-120		NotFnd	<2.4	2.4	U		100
PCB-108/124		NotFnd	<1.7	1.7	U		100
PCB-107		NotFnd	<1.4	1.4	U		100
PCB-123	0.00003	NotFnd	<1.8	1.8	U		100
PCB-106		NotFnd	<1.7	1.7	U		100
PCB-118	0.00003	23.23	30.9	1.8	J		100
PCB-122		23.42	<1.8	1.8	U	1.3	100
PCB-114	0.00003	23.54	<1.7	1.6	J,R	1.7	100
PCB-105	0.00003	23.91	<1.3	1.8	M,J,R	13	100
PCB-127		NotFnd	<1.7	1.7	U		100
PCB-126	0.1	NotFnd	<1.9	1.9	U		100
PCB-155		20.45	<7.5	0.83	J,R	7.5	100
PCB-152		NotFnd	<0.87	0.87	U		100
PCB-150		NotFnd	<0.78	0.78	U		100
PCB-136		20.94	<2.6	0.89	M,J,R	2.6	100
PCB-145		NotFnd	<0.84	0.84	U		100
PCB-148		NotFnd	<1.2	1.2	U		100
PCB-135/151		22.13	11.6	1.2	M,J		100
PCB-154		NotFnd	<0.90	0.90	U		100
PCB-144		NotFnd	<1.2	1.2	U		100
PCB-147/149		22.62	21.0	1.7	J		100
PCB-134/143		22.78	<2.3	2.2	J,R	2.3	100
PCB-139/140		NotFnd	<1.7	1.7	U		100
PCB-131		NotFnd	<2.1	2.1	U		100
PCB-142		NotFnd	<2.1	2.1	U		100
PCB-132		23.33	<8.7	2.0	J,R	8.7	100
PCB-133		NotFnd	<2.0	2.0	U		100
PCB-165		NotFnd	<1.4	1.4	U		100
PCB-146		23.82	3.96	1.6	J		100
PCB-161		NotFnd	<1.4	1.4	U		100
PCB-153/168		24.14	20.8	1.4	J		100
PCB-141		24.28	<6.0	1.8	J,R	6.0	100
PCB-130		24.51	<2.4	2.3	J,R	2.4	100
PCB-137/164		24.61	4.07	1.6	M,J		100
PCB-129/138/163		24.85	<2.8	1.9	J,R	2.8	100
PCB-160		NotFnd	<1.3	1.3	U		100
PCB-158		25.04	<1.6	1.2	J,R	1.6	100
PCB-128/166		25.56	<1.8	1.6	J,R	1.8	100
PCB-159		NotFnd	<1.4	1.4	U		100
PCB-162		NotFnd	<1.4	1.4	U		100
PCB-167	0.00003	NotFnd	<1.3	1.3	U		100
PCB-156/157	0.00003	NotFnd	<1.8	1.8	U		200
PCB-169	0.03	NotFnd	<1.4	1.4	U		100
PCB-188		NotFnd	<1.1	1.1	U		100
PCB-179		23.68	<2.3	1.1	J,R	2.3	100
PCB-184		23.91	6.26	0.92	J		100
PCB-176		NotFnd	<1.1	1.1	U		100
PCB-186		NotFnd	<1.1	1.1	U		100
PCB-178		NotFnd	<1.5	1.5	U		100
PCB-175		NotFnd	<1.5	1.5	U		100
PCB-187		25.49	<3.8	1.3	J,R	3.8	100
PCB-182		NotFnd	<1.3	1.3	U		100
PCB-183		25.80	2.30	1.4	J		100
PCB-185		NotFnd	<1.5	1.5	U		100
PCB-174		25.96	2.68	1.4	J		100
PCB-177		26.21	<1.9	1.5	M,J,R	1.9	100
PCB-181		NotFnd	<1.4	1.4	U		100
PCB-171/173		NotFnd	<1.6	1.6	U		100
PCB-172		NotFnd	<1.6	1.6	U		100

# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	<b>Method Blank</b>	Sampling Date	n/a	
ALS Sample ID	WG3559668-4	Extraction Date	23-Jun-21	
Analysis Method	EPA 1668C	Sample Size	1	Sample
Analysis Type	Blank	Percent Moisture	n/a	
Sample Matrix	QC	Split Ratio	4	Approved: S. Jin --e-signature-- 15-Jul-2021

<b>Run Information</b>	<b>Run 1</b>
Filename	5-210625A08
Run Date	25-Jun-21 18:44
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-5 SPB0ctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-192		NotFnd	<1.2	1.2	U		100
PCB-180/193		27.65	6.82	1.2	J		100
PCB-191		NotFnd	<1.2	1.2	U		100
PCB-170		28.34	3.11	1.7	J		100
PCB-190		NotFnd	<1.0	1.0	U		100
PCB-189	0.00003	NotFnd	<0.79	0.79	U		100
PCB-202		NotFnd	<0.61	0.61	U		100
PCB-201		NotFnd	<0.55	0.55	U		100
PCB-204		NotFnd	<0.54	0.54	U		100
PCB-197		NotFnd	<0.51	0.51	U		100
PCB-200		NotFnd	<0.57	0.57	U		100
PCB-198/199		NotFnd	<0.76	0.76	U		100
PCB-196		NotFnd	<0.79	0.79	U		100
PCB-203		NotFnd	<0.68	0.68	U		100
PCB-195		NotFnd	<0.82	0.82	U		100
PCB-194		31.04	<2.1	0.75	J,R	2.1	100
PCB-205		NotFnd	<0.62	0.62	U		100
PCB-208		NotFnd	<1.3	1.3	U		100
PCB-207		NotFnd	<1.4	1.4	U		100
PCB-206		NotFnd	<2.1	2.1	U		100
PCB-209		NotFnd	<0.46	0.46	U		100
<b>Extraction Standards</b>	<b>pg</b>	<b>Time</b>	<b>% Rec</b>	<b>Limits</b>			
13C12-PCB-001	4000	8.97	47	5-145			
13C12-PCB-003	4000	10.48	50	5-145			
13C12-PCB-004	4000	10.62	49	5-145			
13C12-PCB-015	4000	14.31	58	5-145			
13C12-PCB-019	4000	12.60	40	5-145			
13C12-PCB-037	4000	18.23	68	5-145			
13C12-PCB-054	4000	14.44	37	5-145			
13C12-PCB-081	4000	21.79	75	10-145			
13C12-PCB-077	4000	22.10	76	10-145			
13C12-PCB-104	4000	17.48	45	10-145			
13C12-PCB-123	4000	23.05	80	10-145			
13C12-PCB-118	4000	23.22	78	10-145			
13C12-PCB-114	4000	23.53	87	10-145			
13C12-PCB-105	4000	23.88	84	10-145			
13C12-PCB-126	4000	25.49	88	10-145			
13C12-PCB-155	4000	20.44	58	10-145			
13C12-PCB-167	4000	26.35	86	10-145			
13C12-PCB-156/157	8000	26.99	84	10-145			
13C12-PCB-169	4000	28.65	97	10-145			
13C12-PCB-188	4000	23.43	73	10-145			
13C12-PCB-189	4000	29.92	96	10-145			
13C12-PCB-202	4000	26.21	71	10-145			
13C12-PCB-205	4000	31.29	86	10-145			
13C12-PCB-208	4000	29.64	83	10-145			
13C12-PCB-206	4000	32.35	85	10-145			
13C12-PCB-209	4000	33.46	77	10-145			
<b>Field Spike Standards</b>							
13C12-PCB-031			NS	70-130			
13C12-PCB-095			NS	70-130			
13C12-PCB-153			NS	70-130			
<b>Cleanup Standards</b>							
13C12-PCB-028	4000	15.97	68	5-145			
13C12-PCB-111	4000	21.98	89	10-145			
13C12-PCB-178	4000	25.02	103	10-145			



# ALS Life Sciences

## Laboratory Method Blank Analysis Report

<b>Sample Name</b>	<b>Method Blank</b>	Sampling Date	n/a		
ALS Sample ID	WG3559668-4	Extraction Date	23-Jun-21		Approved: <i>S. Jin</i> --e-signature-- 15-Jul-2021
Analysis Method	EPA 1668C	Sample Size	1	Sample	
Analysis Type	Blank	Percent Moisture	n/a		
Sample Matrix	QC	Split Ratio	4		

Run Information	Run 1
Filename	5-210625A08
Run Date	25-Jun-21 18:44
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-5 SPBOctyl 256608-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
<b>Homologue Group Totals</b>							
Total MonoCB			48.5	1.5	J		400
Total DiCB			1020	5.7	J		800
Total TriCB			481	1.5	J		800
Total TetraCB			606	1.2	J		1600
Total PentaCB			231	1.3	J		1600
Total HexaCB			122	0.78	J		1600
Total HeptaCB			29.2	0.79	J		800
Total OctaCB			2.10	0.51	J		800
Total NonaCB			<1.3	1.3	U		400
DecaCB			<0.46	0.46	U		400
Total PCB			2540		J		3200
<b>Toxic Equivalency - (WHO 2005)</b>							
Lower Bound PCB TEQ			0.00224				
Mid Point PCB TEQ			0.119				
Upper Bound PCB TEQ			0.236				

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
U	Indicates that this compound was not detected above the EDL.
J	Indicates that the analyte was positively identified. The associated numerical result is an estimate.
R	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
NS	Indicates that this compound was not added.
EMPC	Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criterion failure

# ALS Life Sciences

## Laboratory Control Sample Analysis Report

<b>Sample Name</b>	<b>Laboratory Control Sample</b>	Sampling Date	n/a		
ALS Sample ID	WG3559668-2	Extraction Date	23-Jun-21		
Analysis Method	EPA 1668C	Sample Size	1	n/a	
Analysis Type	LCS	Percent Moisture	n/a		
Sample Matrix	QC	Split Ratio	4		
					Approved: S. Jin --e-signature-- 15-Jul-2021

<b>Run Information</b>		<b>Run 1</b>	
Filename		5-210625A03	
Run Date		25-Jun-21 15:14	
Final Volume		25 ul	
Dilution Factor		1	
Analysis Units		% Rec	
Instrument - Column		HRMS-5 SPBOctyl 256608-05	

Target Analytes	pg	Ret. Time	% Rec	Limits	Flags
PCB-001	2000	8.98	102	60-135	
PCB-003	2000	10.51	92	60-135	
PCB-004	2000	10.65	112	60-135	
PCB-015	2000	14.32	103	60-135	
PCB-019	2000	12.62	107	60-135	
PCB-037	2000	18.25	102	60-135	
PCB-054	2000	14.46	109	60-135	
PCB-081	2000	21.80	96	60-135	
PCB-077	2000	22.11	96	60-135	
PCB-104	2000	17.49	101	60-135	
PCB-123	2000	23.07	100	60-135	
PCB-118	2000	23.24	101	60-135	
PCB-114	2000	23.54	96	60-135	
PCB-105	2000	23.91	94	60-135	
PCB-126	2000	25.50	95	60-135	
PCB-155	2000	20.46	103	60-135	
PCB-167	2000	26.37	100	60-135	
PCB-156/157	4000	27.01	97	60-135	
PCB-169	2000	28.68	101	60-135	
PCB-188	2000	23.46	103	60-135	
PCB-189	2000	29.94	99	60-135	
PCB-202	2000	26.24	111	60-135	
PCB-205	2000	31.32	97	60-135	
PCB-208	2000	29.66	93	60-135	
PCB-206	2000	32.38	91	60-135	
PCB-209	2000	33.49	103	60-135	
<b>Extraction Standards</b>					
		<b>Time</b>	<b>% Rec</b>	<b>Limits</b>	
13C12-PCB-001	4000	8.98	33	15-145	
13C12-PCB-003	4000	10.49	33	15-145	
13C12-PCB-004	4000	10.63	35	15-145	
13C12-PCB-015	4000	14.32	37	15-145	
13C12-PCB-019	4000	12.61	28	15-145	
13C12-PCB-037	4000	18.24	47	15-145	
13C12-PCB-054	4000	14.45	24	15-145	
13C12-PCB-081	4000	21.79	59	40-145	
13C12-PCB-077	4000	22.10	61	40-145	
13C12-PCB-104	4000	17.48	31	40-145	
13C12-PCB-123	4000	23.06	67	40-145	
13C12-PCB-118	4000	23.23	64	40-145	
13C12-PCB-114	4000	23.53	70	40-145	
13C12-PCB-105	4000	23.89	70	40-145	
13C12-PCB-126	4000	25.49	74	40-145	
13C12-PCB-155	4000	20.45	43	40-145	
13C12-PCB-167	4000	26.36	70	40-145	
13C12-PCB-156/157	8000	27.00	69	40-145	
13C12-PCB-169	4000	28.67	78	40-145	
13C12-PCB-188	4000	23.45	57	40-145	
13C12-PCB-189	4000	29.92	79	40-145	
13C12-PCB-202	4000	26.23	57	40-145	
13C12-PCB-205	4000	31.30	69	40-145	
13C12-PCB-208	4000	29.64	69	40-145	
13C12-PCB-206	4000	32.35	70	40-145	
13C12-PCB-209	4000	33.46	64	40-145	
<b>Field Spike Standards</b>					
13C12-PCB-031			NS	70-130	
13C12-PCB-095			NS	70-130	
13C12-PCB-153			NS	70-130	
<b>Cleanup Standards</b>					
13C12-PCB-028	4000	15.98	38	15-145	
13C12-PCB-111	4000	21.98	61	40-145	
13C12-PCB-178	4000	25.02	74	40-145	

NS Indicates that this compound was not added.



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## SVOC DATA PACKAGE

### SECTION 6: INTERNAL RECORDS

Including:

- Prep Logs
- Independent calculation checks
- Others as listed below:

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Batch ID: WG3559668

**DX Extraction Standard:**

(Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3559668-1	40	✓
WG3559668-2	40	✓
WG3559668-3	40	✓
WG3559668-4	40	✓
L2602390-1	40	✓
L2602390-2	40	✓
L2602390-3	40	✓
L2602390-4	40	✓
L2602390-5	40	✓
	<del>40</del>	
	<del>40</del>	
	<del>40</del>	

Syringe ID: 320

Standard: M23-ES#2-0434

Spike Date: 23 June 2021

**Spike Witnessing**

Chemist's Initials  
Chemist: AR

Witness's Initials  
Witness: AB

Witness's Initials  
Correct Syringe Obtained: AB

Witness's Initials  
Correct Standard Obtained: AB

Witness's Initials  
Correct Technique Followed: AB

**PCB Extraction Standard:**

(Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3559668-1	40	✓
WG3559668-2	40	✓
WG3559668-3	40	✓
WG3559668-4	40	✓
L2602390-1	40	✓
L2602390-2	40	✓
L2602390-3	40	✓
L2602390-4	40	✓
L2602390-5	40	✓
	<del>40</del>	
	<del>40</del>	

Syringe ID: 382

Standard: 1668A-ES#2-0724

Spike Date: 23 June 2021

**Spike Witnessing**

Chemist's Initials  
Chemist: AR

Witness's Initials  
Witness: AB

Witness's Initials  
Correct Syringe Obtained: AB

Witness's Initials  
Correct Standard Obtained: AB

Witness's Initials  
Correct Technique Followed: AB

Batch ID: WG3559668

Batch ID: WG3559668

DX Native Standard:

Sample I.D.	Volume (ul)	(Checkmark) Spiked
WG3559668-2	40	✓
WG3559668-3	40	✓

PCB Native Standard:

Sample I.D.	Volume (ul)	(Checkmark) Spiked
WG3559668-2	40	✓
WG3559668-3	40	✓

DX Cleanup Standard:

Sample I.D.	Volume (ul)	(Checkmark) Spiked
WG3559668-1	20	✓
WG3559668-2	20	✓
WG3559668-3	N/A	N/A
WG3559668-4	20	✓
L2602390-1	20	✓
L2602390-2	20	✓
L2602390-3	20	✓
L2602390-4	20	✓
L2602390-5	20	✓
	20	
	20	

PCB Cleanup Standard:

Sample I.D.	Volume (ul)	(Checkmark) Spiked
WG3559668-1	20	✓
WG3559668-2	20	✓
WG3559668-3	N/A	N/A
WG3559668-4	20	✓
L2602390-1	20	✓
L2602390-2	20	✓
L2602390-3	20	✓
L2602390-4	20	✓
L2602390-5	20	✓
	20	
	20	
WG3559668 PREP		
3-Oct-18 / MSM RS		
Page 3 of 6		

Syringe ID: 322  
 Standard: 1613B-NS#3-033C  
 Date & Initials: 23-June-2021 AR

Syringe ID: 394  
 Standard: 1668A-NS#1-041C  
 Date & Initials: 23-June-2021 AR

Syringe ID: 357  
 Standard: M23-CL#1-038B  
 Date & Initials: 24-June-21 ACB

Chemist's Initials  
 Correct Syringe Obtained: ACB  
 Correct Standard Obtained: ACB  
 Correct Technique Followed: ACB

Syringe ID: 378  
 Standard: 1668A-CL#2-040H  
 Date & Initials: 24-June-21 ACB

Chemist's Initials  
 Correct Syringe Obtained: ACB  
 Correct Standard Obtained: ACB  
 Correct Technique Followed: ACB

**Batch ID:** WG3559668

**DX Injection Standard:** (Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3559668-1	10	✓
WG3559668-2	10	✓
WG3559668-3	10	✓
WG3559668-4	10	✓
L2602390-1	10	✓
L2602390-2	10	✓
L2602390-3	10	✓
L2602390-4	10	✓
L2602390-5	10	✓
	10	
	10	
	10	
	10	
	10	
	10	
	10	
	10	

**Syringe ID:** 408

**Standard:** 1613B-IS#1-092K

**Date & Initials:** 05-Jul-2021 AP

**Correct Syringe Obtained:**  AP Chemist's Initials

**Correct Standard Obtained:**  AP Chemist's Initials

**Correct Technique Followed:**  AP Chemist's Initials

**PCB Injection Standard:** (Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3559668-1	5	✓
WG3559668-2	5	✓
WG3559668-3	5	✓
WG3559668-4	5	✓
L2602390-1	5	✓
L2602390-2	5	✓
L2602390-3	5	✓
L2602390-4	5	✓
L2602390-5	5	✓
	5	
	5	
	5	
	5	
	5	
	5	
	5	
	5	
	5	

**Syringe ID:** 407

**Standard:** 1668A-IS#2-015A

**Date & Initials:** 25-Jun-2021 AP

**Correct Syringe Obtained:**  AP Chemist's Initials

**Correct Standard Obtained:**  AP Chemist's Initials

**Correct Technique Followed:**  AP Chemist's Initials

**Batch ID:** WG3559668

**Reagent Lot Numbers:**

Reagent	Lot#	Manufacturer
Acetone	105971	
Hexane	105964	
DCM	106160	
Toluene	106112	
Nonane	ORG-WAKONON-059	
1:1 DCM:HEX	ORG-DH2-659	
Sodium Sulphate	ORG-SSU-2648, 2632, 2649	
Acid Silica	ORG-ASI-10066	
Neutral Silica	ORG-NSI-2605	
Alumina	ORG-ALU-409	
1% Decafluorobenzene	ORG-2%DAS-	
3-Chloro-4-methyl-5-nitrobenzene	ORG-CC-302	

Batch ID: WG3559668

**Procedure:**

**This batchsheet is a guideline only. Please see test procedure for complete set of instructions.**

**Extraction:**

- For MB and LCS you **must** use blank media - if not available see your Team Lead
- Place a layer of pre-cleaned glasswool in to the bottom of the soxhlet body.
- Add ~1cm Sodium Sulphate.
- Place PUF in soxhlet
- Spike with Extraction Standard (plus Native for LCS and ENI).
- Soxhlet extract in DCM for 16 hours (check with team lead or supervisor) approved by Brad Reimer

**Rotovap:**

- Rotovap down to approx 2mL
- Transfer to a calibrated c-tube (marked at 1ml and 2ml) with 3x2ml hexane
- Mix well then quantitatively spilt the extract **1/2 DX/PCB 1/2 Archive**

Batch ID: WG3559668

**DX/PCB:**

- Perform Acid Silica column
- Solvent Exchange (reduce to **~50ul**, bulk back up to 1ml Hexane, vortex well.
- Perform Alumina Column:
  - Pre-elute the Alumina Column with 7ml Hexane
  - Place F1 c-tube under the column, then load the sample with 3x1ml Hexane rinses
  - F1 (Archive) 1mL Hexane
  - F2 (DX/PCB) 14mL 1:1 DCM:Hexane

**-Split Alumina F2 1/2 PCB 1/2 DX**

**Micro-Vial:**

**PCB:**

- Blow down to ~1/2ml
- Vortex **very** well.
- Transfer every last drop to a micro-vial (Marked at 20uL with nonane).
- Blow down to the line
- Spike PCB Injection Standard, cap and vortex. **FV=25ul**



**DX:**

- Solvent Exchange to Hexane (Reduce to Just Dry then bulk back up to 1ml Hexane)
- ChromaCarb: - 4cm of well-packed chroma-carb.
  - Pre-elute Carbon with 5ml Hexane
  - Transfer with 3x1ml Hexane
  - F1 = **10ml** 1:1 DCM:Hexane (Archive)
  - After dripping has stopped Invert Column.
  - F2 = 14ml Toluene (DX and PCB)

- After the column has stopped dripping reduce the **F2** portion down to ~1/2ml.

- Vortex well, then transfer to a micro-vial without rinses.

- Blow the micro-vial down to just-dry.

- Spike with Injection Standard, Cap the micro-vial, and Vortex. **FV=10ul**

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**Batch ID:** WG3559668

**Comments:**

**NOTE: Label and Save All Columns including Acid Silica Columns**

\* Each sample contains 3 vials, each with different L#s on inside and out side. Table summarizes L#s.

Approval of Deviation from Standard Method

(Batch Writer): \_\_\_\_\_

Procedure does deviate from Standard Method. **Approved (Supervisor/Manager):** \_\_\_\_\_

WG3559668		Prep Analyst:		
PUF - M23/1668A (HR)		Date:		
	Very Good	Meets Method Req.	Some Outliers	Very Poor
<b>MB</b>				
<b>LCS</b>				
<b>DUP</b>				
<b>ES rec</b>				

Sample L#	Outside L#	inside L#
L2602390-1	L2602387-1 L2577435-1 L2588145-1	L2576584-1 L2550525-5 L2566478-2
L2602390-2	L2577435-2 L2602387-2 L2588145-2	L2550525-4 L2576584-2 L2566478-1
AR L2602390-3	L2602387-3 L2577435-3 L2588145-3	L2576584-3 L2550525-3 L2566478-4
L2602390-4	L2577435-4 L2602387-4 L2588145-4	L2550525-2 L2576584-4 L2566478-5
L2602390-5 WG3559668 PREP 3-Oct-18 / MSM RS Page 6 of 6	L2588145-5 L2577435-5 L2602387-5	L2566478-3 L2550525-1 L2576584-5

# ALS Life Sciences

## Sample Calculation Report

**CS3 RRF Check**

Approved:	<i>S. Jin</i> --e-signature-- 15-Jul-2021
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$$\text{RRF} = \frac{\text{Response of PCB-118}}{\text{Response of 13C12-PCB-118}} \times \frac{\text{Concentration of 13C12-PCB-118}}{\text{Concentration of PCB-118}}$$

$$\text{RRF} = \frac{412135.20}{682591.40} \times \frac{100}{50}$$

Calculated Value	Value from TargetLynx
------------------	-----------------------

= 1.21	= 1.21
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**Calculation of PCB-118 amount in L2602390-4**

$$\text{pg} = \frac{\text{Response of PCB-118}}{\text{Response of 13C12-PCB-118}} \times \frac{\text{pg of 13C12-PCB-118 spiked}}{\text{Mean RRF} * \text{Sample Size}}$$

$$\text{pg} = \frac{2387066}{243293.4} \times \frac{4000}{1.17 * 1.00} = 33500 \quad 33500$$

**Calculation of 13C12-PCB-118 Recovery in L2602390-4**

$$\% \text{ Recovery} = \frac{\text{Response of 13C12-PCB-118}}{\text{Response of 13C12-PCB-101}} \times \frac{\text{pg of 13C12-PCB-101 spiked} * 100}{\text{Mean RRF} * \text{pg 13C12-PCB-118 Spiked}}$$

$$\% \text{ Recovery} = \frac{243293.4}{526428.1} \times \frac{8000 * 100}{1.42 * 4000} = 65 \quad 65 \%$$



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# SVOC DATA PACKAGE

## SECTION 7: SHIPPING/RECEIVING DOCUMENTS

Including:

- Airbills
- Chain-of-Custody Records
- Sample Log-in Sheet(s) - where applicable
- Others as listed below:

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L2588195-COFC

Report To		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)											
Company: <b>Farallon Consulting</b>		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply											
Contact: <b>Molly Alar</b>		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO			4 day [P4-20%] <input type="checkbox"/>		1 Business day [E - 100%] <input type="checkbox"/>									
Phone: <b><del>206-482-9806</del> 425-677-0211</b>		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/> (Laboratory opening fees may apply)									
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			2 day [P2-50%] <input type="checkbox"/>		EMERGENCY									
Street: <b>975 5th Ave NW</b>		Email 1 or Fax: <b>Malara@farallonconsulting.com</b>			Date and Time Required for all E&P TATs:		dd-mmm-yy hh:mm									
City/Province: <b>Issaquah, WA</b>		Email 2: <b>spatterson@farallonconsulting.com</b>			For tests that can not be performed according to the service level selected, you will be contacted.											
Postal Code: <b>98027</b>		Email 3:			Analysis Request											
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below											
Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX														
Company:		Email 1 or Fax: <b>AP@farallonconsulting.com</b>			<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <td colspan="2" style="text-align:center;">EPA Method</td> <td rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">SAMPLES ON HOLD</td> <td rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">SUSPECTED HAZARD (see Special Instructions)</td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">PCBs</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">Dioxins</td> </tr> </table>					NUMBER OF CONTAINERS	EPA Method		SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)	PCBs	Dioxins
NUMBER OF CONTAINERS	EPA Method		SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)												
	PCBs	Dioxins														
Contact:		Email 2: <b>malara@farallonconsulting.com</b>														
Project Information		Oil and Gas Required Fields (client use)														
ALS Account # / Quote #:		AFE/Cost Center:		PO#:												
Job #:		Major/Minor Code:		Routing Code:												
PO / AFE:		Requisitioner:														
LSD:		Location:														
ALS Lab Work Order # (lab use only):		ALS Contact:		Sampler:												
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type												
1	L2566478-2-1	13-May-21	0955	Air	1	X	X									
2	L2566478-1-2		1012		1	X	X									
3	L2566478-4-3		1025		1	X	X									
4	L2566478-5-4		1032		1	X	X									
5	L2566478-3-5		1038		1	X	X									
Drinking Water (DW) Samples <sup>1</sup> (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)											
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Hold samples for composite.			Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>											
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
					INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C									
					6.0°C											
SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)											
Released by: <b>Molly Alar</b>	Date: <b>5/13/21</b>	Time: <b>1400</b>	Received by: <b>ARRAN BURTAN</b>	Date: <b>14-MAY-2021</b>	Time: <b>15:20</b>	Received by:			Date:							

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



<b>Report To</b> Contact and company name below will appear on the final report		<b>Report Format / Distribution</b>		<b>Select Service Level Below - Contact your AM to confirm all E&amp;P TATs (surcharges may apply)</b>																																																																															
Company: <u>Farallon Consulting</u>		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL     EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																																																																															
Contact: <u>Molly Alar</u>		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		PRIORITY (Business Days)	4 day [P4-20%] <input type="checkbox"/>		EMERGENCY	1 Business day [E - 100%] <input type="checkbox"/>																																																																											
Phone: <u>425-077-0211</u>		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>			Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>																																																																											
Company address below will appear on the final report		Select Distribution: <input type="checkbox"/> EMAIL     MAIL <input type="checkbox"/> FAX		2 day [P2-50%] <input type="checkbox"/>																																																																															
Street: <u>975 5th Ave NW</u>		Email 1 or Fax: <u>Malar@farallonconsulting.com</u>		Date and Time Required for all E&P TATs:				dd-mmm-yy hh:mm																																																																											
City/Province: <u>Issaquah, WA</u>		Email 2: <u>Spatterson@farallonconsulting.com</u>		or tests that can not be performed according to the service level selected, you will be contacted.																																																																															
Postal Code: <u>98027</u>		Email 3:		<b>Analysis Request</b>																																																																															
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<b>Invoice Distribution</b>		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																															
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PO / AFE:	Requisitioner:																																																																																		
LSD:	Location:																																																																																		
ALS Lab Work Order # (lab use only):	ALS Contact:	Sampler:																																																																																	
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																																																																													
1	L2576584-1-1		15-Jun-21	1023	Air	1	X	X																																																																											
2	L2576584-2-2			1048		1	X	X																																																																											
3	L2576584-3-3			1114		1	X	X																																																																											
4	L2576584-4-4			1127		1	X	X																																																																											
5	L2576584-5-5			1141		1	X	X																																																																											

**SAMPLES ON HOLD**  
SUSPECTED HAZARD (see Special Instructions)

<b>Drinking Water (DW) Samples' (client use)</b>		<b>Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)</b>		<b>SAMPLE CONDITION AS RECEIVED (lab use only)</b>													
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		<u>Composite with 4/15/21 and 5/13/21 samples and test.</u>		Frozen <input type="checkbox"/>		SIF Observations Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Ice Packs <input checked="" type="checkbox"/>		Ice Cubes <input type="checkbox"/>		Custody seal intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Cooling Initiated <input checked="" type="checkbox"/>			
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				INITIAL COOLER TEMPERATURES °C		15.8°C		FINAL COOLER TEMPERATURES °C									
<b>SHIPMENT RELEASE (client use)</b>				<b>INITIAL SHIPMENT RECEPTION (lab use only)</b>				<b>FINAL SHIPMENT RECEPTION (lab use only)</b>									
Released by: <u>Molly Alar</u>		Date: <u>6/15/2021</u>		Time: <u>11:00</u>		Received by: <u>BARBARA BULTON</u>		Date: <u>16-JUNE-2021</u>		Time: <u>13:20</u>		Received by:		Date:		Time:	

## Sample Receiving Log

Date/Time Received	Client ID	Number/Description of Containers	Temp. on Receipt*	Condition of Samples, Courier & Tracking Information	Receiver's Initials	Date/Time Login Completed	Submission ID	Sample ID Range
18-Apr-2024 12:00	FARALLON	5 x PUFs	7.3°C	Good FedEx 7731 8909 2080	MB	18-Apr-2024 14:30	L2577435	-1-5

\*Temperatures were recorded using  VWR Traceable dedicated I.R. gun (model 36934-178 SN 192108143)  
 Other (specify): \_\_\_\_\_

## Sample Receiving Log

Date/Time Received	Client ID	Number/Description of Containers	Temp. on Receipt*	Condition of Samples, Courier & Tracking Information	Receiver's Initials	Date/Time Login Completed	Submission ID	Sample ID Range
14-May-2024 15:20	FARAWAY	5 x PUFs	6.0°C	Good Fedex 9719 9696 3041	Mg	14-May-2024 17:30	L2S88195	-1-5

\*Temperatures were recorded using :  VWR Traceable dedicated I.R. gun (model 36934-178 SN 192108143)  
 Other (specify): \_\_\_\_\_



## Sample Receiving Log

Date/Time Received	Client ID	Number/Description of Containers	Temp. on Receipt*	Condition of Samples, Courier & Tracking Information	Receiver's Initials	Date/Time Login Completed	Submission ID	Sample ID Range
16-June-2024 13:20	FARALLON	5 x PUFs	15.8°C	Good FESER 7739 4013 4088	Mg	17-June-2024 10:20	L2602387 L2602390	-1-5 -1-5

\*Temperatures were recorded using :  VWR Traceable dedicated I.R. gun (model 36934-178 SN 192108143)

Other (specify): \_\_\_\_\_