

Table 3: Quantitation References for Native and Labeled CBs

CI No. ¹	Congener No. ^{2,3}	RT Ref ⁴	Quantitation Reference ⁵
Native Compounds			
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. ¹	Congener No. ^{2,3}	RT Ref ⁴	Quantitation Reference ⁵
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. ¹	Congener No. ^{2,3}	RT Ref ⁴	Quantitation Reference ⁵
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. ¹	Congener No. ^{2,3}	RT Ref ⁴	Quantitation Reference ⁵
Labelled Extraction Standards			
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
Labelled clean-up standards			
3	28L	52L	52L
5	111L	101L	101L
7	178L	138L	138L
Labelled injection internal standards			
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, 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

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	5-200219A02	19-Feb-2020 14:40
CS-2	5-200219A04	19-Feb-2020 16:17
CS-3	5-200219A01	19-Feb-2020 13:42
CS-4	5-200219A05	19-Feb-2020 16:57
CS-5	5-200219A06	19-Feb-2020 17:39

Approved:	<i>E. Sabljic</i> --e-signature-- 12-Aug-2020
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Target Analytes	Relative Response Factors					Mean	% RSD
	CS-1	CS-2	CS-3	CS-4	CS-5		
PCB-001	1.160	1.143	1.110	1.242		1.164	5%
PCB-003	1.177	1.184	1.115	1.270		1.187	5%
PCB-004	0.787	0.830	0.753	0.853	0.863	0.817	6%
PCB-015	0.925	0.946	0.926	1.036	1.030	0.973	6%
PCB-019	1.086	1.128	1.085	1.197	1.184	1.136	5%
PCB-037	0.970	0.992	0.933	1.039	1.042	0.995	5%
PCB-054	0.951	0.988	0.947	1.061	1.055	1.000	5%
PCB-081	1.058	1.096	1.066	1.166	1.158	1.109	5%
PCB-077	1.068	1.068	1.039	1.144	1.149	1.094	5%
PCB-104	1.041	1.078	1.032	1.159	1.145	1.091	5%
PCB-123	0.930	0.929	0.913	1.007	1.008	0.957	5%
PCB-118	0.956	1.025	1.000	1.096	1.094	1.034	6%
PCB-114	1.001	1.007	0.992	1.093	1.090	1.037	5%
PCB-105	0.958	0.990	0.967	1.068	1.072	1.011	5%
PCB-126	1.011	1.078	1.020	1.123	1.116	1.070	5%
PCB-155	0.928	1.007	0.949	1.042	1.029	0.991	5%
PCB-167	1.061	1.048	1.001	1.106	1.109	1.065	4%
PCB-156/157	1.058	1.088	1.035	1.127	1.136	1.089	4%
PCB-169	0.973	1.019	1.004	1.107	1.102	1.041	6%
PCB-188	0.866	0.925	0.882	0.968	0.958	0.920	5%
PCB-189	0.923	0.945	0.921	1.008	1.027	0.965	5%
PCB-202	1.047	1.052	0.979	1.080	1.081	1.048	4%
PCB-205	0.806	0.842	0.824	0.901	0.906	0.856	5%
PCB-208	1.220	1.278	1.209	1.337	1.332	1.275	5%
PCB-206	1.241	1.287	1.249	1.346	1.354	1.295	4%
PCB-209	0.832	0.870	0.833	0.925	0.911	0.874	5%
Extraction Standards							
13C12-PCB-001	0.870	0.900	0.901	0.912	0.911	0.899	2%
13C12-PCB-003	0.834	0.841	0.875	0.879	0.892	0.864	3%
13C12-PCB-004	0.640	0.641	0.649	0.650	0.643	0.645	1%
13C12-PCB-015	0.907	0.891	0.947	0.945	0.952	0.928	3%
13C12-PCB-019	0.517	0.526	0.521	0.519	0.514	0.519	1%
13C12-PCB-037	1.539	1.494	1.514	1.587	1.592	1.545	3%
13C12-PCB-054	1.347	1.334	1.309	1.348	1.319	1.331	1%
13C12-PCB-081	1.614	1.533	1.558	1.627	1.671	1.601	3%
13C12-PCB-077	1.621	1.536	1.553	1.634	1.664	1.602	3%
13C12-PCB-104	1.516	1.512	1.491	1.529	1.501	1.510	1%
13C12-PCB-123	1.503	1.477	1.450	1.532	1.546	1.502	3%
13C12-PCB-118	1.486	1.460	1.431	1.509	1.516	1.480	2%
13C12-PCB-114	1.440	1.404	1.384	1.452	1.451	1.426	2%
13C12-PCB-105	1.475	1.439	1.411	1.483	1.511	1.464	3%
13C12-PCB-126	1.387	1.314	1.305	1.411	1.444	1.372	4%
13C12-PCB-155	1.714	1.693	1.679	1.692	1.678	1.691	1%
13C12-PCB-167	1.202	1.181	1.155	1.224	1.204	1.193	2%
13C12-PCB-156/157	1.154	1.135	1.113	1.190	1.155	1.149	2%
13C12-PCB-169	1.135	1.101	1.075	1.157	1.159	1.125	3%
13C12-PCB-188	1.171	1.175	1.143	1.167	1.143	1.160	1%
13C12-PCB-189	0.938	0.932	0.890	0.973	0.957	0.938	3%
13C12-PCB-202	1.050	1.053	1.030	1.063	1.035	1.046	1%
13C12-PCB-205	1.355	1.334	1.363	1.372	1.347	1.354	1%
13C12-PCB-208	1.072	1.072	1.106	1.066	1.043	1.072	2%
13C12-PCB-206	0.733	0.722	0.747	0.743	0.732	0.735	1%
13C12-PCB-209	1.130	1.144	1.164	1.154	1.173	1.153	1%
Field Spike Standards							
13C12-PCB-031	1.271	1.287	1.330	1.268	1.249	1.281	2%
13C12-PCB-095	0.596	0.599	0.608	0.587	0.587	0.595	1%
13C12-PCB-153	0.902	0.917	0.951	0.894	0.901	0.913	3%
Cleanup Standards							
13C12-PCB-028	1.626	1.614	1.731	1.646	1.628	1.649	3%
13C12-PCB-111	1.173	1.149	1.207	1.171	1.173	1.175	2%
13C12-PCB-178	0.802	0.806	0.799	0.821	0.808	0.807	1%

ALS Life Sciences

Calibration Report

ALS Sample ID **H5-20-CS1-004**
 Analysis Method EPA 1668C
 Analysis Type Calibration

Filename 5-200219A02	Inst # HRMS-5	Column SPBOCTYL65972-03A	Run Date 19-Feb-2020 14:40	Approved: <i>E. Sabljic</i> --e-signature-- 12-Aug-2020
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Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.85	3.29	1.00	3.99E+04	1.160
PCB-003	10.38	3.07	1.00	3.87E+04	1.177
PCB-004	10.55	1.43	1.00	1.99E+04	0.787
PCB-015	14.22	1.55	1.00	3.31E+04	0.925
PCB-019	12.55	1.13	1.00	2.22E+04	1.086
PCB-037	18.18	1.04	1.00	3.09E+04	0.970
PCB-054	14.41	0.84	1.00	2.65E+04	0.951
PCB-081	21.77	0.78	1.00	2.80E+04	1.058
PCB-077	22.06	0.79	1.00	2.84E+04	1.068
PCB-104	17.49	1.67	1.00	2.59E+04	1.041
PCB-123	23.08	1.64	1.00	2.30E+04	0.930
PCB-118	23.25	1.56	1.00	2.33E+04	0.956
PCB-114	23.55	1.56	1.00	2.37E+04	1.001
PCB-105	23.89	1.53	1.00	2.32E+04	0.958
PCB-126	25.48	1.67	1.00	2.30E+04	1.011
PCB-155	20.51	1.25	1.00	2.61E+04	0.928
PCB-167	26.41	1.11	1.00	2.67E+04	1.061
PCB-156/157	27.03	1.19	2.00	5.12E+04	1.058
PCB-169	28.69	1.17	1.00	2.32E+04	0.973
PCB-188	23.5	0.98	1.00	2.13E+04	0.866
PCB-189	29.98	1.01	1.00	1.82E+04	0.923
PCB-202	26.29	1.02	1.00	2.31E+04	1.047
PCB-205	31.38	0.94	1.00	1.40E+04	0.806
PCB-208	29.72	0.85	1.00	1.67E+04	1.220
PCB-206	32.47	0.79	1.00	1.16E+04	1.241
PCB-209	33.61	1.15	1.00	1.20E+04	0.832

Extraction Standards

13C12-PCB-001	8.85	2.94	100.00	3.44E+06	0.870
13C12-PCB-003	10.38	2.87	100.00	3.29E+06	0.834
13C12-PCB-004	10.54	1.56	100.00	2.53E+06	0.640
13C12-PCB-015	14.21	1.63	100.00	3.58E+06	0.907
13C12-PCB-019	12.54	1.00	100.00	2.04E+06	0.517
13C12-PCB-037	18.17	1.03	100.00	3.18E+06	1.539
13C12-PCB-054	14.4	0.80	100.00	2.79E+06	1.347
13C12-PCB-081	21.76	0.82	100.00	2.65E+06	1.614
13C12-PCB-077	22.06	0.83	100.00	2.66E+06	1.621
13C12-PCB-104	17.48	1.56	100.00	2.49E+06	1.516
13C12-PCB-123	23.07	1.59	100.00	2.47E+06	1.503
13C12-PCB-118	23.24	1.59	100.00	2.44E+06	1.486
13C12-PCB-114	23.54	1.62	100.00	2.36E+06	1.440
13C12-PCB-105	23.88	1.61	100.00	2.42E+06	1.475
13C12-PCB-126	25.47	1.61	100.00	2.28E+06	1.387
13C12-PCB-155	20.5	1.26	100.00	2.81E+06	1.714
13C12-PCB-167	26.39	1.33	100.00	2.52E+06	1.202
13C12-PCB-156/157	27.02	1.33	200.00	4.84E+06	1.154
13C12-PCB-169	28.67	1.33	100.00	2.38E+06	1.135
13C12-PCB-188	23.5	1.05	100.00	2.46E+06	1.171
13C12-PCB-189	29.96	1.05	100.00	1.97E+06	0.938
13C12-PCB-202	26.28	0.91	100.00	2.20E+06	1.050
13C12-PCB-205	31.37	0.87	100.00	1.73E+06	1.355
13C12-PCB-208	29.71	0.78	100.00	1.37E+06	1.072
13C12-PCB-206	32.46	0.79	100.00	9.38E+05	0.733
13C12-PCB-209	33.6	1.17	100.00	1.45E+06	1.130

Field Spike Standards

13C12-PCB-031	15.76	1.04	100.00	3.32E+06	1.271
13C12-PCB-095	19.08	1.62	100.00	1.45E+06	0.596
13C12-PCB-153	24.19	1.32	100.00	2.29E+06	0.902

Cleanup Standards

13C12-PCB-028	15.94	1.04	100.00	3.36E+06	1.626
13C12-PCB-111	22.01	1.61	100.00	1.93E+06	1.173
13C12-PCB-178	25.07	1.05	100.00	1.68E+06	0.802

Injection Standards

13C12-PCB-9	11.81	1.53	100.00	3.95E+06	-
13C12-PCB-52	16.94	0.84	100.00	2.07E+06	-
13C12-PCB-101	20.62	1.58	100.00	1.64E+06	-
13C12-PCB-138	24.85	1.33	100.00	2.10E+06	-
13C12-PCB-194	31.09	0.85	100.00	1.28E+06	-

ALS Life Sciences

Calibration Report

ALS Sample ID **H5-20-CS2-004**
 Analysis Method EPA 1668C
 Analysis Type Calibration

Filename 5-200219A04 Inst # HRMS-5 Column SPBOCTYL65972-03A Run Date 19-Feb-2020 16:17

Approved: *E. Sabljic*
 --e-signature--
 12-Aug-2020

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.87	3.00	5.00	1.76E+05	1.143
PCB-003	10.4	3.04	5.00	1.70E+05	1.184
PCB-004	10.56	1.49	5.00	9.12E+04	0.830
PCB-015	14.23	1.59	5.00	1.44E+05	0.946
PCB-019	12.55	1.06	5.00	1.02E+05	1.128
PCB-037	18.19	1.02	5.00	1.36E+05	0.992
PCB-054	14.42	0.79	5.00	1.21E+05	0.988
PCB-081	21.78	0.76	5.00	1.24E+05	1.096
PCB-077	22.07	0.73	5.00	1.21E+05	1.068
PCB-104	17.49	1.55	5.00	1.20E+05	1.078
PCB-123	23.09	1.56	5.00	1.01E+05	0.929
PCB-118	23.26	1.56	5.00	1.10E+05	1.025
PCB-114	23.56	1.59	5.00	1.04E+05	1.007
PCB-105	23.9	1.62	5.00	1.05E+05	0.990
PCB-126	25.5	1.62	5.00	1.04E+05	1.078
PCB-155	20.52	1.25	5.00	1.26E+05	1.007
PCB-167	26.41	1.17	5.00	1.14E+05	1.048
PCB-156/157	27.04	1.17	10.00	2.27E+05	1.088
PCB-169	28.7	1.16	5.00	1.03E+05	1.019
PCB-188	23.53	1.02	5.00	9.99E+04	0.925
PCB-189	29.99	1.04	5.00	8.10E+04	0.945
PCB-202	26.29	0.90	5.00	1.02E+05	1.052
PCB-205	31.4	0.94	5.00	6.46E+04	0.842
PCB-208	29.74	0.81	5.00	7.88E+04	1.278
PCB-206	32.49	0.81	5.00	5.35E+04	1.287
PCB-209	33.63	1.15	5.00	5.73E+04	0.870

Extraction Standards

13C12-PCB-001	8.85	2.94	100.00	3.08E+06	0.900
13C12-PCB-003	10.38	2.88	100.00	2.88E+06	0.841
13C12-PCB-004	10.55	1.57	100.00	2.20E+06	0.641
13C12-PCB-015	14.22	1.66	100.00	3.05E+06	0.891
13C12-PCB-019	12.54	0.99	100.00	1.80E+06	0.526
13C12-PCB-037	18.17	1.05	100.00	2.75E+06	1.494
13C12-PCB-054	14.41	0.80	100.00	2.45E+06	1.334
13C12-PCB-081	21.77	0.82	100.00	2.26E+06	1.533
13C12-PCB-077	22.06	0.83	100.00	2.26E+06	1.536
13C12-PCB-104	17.49	1.59	100.00	2.23E+06	1.512
13C12-PCB-123	23.08	1.61	100.00	2.17E+06	1.477
13C12-PCB-118	23.25	1.61	100.00	2.15E+06	1.460
13C12-PCB-114	23.55	1.60	100.00	2.07E+06	1.404
13C12-PCB-105	23.89	1.63	100.00	2.12E+06	1.439
13C12-PCB-126	25.48	1.62	100.00	1.94E+06	1.314
13C12-PCB-155	20.5	1.25	100.00	2.49E+06	1.693
13C12-PCB-167	26.4	1.33	100.00	2.17E+06	1.181
13C12-PCB-156/157	27.03	1.34	200.00	4.17E+06	1.135
13C12-PCB-169	28.69	1.35	100.00	2.02E+06	1.101
13C12-PCB-188	23.5	1.05	100.00	2.16E+06	1.175
13C12-PCB-189	29.98	1.04	100.00	1.71E+06	0.932
13C12-PCB-202	26.28	0.90	100.00	1.94E+06	1.053
13C12-PCB-205	31.38	0.86	100.00	1.54E+06	1.334
13C12-PCB-208	29.72	0.80	100.00	1.23E+06	1.072
13C12-PCB-206	32.47	0.79	100.00	8.31E+05	0.722
13C12-PCB-209	33.61	1.17	100.00	1.32E+06	1.144

Field Spike Standards

13C12-PCB-031	15.77	1.03	100.00	2.93E+06	1.287
13C12-PCB-095	19.09	1.62	100.00	1.29E+06	0.599
13C12-PCB-153	24.19	1.33	100.00	2.01E+06	0.917

Cleanup Standards

13C12-PCB-028	15.94	1.03	100.00	2.97E+06	1.614
13C12-PCB-111	22.02	1.63	100.00	1.69E+06	1.149
13C12-PCB-178	25.07	1.06	100.00	1.48E+06	0.806

Injection Standards

13C12-PCB-9	11.81	1.56	100.00	3.42E+06	-
13C12-PCB-52	16.95	0.85	100.00	1.84E+06	-
13C12-PCB-101	20.62	1.61	100.00	1.47E+06	-
13C12-PCB-138	24.87	1.31	100.00	1.84E+06	-
13C12-PCB-194	31.09	0.87	100.00	1.15E+06	-

ALS Life Sciences

Calibration Report

ALS Sample ID **H5-20-CS3-004**
 Analysis Method EPA 1668C
 Analysis Type Calibration

Filename 5-200219A01 Inst # HRMS-5 Column SPBOCTYL65972-03A Run Date 19-Feb-2020 13:42

Approved: *E. Sabljic*
 --e-signature--
 12-Aug-2020

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.91	3.04	50.00	1.27E+06	1.110
PCB-003	10.44	3.06	50.00	1.24E+06	1.115
PCB-004	10.59	1.48	50.00	6.21E+05	0.753
PCB-015	14.28	1.58	50.00	1.11E+06	0.926
PCB-019	12.6	1.06	50.00	7.18E+05	1.085
PCB-037	18.24	1.04	50.00	9.99E+05	0.933
PCB-054	14.46	0.80	50.00	8.76E+05	0.947
PCB-081	21.83	0.77	50.00	9.21E+05	1.066
PCB-077	22.13	0.76	50.00	8.94E+05	1.039
PCB-104	17.54	1.53	50.00	8.53E+05	1.032
PCB-123	23.14	1.57	50.00	7.34E+05	0.913
PCB-118	23.31	1.59	50.00	7.93E+05	1.000
PCB-114	23.61	1.58	50.00	7.61E+05	0.992
PCB-105	23.95	1.59	50.00	7.56E+05	0.967
PCB-126	25.54	1.60	50.00	7.38E+05	1.020
PCB-155	20.57	1.26	50.00	8.83E+05	0.949
PCB-167	26.47	1.16	50.00	8.08E+05	1.001
PCB-156/157	27.09	1.16	100.00	1.61E+06	1.035
PCB-169	28.76	1.18	50.00	7.54E+05	1.004
PCB-188	23.57	1.01	50.00	7.04E+05	0.882
PCB-189	30.05	1.04	50.00	5.73E+05	0.921
PCB-202	26.35	0.89	50.00	7.04E+05	0.979
PCB-205	31.45	0.92	50.00	4.53E+05	0.824
PCB-208	29.78	0.83	50.00	5.40E+05	1.209
PCB-206	32.54	0.82	50.00	3.77E+05	1.249
PCB-209	33.7	1.19	50.00	3.91E+05	0.833

Extraction Standards

13C12-PCB-001	8.9	2.98	100.00	2.29E+06	0.901
13C12-PCB-003	10.42	3.00	100.00	2.22E+06	0.875
13C12-PCB-004	10.59	1.57	100.00	1.65E+06	0.649
13C12-PCB-015	14.27	1.65	100.00	2.41E+06	0.947
13C12-PCB-019	12.6	0.99	100.00	1.32E+06	0.521
13C12-PCB-037	18.22	1.06	100.00	2.14E+06	1.514
13C12-PCB-054	14.45	0.80	100.00	1.85E+06	1.309
13C12-PCB-081	21.82	0.82	100.00	1.73E+06	1.558
13C12-PCB-077	22.12	0.83	100.00	1.72E+06	1.553
13C12-PCB-104	17.53	1.57	100.00	1.65E+06	1.491
13C12-PCB-123	23.13	1.60	100.00	1.61E+06	1.450
13C12-PCB-118	23.3	1.59	100.00	1.59E+06	1.431
13C12-PCB-114	23.6	1.62	100.00	1.53E+06	1.384
13C12-PCB-105	23.94	1.61	100.00	1.56E+06	1.411
13C12-PCB-126	25.53	1.61	100.00	1.45E+06	1.305
13C12-PCB-155	20.56	1.25	100.00	1.86E+06	1.679
13C12-PCB-167	26.45	1.35	100.00	1.61E+06	1.155
13C12-PCB-156/157	27.08	1.32	200.00	3.11E+06	1.113
13C12-PCB-169	28.75	1.32	100.00	1.50E+06	1.075
13C12-PCB-188	23.56	1.07	100.00	1.60E+06	1.143
13C12-PCB-189	30.03	1.06	100.00	1.24E+06	0.890
13C12-PCB-202	26.34	0.91	100.00	1.44E+06	1.030
13C12-PCB-205	31.44	0.86	100.00	1.10E+06	1.363
13C12-PCB-208	29.78	0.80	100.00	8.93E+05	1.106
13C12-PCB-206	32.53	0.80	100.00	6.03E+05	0.747
13C12-PCB-209	33.67	1.18	100.00	9.40E+05	1.164

Field Spike Standards

13C12-PCB-031	15.82	1.04	100.00	2.30E+06	1.330
13C12-PCB-095	19.13	1.64	100.00	9.70E+05	0.608
13C12-PCB-153	24.25	1.35	100.00	1.55E+06	0.951

Cleanup Standards

13C12-PCB-028	15.99	1.01	100.00	2.45E+06	1.731
13C12-PCB-111	22.07	1.64	100.00	1.34E+06	1.207
13C12-PCB-178	25.13	1.07	100.00	1.12E+06	0.799

Injection Standards

13C12-PCB-9	11.85	1.55	100.00	2.54E+06	-
13C12-PCB-52	17	0.85	100.00	1.41E+06	-
13C12-PCB-101	20.68	1.62	100.00	1.11E+06	-
13C12-PCB-138	24.92	1.33	100.00	1.40E+06	-
13C12-PCB-194	31.16	0.86	100.00	8.07E+05	-

ALS Life Sciences

Calibration Report

ALS Sample ID **H5-20-CS4-004**
 Analysis Method EPA 1668C
 Analysis Type Calibration

Filename 5-200219A05 Inst # HRMS-5 Column SPBOCTYL65972-03A Run Date 19-Feb-2020 16:57

Approved: *E. Sabljic*
 --e-signature--
 12-Aug-2020

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.87	3.05	400.00	1.61E+07	1.242
PCB-003	10.4	3.03	400.00	1.58E+07	1.270
PCB-004	10.56	1.47	400.00	7.86E+06	0.853
PCB-015	14.23	1.59	400.00	1.39E+07	1.036
PCB-019	12.55	1.05	400.00	8.81E+06	1.197
PCB-037	18.19	1.04	400.00	1.24E+07	1.039
PCB-054	14.43	0.79	400.00	1.08E+07	1.061
PCB-081	21.78	0.77	400.00	1.14E+07	1.166
PCB-077	22.08	0.77	400.00	1.12E+07	1.144
PCB-104	17.5	1.57	400.00	1.06E+07	1.159
PCB-123	23.09	1.58	400.00	9.27E+06	1.007
PCB-118	23.27	1.57	400.00	9.93E+06	1.096
PCB-114	23.56	1.56	400.00	9.53E+06	1.093
PCB-105	23.91	1.56	400.00	9.51E+06	1.068
PCB-126	25.5	1.57	400.00	9.52E+06	1.123
PCB-155	20.52	1.26	400.00	1.06E+07	1.042
PCB-167	26.43	1.18	400.00	1.03E+07	1.106
PCB-156/157	27.04	1.18	800.00	2.04E+07	1.127
PCB-169	28.71	1.18	400.00	9.73E+06	1.107
PCB-188	23.53	1.00	400.00	8.58E+06	0.968
PCB-189	30	1.03	400.00	7.45E+06	1.008
PCB-202	26.3	0.90	400.00	8.72E+06	1.080
PCB-205	31.4	0.93	400.00	5.90E+06	0.901
PCB-208	29.74	0.82	400.00	6.80E+06	1.337
PCB-206	32.5	0.82	400.00	4.77E+06	1.346
PCB-209	33.64	1.18	400.00	5.09E+06	0.925

Extraction Standards

13C12-PCB-001	8.87	2.93	100.00	3.23E+06	0.912
13C12-PCB-003	10.38	2.91	100.00	3.12E+06	0.879
13C12-PCB-004	10.55	1.56	100.00	2.31E+06	0.650
13C12-PCB-015	14.22	1.65	100.00	3.35E+06	0.945
13C12-PCB-019	12.55	1.00	100.00	1.84E+06	0.519
13C12-PCB-037	18.18	1.05	100.00	2.98E+06	1.587
13C12-PCB-054	14.41	0.79	100.00	2.53E+06	1.348
13C12-PCB-081	21.77	0.82	100.00	2.44E+06	1.627
13C12-PCB-077	22.06	0.82	100.00	2.45E+06	1.634
13C12-PCB-104	17.49	1.57	100.00	2.30E+06	1.529
13C12-PCB-123	23.08	1.60	100.00	2.30E+06	1.532
13C12-PCB-118	23.26	1.61	100.00	2.27E+06	1.509
13C12-PCB-114	23.55	1.61	100.00	2.18E+06	1.452
13C12-PCB-105	23.9	1.61	100.00	2.23E+06	1.483
13C12-PCB-126	25.48	1.62	100.00	2.12E+06	1.411
13C12-PCB-155	20.51	1.24	100.00	2.54E+06	1.692
13C12-PCB-167	26.41	1.33	100.00	2.32E+06	1.224
13C12-PCB-156/157	27.03	1.32	200.00	4.52E+06	1.190
13C12-PCB-169	28.7	1.33	100.00	2.20E+06	1.157
13C12-PCB-188	23.51	1.04	100.00	2.22E+06	1.167
13C12-PCB-189	29.99	1.06	100.00	1.85E+06	0.973
13C12-PCB-202	26.29	0.91	100.00	2.02E+06	1.063
13C12-PCB-205	31.38	0.86	100.00	1.64E+06	1.372
13C12-PCB-208	29.72	0.79	100.00	1.27E+06	1.066
13C12-PCB-206	32.47	0.80	100.00	8.86E+05	0.743
13C12-PCB-209	33.61	1.19	100.00	1.38E+06	1.154

Field Spike Standards

13C12-PCB-031	15.77	1.05	100.00	3.06E+06	1.268
13C12-PCB-095	19.1	1.63	100.00	1.33E+06	0.587
13C12-PCB-153	24.2	1.32	100.00	2.08E+06	0.894

Cleanup Standards

13C12-PCB-028	15.95	1.04	100.00	3.09E+06	1.646
13C12-PCB-111	22.03	1.62	100.00	1.76E+06	1.171
13C12-PCB-178	25.08	1.06	100.00	1.56E+06	0.821

Injection Standards

13C12-PCB-9	11.83	1.55	100.00	3.54E+06	-
13C12-PCB-52	16.95	0.85	100.00	1.88E+06	-
13C12-PCB-101	20.63	1.58	100.00	1.50E+06	-
13C12-PCB-138	24.88	1.34	100.00	1.90E+06	-
13C12-PCB-194	31.11	0.86	100.00	1.19E+06	-

ALS Life Sciences

Calibration Report

ALS Sample ID **H5-20-CS5-004**
 Analysis Method EPA 1668C
 Analysis Type Calibration

Filename 5-200219A06 Inst # HRMS-5 Column SPBOCTYL65972-03A Run Date 19-Feb-2020 17:39

Approved: *E. Sabljic*
 --e-signature--
 12-Aug-2020

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	0	0.00	2000.00	0.00E+00	0.000
PCB-003	0	0.00	2000.00	0.00E+00	0.000
PCB-004	10.55	1.47	2000.00	4.13E+07	0.863
PCB-015	14.22	1.52	2000.00	7.30E+07	1.030
PCB-019	12.55	1.05	2000.00	4.54E+07	1.184
PCB-037	18.18	1.05	2000.00	6.51E+07	1.042
PCB-054	14.42	0.79	2000.00	5.46E+07	1.055
PCB-081	21.78	0.77	2000.00	5.96E+07	1.158
PCB-077	22.07	0.77	2000.00	5.89E+07	1.149
PCB-104	17.49	1.56	2000.00	5.30E+07	1.145
PCB-123	23.09	1.57	2000.00	4.80E+07	1.008
PCB-118	23.26	1.56	2000.00	5.11E+07	1.094
PCB-114	23.56	1.56	2000.00	4.87E+07	1.090
PCB-105	23.9	1.56	2000.00	4.99E+07	1.072
PCB-126	25.5	1.58	2000.00	4.97E+07	1.116
PCB-155	20.52	1.26	2000.00	5.32E+07	1.029
PCB-167	26.41	1.18	2000.00	5.31E+07	1.109
PCB-156/157	27.04	1.19	4000.00	1.04E+08	1.136
PCB-169	28.7	1.19	2000.00	5.08E+07	1.102
PCB-188	23.53	1.00	2000.00	4.36E+07	0.958
PCB-189	29.99	1.04	2000.00	3.91E+07	1.027
PCB-202	26.3	0.90	2000.00	4.45E+07	1.081
PCB-205	31.4	0.92	2000.00	3.07E+07	0.906
PCB-208	29.74	0.82	2000.00	3.50E+07	1.332
PCB-206	32.49	0.82	2000.00	2.49E+07	1.354
PCB-209	33.64	1.18	2000.00	2.69E+07	0.911

Extraction Standards

13C12-PCB-001	8.85	2.92	100.00	3.39E+06	0.911
13C12-PCB-003	10.38	2.88	100.00	3.32E+06	0.892
13C12-PCB-004	10.54	1.53	100.00	2.39E+06	0.643
13C12-PCB-015	14.21	1.64	100.00	3.55E+06	0.952
13C12-PCB-019	12.54	1.00	100.00	1.92E+06	0.514
13C12-PCB-037	18.17	1.05	100.00	3.12E+06	1.592
13C12-PCB-054	14.4	0.79	100.00	2.59E+06	1.319
13C12-PCB-081	21.76	0.82	100.00	2.57E+06	1.671
13C12-PCB-077	22.06	0.84	100.00	2.56E+06	1.664
13C12-PCB-104	17.49	1.55	100.00	2.31E+06	1.501
13C12-PCB-123	23.08	1.59	100.00	2.38E+06	1.546
13C12-PCB-118	23.25	1.60	100.00	2.34E+06	1.516
13C12-PCB-114	23.55	1.61	100.00	2.24E+06	1.451
13C12-PCB-105	23.89	1.61	100.00	2.33E+06	1.511
13C12-PCB-126	25.48	1.58	100.00	2.22E+06	1.444
13C12-PCB-155	20.5	1.24	100.00	2.58E+06	1.678
13C12-PCB-167	26.4	1.33	100.00	2.40E+06	1.204
13C12-PCB-156/157	27.03	1.32	200.00	4.60E+06	1.155
13C12-PCB-169	28.69	1.35	100.00	2.31E+06	1.159
13C12-PCB-188	23.5	1.06	100.00	2.27E+06	1.143
13C12-PCB-189	29.98	1.06	100.00	1.91E+06	0.957
13C12-PCB-202	26.28	0.91	100.00	2.06E+06	1.035
13C12-PCB-205	31.38	0.86	100.00	1.69E+06	1.347
13C12-PCB-208	29.72	0.79	100.00	1.31E+06	1.043
13C12-PCB-206	32.47	0.79	100.00	9.20E+05	0.732
13C12-PCB-209	33.61	1.19	100.00	1.48E+06	1.173

Field Spike Standards

13C12-PCB-031	15.76	1.04	100.00	3.15E+06	1.249
13C12-PCB-095	19.09	1.62	100.00	1.36E+06	0.587
13C12-PCB-153	24.19	1.31	100.00	2.16E+06	0.901

Cleanup Standards

13C12-PCB-028	15.94	1.03	100.00	3.19E+06	1.628
13C12-PCB-111	22.02	1.60	100.00	1.81E+06	1.173
13C12-PCB-178	25.07	1.07	100.00	1.61E+06	0.808

Injection Standards

13C12-PCB-9	11.81	1.55	100.00	3.73E+06	-
13C12-PCB-52	16.94	0.85	100.00	1.96E+06	-
13C12-PCB-101	20.62	1.59	100.00	1.54E+06	-
13C12-PCB-138	24.87	1.32	100.00	1.99E+06	-
13C12-PCB-194	31.11	0.86	100.00	1.26E+06	-

INSTRUMENT 209 PCB CALIBRATION REPORT

Target Analyte	#Hom	Resp	Ra	Ra fail=YES RT	Conc.	H/A	ical RRF	User Rf	%Rec	Mod.Date	Mod.Comment	Code Comments	Noise 1	Noise 2	Ion1 HT	Ion2 HT	Ion1 s/n	Ion2 s/n	Ion1 Area	Ion2 Area	RRT	RT	LCL	RT UCL	Acc.Date	Acc.Time	ID	SpL Size
1 PCB-1	424775.3	3.169	8.87	22.10133	21.62				1.164				88.4		746	6259924	1997878	5531.4	2678.3	303973.5	96921.3	0.9892	10.25	10.32	11-Aug-20	10:34:07	H5-20-WDM-639	1
2 PCB-2	400894.8	3.136	10.28	25	20.594	1.009							1132		746	6259924	1997878	5531.4	2678.3	303973.5	96921.3	0.9892	10.25	10.32	11-Aug-20	10:34:07	H5-20-WDM-639	1
3 PCB-3	415025.3	3.139	10.41	22.92695	19.371	1.186			91.7				1132		746	6120534	1883511	5408.2	2538.4	315967.7	99057.7	1.0013	10.38	10.44	11-Aug-20	10:34:07	H5-20-WDM-639	1
4 PCB-4	270491	1.495	10.56	31.19846	21.529	0.817			124.8				670		12968	3489757	2346220	5208.9	180.9	162095.5	108395.4	1.0013	10.53	10.6	11-Aug-20	10:34:07	H5-20-WDM-639	1
5 PCB-10	406232.7	1.498	10.68	25	21.232	1.296							670		12968	5172505	3474100	7720.7	267.9	243615.4	162617.3	1.012	10.64	10.71	11-Aug-20	10:34:07	H5-20-WDM-639	1
6 PCB-9	413541.3	1.473	11.84	25	19.82	1.32							670		12968	4881484	3255306	7286.8	251	246313	167228.2	1.1222	11.81	11.87	11-Aug-20	10:34:07	H5-20-WDM-639	1
7 PCB-7	404099.2	1.489	11.94	25	19.627	1.289							670		12968	4744566	3211599	7081.9	247.7	241739	162360.2	1.1315	11.9	11.97	11-Aug-20	10:34:07	H5-20-WDM-639	1
8 PCB-6	411804.8	1.513	10.29	19.74	1.314								670		12968	4744566	3211599	7081.9	247.7	241739	162360.2	1.1315	11.9	11.97	11-Aug-20	10:34:07	H5-20-WDM-639	1
9 PCB-5	361743.8	1.474	11.29	25	19.761	1.154							670		12968	4259256	2699503	6357.5	223.6	215333.9	146209.9	1.1647	12.25	12.32	11-Aug-20	10:34:07	H5-20-WDM-639	1
10 PCB-8	440682.4	1.511	10.27	25	19.066	1.406							670		12968	5056044	3362704	7546.8	259.3	265185.8	175506.6	1.1727	12.34	12.41	11-Aug-20	10:34:07	H5-20-WDM-639	1
11 PCB-14	357780.1	1.53	10.36	25	21.787	1.142							2473		5907	4714199	3039133	1906.4	514.5	216377.2	141403	0.9385	13.32	13.39	11-Aug-20	10:34:07	H5-20-WDM-639	1
12 PCB-11	337956.9	1.53	10.36	25	20.844	1.078							2473		5907	4260228	2802801	1722.8	474.5	204390.8	133566.1	0.9741	13.83	13.9	11-Aug-20	10:34:07	H5-20-WDM-639	1
13 PCB-13/12	68762.7	1.517	10.06	50	14.297	1.097							2473		5907	5926613	3938901	2396.8	666.8	415565.5	273206.2	0.9877	14.02	14.09	11-Aug-20	10:34:07	H5-20-WDM-639	1
14 PCB-15	378744.9	1.498	10.24	26.94623	19.687	0.972			107.8				2473		5907	4471599	2968105	1808.3	520.1	227133.2	151612.5	1.0006	14.21	14.27	11-Aug-20	10:34:07	H5-20-WDM-639	1
15 PCB-19	213791.4	1.067	10.25	29.75019	20.059	1.136							957		4239	2213423	2108644	2311.2	3298.9	110348.4	103443.3	1.0071	12.52	12.59	11-Aug-20	10:34:07	H5-20-WDM-639	1
16 PCB-30/18	713710.7	1.114	10.36	50	18.111	1.542							1836		1869	8610520	6177158	3710.2	3305.3	376057.5	337653.2	1.0893	13.63	13.69	11-Aug-20	10:34:07	H5-20-WDM-639	1
17 PCB-17	303174	1.105	10.32	25	22.582	1.31							1836		1869	3954529	3264020	1958.2	1746.5	159177.9	143996.1	1.1099	13.89	13.95	11-Aug-20	10:34:07	H5-20-WDM-639	1
18 PCB-27	417091.1	1.117	10.05	25	23.249	1.803							1836		1869	5116340	4620052	2787.3	2472.1	220065.7	197025.4	1.1202	14.01	14.08	11-Aug-20	10:34:07	H5-20-WDM-639	1
19 PCB-24	383112.7	1.159	10.14	25	22.25	1.656							1836		1869	4576355	4110116	2493.1	2199.3	205677.8	177435	1.1275	14.11	14.17	11-Aug-20	10:34:07	H5-20-WDM-639	1
20 PCB-16	263088.2	1.043	10.2	25	23.38	1.137							1836		1869	3140189	2805646	1710.7	1501.3	134311.7	128775.6	1.1327	14.17	14.24	11-Aug-20	10:34:07	H5-20-WDM-639	1
21 PCB-32	424249.5	1.094	10.14	25	22.619	1.911							1836		1869	5226036	4815838	2847	2579.9	231041.6	211107.9	1.1562	14.47	14.53	11-Aug-20	10:34:07	H5-20-WDM-639	1
22 PCB-34	363684.8	1.04	10.24	25	22.791	1.324							3881		2420	3328033	3258057	896.9	1367.5	156171.6	150193.2	1.0815	15.17	15.24	11-Aug-20	10:34:07	H5-20-WDM-639	1
23 PCB-23	305747.4	1.013	10.2	25	21.702	1.391							3881		2420	3330255	3288045	860.3	1368.6	153868.8	151878.7	1.0817	15.27	15.34	11-Aug-20	10:34:07	H5-20-WDM-639	1
24 PCB-29/26	645640.9	1.019	10.59	49	16.807	1.395							3881		2420	5476980	5371580	1411	2219.4	325880.1	319760.8	0.8519	15.45	15.52	11-Aug-20	10:34:07	H5-20-WDM-639	1
25 PCB-25	341396.2	1.01	10.51	25	19.183	1.476							3881		2420	3290991	3305994	847.9	1366	171560.8	169835.4	0.8584	15.57	15.64	11-Aug-20	10:34:07	H5-20-WDM-639	1
26 PCB-31	338457.5	1.016	10.29	25	21.177	1.463							3881		2420	3612453	3518922	930.7	1453.9	170583.8	167873.7	0.8686	15.76	15.82	11-Aug-20	10:34:07	H5-20-WDM-639	1
27 PCB-28/20	630671.4	1.001	10.57	50	17.451	1.363							3881		2420	5506954	5579341	1418.8	2305.3	315563.8	315107.6	0.8783	15.93	16	11-Aug-20	10:34:07	H5-20-WDM-639	1
28 PCB-21/33	640001.3	1.018	10.09	50	16.334	1.383							3881		2420	5274348	5176160	1358.8	2138.7	322910.3	317091	0.8848	16.05	16.12	11-Aug-20	10:34:07	H5-20-WDM-639	1
29 PCB-22	296628.5	1.007	10.33	25	20.815	1.287							3881		2420	3097277	3067435	799	1267.4	148801.6	147826.9	0.8962	16.3	16.36	11-Aug-20	10:34:07	H5-20-WDM-639	1
30 PCB-33	523749.6	1.078	10.25	25	19.719	1.399							3881		2420	3097277	3067435	799	1267.4	148801.6	147826.9	0.8962	16.3	16.36	11-Aug-20	10:34:07	H5-20-WDM-639	1
31 PCB-39	316174.7	0.993	10.38	25	19.553	1.362							3881		2420	3800544	3122552	793.6	1290.2	157547.4	158627.3	0.9558	17.34	17.41	11-Aug-20	10:34:07	H5-20-WDM-639	1
32 PCB-38	301657.4	1.002	10.17	25	20.326	1.304							3881		2420	3068524	3071674	790.6	1269.2	150968.6	150688.8	0.9742	17.68	17.74	11-Aug-20	10:34:07	H5-20-WDM-639	1
33 PCB-35	297394.2	0.996	10.26	25	18.434	1.285			0.995				3881		2420	2735372	2747181	704.7	1135.1	148384	149010.2	0.9882	17.93	18	11-Aug-20	10:34:07	H5-20-WDM-639	1
34 PCB-37	296400.2	1.016	10.2	24.44656	18.83				97.8				3881		2420	2813137	2775410	724.8	1146.7	149398.6	147001.6	1.0011	18.17	18.23	11-Aug-20	10:34:07	H5-20-WDM-639	1
35 PCB-54	634617.1	0.797	10.2	63.98329	23.323				1				615		943	6656923	8420750	10825.7	8925.6	285424.2	358192.9	1.0006	14.38	14.45	11-Aug-20	10:34:07	H5-20-WDM-639	1
36 PCB-50/53	1207686.8	0.785	10.54	100	19.549	1.157							1972		1812	10230749	13300017	5177.2	7338.1	523236.1	684361.9	1.0852	15.6	15.67	11-Aug-20	10:34:07	H5-20-WDM-639	1
37 PCB-51	182551.8	0.78	10.25	100	16.053	1.117							1972		1812	10230749	13300017	5177.2	7338.1	523236.1	684361.9	1.0852	15.6	15.67	11-Aug-20	10:34:07	H5-20-WDM-639	1
38 PCB-46	351775.3	0.783	10.62	50	22.106	1.019							1972		1812	10568414	6583639	2579.9	3632.4	203183.3	301592.1	1.1246	16.17	16.24	11-Aug-20	10:34:07	H5-20-WDM-639	1
39 PCB-52	632659.3	0.756	10.66	50	21.433	1.212							1972		1812	8837109	7660440	2959.5	4226.6	272338.3	360321	1.1769	16.92	16.99	11-Aug-20	10:34:07	H5-20-WDM-639	1
40 PCB-73	727438.6	0.775	10.2	50	22.032	1.394							1972		1812	6997647	9039519	3548	4987.4	317611.4	409827.2	1.1817	16.99	17.06	11-Aug-20	10:34:07	H5-20-WDM-639	1
41 PCB-43	512394.8	0.766	10.09	50	21.345	0.999							1972		1812	4825404	6364737	2446.6	3511.7	226063.5	295331.3	1.1864	17.06	17.13	11-Aug-20	10:34:07	H5-20-WDM-639	1
42 PCB-69/49	1368535.5	0.764	10.21	100	14.242	1.311							1972		1812	8441476	11029040	4280	6085.1	592709.7	775825.8	1.1946	17.18	17.24	11-Aug-20	10:34:07	H5-20-WDM-639	1
43 PCB-48	605312.6	0.767	10.39	50	20.179	1.16							1972		1812	5856181	7300346	2821.7	4027.9	262771.4	342541.1	1.2068	17.35	17.42	11-Aug-20	10:34:07	H5-20-WDM-639	1
44 PCB-75/65	913286.5	0.761	10.25	150	17.653	1.264							1972		1812	6982127	9180367	1610.2	1856.1	1122962	1610.2	1.157	17.57	17.64	11-Aug-20	10:34:07	H5-20-WDM-639	1
45 PCB-59/62/75	2353652.8	0.781	10.77	150	20.199	1.503																						

100	PCB-151/135	956286.3	1.26	NO	22.18	100	13.259	0.821	100	477	603	7070394	5591903	14817.5	9276	533247.4	423038.9	1.0821	22.14	22.21	11-Aug-20	0.440359	H5-20-WDM-639	1
101	PCB-154	571683.9	1.278	NO	22.28	50	21.353	0.982	100	477	603	6847768	5428742	14350.9	9005.3	320687.9	250996	1.0871	22.25	22.31	11-Aug-20	0.440359	H5-20-WDM-639	1
102	PCB-144	485012.5	1.279	NO	22.46	50	20.797	0.833	100	477	603	6559951	4436333	11861.6	7359.1	272154.4	412958.1	1.0961	22.43	22.5	11-Aug-20	0.440359	H5-20-WDM-639	1
103	* PCB-147/149	1089275.4	1.21	NO	22.86	100	19.522	0.935	100	1833	3725	11641509	9655616	6352.7	2599.2	546323.5	429591.9	1.1055	22.62	22.69	11-Aug-20	0.440359	H5-20-WDM-639	1
104	PCB-134/143	941359.7	1.217	NO	22.91	100	19.737	1.008	100	1833	3725	6323279	5246477	3450.6	1432.5	516739.2	424620.4	1.1134	22.85	22.92	11-Aug-20	0.440359	H5-20-WDM-639	1
105	PCB-139/140	1085572.6	1.219	NO	22.97	100	18.502	0.932	100	1833	3725	11035012	9037982	6218.8	2426	596429.4	489143.3	1.1209	22.94	23.03	21-Aug-20	0.440359	H5-20-WDM-639	1
106	PCB-131	465104.4	1.216	NO	23.1	50	19.658	0.799	100	1833	3725	5017812	4070386	2078.2	1092.6	252526.2	209843.0	0.875	23.07	23.14	11-Aug-20	0.440359	H5-20-WDM-639	1
107	PCB-142	487376.5	1.193	NO	23.19	50	18.925	0.837	100	1833	3725	5017756	4233235	2738.2	1136.3	265137	222339.5	0.8782	23.15	23.22	11-Aug-20	0.440359	H5-20-WDM-639	1
108	PCB-132	473772	1.224	NO	23.35	50	19.642	0.814	100	1833	3725	5121362	4152204	2794.7	1114.6	260730.7	213041.3	0.8842	23.31	23.38	11-Aug-20	0.440359	H5-20-WDM-639	1
109	PCB-133	511835.9	1.206	NO	23.55	50	19.151	0.879	100	1833	3725	5357846	4418840	2923.8	1186.1	279763.7	232072.2	0.892	23.52	23.59	11-Aug-20	0.440359	H5-20-WDM-639	1
110	PCB-165	630699.8	1.213	NO	23.76	50	19.47	1.083	100	1833	3725	6730213	5586502	6572.7	1499.6	346567.8	285025	0.8998	23.72	23.79	11-Aug-20	0.440359	H5-20-WDM-639	1
111	PCB-134/143	941359.7	1.217	NO	23.89	100	19.737	1.008	100	1833	3725	6323279	5246477	3450.6	1432.5	516739.2	424620.4	1.1134	22.85	22.92	11-Aug-20	0.440359	H5-20-WDM-639	1
112	PCB-161	674562.3	1.232	NO	23.96	50	19.975	1.158	100	1833	3725	7436900	6060308	4058.3	1626.7	372315.7	302246.6	0.9075	23.93	24.0	21-Aug-20	0.440359	H5-20-WDM-639	1
113	PCB-153/168	1312731.4	1.203	NO	24.22	100	16.617	1.127	100	1833	3725	11909931	9963239	6499.2	2674.4	417637.9	595993.5	0.9171	24.18	24.25	11-Aug-20	0.440359	H5-20-WDM-639	1
114	PCB-141	556415.6	1.218	NO	24.32	50	19.315	0.956	100	1833	3725	5901312	4826837	3220.3	1295.6	305524.5	250891.1	0.9213	24.29	24.36	11-Aug-20	0.440359	H5-20-WDM-639	1
115	PCB-130	491910.7	1.213	NO	24.54	50	19.328	0.845	100	1833	3725	5211578	4294011	2843.9	1152.6	269645.7	222265	0.9295	24.51	24.58	11-Aug-20	0.440359	H5-20-WDM-639	1
116	PCB-137/164	1274524.5	1.204	NO	24.71	100	11.382	1.094	100	1833	3725	7262450	6586860	4325.4	1763.2	696387.2	578137.3	0.9359	24.68	24.74	11-Aug-20	0.440359	H5-20-WDM-639	1
117	PCB-138/163/129	1759180	1.213	NO	24.88	50	14.51	1.006	100	1833	3725	13986045	11605082	7632.2	3115.1	963863.3	794316.7	0.9423	24.85	24.91	11-Aug-20	0.440359	H5-20-WDM-639	1
118	PCB-160	695855.4	1.222	NO	24.99	50	18.795	1.195	100	1833	3725	7194666	5901274	3926.1	1584.1	382792.8	313162.6	0.9464	24.96	25.02	11-Aug-20	0.440359	H5-20-WDM-639	1
119	PCB-158	802164.3	1.197	NO	25.09	50	19.331	1.078	100	1833	3725	8447677	7054070	4909.9	1893.5	436997.3	365167	0.9501	25.05	25.12	11-Aug-20	0.440359	H5-20-WDM-639	1
120	PCB-128/166	1247150.9	1.21	NO	25.56	100	16.743	1.371	100	1833	3725	11431958	9451357	6238.4	2537	682772.1	564378.8	0.968	25.52	25.59	11-Aug-20	0.440359	H5-20-WDM-639	1
121	PCB-159	730192.2	1.206	NO	26.02	50	18.366	1.254	100	1833	3725	7323492	6095538	4001.3	1636.2	399234.4	330957.8	0.9854	25.98	26.05	11-Aug-20	0.440359	H5-20-WDM-639	1
122	PCB-162	683244.7	1.22	NO	26.16	50	18.684	1.173	100	1833	3725	7014953	5834449	3828	1566.1	375461.4	307783.2	0.9908	26.13	26.19	11-Aug-20	0.440359	H5-20-WDM-639	1
123	PCB-167	174566.9	1.208	NO	26.42	55.63882	14.469	1.065	111.3	1833	3725	7219661	5997941	3939.8	1610	390912.8	323654.1	1.0005	26.38	26.45	11-Aug-20	0.440359	H5-20-WDM-639	1
124	PCB-166/157	1365036.1	1.202	NO	27.04	109.6706	18.369	1.089	109.7	1833	3725	10683767	8948568	5830.1	2402	745092.3	619943.8	1.0005	27.01	27.08	11-Aug-20	0.440359	H5-20-WDM-639	1
125	* PCB-188	571683.9	1.216	NO	28.71	56.01245	13.995	1.041	110	1833	3725	6323279	5246477	3450.6	1432.5	516739.2	424620.4	1.0174	28.68	28.74	11-Aug-20	0.440359	H5-20-WDM-639	1
126	* PCB-188	567216.8	1.012	NO	28.89	55.02247	13.941	0.92	110	1833	1068	5898461	5832568	2351.2	546.3	295788.6	291428.2	1.0005	29.35	29.55	11-Aug-20	0.440359	H5-20-WDM-639	1
127	PCB-179	600615.4	1.012	NO	23.72	50	19.385	1.172	100	1983	1068	5856804	5742769	2953.2	5379.1	302132.4	298483	1.0093	23.69	23.75	11-Aug-20	0.440359	H5-20-WDM-639	1
128	PCB-184	607697	1.015	NO	23.96	50	19.663	1.186	100	1983	1068	6017966	5946791	3034.4	5570.2	306047.8	301649.3	1.0195	23.93	24.0	21-Aug-20	0.440359	H5-20-WDM-639	1
129	PCB-176	585391.3	1.024	NO	24.18	50	18.888	1.142	100	1983	1068	5593488	5498572	2820.4	5150.4	296146.6	289244.7	1.0288	24.15	24.21	11-Aug-20	0.440359	H5-20-WDM-639	1
130	PCB-186	575968.3	1.036	NO	24.42	50	18.916	1.124	100	1983	1068	5542824	5379913	2794.9	5039.3	293030.6	282937.7	1.0391	24.39	24.45	11-Aug-20	0.440359	H5-20-WDM-639	1
131	PCB-178	456526.7	1.02	NO	25.09	50	19.669	0.891	100	1983	1068	4534874	4433671	2286.6	4152.9	230662.1	225994.6	1.0674	25.05	25.12	11-Aug-20	0.440359	H5-20-WDM-639	1
132	PCB-175	476459.7	1.027	NO	25.41	50	19.35	0.93	100	1983	1068	4679670	4505319	2069.8	4291.7	241356.8	235017.8	1.0812	25.38	25.44	11-Aug-20	0.440359	H5-20-WDM-639	1
133	PCB-187	503056.6	1.03	NO	25.69	50	18.733	0.976	100	1983	1068	4840143	4808521	2543.1	4502.2	255606.6	24474.7	1.0874	25.59	25.66	11-Aug-20	0.440359	H5-20-WDM-639	1
134	PCB-182	496808	1.023	NO	25.65	50	19.11	0.969	100	1983	1068	4801480	4701631	2421.1	4403.9	251260.9	245547.1	1.0915	25.62	25.69	11-Aug-20	0.440359	H5-20-WDM-639	1
135	PCB-183	486577.1	1.037	NO	25.87	50	20.242	0.949	100	1983	1068	5013401	4841805	2527.9	4535.2	247667.2	238910	1.1008	25.84	25.9	11-Aug-20	0.440359	H5-20-WDM-639	1
136	PCB-185	446938.4	1.026	NO	25.94	50	19.008	0.872	100	1983	1068	4303221	4222167	2169.8	3954.8	226387.3	220551.2	1.1039	25.91	25.98	11-Aug-20	0.440359	H5-20-WDM-639	1
137	PCB-174	494552.2	1.041	NO	26.02	50	19.256	0.965	100	1983	1068	457866	4634772	2449.5	4341.3	252276	24276.3	1.107	25.98	26.05	11-Aug-20	0.440359	H5-20-WDM-639	1
138	PCB-177	453022.5	1.025	NO	26.25	50	18.813	0.884	100	1983	1068	4313964	4176922	2175.1	3912.4	229298.8	223726.7	1.1167	26.21	26.28	11-Aug-20	0.440359	H5-20-WDM-639	1
139	PCB-181	450988.6	1.02	NO	26.45	50	19.368	0.886	100	1983	1068	4409209	4236930	2085.8	4043.3	227888.6	223099	1.0825	26.42	26.48	11-Aug-20	0.440359	H5-20-WDM-639	1
140	PCB-171/173	890416.7	1.014	NO	26.58	100	18.789	0.869	100	1983	1068	8402581	8186910	4236.8	7688.5	448401.2	442015.5	0.8869	26.62	26.68	11-Aug-20	0.440359	H5-20-WDM-639	1
141	PCB-172	453918	1.033	NO	27.38	50	18.339	0.886	100	1983	1068	4229466	4091727	2132.6	3832.6	230621.3	223296.7	0.9135	27.35	27.42	11-Aug-20	0.440359	H5-20-WDM-639	1
142	PCB-192	525480.9	1.023	NO	27.54	50	18.802	1.025	100	1983	1068	4997419	4807276	2519.9	4543.6	265785.8	259695.1	0.9188	27.51	27.57	11-Aug-20	0.440359	H5-20-WDM-639	1
143	PCB-180/193	1071135.7	1.023	NO	27.7	100	14.058	1.045	100	1983	1068	7614106	7456359	3839.3	6984.2	514628.6	529507.1	0.924	27.66	27.73	11-Aug-20	0.440359	H5-20-WDM-639	1
144	PCB-191	571562.8	1.028	NO	27.9	50	19.126	1.115	100	1983	1068	5542370	5405641	3794.6	5063.4	289780.2	281782.7	0.9309	27.87	27.93	11-Aug-20	0.440359	H5-20-WDM-639	1
145	PCB-170	428825.4	1.019	NO	28.4	50	19.062	0.837	100	1983	1068	4125830	4048917	2080.4	3790.7	216439.4	212386.1	0.9474	28.36	28.43	11-Aug-20	0.440359	H5-20-WDM-639	1
146	PCB-190	606432.6	1.028	NO	28.67	50	17.193	1.183	100	1983	1068	5280004	5120571	2662.3	4796.3	307093.8	299							

ALS Life Sciences

Second Source Calibration Verification Report

Sample Name	CVS	Sampling Date	n/a	
ALS Sample ID	H5-20-RS1-004	Extraction Date	n/a	
Analysis Method	EPA 1668C	Sample Size	1	n/a
Analysis Type	CCV	Percent Moisture	n/a	
Sample Matrix	QC	Split Ratio	1	

Approved: <i>E. Sabljic</i> --e-signature-- 12-Aug-2020
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Run Information	Run 1
Filename	5-200219A07
Run Date	19-Feb-20 18:21
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS-5 SPBOCTYL251239-05

Target Analytes	pg/uL	Ret.		Limits	Flags
		Time	% Rec		
PCB-001	50	8.87	109	75-125	
PCB-003	50	10.40	110	75-125	
PCB-004	50	10.55	111	75-125	
PCB-015	50	14.22	111	75-125	
PCB-019	50	12.54	114	75-125	
PCB-037	50	18.18	111	75-125	
PCB-054	50	14.40	112	75-125	
PCB-081	50	21.77	105	75-125	
PCB-077	50	22.08	105	75-125	
PCB-104	50	17.48	101	75-125	
PCB-123	50	23.08	106	75-125	
PCB-118	50	23.25	106	75-125	
PCB-114	50	23.55	109	75-125	
PCB-105	50	23.89	105	75-125	
PCB-126	50	25.48	105	75-125	
PCB-155	50	20.49	105	75-125	
PCB-167	50	26.40	105	75-125	
PCB-156/157	100	27.03	104	75-125	
PCB-169	50	28.69	107	75-125	
PCB-188	50	23.50	105	75-125	
PCB-189	50	29.97	110	75-125	
PCB-202	50	26.28	109	75-125	
PCB-205	50	31.38	104	75-125	
PCB-208	50	29.71	101	75-125	
PCB-206	50	32.47	102	75-125	
PCB-209	50	33.60	119	75-125	

Extraction Standards		Time	% Rec	Limits
13C12-PCB-001	100	8.85	99	50-145
13C12-PCB-003	100	10.38	100	50-145
13C12-PCB-004	100	10.54	99	50-145
13C12-PCB-015	100	14.21	101	50-145
13C12-PCB-019	100	12.53	101	50-145
13C12-PCB-037	100	18.17	102	50-145
13C12-PCB-054	100	14.39	100	50-145
13C12-PCB-081	100	21.76	102	50-145
13C12-PCB-077	100	22.06	102	50-145
13C12-PCB-104	100	17.47	100	50-145
13C12-PCB-123	100	23.07	102	50-145
13C12-PCB-118	100	23.24	102	50-145
13C12-PCB-114	100	23.54	101	50-145
13C12-PCB-105	100	23.88	101	50-145
13C12-PCB-126	100	25.47	103	50-145
13C12-PCB-155	100	20.48	99	50-145
13C12-PCB-167	100	26.39	101	50-145
13C12-PCB-156/157	200	27.02	102	50-145
13C12-PCB-169	100	28.67	103	50-145
13C12-PCB-188	100	23.48	99	50-145
13C12-PCB-189	100	29.96	103	50-145
13C12-PCB-202	100	26.26	100	50-145
13C12-PCB-205	100	31.37	100	50-145
13C12-PCB-208	100	29.69	99	50-145
13C12-PCB-206	100	32.44	100	50-145
13C12-PCB-209	100	33.58	99	50-145

Field Spike Standards				
13C12-PCB-031	100	15.76	98	70-130
13C12-PCB-095	100	19.07	98	70-130
13C12-PCB-153	100	24.18	98	70-130

Cleanup Standards				
13C12-PCB-028	100	15.93	99	65-135
13C12-PCB-111	100	22.00	99	75-125
13C12-PCB-178	100	25.06	100	75-125

ALS Life Sciences

Continuing Calibration Report

Sample Name	CCV	Sampling Date	n/a		Approved: <i>E. Sabljic</i> --e-signature-- 12-Aug-2020
ALS Sample ID	H5-20-CCV-637	Extraction Date	n/a		
Analysis Method	EPA 1668C	Sample Size	1	n/a	
Analysis Type	CCV	Percent Moisture	n/a		
Sample Matrix	QC	Split Ratio	1		

Run Information	Run 1
Filename	5-200810B24
Run Date	11-Aug-20 08:51
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS-5 SPBOCTYL251239-05

Target Analytes	pg/uL	Ret. Time	% Rec	Limits	Flags
PCB-001	50	8.87	86	75-125	
PCB-003	50	10.40	87	75-125	
PCB-004	50	10.55	114	75-125	
PCB-015	50	14.22	96	75-125	
PCB-019	50	12.54	114	75-125	
PCB-037	50	18.18	94	75-125	
PCB-054	50	14.40	119	75-125	
PCB-081	50	21.77	94	75-125	
PCB-077	50	22.08	93	75-125	
PCB-104	50	17.48	115	75-125	
PCB-123	50	23.08	101	75-125	
PCB-118	50	23.25	99	75-125	
PCB-114	50	23.55	104	75-125	
PCB-105	50	23.89	106	75-125	
PCB-126	50	25.48	102	75-125	
PCB-155	50	20.49	119	75-125	
PCB-167	50	26.40	106	75-125	
PCB-156/157	100	27.03	108	75-125	
PCB-169	50	28.69	110	75-125	
PCB-188	50	23.50	112	75-125	
PCB-189	50	29.97	93	75-125	
PCB-202	50	26.28	112	75-125	
PCB-205	50	31.38	103	75-125	
PCB-208	50	29.71	99	75-125	
PCB-206	50	32.47	97	75-125	
PCB-209	50	33.60	99	75-125	
Extraction Standards					
		Time	% Rec	Limits	
13C12-PCB-001	100	8.85	114	50-145	
13C12-PCB-003	100	10.38	112	50-145	
13C12-PCB-004	100	10.54	105	50-145	
13C12-PCB-015	100	14.21	99	50-145	
13C12-PCB-019	100	12.53	74	50-145	
13C12-PCB-037	100	18.17	89	50-145	
13C12-PCB-054	100	14.39	78	50-145	
13C12-PCB-081	100	21.76	77	50-145	
13C12-PCB-077	100	22.06	79	50-145	
13C12-PCB-104	100	17.47	76	50-145	
13C12-PCB-123	100	23.07	75	50-145	
13C12-PCB-118	100	23.24	76	50-145	
13C12-PCB-114	100	23.54	73	50-145	
13C12-PCB-105	100	23.88	71	50-145	
13C12-PCB-126	100	25.47	75	50-145	
13C12-PCB-155	100	20.48	78	50-145	
13C12-PCB-167	100	26.39	102	50-145	
13C12-PCB-156/157	200	27.02	100	50-145	
13C12-PCB-169	100	28.67	103	50-145	
13C12-PCB-188	100	23.48	104	50-145	
13C12-PCB-189	100	29.96	98	50-145	
13C12-PCB-202	100	26.26	81	50-145	
13C12-PCB-205	100	31.37	101	50-145	
13C12-PCB-208	100	29.69	102	50-145	
13C12-PCB-206	100	32.44	107	50-145	
13C12-PCB-209	100	33.58	93	50-145	
Field Spike Standards					
13C12-PCB-031	100	15.76	108	70-130	
13C12-PCB-095	100	19.07	126	70-130	
13C12-PCB-153	100	24.18	107	70-130	
Cleanup Standards					
13C12-PCB-028	100	15.93	92	65-135	
13C12-PCB-111	100	22.00	102	75-125	
13C12-PCB-178	100	25.06	102	75-125	

ALS Life Sciences

Continuing Calibration Report

Sample Name	CCV	Sampling Date	n/a	
ALS Sample ID	H5-20-CCV-640	Extraction Date	n/a	Approved: <i>E. Sabljic</i> --e-signature-- 12-Aug-2020
Analysis Method	EPA 1668C	Sample Size	1 n/a	
Analysis Type	CCV	Percent Moisture	n/a	
Sample Matrix	QC	Split Ratio	1	

Run Information	Run 1
Filename	5-200811B11
Run Date	11-Aug-20 17:34
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS-5 SPBOCTYL251239-05

Target Analytes	pg/uL	Ret. Time	% Rec	Limits	Flags
PCB-001	50	8.88	84	75-125	
PCB-003	50	10.41	85	75-125	
PCB-004	50	10.58	113	75-125	
PCB-015	50	14.25	97	75-125	
PCB-019	50	12.57	115	75-125	
PCB-037	50	18.21	94	75-125	
PCB-054	50	14.43	115	75-125	
PCB-081	50	21.80	98	75-125	
PCB-077	50	22.10	94	75-125	
PCB-104	50	17.50	114	75-125	
PCB-123	50	23.10	99	75-125	
PCB-118	50	23.27	99	75-125	
PCB-114	50	23.58	101	75-125	
PCB-105	50	23.91	104	75-125	
PCB-126	50	25.52	99	75-125	
PCB-155	50	20.52	115	75-125	
PCB-167	50	26.43	105	75-125	
PCB-156/157	100	27.06	106	75-125	
PCB-169	50	28.72	107	75-125	
PCB-188	50	23.53	112	75-125	
PCB-189	50	30.00	93	75-125	
PCB-202	50	26.31	112	75-125	
PCB-205	50	31.41	102	75-125	
PCB-208	50	29.74	97	75-125	
PCB-206	50	32.50	96	75-125	
PCB-209	50	33.64	100	75-125	
Extraction Standards					
		Time	% Rec	Limits	
13C12-PCB-001	100	8.88	109	50-145	
13C12-PCB-003	100	10.41	104	50-145	
13C12-PCB-004	100	10.56	103	50-145	
13C12-PCB-015	100	14.24	91	50-145	
13C12-PCB-019	100	12.55	79	50-145	
13C12-PCB-037	100	18.20	84	50-145	
13C12-PCB-054	100	14.42	85	50-145	
13C12-PCB-081	100	21.79	85	50-145	
13C12-PCB-077	100	22.08	89	50-145	
13C12-PCB-104	100	17.49	84	50-145	
13C12-PCB-123	100	23.09	83	50-145	
13C12-PCB-118	100	23.26	82	50-145	
13C12-PCB-114	100	23.56	79	50-145	
13C12-PCB-105	100	23.90	76	50-145	
13C12-PCB-126	100	25.51	79	50-145	
13C12-PCB-155	100	20.51	86	50-145	
13C12-PCB-167	100	26.42	103	50-145	
13C12-PCB-156/157	200	27.04	102	50-145	
13C12-PCB-169	100	28.71	105	50-145	
13C12-PCB-188	100	23.51	108	50-145	
13C12-PCB-189	100	29.99	95	50-145	
13C12-PCB-202	100	26.29	88	50-145	
13C12-PCB-205	100	31.40	103	50-145	
13C12-PCB-208	100	29.72	106	50-145	
13C12-PCB-206	100	32.48	112	50-145	
13C12-PCB-209	100	33.61	93	50-145	
Field Spike Standards					
13C12-PCB-031	100	15.79	106	70-130	
13C12-PCB-095	100	19.10	120	70-130	
13C12-PCB-153	100	24.20	105	70-130	
Cleanup Standards					
13C12-PCB-028	100	15.96	91	65-135	
13C12-PCB-111	100	22.03	112	75-125	
13C12-PCB-178	100	25.09	107	75-125	

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

Sample Name
ALS Sample ID
Analysis Method
Analysis Type
Sample Matrix

Method Blank
WG3369876-1
EPA 1668C
Blank
MEDIA

Sampling Date
Extraction Date
Sample Size
Percent Moisture
Split Ratio

n/a
30-Jul-20
1
n/a
2

Blank

Approved:
E. Sabljic
--e-signature--
12-Aug-2020

Run Information

Run 1

Filename: 5-200811B04
Run Date: 11-Aug-20 12:39
Final Volume: 25 ul
Dilution Factor: 1
Analysis Units: pg
Instrument - Column: HRMS-5 SPBOCTYL251239-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-001		NotFnd	<2.8	2.8	U		50
PCB-002		NotFnd	<3.3	3.3	U		50
PCB-003		NotFnd	<2.9	2.9	U		50
PCB-004		NotFnd	<37	37	U		50
PCB-010		NotFnd	<18	18	U		50
PCB-009		NotFnd	<18	18	U		50
PCB-007		NotFnd	<18	18	U		50
PCB-006		NotFnd	<18	18	U		50
PCB-005		NotFnd	<20	20	U		50
PCB-008		NotFnd	<16	16	U		50
PCB-014		NotFnd	<8.9	8.9	U		50
PCB-011		13.87	93.1	9.5			50
PCB-012/013		NotFnd	<9.3	9.3	U		50
PCB-015		NotFnd	<8.7	8.7	U		50
PCB-019		NotFnd	<6.9	6.9	U		50
PCB-018/030		13.68	10.1	3.8	J		50
PCB-017		13.93	<4.6	4.5	M,J,R	4.6	50
PCB-027		NotFnd	<3.3	3.3	U		50
PCB-024		NotFnd	<3.6	3.6	U		50
PCB-016		NotFnd	<5.2	5.2	U		50
PCB-032		NotFnd	<3.1	3.1	U		50
PCB-034		NotFnd	<4.0	4.0	U		50
PCB-023		NotFnd	<4.0	4.0	U		50
PCB-026/029		NotFnd	<3.8	3.8	U		50
PCB-025		NotFnd	<3.6	3.6	U		50
PCB-031		15.79	<9.7	3.6	J,R	9.7	50
PCB-020/028		15.96	<12	3.9	J,R	12	50
PCB-021/033		16.10	<5.9	3.8	M,J,R	5.9	50
PCB-022		16.33	<7.2	4.1	M,J,R	7.2	50
PCB-036		NotFnd	<3.8	3.8	U		50
PCB-039		NotFnd	<3.9	3.9	U		50
PCB-038		NotFnd	<4.1	4.1	U		50
PCB-035		NotFnd	<4.1	4.1	U		50
PCB-037		18.24	<5.4	4.0	M,J,R	5.4	50
PCB-054		NotFnd	<3.1	3.1	U		50
PCB-050/053		NotFnd	<3.7	3.7	U		50
PCB-045/051		NotFnd	<3.8	3.8	U		50
PCB-046		NotFnd	<4.2	4.2	U		50
PCB-052		16.96	<18	3.5	J,R	18	50
PCB-073		NotFnd	<3.0	3.0	U		50
PCB-043		NotFnd	<4.2	4.2	U		50
PCB-049/069		17.23	<8.4	3.2	J,R	8.4	50
PCB-048		17.39	<3.6	3.6	U	2.6	50
PCB-044/047/065		17.52	<21	3.3	J,R	21	50
PCB-059/062/075		NotFnd	<2.8	2.8	U		50
PCB-042		NotFnd	<3.8	3.8	U		50
PCB-040/041/071		18.11	<9.9	3.6	M,J,R	9.9	50
PCB-064		18.21	<5.6	2.7	J,R	5.6	50
PCB-072		NotFnd	<3.7	3.7	U		50
PCB-068		NotFnd	<3.5	3.5	U		50
PCB-057		NotFnd	<3.8	3.8	U		50
PCB-058		19.16	<3.9	3.9	M,U	2.1	50
PCB-067		NotFnd	<3.4	3.4	U		50
PCB-063		NotFnd	<3.6	3.6	U		50
PCB-061/070/074/076		19.56	<9.2	3.7	J,R	9.2	50
PCB-066		19.75	5.09	3.5	M,J		50
PCB-055		NotFnd	<4.0	4.0	U		50
PCB-056		NotFnd	<3.9	3.9	U		50
PCB-060		NotFnd	<3.9	3.9	U		50
PCB-080		NotFnd	<3.3	3.3	U		50
PCB-079		NotFnd	<3.3	3.3	U		50
PCB-078		NotFnd	<3.8	3.8	U		50
PCB-081	0.0003	21.81	<3.7	3.7	U		50
PCB-077	0.0001	NotFnd	<3.6	3.6	U		50
PCB-104		NotFnd	<1.9	1.9	U		50
PCB-096		NotFnd	<1.9	1.9	U		50
PCB-103		NotFnd	<2.8	2.8	U		50
PCB-094		NotFnd	<3.3	3.3	U		50
PCB-095		19.11	11.9	2.9	M,J		50
PCB-093/098/100/102		NotFnd	<3.0	3.0	U		50

ALS Life Sciences

Laboratory Method Blank Analysis Report

Sample Name	Method Blank	Sampling Date	n/a	
ALS Sample ID	WG3369876-1	Extraction Date	30-Jul-20	
Analysis Method	EPA 1668C	Sample Size	1	Blank
Analysis Type	Blank	Percent Moisture	n/a	
Sample Matrix	MEDIA	Split Ratio	2	

Approved:
E. Sabljic
--e-signature--
12-Aug-2020

Run Information	Run 1
Filename	5-200811B04
Run Date	11-Aug-20 12:39
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-5 SPB0CTYL251239-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-088/091		NotFnd	<3.0	3.0	U		50
PCB-084		NotFnd	<3.3	3.3	U		50
PCB-089		NotFnd	<3.2	3.2	U		50
PCB-121		NotFnd	<2.3	2.3	U		50
PCB-092		NotFnd	<3.0	3.0	U		50
PCB-090/101/113		20.65	15.4	2.6	J		50
PCB-083/099		NotFnd	<3.1	3.1	U		50
PCB-112		NotFnd	<2.1	2.1	U		50
PCB-086/087/097/109/119/125		21.28	11.6	2.5	M,J		50
PCB-085/110/115/116/117		21.71	16.5	2.4	M,J		50
PCB-082		NotFnd	<3.3	3.3	U		50
PCB-111		NotFnd	<2.2	2.2	U		50
PCB-120		NotFnd	<2.1	2.1	U		50
PCB-108/124		NotFnd	<2.1	2.1	U		50
PCB-107		NotFnd	<2.0	2.0	U		50
PCB-123	0.00003	NotFnd	<2.3	2.3	U		50
PCB-106		NotFnd	<2.1	2.1	U		50
PCB-118	0.00003	23.26	<9.1	2.2	J,R	9.1	50
PCB-122		NotFnd	<2.1	2.1	U		50
PCB-114	0.00003	NotFnd	<2.3	2.3	U		50
PCB-105	0.00003	23.91	4.59	2.3	J		50
PCB-127		NotFnd	<2.0	2.0	U		50
PCB-126	0.1	NotFnd	<2.4	2.4	U		50
PCB-155		NotFnd	<1.4	1.4	U		50
PCB-152		NotFnd	<1.5	1.5	U		50
PCB-150		NotFnd	<1.5	1.5	U		50
PCB-136		NotFnd	<1.5	1.5	U		50
PCB-145		NotFnd	<1.6	1.6	U		50
PCB-148		NotFnd	<2.0	2.0	U		50
PCB-135/151		22.16	<3.0	2.0	M,J,R	3.0	50
PCB-154		NotFnd	<1.7	1.7	U		50
PCB-144		NotFnd	<2.0	2.0	U		50
PCB-147/149		22.66	<9.0	1.9	M,J,R	9.0	50
PCB-134/143		NotFnd	<2.2	2.2	U		50
PCB-139/140		NotFnd	<1.9	1.9	U		50
PCB-131		NotFnd	<2.2	2.2	U		50
PCB-142		NotFnd	<2.1	2.1	U		50
PCB-132		NotFnd	<2.2	2.2	U		50
PCB-133		NotFnd	<2.0	2.0	U		50
PCB-165		NotFnd	<1.6	1.6	U		50
PCB-146		23.88	<1.7	1.7	J,R	1.7	50
PCB-161		NotFnd	<1.5	1.5	U		50
PCB-153/168		24.20	5.24	1.6	J		50
PCB-141		24.34	<2.2	1.9	J,R	2.2	50
PCB-130		NotFnd	<2.1	2.1	U		50
PCB-137/164		NotFnd	<1.6	1.6	U		50
PCB-129/138/163		24.88	<5.4	1.8	J,R	5.4	50
PCB-160		NotFnd	<1.5	1.5	U		50
PCB-158		NotFnd	<1.3	1.3	U		50
PCB-128/166		NotFnd	<1.7	1.7	U		50
PCB-159		NotFnd	<1.4	1.4	U		50
PCB-162		NotFnd	<1.5	1.5	U		50
PCB-167	0.00003	NotFnd	<1.5	1.5	U		50
PCB-156/157	0.00003	27.04	<2.1	2.1	U	1.5	100
PCB-169	0.03	NotFnd	<1.8	1.8	U		50
PCB-188		NotFnd	<1.9	1.9	U		50
PCB-179		NotFnd	<1.7	1.7	U		50
PCB-184		NotFnd	<1.7	1.7	U		50
PCB-176		NotFnd	<1.8	1.8	U		50
PCB-186		NotFnd	<1.8	1.8	U		50
PCB-178		NotFnd	<2.3	2.3	U		50
PCB-175		NotFnd	<2.2	2.2	U		50
PCB-187		NotFnd	<2.1	2.1	U		50
PCB-182		NotFnd	<2.1	2.1	U		50
PCB-183		NotFnd	<2.1	2.1	U		50
PCB-185		NotFnd	<2.3	2.3	U		50
PCB-174		NotFnd	<2.1	2.1	U		50
PCB-177		NotFnd	<2.3	2.3	U		50
PCB-181		NotFnd	<2.3	2.3	U		50
PCB-171/173		NotFnd	<2.3	2.3	U		50
PCB-172		NotFnd	<2.3	2.3	U		50

ALS Life Sciences

Laboratory Method Blank Analysis Report

Sample Name Method Blank
 ALS Sample ID WG3369876-1
 Analysis Method EPA 1668C
 Analysis Type Blank
 Sample Matrix MEDIA

Sampling Date n/a
 Extraction Date 30-Jul-20
 Sample Size 1 Blank
 Percent Moisture n/a
 Split Ratio 2

Approved:
 E. Sabljic
 --e-signature--
 12-Aug-2020

Run Information Run 1
 Filename 5-200811B04
 Run Date 11-Aug-20 12:39
 Final Volume 25 ul
 Dilution Factor 1
 Analysis Units pg
 Instrument - Column HRMS-5 SPBOCTYL251239-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-192		NotFnd	<2.0	2.0	U		50
PCB-180/193		27.72	<1.9	1.9	M,U	1.9	50
PCB-191		NotFnd	<1.8	1.8	U		50
PCB-170		NotFnd	<2.4	2.4	U		50
PCB-190		NotFnd	<1.7	1.7	U		50
PCB-189	0.00003	NotFnd	<1.4	1.4	U		50
PCB-202		NotFnd	<1.6	1.6	U		50
PCB-201		NotFnd	<1.5	1.5	U		50
PCB-204		NotFnd	<1.5	1.5	U		50
PCB-197		NotFnd	<1.5	1.5	U		50
PCB-200		NotFnd	<1.5	1.5	U		50
PCB-198/199		NotFnd	<2.0	2.0	U		50
PCB-196		NotFnd	<2.0	2.0	U		50
PCB-203		NotFnd	<1.9	1.9	U		50
PCB-195		NotFnd	<1.4	1.4	U		50
PCB-194		31.10	2.81	1.3	J		50
PCB-205		NotFnd	<1.3	1.3	U		50
PCB-208		NotFnd	<3.0	3.0	U		50
PCB-207		NotFnd	<3.4	3.4	U		50
PCB-206		NotFnd	<4.7	4.7	U		50
PCB-209		NotFnd	<1.5	1.5	U		50

Extraction Standards	pg	Time	% Rec	Limits
13C12-PCB-001	4000	8.85	63	5-145
13C12-PCB-003	4000	10.40	67	5-145
13C12-PCB-004	4000	10.55	61	5-145
13C12-PCB-015	4000	14.24	70	5-145
13C12-PCB-019	4000	12.54	49	5-145
13C12-PCB-037	4000	18.20	62	5-145
13C12-PCB-054	4000	14.41	44	5-145
13C12-PCB-081	4000	21.79	67	10-145
13C12-PCB-077	4000	22.08	71	10-145
13C12-PCB-104	4000	17.49	69	10-145
13C12-PCB-123	4000	23.08	73	10-145
13C12-PCB-118	4000	23.26	72	10-145
13C12-PCB-114	4000	23.55	70	10-145
13C12-PCB-105	4000	23.90	70	10-145
13C12-PCB-126	4000	25.50	71	10-145
13C12-PCB-155	4000	20.50	71	10-145
13C12-PCB-167	4000	26.40	102	10-145
13C12-PCB-156/157	8000	27.03	95	10-145
13C12-PCB-169	4000	28.70	97	10-145
13C12-PCB-188	4000	23.50	102	10-145
13C12-PCB-189	4000	29.99	99	10-145
13C12-PCB-202	4000	26.28	80	10-145
13C12-PCB-205	4000	31.38	101	10-145
13C12-PCB-208	4000	29.72	100	10-145
13C12-PCB-206	4000	32.47	108	10-145
13C12-PCB-209	4000	33.61	82	10-145

Field Spike Standards	pg	Time	% Rec	Limits
13C12-PCB-031	0			NS
13C12-PCB-095	0			NS
13C12-PCB-153	0			NS

Cleanup Standards	pg	Time	% Rec	Limits
13C12-PCB-028	4000	15.95	59	5-145
13C12-PCB-111	4000	22.03	94	10-145
13C12-PCB-178	4000	25.07	98	10-145

ALS Life Sciences

Laboratory Method Blank Analysis Report

Sample Name	Method Blank	Sampling Date	n/a		
ALS Sample ID	WG3369876-1	Extraction Date	30-Jul-20		
Analysis Method	EPA 1668C	Sample Size	1	Blank	
Analysis Type	Blank	Percent Moisture	n/a		
Sample Matrix	MEDIA	Split Ratio	2		
					Approved: E. Sabljic --e-signature-- 12-Aug-2020

Run Information	Run 1
Filename	5-200811B04
Run Date	11-Aug-20 12:39
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-5 SPBOCTYL251239-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
Homologue Group Totals							
Total MonoCB			<2.8	2.8	U		200
Total DiCB			93.1	8.7	J		400
Total TriCB			54.9	3.1	J		400
Total TetraCB			77.2	2.7	J		800
Total PentaCB			69.1	1.9	J		800
Total HexaCB			24.8	1.3	J		800
Total HeptaCB			<1.4	1.4	U		400
Total OctaCB			2.81	1.3	J		400
Total NonaCB			<3.0	3.0	U		200
DecaCB			<1.5	1.5	U		200
Total PCB			322		J		1600
Toxic Equivalency - (WHO 2005)							
Lower Bound PCB TEQ			0.000138				
Mid Point PCB TEQ			0.148				
Upper Bound PCB TEQ			0.296				

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

NS Indicates that this standard has not been added.

ALS Life Sciences

Laboratory Method Blank Analysis Report

Sample Name Method Blank
 ALS Sample ID WG3369876-4
 Analysis Method EPA 1668C
 Analysis Type Blank
 Sample Matrix REAGENT

Sampling Date n/a
 Extraction Date 30-Jul-20
 Sample Size 1 Blank
 Percent Moisture n/a
 Split Ratio 2

Approved:
 E. Sabljic
 --e-signature--
 12-Aug-2020

Run Information **Run 1**
 Filename 5-200811B05
 Run Date 11-Aug-20 13:21
 Final Volume 25 ul
 Dilution Factor 1
 Analysis Units pg
 Instrument - Column HRMS-5 SPBOCTYL251239-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-001		NotFnd	<4.1	4.1	U		50
PCB-002		10.33	<3.6	3.0	J,R	3.6	50
PCB-003		NotFnd	<1.9	1.9	U		50
PCB-004		NotFnd	<21	21	U		50
PCB-010		NotFnd	<12	12	U		50
PCB-009		NotFnd	<12	12	U		50
PCB-007		NotFnd	<12	12	U		50
PCB-006		NotFnd	<12	12	U		50
PCB-005		NotFnd	<13	13	U		50
PCB-008		NotFnd	<11	11	U		50
PCB-014		NotFnd	<5.1	5.1	U		50
PCB-011		13.89	52.9	5.4			50
PCB-012/013		NotFnd	<5.3	5.3	U		50
PCB-015		NotFnd	<5.4	5.4	U		50
PCB-019		NotFnd	<3.0	3.0	U		50
PCB-018/030		13.69	6.74	2.3	J		50
PCB-017		13.93	4.35	2.7	M,J		50
PCB-027		NotFnd	<2.0	2.0	U		50
PCB-024		NotFnd	<2.2	2.2	U		50
PCB-016		NotFnd	<3.1	3.1	U		50
PCB-032		14.52	<2.0	1.9	J,R	2.0	50
PCB-034		NotFnd	<3.6	3.6	U		50
PCB-023		NotFnd	<3.6	3.6	U		50
PCB-026/029		NotFnd	<3.4	3.4	U		50
PCB-025		NotFnd	<3.2	3.2	U		50
PCB-031		15.81	10.1	3.2	J		50
PCB-020/028		15.99	10.8	3.5	J		50
PCB-021/033		16.11	<7.1	3.4	J,R	7.1	50
PCB-022		16.34	5.33	3.7	J		50
PCB-036		NotFnd	<3.4	3.4	U		50
PCB-039		NotFnd	<3.4	3.4	U		50
PCB-038		NotFnd	<3.6	3.6	U		50
PCB-035		NotFnd	<3.7	3.7	U		50
PCB-037		18.21	<4.1	3.9	M,J,R	4.1	50
PCB-054		NotFnd	<1.9	1.9	U		50
PCB-050/053		15.64	<2.1	2.1	U	2.0	50
PCB-045/051		16.06	4.73	2.2	J		50
PCB-046		NotFnd	<2.4	2.4	U		50
PCB-052		16.98	<13	2.0	J,R	13	50
PCB-073		NotFnd	<1.7	1.7	U		50
PCB-043		NotFnd	<2.4	2.4	U		50
PCB-049/069		17.25	<6.3	1.8	J,R	6.3	50
PCB-048		NotFnd	<2.1	2.1	U		50
PCB-044/047/065		17.54	18.5	1.9	J		50
PCB-059/062/075		NotFnd	<1.6	1.6	U		50
PCB-042		17.83	<2.2	2.2	M,U	2.1	50
PCB-040/041/071		18.11	9.73	2.1	M,J		50
PCB-064		18.24	<5.0	1.6	J,R	5.0	50
PCB-072		NotFnd	<2.5	2.5	U		50
PCB-068		NotFnd	<2.4	2.4	U		50
PCB-057		NotFnd	<2.6	2.6	U		50
PCB-058		NotFnd	<2.6	2.6	U		50
PCB-067		NotFnd	<2.2	2.2	U		50
PCB-063		NotFnd	<2.4	2.4	U		50
PCB-061/070/074/076		19.58	<12	2.5	M,J,R	12	50
PCB-066		19.75	4.91	2.4	M,J		50
PCB-055		NotFnd	<2.6	2.6	U		50
PCB-056		NotFnd	<2.6	2.6	U		50
PCB-060		NotFnd	<2.6	2.6	U		50
PCB-080		NotFnd	<2.2	2.2	U		50
PCB-079		NotFnd	<2.2	2.2	U		50
PCB-078		NotFnd	<2.6	2.6	U		50
PCB-081	0.0003	NotFnd	<2.7	2.7	U		50
PCB-077	0.0001	NotFnd	<2.6	2.6	U		50
PCB-104		NotFnd	<1.5	1.5	U		50
PCB-096		NotFnd	<1.4	1.4	U		50
PCB-103		NotFnd	<1.7	1.7	U		50
PCB-094		NotFnd	<2.1	2.1	U		50
PCB-095		19.12	12.2	1.8	J		50
PCB-093/098/100/102		NotFnd	<1.9	1.9	U		50

ALS Life Sciences

Laboratory Method Blank Analysis Report

Sample Name **Method Blank**
 ALS Sample ID WG3369876-4
 Analysis Method EPA 1668C
 Analysis Type Blank
 Sample Matrix REAGENT

Sampling Date n/a
 Extraction Date 30-Jul-20
 Sample Size 1 Blank
 Percent Moisture n/a
 Split Ratio 2

Approved:
E. Sabljic
 --e-signature--
 12-Aug-2020

Run Information **Run 1**
 Filename 5-200811B05
 Run Date 11-Aug-20 13:21
 Final Volume 25 ul
 Dilution Factor 1
 Analysis Units pg
 Instrument - Column HRMS-5 SPBOCTYL251239-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-088/091		19.59	<2.4	1.9	J,R	2.4	50
PCB-084		19.71	5.95	2.1	J		50
PCB-089		NotFnd	<2.0	2.0	U		50
PCB-121		NotFnd	<1.4	1.4	U		50
PCB-092		20.33	2.48	1.9	J		50
PCB-090/101/113		20.65	<1.0	1.6	M,J,R	10	50
PCB-083/099		20.96	5.10	1.9	M,J		50
PCB-112		NotFnd	<1.3	1.3	U		50
PCB-086/087/097/109/119/125		21.30	<1.1	1.6	M,J,R	11	50
PCB-085/110/115/116/117		21.71	16.6	1.5	M,J		50
PCB-082		NotFnd	<2.0	2.0	U		50
PCB-111		NotFnd	<1.4	1.4	U		50
PCB-120		NotFnd	<1.3	1.3	U		50
PCB-108/124		NotFnd	<1.7	1.7	U		50
PCB-107		NotFnd	<1.6	1.6	U		50
PCB-123	0.00003	NotFnd	<1.9	1.9	U		50
PCB-106		NotFnd	<1.7	1.7	U		50
PCB-118	0.00003	23.26	7.68	1.8	M,J		50
PCB-122		NotFnd	<1.7	1.7	U		50
PCB-114	0.00003	NotFnd	<1.9	1.9	U		50
PCB-105	0.00003	23.91	<4.0	1.9	J,R	4.0	50
PCB-127		NotFnd	<1.6	1.6	U		50
PCB-126	0.1	NotFnd	<1.9	1.9	U		50
PCB-155		NotFnd	<1.1	1.1	U		50
PCB-152		NotFnd	<1.0	1.0	U		50
PCB-150		NotFnd	<0.97	0.97	U		50
PCB-136		20.97	<2.4	1.0	J,R	2.4	50
PCB-145		NotFnd	<1.0	1.0	U		50
PCB-148		NotFnd	<1.3	1.3	U		50
PCB-135/151		22.18	4.07	1.3	M,J		50
PCB-154		NotFnd	<1.1	1.1	U		50
PCB-144		NotFnd	<1.3	1.3	U		50
PCB-147/149		22.67	<9.5	2.5	J,R	9.5	50
PCB-134/143		NotFnd	<2.9	2.9	U		50
PCB-139/140		NotFnd	<2.5	2.5	U		50
PCB-131		NotFnd	<2.9	2.9	U		50
PCB-142		NotFnd	<2.8	2.8	U		50
PCB-132		23.36	<4.6	2.9	M,J,R	4.6	50
PCB-133		NotFnd	<2.7	2.7	U		50
PCB-165		NotFnd	<2.2	2.2	U		50
PCB-146		NotFnd	<2.2	2.2	U		50
PCB-161		NotFnd	<2.0	2.0	U		50
PCB-153/168		24.22	<5.3	2.1	J,R	5.3	50
PCB-141		NotFnd	<2.4	2.4	U		50
PCB-130		NotFnd	<2.8	2.8	U		50
PCB-137/164		24.72	<2.1	2.1	U	1.1	50
PCB-129/138/163		24.89	<8.2	2.3	J,R	8.2	50
PCB-160		NotFnd	<2.0	2.0	U		50
PCB-158		25.09	<1.7	1.7	U	0.89	50
PCB-128/166		25.58	<2.2	2.2	U	1.8	50
PCB-159		NotFnd	<1.9	1.9	U		50
PCB-162		NotFnd	<2.0	2.0	U		50
PCB-167	0.00003	NotFnd	<1.9	1.9	U		50
PCB-156/157	0.00003	27.04	<2.6	2.6	M,U	100	
PCB-169	0.03	NotFnd	<2.2	2.2	U		50
PCB-188		NotFnd	<1.4	1.4	U		50
PCB-179		NotFnd	<1.3	1.3	U		50
PCB-184		NotFnd	<1.3	1.3	U		50
PCB-176		NotFnd	<1.3	1.3	U		50
PCB-186		NotFnd	<1.4	1.4	U		50
PCB-178		NotFnd	<1.7	1.7	U		50
PCB-175		NotFnd	<1.7	1.7	U		50
PCB-187		25.56	<1.8	1.6	J,R	1.8	50
PCB-182		NotFnd	<1.6	1.6	U		50
PCB-183		NotFnd	<1.6	1.6	U		50
PCB-185		NotFnd	<1.8	1.8	U		50
PCB-174		26.03	1.85	1.6	M,J		50
PCB-177		NotFnd	<1.7	1.7	U		50
PCB-181		NotFnd	<1.8	1.8	U		50
PCB-171/173		NotFnd	<1.8	1.8	U		50
PCB-172		NotFnd	<1.7	1.7	U		50

ALS Life Sciences

Laboratory Method Blank Analysis Report

Sample Name **Method Blank**
 ALS Sample ID WG3369876-4
 Analysis Method EPA 1668C
 Analysis Type Blank
 Sample Matrix REAGENT

Sampling Date n/a
 Extraction Date 30-Jul-20
 Sample Size 1 Blank
 Percent Moisture n/a
 Split Ratio 2

Approved:
E. Sabljic
 --e-signature--
 12-Aug-2020

Run Information

Run 1

Filename 5-200811B05
 Run Date 11-Aug-20 13:21
 Final Volume 25 ul
 Dilution Factor 1
 Analysis Units pg
 Instrument - Column HRMS-5 SPBOCTYL251239-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
PCB-192		NotFnd	<1.5	1.5	U		50
PCB-180/193		27.73	<2.0	1.5	M,J,R	2.0	50
PCB-191		NotFnd	<1.4	1.4	U		50
PCB-170		28.40	<1.9	1.8	J,R	1.9	50
PCB-190		NotFnd	<1.3	1.3	U		50
PCB-189	0.00003	NotFnd	<1.5	1.5	U		50
PCB-202		NotFnd	<0.88	0.88	U		50
PCB-201		NotFnd	<0.78	0.78	U		50
PCB-204		NotFnd	<0.79	0.79	U		50
PCB-197		NotFnd	<0.80	0.80	U		50
PCB-200		NotFnd	<0.80	0.80	U		50
PCB-198/199		NotFnd	<1.1	1.1	U		50
PCB-196		NotFnd	<1.1	1.1	U		50
PCB-203		NotFnd	<1.0	1.0	U		50
PCB-195		NotFnd	<1.0	1.0	U		50
PCB-194		NotFnd	<0.98	0.98	U		50
PCB-205		NotFnd	<0.89	0.89	U		50
PCB-208		NotFnd	<2.7	2.7	U		50
PCB-207		NotFnd	<3.0	3.0	U		50
PCB-206		32.51	<4.1	4.1	U	2.4	50
PCB-209		NotFnd	<1.3	1.3	U		50

Extraction Standards pg Time % Rec Limits

13C12-PCB-001	4000	8.88	92	5-145
13C12-PCB-003	4000	10.44	88	5-145
13C12-PCB-004	4000	10.58	89	5-145
13C12-PCB-015	4000	14.26	82	5-145
13C12-PCB-019	4000	12.57	70	5-145
13C12-PCB-037	4000	18.21	78	5-145
13C12-PCB-054	4000	14.43	76	5-145
13C12-PCB-081	4000	21.80	79	10-145
13C12-PCB-077	4000	22.09	83	10-145
13C12-PCB-104	4000	17.49	84	10-145
13C12-PCB-123	4000	23.09	86	10-145
13C12-PCB-118	4000	23.26	86	10-145
13C12-PCB-114	4000	23.56	83	10-145
13C12-PCB-105	4000	23.90	83	10-145
13C12-PCB-126	4000	25.51	86	10-145
13C12-PCB-155	4000	20.51	71	10-145
13C12-PCB-167	4000	26.42	116	10-145
13C12-PCB-156/157	8000	27.04	110	10-145
13C12-PCB-169	4000	28.71	118	10-145
13C12-PCB-188	4000	23.51	105	10-145
13C12-PCB-189	4000	29.99	108	10-145
13C12-PCB-202	4000	26.29	90	10-145
13C12-PCB-205	4000	31.40	109	10-145
13C12-PCB-208	4000	29.72	103	10-145
13C12-PCB-206	4000	32.48	116	10-145
13C12-PCB-209	4000	33.61	70	10-145

Field Spike Standards

13C12-PCB-031	0	NS
13C12-PCB-095	0	NS
13C12-PCB-153	0	NS

Cleanup Standards

13C12-PCB-028	4000	15.97	67	5-145
13C12-PCB-111	4000	22.04	96	10-145
13C12-PCB-178	4000	25.09	94	10-145

ALS Life Sciences

Laboratory Method Blank Analysis Report

Sample Name	Method Blank	Sampling Date	n/a		
ALS Sample ID	WG3369876-4	Extraction Date	30-Jul-20		
Analysis Method	EPA 1668C	Sample Size	1	Blank	
Analysis Type	Blank	Percent Moisture	n/a		
Sample Matrix	REAGENT	Split Ratio	2		
					Approved: E. Sabljic --e-signature-- 12-Aug-2020

Run Information	Run 1
Filename	5-200811B05
Run Date	11-Aug-20 13:21
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg
Instrument - Column	HRMS-5 SPBOCTYL251239-05

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg	EDL pg	Flags	EMPC pg	LQL
Homologue Group Totals							
Total MonoCB			3.60	1.9	J		200
Total DiCB			52.9	5.1	J		400
Total TriCB			50.5	1.9	J		400
Total TetraCB			74.2	1.6	J		800
Total PentaCB			77.4	1.3	J		800
Total HexaCB			34.1	0.97	J		800
Total HeptaCB			7.55	1.3	J		400
Total OctaCB			<0.78	0.78	U		400
Total NonaCB			<2.7	2.7	U		200
DecaCB			<1.3	1.3	U		200
Total PCB			300		J		1600
Toxic Equivalency - (WHO 2005)							
Lower Bound PCB TEQ			0.000230				
Mid Point PCB TEQ			0.129				
Upper Bound PCB TEQ			0.258				

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.
EMPC	Estimated Maximum Possible Concentration - elevated detection limit due to interference or positive id criterion failure
NS	Indicates that this standard has not been added.

ALS Life Sciences

Laboratory Control Sample Analysis Report

Sample Name	Laboratory Control Sample	Sampling Date	n/a		
ALS Sample ID	WG3369876-2	Extraction Date	30-Jul-20		Approved: <i>E. Sabljic</i> --e-signature-- 12-Aug-2020
Analysis Method	EPA 1668C	Sample Size	1	n/a	
Analysis Type	LCS	Percent Moisture	n/a		
Sample Matrix	QC	Split Ratio	1		

Run Information	Run 1
Filename	5-200811B02
Run Date	11-Aug-20 11:15
Final Volume	25 ul
Dilution Factor	1
Analysis Units	% Rec
Instrument - Column	HRMS-5 SPBOCTYL251239-05

Target Analytes	pg	Ret. Time	% Rec	Limits	Flags
PCB-001	2000	8.90	90	60-135	M
PCB-003	2000	10.47	91	60-135	
PCB-004	2000	10.62	126	60-135	
PCB-015	2000	14.28	99	60-135	
PCB-019	2000	12.60	118	60-135	
PCB-037	2000	18.22	99	60-135	
PCB-054	2000	14.44	123	60-135	
PCB-081	2000	21.82	96	60-135	
PCB-077	2000	22.11	94	60-135	
PCB-104	2000	17.51	108	60-135	
PCB-123	2000	23.12	100	60-135	
PCB-118	2000	23.28	101	60-135	
PCB-114	2000	23.59	108	60-135	
PCB-105	2000	23.93	104	60-135	
PCB-126	2000	25.52	99	60-135	
PCB-155	2000	20.53	113	60-135	
PCB-167	2000	26.44	101	60-135	
PCB-156/157	4000	27.06	104	60-135	
PCB-169	2000	28.72	107	60-135	
PCB-188	2000	23.54	110	60-135	
PCB-189	2000	30.02	94	60-135	
PCB-202	2000	26.31	115	60-135	
PCB-205	2000	31.41	97	60-135	
PCB-208	2000	29.75	94	60-135	
PCB-206	2000	32.50	90	60-135	
PCB-209	2000	33.64	109	60-135	
Extraction Standards					
		Time	% Rec	Limits	
13C12-PCB-001	4000	8.88	68	15-145	M
13C12-PCB-003	4000	10.47	68	15-145	
13C12-PCB-004	4000	10.61	64	15-145	
13C12-PCB-015	4000	14.27	66	15-145	
13C12-PCB-019	4000	12.58	52	15-145	
13C12-PCB-037	4000	18.22	61	15-145	
13C12-PCB-054	4000	14.43	57	15-145	
13C12-PCB-081	4000	21.80	59	40-145	
13C12-PCB-077	4000	22.10	61	40-145	
13C12-PCB-104	4000	17.50	64	40-145	
13C12-PCB-123	4000	23.10	62	40-145	
13C12-PCB-118	4000	23.27	62	40-145	
13C12-PCB-114	4000	23.58	60	40-145	
13C12-PCB-105	4000	23.91	58	40-145	
13C12-PCB-126	4000	25.51	60	40-145	
13C12-PCB-155	4000	20.52	67	40-145	
13C12-PCB-167	4000	26.43	85	40-145	
13C12-PCB-156/157	8000	27.04	83	40-145	
13C12-PCB-169	4000	28.71	94	40-145	
13C12-PCB-188	4000	23.51	89	40-145	
13C12-PCB-189	4000	30.00	88	40-145	
13C12-PCB-202	4000	26.29	76	40-145	
13C12-PCB-205	4000	31.40	82	40-145	
13C12-PCB-208	4000	29.74	84	40-145	
13C12-PCB-206	4000	32.48	92	40-145	
13C12-PCB-209	4000	33.63	66	40-145	
Field Spike Standards					
13C12-PCB-031	0		NS		
13C12-PCB-095	0		NS		
13C12-PCB-153	0		NS		
Cleanup Standards					
13C12-PCB-028	4000	15.98	61	15-145	
13C12-PCB-111	4000	22.04	85	40-145	
13C12-PCB-178	4000	25.10	85	40-145	

M Indicates that a peak has been manually integrated.
 NS Indicates that this standard has not been added.



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

SVOC DATA PACKAGE

SECTION 6: INTERNAL RECORDS

Including:

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

Extraction Workup Sheet

Batch ID:	WG3369876
WG3369876	

Analysis:	PUFS - DX/1668A (HR)
------------------	----------------------

Prep Procedure: BU-TM-1110 Overall HR Prep, BU-TP-1101 8270D Prep, BU-TP-2100 PAH Prep Method

Analyst:	Saurin Patel
-----------------	--------------

Date:	30-July-20
--------------	------------

SUBSAMPLING		
Sample I.D.	Client I.D.	Media Prep L#
WG3369876-1	Method Blank	L245384 -17
WG3369876-2	Laboratory Control Sample	L245384 -18
WG3369876-3	Extraction and Injection STD.	—
WG3369876-4	Method Blank(Reagent)	Gumwood + Cedrium substante
L2479138-1	SITE 1 - COMPOSITE 1 (JULY)	L245384 6, 8, 16-1
L2479138-2	SITE 2 - COMPOSITE 1 (JULY)	L245384 23, 24, 7, 7
L2479138-3	SITE 3 - COMPOSITE 1 (JULY)	L245384 4, 10, 11, 5
L2479138-4	SITE 4 - COMPOSITE 1 (JULY)	L245384 12, 19, 29, 21
L2479138-5	SITE 5 - COMPOSITE 1 (JULY)	L245384 3, 2, 22, 13
	Composite 4 PUFs per sample	
<u>Sample ID</u>	<u>Composite:</u>	
L2479138-1	L2472393-1, L2479135-1, L2468702-1	L2475162-1
L2479138-2	L2472393-2, L2479135-2, L2468702-2	L2475162-2
L2479138-3	L2472393-3, L2479135-3, L2468702-3	L2475162-3
L2479138-4	L2472393-4, L2479135-4, L2468702-4	L2475162-4
L2479138-5	L2472393-5, L2479135-5, L2468702-5	L2475162-5

BATCH TRACKING

	Date/Time/Initials
Client Labels Checked:	SP 30-Jul-20
Media transfer to soxhlet:	SP 30-Jul-20
	—
	—
	—
Soxhlet Start Time:	11:30 AM 30-Jul-20 SP
Soxhlets Reflux Property:	SP
Soxhlet End Time:	31-Jul-20 SP 7:45 AM
	—
	—
	—
	—
Rotovap Reduction + verify temp:	31-Jul-2020 AP
	—
Extract split:	31-Jul-2020 AP
Acid Silica Column:	31-Jul-2020 AP
Solvent exchange:	4-Aug-20 PS
Alumina Column:	4-Aug-20 PS
Carbon Column:	5-Aug-20 PS
PCB microval:	4-Aug-20 PS
Micro/Robo Vial:	5-Aug-20 PS
Update to LIMS:	4-Aug-2020 PS

Batch ID: WG3369876

DX Extraction Standard:

(Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3369876-1	40	✓
WG3369876-2	40	✓
WG3369876-3	40	✓
WG3369876-4	40	✓
L2479138-1	40	✓
L2479138-2	40	✓
L2479138-3	40	✓
L2479138-4	40	✓
L2479138-5	40	✓
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	

Syringe ID: 320

Standard: M23-ES#2-039F

Spike Date: 30-Jul-2020

Spike Witnessing

Chemist's Initials: SP

Chemist: SP

Witness's Initials: A.M

Witness: A.M

Correct Syringe Obtained: A.M

Correct Standard Obtained: A.M

Correct Technique Followed: A.M

PCB Extraction Standard:

(Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3369876-1	40	✓
WG3369876-2	40	✓
WG3369876-3	40	✓
WG3369876-4	40	✓
L2479138-1	40	✓
L2479138-2	40	✓
L2479138-3	40	✓
L2479138-4	40	✓
L2479138-5	40	✗ ✓
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	
	40	

Syringe ID: ~~323~~ 382

Standard: 1668A-ES#2-063G

Spike Date: ~~063F~~ 30-Jul-2020

Spike Witnessing

Chemist's Initials: SP

Chemist: SP

Witness's Initials: A.M

Witness: A.M

Correct Syringe Obtained: A.M

Correct Standard Obtained: A.M

Correct Technique Followed: A.M

DXPCB STACK PREP

3-OCT-18 / MSM PS
Page 2 of 9
Batch ID: WG3369876

Batch ID: WG3369876

DX Native Standard:

Sample I.D.	Volume (ul)	(Checkmark) Spiked
WG3369876-2	40	✓
WG3369876-3	40	✓

PCB Native Standard:

Sample I.D.	Volume (ul)	(Checkmark) Spiked
WG3369876-2	40	✓✓
WG3369876-3	40	✓✓

✓=20ul.
(Checkmark)

Syringe ID: 322
Standard: 1613B-NS#3-028F
Date & Initials: 30-Jul-2020 SP

Syringe ID: 385
Standard: 1668A-NS#1-038B
Date & Initials: 30-Jul-2020 SP

DX Cleanup Standard:

(Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3369876-1	20	✓
WG3369876-2	20	✓
WG3369876-3	N/A	N/A
WG3369876-4	20	✓
L2479138-1	20	✓
L2479138-2	20	✓
L2479138-3	20	✓
L2479138-4	20	✓
L2479138-5	20	✓
	20	
	20	

Syringe ID: **357**

Standard: **M23-CL#1- 036E**

Date & Initials: **31-Jul-2020 AP**

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

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

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

PCB Cleanup Standard:

(Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3369876-1	20	✓
WG3369876-2	20	✓
WG3369876-3	N/A	N/A
WG3369876-4	20	✓
L2479138-1	20	✓
L2479138-2	20	✓
L2479138-3	20	✓
L2479138-4	20	✓
L2479138-5	20	✓
	20	
	20	

Syringe ID: **378**

Standard: **1668A-CL#2- 035B**

Date & Initials: **31-Jul-2020 AP**

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

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

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

Batch ID: WG3369876

DX Injection Standard: (Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3369876-1	10	✓
WG3369876-2	10	✓
WG3369876-3	10	✓
WG3369876-4	10	✓
L2479138-1	10	✓
L2479138-2	10	✓
L2479138-3	10	✓
L2479138-4	10	✓
L2479138-5	10	✓
	10	
	10	
	10	
	10	
	10	
	10	
	10	
	10	

Syringe ID: 387

Standard: 1613B-IS#1-083C

Date & Initials: 5 Aug-2020 DS

Correct Syringe Obtained: Chemist's Initials DS

Correct Standard Obtained: Chemist's Initials DS

Correct Technique Followed: Chemist's Initials DS

PCB Injection Standard: (Checkmark)

Sample I.D.	Volume (ul)	Spiked
WG3369876-1	5	✓
WG3369876-2	5	✓
WG3369876-3	5	✓
WG3369876-4	5	✓
L2479138-1	5	✓
L2479138-2	5	✓
L2479138-3	5	✓
L2479138-4	5	✓
L2479138-5	5	✓
	5	
	5	
	5	
	5	
	5	
	5	
	5	
	5	
	5	

Syringe ID: 260

Standard: 1668A-IS#2-013C

Date & Initials: 4 Aug-2020 DS

Correct Syringe Obtained: Chemist's Initials DS

Correct Standard Obtained: Chemist's Initials DS

Correct Technique Followed: Chemist's Initials DS

Batch ID: WG3369876

Reagent Lot Numbers:

Reagent	Lot#	Manufacturer
Acetone	105124	
Hexane	105426	
DCM	105533	
Toluene	105355	
Nonane	ORG-WAKONON- 052	
1:1 DCM:HEX	ORG-DH2- 641	
Sodium Sulphate	ORG-SSU- 2233, 2326	
Acid Silica	ORG-ASI- 9636, 9638	
Neutral Silica	ORG-NSI- 2369	
Alumina	ORG-ALU- 469	
1% Deactivated Silica	ORG-2%DAS- -	
Chromacarb	ORG-CC- 276	

Com oil ORG-CO-070

Batch ID: WG3369876

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 the contents of the PUF tubes into the soxhlet body (4 per sample)
- Spike with Extraction Standard (plus Native for LCS and ENI).
- Soxhlet extract in ~~DCM~~ for 16 hours (check with team lead or supervisor)

Toluene - sp 30-Jul-20 as per m.m

Rotovap:

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

Batch ID: WG3369876

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	
Batch ID:	WG3369876

Comments:

NOTE: Label and Save All Columns including Acid Silica Columns

Approval of Deviation from Standard Method	
<input type="checkbox"/> Procedure does deviate from Standard Method.	(Batch Writer): _____ Approved (Supervisor/Manager): _____

WG3369876			Prep Analyst:		
PUFS - DX/1668A (HR)			Date:		
	Very Good	meets Method Req	Some Outliers	Very Poor	Comments: 7 was spinbatch sent for rework/2 Why?
MB					
LCS					
DUP					
ES rec					

ALS Life Sciences

Sample Calculation Report

CS3 RRF Check

Approved:	E. Sabljic --e-signature-- 12-Aug-2020
-----------	--

$$\begin{aligned}
 \text{RRF} &= \frac{\text{Response of PCB-118}}{\text{Response of 13C12-PCB-118}} \times \frac{\text{Concentration of 13C12-PCB-118}}{\text{Concentration of PCB-118}} \\
 \text{RRF} &= \frac{792506.10}{1585710.30} \times \frac{100}{50} = 1.00 \quad \text{Value from TargetLynx } 1.00
 \end{aligned}$$

Calculation of PCB-118 amount in L2479138-4

$$\begin{aligned}
 \text{pg} &= \frac{\text{Response of PCB-118}}{\text{Response of 13C12-PCB-118}} \times \frac{\text{pg of 13C12-PCB-118 spiked}}{\text{Mean RRF} * \text{Sample Size}} \\
 \text{pg} &= \frac{1178454}{271071.4} \times \frac{4000}{1.03 * 1.00} = 16800 \quad \text{Value from TargetLynx } 16800
 \end{aligned}$$

Calculation of 13C12-PCB-118 Recovery in L2479138-4

$$\begin{aligned}
 \% \text{ Recovery} &= \frac{\text{Response of 13C12-PCB-118}}{\text{Response of 13C12-PCB-101}} \times \frac{\text{pg of 13C12-PCB-101 spiked} * 100}{\text{Mean RRF} * \text{pg 13C12-PCB-118 Spiked}} \\
 \% \text{ Recovery} &= \frac{271071.4}{665605.9} \times \frac{8000 * 100}{1.48 * 4000} = 55 \quad \text{Value from TargetLynx } 55 \%
 \end{aligned}$$



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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:



L2472393

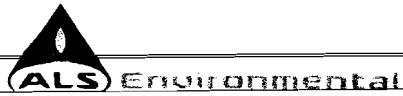
Report To		Report Format / Distribution			Service Requested			
Company: <i>Favilion consulting</i>		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other:			<input checked="" type="checkbox"/> Regular Service			
Contact: <i>Amber Bailey, 206 910 4320</i>		<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax			<input type="checkbox"/> Rush Service (with prior consultation) - surcharge applies			
Address: <i>975 5th AVE NW, Issaquah WA</i>		Email 1: <i>amb@favilionconsulting.com</i>			<input type="checkbox"/> Other - Please contact ALS			
Phone: <i>206 910 4320</i> Fax:		Email 2:			Analysis Request			
Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Client / Project Information						
Company: <i>Floyd / Snider</i>		Job #: <i>1466-004</i>			<i>PCBS method 166B</i> <i>Dioxin method 8242A</i> Hazardous? Provide Details Highly Contaminated? Number of Containers			
Contact: <i>Amber McKay</i>		Location: <i>Seattle Iron and Metal</i>						
Address:		PO:						
Phone: Fax:		Sampled by: <i>Amber Bailey</i>						
Lab Work Order #		ALS Contact:						
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type				
1	<i>L2453819-16-070720-1</i>	<i>7/7/2020</i>	<i>0849</i>	<i>air</i>	<i>x</i>	<i>x</i>		
2	<i>L2453819-24-070720-2</i>	<i> </i>	<i>0945</i>	<i> </i>	<i>x</i>	<i>x</i>		
3	<i>L2453819-11-070720-3</i>	<i> </i>	<i>1005</i>	<i> </i>	<i>x</i>	<i>x</i>		
4	<i>L2453819-20-070720-4</i>	<i> </i>	<i>1028</i>	<i> </i>	<i>x</i>	<i>x</i>		
5	<i>L2453819-13-070720-5</i>	<i> </i>	<i>1054</i>	<i> </i>	<i>x</i>	<i>x</i>		

Special Instructions / Regulations / Hazardous Details

*Hold for composite at end of project. please call Amber upon receipt. Home: 206 910 4320
 Cell: 206 735 6178*

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided by ALS

Released by: <i>ALS Canada Ltd.</i>	Date (dd-mmm-yy): <i>7/7/2020</i>	Time (hh-mm): <i>1421</i>	Received by: <i>ARROW BURTON</i>	Date: <i>9-July-2020</i>	Time: <i>11:40</i>	Temperature: <i>23.5 °C</i>	Verified by:	Date:	Time:	Observations: <i>85 of 91</i> Yes / No ? If Yes add SIF
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Chain of Custody / Analytical Request Form
 1435 Norjohn Court, Unit 1, Burlington, Ontario, Canada, L7L 0E6
 Tel +1-905-331-3111 Fax +1-905-331-4567 www.alsglobal.com

L2475162

Report To Company: <u>Favallan Consulting</u> Contact: <u>Amber Bailey 206 910 4320</u> Address: <u>975 5th AVE NW, Issaquah WA</u> Phone: <u>206 910 4320</u> Fax: _____		Report Format / Distribution <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Email <input type="checkbox"/> Digital <input type="checkbox"/> Fax Email 1: <u>adalleys@favallanconsulting.com</u> Email 2: <u>SPatterson@favallanconsulting.com</u>		Service Requested <input checked="" type="checkbox"/> Regular Service <input type="checkbox"/> Rush Service (with prior consultation) - surcharge applies <input type="checkbox"/> Other - Please contact ALS							
Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Company: _____ Contact: _____ Address: _____ Phone: _____ Fax: _____		Client / Project Information Job #: <u>1406-004</u> Location: <u>Seattle Ion and Metals</u> PO: <u>601 S Myrtle Street, Seattle</u> Sampled by: <u>Amber Bailey</u>		Analysis Request PCBs <input checked="" type="checkbox"/> Dioxin <input checked="" type="checkbox"/> Metals <input checked="" type="checkbox"/> Other: _____							
Lab Work Order # _____		ALS Contact <u>Clare K.</u>		Hazardous? Provide Details _____ Highly Contaminated? _____ Number of Containers _____							
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	PCBs	Dioxin	Metals	Other	Hazardous? Provide Details	Highly Contaminated?	Number of Containers
1	L2453819-1-071420-1	7/14/20	1051	Air	X	X					
2	L2453819-14-071420-2		1140		X	X					
3	L2453819-4-071420-3		1210		X	X					
4	L2453819-12-071420-4		1234		X	X					
5	L2453819-3-071420-5		1255		X	X					

Special Instructions / Regulations / Hazardous Details

Please hold samples for composite after 4 weeks. Email receipt to Amber Bailey

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided by ALS

Released by: <u>cently</u>	Date (dd-mm-yy): <u>7/14/20</u>	Time (hh-mm): <u>15:21</u>	Temperature: <u>4.9 °C</u>	Humidity: _____	Date: _____	Time: _____	86
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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
15-July-2020 15:35	FARALLON Consulting	5 x PUFFS	4.9°C	Good Fedex 3 M5 3948 36913698	NRJ	16-July-2020 12:35	L2475162	-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
23-July-2020 11:45	FARALLAN Consulting	6 x PUFs	6.5°C	Good FedEx 7910 6517 7025	RJ	24-July-2020 10:30	L2479135	-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
2-July-2020 11:50	FLOYD SNIDER	5 x Pufs	25.0°C	>10°C FedEx 3943 4802 4116	Mg	2-July-2020 15:50	L2468702	-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
9-July-2020 11:40	FLOYD SNIDER	5xPUMS	23.5°C	>10°C Fedex 3945 9996 5985	MS	10-July-2020 10:13	L2472393	-1-5

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