



NISTIR 6837

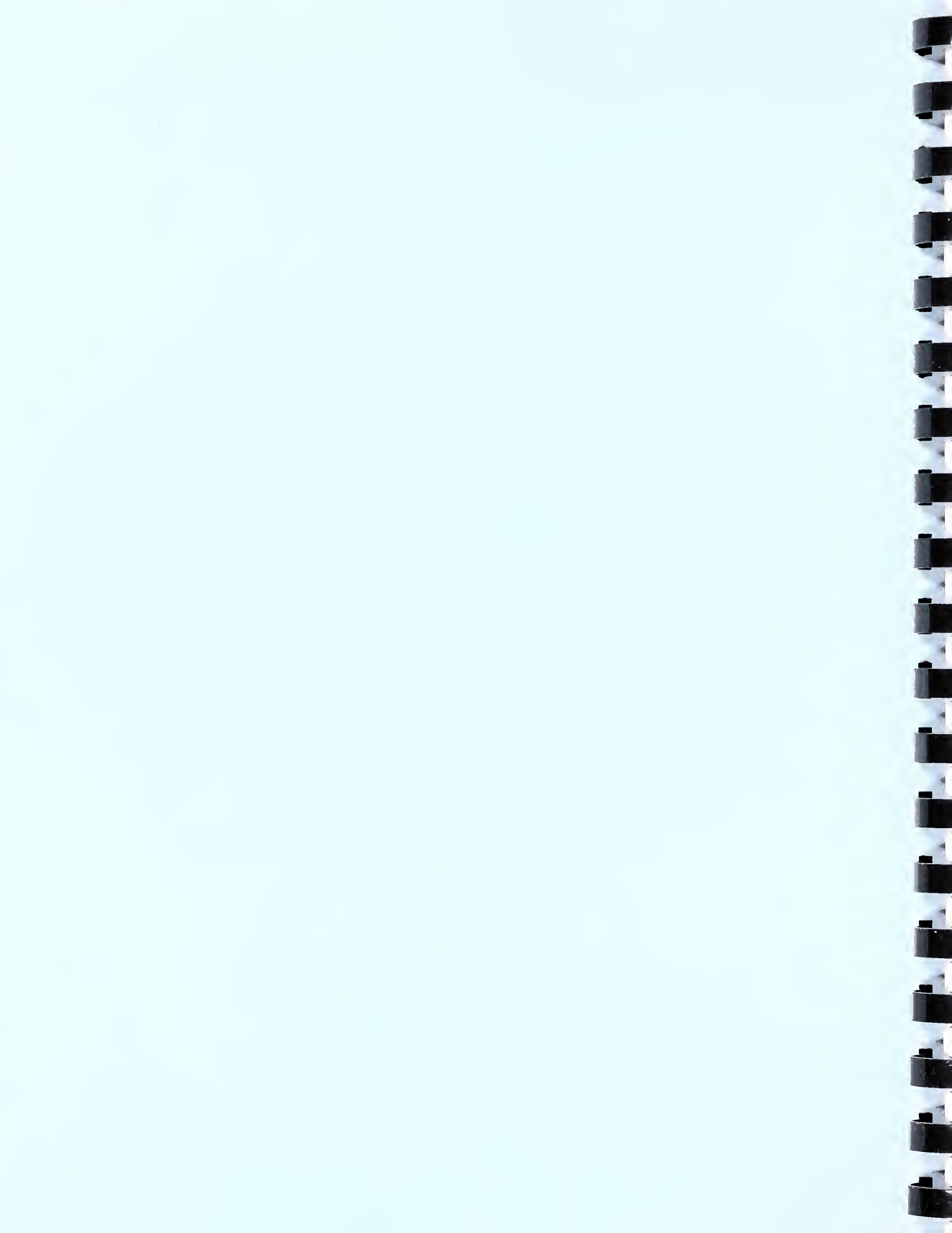
NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment: Description and Results of the 2000 Organic Intercomparison Exercises

Michele M. Schantz
John R. Kucklick
Reenie M. Parris
Stephen A. Wise

QC
100
.456
#6837
2002

NIST

National Institute of Standards and Technology
Technology Administration, U.S. Department of Commerce



NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment: Description and Results of the 2000 Organic Intercomparison Exercises

Michele M. Schantz, John R. Kucklick¹, Reenie M. Parris, and Stephen A. Wise
Analytical Chemistry Division
Chemical Science and Technology Laboratory
National Institute of Standards and Technology
Gaithersburg, MD 20899-8392
and ¹Charleston, SC 29412

July 2002



U.S. Department of Commerce
Donald L. Evans, Secretary

Technology Administration
Phillip J. Bond, Under Secretary for Technology

National Institute of Standards and Technology
Arden L. Bement, Jr., Director

Table of Contents

Abstract	1
Introduction	2
Sources and Preparation of Materials Used in 2000 Intercomparison Exercises	3
Storage and Distribution of Materials	4
Evaluation of Exercise Results	4
Establishment of the Assigned Values	4
Reported Results	6
Performance Scores	6
Accuracy Assessment (z-score)	6
Precision Assessment (p-score)	8
Discussion	8
Acknowledgments	10
Disclaimer and References	11
Tables	12
Table 1. Target Analytes in NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment	13
Table 2. Mussel Tissue X (QA00TIS10): Laboratory Means of Three Replicates and Exercise Assigned Values - Water and PAHs	15
Table 3. Mussel Tissue X (QA00TIS10): Laboratory Means of Three Replicates and Exercise Assigned Values - Pesticides	16
Table 4. Mussel Tissue X (QA00TIS10): Laboratory Means of Three Replicates and Exercise Assigned Values - PCBs	17
Table 5. Marine Sediment X (QA00SED10): Laboratory Means of Three Replicates and Exercise Assigned Values - Water and PAHs	18

Table 6.	Marine Sediment X (QA00SED10): Laboratory Means of Three Replicates and Exercise Assigned Values - Pesticides	19
Table 7.	Marine Sediment X (QA00SED10): Laboratory Means of Three Replicates and Exercise Assigned Values - PCBs	20
Table 8.	Mussel Tissue X (QA00TIS10): Z-Scores (25%) by Laboratory - Water and PAHs	21
Table 9.	Mussel Tissue X (QA00TIS10): Z-Scores (25%) by Laboratory - Pesticides . . .	22
Table 10.	Mussel Tissue X (QA00TIS10): Z-Scores (25%) by Laboratory - PCBs	23
Table 11.	Marine Sediment X (QA00SED10): Z-Scores (25%) by Laboratory - Water and PAHs	24
Table 12.	Marine Sediment X (QA00SED10): Z-Scores (25%) by Laboratory - Pesticides	25
Table 13.	Marine Sediment X (QA00SED10): Z-Scores (25%) by Laboratory - PCBs . . .	26

Appendices

Appendix A: Description, Storage, Use, and Reporting Instructions for Mussel Tissue X (QA00TIS10)	A-1
Appendix B: Description, Storage, Use, and Reporting Instructions for Marine Sediment X (QA00SED10)	B-1
Appendix C: Results by Laboratory, Mussel Tissue X	C-1
Appendix D: Results by Laboratory, Marine Sediment X	D-1
Appendix E: Laboratory Notes Accompanying Data, Mussel Tissue X	E-1
Appendix F: Laboratory Notes Accompanying Data, Marine Sediment X	F-1
Appendix G: Laboratory Methods Used, Mussel Tissue X	G-1
Appendix H: Laboratory Methods Used, Marine Sediment X	H-1
Appendix I: Charts of Mussel Tissue X and SRM 1974a, Results by Analyte	I-1
Appendix J: Charts of Marine Sediment X and SRM 1944, Results by Analyte	J-1
Appendix K: List of Laboratories Participating in 2000 Intercomparison Exercises	K-1



Abstract

In support of marine monitoring measurement programs, the National Institute of Standards and Technology (NIST) conducts yearly interlaboratory comparison exercises to provide one mechanism for participating laboratories and monitoring programs to evaluate the quality and comparability of their performance in measuring selected organic contaminants in environmental samples. In this report, results of the year 2000 exercises of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment are described, in which selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners and chlorinated pesticides were determined in Mussel Tissue X and in Marine Sediment X exercise materials. The analytical methods used by each participating laboratory in this performance-based program are also summarized.

Introduction

The preparation and distribution of two materials, Mussel Tissue X (QA00TIS10) and Marine Sediment X (QA00SED10), used in interlaboratory comparison exercises in year 2000 for the National Institute of Standards and Technology (NIST) Intercomparison Exercise Program for Organic Contaminants in the Marine Environment and the results of these exercises are described in this report. The analytical methods used by each participating laboratory are also summarized.

Tools and mechanisms for the assessment of data produced by laboratories providing environmental analyses are critical because decision-making based on inaccurate results or data of unknown quality can have significant economic and health consequences. NIST provides a variety of activities in support of environmental monitoring programs for organic contaminants. The largest of these programs was initiated and funded in part for twelve years (until 1999) by the National Oceanic and Atmospheric Administration (NOAA) National Status & Trends (NS&T) Marine Monitoring Program [1,2,3]. The EPA Environmental Monitoring and Assessment Program (EMAP) also participated in the NIST/NOAA NS&T effort for a number of years. Private sector and other laboratories that could not be accommodated under the NOAA, EPA, and NIST funding have reimbursed NIST for participation costs and have participated in these exercises and workshops as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment. NIST is now continuing this program on a pay-to-participate basis. Through this program, NIST provides mechanisms for assessing the interlaboratory and temporal comparability of data, and for improving measurements for the monitoring of organic contaminants such as polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in bivalve, sediment, and fish samples. This program includes development of improved analytical methods, production of needed NIST Standard Reference Materials (SRMs) and other control materials, conduct of annual interlaboratory comparison exercises, and coordination of workshops to discuss the results of these exercises and to provide a forum for cooperative problem-solving efforts by participants. Current participants represent multi-laboratory monitoring programs as well as a number of individual programs, and include federal, state/municipal, university/college, private sector, and international laboratories. In this performance-based program, each participating laboratory uses their current methods for analysis of similar materials for its program customers. The target analytes are listed in Table 1.

For the annual intercomparison exercises, samples of two natural-matrix, homogeneous materials derived from the marine environment that have not been fortified with any of the target analytes are analyzed by the participating laboratories. Typical materials, such as mussel or fish tissue homogenates or wetted marine sediment, have levels of target analytes in the 1 ng/g to 15000 ng/g range.

Numerical indices (z- and p-scores) are used to assess and track laboratory performance (for accuracy and precision, respectively) and to provide a mechanism for assessing the comparability of data being produced by the participating laboratories for over 75 target analytes and percent moisture.

Sources and Preparation of Materials used in 2000 Intercomparison Exercises

The Mussel Tissue X was a subset of candidate NIST SRM 1974b [Organics in Mussel Tissue (*Mytilus edulis*)], and the Marine Sediment X was prepared from fines (<61 μm) collected during the preparation of NIST SRM 1944 (New York/New Jersey Waterway Sediment). These materials were true unknowns at the time of the exercise. The use of candidate SRMs enables eventual comparisons for accuracy-based evaluations of the exercise assigned values and the results of the individual laboratories with certified concentrations for these reference materials. The sediment material was issued as a wet sediment to more closely match the matrix of wet sediments typically analyzed by the laboratories.

Marine Sediment X. Sediment used in the preparation of this material was collected in October 1994 from six sites in the vicinity of New York Bay and Newark Bay. The sampler was an epoxy-coated modified Van Veen-type grab sampler designed to sample the sediment to a depth of 10 cm. The material was freeze-dried and sieved. The fraction from 250 μm to 61 μm was used for SRM 1944 while the particles passing through the 61 μm sieve were used to prepare Marine Sediment X. The material was blended, homogenized, and radiation-sterilized.

Clear, 2-oz, wide-mouth, glass bottles were rinsed with deionized water, thermally cleaned at 500 °C for 18 h in a ventilated oven, cooled, capped, and labeled. Each label contained the material's name and code (Marine Sediment X, QA00SED10) as well as an individual bottle number. The Teflon liners of the phenolic screw caps had been removed from the caps, cleaned with hexane, dried, and reinserted in the caps. A calibrated toploader balance (resolution of 0.01 g) was used for weighing the sediment and water. For each sample, approximately 11 g (exact mass known) of the sediment (as received) was weighed into a tared bottle. The bottle was then capped and stored in the dark at room temperature. Approximately four days before the samples were to be shipped to laboratories participating in the intercomparison exercise, approximately 9 g (exact mass known) of HPLC-grade water was added by pipet to each tared bottle of sediment. (Preliminary trials had shown that a minimum of 9 g of water would moisten 11 g of this sediment.) The masses of sediment and water in each bottle were recorded. Each sample was "tilted" by hand until no "dry" sediment was visible. Only a very small amount of water was observed on the top of the wet sediment. After 24 h at room temperature (in the dark), followed by approximately 4 h at -20 °C, each bottle of material was stored at -80 °C until shipped. The bottles were never inverted until the wet samples had been frozen in the bottom of the bottles. The material was not enriched or spiked with any of the analytes of interest in this intercomparison exercise.

Mussel Tissue X. Mussel Tissue X was a subset of SRM 1974b. During the bottling of SRM 1974b, 144 clear, 2-oz, wide-mouth, glass bottles that had been labeled as Mussel Tissue X, QA00TIS10), each with individual bottle numbers were filled with approximately 8 g of mussel tissue. The bottles had been pre-cleaned in the same manner as that used for the sediment. This sample is a cryogenically homogenized "fresh" material prepared from blue mussels (*Mytilus edulis*) collected from the same site in Dorchester Bay as SRM 1974a and SRM 1974.

Each of the three bottles sent to each participant contained approximately 8 g (wet basis) of Mussel Tissue X. This frozen mussel tissue material had not been enriched or spiked. Each 2-oz glass bottle had a Teflon-lined screw cap and was labeled with an individual bottle number as well as the material's name and code (Mussel Tissue X, QA00TIS10).

Storage and Distribution of Materials

Each bottle of Marine Sediment X and Mussel Tissue X material was stored at -80 °C until shipped via overnight delivery to participating laboratories. Instructions for the storage and use of the exercise material and a diskette with files for electronic submission of data were included with each set of material shipped. These instructions are shown in Appendices A and B. Samples of each of these materials have been archived in the National Biomonitoring Specimen Bank at NIST.

Each laboratory participating in these intercomparison exercises was sent the following by overnight delivery:

Exercise 1: Mussel Tissue X (QA00TIS10)

- Three bottles of Mussel Tissue X material (shipped on dry ice)
- Description of the materials and storage/use/reporting instructions for the exercise (See Appendix A.)
- Data diskette with files for the reporting of results

Exercise 2: Marine Sediment X (QA00SED10)

- Three bottles of Marine Sediment X material (shipped on dry ice)
- Description of the materials and storage/use/reporting instructions for the exercise (See Appendix B.)
- Data diskette with files for the reporting of results

In the letter accompanying each shipment each participant was asked to analyze each of three replicate samples in a separate batch/set/string/catalog in order to provide a more realistic assessment of laboratory precision and, if possible, to concurrently analyze the NIST SRM 1974a Organics in Mussel Tissue (*Mytilus edulis*) [4] with Mussel Tissue X and NIST SRM 1944 New York/New Jersey Waterway Sediment [5] with Marine Sediment X. Samples were sent to the laboratories July 2000. Laboratories were requested to submit results for these exercises by February 1, 2001. Laboratories that joined the program later than July 2000 were sent samples as soon as possible after the paperwork was received.

Evaluation of Exercise Results

Establishment of the Assigned Values

The following guidelines were used by the NIST exercise coordinators for the establishment of

the exercise "Assigned Values" for these two exercises. In essence, the laboratory's performance on concurrent reference material analyses was used to determine if that laboratory's results would be included in the calculation of the exercise assigned value for the unknown material for a particular analyte. The results reported for the unknown materials from laboratories that did not report results for the reference materials were not used in these calculations. After the exercise assigned values, standard deviations, and 95% confidence limits had been calculated, all reported results for the Mussel Tissue X and Marine Sediment X materials were evaluated relative to these exercise "assigned values."

Laboratory data submission: Each participating laboratory was to submit data from three replicate determinations of the "unknown" materials (Mussel Tissue X and Marine Sediment X) and were requested to report results of concurrent analyses of NIST SRM 1974a, a cryogenically homogenized mussel tissue reference material, and SRM 1944, a marine sediment reference material. Laboratories were requested to report these results to three significant figures, and provide brief descriptions of their extraction, cleanup, and analytical procedures.

Determination of laboratory analyte means: For each laboratory, the laboratory analyte mean of the three sample results (S1, S2, and S3) was calculated for each analyte. Non-numerical data were treated as follows: A mean "<value" was used when three "<values" were reported; NA (not analyzed/determined) was used for three reported NA's, etc.; and, if the reported results were of mixed type, e.g., S1 and S2 were numerical values and S3 was reported as "<value", the two similar "types" were used to either determine the mean or to set a non-numerical descriptor.

Determination of assigned values: For a particular analyte, the performance on the reference material was deemed acceptable for the purpose of this exercise if the laboratory result was within 30% of the upper and lower limits of the confidence interval for analytes listed in the Certificates of Analysis for SRM 1974a and SRM 1944. For each analyte of interest not certified in these materials, a "target" concentration and the associated uncertainty were calculated. The targets for SRM 1974a were based on noncertified concentrations in SRM 1974a, results of the 1994, 1996, 1997, and 1998 exercises in which SRM 1974a was also used as a control. The targets for SRM 1944 were based on results of the 1995 Marine Sediment V exercise in which SRM 1944 was used as the "unknown material". Laboratory results within target upper and lower limits, typically 30% to 40%, of these concentrations were deemed acceptable for this exercise. If a laboratory demonstrated acceptable performance on a particular analyte in the reference material, that laboratory's results for that analyte in the corresponding "unknown" exercise material was then used in the calculation of the analyte's exercise assigned value unless it was deemed an "outlier." For evaluation of potential outliers, statistical tests and expert analyst judgement were used after viewing both normal and log plots of the data. This judgement utilized knowledge of potential coeluters based on the laboratory's reported methods. In instances in which the analyte concentration was below the detection limit of most participating laboratories, no exercise assigned value was calculated. In data sets such as this with a number of laboratories reporting results as "not detected" at various detection limits, there is no consensus as to what "numerical" value should be assigned to these results in the computation of grand means, etc., e.g., "0," ½ detection limit (DL), and the DL value itself have all been used, and the choice is influenced by the use of the particular data set.

Reported Results

Laboratories were assigned numerical identification codes in order of receipt of data with the exception of NIST-Gaithersburg, which is Laboratory 1 in these exercises. A laboratory was assigned the same code for each material. In this report, the triplicate results as reported by the laboratories for both the exercise materials and the two SRMs are shown in Appendix C (Mussel Tissue X) and Appendix D (Marine Sediment X) along with reference values for each of the materials and performance scores [numerical indicators of accuracy (bias) and precision (reproducibility)]. The laboratory mean replicate data are shown in Tables 2 to 4 and Tables 5 to 7 for the Mussel Tissue X and Marine Sediment X materials, respectively. Included in the means tables are the exercise assigned values, the standard deviation of the assigned value, the percent relative standard deviation (%RSD), and the calculated 95% confidence limits of the assigned value for the percent water, PAHs, chlorinated pesticides, and PCB congeners. Notes included by a laboratory with its data are listed in Appendices E (Mussel Tissue X) and F (Marine Sediment X). Summaries of the methods used by each laboratory are in Appendices G (Mussel Tissue X) and H (Marine Sediment X).

In Appendices I (Mussel Tissue X) and J (Marine Sediment X), charts of the mean reported numerical results by laboratory for **each analyte** are shown for the exercise material and the corresponding reference material.

Performance Scores

The exercise coordinators recognize that different programs have different data quality needs. The acceptability of the results submitted by a particular laboratory will be decided by the individual program(s) for which the particular 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 facilitate their use by these programs in their acceptability assessments.

IUPAC guidelines [6] describe the use of z-scores and p-scores for assessment of accuracy and precision in intercomparison exercises such as those 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)

$$\text{z-score} = \frac{\text{bias estimate}}{\text{performance criterion}}$$

$$z = \frac{(x - X)}{\sigma}$$

where x is the individual laboratory result, X is the "Exercise Assigned Value," and σ is the target value for standard deviation.

As described in the IUPAC guidelines, the choice of σ is dependent upon data quality objectives of a particular program. It can be "fixed" and arrived at by perception, prescription, or reference to validated methodology (e.g., $\sigma = 0.025 X$, X is the analyte concentration), or it can be an estimate of the actual variation (e.g., the calculated s from the exercise data). 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.

We have calculated and reported z-scores using both approaches for each analyte for each laboratory. At a previous workshop, it was decided to use "25% of the exercise assigned value" as the fixed target value for standard deviation for this program, at least for a few years. We also calculated z-scores based on "one assigned-value standard deviation." The z-scores calculated for these exercises can thus be interpreted as shown in the following examples:

z-score (25% X):

- +1 \Rightarrow laboratory result is 25% higher than the assigned value
- 2 \Rightarrow laboratory result is 50% lower than the assigned value

z-score (s):

- +1 \Rightarrow laboratory result is one "exercise standard deviation" higher than the assigned value
- 2 \Rightarrow laboratory result is "two exercise standard deviations" lower than the assigned value

From a scientific point of view, IUPAC does not recommend the classification of z-scores but allows that it is possible to classify scores, e.g.:

$ z \leq 2$	Satisfactory
$2 < z < 3$	Questionable
$ z \geq 3$	Unsatisfactory

The Tables in Appendices C (Mussel Tissue X) and D (Marine Sediment X) show the calculated z-scores for each laboratory for each reported analyte. These tables of the results and

performance include a summary of the number of reported analytes that fall within each category for each laboratory.

Precision Assessment (p-score)

$$p = \frac{\sigma_{lab}}{\sigma_{target}} = \frac{CV_{lab}}{CV_{target}}$$

Prior to the 1994 exercises, participating laboratories typically analyzed the three replicate samples for an exercise with the same sample set, i.e., within one set of samples with the same blank, calibration curve, etc. applicable for each. Since the repeatability for replicates within a set is generally better than the reproducibility for replicates across different sets, this does not result in data that are very useful for overall precision assessment. Since 1994, laboratories have been requested to process each replicate in a different sample set for precision assessment. For the calculation of p-scores for this program, the current target CV for the three replicates is 15%.

The Tables in Appendices C (Marine Sediment X) and D (Marine Sediment X) show the calculated p-scores for each laboratory for each reported analyte.

Discussion

Laboratories were requested to quantify 26 PAHs, 25 chlorinated pesticides, and 25 PCB congeners in this year's exercise. A total of 17 laboratories submitted results for Mussel Tissue X, and 21 laboratories submitted results for Marine Sediment X. One laboratory (4) submitted two sets of data (4a and 4b) for the PAH concentrations in Marine Sediment X. Two laboratories (14 and 16) did not convert the concentrations in Mussel Tissue X to a dry mass basis so the exercise coordinator used 90% as the conversion factor for their data for Mussel Tissue X and 88.61% as the conversion factor for SRM 1974a. For the sediment exercise, two laboratories (8 and 23) reported data for SRM 1941a (Organics in Marine Sediment) as the control material. Their data were evaluated based on the certified and target values for this SRM (see Evaluation of Exercise Results above). Laboratory 15 did not submit data for a mussel reference material, and laboratory 21 did not submit data for a sediment reference material, so the data from these laboratories were not used for the determination of the respective exercise assigned values.

The concentrations of the PAHs of interest in Mussel Tissue X range from 3 ng/ dry basis to 175 ng/g dry basis, the concentrations of the pesticides of interest range from <2 ng/g dry basis to 40 ng/g dry basis, and the concentrations of the PCB congeners range from <2 ng/g dry basis to 140 ng/g dry basis. For the chlorinated pesticides, 11 of the 25 compounds were above the detection

limit for the majority of the laboratories reporting while 21 of the 25 PCB congeners were above the detection limit for the majority of the laboratories. It is interesting to note that the concentrations of the PAHs in Mussel Tissue X tend to be higher than those in SRM 1974a while the concentrations of the PCB congeners are generally lower in Mussel Tissue X than in SRM 1974a.

The z-scores based on 25% of the exercise assigned value are summarized for Mussel Tissue X in Tables 8, 9, and 10 for the PAHs, pesticides, and PCB congeners, respectively. Lab 21 reported PAH concentrations that were very high (>20 times for most PAHs) compared to the other laboratories. Their water determination was low, 68% compared to the exercise assigned value of 89%, but this does not account for the differences noted. Laboratory 21's data were closer to the exercise assigned values for the chlorinated pesticides (25% z-scores ranging from 1.7 to 226) and for the PCB congeners (25% z-scores ranging from -1.8 to 26.1).

For the analytes of interest, the PAH concentrations in Marine Sediment X range from 73 ng/g dry basis to 2600 ng/g dry basis. The pesticide concentrations range from below the detection limits of the methods used to 600 ng/g dry basis, while the PCB concentrations range from 3 ng/g dry basis to 60 ng/g dry basis. Although Marine Sediment X was prepared from the fine fraction remaining from the preparation of SRM 1944, the concentrations of the PAHs in Marine Sediment X are generally 3 times to 4 times lower than in SRM 1944, the concentrations of the chlorinated pesticides range from 0 times to 5 times higher in Marine Sediment X than in SRM 1944, and the concentrations of the PCB congeners range from 15% to 45% lower in Marine Sediment X than in SRM 1944.

The z-scores based on 25% of the exercise assigned value are summarized for Marine Sediment X in Tables 11, 12, and 13 for the PAHs, pesticides, and PCB congeners, respectively. In general, the z-scores were lower for Marine Sediment X compared to Mussel Tissue X, possibly a result of the concentrations generally being higher in the sediment material compared to the mussel tissue. In particular, laboratory 21's z-scores ranged from -0.1 to 4.7 for the PAHs in the Marine Sediment X. As stated above, laboratory 21's data were not used for the determination of the consensus value, since the laboratory did not report values for a corresponding sediment reference material.

As in the past exercises, a variety of methods were used for extraction, extract cleanup, and analysis. These are summarized in Appendix G for the mussel tissue and Appendix H for the sediment. For the PAHs in both materials, two laboratories (7 and 14) used ion trap mass spectrometry (MS). For the chlorinated analytes, laboratory 14 used ion trap MS; laboratories 3, 17, and 21 specified the use of high-resolution MS. The majority of the laboratories used deuterated PAHs as internal standards/surrogates while laboratories 3, 17, 19, and 21 used carbon-13 labeled chlorinated pesticides and PCB congeners as internal standards/surrogates for the corresponding analytes. There was no obvious correlation between z-scores and methods used.

For the year 2000 exercises, the data provided in the various figures and tables of this report can be used for assessing the comparability of results of over 75 analytes of interest in this program

and the performance of an individual laboratory. The z-scores and the p-scores for the individual laboratories are summarized by lab in Appendices C and D for the mussel tissue and sediment, respectively. For both materials, the highest percentage of z-scores and p-scores that were in the unsatisfactory category were for the chlorinated pesticides. The chlorinated pesticides were typically present at lower concentrations in both of these materials than the concentrations of the PAHs and PCB congeners. In these exercises, interlaboratory variability is a greater contributor to measurement incomparability than is the intralaboratory variability. Laboratories reporting results of concurrent reference material analyses typically showed better performance than those laboratories that did not analyze the reference materials.

Subgroups of the exercise participants have demonstrated comparability of results for many analytes within the 0 to 2 z-range based on use of "25% of the analyte concentration" as the performance criterion. This implies that this subgroup can distinguish between two samples that have an analyte concentration difference of 100%. The reported accuracy and reproducibility indices (z- and p-scores, respectively) can be easily converted to conform to the acceptability requirements of a particular program. For example, a z-score based on 25% can be multiplied by two to convert to a z-score based on 12.5% of the analyte concentration.

It is important to evaluate the non-quantitative results reported by each laboratory as well. Although these results are not easily presented or numerically evaluated, they are provided in the various tables of this report that list the mean and individual results of the laboratories. The laboratory and its data users should look closely at these non-quantitative results. Decisions based on false negative or false positive results from a laboratory can lead to significant environmental and/or economic consequences. Some laboratories reported detection limits in these "real" matrix materials that may be too high for the data quality needs of their program(s).

Intercomparison exercises provide an important mechanism for assessing the comparability, accuracy, and reproducibility of data being produced by the participating laboratories. Exercise materials similar in matrix, form, and analyte concentration to typical samples routinely analyzed by the laboratories are most useful for demonstrating the level of comparability and for revealing potential problem areas.

For the determination of the target compounds in these complex marine matrices with relatively low levels of these analytes, the levels of bias and reproducibility of many of the participating laboratories meet their current acceptability requirements. However, there is certainly room for improvement. Minimizing the between-laboratory bias such that the analytical variability is significantly less than the sampling variability should be an achievable goal.

Acknowledgments

The time and efforts of the analysts and management of the participating laboratories and the assistance of the NIST Standard Reference Materials Program with the procurement and preparation of the exercise materials are gratefully acknowledged.

Disclaimer

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

References

1. A. Y. Cantillo and R. M. Parris, "Evaluation of Trace Organic NOAA Status and Trends Quality Assurance Project Performance," in Quality Assurance for Analytical Laboratories, M. Parkany (ed.), Royal Society of Chemistry, Spec. Publ. No. 130 (1993).
2. A. Y. Cantillo and R. M. Parris, National Status and Trends Program Quality Assurance Project: Trace Organic Intercomparison Exercise Results 1986-1990, NOAA Tech. Memo. NOS/ORCA 69 (1994).
3. A. Y. Cantillo, NS&T Quality Assurance Project Intercomparison Exercise Results 1991-1993, NOAA Tech. Memo. 79 NOS/ORCA (1995).
4. Certificate of Analysis for Standard Reference Material (SRM) 1974a, Organics in Mussel Tissue (*Mytilus edulis*), National Institute of Standards and Technology (NIST), Gaithersburg, MD, 1995.
5. Certificate of Analysis for Standard Reference Material (SRM) 1944, New York/New Jersey Waterway Sediment, National Institute of Standards and Technology (NIST), Gaithersburg, MD, 1999.
6. IUPAC "The International Harmonized Protocol for the Proficiency Testing of (Chemical) Analytical Laboratories," Pure Appl. Chem. (1993) 65 (9), 2123-2144.

List of Tables

- Table 1. Target Analytes in NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment.
- Table 2. Mussel Tissue X (QA00TIS10): Laboratory Means of Three Replicates and Exercise Assigned Values - Water and PAHs
- Table 3. Mussel Tissue X (QA00TIS10): Laboratory Means of Three Replicates and Exercise Assigned Values - Pesticides
- Table 4. Mussel Tissue X (QA00TIS10): Laboratory Means of Three Replicates and Exercise Assigned Values - PCBs
- Table 5. Marine Sediment X (QA00SED10): Laboratory Means of Three Replicates and Exercise Assigned Values - Water and PAHs.
- Table 6. Marine Sediment X (QA00SED10): Laboratory Means of Three Replicates and Exercise Assigned Values - Pesticides.
- Table 7. Marine Sediment X (QA00SED10): Laboratory Means of Three Replicates and Exercise Assigned Values - PCBs.
- Table 8. Mussel Tissue X (QA00TIS10): Z-Scores (25%) by Laboratory - Water and PAHs.
- Table 9. Mussel Tissue X (QA00TIS10): Z-Scores (25%) by Laboratory - Pesticides.
- Table 10. Mussel Tissue X (QA00TIS10): Z-Scores (25%) by Laboratory - PCBs.
- Table 11. Marine Sediment X: Z-Scores (25%) by Laboratory - Water and PAHs.
- Table 12. Marine Sediment X: Z-Scores (25%) by Laboratory - Pesticides.
- Table 13. Marine Sediment X: Z-Scores (25%) by Laboratory - PCBs.

Table 1. Target Analytes in NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment

Chlorinated Pesticides

hexachlorobenzene	2,4'-DDE
alpha-HCH (alpha-BHC)	4,4'-DDE
gamma-HCH (gamma-BHC, Lindane)	2,4'-DDD
beta-HCH	4,4'-DDD
heptachlor	2,4'-DDT
heptachlor epoxide	4,4'-DDT
cis-chlordane (alpha-chlordane)	aldrin
trans-chlordane (gamma-chlordane)	dieldrin
oxychlordane	endrin
cis-nonachlor	endosulfan sulfate
trans-nonachlor	endosulfan I
mirex	endosulfan II
chlorpyrifos	

Polychlorinated Biphenyl Congeners

<i>PCB No.</i>	<i>Compound Name</i>
8	2,4'-dichlorobiphenyl
18	2,2',5-trichlorobiphenyl
28	2,4,4'-trichlorobiphenyl
31	2,4',5-trichlorobiphenyl
44	2,2',3,5'-tetrachlorobiphenyl
49	2,2',4,5'-tetrachlorobiphenyl
52	2,2',5,5'-tetrachlorobiphenyl
66	2,3',4,4'-tetrachlorobiphenyl
95	2,2',3,5',6-pentachlorobiphenyl
99	2,2',4,4',5-pentachlorobiphenyl
101	2,2',4,5,5'-pentachlorobiphenyl
105	2,3,3',4,4'-pentachlorobiphenyl
118	2,3',4,4',5-pentachlorobiphenyl
128	2,2',3,3',4,4'-hexachlorobiphenyl
138	2,2',3,4,4',5'-hexachlorobiphenyl
149	2,2',3,4',5',6-hexachlorobiphenyl
153	2,2',4,4',5,5'-hexachlorobiphenyl
156	2,3,3',4,4',5-hexachlorobiphenyl
170	2,2',3,3',4,4',5-heptachlorobiphenyl
180	2,2',3,4,4',5,5'-heptachlorobiphenyl
187	2,2',3,4',5,5',6-heptachlorobiphenyl
194	2,2',3,3',4,4',5,5'-octachlorobiphenyl
195	2,2',3,3',4,4',5,6-octachlorobiphenyl
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl
209	decachlorobiphenyl

Table 1. (continued)

Polycyclic aromatic hydrocarbons (PAH)

naphthalene	benz[<i>a</i>]anthracene
2-methylnaphthalene	chrysene
1-methylnaphthalene	triphenylene
biphenyl	benzo[<i>b</i>]fluoranthene
2,6-dimethylnaphthalene	benzo[<i>j</i>]fluoranthene
acenaphthylene	benzo[<i>k</i>]fluoranthene
acenaphthene	benzo[<i>e</i>]pyrene
1,6,7-trimethylnaphthalene	benzo[<i>a</i>]pyrene
fluorene	perylene
phenanthrene	indeno[1,2,3- <i>cd</i>]pyrene
anthracene	dibenz[<i>a,h</i>]anthracene
1-methylphenanthrene	benzo[<i>ghi</i>]perylene
fluoranthene	
pyrene	

Table 2. Mussel TissueX (QA00TIS10): Laboratory means of three replicates and exercise assigned values - Water and PAHs (reported as if three figures were significant)																				
Laboratory No.	1	2	4	5	6	7	9	10	11	13	14	15	16	17	18	20	21	22	Exercise Assigned	
Water (percent)	90.0	NA	90.1	90.4	89.9	90.2	90.0	90.5	90.6	89.7	NA	90.5	91.6	89.6	90.5	90.5	67.7	88.3	Value	%RSD
																			88.8	5.7
PAHs (ng/g dry basis)																			Exercise Assigned	
Laboratory No.	1	2	4	5	6	7	9	10	11	13	14	15	16	17	18	20	21	22	Value	%RSD
naphthalene	23.1	NA	69.4	<7	DL	40.5	31.9	30.0	NA	29.8	NA	20.8	NA	47.9	10.8	12.3	807	21.8	32.1	9.3
2-methylnaphthalene	11.6	NA	20.0	<7	DL	29.8	<74.7	27.0	NA	62.0	NA	21.9	NA	9.95	5.98	11.0	534	11.8	11.7	4.6
1-methylnaphthalene	5.76	NA	14.7	<7	DL	19.4	<40.0	18.2	NA	44.6	NA	17.8	NA	15.5	3.77	6.19	225	5.50	8.95	5.79
biphenyl	4.72	NA	3.60	<7	DL	12.0	21.0	<74	NA	20.2	NA	4.95	NA	12.0	1.93	3.84	211	7.81	8.35	3.94
2,6-dimethylnaphthalene	1.51	NA	4.99	<7	DL	14.6	<40.9	16.5	NA	36.6	NA	7.81	NA	4.22	2.14	5.29	276	3.52	6.59	5.69
acenaphthylene	6.05	NA	3.01	<5	DL	<1	<12.0	10.5	NA	16.3	NA	<6.4	NA	4.82	6.24	5.50	536	2.88	5.58	2.57
acenaphthene	2.16	NA	2.88	<5	DL	5.83	<15.7	15.8	NA	35.7	NA	<4.7	NA	5.78	3.49	2.35	138	2.95	3.63	1.54
1,6,7-trimethylnaphthalene	3.72	NA	<0.34	<7	DL	8.70	<13.1	18.2	NA	NA	NA	<5.7	NA	3.21	3.56	5.22	NA	3.98	4.73	2.06
fluorene	4.53	NA	5.74	<6	DL	5.43	<12.1	18.6	NA	22.7	NA	5.31	NA	4.59	4.36	6.02	215	4.84	5.07	0.65
phenanthrene	25.9	NA	22.2	20.0	DL	29.7	23.1	49.8	NA	32.8	NA	31.9	NA	27.4	22.3	28.1	1639	24.2	24.8	3.2
anthracene	4.82	NA	4.12	5.85	DL	5.60	<9.7	4.84	NA	15.2	NA	17.1	NA	5.02	11.6	9.92	735	4.29	6.47	2.66
1-methylphenanthrene	9.22	NA	7.75	10.5	DL	9.75	<16.8	24.2	NA	14.3	NA	6.33	NA	14.5	10.8	11.0	240	9.26	12.1	4.8
fluoranthene	166	NA	195	165	DL	169	177	161	NA	124	NA	167	NA	150	157	210	3958	169	168	23
pyrene	177	NA	200	179	DL	175	159	172	NA	133	NA	175	NA	150	163	223	4142	197	175	25
benzo[a]anthracene	41.6	NA	34.1	39.5	DL	46.2	42.0	44.9	NA	39.7	NA	42.4	NA	59.5	40.8	48.1	1576	53.4	44.5	7.1
chrysene/triphenylene	other	NA	103	101	DL	117	108	91.6	NA	other	NA	109	NA	148	97.2	121	2533	133	113	18
chrysene	57.2	NA	other	other	DL	other	other	other	NA	47.4	NA	other	NA	other	other	other	other	other	52.3	ND
triphenylene	39.4	NA	other	NA	DL	Other (1)	NA	NA	NA	NA	NA	NA	NA	other	other	other	NA	other	39.4	ND
benzo[b]fluoranthene	62.4	NA	39.0	55.5	DL	61.9	other	60.4	NA	55.8	NA	117	NA	other	other	70.7	2656	64.2	58.7	9.3
benzo[k]fluoranthene	28.5	NA	other	NA	DL	Other (2)	NA	NA	NA	NA	NA	NA	NA	other	other	other	NA	29.7	29.1	ND
benzo[a]pyrene	31.0	NA	other	39.0	DL	Other (2)	33.0	67.7	NA	22.2	NA	NA	NA	other	other	other	1747	30.7	31.2	6.0
benzo[e]pyrene	95.3	NA	75.1	86.5	DL	91.7	104	81.8	NA	67.2	NA	102	NA	89.1	96.2	112	1851	109	91.6	13.8
benzo[a]pyrene	26.8	NA	17.5	20.5	DL	22.7	8.85	30.0	NA	27.5	NA	24.6	NA	21.2	22.6	33.2	1489	27.3	23.0	6.6
perylene	7.96	NA	11.5	8.00	DL	9.36	<50.9	15.3	NA	16.8	NA	16.3	NA	6.65	7.95	22.5	1048	9.70	10.3	5.5
indeno[1,2,3-cd]pyrene	20.0	NA	10.5	20.0	DL	24.1	<15.7	24.2	NA	30.4	NA	21.5	NA	16.1	15.8	31.6	1449	20.8	20.3	6.0
dibenz[a,h]anthracene	3.22	NA	<0.118	<5	DL	7.77	<10.1	5.47	NA	16.0	NA	<3.6	NA	4.39	3.81	11.3	466	2.83	5.54	3.02
benzofghi]perylene	28.9	NA	23.4	29.5	DL	40.2	13.0	30.5	NA	33.5	NA	33.9	NA	28.7	28.0	44.7	1686	35.1	31.2	8.4

Note: Bolded values were not used in the calculation of the exercise assigned mean.

Table 3. Mussel Tissue X (QA00TTS10): Laboratory means of three replicates and exercise assigned values - Pesticides																			
(reported as if three figures were significant)																			
Laboratory No.	1	2	4	5	6	7	9	10	11	13	14	15	16	17	18	20	21	22	Exercise Assigned
Pesticides (ng/g dry basis)																			Value s %RSD
alpha-HCH (a-BHC)	<1	<8	0.681	NA	DL	NA	<1.82	NA	<1.0	2.67	<1.5	NA	<7.59	<0.56	0.588	NA	ND	2.27	<3
hexachlorobenzene	<1	<8	0.583	<1.2	DL	0.147	<1.65	<16	<0.3	<2.5	28.6	<1.0	<8.54	0.488	0.456	<3.76	8.54	<1	<3
gamma-HCH (g-BHC, lindane)	<1	<8	0.431	<1.2	DL	1.76	<2.32	<32	<1.0	10.4	14.0	NA	<7.12	<0.63	0.307	<4.12	ND	<3	<3
beta-HCH (b-BHC)	<1	<8	0.599	NA	DL	NA	<1.62	NA	<2.0	<2.5	<1	NA	<12.8	<0.63	<1	6.56	ND	<1	<3
heptachlor	<1	<8	<1.08	<1	DL	0.341	<2.06	<16	<2.0	4.24	<1.5	<1.0	<7.83	<1.18	<1	<3.77	ND	1.42	<3
aldrin	<1	<8	<1.22	<1.5	DL	<0.01	<2.25	<16	<1.0	<2.0	<1.5	NA	<9.49	<1.09	<1	6.58	ND	<1	<3
heptachlor epoxide	<1	<8	<1.45	<1.2	DL	5.06	<1.91	<32	<1.0	<2.0	<1.5	<1.0	<3.80	<0.95	<1	<3.77	ND	<1	<3
oxychlorodane	<1	<8	<1.58	NA	DL	NA	7.04	NA	<1.0	<2.0	N/A	NA	na	<1.34	NA	<3.86	ND	4.20	<5
gamma-chlordane (trans-)	10.4	7.31	8.68	NA	25.3	NA	10.3	NA	9.51	7.29	17.8	NA	20.8	7.74	11.6	11.0	36.9	16.8	11.6
2,4'-DDE	3.23	<8	<3.04	<1.2	DL	<0.06	1.80	<27	<2.0	2.21	8.29	6.58	<9.49	2.58	<1	3.61	115	4.14	3.88
endosulfan I	<1	<8	<1.02	<1.2	DL	<0.1	<4.58	<32	<2.0	<2.0	N/A	NA	<8.54	<3.04	<1	<12.2	ND	<1	<5
cis-chlordane (alpha-)	13.4	7.17	13.9	10.3	13.0	3.94	11.8	<17	11.6	10.8	27.1	12.6	10.4	8.21	13.9	13.4	31.4	15.8	11.5
trans-nonachlor	11.9	8.02	13.5	5.95	DL	3.93	4.73	<32	5.50	8.21	91.0	<1.0	11.8	10.1	5.09	7.46	10.4	8.21	13.4
dieldrin	6.04	<8	12.3	47.0	45.6	18.2	33.8	40.1	40.7	27.1	44.8	44.2	38.0	30.3	48.4	45.9	399	45.0	7.27
4,4'-DDE	44.3	28.8	36.4	7.35	109	10.1	16.6	<32	12.6	NA	<1.5	9.65	28.6	8.62	15.7	15.4	320	14.1	7.27
2,4'-DDD	12.0	<8	<6.37	NA	DL	NA	<2.20	<32	<2.0	4.66	<1.5	NA	<15.7	<5.49	<1	NA	ND	<1	13.9
endrin	<1	<8	5.84	<2	DL	<0.1	<4.58	<32	<1.0	<2	N/A	NA	<12.3	<6.15	18.8	<12.4	16.7	<1	<5
endosulfan II	<1	<8	26.7	36.4	19.5	22.6	35.1	18.8	28.4	28.9	46.0	31.4	21.3	32.2	28.8	34.3	1737	38.9	<15
4,4'-DDD	36.9	26.7	28.4	9.13	DL	<0.1	7.15	<16	3.46	5.74	49.0	5.78	<7.12	0.897	10.4	<3.74	38.1	9.24	30.2
2,4'-DDT	9.01	<8	<0.791	NA	DL	NA	9.97	NA	2.45	6.08	16.3	NA	<7.12	1.67	7.49	6.26	39.5	9.37	8.45
cis-nonachlor	8.49	3.75	11.4	4.86	217	1.97	4.27	20.3	3.38	5.93	57.0	4.90	<12.8	2.24	3.83	5.34	1796	7.16	8.25
4,4'-DDT	4.35	<8	2.39	<1.5	DL	3.25	<1.66	<16	<3.0	<2.0	22.5	1.02	<8.07	<0.45	1.12	4.63333	1.6	<1	4.37
mirex	<1	<8	0.581	NA	DL	<0.1	<4.58	<32	<1.0	NA	N/A	NA	<20.9	<0.95	3.40	<12.2	ND	<1	<5
endosulfan sulfate	<1	<8	<1.23	NA	DL	<0.1	<4.58	<32	<1.0	NA	N/A	NA	na	<1.77	NA	NA	NA	<1	<4
chlorpyrifos	<1	<8	<1.04	NA	DL	1.93	1.52	NA	<2.0	NA	N/A	NA	na	<1.77	NA	NA	NA	NA	<2

Note: Bolded values were not used in the calculation of the exercise assigned mean.

Table 4. Mussel Tissue X (QA00TISI0): Laboratory means of three replicates and exercise assigned values - PCBs (reported as if three figures were significant)																			
PCB Congeners (ng/g dry basis)		1	2	4	5	6	7	9	10	11	13	14	15	16	17	18	20	21	22
Laboratory No.		Exercise Assigned																	
		Value	s	%RSD															
PCB 8		<2	NA	5	<2	DL	5.25	3.04	<16	5.39	34.4	36.5	2.80	<8.54	4.10	3.99	NA	21.7	<1
PCB 18		7.72	NA	12.1	<2	16.2	9.19	16.4	14.4	9.20	8.19	24.8	6.58	<7.35	6.78	13.4	11.8	32.6	8.70
PCB 28		35.4	NA	35.3	35.5	DL	25.7	43.7	32.5	40.58	33.1	47.0	23.8	<12.3	33.1	57.4	33.2	98.2	37.4
PCB 31		31.6	NA	NA	NA	NA	NA	26.5	NA	27.38	NA	N/A	NA	na	33.1	NA	31.4	68.9	32.1
PCB 44		41.0	NA	39.4	34.6	137	33.5	52.6	35.4	41.74	32.9	77.2	37.1	55.8	29.2	53.0	38.9	82.7	43.5
PCB 49		60.6	NA	52.0	NA	NA	NA	69.5	NA	56.97	NA	N/A	NA	34.8	42.4	NA	55.5	57.3	61.9
PCB 52		59.1	NA	64.8	57.0	138	53.1	79.5	64.3	65.30	54.4	127	63.1	30.4	59.4	81.8	69.8	102	74.5
PCB 66		69.8	NA	64.1	other	91.4	72.7	69.5	<88	74.87	68.7	191	70.6	106	46.1	other	NA	86.4	66.6
PCB 95		62.9	NA	NA	NA	NA	NA	62.0	NA	69.36	NA	N/A	NA	na	49.1	other	62.6	60.7	67.8
PCB 99		62.8	NA	NA	NA	NA	NA	77.8	NA	62.64	NA	N/A	NA	112	48.5	NA	63.8	42.2	65.7
PCB 101		95.5	NA	94.5	94.9	207	94.6	119	93.1	132	105	58.7	111	182	81.6	136	117	75.0	134
PCB 105		40.0	NA	43.0	36.6	75.8	31.5	35.5	31.1	43.6	39.4	33.0	44	38.1	34.9	49.3	44.3	33.5	44.6
PCB 118		107	NA	115	99.0	151	88.2	106	98.9	118	105	183	116	120	90.2	141	105	70.9	112
PCB 128		19.4	NA	21.9	19.7	77.1	17.4	15.9	15.7	19.4	16.7	26.5	24.6	<14.0	11.5	28.4	19.7	11.7	21.5
PCB 138		90.3	NA	122	101	131	96.9	119	96.5	132	113	223	130	122	55.5	143	133	88.8	69.1
PCB 149		73.5	NA	NA	NA	NA	NA	71.5	NA	75.1	NA	N/A	NA	54.1	58.6	NA	72.8	67.2	75.0
PCB 153		141	NA	150	114	170	98.5	169	110	126	110	318	134	138	125	174	161	73.3	133
PCB 156		7.11	NA	NA	NA	NA	NA	17.8	NA	7.39	NA	N/A	NA	<9.49	5.45	NA	7.98	10.2	9.23
PCB 170		2.89	NA	2.89	<2	20.6	3.68	25.9	<16	2.14	2.42	11.5	3.25	<10.2	3.56	4.57	5.22	26.2	2.61
PCB 180		12.2	NA	33.6	11.8	26.6	12.5	34.3	12.1	13.1	8.20	33.0	11.8	<12.1	7.05	16.4	12.7	70.0	14.9
PCB 187		31.8	NA	31.8	31.1	17.2	22.1	32.4	29.5	28.3	28.7	34.9	27.5	24.0	24.5	42.4	29.0	32.3	32.0
PCB 194		<1	NA	NA	NA	NA	NA	1.11	NA	0.514	NA	N/A	NA	<10.9	0.452	NA	<3.82	16.3	<1
PCB 195		<1	NA	<904	<2	DL	0.595	<1.77	<16	<0.2	<1.5	37.0	2.87	<14.0	0.094	1.08	<3.83	5.85	<1
PCB 206		<1	NA	<912	<2	DL	0.260	<1.83	<16	<0.2	<1.5	18.4	<1.0	<11.9	0.103	0.292	<3.79	11.5	<1
PCB 209		<1	NA	<1.08	<2	DL	0.355	<2.06	<16	1.14	<1.5	<1.5	<1.0	<23.5	0.128	<1	<3.78	10.1	<1

Note: Bolded values were not used in the calculation of the exercise assigned mean.

Table 5. Marine Sediment X (QA00SEDI0): Laboratory means of three replicates and exercise assigned values - Water and PAHs (reported as if three figures were significant)																									
Laboratory No.	1	2	3	4a	4b	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Value	Exercise Assigned s %RSD 95% CL
Water (percent)	45.2	NA	54.0	45.9	45.3	46.1	45.6	45.3	45.3	44.8	45.5	54.1	44.9	NA	46.0	55.2	45.5	46.8	44.7	45.7	45.1	44.2	54.4	47.1	3.7 7.8 1.3
PAHs (ng/g dry basis)	1	2	3	4a	4b	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Value	Exercise Assigned s %RSD 95% CL
naphthalene	389	NA	NA	371	397	451	500	107	356	504	NA	328	564	NA	291	121	470	221	451	363	436	414	337	418	75 18.0 43
2-methylnaphthalene	255	NA	NA	257	274	223	374	74.8	261	300	NA	291	1001	NA	205	106	51.2	158	293	295	290	257	257	277	39 14.1 26
1-methylnaphthalene	112	NA	NA	113	123	NA	153	39.4	94.1	119	NA	90.0	568	NA	96.9	45.0	124	93.8	107	93.7	120	109	117	108	25 22.9 15
biphenyl	101	NA	NA	50.8	110	NA	136	41.1	80.4	173	NA	57.2	111	NA	96.3	53.1	42.9	62.0	101	95.9	104	91.6	79.2	87.2	35.0 40.2 18.0
2,6-dimethylnaphthalene	106	NA	NA	149	217	NA	246	82.1	148	131	NA	NA	428	NA	226	109	162	97.6	208	207	243	100	195	175	47 27.0 29
acenaphthylene	109	NA	NA	123	303	285	14.4	102	255	145	NA	52.1	227	208	41.5	23.2	38.3	141	244	73.1	217	16.4	29.1	99.2	76.7 77.4 40.9
acenaphthylene	61.8	NA	NA	46.9	82.1	55.0	84.6	53.2	60.6	64.7	NA	66.9	98.9	125	57.4	44.4	81.8	72.8	79.5	61.5	83.2	68.5	75.3	73.0	25.1 10.6
1,6,7-trimethylnaphthalene	99.8	NA	NA	73.1	NA	NA	93.6	NA	46.4	76.0	NA	NA	NA	NA	114	244	232	109	NA	85.8	NA	100	158	95.5	29.4 30.8 21.1
fluorene	92.9	NA	NA	73.9	88.0	117	94.2	113	97.9	91.0	NA	90.8	151	269	100	72.9	117	120	120	108	102	95.0	133	104	20 19.3 10
phenanthrene	827	NA	NA	764	783	756	918	1333	766	801	NA	971	894	1210	590	640	945	945	1007	811	858	863	995	867	164 18.9 82
anthracene	363	NA	NA	294	399	400	249	527	525	331	NA	280	210	469	196	195	215	281	375	316	386	277	270	317	100 31.6 50
1-methylphenanthrene	188	NA	NA	157	135	NA	207	357	157	122	NA	121	181	NA	121	109	110	248	382	226	149	174	209	173	42 24.2 25
fluoranthene	2424	NA	NA	2797	2520	1971	2147	4280	2199	3330	NA	2469	2626	2992	2127	1507	2027	2963	2877	2497	2533	2671	2887	2533	381 15.0 203
pyrene	2334	NA	NA	2610	2390	1823	2063	3870	1984	1927	NA	2593	2255	2760	2040	2470	3287	2707	2643	2400	2529	2470	2717	2477	496 20.0 247
benzo[a]anthracene	831	NA	NA	796	845	587	813	2020	1041	687	NA	1273	707	1370	681	536	1075	1100	977	840	867	801	1033	880	185 21.0 99
chrysene	984	NA	NA	other	other	other	other	other	other	other	NA	other	885	722	other	641	other	other	other	other	other	other	other	864	132 15.3 328
triphenylene	375	NA	NA	other	other	other	other	other	other	other	NA	other	NA	NA	other	NA	other	other	other	other	other	other	other	<400	
benzo[b]fluoranthene	1215	NA	NA	1173	1207	881	1210	1370	other	other	NA	other	NA	NA	NA	481	other	other	1770	1247	1363	1112	1317	1220	235 19.3 158
benzo[k]fluoranthene	510	NA	NA	other	other	NA	Other (2)	NA	NA	NA	NA	NA	NA	NA	NA	169	other	other	NA	NA	NA	497	NA	503	9 1.8 83
benzo[a]fluoranthene	548	NA	NA	other	other	752	Other (2)	Other (2)	399	801	NA	952	475	579	NA	NA	other	other	other	other	other	539	949	666	204 30.6 157
benzo[e]pyrene	947	NA	NA	868	1273	NA	1032	1380	845	820	NA	1146	798	NA	1137	189	675	1410	1258	1113	1215	1019	1035	1072	198 18.5 110
benzo[a]pyrene	839	NA	NA	593	903	572	822	953	732	772	NA	1071	116	969	842	273	836	1023	1031	853	989	695	852	845	143 16.9 74
perylene	356	NA	NA	265	363	NA	333	464	288	375	NA	297	119	NA	459	109	490	460	450	374	549	282	240	366	82 22.4 45
indeno[1,2,3-cd]pyrene	892	NA	NA	685	865	638	757	1065	695	841	NA	687	496	87.7	721	157	874	1153	957	932	1222	889	721	881	164 18.6 84
dibenz[a,h]anthracene	138	NA	NA	other	other	other	other	other	other	other	NA	other	111	27.0	other	44.6	other	other	other	other	other	142	other	92.4	53.3 57.7 66.2
benzo[ghi]perylene	930	NA	NA	627	978	503	822	1009	728	654	NA	209	490	85.9	838	181	885	1137	1177	1027	1149	899	870	899	187 20.8 108
chrysene/anthracene	other	other	other	1250	1387	959	1330	1186	1231	1313	NA	1032	other	other	1073	other	1207	1643	1720	1340	1482	1309	1627	1318	217 16.5 116
dibenz[a,h-a,c]anthracene	other	other	other	173	216	206	148	330	157	144	NA	199	other	other	166	other	168	266	323	314	284	142	173	209	70 33.3 40

Note: Bolded values were not used in the calculation of the exercise assigned mean.

Table 7. Marine Sediment X (QA00SED10): Laboratory means of three replicates and exercise assigned values - PCBs (reported as if three figures were significant)																												
Laboratory No.		1	2	3	4a	4b	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Exercise Assigned			
PCB Congeners (ng/g dry basis)																									Value	s	%RSD	95%CL
PCB 8		121	NA	15.7	19.8	NA	8.62	4.36	10.1	9.12	9.73	11.1	28.4	25.2	<1	10.3	19.8	8.59	23.6	12.2	NA	15.0	13.1	NA	14.0	5.8	41.3	3.2
PCB 18		29.9	NA	15.0	25.0	NA	28.2	14.2	22.4	30.1	23.3	15.0	36.0	42.7	6.02	25.7	27.2	15.0	35.7	35.7	32.5	25.9	33.8	NA	29.6	10.2	34.4	5.1
PCB 28		58.4	NA	83.4	54.9	NA	42.3	19.2	59.8	28.2	15.0	64.8	coelute	62.4	53.0	48.0	43.0	coelute	54.3	35.7	34.0	67.8	58.0	NA	54.4	13.9	25.5	7.7
PCB 31		43.7	NA	52.4	NA	NA	NA	30.7	36.0	NA	43.0	NA	coelute	NA	NA	NA	NA	coelute	NA	55.2	43.0	59.9	47.0	NA	46.2	10.7	23.2	9.0
PCB 44		42.5	NA	83.4	40.8	NA	39.9	15.0	38.3	54.2	39.3	44.8	52.0	45.0	7.35	51.8	35.7	23.3	43.0	36.0	15.0	54.7	40.0	NA	40.7	9.5	23.4	4.9
PCB 49		34.2	NA	44.5	34.4	NA	NA	NA	20.3	52.0	NA	41.1	39.9	NA	NA	NA	15.0	31.9	NA	36.0	10.3	42.7	39.7	NA	37.7	9.2	24.4	5.8
PCB 52		50.0	NA	70.1	42.7	NA	44.5	15.0	40.4	76.1	44.3	55.2	43.7	65.6	48.0	92.0	36.0	30.0	67.5	36.0	15.0	66.6	55.4	NA	55.3	14.9	27.0	7.7
PCB 66		47.4	NA	53.0	40.8	NA	14.6	43.0	40.3	52.0	35.7	43.0	70.9	62.4	30.0	58.3	44.1	19.2	coelute	52.2	48.0	53.9	48.4	NA	49.1	13.8	28.1	6.9
PCB 95		21.7	NA	34.7	NA	NA	NA	NA	22.1	30.0	NA	34.2	NA	NA	NA	NA	15.0	coelute	36.0	64.2	38.3	29.6	NA	NA	31.4	7.6	24.1	5.8
PCB 99		25.8	NA	34.4	NA	NA	NA	NA	14.5	30.2	NA	15.0	17.7	NA	NA	NA	36.0	25.0	NA	32.5	36.0	28.1	20.9	NA	24.5	6.8	27.7	4.6
PCB 101		43.8	NA	46.3	40.8	NA	39.9	34.4	63.6	66.8	36.0	52.2	36.0	77.3	8.55	48.0	36.0	19.2	67.5	51.2	63.9	46.7	59.2	NA	51.4	12.1	23.5	6.2
PCB 105		50.0	NA	15.0	13.1	NA	15.7	9.53	15.5	13.6	15.0	43.0	NA	17.4	8.70	20.3	19.2	15.0	15.7	36.0	28.7	21.6	15.5	NA	15.8	4.0	25.6	2.1
PCB 118		42.3	NA	42.7	36.0	NA	15.0	20.7	29.8	43.7	35.7	36.0	17.7	43.0	14.6	41.5	22.1	32.4	39.9	15.0	15.0	44.6	33.5	NA	34.6	10.2	29.5	4.9
PCB 128		9.01	NA	7.88	4.92	NA	6.61	4.73	6.94	6.20	5.50	7.04	8.45	11.5	5.40	17.0	6.21	2.93	8.36	7.88	10.6	9.04	7.01	NA	6.98	2.01	28.8	1.11
PCB 138		50.0	NA	56.5	34.3	NA	46.0	48.0	37.7	63.1	35.7	35.7	42.7	15.0	6.81	65.0	23.3	19.2	64.2	43.0	76.5	67.1	42.8	NA	48.2	15.3	31.7	8.1
PCB 149		42.7	NA	68.5	NA	NA	NA	NA	28.3	45.3	NA	43.0	36.0	NA	NA	NA	28.5	15.7	NA	44.1	15.0	47.3	32.1	NA	38.8	7.8	20.2	5.6
PCB 153		54.5	NA	32.5	43.0	NA	35.2	19.8	36.3	81.4	36.0	46.8	35.7	15.7	15.7	53.0	35.7	52.0	67.5	48.7	84.2	55.6	37.5	NA	49.6	17.4	35.1	8.9
PCB 156		6.97	NA	5.17	NA	NA	NA	NA	6.14	21.8	NA	4.73	NA	NA	NA	NA	13.6	3.58	NA	4.21	7.83	6.52	4.28	NA	6.30	3.14	49.9	2.42
PCB 170		58.0	NA	14.8	13.2	NA	9.18	9.25	15.7	23.2	13.3	15.0	15.5	15.0	2.02	28.3	40.8	17.2	13.5	14.8	23.2	16.3	11.2	NA	15.6	4.5	29.1	2.5
PCB 180		34.6	NA	35.7	16.5	NA	14.6	15.0	29.3	34.3	28.3	33.6	23.3	40.7	2.14	38.5	15.5	15.0	40.3	33.0	46.3	41.9	26.2	NA	30.5	8.8	28.8	4.5
PCB 187		21.7	NA	15.0	14.8	NA	10.3	6.83	10.4	22.1	42.7	11.5	10.3	22.5	NA	21.9	9.12	43.0	23.4	20.7	76.1	24.0	15.6	NA	18.5	5.1	27.4	2.8
PCB 194		9.83	NA	9.52	NA	NA	NA	NA	6.02	8.78	NA	8.48	9.58	NA	NA	NA	5.86	6.49	NA	7.84	NA	10.4	6.35	NA	7.87	1.57	19.9	1.12
PCB 195		3.41	NA	3.59	2.73	NA	2.83	1.55	2.39	5.47	2.49	3.09	8.45	2.71	<1	5.01	3.07	2.20	2.50	3.42	4.09	4.28	2.89	NA	3.18	1.04	32.8	0.58
PCB 206		7.70	NA	7.45	3.49	NA	4.04	3.44	5.15	7.84	4.97	6.64	15.0	36.0	8.78	8.78	2.49	5.84	7.42	5.71	9.03	10.4	6.27	NA	6.05	2.11	34.9	1.17
PCB 209		6.56	NA	6.02	2.40	NA	1.34	2.66	4.97	7.79	4.50	6.30	10.8	7.34	NA	6.80	6.03	4.25	7.27	4.39	6.02	6.94	4.50	NA	5.49	1.61	29.3	0.86

Note: Bolded values were not used in the calculation of the exercise assigned mean.

Table 8. Mussel TissueX (QA00TIS10): z scores (25%) by laboratory - Water and PAHs (z=+1 is 25% higher than the exercise assigned value ; z=-1 is 25% lower than the exercise assigned value)																					
Laboratory No.	1	2	4	5	6	7	9	10	11	13	14	15	16	17	18	20	21	22			
Water	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0		0.1	0.1	0.0	0.1	0.1	-0.9	0.0			
PAHs																					
Laboratory No.	1	2	4	5	6	7	9	10	11	13	14	15	16	17	18	20	21	22			
naphthalene	-1.1		4.6			1.0	0.0	-0.3		-0.3		-1.4		2.0	-2.7	-2.5	96.5	-1.3			
2-methyl/naphthalene	0.0		2.8			6.2		5.2		17.2		3.5		-0.6	-2.0	-0.3	178.2	0.0			
1-methyl/naphthalene	-1.4		2.6			4.7		4.2		15.9		4.0		2.9	-2.3	-1.2	96.3	-1.5			
biphenyl	-1.7		-2.3			1.7	6.0			5.7		-1.6		1.7	-3.1	-2.2	97.0	-0.3			
2,6-dimethylnaphthalene	-3.1		-1.0			4.9		6.0		18.2		0.7		-1.4	-2.7	-0.8	163.5	-1.9			
acenaphthylene	0.3		-1.8					3.6		7.7				-0.5	0.5	-0.1	380.5	-1.9			
acenaphthene	-1.6		-0.8			2.4		13.4		35.3				2.4	-0.2	-1.4	147.9	-0.8			
1,6,7-trimethylnaphthalene	-0.9					3.4		11.4						-1.3	-1.0	0.4		-0.6			
fluorene	-0.4		0.5			0.3		10.7		13.9		0.2		-0.4	-0.6	0.7	165.2	-0.2			
phenanthrene	0.2		-0.4	-0.8		0.8	-0.3	4.0		1.3		1.2		0.4	-0.4	0.5	260.9	-0.1			
anthracene	-1.0		-1.5	-0.4		-0.5		-1.0		5.4		6.6		-0.9	3.2	2.1	450.4	-1.3			
1-methylphenanthrene	-1.0		-1.4	-0.5		-0.8		4.0		0.7		-1.9		0.8	-0.4	-0.4	75.3	-0.9			
fluoranthene	0.0		0.7	-0.1		0.0	0.2	-0.1		-1.0		0.0		-0.4	-0.3	1.0	90.4	0.0			
pyrene	0.0		0.6	0.1		0.0	-0.4	-0.1		-1.0		0.0		-0.6	-0.3	1.1	90.5	0.5			
benz[a]anthracene	-0.3		-0.9	-0.5		0.1	-0.2	0.0		-0.4		-0.2		1.3	-0.3	0.3	137.5	0.8			
chrysene/triphenylene			-0.4	-0.4		0.1	-0.2	-0.8		-2.3		-0.1		1.2	-0.6	0.3	85.6	0.7			
chrysene	0.3									-0.4											
triphenylene	0.0																				
benzo[b]fluoranthene	0.2		-1.3	-0.2		0.2		0.1		-0.2						0.8	176.9	0.4			
benzo[j]fluoranthene	-0.1																	0.1			
benzo[k]fluoranthene	0.0			1.0			0.2	4.7		-1.2							220.2	-0.1			
benzo[e]pyrene	0.2		-0.7	-0.2		0.0	0.5	-0.4		-1.1		0.5		-0.1	0.2	0.9	76.8	0.8			
benzo[a]pyrene	0.7		-1.0	-0.4		-0.1	-2.5	1.2		0.8		0.3		-0.3	-0.1	1.8	254.5	0.7			
perylene	-0.9		0.5	-0.9		-0.4		1.9		2.5		2.3		-1.4	-0.9	4.7	403.2	-0.2			
indeno[1,2,3-cd]pyrene	-0.1		-1.9	-0.1		0.7		0.8		2.0		0.2		-0.8	-0.9	2.2	280.9	0.1			
dibenz[a,h]anthracene	-1.7					1.6		0.0		7.6				-0.8	-1.2	4.1	332.3	-2.0			
benzo[ghi]perylene	-0.3		-1.0	-0.2		1.2	-2.3	-0.1		0.3		0.3		-0.3	-0.4	1.7	212.2	0.5			

Table 9. Mussel Tissue X (QA00TIS10): z scores (25%) by laboratory - Pesticides (z=+1 is 25% higher than the exercise assigned value ; z=-1 is 25% lower than the exercise assigned value)																			
Pesticides	1	2	4	5	6	7	9	10	11	13	14	15	16	17	18	20	21	22	
Laboratory No.																			
alpha-HCH (a-BHC)																			
hexachlorobenzene																			
gamma-HCH (g-BFC,lindane)																			
beta-HCH (b-BHC)																			
heptachlor																			
aldrin																			
heptachlor epoxide																			
oxychlordan																			
gamma-chlordane (trans-)	-0.4	-1.5	-1.0		4.7		-0.4		-0.7	-1.5	2.1		3.2	-1.3	0.0	-0.2	8.7	1.8	
2,4'-DDE	-0.7						-2.1			-1.7	4.5	2.8		-1.3		-0.3	114.4	0.3	
endosulfan I																			
cis-chlordane (alpha-)	0.6	-1.5	0.8	-0.7	0.2	-2.9	0.3		0.3	-2.2	33.1	0.4		-0.8	0.8	0.6	6.9	1.5	
trans-nonachlor	-0.5	-1.6	0.0	-0.9	-0.1	-2.8	-0.5		-0.5	-0.8	4.1	-0.2	-0.9	-1.6	0.4	-0.3	1.9	1.3	
dieldrin	-0.7		2.8	-0.7		-1.8	-1.4		-1.0	0.5	46.1		2.5	1.6	-1.2	0.1	1.7	0.5	
4,4'-DDE	0.5	-1.1	-0.3	0.8	0.6	-2.1	-0.6	0.1	0.1	-1.3	0.6	0.5	-0.1	-0.9	0.9	0.7	36.6	0.6	
2,4'-DDD	-0.6		-0.1	-1.9	27.3	-1.1	0.8		-0.4			-1.2	4.2	-1.5	0.5	0.4	88.0	0.1	
endrin																			
endosulfan II																			
4,4'-DDD	0.9	-0.5	-0.2	0.8	-1.4	-1.0	0.6	-1.5	-0.2	-0.2	2.1	0.2	-1.2	0.3	-0.2	0.5	226.1	1.2	
2,4'-DDT	0.3			0.3			-0.6		-2.4	-1.3	19.2	-1.3		-3.6	0.9		14.0	0.4	
cis-nonachlor	0.1	-2.2	1.5				0.8		-2.8	-1.1	3.9			-3.2	-0.4	-1.0	15.1	0.5	
4,4'-DDT	0.0		-1.8	0.4	194.8	-2.2	-0.1	14.6	-0.9	1.4	48.1	0.5		-1.9	-0.5	0.9		2.5	
mirex																			
endosulfan sulfate																			
chlorpyrifos																			

Table 10. Mussel Issue X (QA00TIS10): z scores (25%) by laboratory - PCBs																					
(z=+1 is 25% higher than the exercise assigned value ; z=-1 is 25% lower than the exercise assigned value)																					
PCB Congeners																					
Laboratory No.	1	2	4	5	6	7	9	10	11	13	14	15	16	17	18	20	21	22			
PCB 8			0.5			0.7	-1.3		0.8	26.8	28.7	-1.5		-0.3	-0.4		15.4				
PCB 18	-1.5		0.0		1.3	-1.0	1.4	0.7	-1.0	-1.3	4.1	-1.8		-1.8	0.4	-0.1	6.7	-1.2			
PCB 28	-0.3		-0.3	-0.3		-1.3	0.6	-0.6	0.3	-0.5	0.9	-1.5		-0.5	2.0	-0.5	6.3	-0.1			
PCB 31	0.2						-0.4		-0.3					0.4		0.2	5.3	0.3			
PCB 44	0.0		-0.1	-0.6	9.4	-0.7	1.2	-0.5	0.1	-0.8	3.6	-0.4	1.5	-1.1	1.2	-0.2	4.1	0.3			
PCB 49	0.4		-0.2				1.1		0.2				-1.5	-0.9		0.1	0.2	0.5			
PCB 52	-0.2		0.1	-0.4	4.8	-0.6	1.1	0.1	0.2	-0.5	4.1	0.0	-2.1	-0.2	1.2	0.5	2.5	0.8			
PCB 66	-0.2		-0.5	-4.0	1.0	0.0	-0.2		0.1	-0.2	6.5	-0.1	1.8	-1.5	-4.0		0.7	-0.3			
PCB 95	0.1						0.0		0.5					-0.8		0.0	-0.1	0.4			
PCB 99	0.0						0.9		-0.1				3.0	-0.9		0.0	-1.3	0.1			
PCB 101	-0.7		-0.8	-0.7	3.1	-0.7	0.1	-0.8	0.5	-0.4	-2.0	-0.2	2.3	-1.2	0.7	0.0	-1.4	0.6			
PCB 105	0.1		0.4	-0.3	3.7	-0.8	-0.4	-0.8	0.4	0.0	-0.6	0.5	-0.1	-0.5	1.0	0.5	-0.6	0.5			
PCB 118	-0.3		0.0	-0.6	1.2	-1.0	-0.3	-0.6	0.1	-0.4	2.3	0.0	0.2	-0.9	0.8	-0.4	-1.6	-0.1			
PCB 128	0.1		0.6	0.1	12.3	-0.3	-0.6	-0.7	0.1	-0.5	1.6	1.2		-1.6	2.0	0.2	-1.5	0.5			
PCB 138	-0.9		0.2	-0.5	0.5	-0.7	0.1	-0.7	0.5	-0.1	3.6	0.5	0.2	-2.1	0.9	0.6	-1.0	-1.6			
PCB 149	0.3						0.2		0.4				-0.9	-0.6		0.2	-0.1	0.4			
PCB 153	0.2		0.5	-0.6	1.1	-1.0	1.1	-0.7	-0.2	-0.7	5.6	0.0	0.2	-0.2	1.2	0.9	-1.8	0.0			
PCB 156	-0.2						5.6		0.0					-1.1		0.3	1.5	1.0			
PCB 170	-0.7		-0.7		19.7	0.2	25.7		-1.5	-1.2	9.2	-0.3		0.1	1.3	2.0	26.1	-1.0			
PCB 180	0.0		7.1	-0.1	4.8	0.1	7.3	0.0	0.3	-1.3	6.9	-0.1		-1.7	1.4	0.2	19.1	0.9			
PCB 187	0.2		0.2	0.1	-1.7	-1.1	0.3	-0.1	-0.2	-0.2	0.7	-0.3	-0.8	-0.7	1.7	-0.1	0.3	0.3			
PCB 194																					
PCB 195																					
PCB 206																					
PCB 209																					

Table 11. Marine Sediment X (QA00SED10): z scores (25%) by laboratory - Water and PAHs (z=+1 is 25% higher than the exercise assigned value; z=-1 is 25% lower than the exercise assigned value))																								
Laboratory No.	1	2	3	4a	4b	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Water	-0.2		0.6	-0.1	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	0.6	-0.2		-0.1	0.7	-0.1	0.0	-0.2	-0.1	-0.2	-0.2	0.6	
PAHs																								
Laboratory No.	1	2	3	4a	4b	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
naphthalene	-0.3			-0.5	-0.2	0.3	0.8	-3.0	-0.6	0.8		-0.9	1.4		-1.2	-2.8	0.5	-1.9	0.3	-0.5	0.2	0.0	-0.8	
2-methylnaphthalene	-0.3			-0.3	0.0	-0.8	1.4	-2.9	-0.2	0.3		0.2	10.4		-1.0	-2.5	-3.3	-1.7	0.2	0.3	0.2	-0.3	-0.3	
1-methylnaphthalene	0.2			0.2	0.5		1.7	-2.5	-0.5	0.4		-0.7	17.0		-0.4	-2.3	0.6	-0.5	0.0	-0.5	0.5	0.0	0.3	
biphenyl	0.6			-1.7	1.0		2.2	-2.1	-0.3	3.9		-1.4	1.1		0.4	-1.6	-2.0	-1.2	0.7	0.4	0.8	0.2	-0.4	
2,6-dimethylnaphthalene	-1.6			-0.6	0.9		1.6	-2.1	-0.6	-1.0			5.8		1.2	-1.5	-0.3	-1.8	0.8	0.7	1.5	-1.7	0.5	
acenaphthylene	0.4			1.0	8.2	7.5	-3.4	0.1	6.3	1.9		-1.9	5.1	4.4	-2.3	-3.1	-2.5	1.7	5.9	-1.1	4.7	-3.3	-2.8	
acenaphthene	-0.6			-1.4	0.5	-1.0	0.6	-1.1	-0.7	-0.5		-0.3	1.4	2.8	-0.9	-1.6	0.5	0.0	0.4	-0.6	0.6	-0.2	0.1	
1,6,7-trimethylnaphthalene	0.2						-0.1		-2.1	-0.8					0.8	6.2	5.7	0.6		-0.4		0.2	2.6	
fluorene	-0.4			-1.2	-0.6	0.5	-0.4	0.4	-0.2	-0.5		-0.5	1.8	6.3	-0.1	-1.2	0.5	0.6	0.6	0.1	-0.1	-0.4	1.1	
phenanthrene	-0.2			-0.5	-0.4	-0.5	0.2	2.2	-0.5	-0.3		0.5	0.1	1.6	-1.3	-1.0	0.4	0.4	0.6	-0.3	0.0	0.0	0.6	
anthracene	0.6			-0.3	1.0	1.0	-0.9	2.7	2.6	0.2		-0.5	-1.4	1.9	-1.5	-1.5	-1.3	-0.4	0.7	0.0	0.9	-0.5	-0.6	
1-methylphenanthrene	0.4			-0.4	-0.9		0.8	4.3	-0.4	-1.2		-1.2	0.2		-1.2	-1.5	-1.5	1.7	4.8	1.2	-0.6	0.0	0.8	
fluoranthene	-0.2			0.4	0.0	-0.9	-0.6	2.8	-0.5	1.3		-0.1	0.1	0.7	-0.6	-1.6	-0.8	0.7	0.5	-0.1	0.0	0.2	0.6	
pyrene	-0.2			0.2	-0.1	-1.1	-0.7	2.2	-0.8	-0.9		0.2	-0.4	0.5	-0.7	0.0	1.3	0.4	0.3	-0.1	0.1	0.0	0.4	
benzo[a]anthracene	-0.2			-0.4	-0.2	-1.3	-0.3	5.2	0.7	-0.9		1.8	-0.8	2.2	-0.9	-1.6	0.9	1.0	0.4	-0.2	-0.1	-0.4	0.7	
chrysene	0.6												0.1	-0.7		-1.0								
triphenylene	0.0																							
benzo[b]fluoranthene	0.0			-0.2	0.0	-1.1	0.0	0.5						-1.0		-2.4			1.8	0.1	0.5	-0.4	0.3	
benzo[k]fluoranthene	0.1																					-0.1		
benzo[a]fluoranthene	-0.7					0.5		-4.0	-1.6	0.8		1.7	-1.1	-0.5		-3.0						-0.8	1.7	
benzo[e]pyrene	-0.5			-0.8	0.8		-0.2	1.1	-0.8	-0.9		0.3	-1.0		0.2	-3.3	-1.5	1.3	0.7	0.2	0.5	-0.2	-0.1	
benzo[a]pyrene	0.0			-1.2	0.3	-1.3	-0.1	0.5	-0.5	-0.3		1.1	-3.5	0.6	0.0	-2.7	0.0	0.8	0.9	0.0	0.7	-0.7	0.0	
perylene	-0.1			-1.1	0.0		-0.4	1.1	-0.9	0.1		-0.8	-2.7		1.0	-2.8	1.3	1.0	0.9	0.1	2.0	-0.9	-1.4	
indeno[1,2,3-cd]pyrene	0.0			-0.9	-0.1	-1.1	-0.6	0.8	-0.8	-0.2		-0.9	-1.8	-3.6	-0.7	-3.3	0.0	1.2	0.3	0.2	1.5	0.0	-0.7	
dibenz[a,h]anthracene	2.0												0.8	-2.8		-2.1						2.1		
benzo[ghi]perylene	0.1			-1.2	0.4	-1.8	-0.3	0.5	-0.8	-1.1		-3.1	-1.8	-3.6	-0.3	-3.2	-0.1	1.1	1.2	0.6	1.1	0.0	-0.1	
chrysene/triphenylene				-0.2	0.2	-1.1	0.0	-0.4	-0.3	0.0		-0.9			-0.7		-0.3	1.0	1.2	0.1	0.5	0.0	0.9	
benz[a,h+a,c]anthracene				-0.7	0.1	-0.1	-1.2	2.3	-1.0	-1.2		-0.2			-0.8		-0.8	1.1	2.2	2.0	1.4	-1.3	-0.7	

Table 12. Marine Sediment X (QA00SED10): z scores (25%) by laboratory - Pesticides (z=+1 is 25% higher than the exercise assigned value; z=-1 is 25% lower than the exercise assigned value))																							
Pesticides	1	2	3	4a	4b	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Laboratory No.																							
alpha-HCH												-3.0	4.3			1.2		-1.3				-3.2	0.0
hexachlorobenzene	-0.3	-2.6	-0.6	-0.5			-2.9	-2.2	-0.4	-1.2	-0.1		-1.4	2.8	-1.0	1.0	1.9	0.3		-0.3	-0.2	-0.2	
gamma-HCH																							
beta-HCH (b-HCH)																							
heptachlor																							
aldrin																							
heptachlor epoxide																							
oxychlorodane																							
gamma-chlordane (trans-)	-0.3	-1.9	0.4	-0.3				0.8	1.4		-0.1	0.1	0.7	-3.5		-1.5	-3.2	0.9			-0.7	-0.3	
2,4'-DDE	0.0	0.6	0.1	0.4		-1.3	-2.1		-0.2	0.2	0.0	0.2	0.7	-3.8	1.1	-1.0	0.5				-0.3	-0.7	
endosulfan I																							
cis-chlordane	0.2	-1.8	0.7	0.0		-0.7	-4.0		1.8	-0.8	1.0	-0.7	0.8	-1.8	1.3	-1.0	-1.5	1.2			-0.5	0.6	
trans-nonachlor	0.0	-1.4	0.4	-0.3		1.7	-2.6		0.0	-0.7	0.9	0.5	4.2	-0.1	1.6	-0.4	-0.8	0.4			-0.7	0.2	
dieldrin	-0.5	-2.0	-0.9	6.4			-3.9		1.7	-0.5	1.7	-0.2	2.5			0.0	-0.5	6.0			-1.8	0.4	
4,4'-DDE	0.2	-1.8	-0.5	-0.7		-0.7	-2.4	-1.3	0.4	0.0	0.6	0.3	0.1	-3.4	1.4	0.9	-0.4	0.7			0.8	-0.4	
2,4'-DDD	-0.8	-1.6	-0.1	2.3		1.5	-3.9	0.4	1.0	-0.1	1.4	-0.7	-1.0	-3.6	1.5	-2.1	4.7	0.7			1.4	-0.1	
endrin																							
endosulfan II																							
4,4'-DDD	-0.7	-1.3	-0.5	-0.4		-0.5	-3.9	-0.8	-0.1	-0.4	1.7	-0.3	0.0			1.6	-0.6	1.2	0.3		2.2	0.1	
2,4'-DDT	-1.1	-1.7	2.3	0.4		-0.7	-1.8		1.0	-0.4	-0.1	-1.3	1.1			-0.6	2.2	3.6			0.7		
cis-nonachlor	-0.4	-2.0	-1.8	2.1					2.0		-1.3	-0.1	2.7	-3.6		0.4	-3.0	2.3			-2.0	0.3	
4,4'-DDT	-0.5	-1.4	0.9	-0.4		0.6	-1.9	-0.8	0.5	0.4	1.9	-2.7	0.8	-4.0		-0.1	-0.5	1.1			1.8		
mirex																							
endosulfan sulfate																							
chlorpyrifos																							

Table 13. Marine Sediment X (QA00SED10): z scores (25%) by laboratory - PCBs (z=+1 is 25% higher than the exercise assigned value; z=-1 is 25% lower than the exercise assigned value))																							
PCB Congeners Laboratory No.	1	2	3	4a	4b	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PCB 8	-0.5		0.5	1.5		-1.5	-2.8	-1.1	-1.4	-1.2	-0.8	4.1	3.2		-1.1	1.7	-1.5	3.3	-0.5		0.3	-0.3	
PCB 18	0.0		0.0	-0.6		-0.2	-2.1	-1.0	0.1	-0.2	0.0	0.1	1.8	-3.2	-0.5	-0.3	-1.4	3.5	0.2	1.1	-0.5	0.6	
PCB 28	0.3		2.1	0.0		-0.9	-1.9	0.4	1.6	0.1	0.8	-4.0	0.6	-3.0	-0.5	-0.3	-4.0	0.0	0.3	0.3	1.0	0.3	
PCB 31	-0.2		0.5					-1.3	-0.9		-0.5	-4.0					-4.0		0.8	1.5	1.2	0.1	
PCB 44	0.2		2.2	-0.1		-0.7	-1.6	-0.2	1.3	-0.1	0.4	1.1	0.4	-3.3	1.1	-1.0	-1.7	0.0	-0.5	1.5	1.4	-0.1	
PCB 49	-0.4		0.7	-0.4				-1.9	1.5		0.4	0.2				-1.2	-0.6	0.2	1.3	0.5	0.2		
PCB 52	-0.4		1.1	-0.4		-0.8	-1.9	-1.1	1.5	-0.8	0.0	-0.8	0.7	-0.5	2.7	-1.6	-0.4	-0.5	-0.3	1.1	0.8	0.0	
PCB 66	-0.1		0.8	-0.7		-1.2	-0.7	-0.7	0.7	0.5	0.1	1.8	1.6	-1.6	0.7	-0.4	-2.4	-4.0	0.2	1.5	0.4	-0.1	
PCB 95	-0.5		0.4					-1.2	0.4		0.4						-1.5	-4.0	0.6	1.6	0.9	-0.2	
PCB 99	0.2		1.6					-1.6	0.9		-0.5	-1.1				-1.3	0.1	1.3	1.0	0.6	-0.6		
PCB 101	-0.6		-0.4	-0.8		-1.0	-1.3	1.0	1.2	0.0	0.1	-1.2	2.0	-3.3	-0.4	-1.4	-0.3	0.5	0.0	1.0	-0.4	0.6	
PCB 105	0.8		0.3	-0.7		0.0	-1.6	-0.1	-0.6	-1.2	-0.6		0.4	-3.1	1.1	-1.4	-0.2	1.0	0.3	2.5	1.5	-0.1	
PCB 118	0.9		0.9	0.1		-1.6	-1.6	-0.6	1.1	-0.3	0.5	-0.9	1.5	-2.3	0.8	-1.4	-0.3	0.6	0.5	2.1	1.2	-0.1	
PCB 128	1.2		0.5	-1.2		-0.2	-1.3	0.0	-0.4	-0.8	0.0	0.7	2.6	-0.9	5.7	-0.4	-2.3	0.8	0.5	2.1	1.2	0.0	
PCB 138	0.2		0.7	-1.2		34.2	-1.1	-0.9	1.2	-1.0	0.5	1.6	0.2	-3.4	1.4	-2.1	-1.6	1.3	-0.1	2.4	1.6	-0.4	
PCB 149	0.4		3.0					-1.1	0.7		0.4	-0.2				-1.1	-0.3	0.6	1.3	0.9	-0.7		
PCB 153	0.4		0.2	0.0		-1.2	-2.4	-1.1	2.6	-0.9	-0.2	2.5	0.5	-2.8	0.3	-1.5	0.6	1.4	-0.1	2.8	0.5	-1.0	
PCB 156	0.4		-0.7					-0.1	9.8		-1.0					4.8	-1.7	1.3	1.0	0.1	-1.3		
PCB 170	0.1		-0.2	-0.6		-1.7	-1.6	0.0	1.4	-0.6	-0.7	2.5	1.0	-3.5	2.2	-1.2	0.4	-0.5	-1.0	1.9	0.2	-1.1	
PCB 180	0.5		0.6	-1.8		-2.2	-1.4	-0.5	0.5	-0.3	0.4	-0.9	1.3	-3.7	1.0	-2.0	-0.7	1.3	0.3	2.1	1.5	-0.6	
PCB 187	0.7		0.7	-0.8		-1.8	-2.5	-1.7	0.9	-0.2	-0.4	-1.8	0.9		0.8	-2.0	-1.2	1.1	0.3	1.6	1.2	-0.6	
PCB 194	1.0		0.8					-0.9	0.5		0.3	0.9				-1.0	-0.7	0.0			1.3	-0.8	
PCB 195	0.3		0.5	-0.6		-0.4	-2.0	-1.0	2.9	-0.9	-0.1	6.6	-0.6		2.3	-0.1	-1.2	-0.9	0.3	1.1	1.4	-0.4	
PCB 206	1.1		0.9	-1.7		-1.3	-1.7	-0.6	1.2	-0.7	0.4	3.8	7.2	-2.5	1.8	-2.4	-0.1	0.9	-0.2	2.0	2.9	0.1	
PCB 209	0.8		0.4	-2.3		-3.0	-2.1	-0.4	1.7	-0.7	0.6	3.9	1.4		1.0	0.4	-0.9	1.3	-0.8	0.4	1.1	-0.7	

**Appendix A: Description, Storage, Use, and Reporting Instructions
for Mussel Tissue X (QA00TIS10)**

**NIST Intercomparison Exercise Program for
Organic Contaminants in the Marine Environment**

NIST QA Program

**Intercomparison Exercise: Mussel Tissue X
Description of Materials and Instructions**

Intercomparison Exercise Materials:

QA00TIS10 (Mussel Tissue X)

Each of the three jars contains approximately 8 g (wet basis) of Mussel Tissue X. This cryogenically homogenized "fresh" material was prepared from mussels collected from an urban area. This material has not been enriched or spiked and still contains its endogenous water. Each 2-oz clear glass jar has a Teflon-lined screw cap and is labeled with an individual jar number as well as the above name.

In addition, three concurrent analyses of SRM 1974a, Organics in Mussel Tissue (*Mytilus edulis*), are recommended. This material can be obtained from the NIST Standard Reference Materials Program (\$470/3 x 15 g (wet basis) (phone: 301/975-6776; fax: 301/948-3730).

Storage of Materials:

Mussel Tissue Material. The tissue material should be stored in the dark at temperatures of -20 °C or lower. If allowed to thaw or if stored for extended periods at temperatures higher than -40 °C, it will lose its powder-like form. This material has been stored at NIST at -80 °C and was shipped to you on dry ice. If only a portion of the contents of a jar is used, the jar should be tightly closed immediately after removal of a subsample to preserve the integrity of the remaining material for later analysis.

Instructions for Use:

You are to analyze Mussel Tissue X and SRM 1974a, using **your** laboratory's and/or program's analytical protocols, for the concentrations (mass/mass [dry basis]) of the 26 polycyclic aromatic hydrocarbon (PAH) compounds, 25 chlorinated pesticides, and 25 polychlorinated biphenyl (PCB) congeners¹ of interest in the current NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment. These compounds are listed in Table 1.

The percentage of water in the Mussel Tissue X material should be determined so that the results can be reported on a dry basis. You should have received sufficient material so that you can perform

¹If your laboratory is not analyzing samples for all three chemical classes, you are expected to submit results only for those compounds currently being determined in your laboratory.

separate determinations for the water content if you do not dry your tissue samples prior to analysis.

The amount of material used for each analysis should correspond to the amount (wet basis) of marine tissue that you would typically analyze as prescribed in your protocols. It is best if the Mussel Tissue IX samples and the SRM 1974a material are not allowed to thaw prior to the taking of samples for analysis; however, if the material has been even partially thawed, you should use the contents of the entire jar as a single sample as it is difficult to take representative samples from a jar once the material has thawed. After removing the material for analysis from the jars, the samples should be used without delay.

You should analyze three samples of Mussel Tissue X and at least one, and more if possible, of SRM 1974a in three different batches/sets/strings/catalogs using your protocol for tissue samples. Specifically, we are asking that you analyze one sample of Mussel Tissue X and one sample of SRM 1974a with one batch of laboratory samples; analyze a second sample of each material with another batch; and the third sample with yet another batch. This will allow a more realistic assessment of laboratory precision over a longer term than the assessment obtained when a laboratory places all three samples in the same extraction and cleanup batch and the resulting extracts are analyzed using the same calibration curve, etc.

Reporting of Results:

Please report one result, as if three figures were significant, for each of the requested analytes in each of the three replicates of the Mussel Tissue X and of SRM 1974a. Report results in units of ng/g **dry** basis. Report the date of measurement of each sample in the requested m/d/y format. Also, report the results of your percentage water determinations of Mussel Tissue X.

We recognize that the reported concentrations for some of the requested determinands will probably include concentrations of compounds reported to coelute with the determinand of interest with methods commonly in use in environmental laboratories. Please note at the bottom of your table of reported results if any coelution qualifiers are applicable to your data. Please note that any changes you make to the column or row headings **within** the tables will **not** be seen by the coordinators because only the table entries and comments at the bottom of the tables are automatically transferred to the exercise database.

We prefer that concentration values be reported for each analyte determined. If the measured concentration is below your typical reporting concentration for an analyte in a particular matrix, you can report the number and list the appropriate detection limit, quantification limit, etc. at the bottom of the data table. However, if you need to report non-numerical data please use the following conventions:

NA	"Not analyzed", "not determined"
<"value"	"Less than specified concentration", e.g., <8 ng/g
Other	"Other"; add note of explanation at end of data table, e.g., interference
DL	"Below detection limit" may be used, however, <"value" is preferable

Do not use negative numbers or parentheses to indicate "less than detection limits".

The enclosed floppy diskette (DOS format) contains an EXCEL file, TIS10.xls. If you have any software/hardware conversion problems, please contact Michele Schantz. The data file templates also include places for you to list the surrogate/internal standards and type of calibration curve used, and to provide a brief description of the analyses. Please **do not** add "spaces" before entering numbers in the table cells and enter them as "numbers" not as "labels". Please **do not** insert any columns or rows **within** the table in the data file. If you wish to include additional data and/or other information or comments, you may add it to the bottom of the data table in the diskette file or send it in hard copy. A printout of the data file format is shown in Table 2.

Submit your results either via diskette file or as an attached file via e-mail (preferred) to:

Michele M. Schantz
NIST
100 Bureau Drive Stop 8392
Gaithersburg, MD 20899-8392

E-mail:
michele.schantz@nist.gov

Further Information:

If you need further information, please contact Michele at the address listed above or at the following phone numbers:

Phone: (301)975-3106
FAX: (301)977-0685

Table 1: Analytes of Interest in NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment

Chlorinated Pesticides

hexachlorobenzene	2,4'-DDE
alpha-HCH (alpha-BHC)	4,4'-DDE
beta-HCH (beta-BHC)	2,4'-DDD
gamma-HCH (gamma-BHC, Lindane)	4,4'-DDD
heptachlor	2,4'-DDT
heptachlor epoxide	4,4'-DDT
cis-chlordane (alpha-chlordane)	chlorpyrifos
trans-chlordane (gamma-chlordane)	aldrin
oxychlordane	dieldrin
cis-nonachlor	endrin
trans-nonachlor	endosulfan I
mirex	endosulfan II
	endosulfan sulfate

Polychlorinated Biphenyl Congeners

<i>PCB No.</i>	<i>Compound Name</i>
8	2,4'-dichlorobiphenyl
18	2,2',5-trichlorobiphenyl
28	2,4,4'-trichlorobiphenyl
31	2,4',5-trichlorobiphenyl
44	2,2',3,5'-tetrachlorobiphenyl
49	2,2',4,5'-tetrachlorobiphenyl
52	2,2',5,5'-tetrachlorobiphenyl
66	2,3',4,4'-tetrachlorobiphenyl
95	2,2',3,5',6-pentachlorobiphenyl
99	2,2',4,4',5-pentachlorobiphenyl
101	2,2',4,5,5'-pentachlorobiphenyl
105	2,3,3',4,4'-pentachlorobiphenyl
118	2,3',4,4',5-pentachlorobiphenyl
128	2,2',3,3',4,4'-hexachlorobiphenyl
138	2,2',3,4,4',5'-hexachlorobiphenyl
149	2,2',3,4',5',6-hexachlorobiphenyl
153	2,2',4,4',5,5'-hexachlorobiphenyl
156	2,3,3',4,4',5-hexachlorobiphenyl
170	2,2',3,3',4,4',5-heptachlorobiphenyl
180	2,2',3,4,4',5,5'-heptachlorobiphenyl
187	2,2',3,4',5,5',6-heptachlorobiphenyl
194	2,2',3,3',4,4',5,5'-octachlorobiphenyl
195	2,2',3,3',4,4',5,6-octachlorobiphenyl
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl
209	decachlorobiphenyl

Table 1. (continued)

Polycyclic aromatic hydrocarbons (PAH)

naphthalene	pyrene
2-methylnaphthalene	benz[<i>a</i>]anthracene
1-methylnaphthalene	chrysene
biphenyl	triphenylene
2,6-dimethylnaphthalene	benzo[<i>b</i>]fluoranthene
acenaphthylene	benzo[<i>j</i>]fluoranthene
acenaphthene	benzo[<i>k</i>]fluoranthene
1,6,7-trimethylnaphthalene	benzo[<i>e</i>]pyrene
fluorene	benzo[<i>a</i>]pyrene
phenanthrene	perylene
anthracene	indeno[1,2,3- <i>cd</i>]pyrene
1-methylphenanthrene	dibenz[<i>a,h</i>]anthracene
fluoranthene	benzo[<i>ghi</i>]perylene

Appendix B: Description, Storage, Use, and Reporting Instructions for Marine Sediment X (QA00SED10)

**NIST Intercomparison Exercise Program for
Organic Contaminants in the Marine Environment**

NIST QA Program

**Intercomparison Exercise: Marine Sediment X
Description of Materials and Instructions**

Intercomparison Exercise Materials:

QA00SED10 (Marine Sediment X)

Each of the three jars contains 21 g (wet basis) of Marine Sediment X. This wetted sediment was prepared from material that was collected from an urban area and then freeze-dried, ground, sieved, and radiation-sterilized. This material has not been enriched or spiked. Each 2-oz clear glass jar has a Teflon-lined screw cap and is labeled with an individual jar number as well as the above name.

In addition, three concurrent analyses of SRM 1944, New York/New Jersey Waterway Sediment, are recommended. This material can be obtained from the NIST Standard Reference Materials Program (\$366/50 g (dry basis) (phone: 301/975-6776; fax: 301/948-3730).

Storage of Materials:

Marine Sediment Material. This Marine Sediment X material should be stored in the dark at temperatures of -15 °C or lower. If only a portion of the contents of a jar is used, that jar should be tightly closed immediately after removal of a subsample to preserve the integrity of the remaining material for later analysis.

Instructions for Use:

You are to analyze Marine Sediment X and SRM 1944, using **your** laboratory's and/or program's analytical protocols, for the concentrations (mass/mass [dry basis]) of the 26 polycyclic aromatic hydrocarbon (PAH) compounds, 25 chlorinated pesticides, and 25 polychlorinated biphenyl (PCB) congeners¹ of interest in the current NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment. These compounds are listed in Table 1.

The percentage of water in the Sediment X material should be determined so that the results can be reported on a dry basis. You should have received sufficient material so that you can perform separate determinations for the water content if you do not dry your sediment samples prior to analysis.

¹If your laboratory is not analyzing samples for all three chemical classes, you are expected to submit results only for those compounds currently being determined in your laboratory.

The amount of material used for each analysis should correspond to the amount (wet basis) of marine sediment that you would typically analyze as prescribed in your protocols. Prior to removing an aliquot of Sediment X, you should thaw the sample in the jar and then **stir or otherwise mix it thoroughly**.

You should analyze three samples of Marine Sediment X and at least one, and more if possible, of SRM 1944 in three different batches/sets/strings/catalogs using your protocol for marine sediment samples. Specifically, we are asking that you analyze one sample of Sediment X and one sample of SRM 1944 with one batch of laboratory samples; analyze a second sample of each material with another batch; and the third sample with yet another batch. This will allow a more realistic assessment of laboratory precision over a longer term than the assessment obtained when a laboratory places all three samples in the same extraction and cleanup batch and the resulting extracts are analyzed using the same calibration curve, etc.

Reporting of Results:

Please report one result, as if three figures were significant, for each of the requested analytes in each of the three replicates of the Marine Sediment X and of SRM 1944. Report results in units of ng/g **dry** basis. Report the date of measurement of each sample in the requested m/d/y format. Also, report the results of your percentage water determinations of Marine Sediment X.

We recognize that the reported concentrations for some of the requested determinands will probably include concentrations of compounds reported to coelute with the determinand of interest with methods commonly in use in environmental laboratories. Please note at the bottom of your table of reported results if any coelution qualifiers are applicable to your data. Please note that any changes you make to the column or row headings **within** the tables will **not** be seen by the coordinators because only the table entries and comments at the bottom of the tables are automatically transferred to the exercise database.

We prefer that concentration values be reported for each analyte determined. If the measured concentration is below your typical reporting concentration for an analyte in a particular matrix, you can report the number and list the appropriate detection limit, quantification limit, etc. at the bottom of the data table. However, if you need to report non-numerical data please use the following conventions:

NA	"Not analyzed", "not determined"
<"value"	"Less than specified concentration", e.g., <8 ng/g
Other	"Other"; add note of explanation at end of data table, e.g., interference
DL	"Below detection limit" may be used, however, <"value" is preferable

Do not use negative numbers or parentheses to indicate "less than detection limits".

The enclosed floppy diskette (DOS format) contains an EXCEL file, SED10.xls. If you have any software/hardware conversion problems, please contact Michele Schantz. The data file templates also include places for you to list the surrogate/internal standards and type of calibration curve used, and to

provide a brief description of the analyses. Please **do not** add "spaces" before entering numbers in the table cells and enter them as "numbers" not as "labels". Please **do not** insert any columns or rows **within** the table in the data file. If you wish to include additional data and/or other information or comments, you may add it to the bottom of the data table in the diskette file or send it in hard copy. A printout of the data file format is shown in Table 2.

Submit your results either via diskette file or as an attached file via e-mail (preferred) to:

Michele M. Schantz
NIST
100 Bureau Drive Stop 8392
Gaithersburg, MD 20899-8392

E-mail:
michele.schantz@nist.gov

Further Information:

If you need further information, please contact Michele at the address listed above or at the following phone numbers:

Phone: (301)975-3106
FAX: (301)977-0685

Table 1: Analytes of Interest in NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment

Chlorinated Pesticides

hexachlorobenzene	2,4'-DDE
alpha-HCH (alpha-BHC)	4,4'-DDE
beta-HCH (beta-BHC)	2,4'-DDD
gamma-HCH (gamma-BHC, Lindane)	4,4'-DDD
heptachlor	2,4'-DDT
heptachlor epoxide	4,4'-DDT
cis-chlordane (alpha-chlordane)	chlorpyrifos
trans-chlordane (gamma-chlordane)	aldrin
oxychlordane	dieldrin
cis-nonachlor	endrin
trans-nonachlor	endosulfan I
mirex	endosulfan II
	endosulfan sulfate

Polychlorinated Biphenyl Congeners

<i>PCB No.</i>	<i>Compound Name</i>
8	2,4'-dichlorobiphenyl
18	2,2',5-trichlorobiphenyl
28	2,4,4'-trichlorobiphenyl
31	2,4',5-trichlorobiphenyl
44	2,2',3,5'-tetrachlorobiphenyl
49	2,2',4,5'-tetrachlorobiphenyl
52	2,2',5,5'-tetrachlorobiphenyl
66	2,3',4,4'-tetrachlorobiphenyl
95	2,2',3,5',6-pentachlorobiphenyl
99	2,2',4,4',5-pentachlorobiphenyl
101	2,2',4,5,5'-pentachlorobiphenyl
105	2,3,3',4,4'-pentachlorobiphenyl
118	2,3',4,4',5-pentachlorobiphenyl
128	2,2',3,3',4,4'-hexachlorobiphenyl
138	2,2',3,4,4',5'-hexachlorobiphenyl
149	2,2',3,4',5',6-hexachlorobiphenyl
153	2,2',4,4',5,5'-hexachlorobiphenyl
156	2,3,3',4,4',5-hexachlorobiphenyl
170	2,2',3,3',4,4',5-heptachlorobiphenyl
180	2,2',3,4,4',5,5'-heptachlorobiphenyl
187	2,2',3,4',5,5',6-heptachlorobiphenyl
194	2,2',3,3',4,4',5,5'-octachlorobiphenyl
195	2,2',3,3',4,4',5,6-octachlorobiphenyl
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl
209	decachlorobiphenyl

Table 1. (continued)

Polycyclic aromatic hydrocarbons (PAH)

naphthalene
2-methylnaphthalene
1-methylnaphthalene
biphenyl
2,6-dimethylnaphthalene
acenaphthylene
acenaphthene
1,6,7-trimethylnaphthalene
fluorene
phenanthrene
anthracene
1-methylphenanthrene
fluoranthene

pyrene
benz[*a*]anthracene
chrysene
triphenylene
benzo[*b*]fluoranthene
benzo[*j*]fluoranthene
benzo[*k*]fluoranthene
benzo[*e*]pyrene
benzo[*a*]pyrene
perylene
indeno[1,2,3-*cd*]pyrene
dibenz[*a,h*]anthracene
benzo[*ghi*]perylene

Appendix C: Results by Laboratory, Mussel Tissue X

(data reported as if three figures were significant)

PAH	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X		SRM 1974a, ng/g dry		Mussel X	
	4/2/01 S1	4/2/01 S2	4/2/01 S3	4/2/01 S1	4/2/01 S2	4/2/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	SRM 1974a lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	z-score (25%)	z-score (15%)
naphthalene	23.3	23.1	22.8	23.6	22.8	22.9	23.1	1.1	23.1	23.1	1.9	32.1	8.6	23.5	-1.1	-1.0
2-methylnaphthalene	11.6	11.4	11.9	9.21	10.0	9.81	11.6	2.2	9.7	9.7	4.2	11.7	4.8	10.2	0.0	0.0
1-methylnaphthalene	5.77	5.71	5.79	5.22	5.47	5.34	5.76	0.72	5.34	5.34	2.34	8.95	7.19	5.30	-1.4	-0.6
biphenyl	4.77	4.67	4.71	5.12	5.22	5.01	4.72	1.07	5.12	5.12	2.05	8.35	3.29	5.11	-1.7	-0.9
2,6-dimethylnaphthalene	1.41	1.44	1.67	3.22	3.24	3.44	1.51	9.44	3.30	3.30	3.69	6.59	4.76	5.30	-3.1	-0.9
acenaphthylene	6.00	6.04	6.11	5.25	4.99	5.11	6.05	0.92	5.12	5.12	2.54	5.58	2.38	5.25	0.3	0.2
acenaphthene	2.16	2.21	2.11	2.98	3.12	3.00	2.16	2.31	3.03	3.03	2.50	3.63	1.43	3.15	-1.6	-1.0
1,6,7-trimethylnaphthalene	3.77	3.67	3.71	3.71	3.77	3.67	3.72	1.35	3.72	3.72	1.35	4.73	2.16	6.60	-0.9	-0.5
fluorene	4.56	4.49	4.55	4.89	4.91	4.99	4.53	0.84	4.93	4.93	1.07	5.07	0.60	5.72	-0.4	-0.8
phenanthrene	25.9	26.3	25.4	20.4	21.6	21.7	25.9	1.7	21.2	21.2	3.4	24.8	2.5	22.2	0.2	0.3
anthracene	4.89	4.87	4.71	6.16	6.21	6.09	4.82	2.05	6.15	6.15	0.98	6.47	2.22	6.10	-1.0	-0.6
1-methylphenanthrene	9.19	9.26	9.21	9.99	10.30	10.30	9.22	0.39	10.20	10.20	1.76	12.1	3.4	10.5	-1.0	-0.6
fluoranthene	166	168	164	161	170	171	166	1	167	167	3	168	15	164	0.0	-0.1
pyrene	177	181	174	155	165	169	177	2	163	163	4	175	17	152	0.0	0.1
benz[a]anthracene	40.6	45.4	38.9	32.7	31.7	31.9	41.6	8.1	32.1	32.1	1.6	44.5	4.8	32.5	-0.3	-0.4
chrysene	57.4	57.9	56.4	42.5	43.1	44.9	57.2	1.3	43.5	43.5	2.9	52.3	ND	94.9	0.4	0.3
triphenylene	38.7	39.5	39.9	49.9	48.7	48.1	39.4	1.6	48.9	48.9	1.9	39.4	ND	50.7	0.0	0.1
benzo[b]fluoranthene	61.8	62.9	62.5	47.8	46.4	46.9	62.4	0.9	47.0	47.0	1.5	58.7	7.8	46.4	0.2	0.4
benzo[k]fluoranthene	28.4	28.9	28.1	21.6	21.9	22.6	28.5	1.4	22.0	22.0	2.3	29.1	ND	20.5	-0.1	0.1
benzo[j]fluoranthene	30.6	30.9	31.4	20.7	20.0	20.1	31.0	1.3	20.3	20.3	1.9	31.2	7.5	20.2	0.0	0.0
benzo[e]pyrene	95.8	94.7	95.4	83.9	83.3	82.7	95.3	0.6	83.3	83.3	0.7	91.6	9.3	84.0	0.2	0.3
benzo[a]pyrene	26.3	27.1	27.0	15.2	15.6	15.4	26.8	1.6	15.4	15.4	1.3	23.0	4.8	15.6	0.7	0.6
perylene	7.87	8.02	7.99	7.55	7.61	7.44	7.96	1.00	7.53	7.53	1.14	10.3	5.0	7.7	-0.9	-0.4
indeno[1,2,3-cd]pyrene	20.5	19.4	20.1	14.4	14.1	14.1	20.0	2.8	14.2	14.2	1.2	20.3	4.6	14.2	-0.1	-0.1
dibenz[a,h]anthracene	3.22	3.27	3.17	2.21	2.26	2.28	3.22	1.55	2.25	2.25	1.60	5.54	2.80	no target	-1.7	-0.8
benzo[ghi]perylene	28.9	29.4	28.4	23.4	23.0	23.1	28.9	1.7	23.2	23.2	0.9	31.2	6.0	22.0	-0.3	-0.3

Laboratory: 1
PAH in Mussel X

Reported Results	No. of Analytes	%
Quantitative	26	100
Qualitative	0	0
Not Determined	0	0

Category	z (25%)	z (s)	p (15%)
< 2	25	24	26
2 to 3	0	0	0
> 3	1	0	0

^az- and p-scores > 1 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TISI0 - Mussel Tissue X

Laboratory No.: 1
Reporting Date: 4/15/01

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X, ng/g dry		SRM 1974a, ng/g dry	z-score (25%)	z-score (s)	p-score (15%)
	4/2/01	4/2/01	4/2/01	4/2/01	4/2/01	4/2/01	4/2/01	4/2/01	4/2/01	4/2/01	assigned value	95% CL	target value ^b			
	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	SRM 1974a, ng/g dry	
alpha-HCH	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
hexachlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
gamma-HCH	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
beta-HCH	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
heptachlor	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
aldrin	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
heptachlor epoxide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
oxychlorodane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
trans-chlordane	10.1	10.4	10.6	16.2	16.4	15.7	10.4	2.4	16.1	2.2	11.6	2.8	16.6	-0.4	-0.3	0.2
2,4'-DDE	3.13	3.33	3.24	4.99	4.87	5.05	3.23	3.10	4.97	1.84	3.88	2.44	5.26	-0.7	-0.3	0.2
endosulfan I	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
cis-chlordane	13.90	13.10	13.20	17.40	17.90	17.10	13.40	3.25	17.47	2.31	11.5	2.0	17.2	0.6	0.6	0.2
trans-nonachlor	11.10	12.50	12.10	18.20	18.90	18.40	11.90	6.06	18.50	1.95	13.4	2.7	18.0	-0.5	-0.3	0.4
dieldrin	6.06	5.98	6.08	6.99	6.54	6.61	6.04	0.88	6.71	3.61	7.27	1.76	6.20	-0.7	-0.5	0.1
4,4'-DDE	44.1	43.9	44.9	49.8	52.0	51.7	44.3	1.2	51.2	2.3	39.4	4.1	51.2	0.5	0.7	0.1
2,4'-DDD	12.2	11.9	11.8	14.7	14.9	14.1	12.0	1.7	14.6	2.9	13.9	0.0	13.7	-0.6	-0.3	0.1
endrin	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
endosulfan II	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
4,4'-DDD	36.6	37.1	37.1	46.6	44.8	46.7	36.9	0.8	46.0	2.3	30.2	4.0	43.0	0.9	0.9	0.1
2,4'-DDT	8.97	9.05	9.01	8.39	8.51	8.47	9.01	0.44	8.46	0.72	8.45	1.78	8.50	0.3	0.3	0.0
cis-nonachlor	8.77	8.15	8.56	7.07	7.17	6.99	8.49	3.71	7.08	1.27	8.25	3.69	6.84	0.1	0.1	0.2
4,4'-DDT	4.22	4.51	4.33	3.99	4.13	4.19	4.35	3.36	4.10	2.50	4.37	1.03	3.91	0.0	0.0	0.2
mirex	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
endosulfan sulfate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	
chlorpyrifos	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	no target	

Laboratory: 1
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	11	44
Qualitative	14	56
Not Determined	0	0

Category	Number by Category
< 2	z (25%) 11 z (s) 11 p (15%) 11
2 to 3	0 0 0
> 3	0 0 0

^a z- and p-scores > 1 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a			
		Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X		SRM 1974a, ng/g dry		Mussel X			
		4/2/01 S 1	4/2/01 S 2	4/2/01 S 3	4/2/01 S 4	4/2/01 S 5	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	SRM 1974a lab mean ng/g dry	SRM 1974a lab %RSD	assigned value	95%CL	target value ^c	95% CL	z-score (25%) (s)	z-score (15%) (s)	
PCB 8		<2	<2	<2	5.14	5.11	4.98	<2	NA	5.08	1.68	4.46	0.96	5.82	1.20				
PCB 18		7.69	7.71	7.77	29.9	30.1	28.7	7.72	0.54	29.6	2.6	12.2	3.0	33.0	11.0		-1.5	-0.9	0.0
PCB 28		34.9	35.9	35.4	75.9	76.4	74.1	35.4	1.4	75.5	1.6	38.1	5.2	79.0	15.0		-0.3	-0.3	0.1
PCB 31		32.1	31.4	31.4	71.1	74.3	72.1	31.6	1.3	72.5	2.3	29.8	3.3	76.0	21.0		0.2	0.7	0.1
PCB 44		41.6	40.9	40.4	69.8	68.4	68.8	41.0	1.5	88.0	1.6	40.9	5.1	72.7	7.4		0.0	0.0	0.1
PCB 49		59.8	60.9	61.0	87.8	87.3	88.7	60.6	1.1	87.9	0.2	54.5	8.0	88.8	5.0		0.4	0.6	0.1
PCB 52		58.7	59.3	59.4	111	112	115	59.1	0.6	113	2	62.6	8.0	115	11		-0.2	-0.3	0.0
PCB 66		70.5	69.5	69.4	100.0	99.7	99.8	69.8	0.9	99.8	0.2	72.9	11.4	101	4		-0.2	-0.2	0.1
PCB 95		63.8	62.4	62.5	82.6	81.9	83.0	62.9	1.2	72.5	0.7	62.1	6.0	83.0	17.0		0.1	0.1	0.1
PCB 99		63.1	62.4	62.9	69.5	71.1	70.4	62.8	0.6	70.3	1.1	63.5	9.8	70.9	4.0		0.0	-0.1	0.0
PCB 101		94.9	95.7	95.8	131.0	133.0	128.0	95.5	0.5	130.7	1.9	116	21	128	10		-0.7	-0.5	0.0
PCB 105		38.1	41.2	40.8	52.9	53.1	53.1	40.0	4.2	53.0	0.2	39.4	3.3	53.0	3.4		0.1	0.1	0.3
PCB 118		102	114	104	131	135	136	107	6	113	2	116	14	131	4		-0.3	-0.4	0.4
PCB 128		19.5	19.7	18.9	21.6	22.8	22.4	19.4	2.1	22.3	2.7	19.0	2.8	22.0	3.4		0.1	0.1	0.1
PCB 138		90.4	89.8	90.7	131	138	134	90.3	0.5	134	3	117	11	134	10		-0.9	-1.5	0.0
PCB 149		74.4	73.8	72.2	86.5	88.1	89.4	73.5	1.5	88.0	1.7	68.6	8.0	87.6	2.3		0.3	0.6	0.1
PCB 153		139	142	141	146	151	152	141	1	150	2	133	16	145	8		0.2	0.3	0.1
PCB 156		6.99	7.12	7.21	7.55	7.41	7.49	7.11	1.56	7.48	0.94	7.43	1.71	7.43	0.99		-0.2	-0.2	0.1
PCB 170		2.98	2.87	2.81	4.59	5.05	5.11	2.89	2.99	4.92	5.79	3.48	0.83	5.50	1.10		-0.7	-0.6	0.2
PCB 180		11.9	12.3	12.5	16.5	15.7	15.9	12.2	2.5	16.0	2.6	12.1	2.0	17.1	3.8		0.0	0.0	0.2
PCB 187		30.8	31.4	33.1	32.9	34.4	34.5	31.8	3.8	33.9	2.6	30.0	2.8	34.0	2.3		0.2	0.4	0.3
PCB 194		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	<4		no target	0.0				
PCB 195		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	<4		no target	0.0				
PCB 206		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	<2		no target	0.0				
PCB 209		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	<2		no target	0.0				

Laboratory: 1
PCBs in Mussel X

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	20	20	20
2 to 3	0	0	0
> 3	0	0	0

Water in Mussel X

Mussel X, %	SRM 1974a, %			Mussel X, %	SRM 1974a, %		
	S1	S2	S3		mean, %	%RSD	%RSD
Water	89.8	89.9	90.1	90.0	0.1		

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 2

Sample: QA00TIS0 - Mussel Tissue X

Reporting Date: 1/12/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores*				
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/gdry	95% CL	target value ^a	95% CL	Mussel X				
		S1	S2	S3	S1	S2	S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	%RSD					z-score (25%)	z-score (s)	p-score (15%)		
	naphthalene																			
	2-methylnaphthalene																			
	1-methylnaphthalene																			
	biphenyl																			
	2,6-dimethylnaphthalene																			
	acenaphthylene																			
	acenaphthene																			
	1,6,7-trimethylnaphthalene																			
	fluorene																			
	phenanthrene																			
	anthracene																			
	1-methylphenanthrene																			
	fluoranthene																			
	pyrene																			
	benz[a]anthracene																			
	chrysene																			
	triphenylene																			
	benzo[b]fluoranthene																			
	benzo[k]fluoranthene																			
	benzo[j]fluoranthene																			
	benzo[e]pyrene																			
	benzo[a]pyrene																			
	perylene																			
	indeno[1,2,3-cd]pyrene																			
	dibenzo[a,h]anthracene																			
	benzo[ghi]perylene																			
Laboratory: 2																Number by Category				
PAH in Mussel X												Category				z (25%) z (s) p (15%)				
												<2				0 0 0				
												2 to 3				0 0 0				
												> 3				0 0 0				

Laboratory: 2
PAH in Mussel X

Reported Results	No. of Analytes	%
Quantitative	0	0
Qualitative	0	0
Not Determined	26	100

Category	Number by Category	z (25%)	z (s)	p (15%)
< 2	0	0	0	0
2 to 3	0	0	0	0
> 3	0	0	0	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 2
Reporting Date: 1/12/01

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a					
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry	Mussel X						
		10/27/00	11/6/00	S 1	S 2	S 3	10/27/00	11/6/00	lab mean	lab %RSD	lab mean	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)		
alpha-HCH	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
hexachlorobenzene	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
gamma-HCH	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
beta-HCH	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
heptachlor	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<3		no target						
aldrin	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
heptachlor epoxide	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
oxychlordane	D-R	10.2	4.42	D-R	11.1	15.7	7.31	55.91	13.4	24.3	11.6	2.8	16.6	1.7	3.88	2.44	5.26	0.27	-1.5	-1.0	3.7
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
trans-chlordane	D-R	7.31	7.03	D-R	13.9	14.0	7.17	2.76	14.0	0.5	11.5	2.0	17.2	2.8	13.4	2.7	18.0	3.6	-1.5	-1.4	0.2
	D-R	4.23	11.8	D-R	13.0	14.5	8.02	66.78	13.8	7.7	7.27	1.76	6.20	1.30	39.4	4.1	51.2	5.5	-1.6	-1.1	4.5
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
2,4'-DDE	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
cis-chlordane	D-R	26.3	31.3	D-R	45.3	32.8	28.8	12.3	39.1	22.6	7.27	1.76	6.20	1.30	39.4	4.1	51.2	5.5	-1.1	-1.5	0.8
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
trans-nonachlor	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
dieldrin	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
4,4'-DDE	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
2,4'-DDD	D-R	26.2	27.2	D-R	46.9	34.8	26.7	2.6	40.9	20.9	30.2	4.0	43.0	6.3	8.45	1.78	8.50	1.90	-0.5	-0.5	0.2
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
2,4'-DDT	D-R	6.80	0.70	D-R	8.77	4.34	3.75	114.95	6.56	47.79	8.25	3.69	6.84	0.90	8.25	3.69	6.84	0.90	-2.2	-1.1	7.7
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
cis-nonachlor	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
4,4'-DDT	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
mirex	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
endosulfan sulfate	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
chlorpyrifos	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						
	D-R	<8	<8	D-R	<8	<8	<8	NA	<8	NA	<8	NA	<5		no target						

Laboratory: 2
Pesticides in Mussel X

Reported Results		No. of Analytes		%	
Quantitative		6		24	
Qualitative		19		76	
Not Determined		0		0	

Category	Number by Category		z (s)	p (15%)
	z (25%)	z (s)		
< 2	5	6	3	3
2 to 3	1	0	0	0
> 3	0	0	0	3

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercmparison Exercise

Laboratory No.: 2

Sample: QA00TIS0 - Mussel Tissue X

(data reported as if three figures were significant)

Reporting Date: 1/12/01

PCBs		Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a				
			Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X				
			S 1	S 2	S 3	S 1	S 2	S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)		
PCB 8							NA	NA	NA	NA	NA	4.46	0.96	5.82	1.20						
PCB 18							NA	NA	NA	NA	NA	12.2	3.0	33.0	11.0						
PCB 28							NA	NA	NA	NA	NA	38.1	5.2	79.0	15.0						
PCB 31							NA	NA	NA	NA	NA	29.8	3.3	76.0	21.0						
PCB 44							NA	NA	NA	NA	NA	40.9	5.1	72.7	7.4						
PCB 49							NA	NA	NA	NA	NA	54.5	8.0	88.8	5.0						
PCB 52							NA	NA	NA	NA	NA	62.6	8.0	115	11						
PCB 66							NA	NA	NA	NA	NA	72.9	11.4	101	4						
PCB 95							NA	NA	NA	NA	NA	62.1	6.0	83.0	17.0						
PCB 99							NA	NA	NA	NA	NA	63.5	9.8	70.9	4.0						
PCB 101							NA	NA	NA	NA	NA	116	21	128	10						
PCB 105							NA	NA	NA	NA	NA	39.4	3.3	53.0	3.4						
PCB 118							NA	NA	NA	NA	NA	116	14	131	4						
PCB 128							NA	NA	NA	NA	NA	19.0	2.8	22.0	3.4						
PCB 138							NA	NA	NA	NA	NA	117	11	134	10						
PCB 149							NA	NA	NA	NA	NA	68.6	8.0	87.6	2.3						
PCB 153							NA	NA	NA	NA	NA	133	16	145	8						
PCB 156							NA	NA	NA	NA	NA	7.43	1.71	7.43	0.99						
PCB 170							NA	NA	NA	NA	NA	3.48	0.83	5.50	1.10						
PCB 180							NA	NA	NA	NA	NA	12.1	2.0	17.1	3.8						
PCB 187							NA	NA	NA	NA	NA	30.0	2.8	34.0	2.3						
PCB 194							NA	NA	NA	NA	NA	<4		no target	0.0						
PCB 195							NA	NA	NA	NA	NA	<4		no target	0.0						
PCB 206							NA	NA	NA	NA	NA	<2		no target	0.0						
PCB 209							NA	NA	NA	NA	NA	<2		no target	0.0						
Laboratory: 2																		Number by Category			
PCBs in Mussel X																		Category	z (25%)	z (s)	p (15%)
																		<2	0	0	0
																		2 to 3	0	0	0
																		>3	0	0	0
Water in Mussel X																		Mussel X, %			
																		Mussel X, %	z (25%)	z (s)	p (15%)
																		assigned	95% CL	target	95% CL
																		88.8	0.0	88.6	0.1

^az- and p-scores > are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PAH	analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		assigned value	95% CL	target value ^b	95% CL	Mussel X		
		9/25/00 S1	9/25/00 S2	9/25/00 S3	9/25/00 S1	9/25/00 S2	9/25/00 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD					z-score (25%)	p-score (15%)	
naphthalene		38.7	72.5	97.1	22.6	37.2	53.6	69.4	42.2	37.8	41.0	32.1	8.6	23.5	4.4	4.6	4.0	2.8
2-methylnaphthalene		11.9	23.9	24.2	9.08	14.5	12.3	20.0	35.1	12.0	22.8	11.7	4.8	10.2	1.5	2.8	1.8	2.3
1-methylnaphthalene		6.67	17.9	19.5	5.99	12.0	9.65	14.7	47.6	9.21	32.87	8.95	7.19	5.30	2.20	2.6	1.0	3.2
biphenyl		3.19	<0.506	4.00	7.78	4.95	2.32	3.60	15.93	5.02	54.43	8.35	3.29	5.11	1.50	-2.3	-1.2	1.1
2,6-dimethylnaphthalene		4.16	5.81	<0.265	4.13	6.38	4.12	4.99	23.40	4.88	26.70	6.59	4.76	5.30	1.80	-1.0	-0.3	1.6
acenaphthylene		3.82	<0.158	2.20	5.90	8.90	1.19	3.01	38.06	5.33	72.92	5.58	2.38	5.25	1.50	-1.8	-1.0	2.5
acenaphthene		2.35	<0.181	3.41	3.87	6.71	2.59	2.88	26.03	4.39	48.03	3.63	1.43	3.15	1.00	-0.8	-0.5	1.7
1,6,7-trimethylnaphthalene		<0.34	<0.34	<0.34	3.84	<0.34	2.07	<0.34	NA	2.96	42.35	4.73	2.16	6.60	2.00			
fluorene		4.69	6.55	5.97	4.90	7.87	4.25	5.74	16.59	5.67	34.02	5.07	0.60	5.72	0.91	0.5	1.0	1.1
phenanthrene		23.0	24.1	19.5	22.8	25.3	16.6	22.2	10.8	21.6	20.8	24.8	2.5	22.2	2.4	-0.4	-0.8	0.7
anthracene		4.65	5.38	2.32	7.18	11.9	3.44	4.12	38.82	7.51	56.48	6.47	2.22	6.10	1.70	-1.5	-0.9	2.6
1-methylphenanthrene		7.75	9.50	5.99	7.39	12.2	8.62	7.75	22.65	9.40	26.57	12.1	3.4	10.5	4.8	-1.4	-0.9	1.5
fluoranthene		189	219	178	188	240	176	195	11	201	17	168	15	164	9	0.7	1.2	0.7
pyrene		187	234	178	163	211	165	200	15	180	15	175	17	152	7	0.6	1.0	1.0
benzo[a]anthracene		37.5	36.5	28.3	26.3	33.0	21.9	34.1	14.8	27.1	20.7	44.5	4.8	32.5	4.7	-0.9	-1.5	1.0
chrysene		99.8	115	93.1	81.7	103	78.4	103	11	87.7	15.2	52.3	ND	94.9	7.0	3.8	2.8	0.7
triphenylene		Other	Other	Other	Other	Other	Other	Other	NA	Other	NA	39.4	ND	50.7	5.9			
benzo[b]fluoranthene		44.1	43.1	29.9	34.1	44.3	22.3	39.0	20.3	33.6	32.8	58.7	7.8	46.4	3.7	-1.3	-2.1	1.4
benzo[k]fluoranthene		Other	Other	Other	Other	Other	Other	Other	NA	Other	NA	29.1	ND	20.5	1.7			
benzo[j]fluoranthene		39.7	46.4	30.5	31.8	35.3	22.8	38.9	20.5	30.0	21.5	31.2	7.5	20.2	0.8	1.0	1.3	1.4
benzo[e]pyrene		81.0	82.0	62.3	65.0	90.7	57.2	75.1	14.8	71.0	24.7	91.6	9.3	84.0	1.9	-0.7	-1.2	1.0
benzo[a]pyrene		17.3	19.0	16.1	12.1	27.1	10.5	17.5	8.3	16.6	55.3	23.0	4.8	15.6	0.7	-1.0	-0.8	0.6
perylene		12.8	7.91	13.7	11.7	30.0	6.95	11.5	27.2	16.2	75.1	10.3	5.0	7.7	0.3	0.5	0.2	1.8
indeno[1,2,3-cd]pyrene		13.0	9.94	8.46	10.9	16.5	5.77	10.5	22.1	11.1	48.5	20.3	4.6	14.2	2.8	-1.9	-1.6	1.5
dibenz[a,h]anthracene		<0.118	<0.118	<0.118	2.41	4.90	<0.118	<0.118	NA	3.66	48.17	5.54	2.80	no target				
benzo[ghi]perylene		36.1	20.1	14.0	23.9	122	12.8	23.4	48.8	52.9	113.6	31.2	6.0	22.0	2.2	-1.0	-0.9	3.3
Laboratory: 4																Number by Category		
PAH in Mussel X												Category				z (25%) z (s) p (15%)		
												<2				17 19 16		
												2 to 3				3 2 4		
												>3				2 1 2		

Laboratory: 4
PAH in Mussel X

Reported Results		No. of Analytes	
Quantitative	22	Quantitative	85
Qualitative	4	Qualitative	15
Not Determined	0	Not Determined	0

Number by Category		Category	
z (25%)	z (s)	z (25%)	z (s)
17	19	< 2	16
3	2	2 to 3	4
2	1	> 3	2

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 4
Reporting Date: 1/30/01

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X, ng/g dry		SRM 1974a, ng/g dry	Mussel X		p-score (15%)
	S1	S2	S3	S1	S2	S3	10/8/00	10/10/00	9/21/00	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	target value ^b	z-score (25%)	z-score (s)	
alpha-HCH	0.648	0.893	0.714	1.21	1.81	1.33	0.681	6.853	1.45	21.9			no target			
hexachlorobenzene	0.481	1.00	0.268	0.393	0.912	0.293	0.583	64.581	0.533	62.383			no target			
gamma-HCH	0.448	0.482	0.413	0.732	1.20	0.605	0.431	5.749	0.846	37.055			no target			
beta-HCH	0.568	0.830	0.398	1.85	2.37	0.795	0.599	36.352	1.67	48.0			no target			
heptachlor	<1.08	<1.08	<1.08	<1.08	<1.08	<1.08	<1.08	NA	<1.08	NA			no target			
aldrin	<1.22	<1.22	<1.22	<1.22	<1.22	<1.22	<1.22	NA	<1.22	NA			no target			
heptachlor epoxide	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	<1.45	NA	<1.45	NA			no target			
oxychlordane	<1.58	<1.58	<1.58	<1.58	<1.58	<1.58	<1.58	NA	<1.58	NA			no target			
trans-chlordane	6.06	10.2	9.79	10.8	12.6	13.0	8.68	26.27	12.1	9.7			16.6	-1.0	-0.7	1.8
2,4'-DDE	<3.04	<3.04	<3.04	<3.04	<3.04	<3.04	<3.04	NA	<3.04	NA			5.26			
endosulfan I	<1.02	<1.02	<1.02	<1.02	<1.02	<1.02	<1.02	NA	<1.02	NA			no target			
cis-chlordane	14.6	15.2	11.9	14.5	18.6	16.3	13.9	12.6	16.5	12.5			17.2	0.8	0.8	0.8
trans-nonachlor	13.9	15.4	11.1	12.8	17.8	15.9	13.5	16.2	15.5	16.3			18.0	0.0	0.0	1.1
dieldrin	13.3	16.7	6.85	13.8	16.2	8.44	12.3	40.7	12.8	31.0			6.20	2.8	1.9	2.7
4,4'-DDE	38.7	48.2	34.1	43.0	45.9	40.7	36.4	8.9	43.2	6.0			51.2	-0.3	-0.4	0.6
2,4'-DDD	16.4	17.7	10.5	17.0	19.3	17.1	13.5	31.0	17.8	7.3			13.7	-0.1	-0.1	2.1
endrin	<637	<637	<637	<637	<637	<637	<637	NA	<637	NA			no target			
endosulfan II	7.06	8.41	2.04	8.08	9.08	3.88	5.84	57.51	7.01	39.34			no target			
4,4'-DDD	36.2	41.9	20.5	31.5	38.8	44.5	28.4	39.2	38.3	17.0			43.0	-0.2	-0.2	2.6
2,4'-DDT	<0.791	<0.791	<0.791	<0.791	<0.791	<0.791	<0.791	NA	<0.791	NA			8.50			
cis-nonachlor	12.7	14.4	7.00	12.4	14.2	10.7	11.4	34.1	12.4	14.1			6.84	1.5	0.8	2.3
4,4'-DDT	3.21	2.56	1.56	3.55	3.25	2.60	2.39	48.92	3.13	15.50			3.91	-1.8	-1.3	3.3
mirex	0.702	0.750	0.290	0.860	1.50	1.35	0.581	43.548	1.24	27.1			no target			
endosulfan sulfate	<1.23	<1.23	<1.23	<1.23	<1.23	<1.23	<1.23	NA	<1.23	NA			no target			
chlorpyrifos	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	NA	<1.04	NA			no target			

Laboratory: 4
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	15	60
Qualitative	10	40
Not Determined	0	0

Category	z (25%)	z (s)	p (15%)
< 2	8	9	4
2 to 3	1	0	4
> 3	0	0	1

^az- and p-scores >3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
		10/000 S1	10/000 S2	10/000 S3	10/000 S1	10/000 S2	10/000 S3	lab mean ng/g dry	lab RSD %	lab mean ng/g dry	lab RSD %							
PCB 8		4.83	6.40	3.77	5.26	6.28	5.03	5.00	26.5	5.52	12.05	4.46	0.96	5.82	1.20	0.5	0.6	1.8
PCB 18		11.8	14.8	9.70	28.8	28.5	23.9	12.1	21.2	27.1	10.1	12.2	3.0	33.0	11.0	0.0	0.0	1.4
PCB 28		32.9	39.0	33.9	73.7	75.2	72.5	35.3	9.3	73.8	1.8	38.1	5.2	79.0	15.0	-0.3	-0.3	0.6
PCB 31								NA	NA	NA	NA	29.8	3.3	76.0	21.0			
PCB 44		37.5	43.2	37.6	69.5	71.0	68.2	39.4	8.3	69.6	2.0	40.9	5.1	72.7	7.4	-0.1	-0.2	0.6
PCB 49		49.7	56.9	49.3	76.8	76.9	75.9	52.0	8.2	76.5	0.7	54.5	8.0	88.8	5.0	-0.2	-0.2	0.5
PCB 52		62.1	70.1	62.1	100	98.7	94.9	64.8	7.1	97.8	2.0	62.6	8.0	115	11	0.1	0.2	0.5
PCB 66		63.7	72.4	56.1	93.2	103	105	64.1	12.7	100	6	72.9	11.4	101	4	-0.5	-0.6	0.8
PCB 95								NA	NA	NA	NA	62.1	6.0	83.0	17.0			
PCB 99								NA	NA	NA	NA	63.5	9.8	70.9	4.0			
PCB 101		94.2	109	80.3	116	121	119	94.5	15.2	119	2	116	21	128	10	-0.8	-0.6	1.0
PCB 105		45.4	52.6	30.9	52.3	54.5	53.8	43.0	25.7	53.5	2.1	39.4	3.3	53.0	3.4	0.4	0.7	1.7
PCB 118		110	126	110	124	125	124	115	8	124	6	116	14	131	4	0.0	0.0	0.5
PCB 128		21.0	23.7	21.0	20.2	23.3	20.2	21.9	7.1	21.2	8.4	19.0	2.8	22.0	3.4	0.6	0.6	0.5
PCB 138		118	131	118	119	125	119	122	6	121	3	117	11	134	10	0.2	0.3	0.4
PCB 149								NA	NA	NA	NA	68.6	8.0	87.6	2.3			
PCB 153		145	159	145	152	155	152	150	5	153	1	133	16	145	8	0.5	0.6	0.4
PCB 156								NA	NA	NA	NA	7.43	1.71	7.43	0.99			
PCB 170		2.86	2.96	2.86	3.10	3.60	3.10	2.89	2.00	3.27	8.84	3.48	0.83	5.50	1.10	-0.7	-0.6	0.1
PCB 180		32.8	35.3	32.8	18.9	20.7	18.9	33.6	4.3	19.5	5.3	12.1	2.0	17.1	3.8	7.1	7.8	0.3
PCB 187		31.0	33.4	31.0	29.6	32.6	29.6	31.8	4.4	30.6	5.7	30.0	2.8	34.0	2.3	0.2	0.4	0.3
PCB 194								NA	NA	NA	NA	<4		no target	0.0			
PCB 195		<904	<904	<904	<904	<904	<904	<904	NA	<904	NA	<4		no target	0.0			
PCB 206		<912	<912	<912	<912	<912	<912	<912	NA	<912	NA	<2		no target	0.0			
PCB 209		<108	<108	<108	<108	<108	<108	<108	NA	<108	NA	<2		no target	0.0			

Laboratory: 4
PCBs in Mussel X

Category	Number by Category		
	z (25%)	z (s)	p (15%)
<2	15	15	16
2 to 3	0	0	0
>3	1	1	0

Water in Mussel X

Mussel X, %	SRM 1974a, %			Mussel X, %	SRM 1974a, %		
	S1	S2	S3		assigned	95% CL	target
water	89.7	91.0	89.7	88.8	0.0	88.6	0.1

^az- and p-scores > 2 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 5

Sample: QA00TIS10 - Mussel Tissue X

Reporting Date: 11/1/01

(data reported as if three figures were significant)

PAH	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		SRM 1974a				Mussel X, ng/g dry		target value ^b	95% CL	z-score (25%)	p-score (15%)
	S1	S2	S1	S2	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL				
naphthalene	<7	<7	10.0	13.1	<7	NA	11.6	19.0	<7	NA	32.1	8.6	23.5	4.4		
2-methylnaphthalene	<7	<7	7.00	8.90	<7	NA	8.0	16.9	<7	NA	11.7	4.8	10.2	1.5		
1-methylnaphthalene	<7	<7	<7	<7	<7	NA	<7	NA	<7	NA	8.95	7.19	5.30	2.20		
biphenyl	<7	<7	<7	<7	<7	NA	<7	NA	<7	NA	8.35	3.29	5.11	1.50		
2,6-dimethylnaphthalene	<7	<7	<7	<7	<7	NA	<7	NA	<7	NA	6.59	4.76	5.30	1.80		
acenaphthylene	<5	<5	<5	<5	<5	NA	<5	NA	<5	NA	5.58	2.38	5.25	1.50		
acenaphthene	<5	<5	<5	<5	<5	NA	<5	NA	<5	NA	3.63	1.43	3.15	1.00		
1,6,7-trimethylnaphthalene	<7	<7	NA	NA	<7	NA	NA	NA	<7	NA	4.73	2.16	6.60	2.00		
fluorene	<6	<6	<6	<6	<6	NA	<6	NA	<6	NA	5.07	0.60	5.72	0.91		
phenanthrene	19.0	21.0	17.4	17.3	20.0	7.1	17.4	0.4	24.8	2.5	24.8	2.5	22.2	2.4	-0.8	-1.5
anthracene	6.10	5.60	5.70	5.10	5.85	6.04	5.40	7.86	6.47	2.22	6.47	2.22	6.10	1.70	-0.4	-0.2
1-methylphenanthrene	10.0	11.0	12.0	13.3	10.5	6.7	12.7	7.3	12.1	3.4	12.1	3.4	10.5	4.8	-0.5	-0.3
fluoranthene	164	165	168	166	165	0	167	1	168	15	168	15	164	9	-0.1	-0.1
pyrene	179	178	168	164	179	0	166	2	175	17	175	17	152	7	0.1	0.1
benz[a]anthracene	41.0	38.0	26.6	25.9	39.5	5.4	26.3	1.9	44.5	4.8	44.5	4.8	32.5	4.7	-0.5	-0.7
chrysene	104	97.0	87.5	89.4	101	5	88.5	1.5	52.3	ND	52.3	ND	94.9	7.0	3.7	2.6
triphenylene	NA	NA	NA	NA	NA	NA	NA	NA	39.4	ND	39.4	ND	50.7	5.9		
benzo[b]fluoranthene	60.0	51.0	42.3	43.7	55.5	11.5	43.0	2.3	58.7	7.8	58.7	7.8	46.4	3.7	-0.2	-0.3
benzo[k]fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	29.1	ND	29.1	ND	20.5	1.7		
benzo[i]fluoranthene	41.0	37.0	20.3	16.3	39.0	7.3	18.3	15.5	31.2	7.5	31.2	7.5	20.2	0.8	1.0	1.3
benzo[e]pyrene	93.0	80.0	82.0	85.3	86.5	10.6	83.7	2.8	91.6	9.3	91.6	9.3	84.0	1.9	-0.2	-0.4
benzo[a]pyrene	22.0	19.0	13.3	14.2	20.5	10.3	13.8	4.6	23.0	4.8	23.0	4.8	15.6	0.7	-0.4	-0.4
perylene	8.00	8.00	6.50	6.30	8.00	0.00	6.40	2.21	10.3	5.0	10.3	5.0	7.7	0.3	-0.9	-0.4
indeno[1,2,3-cd]pyrene	21.0	19.0	16.3	14.8	20.0	7.1	15.6	6.8	20.3	4.6	20.3	4.6	14.2	2.8	-0.1	-0.1
dibenz[a,h]anthracene	<5	<5	<5	<5	<5	NA	<5	NA	5.54	2.80	5.54	2.80	no target			
benz[ghi]perylene	31.0	28.0	24.7	23.3	29.5	7.2	24.0	4.1	31.2	6.0	31.2	6.0	22.0	2.2	-0.2	-0.2

Laboratory: 5
PAH in Mussel X

Reported Results		No. of Analytes	%
Quantitative		14	54
Qualitative		10	38
Not Determined		2	8

Category	Number by Category			p (15%)
	z (25%)	z (s)		
< 2	13	13	14	
2 to 3	0	1	0	0
> 3	1	0	0	0

^az- and p-scores >3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

Analysis date	PESTICIDES																			
	Data as submitted by laboratory												Material reference values				Performance scores ^a			
	Mussel X, ng/g dry		SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		Performance scores ^a				
	08/28/2000	08/11/2000	S 1	S 2	S 3	08/28/2000	08/11/2000	S 1	S 2	S 3	lab mean ng/g dry	%RSD	lab mean ng/g dry	%RSD	assigned value	95% CL	target value ^b	z-score (25%)	z-score (s)	p-score (15%)
		NA	NA				NA	NA	NA			NA	NA	NA	<3		no target			
		<1.2	<1.2				<1.2	<1.2	<1.2			NA	<1.2	NA	<3		no target			
		<1.2	<1.2				<1.2	<1.2	<1.2			NA	<1.2	NA	<3		no target			
		NA	NA				NA	NA	NA			NA	NA	NA	<3		no target			
		<1	<1				<1	<1	<1			NA	<1	NA	<3		no target			
		<1.5	<1.5				<1.5	<1.5	<1.5			NA	<1.5	NA	<3		no target			
		<1.2	<1.2				<1.2	<1.2	<1.2			NA	<1.2	NA	<3		no target			
		NA	NA				NA	NA	NA			NA	NA	NA	<5		no target			
		NA	NA				NA	NA	NA			NA	NA	NA	11.6	2.8	16.6			
		<1.2	<1.2				4.03	4.50				<1.2	NA	4.27	3.88	2.44	5.26			
		<1.2	<1.2				<1.2	<1.2				<1.2	NA	<1.2	<5		no target			
		10.8	8.08				16.1	14.9				9.44	20.37	15.5	11.5	2.0	17.2	-0.7	-0.7	1.4
		11.3	9.34				16.0	18.5				10.3	13.4	17.3	13.4	2.7	18.0	-0.9	-0.6	0.9
		5.00	6.90				7.79	7.38				5.95	22.58	7.59	7.27	1.76	6.20	-0.7	-0.5	1.5
		38.0	56.0				48.2	51.3				47.0	27.1	49.8	39.4	4.1	51.2	0.8	1.1	1.8
		7.67	7.03				14.1	8.60				7.35	6.16	11.4	13.9	0.0	13.7	-1.9	-1.1	0.4
		NA	NA				NA	NA				NA	NA	NA	<5	0.00	no target			
		<2	<2				<2	<2				<2	NA	<2	<15	0.00	no target			
		34.8	37.9	0.0			57.6	35.8				36.4	6.0	46.7	30.2	4.0	43.0	0.8	0.8	0.4
		9.12	9.14				10.1	9.20				9.13	0.15	9.65	8.45	1.78	8.50	0.3	0.4	0.0
		NA	NA				NA	NA				NA	NA	NA	8.25	3.69	6.84			
		4.00	5.71				3.15	3.50				4.86	24.91	3.33	4.37	1.03	3.91	0.4	0.3	1.7
		<1.5	<1.5				<1.5	<1.5				<1.5	NA	<1.5	<5		no target			
		NA	NA				NA	NA				NA	NA	NA	<4		no target			
		NA	NA				NA	NA				NA	NA	NA	<2		no target			

Laboratory: 5
Pesticides in Mussel X

Reported Results		No. of Analytes		%	
Quantitative	8	Quantitative	8	Quantitative	32
Qualitative	9	Qualitative	9	Qualitative	36
Not Determined	8	Not Determined	8	Not Determined	32

Category		Number by Category		z (s)		p (15%)	
<2	8	<2	8	<2	8	<2	8
2 to 3	0	2 to 3	0	2 to 3	0	2 to 3	0
>3	0	>3	0	>3	0	>3	0

^a z- and p-scores >3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00TIS 0 - Mussel Tissue X

Laboratory No.: 5

Reporting Date: 11/1/01

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory													Material reference values				Performance scores ^a					
	Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		p-score						
	lab mean		lab %RSD	lab mean		lab %RSD	lab mean		lab %RSD	assigned value		95% CL	target value ^b		95% CL	z-score (25%)		z-score (s)	p (15%)				
	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3					
Analysis date																							
PCB 8	<2	NA		<2	<2		<2	NA	<2	NA	<2	NA	4.46	0.96	5.82	1.20							
PCB 18	<2	NA		25.1	27.8		<2	NA	26.5	7.2	7.2	NA	12.2	3.0	33.0	11.0							
PCB 28	39.0	32.0		58.2	51.0		35.5	13.9	54.6	9.3	9.3	NA	38.1	5.2	79.0	15.0	-0.3	-0.3	0.9				
PCB 31	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	29.8	3.3	76.0	21.0							
PCB 44	38.1	31.0		70.6	67.8		34.6	14.5	69.2	2.9	2.9	NA	40.9	5.1	72.7	7.4	-0.6	-0.8	1.0				
PCB 49	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	54.5	8.0	88.8	5.0							
PCB 52	58.0	56.0		105	109		57.0	2.5	107	3	3	NA	62.6	8.0	115	11	-0.4	-0.4	0.2				
PCB 66	65.6	75.0		161	177		70.3	9.5	167	7	7	NA	72.9	11.4	101	4	-0.1	-0.2	0.6				
PCB 95	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	62.1	6.0	83.0	17.0							
PCB 99	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	63.5	9.8	70.9	4.0							
PCB 101	98.8	91.0		133	138		94.9	5.8	136	3	3	NA	116	21	128	10	-0.7	-0.6	0.4				
PCB 105	38.0	35.1		52.0	51.0		36.6	5.6	51.5	1.4	1.4	NA	39.4	3.3	53.0	3.4	-0.3	-0.5	0.4				
PCB 118	101	97		126	117		99.0	2.9	122	5	5	NA	116	14	131	4	-0.6	-0.7	0.2				
PCB 128	17.3	22.0		21.9	23.5		19.7	16.9	22.7	5.0	5.0	NA	19.0	2.8	22.0	3.4	0.1	0.1	1.1				
PCB 138	109	93.3		128	133		101	11	131	3	3	NA	117	11	134	10	-0.5	-0.9	0.7				
PCB 149	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	68.6	8.0	87.6	2.3							
PCB 153	115	113		146	139		114	1	143	3	3	NA	133	16	145	8	-0.6	-0.6	0.1				
PCB 156	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	7.43	1.71	7.43	0.99							
PCB 170	<2	<2		5.91	6.52		<2	NA	6.22	6.94	6.94	NA	3.48	0.83	5.50	1.10							
PCB 180	12.6	11.0		14.8	13.5		11.8	9.6	14.2	6.5	6.5	NA	12.1	2.0	17.1	3.8	-0.1	-0.1	0.6				
PCB 187	29.2	33.0		35.2	35.7		31.1	8.6	35.5	1.0	1.0	NA	30.0	2.8	34.0	2.3	0.1	0.2	0.6				
PCB 194	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA	<4		no target	0.0							
PCB 195	<2	<2		<2	<2		<2	NA	<2	NA	<2	NA	<4		no target	0.0							
PCB 206	<2	<2		<2	<2		<2	NA	<2	NA	<2	NA	<2		no target	0.0							
PCB 209	<2	<2		<2	<2		<2	NA	<2	NA	<2	NA	<2		no target	0.0							
Laboratory: 5 PCBs in Mussel X																							
Reported Results										No. of Analytes		Number by Category											
Quantitative										12		Category		z (25%)		z (s)		p (15%)					
Qualitative										6		<2		12		12		12					
Not Determined										7		2 to 3		0		0		0					
										28		>3		0		0		0					
Water in Mussel X																							
Mussel X, %			SRM 1974a, %			Mussel X, %			SRM 1974a, %			Mussel X, %			SRM 1974a, %								
S1	S2	S3	S1	S2	S3	mean, %	%RSD	%RSD	mean, %	%RSD	%RSD	assigned	95% CL	target	95% CL	z (25%)	z (s)	p (15%)					
90.4	90.4					90.4	0.0		90.4	0.0		88.8	0.0	88.6	0.1	0.1	0.3	0.0					
Water																							

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

Sample: QA00TIS10 - Mussel Tissue X

(data reported as if three figures were significant)

Reporting Date: 1/30/01

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores *		
		Mussel X, ng/g dry		SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/gdry		SRM 1974a, ng/g dry		Mussel X			
		11/3/00 S1	11/3/00 S2	11/3/00 S3	11/3/00 S1	11/3/00 S2	11/3/00 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	p-score (15%)	
naphthalene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	32.1	8.6	23.5	4.4			
2-methylnaphthalene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	11.7	4.8	10.2	1.5			
1-methylnaphthalene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	8.95	7.19	5.30	2.20			
biphenyl		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	8.35	3.29	5.11	1.50			
2,6-dimethylnaphthalene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	6.59	4.76	5.30	1.80			
acenaphthylene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	5.58	2.38	5.25	1.50			
acenaphthene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	3.63	1.43	3.15	1.00			
1,6,7-trimethylnaphthalene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	4.73	2.16	6.60	2.00			
fluorene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	5.07	0.60	5.72	0.91			
phenanthrene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	24.8	2.5	22.2	2.4			
anthracene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	6.47	2.22	6.10	1.70			
1-methylphenanthrene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	12.1	3.4	10.5	4.8			
fluoranthene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	168	15	164	9			
pyrene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	175	17	152	7			
benz[a]anthracene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	44.5	4.8	32.5	4.7			
chrysene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	52.3	ND	94.9	7.0			
triphenylene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	39.4	ND	50.7	5.9			
benzo[b]fluoranthene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	58.7	7.8	46.4	3.7			
benzo[k]fluoranthene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	29.1	ND	20.5	1.7			
benzo[j]fluoranthene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	31.2	7.5	20.2	0.8			
benzo[e]pyrene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	91.6	9.3	84.0	1.9			
benzo[a]pyrene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	23.0	4.8	15.6	0.7			
perylene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	10.3	5.0	7.7	0.3			
indeno[1,2,3-cd]pyrene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	20.3	4.6	14.2	2.8			
dibenz[a,h]anthracene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	5.54	2.80	no target				
benzo[ghi]perylene		DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	31.2	6.0	22.0	2.2			
Laboratory: 6												Reported Results		No. of Analytes		Number by Category		
PAH in Mussel X												Quantitative		0		Category		
												Qualitative		26		z (25%)		
												Not Determined		0		z (s)		
														0		p (15%)		
														0		0		
														0		0		
														0		0		

*z- and p-scores > 3 are held.

*Certified material reference values are held.

FY00 NIST Intercomparison Exercise
Sample: QA00T1510 - Mussel Tissue X

Laboratory No: 6
Reporting Date: 1/30/01

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X, ng/g dry		SRM 1974a, ng/g dry	z-score (25%)	z-score (s)	p-score (15%)
	10/24/00	S 1	S 2	11/15/00	S 3	10/24/00	S 1	S 2	11/15/00	S 3	lab mean ng/g dry	lab %RSD	target value ^b			
alpha-HCH	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
hexachlorobenzene	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
gamma-HCH	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
beta-HCH	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
heptachlor	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
aldrin	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
heptachlor epoxide	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
oxychlordane	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
trans-chlordane	DL	27.4	23.1	58.1	58.4	DL	DL	DL	DL	DL	25.3	12.0	58.3	0.4	NA	NA
2,4'-DDE	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	10.90	NA	NA	NA
endosulfan I	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
cis-chlordane	DL	12.7	11.6	DL	21.7	DL	DL	DL	DL	DL	12.2	6.4	21.7	NA	NA	NA
trans-nonachlor	DL	13.0	DL	DL	32.2	DL	DL	DL	DL	DL	13.0	NA	32.2	NA	NA	NA
dieldrin	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
4,4'-DDE	63.0	38.8	34.9	45.0	34.9	31.6	DL	DL	DL	DL	45.6	33.4	37.2	18.8	NA	NA
2,4'-DDO	DL	119	98.8	123	105	DL	DL	DL	DL	DL	109	13	114	11	NA	NA
endrin	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
endosulfan II	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
4,4'-DDD	DL	19.7	19.2	30.2	44.0	14.1	DL	DL	DL	DL	19.5	1.8	29.4	50.8	NA	NA
2,4'-DDT	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
cis-nonachlor	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
4,4'-DDT	435	120	97.10	151	180	61.8	DL	DL	DL	DL	217	87	131	47	NA	NA
mirex	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
endosulfan sulfate	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA
chlorpyrifos	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	NA	NA

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	4	4	4
2 to 3	0	0	1
> 3	3	4	1

Reported Results	No. of Analytes	%
Quantitative	7	28
Qualitative	18	72
Not Determined	0	0

Laboratory: 6
Pesticides In Mussel X

^a z- and p-scores >3 are bolded.

^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 7

Sample: QA00TIS10 - Mussel Tissue X

Reporting Date: 1/24/00

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X		SRM 1974a, ng/g dry		Mussel X		p-score (15%)
		8/1000 S1	8/1000 S2	8/1000 S3	8/1000 S1	8/1000 S2	8/1000 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	
naphthalene		43.6	39.7	38.1	30.3	36.8	25.5	40.5	7.0	30.9	18.4	32.1	8.6	23.5	4.4	1.0	0.9	0.5
2-methylnaphthalene		35.4	21.7	32.3	29.9	25.3	22.5	29.8	24.1	25.9	14.4	11.7	4.8	10.2	1.5	6.2	3.9	1.6
1-methylnaphthalene		18.3	18.0	21.9	14.3	10.5	11.1	19.4	11.2	12.0	17.1	8.95	7.19	5.30	2.20	4.7	1.8	0.7
biphenyl		20.4	4.63	10.9	8.99	6.25	7.35	12.0	66.3	7.53	18.31	8.35	3.29	5.11	1.50	1.7	0.9	4.4
2,6-dimethylnaphthalene		14.9	19.0	9.99	12.9	7.17	5.66	14.6	30.8	8.58	44.53	6.59	4.76	5.30	1.80	4.9	1.4	2.1
acenaphthylene		<1	<1	<1	<1	<1	3.47	<1	NA	3.47	NA	5.58	2.38	5.25	1.50			
acenaphthene		6.84	6.55	4.11	4.07	5.21	4.07	5.83	25.71	4.45	14.79	3.63	1.43	3.15	1.00	2.4	1.4	1.7
1,6,7-trimethylnaphthalene		8.29	9.16	8.64	4.96	3.62	6.95	8.70	5.03	5.18	32.37	4.73	2.16	6.60	2.00	3.4	1.9	0.3
fluorene		7.82	5.26	3.21	6.45	4.10	5.52	5.43	42.54	5.36	22.09	5.07	0.60	5.72	0.91	0.3	0.5	2.8
phenanthrene		30.0	29.8	29.4	26.1	22.8	20.4	29.7	1.0	23.1	12.4	24.8	2.5	22.2	2.4	0.8	1.6	0.1
anthracene		3.95	7.13	5.72	4.66	5.78	6.67	5.60	28.45	5.70	17.66	6.47	2.22	6.10	1.70	-0.5	-0.3	1.9
1-methylphenanthrene		11.6	6.36	11.3	9.25	14.9	11.2	9.75	30.17	11.78	24.35	12.1	3.4	10.5	4.8	-0.8	-0.5	2.0
fluoranthene		152	169	186	144	165	177	169	10	162	10	168	15	164	9	0.0	0.1	0.7
pyrene		163	178	183	143	160	161	175	6	155	7	175	17	152	7	0.0	0.0	0.4
benz[a]anthracene		36.9	51.9	49.8	23.0	40.2	36.4	46.2	17.6	33.2	27.2	44.5	4.8	32.5	4.7	0.1	0.2	1.2
chrysene		Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	NA	Other (1)	NA	52.3	ND	94.9	7.0			
triphenylene		Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	NA	Other (1)	NA	39.4	ND	50.7	5.9			
benzo[b]fluoranthene		57.8	68.9	59.0	42.7	48.5	44.2	61.9	9.8	45.1	6.7	58.7	7.8	46.4	3.7	0.2	0.3	0.7
benzo[k]fluoranthene		Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	NA	Other (2)	NA	29.1	ND	20.5	1.7			
benzo[j]fluoranthene		Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	NA	Other (2)	NA	31.2	7.5	20.2	0.8			
benzo[e]pyrene		94.3	86.7	94.2	81.6	73.4	81.8	91.7	4.8	78.9	6.1	91.6	9.3	84.0	1.9	0.0	0.0	0.3
benzo[a]pyrene		22.1	20.7	25.2	16.3	14.4	16.6	22.7	10.2	15.8	7.6	23.0	4.8	15.6	0.7	-0.1	-0.1	0.7
perylene		9.04	9.41	9.62	5.38	7.94	7.20	9.36	3.14	6.84	19.26	10.3	5.0	7.7	0.3	-0.4	-0.2	0.2
indeno[1,2,3-cd]pyrene		29.5	18.8	23.9	19.9	13.5	15.3	24.1	22.2	16.2	20.3	20.3	4.6	14.2	2.8	0.7	0.6	1.5
dibenz[a,h]anthracene		8.07	8.12	7.11	5.18	4.46	2.86	7.77	7.33	4.17	28.50	5.54	2.80	no target		1.6	0.7	0.5
benzo[ghi]perylene		42.0	38.2	40.4	31.3	28.4	26.5	40.2	4.7	28.7	8.4	31.2	6.0	22.0	2.2	1.2	1.1	0.3

Laboratory: 7	Number by Category		
PAH in Mussel X	z (25%)	z (s)	p (15%)
	<2	16	20
	2 to 3	1	0
	>3	4	1

Laboratory: 7
PAH in Mussel X

Reported Results		No. of Analytes	
Quantitative	21	Quantitative	81
Qualitative	5	Qualitative	19
Not Determined	0	Not Determined	0

Category		Number by Category	
<2	16	z (25%)	z (s)
2 to 3	1	p (15%)	p (15%)
>3	4		

^az- and p-scores > 1 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES		Data as submitted by laboratory														Material reference values				Performance scores ^a															
		Mussel X, ng/g dry									SRM 1974a, ng/g dry					Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X															
		9/20/90			9/20/00			10/15/00			lab mean ng/g dry			%RSD		lab mean ng/g dry			%RSD		assigned value		95% CL		target value ^b		95% CL		z-score (25%)		z-score (s)		p-score (15%)		
Analysis date		S 1	S 2	S 3	S 1	S 2	S 3	S 1	S 2	S 3	S 1	S 2	S 3	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD	lab mean	%RSD
alpha-HCH		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
hexachlorobenzene		0.171	0.142	0.129	0.187	0.158	0.175				0.147	14.594		0.173	8.407																				
gamma-HCH		3.15	<0.8	0.374	1.95	0.450	0.348				1.76	111.40		0.916	97.917																				
beta-HCH		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
heptachlor		<0.04	0.414	0.267	<0.04	0.596	0.655				0.341	30.527		0.626	6.670																				
aldrin		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA		<0.01	NA	<0.01	NA	<0.01	NA	<0.01	NA	<0.01	NA	<0.01	NA	<0.01	NA	<0.01	NA	<0.01	NA	<0.01
heptachlor epoxide		0.612	<0.1	9.50	<0.1	2.32	2.11				5.06	124.3		2.22	6.70																				
oxychlordane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-chlordane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4'-DDE		<0.06	<0.06	<0.06	12.6	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	NA	<0.06	12.6	NA		<0.06	NA	<0.06	NA	<0.06	NA	<0.06	NA	<0.06	NA	<0.06	NA	<0.06	NA	<0.06	NA	<0.06	NA	<0.06
endosulfan I		<0.1	<0.1	<0.1	7.44	6.96	7.56				<0.1	NA	<0.1	7.32	4.34																				
cis-chlordane		7.41	1.42	0.546	9.82	2.53	1.74				3.13	119.55		4.70	94.84																				
trans-nonachlor		4.68	3.97	3.16	7.14	5.67	5.11				3.94	19.32		5.97	17.55																				
dieldrin		4.20	3.82	3.76	6.39	5.21	5.75				3.93	6.08		5.78	10.21																				
4,4'-DDE		22.1	16.8	15.8	29.1	21.1	21.7				18.2	18.6		24.0	18.6																				
2,4'-DDD		14.7	8.05	7.56	19.3	11.8	11.4				10.1	39.5		14.2	31.4																				
endrin		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
endosulfan II		<0.1	<0.1	<0.1	10.8	8.35	8.73				<0.1	NA	<0.1	9.29	14.2																				
4,4'-DDD		30.0	20.3	17.6	34.9	34.0	31.1				22.6	28.8		33.3	6.0																				
2,4'-DDT		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	NA																				
cis-nonachlor		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4,4'-DDT		1.60	2.13	2.18	1.41	1.73	1.60				1.97	16.31		1.58	10.19																				
mirex		<0.2	4.43	2.07	<0.2	2.75	<0.2				3.25	51.3		2.75	NA																				
endosulfan sulfate		<0.1	<0.1	<0.1	5.04	8.61	8.88				<0.1	NA	<0.1	7.51	28.5																				
chlorpyrifos		2.78	2.21	0.79	13.8	12.5	13.4				1.93	53.2		13.2	5.0																				

Laboratory: 7
Pesticides in Mussel X

Reported Results		No. of Analytes		%	
Quantitative		13		52	
Qualitative		6		24	
Not Determined		6		24	

Category	Number by Category	
	z (25%)	p (15%)
< 2	3	5
2 to 3	4	2
> 3	0	1

^az- and p-scores > : are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00T1S10 - Mussel Tissue X

Laboratory No.: 7

Reporting Date: 1/24/00

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory														Material reference values				Performance scores ^a											
	Mussel X, ng/g dry				SRM 1974a, ng/g dry				Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		SRM 1974a											
	92000	92000	S1	S2	92000	92000	S1	S2	92000	92000	lab mean	lab	%RSD	lab mean	lab	%RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)							
Analysis date																														
PCB 8	5.19	5.16	5.39	38.8	35.3	38.8	43.0	65.1	75.9	5.25	2.4	6.04	27.24	4.46	0.96	5.82	1.20	0.7	0.9	0.2										
PCB 18	8.89	4.47	14.2	14.2	16.4	6.92	23.4	53.03	53.1	9.19	53.03	15.6	53.1	12.2	3.0	33.0	11.0	-1.0	-0.6	3.5										
PCB 28	22.4	22.1	32.5	32.5	31.3	32.9	57.4	25.7	23.1	25.7	23.1	40.5	36.1	38.1	5.2	79.0	15.0	-1.3	-1.5	1.5										
PCB 31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.8	3.3	76.0	21.0													
PCB 44	26.4	35.3	38.8	38.8	43.0	65.1	75.9	33.5	19.1	61.3	27.3	27.3	7.4	40.9	5.1	72.7	7.4	-0.7	-0.9	1.3										
PCB 49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54.5	8.0	88.8	5.0													
PCB 52	46.5	48.3	64.5	64.5	61.5	62.7	113	53.1	18.7	79.1	37.2	37.2	11	62.6	8.0	115	11	-0.6	-0.7	1.2										
PCB 66	56.9	60.1	101	101	96.3	91.0	163	72.7	33.8	107	34	34	4	72.9	11.4	101	4	0.0	0.0	2.3										
PCB 95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	62.1	6.0	83.0	17.0													
PCB 99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63.5	9.8	70.9	4.0													
PCB 101	81.3	96.5	106	106	81.2	103	138	94.6	13.2	107	27	27	10	116	21	128	10	-0.7	-0.6	0.9										
PCB 105	25.0	26.2	43.2	43.2	35.8	17.0	56.0	31.5	32.3	36.3	53.8	53.8	3.4	39.4	3.3	53.0	3.4	-0.8	-1.4	2.2										
PCB 118	78.8	78.8	107	107	76.9	93.0	133	88.2	18.5	101	27	27	4	116	14	131	4	-1.0	-1.1	1.2										
PCB 128	15.3	15.3	21.7	21.7	18.8	18.1	23.8	17.4	21.2	20.2	15.4	15.4	3.4	19.0	2.8	22.0	3.4	-0.3	-0.3	1.4										
PCB 138	87.7	84.1	119	119	104	94.4	123	96.9	19.8	107	14	14	10	117	11	134	10	-0.7	-1.2	1.3										
PCB 149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	68.6	8.0	87.6	2.3													
PCB 153	95.4	90.0	110	110	81.5	95.9	112	98.5	10.5	96.5	15.8	15.8	8	133	16	145	8	-1.0	-1.2	0.7										
PCB 156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.43	1.71	7.43	0.99													
PCB 170	4.51	4.82	1.71	1.71	4.18	4.89	2.21	3.68	46.55	3.76	36.93	36.93	1.10	3.48	0.83	5.50	1.10	0.2	0.2	3.1										
PCB 180	11.6	11.5	14.5	14.5	NA	12.7	15.6	12.5	13.6	14.2	14.5	14.5	3.8	12.1	2.0	17.1	3.8	0.1	0.2	0.9										
PCB 187	25.0	20.0	21.3	21.3	28.9	22.6	21.0	22.1	11.7	24.2	17.3	17.3	2.3	30.0	2.8	34.0	2.3	-1.1	-1.6	0.8										
PCB 194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target	0.0													
PCB 195	<0.1	0.566	0.624	0.624	0.414	0.607	0.694	0.595	6.893	0.572	25.068	25.068	0.0	<4		no target	0.0													
PCB 206	<0.1	0.260	<0.1	<0.1	<0.1	0.285	<0.1	0.260	NA	0.285	NA	NA	0.0	<2		no target	0.0													
PCB 209	<0.1	0.453	0.257	0.257	<0.1	0.521	<0.1	0.355	39.040	0.521	NA	NA	0.0	<2		no target	0.0													
Laboratory: 7																							Number by Category							
PCBs In Mussel X																							Category	z (25%)	z (s)	p (15%)				
																							<2	15	15	11				
																							2 to 3	0	0	2				
																							> 3	0	0	2				
Water In Mussel X																							Mussel X, %							
																							assigned		95% CL		target		95% CL	
																							88.8		0.0		88.6		0.1	
																							z (25%)		z (s)		p (15%)			
																							0.1		0.3		0.0			
water																														

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/gdry assigned value	95% CL	SRM 1974a, ng/g dry target value ^b	95% CL	Mussel X		
		1/16/01 S1	1/16/01 S2	1/16/01 S3	1/16/01 S1	1/16/01 S2	1/16/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD					z-score (25%)	z-score (s)	p-score (15%)
naphthalene		38.7	26.6	30.4	16.6	17.0		31.9	19.4	16.8	1.7	32.1	8.6	23.5	4.4	0.0	0.0	1.3
2-methylnaphthalene		<74.7	<74.7	<74.7	<39.4	<39.4		<74.7	NA	<39.4	NA	11.7	4.8	10.2	1.5			
1-methylnaphthalene		<40.0	<40.0	<40.0	<21.1	<21.1		<40.0	NA	<21.1	NA	8.95	7.19	5.30	2.20			
biphenyl		22.4	<11.7	19.5	<8.3	<8.3		21.0	9.8	<8.3	NA	8.35	3.29	5.11	1.50	6.0	3.2	0.7
2,6-dimethylnaphthalene		<40.9	<40.9	<40.9	<21.6	<21.6		<40.9	NA	<21.6	NA	6.59	4.76	5.30	1.80			
acenaphthylene		<12.0	<12.0	<12.0	<6.3	<6.3		<12.0	NA	<6.3	NA	5.58	2.38	5.25	1.50			
acenaphthene		<15.7	<15.7	<15.7	<8.3	<8.3		<15.7	NA	<8.3	NA	3.63	1.43	3.15	1.00			
1,6,7-trimethylnaphthalene		<13.1	<13.1	<13.1	<6.9	<6.9		<13.1	NA	<6.9	NA	4.73	2.16	6.60	2.00			
fluorene		<12.1	<12.1	<12.1	<6.3	<6.3		<12.1	NA	<6.3	NA	5.07	0.60	5.72	0.91			
phenanthrene		25.4	22.0	22.0	22.0	23.1		23.1	8.5	22.6	3.4	24.8	2.5	22.2	2.4	-0.3	-0.5	0.6
anthracene		<9.7	<9.7	<9.7	6.70	<5.0		<9.7	NA	6.70	NA	6.47	2.22	6.10	1.70			
1-methylphenanthrene		<16.8	<16.8	<16.8	11.4	10.1		<16.8	NA	10.75	8.55	12.1	3.4	10.5	4.8			
fluoranthene		191	170	171	204	171		177	7	188	12	168	15	164	9	0.2	0.4	0.4
pyrene		168	156	153	174	154		159	5	164	9	175	17	152	7	-0.4	-0.7	0.3
benz[a]anthracene		48.2	39.8	38.1	37.2	35.8		42.0	12.9	36.5	2.7	44.5	4.8	32.5	4.7	-0.2	-0.4	0.9
chrysene		117	103	103	111	104		108	8	108	5	52.3	ND	94.9	7.0	4.2	3.0	0.5
triphenylene		NA	NA	NA	NA	NA		NA	NA	NA	NA	39.4	ND	50.7	5.9			
benzo[b]fluoranthene		86.6	70.9	78.0	49.3	37.8		78.5	10.0	43.6	18.7	58.7	7.8	46.4	3.7	1.3	2.1	0.7
benzo[k]fluoranthene		NA	NA	NA	NA	NA		NA	NA	NA	NA	29.1	ND	20.5	1.7			
benzo[j]fluoranthene		36.4	27.9	34.6	16.8	17.1		33.0	13.6	17.0	1.3	31.2	7.5	20.2	0.8	0.2	0.3	0.9
benzo[e]pyrene		114	93.9	104	62.5	84.2		104	10	73.4	20.9	91.6	9.3	84.0	1.9	0.5	0.9	0.6
benzo[a]pyrene		<8.2	9.50	8.20	16.3	18.7		8.85	10.39	17.5	9.7	23.0	4.8	15.6	0.7	-2.5	-2.1	0.7
perylene		<50.9	<50.9	<50.9	<26.8	<26.8		<50.9	NA	<26.8	NA	10.3	5.0	7.7	0.3			
indeno[1,2,3-cd]pyrene		<15.7	<15.7	<15.7	17.3	16.3		<15.7	NA	16.8	4.2	20.3	4.6	14.2	2.8			
dibenz[a,h]anthracene		<10.1	<10.1	<10.1	<5.3	<5.3		<10.1	NA	<5.3	NA	5.54	2.80	no target				
benzo[ghi]perylene		11.2	15.4	12.3	14.2	22.5		13.0	16.8	18.4	31.8	31.2	6.0	22.0	2.2	-2.3	-2.2	1.1
Laboratory: 9																Number by Category		
PAH in Mussel X												Category				z (25%) z (s) p (15%)		
												<2				8 7 12		
												2 to 3				2 3 0		
												>3				2 2 0		

Laboratory: 9

PAH in Mussel X

Reported Results		No. of Analyses	
Quantitative	12	46	46
Qualitative	12	46	46
Not Determined	2	8	8

Number by Category		z (s)		p (15%)	
Category	z (25%)	z (s)	z (s)	p (15%)	p (15%)
< 2	8	7	12		
2 to 3	2	3	0		
> 3	2	2	0		

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 9
Reporting Date: 2/1/01

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a			
		Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X		SRM 1974a, ng/g dry		Mussel X			
		1/13/01	1/13/01	1/13/01	1/13/01	1/13/01	lab mean ng/g dry	%RSD	lab mean ng/g dry	%RSD	lab mean ng/g dry	%RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)

Laboratory: 9
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	13	52
Qualitative	12	48
Not Determined	0	0

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	10	11	11
2 to 3	1	0	0
> 3	0	0	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory										Material reference values				Performance scores ^a							
	Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X							
	1/13/01	1/13/01	1/13/01	1/13/01	1/13/01	1/13/01	1/13/01	1/13/01	1/13/01	1/13/01	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	z-score (25%)	p-score (15%)			
PCB 8	3.28	2.44	3.40	3.40	8.42	7.94					3.04	17.2	8.18	4.15	4.46	0.96	5.82	-1.3	-1.6	1.1		
PCB 18	18.0	15.0	16.2	16.2	34.9	37.6					16.4	9.1	36.3	5.3	12.2	3.0	33.0	1.4	0.8	0.6		
PCB 28	45.9	41.2	43.9	43.9	86.7	92.1					43.7	5.3	89.4	4.3	38.1	5.2	79.0	0.6	0.7	0.4		
PCB 31	28.6	23.3	27.6	27.6	38.0	51.4					26.5	10.6	44.7	21.1	29.8	3.3	76.0	-0.4	-1.3	0.7		
PCB 44	56.9	49.9	51.1	51.1	78.6	82.3					52.6	7.1	80.5	4.3	40.9	5.1	72.7	1.2	1.4	0.5		
PCB 49	76.9	66.4	65.1	65.1	99.3	105					69.5	9.3	102	4	54.5	8.0	88.8	1.1	1.4	0.6		
PCB 52	85.6	75.6	77.3	77.3	115	119					79.5	6.8	117	4	62.6	8.0	115	1.1	1.3	0.5		
PCB 66	75.5	66.9	65.9	65.9	93.0	110					69.5	7.6	101	12	72.9	11.4	101	-0.2	-0.2	0.5		
PCB 95	66.3	58.4	61.4	61.4	93.9	92.8					62.0	6.4	93.3	0.8	62.1	6.0	83.0	0.0	0.0	0.4		
PCB 99	83.7	74.4	75.2	75.2	83.6	87.5					77.8	6.6	80.5	3.2	63.5	9.8	70.9	0.9	1.5	0.4		
PCB 101	127	115	114	114	139	140					119	6	140	1	116	21	128	0.1	0.1	0.4		
PCB 105	38.1	34.7	33.5	33.5	42.5	46.9					35.5	6.7	44.7	7.0	39.4	3.3	53.0	-0.4	-0.7	0.4		
PCB 118	115	101	103	120	119						106	7	120	3	116	14	131	-0.3	-0.4	0.5		
PCB 128	18.6	15.1	14.1	20.0	19.8						15.9	14.9	19.9	0.7	19.0	2.8	22.0	-0.6	-0.6	1.0		
PCB 138	127	116	114	125	124						119	6	125	1	117	11	134	0.1	0.1	0.4		
PCB 149	77.4	68.9	68.2	77.2	78.1						71.5	7.2	77.7	0.9	68.6	8.0	87.6	0.2	0.3	0.5		
PCB 153	180	164	164	184	180						169	5	182	2	133	16	145	1.1	1.3	0.3		
PCB 156	19.9	17.1	16.4	17.7	16.3						17.8	10.3	17.0	5.5	7.43	1.71	7.43	5.6	7.5	0.7		
PCB 170	26.4	25.9	25.4	5.26	5.13						25.9	2.0	5.20	1.77	3.48	0.83	5.50	25.7	22.7	0.1		
PCB 180	36.9	33.2	32.8	29.3	30.5						34.3	6.6	29.9	2.8	12.1	2.0	17.1	7.3	8.0	0.4		
PCB 187	34.6	31.3	31.2	34.6	33.6						32.4	6.0	34.1	2.1	30.0	2.8	34.0	0.3	0.5	0.4		
PCB 194	1.21	1.05	1.06	1.49	1.32						1.11	8.1	1.41	8.6	<4		no target					
PCB 195	<1.77	<1.77	<1.77	<0.91	<0.91						<1.77	NA	<0.91	NA	<4		no target					
PCB 206	<1.83	<1.83	<1.83	<0.94	<0.94						<1.83	NA	<0.91	NA	<2		no target					
PCB 209	<2.09	<2.06	<2.06	<1.06	<1.06						<2.06	NA	<1.06	NA	<2		no target					
Laboratory: 9											Reported Results		No. of Analytes									
PCBs in Mussel X											Quantitative		22		88							
											Qualitative		3		12							
											Not Determined		0		0							
Water in Mussel X											Mussel X, %		SRM 1974a, %		Mussel X, %		SRM 1974a, %		Mussel X, %			
											mean, %		mean, %		95% CL		target		95% CL		p (15%)	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2		S 3		S 1		S 2		S 3	
											91.0		89.0		90.0		88.8		0.1		0.1	
											S 1		S 2									

FY00 NIST Intercomparison Exercise

Laboratory No.: 10

Sample: QA00TIS10 - Mussel Tissue X

Reporting Date: 1/30/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a				
		Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X		SRM 1974a, ng/g dry	target value ^b	95% CL				
		10/30/00 S 1	10/30/00 S 2	10/30/00 S 3	10/30/00 S 3	10/30/00 S 3	lab mean ng/g dry	lab %RSD	SRM 1974a ng/g dry	lab mean ng/g dry	lab %RSD	assigned value	95% CL				z-score (25%)	z-score (s)	p-score (15%)	
naphthalene		<33	29.5	30.5	15.2	21.8	23.1	23.1	23.1	23.1	21.0	32.1	8.6	23.5	4.4	-0.3	-0.2	0.2		
2-methylnaphthalene		27.4	26.3	27.4	16.2	20.0	20.2	20.2	20.2	20.2	18.8	12.0	11.7	4.8	10.2	1.5	5.2	3.3	0.1	
1-methylnaphthalene		17.9	17.9	18.9	10.5	13.6	12.5	12.5	12.5	12.5	13.1	13.1	8.95	7.19	5.30	2.20	4.2	1.6	0.2	
biphenyl		<65	<73	<74	40.0	43.6	40.4	40.4	40.4	40.4	48.3	48.3	8.35	3.29	5.11	1.50				
2,6-dimethylnaphthalene		11.6	9.37	28.4	6.67	6.73	7.31	7.31	7.31	7.31	5.13	5.13	6.59	4.76	5.30	1.80	6.0	1.7	4.2	
acenaphthylene		<32	<35	10.5	7.62	8.55	8.85	8.85	8.85	8.85	7.67	7.67	5.58	2.38	5.25	1.50	3.6	1.9		
acenaphthene		<32	15.8	15.8	9.52	11.8	11.5	11.5	11.5	11.5	11.4	11.4	3.63	1.43	3.15	1.00	13.4	7.9	0.0	
1,6,7-trimethylnaphthalene		18.9	16.8	18.9	11.4	12.7	12.5	12.5	12.5	12.5	5.7	5.7	4.73	2.16	6.60	2.00	11.4	6.6	0.4	
fluorene		20.0	16.8	18.9	11.4	12.7	12.5	12.5	12.5	12.5	5.7	5.7	5.07	0.60	5.72	0.91	10.7	20.7	0.6	
phenanthrene		43.2	46.3	60.0	27.6	44.5	36.5	36.5	36.5	36.5	23.4	23.4	24.8	2.5	22.2	2.4	4.0	7.8	1.2	
anthracene		<32	4.74	4.95	<19	5.91	6.35	6.35	6.35	6.35	5.04	5.04	6.47	2.22	6.10	1.70	-1.0	-0.6	0.2	
1-methylphenanthrene		<32	23.2	25.3	16.2	18.2	18.3	18.3	18.3	18.3	6.7	6.7	12.1	3.4	10.5	4.8	4.0	2.5	0.4	
fluoranthene		158	158	168	133	173	183	183	183	183	16	16	168	15	164	9	-0.1	-0.3	0.3	
pyrene		168	168	179	124	164	173	173	173	173	17	17	175	17	152	7	-0.1	-0.1	0.2	
benz[a]anthracene		44.2	44.2	46.3	24.8	31.8	32.7	32.7	32.7	32.7	14.6	14.6	44.5	4.8	32.5	4.7	0.0	0.1	0.2	
chrysene		93.7	86.3	94.7	62.9	80.9	87.5	87.5	87.5	87.5	16.5	16.5	52.3	ND	94.9	7.0	3.0	2.1	0.3	
triphenylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	39.4	ND	50.7	5.9				
benzo[b]fluoranthene		61.1	60.0	60.0	36.2	46.4	51.9	51.9	51.9	51.9	17.8	17.8	58.7	7.8	46.4	3.7	0.1	0.2	0.1	
benzo[k]fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.1	ND	20.5	1.7				
benzo[j]fluoranthene		65.3	67.4	70.5	38.1	52.7	48.1	48.1	48.1	48.1	16.1	16.1	31.2	7.5	20.2	0.8	4.7	6.1	0.3	
benzo[e]pyrene		80.0	81.1	84.2	55.2	75.5	82.7	82.7	82.7	82.7	20.0	20.0	91.6	9.3	84.0	1.9	-0.4	-0.7	0.2	
benzo[a]pyrene		<81	27.4	32.6	<48	23.6	19.2	19.2	19.2	19.2	14.5	14.5	23.0	4.8	15.6	0.7	1.2	1.0	0.8	
perylene		<81	14.7	15.8	<48	14.5	15.4	15.4	15.4	15.4	4.0	4.0	10.3	5.0	7.7	0.3	1.9	0.9	0.3	
indeno[1,2,3-cd]pyrene		<81	24.2	24.2	<48	20.9	19.2	19.2	19.2	19.2	5.9	5.9	20.3	4.6	14.2	2.8	0.8	0.6	0.0	
dibenz[a,h]anthracene		<81	4.95	6.00	<48	6.91	<48	<48	<48	<48	NA	NA	5.54	2.80	no target		0.0	0.0	0.9	
benzo[ghi]perylene		<81	30.5	30.5	<48	28.2	28.8	28.8	28.8	28.8	1.6	1.6	31.2	6.0	22.0	2.2	-0.1	-0.1	0.0	
Laboratory: 10												Reported Results		No. of Analytes		Category		Number by Category		
PAH In Mussel X												Quantitative		23		<2		z (25%) z (s) p (15%)		
												Qualitative		1		2 to 3		12 15 21		
												Not Determined		2		>3		11 6 1		

Laboratory: 10
PAH in Mussel X

Reported Results		No. of Analytes		%	
Quantitative		23		89	
Qualitative		1		4	
Not Determined		2		8	

Category		Number by Category		z (s)		p (15%)	
<2		12		15		21	
2 to 3		0		2		0	
>3		11		6		1	

^az- and p-scores > 3 are holded.

^bCertified material reference values are holded.

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory												Material reference values			Performance scores ^a		
	Mussel X, ng/g dry				SRM 1974a, ng/g dry				Mussel X				Mussel X, ng/g dry		SRM 1974a, ng/g dry	target value ^b	95% CL	95% CL
	S1	S2	S3		S1	S2	S3		lab mean	lab %RSD	lab ng/g dry	lab %RSD	assigned value	95% CL				
alpha-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3		no target			
hexachlorobenzene	<12	<16	<12	<11	<11	<11	<10	<10	<16	NA	<11	NA	<3		no target			
gamma-HCH	<24	<32	<24	<22	<22	<22	<21	<21	<32	NA	<22	NA	<3		no target			
beta-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3		no target			
heptachlor	<12	<16	<12	<11	<11	<11	<10	<10	<16	NA	<11	NA	<3		no target			
aldrin	<12	<16	<12	<11	<11	<11	<10	<10	<16	NA	<11	NA	<3		no target			
heptachlor epoxide	<24	<32	<24	<22	<22	<22	<21	<21	<32	NA	<22	NA	<3		no target			
oxychlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5		no target			
trans-chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11.6	2.8	16.6	1.7		
2,4'-DDE	<12	<27	<12	<28	<30	<26	<26	<26	<27	NA	<30	NA	3.88	2.44	5.26	0.27		
endosulfan I	<24	<32	<24	<22	<22	<22	<21	<21	<32	NA	<22	NA	<5		no target			
cis-chlordane	<24	<32	<24	<22	<22	<22	<21	<21	<32	NA	<22	NA	11.54	1.99	17.2	2.8		
trans-nonachlor	<12	<17	<12	15.70	24.70	9.60	9.60	9.60	<17	NA	16.7	45.6	13.43	2.73	18.0	3.6		
dieldrin	<24	<32	<24	<22	<22	<22	<21	<21	<32	NA	<22	NA	7.27	1.76	6.20	1.30		
4,4'-DDE	36.9	44.7	38.7	51.4	60.0	48.9	48.9	48.9	40.1	10.2	53.4	10.9	39.4	4.1	51.2	5.5	0.1	0.1
2,4'-DDD	<24	<32	<12	<22	<22	<22	<21	<21	<32	NA	<22	NA	13.9	0.0	13.7	2.8		
endrin	<24	<32	<24	<22	<22	<22	<21	<21	<32	NA	<22	NA	<5	0.00	no target			
endosulfan II	<24	<32	<24	<22	<22	<22	<21	<21	<32	NA	<22	NA	<15	0.00	no target			
4,4'-DDD	9.40	20.9	26.0	52.0	46.3	36.0	36.0	36.0	18.8	45.3	44.8	18.1	30.2	4.0	43.0	6.3	-1.5	-1.5
2,4'-DDT	<12	<16	<12	<11	<11	<11	<10	<10	<16	NA	<11	NA	8.45	1.78	8.50	1.90		
cis-nonachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.25	3.69	6.84	0.90		
4,4'-DDT	18.0	23.0	20.0	<22	<27	<22	<22	<22	20.3	12.4	<27	NA	4.37	1.03	3.91	0.59	14.6	10.4
mirex	<12	<16	<12	<11	<11	<11	<10	<10	<16	NA	<11	NA	<5		no target			0.8
endosulfan sulfate	<24	<32	<24	<22	<22	<22	<21	<21	<32	NA	<22	NA	<4		no target			
chlorpyrifos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target			

Laboratory: 10
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	3	12
Qualitative	16	64
Not Determined	6	24

Category	z (25%)	z (s)	p (15%)
<2	2	2	2
2 to 3	0	0	1
>3	1	1	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 10
Reporting Date: 1/30/01

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory														Material reference values				Performance scores ^a			
	Mussel X, ng/g dry						SRM 1974a, ng/g dry						Mussel X		assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)	
	1600-1102	1600-1102	1600-1102	1600-1102	1600-1102	1600-1102	1600-1102	1600-1102	1600-1102	1600-1102	1600-1102	1600-1102	lab mean	lab %RSD								
PCB 8	<12	<16	<12	<11	<11	<10	<16	NA	<11	NA	<11	NA	<16	NA	4.46	0.96	5.82	1.20				
PCB 18	13.4	18.7	11.0	32.7	39.0	27.6	14.4	27.4	33.1	17.3	33.1	17.3	14.4	27.4	12.2	3.0	33.0	11.0	0.7	0.4	1.8	
PCB 28	29.7	36.0	31.9	106	87.1	78.7	32.5	9.8	90.6	15.4	90.6	15.4	32.5	9.8	38.1	5.2	79.0	15.0	-0.6	-0.7	0.7	
PCB 31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.8	3.3	76.0	21.0				
PCB 44	35.9	40.9	29.5	71.3	84.9	51.4	35.4	16.1	69.2	24.3	69.2	24.3	35.4	16.1	40.9	5.1	72.7	7.4	-0.5	-0.6	1.1	
PCB 49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54.5	8.0	88.8	5.0				
PCB 52	50.3	58.9	83.6	105	109	102	64.3	26.9	105	3	105	3	64.3	26.9	62.6	8.0	115	11	0.1	0.1	1.8	
PCB 66	<88	<88	<88	156	151	134	<88	NA	147	8	147	8	<88	NA	72.9	11.4	101	4				
PCB 95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	62.1	6.0	83.0	17.0				
PCB 99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63.5	9.8	70.9	4.0				
PCB 101	86.2	102	91.0	132	160	136	93.1	8.7	143	12	143	12	93.1	8.7	116	21	128	10	-0.8	-0.6	0.6	
PCB 105	32.8	46.3	14.1	40.3	60.9	11.3	31.1	52.0	37.5	66.4	37.5	66.4	31.1	52.0	39.4	3.3	53.0	3.4	-0.8	-1.5	3.5	
PCB 118	95.1	109	92.5	130	155	124	98.9	9.0	136	12	136	12	98.9	9.0	116	14	131	4	-0.6	-0.7	0.6	
PCB 128	14.6	21.2	11.3	16.8	23.6	12.5	15.7	32.1	17.6	31.7	17.6	31.7	15.7	32.1	19.0	2.8	22.0	3.4	-0.7	-0.7	2.1	
PCB 138	90.7	106	92.7	114	140	114	96.5	8.6	123	12	123	12	96.5	8.6	117	11	134	10	-0.7	-1.2	0.6	
PCB 149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	68.6	8.0	87.6	2.3				
PCB 153	103	119	107	131	157	133	110	8	140	10	140	10	110	8	133	16	145	8	-0.7	-0.8	0.5	
PCB 156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.43	1.71	7.43	0.99				
PCB 170	<12	<16	<12	<11	<11	<10	<16	NA	<11	NA	<11	NA	<16	NA	3.48	0.83	5.50	1.10				
PCB 180	10.8	13.8	11.8	12.2	16.7	14.0	12.1	12.6	14.3	15.8	14.3	15.8	12.1	12.6	12.1	2.0	17.1	3.8	0.0	0.0	0.8	
PCB 187	27.1	31.2	30.3	31.4	37.9	32.6	29.5	7.3	34.0	10.2	34.0	10.2	29.5	7.3	30.0	2.8	34.0	2.3	-0.1	-0.1	0.5	
PCB 194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target	0.0				
PCB 195	<12	<16	<12	<11	<11	<10	<16	NA	<11	NA	<11	NA	<16	NA	<4		no target	0.0				
PCB 206	<12	<16	<12	<11	<11	<10	<16	NA	<11	NA	<11	NA	<16	NA	<2		no target	0.0				
PCB 209	<12	<16	<12	<11	<11	<10	<16	NA	<11	NA	<11	NA	<16	NA	<2		no target	0.0				
Laboratory: 10 PCBs In Mussel X																						
Water In Mussel X	Mussel X, %						SRM 1974a, %						Mussel X, %		assigned	95% CL	target	95% CL	z (25%)	z (s)	p (15%)	
	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	mean, %	%RSD								
	90.5	90.5	90.5				90.5	0.0					90.5	0.0	88.8	0.0	88.6	0.1	0.1	0.3	0.0	
water																						

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		SRM 1974a		Mussel X, ng/g dry		assigned value	95% CL	target value ^b	95% CL	Mussel X	
		1/0/00	1/0/00	1/0/00	1/0/00	lab mean	lab %RSD	lab mean	lab %RSD	lab mean	lab %RSD					z-score (25%)	p-score (15%)
naphthalene												32.1	8.6	23.5	4.4		
2-methylnaphthalene												11.7	4.8	10.2	1.5		
1-methylnaphthalene												8.95	7.19	5.30	2.20		
biphenyl												8.35	3.29	5.11	1.50		
2,6-dimethylnaphthalene												6.59	4.76	5.30	1.80		
acenaphthylene												5.58	2.38	5.25	1.50		
acenaphthene												3.63	1.43	3.15	1.00		
1,6,7-trimethylnaphthalene												4.73	2.16	6.60	2.00		
fluorene												5.07	0.60	5.72	0.91		
phenanthrene												24.8	2.5	22.2	2.4		
anthracene												6.47	2.22	6.10	1.70		
1-methylphenanthrene												12.1	3.4	10.5	4.8		
fluoranthene												168	15	164	9		
pyrene												175	17	152	7		
benzo[a]anthracene												44.5	4.8	32.5	4.7		
chrysene												52.3	ND	94.9	7.0		
triphenylene												39.4	ND	50.7	5.9		
benzo[b]fluoranthene												58.7	7.8	46.4	3.7		
benzo[k]fluoranthene												29.1	ND	20.5	1.7		
benzo[ghi]perylene												31.2	7.5	20.2	0.8		
benzo[e]pyrene												91.6	9.3	84.0	1.9		
benzo[a]pyrene												23.0	4.8	15.6	0.7		
perylene												10.3	5.0	7.7	0.3		
indeno[1,2,3-cd]pyrene												20.3	4.6	14.2	2.8		
dibenz[a,h]anthracene												5.54	2.80	no target			
benzo[ghi]perylene												31.2	6.0	22.0	2.2		

Laboratory: 11		Number by Category	
PAH in Mussel X		Category	z (s)
		< 2	0
		2 to 3	0
		> 3	0

Reported Results		No. of Analytes		%	
Quantitative		0		0	
Qualitative		0		0	
Not Determined		26		100	

^az- and p-scores > 3 are holded.

^bCertified material reference values are holded.

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a							
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry	SRM 1974a, ng/g dry		Mussel X								
		01/17/01	01/17/01	01/17/01	01/17/01	S1	S2	S3	lab mean	lab	ng/g dry	%RSD	lab mean	lab	ng/g dry	%RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
alpha-HCH		<1.0	<1.0	<1.0	1.49	1.38	1.40	<1.0	NA	1.43	4.1	<3											
hexachlorobenzene		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	NA	<0.3	NA	<3											
gamma-HCH		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	<3											
beta-HCH		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<3											
heptachlor		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<3											
aldrin		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	<3											
heptachlor epoxide		<1.0	<1.0	<1.0	2.56	2.37	2.41	<1.0	NA	2.45	4.2	<3											
oxychlordane		<1.0	<1.0	<1.0	1.54	1.27	1.50	<1.0	NA	1.44	10.1	<5											
trans-chlordane		9.82	9.33	9.40	10.0	11.1	13.7	9.51	2.79	11.6	16.3	11.6	2.8	16.6	1.7						-0.7	-0.5	0.2
2,4'-DDE		<2.0	<2.0	<2.0	2.40	2.99	2.40	<2.0	NA	2.60	13.15	3.88	2.44	5.26	0.27								
endosulfan I		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<5											
cis-chlordane		14.1	11.3	12.0	14.6	14.3	15.0	12.5	11.7	14.6	2.5	11.54	1.99	17.2	2.8						0.3	0.3	0.8
trans-nonachlor		12.9	10.8	11.1	15.5	15.6	15.9	11.6	9.6	15.6	1.2	13.43	2.73	18.0	3.6						-0.5	-0.4	0.6
dieldrin		6.76	4.90	4.83	5.43	4.41	5.26	5.50	19.91	5.03	10.82	7.27	1.76	6.20	1.30						-1.0	-0.7	1.3
4,4'-DDE		44.5	38.4	39.2	47.2	46.8	48.2	40.7	8.3	47.4	1.5	39.4	4.1	51.2	5.5						0.1	0.2	0.6
2,4'-DDD		14.1	12.9	10.9	13.8	14.7	15.4	12.6	12.5	14.6	5.3	13.9	0.0	13.7	2.8						-0.4	-0.2	0.8
endrin		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<5											
endosulfan II		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	<15											
4,4'-DDD		31.6	26.5	27.2	38.4	38.7	38.6	28.4	9.8	38.6	0.5	30.2	4.0	43.0	6.3						-0.2	-0.2	0.7
2,4'-DDT		4.13	3.07	3.19	3.36	3.35	3.36	3.46	16.74	3.36	0.11	8.45	1.78	8.50	1.90						-2.4	-2.9	1.1
cis-nonachlor		2.60	2.43	2.33	2.97	2.88	2.89	2.45	5.49	2.91	1.60	8.25	3.69	6.84	0.90						-2.8	-1.5	0.4
4,4'-DDT		3.96	2.90	3.28	2.12	2.52	2.29	3.38	15.89	2.31	8.69	4.37	1.03	3.91	0.59						-0.9	-0.6	1.1
mirex		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NA	<3.0	NA	<5											
endosulfan sulfate		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA	<4											
chlorpyrifos		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<2											

Laboratory: 11
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	10	40
Qualitative	15	60
Not Determined	0	0

Category	Number by Category
< 2	z (25%) 8 z (s) 0 p (15%) 10
2 to 3	2 1 0
> 3	0 0 0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

by laboratory

Reported Results	No. of Analyses	%	Number by Category		
			Category	z (25%)	p (15%)
Quantitative	22	88	< 2	20	20
Qualitative	3	12	2 to 3	0	0
Not Determined	0	0	> 3	0	0

Water in Mussel X

[illegible]^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 13

Reporting Date: 2/6/01

(data reported as if three figures were significant)

PAH

PAH	Data as submitted by laboratory													Material reference values				Performance scores ^a			
	Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/gdry		SRM 1974a, ng/g dry		Mussel X		p-score (15%)				
	1/20/01 S1	1/20/01 S2	1/20/01 S3	1/20/01 S1	1/20/01 S2	1/20/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)					
naphthalene	41.1	28.0	20.3	23.9	28.1	20.0	29.8	35.3	24.0	16.9	32.1	8.6	23.5	4.4	-0.3	-0.3	2.4				
2-methylnaphthalene	77.6	55.9	52.5	67.9	67.4	60.9	62.0	22.0	65.4	6.0	11.7	4.8	10.2	1.5	17.2	11.0	1.5				
1-methylnaphthalene	54.8	39.7	39.4	50.5	49.6	44.5	44.6	19.7	48.2	6.7	8.95	7.19	5.30	2.20	15.9	6.2	1.3				
biphenyl	18.3	22.1	20.3	15.6	15.0	17.3	20.2	9.4	16.0	7.5	8.35	3.29	5.11	1.50	5.7	3.0	0.6				
2,6-dimethylnaphthalene	42.6	33.8	33.4	39.5	39.3	40.0	36.6	14.2	39.6	0.9	6.59	4.76	5.30	1.80	18.2	5.3	0.9				
acenaphthylene	18.3	16.2	14.3	14.7	14.0	15.4	16.3	12.3	14.7	4.8	5.58	2.38	5.25	1.50	7.7	4.2	0.8				
acenaphthene	41.1	33.8	32.2	13.8	12.2	12.7	35.7	13.3	12.9	6.3	3.63	1.43	3.15	1.00	35.3	20.8	0.9				
1,6,7-trimethylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.73	2.16	6.60	2.00							
fluorene	24.4	22.1	21.5	30.3	24.3	25.4	22.7	6.8	26.7	12.0	5.07	0.60	5.72	0.91	13.9	27.0	0.5				
phenanthrene	38.1	29.4	31.0	62.4	44.0	45.4	32.8	14.1	50.6	20.2	24.8	2.5	22.2	2.4	1.3	2.5	0.9				
anthracene	16.7	14.7	14.3	15.6	14.0	14.5	15.2	8.4	14.7	5.6	6.47	2.22	6.10	1.70	5.4	3.3	0.6				
1-methylphenanthrene	16.7	13.2	13.1	14.7	12.2	10.9	14.3	14.3	12.6	15.3	12.1	3.4	10.5	4.8	0.7	0.5	1.0				
fluoranthene	123	108	141	116	107	128	124	13	117	9	168	15	164	9	-1.0	-1.9	0.9				
pyrene	135	115	150	117	105	128	133	13	117	10	175	17	152	7	-1.0	-1.7	0.9				
benzo[a]anthracene	41.1	37.5	40.6	24.8	21.1	25.9	39.7	4.9	23.9	10.5	44.5	4.8	32.5	4.7	-0.4	-0.7	0.3				
chrysene	50.2	41.9	50.1	30.3	28.1	30.0	47.4	10.0	29.5	4.0	52.3	ND	94.9	7.0	-0.4	-0.3	0.7				
triphenylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	39.4	ND	50.7	5.9							
benzo[b]fluoranthene	63.9	48.6	54.9	38.6	35.1	40.9	55.8	13.8	38.2	7.6	58.7	7.8	46.4	3.7	-0.2	-0.3	0.9				
benzo[k]fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.1	ND	20.5	1.7							
benzo[j]fluoranthene	27.4	17.7	21.5	16.5	12.6	15.0	22.2	22.0	14.7	13.4	31.2	7.5	20.2	0.8	-1.2	-1.5	1.5				
benzo[e]pyrene	75.3	61.8	64.4	57.8	50.6	61.3	67.2	10.7	56.6	9.6	91.6	9.3	84.0	1.9	-1.1	-1.8	0.7				
benzo[a]pyrene	34.2	24.3	23.9	16.5	15.4	13.6	27.5	21.2	15.2	9.7	23.0	4.8	15.6	0.7	0.8	0.7	1.4				
perylene	20.6	13.2	16.7	11.0	11.2	10.9	16.8	22.0	11.0	1.4	10.3	5.0	7.7	0.3	2.5	1.2	1.5				
indeno[1,2,3-cd]pyrene	41.1	28.7	21.5	26.2	19.7	21.8	30.4	32.6	22.6	14.7	20.3	4.6	14.2	2.8	2.0	1.7	2.2				
dibenz[a,h]anthracene	18.3	15.4	14.3	9.64	4.92	6.82	16.0	12.9	7.13	33.32	5.54	2.80	no target		7.6	3.5	0.9				
benzo[ghi]perylene	43.4	33.1	23.9	26.2	22.5	24.5	33.5	29.1	24.4	7.6	31.2	6.0	22.0	2.2	0.3	0.3	1.9				
Laboratory: 13														Number by Category							
PAH in Mussel X														Category		z (25%)		z (s)		p (15%)	
														<2		13		21			
														2 to 3		1		2			
														>		9		0			

Laboratory: 13
PAH in Mussel X

Reported Results	No. of Analytes	%
Quantitative	23	89
Qualitative	0	0
Not Determined	3	12

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	13	13	21
2 to 3	1	1	2
> 3	9	9	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		p-score (15%)
		1/2001	1/24/01	1/29/01	1/20/01	1/24/01	1/29/01	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	
alpha-HCH		2.65	2.93	2.42	3.56	4.09	3.35	2.67	9.58	3.67	10.40	<3		no target				
hexachlorobenzene		<2.5	<2.5	<2.5	3.52	2.92	3.72	<2.5	NA	3.39	12.3	<3		no target				
gamma-HCH		10.3	10.9	9.94	9.34	11.9	11.3	10.4	4.7	10.8	12.3	<3		no target				
beta-HCH		<2.5	<2.5	<2.5	<2.0	<2.0	<2.0	<2.5	NA	<2.0	NA	<3		no target				
heptachlor		4.23	4.33	4.15	4.02	4.08	4.88	4.24	2.1	4.33	11.1	<3		no target				
aldrin		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<3		no target				
heptachlor epoxide		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<3		no target				
oxychlorodane		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<5		no target				
trans-chlordane		7.41	7.37	7.08	14.6	13.1	12.9	7.3	2.5	13.5	6.9	11.6	2.8	16.6	1.7	-1.5	-1.0	0.2
2,4'-DDE		2.09	2.52	2.03	5.90	4.66	4.79	2.21	12.08	5.12	13.32	3.88	2.44	5.26	0.27	-1.7	-0.7	0.8
endosulfan I		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<5		no target				
cis-chlordane		5.89	4.24	5.20	14.1	14.3	14.3	5.11	16.22	14.25	0.65	11.54	1.99	17.2	2.8	-2.2	-2.1	1.1
trans-nonachlor		10.5	10.4	11.5	20.1	19.8	18.4	10.8	5.6	19.4	4.7	13.43	2.73	18.0	3.6	-0.8	-0.5	0.4
dieldrin		8.60	8.12	7.90	5.65	5.75	6.28	8.21	4.36	5.89	5.75	7.27	1.76	6.20	1.30	0.5	0.4	0.3
4,4'-DDE		27.2	27.3	26.7	43.3	42.8	44.0	27.1	1.2	43.4	1.4	39.4	4.1	51.2	5.5	-1.3	-1.7	0.1
2,4'-DDD		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.9	0.0	13.7	2.8			
endrin		4.52	4.69	4.76	7.16	6.27	6.83	4.66	2.65	6.75	6.66	<5	0.00	no target				
endosulfan II		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	NA	<2.0	NA	<15	0.00	no target				
4,4'-DDD		29.6	29.4	27.8	42.8	43.3	41.2	28.9	3.4	42.4	2.6	30.2	4.0	43.0	6.3	-0.2	-0.2	0.2
2,4'-DDT		6.09	5.42	5.70	8.44	8.51	8.35	5.74	5.87	8.43	0.95	8.45	1.78	8.50	1.90	-1.3	-1.6	0.4
cis-nonachlor		6.13	6.34	5.77	8.45	8.15	9.01	6.08	4.74	8.54	5.11	8.25	3.69	6.84	0.90	-1.1	-0.5	0.3
4,4'-DDT		5.97	6.43	5.39	4.33	4.68	4.29	5.93	8.79	4.43	4.84	4.37	1.03	3.91	0.59	1.4	1.0	0.6
mirex		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA	<5		no target				
endosulfan sulfate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target				
chlorpyrifos		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target				

Laboratory: 13
Pesticides in Mussel X

Reported Results		No. of Analytes		%	
Quantitative		14		56	
Qualitative		8		32	
Not Determined		3		12	

Category		Number by Category		z (s)		p (15%)	
<2		9		0		10	
2 to 3		1		1		0	
>3		0		0		0	

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 13
Reporting Date: 2/6/01

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory												Material reference values				Performance scores ^a					
	Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X			SRM 1974a			Mussel X, ng/g dry		target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)			
	1/2001 S1	1/2001 S2	1/2001 S3	1/2001 S1	1/2001 S2	1/2001 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL										
Analysis date																						
PCB 8	31.8	37.5	33.9	53.3	51.6	50.0	34.4	8.4	51.6	3.2	4.46	0.96	5.82	1.20								
PCB 18	8.22	8.45	7.89	39.9	41.5	35.1	8.19	3.44	38.8	8.6	12.2	3.0	33.0	11.0	-1.3	-0.8	0.2					
PCB 28	28.0	35.1	36.3	87.6	87.4	84.7	33.1	13.5	86.6	1.9	38.1	5.2	79.0	15.0	-0.5	-0.6	0.9					
PCB 31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.8	3.3	76.0	21.0								
PCB 44	33.4	33.3	32.0	67.1	70.2	65.3	32.9	2.4	67.5	3.7	40.9	5.1	72.7	7.4	-0.8	-1.0	0.2					
PCB 49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54.5	8.0	88.8	5.0								
PCB 52	57.2	53.3	52.6	111	113	101	54.4	4.6	108	6	62.6	8.0	115	11	-0.5	-0.6	0.3					
PCB 66	69.0	70.2	66.9	132	130	128	68.7	2.4	130	2	72.9	11.4	101	4	-0.2	-0.3	0.2					
PCB 95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	62.1	6.0	83.0	17.0								
PCB 99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63.5	9.8	70.9	4.0								
PCB 101	108	104	103	156	152	154	105	3	154	1	116	21	128	10	-0.4	-0.3	0.2					
PCB 105	39.7	40.5	38.1	59.5	55.5	61.6	39.4	3.1	58.9	5.3	39.4	3.3	53.0	3.4	0.0	0.0	0.2					
PCB 118	111	104	101	135	135	135	105	5	135	6	116	14	131	4	-0.4	-0.4	0.3					
PCB 128	17.3	16.5	16.3	22.7	23.4	24.1	16.7	3.2	23.4	3.0	19.0	2.8	22.0	3.4	-0.5	-0.5	0.2					
PCB 138	118	114	108	148	139	147	113	4	135	3	117	11	134	10	-0.1	-0.2	0.3					
PCB 149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	68.6	8.0	87.6	2.3								
PCB 153	117	109	104	136	131	130	110	6	132	2	133	16	145	8	-0.7	-0.8	0.4					
PCB 156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.43	1.71	7.43	0.99								
PCB 170	2.56	2.87	1.83	3.61	2.39	3.72	2.42	22.06	3.24	22.78	3.48	0.83	5.50	1.10	-1.2	-1.1	1.5					
PCB 180	8.92	7.67	8.02	12.3	11.8	10.4	8.20	7.86	11.5	8.6	12.1	2.0	17.1	3.8	-1.3	-1.4	0.5					
PCB 187	28.9	30.6	26.6	36.9	36.0	35.4	28.7	7.0	36.1	2.1	30.0	2.8	34.0	2.3	-0.2	-0.3	0.5					
PCB 194	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	NA	NA	NA	<4		no target	0.0								
PCB 195	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	NA	<1.5	NA	<4		no target	0.0								
PCB 206	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	NA	<1.5	NA	<2		no target	0.0								
PCB 209	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	NA	<1.5	NA	<2		no target	0.0								
Laboratory: 13 PCBs in Mussel X																						
Reported Results													No. of Analytes		%		Number by Category		Mussel X, %			
Quantitative													15		60		Category	z (25%)				
Qualitative													3		12							
Not Determined													7		28							
Mussel X, %													88.8		0.0		0.0		Mussel X, %			
SRM 1974a, %													88.8		0.0		0.0					
SRM 1974a, %													88.8		0.0		0.0					
Water in Mussel X																						
Mussel X, %			SRM 1974a, %			Mussel X, %			SRM 1974a, %			Mussel X, %			SRM 1974a, %			Mussel X, %				
S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3		
89.7	89.7	89.6				89.7	89.7	89.6				89.7	89.7	89.6				89.7	89.7	89.6		
water			water			water			water			water			water			water				

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory						Material reference values			Performance scores ^a		
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			assigned value	95% CL	target value ^b	Mussel X		p-score (15%)
		S1	S2	S3	S1	S2	S3				z-score (25%)	z-score (s)	
naphthalene		N/A						32.1	8.6	23.5			
2-methylnaphthalene		N/A						11.7	4.8	10.2			
1-methylnaphthalene		N/A						8.95	7.19	5.30			
biphenyl		N/A						8.35	3.29	5.11			
2,6-dimethylnaphthalene		N/A						6.59	4.76	5.30			
acenaphthylene		N/A						5.58	2.38	5.25			
acenaphthene		N/A						3.63	1.43	3.15			
1,6,7-trimethylnaphthalene		N/A						4.73	2.16	6.60			
fluorene		N/A						5.07	0.60	5.72			
phenanthrene		N/A						24.8	2.5	22.2			
anthracene		N/A						6.47	2.22	6.10			
1-methylphenanthrene		N/A						12.1	3.4	10.5			
fluoranthene		N/A						168	15	164			
pyrene		N/A						175	17	152			
benz[a]anthracene		N/A						44.5	4.8	32.5			
chrysene		N/A						52.3	ND	94.9			
triphenylene		N/A						39.4	ND	50.7			
benzo[b]fluoranthene		N/A						58.7	7.8	46.4			
benzo[k]fluoranthene		N/A						29.1	ND	20.5			
benzo[e]fluoranthene		N/A						31.2	7.5	20.2			
benzo[a]pyrene		N/A						91.6	9.3	84.0			
benzo[a]pyrene		N/A						23.0	4.8	15.6			
perylene		N/A						10.3	5.0	7.7			
indeno[1,2,3-cd]pyrene		N/A						20.3	4.6	14.2			
dibenz[a,h]anthracene		N/A						5.54	2.80	no target			
benzo[ghi]perylene		N/A						31.2	6.0	22.0			
Laboratory: 14													
PAH in Mussel X													
Reported Results								No. of Analytes		Number by Category			
Quantitative								0		z (25%)		z (s)	
Qualitative								0		0		0	
Not Determined								26		2 to 3		0	
								100		> 3		0	

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 14
 Reporting Date: February 7, 2001

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
	Mussel X, ng/g wet			SRM 1974a, ng/g wet			Mussel X			SRM 1974a			Mussel X, ng/g dry		z-score (25%)	z-score (s)	p-score (15%)
	1/1/01	S 1	S 2	S 3	1/1/01	S 1	S 2	S 3	lab mean ng/g dry ^f	lab %RSD	lab mean ng/g dry ^f	lab %RSD	assigned value	95% CL	target value ^b	95% CL	
alpha-HCH	<1.5				<1.5				<1.5	NA	<1.5	NA	<3		no target		
hexachlorobenzene	2.86				<1.5				28.6	NA	<1.5	NA	<3		no target		
gamma-HCH	1.40				<1.5				14.0	NA	<1.5	NA	<3		no target		
beta-HCH	0.00				<1.5				0.00	NA	<1.5	NA	<3		no target		
heptachlor	<1.5				<1.5				<1.5	NA	<1.5	NA	<3		no target		
aldrin	<1.5				<1.5				<1.5	NA	<1.5	NA	<3		no target		
heptachlor epoxide	<1.5				<1.5				<1.5	NA	<1.5	NA	<3		no target		
oxychlordane	N/A				N/A				N/A	NA	N/A	NA	<5		no target		
trans-chlordane	1.78				1.63				17.8	NA	14.3	NA	11.6	2.8	16.6	1.7	2.1 1.4
2,4'-DDE	0.829				0.746				8.29	NA	6.55	NA	3.88	2.44	5.26	0.27	4.5 1.9
endosulfan I	N/A				N/A				N/A	NA	N/A	NA	<5		no target		
cis-chlordane	10.7				2.24				107	NA	19.7	NA	11.54	1.99	17.2	2.8	33.1 30.5
trans-nonachlor	2.71				1.50				27.1	NA	13.2	NA	13.43	2.73	18.0	3.6	4.1 2.8
dieldrin	9.10				1.10				91.0	NA	9.66	NA	7.27	1.76	6.20	1.30	46.1 31.9
4,4'-DDE	4.48				9.70				44.8	NA	85.2	NA	39.4	4.1	51.2	5.5	0.6 0.8
2,4'-DDD	<1.5				2.20				<1.5	NA	19.3	NA	13.9	0.0	13.7	2.8	
endrin	<1.5				<1.5				<1.5	NA	<1.5	NA	<5	0.00	no target		
endosulfan II	N/A				N/A				N/A	NA	N/A	NA	<1.5	0.00	no target		
4,4'-DDD	4.60				5.30				46.0	NA	46.5	NA	30.2	4.0	43.0	6.3	2.1 2.1
2,4'-DDT	4.90				<1.5				49.0	NA	<1.5	NA	8.45	1.78	8.50	1.90	19.2 24.0
cis-nonachlor	1.63				0.635				16.3	NA	5.58	NA	8.25	3.69	6.84	0.90	3.9 2.0
4,4'-DDT	5.70				1.20				57.0	NA	10.5	NA	4.37	1.03	3.91	0.59	48.1 34.4
mirex	2.25				<1.5				22.5	NA	<1.5	NA	<5		no target		
endosulfan sulfate	N/A				N/A				N/A	NA	N/A	NA	<4		no target		
chlorpyrifos	N/A				N/A				N/A	NA	N/A	NA	<2		no target		

Laboratory: 14
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	14	56
Qualitative	11	44
Not Determined	0	0

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	1	3	0
2 to 3	2	3	0
> 3	7	3	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

^c Corrected for moisture by coordinator.

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory										Material reference values				Performance scores ^a		
	Mussel X, ng/g wet					SRM 1974a, ng/g wet					Mussel X		SRM 1974a, ng/g dry		Mussel X		p-score (15%)
	1/101	1/101	1/101	1/101	1/101	1/101	1/101	1/101	1/101	1/101	lab mean ng/g dry ^c	lab %RSD	lab mean ng/g dry ^c	lab %RSD	assigned value	95% CL	target value ^b
PCB 8	3.65										36.5	NA	NA	NA	4.46	0.96	5.82
PCB 18	2.48										24.8	NA	21.4	NA	12.2	3.0	33.0
PCB 28	4.70										47.0	NA	49.9	NA	38.1	5.2	79.0
PCB 31	N/A										N/A	NA	N/A	NA	29.8	3.3	76.0
PCB 44	7.72										77.2	NA	32.5	NA	40.9	5.1	72.7
PCB 49	N/A										N/A	NA	N/A	NA	54.5	8.0	88.8
PCB 52	12.7										127	NA	116	NA	62.6	8.0	115
PCB 66	19.1										191	NA	92.2	NA	72.9	11.4	101
PCB 95	N/A										N/A	NA	N/A	NA	62.1	6.0	83.0
PCB 99	N/A										N/A	NA	N/A	NA	63.5	9.8	70.9
PCB 101	5.87										58.7	NA	116	NA	116	21	128
PCB 105	3.30										33.0	NA	239	NA	39.4	3.3	53.0
PCB 118	18.3										183	NA	116	NA	116	14	131
PCB 128	2.65										26.5	NA	17.8	NA	19.0	2.8	22.0
PCB 138	22.3										223	NA	108	NA	117	11	134
PCB 149	N/A										N/A	NA	N/A	NA	68.6	8.0	87.6
PCB 153	31.8										318	NA	150	NA	133	16	145
PCB 156	N/A										N/A	NA	N/A	NA	7.43	1.71	7.43
PCB 170	1.15										11.5	NA	6.58	NA	3.48	0.83	5.50
PCB 180	3.30										33.0	NA	12.3	NA	12.1	2.0	17.1
PCB 187	3.49										34.9	NA	18.6	NA	30.0	2.8	34.0
PCB 194	N/A										N/A	NA	N/A	NA	<4		no target
PCB 195	3.70										37.0	NA	NA	NA	<4		no target
PCB 206	1.84										18.4	NA	NA	NA	<2		no target
PCB 209	<1.5										<1.5	NA	NA	NA	<2		no target

Laboratory: 14
PCBs in Mussel X

Reported Results		No. of Analytes		Number by Category	
Quantitative	17	68		z (25%)	z (s)
Qualitative	8	32		p (15%)	p (15%)
Not Determined	0	0			

Water in Mussel X

Mussel X, %					SRM 1974a, %					Mussel X, %		
S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	assigned	95% CL	target
										88.8	0.0	88.6
												0.1

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

^c Corrected for moisture by coordinator.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 15

Reporting Date: 2/12/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores*		
		Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		p-score (15%)
		11/16/00	11/16/00	11/16/00	11/16/00	11/16/00	11/16/00	11/16/00	11/16/00	11/16/00	11/16/00	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	
naphthalene		23.2	NA	18.3								32.1	8.6	23.5	4.4	-1.4	-1.2	1.1
2-methylnaphthalene		21.9	NA	<15.3								11.7	4.8	10.2	1.5	3.5	2.2	
1-methylnaphthalene		17.8	NA	<10.3								8.95	7.19	5.30	2.20	4.0	1.5	
biphenyl		4.33	<3.2	5.56								8.35	3.29	5.11	1.50	-1.6	-0.9	1.2
2,6-dimethylnaphthalene		9.61	5.78	8.04								6.59	4.76	5.30	1.80	0.7	0.2	1.6
acenaphthylene		<6.4	NA	<6.4								5.58	2.38	5.25	1.50			
acenaphthene		<4.7	<4.7	<4.7								3.63	1.43	3.15	1.00			
1,6,7-trimethylnaphthalene		<5.7	<5.7	<5.7								4.73	2.16	6.60	2.00			
fluorene		5.70	4.82	5.42								5.07	0.60	5.72	0.91	0.2	0.4	0.6
phenanthrene		38.5	30.2	27.0								24.8	2.5	22.2	2.4	1.2	2.2	1.2
anthracene		14.2	20.0	NA								6.47	2.22	6.10	1.70	6.6	4.0	1.6
1-methylphenanthrene		6.70	5.81	6.47								12.1	3.4	10.5	4.8	-1.9	-1.2	0.5
fluoranthene		186	154	161								168	15	164	9	0.0	0.0	0.7
pyrene		196	158	172								175	17	152	7	0.0	0.0	0.7
benz[a]anthracene		47.0	37.6	42.7								44.5	4.8	32.5	4.7	-0.2	-0.3	0.7
chrysene		129	102	97.0								52.3	ND	94.9	7.0	4.4	3.1	1.0
triphenylene		NA	NA	NA								39.4	ND	50.7	5.9			
benzo[b]fluoranthene		121	116	115								58.7	7.8	46.4	3.7	4.0	6.3	0.2
benzo[k]fluoranthene		NA	NA	NA								29.1	ND	20.5	1.7			
benzo[j]fluoranthene		NA	NA	NA								31.2	7.5	20.2	0.8			
benzo[e]pyrene		107	102	97.8								91.6	9.3	84.0	1.9	0.5	0.8	0.3
benzo[a]pyrene		23.9	23.9	26.0								23.0	4.8	15.6	0.7	0.3	0.2	0.3
perylene		12.1	NA	20.4								10.3	5.0	7.7	0.3	2.3	1.1	2.4
indeno[1,2,3-cd]pyrene		22.7	NA	20.2								20.3	4.6	14.2	2.8	0.2	0.2	0.5
dibenz[a,h]anthracene		NA	<3.6	<3.6								5.54	2.80	no target				
benzo[ghi]perylene		35.5	NA	32.3								31.2	6.0	22.0	2.2	0.3	0.3	0.4

Laboratory: 15		Number by Category	
PAH in Mussel X		Category	z (s)
		<2	13
		2 to 3	1
		>3	5

Reported Results		No. of Analytes		%	
Quantitative		19		73	
Qualitative		4		15	
Not Determined		3		12	

*z- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		Performance scores ^a		
		S1	S2	S3	S1	S2	S3	lab mean	lab %RSD	lab mean	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
alpha-HCH		NA	NA	NA				NA	NA	NA	NA	<3		no target				
hexachlorobenzene		<1.0	<1.0	<1.0				<1.0	NA	NA	NA	<3		no target				
gamma-HCH		NA	NA	NA				NA	NA	NA	NA	<3		no target				
beta-HCH		NA	NA	NA				NA	NA	NA	NA	<3		no target				
heptachlor		<1.0	<1.0	<1.0				<1.0	NA	NA	NA	<3		no target				
aldrin		NA	NA	NA				NA	NA	NA	NA	<3		no target				
heptachlor epoxide		<1.0	<1.0	<1.0				<1.0	NA	NA	NA	<3		no target				
oxychlordane		NA	NA	NA				NA	NA	NA	NA	<5		no target				
trans-chlordane		NA	NA	NA				NA	NA	NA	NA	11.6	2.8	16.6	1.7			
2,4'-DDE		6.82	6.58	6.35				6.58	3.57	NA	NA	3.88	2.44	5.26	0.27	2.8	1.2	0.2
endosulfan I		NA	NA	NA				NA	NA	NA	NA	<5		no target				
cis-chlordane		13.3	12.5	12.5				12.8	3.6	NA	NA	11.54	1.99	17.2	2.8	0.4	0.4	0.2
trans-nonachlor		12.1	12.6	13.2				12.6	4.4	NA	NA	13.43	2.73	18.0	3.6	-0.2	-0.2	0.3
dieldrin		<1.0	<1.0	<1.0				<1.0	NA	NA	NA	7.27	1.76	6.20	1.30			
4,4'-DDE		43.9	45.9	42.8				44.2	3.6	NA	NA	39.4	4.1	51.2	5.5	0.5	0.7	0.2
2,4'-DDD		9.61	10.3	9.03				9.65	6.59	NA	NA	13.9	0.0	13.7	2.8	-1.2	-0.7	0.4
endrin		NA	NA	NA				NA	NA	NA	NA	<5	0.00	no target				
endosulfan II		NA	NA	NA				NA	NA	NA	NA	<15	0.00	no target				
4,4'-DDD		30.8	34.3	29.2				31.4	8.3	NA	NA	30.2	4.0	43.0	6.3	0.2	0.2	0.6
2,4'-DDT		5.91	6.12	5.30				5.78	7.37	NA	NA	8.45	1.78	8.50	1.90	-1.3	-1.6	0.5
cis-nonachlor		NA	NA	NA				NA	NA	NA	NA	8.25	3.69	6.84	0.90			
4,4'-DDT		4.32	4.78	5.59				4.90	13.13	NA	NA	4.37	1.03	3.91	0.59	0.5	0.3	0.9
mirex		<1.0	<1.0	1.02				1.02	NA	NA	NA	<5		no target				
endosulfan sulfate		NA	NA	NA				NA	NA	NA	NA	<4		no target				
chlorpyrifos		NA	NA	NA				NA	NA	NA	NA	<2		no target				

Laboratory: 15
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	9	36
Qualitative	4	16
Not Determined	12	48

Category	Number by Category	z (25%)	z (s)	p (15%)
<2	7	0	0	0
2 to 3	1	0	0	0
>3	0	0	0	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 15
Reporting Date: 2/12/01

(data reported as if three figures were significant)

PCBs

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry	z-score (25%)	z-score (s)	p-score (15%)	
		11/16/00 S1	11/16/00 S2	11/16/00 S3	11/16/00 S1	11/16/00 S2	11/16/00 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b				95% CL
	PCB 8	2.51	2.79	3.11				2.80	10.7	NA	NA	NA	4.46	0.96	5.82	1.20		
	PCB 18	5.79	8.54	5.40				6.58	26.02	NA	NA	NA	12.2	3.0	33.0	11.0	-1.1	1.7
	PCB 28	25.8	24.0	21.5				23.8	9.1	NA	NA	NA	38.1	5.2	79.0	15.0	-1.7	0.6
	PCB 31	NA	NA	NA				NA	NA	NA	NA	NA	29.8	3.3	76.0	21.0		
	PCB 44	34.6	39.6	37.2				37.1	6.7	NA	NA	NA	40.9	5.1	72.7	7.4	-0.4	0.4
	PCB 49	NA	NA	NA				NA	NA	NA	NA	NA	54.5	8.0	88.8	5.0		
	PCB 52	63.5	65.9	59.9				63.1	4.8	NA	NA	NA	62.6	8.0	115	11	0.0	0.3
	PCB 66	72.8	67.2	71.7				70.6	4.2	NA	NA	NA	72.9	11.4	101	4	-0.1	0.3
	PCB 95	NA	NA	NA				NA	NA	NA	NA	NA	62.1	6.0	83.0	17.0		
	PCB 99	NA	NA	NA				NA	NA	NA	NA	NA	63.5	9.8	70.9	4.0		
	PCB 101	111	98.0	125				111	12	NA	NA	NA	116	21	128	10	-0.2	0.8
	PCB 105	45.9	40.7	45.8				44.1	6.7	NA	NA	NA	39.4	3.3	53.0	3.4	0.5	0.4
	PCB 118	123	106	119				116	8	NA	NA	NA	116	14	131	4	0.0	0.5
	PCB 128	25.0	23.9	24.8				24.6	2.4	NA	NA	NA	19.0	2.8	22.0	3.4	1.2	0.2
	PCB 138	133	128	130				130	2	NA	NA	NA	117	11	134	10	0.5	0.1
	PCB 149	NA	NA	NA				NA	NA	NA	NA	NA	68.6	8.0	87.6	2.3		
	PCB 153	143	121	138				134	9	NA	NA	NA	133	16	145	8	0.0	0.6
	PCB 156	NA	NA	NA				NA	NA	NA	NA	NA	7.43	1.71	7.43	0.99		
	PCB 170	2.67	3.95	3.14				3.25	19.90	NA	NA	NA	3.48	0.83	5.50	1.10	-0.3	1.3
	PCB 180	12.1	11.2	12.2				11.8	4.7	NA	NA	NA	12.1	2.0	17.1	3.8	-0.1	0.3
	PCB 187	28.9	25.4	28.3				27.5	6.8	NA	NA	NA	30.0	2.8	34.0	2.3	-0.3	0.5
	PCB 194	NA	NA	NA				NA	NA	NA	NA	NA	<4		no target	0.0		
	PCB 195	<1.0	2.87	<1.0				2.87	NA	NA	NA	NA	<4		no target	0.0		
	PCB 206	<1.0	<1.0	<1.0				<1.0	NA	NA	NA	NA	<2		no target	0.0		
	PCB 209	<1.0	<1.0	<1.0				<1.0	NA	NA	NA	NA	<2		no target	0.0		

Laboratory: 15
PCBs in Mussel X

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	14	14	14
2 to 3	0	0	0
> 3	0	0	0

Water in Mussel X

Mussel X, %	SRM 1974a, %			Mussel X, %	SRM 1974a, %		
	S1	S2	S3		assigned	95% CL	target
water	90.6	90.1	90.8	90.5	88.8	0.0	88.6

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory							Material reference values				Performance scores ^a					
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a	assigned value	95% CL	target value ^b	95% CL	Mussel X		p-score (15%)	
		S 1	S 2	S 3	S 1	S 2	S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry					lab %RSD	z-score (25%)		z-score (s)
naphthalene								NA	NA	NA	NA	32.1	8.6	23.5	4.4			
2-methylnaphthalene								NA	NA	NA	NA	11.7	4.8	10.2	1.5			
1-methylnaphthalene								NA	NA	NA	NA	8.95	7.19	5.30	2.20			
biphenyl								NA	NA	NA	NA	8.35	3.29	5.11	1.50			
2,6-dimethylnaphthalene								NA	NA	NA	NA	6.59	4.76	5.30	1.80			
acenaphthylene								NA	NA	NA	NA	5.58	2.38	5.25	1.50			
acenaphthene								NA	NA	NA	NA	3.63	1.43	3.15	1.00			
1,6,7-trimethylnaphthalene								NA	NA	NA	NA	4.73	2.16	6.60	2.00			
fluorene								NA	NA	NA	NA	5.07	0.60	5.72	0.91			
phenanthrene								NA	NA	NA	NA	24.8	2.5	22.2	2.4			
anthracene								NA	NA	NA	NA	6.47	2.22	6.10	1.70			
1-methylphenanthrene								NA	NA	NA	NA	12.1	3.4	10.5	4.8			
fluoranthene								NA	NA	NA	NA	168	15	164	9			
pyrene								NA	NA	NA	NA	175	17	152	7			
benz[a]anthracene								NA	NA	NA	NA	44.5	4.8	32.5	4.7			
chrysene								NA	NA	NA	NA	52.3	ND	94.9	7.0			
triphenylene								NA	NA	NA	NA	39.4	ND	50.7	5.9			
benzo[b]fluoranthene								NA	NA	NA	NA	58.7	7.8	46.4	3.7			
benzo[k]fluoranthene								NA	NA	NA	NA	29.1	ND	20.5	1.7			
benzo[j]fluoranthene								NA	NA	NA	NA	31.2	7.5	20.2	0.8			
benzo[e]pyrene								NA	NA	NA	NA	91.6	9.3	84.0	1.9			
benzo[a]pyrene								NA	NA	NA	NA	23.0	4.8	15.6	0.7			
perylene								NA	NA	NA	NA	10.3	5.0	7.7	0.3			
indeno[1,2,3-cd]pyrene								NA	NA	NA	NA	20.3	4.6	14.2	2.8			
dibenz[a,h]anthracene								NA	NA	NA	NA	5.54	2.80	no target				
benzo[ghi]perylene								NA	NA	NA	NA	31.2	6.0	22.0	2.2			
Laboratory: 16																		
PAH in Mussel X																		
		Reported Results		No. of Analytes				Category		Number by Category								
		Quantitative		0				<2		z (25%)		z (s)		p (15%)				
		Qualitative		0				2 to 3		0		0		0				0
		Not Determined		26		100		>3		0		0		0				0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 16
Reporting Date: 2/8/01

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g wet			SRM 1974a, ng/g wet			Mussel X		SRM 1974a		assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
		9/7/00	9/16/00	9/28/00	9/7/00	9/16/00	9/28/00	lab mean ng/g dry ^c	lab %RSD	lab mean ng/g dry ^c	lab %RSD							
alpha-HCH		<0.64	<0.64	<0.64	na	na	na	<7.59	NA	NA	NA	<3		no target				
hexachlorobenzene		<0.72	<0.72	<0.72	na	na	na	<8.54	NA	NA	NA	<3		no target				
gamma-HCH		<0.60	<0.60	<0.60	na	na	na	<7.12	NA	NA	NA	<3		no target				
beta-HCH		<1.08	<1.08	<1.08	na	na	na	<12.8	NA	NA	NA	<3		no target				
heptachlor		<0.66	<0.66	<0.66	na	na	na	<7.83	NA	NA	NA	<3		no target				
aldrin		<0.80	<0.80	<0.80	na	na	na	<9.49	NA	NA	NA	<3		no target				
heptachlor epoxide		<0.32	<0.32	<0.32	na	na	na	<3.80	NA	NA	NA	<3		no target				
oxychlordane		na	na	na	na	na	na	na	NA	NA	NA	<5		no target				
trans-chlordane		1.43	1.92	1.92	2.23	2.06	1.96	20.8	16.1	18.3	6.6	11.6	2.8	16.6	1.7	3.2	2.1	1.1
2,4'-DDE		<0.80	<0.80	<0.80	0.710	0.783	0.618	<9.49	NA	6.18	11.75	3.88	2.44	5.26	0.27			
endosulfan I		<0.72	<0.72	<0.72	na	na	na	<8.54	NA	NA	NA	<5		no target				
cis-chlordane		<0.94	<0.94	<0.94	1.48	2.27	2.08	<11.2	NA	17.1	21.2	11.54	1.99	17.2	2.8			
trans-nonachlor		0.835	0.820	0.966	2.30	2.30	1.85	10.4	9.2	18.9	12.1	13.43	2.73	18.0	3.6	-0.9	-0.6	0.6
dieldrin		1.23	1.00	0.748	0.573	0.726	0.822	11.8	24.3	6.21	17.76	7.27	1.76	6.20	1.30	2.5	1.7	1.6
4,4'-DDE		3.75	3.09	2.77	6.03	6.40	5.88	38.0	15.6	53.6	4.4	39.4	4.1	51.2	5.5	-0.1	-0.2	1.0
2,4'-DDD		2.28	2.50	2.46	1.86	1.42	1.55	28.6	4.9	14.1	14.0	13.9	0.0	13.7	2.8	4.2	2.5	0.3
endrin		<1.32	<1.32	<1.32	na	na	na	<15.7	NA	NA	NA	<5	0.00	no target				
endosulfan II		<1.04	<1.04	<1.04	na	na	na	<12.3	NA	NA	NA	<15	0.00	no target				
4,4'-DDD		1.61	1.81	1.97	5.49	5.49	4.42	21.3	10.0	45.1	12.0	30.2	4.0	43.0	6.3	-1.2	-1.2	0.7
2,4'-DDT		<0.6	<0.6	<0.6	0.444	0.526	<0.30	<7.12	NA	4.26	11.96	8.45	1.78	8.50	1.90			
cis-nonachlor		<0.6	<0.6	<0.6	0.706	1.53	<0.30	<7.12	NA	9.82	52.12	8.25	3.69	6.84	0.90			
4,4'-DDT		<1.08	<1.08	<1.08	0.558	0.752	0.465	<12.8	NA	5.19	24.75	4.37	1.03	3.91	0.59			
mirex		<0.68	<0.68	<0.68	na	na	na	<8.07	NA	NA	NA	<5		no target				
endosulfan sulfate		<1.76	<1.76	<1.76	na	na	na	<20.9	NA	NA	NA	<4		no target				
chlorpyrifos		na	na	na	na	na	na	na	NA	NA	NA	<2		no target				

Laboratory: 16		Number by Category	
Pesticides In Mussel X		Category	z (25%)
		< 2	3
		2 to 3	1
		> 3	2
		z (s)	4
		p (15%)	6
		z (s)	2
		p (15%)	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

^c Corrected for moisture by coordinator.

(data reported as if three figures were significant)

by laboratory

Laboratory: 16
PCBs in Mussel X

Category	Number by Category		
	z (25%)	z (s)	p (15%)
<2	9	9	12
2 to 3	3	2	0
>3	0	1	0

Reported Results	No. of Analytes	%
Quantitative	12	48
Qualitative	11	44
Not Determined	2	8

10

	Mussel X. %

	Mussel X. %
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	
97	
98	
99	
100	

^bCertified material reference values are bolded.^cCorrected for moisture by coordinator.

FY00 NIST Intercomparison Exercise
Sample: QA00TISI0 - Mussel Tissue X

Laboratory No.: 17

Reporting Date: 2/1/01

(data reported as if three figures were significant)

PAH

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores*			
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/gdry assigned value	95% CL	target value ^a	95% CL	Mussel X			
		1/25/01 S1	1/25/01 S2	1/25/01 S3	1/25/01 S1	1/25/01 S2	1/25/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD					z-score (25%)	z-score (s)	p-score (15%)	
naphthalene		46.1	51.5	46.0	34.6	33.9	31.9	47.9	6.6	33.5	4.2	32.1	8.6	23.5	4.4	2.0	1.7	0.4	
2-methylnaphthalene:		9.66	10.6	9.58	7.73	8.87	6.72	9.95	5.70	7.77	13.84	11.7	4.8	10.2	1.5	-0.6	-0.4	0.4	
1-methylnaphthalene:		13.1	15.5	18.0	12.9	14.6	10.9	15.5	15.8	12.8	14.5	8.95	7.19	5.30	2.20	2.9	1.1	1.1	
biphenyl		10.6	13.6	11.8	6.73	8.82	7.68	12.0	12.6	7.74	13.51	8.35	3.29	5.11	1.50	1.7	0.9	0.8	
2,6-dimethylnaphthalene		3.84	3.62	5.20	2.14	4.02	3.40	4.22	20.28	3.19	30.06	6.59	4.76	5.30	1.80	-1.4	-0.4	1.4	
acenaphthylene		5.43	5.27	3.76	4.97	4.50	5.39	4.82	19.12	4.95	8.99	5.58	2.38	5.25	1.50	-0.5	-0.3	1.3	
acenaphthene		4.78	5.46	7.09	4.29	4.02	4.87	5.78	20.55	4.39	9.89	3.63	1.43	3.15	1.00	2.4	1.4	1.4	
1,6,7-trimethylnaphthalene		4.53	2.01	3.10	2.53	6.09	4.67	3.21	39.33	4.43	40.45	4.73	2.16	6.60	2.00	-1.3	-0.7	2.6	
fluorene		5.20	4.42	4.16	3.72	3.82	3.28	4.59	11.78	3.61	7.97	5.07	0.60	5.72	0.91	-0.4	-0.7	0.8	
phenanthrene		28.9	26.6	26.6	23.2	20.2	20.9	27.4	4.9	21.4	7.3	24.8	2.5	22.2	2.4	0.4	0.8	0.3	
anthracene		5.41	4.25	5.41	5.75	5.91	6.07	5.02	13.33	5.91	2.71	6.47	2.22	6.10	1.70	-0.9	-0.5	0.9	
1-methylphenanthrene		15.0	13.5	15.0	13.6	13.4	10.8	14.5	6.0	12.6	12.4	12.1	3.4	10.5	4.8	0.8	0.5	0.4	
fluoranthene		137	160	153	153	144	150	150	8	149	3	168	15	164	9	-0.4	-0.8	0.5	
pyrene		133	174	144	137	148	127	150	14	137	8	175	17	152	7	-0.6	-1.0	0.9	
benz[a]anthracene		47.5	67.6	63.5	37.4	35.1	37.2	59.5	17.8	36.6	3.5	44.5	4.8	32.5	4.7	1.3	2.1	1.2	
chrysene		118	168	157	90.6	85.5	92.5	148	18	89.5	4.0	52.3	ND	94.9	7.0			1.2	
triphenylene		118	168	157	90.6	85.5	92.5	148	18	89.5	4.0	39.4	ND	50.7	5.9			1.2	
benzo[b]fluoranthene		76.1	83.3	67.8	61.3	68.9	62.2	75.7	10.2	64.1	6.5	58.7	7.8	46.4	3.7	1.2	1.8	0.7	
benzo[k]fluoranthene		76.1	83.3	67.8	61.3	68.9	62.2	75.7	10.2	64.1	6.5	29.1	ND	20.5	1.7			0.7	
benzo[j]fluoranthene		76.1	83.3	67.8	61.3	68.9	62.2	75.7	10.2	64.1	6.5	31.2	7.5	20.2	0.8			0.7	
benzofluorene		87.3	94.3	85.8	81.3	82.0	76.2	89.1	5.1	79.8	4.0	91.6	9.3	84.0	1.9	-0.1	-0.2	0.3	
benzo[a]pyrene		19.5	22.7	21.3	19.7	18.3	15.2	21.2	7.6	17.7	13.0	23.0	4.8	15.6	0.7	-0.3	-0.3	0.5	
perylene		7.00	6.30	6.66	9.90	8.38	7.60	6.65	5.26	8.63	13.56	10.3	5.0	7.7	0.3	-1.4	-0.7	0.4	
indeno[1,2,3-cd]pyrene		15.2	17.1	16.1	13.1	12.6	12.1	16.1	5.9	12.6	4.0	20.3	4.6	14.2	2.8	-0.8	-0.7	0.4	
dibenz[a,h]anthracene		3.68	5.72	3.76	2.72	2.46	2.95	4.39	26.34	2.71	9.05	5.54	2.80	no target		-0.8	-0.4	1.8	
benzo[ghi]perylene		26.1	30.0	30.0	23.4	23.2	22.8	28.7	7.8	23.1	1.3	31.2	6.0	22.0	2.2	-0.3	-0.3	0.5	
Laboratory: 17 PAH in Mussel X												Number by Category							
												Category		z (25%)		z (s)		p (15%)	
												<2		20		21		25	
												2 to 3		2		1		1	
												>3		0		0		0	

Laboratory: 17
PAH in Mussel X

Reported Results	No. of Analytes	%
Quantitative	26	100
Qualitative	0	0
Not Determined	0	0

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	20	21	25
2 to 3	2	1	1
> 3	0	0	0

*z- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a				
		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		Performance scores ^a				
		1/31/01	1/31/01	1/31/01	S 1	S 2	1/31/01	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)			
alpha-HCH		<0.52	<0.56	<0.51	1.46	1.54	1.42		<0.56	NA	1.47	4.1		<3	no target					
hexachlorobenzene		0.414	0.541	0.510	0.408	0.532	0.539		0.488	13.559	0.493	14.948		<3	no target					
gamma-HCH		<0.63	<0.61	<0.58	<0.46	<0.44	<0.45		<0.63	NA	<0.46	NA		<3	no target					
beta-HCH		<0.63	<0.63	<0.61	<0.46	<0.43	<0.44		<0.63	NA	<0.46	NA		<3	no target					
heptachlor		<1.02	<1.18	<1.06	<0.63	<0.58	<0.58		<1.18	NA	<0.63	NA		<3	no target					
aldrin		<0.92	<0.98	<1.09	<0.59	<0.68	<0.62		<1.09	NA	<0.68	NA		<3	no target					
heptachlor epoxide		<0.73	<0.85	<0.95	<0.49	<0.57	<0.52		<0.95	NA	<0.57	NA		<3	no target					
oxychlorodane		<1.06	<1.17	<1.34	<0.76	<0.94	<0.82		<1.34	NA	<0.94	NA		<5	no target					
trans-chlordane		6.03	7.56	9.64	15.1	15.1	11.7		7.74	23.4	14.0	14.1		11.6	2.8	16.6	1.7	-1.3	-0.9	1.6
2,4'-DDE		4.18	1.71	1.86	2.46	2.49	2.62		2.58	53.6	2.52	3.4		3.88	2.44	5.26	0.27	-1.3	-0.6	3.6
endosulfan I		<2.42	<2.67	<3.04	<1.77	<2.18	<1.9		<3.04	NA	<2.18	NA		<5	no target					
cis-chlordane		7.95	10.7	9.24	16.7	20.4	16.5		9.30	14.8	17.9	12.3		11.54	1.99	17.2	2.8	-0.8	-0.7	1.0
trans-nonachlor		6.74	8.83	9.07	16.5	15.8	12.6		8.21	15.6	15.0	13.9		13.43	2.73	18.0	3.6	-1.6	-1.1	1.0
dieldrin		9.47	10.3	10.5	6.96	9.01	6.36		10.1	5.4	7.44	18.7		7.27	1.76	6.20	1.30	1.6	1.1	0.4
4,4'-DDE		26.8	34.5	29.5	38.8	37.7	36.4		30.3	12.9	37.6	3.2		39.4	4.1	51.2	5.5	-0.9	-1.3	0.9
2,4'-DDD		7.80	9.11	8.94	14.4	16.8	12.8		8.62	8.3	14.7	13.7		13.9	0.0	13.7	2.8	-1.5	-0.9	0.6
endrin		<4.37	<4.85	<5.49	<3.16	<3.91	<3.4		<5.49	NA	<3.91	NA		<5	no target					
endosulfan II		<5.73	<5.67	<6.15	<3.21	<3.75	<3.37		<6.15	NA	<3.75	NA		<15	no target					
4,4'-DDD		28.8	35.2	32.6	43.3	52.8	46.1		32.2	10.0	47.4	10.3		30.2	4.0	43.0	6.3	0.3	0.3	0.7
2,4'-DDT		0.967	0.811	0.914	0.820	1.20	0.845		0.897	8.840	0.955	22.256		8.45	1.78	8.50	1.90	-3.6	-4.5	0.6
cis-nonachlor		1.67	<1.28	<1.25	2.80	2.72	3.64		1.67	NA	3.05	16.69		8.25	3.69	6.84	0.90	-3.2	-1.6	
4,4'-DDT		2.02	2.62	2.09	2.23	2.07	2.07		2.24	14.62	2.12	4.35		4.37	1.03	3.91	0.59	-1.9	-1.4	1.0
mirex		<0.3	<0.45	<0.37	<0.97	<1.11	<0.91		<0.45	NA	<1.11	NA		<5	no target					
endosulfan sulfate		<0.95	<0.94	<1.02	<0.53	<0.62	<0.56		<0.95	NA	<0.62	NA		<4	no target					
chlorpyrifos		<1.53	<1.77	<1.59	<0.89	<1.02	<0.93		<1.77	NA	<1.02	NA		<2	no target					

Laboratory: 17
Pesticides in Mussel X

Reported Results	No. of Analyses	%
Quantitative	12	48
Qualitative	13	52
Not Determined	0	0

Category	Number by Category	z (25%)	z (s)	p (15%)
< 2	9	9	10	9
2 to 3	0	0	0	0
> 3	2	1	1	1

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 17

Reporting Date: 2/1/01

(data reported as if three figures were significant)

PCBs

Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a			
	Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X			SRM 1974a			Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X			
	19/01 S1	19/01 S2	19/01 S3	19/01 S1	19/01 S2	19/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)	
PCB 8	3.82	4.04	4.45	3.81	3.69	3.66	4.10	7.79	3.72	2.13	3.72	2.13	4.46	0.96	5.82	1.20				
PCB 18	6.66	6.43	7.26	24.2	22.8	18.3	6.78	6.32	21.8	14.2	21.8	14.2	12.2	3.0	33.0	11.0	-1.8	-1.1	0.4	
PCB 28	31.2	35.1	33.0	85.8	85.1	81.2	33.1	5.9	84.0	2.9	84.0	2.9	38.1	5.2	79.0	15.0	-0.5	-0.6	0.4	
PCB 31	31.2	35.1	33.0	85.8	85.1	81.2	33.1	5.9	84.0	2.9	84.0	2.9	29.8	3.3	76.0	21.0	0.4	1.3	0.4	
PCB 44	27.4	30.8	29.3	66.7	58.3	55.0	29.2	5.8	55.0	14.1	55.0	14.1	40.9	5.1	72.7	7.4	-1.1	-1.4	0.4	
PCB 49	40.2	47.1	40.0	83.1	76.4	71.0	42.4	9.5	76.8	7.9	76.8	7.9	54.5	8.0	88.8	5.0	-0.9	-1.2	0.6	
PCB 52	56.6	65.0	56.5	118	109	102	59.4	8.2	110	7	110	7	62.6	8.0	115	11	-0.2	-0.2	0.5	
PCB 66	43.9	50.3	44.1	91.1	80.0	74.1	46.1	7.9	81.7	10.6	81.7	10.6	72.9	11.4	101	4	-1.5	-1.7	0.5	
PCB 95	48.5	54.4	44.5	84.7	75.1	63.7	49.1	10.1	74.5	14.1	74.5	14.1	62.1	6.0	83.0	17.0	-0.8	-2.0	0.7	
PCB 99	47.4	56.0	42.1	80.4	72.1	62.0	48.5	14.5	71.5	12.9	71.5	12.9	63.5	9.8	70.9	4.0	-0.9	-1.6	1.0	
PCB 101	81.9	90.0	72.9	133	120	98.0	81.6	10.5	117	15	117	15	116	21	128	10	-1.2	-0.9	0.7	
PCB 105	33.0	36.8	34.9	51.7	44.6	43.6	34.9	5.4	46.6	9.5	46.6	9.5	39.4	3.3	53.0	3.4	-0.5	-0.8	0.4	
PCB 118	85.0	95.5	90.0	121	105	103	90.2	5.8	110	9	110	9	116	14	131	4	-0.9	-1.0	0.4	
PCB 128	11.6	13.3	9.72	16.1	14.5	10.2	11.5	15.5	13.6	22.4	13.6	22.4	19.0	2.8	22.0	3.4	-1.6	-1.6	1.0	
PCB 138	51.9	56.3	58.4	67.1	59.1	58.8	55.5	6.0	81.7	7.6	81.7	7.6	117	11	134	10	-2.1	-3.6	0.4	
PCB 149	56.8	61.0	58.1	80.7	69.3	68.3	58.6	3.7	72.8	9.5	72.8	9.5	68.6	8.0	87.6	2.3	-0.6	-1.2	0.2	
PCB 153	119	129	127	160	138	136	125	4	145	9	145	9	133	16	145	8	-0.2	-0.3	0.3	
PCB 156	51.7	56.4	55.5	70.9	63.4	60.6	55	4.6	65	6.7	65	6.7	74.3	1.71	74.3	0.99	-1.1	-1.4	0.3	
PCB 170	348	367	353	452	400	408	36	2.8	42	6.7	42	6.7	348	0.83	550	1.10	0.1	0.1	0.2	
PCB 180	6.89	7.41	6.84	8.61	8.15	8.24	7.0	4.5	8.3	2.9	8.3	2.9	12.1	2.0	17.1	3.8	-1.7	-1.8	0.3	
PCB 187	21.6	27.1	24.8	33.8	28.0	26.4	24.5	11.3	29.4	13.2	29.4	13.2	30.0	2.8	34.0	2.3	-0.7	-1.1	0.8	
PCB 194	0.390	0.488	0.477	0.564	0.478	0.477	0.452	11.887	0.506	9.864	0.506	9.864	<4		no target	0.0				
PCB 195	0.094	0.099	0.089	0.093	0.049	0.074	0.094	5.597	0.072	30.443	0.072	30.443	<4		no target	0.0				
PCB 206	0.075	0.127	0.107	0.069	0.064	0.067	0.103	25.226	0.087	4.340	0.087	4.340	<2		no target	0.0				
PCB 209	0.107	0.112	0.164	0.092	0.089	0.079	0.128	24.724	0.087	7.584	0.087	7.584	<2		no target	0.0				

Laboratory: 17

PCBs in Mussel X

Reported Results		No. of Analytes		%	
Quantitative		24		96	
Qualitative		1		4	
Not Determined		0		0	

Water in Mussel X

Mussel X, %			SRM 1974a, %			Mussel X, %			SRM 1974a, %			Mussel X, %			SRM 1974a, %			Mussel X, %		
S1	S2	S3	S1	S2	S3	mean, %	%RSD		mean, %	%RSD		assigned	95% CL	target	95% CL	z (25%)	z (s)	p (15%)		
89.3	90.1	89.5				89.6	0.5					88.8	0.0	88.6	0.1	0.0	0.2	0.0		

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

Sample: QA00TIS10 - Mussel Tissue X

Reporting Date: 2/15/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		SRM 1974a		Mussel X, ng/g dry		assigned value	95% CL	target value ^b	95% CL	Mussel X	
		other	S 1	other	S 3	other	S 1	other	S 3	lab mean	lab					z-score (25%)	p-score (15%)
naphthalene			12.9	8.69	13.7	10.3	8.40			10.8	27.6	10.8	24.9				
2-methylnaphthalene			7.08	4.88	6.36	5.05	4.92			5.98	26.01	5.44	14.63				
1-methylnaphthalene			4.14	3.39	4.01	2.68	3.24			3.77	14.09	3.31	20.17				
biphenyl			1.95	1.91	2.97	3.26	3.02			1.93	1.47	3.08	5.03				
2,6-dimethylnaphthalene			2.60	1.67	2.31	2.27	2.36			2.14	30.80	2.31	1.95				
acenaphthylene			6.44	6.03	6.73	7.17	6.46			6.24	4.65	6.79	5.28				
acenaphthene			2.84	4.13	2.73	2.70	2.40			3.49	26.17	2.61	6.99				
1,6,7-trimethylnaphthalene			3.66	3.45	2.67	2.53	2.94			3.56	4.18	2.71	7.68				
fluorene			4.72	3.99	4.63	3.78	4.30			4.36	11.85	4.24	10.11				
phenanthrene			21.6	22.9	17.6	15.4	15.9			22.3	4.1	16.3	7.1				
anthracene			11.5	11.7	11.0	10.1	11.8			11.6	1.2	11.0	7.8				
1-methylphenanthrene			11.6	10.0	11.0	10.0	9.43			10.8	10.5	10.1	7.8				
fluoranthene			155	159	148	154	155			157	2	152	2				
pyrene			163	162	138	144	145			163	0	142	3				
benz[a]anthracene			39.2	42.4	26.2	27.0	29.8			40.8	5.5	27.7	6.8				
chrysene			96.7	97.6	73.8	75.8	82.3			97.2	0.7	77.3	5.7				
triphenylene			other	other	other	other	other			other	NA	other	NA				
benzo[b]fluoranthene			99.6	103	71.9	70.6	69.0			101	2	70.5	2.1				
benzo[k]fluoranthene			other	other	other	other	other			other	NA	other	NA				
benzo[j]fluoranthene			other	other	other	other	other			other	NA	other	NA				
benzo[e]pyrene			95.3	97.0	78.7	78.7	80.6			96.2	1.3	79.3	1.4				
benzo[a]pyrene			21.5	23.7	14.4	13.2	13.1			22.6	6.9	13.6	5.3				
perylene			7.61	8.29	5.90	6.60	5.66			7.95	6.05	6.05	8.07				
indeno[1,2,3-cd]pyrene			14.9	16.6	12.0	11.7	11.5			15.8	7.6	11.7	2.1				
dibenz[a,h]anthracene			3.52	4.10	2.87	2.83	2.72			3.81	10.76	2.81	2.77				
benzo[ghi]perylene			27.6	28.4	24.3	23.1	22.0			28.0	2.0	23.1	5.0				

Laboratory: 18		Number by Category	
PAH in Mussel X		Category	z (25%)
		<2	16
		2 to 3	4
		>3	3

Reported Results		No. of Analytes	
Quantitative		23	
Qualitative		3	
Not Determined		0	

^az- and p-scores > 3 are held.^bCertified material reference values are held.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 18
Reporting Date: 2/15/01

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X			SRM 1974a			assigned value	95% CL	target value ^b	z-score (25%)	p-score (15%)
		2/2/01	2/2/01	2/2/01	2/1/01	2/1/01	2/1/01	lab mean	lab	%RSD	lab mean	lab	%RSD					
alpha-HCH		0.585	0.606	0.574	0.958	0.975	0.977	0.588	2.763	0.970	1.076			<3		no target		
hexachlorobenzene		0.444	0.461	0.464	0.558	0.491	0.498	0.456	2.364	0.516	7.142			<3		no target		
gamma-HCH		0.431	0.255	0.235	0.392	0.387	0.401	0.307	35.131	0.393	1.804			<3		no target		
beta-HCH		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<3		no target		
heptachlor		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<3		no target		
aldrin		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<3		no target		
heptachlor epoxide		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<3		no target		
oxychlorodane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			<5		no target		
trans-chlordane		12.2	11.7	11.0	14.6	14.4	15.7	11.6	5.2	14.9	4.7			11.6	2.8	16.6	0.0	0.0
2,4'-DDE		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			3.88	2.44	5.26		0.3
endosulfan I		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<5		no target		
cis-chlordane		15.2	12.8	13.6	16.4	15.6	16.4	13.9	8.8	16.1	2.9			11.54	1.99	17.2	0.8	0.7
trans-nonachlor		15.6	14.3	14.0	17.1	17.1	17.6	14.6	5.8	17.3	1.7			13.43	2.73	18.0	0.4	0.2
dieldrin		5.21	5.21	4.84	7.30	7.16	7.64	5.09	4.20	7.37	3.35			7.27	1.76	6.20	-1.2	-0.8
4,4'-DDE		51.3	48.1	45.9	52.2	51.8	56.2	48.4	5.6	53.4	4.6			39.4	4.1	51.2	0.9	1.3
2,4'-DDD		16.4	15.4	15.4	18.0	18.0	19.3	15.7	3.7	18.4	4.1			13.9	0.0	13.7	0.5	0.3
endrin		<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<5	0.00	no target		
endosulfan II		19.6	18.5	18.3	18.6	18.9	20.5	18.8	3.7	19.3	5.3			<15	0.00	no target		
4,4'-DDD		29.2	31.0	26.2	37.2	36.2	41.1	28.8	8.4	38.2	6.8			30.2	4.0	43.0	-0.2	-0.2
2,4'-DDT		10.8	10.6	9.83	10.4	9.71	10.4	10.4	4.9	10.2	3.9			8.45	1.78	8.50	0.9	1.2
cis-nonachlor		7.49	7.98	7.00	8.54	7.91	7.59	7.49	6.54	8.01	6.03			8.25	3.69	6.84	-0.4	-0.2
4,4'-DDT		3.88	3.59	4.02	2.79	2.70	2.89	3.83	5.73	2.79	3.40			4.37	1.03	3.91	-0.5	-0.4
mirex		1.13	1.06	1.18	1.20	1.23	1.29	1.12	5.37	1.24	3.70			<5		no target		
endosulfan sulfate		3.46	3.45	3.28	3.49	3.56	3.60	3.40	2.98	3.55	1.57			<4		no target		
chlorpyrifos		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			<2		no target		

Laboratory: 18
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	16	64
Qualitative	7	28
Not Determined	2	8

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	10	10	10
2 to 3	0	0	0
> 3	0	0	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

Analysis date	PCBs	Data as submitted by laboratory												Material reference values				Performance scores ^a				
		Mussel X, ng/g dry						SRM 1974a, ng/g dry			Mussel X			SRM 1974a			Mussel X					
		2/20/01	2/20/01	S1	S2	S3	2/20/01	2/20/01	2/20/01	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
	PCB 8	4.04	4.37	3.57	3.57	5.18	5.19	3.99	10.1	5.01	6.17				4.46	0.96	5.82	1.20				
	PCB 18	144	133	12.6	28.4	29.6	31.0	13.4	6.8	29.7	4.4				12.2	3.0	33.0	11.0		0.4	0.2	0.5
	PCB 28	57.5	57.0	57.7	90.4	86.0	84.1	57.4	0.6	86.8	3.7				38.1	5.2	79.0	15.0		2.0	2.3	0.0
	PCB 31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				29.8	3.3	76.0	21.0				
	PCB 44	55.1	52.5	51.5	75.6	77.0	81.8	53.0	3.5	78.1	4.2				40.9	5.1	72.7	7.4		1.2	1.4	0.2
	PCB 49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				54.5	8.0	88.8	5.0				
	PCB 52	85.4	81.3	78.8	110	110	116	81.8	4.1	112	4				62.6	8.0	115	11		1.2	1.5	0.3
	PCB 66	89.8	79.4	74.2	102	102	108	81.1	9.8	104	4				72.9	11.4	101	4		0.4	0.5	0.7
	PCB 95	other	other	other	other	other	other	other	NA	other	NA				62.1	6.0	83.0	17.0				
	PCB 99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				63.5	9.8	70.9	4.0				
	PCB 101	144	132	132	137	138	148	136	5	141	4				116	21	128	10		0.7	0.5	0.3
	PCB 105	50.0	50.5	47.3	57.2	57.6	58.7	49.3	3.5	57.8	1.3				39.4	3.3	53.0	3.4		1.0	1.8	0.2
	PCB 118	147	140	135	136	137	147	141	4	141	4				116	14	131	4		0.8	1.0	0.3
	PCB 128	29.6	28.1	27.5	26.2	26.3	28.4	28.4	3.8	27.0	4.6				19.0	2.8	22.0	3.4		2.0	2.0	0.3
	PCB 138	150	142	137	129	130	140	143	5	133	5				117	11	134	10		0.9	1.5	0.3
	PCB 149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				68.6	8.0	87.6	2.3				
	PCB 153	177	170	174	164	159	172	174	2	165	4				133	16	145	8		1.2	1.4	0.1
	PCB 156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				7.43	1.71	7.43	0.99				
	PCB 170	4.70	4.82	4.19	4.10	4.69	4.88	4.57	7.32	4.56	8.93				3.48	0.83	5.50	1.10		1.3	1.1	0.5
	PCB 180	17.6	16.3	15.3	15.7	17.0	16.8	16.4	7.0	16.5	4.2				12.1	2.0	17.1	3.8		1.4	1.6	0.5
	PCB 187	44.6	42.1	40.6	39.5	39.5	42.7	42.4	4.8	40.6	4.6				30.0	2.8	34.0	2.3		1.7	2.5	0.3
	PCB 194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				<4		no target	0.0				
	PCB 195	1.25	1.09	0.893	0.902	1.07	0.927	1.08	16.6	0.966	9.380				<4		no target	0.0				
	PCB 206	0.298	0.291	0.287	0.349	0.433	0.269	0.292	1.907	0.350	23.409				<2		no target	0.0				
	PCB 209	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA				<2		no target	0.0				

Laboratory: 18
PCBs in Mussel X

Category	Number by Category	z (25%)	z (s)	p (15%)
<2	13	12	14	
2 to 3	1	2	0	
>3	0	0	0	

Water in Mussel X

Mussel X, %	SRM 1974a, %						Mussel X, %	SRM 1974a, %			
	S1	S2	S3	S1	S2	S3		assigned	95% CL	target	95% CL
water	91.1	90.5	90.0					88.8	0.0	88.6	0.1

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a				
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X		p-score (15%)		
		1276.00	1276.00	1276.00	1276.00	1276.00	1276.00	1276.00	1276.00	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL		z-score (25%)	z-score (s)
		S1	S2	S3	S1	S2	S3	S1	S2	S3										
naphthalene		13.9	12.1	11.0	9.89					12.3	11.9	9.89	NA	32.1	8.6	23.5	4.4	-2.5	-2.1	0.8
2-methylnaphthalene		11.8	10.5	10.6	9.91					11.0	6.6	9.91	NA	11.7	4.8	10.2	1.5	-0.3	-0.2	0.4
1-methylnaphthalene		6.76	6.04	5.77	5.37					6.19	8.27	5.37	NA	8.95	7.19	5.30	2.20	-1.2	-0.5	0.6
biphenyl		4.29	3.80	3.43	3.22					3.84	11.23	3.22	NA	8.35	3.29	5.11	1.50	-2.2	-1.1	0.7
2,6-dimethylnaphthalene		5.60	5.22	5.05	4.55					5.29	5.32	4.55	NA	6.59	4.76	5.30	1.80	-0.8	-0.2	0.4
acenaphthylene		5.56	5.71	5.24	6.41					5.50	4.36	6.41	NA	5.58	2.38	5.25	1.50	-0.1	0.0	0.3
acenaphthene		2.30	<2.77	2.40	2.40					2.35	3.01	2.40	NA	3.63	1.43	3.15	1.00	-1.4	-0.8	0.2
1,6,7-trimethylnaphthalene		5.78	5.32	4.57	5.83					5.22	11.69	5.83	NA	4.73	2.16	6.60	2.00	0.4	0.2	0.8
fluorene		6.33	5.84	5.89	4.53					6.02	4.48	4.53	NA	5.07	0.60	5.72	0.91	0.7	1.5	0.3
phenanthrene		31.7	26.9	25.6	21.5					28.1	11.4	21.5	NA	24.8	2.5	22.2	2.4	0.5	1.0	0.8
anthracene		10.6	9.63	9.52	8.89					9.92	5.99	8.89	NA	6.47	2.22	6.10	1.70	2.1	1.3	0.4
1-methylphenanthrene		12.0	10.4	10.5	11.2					11.0	8.2	11.2	NA	12.1	3.4	10.5	4.8	-0.4	-0.2	0.5
fluoranthene		220	212	199	202					210	5	202	NA	168	15	164	9	1.0	1.9	0.3
pyrene		231	223	215	195					223	4	195	NA	175	17	152	7	1.1	1.9	0.2
benz[a]anthracene		46.0	54.8	43.5	27.3					48.1	12.3	27.3	NA	44.5	4.8	32.5	4.7	0.3	0.5	0.8
chrysene		116	131	115	89.4					121	7	89.4	NA	52.3	ND	94.9	7.0	5.2	3.7	0.5
triphenylene										NA	NA	NA	NA	39.4	ND	50.7	5.9			
benzo[b]fluoranthene		67.8	80.1	64.1	43.9					70.7	11.9	43.9	NA	58.7	7.8	46.4	3.7	0.8	1.3	0.8
benzo[k]fluoranthene										NA	NA	NA	NA	29.1	ND	20.5	1.7			
benzo[j]fluoranthene		49.4	72.7	51.0	35.6					57.7	22.6	35.6	NA	31.2	7.5	20.2	0.8	3.4	4.4	1.5
benzo[e]pyrene		110	119	107	86.7					112	6	86.7	NA	91.6	9.3	84.0	1.9	0.9	1.5	0.4
benzo[a]pyrene		26.6	48.9	24.1	15.2					33.2	41.1	15.2	NA	23.0	4.8	15.6	0.7	1.8	1.5	2.7
perylene		10.3	47.5	9.58	7.25					22.5	96.6	7.25	NA	10.3	5.0	7.7	0.3	4.7	2.2	6.4
indeno[1,2,3-cd]pyrene		26.3	44.0	24.5	18.5					31.6	34.1	18.5	NA	20.3	4.6	14.2	2.8	2.2	1.9	2.3
dibenz[a,h]anthracene		10.0	14.4	9.41	6.94					11.3	24.2	6.94	NA	5.54	2.80	no target		4.1	1.9	1.6
benzo[ghi]perylene		39.8	55.2	39.1	30.5					44.7	20.4	30.5	NA	31.2	6.0	22.0	2.2	1.7	1.6	1.4
Laboratory: 20																				
PAH In Mussel X																				

Laboratory: 20
PAH In Mussel X

Reported Results		No. of Analytes		%	
Quantitative		24		92	
Qualitative		0		0	
Not Determined		2		8	

Category		Number by Category		z (15%)	
< 2		16		20	
2 to 3		4		2	
> 3		4		2	

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
	Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X		SRM 1974a, ng/g dry		z-score (25%)	z-score (s)	p-score (15%)
	2/5/01	2/5/01	2/5/01	S 1	S 2	2/5/01	2/5/01	2/5/01	S 1	S 2	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD			
alpha-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
hexachlorobenzene	<3.27	<2.91	<3.76	<2.98	<2.42						<3.76	NA	<2.98	NA			
gamma-HCH	<3.59	<3.19	<4.12	<3.27	<2.65						<4.12	NA	<3.27	NA			
beta-HCH	7.12	6.34	6.22	8.59	5.89						6.56	7.4	7.24	26.4			
heptachlor	<3.28	<2.92	<3.77	<2.99	<2.43						<3.77	NA	<2.99	NA			
aldrin	6.90	6.73	6.11	9.54	10.3						6.58	6.3	9.92	5.4			
heptachlor epoxide	<3.28	<2.92	<3.77	<2.99	<2.43						<3.77	NA	<2.99	NA			
oxychlordane	<3.35	<2.99	<3.86	<3.06	<2.48						<3.86	NA	<3.06	NA			
trans-chlordane	11.2	11.1	10.8	15.7	16.7						11.0	1.9	16.2	4.4			
2,4'-DDE	3.68	3.53	<3.77	4.33	4.48						3.61	2.94	4.41	2.41			
endosulfan I	<10.6	<9.46	<12.2	<9.68	<7.86						<12.2	NA	<9.68	NA			
cis-chlordane	13.5	13.5	13.1	18.8	19.9						13.4	1.7	19.4	4.0			
trans-nonachlor	12.5	13.0	12.1	18.0	18.8						12.5	3.6	18.4	3.1			
dieldrin	7.89	8.16	6.33	10.3	10.6						7.46	13.24	10.5	2.0			
4,4'-DDE	46.5	46.5	44.7	60.1	62.4						45.9	2.3	61.3	2.7			
2,4'-DDD	15.7	15.5	15.1	23.3	24.5						15.4	2.0	23.9	3.6			
endrin	NA	NA	NA	NA	NA						NA	NA	NA	NA			
endosulfan II	<10.8	<9.6	<12.4	<9.83	<7.98						<12.4	NA	<9.83	NA			
4,4'-DDD	34.4	35.9	32.6	51.2	54.4						34.3	4.8	52.8	4.3			
2,4'-DDT	<3.25	<2.9	<3.74	<2.96	<2.41						<3.74	NA	<2.96	NA			
cis-nonachlor	6.32	6.42	6.03	7.47	8.26						6.26	3.24	7.87	7.10			
4,4'-DDT	5.61	5.07	<3.75	<2.98	<2.42						5.34	7.15	<2.98	NA			
mirex	4.43	4.74	4.73	5.25	5.67						4.63	3.80	5.46	5.44			
endosulfan sulfate	<10.7	<9.48	<12.2	<9.7	<7.88						<12.2	NA	<9.7	NA			
chlorypyrifos	NA	NA	NA	NA	NA						NA	NA	NA	NA			

Laboratory: 20
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	13	52
Qualitative	9	36
Not Determined	3	12

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	10	10	10
2 to 3	0	0	0
> 3	0	0	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 20
Reporting Date: 3/7/01

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a					
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry	SRM 1974a, ng/g dry	Mussel X		p-score (15%)					
		25/01 S1	25/01 S2	25/01 S3	25/01 S1	25/01 S2	25/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL		z-score (25%)	z-score (s)			
PCB 8		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.46	0.96	5.82	1.20				
PCB 18		12.1	12.0	11.4	33.0	34.2		11.8	3.2	33.6	2.5			12.2	3.0	33.0	11.0	-0.1	-0.1	0.2	
PCB 28		32.8	32.4	34.5	80.2	84.5		33.2	3.4	82.4	3.7			38.1	5.2	79.0	15.0	-0.5	-0.6	0.2	
PCB 31		31.3	31.9	30.9	62.3	68.9		31.4	1.6	65.6	7.1			29.8	3.3	76.0	21.0	0.2	0.6	0.1	
PCB 44		38.9	39.2	38.5	80.3	83.7		38.9	0.9	82.4	2.5			40.9	5.1	72.7	7.4	-0.2	-0.2	0.1	
PCB 49		56.5	56.1	53.8	95.9	98.8		55.5	2.6	97.4	7.1			54.5	8.0	88.8	5.0	0.1	0.1	0.2	
PCB 52		70.5	70.7	68.3	126	129		69.8	1.9	128	2			62.6	8.0	115	11	0.5	0.5	0.1	
PCB 66		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	72.9	11.4	101	4				
PCB 95		62.7	63.8	61.2	91.2	92.6		62.6	2.1	91.9	1.1			62.1	6.0	83.0	17.0	0.0	0.1	0.1	
PCB 99		65.4	63.8	62.2	83.6	87.1		63.8	2.5	85.4	2.9			63.5	9.8	70.9	4.0	0.0	0.0	0.2	
PCB 101		118	119	115	155	161		117	2	158	1			116	21	128	10	0.0	0.0	0.1	
PCB 105		45.1	44.8	42.9	58.5	60.2		44.3	2.7	59.4	2.0			39.4	3.3	53.0	3.4	0.5	0.9	0.2	
PCB 118		107	106	103	129	136		105	2	133	1			116	14	131	4	-0.4	-0.4	0.1	
PCB 128		19.9	19.8	19.4	23.2	23.6		19.7	1.3	23.4	1.2			19.0	2.8	22.0	3.4	0.2	0.2	0.1	
PCB 138		136	133	130	152	155		133	2	152	1			117	11	134	10	0.6	1.0	0.2	
PCB 149		74.2	73.2	70.9	87.8	91.9		72.8	2.3	89.9	3.2			68.6	8.0	87.6	2.3	0.2	0.5	0.2	
PCB 153		164	161	158	183	190		161	2	187	3			133	16	145	8	0.9	1.0	0.1	
PCB 156		8.16	7.97	7.80	8.87	9.35		7.98	2.26	9.11	3.73			7.43	1.71	7.43	0.99	0.3	0.4	0.2	
PCB 170		5.33	5.18	5.14	5.27	5.60		5.22	1.92	5.44	4.29			3.48	0.83	5.50	1.10	2.0	1.8	0.1	
PCB 180		13.0	12.8	12.3	14.2	14.8		12.7	2.8	14.5	2.9			12.1	2.0	17.1	3.8	0.2	0.2	0.2	
PCB 187		30.1	28.9	27.9	33.3	34.9		29.0	3.8	34.1	3.3			30.0	2.8	34.0	2.3	-0.1	-0.2	0.3	
PCB 194		<3.32	<2.96	<3.82	<3.03	<2.46		<3.82	NA	<3.03	NA			<4		no target	0.0				
PCB 195		<3.33	<2.96	<3.83	<3.03	<2.46		<3.83	NA	<3.03	NA			<4		no target	0.0				
PCB 206		<3.3	<2.94	<3.79	<3.00	<2.44		<3.79	NA	<3.00	NA			<2		no target	0.0				
PCB 209		<3.29	<2.93	<3.78	<3.00	<2.43		<3.78	NA	<3.00	NA			<2		no target	0.0				
Laboratory: 20																					
PCBs In Mussel X																					
Category																	Number by Category				
z (25%)																	z (s)	p (15%)			
<2																	19	19	19		
2 to 3																	0	0	0		
>3																	0	0	0		
Mussel X, %																					
SRM 1974a, %																	SRM 1974a, %				
assigned																	95% CL	target	95% CL		
88.8																	0.0	88.6	0.1		
0.1																	0.3	0.0	0.0		
Water In Mussel X																					
Mussel X, %																	SRM 1974a, %				
S1																	S2	S3	S1	S2	S3
90.4																	90.8	90.4			
0.1																	0.3	0.0			

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a			
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X			SRM 1974a			Mussel X, ng/gdry		SRM 1974a, ng/g dry	z-score (25%)	z-score (s)	p-score (15%)		
		10/28/00 S1	10/28/00 S2	10/28/00 S3	10/28/00 S1	10/28/00 S2	10/28/00 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL						
naphthalene		774	723	925	101	36.3	49.3	807	13	62.2	55.0			32.1	8.6	23.5	4.4	96.5	83.6	0.9	
2-methylnaphthalene:		502	539	560	39.4	16.3	26.9	534	5	27.5	41.9			11.7	4.8	10.2	1.5	178.2	113.8	0.4	
1-methylnaphthalene:		220	224	230	26.6	ND<16	17.1	225	2	21.8	30.6			8.95	7.19	5.30	2.20	96.3	37.2	0.2	
biphenyl		205	206	222	ND<16	ND<16	ND<16	211	5	ND<16	NA			8.35	3.29	5.11	1.50	97.0	51.4	0.3	
2,6-dimethylnaphthalene		219	289	320	ND<16	ND<16	ND<16	276	19	ND<16	NA			6.59	4.76	5.30	1.80	163.5	47.3	1.2	
acenaphthylene		625	461	522	20.2	ND<16	ND<16	536	15	20.2	NA			5.58	2.38	5.25	1.50	380.5	206.5	1.0	
acenaphthene		156	121	137	ND<16	ND<16	ND<16	138	13	ND<16	NA			3.63	1.43	3.15	1.00	147.9	87.0	0.9	
1,6,7-trimethylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			4.73	2.16	6.60	2.00				
fluorene		240	189	215	20.2	18.6	19.7	215	12	19.5	4.2			5.07	0.60	5.72	0.91	165.2	321.1	0.8	
phenanthrene		1645	1552	1721	34.1	37.3	34.1	1639	5	35.1	5.3			24.8	2.5	22.2	2.4	260.9	503.9	0.3	
anthracene		837	624	744	33.1	28.3	24.3	735	15	28.6	15.4			6.47	2.22	6.10	1.70	450.4	274.1	1.0	
1-methylphenanthrene		234	215	272	ND<16	ND<16	ND<16	240	12	ND<16	NA			12.1	3.4	10.5	4.8	75.3	48.0	0.8	
fluoranthene		3491	3690	4692	269	296	275	3958	16	280	5			168	15	164	9	90.4	168.3	1.1	
pyrene		3885	3801	4740	258	283	270	4142	13	271	5			175	17	152	7	90.5	159.4	0.8	
benz[a]anthracene		1702	1395	1630	67.7	74.6	61.0	1576	10	67.7	10.0			44.5	4.8	32.5	4.7	137.5	215.6	0.7	
chrysene		2362	2613	2625	185	185	165	2533	6	178	7			52.3	ND	94.9	7.0	189.7	135.6	0.4	
triphenylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			39.4	ND	50.7	5.9				
benzo[b]fluoranthene		3412	2051	2505	66.7	69.4	67.2	2656	26	67.8	2.1			58.7	7.8	46.4	3.7	176.9	279.3	1.7	
benzo[k]fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			29.1	ND	20.5	1.7				
benzo[j]fluoranthene		1611	1827	1804	54.9	66.1	57.6	1747	7	59.5	9.8			31.2	7.5	20.2	0.8	220.2	284.8	0.5	
benzofluorene		1883	1761	1908	105	149	130	1851	4	128	17			91.6	9.3	84.0	1.9	76.8	127.6	0.3	
benzo[a]pyrene		1509	1307	1651	47.4	43.2	39.5	1489	12	43.4	9.0			23.0	4.8	15.6	0.7	254.5	220.5	0.8	
perylene		1422	770	953	ND<16	17.92	ND<16	1048	32	17.9	NA			10.3	5.0	7.7	0.3	403.2	190.2	2.1	
indeno[1,2,3-cd]pyrene		1440	1441	1466	24.3	25.4	25.9	1449	1	25.2	3.3			20.3	4.6	14.2	2.8	280.9	236.3	0.1	
dibenz[a,h]anthracene		618	402	377	ND<16	ND<16	ND<16	466	29	ND<16	NA			5.54	2.80	no target		332.3	152.2	1.9	
benzo[ghi]perylene		1793	1665	1601	41.0	37.0	34.4	1686	6	37.4	8.8			31.2	6.0	22.0	2.2	212.2	196.1	0.4	
Laboratory: 21														Number by Category							
PAH in Mussel X														Category		z (25%)		z (s)		p (15%)	
														< 2		0		0		22	
														2 to 3		0		0		1	
														> 3		23		23		0	

Laboratory: 21
PAH in Mussel X

Reported Results		No. of Analytes	
Quantitative		23	89
Qualitative		0	0
Not Determined		3	12

Category		Number by Category	
z (25%)	z (s)	p (15%)	
<2	0	0	22
2 to 3	0	0	1
>3	23	23	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a						
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry	Mussel X						
		12/21/00	1/12/01	S1	S2	S3	12/20/00	1/12/01	1/12/01	lab mean	lab	%RSD	lab mean	lab	%RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (15%)
alpha-HCH			ND<0.40	ND<0.40	ND<0.40	ND<6.4	ND<6.4	ND<6.4	NA	ND<0.400	NA	ND<6.4	NA		<3		no target				
hexachlorobenzene		7.98	8.87	8.78	ND<6.4	ND<6.4	ND<6.4	ND<6.4	8.54	5.69	ND<6.4	NA	ND<6.4	NA		<3		no target			
gamma-HCH		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA	ND<6.4	NA		<3		no target			
beta-HCH		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA	ND<6.4	NA		<3		no target			
heptachlor		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA	ND<6.4	NA		<3		no target			
aldrin		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA	ND<6.4	NA		<3		no target			
heptachlor epoxide		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA	ND<6.4	NA		<5		no target			
oxychlordane		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA	ND<6.4	NA							
trans-chlordane		37.1	38.3	35.3	12.8	11.1	17.5		36.9	4.1	13.8	24.0			11.6	2.8	16.6	1.7	8.7	5.7	0.3
2,4'-DDE		131	119	94.6	ND<6.4	ND<6.4	ND<6.4	ND<6.4	114.90	16.29	ND<6.4	NA			3.88	2.44	5.26	0.27	114.4	47.7	1.1
endosulfan I		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA			<5		no target				
cis-chlordane		31.4	31.8	31.0	16.2	20.5	23.6		31.4	1.3	20.1	18.7			11.54	1.99	17.2	2.8	6.9	6.4	0.1
trans-nonachlor		14.6	19.3	17.0	18.0	21.2	22.7		17.0	13.7	20.6	11.6			13.43	2.73	18.0	3.6	1.1	0.7	0.9
dieldrin		8.96	11.1	11.2	ND<6.4	7.20	9.21		10.4	12.2	8.20	17.33			7.27	1.76	6.20	1.30	1.7	1.2	0.8
4,4'-DDE		413	421	363	90.1	80.2	72.4		399	8	80.9	10.9			39.4	4.1	51.2	5.5	36.6	50.2	0.5
2,4'-DDD		323	372	264	27.1	22.4	19.9		320	17	23.1	16.0			13.9	0.0	13.7	2.8	88.0	51.4	1.1
endrin		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA			<5	0.00	no target				
endosulfan II		11.1	16.9	22.2	45.4	60.9	97.5		16.7	33.1	67.9	39.4			<15	0.00	no target				
4,4'-DDD		1780	2042	1389	100	76.4	70.4		1737	19	82.3	19.1			30.2	4.0	43.0	6.3	226.1	225.7	1.3
2,4'-DDT		75.0	21.2	18.0	ND<6.4	ND<6.4	ND<6.4	ND<6.4	38.1	84.0	ND<6.4	NA			8.45	1.78	8.50	1.90	14.0	17.5	5.6
cis-nonachlor		38.2	55.1	25.1	ND<6.4	10.06	ND<6.4	ND<6.4	39.5	38.1	10.06	NA			8.25	3.69	6.84	0.90	15.1	7.8	2.5
4,4'-DDT		1819	2020	1549	ND<6.4	7.36	ND<6.4	ND<6.4	1796	13	7.36	NA			4.37	1.03	3.91	0.59	1638.3	1169.7	0.9
mirex		1.55	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	1.55	NA	ND<6.4	NA			<5		no target				
endosulfan sulfate		ND<1.2	ND<1.2	ND<1.2	ND<6.4	ND<6.4	ND<6.4	ND<6.4	ND<1.24	NA	ND<6.4	NA			<4		no target				
chlorpyrifos		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			<2		no target				

Laboratory: 21
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	14	56
Qualitative	10	40
Not Determined	1	4

Category	Number by Category	z (25%)	z (s)	p (15%)
< 2	2	2	2	9
2 to 3	0	0	0	1
> 3	9	9	9	1

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory ^a										Material reference values				Performance scores ^a																																	
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X		SRM 1974a		Mussel X, ng/g dry		SRM 1974a, ng/g dry	Mussel X		p-score (15%)																																
		10/22/00 S1	10/22/00 S2	10/22/00 S3	10/22/00 S1	10/22/00 S2	10/22/00 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%) (s)																																	
PCB 8		21.6	22.1	21.2	5.68	5.81	4.98	21.6	1.9	5.49	8.13	4.46	0.96	5.82	1.20																																		
PCB 18		30.0	33.4	34.3	30.1	32.5	28.2	32.6	6.9	30.3	7.1	12.2	3.0	33.0	11.0	6.7	4.1	0.5																															
PCB 28		83.5	108	103	122	137	130	98.2	13.2	130	5	38.1	5.2	79.0	15.0	6.3	7.3	0.9																															
PCB 31		57.0	77.8	71.9	72.5	85.2	78.7	68.9	15.6	78.8	8.1	29.8	3.3	76.0	21.0	5.3	14.9	1.0																															
PCB 44		77.7	81.2	89.2	159	152	157	82.7	7.2	156	2	40.9	5.1	72.7	7.4	4.1	5.0	0.5																															
PCB 49		53.0	55.7	63.3	112	110	117	57.3	9.2	113	5	54.5	8.0	88.8	5.0	0.2	0.3	0.6																															
PCB 52		98.8	101	107	188	184	178	102	4	183	5	62.6	8.0	115	11	2.5	3.0	0.3																															
PCB 66		83.1	84.5	91.6	165	168	169	86.4	5.2	183	5	72.9	11.4	101	4	0.7	0.8	0.3																															
PCB 95		59.1	65.7	57.2	130	123	111	60.7	7.4	120	5	62.1	6.0	83.0	17.0	-0.1	-0.2	0.5																															
PCB 99		40.5	46.3	39.9	122	125	111	42.2	8.4	119	5	63.5	9.8	70.9	4.0	-1.3	-2.3	0.6																															
PCB 101		67.3	81.5	76.3	174	192	188	75.0	9.5	185	5	116	21	128	10	-1.4	-1.1	0.6																															
PCB 105		32.5	34.7	33.2	84.6	93.7	87.8	33.5	3.3	88.7	5.2	39.4	3.3	53.0	3.4	-0.6	-1.1	0.2																															
PCB 118		67.5	77.4	67.7	200	217	196	70.9	8.0	204	5	116	14	131	4	-1.6	-1.8	0.5																															
PCB 128		12.8	10.7	11.7	30.7	24.8	26.2	11.7	9.1	27.2	11.4	19.0	2.8	22.0	3.4	-1.5	-1.5	0.6																															
PCB 138		96.5	82.7	87.2	234	198	191	88.8	7.9	208	11	117	11	134	10	-1.0	-1.6	0.5																															
PCB 149		67.9	65.2	68.6	127	116	117	67.2	2.7	120	5	68.6	8.0	87.6	2.3	-0.1	-0.2	0.2																															
PCB 153		62.6	76.3	81.1	161	192	187	73.3	13.0	180	9	133	16	145	8	-1.8	-2.0	0.9																															
PCB 156		9.71	10.2	10.8	16.3	17.6	17.0	10.2	5.2	17.0	3.8	7.43	1.71	7.43	0.99	1.5	2.0	0.3																															
PCB 170		24.7	27.1	26.6	3.25	3.56	3.37	26.1	4.8	3.39	4.59	3.48	0.83	5.50	1.10	26.1	23.0	0.3																															
PCB 180		67.8	70.3	72.0	22.0	23.3	21.3	70.0	3.0	22.2	4.6	12.1	2.0	17.1	3.8	19.1	20.9	0.2																															
PCB 187		31.9	30.7	34.3	43.0	41.6	43.1	32.3	5.6	42.6	2.0	30.0	2.8	34.0	2.3	0.3	0.5	0.4																															
PCB 194		15.5	17.1	16.3	1.05	1.10	0.945	16.3	4.9	1.03	7.5	<4		no target	0.0																																		
PCB 195		6.52	5.64	5.39	ND<0.64	ND<0.64	ND<0.64	5.85	10.15	ND<0.64	NA	<4		no target	0.0																																		
PCB 206		8.81	12.9	12.9	ND<0.64	ND<0.64	ND<0.64	11.5	20.4	ND<0.64	NA	<2		no target	0.0																																		
PCB 209		9.71	10.4	10.2	ND<1.28	ND<1.28	ND<1.28	10.1	3.6	ND<1.28	NA	<2		no target	0.0																																		
Laboratory: 21																																																	
PCBs in Mussel X																																																	
<table><tr><th colspan="2">Reported Results</th><th colspan="2">No. of Analyses</th><th colspan="2">%</th></tr><tr><td>Quantitative</td><td>24</td><td>96</td><td></td><td></td><td></td></tr><tr><td>Qualitative</td><td>1</td><td>4</td><td></td><td></td><td></td></tr><tr><td>Not Determined</td><td>0</td><td>9</td><td></td><td></td><td></td></tr></table>																		Reported Results		No. of Analyses		%		Quantitative	24	96				Qualitative	1	4				Not Determined	0	9											
Reported Results		No. of Analyses		%																																													
Quantitative	24	96																																															
Qualitative	1	4																																															
Not Determined	0	9																																															
<table><tr><th colspan="2">Category</th><th colspan="2">Number by Category</th><th colspan="2">z (s)</th><th colspan="2">p (15%)</th></tr><tr><td><2</td><td>13</td><td>10</td><td>20</td><td></td><td></td><td></td><td></td></tr><tr><td>2 to 3</td><td>1</td><td>3</td><td>0</td><td></td><td></td><td></td><td></td></tr><tr><td>>3</td><td>6</td><td>7</td><td>0</td><td></td><td></td><td></td><td></td></tr></table>																		Category		Number by Category		z (s)		p (15%)		<2	13	10	20					2 to 3	1	3	0					>3	6	7	0				
Category		Number by Category		z (s)		p (15%)																																											
<2	13	10	20																																														
2 to 3	1	3	0																																														
>3	6	7	0																																														
Water in Mussel X																																																	
Mussel X, %		SRM 1974a, %					Mussel X, %					SRM 1974a, %		Mussel X, %																																			
S1	S2	S3	S1	S2	S3		mean, %	%RSD				assigned	95% CL	target	95% CL	z (25%)	z (s)	p (15%)																															
67.7	67.7	67.7					67.7	0.0				88.8	0.0	88.6	0.1	-0.9	-3.7	0.0																															
Water																																																	

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00TIS10 - Mussel Tissue X

Laboratory No.: 22

Reporting Date: 3/20/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory														Material reference values				Performance scores ^a		
		Mussel X, ng/g dry						SRM 1974a, ng/g dry						Mussel X		Mussel X		p-score (15%)				
		27/01			27/01			27/01			27/01			lab mean		lab mean			z-score (25%)	z-score (s)		
		S1	S2	S3	S1	S2	S3	S1	S2	S3	lab mean ng/g dry	%RSD	lab mean ng/g dry	%RSD	target value ^b	95% CL						
naphthalene		21.6	23.0	20.9	19.0	18.9	17.5	21.8	4.8	18.5	4.5		32.1	8.6	23.5	4.4	-1.3	-1.1	0.3			
2-methylnaphthalene		12.3	11.4	11.5	9.01	9.26	9.38	11.8	4.0	9.21	2.06		11.7	4.8	10.2	1.5	0.0	0.0	0.3			
1-methylnaphthalene		5.65	5.40	5.47	4.17	4.32	4.34	5.50	2.33	4.28	2.12		8.95	7.19	5.30	2.20	-1.5	-0.6	0.2			
biphenyl		8.15	7.29	7.98	5.41	7.32	5.09	7.81	5.80	5.94	20.26		8.35	3.29	5.11	1.50	-0.3	-0.1	0.4			
2,6-dimethylnaphthalene		3.71	3.42	3.43	2.42	2.54	2.61	3.52	4.72	2.52	3.70		6.59	4.76	5.30	1.80	-1.9	-0.5	0.3			
acenaphthylene		2.86	3.07	2.71	2.99	3.42	3.47	2.88	6.31	3.29	8.03		5.58	2.38	5.25	1.50	-1.9	-1.0	0.4			
acenaphthene		2.73	3.22	2.90	2.12	2.64	2.16	2.95	8.51	2.31	12.48		3.63	1.43	3.15	1.00	-0.8	-0.4	0.6			
1,6,7-trimethylnaphthalene		3.99	3.98	3.96	3.61	3.65	3.62	3.98	0.35	3.62	0.50		4.73	2.16	6.60	2.00	-0.6	-0.4	0.0			
fluorene		4.79	4.86	4.88	4.06	4.20	3.73	4.84	0.95	4.00	6.04		5.07	0.60	5.72	0.91	-0.2	-0.4	0.1			
phenanthrene		23.5	24.6	24.5	17.4	17.5	17.4	24.2	2.6	17.4	0.3		24.8	2.5	22.2	2.4	-0.1	-0.2	0.2			
anthracene		4.15	4.52	4.20	4.18	4.44	4.23	4.29	4.66	4.28	3.28		6.47	2.22	6.10	1.70	-1.3	-0.8	0.3			
1-methylphenanthrene		8.89	10.0	8.89	8.77	9.97	9.61	9.26	6.91	9.45	6.47		12.1	3.4	10.5	4.8	-0.9	-0.6	0.5			
fluoranthene		195	196	118	173	180	179	169	26	177	2		168	15	164	9	0.0	0.1	1.8			
pyrene		200	187	204	162	169	168	197	5	166	2		175	17	152	7	0.5	0.9	0.3			
benzo[a]anthracene		51.9	54.1	54.1	33.6	35.8	34.5	53.4	2.4	34.6	3.3		44.5	4.8	32.5	4.7	0.8	1.2	0.2			
chrysene		130	134	135	94.6	99.8	98.4	133	2	97.6	2.7		52.3	ND	94.9	7.0	6.2	4.4	0.2			
triphenylene		Other	Other	Other	Other	Other	Other	Other	NA	Other	NA		39.4	ND	50.7	5.9						
benzo[b]fluoranthene		63.8	63.8	65.0	41.9	43.6	42.8	64.2	1.1	42.8	2.1		58.7	7.8	46.4	3.7	0.4	0.6	0.1			
benzo[k]fluoranthene		30.0	29.3	29.8	21.6	22.8	23.1	29.7	1.2	22.5	3.6		29.1	ND	20.5	1.7	0.1		0.1			
benzo[j]fluoranthene		31.0	30.3	30.8	20.1	21.1	20.8	30.7	1.1	20.7	2.5		31.2	7.5	20.2	0.8	-0.1	-0.1	0.1			
benzo[e]pyrene		106	109	111	80.5	85.4	85.2	109	2	83.7	3.3		91.6	9.3	84.0	1.9	0.8	1.3	0.2			
benzo[a]pyrene		29.1	27.3	25.6	21.1	21.6	20.1	27.3	6.3	20.9	3.7		23.0	4.8	15.6	0.7	0.7	0.6	0.4			
perylene		9.49	9.79	9.81	6.92	7.35	7.03	9.70	1.85	7.10	3.14		10.3	5.0	7.7	0.3	-0.2	-0.1	0.1			
indeno[1,2,3-cd]pyrene		19.7	21.6	21.2	13.6	14.7	14.7	20.8	4.7	14.3	4.5		20.3	4.6	14.2	2.8	0.1	0.1	0.3			
dibenz[a,h]anthracene		2.76	2.94	2.80	1.88	1.94	1.88	2.83	3.46	1.90	1.88		5.54	2.80	no target		-2.0	-0.9	0.2			
benzo[ghi]perylene		34.5	35.2	35.6	24.6	25.6	25.3	35.1	1.6	25.2	2.1		31.2	6.0	22.0	2.2	0.5	0.5	0.1			
Laboratory: 22																Number by Category						
PAH in Mussel X																Category	z (25%)	z (s)	p (15%)			
																<2	24	23	25			
																2 to 3	0	0	0			
																>3	1	1	0			

Laboratory: 22
PAH in Mussel X

Reported Results		No. of Analytes	
Quantitative	25	Quantitative	96
Qualitative	1	Qualitative	4
Not Determined	0	Not Determined	0

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

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a					
		Mussel X, ng/g dry					SRM 1974a, ng/g dry					Mussel X		SRM 1974a, ng/g dry		Mussel X				
		2/7/01	2/7/01	S 1	S 2	S 3	2/7/01	2/7/01	S 1	S 2	S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	z-score (25%)	z-score (s)
alpha-HCH	2.17	2.25	2.38	2.11	2.27	2.09	2.27	4.67	2.16	4.40										
hexachlorobenzene		<1	<1	<1	<1	<1	<1	NA	<1	NA										
gamma-HCH		<3	<3	<3	2.34	2.32	2.46	<3	NA	3.1										
beta-HCH		<1	<1	<1	<1	<1	<1	NA	<1	NA										
heptachlor		1.22	1.16	1.87	6.77	6.78	6.59	1.42	27.67	1.57										
aldrin		<1	<1	<1	<1	<1	<1	NA	<1	NA										
heptachlor epoxide		<1	<1	<1	2.18	2.27	2.18	<1	NA	2.4										
oxychlordane		3.99	4.26	4.35	4.84	5.03	4.67	4.20	4.43	3.76										
trans-chlordane		16.3	17.3	16.8	15.9	17.3	15.6	16.8	2.8	5.7										
2,4'-DDE		3.94	4.31	4.17	3.31	3.33	3.19	4.14	4.59	2.29										
endosulfan I		<1	<1	<1	<1	<1	<1	<1	NA	NA										
cis-chlordane		15.6	15.8	15.9	16.9	18.7	16.9	15.8	0.9	6.0										
trans-nonachlor		17.5	18.0	17.6	18.2	20.2	18.1	17.7	1.4	6.2										
dieldrin		8.07	8.41	8.15	7.82	8.48	7.90	8.21	2.17	4.44										
4,4'-DDE		42.9	47.3	44.9	36.5	40.8	41.4	45.0	5.0	6.8										
2,4'-DDD		13.9	14.2	14.2	15.5	17.2	15.7	14.1	1.1	5.9										
endrin		<1	<1	<1	<1	<1	<1	<1	NA	NA										
endosulfan II		<1	<1	<1	<1	<1	<1	<1	NA	NA										
4,4'-DDD		39.2	38.9	38.5	46.0	51.1	49.6	38.9	0.8	5.4										
2,4'-DDT		8.96	9.44	9.34	8.30	8.57	8.39	9.24	2.74	1.60										
cis-nonachlor		9.06	9.46	9.59	8.79	9.23	8.63	9.37	2.95	3.48										
4,4'-DDT		6.96	7.87	6.64	4.41	4.54	4.37	7.16	8.95	1.99										
mirex		<1	<1	<1	<1	<1	<1	<1	NA	NA										
endosulfan sulfate		<1	<1	<1	<1	<1	<1	<1	NA	NA										
chlorpyrifos		NA	NA	NA	NA	NA	NA	NA	NA	NA										

Laboratory: 22
Pesticides in Mussel X

Reported Results	No. of Analytes	%
Quantitative	14	56
Qualitative	10	40
Not Determined	1	4

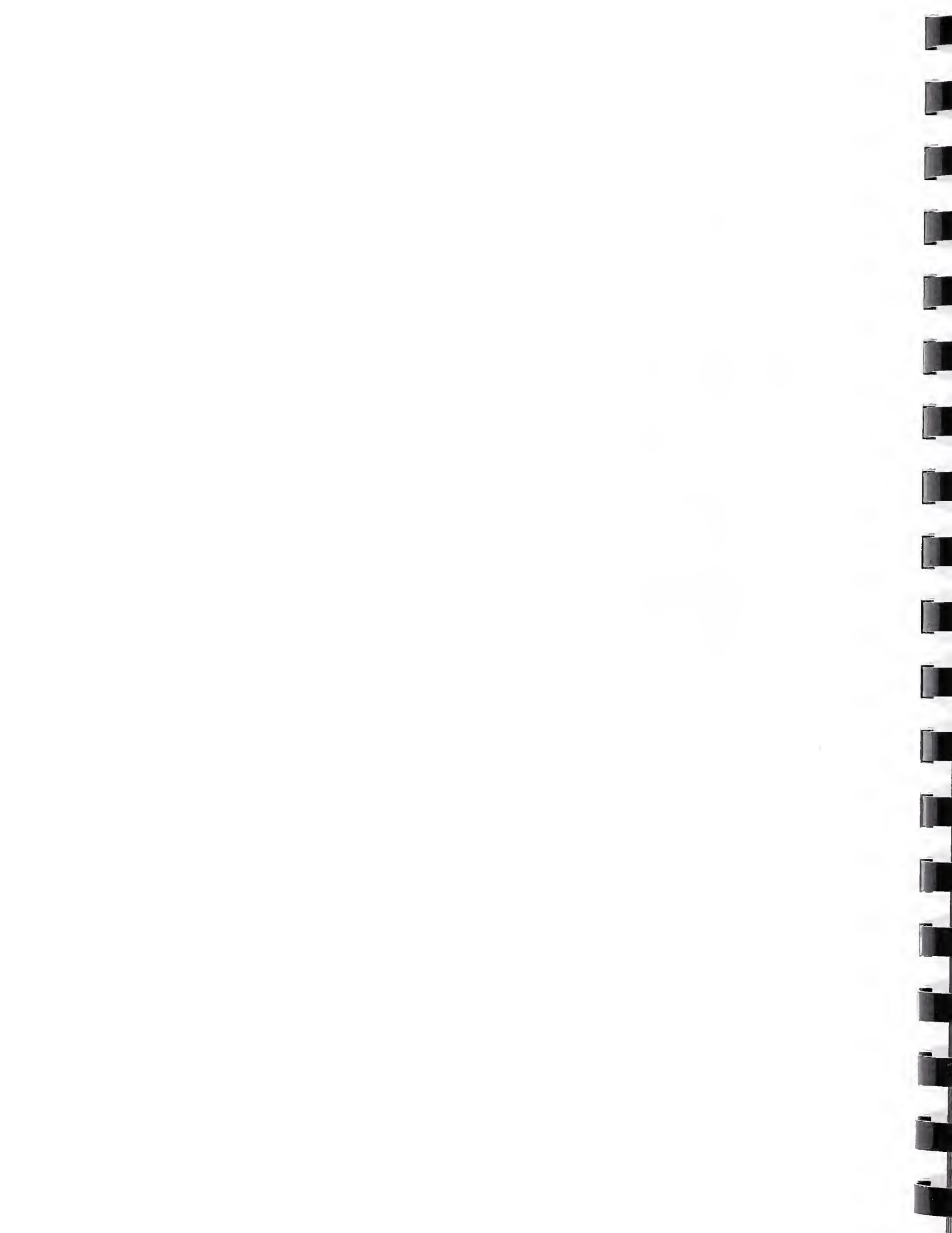
Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	10	11	11
2 to 3	1	0	0
> 3	0	0	0

^a z- and p-scores > 1 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		Mussel X, ng/g dry			SRM 1974a, ng/g dry			Mussel X			SRM 1974a, ng/g dry			Mussel X, ng/g dry		SRM 1974a, ng/g dry		Mussel X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01	S1	S2	27/01



Appendix D: Results by Laboratory, Sediment X

PAH	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a		
		Sediment X, ng/g dry						SRM 1944, ng/g dry						Sediment X, ng/gdry		SRM 1944, ng/g dry		Sediment X		
		4/20/01 S1	4/20/01 S2	4/20/01 S3	4/20/01 S3	4/20/01 S1	4/20/01 S2	4/20/01 S3	4/20/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
naphthalene		399	381	387	1402	1444	1468	1468	389	2	1438	2	418	43	1650	310	-0.3	-0.4	0.2	
2-methylnaphthalene		251	255	260	935	955	941	941	255	2	944	1	277	26	950	50	-0.3	-0.6	0.1	
1-methylnaphthalene		116	110	111	546	531	550	550	112	3	542	2	108	15	520	30	0.2	0.2	0.2	
biphenyl		102	100	101	294	287	281	281	101	1	287	2	87.2	18.0	320	70	0.6	0.4	0.1	
2,6-dimethylnaphthalene		105	111	102	612	621	622	622	106	4	618	1	175	29	755	156	-1.6	-1.5	0.3	
acenaphthylene		114	101	111	436	422	424	424	109	6	427	2	99.2	40.9	546	266	0.4	0.1	0.4	
acenaphthene		60.3	59.9	65.1	537	541	531	531	61.8	4.7	536	1	73.0	10.6	570	30	-0.6	-0.6	0.3	
1,6,7-trimethylnaphthalene		100	101	98.4	448	452	441	441	99.8	1.3	447	1	95.5	21.1	462	133	0.2	0.1	0.1	
fluorene		93.9	92.7	92.2	551	541	531	531	92.9	0.9	541	2	104	10	600	50	-0.4	-0.6	0.1	
phenanthrene		816	821	843	4990	5014	4978	4978	827	2	4994	0	867	82	5270	220	-0.2	-0.2	0.1	
anthracene		352	371	366	1747	1778	1779	1779	363	3	1768	1	317	50	1770	330	0.6	0.5	0.2	
1-methylphenanthrene		186	188	191	1651	1668	1669	1669	188	1	1663	1	173	25	1700	100	0.4	0.4	0.1	
fluoranthene		2411	2418	2444	8709	8881	8901	8901	2424	1	8830	1	2533	203	8920	320	-0.2	-0.3	0.0	
pyrene		2345	2344	2314	9793	9811	9758	9758	2334	1	9787	0	2477	247	9700	420	-0.2	-0.3	0.1	
benzo[a]anthracene		818	831	845	4758	4711	4764	4764	831	2	4744	1	880	99	4720	110	-0.2	-0.3	0.1	
chrysene		995	989	967	4702	4815	4788	4788	984	1	4768	1	864	328	4860	100	0.6	0.9	0.1	
triphenylene		366	378	381	978	999	958	958	375	2	978	2	<400	0	1040	270			0.1	
benzo[b]fluoranthene		1236	1195	1214	3513	3545	3544	3544	1215	2	3534	1	1220	158	3870	420	0.0	0.0	0.1	
benzo[k]fluoranthene		504	511	514	1985	2045	1933	1933	510	1	1988	3	503	83	2090	440	0.1	0.7	0.1	
benzo[j]fluoranthene		546	541	557	2217	2354	2259	2259	548	1	2277	3	666	157	2300	200	-0.7	-0.6	0.1	
benzo[e]pyrene		951	945	944	3250	3267	3278	3278	947	0	3265	0	1072	110	3280	110	-0.5	-0.6	0.0	
benzo[a]pyrene		833	844	841	4490	4417	4387	4387	839	1	4431	1	845	74	4300	130	0.0	0.0	0.0	
perylene		366	345	357	1151	1145	1172	1172	356	3	1156	1	366	45	1170	240	-0.1	-0.1	0.2	
indeno[1,2,3-cd]pyrene		908	881	887	2852	2864	2871	2871	892	2	2862	0	881	84	2780	100	0.0	0.1	0.1	
dibenz[a,h]anthracene		139	133	141	395	369	399	399	138	3	388	4	92.4	66.2	424	69	2.0	0.8	0.2	
benzo[ghi]perylene		949	916	924	2832	2865	2841	2841	930	2	2846	1	899	108	2840	100	0.1	0.2	0.1	

Laboratory: 1		Number by Category	
PAH in Sediment X		Category	p (15%)
		< 2	25
		2 to 3	0
		> 3	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SEDI0 - Marine Sediment X

Laboratory No.: 1

Reporting Date: 4/15/01

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
	Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Performance scores ^a		
	4/20/01	4/20/01	4/20/01	4/20/01	lab mean	lab	lab mean	lab	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)		
alpha-HCH	<2	<2	<2	1.95	<2	NA	1.89	<2	1.42	1.11	2.00	0.30					
hexachlorobenzene	4.93	5.01	5.11	6.05	5.02	1.80	6.10	0.75	5.47	1.04	6.03	0.35	-0.3	-0.3	0.1		
gamma-HCH	<2	<2	<2	<2	<2	NA	<2	NA	<4		no target						
beta-HCH	<2	<2	<2	<2	<2	NA	<2	NA	<2		no target						
heptachlor	<2	<2	<2	<2	<2	NA	<2	NA	<4		no target						
aldrin	<2	<2	<2	<2	<2	NA	<2	NA	<4		no target						
heptachlor epoxide	<2	<2	<2	<2	<2	NA	<2	NA	<6		no target						
oxychlordane	<2	<2	<2	<2	<2	NA	<2	NA	<6		no target						
trans-chlordane	22.2	21.7	21.4	7.16	21.8	1.9	7.53	4.32	23.4	3.6	no target		-0.3	-0.3	0.1		
2,4'-DDE	49.3	48.7	47.1	18.5	48.4	2.4	18.8	1.6	48.6	4.5	19.0	3.0	0.0	0.0	0.2		
endosulfan I	<2	<2	<2	<2	<2	NA	<2	NA	<3		no target						
cis-chlordane	19.8	18.8	18.9	15.7	19.2	2.9	16.0	2.4	18.1	3.0	16.5	0.8	0.2	0.2	0.2		
trans-nonachlor	11.3	11.2	11.0	8.85	11.2	1.4	8.79	1.45	11.2	1.3	8.20	0.51	0.0	0.0	0.1		
dieldrin	6.01	6.06	6.14	7.66	6.07	1.08	7.60	0.73	6.90	1.61	8.00	4.00	-0.5	-0.4	0.1		
4,4'-DDE	163	164	159	96.0	162	2	95.6	0.5	153	17	86.0	12.0	0.2	0.3	0.1		
2,4'-DDD	68.5	74.1	73.2	44.3	71.9	4.2	42.3	4.9	89.4	17.3	38.0	8.0	-0.8	-0.6	0.3		
endrin	<2	<2	<2	<2	<2	NA	<2	NA	<2		no target						
endosulfan II	<2	<2	<2	<2	<2	NA	<2	NA	<4		no target						
4,4'-DDD	227	245	255	124	242	6	122	2	291	37	108	16	-0.7	-0.8	0.4		
2,4'-DDT	7.81	8.88	8.34	4.98	8.34	6.41	5.04	1.29	11.4	2.5	no target		-1.1	-0.8	0.4		
cis-nonachlor	4.93	5.01	4.89	3.95	4.94	1.24	3.99	1.13	5.50	1.97	3.70	0.70	-0.4	-0.2	0.1		
4,4'-DDT	504	521	517	113	514	2	115	2	595	81	119	11	-0.5	-0.7	0.1		
mirex	<2	<2	<2	<2	<2	NA	<2	NA	<2		no target						
endosulfan sulfate	<2	<2	<2	<2	<2	NA	<2	NA	<2		no target						
chlorpyrifos	<2	<2	<2	<2	<2	NA	<2	NA	<3		no target						

Laboratory: 1

Pesticides In Sediment X

Reported Results	No. of Analytes	%
Quantitative	12	48
Qualitative	13	52
Not Determined	0	0

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	12	12	12
2 to 3	0	0	0
> 3	0	0	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

PCBs	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a																
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry	SRM 1944, ng/g dry	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)													
		4/2/01 S 1	4/2/01 S 2	4/2/01 S 3	4/2/01 S 1	4/2/01 S 2	4/2/01 S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)											
PCB 8	12.4	12.1	11.8	22.7	23.1	22.4	12.1	2.5	22.7	1.5	14.0	3.2	22.3	2.3	22.3	2.3	-0.5	-0.3	0.2												
PCB 18	29.3	30.4	30.1	50.1	52.1	51.4	29.9	1.9	51.2	2.0	29.6	5.1	51.0	2.6	51.0	2.6	0.0	0.0	0.1												
PCB 28	57.9	58.4	58.9	78.4	80.1	79.5	58.4	0.9	79.4	1.1	54.4	7.7	80.8	2.7	80.8	2.7	0.3	0.3	0.1												
PCB 31	42.5	42.9	45.7	76.5	77.9	78.1	43.7	4.0	77.5	1.1	46.2	9.0	78.7	1.6	78.7	1.6	-0.2	-0.2	0.3												
PCB 44	41.9	44.5	41.1	61.2	60.2	61.4	42.5	4.2	60.9	1.1	40.7	4.9	60.2	2.0	60.2	2.0	0.2	0.2	0.3												
PCB 49	34.5	34.1	34.1	52.4	52.3	53.6	34.2	0.7	52.8	1.4	37.7	5.8	53.0	1.7	53.0	1.7	-0.4	-0.4	0.0												
PCB 52	48.2	50.1	51.7	78.9	79.5	79.9	50.0	3.5	79.4	0.6	55.3	7.7	79.4	2.0	79.4	2.0	-0.4	-0.4	0.2												
PCB 66	46.5	47.8	47.8	72.6	76.5	74.1	47.4	1.6	79.4	2.6	49.1	6.9	71.9	4.3	71.9	4.3	-0.1	-0.1	0.1												
PCB 95	26.4	26.6	29.0	69.1	69.5	70.4	27.3	5.3	69.9	1.4	31.4	5.8	65.0	8.9	65.0	8.9	-0.5	-0.5	0.4												
PCB 99	25.4	25.9	26.1	35.3	36.4	37.4	25.8	1.4	36.4	2.9	24.5	4.6	37.5	2.4	37.5	2.4	0.2	0.2	0.1												
PCB 101	43.5	44.1	43.9	73.6	71.5	71.4	43.8	0.7	72.2	1.7	51.4	6.2	73.4	2.5	73.4	2.5	-0.6	-0.6	0.0												
PCB 105	20.0	18.8	18.1	25.7	24.6	25.4	19.0	5.1	25.2	2.3	15.8	2.1	24.5	1.1	24.5	1.1	0.8	0.8	0.3												
PCB 118	40.1	44.1	42.6	61.1	60.9	61.8	42.3	4.8	61.3	0.8	34.6	4.9	58.0	4.3	58.0	4.3	0.9	0.8	0.3												
PCB 128	9.04	9.11	8.88	8.34	8.55	8.45	9.01	1.31	8.45	1.24	6.98	1.11	8.47	0.28	8.47	0.28	1.2	1.0	0.1												
PCB 138	52.3	50.1	50.1	60.5	61.8	60.4	50.8	2.5	60.9	1.4	48.2	8.1	62.1	3.0	62.1	3.0	0.2	0.2	0.2												
PCB 149	41.7	44.0	42.5	50.1	49.8	51.2	42.7	2.7	50.4	1.5	38.8	5.6	49.7	1.2	49.7	1.2	0.4	0.5	0.2												
PCB 153	54.4	55.0	54.1	71.8	73.6	72.8	54.5	0.8	72.7	1.2	49.6	8.9	74.0	2.9	74.0	2.9	0.4	0.3	0.1												
PCB 156	7.07	6.89	6.94	6.23	6.66	6.45	6.97	1.33	6.45	3.34	6.30	2.42	6.52	0.66	6.52	0.66	0.4	0.2	0.1												
PCB 170	16.7	15.4	15.8	20.9	22.4	21.8	16.0	4.2	21.7	3.5	15.6	2.5	22.6	1.4	22.6	1.4	0.1	0.1	0.3												
PCB 180	33.6	35.4	34.8	43.6	43.4	43.0	34.6	2.6	43.3	0.7	30.5	4.5	44.3	1.2	44.3	1.2	0.5	0.5	0.2												
PCB 187	21.7	21.4	21.9	23.9	24.5	24.4	21.7	1.2	24.3	1.3	18.5	2.8	25.1	1.0	25.1	1.0	0.7	0.6	0.1												
PCB 194	9.92	9.68	9.88	13.3	13.0	12.7	9.83	1.31	13.0	2.3	7.87	1.12	11.2	1.4	11.2	1.4	1.0	1.2	0.1												
PCB 195	3.68	3.33	3.21	3.80	3.67	3.77	3.41	7.17	3.75	1.82	3.18	0.58	3.75	0.39	3.75	0.39	0.3	0.2	0.5												
PCB 206	7.84	7.65	7.61	9.01	9.22	9.14	7.70	1.60	9.12	1.16	6.05	1.17	9.21	0.51	9.21	0.51	1.1	0.8	0.1												
PCB 209	6.61	6.45	6.62	6.79	6.84	6.88	6.56	1.45	6.84	0.66	5.49	0.86	6.81	0.33	6.81	0.33	0.8	0.7	0.1												
Laboratory: 1 PCBs in Sediment X		Reported Results										No. of Analyses		%		Number by Category		Sediment X, %													
		Quantitative					Qualitative					Not Determined					Category		z (25%)		z (s)		p (15%)								
		25					0					0					< 2		25		25		25								
		0					0					0					2 to 3		0		0		0								
		0					0					0					> 3		0		0		0								
Water in Sediment X		Sediment X, %										Sediment X, %		SRM 1944, %		Sediment X, %		SRM 1944, %		Sediment X, %											
		S 1			S 2			S 3			S 1			S 2			S 3			assigned		target		95% CL		z (25%)		z (s)		p (15%)	
water		45.1			45.3			45.3			45.2			0.3						47.1		1.3				-0.2		-0.5		0.0	

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 2

Sample: QA00SED10 - Marine Sediment X

(data reported as if three figures were significant)

Reporting Date: 1/8/01

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a			
		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944		Sediment X, ng/g dry		assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)	
		1/000 S1	1/000 S2	1/000 S3	1/000 S1	1/000 S2	1/000 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD								
naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	418	43	1650	310					
2-methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	277	26	950	50					
1-methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	108	15	520	30					
biphenyl		NA	NA	NA	NA	NA	NA	NA	NA	NA	87.2	18.0	320	70					
2,6-dimethylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	175	29	755	156					
acenaphthylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	99.2	40.9	546	266					
acenaphthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	73.0	10.6	570	30					
1,6,7-trimethylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	95.5	21.1	462	133					
fluorene		NA	NA	NA	NA	NA	NA	NA	NA	NA	104	10	600	50					
phenanthrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	867	82	5270	220					
anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	317	50	1770	330					
1-methylphenanthrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	173	25	1700	100					
fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	2533	203	8920	320					
pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	2477	247	9700	420					
benzo[a]anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	880	99	4720	110					
chrysene		NA	NA	NA	NA	NA	NA	NA	NA	NA	864	328	4860	100					
triphenylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	<400	0	1040	270					
benzo[b]fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	1220	158	3870	420					
benzo[k]fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	503	83	2090	440					
benzo[j]fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	666	157	2300	200					
benzo[e]pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	1072	110	3280	110					
benzo[a]pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	845	74	4300	130					
perylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	366	45	1170	240					
indeno[1,2,3-cd]pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	881	84	2780	100					
dibenz[a,h]anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	92.4	66.2	424	69					
benzo[ghi]perylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	899	108	2840	100					
Laboratory: 2																Number by Category			
PAH in Sediment X												Category				z (25%) z (s) p (15%)			
												< 2				0 0 0			
												2 to 3				0 0 0			
												> 3				0 0 0			

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X			SRM 1944	Sediment X, ng/g dry		SRM 1944, ng/g dry	Sediment X		p-score (15%)
	9/20/00	10/5/00	10/16/00	9/20/00	10/5/00	10/16/00	lab mean	lab	%RSD	lab mean	lab	95% CL	target value ^b	z-score (25%)	z-score (s)	
alpha-HCH	<1.0	<1.0	<1.0	2.08	1.96	2.18	<1.0	NA	NA	2.07	5.31	1.42	2.00			
hexachlorobenzene	2.17	0.904	2.48	3.34	3.44	2.20	1.85	45.10	23.01	2.99	23.01	5.47	6.03	-2.6	-2.0	3.0
gamma-HCH	<1.0	<1.9	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<1.0	NA	<4	no target			
beta-HCH	0.929	<1.0	<1.0	<1.0	<1.0	<1.0	0.929	NA	NA	<1.0	NA	<2	no target			
heptachlor	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<1.0	NA	<4	no target			
aldrin	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<1.0	NA	<6	no target			
heptachlor epoxide	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<1.0	NA	<6	no target			
oxychlordane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<1.0	NA	<6	no target			
trans-chlordane	12.6	7.31	16.8	15.4	18.3	20.7	12.2	38.9	18.13	18.13	14.64	23.4	no target	-1.9	-2.0	2.6
2,4'-DDE	76.3	24.7	67.2	35.7	34.0	48.0	56.1	49.1	39.2	39.2	19.5	48.6	19.0	0.6	1.2	3.3
endosulfan I	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<1.0	NA	<3	no target			
cis-chlordane	12.4	3.12	14.5	12.1	10.9	15.0	10.0	60.5	12.7	12.7	16.6	18.1	16.5	-1.8	-1.5	4.0
trans-nonachlor	7.03	4.38	10.5	8.28	7.43	9.30	7.30	42.02	8.34	8.34	11.23	11.2	8.20	-1.4	-1.8	2.8
dieldrin	3.76	1.74	4.89	6.31	<1.3	7.48	3.46	46.08	6.90	6.90	12.00	6.90	8.00	-2.0	-1.5	3.1
4,4'-DDE	110	40.8	96.3	65.2	49.5	60.1	82.4	44.5	58.3	58.3	13.7	153	86.0	-1.8	-2.3	3.0
2,4'-DDD	63.2	28.7	67.0	37.4	37.9	40.2	53.0	39.8	38.5	38.5	3.9	89.4	38.0	-1.6	-1.3	2.7
endrin	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	NA	<2.0	NA	<2	no target			
endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4	no target			
4,4'-DDD	250	105	229	80.1	102	104	195	40	95.4	95.4	13.9	291	108	-1.3	-1.5	2.7
2,4'-DDT	7.36	3.18	9.29	3.33	8.53	3.83	6.61	47.25	54.85	5.23	54.85	11.4	no target	-1.7	-1.2	3.2
cis-nonachlor	2.62	2.60	3.19	3.72	3.98	4.07	2.80	11.95	3.92	3.92	4.63	5.50	3.70	-2.0	-1.1	0.8
4,4'-DDT	460	202	483	99.2	112	113	382	41	108	108	7	595	119	-1.4	-1.8	2.7
mirex	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<1.0	NA	<2	no target			
endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2	no target			
chlorpyrifos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3	no target			

Laboratory: 2

Pesticides in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		13		52	
Qualitative		9		36	
Not Determined		3		12	

Category		Number by Category	
z (25%)		p (15%)	
< 2		11	
2 to 3		1	
> 3		0	

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 2

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 1/8/01

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a			
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry	SRM 1944, ng/g dry		Sediment X		SRM 1944		
		S 1	S 2	S 3	S 1	S 2	S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%) (s)	p-score (15%)		
PCB 8											14.0	3.2	22.3	2.3					
PCB 18											29.6	5.1	51.0	2.6					
PCB 28											54.4	7.7	80.8	2.7					
PCB 31											46.2	9.0	78.7	1.6					
PCB 44											40.7	4.9	60.2	2.0					
PCB 49											37.7	5.8	53.0	1.7					
PCB 52											55.3	7.7	79.4	2.0					
PCB 66											49.1	6.9	71.9	4.3					
PCB 95											31.4	5.8	65.0	8.9					
PCB 99											24.5	4.6	37.5	2.4					
PCB 101											51.4	6.2	73.4	2.5					
PCB 105											15.8	2.1	24.5	1.1					
PCB 118											34.6	4.9	58.0	4.3					
PCB 128											6.98	1.11	8.47	0.28					
PCB 138											48.2	8.1	62.1	3.0					
PCB 149											38.8	5.6	49.7	1.2					
PCB 153											49.6	8.9	74.0	2.9					
PCB 156											6.30	2.42	6.52	0.66					
PCB 170											15.6	2.5	22.6	1.4					
PCB 180											30.5	4.5	44.3	1.2					
PCB 187											18.5	2.8	25.1	1.0					
PCB 194											7.87	1.12	11.2	1.4					
PCB 195											3.18	0.58	3.75	0.39					
PCB 206											6.05	1.17	9.21	0.51					
PCB 209											5.49	0.86	6.81	0.33					
Laboratory: 2												Number by Category							
PCBs In Sediment X												Category	z (25%)	z (s)	p (15%)				
												< 2	0	0	0				
												2 to 3	0	0	0				
												> 3	0	0	0				
Water In Sediment X												Sediment X, %				Sediment X, %			
Sediment X, %						SRM 1944, %						Sediment X, %		SRM 1944, %		Sediment X, %		SRM 1944, %	
S 1	S 2	S 3	S 1	S 2	S 3	mean, %	%RSD	mean, %	%RSD	assigned	95% CL	target	95% CL	z (25%)	z (s)	p (15%)			
						NA	NA	NA	NA	47.1	1.3								
water																			

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PAH		Analysis date	Data as submitted by laboratory						Material reference values					Performance scores ^a				
			Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944			Sediment X		p-score (15%)		
									lab mean	lab %RSD	lab mean	lab %RSD	assigned value	95% CL	target value ^b		z-score (25%)	z-score (s)
			S 1	S 2	S 3	S 1	S 2	S 3	ng/g dry	%RSD	ng/g dry	%RSD	ng/g dry	95% CL	ng/g dry		95% CL	(s)
naphthalene								NA	NA	NA	NA	NA	418	43	1650	310		
2-methylnaphthalene								NA	NA	NA	NA	NA	277	26	950	50		
1-methylnaphthalene								NA	NA	NA	NA	NA	108	15	520	30		
biphenyl								NA	NA	NA	NA	NA	87.2	18.0	320	70		
2,6-dimethylnaphthalene								NA	NA	NA	NA	NA	175	29	755	156		
acenaphthylene								NA	NA	NA	NA	NA	99.2	40.9	546	266		
acenaphthene								NA	NA	NA	NA	NA	73.0	10.6	570	30		
1,6,7-trimethylnaphthalene								NA	NA	NA	NA	NA	95.5	21.1	462	133		
fluorene								NA	NA	NA	NA	NA	104	10	600	50		
phenanthrene								NA	NA	NA	NA	NA	867	82	5270	220		
anthracene								NA	NA	NA	NA	NA	317	50	1770	330		
1-methylphenanthrene								NA	NA	NA	NA	NA	173	25	1700	100		
fluoranthene								NA	NA	NA	NA	NA	2533	203	8920	320		
pyrene								NA	NA	NA	NA	NA	2477	247	9700	420		
benzo[a]anthracene								NA	NA	NA	NA	NA	880	99	4720	110		
chrysene								NA	NA	NA	NA	NA	864	328	4860	100		
triphenylene								NA	NA	NA	NA	NA	<400	0	1040	270		
benzo[b]fluoranthene								NA	NA	NA	NA	NA	1220	158	3870	420		
benzo[k]fluoranthene								NA	NA	NA	NA	NA	503	83	2090	440		
benzo[j]fluoranthene								NA	NA	NA	NA	NA	666	157	2300	200		
benzo[e]pyrene								NA	NA	NA	NA	NA	1072	110	3280	110		
benzo[a]pyrene								NA	NA	NA	NA	NA	845	74	4300	130		
perylene								NA	NA	NA	NA	NA	366	45	1170	240		
indeno[1,2,3-cd]pyrene								NA	NA	NA	NA	NA	881	84	2780	100		
dibenz[a,h]anthracene								NA	NA	NA	NA	NA	92.4	66.2	424	69		
benzo[ghi]perylene								NA	NA	NA	NA	NA	899	108	2840	100		
Laboratory: 3			Reported Results		No. of Analytes		%		Category		Number by Category							
PAH in Sediment X			Quantitative		0		0		< 2		z (25%)							
			Qualitative		0		0		2 to 3		z (s)							
			Not Determined		26		100		> 3		p (15%)							
												0						
												0						
												0						

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 3

Reporting Date: 1/29/01

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a					
		Sediment X, ng/g dry				SRM 1944, ng/g dry				Sediment X				SRM 1944, ng/g dry				Sediment X					
		12/5/00	1/14/01	S 1	S 2	1/14/01	12/5/00	S 1	S 2	1/14/01	NA	S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
alpha-HCH																							
hexachlorobenzene																							
gamma-HCH																							
beta-HCH																							
heptachlor																							
aldrin																							
heptachlor epoxide																							
oxychlorodane																							
trans-chlordane																							
2,4'-DDE																							
endosulfan I																							
cis-chlordane																							
trans-nonachlor																							
dieldrin																							
4,4'-DDE																							
2,4'-DDD																							
endrin																							
endosulfan II																							
4,4'-DDD																							
2,4'-DDT																							
cis-nonachlor																							
4,4'-DDT																							
mirex																							
endosulfan sulfate																							
chlorpyrifos																							

Laboratory: 3
Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	12	48
Qualitative	12	48
Not Determined	1	4

Category	Number by Category	z (s)	p (15%)
< 2	11	12	12
2 to 3	1	0	0
> 3	0	0	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

PCBs	Analysis date	Data as submitted by laboratory														Material reference values				Performance scores ^a																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Sediment X, ng/g dry				SRM 1944, ng/g dry				Sediment X		SRM 1944		lab	lab	lab mean	lab	%RSD	ng/g dry	95% CL	target value ^b	95% CL	Sediment X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200										12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200	12200

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 4a

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 1/30/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a			
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X			SRM 1944			Sediment X, ng/gdry		target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)	
		10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00	10/4/00						
		S 1	S 2	S 3	S 1	S 2	S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL						
naphthalene		367	386	361	1380	1510	1460	371	4	1450	5		418	43	1650	310	-0.5	-0.6	0.2		
2-methylnaphthalene		264	255	251	796	834	829	257	3	820	3		277	26	950	50	-0.3	-0.5	0.2		
1-methylnaphthalene		116	112	110	460	493	472	113	3	475	4		108	15	520	30	0.2	0.2	0.2		
biphenyl		53.8	46.5	52.1	137	129	128	50.8	7.5	131	4		87.2	18.0	320	70	-1.7	-1.0	0.5		
2,6-dimethylnaphthalene		157	137	152	553	519	513	149	7	528	4		175	29	755	156	-0.6	-0.6	0.5		
acenaphthylene		144	130	95	722	671	458	123	20	617	23		99.2	40.9	546	266	1.0	0.3	1.4		
acenaphthene		49.3	45.0	46.4	283	289	288	46.9	4.7	287	1		73.0	10.6	570	30	-1.4	-1.4	0.3		
1,6,7-trimethylnaphthalene		81.7	75.6	62.0	328	283	352	73.1	13.8	321	11		95.5	21.1	462	133	-0.9	-0.8	0.9		
fluorene		77.9	71.9	72.0	431	433	417	73.9	4.6	427	2		104	10	600	50	-1.2	-1.5	0.3		
phenanthrene		773	779	741	5350	5770	5670	764	3	5597	4		867	82	5270	220	-0.5	-0.6	0.2		
anthracene		296	317	270	1300	1340	1270	294	8	1303	3		317	50	1770	330	-0.3	-0.2	0.5		
1-methylphenanthrene		158	170	143	1250	1370	1490	157	9	1370	9		173	25	1700	100	-0.4	-0.4	0.6		
fluoranthene		2850	2910	2630	9550	11100	10100	2797	5	10250	8		2533	203	8920	320	0.4	0.7	0.4		
pyrene		2680	2660	2490	10200	11700	10600	2610	4	10833	7		2477	247	9700	420	0.2	0.3	0.3		
benz[a]anthracene		809	801	779	4580	4680	4620	796	2	4627	1		880	99	4720	110	-0.4	-0.5	0.1		
chrysene		1300	1250	1200	5670	5890	5590	1250	4	5717	3		864	328	4860	100	1.8	2.9	0.3		
triphenylene		Other	Other	Other	Other	Other	Other	Other	NA	Other	NA		<400	0	1040	270					
benzo[b]fluoranthene		1210	1160	1150	3550	3560	3650	1173	3	3587	2		1220	158	3870	420	-0.2	-0.2	0.2		
benzo[k]fluoranthene		Other	Other	Other	Other	Other	Other	Other	NA	Other	NA		503	83	2090	440					
benzo[f]fluoranthene		985	911	969	3410	3620	3790	955	4	3607	5		666	157	2300	200	1.7	1.4	0.3		
benzo[e]pyrene		877	832	894	2660	2720	2910	868	4	2763	5		1072	110	3280	110	-0.8	-1.0	0.2		
benzo[a]pyrene		564	577	638	3160	3230	3390	593	7	3260	4		845	74	4300	130	-1.2	-1.8	0.4		
perylene		264	249	283	811	807	907	265	6	842	7		366	45	1170	240	-1.1	-1.2	0.4		
indeno[1,2,3-cd]pyrene		704	618	732	2440	2390	2600	685	9	2477	4		881	84	2780	100	-0.9	-1.2	0.6		
dibenz[a,h]anthracene		176	157	187	671	651	702	173	9	675	4		92.4	66.2	424	69	3.5	1.5	0.6		
benzo[ghi]perylene		639	560	682	2160	2040	2300	627	10	2167	6		899	108	2840	100	-1.2	-1.5	0.7		
Laboratory: 4a														Number by Category							
PAH in Sediment X														Category				z (25%) z (s) p (15%)			
														<2				23 23 24			
														2 to 3				0 1 0			
														> 3				1 0 0			

Laboratory: 4a

PAH in Sediment X

Reported Results	No. of Analytes	%
Quantitative	24	92
Qualitative	2	8
Not Determined	0	0

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

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a		
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X			SRM 1944			Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		p-score (15%)
	S1	S2	S3	S1	S2	S3	lab mean ng/g dry	%RSD	lab	lab mean ng/g dry	%RSD	lab	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	
alpha-HCH	<0.205	<0.205	<0.205	<0.205	<0.205	<0.205	<0.205	NA	NA	<0.205	NA	NA	1.42	1.11	2.00	0.30			
hexachlorobenzene	5.01	4.94	4.37	6.22	6.55	4.37	4.77	7.35	5.71	20.57	NA	20.57	5.47	1.04	6.03	0.35	-0.5	-0.4	0.5
gamma-HCH	<0.253	<0.253	<0.253	<0.253	<0.253	<0.253	<0.253	NA	<0.253	NA	<0.253	NA	<4		no target				
beta-HCH	<0.477	<0.477	<0.477	<0.477	<0.477	<0.477	<0.477	NA	<0.477	NA	<0.477	NA	<2		no target				
heptachlor	<0.449	<0.449	<0.449	<0.449	<0.449	<0.449	<0.449	NA	<0.449	NA	<0.449	NA	<4		no target				
aldrin	<0.366	<0.366	<0.366	3.34	9.82	<0.366	<0.366	NA	6.58	69.6	NA	69.6	<4		no target				
heptachlor epoxide	<0.359	<0.359	<0.359	<0.359	<0.359	<0.359	<0.359	NA	<0.359	NA	<0.359	NA	<6		no target				
oxychlorodane	<0.352	<0.352	<0.352	<0.352	<0.352	<0.352	<0.352	NA	<0.352	NA	<0.352	NA	<6		no target				
trans-chlordane	24.5	21.4	19.1	66.4	66.4	<0.386	21.7	12.5	66.4	NA	<0.386	NA	23.4	3.6	no target		-0.3	-0.3	0.8
2,4'-DDE	66.8	53.8	39.9	<0.857	<0.857	<0.857	53.5	25.1	<0.857	NA	<0.857	NA	48.6	4.5	19.0	3.0	0.4	0.8	1.7
endosulfan I	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	NA	<0.51	NA	<0.51	NA	<3		no target				
cis-chlordane	20.6	17.2	16.3	16.0	16.3	19.1	18.0	12.6	17.1	10.0			18.1	3.0	16.5	0.8	0.0	0.0	0.8
trans-nonachlor	12.4	9.83	9.04	10.3	13.4	10.2	10.4	16.9	11.3	16.1			11.2	1.3	8.20	0.51	-0.3	-0.3	1.1
dieldrin	19.7	21.4	12.9	25.4	24.0	24.8	18.0	25.0	24.7	2.8			6.90	1.61	8.00	4.00	6.4	4.9	1.7
4,4'-DDE	107	81.8	186	73.0	83.2	66.5	125	44	74.2	11.3			153	17	86.0	12.0	-0.7	-0.9	2.9
2,4'-DDD	158	151	111	66.6	22.6	61.3	140	18	50.2	47.9			89.4	17.3	38.0	8.0	2.3	1.8	1.2
endrin	<0.245	<0.245	<0.245	<0.245	<0.245	<0.245	<0.245	NA	<0.245	NA	<0.245	NA	<2		no target				
endosulfan II	27.6	25.0	15.9	52.2	<0.381	43.1	22.8	26.9	47.7	13.5			<4		no target				
4,4'-DDD	247	193	348	123	91.8	117	263	30	111	15			291	37	108	16	-0.4	-0.4	2.0
2,4'-DDT	14.4	11.9	11.2	<0.821	<0.821	<0.821	12.5	13.5	<0.821	NA			11.4	2.5	no target		0.4	0.3	0.9
cis-nonachlor	9.99	8.63	6.74	8.48	<0.194	7.81	8.45	19.31	8.15	5.82			5.50	1.97	3.70	0.70	2.1	1.3	1.3
4,4'-DDT	524	376	711	229	156	187	537	31	191	19			595	81	119	11	-0.4	-0.5	2.1
mirex	1.20	1.08	<0.296	<0.296	<0.296	<0.296	1.14	7.44	<0.296	NA			<2		no target				
endosulfan sulfate	26.0	14.0	13.5	16.9	14.5	18.2	17.8	39.7	16.5	11.4			<2		no target				
chlorpyrifos	<0.658	<0.658	<0.658	<0.658	<0.658	<0.658	<0.658	NA	<0.658	NA	<0.658	NA	<3		no target				

Laboratory: 4a

Pesticides in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		15		60	
Qualitative		10		40	
Not Determined		0		0	

Category		Number by Category		z (s)		p (15%)	
<2		9		11		10	
2 to 3		2		0		2	
>3		1		1		0	

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 4a

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 1/30/01

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory															Material reference values				Performance scores*			
	Sediment X, ng/g dry						SRM 1944, ng/g dry			Sediment X			SRM 1944			Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X			
	8/12/00	8/12/00	8/12/00	S1	S2	S3	8/12/00	8/12/00	8/12/00	lab mean	lab	%RSD	lab mean	lab	%RSD	assigned value	95% CL	target value ^a	95% CL	z-score (25%)	z-score (s)	p-score (15%)	
Analysis date																							
	PCB 8	20.2	23.9	13.4	25.3	25.0	27.6			19.2	27.8		26.0	5.5		14.0	3.2	22.3	2.3	1.5	0.9	1.9	
	PCB 18	26.1	26.6	22.2	63.0	53.2	65.1			25.0	9.6		60.4	10.5		29.6	5.1	51.0	2.6	-0.6	-0.5	0.6	
	PCB 28	61.4	54.2	49.1	75.4	76.2	79.7			54.9	11.3		77.1	3.0		54.4	7.7	80.8	2.7	0.0	0.0	0.8	
	PCB 31									NA	NA		NA	NA		46.2	9.0	78.7	1.6				
	PCB 44	41.7	36.3	41.6	60.3	52.7	59.8			39.9	7.7		57.6	7.4		40.7	4.9	60.2	2.0	-0.1	-0.1	0.5	
	PCB 49	37.8	33.5	31.5	46.2	51.7	50.6			34.3	9.4		49.5	5.9		37.7	5.8	53.0	1.7	-0.4	-0.4	0.6	
	PCB 52	55.7	47.6	45.9	65.5	66.3	68.7			49.7	10.5		66.8	2.5		55.3	7.7	79.4	2.0	-0.4	-0.4	0.7	
	PCB 66	47.1	35.4	40.2	47.6	58.6	53.2			40.9	14.4		53.1	10.4		49.1	6.9	71.9	4.3	-0.7	-0.6	1.0	
	PCB 95									NA	NA		NA	NA		31.4	5.8	65.0	8.9				
	PCB 99									NA	NA		NA	NA		24.5	4.6	37.5	2.4				
	PCB 101	46.7	31.3	44.5	53.6	63.6	58.3			40.8	20.4		58.5	8.6		51.4	6.2	73.4	2.5	-0.8	-0.9	1.4	
	PCB 105	14.8	10.0	14.6	24.9	24.1	25.5			13.1	20.8		24.8	2.8		15.8	2.1	24.5	1.1	-0.7	-0.7	1.4	
	PCB 118	40.8	30.3	36.4	56.9	54.9	56.5			35.8	14.7		56.1	1.9		34.6	4.9	58.0	4.3	0.1	0.1	1.0	
	PCB 128	4.58	2.99	7.19	18.1	11.3	9.26			4.92	43.10		12.9	35.9		6.98	1.11	8.47	0.28	-1.2	-1.0	2.9	
	PCB 138	35.3	29.5	38.0	75.3	73.9	60.6			34.3	12.7		69.4	11.6		48.2	8.1	62.1	3.0	-1.2	-0.9	0.8	
	PCB 149									NA	NA		NA	NA		38.8	5.6	49.7	1.2				
	PCB 153	57.2	39.3	51.5	79.6	63.0	82.5			49.3	18.5		75.0	14.0		49.6	8.9	74.0	2.9	0.0	0.0	1.2	
	PCB 156									NA	NA		NA	NA		6.30	2.42	6.52	0.66				
	PCB 170	13.9	9.6	16.1	23.8	14.3	29.6			13.2	25.1		65.5	102.7		15.6	2.5	22.6	1.4	-0.6	-0.5	1.7	
	PCB 180	13.4	8.1	27.9	44.7	44.7	43.9			16.5	62.2		44.3	1.3		30.5	4.5	44.3	1.2	-1.8	-1.6	4.1	
	PCB 187	14.9	9.5	19.9	26.8	29.2	26.9			14.8	35.1		27.6	4.9		18.5	2.8	25.1	1.0	-0.8	-0.7	2.3	
	PCB 194									NA	NA		NA	NA		7.87	1.12	11.2	1.4				
	PCB 195	1.63	1.13	5.43	12.9	3.62	13.5			2.73	86.14		10.0	55.4		3.18	0.58	3.75	0.39	-0.6	-0.4	5.7	
	PCB 206	1.51	0.953	8.02	17.5	9.34	18.5			3.49	112.45		15.1	33.2		6.05	1.17	9.21	0.51	-1.7	-1.2	7.5	
	PCB 209	0.881	0.711	5.61	10.4	9.19	8.74			2.40	115.83		9.44	9.09		5.49	0.86	6.81	0.33	-2.3	-1.9	7.7	
	Laboratory: 4a																						
	PCBs in Sediment X																						
	Reported Results										No. of Analytes		Category		Number by Category								
	Quantitative										19		<2		z (25%)								
	Qualitative										0		2 to 3		z (s)								
	Not Determined										6		>3		p (15%)								
	Water in Sediment X																						
	Sediment X, %			SRM 1944, %			Sediment X, %			SRM 1944, %			Sediment X, %			SRM 1944, %							
	S1	S2	S3	S1	S2	S3	mean, %	%RSD	mean, %	%RSD	assigned	95% CL	target	95% CL	z (25%)	z (s)	p (15%)						
	45.1	47.0	45.5				45.9	2.2	45.9	2.2	47.1	1.3			-0.1	-0.3	0.1						
	water																						

*z- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 4b

Reporting Date: 1/30/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a			
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X			
		1231/00 S 1	1231/00 S 2	1231/00 S 3	1231/00 S 1	1231/00 S 2	1231/00 S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	SRM 1944 %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)	
naphthalene		379	396	415	1250	0	0	397	5	1250	NA	418	43	1650	310	-0.2	-0.3	0.3	
2-methylnaphthalene		263	275	284	745	0	0	274	4	745	NA	277	26	950	50	0.0	-0.1	0.3	
1-methylnaphthalene		119	122	127	432	0	0	123	3	432	NA	108	15	520	30	0.5	0.6	0.2	
biphenyl		108	109	113	230	0	0	110	2	230	NA	87.2	18.0	320	70	1.0	0.7	0.2	
2,6-dimethylnaphthalene		214	218	218	677	0	0	217	1	677	NA	175	29	755	156	0.9	0.9	0.1	
acenaphthylene		302	300	308	1180	0	0	303	1	1180	NA	99.2	40.9	546	266	8.2	2.7	0.1	
acenaphthene		82.2	82.0	82.2	458	0	0	82.1	0	458	NA	73.0	10.6	570	30	0.5	0.5	0.0	
1,6,7-trimethylnaphthalene		0.0	0.0	0.0	0	0	0	NA	NA	NA	NA	95.5	21.1	462	133				
fluorene		84.0	88.0	92.0	452	0	0	88.0	4.5	452	NA	104	10	600	50	-0.6	-0.8	0.3	
phenanthrene		794	780	775	5140	0	0	783	1	5140	NA	867	82	5270	220	-0.4	-0.5	0.1	
anthracene		396	393	407	1460	0	0	399	2	1460	NA	317	50	1770	330	1.0	0.8	0.1	
1-methylphenanthrene		145	135	125	1150	0	0	135	7	1150	NA	173	25	1700	100	-0.9	-0.9	0.5	
fluoranthene		2550	2470	2540	7020	0	0	2520	2	7020	NA	2533	203	8920	320	0.0	0.0	0.1	
pyrene		2420	2330	2420	7550	0	0	2390	2	7550	NA	2477	247	9700	420	-0.1	-0.2	0.1	
benz[a]anthracene		849	844	841	4210	0	0	845	0	4210	NA	880	99	4720	110	-0.2	-0.2	0.0	
chrysene		1400	1380	1380	5370	0	0	1387	1	5370	NA	864	328	4860	100	2.4	4.0	0.1	
triphenylene		0	0	0	0	0	0	NA	NA	NA	NA	<400	0	1040	270				
benzo[b]fluoranthene		1230	1190	1200	3280	0	0	1207	2	3280	NA	1220	158	3870	420	0.0	-0.1	0.1	
benzo[k]fluoranthene		0	0	0	0	0	0	NA	NA	NA	NA	503	83	2090	440				
benzo[j]fluoranthene		1100	1160	1150	3550	0	0	1137	3	3550	NA	666	157	2300	200	2.8	2.3	0.2	
benzo[e]pyrene		1240	1300	1280	3300	0	0	1273	2	3300	NA	1072	110	3280	110	0.8	1.0	0.2	
benzo[a]pyrene		893	904	911	3970	0	0	903	1	3970	NA	845	74	4300	130	0.3	0.4	0.1	
perylene		355	362	372	896	0	0	363	2	896	NA	366	45	1170	240	0.0	0.0	0.2	
indeno[1,2,3-cd]pyrene		861	859	876	2560	0	0	865	1	2560	NA	881	84	2780	100	-0.1	-0.1	0.1	
dibenz[a,h]anthracene		209	217	222	670	0	0	216	3	670	NA	92.4	66.2	424	69	5.4	2.3	0.2	
benzo[ghi]perylene		971	985	979	2770	0	0	978	1	2770	NA	899	108	2840	100	0.4	0.4	0.0	
Laboratory: 4b												Number by Category							
PAH in Sediment X												Category		z (25%)		z (s)		p (15%)	
												<2		19		19		23	
												2 to 3		2		3		0	
												>3		2		1		0	

Laboratory: 4b

PAH in Sediment X

Reported Results	No. of Analytes	%
Quantitative	23	89
Qualitative	0	0
Not Determined	3	12

Category	Number by Category		
	z (25%)	z (s)	p (15%)
	< 2	19	23
2 to 3	2	3	0
> 3	2	1	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 4b

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 1/30/01

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES	Analysis date	Data as submitted by laboratory														Material reference values				Performance scores ^a								
		Sediment X, ng/g dry						SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry			SRM 1944, ng/g dry		Performance scores ^a								
		1/0/00		1/0/00		1/0/00		1/0/00		1/0/00		lab mean ng/g dry		%RSD		lab mean ng/g dry		%RSD		assigned value		target value ^b		95% CL		Performance scores ^a		
		S 1	S 2	S 3	S 1	S 2	S 3	S 1	S 2	S 3	S 1	S 2	S 3	lab mean ng/g dry	%RSD	lab mean ng/g dry	%RSD	assigned value	target value ^b	95% CL	z-score (25%)	p-score (15%)						
alpha-HCH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	1.42	1.11	2.00	0.30						
hexachlorobenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	5.47	1.04	6.03	0.35						
gamma-HCH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<4		no target							
beta-HCH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<2		no target							
heptachlor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<4		no target							
aldrin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<4		no target							
heptachlor epoxide	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<6		no target							
oxychlorodane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<6		no target							
trans-chlordane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	23.4	3.6	no target							
2,4'-DDE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	48.6	4.5	19.0	3.0						
endosulfan I	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<3		no target							
cis-chlordane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	18.1	3.0	16.5	0.8						
trans-nonachlor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	11.2	1.3	8.20	0.51						
dieldrin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	6.90	1.61	8.00	4.00						
4,4'-DDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	153	17	86.0	12.0						
2,4'-DDD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	89.4	17.3	38.0	8.0						
endrin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<2		no target							
endosulfan II	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<4		no target							
4,4'-DDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	291	37	108	16						
2,4'-DDT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	11.4	2.5	no target							
cis-nonachlor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	5.50	1.97	3.70	0.70						
4,4'-DDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	595	81	119	11						
imirex	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<2		no target							
endosulfan sulfate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<2		no target							
chlorpyrifos	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	NA	NA	<3		no target							

Laboratory: 4b

Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	0	0
Qualitative	0	0
Not Determined	25	100

Category	z (25%)	z (s)	p (15%)
<2	0	0	0
2 to 3	0	0	0
>3	0	0	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00SEDI0 - Marine Sediment X

Laboratory No.: 4b
Reporting Date: 1/30/01

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X		
		1/000 S1	1/000 S2	1/000 S3	1/000 S1	1/000 S2	1/000 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
PCB 8	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	14.0	3.2	22.3	2.3				
PCB 18		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	29.6	5.1	51.0	2.6				
PCB 28		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	54.4	7.7	80.8	2.7				
PCB 31		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	46.2	9.0	78.7	1.6				
PCB 44		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	40.7	4.9	60.2	2.0				
PCB 49		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	37.7	5.8	53.0	1.7				
PCB 52		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	55.3	7.7	79.4	2.0				
PCB 66		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	49.1	6.9	71.9	4.3				
PCB 95		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	31.4	5.8	65.0	8.9				
PCB 99		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	24.5	4.6	37.5	2.4				
PCB 101		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	51.4	6.2	73.4	2.5				
PCB 105		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	15.8	2.1	24.5	1.1				
PCB 118		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	34.6	4.9	58.0	4.3				
PCB 128		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	6.98	1.11	8.47	0.28				
PCB 138		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	48.2	8.1	62.1	3.0				
PCB 149		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	38.8	5.6	49.7	1.2				
PCB 153		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	49.6	8.9	74.0	2.9				
PCB 156		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	6.30	2.42	6.52	0.66				
PCB 170		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	15.6	2.5	22.6	1.4				
PCB 180		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	30.5	4.5	44.3	1.2				
PCB 187		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	18.5	2.8	25.1	1.0				
PCB 194		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	7.87	1.12	11.2	1.4				
PCB 195		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	3.18	0.58	3.75	0.39				
PCB 206		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	6.05	1.17	9.21	0.51				
PCB 209		0.0	0.0	0.0	0.0	0.0	NA	NA	NA	NA	5.49	0.86	6.81	0.33				
Laboratory: 4b PCBs in Sediment X												Category		Number by Category				
												< 2		z (25%)				
												2 to 3		z (s)				
												> 3		p (15%)				

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 6

Reporting Date: 1/30/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X		
		11/3/00 S 1	11/3/00 S 2	11/3/00 S 3	11/3/00 S 1	11/3/00 S 2	11/3/00 S 3	lab mean ng/g dry	%RSD	lab ng/g dry	%RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
naphthalene	527	599	227	1650	1660	1640	451	44	1650	1	418	43	1650	310	0.3	0.4	2.9	
2-methylnaphthalene	252	313	105	844	855	874	223	48	858	2	277	26	950	50	-0.8	-1.4	3.2	
1-methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	108	15	520	30				
biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87.2	18.0	320	70				
2,6-dimethylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	175	29	755	156				
acenaphthylene	298	415	141	1350	1390	1490	285	48	1410	5	99.2	40.9	546	266	7.5	2.4	3.2	
acenaphthene	<38.0	55.0	<38.0	502	539	526	55.0	NA	522	4	73.0	10.6	570	30	-1.0	-1.0		
1,6,7-trimethylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	95.5	21.1	462	133				
fluorene	104	208	38.6	807	778	886	117	73	824	7	104	10	600	50	0.5	0.6	4.9	
phenanthrene	867	1030	370	5180	4690	5050	756	45	4973	5	867	82	5270	220	-0.5	-0.7	3.0	
anthracene	429	586	184	1680	1640	1800	400	51	1707	5	317	50	1770	330	1.0	0.8	3.4	
1-methylphenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	173	25	1700	100				
fluoranthene	2230	2750	932	6280	5200	5940	1971	48	5807	10	2533	203	8920	320	-0.9	-1.5	3.2	
pyrene	2010	2560	900	8350	8860	8680	1823	46	8630	3	2477	247	9700	420	-1.1	-1.3	3.1	
benz[a]anthracene	637	833	292	3410	3520	3520	587	47	3483	2	880	99	4720	110	-1.3	-1.6	3.1	
chrysene	1070	1340	466	4390	4230	4430	959	47	4350	2	864	328	4860	100	0.4	0.7	3.1	
triphenylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<400	0	1040	270				
benzo[b]fluoranthene	958	1260	425	3320	3220	3190	881	48	3243	2	1220	158	3870	420	-1.1	-1.4	3.2	
benzo[k]fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	503	83	2090	440				
benzo[j]fluoranthene	884	1010	362	2420	2090	2700	752	46	2403	13	666	157	2300	200	0.5	0.4	3.0	
benzo[e]pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1072	110	3280	110				
benzo[a]pyrene	608	830	279	2920	2800	2950	572	48	2890	3	845	74	4300	130	-1.3	-1.9	3.2	
perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	366	45	1170	240				
indeno[1,2,3-cd]pyrene	608	667	<56.0	2230	2030	1730	638	7	1997	13	881	84	2780	100	-1.1	-1.5	0.4	
dibenz[a,h]anthracene	<62.0	206	<62.0	569	680	647	206	NA	632	9	92.4	66.2	424	69	4.9	2.1		
benzo[ghi]perylene	641	684	183	1970	1790	1650	503	55	1803	9	899	108	2840	100	-1.8	-2.1	3.7	
Laboratory: 6																		
PAH in Sediment X							Reported Results	No. of Analytes	%				Category		z (25%)	z (s)	p (15%)	
							Quantitative	17	65				<2		15	14	1	
							Quantitative	0	0				2 to 3		0	3	3	
							Not Determined	9	35				> 3		2	0	11	

Laboratory: 6

PAH in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		17	65		
Qualitative		0	0		
Not Determined		9	35		

Category		Number by Category		z (s)		p (15%)	
< 2		15	14			1	
2 to 3		0	3			3	
> 3		2	0			11	

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a					
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X			SRM 1944			Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X					
		10/24/00	10/24/00	11/15/00	S 1	S 2	S 3	10/24/00	10/24/00	11/15/00	lab mean	lab	%RSD	lab mean	lab	%RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
alpha-HCH		DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
hexachlorobenzene		DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
gamma-HCH		DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
beta-HCH		DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
heptachlor		DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
aldrin		DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
heptachlor epoxide		DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
oxychlordane		DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
trans-chlordane		DL	54.1	DL	40.2	54.7	10.4	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	
2,4'-DDE		27.2	49.2	21.8	DL	31.9	DL	DL	32.7	44.3	31.9	NA	48.6	4.5	19.0	3.0	23.4	3.6	no target	no target	-1.3	-2.5	3.0
endosulfan I		DL	DL	DL	18.2	DL	DL	DL	DL	NA	18.20	NA	<3		no target		<3		no target				
cis-chlordane		DL	19.7	10.2	29.0	22.6	23.1	DL	15.0	44.9	24.9	14.3	18.1	3.0	16.5	0.8	11.2	3.0	16.5	0.8	-0.7	-0.6	3.0
trans-nonachlor		DL	14.5	17.4	DL	10.4	5.28	DL	16.0	12.9	7.84	46.18	6.90	1.61	8.00	4.00	11.2	1.3	8.20	0.51	1.7	2.2	0.9
dieldrin		DL	DL	DL	36.9	DL	DL	DL	DL	NA	36.90	NA	6.90	1.61	8.00	4.00	6.90	1.61	8.00	4.00			
4,4'-DDE		107	191	78	93.6	70.9	44.3	DL	125	47	69.6	35.5	153	17	86.0	12.0	153	17	86.0	12.0	-0.7	-0.9	3.1
2,4'-DDD		103	187	77.8	83.8	102	57.0	DL	123	47	80.9	28.0	89.4	17.3	38.0	8.0	89.4	17.3	38.0	8.0	1.5	1.2	3.1
endrin		DL	DL	DL	57.9	DL	DL	DL	DL	NA	57.90	NA	<2		no target		<2		no target				
endosulfan II		DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	<4		no target		<4		no target				
4,4'-DDD		228	378	162	157	104	55	DL	256	43	105	49	291	37	108	16	291	37	108	16	-0.5	-0.5	2.9
2,4'-DDT		8.75	12.6	7.10	56.4	DL	DL	DL	9.48	29.76	56.4	NA	11.4	2.5	no target		11.4	2.5	no target		-0.7	-0.5	2.0
cis-nonachlor		DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	5.50	1.97	3.70	0.70	5.50	1.97	3.70	0.70			
4,4'-DDT		572	1022	438	335	443	242	DL	677	45	340	30	595	81	119	11	595	81	119	11	0.6	0.7	3.0
mirex		DL	DL	DL	40.2	DL	DL	DL	DL	NA	40.2	NA	<2		no target		<2		no target				
endosulfan sulfate		DL	DL	DL	66.7	4.11	DL	DL	DL	NA	35.4	125.0	<2		no target		<2		no target				
chlorpyrifos		DL	DL	DL	DL	DL	DL	DL	DL	NA	DL	NA	<3		no target		<3		no target				

Laboratory: 6
Pesticides in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		8		32	
Qualitative		17		68	
Not Determined		0		0	

Category		Number by Category	
z (25%)		z (s)	
< 2		8	
2 to 3		0	
> 3		0	

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a			
		Sediment X, ng/g dry						SRM 1944, ng/g dry			Sediment X			SRM 1944			Sediment X, %		Sediment X		
		10/24/00		10/24/00		10/24/00		10/24/00		10/24/00		10/24/00		10/24/00		10/24/00		10/24/00		10/24/00	
		S1	S2	S3	S1	S2	S3	S1	S2	S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	z-score (25%)	z-score (s)	p-score (15%)
PCB 8	9.65	DL	7.59	DL	25.9	15.8	8.62	16.90	20.9	34.3	34.3	14.0	3.2	22.3	2.3	-1.5	-0.9	1.1			
PCB 18	26.9	37.2	20.4	DL	30.1	35.3	28.2	30.1	32.7	11.2	11.2	29.6	5.1	51.0	2.6	-0.2	-0.1	2.0			
PCB 28	39.2	59.7	27.9	73.3	93.6	47.0	42.3	38.1	71.3	32.8	32.8	54.4	7.7	80.8	2.7	-0.9	-0.9	2.5			
PCB 31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46.2	9.0	78.7	1.6						
PCB 44	30.9	47.2	22.5	73.2	73.1	35.5	33.5	37.5	60.6	35.9	35.9	40.7	4.9	60.2	2.0	-0.7	-0.8	2.5			
PCB 49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.7	5.8	53.0	1.7						
PCB 52	39.7	63.9	31.0	74.2	91.2	47.8	44.9	38.0	71.1	30.8	30.8	55.3	7.7	79.4	2.0	-0.8	-0.7	2.5			
PCB 66	34.8	45.3	23.7	DL	76.8	35.0	34.6	31.2	55.9	52.9	52.9	49.1	6.9	71.9	4.3	-1.2	-1.1	2.1			
PCB 95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.4	5.8	65.0	8.9						
PCB 99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.5	4.6	37.5	2.4						
PCB 101	35.5	57.1	24.4	44.9	90.3	36.8	39.0	42.6	57.3	50.3	50.3	51.4	6.2	73.4	2.5	-1.0	-1.0	2.8			
PCB 105	14.7	23.4	9.11	DL	35.9	17.7	15.7	45.8	26.8	48.0	48.0	15.8	2.1	24.5	1.1	0.0	0.0	3.1			
PCB 118	19.2	30.0	12.7	73.2	45.0	24.3	20.6	42.4	47.5	51.7	51.7	34.6	4.9	58.0	4.3	-1.6	-1.4	2.8			
PCB 128	5.80	9.44	4.58	19.0	13.5	7.13	6.61	38.27	13.2	45.0	45.0	6.98	1.11	8.47	0.28	-0.2	-0.2	2.6			
PCB 138	381	745	255	242	242	153	460	55	212	24	24	48.2	8.1	62.1	3.0	34.2	27.0	3.7			
PCB 149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38.8	5.6	49.7	1.2						
PCB 153	33.1	52.1	20.4	48.8	81.3	35.4	35.2	45.3	55.2	42.8	42.8	49.6	8.9	74.0	2.9	-1.2	-0.8	3.0			
PCB 156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.30	2.42	6.52	0.66						
PCB 170	6.95	11.4	DL	10.1	13.4	10.4	9.18	34.30	11.3	16.1	16.1	15.6	2.5	22.6	1.4	-1.7	-1.4	2.3			
PCB 180	13.5	21.9	6.49	DL	26.0	15.8	14.0	55.3	20.9	34.5	34.5	30.5	4.5	44.3	1.2	-2.2	-1.9	3.7			
PCB 187	8.45	15.9	6.48	12.9	16.5	10.6	10.3	48.3	13.3	22.3	22.3	18.5	2.8	25.1	1.0	-1.8	-1.6	3.2			
PCB 194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.87	1.12	11.2	1.4						
PCB 195	1.58	4.08	DL	DL	2.75	1.47	2.83	62.47	2.11	42.90	42.90	3.18	0.58	3.75	0.39	-0.4	-0.3	4.2			
PCB 206	2.51	4.32	5.30	DL	4.65	2.77	4.04	35.01	3.71	35.83	35.83	6.05	1.17	9.21	0.51	-1.3	-1.0	2.3			
PCB 209	DL	1.34	DL	DL	DL	1.27	1.34	NA	1.27	NA	NA	5.49	0.86	6.81	0.33	-3.0	-2.6				
Laboratory: 6		Reported Results												No. of Analytes		%		Number by Category			
PCBs in Sediment X		Quantitative												18		72		Category			
		Qualitative												0		0		< 2			
		Not Determined												7		28		2 to 3			
																		> 3			
Water In Sediment X		Sediment X, %			SRM 1944, %			Sediment X, %			SRM 1944, %			Sediment X, %			Sediment X, %				
		S1 S2 S3			S1 S2 S3			mean, %			mean, %			assigned			target				
		45.7 46.6 45.9			45.7 46.6 45.9			46.1 1.0			46.1 1.0			47.1 1.3			95% CL				
														z (25%)			z (s)				
														-0.1 -0.3			p (15%)				
														0.1			0.1				

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Performance scores ^a		
		S 1	S 2	S 3	S 1	S 2	S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	target value ^b	95% CL	assigned value	95% CL	z-score (25%)	z-score (s)	p-score (15%)
naphthalene		483	506	510	1620	1740	1780	500	3	1713	5	1650	310	418	43	0.8	1.1	0.2
2-methylnaphthalene		347	384	391	1300	1020	1090	374	6	1137	13	950	50	277	26	1.4	2.5	0.4
1-methylnaphthalene		143	152	165	666	587	531	153	7	595	11	520	30	108	15	1.7	1.8	0.5
biphenyl		116	138	153	338	225	291	136	14	285	20	320	70	87.2	18.0	2.2	1.4	0.9
2,6-dimethylnaphthalene		235	233	269	1060	901	894	246	8	952	10	755	156	175	29	1.6	1.5	0.5
acenaphthylene		13.0	12.9	17.4	180	185	167	14.4	17.8	177	5	546	266	99.2	40.9	-3.4	-1.1	1.2
acenaphthene		77.0	82.0	94.7	536	468	481	84.6	10.8	495	7	570	30	73.0	10.6	0.6	0.6	0.7
1,6,7-trimethylnaphthalene		85.8	75.9	119	459	524	416	93.6	24.1	466	12	462	133	95.5	21.1	-0.1	-0.1	1.6
fluorene		87.4	85.1	110	631	735	655	94.2	14.6	674	8	600	50	104	10	-0.4	-0.5	1.0
phenanthrene		780	825	1150	6230	6020	6290	918	22	6180	2	5270	220	867	82	0.2	0.3	1.5
anthracene		225	259	262	1240	1240	1160	249	8	1213	4	1770	330	317	50	-0.9	-0.7	0.6
1-methylphenanthrene		200	181	239	1440	1780	1810	207	14	1677	12	1700	100	173	25	0.8	0.8	1.0
fluoranthene		2060	2030	2350	9610	9430	9040	2147	8	9360	3	8920	320	2533	203	-0.6	-1.0	0.5
pyrene		1900	1990	2300	10600	12000	12900	2063	10	11833	10	9700	420	2477	247	-0.7	-0.8	0.7
benz[a]anthracene		758	771	909	4510	4470	4210	813	10	4397	4	4720	110	880	99	-0.3	-0.4	0.7
chrysene		Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	NA	Other (1)	NA	4860	100	864	328			
triphenylene		Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	Other (1)	NA	Other (1)	NA	1040	270	<400	0	0.0	0.0	0.7
benzo[b]fluoranthene		1060	1270	1300	3880	3860	3850	1210	11	3863	1	3870	420	1220	158			
benzo[k]fluoranthene		Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	NA	Other (2)	NA	2090	440	503	83			
benzo[j]fluoranthene		Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	Other (2)	NA	Other (2)	NA	2300	200	666	157			
benzof[e]pyrene		1060	945	1090	3120	3380	3030	1032	7	3177	6	3280	110	1072	110	-0.2	-0.2	0.5
benzo[a]pyrene		774	794	899	3690	4040	3390	822	8	3707	9	4300	130	845	74	-0.1	-0.2	0.5
perylene		298	321	380	1100	1000	1180	333	13	1093	8	1170	240	366	45	-0.4	-0.4	0.8
indeno[1,2,3-cd]pyrene		705	732	833	1910	2300	1540	757	9	1917	20	2780	100	881	84	-0.6	-0.8	0.6
dibenz[a,h]anthracene		146	126	172	668	604	654	148	16	642	5	424	69	92.4	66.2	2.4	1.0	1.0
benz[ghi]perylene		795	719	952	2390	1860	1610	822	14	1953	20	2840	100	899	108	-0.3	-0.4	1.0

Laboratory: 7

PAH in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		22		85	
Qualitative		4		15	
Not Determined		0		0	

Category		Number by Category		z (s)		p (15%)	
< 2		19		21		22	
2 to 3		2		1		0	
> 3		1		0		0	

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 7

Reporting Date: 1/24/00

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory														Material reference values				Performance scores ^a		
	Sediment X, ng/g dry						SRM 1944, ng/g dry				Sediment X		SRM 1944, ng/g dry		Sediment X		p-score (15%)				
	9/11/00	9/18/00	9/20/00	S1	S2	S3	9/11/00	9/18/00	9/20/00	lab mean	lab %RSD	lab mean	lab %RSD	assigned value	95% CL	target value ^b		z-score (25%)	z-score (s)		
PESTICIDES	alpha-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.42	1.11	2.00	0.30				
	hexachlorobenzene	1.28	1.71	1.56	0.329	<0.06	0.407	1.52	14.39	0.368	14.988	5.47	1.04	6.03	0.35			-2.9	-2.2	1.0	
	gamma-HCH	<0.08	<0.08	<0.08	0.162	0.128	0.142	<0.08	NA	0.144	11.867	<4		no target		no target					
	beta-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target		no target					
	heptachlor	1.32	1.36	1.65	<0.04	<0.04	<0.04	1.44	12.48	<0.04	NA	<4		no target		no target					
	aldrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	<0.01	NA	NA	<4		no target		no target				
	heptachlor epoxide	<0.1	<0.1	<0.1	0.449	0.398	<0.1	<0.1	NA	0.424	8.515	<6		no target		no target					
	oxychlorodane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<6		no target		no target				
	trans-chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.4	3.6	no target		no target				
	2,4'-DDE	19.1	29.1	20.0	3.86	8.45	<0.06	22.7	24.3	6.16	52.73	48.6	4.5	19.0	3.0			-2.1	-4.1	1.6	
	endosulfan I	<0.1	<0.1	<0.1	0.530	0.222	0.377	<0.1	NA	0.376	40.921	<3		no target		no target					
	cis-chlordane	0.193	0.149	0.274	1.24	1.25	1.65	0.205	30.880	1.38	16.95	18.1	3.0	16.5	0.8			-4.0	-3.3	2.1	
	trans-nonachlor	3.18	4.27	4.38	3.83	4.49	3.90	3.94	16.82	4.07	8.90	11.2	1.3	8.20	0.51			-2.6	-3.3	1.1	
	dieldrin	<0.2	<0.2	0.212	1.63	1.27	1.45	0.212	NA	1.45	12.41	6.90	1.61	8.00	4.00			-3.9	-3.0		
	4,4'-DDE	51.1	73.6	55.4	30.1	33.3	<0.03	60.0	NA	31.7	7.1	153	17	86.0	12.0			-2.4	-3.0	1.0	
2,4'-DDD	2.72	2.80	3.56	6.57	6.97	14.1	3.03	15.32	9.21	45.98	89.4	17.3	38.0	8.0			-3.9	-3.0			
endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target		no target					
endosulfan II	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	NA	<4		no target		no target					
4,4'-DDD	9.11	9.54	11.1	19.0	20.6	<0.2	9.92	10.56	19.8	5.7	291	37	108	16			-3.9	-4.4	0.7		
2,4'-DDT	5.48	6.93	6.55	<0.1	<0.1	<0.1	6.32	11.90	<0.1	NA	11.4	2.5	no target				-1.8	-1.3	0.8		
cis-nonachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.50	1.97	3.70	0.70							
4,4'-DDT	272	366	280	30.4	35.1	31.8	306	17	32.4	7.4	595	81	119	11			-1.9	-2.4	1.1		
mirex	<0.2	<0.2	0.706	1.00	1.19	<0.2	0.706	NA	1.09	12.4	<2		no target								
endosulfan sulfate	<0.1	0.23	<0.1	<0.1	<0.1	<0.1	0.232	NA	<0.1	NA	<2		no target								
chlorpyrifos	<0.1	0.122	0.144	0.158	0.306	0.120	0.133	11.697	0.195	50.482	<3		no target								

Laboratory: 7

Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	14	56
Qualitative	5	20
Not Determined	6	24

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	2	1	7
2 to 3	4	5	1
> 3	4	4	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

PCBs	Data as submitted by laboratory														Material reference values				Performance scores*		
	Sediment X, ng/g dry						Sediment X		SRM 1944, ng/g dry		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X						
	9/11/00 S1	9/11/00 S2	9/11/00 S3	9/11/00 S1	9/11/00 S2	9/11/00 S3	lab ng/g dry	lab %RSD	lab ng/g dry	lab %RSD	assigned value	95% CL	target value ^a	95% CL	z-score (25%)	p-score (15%)					
Analysis date																					
PCB 8	1.52	5.22	6.35	11.4	9.46	13.4	4.4	57.9	11.4	17.3	14.0	3.2	22.3	2.3	-2.8	-1.7	3.9				
PCB 18	12.9	14.5	15.3	<0.2	<0.2	19.6	14.2	8.6	19.6	NA	29.6	5.1	51.0	2.6	-2.1	-1.5	0.6				
PCB 28	40.8	21.7	25.1	31.9	32.4	35.6	29.2	34.9	33.3	6.0	54.4	7.7	80.8	2.7	-1.9	-1.8	2.3				
PCB 31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46.2	9.0	78.7	1.6							
PCB 44	1.85	33.9	36.1	48.1	48.0	50.1	24.0	80.0	48.7	2.4	40.7	4.9	60.2	2.0	-1.6	-1.8	5.3				
PCB 49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.7	5.8	53.0	1.7							
PCB 52	<0.07	35.6	23.1	43.4	41.8	39.2	29.4	30.1	41.5	5.1	55.3	7.7	79.4	2.0	-1.9	-1.7	2.0				
PCB 66	<0.06	38.9	41.1	64.8	64.5	68.4	40.0	3.9	65.9	8.3	49.1	6.9	71.9	4.3	-0.7	-0.7	0.3				
PCB 95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.4	5.8	65.0	8.9							
PCB 99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.5	4.6	37.5	2.4							
PCB 101	<0.1	36.6	32.1	56.7	50.8	59.2	34.4	9.3	55.6	7.8	51.4	6.2	73.4	2.5	-1.3	-1.4	0.6				
PCB 105	7.92	10.8	9.72	16.9	20.4	19.4	9.48	15.35	18.9	9.5	15.8	2.1	24.5	1.1	-1.6	-1.6	1.0				
PCB 118	17.8	22.7	21.5	32.4	37.4	37.7	20.7	12.4	35.8	8.3	34.6	4.9	58.0	4.3	-1.6	-1.4	0.8				
PCB 128	3.94	4.70	5.54	8.70	7.71	9.06	4.73	16.93	8.49	8.23	6.98	1.11	8.47	0.28	-1.3	-1.1	1.1				
PCB 138	29.3	34.7	41.1	24.9	28.8	28.6	35.0	16.9	27.4	6.0	48.2	8.1	62.1	3.0	-1.1	-0.9	1.1				
PCB 149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38.8	5.6	49.7	1.2							
PCB 153	17.0	21.3	21.2	30.3	35.4	35.6	19.8	12.4	33.8	8.9	49.6	8.9	74.0	2.9	-2.4	-1.7	0.8				
PCB 156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.30	2.42	6.52	0.66							
PCB 170	7.51	9.24	11.0	17.0	17.1	18.1	9.25	18.87	17.4	3.5	15.6	2.5	22.6	1.4	-1.6	-1.4	1.3				
PCB 180	16.6	20.5	21.7	32.6	35.8	37.8	19.6	13.6	35.4	7.4	30.5	4.5	44.3	1.2	-1.4	-1.2	0.9				
PCB 187	5.78	7.41	7.30	10.6	12.9	12.5	6.83	13.34	12.0	10.2	18.5	2.8	25.1	1.0	-2.5	-2.3	0.9				
PCB 194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.87	1.12	11.2	1.4							
PCB 195	1.27	1.56	1.83	2.57	2.87	2.88	1.55	18.03	2.77	6.35	3.18	0.58	3.75	0.39	-2.0	-1.6	1.2				
PCB 206	2.95	3.62	3.74	6.07	7.38	7.00	3.44	12.39	6.82	9.89	6.05	1.17	9.21	0.51	-1.7	-1.2	0.8				
PCB 209	2.91	2.67	2.40	4.71	5.67	5.60	2.66	9.59	5.33	10.05	5.49	0.86	6.81	0.33	-2.1	-1.8	0.6				
Laboratory: 7															Number by Category						
PCBs In Sediment X															Category	z (25%)	p (15%)				
															<2	12	17	14			
															2 to 3	5	1	2			
															>3	0	0	2			
Water In Sediment X															Sediment X, %						
	Sediment X, %						Sediment X, %		SRM 1944, %		Sediment X, %		SRM 1944, %		Sediment X, %						
	S1	S2	S3	S1	S2	S3	mean, %	%RSD	mean, %	%RSD	assigned	95% CL	target	95% CL	z (25%)	p (15%)					
water	45.7	45.3	45.9				45.6	0.7			47.1	1.3			-0.1	-0.4	0.0				

^az- and p-scores > | are bolded.^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 8

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 1/19/01

(data reported as if three figures were significant)

PAH

PAH	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a		
		Sediment X, ng/g dry			SRM 1941a, ng/g dry			Sediment X		SRM 1941a		Sediment X		SRM 1941a, ng/g dry		Sediment X		p-score (15%)		
		01/08/01 S 1	01/08/01 S 2	01/08/01 S 3	01/08/01 S 1	01/08/01 S 2	01/08/01 S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)			
naphthalene		116	98.6	107	411	354	383	107	8	383	7		418	43	1010	140	-3.0	-4.1	0.5	
2-methylnaphthalene		94.7	68.4	61.3	65.5	50.9	49.2	74.8	23.5	55.2	16.2		277	26			-2.9	-5.2	1.6	
1-methylnaphthalene		50.6	35.9	31.8	32.5	26.0	25.0	39.4	25.1	27.8	14.6		108	15			-2.5	-2.8	1.7	
biphenyl		54.2	36.4	32.6	33.7	29.8	27.9	41.1	28.1	30.5	9.7		87.2	18.0	175	18	-2.1	-1.3	1.9	
2,6-dimethylnaphthalene		94.1	72.3	79.9	57.5	51.5	47.0	82.1	13.5	52.0	10.1		175	29			-2.1	-2.0	0.9	
acenaphthylene		111	95.0	101	42.7	34.2	37.7	102	8	38.2	11.2		99.2	40.9	37	14	0.1	0.0	0.5	
acenaphthene		53.0	58.9	47.7	23.1	22.4	19.5	53.2	10.5	21.7	8.8		73.0	10.6	41	10	-1.1	-1.1	0.7	
1,6,7-trimethylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		95.5	21.1						
fluorene		157	103	80.3	72.8	75.9	63.8	113	35	70.8	8.9		104	10	97.3	8.6	0.4	0.5	2.3	
phenanthrene		1710	1240	1050	581	459	510	1333	25	517	12		867	82	489	23	2.2	2.8	1.7	
anthracene		651	466	465	207	173	172	527	20	184	11		317	50	184	14	2.7	2.1	1.4	
1-methylphenanthrene		507	313	252	135	123	117	357	37	125	7		173	25	101	27	4.3	4.4	2.5	
fluoranthene		5310	3990	3540	1240	979	1164	4280	21	1128	12		2533	203	981	78	2.8	4.6	1.4	
pyrene		4700	3590	3320	965	779	888	3870	19	877	11		2477	247	811	24	2.2	2.8	1.3	
benz[a]anthracene		2550	1880	1630	743	607	725	2020	24	692	11		880	99	427	25	5.2	6.2	1.6	
chrysene		1530	1090	937	480	396	475	1186	26	450	10		864	328	380	24	1.5	2.4	1.7	
triphenylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		<400	0	197	11				
benzo[b]fluoranthene		1580	1330	1200	746	633	772	1370	14	717	10		1220	158	740	110	0.5	0.6	0.9	
benzo[k]fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		503	83	361	18				
benzo[j]fluoranthene		2030	1530	1300	835	660	797	1620	23	764	12		666	157	341	22	5.7	4.7	1.5	
benzo[e]pyrene		1630	1320	1190	652	544	583	1380	16	593	9		1072	110	553	59	1.1	1.6	1.1	
benzo[a]pyrene		1120	878	860	569	448	561	953	15	526	13		845	74	628	52	0.5	0.8	1.0	
perylene		563	417	411	373	337	368	464	19	359	5		366	45	452	58	1.1	1.2	1.2	
indeno[1,2,3-cd]pyrene		1410	937	848	722	593	621	1065	28	645	11		881	84	501	72	0.8	1.1	1.9	
dibenz[a,h]anthracene		273	363	353	66	126	143	330	15	112	36		92.4	66.2	74	10	10.3	4.4	1.0	
benzo[ghi]perylene		1230	863	935	579	459	473	1009	19	504	13		899	108	525	67	0.5	0.6	1.3	

Laboratory: 8

PAH in Sediment X

Reported Results		No. of Analytes	
Quantitative	23	Quantitative	89
Qualitative	0	Qualitative	0
Not Determined	3	Not Determined	12

Category		Number by Category	
<2	10	z (s)	11
2 to 3	9	p (15%)	21
>3	4		7
			0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES		Data as submitted by laboratory																			Material reference values				Performance scores ^a		
		Sediment X, ng/g dry						SRM 1941a, ng/g dry			Sediment X			SRM 1941a, ng/g dry			Sediment X										
		01/04/01	1/5/01	S 1	S 2	S 3	1/8/01	01/04/01	1/5/01	S 1	S 2	S 3	1/8/01	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (15%)				
Analysis date	alpha-HCH	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<2.5	NA	1.42	1.11								
	hexachlorobenzene	2.07	2.42	2.78	26.3	24.2	26.7	26.3	24.2	26.7	26.7	24.2	14.65	25.7	5.2	5.47	1.04	70	25	-2.2	-1.7	1.0					
	gamma-HCH	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<4											
	beta-HCH	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<2											
	heptachlor	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<4											
	aldrin	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<4											
	heptachlor epoxide	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<6											
	oxychlordane	37.5	43.2	50.6	9.14	8.51	8.92	9.14	8.51	8.92	8.92	43.8	15.0	8.86	3.6	<6		2.59	0.19								
	trans-chlordane	24.4	27.4	33.1	7.84	5.43	7.88	7.84	5.43	7.88	7.88	28.3	15.6	7.05	19.90	23.4	3.6			0.8	0.9	1.0					
	2,4'-DDE	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	48.6	4.5	0.73	0.11							
endosulfan I	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<3											
cis-chlordane	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	18.1	3.0	2.33	0.56								
trans-nonachlor	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	11.2	1.3	1.26	0.13								
dieldrin	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	6.90	1.61	1.26	0.37								
4,4'-DDE	107	100	104	3.86	3.47	3.39	3.86	3.47	3.39	3.39	104	3	3.57	7.04	153	17	6.59	0.56	-1.3	-1.6	0.2						
2,4'-DDD	115	90.3	87.9	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	97.7	15.3	<2.5	NA	89.4	17.3			0.4	0.3	1.0						
endrin	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<2											
endosulfan II	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<4											
4,4'-DDD	252	225	216	2.78	2.56	2.60	2.78	2.56	2.60	2.60	231	8	2.65	4.43	291	37	5.06	0.58	-0.8	-0.9	0.5						
2,4'-DDT	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	11.4	2.5										
cis-nonachlor	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	5.50	1.97										
4,4'-DDT	519	477	442	1.20	0.881	0.920	1.20	0.881	0.920	0.920	479	8	1.00	17.40	595	81	1.25	0.10	-0.8	-1.0	0.5						
mirex	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<2											
endosulfan sulfate	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	NA	<2											
chlorpyrifos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3											

Laboratory: 8

Pesticides in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		7		28	
Qualitative		17		68	
Not Determined		1		4	

Category		Number by Category		z (15%)	
<2		5		6	
2 to 3		1		0	
>3		0		6	

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 8

Sample: QA00SEDI0 - Marine Sediment X

Reporting Date: 1/19/01

(data reported as if three figures were significant)

Analysis date	Data as submitted by laboratory												Material reference values			Performance scores ^a		
	Sediment X, ng/g dry			SRM 1941a, ng/g dry			Sediment X			SRM 1941a			assigned value	95% CL	target value ^b	z-score (25%)	z-score (s)	p-score (15%)
	1/4/01	1/4/01	1/4/01	1/4/01	1/4/01	1/4/01	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD						
PCB 8	8.25	10.1	11.8	11.8	2.42	1.45	1.73		10.1	17.7	1.87	26.74	14.0	3.2	1.39	-1.1	-0.7	1.2
PCB 18	18.5	23.2	25.5	25.5	1.86	2.09	2.43		22.4	15.9	2.13	13.48	29.6	5.1	1.15	-1.0	-0.7	1.1
PCB 28	53.4	61.9	64.0	64.0	6.63	6.50	5.90		59.8	9.4	6.34	6.14	54.4	7.7	9.8	0.4	0.4	0.6
PCB 31	26.7	32.3	33.1	33.1	3.54	3.28	2.92		30.7	11.4	3.25	9.59	46.2	9.0	6.2	-1.3	-1.4	0.8
PCB 44	35.2	39.6	40.2	40.2	4.42	4.05	4.04		38.3	7.1	4.17	5.19	40.7	4.9	4.80	-0.2	-0.2	0.5
PCB 49	17.3	22.0	21.3	21.3	3.45	3.04	3.28		20.2	12.6	3.26	6.33	37.7	5.8	9.5	-1.9	-1.9	0.8
PCB 52	35.5	42.1	43.6	43.6	6.55	5.89	5.85		40.4	10.7	6.10	6.45	55.3	7.7	6.89	-1.1	-1.0	0.7
PCB 66	35.4	45.8	39.7	39.7	11.9	9.32	10.5		40.3	13.0	10.6	12.2	49.1	6.9	6.8	-0.7	-0.6	0.9
PCB 95	18.7	24.6	23.1	23.1	7.77	5.56	5.84		22.1	13.9	6.39	18.83	31.4	5.8	7.5	-1.2	-1.2	0.9
PCB 99	13.1	14.8	15.5	15.5	4.55	4.33	4.27		14.5	8.5	4.38	3.36	24.5	4.6	4.17	-1.6	-1.5	0.6
PCB 101	58.8	62.9	69.2	69.2	11.6	11.2	10.8		63.6	8.2	11.2	3.6	51.4	6.2	11.0	1.0	1.0	0.5
PCB 105	15.1	15.6	15.9	15.9	2.75	2.57	2.27		15.5	2.6	2.53	9.58	15.8	2.1	3.65	-0.1	-0.1	0.2
PCB 118	27.0	29.4	33.0	33.0	6.98	6.27	6.01		29.8	10.1	6.42	7.82	34.6	4.9	10.0	-0.6	-0.5	0.7
PCB 128	5.97	7.03	7.82	7.82	1.73	1.18	1.21		6.94	13.38	1.37	22.52	6.98	1.11	1.87	0.0	0.0	0.9
PCB 138	30.8	42.2	40.2	40.2	12.2	10.0	10.3		37.7	16.1	10.6	11.2	48.2	8.1	13.4	-0.9	-0.7	1.1
PCB 149	23.1	30.0	31.1	31.1	9.08	8.13	7.41		28.1	15.4	8.21	10.21	38.8	5.6	9.2	-1.1	-1.4	1.0
PCB 153	29.9	37.6	41.3	41.3	11.0	10.2	9.14		36.3	16.0	10.1	9.2	49.6	8.9	17.6	-1.1	-0.8	1.1
PCB 156	5.58	6.36	6.48	6.48	2.22	2.31	1.87		6.14	7.96	2.13	10.90	6.30	2.42	0.93	-0.1	-0.1	0.5
PCB 170	14.5	18.5	14.1	14.1	3.58	3.29	2.60		15.7	15.5	3.16	15.95	15.6	2.5	3.00	0.0	0.0	1.0
PCB 180	21.2	29.1	30.7	30.7	8.02	7.72	7.15		27.0	18.8	7.63	5.79	30.5	4.5	5.83	-0.5	-0.4	1.3
PCB 187	9.5	11.1	10.7	10.7	4.09	3.74	3.55		10.4	7.9	3.79	7.22	18.5	2.8	7.0	-1.7	-1.6	0.5
PCB 194	5.46	5.94	6.85	6.85	2.23	1.92	1.93		6.08	11.61	7.63	8.69	7.87	1.12	1.78	-0.9	-1.1	0.8
PCB 195	2.36	2.32	2.49	2.49	<2.5	<2.5	<2.5		2.39	3.72	<2.5	NA	3.18	0.58		-1.0	-0.8	0.2
PCB 206	4.32	5.46	5.66	5.66	3.26	3.19	2.89		5.15	14.05	3.11	6.31	6.05	1.17	3.67	-0.6	-0.4	0.9
PCB 209	4.43	5.01	5.47	5.47	9.84	9.60	9.02		4.97	10.49	9.49	4.44	5.49	0.86	8.34	-0.4	-0.3	0.7

Laboratory: 8

PCBs in Sediment X

Category	Number by Category	
	z (25%)	p (15%)
< 2	25	25
2 to 3	0	0
> 3	0	0

Water in Sediment X

Sediment X, %	SRM 1941a, %			Sediment X, %	SRM 1941a, %		
	S1	S2	S3		assigned	95% CL	target
water	45.6	46.1	44.3	45.3	47.1	1.3	

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

Sample: QA00SED10 - Marine Sediment X

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Performance scores ^a		
		1/11/01 S1	1/11/01 S2	1/11/01 S3	1/11/01 S1	1/11/01 S2	1/11/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
naphthalene		364	352	353	1180	1290		356	2	1235	6	418	43	1650	310	-0.6	-0.8	0.1
2-methylnaphthalene		268	257	259	809	816		261	2	813	1	277	26	950	50	-0.2	-0.4	0.1
1-methylnaphthalene		97.7	92.8	91.8	446	435		94.1	3.4	441	2	108	15	520	30	-0.5	-0.6	0.2
biphenyl		83.6	78.8	78.9	234	280		80.4	3.4	257	13	87.2	18.0	320	70	-0.3	-0.2	0.2
2,6-dimethylnaphthalene		151	151	141	683	774		148	4	729	9	175	29	755	156	-0.6	-0.6	0.3
acenaphthylene		240	263	262	1110	966		255	5	1038	10	99.2	40.9	546	266	6.3	2.0	0.3
acenaphthene		61.5	60.6	59.6	380	400		60.6	1.6	390	4	73.0	10.6	570	30	-0.7	-0.7	0.1
1,6,7-trimethylnaphthalene		46.2	46.1	47.0	239	280		46.4	1.1	260	11	95.5	21.1	462	133	-2.1	-1.7	0.1
fluorene		97.5	101	95.2	605	536		97.9	3.0	571	9	104	10	600	50	-0.2	-0.3	0.2
phenanthrene		768	759	770	5120	4380		766	1	4750	11	867	82	5270	220	-0.5	-0.6	0.1
anthracene		526	526	524	1723	1410		525	0	1567	14	317	50	1770	330	2.6	2.1	0.0
1-methylphenanthrene		160	155	157	1400	1070		157	2	1235	19	173	25	1700	100	-0.4	-0.4	0.1
fluoranthene		2265	2138	2193	8460	6690		2199	3	7575	17	2533	203	8920	320	-0.5	-0.9	0.2
pyrene		1995	1958	1998	9130	7460		1984	1	8295	14	2477	247	9700	420	-0.8	-1.0	0.1
benz[a]anthracene		1022	1059	1041	4310	3580		1041	2	3945	13	880	99	4720	110	0.7	0.9	0.1
chrysene		1235	1243	1215	5760	4630		1231	1	5195	15	864	328	4860	100	1.7	2.8	0.1
triphenylene		NA	NA	NA	NA	NA		NA	NA	NA	NA	<400	0	1040	270			
benzo[b]fluoranthene		1723	1513	1613	3980	3280		1616	6	3630	14	1220	158	3870	420	1.3	1.7	0.4
benzo[k]fluoranthene		NA	NA	NA	NA	NA		NA	NA	NA	NA	503	83	2090	440			
benzo[f]fluoranthene		387	406	405	1977	2716		399	3	2347	22	666	157	2300	200	-1.6	-1.3	0.2
benzo[e]pyrene		886	812	837	2940	2800		845	4	2870	3	1072	110	3280	110	-0.8	-1.1	0.3
benzo[a]pyrene		756	708	731	3470	3270		732	3	3370	4	845	74	4300	130	-0.5	-0.8	0.2
perylene		292	292	281	892	846		288	2	869	4	366	45	1170	240	-0.9	-0.9	0.1
indeno[1,2,3-cd]pyrene		721	678	685	2210	2880		695	3	2545	19	881	84	2780	100	-0.8	-1.1	0.2
dibenz[a,h]anthracene		164	142	164	415	493		157	8	454	12	92.4	66.2	424	69	2.8	1.2	0.5
benzo[ghi]perylene		759	713	712	2670	2470		728	4	2570	6	899	108	2840	100	-0.8	-0.9	0.2

Laboratory: 9

PAH in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		24		92	
Qualitative		0		0	
Not Determined		2		8	

Number by Category		z (s)		p (15%)	
Category		z (25%)	z (s)	p (15%)	
< 2		20	21	24	
2 to 3		3	3	0	
> 3		1	0	0	

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
	Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Performance scores ^a		
	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	1/17/01	z-score (25%)	z-score (s)	p-score (15%)
alpha-HCH	0.92	<0.92	<0.92	<3.67	<3.67	<3.67	<3.67	<3.67	<0.92	NA	<3.67	NA	1.42	2.00	0.30		
hexachlorobenzene	4.80	5.45	4.64	6.37	6.68	6.68	6.68	6.68	4.96	8.64	6.53	3.36	5.47	1.04	0.35	-0.4	0.6
gamma-HCH	<0.41	<0.41	<0.41	<1.63	<1.63	<1.63	<1.63	<1.63	<0.41	NA	<1.63	NA	<4				
beta-HCH	<0.41	<0.41	<0.41	<1.65	<1.65	<1.65	<1.65	<1.65	<0.41	NA	<1.65	NA	<2				
heptachlor	<0.45	<0.45	<0.45	<1.78	<1.78	<1.78	<1.78	<1.78	<0.45	NA	<1.78	NA	<4				
aldrin	<0.53	<0.53	<0.53	<2.11	<2.11	<2.11	<2.11	<2.11	<0.53	NA	<2.11	NA	<4				
heptachlor epoxide	0.960	0.930	0.850	<2.35	<2.35	<2.35	<2.35	<2.35	0.913	6.226	<2.35	NA	<6				
oxychlorodane	4.61	3.86	3.74	6.80	12.5	12.5	12.5	12.5	4.07	11.6	9.66	41.8	<6				
trans-chlordane	33.6	31.1	29.8	25.1	27.1	27.1	27.1	27.1	31.5	6.1	26.1	5.4	23.4	3.6		1.4	0.4
2,4'-DDE	44.3	46.9	47.7	13.4	18.3	18.3	18.3	18.3	46.3	3.9	15.9	21.7	48.6	4.5	3.0	-0.2	0.3
endosulfan I	<0.46	<0.46	<0.46	<1.83	<1.83	<1.83	<1.83	<1.83	<0.46	NA	<1.83	NA	<3				
cis-chlordane	26.6	26.0	26.2	20.1	21.5	21.5	21.5	21.5	26.2	1.2	20.8	4.7	18.1	3.0	0.8	1.8	0.1
trans-nonachlor	11.5	11.4	11.0	9.53	11.0	11.0	11.0	11.0	11.3	2.4	10.3	10.4	11.2	1.3	0.51	0.0	0.2
dieldrin	10.1	9.95	9.59	18.2	26.5	26.5	26.5	26.5	9.87	2.53	22.3	26.2	6.90	1.61	4.00	1.7	0.2
4,4'-DDE	161	171	174	78.1	85.7	85.7	85.7	85.7	168	4	81.9	6.6	153	17	12.0	0.4	0.3
2,4'-DDD	103	113	118	57.9	67.2	67.2	67.2	67.2	112	7	62.5	10.5	89.4	17.3	8.0	1.0	0.5
endrin	0.640	0.540	0.480	<1.65	<1.65	<1.65	<1.65	<1.65	0.553	14.608	<1.65	NA	<2				
endosulfan II	<0.46	<0.46	<0.46	<1.83	<1.83	<1.83	<1.83	<1.83	<0.46	NA	<1.83	NA	<4				
4,4'-DDD	259	289	313	109	130	130	130	130	287	9	120	12	291	37	16	-0.1	0.6
2,4'-DDT	14.4	12.9	15.1	7.44	9.33	9.33	9.33	9.33	14.2	7.9	8.39	15.94	11.4	2.5		1.0	0.5
cis-nonachlor	9.05	7.57	8.08	4.87	5.18	5.18	5.18	5.18	8.23	9.13	5.03	4.36	5.50	1.97	0.70	2.0	0.6
4,4'-DDT	630	683	716	169	169	169	169	169	676	6	169	0	595	81	11	0.5	0.4
mirex	<0.46	<0.46	<0.46	6.25	8.92	8.92	8.92	8.92	<0.46	NA	7.59	24.89	<2				
endosulfan sulfate	<0.46	<0.46	<0.46	<1.83	<1.83	<1.83	<1.83	<1.83	<0.46	NA	<1.83	NA	<2				
chlorpyrifos	2.62	2.66	3.80	<2.31	<2.31	<2.31	<2.31	<2.31	3.03	22.1	<2.31	NA	<3				

Laboratory: 9

Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	16	64
Qualitative	9	36
Not Determined	0	0

Category	Number by Category	z (s)	p (15%)
<2	12	12	12
2 to 3	0	0	0
>3	0	0	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

1/28/01

Performance scores^a

	Sediment X _s , %						SRM 1944, %						Sediment X _s , %						SRM 1944, %																	
	S 1			S 2			S 3			S 1			S 2			S 3			S 1			S 2			S 3			assigned			95% CL target			95% CL target		
	mean, %			%RSD			mean, %			%RSD			mean, %			%RSD			mean, %			%RSD			mean, %			%RSD			z (25%)			z (15%)		
Water	46.0	45.0	45.0				45.3	1.3											47.1	1.3												-0.2	-0.5	0.1		

²Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 10

Sample: QA00SEDI0 - Marine Sediment X

(data reported as if three figures were significant)

Reporting Date: 1/30/01

PAH	Data as submitted by laboratory														Material reference values				Performance scores ^a							
	Sediment X, ng/g dry						SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X								
	10/4/00 S1	10/4/00 S2	10/4/00 S3	10/4/00 S1	10/4/00 S2	10/4/00 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)									
Analysis date																										
naphthalene	476	517	519	1630	1860	NA	NA	504	5	1745	9		418	43	1650	310	0.8	1.1	0.3							
2-methylnaphthalene	286	310	303	941	1050	NA	NA	300	4	996	8		277	26	950	50	0.3	0.6	0.3							
1-methylnaphthalene	111	125	120	503	545	NA	NA	119	6	524	6		108	15	520	30	0.4	0.4	0.4							
biphenyl	159	183	178	839	1050	NA	NA	173	7	945	16		87.2	18.0	320	70	3.9	2.5	0.5							
2,6-dimethylnaphthalene	124	139	130	420	442	NA	NA	131	6	431	4		175	29	755	156	-1.0	-0.9	0.4							
acenaphthylene	146	132	158	602	744	NA	NA	145	9	673	15		99.2	40.9	546	266	1.9	0.6	0.6							
acenaphthene	62.0	65.0	67.0	390	416	NA	NA	64.7	3.9	403	5		73.0	10.6	570	30	-0.5	-0.5	0.3							
1,6,7-trimethylnaphthalene	73.0	78.0	77.0	390	418	NA	NA	76.0	3.5	404	5		95.5	21.1	462	133	-0.8	-0.7	0.2							
fluorene	87.0	93.0	93.0	509	556	NA	NA	91.0	3.8	533	6		104	10	600	50	-0.5	-0.7	0.3							
phenanthrene	756	822	825	4980	5570	NA	NA	801	5	5275	8		867	82	5270	220	-0.3	-0.4	0.3							
anthracene	327	330	335	1170	1330	NA	NA	331	1	1250	9		317	50	1770	330	0.2	0.1	0.1							
1-methylphenanthrene	123	129	115	912	1100	NA	NA	122	6	1006	13		173	25	1700	100	-1.2	-1.2	0.4							
fluoranthene	2720	3450	3820	9970	6620	NA	NA	3330	17	8295	29		2533	203	8920	320	1.3	2.1	1.1							
pyrene	1810	2000	1970	6080	6540	NA	NA	1927	5	6310	5		2477	247	9700	420	-0.9	-1.1	0.4							
benz[a]anthracene	651	695	714	3100	3420	NA	NA	687	5	3260	7		880	99	4720	110	-0.9	-1.0	0.3							
chrysene	1200	1400	1340	4790	5820	NA	NA	1313	8	5305	14		864	328	4860	100	2.1	3.4	0.5							
triphenylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		<400	0	1040	270										
benzo[b]fluoranthene	1520	1620	1790	6400	5800	NA	NA	1643	8	6100	7		1220	158	3870	420	1.4	1.8	0.6							
benzo[k]fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		503	83	2090	440										
benzo[j]fluoranthene	765	815	824	2890	3070	NA	NA	801	4	2980	4		666	157	2300	200	0.8	0.7	0.3							
benzo[e]pyrene	760	822	879	2410	2420	NA	NA	820	7	2415	0		1072	110	3280	110	-0.9	-1.3	0.5							
benzo[a]pyrene	710	787	819	3420	3590	NA	NA	772	7	3505	3		845	74	4300	130	-0.3	-0.5	0.5							
perylene	343	381	401	821	881	NA	NA	375	8	851	5		366	45	1170	240	0.1	0.1	0.5							
indeno[1,2,3-cd]pyrene	746	766	1010	2880	2980	NA	NA	841	17	2930	2		881	84	2780	100	-0.2	-0.2	1.2							
dibenz[a,h]anthracene	111	146	176	693	776	NA	NA	144	23	735	8		92.4	66.2	424	69	2.3	1.0	1.5							
benz[ghi]perylene	582	611	770	2180	2310	NA	NA	654	15	2245	4		899	108	2840	100	-1.1	-1.3	1.0							
Laboratory: 10																										
PAH in Sediment X	Reported Results														Number by Category											
	Analytes														z (25%)				z (s)				p (15%)			
	Quantitative														24				21				21			
	Quantitative														0				2				2			
	Not Determined														2				1				1			

Laboratory: 10

PAH in Sediment X

Reported Results		No. of Analytes	%
Quantitative		24	92
Qualitative		0	0
Not Determined		2	8

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	21	21	24
2 to 3	2	2	0
> 3	1	1	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Performance scores ^a		
		S1	S2	S3	S1	S2	S3	lab mean ng/g dry	%RSD	lab mean ng/g dry	%RSD	lab mean ng/g dry	%RSD	assigned value	95% CL	target value ^b	z-score (25%)	p-score (15%)
alpha-HCH		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.42	1.11	2.00		
hexachlorobenzene		4.30	3.70	3.30	4.90	5.50	NA	3.77	13.36	5.20	8.16	NA	NA	5.47	1.04	6.03	-1.2	0.9
gamma-HCH		<1.3	<1.3	<1.3	<2	<2	NA	<1.3	NA	<2	NA	NA	NA	<4		no target		
beta-HCH		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target		
heptachlor		<1.3	<1.3	<3.2	<5.9	<2.0	NA	<1.3	NA	<5.9	NA	NA	NA	<4		no target		
aldrin		<1.3	<9.4	<9.3	<12	<2	NA	<1.3	NA	<12	NA	NA	NA	<4		no target		
heptachlor epoxide		<1.3	<4.3	<1.3	<4	<4.3	NA	<1.3	NA	<4	NA	NA	NA	<6		no target		
oxychlorodane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<6		no target		
trans-chlordane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.4	3.6	no target		
2,4'-DDE		60.0	53.0	42.0	17.0	19.0	NA	51.7	17.6	18.0	7.9	NA	NA	48.6	4.5	19.0	0.2	1.2
endosulfan I		<1.3	<1.3	<1.3	<2.0	<2.0	NA	<1.3	NA	<2.0	NA	NA	NA	<3		no target		
cis-chlordane		10.0	18.0	16.0	14.0	18.0	NA	14.7	28.4	16.0	17.7	NA	NA	18.1	3.0	16.5	-0.8	1.9
trans-nonachlor		10.0	9.40	8.40	8.30	9.20	NA	9.27	8.72	8.75	7.27	NA	NA	11.2	1.3	8.20	-0.7	0.6
dieldrin		4.50	7.30	6.50	7.20	9.60	NA	6.10	23.64	8.40	20.20	NA	NA	6.90	1.61	8.00	-0.5	1.6
4,4'-DDE		170	150	140	59.0	78.0	NA	153	10	68.5	19.6	NA	NA	153	17	86.0	0.0	0.7
2,4'-DDD		66.0	99.0	94.0	<40	47.0	NA	86.3	20.6	47.0	NA	NA	NA	89.4	17.3	38.0	-0.1	1.4
endrin		<3.1	<5.1	<5.3	<2.0	<2.0	NA	<3.1	NA	<2.0	NA	NA	NA	<2		no target		
endosulfan II		<1.3	<1.3	<1.3	<2.0	<2.0	NA	<1.3	NA	<2.0	NA	NA	NA	<4		no target		
4,4'-DDD		190	320	280	82.0	110	NA	263	25	96.0	20.6	NA	NA	291	37	108	-0.4	1.7
2,4'-DDT		11.0	11.0	8.90	<2.0	<2.0	NA	10.3	11.8	<2.0	NA	NA	NA	11.4	2.5	no target	-0.4	0.8
cis-nonachlor		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.50	1.97	3.70		
4,4'-DDT		580	700	690	140	160	NA	657	10	150	9	NA	NA	595	81	119	0.4	0.7
mirex		<1.3	<1.3	<1.3	<2.0	<2.0	NA	<1.3	NA	<2.0	NA	NA	NA	<2		no target		
endosulfan sulfate		<6	<9.3	<9.3	<12	<20	NA	<6	NA	<12	NA	NA	NA	<2		no target		
chlorpyrifos		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3		no target		

Laboratory: 10
Pesticides in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		10		40	
Qualitative		9		36	
Not Determined		6		24	

Category		Number by Category		z (25%)		p (15%)	
<2		10		10		10	
2 to 3		0		0		0	
>3		0		0		0	

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: OA00SED10 - Marine Sediment X

Laboratory No.: 10

Reporting Date: 1/30/01

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory											Material reference values				Performance scores*					
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944				
		10/19/2018 - 10/19/2018		10/19/2018 - 10/19/2018	S1	S2	S3	lab mean ng/g dry	%RSD	lab ng/g dry	%RSD	lab mean ng/g dry	%RSD	assigned value	target value ^a	95% CL	z-score (25%)	p-score (15%)	z-score (s)	p-score (15%)		
		S1	S2	S3	S1	S2	S3															
PCB 8		11.0	9.70	8.50	21.0	26.0	NA	9.73	12.85			23.5	15.0	14.0	3.2	22.3	2.3	-1.2	-0.7	0.9		
PCB 18		32.0	28.0	25.0	47.0	63.0	NA	28.3	12.4	55.0	20.6			29.6	5.1	51.0	2.6	-0.2	-0.1	0.8		
PCB 28		61.0	55.0	50.0	87.0	100	NA	55.3	10.0	93.5	9.4			54.4	7.7	80.8	2.7	0.1	0.1	0.7		
PCB 31		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46.2	9.0	78.7	1.6					
PCB 44		43.0	39.0	36.0	55.0	65.0	NA	39.3	8.9	60.0	11.8			40.7	4.9	60.2	2.0	-0.1	-0.1	0.6		
PCB 49		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.7	5.8	53.0	1.7					
PCB 52		49.0	44.0	40.0	63.0	70.0	NA	44.3	10.2	66.5	9.4			55.3	7.7	79.4	2.0	-0.8	-0.7	0.7		
PCB 66		53.0	59.0	53.0	63.0	72.0	NA	55.0	6.3	67.5	9.4			49.1	6.9	71.9	4.3	0.5	0.4	0.4		
PCB 95		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.4	5.8	65.0	8.9					
PCB 99		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.5	4.6	37.5	2.4					
PCB 101		57.0	51.0	45.0	59.0	70.0	NA	51.0	11.8	64.5	12.1			51.4	6.2	73.4	2.5	0.0	0.0	0.8		
PCB 105		12.0	11.0	10.0	14.0	17.0	NA	11.0	9.1	15.5	13.7			15.8	2.1	24.5	1.1	-1.2	-1.2	0.6		
PCB 118		37.0	31.0	27.0	42.0	50.0	NA	31.7	15.9	46.0	12.3			34.6	4.9	58.0	4.3	-0.3	-0.3	1.1		
PCB 128		6.00	5.40	5.10	6.10	7.90	NA	5.50	8.33	7.00	18.18			6.98	1.11	8.47	0.28	-0.8	-0.7	0.6		
PCB 138		34.0	39.0	34.0	47.0	54.0	NA	35.7	8.1	50.5	9.8			48.2	8.1	62.1	3.0	-1.0	-0.8	0.5		
PCB 149		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38.8	5.6	49.7	1.2					
PCB 153		43.0	38.0	34.0	48.0	55.0	NA	38.3	11.8	51.5	9.6			49.6	8.9	74.0	2.9	-0.9	-0.6	0.8		
PCB 156		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.30	2.42	6.52	0.66					
PCB 170		15.0	12.0	13.0	14.0	17.0	NA	13.3	11.5	15.5	13.7			15.6	2.5	22.6	1.4	-0.6	-0.5	0.8		
PCB 180		33.0	26.0	26.0	28.0	34.0	NA	28.3	14.3	31.0	13.7			30.5	4.5	44.3	1.2	-0.3	-0.2	1.0		
PCB 187		20.0	17.0	16.0	17.0	22.0	NA	17.7	11.8	19.5	18.1			18.5	2.8	25.1	1.0	-0.2	-0.2	0.8		
PCB 194		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.87	1.12	11.2	1.4					
PCB 195		2.60	2.30	2.40	2.50	3.30	NA	2.43	6.28	2.90	19.51			3.18	0.58	3.75	0.39	-0.9	-0.7	0.4		
PCB 206		5.40	4.90	4.60	7.40	6.50	NA	4.97	8.14	6.95	9.16			6.05	1.17	9.21	0.51	-0.7	-0.5	0.5		
PCB 209		4.90	4.40	4.20	4.90	5.50	NA	4.50	8.01	5.20	9.16			5.49	0.86	6.81	0.33	-0.7	-0.6	0.5		
Laboratory: 10													Reported Results		No. of Analytes		%		Number by Category			
PCBs in Sediment X													Quantitative		18		72		Category			
													Qualitative		0		0		z (25%)			
													Not Determined		7		28		p (15%)			
																			z (s)			
																			p (15%)			
Water in Sediment X													Sediment X, %		SRM 1944, %		%		Sediment X, %			
													mean, %		mean, %		%		Sediment X, %			
													%RSD		%RSD		%RSD		Sediment X, %			
													44.8		2.2		2.2		Sediment X, %			
													47.1		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %			
													471		1.3		1.3		Sediment X, %</			

 χ^2 - and p-scores > 3 are bolded.

^bCertified material reference values are **bolded**.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Performance scores ^a	
		S1	S2	S3	S1	S2	S3	lab mean ng/g dry	lab %RSD	SRM 1944 lab mean ng/g dry	SRM 1944 lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	p-score (15%)
naphthalene								NA	NA	NA	NA	418	43	1650	310		
2-methylnaphthalene								NA	NA	NA	NA	277	26	950	50		
1-methylnaphthalene								NA	NA	NA	NA	108	15	520	30		
biphenyl								NA	NA	NA	NA	87.2	18.0	320	70		
2,6-dimethylnaphthalene								NA	NA	NA	NA	175	29	755	156		
acenaphthylene								NA	NA	NA	NA	99.2	40.9	546	266		
acenaphthene								NA	NA	NA	NA	73.0	10.6	570	30		
1,6,7-trimethylnaphthalene								NA	NA	NA	NA	95.5	21.1	462	133		
fluorene								NA	NA	NA	NA	104	10	600	50		
phenanthrene								NA	NA	NA	NA	867	82	5270	220		
anthracene								NA	NA	NA	NA	317	50	1770	330		
1-methylphenanthrene								NA	NA	NA	NA	173	25	1700	100		
fluoranthene								NA	NA	NA	NA	2533	203	8920	320		
pyrene								NA	NA	NA	NA	2477	247	9700	420		
benz[a]anthracene								NA	NA	NA	NA	880	99	4720	110		
chrysene								NA	NA	NA	NA	864	328	4860	100		
triphenylene								NA	NA	NA	NA	<400	0	1040	270		
benzo[b]fluoranthene								NA	NA	NA	NA	1220	158	3870	420		
benzo[k]fluoranthene								NA	NA	NA	NA	503	83	2090	440		
benzo[j]fluoranthene								NA	NA	NA	NA	666	157	2300	200		
benzo[e]pyrene								NA	NA	NA	NA	1072	110	3280	110		
benzo[a]pyrene								NA	NA	NA	NA	845	74	4300	130		
perylene								NA	NA	NA	NA	366	45	1170	240		
indeno[1,2,3-cd]pyrene								NA	NA	NA	NA	881	84	2780	100		
dibenz[a,h]anthracene								NA	NA	NA	NA	92.4	66.2	424	69		
benzo[ghi]perylene								NA	NA	NA	NA	899	108	2840	100		

Laboratory: 11
PAH in Sediment X

Reported Results	No. of Analytes	%
Quantitative	0	0
Qualitative	0	0
Not Determined	26	100

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	0	0	0
2 to 3	0	0	0
> 3	0	0	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory														Material reference values				Performance scores ^a		
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Performance scores ^a				
	01/17/01	S1	S2	01/17/01	S1	S2	01/17/01	lab mean ng/g dry	%RSD	lab	lab mean ng/g dry	%RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)		
alpha-HCH	<1.0	<1.0	<1.0	<1.0	<1.0	1.14	1.31		NA	1.23	9.80		1.42	1.11	2.00	0.30					
hexachlorobenzene	5.37	5.40	5.24	6.19	5.93	6.17		5.34	1.57	6.10	2.38		5.47	1.04	6.03	0.35	-0.1	-0.1	0.1		
gamma-HCH	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA		<4		no target						
beta-HCH	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA		<2		no target						
heptachlor	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA		<4		no target						
aldrin	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA		<4		no target						
heptachlor epoxide	5.45	5.58	5.25	5.10	4.74	5.47		5.43	3.01	5.10	7.11		<6		no target						
oxychlordane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA		<6		no target						
trans-chlordane	23.1	23.5	22.0	20.9	20.0	23.6		22.9	3.5	21.5	8.7		23.4	3.6	no target	3.0	-0.1	-0.1	0.2		
2,4'-DDE	47.6	48.9	49.4	12.8	12.5	13.5		48.6	1.9	12.9	3.9		48.6	4.5	19.0		0.0	0.0	0.1		
endosulfan I	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA		<3		no target						
cis-chlordane	24.1	22.7	21.3	18.8	18.2	21.1		22.7	6.2	19.4	7.9		18.1	3.0	16.5	0.8	1.0	0.9	0.4		
trans-nonachlor	13.6	13.9	13.8	10.5	10.5	10.9		13.8	1.0	10.6	2.1		11.2	1.3	8.20	0.51	0.9	1.2	0.1		
dieldrin	9.15	10.4	10.2	15.1	16.3	15.2		9.92	6.84	15.5	4.1		6.90	1.61	8.00	4.00	1.7	1.3	0.5		
4,4'-DDE	173	174	175	69.9	68.3	69.4		174	1	69.2	1.2		153	17	86.0	12.0	0.6	0.7	0.0		
2,4'-DDD	121	126	117	46.6	42.8	55.7		121	4	48.4	13.7		89.4	17.3	38.0	8.0	1.4	1.1	0.2		
endrin	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA		<2		no target						
endosulfan II	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA		<4		no target						
4,4'-DDD	401	422	409	110	104	125		411	3	113	9		291	37	108	16	1.7	1.9	0.2		
2,4'-DDT	10.6	11.4	11.6	4.40	4.24	4.42		11.2	4.8	4.35	2.32		11.4	2.5	no target		-0.1	-0.1	0.3		
cis-nonachlor	3.95	3.92	3.23	2.99	2.84	3.50		3.70	10.99	3.11	11.21		5.50	1.97	3.70	0.70	-1.3	-0.8	0.7		
4,4'-DDT	870	895	860	192	194	209		875	2	198	5		595	81	119	11	1.9	2.3	0.1		
mirex	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	NA	<3.0	NA		<2		no target						
endosulfan sulfate	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	NA		<2		no target						
chlorpyrifos	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA	<2.0	NA		<3		no target						

Laboratory: 11

Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	13	52
Qualitative	12	48
Not Determined	0	0

Category	Number by Category	z (25%)	z (s)	p (15%)
< 2	12	11	12	12
2 to 3	0	1	0	0
> 3	0	0	0	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

PCBs	Data as submitted by laboratory											Material reference values				Performance scores ^a																															
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry	SRM 1944, ng/g dry	95% CL	target value ^b	95% CL	Sediment X																															
	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL				z-score (25%)	z-score (s)	p-score (15%)																													
Analysis date	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01	01/17/01																													
PCB 8	10.5	11.4	11.4	15.3	15.5	11.3	11.1	4.7	14.0	17.0	14.0	3.2	22.3	2.3	-0.8	-0.5	0.3																														
PCB 18	30.1	29.6	29.9	51.3	50.8	45.3	29.8	0.9	49.1	6.7	29.6	5.1	51.0	2.6	0.0	0.0	0.1																														
PCB 28	64.1	65.3	65.1	89.8	88.9	83.3	64.8	1.0	87.3	4.0	54.4	7.7	80.8	2.7	0.8	0.8	0.1																														
PCB 31	40.3	40.9	41.1	65.1	63.9	59.0	40.8	0.9	62.7	5.1	46.2	9.0	78.7	1.6	-0.5	-0.5	0.1																														
PCB 44	44.0	44.7	44.9	56.0	55.0	51.2	44.6	1.0	57.3	4.7	40.7	4.9	60.2	2.0	0.4	0.4	0.1																														
PCB 49	40.7	41.2	41.4	49.5	48.8	45.0	41.1	0.8	47.8	5.1	37.7	5.8	53.0	1.7	0.4	0.4	0.1																														
PCB 52	54.2	55.6	55.8	66.7	67.3	62.2	55.2	1.6	65.4	4.2	55.3	7.7	79.4	2.0	0.0	0.0	0.1																														
PCB 66	49.4	50.2	49.9	59.9	59.8	53.8	49.9	0.8	57.8	4.0	49.1	6.9	71.9	4.3	0.1	0.1	0.1																														
PCB 95	34.1	34.3	34.4	43.8	43.7	38.1	34.2	0.5	41.9	7.7	31.4	5.8	65.0	8.9	0.4	0.4	0.0																														
PCB 99	21.3	22.0	21.6	24.7	25.3	23.3	21.6	1.7	24.4	4.3	24.5	4.6	37.5	2.4	-0.5	-0.4	0.1																														
PCB 101	52.6	52.9	50.9	62.3	63.5	59.4	52.2	2.0	61.7	3.4	51.4	6.2	73.4	2.5	0.1	0.1	0.1																														
PCB 105	12.4	13.8	13.9	13.9	13.7	8.60	13.4	6.3	12.1	24.9	15.8	2.1	24.5	1.1	-0.6	-0.6	0.4																														
PCB 118	38.3	38.9	39.0	47.5	46.9	43.8	38.8	1.0	49.1	4.2	34.6	4.9	58.0	4.3	0.5	0.4	0.1																														
PCB 128	7.02	6.97	7.13	7.82	7.85	6.68	7.04	1.16	7.45	8.95	6.98	1.11	8.47	0.28	0.0	0.0	0.1																														
PCB 138	53.8	54.4	53.0	61.5	62.0	57.9	53.7	1.3	60.5	3.7	48.2	8.1	62.1	3.0	0.5	0.4	0.1																														
PCB 149	43.3	43.3	42.4	49.8	49.6	45.6	43.0	1.3	48.3	4.9	38.8	5.6	49.7	1.2	0.4	0.5	0.1																														
PCB 153	46.7	47.3	46.3	54.3	53.6	49.8	46.8	1.1	52.6	4.6	49.6	8.9	74.0	2.9	-0.2	-0.2	0.1																														
PCB 156	4.77	4.70	4.72	4.34	5.31	5.16	4.73	0.72	4.94	10.54	6.30	2.42	6.52	0.66	-1.0	-0.5	0.0																														
PCB 170	13.1	13.2	12.8	14.4	14.1	13.3	13.0	1.7	13.9	3.9	15.6	2.5	22.6	1.4	-0.7	-0.6	0.1																														
PCB 180	33.7	33.7	33.5	35.9	35.5	33.3	33.6	0.4	34.9	4.1	30.5	4.5	44.3	1.2	0.4	0.4	0.0																														
PCB 187	16.6	16.3	16.4	19.6	19.4	18.2	16.5	1.0	19.1	4.1	18.5	2.8	25.1	1.0	-0.4	-0.4	0.1																														
PCB 194	8.38	8.52	8.32	8.96	8.85	8.40	8.40	1.25	8.73	3.43	7.87	1.12	11.2	1.4	0.3	0.3	0.1																														
PCB 195	3.15	3.09	3.03	1.98	1.92	1.80	3.09	2.01	1.90	4.93	3.18	0.58	3.75	0.39	-0.1	-0.1	0.1																														
PCB 206	6.47	6.89	6.57	6.73	6.49	6.30	6.64	3.34	6.51	3.25	6.05	1.17	9.21	0.51	0.4	0.3	0.2																														
PCB 209	6.44	6.38	6.07	6.35	6.29	6.76	6.30	3.16	6.47	3.93	5.49	0.86	6.81	0.33	0.6	0.5	0.2																														
Laboratory: 11																																															
PCBs In Sediment X																																															
<table><tr><th colspan="2">Reported Results</th><th colspan="2">No. of Analytes</th><th colspan="2">%</th></tr><tr><td>Quantitative</td><td>25</td><td>100</td><td></td><td></td><td></td></tr><tr><td>Qualitative</td><td>0</td><td>0</td><td></td><td></td><td></td></tr><tr><td>Not Determined</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>																		Reported Results		No. of Analytes		%		Quantitative	25	100				Qualitative	0	0				Not Determined	0	0									
Reported Results		No. of Analytes		%																																											
Quantitative	25	100																																													
Qualitative	0	0																																													
Not Determined	0	0																																													
<table><tr><th colspan="2">Number by Category</th><th colspan="2">z (s)</th><th colspan="2">p (15%)</th></tr><tr><td>Category</td><td></td><td>z (25%)</td><td>z (s)</td><td>25</td><td>25</td></tr><tr><td>< 2</td><td></td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2 to 3</td><td></td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>> 3</td><td></td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>																		Number by Category		z (s)		p (15%)		Category		z (25%)	z (s)	25	25	< 2		0	0	0	0	2 to 3		0	0	0	0	> 3		0	0	0	0
Number by Category		z (s)		p (15%)																																											
Category		z (25%)	z (s)	25	25																																										
< 2		0	0	0	0																																										
2 to 3		0	0	0	0																																										
> 3		0	0	0	0																																										
Water in Sediment X																																															
Sediment X, %			SRM 1944, %			Sediment X, %			SRM 1944, %			Sediment X, %			SRM 1944, %																																
S1	S2	S3	S1	S2	S3	mean, %	%RSD	mean, %	%RSD	mean, %	%RSD	assigned	95% CL	target	95% CL	z (25%)	p (15%)																														
45.4	45.5	45.5				45.5	0.1			47.1	1.3					-0.1	0.0																														
water																																															

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 2/5/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a			
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X		SRM 1944, ng/g dry	
		1/24/01 S1	1/24/01 S2	1/24/01 S3	1/24/01 S1	1/24/01 S2	1/24/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)	
naphthalene	393	296	297	980	388	539	328	17	636	48	418	43	1650	310	-0.9	-1.2	1.1		
2-methylnaphthalen:	333	268	271	689	366	473	291	13	509	32	277	26	950	50	0.2	0.3	0.8		
1-methylnaphthalen:	103	86.7	80.1	288	167	52.1	90.0	13.2	169	70	108	15	520	30	-0.7	-0.7	0.9		
biphenyl	61.6	55.5	54.4	130	100	104	57.2	6.8	111	15	87.2	18.0	320	70	-1.4	-0.9	0.5		
2,6-dimethylnaphthalene							NA	NA	NA	NA	175	29	755	156					
acenaphthylene	52.3	50.7	53.3	326	381	272	52.1	2.4	327	17	99.2	40.9	546	266	-1.9	-0.6	0.2		
acenaphthene	76.7	61.7	62.3	354	326	302	66.9	12.7	328	8	73.0	10.6	570	30	-0.3	-0.3	0.8		
1,6,7-trimethylnaphthalene							NA	NA	NA	NA	95.5	21.1	462	133					
fluorene	106	81.3	85.1	505	542	436	90.8	14.7	494	11	104	10	600	50	-0.5	-0.7	1.0		
phenanthrene	1039	923	950	5885	6935	5293	971	6	6038	14	867	82	5270	220	0.5	0.6	0.4		
anthracene	253	295	292	1383	1546	1018	280	8	1316	21	317	50	1770	330	-0.5	-0.4	0.6		
1-methylphenanthrene	116	133	112	1000	1180	799	121	9	993	19	173	25	1700	100	-1.2	-1.2	0.6		
fluoranthene	2980	2123	2305	6360	8101	6475	2469	18	6979	14	2533	203	8920	320	-0.1	-0.2	1.2		
pyrene	3078	2265	2437	7354	9263	7315	2593	17	7977	14	2477	247	9700	420	0.2	0.2	1.1		
benzo[a]anthracene	1515	1114	1189	5479	7021	5427	1273	17	5976	15	880	99	4720	110	1.8	2.1	1.1		
chrysene	1177	918	1001	3743	4767	3678	1032	13	4063	15	864	328	4860	100	0.8	1.3	0.9		
triphenylene							NA	NA	NA	NA	<400	0	1040	270					
benzo[b]fluoranthene	2446	1853	2075	4891	5886	4147	2125	14	4975	18	1220	158	3870	420	3.0	3.8	0.9		
benzo[k]fluoranthene							NA	NA	NA	NA	503	83	2090	440					
benzo[j]fluoranthene	962	906	989	2688	3369	2820	952	4	2959	12	666	157	2300	200	1.7	1.4	0.3		
benzo[e]pyrene	1247	1049	1141	2564	3193	2474	1146	9	2744	14	1072	110	3280	110	0.3	0.4	0.6		
benzo[a]pyrene	1131	1002	1079	3811	4755	3553	1071	6	4039	16	845	74	4300	130	1.1	1.6	0.4		
perylene	315	277	299	684	831	644	297	6	720	14	366	45	1170	240	-0.8	-0.8	0.4		
indeno[1,2,3-cd]pyrene	723	647	692	2145	2857	1868	687	6	2290	22	881	84	2780	100	-0.9	-1.2	0.4		
dibenz[a,h]anthracene	233	188	178	244	248	169	199	15	220	20	92.4	66.2	424	69	4.6	2.0	1.0		
benzo[ghi]perylene	233	188	208	3131	3905	2924	209	11	3320	16	899	108	2840	100	-3.1	-3.7	0.7		
Laboratory: 12							Reported Results	No. of Analytes	%						Number by Category				
PAH in Sediment X							Quantitative	22	85		Category				z (25%)	z (s)	p (15%)		
							Qualitative	0	0						19	18	22		
							Not Determined	4	15						1	2	0		
															2	2	0		

Laboratory: 12
PAH in Sediment X

Reported Results	No. of Analytes	%
Quantitative	22	85
Qualitative	0	0
Not Determined	4	15

Category	z (25%)	z (s)	p (15%)
<2	19	18	22
2 to 3	1	2	0
>3	2	2	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

Sample: QA00SED10 - Marine Sediment X (data reported as if three figures were significant)

Reporting Date: 2/5/01

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a	
	Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		p-score (15%)
	1/24/01 S1	1/8/01 S2	1/16/01 S3	1/24/01 S1	1/8/01 S2	1/16/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	z-score (25%)	
alpha-HCH	0.390	0.270	0.380	0.130	0.190	0.220	0.347	19.207	0.180	25.459	1.42	1.11	2.00	-3.0	1.3
hexachlorobenzene							NA	NA	NA	NA	5.47	1.04	6.03		
gamma-HCH	1.34	1.41	1.30	0.540	0.470	0.610	1.35	4.12	0.540	12.963	<4		no target		
beta-HCH	10.0	7.63	6.53	17.2	8.45	24.9	8.05	22.02	16.9	48.8	<2		no target		
heptachlor	2.98	4.71	4.21	7.04	6.56	7.36	3.97	22.44	6.99	5.76	<4		no target		
aldrin	0.340	0.440	0.410	0.570	0.650	0.160	0.397	12.937	0.460	57.145	<4		no target		
heptachlor epoxide	2.53	2.77	3.31	0.310	0.740	0.580	2.87	13.9	0.543	40.000	<6		no target		
oxychlordane							NA	NA	NA	NA	<6		no target		
trans-chlordane	23.9	26.7	20.7	26.0	34.9	23.2	23.8	12.7	28.0	21.8	23.4	3.6	no target	0.1	0.8
2,4'-DDE	41.5	60.6	49.5	32.5	35.1	34.6	50.5	19.0	34.1	4.0	48.6	4.5	19.0	0.2	1.3
endosulfan I	2.81	2.99	2.66	0.840	0.890	0.950	2.82	5.9	0.893	6.165	<3		no target		
cis-chlordane	16.6	15.0	13.1	14.7	19.0	12.3	14.9	11.9	15.4	22.3	18.1	3.0	16.5	-0.7	0.8
trans-nonachlor	10.7	15.2	12.0	13.7	14.9	15.4	12.7	18.3	14.7	6.0	11.2	1.3	8.20	0.5	1.2
dieldrin	6.09	6.57	6.92	4.92	6.70	1.94	6.53	6.38	4.52	53.21	6.90	1.61	8.00	-0.2	0.4
4,4'-DDE	136	188	163	51.0	59.0	58.4	163	16	56.1	7.9	153	17	86.0	0.3	1.1
2,4'-DDD	71.0	77.9	73.8	26.1	39.1	25.9	74.2	4.7	30.4	24.9	89.4	17.3	38.0	-0.7	0.3
endrin	1.92	1.15	1.05	0.510	1.20	0.680	1.37	34.66	0.797	45.124	<2		no target		
endosulfan II	0.300	0.370	0.370	0.080	0.090	0.040	0.347	11.658	0.070	37.796	<4		no target		
4,4'-DDD	263	282	259	52.5	65.2	54.9	268	5	57.5	11.7	291	37	108	-0.3	0.3
2,4'-DDT	7.78	7.55	7.70	5.34	7.26	6.00	7.68	1.52	6.20	15.73	11.4	2.5	no target	-1.3	0.1
cis-nonachlor	4.58	6.41	5.19	5.87	8.59	4.91	5.39	17.28	6.46	29.56	5.50	1.97	3.70	-0.1	1.2
4,4'-DDT	259	133	184	37.2	57.1	30.1	192	33	41.5	33.7	595	81	119	-2.7	2.2
mirex							NA	NA	NA	NA	<2		no target		
endosulfan sulfate							NA	NA	NA	NA	<2		no target		
chlorpyrifos							NA	NA	NA	NA	<3		no target		

Laboratory: 12

Pesticides in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		20		80	
Qualitative		0		0	
Not Determined		5		20	

Category		Number by Category		z (s)		p (15%)	
< 2		10		10		11	
2 to 3		2		1		1	
> 3		0		1		0	

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

PCBs

[illegible]

Laboratory: 12

	Reported Results	No. of Analytes	%
	Quantitative	21	84
	Qualitative	0	0
	Not Determined	4	16

Water in Sediment X

Water in Sediment X									
Sediment X, %			SRM 1944, %			Sediment X, %		SRM 1944, %	
S 1	S 2	S 3	S 1	S 2	S 3	mean, %	%RSD	assigned	95% CL
54.1	54.1	54.2				54.1	0.1	47.1	1.3
						mean, %	%RSD	target	95% CL
								z (25%)	p (15%)
								0.6	1.9
									0.0

^az- and p-scores > 3 are bolded.^bCertified material reference values are **bolded**.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a			
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		z-score (25%)	z-score (s)	p-score (15%)			
		1/20/01 S1	1/20/01 S2	1/20/01 S3	1/20/01 S1	1/20/01 S2	1/20/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL						
naphthalene		614	609	470	996	726	1012	564	14	911	18		418	43	1650	310	1.4	1.9	1.0		
2-methylnaphthalene		1124	1040	839	637	467	639	1001	15	581	17		277	26	950	50	10.4	18.5	1.0		
1-methylnaphthalene		648	582	473	332	253	331	568	16	305	15		108	15	520	30	17.0	18.6	1.0		
biphenyl		113	119	101	217	172	211	111	8	200	12		87.2	18.0	320	70	1.1	0.7	0.6		
2,6-dimethylnaphthalene		458	454	372	652	509	651	428	11	604	14		175	29	755	156	5.8	5.4	0.8		
acenaphthylene		223	246	211	936	831	901	227	8	889	6		99.2	40.9	546	266	5.1	1.7	0.5		
acenaphthene		89.6	128	79.0	320	256	286	98.9	26.1	287	11		73.0	10.6	570	30	1.4	1.4	1.7		
1,6,7-trimethylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		95.5	21.1	462	133					
fluorene		144	172	138	540	470	491	151	12	500	7		104	10	600	50	1.8	2.3	0.8		
phenanthrene		761	1025	897	4633	4651	4922	894	15	4735	3		867	82	5270	220	0.1	0.2	1.0		
anthracene		192	235	202	978	1063	1084	210	11	1042	5		317	50	1770	330	-1.4	-1.1	0.7		
1-methylphenanthrene		165	199	179	1277	1238	1313	181	9	1276	3		173	25	1700	100	0.2	0.2	0.6		
fluoranthene		2520	2816	2541	8110	7994	8319	2626	6	8141	2		2533	203	8920	320	0.1	0.2	0.4		
pyrene		2181	2341	2244	7123	8207	8584	2255	4	7971	10		2477	247	9700	420	-0.4	-0.4	0.2		
benz[a]anthracene		626	790	704	4584	4232	4334	707	12	4383	4		880	99	4720	110	-0.8	-0.9	0.8		
chrysene		810	959	886	4962	4434	4605	885	8	4667	6		864	328	4860	100	0.1	0.2	0.6		
triphenylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		<400	0	1040	270					
benzo[b]fluoranthene		1436	1601	1405	6785	5440	6123	1481	7	6116	11		1220	158	3870	420	0.9	1.1	0.5		
benzo[k]fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		503	83	2090	440					
benzo[j]fluoranthene		458	529	438	1926	1946	2126	475	10	1999	6		666	157	2300	200	-1.1	-0.9	0.7		
benzo[e]pyrene		803	852	738	3601	2883	3169	798	7	3218	11		1072	110	3280	110	-1.0	-1.4	0.5		
benzo[a]pyrene		85.5	154	107	1578	1635	1642	116	30	1618	2		845	74	4300	130	-3.5	-5.1	2.0		
perylene		101	145	112	809	735	723	119	19	756	6		366	45	1170	240	-2.7	-3.0	1.3		
indeno[1,2,3-cd]pyrene		535	508	444	2128	1669	1675	496	9	1824	14		881	84	2780	100	-1.8	-2.4	0.6		
dibenz[a,h]anthracene		116	107	110	570	434	395	111	4	466	20		92.4	66.2	424	69	0.8	0.3	0.3		
benzo[ghi]perylene		547	493	430	1980	1545	1509	490	12	1678	16		899	108	2840	100	-1.8	-2.2	0.8		
Laboratory: 13														Number by Category							
PAH in Sediment X														Category		z (25%)		z (s)		p (15%)	
														<2		17		15		22	
														2 to 3		1		4		1	
														>3		5		4		0	

Laboratory: 13
PAH in Sediment X

Reported Results		No. of Analytes	
Quantitative	23	Quantitative	89
Qualitative	0	Qualitative	0
Not Determined	3	Not Determined	12

Number by Category		z (25%)		p (15%)	
Category	z (25%)	z (s)	p (15%)	Category	z (25%)
< 2	17	15	22	< 2	17
2 to 3	1	4	1	2 to 3	1
> 3	5	4	0	> 3	5

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

Pesticides	Analysis date	Data as submitted by laboratory														Material reference values				Performance scores ^a									
		Sediment X, ng/g dry						SRM 1944, ng/g dry						Sediment X		SRM 1944, ng/g dry		Sediment X											
		1/20/01	1/26/01	2/2/01	S1	S2	S3	lab mean	lab	%RSD	ng/g dry	lab mean	lab	%RSD	ng/g dry	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)									
alpha-HCH	2.66	3.00	3.20	3.02	3.15	3.10	2.95	9.24	3.09	2.12	hexachlorobenzene	3.48	3.53	3.85	5.72	5.68	5.62	3.62	5.55	5.67	0.89	1.42	1.11	2.00	0.30	4.3	3.4	0.6	
	12.7	13.9	16.7	11.9	11.2	11.4	14.4	14.2	11.5	3.1		5.47	1.04	6.03	0.35	no target	gamma-HCH												
	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	NA	<0.60	NA		<0.60	NA	<0.60	NA	no target													
<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	NA	<0.60	NA	<0.60	NA	<0.60	NA	no target	beta-HCH													
heptachlor	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	NA	<0.60	NA	<0.60	NA	<0.60	NA	no target		aldrin												
heptachlor epoxide	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	NA	<0.60	NA	<0.60	NA	<0.60	NA	no target														
oxychlordane	5.80	6.33	6.84	7.82	7.05	7.44	6.32	8.22	7.44	5.18	23.1	26.7	32.0	12.5	12.3	13.4		27.3	16.4	12.73	4.60	23.4	3.6	no target					
trans-chlordane	58.7	53.8	57.3	19.6	19.4	23.8	56.6	4.5	20.9	11.9	2,4'-DDE	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	48.6	4.5	19.0	3.0	4.5	19.0	3.0	0.7	1.3	0.3		
endosulfan I	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	NA	<0.60	NA		<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<3											
cis-chlordane	18.5	21.7	24.7	16.1	15.4	15.4	21.6	14.3	15.6	2.6		18.5	21.7	24.7	16.1	15.4	15.4	18.1	3.0	16.5	0.8	11.2	1.3	8.20	0.51	4.2	5.3	0.5	
trans-nonachlor	21.8	25.2	22.1	8.69	8.24	9.86	23.0	8.2	8.93	9.36	dieldrin	9.67	12.1	12.1	10.3	10.2	11.5	11.3	12.4	10.7	6.8	6.90	1.61	8.00	4.00	2.5	2.0	0.8	
4,4'-DDE	160	160	153	86.3	81.9	85.4	158	3	84.5	2.7		160	160	153	86.3	81.9	85.4	153	17	86.0	12.0	153	17	86.0	12.0	0.1	0.2	0.2	
2,4'-DDD	63.2	67.6	68.9	43.6	36.6	46.5	66.6	4.5	42.2	12.1		63.2	67.6	68.9	43.6	36.6	46.5	66.6	4.5	42.2	12.1	89.4	17.3	38.0	8.0	-1.0	-0.8	0.3	
endrin	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	NA	<0.60	NA	endosulfan II	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<2											
4,4'-DDD	302	297	283	119	110	118	294	3	116	4		<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<4											
2,4'-DDT	15.2	13.6	14.7	9.75	10.2	9.23	14.5	5.6	9.73	4.99		302	297	283	119	110	118	291	37	108	16	11.4	2.5	no target		0.0	0.1	0.2	
cis-nonachlor	8.03	9.06	10.7	4.48	3.57	4.23	9.26	14.54	4.09	11.49	4,4'-DDT	727	725	692	129	134	143	715	3	135	5	5.50	1.97	3.70	0.70	2.7	1.6	1.0	
4,4'-DDT	<0.60	<0.60	<0.60	3.20	5.54	5.29	<0.60	NA	4.68	27.5		<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<2											
mirex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<2											
endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2											
chlorpyrifos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3											

Laboratory: 13

Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	15	60
Qualitative	8	32
Not Determined	2	8

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	9	11	13
2 to 3	2	0	0
> 3	2	2	0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 13

Reporting Date: 2/6/01

(data reported as if three figures were significant)

Analysis date	PCBs	Data as submitted by laboratory										Material reference values			Performance scores ^a						
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		Sediment X							
		1/2001 S1	1/2001 S2	1/2001 S3	1/2001 S1	1/2001 S2	1/2001 S3	lab mean ng/g dry	lab %RSD	Sediment X lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%) (s)	p-score (15%) (15%)				
	PCB 8	22.0	25.5	28.0	23.5	23.2	22.6	25.2	12.0	23.1	2.0	14.0	3.2	22.3	2.3	3.2	1.9	0.8			
	PCB 18	41.7	41.3	45.0	48.4	59.9	58.1	42.7	4.8	55.5	11.2	29.6	5.1	51.0	2.6	1.8	1.3	0.3			
	PCB 28	62.2	61.5	63.5	78.9	81.9	87.6	62.4	1.6	82.8	5.3	54.4	7.7	80.8	2.7	0.6	0.6	0.1			
	PCB 31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46.2	9.0	78.7	1.6						
	PCB 44	44.4	44.3	46.4	62.8	57.5	62.9	45.0	2.6	61.1	5.1	40.7	4.9	60.2	2.0	0.4	0.5	0.2			
	PCB 49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.7	5.8	53.0	1.7						
	PCB 52	62.9	64.0	70.0	79.5	71.5	84.2	65.6	5.8	78.4	8.2	55.3	7.7	79.4	2.0	0.7	0.7	0.4			
	PCB 66	69.5	65.9	69.7	78.2	75.6	81.5	68.4	3.1	78.4	3.8	49.1	6.9	71.9	4.3	1.6	1.4	0.2			
	PCB 95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.4	5.8	65.0	8.9						
	PCB 99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.5	4.6	37.5	2.4						
	PCB 101	72.4	76.5	83.1	85.9	87.3	86.9	77.3	7.0	86.7	0.8	51.4	6.2	73.4	2.5	2.0	2.1	0.5			
	PCB 105	16.0	17.4	18.7	25.2	23.6	25.4	17.4	7.8	24.7	4.0	15.8	2.1	24.5	1.1	0.4	0.4	0.5			
	PCB 118	49.9	45.3	47.6	59.6	57.7	62.8	47.6	4.8	60.0	4.3	34.6	4.9	58.0	4.3	1.5	1.3	0.3			
	PCB 128	10.8	11.9	11.7	9.21	10.3	10.4	11.5	5.1	9.97	6.62	6.98	1.11	8.47	0.28	2.6	2.2	0.3			
	PCB 138	48.1	50.9	54.4	64.4	62.0	64.6	51.1	6.2	63.7	2.3	48.2	8.1	62.1	3.0	0.2	0.2	0.4			
	PCB 149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38.8	5.6	49.7	1.2						
	PCB 153	54.2	55.8	55.9	70.9	67.8	75.6	55.3	1.7	71.4	5.5	49.6	8.9	74.0	2.9	0.5	0.3	0.1			
	PCB 156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.30	2.42	6.52	0.66						
	PCB 170	18.2	20.2	20.5	21.1	20.9	28.0	19.6	6.4	23.3	17.3	15.6	2.5	22.6	1.4	1.0	0.9	0.4			
	PCB 180	35.0	44.3	42.7	49.2	47.1	54.8	40.7	12.2	50.4	7.9	30.5	4.5	44.3	1.2	1.3	1.2	0.8			
	PCB 187	20.2	23.5	23.9	24.7	23.3	28.5	22.5	9.0	25.5	10.6	18.5	2.8	25.1	1.0	0.9	0.8	0.6			
	PCB 194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.87	1.12	11.2	1.4						
	PCB 195	2.47	2.93	2.74	3.18	3.72	3.96	2.71	8.52	3.62	11.04	3.18	0.58	3.75	0.39	-0.6	-0.5	0.6			
	PCB 206	16.0	17.2	17.6	9.10	10.1	12.2	16.9	4.9	10.5	15.1	6.05	1.17	9.21	0.51	7.2	5.2	0.3			
	PCB 209	7.85	6.97	7.21	6.23	8.51	7.08	7.34	6.19	7.27	15.84	5.49	0.86	6.81	0.33	1.4	1.2	0.4			
	Laboratory: 13											Reported Results		No. of Analytes		Number by Category					
	PCBs in Sediment X	Sediment X, %					SRM 1944, %					Sediment X, %		Sediment X, %		Category		z (25%)		p (15%)	
		S1	S2	S3	S1	S2	S3	mean, %	%RSD	mean, %	%RSD	assigned	95% CL	target	95% CL	z (25%)	z (s)	z (s)	z (s)	p (15%)	p (15%)
	Water in Sediment X	450	450	447				44.9	0.4			47.1	1.3			-0.2	-0.6	-0.6	-0.6	0.0	0.0
	Water																				

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X		p-score (15%)
		1/1/01	1/1/01	1/1/01	1/1/01	1/1/01	1/1/01	1/1/01	1/1/01	1/1/01	1/1/01	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	z-score (25%)	
naphthalene												NA	NA	418	43	1650		
2-methylnaphthalene		N/A					N/A					NA	NA	277	26	950		
1-methylnaphthalene		N/A					N/A					NA	NA	108	15	520		
biphenyl		N/A					N/A					NA	NA	87.2	18.0	320		
2,6-dimethylnaphthalene		N/A					N/A					NA	NA	175	29	755		
acenaphthylene		208									208	NA	NA	99.2	40.9	546	4.4	1.4
acenaphthene		125					559				125	NA	NA	73.0	10.6	570	2.8	2.8
1,6,7-trimethylnaphthalene		N/A					N/A				NA	NA	NA	95.5	21.1	462		
fluorene		269					984				269	NA	NA	104	10	600	6.3	8.2
phenanthrene		1210					12000				1210	NA	NA	867	82	5270	1.6	2.1
anthracene		469					5200				469	NA	NA	317	50	1770	1.9	1.5
1-methylphenanthrene		N/A					N/A				NA	NA	NA	173	25	1700		
fluoranthene		2992					19000				2992	NA	NA	2533	203	8920	0.7	1.2
pyrene		2760					25000				2760	NA	NA	2477	247	9700	0.5	0.6
benz[a]anthracene		1370					1480				1370	NA	NA	880	99	4720	2.2	2.6
chrysene		722					6150				722	NA	NA	864	328	4860	-0.7	-1.1
triphenylene		N/A					N/A				NA	NA	NA	<400	0	1040		
benzo[b]fluoranthene		921					3250				921	NA	NA	1220	158	3870	-1.0	-1.3
benzo[k]fluoranthene		N/A					N/A				NA	NA	NA	503	83	2090		
benzo[j]fluoranthene		579					2470				579	NA	NA	666	157	2300	-0.5	-0.4
benzo[e]pyrene		N/A					N/A				NA	NA	NA	1072	110	3280		
benzo[a]pyrene		969					4070				969	NA	NA	845	74	4300	0.6	0.9
perylene		N/A					N/A				NA	NA	NA	366	45	1170		
indeno[1,2,3-cd]pyrene		87.7					2030				87.7	NA	NA	881	84	2780	-3.6	-4.8
dibenz[a,h]anthracene		27.0					412				27.0	NA	NA	92.4	66.2	424	-2.8	-1.2
benzo[ghi]perylene		85.9					2090				85.9	NA	NA	899	108	2840	-3.6	-4.3

Laboratory: 14		PAH in Sediment X	
Reported Results		No. of Analytes	
Quantitative		15	
Qualitative		0	
Not Determined		11	

Category		Number by Category	
z (25%)		z (s)	
< 2		9	
2 to 3		3	
> 3		3	

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

Sample: QA00SEDI0 - Marine Sediment X

Reporting Date: 1/1/01

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry	Sediment X		
	1/1/01	S 1	S 2	S 3	S 1	S 2	S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	p-score (15%)
alpha-HCH	<1				<1			<1	NA	<1	NA	1.42	1.11	2.00	0.30	
hexachlorobenzene	9.25				7.99			9.25	NA	7.99	NA	5.47	1.04	6.03	0.35	2.8
gamma-HCH	<1				<1			<1	NA	<1	NA	<4		no target		2.1
beta-HCH	<1				<1			<1	NA	<1	NA	<2		no target		
heptachlor	<1				<1			<1	NA	<1	NA	<4		no target		
aldrin	<1				<1			<1	NA	<1	NA	<4		no target		
heptachlor epoxide	<1				0.00			<1	NA	NA	NA	<6		no target		
oxychlorodane	N/A				N/A			N/A	NA	N/A	NA	<6		no target		
trans-chlordane	2.82				8.26			2.82	NA	8.26	NA	23.4	3.6	no target		-3.5
2,4'-DDE	1.84							1.84	NA	NA	NA	48.6	4.5	19.0	3.0	-3.8
endosulfan I	N/A				N/A			N/A	NA	N/A	NA	<3		no target		-7.5
cis-chlordane	9.88				15.3			9.88	NA	15.3	NA	18.1	3.0	16.5	0.8	-1.8
trans-nonachlor	10.8				6.16			10.8	NA	6.16	NA	11.2	1.3	8.20	0.51	-0.1
dieldrin	<1				<1			<1	NA	<1	NA	6.90	1.61	8.00	4.00	-3.4
4,4'-DDE	22.1							22.1	NA	NA	NA	153	17	86.0	12.0	-4.3
2,4'-DDD	8.40							8.40	NA	NA	NA	89.4	17.3	38.0	8.0	-2.8
endrin	<1							<1	NA	NA	NA	<2		no target		
endosulfan II	N/A				N/A			N/A	NA	N/A	NA	<4		no target		
4,4'-DDD	<1							<1	NA	NA	NA	291	37	108	16	
2,4'-DDT	<1				122			<1	NA	122	NA	11.4	2.5	no target		
cis-nonachlor	0.523				4.14			0.523	NA	4.14	NA	5.50	1.97	3.70	0.70	-3.6
4,4'-DDT	5.50				2.45			5.50	NA	2.45	NA	595	81	119	11	-4.0
mirex	<1				<1			<1	NA	<1	NA	<2		no target		
endosulfan sulfate	N/A				N/A			N/A	NA	N/A	NA	<2		no target		
chlorpyrifos	N/A				N/A			N/A	NA	N/A	NA	<3		no target		

Laboratory: 14
Pesticides in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		9		36	
Qualitative		16		64	
Not Determined		0		0	

Category		Number by Category		z (25%)		z (s)		p (15%)	
< 2		2		2		2		0	
2 to 3		1		1		3		0	
> 3		6		6		4		0	

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 14

Reporting Date: 1/1/01

(data reported as if three figures were significant)

PCBs																																																
Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a																																	
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry	SRM 1944, ng/g dry	target value ^b	95% CL	assigned value	95% CL	z-score (25%)	z-score (s)	p-score (15%)																													
	1/1/01	1/1/01	1/1/01	1/1/01	1/1/01	1/1/01	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	14.0	3.2	22.3	2.3	29.6	5.1	51.0	2.6	-3.2	-2.3																												
PCB 8	<1			16.3			<1	NA	16.3	NA																																						
PCB 18	6.02			44.3			6.02	NA	44.3	NA																																						
PCB 28	13.0			88.2			13.0	NA	88.2	NA																																						
PCB 31	N/A			N/A			N/A	NA	N/A	NA																																						
PCB 44	7.35			61.0			7.35	NA	68.0	NA																																						
PCB 49	N/A			N/A			N/A	NA	N/A	NA																																						
PCB 52	48.0						48.0	NA	NA	NA																																						
PCB 66	30.0			68.0			30.0	NA	68.0	NA																																						
PCB 95	N/A			N/A			N/A	NA	N/A	NA																																						
PCB 99	N/A			N/A			N/A	NA	N/A	NA																																						
PCB 101	8.55						8.55	NA	NA	NA																																						
PCB 105	3.70						3.70	NA	NA	NA																																						
PCB 118	14.6			35.5			14.6	NA	35.5	NA																																						
PCB 128	5.40			7.30			5.40	NA	7.30	NA																																						
PCB 138	6.81			59.2			6.81	NA	59.2	NA																																						
PCB 149	N/A			N/A			N/A	NA	N/A	NA																																						
PCB 153	15.3			85.1			15.3	NA	85.1	NA																																						
PCB 156	N/A			N/A			N/A	NA	N/A	NA																																						
PCB 170	2.02			24.8			2.02	NA	24.8	NA																																						
PCB 180	2.14			48.1			2.14	NA	48.1	NA																																						
PCB 187	N/A						N/A	NA	NA	NA																																						
PCB 194	N/A			N/A			N/A	NA	N/A	NA																																						
PCB 195	<1						<1	NA	NA	NA																																						
PCB 206	2.28						2.28	NA	NA	NA																																						
PCB 209	0.00						NA	NA	NA	NA																																						
Laboratory: 14																																																
PCBs In Sediment X																																																
<table><tr><th colspan="2">Reported Results</th><th colspan="2">No. of Analytes</th><th colspan="2">%</th></tr><tr><td>Quantitative</td><td></td><td>14</td><td>56</td><td></td><td></td></tr><tr><td>Qualitative</td><td></td><td>11</td><td>44</td><td></td><td></td></tr><tr><td>Not Determined</td><td></td><td>0</td><td>0</td><td></td><td></td></tr></table>																	Reported Results		No. of Analytes		%		Quantitative		14	56			Qualitative		11	44			Not Determined		0	0										
Reported Results		No. of Analytes		%																																												
Quantitative		14	56																																													
Qualitative		11	44																																													
Not Determined		0	0																																													
<table><tr><th colspan="2">Category</th><th colspan="2">Number by Category</th><th colspan="2">z (25%)</th><th colspan="2">p (15%)</th></tr><tr><td>< 2</td><td></td><td>3</td><td>6</td><td></td><td></td><td></td><td></td></tr><tr><td>2 to 3</td><td></td><td>4</td><td>5</td><td></td><td></td><td></td><td></td></tr><tr><td>> 3</td><td></td><td>7</td><td>3</td><td></td><td></td><td></td><td></td></tr></table>																	Category		Number by Category		z (25%)		p (15%)		< 2		3	6					2 to 3		4	5					> 3		7	3				
Category		Number by Category		z (25%)		p (15%)																																										
< 2		3	6																																													
2 to 3		4	5																																													
> 3		7	3																																													
Water In Sediment X																																																
Sediment X, %					SRM 1944, %					Sediment X, %			SRM 1944, %																																			
S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	assigned	95% CL	target	95% CL	z (25%)	z (s)	p (15%)																																
										47.1	1.3																																					
water																																																

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PAH		Data as submitted by laboratory										Material reference values			Performance scores ^a		
Analysis date	Sediment X, ng/g dry	SRM 1944, ng/g dry			Sediment X			SRM 1944			Sediment X, ng/g dry	assigned value	95% CL	target value ^b	95% CL	Sediment X	
	11/16/00 S1	11/16/00 S2	11/16/00 S3	11/16/00 S1	11/16/00 S2	11/16/00 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD						z-score (25%)	p-score (15%)
naphthalene	294	278	300	791	746	879	291	4	805	8	418	43	1650	310	-1.2	-1.7	0.3
2-methylnaphthalene	199	197	219	524	448	533	205	6	502	9	277	26	950	50	-1.0	-1.8	0.4
1-methylnaphthalene	94.9	94.9	101	463	403	441	96.9	3.6	436	7	108	15	520	30	-0.4	-0.4	0.2
biphenyl	90.9	94.9	103	215	188	230	96.3	6.4	211	10	87.2	18.0	320	70	0.4	0.3	0.4
2,6-dimethylnaphthalene	215	221	242	874	738	852	226	6	821	9	175	29	755	156	1.2	1.1	0.4
acenaphthylene	30.8	64.9	28.7	NA	NA	NA	41.5	49.0	NA	NA	99.2	40.9	546	266	-2.3	-0.8	3.3
acenaphthene	61.6	53.4	57.1	422	401	403	57.4	7.2	409	3	73.0	10.6	570	30	-0.9	-0.9	0.5
1,6,7-trimethylnaphthalene	108	110	123	493	467	496	114	7	485	3	95.5	21.1	462	133	0.8	0.6	0.5
fluorene	95.1	107	99.1	652	643	659	100	6	651	1	104	10	600	50	-0.1	-0.2	0.4
phenanthrene	599	585	585	4180	4100	3940	590	1	4073	3	867	82	5270	220	-1.3	-1.7	0.1
anthracene	171	252	165	1200	1080	NA	196	25	1140	7	317	50	1770	330	-1.5	-1.2	1.7
1-methylphenanthrene	122	126	116	992	928	941	121	4	954	4	173	25	1700	100	-1.2	-1.2	0.3
fluoranthene	2080	2200	2100	7420	7590	7090	2127	3	7337	4	2533	203	8920	320	-0.6	-1.1	0.2
pyrene	2050	2080	1990	7810	7880	7470	2040	2	7720	3	2477	247	9700	420	-0.7	-0.9	0.1
benzo[a]anthracene	645	682	717	3150	2950	3520	681	5	3207	9	880	99	4720	110	-0.9	-1.1	0.4
chrysene	1030	1110	1080	4320	3820	4150	1073	4	4097	6	864	328	4860	100	1.0	1.6	0.3
triphenylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<400	0	1040	270			
benzo[b]fluoranthene	2700	2660	2380	8780	8260	7180	2580	7	8073	10	1220	158	3870	420	4.5	5.8	0.5
benzo[k]fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	503	83	2090	440			
benzo[j]fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	666	157	2300	200			
benzo[e]pyrene	1240	1100	1070	3380	3280	3070	1137	8	3243	5	1072	110	3280	110	0.2	0.3	0.5
benzo[a]pyrene	880	857	789	4110	4010	3240	842	6	3787	13	845	74	4300	130	0.0	0.0	0.4
perylene	477	437	462	1320	1270	1150	459	4	1247	7	366	45	1170	240	1.0	1.1	0.3
indeno[1,2,3-cd]pyrene	814	563	787	2860	2350	2110	721	19	2440	16	881	84	2780	100	-0.7	-1.0	1.3
dibenz[a,h]anthracene	175	151	173	787	669	NA	166	8	728	11	92.4	66.2	424	69	3.2	1.4	0.5
benzo[ghi]perylene	963	720	830	2850	2560	2230	838	15	2547	12	899	108	2840	100	-0.3	-0.3	1.0

Laboratory: 15

PAH in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		23		89	
Qualitative		0		0	
Not Determined		3		12	

Category		Number by Category	
<2		z (25%)	
2 to 3		z (s)	
>3		p (15%)	

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 15
Reporting Date: 2/12/01

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		SRM 1944		Sediment X, ng/g dry		assigned value	95% CL	target value ^b	z-score (25%)	z-score (s)	p-score (15%)
	S1	S2	S1	S2	lab mean	lab %RSD	lab mean	lab %RSD	lab mean	lab %RSD						
alpha-HCH	NA	NA	NA	NA	NA	NA	NA	NA	4.50	4.21	3.75	4.88	4.72	3.92	NA	NA
hexachlorobenzene	4.50	4.21	3.75	4.88	4.72	3.92	NA	NA	4.51	11.41	5.47	1.04	6.03	0.35	-1.0	0.6
gamma-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target			
beta-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target			
heptachlor	2.83	<1.0	<1.0	<1.0	2.83	NA	NA	NA	2.83	NA	<4		no target			
aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target			
heptachlor epoxide	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<6		no target			
oxychlorodane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<6		no target			
trans-chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.4	3.6	no target			
2,4'-DDE	59.9	63.4	61.9	27.4	32.0	36.8	61.7	2.8	32.1	14.7	48.6	4.5	19.0	3.0	1.1	0.2
endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3		no target			
cis-chlordane	22.1	25.0	24.2	20.5	21.8	23.3	23.8	6.3	21.9	6.4	18.1	3.0	16.5	0.8	1.3	0.4
trans-nonachlor	15.0	15.6	16.2	12.6	13.6	15.0	15.6	3.8	13.7	8.8	11.2	1.3	8.20	0.51	1.6	0.3
dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.90	1.61	8.00	4.00		
4,4'-DDE	205	218	199	79.9	100	NA	207	5	90.0	15.8	153	17	86.0	12.0	1.4	0.3
2,4'-DDD	105	139	123	28.2	34.2	49.8	122	14	37.4	29.8	89.4	17.3	38.0	8.0	1.5	0.9
endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target			
endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target			
4,4'-DDD	353	459	406	91.3	122	121	406	13	111	16	291	37	108	16	1.6	0.9
2,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11.4	2.5	no target			
cis-nonachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.50	1.97	3.70	0.70		
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	595	81	119	11		
mirex	<1.0	<1.0	<1.0	NA	NA	NA	<1.0	NA	NA	NA	<2		no target			
endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target			
chlorpyrifos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3		no target			

Laboratory: 15

Pesticides In Sediment X

Reported Results	No. of Analytes	%
Quantitative	8	32
Qualitative	2	8
Not Determined	15	60

Category	z (25%)	z (s)	p (15%)
<2	7	6	7
2 to 3	0	1	0
>3	0	0	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 15

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 2/12/01

(data reported as if three figures were significant)

Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a						
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X			SRM 1944			Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X						
	11/16/00 S1	11/16/00 S2	11/16/00 S3	11/16/00 S1	11/16/00 S2	11/16/00 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)				
PCB 8	10.6	11.1	9.12	22.1	20.1	20.6	10.3	10.0	20.9	5.0	20.9	5.0	14.0	3.2	22.3	2.3	-1.1	-0.6	0.7				
PCB 18	27.4	28.8	20.9	57.6	52.1	59.7	25.7	16.4	56.5	7.9	56.5	7.9	29.6	5.1	51.0	2.6	-0.5	-0.4	1.1				
PCB 28	50.3	54.8	38.9	55.2	54.5	46.5	48.0	17.1	52.1	9.3	52.1	9.3	54.4	7.7	80.8	2.7	-0.5	-0.5	1.1				
PCB 31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46.2	9.0	78.7	1.6							
PCB 44	53.3	51.8	50.3	56.5	58.9	65.7	51.8	2.9	60.4	7.9	60.4	7.9	40.7	4.9	60.2	2.0	1.1	1.2	0.2				
PCB 49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37.7	5.8	53.0	1.7							
PCB 52	102	80.9	93.2	96.1	100	98.1	92.0	11.5	98.1	2.0	98.1	2.0	55.3	7.7	79.4	2.0	2.7	2.5	0.8				
PCB 66	58.5	59.0	57.3	65.9	63.8	69.5	58.3	1.5	66.4	9.3	66.4	9.3	49.1	6.9	71.9	4.3	0.7	0.7	0.1				
PCB 95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.4	5.8	65.0	8.9							
PCB 99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.5	4.6	37.5	2.4							
PCB 101	46.4	50.8	40.8	50.6	51.7	51.9	46.0	10.9	51.4	1.4	51.4	1.4	51.4	6.2	73.4	2.5	-0.4	-0.4	0.7				
PCB 105	20.8	20.6	19.6	20.7	22.6	27.9	20.3	3.2	23.7	15.7	23.7	15.7	15.8	2.1	24.5	1.1	1.1	1.1	0.2				
PCB 118	43.3	43.2	38.0	38.3	42.6	58.5	41.5	7.3	46.5	22.9	46.5	22.9	34.6	4.9	58.0	4.3	0.8	0.7	0.5				
PCB 128	18.3	16.7	15.9	19.8	17.9	23.6	17.0	7.2	20.4	14.2	20.4	14.2	6.98	1.11	8.47	0.28	5.7	5.0	0.5				
PCB 138	63.8	71.0	60.1	71.3	78.6	NA	65.0	8.5	75.0	6.9	75.0	6.9	48.2	8.1	62.1	3.0	1.4	1.1	0.6				
PCB 149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38.8	5.6	49.7	1.2							
PCB 153	52.6	53.5	53.0	50.9	51.6	67.6	53.0	0.9	56.7	16.7	56.7	16.7	49.6	8.9	74.0	2.9	0.3	0.2	0.1				
PCB 156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.30	2.42	6.52	0.66							
PCB 170	24.4	25.1	22.7	18.2	27.5	26.5	24.1	5.1	24.1	21.2	24.1	21.2	15.6	2.5	22.6	1.4	2.2	1.9	0.3				
PCB 180	39.5	39.8	36.2	39.4	42.9	44.7	38.5	5.2	42.3	6.4	42.3	6.4	30.5	4.5	44.3	1.2	1.0	0.9	0.3				
PCB 187	21.6	23.3	20.9	24.2	25.6	25.8	21.9	5.6	25.2	3.5	25.2	3.5	18.5	2.8	25.1	1.0	0.8	0.7	0.4				
PCB 194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.87	1.12	11.2	1.4							
PCB 195	4.93	3.82	6.27	4.86	5.06	6.16	5.01	24.50	5.36	13.06	5.36	13.06	3.18	0.58	3.75	0.39	2.3	1.7	1.6				
PCB 206	9.76	7.80	8.78	12.4	8.57	7.49	8.78	11.16	9.49	27.20	9.49	27.20	6.05	1.17	9.21	0.51	1.8	1.3	0.7				
PCB 209	7.19	6.62	6.60	8.91	6.04	7.99	6.80	4.92	7.65	19.16	7.65	19.16	5.49	0.86	6.81	0.33	1.0	0.8	0.3				
Laboratory: 15 PCBs in Sediment X																	Number by Category						
																	Category	z (25%)		z (s)		p (15%)	
																	< 2	14		16		18	
																	2 to 3	3		1		0	
																	> 3	1		1		0	
Water in Sediment X																	Sediment X, %						
			Sediment X, %			SRM 1944, %			Sediment X, %			SRM 1944, %			Sediment X, %								
			S1	S2	S3	S1	S2	S3	mean, %			46.0	0.2	target			95% CL	z (25%)	z (s)	p (15%)			
water			45.9	46.0	46.1							47.1	1.3					-0.1	-0.3	0.0			
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														
									ng/g dry														
									%RSD														
									lab														

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X		p-score (15%)
		S1	S2	S3	8/18/00	8/18/00	S1	S2	S3	8/18/00	8/18/00	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	target value ^b	95% CL	z-score (25%)
naphthalene		86.1	218	59.6	465	683	645					121	70	598	19	1650	310	-2.8
2-methylnaphthalene		84.5	149	85.6	356	443	417					106	35	405	11	950	50	-2.5
1-methylnaphthalene		37.1	59.9	38.0	229	271	250					45.0	28.7	250	8	520	30	-2.3
biphenyl		42.6	63.0	53.7	113	145	130					53.1	19.2	129	12	320	70	-1.6
2,6-dimethylnaphthalene		88.5	134	104	429	524	471					109	21	475	10	755	156	-1.5
acenaphthylene		27.0	20.1	22.6	134	200	132					23.2	15.0	155	25	546	266	-3.1
acenaphthene		35.7	52.5	45.0	237	329	291					44.4	19.0	286	16	570	30	-1.6
1,6,7-trimethylnaphthalene		661	38.4	32.8	3110	187	150					244	148	1149	148	462	133	6.2
fluorene		77.0	76.9	64.7	410	583	480					72.9	9.7	491	18	600	50	-1.2
phenanthrene		712	630	577	3350	4580	3860					640	11	3930	16	5270	220	-1.0
anthracene		222	195	168	724	1010	817					195	14	850	17	1770	330	-1.5
1-methylphenanthrene		128	105	94.5	787	978	804					109	16	856	12	1700	100	-1.5
fluoranthene		1920	1390	1210	4330	5480	3890					1507	24	4567	18	8920	320	-1.6
pyrene		2460	2680	2270	6470	8470	6440					2470	8	7127	16	9700	420	0.0
benz[a]anthracene		578	531	498	1970	2280	1780					536	8	2010	13	4720	110	-1.6
chrysene		670	665	588	2170	3360	2490					641	7	2673	23	4860	100	-1.0
triphenylene		na	na	na	na	na	na					NA	NA	NA	NA	1040	270	
benzo[b]fluoranthene		486	402	555	1910	2220	1990					481	16	2040	8	3870	420	-2.4
benzo[k]fluoranthene		na	na	na	na	na	na					NA	NA	NA	NA	2090	440	
benzo[j]fluoranthene		162	172	172	660	858	752					169	3	757	13	2300	200	-3.0
benzo[e]pyrene		194	170	202	1240	1480	1140					189	9	1287	14	3280	110	-3.3
benzo[a]pyrene		257	235	326	1180	1250	1100					273	17	1177	6	4300	130	-2.7
perylene		100	98.9	127	365	506	520					109	15	464	18	1170	240	-2.8
indeno[1,2,3-cd]pyrene		176	125	169	794	1010	906					157	18	903	12	2780	100	-3.3
dibenz[a,h]anthracene		<0.7	40.2	48.9	311	462	272					44.6	13.8	348	29	424	69	-2.1
benzo[ghi]perylene		178	153	211	796	1160	958					181	16	971	19	2840	100	-3.2

Laboratory: 16		No. of Analytes		%	
PAH in Sediment X		Quantitative	24	92	
		Qualitative	0	0	
		Not Determined	2	8	

Number by Category		z (s)		p (15%)	
Category	z (25%)	z (s)	p (15%)	z (s)	p (15%)
<2	11	12	21		
2 to 3	8	3	1		
>3	5	9	2		

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

Pesticides	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X	
		lab S1	lab S2	lab S3	lab S1	lab S2	lab S3	lab S1	lab S2	lab S3	lab mean ng/g dry	lab %RSD	assigned value	target value ^b	95% CL	z-score (25%)	p-score (15%)
alpha-HCH		1.98	0.424	3.18	1.37	2.11	1.68	1.86	74.24	1.72	21.61		1.42	1.11	2.00	1.2	4.9
hexachlorobenzene		5.73	6.92	7.72	5.96	5.67	6.31	6.79	14.75	5.98	5.36		5.47	1.04	6.03	1.0	1.0
gamma-HCH		<0.05	<0.05	<0.05	na	na	na	<0.05	na	na	na		<4		no target		
beta-HCH		<0.12	<0.12	<0.12	na	na	na	<0.12	na	na	na		<2		no target		
heptachlor		3.09	5.79	3.74	na	na	na	4.21	33.50	na	na		<4		no target		
aldrin		4.37	3.91	4.19	na	na	na	4.16	5.58	na	na		<4		no target		
heptachlor epoxide		2.78	3.10	3.92	na	na	na	3.27	18.00	na	na		<6		no target		
oxychlorodane		na	na	na	na	na	na	na	na	na	na		<6		no target		
trans-chlordane		12.2	15.8	15.8	8.20	8.12	9.69	14.6	14.2	8.67	10.20		23.4	3.6	no target	-1.5	0.9
2,4'-DDE		38.1	35.8	35.4	17.9	16.5	19.6	36.4	4.0	18.0	8.6		48.6	4.5	19.0	-1.0	0.3
endosulfan I		<0.04	<0.04	<0.04	na	na	na	<0.04	na	na	na		<3		no target		
cis-chlordane		11.8	14.8	13.4	15.4	15.8	16.8	13.3	11.3	16.0	4.5		18.1	3.0	16.5	-1.0	0.8
trans-nonachlor		9.09	11.0	9.95	8.49	8.45	8.50	10.0	9.6	8.48	0.31		11.2	1.3	8.20	-0.4	0.6
dieldrin		6.07	7.70	6.71	na	na	na	6.83	12.03	na	na		6.90	1.61	8.00	0.0	0.8
4,4'-DDE		172	190	199	81.7	75.1	79.6	187	7	78.8	4.3		153	17	86.0	0.9	0.5
2,4'-DDD		43.5	41.3	43.4	34.9	30.7	40.6	42.7	2.9	35.4	14.0		89.4	17.3	38.0	-2.1	0.2
endrin		<0.17	<0.17	<0.17	na	na	na	<0.17	na	na	na		<2		no target		
endosulfan II		<0.18	<0.18	<0.18	na	na	na	<0.18	na	na	na		<4		no target		
4,4'-DDD		233	248	259	92.7	93.9	108	247	5	98.2	8.7		291	37	108	-0.6	0.4
2,4'-DDT		9.40	9.37	9.96	na	na	na	9.58	3.47	na	na		11.4	2.5	no target	-0.6	0.2
cis-nonachlor		4.96	6.36	6.96	3.07	3.65	3.53	6.09	16.84	3.42	8.96		5.50	1.97	3.70	0.4	1.1
4,4'-DDT		565	577	607	124	124	122	583	4	123	1		595	81	119	-0.1	0.2
mirex		3.51	4.89	5.84	na	na	na	4.75	24.68	na	na		<2		no target		
endosulfan sulfate		<0.18	<0.18	<0.18	na	na	na	<0.18	na	na	na		<2		no target		
chlorthrifos		na	na	na	na	na	na	na	na	na	na		<3		no target		

Laboratory: 16		Pesticides in Sediment X	
Category		Number by Category	
z (25%)		z (s)	
< 2		13	
2 to 3		1	
> 3		0	

Reported Results		No. of Analytes	
Quantitative		17	
Qualitative		6	
Not Determined		2	

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 16

Reporting Date: 2/8/01

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory										Material reference values				Performance scores ^a		
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X			SRM 1944, ng/g dry			Sediment X			Sediment X	
	lab S1	lab S2	lab S3	lab S1	lab S2	lab S3	lab mean ng/g dry	lab %RSD	lab %RSD	lab mean ng/g dry	lab %RSD	lab %RSD	assigned value	95% CL	target value ^b	z-score (25%)	p-score (15%)
PCB 8	18.9	18.4	22.1	22.3	24.4	24.1	19.8	10.1	10.1	23.6	4.8	4.8	14.0	3.2	22.3	1.7	0.7
PCB 18	25.0	24.9	31.6	51.0	53.2	50.1	27.2	14.1	14.1	51.4	3.1	3.1	29.6	5.1	51.0	-0.3	0.9
PCB 28	46.0	51.4	52.3	78.5	78.4	78.5	49.9	6.8	6.8	78.5	0.1	0.1	54.4	7.7	80.8	-0.3	0.5
PCB 31	na	na	na	na	na	na	na	na	na	na	na	na	46.2	9.0	78.7		
PCB 44	31.4	29.0	31.7	58.4	60.0	59.1	30.7	4.8	4.8	59.2	1.4	1.4	40.7	4.9	60.2	-1.0	0.3
PCB 49	23.7	26.1	28.2	54.4	51.9	52.8	26.0	8.7	8.7	58.9	2.4	2.4	37.7	5.8	53.0	-1.2	0.6
PCB 52	30.9	33.8	35.4	78.0	78.3	79.8	33.4	6.8	6.8	78.7	1.2	1.2	55.3	7.7	79.4	-1.6	0.5
PCB 66	45.4	44.1	42.8	74.2	71.2	70.4	44.1	2.9	2.9	71.9	2.8	2.8	49.1	6.9	71.9	-0.4	0.2
PCB 95	na	na	na	na	na	na	na	na	na	na	na	na	31.4	5.8	65.0		
PCB 99	15.7	16.1	18.3	37.4	37.0	39.4	16.7	8.4	8.4	37.9	3.4	3.4	24.5	4.6	37.5	-1.3	0.6
PCB 101	32.3	33.2	33.6	75.1	71.1	71.5	33.0	2.0	2.0	72.6	3.4	3.4	51.4	6.2	73.4	-1.4	0.1
PCB 105	9.21	10.8	10.7	23.6	24.1	23.9	10.2	8.7	8.7	23.9	1.1	1.1	15.8	2.1	24.5	-1.4	0.6
PCB 118	22.6	20.8	23.0	60.9	55.5	60.3	22.1	5.3	5.3	58.9	5.0	5.0	34.6	4.9	58.0	-1.4	0.4
PCB 128	6.58	5.98	6.06	8.41	8.43	8.43	6.21	5.25	5.25	8.42	0.14	0.14	6.98	1.11	8.47	-0.4	0.3
PCB 138	21.8	25.7	21.6	62.8	60.9	61.5	23.0	10.0	10.0	61.7	1.6	1.6	48.2	8.1	62.1	-2.1	0.7
PCB 149	27.0	29.7	28.9	50.3	49.4	50.7	28.5	4.9	4.9	50.1	1.3	1.3	38.8	5.6	49.7	-1.1	0.3
PCB 153	27.0	31.4	35.2	72.7	55.6	72.4	31.2	13.2	13.2	66.9	14.6	14.6	49.6	8.9	74.0	-1.5	0.9
PCB 156	10.5	14.7	16.3	7.14	4.91	7.06	13.8	21.7	21.7	6.4	19.9	19.9	6.30	2.42	6.52	4.8	1.4
PCB 170	8.08	12.0	12.7	23.4	22.7	23.7	10.9	22.8	22.8	23.3	2.2	2.2	15.6	2.5	22.6	-1.2	1.5
PCB 180	14.8	15.6	16.2	44.1	42.4	43.6	15.5	4.5	4.5	43.4	2.0	2.0	30.5	4.5	44.3	-2.0	0.3
PCB 187	8.65	10.2	8.52	26.1	26.0	24.3	9.12	10.24	10.24	25.5	4.0	4.0	18.5	2.8	25.1	-2.0	0.7
PCB 194	5.88	5.63	6.07	10.9	10.7	11.3	5.86	3.77	3.77	11.0	2.0	2.0	7.87	1.12	11.2	-1.0	0.3
PCB 195	2.23	4.07	2.92	3.86	3.54	3.76	3.07	30.25	30.25	3.72	4.40	4.40	3.18	0.58	3.75	-0.1	2.0
PCB 206	2.17	2.88	2.41	9.66	9.58	9.03	2.49	14.52	14.52	9.42	3.64	3.64	6.05	1.17	9.21	-2.4	1.0
PCB 209	5.67	6.58	5.84	6.75	6.65	7.29	6.03	8.02	8.02	6.90	4.99	4.99	5.49	0.86	6.81	0.4	0.5
Laboratory: 16 PCBs in Sediment X																	
Water in Sediment X																	
Sediment X, %			SRM 1944, %			Sediment X, %			SRM 1944, %			Sediment X, %			SRM 1944, %		
S1	S2	S3	S1	S2	S3	mean, %	%RSD	%RSD	mean, %	%RSD	%RSD	assigned	95% CL	target	95% CL	z (25%)	p (15%)
55.4	55.5	54.8				55.2	0.7					47.1	1.3			0.7	0.0
water																	

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

Sample: QA00SED10 - Marine Sediment X (data reported as if three figures were significant)

Reporting Date: 2/1/01

PAH

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Performance scores ^a
		1/25/01 S1	1/25/01 S2	1/25/01 S3	1/25/01 S1	1/25/01 S2	1/25/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
naphthalene	415	458	538	1370	1380	1450	470	13	1400	3	418	43	1650	310	0.5	0.7	0.9	
2-methylnaphthalene	43.3	47.8	62.4	262	192	180	51.2	19.5	211	21	277	26	950	50	-3.3	-5.8	1.3	
1-methylnaphthalene	105	115	153	508	347	360	124	20	405	22	108	15	520	30	0.6	0.7	1.4	
biphenyl	40.9	42.5	45.3	147	106	102	42.9	5.2	118	21	87.2	18.0	320	70	-2.0	-1.3	0.3	
2,6-dimethylnaphthalene	141	153	191	608	548	518	162	16	558	8	175	29	755	156	-0.3	-0.3	1.1	
acenaphthylene	34.9	32.8	47.2	254	230	172	38.3	20.3	219	19	99.2	40.9	546	266	-2.5	-0.8	1.4	
acenaphthene	71.5	72.0	102	419	388	418	81.8	21.3	408	4	73.0	10.6	570	30	0.5	0.5	1.4	
1,6,7-trimethylnaphthalene	181	152	362	784	568	614	231.7	49.1	655	17	95.5	21.1	462	133	5.7	4.6	3.3	
fluorene	112	112	127	534	552	574	117.0	7.4	553	4	104	10	600	50	0.5	0.6	0.5	
phenanthrene	845	869	1120	5780	5230	5720	945	16	5577	5	867	82	5270	220	0.4	0.5	1.1	
anthracene	177	212	256	1010	954	945	215	18	970	4	317	50	1770	330	-1.3	-1.0	1.2	
1-methylphenanthrene	91.4	110	129	698	635	651	110	17	661	5	173	25	1700	100	-1.5	-1.5	1.1	
fluoranthene	1930	1980	2170	8250	6200	6350	2027	6	6933	16	2533	203	8920	320	-0.8	-1.3	0.4	
pyrene	3220	3000	3640	9220	8290	8930	3287	10	8813	5	2477	247	9700	420	1.3	1.6	0.7	
benz[a]anthracene	905	1070	1250	5330	5920	5240	1075	16	5497	7	880	99	4720	110	0.9	1.1	1.1	
chrysene	1090	1190	1340	5020	5080	4780	1207	10	4960	3	864	328	4860	100	1.6	2.6	0.7	
triphenylene	1090	1190	1340	5020	5080	4780	1207	10	4960	3	<400	0	1040	270			0.7	
benzo[b]fluoranthene	1750	2690	2930	6660	6020	7530	2457	25	6737	11	1220	158	3870	420	4.1	5.3	1.7	
benzo[k]fluoranthene	1750	2690	2930	6660	6020	7530	2457	25	6737	11	503	83	2090	440	15.5	211.7	1.7	
benzo[j]fluoranthene	1750	2690	2930	6660	6020	7530	2457	25	6737	11	666	157	2300	200	10.8	8.8	1.7	
benzo[e]pyrene	632	608	786	2080	1970	1990	675	14	2013	3	1072	110	3280	110	-1.5	-2.0	1.0	
benzo[a]pyrene	762	759	987	3880	3680	4080	836	16	3880	5	845	74	4300	130	0.0	-0.1	1.0	
perylene	421	426	622	1360	1350	1490	490	23	1400	6	366	45	1170	240	1.3	1.5	1.6	
indeno[1,2,3-cd]pyrene	778	753	1090	2710	2570	2750	874	21	2677	4	881	84	2780	100	0.0	0.0	1.4	
dibenz[a,h]anthracene	156	146	201	498	551	501	168	17	517	6	92.4	66.2	424	69	3.3	1.4	1.2	
benzo[ghi]perylene	823	732	1100	2810	2520	2640	885	22	2657	5	899	108	2840	100	-0.1	-0.1	1.4	
Laboratory: 17											Reported Results		No. of Analytes		Number by Category			
PAH in Sediment X											Quantitative		26		Category		z (25%)	
											Quantitative		0		<2		z (s)	
											Not Determined		0		2 to 3		p (15%)	
													0		>3		1	

Laboratory: 17

PAH in Sediment X

Reported Results		No. of Analytes	
Quantitative	26	Quantitative	100
Qualitative	0	Qualitative	0
Not Determined	0	Not Determined	0

Number by Category		p (15%)	
Category	z (25%)	z (s)	p (15%)
< 2	17	18	25
2 to 3	2	2	0
> 3	6	5	1

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES			Data as submitted by laboratory																	Material reference values				Performance scores ^a		
			Sediment X, ng/g dry						SRM 1944, ng/g dry			Sediment X			SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		p-score			
			Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	lab mean	%RSD	lab	lab mean	%RSD	lab mean	lab	target value ^b	95% CL	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	(15%)		
Analysis date	alpha-HCH	<0.053	<0.039	<0.15	<0.096	<0.048	<0.025	<0.15	NA	NA	<0.096	NA	NA	2.00	0.30	1.42	1.11	2.00	0.30							
	hexachlorobenzene	6.25	7.87	10.2	4.40	7.17	5.64	8.11	24.49	5.74	24.19	NA	NA	6.03	0.35	5.47	1.04	6.03	0.35	1.9	1.5	1.6				
	gamma-HCH	<0.065	<0.048	<0.11	<0.1	<0.094	<0.057	<0.11	NA	<0.1	NA	NA	NA	no target		<4		no target								
	beta-HCH	<0.093	<0.083	<0.2	<0.088	<0.081	<0.049	<0.2	NA	<0.088	NA	NA	NA	no target		<2		no target								
	heptachlor	<0.31	<0.054	<0.26	<0.11	<0.17	<0.072	<0.31	NA	<0.17	NA	NA	NA	no target		<4		no target								
	aldrin	<0.22	<0.24	<0.17	<0.34	<0.52	<0.11	<0.24	NA	<0.52	NA	NA	NA	no target		<4		no target								
	heptachlor epoxide	0.319	0.382	0.480	0.368	0.556	0.420	0.394	20.609	0.448	21.669	NA	NA	no target		<6		no target								
	oxychlordane	<0.21	<0.21	<0.15	<0.27	<0.45	<0.23	<0.21	NA	<0.45	NA	NA	NA	no target		<6		no target								
	trans-chlordane	4.50	4.67	5.47	6.77	5.56	3.77	4.88	10.61	5.37	28.12	NA	NA	19.0	3.0	23.4	3.6	19.0	3.0	-3.2	-3.3	0.7				
	2,4'-DDE	46.8	48.5	68.8	20.4	22.2	22.3	54.7	22.4	21.6	4.9	NA	NA	no target		48.6	4.5	19.0	3.0	0.5	1.0	1.5				
	endosulfan I	<0.79	<0.78	<0.6	<1.04	<1.66	<0.82	<0.79	NA	<1.66	NA	NA	NA	no target		<3		no target								
	cis-chlordane	10.1	11.1	12.3	16.7	13.1	11.3	11.2	9.9	13.7	20.1	NA	NA	16.5	0.8	18.1	3.0	16.5	0.8	-1.5	-1.3	0.7				
	trans-nonachlor	7.97	8.49	10.2	12.9	9.67	8.96	8.89	13.13	10.5	20.0	NA	NA	8.20	0.51	11.2	1.3	8.20	0.51	-0.8	-1.0	0.9				
	dieldrin	5.65	6.12	6.20	10.6	9.63	7.75	5.99	4.96	9.33	15.54	NA	NA	8.00	4.00	6.90	1.61	8.00	4.00	-0.5	-0.4	0.3				
	4,4'-DDE	119	128	162	66.1	63.7	70.2	136	17	66.7	4.9	NA	NA	86.0	12.0	153	17	86.0	12.0	-0.4	-0.5	1.1				
2,4'-DDD	193	171	217	71.0	71.5	63.5	194	12	68.7	6.5	NA	NA	38.0	8.0	89.4	17.3	38.0	8.0	4.7	3.6	0.8					
endrin	<0.81	<0.8	<0.61	<1.07	<1.7	<0.88	<0.81	NA	<1.7	NA	NA	NA	no target		<2		no target									
endosulfan II	<1.27	<0.77	<0.81	<1.01	<1.97	<0.77	<1.27	NA	<1.97	NA	NA	NA	no target		<4		no target									
4,4'-DDD	380	339	423	134	141	113	381	11	129	11	NA	NA	108	16	291	37	108	16	1.2	1.4	0.7					
2,4'-DDT	18.0	15.4	19.7	5.45	5.36	5.46	17.7	12.2	5.42	1.02	NA	NA	no target		11.4	2.5	no target		2.2	1.6	0.8					
cis-nonachlor	1.02	1.42	1.73	1.48	1.12	1.22	1.39	25.61	1.27	14.59	NA	NA	3.70	0.70	5.50	1.97	3.70	0.70	-3.0	-1.7	1.7					
4,4'-DDT	468	470	614	143	118	115	517	16	125	12	NA	NA	119	11	595	81	119	11	-0.5	-0.6	1.1					
mixtex	0.974	0.634	1.31	1.23	1.98	0.994	0.973	34.750	1.40	36.74	NA	NA	no target		<2		no target									
endosulfan sulfate	<0.57	<0.34	<0.33	<0.46	<0.79	<0.31	<0.57	NA	<0.79	NA	NA	NA	no target		<2		no target									
chlorpyrifos	<1.32	<1.44	<1.02	<2.04	<1.92	<1.32	<1.44	NA	<2.04	NA	NA	NA	no target		<3		no target									

Laboratory: 17

Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	14	56
Qualitative	11	44
Not Determined	0	0

Category	z (25%)	z (s)	p (15%)
<2	8	10	12
2 to 3	2	0	0
>3	2	2	0

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

(data reported as if three figures were significant)

Laboratory No.: 17

Reporting Date: 2/1/01

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a						
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X		p-score (15%)				
		Sample 1 S1	Sample 1 S2	Sample 1 S3	Sample 1 S1	Sample 1 S2	Sample 1 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL		z-score (25%)	z-score (s)		
	PCB 8	8.46	8.15	9.15	14.2	17.3	19.3	8.59	5.96	16.9	15.2	14.0	3.2	22.3	2.3	22.3	2.3	-1.5	-0.9	0.4		
	PCB 18	18.5	18.3	20.6	39.0	43.7	57.7	19.1	6.7	46.8	20.8	29.6	5.1	51.0	2.6	51.0	2.6	-1.4	-1.0	0.4		
	PCB 28	86.4	69.3	88.6	104	104	91.7	81.4	13.0	99.9	7.1	54.4	7.7	80.8	2.7	80.8	2.7			0.9		
	PCB 31	86.4	69.3	88.6	104	104	91.7	81.4	13.0	99.9	7.1	46.2	9.0	78.7	1.6	78.7	1.6			0.9		
	PCB 44	22.4	20.2	27.4	44.0	41.9	47.0	23.3	15.8	44.3	5.8	40.7	4.9	60.2	2.0	60.2	2.0	-1.7	-1.8	1.1		
	PCB 49	28.8	29.9	37.1	53.5	51.7	54.5	31.9	14.1	53.2	7.7	37.7	5.8	53.0	1.7	53.0	1.7	-0.6	-0.6	0.9		
	PCB 52	44.8	47.5	57.6	84.4	83.8	87.5	50.0	13.5	85.2	2.3	55.3	7.7	79.4	2.0	79.4	2.0	-0.4	-0.4	0.9		
	PCB 66	13.7	14.3	29.7	45.0	47.1	48.8	19.2	47.2	47.0	3.1	49.1	6.9	71.9	4.3	71.9	4.3	-2.4	-2.2	3.1		
	PCB 95	16.3	16.7	25.9	42.5	43.6	40.9	19.6	27.7	42.3	3.2	31.4	5.8	65.0	8.9	65.0	8.9	-1.5	-1.6	1.8		
	PCB 99	23.7	22.7	28.6	31.2	32.5	27.7	25.0	12.6	30.5	3.1	24.5	4.6	37.5	2.4	37.5	2.4	0.1	0.1	0.8		
	PCB 101	46.3	42.9	55.4	56.7	62.5	53.8	48.2	13.4	57.7	7.7	51.4	6.2	73.4	2.5	73.4	2.5	-0.3	-0.3	0.9		
	PCB 105	15.0	12.9	17.2	23.4	23.6	23.4	15.0	14.3	23.5	0.5	15.8	2.1	24.5	1.1	24.5	1.1	-0.2	-0.2	1.0		
	PCB 118	31.2	28.8	37.1	52.3	50.5	53.0	32.4	13.2	51.9	2.5	34.6	4.9	58.0	4.3	58.0	4.3	-0.3	-0.2	0.9		
	PCB 128	2.15	3.94	2.71	7.83	5.94	8.00	2.93	31.22	7.26	15.76	6.98	1.11	8.47	0.28	8.47	0.28	-2.3	-2.0	2.1		
	PCB 138	39.3	19.0	29.3	37.4	35.9	38.2	29.2	34.8	37.2	3.1	48.2	8.1	62.1	3.0	62.1	3.0	-1.6	-1.2	2.3		
	PCB 149	39.7	26.9	40.6	54.5	52.4	59.7	35.7	21.4	55.5	6.8	38.8	5.6	49.7	1.2	49.7	1.2	-0.3	-0.4	1.4		
	PCB 153	62.3	43.8	64.9	76.2	82.9	87.2	57.0	20.2	82.1	6.8	49.6	8.9	74.0	2.9	74.0	2.9	0.6	0.4	1.3		
	PCB 156	3.35	3.11	4.27	5.73	5.71	5.73	3.58	17.12	5.72	0.20	6.30	2.42	6.52	0.66	6.52	0.66	-1.7	-0.9	1.1		
	PCB 170	13.4	16.8	21.4	26.3	24.7	24.6	17.2	23.3	25.2	3.8	15.6	2.5	22.6	1.4	22.6	1.4	0.4	0.3	1.6		
	PCB 180	19.7	23.7	31.5	33.4	35.0	33.9	25.0	24.0	34.1	2.4	30.5	4.5	44.3	1.2	44.3	1.2	-0.7	-0.6	1.6		
	PCB 187	10.8	12.8	15.5	19.7	18.2	17.1	13.0	18.1	18.3	7.1	18.5	2.8	25.1	1.0	25.1	1.0	-1.2	-1.1	1.2		
	PCB 194	6.26	5.58	7.63	10.2	10.0	10.1	6.5	16.1	10.1	1.2	7.87	1.12	11.2	1.4	11.2	1.4	-0.7	-0.9	1.1		
	PCB 195	2.14	1.86	2.60	3.35	3.30	3.29	2.2	17.0	3.3	1.0	3.18	0.58	3.75	0.39	3.75	0.39	-1.2	-0.9	1.1		
	PCB 206	4.56	6.22	6.74	8.54	8.37	8.13	5.8	19.5	3.3	2.5	6.05	1.17	9.21	0.51	9.21	0.51	-0.1	-0.1	1.3		
	PCB 209	3.40	4.28	5.06	6.64	6.50	6.67	4.2	19.6	6.6	1.4	5.49	0.86	6.81	0.33	6.81	0.33	-0.9	-0.8	1.3		
Laboratory: 17																				Number by Category		
PCBs In Sediment X																				Category		
																				< 2		
																				2 to 3		
																				> 3		
												</										

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SEDI0 - Marine Sediment X

Laboratory No.: 18

Reporting Date: 2/15/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X	
		23/01	23/01	23/01	23/01	23/01	23/01	23/01	23/01	23/01	23/01	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	p-score (15%)
naphthalene		214	219	229	628	574	638					418	43	1650	310	-1.9	-2.6
2-methylnaphthalene		157	156	162	382	347	393					277	26	950	50	-1.7	-3.0
1-methylnaphthalene		92.7	94.6	94.0	362	360	410					108	15	520	30	-0.5	-0.6
biphenyl		59.8	62.0	64.1	120	115	128					87.2	18.0	320	70	-1.2	-0.7
2,6-dimethylnaphthalene		93.7	97.2	102	289	354	299					175	29	755	156	-1.8	-1.6
acenaphthylene		138	140	144	575	597	617					99.2	40.9	546	266	1.7	0.5
acenaphthene		70.2	72.4	75.7	381	370	400					73.0	10.6	570	30	0.0	0.0
1,6,7-trimethylnaphthalene		107	108	111	260	317	348					95.5	21.1	462	133	0.6	0.4
fluorene		116	118	125	569	561	601					104	10	600	50	0.6	0.8
phenanthrene		894	920	1020	4630	4570	4800					867	82	5270	220	0.4	0.5
anthracene		271	281	292	1070	1090	1120					317	50	1770	330	-0.4	-0.4
1-methylpicnanthrene		243	238	262	1460	1490	1580					173	25	1700	100	1.7	1.8
fluoranthene		2830	2900	3160	8100	7820	8200					2533	203	8920	320	0.7	1.1
pyrene		2600	2650	2870	8500	8380	8630					2477	247	9700	420	0.4	0.5
benz[a]anthracene		1050	1060	1190	4130	4740	4570					880	99	4720	110	1.0	1.2
chrysene		1550	1590	1790	5330	5490	5270					864	328	4860	100		0.5
triphenylene		other	other	other	other	other	other					<400	0	1040	270		
benzo[b]fluoranthene		2990	3070	3310	7340	8250	7820					1220	158	3870	420		0.4
benzo[k]fluoranthene		other	other	other	other	other	other					503	83	2090	440		
benzo[j]fluoranthene		other	other	other	other	other	other					666	157	2300	200		
benzo[e]pyrene		1360	1390	1480	3290	3530	3420					1072	110	3280	110	1.3	1.7
benzo[a]pyrene		980	1010	1080	3680	4080	3900					845	74	4300	130	0.8	1.3
perylene		447	457	475	1120	1250	1130					366	45	1170	240	1.0	1.1
indeno[1,2,3-cd]pyrene		1100	1140	1220	2490	2710	2840					881	84	2780	100	1.2	1.7
4-benz[a,h]anthracene		250	264	285	586	630	637					92.4	66.2	424	69		0.4
benzo[ghi]perylene		1090	1120	1200	2530	2740	2710					899	108	2840	100	1.1	1.3

Laboratory: 18

PAH in Sediment X

Reported Results		No. of Analytes		%	
Quantitative	23	Quantitative	23	Quantitative	89
Qualitative	3	Qualitative	3	Qualitative	12
Not Determined	0	Not Determined	0	Not Determined	0

Category		Number by Category		z (s)		p (15%)	
< 2	20	< 2	20	< 2	20	< 2	20
2 to 3	0	2 to 3	0	2 to 3	0	2 to 3	0
> 3	0	> 3	0	> 3	0	> 3	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a			
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Sediment X	
		22/01	22/01	22/01	22/01	22/01	22/01	22/01	22/01	22/01	22/01	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)	p-score (15%)
alpha-HCH		0.755	1.09	1.05	1.26	1.35	1.36	1.36	1.36	1.36	1.36	1.42	1.11	2.00	0.30	-1.3	-1.0	1.3	1.3
hexachlorobenzene		5.33	6.16	6.03	7.65	7.58	7.85	7.85	7.85	7.85	7.85	5.47	1.04	6.03	0.35	0.3	0.2	0.5	0.5
gamma-HCH		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<4		no target					
beta-HCH		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2		no target					
heptachlor		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<4		no target					
aldrin		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<4		no target					
heptachlor epoxide		4.59	5.27	5.92	9.84	7.91	8.49	8.49	8.49	8.49	8.49	<6		no target					
oxychlorodane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<6		no target					
trans-chlordane		26.5	29.5	30.3	28.1	25.7	29.6	29.6	29.6	29.6	29.6	23.4	3.6	no target		0.9	1.0	0.5	0.5
2,4'-DDE		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	48.6	4.5	19.0	3.0				
endosulfan I		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<3		no target					
cis-chlordane		22.3	23.0	24.7	20.6	20.1	21.1	21.1	21.1	21.1	21.1	18.1	3.0	16.5	0.8	1.2	1.0	0.4	0.4
trans-nonachlor		11.4	12.7	13.2	10.7	9.01	10.5	10.5	10.5	10.5	10.5	11.2	1.3	8.20	0.51	0.4	0.6	0.5	0.5
dieldrin		16.0	17.8	17.9	41.7	34.4	37.9	37.9	37.9	37.9	37.9	6.90	1.61	8.00	4.00	6.0	4.6	0.4	0.4
4,4'-DDE		176	195	171	121	111	123	123	123	123	123	153	17	86.0	12.0	0.7	0.9	0.5	0.5
2,4'-DDD		100	113	99.6	79.2	70.6	76.3	76.3	76.3	76.3	76.3	89.4	17.3	38.0	8.0	0.7	0.5	0.5	0.5
endrin		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2		no target					
endosulfan II		24.4	24.7	24.7	63.3	63.3	69.6	69.6	69.6	69.6	69.6	<4		no target					
4,4'-DDD		302	333	302	184	166	170	170	170	170	170	291	37	108	16	0.3	0.3	0.4	0.4
2,4'-DDT		21.1	23.7	20.4	41.4	46.2	46.3	46.3	46.3	46.3	46.3	11.4	2.5	no target		3.6	2.6	0.5	0.5
cis-nonachlor		7.86	9.62	8.49	8.56	4.91	5.22	5.22	5.22	5.22	5.22	5.50	1.97	3.70	0.70	2.3	1.3	0.7	0.7
4,4'-DDT		754	811	717	176	162	183	183	183	183	183	595	81	119	11	1.1	1.4	0.4	0.4
mirex		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2		no target					
endosulfan sulfate		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2		no target					
chlorpyrifos		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3		no target					

Laboratory: 18

Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	14	56
Qualitative	9	36
Not Determined	2	8

Category	z (25%)	z (s)	p (15%)
<2	9	10	12
2 to 3	1	1	0
>3	2	1	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 18

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 2/15/01

(data reported as if three figures were significant)

PCBs	Data as submitted by laboratory														Material reference values				Performance scores ^a			
	Sediment X, ng/g dry				SRM 1944, ng/g dry				Sediment X		SRM 1944		lab	lab mean	Sediment X, ng/g dry		SRM 1944, ng/g dry		z-score (25%)	z-score (s)	p-score (15%)	
	22/01	S 1	S 2	S 3	22/01	S 1	S 2	S 3	lab mean ng/g dry	%RSD	lab mean ng/g dry	%RSD			assigned value	95% CL	target value ^b	95% CL				
Analysis date																						
PCB 8	23.1	27.9	25.8	28.7	30.0	30.1			25.6	9.4	29.6	2.6			14.0	3.2	22.3	2.3	3.3	2.0	0.6	
PCB 18	53.9	57.9	53.9	57.6	55.6	60.8			55.2	4.2	58.0	4.5			29.6	5.1	51.0	2.6	3.5	2.5	0.3	
PCB 28	51.5	57.7	53.6	92.1	87.0	97.1			54.3	5.8	92.1	5.5			54.4	7.7	80.8	2.7	0.0	0.0	0.4	
PCB 31	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA			46.2	9.0	78.7	1.6				
PCB 44	39.0	43.0	41.0	72.0	67.5	77.0			41.0	4.9	72.2	6.6			40.7	4.9	60.2	2.0	0.0	0.0	0.3	
PCB 49	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA			37.7	5.8	53.0	1.7				
PCB 52	44.0	50.7	49.0	85.5	79.8	81.5			47.9	7.3	82.3	3.6			55.3	7.7	79.4	2.0	-0.5	-0.5	0.5	
PCB 66	50.9	55.1	51.2	79.2	79.6	88.4			52.4	4.5	82.3	6.4			49.1	6.9	71.9	4.3	0.3	0.2	0.3	
PCB 95	other	other	other	other	other	other			other	NA	other	NA			31.4	5.8	65.0	8.9				
PCB 99	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA			24.5	4.6	37.5	2.4				
PCB 101	45.8	50.0	76.2	98.2	95.7	98.1			57.3	28.7	97.3	1.5			51.4	6.2	73.4	2.5	0.5	0.5	1.9	
PCB 105	18.4	19.7	21.1	26.0	26.4	29.2			19.7	6.8	27.2	6.4			15.8	2.1	24.5	1.1	1.0	1.0	0.5	
PCB 118	39.1	40.9	39.8	71.0	65.0	68.9			39.9	2.3	68.3	4.5			34.6	4.9	58.0	4.3	0.6	0.5	0.2	
PCB 128	7.80	8.93	8.34	8.15	6.56	5.88			8.36	6.76	6.86	16.97			6.98	1.11	8.47	0.28	0.8	0.7	0.5	
PCB 138	62.6	71.0	59.1	69.6	64.4	62.8			64.2	9.5	65.6	6.4			48.2	8.1	62.1	3.0	1.3	1.1	0.6	
PCB 149	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA			38.8	5.6	49.7	1.2				
PCB 153	61.2	73.5	67.8	96.3	97.4	97.8			67.5	9.1	97.2	0.8			49.6	8.9	74.0	2.9	1.4	1.0	0.6	
PCB 156	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA			6.30	2.42	6.52	0.66				
PCB 170	11.8	15.0	13.8	15.7	16.0	23.0			13.5	11.9	18.2	22.7			15.6	2.5	22.6	1.4	-0.5	-0.5	0.8	
PCB 180	38.1	42.8	40.1	45.1	46.1	46.6			40.3	5.8	45.9	1.7			30.5	4.5	44.3	1.2	1.3	1.1	0.4	
PCB 187	20.1	26.6	23.5	33.3	33.0	32.2			23.4	13.9	32.8	1.7			18.5	2.8	25.1	1.0	1.1	1.0	0.9	
PCB 194	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA			7.87	1.12	11.2	1.4				
PCB 195	2.41	2.77	2.32	3.01	2.63	3.44			2.50	9.52	3.03	13.39			3.18	0.58	3.75	0.39	-0.9	-0.7	0.6	
PCB 206	7.18	8.36	6.71	8.91	10.0	12.0			7.42	11.46	10.3	15.2			6.05	1.17	9.21	0.51	0.9	0.6	0.8	
PCB 209	7.20	7.69	6.92	8.90	8.83	8.82			7.27	5.36	8.85	0.49			5.49	0.86	6.81	0.33	1.3	1.1	0.4	
Laboratory: 18																						
PCBs In Sediment X	Reported Results														No. of Analytes		Category		Number by Category			
	Quantitative														18		< 2		16		18	
	Qualitative														1		2 to 3		0		2	
	Not Determined														6		> 3		2		0	
Water In Sediment X	Sediment X, %														SRM 1944, %		Sediment X, %		Sediment X, %			
	S 1	S 2	S 3		S 1	S 2	S 3		mean, %	%RSD	mean, %	%RSD	assigned	95% CL	target	95% CL	z (25%)	z (s)	p (15%)	z (25%)	z (s)	p (15%)
water	46.7	48.1	45.7						46.8	2.6			47.1	1.3			0.0	-0.1	0.2	0.0	-0.1	0.2

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 19

Reporting Date: 2/15/01

Sample: QA00SED10 - Marine Sediment X (data reported as if three figures were significant)

PAH

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X	
	1/25/01 S1	1/25/01 S2	1/25/01 S3	1/25/01 S1	1/25/01 S2	1/25/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	p-score (15%)
naphthalene	394	492	468	1540			451	11	1540	NA	418	43	1650	310	0.3	0.4
2-methylnaphthalene	245	336	297	831			293	16	831	NA	277	26	950	50	0.2	0.4
1-methylnaphthalene	90.8	123	108	373			107	15	373	NA	108	15	520	30	0.0	0.0
biphenyl	81.2	112	111	239			101	17	239	NA	87.2	18.0	320	70	0.7	0.4
2,6-dimethylnaphthalene	136	253	235	568			208	30	568	NA	175	29	755	156	0.8	0.7
acenaphthylene	181	282	270	988			244	23	988	NA	99.2	40.9	546	266	5.9	1.9
acenaphthene	57.7	90.6	90.3	470			79.5	23.8	470	NA	73.0	10.6	570	30	0.4	0.4
1,6,7-trimethylnaphthalene	NA	NA	NA	NA			NA	NA	NA	NA	95.5	21.1	462	133		
fluorene	62.5	152	146	557			120	42	557	NA	104	10	600	50	0.6	0.8
phenanthrene	671	1130	1220	5770			1007	29	5770	NA	867	82	5270	220	0.6	0.9
anthracene	295	412	417	1400			375	18	1400	NA	317	50	1770	330	0.7	0.6
1-methylphenanthrene	ND	387	377	1830			382	2	1830	NA	173	25	1700	100	4.8	5.0
fluoranthene	2110	3200	3320	8410			2877	23	8410	NA	2533	203	8920	320	0.5	0.9
pyrene	2010	2950	2970	8580			2643	21	8580	NA	2477	247	9700	420	0.3	0.3
benz[a]anthracene	700	1080	1150	4040			977	25	4040	NA	880	99	4720	110	0.4	0.5
chrysene	1190	1950	2020	5810			1720	27	5810	NA	864	328	4860	100	4.0	6.5
triphenylene	NA	NA	NA	NA			NA	NA	NA	NA	<400	0	1040	270		
benzo[b]fluoranthene	1210	2060	2040	3990			1770	27	3990	NA	1220	158	3870	420	1.8	2.3
benzo[k]fluoranthene	NA	NA	NA	NA			NA	NA	NA	NA	503	83	2090	440		
benzo[j]fluoranthene	1050	1220	1260	3430			1177	9	3430	NA	666	157	2300	200	3.1	2.5
benzo[e]pyrene	993	1350	1430	3030			1258	19	3030	NA	1072	110	3280	110	0.7	0.9
benzo[a]pyrene	813	1120	1160	4010			1031	18	4010	NA	845	74	4300	130	0.9	1.3
perylene	378	490	481	1120			450	14	1120	NA	366	45	1170	240	0.9	1.0
indeno[1,2,3-cd]pyrene	831	1030	1010	2570			957	11	2570	NA	881	84	2780	100	0.3	0.5
dibenz[a,h]anthracene	211	365	393	674			323	30	674	NA	92.4	66.2	424	69	10.0	4.3
benzo[ghi]perylene	920	1280	1330	3070			1177	19	3070	NA	899	108	2840	100	1.2	1.5

Laboratory: 19

PAH in Sediment X

Reported Results	No. of Analytes	%
Quantitative	23	89
Qualitative	0	0
Not Determined	3	12

Category	z (25%)	z (s)	p (15%)
< 2	18	18	20
2 to 3	0	2	3
> 3	5	3	0

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 19

Reporting Date: 2/15/01

(data reported as if three figures were significant)

PESTICIDES	Analysis date	Data as submitted by laboratory						Material reference values				Performance scores ^a		
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944, ng/g dry		Sediment X		
		S1	S2	S3	S1	S2	S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b
alpha-HCH								NA	NA	NA	NA	1.42	1.11	2.00
hexachlorobenzene								NA	NA	NA	NA	5.47	1.04	6.03
gamma-HCH								NA	NA	NA	NA	<4		no target
beta-HCH								NA	NA	NA	NA	<2		no target
heptachlor								NA	NA	NA	NA	<4		no target
aldrin								NA	NA	NA	NA	<4		no target
heptachlor epoxide								NA	NA	NA	NA	<6		no target
oxychlorodane								NA	NA	NA	NA	<6		no target
trans-chlorodane								NA	NA	NA	NA	23.4	3.6	no target
2,4'-DDE								NA	NA	NA	NA	48.6	4.5	19.0
endosulfan I								NA	NA	NA	NA	<3		no target
cis-chlorodane								NA	NA	NA	NA	18.1	3.0	16.5
trans-nonachlor								NA	NA	NA	NA	11.2	1.3	8.20
dieldrin								NA	NA	NA	NA	6.90	1.61	8.00
4,4'-DDE								NA	NA	NA	NA	153	17	86.0
2,4'-DDD								NA	NA	NA	NA	89.4	17.3	38.0
endrin								NA	NA	NA	NA	<2		no target
endosulfan II								NA	NA	NA	NA	<4		no target
4,4'-DDD								NA	NA	NA	NA	291	37	108
2,4'-DDT								NA	NA	NA	NA	11.4	2.5	no target
cis-nonachlor								NA	NA	NA	NA	5.50	1.97	3.70
4,4'-DDT								NA	NA	NA	NA	595	81	119
mirex								NA	NA	NA	NA	<2		no target
endosulfan sulfate								NA	NA	NA	NA	<2		no target
chlorpyrifos								NA	NA	NA	NA	<3		no target

Category	Number by Category		
	z (25%)	z (s)	p (15%)
<2	0	0	0
2 to 3	0	0	0
>3	0	0	0

Reported Results	No. of Analytes		%
Quantitative	0	0	0
Qualitative	0	0	0
Not Determined	25	100	

Laboratory: 19
Pesticides in Sediment X

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

ry

Laboratory: 19
PCBs in Sediment X

SRM 1944, %

^bCertified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 20

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 3/1/01

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory												Material reference values				Performance scores ^a			
		Sediment X, ng/g dry						SRM 1944, ng/g dry			Sediment X			Sediment X, ng/g dry		Sediment X		p-score (15%)			
		25/01 S 1	25/01 S 2	25/01 S 3	25/01 S 1	25/01 S 2	25/01 S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)				
naphthalene	368	356	364	1270	1180	1630			363	2	1360	18	418	43	1650	310	-0.5	-0.7	0.1		
2-methylnaphthalene	288	286	312	736	828	911			295	5	825	11	277	26	950	50	0.3	0.5	0.3		
1-methylnaphthalene	105	96.9	79.1	341	351	328			93.7	14.1	340	3	108	15	520	30	-0.5	-0.6	0.9		
biptyrenyl	98.2	98.4	91.2	172	192	189			95.9	4.3	184	6	87.2	18.0	320	70	0.4	0.2	0.3		
2,6-dimethylnaphthalene	227	202	191	573	597	662			207	9	611	8	175	29	755	156	0.7	0.7	0.6		
acenaphthylene	83.9	71.0	64.3	317	310	309			73.1	13.6	312	1	99.2	40.9	546	266	-1.1	-0.3	0.9		
acenaphthene	<61.2	61.5	<60.7	278	335	326			61.5	NA	313	10	73.0	10.6	570	30	-0.6	-0.6			
1,6,7-trimethylnaphthalene	100	90.6	66.9	361	399	375			85.8	19.9	378	5	95.5	21.1	462	133	-0.4	-0.3	1.3		
fluorene	101	101	122	392	434	420			108	11	415	5	104	10	600	50	0.1	0.2	0.7		
phenanthrene	872	803	757	4120	4690	4580			811	7	4463	7	867	82	5270	220	-0.3	-0.3	0.5		
anthracene	334	304	309	933	993	1040			316	5	989	5	317	50	1770	330	0.0	0.0	0.3		
1-methylphenanthrene	236	235	208	1150	1200	1230			226	7	1193	3	173	25	1700	100	1.2	1.3	0.5		
fluoranthene	2600	2530	2360	7190	7820	7760			2497	5	7590	5	2533	203	8920	320	-0.1	-0.1	0.3		
pyrene	2500	2390	2310	7450	8040	8110			2400	4	7867	5	2477	247	9700	420	-0.1	-0.2	0.3		
benz[a]anthracene	836	844	839	3650	3850	3960			840	0	3820	4	880	99	4720	110	-0.2	-0.2	0.0		
chrysene	1300	1360	1360	4800	5470	4980			1340	3	5083	7	864	328	4860	100	2.2	3.6	0.2		
triphenylene	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA	<400	0	1040	270					
benzo[b]fluoranthene	1220	1250	1270	3110	3350	3220			1247	2	3227	4	1220	158	3870	420	0.1	0.1	0.1		
benzo[k]fluoranthene	NA	NA	NA	NA	NA	NA			NA	NA	NA	NA	503	83	2090	440					
benzo[j]fluoranthene	1110	1170	1140	3170	3450	3480			1140	3	3367	5	666	157	2300	200	2.8	2.3	0.2		
benzo[e]pyrene	1080	1130	1130	2780	2900	2910			1113	3	2863	3	1072	110	3280	110	0.2	0.2	0.2		
benzo[a]pyrene	836	862	862	3250	3430	3420			853	2	3367	3	845	74	4300	130	0.0	0.1	0.1		
perylene	355	377	391	829	910	890			374	5	876	5	366	45	1170	240	0.1	0.1	0.3		
indeno[1,2,3-cd]pyrene	887	962	946	2530	2690	2640			932	4	2620	3	881	84	2780	100	0.2	0.3	0.3		
dibenz[a,h]anthracene	301	324	316	829	888	871			314	4	863	4	92.4	66.2	424	69	9.6	4.1	0.2		
benzo[ghi]perylene	1000	1040	1040	2550	2730	2700			1027	2	2660	4	899	108	2840	100	0.6	0.7	0.1		
Laboratory: 20														Number by Category							
PAH in Sediment X														Category		z (25%)		z (s)		p (15%)	
														<2		21		21		23	
														2 to 3		2		1		0	
														>3		1		2		0	

Laboratory: 20
PAH in Sediment X

Reported Results		No. of Analytes		Number by Category	
Quantitative	Qualitative	24	92	Category	z (25%)
2	8	24	92	<2	21
2	8	0	0	2 to 3	21
2	8	2	1	>3	23
2	8	2	1		0

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

Sample: QA00SED10 - Marine Sediment X (data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory													Material reference values				Performance scores ^a		
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		Performance scores ^a			
	25/01	25/01	25/01	25/01	25/01	25/01	lab mean	lab	lab mean	lab	lab mean	lab	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)		
	S1	S2	S3	S1	S2	S3	ng/g dry	%RSD	ng/g dry	%RSD	ng/g dry	%RSD								
alpha-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.42	2.00	1.11	-0.3	-0.2	0.2		
hexachlorobenzene	4.98	5.24	5.15	5.86	5.49	5.99	5.12	2.58	5.78	4.49	5.47	1.04	6.03	0.35						
gamma-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target							
beta-HCH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target							
heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target							
aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<6		no target							
heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<6		no target							
oxychlorodane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.4	3.6	no target							
trans-chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	48.6	4.5	19.0	3.0						
2,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3		no target							
endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.1	3.0	16.5	0.8						
cis-chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11.2	1.3	8.20	0.51						
trans-nonachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.90	1.61	8.00	4.00						
dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	153	17	86.0	12.0						
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	89.4	17.3	38.0	8.0						
2,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target							
endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4		no target							
endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	291	37	108	16						
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11.4	2.5	no target							
2,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.50	1.97	3.70	0.70						
cis-nonachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	595	81	119	11						
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target							
mirex	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2		no target							
endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<3		no target							
chlorpyrifos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA										

Laboratory: 20

Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	1	4
Qualitative	0	0
Not Determined	24	96

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	1	1	1
2 to 3	0	0	0
> 3	0	0	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry	SRM 1944, ng/g dry		Sediment X			
		25/01 S 1	25/01 S 2	25/01 S 3	25/01 S 1	25/01 S 2	25/01 S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
PCB 8		NA	NA	NA	NA	NA	NA	NA	NA	NA	14.0	3.2	22.3	2.3				
PCB 18		36.7	38.1	37.6	58.3	59.3	60.3	37.5	1.9	59.3	1.7	29.6	5.1	51.0	2.6	1.1	0.8	0.1
PCB 28		57.3	59.2	60.5	77.8	79.0	79.1	59.0	2.7	78.6	0.9	54.4	7.7	80.8	2.7	0.3	0.3	0.2
PCB 31		63.7	64.3	62.9	89.0	88.6	92.7	63.6	1.1	90.1	2.5	46.2	9.0	78.7	1.6	1.5	1.6	0.1
PCB 44		55.8	53.7	57.2	63.8	65.5	66.3	55.6	3.2	65.2	2.5	40.7	4.9	60.2	2.0	1.5	1.6	0.2
PCB 49		50.5	51.2	49.2	60.1	53.9	54.6	50.3	2.0	56.2	6.0	37.7	5.8	53.0	1.7	1.3	1.4	0.1
PCB 52		69.6	70.5	71.6	82.5	83.5	85.8	70.6	1.4	83.9	2.5	55.3	7.7	79.4	2.0	1.1	1.0	0.1
PCB 66		67.4	68.5	68.0	76.8	77.4	79.0	68.0	0.8	77.7	2.5	49.1	6.9	71.9	4.3	1.5	1.4	0.1
PCB 95		43.5	44.5	44.6	50.8	51.9	53.5	44.2	1.4	52.1	2.5	31.4	5.8	65.0	8.9	1.6	1.7	0.1
PCB 99		30.7	30.4	30.1	34.4	34.7	36.2	30.4	1.0	35.1	2.7	24.5	4.6	37.5	2.4	1.0	0.9	0.1
PCB 101		63.4	64.0	64.2	75.3	76.1	78.8	63.9	0.7	76.7	2.4	51.4	6.2	73.4	2.5	1.0	1.0	0.0
PCB 105		25.2	26.1	25.7	30.6	31.4	32.2	25.7	1.8	31.4	2.5	15.8	2.1	24.5	1.1	2.5	2.4	0.1
PCB 118		52.2	54.3	52.9	63.6	63.8	66.0	53.1	2.0	64.5	2.4	34.6	4.9	58.0	4.3	2.1	1.8	0.1
PCB 128		10.5	10.7	10.7	12.3	12.8	13.9	10.6	1.1	13.0	6.3	6.98	1.11	8.47	0.28	2.1	1.8	0.1
PCB 138		76.0	78.2	75.3	89.1	90.1	94.4	76.5	2.0	91.2	3.1	48.2	8.1	62.1	3.0	2.4	1.9	0.1
PCB 149		51.3	52.1	51.4	60.0	60.8	64.1	51.6	0.8	61.6	3.5	38.8	5.6	49.7	1.2	1.3	1.6	0.1
PCB 153		83.6	85.5	83.4	98.0	99.6	104	84.2	1.4	101	3	49.6	8.9	74.0	2.9	2.8	2.0	0.1
PCB 156		7.65	7.95	7.79	9.30	9.39	9.97	7.80	1.93	9.55	3.81	6.30	2.42	6.52	0.66	1.0	0.5	0.1
PCB 170		23.2	23.6	22.9	26.5	26.6	27.8	23.2	1.5	27.0	2.7	15.6	2.5	22.6	1.4	1.9	1.7	0.1
PCB 180		46.1	47.1	45.6	50.7	51.5	53.2	46.3	1.7	51.8	2.5	30.5	4.5	44.3	1.2	2.1	1.8	0.1
PCB 187		25.7	26.6	25.9	28.3	28.6	30.1	26.1	1.8	29.0	3.3	18.5	2.8	25.1	1.0	1.6	1.5	0.1
PCB 194		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.87	1.12	11.2	1.4			
PCB 195		4.23	4.15	3.88	4.28	4.46	4.61	4.09	4.49	4.45	3.71	3.18	0.58	3.75	0.39	1.1	0.9	0.3
PCB 206		9.15	9.14	8.79	10.2	10.3	10.6	9.03	2.27	10.4	2.0	6.05	1.17	9.21	0.51	2.0	1.4	0.2
PCB 209		6.06	5.97	6.02	6.36	6.64	6.99	6.02	0.75	6.66	4.74	5.49	0.86	6.81	0.33	0.4	0.3	0.0
Laboratory: 20												Reported Results		No. of Analytes		%		
PCBs In Sediment X												Quantitative		23		92		
												Qualitative		0		0		
												Not Determined		2		8		

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 21

Sample: QA00SED10 - Marine Sediment X (data reported as if three figures were significant)

Reporting Date: 5/7/01

PAH

Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
	Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X			SRM 1944	Sediment X, ng/g dry		target value ^b	Sediment X		p-score (15%)
	3/19/01 S1	3/19/01 S2	3/19/01 S3	3/19/01 S1	3/19/01 S2	3/19/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL		z-score (25%)	z-score (s)	
naphthalene	433	428	448				436	2	NA	NA	418	43	1650	310	0.2	0.2
2-methylnaphthalene	312	271	288				290	7	NA	NA	277	26	950	50	0.2	0.3
1-methylnaphthalene	129	111	121				120	7	NA	NA	108	15	520	30	0.5	0.5
biphenyl	95.8	119	97.7				104	12	NA	NA	87.2	18.0	320	70	0.8	0.5
2,6-dimethylnaphthalene	251	238	239				243	3	NA	NA	175	29	755	156	1.5	1.4
acenaphthylene	190	278	182				217	24	NA	NA	99.2	40.9	546	266	4.7	1.5
acenaphthene	81.5	83.5	84.7				83.2	1.9	NA	NA	73.0	10.6	570	30	0.6	0.6
1,6,7-trimethylnaphthalene	NA	NA	NA				NA	NA	NA	NA	95.5	21.1	462	133		
fluorene	99.6	101	106				102	3	NA	NA	104	10	600	50	-0.1	-0.1
phenanthrene	859	837	877				858	2	NA	NA	867	82	5270	220	0.0	-0.1
anthracene	379	372	407				386	5	NA	NA	317	50	1770	330	0.9	0.7
1-methylphenanthrene	146	151	149				149	2	NA	NA	173	25	1700	100	-0.6	-0.6
fluoranthene	2312	2647	2639				2533	8	NA	NA	2533	203	8920	320	0.0	0.0
pyrene	2478	2542	2567				2529	2	NA	NA	2477	247	9700	420	0.1	0.1
benz[a]anthracene	849	858	893				867	3	NA	NA	880	99	4720	110	-0.1	-0.1
chrysene	1436	1470	1539				1482	4	NA	NA	864	328	4860	100	2.9	4.7
triphenylene	NA	NA	NA				NA	NA	NA	NA	<400	0	1040	270		
benzo[b]fluoranthene	1385	1387	1316				1363	3	NA	NA	1220	158	3870	420	0.5	0.6
benzo[k]fluoranthene	NA	NA	NA				NA	NA	NA	NA	503	83	2090	440		
benzo[j]fluoranthene	1162	1179	1353				1231	9	NA	NA	666	157	2300	200	3.4	2.8
benzo[e]pyrene	1176	1215	1255				1215	3	NA	NA	1072	110	3280	110	0.5	0.7
benzo[a]pyrene	981	998	989				989	1	NA	NA	845	74	4300	130	0.7	1.0
perylene	507	587	551				549	7	NA	NA	366	45	1170	240	2.0	2.2
indeno[1,2,3-cd]pyrene	1219	1317	1129				1222	8	NA	NA	881	84	2780	100	1.5	2.1
dibenz[a,h]anthracene	235	295	323				284	16	NA	NA	92.4	66.2	424	69	8.3	3.6
benzo[ghi]perylene	1058	1243	1148				1149	8	NA	NA	899	108	2840	100	1.1	1.3

Laboratory: 21

PAH in Sediment X

Reported Results		No. of Analytes		%	
Quantitative		23		89	
Qualitative		0		0	
Not Determined		3		12	

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	19	18	23
2 to 3	1	3	0
> 3	3	2	0

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

Sample: QA00SED10 - Marine Sediment X

Reporting Date: 5/7/01

(data reported as if three figures were significant)

PESTICIDES

PESTICIDES	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a				
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X		p-score (15%)		
		3/30/01	3/24/01	3/29/01				lab mean	lab	%RSD	lab mean	lab	%RSD	assigned value	95% CL	target value ^b	95% CL		z-score (25%)	z-score (s)
alpha-HCH		0.315	0.306	0.272				0.298	7.499	NA	NA	NA	NA	1.42	1.11	2.00	0.30	-3.2	-2.5	0.5
hexachlorobenzene		5.21	5.42	5.05				5.23	3.62	NA	NA	NA	NA	5.47	1.04	6.03	0.35	-0.2	-0.1	0.2
gamma-HCH		0.195	0.246	0.199				0.213	13.274	NA	NA	NA	NA	<4		no target				
beta-HCH		0.315	0.276	0.250				0.280	11.689	NA	NA	NA	NA	<2		no target				
heptachlor		D<0.909	0.105	D<0.909				0.105	NA	NA	NA	NA	NA	<4		no target				
aldrin		D<0.909	D<0.909	D<0.909				ND<0.9099	NA	NA	NA	NA	NA	<4		no target				
heptachlor epoxide		0.146	0.235	0.357				0.246	42.922	NA	NA	NA	NA	<6		no target				
oxychlorodane		D<0.909	D<0.909	D<0.909				ND<0.9099	NA	NA	NA	NA	NA	<6		no target				
trans-chlordane		20.5	19.2	19.0				19.5	4.1	NA	NA	NA	NA	23.4	3.6	no target		-0.7	-0.7	0.3
2,4'-DDE		37.9	48.4	50.3				45.5	14.7	NA	NA	NA	NA	48.6	4.5	19.0	3.0	-0.3	-0.5	1.0
endosulfan I		D<0.909	D<0.909	D<0.909				ND<0.9099	NA	NA	NA	NA	NA	<3		no target				
cis-chlordane		15.4	16.2	15.5				15.7	2.9	NA	NA	NA	NA	18.1	3.0	16.5	0.8	-0.5	-0.4	0.2
trans-nonachlor		9.28	9.68	8.59				9.19	6.03	NA	NA	NA	NA	11.2	1.3	8.20	0.51	-0.7	-0.9	0.4
dieldrin		3.66	3.12	4.81				3.87	22.37	NA	NA	NA	NA	6.90	1.61	8.00	4.00	-1.8	-1.4	1.5
4,4'-DDE		160	196	191				183	11	NA	NA	NA	NA	153	17	86.0	12.0	0.8	1.0	0.7
2,4'-DDD		85.9	142	133				120	25	NA	NA	NA	NA	89.4	17.3	38.0	8.0	1.4	1.1	1.7
endrin		D<0.909	D<0.909	D<0.909				ND<0.9099	NA	NA	NA	NA	NA	<2		no target				
endosulfan II		9.22	6.49	13.9				9.86	37.8	NA	NA	NA	NA	<4		no target				
4,4'-DDD		557	390	398				448	21	NA	NA	NA	NA	291	37	108	16	2.2	2.5	1.4
2,4'-DDT		15.5	13.5	11.2				13.4	16.3	NA	NA	NA	NA	11.4	2.5	no target		0.7	0.5	1.1
cis-nonachlor		2.16	3.15	3.02				2.78	19.39	NA	NA	NA	NA	5.50	1.97	3.70	0.70	-2.0	-1.2	1.3
4,4'-DDT		919	745	933				865	12	NA	NA	NA	NA	595	81	119	11	1.8	2.2	0.8
mirex		0.066	0.093	0.091				0.083	18.183	NA	NA	NA	NA	<2		no target				
endosulfan sulfate		D<0.909	D<0.909	D<0.909				ND<0.9099	NA	NA	NA	NA	NA	<2		no target				
chlorpyrifos		NA	NA	NA				NA	NA	NA	NA	NA	NA	<3		no target				

Laboratory: 21
Pesticides in Sediment X

Reported Results		No. of Analytes		%
Quantitative	Qualitative	Quantitative	Qualitative	
19	5	1	4	76
Not Determined				20

Category		Number by Category		p (15%)
z (25%)	z (s)	z (25%)	z (s)	
< 2	11	10	13	13
2 to 3	1	3	0	0
> 3	1	0	0	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise
Sample: QA00SED10 - Marine Sediment X

Laboratory No.: 21
Reporting Date: 5/7/01

(data reported as if three figures were significant)

PCBs	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a							
		Sediment X, ng/g dry			SRM 1944, ng/g dry			Sediment X		SRM 1944		Sediment X, ng/g dry	assigned value	95% CL	target value ^b	95% CL	Sediment X		Sediment X, %				
		3/19/01 S1	3/19/01 S2	3/19/01 S3	3/19/01 S1	3/19/01 S2	3/19/01 S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD						z-score (25%)	z-score (s)		p-score (15%)			
PCB 8		15.4	15.7	13.8				15.0	6.9	NA	NA	14.0	3.2	22.3	2.3		0.3	0.2	0.5				
PCB 18		25.4	26.7	25.4				25.9	3.0	NA	NA	29.6	5.1	51.0	2.6		-0.5	-0.4	0.2				
PCB 28		64.8	71.7	67.0				67.8	5.2	NA	NA	54.4	7.7	80.8	2.7		1.0	1.0	0.3				
PCB 31		58.5	64.1	57.2				59.9	6.2	NA	NA	46.2	9.0	78.7	1.6		1.2	1.3	0.4				
PCB 44		50.1	59.1	54.8				54.7	8.3	NA	NA	40.7	4.9	60.2	2.0		1.4	1.5	0.6				
PCB 49		39.6	47.0	41.4				42.7	9.1	NA	NA	37.7	5.8	53.0	1.7		0.5	0.5	0.6				
PCB 52		62.9	74.4	62.4				66.6	10.2	NA	NA	55.3	7.7	79.4	2.0		0.8	0.8	0.7				
PCB 66		46.5	60.5	54.9				53.9	13.1	NA	NA	49.1	6.9	71.9	4.3		0.4	0.3	0.9				
PCB 95		35.4	41.6	37.8				38.3	8.1	NA	NA	31.4	5.8	65.0	8.9		0.9	0.9	0.5				
PCB 99		26.8	31.0	26.4				28.1	9.1	NA	NA	24.5	4.6	37.5	2.4		0.6	0.5	0.6				
PCB 101		45.2	52.6	42.3				46.7	11.3	NA	NA	51.4	6.2	73.4	2.5		-0.4	-0.4	0.8				
PCB 105		21.9	21.8	21.0				21.6	2.3	NA	NA	15.8	2.1	24.5	1.1		1.5	1.4	0.2				
PCB 118		44.4	47.6	41.8				44.6	6.5	NA	NA	34.6	4.9	58.0	4.3		1.2	1.0	0.4				
PCB 128		9.44	8.68	8.98				9.04	4.27	NA	NA	6.98	1.11	8.47	0.28		1.2	1.0	0.3				
PCB 138		74.7	64.8	61.8				67.1	10.0	NA	NA	48.2	8.1	62.1	3.0		1.6	1.2	0.7				
PCB 149		53.5	47.4	41.1				47.3	13.0	NA	NA	38.8	5.6	49.7	1.2		0.9	1.1	0.9				
PCB 153		67.0	55.9	44.0				55.6	20.7	NA	NA	49.6	8.9	74.0	2.9		0.5	0.3	1.4				
PCB 156		6.84	6.28	6.45				6.52	4.35	NA	NA	6.30	2.42	6.52	0.66		0.1	0.1	0.3				
PCB 170		16.3	16.7	16.0				16.3	2.1	NA	NA	15.6	2.5	22.6	1.4		0.2	0.1	0.1				
PCB 180		41.5	41.6	42.5				41.9	1.4	NA	NA	30.5	4.5	44.3	1.2		1.5	1.3	0.1				
PCB 187		27.7	24.4	19.9				24.0	16.3	NA	NA	18.5	2.8	25.1	1.0		1.2	1.1	1.1				
PCB 194		10.6	10.1	10.4				10.4	2.8	NA	NA	7.87	1.12	11.2	1.4		1.3	1.6	0.2				
PCB 195		4.39	4.01	4.44				4.28	5.43	NA	NA	3.18	0.58	3.75	0.39		1.4	1.0	0.4				
PCB 206		7.88	11.54	11.87				10.4	21.3	NA	NA	6.05	1.17	9.21	0.51		2.9	2.1	1.4				
PCB 209		7.14	6.97	6.87				6.99	1.96	NA	NA	5.49	0.86	6.81	0.33		1.1	0.9	0.1				
Laboratory: 21																							
PCBs in Sediment X																							
												Reported Results		No. of Analytes		%		Number by Category					
												Quantitative		25		100		Category		z (25%)		p (15%)	
												Qualitative		0		0		2 to 3		1		0	
												Not Determined		0		0		> 3		0		0	

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a			
		Sediment X, ng/g dry					SRM 1944, ng/g dry					Sediment X		SRM 1944, ng/g dry		Sediment X		SRM 1944, ng/g dry	
		27/01 S 1	27/01 S 2	27/01 S 3	27/01 S 1	27/01 S 2	27/01 S 3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)	
naphthalene		411	383	448	1371	1417	1463	414	8	1417	3	418	43	1650	310	0.0	-0.1	0.5	
2-methylnaphthalene		247	235	293	753	798	827	259	12	793	5	277	26	950	50	-0.3	-0.5	0.8	
1-methylnaphthalene		103	100	123	434	453	448	109	12	445	2	108	15	520	30	0.0	0.0	0.8	
biphenyl		92.6	86.0	96.1	252	243	250	91.6	5.6	248	2	87.2	18.0	320	70	0.2	0.1	0.4	
2,6-dimethylnaphthalene		92.9	90.0	117	424	430	441	100	15	432	2	175	29	755	156	-1.7	-1.6	1.0	
acenaphthylene		16.6	15.5	17.1	162	196	187	16.4	5.2	182	10	99.2	40.9	546	266	-3.3	-1.1	0.3	
acenaphthene		64.0	64.0	77.6	397	386	399	68.5	11.4	394	2	73.0	10.6	570	30	-0.2	-0.2	0.8	
1,6,7-trimethylnaphthalene		87.6	88.8	125	374	406	384	100	21	388	4	95.5	21.1	462	133	0.2	0.2	1.4	
fluorene		85.7	86.5	113	477	508	496	95.0	16.2	494	3	104	10	600	50	-0.4	-0.5	1.1	
phenanthrene		768	775	1044	5682	5668	5781	863	18	5711	1	867	82	5270	220	0.0	0.0	1.2	
anthracene		270	260	301	1083	1116	1096	277	8	1098	2	317	50	1770	330	-0.5	-0.4	0.5	
1-methylphenanthrene		148	156	218	1524	1566	1555	174	22	1548	1	173	25	1700	100	0.0	0.0	1.5	
fluoranthene		2436	2545	3033	9628	9577	9788	2671	12	9664	1	2533	203	8920	320	0.2	0.4	0.8	
pyrene		2276	2385	2748	9664	9530	9815	2470	10	9670	1	2477	247	9700	420	0.0	0.0	0.7	
benz[a]anthracene		724	762	917	4426	4407	4293	801	13	4375	2	880	99	4720	110	-0.4	-0.4	0.9	
chrysene		1171	1248	1507	5767	5856	5620	1309	13	5748	2	864	328	4860	100	2.1	3.4	0.9	
triphenylene		other	other	other	other	other	other	other	NA	other	NA	<400	0	1040	270				
benzo[b]fluoranthene		1019	1070	1246	3582	3467	3369	1112	11	3473	3	1220	158	3870	420	-0.4	-0.5	0.7	
benzo[k]fluoranthene		455	470	565	1930	1903	1832	497	12	1888	3	503	83	2090	440	-0.1	-0.7	0.8	
benzo[j]fluoranthene		492	515	610	2039	1989	1922	539	12	1983	3	666	157	2300	200	-0.8	-0.6	0.8	
benzo[e]pyrene		943	990	1123	3291	3236	3130	1019	9	3219	3	1072	110	3280	110	-0.2	-0.3	0.6	
benzo[a]pyrene		653	677	753	3416	3315	3207	695	8	3313	3	845	74	4300	130	-0.7	-1.0	0.5	
perylene		264	275	308	826	816	816	282	8	819	1	366	45	1170	240	-0.9	-1.0	0.5	
indeno[1,2,3-cd]pyrene		839	843	984	2958	2883	2923	889	9	2921	1	881	84	2780	100	0.0	0.0	0.6	
4-benz[a,h]anthracene		119	141	164	540	551	556	142	16	549	1	92.4	66.2	424	69	2.1	0.9	1.1	
benzo[ghi]perylene		850	866	980	2908	2835	2873	899	8	2872	1	899	108	2840	100	0.0	0.0	0.5	

Laboratory: 22		Number by Category	
PAH in Sediment X		Category	z (25%)
		<2	22
		2 to 3	2
		>3	1

Number by Category		z (s)	p (15%)
		24	25
		0	0
		1	0

^az- and p-scores > 3 are bolded.^bCertified material reference values are bolded.

(data reported as if three figures were significant)

Sample: QA00SED10 - Marine Sediment X

PESTICIDES

Analysis date	PESTICIDES																						
	Data as submitted by laboratory														Material reference values				Performance scores ^a				
	Sediment X, ng/g dry						SRM 1944, ng/g dry				Sediment X				Sediment X, ng/g dry		SRM 1944, ng/g dry		Sediment X				
	2/7/01	2/7/01	2/7/01	S1	S2	S3	2/7/01	2/7/01	2/7/01	S1	S2	S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	p-score (15%)
	1.40	1.23	1.66	1.41	1.60	1.47	1.43	15.17	1.49	6.31			1.42	1.11	2.00	0.30	0.0	0.0	1.0				
	4.58	5.47	5.50	6.27	6.32	6.43	5.18	10.03	6.34	1.23			5.47	1.04	6.03	0.35	-0.2	-0.2	0.7				
	3.27	2.62	2.93	2.72	3.03	2.82	2.94	11.0	2.86	5.5			<4		no target		<4		no target				
	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<2		no target		<4		no target				
	8.27	8.48	9.67	14.3	15.5	15.4	8.81	8.6	15.1	4.3			<4		no target		<6		no target				
	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<4		no target		<6		no target				
	<1	<1	<1	3.26	5.26	4.15	<1	NA	4.22	23.6			<6		no target		<6		no target				
	2.10	1.85	2.13	3.08	3.12	2.70	2.03	7.7	2.97	7.8			<6		no target		<6		no target				
	20.4	22.6	21.8	17.3	17.0	17.3	21.6	5.2	17.2	1.1			23.4	3.6	no target		23.4	3.6	no target		-0.3	-0.3	0.3
	39.8	45.1	36.7	15.8	17.8	17.4	40.5	10.4	17.0	6.4			48.6	4.5	19.0	3.0	48.6	4.5	19.0	3.0	-0.7	-1.3	0.7
	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<3		no target		<3		no target				
	20.4	21.0	20.9	18.6	19.6	18.3	20.7	1.6	18.8	3.8			18.1	3.0	16.5	0.8	18.1	3.0	16.5	0.8	0.6	0.5	0.1
	11.4	12.0	11.7	10.7	11.5	11.0	11.7	2.6	11.1	3.8			11.2	1.3	8.20	0.51	11.2	1.3	8.20	0.51	0.2	0.2	0.2
	7.69	7.30	7.57	8.14	9.64	8.91	7.52	2.64	8.90	8.42			6.90	1.61	8.00	4.00	6.90	1.61	8.00	4.00	0.4	0.3	0.2
	134	150	130	69.9	74.8	71.8	138	8	72.2	3.5			153	17	86.0	12.0	153	17	86.0	12.0	-0.4	-0.5	0.5
	88.3	96.6	78.7	26.6	28.3	28.1	87.9	10.2	27.7	3.4			89.4	17.3	38.0	8.0	89.4	17.3	38.0	8.0	-0.1	-0.1	0.7
	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<2		no target		<2		no target				
	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<4		no target		<4		no target				
	302	311	287	84.8	98.3	98.6	300	4	93.9	8.4			291	37	108	16	291	37	108	16	0.1	0.1	0.3
	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			11.4	2.5	no target		11.4	2.5	no target				
	6.23	5.99	5.50	5.07	5.16	4.92	5.91	6.33	5.05	2.35			5.50	1.97	3.70	0.70	5.50	1.97	3.70	0.70	0.3	0.2	0.4
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			595	81	119	11	595	81	119	11			
	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<2		no target		<2		no target				
	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA			<2		no target		<2		no target				
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			<3		no target		<3		no target				

Laboratory: 22

Pesticides in Sediment X

Reported Results	No. of Analyses	%
Quantitative	14	56
Qualitative	9	36
Not Determined	2	8

Category	Number by Category	z (25%)	z (s)	p (15%)
<2	11	11	11	11
2 to 3	0	0	0	0
>3	0	0	0	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

(data reported as if three figures were significant)

PAH	Analysis date	Data as submitted by laboratory										Material reference values			Performance scores ^a		
		Sediment X, ng/g dry					SRM 1941a, ng/g dry					Sediment X, ng/g dry		target value ^b	Sediment X		p-score (15%)
		1/8/01 S1	1/8/01 S2	1/8/01 S3	1/8/01 S1	1/8/01 S2	1/8/01 S3	1/8/01 S1	1/8/01 S2	1/8/01 S3	lab mean ng/g dry	lab %RSD	assigned value	95% CL	z-score (25%)	z-score (s)	
naphthalene		310	352	349	703	659					337	7	418	43	-0.8	-1.1	0.5
2-methylnaphthalene		248	281	243	268	240					257	8	277	26	-0.3	-0.5	0.5
1-methylnaphthalene		111	127	114	154	143					117	7	108	15	0.3	0.4	0.5
biphenyl		71.2	86.0	80.4	68.4	74.8					79.2	9.4	87.2	18.0	-0.4	-0.2	0.6
2,6-dimethylnaphthalene		173	220	192	115	106					195	12	175	29	0.5	0.4	0.8
acenaphthylene		27.9	27.3	32.2	39.5	44.2					29.1	9.2	99.2	40.9	-2.8	-0.9	0.6
acenaphthene		63.7	82.2	80.0	42.2	38.5					75.3	13.4	73.0	10.6	0.1	0.1	0.9
1,6,7-trimethylnaphthalene		165	151	157	39.7	40.3					158	4	95.5	21.1	2.6	2.1	0.3
fluorene		128	132	140	93.2	116					133	5	104	10	1.1	1.4	0.3
phenanthrene		786	1090	1110	476	463					995	18	867	82	0.6	0.8	1.2
anthracene		247	283	279	178	174					270	7	317	50	-0.6	-0.5	0.5
1-methylphenanthrene		159	232	235	72.9	73.4					209	21	173	25	0.8	0.9	1.4
fluoranthene		2400	3100	3160	877	870					2887	15	2533	203	0.6	0.9	1.0
pyrene		2320	2890	2940	727	694					2717	13	2477	247	0.4	0.5	0.8
benz[a]anthracene		849	1140	1110	379	366					1033	15	880	99	0.7	0.8	1.0
chrysene		1350	1750	1780	513	469					1627	15	864	328	3.5	5.8	1.0
triphenylene		NA	NA	NA	NA	NA					NA	NA	<400	0			
benzo[b]fluoranthene		1150	1390	1410	666	680					1317	11	1220	158	0.3	0.4	0.7
benzo[k]fluoranthene		NA	NA	NA	NA	NA					NA	NA	503	83			
benzo[j]fluoranthene		808	1000	1040	397	387					949	13	666	157	1.7	1.4	0.9
benzo[e]pyrene		905	1100	1100	481	449					1035	11	1072	110	-0.1	-0.2	0.7
benzo[a]pyrene		752	896	909	539	471					852	10	845	74	0.0	0.1	0.7
perylene		229	243	247	262	253					240	4	366	45	-1.4	-1.5	0.3
indeno[1,2,3-cd]pyrene		626	743	795	483	455					721	12	881	84	-0.7	-1.0	0.8
dibenz[a,h]anthracene		150	181	188	76.4	76.1					173	12	92.4	66.2	3.5	1.5	0.8
benzo[ghi]perylene		756	904	951	421	403					870	12	899	108	-0.1	-0.2	0.8

Laboratory: 23
PAH in Sediment X

Reported Results		No. of Analytes	
Quantitative		24	92
Qualitative		0	0
Not Determined		2	8

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

^az- and p-scores > 3 are bolded.

^bCertified material reference values are bolded.

(data reported as if three figures were significant)

PESTICIDES

Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a		
	Sediment X, ng/g dry			SRM 1941a, ng/g dry			Sediment X		SRM 1941a		Sediment X, ng/g dry		SRM 1941a, ng/g dry		Sediment X		p-score (15%)
	S1	S2	S3	S1	S2	S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)	
alpha-HCH							NA	NA	NA	NA	1.42	1.11					
hexachlorobenzene							NA	NA	NA	NA	5.47	1.04	70	25			
gamma-HCH							NA	NA	NA	NA	<4						
beta-HCH							NA	NA	NA	NA	<2						
heptachlor							NA	NA	NA	NA	<4						
aldrin							NA	NA	NA	NA	<4						
heptachlor epoxide							NA	NA	NA	NA	<6						
oxychlorodane							NA	NA	NA	NA	<6		2.59	0.19			
trans-chlordane							NA	NA	NA	NA	23.4	3.6					
2,4'-DDE							NA	NA	NA	NA	48.6	4.5	0.73	0.11			
endosulfan I							NA	NA	NA	NA	<3						
cis-chlordane							NA	NA	NA	NA	18.1	3.0	2.33	0.56			
trans-nonachlor							NA	NA	NA	NA	11.2	1.3	1.26	0.13			
dieldrin							NA	NA	NA	NA	6.90	1.61	1.26	0.37			
4,4'-DDE							NA	NA	NA	NA	153	17	6.59	0.56			
2,4'-DDD							NA	NA	NA	NA	89.4	17.3					
endrin							NA	NA	NA	NA	<2						
endosulfan II							NA	NA	NA	NA	<4						
4,4'-DDD							NA	NA	NA	NA	291	37	5.06	0.58			
2,4'-DDT							NA	NA	NA	NA	11.4	2.5					
cis-nonachlor							NA	NA	NA	NA	5.50	1.97					
4,4'-DDT							NA	NA	NA	NA	595	81	1.25	0.10			
mirex							NA	NA	NA	NA	<2						
endosulfan sulfate							NA	NA	NA	NA	<2						
chlorpyrifos							NA	NA	NA	NA	<3						

Laboratory: 23
Pesticides in Sediment X

Reported Results	No. of Analytes	%
Quantitative	0	0
Qualitative	0	0
Not Determined	25	100

Category	Number by Category		
	z (25%)	z (s)	p (15%)
< 2	0	0	0
2 to 3	0	0	0
> 3	0	0	0

^a z- and p-scores > 3 are bolded.^b Certified material reference values are bolded.

FY00 NIST Intercomparison Exercise

Laboratory No.: 23

Reporting Date: 4/3/01

Sample: QA00SED10 - Marine Sediment X (data reported as if three figures were significant)

PCBs		Analysis date	Data as submitted by laboratory										Material reference values				Performance scores ^a				
			Sediment X, ng/g dry			SRM 1941a, ng/g dry			Sediment X		SRM 1941a		Sediment X, ng/g dry		SRM 1941a, ng/g dry		Sediment X		p-score (15%)		
			S1	S2	S3	S1	S2	S3	lab mean ng/g dry	lab %RSD	lab mean ng/g dry	lab %RSD	assigned value	95% CL	target value ^b	95% CL	z-score (25%)	z-score (s)			
PCB 8								NA	NA	NA	NA	14.0	3.2	1.39	0.19						
PCB 18								NA	NA	NA	NA	29.6	5.1	1.15	0.16						
PCB 28								NA	NA	NA	NA	54.4	7.7	9.8	3.7						
PCB 31								NA	NA	NA	NA	46.2	9.0	6.2	2.4						
PCB 44								NA	NA	NA	NA	40.7	4.9	4.80	0.62						
PCB 49								NA	NA	NA	NA	37.7	5.8	9.5	2.1						
PCB 52								NA	NA	NA	NA	55.3	7.7	6.89	0.56						
PCB 66								NA	NA	NA	NA	49.1	6.9	6.8	1.4						
PCB 95								NA	NA	NA	NA	31.4	5.8	7.5	1.1						
PCB 99								NA	NA	NA	NA	24.5	4.6	4.17	0.51						
PCB 101								NA	NA	NA	NA	51.4	6.2	11.0	1.6						
PCB 105								NA	NA	NA	NA	15.8	2.1	3.65	0.27						
PCB 118								NA	NA	NA	NA	34.6	4.9	10.0	1.1						
PCB 128								NA	NA	NA	NA	6.98	1.11	1.87	0.32						
PCB 138								NA	NA	NA	NA	48.2	8.1	13.4	1.0						
PCB 149								NA	NA	NA	NA	38.8	5.6	9.2	1.1						
PCB 153								NA	NA	NA	NA	49.6	8.9	17.6	1.9						
PCB 156								NA	NA	NA	NA	6.30	2.42	0.93	0.14						
PCB 170								NA	NA	NA	NA	15.6	2.5	3.00	0.46						
PCB 180								NA	NA	NA	NA	30.5	4.5	5.83	0.58						
PCB 187								NA	NA	NA	NA	18.5	2.8	7.0	2.6						
PCB 194								NA	NA	NA	NA	7.87	1.12	1.78	0.23						
PCB 195								NA	NA	NA	NA	3.18	0.58								
PCB 206								NA	NA	NA	NA	6.05	1.17	3.67	0.87						
PCB 209								NA	NA	NA	NA	5.49	0.86	8.34	0.49						
Laboratory: 23																Number by Category					
PCBs in Sediment X												Reported Results		No. of Analytes		Category		z (25%)		p (15%)	
												Quantitative		0		< 2		0		0	
												Qualitative		1		2 to 3		0		0	
												Not Determined		24		> 3		0		0	
Water In Sediment X		Sediment X, %			SRM 1941a, %			Sediment X, %		SRM 1941a, %		Sediment X, %		SRM 1941a, %		Sediment X, %		z (25%)		p (15%)	
		S1	S2	S3	S1	S2	S3	mean, %	%RSD	mean, %	%RSD	assigned	95% CL	target	95% CL	z (s)	z (s)	2.0	0.0		
water		54.4	54.6	54.2				54.4	0.4			47.1	1.3			0.6	2.0	0.0			

^a z- and p-scores > 3 are bolded.

^b Certified material reference values are bolded.

**Appendix E: Laboratory Notes Accompanying Data,
Mussel Tissue X**

Lab	Additional notes for Mussel Tissue X																																															
2	<p>Note 1: For Pesticide results: Dry weight figures based on 0.1139 correction factor and was used for SRM 1974A and Mussel X.</p> <p>Note 2: "D-R" NWQL acronym means "deleted ruined during prep or analysis". For both Mussel Tissue X and SRM 1974A, Batch A, Sample 1 were ruined during the prep or analysis process.</p>																																															
4	<p>Other: Reported Chrysene concentration equals combined detected Chrysene and Triphenylene concentration (we do not report them separately).</p> <p>Reported B[k]F concentration equals combined detected B[j]F and B[k]F concentration (we do not report them separately).</p> <p>Compounds reported with a "<" were not detected; the "<" value is our method detection limit value.</p> <p>Compounds analyzed by GC-ECD, which eluted before PCB112 were quantified using PCB34. Those compounds eluting after were quantified using PCB112</p>																																															
5	<p>PCB 66 is the sum of 66+95</p> <p>PCB 170 is the sum of 170+190</p>																																															
6	<p>4,4' DDT AND PCB CONGENER 138 COELUTE ON BOTH COLUMNS</p> <table> <tr> <th></th><th>Mussel Tissue Sample 1</th><th>Mussel Tissue Sample 2</th><th>Mussel Tissue Sample 3</th><th>SRM 1974a Sample 1</th><th>SRM 1974a Sample 2</th><th>SRM 1974a Sample 3</th></tr> <tr> <td>Prep. Date, Pesticide & PCB</td><td>9/18/00</td><td>10/13/00</td><td>11/13/01</td><td>9/18/00</td><td>10/13/00</td><td>11/13/01</td></tr> <tr> <td>Prep. Date, PAH</td><td>9/14/00</td><td>11/3/00</td><td>11/21/00</td><td>9/14/00</td><td>11/3/00</td><td>11/21/00</td></tr> </table> <p>For Mussel X sample extracted for Pesticide & PCB is approximately 3 g, and for PAH 4 g, wet basis.</p> <p>For SRM 1974a sample extracted for Pesticide & PCB is approximately 3 g, and for PAH 8 g, wet basis.</p>							Mussel Tissue Sample 1	Mussel Tissue Sample 2	Mussel Tissue Sample 3	SRM 1974a Sample 1	SRM 1974a Sample 2	SRM 1974a Sample 3	Prep. Date, Pesticide & PCB	9/18/00	10/13/00	11/13/01	9/18/00	10/13/00	11/13/01	Prep. Date, PAH	9/14/00	11/3/00	11/21/00	9/14/00	11/3/00	11/21/00																					
	Mussel Tissue Sample 1	Mussel Tissue Sample 2	Mussel Tissue Sample 3	SRM 1974a Sample 1	SRM 1974a Sample 2	SRM 1974a Sample 3																																										
Prep. Date, Pesticide & PCB	9/18/00	10/13/00	11/13/01	9/18/00	10/13/00	11/13/01																																										
Prep. Date, PAH	9/14/00	11/3/00	11/21/00	9/14/00	11/3/00	11/21/00																																										
7	<p>PAH Internal Standards</p> <p>d8-naphthalene, d8-acenaphthylene, d10-acenaphthene, d10-fluorene, d10-phenanthrene, d10-anthracene, d10-fluoranthene</p> <p>d10-pyrene, d12-benz(a)anthracene, d12-chrysene, d12-benzo(b)fluoranthene, d12-benzo(k)fluoranthene, d12-benzo(e)pyrene</p> <p>d12-benzo(a)pyrene, d12-perylene, d12-indeno(1,2,3-cd)pyrene, d12-dibenz(a,h)anthracene, d12-benzo(ghi)perylene</p> <p>GC-MS ion interferences in: 1,6,7 trimethylnaphthalene, acenaphthylene and acenaphthene.</p> <p>Other (1) - Under our chromatographic conditions, chrysene and triphenylene co-elute. They are reported as the sum, based upon the response factor of chrysene.</p> <p>Other (2) - Under our chromatographic conditions, B[j]F and B[k]F co-elute. They are reported as the sum, based upon the response factor of B[k]F.</p> <table> <tr> <th></th><th>Mussel X Sample 1</th><th>Mussel X Sample 2</th><th>Mussel X Sample 3</th><th>SRM 1974a Sample 1</th><th>SRM 1974a Sample 2</th><th>SRM 1974a Sample 3</th></tr> <tr> <td>chrysene+triphenylene</td><td>115</td><td>115</td><td>121</td><td>93.3</td><td>90.6</td><td>95.2</td></tr> <tr> <td>benzo[j+k]fluoranthene</td><td>42.2</td><td>48.7</td><td>57.6</td><td>36.2</td><td>33.5</td><td>39.9</td></tr> </table> <p>Note - Under our chromatographic conditions, dibenz[a,h]anthracene is known to co-elute with dibenz[a,c]anthracene.</p> <p>SRM 1974a was fortified before extraction with a suite of non-persistent pesticides including endosulfan I, endosulfan II and endosulfan sulfate.</p>							Mussel X Sample 1	Mussel X Sample 2	Mussel X Sample 3	SRM 1974a Sample 1	SRM 1974a Sample 2	SRM 1974a Sample 3	chrysene+triphenylene	115	115	121	93.3	90.6	95.2	benzo[j+k]fluoranthene	42.2	48.7	57.6	36.2	33.5	39.9																					
	Mussel X Sample 1	Mussel X Sample 2	Mussel X Sample 3	SRM 1974a Sample 1	SRM 1974a Sample 2	SRM 1974a Sample 3																																										
chrysene+triphenylene	115	115	121	93.3	90.6	95.2																																										
benzo[j+k]fluoranthene	42.2	48.7	57.6	36.2	33.5	39.9																																										
9	<p>PCB101 coelutes with PCB90</p> <p>PCB153 coelutes with PCB132 and 168</p> <p>PCB170 coelutes with PCB190</p> <p>PCB 8 coelutes with PCB 5</p> <p>PCB 195 coelutes with PCB208</p> <p><symbol refers to values less than our MDL</p> <p>the chrysene number is the sum of chrysene and triphenylene, we cannot resolve the two</p> <p>we do not analyze for benzo(j)fluoranthene because it coelutes with benzo(b)fluoranthene</p> <p>Tissue MDL values are high due to limited sample volume and reporting data on a dry weight basis.</p> <p>Our MDLs are based on 15.0g wet weight of mussel. Therefore MDLs reported here are approximately 50X higher than those on 15 g wet. Additionally, sample PAH concentrations are low which is compounded by the small sample volume.</p>																																															
10	<p>* Approximate amount of sample extracted: Mussel X PAH 6 g, wet basis; SRM 1974a 82 g, dry basis</p> <p>Pesticides/PCB 5 g, wet basis; SRM 1974a 45 g, dry basis</p> <p>** Columns: RTX-CLPesticides / RTX-CLPesticides2</p> <p>*** naphthalene-d8, 1 & 2-methylnaphthalene-d10, biphenyl-d10, 2,6-dimethylnaphthalene-d12, acenaphthylene-d8, acenaphthene-d10, fluorene-d10, dibenzothiophene-d8, phenanthrene-d10, anthracene-d10, fluoranthene-d10, pyrene-d10, benzo(a)anthracene-d12, chrysene-d12, benzo[b]fluoranthene-d12, benzo[k]fluoranthene-d12, benzo[a]pyrene-d12, perylene-d12, indeno[1,2,3-cd]pyrene-d12, dibenzo[a,h]anthracene-d14, benzo[ghi]perylene-d12</p> <p>Co-elution: 138 interferes with 4,4-DDT. Unknown interferes with congener 66.</p>																																															
13	<table> <tr> <th></th><th>Mussel X Sample 1</th><th>Mussel X Sample 2</th><th>Mussel X Sample 3</th><th>SRM 1974a Sample 1</th><th>SRM 1974a Sample 2</th><th>SRM 1974a Sample 3</th></tr> <tr> <td>total extractables (% dry basis)</td><td>6.2</td><td>5.86</td><td>6.2</td><td>7.23</td><td>7.01</td><td>7.27</td></tr> </table>							Mussel X Sample 1	Mussel X Sample 2	Mussel X Sample 3	SRM 1974a Sample 1	SRM 1974a Sample 2	SRM 1974a Sample 3	total extractables (% dry basis)	6.2	5.86	6.2	7.23	7.01	7.27																												
	Mussel X Sample 1	Mussel X Sample 2	Mussel X Sample 3	SRM 1974a Sample 1	SRM 1974a Sample 2	SRM 1974a Sample 3																																										
total extractables (% dry basis)	6.2	5.86	6.2	7.23	7.01	7.27																																										
14	Percent moisture was not determined. AI+R[-175]CI results reported as wet weight.																																															
15	<p>* = chrysene + triphenylene; benzo[b]fluoranthene + [j + k]; dibenz[a,h]anthracene + [a,c].</p> <p>† = CB101 + CB90; C138 + CB163/164; CB187 + CB182/159; CB170 + CB190.</p>																																															
16	<table> <tr> <th></th><th>Mussel X Sample 1</th><th>Mussel X Sample 2</th><th>Mussel X Sample 3</th><th>SRM 1974a Sample 1</th><th>SRM 1974a Sample 2</th><th>SRM 1974a Sample 3</th></tr> <tr> <td>PCB 37</td><td><0.86</td><td><0.86</td><td><0.86</td><td><0.86</td><td><0.86</td><td><0.86</td></tr> <tr> <td>PCB 74</td><td>2.12</td><td>2.75</td><td>2.11</td><td>2.52</td><td>1.95</td><td>2.96</td></tr> <tr> <td>PCB 70</td><td>5.52</td><td>5.66</td><td>6.31</td><td>5.81</td><td>6.02</td><td>8.64</td></tr> <tr> <td>PCB 119</td><td><1.06</td><td><1.06</td><td><1.06</td><td><1.06</td><td><1.06</td><td><1.06</td></tr> <tr> <td>PCB 87</td><td>4.69</td><td>3</td><td>3.19</td><td>3.11</td><td>3.23</td><td>2.55</td></tr> </table>							Mussel X Sample 1	Mussel X Sample 2	Mussel X Sample 3	SRM 1974a Sample 1	SRM 1974a Sample 2	SRM 1974a Sample 3	PCB 37	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86	PCB 74	2.12	2.75	2.11	2.52	1.95	2.96	PCB 70	5.52	5.66	6.31	5.81	6.02	8.64	PCB 119	<1.06	<1.06	<1.06	<1.06	<1.06	<1.06	PCB 87	4.69	3	3.19	3.11	3.23	2.55
	Mussel X Sample 1	Mussel X Sample 2	Mussel X Sample 3	SRM 1974a Sample 1	SRM 1974a Sample 2	SRM 1974a Sample 3																																										
PCB 37	<0.86	<0.86	<0.86	<0.86	<0.86	<0.86																																										
PCB 74	2.12	2.75	2.11	2.52	1.95	2.96																																										
PCB 70	5.52	5.66	6.31	5.81	6.02	8.64																																										
PCB 119	<1.06	<1.06	<1.06	<1.06	<1.06	<1.06																																										
PCB 87	4.69	3	3.19	3.11	3.23	2.55																																										

	PCB 110	6.64	6.46	7.51	7.56	8.3	7.73
	PCB 81	<1.64	<1.64	<1.64	<1.64	<1.64	<1.64
	PCB 151	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54
	PCB 77	<0.84	<0.84	<0.84	<0.84	<0.84	<0.84
	PCB 123	<1.56	<1.56	<1.56	<1.56	<1.56	<1.56
	PCB 114	<0.84	<0.84	<0.84	<0.84	<0.84	<0.84
	PCB 168	3.21	3.69	4.16	3.18	4.53	2.19
	PCB 158	<1.12	<1.12	<1.12	<1.12	<1.12	<1.12
	PCB 183	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78
	PCB 126	<1.56	<1.56	<1.56	<1.56	<1.56	<1.56
	PCB 167	<1.02	<1.02	<1.02	<1.02	<1.02	<1.02
	PCB 177	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
	PCB 200	<1.02	<1.02	<1.02	<1.02	<1.02	<1.02
	PCB 157	<1.44	<1.44	<1.44	<1.44	<1.44	<1.44
	PCB 201	<1.22	<1.22	<1.22	<1.22	<1.22	<1.22
	PCB 169	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74
	PCB 189	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90
	delta-BHC	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72
	endrin aldehyde	<0.84	<0.84	<0.84	<0.84	<0.84	<0.84
	methoxychlor	<2.60	<2.60	<2.60	<2.60	<2.60	<2.60
17	<p>Coelutions: 8/5, 28/31, 52/43, 138/160, 149/139, 153/132/168, 170/190, 180/193, 187/182</p> <p>Note: PCB Congeners 28 and 31 coeluted, the total conc. for this pair is reported for each congener</p> <p>Attachment A: Internal Standards for PAHs</p> <p>d10-acenaphthene</p> <p>d10-anthracene</p> <p>d12-benzo(a)anthracene</p> <p>d12-benzo(a)pyrene</p> <p>d12-benzo(b)fluoranthene</p> <p>d12-benzo(k)fluoranthene</p> <p>d12-benzo(ghi)perylene</p> <p>d12-chrysene</p> <p>d14-dibenzo(a,h)anthracene</p> <p>d10-fluoranthene</p> <p>d10-fluorene</p> <p>d12-indeno(1,2,3-cd)pyrene</p> <p>d8-naphthalene</p> <p>d10-phenanthrene</p> <p>d10-pyrene</p> <p>Attachment B: Internal Standards for Pesticides</p> <p>13C4-Aldrin</p> <p>13C6-alpha-BHC</p> <p>13C6-beta-BHC</p> <p>13C6-delta-BHC</p> <p>13C6-gamma-BHC (Lindane)</p> <p>13C4-Dieldrin</p> <p>13C12-4,4'-DDE</p> <p>13C12-4,4'-DDT</p> <p>13C4-Heptachlor</p> <p>13C8-Mirex</p> <p>13C6-Chlorobenzenes</p> <p>Attachment C: Internal Standards for PCB Congeners</p> <p>1 13C12-2-Monochlorobiphenyl</p> <p>3 13C12-4-Monochlorobiphenyl</p> <p>4 13C12-2,2'-Dichlorobiphenyl</p> <p>15 13C12-4,4'-Dichlorobiphenyl</p> <p>19 13C12-2,2',6-Trichlorobiphenyl</p> <p>37 13C12-3,4,4'-Trichlorobiphenyl</p> <p>54 13C12-2,2',6,6'-Tetrachlorobiphenyl</p> <p>77 13C12-3,3',4,4'-Tetrachlorobiphenyl</p> <p>81 13C12-3,4,4',5-Tetrachlorobiphenyl</p> <p>104 13C12-2,2',4,6,6'-Pentachlorobiphenyl</p> <p>126 13C12-3,3',4,4',5-Pentachlorobiphenyl</p> <p>155 13C12-2,2',4,4',6,6'-Hexachlorobiphenyl</p> <p>156 13C12-2,3,3',4,4',5-Hexachlorobiphenyl</p> <p>157 13C12-2,3,3',4,4',5'-Hexachlorobiphenyl</p> <p>167 13C12-2,3',4,4',5,5'-Hexachlorobiphenyl</p> <p>169 13C12-3,3',4,4',5,5'-Hexachlorobiphenyl</p> <p>188 13C12-2,2',3,4',5,6,6'-Heptachlorobiphenyl</p> <p>189 13C12-2,3,3',4,4',5,5'-Heptachlorobiphenyl</p> <p>202 13C12-2,2',3,3',5,5',6,6'-Octachlorobiphenyl</p>						

	105 13C12-2,3,3',4,4'-Pentachlorobiphenyl 114 13C12-2,3,4,4',5-Pentachlorobiphenyl 118 13C12-2,3',4,4',5-Pentachlorobiphenyl 123 13C12-2',3,4,4',5-Pentachlorobiphenyl Attachment D: Standards added after extraction/cleanup and JUST PRIOR to Pesticide/PAH chromatographic analysis: d8-acenaphthylene d12-perylene d14-p-terphenyl d12-benzo(e)pyrene Attachment E: Standards added after extraction/cleanup and JUST PRIOR to PCB chromatographic analysis: 9 13C12-2,5-Dichlorobiphenyl 52 13C12-2,2',5,5'-Tetrachlorobiphenyl 101 13C12-2,2',4,5,5'-Pentachlorobiphenyl 138 13C12-2,2',3,4,4',5'-Hexachlorobiphenyl 194 13C12-2,2',3,3',4,4',5,5'-Octachlorobiphenyl Attachment F: Standards added after extraction and prior to sample cleanup 28 13C12-2,4,4'-Trichlorobiphenyl 111 13C12-2,3,3',5,5'-Pentachlorobiphenyl 178 13C12-2,2',3,3',5,5',6-Heptachlorobiphenyl	205 13C12-2,3,3',4,4',5,5',6-Octachlorobiphenyl 206 13C12-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl 208 13C12-2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl 209 13C12-Decachlorobiphenyl				
18	(1) chrysene and triphenylene co-elute and are reported as a sum (2) benzo[b], benzo[j], and benzo[k]fluoranthene co-elute and are reported as a sum (3) PCB66 and PCB95 co-elute and are reported as a sum (4) The PAH results for #187 were significantly different from the other two sets, indicating a potential issue with the preparation or analytical procedure. The results are NOT reported, pending further investigation.					
20	PCB 17 PCB 33 PCB 70 PCB 74 PCB 82 PCB 87 PCB 110 PCB 151 PCB 158 PCB 171 PCB 177 PCB 183 PCB 191 PCB 199 PCB 205 PCB 208 dibenzothiophene	Mussel X Sample 1 12.1 6.31 69.5 42.6 11.8 47.3 110 19.1 11.9 6.4 12.5 14.4 <3.32 <2.49 <3.32 <3.32 5.6	Mussel X Sample 2 12 7.05 68.5 41.9 11.5 47.2 108 19.3 11.7 6.38 12.2 14 <2.96 <2.22 <2.96 <2.96 4.84	Mussel X Sample 3 11.7 5.9 66.6 40.7 11.6 46.1 105 18.8 11.5 6.37 12 13.8 <3.82 <2.86 <3.82 <3.82 5.06	SRM 1974a Sample 1 25.9 15.7 121 76.6 18.1 66.8 141 24.7 13.5 7.17 14.1 16.4 <3.03 <2.27 <3.03 <3.03 4.45	SRM 1974a Sample 2 27.1 16.5 125 79.8 18.9 69.9 146 25.4 14.4 7.59 14.9 16.8 <2.43 <1.84 <2.46 <2.46
	Note: By our method, chrysene coelutes with triphenylene and B[j]F coelutes with B[k]F. The concentrations reported for chrysene and B[k]F are the sums of these coeluting compounds.					
21	The PCB coelutions are as follows: PCB-5/8, PCB-18/30, PCB-20/28, PCB-44/47/65, PCB-49/69, PCB-90/101/113, PCB-128/166, PCB-129/138/163, PCB-147/149, PCB-153/168, PCB-156/157, PCB-180/193 In general the difference between the values we have reported and the certificate of analysis for the SRM 1974a material, appears to be the % solid quantitation. SRM 1974a has an 11.4% solid (88.6% water) quantitation, and our calculation is 6.25% solid (93.75% water).					
22	*Chrysene is chrysene plus triphenylene NA not determined					

Appendix F: Laboratory Notes Accompanying Data, Sediment X

Lab	Additional notes for Marine Sediment X																																																																																																																																																								
3	Sediment X samples 2 and 3 were processed in the same extraction batch along with one aliquot of SRM 1944. Co-elutions apply to the above as follows: 30/18 20/28/21/33 49/69 44/47/65 52/43/73 95/100/93/102/98 90/101/113 83/99 147/149 153/168 129/138/160/163 166/128 156/157 180/193																																																																																																																																																								
4a	Other: Reported Chrysene concentration equals combined detected Chrysene and Triphenylene concentration (we do not report them separately). Reported Benzo[k]fluoranthene concentration equals combined detected Benzo[j]fluoranthene and Benzo[k]fluoranthene concentration (we do not report them separately). Compounds analyzed by GC-ECD, which elute before PCB 112 were quantified using PCB34. Those compounds eluting after were quantified using PCB 112.																																																																																																																																																								
4b	1) Due to the limited amount of sediment, NIST sample jars #150 and #167 were combined and three replicate aliquotes were analyzed. Dry weights for the sediments were achieved using previous data. 2) 1-Methylnaphthalene-d10, 2,6-Dimethylnaphthalene-d12, 2-Methylnaphthalene-d10, Acenaphthylene-d8, Benzo[a]anthracene-d12, Benzo[a]pyrene-d12, Benzo[b]fluoranthene-d12, Benzo[ghi]perylene-d12, Benzo[k]fluoranthene-d12, Chrysene-d12, Dibenz[a,h]anthracene-d14, Fluoranthene-d10, Indeno[1,2,3-c,d]pyrene-d12, Naphthalene-d8, Perylene-d12, Phenanthrene-d10																																																																																																																																																								
6	<table border="1"> <thead> <tr> <th></th><th>Sediment X Sample 1</th><th>Sediment X Sample 2</th><th>Sediment X Sample 3</th><th>SRM 1944 Sample 1</th><th>SRM 1944 Sample 2</th><th>SRM 1944 Sample 3</th></tr> </thead> <tbody> <tr> <td>PCB 77</td><td>9.03</td><td>16.4</td><td>6.1</td><td>22</td><td>16.7</td><td>8.32</td></tr> <tr> <td colspan="7">4,4'-DDT AND PCB CONGENER 138 COELUTE ON BOTH COLUMNS.</td></tr> <tr> <td>Prep. Date, PCB Congener</td><td>9/18/00</td><td>10/24/00</td><td>11/9/00</td><td>9/18/00</td><td>10/24/00</td><td>11/9/00</td></tr> <tr> <td>Prep. Date, Pesticide</td><td>9/18/00</td><td>10/24/00</td><td>11/9/00</td><td>9/18/00</td><td>10/24/00</td><td>11/9/00</td></tr> <tr> <td>Prep Date, PAH</td><td>9/12/00</td><td>11/7/00</td><td>11/9/00</td><td>9/12/00</td><td>11/7/00</td><td>11/9/00</td></tr> </tbody> </table> <p>For Sediment X sample extracted for Pesticide & PCB is approximately 6 g and for PAH 7 to 10 g, wet basis. For SRM 1944 sample extracted for Pesticide & PCB is approximately 6 g and for PAH 8 to 10 g, wet basis.</p>							Sediment X Sample 1	Sediment X Sample 2	Sediment X Sample 3	SRM 1944 Sample 1	SRM 1944 Sample 2	SRM 1944 Sample 3	PCB 77	9.03	16.4	6.1	22	16.7	8.32	4,4'-DDT AND PCB CONGENER 138 COELUTE ON BOTH COLUMNS.							Prep. Date, PCB Congener	9/18/00	10/24/00	11/9/00	9/18/00	10/24/00	11/9/00	Prep. Date, Pesticide	9/18/00	10/24/00	11/9/00	9/18/00	10/24/00	11/9/00	Prep Date, PAH	9/12/00	11/7/00	11/9/00	9/12/00	11/7/00	11/9/00																																																																																																									
	Sediment X Sample 1	Sediment X Sample 2	Sediment X Sample 3	SRM 1944 Sample 1	SRM 1944 Sample 2	SRM 1944 Sample 3																																																																																																																																																			
PCB 77	9.03	16.4	6.1	22	16.7	8.32																																																																																																																																																			
4,4'-DDT AND PCB CONGENER 138 COELUTE ON BOTH COLUMNS.																																																																																																																																																									
Prep. Date, PCB Congener	9/18/00	10/24/00	11/9/00	9/18/00	10/24/00	11/9/00																																																																																																																																																			
Prep. Date, Pesticide	9/18/00	10/24/00	11/9/00	9/18/00	10/24/00	11/9/00																																																																																																																																																			
Prep Date, PAH	9/12/00	11/7/00	11/9/00	9/12/00	11/7/00	11/9/00																																																																																																																																																			
7	<p>PAH Internal Standards d8-naphthalene, d8-acenaphthylene, d10-acenaphthene, d10-fluorene, d10-phenanthrene, d10-anthracene, d10-fluoranthene d10-pyrene, d12-benz(a)anthracene, d12-chrysene, d12-benzo(b)fluoranthene, d12-benzo(k)fluoranthene, d12-benzo(e)pyrene d12-benzo(a)pyrene, d12-phenylene, d12-indeno(1,2,3-cd)pyrene, d12-dibenz(a,h)anthracene, d12-benzo(ghi)perylene GC-MS ion interferences in: 1,6,7 trimethylnaphthalene, acenaphthylene and acenaphthene. Other (1) - Under our chromatographic conditions, chrysene and triphenylene co-elute. They are reported as the sum, based upon the response factor of chrysene. Other (2) - Under our chromatographic conditions, benzo [j] and [k] fluoranthene co-elute. They are reported as the sum, based upon the response factor of b[k]f.</p> <table border="1"> <thead> <tr> <th></th><th>Sediment X Sample 1</th><th>Sediment X Sample 2</th><th>Sediment X Sample 3</th><th>SRM 1944 Sample 1</th><th>SRM 1944 Sample 2</th><th>SRM 1944 Sample 3</th></tr> </thead> <tbody> <tr> <td>chrysene+triphenylene</td><td>1210</td><td>1300</td><td>1480</td><td>5060</td><td>5510</td><td>5710</td></tr> <tr> <td>benzo[j+k]fluoranthene</td><td>1160</td><td>896</td><td>1070</td><td>3350</td><td>3560</td><td>4190</td></tr> </tbody> </table> <p>Note - Under our chromatographic conditions, dibenz[a,h]anthracene is known to co-elute with dibenz[a,c]anthracene.</p>							Sediment X Sample 1	Sediment X Sample 2	Sediment X Sample 3	SRM 1944 Sample 1	SRM 1944 Sample 2	SRM 1944 Sample 3	chrysene+triphenylene	1210	1300	1480	5060	5510	5710	benzo[j+k]fluoranthene	1160	896	1070	3350	3560	4190																																																																																																																														
	Sediment X Sample 1	Sediment X Sample 2	Sediment X Sample 3	SRM 1944 Sample 1	SRM 1944 Sample 2	SRM 1944 Sample 3																																																																																																																																																			
chrysene+triphenylene	1210	1300	1480	5060	5510	5710																																																																																																																																																			
benzo[j+k]fluoranthene	1160	896	1070	3350	3560	4190																																																																																																																																																			
8	<p>used SRM 1941a instead of SRM 1944</p> <table border="1"> <thead> <tr> <th></th><th>Sediment X Sample 1</th><th>Sediment X Sample 2</th><th>Sediment X Sample 3</th><th>SRM 1941a Sample 1</th><th>SRM 1941a Sample 2</th><th>SRM 1941a Sample 3</th></tr> </thead> <tbody> <tr><td>PCB 6</td><td><2.5</td><td><2.5</td><td><2.5</td><td>19.5</td><td>18</td><td>18.8</td></tr> <tr><td>PCB 17</td><td>7.94</td><td>9.88</td><td>10.1</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 22</td><td>6.34</td><td>10.2</td><td>9.48</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 33</td><td>23.2</td><td>24</td><td>21.3</td><td>2.56</td><td>2.19</td><td>2.51</td></tr> <tr><td>PCB 42</td><td>9</td><td>13.9</td><td>11</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 45</td><td>13.8</td><td>13.4</td><td>13.5</td><td>1.9</td><td>2.22</td><td>1.49</td></tr> <tr><td>PCB 47</td><td>12.6</td><td>15.6</td><td>14.4</td><td>4.41</td><td>4.91</td><td>4.4</td></tr> <tr><td>PCB 48</td><td>7.22</td><td>8.24</td><td>8.19</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 70</td><td><2.5</td><td><2.5</td><td><2.5</td><td>4.4</td><td>4.29</td><td>4.14</td></tr> <tr><td>PCB 71</td><td>7.8</td><td>8.87</td><td>8.75</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 74</td><td>15.4</td><td>18.5</td><td>16.1</td><td>1.82</td><td>2.47</td><td>2.04</td></tr> <tr><td>PCB 85</td><td>8.14</td><td>8.4</td><td>7.37</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 110</td><td>27.9</td><td>35.2</td><td>32</td><td>9.82</td><td>8.83</td><td>8.58</td></tr> <tr><td>PCB 132</td><td>7.05</td><td>8.53</td><td>9.54</td><td>2.7</td><td>2.58</td><td>2.52</td></tr> <tr><td>PCB 141</td><td>5.59</td><td>6.6</td><td>7.59</td><td>1.75</td><td>1.83</td><td>1.46</td></tr> <tr><td>PCB 146</td><td>10.1</td><td>12.6</td><td>12.3</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 174</td><td>8.31</td><td>10.4</td><td>11.6</td><td>3.18</td><td>3</td><td>2.64</td></tr> <tr><td>PCB 177</td><td>5.82</td><td>6.08</td><td>8.03</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 179</td><td>5.81</td><td>7.51</td><td>8.27</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> <tr><td>PCB 183</td><td>4.77</td><td>6.61</td><td>7.74</td><td><2.5</td><td><2.5</td><td><2.5</td></tr> </tbody> </table>							Sediment X Sample 1	Sediment X Sample 2	Sediment X Sample 3	SRM 1941a Sample 1	SRM 1941a Sample 2	SRM 1941a Sample 3	PCB 6	<2.5	<2.5	<2.5	19.5	18	18.8	PCB 17	7.94	9.88	10.1	<2.5	<2.5	<2.5	PCB 22	6.34	10.2	9.48	<2.5	<2.5	<2.5	PCB 33	23.2	24	21.3	2.56	2.19	2.51	PCB 42	9	13.9	11	<2.5	<2.5	<2.5	PCB 45	13.8	13.4	13.5	1.9	2.22	1.49	PCB 47	12.6	15.6	14.4	4.41	4.91	4.4	PCB 48	7.22	8.24	8.19	<2.5	<2.5	<2.5	PCB 70	<2.5	<2.5	<2.5	4.4	4.29	4.14	PCB 71	7.8	8.87	8.75	<2.5	<2.5	<2.5	PCB 74	15.4	18.5	16.1	1.82	2.47	2.04	PCB 85	8.14	8.4	7.37	<2.5	<2.5	<2.5	PCB 110	27.9	35.2	32	9.82	8.83	8.58	PCB 132	7.05	8.53	9.54	2.7	2.58	2.52	PCB 141	5.59	6.6	7.59	1.75	1.83	1.46	PCB 146	10.1	12.6	12.3	<2.5	<2.5	<2.5	PCB 174	8.31	10.4	11.6	3.18	3	2.64	PCB 177	5.82	6.08	8.03	<2.5	<2.5	<2.5	PCB 179	5.81	7.51	8.27	<2.5	<2.5	<2.5	PCB 183	4.77	6.61	7.74	<2.5	<2.5	<2.5
	Sediment X Sample 1	Sediment X Sample 2	Sediment X Sample 3	SRM 1941a Sample 1	SRM 1941a Sample 2	SRM 1941a Sample 3																																																																																																																																																			
PCB 6	<2.5	<2.5	<2.5	19.5	18	18.8																																																																																																																																																			
PCB 17	7.94	9.88	10.1	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 22	6.34	10.2	9.48	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 33	23.2	24	21.3	2.56	2.19	2.51																																																																																																																																																			
PCB 42	9	13.9	11	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 45	13.8	13.4	13.5	1.9	2.22	1.49																																																																																																																																																			
PCB 47	12.6	15.6	14.4	4.41	4.91	4.4																																																																																																																																																			
PCB 48	7.22	8.24	8.19	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 70	<2.5	<2.5	<2.5	4.4	4.29	4.14																																																																																																																																																			
PCB 71	7.8	8.87	8.75	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 74	15.4	18.5	16.1	1.82	2.47	2.04																																																																																																																																																			
PCB 85	8.14	8.4	7.37	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 110	27.9	35.2	32	9.82	8.83	8.58																																																																																																																																																			
PCB 132	7.05	8.53	9.54	2.7	2.58	2.52																																																																																																																																																			
PCB 141	5.59	6.6	7.59	1.75	1.83	1.46																																																																																																																																																			
PCB 146	10.1	12.6	12.3	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 174	8.31	10.4	11.6	3.18	3	2.64																																																																																																																																																			
PCB 177	5.82	6.08	8.03	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 179	5.81	7.51	8.27	<2.5	<2.5	<2.5																																																																																																																																																			
PCB 183	4.77	6.61	7.74	<2.5	<2.5	<2.5																																																																																																																																																			

9	the chrysene number is the sum of chrysene and triphenylene, we cannot resolve the two we do not analyze for Benzo(j)fluoranthene it coelutes with benzo(b)fluoranthene <symbol refers to values less than our MDL PCB101 coelutes with PCB90 PCB153 coelutes with PCB132 and 168 PCB170 coelutes with PCB190 PCB8 coelutes with PCB5 PCB195 coelutes with PCB208																																																																																																																																																																																												
10	* Dual Columns: RTX-CLPesticides / RTX-CLPesticides2 ** naphthalene-d8, 1 & 2-methylnaphthalene-d10, biphenyl-d10, 2,6-dimethylnaphthalene-d12, acenaphthylene-d8, acenaphthene-d10, fluorene-d10, dibenzothiophene-d8, phenanthrene-d10, anthracene-d10,fluoranthene-d10, pyrene-d10, benzo(a)anthracene-d12, chrysene-d12, benzo(b)fluoranthene-d12, benzo(k)fluoranthene-d12, benzo(e)pyrene-d12, benzo(a)pyrene-d12, perylene-d12, indeno[1,2,3-cd]pyrene-d12, dibenzo(a,h)anthracene-d14, benzo(ghi)perylene-d12																																																																																																																																																																																												
12	Following Reported as Coeluting		Congeners 8+5 Congeners 28+31 Congener 101 (based on Mullins '610' Method where mass of 90 is not supplied) Congeners 132+105+153 Congeners 138+163 Congeners 195+208																																																																																																																																																																																										
15	NOTE: * = combined values for chrysene + triphenylene; benzo(b)fluoranthene + [j+k]; dibenz(a,h)anthracene + [a,c]. † = combined values for CB101 + CB90; C138 +CB163/164; CB187 + CB182/159; CB170 + CB190																																																																																																																																																																																												
16	<table><thead><tr><th></th><th>Sediment X Sample 1</th><th>Sediment X Sample 2</th><th>Sediment X Sample 3</th><th>SRM 1944 Sample 1</th><th>SRM 1944 Sample 2</th><th>SRM 1944 Sample 3</th></tr></thead><tbody><tr><td>PCB 37</td><td>123</td><td>119</td><td>118</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 74</td><td>18.1</td><td>20.4</td><td>17.2</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 70</td><td>34.5</td><td>37.8</td><td>36.2</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 119</td><td><0.14</td><td><0.14</td><td><0.14</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 87</td><td>13.2</td><td>10.8</td><td>11.6</td><td>27</td><td>27.3</td><td>29.6</td></tr><tr><td>PCB 110</td><td>58.5</td><td>56.1</td><td>55.9</td><td>64.5</td><td>65.8</td><td>66</td></tr><tr><td>PCB 81</td><td><0.16</td><td><0.16</td><td><0.16</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 151</td><td>12</td><td>12.6</td><td>10.6</td><td>16.9</td><td>16.9</td><td>17.1</td></tr><tr><td>PCB 77</td><td>11.7</td><td>11.7</td><td>9.96</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 123</td><td>2.78</td><td>3.23</td><td>3.37</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 114</td><td>2.14</td><td>3.28</td><td>2.81</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 168</td><td>10.5</td><td>12.5</td><td>13</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 158</td><td>3.07</td><td>3.14</td><td>3.2</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 183</td><td>3.64</td><td>4.34</td><td>4.49</td><td>12</td><td>11.9</td><td>11.7</td></tr><tr><td>PCB 126</td><td><0.14</td><td><0.14</td><td><0.14</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 167</td><td><0.18</td><td><0.18</td><td><0.18</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 177</td><td>6.21</td><td>6.42</td><td>7.01</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 200</td><td>4.27</td><td>5.37</td><td>5.29</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 157</td><td><0.15</td><td><0.15</td><td><0.15</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 201</td><td>8.07</td><td>7.82</td><td>8.68</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 169</td><td>3.67</td><td>5.06</td><td>5.5</td><td>na</td><td>na</td><td>na</td></tr><tr><td>PCB 189</td><td>2.58</td><td>2.56</td><td>3.62</td><td>na</td><td>na</td><td>na</td></tr><tr><td>delta-BHC</td><td><0.12</td><td><0.12</td><td><0.12</td><td>na</td><td>na</td><td>na</td></tr><tr><td>endrin aldehyde</td><td>9.08</td><td>10.3</td><td>10.8</td><td>na</td><td>na</td><td>na</td></tr><tr><td>methoxychlor</td><td><0.16</td><td><0.16</td><td><0.16</td><td>na</td><td>na</td><td>na</td></tr></tbody></table>							Sediment X Sample 1	Sediment X Sample 2	Sediment X Sample 3	SRM 1944 Sample 1	SRM 1944 Sample 2	SRM 1944 Sample 3	PCB 37	123	119	118	na	na	na	PCB 74	18.1	20.4	17.2	na	na	na	PCB 70	34.5	37.8	36.2	na	na	na	PCB 119	<0.14	<0.14	<0.14	na	na	na	PCB 87	13.2	10.8	11.6	27	27.3	29.6	PCB 110	58.5	56.1	55.9	64.5	65.8	66	PCB 81	<0.16	<0.16	<0.16	na	na	na	PCB 151	12	12.6	10.6	16.9	16.9	17.1	PCB 77	11.7	11.7	9.96	na	na	na	PCB 123	2.78	3.23	3.37	na	na	na	PCB 114	2.14	3.28	2.81	na	na	na	PCB 168	10.5	12.5	13	na	na	na	PCB 158	3.07	3.14	3.2	na	na	na	PCB 183	3.64	4.34	4.49	12	11.9	11.7	PCB 126	<0.14	<0.14	<0.14	na	na	na	PCB 167	<0.18	<0.18	<0.18	na	na	na	PCB 177	6.21	6.42	7.01	na	na	na	PCB 200	4.27	5.37	5.29	na	na	na	PCB 157	<0.15	<0.15	<0.15	na	na	na	PCB 201	8.07	7.82	8.68	na	na	na	PCB 169	3.67	5.06	5.5	na	na	na	PCB 189	2.58	2.56	3.62	na	na	na	delta-BHC	<0.12	<0.12	<0.12	na	na	na	endrin aldehyde	9.08	10.3	10.8	na	na	na	methoxychlor	<0.16	<0.16	<0.16	na	na	na	
	Sediment X Sample 1	Sediment X Sample 2	Sediment X Sample 3	SRM 1944 Sample 1	SRM 1944 Sample 2	SRM 1944 Sample 3																																																																																																																																																																																							
PCB 37	123	119	118	na	na	na																																																																																																																																																																																							
PCB 74	18.1	20.4	17.2	na	na	na																																																																																																																																																																																							
PCB 70	34.5	37.8	36.2	na	na	na																																																																																																																																																																																							
PCB 119	<0.14	<0.14	<0.14	na	na	na																																																																																																																																																																																							
PCB 87	13.2	10.8	11.6	27	27.3	29.6																																																																																																																																																																																							
PCB 110	58.5	56.1	55.9	64.5	65.8	66																																																																																																																																																																																							
PCB 81	<0.16	<0.16	<0.16	na	na	na																																																																																																																																																																																							
PCB 151	12	12.6	10.6	16.9	16.9	17.1																																																																																																																																																																																							
PCB 77	11.7	11.7	9.96	na	na	na																																																																																																																																																																																							
PCB 123	2.78	3.23	3.37	na	na	na																																																																																																																																																																																							
PCB 114	2.14	3.28	2.81	na	na	na																																																																																																																																																																																							
PCB 168	10.5	12.5	13	na	na	na																																																																																																																																																																																							
PCB 158	3.07	3.14	3.2	na	na	na																																																																																																																																																																																							
PCB 183	3.64	4.34	4.49	12	11.9	11.7																																																																																																																																																																																							
PCB 126	<0.14	<0.14	<0.14	na	na	na																																																																																																																																																																																							
PCB 167	<0.18	<0.18	<0.18	na	na	na																																																																																																																																																																																							
PCB 177	6.21	6.42	7.01	na	na	na																																																																																																																																																																																							
PCB 200	4.27	5.37	5.29	na	na	na																																																																																																																																																																																							
PCB 157	<0.15	<0.15	<0.15	na	na	na																																																																																																																																																																																							
PCB 201	8.07	7.82	8.68	na	na	na																																																																																																																																																																																							
PCB 169	3.67	5.06	5.5	na	na	na																																																																																																																																																																																							
PCB 189	2.58	2.56	3.62	na	na	na																																																																																																																																																																																							
delta-BHC	<0.12	<0.12	<0.12	na	na	na																																																																																																																																																																																							
endrin aldehyde	9.08	10.3	10.8	na	na	na																																																																																																																																																																																							
methoxychlor	<0.16	<0.16	<0.16	na	na	na																																																																																																																																																																																							
17	Coelutions: 8/5, 28/31, 52/43, 138/160, 149/139, 153/132/168, 170/190, 180/193, 187/182 Note: PCB Congeners 28 and 31 coeluted, the total conc. for this pair is reported for each congener Attachment A: Internal Standards for PAHs d10-acenaphthene d10-anthracene d12-benzo(a)anthracene d12-benzo(a)pyrene d12-benzo(b)fluoranthene d12-benzo(k)fluoranthene d12-benzo(ghi)perylene d12-chrysene d14-dibenzo(a,h)anthracene d10-fluoranthene d10-fluorene d12-indeno[1,2,3-cd]pyrene d8-naphthalene d10-phenanthrene d10-pyrene Attachment B: Internal Standards for Pesticides 13C4-Aldrin 13C6-alpha-BHC 13C6-beta-BHC 13C6-delta-BHC 13C6-gamma-BHC (Lindane) 13C4-Dieldrin 13C12-4,4'-DDE 13C12-4,4'-DDT 13C4-Heptachlor 13C8-Mirex 13C6-Chlorobenzenes																																																																																																																																																																																												

17 cont.	Attachment C: Internal Standards for PCB Congeners																																																																																																																												
	1 13C12-2-Monochlorobiphenyl																																																																																																																												
	3 13C12-4-Monochlorobiphenyl			126 13C12-3,3',4,4',5-Pentachlorobiphenyl																																																																																																																									
	4 13C12-2,2'-Dichlorobiphenyl			155 13C12-2,2',4,4',6,6'-Hexachlorobiphenyl																																																																																																																									
	15 13C12-4,4'-Dichlorobiphenyl			156 13C12-2,3,3',4,4',5-Hexachlorobiphenyl																																																																																																																									
	19 13C12-2,2',6-Trichlorobiphenyl			157 13C12-2,3,3',4,4',5'-Hexachlorobiphenyl																																																																																																																									
	37 13C12-3,4,4'-Trichlorobiphenyl			167 13C12-2,3',4,4',5,5'-Hexachlorobiphenyl																																																																																																																									
	54 13C12-2,2',6,6'-Tetrachlorobiphenyl			169 13C12-3,3',4,4',5,5'-Hexachlorobiphenyl																																																																																																																									
	77 13C12-3,3',4,4'-Tetrachlorobiphenyl			188 13C12-2,2',3,4',5,6,6'-Heptachlorobiphenyl																																																																																																																									
	81 13C12-3,4,4',5-Tetrachlorobiphenyl			189 13C12-2,3,3',4,4',5,5'-Heptachlorobiphenyl																																																																																																																									
	104 13C12-2,2',4,6,6'-Pentachlorobiphenyl			202 13C12-2,2',3,3',5,5',6,6'-Octachlorobiphenyl																																																																																																																									
	105 13C12-2,3,3',4,4'-Pentachlorobiphenyl			205 13C12-2,3,3',4,4',5,5',6-Octachlorobiphenyl																																																																																																																									
	114 13C12-2,3,4,4',5-Pentachlorobiphenyl			206 13C12-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl																																																																																																																									
	118 13C12-2,3',4,4',5-Pentachlorobiphenyl			208 13C12-2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl																																																																																																																									
	123 13C12-2',3,4,4',5-Pentachlorobiphenyl			209 13C12-Decachlorobiphenyl																																																																																																																									
	Attachment D: Standards added after extraction/cleanup and JUST PRIOR to Pesticide/PAH chromatographic analysis:																																																																																																																												
	d8-acenaphthylene																																																																																																																												
	d12-perylene																																																																																																																												
	d14-p-terphenyl																																																																																																																												
	d12-benzo(e)pyrene																																																																																																																												
	Attachment E: Standards added after extraction/cleanup and JUST PRIOR to PCB chromatographic analysis:																																																																																																																												
	9 13C12-2,5-Dichlorobiphenyl																																																																																																																												
	52 13C12-2,2',5,5'-Tetrachlorobiphenyl																																																																																																																												
	101 13C12-2,2',4,5,5'-Pentachlorobiphenyl																																																																																																																												
	138 13C12-2,2',3,4,4',5'-Hexachlorobiphenyl																																																																																																																												
	194 13C12-2,2',3,3',4,4',5,5'-Octachlorobiphenyl																																																																																																																												
	Attachment F: Standards added after extraction and prior to sample cleanup																																																																																																																												
	28 13C12-2,4,4'-Trichlorobiphenyl																																																																																																																												
	111 13C12-2,3,3',5,5'-Pentachlorobiphenyl																																																																																																																												
	178 13C12-2,2',3,3',5,5',6-Heptachlorobiphenyl																																																																																																																												
18	(1) chrysene and triphenylene co-elute and are reported as a sum																																																																																																																												
	(2) benzo[b], benzo[j], and benzo[k]fluoranthene co-elute and are reported as a sum																																																																																																																												
	(3) PCB66 and PCB95 co-elute and are reported as a sum																																																																																																																												
20	<table> <tr> <th></th><th>Sediment X</th><th>Sediment X</th><th>Sediment X</th><th>SRM 1944</th><th>SRM 1944</th><th>SRM 1944</th></tr> <tr> <th></th><th>Sample 1</th><th>Sample 2</th><th>Sample 3</th><th>Sample 1</th><th>Sample 2</th><th>Sample 3</th></tr> <tr> <td>PCB 17</td><td>18</td><td>18.6</td><td>18.7</td><td>25.3</td><td>26.4</td><td>26.4</td></tr> <tr> <td>PCB 33</td><td>22.5</td><td>23.4</td><td>22.5</td><td>37.9</td><td>38.7</td><td>39</td></tr> <tr> <td>PCB 70</td><td>74.6</td><td>76.5</td><td>73.9</td><td>90.4</td><td>91.5</td><td>93.3</td></tr> <tr> <td>PCB 74</td><td>34.8</td><td>34.7</td><td>36.5</td><td>43.6</td><td>43.7</td><td>45.2</td></tr> <tr> <td>PCB 82</td><td><2.5</td><td>3.7</td><td>3.35</td><td>4.91</td><td>6.31</td><td>7.16</td></tr> <tr> <td>PCB 87</td><td>27.9</td><td>28.6</td><td>28.9</td><td>35.2</td><td>34.4</td><td>37.3</td></tr> <tr> <td>PCB 110</td><td>65.3</td><td>66.5</td><td>66.4</td><td>76.8</td><td>77.4</td><td>81.1</td></tr> <tr> <td>PCB 151</td><td>14.8</td><td>15.1</td><td>14.9</td><td>17</td><td>16.6</td><td>17.5</td></tr> <tr> <td>PCB 158</td><td>6.82</td><td>6.85</td><td>6.74</td><td>8.37</td><td>8.33</td><td>8.75</td></tr> <tr> <td>PCB 171</td><td>5.55</td><td>5.78</td><td>5.56</td><td>6.79</td><td>6.49</td><td>6.55</td></tr> <tr> <td>PCB 177</td><td>12.1</td><td>12.4</td><td>12</td><td>13.3</td><td>13.2</td><td>13.7</td></tr> <tr> <td>PCB 183</td><td>12</td><td>12.3</td><td>11.8</td><td>13.2</td><td>13.4</td><td>13.6</td></tr> <tr> <td>PCB 191</td><td><3.21</td><td><2.74</td><td><3.28</td><td><2.4</td><td><2.61</td><td><3.81</td></tr> <tr> <td>PCB 208</td><td><3.21</td><td>3.06</td><td><3.28</td><td><2.4</td><td>3.46</td><td><3.81</td></tr> <tr> <td>dibenzothiophene</td><td><54</td><td><45.4</td><td><53.5</td><td>601</td><td>661</td><td>618</td></tr> </table>							Sediment X	Sediment X	Sediment X	SRM 1944	SRM 1944	SRM 1944		Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	PCB 17	18	18.6	18.7	25.3	26.4	26.4	PCB 33	22.5	23.4	22.5	37.9	38.7	39	PCB 70	74.6	76.5	73.9	90.4	91.5	93.3	PCB 74	34.8	34.7	36.5	43.6	43.7	45.2	PCB 82	<2.5	3.7	3.35	4.91	6.31	7.16	PCB 87	27.9	28.6	28.9	35.2	34.4	37.3	PCB 110	65.3	66.5	66.4	76.8	77.4	81.1	PCB 151	14.8	15.1	14.9	17	16.6	17.5	PCB 158	6.82	6.85	6.74	8.37	8.33	8.75	PCB 171	5.55	5.78	5.56	6.79	6.49	6.55	PCB 177	12.1	12.4	12	13.3	13.2	13.7	PCB 183	12	12.3	11.8	13.2	13.4	13.6	PCB 191	<3.21	<2.74	<3.28	<2.4	<2.61	<3.81	PCB 208	<3.21	3.06	<3.28	<2.4	3.46	<3.81	dibenzothiophene	<54	<45.4	<53.5	601	661	618
	Sediment X	Sediment X	Sediment X	SRM 1944	SRM 1944	SRM 1944																																																																																																																							
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3																																																																																																																							
PCB 17	18	18.6	18.7	25.3	26.4	26.4																																																																																																																							
PCB 33	22.5	23.4	22.5	37.9	38.7	39																																																																																																																							
PCB 70	74.6	76.5	73.9	90.4	91.5	93.3																																																																																																																							
PCB 74	34.8	34.7	36.5	43.6	43.7	45.2																																																																																																																							
PCB 82	<2.5	3.7	3.35	4.91	6.31	7.16																																																																																																																							
PCB 87	27.9	28.6	28.9	35.2	34.4	37.3																																																																																																																							
PCB 110	65.3	66.5	66.4	76.8	77.4	81.1																																																																																																																							
PCB 151	14.8	15.1	14.9	17	16.6	17.5																																																																																																																							
PCB 158	6.82	6.85	6.74	8.37	8.33	8.75																																																																																																																							
PCB 171	5.55	5.78	5.56	6.79	6.49	6.55																																																																																																																							
PCB 177	12.1	12.4	12	13.3	13.2	13.7																																																																																																																							
PCB 183	12	12.3	11.8	13.2	13.4	13.6																																																																																																																							
PCB 191	<3.21	<2.74	<3.28	<2.4	<2.61	<3.81																																																																																																																							
PCB 208	<3.21	3.06	<3.28	<2.4	3.46	<3.81																																																																																																																							
dibenzothiophene	<54	<45.4	<53.5	601	661	618																																																																																																																							
	Note: by our method, chrysene coelutes with triphenylene and B[j]F coelutes with B[k]F. The concentrations reported for chrysene and B[k]F are the sums of these coeluting compounds.																																																																																																																												
21	Most of the isomers requested coelute on the SPB-Octyl column. The list of coelutions: PCB 5/8, PCB 18/30, PCB 20/28, PCB 49/69 PCB 44/47/65, PCB 90/101/113, PCB 83/99/112, PCB 147/149, PCB 153/168, PCB 129/138/163, PCB-128/166, PCB-156/157, PCB-180/193																																																																																																																												
22	*Chrysene is chrysene plus triphenylene NA not determined. 4,4'-DDT was not quantified since it and deuterated 4,4'-DDT split between first and second fractions of the aminopropylsilane LC separation step.																																																																																																																												
23	used SRM 1941a instead of SRM 1944																																																																																																																												

Appendix G: Laboratory Methods Used, Mussel Tissue X

Lab #	Reported	g extracted QA00TIS10	g extracted SRM 1974a	% water Determination	Extraction Method	Extraction Solvent	Extraction Time	Extraction other
1	4/20/01	9 wet	8 wet	freeze-dry	Soxhlet	dichloromethane	16 h	
2	1/30/01	10 wet	1.02 dry	not done - based on % moisture for SRM 1974a	Soxhlet	dichloromethane	12 h	
4	1/30/01	0.4 wet	0.8 wet	24 h at 105 °C	NS&T tissuizer technique	dichloromethane	2 extractions x 2 min each	0.5 h shake
5	1/30/01	3 wet	7 dry	lg of wet tissue dried 5 h at 110 °C	polytron	dichloromethane	3 times x 2 min each	
6	1/30/01	4 wet for PAH; 3 wet for Pest/PCB	1 dry for PAH; 0.3 dry for Pest/PCB	24 h at 104 °C	pressurized fluid extraction (PFE)	dichloromethane:acetone (2:1)	30 min	acetonitrile partitioning for pesticides and PCBs
7	1/31/01	5 wet	0.5 dry	16 h at 120 °C	PFE	dichloromethane	3 cycles at 5 min/cycle	temp = 100 °C; pressure 2000 psi; samples dried with anhydrous sodium sulfate prior to extraction
9	2/1/01	3 wet	0.60 dry	105 °C until constant weight	PFE	dichloromethane	13 min / sample	temp = 100 °C; pressure 2000 psi; 2 static cycles / sample
10	2/1/01	6 wet (PAHs); 5 wet (PCB and pesticide)	82 dry (PAHs); 45 dry (PCB and pesticide)	24 h at 105 °C	SW-846 Method 3540, Soxhlet extraction	dichloromethane:hexane (1:1)	18 h	
11	2/1/01	3.5 wet	0.55 dry	48 h at 70 °C	PFE	dichloromethane/acetone	40 min	
13	2/7/01	10 wet	2 dry	freeze-dry	PFE	dichloromethane	10 min	
14	2/8/01	10 wet	10 dry		shake 1 h with 100 mL of	dichloromethane	1 h	repeat 2 more times
15	2/12/01	8.15 wet	NA	110 - 120 °C until constant weight	metabolic shaker of sample and solvents in Teflon centrifuge tube at 50 °C	acetonitrile : hexane (3:2)	1 h	cool; add water; centrifuge; draw off hexane layer; repeat with hexane 2 more times
16	2/14/01	0.5 wet	0.5 dry	overnight at 105 °C	PFE	dichloromethane	11 min	
17	2/15/01	8 wet	2 dry	dry until constant weight	Soxhlet mixed with sodium sulfate - Method 3540C	dichloromethane / hexane	16 h	
18	2/15/01	10 wet	1.5 dry	24 h at 105 °C	ultrasonication; ambient temperature shaking	1:1 dichloromethane:acetone	3 cycles of 3 min sonication; 4 h shaker table	
20	3/13/01	4 wet	0.4 dry	overnight at 120 °C	NOAA Tech Memo NOS ORCA 71 Vol IV, Chap. 2	dichloromethane	16 h for dichloromethane/acetone extraction then 16 h for toluene extraction	sodium sulfate added to samples prior to extraction
21	3/19/01	2.5 wet	2.5 wet	Method D2216	Soxhlet	dichloromethane/acetone then toluene		after both extractions, reduced using rotovap and combined into one fraction
22	3/21/01	9 wet	1.5 dry	18 h at 120 °C	PFE	dichloromethane	3 cycles at 5 min/cycle	temp = 100 °C; pressure 2000 psi; 3 static cycles / sample at 5 min each

Lab #	Sample extract cleanup method	PCBs and Pesticides Separated?	Method of quantitation
1	silica solid phase extraction (SPE) column; condition and elute with 10 % dichloromethane in hexane; repeat SPE step one more time	no	IS
2	gel permeation chromatography; sodium sulfate filtration; alumina silica clean up and fractionation	yes	only pesticide data - ES
4	2% deactivated F20 alumina 40 g column cleanup; HPLC/GPC cleanup	no	IS
5	gel permeation chromatography; fractionation and cleanup: 7.3 % deactivated silica gel	yes	IS
6	florisil cleanup	no	IS
7	1) size exclusion HPLC (SDVB column with dichloromethane mobile phase; 2a) 1/2 of extract - aliphatic/aromatic fractionation on silica SPE - analyze aromatic fraction for PAH; 2b) other 1/2 extract - PCB/pest fractionation on silica SPE (F1/ hexane; F2 /hexane : DCM 1:1 (v/v))	gamma-HCH, heptachlor epoxide, DDD's, and dieldrin were separated	IS
9	silica/alumina column chromatography; HPLC (Phenogel 100A column); reduction to 0.5 mL using water bath	no	IS
10	PAH: SW-846 3630BA (silica gel) and 3640 (Gel Permeation Chromatography); pesticides and PCBs: SW-846 Method 3620B Florisil cleanup procedure, sulfuric acid cleanup of 100% hexane fraction, acetonitrile back extraction cleanup of 50% fraction followed by florisil cleanup procedure with a collection of a 6 [^] , 15%, and 50% v/v preserved diethyl ether/hexane fraction.	no	IS for PAH; ES for pesticides and PCBs
11	gel permeation chromatography and florisil	no	ES
13	silica/alumina column and GPC	no	IS
14	GPC	no	IS
15	cleanup using solid phase extraction silica gel column chromatography to give one fraction, eluted with 90% hexane / 10% dichloromethane	no	IS
16	final extract was concentrated and cleaned using a 6 g florisil cartridge	no	IS
17	PCB-acid cleanup, silica gel, alumina; PAHs and pesticide-GPC method 3640a, silica gel method 3630C, sulphur method 3660B	no	IS
18	alumina/silica gel column; GPC-HPLC	no	IS
20	silica/alumina and HPLC-SEC chromatography - NOAA Technical Memorandum NOS ORCA 71 Volume IV, Chapter 2	no	IS
21	PAH-silica gel column chromatography; pesticide-florisil column, followed by silica gel column, followed by another florisil column, and finally mercury cleanup; PCB-silica gel column, followed by acid alumina column, and finally mercury cleanup	yes	IS
22	size exclusion chromatography (PL gel); 1g aminopropyl solid phase extraction cartridges using 10% dichloromethane in hexane - PAH analysis; fractionation using aminopropylsilane column into relatively polar and nonpolar fractions - organochlorine analysis	yes	IS

Lab #	Instrument	PAHs Phase	Dimensions	Calibration Curve # points	range
1	GC/MS	DB-XLB	60m x 0.25 mm, 0.25um filn	5	200 - 5000 ng/g
2	NA				
4	GC/MS	DB-5MS	60m x 0.25 mm, 0.25um filn	8	0.01 - 10 ng/uL
5	HRGC/MS	DB-5MS	30m x 0.25 mm, 0.25um filn	5	10 - 1200 ng/mL
6	GC/MS	DB-5	30m x 0.25 mm, 0.25um filn	5	20 - 100 ppm
7	GC-ITMS	RTX-5-MS	30m x 0.25 mm, 0.25um filn	6	30 - 6600 ng/mL
9	GC/MS	DB-5MS	60m x 0.25 mm, 0.25um filn	5	20 - 1000 ng/mL
10	GC/MS	DB-5	30m x 0.25 mm, 0.25um filn	9	0.01 - 2.4 ug/mL
11	NA				
13	GC/MS	DB-XLB	30m x 0.25 mm, 0.50um filn	5	0.1 - 10 ug/mL
14	ITD	RTX-5MS	30m x 0.25 mm, 0.25um filn	3	25 - 500 ng/mL
15	GC/MS	HP-5MS	60m x 0.25 mm, 0.25um filn	3	1.0 - 20 ng
16	NA				
17	GC/MS	RTX-5Sil	30m x 0.25 mm, 0.25um filn	6	0.05 - 2 ng/uL
18	GC/MS	DB-5	30m x 0.25 mm, 0.25um filn	5	25 - 2000 ng/mL
20	GC/MS	DB-5	60m x 0.25 mm, 0.25um filn	5	0.004 - 3 ng/uL
21	9D5	DB-5	60m x 0.32 mm, 0.25um filn	5	10 - 500 pg/uL
22	GC/MS	DB-17	60m x 0.25 mm, 0.25um filn	5	0.014 - 9.5 ng/uL

Lab #	PCBs			Calibration Curve			PESTICIDES			Calibration Curve		
	Instrument	Phase	Dimensions	# points	range		Instrument	Phase	Dimensions	# points	range	
1	GC/MS	DB-XLB	60m x 0.25 mm, 0.25um	5	2 - 150 ng/g		GC/MS	DB-XLB	60m x 0.25 mm, 0.25um	5	2 - 150 ng/g	
2	NA						GC-ECD	RTX-5 and RTX-1701	each 30m x 0.25 mm, 0.25um film	6	5 - 200 pg/uL	
4	GC-ECD	DB-5	60m x 0.25 mm, 0.25um	5	0.008 - 0.12 ng/uL		GC-ECD	DB-5	60m x 0.25 mm, 0.25um	5	0.008 - 0.12 ng/uL	
5	GC-ECD	DB-5 and DB-17	30m x 0.25 mm, 0.25um film	4	5 - 100 ng/mL		GC-ECD	DB-5 and DB-17	30m x 0.25 mm, 0.25um film	4	5 - 100 ng/mL	
6	GC-ECD	DB-5/DB-XLB	60m x 0.32 mm, 0.25um	6	10 - 100 ppb		GC-ECD	DB-5/DB-XLB	60m x 0.32 mm, 0.25um	6	10 - 100 ppb	
7	GC-ECD	RTX-5/RTX-50	30m x 0.25 mm, 0.25um film	3	1 - 50 ng/mL		GC-ECD	DB-1701/RTX5	30m x 0.25 mm, 0.25um film	3	1 - 50 ng/mL	
9	GC-ECD	DB-5, DB-17	30m x 0.25 mm, 0.25um	5	5 - 200 ng/mL		GC-ECD	DB-5, DB-17	30m x 0.25 mm, 0.25um	5	5 - 200 ng/mL	
		RTX-						RTX-				
		CLPesticides /						CLPesticides /				
10	GC-ECD	RTX-	30m x 0.32 mm, 0.5/0.25um film	6	1 - 500 pg/uL		GC-ECD	RTX-	30m x 0.32 mm, 0.5/0.25um film	6	2.5 - 250 pg/uL	
11	GC-ECD	DB-5/DB-17	60m x 0.25 mm, 0.25um	7	0.5 - 50 ppb		GC-ECD	DB-5/DB-17	60m x 0.25 mm, 0.25um	7	0.5 - 100 ppb	
13	GC-ECD	DB-XLB	60m x 0.25 mm, 0.25um	5	2.5 - 200 ng/mL		GC-ECD	DB-XLB	60m x 0.25 mm, 0.25um	5	2.5 - 200 ng/mL	
14	ITD	RTX-CLP	60m x 0.25 mm, 0.25um	5	5 - 501 ng/mL		ITD	RTX-CLP	30m x 0.25 mm, 0.25um	5	5 - 500 ng/mL	
15	GC/MS	HP-5MS	60m x 0.25 mm, 0.25um	3	12 - 100 pg		GC/MS	HP-5MS	60m x 0.25 mm, 0.25um	3	12 - 100 pg	
16	GC-ECD	DB-XLB, DB-5	60m x 0.32 mm, 0.25um	5 +	1.0 - 250 ng/mL		GC-ECD	DB-XLB, DB-5	60m x 0.32 mm, 0.25um	5 +	1.0 - 250 ng/mL	
17	GC/MS	RTX-5sil MS	60m x 0.25 mm, 0.25um	5	0.001 - 2 ng/uL		GC/MS	XTI-5	30m x 0.32 mm, 0.50um	6	0.05 - 5 ng/uL	
18	GC-ECD	RTX-5/DB-1701	30m x 0.25 mm, 0.25um film	5	5 - 200 ng/mL		GC-ECD	RTX-5/DB-1701	30m x 0.25 mm, 0.25um film	5	5 - 200 ng/mL	
20	GC/MS	DB-5	60m x 0.25 mm, 0.25um	6	0.0032 - 1.00 ng/uL		GC/MS	DB-5	60m x 0.25 mm, 0.25um	6	0.0032 - 1.00 ng/uL	
21	SD5 & dD5	SPB-Octyl	30m x 0.32 mm, 0.25um	5	0.5 - 4000 pg/uL		GC-ECD	DB-5	60m x 0.32 mm, 0.25um	5	10 - 2500 pg/uL	
22	GC-ECD	DB-5/DB-XLB	60m x 0.25 mm, 0.25um	5	0.005 - 0.4 ng/uL		GC-ECD	DB-5/DB-XLB	60m x 0.25 mm, 0.25um	5	0.005 - 0.4 ng/uL	

Lab #	IS/surrogate added prior to extraction	PAHs				corrected for recovery?	others?
		Used ⁽¹⁾	added prior to analysis	Used?			
1	deuterated naphthalene, naphenyl, acenaphthene, phenanthrene, fluoranthene, pyrene, B[a]A, B[a]P, perylene, B[ghi]P, DB[a,h]A	x					
2	NA						
4	deuterated naphthalene, phenanthrene, chrysene		deuterated acenaphthene, fluorene, B[a]P	x			
5	deuterated naphthalene, acenaphthene, phenanthrene, fluoranthene, chrysene, B[a]P, B[ghi]P		deuterated fluorene, pyrene, perylene	x	n		
6			deuterated phenanthrene, chrysene, perylene, acenaphthene, naphthalene, 1,2-dichlorobenzene	x	n		
7	18 perdeuterated PAH (see notes for details)	x	deuterated p-terphenyl				
9	SU - deuterated naphthalene, acenaphthene, phenanthrene, chrysene, perylene		IS - deuterated fluorene, pyrene, and B[a]P	x			
10	see notes	x	2,2'-difluorobiphenyl - injection internal standard				
11	NA						
13	deuterated - p-terphenyl		deuterated naphthalene, acenaphthene, phenanthrene, chrysene, and perylene	x	n		
14	PCB 14 and deuterated alpha-BHC		deuterated chrysene	x	n		
15	deuterated naphthalene, acenaphthene, anthracene, B[a]P	x	o-terphenyl- ES added just prior to GC analysis to calculate IS recoveries		n		
16	NA						
17	see attachment A in notes	x	see attachment D in notes				
18	deuterated naphthalene, phenanthrene, acenaphthene, B[a]P		deuterated fluorene and chrysene	x			deuterated phenanthrene
20	deuterated naphthalene, acenaphthene, B[a]P	x	hexamethylbenzene				
21	deuterated naphthalene, acenaphthene, fluorene, phenanthrene, pyrene, B[a]A, chrysene, B[b]F, B[k]F, B[e]P, perylene, indeno[1,2,3-cd]pyrene, DB[a,h]A, B[ghi]P	x	deuterated methyl naphthalene, anthracene, terphenyl, B[e]P				
22	deuterated naphthalene, biphenyl, acenaphthene, fluoranthene, pyrene, B[a]A, B[a]P, perylene, B[ghi]P, DB[a,h]A	x					

Lab #	IS/surrogate added prior to extraction	PCBs			corrected for recovery?	others?	IS/surrogate added prior to extraction	Pesticides added prior to analysis			corrected for recovery?	others?
		Used?	Added prior to analysis	Used?				Used?	Added prior to analysis	Used?		
1	PCB 103, PCB 198, and deuterated DDD and DDT	x					PCB 103, PCB 198, and deuterated DDD and DDT	x				
2												
4	PCB 14, PCB 34, PCB 104, PCB 112		PCB 96, PCB 103, PCB 166	x	y		PCB 14, PCB 34, PCB 104, PCB 112		PCB 96, PCB 103, PCB 166		y	
5	PCB 113 and PCB 198		4,4'-dibromooctafluorobiphenyl	x	n		gamma-chlordane		4,4'-dibromooctafluorobiphenyl	x	n	
6			4,4'-dibromooctafluorobiphenyl	x	n				4,4'-dibromooctafluorobiphenyl	x	n	
7	PCB 113 and PCB 198	x	delta-HCH				deuterated DDT (T) and endosulfan II (Z)	x	delta-HCH			
9	SU - 4,4'-Dibromooctafluorobiphenyl, 2,3',4,5',6'- Pentafluorobiphenyl, 2,2',3,3',4,5,5',6'-Octafluorobiphenyl						SU - 4,4'-Dibromooctafluorobiphenyl, 2,3',4,5',6'- Pentafluorobiphenyl, 2,2',3,3',4,5,5',6'-Octafluorobiphenyl					
10			IS - Tetracloro-metaxylene	x	y				IS - Tetracloro-metaxylene	x	y	
11												
13	dibromooctafluorobiphenyl, octachloronaphthalene											
14	alpha-BHC-4 ₆ and PCB 16		1-bromo-2-nitrobenzene	x	n				1-bromo-2-nitrobenzene	x	n	
15	DBDFB, PCB 103, and PCB 198		d ₁₂ -chryse	x	n				d ₁₂ -chryse	x	n	
16	TCMX, PCB 65, PCB 191	x	PCB 100				DBDFB, PCB 103, and PCB 198	x	PCB 100			
17	see Notes - attachment C for lab 17		PCB 30 and PCB 205	x	n		TCMX, PCB 65, PCB 191		PCB 30 and PCB 205	x	n	
18	DBDFB, PCB 103, and PCB 198	x	see Notes - attachment E for lab 17				see Notes - attachment B for lab 17	x	see Notes - attachment D for lab 17			
20	PCB 103		TCMX	x	y		DBDFB, PCB 103, and PCB 198		TCMX	x		
		x	tetracloro-o-xylene				PCB 103		tetracloro-o-xylene			tetracloro-m-xylene prior to HPLC-SEC cleanup
21	carbon-13 labeled PCB 3, PCB 15, PCB 28, PCB 77, PCB 105, PCB 114, PCB 118, PCB 126, PCB 156, PCB 167, PCB 169, PCB 170, PCB 180, PCB 194, and PCB 209	x	carbon-13 labeled PCB 52, PCB 101, PCB 138, and PCB 202				carbon-13 labeled alpha-BHC, beta-BHC, HCB, 4,4'-DDE, 4,4'-DDT, endosulfan-I, and methoxychlor	x	carbon-13 labeled delta-BHC and PCB 101			
22	PCB 113 and PCB 198	x					deuterated 4,4'-DDE, 4,4'-DDT, 4,4'-DDD, and endosulfan	x				

Appendix H: Laboratory Methods Used, Sediment X

Lab #	Reported	g extracted QA00SED10	g extracted SRM 1944	% water Determination	Extraction Method	Extraction Solvent	Extraction Time	Extraction other
1	4/20/01	10 wet	3 dry	oven drying at 105 °C	Soxhlet	dichloromethane	16 h	
2	1/30/01	18 wet	2 dry	dryer balance	Soxhlet	dichloromethane	12 h	
3	1/30/01	1 wet	0.5 - 1 dry	overnight at 100 °C	Soxhlet	50% dichloromethane / 50% acetone for pesticides and dichloromethane for PCBs	>16 h	
4a	1/30/01	7.8 wet	1.5 dry	24 h at 105 °C	shaker table - 3x	dichloromethane	12 h + 4 h + 1 h	
4b	1/30/01	2.9 wet	1.3 dry	24 h at 105 °C	shaker table - 3x	dichloromethane	12 h + 4 h + 1 h	
6	1/30/01	7-10 wet for PAH; 6 wet for Pes/PCB	8-10 dry for PAH; 6 dry for Pes/PCB	24 h at 104 °C	pressurized fluid extraction (PFE)	dichloromethane:acetone (2:1)	30 min	acetonitrile partitioning for pesticides and PCBs
7	1/31/01	5 wet	2.5 dry	16 h at 120 °C	PFE	dichloromethane	3 cycles at 5 min/cycle	temp = 100 °C; pressure 2000 psi; samples dried with anhydrous sodium sulfate prior to extraction
8	2/1/01	10 wet	2.5 dry	1 h at 104 °C	EPA method 3550 sonication	dichloromethane	75 mL methylene chloride 3 x for 2 min pulse sonication	temp = 100 °C; pressure 2000 psi; 2 static cycles / sample
9	2/1/01	3.64 wet	0.50 dry	105 °C until constant weight	PFE	dichloromethane	13 min / sample	samples air dried 72 h at room temp
10	2/1/01	7.6 wet	5.1 dry	24 h at 105 °C	SW-846 Method 3545 PFE, 2 cycles	dichloromethane	20 min	
11	2/1/01	5 wet	5 dry	48 h at 70 °C	PFE	dichloromethane/acetone	40 min	
12	2/6/01	1.5 wet	1.5 dry	24 h at 65 °C	Soxhlet	dichloromethane	24 h	
13	2/7/01	10 wet	5 dry	freeze-dry	PFE	dichloromethane	10 min	
14	2/8/01	10 wet	10 dry		shake 1 h with 100 mL of metabolic shaker of sample and solvents in Teflon centrifuge tube at 50 °C	dichloromethane	1 h	repeat 2 more times
15	2/12/01	1.93 wet	1.42 dry	110 - 120 °C until constant weight	rollers for PCBs and pest; PFE for PAH	acetonitrile : hexane (3:2)	1 h	cool; add water; centrifuge; draw off hexane layer; repeat with hexane 2 more times
16	2/14/01	5 wet	10 dry	overnight at 105 °C	Soxhlet mixed with sodium sulfate - Method 3540C	dichloromethane : acetone for PFE	36 h for rollers; 10 min for PFE	
17	2/15/01	11 wet	8 dry	dry until constant weight	ultrasonication; ambient temperature shaking	dichloromethane / acetone	16 h	
18	2/15/01	10 wet	1 dry	24 h at 105 °C	Soxhlet	1:1 dichloromethane:acetone	3 cycles of 3 min sonication; 4 h shaker table	
19	2/16/01	2 wet	2 dry	ASTM 160.2	NOAA Tech Memo NOS ORCA 71 Vol IV, Chap. 2	dichloromethane	16 h	sodium sulfate added to samples prior to extraction
20	3/13/01	1 wet	0.50 dry	overnight at 120 °C	Soxhlet	1:1 acetone:dichloromethane followed by toluene extraction	16 h each extraction	both extractions were solvent reduced and combined
21	5/7/01	8 wet		ASTM method D2216-90	PFE	dichloromethane	3 cycles at 5 min/cycle	temp = 100 °C; pressure 2000 psi; 3 static cycles / sample at 5 min each
22	3/21/01	3 wet	1.2 dry	18 h at 120 °C	agitation	dichloromethane	32 h	extraction in 3 separate increments - fresh solvent each time
23	4/4/01	7 wet	1 dry	drying oven				

Lab #	Sample extract cleanup method	PCBs and Pesticides Separated?	Method of quantitation
1	silica solid phase extraction (SPE) column; condition and elute with 10 % dichloromethane in hexane; add activated copper powder to fraction; repeat SPE step one more time	no	IS
2	gel permeation chromatography; alumina silica fractionation	no	only pesticide data - ES
3	pesticides - copper to remove sulfur; water wash; multiple silica gel cleanup columns; PCBs - acid-base wash; layered silica, carbon celite		IS
4a	2% deactivated F20 alumina 20 g column cleanup; HPLC/GPC cleanup; activated copper		IS
4b	20 g, 22 mL 2% deactivated F-20 alumina column		IS
6	florisil cleanup and copper cleanup for pesticides and PCBs; florisil cleanup for PAH	no	IS
7	1) size exclusion HPLC (SDVB column with dichloromethane mobile phase; 2a) 1/2 of extract - aliphatic/aromatic fractionation on silica SPE - analyze aromatic fraction for PAH; 2b) other 1/2 extract - PCB/pest fractionation on silica SPE (FI/ hexane; F2 /hexane : DCM 1:1 (v/v))	gamma-HCH, heptachlor epoxide, DDD's, and dieldrin were separated	IS
8	Copper and silica gel for PAH; Copper for pesticides; Copper and acid for PCBs	yes	IS
9	silica/alumina column chromatography; copper for sulfur removal; reduce to 1.0 mL using water bath	no	IS
10	PAH: SW-846 3630BA (silica gel); pesticides and PCBs: SW-846 Method 3620 Florisil cleanup, 2 fractions: 100% hexane, 50% preserved diethyl ether / 50% hexane; elemental mercury to remove sulfur; concentrated sulfuric acid treatment - 100% hexane fraction only	no	IS for PAH; ES for pesticides and PCBs
11	gel permeation chromatography and florisil	no	
12	alumina prior to PAH analysis; florisil prior to PCB analysis	yes	IS
13	silica/alumina column and GPC	no	IS
14	none		IS
15	removal of elemental sulfur via copper powder; solid phase extraction silica gel column chromatography to give one fraction, eluted with 90% hexane / 10% dichloromethane	no	IS
16	for PAH - addition of copper for removal of sulfur; for PCB and pesticides - 6 g florisil cartridge and addition of copper for sulfur removal	no	IS
17	PCB-acid cleanup, silica gel, alumina; PAHs-silica gel, method 3630C, sulphur method 3660B; pesticide-silica gel, method 3630C, sulphur method 3660B	no	IS
18	alumina/silica gel column; granulated copper	no	IS
19	PCBs - acid wash, florisil column, mercury cleanup for sulfur; PAHs - none		isotope dilution IS
20	silica/alumina and HPLC-SEC chromatography - NOAA Technical Memorandum NOS ORCA 71 Volume IV, Chapter 2		
21	PAHs - silica gel column; pesticides - two florisil column, silica gel column, and mercury cleanup; PCBs - silica gel column, acid alumina column, and mercury cleanup	no	IS
22	size exclusion chromatography (PL gel); activated copper for sulfur removal; 1g aminopropyl solid phase extraction cartridges using 10% dichloromethane in hexane - PAH analysis; fractionation using aminopropylsilane column into relatively polar and nonpolar fractions - organochlorine analysis separate into aliphatic and aromatic components using a silica gel and alumina column; aromatic fraction is further cleaned by GPC/HPLC fractionation	yes	IS
23		only PAH	IS

Lab #	Instrument	PAHs Phase	Dimensions	Calibration Curve # points	range
1	GC/MS	DB-XLB	60m x 0.25 mm, 0.25um filn	5	200 - 5000 ng/g
2	NA				
3	NA				
4a	GC/MS	DB-5MS	60m x 0.25 mm, 0.25um filn	8	0.01 - 10 ng/uL
4b	GC/MS	DB-5	60m x 0.25 mm, 0.25um filn	6	0.01 - 10 ng/uL
6	GC/MS	DB-5	30m x 0.25 mm, 0.25um filn	5	20 - 100 ppm
7	GC-ITMS	RTX-5-MS	30m x 0.25 mm, 0.25um filn	6	30 - 6600 ng/mL
8	GC/MS	RTX-5-MS	30m x 0.25 mm, 0.25um filn	5	5 - 100 ng/mL
9	GC/MS	DB-5MS	60m x 0.25 mm, 0.25um filn	5	20 - 1000 ng/mL
10	GC/MS	DB-5	30m x 0.25 mm, 0.25um filn	9	0.01 - 2.4 ug/mL
11	NA				
12	GC/MS	5% phenylmethyl	25m x 0.2 mm, 0.33um film		
13	GC/MS	DB-XLB	30m x 0.25 mm, 0.50um filn	5	0.1 - 10 ug/mL
14	ITD			3	25 - 500 ng/mL
15	GC/MS	HP-5MS	60m x 0.25 mm, 0.25um filn	3	1.0 - 20 ng
16	GC/MS (SIR)	DB-XLB	30m x 0.25 mm, 0.25um filn	5+	0.01 - 10 ug/mL
17	GC/MS	RTX-5Sil	30m x 0.25 mm, 0.25um filn	6	0.05 - 2 ng/uL
18	GC/MS	DB-5	30m x 0.25 mm, 0.25um filn	5	25 - 2000 ng/mL
19	GC/MS	RTX-5	30m x 0.25 mm, 0.10um filn	7	
20	GC/MS	DB-5	60m x 0.25 mm, 0.25um filn	5	0.1 - 10 ng/uL
	Micromass				
21	Autospec	DB-5	60m x 0.32 mm, 0.25um filn	5	10 - 500 pg/uL
22	GC/MS	DB-17	60m x 0.25 mm, 0.25um filn	5	0.014 - 9.5 ng/uL
23	GC/MS	5% phenylmethyl	25m x 0.2 mm, 0.33um film	5	6 - 1800 ng/g

Lab #	Instrument	PCBs Phase	Dimensions	Calibration Curve # points	range	Instrument	PESTICIDES Phase	Dimensions	Calibration Curve # points	range
1	GC/MS	DB-XLB	film	5	2 - 150 ng/g	GC/MS	DB-XLB	60m x 0.25 mm, 0.25um filr	5	2 - 150 ng/g
2	NA					GC-ECD	5% phenyl; 14% cyanopryl;			
3	GC-HRMS	SPB-Octyl	30m x 0.25 mm, 0.25um	6	0.2 - 2000 ng/mL	GC-HRMS	DB-5	30m x 0.25 mm, 0.25um filr	6	5 - 200 pg/uL
4a	GC-ECD	DB-5	60m x 0.25 mm, 0.25um	5	0.008 - 0.12 ng/uL	GC-ECD	DB-5	60m x 0.32 mm, 0.25um filr	6	2.5 - 2500 ng/mL
4b	NA					GC-ECD	DB-5	60m x 0.25 mm, 0.25um filr	5	0.008 - 0.12 ng/uL
6	GC-ECD	DB-5/DB-XLB	60m x 0.32 mm, 0.25um	6	10 - 100 ppb	GC-ECD	DB-5/DB-XLB	60m x 0.32 mm, 0.25um filr	6	10 - 100 ppb
7	GC-ECD	RTX-5/RTX-50	30m x 0.25 mm, 0.25um	3	1 - 50 ng/mL	GC-ECD	DB-1701/RTX5	30m x 0.25 mm, 0.25um filr	3	1 - 50 ng/mL
8	GC-ECD	RTX-5/RTX-35	60m x 0.25 mm, 0.25um	5	2 - 30 ng/mL	GC-ECD	RTX-5/RTX-35	60m x 0.25 mm, 0.25um filr	5	1 - 50 ng/mL
9	GC-ECD	DB-5, DB-17	30m x 0.25 mm, 0.25um	5	5 - 200 ng/mL	GC-ECD	DB-5, DB-17	30m x 0.25 mm, 0.25um filr	5	5 - 200 ng/mL
		RTX- CLPesticides /					RTX- CLPesticides /			
10	GC-ECD	RTX- CLPesticides2	30m x 0.32 mm, 0.5/0.25um	6	1 - 500 pg/uL	GC-ECD	RTX- CLPesticides2	30m x 0.32 mm, 0.5/0.25um filr	6	2.5 - 250 pg/uL
11	GC-ECD	DB-5/DB-17	60m x 0.25 mm, 0.25um	7	0.5 - 50 ppb	GC-ECD	DB-5/DB-17	60m x 0.25 mm, 0.25um	7	0.5 - 100 ppb
12	GC-ECD	DB-5	60m x 0.25 mm, 0.25um			GC-ECD	DB-5	60m x 0.25 mm, 0.25um		
13	GC-ECD	DB-XLB	60m x 0.25 mm, 0.25um	5	2.5 - 200 ng/mL	GC-ECD	DB-XLB	60m x 0.25 mm, 0.25um	5	2.5 - 200 ng/mL
14	ITD			5	5 - 500 ng/mL	ITD			5	5 - 501 ng/mL
15	GC/MS	HP-5MS	60m x 0.25 mm, 0.25um	3	12 - 100 pg	GC/MS	HP-5MS	60m x 0.25 mm, 0.25um	3	12 - 100 pg
16	GC-ECD	DB-XLB, DB-5	60m x 0.32 mm, 0.25um	5 +	1.0 - 250 ng/mL	GC-ECD	DB-XLB, DB-5	60m x 0.32 mm, 0.25um	5 +	1.0 - 250 ng/mL
17	GC/MS	RTX-5sil MS	60m x 0.32 mm, 0.25um	5	0.001 - 2 ng/uL	GC/MS	XTI-5	30m x 0.32 mm, 0.50um filr	6	0.05 - 5 ng/uL
18	GC-ECD	RTX-5/DB-1701	30m x 0.25 mm, 0.25um	5	5 - 200 ng/mL	GC-ECD	RTX-5/DB-1701	30m x 0.25 mm, 0.25um	5	5 - 200 ng/mL
19	1668 A Mod	SPB-Octyl	60m x 0.50 mm, 0.25um	6		NA				
20	GC/MS	DB-5	60m x 0.25 mm, 0.25um	5	0.003 - 0.3 ng/uL	GC/MS	DB-5	60m x 0.25 mm, 0.25um	5	0.003 - 0.3 ng/uL
21	Micromass Autospec	SPB-Octyl	30m x 0.25 mm, 0.25um	5	0.5 - 4000 pg/uL	VG-70 S	DB-5	60m x 0.32 mm, 0.25um film	5	10-2500 pg/uL
22	GC-ECD	DB-5/DB-XLB	60m x 0.25 mm, 0.25um	5	0.005 - 0.4 ng/uL	GC-ECD	DB-5/DB-XLB	60m x 0.25 mm, 0.25um	5	0.005 - 0.4 ng/uL
23	NA					NA				

Lab #	IS/surrogate added prior to extraction	PAHs			corrected for recovery?	others?
		added prior to analysis	Used?	Used?		
1	deuterated naphthalene, biphenyl, acenaphthene, phenanthrene, fluoranthene, pyrene, B[a]A, B[a]P, perylene, B[ghi]P, DB[a,h]A		x			
2	NA					
3	NA					
4a	deuterated naphthalene, phenanthrene, chrysene	deuterated acenaphthene, fluorene, B[a]P				
4b	see comment 2 in notes	deuterated acenaphthene, fluorene, B[a]P		x		
6		deuterated phenanthrene, chrysene, perylene, acenaphthene, naphthalene, 1,2-dichlorobenzene		x		n
7	18 perdeuterated PAH (see notes for details)	deuterated p-terphenyl	x			
8	100 ng of deuterated naphthalene, acenaphthylene, phenanthrene, perylene	25 ng/mL of IS, deuterated fluorene and chrysene		x		n
9	SU - deuterated naphthalene, acenaphthene, phenanthrene, chrysene, perylene	IS - deuterated fluorene, pyrene, and B[a]P		x		
10	see notes	2,2'-difluorobiphenyl - injection internal standard	x			
11	NA					
12	surrogates added - perdeuterated PAH	perdeuterated IS		x		
13	deuterated - p-terphenyl	deuterated naphthalene, acenaphthene, phenanthrene, chrysene, and perylene	x			n
14	PCB 14 and deuterated alpha-BHC	deuterated chrysene		x		n
15	deuterated naphthalene, acenaphthene, anthracene, B[a]P	o-terphenyl: ES added just prior to GC analysis to calculate IS recoveries	x			n
16	deuterated nitrobenzene, 2-fluorobiphenyl, p-terphenyl	deuterated naphthalene, acenaphthene, phenanthrene, chrysene, and perylene		x		n
17	see attachment A in notes	see attachment D in notes	x			
18	deuterated naphthalene, phenanthrene, acenaphthene, B[a]P	deuterated fluorene and chrysene		x		
19	deuterated naphthalene, 2-methylnaphthalene, 1-methylnaphthalene, acenaphthylene, phenanthrene, 2,6-dimethylnaphthalene, fluoranthene, B[a]A, chrysene, B[b]F, B[k]F	deuterated acenaphthene, pyrene, B[a]P	x			
20	deuterated naphthalene, acenaphthene, B[a]P	hexamethylbenzene	x			deuterated phenanthrene
21	d8-naphthalene, d8-acenaphthylene, d10-acenaphthene, d10-fluorene, d10-phenanthrene, d10-fluoranthene, d10-pyrene, d12-benzo(a)anthracene, d12-chrysene, d12-benzo(b)fluoranthene, d12-benzo(k)fluoranthene, d12-benzo(a)pyrene, d12-phenanthrene, d12-perylene, d12-indeno(1,2,3-cd)pyrene, d14-dibenz(ab)anthracene, d12-benzo(ghi)perylene	d10-2-methylnaphthalene, d10-anthracene, d14-terphenyl, d12-benzo(e)pyrene	x			
22	deuterated naphthalene, biphenyl, acenaphthene, phenanthrene, fluoranthene, pyrene, B[a]A, B[a]P, perylene, B[ghi]P, DB[a,h]A		x			
23	deuterated naphthalene, acenaphthene, phenanthrene, chrysene, B[a]P, perylene	hexamethylbenzene	x			

Lab #	IS/surrogate added prior to extraction	PCBs		corrected for recovery?	others?	Pesticides		corrected for recovery?	others?
		Used?	added prior to analysis			Used?	added prior to analysis		
1	PCB 103, PCB 198, and deuterated DDD and DDT	x				x			
2									
	1L, 3L, 4L, 19L, 15L, 54L, 104L, 37L, 155L, 81L, 77L, 123L, 118L, 188L, 114L, 105L, 126L, 202L, 167L, 156L, 157L, 169L, 208L, 180L, 205L, 206L, 209L								
3			9L, 52L, 101L, 138L, 194L		28L, 111L, 178L				
4a	PCB 14, PCB 34, PCB 104, PCB 112	x	PCB 96, PCB 103, PCB 166	x		x	¹³ C ₁₂ -delta-HCH, ¹³ C ₁₂ -PCB-101	x	y
4b							PCB 96, PCB 103, PCB 166	x	
6			4,4'-dibromooctachlorobiphenyl	x			4,4'-dibromooctachlorobiphenyl	x	
7	PCB 103 and PCB 198	x	delta-HCH			x	delta-HCH		
8	tetrachloro-m-xylene		DBFOB	x	n		DBFOB	x	n
	SU - 4,4'-Dibromooctachlorobiphenyl, 2,3',4,5',6'-Pentachlorobiphenyl, 2,2',3,3',4,5,5',6'-Octachlorobiphenyl								
9			IS - Tetrachloro-m-xylene	x	y		IS - Tetrachloro-m-xylene	x	y
10									
11									
12	Surrogates added - PCBs 14, 65, and 166		PCBs 30 and 204	x			PCBs 30 and 204	x	
13	dibromooctachlorobiphenyl, octachloronaphthalene	x	1-bromo-2-nitrobenzene		n	x	1-bromo-2-nitrobenzene		n
14	alpha-BHC- α_1 and PCB 16		d,l-chryse	x	n		d,l-chryse	x	n
15	DBOFR, PCB 103, and PCB 198	x	PCB 100		n	x	PCB 100		n
16	TCMX, PCB 65, PCB 191		PCB 30 and PCB 205	x	n		PCB 30 and PCB 205	x	n
17	see Notes - attachment C for lab 17	x	see Notes - attachment E for lab 17			x	see Notes - attachment D for lab 17		
18	DBOFR, PCB 103, and PCB 198		TCMX	x			TCMX	x	
	13C12-4-ch, 13C12-2,4'-diob, 13C12-3,4,4'-trich, 13C12-2,2',5,5'-tetraob, 13C12-2,2',4,5,5'-pentaob, 13C12-2,2',3,4,4',5'-hexach, 13C12-2,2',3,3',5,5'-hexach, 13C12-2,2',3,3',5,5',6,6'-octach, 13C12-2,2',3,3',4,4',5,6'-nonach								
19									
	13C12-4-ch, 13C12-2,4'-diob, 13C12-2,4,4'-trich, 13C12-2,2',5,5'-tetraob, 13C12-2,2',3,4,4',5'-pentaob, 13C12-2,2',3,3',4,4',5'-hexach, 13C12-2,2',3,3',5,5'-hexach, 13C12-2,2',3,3',4,4',5,6'-octach, 13C12-2,2',3,3',4,4',5,6'-nonach								
20	PCB 103	x	tetrachloro-m-xylene			x	tetrachloro-m-xylene		tetrachloro-m-xylene prior to HPLC-SEC cleanup
	13C-MeCB-3, 13C-DiCB-15, 13C-TeCB-28, 13C-TeCB-77, 13C-PeCB-118, 13C-PeCB-114, 13C-PeCB-105, 13C-PeCB-126, 13C-HxCB-167, 13C-HxCB-156, 13C-HxCB-169, 13C-HpCB-180, 13C-HpCB-170, 13C-HpCB-189, 13C-OCB-194, 13C-NOCB-208, 13C-DeCB-209								
21			13C-TeCB-52, 13C-PeCB-101, 13C-HpCB-138, 13C-OCB-202			x	13C-Alpha-BHC, 13C-Beta-BHC, 13C-Gamma-BHC, 13C-Hexachlorobenzene, 13C-4,4'-DDE, 13C-4,4'-DDT, 64-Endosulfan-I, 13C-Methoxychlor	x	
22	PCB 103 and PCB 198	x				x	deuterated 4,4'-DDE, 4,4'-DDT, 4,4'-DDD, and endosulfan	x	
23									

Appendix I: Charts of Mussel Tissue X and SRM 1974a Results by Analyte

See Tables 2, 3, and 4 and Appendix C for results reported as *<number*, DL, etc.
Charts for analytes with few reported numerical results are not included in this appendix.

For Fish Mussel Tissue X plots:

Solid line: exercise assigned value

Dotted line: $z = \pm 1$, i. e., 25% from assigned value

Dotted/dashed line: $z = \pm 2$, i. e., 50% from assigned value

Dashed line: $z = \pm 3$, i. e., 75% from assigned value

For SRM 1974a plots:

Solid line: material certified concentration or target value (see caption of each plot)

Dotted line: 95% confidence limits

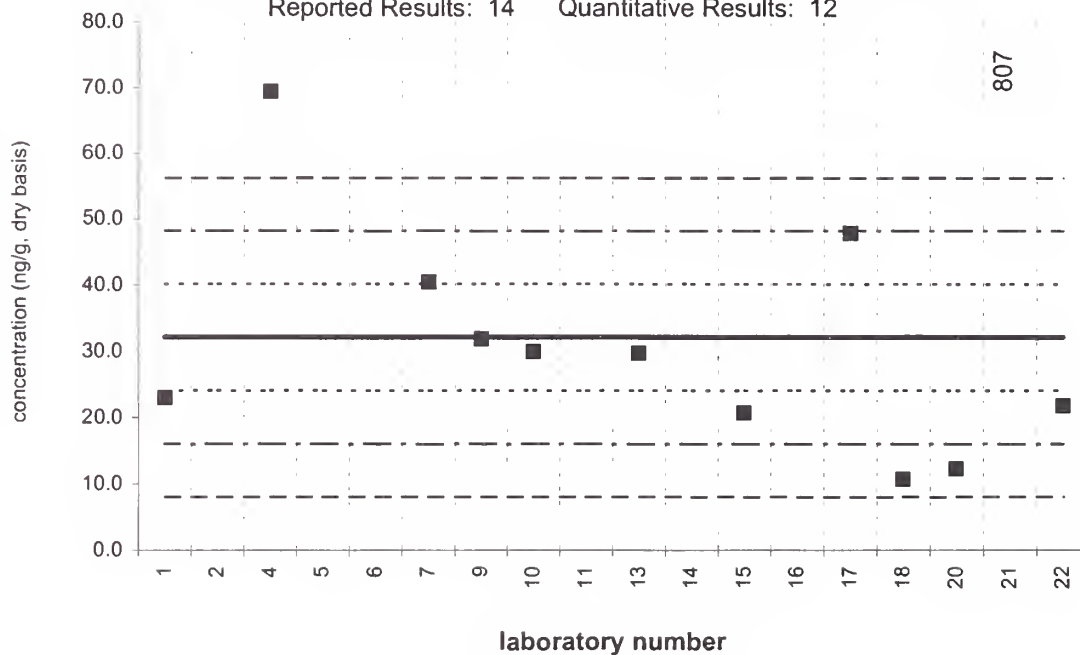
Dashed line: 30% from 95% confidence limits

naphthalene

Tissue X (QA00TIS10)

Assigned value = 32.1 ng/g $s = 9.3$ ng/g 95% CL = 8.6 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 12

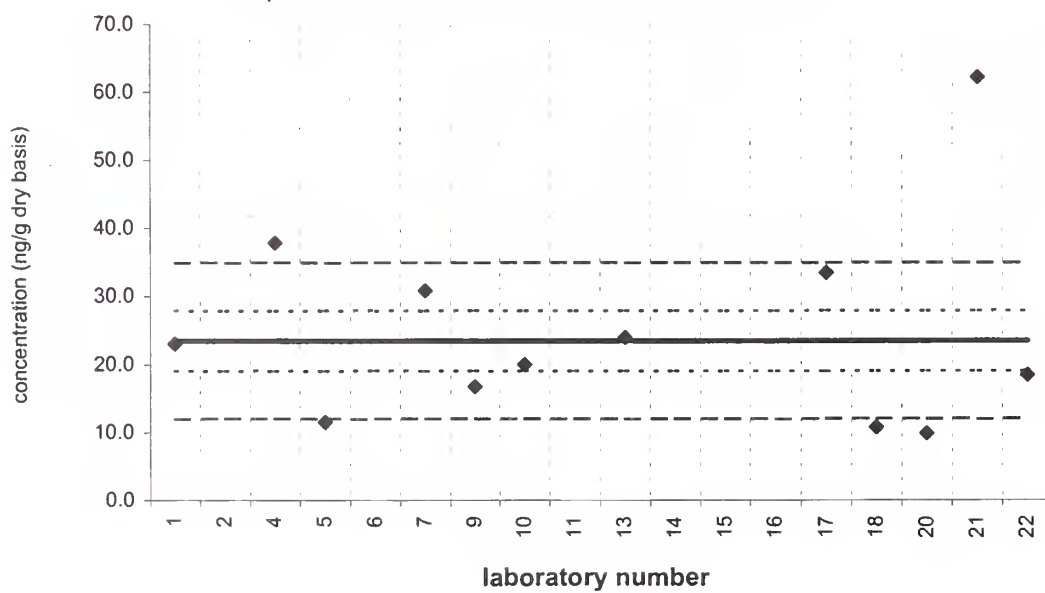


naphthalene

SRM 1974a

Certified Value = 23.5 \pm 4.4 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 12

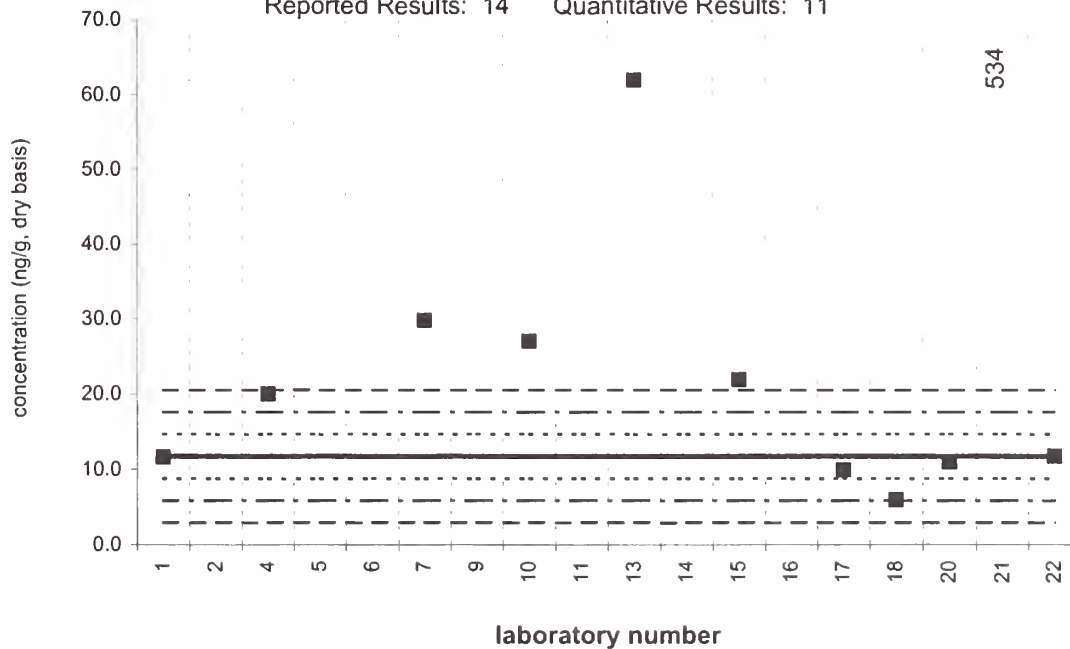


2-methylnaphthalene

Tissue X (QA00TIS10)

Assigned value = 11.7 ng/g $s = 4.6$ ng/g 95% CL = 4.8 ng/g (dry basis)

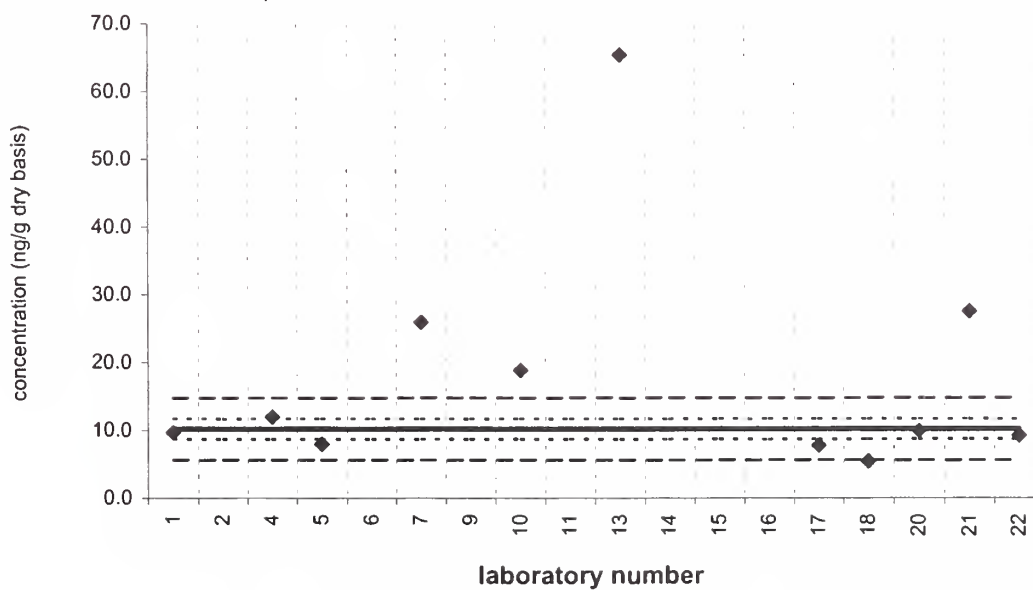
Reported Results: 14 Quantitative Results: 11



2-methylnaphthalene

SRM 1974a

Noncertified Value = 10.2 ± 1.5 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 11

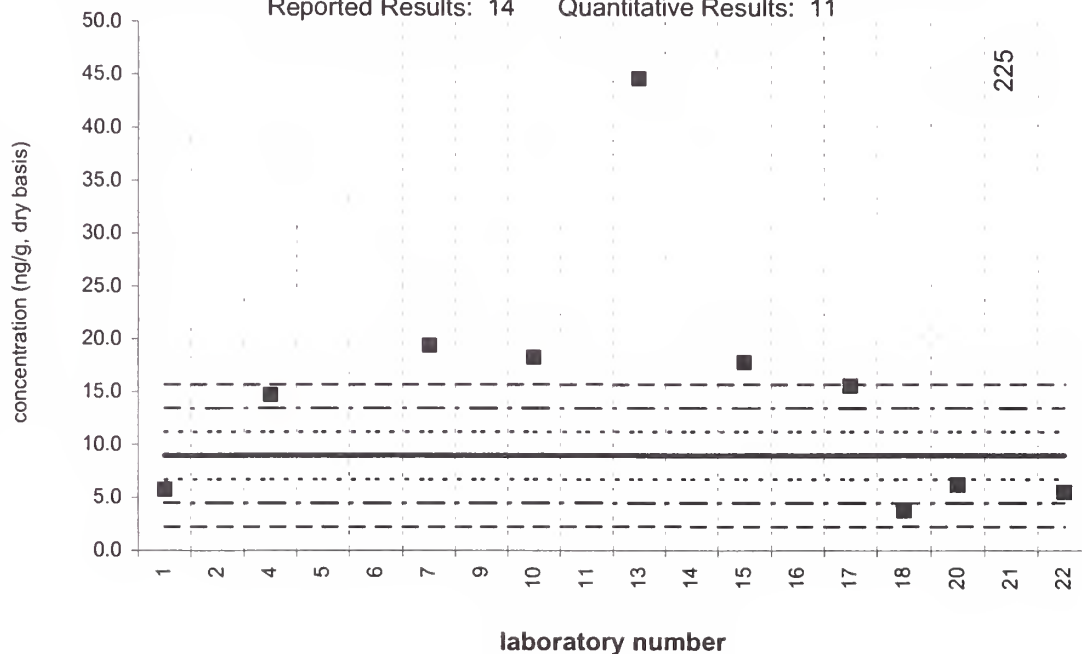


1-methylnaphthalene

Tissue X (QA00TIS10)

Assigned value = 8.95 ng/g $s = 5.79$ ng/g 95% CL = 7.19 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 11

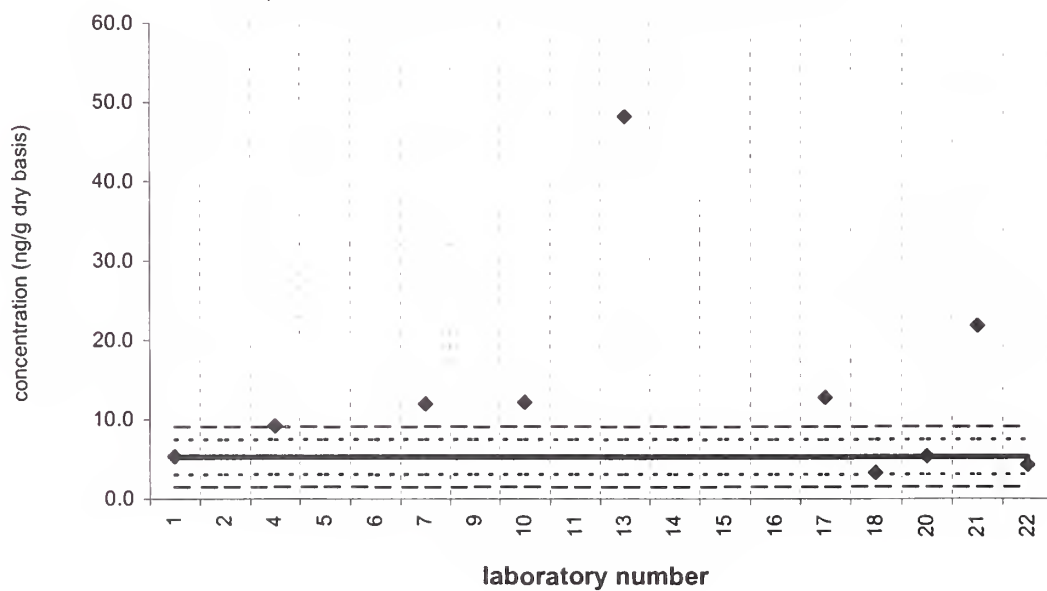


1-methylnaphthalene

SRM 1974a

Target Value = 5.30 \pm 2.20 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 10

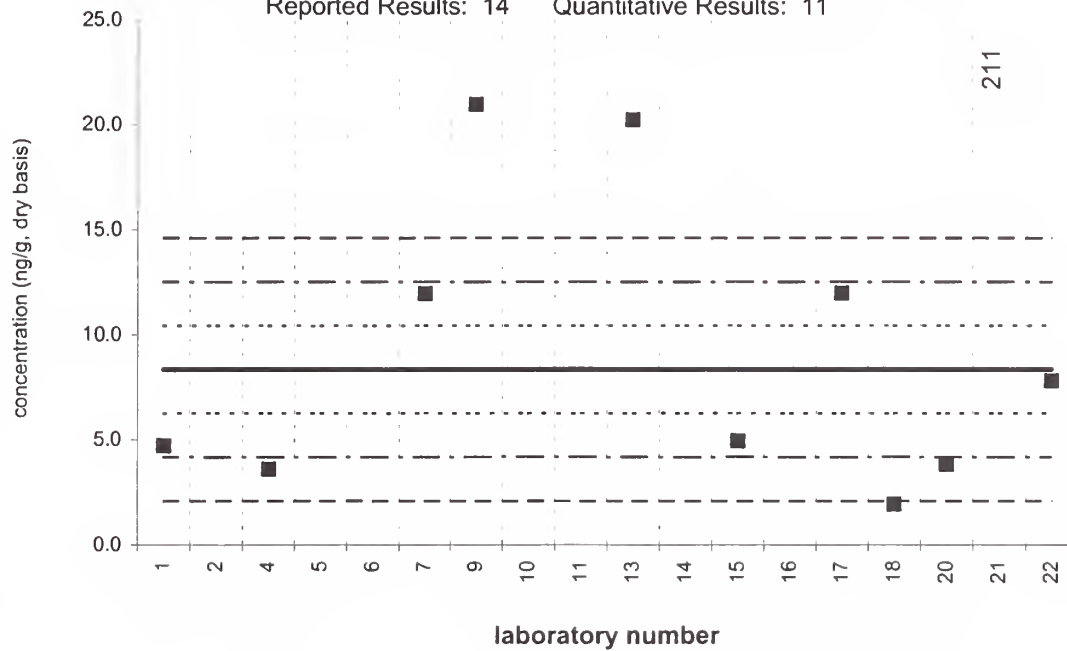


biphenyl

Tissue X (QA00TIS10)

Assigned value = 8.35 ng/g $s = 3.94$ ng/g 95% CL = 3.29 ng/g (dry basis)

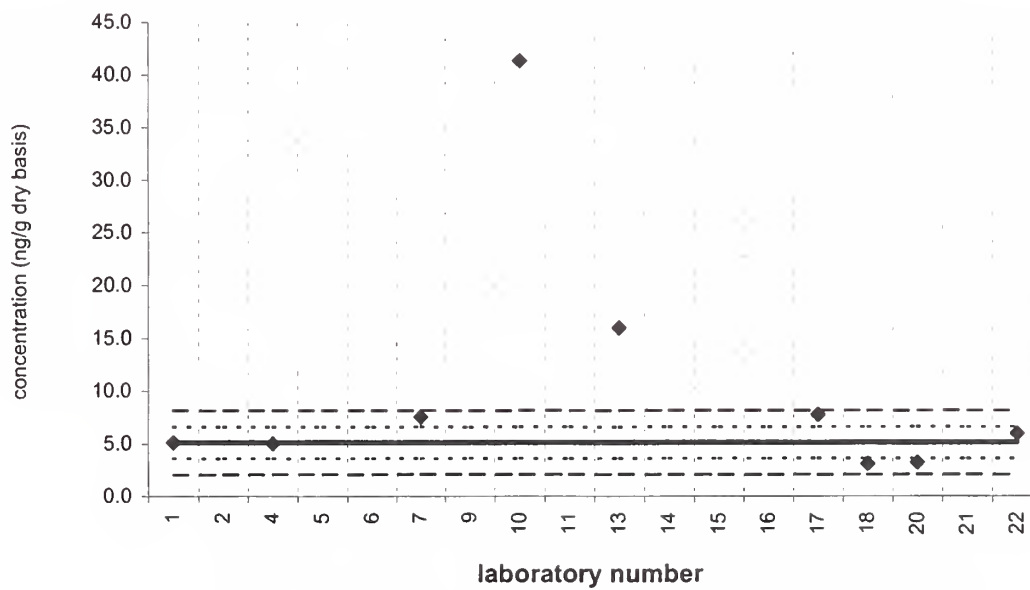
Reported Results: 14 Quantitative Results: 11



biphenyl

SRM 1974a

Target Value = 5.11 ± 1.50 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 9

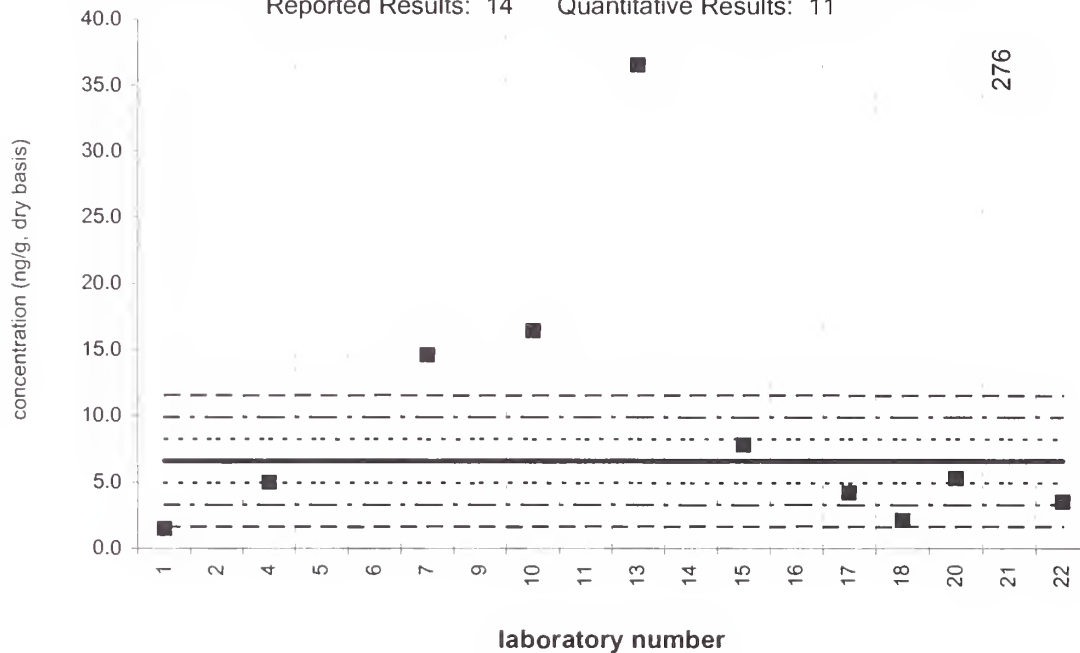


2,6-dimethylnaphthalene

Tissue X (QA00TIS10)

Assigned value = 6.59 ng/g $s = 5.69$ ng/g 95% CL = 4.76 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 11

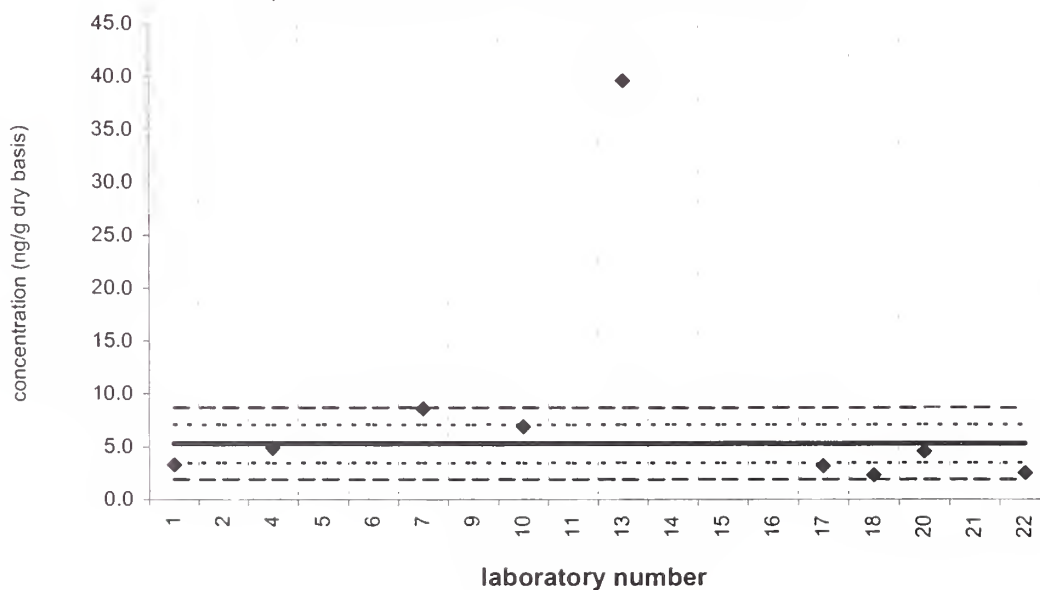


2,6-dimethylnaphthalene

SRM 1974a

Target Value = 5.30 \pm 1.80 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 9

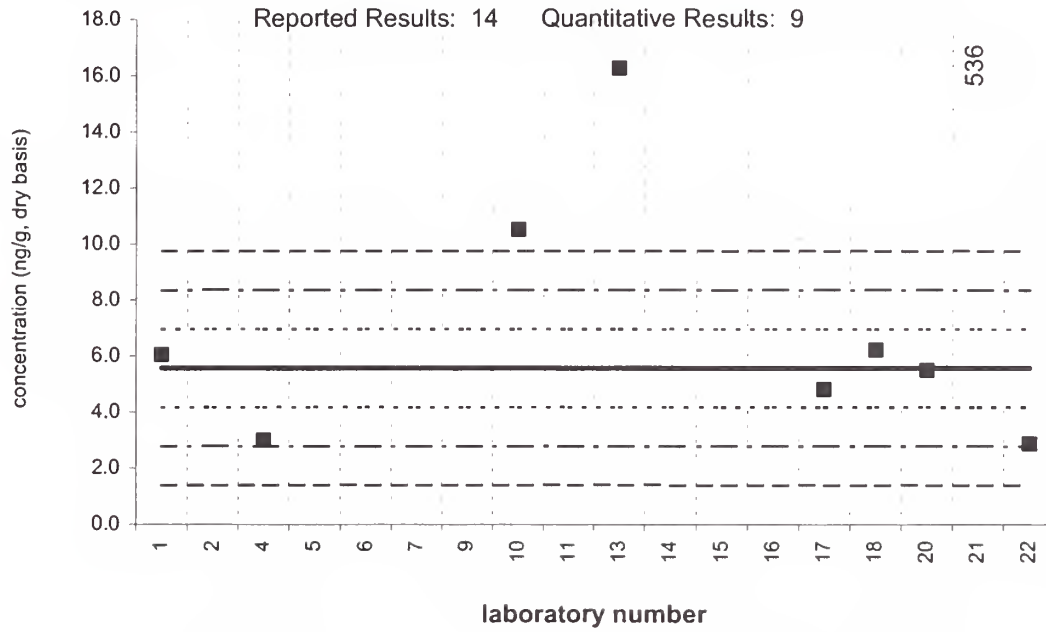


Tissue X (QA00TIS10)

acenaphthylene

Assigned value = 5.58 ng/g $s = 2.57$ ng/g 95% CL = 2.38 ng/g (dry basis)

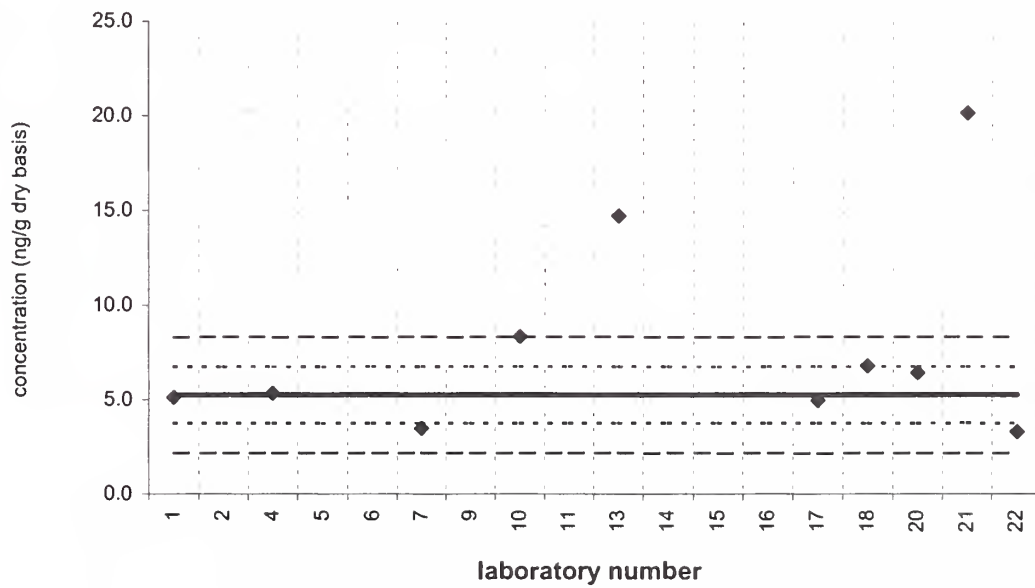
Reported Results: 14 Quantitative Results: 9



acenaphthylene

SRM 1974a

Target Value = 5.25 ± 1.50 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 10

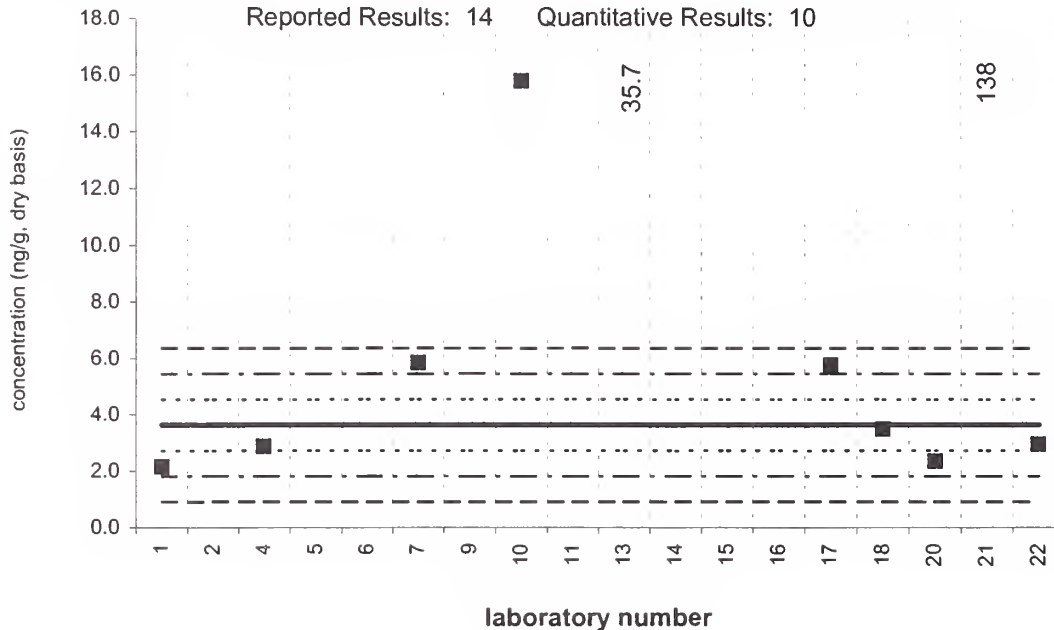


Tissue X (QA00TIS10)

acenaphthene

Assigned value = 3.63 ng/g $s = 1.54$ ng/g 95% CL = 1.43 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 10

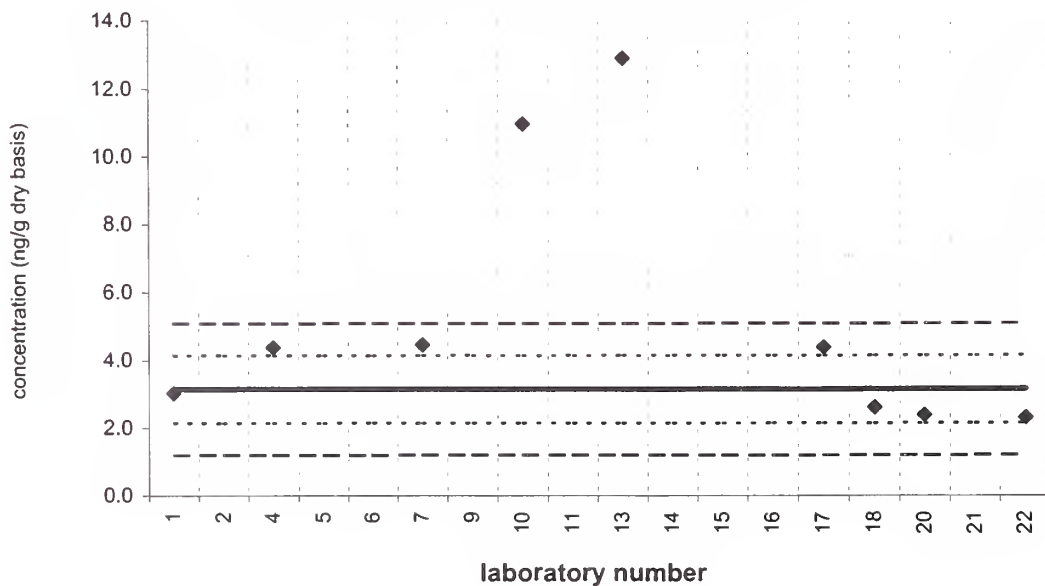


acenaphthene

SRM 1974a

Target Value = 3.15 \pm 1.00 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 9

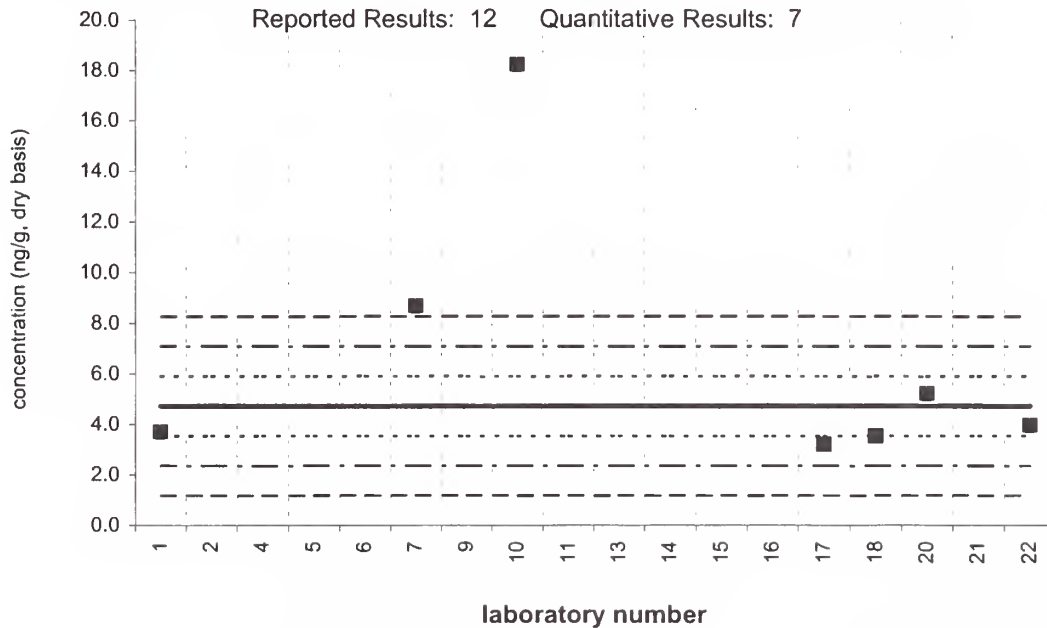


Tissue X (QA00TIS10)

1,6,7-trimethylnaphthalene

Assigned value = 4.73 ng/g $s = 2.06$ ng/g 95% CL = 2.16 ng/g (dry basis)

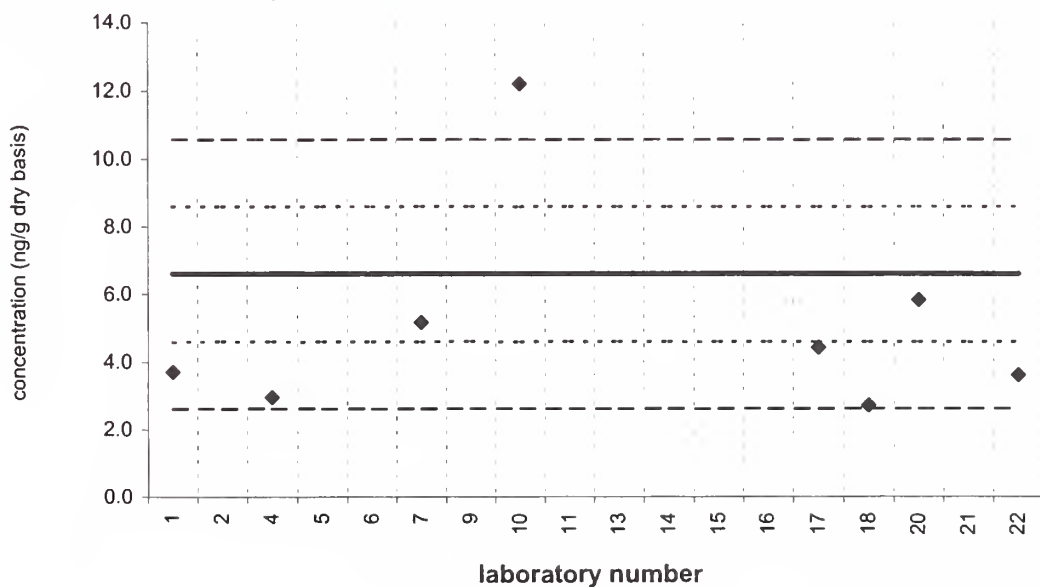
Reported Results: 12 Quantitative Results: 7



1,6,7-trimethylnaphthalene

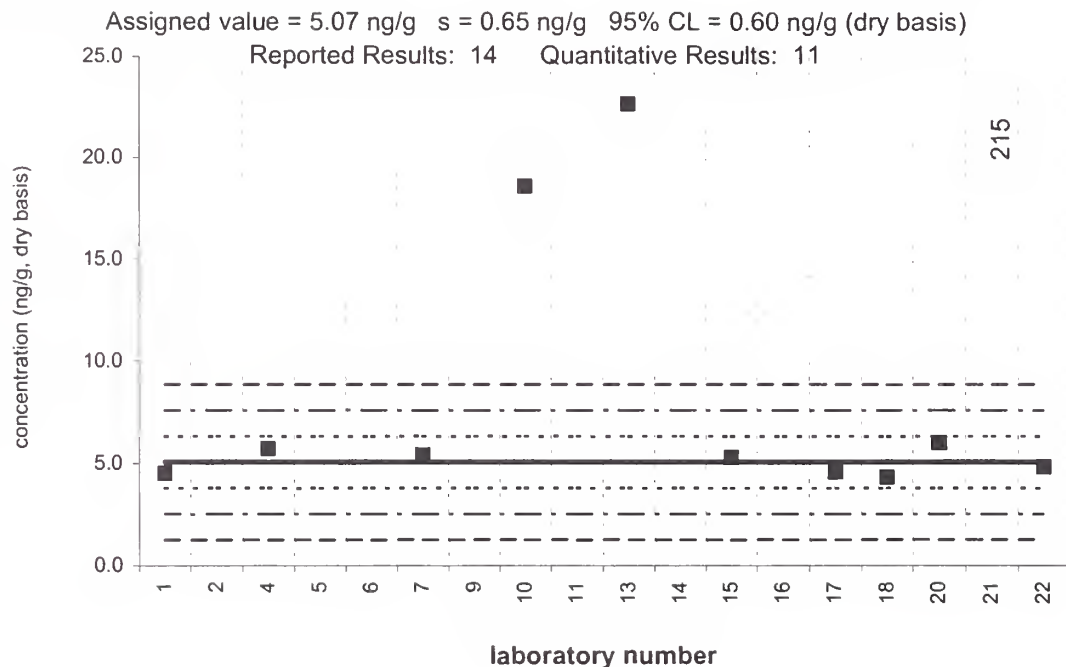
SRM 1974a

Target Value = 6.60 \pm 2.00 ng/g (dry basis)
Reported Results: 11 Quantitative Results: 8



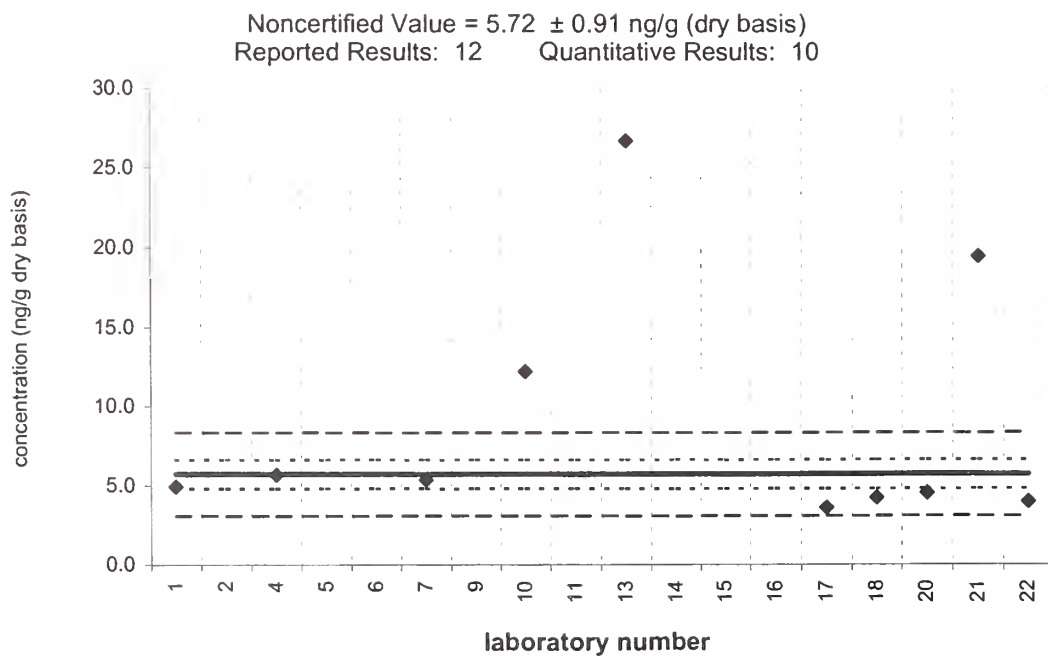
Tissue X (QA00TIS10)

fluorene



fluorene

SRM 1974a

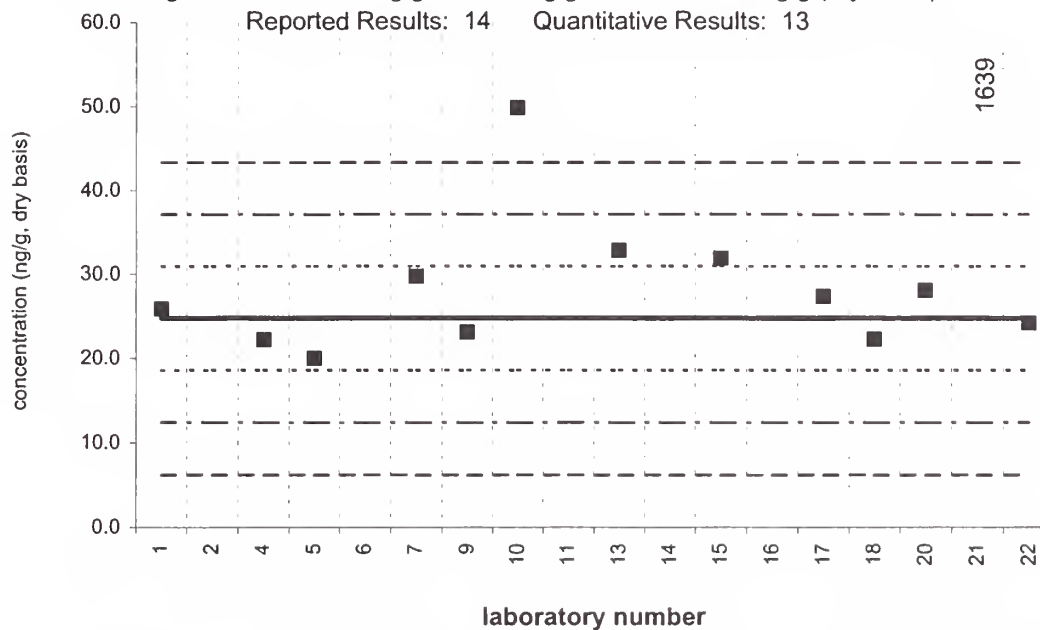


Tissue X (QA00TIS10)

phenanthrene

Assigned value = 24.8 ng/g $s = 3.2$ ng/g 95% CL = 2.5 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 13

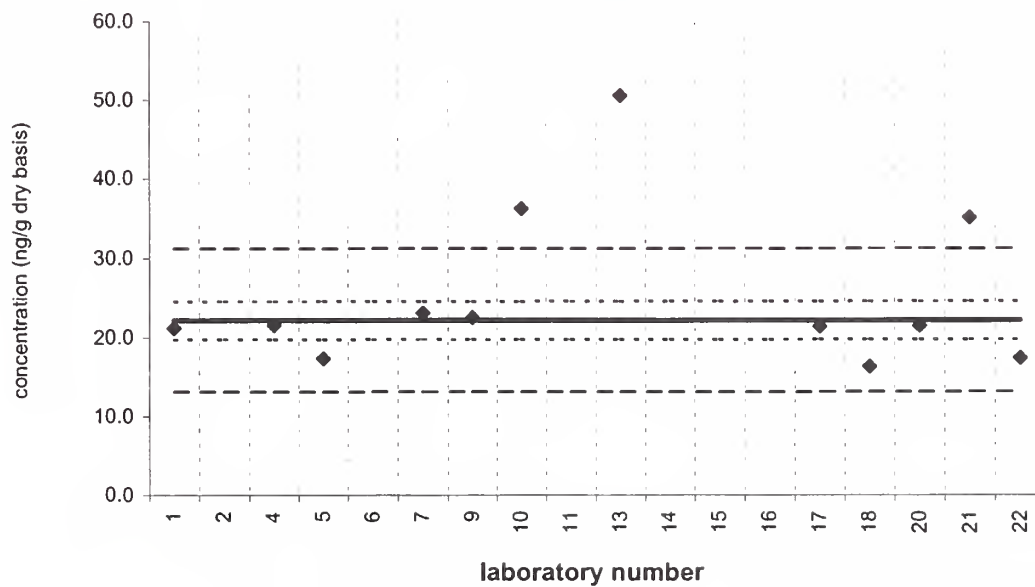


1639

phenanthrene

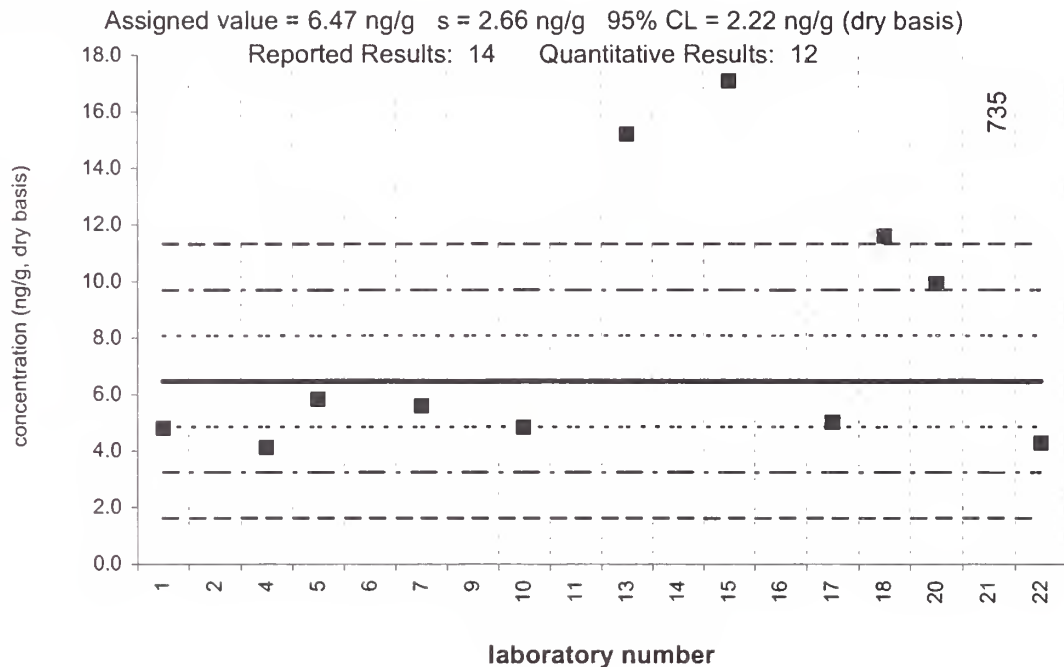
SRM 1974a

Certified Value = 22.2 \pm 2.4 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 12



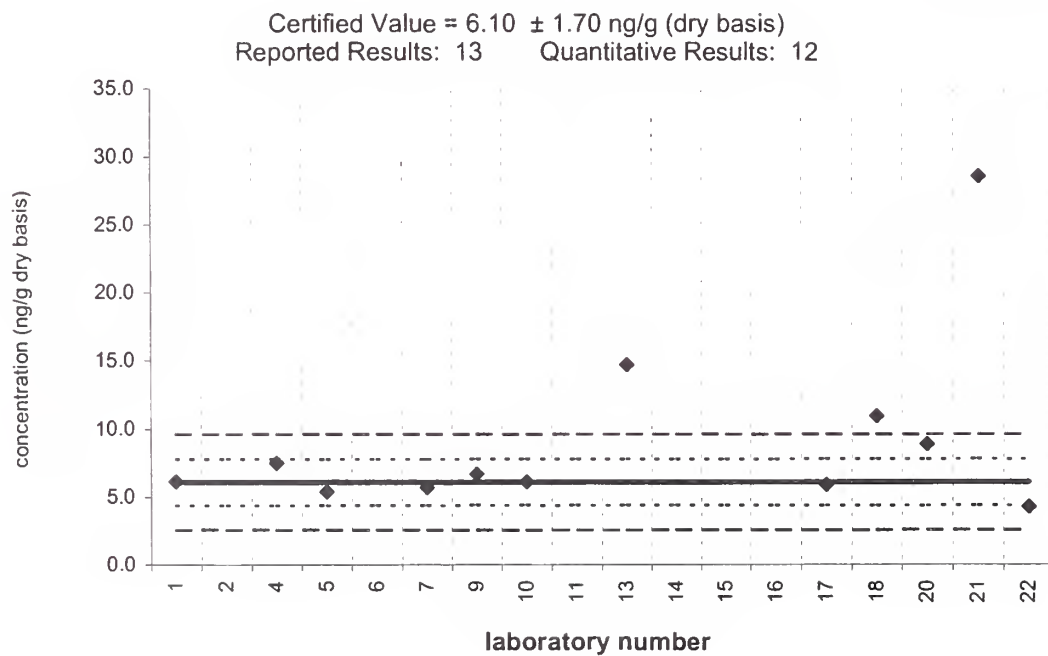
Tissue X (QA00TIS10)

anthracene



anthracene

SRM 1974a

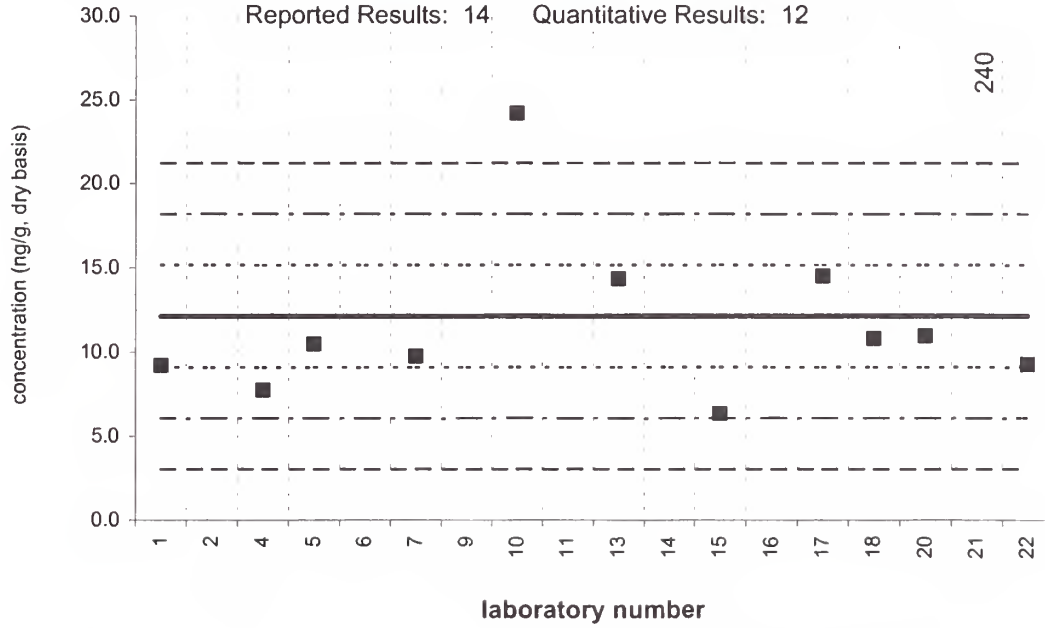


Tissue X (QA00TIS10)

1-methylphenanthrene

Assigned value = 12.1 ng/g $s = 4.8$ ng/g 95% CL = 3.4 ng/g (dry basis)

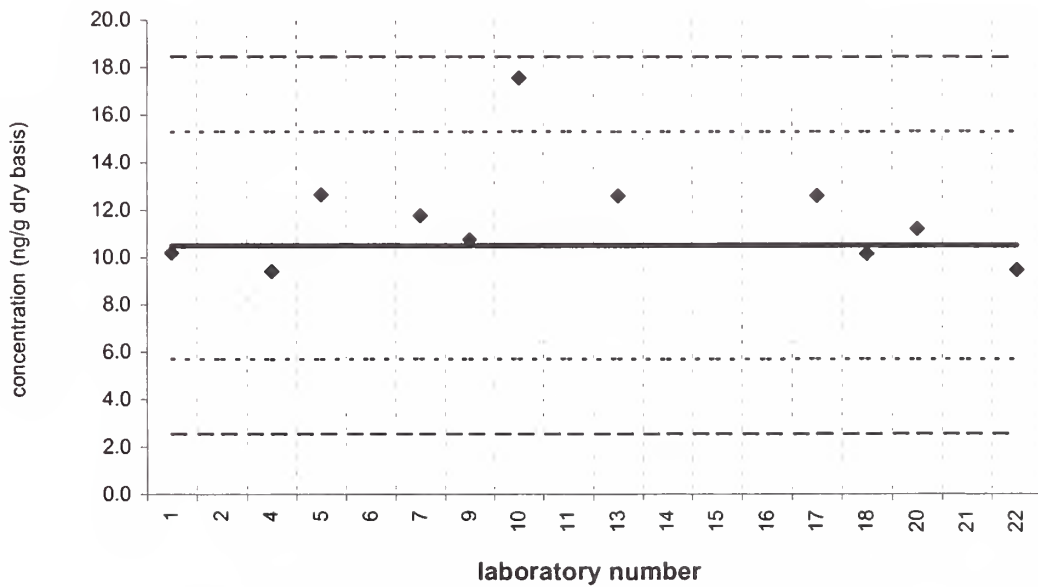
Reported Results: 14 Quantitative Results: 12



1-methylphenanthrene

SRM 1974a

Noncertified Value = 10.5 ± 4.8 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 11

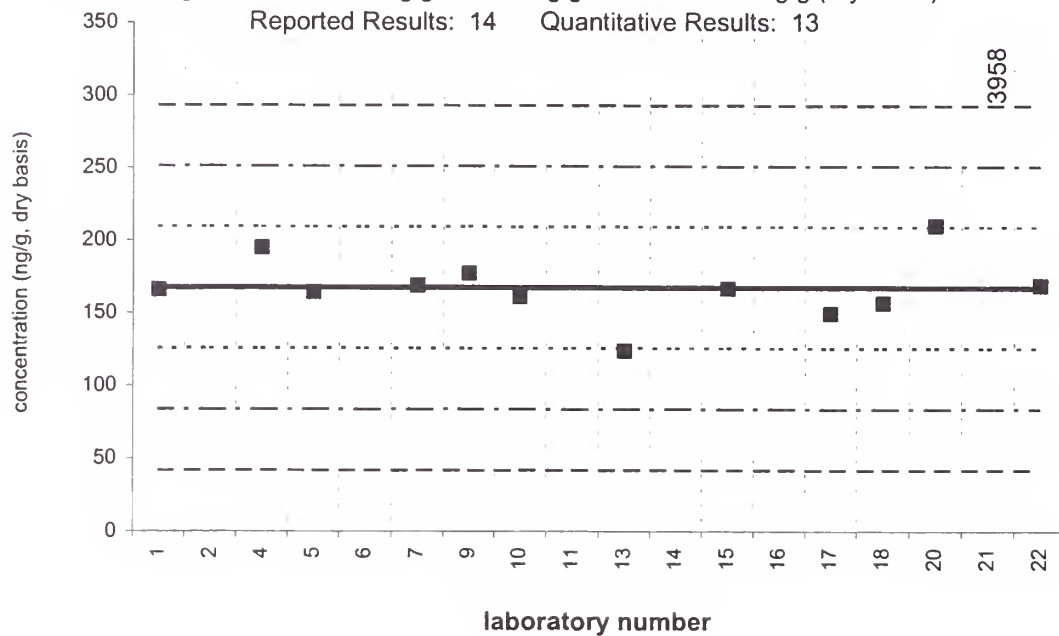


Tissue X (QA00TIS10)

fluoranthene

Assigned value = 168 ng/g $s = 23$ ng/g 95% CL = 15 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 13

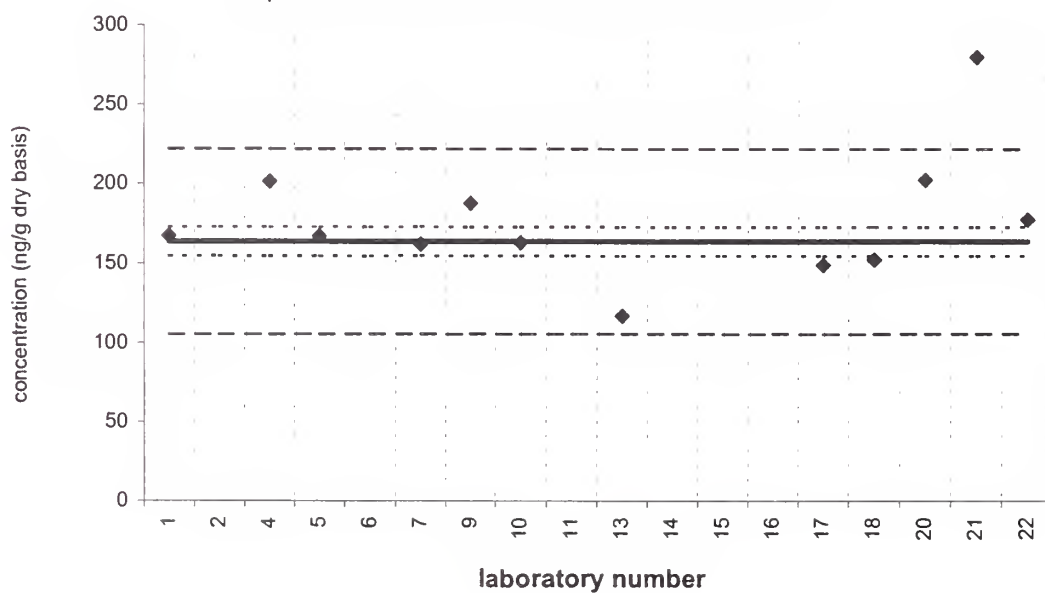


fluoranthene

SRM 1974a

Certified Value = 164 ± 9 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 12

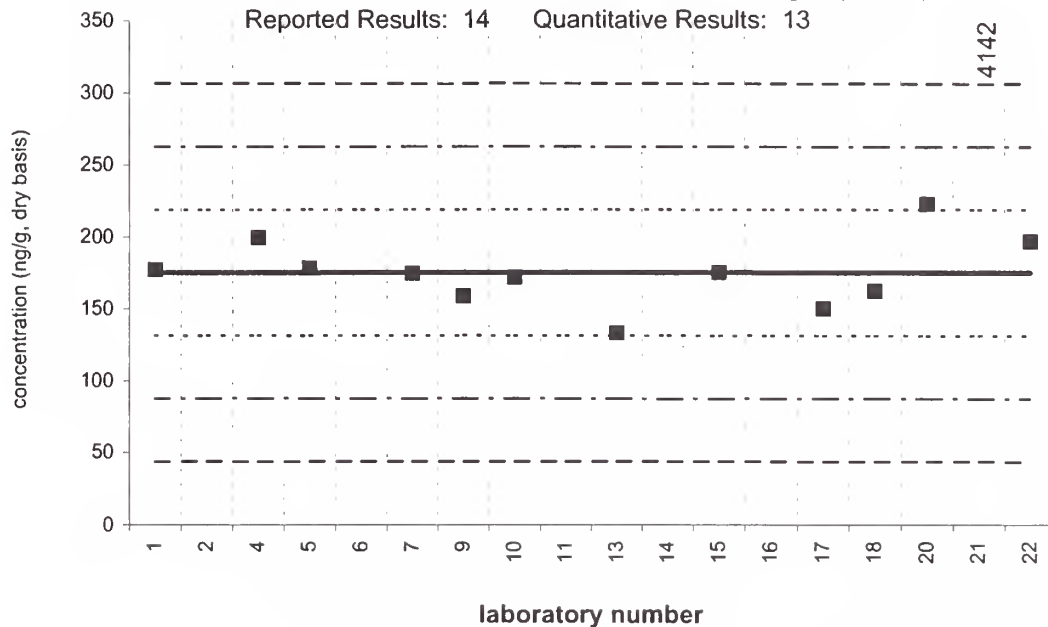


Tissue X (QA00TIS10)

pyrene

Assigned value = 175 ng/g $s = 25$ ng/g 95% CL = 17 ng/g (dry basis)

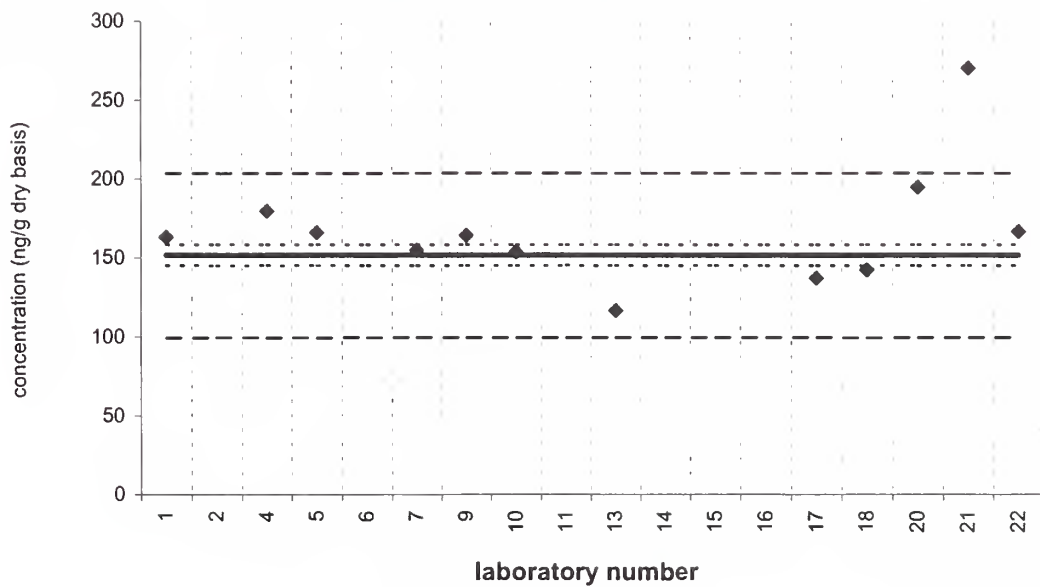
Reported Results: 14 Quantitative Results: 13



pyrene

SRM 1974a

Certified Value = 152 \pm 7 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 12

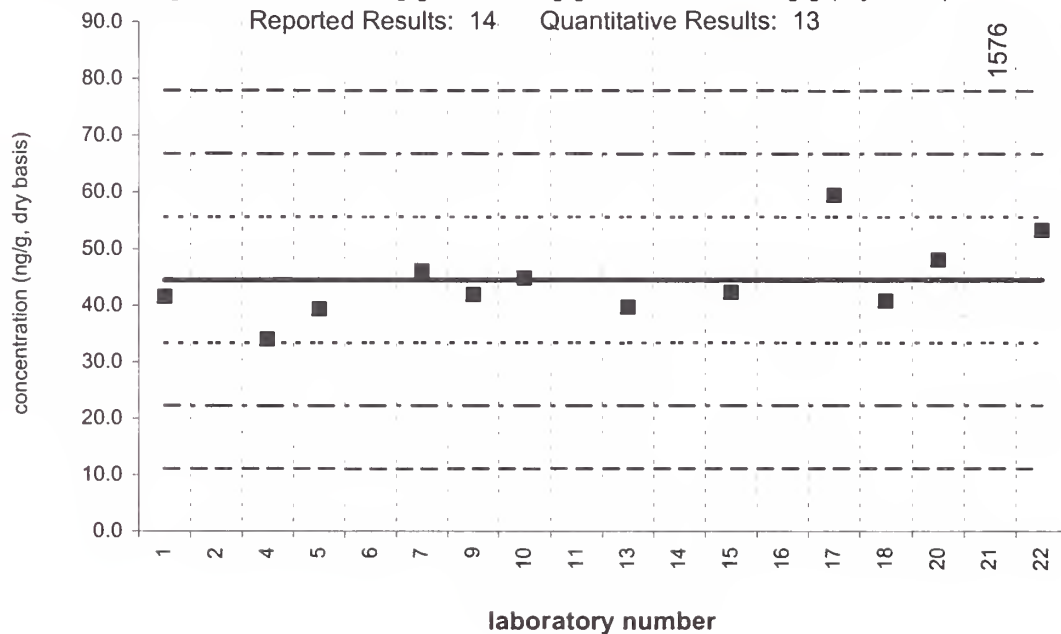


Tissue X (QA00TIS10)

benz[a]anthracene

Assigned value = 44.5 ng/g $s = 7.1$ ng/g 95% CL = 4.8 ng/g (dry basis)

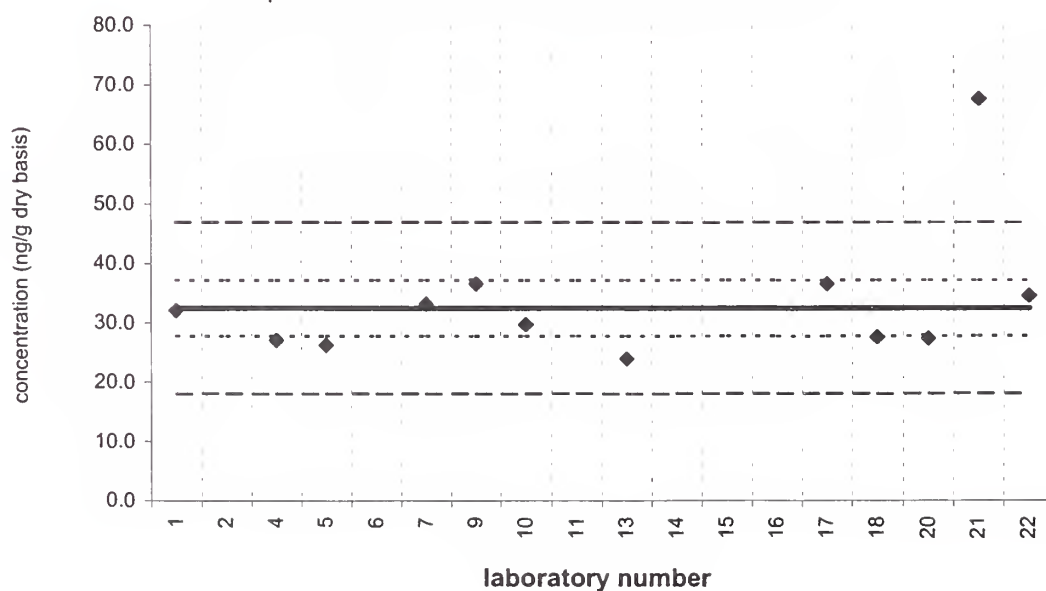
Reported Results: 14 Quantitative Results: 13



benz[a]anthracene

SRM 1974a

Certified Value = 32.5 ± 4.7 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 12

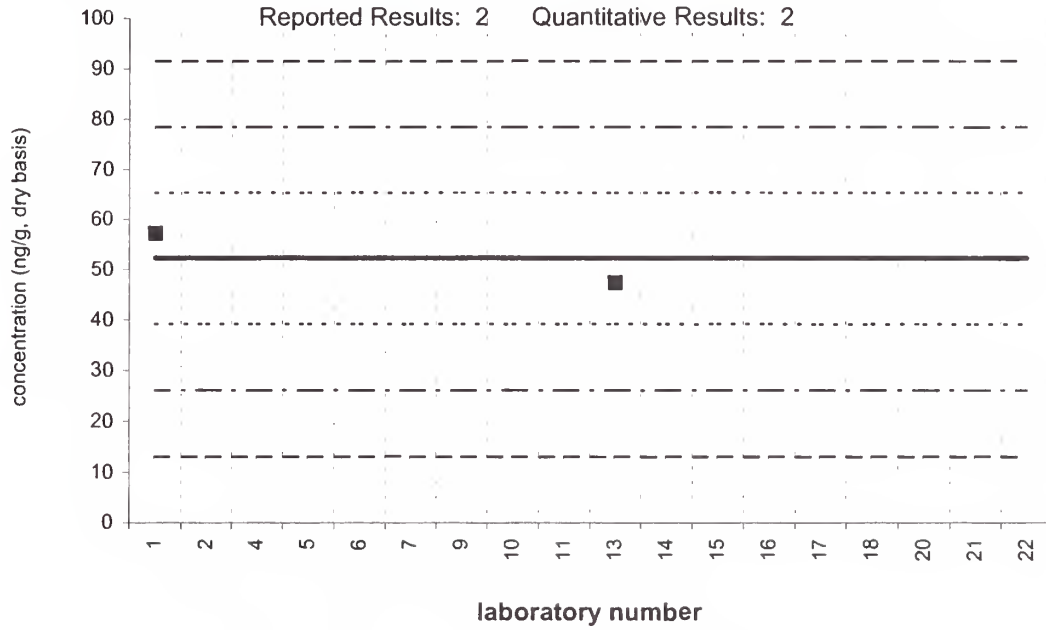


Tissue X (QA00TIS10)

chrysene

Assigned value = 52.3 ng/g s = ND ng/g 95% CL = ND ng/g (dry basis)

Reported Results: 2 Quantitative Results: 2

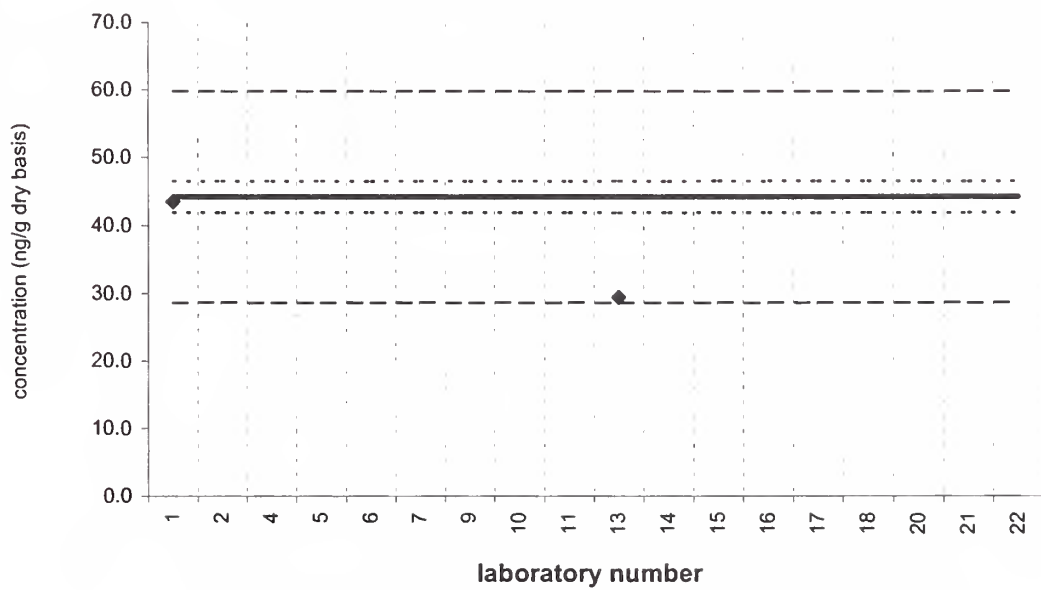


chrysene

SRM 1974a

Certified Value = 44.2 ± 2.3 ng/g (dry basis)

Reported Results: 2 Quantitative Results: 2

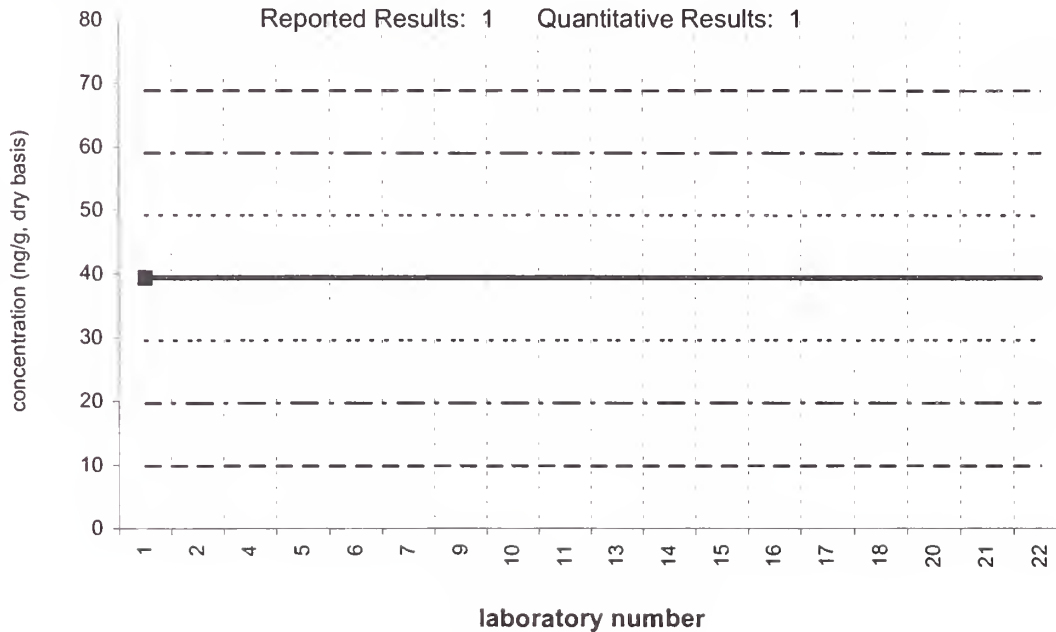


Tissue X (QA00TIS10)

triphenylene

Assigned value = 39.4 ng/g s = ND ng/g 95% CL = ND ng/g (dry basis)

Reported Results: 1 Quantitative Results: 1

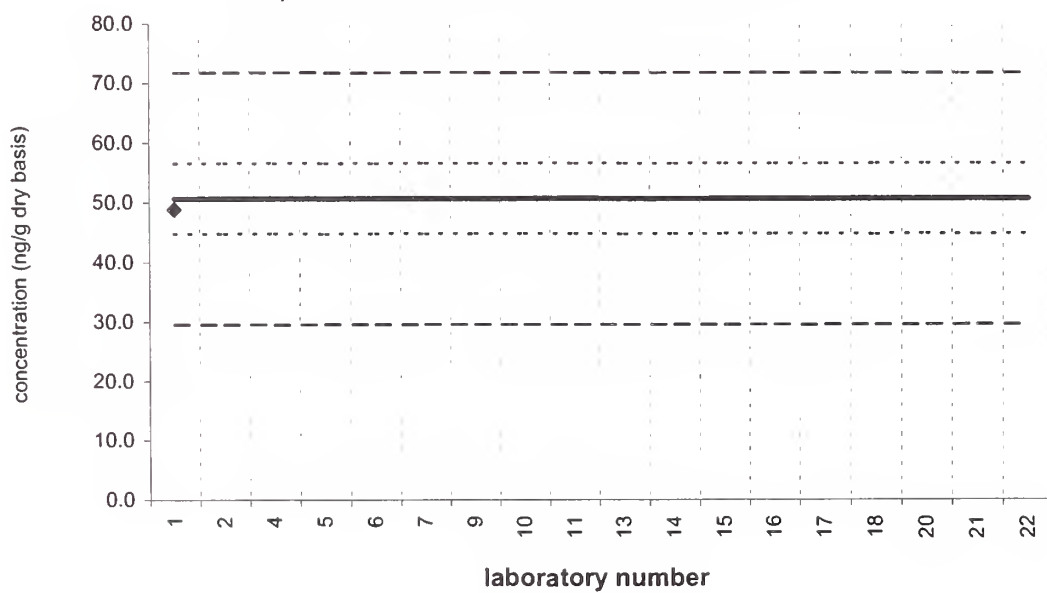


triphenylene

SRM 1974a

Certified Value = 50.7 ± 5.9 ng/g (dry basis)

Reported Results: 1 Quantitative Results: 1

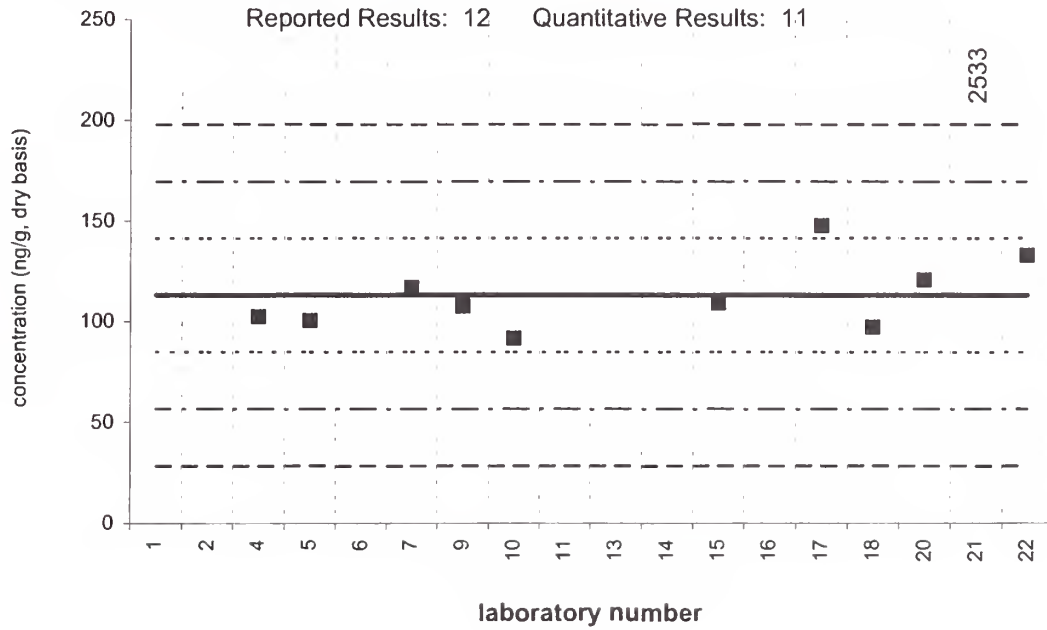


Tissue X (QA00TIS10)

chrysene/triphenylene

Assigned value = 113 ng/g s = 18 ng/g 95% CL = 14 ng/g (dry basis)

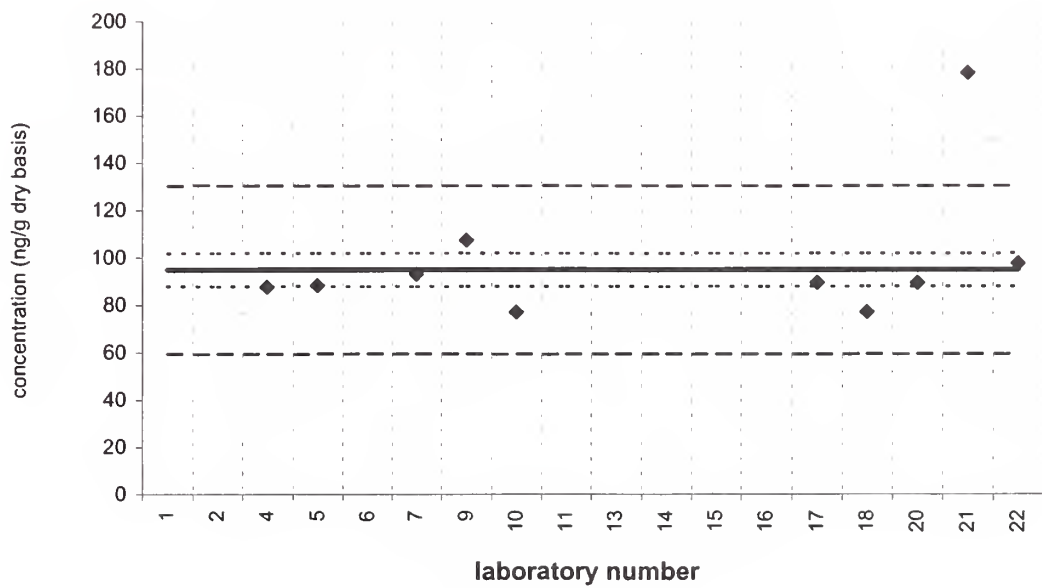
Reported Results: 12 Quantitative Results: 11



chrysene/triphenylene

SRM 1974a

Target Value = 94.9 ± 7.0 ng/g (dry basis)
Reported Results: 11 Quantitative Results: 10

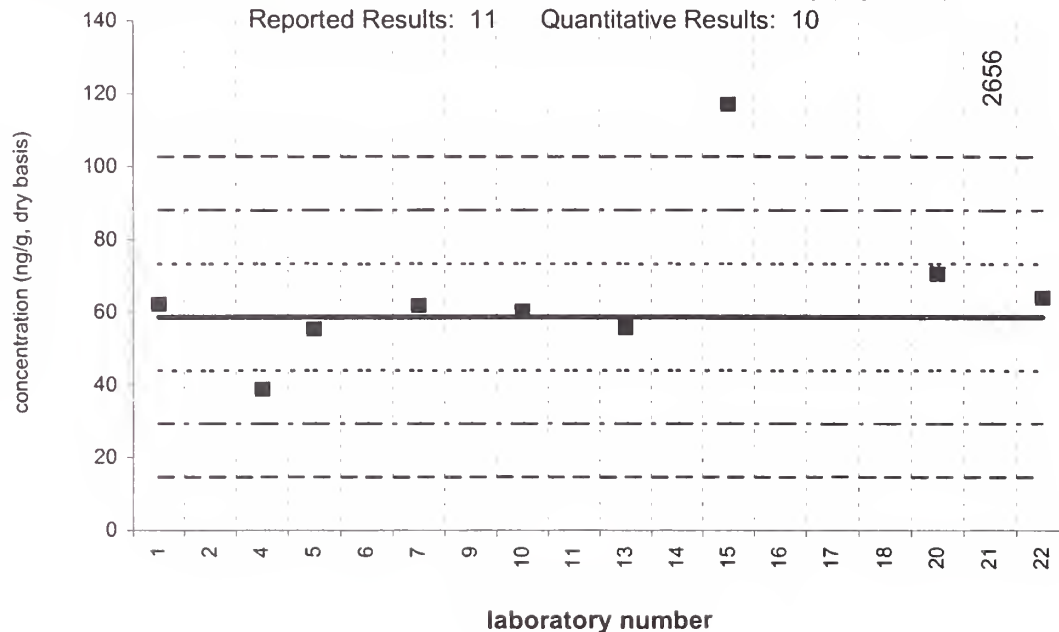


Tissue X (QA00TIS10)

benzo[b]fluoranthene

Assigned value = 58.7 ng/g $s = 9.3$ ng/g 95% CL = 7.8 ng/g (dry basis)

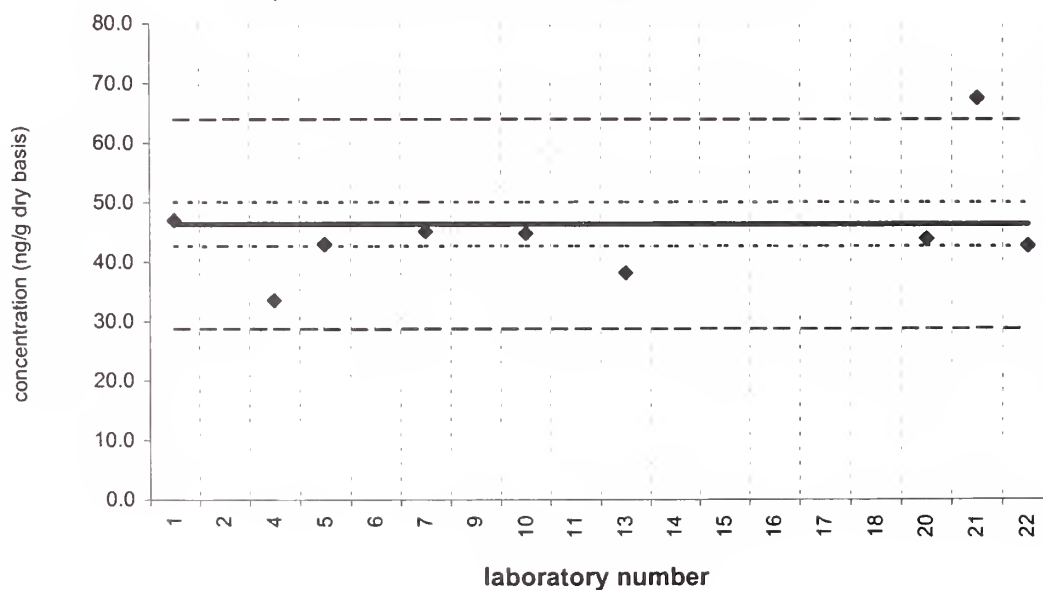
Reported Results: 11 Quantitative Results: 10



benzo[b]fluoranthene

SRM 1974a

Certified Value = 46.4 ± 3.7 ng/g (dry basis)
Reported Results: 10 Quantitative Results: 9

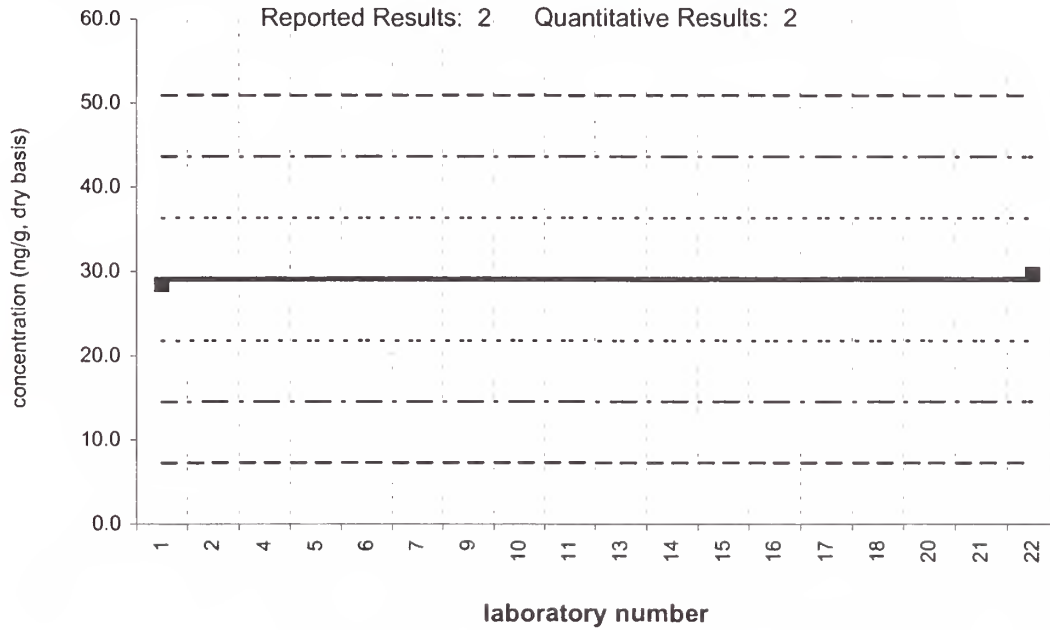


Tissue X (QA00TIS10)

benzo[j]fluoranthene

Assigned value = 29.1 ng/g s = ND ng/g 95% CL = ND ng/g (dry basis)

Reported Results: 2 Quantitative Results: 2

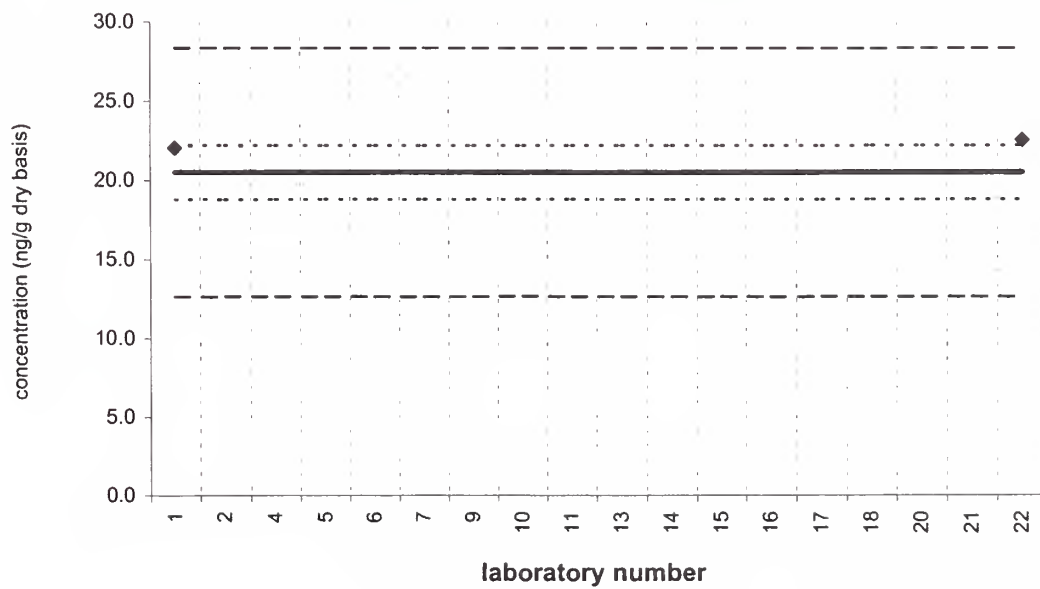


benzo[j]fluoranthene

SRM 1974a

Noncertified Value = 20.5 ± 1.7 ng/g (dry basis)

Reported Results: 2 Quantitative Results: 2

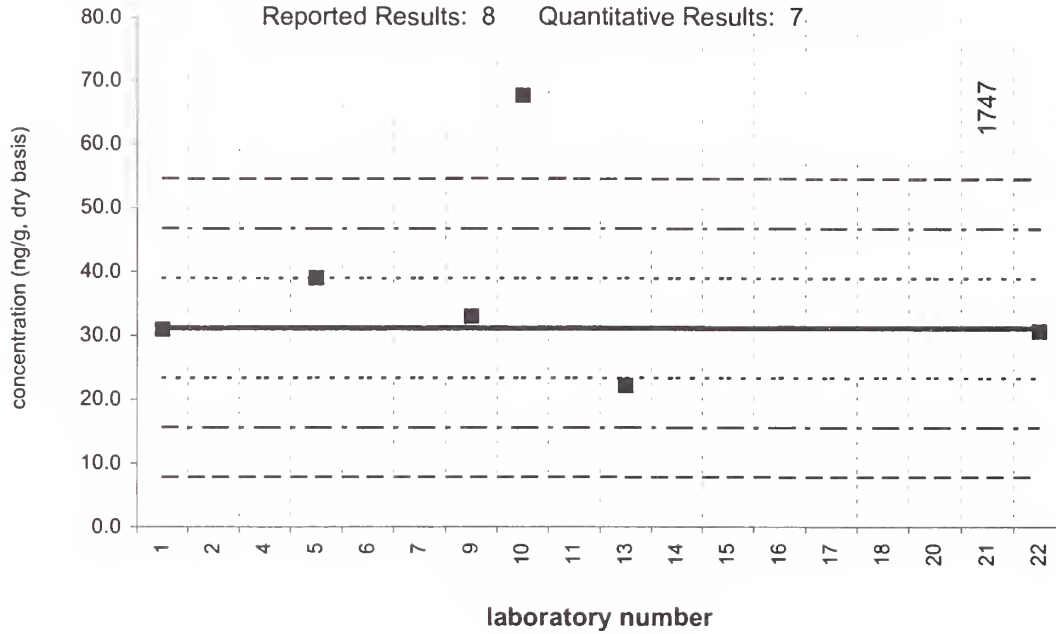


Tissue X (QA00TIS10)

benzo[k]fluoranthene

Assigned value = 31.2 ng/g $s = 6.0$ ng/g 95% CL = 7.5 ng/g (dry basis)

Reported Results: 8 Quantitative Results: 7

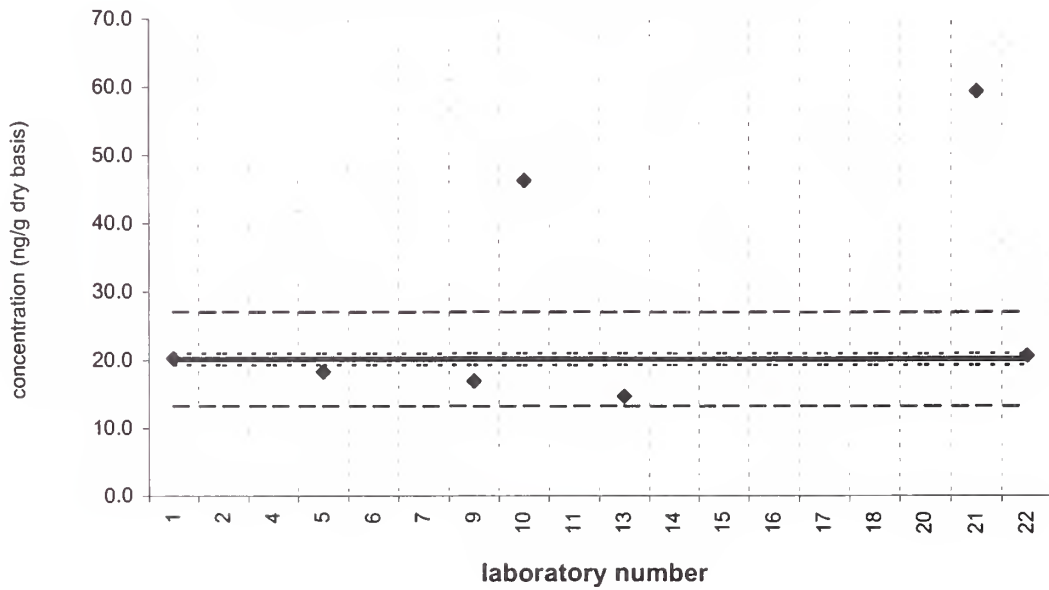


benzo[k]fluoranthene

SRM 1974a

Certified Value = 20.2 ± 0.8 ng/g (dry basis)

Reported Results: 8 Quantitative Results: 7

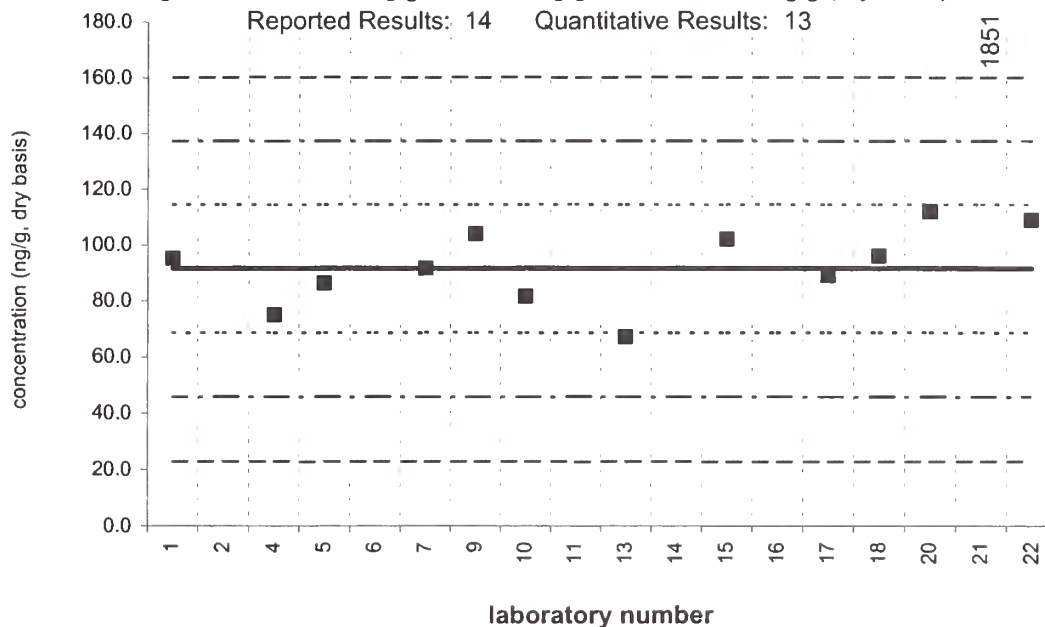


Tissue X (QA00TIS10)

benzo[e]pyrene

Assigned value = 91.6 ng/g $s = 13.8$ ng/g 95% CL = 9.3 ng/g (dry basis)

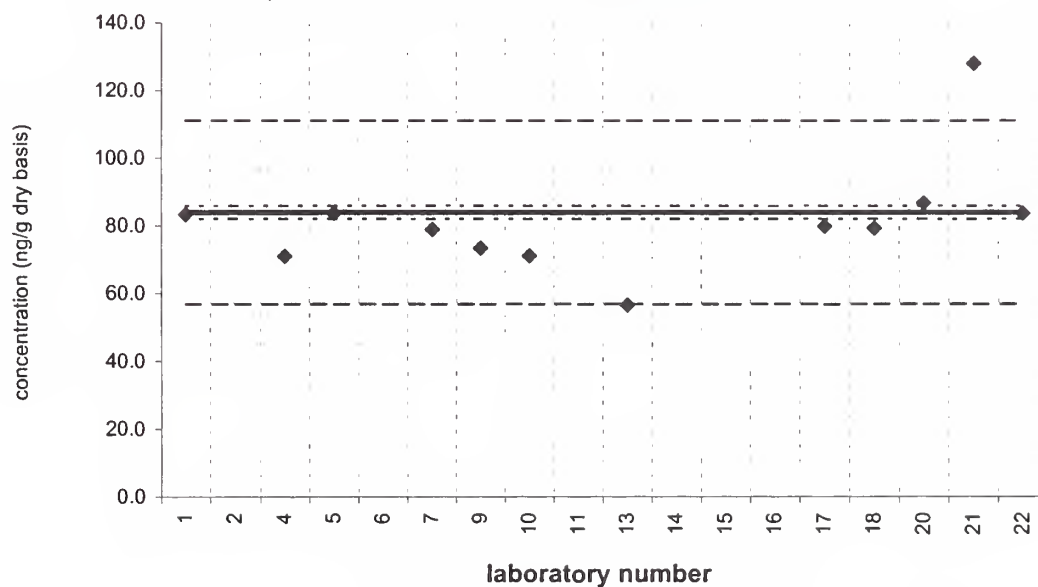
Reported Results: 14 Quantitative Results: 13



benzo[e]pyrene

SRM 1974a

Certified Value = 84.0 ± 1.9 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 12

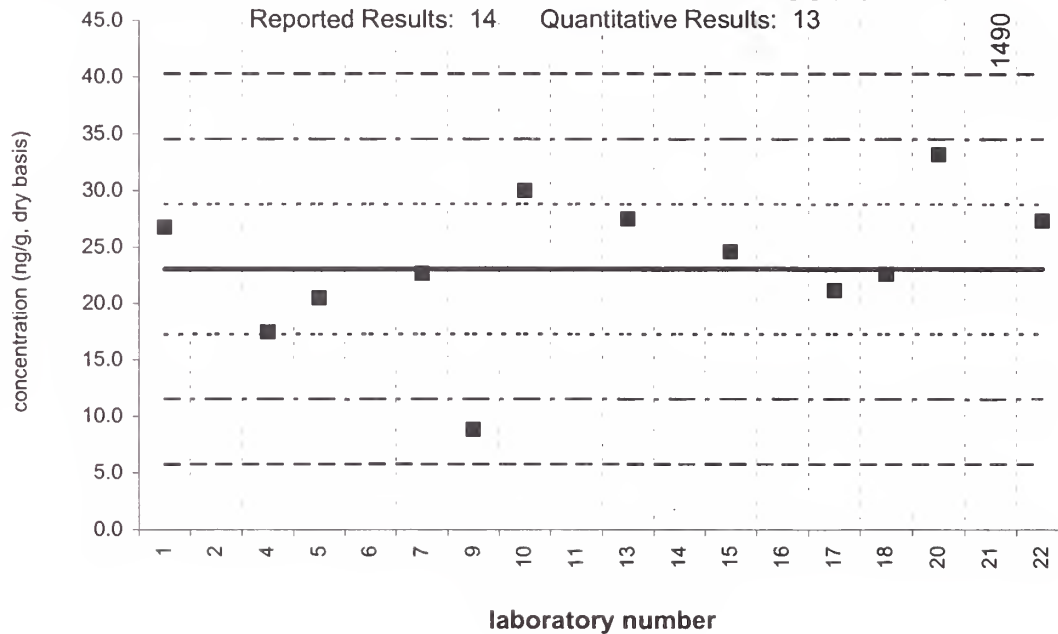


Tissue X (QA00TIS10)

benzo[a]pyrene

Assigned value = 23.0 ng/g $s = 6.6$ ng/g 95% CL = 4.8 ng/g (dry basis)

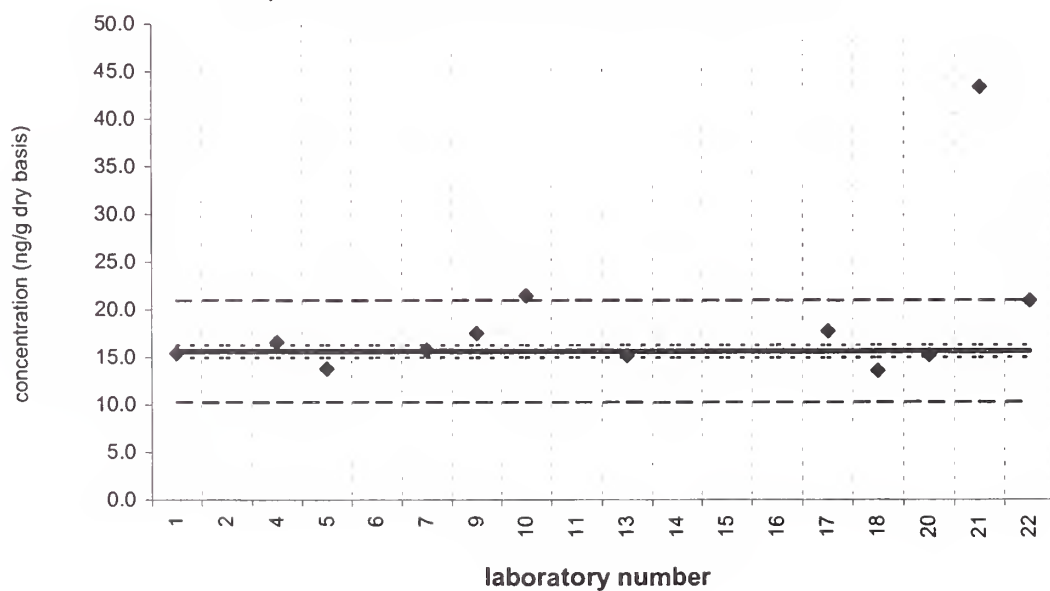
Reported Results: 14 Quantitative Results: 13



benzo[a]pyrene

SRM 1974a

Noncertified Value = 15.6 ± 0.7 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 12

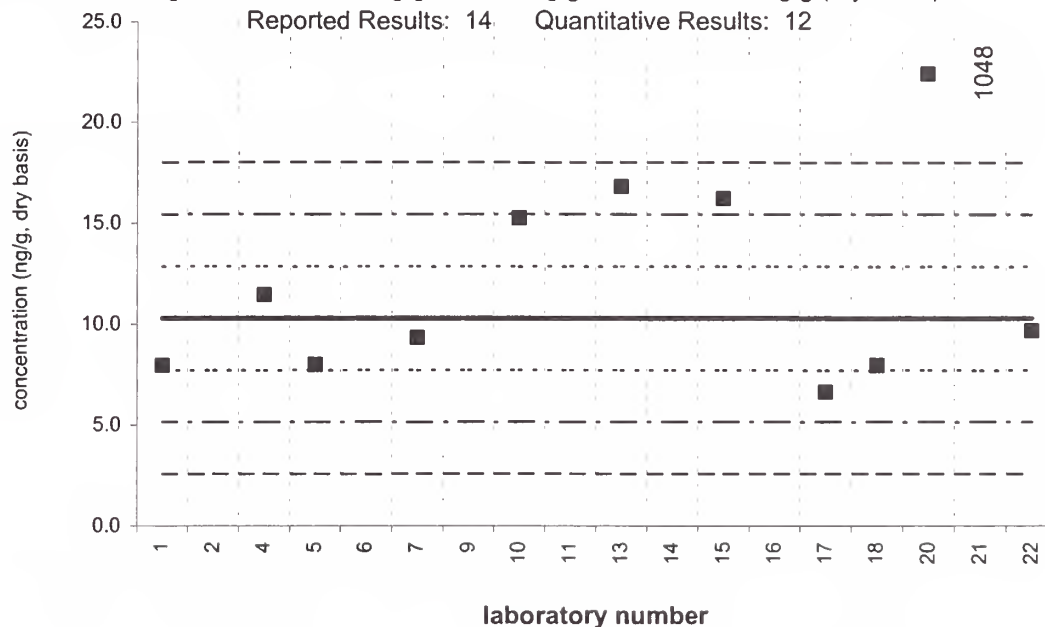


Tissue X (QA00TIS10)

perylene

Assigned value = 10.3 ng/g $s = 5.5$ ng/g 95% CL = 5.0 ng/g (dry basis)

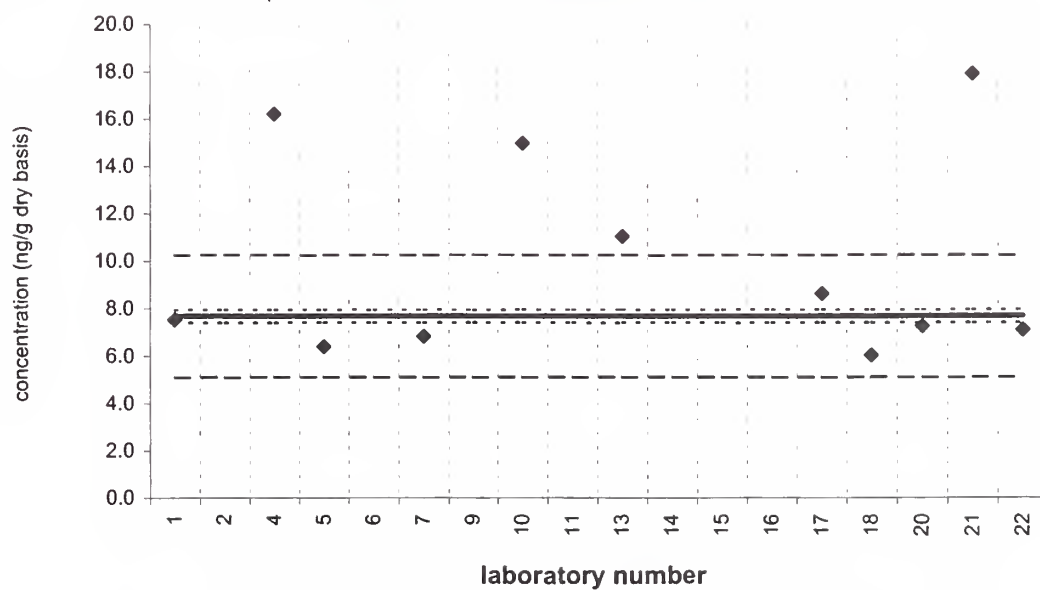
Reported Results: 14 Quantitative Results: 12



perylene

SRM 1974a

Certified Value = 7.68 ± 0.27 ng/g (dry basis)
Reported Results: 13 Quantitative Results: 11

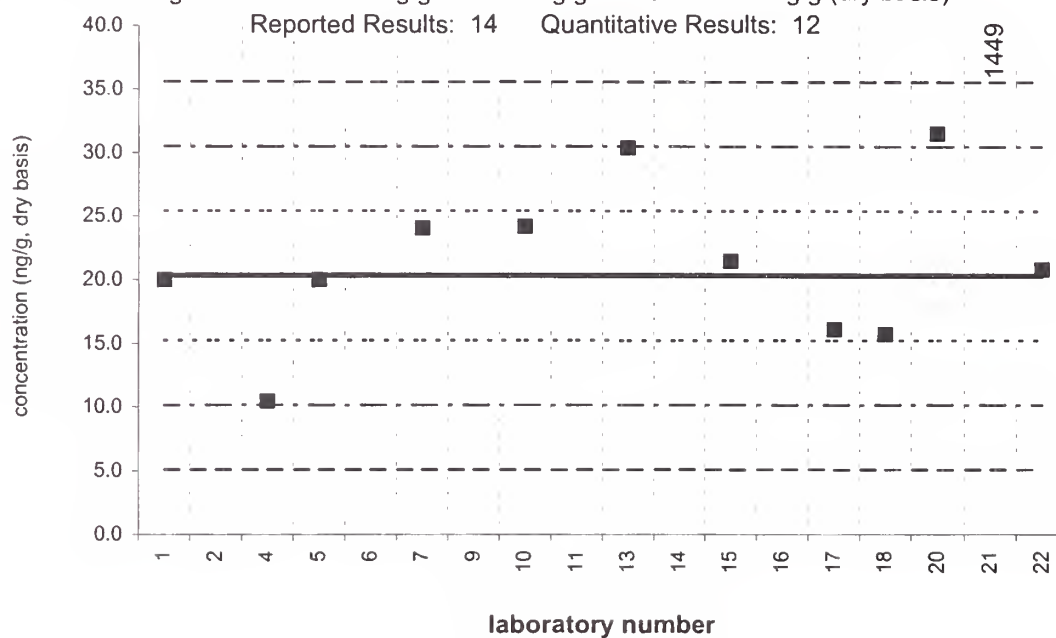


Tissue X (QA00TIS10)

indeno[1,2,3-cd]pyrene

Assigned value = 20.3 ng/g $s = 6.0$ ng/g 95% CL = 4.6 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 12

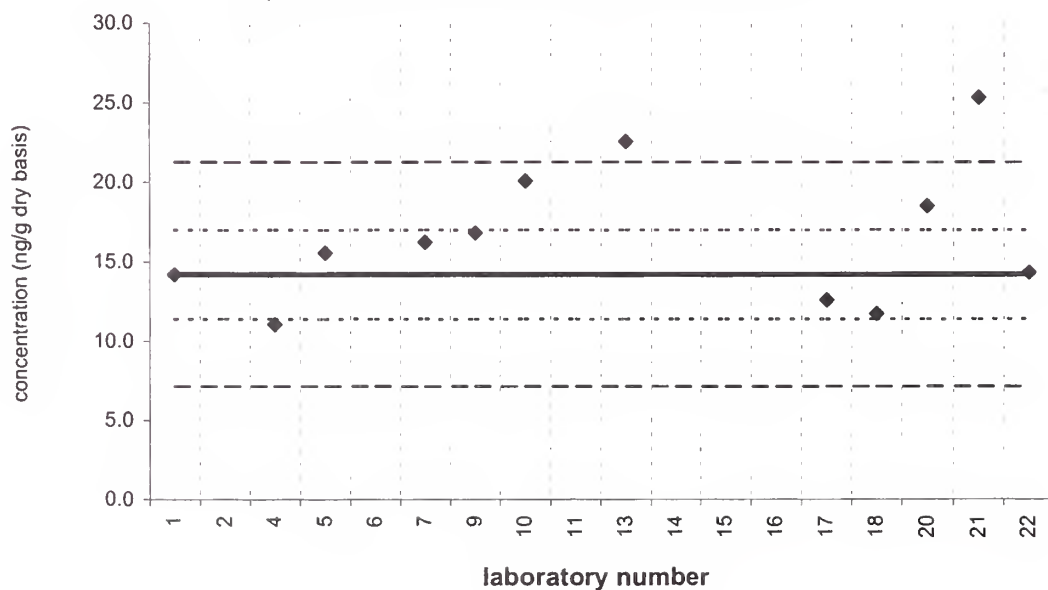


indeno[1,2,3-cd]pyrene

SRM 1974a

Certified Value = 14.2 ± 2.8 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 11

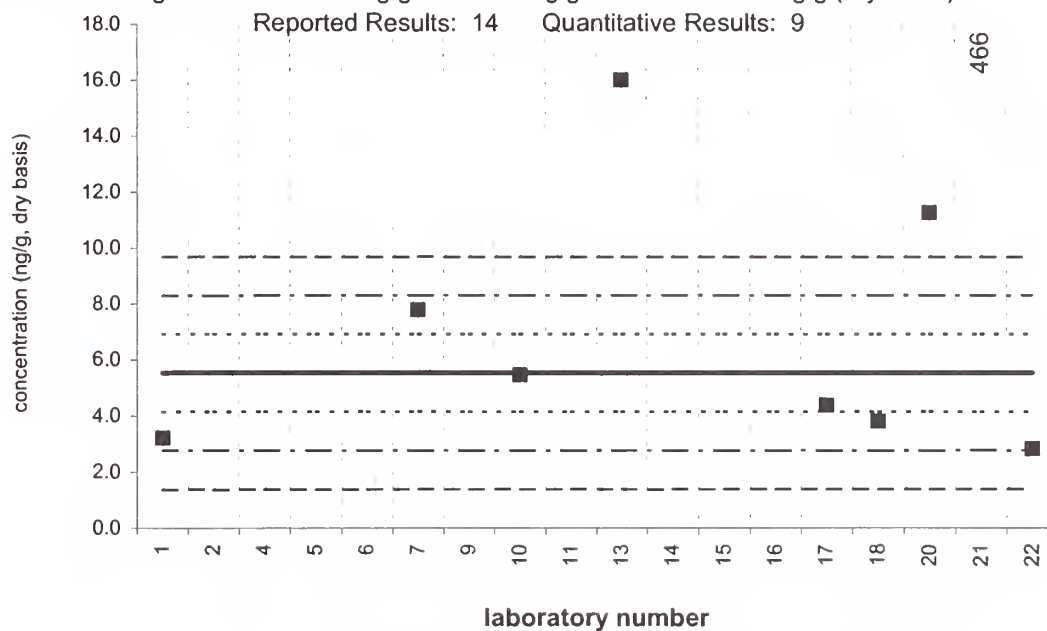


Tissue X (QA00TIS10)

dibenz[a,h]anthracene

Assigned value = 5.54 ng/g $s = 3.02$ ng/g 95% CL = 2.80 ng/g (dry basis)

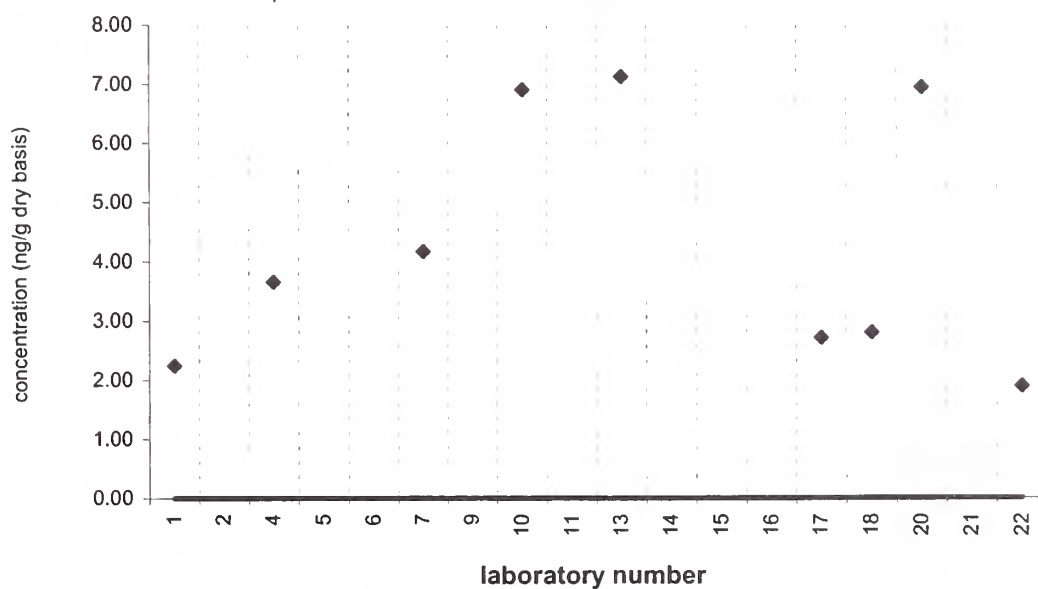
Reported Results: 14 Quantitative Results: 9



dibenz[a,h]anthracene

SRM 1974a

Target Value = no target ng/g (dry basis)
Reported Results: 13 Quantitative Results: 9

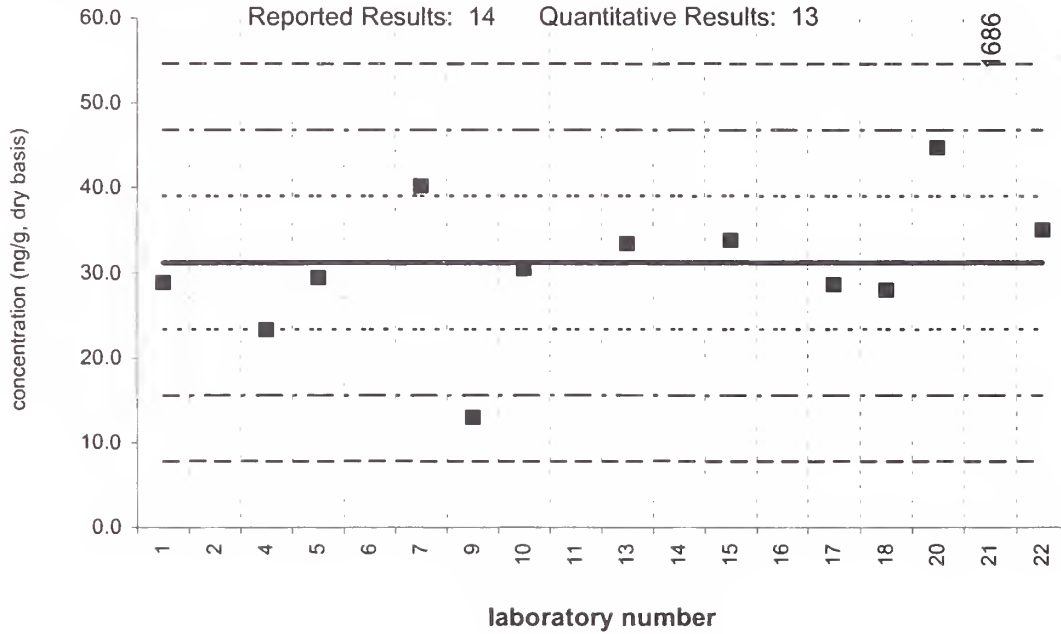


Tissue X (QA00TIS10)

benzo[ghi]perylene

Assigned value = 31.2 ng/g $s = 8.4$ ng/g 95% CL = 6.0 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 13

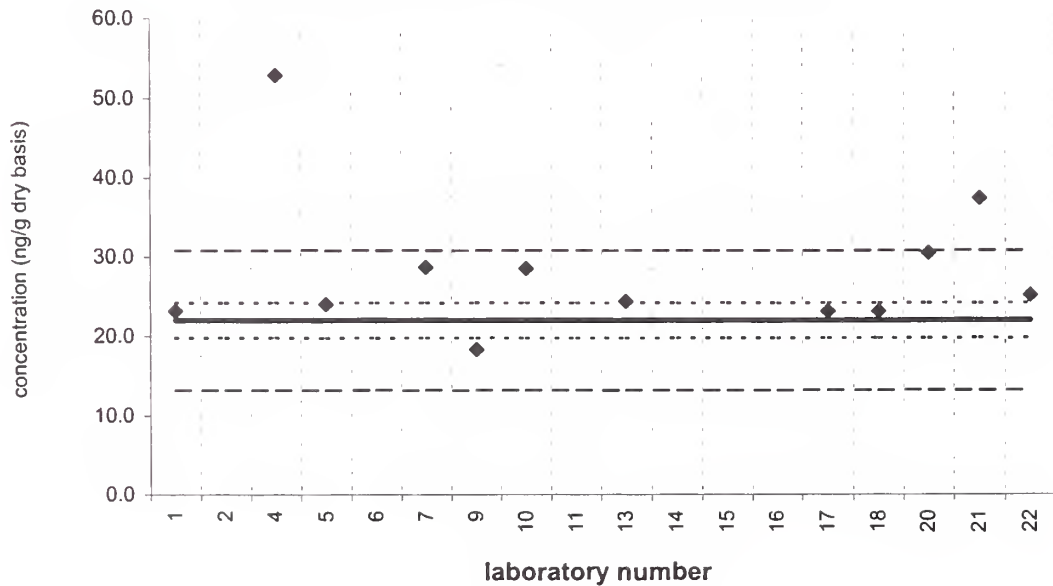


benzo[ghi]perylene

SRM 1974a

Certified Value = 22.0 \pm 2.2 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 12

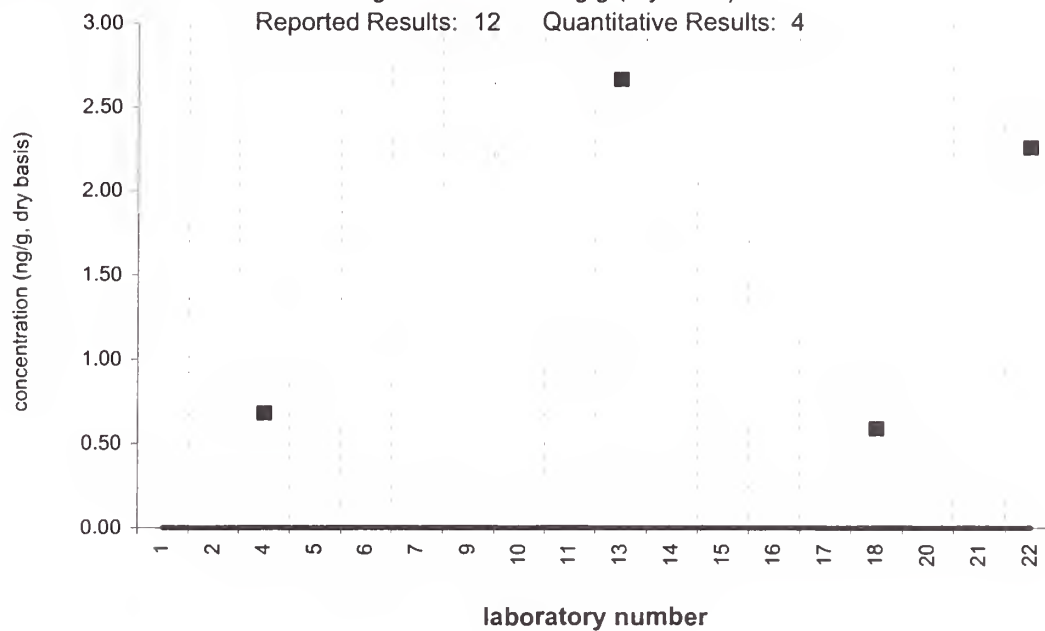


Tissue X (QA00TIS10)

alpha-HCH (a-BHC)

Assigned value = <3 ng/g (dry basis)

Reported Results: 12 Quantitative Results: 4

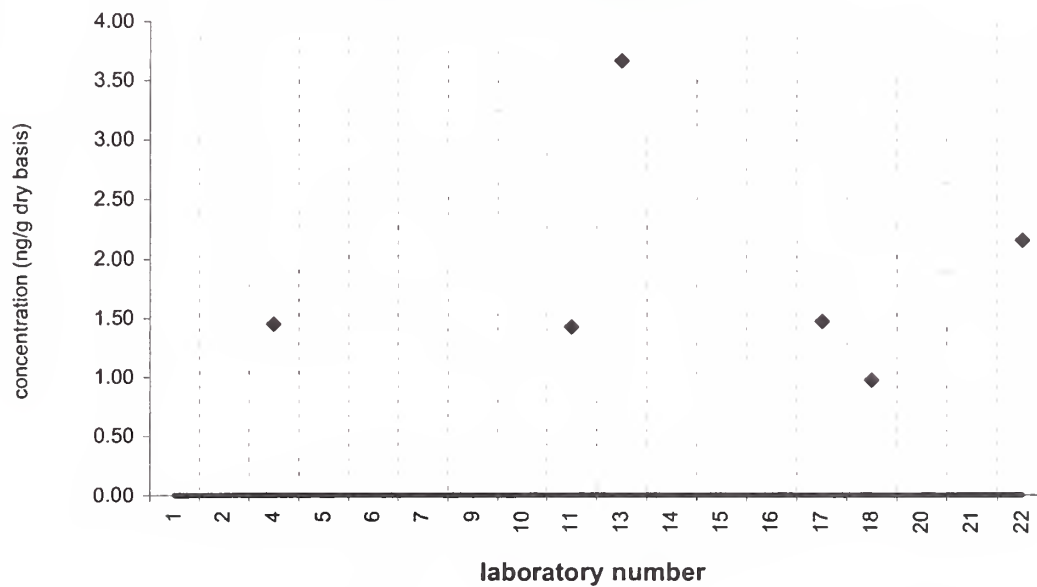


alpha-HCH (a-BHC)

SRM 1974a

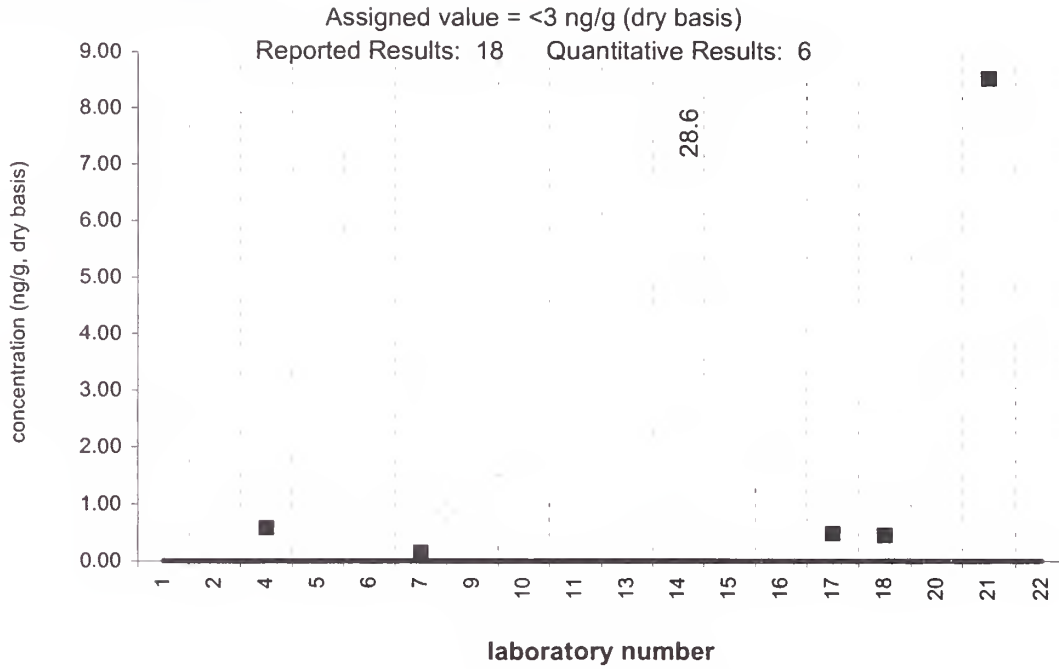
Target Value = no target ng/g (dry basis)

Reported Results: 12 Quantitative Results: 6



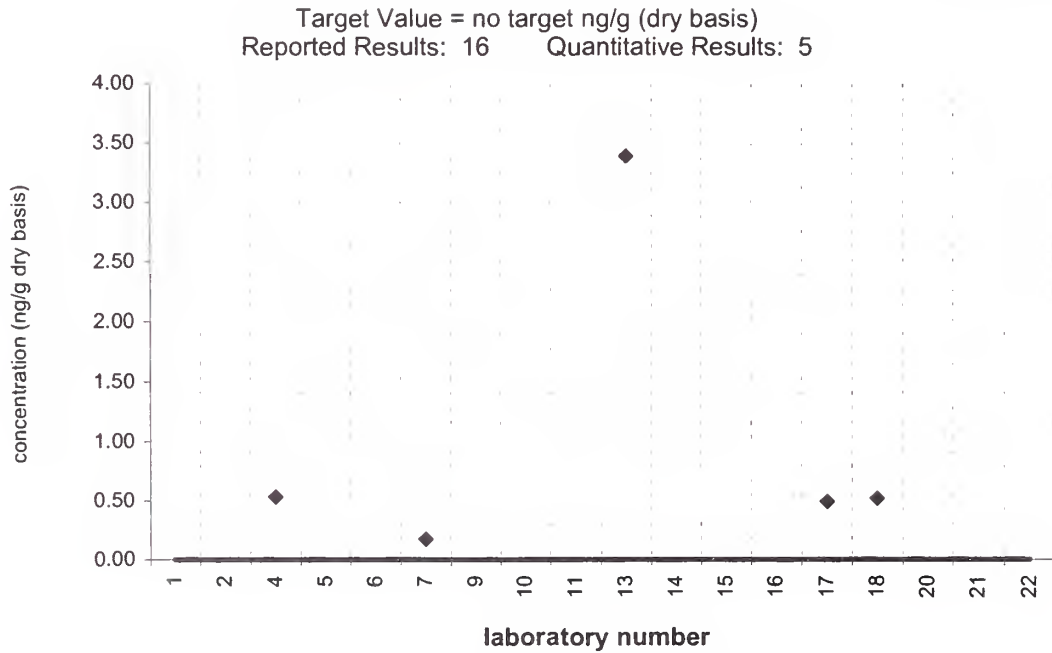
Tissue X (QA00TIS10)

hexachlorobenzene



hexachlorobenzene

SRM 1974a



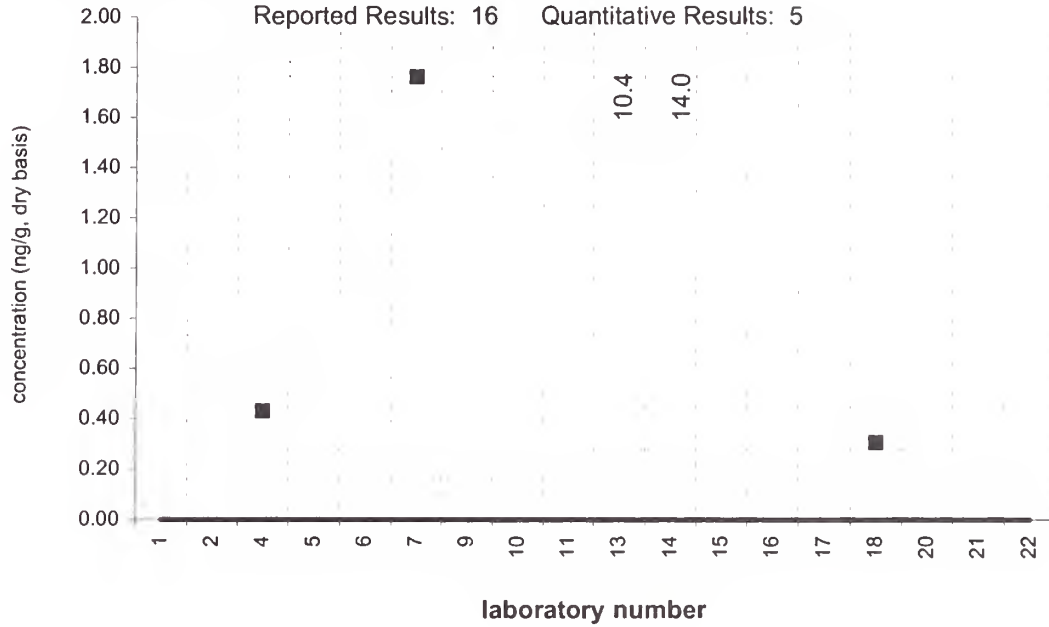
Tissue X (QA00TIS10)

gamma-HCH (g-BHC,lindane)

Assigned value = <3 ng/g (dry basis)

Reported Results: 16

Quantitative Results: 5



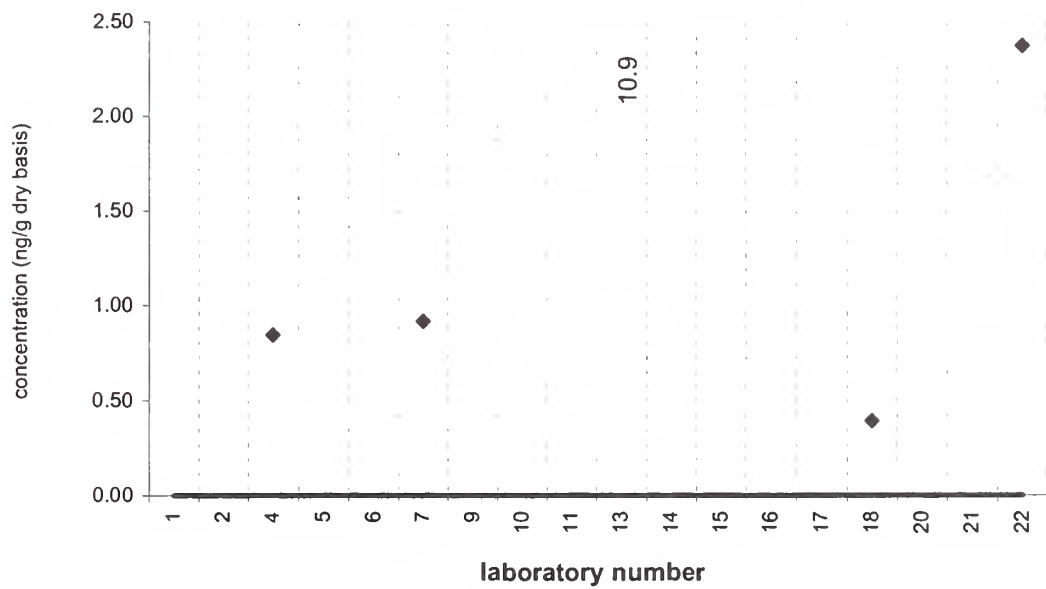
gamma-HCH (g-BHC,lindane)

SRM 1974a

Target Value = no target ng/g (dry basis)

Reported Results: 16

Quantitative Results: 5

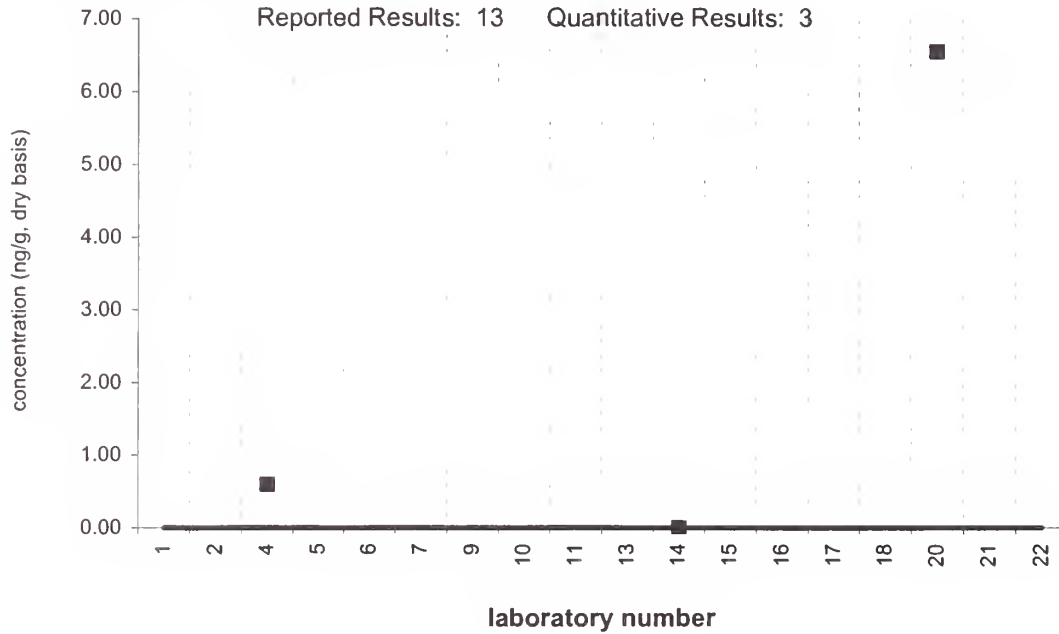


Tissue X (QA00TIS10)

beta-HCH (b-BHC)

Assigned value = <3 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 3

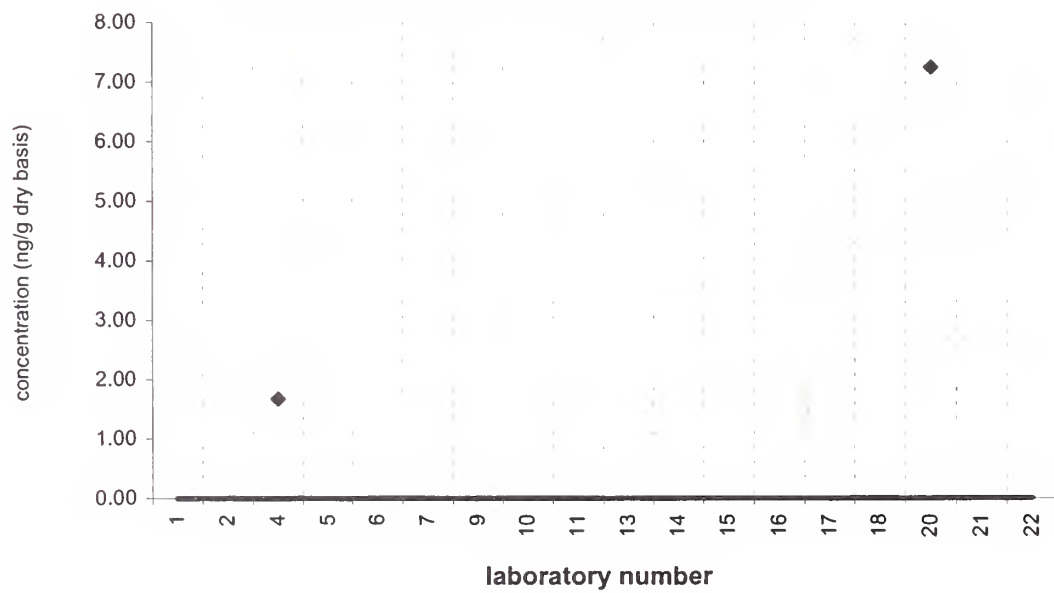


beta-HCH (b-BHC)

SRM 1974a

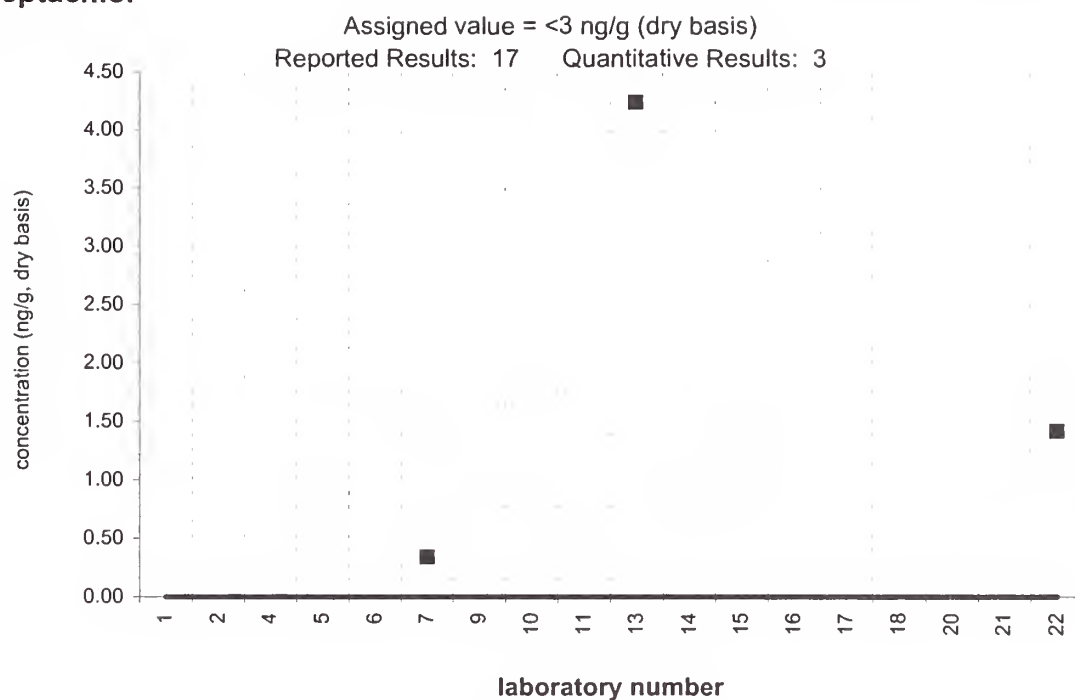
Target Value = no target ng/g (dry basis)

Reported Results: 13 Quantitative Results: 2



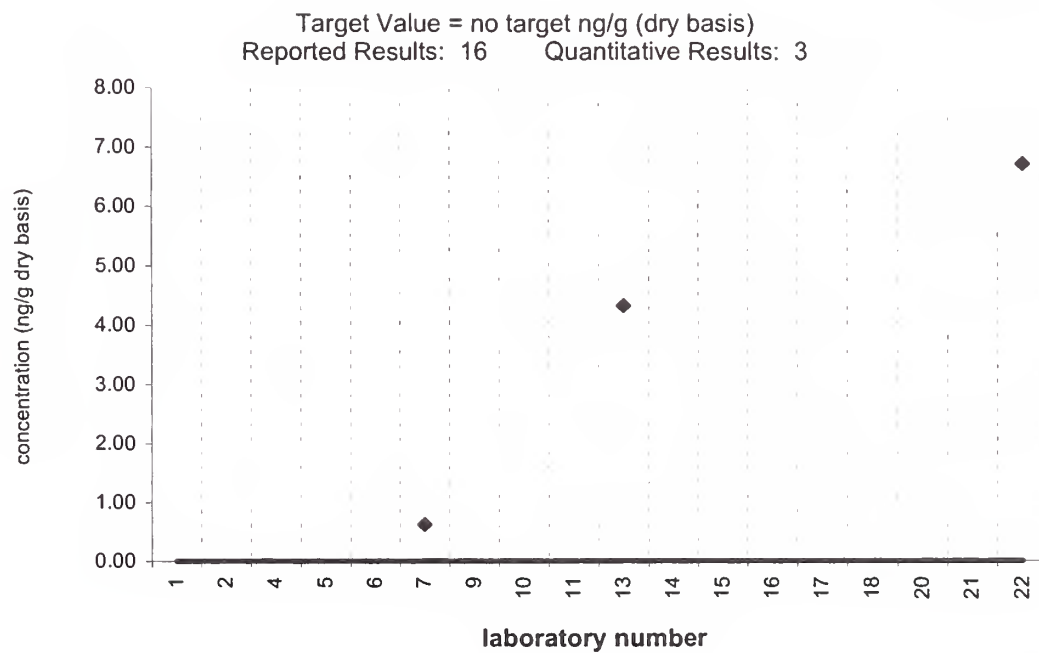
heptachlor

Tissue X (QA00TIS10)



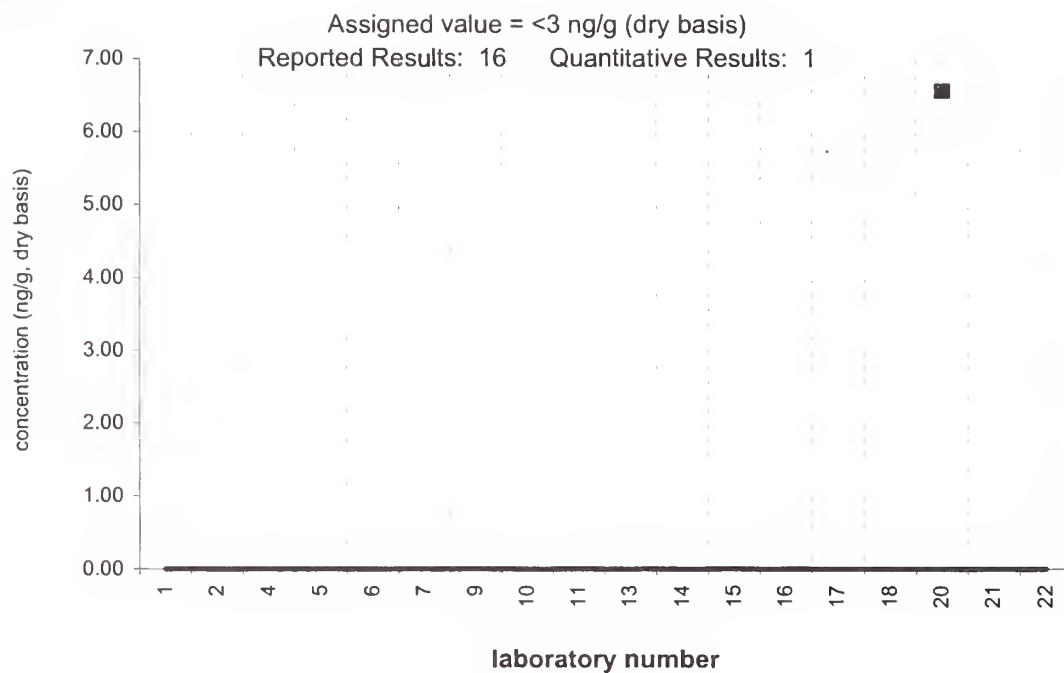
heptachlor

SRM 1974a



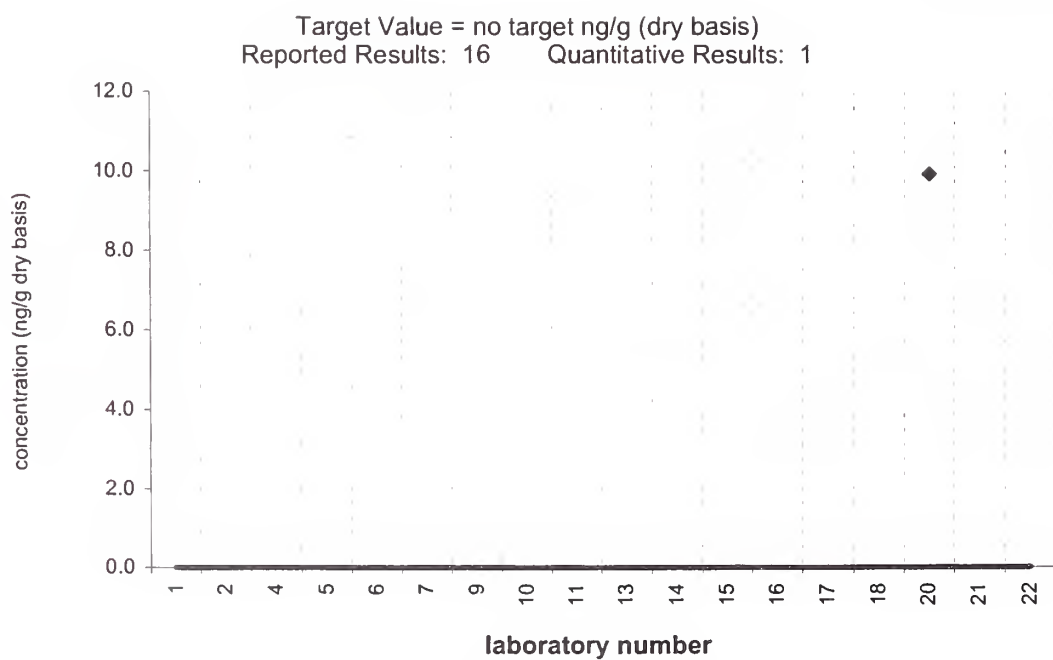
Tissue X (QA00TIS10)

aldrin



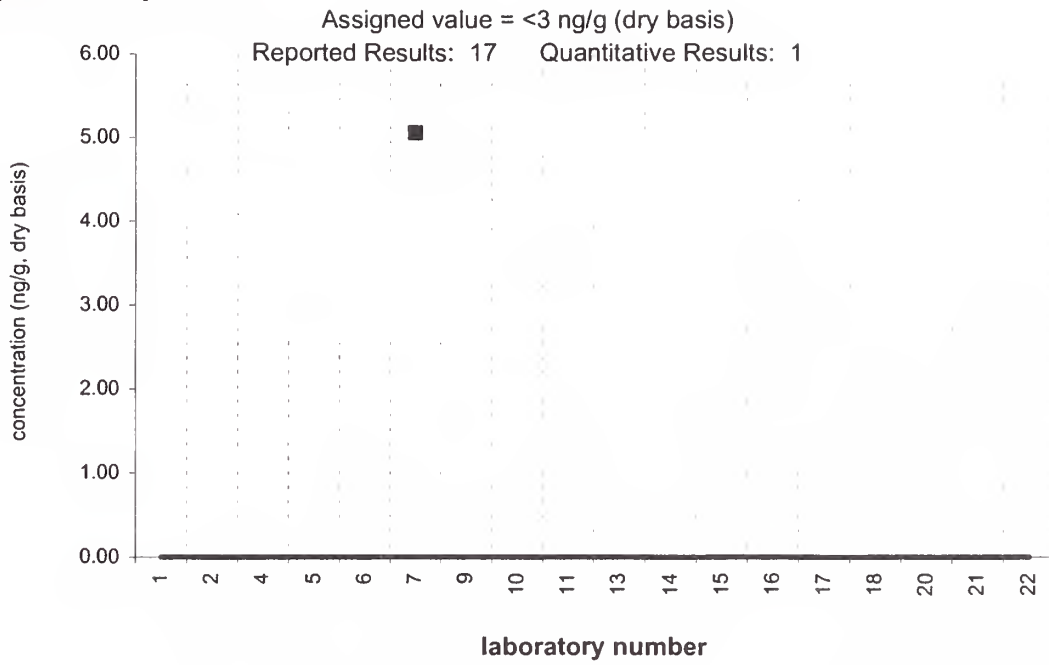
aldrin

SRM 1974a



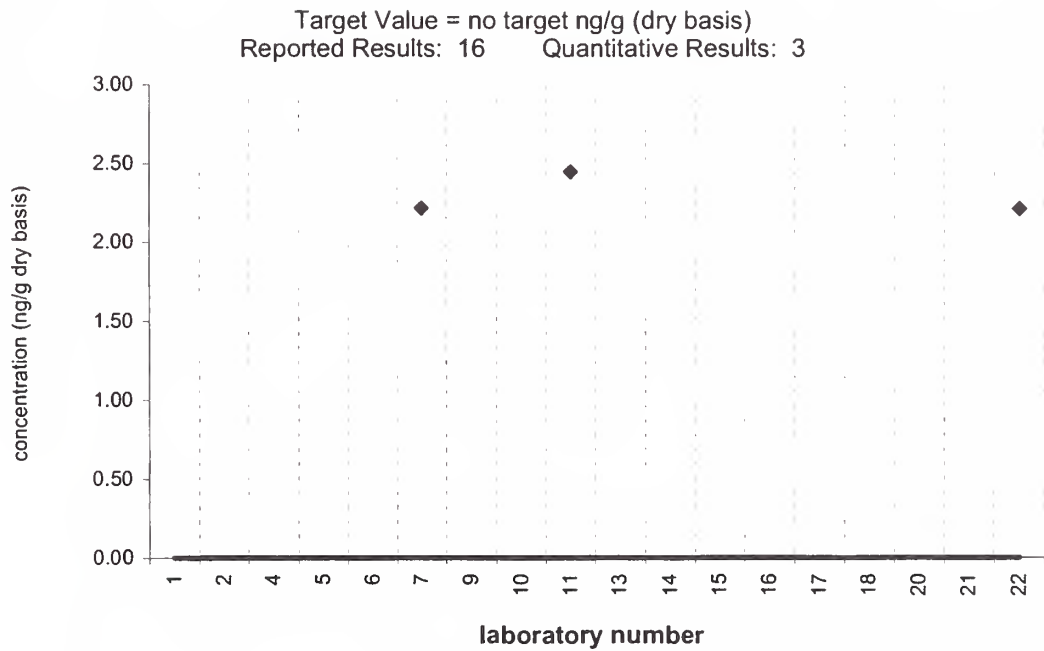
Tissue X (QA00TIS10)

heptachlor epoxide



heptachlor epoxide

SRM 1974a



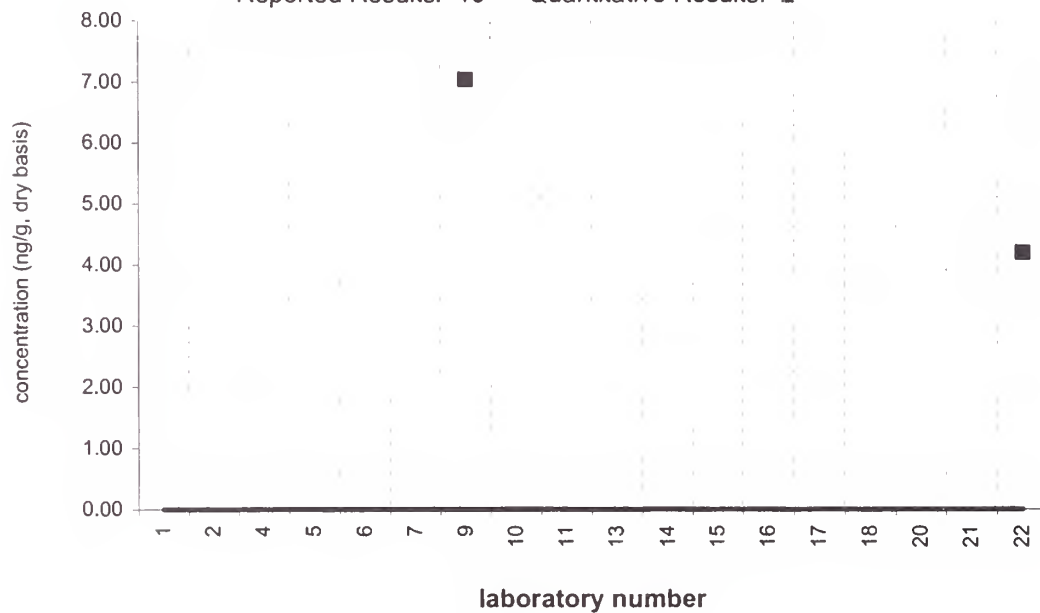
oxychlordan

Tissue X (QA00TIS10)

Assigned value = <5 ng/g (dry basis)

Reported Results: 10

Quantitative Results: 2



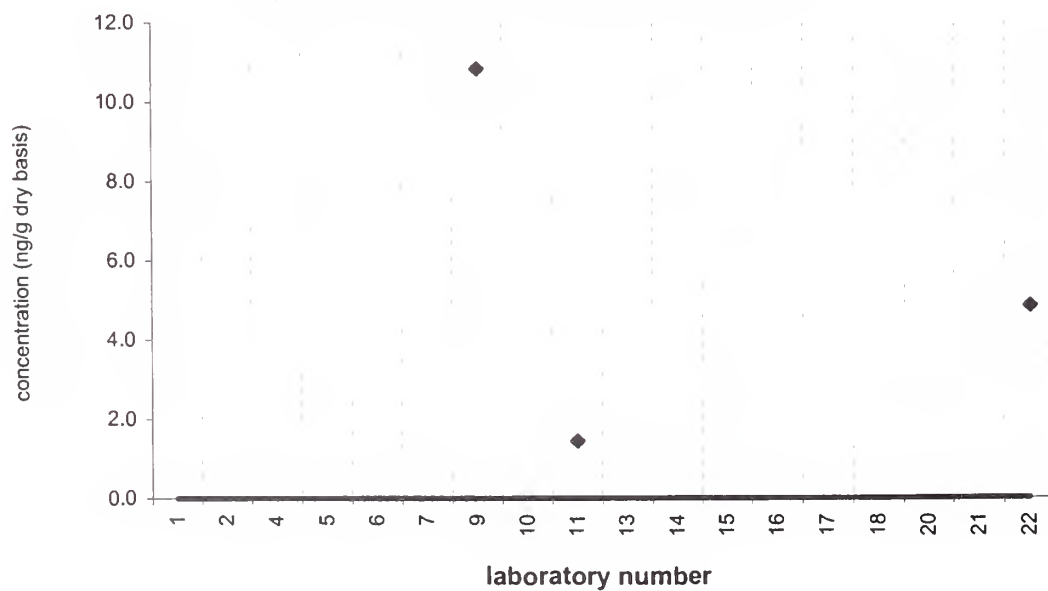
oxychlordan

SRM 1974a

Target Value = no target ng/g (dry basis)

Reported Results: 11

Quantitative Results: 3

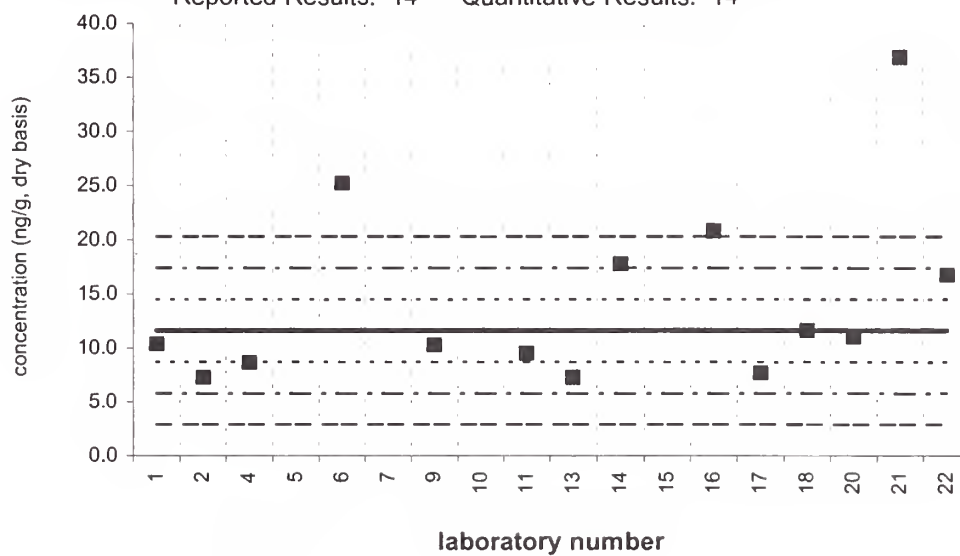


gamma-chlordane

Tissue X (QA00TIS10)

Assigned value = 11.6 ng/g $s = 4.5$ ng/g 95% CL = 2.8 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 14

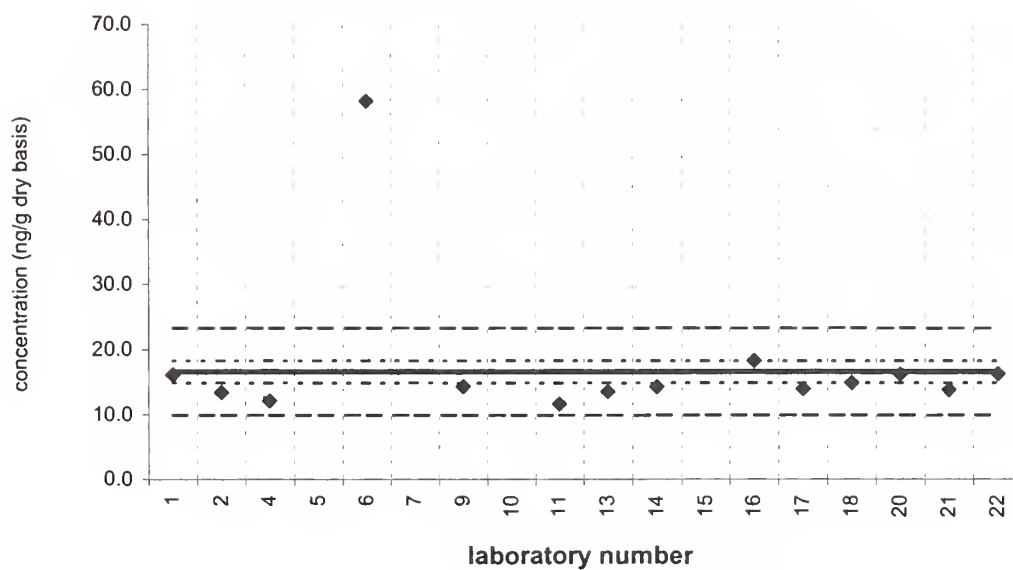


gamma-chlordane

SRM 1974a

Certified Value = 16.6 \pm 1.7 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 14

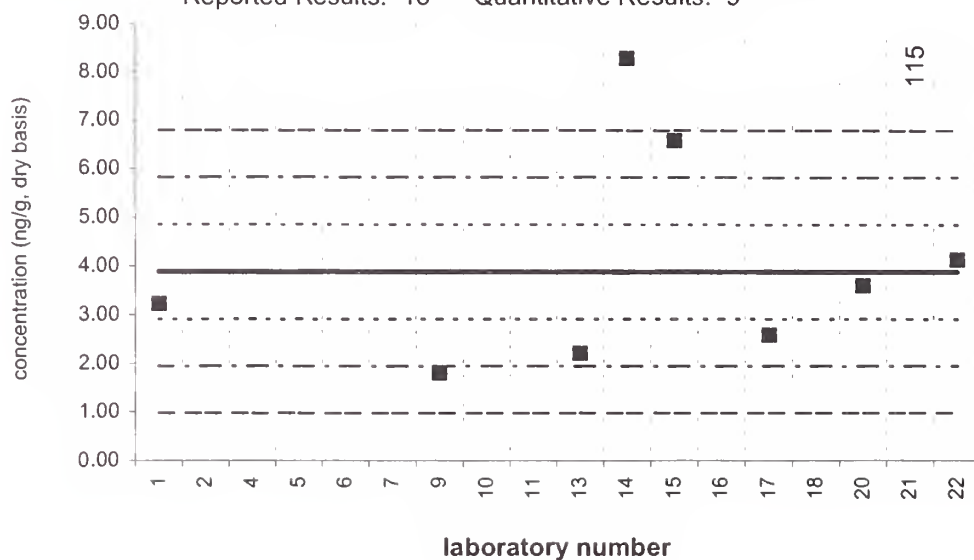


2,4'-DDE

Tissue X (QA00TIS10)

Assigned value = 3.88 ng/g $s = 2.33$ ng/g 95% CL = 2.44 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 9

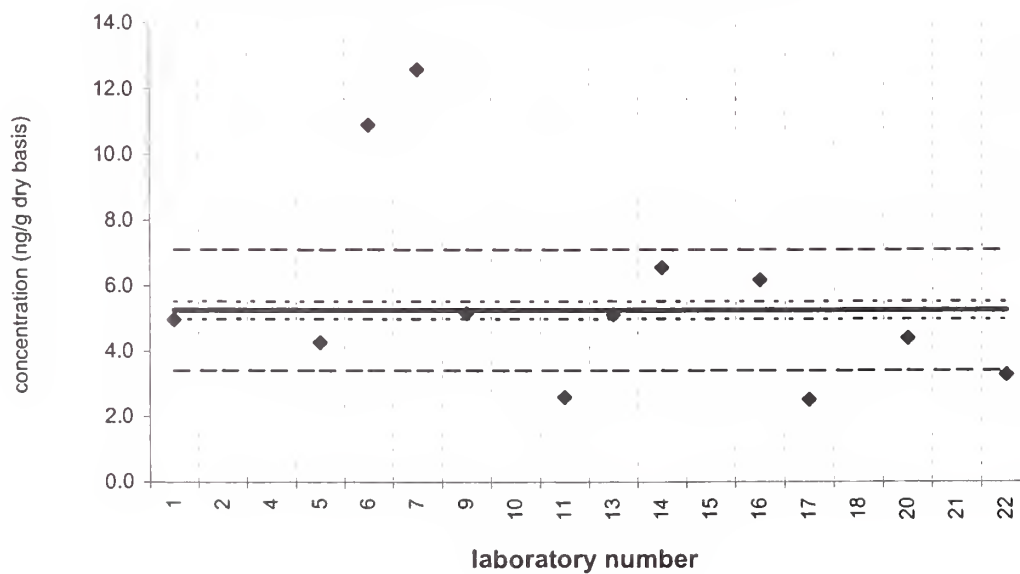


2,4'-DDE

SRM 1974a

Noncertified Value = 5.26 ± 0.27 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 12

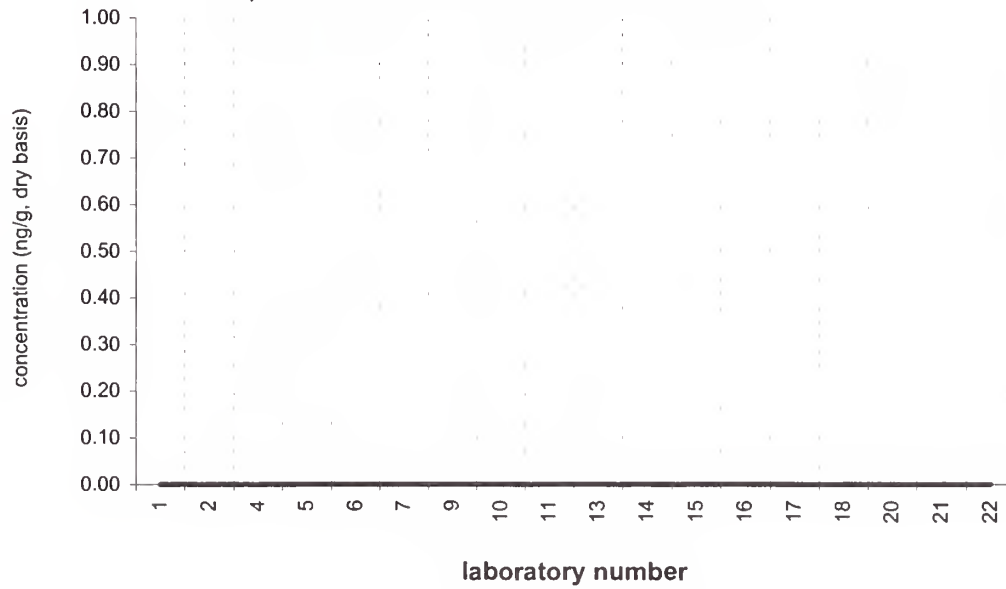


endosulfan I

Tissue X (QA00TIS10)

Assigned value = <5 ng/g (dry basis)

Reported Results: 15 Quantitative Results: 0

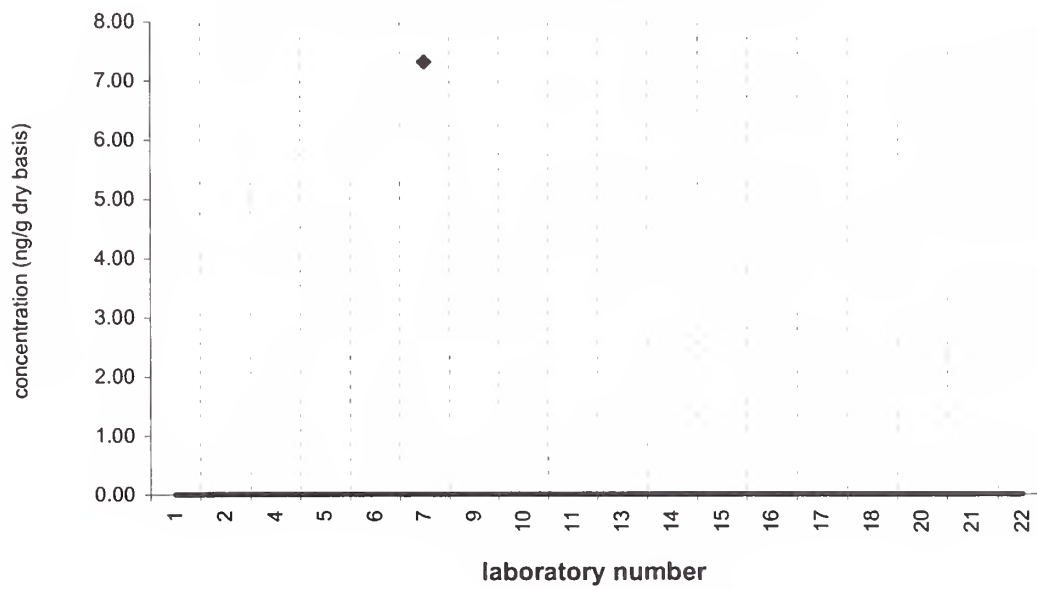


endosulfan I

SRM 1974a

Target Value = no target ng/g (dry basis)

Reported Results: 15 Quantitative Results: 1

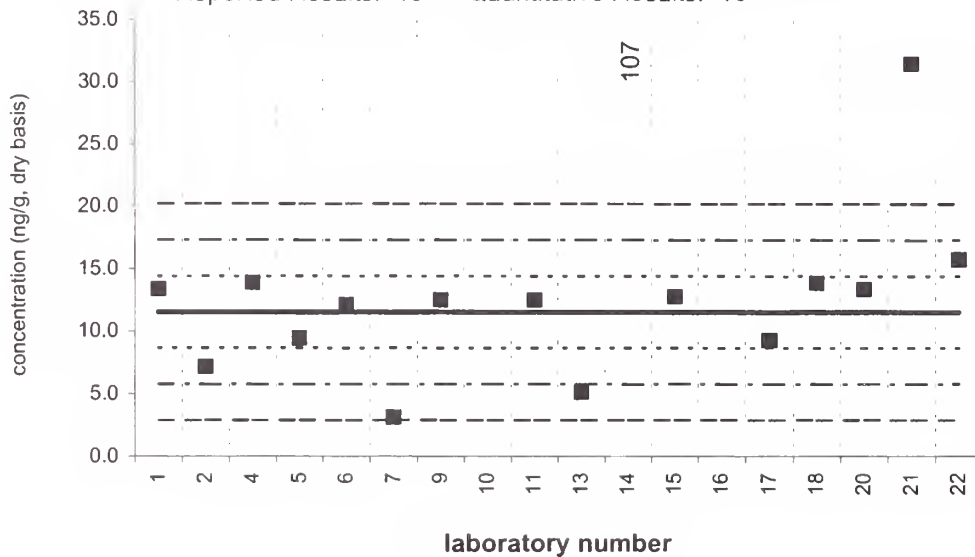


cis-chlordane (alpha-chlordane)

Tissue X (QA00TIS10)

Assigned value = 11.5 ng/g $s = 3.1$ ng/g 95% CL = 2.0 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 16

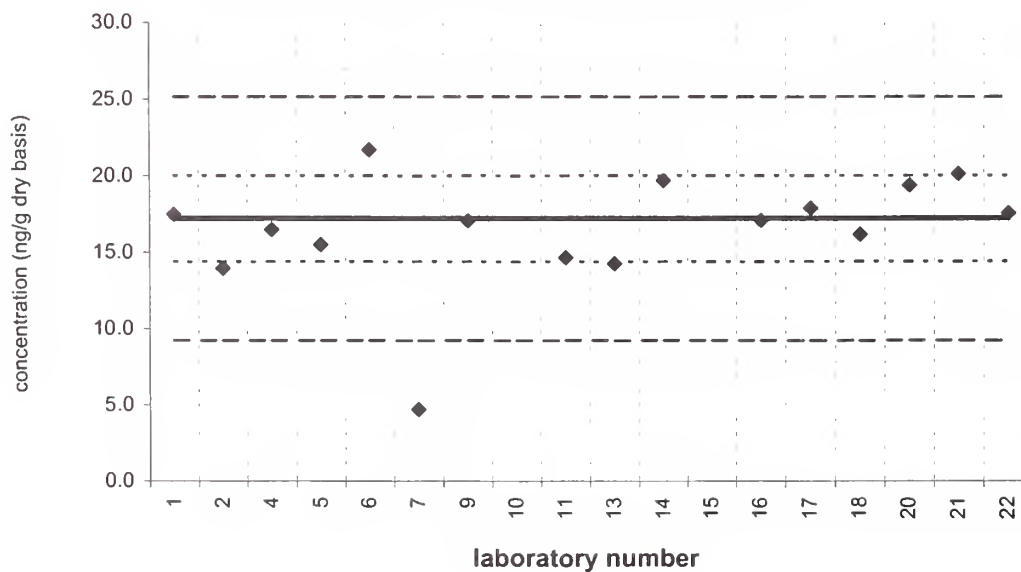


cis-chlordane (alpha-chlordane)

SRM 1974a

Certified Value = 17.2 ± 2.8 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 16

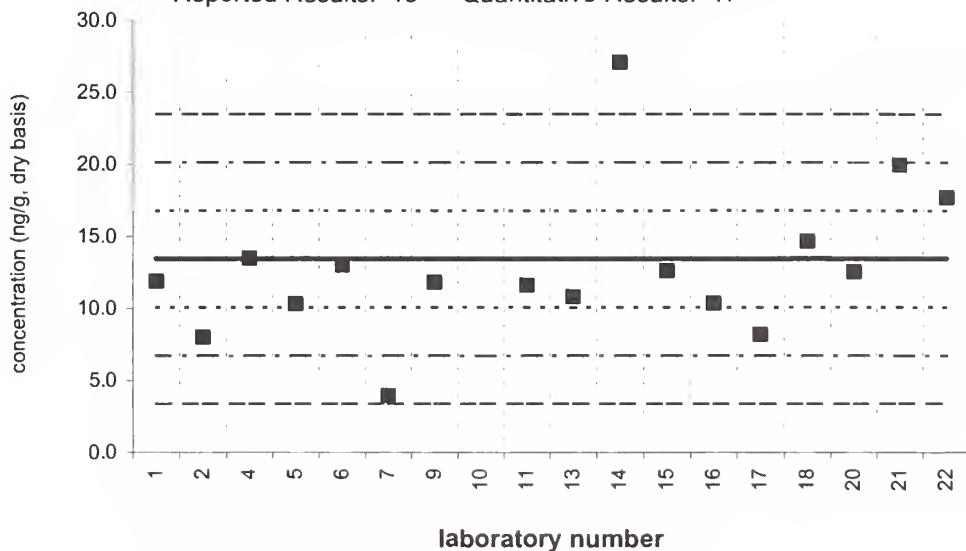


trans-nonachlor

Tissue X (QA00TIS10)

Assigned value = 13.4 ng/g $s = 4.9$ ng/g 95% CL = 2.7 ng/g (dry basis)

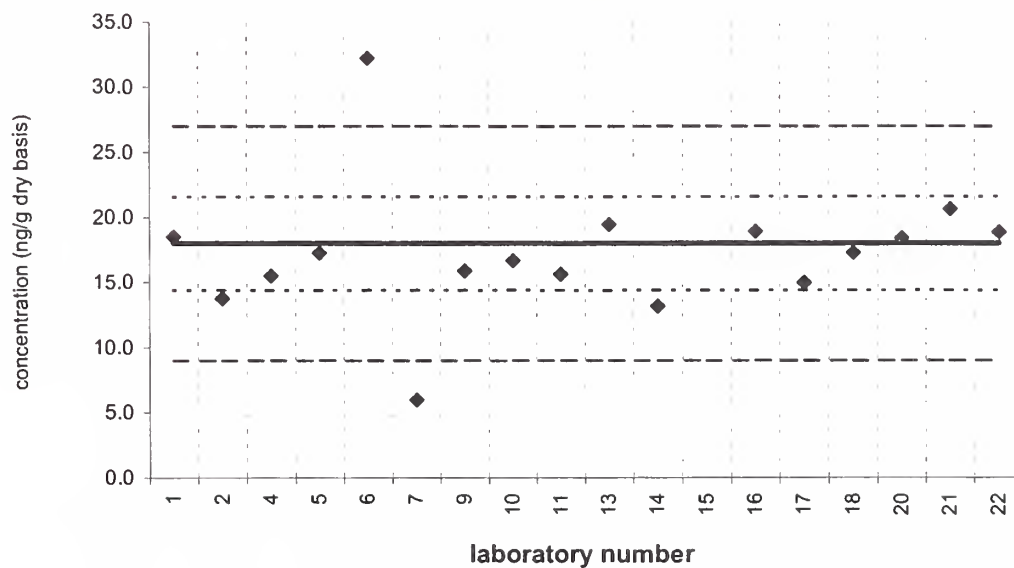
Reported Results: 18 Quantitative Results: 17



trans-nonachlor

SRM 1974a

Certified Value = 18.0 ± 3.6 ng/g (dry basis)
Reported Results: 17 Quantitative Results: 17

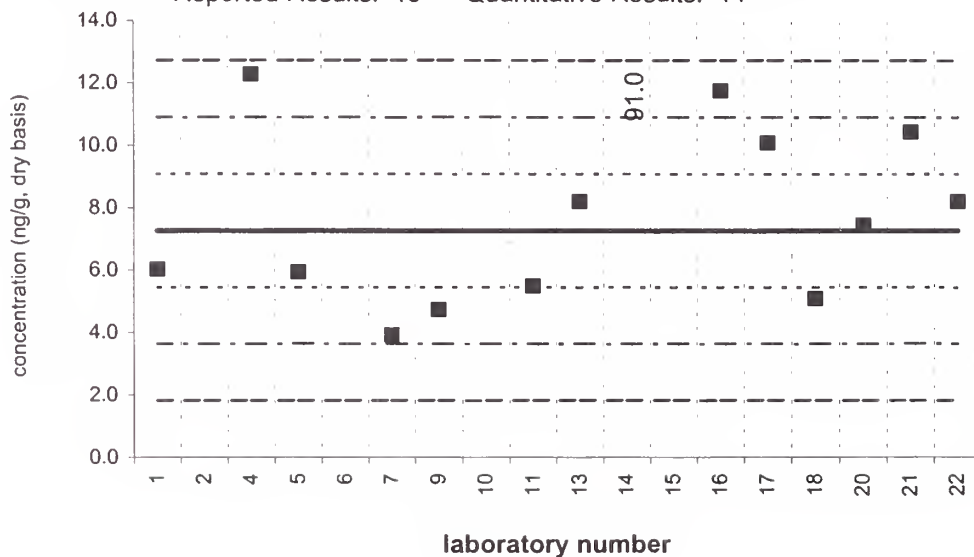


dieldrin

Tissue X (QA00TIS10)

Assigned value = 7.27 ng/g $s = 2.62$ ng/g 95% CL = 1.76 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 14

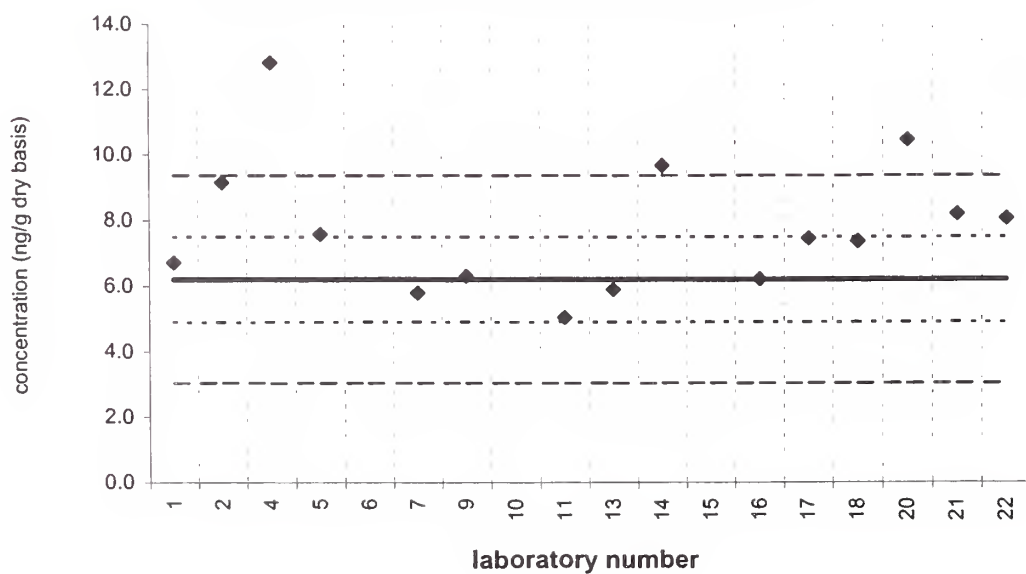


dieldrin

SRM 1974a

Noncertified Value = 6.20 ± 1.30 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 15

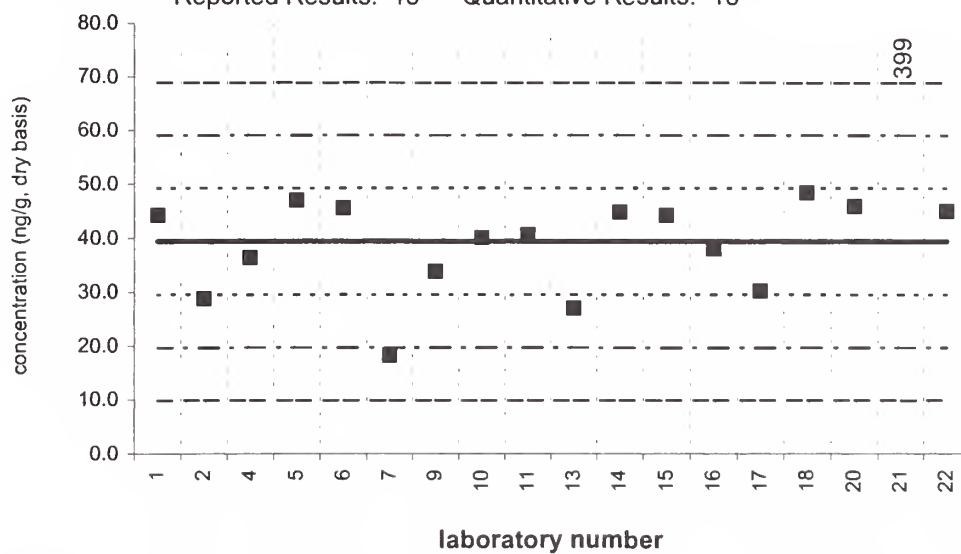


4,4'-DDE

Tissue X (QA00TIS10)

Assigned value = 39.4 ng/g $s = 7.2$ ng/g 95% CL = 4.1 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 18

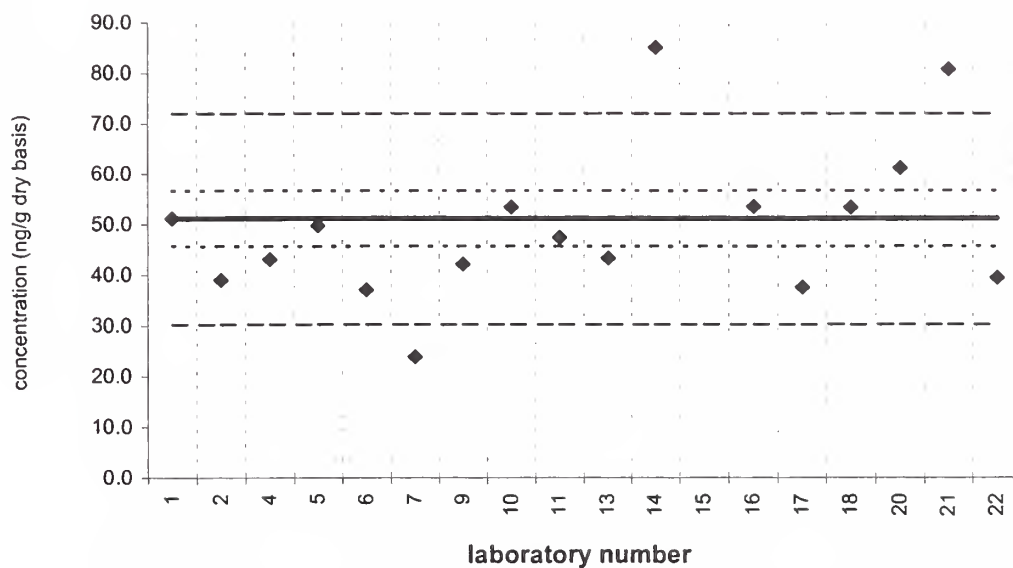


4,4'-DDE

SRM 1974a

Certified Value = 51.2 ± 5.5 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 17

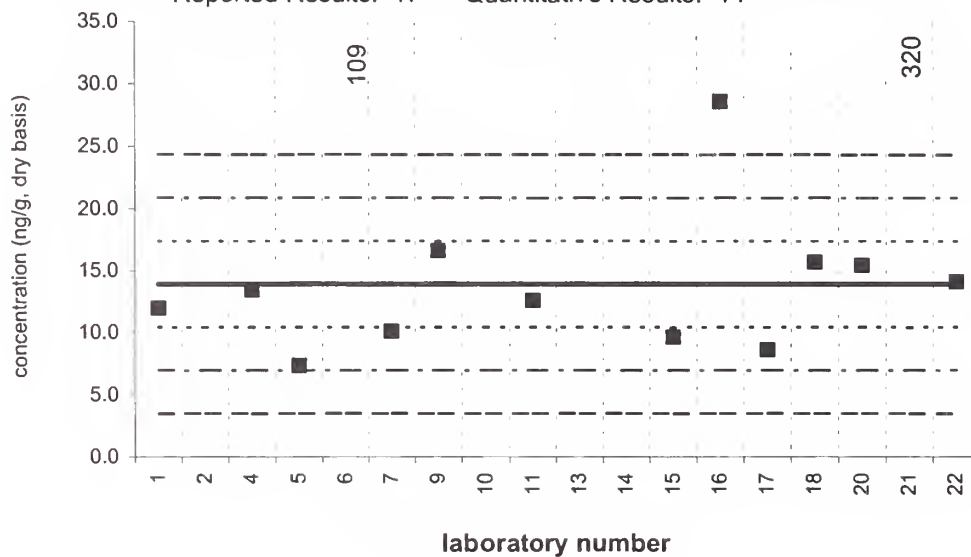


2,4'-DDD

Tissue X (QA00TIS10)

Assigned value = 13.9 ng/g $s = 5.9$ ng/g 95% CL = 0.0 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 14

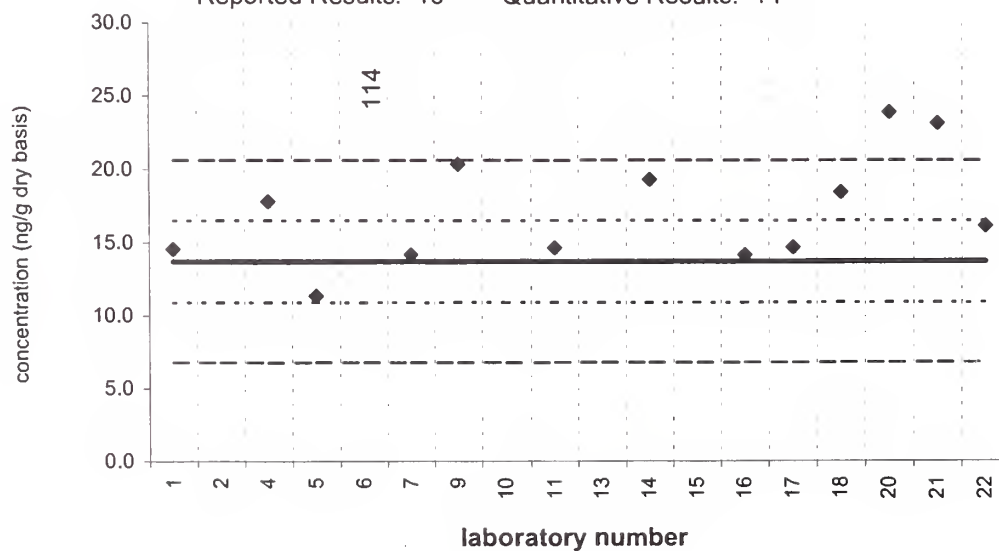


2,4'-DDD

SRM 1974a

Noncertified Value = 13.7 ± 2.8 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 14

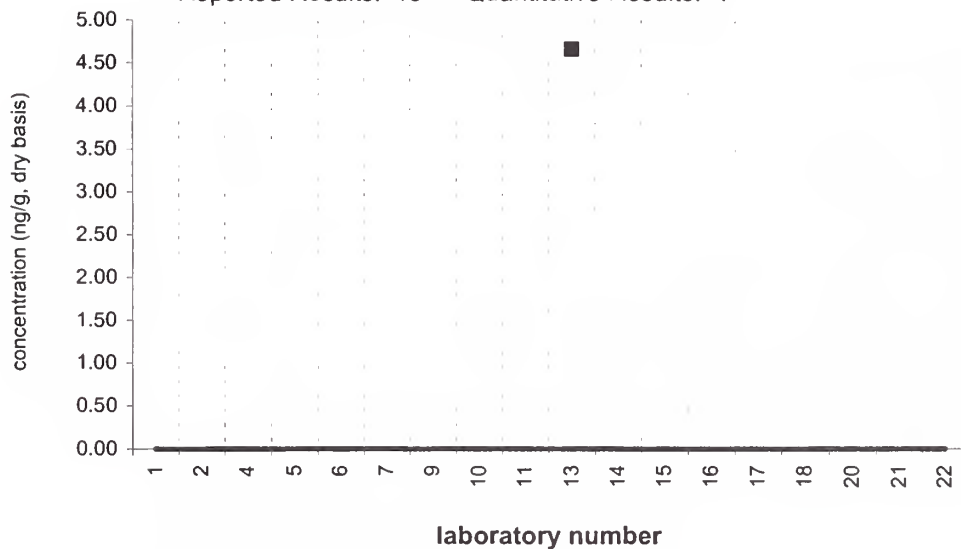


endrin

Tissue X (QA00TIS10)

Assigned value = <5 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 1

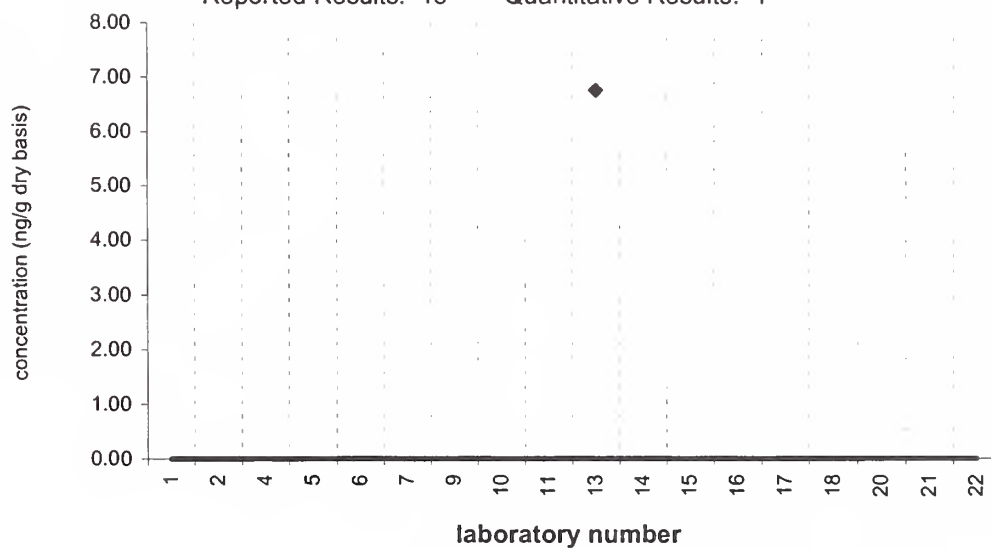


endrin

SRM 1974a

Target Value = no target ng/g (dry basis)

Reported Results: 13 Quantitative Results: 1

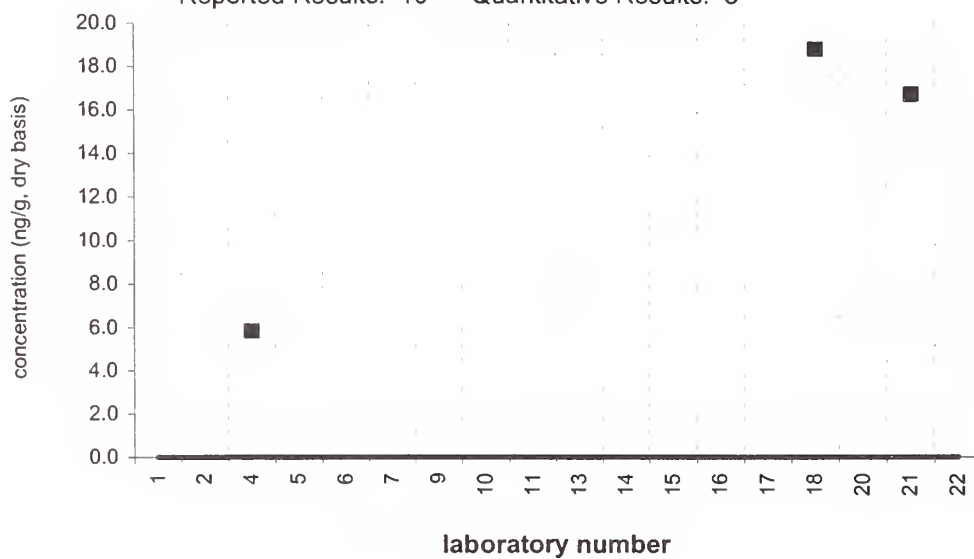


endosulfan II

Tissue X (QA00TIS10)

Assigned value = <15 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 3

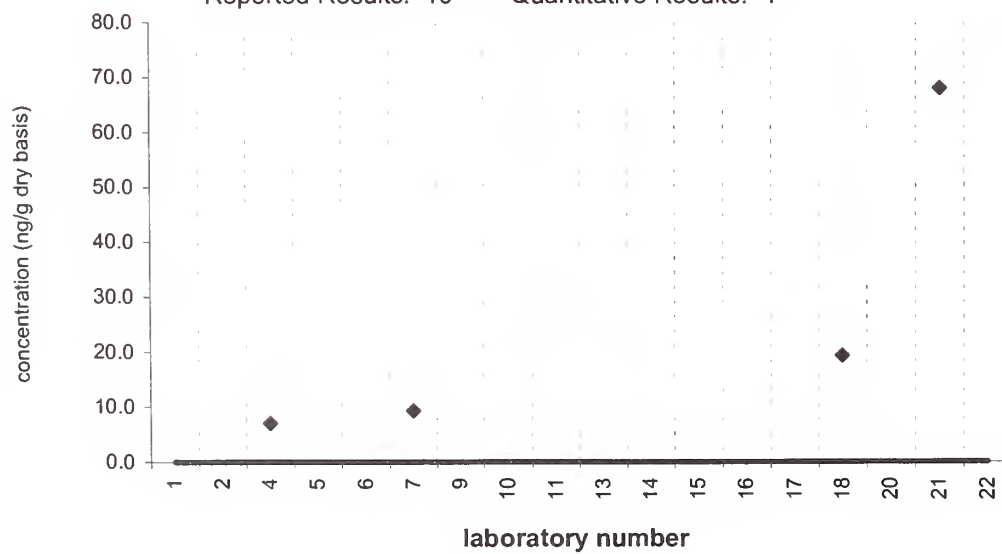


endosulfan II

SRM 1974a

Target Value = no target ng/g (dry basis)

Reported Results: 16 Quantitative Results: 4

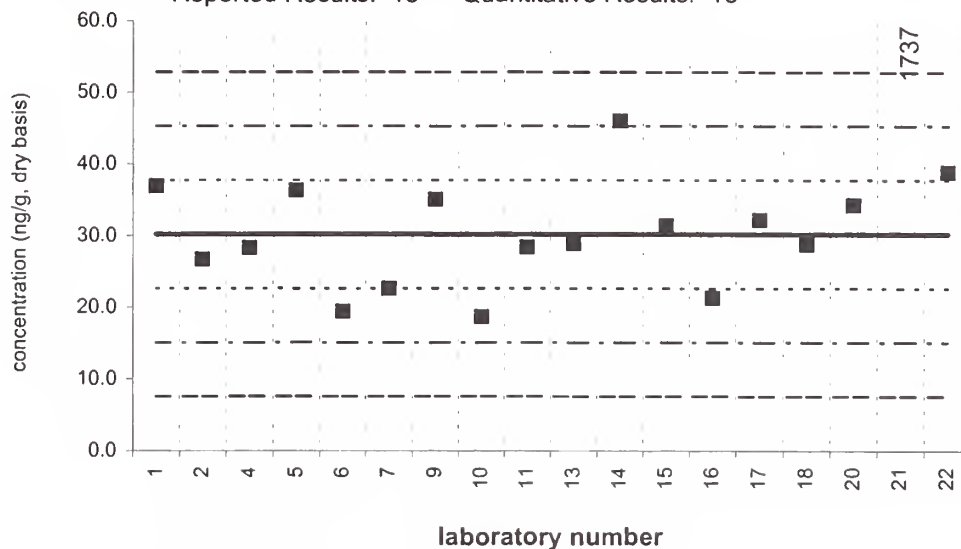


4,4'-DDD

Tissue X (QA00TIS10)

Assigned value = 30.2 ng/g $s = 7.6$ ng/g 95% CL = 4.0 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 18

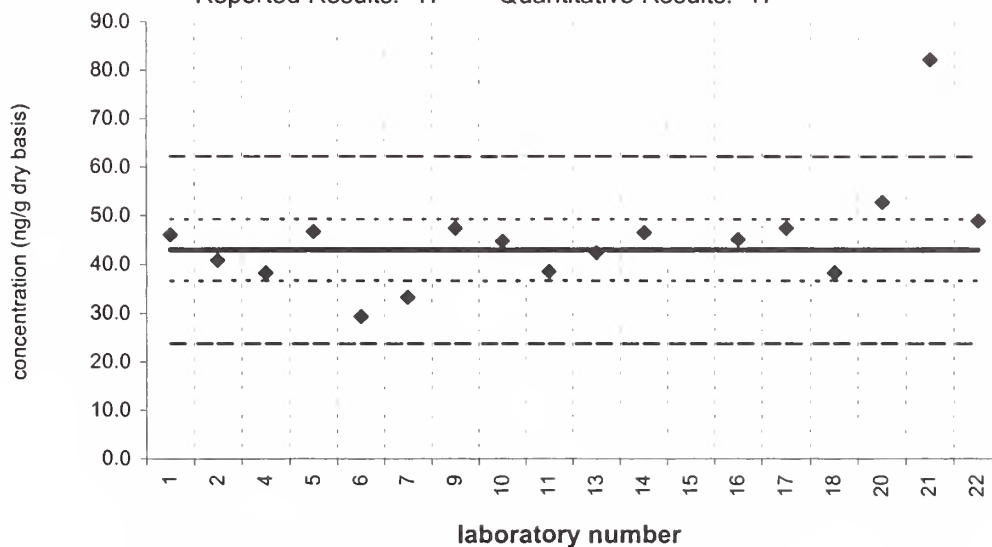


4,4'-DDD

SRM 1974a

Certified Value = 43.0 \pm 6.3 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

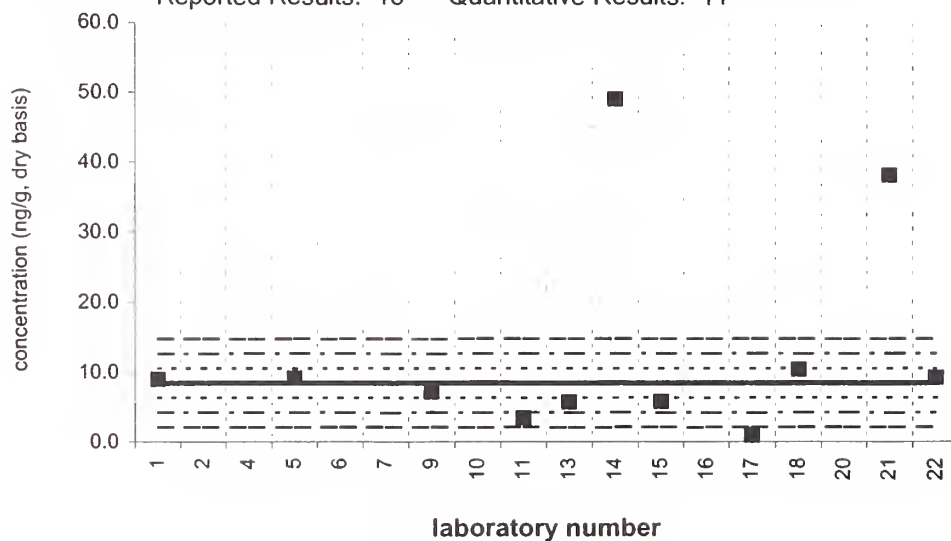


2,4'-DDT

Tissue X (QA00TIS10)

Assigned value = 8.45 ng/g $s = 1.69$ ng/g 95% CL = 1.78 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 11

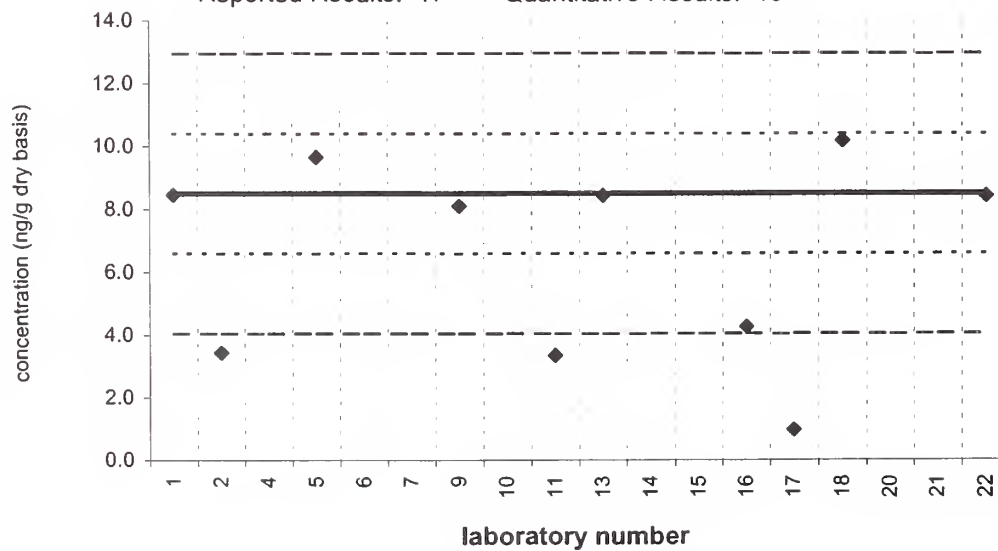


2,4'-DDT

SRM 1974a

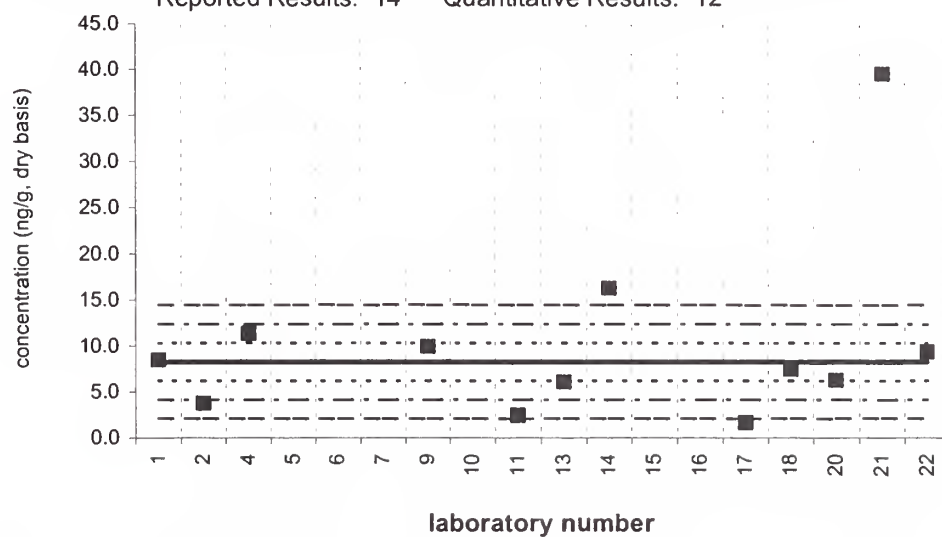
Noncertified Value = 8.50 ± 1.90 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 10

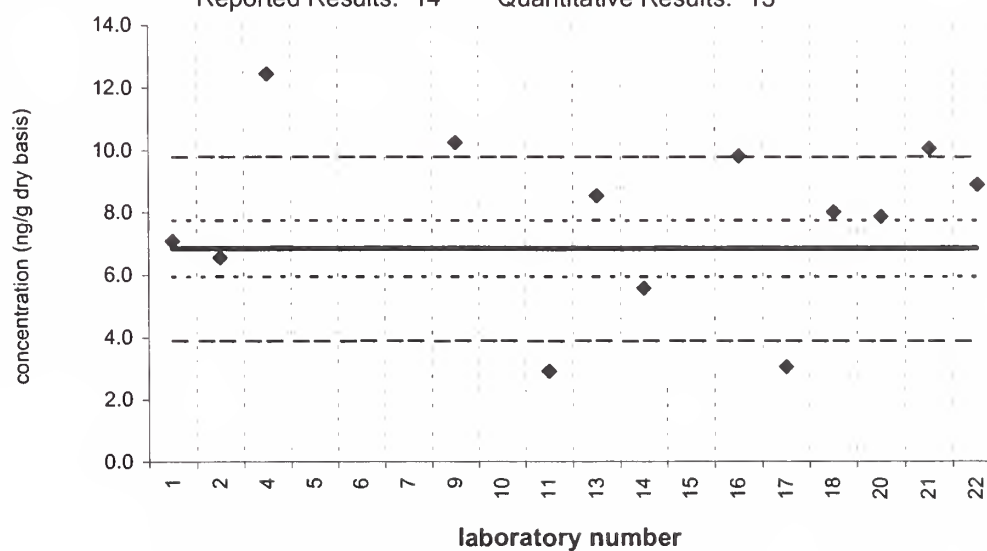


cis-nonachlor**Tissue X (QA00TIS10)**Assigned value = 8.25 ng/g $s = 3.99$ ng/g 95% CL = 3.69 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 12

**cis-nonachlor****SRM 1974a**Certified Value = 6.84 ± 0.90 ng/g (dry basis)

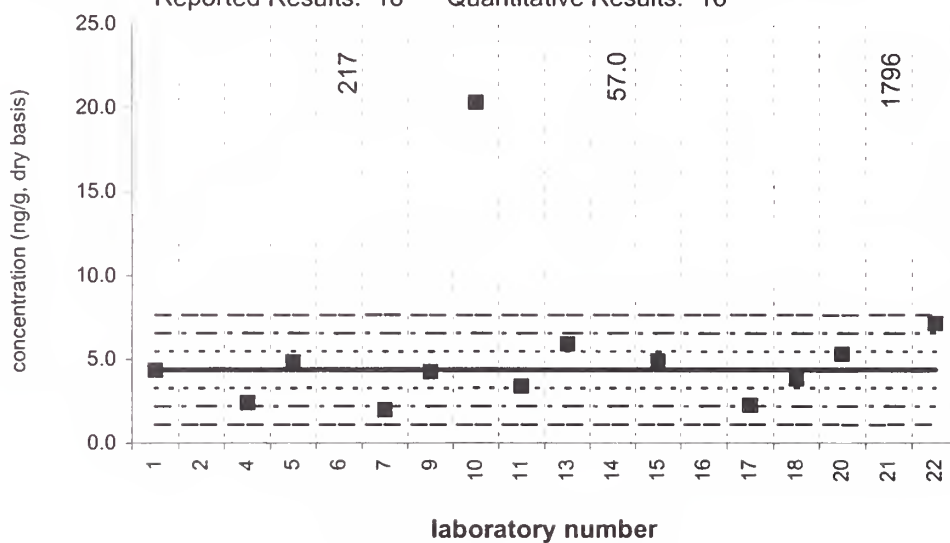
Reported Results: 14 Quantitative Results: 13



4,4'-DDT

Tissue X (QA00TIS10)

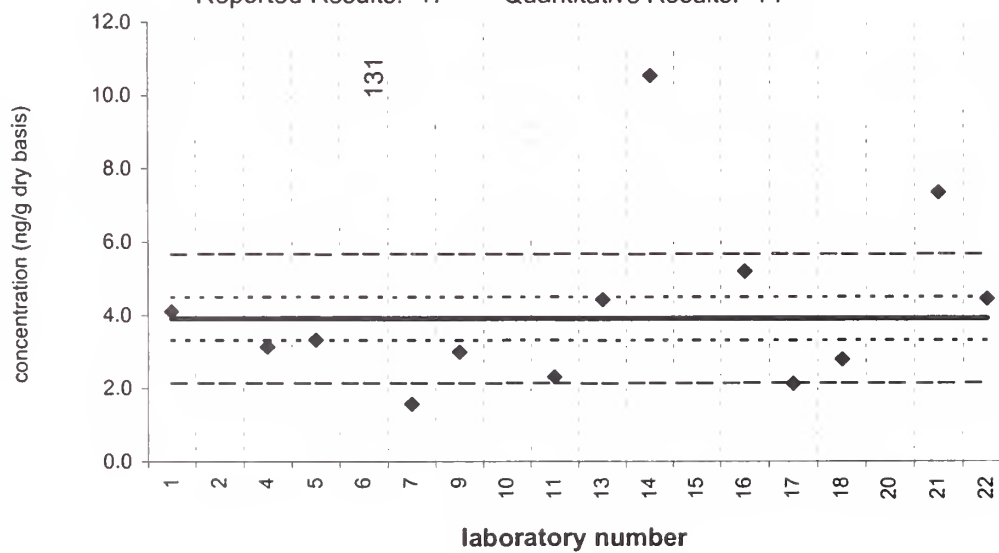
Assigned value = 4.37 ng/g $s = 1.53$ ng/g 95% CL = 1.03 ng/g (dry basis)
Reported Results: 18 Quantitative Results: 16



4,4'-DDT

SRM 1974a

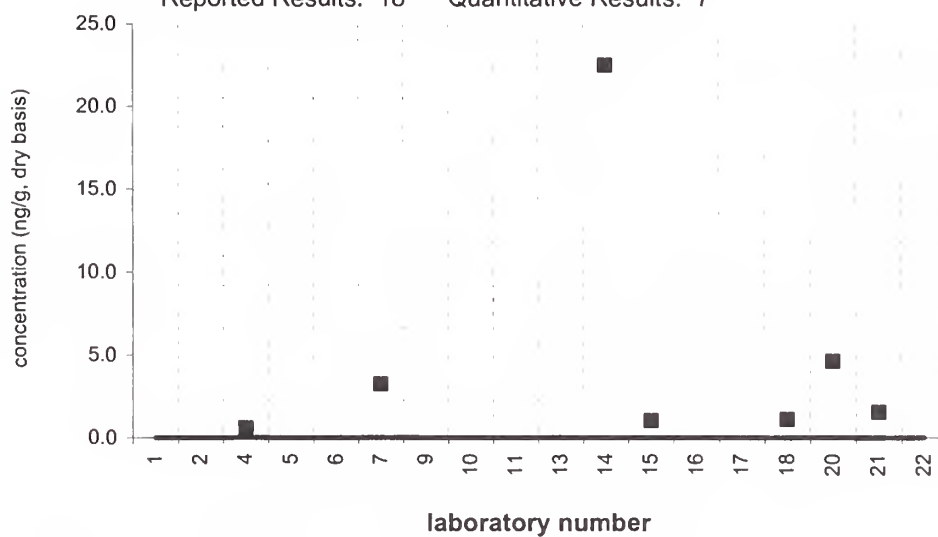
Certified Value = 3.91 ± 0.59 ng/g (dry basis)
Reported Results: 17 Quantitative Results: 14



mirex

Tissue X (QA00TIS10)

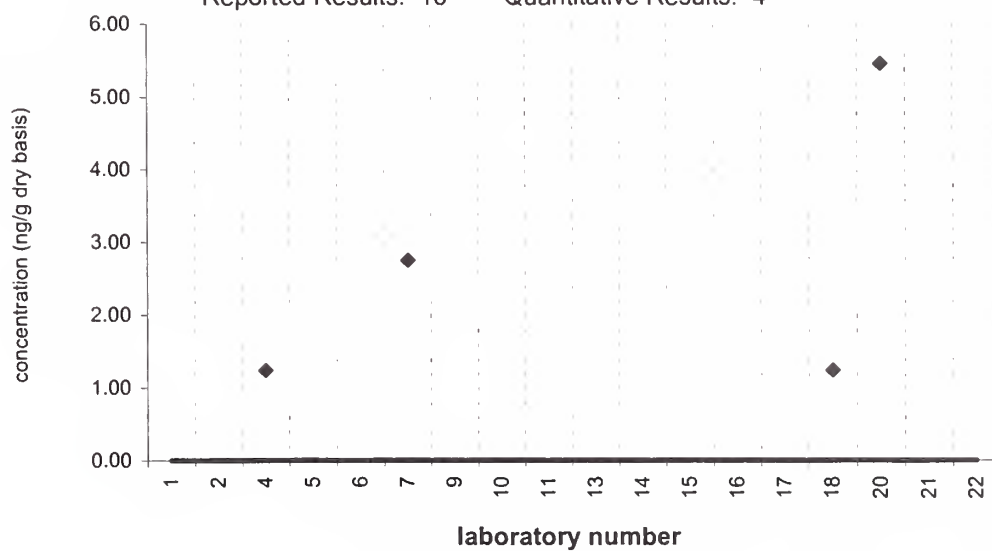
Assigned value = <5 ng/g (dry basis)
Reported Results: 18 Quantitative Results: 7



mirex

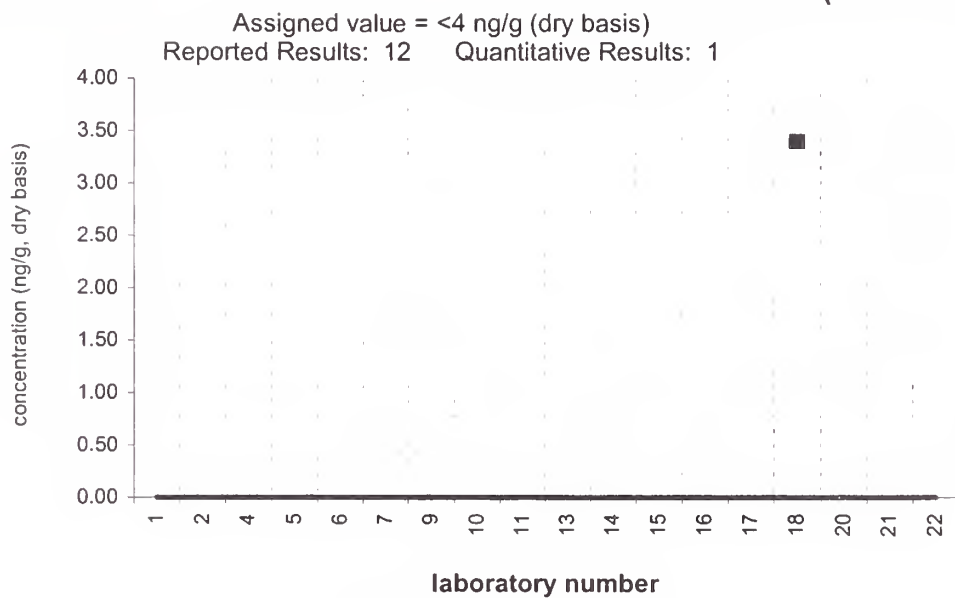
SRM 1974a

Target Value = no target ng/g (dry basis)
Reported Results: 16 Quantitative Results: 4



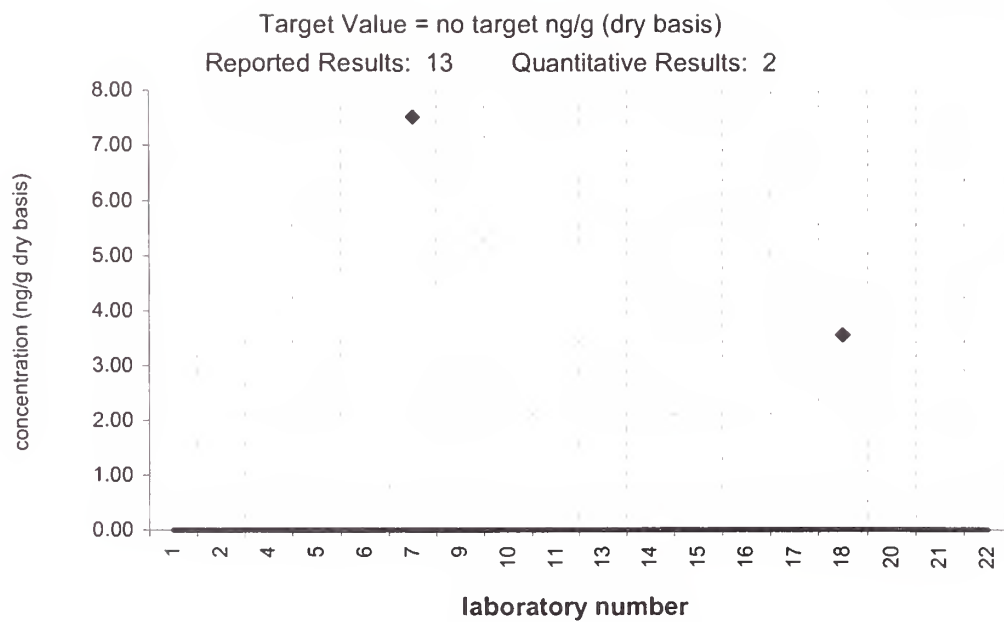
endosulfan sulfate

Tissue X (QA00TIS10)



endosulfan sulfate

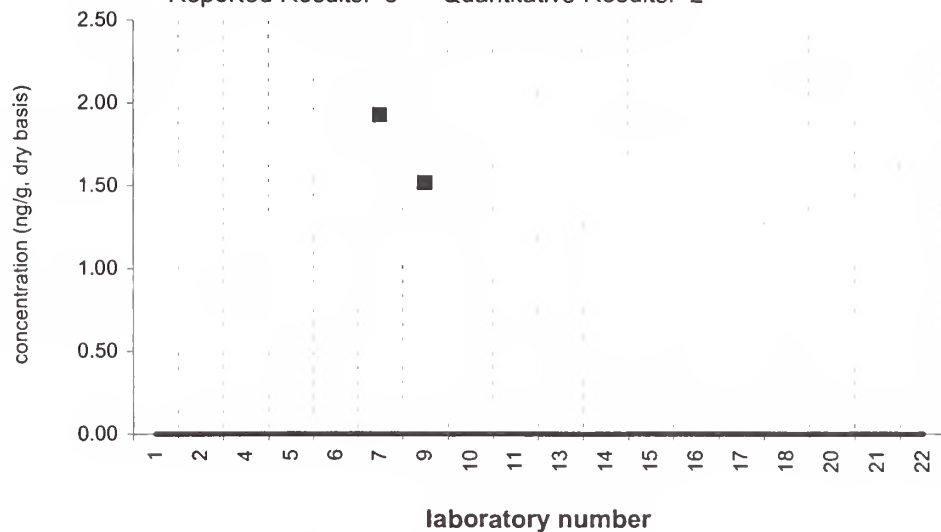
SRM 1974a



chlorpyrifos

Tissue X (QA00TIS10)

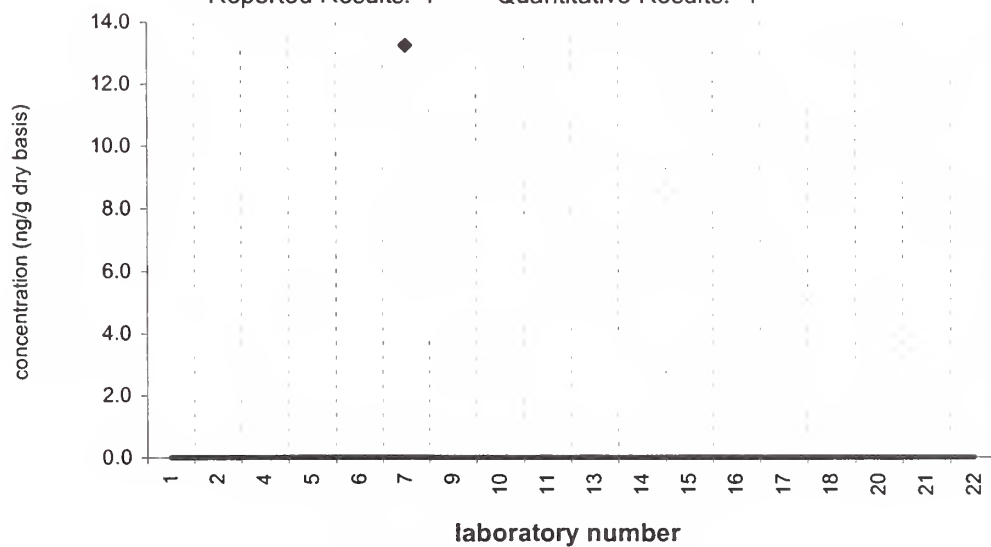
Assigned value = <2 ng/g (dry basis)
Reported Results: 8 Quantitative Results: 2



chlorpyrifos

SRM 1974a

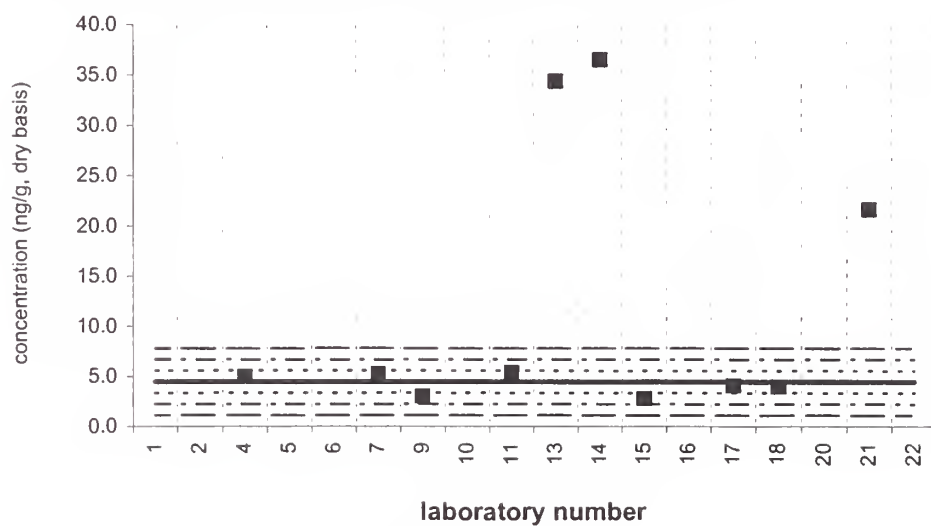
Target Value = no target ng/g (dry basis)
Reported Results: 7 Quantitative Results: 1



PCB 8**Tissue X (QA00TIS10)**

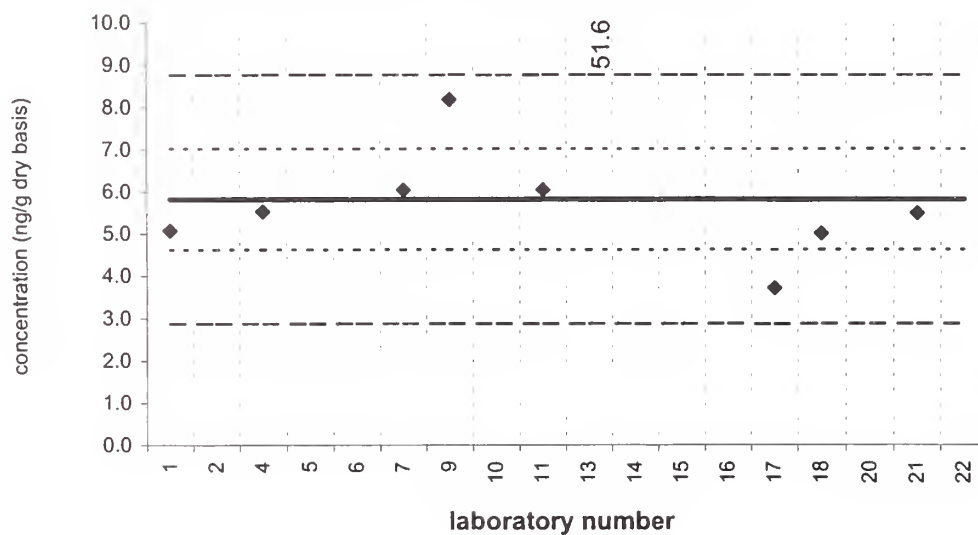
Assigned value = 4.46 ng/g $s = 0.91$ ng/g 95% CL = 0.96 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 10

**PCB 8****SRM 1974a**

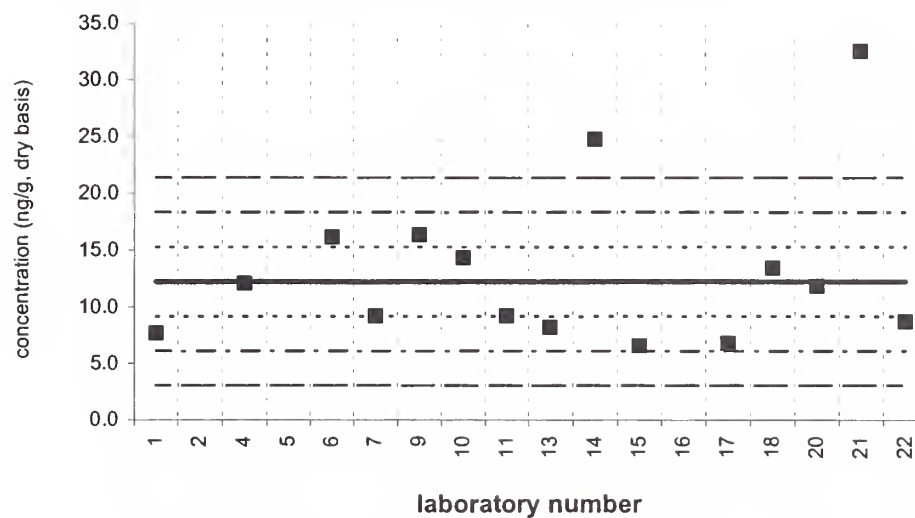
Target Value = 5.82 ± 1.20 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 9

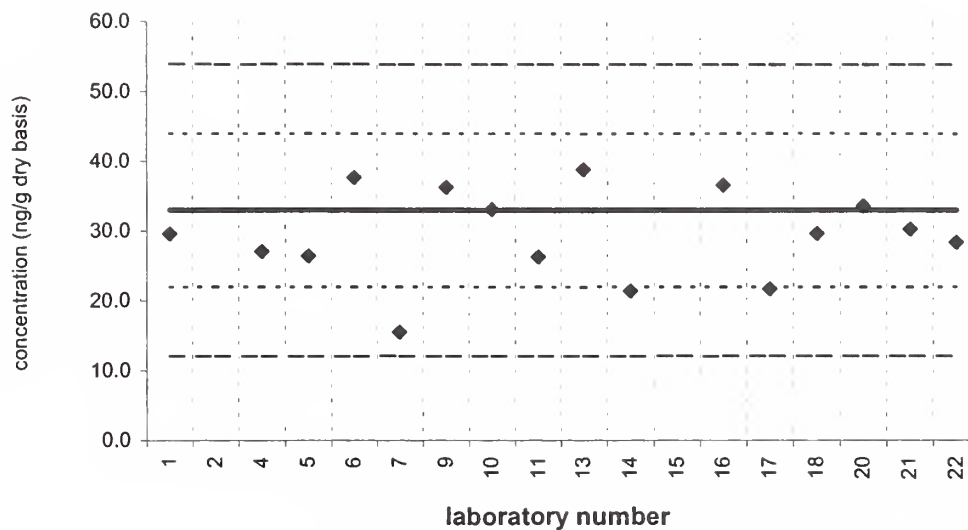


PCB 18**Tissue X (QA00TIS10)**Assigned value = 12.2 ng/g $s = 5.0$ ng/g 95% CL = 3.0 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 15

**PCB 18****SRM 1974a**Noncertified Value = 33.0 ± 11.0 ng/g (dry basis)

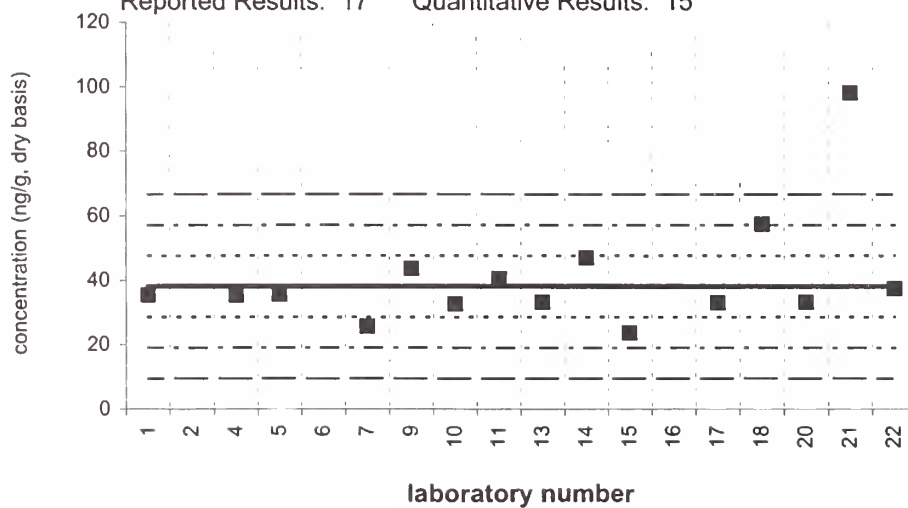
Reported Results: 16 Quantitative Results: 16



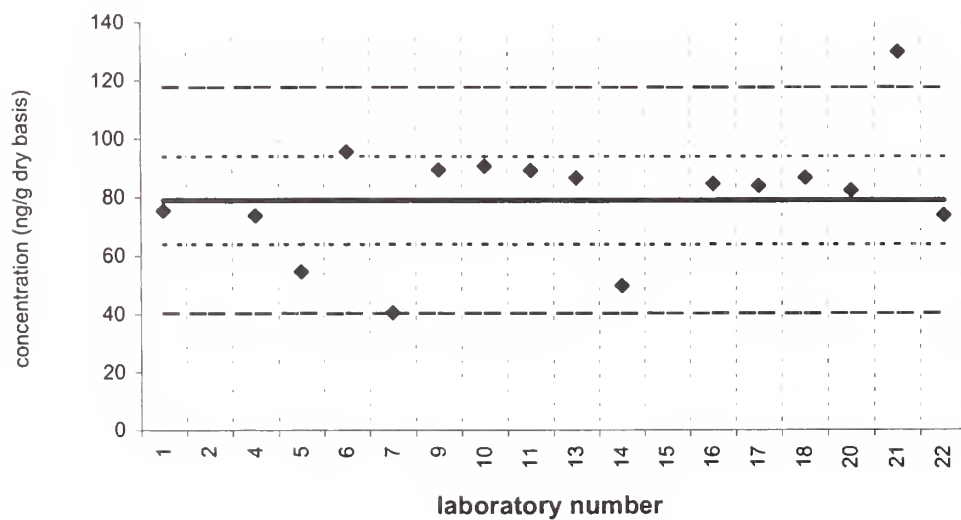
PCB 28**Tissue X (QA00TIS10)**

Assigned value = 38.1 ng/g $s = 8.2$ ng/g 95% CL = 5.2 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 15

**PCB 28****SRM 1974a**

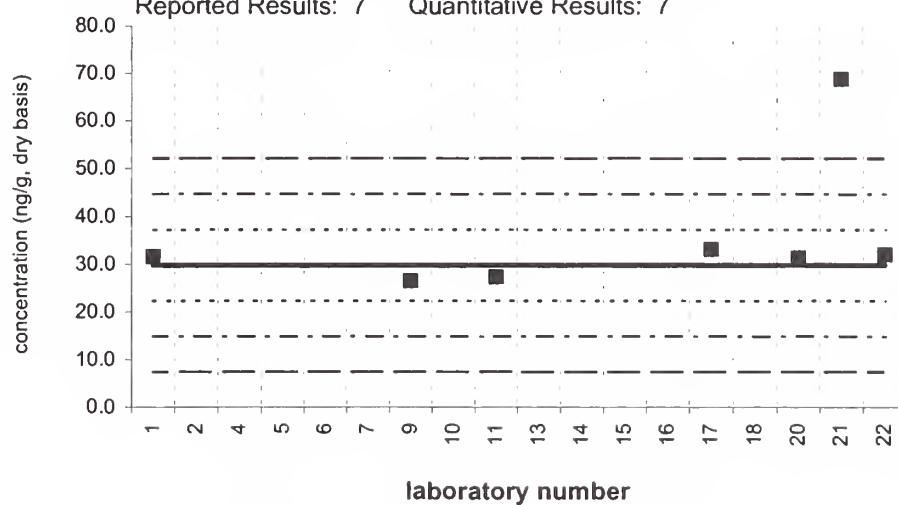
Noncertified Value = 79.0 ± 15.0 ng/g (dry basis)
Reported Results: 16 Quantitative Results: 16



PCB 31**Tissue X (QA00TIS10)**

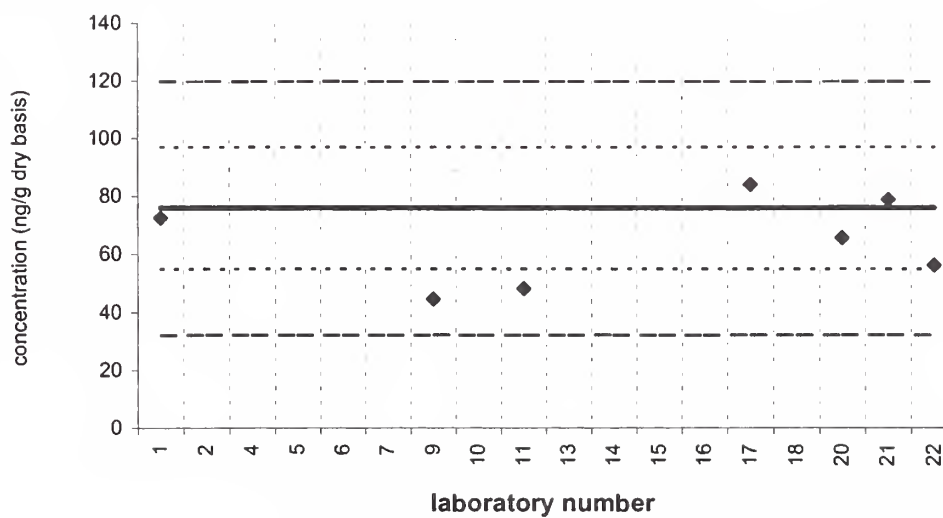
Assigned value = 29.8 ng/g $s = 2.6$ ng/g 95% CL = 3.3 ng/g (dry basis)

Reported Results: 7 Quantitative Results: 7

**PCB 31****SRM 1974a**

Noncertified Value = 76.0 ± 21.0 ng/g (dry basis)

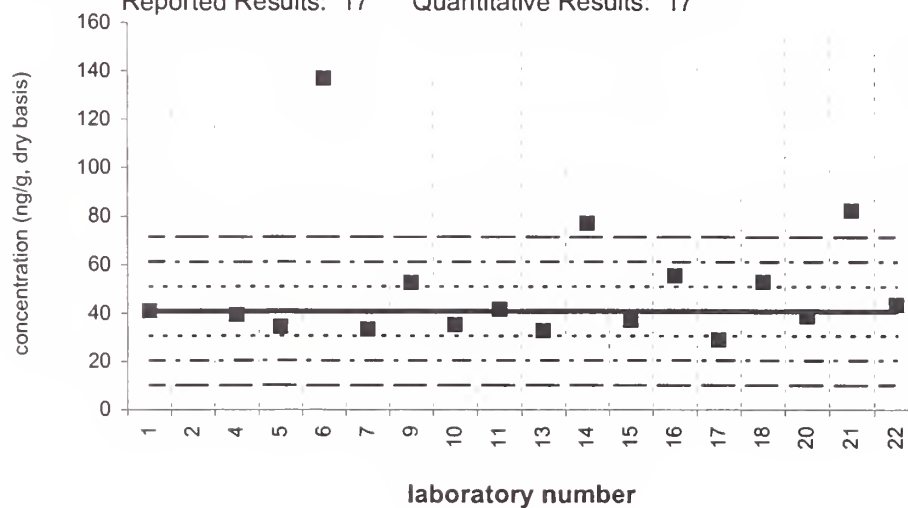
Reported Results: 7 Quantitative Results: 7



PCB 44**Tissue X (QA00TIS10)**

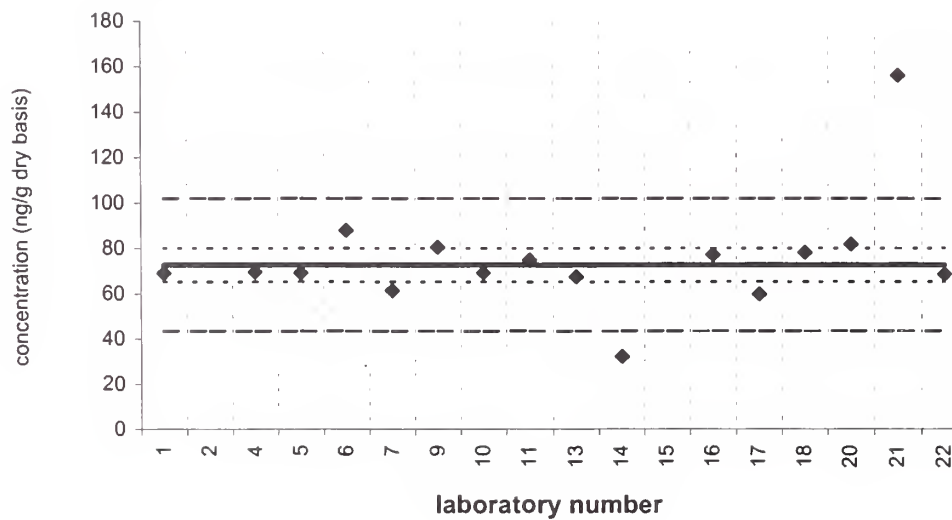
Assigned value = 40.9 ng/g $s = 8.4$ ng/g 95% CL = 5.1 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

**PCB 44****SRM 1974a**

Certified Value = 72.7 ± 7.4 ng/g (dry basis)

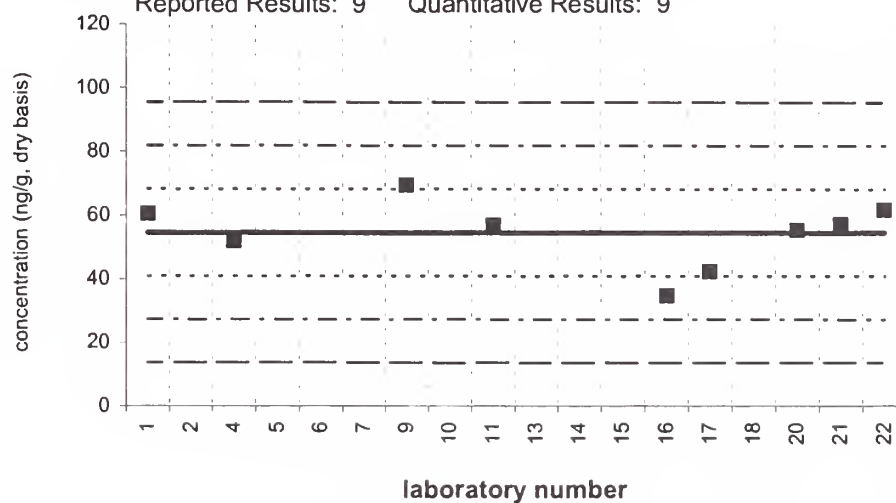
Reported Results: 16 Quantitative Results: 16



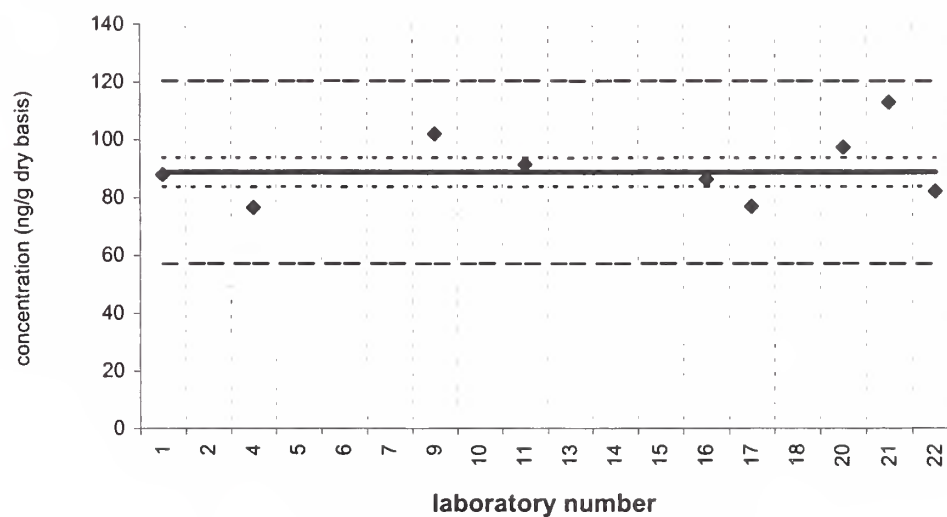
PCB 49**Tissue X (QA00TIS10)**

Assigned value = 54.5 ng/g $s = 10.4$ ng/g 95% CL = 8.0 ng/g (dry basis)

Reported Results: 9 Quantitative Results: 9

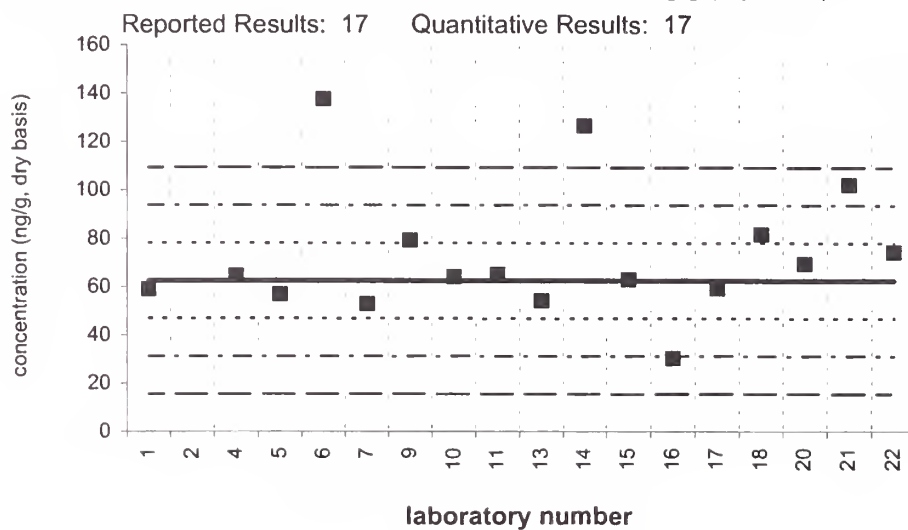
**PCB 49****SRM 1974a**

Certified Value = 88.8 ± 5.0 ng/g (dry basis)
Reported Results: 9 Quantitative Results: 9



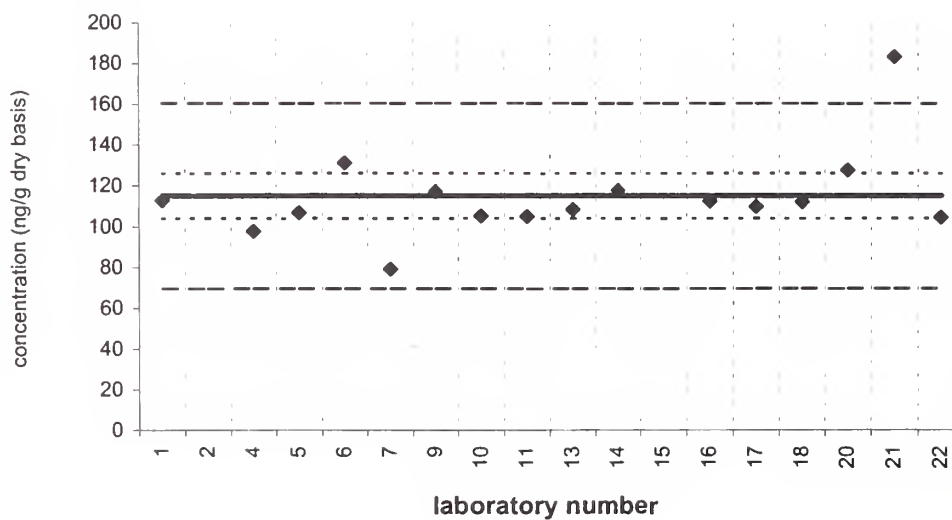
PCB 52**Tissue X (QA00TIS10)**

Assigned value = 62.6 ng/g $s = 13.3$ ng/g 95% CL = 8.0 ng/g (dry basis)

**PCB 52****SRM 1974a**

Certified Value = 115 ± 11 ng/g (dry basis)

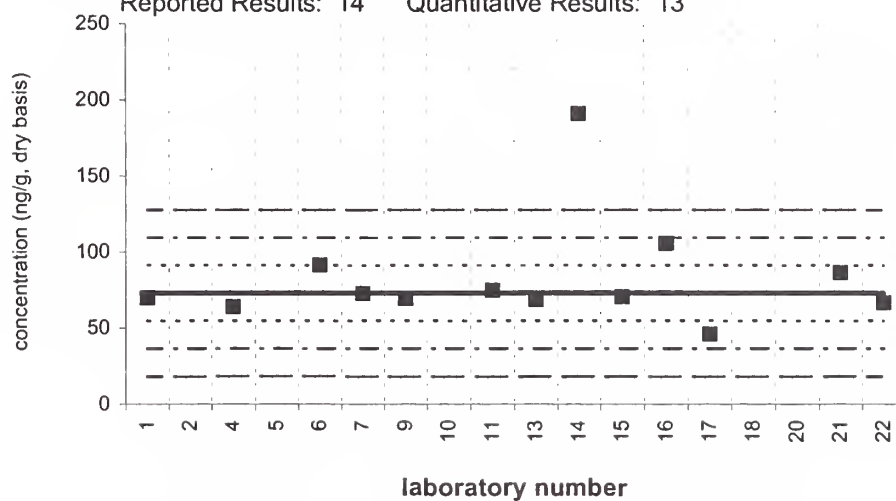
Reported Results: 16 Quantitative Results: 16



PCB 66**Tissue X (QA00TIS10)**

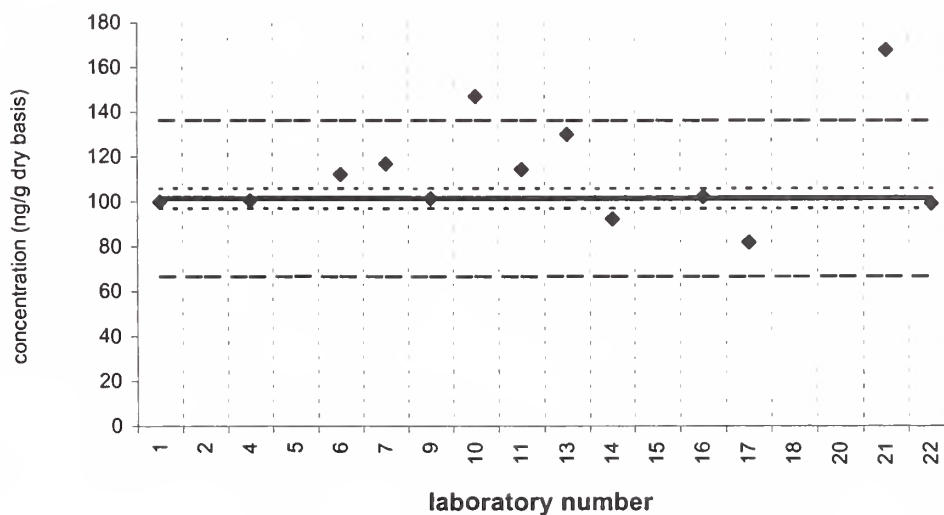
Assigned value = 72.9 ng/g $s = 16.0$ ng/g 95% CL = 11.4 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 13

**PCB 66****SRM 1974a**

Certified Value = 101 ± 4 ng/g (dry basis)

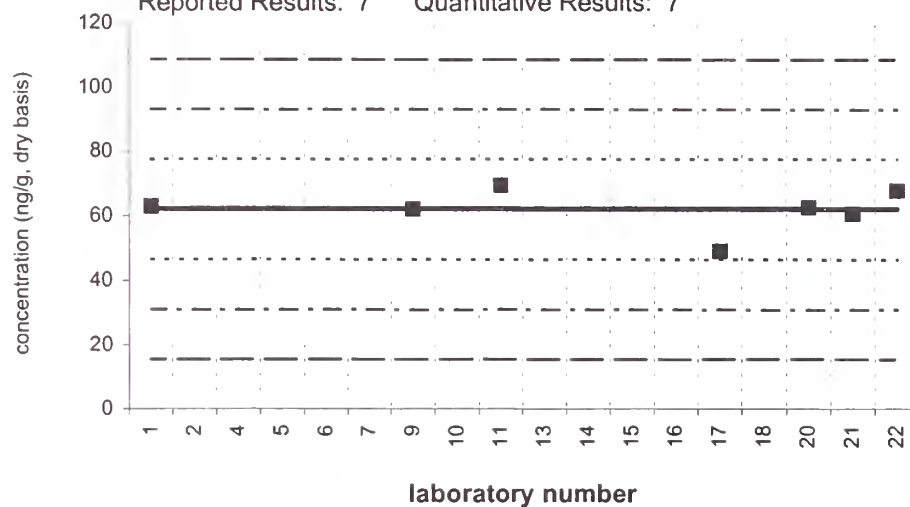
Reported Results: 13 Quantitative Results: 13



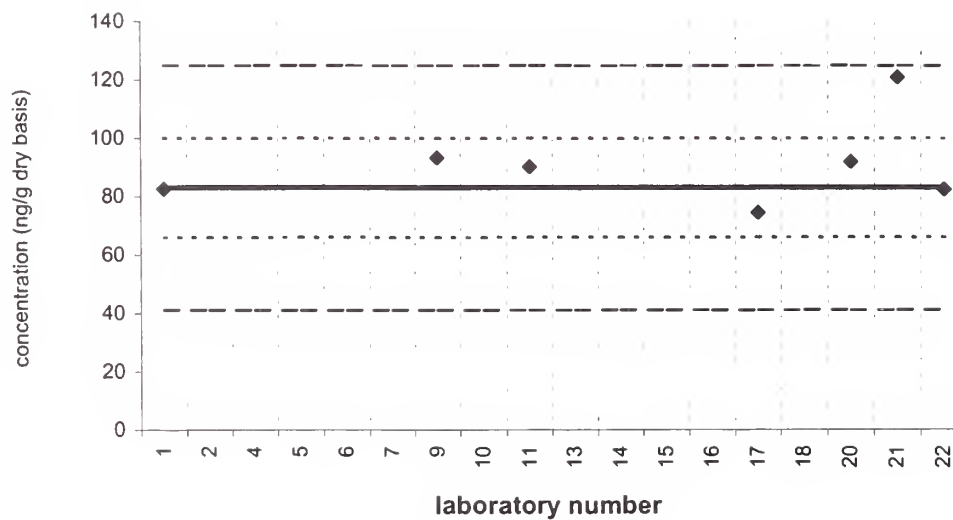
PCB 95**Tissue X (QA00TIS10)**

Assigned value = 62.1 ng/g $s = 6.5$ ng/g 95% CL = 6.0 ng/g (dry basis)

Reported Results: 7 Quantitative Results: 7

**PCB 95****SRM 1974a**

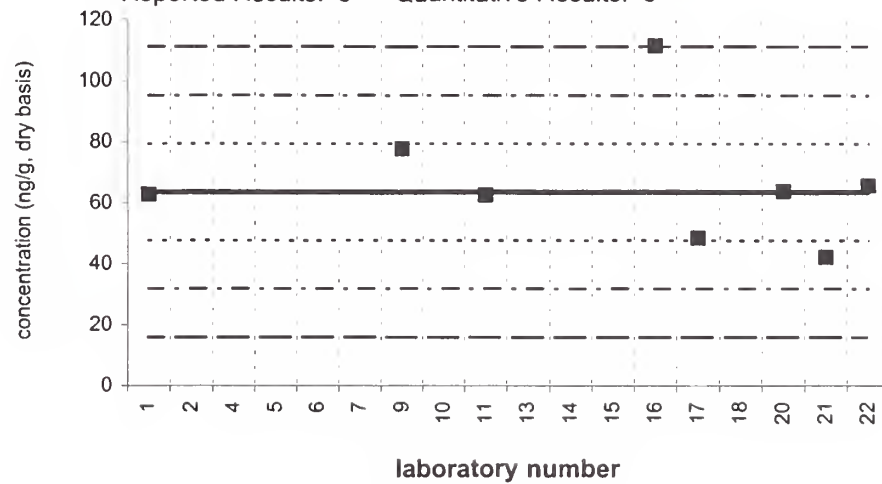
Certified Value = 83.0 ± 17.0 ng/g (dry basis)
Reported Results: 7 Quantitative Results: 7



PCB 99**Tissue X (QA00TIS10)**

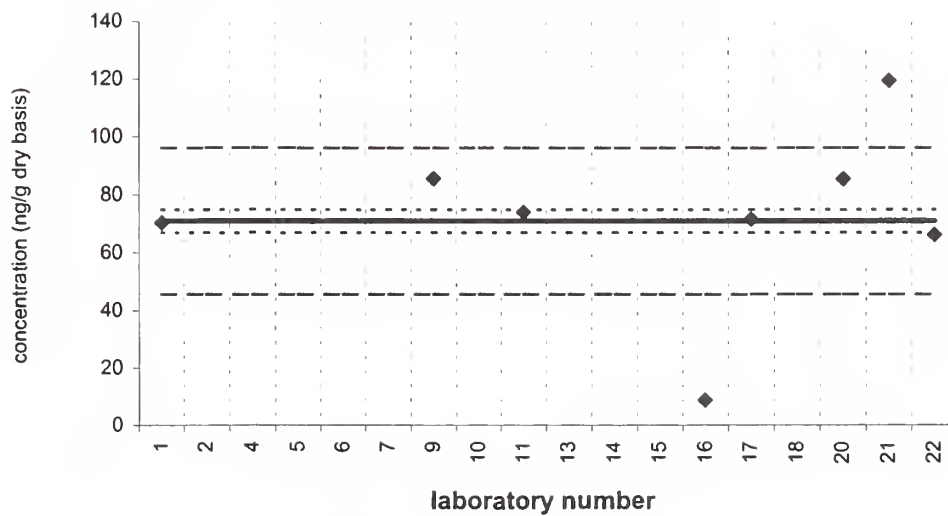
Assigned value = 63.5 ng/g $s = 9.3$ ng/g 95% CL = 9.8 ng/g (dry basis)

Reported Results: 8 Quantitative Results: 8

**PCB 99****SRM 1974a**

Certified Value = 70.9 ± 4.0 ng/g (dry basis)

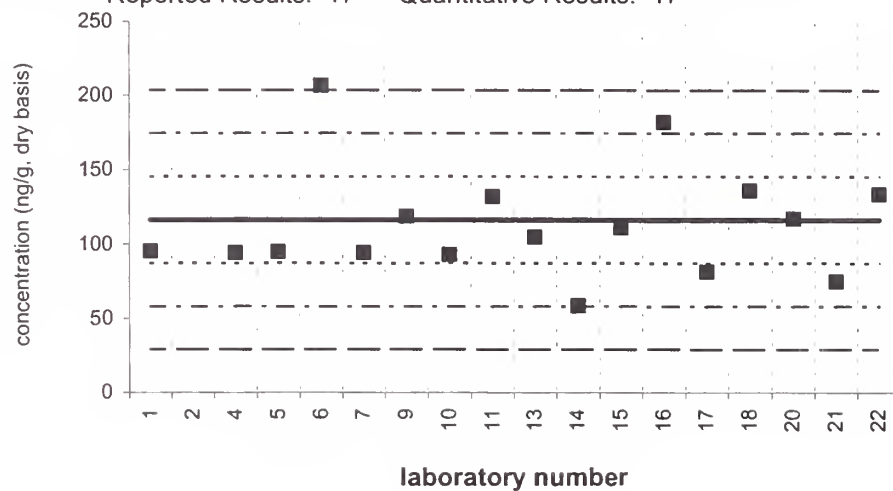
Reported Results: 8 Quantitative Results: 8



PCB 101**Tissue X (QA00TIS10)**

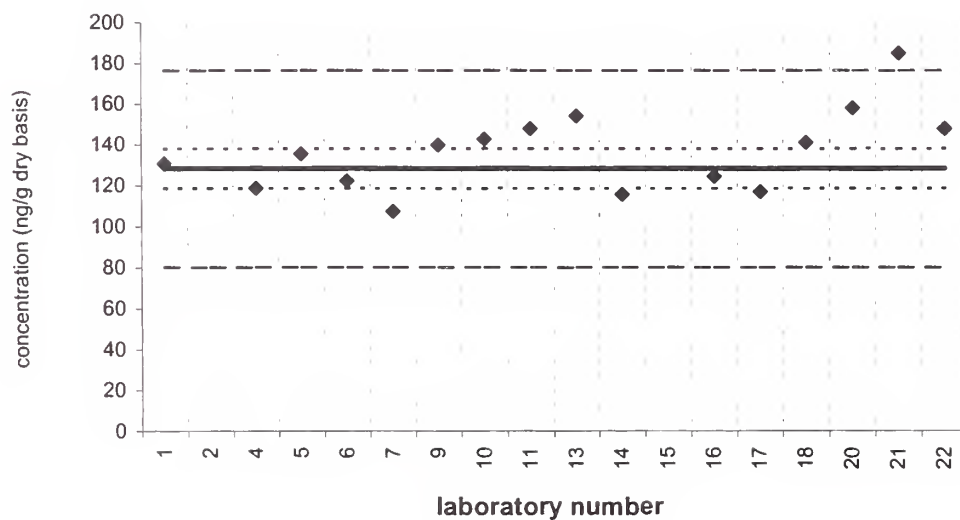
Assigned value = 116 ng/g $s = 38$ ng/g 95% CL = 21 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

**PCB 101****SRM 1974a**

Certified Value = 128 ± 10 ng/g (dry basis)

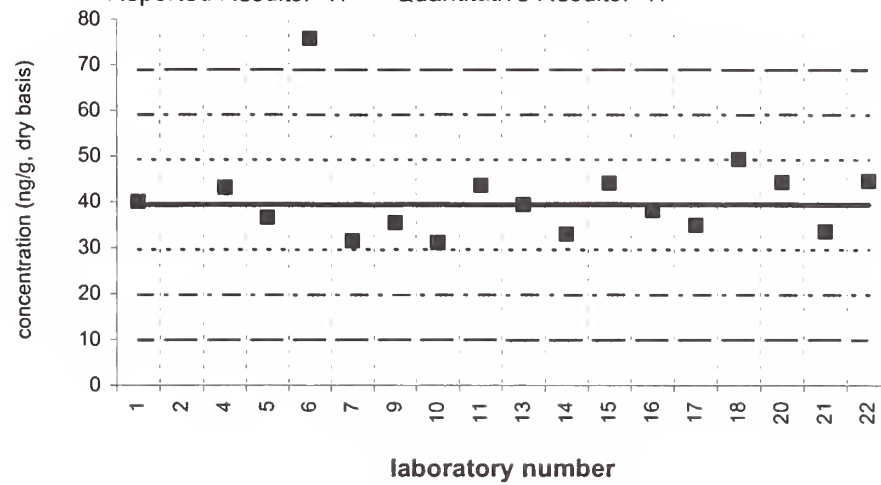
Reported Results: 16 Quantitative Results: 16



PCB 105**Tissue X (QA00TIS10)**

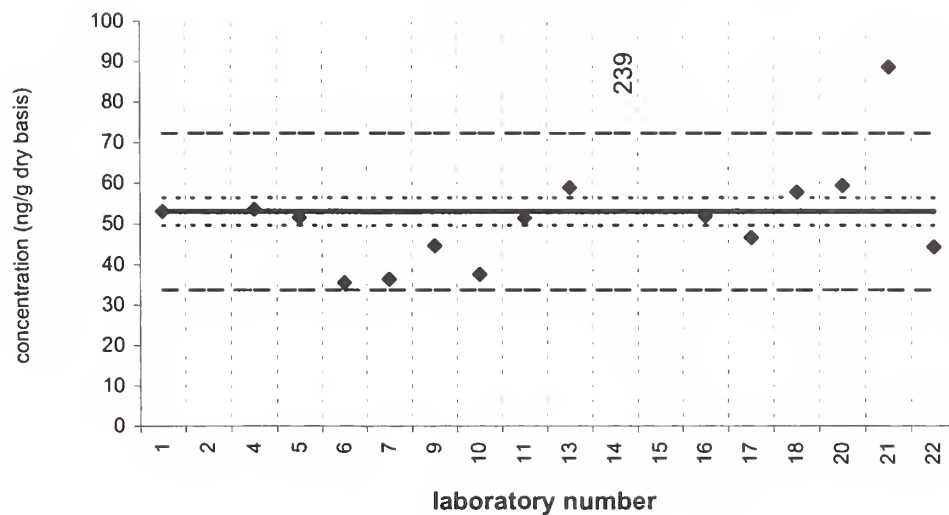
Assigned value = 39.4 ng/g $s = 5.5$ ng/g 95% CL = 3.3 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

**PCB 105****SRM 1974a**

Certified Value = 53.0 \pm 3.4 ng/g (dry basis)

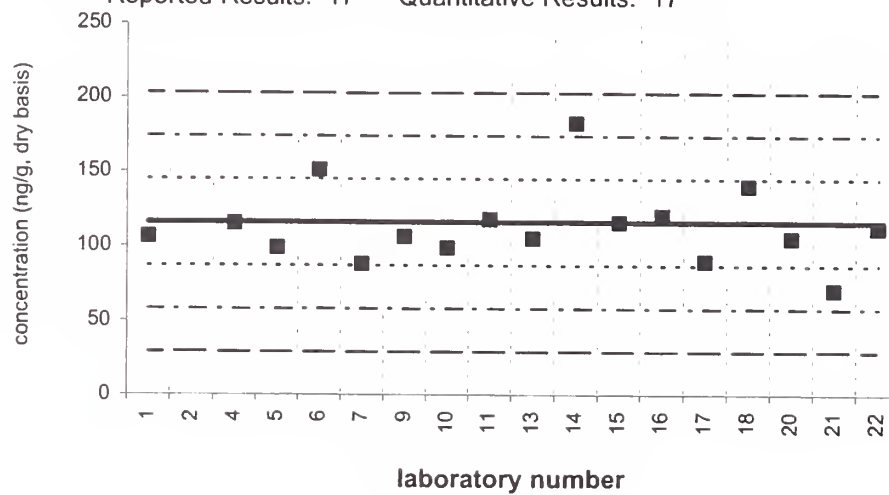
Reported Results: 16 Quantitative Results: 16



PCB 118**Tissue X (QA00TIS10)**

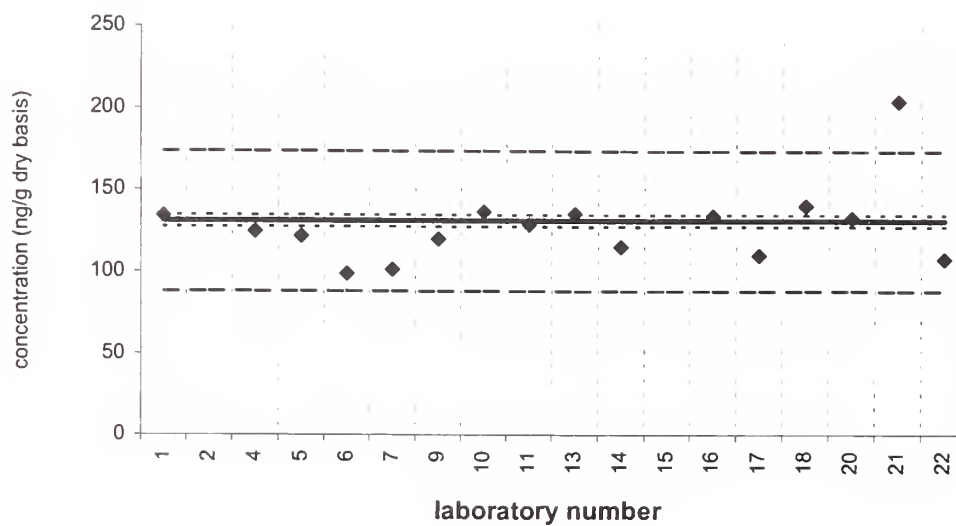
Assigned value = 116 ng/g $s = 25$ ng/g 95% CL = 14 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

**PCB 118****SRM 1974a**

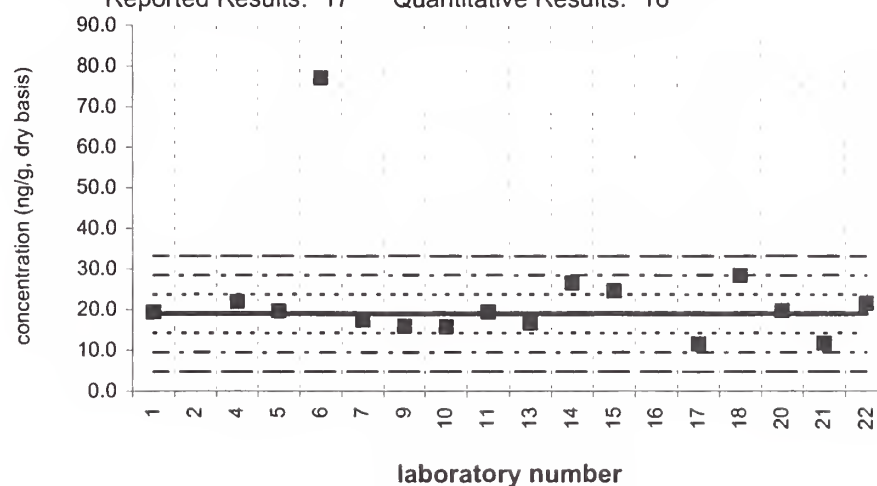
Certified Value = 131 ± 4 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

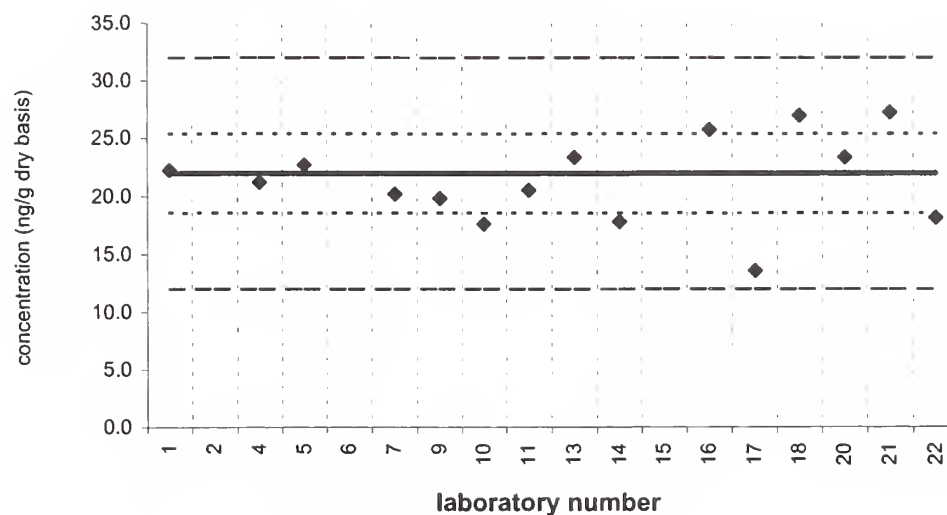


PCB 128**Tissue X (QA00TIS10)**Assigned value = 19.0 ng/g $s = 4.8$ ng/g 95% CL = 2.8 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 16

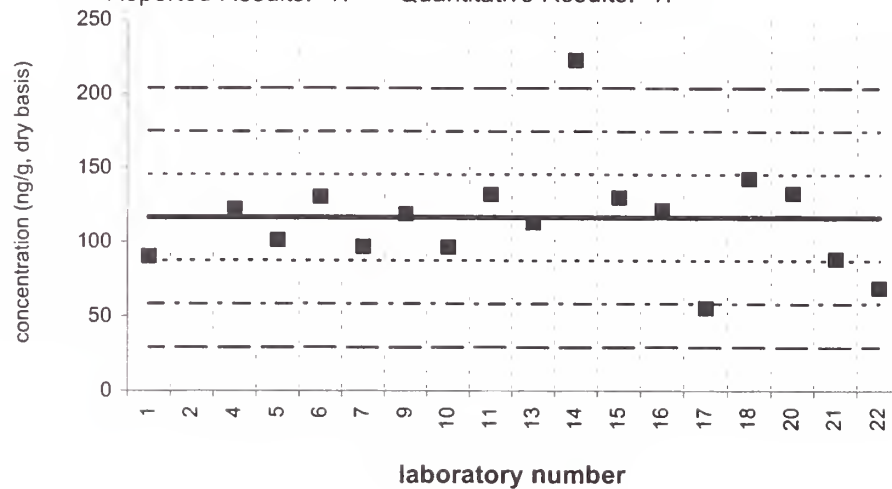
**PCB 128****SRM 1974a**Certified Value = 22.0 ± 3.4 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 15

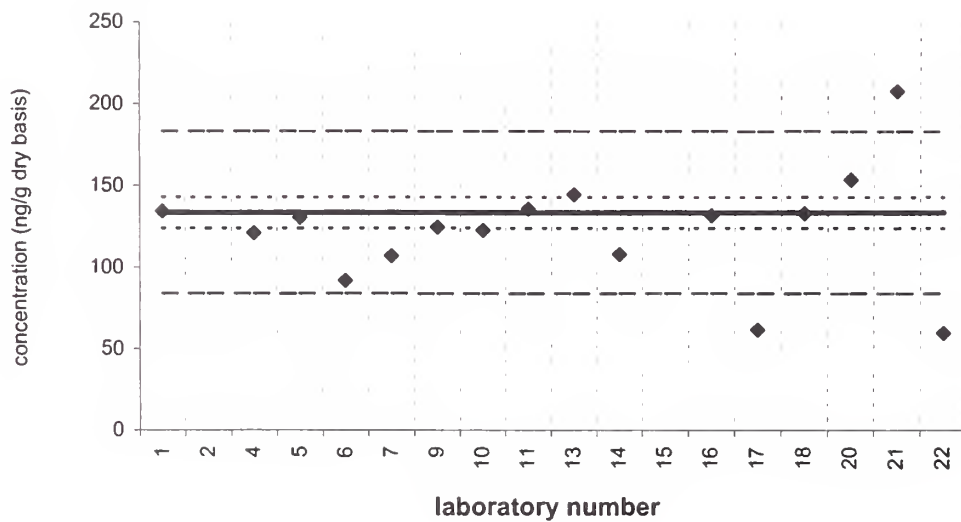


PCB 138**Tissue X (QA00TIS10)**Assigned value = 117 ng/g $s = 17$ ng/g 95% CL = 11 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

**PCB 138****SRM 1974a**Certified Value = 134 ± 10 ng/g (dry basis)

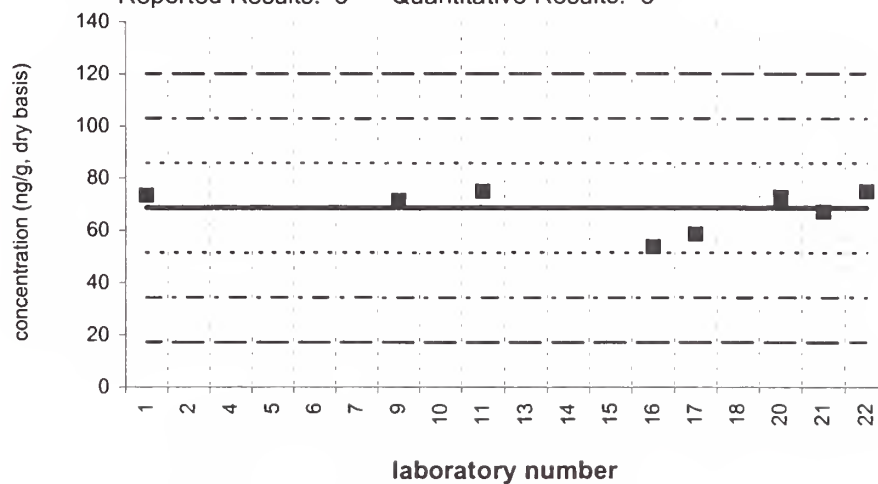
Reported Results: 16 Quantitative Results: 16



PCB 149**Tissue X (QA00TIS10)**

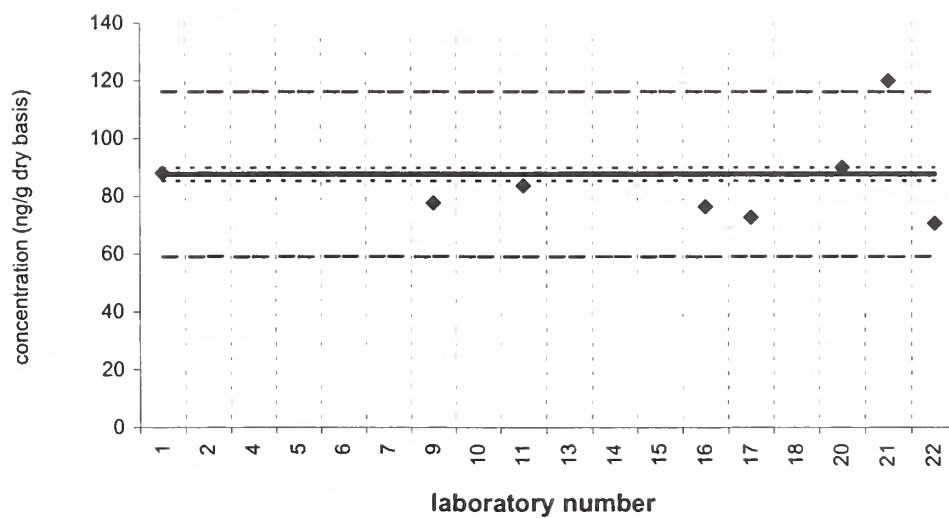
Assigned value = 68.6 ng/g $s = 8.6$ ng/g 95% CL = 8.0 ng/g (dry basis)

Reported Results: 8 Quantitative Results: 8

**PCB 149****SRM 1974a**

Certified Value = 87.6 ± 2.3 ng/g (dry basis)

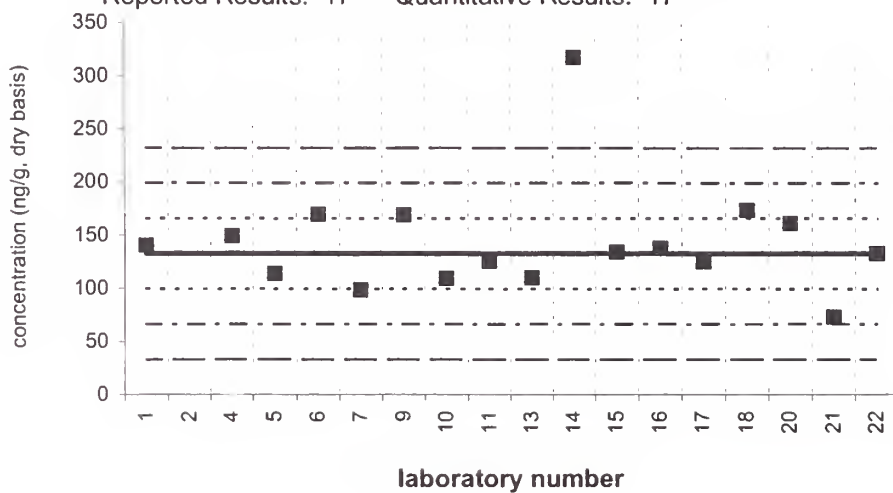
Reported Results: 8 Quantitative Results: 8



PCB 153**Tissue X (QA00TIS10)**

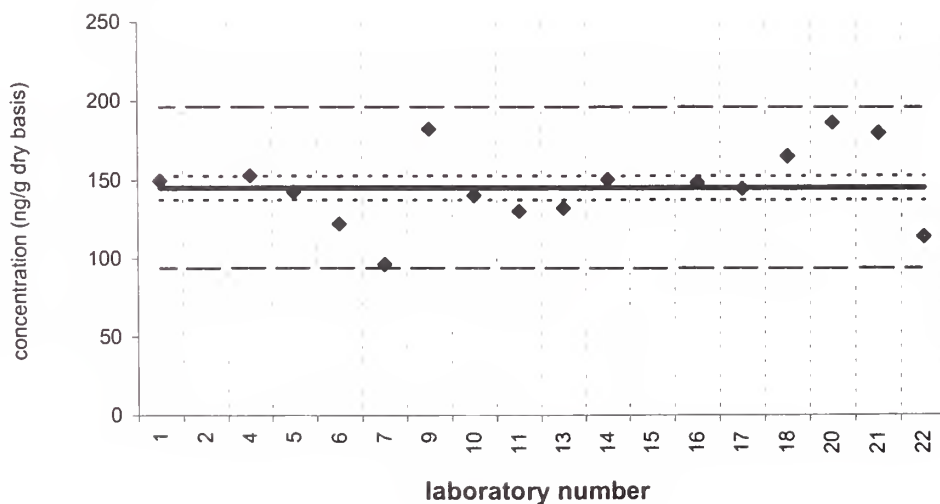
Assigned value = 133 ng/g $s = 29$ ng/g 95% CL = 16 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

**PCB 153****SRM 1974a**

Certified Value = 145 ± 8 ng/g (dry basis)

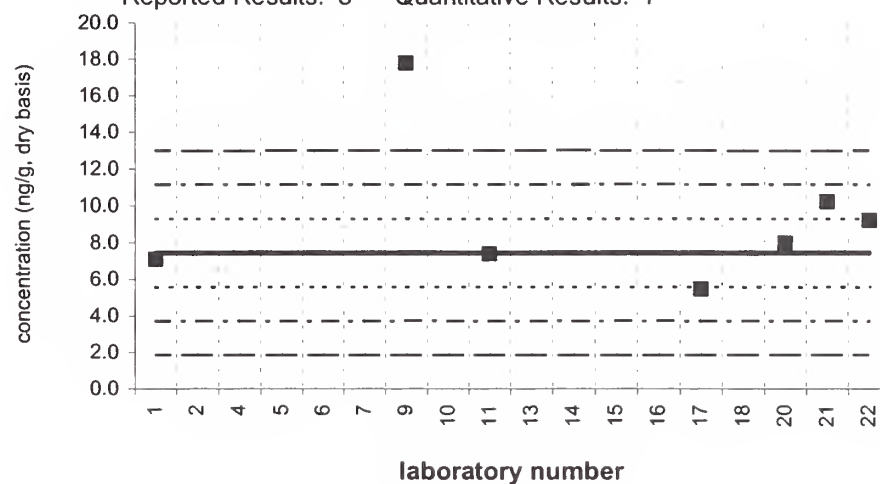
Reported Results: 16 Quantitative Results: 16



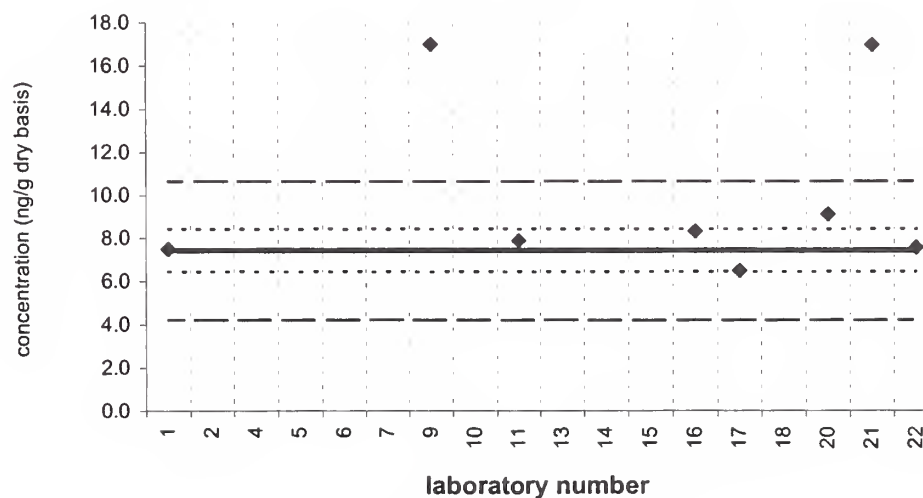
PCB 156**Tissue X (QA00TIS10)**

Assigned value = 7.43 ng/g $s = 1.37$ ng/g 95% CL = 1.71 ng/g (dry basis)

Reported Results: 8 Quantitative Results: 7

**PCB 156****SRM 1974a**

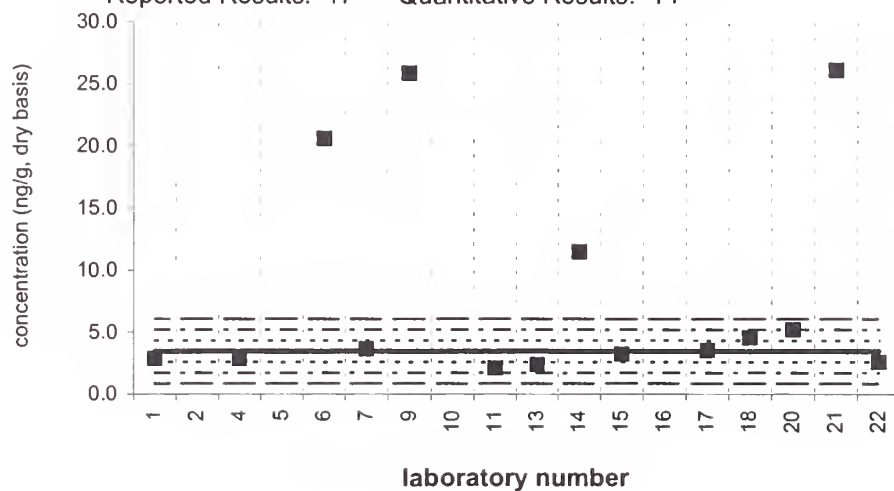
Certified Value = 7.43 \pm 0.99 ng/g (dry basis)
Reported Results: 8 Quantitative Results: 8



PCB 170**Tissue X (QA00TIS10)**

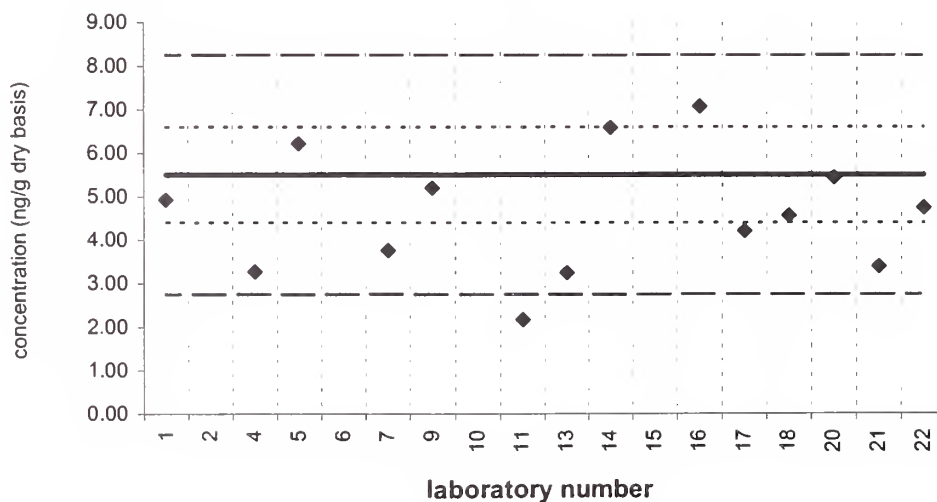
Assigned value = 3.48 ng/g $s = 0.99$ ng/g 95% CL = 0.83 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 14

**PCB 170****SRM 1974a**

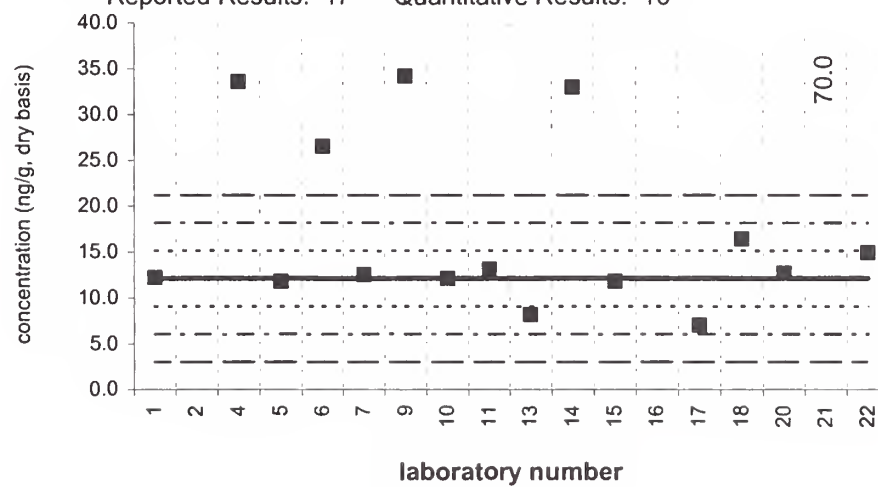
Certified Value = 5.50 ± 1.10 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 14

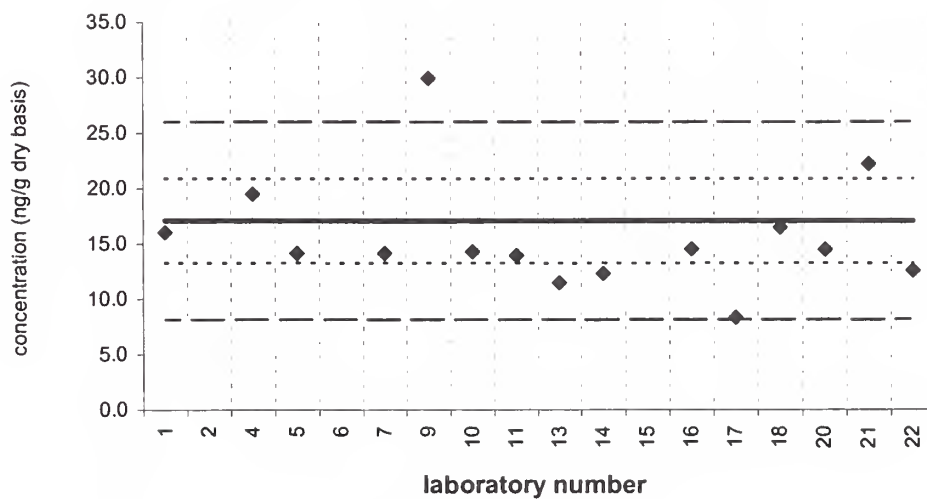


PCB 180**Tissue X (QA00TIS10)**Assigned value = 12.1 ng/g $s = 2.8$ ng/g 95% CL = 2.0 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 16

**PCB 180****SRM 1974a**Certified Value = 17.1 ± 3.8 ng/g (dry basis)

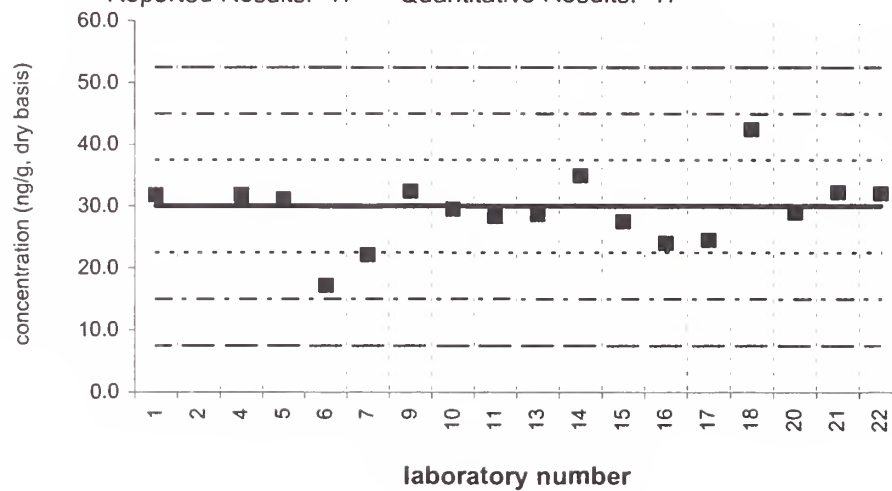
Reported Results: 16 Quantitative Results: 15



PCB 187**Tissue X (QA00TIS10)**

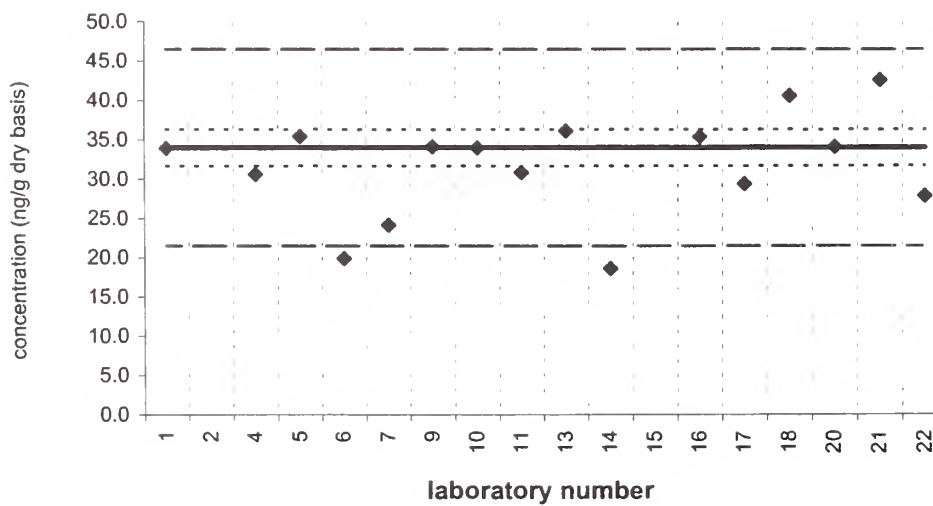
Assigned value = 30.0 ng/g $s = 4.9$ ng/g 95% CL = 2.8 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

**PCB 187****SRM 1974a**

Certified Value = 34.0 ± 2.3 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

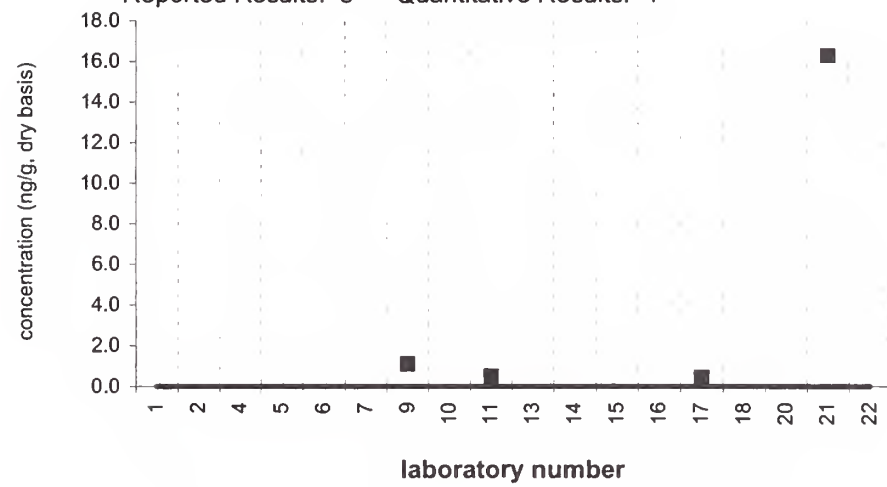


PCB 194

Tissue X (QA00TIS10)

Assigned value = <4 ng/g (dry basis)

Reported Results: 8 Quantitative Results: 4

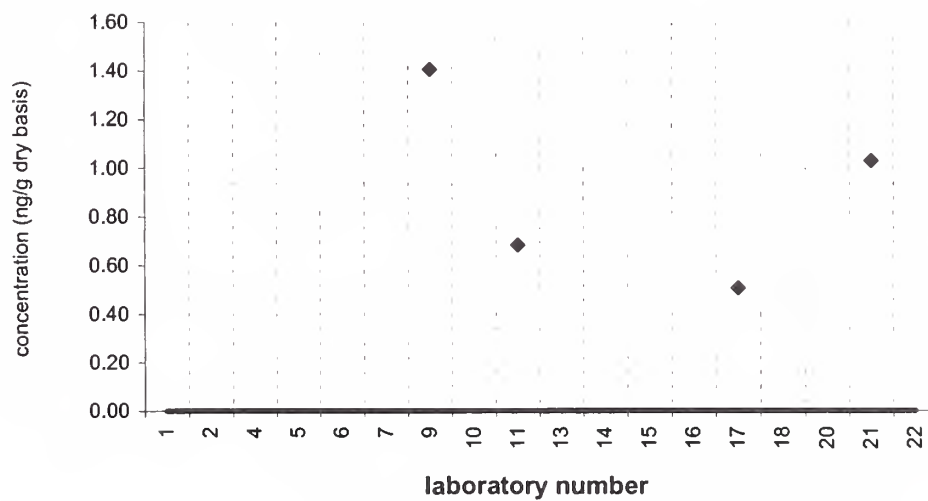


PCB 194

SRM 1974a

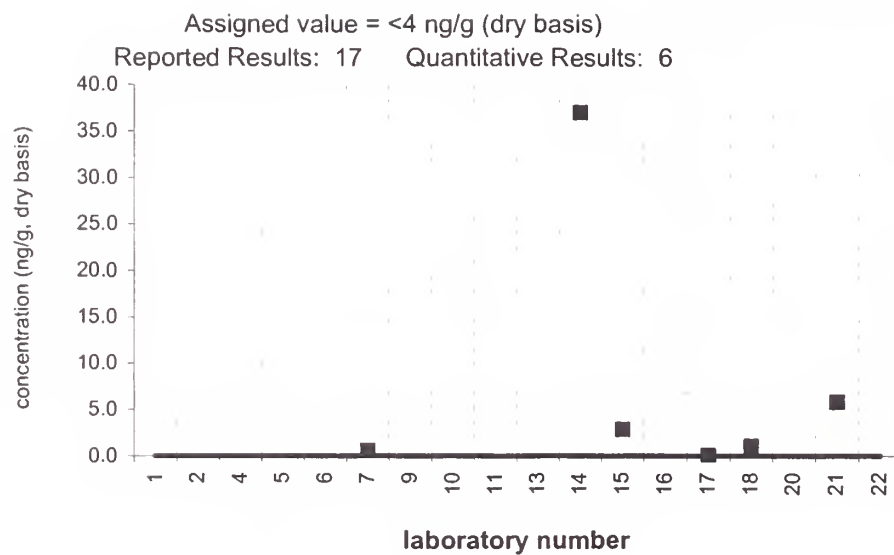
Target Value = no target ng/g (dry basis)

Reported Results: 7 Quantitative Results: 4



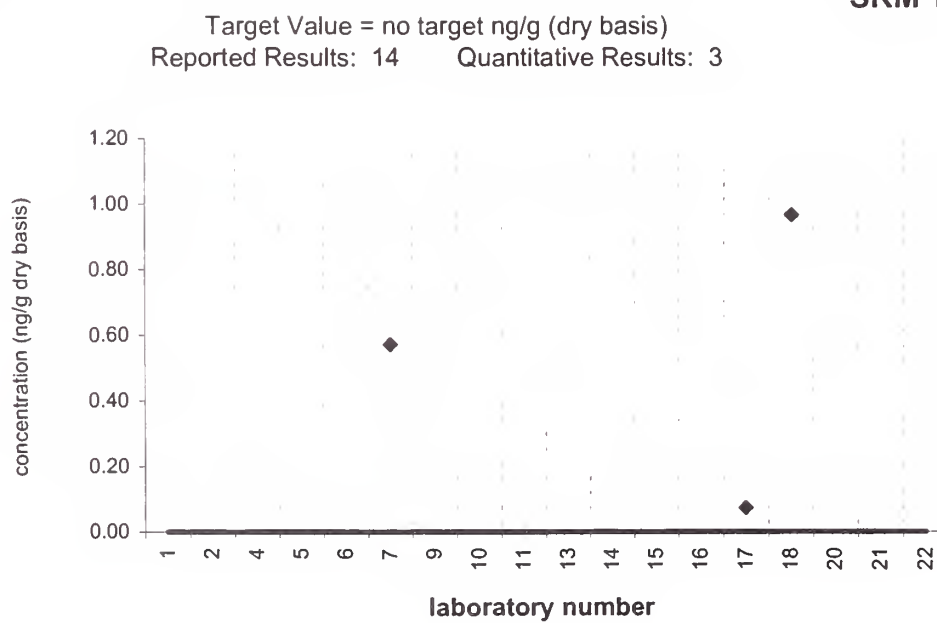
PCB 195

Tissue X (QA00TIS10)



PCB 195

SRM 1974a

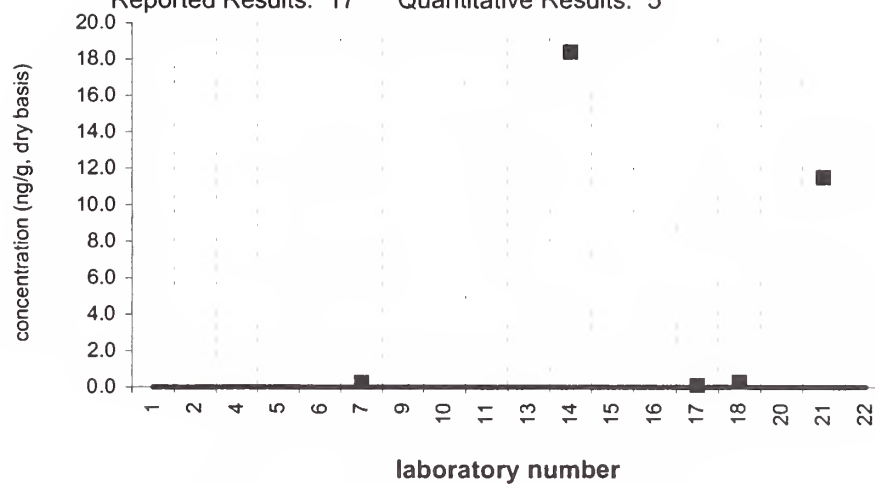


PCB 206

Tissue X (QA00TIS10)

Assigned value = <2 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 5

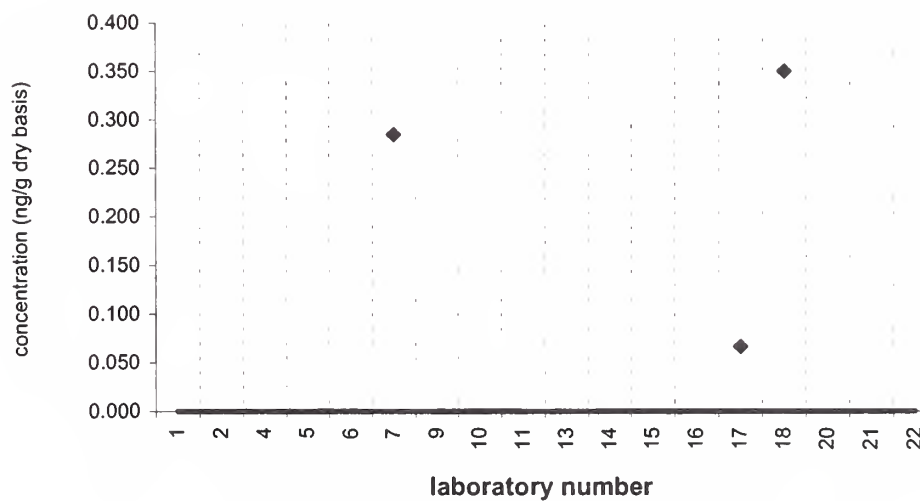


PCB 206

SRM 1974a

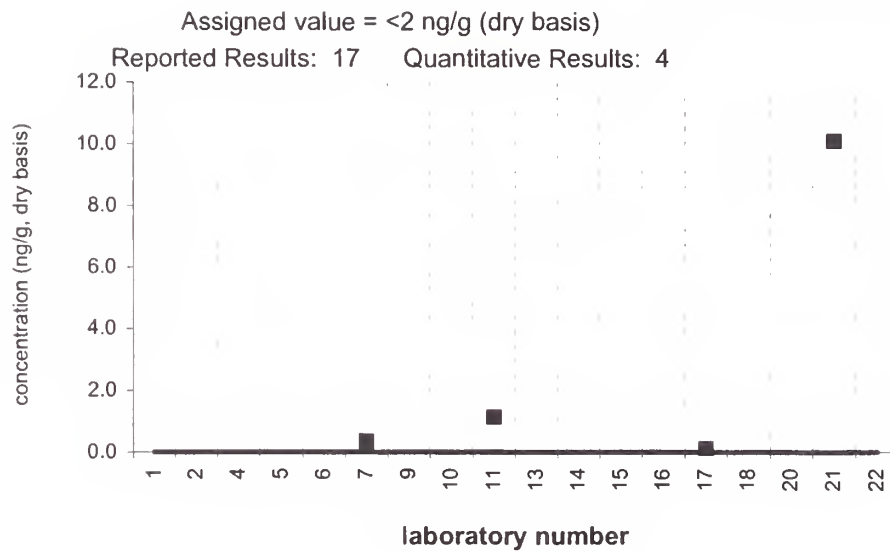
Target Value = no target ng/g (dry basis)

Reported Results: 14 Quantitative Results: 3



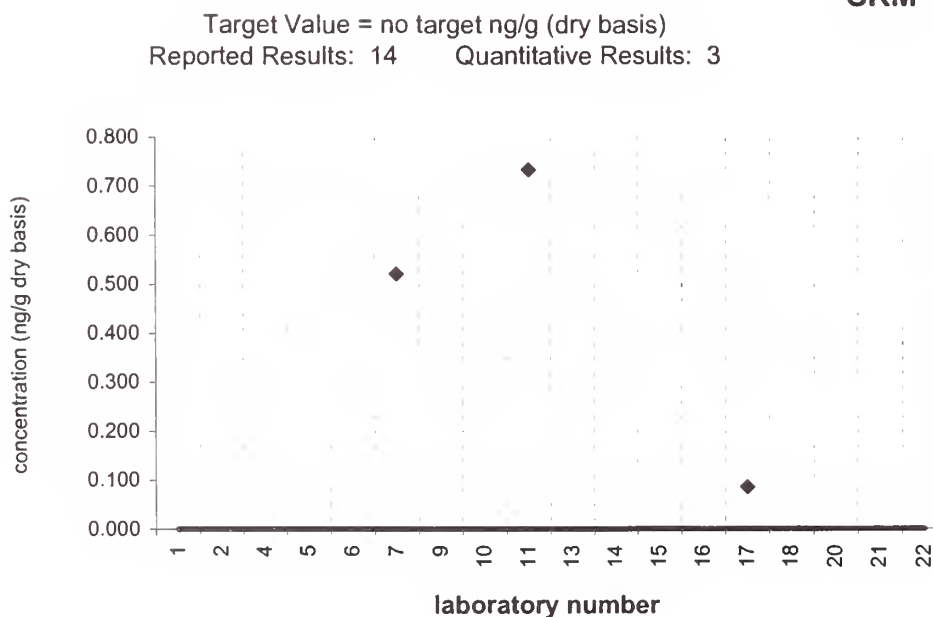
PCB 209

Tissue X (QA00TIS10)



PCB 209

SRM 1974a



Appendix J: Charts of Sediment X and SRM 1944 Results by Analyte

See Tables 5, 6, and 7 and Appendix D for results reported as *<number*, DL, etc.
Charts for analytes with few reported numerical results are not included in this appendix.

For Sediment X plots:

Solid line: exercise assigned value

Dotted line: $z = \pm 1$, i. e., 25% from assigned value

Dotted/dashed line: $z = \pm 2$, i. e., 50% from assigned value

Dashed line: $z = \pm 3$, i. e., 75% from assigned value

For SRM 1944 plots:

Solid line: material certified concentration, certificate reference concentration or target value
(see caption of each plot)

Dotted line: 95% confidence limits

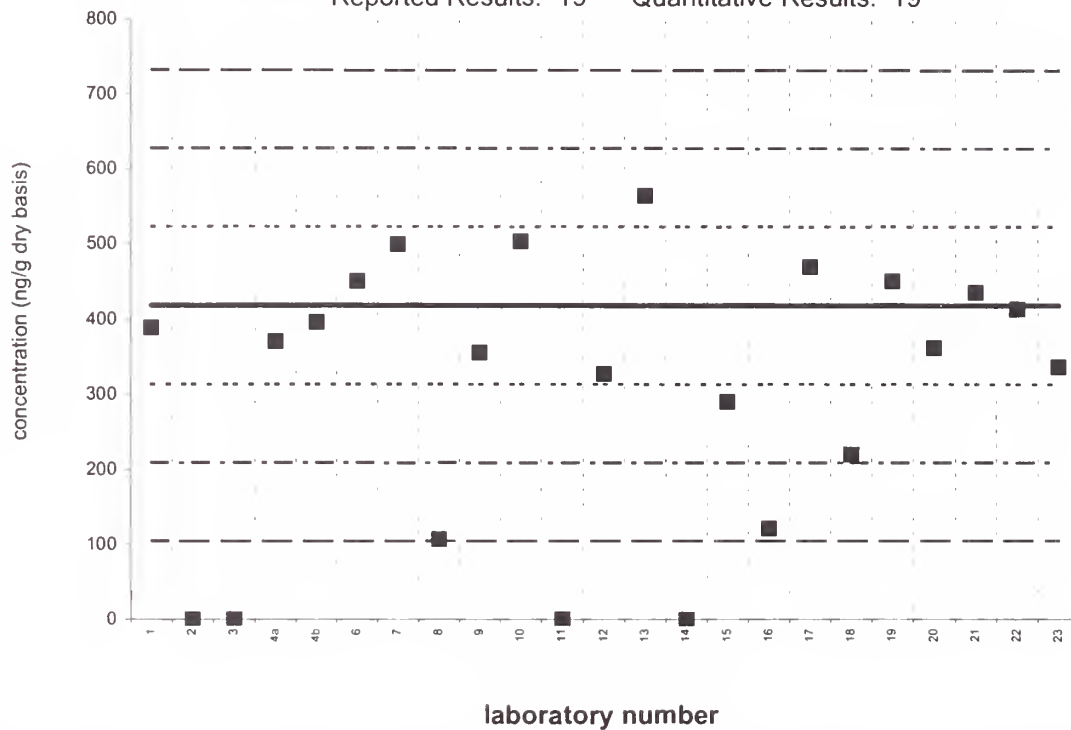
Dashed line: 30% from 95% confidence limits

naphthalene

SedimentX (QA00SED10)

Assigned value = 418 ng/g s = 75 ng/g 95% CL = 43 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 19

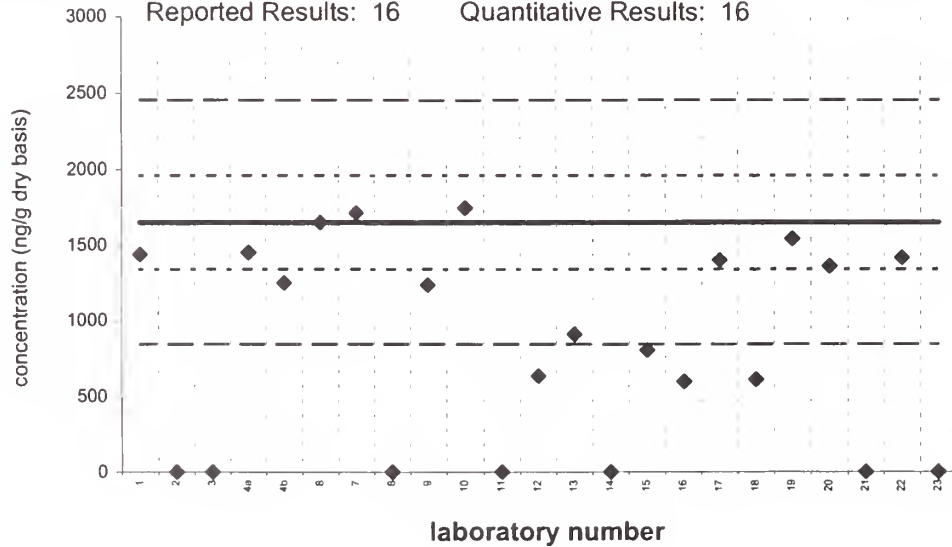


naphthalene

SRM 1944

Certified Value = 1650 ± 310 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

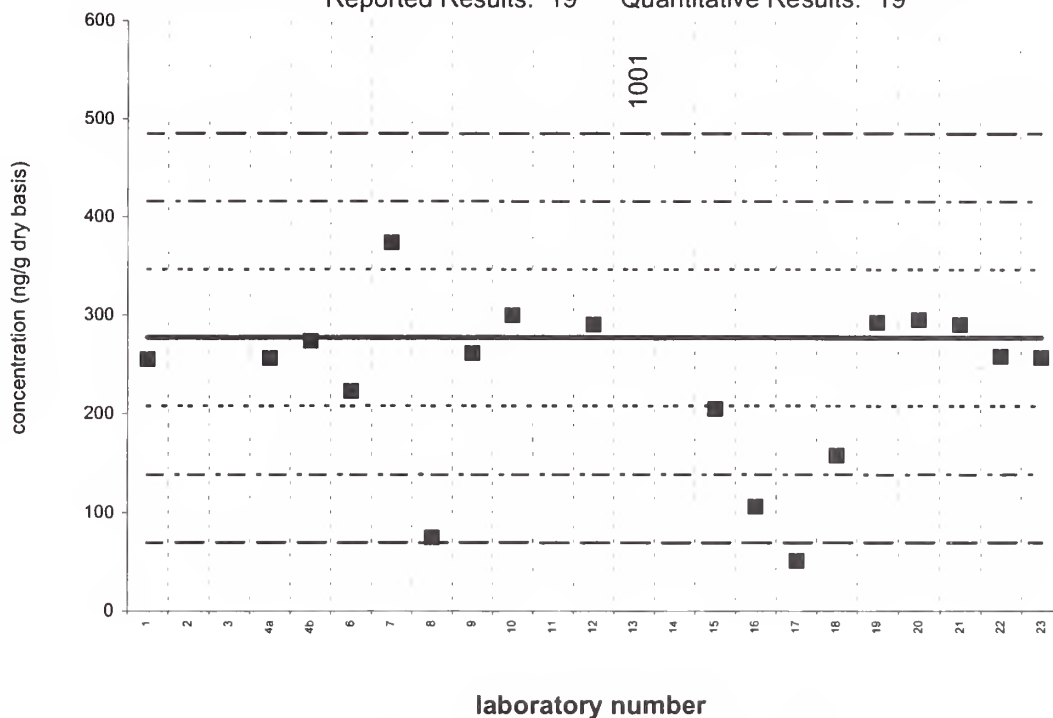


2-methylnaphthalene

SedimentX (QA00SED10)

Assigned value = 277 ng/g $s = 39$ ng/g 95% CL = 26 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 19

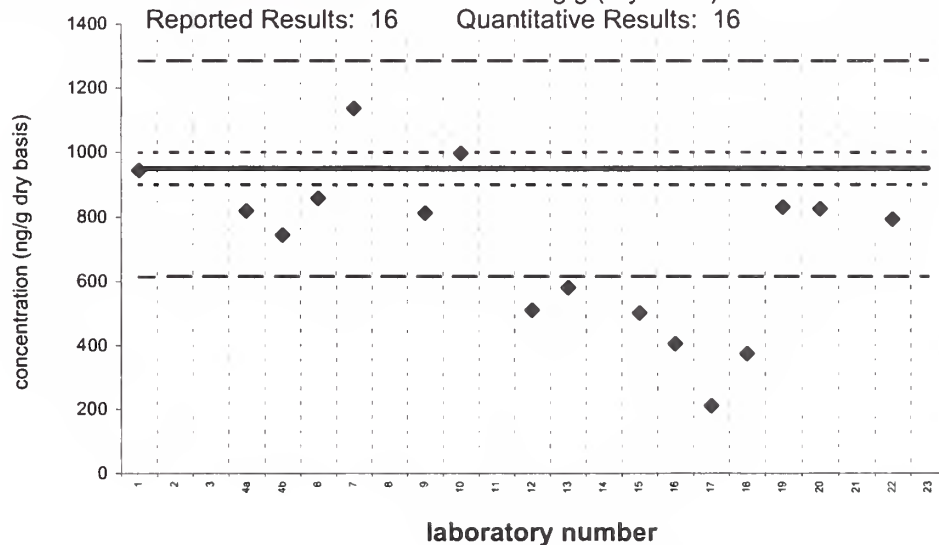


2-methylnaphthalene

SRM 1944

Reference Value = 950 ± 50 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

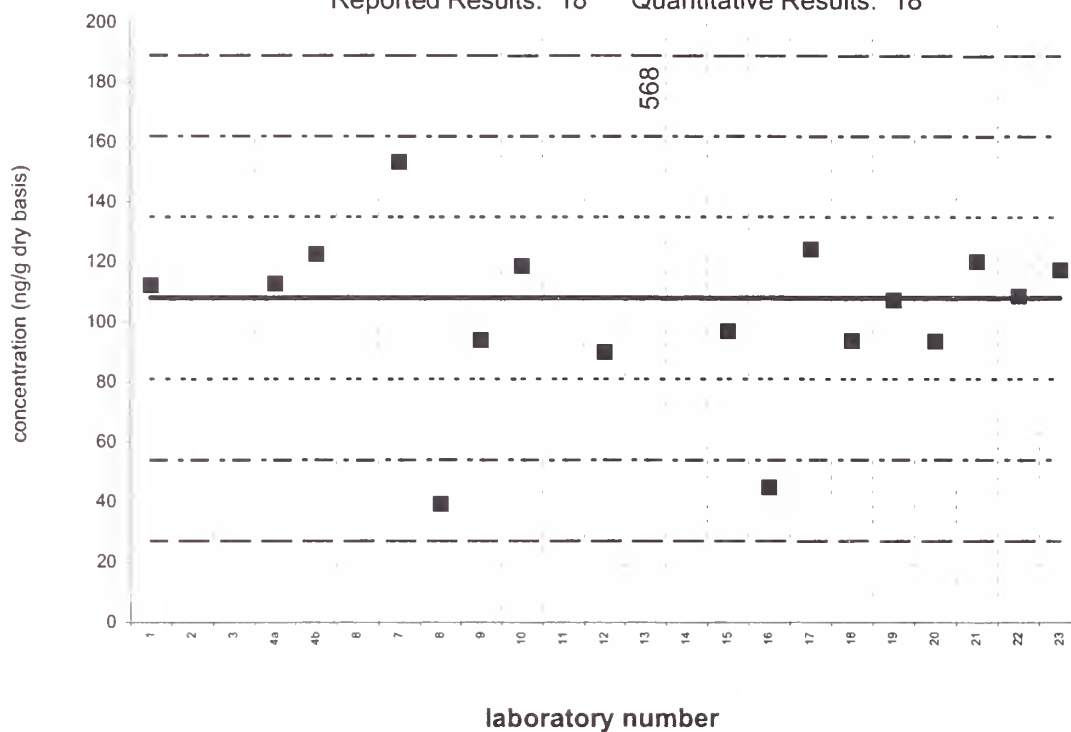


1-methylnaphthalene

SedimentX (QA00SED10)

Assigned value = 108 ng/g $s = 25$ ng/g 95% CL = 15 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 18

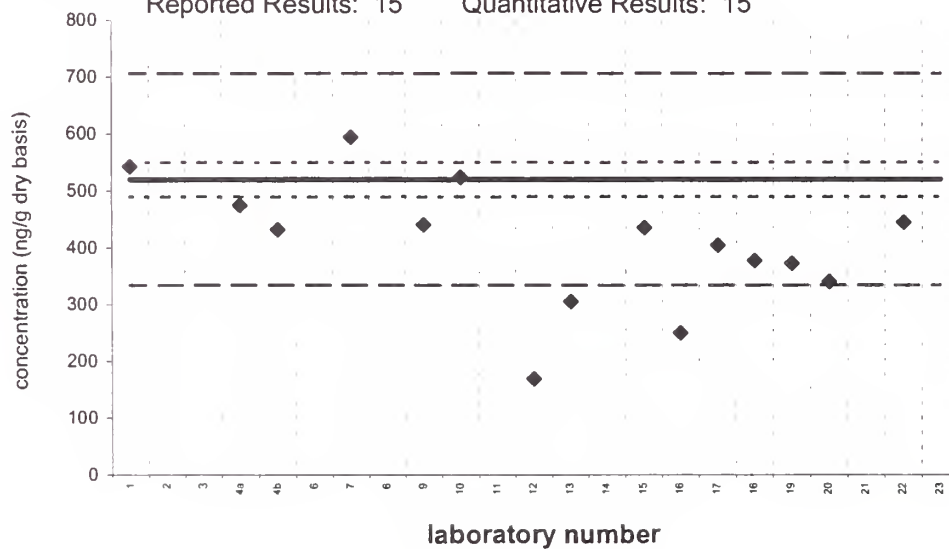


1-methylnaphthalene

SRM 1944

Reference Value = 520 \pm 30 ng/g (dry basis)

Reported Results: 15 Quantitative Results: 15

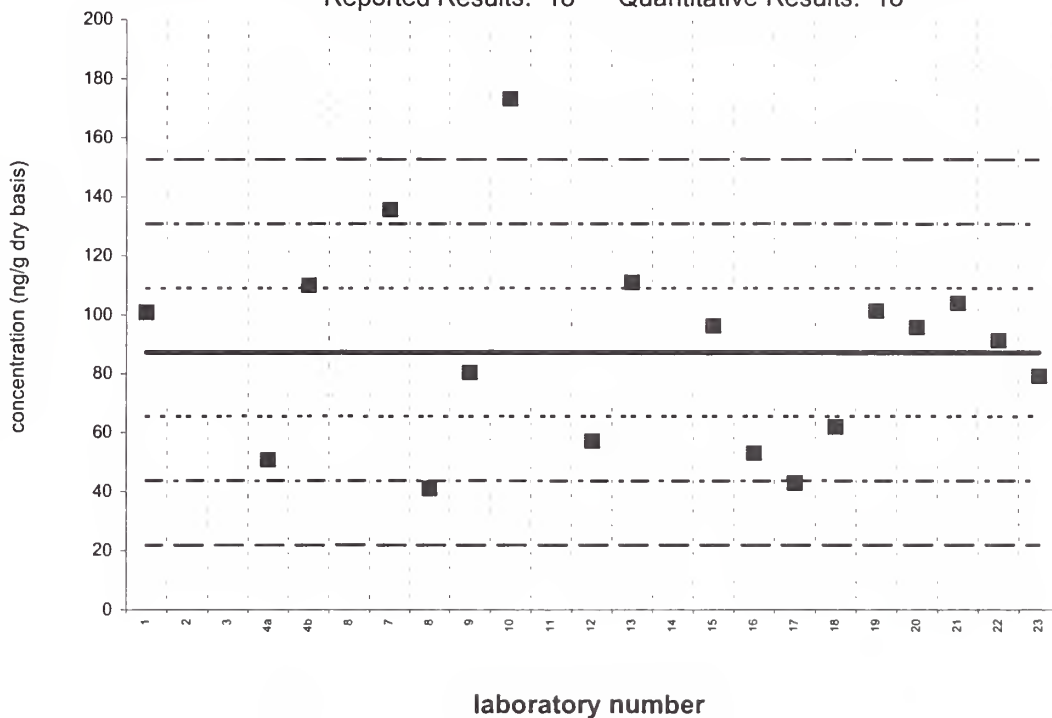


biphenyl

SedimentX (QA00SED10)

Assigned value = 87.2 ng/g $s = 35.0$ ng/g 95% CL = 18.0 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 18

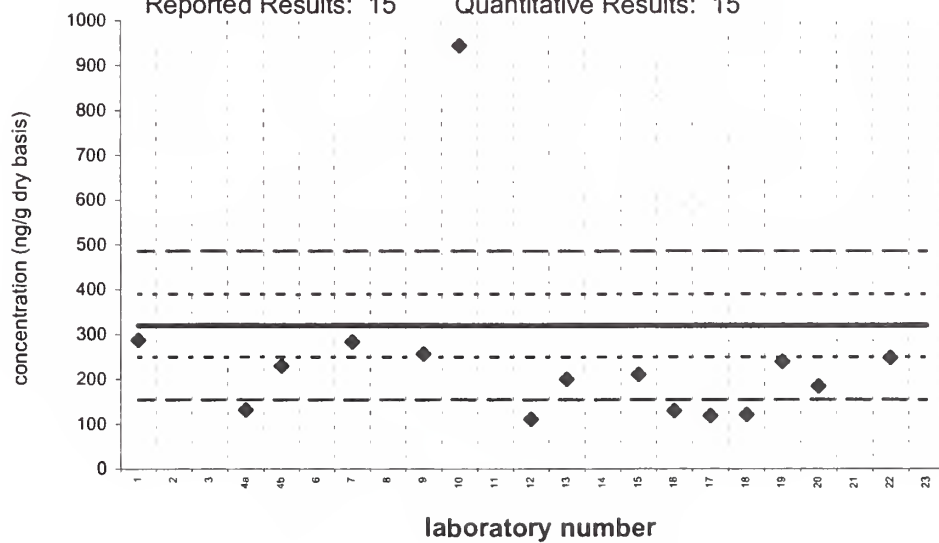


biphenyl

SRM 1944

Reference Value = 320 ± 70 ng/g (dry basis)

Reported Results: 15 Quantitative Results: 15

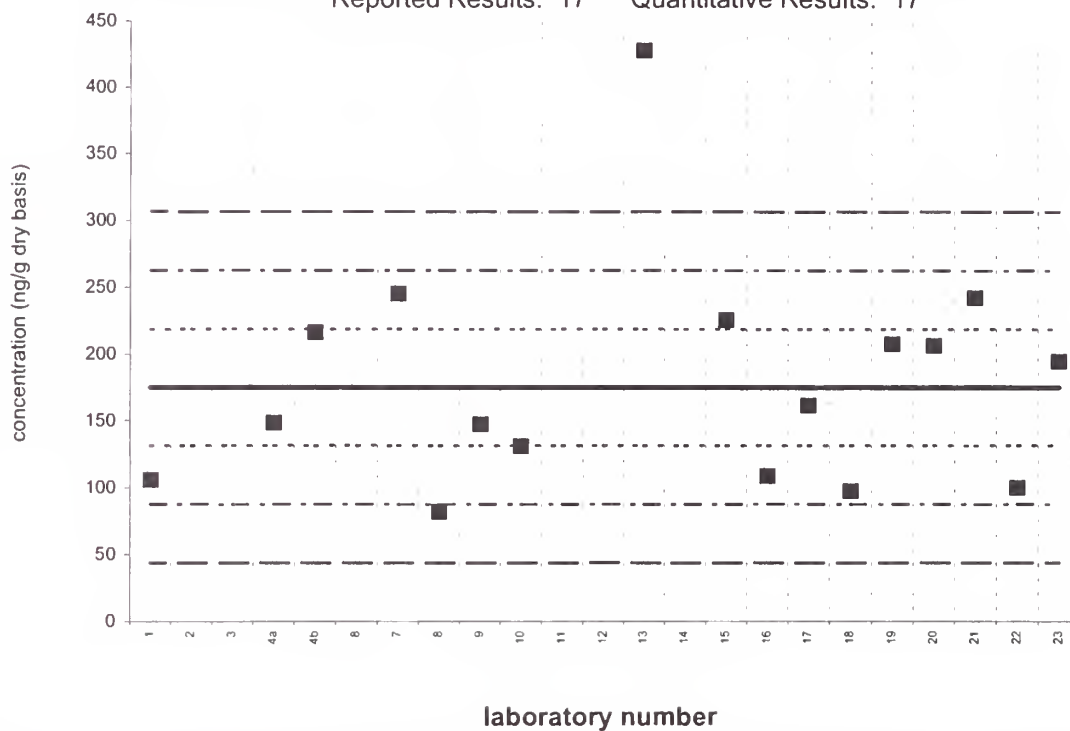


2,6-dimethylnaphthalene

SedimentX (QA00SED10)

Assigned value = 175 ng/g $s = 47$ ng/g 95% CL = 29 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

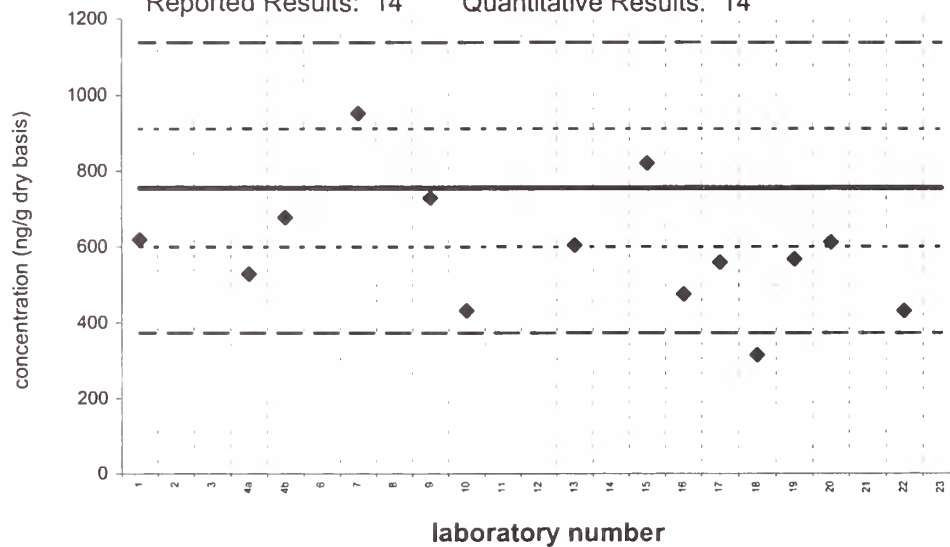


2,6-dimethylnaphthalene

SRM 1944

Target Value = 755 \pm 156 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 14

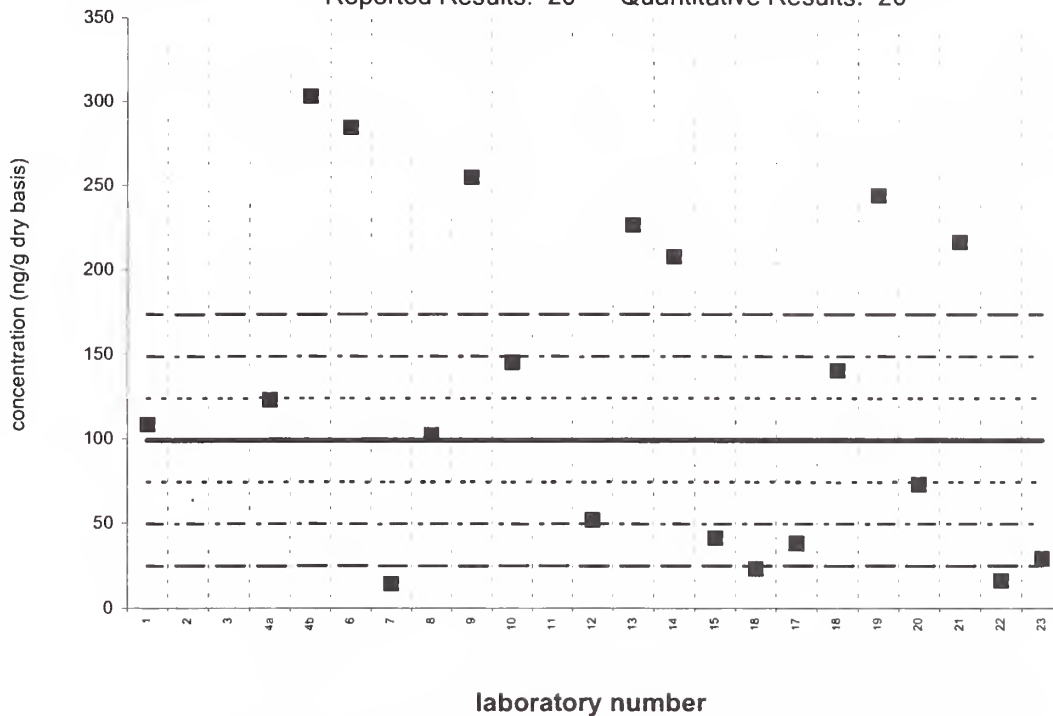


acenaphthylene

Sediment X (QA00SED10)

Assigned value = 99.2 ng/g $s = 76.7$ ng/g 95% CL = 40.9 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

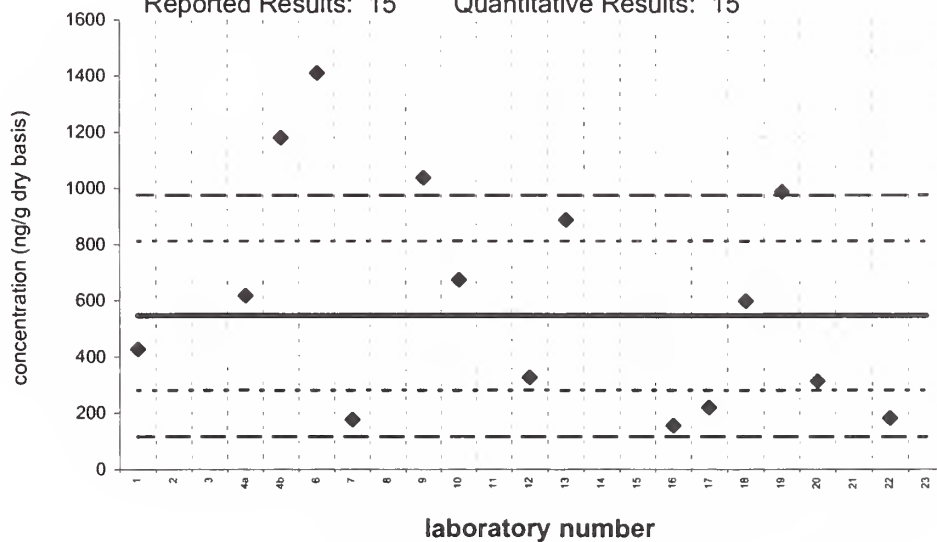


acenaphthylene

SRM 1944

Target Value = 546 ± 266 ng/g (dry basis)

Reported Results: 15 Quantitative Results: 15

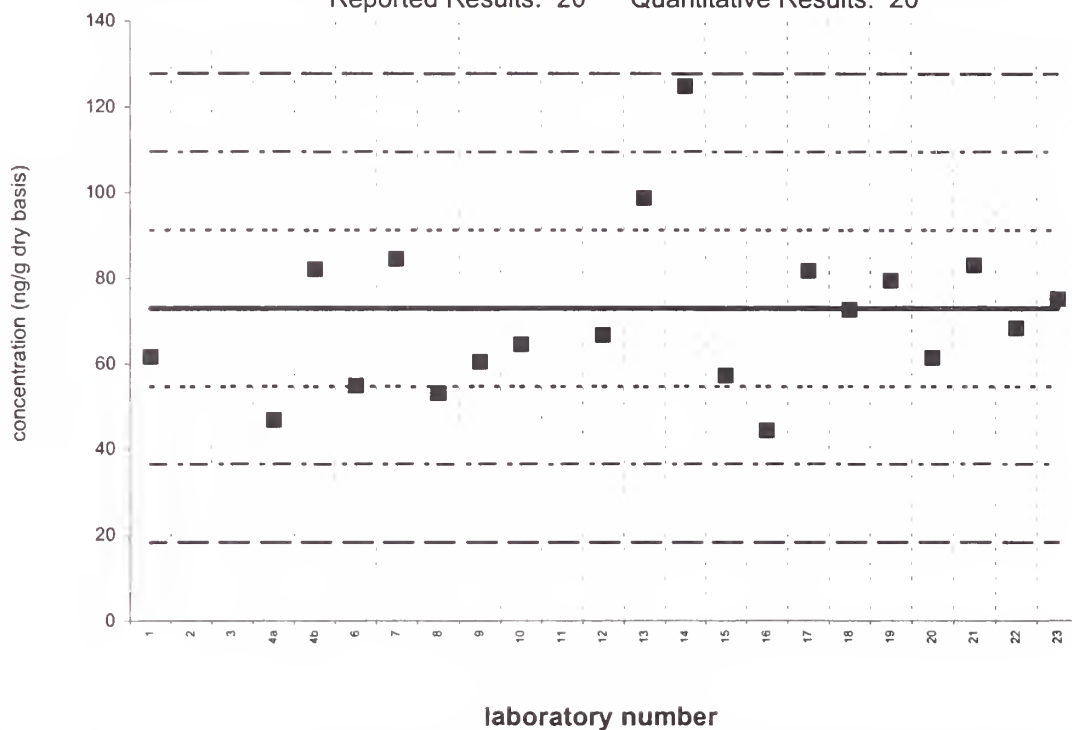


acenaphthene

Sediment X (QA00SED10)

Assigned value = 73.0 ng/g s = 18.4 ng/g 95% CL = 10.6 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

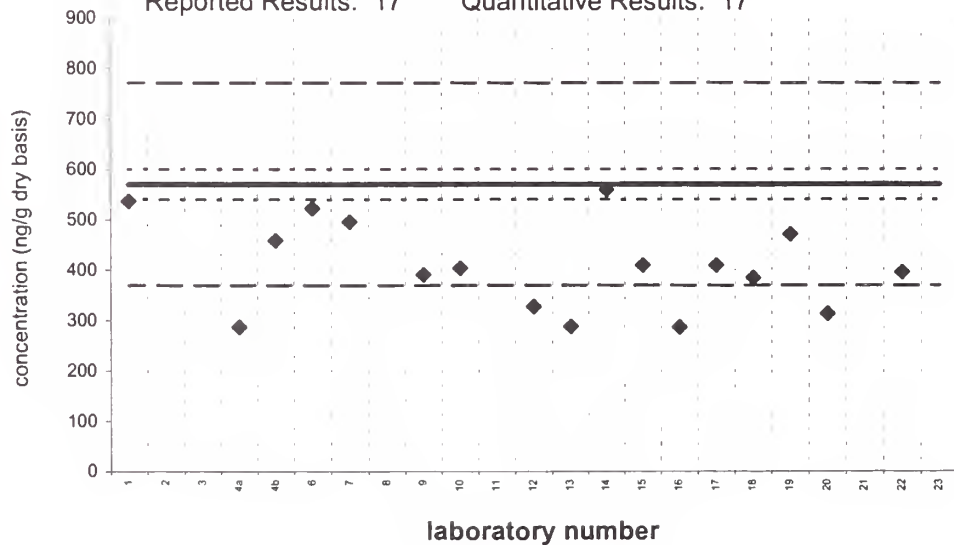


acenaphthene

SRM 1944

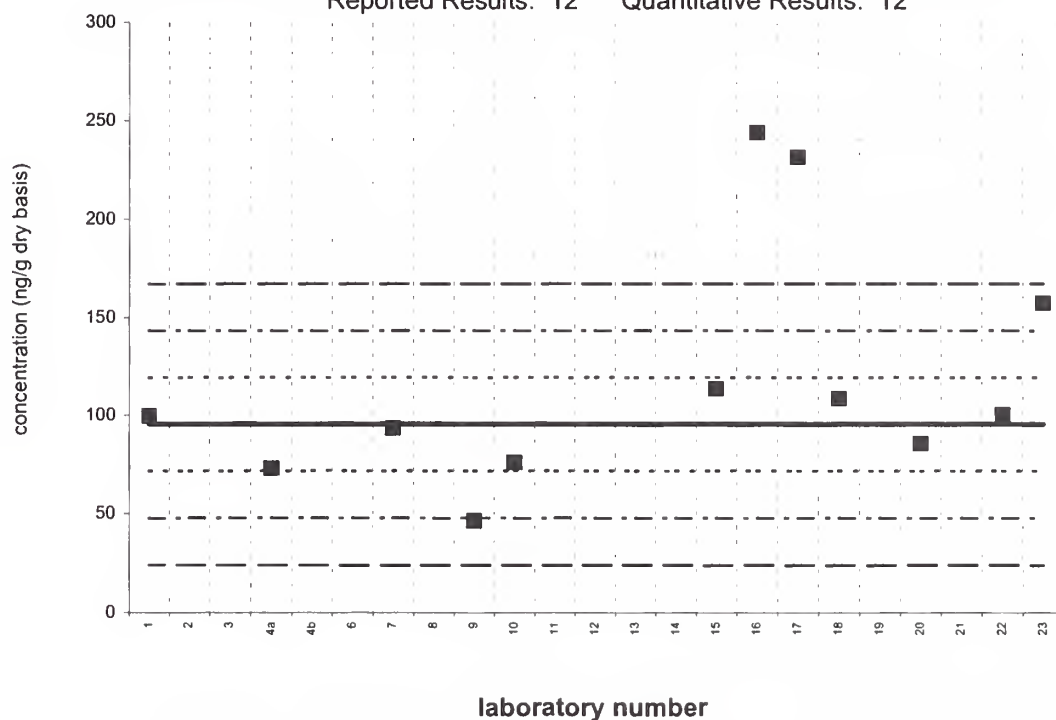
Reference Value = 570 ± 30 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

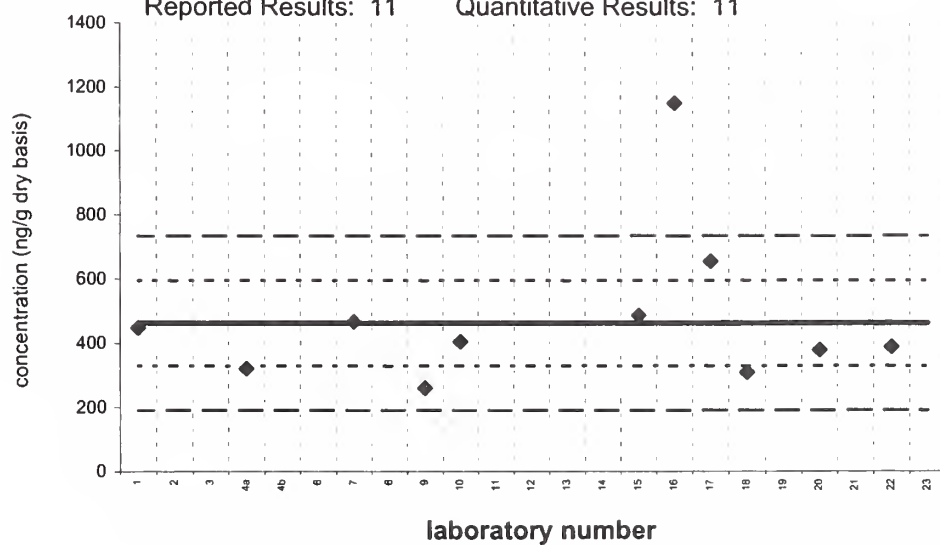


1,6,7-trimethylnaphthalene**Sediment X (QA00SED10)**Assigned value = 95.5 ng/g $s = 29.4$ ng/g 95% CL = 21.1 ng/g (dry basis)

Reported Results: 12 Quantitative Results: 12

**1,6,7-trimethylnaphthalene****SRM 1944**Target Value = 462 \pm 133 ng/g (dry basis)

Reported Results: 11 Quantitative Results: 11

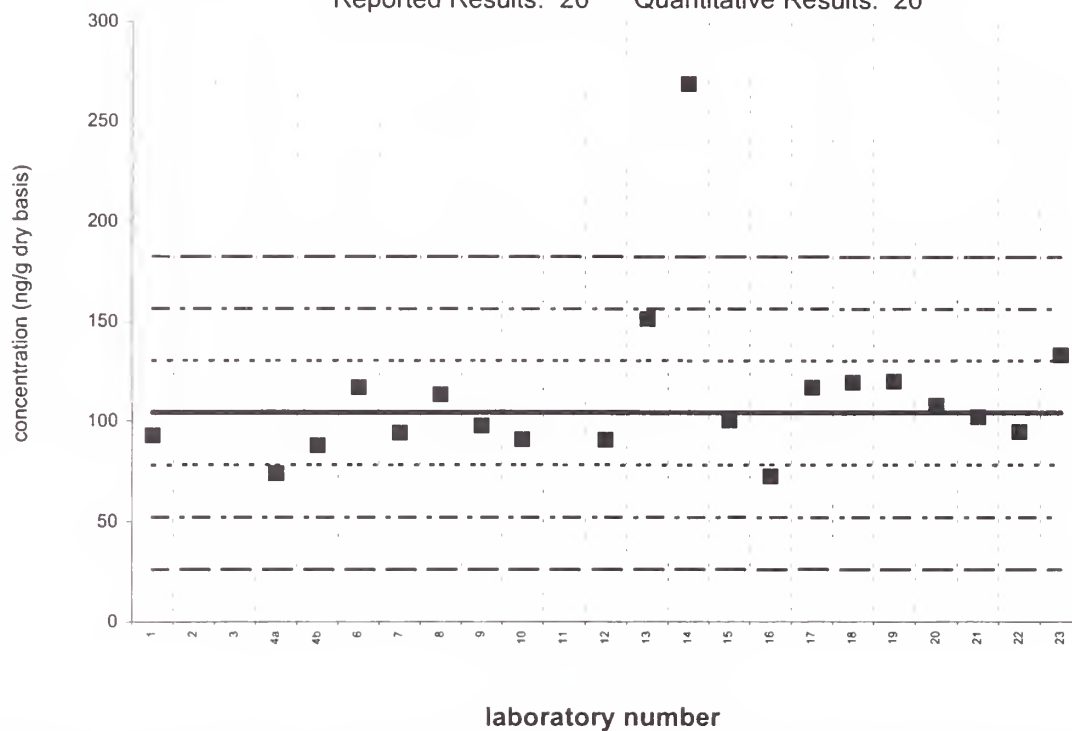


fluorene

Sediment X (QA00SED10)

Assigned value = 104 ng/g s = 20 ng/g 95% CL = 10 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

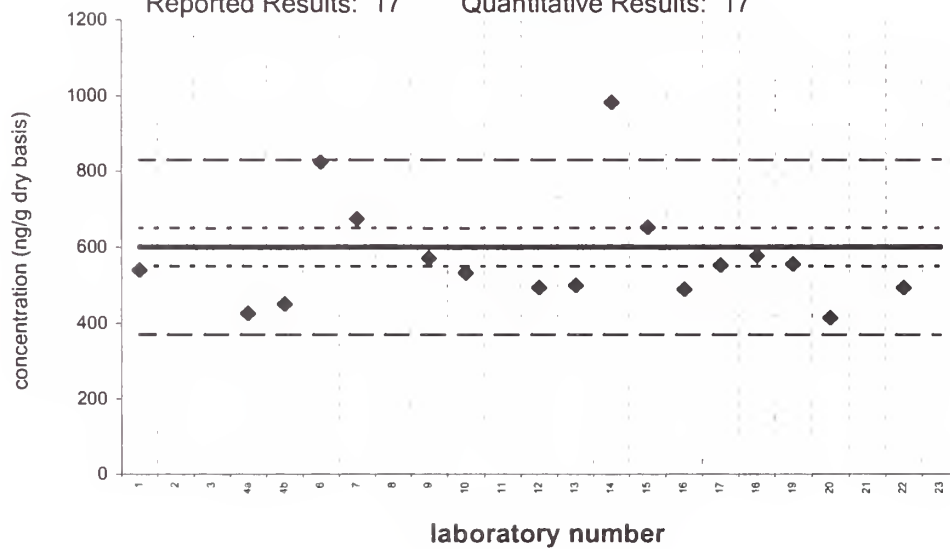


fluorene

SRM 1944

Target Value = 600 ± 50 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

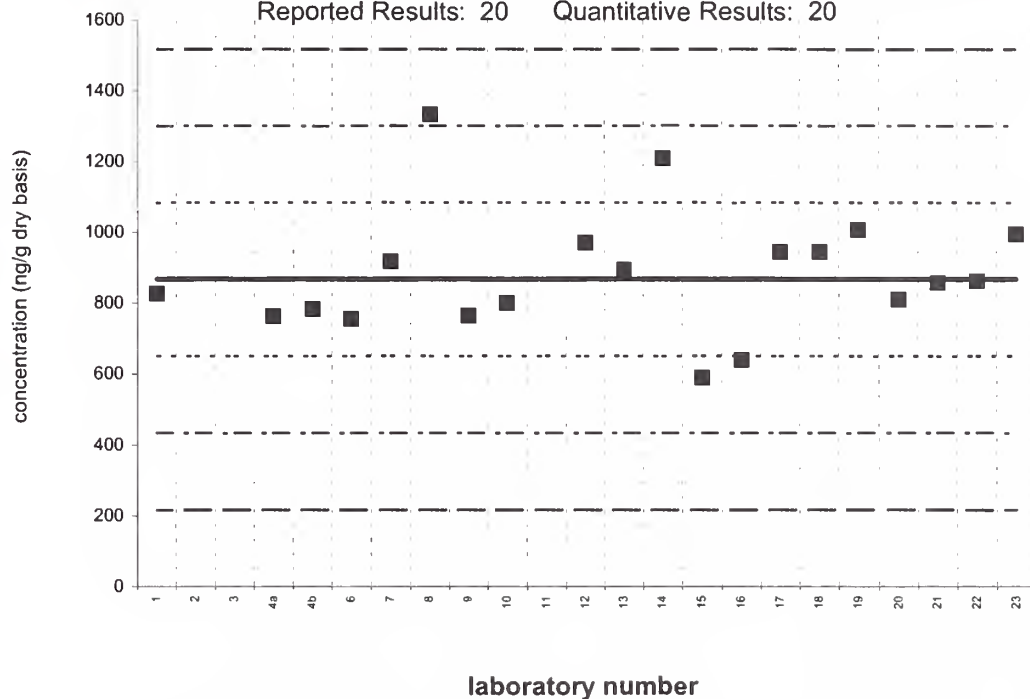


phenanthrene

Sediment X (QA00SED10)

Assigned value = 867 ng/g $s = 164$ ng/g 95% CL = 82 ng/g (dry basis)

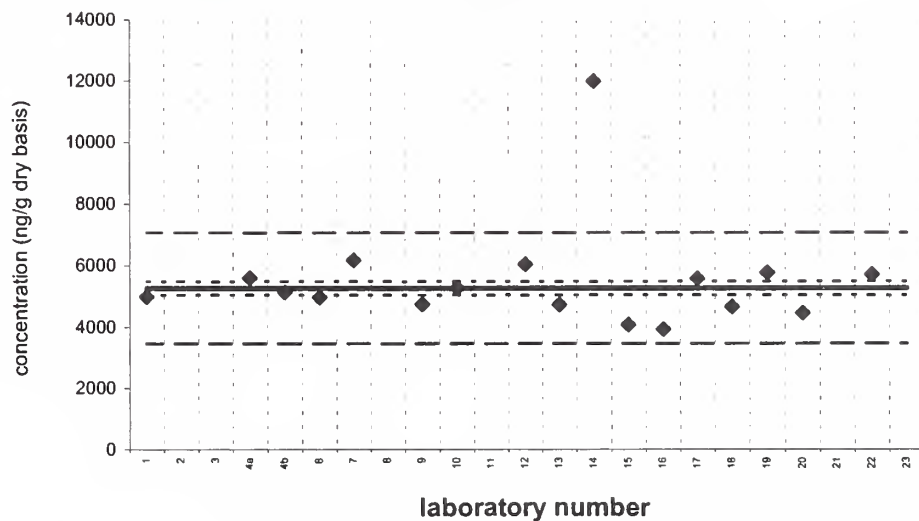
Reported Results: 20 Quantitative Results: 20



phenanthrene

SRM 1944

Certified Value = 5270 \pm 220 ng/g (dry basis)
Reported Results: 17 Quantitative Results: 17

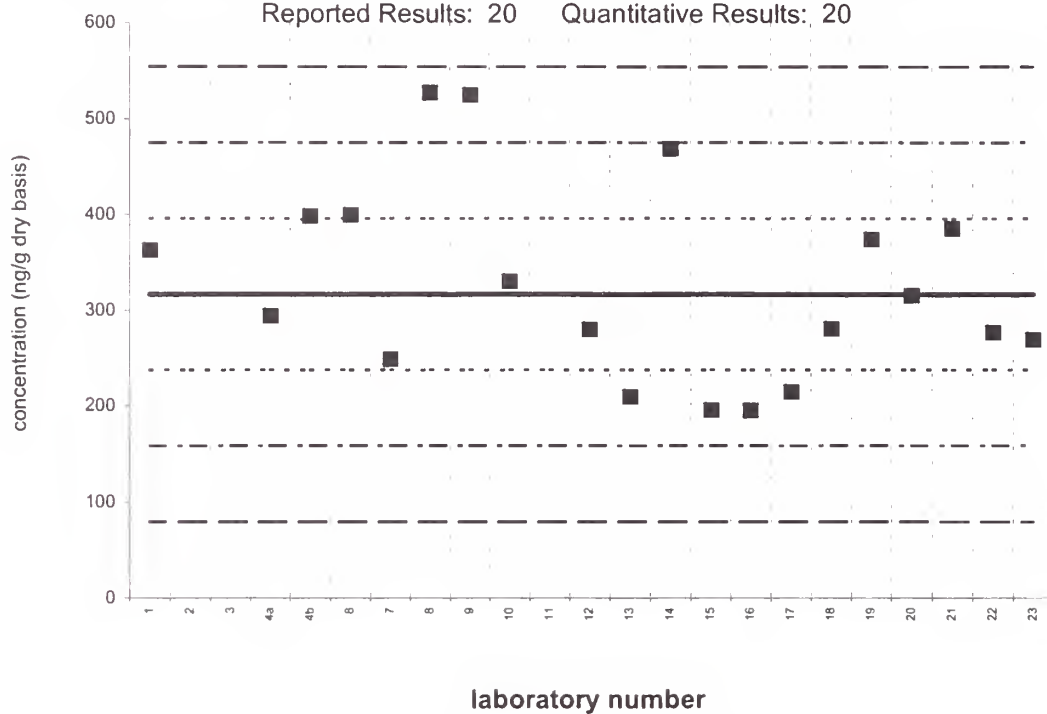


anthracene

Sediment X (QA00SED10)

Assigned value = 317 ng/g s = 100 ng/g 95% CL = 50 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

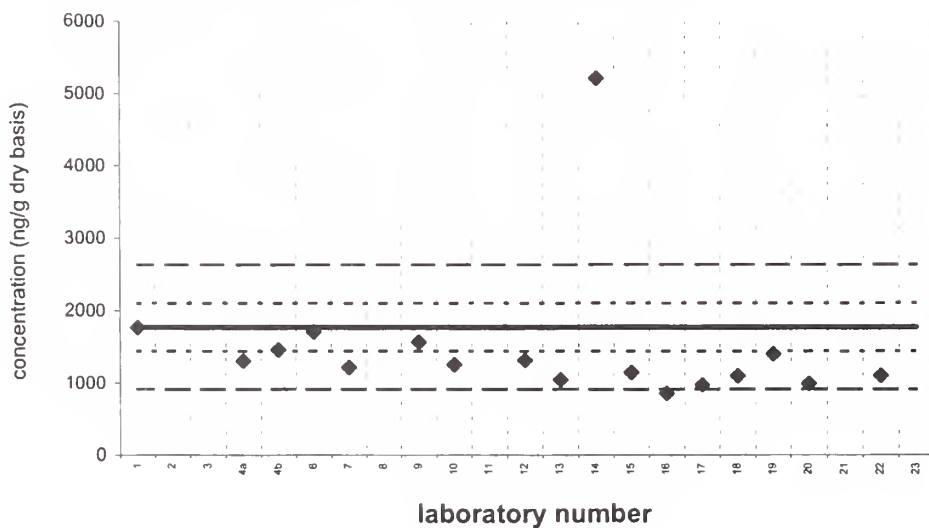


anthracene

SRM 1944

Certified Value = 1770 ± 330 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

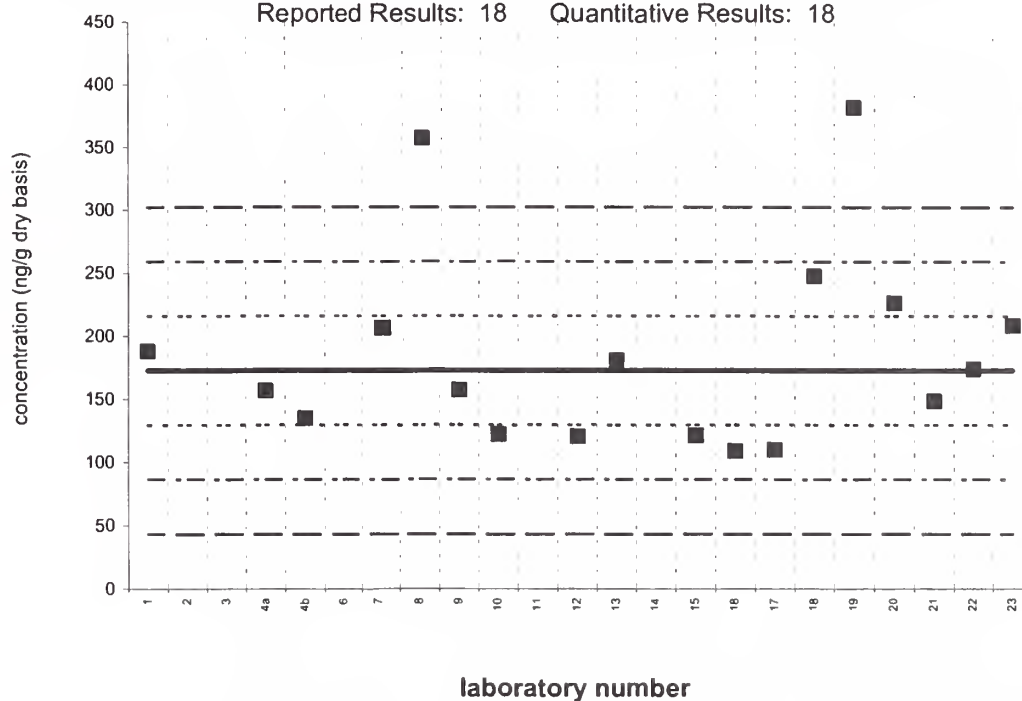


1-methylphenanthrene

Sediment X (QA00SED10)

Assigned value = 173 ng/g $s = 42$ ng/g 95% CL = 25 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 18

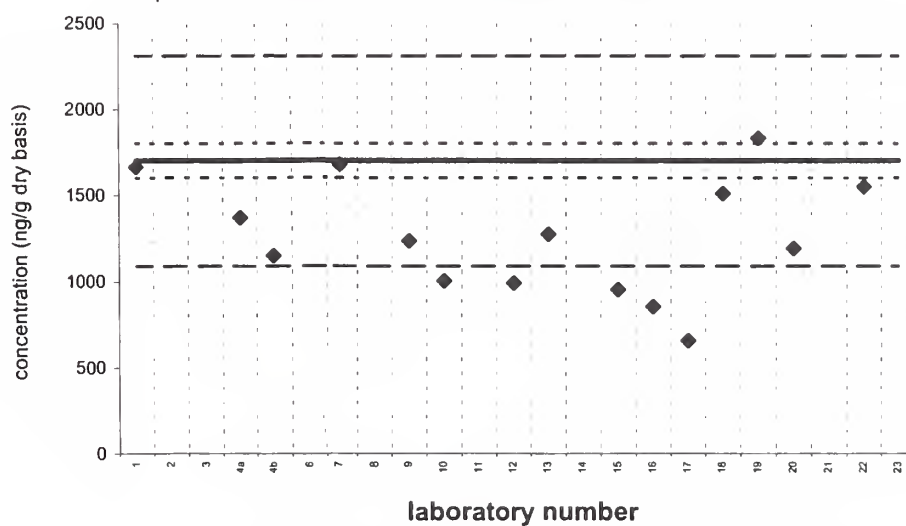


1-methylphenanthrene

SRM 1944

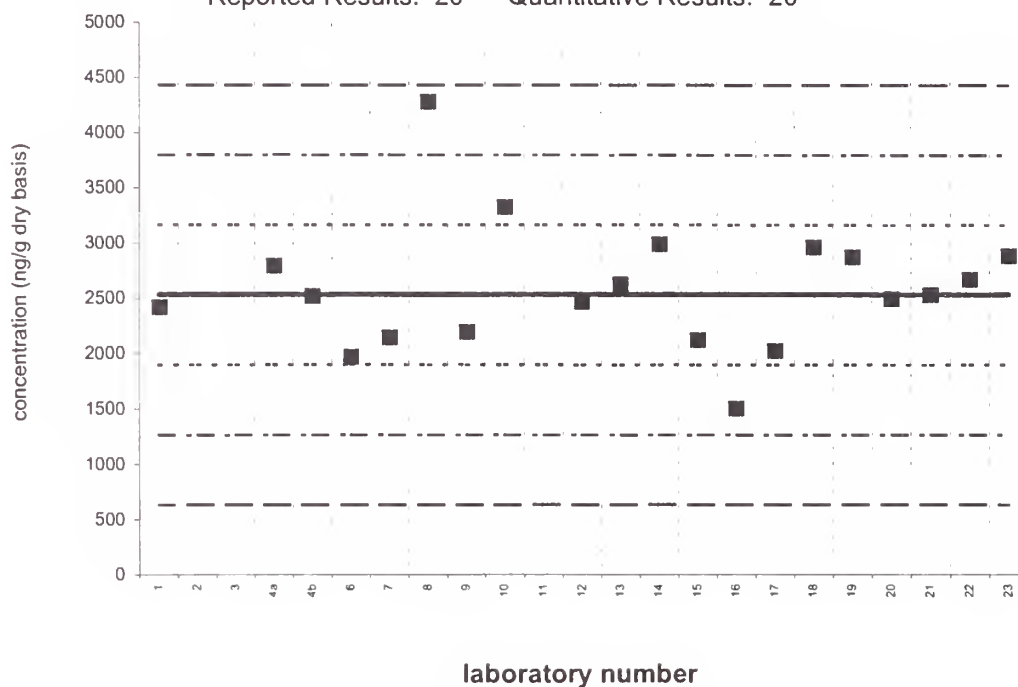
Reference Value = 1700 ± 100 ng/g (dry basis)

Reported Results: 15 Quantitative Results: 15

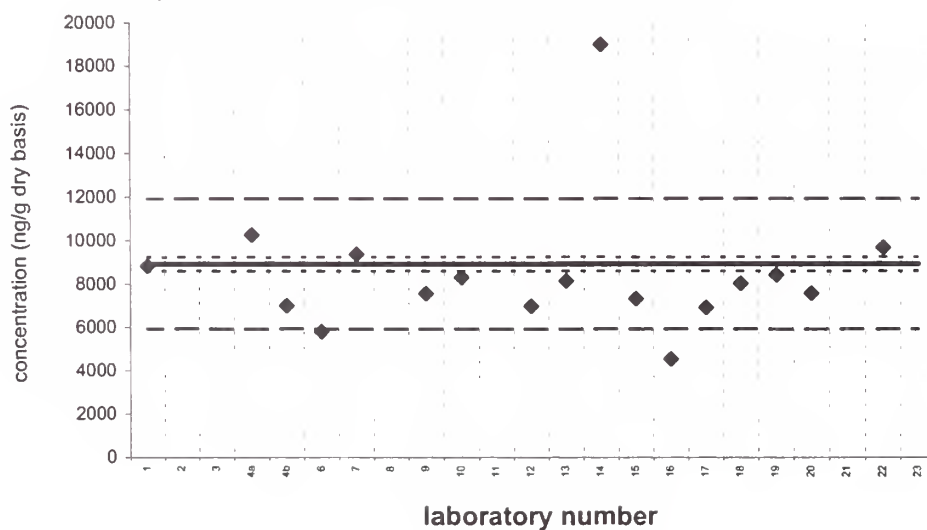


fluoranthene**Sediment X (QA00SED10)**Assigned value = 2533 ng/g $s = 381$ ng/g 95% CL = 203 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**fluoranthene****SRM 1944**Certified Value = 8920 \pm 320 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

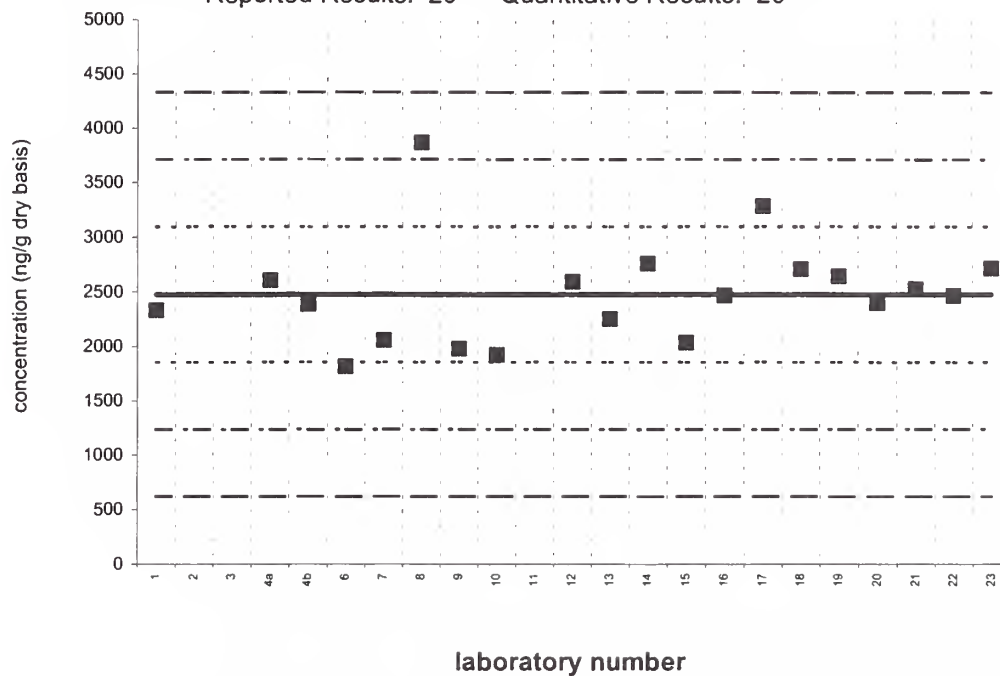


pyrene

Sediment X (QA00SED10)

Assigned value = 2477 ng/g $s = 496$ ng/g 95% CL = 247 ng/g (dry basis)

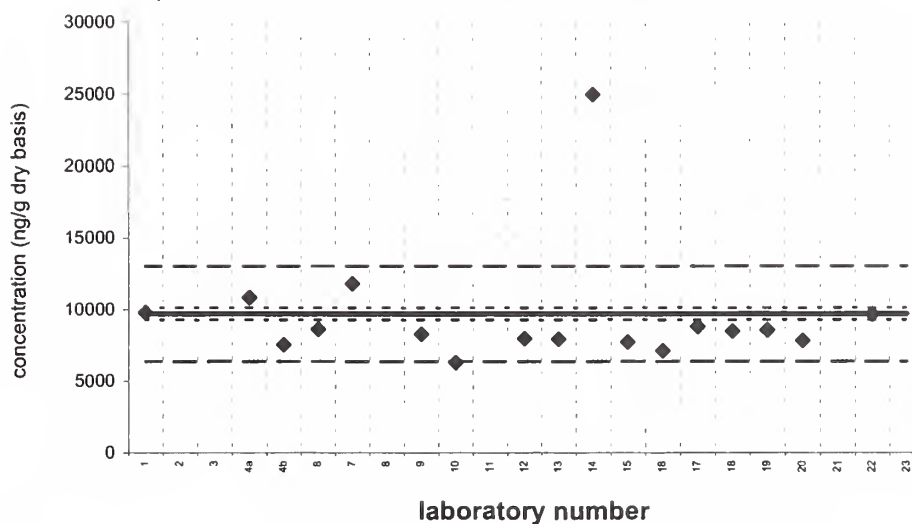
Reported Results: 20 Quantitative Results: 20



pyrene

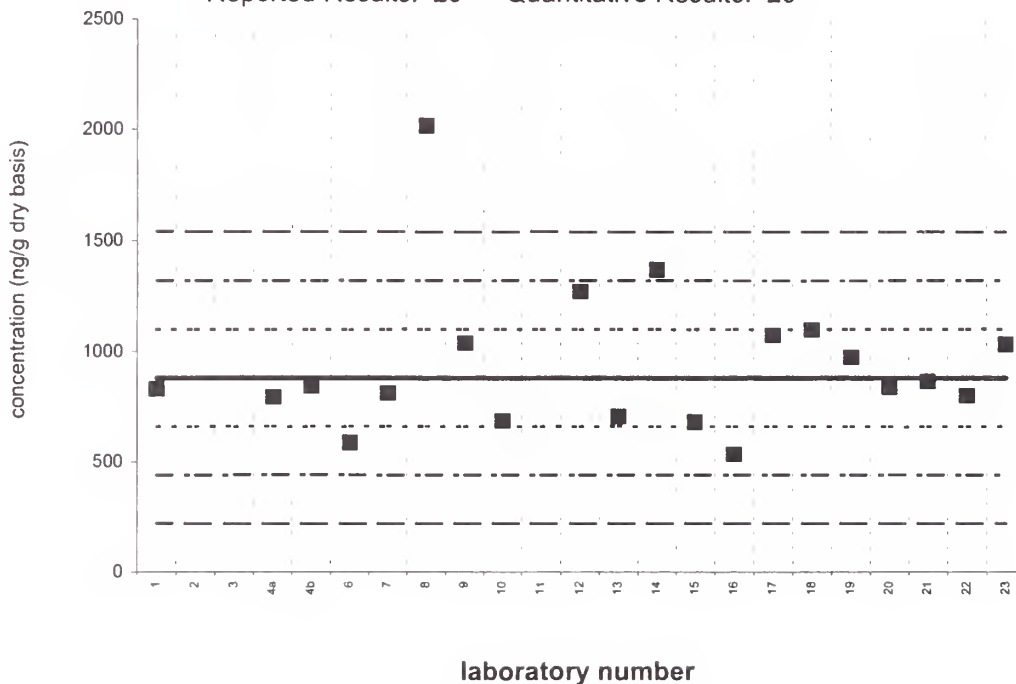
SRM 1944

Certified Value = 9700 ± 420 ng/g (dry basis)
Reported Results: 17 Quantitative Results: 17

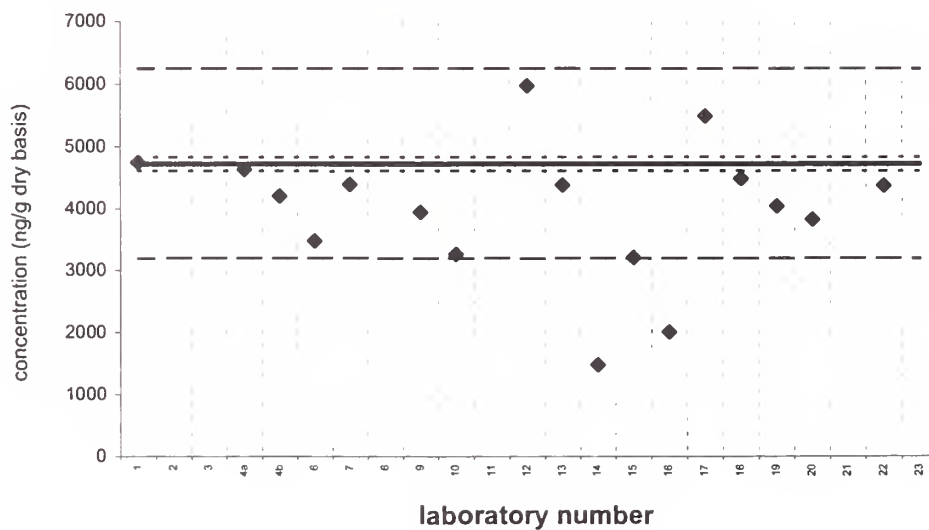


benz[a]anthracene**Sediment X (QA00SED10)**Assigned value = 880 ng/g $s = 185$ ng/g 95% CL = 99 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**benz[a]anthracene****SRM 1944**Certified Value = 4720 ± 110 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

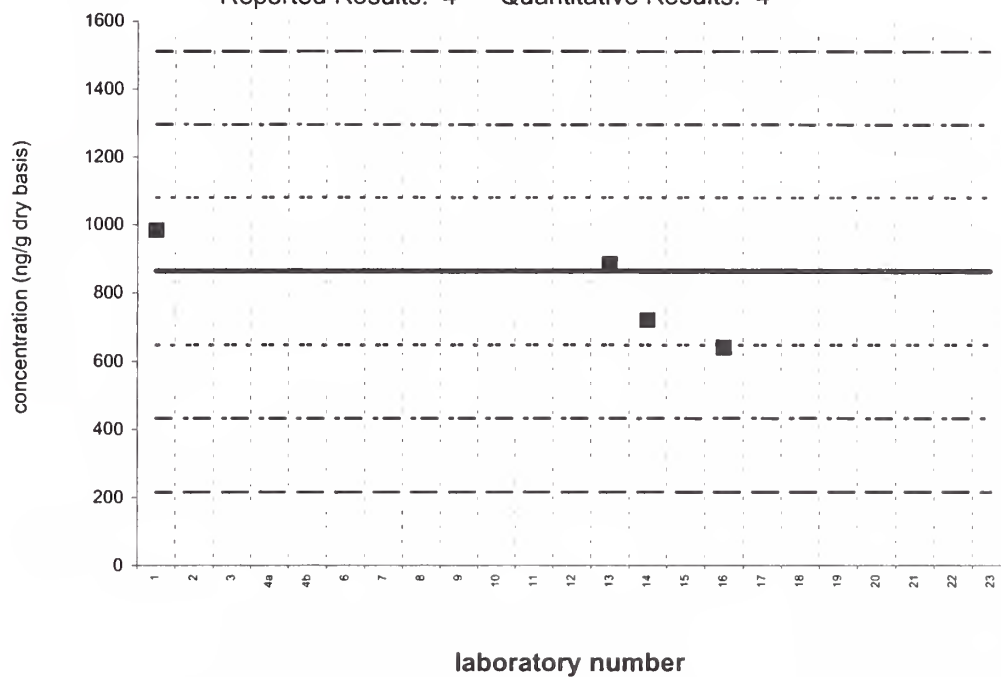


chrysene

Sediment X (QA00SED10)

Assigned value = 864 ng/g $s = 132$ ng/g 95% CL = 328 ng/g (dry basis)

Reported Results: 4 Quantitative Results: 4

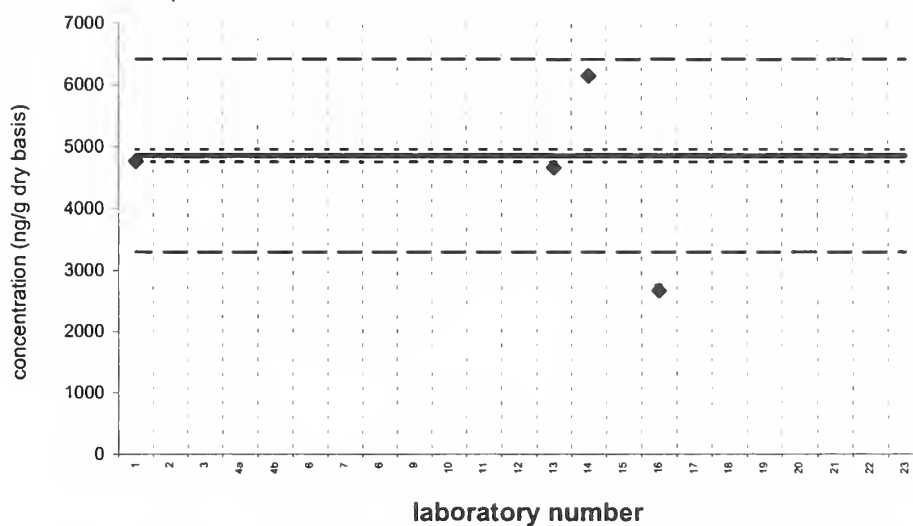


chrysene

SRM 1944

Certified Value = 4860 ± 100 ng/g (dry basis)

Reported Results: 4 Quantitative Results: 4

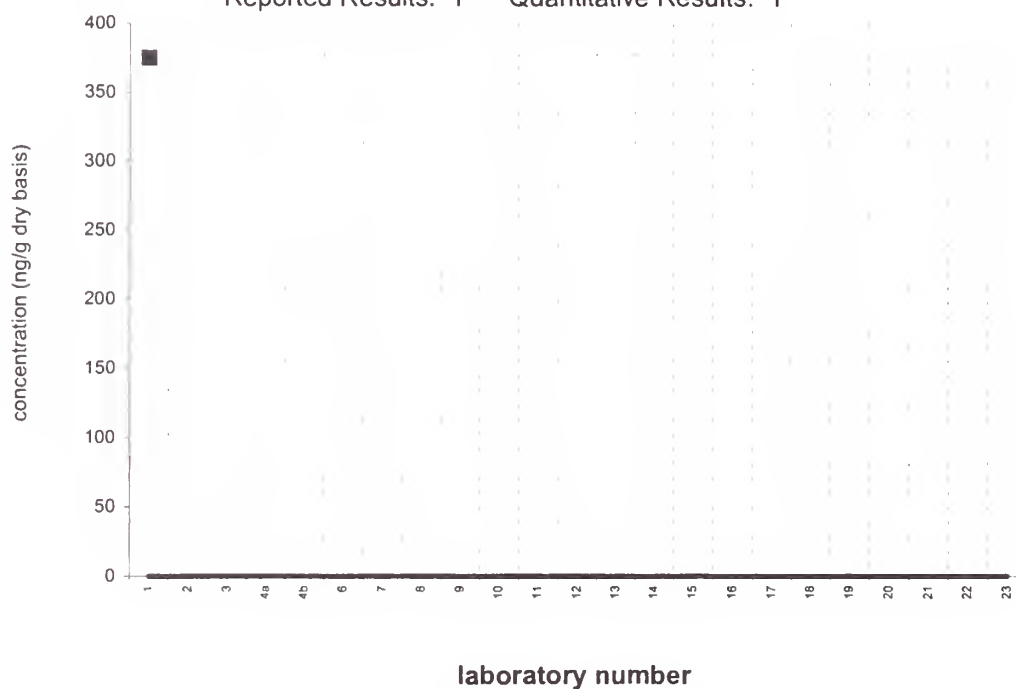


triphenylene

Sediment X (QA00SED10)

Assigned value = <400 ng/g (dry basis)

Reported Results: 1 Quantitative Results: 1

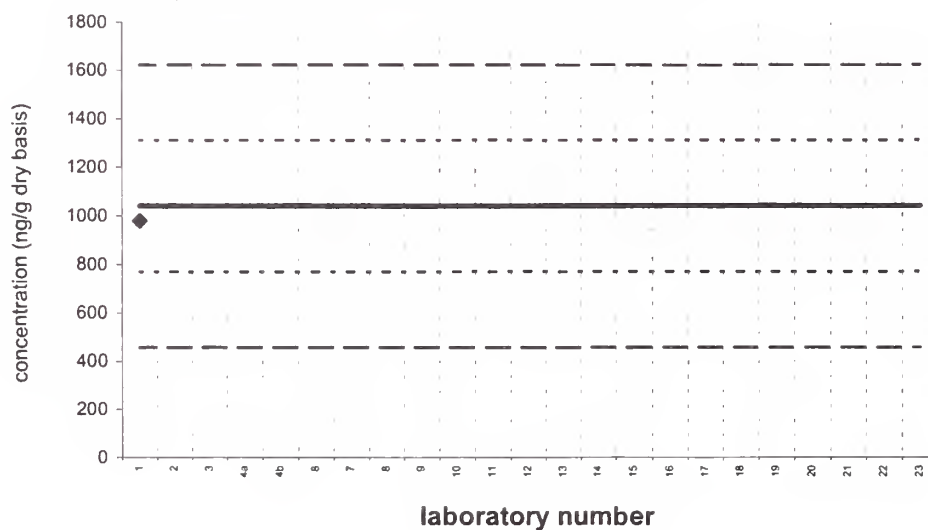


triphenylene

SRM 1944

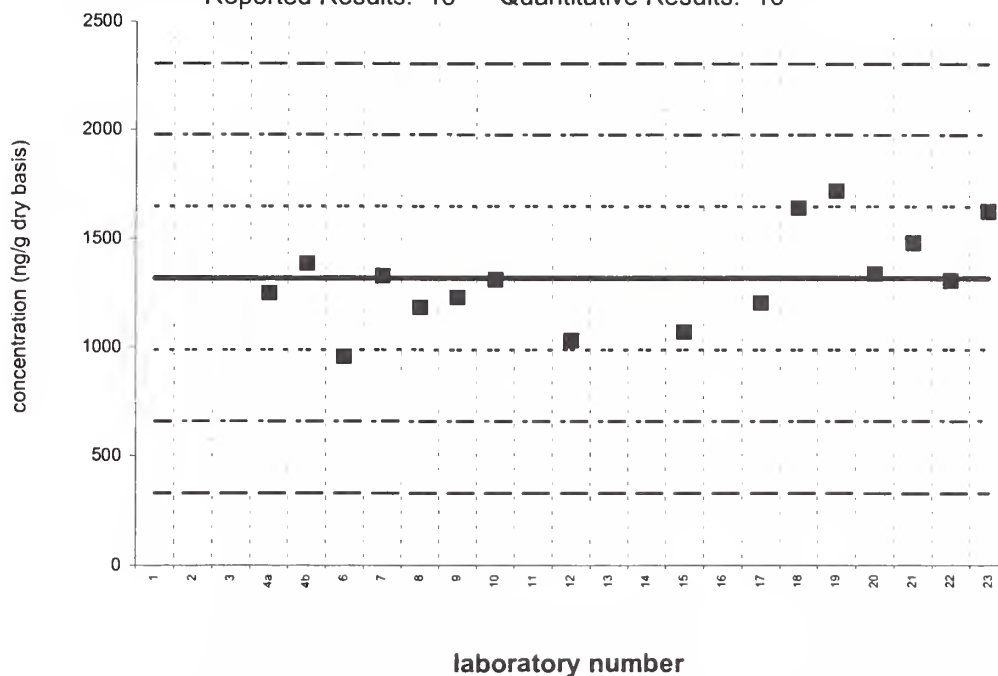
Certified Value = 1040 ± 270 ng/g (dry basis)

Reported Results: 1 Quantitative Results: 1

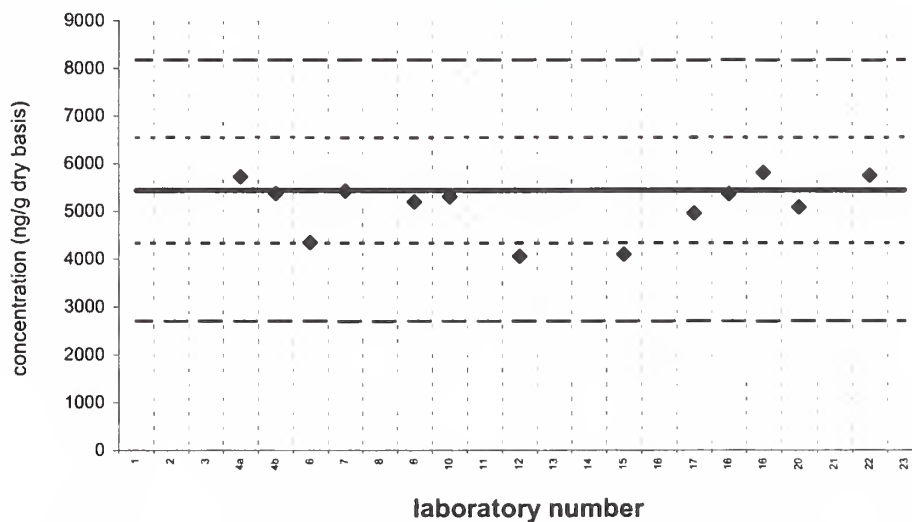


chrysene/triphenylene**Sediment X (QA00SED10)**Assigned value = 1318 ng/g $s = 217$ ng/g 95% CL = 116 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

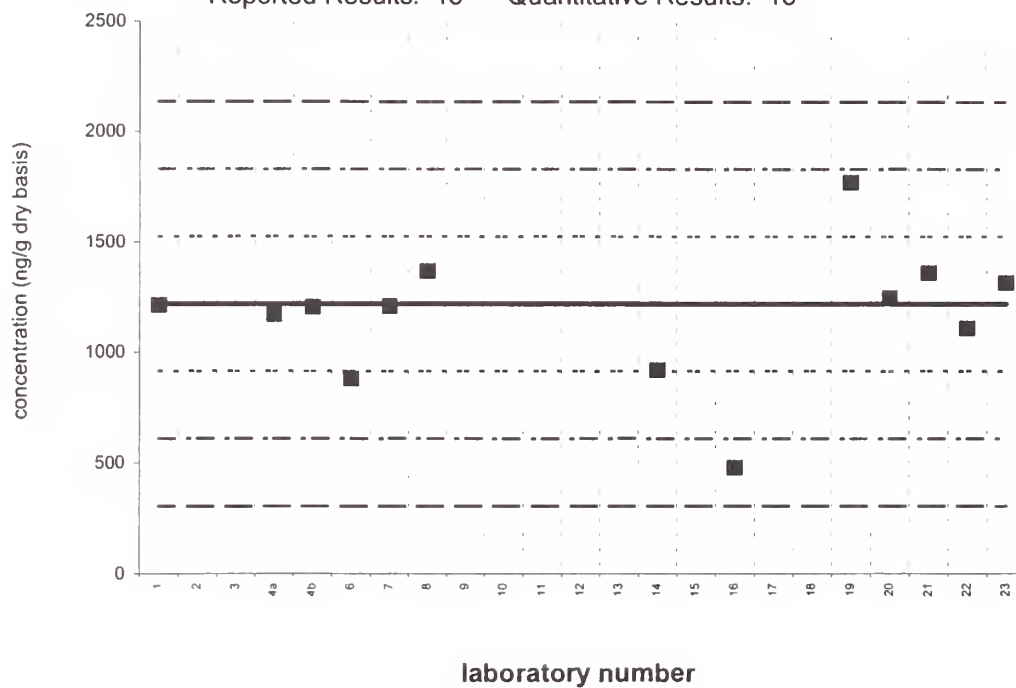
**chrysene/triphenylene****SRM 1944**Target Value = 5439 \pm 1106 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 13

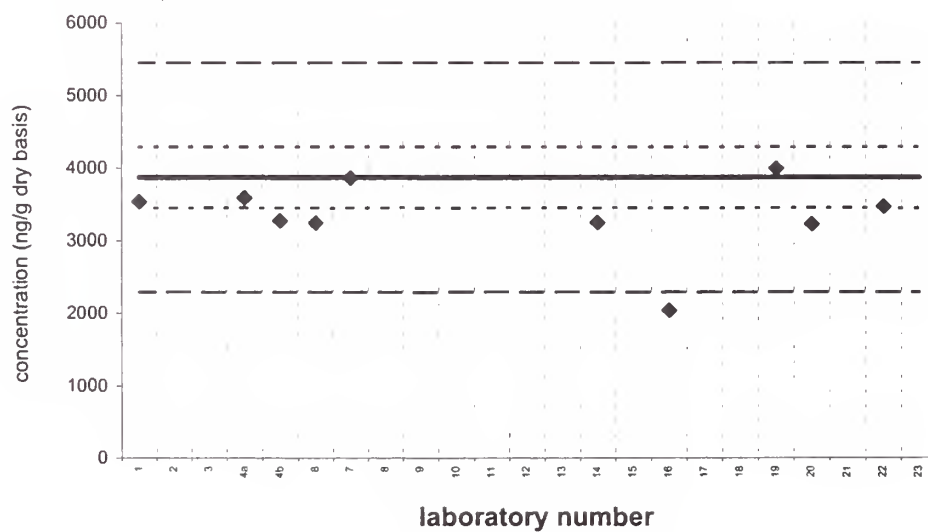


benzo[b]fluoranthene**Sediment X (QA00SED10)**Assigned value = 1220 ng/g $s = 235$ ng/g 95% CL = 158 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 13

**benzo[b]fluoranthene****SRM 1944**Certified Value = 3870 \pm 420 ng/g (dry basis)

Reported Results: 10 Quantitative Results: 10

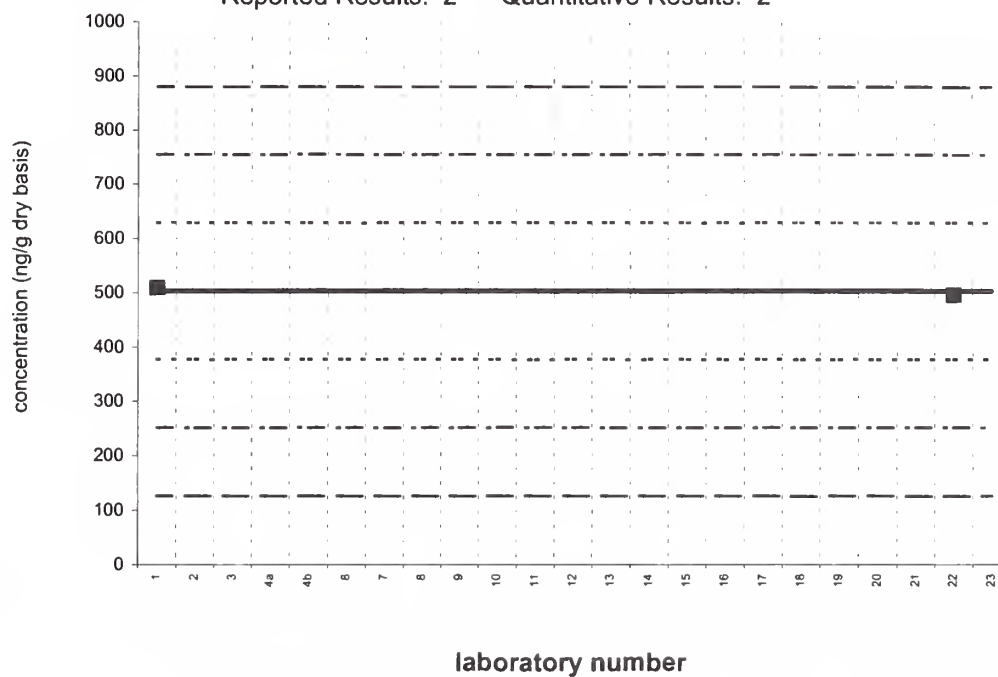


benzo[j]fluoranthene

Sediment X (QA00SED10)

Assigned value = 503 ng/g $s = 9$ ng/g 95% CL = 83 ng/g (dry basis)

Reported Results: 2 Quantitative Results: 2

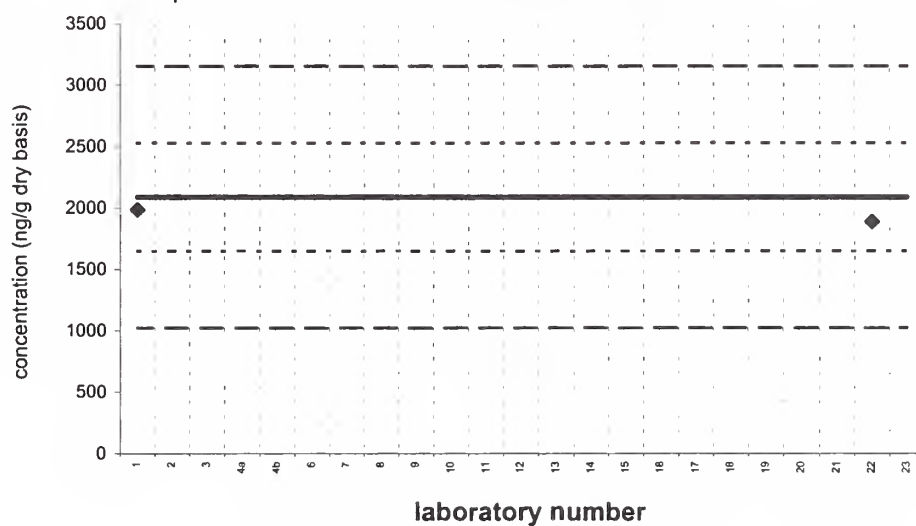


benzo[j]fluoranthene

SRM 1944

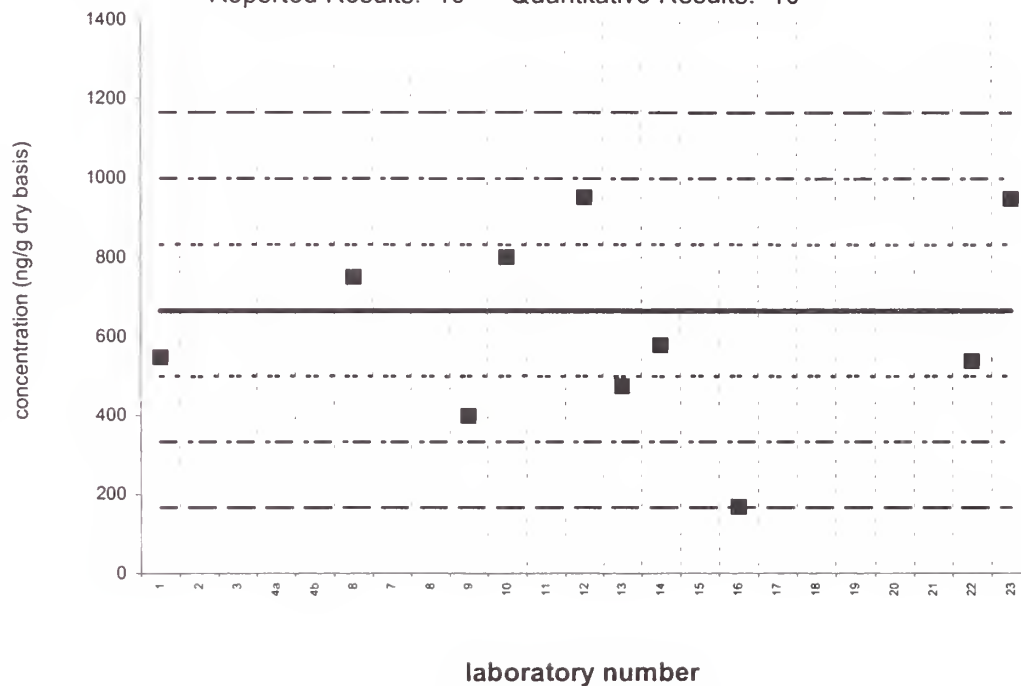
Certified Value = 2090 \pm 440 ng/g (dry basis)

Reported Results: 2 Quantitative Results: 2

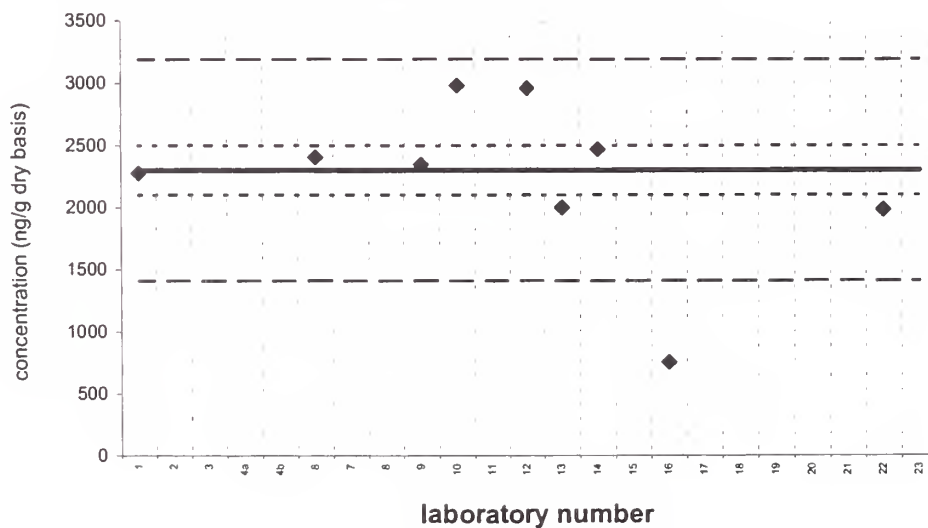


benzo[k]fluoranthene**Sediment X (QA00SED10)**Assigned value = 666 ng/g $s = 204$ ng/g 95% CL = 157 ng/g (dry basis)

Reported Results: 10 Quantitative Results: 10

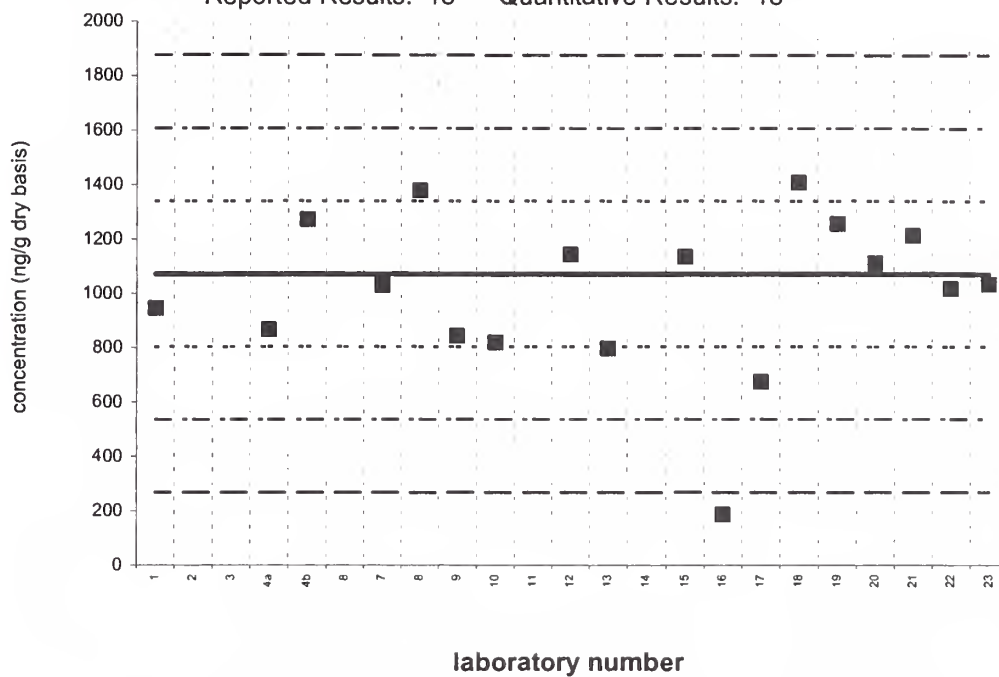
**benzo[k]fluoranthene****SRM 1944**Certified Value = 2300 \pm 200 ng/g (dry basis)

Reported Results: 9 Quantitative Results: 9

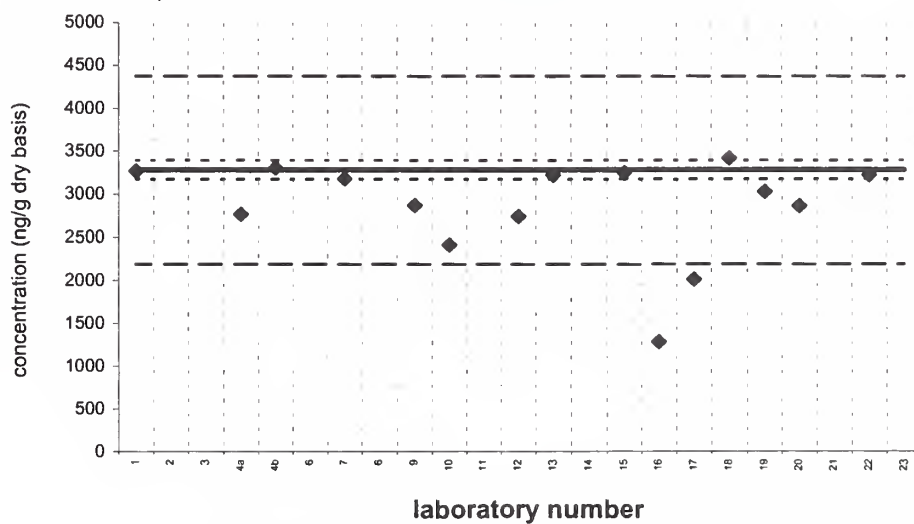


benzo[e]pyrene**Sediment X (QA00SED10)**Assigned value = 1072 ng/g $s = 198$ ng/g 95% CL = 110 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 18

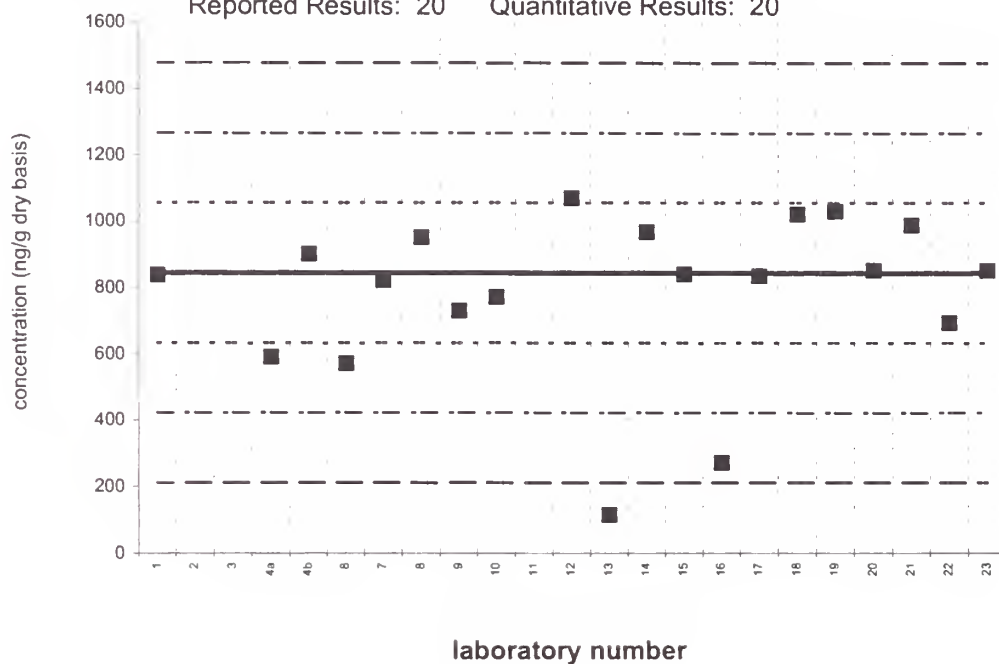
**benzo[e]pyrene****SRM 1944**Certified Value = 3280 \pm 110 ng/g (dry basis)

Reported Results: 15 Quantitative Results: 15

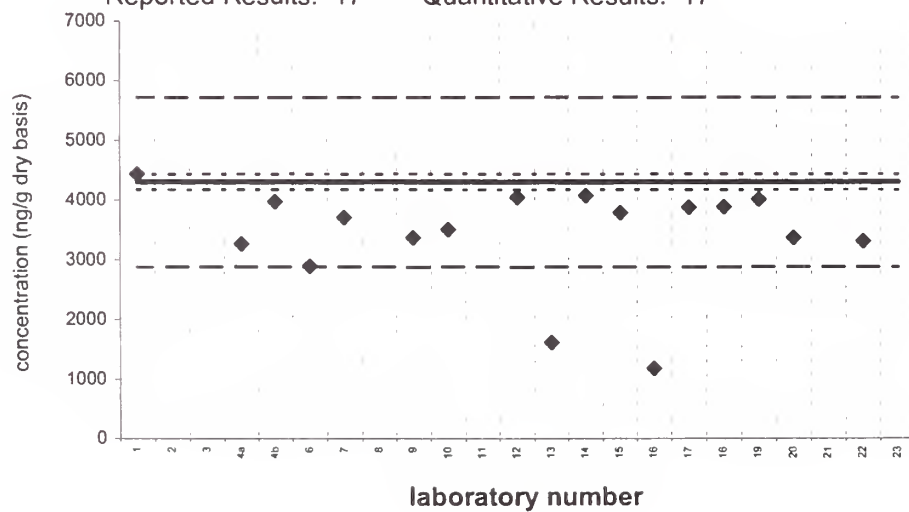


benzo[a]pyrene**Sediment X (QA00SED10)**Assigned value = 845 ng/g $s = 143$ ng/g 95% CL = 74 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**benzo[a]pyrene****SRM 1944**Certified Value = 4300 \pm 130 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

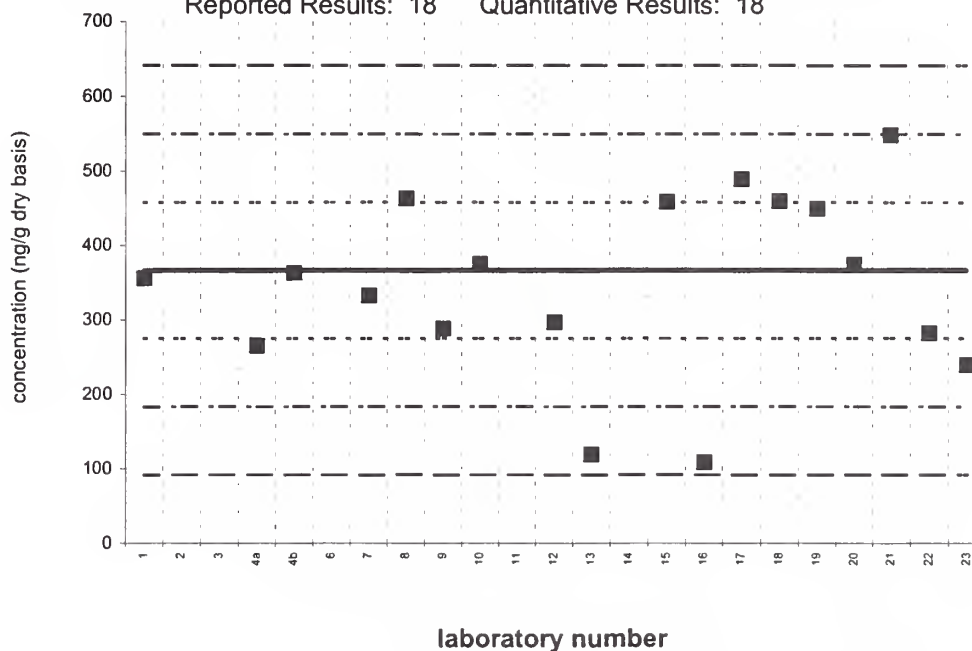


perylene

Sediment X (QA00SED10)

Assigned value = 366 ng/g $s = 82$ ng/g 95% CL = 45 ng/g (dry basis)

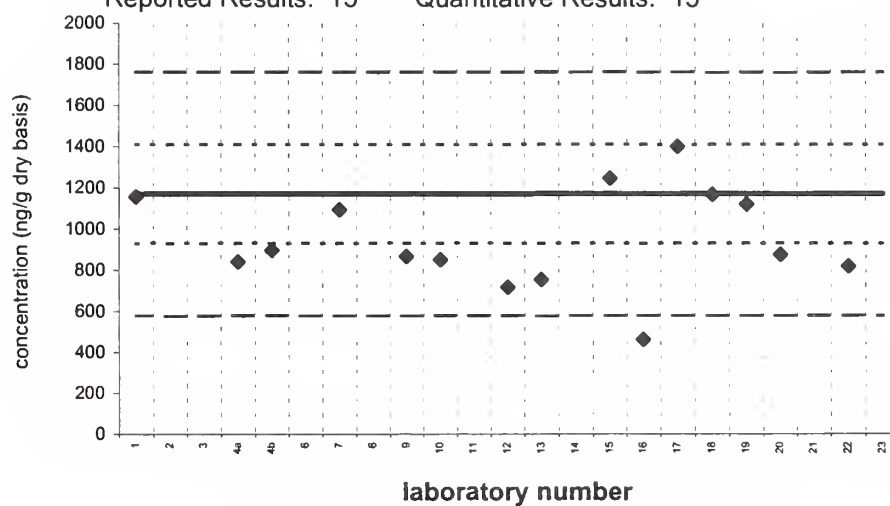
Reported Results: 18 Quantitative Results: 18



perylene

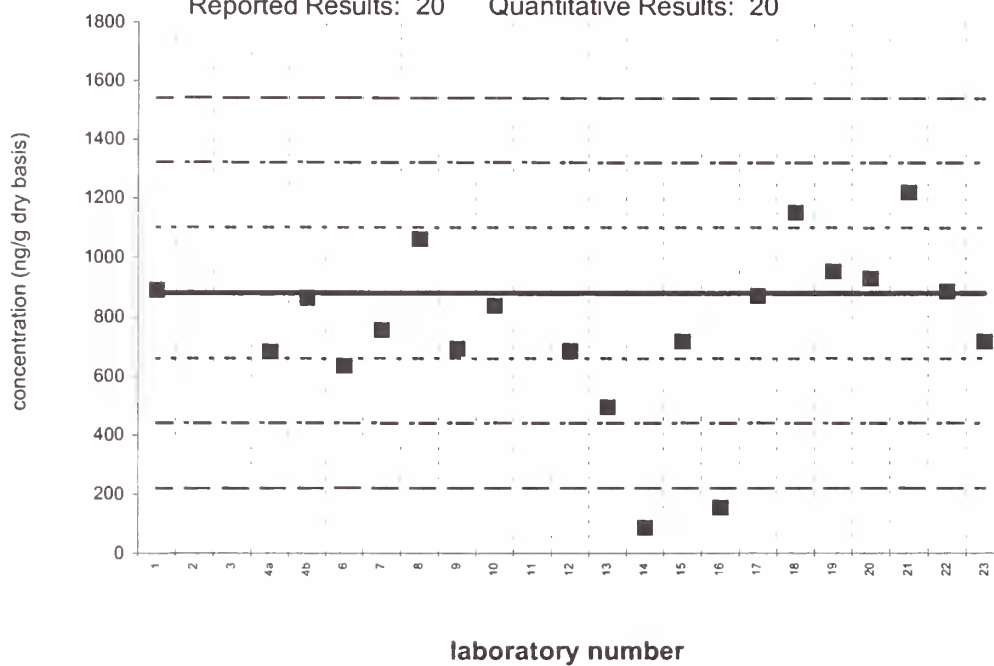
SRM 1944

Certified Value = 1170 ± 240 ng/g (dry basis)
Reported Results: 15 Quantitative Results: 15

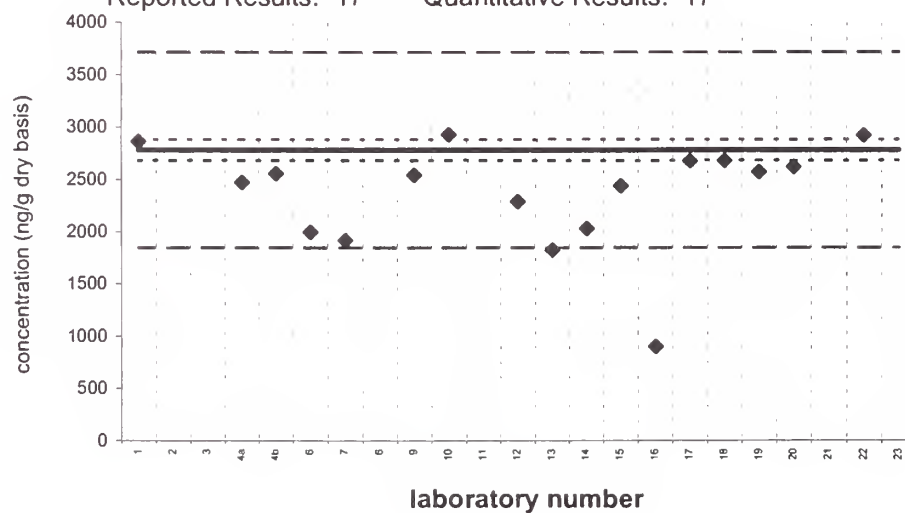


indeno[1,2,3-cd]pyrene**Sediment X (QA00SED10)**Assigned value = 881 ng/g $s = 164$ ng/g 95% CL = 84 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**indeno[1,2,3-cd]pyrene****SRM 1944**Certified Value = 2780 ± 100 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

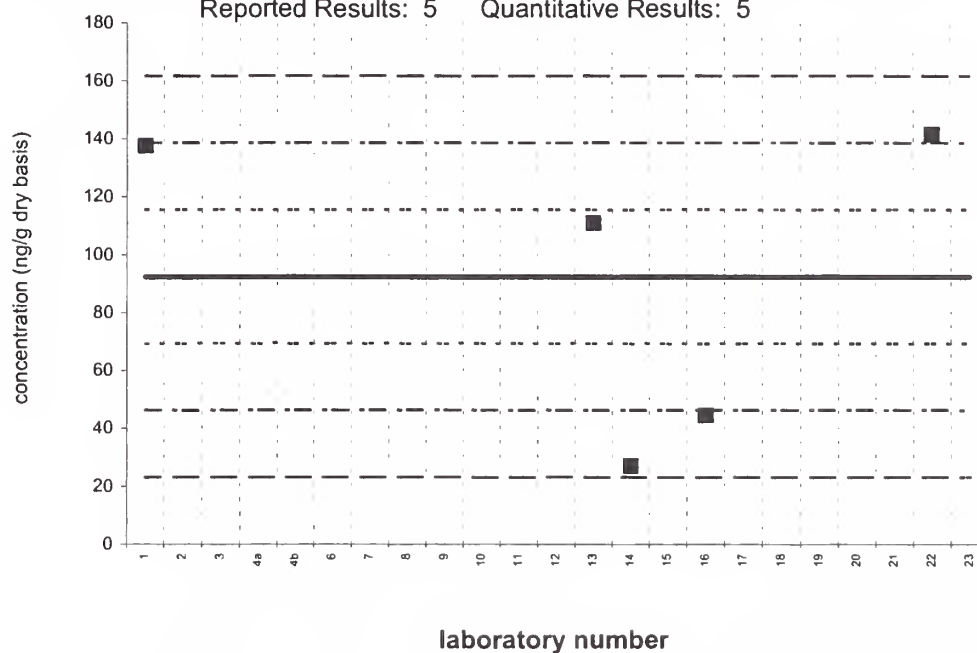


dibenz[a,h]anthracene

Sediment X (QA00SED10)

Assigned value = 92.4 ng/g $s = 53.3$ ng/g 95% CL = 66.2 ng/g (dry basis)

Reported Results: 5 Quantitative Results: 5

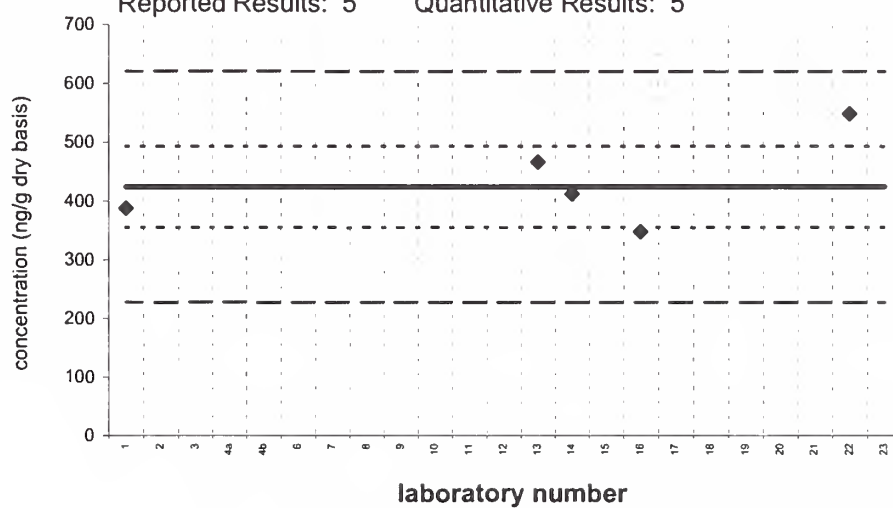


dibenz[a,h]anthracene

SRM 1944

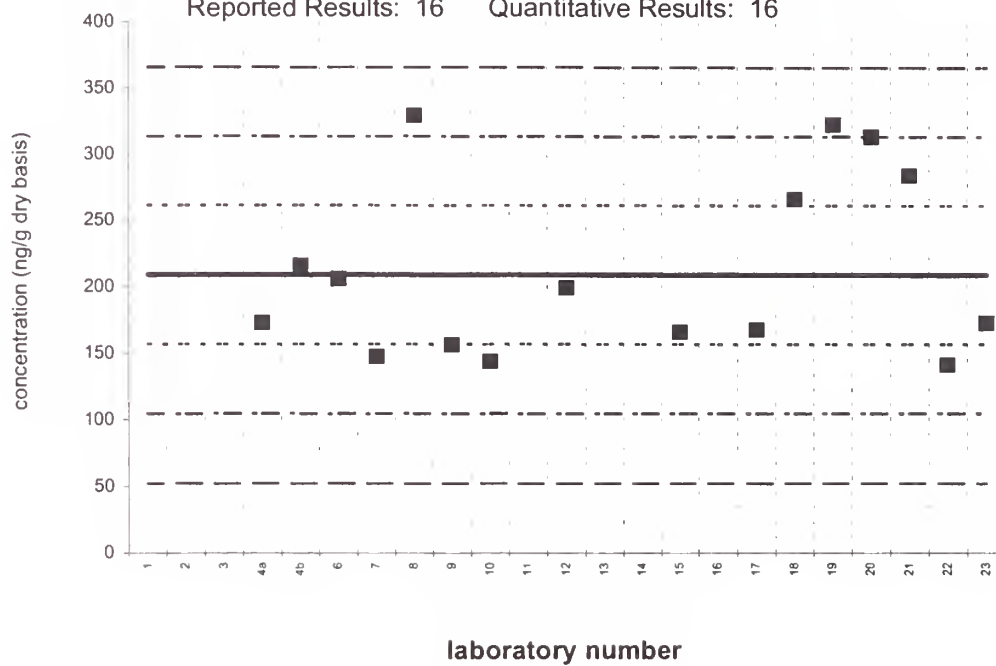
Certified Value = 424 \pm 69 ng/g (dry basis)

Reported Results: 5 Quantitative Results: 5

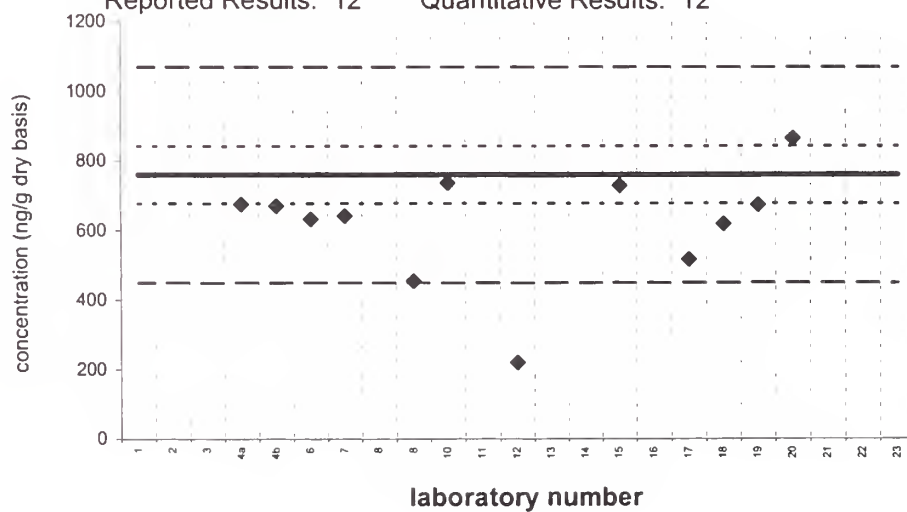


dibenz[a,h+a,c]anthracene**Sediment X (QA00SED10)**Assigned value = 209 ng/g $s = 70$ ng/g 95% CL = 40 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

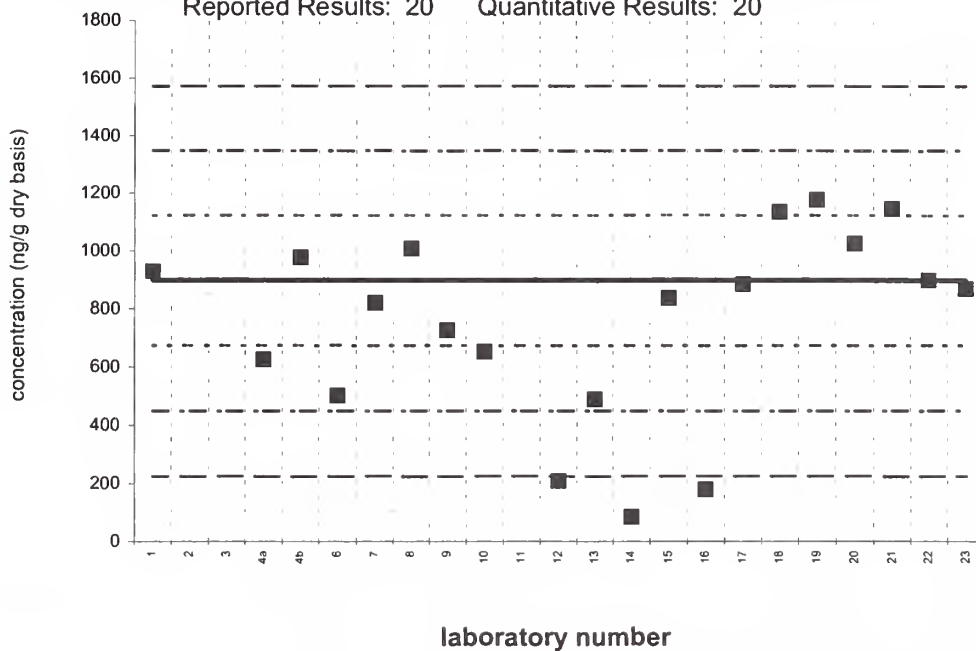
**Dibenz[a,h+a,c]anthracene****SRM 1944**Target Value = 759 \pm 82 ng/g (dry basis)

Reported Results: 12 Quantitative Results: 12

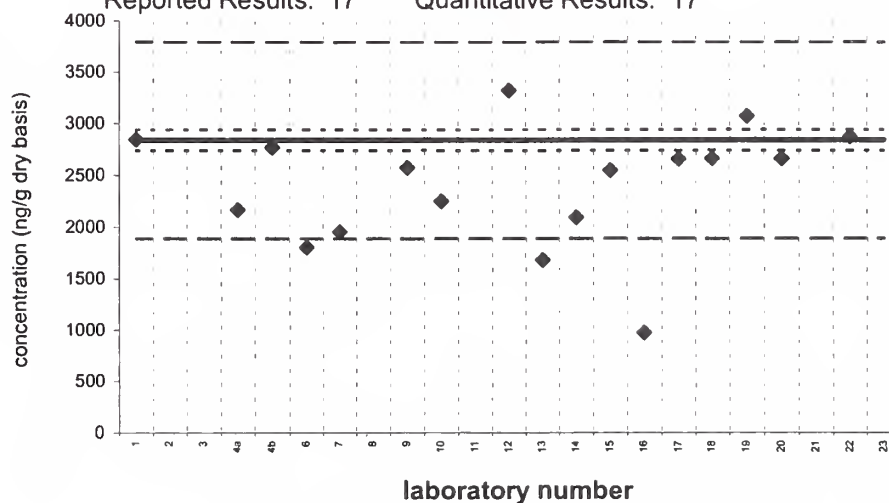


benzo[ghi]perylene**Sediment X (QA00SED10)**Assigned value = 899 ng/g $s = 187$ ng/g 95% CL = 108 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**benzo[ghi]perylene****SRM 1944**Certified Value = 2840 ± 100 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

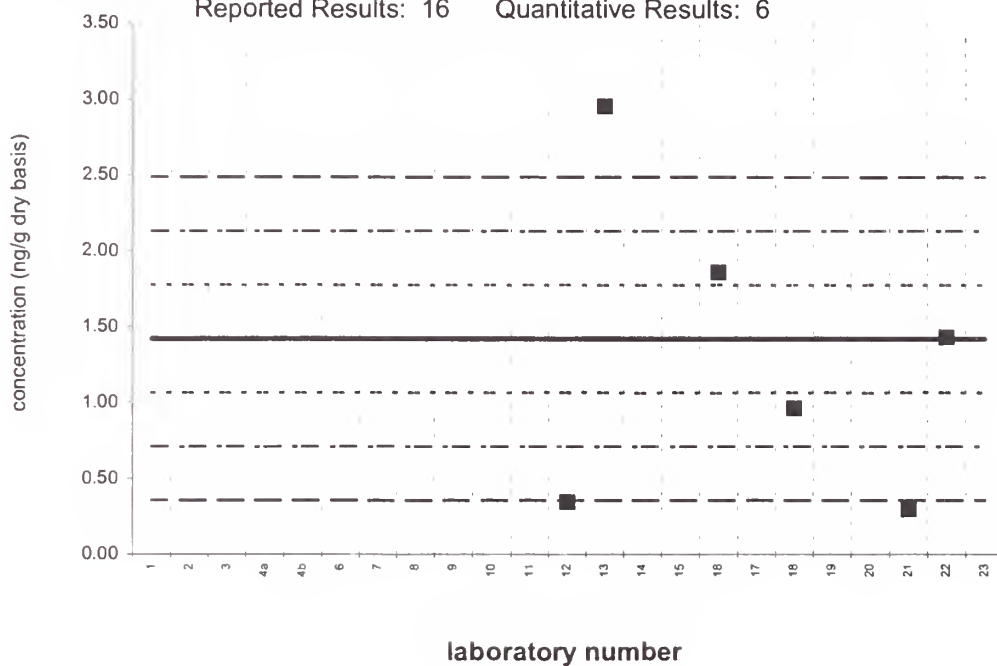


alpha-HCH

Sediment X (QA00SED10)

Assigned value = 1.42 ng/g $s = 0.45$ ng/g 95% CL = 1.11 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 6

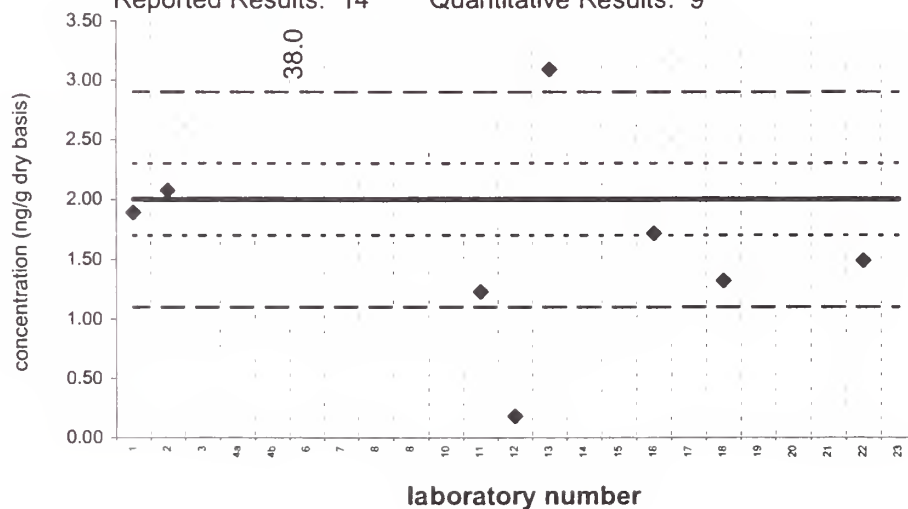


alpha-HCH

SRM 1944

Reference Value = 2.00 ± 0.30 ng/g (dry basis)

Reported Results: 14 Quantitative Results: 9

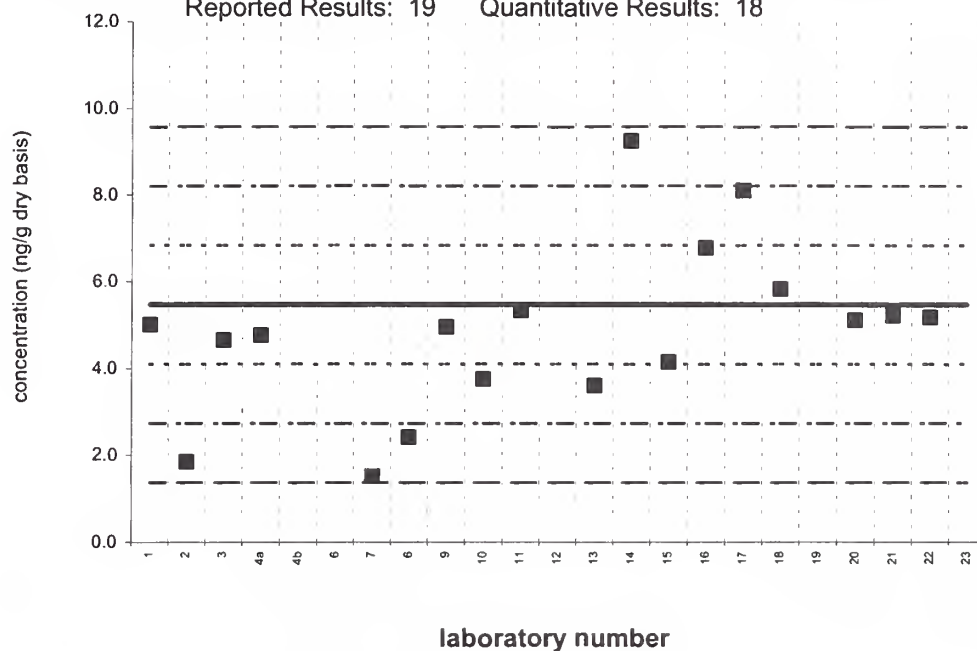


hexachlorobenzene

Sediment X (QA00SED10)

Assigned value = 5.47 ng/g $s = 1.80$ ng/g 95% CL = 1.04 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 18

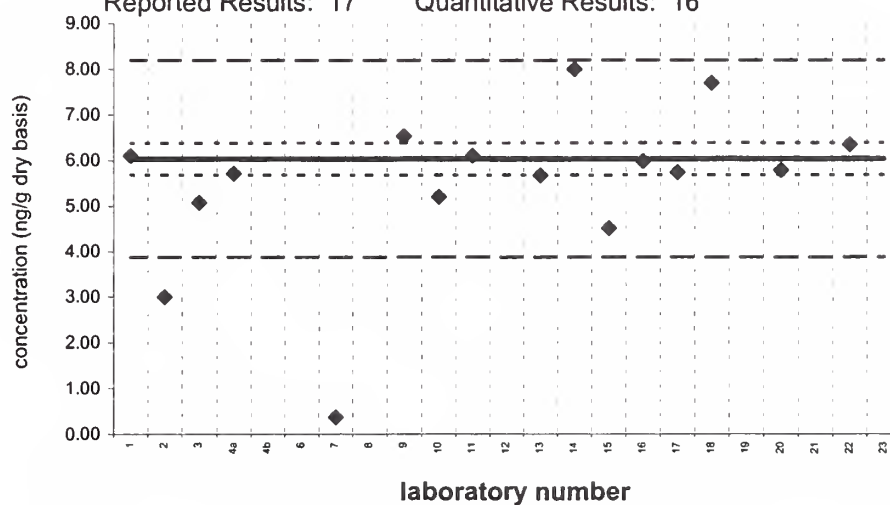


hexachlorobenzene

SRM 1944

Certified Value = 6.03 ± 0.35 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 16



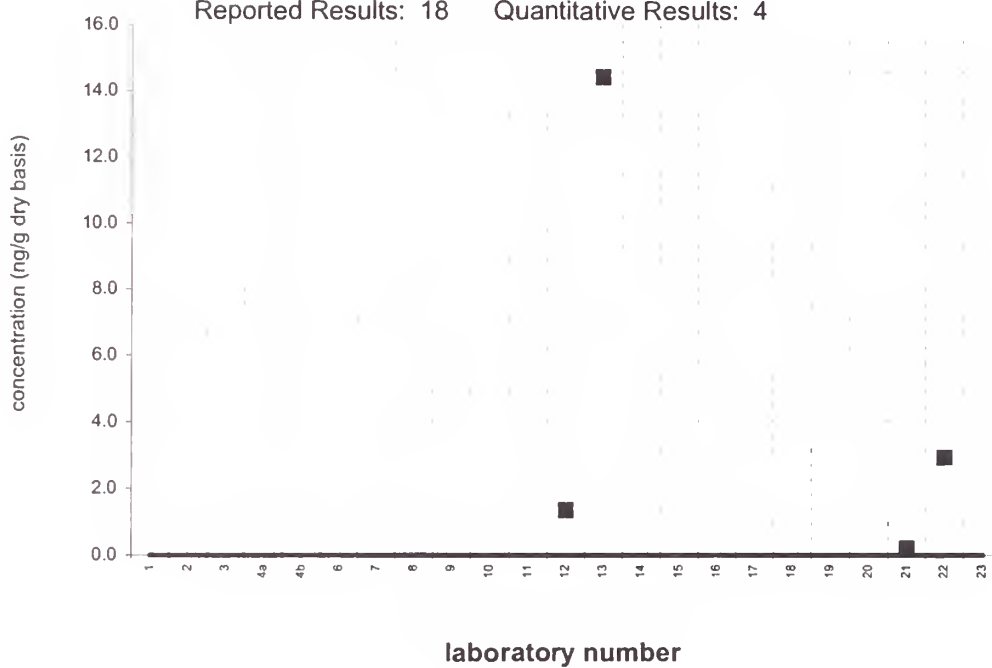
gamma-HCH

Sediment X (QA00SED10)

Assigned value = <4 ng/g (dry basis)

Reported Results: 18

Quantitative Results: 4



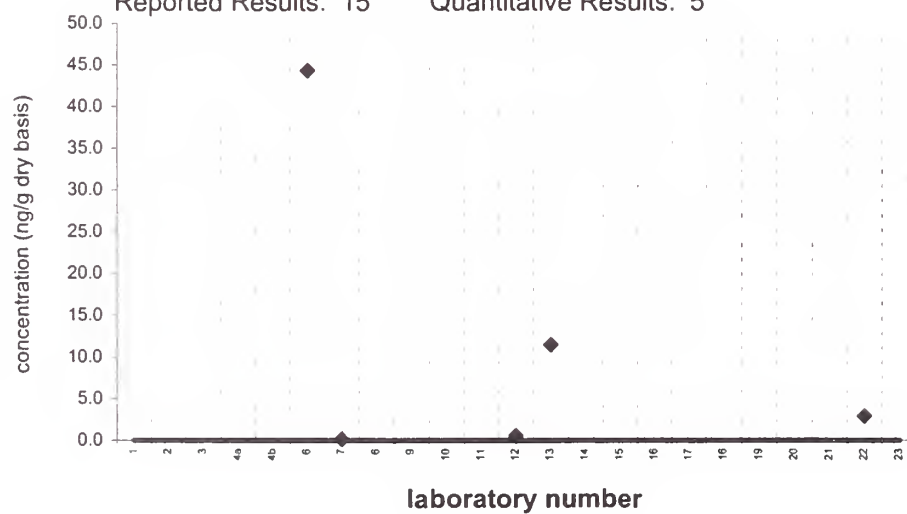
gamma-HCH

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 15

Quantitative Results: 5



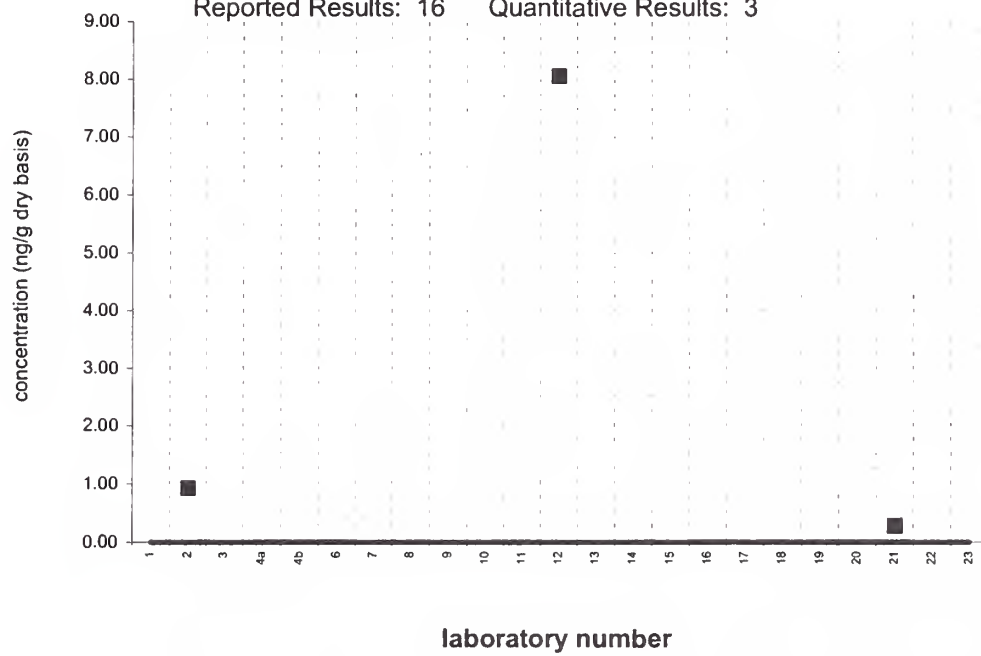
beta-HCH (b-HCH)

Sediment X (QA00SED10)

Assigned value = <2 ng/g (dry basis)

Reported Results: 16

Quantitative Results: 3



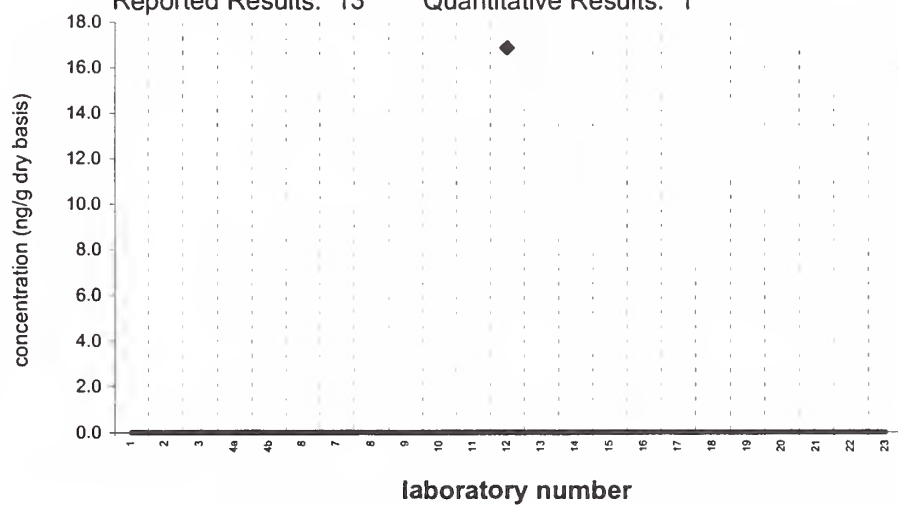
beta-HCH (b-HCH)

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 13

Quantitative Results: 1

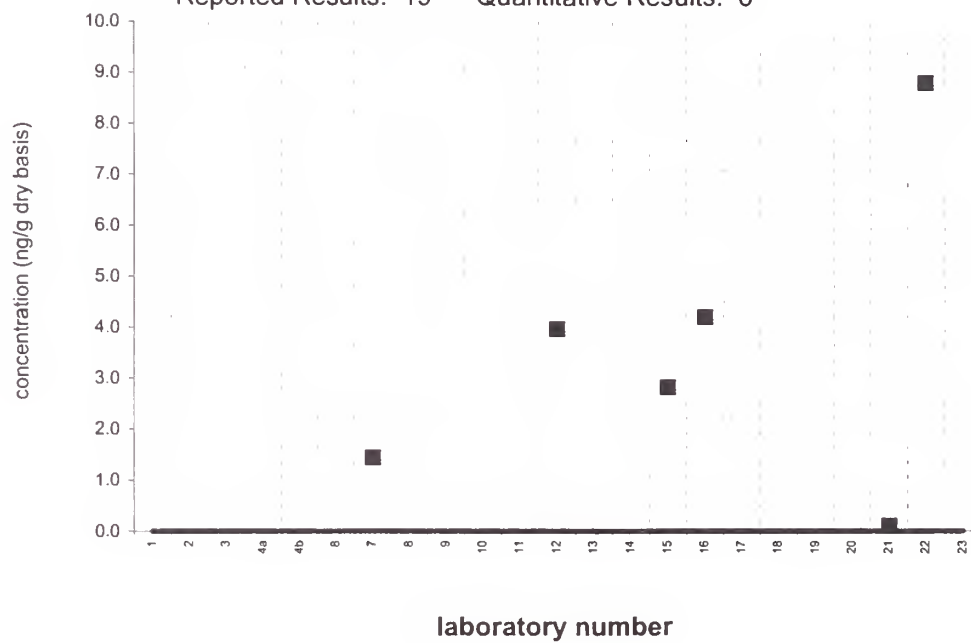


heptachlor

Sediment X (QA00SED10)

Assigned value = <4 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 6

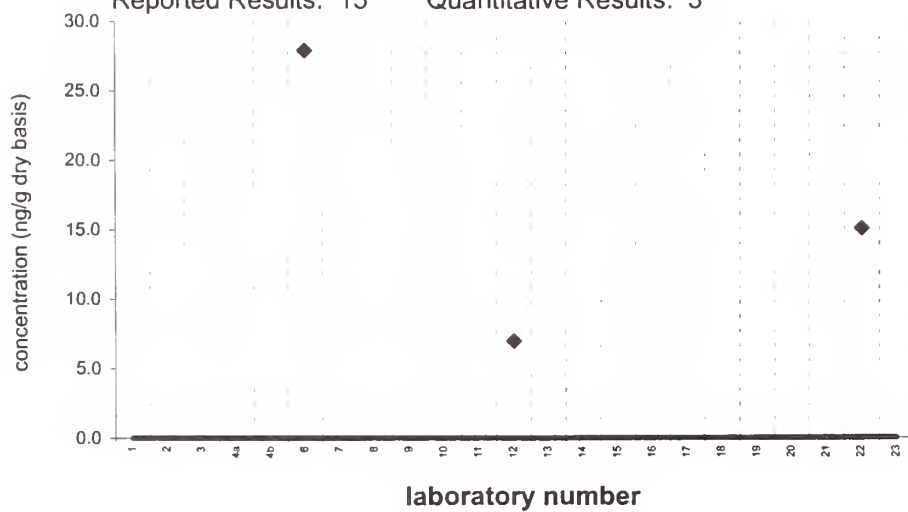


heptachlor

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 15 Quantitative Results: 3

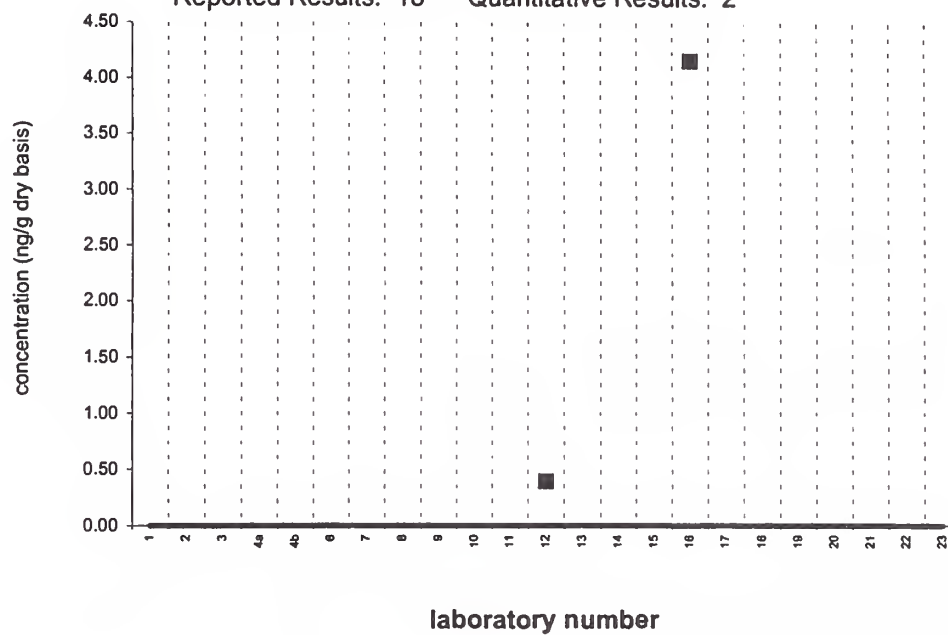


aldrin

Sediment X (QA00SED10)

Assigned value = <4 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 2

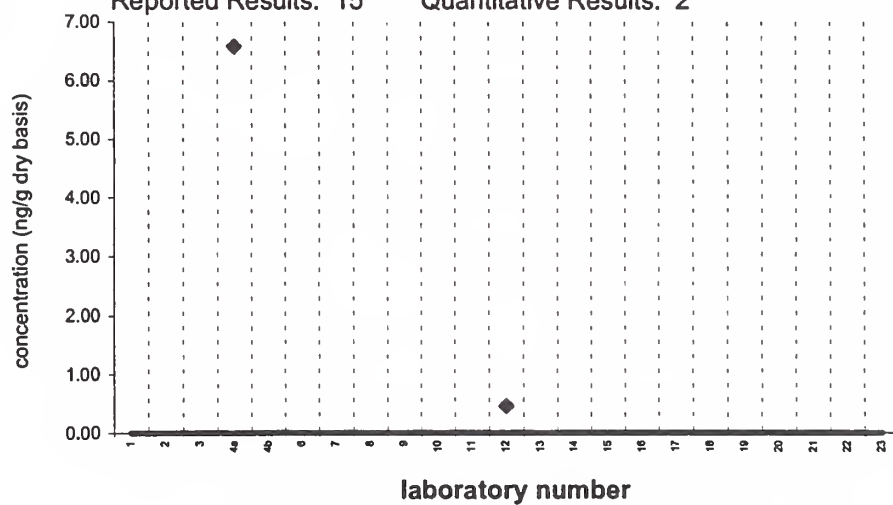


aldrin

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 15 Quantitative Results: 2



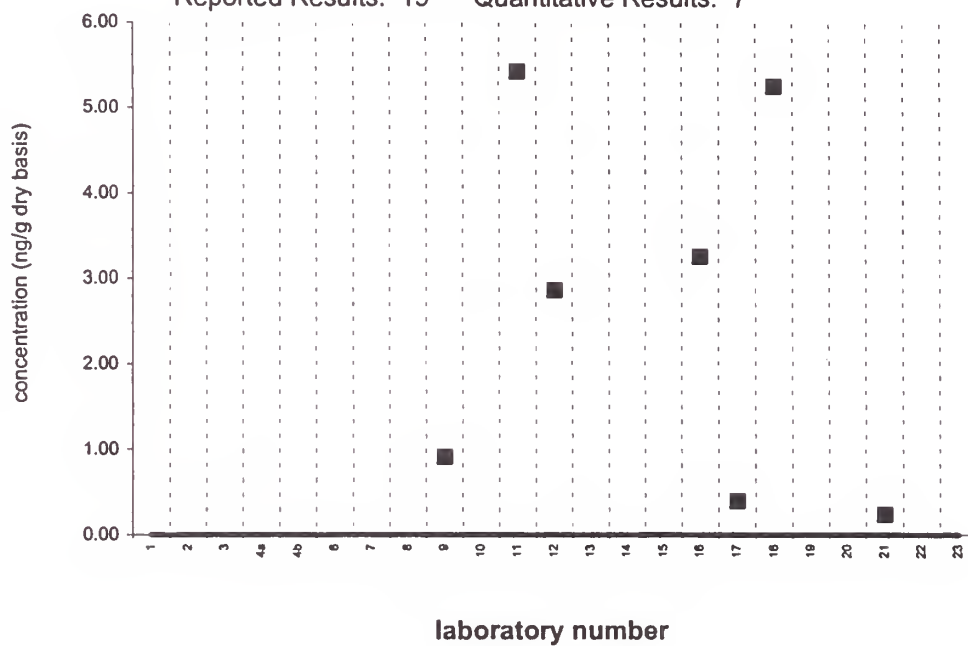
heptachlor epoxide

Sediment X (QA00SED10)

Assigned value = <6 ng/g (dry basis)

Reported Results: 19

Quantitative Results: 7



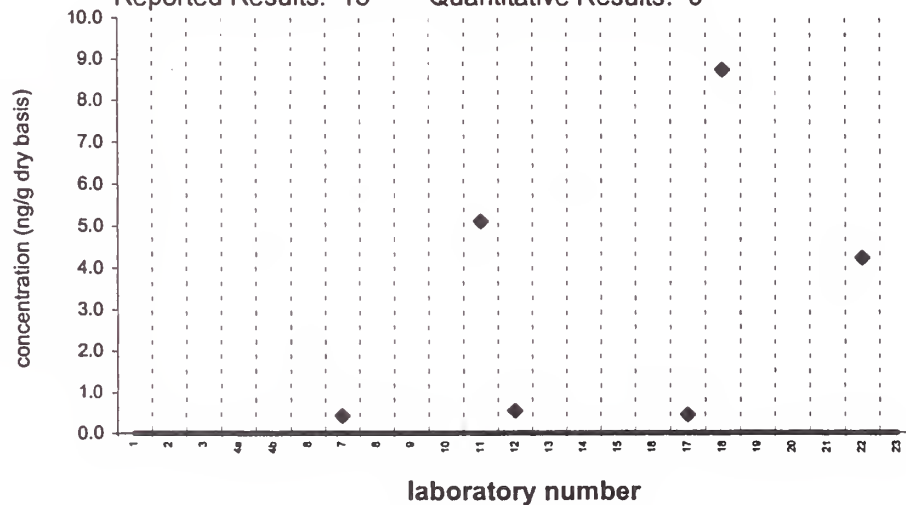
heptachlor epoxide

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 15

Quantitative Results: 6

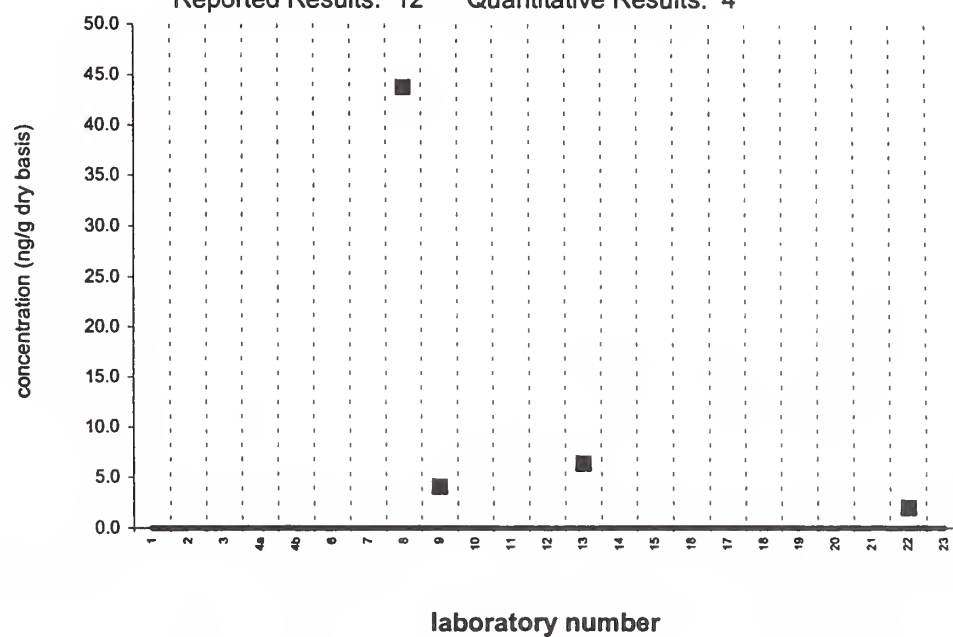


oxychlordanes

Sediment X (QA00SED10)

Assigned value = <6 ng/g (dry basis)

Reported Results: 12 Quantitative Results: 4

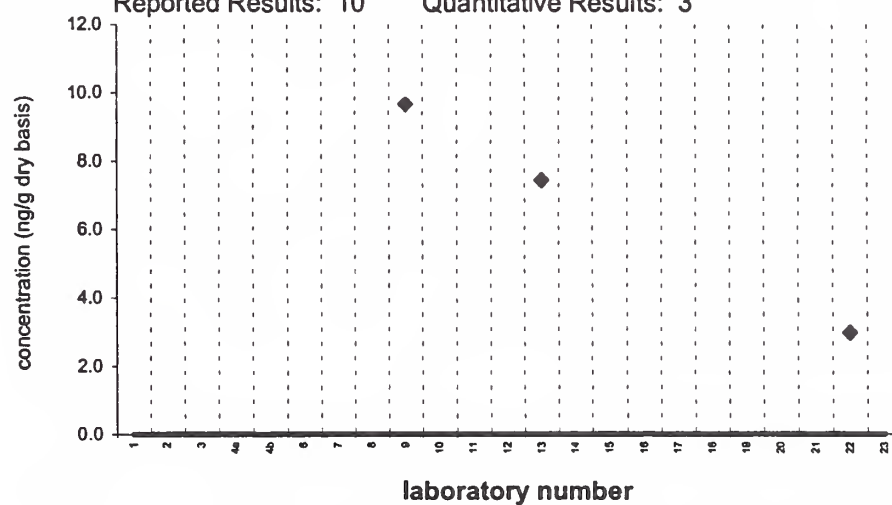


oxychlordanes

SRM 1944

Target Value = no target ng/g (dry basis)

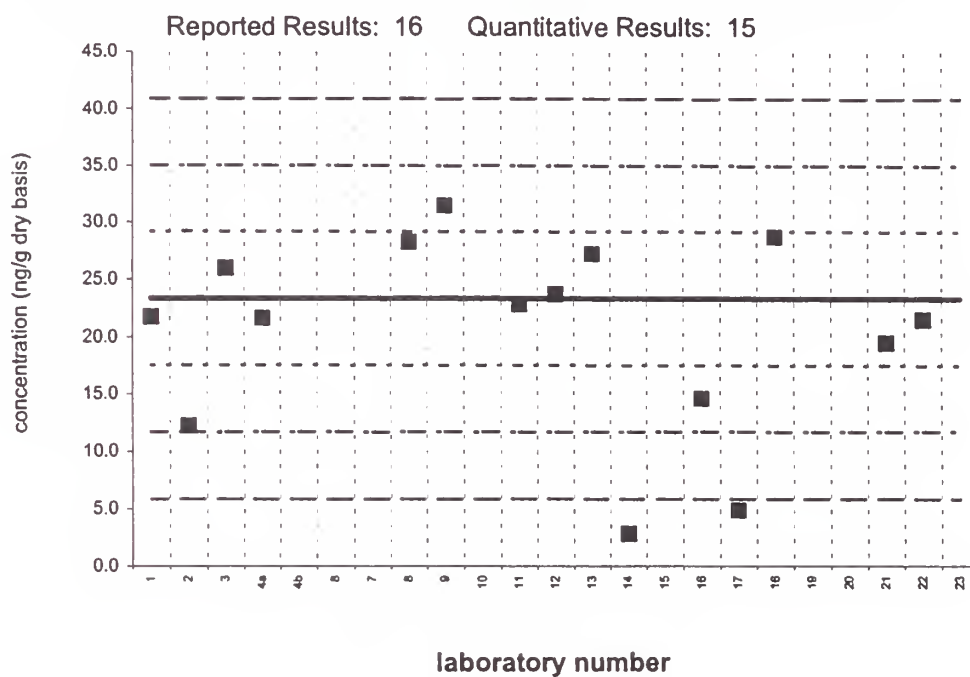
Reported Results: 10 Quantitative Results: 3



gamma-chlordane (trans-chlordane)

Sediment X (QA00SED10)

Assigned value = 23.4 ng/g $s = 5.7$ ng/g 95% CL = 3.6 ng/g (dry basis)

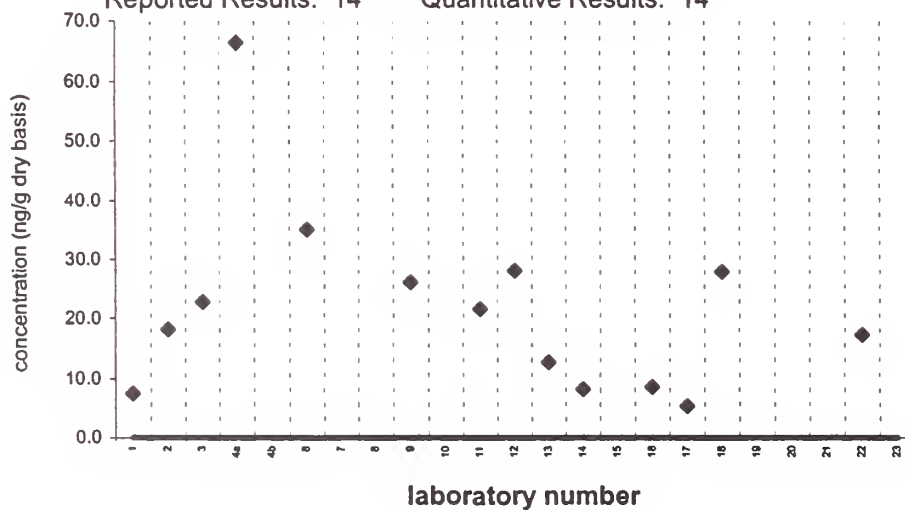


gamma-chlordane (trans-chlordane)

SRM 1944

Target Value = no target ng/g (dry basis)

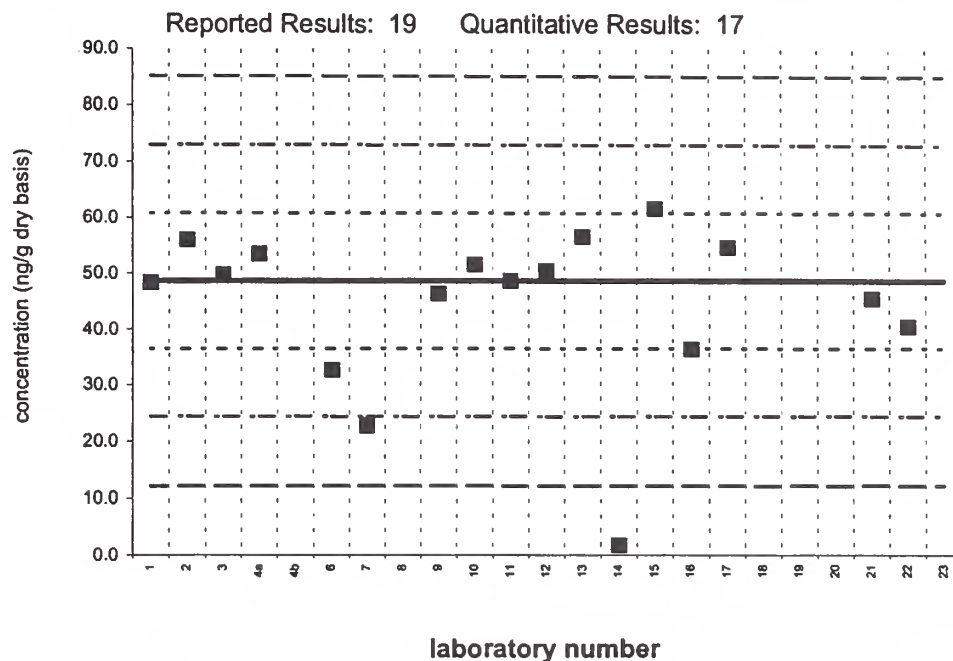
Reported Results: 14 Quantitative Results: 14



2,4'-DDE

Sediment X (QA00SED10)

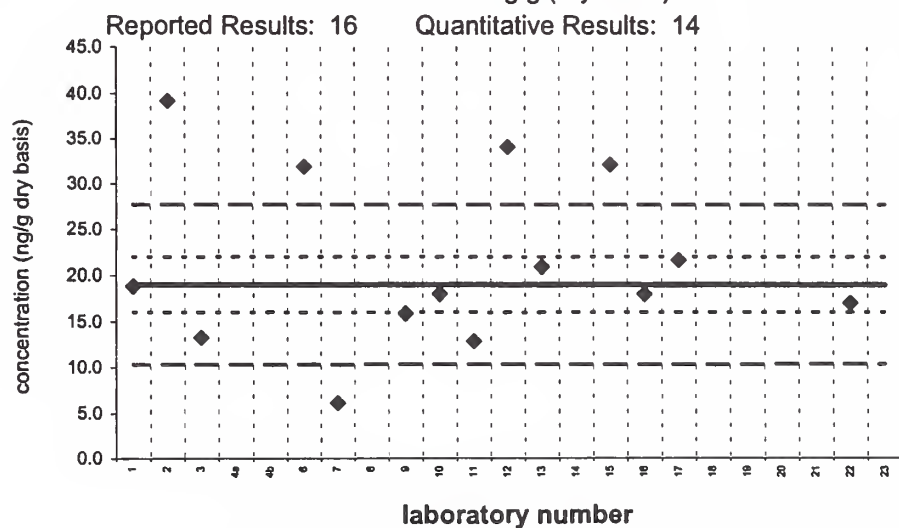
Assigned value = 48.6 ng/g $s = 6.3$ ng/g 95% CL = 4.5 ng/g (dry basis)



2,4'-DDE

SRM 1944

Reference Value = 19.0 ± 3.0 ng/g (dry basis)



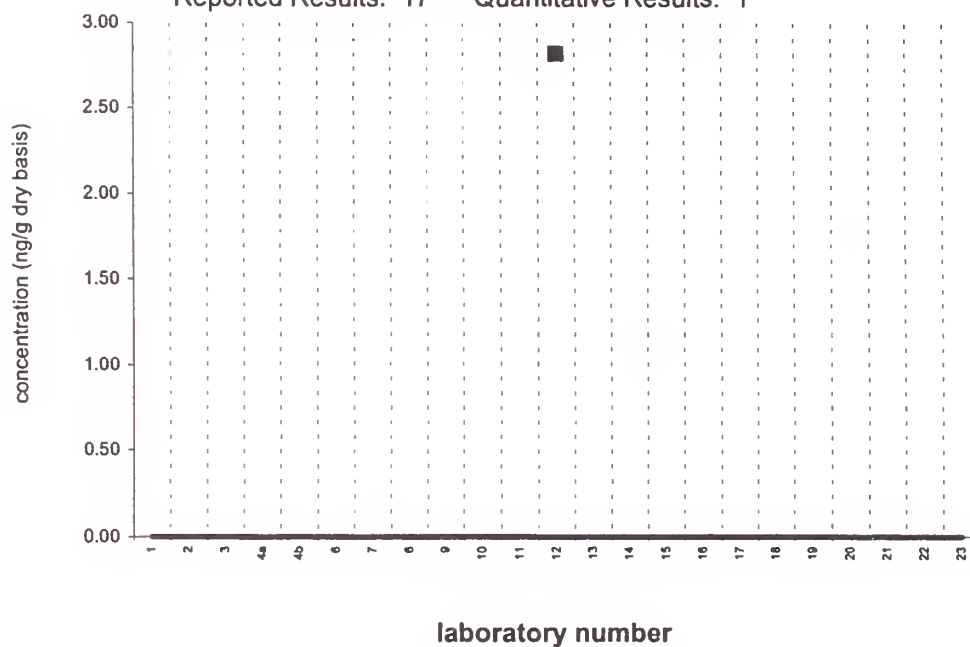
endosulfan I

Sediment X (QA00SED10)

Assigned value = <3 ng/g (dry basis)

Reported Results: 17

Quantitative Results: 1



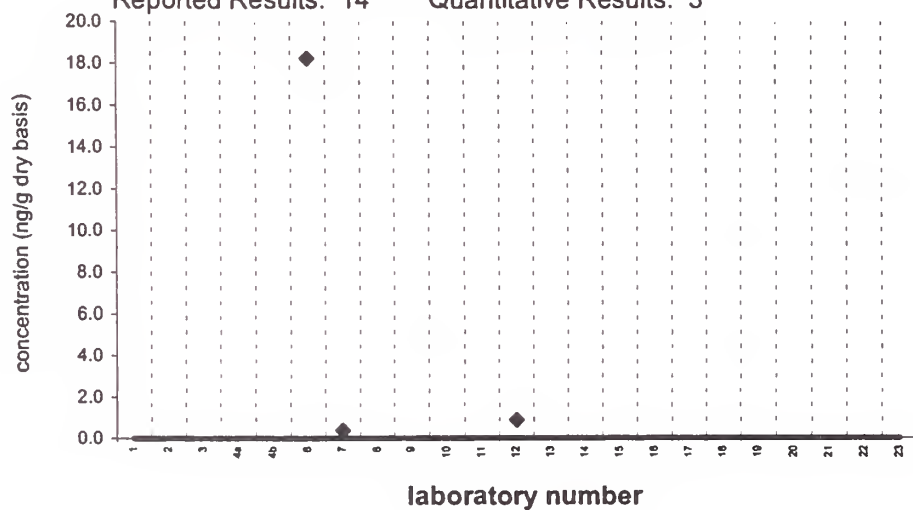
endosulfan I

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 14

Quantitative Results: 3

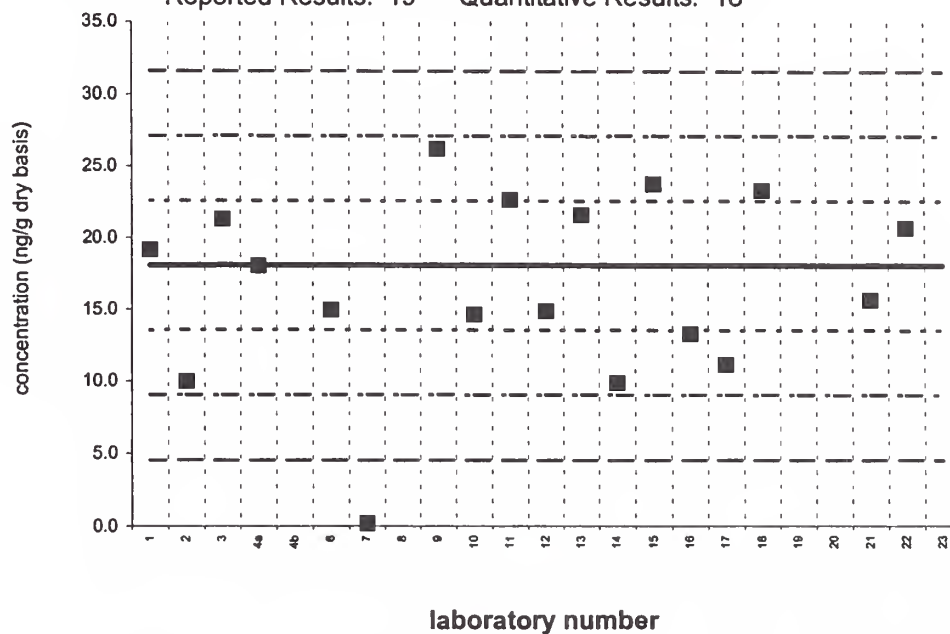


cis-chlordane

Sediment X (QA00SED10)

Assigned value = 18.1 ng/g $s = 5.4$ ng/g 95% CL = 3.0 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 18

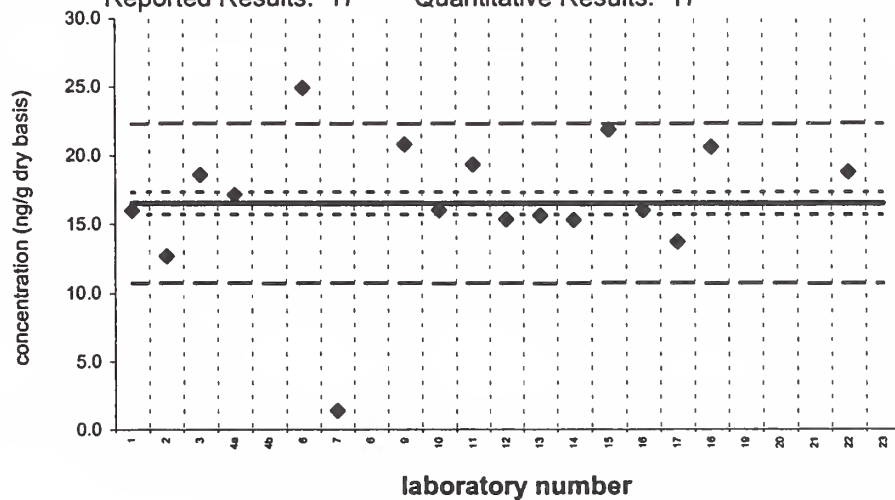


cis-chlordane

SRM 1944

Certified Value = 16.5 ± 0.8 ng/g (dry basis)

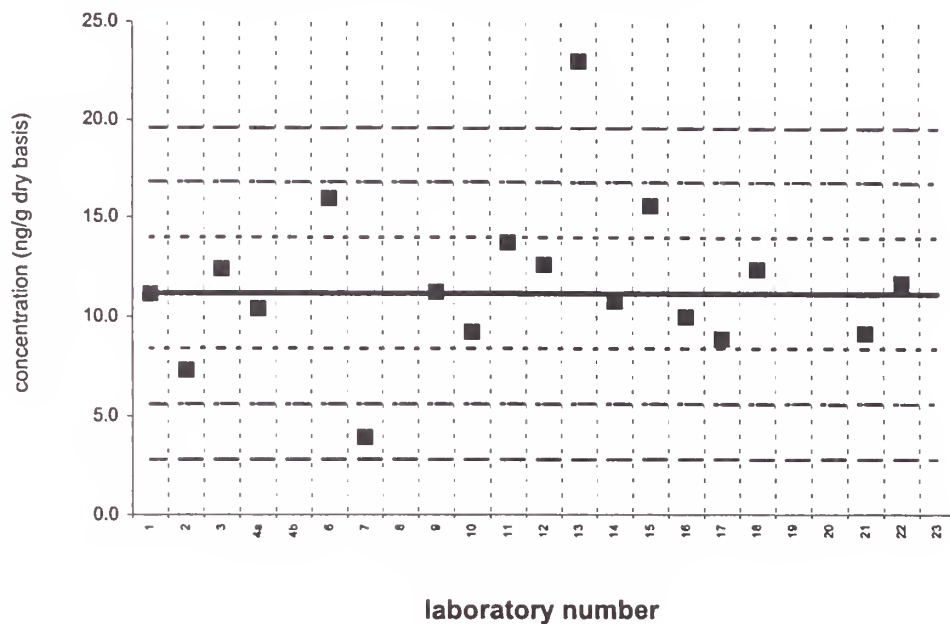
Reported Results: 17 Quantitative Results: 17



trans-nonachlor**Sediment X (QA00SED10)**

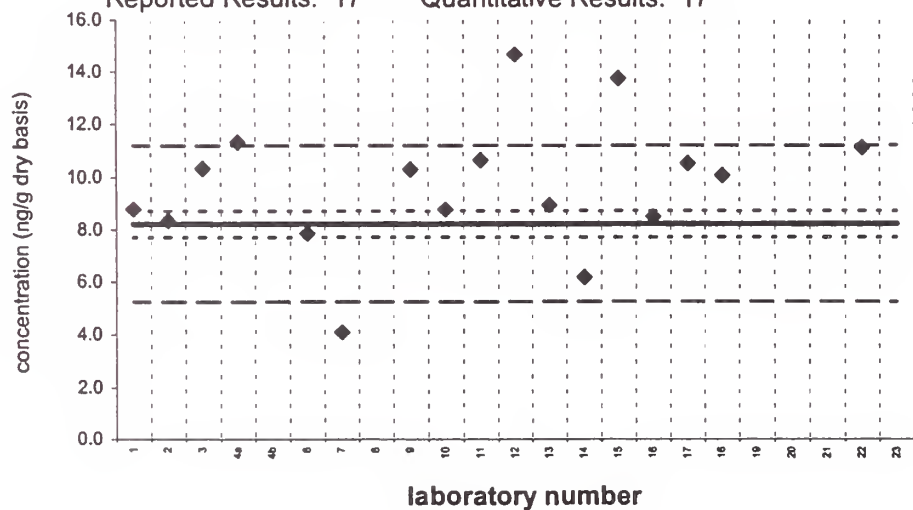
Assigned value = 11.2 ng/g $s = 2.2$ ng/g 95% CL = 1.3 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 18

**trans-nonachlor****SRM 1944**

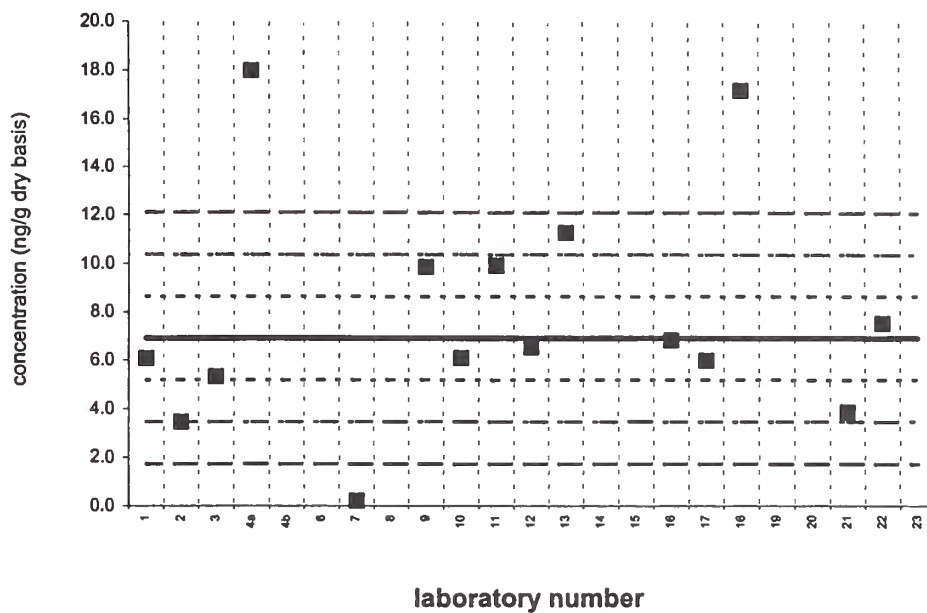
Certified Value = 8.20 ± 0.51 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

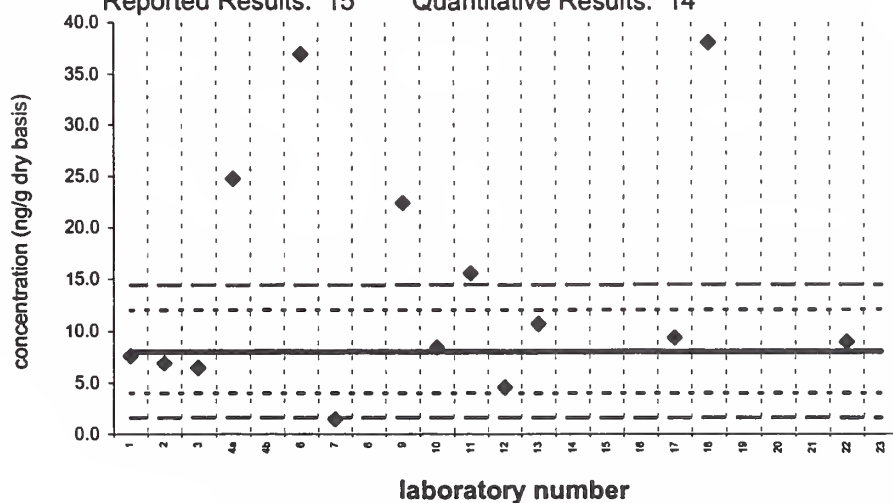


dieldrin**Sediment X (QA00SED10)**Assigned value = 6.90 ng/g $s = 2.25$ ng/g 95% CL = 1.61 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 15

**dieldrin****SRM 1944**Target Value = 8.00 \pm 4.00 ng/g (dry basis)

Reported Results: 15 Quantitative Results: 14

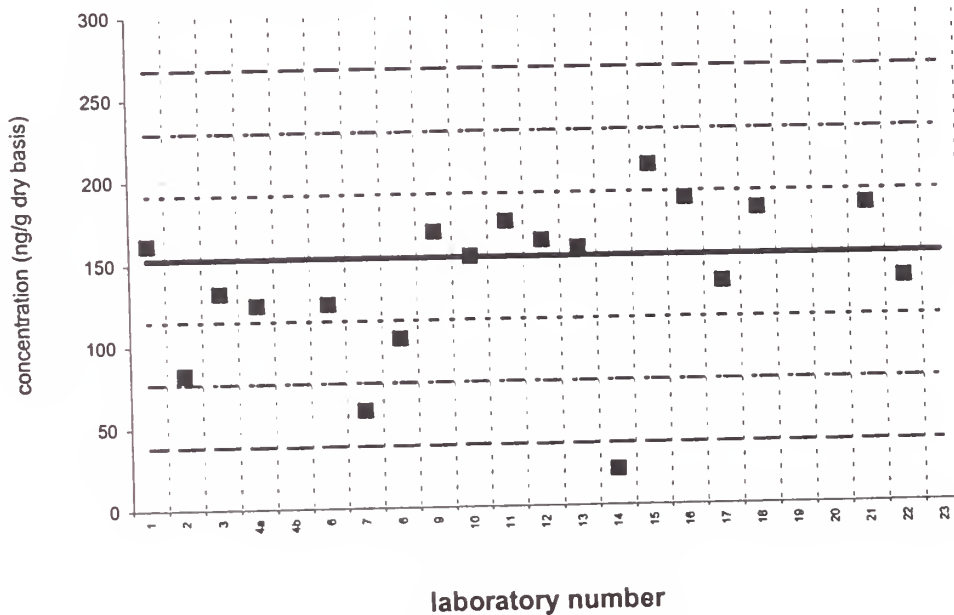


4,4'-DDE

Sediment X (QA00SED10)

Assigned value = 153 ng/g $s = 31$ ng/g 95% CL = 17 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 19

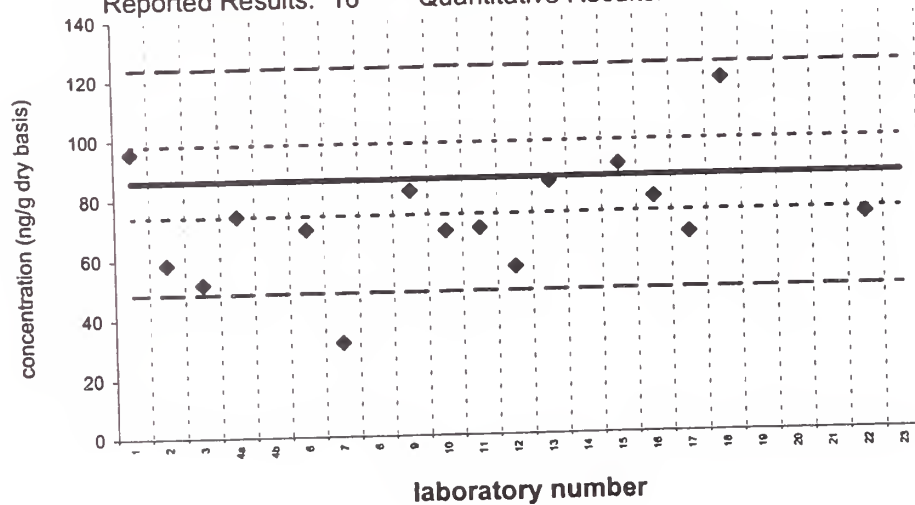


4,4'-DDE

SRM 1944

Reference Value = 86.0 ± 12.0 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

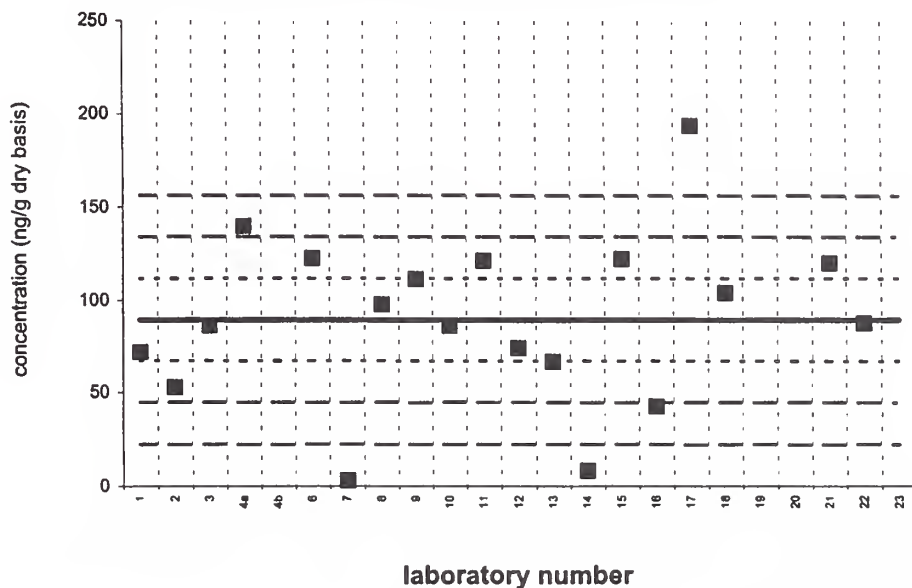


2,4'-DDD

Sediment X (QA00SED10)

Assigned value = 89.4 ng/g $s = 28.6$ ng/g 95% CL = 17.3 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 19

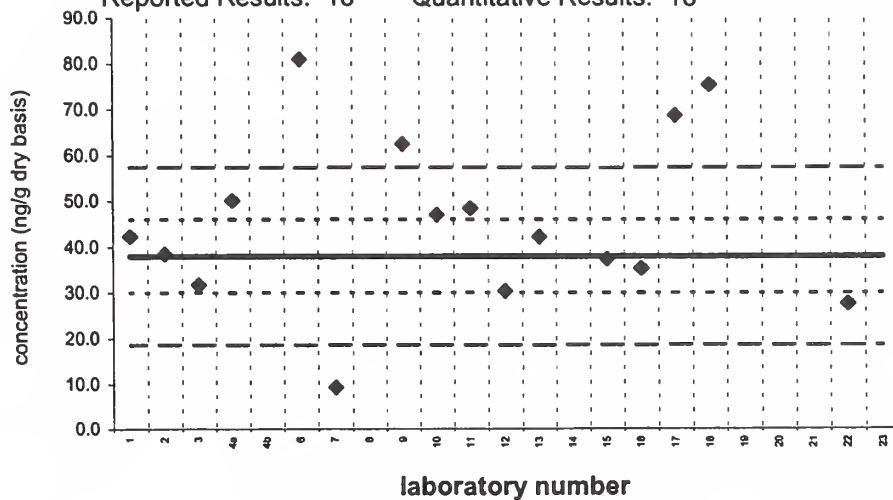


2,4'-DDD

SRM 1944

Reference Value = 38.0 ± 8.0 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

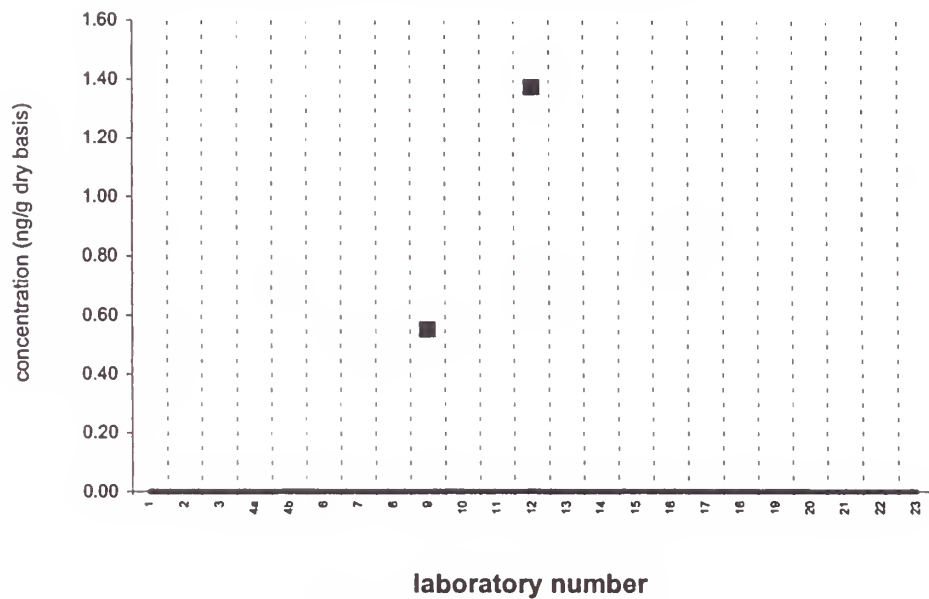


endrin

Sediment X (QA00SED10)

Assigned value = <2 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 2

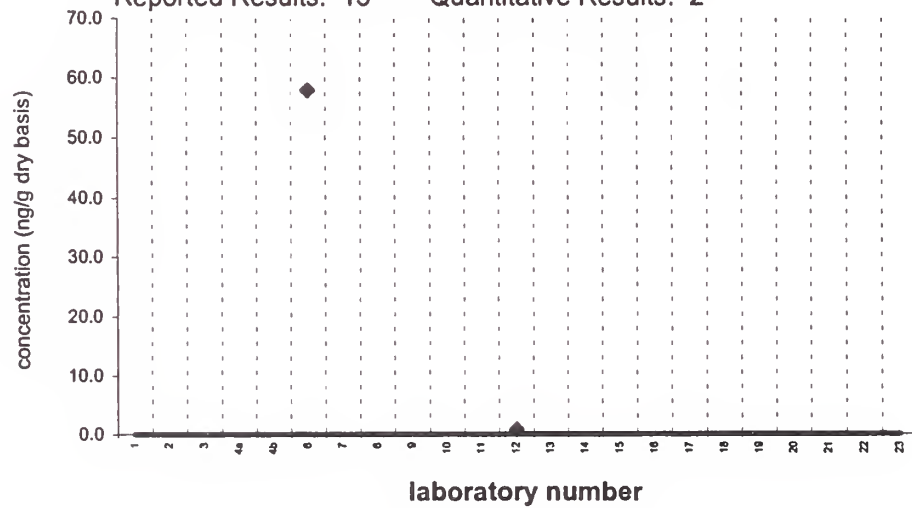


endrin

SRM 1944

Target Value = no target ng/g (dry basis)

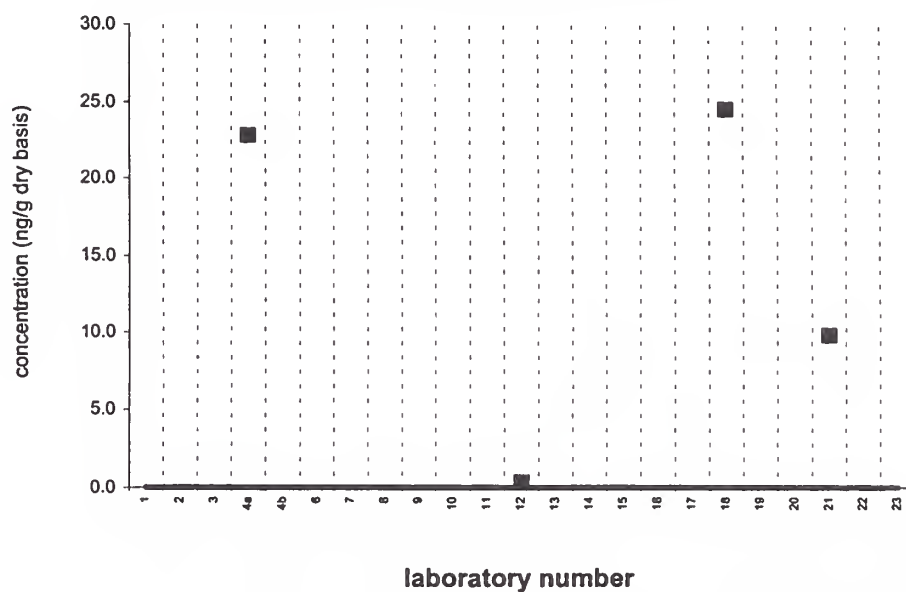
Reported Results: 13 Quantitative Results: 2



endosulfan II

Sediment X (QA00SED10)

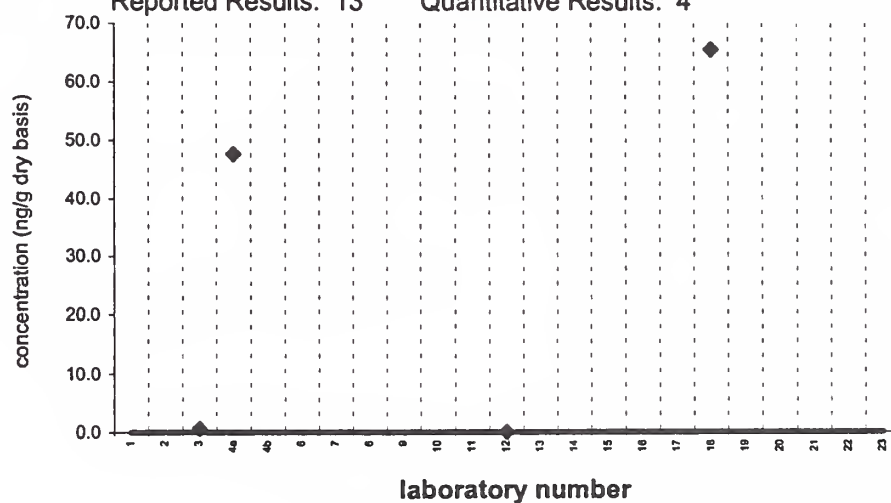
Assigned value = <4 ng/g (dry basis)
Reported Results: 16 Quantitative Results: 4



endosulfan II

SRM 1944

Target Value = no target ng/g (dry basis)
Reported Results: 13 Quantitative Results: 4

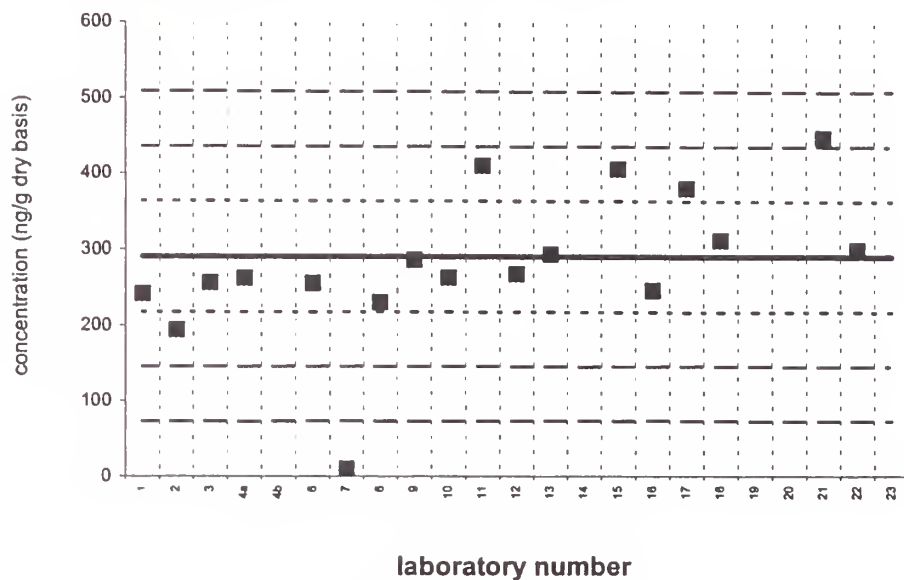


4,4'-DDD

Sediment X (QA00SED10)

Assigned value = 291 ng/g $s = 64$ ng/g 95% CL = 37 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 18

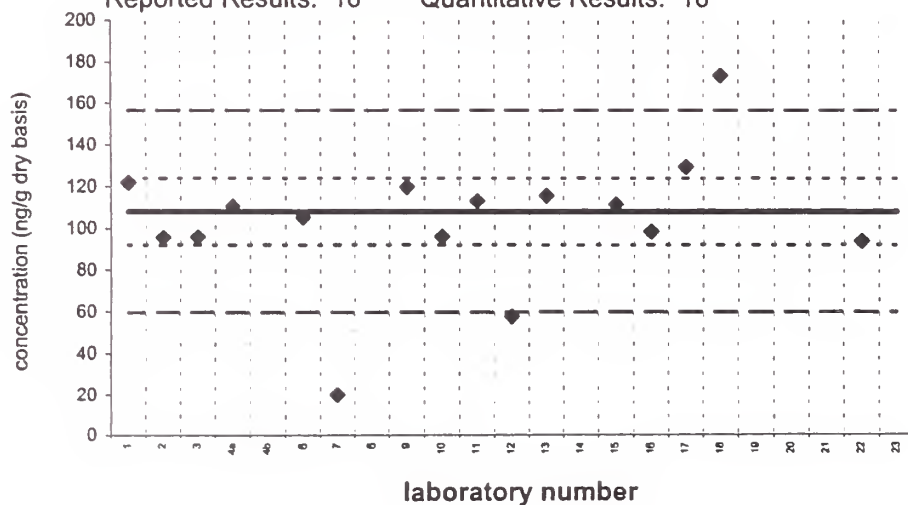


4,4'-DDD

SRM 1944

Reference Value = 108 ± 16 ng/g (dry basis)

Reported Results: 16 Quantitative Results: 16

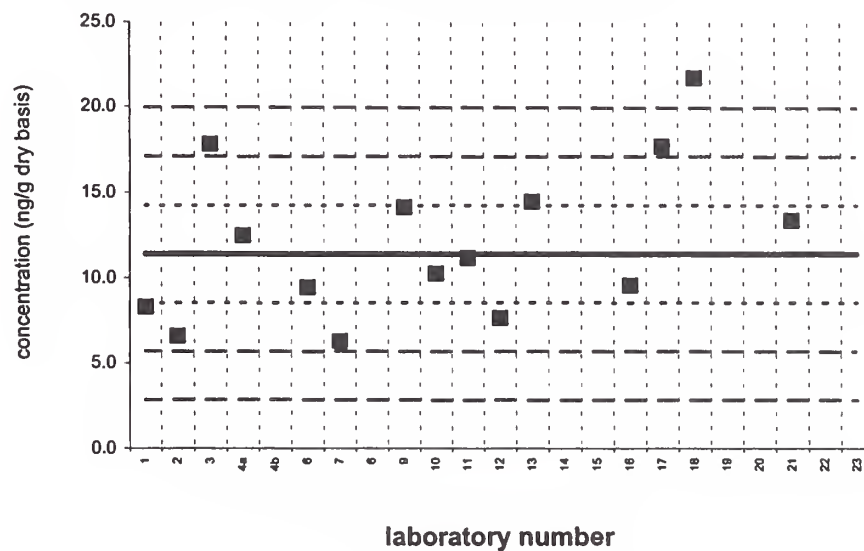


2,4'-DDT

Sediment X (QA00SED10)

Assigned value = 11.4 ng/g $s = 4.0$ ng/g 95% CL = 2.5 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 15

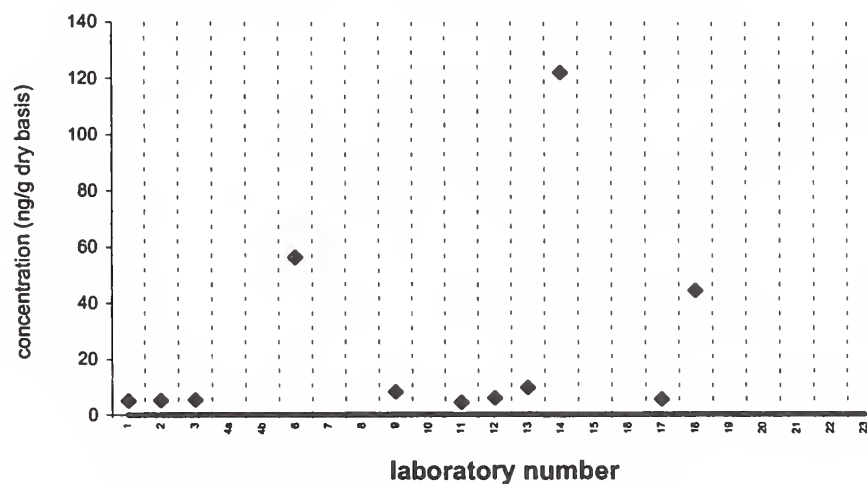


2,4'-DDT

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 15 Quantitative Results: 11

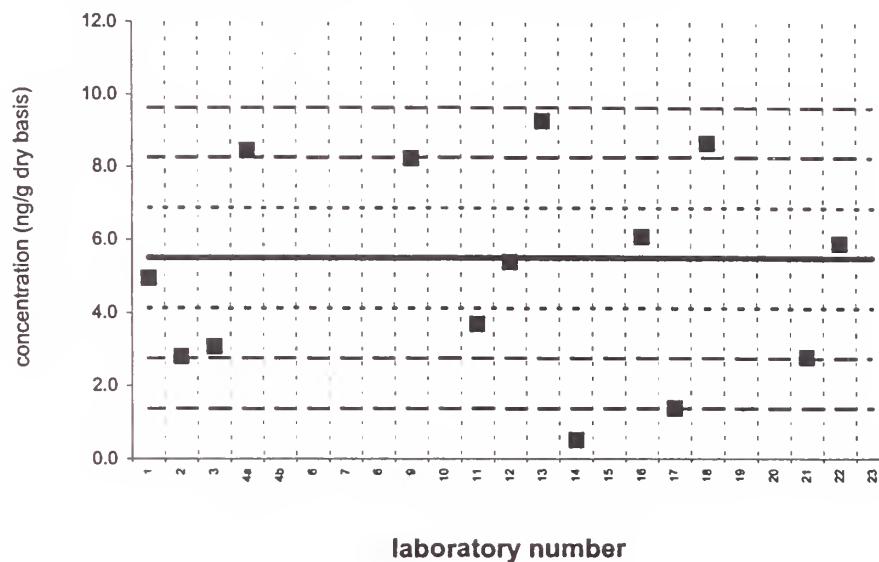


cis-nonachlor

Sediment X (QA00SED10)

Assigned value = 5.50 ng/g $s = 2.36$ ng/g 95% CL = 1.97 ng/g (dry basis)

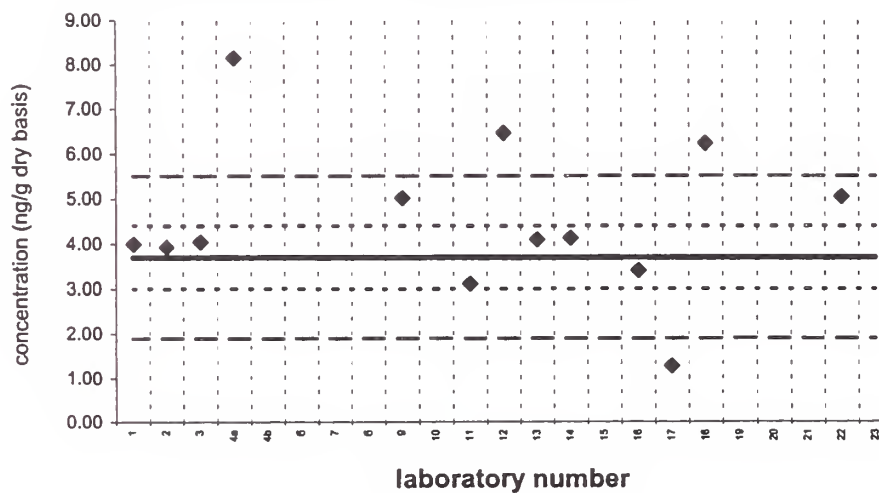
Reported Results: 16 Quantitative Results: 14



cis-nonachlor

SRM 1944

Reference Value = 3.70 ± 0.70 ng/g (dry basis)
Reported Results: 14 Quantitative Results: 13

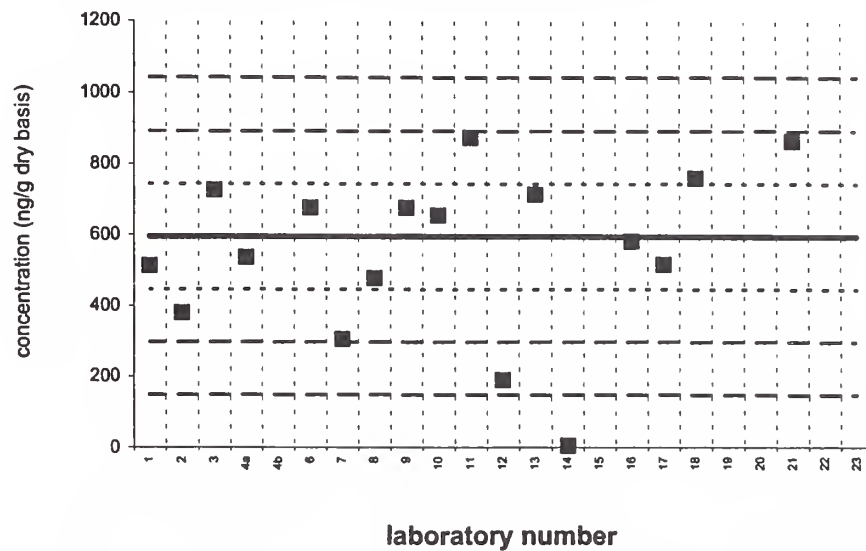


4,4'-DDT

Sediment X (QA00SED10)

Assigned value = 595 ng/g s = 120 ng/g 95% CL = 81 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

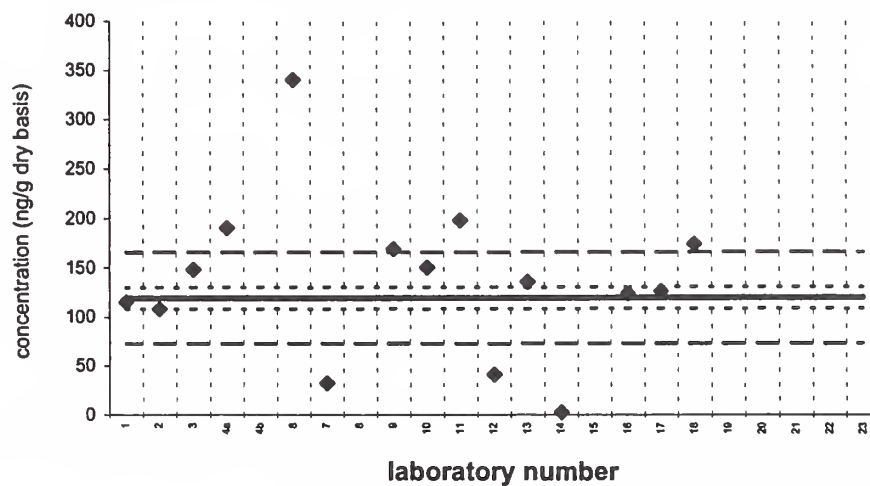


4,4'-DDT

SRM 1944

Certified Value = 119 ± 11 ng/g (dry basis)

Reported Results: 15 Quantitative Results: 15

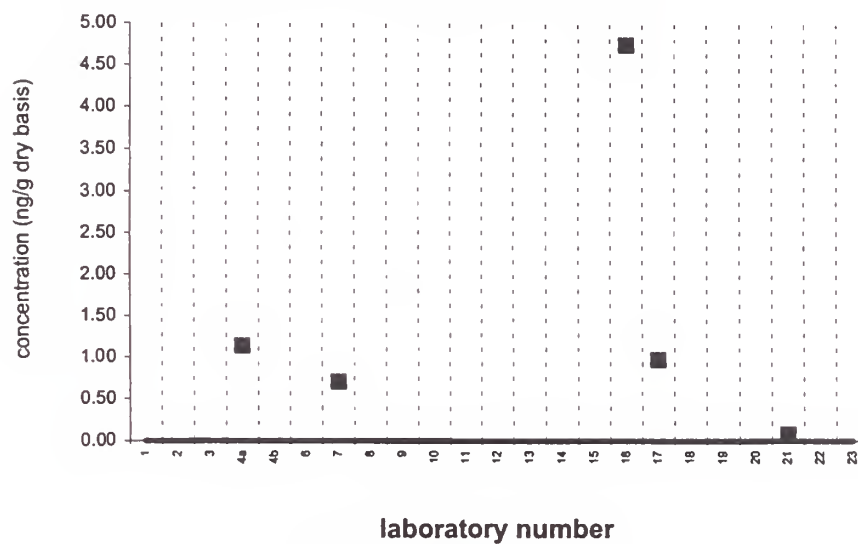


mirex

Sediment X (QA00SED10)

Assigned value = <2 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 5

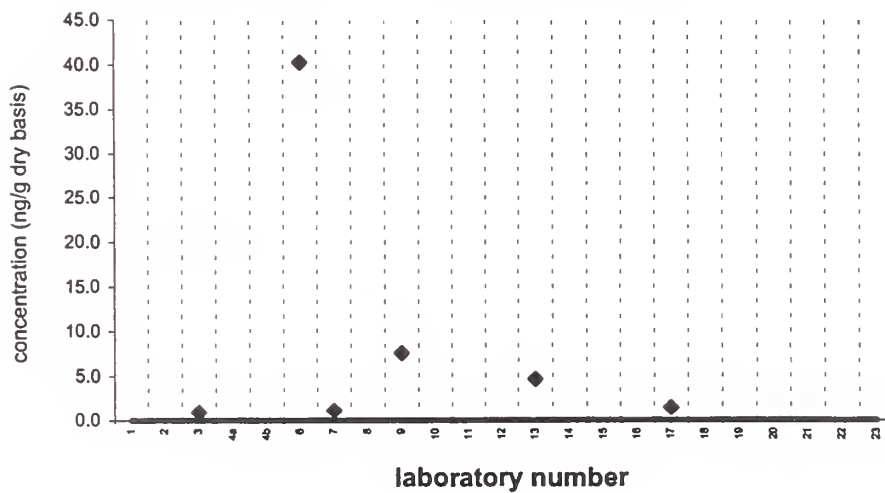


mirex

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 14 Quantitative Results: 6



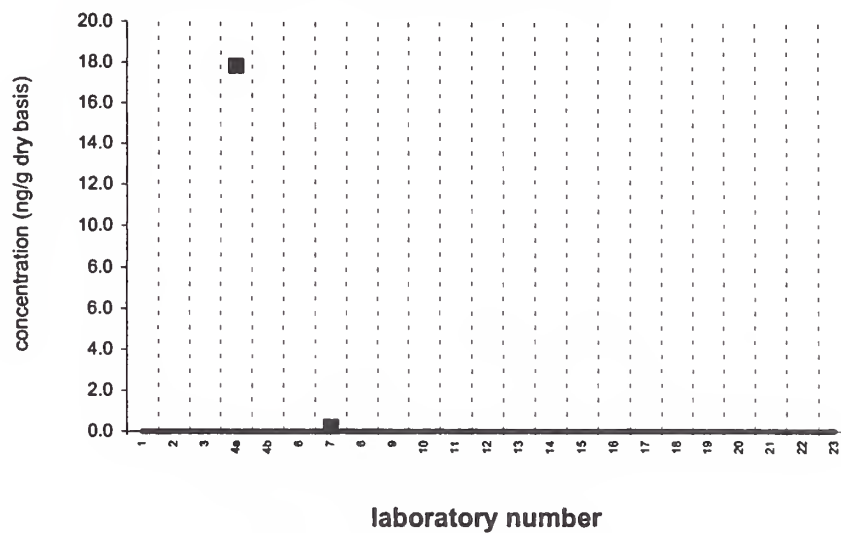
endosulfan sulfate

Sediment X (QA00SED10)

Assigned value = <2 ng/g (dry basis)

Reported Results: 14

Quantitative Results: 2



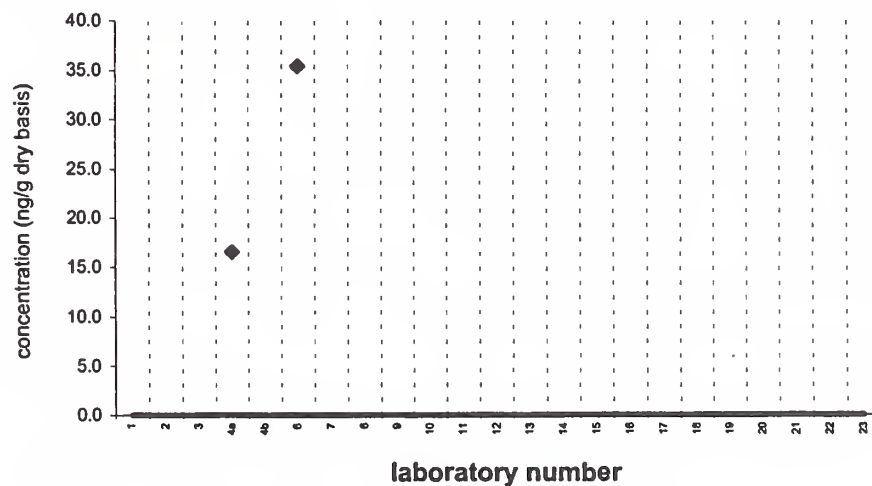
endosulfan sulfate

SRM 1944

Target Value = no target ng/g (dry basis)

Reported Results: 11

Quantitative Results: 2

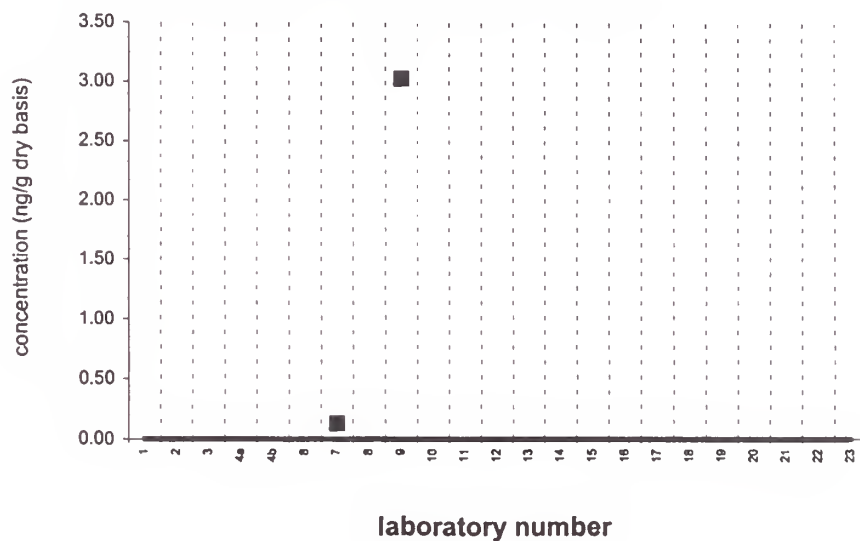


chlorpyrifos

Sediment X (QA00SED10)

Assigned value = <3 ng/g (dry basis)

Reported Results: 7 Quantitative Results: 2

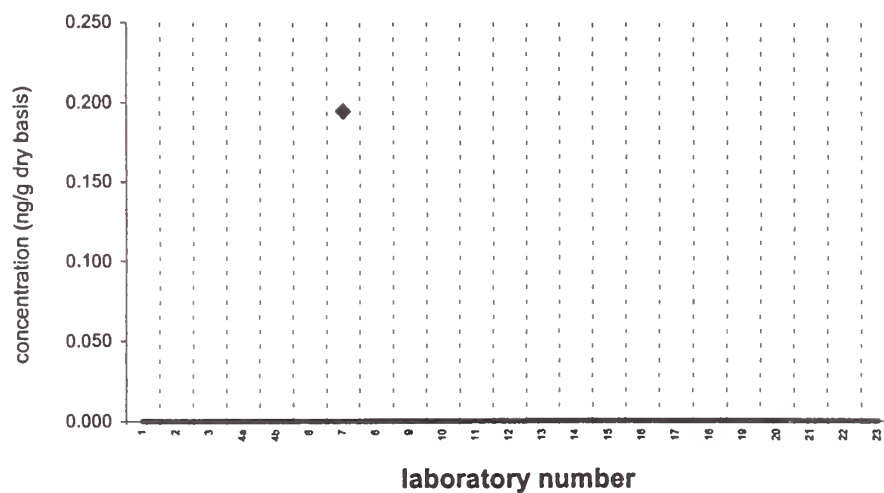


chlorpyrifos

SRM 1944

Target Value = no target ng/g (dry basis)

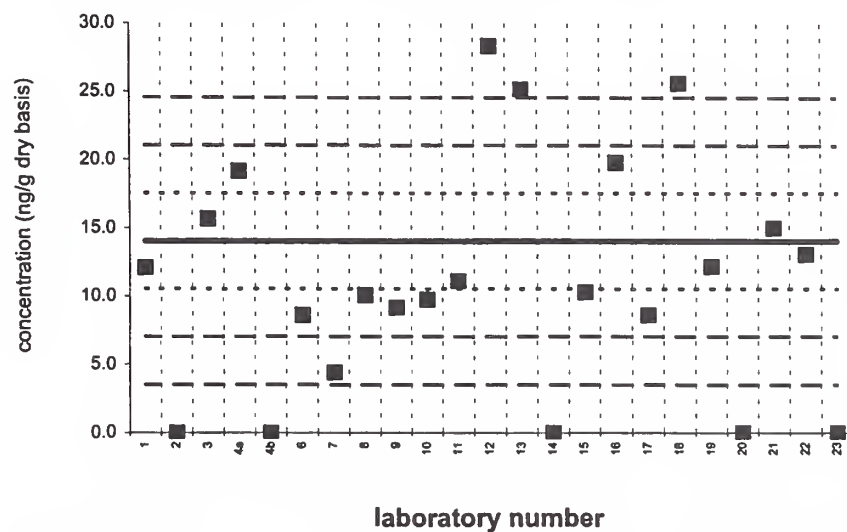
Reported Results: 7 Quantitative Results: 1



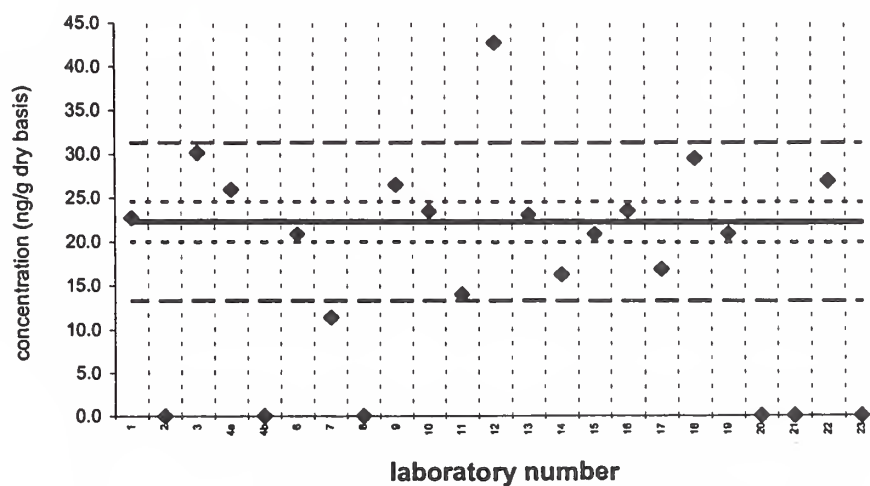
PCB 8**Sediment X (QA00SED10)**

Assigned value = 14.0 ng/g $s = 5.8$ ng/g 95% CL = 3.2 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 18

**PCB 8****SRM 1944**

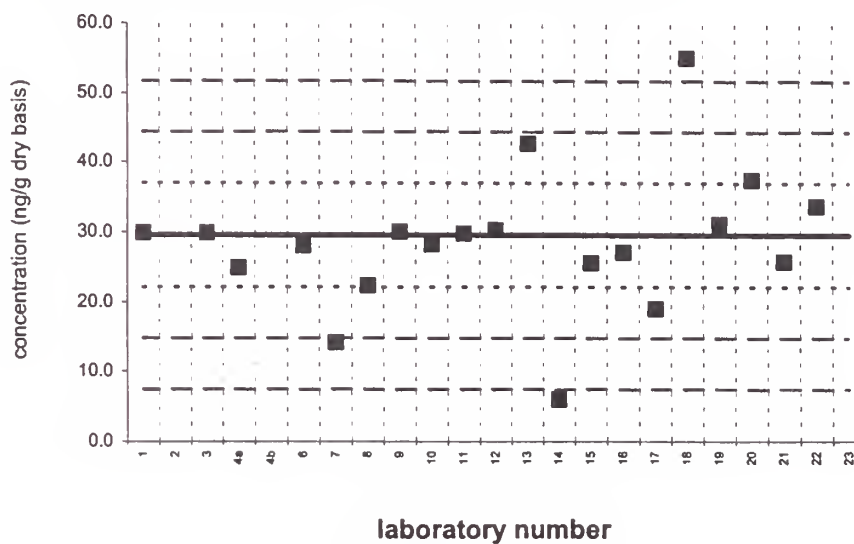
Certified Value = 22.3 ± 2.3 ng/g (dry basis)
Reported Results: 17 Quantitative Results: 17



PCB 18**Sediment X (QA00SED10)**

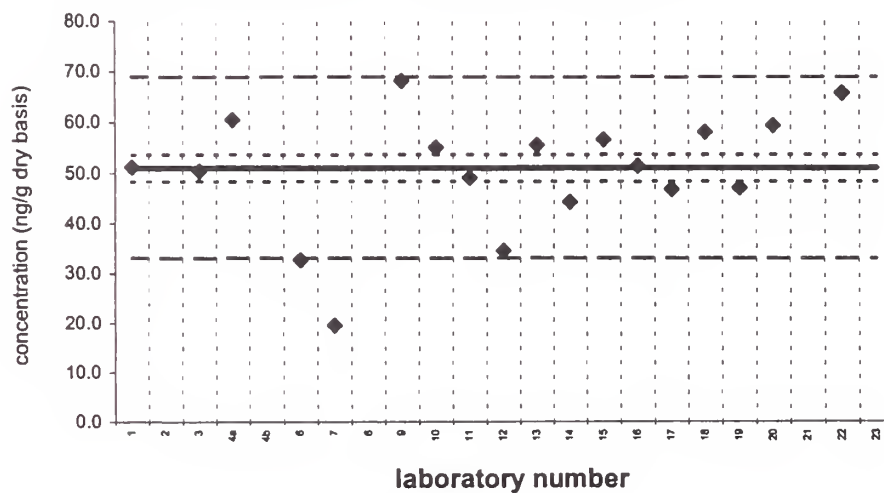
Assigned value = 29.6 ng/g $s = 10.2$ ng/g 95% CL = 5.1 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 18****SRM 1944**

Certified Value = 51.0 ± 2.6 ng/g (dry basis)

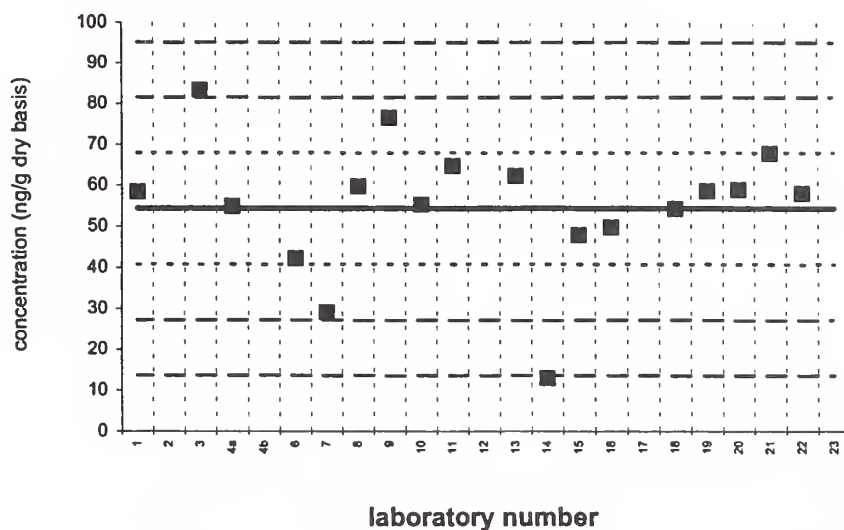
Reported Results: 18 Quantitative Results: 18



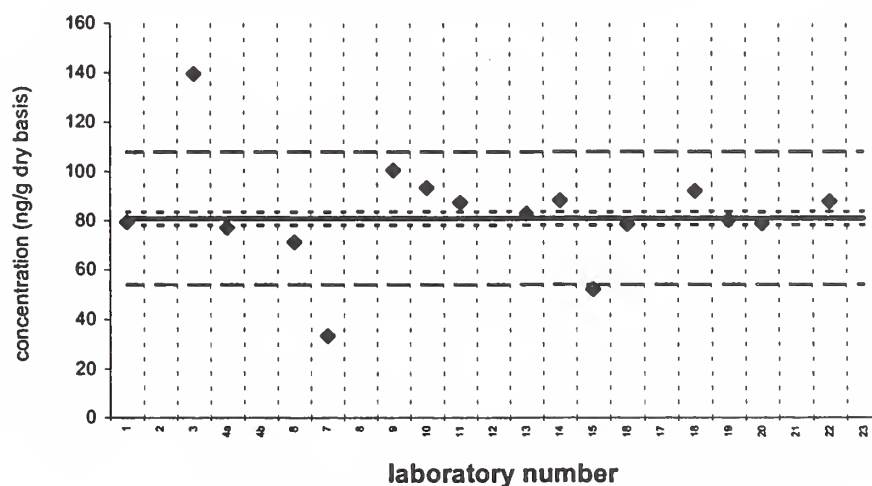
PCB 28**Sediment X (QA00SED10)**

Assigned value = 54.4 ng/g $s = 13.9$ ng/g 95% CL = 7.7 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 18

**PCB 28****SRM 1944**

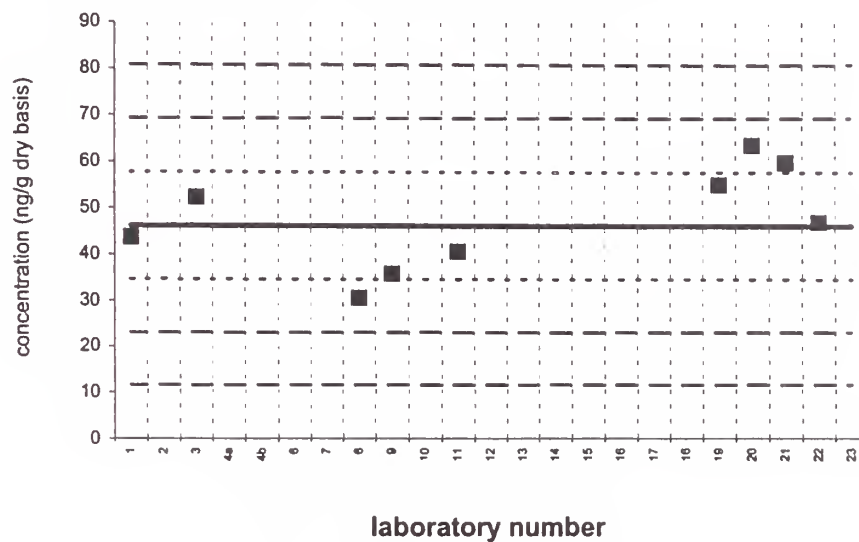
Certified Value = 80.8 ± 2.7 ng/g (dry basis)
Reported Results: 16 Quantitative Results: 16



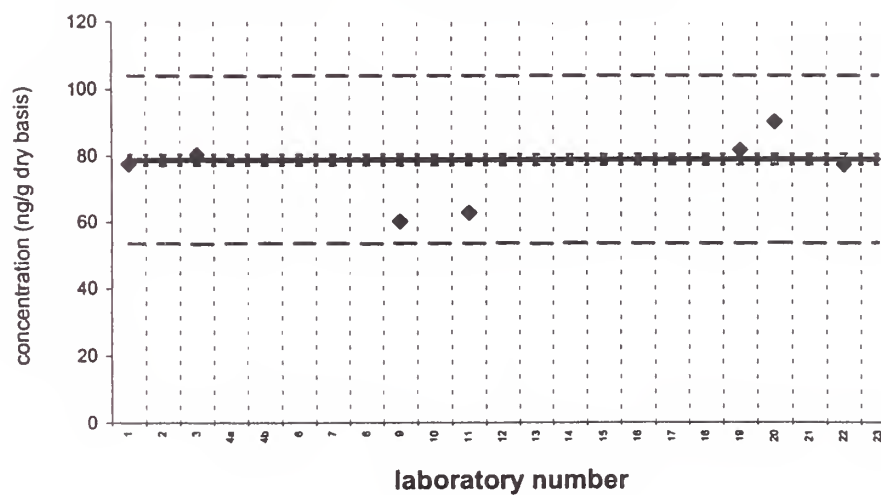
PCB 31**Sediment X (QA00SED10)**

Assigned value = 46.2 ng/g $s = 10.7$ ng/g 95% CL = 9.0 ng/g (dry basis)

Reported Results: 9 Quantitative Results: 9

**PCB 31****SRM 1944**

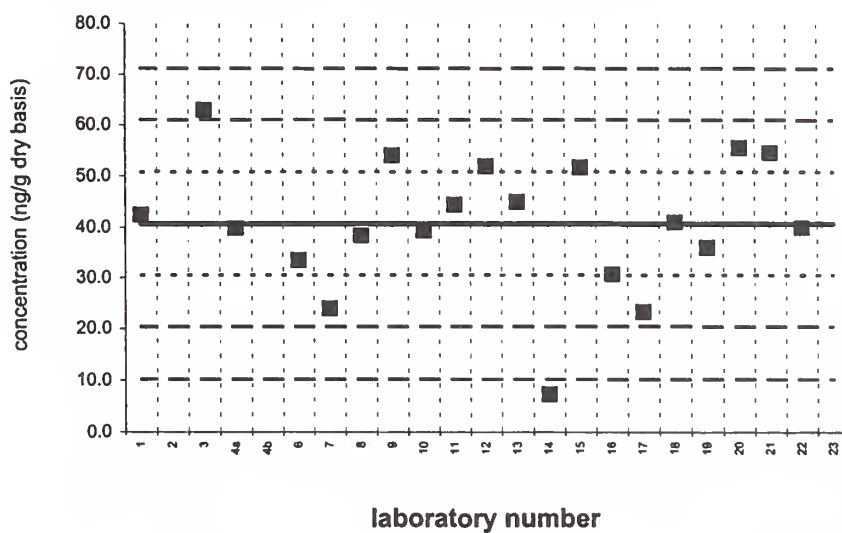
Certified Value = 78.7 ± 1.6 ng/g (dry basis)
Reported Results: 7 Quantitative Results: 7



PCB 44**Sediment X (QA00SED10)**

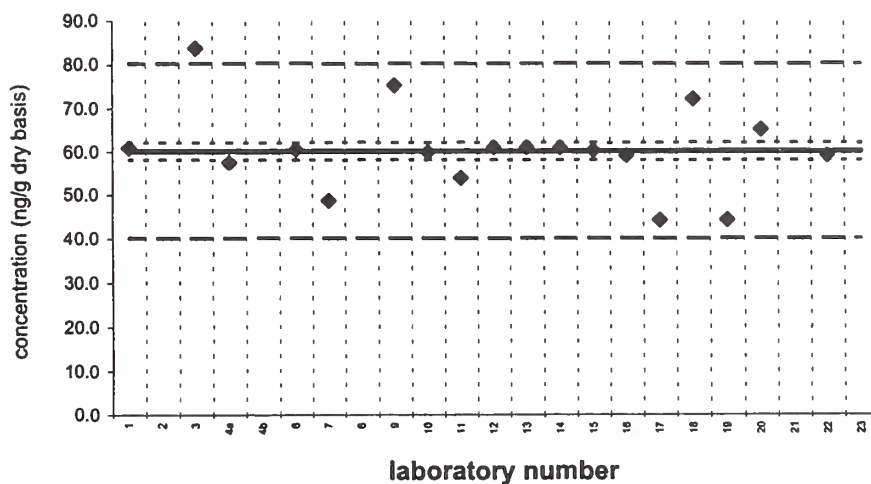
Assigned value = 40.7 ng/g $s = 9.5$ ng/g 95% CL = 4.9 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 44****SRM 1944**

Certified Value = 60.2 ± 2.0 ng/g (dry basis)

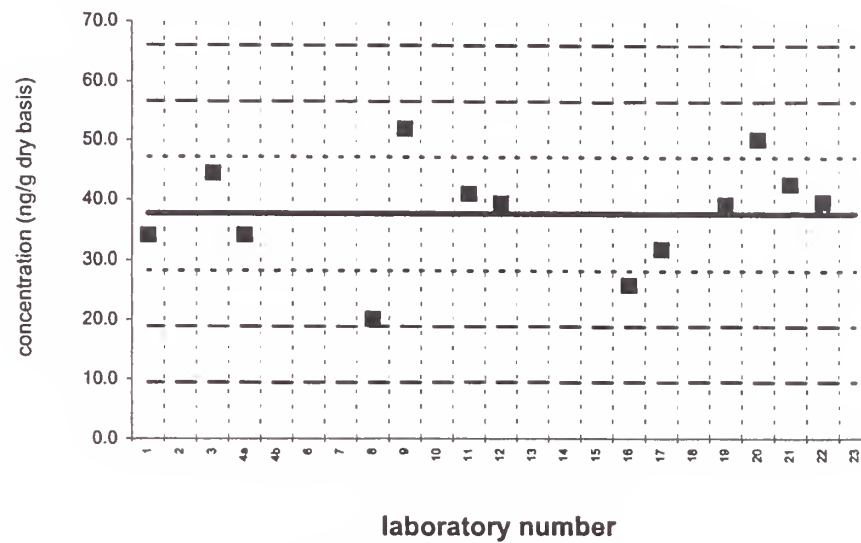
Reported Results: 18 Quantitative Results: 18



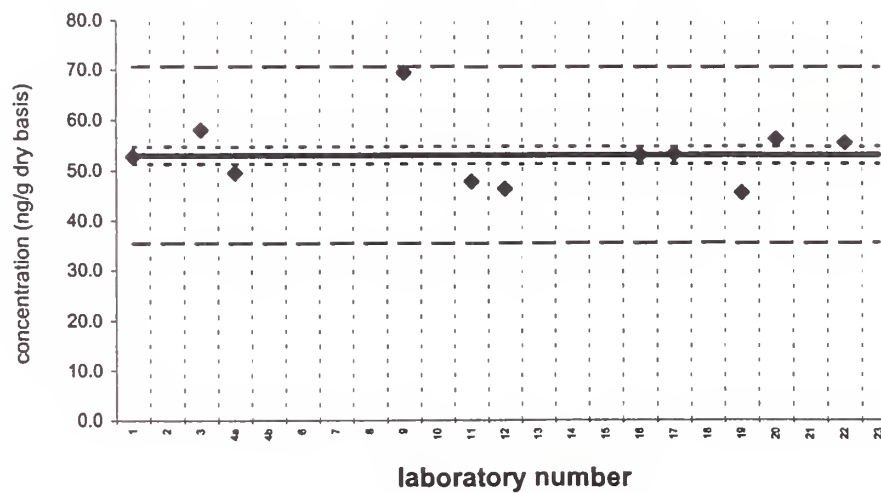
PCB 49**Sediment X (QA00SED10)**

Assigned value = 37.7 ng/g $s = 9.2$ ng/g 95% CL = 5.8 ng/g (dry basis)

Reported Results: 13 Quantitative Results: 13

**PCB 49****SRM 1944**

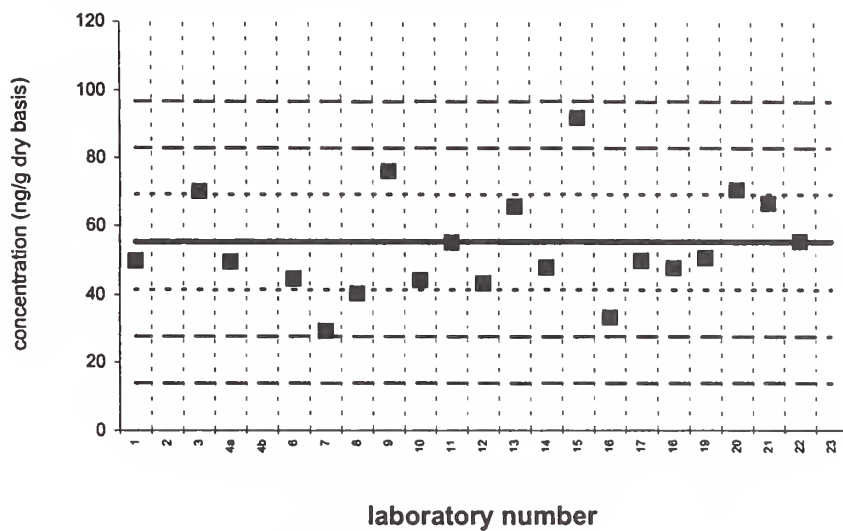
Certified Value = 53.0 \pm 1.7 ng/g (dry basis)
Reported Results: 11 Quantitative Results: 11



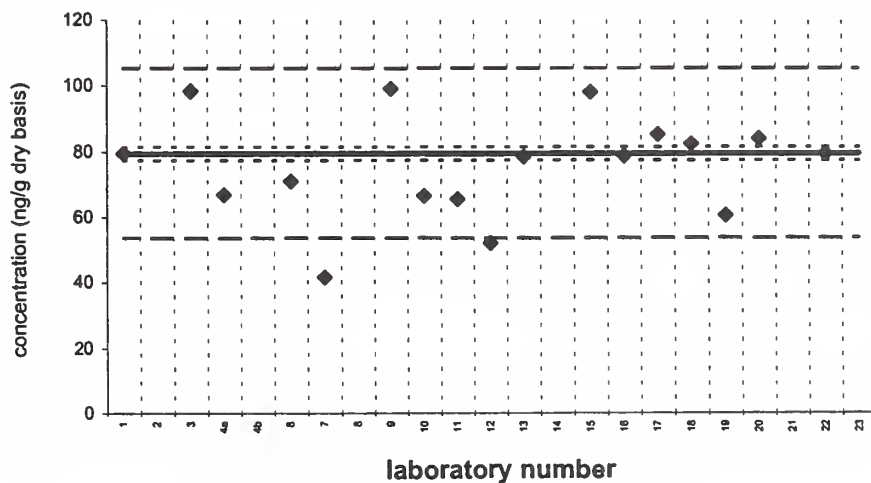
PCB 52**Sediment X (QA00SED10)**

Assigned value = 55.3 ng/g $s = 14.9$ ng/g 95% CL = 7.7 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 52****SRM 1944**

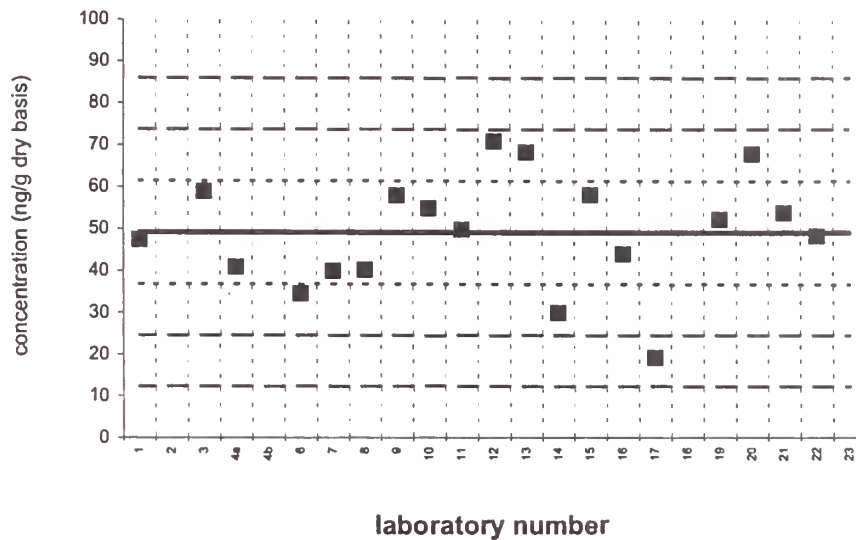
Certified Value = 79.4 ± 2.0 ng/g (dry basis)
Reported Results: 17 Quantitative Results: 17



PCB 66**Sediment X (QA00SED10)**

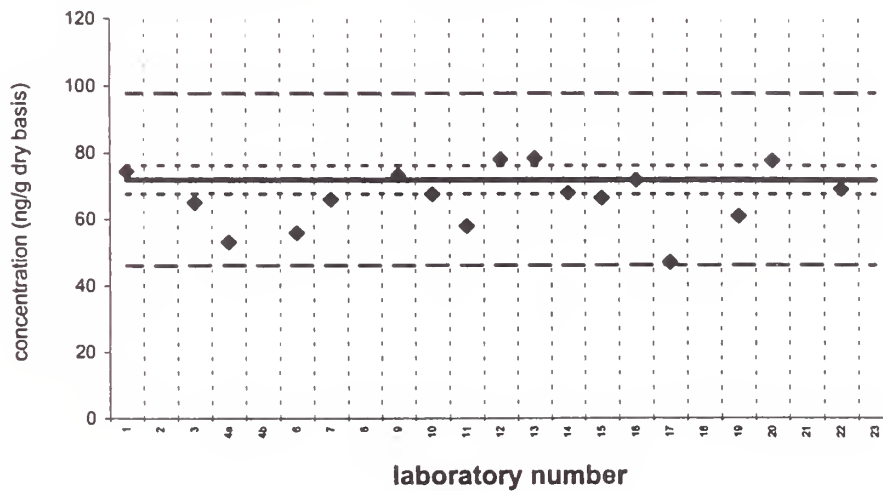
Assigned value = 49.1 ng/g $s = 13.8$ ng/g 95% CL = 6.9 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 19

**PCB 66****SRM 1944**

Certified Value = 71.9 ± 4.3 ng/g (dry basis)

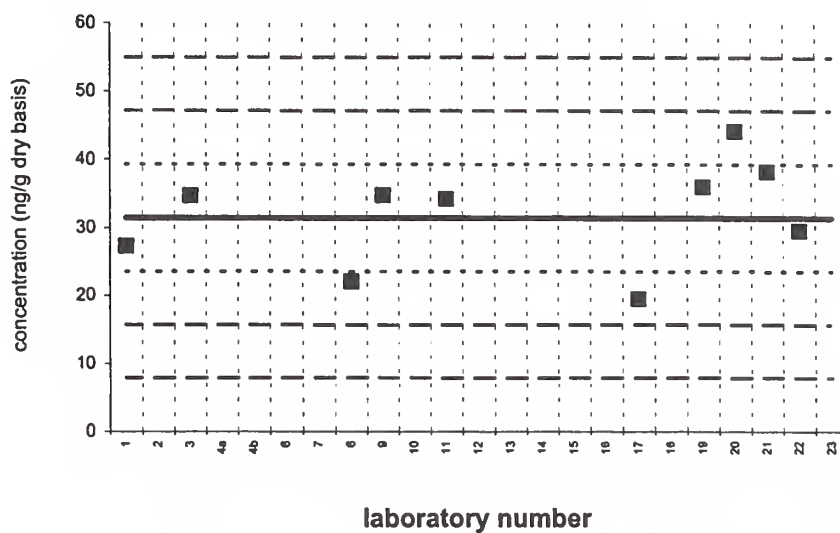
Reported Results: 17 Quantitative Results: 17



PCB 95**Sediment X (QA00SED10)**

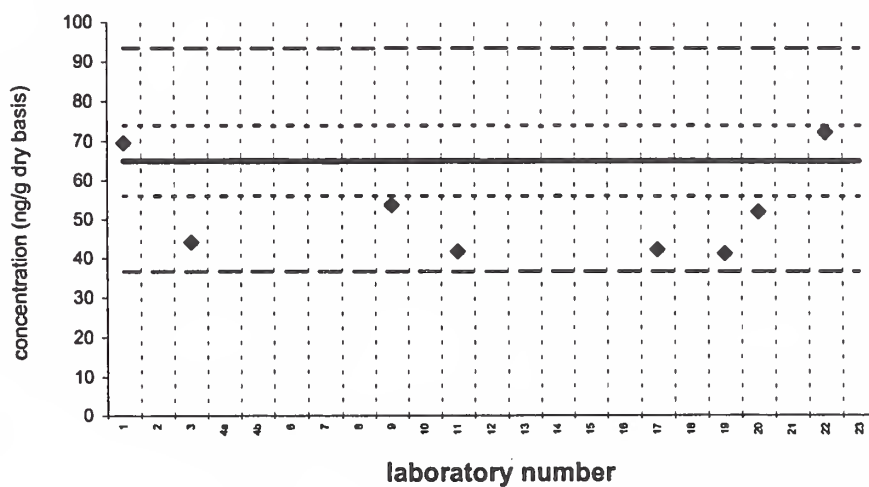
Assigned value = 31.4 ng/g $s = 7.6$ ng/g 95% CL = 5.8 ng/g (dry basis)

Reported Results: 10 Quantitative Results: 10

**PCB 95****SRM 1944**

Certified Value = 65.0 \pm 8.9 ng/g (dry basis)

Reported Results: 8 Quantitative Results: 8

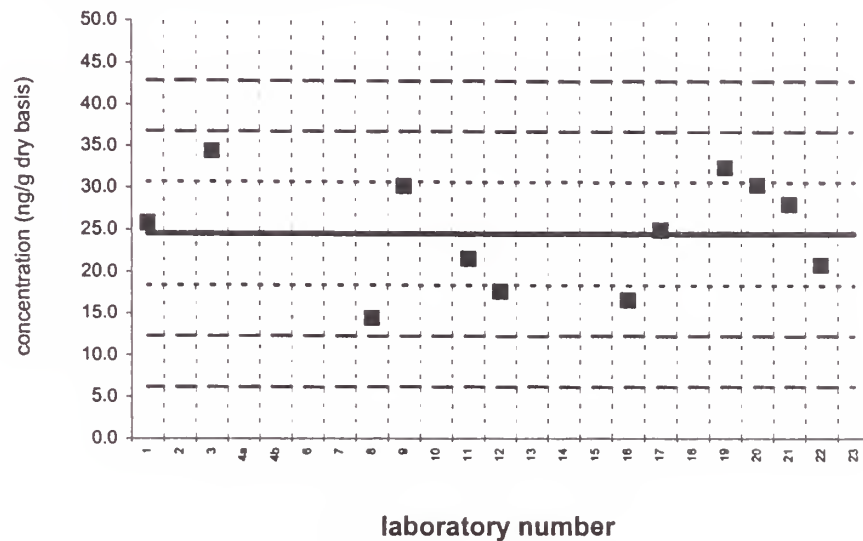


PCB 99

Sediment X (QA00SED10)

Assigned value = 24.5 ng/g $s = 6.8$ ng/g 95% CL = 4.6 ng/g (dry basis)

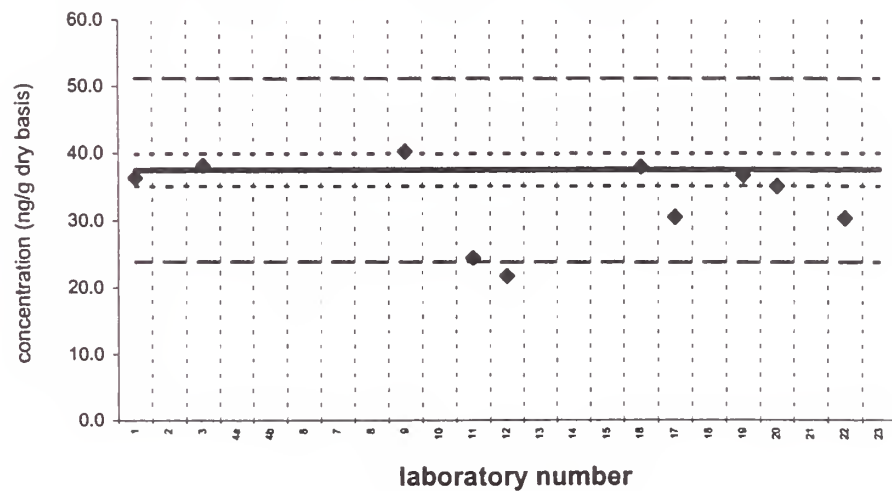
Reported Results: 12 Quantitative Results: 12



PCB 99

SRM 1944

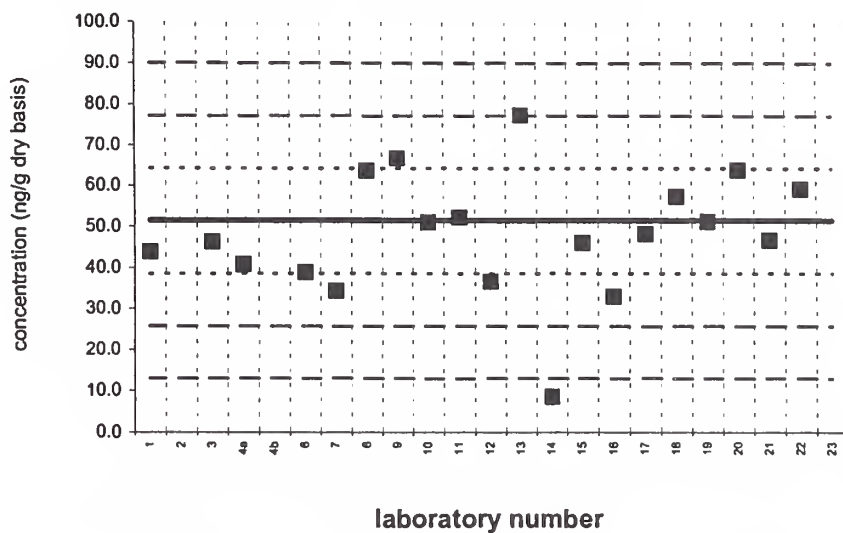
Certified Value = 37.5 ± 2.4 ng/g (dry basis)
Reported Results: 10 Quantitative Results: 10



PCB 101**Sediment X (QA00SED10)**

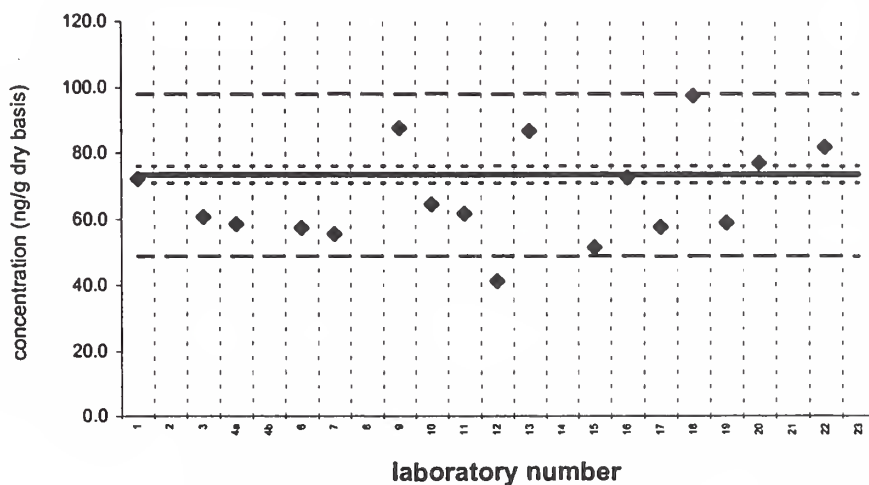
Assigned value = 51.4 ng/g $s = 12.1$ ng/g 95% CL = 6.2 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 101****SRM 1944**

Certified Value = 73.4 ± 2.5 ng/g (dry basis)

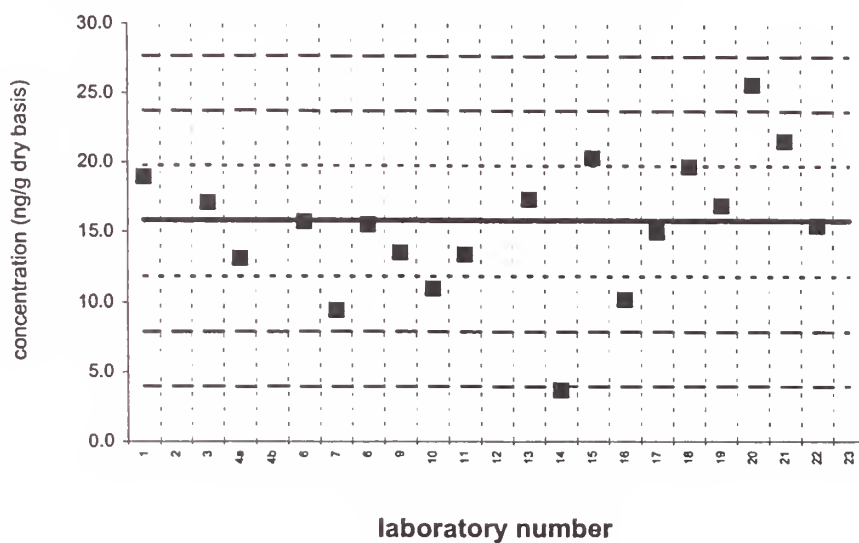
Reported Results: 17 Quantitative Results: 17



PCB 105**Sediment X (QA00SED10)**

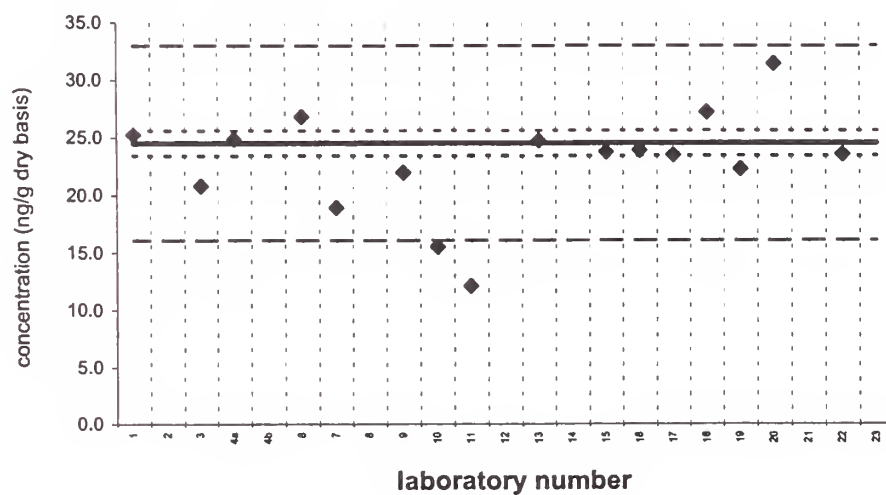
Assigned value = 15.8 ng/g $s = 4.0$ ng/g 95% CL = 2.1 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 19

**PCB 105****SRM 1944**

Certified Value = 24.5 ± 1.1 ng/g (dry basis)

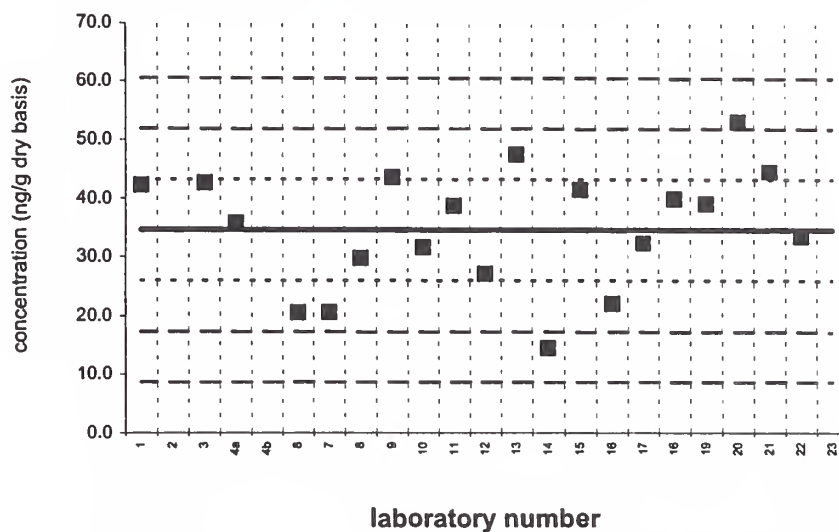
Reported Results: 16 Quantitative Results: 16



PCB 118**Sediment X (QA00SED10)**

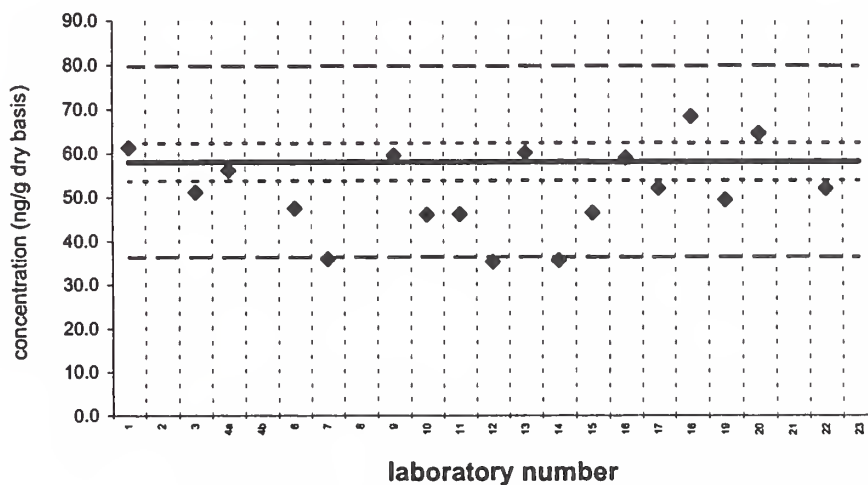
Assigned value = 34.6 ng/g $s = 10.2$ ng/g 95% CL = 4.9 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 118****SRM 1944**

Certified Value = 58.0 ± 4.3 ng/g (dry basis)

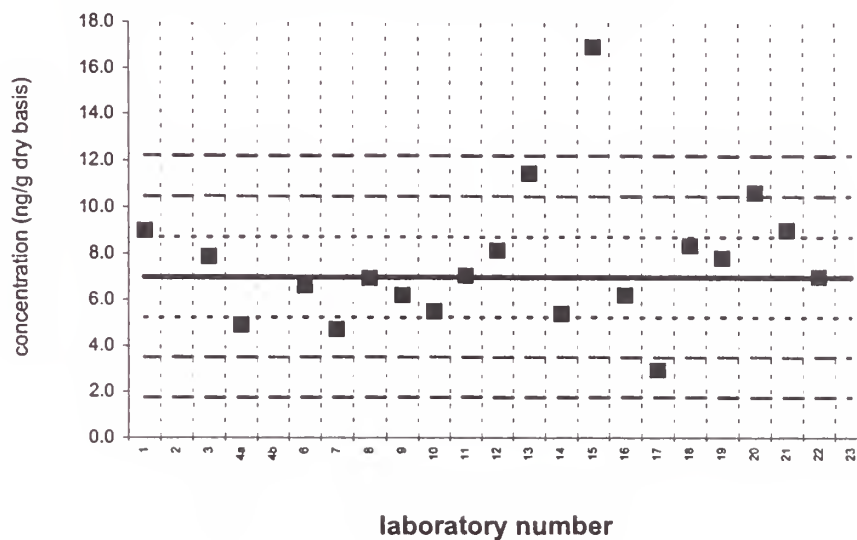
Reported Results: 18 Quantitative Results: 18



PCB 128**Sediment X (QA00SED10)**

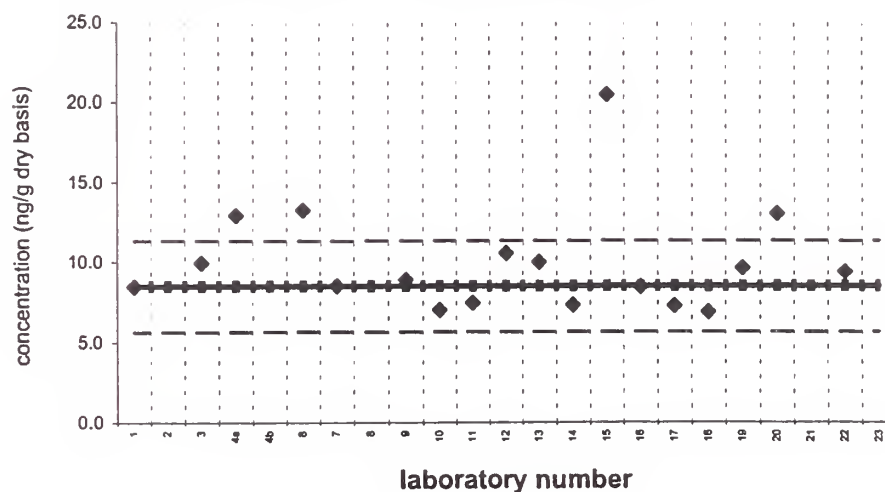
Assigned value = 6.98 ng/g $s = 2.01$ ng/g 95% CL = 1.11 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 128****SRM 1944**

Certified Value = 8.47 ± 0.28 ng/g (dry basis)

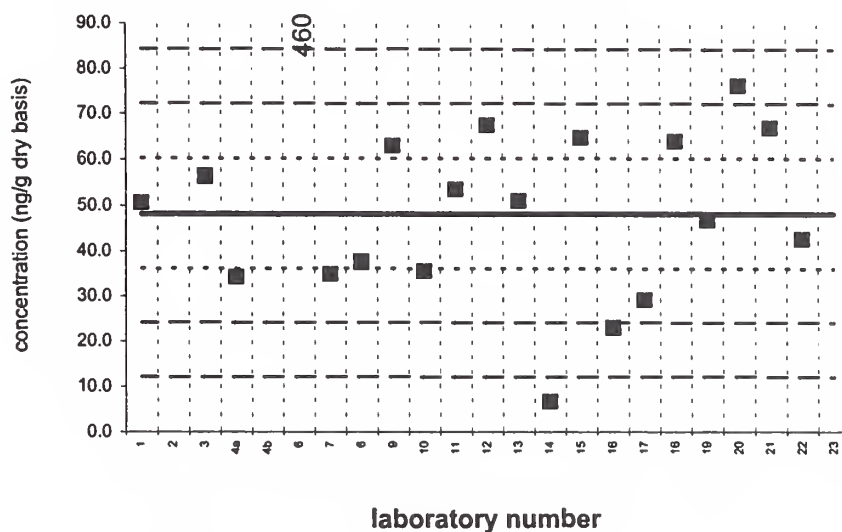
Reported Results: 18 Quantitative Results: 18



PCB 138**Sediment X (QA00SED10)**

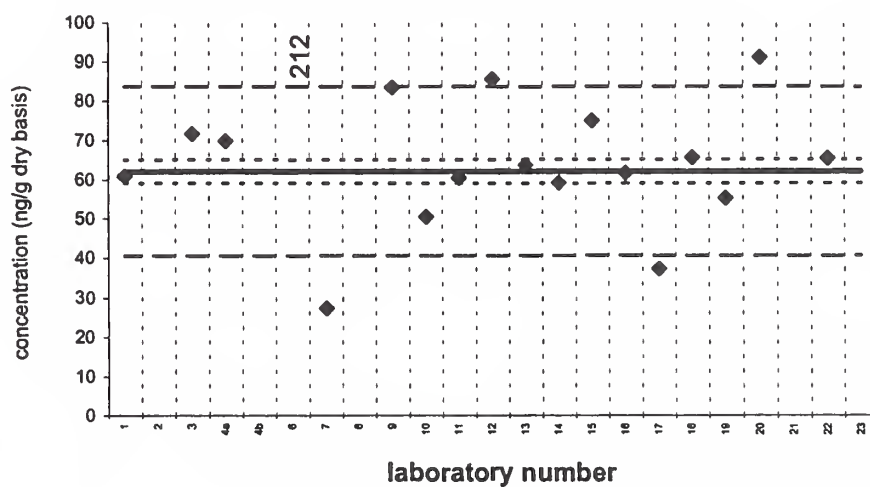
Assigned value = 48.2 ng/g $s = 15.3$ ng/g 95% CL = 8.1 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 138****SRM 1944**

Certified Value = 62.1 ± 3.0 ng/g (dry basis)

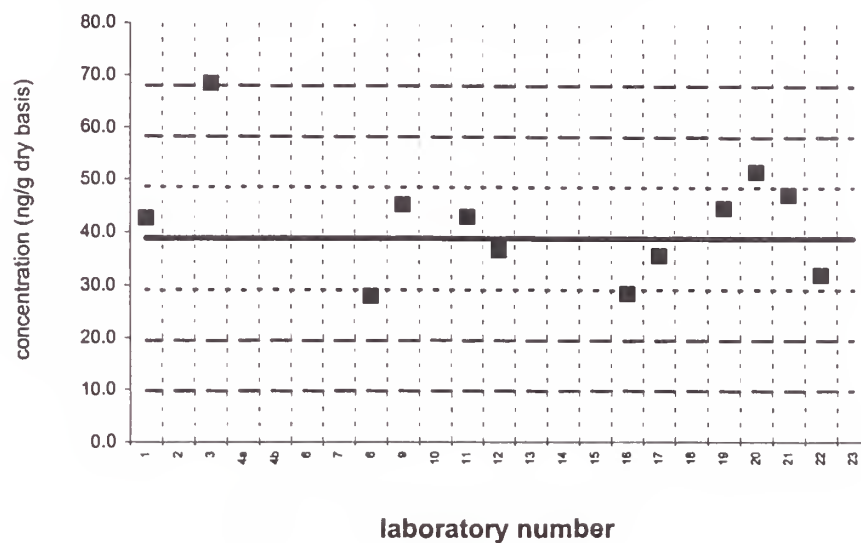
Reported Results: 18 Quantitative Results: 18



PCB 149**Sediment X (QA00SED10)**

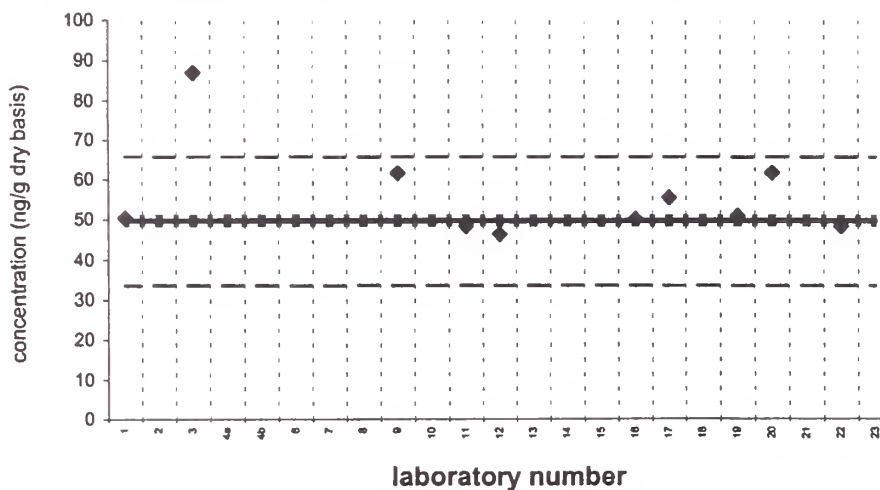
Assigned value = 38.8 ng/g $s = 7.8$ ng/g 95% CL = 5.6 ng/g (dry basis)

Reported Results: 12 Quantitative Results: 12

**PCB 149****SRM 1944**

Certified Value = 49.7 ± 1.2 ng/g (dry basis)

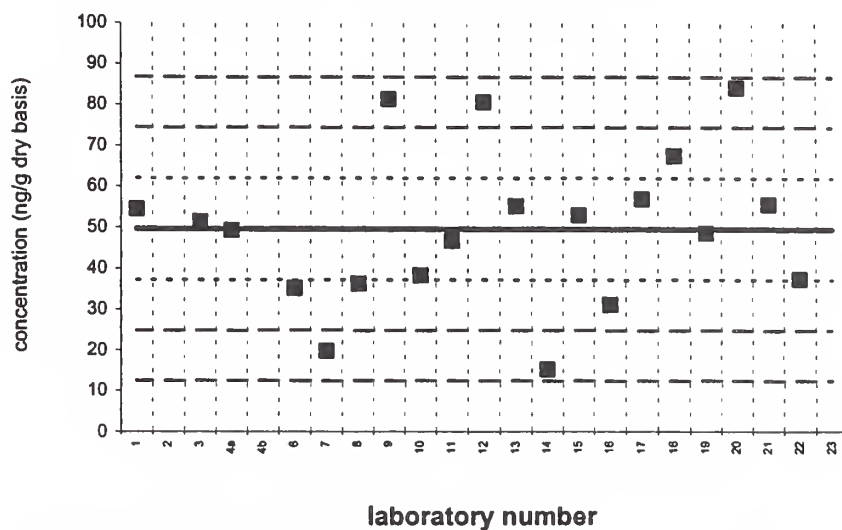
Reported Results: 10 Quantitative Results: 10



PCB 153**Sediment X (QA00SED10)**

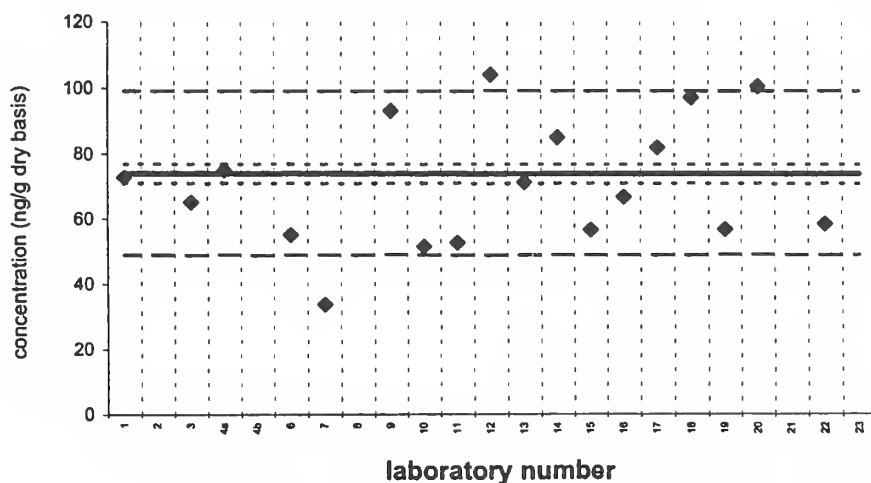
Assigned value = 49.6 ng/g $s = 17.4$ ng/g 95% CL = 8.9 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 153****SRM 1944**

Certified Value = 74.0 ± 2.9 ng/g (dry basis)

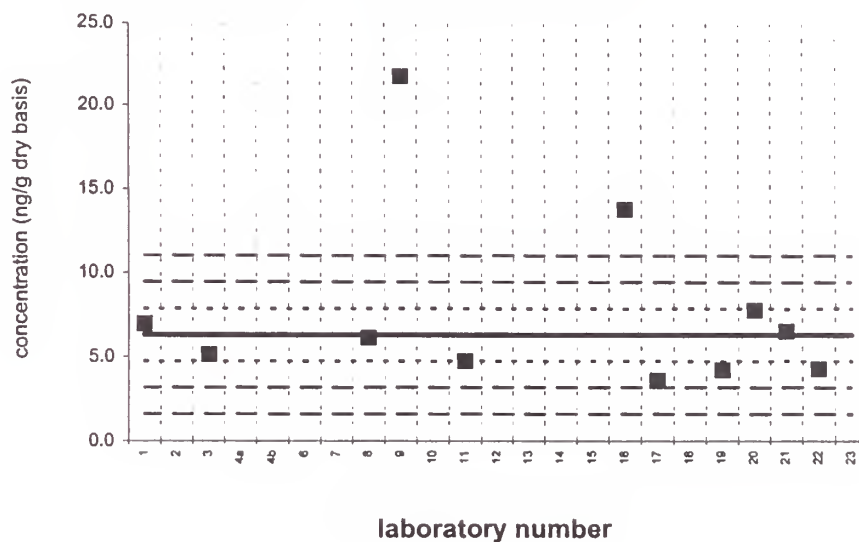
Reported Results: 18 Quantitative Results: 18



PCB 156**Sediment X (QA00SED10)**

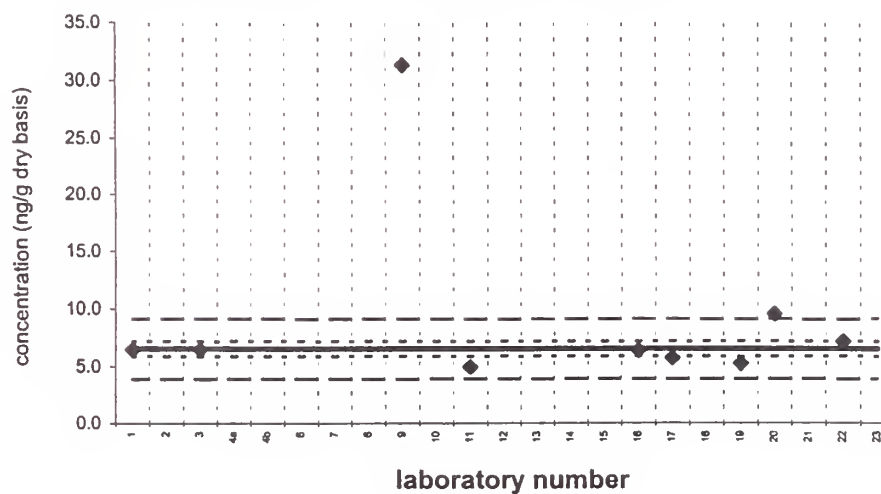
Assigned value = 6.30 ng/g $s = 3.14$ ng/g 95% CL = 2.42 ng/g (dry basis)

Reported Results: 11 Quantitative Results: 11

**PCB 156****SRM 1944**

Certified Value = 6.52 ± 0.66 ng/g (dry basis)

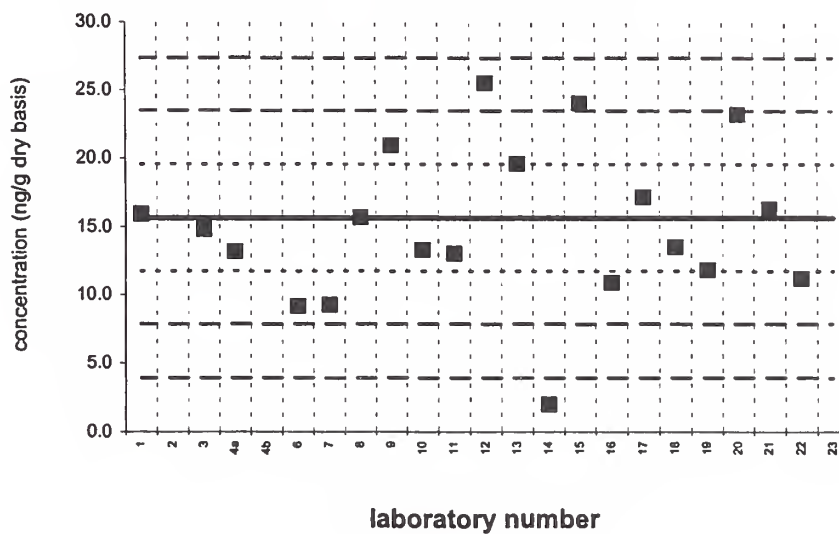
Reported Results: 9 Quantitative Results: 9



PCB 170**Sediment X (QA00SED10)**

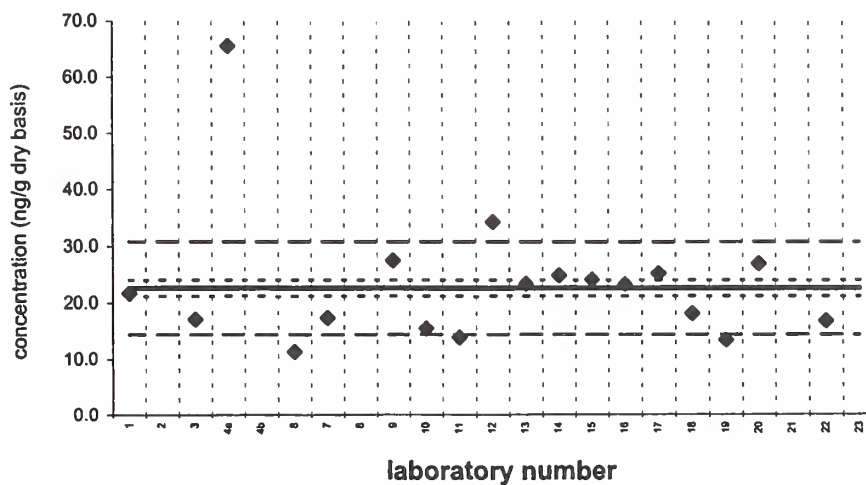
Assigned value = 15.6 ng/g $s = 4.5$ ng/g 95% CL = 2.5 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 170****SRM 1944**

Certified Value = 22.6 ± 1.4 ng/g (dry basis)

Reported Results: 18 Quantitative Results: 18

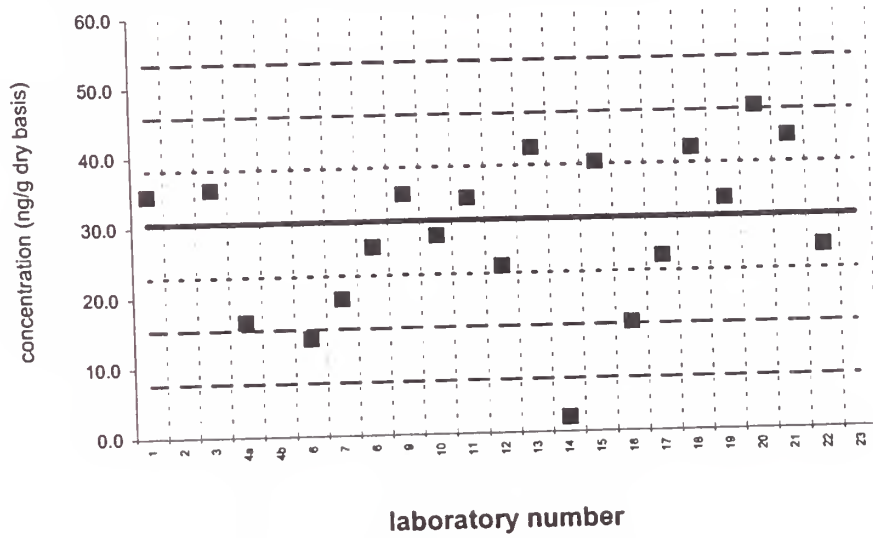


PCB 180

Sediment X (QA00SED10)

Assigned value = 30.5 ng/g $s = 8.8$ ng/g 95% CL = 4.5 ng/g (dry basis)

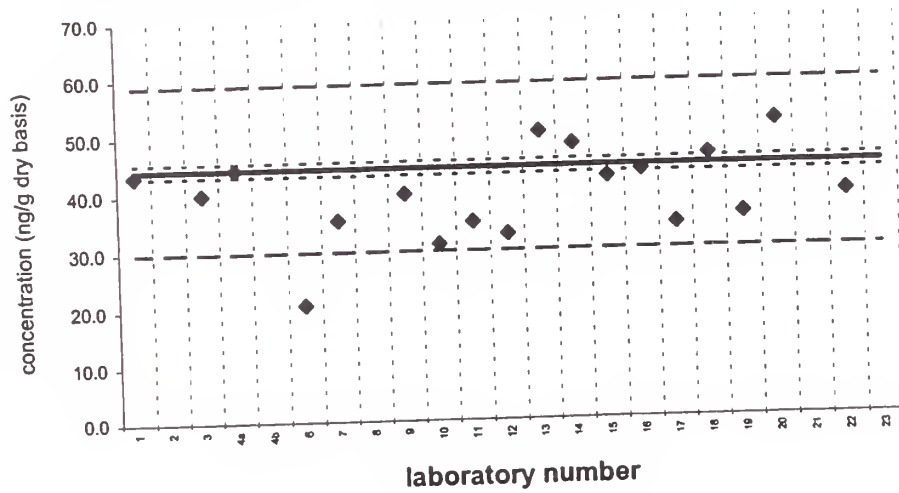
Reported Results: 20 Quantitative Results: 20



PCB 180

SRM 1944

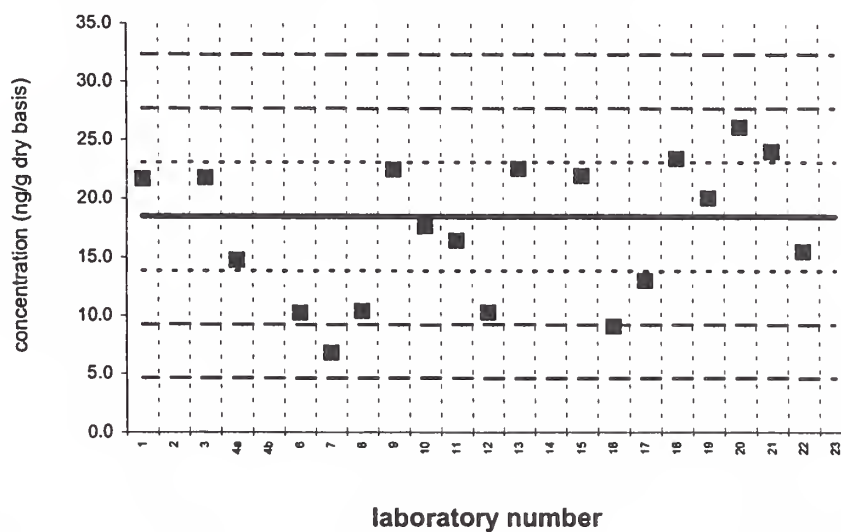
Certified Value = 44.3 ± 1.2 ng/g (dry basis)
Reported Results: 18 Quantitative Results: 18



PCB 187**Sediment X (QA00SED10)**

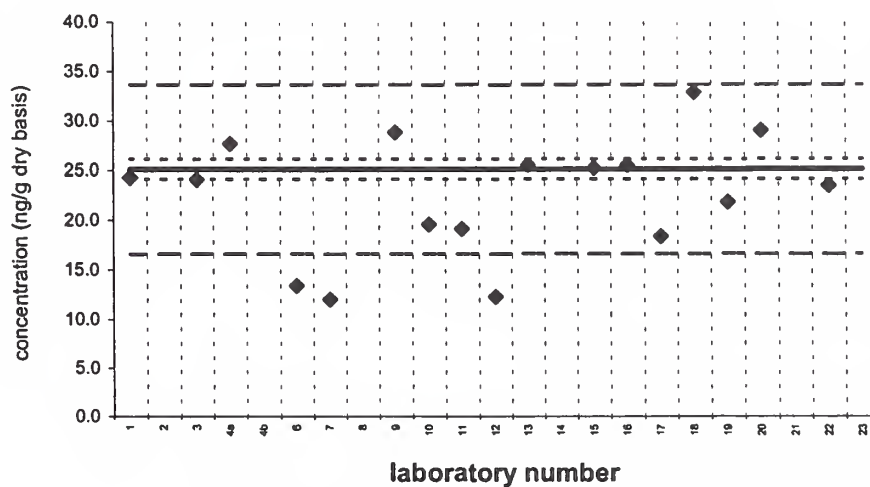
Assigned value = 18.5 ng/g $s = 5.1$ ng/g 95% CL = 2.8 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 19

**PCB 187****SRM 1944**

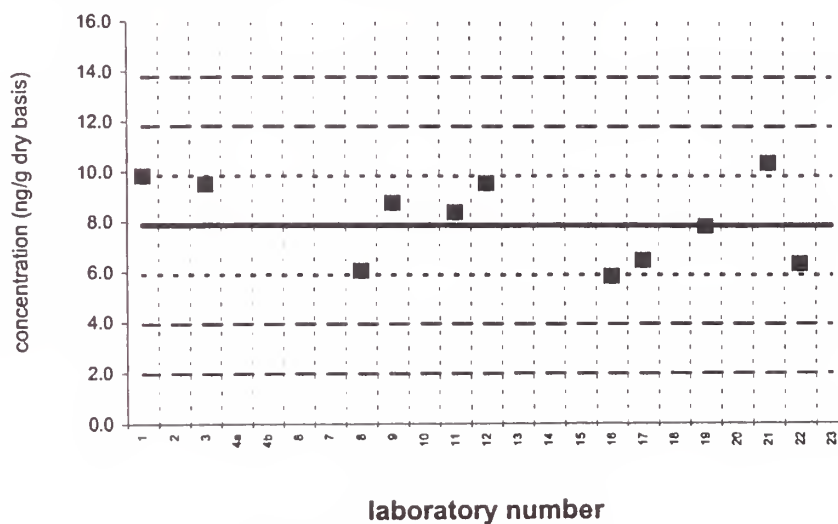
Certified Value = 25.1 \pm 1.0 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17

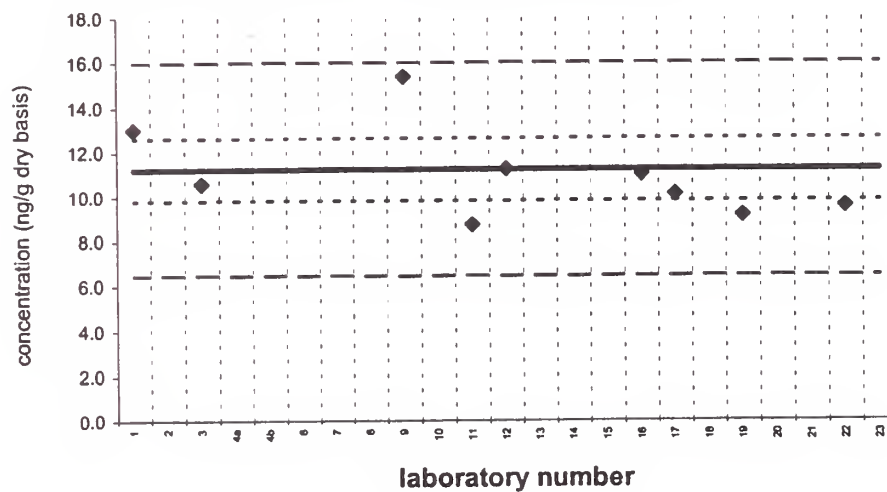


PCB 194**Sediment X (QA00SED10)**Assigned value = 7.87 ng/g $s = 1.57$ ng/g 95% CL = 1.12 ng/g (dry basis)

Reported Results: 11 Quantitative Results: 11

**PCB 194****SRM 1944**Certified Value = 11.2 ± 1.4 ng/g (dry basis)

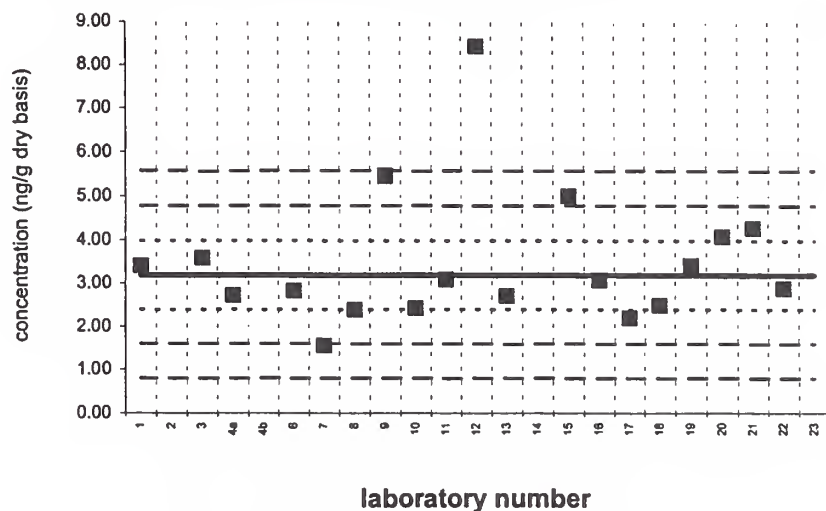
Reported Results: 9 Quantitative Results: 9



PCB 195**Sediment X (QA00SED10)**

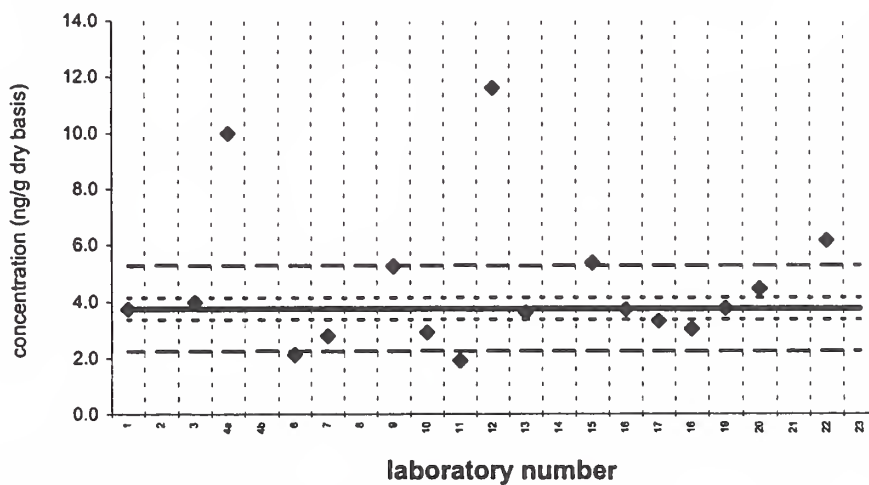
Assigned value = 3.18 ng/g $s = 1.04$ ng/g 95% CL = 0.58 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 19

**PCB 195****SRM 1944**

Certified Value = 3.75 ± 0.39 ng/g (dry basis)

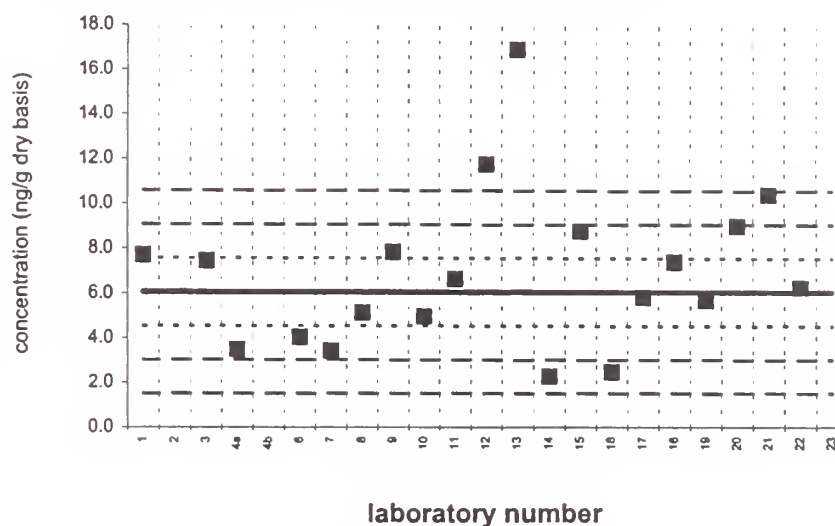
Reported Results: 17 Quantitative Results: 17



PCB 206**Sediment X (QA00SED10)**

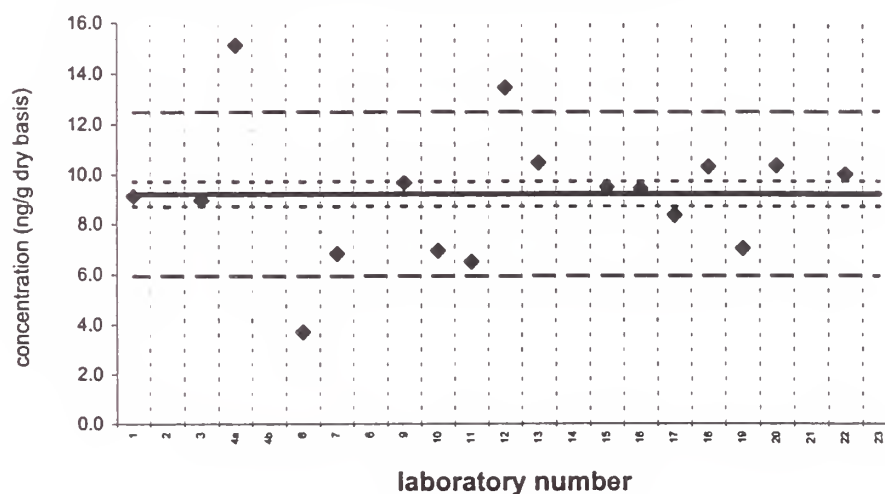
Assigned value = 6.05 ng/g $s = 2.11$ ng/g 95% CL = 1.17 ng/g (dry basis)

Reported Results: 20 Quantitative Results: 20

**PCB 206****SRM 1944**

Certified Value = 9.21 ± 0.51 ng/g (dry basis)

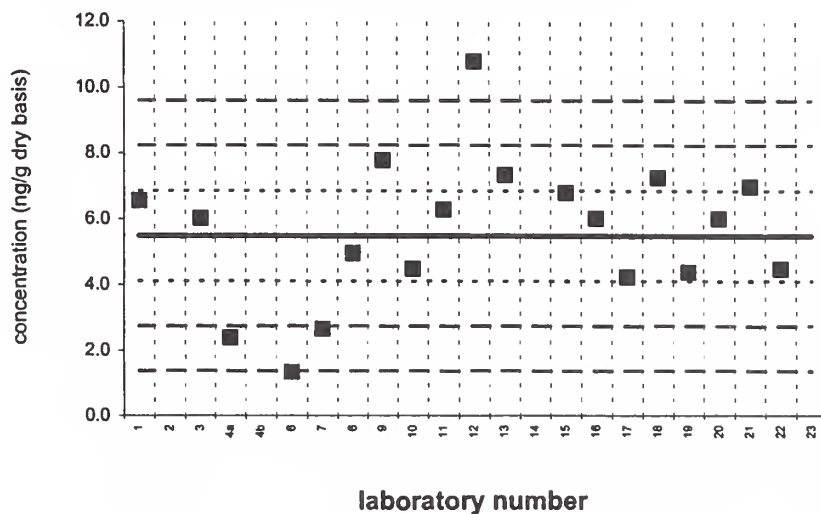
Reported Results: 17 Quantitative Results: 17



PCB 209**Sediment X (QA00SED10)**

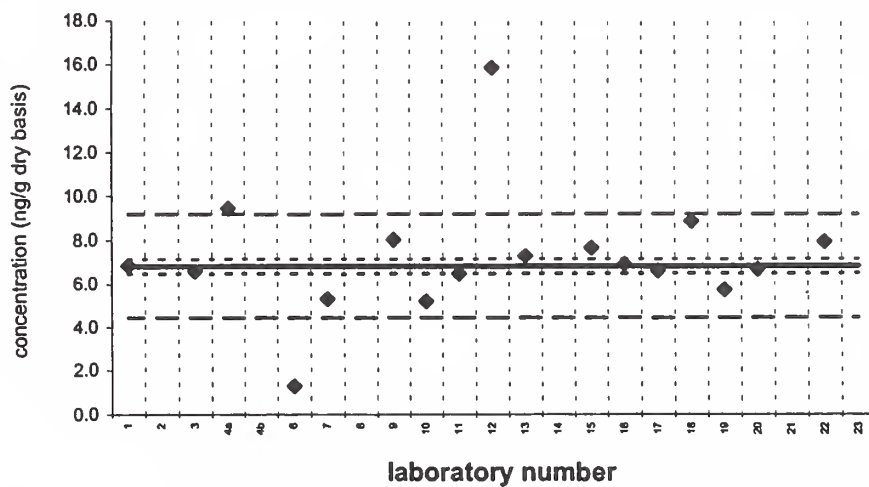
Assigned value = 5.49 ng/g $s = 1.61$ ng/g 95% CL = 0.86 ng/g (dry basis)

Reported Results: 19 Quantitative Results: 19

**PCB 209****SRM 1944**

Certified Value = 6.81 ± 0.33 ng/g (dry basis)

Reported Results: 17 Quantitative Results: 17



Appendix K: List of Laboratories Participating in 2000 Intercomparison Exercises

For this exercise, data was received from the following laboratories within the required timeframe. (This listing does NOT correspond to the laboratory number identification codes used in this report which were assigned in order of receipt of data with the exception of NIST-Gaithersburg which is Laboratory #1 in this exercise. The same code was used with both exercises.)

Academy of Natural Sciences
1900 Benjamin Franklin Parkway
Philadelphia, PA 19103
Jeffrey Ashley

Arthur D. Little, Inc.
20 Acorn Park
Cambridge, MA 02140
John Brown

B& B Laboratories
1902 Pinon
College Station, TX 77845
Sue McDonald

Battelle Columbus
505 King Ave.
Columbus, OH 43201
Mary Schrock

Battelle Ocean Sciences
397 Washington Street
Duxbury, MA 02332
Carole Peven McCarthy

California Dept. of Fish and Game
Fish and Wildlife Water Pollution Control Laboratory
2005 Nimbus Road
Rancho Cordova, CA 95670
Kathleen Regalado

City of Los Angeles
Environmental Monitoring Division
12000 Vista del Mar
Playa del Rey, CA 90293
Zbyslaw J. Petryka/Ofelia Kim

Environment Canada
Environmental Sciences Centre
P. O. Box 23005
Moncton, New Brunswick E1A6S8
Canada
Marc Bernier

Manchester Environmental Laboratory
7411 Beach Drive East
Port Orchard, WA 98366
Karin Feddersen

MWRA Central Lab
190 Taft Ave.
Winthrop, MA 02152
Houte Yang

NIST
100 Bureau Drive, Stop 8392
Gaithersburg, MD 20899-8392
Michele M. Schantz

NIST-Charleston Laboratory
219 Fort Johnson Road
Charleston, SC 29412-9110
John Kucklick

NOAA/NMFS/ABL
Auke Bay Laboratory
P. O. Box 210155
11305 Glacier Highway
Juneau, AK 99821
Marie Larsen

NOAA-NMFS
2725 Montlake Boulevard, East
Seattle, WA 98112
Donald Brown /Jennie Bolton

NOAA/NOS/CCEHBR
219 Fort Johnson Road
Charleston, SC 29412
Dan Bearden

Orange County Sanitation District
Environmental Sciences Laboratory
10844 Ellis Avenue
Fountain Valley, CA 92708
Kim Christensen

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
David Thal

STL Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Pamela Schemmer / Clark Pickell

Texas Parks and Wildlife Department
505 Staples Road
San Marcos, TX 78666
David Klein/Pamela Hamlett

University of Connecticut
Environmental Research Institute
U-210; Longley Bldg
Storrs, CT 06269
Paul de Fur

University of Rhode Island
Graduate School of Oceanography
South Ferry Road
Narragansett, RI 02882
James G. Quinn

USGS
National Water Quality Laboratory
PO Box 25046
Denver Federal Center
Bldg 95, Ent E3, MS 407
Denver, CO 80225-0048
Mary Cast/Tom Maloney

Wright State University
175 Brehm Laboratory
3640 Colonel Glenn Highway
Dayton, OH 45435
Thomas Tiernan

