NISTIR 7410

Description and Results of the 2005 NIST/NOAA Interlaboratory Comparison Exercise Program for Organic Contaminants in Marine Mammal Tissues

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March 2007

U.S. Department of Commerce
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TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

DISCLAIMER

Certain commercial equipment or instruments are identified in this report to specify adequately the experimental procedures. Such identification does not imply recommendations or endorsement by the National Institute of Standards and Technology nor does it imply that the equipment or instruments are the best available for the purpose.

ABSTRACT

The National Institute of Standards and Technology (NIST), in support of the National Oceanic and Atmospheric Administration's Marine Mammal Health and Stranding Response Program (NOAA/MMHSRP), conducts annual interlaboratory comparison exercises for the determination of chlorinated pesticides, polychlorinated biphenyl congeners (PCBs), and trace elements in marine mammal tissues. These exercises provide one mechanism for laboratories to evaluate their measurement quality and comparability for these constituents in marine mammal tissues. In the 2005 exercise, 4 and 17 laboratories participated in determining the concentrations of selected fatty acids and PCBs and organochlorine pesticides, respectively, in a homogenized blubber control material "Marine Mammal Quality Assurance Exercise Homogenate VII" (Homogenate VII) and Standard Reference Material (SRM) 1945 Organics in Whale Blubber. This report includes the results reported by the participating laboratories, combined consensus data results, and summary statistics for each analyte in the samples. The numerical indices used to assess laboratory performance are also discussed.

INTRODUCTION

Laboratories measuring organic contaminants in the marine environment must assess the accuracy and precision of their measurements. Quality control of measurements made on marine environmental samples is vital to the accurate assessment of marine pollution and its effects on wildlife and human health. NIST aims to improve the quality of analytical measurements of organic contaminants in marine and environmental matrices by developing improved analytical methods, producing NIST Standard Reference Materials (SRMs) and other control materials, and conducting annual interlaboratory comparison exercises.

Through the NIST National Marine Analytical Quality Assurance Program and with support from the NOAA Marine Mammal Health and Stranding Response Program (MMHSRP), NIST conducts interlaboratory comparison activities to include analyses of marine mammal tissues. The 2005 NIST/NOAA Interlaboratory Comparison Exercise Program for Organic Contaminants in Marine Mammal Tissues was modeled after previous exercises (e.g., Schantz et al., 1996; Schantz et al., 2002; Kucklick et al., 2002, Kucklick et al., 2006). The current exercise was designed to help laboratories assess data comparability and quality relative to other groups providing measurements of organochlorine contaminants in marine mammal tissues and to link these important measurements to a national metrology laboratory. The results of the exercises presented in this report should be useful for both assessing current methodology and reducing the variability of contaminant data reported on marine mammals. Future exercises will allow for the assessment of analytical data quality over time. This report summarizes the 2005 organic contaminant exercise including methods used for analysis, data reported by the laboratories on the intercomparison materials, and numerical indices used to assess laboratory performance. A report describing the 2005 trace element results of this exercise is also available (Christopher et al. 2006).

MATERIALS USED IN THE 2005 EXERCISE

The 2005 NIST/NOAA Interlaboratory Comparison Exercise for Organochlorines in Marine Mammal Tissues (2005 MMQA) used two materials sent out to 24 laboratories. Twenty-one data sets from 18 laboratories were submitted for this exercise (Table 1). Seventeen data sets were submitted for organohalogen compounds and four for fatty acid compounds. Participants were asked to make three measurements each on two materials: SRM 1945 "Organics in Whale Blubber" and MMQA-VII (Homogenate VII), the "unknown." The unknown material for the 2005 Organic Intercomparison Exercise was blubber from a male Blainville's beaked whale (*Mesoplodon densirostris*) that stranded in North Carolina, USA. The tissues were homogenized and blended (Zeisler *et al.,* 1983). At a NIST facility in Charleston, South Carolina, the blubber tissue was stored in a liquid nitrogen (LN_2) vapor phase freezer at –150 °C until prepared for this exercise. One bottle of this material containing approximately 10 g along with one bottle of SRM 1945 were sent either on dry ice or using a liquid nitrogen-cooled biological dry shipper via overnight express to each participating laboratory.

Exercise Requirements and Target Analytes

A suite of analytes was chosen for the exercise based on those tested in prior exercises (Schantz et al., 1996; Schantz et al., 2002; Kucklick et al., 2002; Kucklick et al., 2006) and several

additional analytes were included to broaden this list (Table 2a). In addition to the compounds listed in Table 2a, participants were requested to provide, if possible, values for polybrominated diphenyl ether (PBDE) congeners, coplanar polychlorinated biphenyl (PCB) congeners, total toxaphene and toxaphene congeners, chlorinated dioxins and furans and fatty acids (Table 2b). Laboratories were requested to make triplicate measurements of these compounds in each of the materials and to report their data using a data template provided by NIST. Results from the exercise were discussed during a workshop held in conjunction with the 2005 Society of Marine Mammology Biennial meeting in San Diego, California on December 13, 2005.

EVALUATION OF THE EXERCISE RESULTS

Determination of Laboratory Means and Consensus Values for Homogenate VII

Each laboratory reported the results of their analyses (Sample 1, Sample 2, and Sample 3) and the mean for each laboratory was calculated. The consensus value was calculated after comparing the results from an individual laboratory's analysis of SRM 1945 to the certified or reference value for the target organohalogens compounds given on the Certificate of Analysis for SRM 1945. If the value of a compound from a given laboratory for SRM 1945 was within 30 % of the reference value, the laboratory's result for the unknown sample was included in the calculation of the consensus value for the Homogenate VII. The median value for each compound was then calculated (Tables 3-5).

For the fatty acid portion of the exercise, the consensus value was not derived after screening the data as above. The 2005 exercise was only the second time participants were asked to measure fatty acids in SRM 1945 or an unknown; the first time was the 2003 exercise (Kucklick et al., 2006). The fatty acid consensus values for SRM 1945 from the 2003 exercise only consisted of results from three laboratories hence we did not fell it appropriate to use a consensus value based on such a small number of observations to screen data from the 2005 exercise.

Reported Results

Laboratories were assigned a random numerical identification code to shield the identity of the participants with the exception of NIST which was laboratories 1, 2, and 3. The same code was used for both materials. The results from the analysis of Homogenate VII and SRM 1945 are summarized in Tables 3 through 10. Appendix A shows the tabulated results from the individual laboratories for both materials and the results are shown graphically in Appendices B, C, and D. Appendix E gives the methods used for analysis by each laboratory and Appendix F shows data for additional analytes notes.

Table 1: Laboratories Participating in the 2005 NIST/NOAA Interlaboratory Comparison Exercise Program for Organic Contaminants.

Mississippi State Chemical Lab Mississippi State Mississippi State, Mississippi USA	Geochemical and Environmental Research Group Texas A&M University USA
California Animal Health and Food Safety Lab Toxicology UC Davis, School of Veterinary Medicine Davis, California USA	University of Pennsylvania Toxicology Laboratory Philadelphia, Pennsylvania USA
NOAA/National Ocean Service Hollings Marine Laboratory Charleston, South Carolina USA	Center for Marine Environmental studies, Ehime University Ehime, Japan Japan
NOAA/National Marine Fisheries Service Highlands, New Jersey USA	NOAA/National Marine Fisheries Service Northwest Fisheries Science Center Seattle, Washington USA (three data sets)
Laboratory of Environmental Toxicology The Norwegian School of Veterinary Science Oslo Norway	NIST Hollings Marine Laboratory Charleston, South Carolina USA
NOAA/National Ocean Service Center for Coastal Environmental Health and Biomolecular Research Charleston, South Carolina USA	NIST Gaithersburg, Maryland USA (two data sets)
Toxicological Center University of Antwerp (UA) Wilrijk Belgium	Mote Marine Laboratory Sarasota, Florida USA
Veterinary Medical Center Michigan State University East Lansing, Michigan USA	NOAA Auke Bay Laboratory Juneau, Alaska USA
Centre for Environment, Fisheries and Aquaculture Science CEFAS Burnham Laboratory Essex UK	Department of Biology University of Ottawa Ottawa, Ontario Canada

Table 2a: Target Analytes for the NIST/NOAA Interlaboratory Comparison Exercise Program for Organic Contaminants in Marine Mammal Tissues.

Pesticides	PCB Congeners	Substitution
2,4'-DDT	18	2,2',5
4,4'-DDT	28	2,4,4'
2,4'-DDE	31	2,4',5
4,4'-DDE	44	2,2',3,5'
2,4'-DDD	49	2,2',4,5'
4,4'-DDD	52	2,2',5,5'
HCB	66	2,3',4,4'
α-HCH	87	2,2',3,4,5'
γ-HCH	95	2,2',3,5',6l
β-HCH	99	2,2',4,4',5
heptachlor epoxide	101	2,2',4,5,5'
cis-chlordane	105	2,3,3',4,4'
trans-chlordane	118	2,3',4,4',5
oxychlordane	128	2,2',3,3',4,4'
cis-nonachlor	132	2,2',3,3',4,6'
trans-nonachlor	138	2,2',3,4,4',5'
dieldrin	149	2,2',3,4',5',6
Mirex	151	2,2',3,5,5',6
	153	2,2',4,4',5,5'
	156	2,3,3',4,4',5
	170	2,2',3,3',4,4',5
	180	2,2',3,4,4',5,5'
	183	2,2',3,4,4',5',6
	187	2,2',3,4',5,5',6
	194	2,2',3,3',4,4',5,5'
	195	2,2',3,3',4,4',5,6
	201	2,2',3,3',4,5,5',6'
	206	2,2',3,3',4,4',5,5',6
	209	2,2',3,3',4,4',5,5',6,6'

Table 2b: Optional Analytes for the NIST/NOAA Interlaboratory Comparison Exercise Program for Organic Contaminants in Marine Mammal Tissues.

Compound	Substitution	Compound	Substitution
Polybrominated Diphenyl Ethers		**Toxaphene**	
PBDE 47	2,2',4,4'	Total toxaphene	
PBDE 99	2,2',4,4',5	Toxaphene Congener 26	2-endo,3-exo,5-endo,6-exo,8,8,10,10-Octachlorobornane
PBDE 100	2,2',4,4,'6	Toxaphene Congener 50	2-endo,3-exo,5-endo,6-exo,8,8,9,10,10-Nonachlorobornane
PBDE 153	2,2',4,4',5,5'	Toxaphene Congener 62	2,2,5,5,8,9,9,10,10-Nonachlorobornane
PBDE 154	2,2',4,4',5,6'		
		Coplanar PCBs	
Fatty Acids		PCB 77	3,3',4,4'
Lauric acid	C12:0	PCB 126	3,3',4,4',5
Myristic acid	C14:0	PCB 169	3,3',4,4',5,5'
Pentadecanoic acid	C15:0		
		Chloro Dioxins and	
Palmitic acid	C16:0	**Furans**	
		Hexabromocyclododecane	
Margaric acid	C17:0	Isomers (α-, β-, and γ)	
Stearic acid	C18:0		
Arachidic acid	C20:0		
Palmitoleic acid	C16:1(n-7)		
Vaccenic acid	C18:1(n-7)		
Oleic acid	C18:1(n-9)		
Elaidic acid	C18:1(n-9)		
	C20:1(n-7)		
Gondoic	C20:1(n-9)		
Gadoleic acid	C:20:1(n-11)		
Erucic acid	C22:1(n-9)		
Cetoleic	C22:1(n-11)		
Nervonic acid	C24:1(n-9)		
Linoleic acid	C18:2(n-6)		
a-Linolenic acid	C18:3(n-3)		
g-linolenic acid	C18:3(n-6)		
Stearidonic acid	C18:4(n-3)		
Homo-gamma-linoleic acid	C20:2(n-6)		
Homo-alpha-linolenic acid	C20:3(n-3)		
Arachidonic acid	C20:4(n-6)		
EPA	C20:5(n-3)		
	C22:2(n-6)		
DPA	C22:5(n-3)		
DHA	C22:6(n-3)		

Assignment of z-and p-scores

Performance Scores: Different programs have different data quality needs. The acceptability of the results submitted by a laboratory will be decided by the individual program(s) for which the laboratory provides data. Typically, the program will use these exercise results in conjunction with the laboratory's performance in the analysis of certified reference materials and/or control materials, and of other quality assurance samples. These exercise results are shown in a number of ways in this report to aid in the evaluation of data quality.

IUPAC guidelines (IUPAC 1993) describe the use of "z-scores" and "p-scores" for assessment of accuracy and precision in interlaboratory comparison exercises, such as described in this report. These indices assess the difference between the result of the laboratory and the exercise assigned value, and can be used, with caution, to compare performance on different analytes and on different materials.

Accuracy Assessment (z-score):

$$z = \text{bias estimate} / \text{performance criterion}$$

or

$$z = (x - X)/\sigma$$

where x is the individual laboratory result, X is the "Exercise Assigned Value," and σ is the target value for the standard deviation. As described in the IUPAC guidelines, the choice of σ is dependent upon the data quality objective of a particular program. It can be fixed or determined by reference to validated methodology (*e.g.,* the calculated σ from the exercise data, see Tables 3 through 5). The fixed performance criterion is more useful in the comparison of a laboratory's performance on different materials, while the use of the actual variation may be more useful within a given exercise, for example, if the determination of a particular analyte is more problematic than usual.

The z-scores calculated using both approaches and applied to each laboratory's data are given in Appendix A. The same criterion was adopted for use in this exercise as was used in the former NIST/NOAA/NS&T program, where the target standard deviation was set to 25 % of the exercise assigned value. The z-scores for the Homogenate VII represent 25 % of the assigned value so that z = +1 is the assigned value plus 25 %, z = -1 is the assigned value minus 25 % and so forth. z-scores are also calculated based on the standard deviation of an analyte in the unknown material such that z = +1 is one "exercise standard deviation" higher than the assigned value and z = -1 is one "exercise standard deviation" lower than the assigned value and so forth. From a scientific point of view, IUPAC does not recommend the classification of z-scores, but does allow for such classification, *e.g.,*

$|z| \leq 2$ Satisfactory

$2 \leq |z| \leq 3$ Questionable

$|z| \geq 3$ Unsatisfactory

The tables in Appendix A summarize the results and performance indices including the number of analytes that fall within each category for each laboratory.

Precision Assessment (p-score):

$$p = \sigma_{lab} / \sigma_{target} \approx CV_{lab} / CV_{target}$$

where σ_{lab} and σ_{target} are variance estimates for the individual laboratory and the target variance, respectively. The CV_{lab} is the coefficient of variance (or ratio of standard deviation to the mean), while the CV_{target} is a target value chosen by the participants. During the workshop that accompanied this exercise, a target CV of 15 % was agreed upon, which is the same value used by other NIST run exercise programs (Schantz et al., 1996; Schantz et al., 2002; Kucklick et al., 2002; Kucklick et al., 2006). Note that the precision that p describes is that which occurs within a batch of analyses. Between-batch variance is likely larger and was not assessed in this exercise.

RESULTS AND DISCUSSION

Summarized results are shown in Tables 3 through 10 for the compounds listed in Tables 2a and 2b. Tabular results for individual laboratories are given in Appendix A, graphical results are given in Appendices B, C and D, and methods used by individual laboratories along with additional data and notes are given in Appendices E and F, respectively. Seventeen data sets were submitted for the organohalogen portion and four data sets were submitted for the fatty acid portion of the exercise. Fourteen data sets were submitted for pesticides, 12 for PCB congeners, and eight for the requested PBDE congeners. All except one laboratory had participated in the exercise before. For the 2003 exercise, 23 data sets were submitted for the organohalogen portion (PCB congeners and organochlorine pesticides) of the exercise and six data sets were submitted for the fatty acid portion (Kucklick et al., 2006).

The laboratories used a variety of methods to analyze the samples (Appendix E). For extraction, eight laboratories used pressurized fluid extraction, four used Soxhlet extraction, three used assisted extraction either with sonication or homogenization, two used liquid/liquid extraction, and one laboratory used column elution. Most laboratories (15) used internal standards, four laboratories used external standards, and one laboratory used a combination of internal and external standards. For detection, the most commonly used technique was gas chromatography-mass spectrometry (GC-MS; 10 laboratories), followed by GC-electron capture detection (GC-ECD; seven laboratories), GC-flame ionization detection (GC-FID; one lab for fatty acids), liquid chromatography diode array detection (one lab), and a combination of GC-MS and GC-ECD depending on compound class (one lab). All laboratories employing GC used capillary columns ranging in length form 25 m to 60 m. For organohalogen analysis, the most commonly used column was a 5 % phenyl methyl polysiloxane phase.

Based on the consensus values, Homogenate VII had considerably higher concentrations of total pesticides, PCBs, and PBDE congeners relative to SRM 1945 (Tables 3-8; Appendices B through D). The factor differences between Homogenate VII and SRM 1945 (i.e., Homogenate VII concentration/SRM 1945 concentration) were 9.7, 6.7, and 2.7 for the total organochlorine pesticides, total PCB congeners, and PBDE congeners, respectively, listed on Tables 3-8. The difference may be due to habitat, diet, or gender; SRM 1945 was collected from a mature female pilot whale while Homogenate VII was collected from a male Blainvilles's beaked whale. Concentrations of organohalogens are lower in female whales that have had calves relative to male or juvenile toothed whales (e.g., Tuerk et al. 2005).

The relative scatter of reported values seemed similar among compounds with some exceptions. The reported values for lipid (See Appendix C) were less than for the organohalogen compounds. PCB congener 201 showed somewhat of a bimodal distribution of values (Appendix A). For SRM 1945, the certified value for this compound is 16.8 ng/g ± 1.3 ng/g. However, four laboratories reported values averaging about 65 ng/g for this compound. It is likely that the laboratories were using the Zell and Ballschmiter nomenclature (Guitart et al., 1993) and are actually reporting the value for IUPAC congener 199 that has a reference value of 84.8 ng/g ± 2.2 ng/g in SRM 1945. For the 2005 exercise, eight laboratories submitted data for the PBDEs which is three more laboratories than in 2003 (Kucklick et al., 2006). While several laboratories generally had good agreement with the certified values for the PBDE congener values in SRM 1945, a few labs had difficulty consistently obtaining values within 25 % of the certified value indicating that PBDE congener determination is still challenging for some laboratories (Appendix D).

This is the second exercise in which fatty acid analysis was requested. The values for individual fatty acids in SRM 1945 were on average within 25 % of the median of the 2003 results. For comparison, the median values for PCB congeners and organochlorine pesticides in SRM 1945 for the 2005 exercise were on average within 9 % of the certified values. The median fatty acid results from the 2003 and 2005 exercises will be compiled by NIST and listed on the Certificate of Analysis for SRM 1945.

CONCLUSIONS

Twenty-one laboratories submitted data for the two exercise materials on a wide variety of organic constituents including PCBs, pesticides, fatty acids, and PBDE congeners. The repeated participation of many laboratories in the exercise suggests that the exercise has been a useful tool for assessing their analytical performance. A new exercise will be conducted in 2007 using SRM 1945 and a new unknown material. The exercise coordinators plan to vary the type of control material used to include other species of interest such as a delphinid. NIST is somewhat constrained on the choice of the material as a fairly large quantity (≈ 1 kg) is needed, and this amount of material is not available on a routine basis. SRM 1945 will continue to be the control material used in this exercise because it is the only marine mammal tissue available with certified and reference values for organochlorine compounds. During the meeting for participants held in conjunction with the Society of Marine Mammology biennial meeting, several laboratories indicated that a marine mammal plasma, serum, or whole blood should be

included as a matrix for the next exercise. NIST is attempting to obtain blood materials for this purpose. So far the attempts at obtaining a large enough pool of materials for the exercise have not been successful, however these attempts are continuing. It is likely that the blubber and blood exercises will not take place concurrently due to these difficulties.

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Table 3: Median organochlorine pesticide and lipid concentrations in Homogenate VII (Blainville's beaked whale; ng/g wet mass) reported by each laboratory. The values in bold were not used to derive the consensus value (see text for explanation).

Compound	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Overall Median	1 SD	n	Consensus Median	1 SD	n
2,4'-DDT	572	1096	**1473**	**433**	333	295	523	**1011**		**2250**		**1573**			317		**1826**	792	670	12	428	304	6
4,4'-DDT	2624	2427	2511	2320	2343	1432	**3227**	3170	2076	**4023**		**4149**		**1112**	1553		**5021**	2469	1108	14	2343	534	9
2,4'-DDE	102.3	86.8	80.3	76.6		72.9	66.2	82.4							58.0			78.4	13.4	8	78.4	13	8
4,4'-DDE	8694	6265	**9927**	7660	8630	6520	7143	**10370**	6969	5507		7166		2538	5703	8720	**1055**	7143	2515	15	7056	1733	12
2,4'-DDD	111	73.5	84.9	96.6	125	**110**	116	198		**670**		75.0			47.7			110	175	11	97	43	9
4,4'-DDD	1502	471	464	1323	1473	1076		**2490**	1248	1650		1361		760	983	**1940**	**1286**	1305	544	14	1286	412	10
HCB	314	267	277	251	314	**288**	267	279	205			258			208		**181**	267	42	12	267	37	10
alpha-HCH				4.59				6.25				3.66			3.50			4.12	1.3	4.0	4.12	1.3	4
beta-HCH				3.27			13.8					5.79		7.03				6.41	4.5	4			
gamma-HCH							**17.0**	**5.61**				0.87			3.37			4.49	7.1	4	2.12	1.8	2
Heptachlor Epoxide		48.8	49.6	59.2		**63.8**	**51.1**							16.3	**69.7**		**89.4**	55.1	21	8	49.2	19	4
Cis-Chlordane	88.6	87.4	**93.4**	32.0		29.7	17.8	47.8				61.8		86.9	51.0		**94.9**	61.8	29	11	49.4	26	8
Trans-Chlordane	7.79	19.9		7.62		7.14	**16.8**	**41.2**		**1430**		23.5					**80.9**	19.9	469	9	7.79	7.9	5
Oxychlordane	275	350	321	265		240	252	232				275		155	237			258	53	10	258	53	10
Cis-Nonachlor	218	232	242	256		**198**		248				**672**			227	209		232	149	9	232	17	7
Trans-Nonachlor	1830	1888	1851	1410		1494	1360	1397				1737			1353	**116**		1452	515	10	1494	230	9
Dieldrin	164	175	208	210		**235**		303	**100**	**617**				75.0	128	**420**		208	158	11	175	72	7
Mirex	200	165	177	187		128		237.0		**363**		**234**			**155**		**190**	188	65.2	10	177	27	5
Lipid	80.8	79.7	93.5	70.5	87.7	81.7	88.3	73.6	82.0	79.6	78.0	89.3	86	77.4	84.8		86.2	81.8	6.1	16	81.8	6	16

Table 4: Median PCB congener concentrations in Homogenate VII (Blainville's beaked whale; ng/g wet mass) reported by each laboratory. The values in bold were not used to derive the consensus value (see text for explanation).

Congener(s)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Overall Median	1 SD	n	Consensus Median	1 SD	n
18	8.39	4.75	3.46			**8.40**	30.8		**32.0**						**4.2**		**6.84**	7.62	12	8	6.57	13	4
28	23.2	18.6	18.5	15.3			17.7	22.7	**19.3**			20.0	25.0		14.4		**5.6**	18.6	5.3	11	18.6	3.6	9
31		1.76		2.69			**3.0**					16.4			0.0		0.80	2.69	6.5	5	1.76	0.7	3
44	50.2	43.7	44.6	48.5		**47.7**	55.3	46.2	**49.3**						44.1		**6.3**	47.0	13.5	10	46.2	4.2	7
49	88.7	89.1	86.0	92.7		**96.7**	**98.8**	85.0	101						69.6		**25.8**	88.9	22.1	10	88.7	10	7
52	332	284	276	269		222	270	271	262			259.2	344		282		56	271	72	12	271	34	11
66/95*							**380**											380		1			
87		226	**220**	201				195									**40**	201	77	5	201	16	3
99	558	460	490	426		477	465	466				483	324		352		234	465	92	11	465	68	11
101 (+90)	843	715	**753**	609	**2953**			653	645.0			579	465		1070		**178**	653	729	11	649	185	8
105	89.2	95.8	95.7	83.0	90.3	76.1	**112**	84.2	87.0			104.9	92		177		**9.5**	90.3	35	13	90.3	27	11
118	536	695	704	670	813		636	**878**	610			583	553		645		**151**	640	179	12	640	82	10
128	129	148	157	155	144		**157**		173			152	144		171		**74**	152	27	11	150	14	10
132								**1907**							**127**		**29.5**	127	1057	3			0
138 (+163+164)	1902	1375	1388	1563	1377		1217	1273	1326			1507	1062		1670		**343**	1376	381	12	1377	230	11
149	833	743	761	741		859	697	605	636			653	793		720		**185**	731	175	12	741	80	11
151	330	251	277	261		262	277	210	242			294			254		**0**	261	32	10	261	32	10
153	**2496**		**2534**	1970	2207		1387		1831			1977	1703		1320		**542**	1900	600	10	1831	324	7
156	76.3	105	102	94.4	75.9	90.6	102	88.9	**92.7**			112	76.6		155			93.5	22	12	98.2	24	10
170 (+190)	307	286	301			291	281	306	334			305	257		248		**72**	291	70	11	296	25	10
180	908	830	909	834	890	800	827	915	890			1023	540		616		**222**	834	212	13	862	133	12
183	249	233	254	236		199	**259**	249	222			199	206		242		**82**	234	48	12	234	21	10
187	969	794	800	720		648	635	699	747			**478**	572		609		**252**	674	180	12	710	116	10
194	136	121	127	128		**149**	**161**	110	135			149	76.9		**162**		**30**	131	38	12	127	22	8
195	36.1	41.5	35.8	33.7		37.5	77.0	30.9							84		**9.67**	36.1	23	9	36.8	21	8
201	50.8	47.2	45.2	**276**		**276**	**272**	40.8							**292**		**94**	94.0	119	9	46.2	4.2	4
206	78.8	81.7	84.6	79.3		63.9	84.4	68.3				92.4			131		**27.0**	80.5	26	10	81.7	19	9
209	34.0	26.6	25.3	23.9		18.1	**35.0**	22.2				36.9			43		**9.5**	26.0	9.8	10	26.0	8.3	8
66	56.4	83.1	77.2	73.4		**87.3**		68.5	103			246			107		**55.0**	80.2	55	10	77.2	61	9
95	290	333	357	335		250							255		326			326	42	7	308	39	6

Table 5: Median PBDE congener concentrations in Homogenate VII (Blainville's Beaked whale; ng/g wet mass) reported by each laboratory. The values in bold were not used to derive the consensus value (see text for explanation).

Compound	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Median	1 SD	n	Consensus Median	1 SD	n
PBDE 47	160			153		174	143				119	103	121		122			132	24	8	132	24	8
PBDE 99				26.3		**43.5**	26.6				21.7	19.2	22.2		**76.0**			26.3	20	7	22.2	3.2	5
PBDE 100	49.9			39.7		**44.8**	40.8				41.4	25.6	34.6		28.9			40.2	8.1	8	39.7	8.2	7
PBDE 153	17.1			15.4		**26.1**	16.1				13.1	12.6	12.6		**35.3**			15.8	8.1	8	14.2	2.0	6
PBDE 154	54.7			37.5		**61.6**	44.6				35.9	28.0	33.4		**17.6**			36.7	14	8	36.7	9.4	6

Table 6: Median organochlorine pesticide and lipid concentrations in SRM 1945 determined by each laboratory (ng/g wet mass and percent (mass fraction), respectively).

Compound	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Median	1 SD	± 95% CI	n	Reference Value	Uncertainty	Comment
2,4'-DDT	97.7	94.9	134	57.5	85.4	85.3	101	130.7		220		178			71.0		266	99	64	36	12	90.9	13.5	certified value
4,4'-DDT	255	220	239	169	229	196	362	251	216	440		372		383	180		370	245	89	46	14	233	8.02	certified value
2,4'-DDE	16.8	12.5	11.1	14.2		17.4	14.3	14.2							17.3			14.2	2.3	1.6	8	14.2	1.39	certified value
4,4'-DDE	519	470	851	516	477	482	509	687	452	407		510		355	412	454	85.7	477	162	82	15	497	19.5	certified value
2,4'-DDD	22.0	17.9	21.2	18.5	24.7	53.2	25.1	21.7		93.3		18.0			19.7			21.7	23	14	11	19.55	1.18	certified value
4,4'-DDD	120	126	86.7	117	114	152		199	96.0	153		102		78.2	106	160	167	119	35	18	14	119.9	4.87	certified value
HCB	30.9	28.6	32.6	27.3	30.6	41.3	37.1	29.9	26.7			28.6			25.9		40.3	30.3	5.2	2.9	12	30.6	1.45	certified value
alpha-HCH	21.1			16.1				17.6				13.9		7.30	13.0		20.3	16.1	4.7	3.5	7	16.9	1.41	certified value
beta-HCH				5.02			11.2	10.4				2.0		5.03	6.33			5.68	3.5	2.8	6			
gamma-HCH	4.81			2.95			107	8.3				2.5			3.37		3.85	3.85	39	29	7	3.18	0.01	certified value
Heptachlor Epoxide		10.7	10.3	10.0		23.9	17.9	15.4						9.57	16.3		14.0	14.0	4.7	3.1	9	10.7	0.09	certified value
Cis-Chlordane	58.4	47.1	81.1	51.0		43.5	45.7	50.2				52.0		24.8	41.7		22.7	47.1	16	9.3	11	48.1	1.58	certified value
Trans-Chlordane	12.4	11.8	5.65	11.2		11.1	20.2	27.0		145		15.1			12.7		70.7	12.7	42	25	11	11.8	0.54	certified value
Oxychlordane	19.0	21.6	23.8	17.4		18.7	21.5	24.8				20.7		21.2	17.3			21.0	2.5	1.6	10	21.2	1.06	certified value
Cis-Nonachlor	36.3	48.0	55.0	50.7		62.5		53.0				115			52.7	46.0		52.7	22	15	9	45.8	3.29	certified value
Trans-Nonachlor	197	193	241	162		173	170	197				189			153	93.5		181	38	24	10	197.5	15.5	certified value
Dieldrin	52.7	53.4	52.5	47.6		67.0		58.8	33.5	103				52.0	41.3	81.5		52.7	19	12	11	50.1	4.05	certified value
Mirex	34.9	27.7	37.4	32.6		39.5		43.0		127		44.7			18.7		55.4	38.5	30	19	10	31.0	3.35	certified value
Lipid	71.2	72.2	72.0	61.9	52.4	68.8	74.1	54.0	73.3	63	69.3	76.5	75.2	64.9	72.3		75.0	71.6	6.6	3.2	16	71.9	1.27	reference value

Table 7: Median PCB congener concentrations in SRM 1945 determined by each laboratory (ng/g wet mass).

Congener	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Median	1 SD	± 95% CI	n	Reference Value	Uncertainty	Comment
18	5.19	4.81	3.49			8.43	5.16	3.38							2.57		8.16	4.99	2.2	1.5	8	4.35	0.56	certified value
28	13.5	12.5	9.91	10.5			13.8	14.8				10.5	12.4		11.5		5.68	11.9	2.6	1.6	10	13.1	1.07	certified value
31	2.79	3.26	3.94	3.23			6.42					7.70	2.27		4.38		3.00	3.26	1.8	1.2	9	3.56	0.36	certified value
44	11.3	11.2	11.3	12.8		16.9	13.0	13.5							10.9		4.05	11.3	3.4	2.2	9	12.1	0.51	certified value
49	18.3	18.3	18.5	18.8		28.3	25.3	18.2	17.5						16.9		10.8	18.3	4.7	2.9	10	18.3	0.04	certified value
52	43.0	42.2	39.8	38.1		36.3	47.5	38.3	31.0			38.4	43.9		34.4		18.5	38.3	7.5	4.2	12	40.7	1.30	certified value
66/95*							64.0																	
87		18.8	28.2	26.0				22.8									12.6	22.8	6.2	5.4	5	20.6	2.55	certified value
99	65.0	56.5	68.2	56.8		69.7	63.8	58.8				67.3	44.0		58.6		49.2	58.8	8.1	4.8	11	58.5	5.17	certified value
101 (+90)	98.0	71.6	104.1	78.2	456			78.8	79.3			81.3	62.3		79.4		43.8	79.3	115	68	11	78.2	12.4	certified value
105	26.7	26.5	30.8	28.1	31.6	31.0	37.7	24.7	32.3			31.5	29.5		25.3		10.8	29.5	6.3	3.4	13	28.6	1.16	certified value
118	68.9	75.2	98.9	84.5	96.1		88.1	102.9	79.7			81.5	74.5		67.1		42.6	80.6	16	9.3	12	76.5	2.87	certified value
128	22.2	22.9	24.8	23.7	20.0		34.8	22.7	28.3			23.3	23.4		26.5		22.8	23.3	3.8	2.2	12	23.0	1.06	certified value
132								224.0							35.4		9.4	35.4	117	133	3	21.1	4.75	reference value
138 (+163+164)	182	143	166	189	144		165	137	156			170	133		173		84	161	28	16	12	146	12.9	certified value
149	103	95.0	99.2	84.1		98.3	95.5	70.1	80.7			69.6	95.7		74.1		39.6	89.6	18	10	12	89.0	6.94	certified value
151	32.3	26.8	32.5	27.8		31.7	32.2	21.1	26.7			32.5			26.2			27.8	9.5	5.6	11	28.6	1.33	certified value
153	300		334	249	279	0.0	201		215			245	211		181		109	230	64	40	10	228	9.75	certified value
156	10.2	11.0	14.0	12.3	8.02	15.8	14.6	10.9	16.0			13.4	10.2		12.6			12.4	2.5	1.4	12	11.4	0.95	certified value
170 (+190)	43.9	43.4	46.9			47.1	40.3	44.1	49.0			44.3	39.1		33.0		25.6	43.9	6.9	4.1	11	42.6	2.18	certified value
180	148	133	169	143	141	141	165	157	160			153	100		107		73.1	143	28	15	13	138.3	9.70	certified value
183	39.3	35.1	44.7	39.9		37.4	49	42.3	38.7			37.7	36.6		30.5		21.3	38.2	7.0	4.0	12	38.04	1.83	certified value
187	150	113	146	116		117	130	116	124			83.9	103		97.0		64.0	116	24	14	12	121.5	11.1	certified value
194	64.6	47.2	60.3	55.7		78.8	77.9	50.3	61.0			60.3	37.7		32.0		29.9	58.0	16	9.0	12	53.5	5.18	certified value
195	14.0	12.6	11.5	10.3		15.4	11.6	12.5							15.3		5.23	12.5	3.1	2.0	9	14.3	2.17	certified value
201	16.7	16.2	15.8	80.2		24.9	87.5	13.1							53.7		43.0	24.9	29	18.9	9	16.8	1.30	certified value
206	50.5	43.8	54.3	48.5		39.8	51.8	44.0				52.9			35.9		25.5	46.3	9.0	5.6	10	44.9	4.23	certified value
209	18.7	18.9	20.5	18.1		13.3	25.5	19.0				19.8			14.6		10.4	18.8	4.2	2.6	10	17.2	1.86	certified value
66	22.3	22.9	26.7	22.2		30.5		21.8	26.7			25.4			22.2		18.2	22.6	3.5	2.1	10	22.4	0.51	certified value
95	33.3	33.5	47.9	39.6		39.3		35.0					33.0		39.8			37.1	5.1	3.5	8	33.9	0.51	certified value

Table 8: Median PBDE congener concentrations in SRM 1945 determined by each laboratory (ng/g wet mass).

Congener	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Median	1 SD	± 95% CI	n	Reference Value	Uncertainty	Comment
PBDE 47	39.7			37.0		51.5	40.9				35.5	37.8	36.4		32.3			37.4	5.7	4.0	8	39.6	0.18	certified value
PBDE 99				15.4		29.4	17.6				16.5	16.5	16.4		46.9			16.5	12	8.7	7	18.9	2.32	certified value
PBDE 100	12.0			8.44		16.4	9.51				10.3	9.24	9.10		9.39			9.45	2.6	1.8	8	10.3	1.13	certified value
PBDE 153	8.01			7.46		17.3	7.16				8.33	8.38	7.50		12.6			8.17	3.6	2.5	8	8.34	0.55	certified value
PBDE 154	10.9			11.3		30.8	12.3				12.4	13.0	10.9		8.26			11.8	7.0	4.9	8	13.3	1.73	certified value

Table 9: Results from the analysis of Homogenate VII (Blainville's beaked whale) for fatty acids. Values are in percent (mass fraction). Fatty acids not requested for the exercise are given in Appendix F.

Compound (Synonyms)			Laboratory					
			18	19	20	21	Median	1 SD
Lauric acid	Dodecanoic acid	C12:0	0.082	0.080	0.059	0.092	0.078	0.01
Myristic acid	Tetradecanoic acid	C14:0	0.72	1.51	1.19	1.72	1.28	0.44
Pentadecanoic acid	Pentadecanoic acid	C15:0	0.075	0.073	0.052	0.084	0.071	0.01
Palmitic acid	Hexadecanoic acid	C16:0	0.98	2.44	1.78	2.64	1.96	0.75
Margaric acid	Heptadecanoic acid	C17:0	0.058	0.050	0.043	0.071	0.055	0.01
Stearic acid	Octadecanoic acid	C18:0	0.65	0.71	0.48	0.89	0.68	0.17
Arachidic acid	Eicosanoic acid	C20:0	0.082	0.12	0.054	0.16	0.10	0.05
Palmitoleic acid	(Z)-9-Hexadecanoic acid	C16:1(n-7)	3.04	3.09	2.34	3.54	3.00	0.49
Vaccenic acid	(Z)-11-Octadecenoic acid	C18:1(n-7)	1.31	1.25	0.99	1.49	1.26	0.21
Oleic acid	(Z)-9-Octadecanoic acid	C18:1(n-9)	18.3	13.4	8.00	15.2	13.7	4.3
Elaidic acid	(E)-9-Octadecenoic acid	C18:1(n-9)						
	(Z)-13-eicosenoic acid	C20:1(n-7)		0.26	0.25	0.35	0.29	0.06
Gondoic	(Z)-11-eicosenoic acid	C20:1(n-9)	6.09	7.09	4.62	8.17	6.49	1.51
Gadoleic acid	(Z)-9-Eicosenoic acid	C:20:1(n-11)	5.91	5.04	3.32	5.69	4.99	1.17
Erucic acid	(Z)-13-Docosenoic acid	C22:1(n-9)	0.73	0.73	0.42	1.11	0.75	0.28
Cetoleic	(Z)-11-docosenoic acid	C22:1(n-11)	5.94	4.64	3.06	5.41	4.76	1.26
Nervonic acid	(Z)-15-Tetracosenoic acid	C24:1(n-9)	0.19	0.15	0.08	0.20	0.16	0.05
Linoleic acid	(Z,Z)-9,12-Octadecadienoic acid	C18:2(n-6)	0.47	0.41	0.03	0.54	0.36	0.23
a-Linolenic acid	(Z,Z,Z)-9,12,15-Octadecatrienoic acid	C18:3(n-3)	0.54	0.083		0.17	0.26	0.24
g-linolenic acid	(Z,Z,Z)-6,9,12-Octadecatetraenoic acid	C18:3(n-6)	0.011	0.010		0.022	0.014	0.01
Stearidonic acid	(Z,Z,Z,Z,)-6,9,12,15-Octadecatetraenoic acid	C18:4(n-3)	0.079	0.143		0.090	0.10	0.03
Homo-gamma-linoleic acid	(Z,Z)-11,14-Eicosadienoic acid	C20:2(n-6)	0.15	0.067		0.17	0.13	0.06
Homo-alpha-linolenic acid	(Z,Z,Z)-11,14,17-Eicosatrienoic acid	C20:3(n-3)		0.030		0.066	0.048	0.03
Arachidonic acid	(Z,Z,Z,Z)-5,8,11,14-Eicosatetraenoic acid	C20:4(n-6)	0.13	0.12	0.04	0.18	0.12	0.06
EPA	(Z,Z,Z,Z,Z)-5,8,11,14,17-Eicosapentaenoic acid	C20:5(n-3)	0.38	0.31	0.11	0.51	0.33	0.17
	(Z,Z)-13,16-Docosadienoic acid	C22:2(n-6)	0.031			0.033	0.032	
DPA	(Z,Z,Z,Z,Z)-7,10,13,16,19-Docosapentaenoic acid	C22:5(n-3)	0.29	0.20	0.08	0.47	0.26	0.17
DHA	(Z,Z,Z,Z,Z,Z)-4,7,10,13,16,19-Docosahexaenoic Acid	C22:6(n-3)	0.86	0.57	0.10	0.85	0.59	0.36

Table 10: Results from the analysis of SRM 1945 for fatty acids. Values are in percent (mass fraction). Fatty acids not requested for the exercise are given in Appendix F. 2003 values are the median of results from thee laboratories.

Compound (Synonyms)			Laboratory						2003 Values	
			18	19	20	21	Median	1 SD	Median	1 SD
Lauric acid	Dodecanoic acid	C12:0	0.19	0.15	0.13	0.19	0.16	0.03	0.20	0.09
Myristic acid	Tetradecanoic acid	C14:0	0.87	3.13	2.71	3.63	2.59	1.20	3.44	1.2
Pentadecanoic acid	Pentadecanoic acid	C15:0	0.25	0.30	0.23	0.36	0.28	0.06	0.36	0.08
Palmitic acid	Hexadecanoic acid	C16:0	1.22	7.51	5.96	7.41	5.52	2.96	7.13	3.5
Margaric acid	Heptadecanoic acid	C17:0	0.16	0.22	0.16	0.25	0.20	0.05	0.25	0.09
Stearic acid	Octadecanoic acid	C18:0	0.83	1.25	1.11	1.43	1.16	0.25	1.36	0.38
Arachidic acid	Eicosanoic acid	C20:0	0.069	0.10	0.075	0.14	0.10	0.03	0.11	0.02
Palmitoleic acid	(Z)-9-Hexadecanoic acid	C16:1(n-7)	5.08	5.75	4.50	6.46	5.45	0.85	6.47	1.8
Vaccenic acid	(Z)-11-Octadecenoic acid	C18:1(n-7)	1.59	1.80	1.61	2.00	1.75	0.19	2.04	0.7
Oleic acid	(Z)-9-Octadecanoic acid	C18:1(n-9)	17.8	13.9	10.9	15.2	14.4	2.83	16.7	2.5
Elaidic acid	(E)-9-Octadecenoic acid	C18:1(n-9)							0.21	0.08
	(Z)-13-eicosenoic acid	C20:1(n-7)		0.24	0.18	0.27	0.23	0.04		
Gondoic	(Z)-11-eicosenoic acid	C20:1(n-9)	4.24	4.67	3.54	5.27	4.43	0.73	5.04	1.9
Gadoleic acid	(Z)-9-Eicosenoic acid	C:20:1(n-11)	3.05	2.94	2.48	3.25	2.93	0.33	1.41	1.6
Erucic acid	(Z)-13-Docosenoic acid	C22:1(n-9)	0.47	0.51	0.44	0.80	0.56	0.17	0.70	0.20
Cetoleic	(Z)-11-docosenoic acid	C22:1(n-11)	5.14	4.61	3.32	5.17	4.56	0.86	4.12	
Nervonic acid	(Z)-15-Tetracosenoic acid	C24:1(n-9)	0.29	0.22	0.13	0.30	0.24	0.08	0.30	
Linoleic acid	(Z,Z)-9,12-Octadecadienoic acid	C18:2(n-6)	0.75	0.75	0.11	0.91	0.63	0.36	0.91	0.30
a-Linolenic acid	(Z,Z,Z)-9,12,15-Octadecatrienoic acid	C18:3(n-3)	0.35	0.32		0.40	0.36	0.04	0.62	0.21
g-linolenic acid	(Z,Z,Z)-6,9,12-Octadecatetraenoic acid	C18:3(n-6)	0.018	0.020		0.026	0.021	0.004	0.02	0.01
Stearidonic acid	(Z,Z,Z,Z,)-6,9,12,15-Octadecatetraenoic acid	C18:4(n-3)	0.21	0.23		0.20	0.21	0.02	0.18	
Homo-gamma-linoleic acid	(Z,Z)-11,14-Eicosadienoic acid	C20:2(n-6)	0.22	0.17		0.030	0.14	0.10	0.24	0.09
Homo-alpha-linolenic acid	(Z,Z,Z)-11,14,17-Eicosatrienoic acid	C20:3(n-3)	0.14	0.13		0.19	0.16	0.03	0.18	
Arachidonic acid	(Z,Z,Z,Z)-5,8,11,14-Eicosatetraenoic acid	C20:4(n-6)	0.23	0.22	0.08	0.31	0.21	0.10	0.30	
EPA	(Z,Z,Z,Z,Z)-5,8,11,14,17-Eicosapentaenoic acid	C20:5(n-3)	1.09	1.12	0.54	1.27	1.00	0.32	1.44	0.32
	(Z,Z)-13,16-Docosadienoic acid	C22:2(n-6)	0.02			0.04	0.029	0.01	0.018	0.01
DPA	(Z,Z,Z,Z,Z)-7,10,13,16,19-Docosapentaenoic acid	C22:5(n-3)	1.00	0.88	0.48	0.94	0.83	0.23	1.05	0.3
DHA	(Z,Z,Z,Z,Z,Z)-4,7,10,13,16,19-Docosahexaenoic Acid	C22:6(n-3)	3.34	3.70	0.88	4.33	3.06	1.51	4.42	1.5

Appendix A

Tabular results of PCB congener, pesticide, PBDE congener, and lipid data reported by all laboratories.

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 1**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	573	569	576	92.9	100	100	572	0.6	97.7	4.2	428	243	90.9	13.5	1.4	0.5	0.0
4,4'-DDT	2577	2621	2673	255	254	256	2624	1.8	255	0.4	2343	349	233	8.02	0.5	0.5	0.1
2,4'-DDE	105	105	97.1	17.4	16.9	16.1	102	4.5	16.8	4.0	78.4	9.3	14.2	1.39	1.2	1.8	0.3
4,4'-DDE	8882	8621	8578	517	509	531	8694	1.9	519	2.1	7056	981	497	19.5	0.9	0.9	0.1
2,4'-DDD	118	109	107	22.8	21.2	21.8	111	5.3	22.0	3.5	96.6	28	19.5	1.18	0.6	0.3	0.4
4,4'-DDD	1486	1499	1521	120	120	121	1502	1.2	120	0.2	1286	255	120	4.87	0.7	0.5	0.1
HCB	321	314	308	31.0	29.1	32.7	314	2.0	30.9	5.9	267	23	30.6	1.45	0.7	1.3	0.1
α-HCH	<2	<2	<2	20.1	18.9	24.2	<2		21.1	13.3	4.12	1.2	16.9	1.41			
β-HCH	<2	<2	<2	<2	<2	<2	<2										
γ-HCH	<2	<2	<2	4.85	4.39	5.18	<2		4.81	8.2	2.12	2.5	3.18	0.01			
Heptachlor Epoxide	<10	<10	<10	<10	<10	<10	<10				49.2	18	10.7	0.09			
Cis-Chlordane	83.2	92.6	89.9	59.9	59.8	55.6	89	5.4	58.4	4.2	49.4	18	48.1	1.58	3.2	1.5	0.4
Trans-Chlordane	7.76	7.07	8.55	11.8	12.5	13.0	7.79	9.5	12.4	4.6	7.79	6.9	11.8	0.54	0.0	0.0	0.6
Oxychlordane	261	300	264	18.9	19.7	18.5	275	7.9	19.0	3.1	258	33	21.2	1.06	0.3	0.3	0.5
Cis-Nonachlor	208	217	229	33.7	36.7	38.6	218	4.9	36.3	6.8	232	12	45.8	3.29	-0.2	-0.8	0.3
Trans-Nonachlor	1751	1768	1972	193	192	205	1830	6.7	197	3.9	1494	150	198	15.5	0.9	1.5	0.4
Dieldrin	171	150	171	49.1	54.9	54.0	164	7.4	52.7	5.9	175	53	50.1	4.05	-0.3	-0.2	0.5
Mirex	197	206	196	31.8	35.4	37.4	200	2.9	34.9	8.1	177	24	31.0	3.35	0.5	0.8	0.2
PBDE 47	152	160	167	38.3	40.7	40.0	160	4.7	39.7	3.1	132	17	39.6	0.18	0.8	1.1	0.3
PBDE 99	inf*	inf	inf	inf	inf	inf					22.2	2.8	18.9	2.32			
PBDE 100	45.8	49.1	54.7	11.7	12.7	11.6	49.9	9.0	12.0	5.1	39.7	6.1	10.3	1.13	1.0	1.2	0.6
PBDE 153	16.7	17.5	17.2	7.93	8.13	7.96	17.1	2.3	8.01	1.4	14.2	1.6	8.34	0.55	0.8	1.4	0.2
PBDE 154	54.0	52.9	57.2	10.4	10.4	12.0	54.7	4.1	10.9	8.7	36.7	7.5	13.3	1.73	2.0	1.9	0.3
Lipid (mass fraction (%))	82.1	80.3	80.1	71.8	70.8	71.1	80.8	1.40	71.2	0.74	80.5	3.3	71.9	1.27	0.0	0.0	0.1

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	18	19	19
2 to 3	0	0	0
≥ 3	1	0	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 1**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18	8.19	8.11	8.88	5.23	5.19	5.15	8.39	5	5.2	0.9	6.57	12.6	4.35	0.56	1.1	0.1	0.3
28	22.9	22.4	24.4	13.9	13.2	13.3	23.2	4.5	13.5	2.6	18.6	2.4	13.06	1.07	1.0	1.3	0.3
31	<2	<2	<2	2.9	2.7	2.7	<2		2.8	3.5	1.76	0.7	3.56	0.36			
44	46.9	52.2	51.4	11.5	11.1	11.3	50.2	5.7	11.3	1.7	46.2	3.1	12.1	0.51	0.3	0.9	0.4
49	84.7	91.0	90.4	18.3	18.4	18.1	88.7	3.9	18.3	0.6	88.7	7.0	18.3	0.04	0.0	0.0	0.3
52	333	328	335	41.7	43.3	43.9	332	1.1	43.0	2.6	271	20	40.7	1.30	0.9	1.8	0.1
66/95*	below	below	below	below	below	below	below		below								
87	inf*	inf	inf	inf	inf	inf	inf		inf		201	18	20.6	2.55			
99	592	561	520	65.4	63.0	66.5	558	6.5	65.0	2.7	465	40	58.5	5.17	0.8	1.4	0.4
101 (+90)	870	852	806	97.5	97.0	99.4	843	3.9	98.0	1.3	649	129	78.2	12.4	1.2	1.0	0.3
105	91.1	86.3	90.0	27.0	25.8	27.4	89.2	2.8	26.7	3.1	90	16	28.6	1.16	0.0	0.0	0.2
118	541	531	536	68.5	67.7	70.6	536	0.9	68.9	2.2	640	51	76.5	2.87	-0.7	-1.3	0.1
128	127	126	134	22.4	22.2	22.1	129	3.1	22.2	0.7	150	8.6	23.0	1.06	-0.6	-1.5	0.2
132	w/153	w/153	w/153	w/153	w/153	w/153	w/153		w/153				21.1	4.75			
138 (+163+164)	1867	1876	1963	174	181	192	1902	2.8	182	5.1	1377	136	146	12.9	1.5	2.3	0.2
149	849	831	818	103.5	101.8	103.6	833	1.9	103	1.0	741	47	89.0	6.94	0.5	1.1	0.1
151	330	333	327	32.3	32.3	32.2	330	0.9	32.3	0.2	261	20	28.6	1.33	1.0	2.1	0.1
153	2489	2476	2522	301	297	302	2496	1.0	300	0.9	1831	240	228	9.75	1.5	2.1	0.1
156	77.2	72.1	79.5	9.9	10.1	10.5	76.3	5.0	10.2	3.0	98.2	15	11.4	0.95	-0.9	-0.9	0.3
170 (+190)	296	314	312	45.7	41.5	44.6	307	3.2	43.9	5.0	296	16	42.6	2.18	0.2	0.5	0.2
180	880	919	924	150	145	148	908	2.7	148	1.7	862	75	138	9.70	0.2	0.3	0.2
183	235	264	248	39.7	38.8	39.5	249	5.9	39.3	1.2	234	13	38.0	1.83	0.3	0.7	0.4
187	932	1006	970	148	147	155	969	3.8	150	2.8	710	72	121	11.1	1.5	2.2	0.3
194	133	142	132	63.0	65.2	65.6	136	4.1	64.6	2.2	127	15	53.5	5.18	0.3	0.4	0.3
195	38.0	35.0	35.2	13.8	13.6	14.5	36.1	4.6	14.0	3.3	37	14	14.3	2.17	-0.1	0.0	0.3
201	50.0	55.5	46.8	16.7	16.2	17.4	50.8	8.6	16.7	3.8	46.2	4.1	16.8	1.30	0.4	1.1	0.6
206	82.5	75.0	78.9	49.8	51.2	50.5	78.8	4.8	50.5	1.4	81.7	13	44.9	4.23	-0.1	-0.2	0.3
209	32.6	32.0	37.5	17.8	19.8	18.5	34.0	8.8	18.7	5.3	26.0	5.7	17.2	1.86	1.2	1.0	0.6
66	54.0	55.8	59.4	22.0	22.4	22.5	56.4	4.9	22.3	1.2	77.2	40	22.4	0.51	-1.1	-0.3	0.3
95	307	293	270	33.6	32.9	33.4	290	6.5	33.3	1.1	308	31	33.9	0.51	-0.2	-0.5	0.4

[a]Certified values are in bold [b]See text for explaination

*interference

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	26	22	26
2 to 3	0	4	0
≥ 3	0	0	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 2**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	1079	1066	1144	96.7	93.6	94.5	1096	3.8	94.9	1.7	428	243	90.9	13.5	6.3	2.2	0.3
4,4'-DDT	2390	2450	2440	221	207	231	2427	1.3	220	5.5	2343	349	233	8.02	0.1	0.2	0.1
2,4'-DDE	83.5	91.3	85.6	12.5	12.9	12.1	87	4.6	12.5	3.2	78.4	9.3	14.2	1.39	0.4	0.6	0.3
4,4'-DDE	6315	6193	6287	462	467	481	6265	1.0	470	2.1	7056	981	497	19.5	-0.4	-0.5	0.1
2,4'-DDD	73.0	71.1	76.5	18.1	18.1	17.6	74	3.7	17.9	1.6	96.6	28	19.5	1.18	-1.0	-0.5	0.2
4,4'-DDD	481	456	477	130	126	122	471	2.8	126	3.2	1286	255	120	4.87	-2.5	-2.0	0.2
HCB	269	277	254	31.4	27.1	27.3	267	4.4	28.6	8.5	267	23	30.6	1.45	0.0	0.0	0.3
α-HCH	<20	<20	<20	<20	<20	<20	<20		<20		4.12	1.2	16.9	1.41			
β-HCH	<10	<10	<10	<10	<10	<10	<10		<10								
γ-HCH	<10	<10	<10	<10	<10	<10	<10		<10		2.12	2.5	3.2	0.01			
Heptachlor Epoxide	45.9	49.2	51.4	10.3	10.4	11.5	48.8	5.7	10.7	6.2	49.2	18	10.7	0.09	0.0	0.0	0.4
Cis-Chlordane	80.3	90.1	91.7	47.3	46.8	47.3	87.4	7.1	47.1	0.6	49.4	18	48.1	1.58	3.1	1.5	0.5
Trans-Chlordane	20.4	19.5	19.7	12.3	11.8	11.3	19.9	2.4	11.8	4.2	7.79	6.9	11.8	0.54	6.2	1.5	0.2
Oxychlordane	366	347	338	21.9	22.1	20.7	350	4.1	21.6	3.5	258	33	21.2	1.06	1.4	1.7	0.3
Cis-Nonachlor	237	234	224	48.3	48.5	47.3	232	2.9	48.0	1.3	232	12	45.8	3.29	0.0	0.0	0.2
Trans-Nonachlor	1916	1896	1851	193	196	190	1888	1.8	193	1.6	1494	150	198	15.5	1.1	1.7	0.1
Dieldrin	166	186	174	52.9	51.3	55.9	175	5.7	53.4	4.4	175	53	50.1	4.05	0.0	0.0	0.4
Mirex	168	164	164	28.6	27.3	27.1	165	1.4	27.7	2.9	177	24	31.0	3.35	-0.3	-0.4	0.1
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.3	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))	78.8	80.3	80.1	72.5	70.8	73.1	79.7	1.05	72.2	1.63	80.5	3.3	71.9	1.27	0.0	-0.1	0.07

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	12	15	16
2 to 3	1	1	0
≥ 3	3	0	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 2**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18	4.88	4.71	4.66	4.99	4.71	4.74	4.75	2	4.8	3.2	6.57	12.6	4.35	0.56	-1.1	-0.1	0.2
28	18.4	18.3	19.1	12.9	12.1	12.6	18.6	2.3	12.5	3.2	18.6	2.4	13.06	1.07	0.0	0.0	0.2
31	1.74	1.83	1.71	3.2	3.2	3.4	1.8	3.5	3.3	3.0	1.76	0.7	3.56	0.36	0.0	0.0	0.2
44	40.3	46.2	44.6	11.2	10.6	11.9	43.7	7.0	11.2	5.8	46.2	3.1	12.1	0.51	-0.2	-0.6	0.5
49	87.2	89.9	90.1	18.7	17.5	18.6	89.1	1.8	18.3	3.6	88.7	7.0	18.3	0.04	0.0	0.0	0.1
52	283	298	271	41.2	44.4	40.9	284	4.8	42.2	4.6	271	20	40.7	1.30	0.2	0.4	0.3
66/95*	below	below	below	below	below	below	below		below								
87	214	226	237	19.6	18.3	18.4	226	5.1	18.8	3.9	201	18	20.6	2.55	0.5	1.5	0.3
99	470	438	472	55.4	58.2	55.9	460	4.1	56.5	2.6	465	40	58.5	5.17	0.0	-0.1	0.3
101 (+90)	711	725	710	70.7	71.5	72.7	715	1.2	71.6	1.4	649	129	78.2	12.4	0.4	0.4	0.1
105	95.9	98.7	92.7	26.8	25.4	27.3	95.8	3.1	26.5	3.7	90	16	28.6	1.16	0.2	0.2	0.2
118	697	710	677	78.7	70.4	76.5	695	2.4	75.2	5.7	640	51	76.5	2.87	0.3	0.7	0.2
128	159	142	144	21.8	23.4	23.4	148	6.3	22.9	4.0	150	8.6	23.0	1.06	-0.1	-0.1	0.4
132	w/153	w/153	w/153	w/153	w/153	w/153	w/153		w/153				21.1	4.75			
138 (+163+164)	1347	1385	1394	148	134	146	1375	1.8	143	5.3	1377	136	146	12.9	0.0	0.0	0.1
149	742	762	724	97.1	97.3	90.6	743	2.6	95	4.0	741	47	89.0	6.94	0.0	0.0	0.2
151	264	232	257	27.3	26.4	26.7	251	6.7	26.8	1.7	261	20	28.6	1.33	-0.2	-0.3	0.4
153	w/132	w/132	w/132	w/132	w/132	w/132	w/132		w/132		1831	240	228	9.75			
156	108	107	101	11.7	10.7	10.5	105	3.6	11.0	5.9	98.2	15	11.4	0.95	0.3	0.3	0.2
170 (+190)	287	298	272	44.9	42.4	42.9	286	4.6	43.4	3.0	296	16	42.6	2.18	-0.1	-0.4	0.3
180	842	821	828	133	139	127	830	1.3	133	4.5	862	75	138	9.70	-0.1	-0.2	0.1
183	243	239	216	36.9	36.2	32.1	233	6.3	35.1	7.4	234	13	38.0	1.83	0.0	-0.1	0.4
187	803	798	781	116	119	103	794	1.5	113	7.5	710	72	121	11.1	0.5	0.7	0.1
194	127	118	119	48.7	43.2	49.7	121	4.1	47.2	7.4	127	15	53.5	5.18	-0.2	-0.3	0.3
195	41.9	42.3	40.4	12.5	12.4	12.9	41.5	2.4	12.6	2.1	36.8	14	14.3	2.17	0.5	0.2	0.2
201	48.6	47.6	45.3	16.4	16.6	15.7	47.2	3.6	16.2	2.9	46.2	4.1	16.8	1.30	0.1	0.2	0.2
206	82.6	81.9	80.7	45.1	42.5	43.9	81.7	1.2	43.8	3.0	81.7	13	44.9	4.23	0.0	0.0	0.1
209	28.3	26.7	24.8	18.2	18.6	19.8	26.6	6.6	18.9	4.4	26.0	5.7	17.2	1.86	0.1	0.1	0.4
66	81.8	83.7	83.9	22.6	23.1	23.1	83.1	1.4	22.9	1.3	77.2	40	22.4	0.51	0.3	0.1	0.1
95	364	308	327	34.6	33.7	32.1	333	8.6	33.5	3.8	308	31	33.9	0.51	0.3	0.6	0.6

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	27	27	27
2 to 3	0	0	0
≥ 3	0	0	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 3**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	1458	1495	1466	132	140	130	1473	1.3	134	3.9	428	243	90.9	13.5	9.8	3.4	0.09
4,4'-DDT	2471	2563	2499	245	236	237	2511	1.9	239	2.1	2343	349	233	8.02	0.3	0.3	0.13
2,4'-DDE	80.2	80.9	79.8	10.4	12.3	10.5	80.3	0.7	11.1	9.7	78.4	9.3	14.2	1.39	0.1	0.1	0.05
4,4'-DDE	10303	9566	9912	786	980	787	9927	3.7	851	13.1	7056	981	497	19.5	1.6	1.7	0.25
2,4'-DDD	83.4	86.4	84.9	20.7	22.5	20.5	84.9	1.8	21.2	5.2	96.6	28	19.5	1.18	-0.5	-0.3	0.12
4,4'-DDD	457	472	462	85.2	87.8	87.2	464	1.6	86.7	1.6	1286	255	120	4.87	-2.6	-2.0	0.11
HCB	283	272	277	33.4	29.0	35.5	277	2.0	32.6	10.2	267	23	30.6	1.45	0.2	0.3	0.13
α-HCH	<15	<15	<15	<38	<38	<38	<15		<15		4.12	1.2	16.9	1.41			
β-HCH	< 7	< 7	< 7	<7	<7	<7	<7		<7								
γ-HCH	< 7	< 7	< 7	<7	<7	<7	<7		<7		2.12	2.5	3.18	0.01			
Heptachlor Epoxide	49.2	50.5	49.1	9.36	12.1	9.40	49.6	1.6	10.3	15.1	49.2	18	10.7	0.09	0.0	0.0	0.10
Cis-Chlordane	92.6	95.1	92.6	77.7	87.8	77.9	93.4	1.5	81.1	7.1	49.4	18	48.1	1.58	3.6	1.7	0.10
Trans-Chlordane				5.23	6.22	5.49			5.65	9.1	7.79	6.9	11.8	0.54			
Oxychlordane	320	321	321	21.4	27.4	22.5	321	0.2	23.8	13.4	258	33	21.2	1.06	1.0	1.2	0.01
Cis-Nonachlor	237	246	242	53.6	55.6	55.7	242	1.9	55.0	2.2	232	12	45.8	3.29	0.2	0.6	0.12
Trans-Nonachlor	1855	1848	1850	240	249	234	1851	0.2	241	3.1	1494	150	198	15.5	1.0	1.5	0.01
Dieldrin	211	217	197	50.9	57.3	49.3	208	4.9	52.5	8.1	175	53	50.1	4.05	0.8	0.5	0.33
Mirex	178	176	177	37.3	38.4	36.6	177	0.6	37.4	2.4	177	24	31.0	3.35	0.0	0.0	0.04
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.3	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))	76.9	100	103	64.4	64.2	87.4	93.5	15.5	72.0	18.5	80.5	3.3	71.9	1.27	0.6	1.8	1.04

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	12	14	15
2 to 3	1	0	0
≥ 3	2	1	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 3**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	95% CL	z-score (25%)	z-score (s)	p-score (15%)
18	3.44	3.25	3.68	3.15	3.50	3.81	3.46	6	3.49	9.5	6.57	12.6	4.35	0.56	-1.9	-0.2	0.42
28	19.4	17.9	18.3	9.9	9.2	10.7	18.5	4.2	9.91	7.7	18.6	2.4	13.06	1.07	0.0	0.0	0.28
31	<1	<1	<1	3.7	4.0	4.1	<1		3.94	5.0	1.76	0.7	3.56	0.36			
44	46.5	43.6	43.7	11.3	10.7	11.8	44.6	3.7	11.3	5.1	46.2	3.1	12.1	0.51	-0.1	-0.4	0.25
49	88.5	84.0	85.4	18.5	17.1	20.0	86.0	2.7	18.5	7.7	88.7	7.0	18.3	0.04	-0.1	-0.3	0.18
52	284	270	273	40.5	37.7	41.1	276	2.7	39.8	4.5	271	20	40.7	1.30	0.1	0.1	0.18
66/95*	below	below	below	below	below	below	below										
87	222	222	217	26.9	29.7	28.1	220	1.3	28.2	5.1	201	18	20.6	2.55	0.4	1.2	0.09
99	495	496	479	66.4	71.9	66.4	490	1.9	68.2	4.7	465	40	58.5	5.17	0.2	0.4	0.13
101 (+90)	762	758	739	101	112	99.5	753	1.6	104	6.5	649	129	78.2	12.4	0.6	0.6	0.11
105	96.8	96.4	93.9	29.6	32.4	30.3	95.7	1.6	30.8	4.7	90	16	28.6	1.16	0.2	0.2	0.11
118	710	716	686	95.9	104.6	96.3	704	2.3	98.9	5.0	640	51	76.5	2.87	0.4	0.8	0.15
128	157	159	155	24.4	26.2	23.7	157	1.3	24.8	5.2	150	8.6	23.0	1.06	0.2	0.5	0.08
132	w/153	w/153	w/153	w/153	w/153	w/153	w/153						21.1	4.75			
138 (+163+164)	1398	1387	1378	163	176	161	1388	0.7	166	5.1	1377	136	146	12.9	0.0	0.0	0.05
149	767	767	749	97.2	104.4	96.1	761	1.4	99.2	4.5	741	47	89.0	6.94	0.1	0.2	0.09
151	278	278	275	31.8	34.8	30.9	277	0.6	32.5	6.2	261	20	28.6	1.33	0.2	0.5	0.04
153	2550	2531	2521	327	353	323	2534	0.6	334	4.8	1831	240	228	9.75	1.5	2.2	0.04
156	100	105	101	13.7	14.6	13.7	102	2.6	14.0	3.9	98.2	15	11.4	0.95	0.2	0.2	0.17
170 (+190)	299	305	299	45.5	49.2	46.0	301	1.2	46.9	4.3	296	16	42.6	2.18	0.1	0.2	0.08
180	897	922	907	165	174	168	909	1.4	169	2.6	862	75	138	9.70	0.2	0.4	0.09
183	256	255	252	44.0	46.5	43.5	254	0.8	44.7	3.6	234	13	38.0	1.83	0.3	0.9	0.05
187	802	801	797	143	151	143	800	0.3	146	3.1	710	72	121	11.1	0.5	0.8	0.02
194	127	128	125	60.0	61.7	59.2	127	1.2	60.3	2.1	127	15	53.5	5.18	0.0	0.0	0.08
195	36.0	36.0	35.3	11.4	12.1	11.0	35.8	1.1	11.5	4.6	36.8	14	14.3	2.17	-0.1	0.0	0.08
201	44.7	45.5	45.3	15.5	16.4	15.6	45.2	0.9	15.8	3.1	46.2	4.1	16.8	1.30	-0.1	-0.2	0.06
206	84.1	85.5	84.3	53.4	55.5	54.1	84.6	0.9	54.3	1.9	81.7	13	44.9	4.23	0.1	0.2	0.06
209	26.2	25.1	24.6	20.2	20.5	20.7	25.3	3.2	20.5	1.3	26.0	5.7	17.2	1.86	-0.1	-0.1	0.22
66	78.1	77.5	75.9	25.6	28.0	26.5	77.2	1.5	26.7	4.4	77.2	40	22.4	0.51	0.0	0.0	0.10
95	362	361	349	46.4	51.6	45.8	357	2.0	47.9	6.6	308	31	33.9	0.51	0.6	1.3	0.13

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	27	26	27
2 to 3	0	1	0
≥ 3	0	0	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 4**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	424	439	437	57.5			433	1.9	58		428	243	90.9	13.5	0.1	0.0	0.13
4,4'-DDT	2240	2300	2420	169			2320	4.0	169		2343	349	233	8.02	0.0	0.0	0.26
2,4'-DDE	75.4	76.9	77.4	14.2			76.6	1.4	14.2		78.4	9.3	14.2	1.39	-0.1	-0.1	0.09
4,4'-DDE	7660	7590	7730	516			7660	0.9	516		7056	981	497	19.5	0.3	0.3	0.06
2,4'-DDD	92.1	98.2	99.6	18.5			96.6	4.1	18.5		96.6	28	19.5	1.18	0.0	0.0	0.28
4,4'-DDD	1270	1340	1360	117			1323	3.6	117.0		1286	255	120	4.87	0.1	0.1	0.24
HCB	252	249	252	27.3			251	0.7	27.3		267	23	30.6	1.45	-0.2	-0.4	0.05
α-HCH	4.44	4.74	<2.49	16.1			4.59	4.6	16		4.12	1.2	16.9	1.41	0.5	0.4	0.31
β-HCH	3.88	2.66	<2.47	5.02			3.27	26.4	5								
γ-HCH	<2.16	<1.79	<2.37	2.95					3		2.12	2.5	3.18	0.01			
Heptachlor Epoxide	55.1	59.0	63.5	10.00			59.2	7.1	10.0		49.2	18	10.7	0.09	0.8	0.5	0.47
Cis-Chlordane	28.3	34.9	32.9	51.0			32.0	10.6	51.0		49.4	18	48.1	1.58	-1.4	-0.7	0.70
Trans-Chlordane	7.15	7.91	7.80	11.20			7.6	5.4	11.20		7.79	6.9	11.8	0.54	-0.1	0.0	0.36
Oxychlordane	260	268	267	17.4			265	1.6	17.4		258	33	21.2	1.06	0.1	0.1	0.11
Cis-Nonachlor	246	257	264	50.7			256	3.5	50.7		232	12	45.8	3.29	0.4	1.5	0.24
Trans-Nonachlor	1390	1410	1430	162			1410	1.4	162		1494	150	198	15.5	-0.2	-0.4	0.09
Dieldrin	206	212	213	47.6			210	1.8	47.6		175	53	50.1	4.05	0.8	0.5	0.12
Mirex	183	186	192	32.6			187	2.5	32.6		177	24	31.0	3.35	0.2	0.4	0.16
PBDE 47	147	156	157	37.0			153	3.6	37		132	17	39.6	0.18	0.6	0.9	0.24
PBDE 99	24.7	26.5	27.8	15			26.3	5.9	15		22.2	2.8	18.9	2.32	0.7	1.3	0.39
PBDE 100	37.1	41.3	40.7	8.4			39.7	5.7	8		39.7	6.1	10.3	1.13	0.0	0.0	0.38
PBDE 153	14.7	15.4	16.0	7.5			15.4	4.2	7		14.2	1.6	8.34	0.55	0.3	0.6	0.28
PBDE 154	35.7	38.2	38.5	11.3			37.5	4.1	11		36.7	7.5	13.3	1.73	0.1	0.1	0.27
Lipid (mass fraction (%))	71.7	69.3	70.6	61.9			70.5	1.7	61.9		80.5	3.3	71.9	1.27	-0.5	-1.3	0.11

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	22	22	22
2 to 3	0	0	0
≥ 3	0	0	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 4**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)								Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18											6.57	12.6	4.35	0.56			
28	16.2	15.7	13.9	10.5			15.3	7.9	10.50		18.6	2.4	13.06	1.07	-0.7	-0.9	0.53
31	2.79	2.80	2.48	3.23			2.69	6.8	3.23		1.76	0.7	3.56	0.36	2.1	1.4	0.45
44	48.3	48.1	49.0	12.8			48.5	1.0	12.8		46.2	3.1	12.1	0.51	0.2	0.5	0.07
49	89.3	91.9	97.0	18.8			92.7	4.2	18.8		88.7	7.0	18.3	0.04	0.2	0.4	0.28
52	269	268	271	38.1			269	0.6	38.1		271	20	40.7	1.30	0.0	-0.1	0.04
66/95*	na	na	na	na			na										
87	198	200	204	26.0			201	1.5	26.0		201	18	20.6	2.55	0.0	0.0	0.10
99	423	428	426	56.8			426	0.6	56.8		465	40	58.5	5.17	-0.3	-0.6	0.04
101 (+90)	607	609	610	78			609	0.3	78.2		649	129	78.2	12.4	-0.2	-0.2	0.02
105	88.7	84.2	76.1	28.1			83.0	7.7	28.1		90	16	28.6	1.16	-0.3	-0.3	0.51
118	664	671	676	84.5			670	0.9	84.5		640	51	76.5	2.87	0.2	0.4	0.06
128	153	155	158	23.7			155	1.6	23.7		150	8.6	23.0	1.06	0.1	0.4	0.11
132	na	na	na	na			na		n				21.1	4.75			
138 (+163+164)	1560	1550	1580	189			1563	1.0	189		1377	136	146	12.9	0.5	0.8	0.07
149	731	746	747	84.1			741	1.2	84.1		741	47	89.0	6.94	0.0	0.0	0.08
151	257	260	265	27.8			261	1.6	27.8		261	20	28.6	1.33	0.0	0.0	0.10
153	1960	1950	2000	249			1970	1.3	249		1831	240	228	9.75	0.3	0.4	0.09
156	91.5	94.8	96.8	12.3			94	2.8	12.3		98.2	15	11.4	0.95	-0.2	-0.2	0.19
170 (+190)											296	16	42.6	2.18			
180	824	829	848	143			834	1.5	143		862	75	138	9.70	-0.1	-0.2	0.10
183	233	234	241	39.9			236	1.8	39.9		234	13	38.0	1.83	0.0	0.1	0.12
187	710	725	724	116			720	1.2	116		710	72	121	11.1	0.1	0.1	0.08
194	125	128	130	55.7			128	2.0	55.7		127	15	53.5	5.18	0.0	0.0	0.13
195	33.2	33.7	34.3	10.3			33.7	1.6	10.3		36.8	14	14.3	2.17	-0.3	-0.1	0.11
201	271	278	279	80.2			276.0	1.6	80.2		46.2	4.1	16.8	1.30	19.9	55.1	0.11
206	77.9	80.1	80.0	48.5			79.3	1.6	48.5		81.7	13	44.9	4.23	-0.1	-0.1	0.10
209	23.6	24.1	24.1	18.1			23.9	1.2	18.1		26.0	5.7	17.2	1.86	-0.3	-0.2	0.08
66	72.1	75.1	73.0	22.2			73.4	2.1	22.2		77.2	40	22.4	0.51	-0.2	-0.1	0.14
95	330	337	338	39.6			335	1.3	39.6		308	31	33.9	0.51	0.4	0.7	0.09

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	24	25	26
2 to 3	1	0	0
≥ 3	1	1	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 5**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	333	336	330	85.9	90.9	79.4	333	0.9	85.4	6.8	428	243	90.9	13.5	-0.9	-0.3	0.06
4,4'-DDT	2350	2360	2320	231	233	222	2343	0.9	229	2.6	2343	349	233	8.02	0.0	0.0	0.06
2,4'-DDE											78.4	9.3	14.2	1.39			
4,4'-DDE	8610	8610	8670	484	459	488	8630	0.4	477	3.3	7056	981	497	19.5	0.9	0.9	0.03
2,4'-DDD	118	131	127	25.4	25.6	23.0	125	5.3	24.7	5.9	96.6	28	19.5	1.18	1.2	0.7	0.35
4,4'-DDD	1460	1480	1480	116	112	113	1473	0.8	114	1.8	1286	255	120	4.87	0.6	0.5	0.05
HCB	308	318	316	30.6	31.4	29.9	314	1.7	30.6	2.5	267	23	30.6	1.45	0.7	1.3	0.11
α-HCH											4.12	1.2	16.9	1.41			
β-HCH																	
γ-HCH											2.12	2.5	3.18	0.01			
Heptachlor Epoxide											49.2	18	10.7	0.09			
Cis-Chlordane											49.4	18	48.1	1.58			
Trans-Chlordane											7.79	6.9	11.8	0.54			
Oxychlordane											258	33	21.2	1.06			
Cis-Nonachlor											232	12	45.8	3.29			
Trans-Nonachlor											1494	150	198	15.5			
Dieldrin											175	53	50.1	4.05			
Mirex											177	24	31.0	3.35			
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.34	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))	84.0	85.2	94.1	54.1	49.7	53.4	87.7	6.29	52.4	4.50	80.5	3.3	71.9	1.27	0.4	1.0	0.42

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	7	7	7
2 to 3	0	0	0
≥ 3	0	0	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 5**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18											6.57	12.6	4.35	0.56			
28											18.6	2.4	13.06	1.07			
31											1.76	0.7	3.56	0.36			
44											46.2	3.1	12.1	0.51			
49											88.7	7.0	18.3	0.04			
52											271	20	40.7	1.30			
66/95*																	
87											201	18	20.6	2.55			
99											465	40	58.5	5.17			
101 (+90)	2870	2990	3000	458.0	459.0	452.0	2953	2.4	456.3	0.8	649	129	78.2	12.4	14.2	12.4	0.16
105	90.4	92.4	88.0	30.7	32.9	31.2	90.3	2.4	31.6	3.6	90.3	16	28.6	1.16	0.0	0.00	0.16
118	812	816	811	95.8	97.2	95.2	813	0.3	96.1	1.1	640	51	76.5	2.87	1.1	2.11	0.02
128	146	154	132	22.8	16.6	20.7	144	7.7	20.0	15.7	150	8.6	23.0	1.06	-0.2	-0.45	0.52
132													21.1	4.75			
138 (+163+164)	1360	1400	1370	142	146	143	1377	1.5	144	1.4	1377	136	146	12.9	0.0	0.00	0.10
149											741	47	89.0	6.94			
151											261	20	28.6	1.33			
153	2210	2250	2160	278	277	281	2207	2.0	279	0.7	1831	240	228	9.75	0.8	1.16	0.14
156	75.0	76.4	76.4	8.32	7.84	7.89	75.9	1.1	8.02	3.3	98.2	15	11.4	0.95	-0.9	-0.94	0.07
170 (+190)											296	16	42.6	2.18			
180	903	858	908	142	141	139	890	3.1	141	1.1	862	75	138	9.70	0.1	0.21	0.21
183											234	13	38.0	1.83			
187											710	72	121	11.1			
194											127	15	53.5	5.18			
195											37	14	14.3	2.17			
201											46.2	4.1	16.8	1.30			
206											81.7	13	44.9	4.23			
209											26.0	5.7	17.2	1.86			
66											77.2	40	22.4	0.51			
95											308	31	33.9	0.51			

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	7	6	8
2 to 3	0	1	0
≥ 3	1	1	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 6**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	290	295	301	91.8	75.3	88.8	295	1.9	85.3	10.3	428	243	90.9	13.5	-1.2	-0.4	0.13
4,4'-DDT	1427	1389	1481	196	193	200	1432	3.2	196	1.8	2343	349	233	8.02	-1.6	-1.7	0.21
2,4'-DDE	73.3	72.4	72.9	16.4	18.5	17.3	72.9	0.6	17.4	6.1	78.4	9.3	14.2	1.39	-0.3	-0.4	0.04
4,4'-DDE	6581	6534	6446	491	479	477	6520	1.1	482	1.5	7056	981	497	19.5	-0.3	-0.3	0.07
2,4'-DDD	113	114	104	56.0	54.5	49.1	110	4.8	53.2	6.8	96.6	28	19.5	1.18	0.6	0.3	0.32
4,4'-DDD	1093	1092	1042	155	156	144	1076	2.7	152	4.3	1286	255	120	4.87	-0.7	-0.5	0.18
HCB	291	290	284	43.3	40.7	39.8	288	1.3	41.3	4.4	267	23	30.6	1.45	0.3	0.6	0.09
α-HCH	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74	<0.74		<0.74		4.12	1.2	16.9	1.41			
β-HCH	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64		<0.64								
γ-HCH	<2.47	<2.47	<2.47	<2.47	<2.47	<2.47	<2.47		<2.47		2.12	2.5	3.2	0.01			
Heptachlor Epoxide	63.7	64.5	63.3	24.6	24.7	22.4	63.8	0.9	23.9	5.4	49.2	18	10.7	0.09	1.2	0.8	0.06
Cis-Chlordane	31.6	27.9	29.6	45.1	44.5	40.8	29.7	6.1	43.5	5.4	49.4	18	48.1	1.58	-1.6	-0.8	0.41
Trans-Chlordane	7.14	7.05	7.24	11.0	11.1	11.1	7.14	1.3	11.1	0.4	7.79	6.9	11.8	0.54	-0.3	-0.1	0.09
Oxychlordane	237	239	244	18.5	18.7	19.0	240	1.5	18.7	1.4	258	33	21.2	1.06	-0.3	-0.4	0.10
Cis-Nonachlor	199	198	196	61.2	62.4	63.8	198	0.9	62.5	2.0	232	12	45.8	3.29	-0.6	-2.1	0.06
Trans-Nonachlor	1502	1469	1512	173	173	173	1494	1.5	173	0.1	1494	150	198	15.5	0.0	0.0	0.10
Dieldrin	237	232	237	58.0	72.2	70.8	235	1.2	67.0	11.6	175	53	50.1	4.05	1.4	0.8	0.08
Mirex	128	128	128	39.5	40.0	39.0	128	0.2	39.5	1.2	177	24	31.0	3.35	-1.1	-1.8	0.01
PBDE 47	173	173	175	51.8	47.8	54.9	174	0.7	51.5	6.9	132	17	39.6	0.18	1.2	1.7	0.04
PBDE 99	44.4	43.0	43.1	29.3	28.0	31.0	43.5	1.8	29.4	5.2	22.2	2.8	18.9	2.32	3.8	6.7	0.12
PBDE 100	45.2	44.3	44.9	16.6	16.3	16.4	44.8	1.0	16.4	1.2	39.7	6.1	10.3	1.13	0.5	0.6	0.07
PBDE 153	26.7	26.2	25.6	16.1	17.0	18.7	26.1	2.1	17.3	7.8	14.2	1.6	8.3	0.55	3.3	6.0	0.14
PBDE 154	63.0	60.0	61.7	33.3	31.0	28.2	61.6	2.4	30.8	8.3	36.7	7.5	13.3	1.73	2.7	2.6	0.16
Lipid (mass fraction (%))	81.0	82.0	82.0	67.0	69.4	70.0	81.7	0.71	68.8	2.31	80.5	3.3	71.9	1.27	0.1	0.2	0.05

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	18	17	21
2 to 3	1	2	0
≥ 3	2	2	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 6**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18	8.79	7.84	8.56	7.82	9.81	7.65	8.40	6	8.4	14.3	6.57	12.6	4.35	0.56	1.1	0.14	0.39
28											18.6	2.4	13.06	1.07			
31											1.76	0.7	3.56	0.36			
44	47.9	47.8	47.4	17.1	17.4	16.2	47.7	0.6	16.9	3.8	46.2	3.1	12.1	0.51	0.1	0.36	0.04
49	97.7	96.3	96.0	28.6	29.9	26.3	96.7	1.0	28.3	6.4	88.7	7.0	18.3	0.04	0.4	0.84	0.06
52	222	221	222	37.4	36.4	35.1	222	0.3	36.3	3.2	271	20	40.7	1.30	-0.7	-1.47	0.02
66/95*																	
87											201	18	20.6	2.55			
99	478	467	487	71.1	68.6	69.4	477	2.1	69.7	1.8	465	40	58.5	5.17	0.1	0.18	0.14
101 (+90)											649	129	78.2	12.4			
105	77.0	74.5	77.0	31.7	31.7	29.7	76.1	1.9	31.0	3.8	90	16	28.6	1.16	-0.6	-0.52	0.13
118											640	51	76.5	2.87			
128											150	8.6	23.0	1.06			
132													21.1	4.75			
138 (+163+164)											1377	136	146	12.9			
149	860	843	875	98.9	98.4	97.7	859	1.9	98.3	0.6	741	47	89.0	6.94	0.6	1.47	0.12
151	264	256	267	32.2	32.0	31.1	262	2.3	31.7	1.8	261	20	28.6	1.33	0.0	0.03	0.15
153											1831	240	228	9.75			
156	90.5	91.2	90.2	15.2	16.6	15.7	90.6	0.6	15.8	4.7	98.2	15	11.4	0.95	-0.3	-0.32	0.04
170 (+190)	275	300	297	47.4	47.7	46.1	291	4.6	47.1	1.8	296	16	42.6	2.18	-0.1	-0.21	0.31
180	790	820	790	140	144	140	800	2.1	141	1.8	862	75	138	9.70	-0.3	-0.46	0.14
183	189	199	208	37.6	37.0	37.4	199	4.9	37.4	0.8	234	13	38.0	1.83	-0.6	-1.67	0.32
187	619	648	678	118	116	118	648	4.5	117	0.7	710	72	121	11.1	-0.3	-0.52	0.30
194	148	150	149	79.8	84.5	72.0	149	0.6	78.8	8.0	127	15	53.5	5.18	0.7	1.01	0.04
195	38.3	36.9	37.4	16.3	16.1	13.8	37.5	1.9	15.4	8.8	37	14	14.3	2.17	0.1	0.03	0.13
201	278	267	283	26.4	26.3	22.2	276.2	2.9	24.9	9.6	46.2	4.1	16.8	1.30	19.9	55.15	0.19
206	63.3	64.7	63.7	37.2	42.1	40.0	63.9	1.1	39.8	6.1	81.7	13	44.9	4.23	-0.9	-0.92	0.08
209	17.8	17.7	18.8	13.0	13.2	13.8	18.1	3.1	13.3	3.2	26.0	5.7	17.2	1.86	-1.2	-0.95	0.21
66	88.1	88.0	85.9	30.1	31.3	30.1	87.3	1.4	30.5	2.3	77.2	40	22.4	0.51	0.5	0.17	0.09
95	248	247	254	38.7	40.3	38.8	250	1.4	39.3	2.3	308	31	33.9	0.51	-0.8	-1.49	0.09

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	19	19	20
2 to 3	0	0	0
≥ 3	1	1	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 7**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	518	531	519	96.0	103	103	523	1.4	101	4.0	428	243	90.9	13.5	0.9	0.3	0.09
4,4'-DDT	3180	3260	3240	349	370	367	3227	1.3	362	3.1	2343	349	233	8.02	1.5	1.7	0.09
2,4'-DDE	67.2	65.7	65.8	12.9	15.5	14.4	66	1.3	14.3	9.1	78.4	9.3	14.2	1.39	-0.6	-0.9	0.08
4,4'-DDE	7150	7090	7190	485	515	526	7143	0.7	509	4.2	7056	981	497	19.5	0.0	0.1	0.05
2,4'-DDD	115	115	117	23.8	26.6	25.0	116	1.0	25.1	5.6	96.6	28	19.5	1.18	0.8	0.4	0.07
4,4'-DDD											1286	255	120	4.87			
HCB	279	263	258	36.2	36.6	38.4	267	4.1	37.1	3.2	267	23	30.6	1.45	0.0	0.0	0.27
α-HCH											4.12	1.2	16.9	1.41			
β-HCH	12.7	10.4	18.4	18.4	7.15	8.09	13.8	29.8	11.2	56							
γ-HCH	19.2	14.5	17.3	102	89.0	129	17.0	13.9	107	19	2.12	2.5	3.18	0.01	28.1	8.4	0.93
Heptachlor Epoxide	52.1	52.8	48.3	16.8	20.2	16.6	51.1	4.7	17.9	11	49.2	18	10.7	0.09	0.2	0.1	0.32
Cis-Chlordane	17.6	14.9	20.9	43.5	46.3	47.2	17.8	16.9	45.7	4.2	49.4	18	48.1	1.58	-2.6	-1.2	1.13
Trans-Chlordane	31.2	9.09	10.1	20.2	20.7	19.6	16.8	74.3	20.2	2.7	7.79	6.9	11.8	0.54	4.6	1.1	4.95
Oxychlordane	250	250	255	20.2	22.8	21.4	252	1.1	21.5	6.1	258	33	21.2	1.06	-0.1	-0.1	0.08
Cis-Nonachlor											232	12	45.8	3.29			
Trans-Nonachlor	1360	1350	1370	164	173	173	1360	0.7	170	3.1	1494	150	198	15.5	-0.4	-0.6	0.05
Dieldrin											175	53	50.1	4.05			
Mirex											177	24	31.0	3.35			
PBDE 47	140	146	142	38.8	40.9	42.9	143	2.1	41	5.0	132	17	39.6	0.18	0.3	0.4	0.14
PBDE 99	27.7	26.3	25.9	16.5	18.3	17.9	26.6	3.5	18	5.4	22.2	2.8	18.9	2.32	0.8	1.4	0.24
PBDE 100	41.6	40.7	40.0	9.3	9.9	9.3	40.8	2.0	9.51	3.9	39.7	6.1	10.3	1.13	0.1	0.1	0.13
PBDE 153	17.1	15.9	15.4	6.1	8.2	7.2	16.1	5.4	7.16	14.8	14.2	1.6	8.34	0.55	0.5	1.0	0.36
PBDE 154	44.4	44.5	44.9	11.4	12.8	12.6	44.6	0.6	12.3	6.2	36.7	7.5	13.3	1.73	0.9	0.8	0.04
Lipid (mass fraction (%))	86.0	88.2	90.7	73.6	73.2	75.7	88.3	2.65	74.1	1.79	80.5	3.3	71.9	1.27	0.4	1.1	0.18

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	15	17	17
2 to 3	1	0	0
≥ 3	2	1	1
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 7**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18	33.3	29.9	29.3	4.47	5.85	DL	30.8	7	5.2	18.9	6.57	12.6	4.35	0.56	14.8	1.9	0.47
28	20.8	16.1	16.2	13.5	14.1	13.8	17.7	15.2	13.8	2.2	18.6	2.4	13.06	1.07	-0.2	-0.3	1.01
31	3.52	2.74	2.80	6.24	6.36	6.66	3.02	14.4	6.42	3.4	1.76	0.7	3.56	0.36	2.9	1.9	0.96
44	56.2	54.3	55.5	13.8	12.0	13.1	55.3	1.7	13.0	7.0	46.2	3.1	12.1	0.51	0.8	2.2	0.12
49	99.4	98.3	98.6	23.2	26.4	26.2	98.8	0.6	25.3	7.1	88.7	7.0	18.3	0.04	0.5	1.1	0.04
52	274	269	267	43.2	48.9	50.4	270	1.3	47.5	8.0	271	20	40.7	1.30	0.0	0.0	0.09
66/95*	380	379	380	62.7	66.9	62.4	380	0.2	64.0	3.9							
87											201	18	20.6	2.55			
99	467	464	465	62.0	66.0	63.3	465	0.3	63.8	3.2	465	40	58.5	5.17	0.0	0.0	0.02
101 (+90)											649	129	78.2	12.4			
105	111	113	113	36.5	39.0	37.5	112	1.0	37.7	3.3	90	16	28.6	1.16	1.0	0.8	0.07
118	635	632	640	83.1	91.5	89.8	636	0.6	88.1	5.0	640	51	76.5	2.87	0.0	-0.1	0.04
128	159	157	156	34.6	36.1	33.7	157	1.0	34.8	3.5	150	8.6	23.0	1.06	0.2	0.5	0.06
132													21.1	4.75			
138 (+163+164)	1230	1220	1200	165	173	158	1217	1.3	165	4.5	1377	136	146	12.9	-0.5	-0.7	0.08
149	703	693	695	92.9	98.8	94.7	697	0.8	95.5	3.2	741	47	89.0	6.94	-0.2	-0.6	0.05
151	278	275	279	31.6	33.3	31.7	277	0.8	32.2	3.0	261	20	28.6	1.33	0.2	0.5	0.05
153	1380	1410	1370	200	214	189	1387	1.5	201	6.2	1831	240	228	9.75	-1.0	-1.4	0.10
156	103.0	101.0	103.0	14.4	15.5	14.0	102.3	1.1	14.6	5.3	98.2	15	11.4	0.95	0.2	0.2	0.08
170 (+190)	297	272	273	39.0	43.0	39.0	281	5.0	40.3	5.7	296	16	42.6	2.18	-0.2	-0.6	0.34
180	841	823	818	164	172	158	827	1.5	165	4.3	862	75	138	9.70	-0.2	-0.3	0.10
183	263	259	255	49.3	51.8	47.3	259	1.5	49.5	4.6	234	13	38.0	1.83	0.4	1.2	0.10
187	641	637	626	130	138	123	635	1.2	130	5.8	710	72	121	11.1	-0.4	-0.6	0.08
194	166	159	157	77.4	80.9	75.4	161	2.9	77.9	3.6	127	15	53.5	5.18	1.1	1.5	0.20
195	78.9	76.9	75.3	12.1	12.1	10.5	77.0	2.3	11.6	8.0	37	14	14.3	2.17	4.4	1.9	0.16
201	284.0	266.0	265.0	87.6	91.8	83.2	272	3.9	87.5	4.9	46.2	4.1	16.8	1.30	19.5	54.1	0.26
206	85.3	84.3	83.6	51.1	54.5	49.7	84.4	1.0	51.8	4.8	81.7	13	44.9	4.23	0.1	0.1	0.07
209	34.4	35.4	35.3	26.1	26.1	24.4	35.0	1.6	25.5	3.8	26.0	5.7	17.2	1.86	1.4	1.1	0.10
66											77.2	40	22.4	0.51			
95											308	31	33.9	0.51			

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	20	22	24
2 to 3	1	1	0
≥ 3	3	1	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 8**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	1020	873	1140	134.0	122	136	1011	13.2	131	5.8	428	243	90.9	13.5	5.5	1.9	0.88
4,4'-DDT	3380	2710	3420	251	250	253	3170	12.6	251	0.6	2343	349	233	8.02	1.4	1.5	0.84
2,4'-DDE	86.2	74.2	86.9	13.4	14.5	14.7	82	8.7	14.2	4.9	78.4	9.3	14.2	1.39	0.2	0.3	0.58
4,4'-DDE	10800	9710	10600	687	694	679	10370	5.6	687	1.1	7056	981	497	19.5	1.9	1.9	0.37
2,4'-DDD	190	190	213	22.0	23.0	20.2	198	6.7	21.7	6.5	96.6	28	19.5	1.18	4.2	2.4	0.45
4,4'-DDD	2750	2190	2530	198	197	202	2490	11.3	199	1.3	1286	255	120	4.87	3.7	2.9	0.76
HCB	286	274	277	28.4	30.0	31.3	279	2.2	29.9	4.9	267	23	30.6	1.45	0.2	0.3	0.15
α-HCH	6.63	5.50	6.61	17.6	18.2	16.9	6.25	10	17.6	3.7	4.12	1.2	16.9	1.41	2.1	1.7	0.69
β-HCH				7.72	10.1	13.5			10.4	28							
γ-HCH	5.06	5.91	5.86	6.30	11.6	7.12	5.61	8.5	8.34	34	2.12	2.5	3.18	0.01	6.6	2.0	0.57
Heptachlor Epoxide				11.2	27.6	7.34			15.4	70	49.2	18	10.7	0.09			
Cis-Chlordane	54.5	43.2	45.6	49.6	48.7	52.4	47.8	12.5	50.2	3.8	49.4	18	48.1	1.58	-0.1	-0.1	0.83
Trans-Chlordane	45.9	36.2	41.5	26.2	25.5	29.4	41.2	11.8	27.0	7.7	7.79	6.9	11.8	0.54	17.1	4.2	0.79
Oxychlordane	203	264	228	24.1	24.3	25.9	232	13.2	24.8	4.0	258	33	21.2	1.06	-0.4	-0.5	0.88
Cis-Nonachlor	268	219	256	52.8	49.8	56.4	248	10.3	53.0	6.2	232	12	45.8	3.29	0.3	1.0	0.69
Trans-Nonachlor	1490	1280	1420	192	195	205	1397	7.7	197	3.4	1494	150	198	15.5	-0.3	-0.4	0.51
Dieldrin	313	313	284	58.1	59.5	58.9	303	5.5	58.8	1.2	175	53	50.1	4.05	2.9	1.8	0.37
Mirex	245	220	246	42.1	43.6	43.2	237	6.2	43.0	1.8	177	24	31.0	3.35	1.4	2.2	0.41
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.34	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))	76.7	70.5	73.6	55.2	52.9		73.6	4.22	54.0	3.06	80.5	3.3	71.9	1.27	-0.3	-0.9	0.28

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	10	13	17
2 to 3	2	3	0
≥ 3	5	1	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 8**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18					3.45	3.30			3.4	3.1	6.57	12.6	4.35	0.56			
28	22.9	21.7	23.4	14.0	14.5	15.9	22.7	3.9	14.8	6.7	18.6	2.4	13.06	1.07	0.9	1.1	0.26
31	w/28	w/28	w/28	w/28	w/28	w/28	w/28		w/28		1.76	0.7	3.56	0.36			
44	47.4	43.5	47.7	13.3	11.4	15.9	46.2	5.1	13.5	16.7	46.2	3.1	12.1	0.51	0.0	0.0	0.34
49	86.2	80.7	88.1	18.2	17.6	18.7	85.0	4.5	18.2	3.0	88.7	7.0	18.3	0.04	-0.2	-0.4	0.30
52	280	258	276	35.3	38.9	40.6	271	4.3	38.3	7.1	271	20	40.7	1.30	0.0	0.0	0.29
66/95*	below	below	below	below	below	below	below		below								
87	204.0	185.0	196.0	21.4	22.9	24.0	195.0	4.9	22.8	5.7	201	18	20.6	2.55	-0.1	-0.3	0.33
99	480	434	483	55.8	58.6	61.9	466	5.9	58.8	5.2	465	40	58.5	5.17	0.0	0.0	0.39
101 (+90)	665	619	674	77.1	77.6	81.8	653	4.5	78.8	3.3	649	129	78.2	12.4	0.0	0.0	0.30
105	88.2	79.4	85.0	23.6	26.8	23.6	84.2	5.3	24.7	7.5	90	16	28.6	1.16	-0.3	-0.2	0.35
118	890	852	893	97.7	104	107	878	2.6	103	4.6	640	51	76.5	2.87	1.5	2.9	0.17
128				22.4	22.8	22.9			22.7	1.2	150	8.6	23.0	1.06			
132	w/153	w/153	w/153	w/153	w/153	w/153	w/153		w/153				21.1	4.75			
138 (+163+164)	1290	1200	1330	127	131	154	1273	5.2	137	10.6	1377	136	146	12.9	-0.3	-0.5	0.35
149	622	575	619	67.3	70.5	72.5	605	4.3	70	3.7	741	47	89.0	6.94	-0.7	-1.7	0.29
151	215	202	213	18.8	20.4	24.0	210	3.3	21.1	12.6	261	20	28.6	1.33	-0.8	-1.6	0.22
153	1960	1810	1950	213	226	233	1907	4.4	224	4.5	1831	240	228	9.75	0.2	0.2	0.29
156	87.0	84.6	95.1	10.4	11.1	11.4	88.9	6.2	10.9	4.8	98.2	15	11.4	0.95	-0.4	-0.4	0.41
170 (+190)	309	290	318	40.6	46.7	45.1	306	4.7	44.1	7.2	296	16	42.6	2.18	0.1	0.4	0.31
180	932	849	963	149	154	168	915	6.4	157	6.3	862	75	138	9.70	0.2	0.4	0.43
183	253	235	259	41.5	44.1	41.3	249	5.0	42.3	3.7	234	13	38.0	1.83	0.3	0.7	0.33
187	712	657	729	ND	112	119	699	5.4	116	4.3	710	72	121	11.1	-0.1	-0.1	0.36
194	112	102	116	48.8	50.4	51.8	110	6.6	50.3	3.0	127	15	53.5	5.18	-0.5	-0.8	0.44
195	31.5	inf	30.2	12.3	12.3	12.9	30.9	3.0	12.5	2.8	36.8	14	14.3	2.17	-0.6	-0.3	0.20
201	41.2	39.3	41.8	12.4	13.6	13.4	40.8	3.2	13.1	4.9	46.2	4.1	16.8	1.30	-0.5	-1.3	0.21
206	67.2	64.5	73.2	41.3	44.1	46.6	68.3	6.5	44.0	6.0	81.7	13	44.9	4.23	-0.7	-0.7	0.43
209	22.7	20.5	23.4	17.3	19.1	20.7	22.2	6.8	19.0	8.9	26.0	5.7	17.2	1.86	-0.6	-0.5	0.45
66	70.5	64.2	70.8	20.9	21.8	22.8	68.5	5.4	21.8	4.4	77.2	40	22.4	0.51	-0.4	-0.1	0.36
95				33.1	34.6	37.3			35.0	6.1	308	31	33.9	0.51			

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	24	23	24
2 to 3	0	1	0
≥ 3	0	0	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 9**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT											428	243	90.9	13.5			
4,4'-DDT	2614	2089	1526	208	210	230	2076	26.2	216	5.6	2343	349	233	8.02	-0.5	-0.5	1.75
2,4'-DDE											78.4	9.3	14.2	1.39			
4,4'-DDE	7664	6612	6632	428	466	462	6969	8.6	452	4.6	7056	981	497	19.5	0.0	-0.1	0.58
2,4'-DDD											96.6	28	19.5	1.18			
4,4'-DDD	1300	1405	1040	100	104	84	1248	15.1	96	11.0	1286	255	120	4.87	-0.1	-0.1	1.00
HCB	236	185	195	29.0	26.0	25.0	205	13.2	27	7.8	267	23	30.6	1.45	-0.9	-1.7	0.88
α-HCH	<11	<15	<20	<17	<20	<44	<		<		4.12	1.2	16.9	1.41			
β-HCH																	
γ-HCH	<10	<13	<18	<22	<18	<44	<		<		2.12	2.5	3.18	0.01			
Heptachlor Epoxide											49.2	18	10.7	0.09			
Cis-Chlordane											49.4	18	48.1	1.58			
Trans-Chlordane											7.79	6.9	11.8	0.54			
Oxychlordane											258	33	21.2	1.06			
Cis-Nonachlor											232	12	45.8	3.29			
Trans-Nonachlor											1494	150	198	15.5			
Dieldrin	224	50	27	49.0	18.0	<38	100	107.4	34	65.4	175	53	50.1	4.05	-1.7	-1.0	7.16
Mirex											177	24	31.0	3.35			
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.34	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))	83.0	80.9	82.1	74.8	74.2	70.9	82.0	1.28	73.3	2.86	80.5	3.3	71.9	1.27	0.1	0.2	0.09

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	6	6	5
2 to 3	0	0	0
≥ 3	0	0	1
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 9**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18	41.0	<9	23.00	<2	<16	<3	32.0	40			6.57	12.6	4.35	0.56	15.5	1.98	2.65
28	22.0	19.0	17.0	<11	<21	<14	19.3	13.0			18.6	2.4	13.06	1.07	0.2	0.20	0.87
31	<8	<15	<11	<8	<20	<11					1.76	0.7	3.56	0.36			
44	56.0	39.0	53.0	<9	<17	<12	49.3	18.4			46.2	3.1	12.1	0.51	0.3	0.75	1.23
49	126	74.0	103	17.0	18.0	<20	101	25.8	17.5	4.0	88.7	7.0	18.3	0.04	0.6	1.29	1.72
52	317	216	254	37.0	28.0	28.0	262	19.4	31.0	16.8	271	20	40.7	1.30	-0.1	-0.27	1.30
66/95*	below	below	below	below	below	below	below		below								
87											201	18	20.6	2.55			
99											465	40	58.5	5.17			
101 (+90)	743	567	625	95.0	74.0	69.0	645	13.9	79.3	17.4	649	129	78.2	12.4	0.0	-0.02	0.93
105	98.0	75.0	88.0	30.0	36.0	31.0	87.0	13.3	32.3	9.9	90	16	28.6	1.16	-0.1	-0.12	0.88
118	668	556	605	91.0	76.0	72.0	610	9.2	79.7	12.6	640	51	76.5	2.87	-0.2	-0.37	0.61
128	187	151	182	28.0	28.0	29.0	173	11.3	28.3	2.0	150	8.6	23.0	1.06	0.6	1.67	0.75
132													21.1	4.75			
138 (+163+164)	1420	1281	1277	181	137	149	1326	6.1	156	14.6	1377	136	146	12.9	-0.1	-0.22	0.41
149	706	589	613	91.0	73.0	78.0	636	9.7	81	11.5	741	47	89.0	6.94	-0.6	-1.32	0.65
151	276	216	234	31.0	24.0	25.0	242	12.7	26.7	14.2	261	20	28.6	1.33	-0.3	-0.61	0.85
153	1944	1711	1837	242	194	210	1831	6.4	215	11.4	1831	240	228	9.75	0.0	0.00	0.42
156	107.0	77.0	94.0	12.0	20.0	<10	92.7	16.2	16.0	35.4	98.2	15	11.4	0.95	-0.2	-0.23	1.08
170 (+190)	372	300	330	54.0	46.0	47.0	334	10.8	49.0	8.9	296	16	42.6	2.18	0.5	1.51	0.72
180	955	849	867	179	143	159	890	6.4	160	11.2	862	75	138	9.70	0.1	0.22	0.42
183	258	190	219	43.0	36.0	37.0	222	15.3	38.7	9.8	234	13	38.0	1.83	-0.2	-0.56	1.02
187	833	698	710	142	109	120	747	10.0	124	13.6	710	72	121	11.1	0.2	0.32	0.67
194	155	111	138	69.0	52.0	62.0	135	16.5	61.0	14.0	127	15	53.5	5.18	0.2	0.35	1.10
195											36.8	14	14.3	2.17			
201											46.2	4.1	16.8	1.30			
206											81.7	13	44.9	4.23			
209											26.0	5.7	17.2	1.86			
66	97.0	71.0	141	29.0	26.0	25.0	103	34.4	26.7	7.8	77.2	40	22.4	0.51	1.3	0.43	2.29
95											308	31	33.9	0.51			

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	19	20	18
2 to 3	0	0	2
≥ 3	1	0	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 10**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	2200	2100	2450	260.0	210	190	2250	8.0	220	16.4	428	243	90.9	13.5	17.0	6.0	0.53
4,4'-DDT	3960	3750	4360	410	470	440	4023	7.7	440	6.8	2343	349	233	8.02	2.9	3.1	0.51
2,4'-DDE	260	260	310.0	<100	<100	<100	277	10.4			78.4	9.3	14.2	1.39	10.1	14.8	0.70
4,4'-DDE	5450	5860	5210	430	410	380	5507	6.0	407	6.2	7056	981	497	19.5	-0.9	-0.9	0.40
2,4'-DDD	650	640	720	90.0	100	90.0	670	6.5	93	6.2	96.6	28	19.5	1.18	23.7	13.3	0.43
4,4'-DDD	1650	1520	1780	170	150	140	1650	7.9	153	10.0	1286	255	120	4.87	1.1	0.9	0.53
HCB	130	140	170	<50	<50	<50	147	14.2	<50		267	23	30.6	1.45	-1.8	-3.3	0.95
α-HCH	<50	<50	<50	<50	<50	<50	<50		<50		4.12	1.2	16.9	1.41			
β-HCH																	
γ-HCH	<50	<50	<50	<50	<50	<50	<50		<50		2.12	2.5	3.2	0.01			
Heptachlor Epoxide	<50	<50	<50	<50	<50	<50	<50		<50		49.2	18	10.7	0.09			
Cis-Chlordane											49.4	18	48.1	1.58			
Trans-Chlordane	1360	1380	1550	<50	160	130	1430	7.3	145	14.6	7.79	6.9	11.8	0.54	730.0	180.5	0.49
Oxychlordane											258	33	21.2	1.06			
Cis-Nonachlor											232	12	45.8	3.29			
Trans-Nonachlor											1494	150	198	15.5			
Dieldrin	570	590	690	100	110	100	617	10.4	103	5.6	175	53	50.1	4.05	10.1	6.1	0.70
Mirex	350	360	380	160	110	110	363	4.2	127	22.8	177	24	31.0	3.35	4.2	6.8	0.28
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.3	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))	79.6			63.0	63.7		79.6		63.4	0.78	80.5	3.3	71.9	1.27	0.0	-0.1	0.00

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	4	3	11
2 to 3	1	0	0
≥ 3	6	8	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 11**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT											428	243	90.9	13.5			
4,4'-DDT											2343	349	233	8.02			
2,4'-DDE											78.4	9.3	14.2	1.39			
4,4'-DDE											7056	981	497	19.5			
2,4'-DDD											96.6	28	19.5	1.18			
4,4'-DDD											1286	255	120	4.87			
HCB											267	23	30.6	1.45			
α-HCH											4.12	1.2	16.9	1.41			
β-HCH																	
γ-HCH											2.12	2.5	3.18	0.01			
Heptachlor Epoxide											49.2	18	10.7	0.09			
Cis-Chlordane											49.4	18	48.1	1.58			
Trans-Chlordane											7.79	6.9	11.8	0.54			
Oxychlordane											258	33	21.2	1.06			
Cis-Nonachlor											232	12	45.8	3.29			
Trans-Nonachlor											1494	150	198	15.5			
Dieldrin											175	53	50.1	4.05			
Mirex											177	24	31.0	3.35			
PBDE 47	117	121	120	36.0	35.0	NA	119	1.7	36	2.0	132	17	39.6	0.18	-0.4	-0.5	0.12
PBDE 99	21.0	21.9	22.1	16.8	16.1	NA	22	2.8	16	3.0	22.2	2.8	18.9	2.32	-0.1	-0.2	0.19
PBDE 100	38.7	42.9	42.6	10.9	9.8	NA	41	5.7	10	7.6	39.7	6.1	10.3	1.13	0.2	0.2	0.38
PBDE 153	12.3	13.4	13.6	8.3	8.4	NA	13	5.3	8	0.4	14.2	1.6	8.34	0.55	-0.3	-0.6	0.36
PBDE 154	35.1	35.9	36.6	12.3	12.4	NA	36	2.1	12	0.6	36.7	7.5	13.3	1.73	-0.1	-0.1	0.14
Lipid (mass fraction (%))	77.2	79.1	77.7	69.4	69.7	68.8	78.0	1.28	69.3	0.68	80.5	3.3	71.9	1.27	-0.1	-0.3	0.09

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	6	6	6
2 to 3	0	0	0
≥ 3	0	0	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 12**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	1583	1577	1559	167.6	174	191	1573	0.8	178	6.7	428	243	90.9	13.5	10.7	3.8	0.05
4,4'-DDT	3831	4349	4267	352	368	394	4149	6.7	372	5.7	2343	349	233	8.02	3.1	3.4	0.45
2,4'-DDE											78.4	9.3	14.2	1.39			
4,4'-DDE	7420	7017	7060	473	514	544	7166	3.1	510	7.0	7056	981	497	19.5	0.1	0.1	0.21
2,4'-DDD	81.4	71.9	71.5	16.9	18.3	18.8	75	7.5	18.0	5.6	96.6	28	19.5	1.18	-0.9	-0.5	0.50
4,4'-DDD	1347	1371	1365	100	100	105	1361	0.9	102	2.7	1286	255	120	4.87	0.2	0.2	0.06
HCB	255	259	260	28.6	28.5	28.7	258	1.0	28.6	0.4	267	23	30.6	1.45	-0.1	-0.2	0.07
α-HCH	3.75	3.55	3.66	13.9	13.8	14.1	3.66	2.9	13.9	0.9	4.12	1.2	16.9	1.41	-0.5	-0.4	0.19
β-HCH	5.56	5.73	6.07	2.06	1.86	1.95	5.79	4.5	1.96	4.9							
γ-HCH	0.92	0.84	0.84	2.46	2.45	2.58	0.87	5.1	2.50	3.0	2.12	2.5	3.18	0.01	-2.4	-0.7	0.34
Heptachlor Epoxide											49.2	18	10.7	0.09			
Cis-Chlordane	62.9	61.4	61.1	51.2	51.4	53.6	61.8	1.5	52.0	2.6	49.4	18	48.1	1.58	1.0	0.5	0.10
Trans-Chlordane	21.72	24.26	24.65	15.0	14.8	15.4	23.5	6.8	15.1	2.1	7.79	6.9	11.8	0.54	8.1	2.0	0.45
Oxychlordane	292	268	265	20.0	21.1	21.2	275	5.4	20.7	3.3	258	33	21.2	1.06	0.3	0.3	0.36
Cis-Nonachlor	699	675	643	106	115	122	672	4.1	115	7.3	232	12	45.8	3.29	7.6	26.6	0.28
Trans-Nonachlor	1732	1767	1712	185	188	195	1737	1.6	189	2.8	1494	150	198	15.5	0.6	1.1	0.11
Dieldrin											175	53	50.1	4.05			
Mirex	231	236	235	46.9	44.0	43.1	234	1.2	44.7	4.4	177	24	31.0	3.35	1.3	2.1	0.08
PBDE 47	114	93	102	39.0	36.4	38.0	103	10.3	37.8	3.4	132	17	39.6	0.18	-0.9	-1.2	0.69
PBDE 99	23.8	16.1	17.9	15.5	18.4	15.5	19.2	20.9	16.5	10.2	22.2	2.8	18.9	2.32	-0.5	-0.9	1.39
PBDE 100	27.9	23.6	25.4	9.73	8.84	9.14	25.6	8.4	9.24	4.9	39.7	6.1	10.3	1.13	-1.4	-1.7	0.56
PBDE 153	13.7	11.0	13.0	8.21	8.42	8.52	12.6	10.8	8.38	1.9	14.2	1.6	8.34	0.55	-0.5	-0.8	0.72
PBDE 154	30.0	25.7	28.4	13.1	12.5	13.3	28.0	7.7	13.0	3.1	36.7	7.5	13.3	1.73	-0.9	-0.9	0.51
Lipid (mass fraction (%))	88.3	89.9	89.6	77.3	76.1	76.2	89.3	0.97	76.5	0.85	80.5	3.3	71.9	1.27	0.4	1.2	0.06

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	15	16	20
2 to 3	1	1	0
≥ 3	4	3	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 12**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18											6.57	12.6	4.35	0.56			
28	20.7	19.5	19.9	10.3	10.3	10.8	20.0	3.2	10.5	3.0	18.6	2.4	13.06	1.07	0.3	0.39	0.21
31	17.5	15.6	16.1	6.92	7.86	8.32	16.4	6.0	7.70	9.3	1.76	0.7	3.56	0.36	33.3	22.25	0.40
44											46.2	3.1	12.1	0.51			
49											88.7	7.0	18.3	0.04			
52	258	259	260	36.7	38.4	40.1	259	0.4	38.4	4.5	271	20	40.7	1.30	-0.2	-0.36	0.03
66/95*	below	below	below	below	below	below	below		below								
87											201	18	20.6	2.55			
99	483	490	475	66.9	66.3	68.6	483	1.5	67.3	1.8	465	40	58.5	5.17	0.1	0.26	0.10
101 (+90)	575	590	572	80.5	81.0	82.3	579	1.6	81.3	1.1	649	129	78.2	12.4	-0.4	-0.38	0.11
105	103.2	106.3	105.2	31.4	31.4	31.8	104.9	1.5	31.5	0.8	90	16	28.6	1.16	0.6	0.54	0.10
118	578	594	577	80.5	78.4	85.5	583	1.7	81.5	4.5	640	51	76.5	2.87	-0.4	-0.70	0.11
128	163	148	145	22.2	23.5	24.2	152	6.4	23.3	4.3	150	8.6	23.0	1.06	0.1	0.14	0.43
132													21.1	4.75			
138 (+163+164)	1527	1543	1450	164	163	182	1507	3.3	170	6.2	1377	136	146	12.9	0.4	0.57	0.22
149	644	663	651	67.1	69.4	72.2	653	1.5	69.6	3.6	741	47	89.0	6.94	-0.5	-1.11	0.10
151	286	300	295	35.0	31.2	31.4	294	2.4	32.5	6.7	261	20	28.6	1.33	0.5	1.00	0.16
153	1948	2026	1959	237	245	252	1977	2.1	245	3.0	1831	240	228	9.75	0.3	0.45	0.14
156	111	116	109	12.4	13.5	14.1	112	3.4	13.4	6.4	98.2	15	11.4	0.95	0.6	0.57	0.23
170 (+190)	292	318	303	42.4	45.0	45.6	305	4.3	44.3	3.8	296	16	42.6	2.18	0.1	0.35	0.28
180	971	1064	1034	155	150	156	1023	4.7	153	2.2	862	75	138	9.70	0.7	1.21	0.31
183	189	210	198	36.4	37.4	39.2	199	5.3	37.7	3.9	234	13	38.0	1.83	-0.6	-1.67	0.35
187	475	489	469	81.3	84.1	86.4	478	2.1	83.9	3.0	710	72	121	11.1	-1.3	-1.99	0.14
194	149	160	138	57.0	58.8	65.3	149	7.6	60.3	7.2	127	15	53.5	5.18	0.7	1.01	0.50
195											36.8	14	14.3	2.17			
201											46.2	4.1	16.8	1.30			
206	95.8	91.1	90.2	50.5	52.8	55.3	92.4	3.3	52.9	4.5	81.7	13	44.9	4.23	0.5	0.55	0.22
209	37.9	35.9	36.8	18.6	20.3	20.5	36.9	2.8	19.8	5.4	26.0	5.7	17.2	1.86	1.7	1.32	0.19
66	242.9	251.1	242.7	25.5	24.8	25.7	245.6	2.0	25.4	1.8	77.2	40	22.4	0.51	8.7	2.78	0.13
95											308	31	33.9	0.51			

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	19	19	21
2 to 3	0	1	0
≥ 3	2	1	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 13**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT											428	243	90.9	13.5			
4,4'-DDT											2343	349	233	8.02			
2,4'-DDE											78.4	9.3	14.2	1.39			
4,4'-DDE											7056	981	497	19.5			
2,4'-DDD											96.6	28	19.5	1.18			
4,4'-DDD											1286	255	120	4.87			
HCB											267	23	30.6	1.45			
α-HCH											4.12	1.2	16.9	1.41			
β-HCH																	
γ-HCH											2.12	2.5	3.18	0.01			
Heptachlor Epoxide											49.2	18	10.7	0.09			
Cis-Chlordane											49.4	18	48.1	1.58			
Trans-Chlordane											7.79	6.9	11.8	0.54			
Oxychlordane											258	33	21.2	1.06			
Cis-Nonachlor											232	12	45.8	3.29			
Trans-Nonachlor											1494	150	198	15.5			
Dieldrin											175	53	50.1	4.05			
Mirex											177	24	31.0	3.35			
PBDE 47	123		119	35.8	36.7	36.7	121	2.6	36.4	1.4	132	17	39.6	0.18	-0.3	-0.5	0.17
PBDE 99	23.6	22.0	21.1	16.5	16.0	16.8	22.2	5.7	16.4	2.5	22.2	2.8	18.9	2.32	0.0	0.0	0.38
PBDE 100	35.9	34.7	33.3	9.20	9.10	9.00	34.6	3.8	9.10	1.1	39.7	6.1	10.3	1.13	-0.5	-0.6	0.25
PBDE 153	13.0	12.2	12.5	7.90	7.00	7.60	12.6	3.2	7.50	6.1	14.2	1.6	8.34	0.55	-0.5	-0.8	0.21
PBDE 154	34.6	32.4	33.1	11.1	10.5	11.1	33.4	3.4	10.9	3.2	36.7	7.5	13.3	1.73	-0.4	-0.4	0.22
Lipid (mass fraction (%))	87.9	87.8	83.0	72.9	76.0	76.6	86.2	3.25	75.2	2.64	80.5	3.3	71.9	1.27	0.3	0.8	0.22

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	6	6	6
2 to 3	0	0	0
≥ 3	0	0	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 13**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18											6.57	12.6	4.35	0.56			
28	26.4	24.8	23.8	12.8	12.7	11.7	25.0	5.2	12.4	4.9	18.6	2.4	13.06	1.07	1.4	1.8	0.3
31	< 2	< 2	< 2	3.0	1.7	2.1	<2		2.27	29	1.76	0.7	3.56	0.36			
44											46.2	3.1	12.1	0.51			
49											88.7	7.0	18.3	0.04			
52	355	346	332	44.0	44.8	42.8	344	3.3	43.9	2.3	271	20	40.7	1.30	1.1	2.2	0.2
66/95*	below	below	below	below	below	below	below		below								
87											201	18	20.6	2.55			
99	312	335	327	43.6	44.3	44.1	324	3.6	44.0	0.8	465	40	58.5	5.17	-1.2	-2.1	0.2
101 (+90)	447	481	467	61.7	62.7	62.6	465	3.6	62.3	0.9	649	129	78.2	12.4	-1.1	-1.0	0.2
105	90.0	93.8	91.1	29.4	29.1	29.9	91.6	2.1	29.5	1.4	90	16	28.6	1.16	0.1	0.0	0.1
118	543	564	553	73.9	74.6	75.1	553	1.9	74.5	0.8	640	51	76.5	2.87	-0.5	-1.1	0.1
128	140	148	145	22.7	24.1	23.3	144	3.0	23.4	3.0	150	8.6	23.0	1.06	-0.2	-0.4	0.2
132													21.1	4.75			
138 (+163+164)	1038	1088	1061	132	134	135	1062	2.4	133	1.3	1377	136	146	12.9	-0.9	-1.4	0.2
149	768	817	794	94.8	95.7	96.5	793	3.1	96	0.9	741	47	89.0	6.94	0.3	0.6	0.2
151											261	20	28.6	1.33			
153	1667	1746	1697	208	212	213	1703	2.3	211	1.1	1831	240	228	9.75	-0.3	-0.4	0.2
156	75.8	76.4	77.6	9.90	10.0	10.7	76.6	1.2	10.2	4.3	98.2	15	11.4	0.95	-0.9	-0.9	0.1
170 (+190)	246	267	259	38.3	39.6	39.4	257	4.0	39.1	1.8	296	16	42.6	2.18	-0.5	-1.5	0.3
180	523	557	540	98.1	101	100	540	3.1	100	1.3	862	75	138	9.70	-1.5	-2.4	0.2
183	199	212	207	36.0	37.0	36.7	206	3.0	36.6	1.4	234	13	38.0	1.83	-0.5	-1.3	0.2
187	554	588	574	101	104	104	572	3.0	103	1.5	710	72	121	11.1	-0.8	-1.2	0.2
194	74.0	79.7	77.1	37.0	38.1	38.0	76.9	3.7	37.7	1.6	127	15	53.5	5.18	-1.6	-2.3	0.2
195											36.8	14	14.3	2.17			
201											46.2	4.1	16.8	1.30			
206											81.7	13	44.9	4.23			
209											26.0	5.7	17.2	1.86			
66											77.2	40	22.4	0.51			
95	242	265	257	33.3	32.9	32.9	255	4.5	33.0	0.7	308	31	33.9	0.51	-0.7	-1.4	0.3

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	17	13	17
2 to 3	0	4	0
≥ 3	0	0	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 14**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT											428	243	90.9	13.5			
4,4'-DDT	1332	956	1048	476	298	376	1112	17.6	383	23.3	2343	349	233	8.02	-2.1	-2.3	1.18
2,4'-DDE											78.4	9.3	14.2	1.39			
4,4'-DDE	2982	2213	2418	361	350	354	2538	15.7	355	1.7	7056	981	497	19.5	-2.6	-2.6	1.05
2,4'-DDD											96.6	28	19.5	1.18			
4,4'-DDD	637	828	814	74.4	79.3	81.0	760	14.0	78.2	4.4	1286	255	120	4.87	-1.6	-1.3	0.93
HCB											267	23	30.6	1.45			
α-HCH	<5ppb	<5ppb	<5ppb	7.90	7.30	6.70			7.30	8.2	4.12	1.2	16.9	1.41			
β-HCH	10.2	5.10	5.80	5.60	5.40	4.10	7.03	39.3	5.03	16.2							
γ-HCH	<5ppb	<5ppb	<5ppb	<5ppb	<5ppb	<5ppb	<5ppb				2.12	2.5	3.18	0.01			
Heptachlor Epoxide	18.8	13.8	16.3	10.0	9.60	9.10	16.3	15.3	9.57	4.7	49.2	18	10.7	0.09	-2.7	-1.8	1.02
Cis-Chlordane	125.9	64.4	70.3	24.2	24.8	25.5	86.9	39.1	24.8	2.6	49.4	18	48.1	1.58	3.0	1.4	2.60
Trans-Chlordane											7.79	6.9	11.8	0.54			
Oxychlordane	117	169	180	21.1	22.5	19.9	155	21.6	21.2	6.1	258	33	21.2	1.06	-1.6	-2.0	1.44
Cis-Nonachlor											232	12	45.8	3.29			
Trans-Nonachlor											1494	150	198	15.5			
Dieldrin	110	55.4	59.6	57.2	49.3	49.5	75.0	40.5	52.0	8.7	175	53	50.1	4.05	-2.3	-1.4	2.70
Mirex											177	24	31.0	3.35			
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.34	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))	78.2	76.9	77.2	67.1	63.1	64.5	77.4	0.88	64.9	3.13	80.5	3.3	71.9	1.27	-0.2	-0.4	0.06

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	3	6	6
2 to 3	4	2	2
≥ 3	1	0	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 15**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	300	323	328	67.0	74.0	72.0	317	4.7	71.0	5.1	428	243	90.9	13.5	-1.0	-0.4	0.31
4,4'-DDT	1520	1560	1580	190	177	174	1553	2.0	180	4.7	2343	349	233	8.02	-1.3	-1.5	0.13
2,4'-DDE	51.0	61.0	62.0	21.0	16.0	15.0	58.0	10.5	17.3	18.5	78.4	9.3	14.2	1.39	-1.0	-1.5	0.70
4,4'-DDE	5560	5840	5710	428	426	382	5703	2.5	412	6.3	7056	981	497	19.5	-0.8	-0.8	0.16
2,4'-DDD	59.0	42.0	42.0	15.0	26.0	18.0	47.7	20.6	19.7	28.9	96.6	28	19.5	1.18	-2.0	-1.1	1.37
4,4'-DDD	965	990	995	102	104	111	983	1.6	106	4.5	1286	255	120	4.87	-0.9	-0.7	0.11
HCB	204	224	195	24.7	25.6	27.5	208	7.1	25.9	5.5	267	23	30.6	1.45	-0.9	-1.6	0.48
α-HCH	3.60	3.10	3.80	13.0	13.0	13.0	3.50	10	13.0	0.0	4.12	1.2	16.9	1.41	-0.6	-0.5	0.69
β-HCH	<2	<2	<2	7.50	4.30	7.20	<2		6.33	27.9							
γ-HCH	2.90	3.00	4.20	3.70	3.40	3.00	3.37	21.5	3.37	10.4	2.12	2.5	3.18	0.01	2.4	0.7	1.43
Heptachlor Epoxide	75.0	65.0	69.0	17.0	16.0	16.0	69.7	7.2	16.3	3.5	49.2	18	10.7	0.09	1.7	1.1	0.48
Cis-Chlordane	46.0	52.0	55.0	43.0	37.0	45.0	51.0	9.0	41.7	10.0	49.4	18	48.1	1.58	0.1	0.1	0.60
Trans-Chlordane	<2	<2	<2	13.0	13.0	12.0	<2		12.7	4.6	7.79	6.9	11.8	0.54			
Oxychlordane	244	231	236	18.0	18.0	16.0	237	2.8	17.3	6.7	258	33	21.2	1.06	-0.3	-0.4	0.18
Cis-Nonachlor	235	221	226	54.0	58.0	46.0	227	3.1	52.7	11.6	232	12	45.8	3.29	-0.1	-0.3	0.21
Trans-Nonachlor	1430	1310	1320	156	152	151	1353	4.9	153	1.7	1494	150	198	15.5	-0.4	-0.6	0.33
Dieldrin	137	108	138	42.0	40.0	42.0	128	13.3	41.3	2.8	175	53	50.1	4.05	-1.1	-0.7	0.89
Mirex	165	147	154	14.0	20.0	22.0	155	5.8	18.7	22.3	177	24	31.0	3.35	-0.5	-0.8	0.39
PBDE 47	87.4	143	136	32.8	33.2	30.8	122	24.8	32.3	4.0	132	17	39.6	0.18	-0.3	-0.4	1.65
PBDE 99	60.0	85.1	83.0	43.0	47.1	50.5	76.0	18.3	46.9	8.0	22.2	2.8	18.9	2.32	9.7	16.9	1.22
PBDE 100	24.3	31.7	30.7	9.05	9.58	9.55	28.9	13.9	9.39	3.2	39.7	6.1	10.3	1.13	-1.1	-1.3	0.93
PBDE 153	27.3	37.1	41.4	10.2	12.3	15.2	35.3	20.5	12.6	20.0	14.2	1.6	8.34	0.55	5.9	10.6	1.37
PBDE 154	13.4	20.0	19.3	5.79	7.80	11.2	17.6	20.6	8.26	33.1	36.7	7.5	13.3	1.73	-2.1	-2.0	1.38
Lipid (mass fraction (%))	84.9	84.2	85.2	74.7	71.3	71.0	84.8	0.61	72.3	2.84	80.5	3.3	71.9	1.27	0.2	0.6	0.04

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	17	19	22
2 to 3	3	1	0
≥ 3	2	2	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 15**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
18	3.45	4.81	4.48	2.66	2.83	2.21	4.25	17	2.57	12.5	6.57	12.6	4.35	0.56	-1.4	-0.18	1.11
28	14.3	15.1	13.8	13.4	9.19	11.9	14.4	4.6	11.5	18.6	18.6	2.4	13.06	1.07	-0.9	-1.17	0.30
31	0.580	0.350	0.320	4.33	4.57	4.24	0.4	34.1	4.38	3.9	1.76	0.7	3.56	0.36	-3.1	-2.04	2.28
44	36.5	47.2	48.7	9.63	11.6	11.6	44.1	15.1	10.9	10.4	46.2	3.1	12.1	0.51	-0.2	-0.49	1.00
49	73.0	64.2	71.6	17.5	17.0	16.2	69.6	6.8	16.9	3.9	88.7	7.0	18.3	0.04	-0.9	-2.01	0.45
52	268	309	270	33.3	32.5	37.3	282	8.2	34.4	7.5	271	20	40.7	1.30	0.2	0.33	0.55
66/95*	Below	Below	Below	Below	Below	Below	Below		Below								
87											201	18	20.6	2.55			
99	315	348	393	60.1	60.4	55.4	352	11.1	58.6	4.8	465	40	58.5	5.17	-1.0	-1.67	0.74
101 (+90)	1190	1170	850	82.7	71.0	84.4	1070	17.8	79.4	9.2	649	129	78.2	12.4	2.6	2.27	1.19
105	164	192	175	26.8	25.3	23.9	177	8.0	25.3	5.7	90.3	16	28.6	1.16	3.8	3.17	0.53
118	592	691	652	63.1	66.5	71.6	645	7.7	67.1	6.4	640	51	76.5	2.87	0.0	0.06	0.52
128	164	179	171	23.6	26.4	29.6	171	4.4	26.5	11.3	150	8.6	23.0	1.06	0.6	1.52	0.29
132	159.0	127.0	96.0	33.3	34.9	38.1	127	24.7	35.4	6.9			21.1	4.75			
138 (+163+164)	1450	1810	1750	159	184	176	1670	11.5	173	7.4	1377	136	146	12.9	0.9	1.28	0.77
149	665	839	657	68.6	72.1	81.5	720	14.3	74.1	9.0	741	47	89.0	6.94	-0.1	-0.26	0.95
151	246	267	248	23.5	25.7	29.4	254	4.6	26.2	11.4	261	20	28.6	1.33	-0.1	-0.24	0.30
153	1300	1330	1330	188	184	172	1320	1.3	181	4.6	1831	240	228	9.75	-1.1	-1.57	0.09
156	151	171	143	12.8	12.8	12.1	155	9.3	12.6	3.2	98.2	15	11.4	0.95	2.3	2.40	0.62
170 (+190)	241	262	241	30.7	32.9	35.3	248	4.9	33.0	7.0	296	16	42.6	2.18	-0.6	-1.89	0.33
180	578	662	609	111	109	100	616	6.9	107	5.5	862	75	138	9.70	-1.1	-1.85	0.46
183	228	260	238	31.1	31.2	29.2	242	6.8	30.5	3.7	234	13	38.0	1.83	0.1	0.36	0.45
187	575	644	608	93.6	95.3	102	609	5.7	97.0	4.6	710	72	121	11.1	-0.6	-0.86	0.38
194	149	176	160	30.5	32.4	33.2	162	8.4	32.0	4.3	127	15	53.5	5.18	1.1	1.59	0.56
195	79.7	83.2	88.3	14.4	15.0	16.5	83.7	5.2	15.3	7.1	36.8	14	14.3	2.17	5.1	2.25	0.34
201	268	310	297	46.4	69.5	45.1	292	7.4	53.7	25.6	46.2	4.1	16.8	1.30	21.3	58.85	0.49
206	106	153	134	33.2	36.6	38.0	131	18.0	35.9	6.9	81.7	13	44.9	4.23	2.4	2.55	1.20
209	48.9	39.8	38.9	13.5	14.9	15.4	42.5	13.0	14.6	6.7	26.0	5.7	17.2	1.86	2.6	2.00	0.87
66	110	110	100	25.7	23.2	17.7	106.7	5.4	22.2	18.4	77.2	40	22.4	0.51	1.5	0.49	0.36
95	309	348	321	36.4	38.1	44.9	326	6.1	39.8	11.3	308	31	33.9	0.51	0.2	0.46	0.41

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	19	18	26
2 to 3	4	7	1
≥ 3	4	2	0

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 16**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	350	375		<20	<20		363	4.9	<20		428	243	90.9	13.5	-0.6	-0.2	0.33
4,4'-DDT	3090	3620		236	261		3355	11.2	249	7.1	2343	349	233	8.02	1.7	1.9	0.74
2,4'-DDE	<20	<20		<20	<20		<20		<20		78.4	9.3	14.2	1.39			
4,4'-DDE	8870	8570		430	478		8720	2.4	454	7.5	7056	981	497	19.5	0.9	1.0	0.16
2,4'-DDD	<20	<20		<20	<20		<20		<20		96.6	28	19.5	1.18			
4,4'-DDD	1870	2010		151	168		1940	5.1	160	7.5	1286	255	120	4.87	2.0	1.6	0.34
HCB											267	23	30.6	1.45			
α-HCH	<20	<20		<20	<20		<20		<20		4.12	1.2	16.9	1.41			
β-HCH	<20	<20		<20	<20		<20		<20								
γ-HCH	<20	<20		<20	<20		<20		<20		2.12	2.5	3.18	0.01			
Heptachlor Epoxide	<20	<20		<20	<20		<20		<20		49.2	18	10.7	0.09			
Cis-Chlordane	<20	<20		<20	<20		<20		<20		49.4	18	48.1	1.58			
Trans-Chlordane	<20	<20		<20	<20		<20		<20		7.79	6.9	11.8	0.54			
Oxychlordane	155	159		<20	<20		157	1.8	<20		258	33	21.2	1.06	-1.6	-1.9	0.12
Cis-Nonachlor	198	220		44.0	48.0		209	7.4	46	6.1	232	12	45.8	3.29	-0.4	-1.4	0.50
Trans-Nonachlor	108	124		91.0	96.0		116	9.8	94	3.8	1494	150	198	15.5	-3.7	-6.0	0.65
Dieldrin	417	422		82.0	81.0		420	0.8	82	0.9	175	53	50.1	4.05	5.6	3.4	0.06
Mirex	<20	<20		<20	<20		<20		<20		177	24	31.0	3.35			
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.34	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))											80.5	3.3	71.9	1.27			

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	5	6	8
2 to 3	1	0	0
≥ 3	2	2	0
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 17**

SAMPLES: Homogenate VII AND SRM 1945

PESTICIDE, PBDE, AND LIPID ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	Uncert	z-score (25%)	z-score (s)	p-score (15%)
2,4'-DDT	2848	2244	385	279	207	313	1826	70.3	266	20.4	428	243	90.9	13.5	13.1	4.6	4.7
4,4'-DDT	7876	6274	914	398	269	443	5021	72.6	370	24.4	2343	349	233	8.02	4.6	5.0	4.8
2,4'-DDE											78.4	9.3	14.2	1.39			
4,4'-DDE	2322	690	152	68.3	72.1	117	1055	107	86	31.5	7056	981	497	19.5	-3.4	-3.5	7.1
2,4'-DDD											96.6	28	19.5	1.18			
4,4'-DDD	561	2814	482	177	119	204	1286	103	167	26.1	1286	255	120	4.87	0.0	0.0	6.9
HCB	189	322	31.2	42.7	39.5	38.6	181	80.6	40	5.5	267	23	30.6	1.45	-1.3	-2.3	5.4
a-HCH				22.1	15.1	23.8			20	22.6	4.12	1.2	16.9	1.41			
b-HCH																	
g-HCH				4.1	2.8	4.6			4	24.6	2.12	2.5	3.2	0.01			
Heptachlor Epoxide	268			15.1	10.4	16.6	268		14	22.9	49.2	18	10.7	0.09	17.8	11.7	0.0
Cis-Chlordane	200	73.8	11.4	24.3	15.7	28.2	95	101	23	28.0	49.4	18	48.1	1.58	3.7	1.7	6.7
Trans-Chlordane	149	79.6	14.0	75.6	50.1	86.3	81	83.5	71	26.3	7.79	6.9	11.8	0.54	37.5	9.3	5.6
Oxychlordane											258	33	21.2	1.06			
Cis-Nonachlor											232	12	45.8	3.29			
Trans-Nonachlor											1494	150	198	15.5			
Dieldrin											175	53	50.1	4.05			
Mirex	321	224	24.7	54.1	53.4	58.8	190	79.5	55	5.3	177	24	31.0	3.35	0.3	0.5	5.3
PBDE 47											132	17	39.6	0.18			
PBDE 99											22.2	2.8	18.9	2.32			
PBDE 100											39.7	6.1	10.3	1.13			
PBDE 153											14.2	1.6	8.3	0.55			
PBDE 154											36.7	7.5	13.3	1.73			
Lipid (mass fraction (%))	86.4	87.3	85.0	73.0	77.5	74.6	86.2	1.37	75.0	3.05	80.5	3.3	71.9	1.27	0.3	0.8	0.1

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category z (25%)	z (s)	p (15%)
≤ 2	4	4	2
2 to 3	0	1	0
≥ 3	6	5	8
	z (25%)	**z (s)**	**p (15%)**

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 17**

SAMPLES: Homogenate VII AND SRM 1945

PCB CONGENER ANALYSES Date(s) of measurements	Data as Submitted by Laboratory (ng/g wet mass)										Material Reference Values (ng/g wet mass)				Performance Scores[a]		
	Homog VII			SRM 1945			Homog VII		SRM 1945		Homog VII		SRM 1945			Homog VII	
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean ng/g wet	lab %RSD	lab mean ng/g wet	lab %RSD	Assigned Value	95% CL	Target[b] Value	95% CL	z-score (25%)	z-score (s)	p-score (15%)
18	11.9	7.07	1.55	9.84	9.30	5.35	6.84	76	8.16	30	6.57	12.6	4.35	0.56	0.2	0.02	5.04
28	5.28	10.2	1.43	5.62	5.94	5.49	5.65	78	5.68	4	18.6	2.4	13.06	1.07	-2.8	-3.60	5.20
31	0.949	1.28	0.17	2.89	3.20	2.91	0.799	72	3.00	6	1.76	0.7	3.56	0.36	-2.2	-1.46	4.77
44	5.92	11.8	1.34	3.79	4.05	4.30	6.34	82	4.05	6	46.2	3.1	12.1	0.51	-3.5	-9.52	5.50
49	27.5	45.3	4.5	11.4	10.9	10.3	25.8	79	10.8	5	88.7	7.0	18.3	0.04	-2.8	-6.62	5.29
52	45.2	113	10.8	19.0	18.9	17.5	56.4	92	18.5	5	271	20	40.7	1.30	-3.2	-6.39	6.16
66/95*																	
87	18.7	94.6	7.24	12.8	13.2	11.9	40.2	118	12.6	5	201	18	20.6	2.55	-3.2	-9.84	7.87
99	307	366	28.6	49.5	51.0	47.3	234	77	49.2	4	465	40	58.5	5.17	-2.0	-3.40	5.14
101 (+90)	162	347	25.2	46.8	43.4	41.4	178	91	43.8	6	649	129	78.2	12.4	-2.9	-2.54	6.04
105	1.61	24.5	2.36	10.3	11.5	10.7	9.5	137	10.8	6	90	16	28.6	1.16	-3.6	-2.95	9.14
118	77.2	351	23.8	44.5	42.4	40.8	151	116	42.6	4	640	51	76.5	2.87	-3.1	-5.99	7.77
128	69.2	141.1	12.4	22.6	22.8	22.9	74.2	87	22.8	1	150	8.6	23.0	1.06	-2.0	-5.50	5.79
132	16.1	64.6	7.68	8.91	9.75	9.48	29.5	104	9.38	5			21.1	4.75			6.95
138 (+163+164)	242	736	51.7	88.9	83.3	79.6	343	103	84.0	6	1377	136	146	12.9	-3.0	-4.50	6.86
149	194	336	24.6	41.5	39.4	38.0	185	84	39.6	5	741	47	89.0	6.94	-3.0	-6.96	5.62
151											261	20	28.6	1.33			
153	568	992	65.7	118	106	103	542	86	109	7	1831	240	228	9.75	-2.8	-3.97	5.71
156											98.2	15	11.4	0.95			
170 (+190)	30.0	175	12.6	26.6	25.3	24.9	72.4	123	25.6	4	296	16	42.6	2.18	-3.0	-8.84	8.19
180	144	490	30.6	78.2	71.2	69.7	222	108	73.1	6	862	75	138	9.70	-3.0	-4.82	7.19
183	101	136	9.6	22.4	20.8	20.7	82.2	79	21.3	5	234	13	38.0	1.83	-2.6	-7.15	5.29
187	308	419	28.5	66.9	63.2	61.9	252	80	64.0	4	710	72	121	11.1	-2.6	-3.94	5.33
194	8.9	75.9	5.4	31.1	29.3	29.3	30.1	132	29.9	3	127	15	53.5	5.18	-3.1	-4.47	8.81
195	8.06	19.5	1.43	5.46	5.13	5.09	9.67	95	5.23	4	36.8	14.5	14.3	2.17	-2.9	-1.30	6.31
201	109	162	11.4	44.9	42.2	41.9	94.0	81	43.0	4	46.2	4.1	16.8	1.30	4.1	11.46	5.41
206	29.6	47.9	3.5	26.8	24.8	24.8	27.0	83	25.5	5	81.7	13	44.9	4.23	-2.7	-2.84	5.51
209	12.7	14.7	1.1	10.8	10.2	10.3	9.48	78	10.4	3	26.0	5.7	17.2	1.86	-2.5	-1.99	5.17
66	45.2	109	10.8	23.0	23.3	8.3	55.0	90	18.2	47	77.2	40	22.4	0.51	-1.2	-0.37	6.03
95											308	31	33.9	0.51			

[a]Certified values are in bold [b]See text for explaination

Category	Number by Category		
	z (25%)	z (s)	p (15%)
≤ 2	3	5	0
2 to 3	12	3	0
≥ 3	10	17	26

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 18**
SAMPLES: Homogenate VII AND SRM 1945

			Mass Fraction (%)									
FATTY ACID			**Homog VII**			**SRM 1945**			**Homog VII**		**SRM 1945**	
ANALYSES			**Sample 1**	**Sample 2**	**Sample 3**	**Sample 1**	**Sample 2**	**Sample 3**	**lab mean ng/g wet**	**lab %RSD**	**lab mean ng/g wet**	**lab %RSD**
Lauric acid	Dodecanoic acid	C12:0	0.07	0.09	0.09	0.19	0.20	0.19	0.08	8.2	0.19	2.9
Myristic acid	Tetradecanoic acid	C14:0	0.48	0.90	0.78	0.79	0.99	0.83	0.72	30.0	0.87	12.5
Pentadecanoic acid	Pentadecanoic acid	C15:0	0.07	0.08	0.08	0.25	0.26	0.23	0.07	6.6	0.25	5.3
Palmitic acid	Hexadecanoic acid	C16:0	0.65	1.21	1.07	1.09	1.43	1.14	0.98	30.2	1.22	15
Margaric acid	Heptadecanoic acid	C17:0	0.05	0.06	0.06	0.17	0.17	0.15	0.06	6.8	0.16	5.4
Stearic acid	Octadecanoic acid	C18:0	0.58	0.67	0.68	0.83	0.87	0.79	0.65	8.4	0.83	4.9
Arachidic acid	Eicosanoic acid	C20:0	0.08	0.08	0.08	0.08	0.07	0.06	0.08	3.1	0.07	9.6
Palmitoleic acid	(Z)-9-Hexadecanoic acid	C16:1(n-7)	2.82	3.15	3.16	4.95	5.32	4.96	3.04	6.4	5.08	4.1
Vaccenic acid	(Z)-11-Octadecenoic acid	C18:1(n-7)	1.41	1.26	1.25	1.53	1.73	1.50	1.31	6.9	1.59	8.1
Oleic acid	(Z)-9-Octadecanoic acid	C18:1(n-9)	17.48	18.71	18.81	18.06	18.07	17.12	18.3	4.1	17.8	3.1
Elaidic acid	(E)-9-Octadecenoic acid	C18:1(n-9)										
	(Z)-13-eicosenoic acid	C20:1(n-7)										
Gondoic	(Z)-11-eicosenoic acid	C20:1(n-9)	5.49	6.50	6.30	4.18	4.41	4.13	6.09	8.8	4.24	3.5
Gadoleic acid	(Z)-9-Eicosenoic acid	C:20:1(n-11)	6.82	5.27	5.65	3.00	3.14	3.02	5.91	13.6	3.05	2.7
Erucic acid	(Z)-13-Docosenoic acid	C22:1(n-9)	0.53	0.82	0.84	0.45	0.56	0.39	0.73	24.1	0.47	17
Cetoleic	(Z)-11-docosenoic acid	C22:1(n-11)	6.01	5.96	5.86	5.23	5.27	4.90	5.94	1.3	5.14	3.9
Nervonic acid	(Z)-15-Tetracosenoic acid	C24:1(n-9)	0.19	0.18	0.20	0.29	0.31	0.29	0.19	4.0	0.29	3.6
Linoleic acid	(Z,Z)-9,12-Octadecadienoic acid	C18:2(n-6)	0.46	0.46	0.49	0.75	0.79	0.73	0.47	3.4	0.75	4.2
a-Linolenic acid	(Z,Z,Z)-9,12,15-Octadecatrienoic acid	C18:3(n-3)	0.43	0.59	0.58	0.34	0.37	0.35	0.54	17.2	0.35	4.9
g-linolenic acid	(Z,Z,Z)-6,9,12-Octadecatetraenoic acid	C18:3(n-6)	0.01	0.01	0.01	0.02	0.02	0.02	0.01	2.8	0.02	4.1
Stearidonic acid	(Z,Z,Z,Z,)-6,9,12,15-Octadecatetraenoic acid	C18:4(n-3)	0.08	0.08	0.08	0.20	0.22	0.20	0.08	5.9	0.21	3.5
Homo-gamma-linoleic acid	(Z,Z)-11,14-Eicosadienoic acid	C20:2(n-6)	0.15	0.15	0.15	0.21	0.23	0.22	0.15	1.3	0.22	4.1
Homo-alpha-linolenic acid	(Z,Z,Z)-11,14,17-Eicosatrienoic acid	C20:3(n-3)				0.14	0.15	0.13			0.14	4.8
Arachidonic acid	(Z,Z,Z,Z)-5,8,11,14-Eicosatetraenoic acid	C20:4(n-6)	0.12	0.13	0.14	0.22	0.24	0.23	0.13	4.6	0.23	4.4
EPA	(Z,Z,Z,Z,Z)-5,8,11,14,17-Eicosapentaenoic acid	C20:5(n-3)	0.35	0.39	0.40	1.00	1.20	1.06	0.38	6.9	1.09	9.3
	(Z,Z)-13,16-Docosadienoic acid	C22:2(n-6)	0.03	0.03	0.03	0.03	0.02	0.02	0.03	10.1	0.02	16
DPA	(Z,Z,Z,Z,Z)-7,10,13,16,19-Docosapentaenoic acid	C22:5(n-3)	0.28	0.29	0.31	0.94	1.06	1.01	0.29	3.9	1.00	6.0
DHA	(Z,Z,Z,Z,Z,Z)-4,7,10,13,16,19-Docosahexaenoic Acid	C22:6(n-3)	0.80	0.89	0.88	3.25	3.61	3.16	0.86	5.4	3.34	7.0
Total Lipid			70.3	73.5	83.6	68.1	68.4	69.0	75.8	9.2	68.5	0.7

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 19**
SAMPLES: Homogenate VII AND SRM 1945

			Mass Fraction (%)									
FATTY ACID			**Homog VII**			**SRM 1945**			**Homog VII**		**SRM 1945**	
ANALYSES			**Sample 1**	**Sample 2**	**Sample 3**	**Sample 1**	**Sample 2**	**Sample 3**	**lab mean ng/g wet**	**lab %RSD**	**lab mean ng/g wet**	**lab %RSD**
Lauric acid	Dodecanoic acid	C12:0	0.08	0.08	0.08	0.15	0.15	0.14	0.08	0.00	0.15	3.9
Myristic acid	Tetradecanoic acid	C14:0	1.53	1.51	1.48	3.20	3.16	3.04	1.51	1.7	3.13	2.7
Pentadecanoic acid	Pentadecanoic acid	C15:0	0.08	0.07	0.07	0.31	0.31	0.29	0.07	7.9	0.30	3.8
Palmitic acid	Hexadecanoic acid	C16:0	2.46	2.46	2.41	7.68	7.57	7.27	2.44	1.2	7.51	2.8
Margaric acid	Heptadecanoic acid	C17:0	0.05	0.04	0.06	0.26	0.21	0.20	0.05	20.0	0.22	14.4
Stearic acid	Octadecanoic acid	C18:0	0.72	0.72	0.70	1.29	1.26	1.21	0.71	1.6	1.25	3.2
Arachidic acid	Eicosanoic acid	C20:0	0.15	0.12	0.09	0.11	0.11	0.09	0.12	25.0	0.10	11.2
Palmitoleic acid	(Z)-9-Hexadecanoic acid	C16:1(n-7)	3.14	3.09	3.03	5.90	5.78	5.56	3.09	1.8	5.75	3.0
Vaccenic acid	(Z)-11-Octadecenoic acid	C18:1(n-7)	1.30	1.23	1.21	1.83	1.81	1.75	1.25	3.8	1.80	2.3
Oleic acid	(Z)-9-Octadecanoic acid	C18:1(n-9)	13.60	13.50	13.20	14.20	14.00	13.40	13.4	1.5	13.9	3.0
Elaidic acid	(E)-9-Octadecenoic acid	C18:1(n-9)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01				
	(Z)-13-eicosenoic acid	C20:1(n-7)	0.26	0.26	0.27	0.25	0.24	0.23	0.26	2.2	0.24	4.2
Gondoic	(Z)-11-eicosenoic acid	C20:1(n-9)	7.14	7.14	6.98	4.79	4.71	4.50	7.09	1.3	4.67	3.2
Gadoleic acid	(Z)-9-Eicosenoic acid	C:20:1(n-11)	5.08	5.08	4.95	3.02	2.96	2.84	5.04	1.5	2.94	3.1
Erucic acid	(Z)-13-Docosenoic acid	C22:1(n-9)	0.74	0.74	0.72	0.54	0.50	0.50	0.73	1.6	0.51	4.5
Cetoleic	(Z)-11-docosenoic acid	C22:1(n-11)	4.68	4.70	4.54	4.74	4.63	4.45	4.64	1.9	4.61	3.2
Nervonic acid	(Z)-15-Tetracosenoic acid	C24:1(n-9)	0.15	0.14	0.15	0.23	0.22	0.21	0.15	3.9	0.22	4.5
Linoleic acid	(Z,Z)-9,12-Octadecadienoic acid	C18:2(n-6)	0.41	0.41	0.40	0.78	0.76	0.71	0.41	1.4	0.75	4.8
a-Linolenic acid	(Z,Z,Z)-9,12,15-Octadecatrienoic acid	C18:3(n-3)	0.08	0.09	0.08	0.33	0.33	0.31	0.08	6.9	0.32	3.6
g-linolenic acid	(Z,Z,Z)-6,9,12-Octadecatetraenoic acid	C18:3(n-6)	0.01	< 0.01	0.01	0.02	0.02	0.02	0.01	0.0	0.02	0.0
Stearidonic acid	(Z,Z,Z,Z,)-6,9,12,15-Octadecatetraenoic acid	C18:4(n-3)	0.15	0.14	0.14	0.24	0.23	0.23	0.14	4.0	0.23	2.5
Homo-gamma-linoleic acid	(Z,Z)-11,14-Eicosadienoic acid	C20:2(n-6)	0.07	0.06	0.07	0.18	0.17	0.17	0.07	8.7	0.17	3.3
Homo-alpha-linolenic acid	(Z,Z,Z)-11,14,17-Eicosatrienoic acid	C20:3(n-3)	0.03	0.03	0.03	0.14	0.13	0.13	0.03	0.0	0.13	4.3
Arachidonic acid	(Z,Z,Z,Z)-5,8,11,14-Eicosatetraenoic acid	C20:4(n-6)	0.11	0.13	0.11	0.23	0.22	0.22	0.12	9.9	0.22	2.6
EPA	(Z,Z,Z,Z,Z)-5,8,11,14,17-Eicosapentaenoic acid	C20:5(n-3)	0.31	0.32	0.31	1.15	1.12	1.08	0.31	1.8	1.12	3.1
	(Z,Z)-13,16-Docosadienoic acid	C22:2(n-6)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01				
DPA	(Z,Z,Z,Z,Z)-7,10,13,16,19-Docosapentaenoic acid	C22:5(n-3)	0.20	0.20	0.20	0.88	0.90	0.85	0.20	0.0	0.88	2.9
DHA	(Z,Z,Z,Z,Z,Z)-4,7,10,13,16,19-Docosahexaenoic Acid	C22:6(n-3)	0.57	0.57	0.57	3.75	3.71	3.63	0.57	0.0	3.70	1.7
Total Lipid			81.1	82	78.5	75.9	73.8	66.7	80.5	2.3	72.1	6.7

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 20**
SAMPLES: Homogenate VII AND SRM 1945

			Mass Fraction (%)									
FATTY ACID			**Homog VII**			**SRM 1945**			**Homog VII**		**SRM 1945**	
ANALYSES			**Sample 1**	**Sample 2**	**Sample 3**	**Sample 1**	**Sample 2**	**Sample 3**	**lab mean ng/g wet**	**lab %RSD**	**lab mean ng/g wet**	**lab %RSD**
Lauric acid	Dodecanoic acid	C12:0	0.06	0.08	0.07	0.14	0.12	0.12	0.07	14.0	0.13	8.4
Myristic acid	Tetradecanoic acid	C14:0	1.19	1.33	1.41	2.73	2.81	2.60	1.31	8.6	2.71	3.8
Pentadecanoic acid	Pentadecanoic acid	C15:0	0.05	0.05	0.06	0.24	0.22	0.22	0.05	4.7	0.23	4.8
Palmitic acid	Hexadecanoic acid	C16:0	1.78	2.04	2.19	5.86	6.17	5.86	2.00	10.2	5.96	3.0
Margaric acid	Heptadecanoic acid	C17:0	0.04	0.03	0.04	0.16	0.18	0.15	0.04	12.6	0.16	6.6
Stearic acid	Octadecanoic acid	C18:0	0.48	0.63	0.71	1.09	1.18	1.06	0.61	19.3	1.11	5.4
Arachidic acid	Eicosanoic acid	C20:0	0.05	0.05	0.04	0.09	0.06	0.07	0.05	12.4	0.07	22.0
Palmitoleic acid	(Z)-9-Hexadecanoic acid	C16:1(n-7)	2.34	2.72	2.96	4.60	4.42	4.48	2.67	11.5	4.50	2.0
Vaccenic acid	(Z)-11-Octadecenoic acid	C18:1(n-7)	0.99	1.19	1.32	1.62	1.60	1.61	1.17	14.0	1.61	0.5
Oleic acid	(Z)-9-Octadecanoic acid	C18:1(n-9)	8.00	10.46	11.68	10.86	11.94	10.03	10.0	18.6	10.9	8.8
Elaidic acid	(E)-9-Octadecenoic acid	C18:1(n-9)										
	(Z)-13-eicosenoic acid	C20:1(n-7)	0.25	0.29	0.37	0.13	0.24	0.16	0.30	20.3	0.18	31.6
Gondoic	(Z)-11-eicosenoic acid	C20:1(n-9)	4.62	5.70	6.00	3.44	3.71	3.47	5.44	13.3	3.54	4.2
Gadoleic acid	(Z)-9-Eicosenoic acid	C:20:1(n-11)	3.32	4.51	4.88	2.32	2.89	2.23	4.24	19.2	2.48	14.4
Erucic acid	(Z)-13-Docosenoic acid	C22:1(n-9)	0.42	0.59	0.69	0.41	0.46	0.46	0.57	24.2	0.44	6.1
Cetoleic	(Z)-11-docosenoic acid	C22:1(n-11)	3.06	3.48	4.01	3.41	3.71	2.85	3.52	13.5	3.32	13.0
Nervonic acid	(Z)-15-Tetracosenoic acid	C24:1(n-9)	0.08	0.07	0.08	0.14	0.14	0.10	0.08	9.7	0.13	19.2
Linoleic acid	(Z,Z)-9,12-Octadecadienoic acid	C18:2(n-6)	0.03	0.04	0.03	0.13	0.09	0.11	0.03	17.1	0.11	20.6
a-Linolenic acid	(Z,Z,Z)-9,12,15-Octadecatrienoic acid	C18:3(n-3)										
g-linolenic acid	(Z,Z,Z)-6,9,12-Octadecatetraenoic acid	C18:3(n-6)										
Stearidonic acid	(Z,Z,Z,Z,)-6,9,12,15-Octadecatetraenoic acid	C18:4(n-3)										
Homo-gamma-linoleic acid	(Z,Z)-11,14-Eicosadienoic acid	C20:2(n-6)										
Homo-alpha-linolenic acid	(Z,Z,Z)-11,14,17-Eicosatrienoic acid	C20:3(n-3)										
Arachidonic acid	(Z,Z,Z,Z)-5,8,11,14-Eicosatetraenoic acid	C20:4(n-6)	0.04	0.04	0.04	0.08	0.08	0.07	0.04	5.9	0.08	10.5
EPA	(Z,Z,Z,Z,Z)-5,8,11,14,17-Eicosapentaenoic acid	C20:5(n-3)	0.11	0.14	0.15	0.58	0.55	0.49	0.13	17.0	0.54	9.0
	(Z,Z)-13,16-Docosadienoic acid	C22:2(n-6)										
DPA	(Z,Z,Z,Z,Z)-7,10,13,16,19-Docosapentaenoic acid	C22:5(n-3)	0.08	0.09	0.09	0.58	0.47	0.39	0.09	6.0	0.48	20.7
DHA	(Z,Z,Z,Z,Z,Z)-4,7,10,13,16,19-Docosahexaenoic Acid	C22:6(n-3)	0.10	0.13	0.12	0.94	0.95	0.76	0.12	13.4	0.88	12.1
Total Lipid			65.3	72.2	79.7	70.3	69.3	68.6	72.4	9.9	69.4	1.2

2005 EXERCISE FOR ORGANOCHLORINES IN MARINE MAMMAL TISSUES **Laboratory Number: 21**
SAMPLES: Homogenate VII AND SRM 1945

			Mass Fraction (%)									
FATTY ACID			**Homog VII**			**SRM 1945**			**Homog VII**		**SRM 1945**	
ANALYSES			**Sample 1**	**Sample 2**	**Sample 3**	**Sample 1**	**Sample 2**	**Sample 3**	**lab mean ng/g wet**	**lab %RSD**	**lab mean ng/g wet**	**lab %RSD**
Lauric acid	Dodecanoic acid	C12:0	0.09	0.09	0.09	0.19			0.09	0.7	0.19	
Myristic acid	Tetradecanoic acid	C14:0	1.72	1.76	1.73	3.63			1.74	1.2	3.63	
Pentadecanoic acid	Pentadecanoic acid	C15:0	0.08	0.09	0.08	0.36			0.08	1.6	0.36	
Palmitic acid	Hexadecanoic acid	C16:0	2.64	2.73	2.68	7.41			2.68	1.7	7.41	
Margaric acid	Heptadecanoic acid	C17:0	0.07	0.07	0.07	0.25			0.07	2.7	0.25	
Stearic acid	Octadecanoic acid	C18:0	0.89	0.90	0.88	1.43			0.89	1.5	1.43	
Arachidic acid	Eicosanoic acid	C20:0	0.16	0.17	0.16	0.14			0.17	1.4	0.14	
Palmitoleic acid	(Z)-9-Hexadecanoic acid	C16:1(n-7)	3.54	3.56	3.64	6.46			3.58	1.5	6.46	
Vaccenic acid	(Z)-11-Octadecenoic acid	C18:1(n-7)	1.49	1.50	1.47	2.00			1.49	1.0	2.00	
Oleic acid	(Z)-9-Octadecanoic acid	C18:1(n-9)	15.20	15.20	15.10	15.20			15.2	0.4	15.2	
Elaidic acid	(E)-9-Octadecenoic acid	C18:1(n-9)										
	(Z)-13-eicosenoic acid	C20:1(n-7)	0.35	0.36	0.34	0.27			0.35	2.2	0.27	
Gondoic	(Z)-11-eicosenoic acid	C20:1(n-9)	8.17	8.30	8.07	5.27			8.18	1.4	5.27	
Gadoleic acid	(Z)-9-Eicosenoic acid	C:20:1(n-11)	5.69	5.76	5.60	3.25			5.68	1.4	3.25	
Erucic acid	(Z)-13-Docosenoic acid	C22:1(n-9)	1.11	1.12	1.07	0.80			1.10	2.4	0.80	
Cetoleic	(Z)-11-docosenoic acid	C22:1(n-11)	5.41	5.51	5.37	5.17			5.43	1.3	5.17	
Nervonic acid	(Z)-15-Tetracosenoic acid	C24:1(n-9)	0.20	0.20	0.20	0.30			0.20	1.5	0.30	
Linoleic acid	(Z,Z)-9,12-Octadecadienoic acid	C18:2(n-6)	0.54	0.54	0.53	0.91			0.54	1.1	0.91	
a-Linolenic acid	(Z,Z,Z)-9,12,15-Octadecatrienoic acid	C18:3(n-3)	0.17	0.17	0.17	0.40			0.17	2.1	0.40	
g-linolenic acid	(Z,Z,Z)-6,9,12-Octadecatetraenoic acid	C18:3(n-6)	0.02	0.02	0.02	0.03			0.02	4.3	0.03	
Stearidonic acid	(Z,Z,Z,Z,)-6,9,12,15-Octadecatetraenoic acid	C18:4(n-3)	0.09	0.10	0.10	0.20			0.10	6.3	0.20	
Homo-gamma-linoleic acid	(Z,Z)-11,14-Eicosadienoic acid	C20:2(n-6)	0.17	0.18	0.17	0.03			0.17	2.3	0.03	
Homo-alpha-linolenic acid	(Z,Z,Z)-11,14,17-Eicosatrienoic acid	C20:3(n-3)	0.07	0.07	0.06	0.19			0.07	3.7	0.19	
Arachidonic acid	(Z,Z,Z,Z)-5,8,11,14-Eicosatetraenoic acid	C20:4(n-6)	0.18	0.21	0.18	0.31			0.19	8.0	0.31	
EPA	(Z,Z,Z,Z,Z)-5,8,11,14,17-Eicosapentaenoic acid	C20:5(n-3)	0.51	0.51	0.49	1.27			0.50	1.8	1.27	
	(Z,Z)-13,16-Docosadienoic acid	C22:2(n-6)	0.03	0.04	0.03	0.04			0.04	18.5	0.04	
DPA	(Z,Z,Z,Z,Z)-7,10,13,16,19-Docosapentaenoic acid	C22:5(n-3)	0.47	0.29	0.39	0.94			0.38	24.4	0.94	
DHA	(Z,Z,Z,Z,Z,Z)-4,7,10,13,16,19-Docosahexaenoic Acid	C22:6(n-3)	0.85	0.83	0.83	4.33			0.84	1.5	4.33	
Total Lipid			71.6	69.3	70.6	61.9			70.5	1.6	61.9	

Appendix B

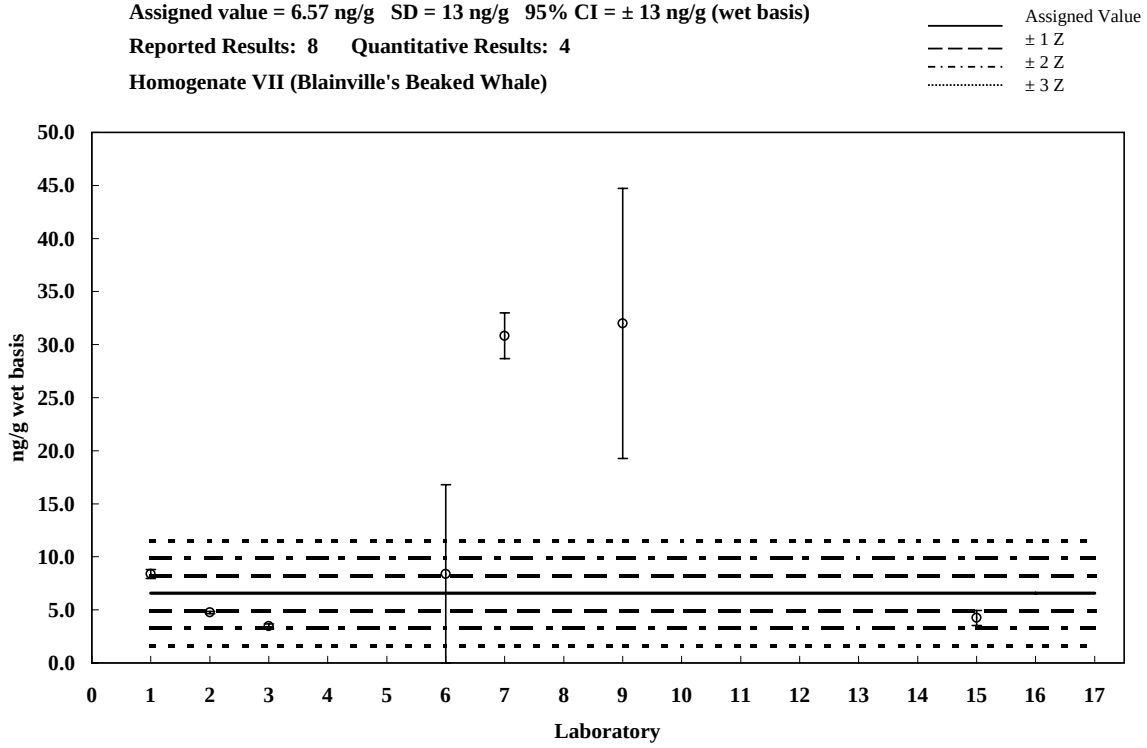
Graphical results of PCB congener and lipid data reported by all laboratories. The Z-scores for Homogenate VII represent 25 % of the assigned value so that z = +1 is the assigned value plus 25 %, z = -1 is the assigned value minus 25 % and so forth. Error bars are ± 1 standard deviation.

PCB 18

Assigned value = 6.57 ng/g SD = 13 ng/g 95% CI = ± 13 ng/g (wet basis)

Reported Results: 8 Quantitative Results: 4

Homogenate VII (Blainville's Beaked Whale)

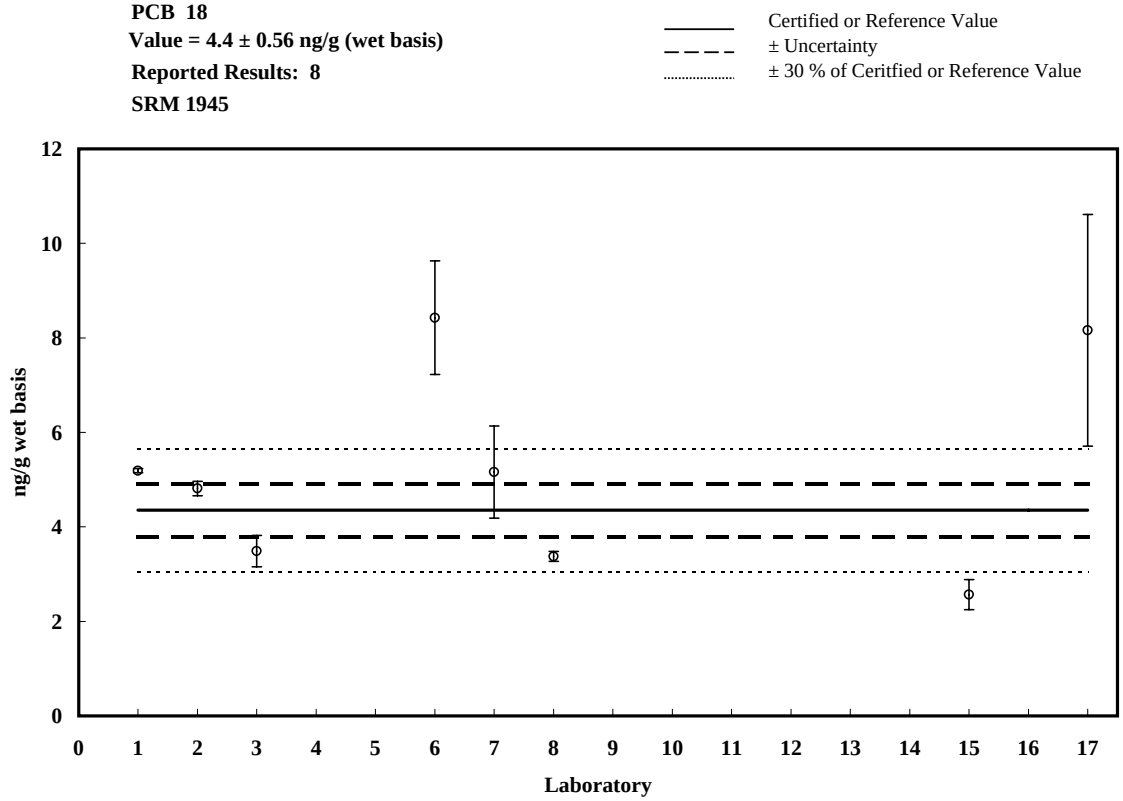


PCB 18

Value = 4.4 ± 0.56 ng/g (wet basis)

Reported Results: 8

SRM 1945

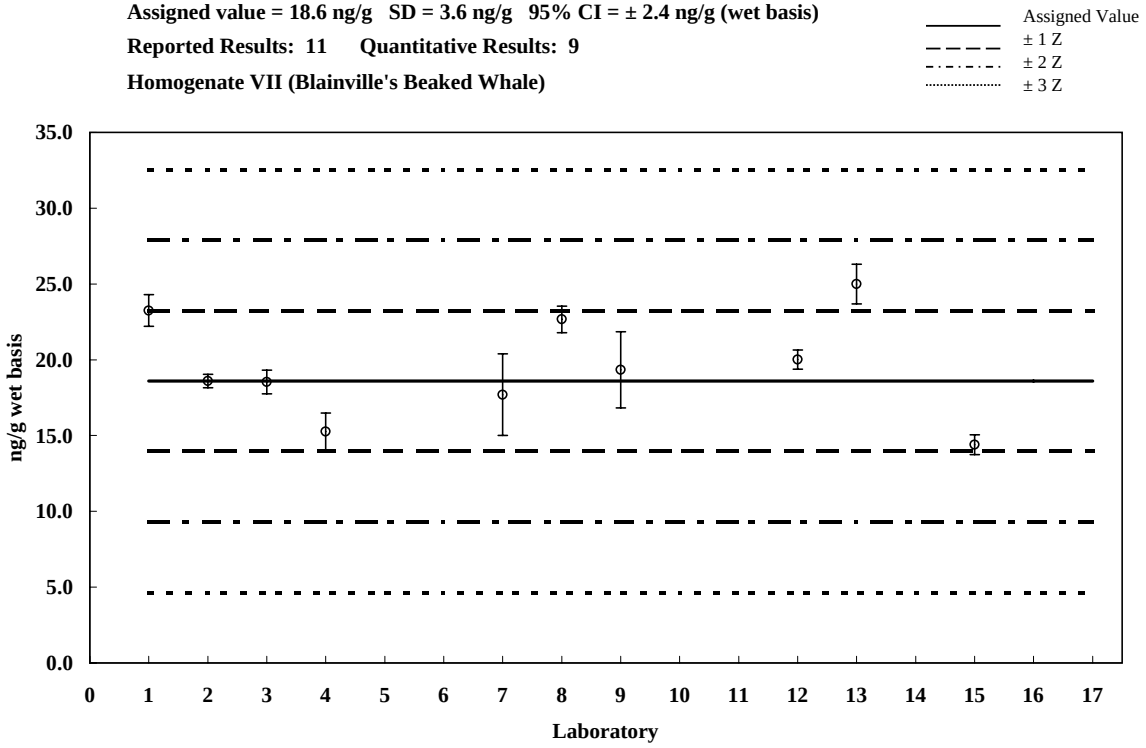


PCB 28

Assigned value = 18.6 ng/g SD = 3.6 ng/g 95% CI = ± 2.4 ng/g (wet basis)

Reported Results: 11 Quantitative Results: 9

Homogenate VII (Blainville's Beaked Whale)

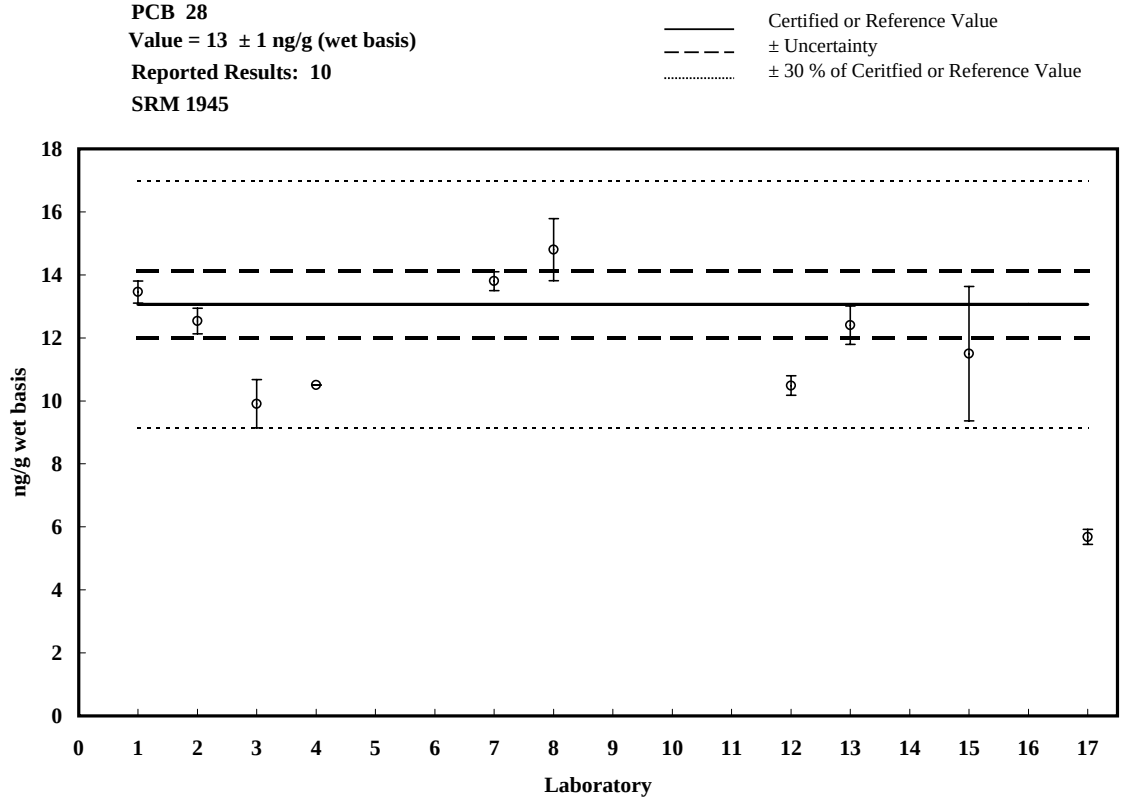


PCB 28

Value = 13 ± 1 ng/g (wet basis)

Reported Results: 10

SRM 1945

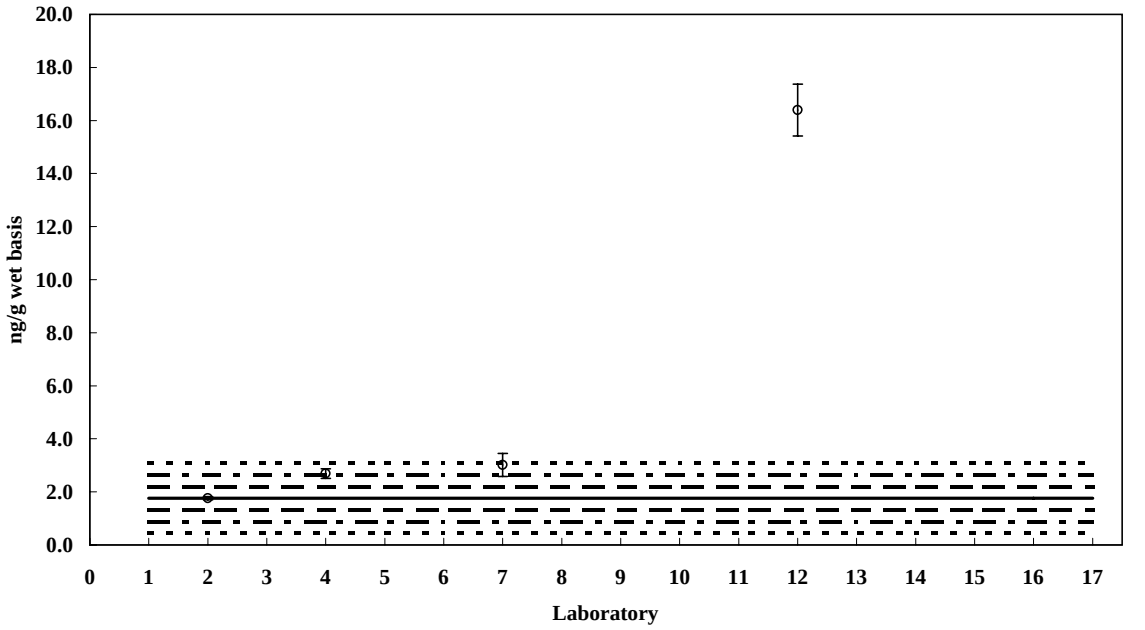


PCB 31

Assigned value = 1.76 ng/g SD = 0.66 ng/g 95% CI = ± 0.74 ng/g (wet basis)

Reported Results: 5 Quantitative Results: 3

Homogenate VII (Blainville's Beaked Whale)

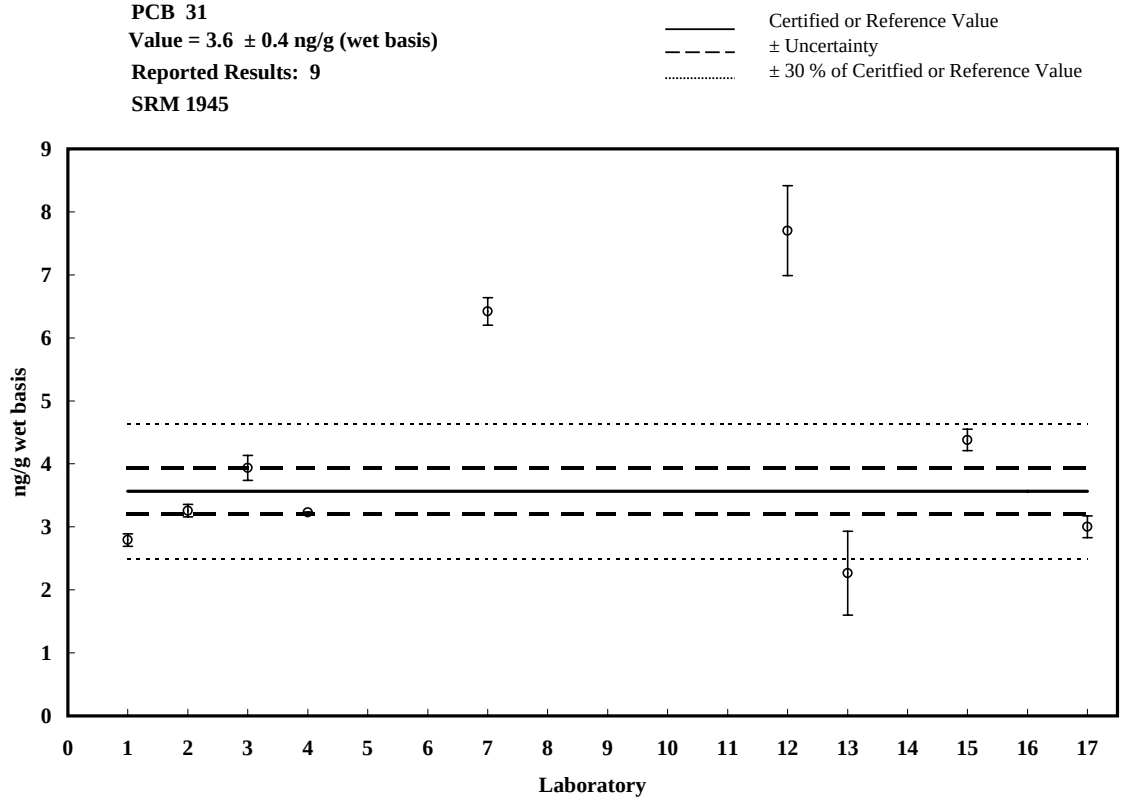


PCB 31

Value = 3.6 ± 0.4 ng/g (wet basis)

Reported Results: 9

SRM 1945

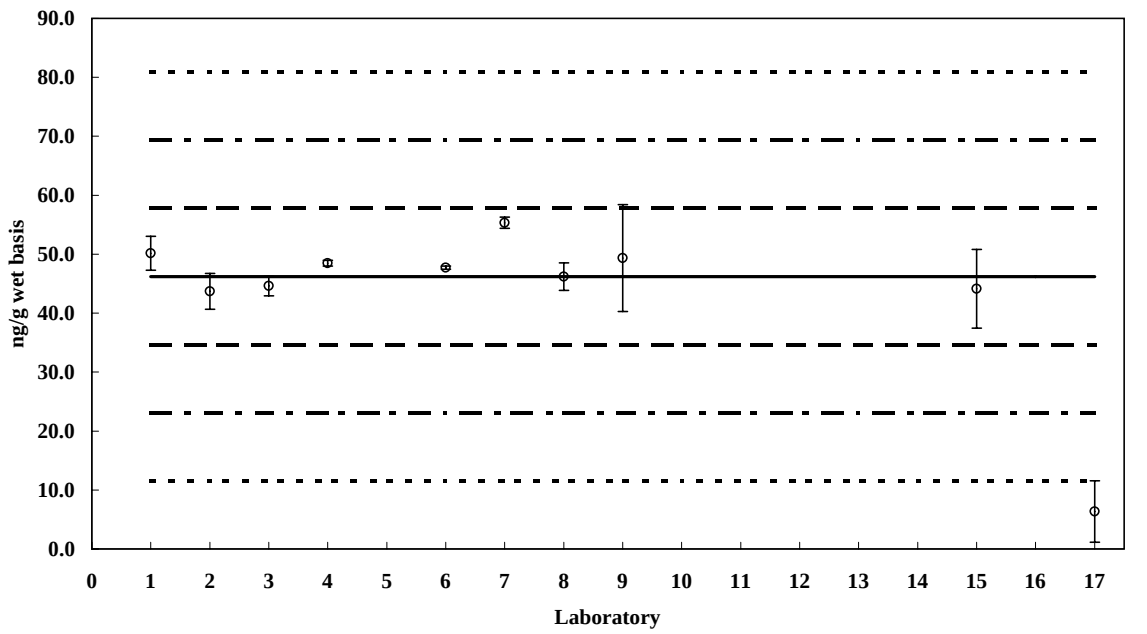


PCB 44

Assigned value = 46.2 ng/g SD = 4.2 ng/g 95% CI = ± 3.1 ng/g (wet basis)

Reported Results: 10 Quantitative Results: 7

Homogenate VII (Blainville's Beaked Whale)

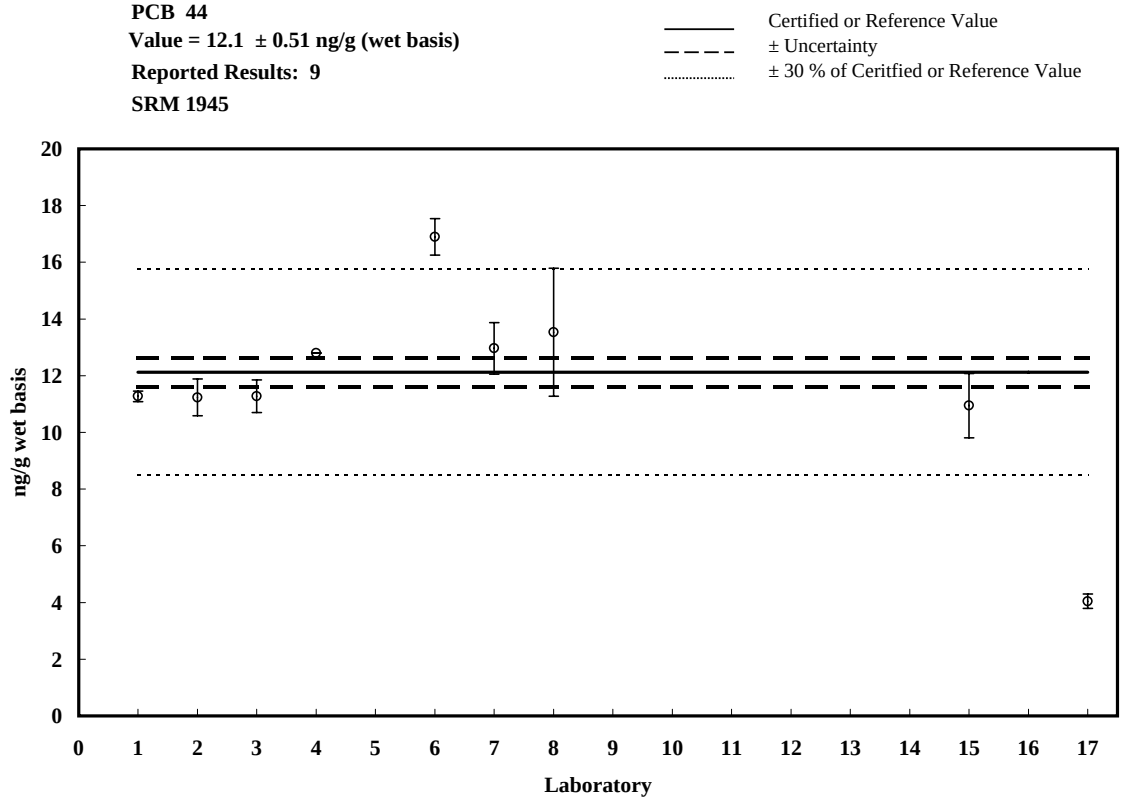


PCB 44

Value = 12.1 ± 0.51 ng/g (wet basis)

Reported Results: 9

SRM 1945

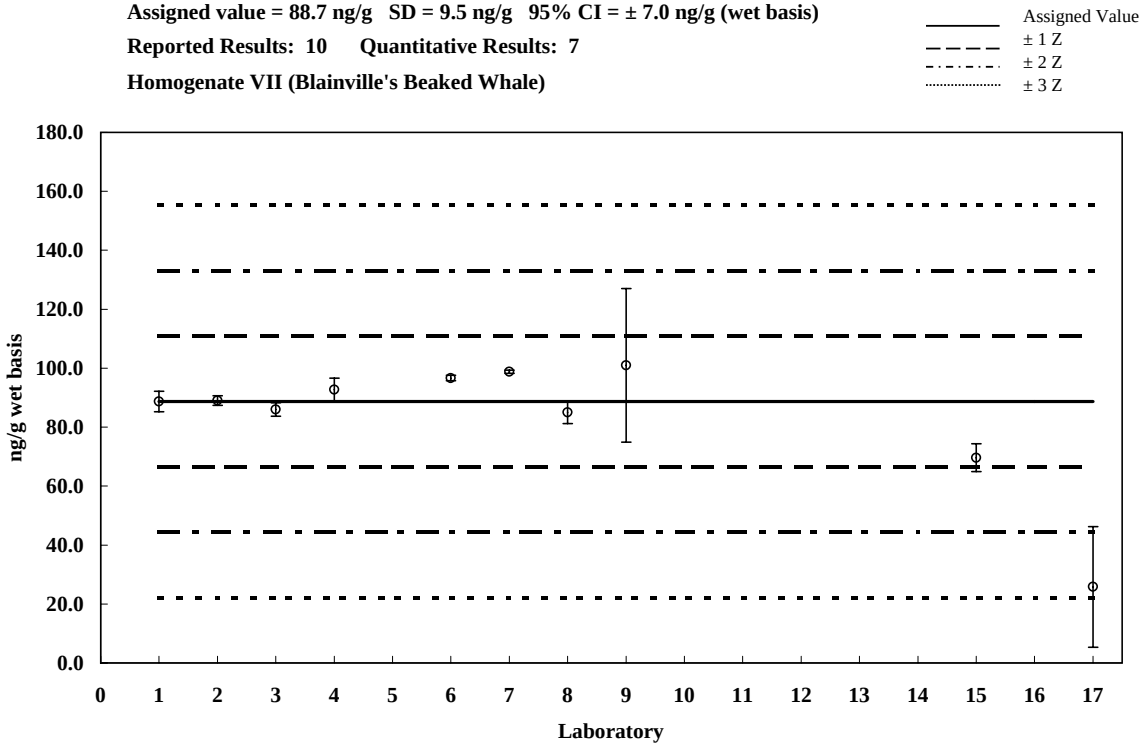


PCB 49

Assigned value = 88.7 ng/g SD = 9.5 ng/g 95% CI = ± 7.0 ng/g (wet basis)

Reported Results: 10 Quantitative Results: 7

Homogenate VII (Blainville's Beaked Whale)

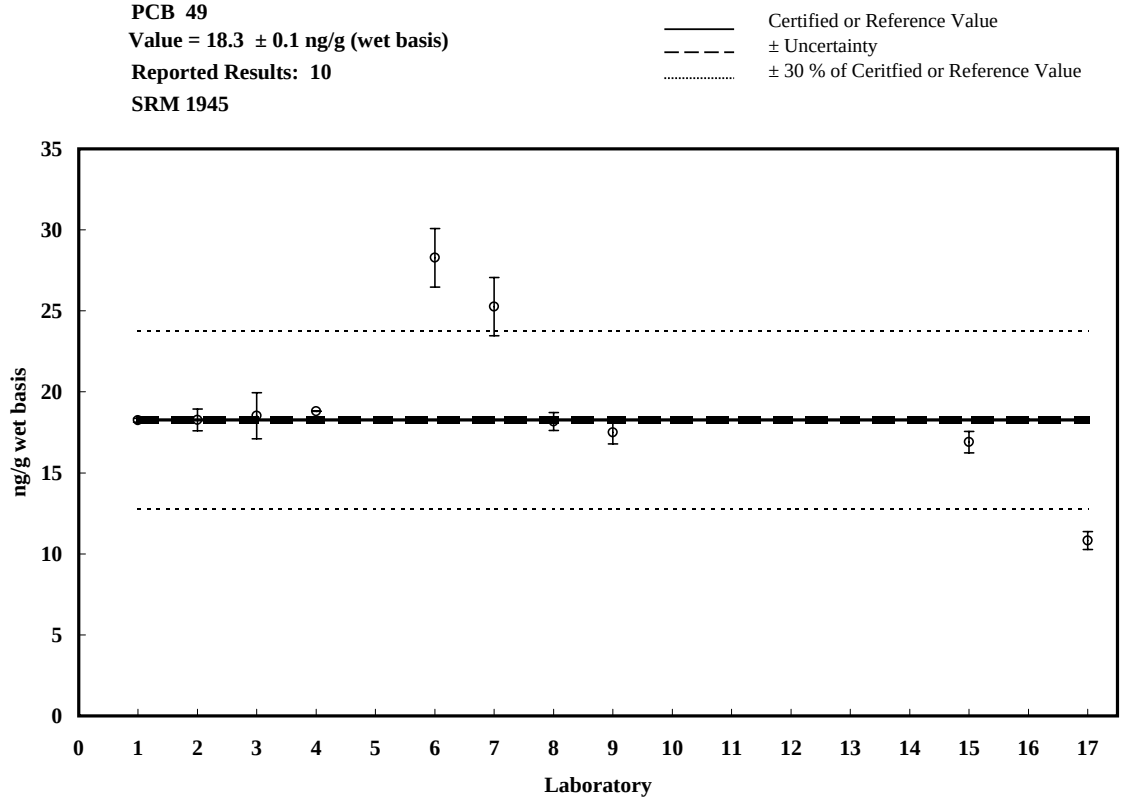


PCB 49

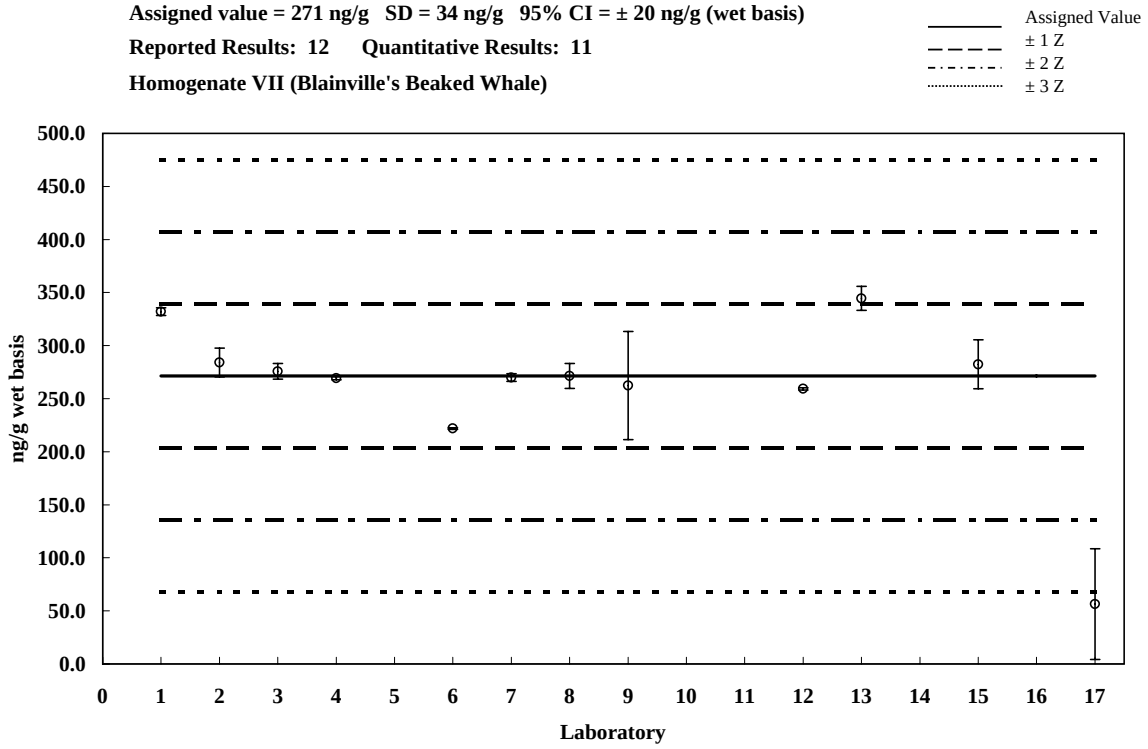
Value = 18.3 ± 0.1 ng/g (wet basis)

Reported Results: 10

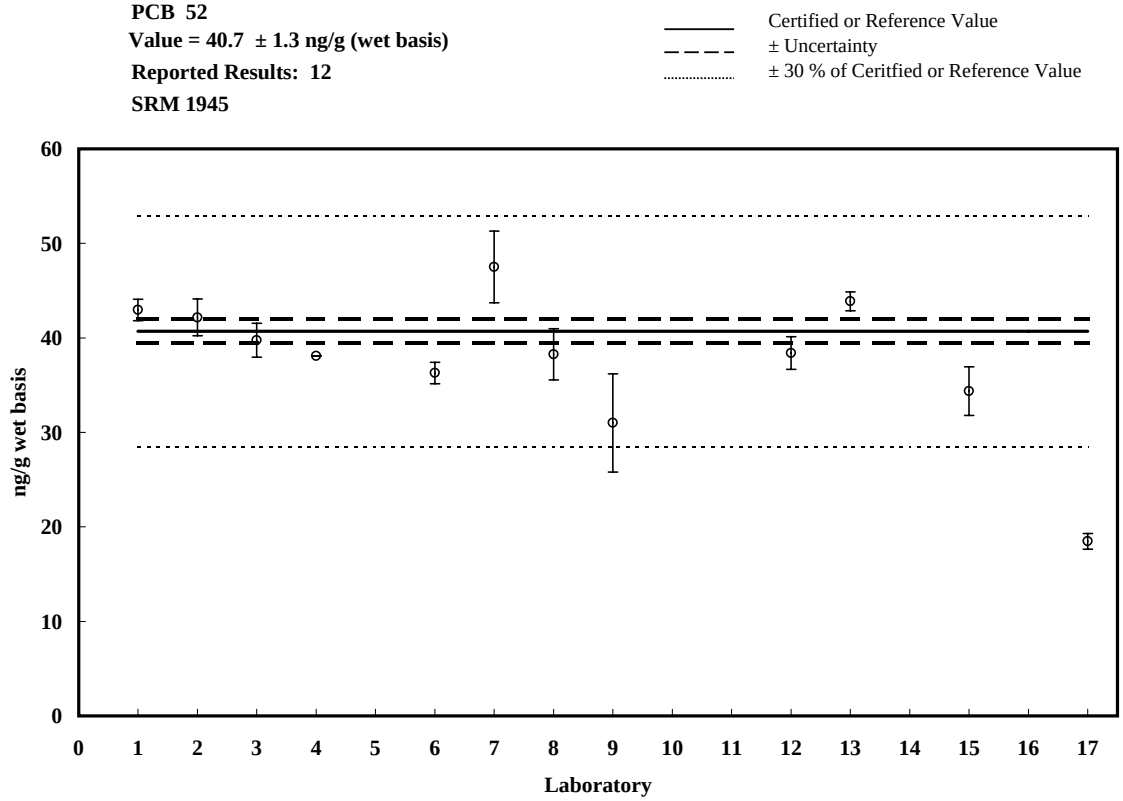
SRM 1945



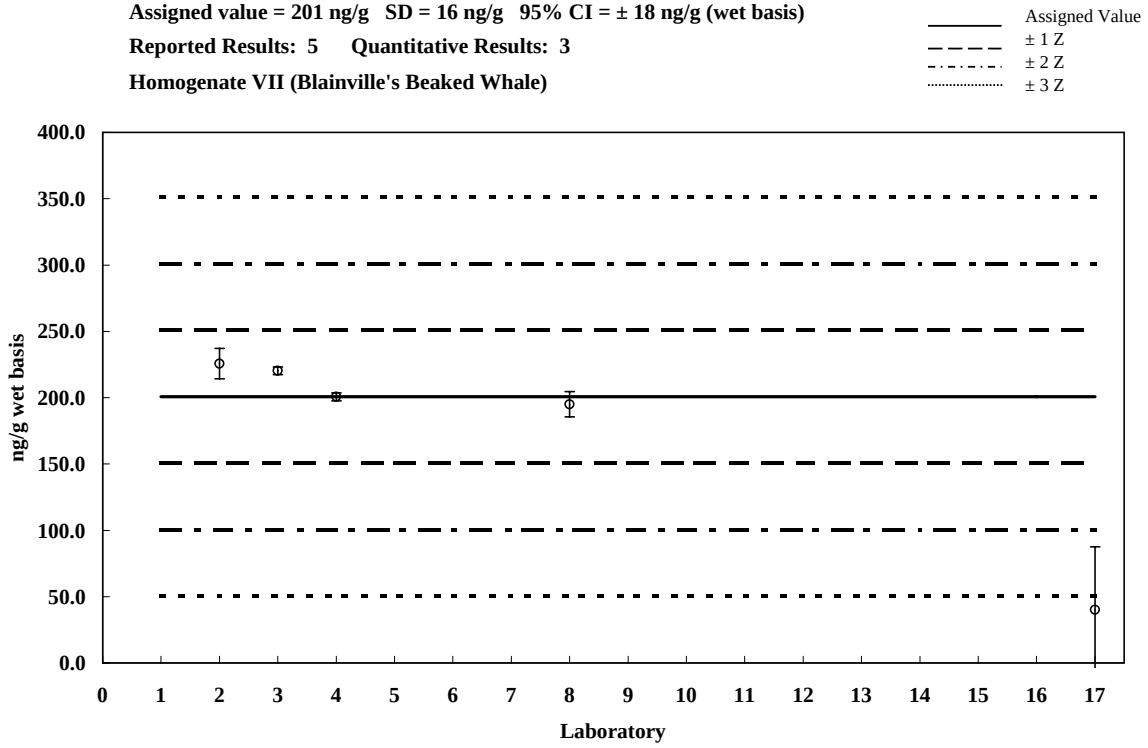
PCB 52
Assigned value = 271 ng/g SD = 34 ng/g 95% CI = ± 20 ng/g (wet basis)
Reported Results: 12 Quantitative Results: 11
Homogenate VII (Blainville's Beaked Whale)



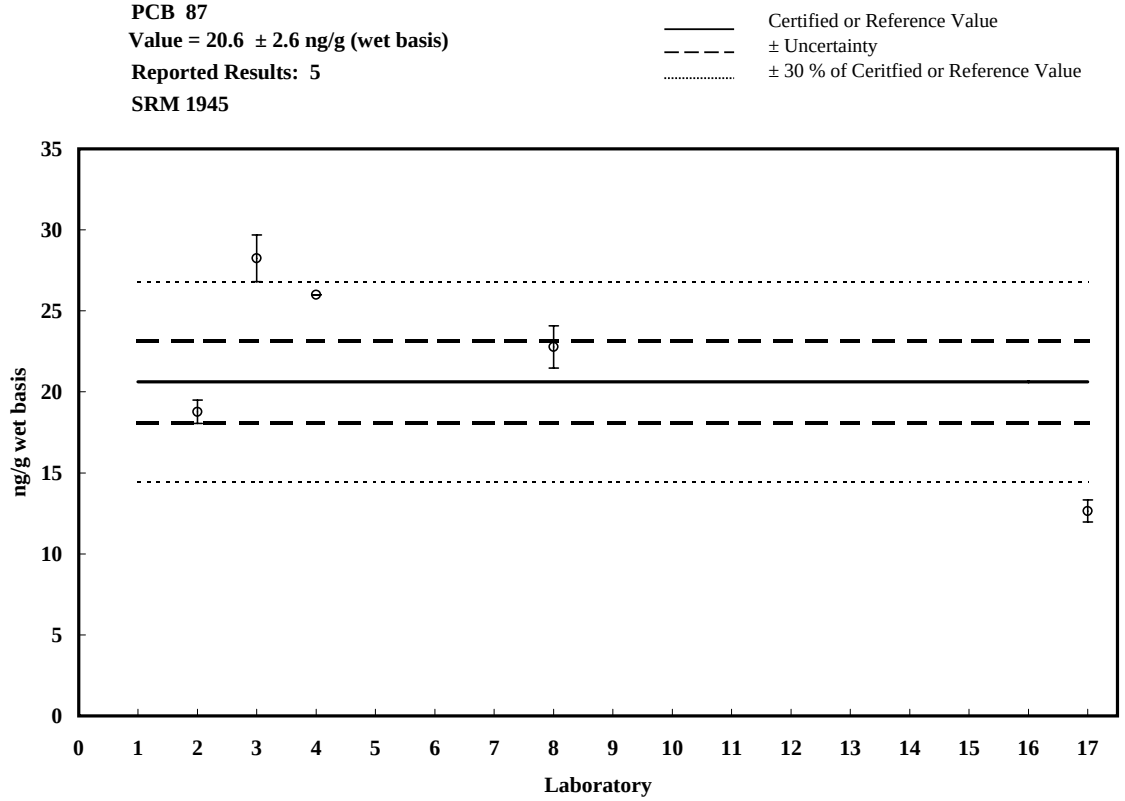
PCB 52
Value = 40.7 ± 1.3 ng/g (wet basis)
Reported Results: 12
SRM 1945



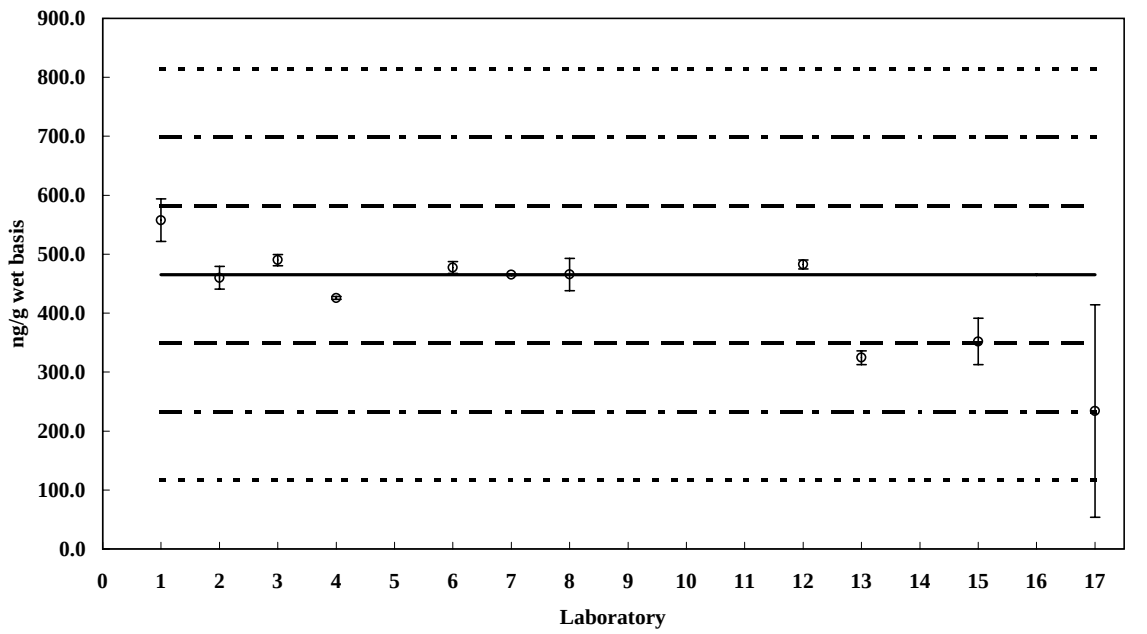
PCB 87
Assigned value = 201 ng/g SD = 16 ng/g 95% CI = ± 18 ng/g (wet basis)
Reported Results: 5 Quantitative Results: 3
Homogenate VII (Blainville's Beaked Whale)



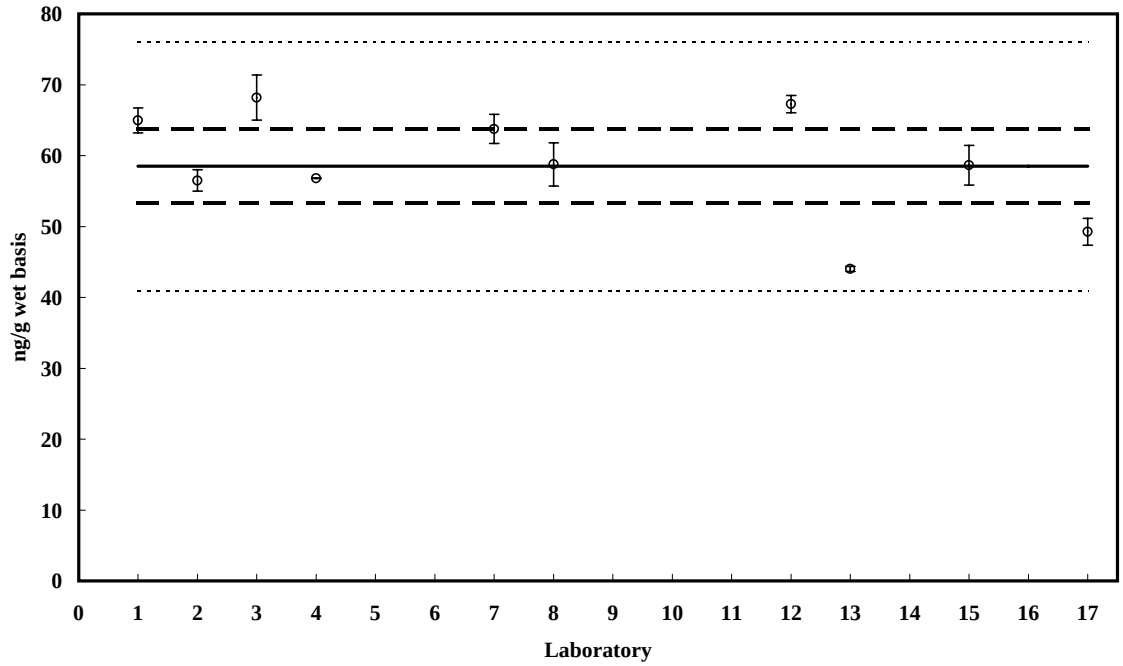
PCB 87
Value = 20.6 ± 2.6 ng/g (wet basis)
Reported Results: 5
SRM 1945



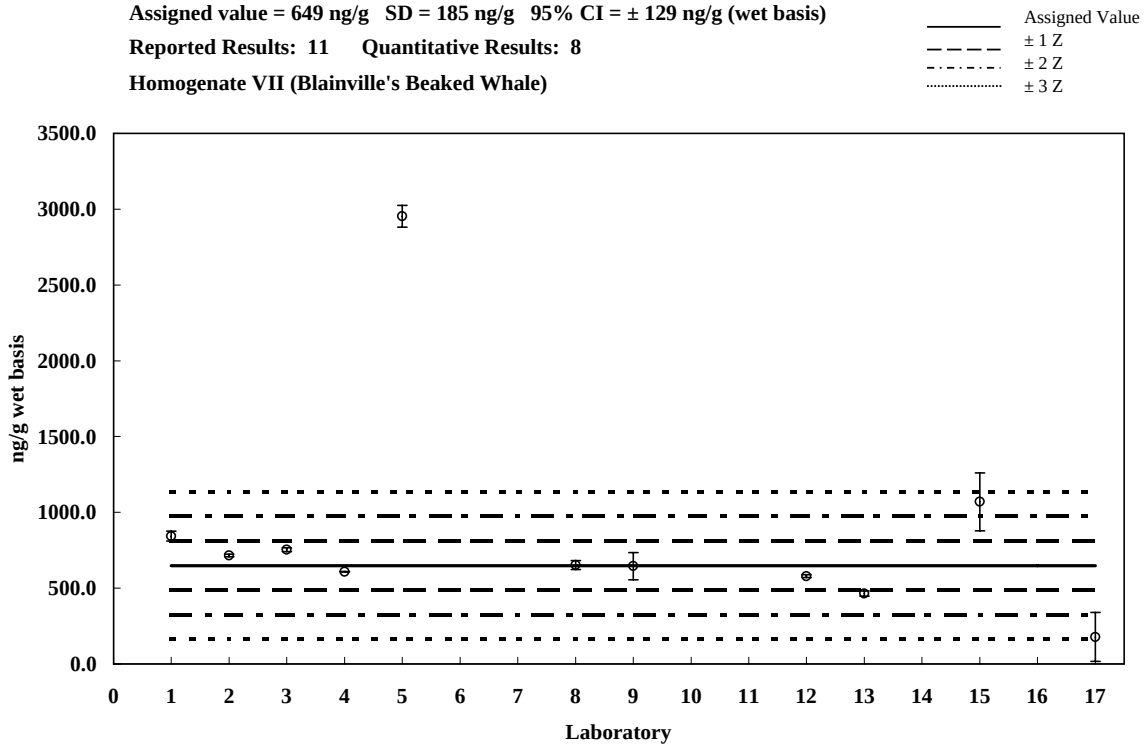
PCB 99
Assigned value = 465 ng/g SD = 68 ng/g 95% CI = ± 40 ng/g (wet basis)
Reported Results: 11 Quantitative Results: 11
Homogenate VII (Blainville's Beaked Whale)



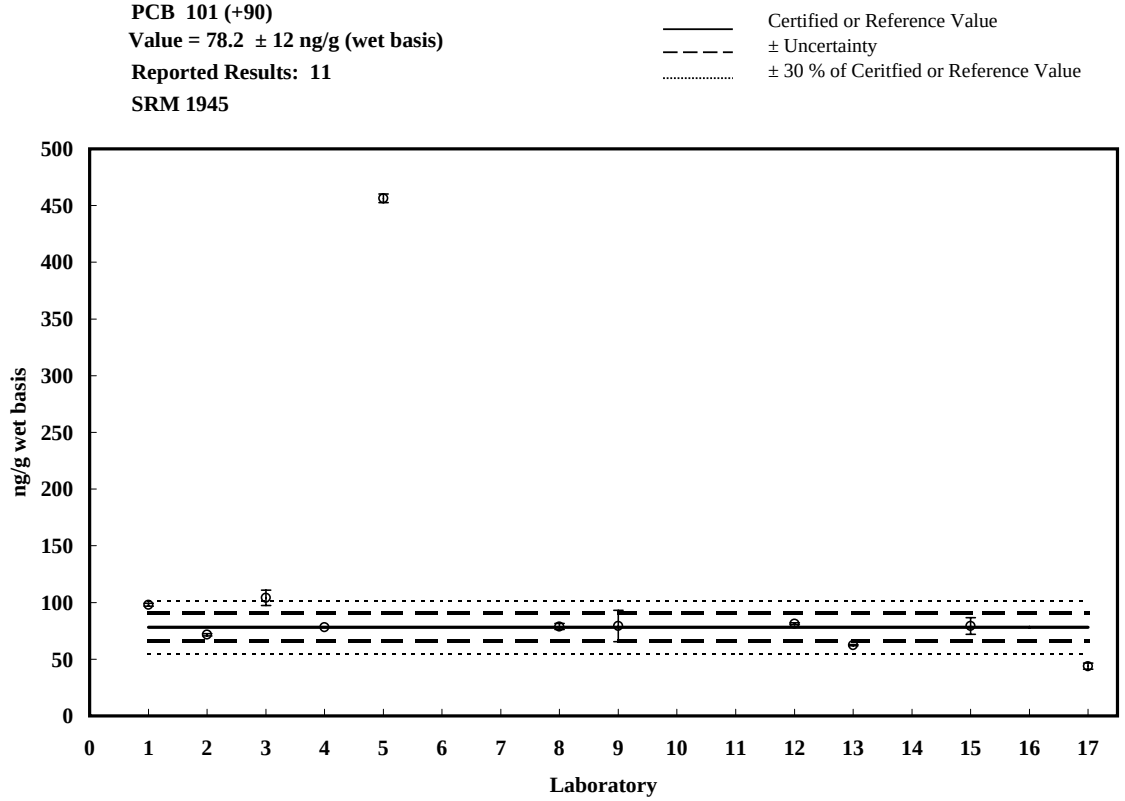
PCB 99
Value = 58.5 ± 5.2 ng/g (wet basis)
Reported Results: 11
SRM 1945



PCB 101 (+90)
Assigned value = 649 ng/g SD = 185 ng/g 95% CI = ± 129 ng/g (wet basis)
Reported Results: 11 Quantitative Results: 8
Homogenate VII (Blainville's Beaked Whale)



PCB 101 (+90)
Value = 78.2 ± 12 ng/g (wet basis)
Reported Results: 11
SRM 1945

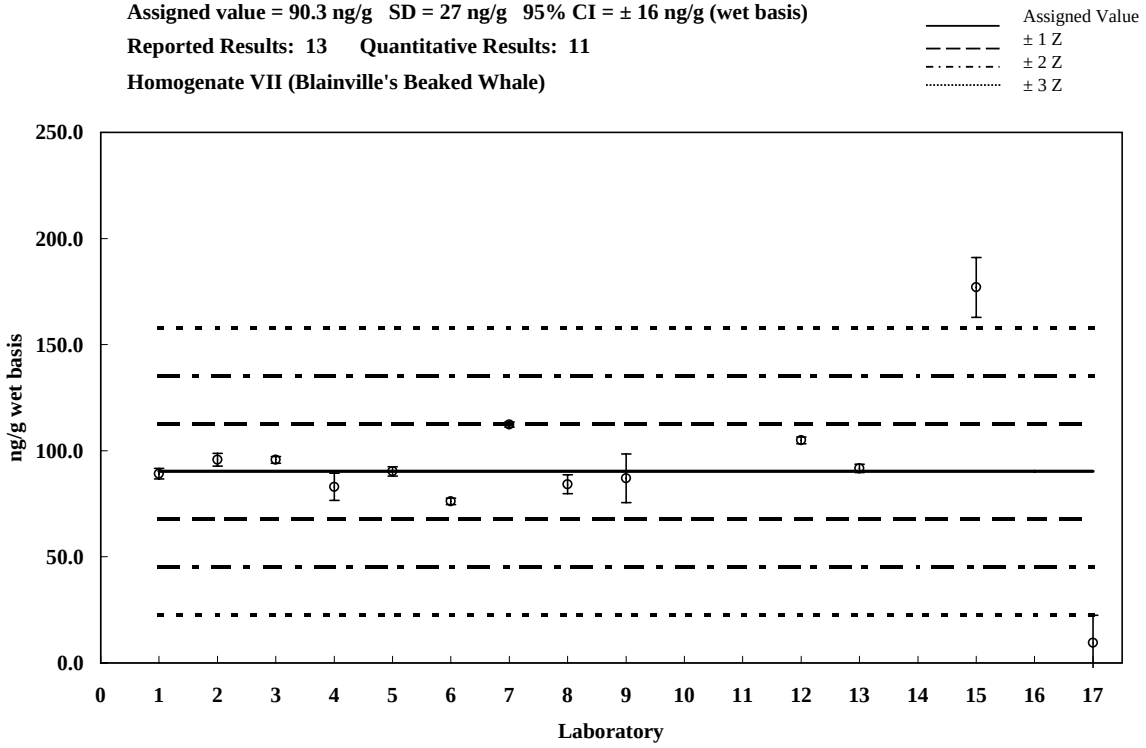


PCB 105

Assigned value = 90.3 ng/g SD = 27 ng/g 95% CI = ± 16 ng/g (wet basis)

Reported Results: 13 Quantitative Results: 11

Homogenate VII (Blainville's Beaked Whale)

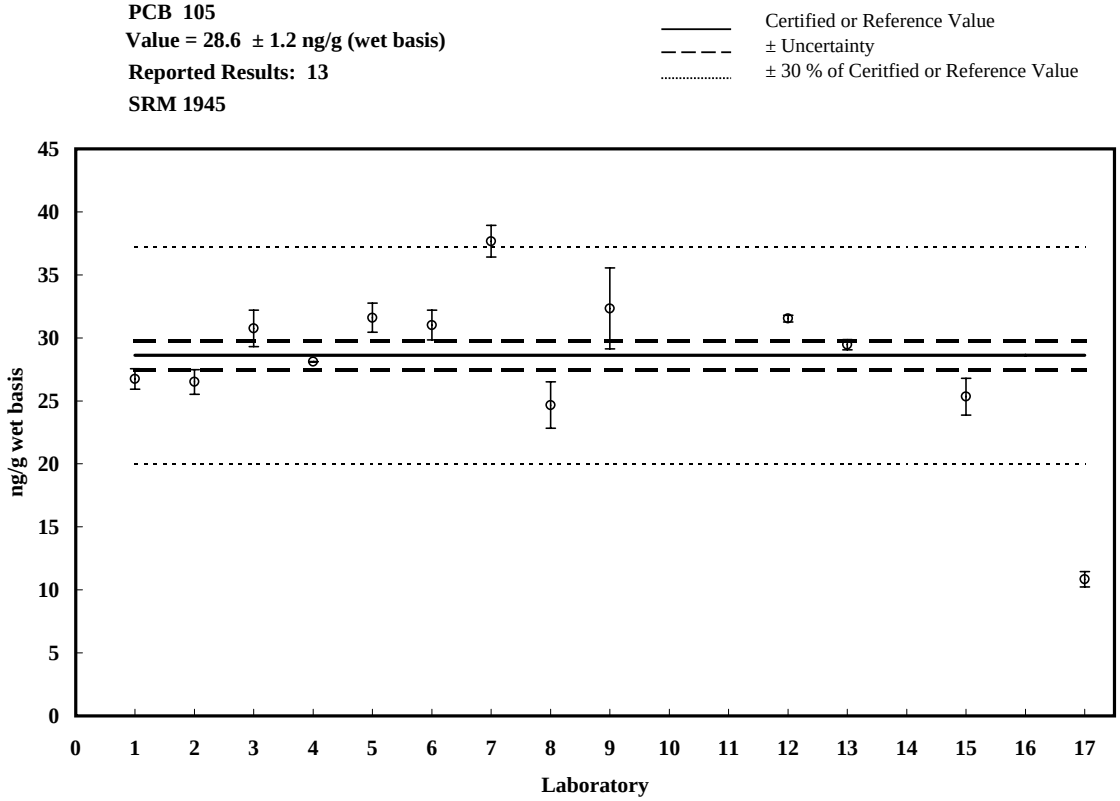


PCB 105

Value = 28.6 ± 1.2 ng/g (wet basis)

Reported Results: 13

SRM 1945

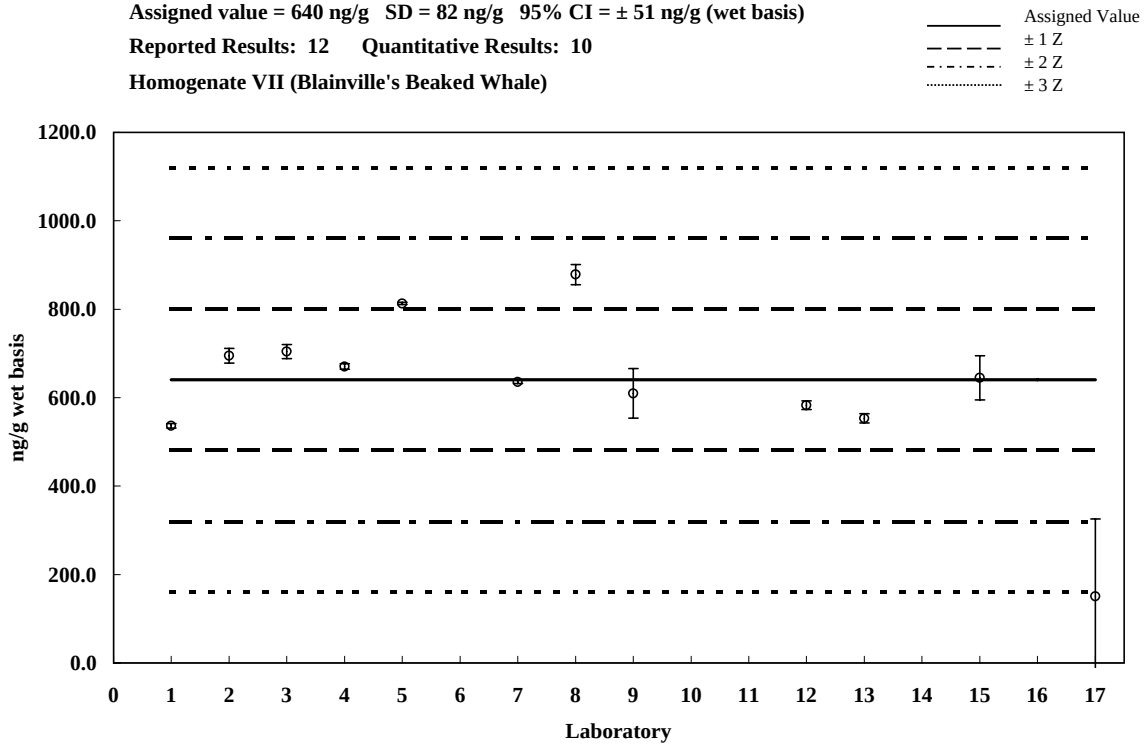


PCB 118

Assigned value = 640 ng/g SD = 82 ng/g 95% CI = ± 51 ng/g (wet basis)

Reported Results: 12 Quantitative Results: 10

Homogenate VII (Blainville's Beaked Whale)

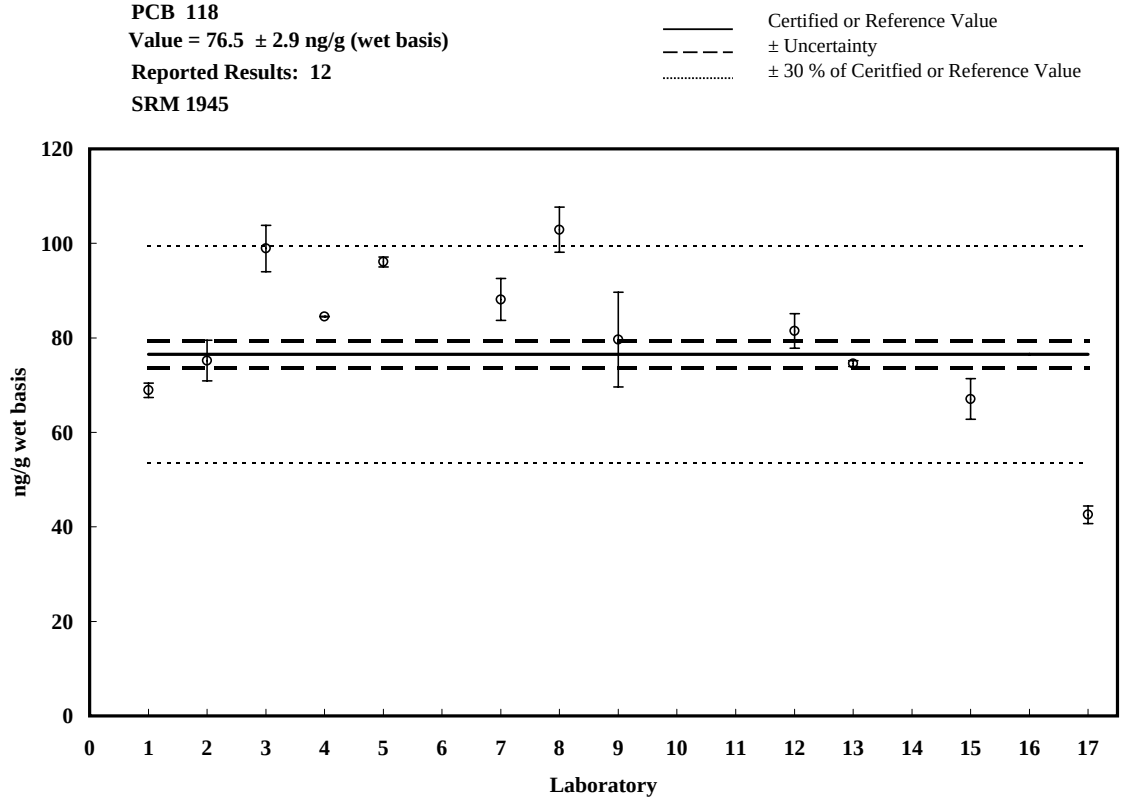


PCB 118

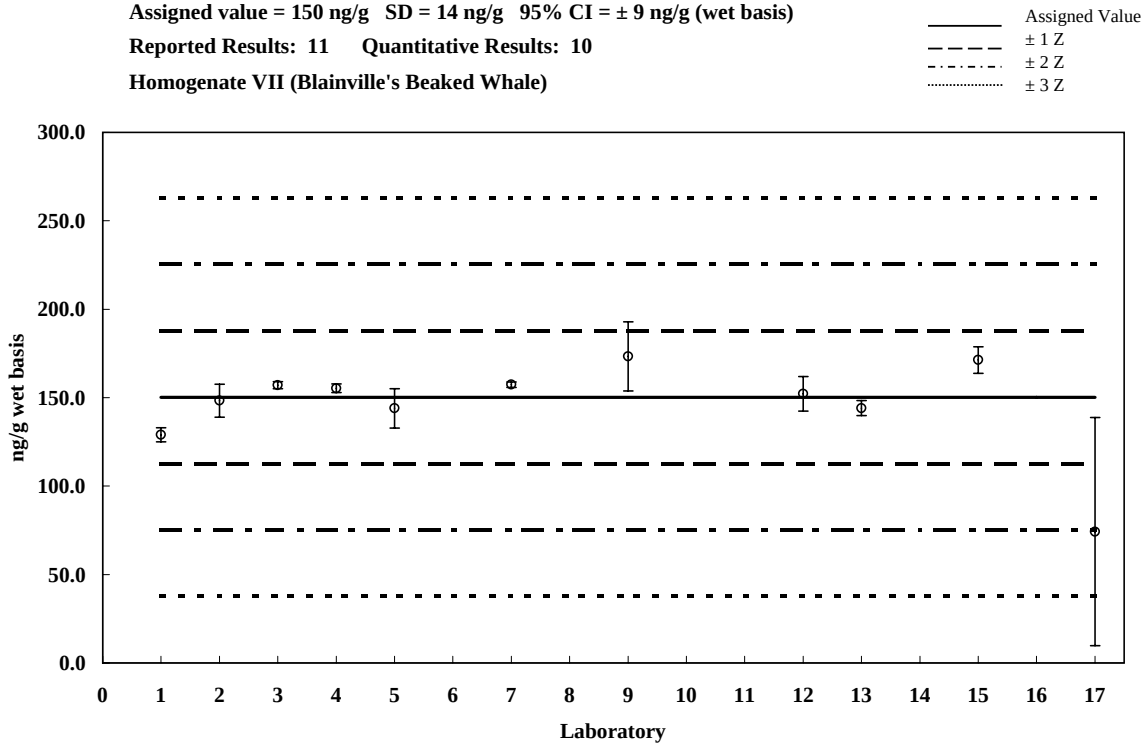
Value = 76.5 ± 2.9 ng/g (wet basis)

Reported Results: 12

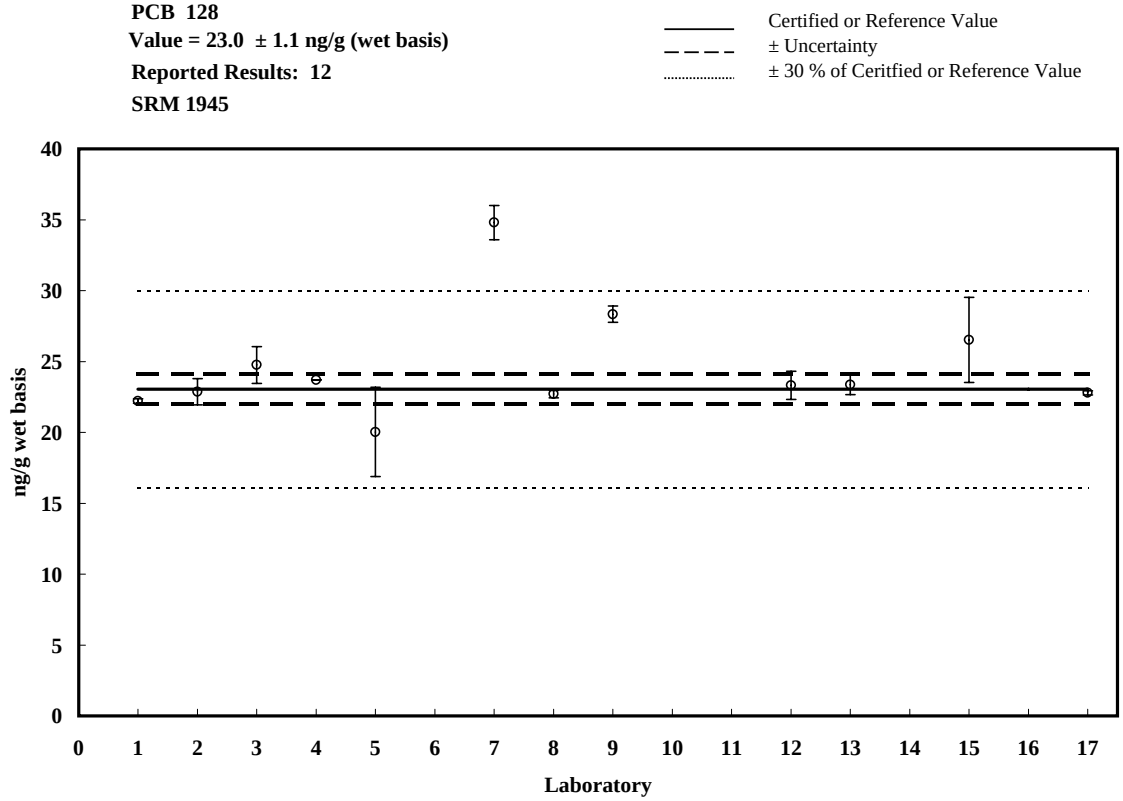
SRM 1945



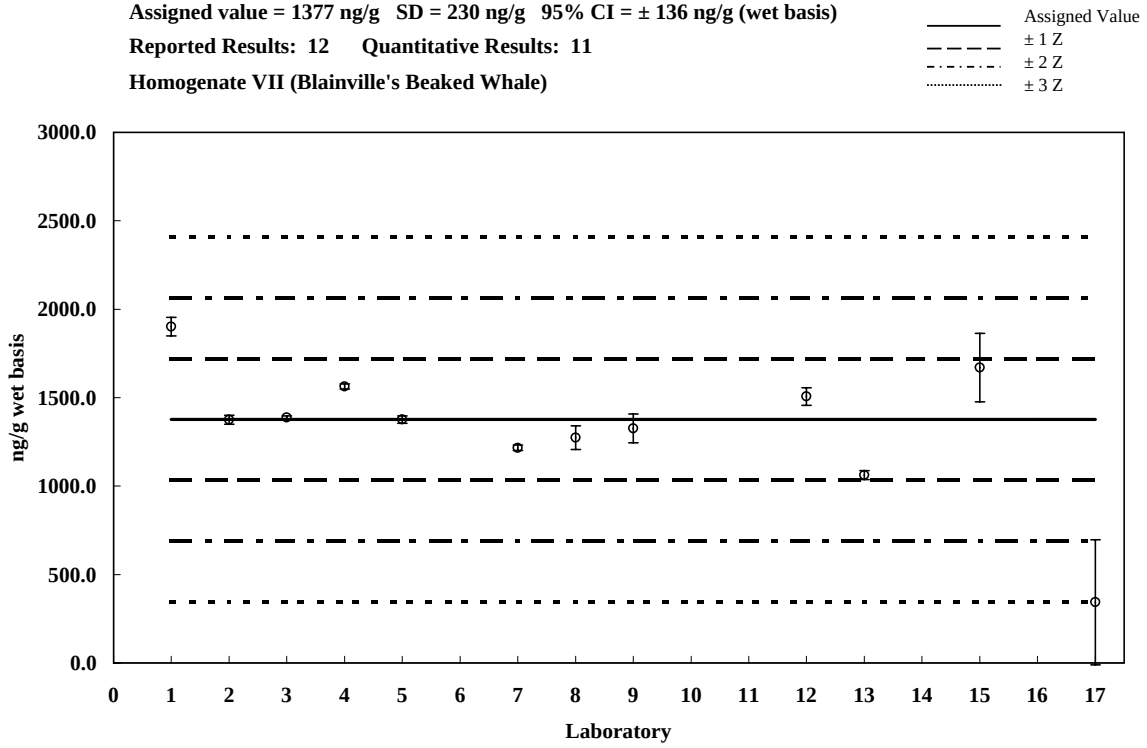
PCB 128
Assigned value = 150 ng/g SD = 14 ng/g 95% CI = ± 9 ng/g (wet basis)
Reported Results: 11 Quantitative Results: 10
Homogenate VII (Blainville's Beaked Whale)



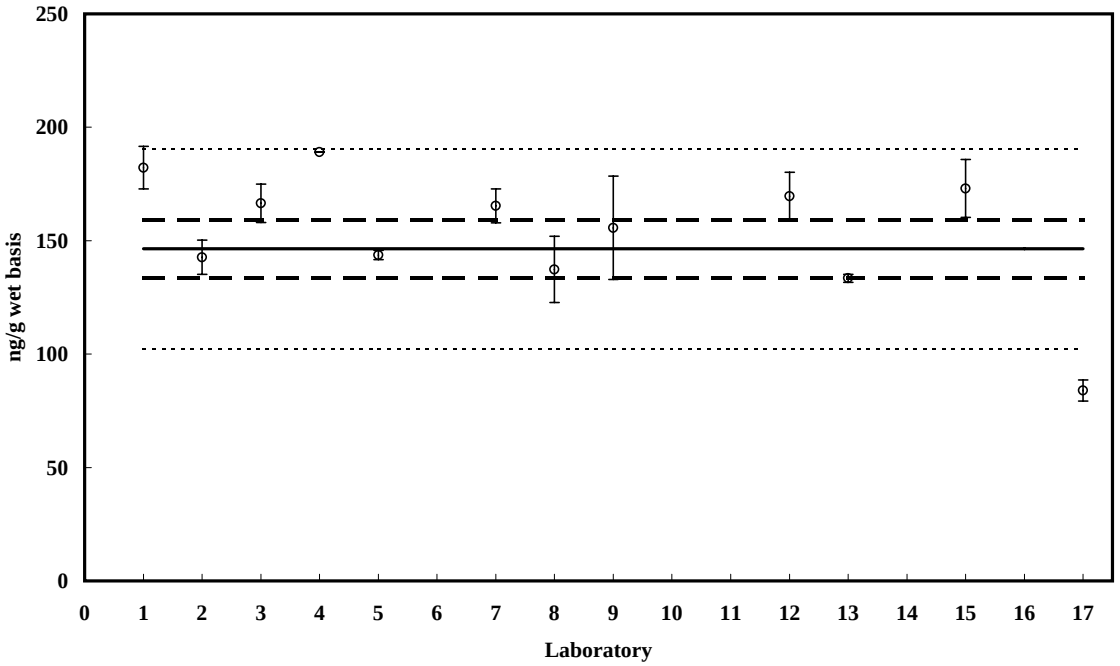
PCB 128
Value = 23.0 ± 1.1 ng/g (wet basis)
Reported Results: 12
SRM 1945



PCB 138 (+163+164)
Assigned value = 1377 ng/g SD = 230 ng/g 95% CI = ± 136 ng/g (wet basis)
Reported Results: 12 Quantitative Results: 11
Homogenate VII (Blainville's Beaked Whale)



PCB 138 (+163+164)
Value = 146 ± 13 ng/g (wet basis)
Reported Results: 12
SRM 1945

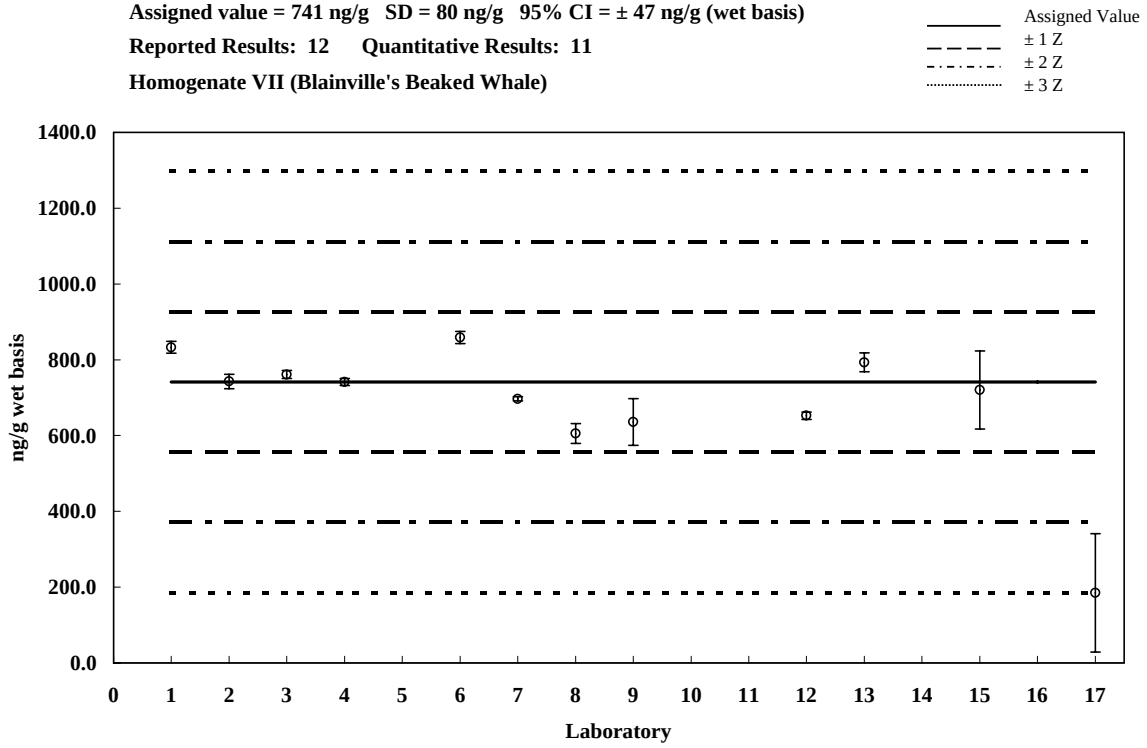


PCB 149

Assigned value = 741 ng/g SD = 80 ng/g 95% CI = ± 47 ng/g (wet basis)

Reported Results: 12 Quantitative Results: 11

Homogenate VII (Blainville's Beaked Whale)

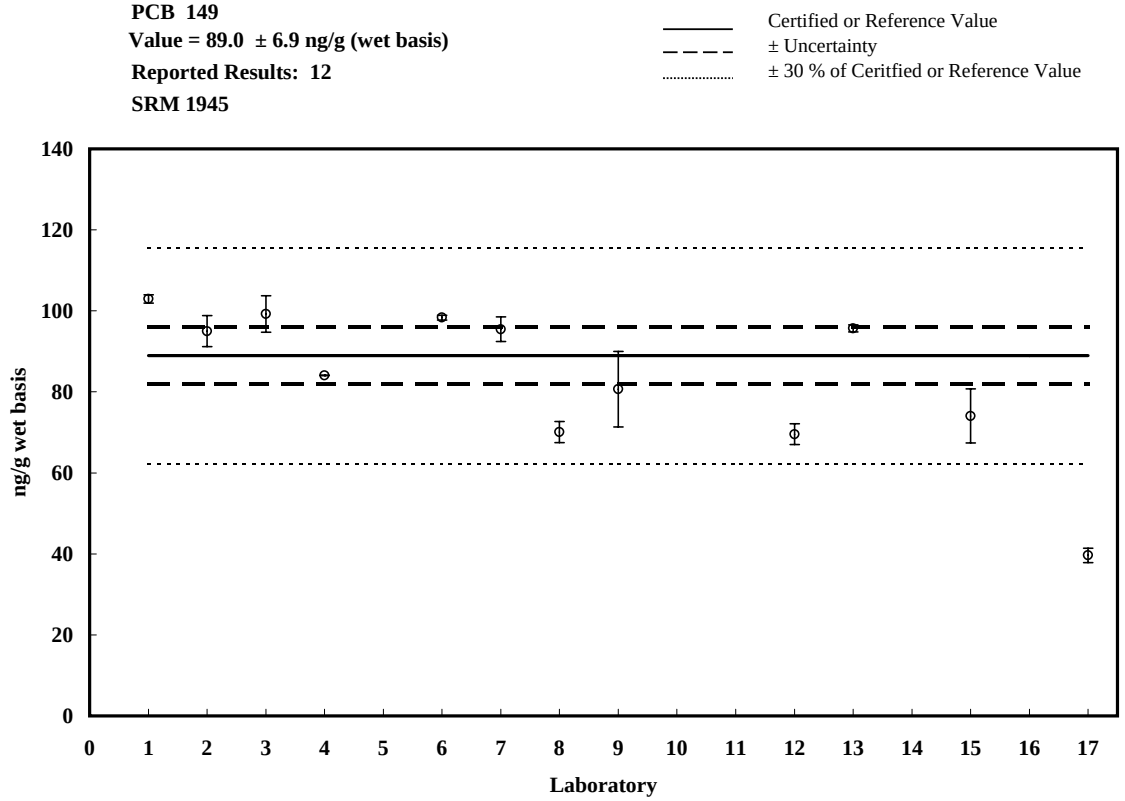


PCB 149

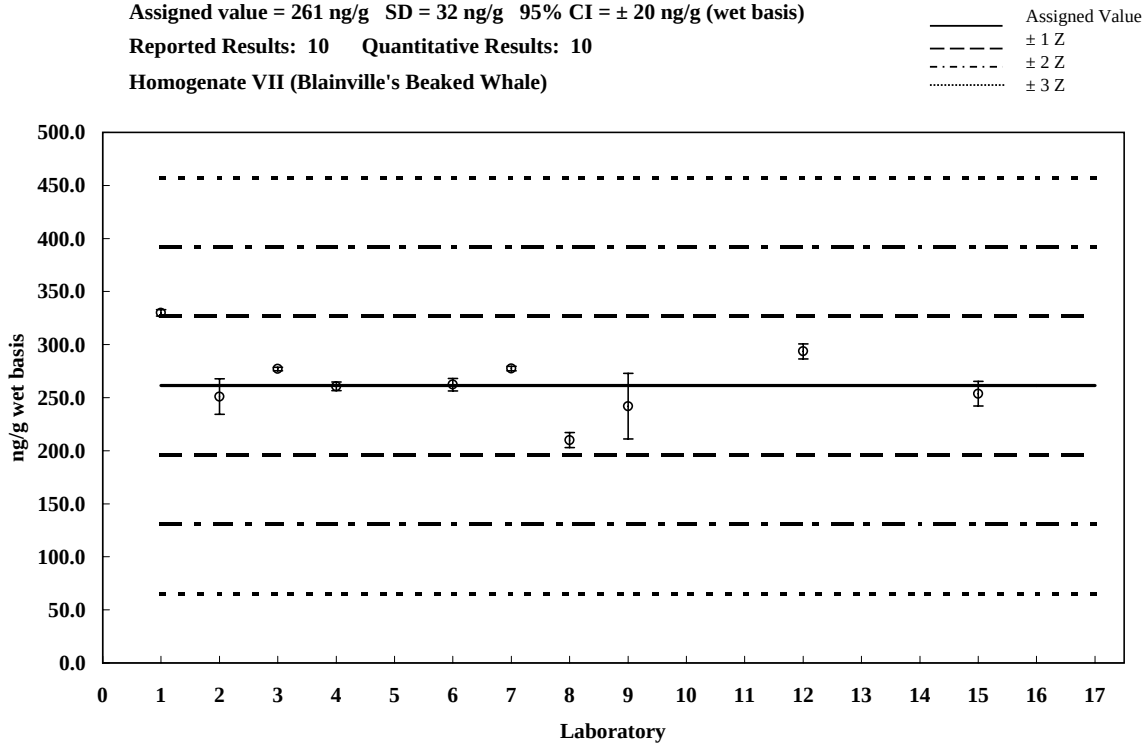
Value = 89.0 ± 6.9 ng/g (wet basis)

Reported Results: 12

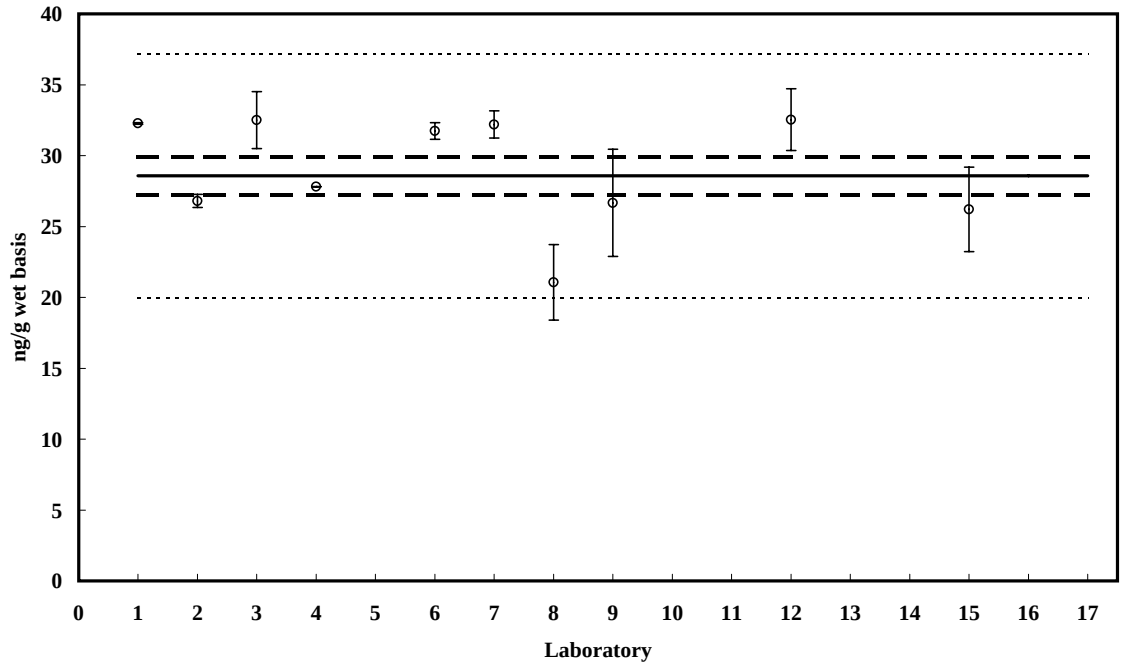
SRM 1945



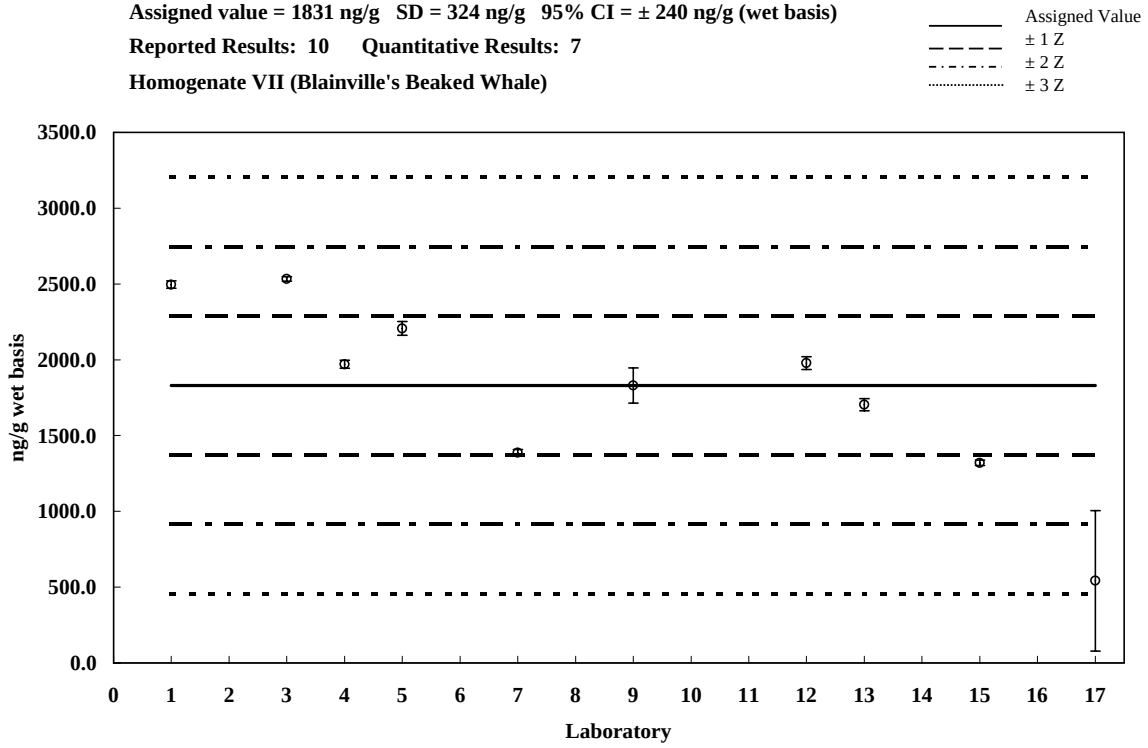
PCB 151
Assigned value = 261 ng/g SD = 32 ng/g 95% CI = ± 20 ng/g (wet basis)
Reported Results: 10 Quantitative Results: 10
Homogenate VII (Blainville's Beaked Whale)



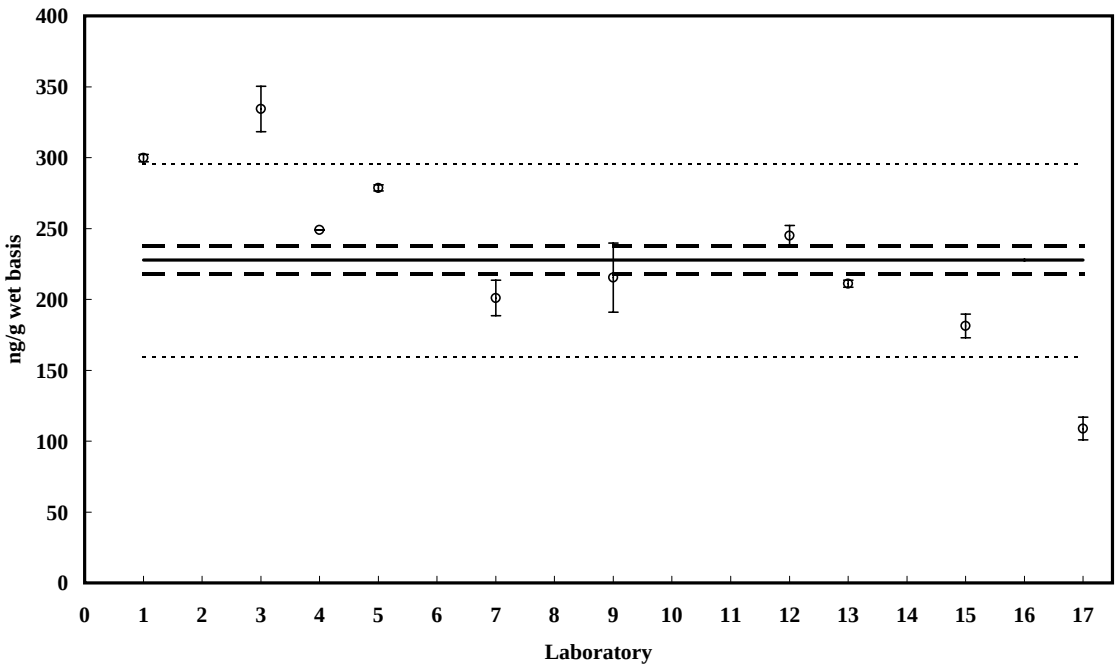
PCB 151
Value = 28.6 ± 1.3 ng/g (wet basis)
Reported Results: 11
SRM 1945



PCB 153
Assigned value = 1831 ng/g SD = 324 ng/g 95% CI = ± 240 ng/g (wet basis)
Reported Results: 10 Quantitative Results: 7
Homogenate VII (Blainville's Beaked Whale)



PCB 153
Value = 228 ± 10 ng/g (wet basis)
Reported Results: 10
SRM 1945

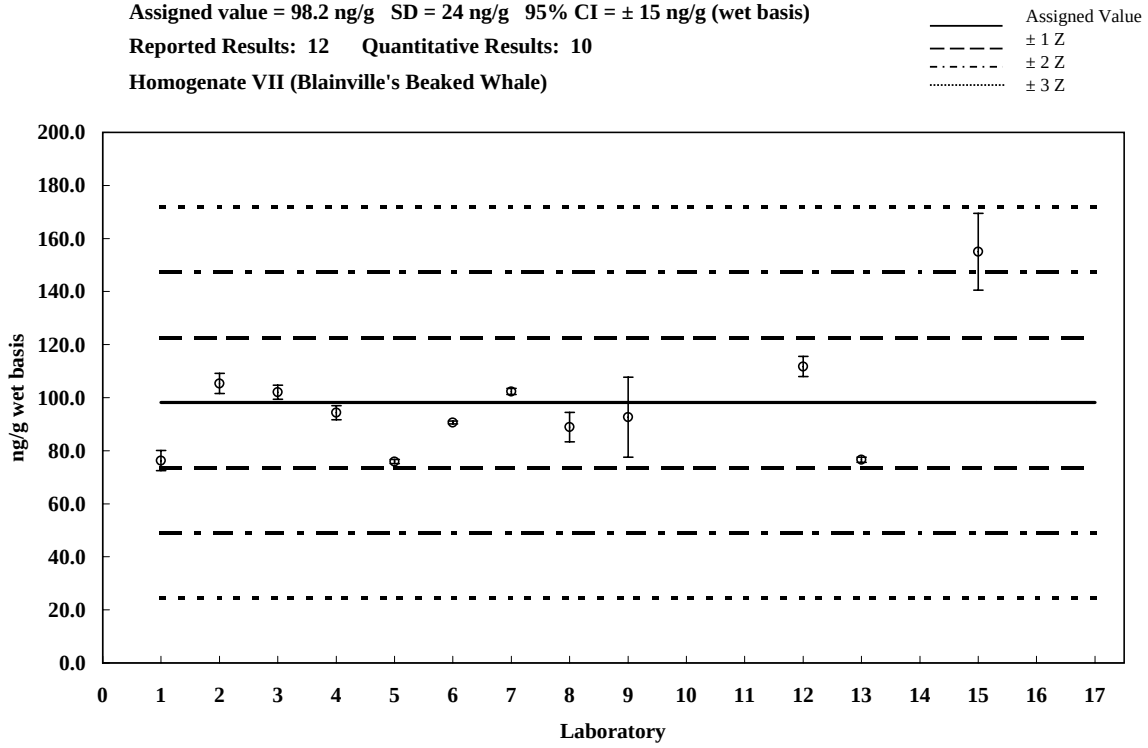


PCB 156

Assigned value = 98.2 ng/g SD = 24 ng/g 95% CI = ± 15 ng/g (wet basis)

Reported Results: 12 Quantitative Results: 10

Homogenate VII (Blainville's Beaked Whale)

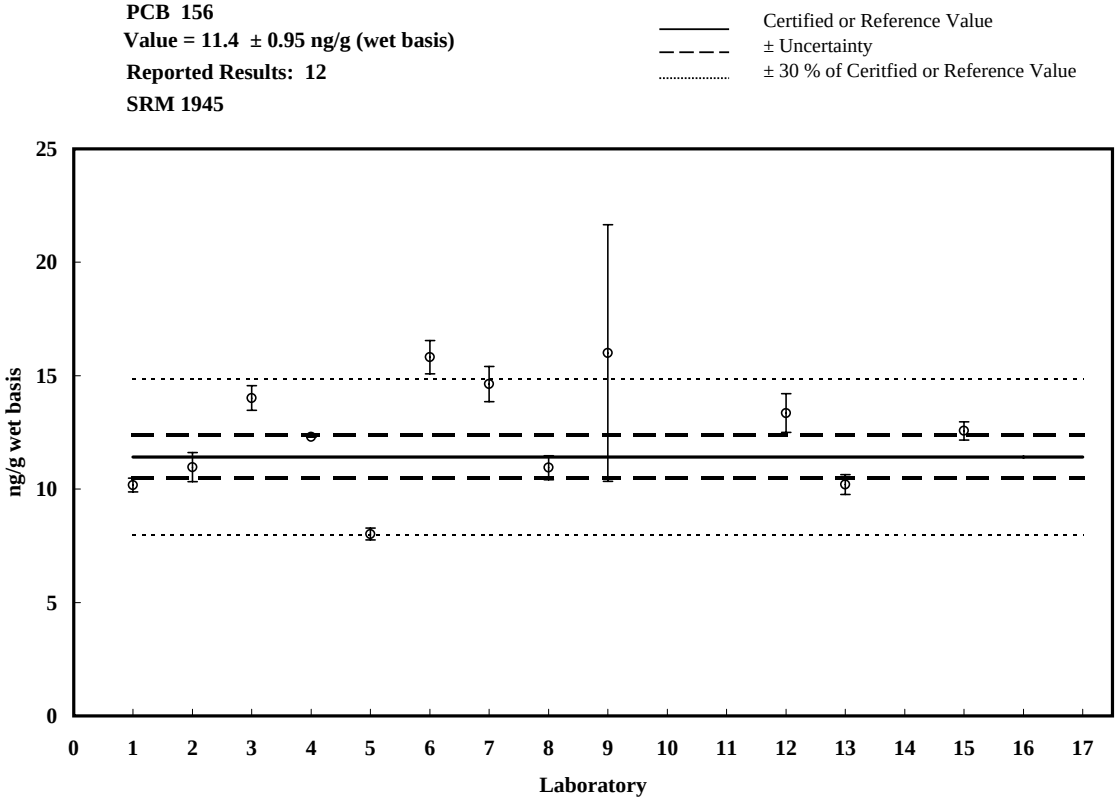


PCB 156

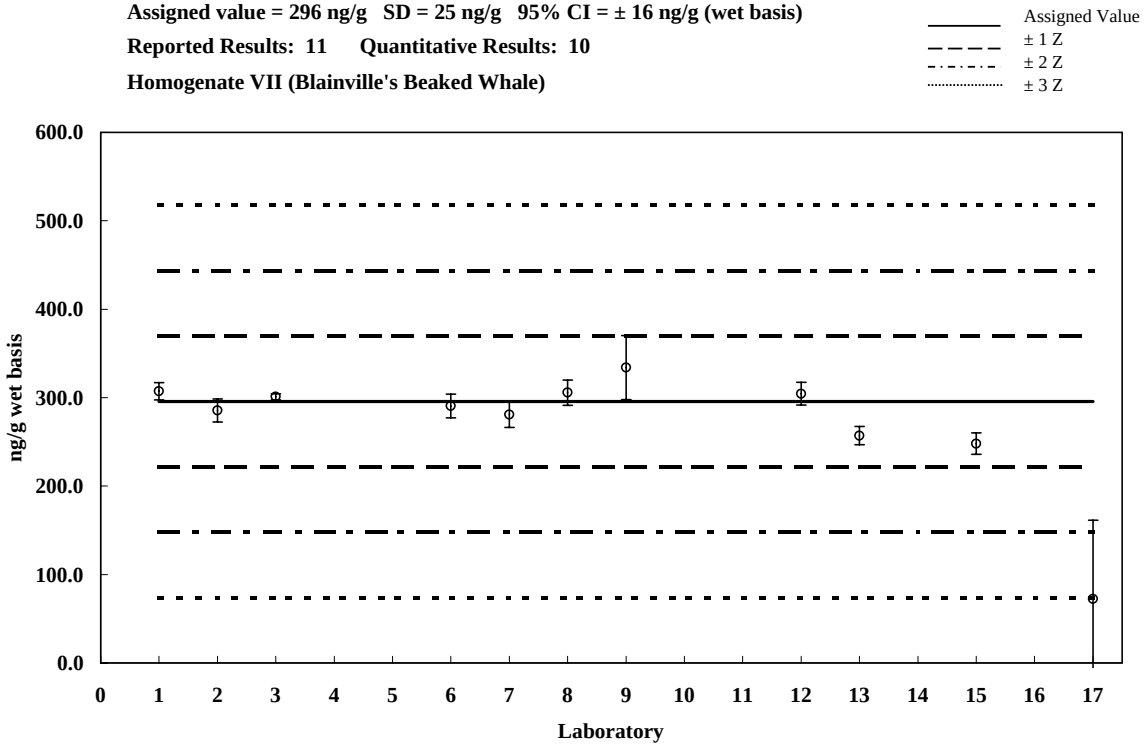
Value = 11.4 ± 0.95 ng/g (wet basis)

Reported Results: 12

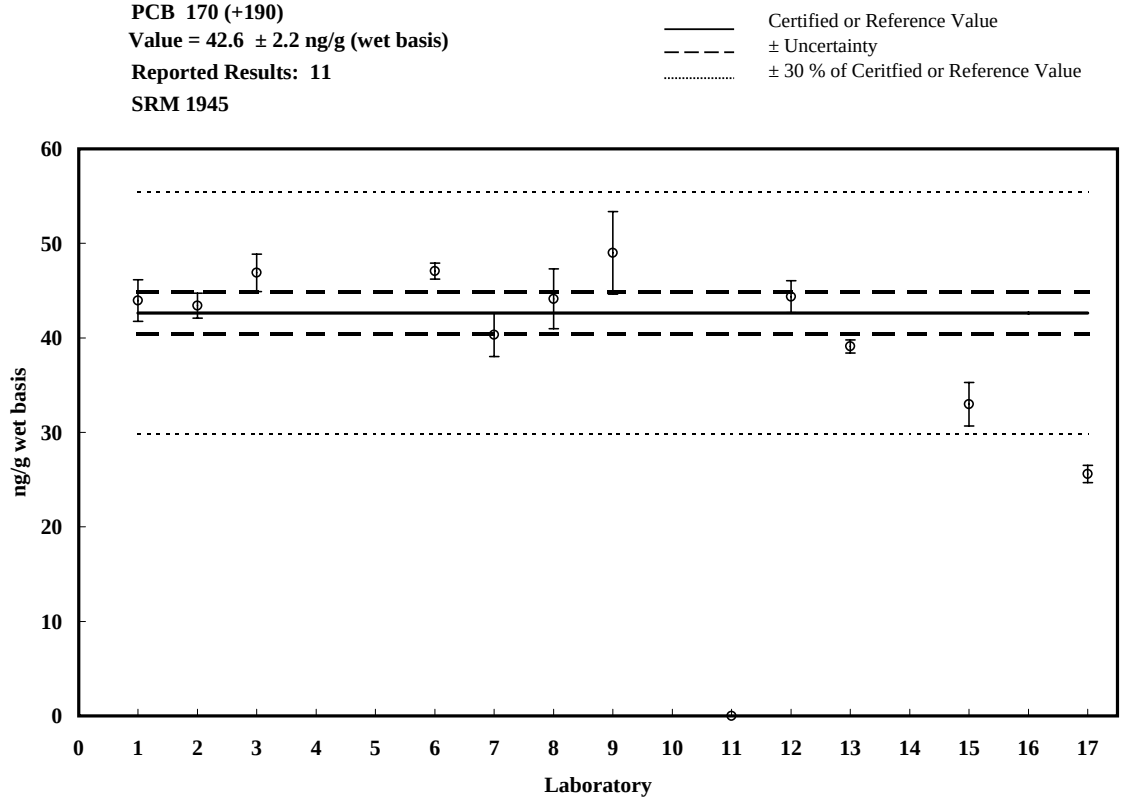
SRM 1945



PCB 170 (+190)
Assigned value = 296 ng/g SD = 25 ng/g 95% CI = ± 16 ng/g (wet basis)
Reported Results: 11 Quantitative Results: 10
Homogenate VII (Blainville's Beaked Whale)



PCB 170 (+190)
Value = 42.6 ± 2.2 ng/g (wet basis)
Reported Results: 11
SRM 1945

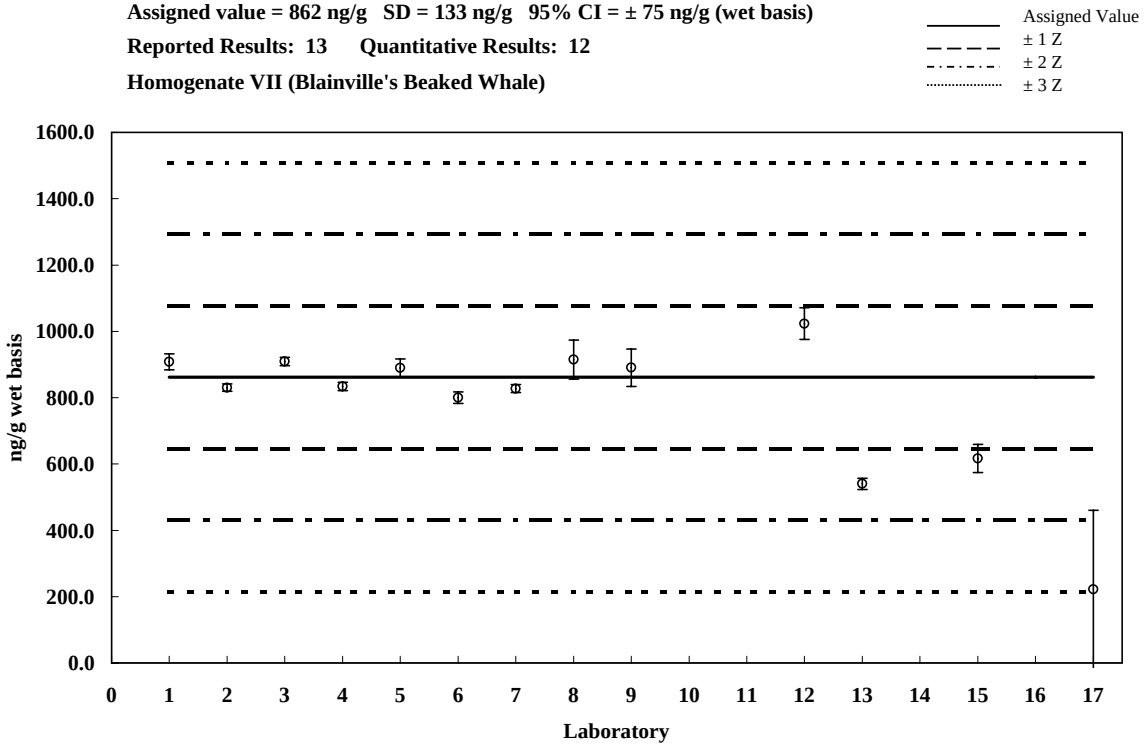


PCB 180

Assigned value = 862 ng/g SD = 133 ng/g 95% CI = ± 75 ng/g (wet basis)

Reported Results: 13 Quantitative Results: 12

Homogenate VII (Blainville's Beaked Whale)

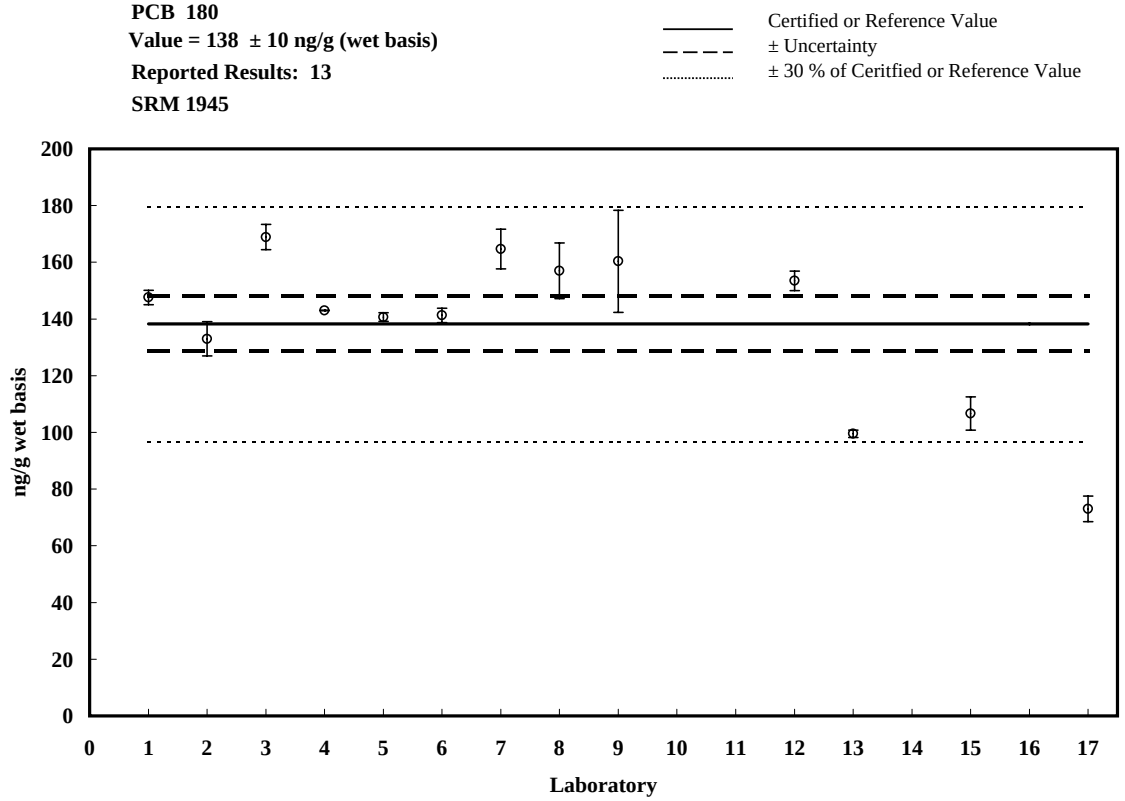


PCB 180

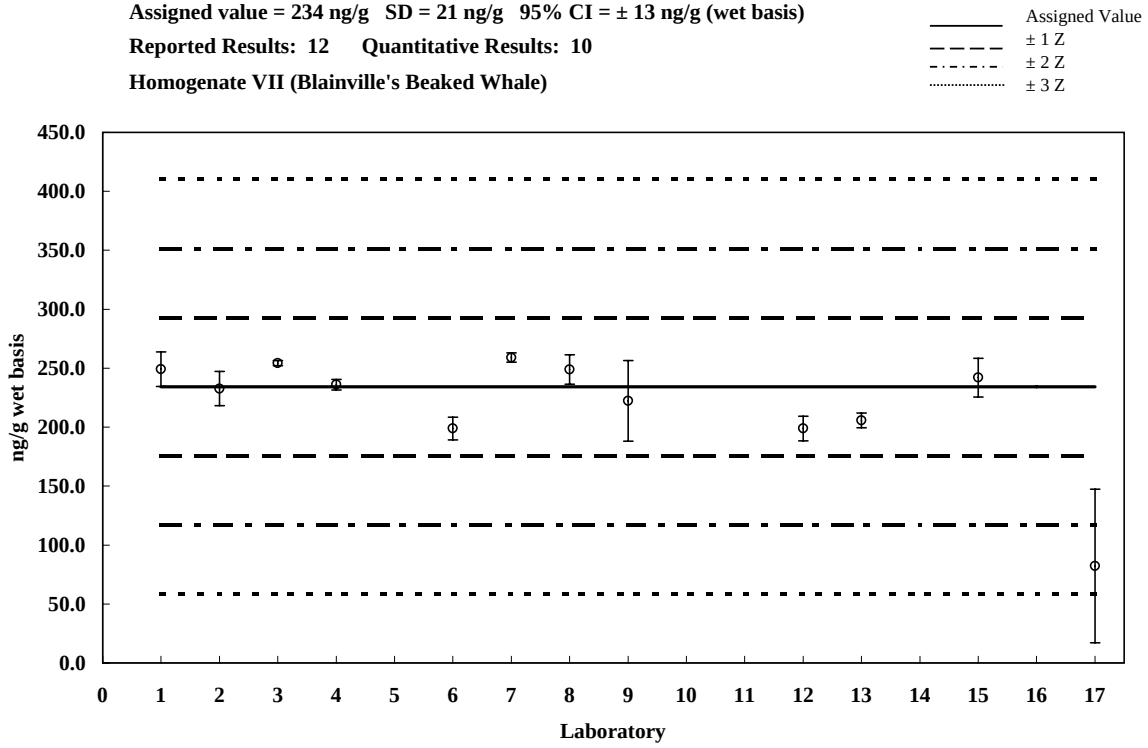
Value = 138 ± 10 ng/g (wet basis)

Reported Results: 13

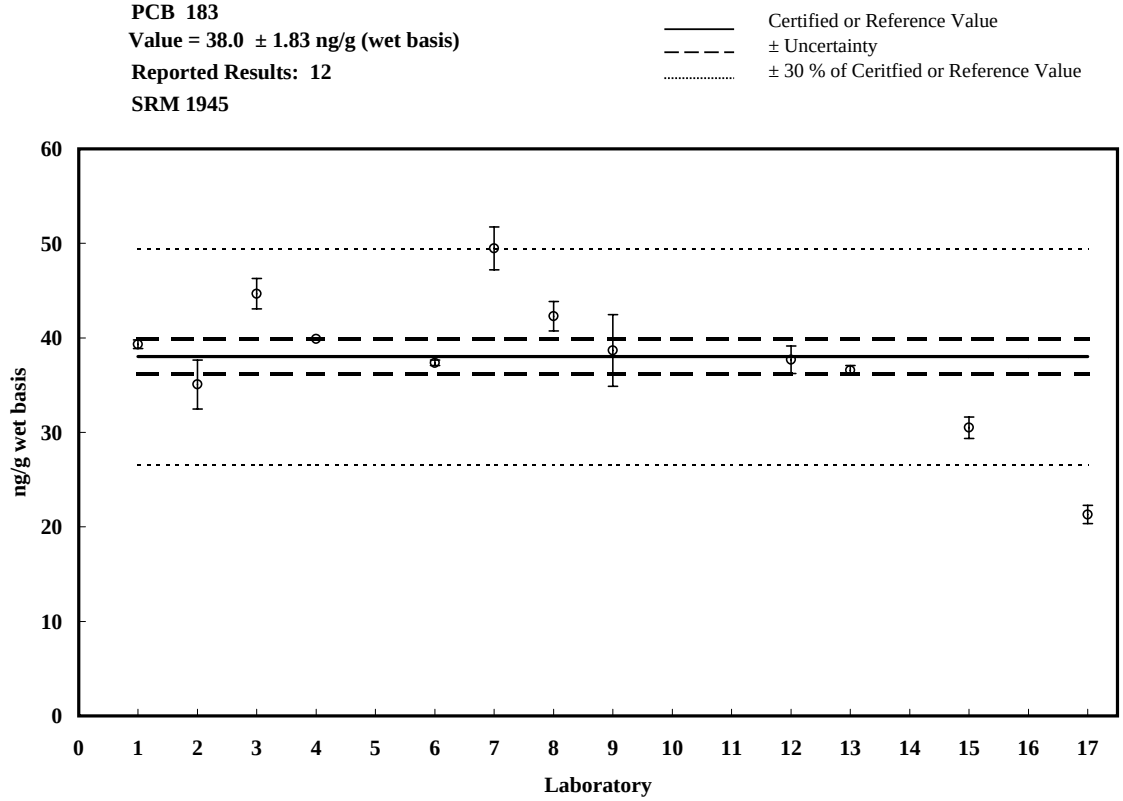
SRM 1945



PCB 183
Assigned value = 234 ng/g SD = 21 ng/g 95% CI = ± 13 ng/g (wet basis)
Reported Results: 12 Quantitative Results: 10
Homogenate VII (Blainville's Beaked Whale)



PCB 183
Value = 38.0 ± 1.83 ng/g (wet basis)
Reported Results: 12
SRM 1945

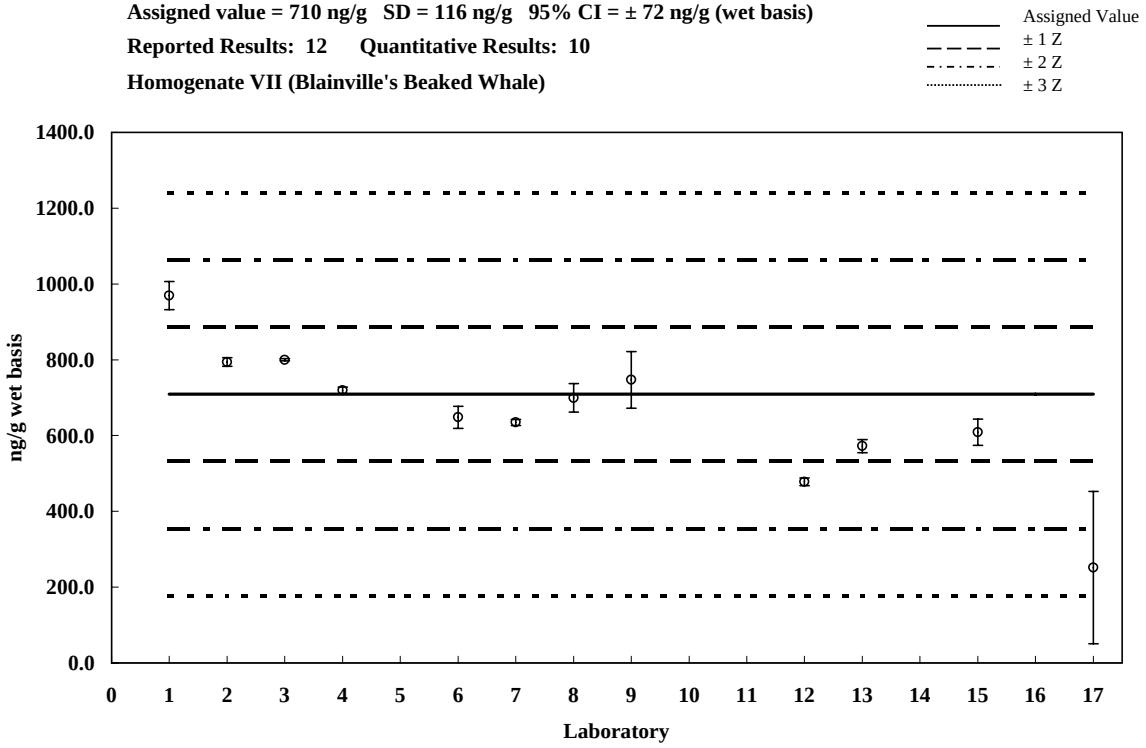


PCB 187

Assigned value = 710 ng/g SD = 116 ng/g 95% CI = ± 72 ng/g (wet basis)

Reported Results: 12 Quantitative Results: 10

Homogenate VII (Blainville's Beaked Whale)

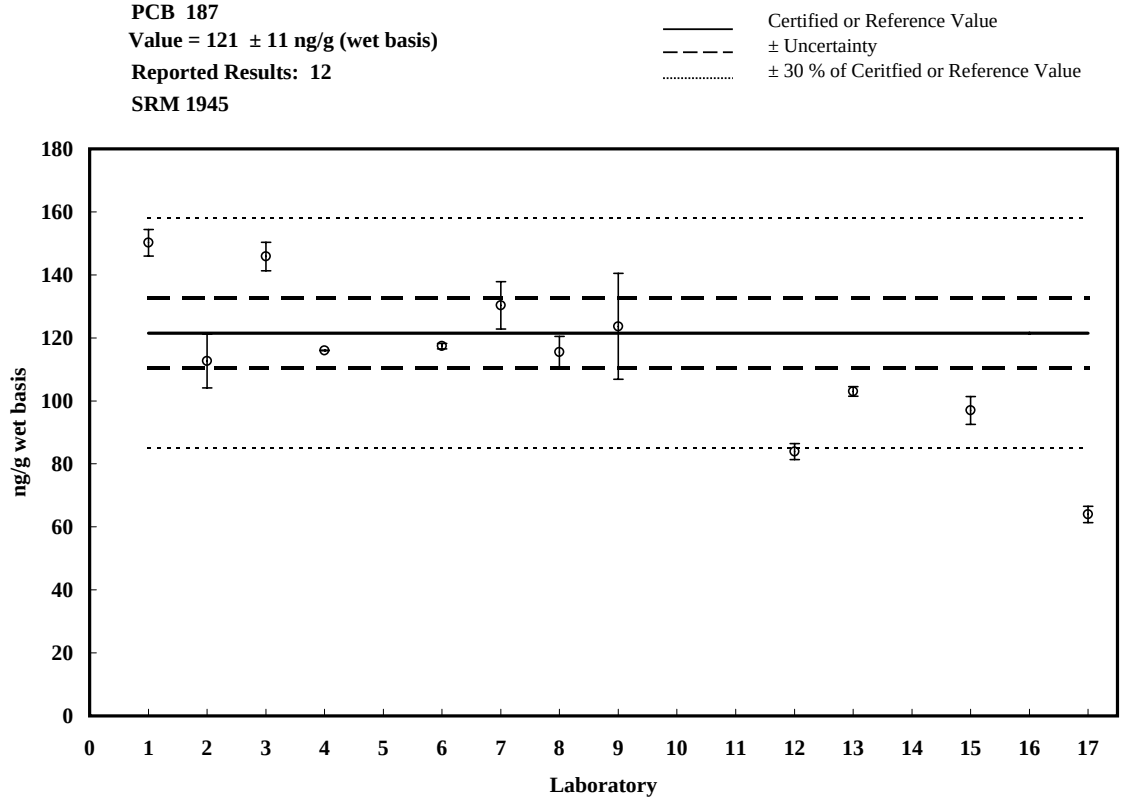


PCB 187

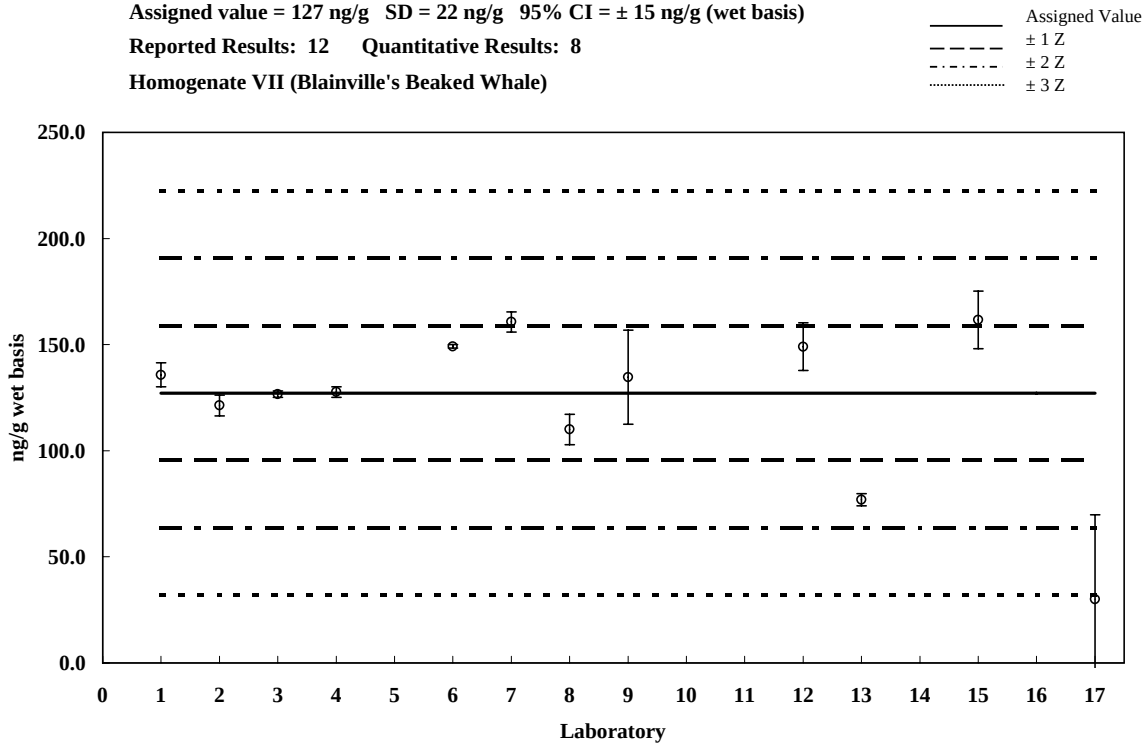
Value = 121 ± 11 ng/g (wet basis)

Reported Results: 12

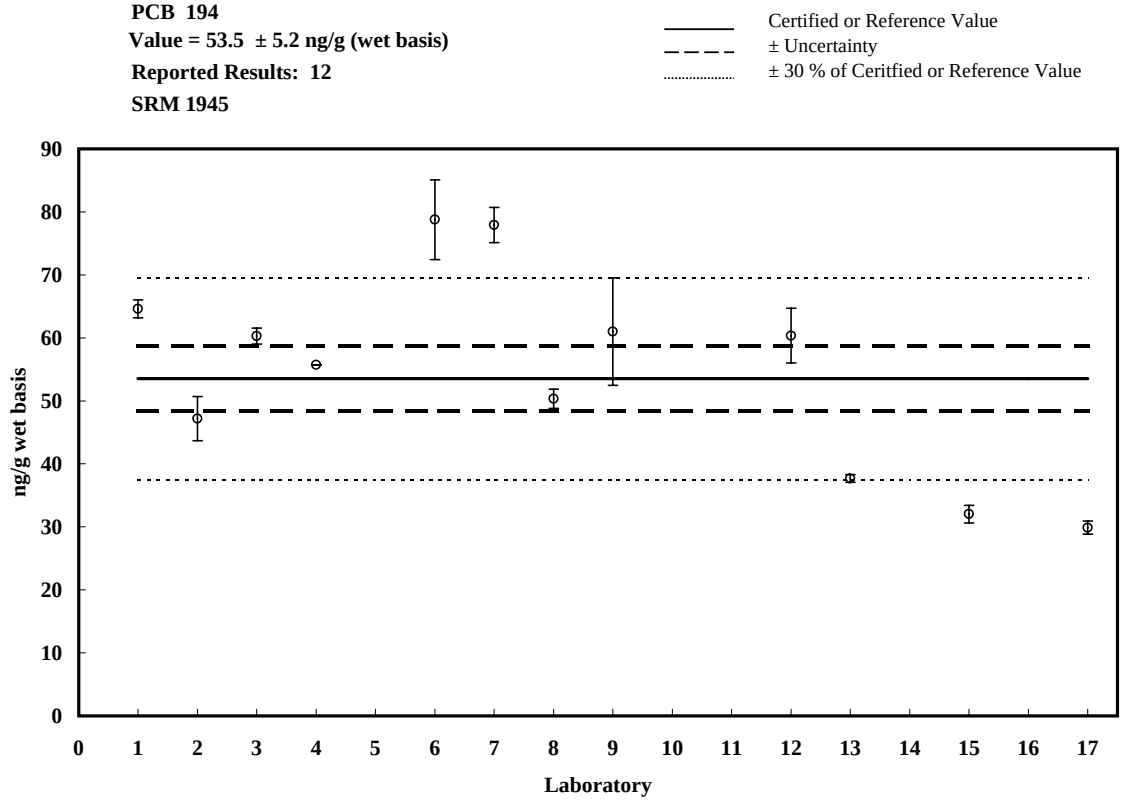
SRM 1945



PCB 194
Assigned value = 127 ng/g SD = 22 ng/g 95% CI = ± 15 ng/g (wet basis)
Reported Results: 12 Quantitative Results: 8
Homogenate VII (Blainville's Beaked Whale)



PCB 194
Value = 53.5 ± 5.2 ng/g (wet basis)
Reported Results: 12
SRM 1945

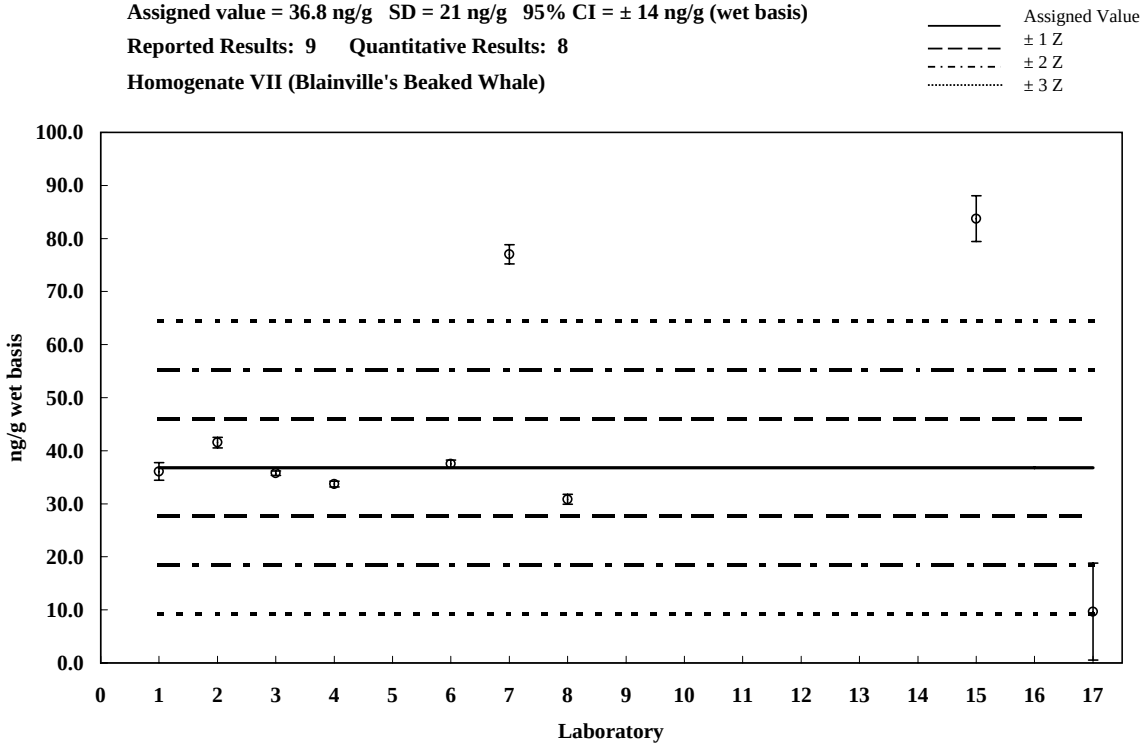


PCB 195

Assigned value = 36.8 ng/g SD = 21 ng/g 95% CI = ± 14 ng/g (wet basis)

Reported Results: 9 Quantitative Results: 8

Homogenate VII (Blainville's Beaked Whale)

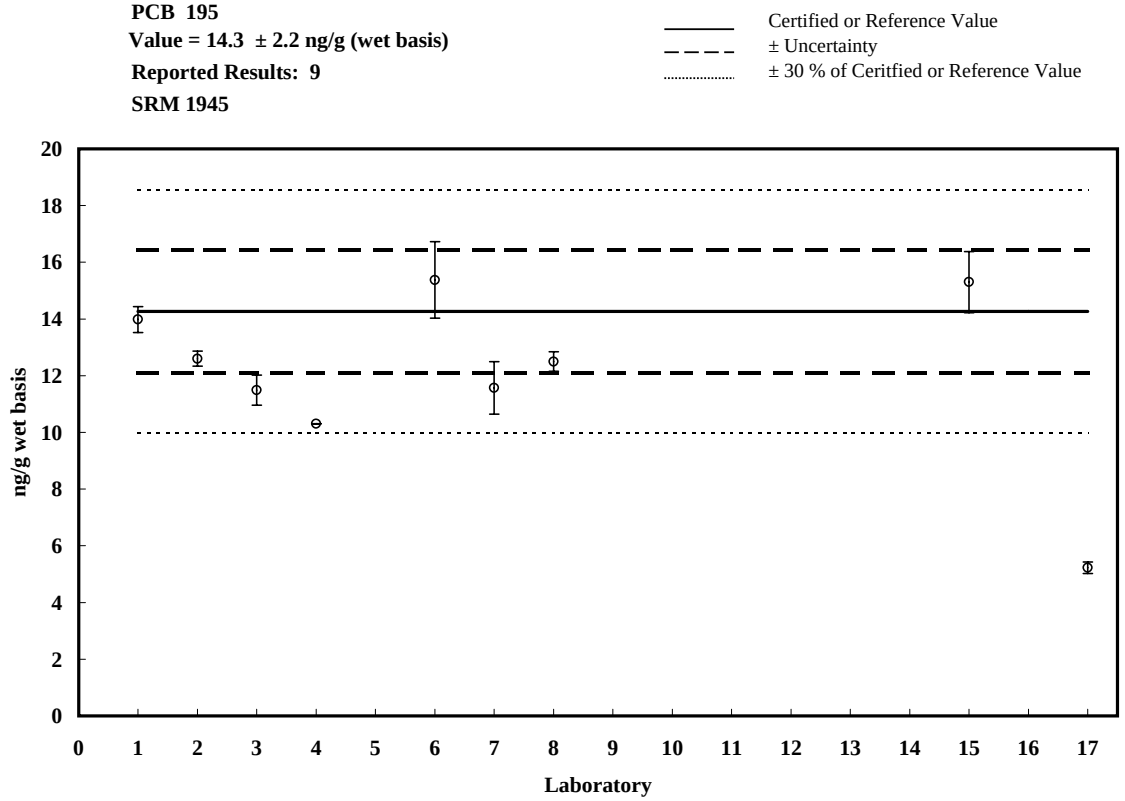


PCB 195

Value = 14.3 ± 2.2 ng/g (wet basis)

Reported Results: 9

SRM 1945

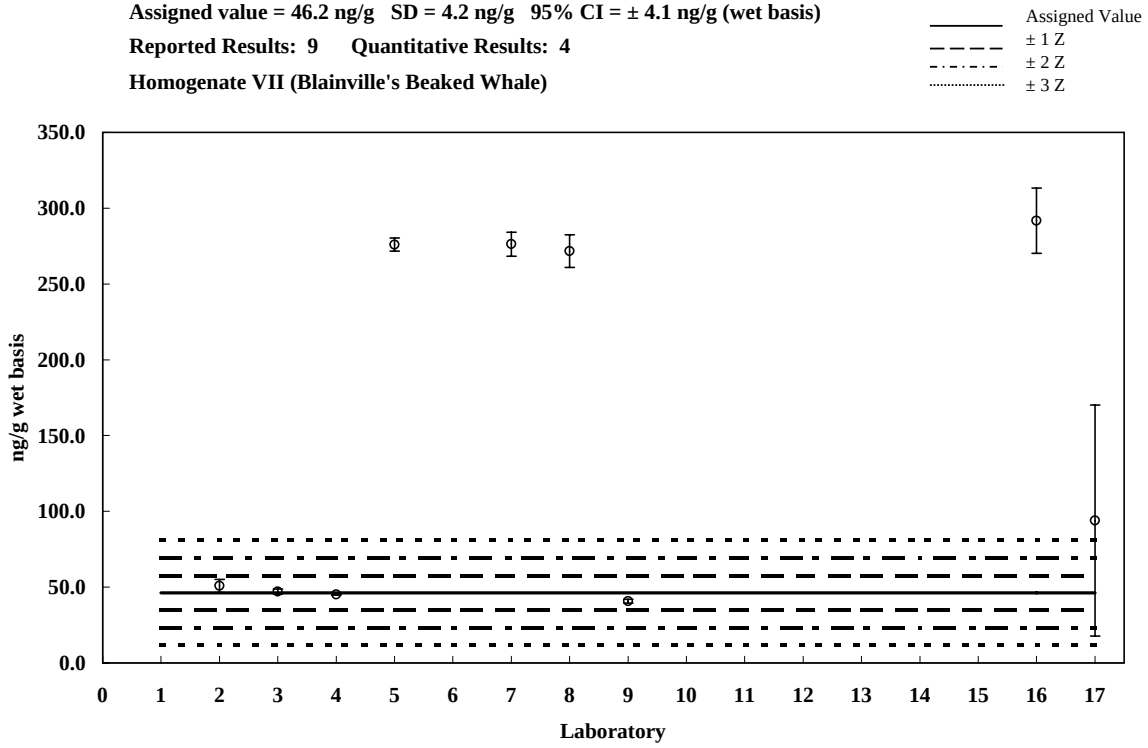


PCB 201

Assigned value = 46.2 ng/g SD = 4.2 ng/g 95% CI = ± 4.1 ng/g (wet basis)

Reported Results: 9 Quantitative Results: 4

Homogenate VII (Blainville's Beaked Whale)

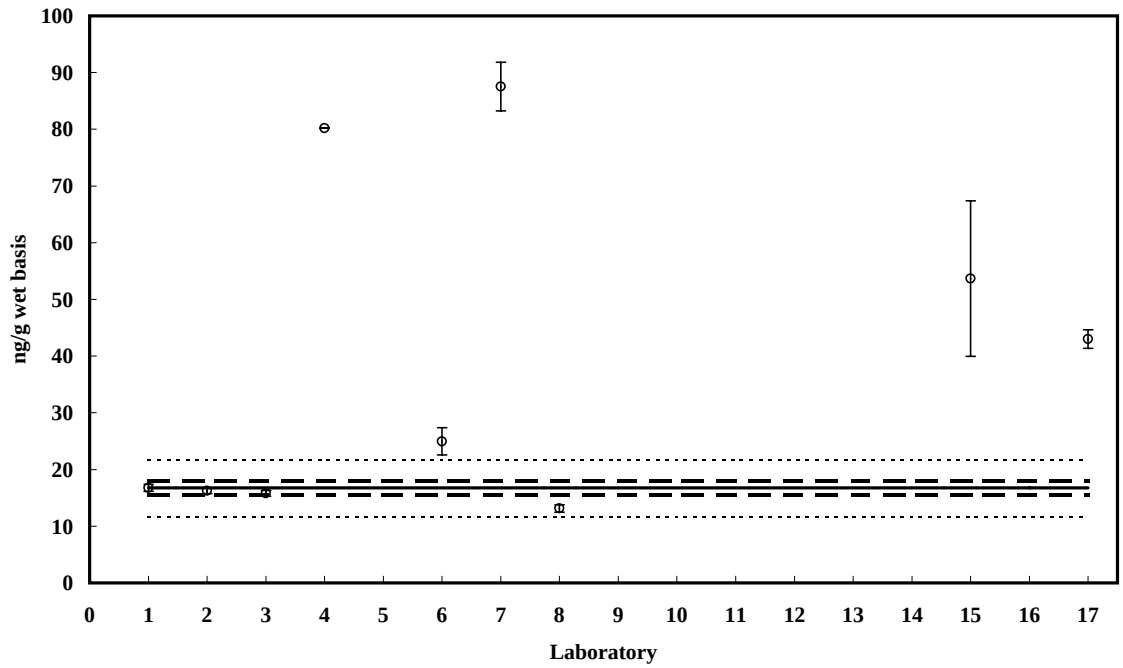


PCB 201

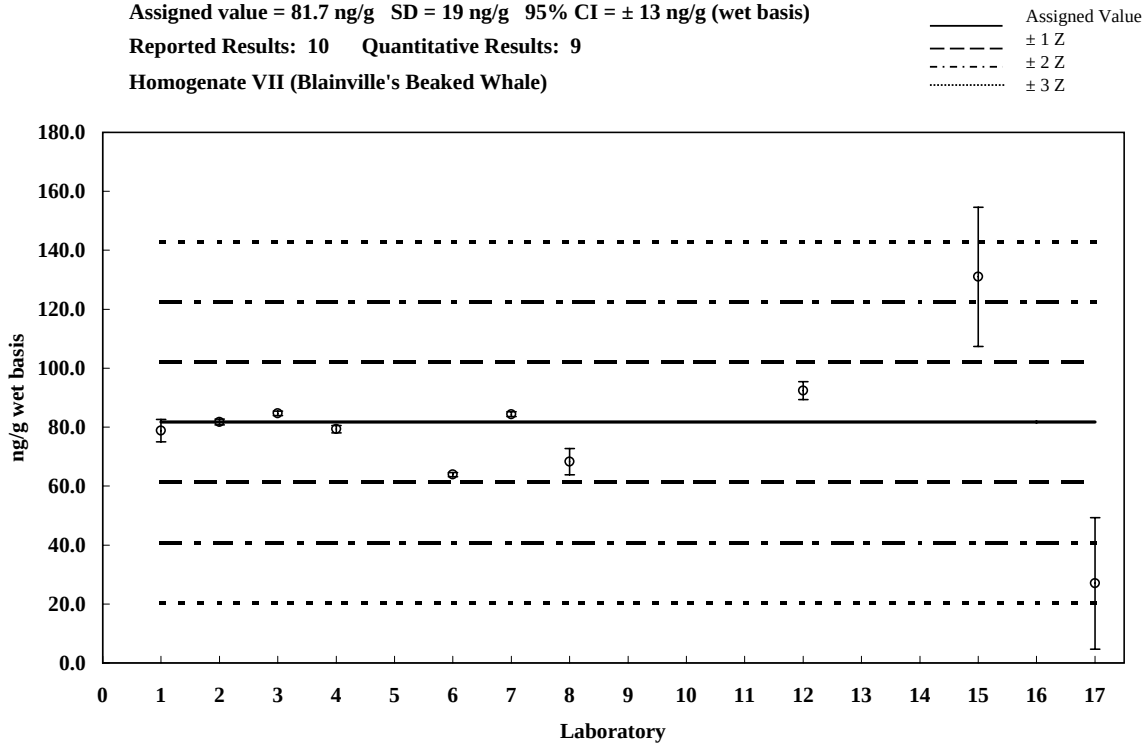
Value = 16.8 ± 1.3 ng/g (wet basis)

Reported Results: 9

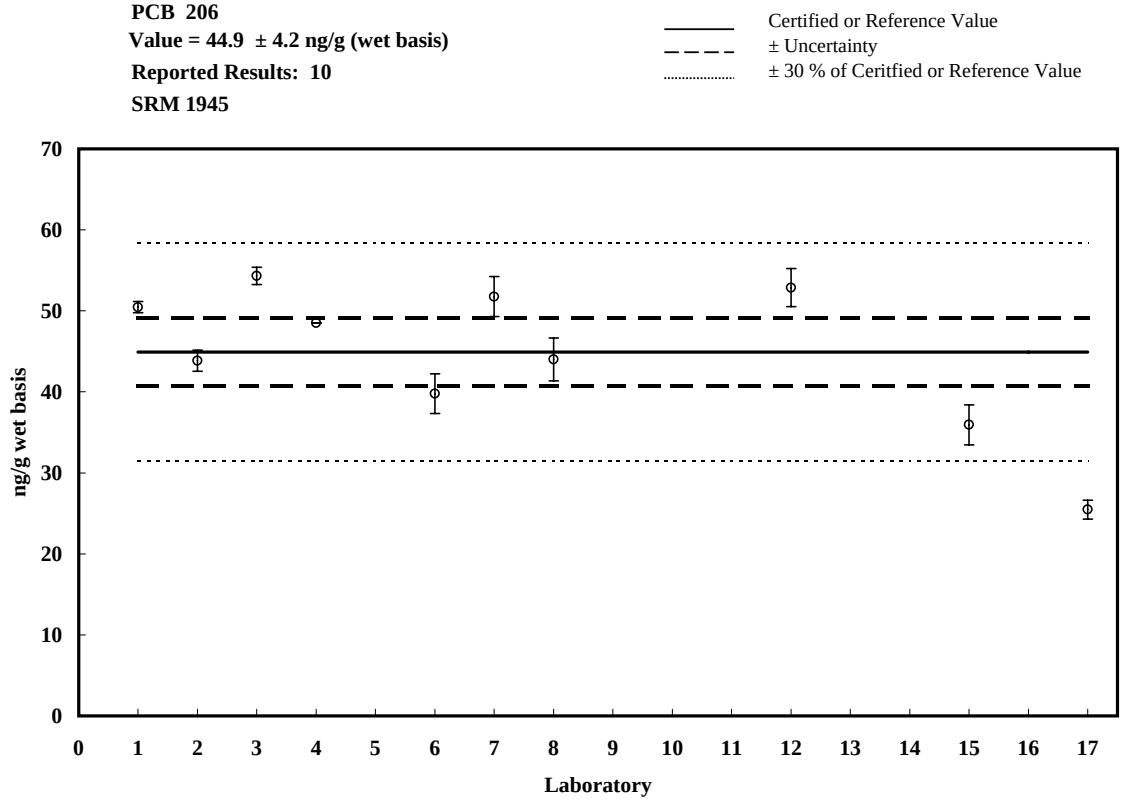
SRM 1945



PCB 206
Assigned value = 81.7 ng/g SD = 19 ng/g 95% CI = ± 13 ng/g (wet basis)
Reported Results: 10 Quantitative Results: 9
Homogenate VII (Blainville's Beaked Whale)



PCB 206
Value = 44.9 ± 4.2 ng/g (wet basis)
Reported Results: 10
SRM 1945

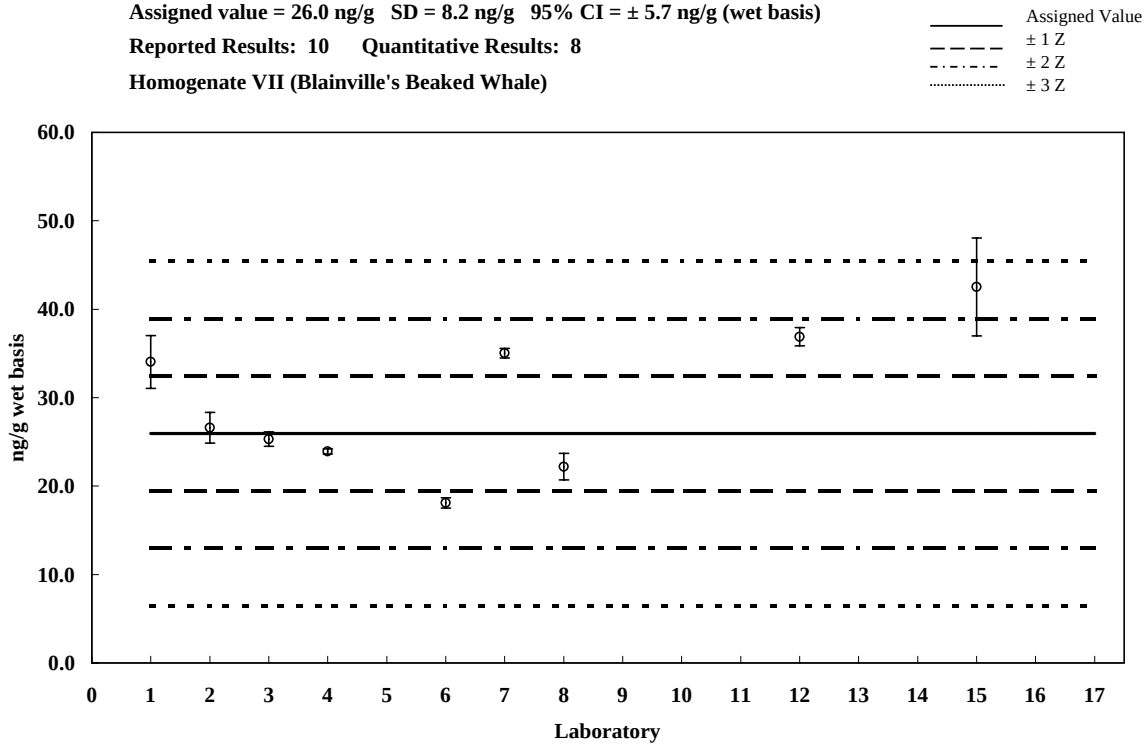


PCB 209

Assigned value = 26.0 ng/g SD = 8.2 ng/g 95% CI = ± 5.7 ng/g (wet basis)

Reported Results: 10 Quantitative Results: 8

Homogenate VII (Blainville's Beaked Whale)

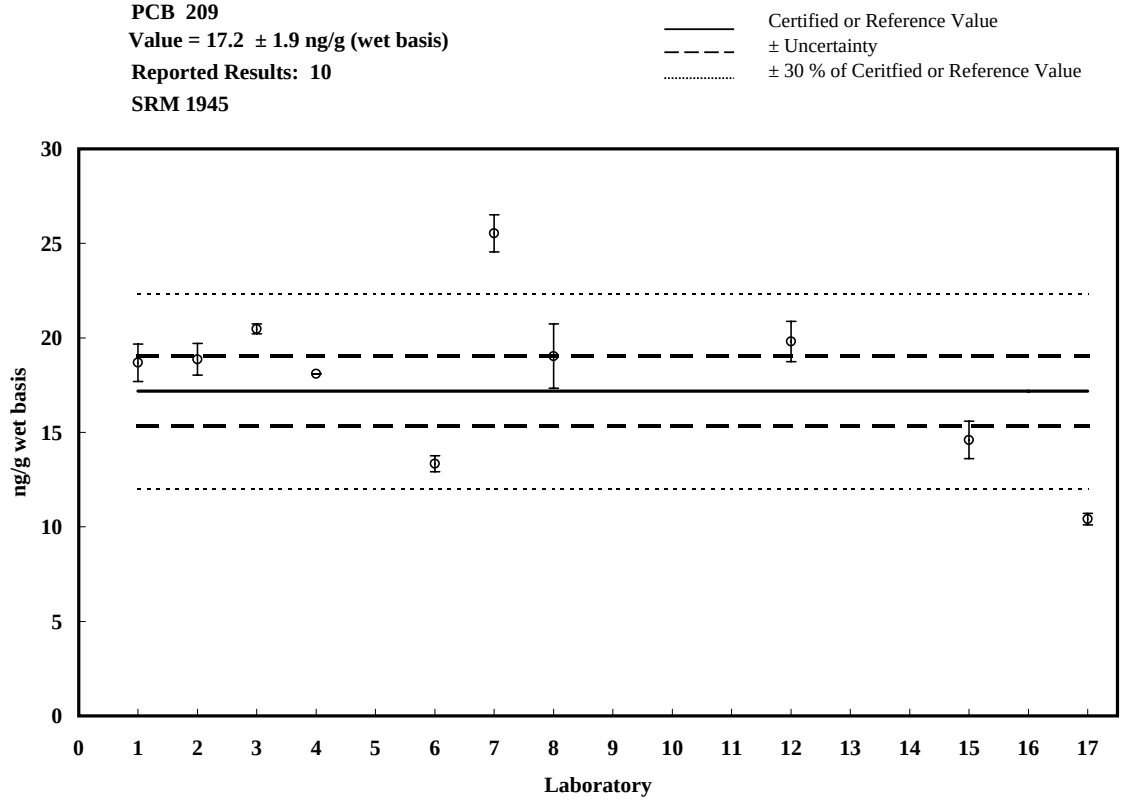


PCB 209

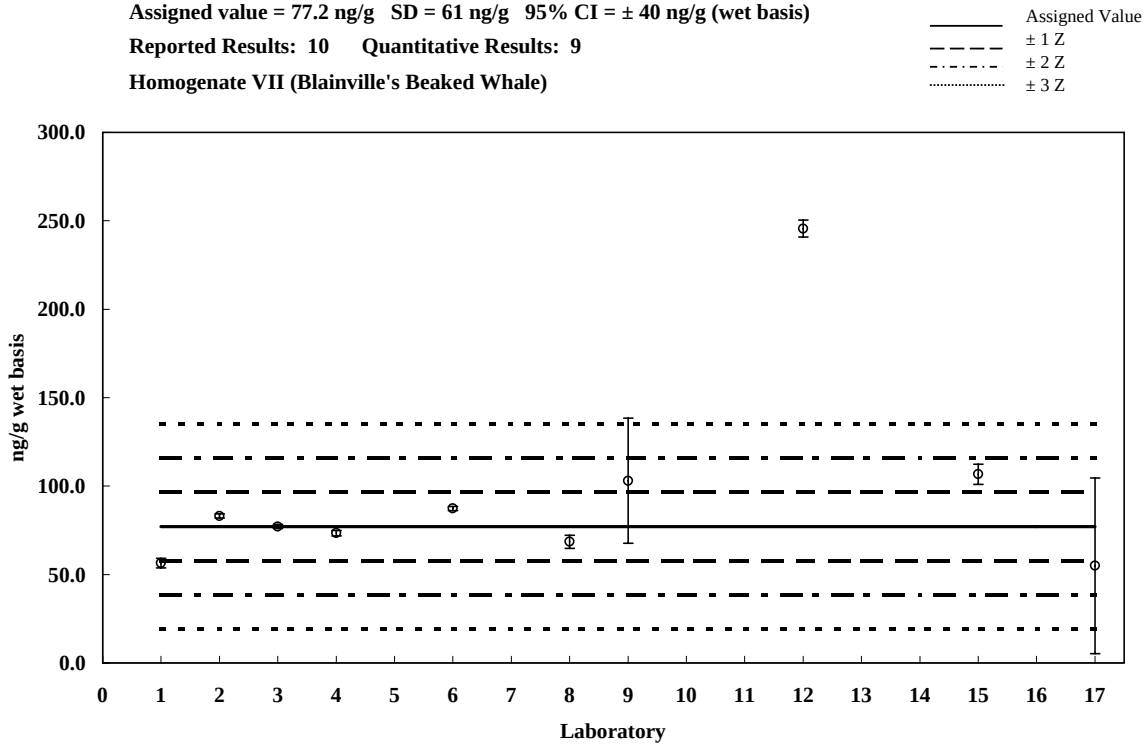
Value = 17.2 ± 1.9 ng/g (wet basis)

Reported Results: 10

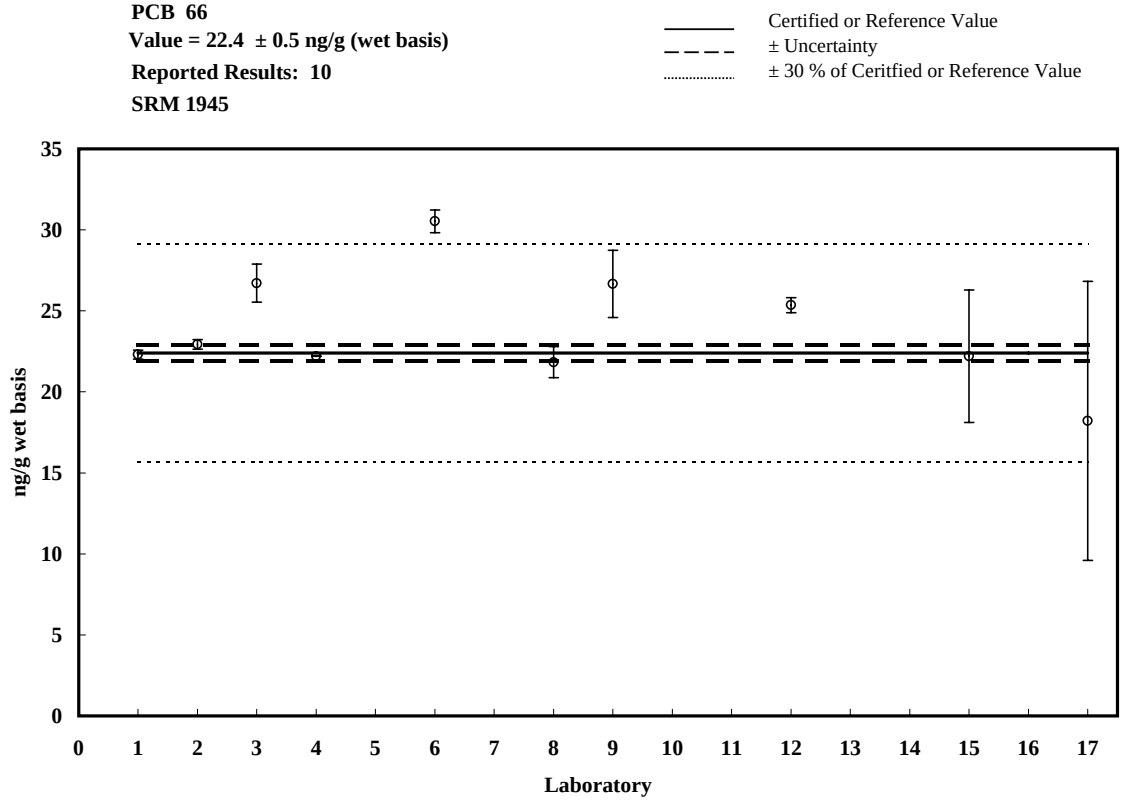
SRM 1945



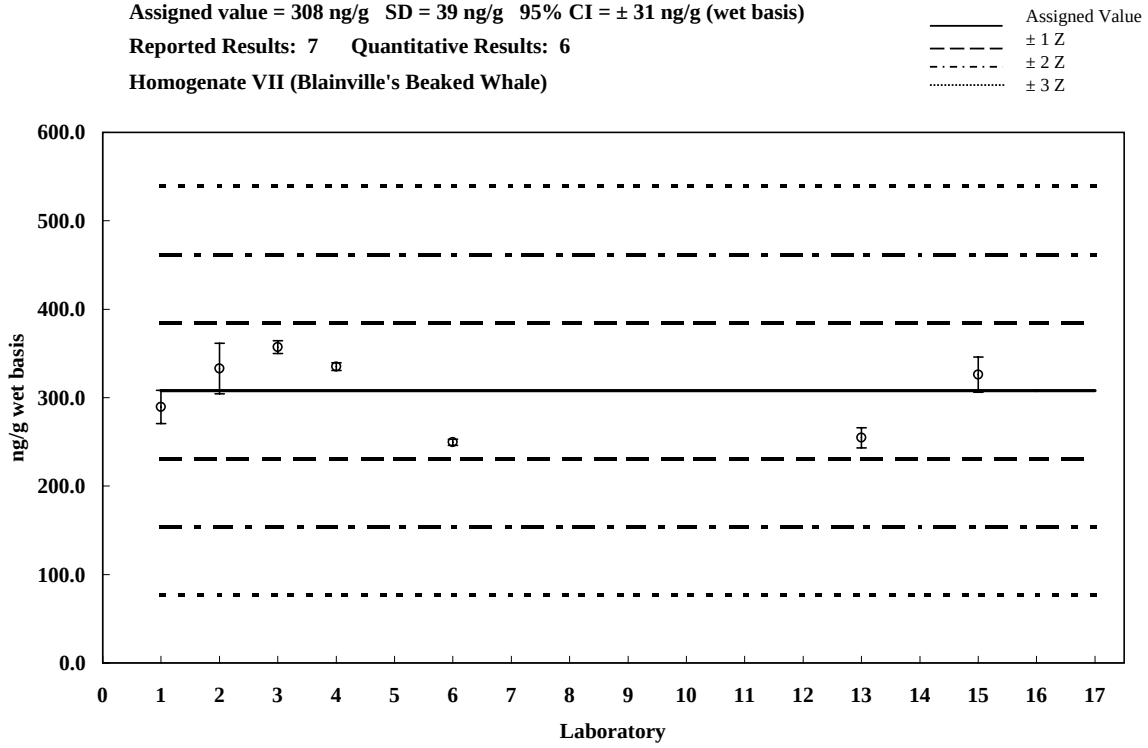
PCB 66
Assigned value = 77.2 ng/g SD = 61 ng/g 95% CI = ± 40 ng/g (wet basis)
Reported Results: 10 Quantitative Results: 9
Homogenate VII (Blainville's Beaked Whale)



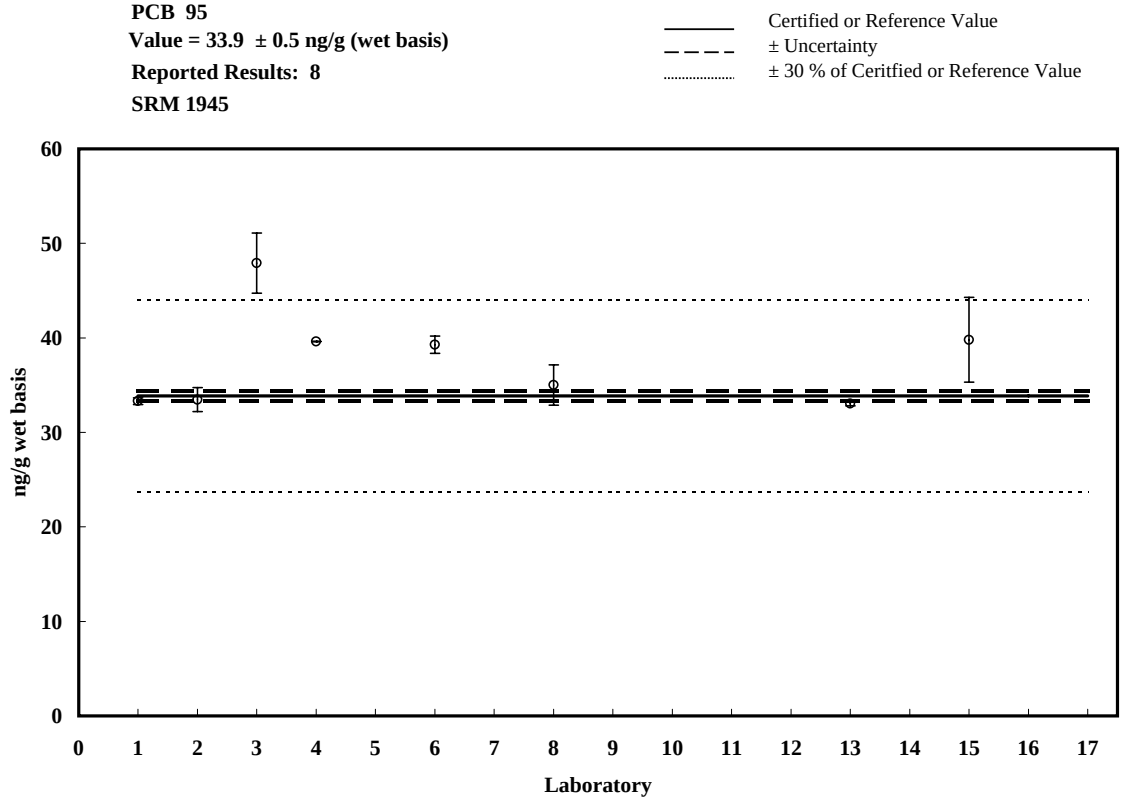
PCB 66
Value = 22.4 ± 0.5 ng/g (wet basis)
Reported Results: 10
SRM 1945



PCB 95
Assigned value = 308 ng/g SD = 39 ng/g 95% CI = ± 31 ng/g (wet basis)
Reported Results: 7 Quantitative Results: 6
Homogenate VII (Blainville's Beaked Whale)



PCB 95
Value = 33.9 ± 0.5 ng/g (wet basis)
Reported Results: 8
SRM 1945



Appendix C

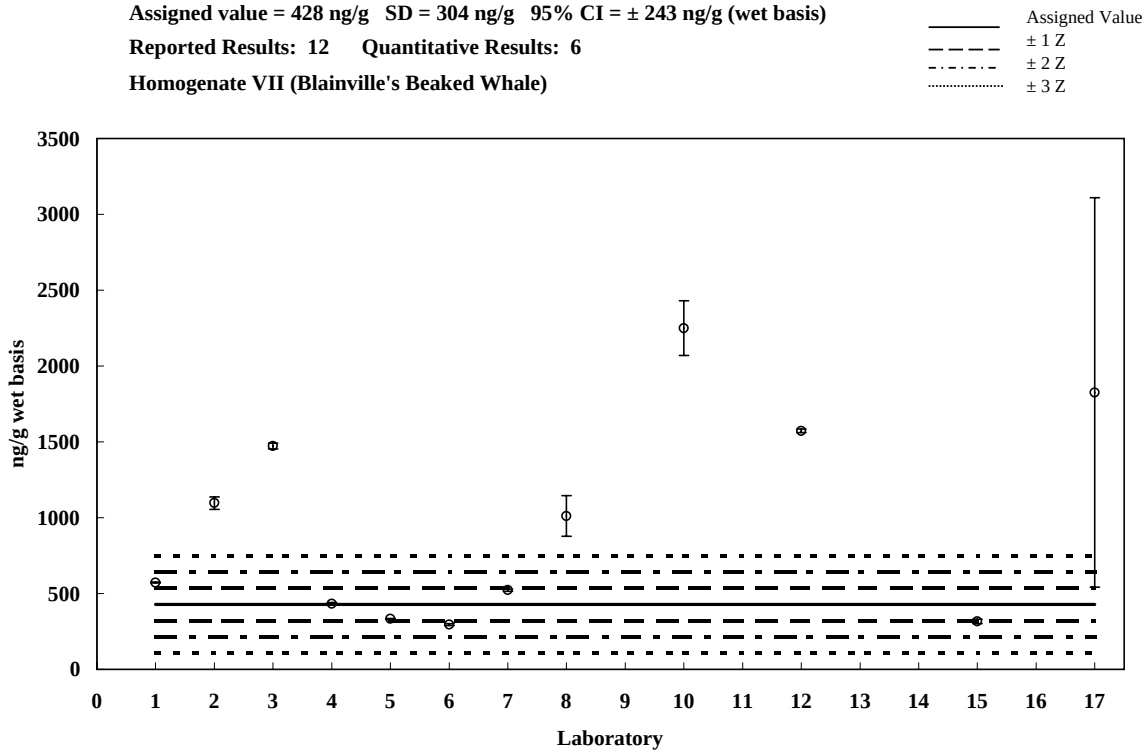
Graphical results of pesticide and lipid data reported by all laboratories. The Z-scores for Homogenate VII represent 25 % of the assigned value so that z = +1 is the assigned value plus 25 %, z = -1 is the assigned value minus 25 % and so forth. Error bars are ± 1 standard deviation.

2,4'-DDT

Assigned value = 428 ng/g SD = 304 ng/g 95% CI = ± 243 ng/g (wet basis)

Reported Results: 12 Quantitative Results: 6

Homogenate VII (Blainville's Beaked Whale)

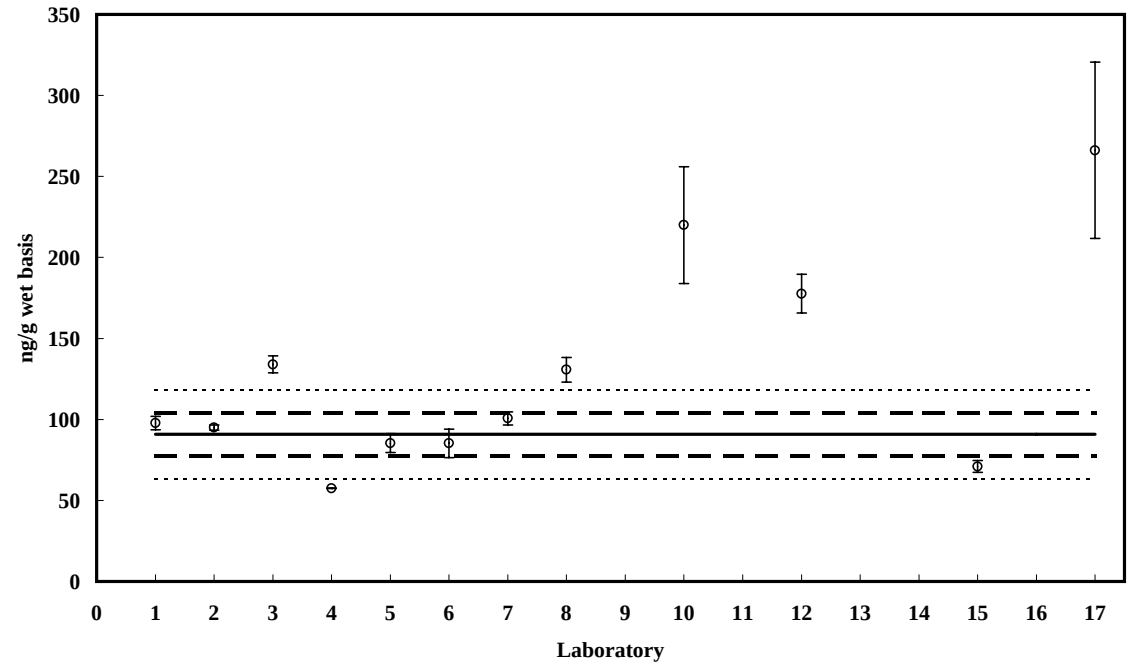


2,4'-DDT

Value = 91.0 ± 13 ng/g (wet basis)

Reported Results: 12

SRM 1945

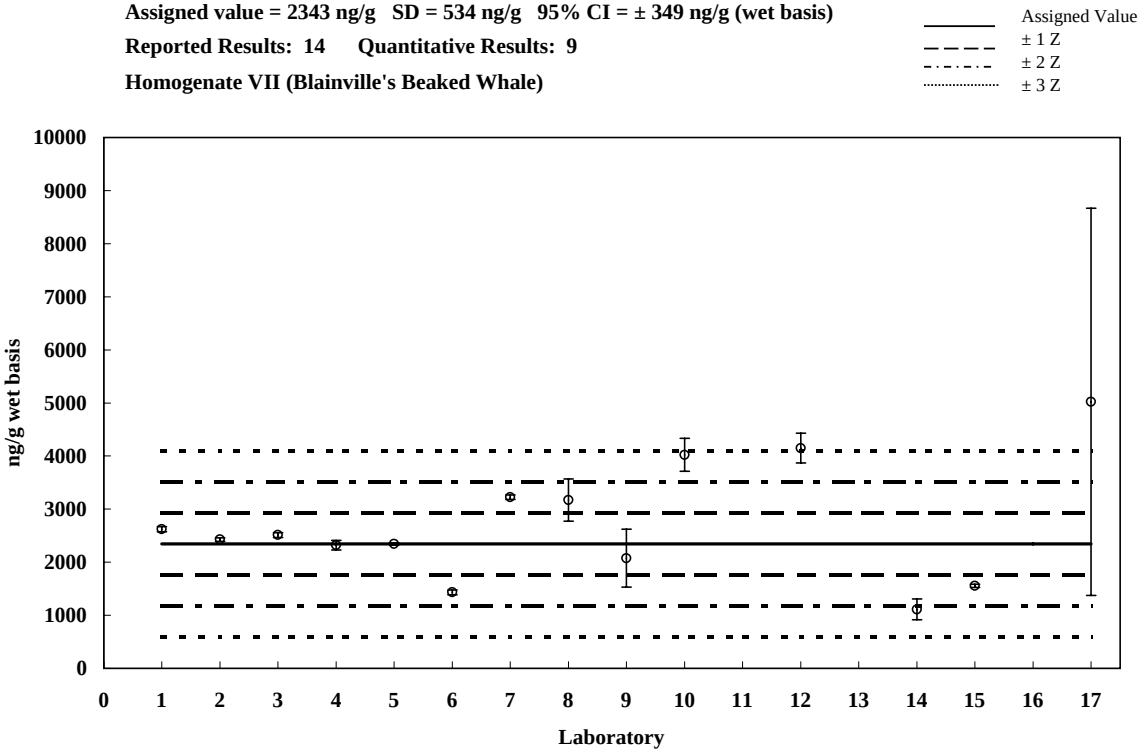


4,4'-DDT

Assigned value = 2343 ng/g SD = 534 ng/g 95% CI = ± 349 ng/g (wet basis)

Reported Results: 14 Quantitative Results: 9

Homogenate VII (Blainville's Beaked Whale)

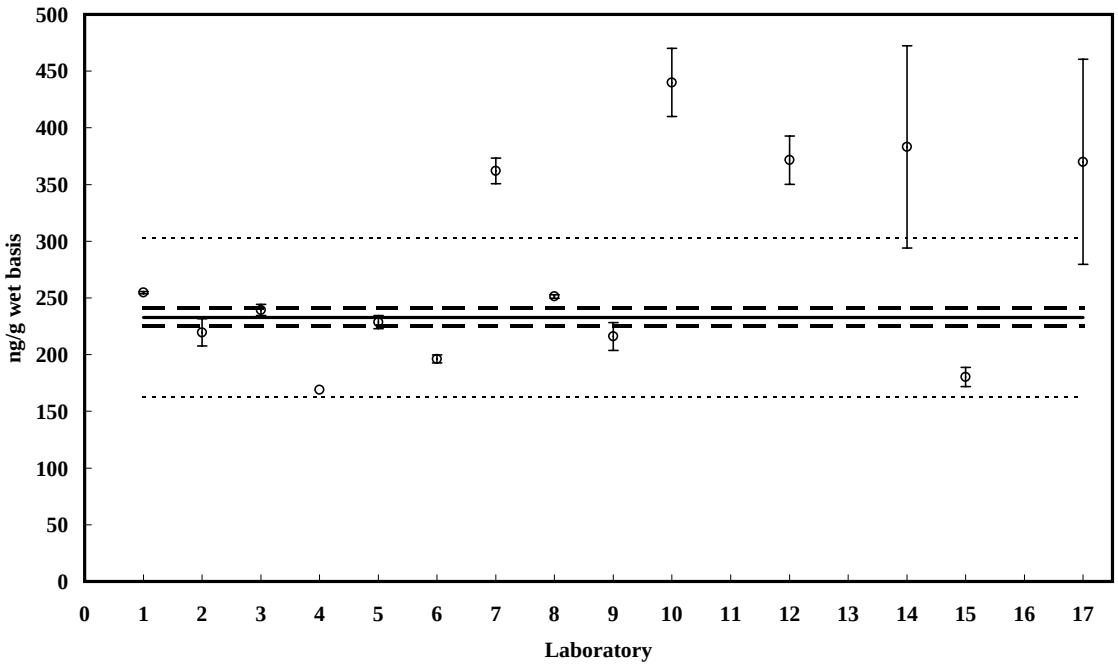


4,4'-DDT

Value = 233 ± 8.0 ng/g (wet basis)

Reported Results: 14

SRM 1945

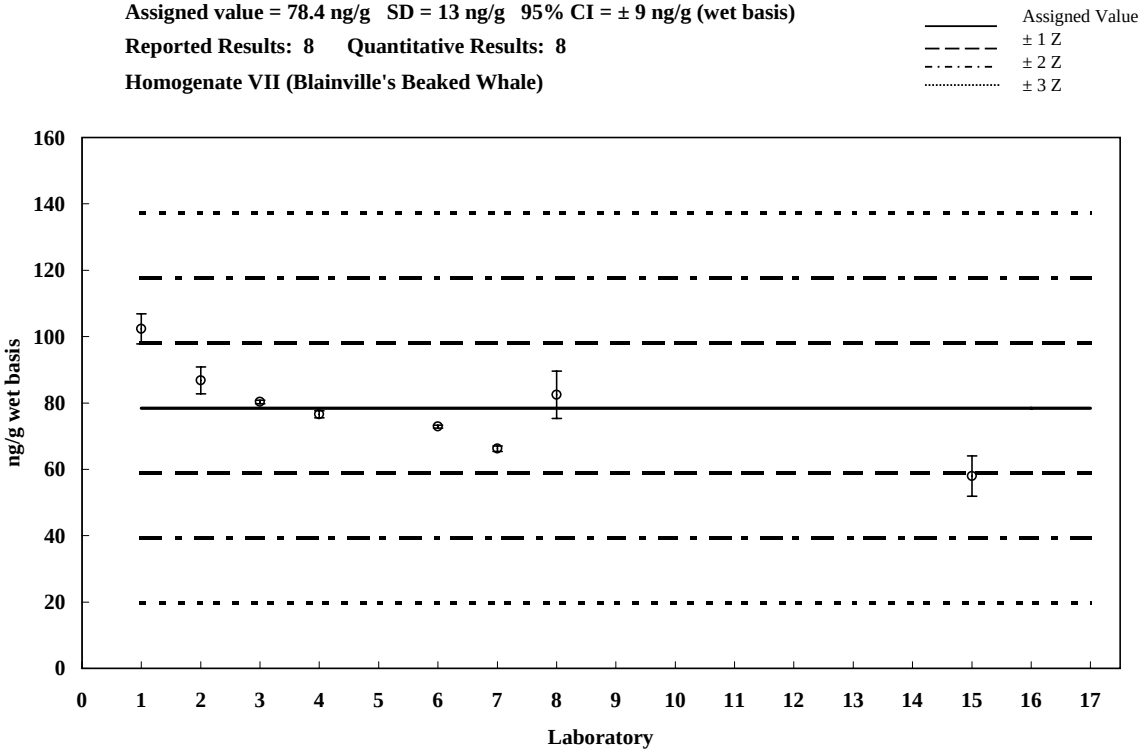


2,4'-DDE

Assigned value = 78.4 ng/g SD = 13 ng/g 95% CI = ± 9 ng/g (wet basis)

Reported Results: 8 Quantitative Results: 8

Homogenate VII (Blainville's Beaked Whale)

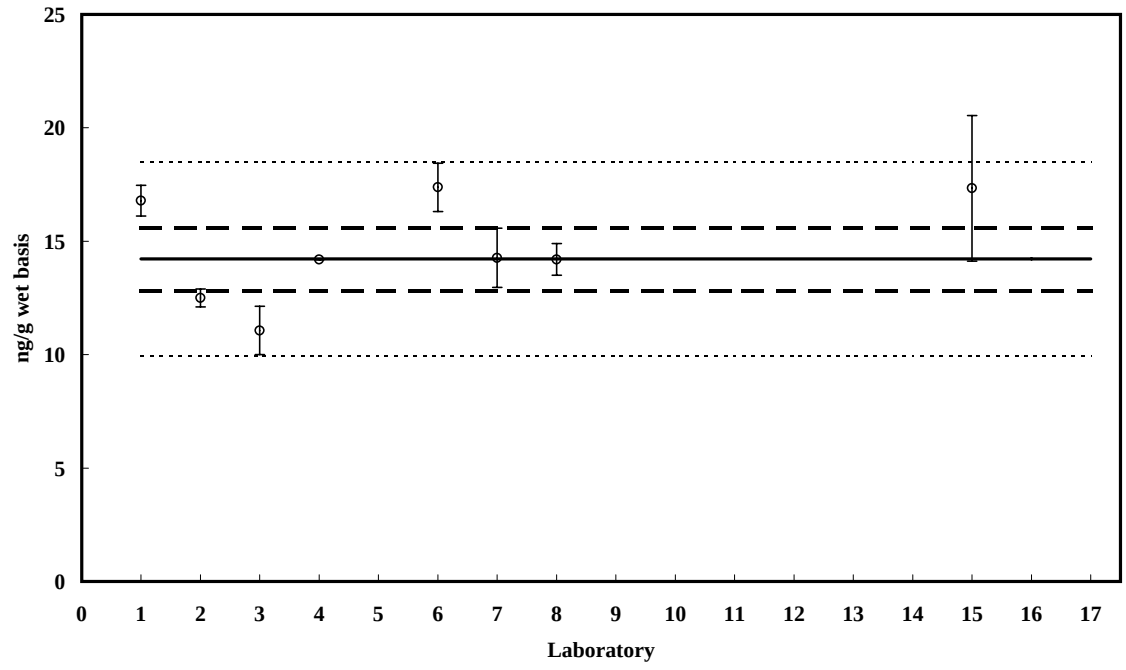


2,4'-DDE

Value = 14.2 ± 1.4 ng/g (wet basis)

Reported Results: 8

SRM 1945

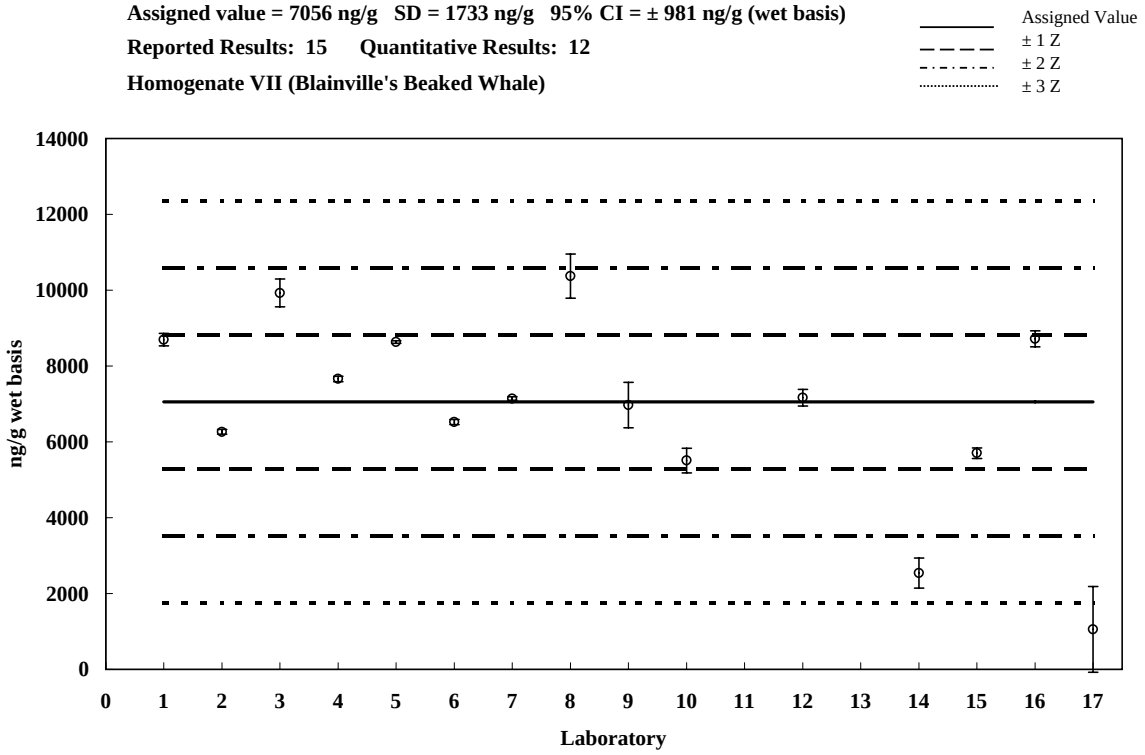


4,4'-DDE

Assigned value = 7056 ng/g SD = 1733 ng/g 95% CI = ± 981 ng/g (wet basis)

Reported Results: 15 Quantitative Results: 12

Homogenate VII (Blainville's Beaked Whale)

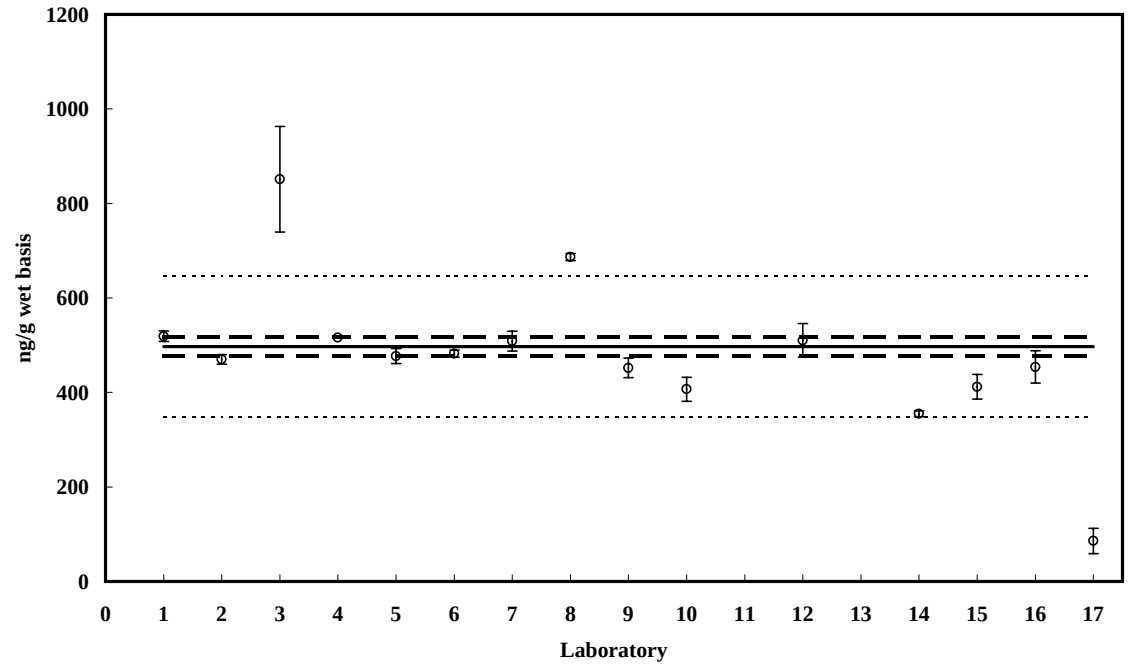


4,4'-DDE

Value = 497 ± 19 ng/g (wet basis)

Reported Results: 15

SRM 1945

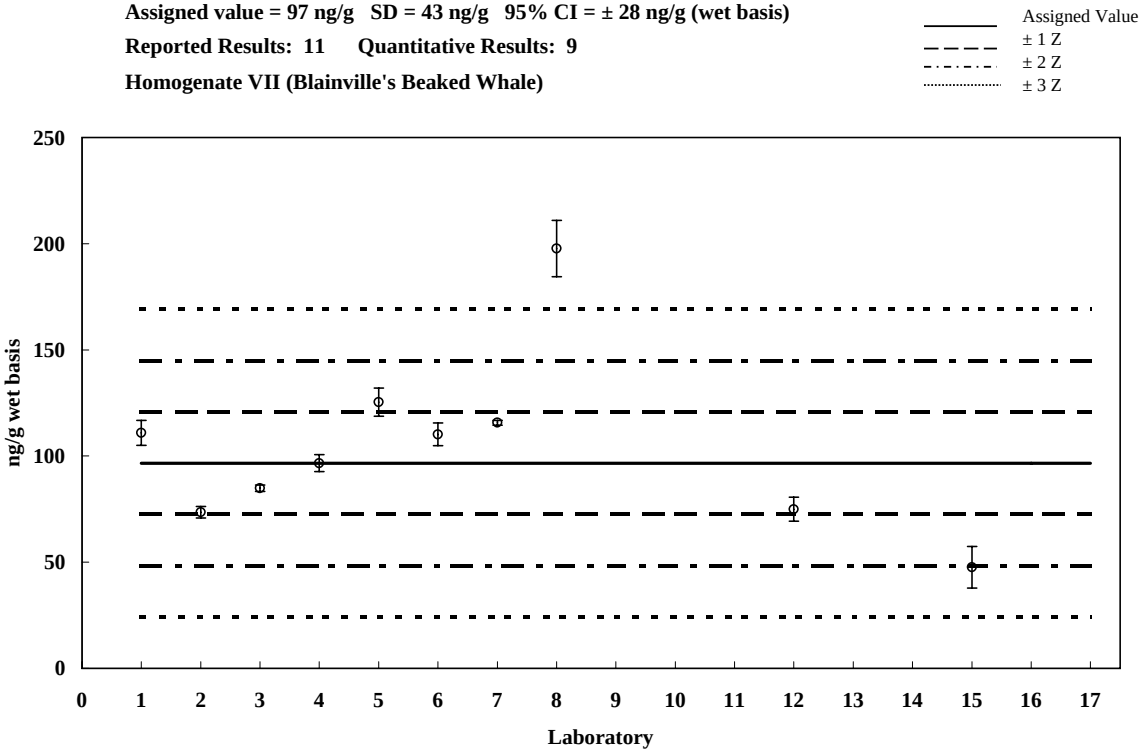


2,4'-DDD

Assigned value = 97 ng/g SD = 43 ng/g 95% CI = ± 28 ng/g (wet basis)

Reported Results: 11 Quantitative Results: 9

Homogenate VII (Blainville's Beaked Whale)

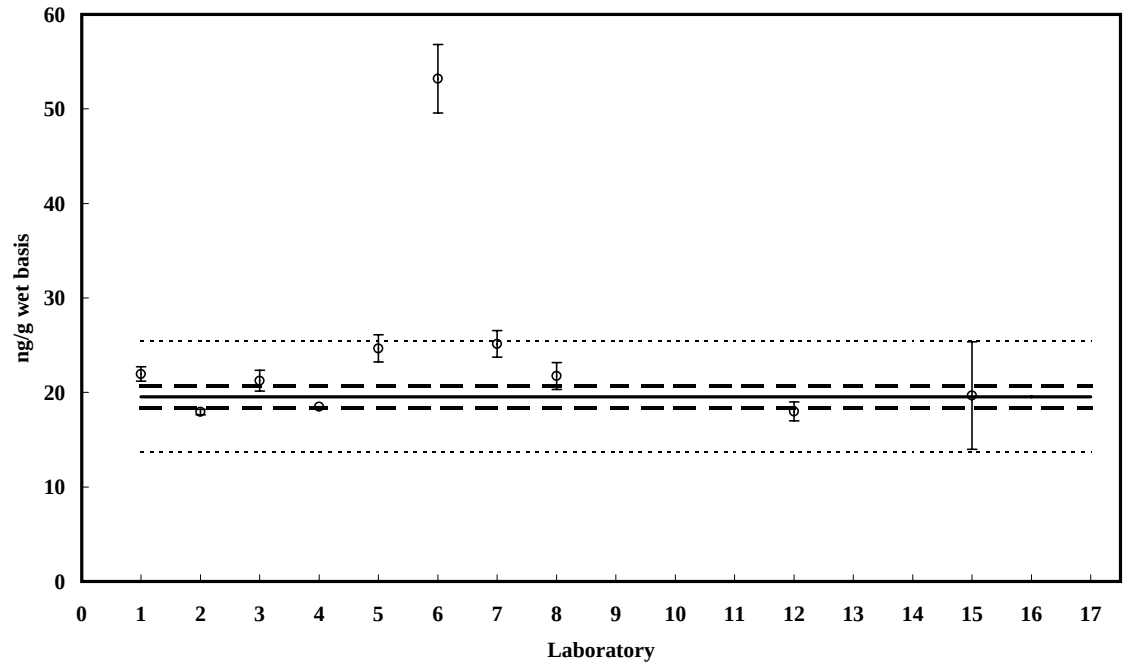


2,4'-DDD

Value = 19.5 ± 1.2 ng/g (wet basis)

Reported Results: 11

SRM 1945

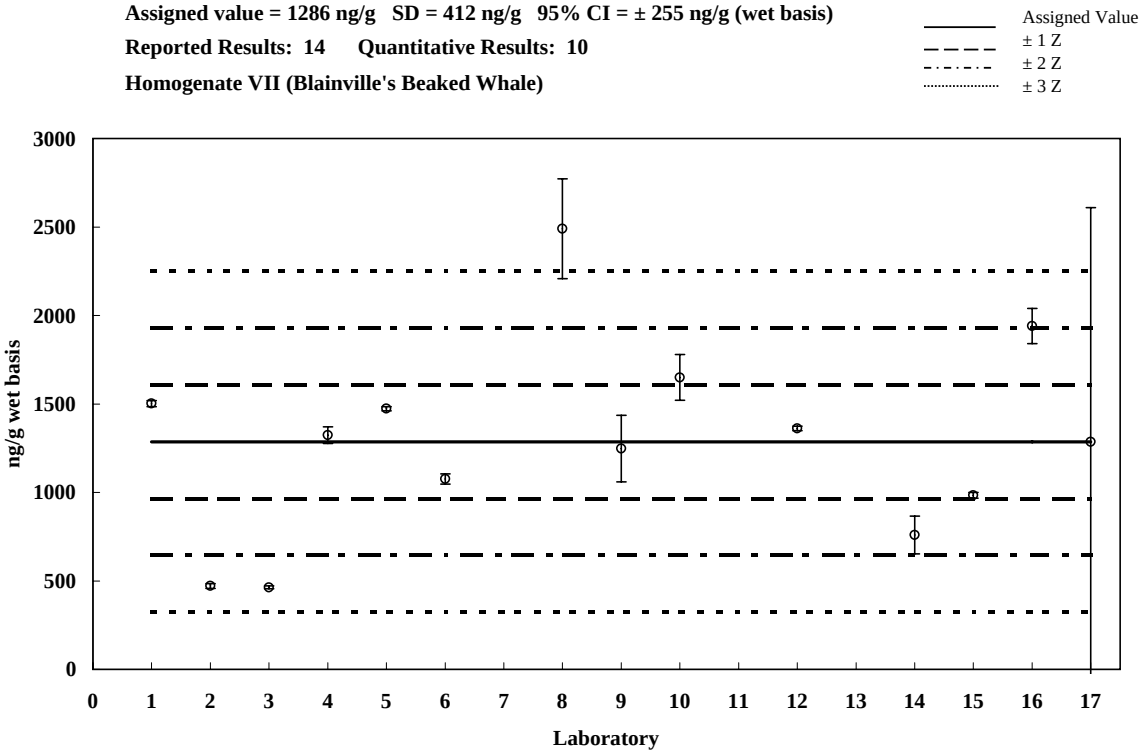


4,4'-DDD

Assigned value = 1286 ng/g SD = 412 ng/g 95% CI = ± 255 ng/g (wet basis)

Reported Results: 14 Quantitative Results: 10

Homogenate VII (Blainville's Beaked Whale)

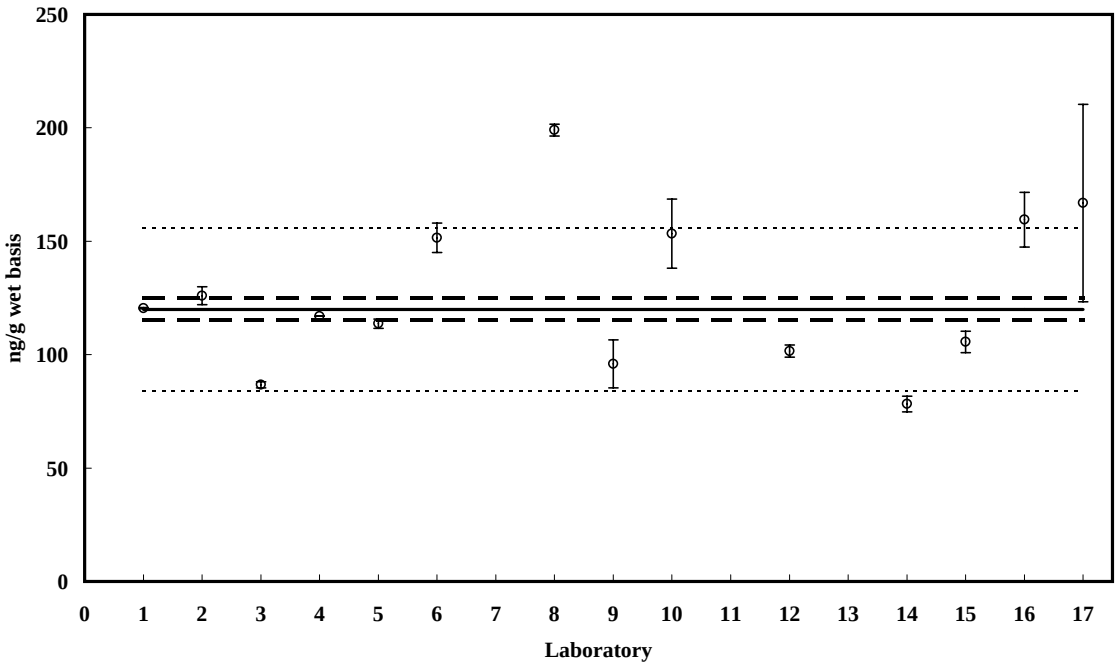


4,4'-DDD

Value = 120 ± 5 ng/g (wet basis)

Reported Results: 14

SRM 1945

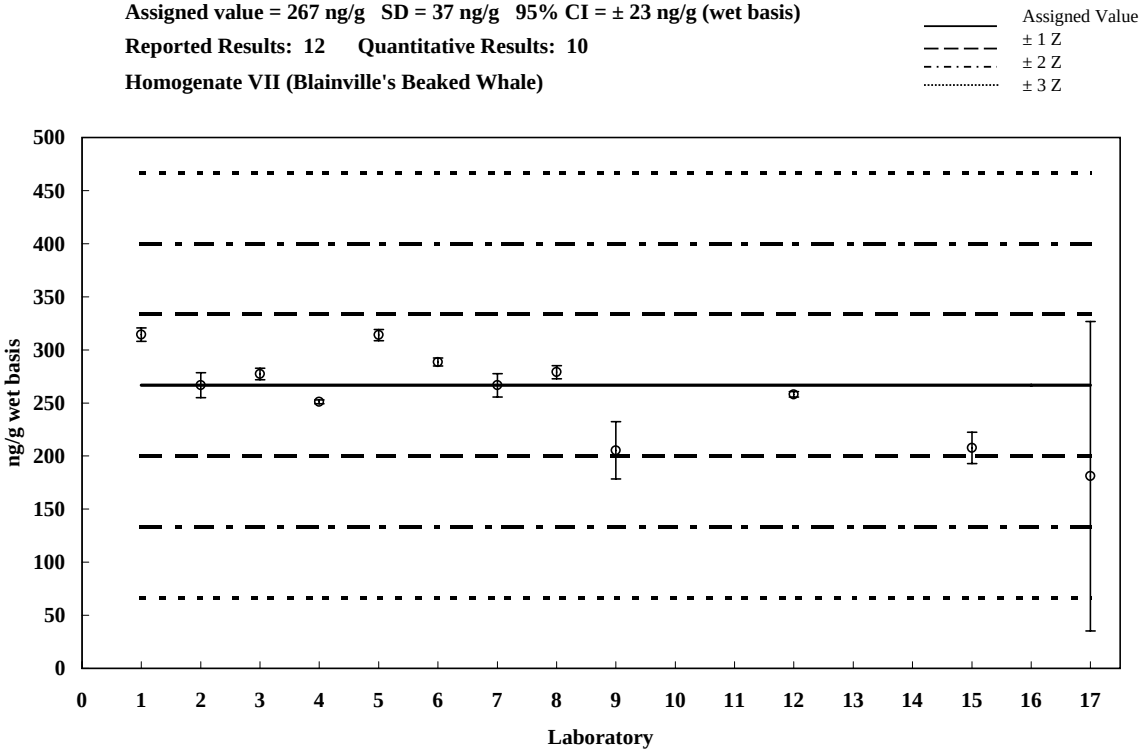


HCB

Assigned value = 267 ng/g SD = 37 ng/g 95% CI = ± 23 ng/g (wet basis)

Reported Results: 12 Quantitative Results: 10

Homogenate VII (Blainville's Beaked Whale)

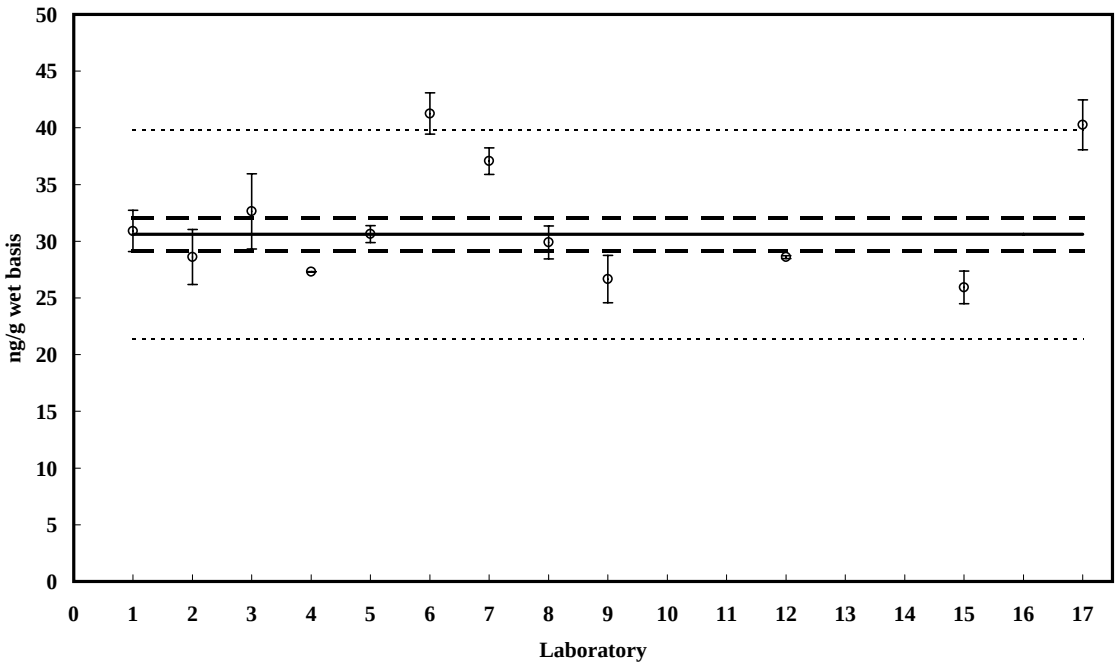


HCB

Value = 30.6 ± 1.5 ng/g (wet basis)

Reported Results: 12

SRM 1945

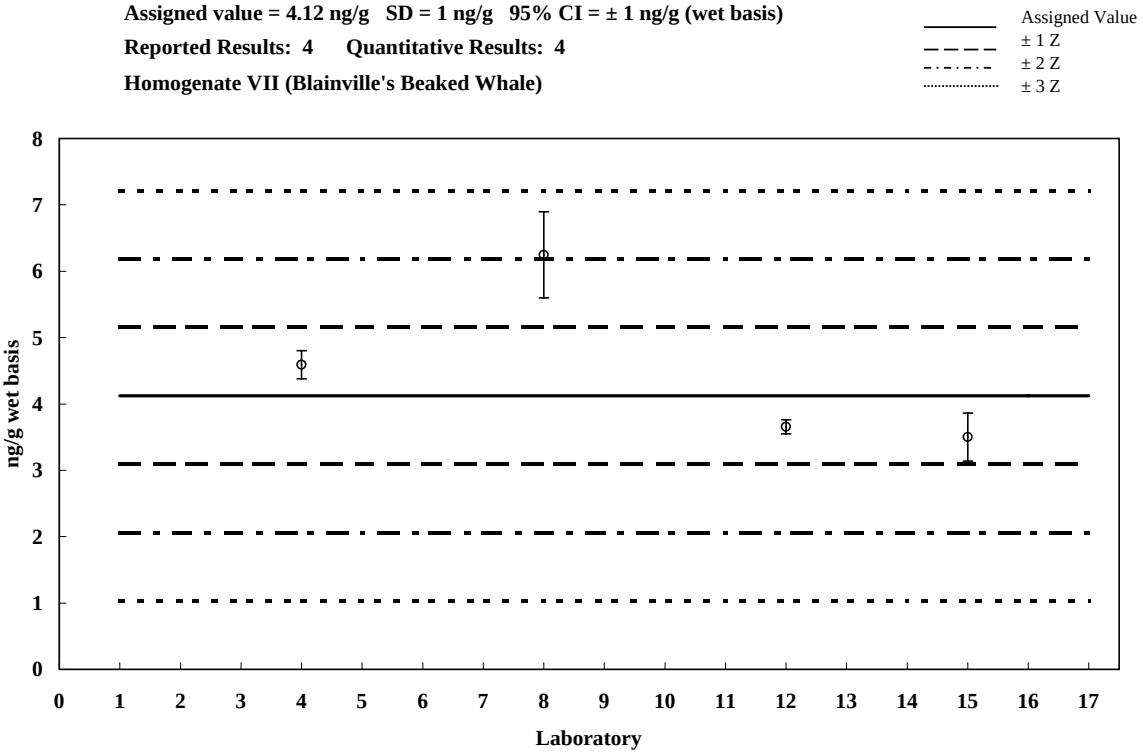


alpha-HCH

Assigned value = 4.12 ng/g SD = 1 ng/g 95% CI = ± 1 ng/g (wet basis)

Reported Results: 4 Quantitative Results: 4

Homogenate VII (Blainville's Beaked Whale)

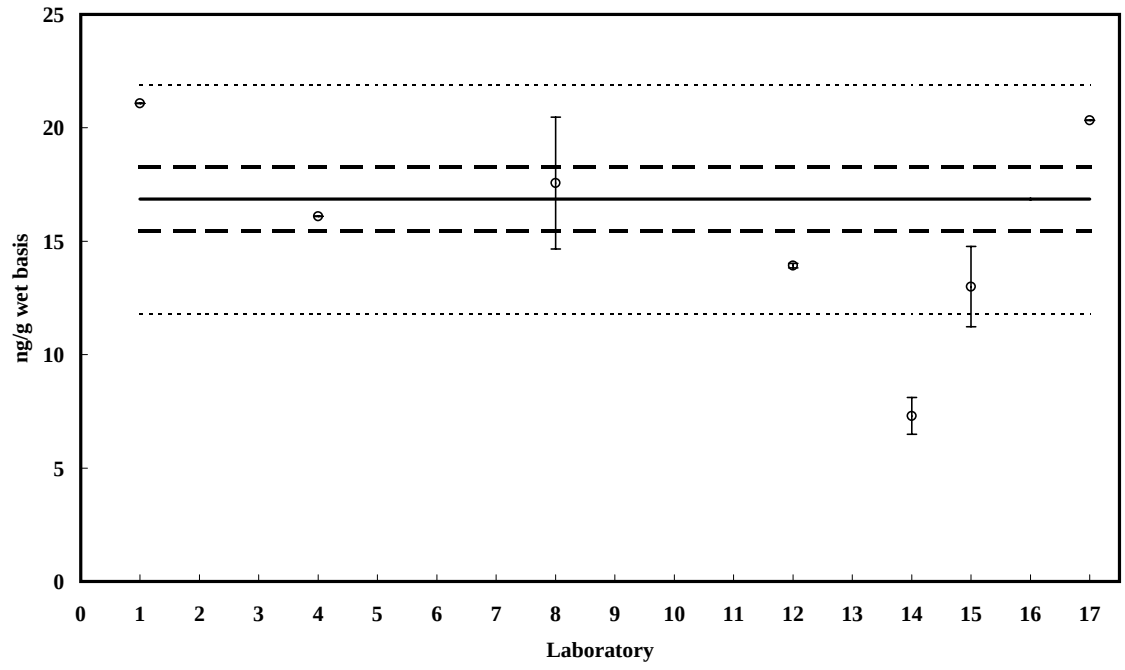


alpha-HCH

Value = 16.9 ± 1.4 ng/g (wet basis)

Reported Results: 7

SRM 1945

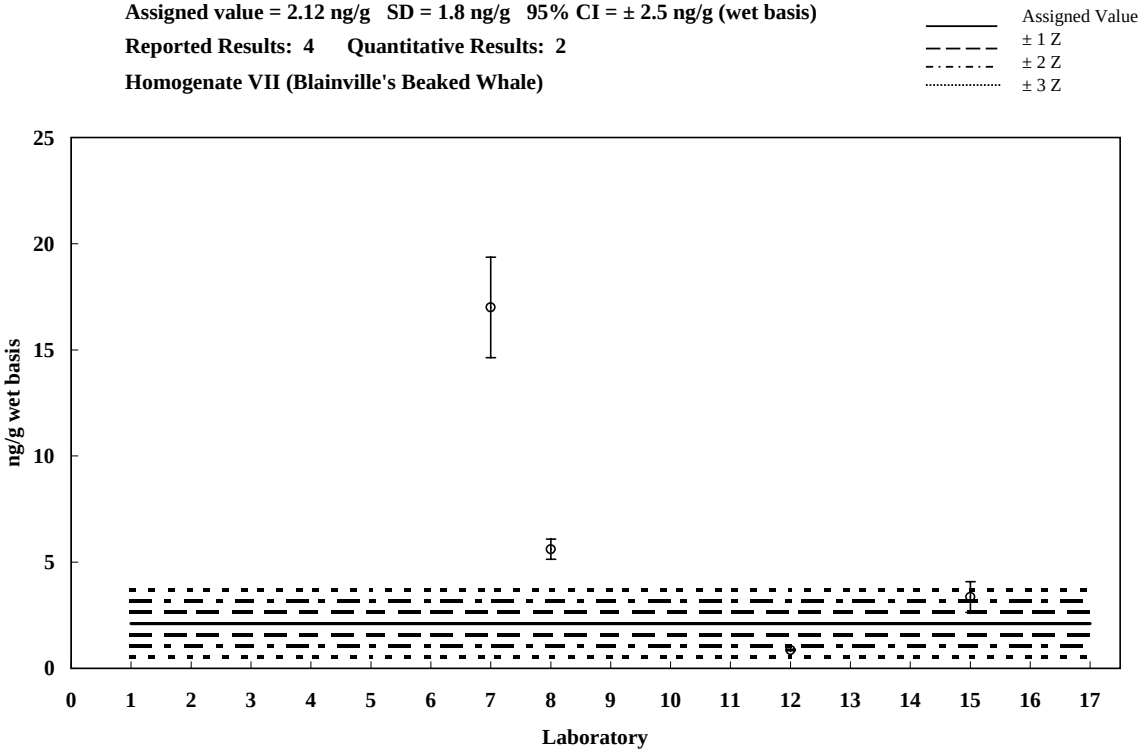


gamma-HCH

Assigned value = 2.12 ng/g SD = 1.8 ng/g 95% CI = ± 2.5 ng/g (wet basis)

Reported Results: 4 Quantitative Results: 2

Homogenate VII (Blainville's Beaked Whale)

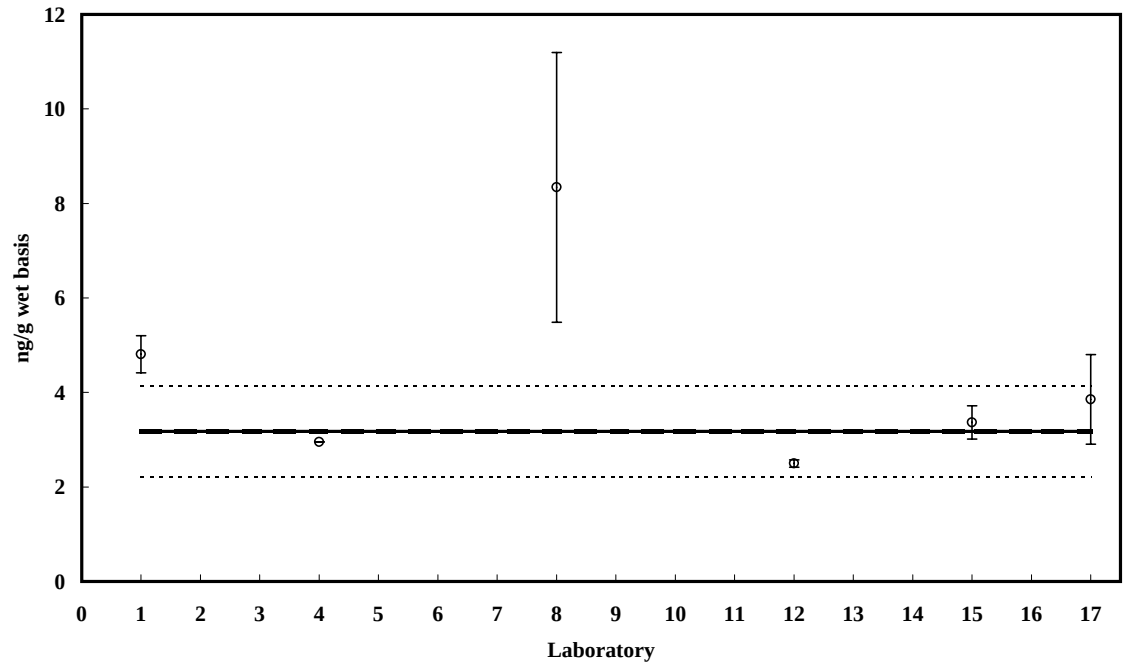


gamma-HCH

Value = 3.0 ± 0.01 ng/g (wet basis)

Reported Results: 7

SRM 1945

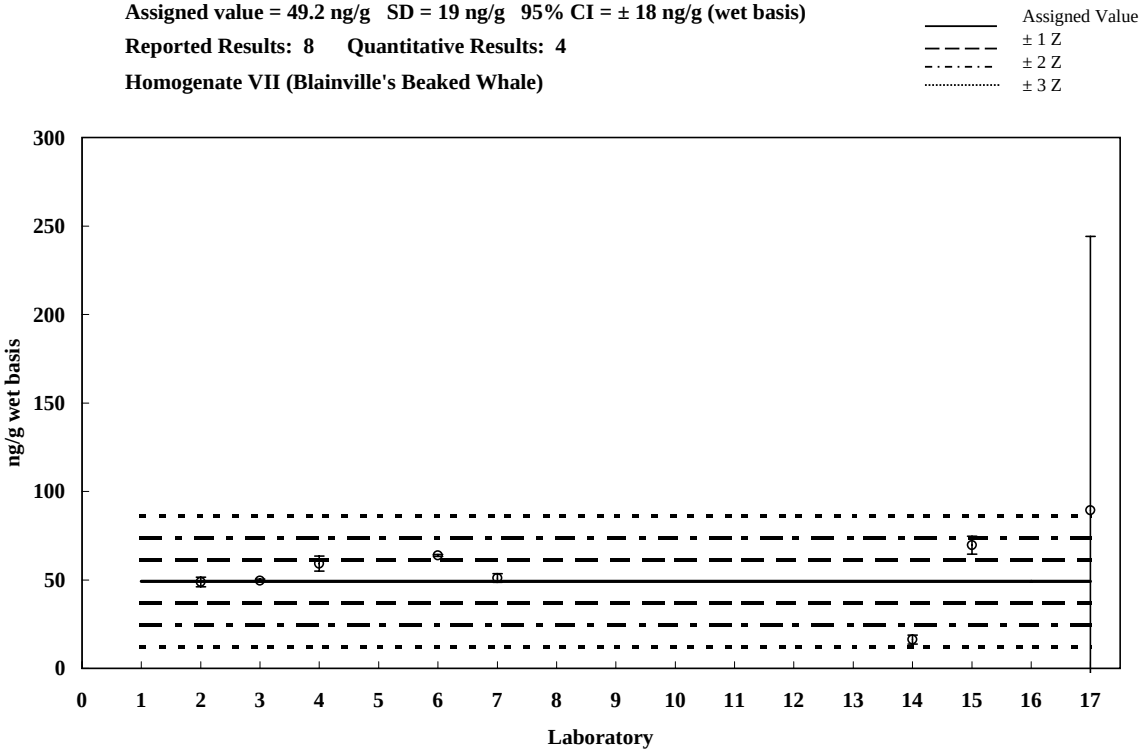


Heptachlor Epoxide

Assigned value = 49.2 ng/g SD = 19 ng/g 95% CI = ± 18 ng/g (wet basis)

Reported Results: 8 Quantitative Results: 4

Homogenate VII (Blainville's Beaked Whale)

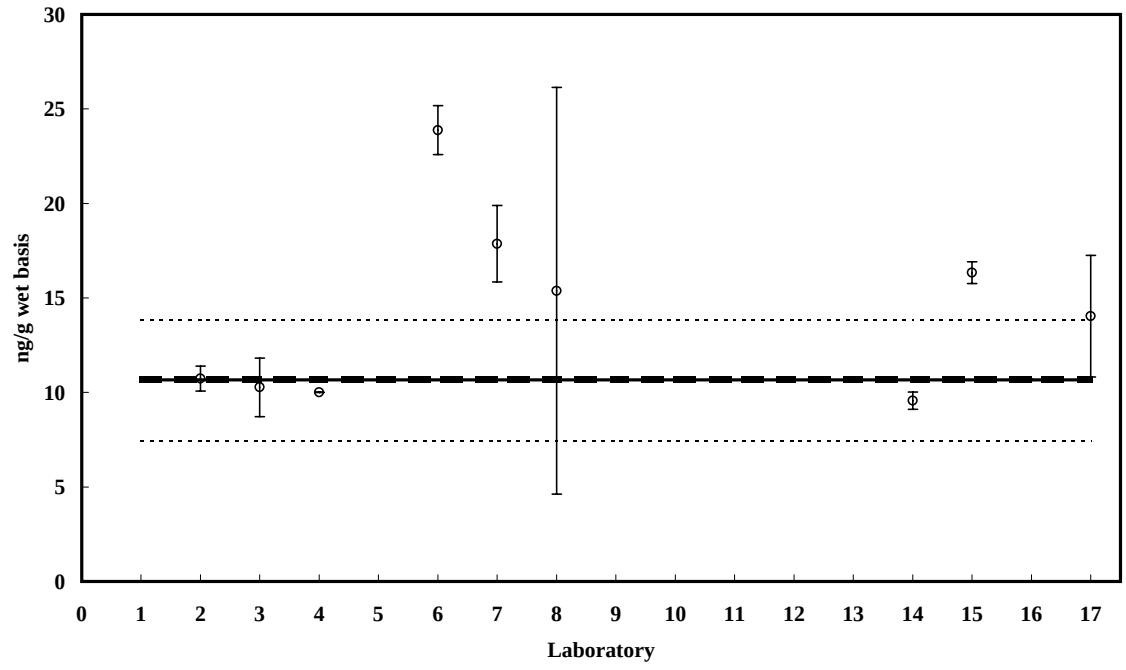


Heptachlor Epoxide

Value = 10.9 ± 0.1 ng/g (wet basis)

Reported Results: 9

SRM 1945

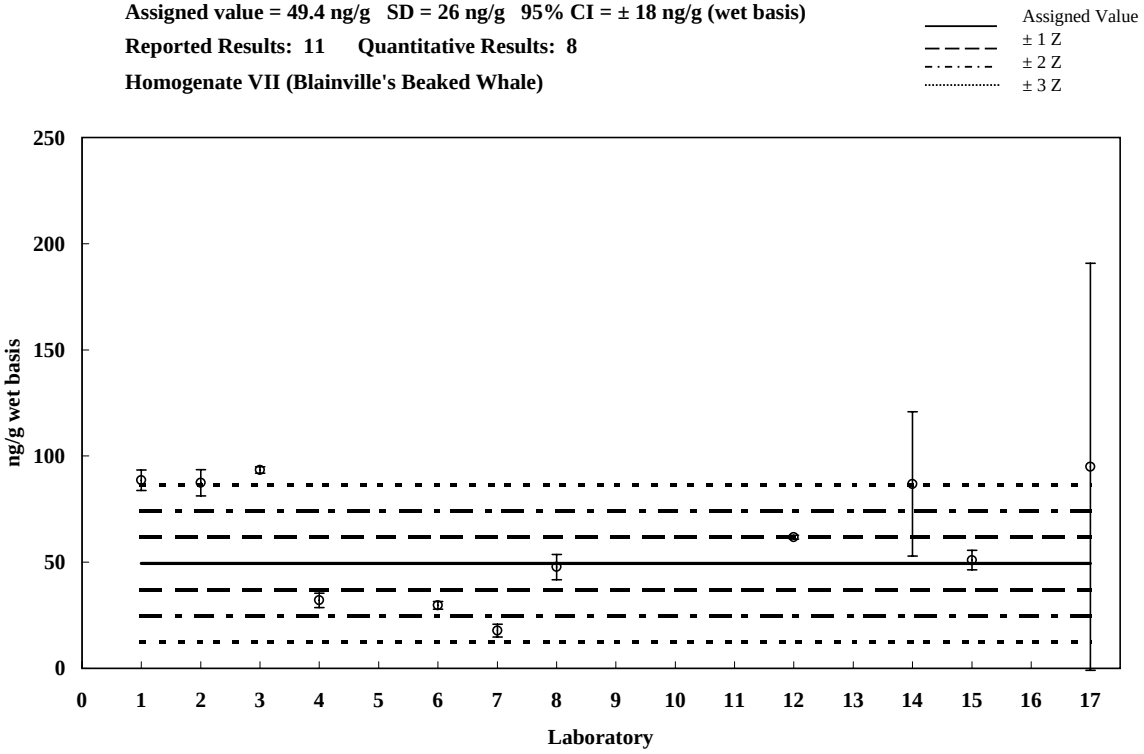


Cis-Chlordane

Assigned value = 49.4 ng/g SD = 26 ng/g 95% CI = ± 18 ng/g (wet basis)

Reported Results: 11 Quantitative Results: 8

Homogenate VII (Blainville's Beaked Whale)

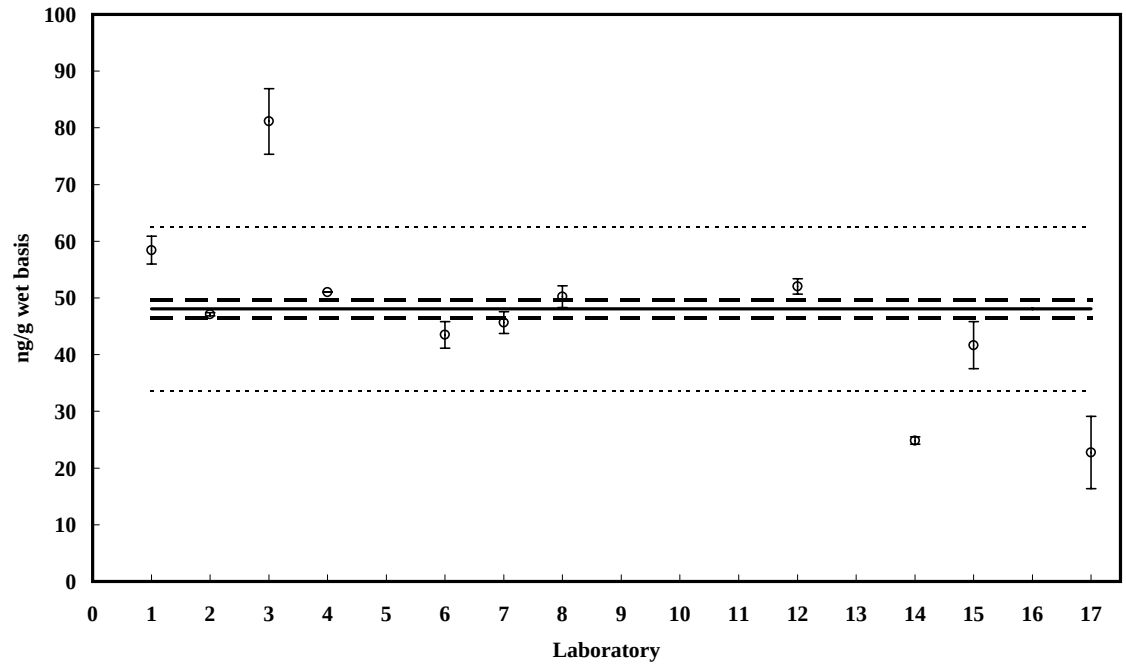


Cis-Chlordane

Value = 48.1 ± 1.6 ng/g (wet basis)

Reported Results: 11

SRM 1945

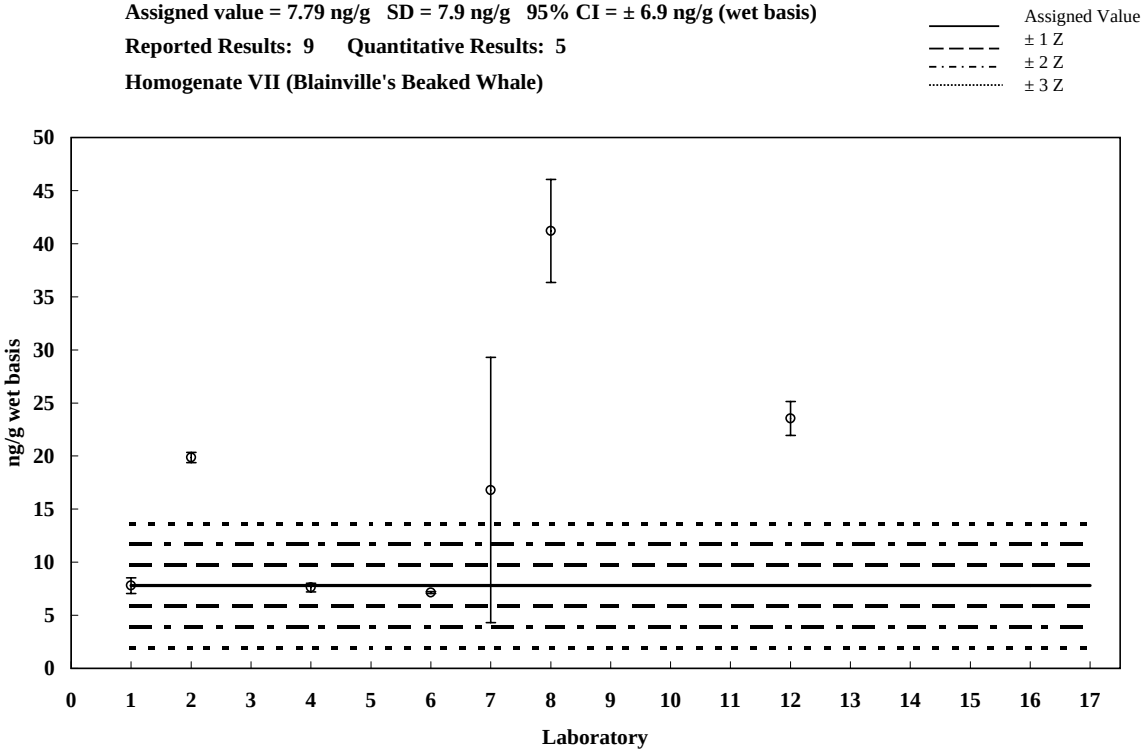


Trans-Chlordane

Assigned value = 7.79 ng/g SD = 7.9 ng/g 95% CI = ± 6.9 ng/g (wet basis)

Reported Results: 9 Quantitative Results: 5

Homogenate VII (Blainville's Beaked Whale)

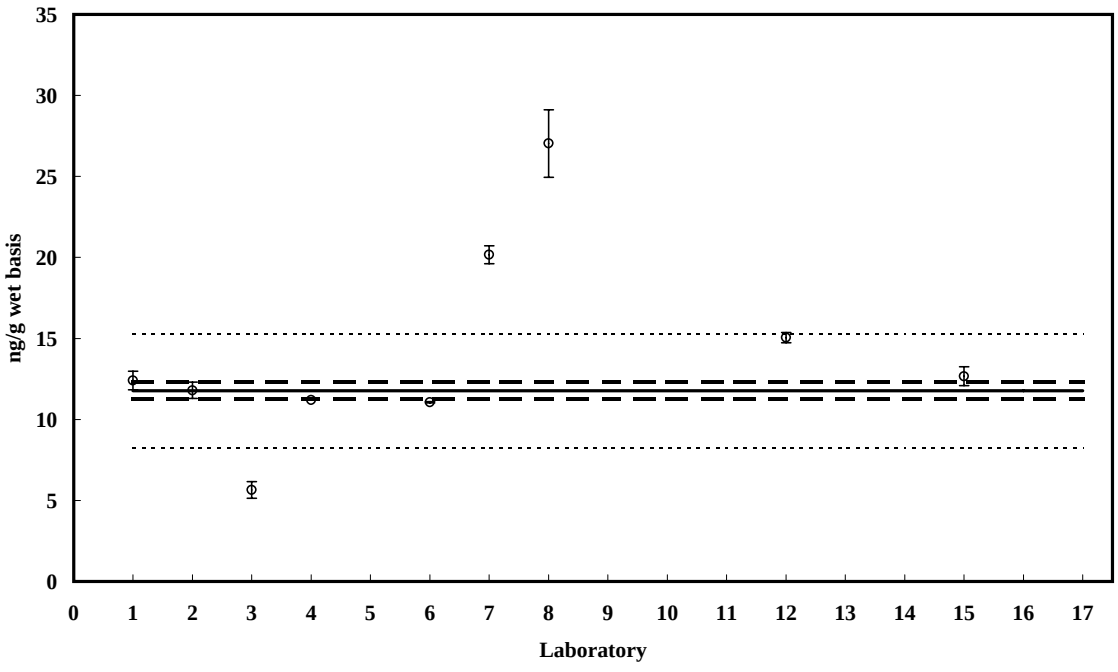


Trans-Chlordane

Value = 11.9 ± 0.54 ng/g (wet basis)

Reported Results: 11

SRM 1945

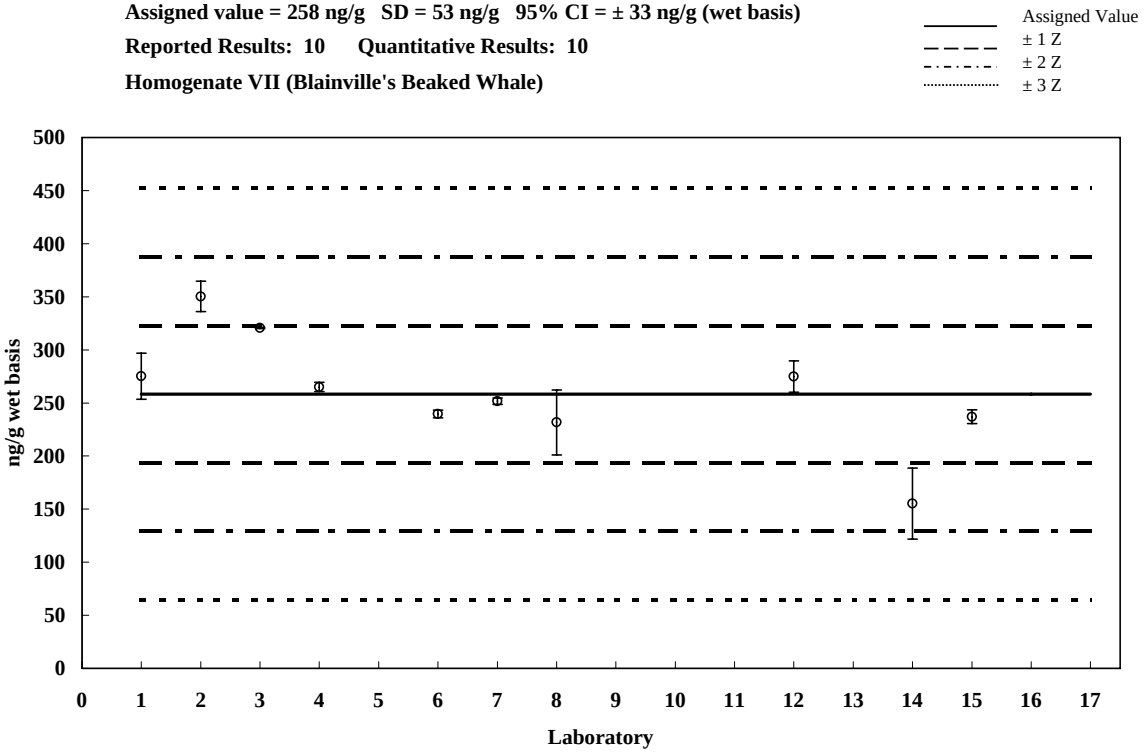


Oxychlordane

Assigned value = 258 ng/g SD = 53 ng/g 95% CI = ± 33 ng/g (wet basis)

Reported Results: 10 Quantitative Results: 10

Homogenate VII (Blainville's Beaked Whale)

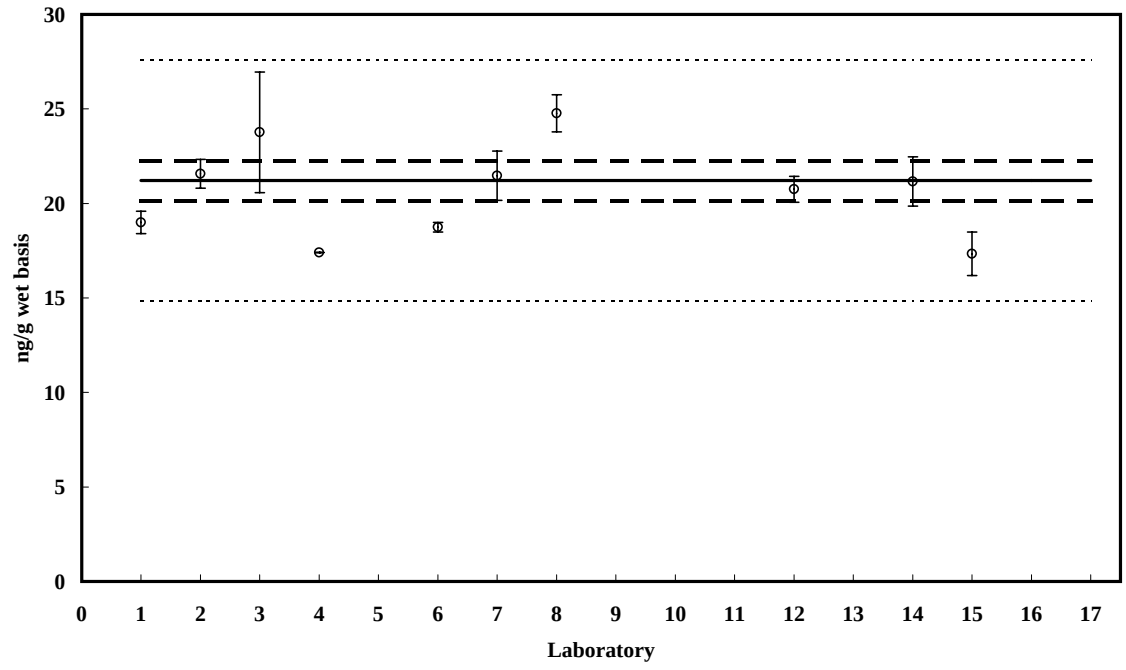


Oxychlordane

Value = 21.2 ± 1.1 ng/g (wet basis)

Reported Results: 10

SRM 1945

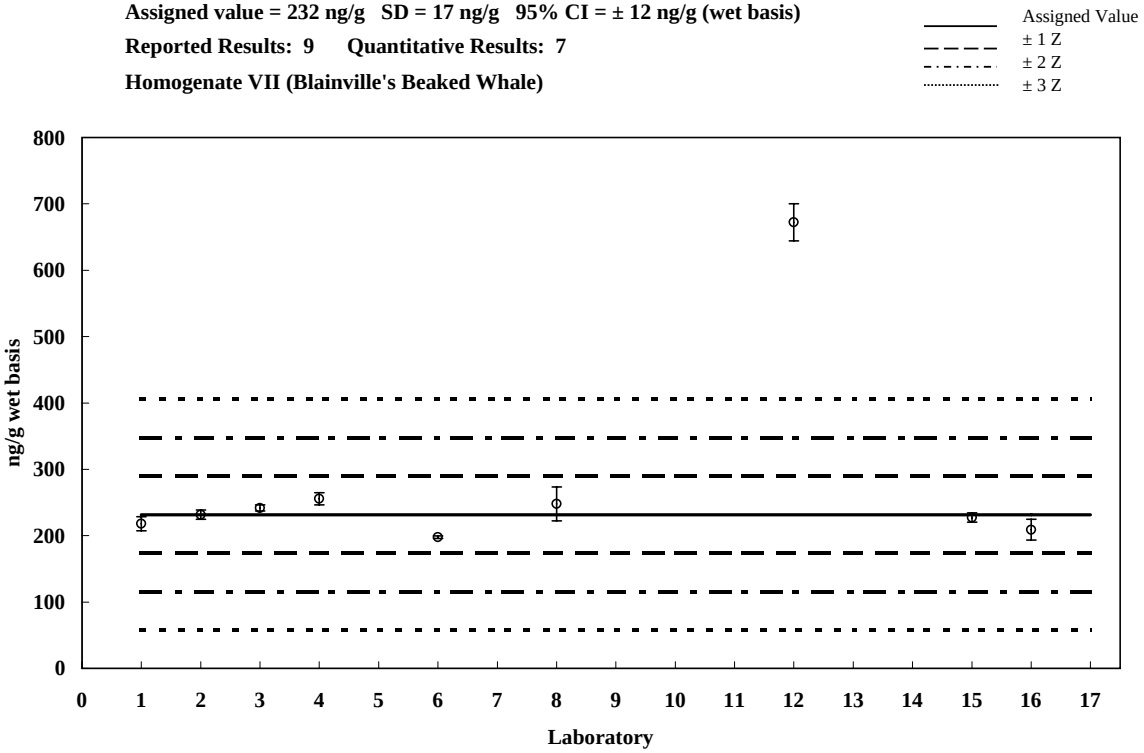


Cis-Nonachlor

Assigned value = 232 ng/g SD = 17 ng/g 95% CI = ± 12 ng/g (wet basis)

Reported Results: 9 Quantitative Results: 7

Homogenate VII (Blainville's Beaked Whale)

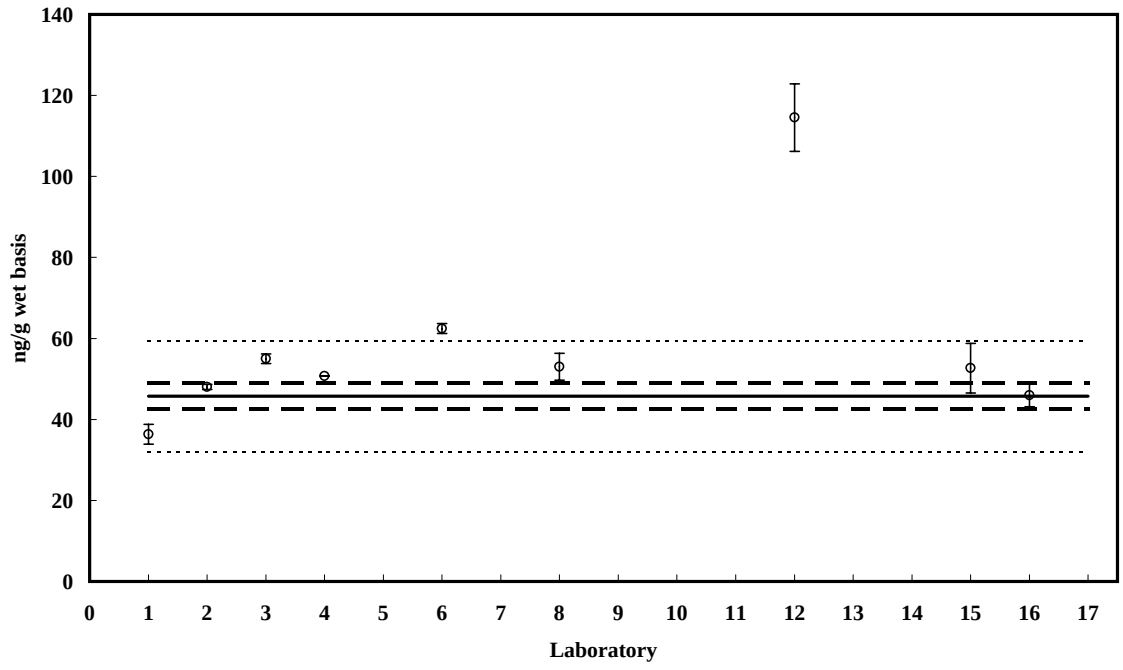


Cis-Nonachlor

Value = 45.8 ± 3.3 ng/g (wet basis)

Reported Results: 9

SRM 1945

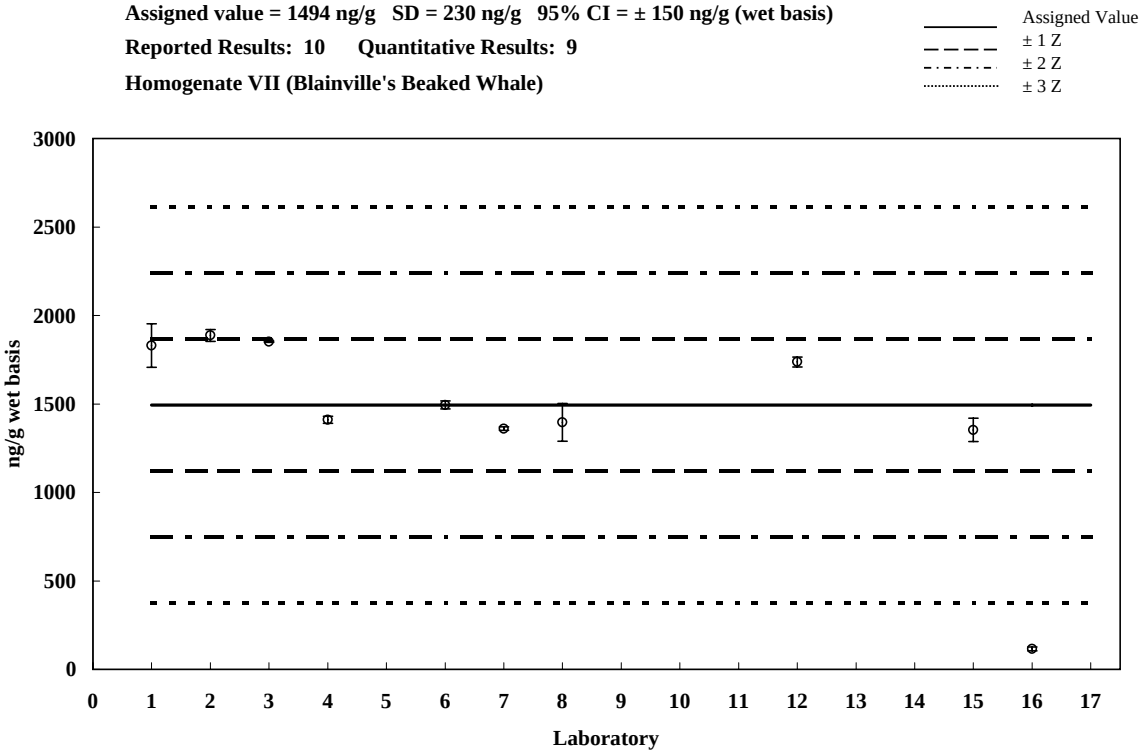


Trans-Nonachlor

Assigned value = 1494 ng/g SD = 230 ng/g 95% CI = ± 150 ng/g (wet basis)

Reported Results: 10 Quantitative Results: 9

Homogenate VII (Blainville's Beaked Whale)

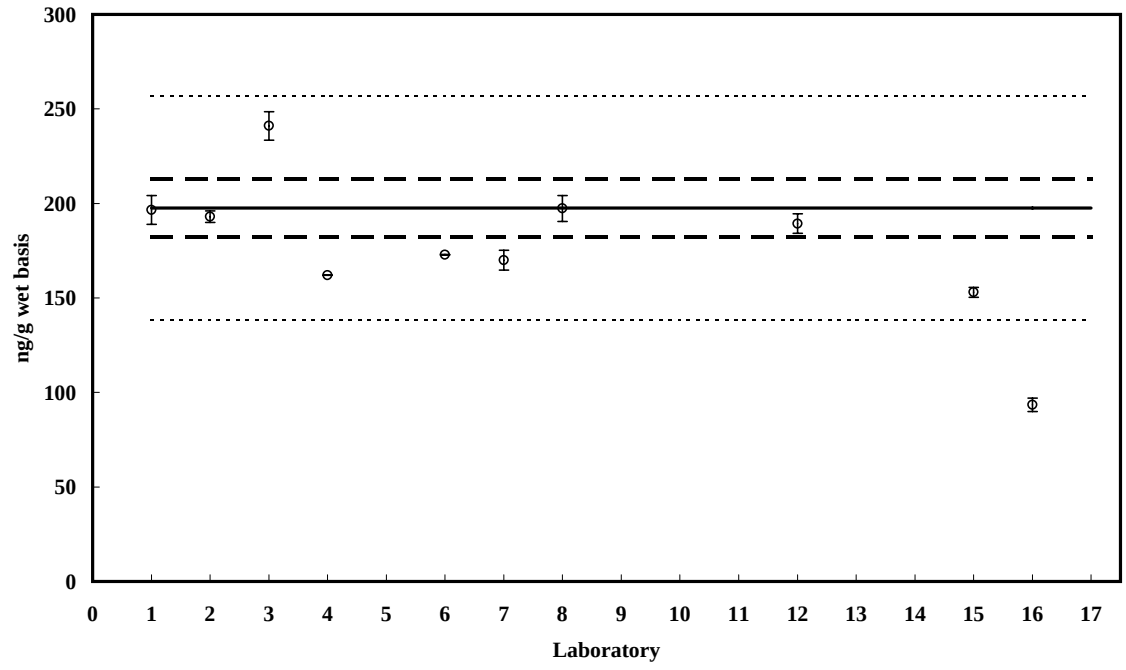


Trans-Nonachlor

Value = 198 ± 16 ng/g (wet basis)

Reported Results: 10

SRM 1945

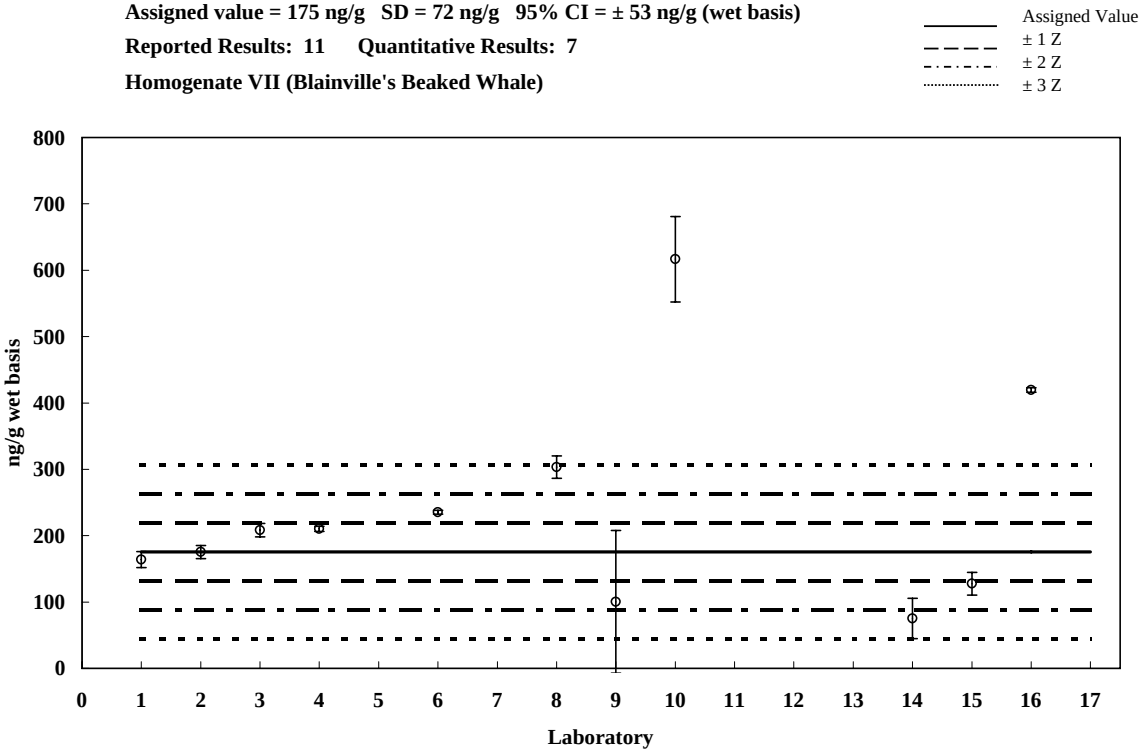


Dieldrin

Assigned value = 175 ng/g SD = 72 ng/g 95% CI = ± 53 ng/g (wet basis)

Reported Results: 11 Quantitative Results: 7

Homogenate VII (Blainville's Beaked Whale)

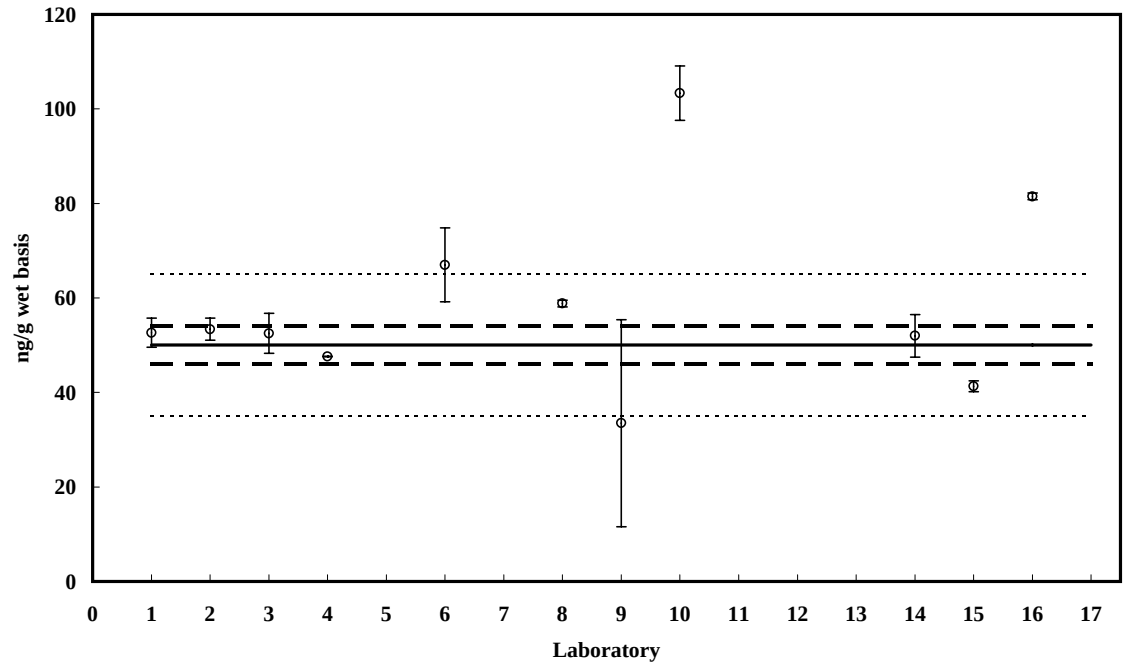


Dieldrin

Value = 50.1 ± 4.1 ng/g (wet basis)

Reported Results: 11

SRM 1945

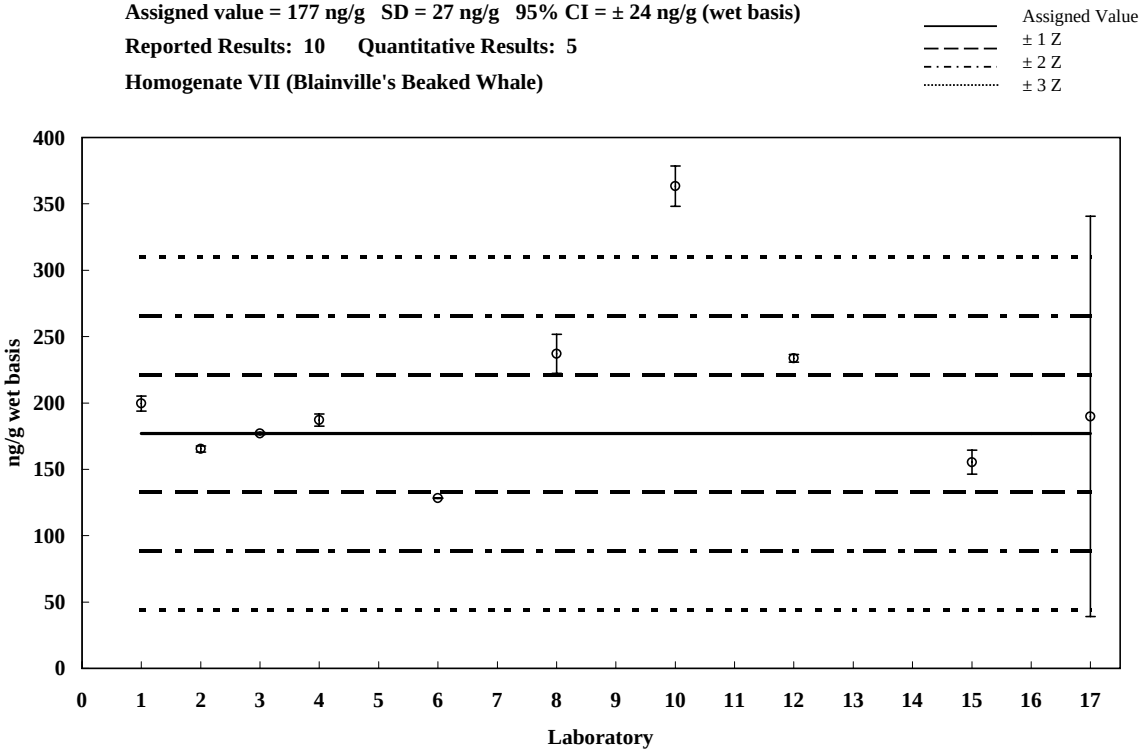


Mirex

Assigned value = 177 ng/g SD = 27 ng/g 95% CI = ± 24 ng/g (wet basis)

Reported Results: 10 Quantitative Results: 5

Homogenate VII (Blainville's Beaked Whale)

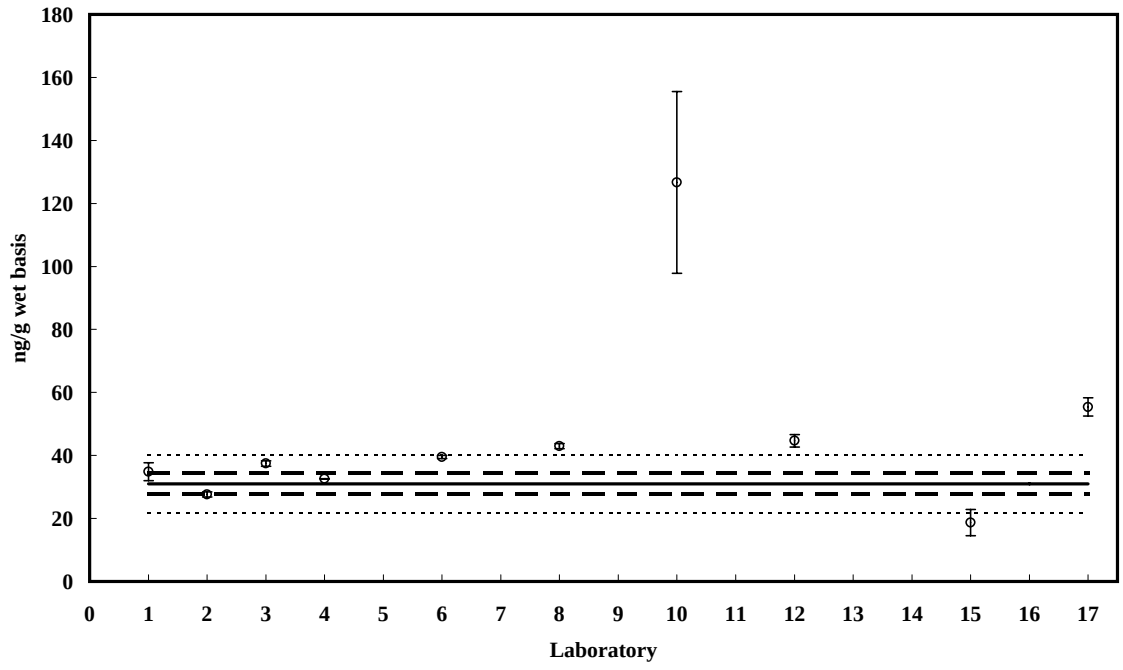


Mirex

Value = 31.0 ± 3.4 ng/g (wet basis)

Reported Results: 10

SRM 1945

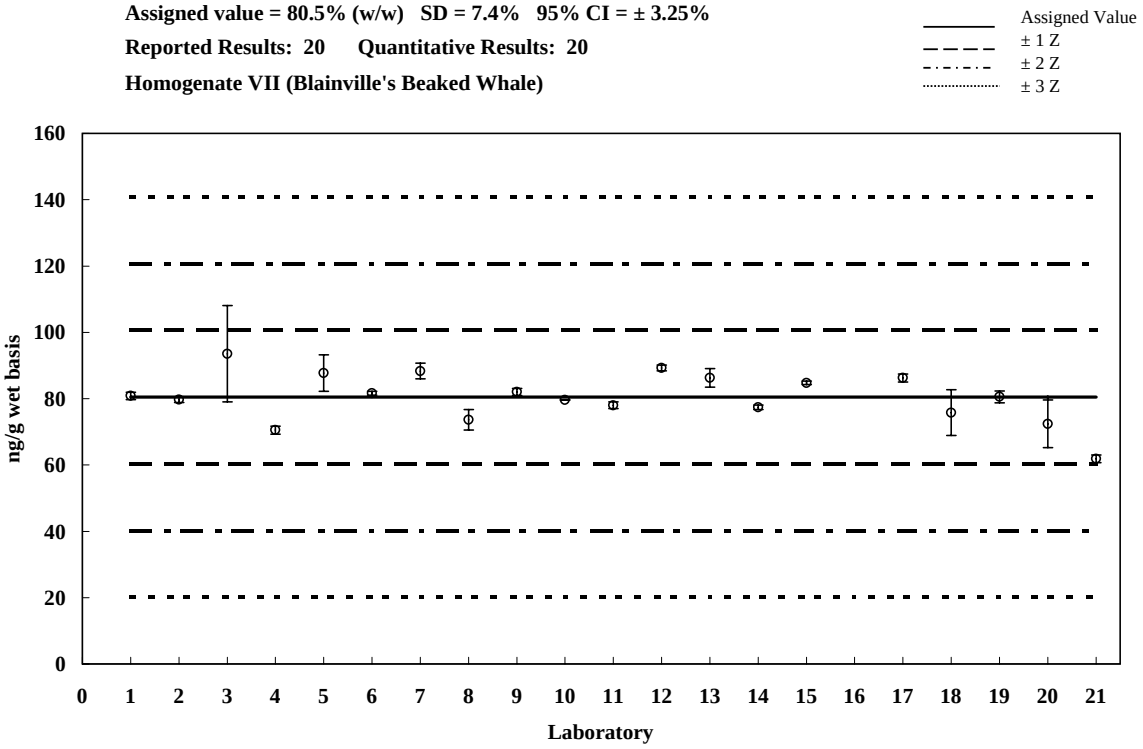


Lipid

Assigned value = 80.5% (w/w) SD = 7.4% 95% CI = ± 3.25%

Reported Results: 20 Quantitative Results: 20

Homogenate VII (Blainville's Beaked Whale)

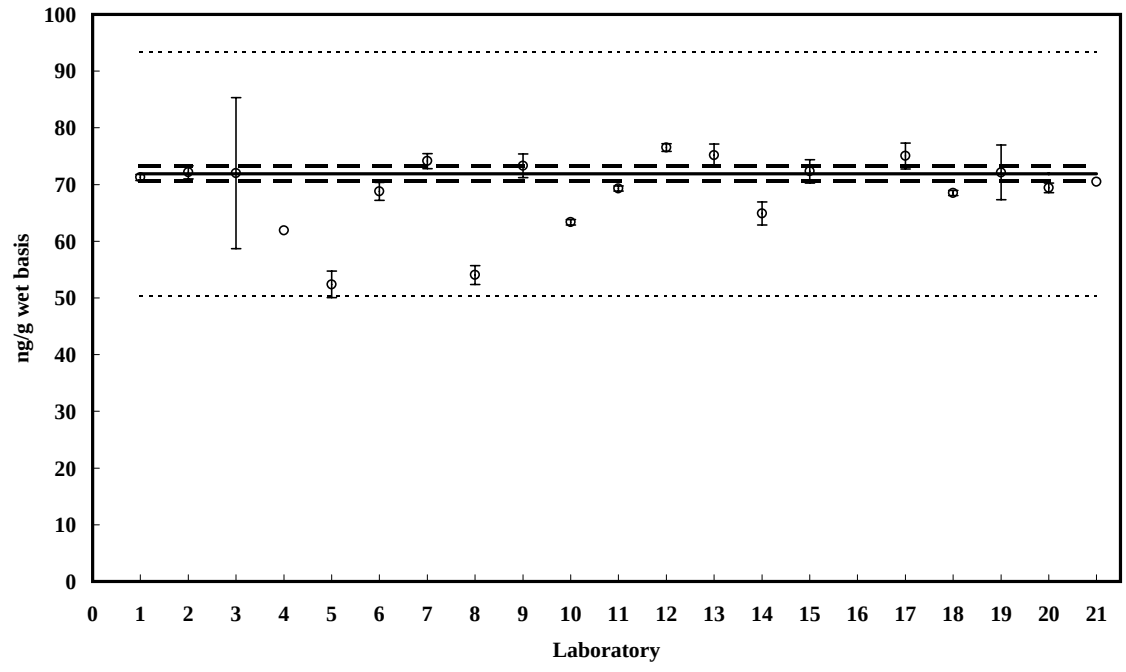


Lipid

Value = 71.9% ± 1.3% (w/w)

Reported Results: 20

SRM 1945



Appendix D

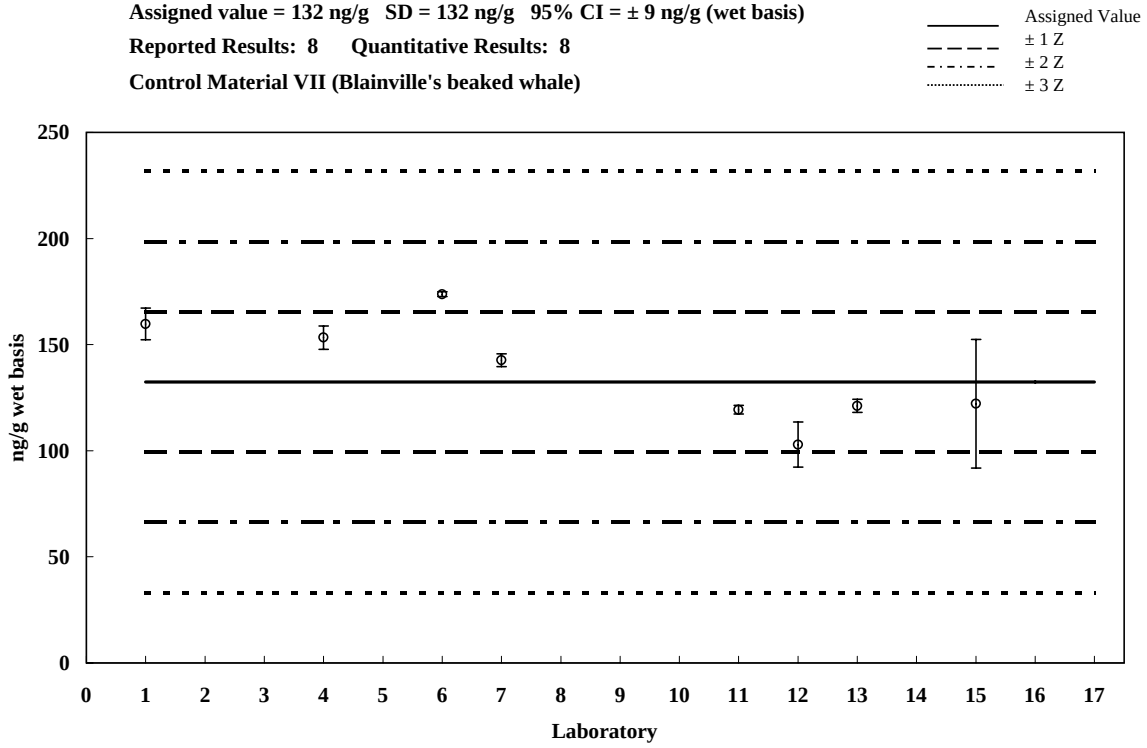
Graphical results of PBDE congener data reported by all laboratories. The Z-scores for Homogenate VII represent 25 % of the assigned value so that z = +1 is the assigned value plus 25 %, z = -1 is the assigned value minus 25 % and so forth. Error bars are ± 1 standard deviation.

PBDE 47

Assigned value = 132 ng/g SD = 132 ng/g 95% CI = ± 9 ng/g (wet basis)

Reported Results: 8 Quantitative Results: 8

Control Material VII (Blainville's beaked whale)

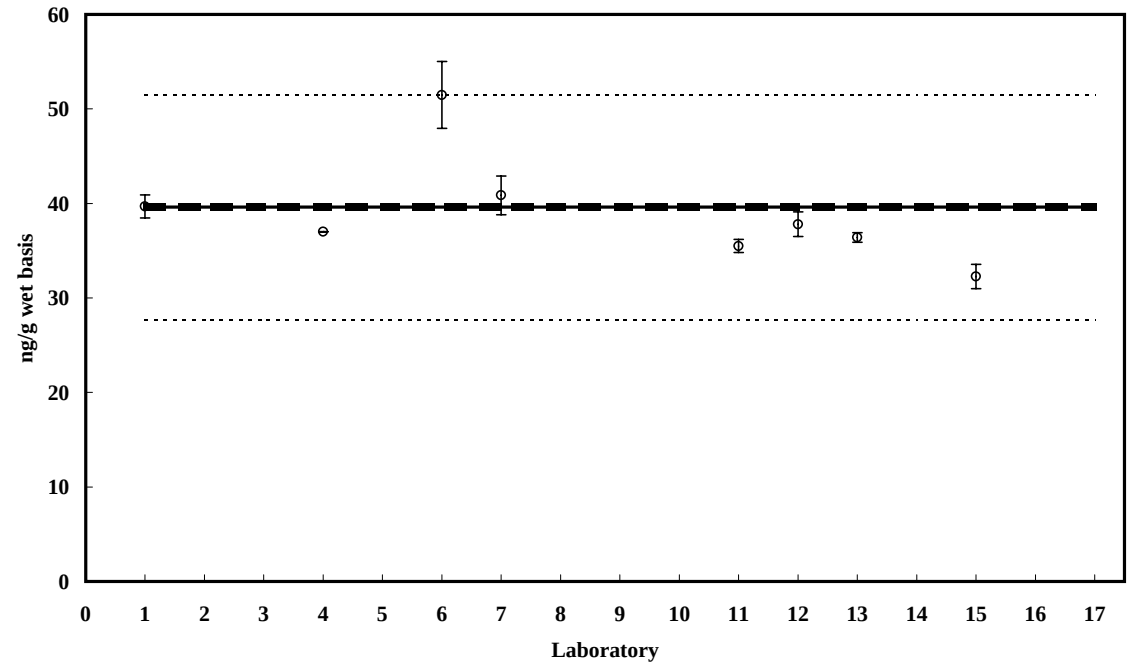


PBDE 47

Value = 39.6 ± 0.2 ng/g (wet basis)

Reported Results: 8

SRM 1945

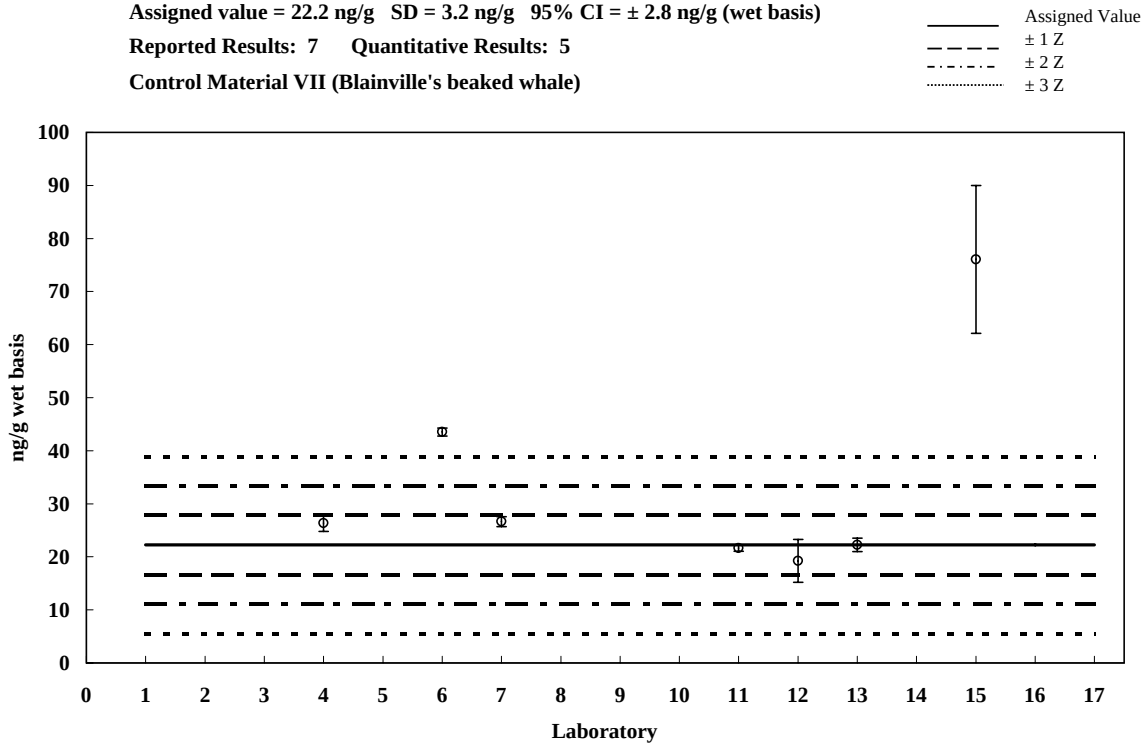


PBDE 99

Assigned value = 22.2 ng/g SD = 3.2 ng/g 95% CI = ± 2.8 ng/g (wet basis)

Reported Results: 7 Quantitative Results: 5

Control Material VII (Blainville's beaked whale)

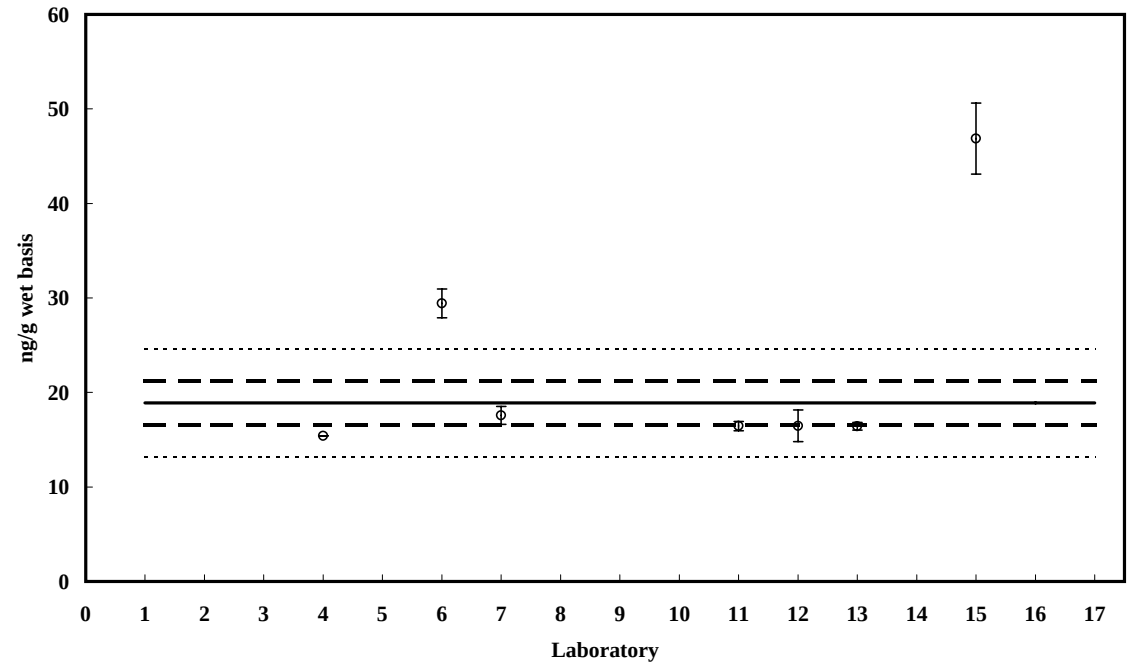


PBDE 99

Value = 18.9 ± 2.3 ng/g (wet basis)

Reported Results: 7

SRM 1945

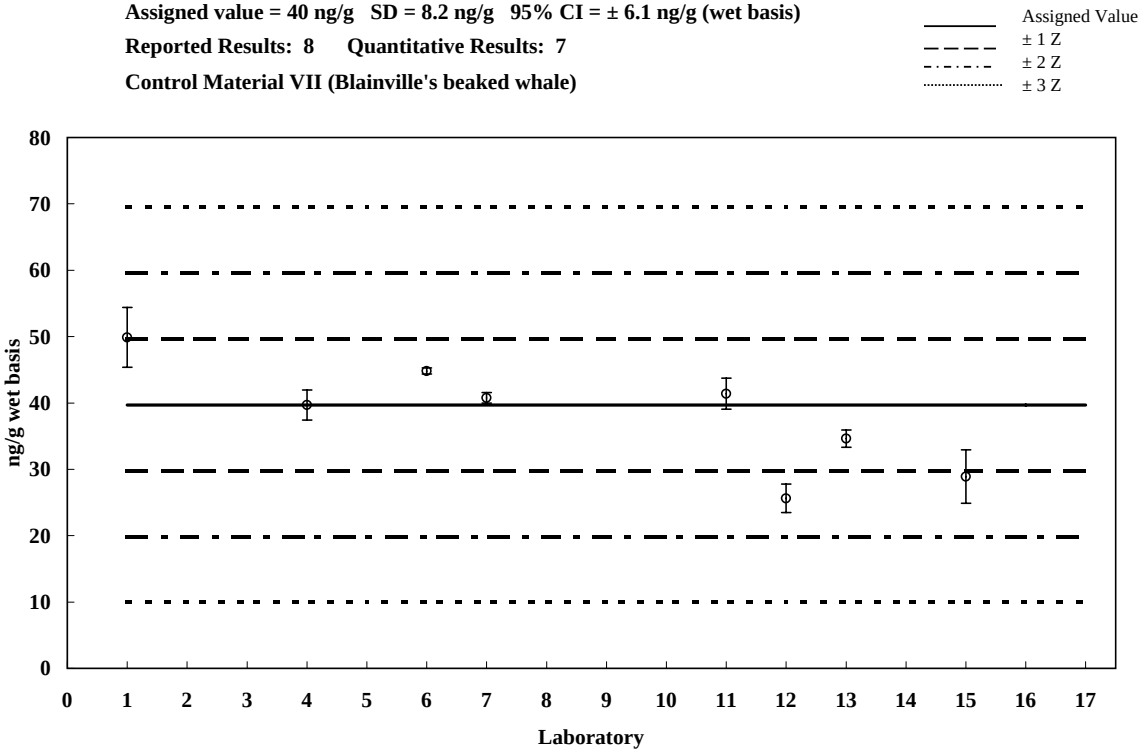


PBDE 100

Assigned value = 40 ng/g SD = 8.2 ng/g 95% CI = ± 6.1 ng/g (wet basis)

Reported Results: 8 Quantitative Results: 7

Control Material VII (Blainville's beaked whale)

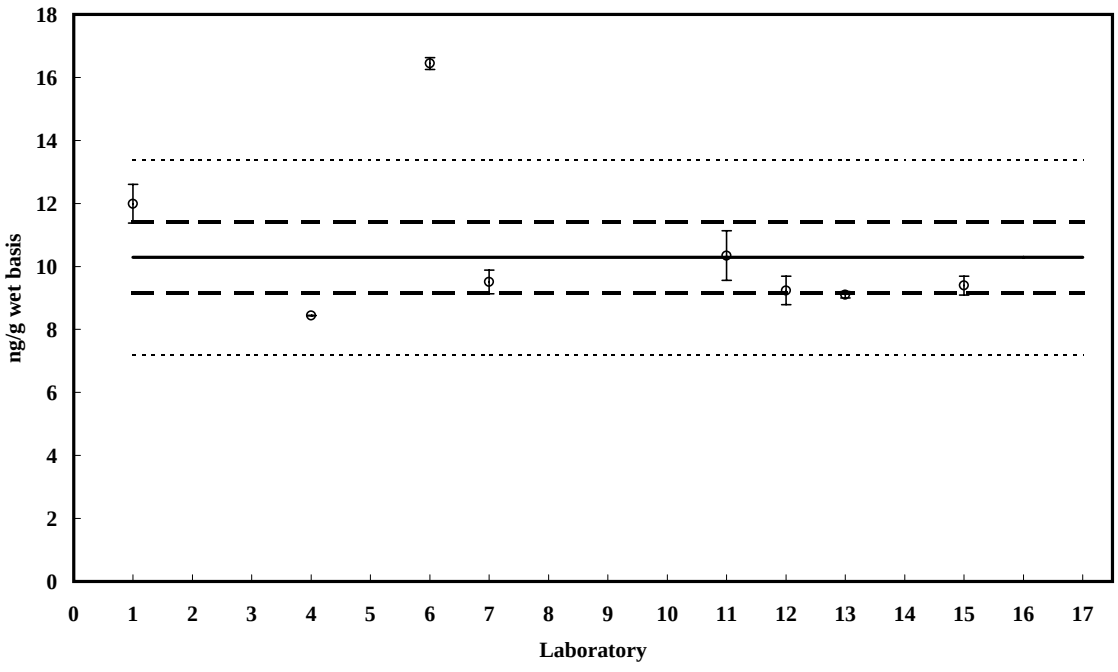


PBDE 100

Value = 10.3 ± 1.1 ng/g (wet basis)

Reported Results: 8

SRM 1945

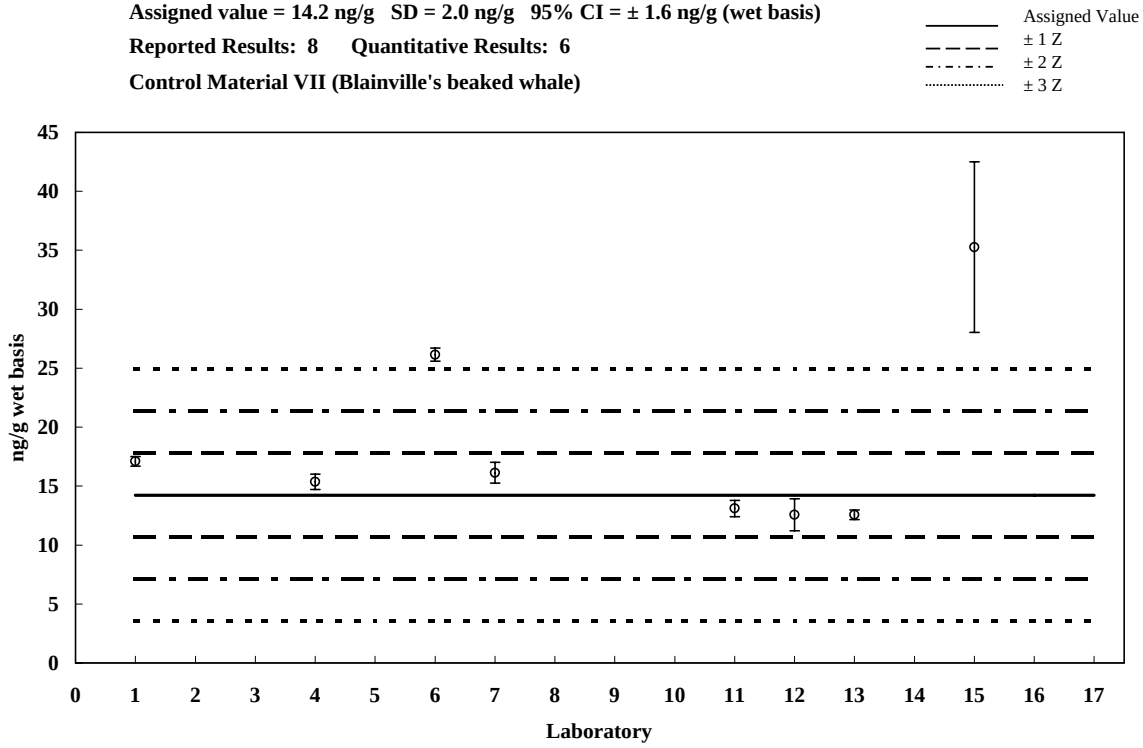


PBDE 153

Assigned value = 14.2 ng/g SD = 2.0 ng/g 95% CI = ± 1.6 ng/g (wet basis)

Reported Results: 8 Quantitative Results: 6

Control Material VII (Blainville's beaked whale)

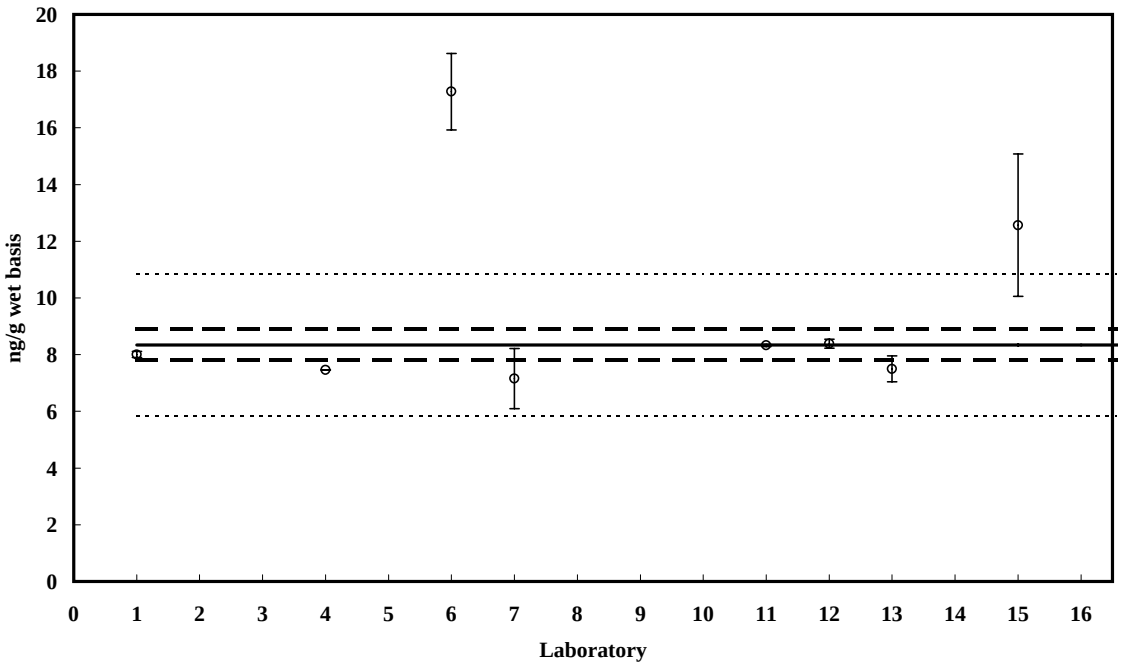


PBDE 153

Value = 8.3 ± 0.6 ng/g (wet basis)

Reported Results: 8

SRM 1945

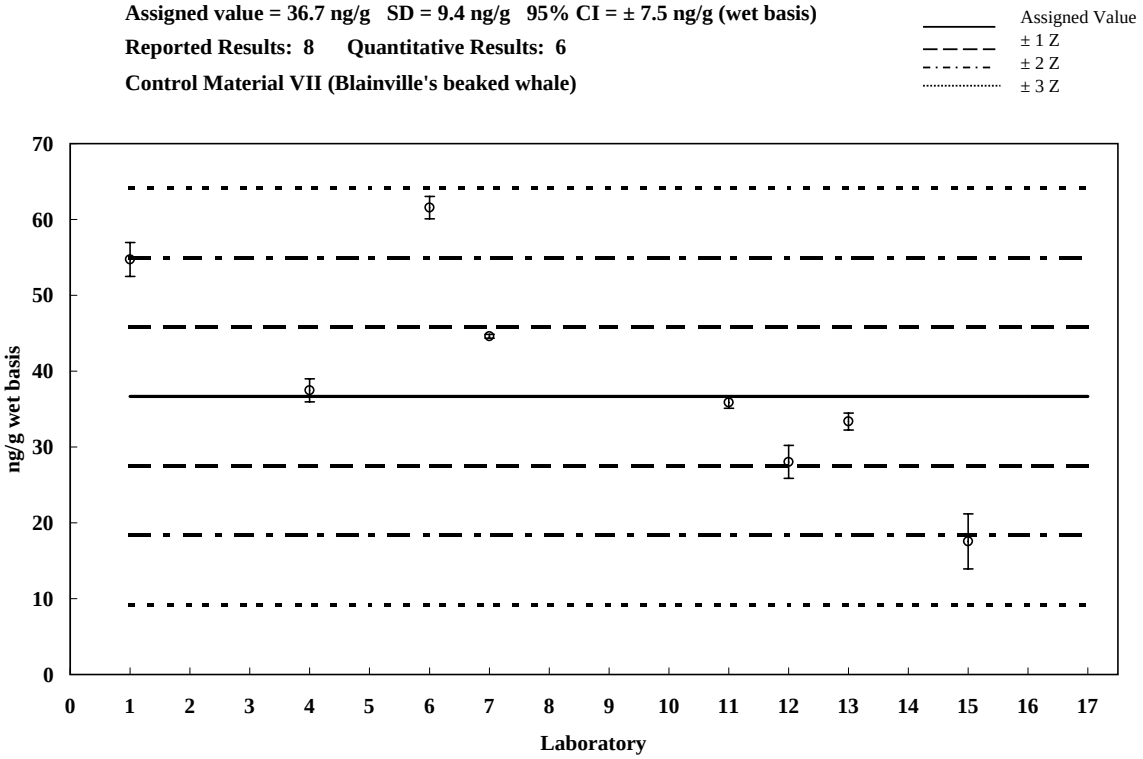


PBDE 154

Assigned value = 36.7 ng/g SD = 9.4 ng/g 95% CI = ± 7.5 ng/g (wet basis)

Reported Results: 8 Quantitative Results: 6

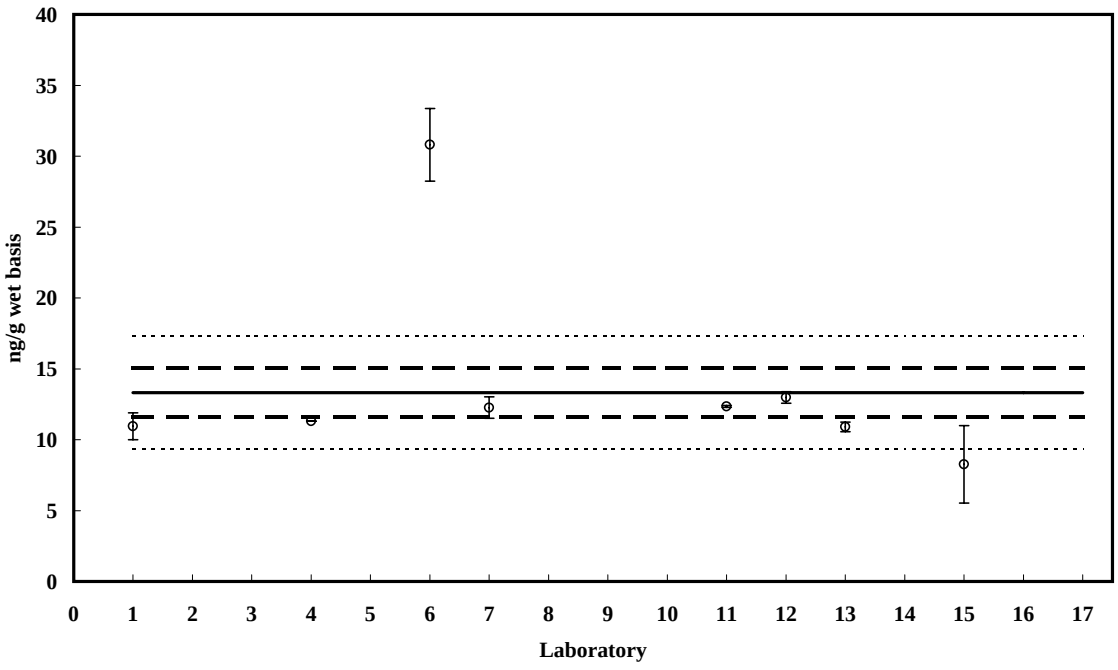
Control Material VII (Blainville's beaked whale)



PBDE 154

Value = 13.3 ± 1.7 ng/g (wet basis)

SRM 1945



Appendix E

Tabular summary of methods used for analysis by each laboratory.

Summary of Methods Used

Laboratory	Approximate mass of sample extracted (g): SRM 1945	Homog. VII	Procedure used to measure Lipid	Were "wet" or "dry" samples extracted? SRM 1945	Homog. VII
1	1	1	Subsampled the dichloromethane extract, evaporated the solvent and weighed the remaining residue	wet	wet
2	1.5	1.5	gravimetric - using 100 µL aliquot of extract	wet	wet
3	1	1	removed aliquot and allowed to air dry	wet	wet
4	1	1	Gravimetric determination; ASE extraction using dichloromethane.	wet	wet
5	0.3	0.3	Accelerated solvent extraction (ASE) with dichloromethane and quantitation by thin-layer chromatography with flame ionization detection (TLC-FID) for total lipid and lipid classes.	wet	wet
6	1	1	Gravimetric	wet	wet
7	3.17 to 4.03	3.65 to 5.52	After extraction with dichloromethane, the extracts of Homognate VII were concentrated to 10ml. The extracts of SRM 1945 were relatively lipid rich and were concentrated to 25ml. Then, 20% by volume of these extracts was added to a previously weighed and dried aluminum pan. The contents were allowed to evaporate, and the pan was reweighed. See note 1 at the end of this report for additional comments	wet	wet
8	0.6	0.7	Weighing aloquot of methylene chloride extrac	wet	wet
9	1	1	Gravimetric	wet	wet
10	3	5	Total extractable lipids (gravimetric from Soxhlet extract)	wet	wet
11	2.25-3.02	2.54-3.62	Gravimetric determination from portion of the Soxhlet extraction.	wet	wet
12	1	1	evaporisation of the lipid extract is done under a stream of Nitrogen	wet	wet
13	0.15	0.12	Samples were mixed with sodium sulphate and Soxhlet extracted. Lipids were determined on an aliquot of the extract (~1/6) after solvent evaporation at 105° for 1h	wet	wet
14	1	1		wet	wet
15	1	1		wet	wet
16	2	2		wet	wet
17	0.591	0.593	Accelerated solvent extraction with methylene chloride. Heat for 6 minutes in 125 Celsius oven at 2000 psi UHP nitrogen. Static hold of 4 minutes followed by 60% flush for 120 seconds.	wet	wet
18	0.278	0.348	Extract is brought to a fixed volume (1ml) volumetrically by adding chloroform, then 50% of the extract is panned out and dried until moisture loss is negligible. % Lipid is then determined gravimetrically	wet	wet
19	1	1	Lipid composition: TLC indicated that SRM-1945 was primarily triacylglycerol and QC05WB7 primarily wax esters.	wet	wet
20	1	1	NOAA Sampling an Analytical Method of the National Status and Trends Program NOAA Technical Memorandum NOS ORCA 130	wet	wet
21	1	1	Gravimetric determination; ASE extraction using dichloromethane.	wet	wet

Summary of Methods Used

Laboratory	Extraction Method	Extraction Solvent	Extraction Time	Extraction Other	Sample Extract Cleanup Method
1	Pressurized Fluid Extraction (Dionex, ASE)	Dichloromethane	15 min	Sample dried with 45 g sodium sulfate, then packed into a 33 mL PFE cell. PFE Conditions: cell temp 100 °C. equilibration 5 min, static time 5 min, cell pressure 2000 psi and there were three cylces. Samples were first run through a Gel Permeation chrom.	Samples were first run through a size exclusion chromatogramphy (SEC) column (Phenomenex) using DCM as the mobile phase. Eluent containing organochlorines was further refined by passing though a ca. 2 g alumina solid phase extraction cartridge eluting with 12 mL 25% DCM:75% hexane (volume fraction).
2	Pressurized Fluid Extraction (Dionex, ASE)	Dichloromethane	15 min	100 °C; 2000 psi, 3 cycles; 9(	Size exclusion chromatography followed by solid phase extraction clean-up using silica SPE with 15 mL of 10 % DCM in hexane.
3	Soxhlet	Dichloromethane	Overnight		Size exclusion chromatography followed by silica solid phase extraction cartridges with 15 mL of 25 % methylene chloride in hexane solid phase extraction procedure was repeated (as above) followed by size-exclusion chromatography (as above) a second time and a final solid phase extraction (as above).
4	Pressurized Fluid Extraction (Dionex, ASE)	Dichloromethane	16 min	ASE Conditions: Pressure = 2000 psi, temp = 100 °C	Gravity flow column with silica and neutral alumina, followed by HPLC-SEC to elute AH/CH fraction.
5	Pressurized Fluid Extraction (Dionex, ASE)	Dichloromethane	17 min	ASE Conditions: Pressure = 2000 psi, temp = 100 °C	Acidic/basic/neutral silica gel column (see Krahn et al. 1994 Chemosphere).
6	Pressurized Fluid Extraction (Dionex, ASE)	Dichloromethane	20 min		SX-2 Biobeads, Size exclusion Chromatography/dichlorometha n. Florisil adsorptive chromatography/20% Ethlyl/Petroleum Ether.

Summary of Methods Used

Laboratory	Extraction Method	Extraction Solvent	Extraction Time	Extraction Other	Sample Extract Cleanup Method
7	Soxhlet	Dichloromethane	18 hours		Each extract was eluted through a glass chromatography column packed with florisil, alumina, and silica and was concentrated to 10mL. A single, 2 mL. portion of this eluate was diluted to 5 mL with methylene chloride. The unused portion of each sample was stored away as a reserve. Each 5 mL portion was manually injected into a single Phenogel, size exclusion HPLC column (60 cm x 2.1 cm). Each HPLC-cleaned fraction was concentrated, the solvent was exchanged to hexane, and the sample volume was adjusted to 5mL for initial GC screening. After screening, each sample was concentrated to 1mL for final data collection.
8	Tissuemizer with Na_2SO_4	Dichloromethane	3 x 3 min		Silica/alumina column; HPLC phenogel
9	Soxhlet	Hexane:Acetone 1:1	4-6 hours		Alumina cleanup followed by silica cleanup.
10	Liquid/Liquid	Ethanol:Ethyl Acetate (5:95)	1 min with 20 g Na2SO4 by high speed homogenizer		Gel permeation chromotography.
11	Soxhlet	Hexane:dithethyl ether (1:3)	8 hours	Sample ground with Na_2SO_4.	Silica-gel column chromatography (activated by 3-6 hours at 130C., 1.5g, cloumn i.d.: 10mm.) after gel permeation chromatography (GPC) (Gel: Bio-bead S-X3, Column: 2cm i.d. 50cm length).
12	Liquid/Liquid with ultrasonication	Acetone/Cyclohexane	2 min + 1 min	Evaporation of lipid extract is done under stream of nitrogen.	Clean up with concentrated ultra clean sulfuric acid.
13	Hot Soxhlet	Hexane:Acetone (3:1; v/v)	2 hours	Samples mixed with Na_2SO_4	Column chromatography on silica/acid silica elution with 15 ml hexane and 10 ml dichloromethane.
14	Liquid/Liquid	Pentane	15 min		Florisil SPE, sodium sulfate, extract with dichoromethane.
15	Pressurized Fluid Extraction (Dionex, ASE)	Dichloromethane	11 min	Preheat 0; Heat 5 min; Static 2 min; Flush 100 %; Purge 30 sec; Cycles 2; Pressure 1500 psi; Temp 100 °C; Cell size 22 ml	Pesticides: GPC. Florsil, Silisic acid (use 0.2 g equivalent of extract) PCB congeners; H4IIE procedure on the remainder of the extract.

Summary of Methods Used

Laboratory	Extraction Method	Extraction Solvent	Extraction Time	Extraction Other	Sample Extract Cleanup Method
16	Sample was mixed with about 50 g anhydrous sodium sulfate and extrated with mixed organic solvents.	petroleum ether/ether (1:1)	20 min		Silica gel cleanup. Two fractions eluted by hexane and benzene, respectively, were collected.
17	Chromaflex Column Extraction with sodium sulfate to grind & distibute sample.	Hexane, Methylene Chloride (1:1)	30 min		Automated gel permeation chromatography with hexane, methylene chloride (1:1). 8 grams of 100% activated Davisil 635 Type 60A silica gel in a 1 cm (ID) x 250 ml Chromaflex Column. Elution solvents 50 ml hexane, followed by 80 ml of hexane, methylene chloride (1:1).
18	Modified Folch method, at 1200 psi using an Accelerated Solvent Extractor (ASE)	2:1 (v/v) Chloroform:Methanol	2 cycles, approx. 20 min total		As per Christie, Lipid Analysis, 2003, pp101: 1/4 volume of 0.88% KCl is added to extract, then aqueous layer is removed, followed by second wash with 1/4 volume of 50% (aq) methanol, and removal of the aqueous layer. The lipid extract (in chloroform) is then reduced in volume to <1ml using a Rotoevaporator.
19	Sample extraction: tissue was macerated with anhydrous sodium sulfate and extracted with hexane using sonication at room temperature.	hexane			Derivatization: fatty acid methyl esters (FAMEs) for SRM1945 were prepared using methanolic KOH at room temperature. (Christopherson, S. W. and Glass, R. L., 1969. Preparation of milk fat methyl esters by alcoholysis in an essentially nonalcoholic solution. J. Dairy Science 52, 1289-129.) FAMEs for QC05WB7 were prepared using 10% BF3 in methanol. Corresponding alcohols were not removed prior to instrumental analysis and likely affected quantitation of minor components following 16:1, 18:2 and the 24 carbon fatty acids.
20	Modfied NOAA Status and Trends for Extraction of Biological Tissues for Trace Organics	dichloromethane:MEOH (3:1 v/v)- 0.01 %BHT added as preservative	10 min sonication		Florisil column used post derivatization. Picolinyl ester derivatization.
21	Accelerated solvent extraction (ASE)	Dichloromethane	~16 min	ASE conditions: Pressure = 2000 psi, temperature = 100 °C	

Summary of Methods Used

Laboratory		Instrument	Column Phase	Length (m)	Column i.d. (mm)	Film Thickness (µm)	Points	Conc. Range	Analytes Outside of Calibration Range
1	Pest.	GC-MS	DB-XLB	30	0.18	0.18	6	0.7 ng to 250 ng	none
	PCB	GC-MS	DB-XLB	30	0.18	0.18	6	0.7 ng to 250 ng	none
	PBDE	GC-MS	DB-XLB	30	0.18	0.18	6	0.7 ng to 250 ng	none
2	Pest.	GC/MS	HP-5MS	30	0.25	0.25	5	5 ng to 300 ng extracted	
	PCB	GC/MS	HP-5MS	30	0.25	0.25	5	5 ng to 300 ng extracted	
3	Pest.	GC/MS	DB-XLB	60	0.25	0.25	6	about 8 to 438 ng extracted	2,4'-DDT; 4,4'-DDT; 4,4'-DDE; 4,4'-DDD, trans-nonachlor
	PCB	GC/MS	DB-XLB	60	0.25	0.25	6	about 8 to 438 ng extracted	PCBs 99, 101, 118, 138, 149, 153, 180, 187
4	PBDE								
	Pest.	GC/MS (SIM)	DB-5	60	0.25	0.25	5 to 10	0.003-100 ng/µL	
	PCB	GC/MS (SIM)	DB-5	60	0.25	0.25	5 to 8	0.003-10 ng/µL	PCBs 95, 99, 149, 151, 158, 183, 199 (in WB7 only)
5	Pest.	HPLC-PDA	2 (5-PYE) analytical columns in series	0.25	4.6	5 µm particles	1	0.322 ng/µL	
	PCB	HPLC-PDA	2 (5-PYE) analytical columns in series	0.25	4.6	5 µm particles	1	0.322 ng/µL	
6	Pest.	GC-MS SIM	DB-5	30	0.25	0.25	5	.2-1 -2 -5 -15 ng/ul	lower than 0.2 ng/ul: 2,4 DDE; 2,4 DDD; HCB; Hepachlor Epoxide, cis-Chlordane; trans-Chlordane; Oxychlordane; Mirex (SRMs)
	PCB	GC-MS SIM	DB-5	30	0.25	0.25	5	.2-1-2-5-9.25 ng/ul	lower than 0.2 ng/ul: PCBs 18; 44; 49; 52; 105; 151; 156; 170/190; 183; 194; 195; 206;209; 66; 95; 28/31; 87/115; 101/87/90; 106/118/123; 128/167; 45; 48; 74/61; 76/70; 92; 84; 119; 110; 82; 107/108; 154; 146; 141; 130; 159; 188; 184; 174; 177; 189; 202; 207(SRMs)
	PBDE	GC-MS SIM	DB-5	30	0.25	0.25	5	.2-.5-1-2-3 ng/ul	lower than 0.2 ng/ul: PBDEs 47; 99; 100; 153; 154; 28 (SRMs)

Summary of Methods Used

Laboratory		Instrument	Column Phase	Length (m)	Column i.d. (mm)	Film Thickness (µm)	Points	Conc. Range	Analytes Outside of Calibration Range
7	Pest.	GC-ECD	DB-5	60	0.25	0.25	1	100 ng/ml	4,4'-DDE (All Homog VII & All SRM 1945 analyses); t-Nonachlor (Homog VI analysis 2 & 3)
	PCB	GC-ECD	DB-5	60	0.25	0.25	1	100 ng/ml	PCBs 138, 149, 153, & 180 (All Homog VII analyses); PCBs 118 & 187 (Homog VI analyses 2 & 3)
	PBDE	GC-MS	DB-5	15	0.25	0.25	1	100-550 ng/ml	See notes 3 and 4 at the end of this report.
8	Pest.	GC-MS-SIM	DB-5MS	30	0.25	0.25	4	5-200 ng/mL	
	PCB	GC-MS-SIM	DB-5MS	30	0.25	0.25	4	5-200 ng/mL	
	PBDE								
9	Pest.	GC-ECD	DB5	50	2	0.33	7	0.5-100 ng/ml	4,4'-DDE, 4,4'-DDT
	PCB	GC-ECD	DB5	50	2	0.33	7	0.5-100 ng/ml	153
	PBDE	GC-ECD	HP-5	30	0.25	0.25	4	0.6-120 pg/µL	
10	Pest.	GC-ECD	DB-608	30	0.53	0.83 µm	3	50-2000ppb	Aldrin
	PCB						3	DDE & Dicofol)	p,p'-DDE,
11	PBDE	GC-EI-MSD	DB-1	30	0.25	0.25	8	4 - 1000 ng/ml	
12	Pest.	GC-ECD	SPB-5	60	0.25	0.25	5	0.48-104 ng/ml	The samples were diluted prior GC analysis to ensure that all compounds where within the range. The range varies from coumpound to coumpound.
	PCB	GC-ECD	SPB-5	60	0.25	0.25	5	0.59-91.2 ng/ml	
	PBDE	GC-NCI-MS	SPB-5	40	0.25	0.25	12	0.1-100 ng/ml	
13	Pest.								
	PCB	GC/MS (EI)	DB-1	30	0.25	0.25	7		none
	PBDE	GC/MS (ECNI)	HT-8	25	0.22	0.25	7		none
14	Pest.	GC/ECD	HP50+/HP5 MS	30/30	0.25/ 0.25	0.25/ 0.25		1,000 to 10 ppb	none
	PCB							1000 to 10 ppb	none
	PBDE								
15	Pest.	GC-ECD	DB-608	30	0.53	0.83	3	2 to 250 pg/ul	Dilute to inside of curve
	PCB	GC-ECD	DB-5	30	0.53	1.5	5	1 to 200 pg/ul	Dilute to inside of curve
	PBDE	GC-ECD	DB-XLB	60	0.25	0.25	4	0.5 to 500 pg	Dilute to inside of curve
16	Pest.	GC-ECD	DB608/DB1701	30/15	0.32/0.32	0.5/0.25	4 or 5	0.001-0.50 or 0.001-1.0	none
	PCB								
17	Pest.	GC/uECD	5% Phenyl Methylpolysiloxane	60	0.25	0.25	5	1-75 pg/ul	
	PCB	GC/uECD	5% Phenyl Methylpolysiloxane	60	0.25	0.25	5	1 - 100 pg/ul	
18	Fatty Acid								
19	Fatty Acid	GC-FID/MS	HP-225	30	0.25	0.25			
20	Fatty Acid	GC-MS	DB-5	30	0.25	0.25			
21	Fatty Acid	GC/MS (SIM)	DB-23	60	0.25	0.25	8	0.01-40 ng/µL (as methyl esters)	

Summary of Methods Used

Laboratory		Method of Quantitation	Added Prior to Extraction	Indentity of Internal Standards Added Prior to Chromatographic Analysis
1	Pest.	IS	4,4'-DDD-D8, 4,4'-DDT-d8, 13C-cis chlordane	
	PCB	IS	^{13}C labeled PCBs 28, 52, 118, 153, 180, 194, 206, and 209	
	PBDE	IS	^{13}C BDE 99	
2	Pest.	IS	carbon-13 labeled lindane, trans-nonachlor, 4,4'-DDE, and 4,4'-DDT	
	PCB	IS	PCB 103 and PCB 198	
3	Pest.	IS		
	PCB	IS		
4	Pest.	IS	CB103	tetrachloro-o-xylene
	PCB	IS	CB103	tetrachloro-o-xylene
	PBDE	IS	CB 103	tetrachloro-o-xylene
5	Pest.	IS	1,2,3,4-tetrachloro-*p* -dibenzodioxin	1,7,8-trichloro-*p* -dibenzodioxin
	PCB	IS	1,2,3,4-tetrachloro-*p* -dibenzodioxin	1,7,8-trichloro-*p* -dibenzodioxin
6	Pest.	IS	4,4'-DDE13C12,HCB13C6,g-Chlordane13C10	Phenanthrene d12
	PCB	IS	BZ-3,15,28,52,118,153,180,194,208,209, all 13C12	Phenanthrene d12
	PBDE	IS	BDE100, BDE183, both 13C12	Phenanthrene d12
7	Pest.	IS	Ronnel	Tetrachloro-m-xylene (TCMX)
	PCB	IS	4,4' Dibromooctafluorobiphenyl (DOB) & PCB 198	PCB 103 & 3,3',4,4'-Tetrabromobiphenyl (TBB).
	PBDE	ES		
8	Pest.	IS	4,4'dibrooctafluorbiphenyl, PCB 103, PCB 198	Tetrachloro-meta-xylene
	PCB	IS	4,4'dibrooctafluorbiphenyl, PCB 103, PCB 198	Tetrachloro-meta-xylene
	PBDE			
9	Pest.	IS		PCB53
	PCB	IS		PCB53
10	Pest.	ES		
11	PBDE	IS		13C12-BDE-139
12	Pest.	IS	PCB 29, 112, 207	
	PCB	IS	PCB 29, 112, 207	
	PBDE	IS	BDE-119, 181	
13	PCB	IS	PCB 46, PCB 143	
	PBDE	IS	BDE 77, BDE 128	
14	Pest.	ES		
	PCB	ES		
15	Pest.	ES		
	PCB	ES		
	PBDE	ES		
16	Pest.	ES		
17	Pest.	IS	Octachloronapthalene	
	PCB	IS	Octachloronapthalene	
19	Fatty Acid	IS	C19:2n-6FAME	
20	Fatty Acid	IS	19:0 fame	
21	Fatty Acid	IS	C11:1 (as triglyceride)	C13:0 (as methyl ester)

Summary of Methods Used

Laboratory		Any Other Internal Standards?	Added When?	IS Surrogate Standards Used for Quantitation Were Added:	If the IS/surrogates Added After Extraction/Cleanup, Were Results Corrected for Recovery?
1				Prior to extraction	
2				Prior to extraction	
3				Prior to extraction	
4		Yes	Just before HPLC-SEC	Prior to extraction	
5				Prior to extraction	
6				Prior to extraction	
7	**Pest.** **PCB**	1,2,3-trichlorobenzene PCB 192		those added after extraction prior to chromatographic analysis	
8	**Pest.**			Prior to extraction	
11	**Pest.** **PCB** **PBDE**	(All 13 C12-PBDEs) BDE-3, BDE-15, BDE-28, BDE-47, BDE-99, BDE-153, BDE-154, BDE-183, BDE-197, BDE-207, BDE-209	Just prior to GPC	Prior to GPC	
12				Prior to extraction	
13				Prior to extraction	
21	**Fatty Acid**	C13:1 (as triglyceride)	Just prior to derivitization	those added after extraction/cleanup and just prior to chromatographic analysis (C13:1, as acid)	Yes

Summary of Methods Used

Laboratory		Recovery Range (%)	Were PCBs Separated From Pesticides Prior to GC?	Does PCB 132 coelute with PCB 153 or with PCB 105 or is it separated from both?
1			No	PCB 132 coelutes w/153
2			No	PCB 132 coelutes w/153
3			No	PCB 132 coelutes w/153
4	**Pest.**	106-111	No	PCB 132 coelutes w/153
	PCB	106-111		
	PBDE	106-111		
5	**Pest.**	83-94	No	
	PCB	83-94		
6			No	132/153/168 co-elute
7	**Pest.**	Ronnel: Homog. VII (136 ± 8%), SRM1945 (145 ± 6%); 123-TCB: Homog. VII (93 ± 3%), SRM1945 (77 ± 3%) DOB: Homog. VII (114 ± 5%), SRM1945 (107 ± 5%); PCB 198: Homog. VII (121 ± 4%), SRM1945 (134 ± 8%); PCB 192: Homog. VII (98 ± 4%), SRM1945 (102 ± 2%)	No	See Notes
	PCB			
	PBDE	See notes		
8			No	separates
9			Yes	
12			No	separates
13			No	separates
	PCB	75-90		
	PBDE	75-90		
14			No	
15			yes	separates
16			yes	
17			Yes	separates
21	**Fatty Acids**	92-99		

Appendix F

Additional analyte data and notes reported by individual laboratories.

Laboratory Additional Data and Notes

2

	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
PCB 153/132	2401	2599	2209	235	235	226

3

	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
PCB 45	4.35	4.03	4.27	<2	<2	<2
PCB 70	5.13	4.60	5.10	11.29	13.06	11.54
PCB 74	121	122	117	19.2	21.5	19.4
PCB 82	30.8	30.4	28.8	5.92	6.54	6.27
PCB 92	118	117	112	20.8	23.3	20.9
PCB 107	10.1	10.3	9.7	4.58	4.83	4.67
PCB 110	43.4	43.2	41.8	37.7	41.0	39.6
PCB 146	377	374	364	50.2	53.6	48.8
PCB 154	26.6	26.4	26.3	3.69	4.22	3.42
PCB 157	27.5	28.4	27.4	3.49	4.03	3.44
PCB 158	77.1	78.0	75.6	9.39	9.45	8.88
PCB 163	272	268	263	47.0	49.1	47.8
PCB 174	211	209	208	26.70	28.55	26.04
PCB 193	57.0	56.5	56.8	10.1	10.4	9.60

4

Pesticide	Homog VII Analysis A (ng/g wet wt)	Homog VII Analysis B (ng/g wet wt)	Homog VII Analysis C (ng/g wet wt)	SRM 1945 Analysis A (ng/g wet wt)	SRM 1945 Analysis B (ng/g wet wt)	SRM 1945 Analysis C (ng/g wet wt)
aldrin	<2.17	<1.80	<2.38	<1.70		
endosulfan I	<2.18	<1.80	<2.39	<1.71		
heptachlor	<2.17	<1.79	<2.37	<1.70		
nonachlor III	197	201	208	20.4		

PCB Congeners	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
17	1.32	1.15	0.914	1.73		
18	3.12	3.33	3.32	2.66		
33	<2.17	<1.79	<2.38	<1.70		
70	<2.17	<1.80	<2.38	9.94		
74	103	104	104	16.7		
82	12.9	12.9	13.2	4.03		
110	38.5	38.9	39.4	34.8		
158	75.6	75.2	76.1	9.69		
170 (separated from PCB 190)	282	286	299	41.9		
171	72.6	72.7	74.9	11.0		
177	194	194	200	29.8		
191	8.93	9.08	9.67	<1.72		
205	5.12	5.40	5.40	<1.71		
208	42.3	43.2	43.4	23.6		

Note: The analysis for PBDEs was performed on the same fraction as for pesticides/PCBs, using the same surrogate standard (PCB103).

PBDE CONGENER ANALYSES	Homog VII Sample 1	Homog VII Sample 2	Homog VII Sample 3	SRM 1945 Sample 1	SRM 1945 Sample 2	SRM 1945 Sample 3
Analyst (Initials)	RHB	RHB	RHB	RHB	_____	_____
Date(s) of measurements (m/d/y)	4/11/2005	4/11/2005	4/11/2005	4/11/2005	_____	_____

Congener	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
PBDE 47	147	156	157	37.0		
PBDE 99	24.7	26.5	27.8	15.4		
PBDE 100	37.1	41.3	40.7	8.44		
PBDE 153	14.7	15.4	16.0	7.46		
PBDE 154	35.7	38.2	38.5	11.3		
PBDE 28	3.86	4.06	4.20	1.75		
PBDE 49	4.34	4.80	4.80	2.44		
PBDE 66	3.74	4.33	4.34	<1.54		
PBDE 85	<1.96	<1.62	<2.15	<1.54		
PBDE 183	<1.98	<1.64	<2.17	1.59		
Br6Unk#2	24.1	34.3	25.9	4.31		
Br7Unk#1	2.42	2.64	2.55	<1.55		

Calibration Curve - PBDEs

	Points	Conc. Range	Analytes outside of calibration curve calibration range
PBDE Congeners	5	0.0025-2.5 ng/µL	none

Additional Data and Notes (Continued)

5	**Pesticide/PCB CONGENER ANALYSES**	Homog VII Sample 1	Homog VII Sample 2	Homog VII Sample 3	SRM 1945 Sample 1	SRM 1945 Sample 2	SRM 1945 Sample 3
	Analyst (Initials)	DB	DB	DB	DB	DB	DB
	Date(s) of measurements (m/d/y)	04/27/05	04/27/05	04/27/05	04/27/05	04/27/05	04/27/05
	PCB Congener	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
	77	<1.3	<1.3	<1.1	<1.1	<1.1	<1.2
	126	<1.1	<1.1	<1.0	<0.96	<0.99	<1.0
	157	30.2	31.3	31.8	<0.70	<0.71	<0.74
	169	<1.7	<1.7	<1.5	<1.4	<1.5	<1.5
	170 + 194	431	441	446	93.9	95.7	94
	189	10.1	11.3	10.5	2.78	<0.72	<0.75
	Sum PCBs	11400	11700	12100	1850	1870	1840
	Sum DDTs	12950	12970	12960	941	917	922
	LIPID CLASS ANALYSES	Homog VII Sample 1	Homog VII Sample 2	Homog VII Sample 3	SRM 1945 Sample 1	SRM 1945 Sample 2	SRM 1945 Sample 3
	Analyst (Initials)	KT	KT	KT	KT	KT	KT
	Date(s) of measurements (m/d/y)	05/24/05	05/24/05	05/24/05	05/24/05	05/24/05	05/24/05
	Wax esters	93.5	94.3	94.7	1.20	1.08	1.09
	Triglycerides	6.54	5.66	5.28	98.8	98.9	98.9
	Free fatty acids	0	0	0	0	0	0
	Cholesterol	0	0	0	0	0	0
	Phosphoplipids	0	0	0	0	0	0
6	**PCB Congeners**	HomogVII Sample 1	HomogVII Sample 2	Homog VII Sample 3	SRM 1945 Sample 1	SRM 1945 Sample 2	SRM 1945 Sample 3
	28/31	75.43	75.78	71.24	57.46	66.41	60.78
	87/115	166.46	162.25	166.66	41.33	41.53	37.3
	101/89/90	642.14	627.84	650.65	107.33	107.05	102.08
	106/118/123	919.45	890.7	889.85	116.7	117.13	116.26
	128/167	217.98	218.35	220.42	40.29	40.05	38.48
	132/153/168	2885.03	2870.44	2929.8	363.45	362.71	352.98
	138/163/158/164	2008.46	2001.22	2047.63	246.47	244.85	239.44
	tetrapcb50	8.4	8.27	7.48	<1.33	<1.33	<1.33
	tetrapcb45	13.4	13.43	13.11	10.51	10.66	8.99
	tetrapcb48	75.4	75.68	74.73	26.07	26.05	24.29
	tetrapcb74-61	139.58	136.42	134.46	48.58	47.99	42.81
	tetrapcb76-70	44.41	41.57	37.92	43.21	42.23	36.88
	tetrapcb81	13.49	13.59	12.58	<0.95	<0.95	<0.95
	pentapcb92	93.96	92.46	94.48	29.13	28.53	26.46
	pentapcb84	47.36	47.8	46.96	14.57	14.56	12.92
	pentapcb119	26.41	26.01	25.2	15.05	15.07	12.8
	pentapcb110	39.34	38.62	39.32	33.94	36.32	35.52
	pentapcb82	15.49	15.22	15.05	8.65	8.74	7.76
	pentapcb107-108	N/D	N/D	N/D	30.43	30.54	25.63
	pentapcb 114	28.74	28.21	27.42	<1.86	<1.86	<1.86
	hexapcb154	31.28	30.82	31.43	9.12	9.08	8.1
	hexapcb146	329.49	325.36	337.03	37.19	36.85	38.8
	hexapcb 141	127.31	125.37	127.57	24.44	26.45	25.08
	hexapcb130	97.63	98.36	96.82	15.34	15.28	14.31
	hexapcb159	24.39	25.03	24.23	8.78	8.74	7.8
	hexapcb157	28.62	28.66	28.25	<0.81	<0.81	<0.81
	heptapcb188	7.89	7.89	7.73	5.24	5.28	4.42
	heptapcb 184	7.26	7.17	6.93	5.47	5.56	4.93
	heptapcb174	191.99	201.28	209.8	27.58	28.82	29.04
	heptapcb 177	160.4	169.72	177.88	29.8	28.73	28.82
	heptapcb172	75.4	81.71	83.36	16.71	16.22	16.25
	heptapcb 189	10.67	11.39	11.05	5.45	5.5	4.89
	octapcb202	101.8	95.53	102.13	37.77	37.52	31.93
	nonapcb 207	21.53	21.21	21.08	16.21	16.5	15.34
	BDEs						
	bde28	6.67	6.01	5.73	5.39	4.98	4.72

Additional Data and Notes (Continued)

7

Notes:

1. After the completion of the lipid determinination, the volume of each Homogenate VII extract and SRM 1945 extract was restored to 10 and 25mL, respectively with fresh methylene chloride. We took 4-mL of each Homogenate VII extract and 14-mL of each SRM1945 extract for the analyses of the chlorinated pesticides, PCBs and PBDEs. We then took a 1mL portion of each extract for the analysis of fatty acids at a later date. The balance of each extract was stored away as a reserve.

2. In the absence of surrogate PBDE standards, a dichloromethane blank was spiked with 27 PBDE congeners to determine their recoveries through the entire extaction and cleanup process. See Table 2 for the percent recovery of each PBDE congener. The lower recoveries of the higher homologs may be due to an unoptimized fraction collection window during the HPLC cleanup step. This is our first attempt to analyze the PBDE congeners, and the collection window was calibrated for the PCB/pesticide collection.

3. To prepare the calibration solutions for this intercomparison exercise, we used these solutions: SRM 2261 and SRM 2274 from NIST as the sources for. the chlorinated pesticides. From Accustandard, Inc, New Haven, CT., we purchased the 20 PCB mixture C-CCSEC and the individual PCBs: 87, 132, and 201. We also purchased the supplementary PCB solution SRM 2275 from NIST. We purchased the standard solution, BDE-MXE, a mixture of 27 polybrominated diphenyl ethers (PBDE), from TerraChem, Shawnee Mission, KS; the US distributor for Wellington Laboratories, Guelph, Ontario Canada.

4. We used hydrogen gas as the carrier gas at a linear velocity of 40 cm/min for the GC-ECD analysis of the pesticides and PCBs. For the analyses of PCBs and pesticides, 1 microliter of sample was injected into the GC-ECD. We also use a nitrogen generator as the source of the make-up gas for the ECD. The PBDE analyses were conducted using a short column, higher flow rate, and accelerated oven temperature program to minimize the degradation of higher brominated congeners All 27 congeners were base-line separated using these chromatographic conditions. Two microliters of sample were injected into the GC-MS for PBDE analyses. We report the concentrations for the optional pesticides and PCBs in Table 1. We also report the concentrations of the PBDE congeners with poor matching of mass spectral data in Table 3.

5. Using our gas chromatographic conditions, PCB 153 and PCB 132 elute very closely to each other when a calibration solution is run. In the samples, the peak in this region of the chromatogram is very broad making identification and quantification of PCB 132 very difficult. PCB 105 is separated from both PCB 153 and PCB 132. Conservatively, the concentration of PCB 153 given in the table should be treated as the sum of PCB 153 and PCB 132.

The Meaning of Other found in the Tables for the Pesticide and PCB Concentrations: We found the following pairs of analytes coelute from our DB-5 column:

OtherA : 4,4'-DDD and cis-Nonachlor
OtherB : PCB 8 and alpha-HCH
OtherC : PCB 87 and dieldrin
OtherD : PCB 169 and Mirex
OtherE : PCB 101 and Endosulfan I
OtherF : PCBs 132 and 153 elute closely to each other. Conservatively, the concentration of PCB 153 given in the table should be treated as the sum of PCB 153 and PCB 132.

Table 1: Optional Pesticide and PCB Results

Additional Pesticides and PCBs	**Homog VII Sample 1 (ng/g wet wt)**	**Homog VII Sample 2 (ng/g wet wt)**	**Homog VII Sample 3 (ng/g wet wt)**	**SRM 1945 Sample 1 (ng/g wet wt)**	**SRM 1945 Sample 2 (ng/g wet wt)**	**SRM 1945 Sample 3 (ng/g wet wt)**
Heptachlor	1.11	DL	DL	DL	2.08	DL
Endrin	9.01	11.0	10.4	DL	DL	DL
Endosulfan I	Other[E]	Other[E]	Other[E]	Other[E]	Other[E]	Other[E]
Endosulfan II	6.35	7.25	6.18	44.8	45.0	45.8
Endosulfan Sulfate	30.3	24.7	19.0	148	147	146
BZ 8	Other[B]	Other[B]	Other[B]	Other[B]	Other[B]	Other[B]
BZ 77	Other[G]	Other[G]	Other[G]	Other[G]	Other[G]	Other[G]
BZ 110	Other[G]	Other[G]	Other[G]	Other[G]	Other[G]	Other[G]
BZ 126	5.07	5.26	4.69	23.5	24.8	24.8
BZ 169	Other[D]	Other[D]	Other[D]	Other[D]	Other[D]	Other[D]

Other: We found the following pairs of analytes coelute from our DB-5 column:

OtherB : PCB 8 and alpha-HCH
OtherD : PCB 169 and Mirex

Additional Data and Notes (Continued)

7

OtherE : PCB 101 and Endosulfan I

OtherG : Since PCB 77and PCB 110 coelute from our column and the response of each congener vary from each other, the relative ratios of two congeners can not be determined. We do not report the concentrations of either PCB 77 or PCB 110.

Table 2: Recoveries of individual PBDE congeners spiked into dichlormethane

PBDE Congener	Degree of Bromination	Recovery (%)
PBDE 3	1	86.7
PBDE 7	2	84.9
PBDE 15	2	98.4
PBDE 17	3	98.5
PBDE 28	3	98.9
PBDE 49	4	108.6
PBDE 71	4	101.0
PBDE 47	4	105.1
PBDE 66	4	103.6
PBDE 77	4	107.6
PBDE 119	5	107.8
PBDE 99	5	111.2
PBDE 100	5	105.6
PBDE 85	5	101.8
PBDE 126	5	104.4
PBDE 154	6	97.5
PBDE 153	6	96.9
PBDE 138	6	92.8
PBDE 156	6	82.7
PBDE 184	7	87.3
PBDE 183	7	80.6
PBDE 191	7	66.1
PBDE 197	8	59.3
PBDE 196	8	43.0
PBDE 207	9	46.7
PBDE 206	9	17.8
PBDE 209	10	11.5

Table 3: Concentrations of PBDE congeners with poor matching of mass spectral data.

Additional Polybrominated diphenyl ethers	Degree of Bromination	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	Homog VII Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
PBDE 3	1	12.3	10.8	10.1	12.3	19.2	14.4
PBDE 7	2	DL	DL	DL	DL	DL	DL
PBDE 15	2	DL	DL	DL	DL	DL	DL
PBDE 17	3	DL	DL	DL	DL	DL	DL
PBDE 28	3	4.50	DL	3.35	DL	DL	DL
PBDE 49	4	DL	DL	4.56	3.05	DL	3.09
PBDE 66	4	DL	DL	DL	DL	DL	DL
PBDE 71	4	DL	DL	DL	DL	DL	DL
PBDE 77	4	DL	DL	DL	DL	DL	DL
PBDE 85	5	DL	DL	DL	DL	DL	DL
PBDE 119	5	DL	DL	DL	DL	DL	DL
PBDE 126	5	DL	DL	DL	DL	DL	DL
PBDE 138	6	DL	DL	DL	DL	DL	DL
PBDE 156	6	DL	DL	DL	DL	DL	DL
PBDE 183	7	DL	DL	DL	19.9	DL	DL
PBDE 184	7	DL	DL	DL	DL	DL	DL
PBDE 191	7	DL	DL	DL	DL	DL	DL
PBDE 196	8	DL	DL	DL	DL	DL	DL
PBDE 197	8	DL	DL	DL	DL	DL	DL
PBDE 206	9	DL	DL	DL	DL	DL	DL
PBDE 207	9	DL	DL	DL	DL	DL	DL
PBDE 209	10	DL	DL	DL	DL	DL	DL

Adddtional Data and Notes (Continued)

11 **HBCD ISOMER ANALYSES**

Analytical method used (e.g., GC-MS (include ionization type), GC-ECD):

	Analyt. Instr.	Column Phase	Col. Length, m	Col. i.d., mm	particle size, µm	
HBCD	LC-MS-MS	C18	0.15	2.1	5	Agilent, ExtendC18

Method of quantitation (IS = internal standard, ES = external standard):

HBCD	IS

IF internal standard method was used, please complete the following section:

Identity of internal standards/surrogates used that were added PRIOR to extraction of sample:

HBCD	none

Added after extraction/cleanup and JUST PRIOR to chromatographic analysis:

HBCD	beta-HBCD-d18

Any others? Added at what point in analyses: Added after extraction/ prior to GPC

HBCD	13C12-alpha-HBCD, 13C12-beta-HBCD, 13C12-gamma-HBCD

IS/surrogate standards used for quantitation calculations were:

	those added prior to extraction
	those added after extraction/cleanup and just prior to chromatographic analysis
X	those added after extraction/ prior to GPC

If the IS/surrogates added after extraction/cleanup extraction were used for quantitation, were results corrected for percent recovery? No

Percent recovery range:

Calibration Curve

	Points	Conc. Range	Analytes outside of calibration curve calibration range
HBCD	6	0.4 - 400 ng/ml	0.2 - 400 ng/ml

RESULTS:	Homog VII Sample 1	Homog VII Sample 2	Homog VII Sample 3	SRM 1945 Sample 1	SRM 1945 Sample 2	SRM 1945 Sample 3
Analyst (Initials)	TI	TI	TI	TI	TI	TI
Date(s) of measurements (m/d/y)	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005
HBCD	Homog VII Analysis A (ng/g wet wt)	Homog VII Analysis B (ng/g wet wt)	Homog VII Analysis C (ng/g wet wt)	SRM 1945 Analysis A (ng/g wet wt)	SRM 1945 Analysis B (ng/g wet wt)	SRM 1945 Analysis C (ng/g wet wt)
alpha-HBCD	15.1	18.0	17.2	8.1	7.2	NA
beta-HBCD	<0.03	<0.03	<0.03	0.40	0.29	NA
gamma-HBCD	0.05	0.03	0.04	0.48	0.34	NA

12

TOXAPHENES	Homog VII Sample 1	Homog VII Sample 2	Homog VII Sample 3	SRM 1945 Sample 1	SRM 1945 Sample 2	SRM 1945 Sample 3
Analyst (Initials)	KIB/SIF/KBL	KIB/SIF/KBL	KIB/SIF/KBL	KIB/SIF/KBL	KIB/SIF/KBL	KIB/SIF/KBL
Date(s) of measurements (m/d/y)	06.30.05	06.30.05	06.30.05	06.30.05	06.30.05	06.30.05
CHB-26	261.5	334.3	223.0	n.a	39.1	44.6
CHB-40	85.7	96.3	80.9	n.a	16.4	16.7
CHB-41	39.7	45.4	37.3	n.a	10.4	11.1
CHB-44	90.1	107.1	66.6	n.a	30.0	31.7
CHB-50	194.7	225.0	171.0	n.a	93.4	91.8
CHB-62	66.1	76.5	58.3	n.a	44.1	51.1

13

PCB CONGENER ANALYSES **Congener**	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
74	120.5	112.3	109.3	14.7	16	15
110	20.1	21.5	21	21.4	21.4	21.5
196	121.5	128.5	124.7	49.6	51.3	50.8
199	148.1	158.7	153.8	48.9	50.8	49.8

PBDE CONGENER ANALYSES **Congener**	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
28	2.02	1.83	1.97	1.15	1.11	1.09
49	2.12	1.79	1.99	1.16	0.97	1.06
66	3.76	3.56	3.63	1.39	1.24	1.29
85	2.22	1.56	3.29	NA	NA	NA
2'-MeO-BDE68	59.1	59.9	59.4	39.9	37.5	36.1
6-MeO-BDE47	500.1	467.8	457.7	49	48.9	47.1

Additional Data and Notes (Continued)

18	Fatty Acids	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
	iso + antiso C5:0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	4,8,12-trimethyltridecanoic acid (TMTD)	0.02	0.02	0.02	0.08	0.07	0.08
	(Z)-9-tetradecenoic acid (14:1n-5)	0.16	0.15	0.15	0.41	0.38	0.38
	iso 15:0	0.04	0.04	0.03	0.21	0.2	0.2
	antiso 15:0	0.03	0.03	0.02	0.08	0.08	0.08
	(Z)-7-hexadecenoic acid (16:1n-9)	0.41	0.41	0.42	1.99	1.976	1.88
	(Z,Z)-6,9-Hexadecadieonic acid (16:2n-7)	< 0.01	< 0.01	< 0.01	0.02	0.02	0.02
	(Z,Z)-9,12-Hexadecadieonic acid (16:2n-4)	0.06	0.07	0.11	< 0.01	< 0.01	< 0.01
	Iso17	0.03	0.03	0.04	0.12	0.11	0.11
	antiso17:0	< 0.01	0.01	0.01	0.07	0.07	0.07
	7-methyl-7-hexadecenoic acid (7M7H)	0.23	0.22	0.27	0.39	0.37	0.37
	phytanate	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
	(Z)-9-heptadecenoic acid (17:1n-8)	0.16	0.17	0.18	0.41	0.4	0.39
	(Z)-7-octadecenoic acid (18:1n-11)	2.1	1.97	1.93	2.7	2.7	2.5
	(Z)-13-octadecenoic acid (18:1n-5)	0.11	0.1	0.11	0.24	0.23	0.23
	(Z,Z)-11,14-Octadecadienoic acid (18:2n-4)	0.02	< 0.01	0.02	0.03	0.03	0.03
	(Z,Z,Z)-8,11,14-Eicosatrienoic acid (20:3n-6)	0.02	0.02	0.02	< 0.01	< 0.01	< 0.01
	(Z,Z,Z,Z)-8,11,14,17-Eicosatetraenoic acid (20:4n-3)	0.14	0.14	0.14	0.23	0.22	0.21
	Total reported	46.6	46.3	45.3	63.2	62.1	59.6

19	Fatty Acids	Homog VII Sample 1 (ng/g wet wt)	Homog VII Sample 2 (ng/g wet wt)	Homog VII Sample 3 (ng/g wet wt)	SRM 1945 Sample 1 (ng/g wet wt)	SRM 1945 Sample 2 (ng/g wet wt)	SRM 1945 Sample 3 (ng/g wet wt)
	iso 5:0				0.99	1.01	1.08
	Iso 12:0				0.12	0.01	0.01
	12:1n5				0.34	0.03	0.03
	3-Me 13:0				1.00	0.10	0.11
	13:1 n7				0.26	0.04	0.02
	iso 13:0				0.10	0.01	0.01
	anteiso 13:0				0.07	0.01	0.01
	13:0	0.02	0.01	0.02	0.19	0.02	0.02
	iso 14:0	0.01	0.01	0.01	0.27	0.02	0.02
	14:1 n10	0.02	0.01	0.01	0.68	0.05	0.05
	14:1n7	0.03	0.05	0.06	0.76	0.07	0.06
	14:1n5	0.10	0.11	0.13	3.03	0.27	0.27
	14:0	1.19	1.33	1.41	27.33	2.81	2.60
	9-me 15:0	0.02	0.02	0.02	0.68	0.08	0.06
	iso 15	0.00	0.03	0.03	1.47	0.13	0.13
	anteiso 15	0.02	0.02	0.02	0.70	0.06	0.06
	15:1n6				0.14	0.01	0.02
	12-me 16:0				0.07	0.01	0.01
	iso 16:0	0.05	0.07	0.06	1.20	0.19	0.12
	16:1n9	0.21	0.27	0.28	11.25	0.95	1.13
	16:1n5	0.03	0.05	0.05	0.71	0.06	0.07
	2,6,10,14-tetra methyl 19:0	0.02	0.02	0.02	0.52	0.07	0.06
	12-me 17	0.01	0.02	0.02	0.56	0.07	0.06
	17:1n9	0.18	0.19	0.21	2.79	0.29	0.25
	13 me 17:0				0.09	0.01	0.01
	iso 17:0	0.02	0.02	0.02	0.91	0.09	0.08
	anteiso 17	0.02	0.02	0.02	0.61	0.05	0.06
	17:1n8	0.12	0.13	0.13	2.52	0.26	0.21
	3,7,11, 15-tetra methyl 20:0	0.01	0.02	0.02	0.76	0.07	0.07
	14-me 18:0				1.41	0.09	0.11
	18:1n11	1.80	3.22	3.27	36.90	3.57	3.07
	18:1n5	0.22	0.11	0.13	2.22	0.28	0.17
	20:4n3	0.07	0.07	0.07	0.47	0.10	0.09
	21:1n12	0.02	0.02	0.02			
	21:1n10	0.02	0.02	0.02			
	22:5n6				0.19	0.02	0.00
	22:2n9				0.34	0.04	0.03
	22:1n7	0.00	0.01	0.10			
	22:0				0.22	0.04	0.03
	24:5n3				0.27	0.01	0.02
	24:1n11	0.03	0.01	0.01	0.33	0.02	0.02

Additional Data and Notes (Continued)

20					
	Fatty Acid (as methyl ester)	Homog VII Sample 1 (%, wet weight)	Homog VII Sample 2 (%, wet weight)	Homog VII Sample 3 (%, wet weight)	SRM 1945 Sample 1 (%, wet weight)
	Capric acid (C10:0)	<0.00491	<0.00495	<0.00499	0.0284
	C11:0	<0.00245	<0.00247	<0.00249	0.00461
	C12:1	<0.00491	<0.00495	<0.00499	0.00465
	isoC14:0	0.0161	0.0162	0.0167	0.0479
	C14:1n9*	0.0353	0.0367	0.037	0.102
	4,8,12-trrimethyl C13:0*	0.00524	0.00601	0.00552	0.0274
	C14:1n7*	0.0549	0.0554	0.0563	0.133
	11-methyl C14:0*	0.00289	0.00295	0.00288	0.00596
	isoC15:0*	0.0417	0.0425	0.0413	0.228
	anteisoC15:0	0.0192	0.0197	0.0193	0.0665
	C15:1n5	<0.00245	0.0028	<0.00249	0.00365
	isoC16:0	0.0220	0.0229	0.0224	0.0890
	anteisoC16:0*	<0.00233	<0.00235	<0.00237	0.00525
	2,6,10,14-tetramethyl C15:0*	0.0321	0.0326	0.0304	0.0692
	C16:1n11*	0.103	0.107	0.106	0.195
	C16:1n9*	0.428	0.437	0.442	2.06
	C16:1n5*	0.0742	0.0756	0.075	0.204
	7-methyl C16:1*	0.0476	0.0493	0.0471	0.0648
	isoC17:0	0.0494	0.0504	0.0487	0.148
	C16:2n6*	0.023	0.0228	0.0233	0.320
	anteisoC17:0*	0.0171	0.0178	0.0171	0.0709
	C16:2n4*	0.102	0.105	0.104	0.173
	C16:3n6*	0.0156	0.0162	0.0133	0.0237
	C16:3n4*	0.0306	0.0290	0.0274	0.0331
	Margoleic acid (C17:1n?)*	0.260	0.262	0.264	0.405
	C17:1n7	0.00502	0.00705	0.00500	0.0105
	C16:4n3*	0.0352	0.0386	0.0348	0.192
	isoC18:0	0.0249	0.021	0.0205	0.0337
	anteisoC18:0*	0.00247	0.00222	<0.00204	0.00593
	C16:4n1*	0.0255	0.0246	0.0288	0.0331
	C18:1n13*	0.0217	0.0264	0.0255	0.0432
	C18:1n11*	2.05	2.05	2.04	2.67
	C18:1n5*	0.132	0.13	0.124	0.271
	C18:2n7*	0.0333	0.0334	0.034	0.0405
	C18:2n4*	0.0488	0.0491	0.0479	0.0641
	C19:0	0.0483	0.049	0.0471	0.0498
	C18:3n4*	0.0668	0.0694	0.0603	0.0371
	C18:3n1*	<0.00981	<0.00900	<0.00997	<0.00814
	C18:4n1*	0.0199	<0.0148	<0.0150	<0.0122
	C20:1n15	0.0264	0.0296	0.0250	0.0192
	C20:1n11§	5.69	5.76	5.60	3.25
	C20:1n5*	0.0589	0.0598	0.0578	0.0514
	C20:2n9*	0.0251	0.0270	0.0241	0.00689
	dihomo-g-Linolenic acid (C20:3n6)	0.0514	0.0602	0.0515	0.0552
	C20:4n3*	0.173	0.181	0.174	0.228
	Behenic acid (C22:0)	0.0272	0.0279	0.0269	0.0331
	C22:1n7*	0.137	0.146	0.134	0.119
	C22:1n5*	<0.00981	<0.00900	<0.00997	<0.00814
	C22:5n3	0.0470	0.0575	0.0485	0.103
	C22:4n6	0.0564	0.0585	0.0500	0.103
	C22:3n3	<0.0160	<0.0161	<0.0163	<0.0133
	C22:4n3*	<0.0313	<0.0316	<0.0318	0.0470
	C22:1n11*				
	§ C22:1n11 is quantitated using C:22:1n12 in calibration stanards.				
	* Compounds are tentatively idenitfied as to specific positional isomer, and are quantitated using response factor of closest retention time compound of similar structure; results should be considered semi-quantitative.				