

Interlaboratory Comparison on POPs in Food 2013



Fourteenth Round of an International Study

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Rapport 2013:11
Nasjonalt folkehelseinstitutt

Norwegian Institute of Public Health
Published November 2013

Title:

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Published by :

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www.fhi.no

Layout:

Grete Søimer

Cover Photos:

©Colourbox

Ordering:

Printed copy: Not available
Electronic copy: www.fhi.no/publications
www.fhi.no/publikasjoner

ISSN:1503-1403
ISBN: 978-82-8082-595-7 (electronic version)

Website Interlaboratory Comparison on POPs in Food:
www.fhi.no/ILC

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Summary

In 2013, the fourteenth round of the Interlaboratory Comparison on POPs in Food was conducted on the determination of the 2,3,7,8-chlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs) as well as dioxin-like non-ortho and mono-ortho chlorinated biphenyls (PCBs) in three different food items. In addition, laboratories could voluntarily determine and report six indicator PCBs, polybrominated diphenyl ethers (PBDEs) and hexabromocyclododecanes (HBCDs).

The objectives of this interlaboratory comparison study were

- a) To offer a tool for quality assurance for the participating laboratories
- b) To assess the between laboratory reproducibility
- c) To assess the readiness of expert laboratories worldwide to determine levels of chlorinated and brominated persistent organic pollutants in regular foodstuffs.

The 2013 study was performed on sample homogenates of poultry, crab meat and egg. In addition, six standard solutions were provided containing known concentrations of PCDDs/PCDFs, non-ortho PCBs, mono-ortho PCBs, PBDEs, indicator PCBs and α -HBCD.

The test materials were sent to 86 laboratories in 38 different countries in January 2013, and results were returned from 84 of these laboratories by the deadline in April.

A draft report was made available on our webpage www.fhi.no/ILC in July and was presented at the DIOXIN 2013 Symposium in Daegu, South Korea.

This report presents the reported results for all seventeen 2,3,7,8-substituted PCDDs/PCDFs, the non-ortho substituted PCBs #77, 81, 126 and 169 and the eight mono-ortho substituted PCBs #105, 114, 118, 123, 156, 157, 167, 189 in the three food items on a fresh weight and lipid weight basis.

In addition, the results for eight PBDEs #28, 47, 99, 100, 153, 154, 183 and 209, six indicator PCBs #28, 52, 101, 138, 153 and 180, and total HBCDs as well as the α -, β - and γ -isomers were reported from those laboratories that voluntarily determined their concentrations.

The consensus concentration (assigned value) for each analyte in the three food samples was determined as follows: Non-detected congeners were assigned a concentration corresponding to the reported detection limits except for the PBDEs, the indicator PCBs and HBCDs where non-detects were removed from the data set. The median of all reported concentrations for each analyte was calculated. All values above twice the median were removed from the calculation. The consensus median and consensus mean as well as standard deviation (SD) were calculated from the remaining data.

Toxic equivalents (TEQs) were calculated from the consensus values of individual congeners using the toxic equivalency factors derived by WHO in 1998 and 2005.

Z-scores for the PCDD/PCDF TEQs were calculated for each laboratory using $\pm 20\%$ of the consensus TEQs (from 2012: WHO₂₀₀₅ TEQs as opposed to WHO₁₉₉₈ TEQs as in the previous reports) as a value for target standard deviation (σ). Further, Z-scores were calculated for the non-ortho PCB TEQ, the mono-ortho PCB TEQ, the total TEQ, the sum of six indicator PCBs, the sum of eight PBDEs, total HBCD, and the three isomers of HBCD and for each single congener in all three matrices.

The consensus values of the standard solutions were calculated as mentioned above with the exception of the removal of all values exceeding $\pm 50\%$ of the median prior to the final calculation of the consensus median and mean.

The consensus values for the lipid content were calculated by first excluding results deviating more than two SD from the mean of all values, and then re-calculating the median, mean and SD.

For the determination of total TEQs in the three food samples, Z-scores within ± 1 were obtained by 66-71 % of the laboratories. The majority of the laboratories (83-90 %) reported results for total TEQ with a trueness of $\pm 40\%$ for all food samples (Z-score ± 2). The relative standard deviation (RSD) calculated for the total TEQ after removal of outliers was 11-12 %. Considering this, it may be concluded that the performance of laboratories worldwide in determining dioxin-like compounds is generally good for the food samples included in this study.

For the different food samples, 55-56 laboratories reported results for the six indicator PCBs,

22-30 laboratories reported concentrations for all seven of the tetra- to hepta-BDEs and 19-23 laboratories reported concentrations for BDE-209. The concentrations of the sum of seven PBDEs on fresh weight basis were 36 (21 %), 51 (18 %) and 43 (17 %) pg/g in poultry, crab meat and boiled egg, respectively, with average RSD given in parentheses.

The consensus concentrations for BDE-209 were 36 (n=19), 23 (n=23) and 91 (n=33) pg/g fresh weight in poultry, crab meat and boiled egg, respectively. The

corresponding RSD on fresh weight basis were 30, 23 and 19 %. The total concentrations on fresh weight basis for six indicator PCBs were 972 pg/g (25 %) in poultry, 1641 pg/g (19 %) in crab meat and 2299 pg/g (15 %) in boiled egg. Average RSDs are given in parentheses.

The consensus concentrations calculated for HBCDs are just indicative values because only few laboratories reported results (n=6-9).

Introduction

In order to ensure consumer protection and reduce human exposure to dioxins and dioxin-like PCBs through food consumption, many countries request frequent monitoring of the presence of these toxic pollutants in food and feed. Thus, there is a large demand for chemical laboratories that are able to determine these contaminants at low levels. It is usually required by the authorities that laboratories performing such measurements are accredited according to ISO standards and prove their competence by successful participation in inter-laboratory studies.

This is the 14th round of a world-wide interlaboratory comparison study on dioxin-like compounds in food organized by the Department of Exposure and Risk Assessment, Division of Environmental Medicine, Norwegian Institute of Public Health (NIPH), Oslo, Norway.

The main objective of this exercise is to assess the between laboratory reproducibility of dioxin-like compounds analyses in frequently consumed foods and provide a QA/QC instrument for each participating

laboratory to contribute to its proficiency. Participants were also asked to voluntarily determine the concentrations of eight PBDEs, six indicator PCBs and HBCD in the food samples in order to assess the readiness of laboratories to analyze these persistent organic pollutants.

The exercise took place from January 2013, when the samples were shipped to the laboratories for analysis, till the reporting deadline in April 2013, when the last reports with results were received. A draft report was made available to the participants on our webpage (<http://www.fhi.no/ILC>) in July and was presented during the DIOXIN 2013 Symposium in Daegu, South Korea.

All participants from previous rounds in this series of "Interlaboratory Comparisons on POPs in Food" were invited to participate. In addition, several other laboratories announced their interest and were invited to participate. There was no limit to the total number of participating laboratories. The 84 laboratories that submitted results, and thereby contributed to the study results, are presented in Table 1.

Table 1. Participants that reported results in the 14th round of Interlaboratory Comparison on POP's in food 2013

ASAE (Food Safety and Economic Authority) LISBOA, PORTUGAL	Dioxin laboratory of comprehensive test center Chinese Academy of Inspection and Quarantine Beijing, China
AsureQuality Limited - Wellington Laboratory Wellington, New Zealand	Environmental Laboratory - IQS Barcelona, Spain
BioDetection Systems Amsterdam, The Netherlands	Eurofins GfA Lab Service GmbH Hamburg, Germany
Canadian Food Inspection Agency (CFIA) Calgary, Alberta, Canada	Food and Drug Administration Arkansas Regional Lab Dioxin Group Jefferson, USA
CARSO-LSEHL Lyon, France	Food and Drug Administration Kansas City Lab Lenexa, USA
CART University of Liège Liege, Belgium	Food GmbH Jena Analytik & Consulting Jena, Germany
Central Lab of Residue Analysis of Pesticides and Heavy Metals in Foods Giza, Egypt	Gesellschaft für Lebensmittel-Forschung mbH Berlin, Germany
Centre for Advanced Analytical Toxicology Services (CAATS) Penang, Malaysia	Government Laboratory (HKSAR) Hong Kong SAR, China
CHELAB SRL Unità Locale di Lusciano Lusciano (CE), Italy	Health Canada Food Research Division Health Products and Food Branch Ottawa, Ontario, Canada
Chemical and Veterinary Analytical Institute Münsterland-Emscher-Lippe (CVUA-MEL) Münster, Germany	Health Canada Regions and Programs Branch Western Region Laboratory Burnaby, British Columbia, Canada
Chemisches und mikrobiologisches Institut UEG GmbH Wetzlar, Germany	Institute of Aquaculture Nutrition Analytical Service Stirling, Scotland, UK
Chemisches und Veterinäruntersuchungsamt (CVUA) Freiburg Freiburg, Germany	Istituto Zooprofilattico Sperimentale Abruzzo e Molise "G. Caporale" Teramo, Italy
China National Center of Food Safety Risk Assessment Beijing, China	Istituto Zooprofilattico Sperimentale Lombardia Emilia Romagna-Brescia Brescia, Italy
Chinese Academy of Sciences Center for Eco-Environmental Sciences Dioxin Lab Beijing, China	Istituto Zooprofilattico Sperimentale Lombardia Emilia Romagna Bologna, Italy
CSD IDEA (Beijing) Institute of Environmental Innovation Beijing, China	Italian National Institute for Health Toxicological Chemistry Unit Rome, Italy

Danish Veterinary and Food Administration Ringsted, Denmark	Japan Food Research Laboratories Japan
Josera GmbH & Co. KG Kleinheubach, Germany	Ministry of Health Key Lab of Food Safety Risk Assessment Beijing, China
Korea Food & Drug Administration Food Contaminants Division Chungcheongbuk-do, South Korea	National Cheng Kung University Research Center for Environmental Trace Toxic Substances Tainan, Taiwan (ROC)
La Drome Laboratoire Valence, France	National Institute for Health and Welfare Department of Environmental Health Kuopio, Finland
LABERCA - ONIRIS Nantes, France	National Institute of Nutrition and Seafood Research - NIFES Bergen, Norway
Laboratorio BDS Chile Ltda. Rancagua, Chile	National Measurement Institute Dioxin Analysis Unit – North Ryde Sydney, Australia
Laboratory of SGS Bulgaria Ltd Varna, Bulgaria	NCSR “Demokritos” Mass Spectrometry and Dioxin Analysis Lab Athens, Greece
Laboratory of Vendee (LEAV) La Roche-sur-Yon, France	NEOTRON SpA Laboratory Modena, Italy
Landesamt für Umweltschutz Sachsen-Anhalt Halle, Germany	Nestlé France SAS Cergy Pontoise, France
Landesuntersuchungsamt Institut für Lebensmittelchemie Speyer, Germany	Niedersächsisches Landesamt für Verbraucherschutz und Lebensmittelsicherheit Lebensmittel- und Veterinärinstitut Oldenburg Oldenburg, Germany
Landwirtschaftliche Untersuchungs- und Forschungsanstalt Speyer, Germany	Nofalab BV Schiedam, The Netherlands
LUFA der LMS Rostock Rostock, Germany	Norwegian Institute for Air Research (NILU) Kjeller, Norway
LUFA Nord-West Institute for Feed Analysis Oldenburg, Germany	Oekometric Bayreuth, Germany
Marchwood Scientific Services Southampton, UK	Pacific Rim Laboratories Inc. Surrey, British Columbia, Canada
Marino SRL Santa Maria a Vico (CE), Italia	R&C LAB SRL Altavilla Vicentina , Italy
mas münster analytical solutions gmbh Münster , Germany	Research and Productivity Council (RPC) Fredericton, New Brunswick, Canada
MicroPolluants Technologie Saint Julien Les Metz, France	RIKILT Wageningen, The Netherlands

Servizos de Apoyo á Investigación (Scientific Research Support Services) Coruña, Spain	Vista Analytical Laboratory El Dorado Hills, CA, USA
SGS Analytical Perspectives Wilmington, NC, USA	Wellington Laboratories Inc. Guelph, Ontario, Canada
SGS Belgium NV Division IAC Antwerpen, Belgium	Wessling Laboratorien GmbH Altenberge, Germany
SGS Institut Fresenius GmbH Bayreuth, Germany	Worthies Engineering Consultants Corp. Environmental Analysis Lab Taichung, Taiwan (ROC)
Shimadzu Techno-Research, Inc. Environment and Food Division Kyoto, Japan	Örebro University MTM Research Centre Dioxin Laboratory Örebro, Sweden
State Laboratory County Kildare, Ireland	
Sun Dream Environmental Technology Corporation Food Hygiene Laboratory Taichung City, Taiwan (ROC)	
Super Micro Mass Research & Technology Center Cheng Shiu University Niaosong Township, Kaohsiung County, Taiwan (ROC)	
synlab Umweltinstitut GmbH Linz, Austria	
The Food and Environment Research Agency (FERA) York, UK	
TLR International Rotterdam, The Netherlands	
Umeå University Department of Chemistry Umeå, Sweden	
USDA Agricultural Research Service Biosciences Research Laboratory Fargo, North Dakota, United States	
Veterinary Public Health Laboratory Laboratories Department Contaminants Section Singapore, Singapore	
Vietnam Environment Administration (VEA) Dioxin Laboratory Hanoi, Vietnam	

Design and practical implementation

Study design and reporting of results

As in the previous rounds of this interlaboratory comparison study, the test material chosen represented naturally contaminated food samples. The analytes to be determined were all seventeen 2,3,7,8-substituted PCDDs/PCDFs, the four non-ortho substituted PCBs #77, 81, 126 and 169 and the eight mono-ortho substituted PCBs #105, 114, 118, 123, 156, 157, 167 and 189. In addition, laboratories were asked to determine on a voluntary basis eight PBDEs #28, 47, 99, 100, 153, 154, 183 and 209, six indicator PCBs #28, 52, 101, 138, 153 and 180, total HBCD and its three isomers

(α -, β -, γ -HBCD). The six PCB congeners belong together with the mono-ortho PCB #118 to the selection of PCBs commonly referred to as ICES-7 (ICES-7: Report of the ICES Advisory Committee, 2010; Book 7).

The analysis should be performed using the laboratories' own methods for sample preparation and instrumental analysis, their own standards and quantification procedures and their own method for lipid determination.

It was recommended that laboratories determine as many as possible of the 2,3,7,8-substituted PCDDs/PCDFs, dioxin-like PCBs, PBDEs, indicator PCBs and HBCD. The report was to include the determined lipid percent for the poultry sample, the crab meat and the sample of egg. In addition, the actual amount of sample used and the found lipid amount (g) for each determination should be reported. For each sample, laboratories were to report the found concentration on fresh weight basis for each congener which was detected (e.g. $S/N \geq 3$) as well as the level of determination (LOD, e.g., $S/N = 3$). Non-detected congeners (e.g. $S/N < 3$) were to be marked "ND" in the comments column of the Report forms.

In addition to the food samples, six standard solutions containing known concentrations of the analytes were to be analyzed using the laboratory's own quantification standards and methods. The standard solutions consisted of the following components:

- 1) seventeen 2,3,7,8-substituted PCDDs/PCDFs
- 2) four non-ortho PCBs
- 3) eight mono-ortho PCBs
- 4) eight PBDEs
- 5) six indicator PCBs
- 6) α -HBCD

The test materials consisted of homogenates of poultry, crab meat and egg. The laboratories could choose to analyze one, two or all three food samples.

Each participating laboratory was given an exclusive laboratory code by the co-coordinators. In the present report, the participants are presented in the tables and figures by their unique codes. The participants have access to their own code only and laboratory codes were not revealed to third parties.

When received by the co-coordinators, the raw data from the laboratories were entered into a database. A draft report was generated and made available to all participants on the Internet in July 2013. The draft of the final report was discussed during the DIOXIN 2013 Symposium in August in Daegu, South Korea.

Collection, preparation, and distribution of samples

Samples shipped to the participants comprised one to three of the following:

- Poultry (~90 g)
- Crab meat (~130 g)
- Egg (~80 g)

The test materials consisted of natural products unfortified with standards.

The contaminated samples of poultry and egg were generously provided by Dr. Elke Bruns-Weller, LAVES, Oldenburg, Germany. The crab meat was a kind gift from Hitramat AS, Hitra, Norway.

The poultry from Germany was already ground on arrival at the Norwegian Institute of Public Health. Further preparation consisted in thoroughly homo-

genation of the German poultry with Norwegian ground chicken meat in a food grinder.

The egg-samples from Germany were pooled and homogenized using the same food grinder.

The crab samples were prepared as follows: 12 kg of white crab meat and 6 kg of brown crab meat were blended thoroughly. The homogeneity of these materials was tested using an approach developed at NIPH. The rationale for and description of the test method is given in Appendix D.

Sub-samples of at least 90 g of poultry (P), 130 g of crab meat (C) and 80 g of egg (E) were placed into carefully cleaned screw-cap polystyrene bottles. All samples were stored at -20 °C until shipment to the participating laboratories.

Statistical analysis

Based on experiences from previous rounds, we have chosen the following approach for the calculation of the consensus concentrations for each of the congeners:

For PCDDs/PCDFs and dioxin-like PCBs congener-by-congener medians were calculated from the food sample data of all reporting laboratories using the detection limit as concentration for non-detected congeners (upper bound concentration). For PBDEs, indicator PCBs and HBCD, non-detected congeners were removed from the data set prior to consensus calculation.

Outliers were defined as those values exceeding twice the median of all values and were removed from the data set.

The consensus values were defined as the median of the remaining data for each congener. In addition, the consensus mean and SD were calculated from this data set for each congener. Those congener data which had been removed prior to consensus calculation are marked accordingly in the tables presenting the individual results.

For the standard solutions, outliers were defined as those values outside ±50 % of the median of all reported values and subsequently removed from the data set before the calculation of the median, mean and SD were calculated from the remaining data. The consensus of the lipid content was calculated as the mean after removal of values outside ±2SD.

TEQs were calculated from the consensus values for PCDDs/PCDFs, non-ortho PCBs, and mono-ortho PCBs, using the toxic equivalency factors derived by WHO in 1998 and 2005. As the detection limit was used for the concentration of non-detects, these TEQs represent upper bound concentrations.

Z-scores for PCDD/PCDF TEQ as well as for the non-ortho PCB TEQ, the mono-ortho PCB TEQ, the total TEQ (WHO₂₀₀₅ TEFs), the sum of six indicator PCBs, the sum of eight PBDEs, total HBCD and for each congener were calculated for each laboratory according to the following equation:

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

Where x = reported value; X = consensus value (assigned value); σ = target value for standard deviation. A σ of 20 % of the consensus was used, i.e. Z-scores between +1 and -1 reflect a deviation of ±20 % from the consensus value.

The final report and certificate

The draft of the final report was prepared by the co-coordinators and published on the web in July 2013. The draft results were presented at the DIOXIN 2013 Symposium in Daegu, South Korea.

The final report will be made available to the participants in pdf format at www.fhi.no/ILC.

A certificate, stating the participant's laboratory code, will be sent to each participant who had contributed to the results at the end of 2013.

The study was initiated and carried out by the Department of Exposure and Risk Assessment, Division of Environmental Medicine, Norwegian Institute of Public Health, Oslo, Norway. Members of the co-ordination committee were:

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Presentation in the report

84 laboratories in 38 different countries submitted their results within the deadline and the results will be presented in the following chapters. Any participating laboratory will be able to compare its performance congener by congener with the other laboratories. Since variations in performances are based on several factors, it is recommended that each laboratory carefully evaluates the factors that, favorably or unfavorably, have contributed to its performance. A general reader of the report can without access to the laboratory codes get a general picture of the analytical performance of laboratories worldwide for determining dioxins, dioxin-like PCBs, indicator PCBs, PBDEs and HBCD in regular foods.

In Appendix E the consensus statistics are given on fresh and lipid weight basis for concentrations of individual congeners and TEQ values, a summary of TEQ values for each food item, and the Z-score plots based on a target deviation of ± 20 %.

Individual results reported by the laboratories for each congener are given for poultry, crab meat and egg in Appendix 2, 3 and 4. Results of the lipid determinations are presented in Appendix 5.

Summarizing comments on results

PCDDs/PCDFs

Analyte solution

Concentrations for PCDDs/PCDFs were reported by 68 laboratories. The average RSD for the 17 congeners was 8.3 % ranging from 7.0 % for 1,2,3,4,7,8-HxCDF to 10 % for 1,2,3,4,7,8,9-HpCDF. The calculation of Z-scores for the TEQs (target 13.6 pg TEQ/ μ L) of the PCDD/PCDF standard solution showed that 97 % of the laboratories were within the range of ± 20 % of the consensus value. This demonstrates the generally high quality of the calibration solutions used by the laboratories.

Poultry

For the sample of poultry, PCDD/PCDF results from 66-67 laboratories were received. The consensus TEQ (PCDD/PCDF TEQ based on WHO₂₀₀₅ TEFs) was 0.14 pg TE/g fresh weight and 1.6 pg TE/g lipid weight.

The average RSD was 41 %, ranging from 20-68 % for 1,2,3,6,7,8-HxCDD and 1,2,3,4,7,8,9-HpCDF respectively. Z-scores within ± 1 were obtained by 67 % of the laboratories and 83 % of the laboratories had Z-scores within ± 2 .

Crab meat

PCDD/PCDF concentrations in the crab meat mixture were reported by 71 laboratories. The consensus TEQ was 0.38 pg TEQ/g fresh weight and 12 pg TEQ/g lipid weight (PCDD/PCDF TEQ based on WHO₂₀₀₅ TEFs). The average RSD was 35 % ranging from 26-59 % (1,2,3,6,7,8-HxCDD and 1,2,3,4,7,8,9-HpCDF respectively). Z-scores were within ± 1 for 71 % of the laboratories and within ± 2 for 90 % of the laboratories.

Egg

PCDD/PCDF concentrations in the egg-sample were determined by 68 laboratories. The consensus TEQ was 0.29 pg TEQ/g on fresh weight basis and 2.9 pg TEQ/g on lipid weight basis (PCDD/PCDF TEQ based on WHO₂₀₀₅ TEFs). The average RSD was 38 % ranging from 26-58 % (1,2,3,6,7,8-HxCDD and 1,2,3,7,8,9-HxCDF respectively). Z-scores for PCDD/PCDF TEQ within ± 1 were obtained by 66 % of the laboratories and 86 % had Z-scores within ± 2 .

Dioxin-like PCBs

Analyte solution

The 12 dioxin-like PCBs in the analyte solution were analyzed and reported by 66-68 laboratories. The RSDs for the different congeners were 8.2-10 % with an average of 9.2 %.

Poultry

Dioxin-like PCB concentrations in the poultry sample were reported from 66-67 laboratories. The concentrations of the 12 congeners varied between 0.09 pg/g

fresh weight (CB-169) and 69 pg/g fresh weight (CB-118). The average RSD for concentrations of individual dioxin-like PCB congeners was 31 % ranging from 18% for CB-156 to 53 % for CB-123.

The dioxin-like PCBs contribute 32 % to the total TEQ (WHO TEF₂₀₀₅) in the sample with CB-126 as the main contributor (29 %).

Crab meat

Of the participating laboratories, 69-71 measured and reported dioxin-like PCB concentrations in crab meat. The concentrations ranged from 0.65 pg/g fresh weight for CB-81 to 298 pg/g fresh weight for CB-118. The average RSD for concentrations of individual dioxin-like PCB congeners on fresh weight basis was 24 % ranging from 15 % for CB-157 to 38 % for CB-123.

The dioxin-like PCBs contribute to about 42 % of the total TEQ in the sample with CB-126 as the main contributor (36 %).

Egg

Dioxin-like PCBs in the egg-sample were reported by 66-67 laboratories. Levels were ranging from 0.13 pg/g fresh weight for CB-81 to 189 pg/g fresh weight for CB-118. The average RSD for concentrations of individual dioxin-like PCB congeners on fresh weight basis was 30 % ranging from 20 % for CB-167 to 47 % for CB-123. The contribution of the dioxin-like PCBs to the total TEQ was about 44 % with CB-126 as the main contributor (40 %).

Total TEQ

The total TEQ for poultry was 0.21 pg TEQ/g fresh weight and 2.3 pg TEQ/g lipid weight (WHO TEF₂₀₀₅). The total TEQ of crab meat was 0.65 pg TEQ/g fresh weight and 21 pg TEQ/g lipid weight, and the eggs contained 0.51 pg TEQ/g fresh weight and 5.1 pg TEQ/g lipid weight.

The RSDs for total TEQs on fresh weight basis calculated from the RSD of individual congeners were 10 % for poultry, 9.4 % for crab meat and 12 % for egg.

In Figure 1 the contribution of the three groups of dioxin-like compounds is depicted based on WHO TEF₂₀₀₅ and WHO TEF₁₉₉₈ respectively. For all three food-items included in this study the dioxin-like PCBs contributed to 32 % to 44 % the total TEQ (using WHO TEF₂₀₀₅), demonstrating the importance of PCBs for the determination of the total TEQ related toxic potency of food samples.

Indicator PCBs

Analyte solution

56 laboratories reported indicator PCBs in the analyte solution. The average RSD was 8.7 % ranging from 7.5 to 10 %.

Poultry

For the sample of poultry, results for indicator PCBs were received from 55 laboratories. The concentrations varied between 90 pg/g fresh weight (CB-101) and

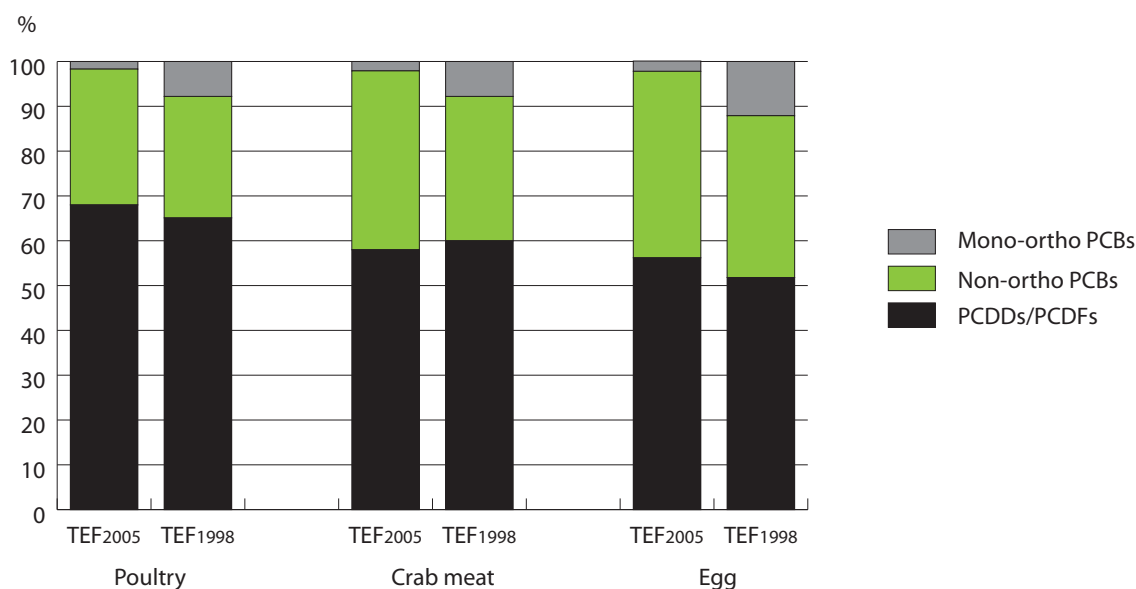


Figure 1. The contribution of PCDDs/PCDFs, non-ortho PCBs and mono-ortho PCBs to the total TEQ calculated using both the WHO₂₀₀₅ TEFs and WHO₁₉₉₈ TEFs, in the three food samples.

240 pg/g fresh weight (CB-28). The RSDs were ranging from 23 to 63 % for CB-180 and CB-52 respectively, with an average of 44 % for all indicator PCBs. The consensus median for the sum of indicator PCBs was 972 pg/g fresh weight.

Crab meat

Within the deadline, 55 laboratories reported results of indicator PCBs in the crab meat sample. The concentrations ranged from 25 pg/g fresh weight (CB-52) to 810 pg/g fresh weight (CB-153) with a consensus median for the sum of indicator PCBs of 1641 pg/g fresh weight. The average RSD was 49 %, ranging from 25 to 107 % for CB-180 and CB-52 respectively.

Egg

Results were obtained from 56 laboratories. The concentrations of indicator PCBs in the egg sample ranged from 8.2 pg/g fresh weight (CB-52) to 951 pg/g (CB-153) and the consensus median for the sum was 2299 pg/g fresh weight. The average RSD was 30 %, ranging from 20 to 45 % for CB-153 and CB-52 respectively.

PBDEs

Analyte solution

The tri- to hepta-PBDE standard solution was analyzed by 31-32 laboratories and 24 laboratories reported values for BDE-209. The RSDs were between 8.7-13 % for all congeners.

Poultry

The PBDE concentrations in poultry were reported by 22-33 laboratories, except for BDE-209 for which 19 results were received. The consensus concentrations were in the range from 0.29 pg/g fresh weight for BDE-28 to 12 pg/g fresh weight for BDE-99. The consensus concentration for BDE-209 was 40 pg/g fresh weight. The sum of tri- to hepta-BDEs was 36 pg/g fresh weight. The range of RSDs on fresh weight basis was 21-52 %, with an average of 33 % including BDE-209.

Crab meat

Within the deadline, 30-31 laboratories had reported results for tri- to hepta-PBDEs in crab meat and 23 laboratories had reported results for BDE-209. The consensus concentrations varied between 0.51 pg/g fresh weight (BDE-183) and 26 pg/g fresh weight (BDE-47). The concentration for BDE-209 was 23 pg/g fresh weight. The sum of tri- to heptaBDEs was 51 pg/g fresh weight. The RSD calculated from the concentrations on fresh weight ranged from 24-63 %, with an average of 34 % for PBDEs including BDE-209.

Egg

22-23 laboratories reported results for tri- to hepta-PBDEs in egg, and 19 reported results for BDE-209. The concentrations varied between 0.26 pg/g fresh weight (BDE-28) and 16 pg/g (BDE-99). The concentration for BDE-209 was 91 pg/g. The sum of tri- to hepta-BDEs was 43 pg/g fresh weight. The RSDs for the individual congeners were ranging from 17 to 51 % with an average of 28 % including BDE-209.

HBCD

Also in this round of the study, total HBCD and the isomers α -, β - and γ -HBCD could be determined and reported. A total of 9 laboratories reported α -HBCD in the standard solution and 6-10 laboratories reported one or more of the three isomers in the food samples. The consensus concentrations for the sum of individual HBCD isomers were 2541 pg/g fresh weight for the poultry sample, 12 pg/g for the crab meat and 380 pg/g fresh weight for the egg sample. Since only few laboratories reported HBCD, these results must be regarded as indicative values.

Lipid content

The mean and RSDs (in parentheses) for the lipid contents of the food samples were calculated to be 8.8 % (RSD=12 %) for poultry, 3.1 % (RSD=22 %) for the crab meat and 10 % (RSD=16 %) for the egg sample.

Acknowledgements

The laboratories are acknowledged for their participation in this interlaboratory comparison and their interest in its overall objectives, thereby making it clear that they value good analytical performance. All the individual analysts are acknowledged for their contributions to the results.

We are grateful to Cambridge Isotope Laboratories, Inc. for providing the standard solutions for this interlaboratory study. We thank Dr. Elke Bruns-Weller at Niedersächsisches Landesamt für Verbraucherschutz und Lebensmittelsicherheit (LAVES) for generously providing both the poultry and the egg samples and Hitramat for kindly providing the crab meat.

Appendix A:

Participant's affiliations
and addresses

Appendix A: Affiliations and addresses of participants

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Appendix B:

Study announcement and
instructions for participants

Announcement for Interlaboratory Comparison on POPs in Food 2013

Introduction

We hereby announce the 14th round of the Interlaboratory Comparison on the Determination of POPs in Food. The study is open for academic, regulatory as well as commercial laboratories world-wide. The organizer of this study is the Division of Environmental Medicine, Department of Exposure and Risk Assessment at the Norwegian Institute of Public Health, Oslo, Norway. The study is scheduled to take place from January to April 2013.

A draft report will be available by mid July 2013 and the final report will be available to the participants by November 2013. All participants who have contributed to the results will receive a certificate of participation in the study.

Objectives

One of the main objectives of this exercise is to assess the interlaboratory consistency in results from analyses of dioxins, PCBs, PBDEs and HBCDs in regular food items known to contribute to the intake in the general population. Further, the world-wide readiness and capacity in analysing halogenated persistent organic pollutants in food will be demonstrated. The study also serves as a tool of quality assurance for the participating laboratories.

Participants

We encourage all laboratories world-wide working in this field to participate and assess their analytical performance. To do this, participants are requested to completely fill out the Registration Form and mark the desired sample types and what analytes they intend to determine.

Analytical requirements

In this interlaboratory comparison, all the seventeen 2, 3, 7, 8-substituted PCDDs and PCDFs, the four non-ortho PCBs, CB-77, 81, 126 and 169 as well as the eight mono-ortho PCBs, CB-105, 114, 118, 123, 156, 157, 167, and 189 will be assessed. In addition, the participants are invited to determine six marker PCBs, eight PBDEs and HBCDs. The concentration of the following congeners can be reported: CB-28, 52, 101, 138, 153 and 180 and BDE-28, 47, 99, 100, 153, 154, 183 and 209. The concentration of α -HBCD, β -HBCD and γ -HBCD as well as the total of these isomers will also be assessed. The test materials consist of three fresh food homogenates. You can choose to analyse one, two or all three of the food items. We encourage you to determine as many analytes as possible. You are further requested to determine and report the lipid content of the foods.

We also include standard solutions of all analytes that should be analysed as solutions of known concentration, which may be used to check your own calibration solutions.

Test material

The test materials consist of three unfortified natural food product homogenates, Poultry (chicken), (labelled P) ~90 g, Crab meat (labelled C) ~130 g and Boiled Eggs (labelled E) ~80 g, and will be distributed by an international courier service to the participating laboratories.

Please note:

In order to avoid delay or retention of the samples at customs, please inform us if there are import restrictions for any of the samples in your country.

Instructions for analysis and reporting

Further detailed instructions and reporting forms will be sent by e-mail simultaneously with the dispatch of the samples in January.

In short, the participating laboratories should:

- use their own standard operation procedures for extraction clean-up and instrumental determination
- use their own reference standards for identification and quantification
- report one single concentration for each analyte in each food matrix determined on fresh weight basis
- report limits of detection for all measured analytes in each food item
- report the lipid content

Time schedule

Announcement	December 2012
Return of registration form	December 31, 2012
Shipment of test material	Third week, 2013
Confirmation of receipt of test material by participant	Within 7 days
Reporting of test results ^{a)}	April 19, 2013
Publication of draft report on web-site	July 2013
Final report available to all participants	November 2013

- a) Please be sure that your results are reported on time as there will be **no extension of the deadline.**

Participation fee

All laboratories that have received the test materials will also receive a corresponding invoice in Norwegian kroner (NOK). The participation fee for any combination of the analytes in one food item is 9 000 NOK, in two food items 11 200 NOK, and for the complete set of all three food items 13 400 NOK.

Co-ordinating group

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Interlaboratory Comparison on Dioxins in Food 2013

Instructions for participants

January 2013

1. Introduction

This is the 14th Round of the Interlaboratory Comparison Study on the Determination of POPs in Food organised by the Department of Exposure and Risk Assessment, Norwegian Institute of Public Health, Oslo, Norway. The objective of this exercise is to assess the interlaboratory comparability of the results from analyses of all dioxins and dioxin-like PCBs included in the WHO-TEF schemes in regular foods. Participants may also determine and report concentrations of six marker PCBs, eight polybrominated diphenylethers (PBDEs) and hexabromocyclododecane (HBCD). The exercise serves as a quality assurance instrument for the participating laboratories. A further objective is to assess the world-wide readiness and capacity for the determination of dioxin-like compounds, marker PCBs, PBDEs and HBCD in food. Instructions for the analysis and submission of results are given below.

Please read these instructions carefully before starting the experimental work.

The participating laboratories will collaboratively assess the interlaboratory comparability in the analytical performance for determination of:

- dioxins and furans: all seventeen 2,3,7,8-substituted PCDDs and PCDFs
- non-ortho PCBs: CB-77, 81, 126 and 169
- mono-ortho PCBs: CB-105, 114, 118, 123, 156, 157, 167 and 189.
- marker PCBs: CB-28, 52, 101, 138, 153 and 180
- PBDEs: BDE-28, 47, 99, 100, 153, 154, 183 and 209
- HBCD α -HBCD, β -HBCD, γ -HBCD and total HBCD

in samples of Poultry (P), Crab meat (C) and Boiled eggs (E). The mentioned analytes should also be determined in the respective six standard solutions. For HBCD, concentrations of α -HBCD, β -HBCD and γ -HBCD as well as the total of these isomers will be assessed. Both results from GC-MS and LC-MS or LC-MS/MS are welcome.

2. Participants

A list of participants is attached. Eighty-six laboratories have announced their participation in the study.

3. Design of the study

3.1 Test materials

Samples

One standard solution of each:

- EDF-5008-50 with PCDDs/PCDFs at concentrations 2:5:10 pg/μl for tetra:penta-hexa-hepta:octa chlorinated dibenzo-p-dioxins/-dibenzo furans respectively
- EC-4986/1000 with non-ortho PCBs at concentration 10 pg/μl
- EC-4987/100 with mono-ortho PCBs at concentration 100 pg/μl
- EC-5179/50 with marker PCBs at concentration 100 pg/μl
- EO-5103/100X-0.1 with PBDEs at concentration 25 pg/μl, except BDE-209 at 100 pg/μl
- ULM-4834-S/100-0.1 with α-HBCD at a concentration 500 pg/μl

One sample of each

- ca. 90 g poultry
- ca. 130 g crab meat
- ca. 80 g boiled egg

Fortification

The samples are prepared from regular market foods. There is no fortification or spiking of the PCDD, PCDF, PCB, PBDE or HBCD analytes in the food samples.

Shipment

The samples are fresh frozen food homogenates. They are distributed by DHL and should reach the receiving laboratory in good condition within a few days. The airwaybill numbers will be made available for the participants to trace the shipment at <http://www.dhl.com>.

3.2 Coding

Coding of laboratories

Upon arrival of the samples in the participant's laboratory, the Microsoft excel file named "Participant confirmation", shall be filled in and **immediately** returned to the co-ordinators by e-mail or telefax. The code of the laboratory will then be given by the co-ordinators. The laboratory codes will not be revealed to the other participants or to third parties.

Coding of samples

Poultry	P
Crab meat	C
Egg	E

The above sample coding is marked on the sample bottles.

3.3 Analytical procedure

Methods to be used

Laboratories shall use

- their own methods for sample preparation and instrumental analysis

- their own internal- and quantification standards
- their own lipid determination procedure

Standard solutions

The standard solutions should be analysed using the laboratory's own quantification standards and methods and the results shall be reported.

General

Beware of the high risk of background contamination and positive blank values when analysing food samples with levels of dioxins, PCBs, PBDEs and HBCD in the low ppt range.

Use sample size according to expected levels of dioxins for the determinations in order to achieve a detection level that leaves as few as possible analytes as non-detected. The sample amount dispatched is not meant for replicate analyses.

The samples might become inhomogeneous during freezing and transport. Re-homogenise all received material of each food item before any portion is taken out for analysis.

4. Reporting

4.1 Results to be reported

Laboratories are recommended to report as many as possible of the congeners mentioned in chapter 1.

The reports must include the determined lipid percent for the samples. Also, the actual sample amount (g) for each determination must be reported.

The analytical report must include concentrations for all the congeners in all the samples on fresh weight basis, see Report forms B, C, D for PCDD/PCDF and dioxin-like PCBs and Report form 2, 3, 4 for marker PCBs, PBDEs and HBCD.

Laboratories must report one concentration on fresh weight basis for each congener which is detected ($S/N \geq 3$), as well as the limit of determination (LOD, $S/N = 3$) for each sample. Non-detected congeners ($S/N < 3$) must be marked ND in the Comments column of the Report form. **Please note that the LOD will be used as concentration of non-detected congeners.**

4.2 Checklist

Please use the attached checklist before returning the Report forms with your results.

4.3 Submitting results

Three Microsoft Excel files are provided to each participant comprising:

Participants confirmation

- confirmation of receiving test materials

Report form dioxins and dioxinlike PCBs

- analytical data, Report forms A, B, C and D

Report form marker PCBs, PBDEs and HBCD

- analytical data, Report forms 1, 2, 3 and 4

Participants are requested to submit their reports electronically to avoid possible transcription errors.

Please, do not alter rows or columns in the original Report forms!

The electronic report shall be sent to dioxin@fhi.no within the deadline.

If necessary, a hard copy of the Report forms can be provided. Please contact one of the co-ordinators. If a hard copy report is used, it shall either be faxed to: + 47 21 07 66 86 or mailed to:

Norwegian Institute of Public Health
att. Nanna Bruun Bremnes
P.O. Box 4403 Nydalen
N-0403 Oslo, Norway

Deadline

The reports must be in our hands no later than April 26, 2013 to enable us to prepare the draft report to be published by July 2013. There will be no extension of this deadline. A confirmation for the receipt of your results will be sent to you by e-mail within a week.

5. Statistical evaluations

Prior to the final report, a draft version will be prepared based on the data reported by April 26th. The co-ordinators will calculate mean, median and between-laboratory standard deviations for each congener. Outliers will be removed, and consensus values will be calculated. In case of extreme deviation from normal distribution, appropriate procedures will be used to get a best available estimate of the true value. For the dioxin-like compounds, TEQ values will be calculated for each laboratory and a consensus TEQ value based on the consensus of the congeners. Z-scores will be calculated for laboratories' results for PCDD/PCDF TEQs and PCB TEQs.

6. Final report

The final report will be prepared by the co-ordinators by November 2013 and will then be made available for all interested parties in an electronic version on <http://www.fhi.no>. All participants will be presented by their laboratory code. Prior to this, a draft will be published on the Internet in the beginning of August.

Certificates of participation in the study will be given to all laboratories submitting results.

7. Fee

To all laboratories that have received the materials, an invoice will be sent. The participation fee for any combination of the 29 dioxin-like congeners, six marker PCBs, 8 PBDEs and HBCD is

- NOK 9000 for one food item
- NOK 11200 for two food items
- NOK 13400 for the complete set of all three food items.

Up to six standard solutions will be distributed free of charge to all participants, dependent on which analytes the participating laboratories intend to determine.

Invoices will be sent out after we have received the Participant confirmation from the participants.

8. Time schedule

Announcement	December 2012
Return of registration form	January, 2013
Shipment of test material	January, 2013
Confirmation of receipt of test material by participant	Within 7 days
Reporting of test results ^{a)}	April 26, 2013
Publication of draft report on web-site	July 2013
Final report available to all participants	November 2013

- a) Please be sure that your results are reported in time as there will be **no extension of the deadline.**

9. Co-ordinators of the study

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Interlaboratory Comparison on Dioxins in Food 2012

Checklist

In order to avoid possible misunderstandings and errors when reporting your results, we here give a list of possible pitfalls. Please, check this list and your Report forms before reporting your results.

- Are the results for each congener filled out in the correct order? Be especially aware of 2,3,4,6,7,8- and 1,2,3,7,8,9-HxCDF, and PCB 81.
- Are all congener results reported in pg/ μ l for standards and pg/g for samples?
- Are both concentration and LOD reported for each congener?
- Are sample amount and measured lipid content filled in?
- Are not detected congeners marked with ND in the Comments column?

Appendix C:

WHO TEFs for human risk assessment

WHO TEFs for human risk assessment based on the conclusions of the World Health Organisation Meeting in Stockholm, Sweden, 15-18 June 1997 and International Programme on Chemical Safety expert meeting in Geneva, June 2005 (M. van den Berg et al., Environ Health Perspect 1998;106:775-792; M. van den Berg et al., Toxicological sciences 93(2), 223-241 (2006))

Congener	TEF values (1998)	TEF values (2005)	Congener	TEF values (1998)	TEF values (2005)
"Dioxins"			"Dioxin-like" PCBs		
Polychlorinated dibenzo-p-dioxins (PCDDs)			Non-ortho PCBs		
2,3,7,8-TCDD	1	1	PCB 77	0.0001	0.0001
1,2,3,7,8-PeCDD	1	1	PCB 81	0.0001	0.0003
1,2,3,4,7,8-HxCDD	0.1	0.1	PCB 126	0.1	0.1
1,2,3,6,7,8-HxCDD	0.1	0.1	PCB 169	0.01	0.03
1,2,3,7,8,9-HxCDD	0.1	0.1			
1,2,3,4,6,7,8-HpCDD	0.01	0.01			
OCDD	0.0001	0.0003			
Polychlorinated dibenzofurans (PCDFs)			Mono-ortho PCBs		
2,3,7,8-TCDF	0.1	0.1	PCB 105	0.0001	0.00003
1,2,3,7,8-PeCDF	0.05	0.03	PCB 114	0.0005	0.00003
2,3,4,7,8-PeCDF	0.5	0.3	PCB 118	0.0001	0.00003
1,2,3,4,7,8-HxCDF	0.1	0.1	PCB 123	0.0001	0.00003
1,2,3,6,7,8-HxCDF	0.1	0.1	PCB 156	0.0005	0.00003
1,2,3,7,8,9-HxCDF	0.1	0.1	PCB 157	0.0005	0.00003
2,3,4,6,7,8-HxCDF	0.1	0.1	PCB 167	0.00001	0.00003
1,2,3,4,6,7,8-HpCDF	0.01	0.01	PCB 189	0.0001	0.00003
1,2,3,4,7,8,9-HpCDF	0.01	0.01			
OCDF	0.0001	0.0003			

Abbreviations used: "T" = tetra; "Pe" = penta; "Hx" = hexa; "Hp" = hepta; "O" = octa; "CDD" = chlorodibenzo-p-dioxin; "CDF" = chlorodibenzofuran; "CB" = chlorobiphenyl.

Appendix D:

Homogeneity testing

Homogeneity testing of test materials for “Interlaboratory Comparison on Dioxins in Food” organised by the Norwegian Institute of Public Health

Introduction

The International Harmonized Protocol for the Proficiency Testing of Analytical Chemistry Laboratories (Pure Appl Chem 2006;78:145-96) states that “The bulk material prepared for the proficiency test must be sufficient homogeneous and stable, in respect of each analyte, to ensure that all laboratories receive distribution units that do not differ to any consequential degree in mean analyte concentration. The scheme provider must clearly state the procedure used to establish the homogeneity of the test material”.

The protocol requires that the variation in composition among the distributed units is negligible in relation to variation introduced by the measurements conducted by the participants of the proficiency test (PT). The estimated variation between the samples (s_{sam}) should be less than 30% of the target standard deviation (σ_p), i.e., $s_{\text{sam}} < 0.3 \sigma_p$.

Further the protocol states that homogeneity testing is required to reassure the participants in proficiency testing schemes that the distributed units of the test material are sufficiently similar. The test specified calls for the selection of ten or more units at random after the putative homogenized material has been split and packaged into discrete samples for distribution. The material from each sample is then analyzed in duplicate, under randomized repeatability conditions (that is, all in one run) using a method with sufficient analytical precision. The value of σ_{sam} is then estimated from the mean squares after one-way analysis of variance (ANOVA).

Much depends on the quality of the analytical results of the homogeneity testing. If the analytical precision (σ_{an}) of the homogeneity test is not small, important sampling variation may be obscured by analytical variation. We may get a non-significant result when testing for heterogeneity, not because it is not present, but the test has no power to detect it. It is recommended that the analytical (repeatability) precision of the method used in the homogeneity test should satisfy $\sigma_{\text{an}} < 0.5 \sigma_p$

Consequences for the Interlaboratory Comparison on Dioxins in Food

Below follows the consequences for the Interlaboratory Comparison on Dioxin in Food;

1.

The protocol recommends duplicate analysis of at least 10 distribution units. Due to limited amount of test material in each distribution unit and the requirement for sufficiently low analytical standard deviation, the test analysis has to be restricted to PCB, e.g., 6 indicator PCB or CB-153. It is, however, questionable whether analysis of indicator PCB also reflects the distribution of dioxins and other contaminants in the sample, as the test material is often prepared by mixing specifically contaminated material with background contaminated material in order to achieve a sufficient contamination level. Therefore, the distribution of PCBs in the sample might not be relevant for the distribution of dioxins in the sample. The analytical precision of the method used in the homogeneity test should be less than half of the target standard deviation, i.e., $\sigma_{\text{an}} < 0.5 \sigma_p$. For determination of dioxins, the target standard deviation may be approximated by the requirement for trueness (Commission Regulation (EC) No 1883/2006) of $\pm 20\%$ for total TEQ, i.e., the analytical precision should be less than 10%. This is unrealistic to achieve for the determination of dioxins.

2.

The homogeneity testing using, e.g., the determination of indicator PCBs, requires the analysis of at least 60 samples prior to shipment of the distribution units to the participants. This causes problems for the time schedule of the sample preparation and involves high costs.

3.

The laboratory conducting the homogeneity test on PT analytes would have access to the test material and knowledge of contamination levels prior to the start of the PT and would therefore not be qualified for participation in the PT.

Conclusion

A valid testing of homogeneity of the test materials of the Interlaboratory Comparison (ILC) on Dioxins in Food with respect to the distribution of dioxins and dioxin-like PCBs is not guaranteed using indicator PCBs. It is doubtful that the analytical precision is small enough to detect a lack in sufficient homogeneity. Given the need for annually testing three different matrices for homogeneity, alternative, rapid and low cost homogeneity tests using surrogate should be applied.

Present approach for homogeneity testing for the ILC on Dioxins in Food

The Harmonized Protocol states under Chapter Testing for sufficient homogeneity: “Tests for sufficient homogeneity are in practice never wholly satisfactory... However, given that sufficient homogeneity is a reasonable prior assumption (because proficiency testing scheme providers do their best to ensure it), and that the cost [and time-consumption] of testing for it is often high, it is sensible to make the main emphasis the avoidance of “Type 1 errors” (that is, false rejection of a satisfactory material).

Having this in mind and the facts that it is impossible to determine all analytes for homogeneity testing of food test material and that a single indicator analyte not necessarily reflects the distribution of the other analytes, we have developed an approach that ensures that the test material is thoroughly blended and evenly distributed among the individual test bottles. The homogeneity testing of solid samples is based on the principle of measuring electrolytic conductivity after addition of sodium chloride to a small portion of the coarsely blended test material. A demonstration of homogeneous distribution of the added salt in the sub samples would indicate our ability to evenly blend the food matrix, i.e., with this approach we ensure the efficiency of our blending procedure. This is especially of importance when blending highly contaminated food matrices with background contaminated food matrices.

When testing homogeneity of the food samples, sodium chloride was added to about 10% of the test material in such an amount that the conductivity was about doubled compared to the natural conductivity. This sub-sample was added to the total sample. For example, to 1 kg of homogenised chicken meat, 150 g NaCl were added resulting in an addition of 1% NaCl to the final test material of 15 kg. Conductivity measurements are performed as follows: boiling water is added to 10.0g of the test material, and the resulting dispersion is ultrasonicated. After centrifugation, the extract is filtered through folded paper filters and allowed to cool to room temperature. The electrolytic conductivity of the water extract is measured using a conductivity meter.

Homogeneity of the test material was demonstrated by comparing the conductivity in water extracts of 10 samples from the same bottle (variation within bottles), and in extracts from 10 different bottles (variation between bottles).

Example

As an example, the relative standard deviation (RSD) of 10 conductivity measurements within a sample bottle containing chicken meat homogenate was 2%. The RSD for the measurement of samples from 10 different, randomly selected bottles was 3%. The contribution of the inhomogeneity to the total variation, calculated from $RSD^2_{\text{inhomogeneity}} = RSD^2_{\text{between}} - RSD^2_{\text{within}}$ ¹ was 2.2% and hence small and acceptable. The total uncertainty for the determination of PCDD/Fs is usually considerably larger, so the measured contribution of inhomogeneity to the total uncertainty can be neglected

¹G. Becher, L.S. Haug, C. Thomsen, World-wide comparison on the quality of analytical determinations of PCDDs/PCDFs and dioxin-like PCBs in food, *Talanta* 63 (2004) 1115-1122.

Appendix E:

Summary results

Consensus of congener concentrations

Consensus of TEQ values

Consensus statistics

Laboratories' reported TEQs

Laboratories' Z-scores

Z-score plots

Consensus congener concentrations

	Poultry		Crab meat		Egg	
	pg/g fw.	pg/g lw.	pg/g fw.	pg/g lw.	pg/g fw.	pg/g lw.
2,3,7,8-TCDD	0.0050	0.056	0.026	0.83	0.0051	0.051
1,2,3,7,8-PeCDD	0.019	0.21	0.10	3.2	0.029	0.29
1,2,3,4,7,8-HxCDD	0.011	0.12	0.063	2.0	0.021	0.22
1,2,3,6,7,8-HxCDD	0.79	9.0	0.13	4.2	1.6	16
1,2,3,7,8,9-HxCDD	0.16	1.8	0.053	1.7	0.44	4.4
1,2,3,4,6,7,8-HpCDD	0.38	4.3	0.18	5.7	2.0	20
1,2,3,4,6,7,8,9-OCDD	0.43	4.8	0.36	11	1.1	11
2,3,7,8-TCDF	0.040	0.45	0.74	23	0.058	0.59
1,2,3,7,8-PeCDF	0.015	0.17	0.091	2.9	0.027	0.28
2,3,4,7,8-PeCDF	0.025	0.29	0.38	12	0.049	0.49
1,2,3,4,7,8-HxCDF	0.012	0.14	0.10	3.2	0.033	0.33
1,2,3,6,7,8-HxCDF	0.0081	0.092	0.048	1.5	0.020	0.20
2,3,4,6,7,8-HxCDF	0.0080	0.090	0.15	4.6	0.019	0.19
1,2,3,7,8,9-HxCDF	0.0052	0.058	0.0072	0.23	0.0065	0.066
1,2,3,4,6,7,8-HpCDF	0.023	0.26	0.16	5.0	0.053	0.54
1,2,3,4,7,8,9-HpCDF	0.0081	0.091	0.0050	0.16	0.0090	0.090
1,2,3,4,6,7,8,9-OCDF	0.049	0.56	0.018	0.58	0.032	0.32
PCB 77	2.5	28	10	331	2.6	26
PCB 126	0.59	6.7	2.4	75	2.0	21
PCB 169	0.090	1.0	0.75	24	0.25	2.5
PCB 81	0.13	1.5	0.65	20	0.13	1.3
PCB 105	20	226	89	2801	54	546
PCB 114	1.4	16	3.9	124	1.7	17
PCB 118	69	774	298	9420	189	1911
PCB 123	0.86	9.7	4.4	140	2.4	24
PCB 156	13	149	27	840	75	755
PCB 157	1.9	22	8.9	282	10.0	101
PCB 167	6.7	76	23	717	39	393
PCB 189	2.1	23	3.0	95	12	116

fw. - fresh weight

lw. - lipid weight

Consensus congener concentrations

	Poultry		Crab meat		Egg	
	pg/g fw.	pg/g lw.	pg/g fw.	pg/g lw.	pg/g fw.	pg/g lw.
CB 28	240	2712	76	2414	38	387
CB 52	205	2322	25	777	8.2	82
CB 101	90	1022	98	3097	21	216
CB 138	143	1616	490	15516	787	7945
CB 153	192	2169	810	25633	951	9606
CB 180	101	1141	142	4495	493	4983
BDE 28	0.29	3	2.7	85	0.26	3
BDE 47	9.7	110	26	837	11	107
BDE 99	12	137	5.3	168	16	158
BDE 100	3.4	39	6.7	211	3.8	39
BDE 153	5.7	65	2.3	73	6.1	62
BDE 154	1.9	22	6.7	211	2.4	24
BDE 183	2.9	33	0.51	16	4.2	43
BDE 209	40	455	23	714	91	919
α-HBCD	1999	22588	8.0	254	321	3247
β-HBCD	36	405	1.3	41	43	434
γ-HBCD	129	1458	3.9	124	243	2449
Tot HBCD	2541	28712	12	376	380	3838
Sum PCB	972	10982	1641	51930	2299	23219
Sum BDE without 209	36	409	51	1600	43	435
Sum BDE	76	863	73	2315	134	1354

fw. - fresh weight

lw. - lipid weight

Consensus of TEQs

TEF₂₀₀₅

	Poultry		Crab meat		Egg	
	pg TE/g fw.	pg TE/g lw.	pg TE/g fw.	pg TE/g lw.	pg TE/g fw.	pg TE/g lw.
2,3,7,8-TCDD	0.0050	0.056	0.026	0.83	0.0051	0.051
1,2,3,7,8-PeCDD	0.019	0.21	0.10	3.2	0.029	0.29
1,2,3,4,7,8-HxCDD	0.0011	0.012	0.0063	0.20	0.0021	0.022
1,2,3,6,7,8-HxCDD	0.079	0.90	0.013	0.42	0.16	1.6
1,2,3,7,8,9-HxCDD	0.016	0.18	0.0053	0.17	0.044	0.44
1,2,3,4,6,7,8-HpCDD	0.0038	0.043	0.0018	0.057	0.020	0.20
1,2,3,4,6,7,8,9-OCDD	0.00013	0.0014	0.00011	0.0034	0.00034	0.0034
2,3,7,8-TCDF	0.0040	0.045	0.074	2.3	0.0058	0.059
1,2,3,7,8-PeCDF	0.00045	0.0051	0.0027	0.086	0.00082	0.0083
2,3,4,7,8-PeCDF	0.0076	0.086	0.11	3.6	0.015	0.15
1,2,3,4,7,8-HxCDF	0.0012	0.014	0.010	0.32	0.0033	0.033
1,2,3,6,7,8-HxCDF	0.00081	0.0092	0.0048	0.15	0.0020	0.020
2,3,4,6,7,8-HxCDF	0.00080	0.0090	0.015	0.46	0.0019	0.019
1,2,3,7,8,9-HxCDF	0.00052	0.0058	0.00072	0.023	0.00065	0.0066
1,2,3,4,6,7,8-HpCDF	0.00023	0.0026	0.0016	0.050	0.00053	0.0054
1,2,3,4,7,8,9-HpCDF	0.000081	0.00091	0.000050	0.0016	0.000090	0.00090
1,2,3,4,6,7,8,9-OCDF	0.000015	0.00017	0.0000055	0.00017	0.000010	0.00010
PCB 77	0.00025	0.0028	0.0010	0.033	0.00026	0.0026
PCB 126	0.059	0.67	0.24	7.5	0.20	2.1
PCB 169	0.0027	0.030	0.023	0.71	0.0075	0.076
PCB 81	0.000039	0.00044	0.00019	0.0061	0.000039	0.00039
PCB 105	0.00060	0.0068	0.0027	0.084	0.0016	0.016
PCB 114	0.000042	0.00047	0.00012	0.0037	0.000051	0.00052
PCB 118	0.0021	0.023	0.0089	0.28	0.0057	0.057
PCB 123	0.000026	0.00029	0.00013	0.0042	0.000071	0.00072
PCB 156	0.00040	0.0045	0.00080	0.025	0.0022	0.023
PCB 157	0.000058	0.00066	0.00027	0.0085	0.00030	0.0030
PCB 167	0.00020	0.0023	0.00068	0.022	0.0012	0.012
PCB 189	0.000062	0.00070	0.000090	0.0028	0.00035	0.0035
PCDDs/PCDFs	0.14	1.6	0.38	12	0.29	2.9
Non-ortho PCBs	0.062	0.70	0.26	8.2	0.21	2.1
Mono-ortho PCBs	0.0034	0.039	0.014	0.43	0.011	0.12
Total TEQ	0.21	2.3	0.65	21	0.51	5.1

fw. - fresh weight

lw- - lipid weight

Consensus of TEQs

TEF₁₉₉₈

	Poultry		Crab meat		Egg	
	pg TE/g fw.	pg TE/g lw.	pg TE/g fw.	pg TE/g lw.	pg TE/g fw.	pg TE/g lw.
2,3,7,8-TCDD	0.0050	0.056	0.026	0.83	0.0051	0.051
1,2,3,7,8-PeCDD	0.019	0.21	0.10	3.2	0.029	0.29
1,2,3,4,7,8-HxCDD	0.0011	0.012	0.0063	0.20	0.0021	0.022
1,2,3,6,7,8-HxCDD	0.079	0.90	0.013	0.42	0.16	1.6
1,2,3,7,8,9-HxCDD	0.016	0.18	0.0053	0.17	0.044	0.44
1,2,3,4,6,7,8-HpCDD	0.0038	0.043	0.0018	0.057	0.020	0.20
1,2,3,4,6,7,8,9-OCDD	0.000043	0.00048	0.000036	0.0011	0.00011	0.0011
2,3,7,8-TCDF	0.0040	0.045	0.074	2.3	0.0058	0.059
1,2,3,7,8-PeCDF	0.00075	0.0084	0.0046	0.14	0.0014	0.014
2,3,4,7,8-PeCDF	0.013	0.14	0.19	6.1	0.024	0.25
1,2,3,4,7,8-HxCDF	0.0012	0.014	0.010	0.32	0.0033	0.033
1,2,3,6,7,8-HxCDF	0.00081	0.0092	0.0048	0.15	0.0020	0.020
2,3,4,6,7,8-HxCDF	0.00080	0.0090	0.015	0.46	0.0019	0.019
1,2,3,7,8,9-HxCDF	0.00052	0.0058	0.00072	0.023	0.00065	0.0066
1,2,3,4,6,7,8-HpCDF	0.00023	0.0026	0.0016	0.050	0.00053	0.0054
1,2,3,4,7,8,9-HpCDF	0.000081	0.00091	0.000050	0.0016	0.000090	0.00090
1,2,3,4,6,7,8,9-OCDF	0.0000049	0.000056	0.0000018	0.000058	0.0000032	0.000032
PCB 77	0.00025	0.0028	0.0010	0.033	0.00026	0.0026
PCB 126	0.059	0.67	0.24	7.5	0.20	2.1
PCB 169	0.00090	0.010	0.0075	0.24	0.0025	0.025
PCB 81	0.000013	0.00015	0.000065	0.0020	0.000013	0.00013
PCB 105	0.0020	0.023	0.0089	0.28	0.0054	0.055
PCB 114	0.00070	0.0079	0.0020	0.062	0.00085	0.0086
PCB 118	0.0069	0.077	0.030	0.94	0.019	0.19
PCB 123	0.000086	0.0010	0.00044	0.014	0.00024	0.0024
PCB 156	0.0066	0.075	0.013	0.42	0.037	0.38
PCB 157	0.00097	0.011	0.0045	0.14	0.0050	0.050
PCB 167	0.000067	0.00076	0.00023	0.0072	0.00039	0.0039
PCB 189	0.00021	0.0023	0.00030	0.0095	0.0012	0.012
PCDDs/PCDFs	0.15	1.6	0.46	14	0.30	3.0
Non-ortho PCBs	0.061	0.68	0.25	7.8	0.21	2.1
Mono-ortho PCBs	0.017	0.20	0.059	1.9	0.069	0.70
Total TEQ	0.22	2.5	0.76	24	0.57	5.8

fw. - fresh weight

lw- - lipid weight

Consensus statistics

Analyte solution

	Target value pg/ul	Consensus median, pg/ul	Median all values pg/ul	Consensus mean, pg/ul	Standard deviation, pg/ul	Relative standard deviation, %	No. of values reported	No. of values removed
2,3,7,8-TCDD	2.0	2.0	2.0	2.0	0.18	9	68	0
1,2,3,7,8-PeCDD	5.0	4.9	4.9	4.9	0.41	8	68	0
1,2,3,4,7,8-HxCDD	5.0	4.9	4.9	4.9	0.38	8	68	0
1,2,3,6,7,8-HxCDD	5.0	5.0	5.0	4.9	0.43	9	68	0
1,2,3,7,8,9-HxCDD	5.0	5.2	5.2	5.1	0.45	9	68	0
1,2,3,4,6,7,8-HpCDD	5.0	4.9	4.9	4.9	0.37	8	68	0
1,2,3,4,6,7,8,9-OCDD	10	9.9	9.9	9.8	0.84	9	68	0
2,3,7,8-TCDF	2.0	2.0	2.0	1.9	0.18	9	68	0
1,2,3,7,8-PeCDF	5.0	5.0	5.0	5.0	0.41	8	68	0
2,3,4,7,8-PeCDF	5.0	4.8	4.8	4.8	0.36	7	68	0
1,2,3,4,7,8-HxCDF	5.0	4.9	4.9	4.9	0.35	7	68	0
1,2,3,6,7,8-HxCDF	5.0	4.9	4.9	5.0	0.44	9	68	0
2,3,4,6,7,8-HxCDF	5.0	5.0	5.0	5.0	0.36	7	68	0
1,2,3,7,8,9-HxCDF	5.0	4.9	4.9	5.0	0.39	8	68	0
1,2,3,4,6,7,8-HpCDF	5.0	4.9	5.0	4.9	0.41	8	68	0
1,2,3,4,7,8,9-HpCDF	5.0	4.9	4.9	5.0	0.51	10	68	0
1,2,3,4,6,7,8,9-OCDF	10	9.8	9.8	9.8	0.90	9	68	0
PCB 77	10	10	10	10	1.1	10	68	1
PCB 126	10	10	10	10	0.93	9	68	1
PCB 169	10	10	10	10	0.96	9	68	1
PCB 81	10	10	10	10	0.85	8	66	2
PCB 105	100	101	101	102	8.9	9	67	1
PCB 114	100	100	100	101	10	10	67	2
PCB 118	100	102	102	104	10	10	67	1
PCB 123	100	102	102	103	9.0	9	67	1
PCB 156	100	102	102	103	8.7	8	67	1
PCB 157	100	101	101	103	10	10	67	1
PCB 167	100	101	101	102	8.6	8	67	1
PCB 189	100	101	101	102	9.1	9	67	1

Consensus statistics

Poultry, fresh weight

	Consensus median, pg/g	Median all values pg/g	Consensus mean, pg/g	Standard deviation, pg/g	Relative standard deviation, %	No. of values reported	No. of values removed	No. of reported non-detects
2,3,7,8-TCDD	0.0050	0.0058	0.0054	0.0026	48	67	16	37
1,2,3,7,8-PeCDD	0.019	0.020	0.019	0.0069	36	67	10	12
1,2,3,4,7,8-HxCDD	0.011	0.013	0.012	0.0047	40	67	18	23
1,2,3,6,7,8-HxCDD	0.79	0.79	0.77	0.15	20	67	0	1
1,2,3,7,8,9-HxCDD	0.16	0.16	0.16	0.038	24	67	3	1
1,2,3,4,6,7,8-HpCDD	0.38	0.38	0.37	0.097	26	67	2	2
1,2,3,4,6,7,8,9-OCDD	0.43	0.43	0.44	0.13	30	67	4	2
2,3,7,8-TCDF	0.040	0.040	0.041	0.014	35	67	6	7
1,2,3,7,8-PeCDF	0.015	0.017	0.016	0.0063	40	67	12	14
2,3,4,7,8-PeCDF	0.025	0.026	0.027	0.010	39	67	8	6
1,2,3,4,7,8-HxCDF	0.012	0.014	0.013	0.0053	40	67	17	18
1,2,3,6,7,8-HxCDF	0.0081	0.010	0.0091	0.0039	44	67	19	19
2,3,4,6,7,8-HxCDF	0.0080	0.010	0.0086	0.0041	49	67	18	26
1,2,3,7,8,9-HxCDF	0.0052	0.0091	0.0060	0.0039	66	67	17	44
1,2,3,4,6,7,8-HpCDF	0.023	0.027	0.026	0.012	47	67	13	11
1,2,3,4,7,8,9-HpCDF	0.0081	0.010	0.0083	0.0057	68	66	18	40
1,2,3,4,6,7,8,9-OCDF	0.049	0.056	0.052	0.022	43	67	14	9
PCB 77	2.5	2.6	2.6	1.0	40	67	8	0
PCB 126	0.59	0.60	0.61	0.15	24	67	2	2
PCB 169	0.090	0.099	0.096	0.029	30	67	11	15
PCB 81	0.13	0.15	0.14	0.063	45	66	15	12
PCB 105	20	21	21	6.5	32	66	5	1
PCB 114	1.4	1.6	1.5	0.57	38	66	9	3
PCB 118	69	71	72	27	37	66	4	0
PCB 123	0.86	1.0	0.94	0.50	53	66	14	8
PCB 156	13	13	13	2.4	18	66	1	0
PCB 157	1.9	2.0	2.0	0.39	20	66	3	1
PCB 167	6.7	6.9	6.8	1.4	21	66	4	0
PCB 189	2.1	2.1	2.1	0.43	21	66	2	1

Consensus statistics

Crab meat, fresh weight

	Consensus median, pg/g	Median all values pg/g	Consensus mean, pg/g	Standard deviation, pg/g	Relative standard deviation, %	No. of values reported	No. of values removed	No. of reported non-detects
2,3,7,8-TCDD	0.026	0.028	0.025	0.0091	36	71	6	11
1,2,3,7,8-PeCDD	0.10	0.11	0.099	0.031	31	71	2	1
1,2,3,4,7,8-HxCDD	0.063	0.064	0.062	0.019	30	71	2	5
1,2,3,6,7,8-HxCDD	0.13	0.14	0.13	0.033	26	71	1	2
1,2,3,7,8,9-HxCDD	0.053	0.054	0.050	0.016	32	71	5	5
1,2,3,4,6,7,8-HpCDD	0.18	0.18	0.18	0.050	28	71	3	1
1,2,3,4,6,7,8,9-OCDD	0.36	0.38	0.38	0.14	37	71	6	2
2,3,7,8-TCDF	0.74	0.74	0.70	0.19	27	71	0	0
1,2,3,7,8-PeCDF	0.091	0.092	0.088	0.026	29	71	1	2
2,3,4,7,8-PeCDF	0.38	0.38	0.38	0.10	28	71	0	0
1,2,3,4,7,8-HxCDF	0.10	0.10	0.093	0.030	32	71	5	2
1,2,3,6,7,8-HxCDF	0.048	0.048	0.046	0.016	34	71	3	6
2,3,4,6,7,8-HxCDF	0.15	0.15	0.14	0.040	28	71	0	0
1,2,3,7,8,9-HxCDF	0.0072	0.0090	0.0068	0.0036	53	71	18	38
1,2,3,4,6,7,8-HpCDF	0.16	0.16	0.15	0.047	31	71	1	1
1,2,3,4,7,8,9-HpCDF	0.0050	0.0080	0.0059	0.0035	59	71	20	44
1,2,3,4,6,7,8,9-OCDF	0.018	0.022	0.020	0.0094	48	71	18	25
PCB 77	10	10	11	3.0	28	71	0	0
PCB 126	2.4	2.4	2.3	0.52	22	71	1	0
PCB 169	0.75	0.75	0.73	0.17	23	70	1	3
PCB 81	0.65	0.65	0.65	0.23	36	69	5	5
PCB 105	89	89	90	21	23	69	0	0
PCB 114	3.9	3.9	4.1	1.2	29	69	3	1
PCB 118	298	298	297	63	21	69	0	0
PCB 123	4.4	4.7	4.4	1.7	38	69	8	6
PCB 156	27	27	27	4.5	17	69	0	0
PCB 157	8.9	8.9	8.7	1.3	15	69	1	2
PCB 167	23	23	23	3.8	17	69	2	0
PCB 189	3.0	3.0	3.0	0.52	17	69	3	4

Consensus statistics

Egg, fresh weight

	Consensus median, pg/g	Median all values pg/g	Consensus mean, pg/g	Standard deviation, pg/g	Relative standard deviation, %	No. of values reported	No. of values removed	No. of reported non-detects
2,3,7,8-TCDD	0.0051	0.0068	0.0060	0.0029	48	68	20	35
1,2,3,7,8-PeCDD	0.029	0.029	0.027	0.011	39	68	7	14
1,2,3,4,7,8-HxCDD	0.021	0.024	0.022	0.0086	40	68	12	18
1,2,3,6,7,8-HxCDD	1.6	1.6	1.5	0.39	26	68	0	0
1,2,3,7,8,9-HxCDD	0.44	0.44	0.41	0.14	33	68	1	0
1,2,3,4,6,7,8-HpCDD	2.0	2.0	1.8	0.49	27	68	0	1
1,2,3,4,6,7,8,9-OCDD	1.1	1.1	1.1	0.35	32	68	1	1
2,3,7,8-TCDF	0.058	0.058	0.054	0.021	38	68	5	5
1,2,3,7,8-PeCDF	0.027	0.029	0.028	0.011	41	68	6	10
2,3,4,7,8-PeCDF	0.049	0.049	0.047	0.015	32	68	4	4
1,2,3,4,7,8-HxCDF	0.033	0.034	0.034	0.012	36	68	8	5
1,2,3,6,7,8-HxCDF	0.020	0.022	0.022	0.0076	34	68	10	6
2,3,4,6,7,8-HxCDF	0.019	0.021	0.020	0.0082	40	68	9	12
1,2,3,7,8,9-HxCDF	0.0065	0.010	0.0065	0.0038	58	68	22	43
1,2,3,4,6,7,8-HpCDF	0.053	0.059	0.057	0.021	36	68	7	5
1,2,3,4,7,8,9-HpCDF	0.0090	0.010	0.0089	0.0042	48	68	20	40
1,2,3,4,6,7,8,9-OCDF	0.032	0.039	0.033	0.015	45	68	23	14
PCB 77	2.6	2.6	2.5	0.76	31	67	5	0
PCB 126	2.0	2.1	2.0	0.55	28	67	3	1
PCB 169	0.25	0.26	0.25	0.083	33	67	8	11
PCB 81	0.13	0.14	0.13	0.047	37	66	11	9
PCB 105	54	54	52	14	27	66	2	0
PCB 114	1.7	1.8	1.7	0.61	36	66	7	6
PCB 118	189	190	184	51	28	66	1	1
PCB 123	2.4	2.6	2.4	1.1	47	66	9	9
PCB 156	75	75	73	16	22	66	0	1
PCB 157	10.0	10	9.7	2.4	25	66	2	1
PCB 167	39	39	38	7.6	20	66	2	0
PCB 189	12	12	11	2.6	23	66	0	1

Consensus statistics

Analyte solution

	Target value pg/ μ l	Median, pg/ μ l all values	Median, pg/ μ l outliers removed	Mean, pg/ μ l all values	Mean, pg/ μ l outliers removed
CB 28	100	99	99	100	100
CB 52	100	99	99	100	100
CB 101	100	99	99	99	99
CB 138	100	99	99	100	100
CB 153	100	99	99	100	100
CB 180	100	100	100	100	100
BDE 28	25	25	25	25	25
BDE 47	25	25	25	26	25
BDE 99	25	24	24	24	24
BDE 100	25	23	23	24	24
BDE 153	25	24	24	24	24
BDE 154	25	24	24	24	24
BDE 183	25	25	25	25	25
BDE 209	100	100	100	100	100
α -HBCD *	500	493	493	485	485

	Relative standard deviation, % all values	Relative standard deviation, % outliers removed	Number of reported values	Number of reported outliers
CB 28	21	9	56	3
CB 52	20	10	56	2
CB 101	19	9	56	2
CB 138	21	9	56	2
CB 153	19	7	56	2
CB 180	20	9	56	2
BDE 28	10	10	32	0
BDE 47	18	9	32	1
BDE 99	9	9	32	0
BDE 100	12	12	32	0
BDE 153	9	9	32	0
BDE 154	9	9	32	0
BDE 183	13	13	31	0
BDE 209	10	10	24	0
α -HBCD *	9	9	9	0

NDs: Non-detects

* : Indicative value due to few reported values

Consensus statistics

Poultry, fresh weight

	Median, pg/g all values	Median, pg/g outliers removed	Median, pg/g outliers and NDs removed	Mean, pg/g all values	Mean, pg/g outliers removed	Mean, pg/g outliers and NDs removed
CB 28	310	240	240	451	255	255
CB 52	311	205	205	408	247	247
CB 101	118	95	90	217	104	104
CB 138	144	142	143	174	148	151
CB 153	198	192	192	221	191	194
CB 180	101	101	101	119	102	104
BDE 28	0.39	0.29	0.29	7.3	0.31	0.31
BDE 47	10	10	10	464	10	11
BDE 99	12	12	12	440	13	14
BDE 100	3.6	3.4	3.4	88	3.6	3.5
BDE 153	5.7	5.6	5.7	35	5.8	6.2
BDE 154	2.0	1.9	1.9	34	1.9	1.9
BDE 183	3.0	2.9	2.9	14	2.8	2.9
BDE 209	47	40	40	984	41	42
α -HBCD *	1999	1999	1999	2050	2050	2050
β -HBCD *	70	36	36	89	55	55
γ -HBCD *	219	130	129	350	133	111
Tot HBCD *	2541	2541	2541	2478	2478	2478

	Relative standard deviation, % all values	Relative standard deviation, % outliers removed	Relative standard deviation, % outliers and NDs removed	Number of reported values	Number of outliers	Number of reported NDs
CB 28	95	62	62	55	14	1
CB 52	106	63	63	55	11	1
CB 101	121	60	61	55	16	2
CB 138	78	32	28	55	3	2
CB 153	65	29	25	55	3	2
CB 180	105	27	23	55	1	2
BDE 28	444	57	52	23	5	9
BDE 47	467	42	36	23	3	2
BDE 99	464	45	40	23	2	1
BDE 100	458	30	30	23	3	1
BDE 153	401	32	25	23	1	2
BDE 154	447	31	27	23	3	3
BDE 183	340	28	21	22	5	4
BDE 209	404	34	30	19	6	2
α -HBCD *	12	12	12	10	0	0
β -HBCD *	103	81	81	10	2	1
γ -HBCD *	82	57	54	10	4	1
Tot HBCD *	17	17	17	9	0	0

NDs: Non-detects

* : Indicative value due to few reported values

Consensus statistics

Crab meat, fresh weight

	Median, pg/g all values	Median, pg/g outliers removed	Median, pg/g outliers and NDs removed	Mean, pg/g all values	Mean, pg/g outliers removed	Mean, pg/g outliers and NDs removed
CB 28	140	76	76	271	97	100
CB 52	100	25	25	189	48	48
CB 101	110	98	98	175	106	109
CB 138	492	489	490	527	502	511
CB 153	812	810	810	818	780	791
CB 180	144	141	142	161	138	141
BDE 28	2.7	2.7	2.7	2.7	3	3
BDE 47	26	26	26	27	27	28
BDE 99	5.5	5.2	5.3	8.2	5.9	6
BDE 100	6.8	6.7	6.7	7.2	6.9	7
BDE 153	2.3	2.3	2.3	2.7	2.5	3
BDE 154	6.6	6.6	6.7	6.9	6.9	7
BDE 183	1.0	0.54	0.51	1.6	0.79	1
BDE 209	25	22	23	89	22	23
α -HBCD *	10	8.4	8	15	7.5	7
β -HBCD *	5.0	4.0	1.3	14	5.1	1
γ -HBCD *	10	4.0	3.9	15	7.3	4
Tot HBCD *	13	8.4	12	17	8.0	10

	Relative standard deviation, % all values	Relative standard deviation, % outliers removed	Relative standard deviation, % outliers and NDs removed	Number of reported values	Number of outliers	Number of reported NDs
CB 28	140	67	65	55	19	3
CB 52	121	106	107	55	21	3
CB 101	93	44	41	55	14	3
CB 138	42	36	33	55	2	2
CB 153	37	29	26	55	2	2
CB 180	79	29	25	55	3	2
BDE 28	43	38	31	31	1	3
BDE 47	30	30	24	31	0	1
BDE 99	82	32	27	31	5	2
BDE 100	34	29	29	31	1	0
BDE 153	46	32	29	31	2	4
BDE 154	33	33	28	31	0	1
BDE 183	97	64	63	30	8	8
BDE 209	202	48	44	23	4	3
α -HBCD *	79	52	28	9	3	4
β -HBCD *	190	76	0	9	1	8
γ -HBCD *	105	81	3	9	2	7
Tot HBCD *	87	76	46	6	2	2

NDs: Non-detects

* : Indicative value due to few reported values

Consensus statistics

Egg, fresh weight

	Median, pg/g all values	Median, pg/g outliers removed	Median, pg/g outliers and NDs removed	Mean, pg/g all values	Mean, pg/g outliers removed	Mean, pg/g outliers and NDs removed
CB 28	39	37	38	69	36	38
CB 52	10	8.0	8.2	68	9.2	9.4
CB 101	23	21	21	56	22	22
CB 138	787	787	787	791	791	802
CB 153	951	951	951	927	927	944
CB 180	493	493	493	495	486	495
BDE 28	0.34	0.26	0.26	0.50	0.28	0.26
BDE 47	11	10	11	14	10	11
BDE 99	16	15	16	18	16	17
BDE 100	3.9	3.8	3.8	4.6	4.1	4.0
BDE 153	5.6	5.6	6.1	5.9	5.9	6.2
BDE 154	2.4	2.4	2.4	2.3	2.3	2.4
BDE 183	4.4	4.2	4.2	5.0	4.1	4.3
BDE 209	91	86	91	106	85	93
α -HBCD *	321	321	321	353	353	353
β -HBCD *	54	40	43	80	43	53
γ -HBCD *	243	79	243	313	149	250
Tot HBCD *	536	380	380	675	441	441

	Relative standard deviation, % all values	Relative standard deviation, % outliers removed	Relative standard deviation, % outliers and NDs removed	Number of reported values	Number of outliers	Number of reported NDs
CB 28	215	43	37	56	7	7
CB 52	381	52	45	56	11	7
CB 101	268	32	29	56	8	6
CB 138	29	29	26	56	0	2
CB 153	25	25	20	56	0	1
CB 180	29	26	22	56	1	2
BDE 28	127	59	51	23	4	8
BDE 47	75	44	29	23	3	2
BDE 99	47	33	24	23	3	1
BDE 100	40	28	27	23	2	1
BDE 153	27	27	18	23	0	2
BDE 154	36	36	28	23	0	3
BDE 183	50	26	17	22	3	2
BDE 209	70	44	33	19	2	2
α -HBCD *	40	40	40	10	0	0
β -HBCD *	104	71	49	10	2	3
γ -HBCD *	97	111	61	10	3	3
Tot HBCD *	73	65	65	8	2	0

NDs: Non-detects

* : Indicative value due to few reported values

Laboratories' reported TEQs, sum indicator PCB and sum BDE without BDE 209

TEF ₂₀₀₅	Median pg/g	Mean pg/g	SD pg/g	RSD %	Min pg/g	Max pg/g	Reporting laboratories
Poultry, fresh weight							
PCDD/PCDF TEQ	0,15	0,24	0,34	142	0,024	2,7	69
Non-ortho PCB TEQ	0,064	0,069	0,023	33	0,018	0,14	67
Mono-ortho PCB TEQ	0,0037	0,0044	0,0035	80	0,00078	0,026	66
Total TEQ	0,21	0,30	0,35	116	0,086	2,8	69
Sum indicator PCB	1254	1589	1300	82	0,95	7856	55
Sum BDE without BDE 209	37	1080	4978	461	17	23918	23
Crab meat, fresh weight							
PCDD/PCDF TEQ	0,40	0,48	0,19	40	0,030	1,4	72
Non-ortho PCB TEQ	0,26	0,26	0,067	26	0,021	0,56	71
Mono-ortho PCB TEQ	0,014	0,014	0,0024	17	0,0080	0,020	69
Total TEQ	0,67	0,70	0,26	37	0,050	2,0	73
Sum indicator PCB	1990	2204	1056	48	1,7	6000	51
Sum BDE without BDE 209	52	57	18	31	28	101	29
Egg, fresh weight							
PCDD/PCDF TEQ	0,29	0,37	0,31	84	0,079	2,4	68
Non-ortho PCB TEQ	0,22	0,24	0,17	73	0,00072	1,5	66
Mono-ortho PCB TEQ	0,012	0,012	0,0037	32	0,00070	0,033	65
Total TEQ	0,53	0,60	0,39	64	0,10	2,6	69
Sum indicator PCB	2312	2406	851	0	2,4	6160	56
Sum BDE without BDE 209	43	50	20	0	16	90	23

Laboratories' reported TEQs, sum indicator PCB and sum BDE without BDE 209

TEF ₁₉₉₈	Median pg/g	Mean pg/g	SD pg/g	RSD %	Min pg/g	Max pg/g	Reporting laboratories
Poultry, fresh weight							
PCDD/PCDF TEQ	0,15	0,24	0,38	158	0,025	3,0	67
Non-ortho PCB TEQ	0,062	0,065	0,020	31	0,0099	0,14	67
Mono-ortho PCB TEQ	0,019	0,022	0,015	68	0,0042	0,11	66
Total TEQ	0,23	0,33	0,39	118	0,085	3,1	67
Sum indicator PCB	1254	1589	1300	82	0,95	7856	55
Sum BDE without BDE 209	37	1080	4978	461	17	23918	23
Crab meat, fresh weight							
PCDD/PCDF TEQ	0,47	0,48	0,16	34	0,036	1,1	71
Non-ortho PCB TEQ	0,25	0,25	0,062	25	0,020	0,49	71
Mono-ortho PCB TEQ	0,059	0,063	0,026	41	0,035	0,26	69
Total TEQ	0,80	0,78	0,20	26	0,056	1,6	71
Sum indicator PCB	1990	2204	1056	48	1,7	6000	51
Sum BDE without BDE 209	52	57	18	31	28	101	29
Egg, fresh weight							
PCDD/PCDF TEQ	0,30	0,37	0,32	87	0,081	2,4	67
Non-ortho PCB TEQ	0,21	0,23	0,17	73	0,0004	1,4	66
Mono-ortho PCB TEQ	0,071	0,073	0,027	37	0,001	0,22	65
Total TEQ	0,60	0,66	0,40	61	0,11	2,7	67
Sum indicator PCB	2312	2406	851	0	2,4	6160	56
Sum BDE without BDE 209	43	50	20	0	16	90	23

Laboratories Z-scores: Analyte solution

LABCODE	Sum TE total	Sum TE PCDD/PCDF	Sum TE non-ortho PCB	Sum TE mono-orto PCB	Sum Indicator PCB	Sum u/209	Sum m/209
1							
2	-0.12	-0.10	-0.25	-0.019		-0.59	-2.2
3							
4	0.0066	-0.015	0.22	-0.39	0.18	-0.37	-0.0369
5	0.064	0.087	-0.15	0.29	0.68		
6	-0.30	-0.34	0.12	-0.27	-0.36		
7	0.41	0.52	-0.58	-0.21	0.32		
8							
9	0.054	0.064	-0.042	0.11	0.71	0.38	0.40
10							
11							
12	0.050	0.038	0.16	0.10	-0.074	0.38	-1.6
13							
14	0.64	0.65	0.51	1.2	0.27	0.54	0.67
15							
16	-0.10	-0.14	0.25	0.16	0.33		
17							
18							
19	-0.23	-0.31	0.44	1.0	-0.19	-0.066	-1.9
20	-0.48	-0.54	0.12	0.33	-0.29		
21	-0.0055	-0.011	0.045	-0.072	-0.012	0.24	0.049
22							
23	0.049	0.042	0.12	-0.20	-0.087		
24							
25							
26							
27	0.047	0.021	0.29	0.083			
28	0.064	-0.0020	0.70	0.33	0.14	0.060	0.047
29	1.4	1.3	2.4	0.20	0.21		
30							
31	-0.048	-0.046	-0.062	-0.31	-0.18	-0.33	-2.1
32	-0.10	-0.14	0.31	0.18	-0.30	0.29	-1.7
33	0.24	0.22	0.45	0.34	0.40	-0.29	-0.19
34	-0.083	-0.086	-0.052	-0.23	0.062		
35	-0.028	-0.084	0.50	0.24	0.11	0.026	-1.8
36							
37	0.027	-0.00046	0.29	0.033	0.100		
38							
39							
40	-0.22	-0.22	-0.20	0.16	1.4	0.23	-1.7
41	-0.018	-0.048	0.27	-0.18	0.23		
42	0.13	0.17	-0.20	-0.11	-0.35		
43	-0.30	-0.31	-0.21	-0.18			
44	-0.25	-0.27	-0.069	0.064	-0.15		
45	-0.0027	-0.034	0.29	0.21	0.086	-0.032	0.10
46							
47							
48							
49							
50	-0.1	0.0	-0.3	0.0	-0.2	-0.2	0.05
51	-0.083	-0.068	-0.22	-0.31		0.24	0.18
52							
53							
54	0.047	-0.038	0.86	0.42	0.22		
55	-0.15	-0.25	0.86	0.28	0.14		
56							
57							
58	0.27	0.17	1.20	1.2	1.3	0.90	0.75
59	-0.33	-0.39	0.27	-0.038			
60	-0.20	-0.21	-0.17	1.4			
61	0.22	0.25	-0.079	0.15	0.18		
62							
63							
64	-0.051	-0.62	5.3	4.9	4.4		
0							
66							
67	-0.16	-0.13	-0.44	-0.40			
68	0.16	0.16	0.16	-0.20	-0.74		
69	-0.53	-0.051					
70	-0.28	-0.38	0.59	0.94	-0.20	-0.22	-0.105
0							
0							
73	-0.36	-0.46	0.59	-0.00062	0.046	-0.053	0.22
74	-0.15	-0.22	0.51	0.066	-0.42		
75			0.08	-0.16		-0.68	-0.75
76	-0.027	-0.048	0.17	0.11			
77	-0.18	-0.29	0.88	1.6			

Laboratories Z-scores: Analyte solution (continued)

LABCODE	Sum TE total	Sum TE PCDD/PCDF	Sum TE non-ortho PCB	Sum TE mono-orto PCB	Sum Indicator PCB	Sum u/209	Sum m/209
78							
0							
80	-0.13	-0.18	0.42	-0.019	-0.085	-0.19	-0.18
81	0.20	0.22	0.037	-0.071		0.067	-0.026
82							
83	-1.0	-1.2	-0.0024	-0.30	0.23		
0							
85	0.11	0.13	-0.081	0.0063	-0.16	0.76	0.19
0							
0							
88							
0							
90	-0.013	-0.041	0.25	0.39	0.12		
91	0.059	0.057	0.072	-0.050	-0.44		
92	0.056	0.016	0.44	0.36	0.33	0.79	0.11
93	-0.42	-0.45	-0.14	0.14	0.60		
94							
0							
0							
97	-0.014	-0.026	0.11	-0.47	-0.39		
0							
99	-0.025	-0.067	0.37	-0.16	-0.17	-0.18	-0.20
100	-0.013	-0.034	0.17	0.75	0.066	-0.11	-0.14
101	0.26	0.26	0.28	0.24	-0.011		
102	-0.13	-0.15	0.0048	-0.44	-0.17		
0							
104	0.11	0.081	0.42	-0.0062	-5.0	0.20	0.34
105	-0.041	-0.094	0.46	0.50	-0.14	0.23	0.15
106	0.26	0.24	0.35	0.10	-0.18	0.12	-1.8
107	-0.25	-0.27	0.052		-0.44	-0.31	-0.37
0							
109							
110	0.064	0.055	0.15	0.0028	-0.11		
111	-0.49	-0.53	-0.17	0.069	-0.15	-0.58	-0.66
0							
113	-0.27	-0.27	-0.32	-0.54	-0.13		
114	-0.22	-0.26	0.11	0.30			
115							
0							
117							
118	0.39	0.40	0.28	0.12	-0.027		
119							
120	-0.072	-0.062	-0.17	-0.12	-0.035	-0.14	-0.15

Laboratories Z-scores: Poultry

LABCODE	Sum TE total	Sum TE PCDD/PCDF	Sum TE non-ortho PCB	Sum TE mono-orto PCB	Sum Indicator PCB	Sum u/209	Sum m/209
1							
2	1.11	1.8	-0.44	1.5		2.3	-1.6
3							
4	-0.087	-0.082	-0.037	-1.2	-1.4	-0.076	1.8
5	1.5	1.1	2.6	0.87	-0.13		
6	0.065	-0.15	0.44	2.1	-4.9		
7	-0.28	-0.0024	-0.99	1.5	3.1		
8							
9	1.1	1.7	-0.45	2.3	10	1.9	1.2
10							
11							
12	0.024	0.23	-0.39	-0.94	-2.0		
13							
14	0.14	0.65	-1.0	0.25	4.1	-2.6	-1.1
15	2.5	1.2					
16	3.0	0.66	6.6	33	7.7		
17							
18	0.89	1.2	0.28	-0.25	5.6		
19	0.096	0.20	-0.16	0.37	3.2	-0.69	-0.32
20	1.5	2.0	0.36	0.11	-0.47		
21	0.15	-0.89	2.3	4.0	6.4	3303	2699
22							
23	-0.10	0.39	-1.3	1.4	2.8		
24							
25							
26							
27	2.0	2.1	1.7	1.2			
28	0.64	0.64	0.41	4.9	9.8	-0.038	-0.34
29	1.4	2.0	0.21	2.2	2.5		
30							
31	-0.74	-0.60	-1.0	-1.5	-2.4	2.3	-1.5
32	0.12	0.33	-0.36	0.41	-0.48	1.3	-2.0
33	-0.39	-0.15	-1.1	2.1	8.8	-0.60	3.4
34	0.48	-0.46	1.3	23	35		
35							
36							
37	0.47	0.51	0.18	4.3	9.0		
38							
39							
40	-0.73	-0.49	-1.4	1.8	4.9		
41	1.2	2.1	-0.82	2.3	4.2		
42	0.54	0.24	1.2	1.4	8.4		
43	-0.39	-0.39	-0.39	-0.31			
44	-0.49	-0.70	0.0016	-0.94	-0.77		
45	0.55	0.58	0.57	-0.65	-1.99	0.17	-1.2
46							
47	1.4	-1.5					
48							
49							
50							
51							
52							
53							
54	0.70	0.69	0.77	0.11	3.7		
55	0.18	0.14	0.31	-0.57	-1.3		
56							
57							
58	0.82	0.77	0.95	0.34	0.093	4.0	2.9
59	2.7	4.1	-0.19	-1.4			
60	13	19	0.78	1.1			
61	-0.18	-0.10	-0.32	-1.1	-5.0		
62							
63							
64	0.19	0.28	0.047	-0.99	-1.4		
0							
66	0.17	0.025	0.53	-0.54			
67	-0.91	-1.0	-0.64	-1.8			
68							
69							
70	0.81	0.87	0.63	1.5	3.2	-1.5	5.4
0							
0							
73	-0.19	-0.32	0.15	-1.0	-2.0	-1.0	3.7
74	62	91	2.1	1.6	2.4		
75							
76	0.37	-0.050	0.91	7.9			
77	21	28	5.0	1.8			

Laboratories Z-scores: Poultry (continued)

LABCODE	Sum TE total	Sum TE PCDD/PCDF	Sum TE non-ortho PCB	Sum TE mono-orto PCB	Sum Indicator PCB	Sum u/209	Sum m/209
78							
0							
80	0.18	0.31	-0.042	-0.81	0.35	2.6	5.1
81	0.14	0.22	0.0087	-0.71		0.53	20
82	5.0	4.9	5.5	-0.75	0.00028		
83	3.8	3.1	5.5	0.41	26		
0							
85	25	35	3.4	-0.65	-0.19	4.0	2.5
0							
0							
88	11	13	5.8	0.25	0.68		
0							
90	-0.61	-1.0	0.13	4.0	9.3		
91	-0.64	-0.35	-1.4	0.92	1.4		
92	-0.14	-0.25	0.12	-0.37	-0.13	-0.32	0.31
93							
94	-0.64	0.74	-3.6	-3.9			
0							
0							
97	-0.041	-0.055	0.038	-0.90	-0.020		
0							
99	-0.18	-0.23	-0.014	-0.98	0.23	1.1	0.43
100	0.86	1.6	-0.77	-0.67	3.4		
101					0.50		
102	0.0061	0.17	-0.32	-0.75	-1.8		
0							
104							
105	-0.092	0.11	-0.52	-0.54	-0.87	-0.37	-0.53
106							
107	-2.9	-4.1	-0.066		-0.45	-0.82	-1.9
0							
109	1.5	1.5	1.4	2.6	11		
110	-0.55	0.050	-2.0	1.2	4.7		
111	-1.0	-1.1	-1.0	1.2	2.5	-0.33	-2.8
0							
113							
114	0.043	0.26	-0.47	0.60			
115	0.096	0.13	0.10	-1.2	-0.37		
0							
117	1.8	1.2	3.5	-0.72	4.2		
118	0.83	0.64	1.3	0.36	-0.063		
119	0.078	-0.26	0.83	0.28			
120	0.45	0.41	0.51	1.2	2.8	7.1	2.8

Laboratories Z-scores: Crab meat

LABCODE:	Sum TE total	Sum TE PCDD/PCDF	Sum TE non-ortho PCB	Sum TE mono-orto PCB	Sum Indicator PCB	Sum u/209	Sum m/209
1							
2	0.41	0.69	0.014	0.41		-0.26	-1.7
3							
4	0.56	0.82	0.25	-0.61	-0.51	0.23	0.73
5	1.4	1.4	1.3	1.1	1.7		
6	-0.72	-1.2	-0.022	-0.016	-5.0		
7	-1.0	-0.87	-1.3	-0.97	-0.18		
8							
9	-0.014	0.36	-0.56	-0.047	1.5	0.69	0.31
10							
11							
12	0.39	0.64	0.0083	0.49	2.3	1.5	-0.48
13							
14	-0.61	-0.50	-0.80	-0.12	0.93	-0.42	43
15	10	14					
16	0.26	-0.47	1.2	2.5	0.81		
17							
18	-0.30	-0.025	-0.70	-0.12	7.9		
19	-0.0061	0.52	-0.74	-0.79	0.15	0.12	0.47
20	-0.18	-0.50	0.26	0.44	2.7		
21	-1.3	-2.4	0.16	1.0	3.6	-1.5	-2.1
22							
23							
24							
25							
26							
27	0.13	0.74	-0.77	0.35			
28	1.5	2.0	0.79	0.72	2.9	0.13	0.27
29	-0.20	-0.66	0.43	0.49	2.7		
30							
31	-0.56	-0.66	-0.40	-1.1	0.61	4.5	1.6
32	0.40	0.58	0.18	-0.22	-0.62	0.29	-1.3
33	0.16	0.47	-0.33	0.71	2.0	-0.44	-0.34
34	-1.6	-2.2	-0.88	-0.54	1.6		
35	0.85	0.65	1.1	1.4	4.3	2.5	0.17
36							
37	-1.3	-2.6	0.65	-0.25	-0.54		
38							
39							
40	-0.75	-0.77	-0.76	-0.11	1.5	-0.62	-2.0
41	-0.076	0.25	-0.61	1.1	11		
42	0.61	0.55	0.72	0.21	0.67		
43	-0.70	-0.87	-0.46	-0.78			
44							
45	0.52	0.56	0.49	0.048	-0.14	0.18	-0.60
46							
47							
48							
49							
50	-0.45	-0.69	-0.13	0.020	2.2	3.8	10
51	0.43	0.81	-0.06	-0.51		-0.15	0.66
52							
53							
54							
55	-0.16	0.036	-0.45	-0.30	-0.46		
56							
57							
58	0.71	0.62	0.84	0.47	0.58	1.1	1.2
59	4.4	7.5	0.03	1.8			
60	0.65	0.99	0.14	0.89			
61	-0.26	-0.0058	-0.60	-0.59	-5.0		
62							
63	6.7						
64	2.4	0.97	4.5	0.63	3.2		
0							
66	0.38	0.29	0.51	0.49			
67	-1.9	-2.1	-1.7	-2.1			
68							
69	0.14	0.39	-0.26	0.89			
70	0.25	0.58	-0.19	-0.61	0.42	1.3	-0.094
0							
0							
73	-0.20	-0.50	0.26	-0.67	-0.34	-1.1	0.93
74	5.9	8.6	2.3	2.1	1.8		
75	-1.6	-1.9	-1.2	-0.14		-1.2	-1.7
76	-0.97	-1.2	-0.65	-0.74			
77	1.5	-1.4	5.7	2.2			

Laboratories Z-scores: Crab meat (continued)

LABCODE:	Sum TE total	Sum TE PCDD/PCDF	Sum TE non-ortho PCB	Sum TE mono-orto PCB	Sum Indicator PCB	Sum u/209	Sum m/209
78	-4.6	-4.6	-4.6				
0							
80	-0.98	-1.3	-0.55	-0.60	-0.22	1.2	14
81	0.68	0.70	0.65	0.62		-0.44	41
82	0.42	0.74	-0.019	0.20	1.4		
83	-1.2	-0.36	-2.4	-0.43	13		
0							
85	4.3	7.1	0.53	1.2	7.6	2.7	2.4
0							
0							
88	0.47	-0.084	1.3	-0.51	-0.12		
0							
90	0.22	-0.050	0.66	-0.73	1.5		
91	-0.79	-0.57	-1.1	-0.76	-0.40		
92	-0.12	-0.25	0.059	-0.13	-0.16	-0.79	-0.25
93							
94							
0							
0							
97	-1.3	-1.7	-0.71	-0.80	0.076		
0							
99	0.10	-0.11	0.41	-0.22	-0.68	0.30	-0.17
100	-0.86	-0.73	-1.1	-0.72	1.7		
101	-0.71	-0.90	-0.40	-1.2	-0.49		
102	0.30	0.61	-0.11	-0.24	-0.21		
0							
104	0.92	1.1	0.66	0.46	-5.0	0.023	-0.30
105	1.1	1.2	1.1	0.27	1.3	-0.38	-0.22
106	1.7	2.7	0.42	1.0	5.8	2.7	0.29
107	-0.010	0.16	-0.0012		-0.085	-2.2	-2.6
0							
109	1.1	1.8	0.19	2.1	7.4		
110							
111	0.38	0.58	0.10	0.17	0.49	0.052	-1.5
0							
113							
114	0.015	0.32	-0.41	-0.32			
115	-0.17	-0.052	-0.32	-0.58	0.33		
0							
117	0.11	1.0	-1.3	0.61	2.1		
118	0.81	0.81	0.83	0.43	1.1		
119	0.40	-0.093	1.1	0.55			
120	0.52	0.79	0.14	0.085	2.8	4.9	3.1

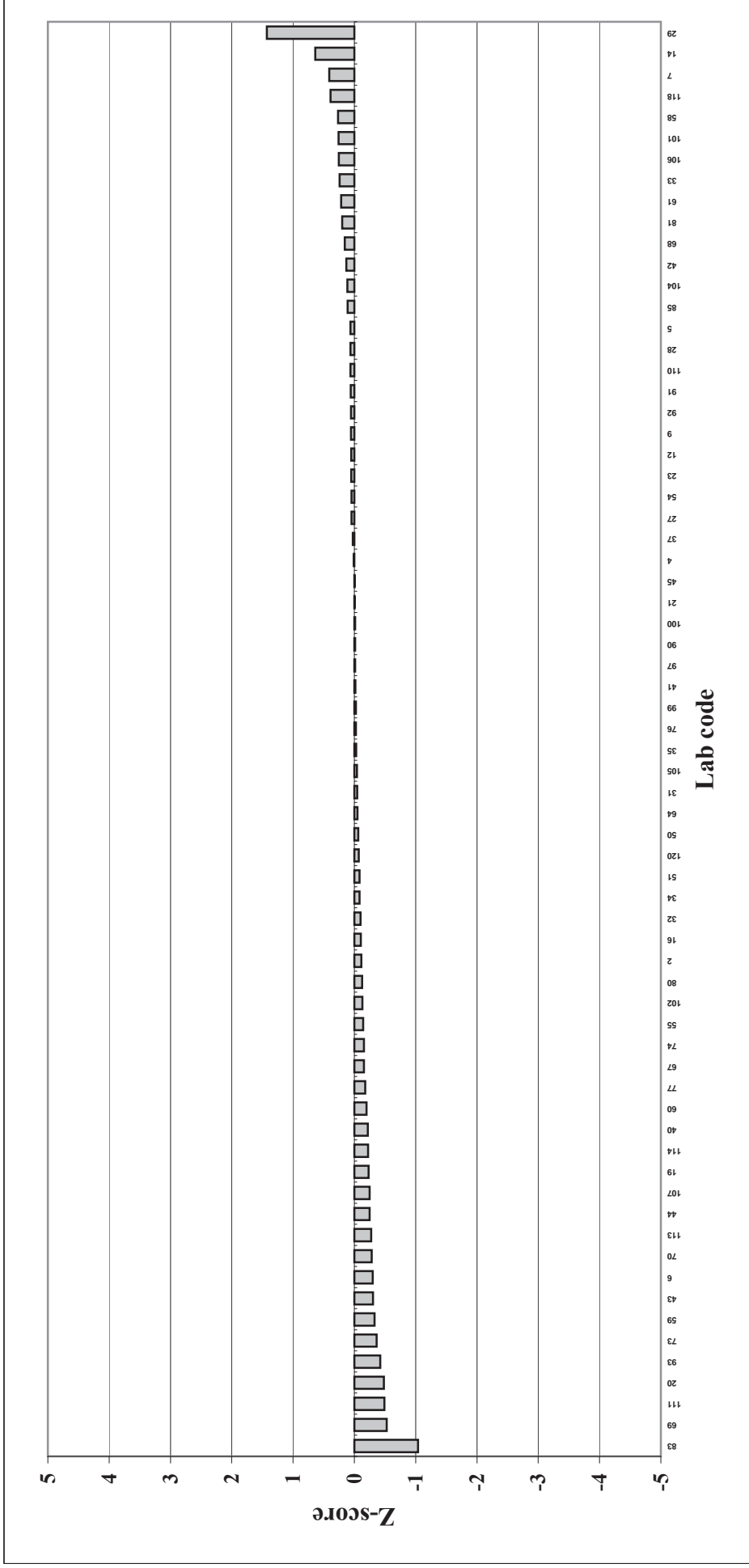
Laboratories Z-scores: Egg

LABCODE:	Sum TE total	Sum TE PCDD/PCDF	Sum TE non-ortho PCB	Sum TE mono-orto PCB	Sum Indicator PCB	Sum u/209	Sum m/209
1	-3.1	-1.7					
2	1.0	1.3	0.59	0.60		0.023	-3.4
3							
4	0.15	0.18	0.15	-0.54	-0.17	-0.0078	0.51
5	0.46	0.12	0.92	0.62	0.73		
6	-0.00060	-0.28	0.35	0.52	-5.0		
7	-3.8	-2.9	-5.0	-4.7	-1.8		
8							
9	0.34	0.84	-0.34	0.32	2.1	1.6	0.89
10							
11					0.10		
12							
13							
14	-0.11	0.28	-0.74	1.7	0.29	-0.038	-0.95
15	2.1	-0.59					
16	1.0	-0.08	2.0	9.5	2.00		
17							
18	0.56	1.1	-0.12	0.019	0.38		
19	0.45	0.66	0.20	0.10	0.42	-0.44	2.6
20	0.51	1.3	-0.53	-0.031	0.070		
21	2.7	-0.35	7.0	0.71	0.97	-0.88	-1.4
22							
23							
24							
25							
26							
27	0.47	-0.40	1.6	2.1			
28	0.77	0.85	0.68	0.48	1.0	0.13	-0.16
29	0.12	-0.17	0.48	0.96	1.3		
30							
31	-1.6	-1.8	-1.5	-1.5	-0.24	5.5	-1.6
32	0.45	0.50	0.40	-0.015	0.0042	-0.21	-3.5
33	-0.073	0.37	-0.70	0.32	0.79	-0.23	0.076
34	-1.4	-1.7	-1.1	-0.54	-0.19		
35							
36							
37	0.80	0.87	0.74	0.013	-0.50		
38							
39							
40	-1.3	-1.1	-1.6	-0.88	0.060		
41	1.5	3.3	-0.87	1.0	-0.51		
42	0.77	0.51	1.1	0.40	0.30		
43							
44	-0.16	-0.30	0.012	-0.12	-0.091		
45	-0.011	0.021	-0.053	-0.028	-0.012	0.47	-1.8
46							
47							
48							
49							
50							
51							
52							
53	-4.0	-3.6	-4.5	-3.5	0.010		
54	-0.13	-0.54	0.44	-0.46	0.43		
55	0.026	0.0039	0.054	0.065	0.071		
56							
57							
58	0.79	0.74	0.86	0.51	0.69	5.2	2.9
59	6.5	12	-0.25	-1.1			
60	-0.37	-1.2	0.62	1.3			
61	-0.012	0.11	-0.14	-0.78	-5.0		
62							
63	2.0						
64	0.55	0.57	0.53	0.36	0.84		
0							
66	0.21	0.12	0.33	0.18			
67	-0.74	-1.0	-0.35	-0.92			
68	-1.2	-1.1	-1.5	1.4	-0.49		
69							
70	-0.091	0.25	-0.56	0.0082	0.38	-1.5	0.27
0							
0							
73	-1.4	-1.6	-1.2	-0.89	-0.38	-1.5	4.3
74	21	37	0.27	-0.23	-0.25		
75							
76							
77	1.7	-0.13	4.0	2.1			

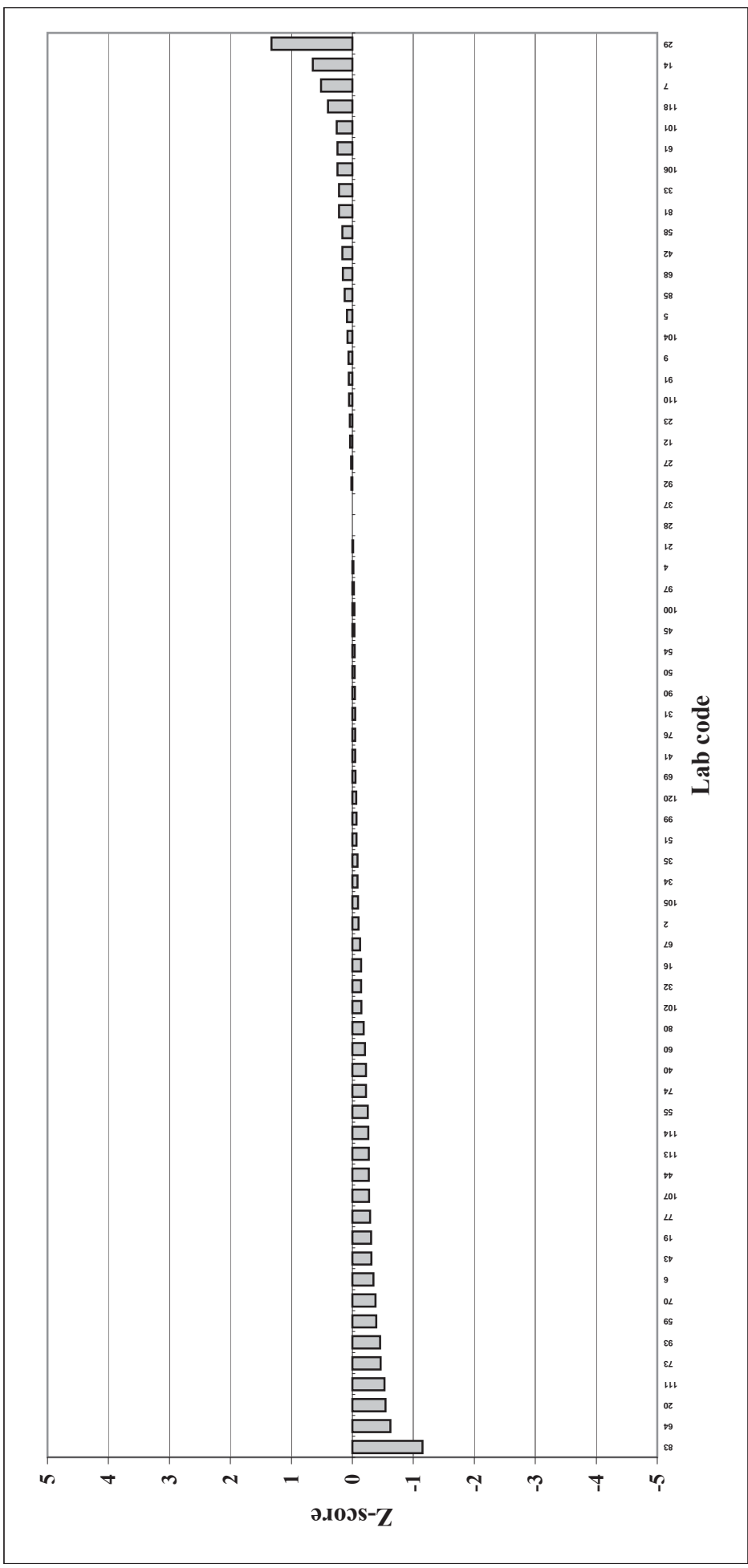
Laboratories Z-scores: Egg (continued)

LABCODE:	Sum TE total	Sum TE PCDD/PCDF	Sum TE non-ortho PCB	Sum TE mono-orto PCB	Sum Indicator PCB	Sum u/209	Sum m/209
78							
0							
80	-0.51	-0.61	-0.38	-0.60	-0.33	4.4	0.51
81	0.69	0.56	0.88	0.59		0.54	9.7
82	1.7	2.6	0.50	0.39	1.4		
83	-0.049	1.4	-2.0	0.013	8.4		
0							
85	10	18	0.091	0.16	-0.34	3.6	-0.38
0							
0							
88	5.0	2.9	8.1	-0.60	-0.33		
0							
90	1.5	1.4	1.6	3.4	6.4		
91	0.058	0.26	-0.21	-0.086	-0.32		
92	-0.35	-0.23	-0.51	-0.43	-0.45	-1.0	-0.62
93	0.61	0.012	1.4	0.31	-0.0058		
94	-1.9	0.038	-4.5	-1.1			
0							
0							
97	-1.2	-1.6	-0.73	0.15	-1.4		
0							
99	0.28	0.042	0.62	-0.10	-0.34	1.4	0.46
100	0.083	0.041	0.11	0.59	1.3		
101	-0.59	-0.63	-0.51	-0.93	-0.41		
102	-0.21	-0.13	-0.30	-0.35	-0.19		
0							
104							
105	0.82	0.36	1.4	0.47	1.3	0.27	1.3
106							
107	-0.33	-0.32	-0.081		-0.18	-3.1	-4.3
0							
109							
110							
111	0.18	0.25	0.084	0.21	0.58	-0.39	-3.5
0							
113	0.10	0.37	-0.23	-0.71	-0.18		
114	19	11	29	1.8			
115	0.11	0.12	0.15	-0.83	0.046		
0							
117	0.20	0.42	-0.096	0.29	-1.1		
118	0.29	0.17	0.46	0.012	0.56		
119	0.35	-0.19	1.1	0.45			
120	0.56	0.50	0.68	-0.23	0.40	5.0	1.2

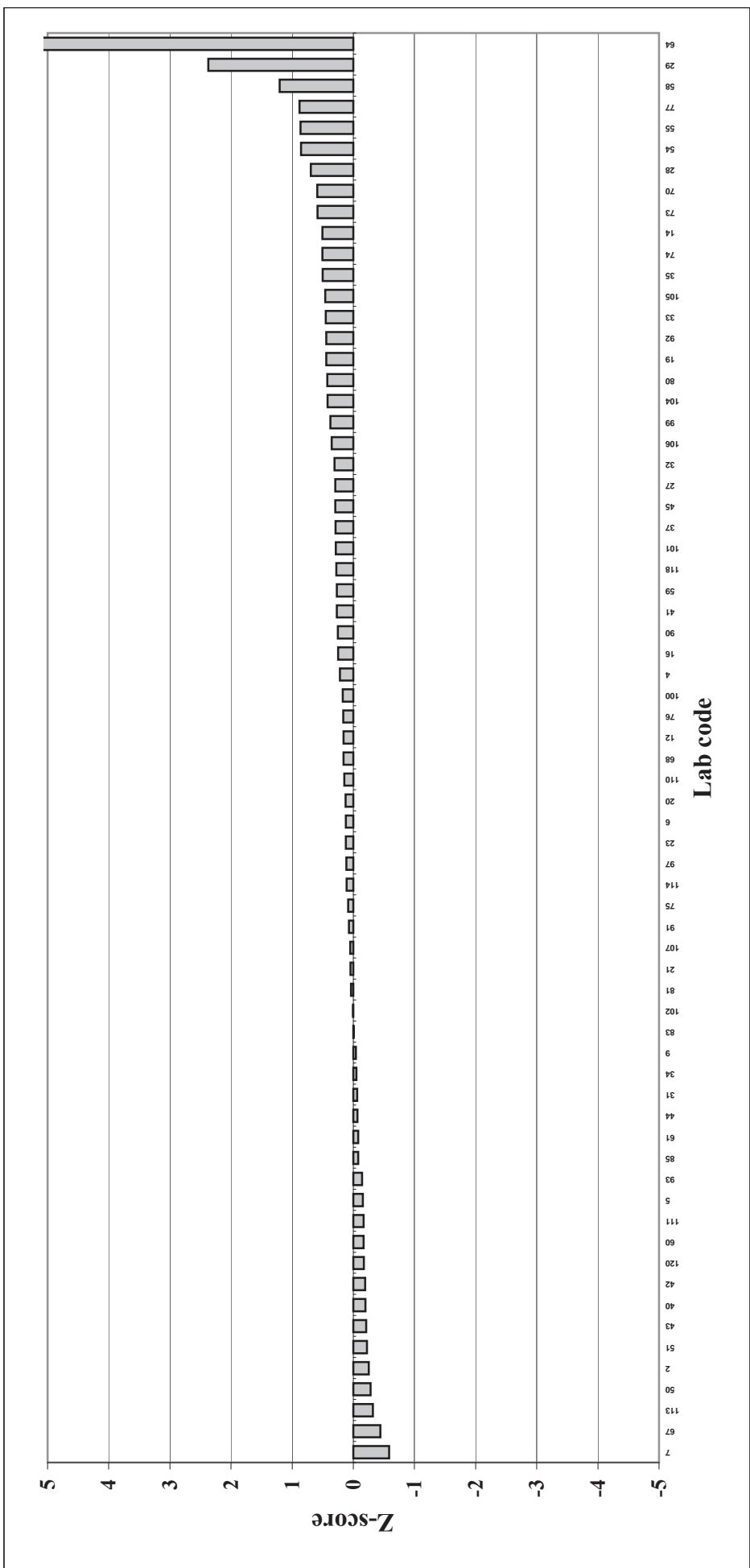
Z-score analyte solution; total TEQ



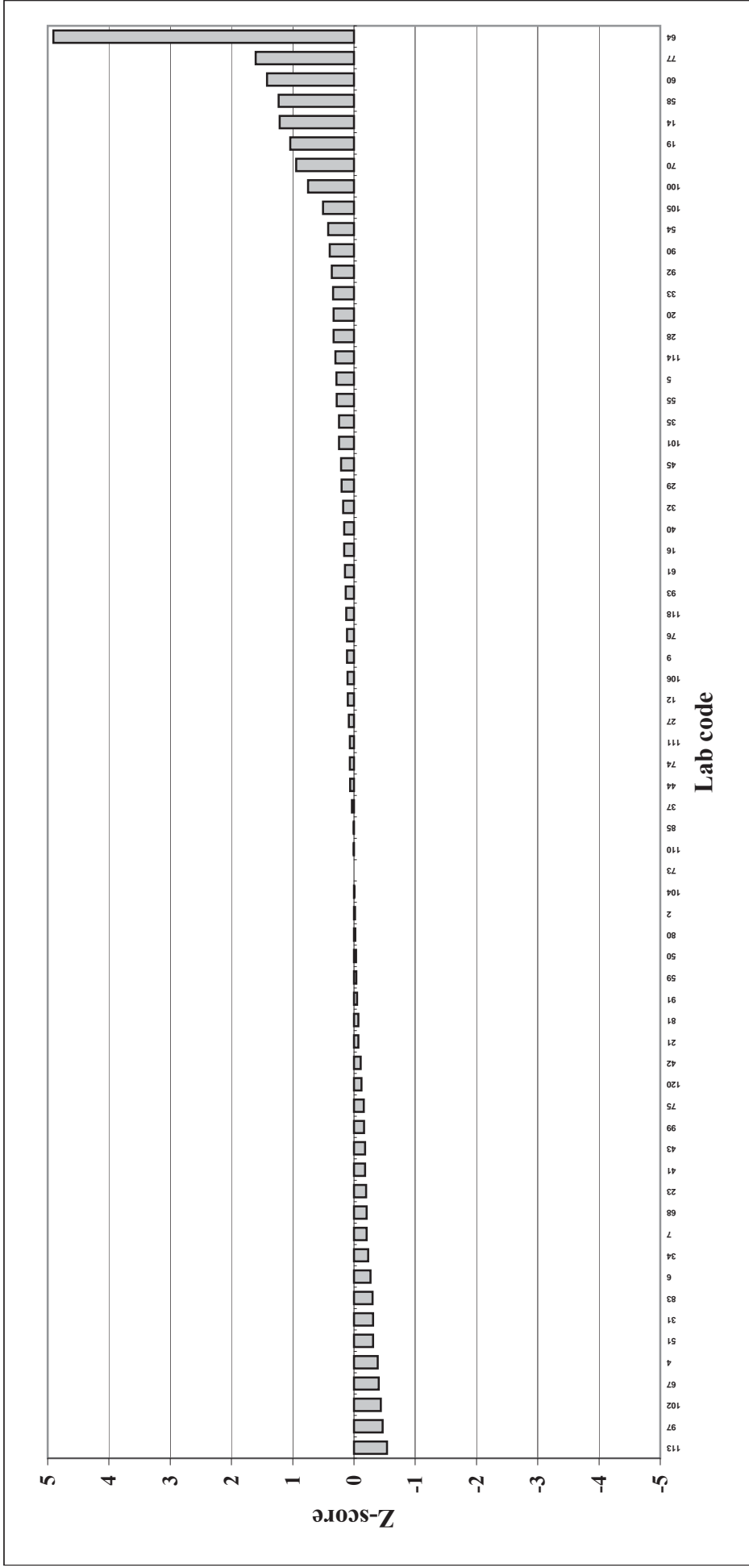
Z-score analyte solution; PCDD/PCDF TEQ



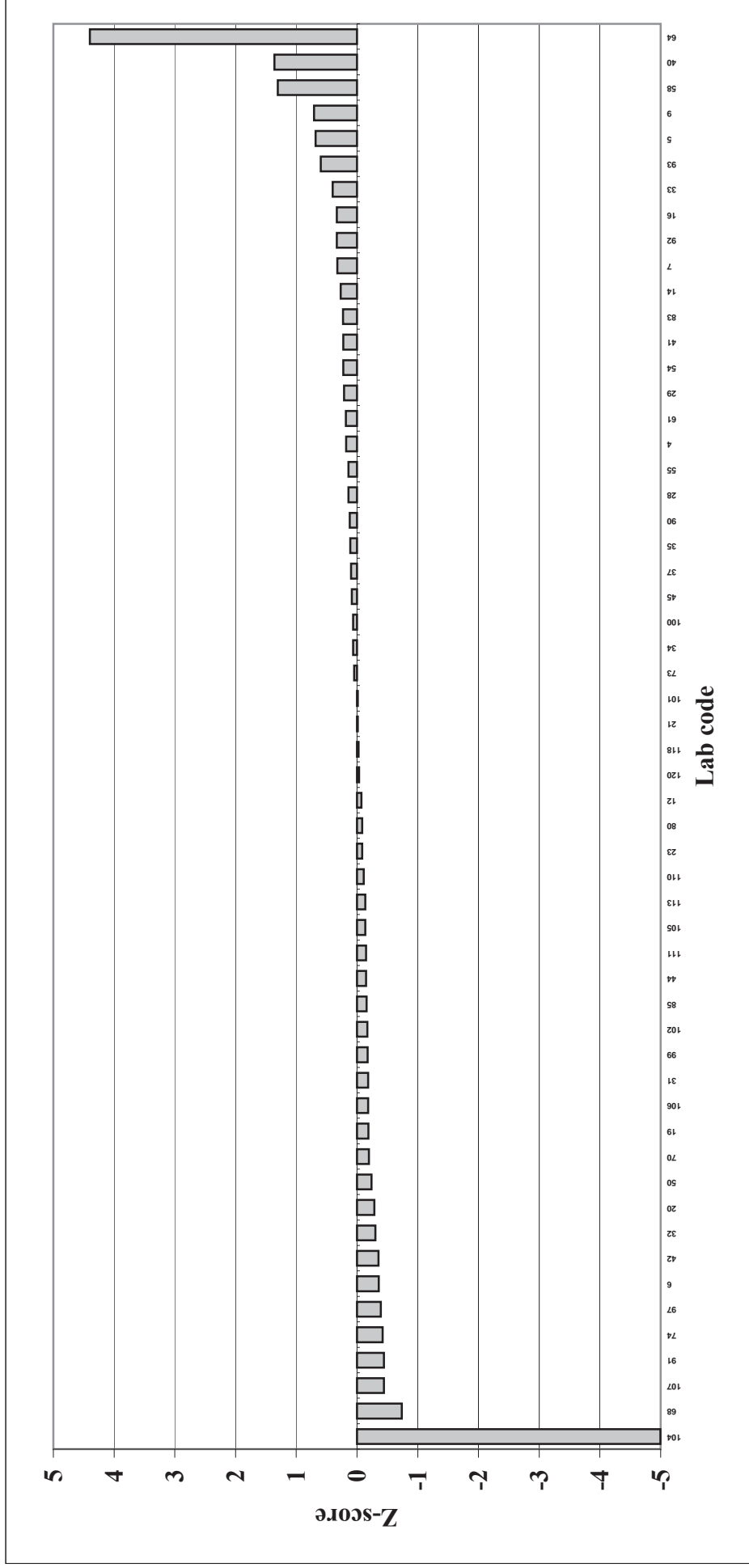
Z-score analyte solution; non-ortho PCB TEQ



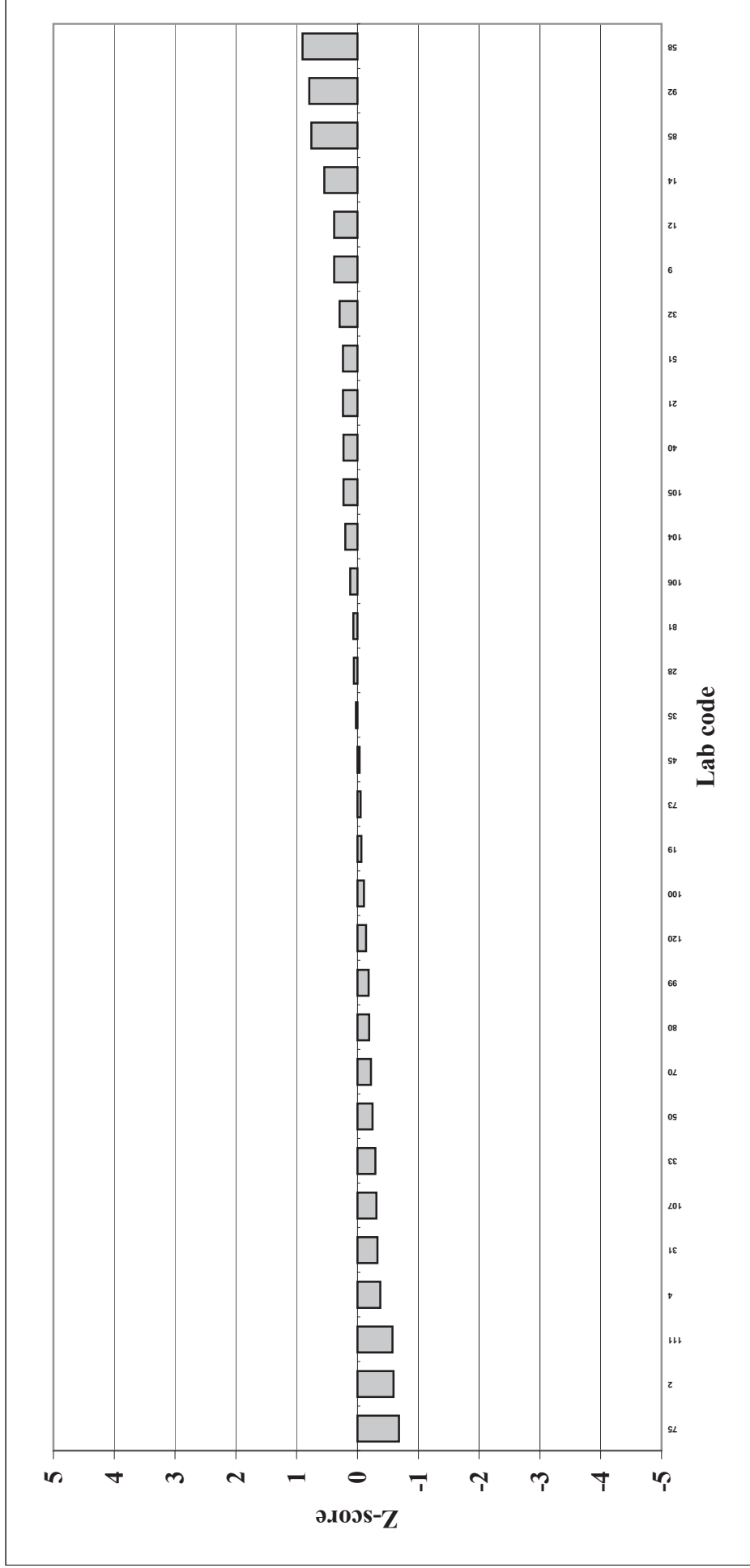
Z-score analyte solution; mono-ortho PCB TEQ



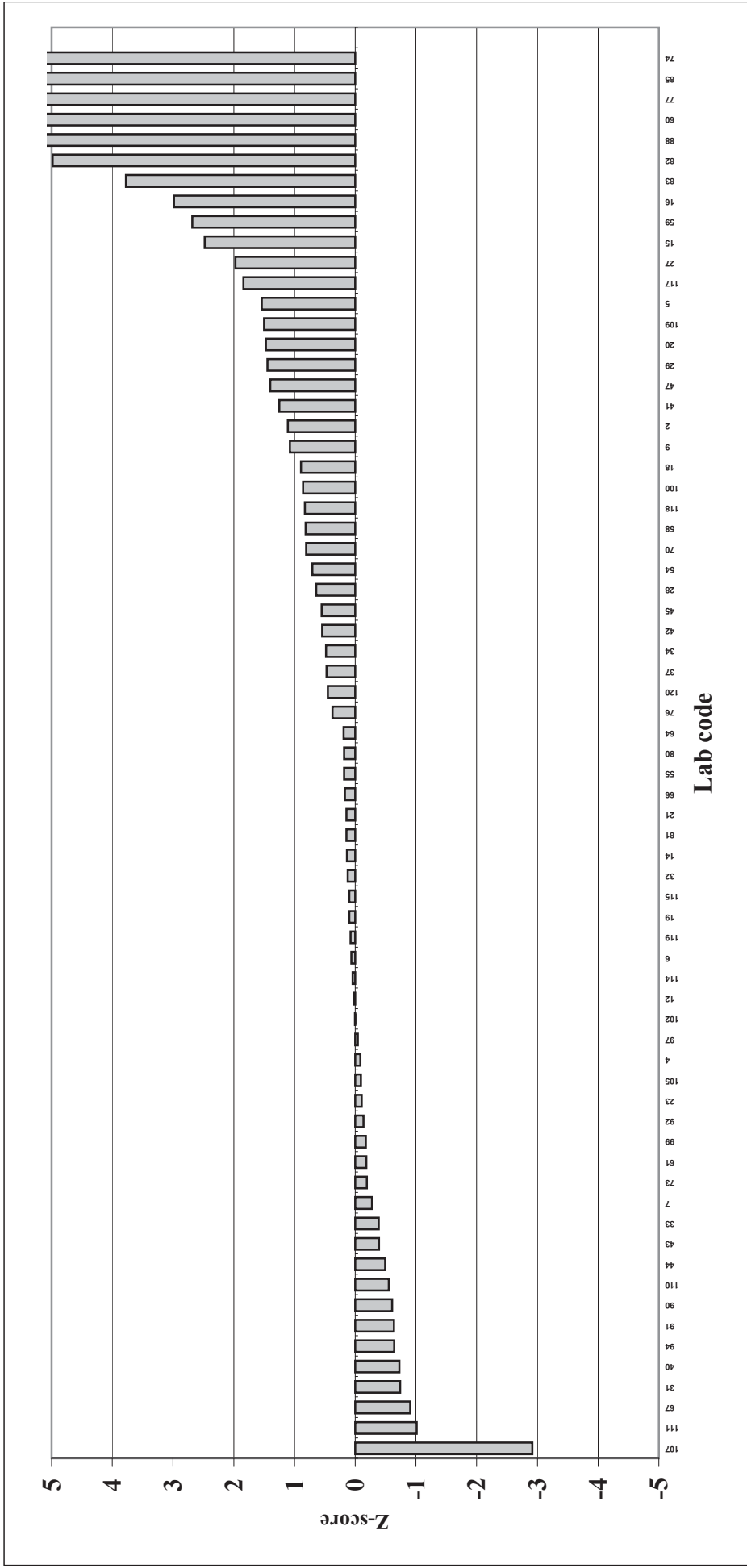
Z-score analyte solution; sum indicator PCB



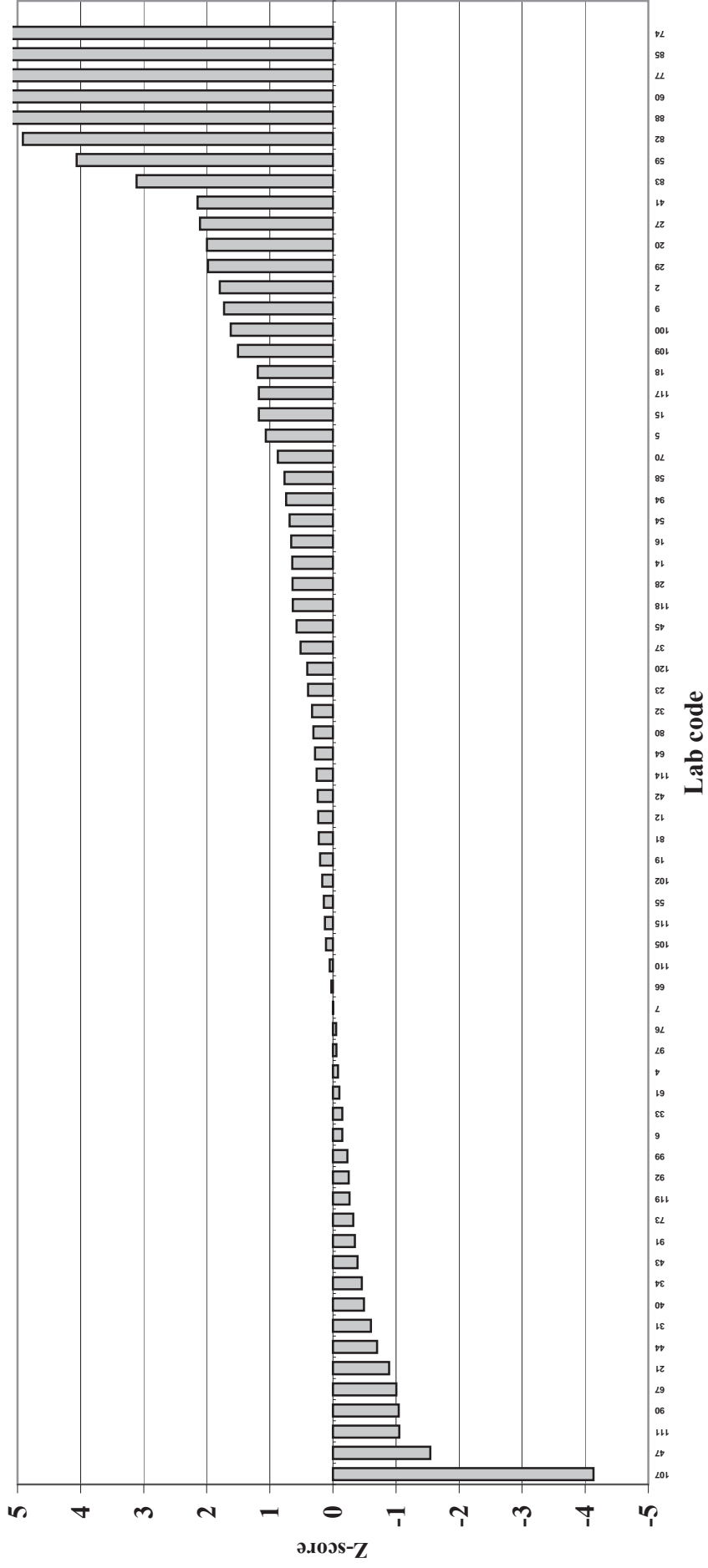
Z-score analyte solution; sum PBDE without BDE-209



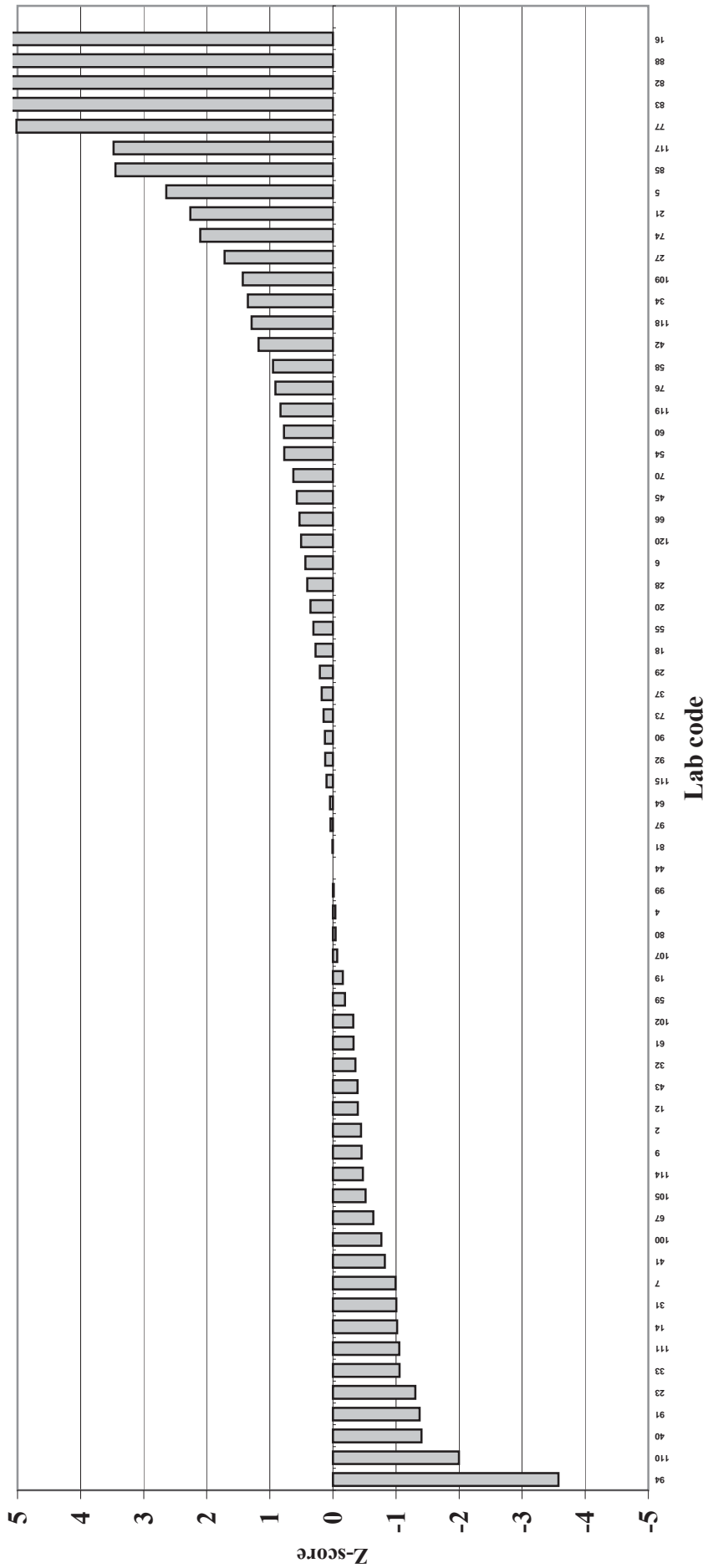
Z-score Poultry; total TEQ



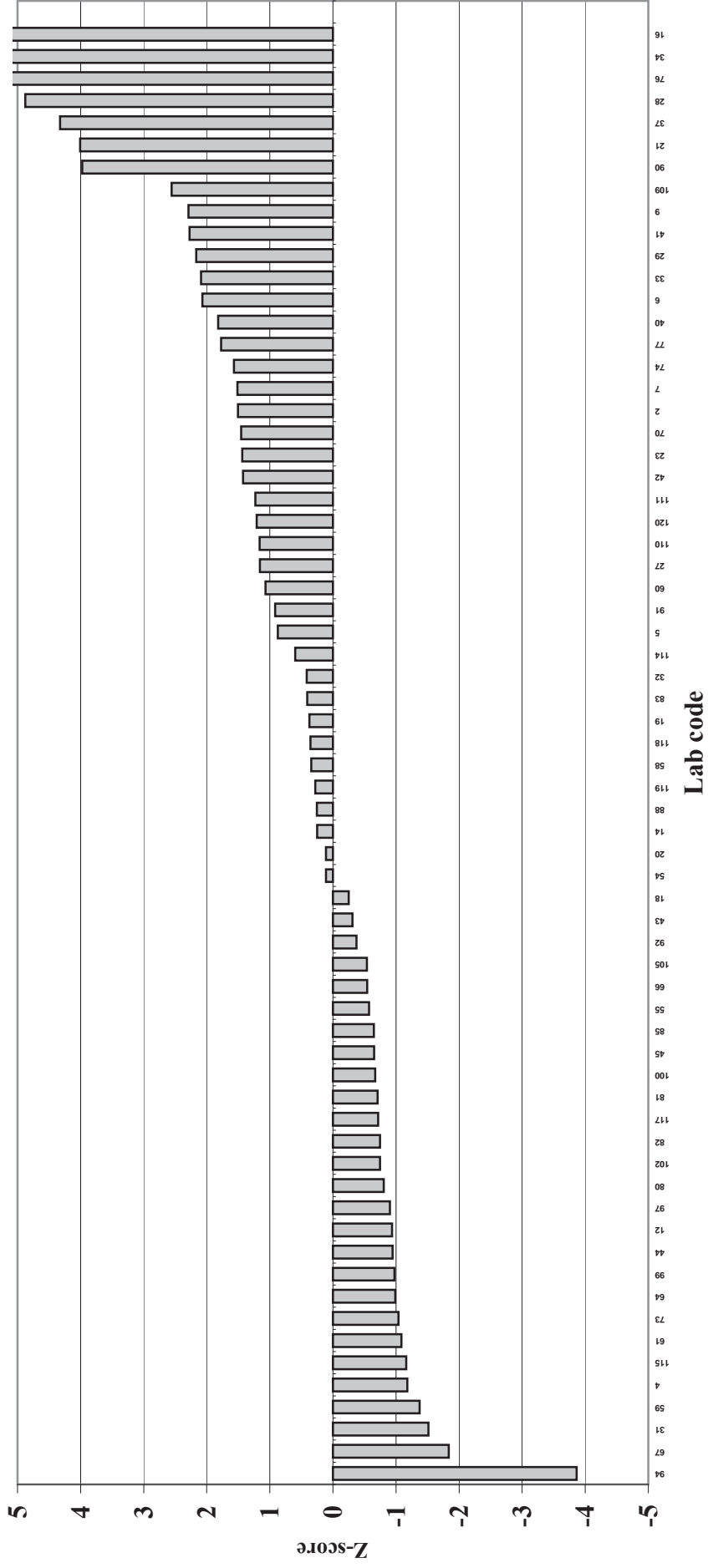
Z-score Poultry; PCDD/PCDF TEQ



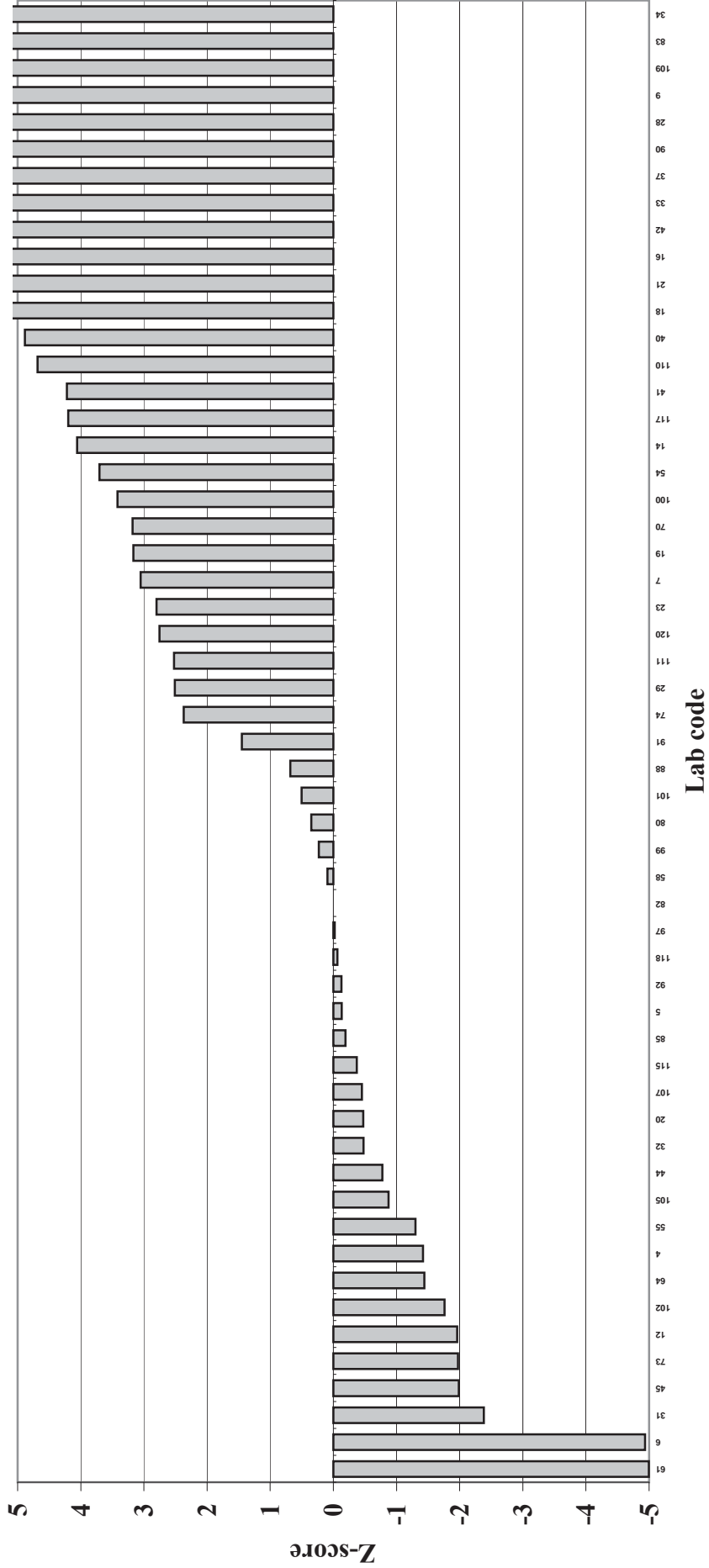
Z-score Poultry; non-ortho PCB TEQ



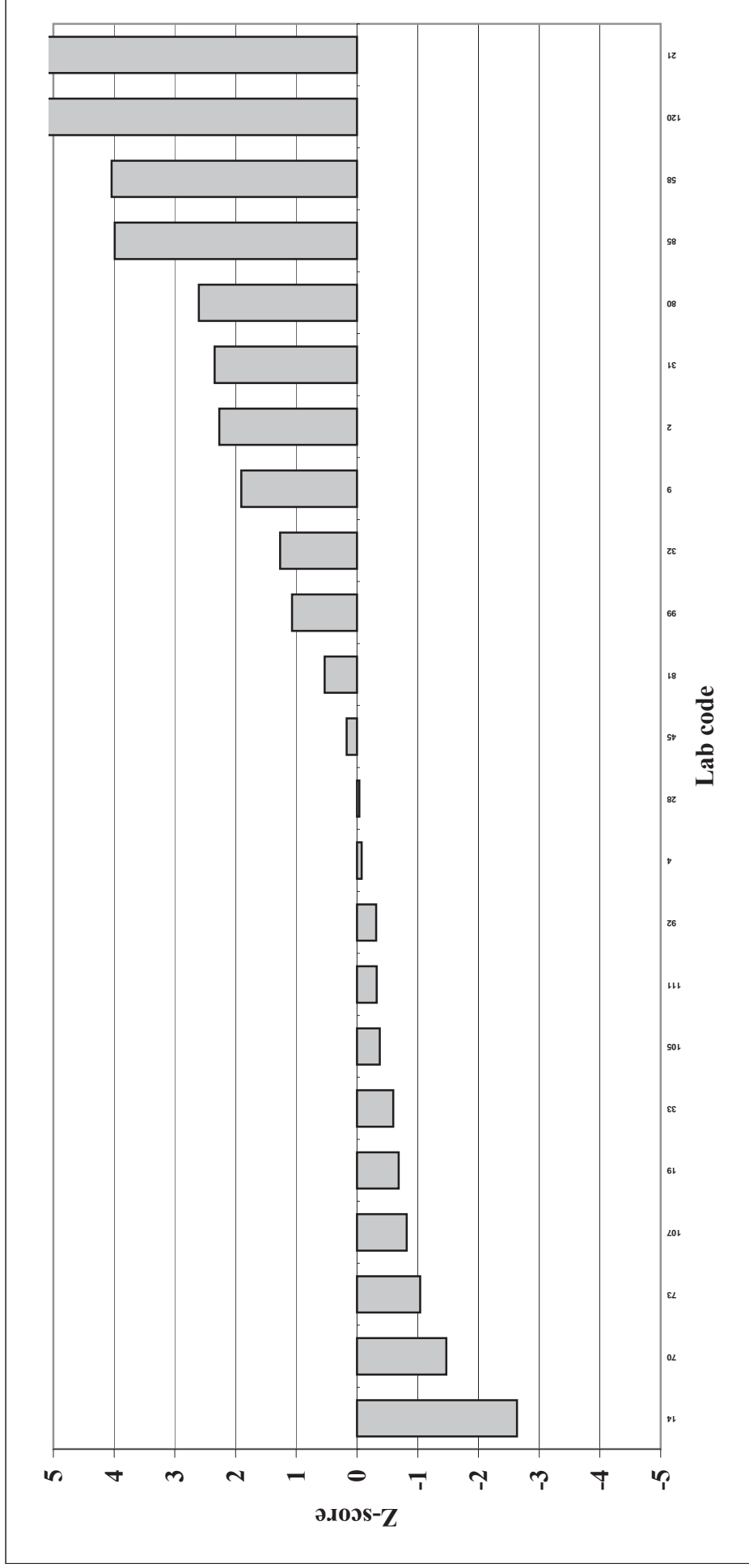
Z-score Poultry; mono-ortho PCB TEQ



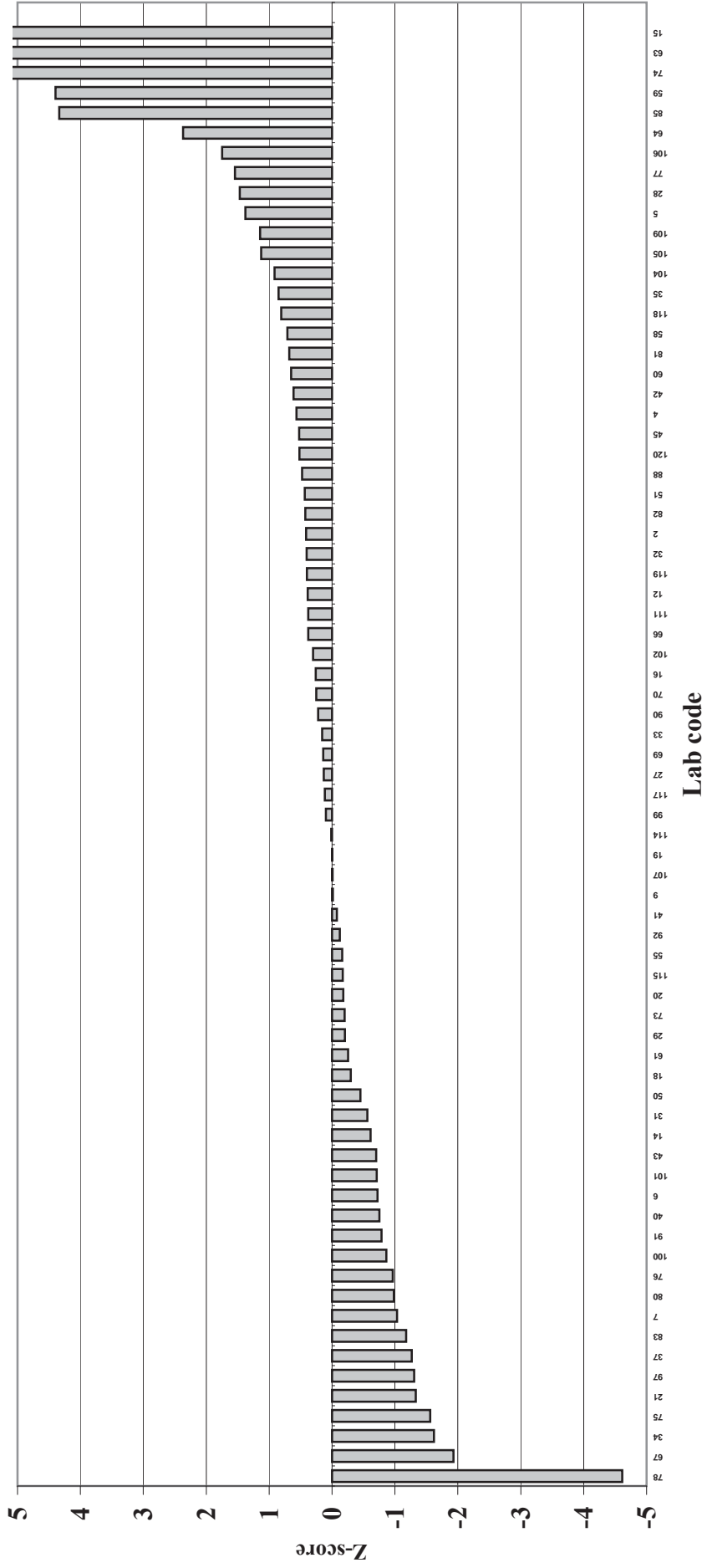
Z-score Poultry; sum indicator PCB



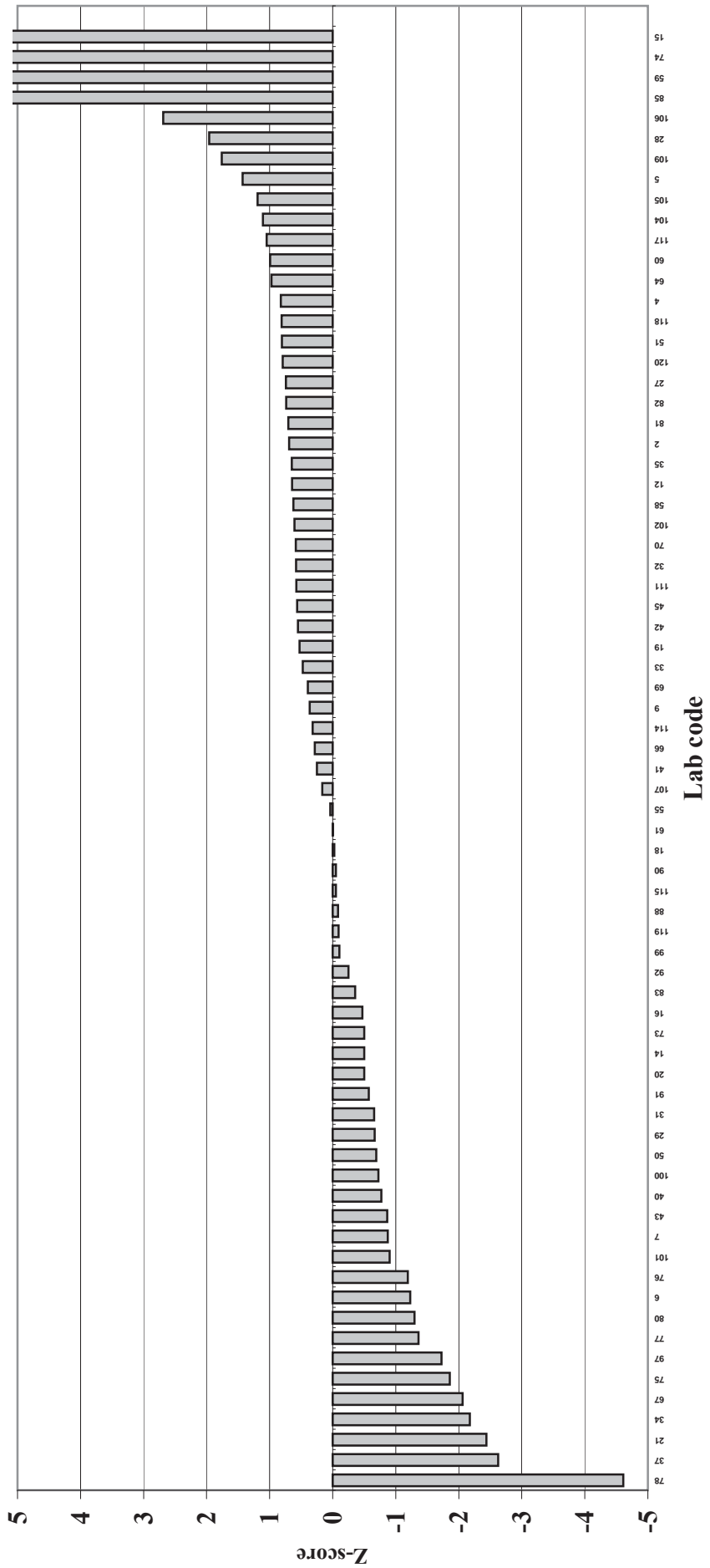
Z-score Poultry; sum PBDE without BDE-209



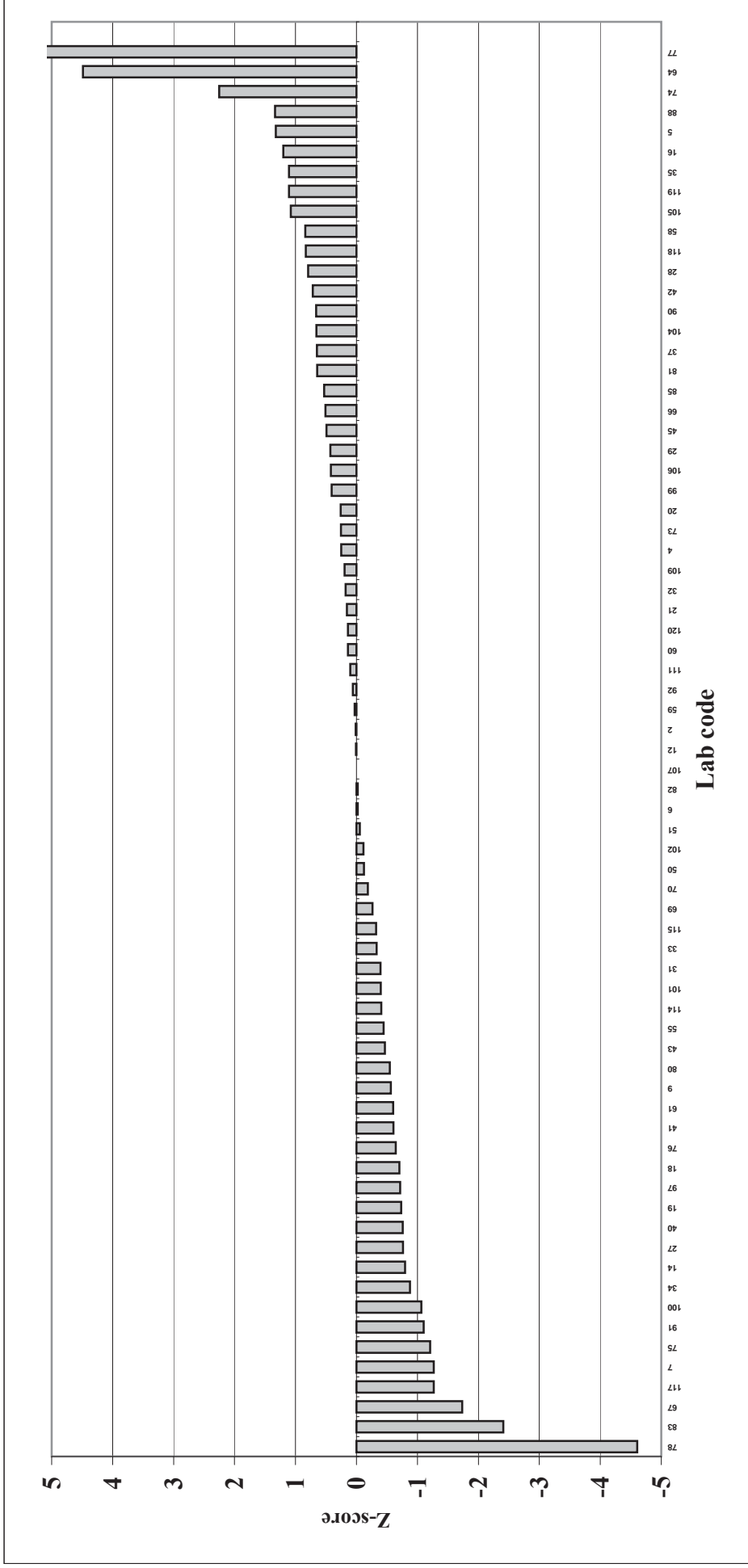
Z-score Crab meat; total TEQ



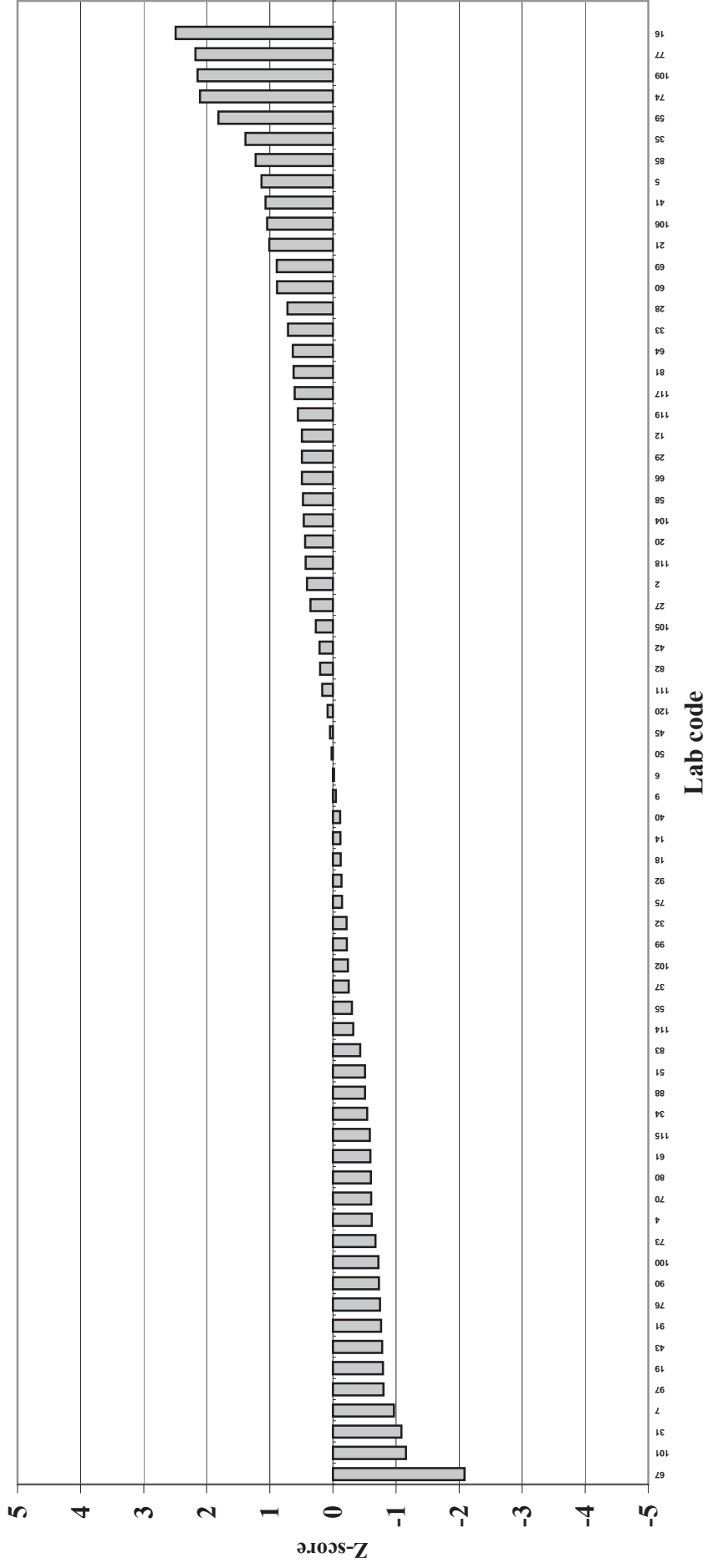
Z-score Crab meat; PCDD/PCDF TEQ



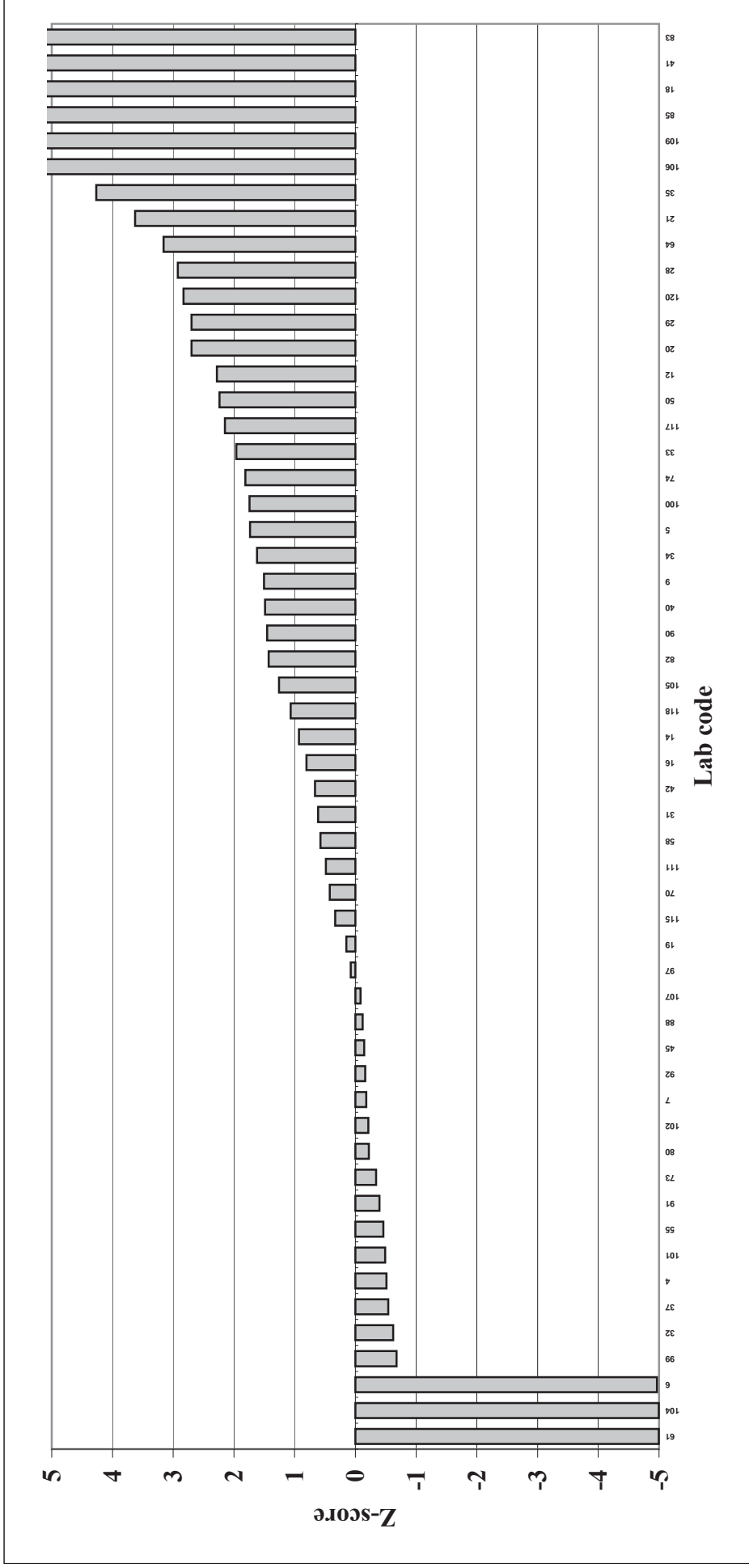
Z-score Crab meat; non-ortho PCB TEQ



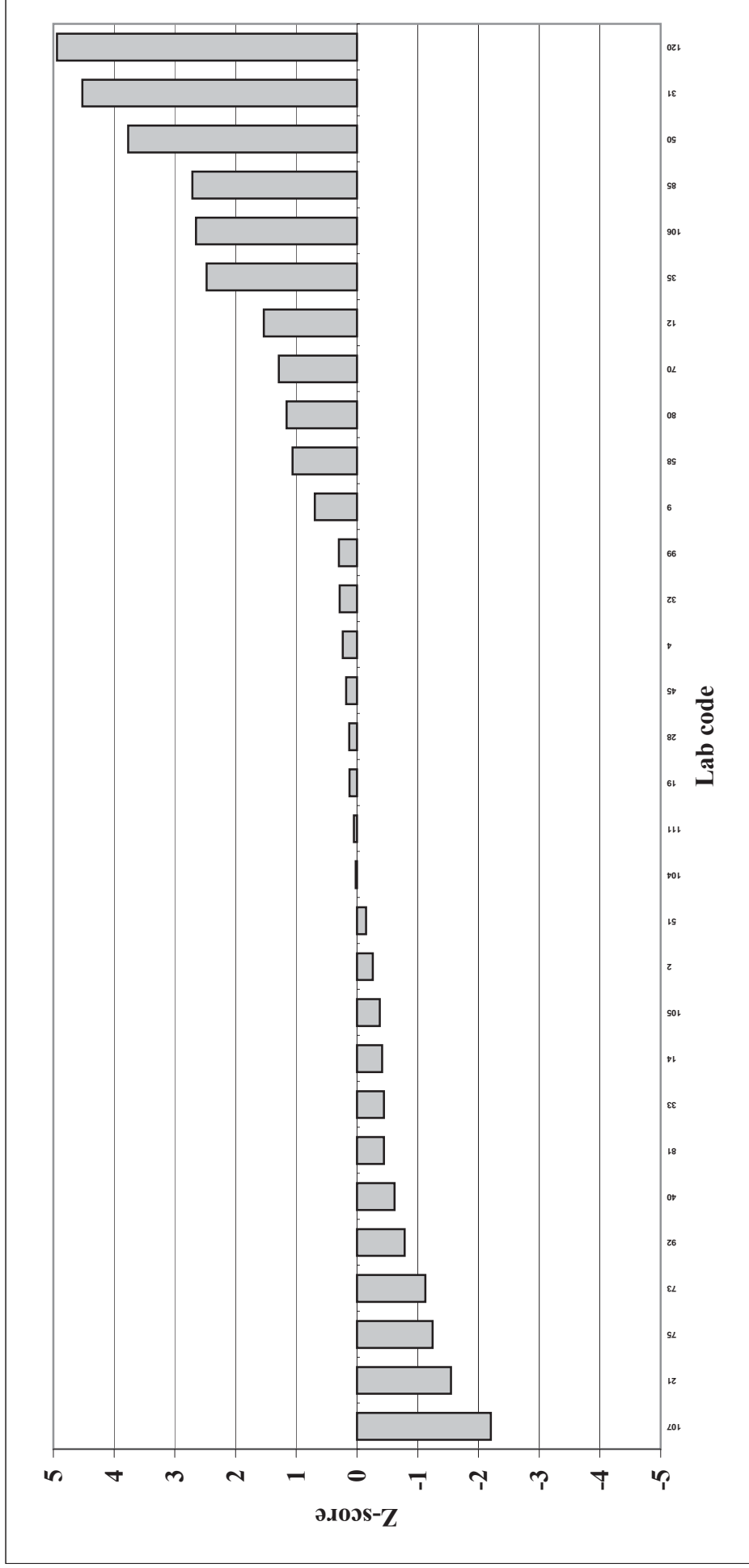
Z-score Crab meat; mono-ortho PCB TEQ



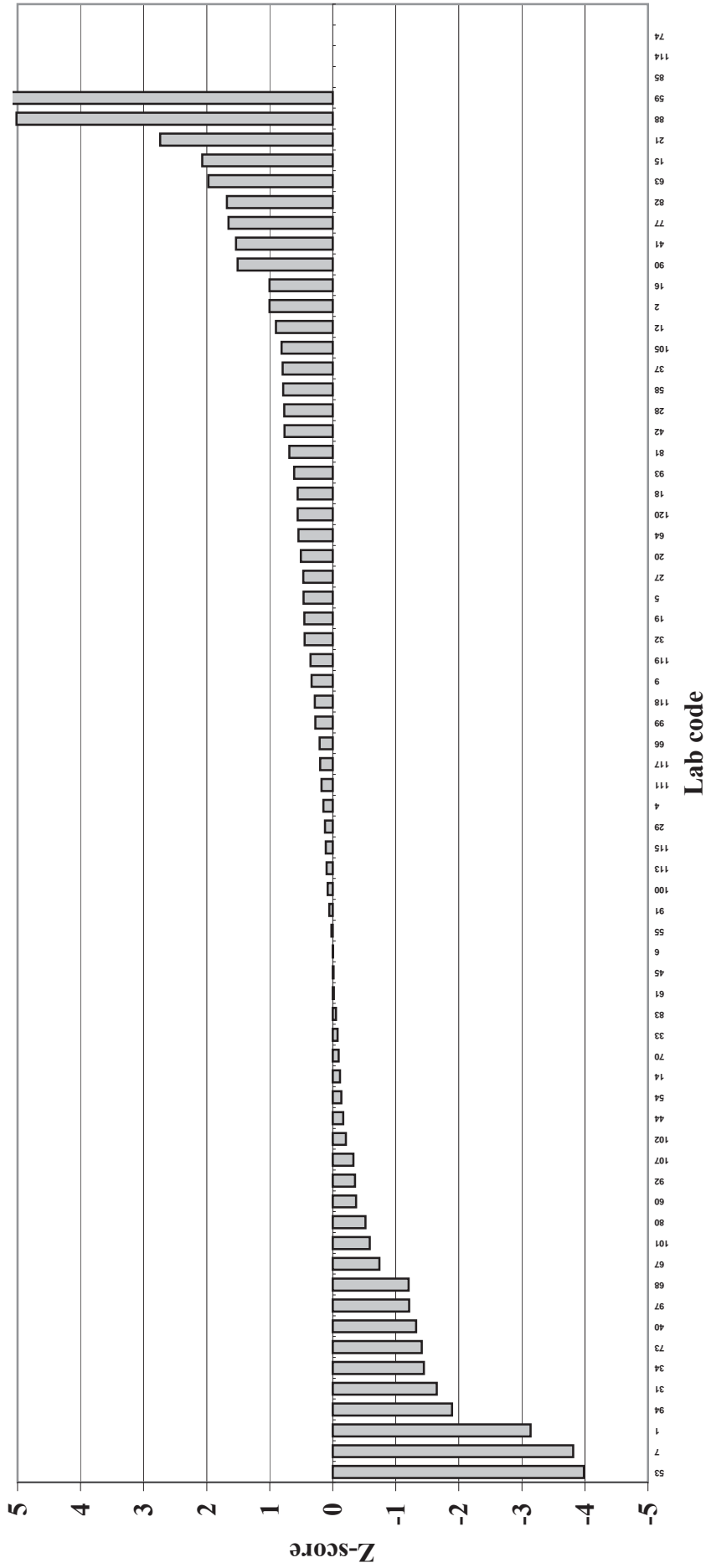
Z-score Crab meat; sum indicator PCB



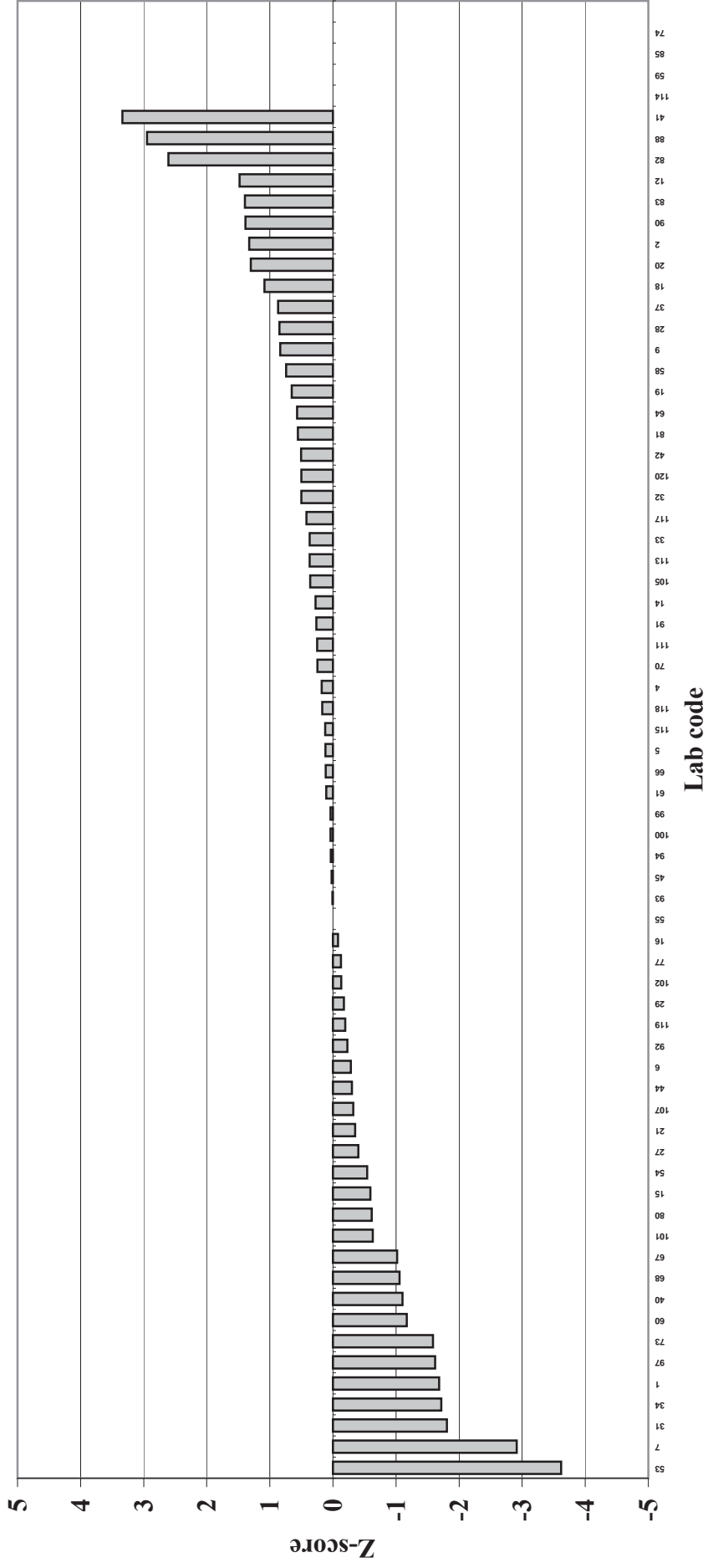
Z-score Crab meat; sum PBDE without BDE-209



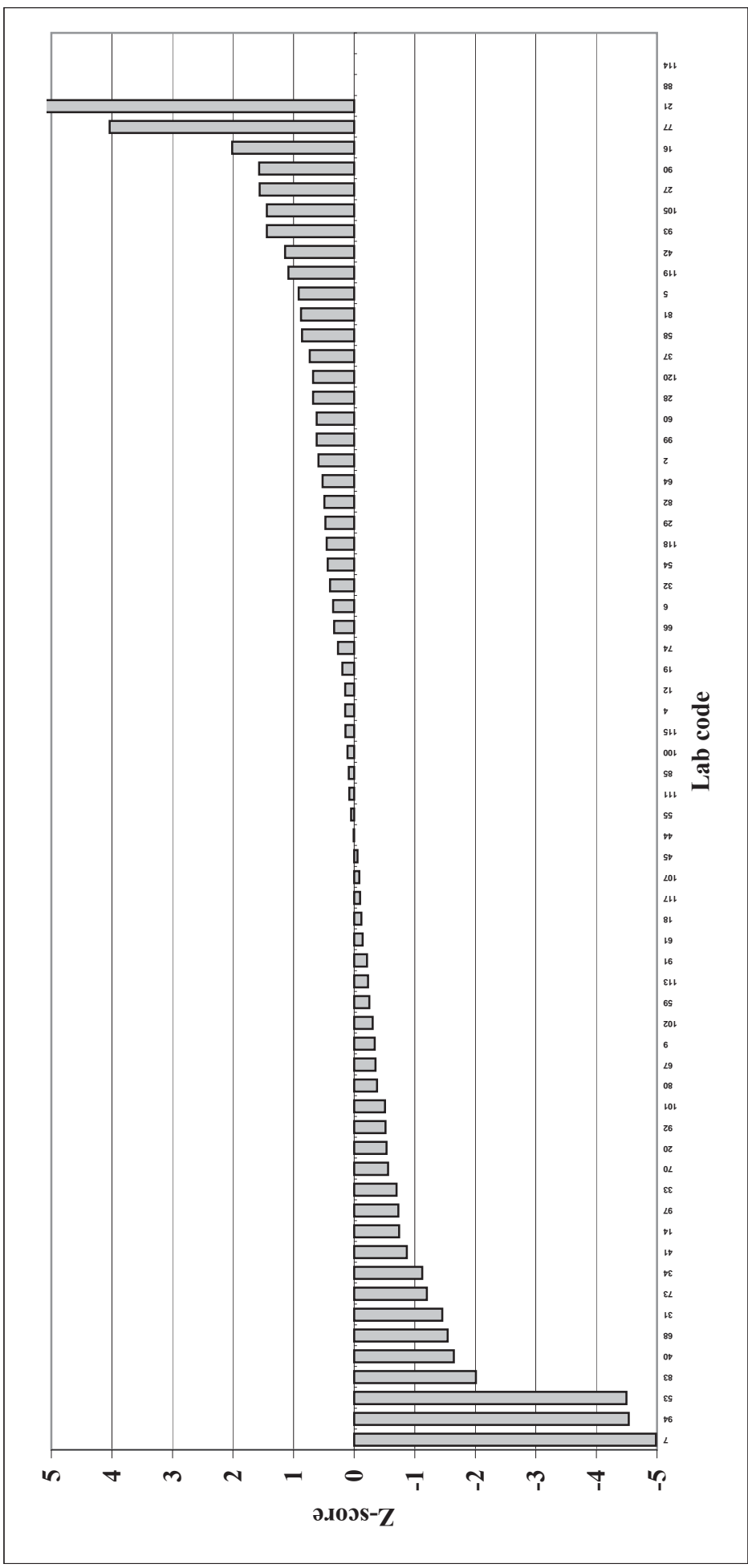
Z-score Egg; total TEQ



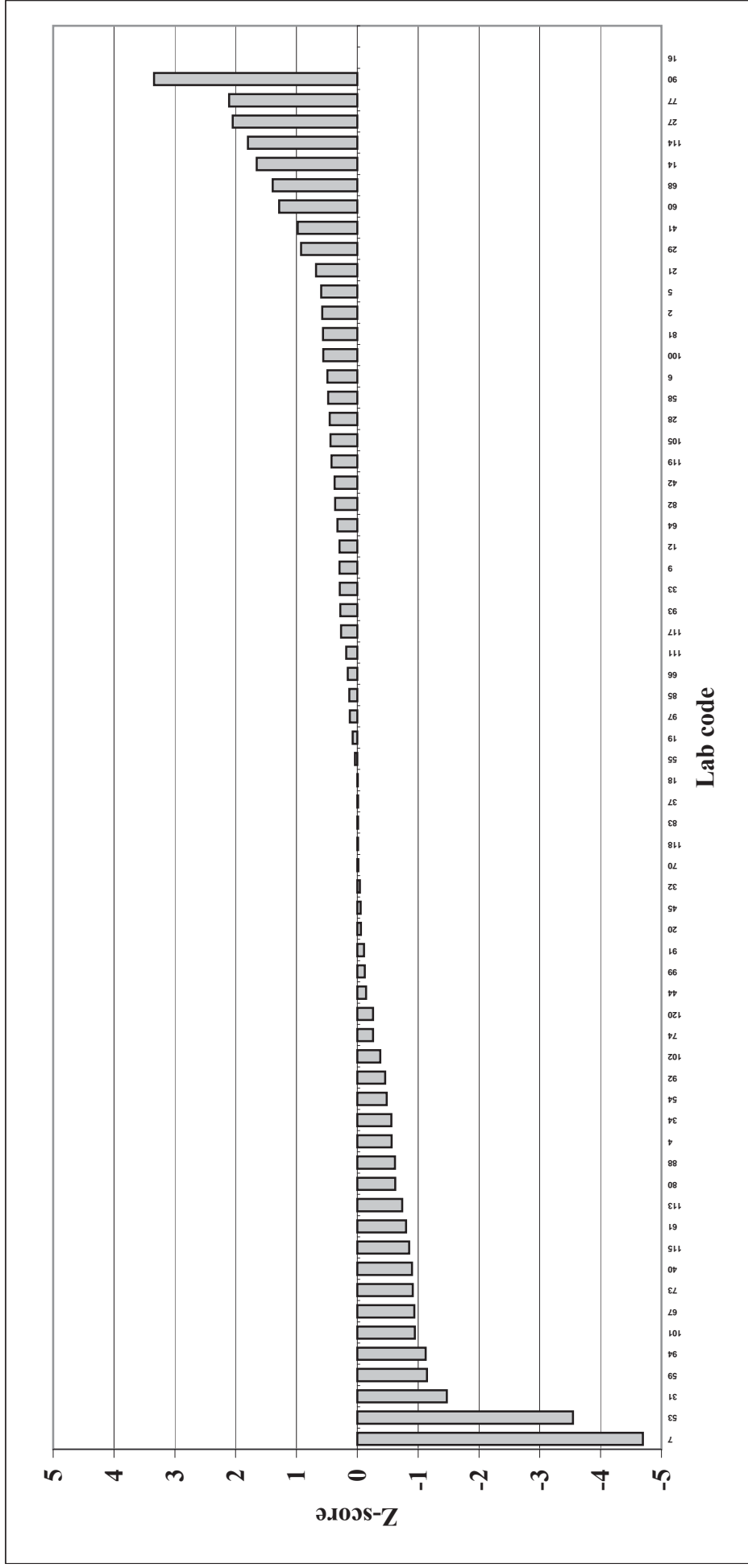
Z-score Egg; PCDD/PCDF TEQ



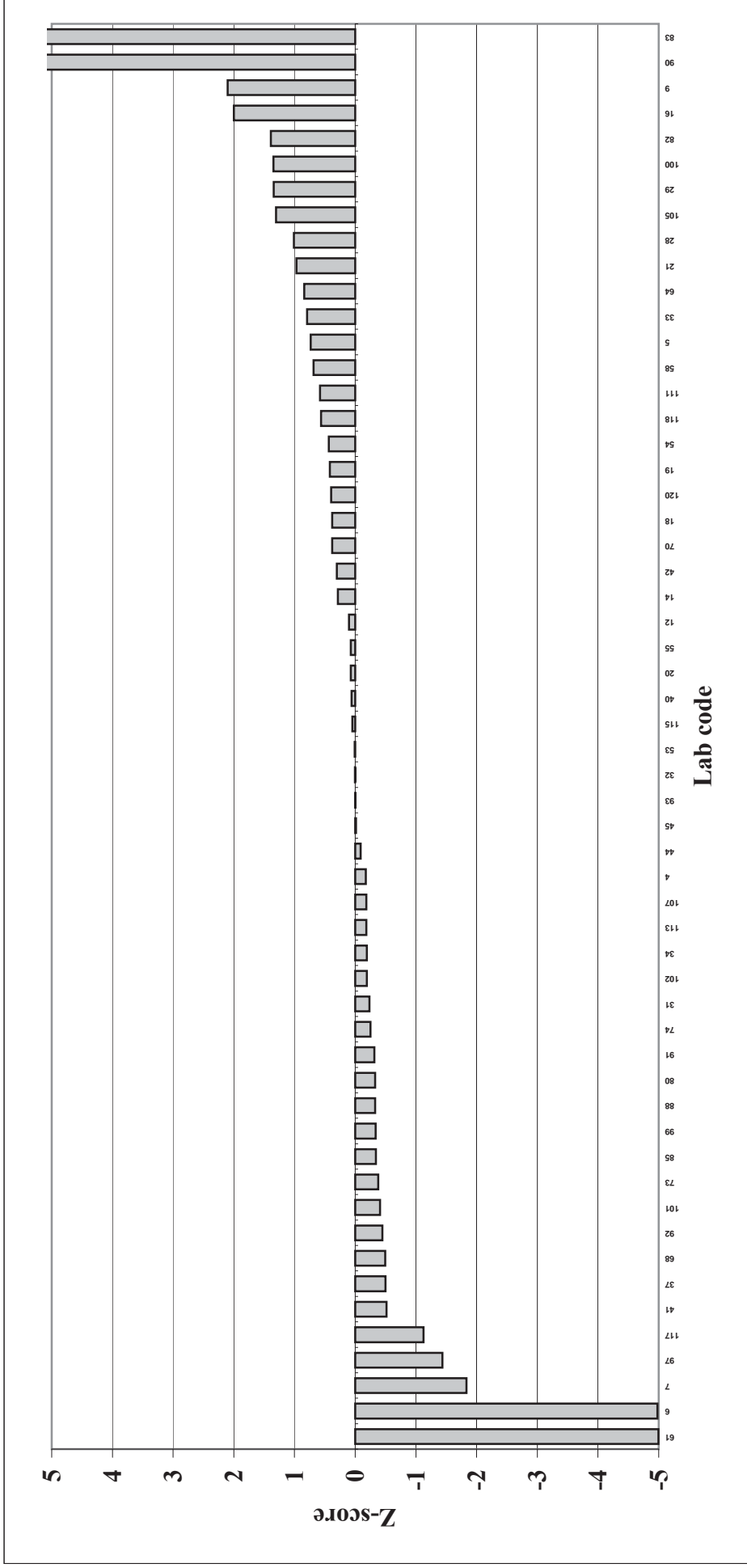
Z-score Egg; non-ortho PCB TEQ



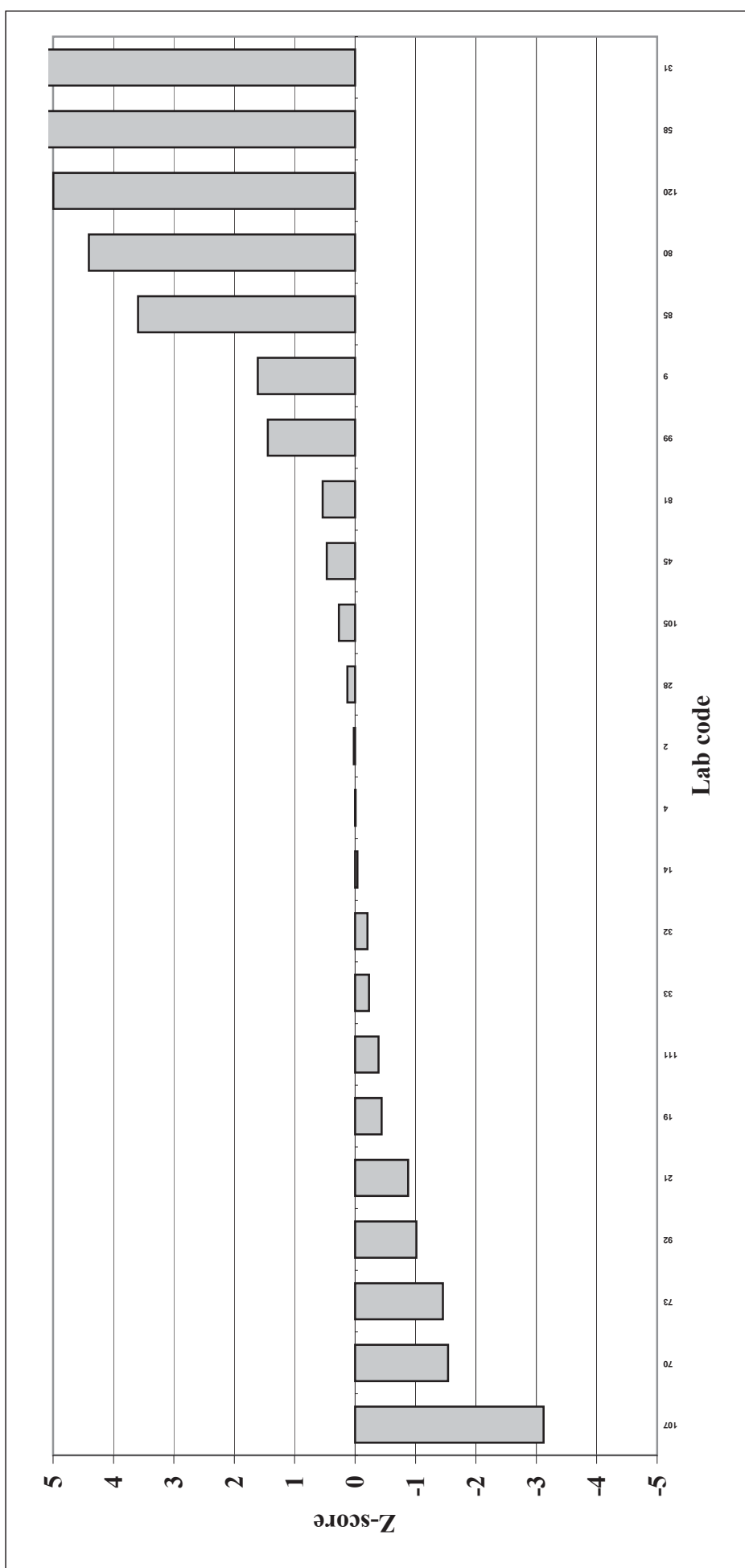
Z-score Egg; mono-ortho PCB TEQ



Z-score Egg; sum indicator PCB



Z-score Egg; sum PBDE without BDE-209



Appendix 1:

Presentation of results
for analyte solution

Appendix 1: Presentation of results: Analyte solution

Statistic calculations for PCDDs, PCDFs, dioxin-like PCBs, indicator PCBs, PBDEs and α -HBCD

The analyte solution contained

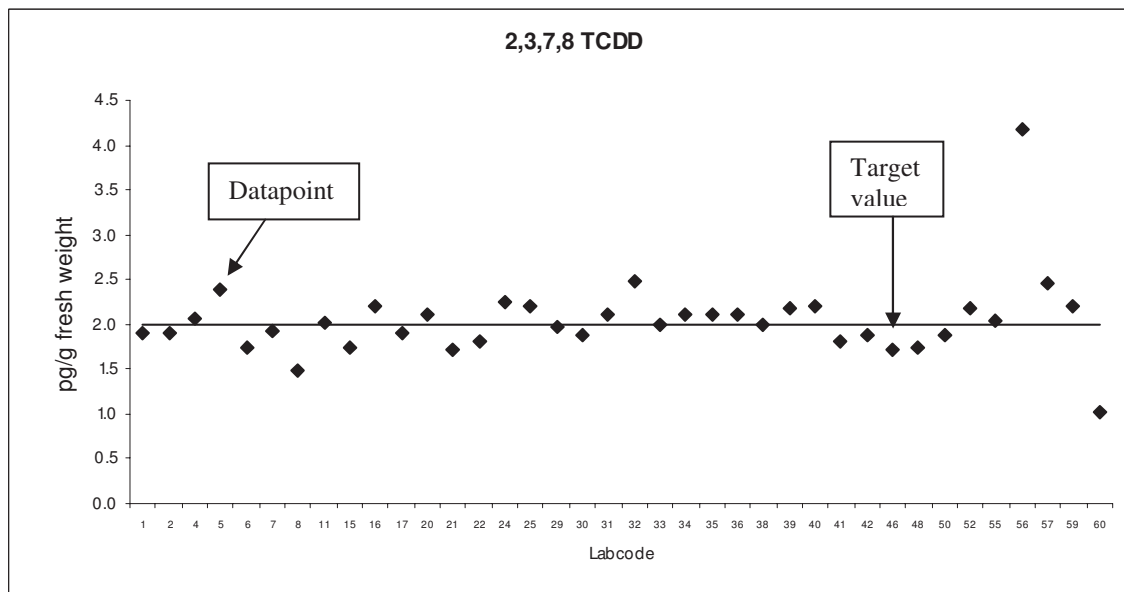
- PCDDs/PCDFs at concentrations of 2:5:10 pg/ μ l for tetra:penta-hexa-hepta:octa chlorinated dibenzodioxins/furans respectively.
- Non-ortho PCBs at concentration of 10 pg/ μ l.
- Mono-ortho PCBs and indicator PCBs at concentration of 100 pg/ μ l.
- PBDE at a concentration of 25 pg/ μ l, except BDE-209 at 100 pg/ μ l.
- α -HBCD at a concentration of 500 pg/ μ l.

These concentrations are called the congeners' target value.

For each congener, the outliers were removed and the consensus calculated according to the following procedure:

1. The median was calculated from all the reported data.
2. Values outside a range of 50 % to 150 % of this median, were defined as outliers and removed from the data set.
3. Median, mean and standard deviation were re-calculated from the remaining data. This median and mean were called consensus median and mean.

The diagram shows the target value and the reported data. Values outside a range of 50 % to 150 % of “median of all values”, were defined as outliers and are not shown in the plot.



Z-Scores of individual congeners

Z-scores of each congener were calculated for each laboratory according to the following equation:

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

Where x = reported value; X = assigned value (consensus); σ = target value for standard deviation. A σ of 20% of the consensus was used, i.e. z-scores between +1 and -1 reflect a deviation of $\pm 20\%$ from the consensus value.

Analyte solution

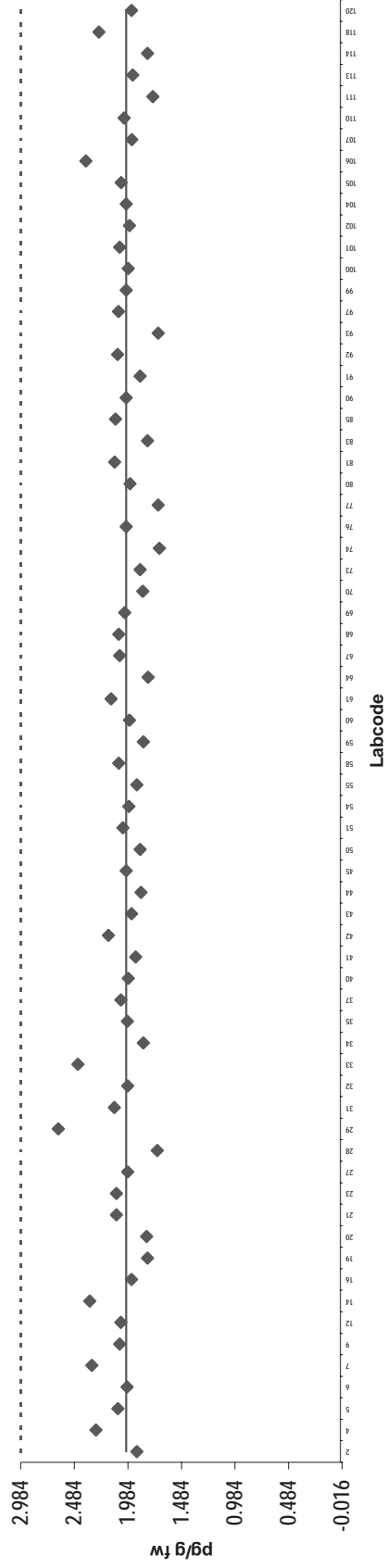
Congener: 2,3,7,8 TCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	1.9		80	2.0	
4	2.3		81	2.1	
5	2.1		83	1.8	
6	2.0		85	2.1	
7	2.3		90	2.0	
9	2.1		91	1.9	
12	2.1		92	2.1	
14	2.3		93	1.7	
16	2.0		97	2.1	
19	1.8		99	2.0	
20	1.8		100	2.0	
21	2.1		101	2.1	
23	2.1		102	2.0	
27	2.0		104	2.0	
28	1.7		105	2.0	
29	2.6		106	2.4	
31	2.1		107	1.9	
32	2.0		110	2.0	
33	2.5		111	1.8	
34	1.8		113	1.9	
35	2.0		114	1.8	
37	2.1		118	2.3	
40	2.0		120	1.9	
41	1.9				
42	2.2				
43	2.0				
44	1.9				
45	2.0				
50	1.9				
51	2.0				
54	2.0				
55	1.9				
58	2.1				
59	1.8				
60	2.0				
61	2.1				
64	1.8				
67	2.1				
68	2.1				
69	2.0				
70	1.8				
73	1.9				
74	1.7				
76	2.0				
77	1.7				

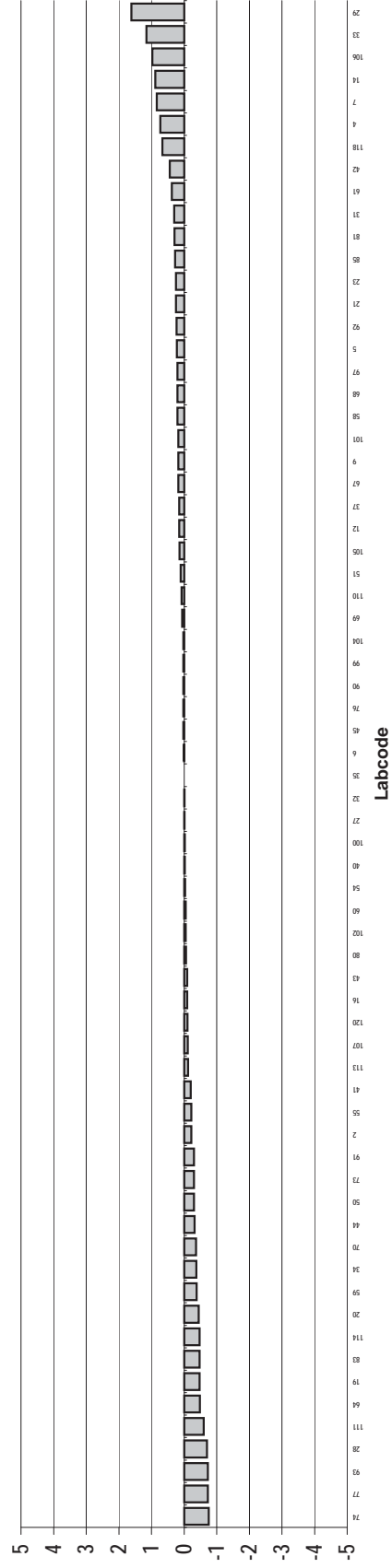
Consensus statistics

Consensus median, pg/g	2.0
Median all values pg/g	2.0
Consensus mean, pg/g	2.0
Standard deviation, pg/g	0.18
Relative standard deviation, %	8.8
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

2,3,7,8 TCDD



Z-score: 2,3,7,8 TCDD



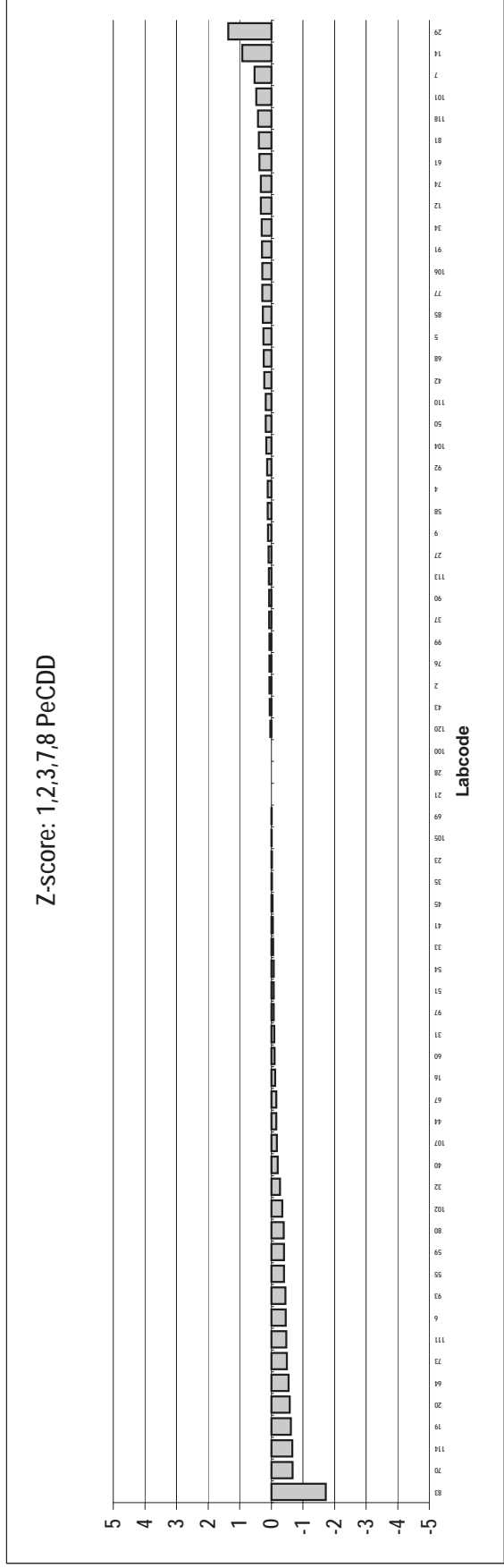
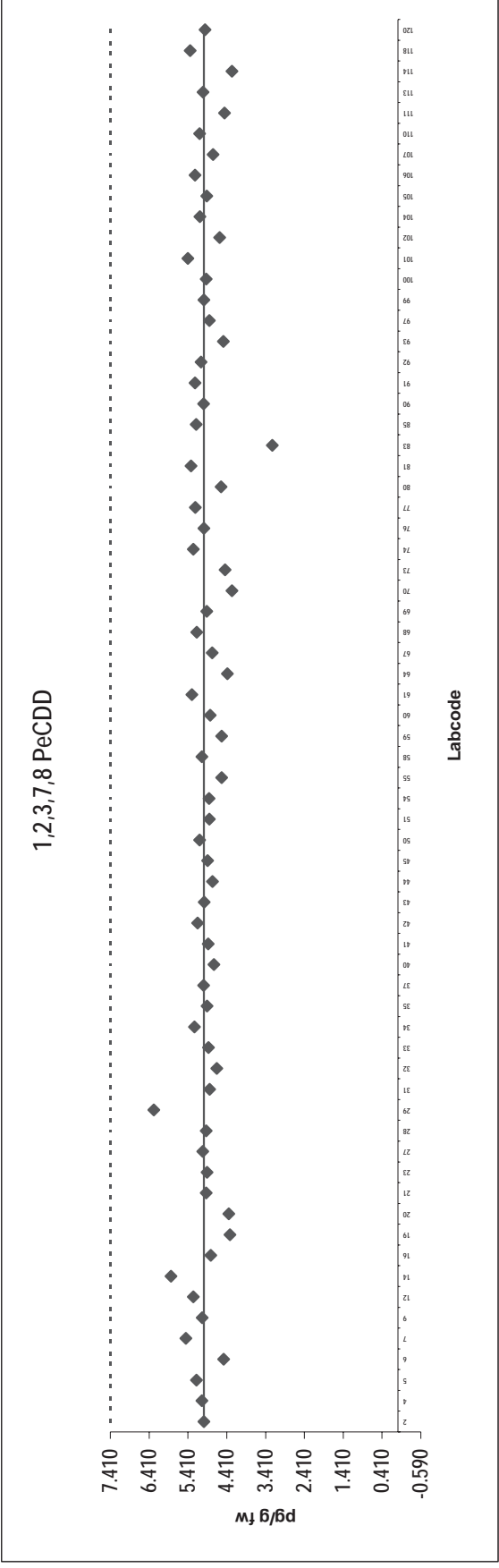
Analyte solution

Congener: 1,2,3,7,8 PeCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	5.0		80	4.6	
4	5.1		81	5.3	
5	5.2		83	3.2	
6	4.5		85	5.2	
7	5.5		90	5.0	
9	5.0		91	5.2	
12	5.3		92	5.1	
14	5.9		93	4.5	
16	4.8		97	4.9	
19	4.3		99	5.0	
20	4.4		100	4.9	
21	4.9		101	5.4	
23	4.9		102	4.6	
27	5.0		104	5.1	
28	4.9		105	4.9	
29	6.3		106	5.2	
31	4.9		107	4.8	
32	4.7		110	5.1	
33	4.9		111	4.5	
34	5.2		113	5.0	
35	4.9		114	4.3	
37	5.0		118	5.4	
40	4.7		120	5.0	
41	4.9				
42	5.2				
43	5.0				
44	4.8				
45	4.9				
50	5.1				
51	4.9				
54	4.9				
55	4.5				
58	5.1				
59	4.5				
60	4.8				
61	5.3				
64	4.4				
67	4.8				
68	5.2				
69	4.9				
70	4.3				
73	4.5				
74	5.3				
76	5.0				
77	5.2				

Consensus statistics

Consensus median, pg/g	4.9
Median all values pg/g	4.9
Consensus mean, pg/g	4.9
Standard deviation, pg/g	0.41
Relative standard deviation, %	8.2
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0



Analyte solution

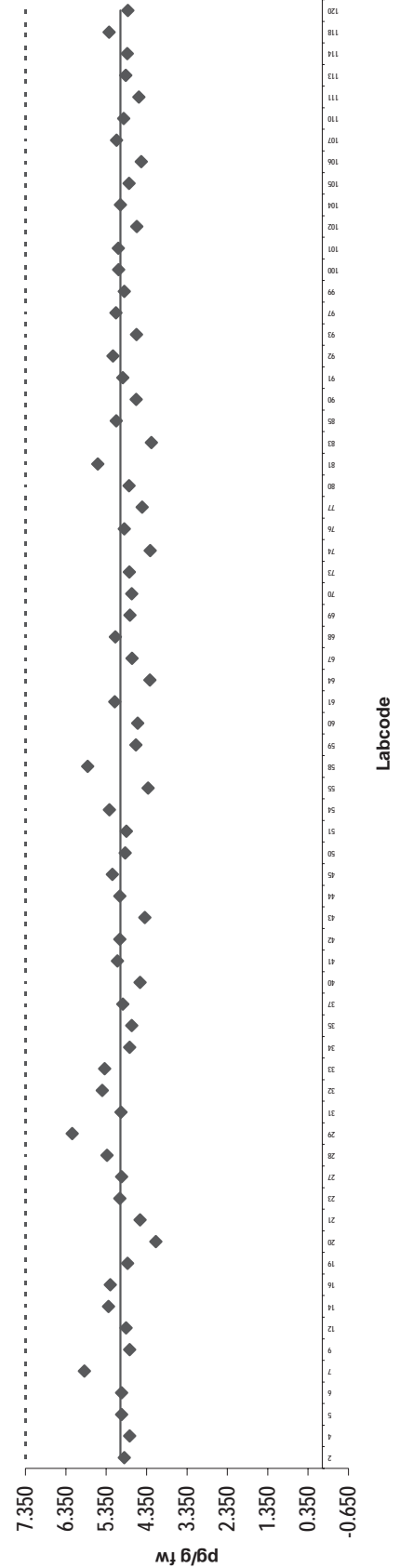
Congener: 1,2,3,4,7,8 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.9		80	4.8	
4	4.8		81	5.6	
5	5.0		83	4.2	
6	5.0		85	5.1	
7	5.9		90	4.6	
9	4.8		91	4.9	
12	4.9		92	5.2	
14	5.3		93	4.6	
16	5.3		97	5.1	
19	4.8		99	4.9	
20	4.1		100	5.0	
21	4.5		101	5.1	
23	5.0		102	4.6	
27	5.0		104	5.0	
28	5.3		105	4.8	
29	6.2		106	4.5	
31	5.0		107	5.1	
32	5.4		110	4.9	
33	5.4		111	4.5	
34	4.8		113	4.9	
35	4.7		114	4.8	
37	4.9		118	5.3	
40	4.5		120	4.8	
41	5.1				
42	5.0				
43	4.4				
44	5.0				
45	5.2				
50	4.9				
51	4.9				
54	5.3				
55	4.3				
58	5.8				
59	4.6				
60	4.6				
61	5.1				
64	4.3				
67	4.7				
68	5.1				
69	4.8				
70	4.7				
73	4.8				
74	4.3				
76	4.9				
77	4.5				

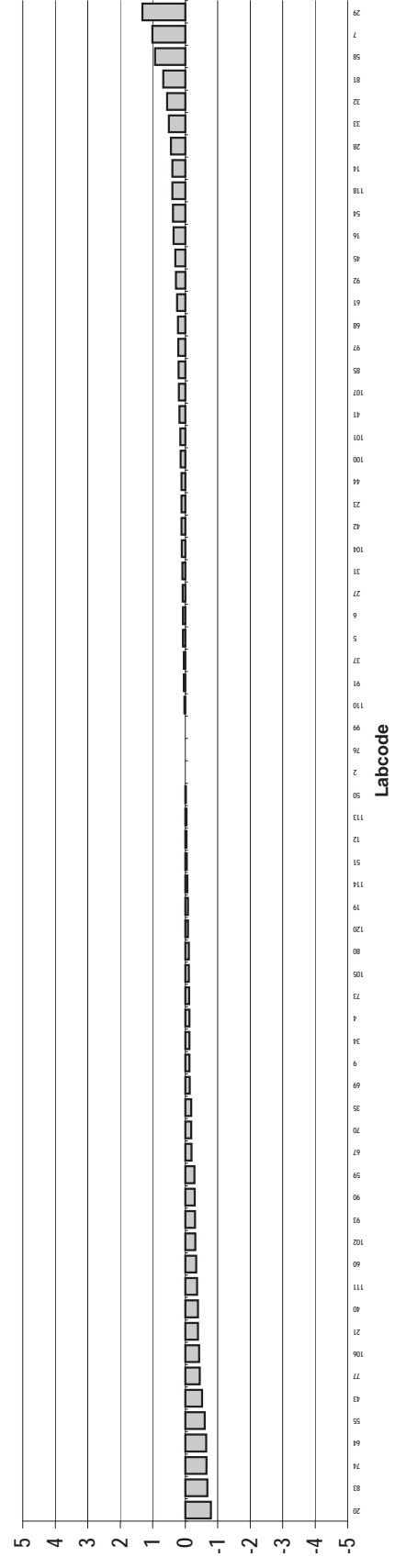
Consensus statistics

Consensus median, pg/g	4.9
Median all values pg/g	4.9
Consensus mean, pg/g	4.9
Standard deviation, pg/g	0.38
Relative standard deviation, %	7.7
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,4,7,8 HxCDD



Z-score: 1,2,3,4,7,8 HxCDD



Analyte solution

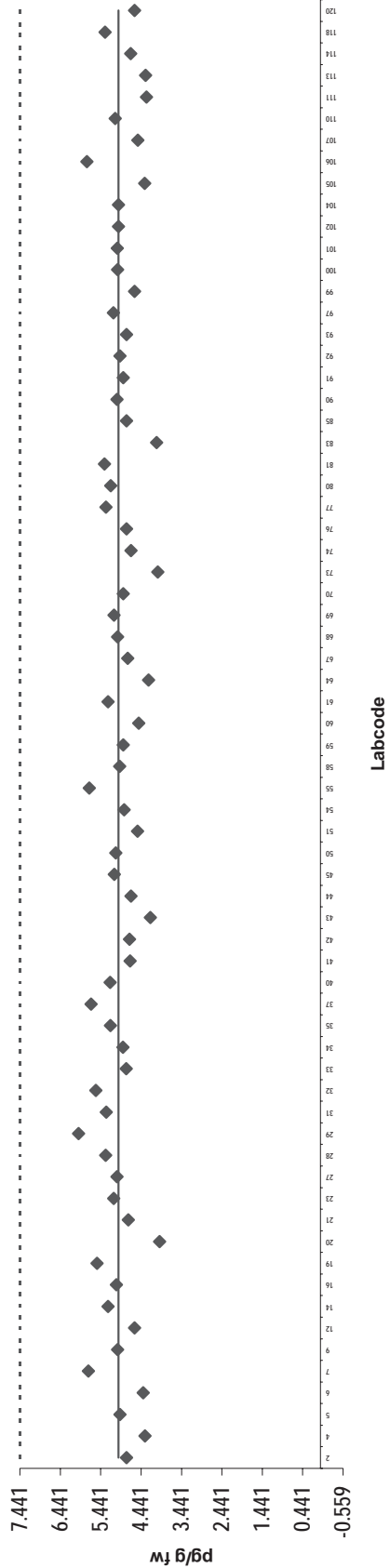
Congener: 1,2,3,6,7,8 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.8		80	5.2	
4	4.3		81	5.3	
5	5.0		83	4.1	
6	4.4		85	4.8	
7	5.7		90	5.0	
9	5.0		91	4.9	
12	4.6		92	5.0	
14	5.3		93	4.8	
16	5.1		97	5.1	
19	5.5		99	4.6	
20	4.0		100	5.0	
21	4.8		101	5.0	
23	5.1		102	5.0	
27	5.0		104	5.0	
28	5.3		105	4.4	
29	6.0		106	5.8	
31	5.3		107	4.5	
32	5.6		110	5.1	
33	4.8		111	4.3	
34	4.9		113	4.3	
35	5.2		114	4.7	
37	5.7		118	5.3	
40	5.2		120	4.6	
41	4.7				
42	4.7				
43	4.2				
44	4.7				
45	5.1				
50	5.1				
51	4.5				
54	4.9				
55	5.7				
58	5.0				
59	4.9				
60	4.5				
61	5.3				
64	4.3				
67	4.8				
68	5.0				
69	5.1				
70	4.9				
73	4.0				
74	4.7				
76	4.8				
77	5.3				

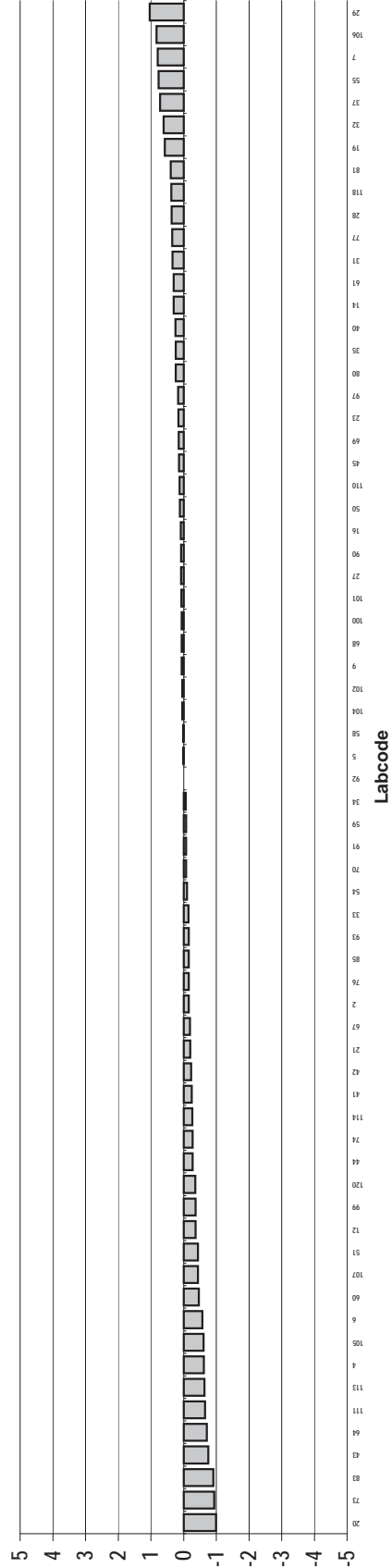
Consensus statistics

Consensus median, pg/g	5.0
Median all values pg/g	5.0
Consensus mean, pg/g	4.9
Standard deviation, pg/g	0.43
Relative standard deviation, %	8.7
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,6,7,8 HxCDD



Z-score: 1,2,3,6,7,8 HxCDD



Analyte solution

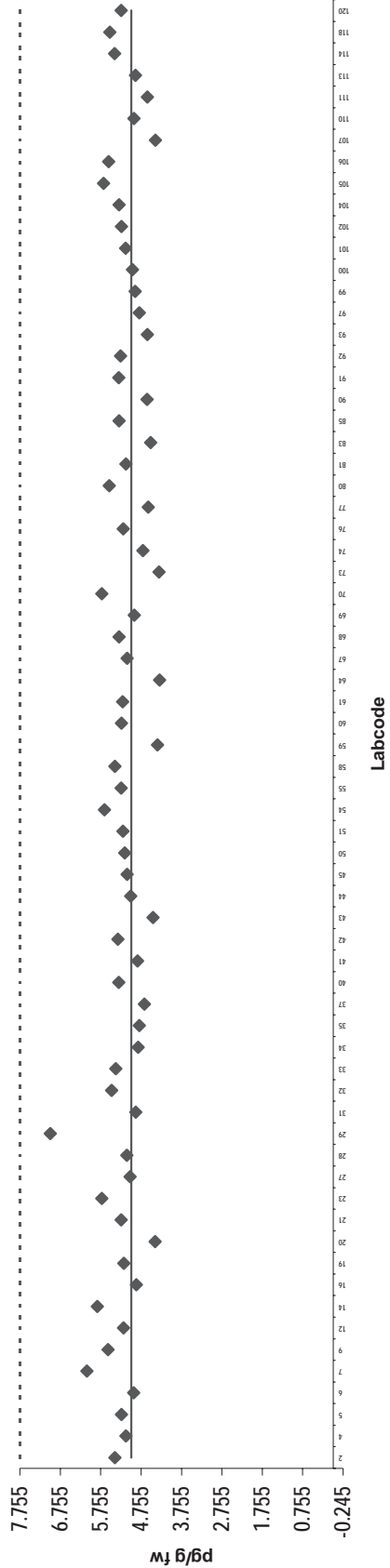
Congener: 1,2,3,7,8,9 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	5.4		80	5.5	
4	5.1		81	5.1	
5	5.2		83	4.5	
6	4.9		85	5.3	
7	6.1		90	4.6	
9	5.6		91	5.3	
12	5.2		92	5.3	
14	5.8		93	4.6	
16	4.9		97	4.8	
19	5.2		99	4.9	
20	4.4		100	5.0	
21	5.3		101	5.1	
23	5.7		102	5.2	
27	5.0		104	5.3	
28	5.1		105	5.7	
29	7.0		106	5.6	
31	4.9		107	4.4	
32	5.5		110	4.9	
33	5.4		111	4.6	
34	4.8		113	4.9	
35	4.8		114	5.4	
37	4.7		118	5.5	
40	5.3		120	5.2	
41	4.8				
42	5.3				
43	4.5				
44	5.0				
45	5.1				
50	5.2				
51	5.2				
54	5.7				
55	5.3				
58	5.4				
59	4.3				
60	5.2				
61	5.2				
64	4.3				
67	5.1				
68	5.3				
69	4.9				
70	5.7				
73	4.3				
74	4.7				
76	5.2				
77	4.6				

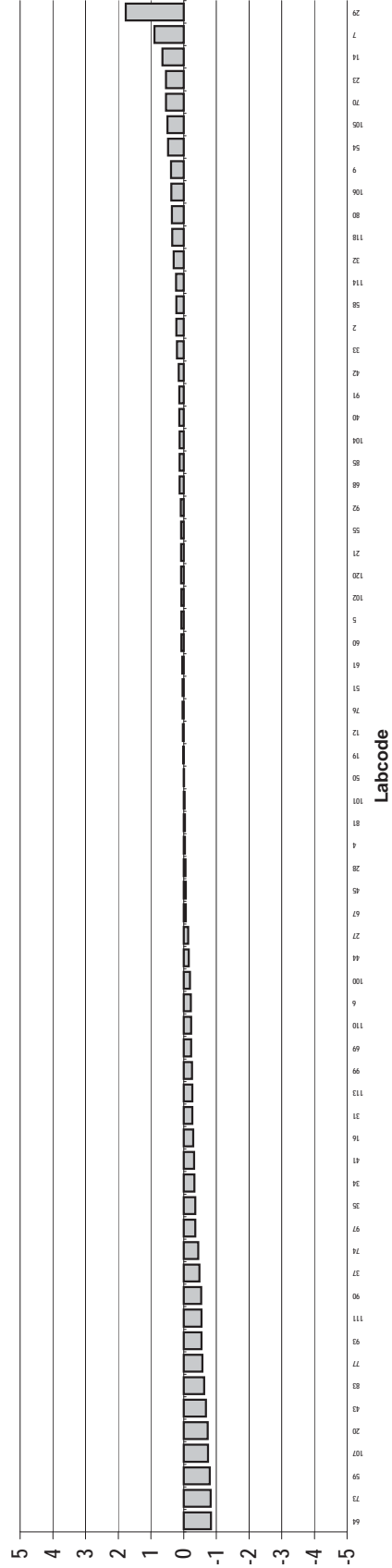
Consensus statistics

Consensus median, pg/g	5.2
Median all values pg/g	5.2
Consensus mean, pg/g	5.1
Standard deviation, pg/g	0.45
Relative standard deviation, %	8.9
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,7,8,9 HxCDD



Z-score: 1,2,3,7,8,9 HxCDD



Analyte solution

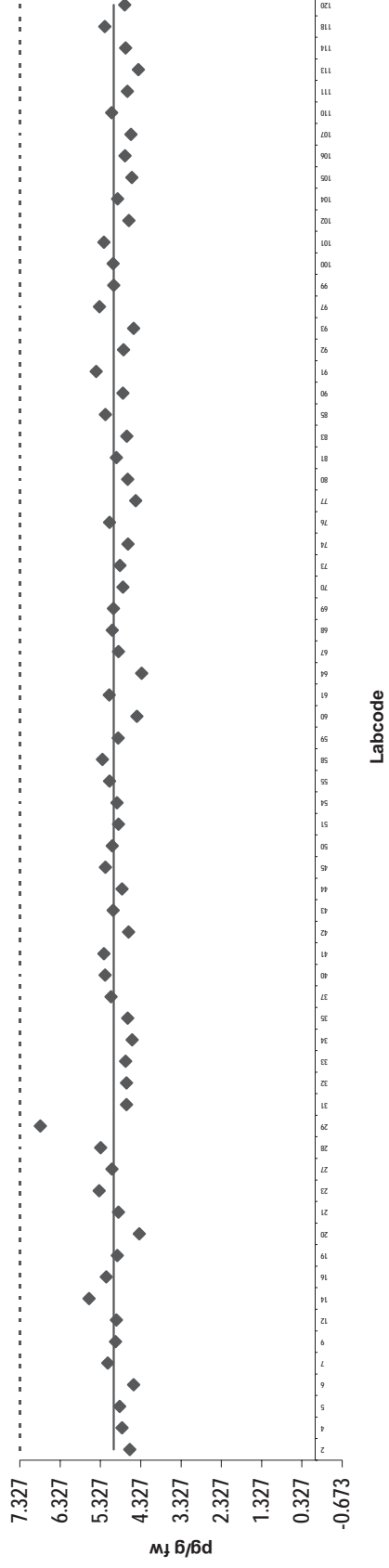
Congener: 1,2,3,4,6,7,8 HpCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.6		80	4.7	
4	4.8		81	4.9	
5	4.8		83	4.7	
6	4.5		85	5.2	
7	5.1		90	4.8	
9	5.0		91	5.4	
12	4.9		92	4.8	
14	5.6		93	4.5	
16	5.2		97	5.3	
19	4.9		99	5.0	
20	4.4		100	5.0	
21	4.9		101	5.2	
23	5.4		102	4.6	
27	5.0		104	4.9	
28	5.3		105	4.6	
29	6.8		106	4.7	
31	4.7		107	4.6	
32	4.7		110	5.1	
33	4.7		111	4.7	
34	4.5		113	4.4	
35	4.7		114	4.7	
37	5.1		118	5.2	
40	5.2		120	4.7	
41	5.2				
42	4.6				
43	5.0				
44	4.8				
45	5.2				
50	5.0				
51	4.9				
54	4.9				
55	5.1				
58	5.3				
59	4.9				
60	4.4				
61	5.1				
64	4.3				
67	4.9				
68	5.0				
69	5.0				
70	4.8				
73	4.8				
74	4.6				
76	5.1				
77	4.5				

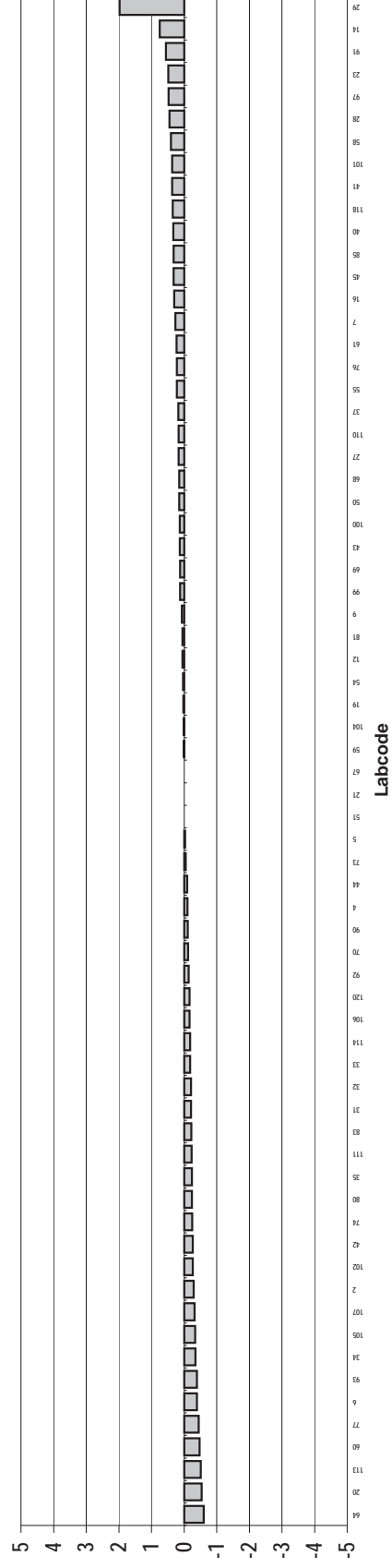
Consensus statistics

Consensus median, pg/g	4.9
Median all values pg/g	4.9
Consensus mean, pg/g	4.9
Standard deviation, pg/g	0.37
Relative standard deviation, %	7.5
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,4,6,7,8 HpCDD



Z-score: 1,2,3,4,6,7,8 HpCDD



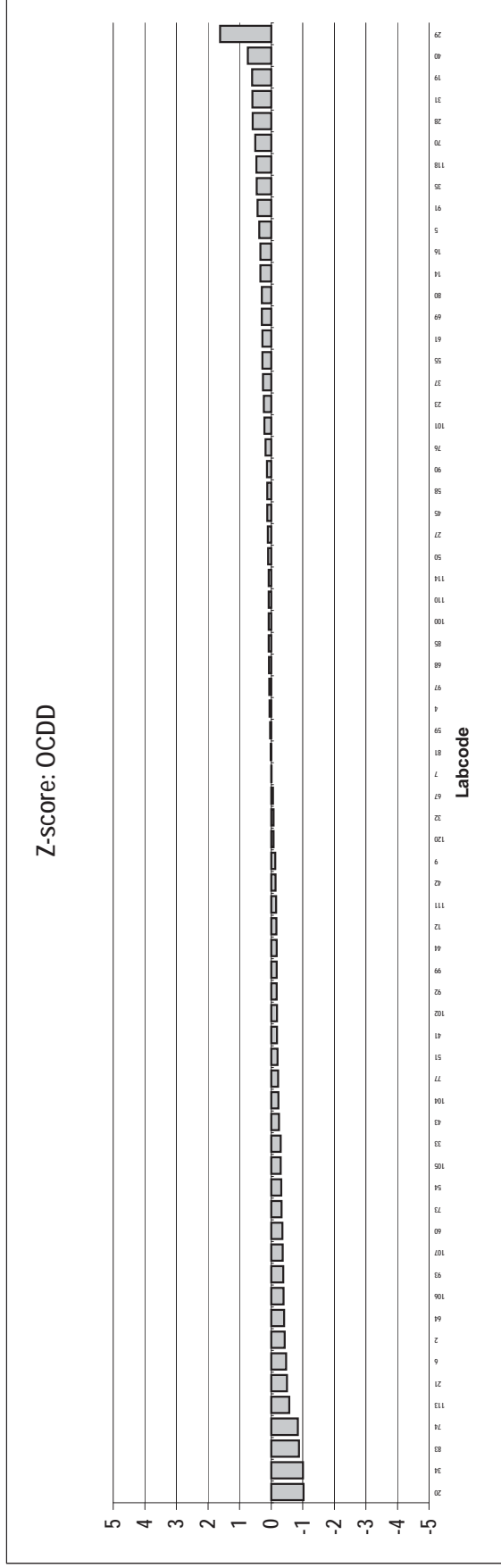
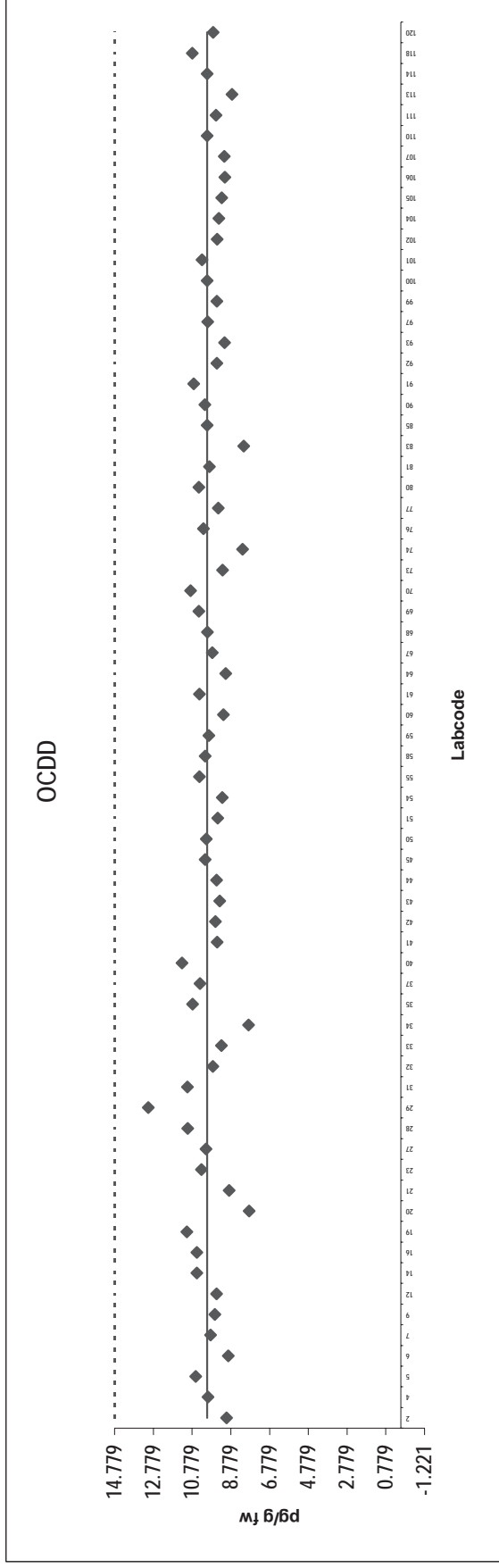
Analyte solution

Congener: OCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	9.0		80	10	
4	10.0		81	9.9	
5	11		83	8.1	
6	8.9		85	10	
7	9.8		90	10	
9	9.6		91	11	
12	9.5		92	9.5	
14	11		93	9.1	
16	11		97	10.0	
19	11		99	9.5	
20	7.8		100	10	
21	8.9		101	10	
23	10		102	9.5	
27	10		104	9.4	
28	11		105	9.3	
29	13		106	9.1	
31	11		107	9.1	
32	9.7		110	10	
33	9.3		111	9.5	
34	7.9		113	8.7	
35	11		114	10	
37	10		118	11	
40	11		120	9.7	
41	9.5				
42	9.6				
43	9.4				
44	9.5				
45	10				
50	10				
51	9.5				
54	9.2				
55	10				
58	10				
59	9.9				
60	9.2				
61	10				
64	9.1				
67	9.7				
68	10.0				
69	10				
70	11				
73	9.2				
74	8.2				
76	10				
77	9.4				

Consensus statistics

Consensus median, pg/g	9.9
Median all values pg/g	9.9
Consensus mean, pg/g	9.8
Standard deviation, pg/g	0.84
Relative standard deviation, %	8.6
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0



Analyte solution

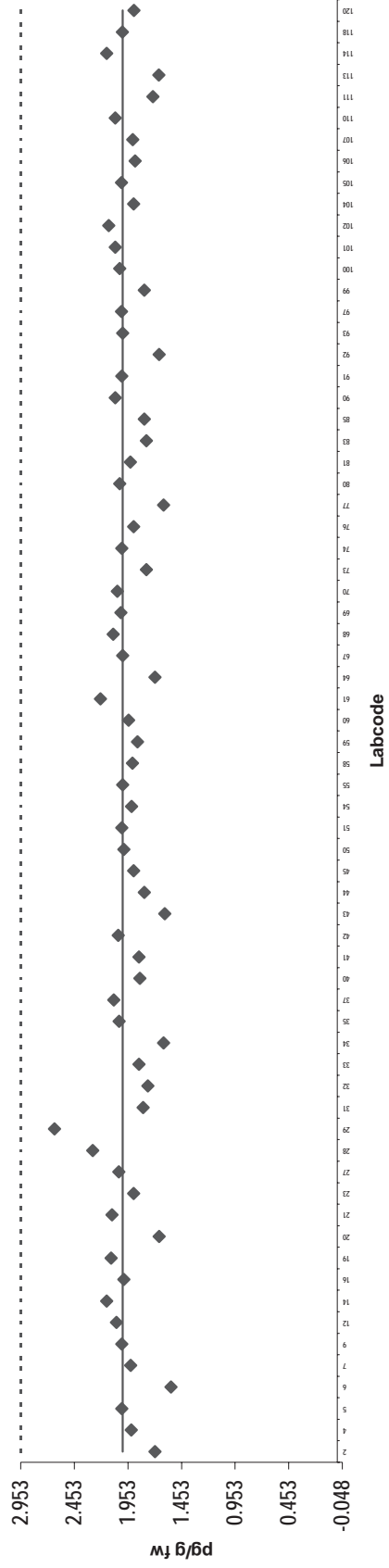
Congener: 2,3,7,8 TCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	1.7		80	2.0	
4	1.9		81	1.9	
5	2.0		83	1.8	
6	1.6		85	1.8	
7	1.9		90	2.1	
9	2.0		91	2.0	
12	2.1		92	1.7	
14	2.2		93	2.0	
16	2.0		97	2.0	
19	2.1		99	1.8	
20	1.7		100	2.0	
21	2.1		101	2.1	
23	1.9		102	2.1	
27	2.0		104	1.9	
28	2.3		105	2.0	
29	2.6		106	1.9	
31	1.8		107	1.9	
32	1.8		110	2.1	
33	1.9		111	1.7	
34	1.6		113	1.7	
35	2.0		114	2.2	
37	2.1		118	2.0	
40	1.8		120	1.9	
41	1.9				
42	2.0				
43	1.6				
44	1.8				
45	1.9				
50	2.0				
51	2.0				
54	1.9				
55	2.0				
58	1.9				
59	1.9				
60	1.9				
61	2.2				
64	1.7				
67	2.0				
68	2.1				
69	2.0				
70	2.1				
73	1.8				
74	2.0				
76	1.9				
77	1.6				

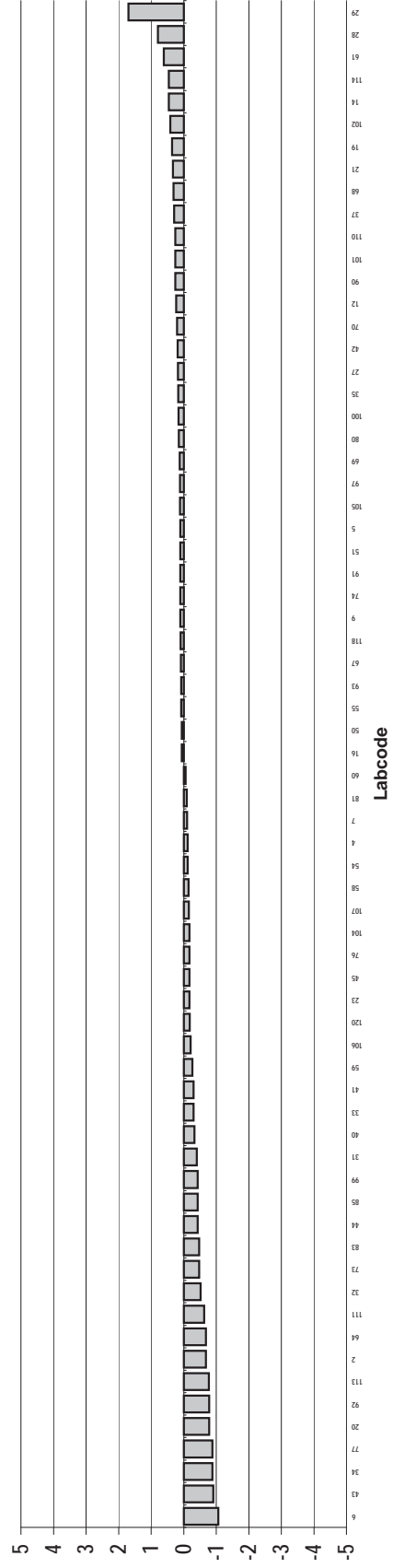
Consensus statistics

Consensus median, pg/g	2.0
Median all values pg/g	2.0
Consensus mean, pg/g	1.9
Standard deviation, pg/g	0.18
Relative standard deviation, %	9.2
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

2,3,7,8 TCDF



Z-score: 2,3,7,8 TCDF



Analyte solution

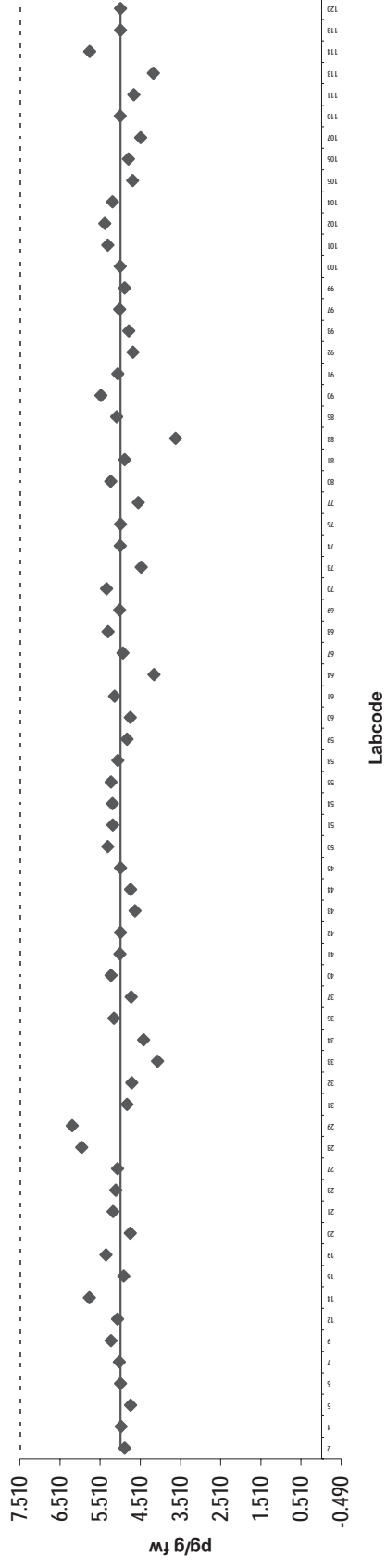
Congener: 1,2,3,7,8 PeCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.9		80	5.2	
4	5.0		81	4.9	
5	4.8		83	3.6	
6	5.0		85	5.1	
7	5.0		90	5.5	
9	5.2		91	5.1	
12	5.1		92	4.7	
14	5.8		93	4.8	
16	4.9		97	5.0	
19	5.4		99	4.9	
20	4.8		100	5.0	
21	5.2		101	5.3	
23	5.1		102	5.4	
27	5.1		104	5.2	
28	6.0		105	4.7	
29	6.2		106	4.8	
31	4.8		107	4.5	
32	4.7		110	5.0	
33	4.1		111	4.7	
34	4.4		113	4.2	
35	5.2		114	5.8	
37	4.7		118	5.0	
40	5.2		120	5.0	
41	5.0				
42	5.0				
43	4.6				
44	4.8				
45	5.0				
50	5.3				
51	5.2				
54	5.2				
55	5.2				
58	5.1				
59	4.8				
60	4.8				
61	5.2				
64	4.2				
67	4.9				
68	5.3				
69	5.0				
70	5.4				
73	4.5				
74	5.0				
76	5.0				
77	4.6				

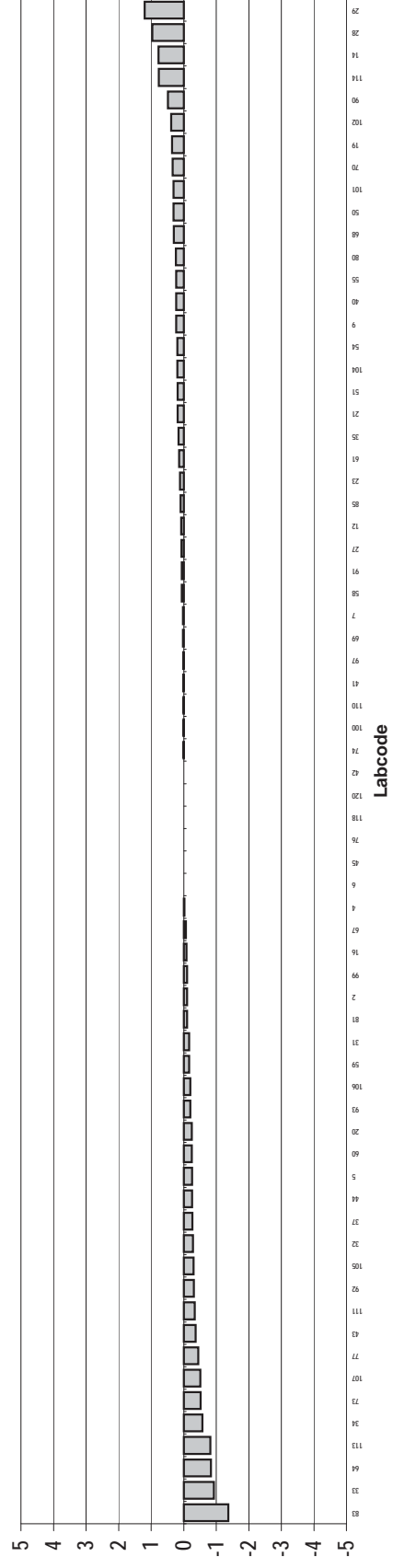
Consensus statistics

Consensus median, pg/g	5.0
Median all values pg/g	5.0
Consensus mean, pg/g	5.0
Standard deviation, pg/g	0.41
Relative standard deviation, %	8.2
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,7,8 PeCDF



Z-score: 1,2,3,7,8 PeCDF



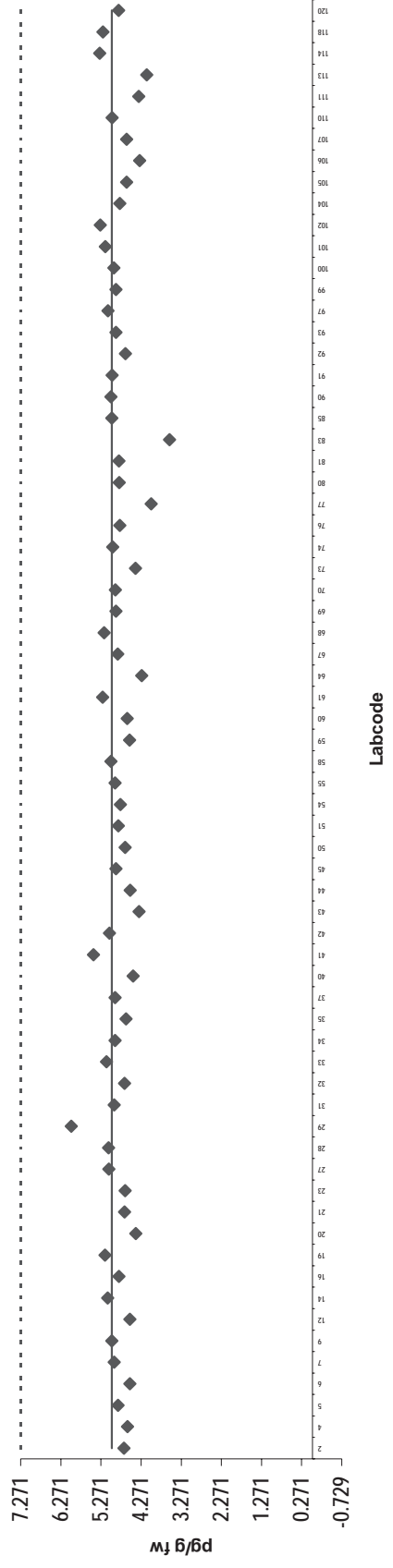
Analyte solution

Congener: 2,3,4,7,8 PeCDF

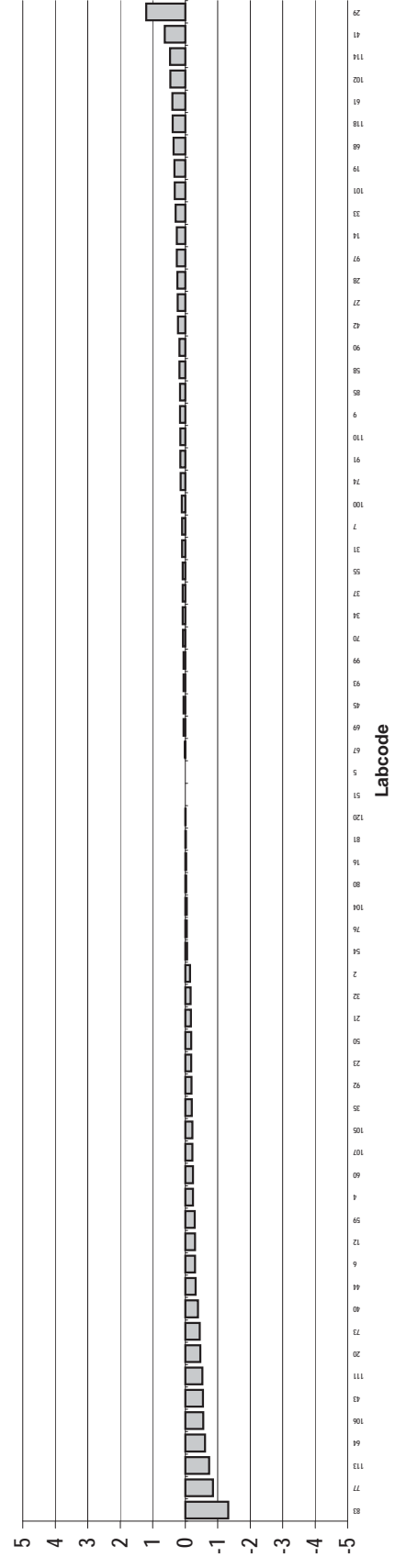
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.7		80	4.8	
4	4.6		81	4.8	
5	4.8		83	3.6	
6	4.6		85	5.0	
7	4.9		90	5.0	
9	5.0		91	5.0	
12	4.6		92	4.7	
14	5.1		93	4.9	
16	4.8		97	5.1	
19	5.2		99	4.9	
20	4.4		100	5.0	
21	4.7		101	5.2	
23	4.7		102	5.3	
27	5.1		104	4.8	
28	5.1		105	4.6	
29	6.0		106	4.3	
31	4.9		107	4.6	
32	4.7		110	5.0	
33	5.1		111	4.3	
34	4.9		113	4.1	
35	4.6		114	5.3	
37	4.9		118	5.2	
40	4.5		120	4.8	
41	5.5				
42	5.1				
43	4.3				
44	4.5				
45	4.9				
50	4.7				
51	4.8				
54	4.8				
55	4.9				
58	5.0				
59	4.6				
60	4.6				
61	5.2				
64	4.3				
67	4.9				
68	5.2				
69	4.9				
70	4.9				
73	4.4				
74	5.0				
76	4.8				
77	4.0				

Consensus statistics	
Consensus median, pg/g	4.8
Median all values pg/g	4.8
Consensus mean, pg/g	4.8
Standard deviation, pg/g	0.36
Relative standard deviation, %	7.4
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

2,3,4,7,8 PeCDF



Z-score: 2,3,4,7,8 PeCDF



Analyte solution

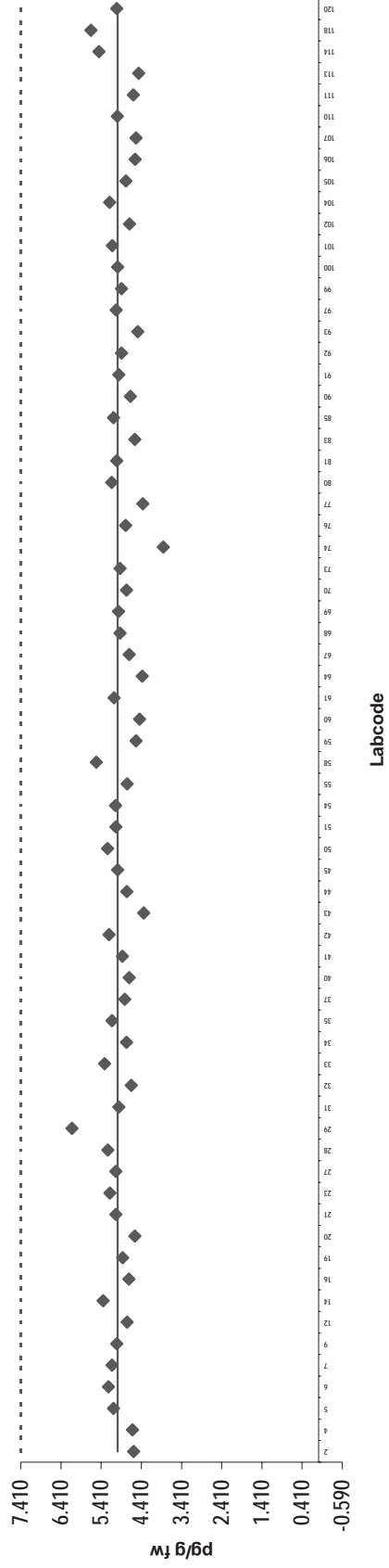
Congener: 1,2,3,4,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.6		80	5.1	
4	4.6		81	5.0	
5	5.1		83	4.6	
6	5.2		85	5.1	
7	5.1		90	4.7	
9	5.0		91	5.0	
12	4.8		92	4.9	
14	5.4		93	4.5	
16	4.7		97	5.0	
19	4.9		99	4.9	
20	4.6		100	5.0	
21	5.0		101	5.1	
23	5.2		102	4.7	
27	5.0		104	5.2	
28	5.2		105	4.8	
29	6.1		106	4.6	
31	5.0		107	4.5	
32	4.7		110	5.0	
33	5.3		111	4.6	
34	4.8		113	4.5	
35	5.1		114	5.5	
37	4.8		118	5.7	
40	4.7		120	5.0	
41	4.9				
42	5.2				
43	4.4				
44	4.8				
45	5.0				
50	5.3				
51	5.0				
54	5.1				
55	4.8				
58	5.5				
59	4.5				
60	4.5				
61	5.1				
64	4.4				
67	4.7				
68	4.9				
69	5.0				
70	4.8				
73	4.9				
74	3.9				
76	4.8				
77	4.4				

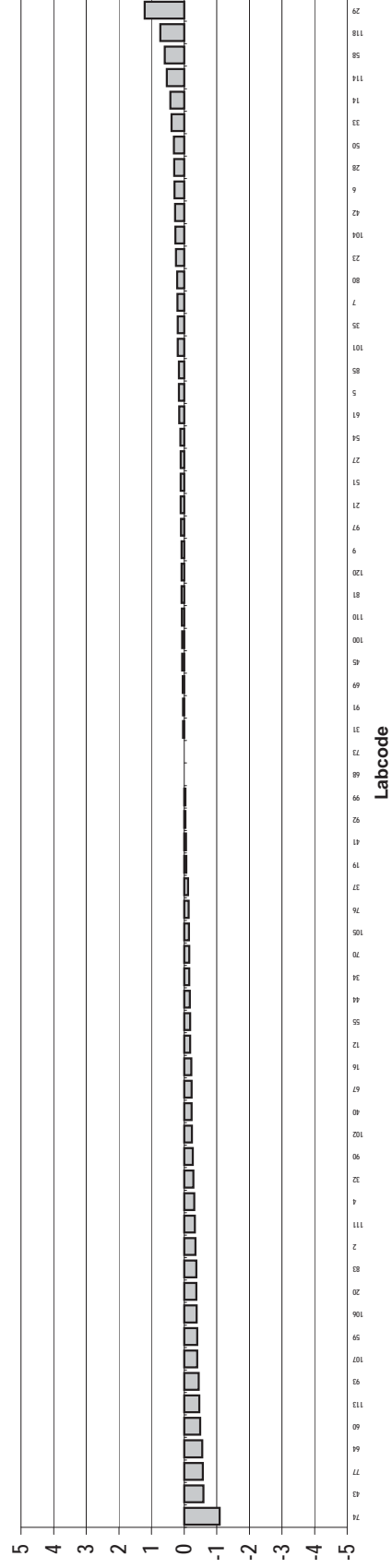
Consensus statistics

Consensus median, pg/g	4.9
Median all values pg/g	4.9
Consensus mean, pg/g	4.9
Standard deviation, pg/g	0.35
Relative standard deviation, %	7.0
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,4,7,8 HxCDF



Z-score: 1,2,3,4,7,8 HxCDF



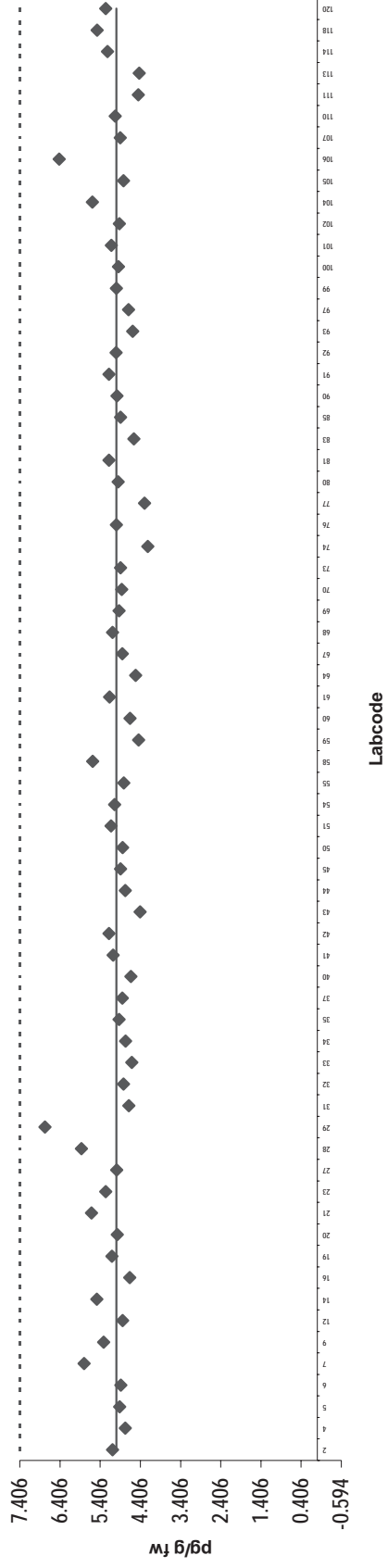
Analyte solution
Congener: 1,2,3,6,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	5.1		80	5.0	
4	4.8		81	5.2	
5	4.9		83	4.6	
6	4.9		85	4.9	
7	5.8		90	5.0	
9	5.3		91	5.2	
12	4.9		92	5.0	
14	5.5		93	4.6	
16	4.7		97	4.7	
19	5.1		99	5.0	
20	5.0		100	5.0	
21	5.6		101	5.1	
23	5.3		102	4.9	
27	5.0		104	5.6	
28	5.9		105	4.8	
29	6.8		106	6.4	
31	4.7		107	4.9	
32	4.8		110	5.0	
33	4.6		111	4.5	
34	4.8		113	4.4	
35	4.9		114	5.2	
37	4.9		118	5.5	
40	4.6		120	5.3	
41	5.1				
42	5.2				
43	4.4				
44	4.8				
45	4.9				
50	4.9				
51	5.1				
54	5.0				
55	4.8				
58	5.6				
59	4.5				
60	4.7				
61	5.2				
64	4.5				
67	4.9				
68	5.1				
69	4.9				
70	4.9				
73	4.9				
74	4.2				
76	5.0				
77	4.3				

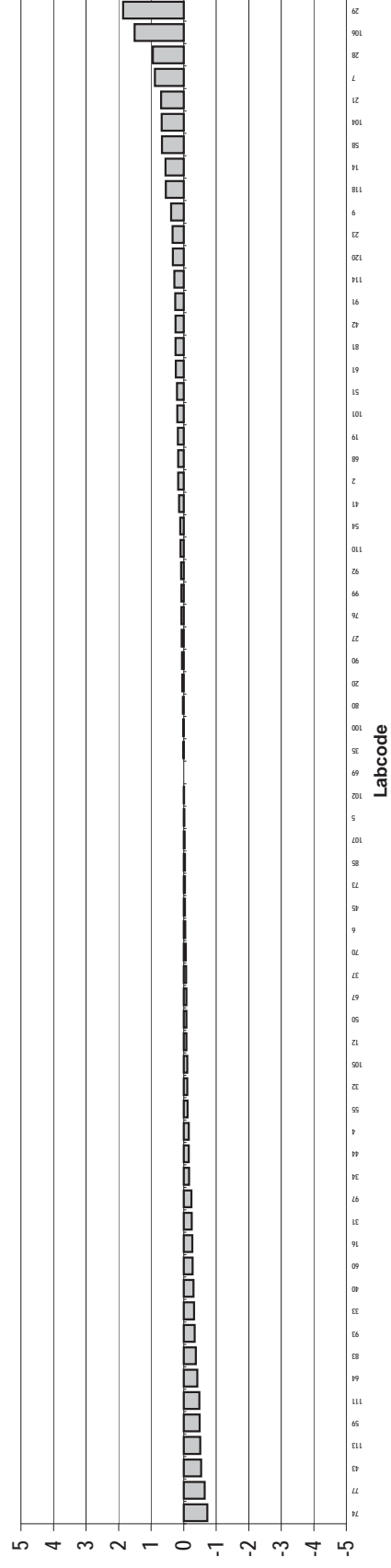
Consensus statistics

Consensus median, pg/g	4.9
Median all values pg/g	4.9
Consensus mean, pg/g	5.0
Standard deviation, pg/g	0.44
Relative standard deviation, %	8.7
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,6,7,8 HxCDF



Z-score: 1,2,3,6,7,8 HxCDF



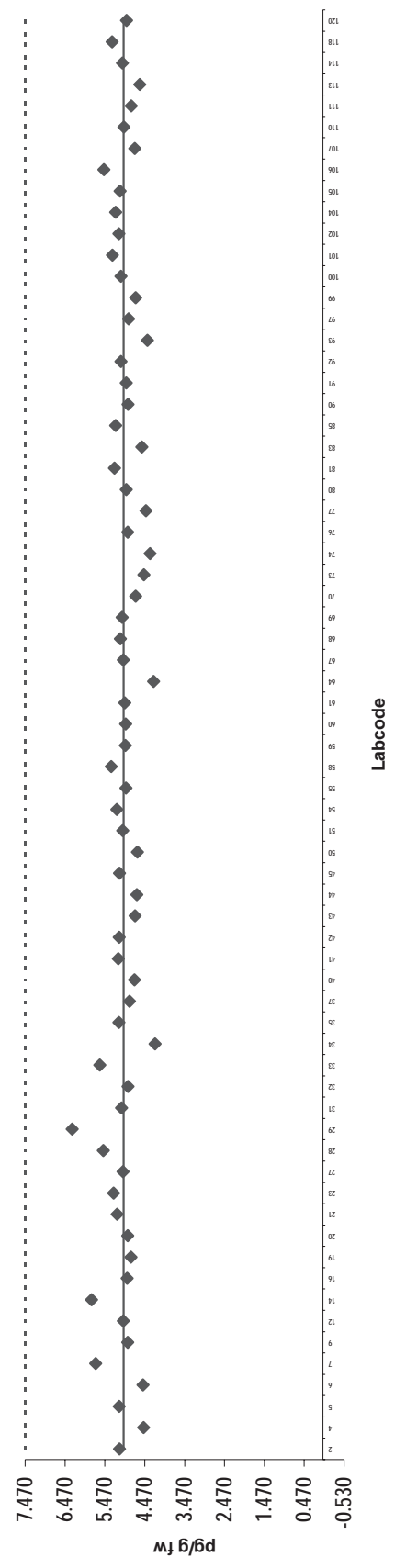
Analyte solution
Congener: 2,3,4,6,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	5.1		80	4.9	
4	4.5		81	5.2	
5	5.1		83	4.5	
6	4.5		85	5.2	
7	5.7		90	4.9	
9	4.9		91	4.9	
12	5.0		92	5.1	
14	5.8		93	4.4	
16	4.9		97	4.9	
19	4.8		99	4.7	
20	4.9		100	5.1	
21	5.2		101	5.3	
23	5.3		102	5.1	
27	5.0		104	5.2	
28	5.5		105	5.1	
29	6.3		106	5.5	
31	5.1		107	4.7	
32	4.9		110	5.0	
33	5.6		111	4.8	
34	4.2		113	4.6	
35	5.1		114	5.0	
37	4.9		118	5.3	
40	4.7		120	4.9	
41	5.1				
42	5.1				
43	4.7				
44	4.7				
45	5.1				
50	4.7				
51	5.0				
54	5.2				
55	4.9				
58	5.3				
59	5.0				
60	4.9				
61	5.0				
64	4.2				
67	5.0				
68	5.1				
69	5.0				
70	4.7				
73	4.5				
74	4.3				
76	4.9				
77	4.4				

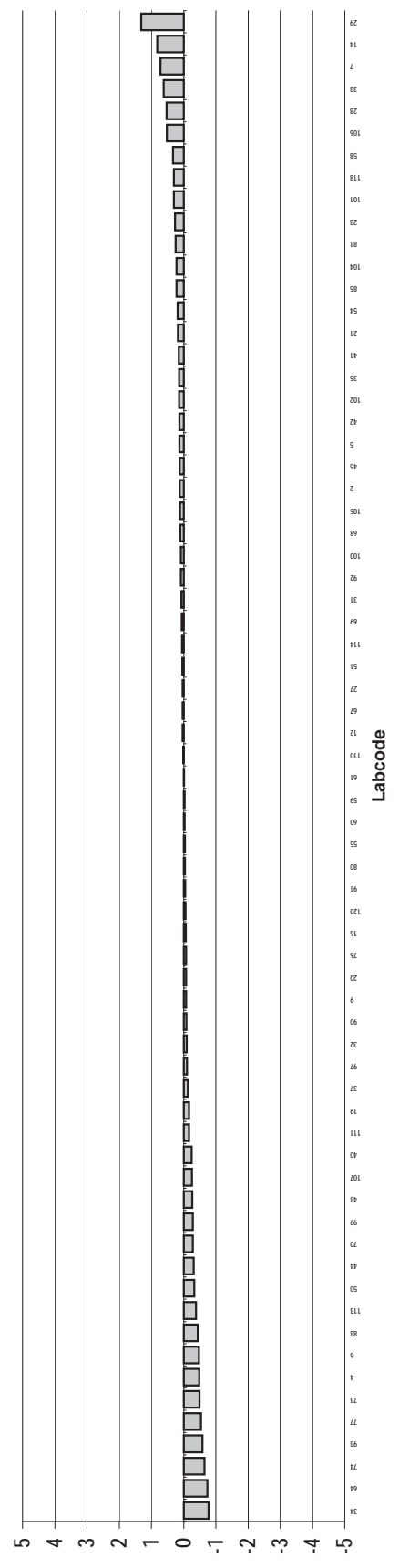
Consensus statistics

Consensus median, pg/g	5.0
Median all values pg/g	5.0
Consensus mean, pg/g	5.0
Standard deviation, pg/g	0.36
Relative standard deviation, %	7.2
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

2,3,4,6,7,8 HxCDF



Z-score: 2,3,4,6,7,8 HxCDF



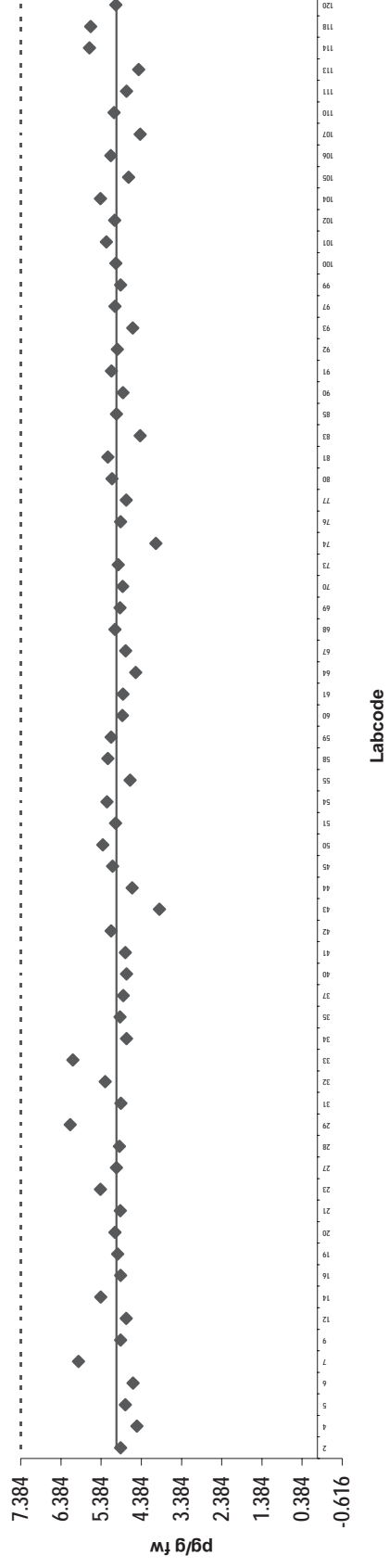
Analyte solution
Congener: 1,2,3,7,8,9 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.9		80	5.1	
4	4.5		81	5.2	
5	4.8		83	4.4	
6	4.6		85	5.0	
7	5.9		90	4.8	
9	4.9		91	5.1	
12	4.8		92	5.0	
14	5.4		93	4.6	
16	4.9		97	5.0	
19	5.0		99	4.9	
20	5.0		100	5.0	
21	4.9		101	5.3	
23	5.4		102	5.0	
27	5.0		104	5.4	
28	4.9		105	4.7	
29	6.2		106	5.1	
31	4.9		107	4.4	
32	5.3		110	5.1	
33	6.1		111	4.8	
34	4.8		113	4.5	
35	4.9		114	5.7	
37	4.8		118	5.6	
40	4.8		120	5.0	
41	4.8				
42	5.1				
43	3.9				
44	4.6				
45	5.1				
50	5.3				
51	5.0				
54	5.2				
55	4.7				
58	5.2				
59	5.1				
60	4.9				
61	4.8				
64	4.5				
67	4.8				
68	5.0				
69	4.9				
70	4.9				
73	5.0				
74	4.0				
76	4.9				
77	4.8				

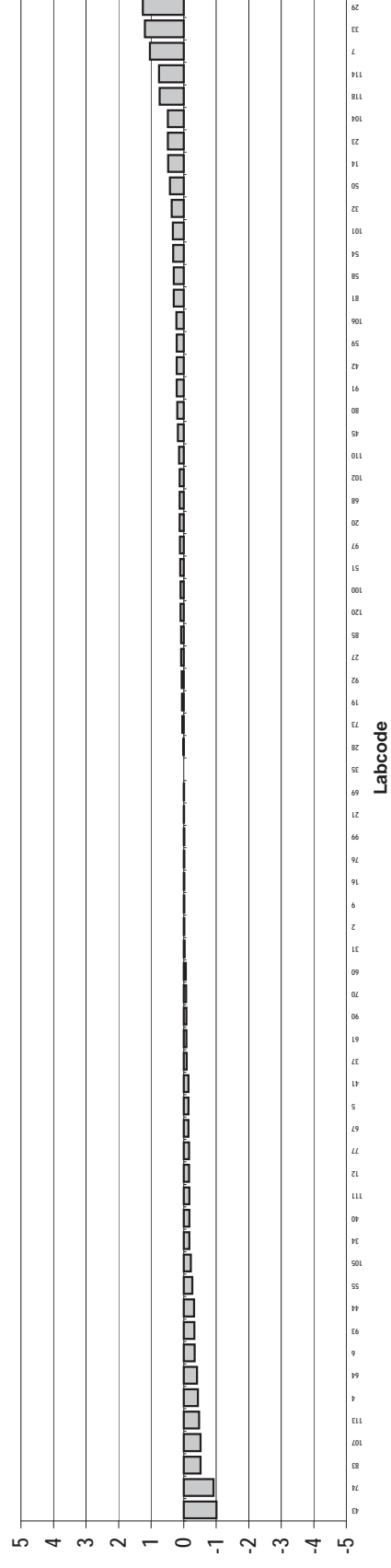
Consensus statistics

Consensus median, pg/g	4.9
Median all values pg/g	4.9
Consensus mean, pg/g	5.0
Standard deviation, pg/g	0.39
Relative standard deviation, %	7.8
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,7,8,9 HxCDF



Z-score: 1,2,3,7,8,9 HxCDF



Analyte solution

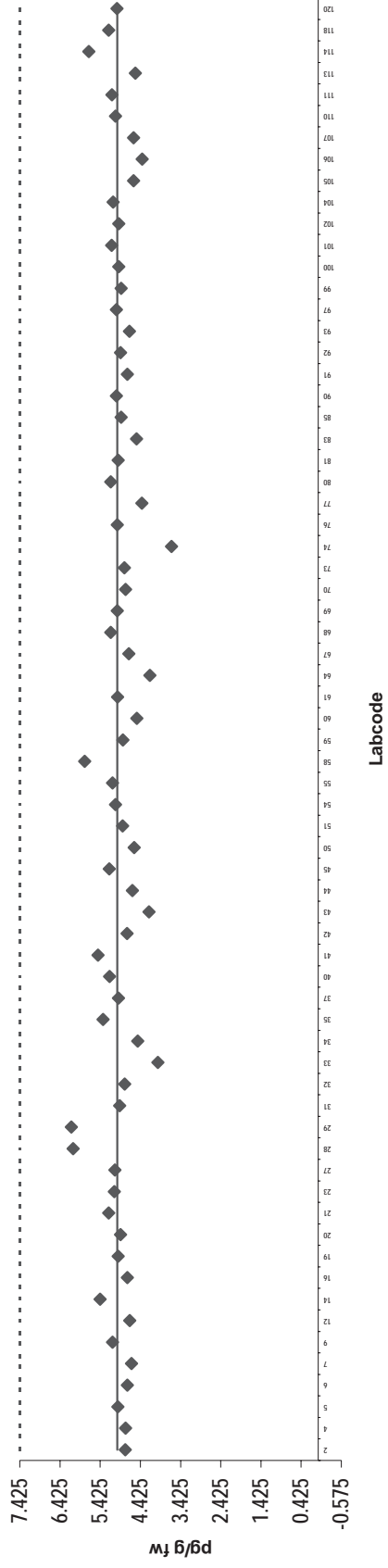
Congener: 1,2,3,4,6,7,8 HpCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.8		80	5.2	
4	4.8		81	5.0	
5	5.0		83	4.5	
6	4.8		85	4.9	
7	4.6		90	5.0	
9	5.1		91	4.8	
12	4.7		92	4.9	
14	5.4		93	4.7	
16	4.8		97	5.0	
19	5.0		99	4.9	
20	4.9		100	5.0	
21	5.2		101	5.1	
23	5.1		102	5.0	
27	5.1		104	5.1	
28	6.1		105	4.6	
29	6.1		106	4.4	
31	4.9		107	4.6	
32	4.8		110	5.0	
33	4.0		111	5.1	
34	4.5		113	4.5	
35	5.4		114	5.7	
37	5.0		118	5.2	
40	5.2		120	5.0	
41	5.5				
42	4.8				
43	4.2				
44	4.6				
45	5.2				
50	4.6				
51	4.9				
54	5.0				
55	5.1				
58	5.8				
59	4.9				
60	4.5				
61	5.0				
64	4.2				
67	4.7				
68	5.2				
69	5.0				
70	4.8				
73	4.8				
74	3.7				
76	5.0				
77	4.4				

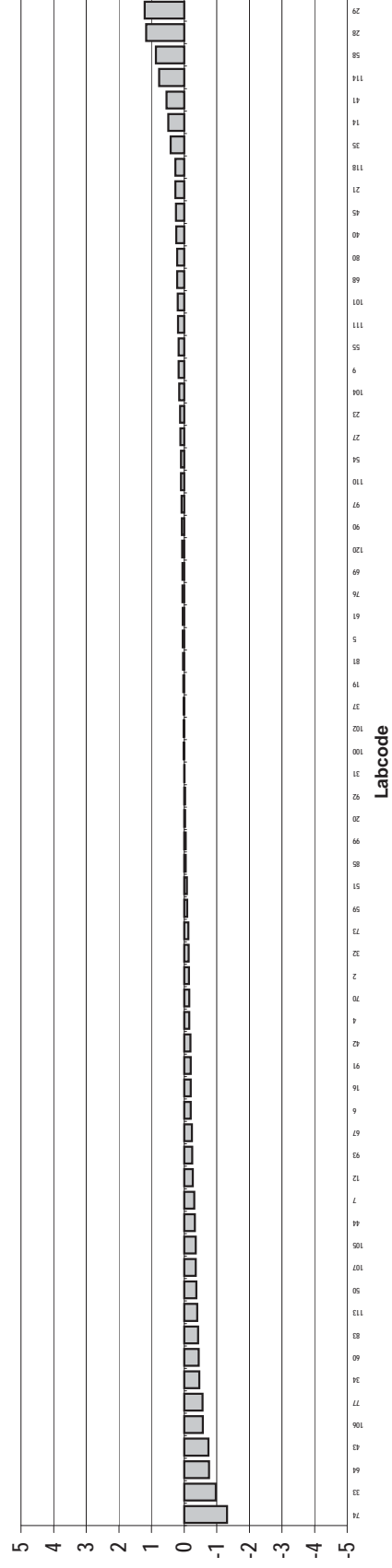
Consensus statistics

Consensus median, pg/g	5.0
Median all values pg/g	5.0
Consensus mean, pg/g	4.9
Standard deviation, pg/g	0.41
Relative standard deviation, %	8.4
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,4,6,7,8 HpCDF



Z-score: 1,2,3,4,6,7,8 HpCDF



Analyte solution

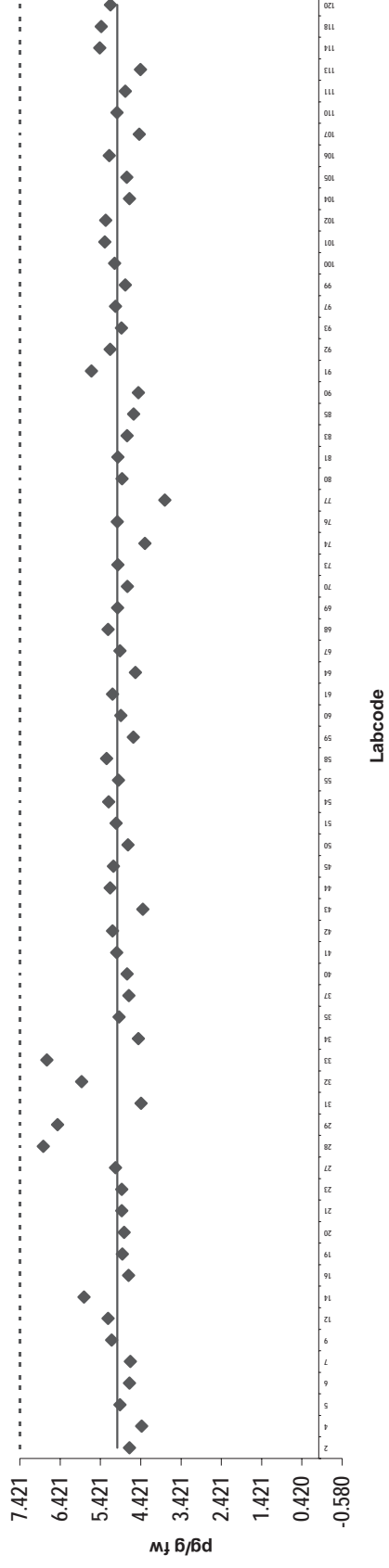
Congener: 1,2,3,4,7,8,9 HpCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.7		80	4.9	
4	4.4		81	5.0	
5	4.9		83	4.8	
6	4.7		85	4.6	
7	4.7		90	4.5	
9	5.1		91	5.6	
12	5.2		92	5.2	
14	5.8		93	4.9	
16	4.7		97	5.0	
19	4.9		99	4.8	
20	4.8		100	5.1	
21	4.9		101	5.3	
23	4.9		102	5.3	
27	5.0		104	4.7	
28	6.8		105	4.8	
29	6.5		106	5.2	
31	4.4		107	4.5	
32	5.9		110	5.0	
33	6.8		111	4.8	
34	4.5		113	4.4	
35	5.0		114	5.4	
37	4.7		118	5.4	
40	4.8		120	5.2	
41	5.0				
42	5.1				
43	4.4				
44	5.2				
45	5.1				
50	4.7				
51	5.0				
54	5.2				
55	5.0				
58	5.3				
59	4.6				
60	4.9				
61	5.1				
64	4.6				
67	4.9				
68	5.2				
69	5.0				
70	4.8				
73	5.0				
74	4.3				
76	5.0				
77	3.8				

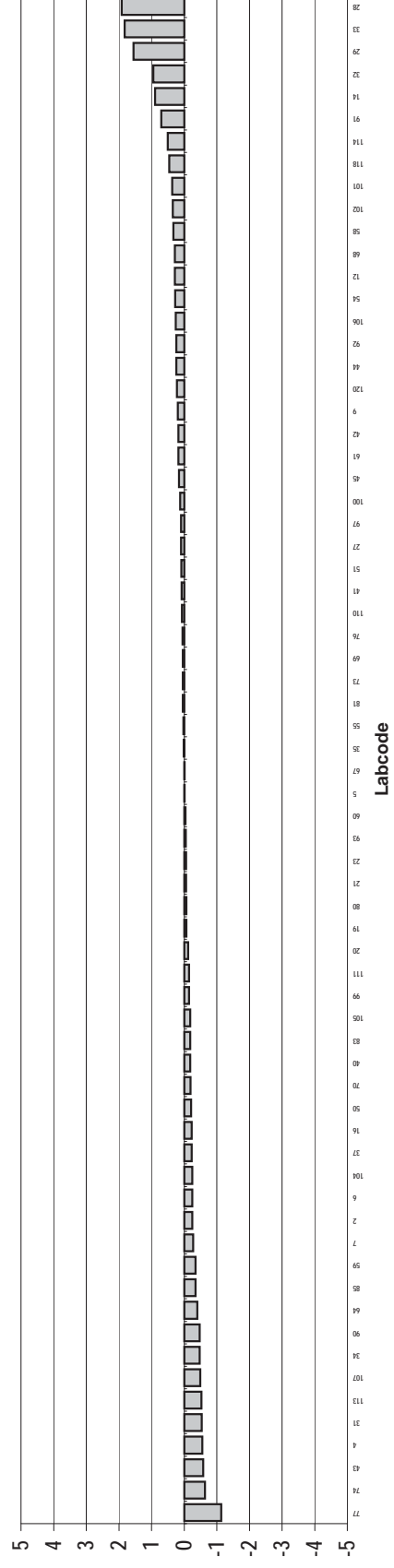
Consensus statistics

Consensus median, pg/g	4.9
Median all values pg/g	4.9
Consensus mean, pg/g	5.0
Standard deviation, pg/g	0.51
Relative standard deviation, %	10
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,4,7,8,9 HpCDF



Z-score: 1,2,3,4,7,8,9 HpCDF



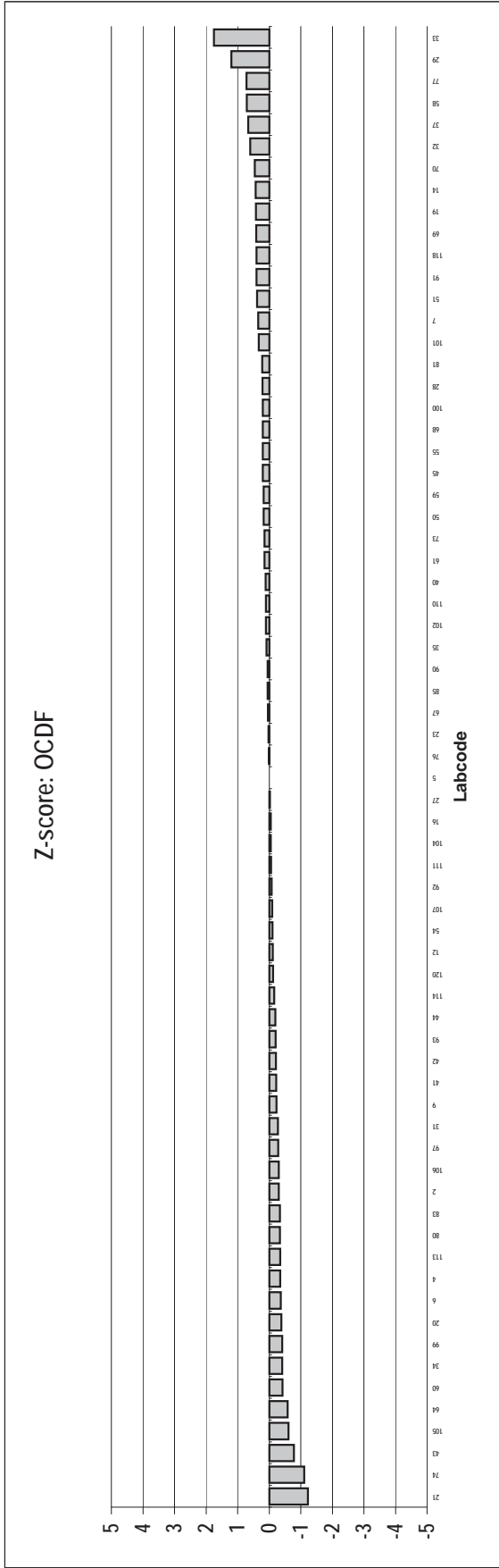
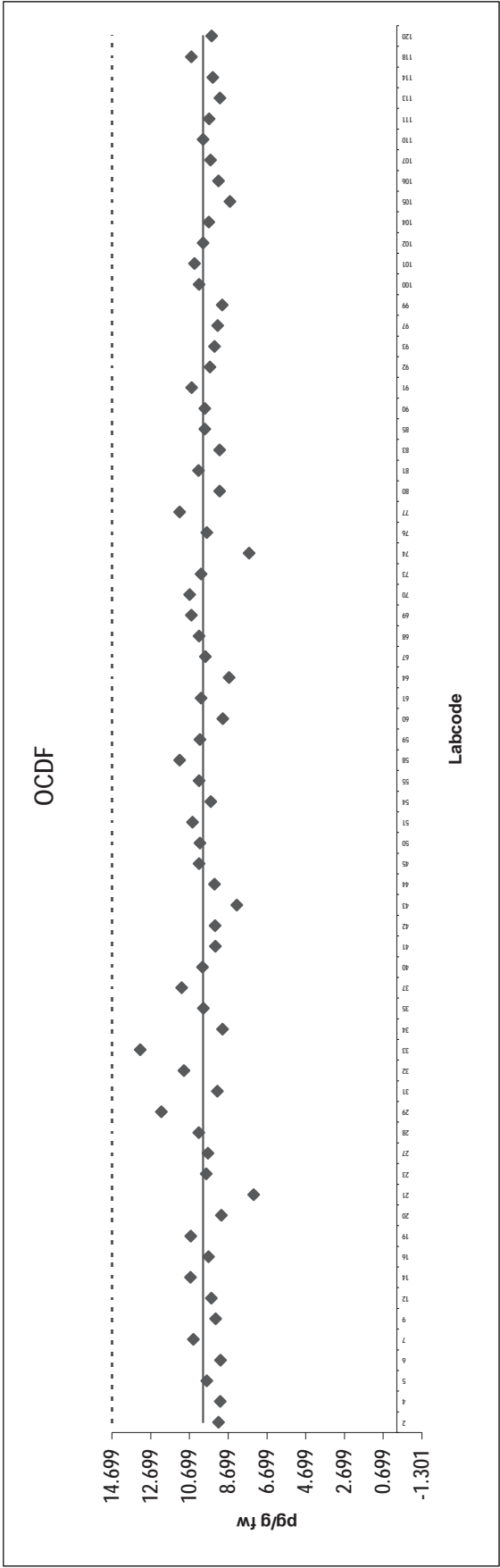
Analyte solution

Congener: OCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	9.2		80	9.1	
4	9.1		81	10	
5	9.8		83	9.1	
6	9.1		85	9.9	
7	10		90	9.9	
9	9.3		91	11	
12	9.6		92	9.6	
14	11		93	9.4	
16	9.7		97	9.2	
19	11		99	9.0	
20	9.1		100	10	
21	7.4		101	10	
23	9.8		102	10.0	
27	9.8		104	9.7	
28	10		105	8.6	
29	12		106	9.2	
31	9.3		107	9.6	
32	11		110	10	
33	13		111	9.7	
34	9.0		113	9.1	
35	10.0		114	9.5	
37	11		118	11	
40	10		120	9.6	
41	9.4				
42	9.4				
43	8.3				
44	9.4				
45	10				
50	10				
51	11				
54	9.6				
55	10				
58	11				
59	10				
60	9.0				
61	10				
64	8.7				
67	9.9				
68	10				
69	11				
70	11				
73	10				
74	7.6				
76	9.8				
77	11				

Consensus statistics

Consensus median, pg/g	9.8
Median all values pg/g	9.8
Consensus mean, pg/g	9.8
Standard deviation, pg/g	0.90
Relative standard deviation, %	9.2
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0



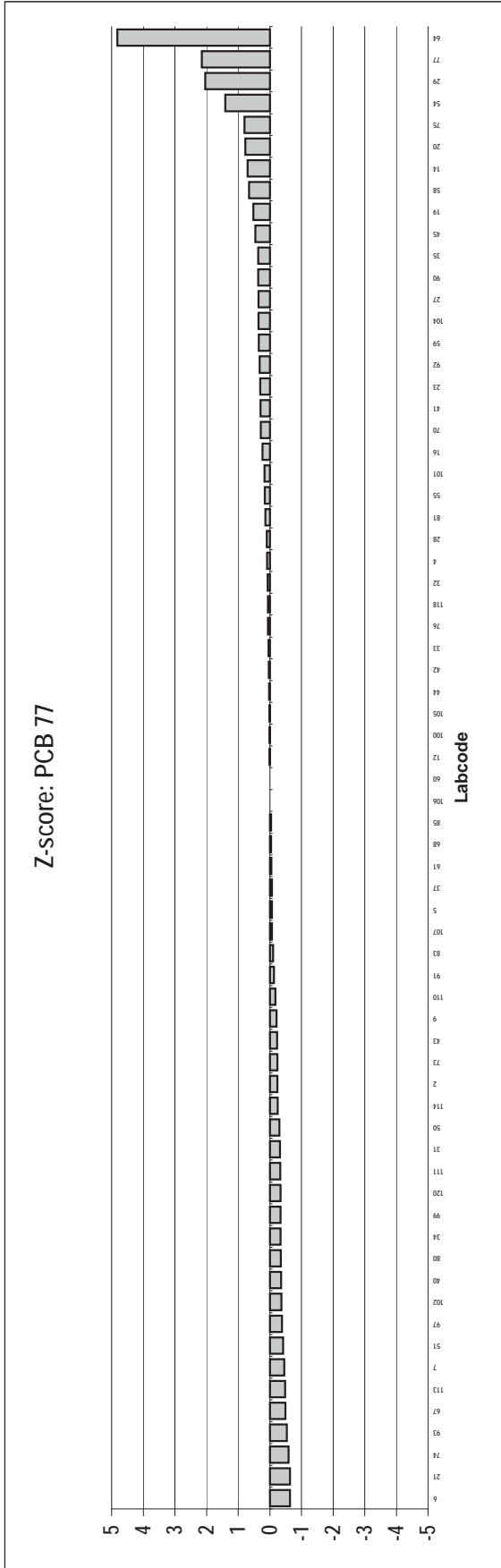
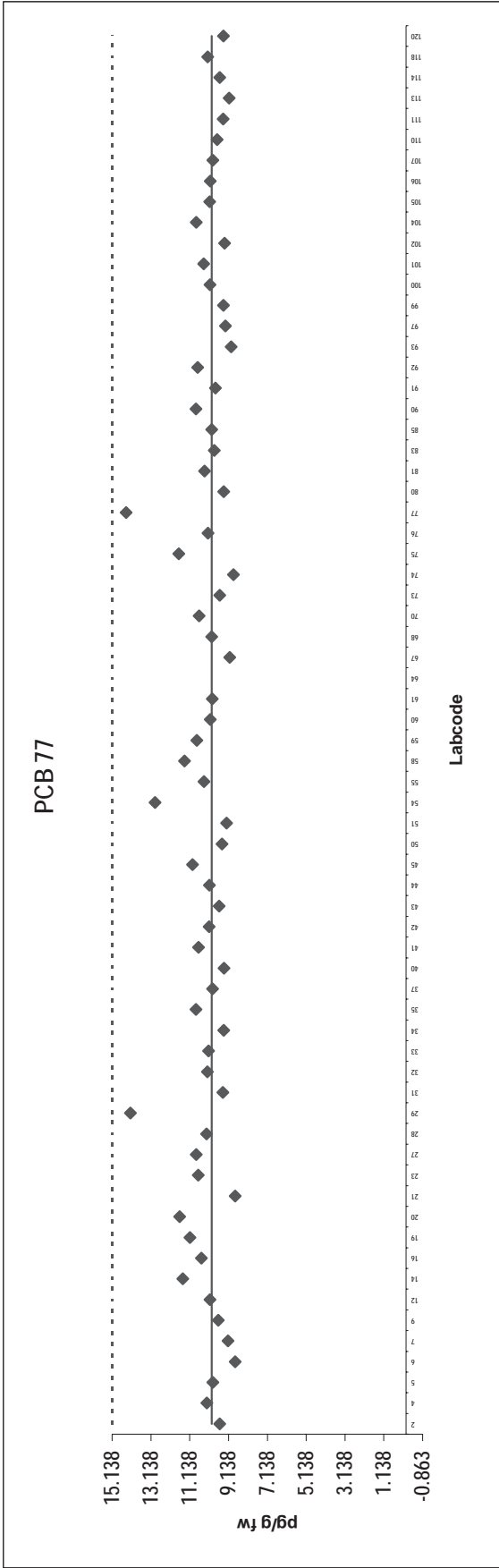
Analyte solution

Congener: PCB 77

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	9.6		80	9.4	
4	10		81	10	
5	10.0		83	9.9	
6	8.8		85	10	
7	9.2		90	11	
9	9.7		91	9.8	
12	10		92	11	
14	11		93	9.0	
16	11		97	9.3	
19	11		99	9.4	
20	12		100	10	
21	8.8		101	10	
23	11		102	9.3	
27	11		104	11	
28	10		105	10	
29	14		106	10	
31	9.4		107	9.9	
32	10		110	9.7	
33	10		111	9.4	
34	9.4		113	9.1	
35	11		114	9.6	
37	10.0		118	10	
40	9.4		120	9.4	
41	11				
42	10				
43	9.6				
44	10				
45	11				
50	9.5				
51	9.2				
54	13				
55	10				
58	11				
59	11				
60	10				
61	10.0				
64	20	Outlier			
67	9.1				
68	10				
70	11				
73	9.6				
74	8.9				
75	12				
76	10				
77	14				

Consensus statistics

Consensus median, pg/g	10
Median all values pg/g	10
Consensus mean, pg/g	10
Standard deviation, pg/g	1.1
Relative standard deviation, %	10
No. of values reported	68
No. of values removed	1
No. of reported non-detects	0



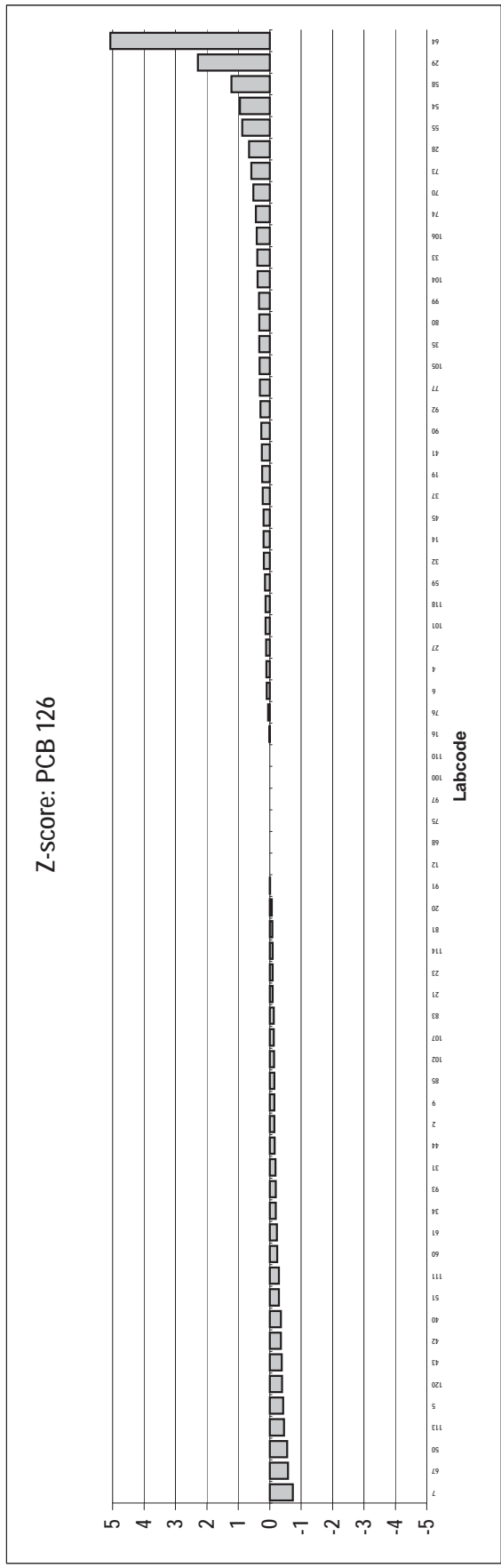
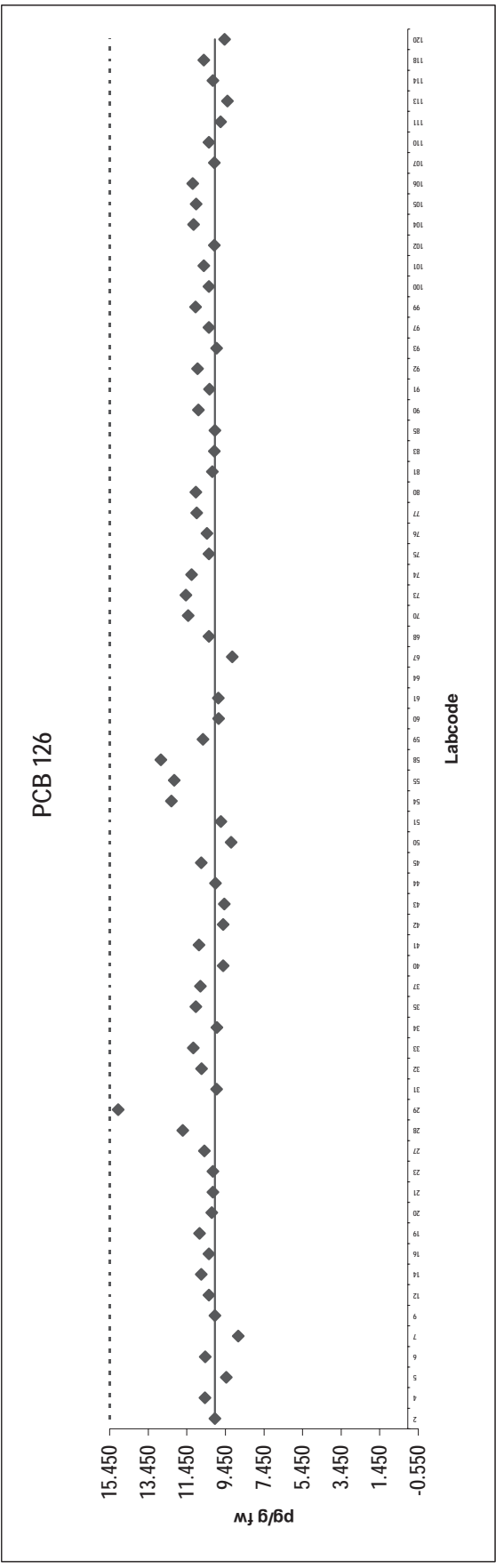
Analyte solution

Congener: PCB 126

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	10		80	11	
4	11		81	10	
5	9.4		83	10	
6	11		85	10	
7	8.8		90	11	
9	10		91	10	
12	10		92	11	
14	11		93	9.9	
16	10		97	10	
19	11		99	11	
20	10		100	10	
21	10		101	11	
23	10		102	10	
27	11		104	11	
28	12		105	11	
29	15		106	11	
31	9.9		107	10	
32	11		110	10	
33	11		111	9.7	
34	9.9		113	9.4	
35	11		114	10	
37	11		118	11	
40	9.6		120	9.5	
41	11				
42	9.6				
43	9.5				
44	10.0				
45	11				
50	9.2				
51	9.7				
54	12				
55	12				
58	13				
59	11				
60	9.8				
61	9.8				
64	21				
67	9.1				
68	10				
70	11				
73	12				
74	11				
75	10				
76	10				
77	11				

Consensus statistics

Consensus median, pg/g	10
Median all values pg/g	10
Consensus mean, pg/g	10
Standard deviation, pg/g	0.93
Relative standard deviation, %	8.9
No. of values reported	68
No. of values removed	1
No. of reported non-detects	0



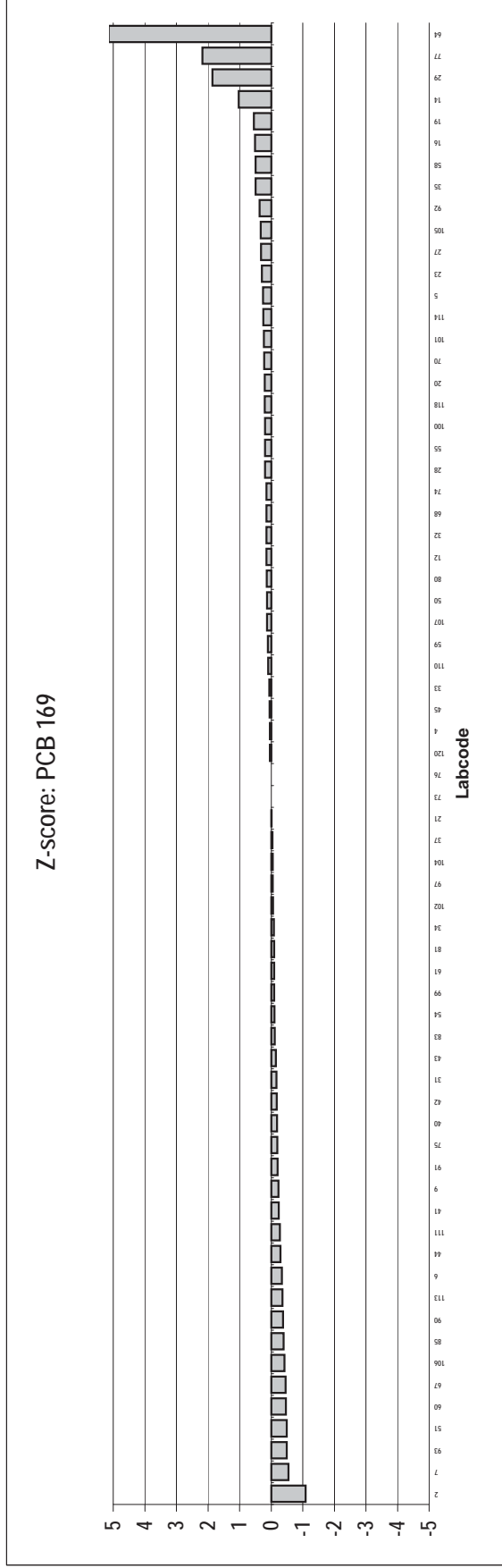
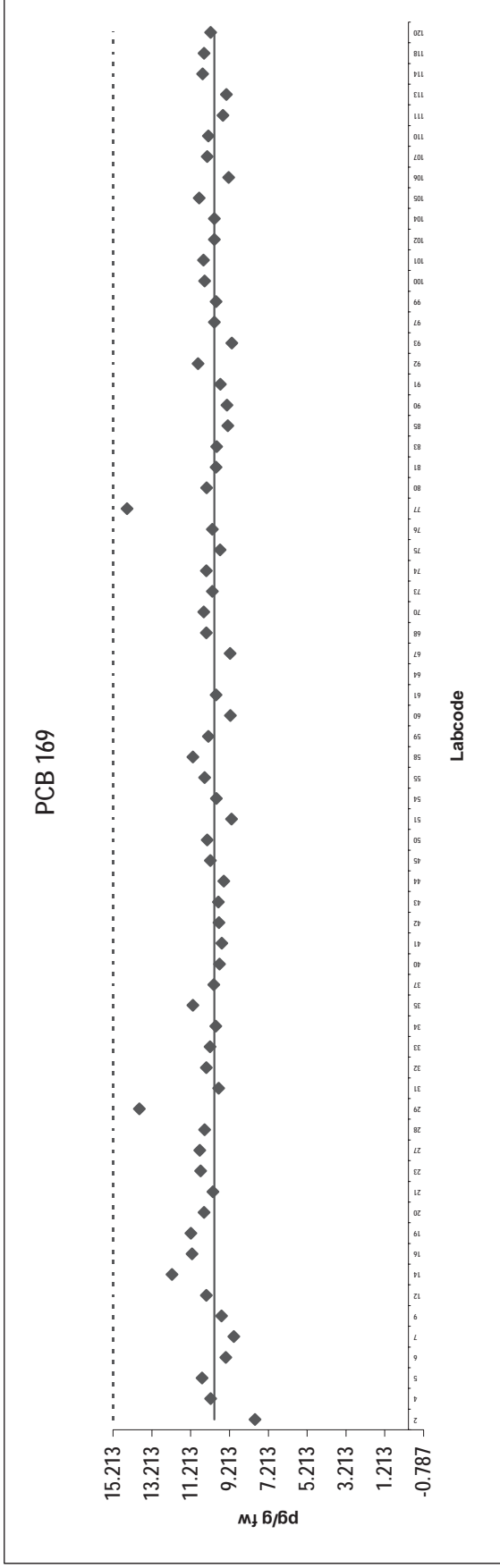
Analyte solution

Congener: PCB 169

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	7.9		80	10	
4	10		81	9.9	
5	11		83	9.9	
6	9.4		85	9.3	
7	9.0		90	9.3	
9	9.6		91	9.7	
12	10		92	11	
14	12		93	9.1	
16	11		97	10	
19	11		99	9.9	
20	11		100	11	
21	10		101	11	
23	11		102	10.0	
27	11		104	10	
28	10		105	11	
29	14		106	9.3	
31	9.8		107	10	
32	10		110	10	
33	10		111	9.6	
34	9.9		113	9.4	
35	11		114	11	
37	10		118	11	
40	9.7		120	10	
41	9.6				
42	9.8				
43	9.8				
44	9.5				
45	10				
50	10				
51	9.1				
54	9.9				
55	11				
58	11				
59	10				
60	9.2				
61	9.9				
64	21	Outlier			
67	9.2				
68	10				
70	11				
73	10				
74	10				
75	9.7				
76	10				
77	14				

Consensus statistics

Consensus median, pg/g	10
Median all values pg/g	10
Consensus mean, pg/g	10
Standard deviation, pg/g	0.96
Relative standard deviation, %	9.4
No. of values reported	68
No. of values removed	1
No. of reported non-detects	0



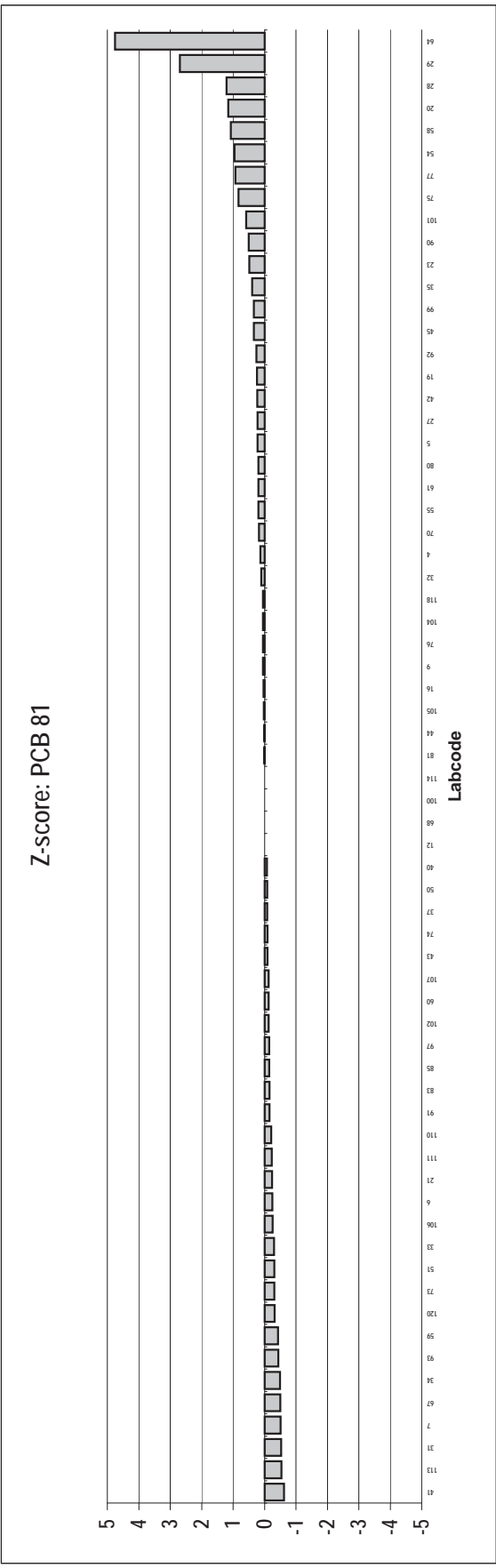
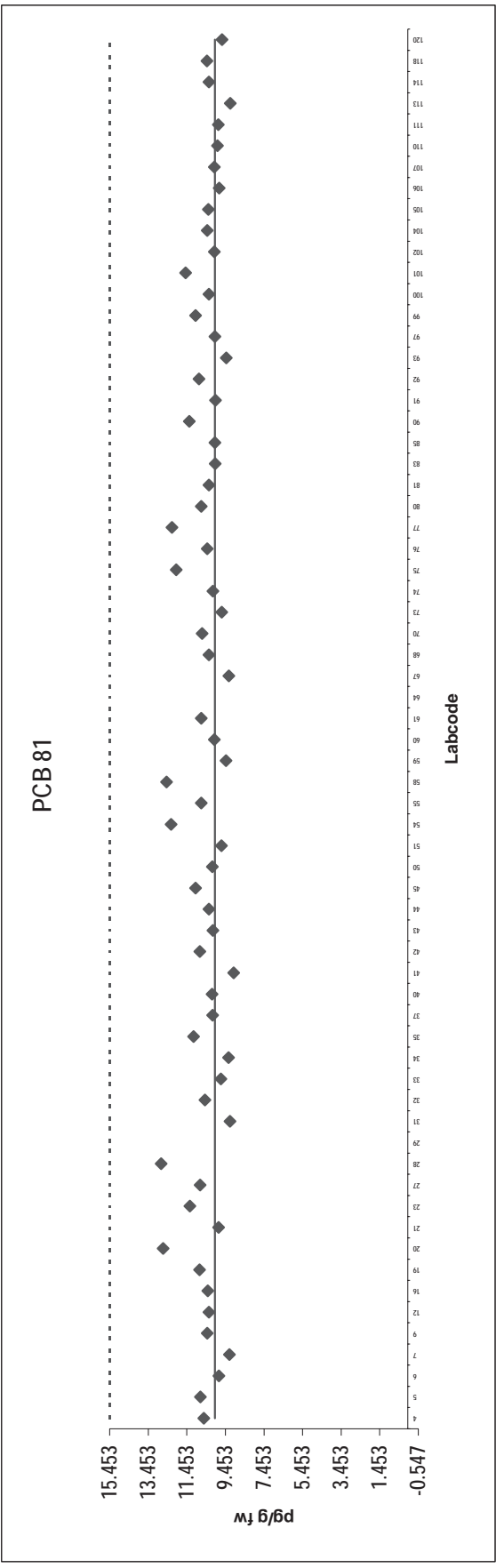
Analyte solution

Congener: PCB 81

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	11		83	10.0	
5	11		85	10	
6	9.8		90	11	
7	9.2		91	10.0	
9	10		92	11	
12	10		93	9.4	
16	10		97	10	
19	11		99	11	
20	13		100	10	
21	9.8		101	12	
23	11		102	10	
27	11		104	10	
28	13		105	10	
29	16		106	9.8	
31	9.2		107	10	
32	11		110	9.9	
33	9.7		111	9.8	
34	9.3		113	9.2	
35	11		114	10	
37	10		118	10	
40	10		120	9.6	
41	9.0				
42	11				
43	10				
44	10				
45	11				
50	10				
51	9.7				
54	12				
55	11				
58	13				
59	9.4				
60	10				
61	11				
64	20				
67	9.3				
68	10				
70	11				
73	9.7				
74	10				
75	12				
76	10				
77	12				
80	11				
81	10				

Consensus statistics

Consensus median, pg/g	10
Median all values pg/g	10
Consensus mean, pg/g	10
Standard deviation, pg/g	0.85
Relative standard deviation, %	8.2
No. of values reported	66
No. of values removed	2
No. of reported non-detects	0



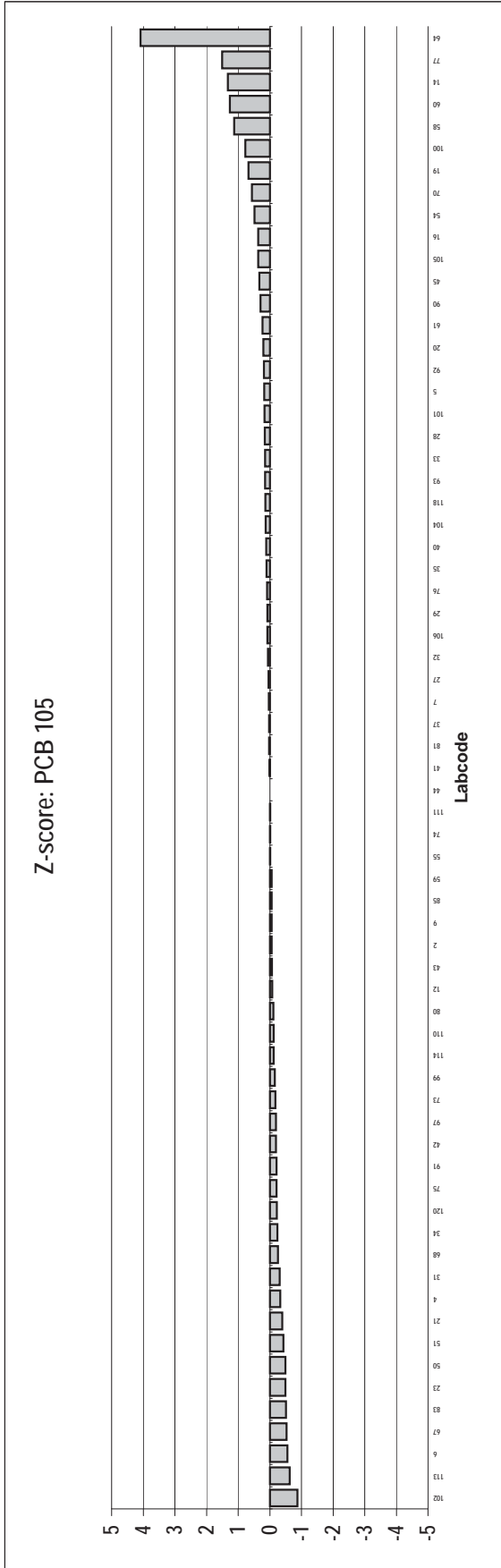
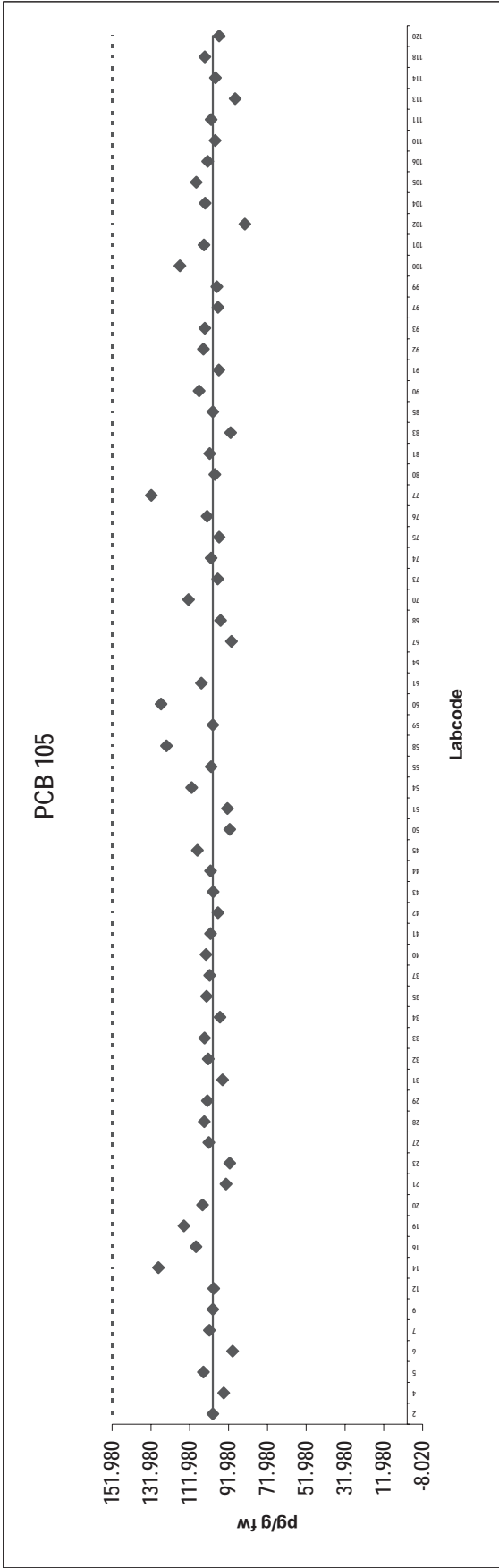
Analyte solution

Congener: PCB 105

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	100		80	99	
4	94		81	102	
5	105		83	91	
6	90		85	100	
7	102		90	107	
9	100		91	97	
12	100		92	105	
14	128		93	104	
16	109		97	97	
19	115		99	98	
20	105		100	117	
21	93		101	105	
23	91		102	84	
27	102		104	104	
28	104		105	109	
29	103		106	103	
31	95		110	99	
32	102		111	101	
33	104		113	89	
34	96		114	99	
35	103		118	104	
37	102		120	97	
40	104				
41	101				
42	97				
43	100				
44	101				
45	108				
50	91				
51	93				
54	111				
55	101				
58	124				
59	100				
60	127				
61	106				
64	184				
67	91				
68	96				
70	113				
73	98				
74	101				
75	97				
76	103				
77	132				

Consensus statistics

Consensus median, pg/g	101
Median all values pg/g	101
Consensus mean, pg/g	102
Standard deviation, pg/g	8.9
Relative standard deviation, %	8.7
No. of values reported	67
No. of values removed	1
No. of reported non-detects	0



Analyte solution

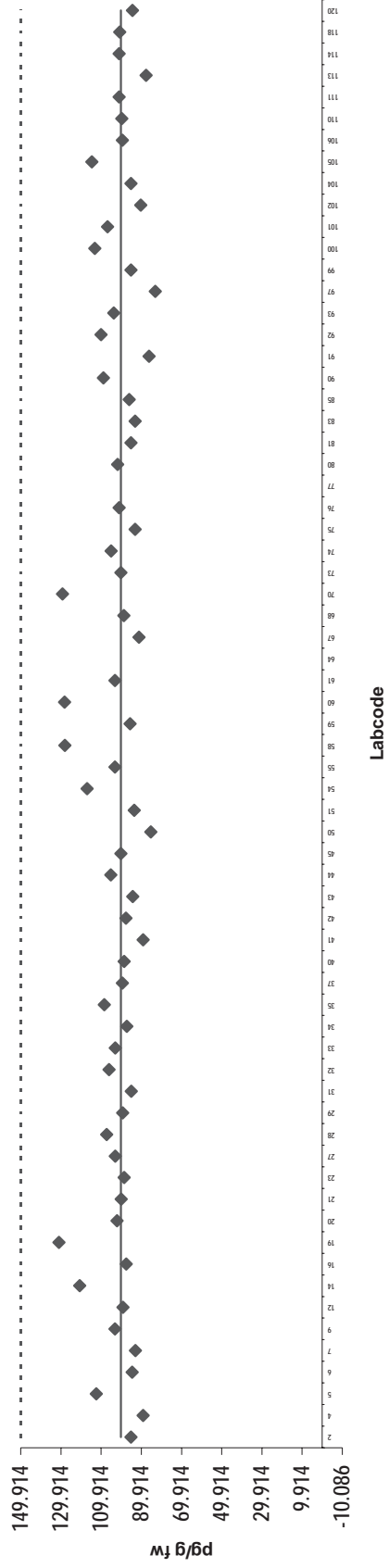
Congener: PCB 114

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	95		80	102	
4	89		81	95	
5	112		83	93	
6	94		85	96	
7	93		90	109	
9	103		91	86	
12	99		92	110	
14	121		93	104	
16	97		97	83	
19	131		99	95	
20	102		100	113	
21	100		101	107	
23	98		102	90	
27	103		104	95	
28	107		105	114	
29	99		106	99	
31	95		110	100	
32	106		111	101	
33	103		113	88	
34	97		114	101	
35	108		118	101	
37	99		120	94	
40	98				
41	89				
42	98				
43	94				
44	105				
45	100				
50	85				
51	93				
54	117				
55	103				
58	128				
59	95				
60	128				
61	103				
64	196				
67	91				
68	99				
70	129				
73	100				
74	105				
75	93				
76	101				
77	150	Outlier			

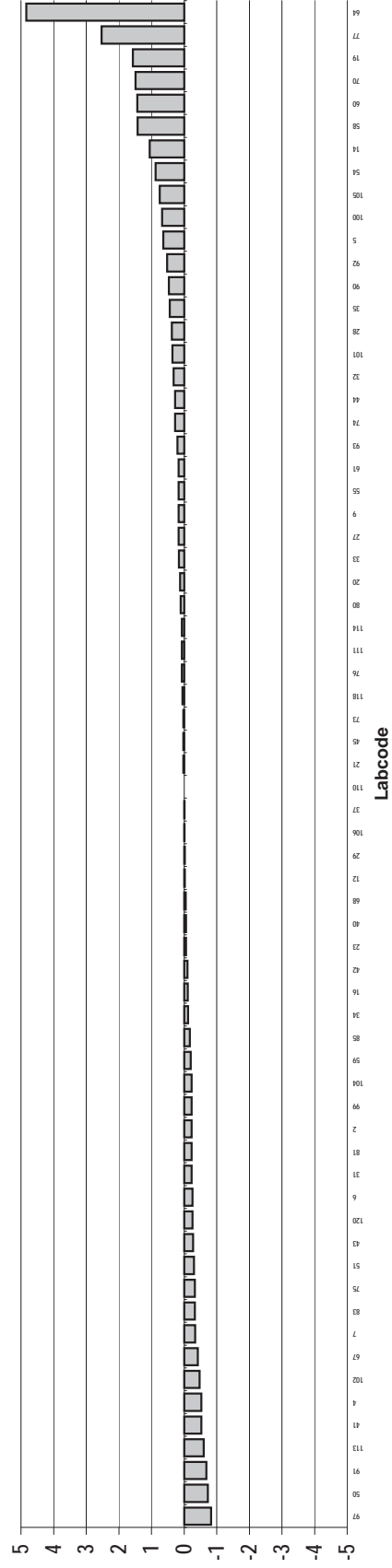
Consensus statistics

Consensus median, pg/g	100
Median all values pg/g	100
Consensus mean, pg/g	101
Standard deviation, pg/g	10
Relative standard deviation, %	10
No. of values reported	67
No. of values removed	2
No. of reported non-detects	0

PCB 114



Z-score: PCB 114



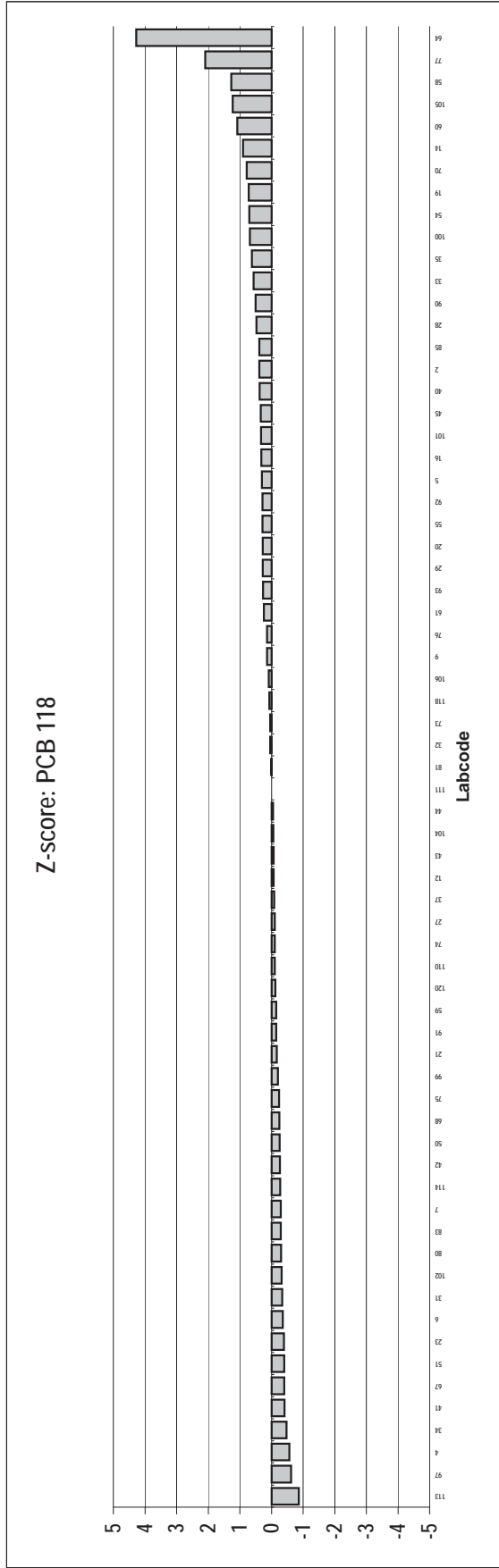
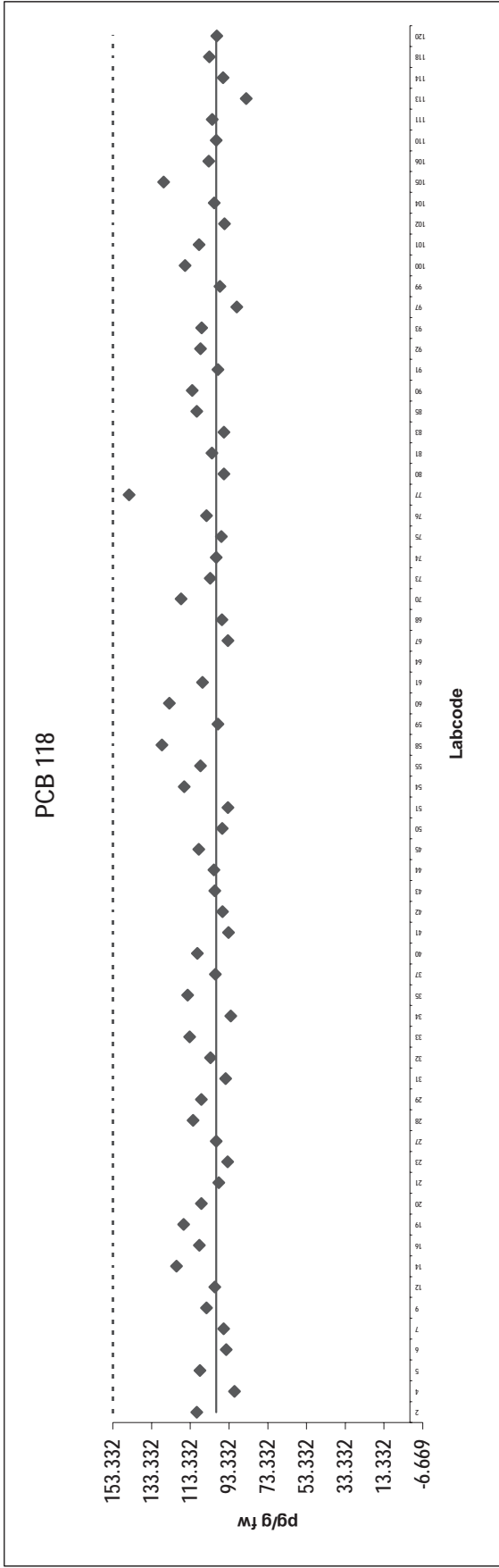
Analyte solution

Congener: PCB 118

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	110		80	96	
4	90		81	102	
5	108		83	96	
6	95		85	110	
7	96		90	112	
9	105		91	99	
12	101		92	108	
14	120		93	108	
16	109		97	89	
19	117		99	98	
20	108		100	116	
21	99		101	109	
23	94		102	96	
27	100		104	101	
28	112		105	127	
29	108		106	104	
31	95		110	100	
32	103		111	102	
33	114		113	84	
34	93		114	96	
35	115		118	103	
37	100		120	100	
40	110				
41	94				
42	97				
43	101				
44	101				
45	109				
50	97				
51	94				
54	116				
55	108				
58	128				
59	99				
60	124				
61	107				
64	190	Outlier			
67	94				
68	97				
70	118				
73	103				
74	100				
75	97				
76	105				
77	145				

Consensus statistics

Consensus median, pg/g	102
Median all values pg/g	102
Consensus mean, pg/g	104
Standard deviation, pg/g	10
Relative standard deviation, %	10
No. of values reported	67
No. of values removed	1
No. of reported non-detects	0



Analyte solution

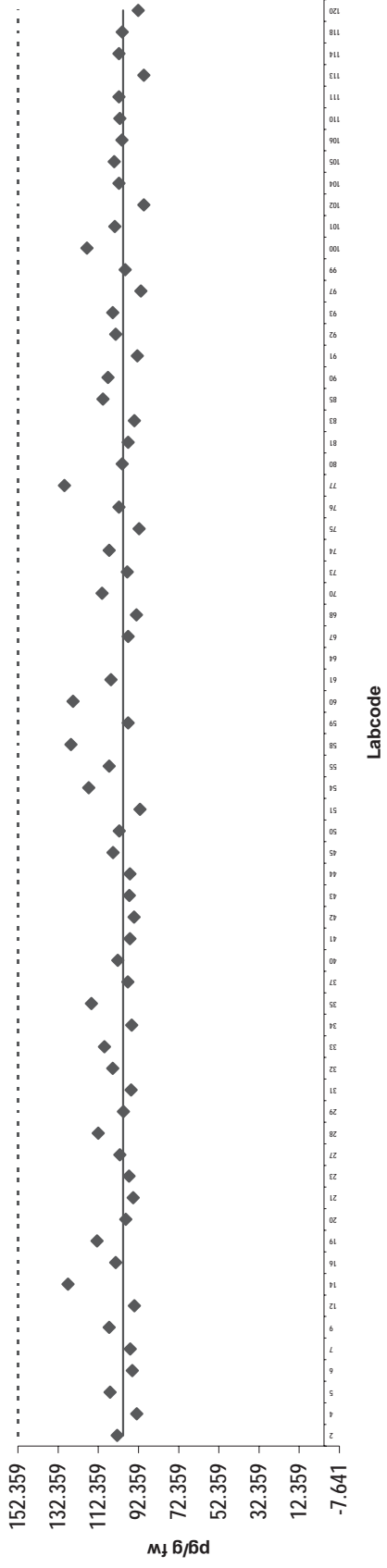
Congener: PCB 123

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	103		80	100	
4	93		81	98	
5	107		83	94	
6	96		85	110	
7	96		90	108	
9	107		91	93	
12	94		92	104	
14	127		93	105	
16	104		97	91	
19	113		99	99	
20	99		100	118	
21	95		101	104	
23	97		102	90	
27	102		104	102	
28	112		105	104	
29	100		106	101	
31	96		110	102	
32	105		111	102	
33	109		113	90	
34	96		114	102	
35	116		118	100	
37	98		120	92	
40	103				
41	97				
42	95				
43	97				
44	97				
45	105				
50	102				
51	92				
54	117				
55	107				
58	126				
59	98				
60	125				
61	106				
64	211	Outlier			
67	97				
68	93				
70	110				
73	98				
74	107				
75	92				
76	102				
77	129				

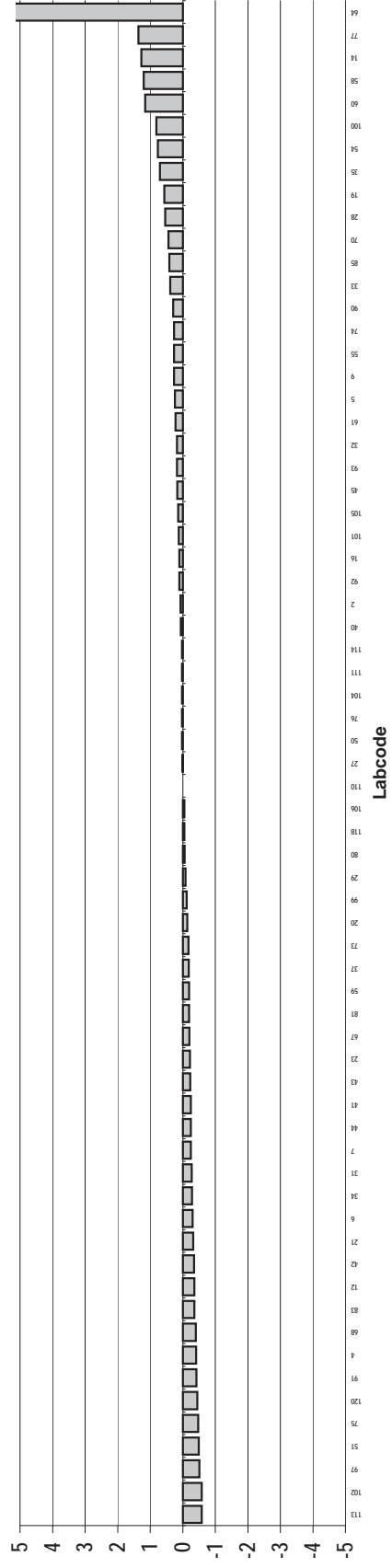
Consensus statistics

Consensus median, pg/g	102
Median all values pg/g	102
Consensus mean, pg/g	103
Standard deviation, pg/g	9.0
Relative standard deviation, %	8.8
No. of values reported	67
No. of values removed	1
No. of reported non-detects	0

PCB 123



Z-score: PCB 123



Analyte solution

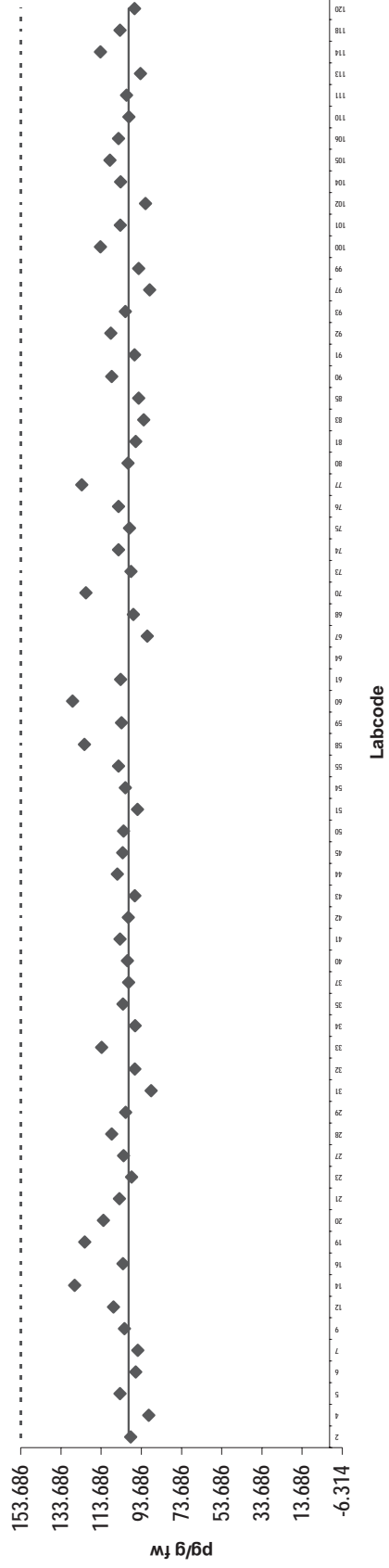
Congener: PCB 156

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	99		80	100	
4	90		81	97	
5	104		83	92	
6	96		85	95	
7	95		90	108	
9	102		91	97	
12	108		92	109	
14	127		93	102	
16	103		97	90	
19	122		99	95	
20	113		100	114	
21	105		101	104	
23	99		102	92	
27	102		104	104	
28	108		105	109	
29	101		106	105	
31	89		110	100	
32	97		111	101	
33	114		113	94	
34	97		114	114	
35	103		118	104	
37	100		120	97	
40	101				
41	104				
42	100				
43	97				
44	106				
45	103				
50	103				
51	96				
54	102				
55	105				
58	122				
59	103				
60	128				
61	104				
64	200	Outlier			
67	91				
68	98				
70	121				
73	99				
74	105				
75	100				
76	105				
77	123				

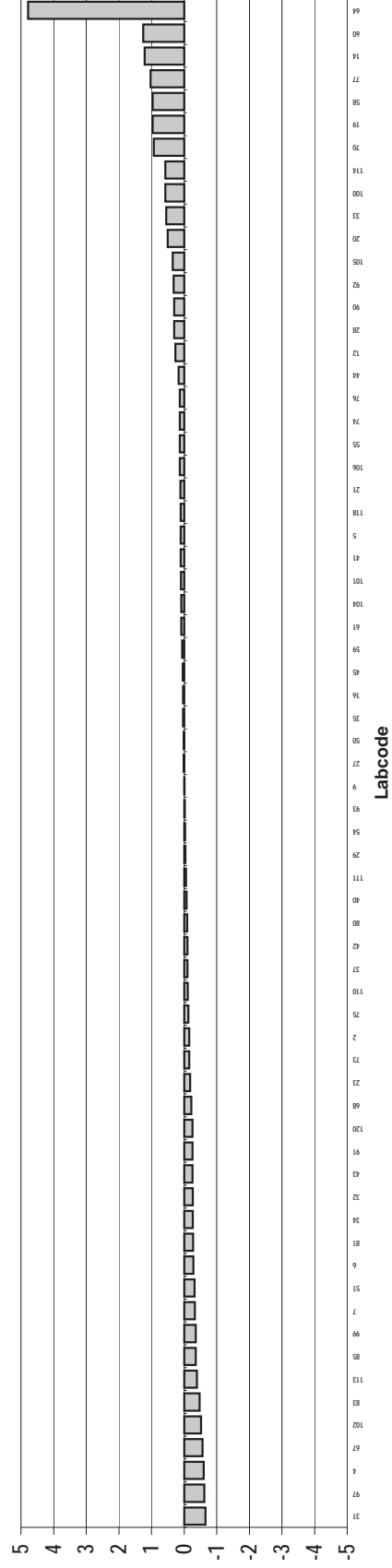
Consensus statistics

Consensus median, pg/g	102
Median all values pg/g	102
Consensus mean, pg/g	103
Standard deviation, pg/g	8.7
Relative standard deviation, %	8.5
No. of values reported	67
No. of values removed	1
No. of reported non-detects	0

PCB 156



Z-score: PCB 156



Analyte solution

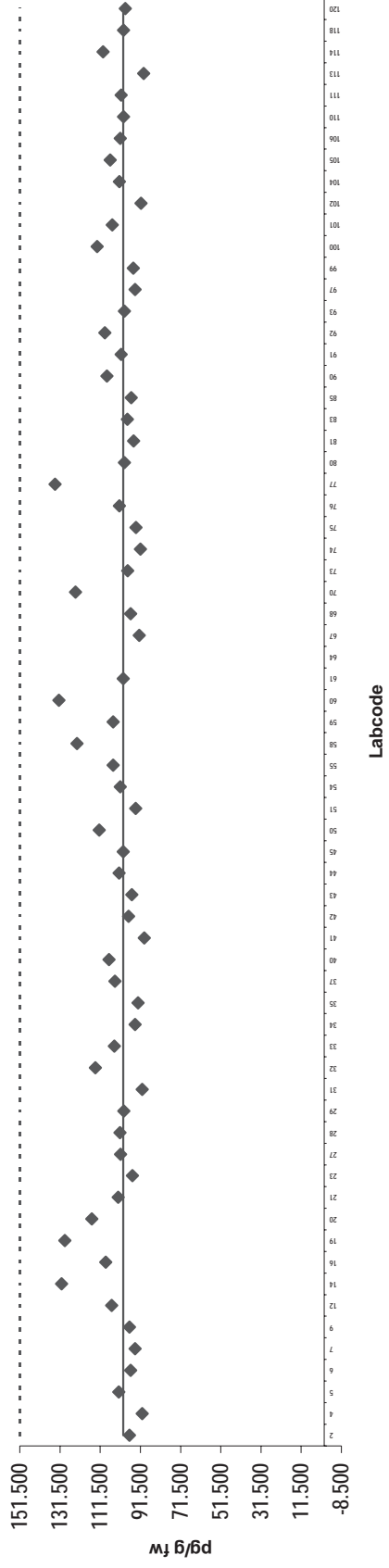
Congener: PCB 157

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	97		80	99	
4	91		81	95	
5	102		83	98	
6	96		85	96	
7	94		90	108	
9	97		91	101	
12	106		92	109	
14	131		93	100	
16	109		97	94	
19	129		99	95	
20	116		100	113	
21	103		101	106	
23	96		102	91	
27	101		104	102	
28	102		105	107	
29	100		106	101	
31	91		110	100	
32	114		111	101	
33	105		113	90	
34	94		114	110	
35	93		118	100	
37	104		120	99	
40	107				
41	90				
42	97				
43	96				
44	102				
45	100				
50	112				
51	94				
54	101				
55	105				
58	123				
59	105				
60	132				
61	100				
64	200	Outlier			
67	92				
68	96				
70	124				
73	98				
74	92				
75	94				
76	102				
77	134				

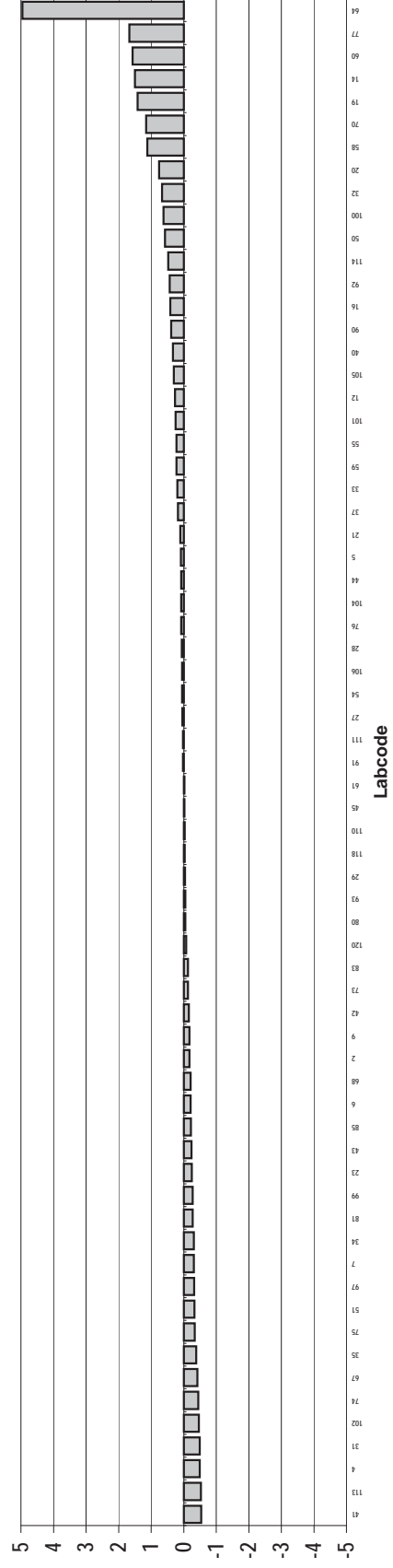
Consensus statistics

Consensus median, pg/g	101
Median all values pg/g	101
Consensus mean, pg/g	103
Standard deviation, pg/g	10
Relative standard deviation, %	10
No. of values reported	67
No. of values removed	1
No. of reported non-detects	0

PCB 157



Z-score: PCB 157



Analyte solution

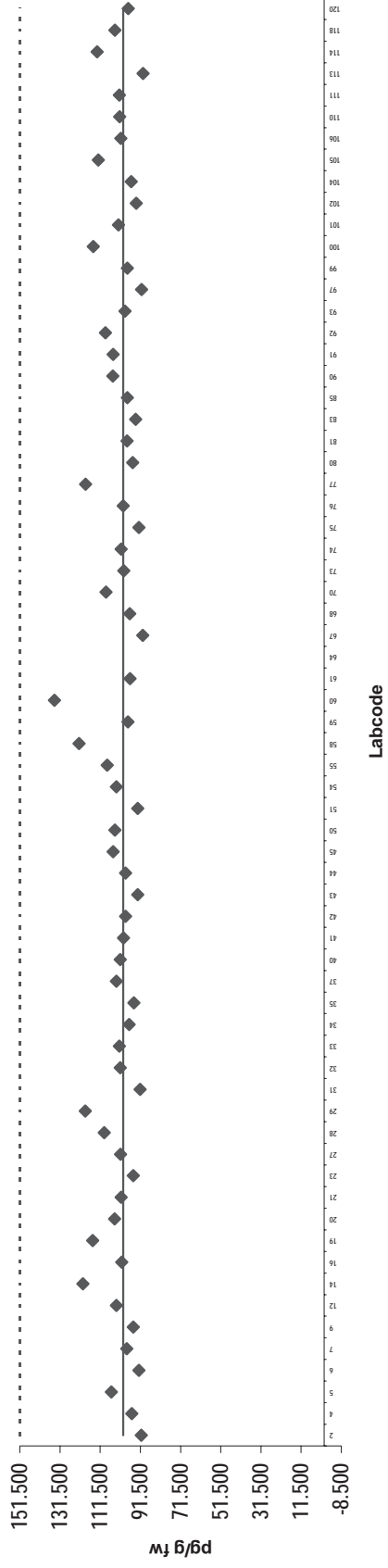
Congener: PCB 167

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	91		80	95	
4	96		81	98	
5	106		83	94	
6	92		85	98	
7	98		90	105	
9	95		91	105	
12	103		92	109	
14	120		93	99	
16	101		97	91	
19	115		99	98	
20	104		100	115	
21	101		101	102	
23	95		102	94	
27	101		104	96	
28	109		105	112	
29	119		106	101	
31	92		110	102	
32	102		111	102	
33	102		113	90	
34	97		114	113	
35	95		118	104	
37	103		120	98	
40	102				
41	100				
42	99				
43	93				
44	99				
45	105				
50	104				
51	93				
54	103				
55	108				
58	122				
59	98				
60	134				
61	97				
64	203	Outlier			
67	90				
68	97				
70	109				
73	100				
74	101				
75	92				
76	100				
77	119				

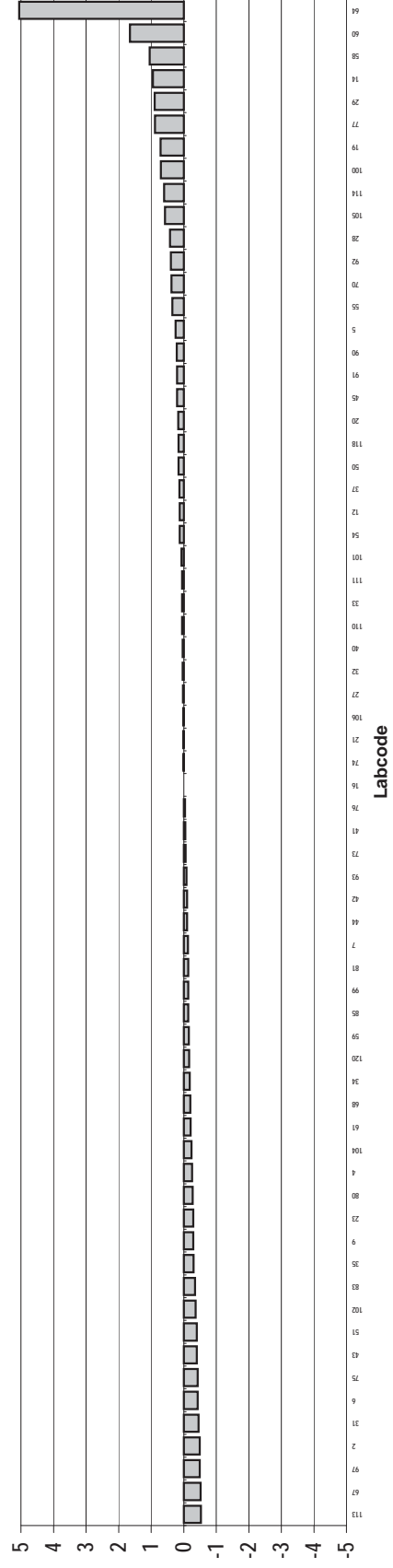
Consensus statistics

Consensus median, pg/g	101
Median all values pg/g	101
Consensus mean, pg/g	102
Standard deviation, pg/g	8.6
Relative standard deviation, %	8.4
No. of values reported	67
No. of values removed	1
No. of reported non-detects	0

PCB 167



Z-score: PCB 167



Analyte solution

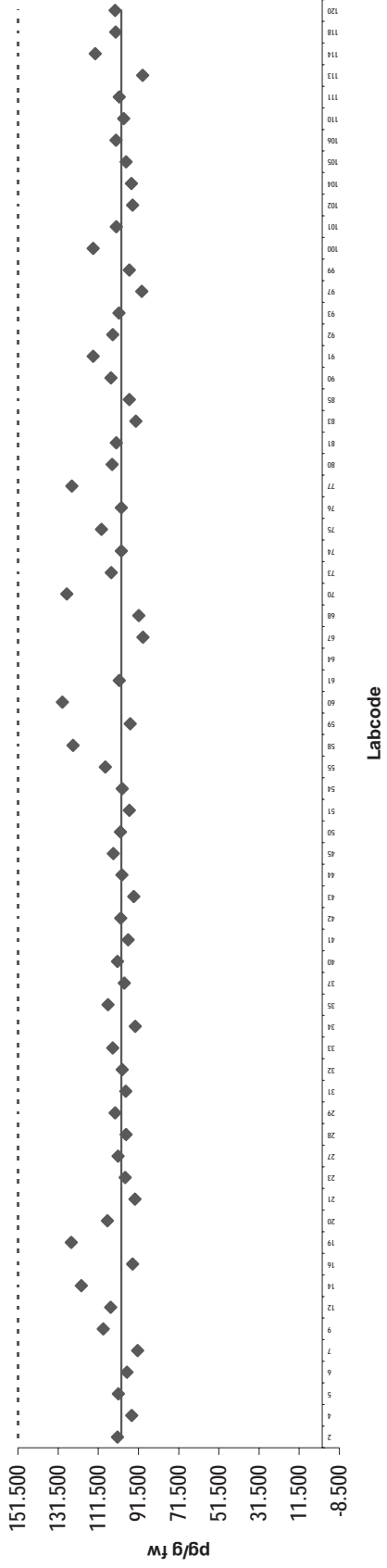
Congener: PCB 189

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	102		80	105	
4	95		81	103	
5	102		83	93	
6	97		85	96	
7	92		90	105	
9	109		91	114	
12	105		92	104	
14	120		93	101	
16	94		97	90	
19	125		99	96	
20	107		100	114	
21	93		101	103	
23	98		102	95	
27	102		104	95	
28	98		105	98	
29	103		106	103	
31	98		110	99	
32	100		111	101	
33	104		113	89	
34	93		114	113	
35	107		118	103	
37	99		120	103	
40	102				
41	97				
42	100				
43	94				
44	100				
45	104				
50	101				
51	96				
54	100				
55	108				
58	124				
59	96				
60	129				
61	101				
64	203	Outlier			
67	89				
68	91				
70	127				
73	105				
74	100				
75	110				
76	100				
77	125				

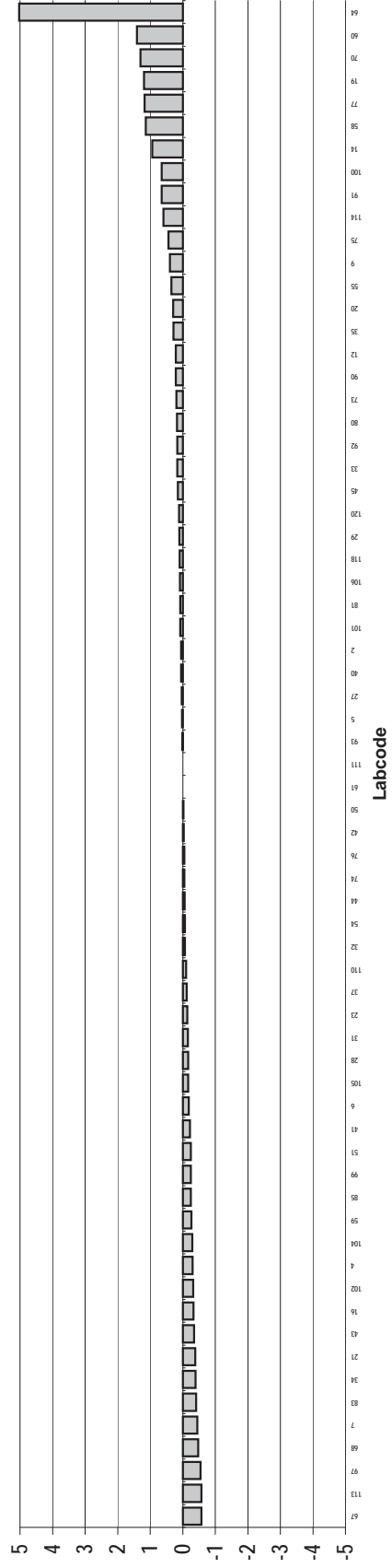
Consensus statistics

Consensus median, pg/g	101
Median all values pg/g	101
Consensus mean, pg/g	102
Standard deviation, pg/g	9.1
Relative standard deviation, %	8.9
No. of values reported	67
No. of values removed	1
No. of reported non-detects	0

PCB 189



Z-score: PCB 189



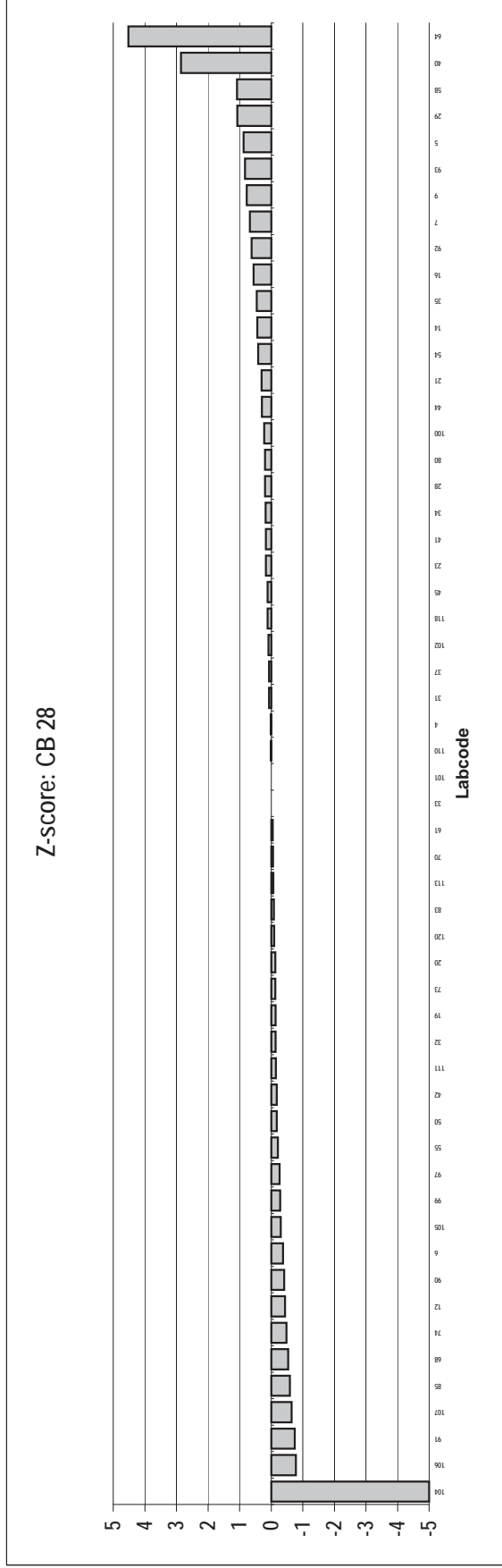
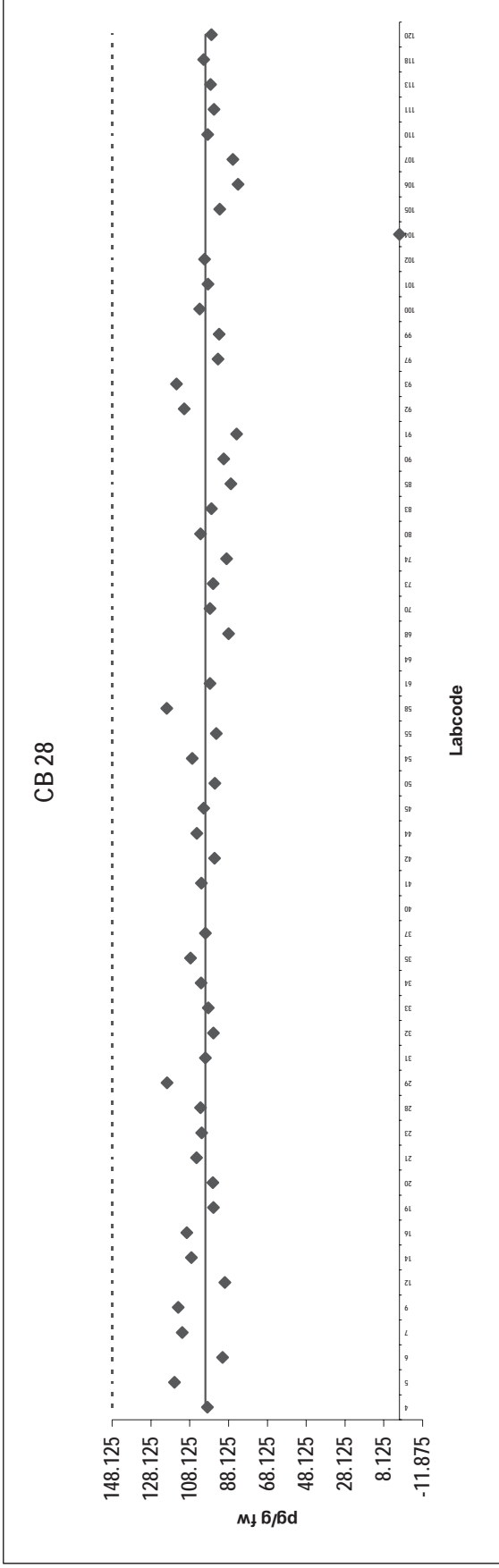
Analyte solution

Congener: CB 28

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	99		101	99	
5	116		102	100	
6	91		104	0.084	Outlier
7	112		105	93	
9	114		106	83	
12	90		107	86	
14	107		110	99	
16	110		111	96	
19	96		113	97	
20	96		118	101	
21	105		120	97	
23	102				
28	102				
29	120				
31	100				
32	96				
33	99				
34	102				
35	108				
37	100				
40	155	Outlier			
41	102				
42	95				
44	104				
45	101				
50	95				
54	107				
55	95				
58	120				
61	98				
64	188	Outlier			
68	88				
70	98				
73	96				
74	89				
80	103				
83	97				
85	87				
90	91				
91	84				
92	111				
93	115				
97	94				
99	93				
100	103				

Consensus statistics

Consensus median, pg/g	99
Median all values pg/g	99
Consensus mean, pg/g	100
Standard deviation, pg/g	8.6
Relative standard deviation, %	8.6
No. of values reported	56
No. of values removed	3
No. of reported non-detects	0



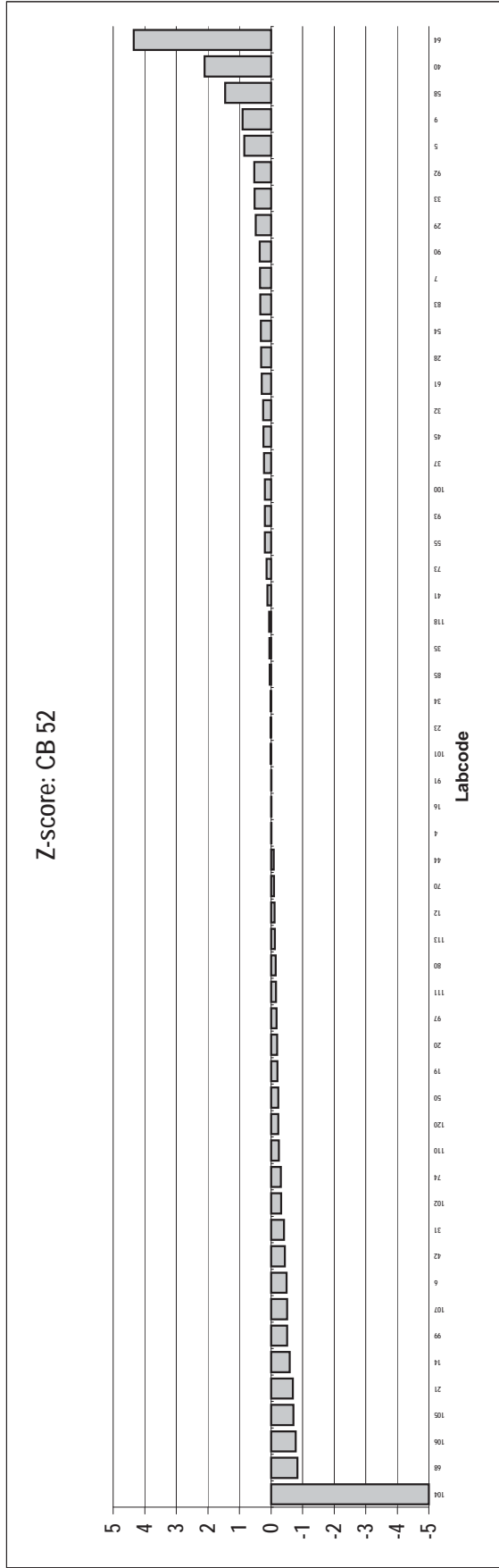
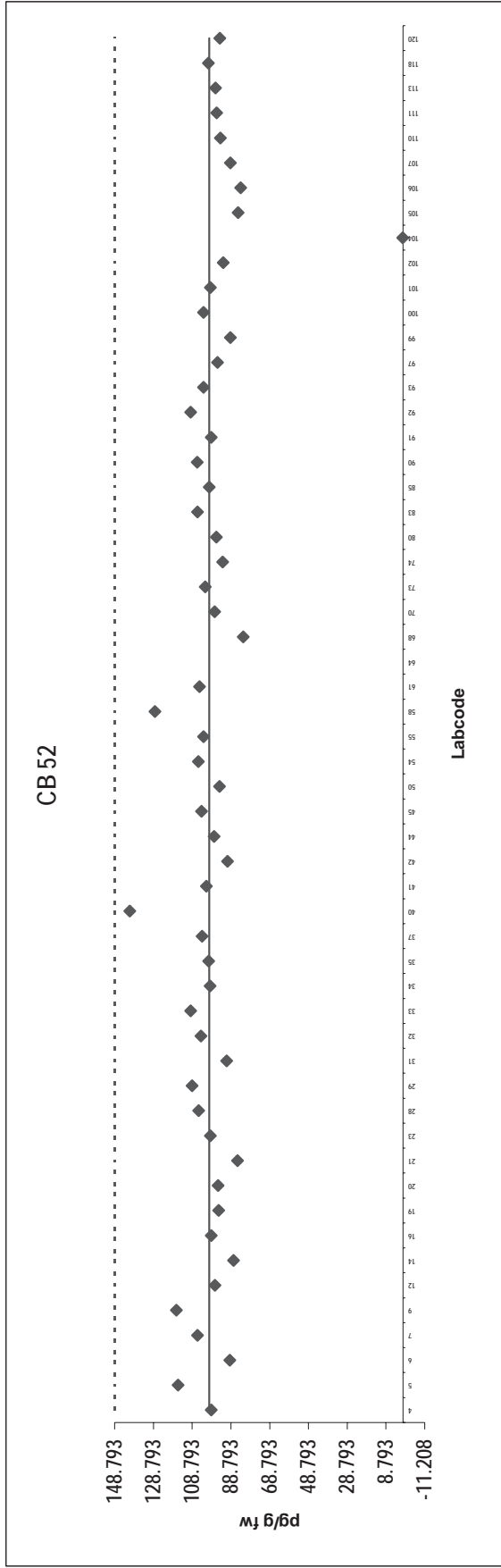
Analyte solution

Congener: CB 52

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	99		101	99	
5	116		102	93	
6	89		104	0.080	Outlier
7	106		105	85	
9	117		106	84	
12	97		107	89	
14	87		110	94	
16	99		111	96	
19	95		113	97	
20	95		118	100	
21	85		120	95	
23	99				
28	105				
29	109				
31	91				
32	104				
33	110				
34	100				
35	100				
37	104				
40	141				
41	102				
42	91				
44	98				
45	104				
50	95				
54	106				
55	103				
58	128				
61	105				
64	186				
68	83				
70	97				
73	102				
74	93				
80	96				
83	106				
85	100				
90	106				
91	99				
92	110				
93	103				
97	96				
99	89				
100	103				

Consensus statistics

Consensus median, pg/g	99
Median all values pg/g	99
Consensus mean, pg/g	100
Standard deviation, pg/g	10
Relative standard deviation, %	10
No. of values reported	56
No. of values removed	2
No. of reported non-detects	0



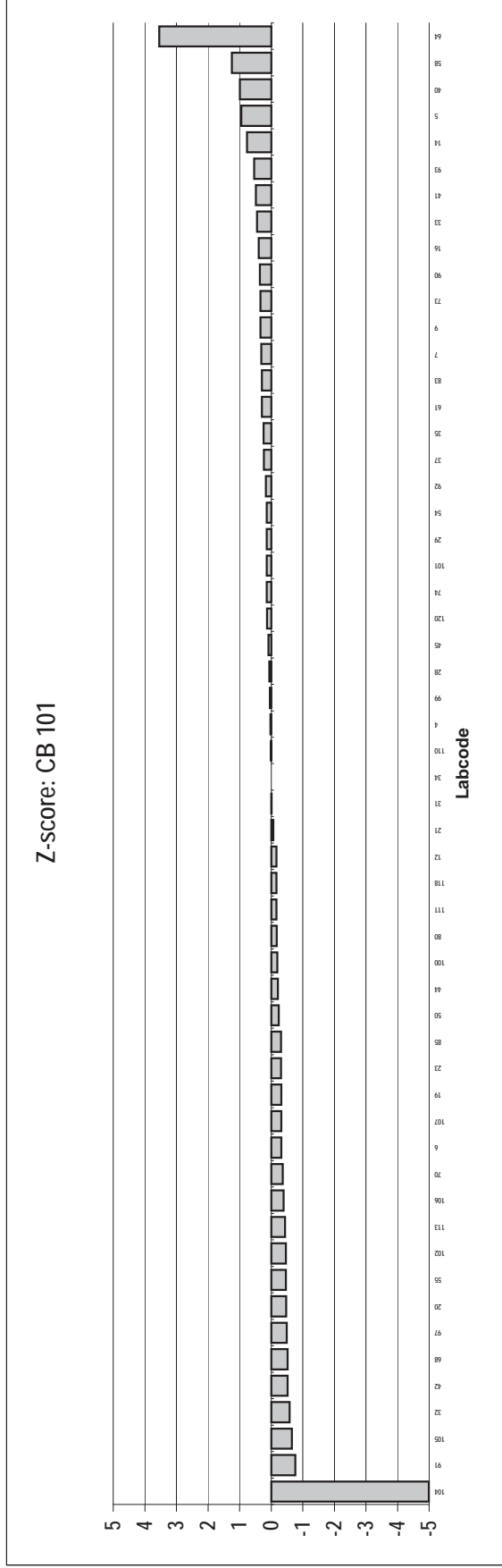
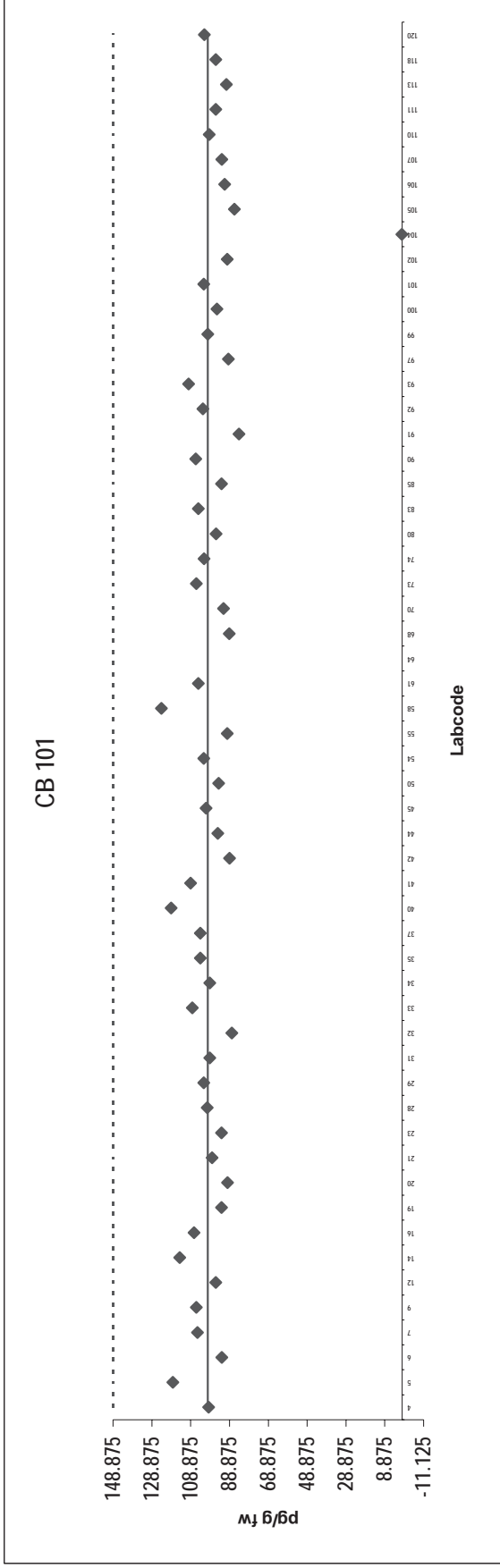
Analyte solution

Congener: CB 101

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	100		101	102	
5	118		102	90	
6	93		104	0.094	Outlier
7	105		105	86	
9	106		106	91	
12	96		107	93	
14	114		110	99	
16	107		111	96	
19	93		113	90	
20	90		118	96	
21	98		120	102	
23	93				
28	100				
29	102				
31	99				
32	88				
33	108				
34	99				
35	104				
37	104				
40	119				
41	109				
42	89				
44	95				
45	101				
50	95				
54	102				
55	90				
58	124				
61	105				
64	170	Outlier			
68	89				
70	92				
73	106				
74	102				
80	96				
83	105				
85	93				
90	106				
91	84				
92	103				
93	110				
97	90				
99	100				
100	95				

Consensus statistics

Consensus median, pg/g	99
Median all values pg/g	99
Consensus mean, pg/g	99
Standard deviation, pg/g	8.5
Relative standard deviation, %	8.6
No. of values reported	56
No. of values removed	2
No. of reported non-detects	0



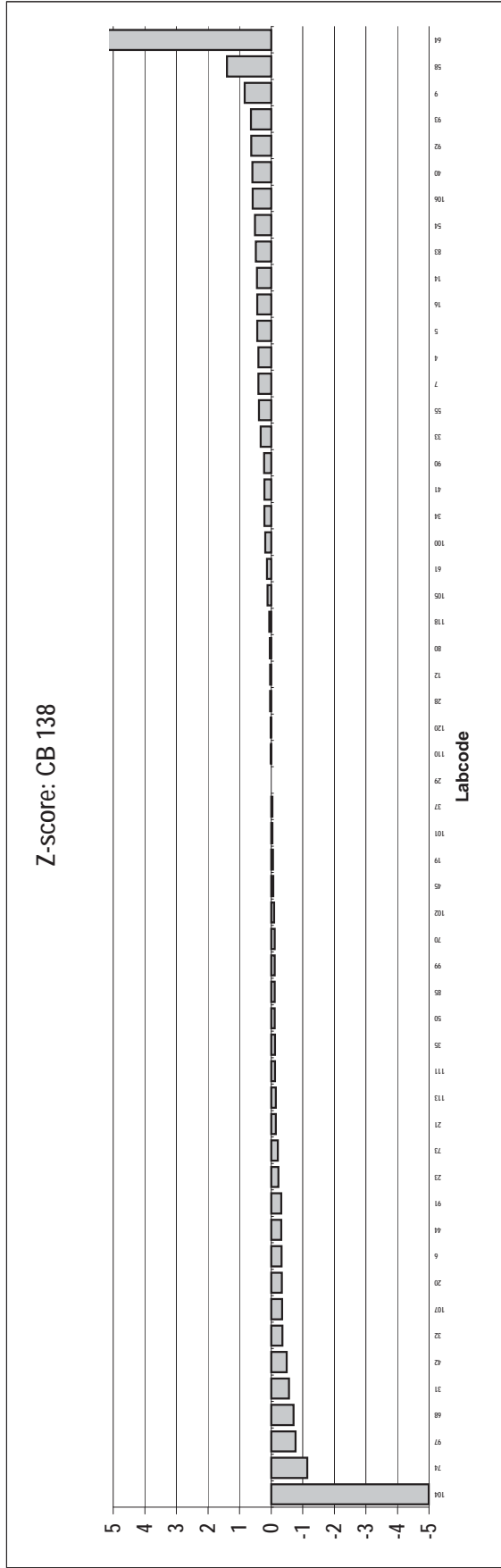
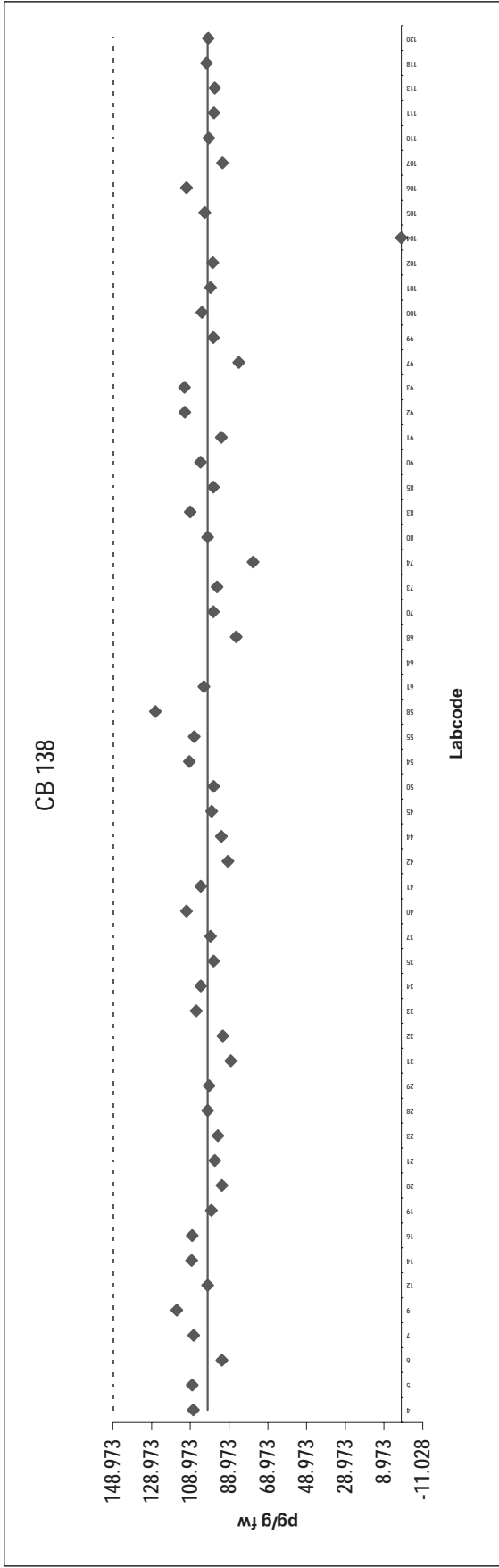
Analyte solution

Congener: CB 138

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	107		101	99	
5	108		102	97	
6	93		104	0.090	Outlier
7	107		105	102	
9	116		106	111	
12	100		107	92	
14	108		110	99	
16	108		111	97	
19	98		113	96	
20	93		118	101	
21	96		120	100	
23	95				
28	100				
29	99				
31	88				
32	92				
33	106				
34	104				
35	97				
37	99				
40	111				
41	104				
42	90				
44	93				
45	98				
50	97				
54	109				
55	107				
58	127				
61	102				
64	206	Outlier			
68	85				
70	97				
73	95				
74	77				
80	100				
83	109				
85	97				
90	104				
91	93				
92	112				
93	112				
97	84				
99	97				
100	103				

Consensus statistics

Consensus median, pg/g	99
Median all values pg/g	99
Consensus mean, pg/g	100
Standard deviation, pg/g	8.6
Relative standard deviation, %	8.5
No. of values reported	56
No. of values removed	2
No. of reported non-detects	0



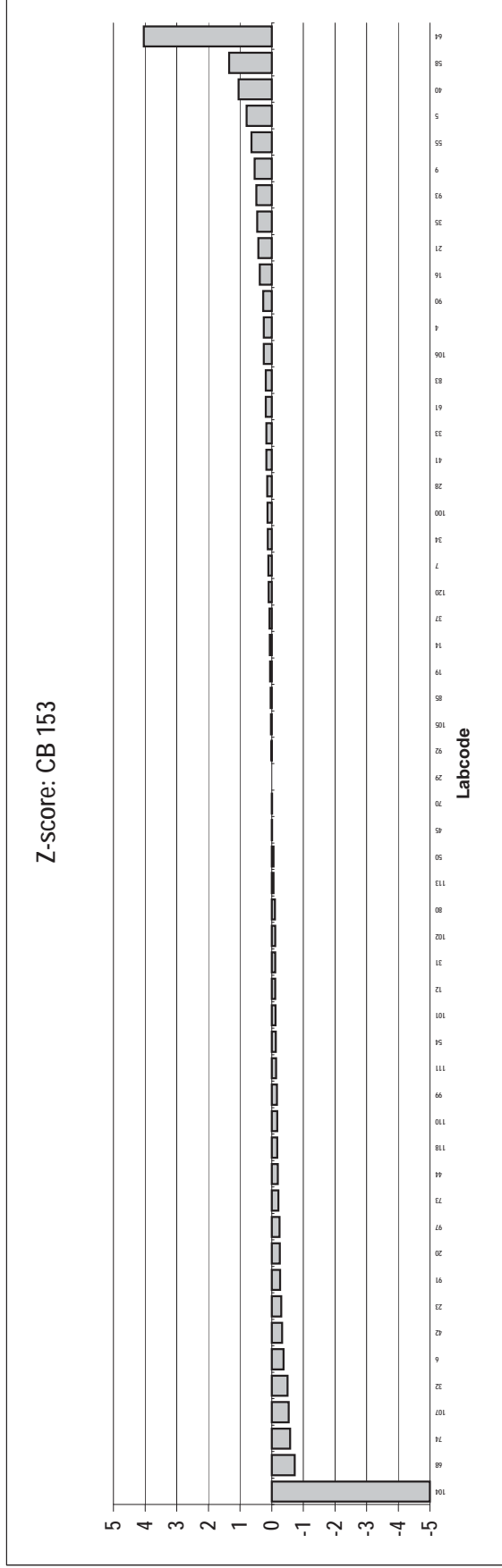
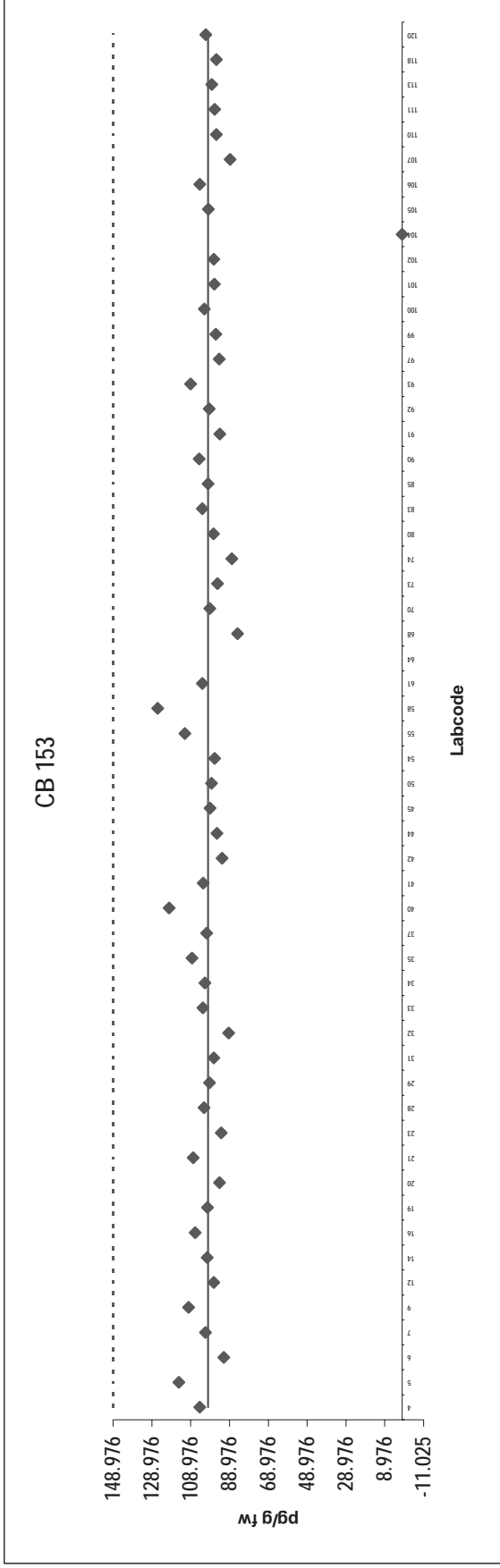
Analyte solution

Congener: CB 153

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	104		101	97	
5	115		102	97	
6	92		104	0.089	Outlier
7	101		105	100	
9	110		106	104	
12	97		107	89	
14	101		110	96	
16	107		111	97	
19	100		113	98	
20	94		118	96	
21	108		120	101	
23	93				
28	102				
29	99				
31	97				
32	89				
33	103				
34	102				
35	108				
37	101				
40	120				
41	103				
42	93				
44	95				
45	99				
50	98				
54	97				
55	112				
58	126				
61	103				
64	180	Outlier			
68	85				
70	99				
73	95				
74	88				
80	97				
83	103				
85	100				
90	105				
91	94				
92	99				
93	109				
97	94				
99	96				
100	102				

Consensus statistics

Consensus median, pg/g	99
Median all values pg/g	99
Consensus mean, pg/g	100
Standard deviation, pg/g	7.5
Relative standard deviation, %	7.5
No. of values reported	56
No. of values removed	2
No. of reported non-detects	0



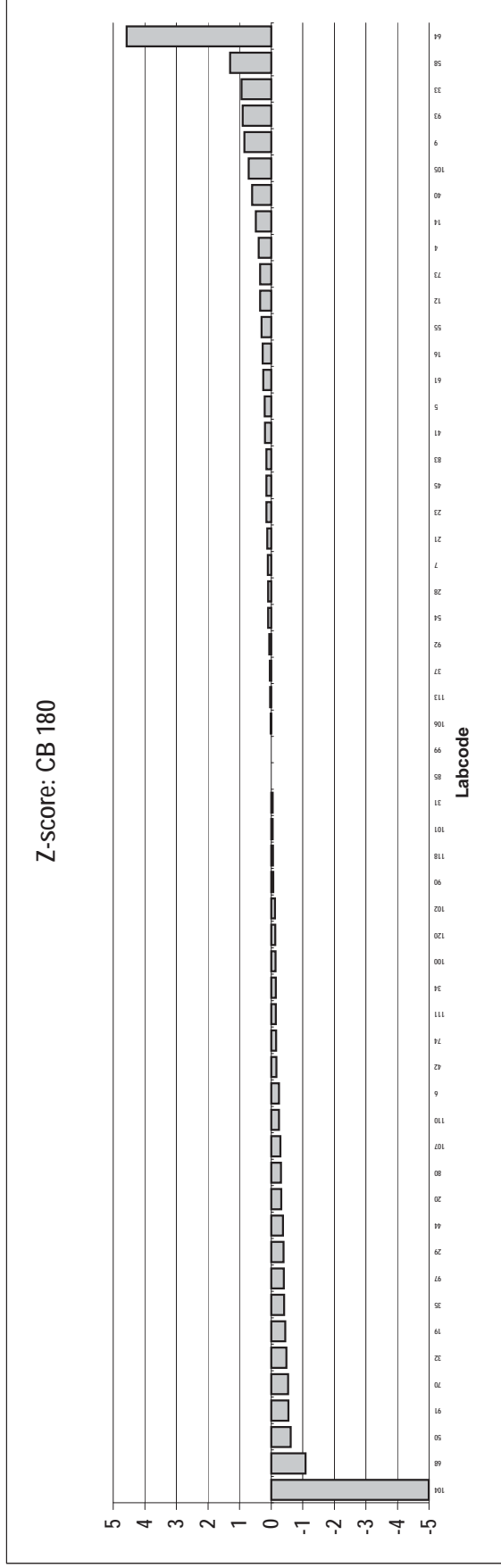
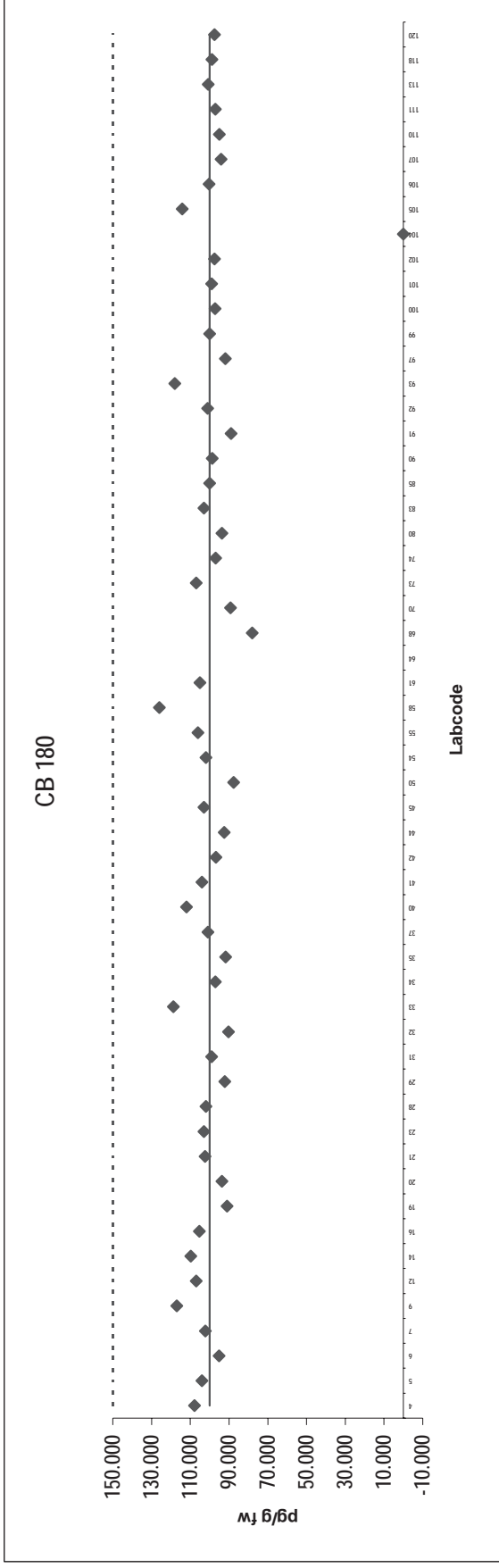
Analyte solution

Congener: CB 180

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	108		101	99	
5	104		102	98	
6	95		104	0.096	Outlier
7	102		105	114	
9	117		106	100	
12	107		107	94	
14	110		110	95	
16	105		111	97	
19	91		113	101	
20	94		118	99	
21	102		120	97	
23	103				
28	102				
29	92				
31	99				
32	90				
33	119				
34	97				
35	92				
37	101				
40	112				
41	104				
42	97				
44	93				
45	103				
50	88				
54	102				
55	106				
58	126				
61	105				
64	192	Outlier			
68	78				
70	89				
73	107				
74	97				
80	94				
83	103				
85	100				
90	99				
91	89				
92	101				
93	118				
97	92				
99	100				
100	97				

Consensus statistics

Consensus median, pg/g	100
Median all values pg/g	100
Consensus mean, pg/g	100
Standard deviation, pg/g	8.6
Relative standard deviation, %	8.6
No. of values reported	56
No. of values removed	2
No. of reported non-detects	0



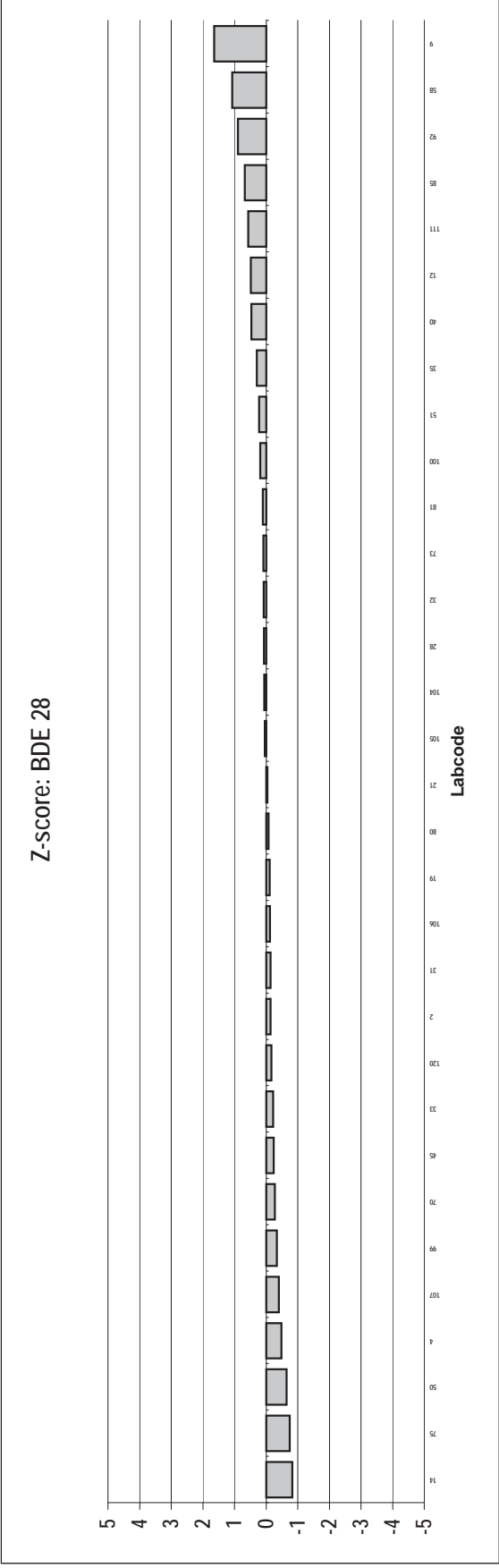
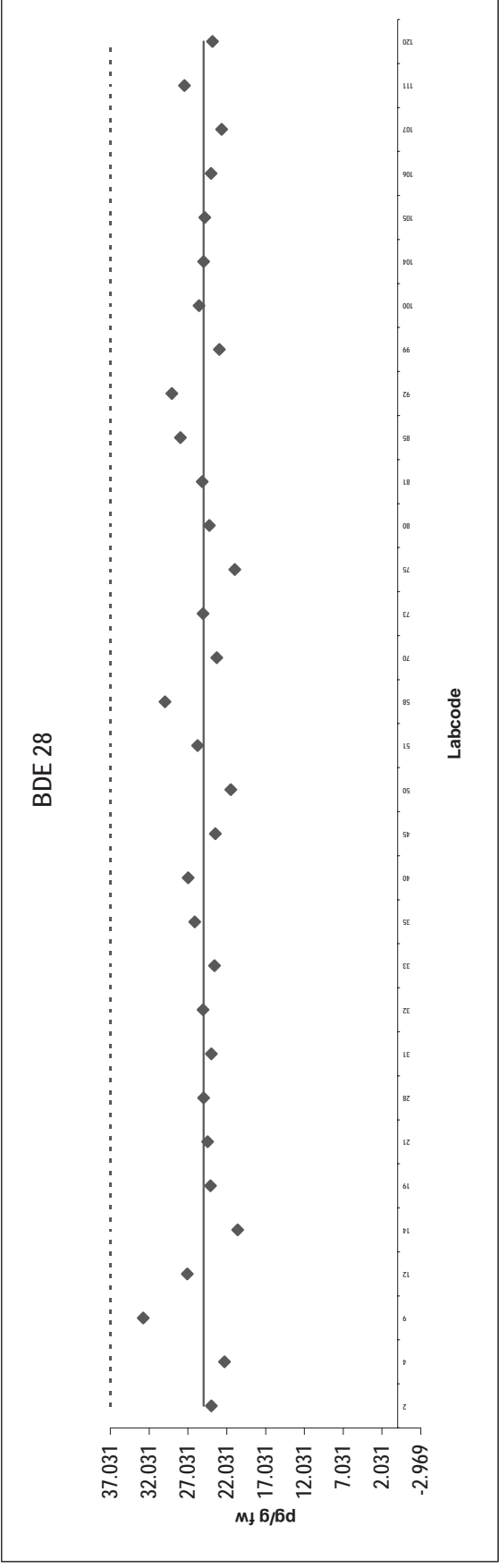
Analyte solution

Congener: BDE 28

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	24				
4	22				
9	33				
12	27				
14	21				
19	24				
21	25				
28	25				
31	24				
32	25				
33	24				
35	26				
40	27				
45	24				
50	22				
51	26				
58	30				
70	23				
73	25				
75	21				
80	24				
81	25				
85	28				
92	29				
99	23				
100	26				
104	25				
105	25				
106	24				
107	23				
111	28				
120	24				

Consensus statistics

Consensus median, pg/g	25
Median all values pg/g	25
Consensus mean, pg/g	25
Standard deviation, pg/g	2.6
Relative standard deviation, %	10
No. of values reported	32
No. of values removed	0
No. of reported non-detects	0



Analyte solution

Congener: BDE 47

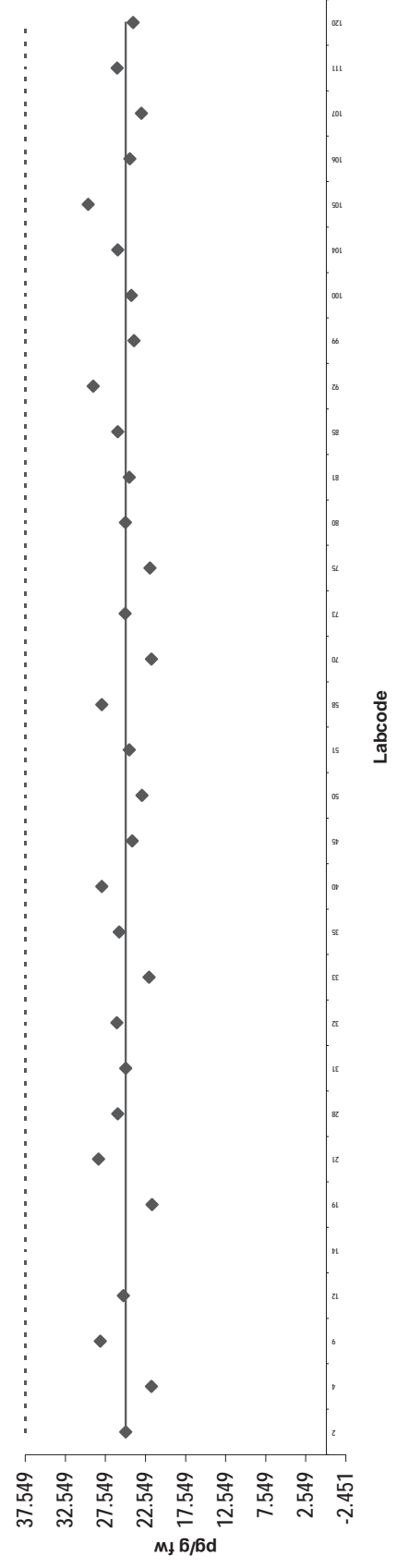
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	25				
4	22				
9	28				
12	25				
14	48				
19	22				
21	28				
28	26				
31	25				
32	26				
33	22				
35	26				
40	28				
45	24				
50	23				
51	25				
58	28				
70	22				
73	25				
75	22				
80	25				
81	25				
85	26				
92	29				
99	24				
100	24				
104	26				
105	30				
106	25				
107	23				
111	26				
120	24				

Outlier

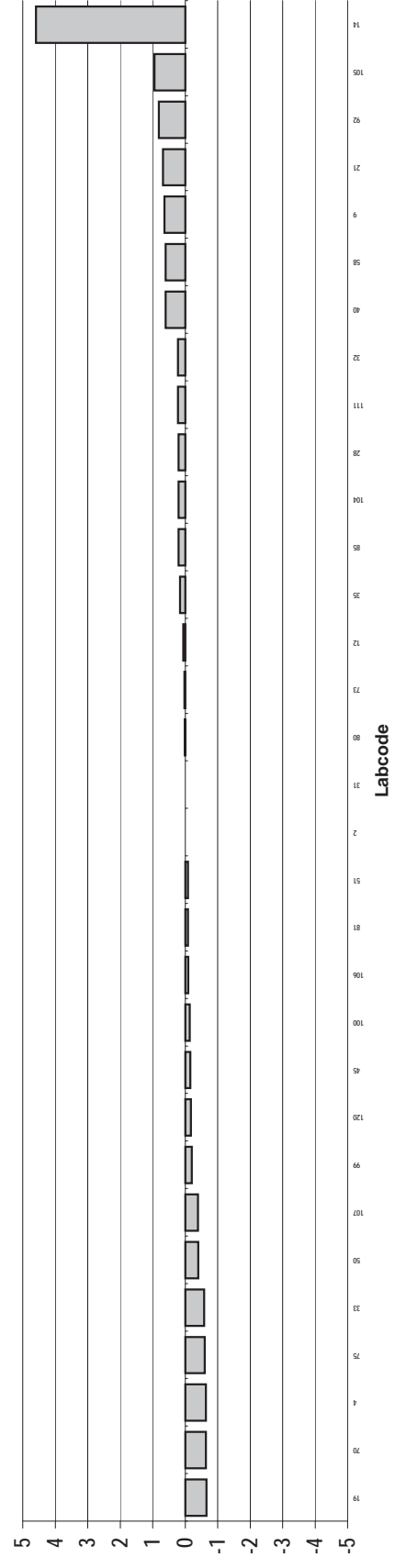
Consensus statistics

Consensus median, pg/g	25
Median all values pg/g	25
Consensus mean, pg/g	25
Standard deviation, pg/g	2.2
Relative standard deviation, %	8.7
No. of values reported	32
No. of values removed	1
No. of reported non-detects	0

BDE 47



Z-score: BDE 47



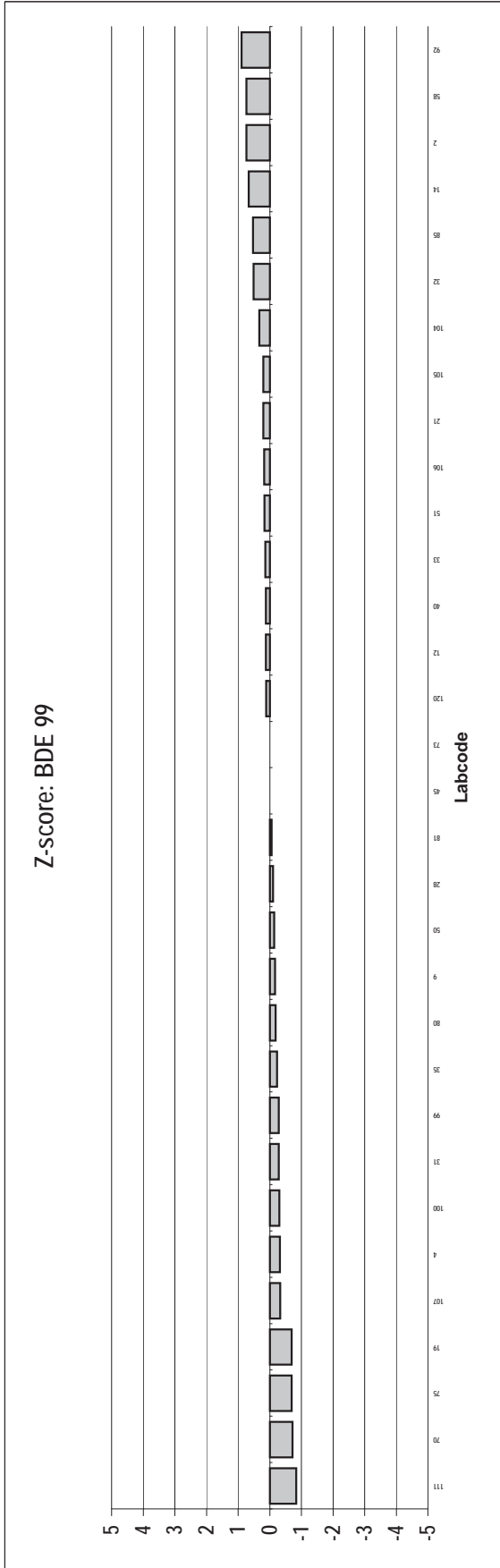
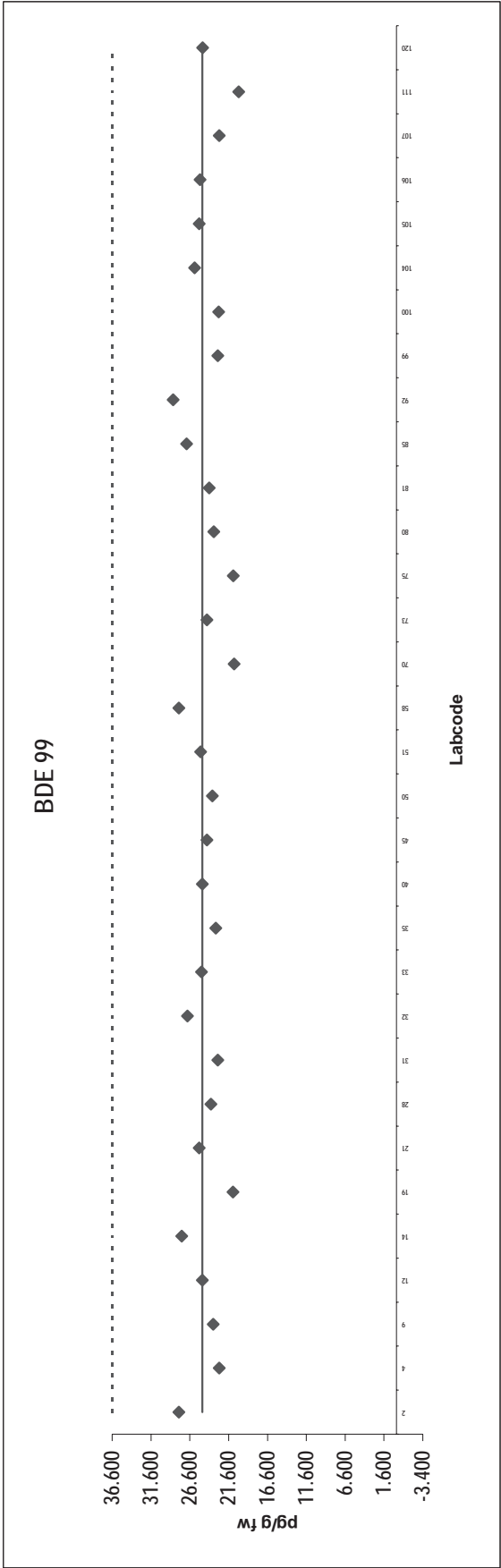
Analyte solution

Congener: BDE 99

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	28				
4	23				
9	24				
12	25				
14	28				
19	21				
21	25				
28	24				
31	23				
32	27				
33	25				
35	23				
40	25				
45	24				
50	24				
51	25				
58	28				
70	21				
73	24				
75	21				
80	24				
81	24				
85	27				
92	29				
99	23				
100	23				
104	26				
105	25				
106	25				
107	23				
111	20				
120	25				

Consensus statistics

Consensus median, pg/g	24
Median all values pg/g	24
Consensus mean, pg/g	24
Standard deviation, pg/g	2.1
Relative standard deviation, %	8.8
No. of values reported	32
No. of values removed	0
No. of reported non-detects	0



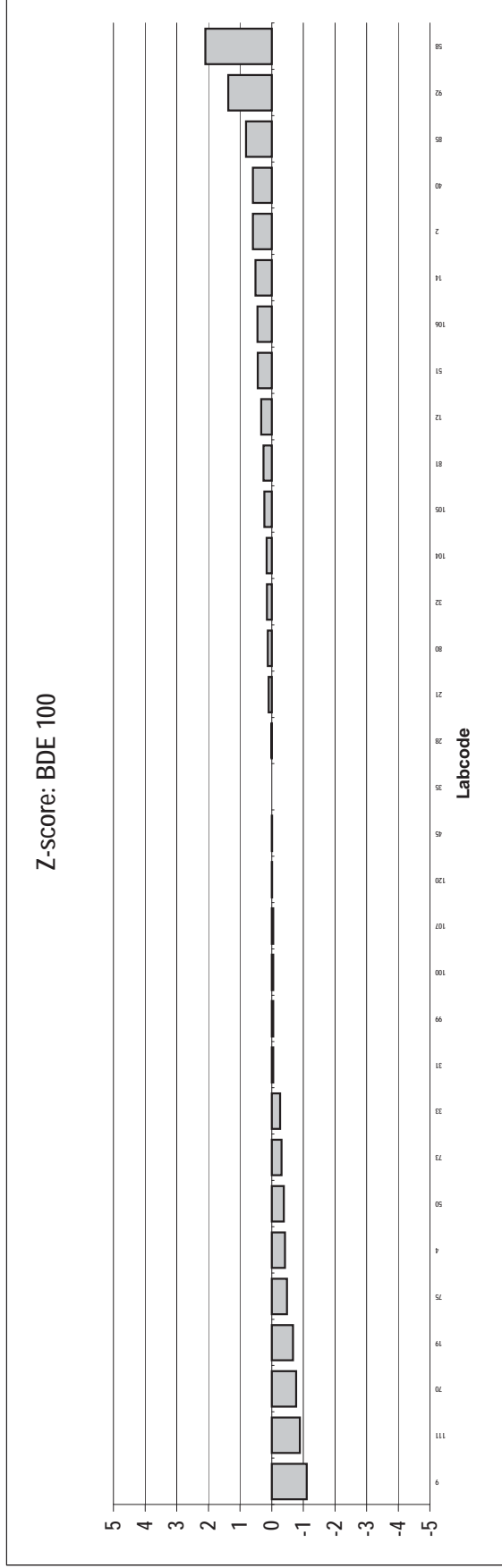
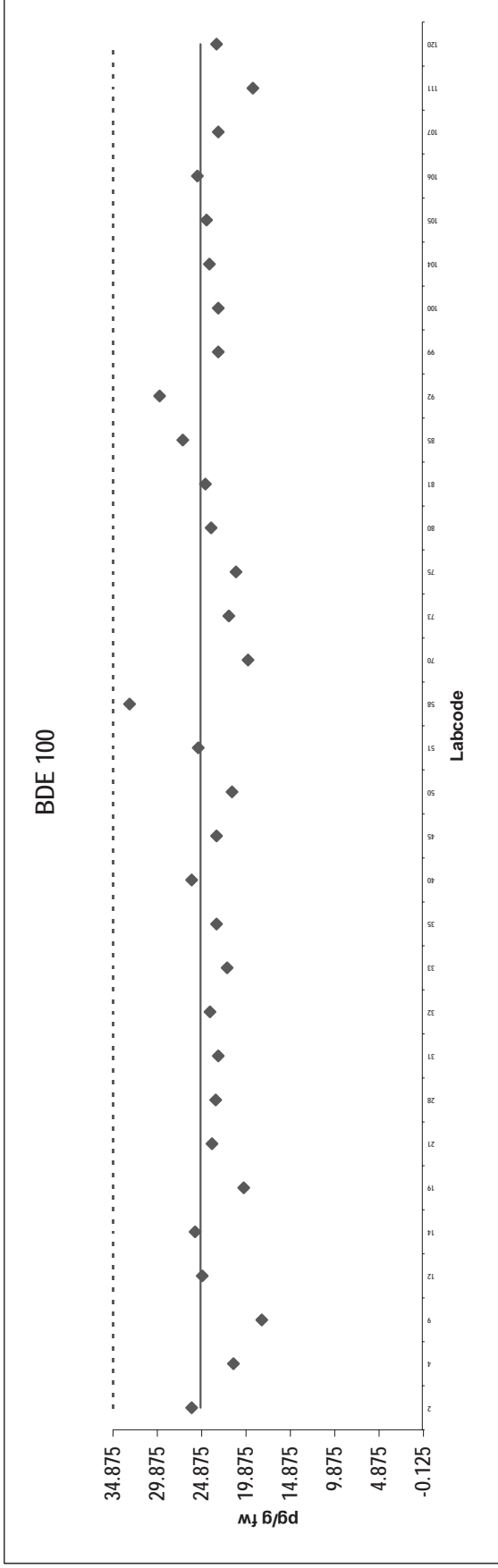
Analyte solution

Congener: BDE 100

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	26				
4	21				
9	18				
12	25				
14	26				
19	20				
21	24				
28	23				
31	23				
32	24				
33	22				
35	23				
40	26				
45	23				
50	21				
51	25				
58	33				
70	20				
73	22				
75	21				
80	24				
81	24				
85	27				
92	30				
99	23				
100	23				
104	24				
105	24				
106	25				
107	23				
111	19				
120	23				

Consensus statistics

Consensus median, pg/g	23
Median all values pg/g	23
Consensus mean, pg/g	24
Standard deviation, pg/g	2.9
Relative standard deviation, %	12
No. of values reported	32
No. of values removed	0
No. of reported non-detects	0



Analyte solution

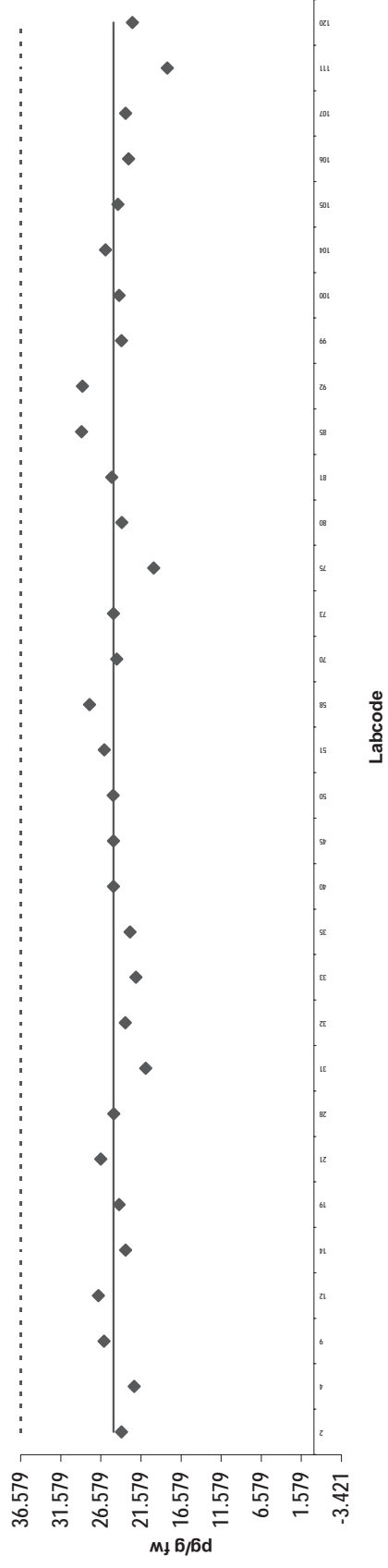
Congener: BDE 153

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	24				
4	22				
9	26				
12	27				
14	24				
19	24				
21	27				
28	25				
31	21				
32	24				
33	22				
35	23				
40	25				
45	25				
50	25				
51	26				
58	28				
70	25				
73	25				
75	20				
80	24				
81	25				
85	29				
92	29				
99	24				
100	24				
104	26				
105	24				
106	23				
107	24				
111	18				
120	23				

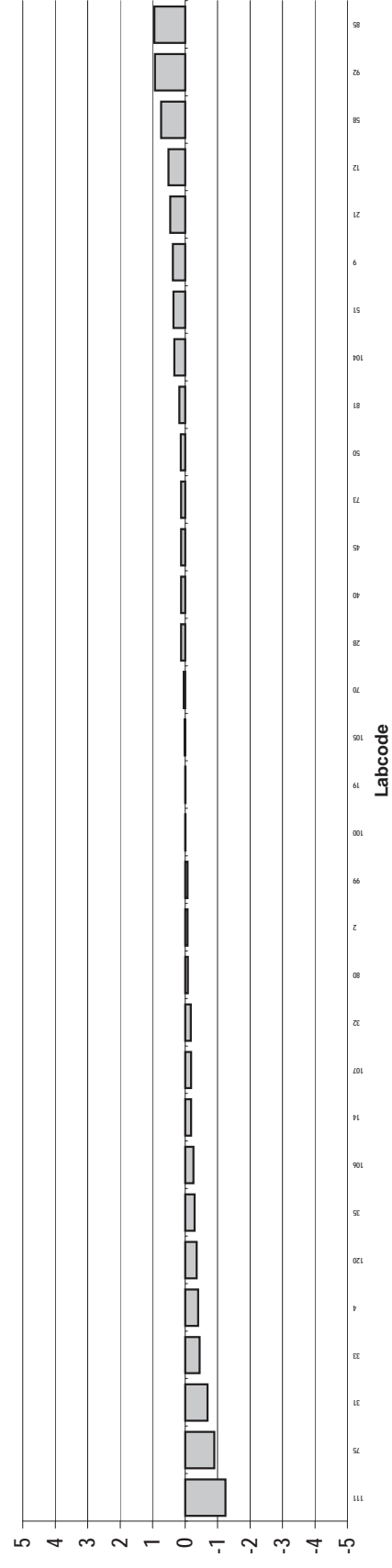
Consensus statistics

Consensus median, pg/g	24
Median all values pg/g	24
Consensus mean, pg/g	24
Standard deviation, pg/g	2.3
Relative standard deviation, %	9.4
No. of values reported	32
No. of values removed	0
No. of reported non-detects	0

BDE 153



Z-score: BDE 153



Analyte solution

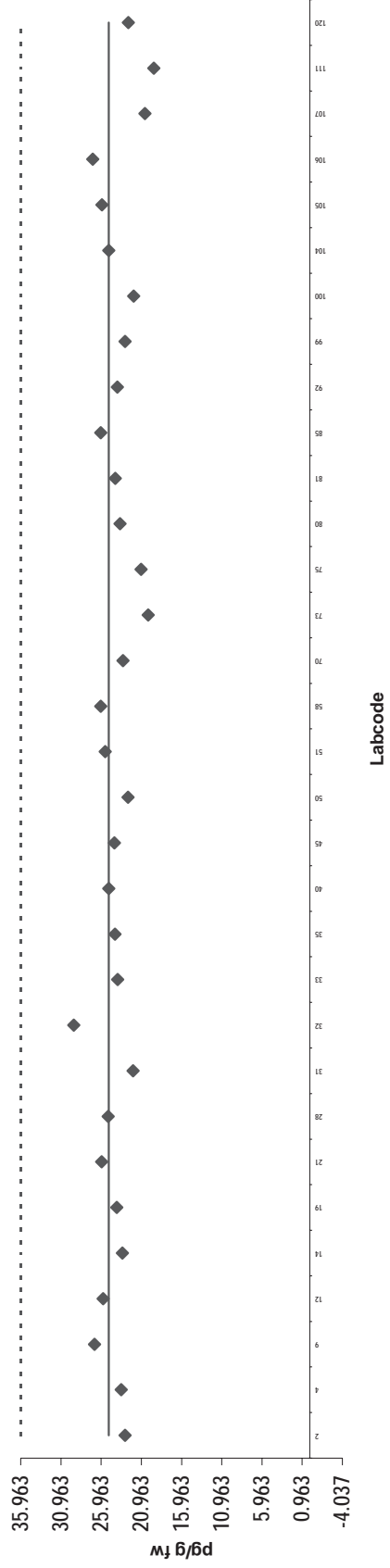
Congener: BDE 154

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	23				
4	23				
9	27				
12	26				
14	23				
19	24				
21	26				
28	25				
31	22				
32	29				
33	24				
35	24				
40	25				
45	24				
50	23				
51	25				
58	26				
70	23				
73	20				
75	21				
80	24				
81	24				
85	26				
92	24				
99	23				
100	22				
104	25				
105	26				
106	27				
107	21				
111	19				
120	23				

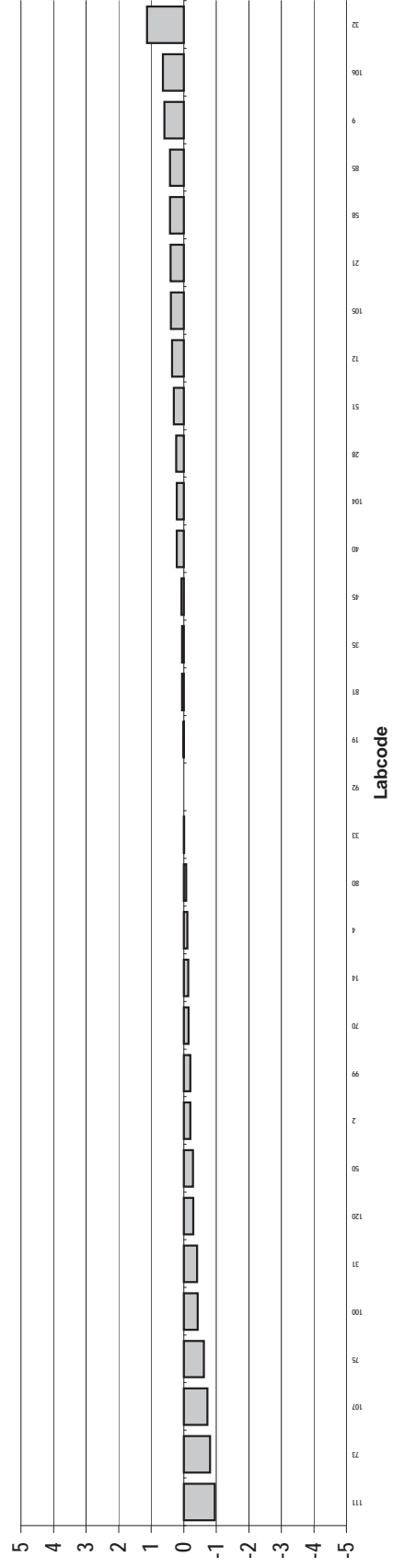
Consensus statistics

Consensus median, pg/g	24
Median all values pg/g	24
Consensus mean, pg/g	24
Standard deviation, pg/g	2.1
Relative standard deviation, %	8.9
No. of values reported	32
No. of values removed	0
No. of reported non-detects	0

BDE 154



Z-score: BDE 154



Analyte solution

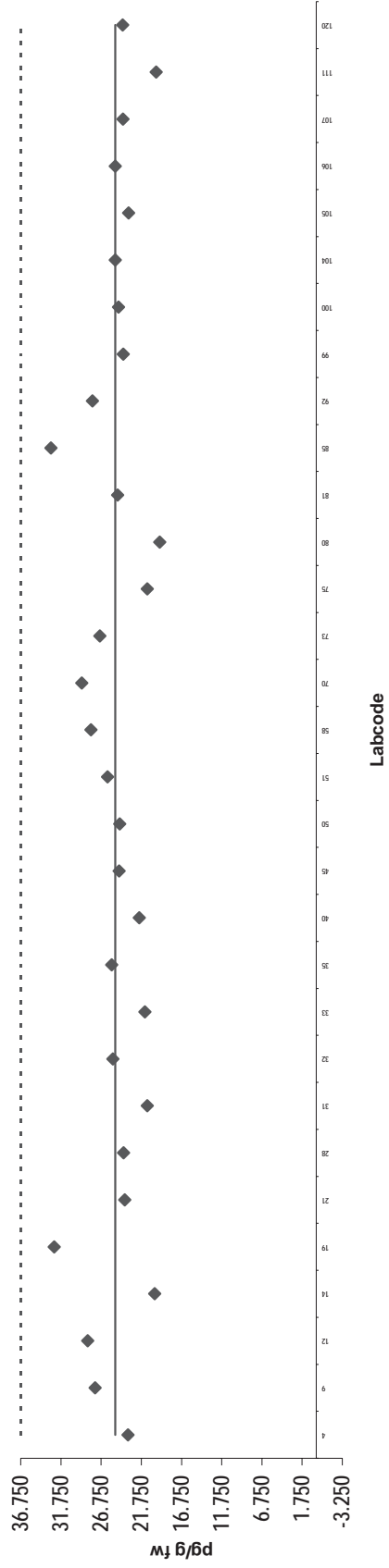
Congener: BDE 183

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	23				
9	28				
12	28				
14	20				
19	33				
21	24				
28	24				
31	21				
32	25				
33	21				
35	25				
40	22				
45	25				
50	24				
51	26				
58	28				
70	29				
73	27				
75	21				
80	19				
81	25				
85	33				
92	28				
99	24				
100	25				
104	25				
105	23				
106	25				
107	24				
111	20				
120	24				

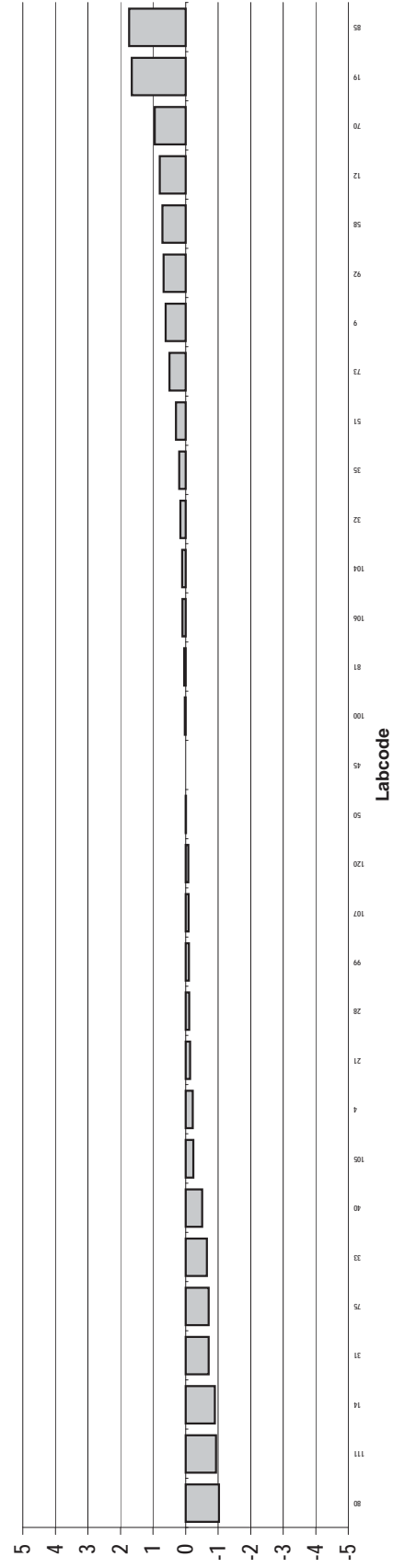
Consensus statistics

Consensus median, pg/g	25
Median all values pg/g	25
Consensus mean, pg/g	25
Standard deviation, pg/g	3.3
Relative standard deviation, %	13
No. of values reported	31
No. of values removed	0
No. of reported non-detects	0

BDE 183



Z-score: BDE 183



Analyte solution

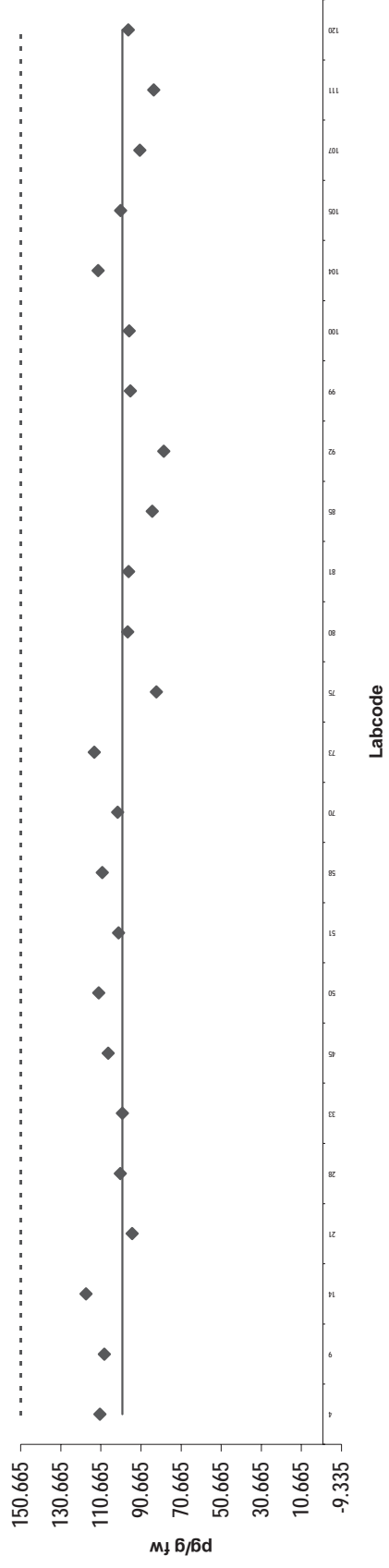
Congener: BDE 209

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	111				
9	109				
14	118				
21	95				
28	101				
33	100				
45	107				
50	112				
51	102				
58	110				
70	102				
73	114				
75	83				
80	97				
81	97				
85	85				
92	79				
99	96				
100	97				
104	112				
105	101				
107	91				
111	84				
120	97				

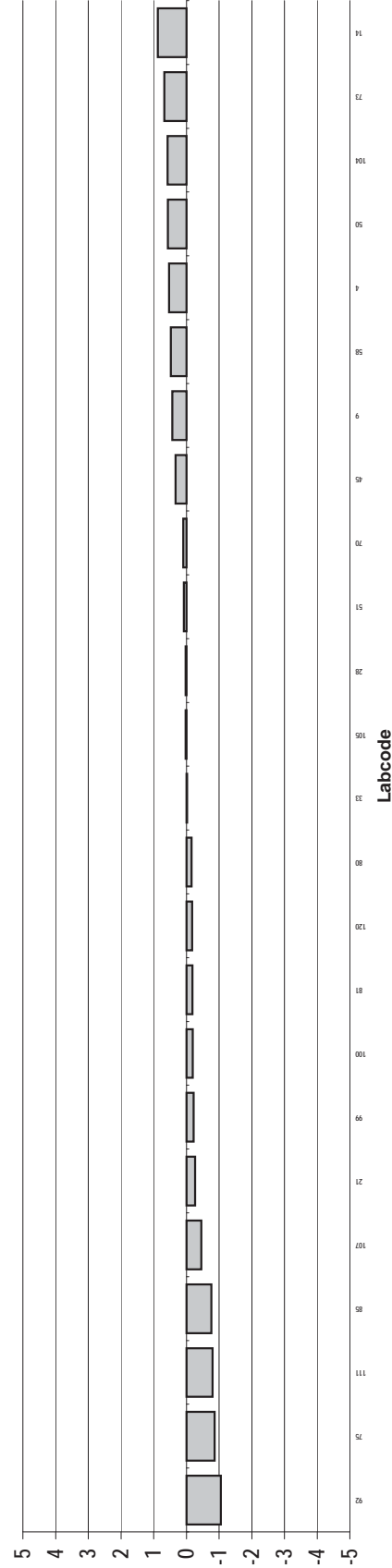
Consensus statistics

Consensus median, pg/g	100
Median all values pg/g	100
Consensus mean, pg/g	100
Standard deviation, pg/g	10
Relative standard deviation, %	10
No. of values reported	24
No. of values removed	0
No. of reported non-detects	0

BDE 209



Z-score: BDE 209



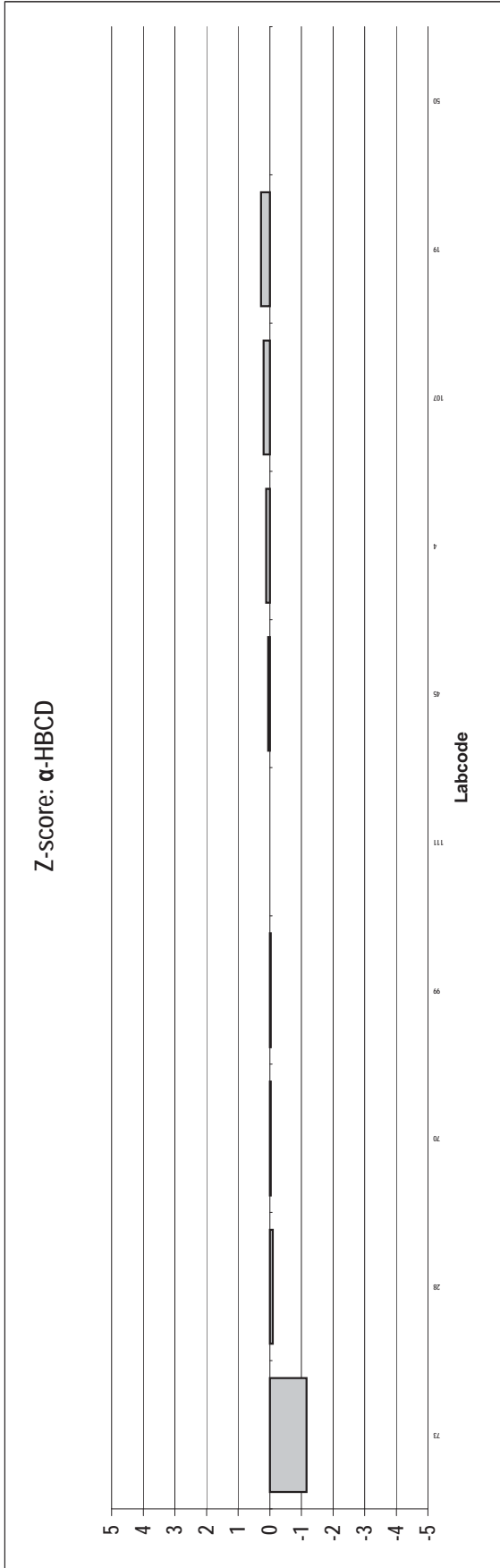
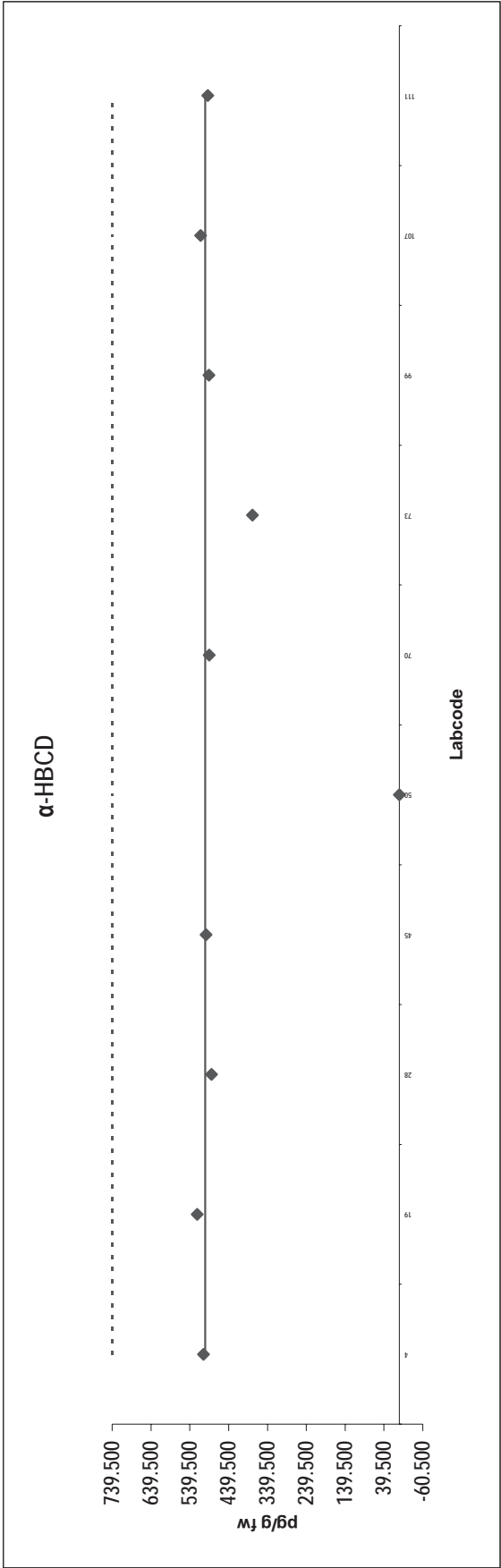
Analyte solution

Congener: α -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	504				
19	520				
28	484				
45	498				
50	Not tested	Outlier,ND			
70	490				
73	378				
99	490				
107	512				
111	493				

Consensus statistics

Consensus median, pg/g	493
Median all values pg/g	493
Consensus mean, pg/g	485
Standard deviation, pg/g	42
Relative standard deviation, %	8.6
No. of values reported	9
No. of values removed	0
No. of reported non-detects	1



Appendix 2:

Presentation of results
for poultry

Appendix 2: Presentation of results: Poultry

Statistic calculations for PCDDs, PCDFs and dioxin-like PCBs

For each congener, the outliers were removed and the consensus calculated according to the following procedure:

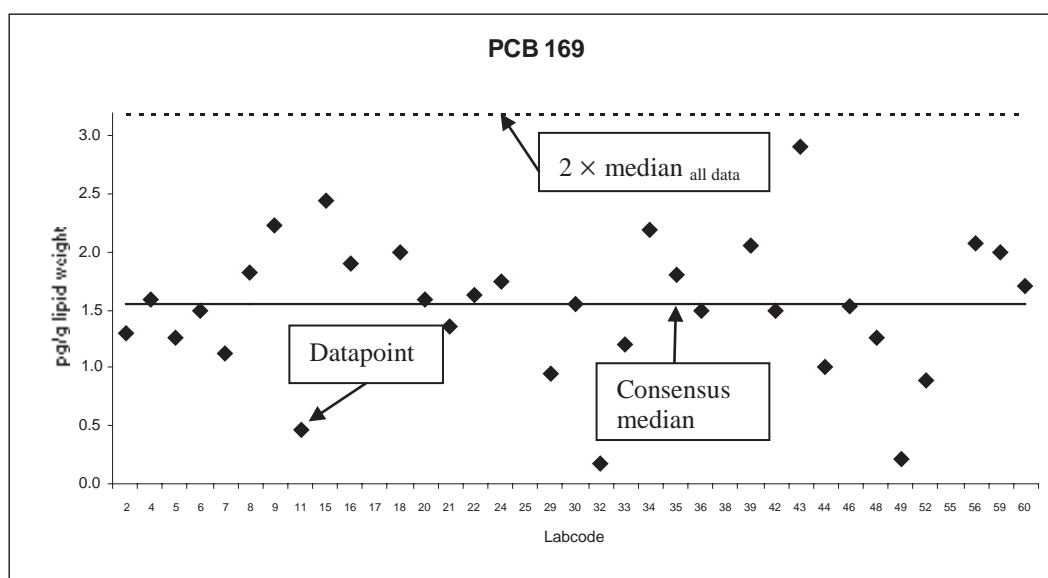
1. The median was calculated from all the reported data, using the detection limit as concentration for non-detected congeners.
2. Values exceeding $2 \times$ this median were defined as outliers and removed from the data set.
3. Median, mean and standard deviation were re-calculated from the remaining data. This second median was called consensus.

Statistic calculations for indicator PCBs, PBDEs and HBCD

For each congener, the outliers were removed and the consensus calculated according to the following procedure:

1. The median was calculated from all the reported data, using the detection limit as concentration for non-detected congeners (NDs).
2. Values exceeding $2 \times$ this median were defined as outliers and removed from the data set. The NDs were also removed.
3. Median, mean and standard deviation were re-calculated from the remaining data. This second median was called consensus.
4. For comparison, median, mean and standard deviation were also calculated without removing NDs.

The diagram shows the reported data up to approximately the limit for outliers ($2 \times$ the first median).



Z-Scores of individual congeners

Z-scores of each congener were calculated for each laboratory according to the following equation:

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

where x = reported value; X = assigned value (consensus); σ = target value for standard deviation. A σ of 20% of the consensus was used, i.e. z-scores between +1 and -1 reflect a deviation of $\pm 20\%$ from the consensus value.

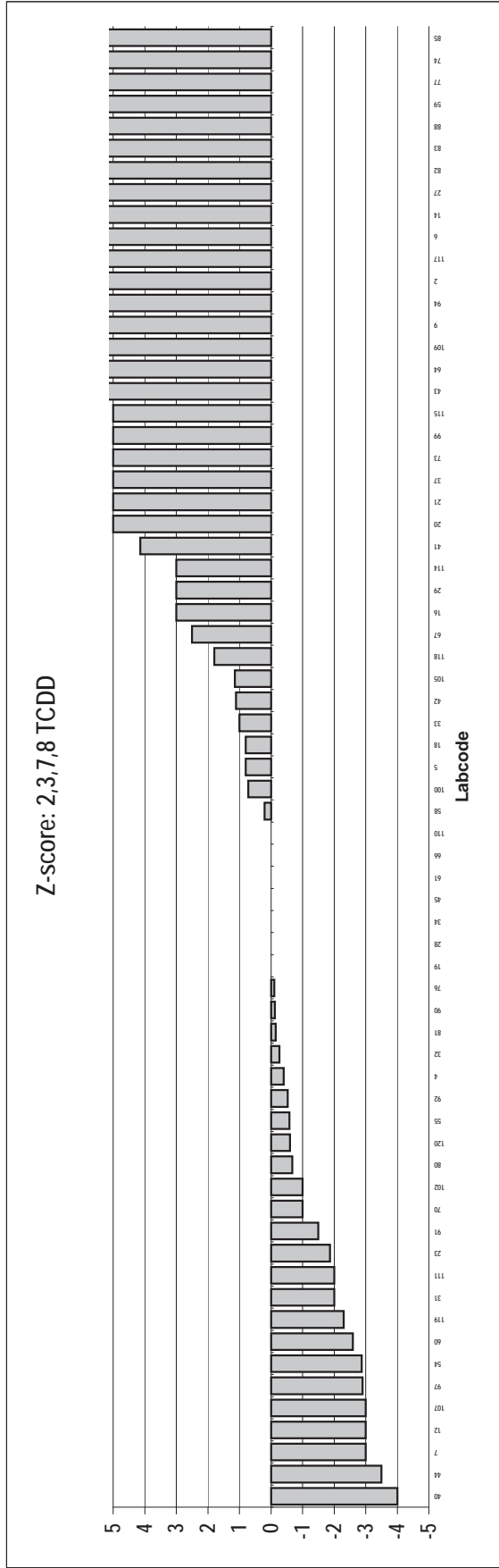
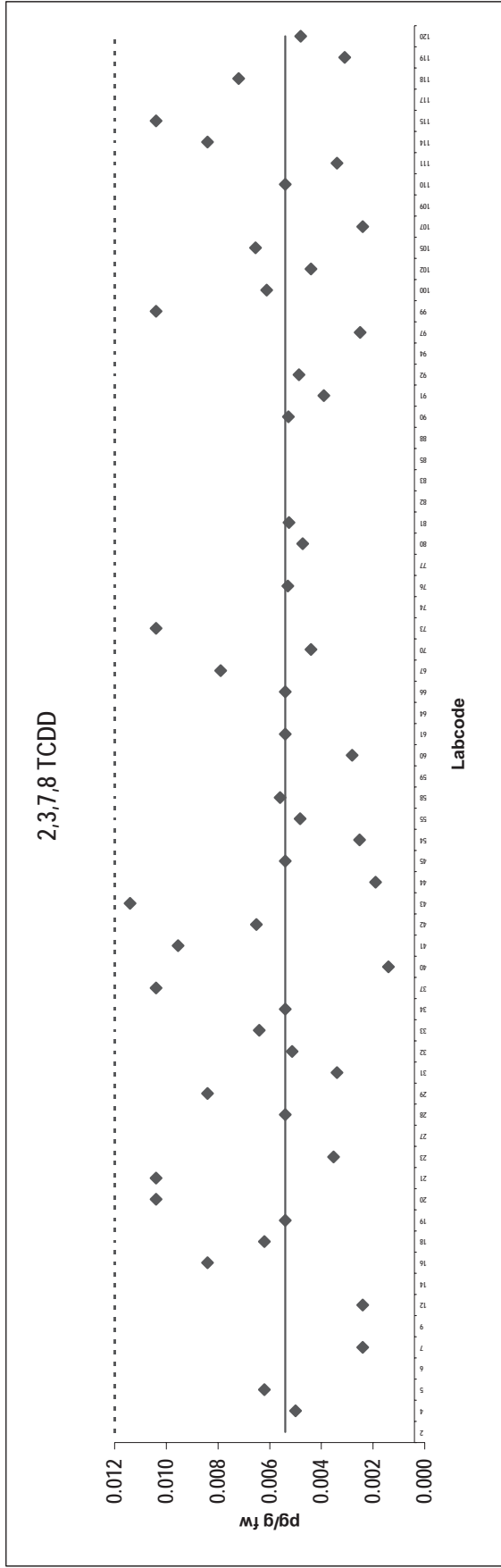
Poultry

Congener: 2,3,7,8 TCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.020	Outlier,ND	83	0.040	Outlier,ND
4	0.0046		85	0.40	Outlier,ND
5	0.0058		88	0.050	Outlier,ND
6	0.020	Outlier,ND	90	0.0049	
7	0.0020	ND	91	0.0035	ND
9	0.016	Outlier	92	0.0045	
12	0.0020		94	0.019	Outlier,ND
14	0.032	Outlier,ND	97	0.0021	
16	0.0080		99	0.010	ND
18	0.0058		100	0.0057	
19	0.0050		102	0.0040	
20	0.010		105	0.0061	ND
21	0.010	ND	107	0.0020	ND
23	0.0031	ND	109	0.016	Outlier,ND
27	0.034	Outlier	110	0.0050	ND
28	0.0050		111	0.0030	ND
29	0.0080	ND	114	0.0080	
31	0.0030		115	0.010	ND
32	0.0047		117	0.020	Outlier,ND
33	0.0060		118	0.0068	ND
34	0.0050	ND	119	0.0027	ND
37	0.010		120	0.0044	
40	0.0010	ND			
41	0.0091	ND			
42	0.0061				
43	0.011	ND			
44	0.0015	ND			
45	0.0050	ND			
54	0.0021	ND			
55	0.0044				
58	0.0052	ND			
59	0.051	Outlier			
60	0.0024	ND			
61	0.0050	ND			
64	0.012	Outlier,ND			
66	0.0050				
67	0.0075	ND			
70	0.0040				
73	0.010	ND			
74	0.25	Outlier,ND			
76	0.0049				
77	0.12	Outlier			
80	0.0043				
81	0.0049				
82	0.040	Outlier,ND			

Consensus statistics

Consensus median, pg/g	0.0050
Median all values pg/g	0.0058
Consensus mean, pg/g	0.0054
Standard deviation, pg/g	0.0026
Relative standard deviation, %	48
No. of values reported	67
No. of values removed	16
No. of reported non-detects	37



Poultry

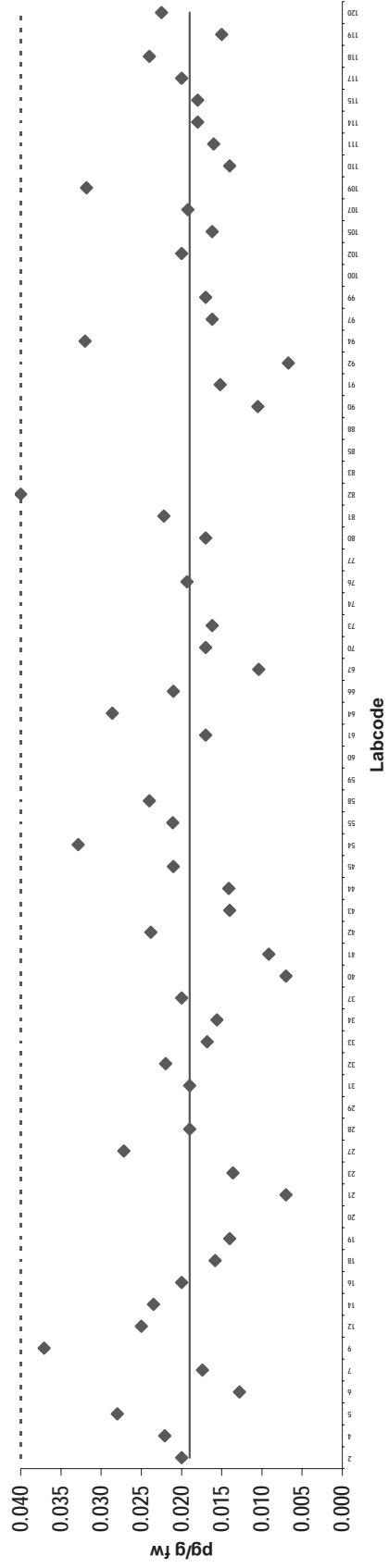
Congener: 1,2,3,7,8 PeCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.020	ND	83	0.050	Outlier,ND
4	0.022		85	0.40	Outlier,ND
5	0.028		88	0.35	Outlier
6	0.013		90	0.011	
7	0.017		91	0.015	ND
9	0.037		92	0.0067	
12	0.025		94	0.032	ND
14	0.024		97	0.016	
16	0.020		99	0.017	
18	0.016		100	0.053	Outlier
19	0.014		102	0.020	
20	0.072		105	0.016	
21	0.0070	Outlier	107	0.019	
23	0.014	ND	109	0.032	ND
27	0.027		110	0.014	
28	0.019		111	0.016	
29	0.046		114	0.018	
31	0.019	Outlier	115	0.018	
32	0.022		117	0.020	
33	0.017		118	0.024	ND
34	0.016		119	0.015	
37	0.020		120	0.023	
40	0.0070				
41	0.0091	ND			
42	0.024				
43	0.014				
44	0.014				
45	0.021				
54	0.033				
55	0.021				
58	0.024				
59	0.074	Outlier			
60	0.27	Outlier			
61	0.017				
64	0.029	ND			
66	0.021				
67	0.010				
70	0.017				
73	0.016				
74	1.3	Outlier,ND			
76	0.019				
77	0.30	Outlier			
80	0.017				
81	0.022				
82	0.040	ND			

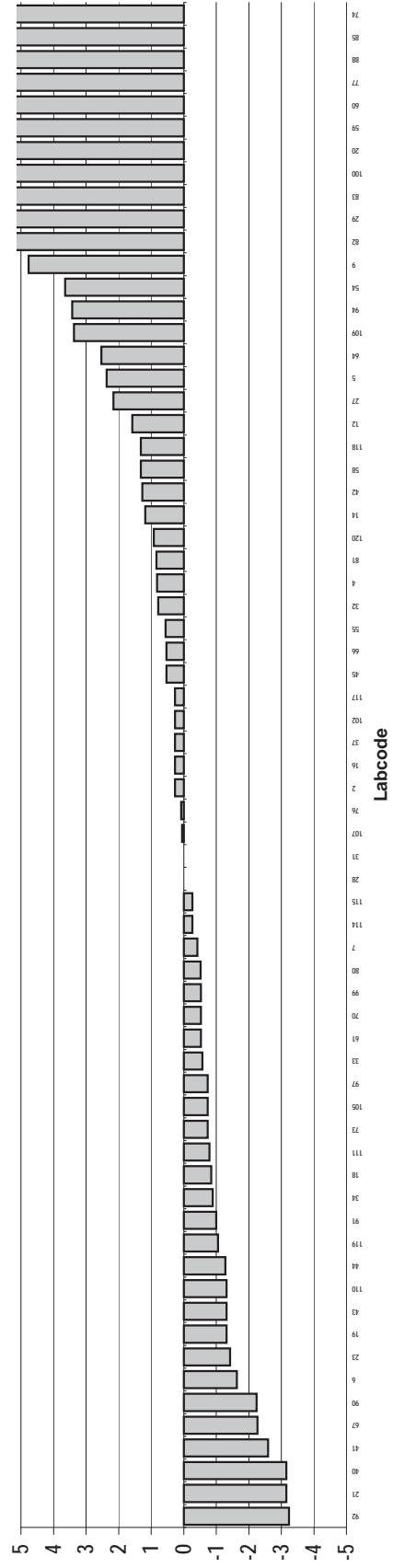
Consensus statistics

Consensus median, pg/g	0.019
Median all values pg/g	0.020
Consensus mean, pg/g	0.019
Standard deviation, pg/g	0.0069
Relative standard deviation, %	36
No. of values reported	67
No. of values removed	10
No. of reported non-detects	12

1,2,3,7,8 PeCDD



Z-score: 1,2,3,7,8 PeCDD



Poultry

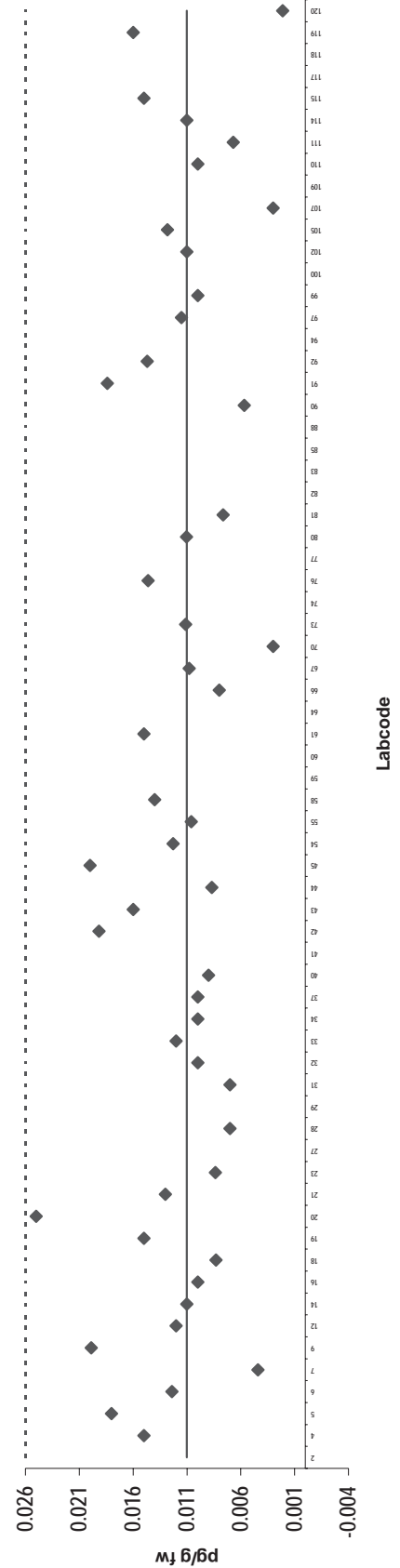
Congener: 1,2,3,4,7,8 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.030	Outlier,ND	83	0.050	Outlier,ND
4	0.015		85	0.20	Outlier,ND
5	0.018		88	0.050	Outlier,ND
6	0.012		90	0.0057	
7	0.0044		91	0.018	ND
9	0.020		92	0.015	
12	0.012		94	0.038	Outlier,ND
14	0.011		97	0.012	
16	0.010	ND	99	0.010	ND
18	0.0083		100	0.054	Outlier
19	0.015		102	0.011	
20	0.025		105	0.013	ND
21	0.013		107	0.0030	ND
23	0.0084		109	0.056	Outlier,ND
27	0.031	Outlier	110	0.010	ND
28	0.0070	ND	111	0.0067	
29	0.039	Outlier	114	0.011	
31	0.0070		115	0.015	
32	0.010	ND	117	0.050	Outlier,ND
33	0.012		118	0.027	Outlier
34	0.010	ND	119	0.016	ND
37	0.010		120	0.0021	ND
40	0.0090				
41	0.76	Outlier			
42	0.019				
43	0.016	ND			
44	0.0087	ND			
45	0.020				
54	0.012				
55	0.011				
58	0.014				
59	0.041	Outlier			
60	0.25	Outlier			
61	0.015				
64	0.028	Outlier,ND			
66	0.0080				
67	0.011				
70	0.0030				
73	0.011				
74	1.3	Outlier,ND			
76	0.015				
77	0.40	Outlier			
80	0.011				
81	0.0076				
82	0.080	Outlier,ND			

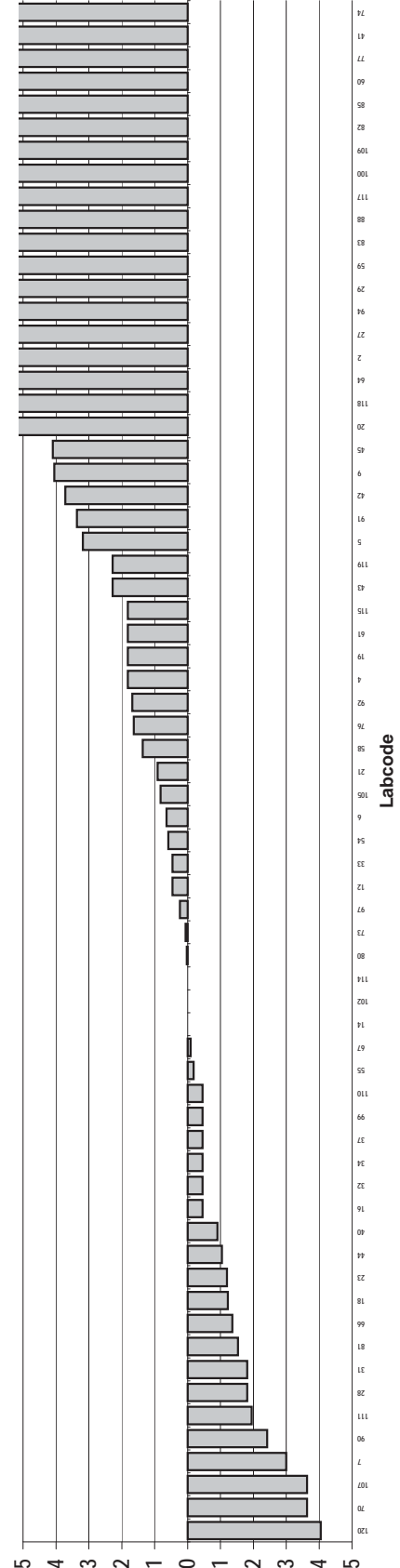
Consensus statistics

Consensus median, pg/g	0.011
Median all values pg/g	0.013
Consensus mean, pg/g	0.012
Standard deviation, pg/g	0.0047
Relative standard deviation, %	40
No. of values reported	67
No. of values removed	18
No. of reported non-detects	23

1,2,3,4,7,8 HxCDD



Z-score: 1,2,3,4,7,8 HxCDD



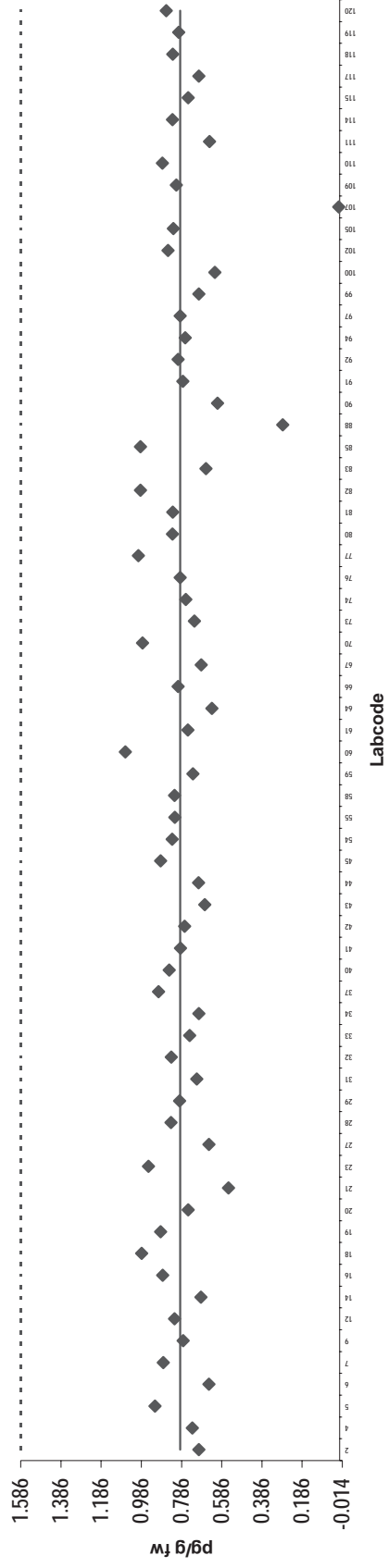
Poultry
Congener: 1,2,3,6,7,8 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.70		83	0.67	
4	0.73		85	0.99	
5	0.92		88	0.28	
6	0.65		90	0.61	
7	0.88		91	0.78	
9	0.78		92	0.80	
12	0.82		94	0.77	
14	0.69		97	0.79	
16	0.88		99	0.70	
18	0.99		100	0.62	
19	0.89		102	0.85	
20	0.75		105	0.83	
21	0.55		107	0.0033	ND
23	0.95		109	0.81	
27	0.65		110	0.88	
28	0.84		111	0.65	
29	0.79		114	0.83	
31	0.71		115	0.75	
32	0.84		117	0.70	
33	0.75		118	0.83	
34	0.70		119	0.80	
37	0.90		120	0.86	
40	0.85				
41	0.79				
42	0.77				
43	0.67				
44	0.70				
45	0.89				
54	0.83				
55	0.82				
58	0.82				
59	0.73				
60	1.1				
61	0.75				
64	0.64				
66	0.80				
67	0.69				
70	0.98				
73	0.72				
74	0.77				
76	0.79				
77	1.0				
80	0.83				
81	0.83				
82	0.99				

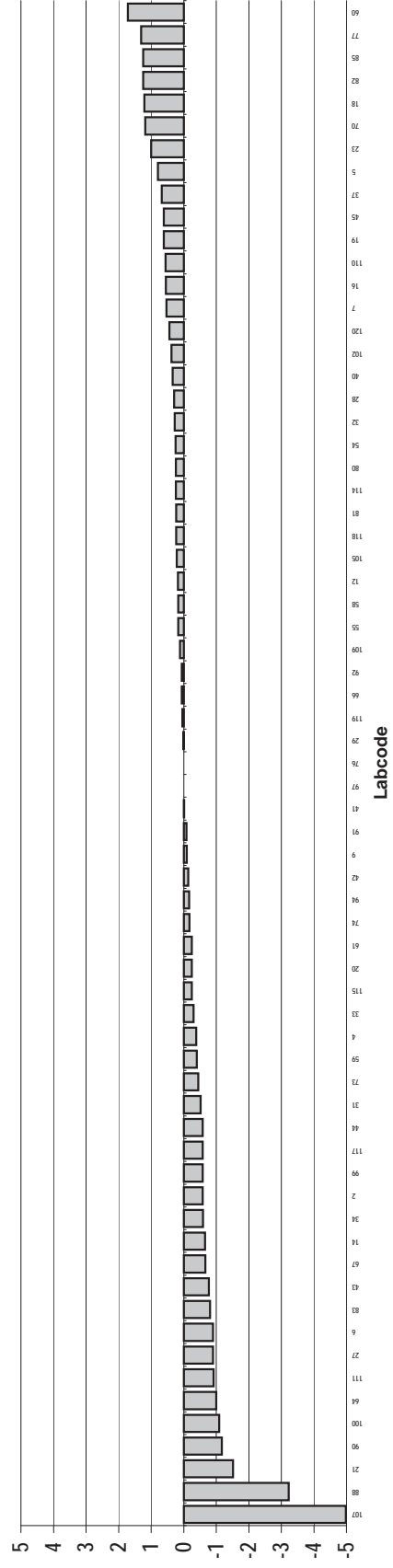
Consensus statistics

Consensus median, pg/g	0.79
Median all values pg/g	0.79
Consensus mean, pg/g	0.77
Standard deviation, pg/g	0.15
Relative standard deviation, %	20
No. of values reported	67
No. of values removed	0
No. of reported non-detects	1

1,2,3,6,7,8 HxCDD



Z-score: 1,2,3,6,7,8 HxCDD



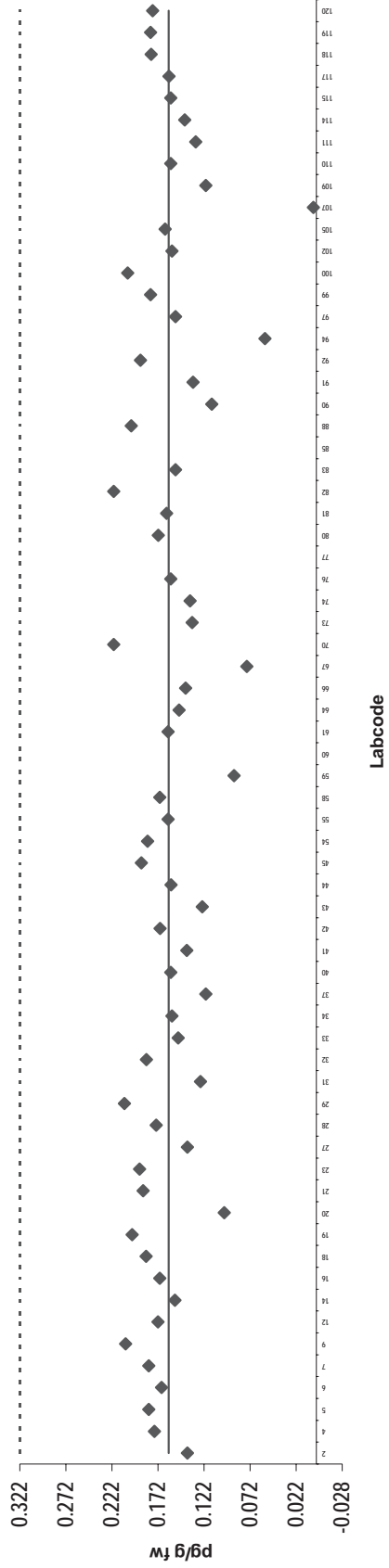
Poultry
Congener: 1,2,3,7,8,9 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.14		83	0.15	
4	0.18		85	0.33	Outlier
5	0.18		88	0.20	
6	0.17		90	0.11	
7	0.18		91	0.13	
9	0.21		92	0.19	
12	0.17		94	0.056	
14	0.15		97	0.15	
16	0.17		99	0.18	
18	0.19		100	0.21	
19	0.20		102	0.16	
20	0.10		105	0.16	
21	0.19		107	0.0033	ND
23	0.19		109	0.12	
27	0.14		110	0.16	
28	0.17		111	0.13	
29	0.21		114	0.14	
31	0.13		115	0.16	
32	0.18		117	0.16	
33	0.15		118	0.18	
34	0.16		119	0.18	
37	0.12		120	0.18	
40	0.16				
41	0.14				
42	0.17				
43	0.12				
44	0.16				
45	0.19				
54	0.18				
55	0.16				
58	0.17				
59	0.089				
60	0.44				
61	0.16				
64	0.15				
66	0.14				
67	0.076				
70	0.22				
73	0.13				
74	0.14				
76	0.16				
77	0.49				
80	0.17				
81	0.16				
82	0.22				

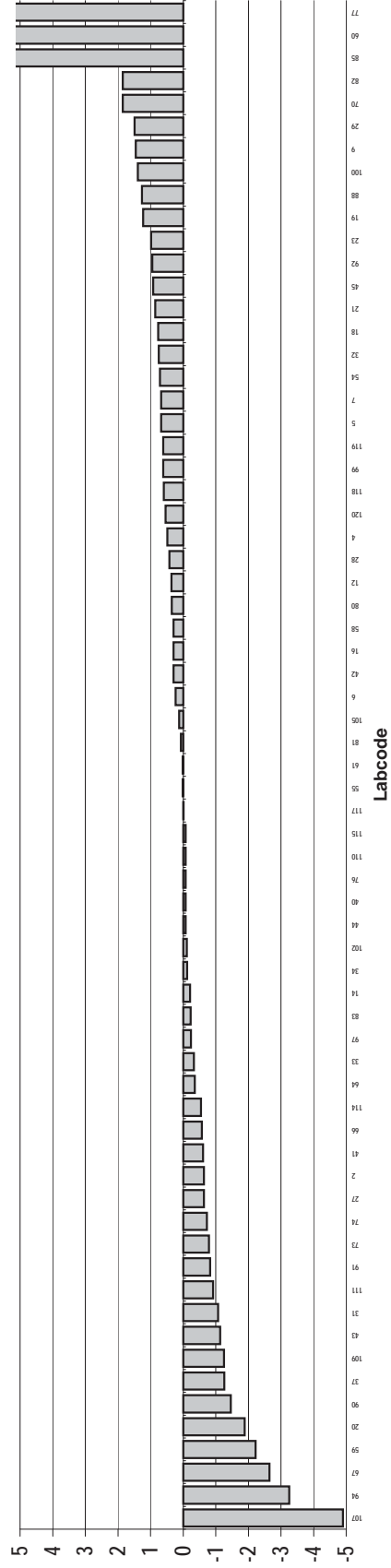
Consensus statistics

Consensus median, pg/g	0.16
Median all values pg/g	0.16
Consensus mean, pg/g	0.16
Standard deviation, pg/g	0.038
Relative standard deviation, %	24
No. of values reported	67
No. of values removed	3
No. of reported non-detects	1

1,2,3,7,8,9 HxCDD



Z-score: 1,2,3,7,8,9 HxCDD



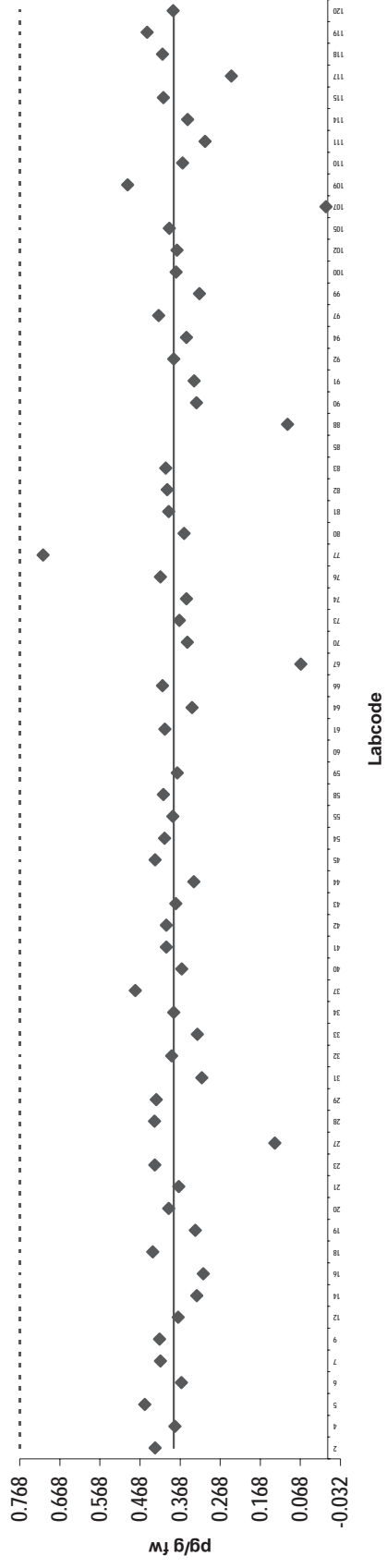
Poultry
Congener: 1,2,3,4,6,7,8 HpCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.43		83	0.40	
4	0.38		85	0.80	Outlier
5	0.46		88	0.10	ND
6	0.37		90	0.33	
7	0.42		91	0.33	
9	0.42		92	0.38	
12	0.37		94	0.35	
14	0.33		97	0.42	
16	0.31		99	0.32	
18	0.44		100	0.38	
19	0.33		102	0.38	
20	0.40		105	0.40	
21	0.37		107	0.0040	ND
23	0.43		109	0.50	
27	0.13		110	0.36	
28	0.43		111	0.31	
29	0.43		114	0.35	
31	0.31		115	0.41	
32	0.39		117	0.24	
33	0.33		118	0.41	
34	0.38		119	0.45	
37	0.48		120	0.39	
40	0.36				
41	0.40				
42	0.40				
43	0.38				
44	0.33				
45	0.43				
54	0.41				
55	0.39				
58	0.41				
59	0.38				
60	0.80				
61	0.41				
64	0.34				
66	0.41				
67	0.067				
70	0.35				
73	0.37				
74	0.35				
76	0.42				
77	0.71				
80	0.36				
81	0.40				
82	0.40				

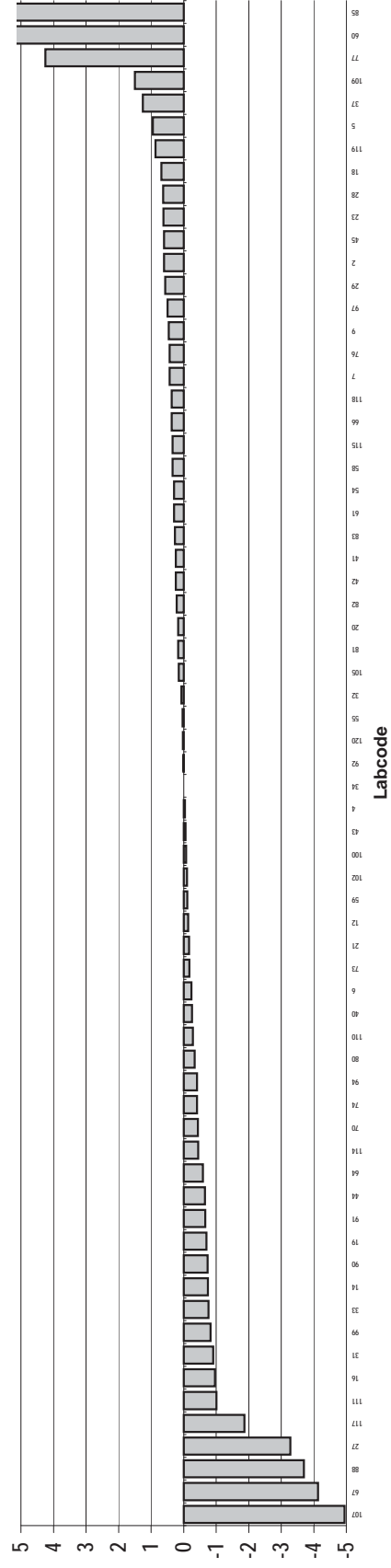
Consensus statistics

Consensus median, pg/g	0.38
Median all values pg/g	0.38
Consensus mean, pg/g	0.37
Standard deviation, pg/g	0.097
Relative standard deviation, %	26
No. of values reported	67
No. of values removed	2
No. of reported non-detects	2

1,2,3,4,6,7,8 HpCDD



Z-score: 1,2,3,4,6,7,8 HpCDD

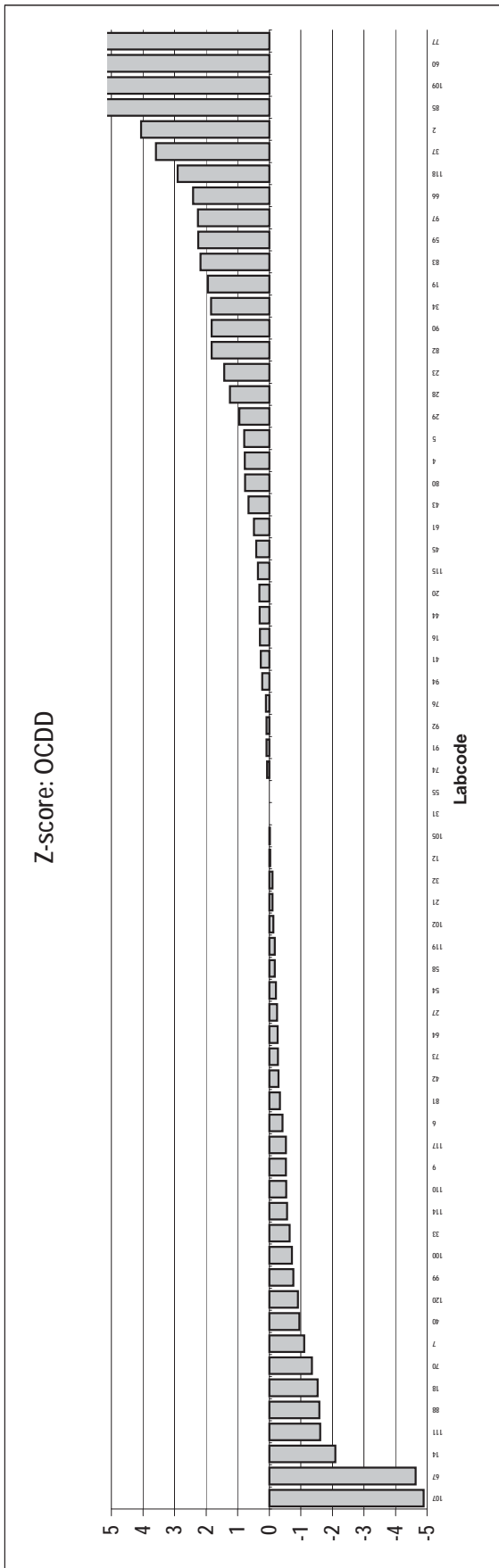
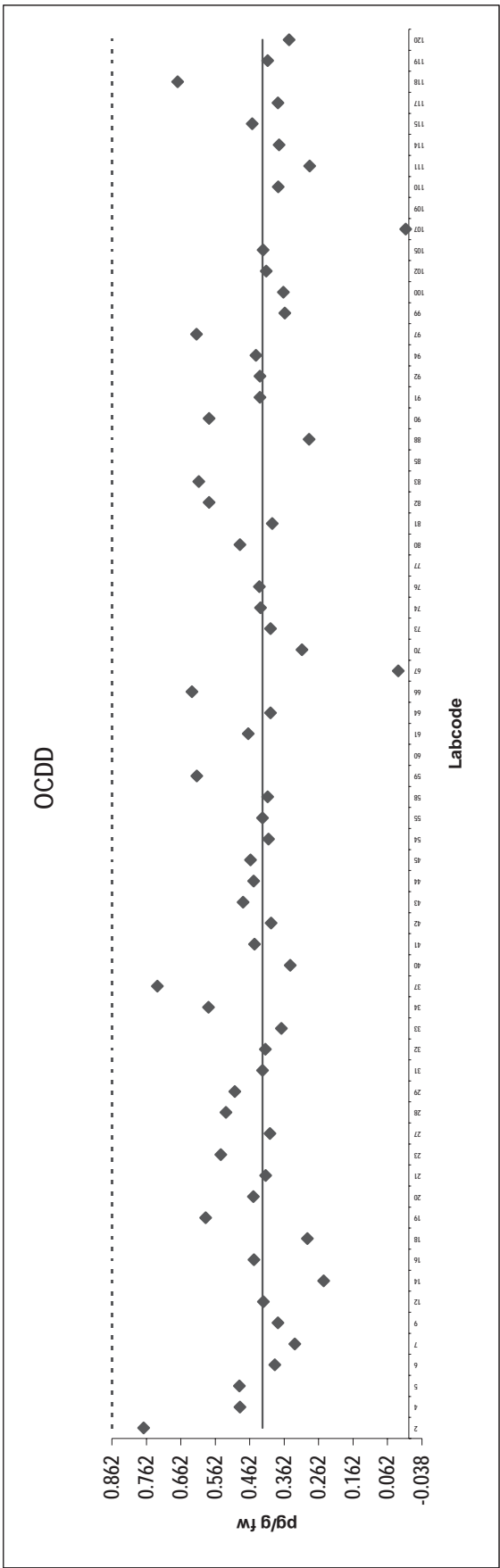


Poultry
Congener: OCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.77	ND	83	0.61	
4	0.49		85	0.88	Outlier
5	0.49		88	0.29	
6	0.39		90	0.58	
7	0.33		91	0.43	
9	0.38		92	0.43	
12	0.42		94	0.44	
14	0.25		97	0.62	
16	0.45		99	0.36	
18	0.30		100	0.36	
19	0.59		102	0.41	
20	0.45		105	0.42	
21	0.42		107	0.0093	ND
23	0.55		109	1.3	Outlier
27	0.40		110	0.38	
28	0.53		111	0.29	
29	0.51		114	0.38	
31	0.43		115	0.46	
32	0.42		117	0.38	
33	0.37		118	0.67	
34	0.58		119	0.41	
37	0.73		120	0.35	
40	0.34				
41	0.45				
42	0.40				
43	0.48				
44	0.45				
45	0.46				
54	0.41				
55	0.43				
58	0.41				
59	0.62				
60	1.5				
61	0.47				
64	0.40				
66	0.63				
67	0.031				
70	0.31				
73	0.40				
74	0.43				
76	0.43				
77	1.7				
80	0.49				
81	0.40				
82	0.58				

Consensus statistics

Consensus median, pg/g	0.43
Median all values pg/g	0.43
Consensus mean, pg/g	0.44
Standard deviation, pg/g	0.13
Relative standard deviation, %	30
No. of values reported	67
No. of values removed	4
No. of reported non-detects	2

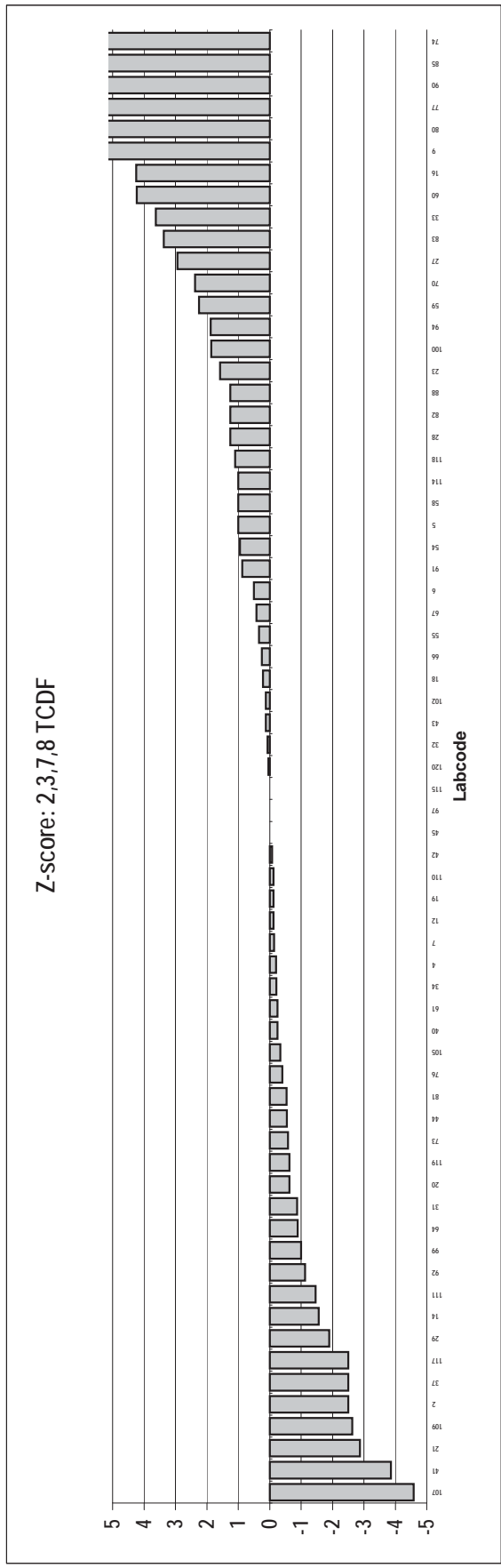
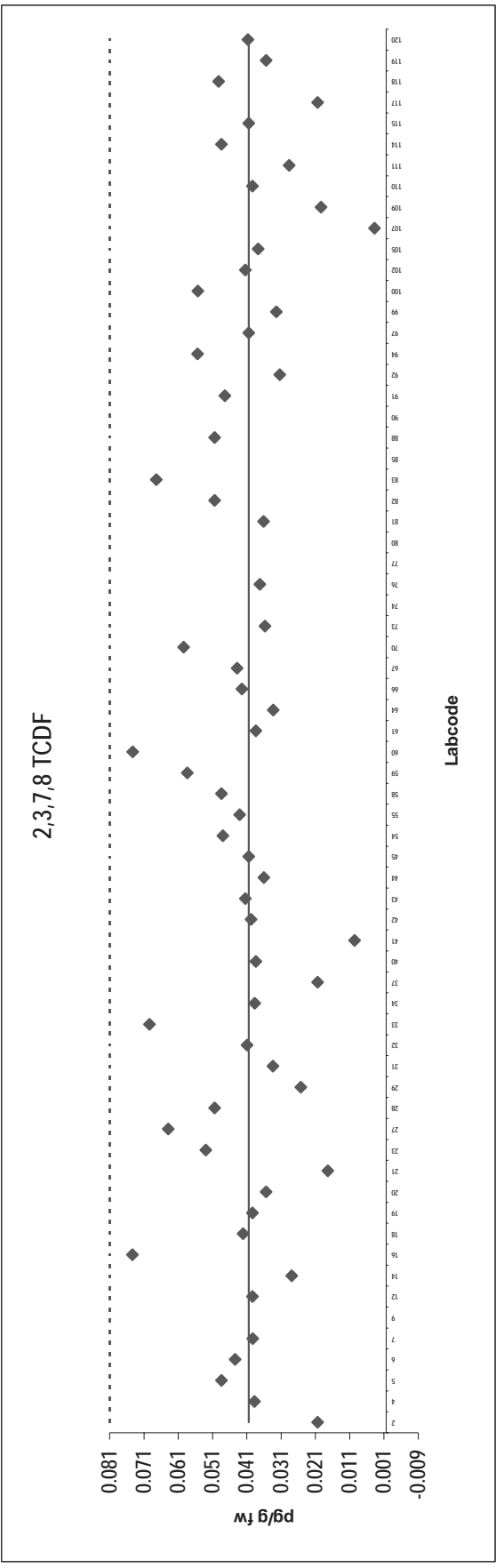


Poultry
Congener: 2,3,7,8 TCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.020	ND	83	0.067	
4	0.038		85	0.20	Outlier,ND
5	0.048		88	0.050	
6	0.044		90	0.11	Outlier
7	0.039		91	0.047	
9	0.094		92	0.031	
12	0.039	Outlier	94	0.055	
14	0.028		97	0.040	
16	0.074		99	0.032	
18	0.042		100	0.055	
19	0.039		102	0.041	
20	0.035		105	0.037	
21	0.017		107	0.0033	ND
23	0.053	ND	109	0.019	ND
27	0.063		110	0.039	
28	0.050		111	0.028	
29	0.025		114	0.048	
31	0.033		115	0.040	
32	0.041		117	0.020	
33	0.069		118	0.049	
34	0.038		119	0.035	
37	0.020		120	0.040	
40	0.038				
41	0.0091				
42	0.039	ND			
43	0.041				
44	0.036				
45	0.040				
54	0.048				
55	0.043				
58	0.048				
59	0.058				
60	0.074				
61	0.038				
64	0.033				
66	0.042				
67	0.043				
70	0.059				
73	0.035				
74	0.25	Outlier,ND			
76	0.037				
77	0.10	Outlier			
80	0.098	Outlier			
81	0.036				
82	0.050				

Consensus statistics

Consensus median, pg/g	0.040
Median all values pg/g	0.040
Consensus mean, pg/g	0.041
Standard deviation, pg/g	0.014
Relative standard deviation, %	35
No. of values reported	67
No. of values removed	6
No. of reported non-detects	7



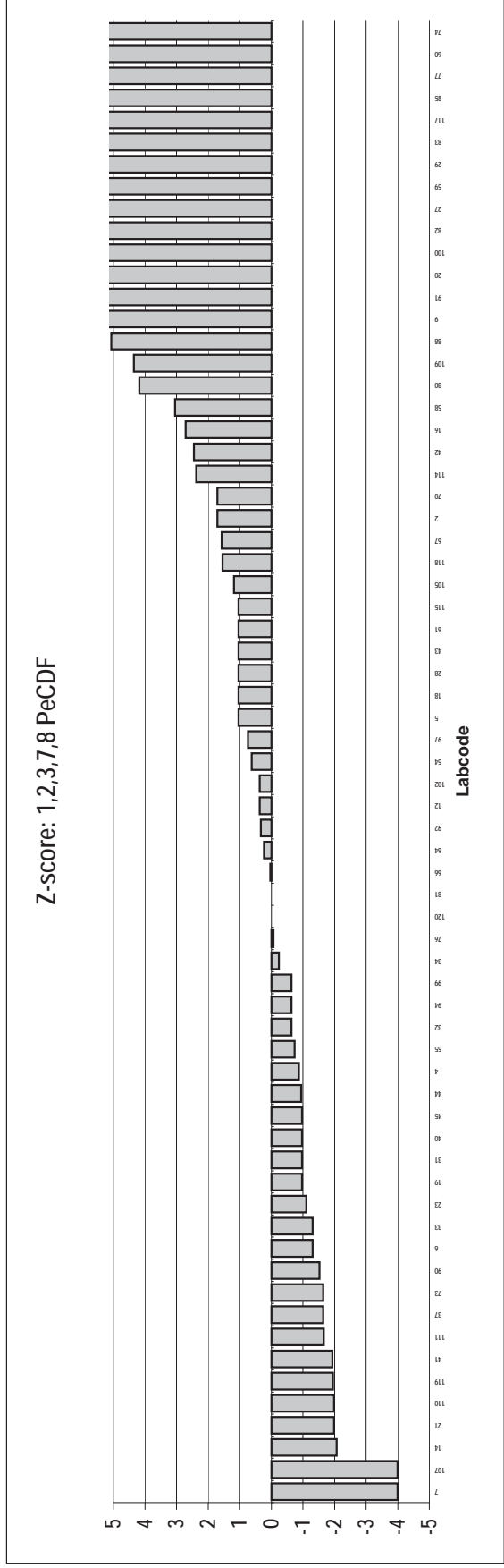
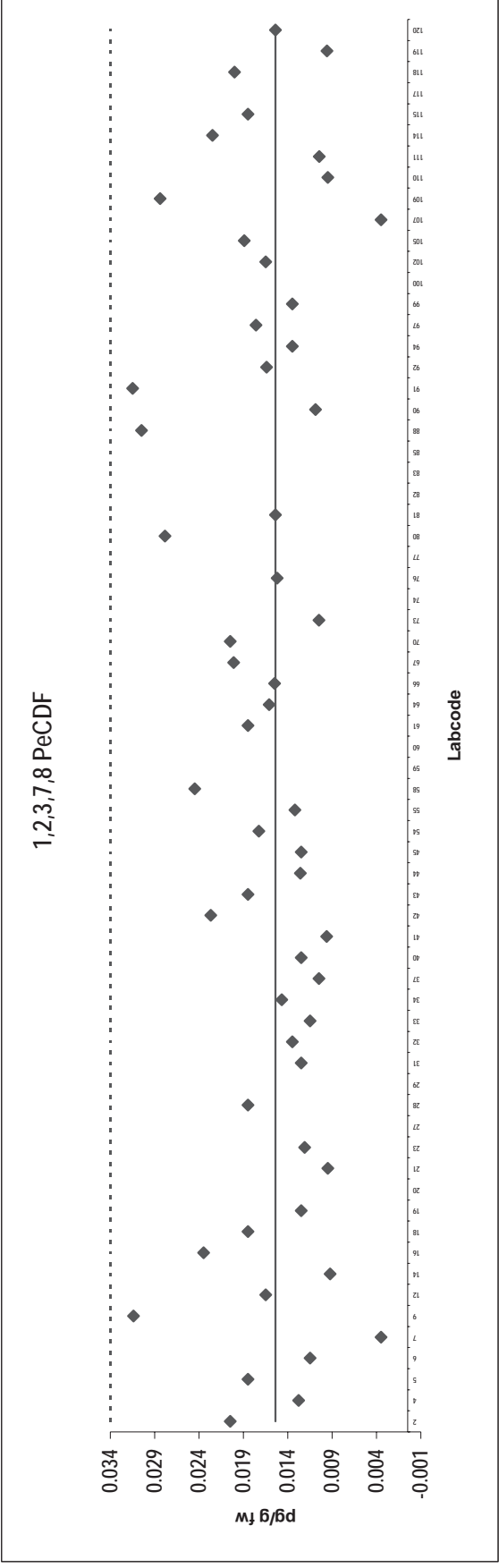
Poultry

Congener: 1,2,3,7,8 PeCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.020	ND	83	0.050	Outlier,ND
4	0.012		85	0.20	Outlier,ND
5	0.018		88	0.030	ND
6	0.011		90	0.010	
7	0.0030		91	0.031	
9	0.031		92	0.016	
12	0.016		94	0.013	
14	0.0088	ND	97	0.017	
16	0.023		99	0.013	
18	0.018		100	0.040	Outlier
19	0.012		102	0.016	
20	0.038	Outlier	105	0.018	
21	0.0090	ND	107	0.0030	ND
23	0.012		109	0.028	
27	0.042	Outlier	110	0.0090	
28	0.018		111	0.0100	
29	0.049	Outlier	114	0.022	
31	0.012		115	0.018	
32	0.013		117	0.050	Outlier,ND
33	0.011		118	0.020	
34	0.014		119	0.0091	
37	0.010		120	0.015	
40	0.012				
41	0.0091	ND			
42	0.022				
43	0.018	ND			
44	0.012				
45	0.012				
54	0.017				
55	0.013				
58	0.024				
59	0.044	Outlier			
60	0.28	Outlier			
61	0.018				
64	0.016	ND			
66	0.015				
67	0.020				
70	0.020				
73	0.010	ND			
74	1.3	Outlier,ND			
76	0.015				
77	0.28	Outlier			
80	0.027				
81	0.015				
82	0.040	Outlier,ND			

Consensus statistics

Consensus median, pg/g	0.015
Median all values pg/g	0.017
Consensus mean, pg/g	0.016
Standard deviation, pg/g	0.0063
Relative standard deviation, %	40
No. of values reported	67
No. of values removed	12
No. of reported non-detects	14



Poultry

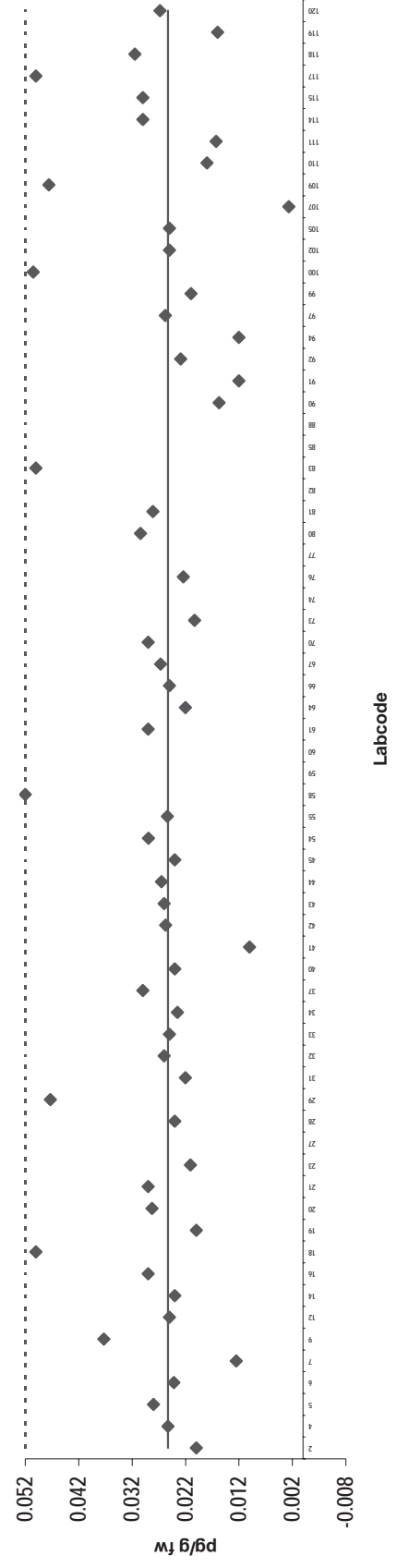
Congener: 2,3,4,7,8 PeCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.020	ND	83	0.050	ND
4	0.025		85	0.20	Outlier,ND
5	0.028		88	0.062	Outlier
6	0.024		90	0.016	
7	0.013		91	0.012	
9	0.037		92	0.023	
12	0.025		94	0.012	
14	0.024		97	0.026	
16	0.029		99	0.021	
18	0.050		100	0.051	
19	0.020		102	0.025	
20	0.028		105	0.025	
21	0.029		107	0.0027	ND
23	0.021		109	0.048	
27	0.100	Outlier	110	0.018	
28	0.024		111	0.016	
29	0.047		114	0.030	
31	0.022		115	0.030	
32	0.026		117	0.050	ND
33	0.025		118	0.032	
34	0.024		119	0.016	
37	0.030		120	0.027	
40	0.024				
41	0.010				
42	0.026				
43	0.026				
44	0.027				
45	0.024				
54	0.029				
55	0.025				
58	0.052				
59	0.053	Outlier			
60	0.28	Outlier			
61	0.029				
64	0.022				
66	0.025				
67	0.027				
70	0.029				
73	0.020				
74	1.3	Outlier,ND			
76	0.022				
77	0.41	Outlier			
80	0.030				
81	0.028				
82	0.080	Outlier			

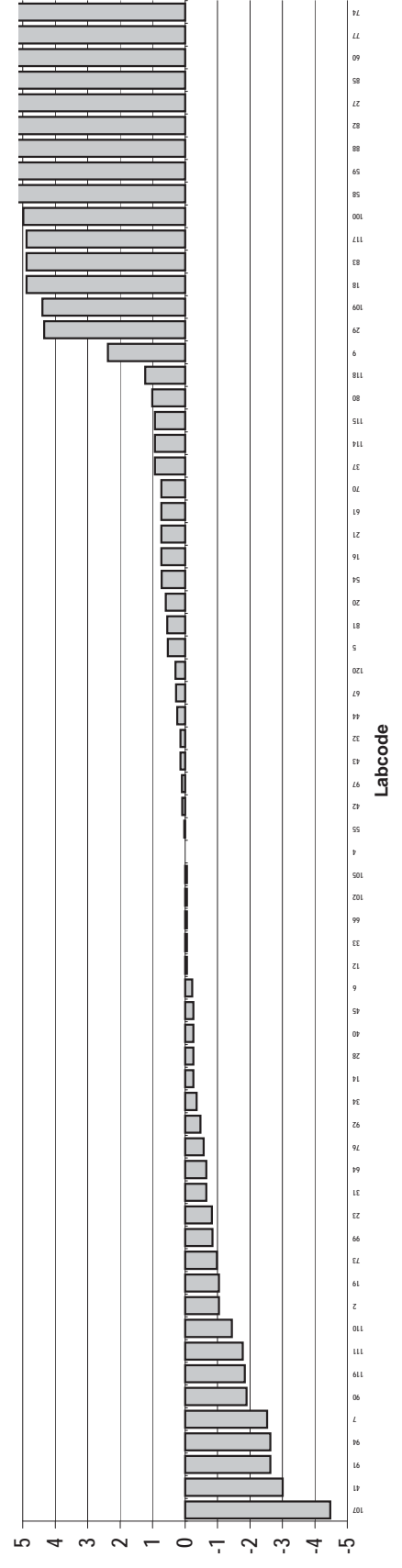
Consensus statistics

Consensus median, pg/g	0.025
Median all values pg/g	0.026
Consensus mean, pg/g	0.027
Standard deviation, pg/g	0.0103
Relative standard deviation, %	39
No. of values reported	67
No. of values removed	8
No. of reported non-detects	6

2,3,4,7,8 PeCDF



Z-score: 2,3,4,7,8 PeCDF



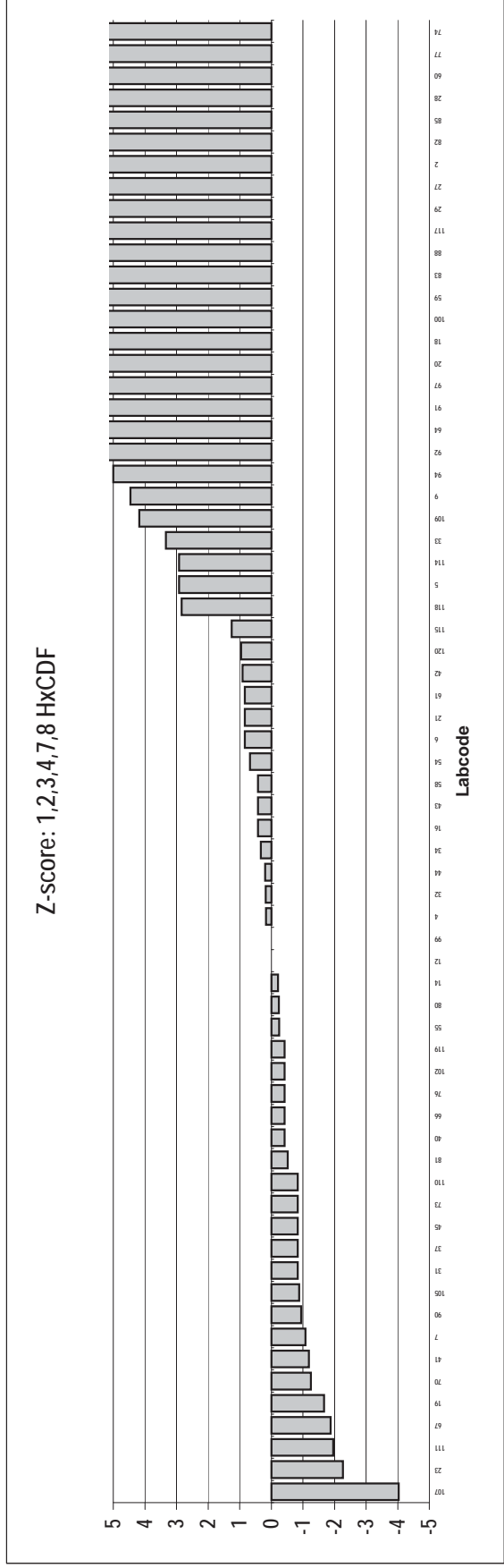
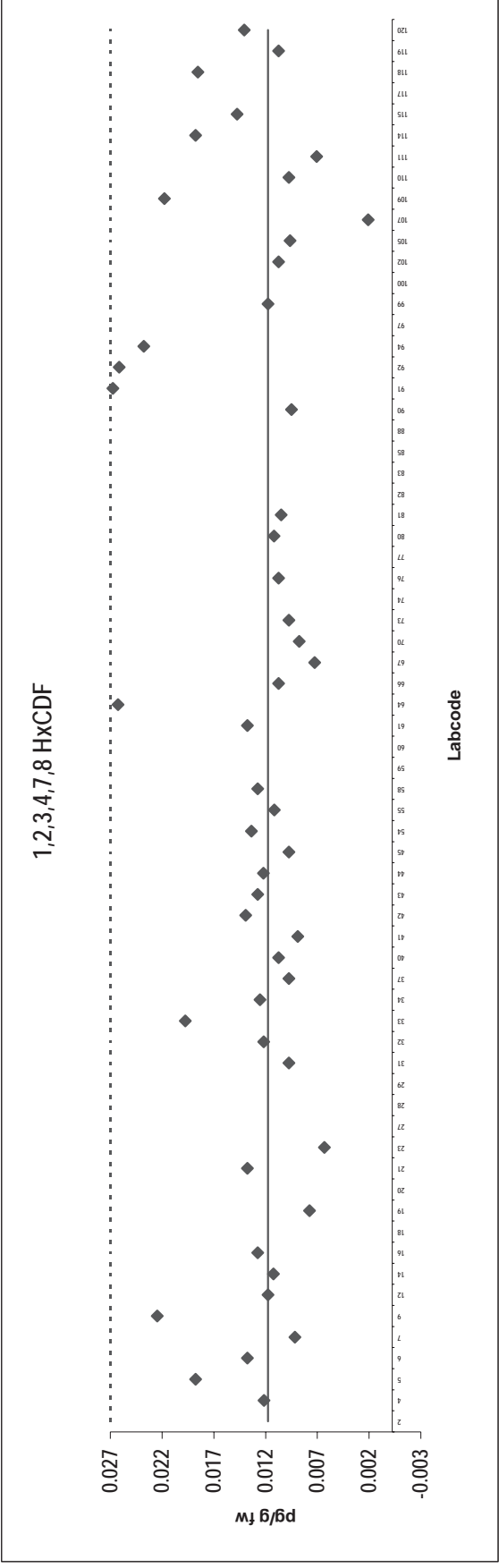
Poultry

Congener: 1,2,3,4,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.071	Outlier,ND	83	0.050	Outlier,ND
4	0.012		85	0.10	Outlier,ND
5	0.019		88	0.050	Outlier,ND
6	0.014		90	0.0097	
7	0.0094		91	0.027	
9	0.023		92	0.026	
12	0.012		94	0.024	ND
14	0.012		97	0.028	Outlier
16	0.013		99	0.012	
18	0.033	Outlier	100	0.042	Outlier
19	0.0080		102	0.011	
20	0.030	Outlier	105	0.0099	ND
21	0.014	ND	107	0.0023	ND
23	0.0066		109	0.022	ND
27	0.053	Outlier	110	0.010	ND
28	0.11	Outlier	111	0.0073	
29	0.051	Outlier	114	0.019	
31	0.010		115	0.015	
32	0.012		117	0.050	
33	0.020	ND	118	0.019	
34	0.013		119	0.011	
37	0.010		120	0.014	
40	0.011				Outlier,ND
41	0.0091	ND			
42	0.014				
43	0.013				
44	0.012				
45	0.010				
54	0.014				
55	0.011				
58	0.013				
59	0.043	Outlier			
60	0.26	Outlier			
61	0.014				
64	0.027	ND			
66	0.011				
67	0.0075	ND			
70	0.0090				
73	0.010	ND			
74	1.3	Outlier,ND			
76	0.011				
77	0.36	Outlier			
80	0.011				
81	0.011				
82	0.080	Outlier,ND			

Consensus statistics

Consensus median, pg/g	0.012
Median all values pg/g	0.014
Consensus mean, pg/g	0.013
Standard deviation, pg/g	0.0053
Relative standard deviation, %	40
No. of values reported	67
No. of values removed	17
No. of reported non-detects	18



Poultry

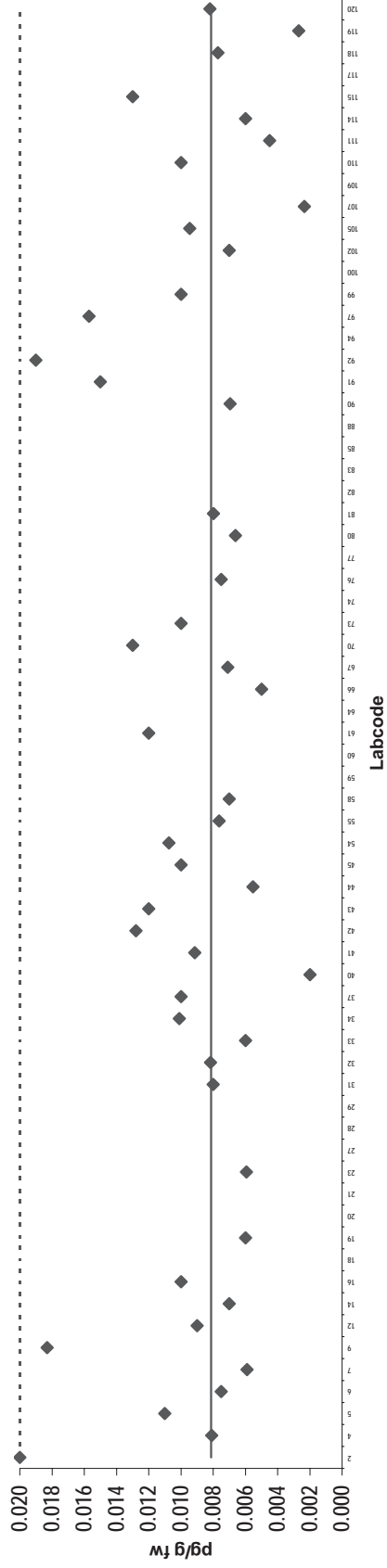
Congener: 1,2,3,6,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.020	ND	83	0.050	Outlier,ND
4	0.0081		85	0.10	Outlier,ND
5	0.011		88	0.15	Outlier
6	0.0075		90	0.0070	
7	0.0059		91	0.015	
9	0.018		92	0.019	
12	0.0090		94	0.026	Outlier,ND
14	0.0070	ND	97	0.016	
16	0.010	ND	99	0.010	
18	0.034	Outlier	100	0.028	Outlier
19	0.0060		102	0.0070	
20	0.030	Outlier	105	0.0095	ND
21	0.025	Outlier	107	0.0023	ND
23	0.0059		109	0.049	Outlier
27	0.073	Outlier	110	0.010	ND
28	0.021	Outlier	111	0.0045	
29	0.047	Outlier	114	0.0060	
31	0.0080		115	0.013	
32	0.0082		117	0.050	Outlier,ND
33	0.0060		118	0.0077	
34	0.010		119	0.0027	ND
37	0.010		120	0.0082	
40	0.0020				
41	0.0091	ND			
42	0.013				
43	0.012	ND			
44	0.0055				
45	0.010	ND			
54	0.011				
55	0.0076				
58	0.0070				
59	0.034	Outlier			
60	0.28	Outlier			
61	0.012				
64	0.026	Outlier,ND			
66	0.0050				
67	0.0071	ND			
70	0.013				
73	0.010	ND			
74	1.3	Outlier,ND			
76	0.0075				
77	0.38	Outlier			
80	0.0066				
81	0.0080				
82	0.080	Outlier,ND			

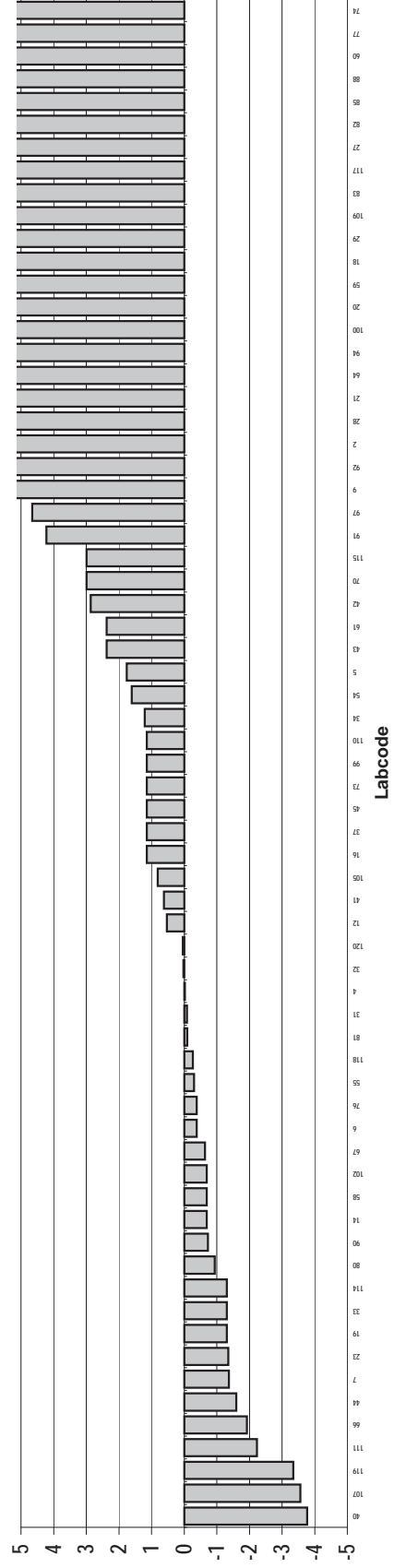
Consensus statistics

Consensus median, pg/g	0.0081
Median all values pg/g	0.010
Consensus mean, pg/g	0.0091
Standard deviation, pg/g	0.0039
Relative standard deviation, %	44
No. of values reported	67
No. of values removed	19
No. of reported non-detects	19

1,2,3,6,7,8 HxCDF



Z-score: 1,2,3,6,7,8 HxCDF



Poultry

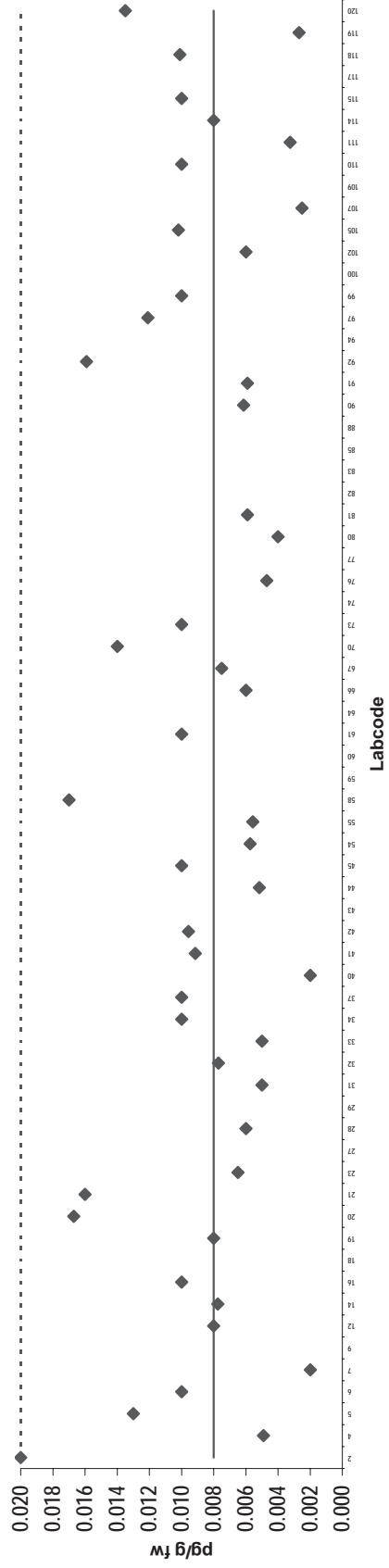
Congener: 2,3,4,6,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.020	ND	83	0.050	Outlier,ND
4	0.0049		85	0.20	Outlier,ND
5	0.013		88	0.050	Outlier,ND
6	0.010		90	0.0061	
7	0.0020	ND	91	0.0059	
9	0.021	Outlier	92	0.016	
12	0.0080		94	0.025	Outlier,ND
14	0.0078	ND	97	0.012	
16	0.010	ND	99	0.010	ND
18	0.020	Outlier	100	0.023	Outlier
19	0.0080		102	0.0060	
20	0.017		105	0.010	ND
21	0.016	ND	107	0.0025	ND
23	0.0065		109	0.024	Outlier,ND
27	0.029	Outlier	110	0.010	ND
28	0.0060		111	0.0033	
29	0.028	Outlier	114	0.0080	
31	0.0050		115	0.010	ND
32	0.0077		117	0.050	Outlier,ND
33	0.0050		118	0.010	
34	0.010	ND	119	0.0027	ND
37	0.010		120	0.014	
40	0.0020				
41	0.0091	ND			
42	0.0096				
43	0.021	Outlier			
44	0.0052				
45	0.010	ND			
54	0.0057				
55	0.0056				
58	0.017				
59	0.026	Outlier			
60	0.36	Outlier			
61	0.010	ND			
64	0.027	Outlier,ND			
66	0.0060				
67	0.0075	ND			
70	0.014				
73	0.010	ND			
74	1.3	Outlier,ND			
76	0.0047				
77	0.23	Outlier			
80	0.0040				
81	0.0059				
82	0.080	Outlier,ND			

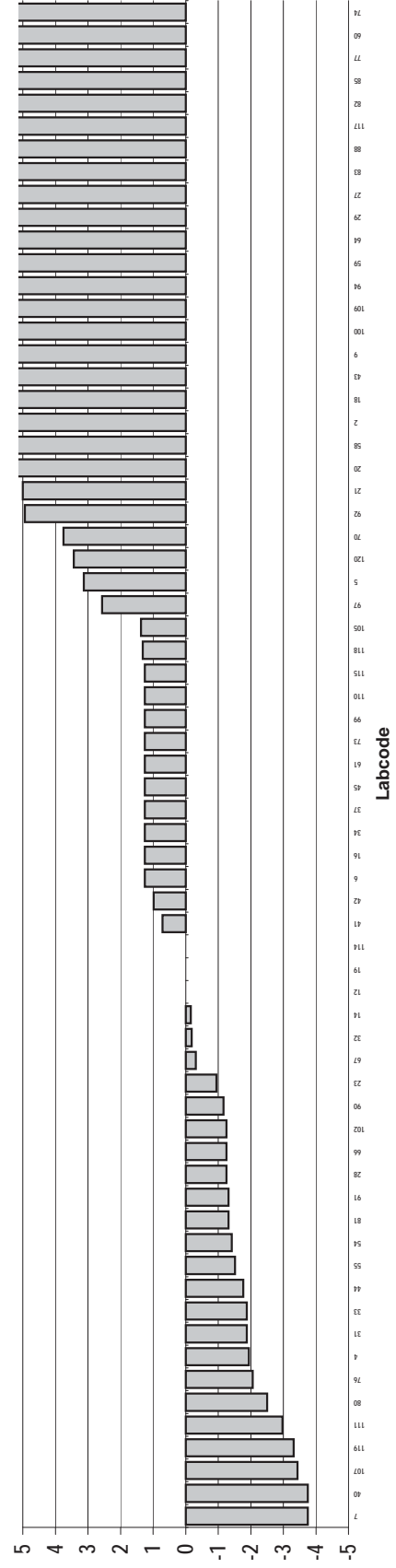
Consensus statistics

Consensus median, pg/g	0.0080
Median all values pg/g	0.010
Consensus mean, pg/g	0.0086
Standard deviation, pg/g	0.0041
Relative standard deviation, %	49
No. of values reported	67
No. of values removed	18
No. of reported non-detects	26

2,3,4,6,7,8 HxCDF



Z-score: 2,3,4,6,7,8 HxCDF



Poultry

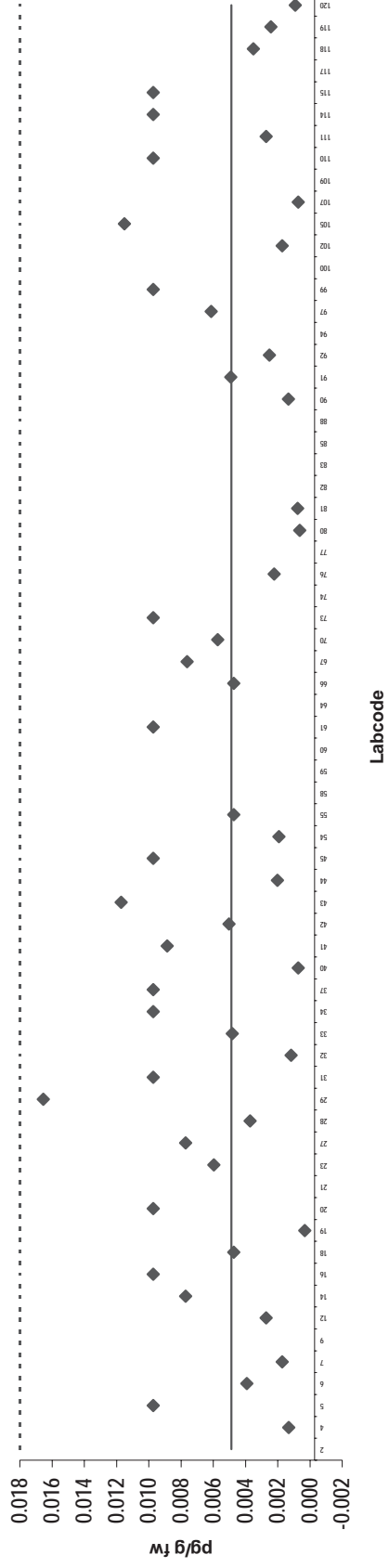
Congener: 1,2,3,7,8,9 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.35	Outlier,ND	83	0.050	Outlier,ND
4	0.0016		85	0.20	Outlier,ND
5	0.010	ND	88	0.050	Outlier,ND
6	0.0042		90	0.0016	
7	0.0020	ND	91	0.0052	
9	0.020	Outlier	92	0.0028	ND
12	0.0030	ND	94	0.025	Outlier,ND
14	0.0080	ND	97	0.0064	
16	0.010	ND	99	0.010	ND
18	0.0050	ND	100	0.027	Outlier
19	0.00060		102	0.0020	ND
20	0.010	ND	105	0.012	ND
21	0.023	Outlier	107	0.0010	ND
23	0.0063	ND	109	0.032	Outlier,ND
27	0.0080	ND	110	0.010	ND
28	0.0040	ND	111	0.0030	ND
29	0.017		114	0.010	
31	0.010	ND	115	0.010	ND
32	0.0014		117	0.050	Outlier,ND
33	0.0051	ND	118	0.0038	
34	0.010	ND	119	0.0027	ND
37	0.010		120	0.0012	ND
40	0.0010	ND			
41	0.0091	ND			
42	0.0053				
43	0.012	ND			
44	0.0023	ND			
45	0.010	ND			
54	0.0022	ND			
55	0.0050	ND			
58	0.024	Outlier			
59	0.045	Outlier			
60	0.33	Outlier			
61	0.010	ND			
64	0.033	Outlier,ND			
66	0.0050				
67	0.0079	ND			
70	0.0060				
73	0.010	ND			
74	1.3	Outlier,ND			
76	0.0025	ND			
77	0.74	Outlier			
80	0.00091				
81	0.0010	ND			
82	0.080	Outlier,ND			

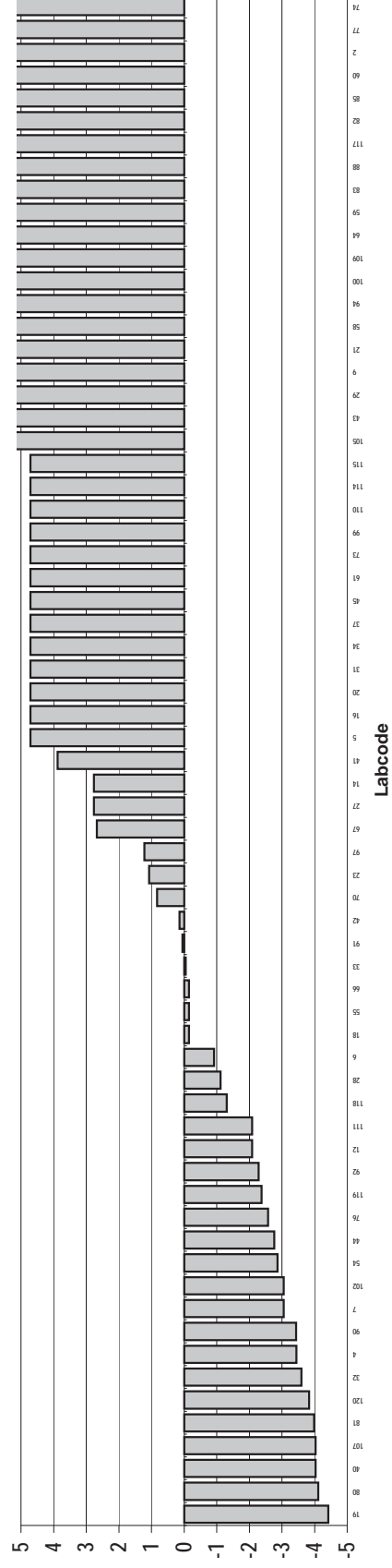
Consensus statistics

Consensus median, pg/g	0.0052
Median all values pg/g	0.0091
Consensus mean, pg/g	0.0060
Standard deviation, pg/g	0.0039
Relative standard deviation, %	66
No. of values reported	67
No. of values removed	17
No. of reported non-detects	44

1,2,3,7,8,9 HxCDF



Z-score: 1,2,3,7,8,9 HxCDF



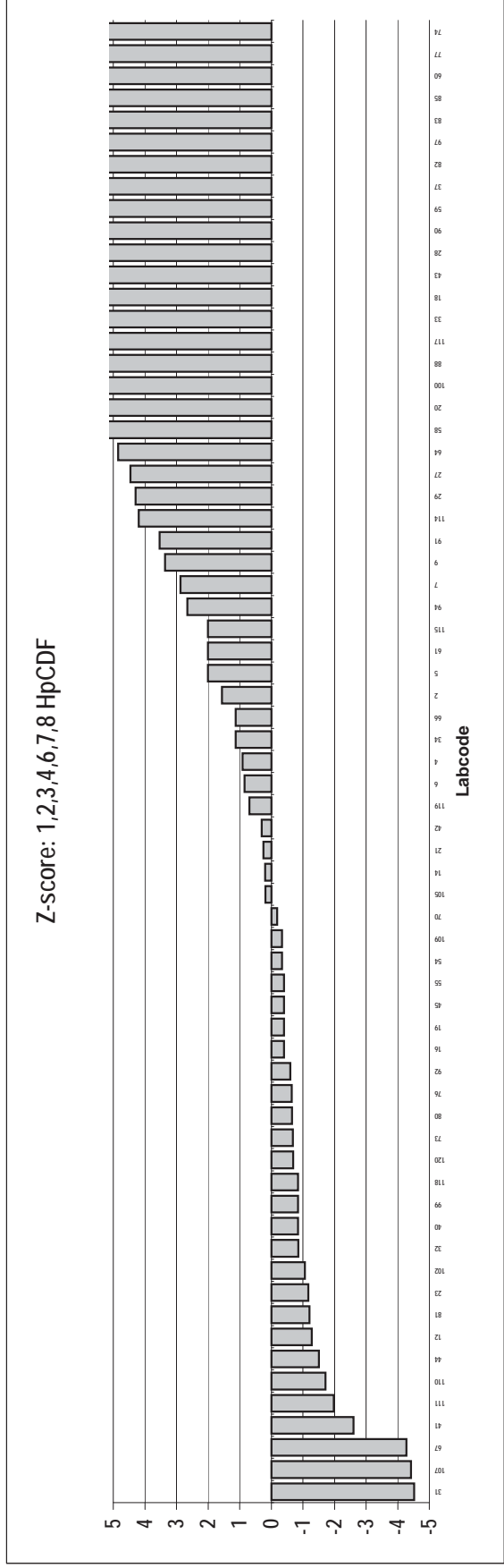
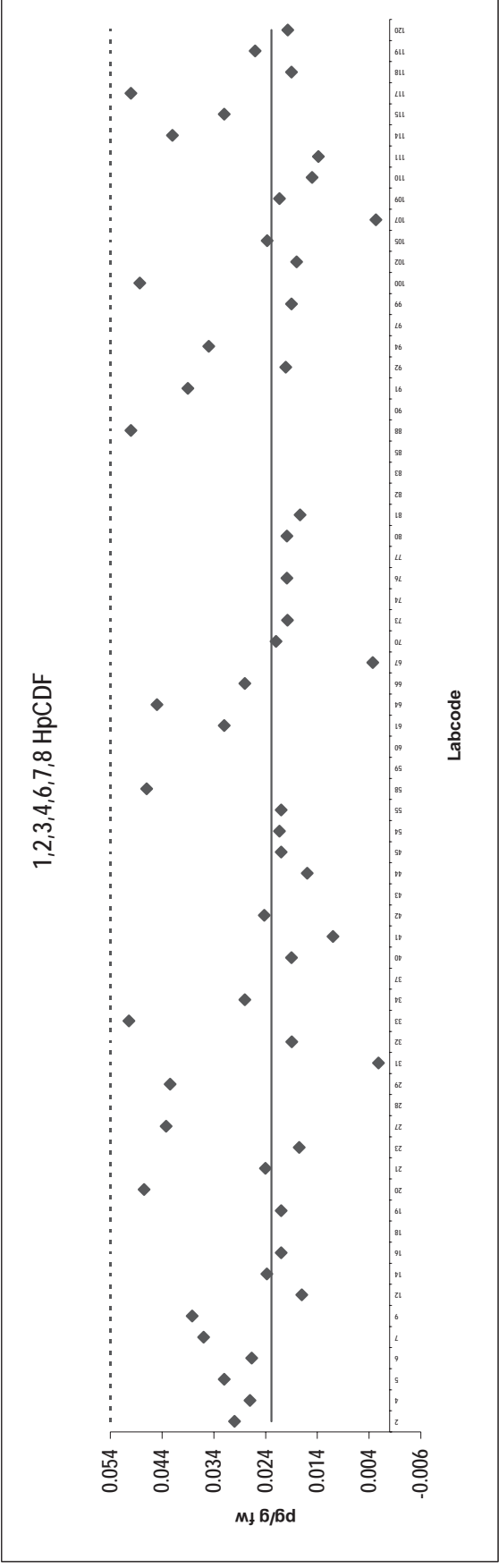
Poultry

Congener: 1,2,3,4,6,7,8 HpCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.030	ND	83	0.15	Outlier,ND
4	0.027		85	0.20	Outlier,ND
5	0.032		88	0.050	ND
6	0.027		90	0.078	Outlier
7	0.036		91	0.039	
9	0.038		92	0.020	
12	0.017		94	0.035	
14	0.024		97	0.12	Outlier
16	0.021		99	0.019	
18	0.056		100	0.048	
19	0.021	Outlier	102	0.018	
20	0.048		105	0.024	
21	0.024		107	0.0027	ND
23	0.018		109	0.021	ND
27	0.043		110	0.015	ND
28	0.077	Outlier	111	0.014	
29	0.042		114	0.042	
31	0.0022		115	0.032	
32	0.019		117	0.050	ND
33	0.050		118	0.019	
34	0.028		119	0.026	
37	0.10	Outlier	120	0.020	
40	0.019				
41	0.011				
42	0.024				
43	0.071	Outlier			
44	0.016				
45	0.021				
54	0.021				
55	0.021				
58	0.047				
59	0.098	Outlier			
60	0.35	Outlier			
61	0.032				
64	0.045	ND			
66	0.028				
67	0.0033				
70	0.022				
73	0.020				
74	1.3	Outlier,ND			
76	0.020				
77	0.36	Outlier			
80	0.020				
81	0.017				
82	0.12	Outlier,ND			

Consensus statistics

Consensus median, pg/g	0.023
Median all values pg/g	0.027
Consensus mean, pg/g	0.026
Standard deviation, pg/g	0.012
Relative standard deviation, %	47
No. of values reported	67
No. of values removed	13
No. of reported non-detects	11



Poultry

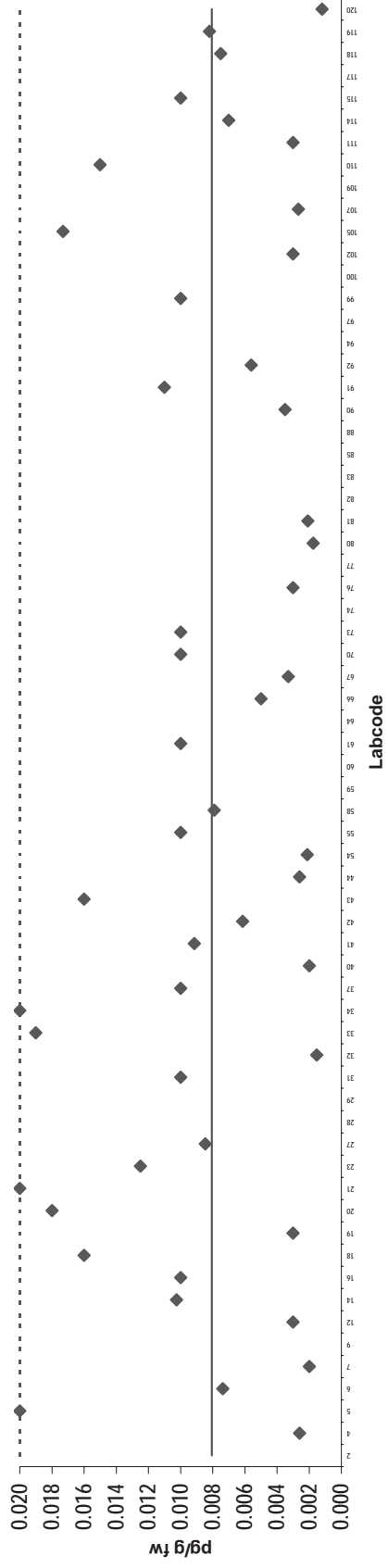
Congener: 1,2,3,4,7,8,9 HpCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.36	Outlier,ND	85	0.20	Outlier,ND
4	0.0026		88	0.050	Outlier,ND
5	0.020	ND	90	0.0035	
6	0.0074		91	0.011	
7	0.0020	ND	92	0.0056	ND
9	0.020	Outlier	94	0.030	Outlier,ND
12	0.0030	ND	97	0.037	Outlier
14	0.010	ND	99	0.010	ND
16	0.010	ND	100	0.030	Outlier
18	0.016		102	0.0030	
19	0.0030		105	0.017	ND
20	0.018	ND	107	0.0027	ND
21	0.020	ND	109	0.039	Outlier,ND
23	0.013	ND	110	0.015	ND
27	0.0085		111	0.0030	ND
28	0.031	Outlier	114	0.0070	
29	0.031	Outlier	115	0.010	ND
31	0.010	ND	117	0.050	Outlier,ND
32	0.0015		118	0.0075	
33	0.019	ND	119	0.0082	ND
34	0.020	ND	120	0.0012	ND
37	0.010				
40	0.0020				
41	0.0091	ND			
42	0.0061				
43	0.016	ND			
44	0.0026	ND			
54	0.0021	ND			
55	0.010	ND			
58	0.0079	ND			
59	0.037	Outlier			
60	0.39	Outlier			
61	0.010	ND			
64	0.071	Outlier,ND			
66	0.0050				
67	0.0033	ND			
70	0.010				
73	0.010	ND			
74	1.3	Outlier,ND			
76	0.0030	ND			
77	0.42	Outlier			
80	0.0017				
81	0.0021				
82	0.12	Outlier,ND			
83	0.15	Outlier,ND			

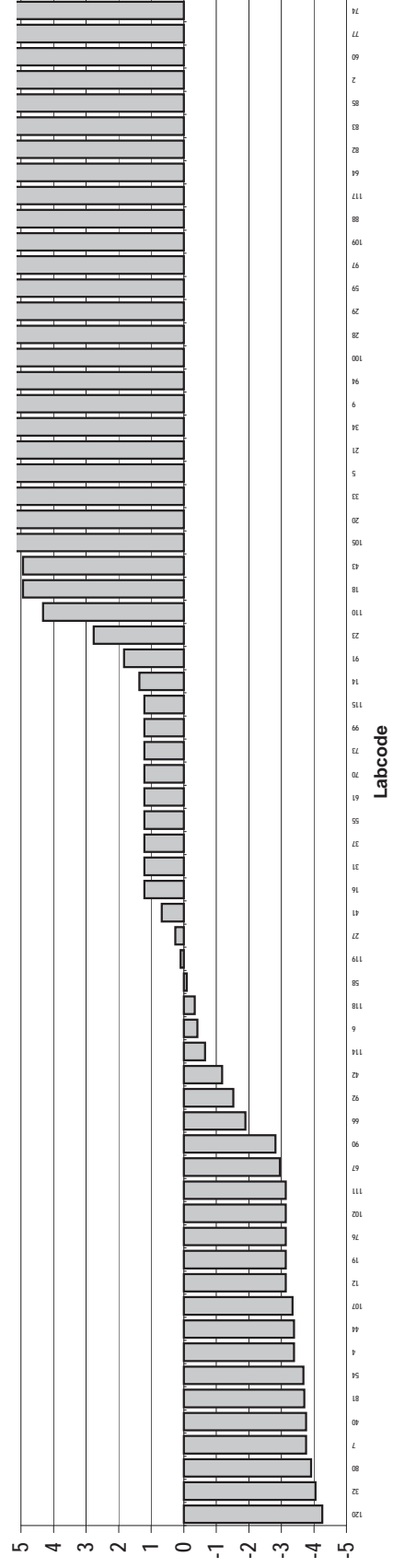
Consensus statistics

Consensus median, pg/g	0.0081
Median all values pg/g	0.010
Consensus mean, pg/g	0.0083
Standard deviation, pg/g	0.0057
Relative standard deviation, %	68
No. of values reported	66
No. of values removed	18
No. of reported non-detects	40

1,2,3,4,7,8,9 HpCDF



Z-score: 1,2,3,4,7,8,9 HpCDF



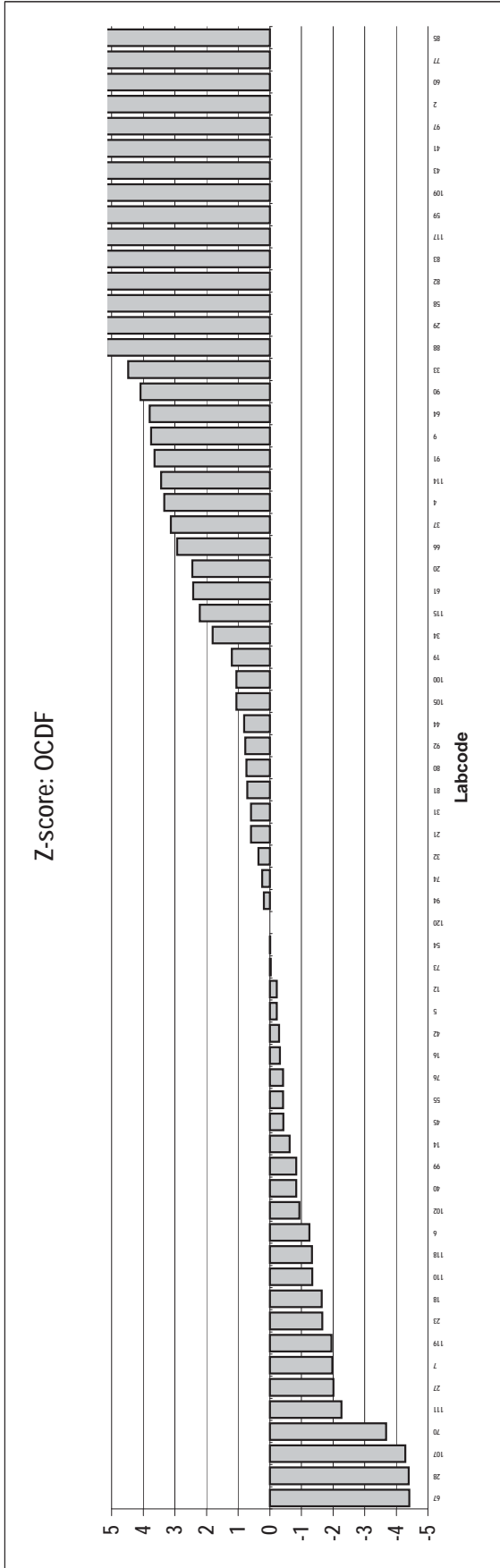
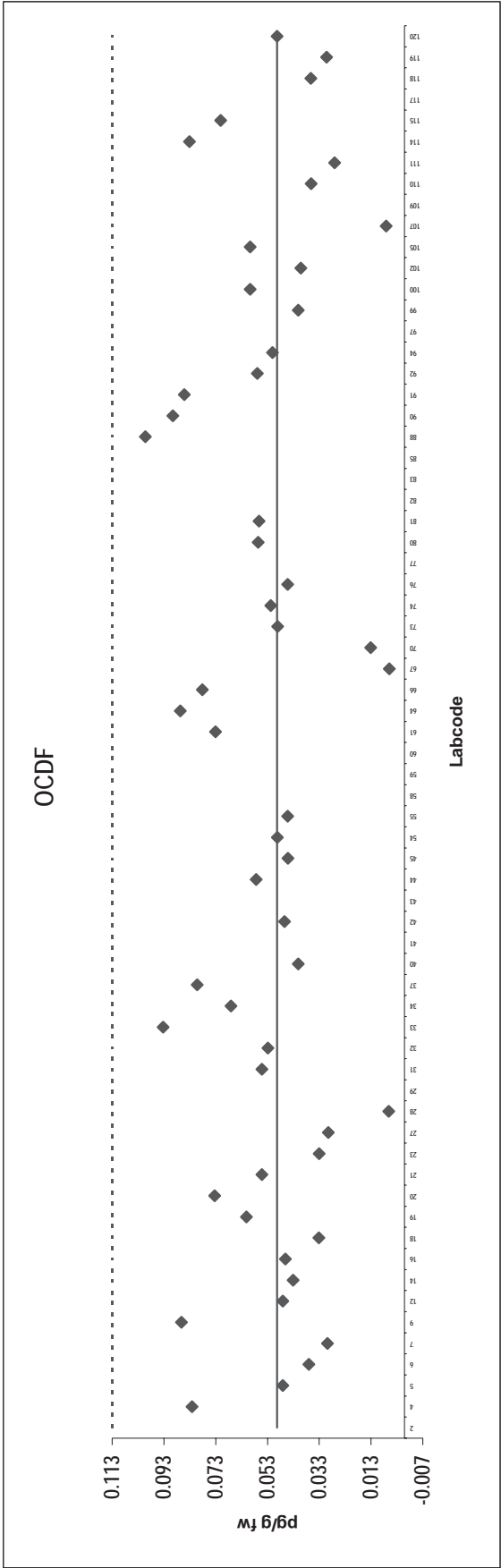
Poultry

Congener: OCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.83	Outlier,ND	83	0.20	Outlier,ND
4	0.082		85	2.0	Outlier,ND
5	0.047		88	0.10	ND
6	0.037		90	0.089	
7	0.030		91	0.085	
9	0.086		92	0.057	
12	0.047		94	0.051	
14	0.043		97	0.41	Outlier
16	0.046		99	0.041	
18	0.033		100	0.060	
19	0.061		102	0.040	
20	0.073		105	0.060	
21	0.055		107	0.0070	ND
23	0.033		109	0.21	Outlier
27	0.029		110	0.036	
28	0.0060		111	0.027	
29	0.12	ND	114	0.083	
31	0.055	Outlier	115	0.071	
32	0.053		117	0.20	Outlier,ND
33	0.093		118	0.036	
34	0.067		119	0.030	
37	0.080		120	0.049	
40	0.041				
41	0.36	Outlier			
42	0.046				
43	0.27	Outlier			
44	0.057				
45	0.045				
54	0.049				
55	0.045				
58	0.16	Outlier			
59	0.21	Outlier			
60	1.1	Outlier			
61	0.073				
64	0.087				
66	0.078				
67	0.0058	ND			
70	0.013				
73	0.049				
74	0.052				
76	0.045				
77	1.1	Outlier			
80	0.056				
81	0.056	Outlier,ND			
82	0.16				

Consensus statistics

Consensus median, pg/g	0.049
Median all values pg/g	0.056
Consensus mean, pg/g	0.052
Standard deviation, pg/g	0.022
Relative standard deviation, %	43
No. of values reported	67
No. of values removed	14
No. of reported non-detects	9

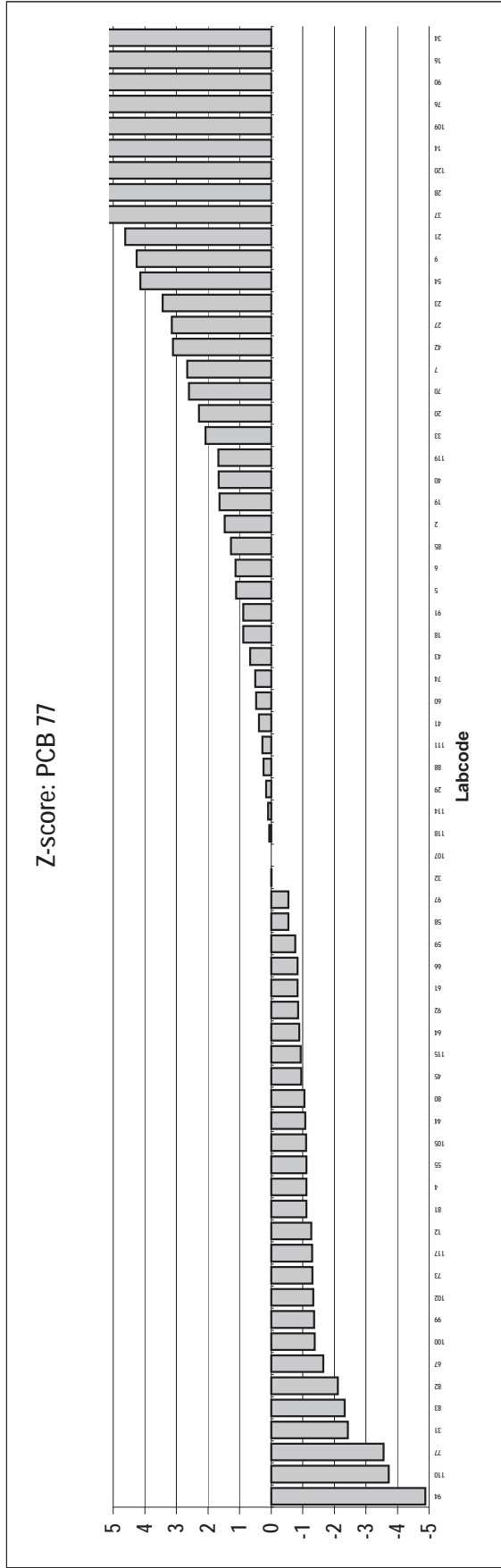
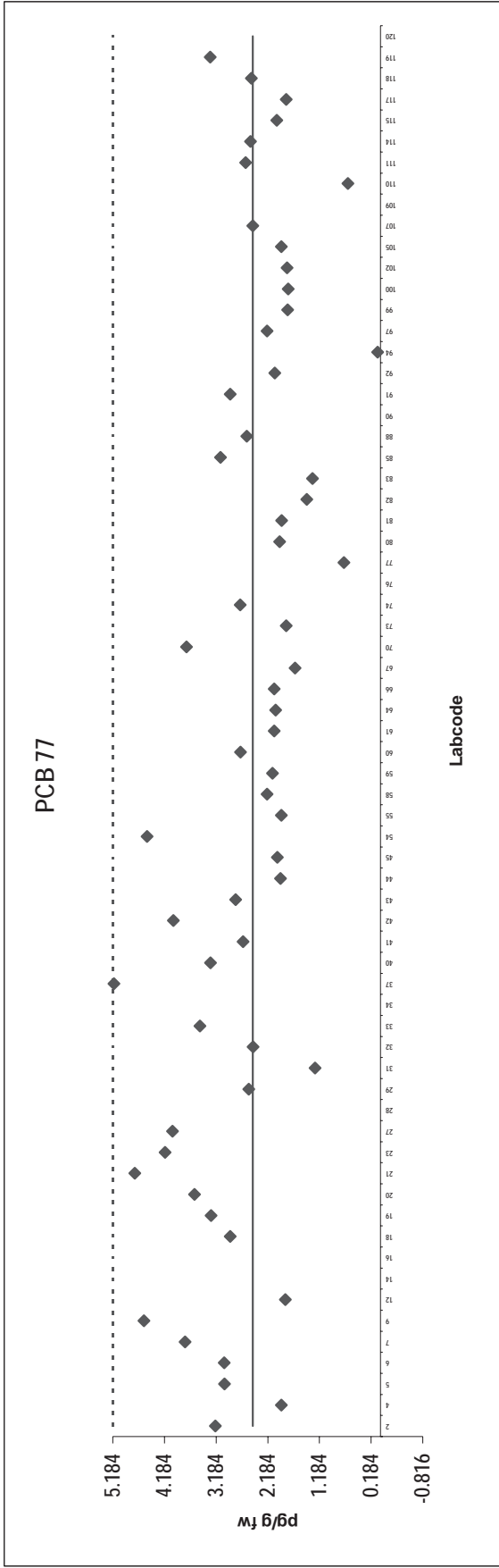


Poultry
Congener: PCB 77

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	3.2		83	1.3	
4	1.9		85	3.1	
5	3.0		88	2.6	
6	3.0		90	7.8	Outlier
7	3.8		91	2.9	
9	4.6		92	2.1	
12	1.8		94	0.060	
14	5.7		97	2.2	
16	10.0	Outlier	99	1.8	
18	2.9	Outlier	100	1.8	
19	3.3		102	1.8	
20	3.6		105	1.9	
21	4.8		107	2.5	
23	4.2		109	6.5	Outlier
27	4.0		110	0.63	
28	5.2		111	2.6	
29	2.6		114	2.5	
31	1.3		115	2.0	
32	2.5		117	1.8	
33	3.5		118	2.5	
34	19	Outlier	119	3.3	
37	5.2		120	5.3	Outlier
40	3.3				
41	2.7				
42	4.0				
43	2.8				
44	1.9				
45	2.0				
54	4.5				
55	1.9				
58	2.2				
59	2.1				
60	2.7				
61	2.1				
64	2.0				
66	2.1				
67	1.7				
70	3.8				
73	1.8				
74	2.7				
76	7.1				
77	0.71	Outlier			
80	2.0				
81	1.9				
82	1.4				

Consensus statistics

Consensus median, pg/g	2.5
Median all values pg/g	2.6
Consensus mean, pg/g	2.6
Standard deviation, pg/g	1.0
Relative standard deviation, %	40
No. of values reported	67
No. of values removed	8
No. of reported non-detects	0



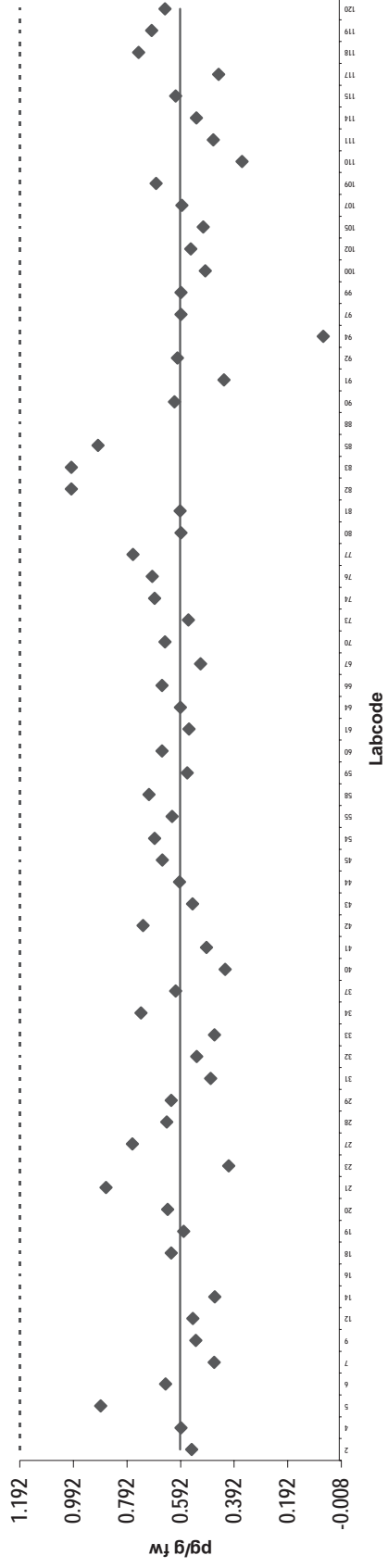
Poultry
Congener: PCB 126

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.55		83	1.0	ND
4	0.59		85	0.90	
5	0.89		88	1.3	Outlier
6	0.65		90	0.61	
7	0.47		91	0.43	
9	0.54		92	0.60	
12	0.55		94	0.060	
14	0.46		97	0.59	
16	1.4		99	0.59	
18	0.63		100	0.50	
19	0.58		102	0.55	
20	0.64		105	0.51	
21	0.87		107	0.59	
23	0.41		109	0.68	
27	0.77		110	0.36	
28	0.64		111	0.47	
29	0.63		114	0.53	
31	0.48		115	0.61	
32	0.53		117	0.45	
33	0.47		118	0.75	
34	0.74		119	0.70	
37	0.61		120	0.65	
40	0.43				
41	0.50				
42	0.73				
43	0.55				
44	0.60				
45	0.66				
54	0.69				
55	0.62				
58	0.71				
59	0.57				
60	0.66				
61	0.56				
64	0.59				
66	0.66				
67	0.52				
70	0.65				
73	0.56				
74	0.69				
76	0.70				
77	0.77				
80	0.59				
81	0.59				
82	1.0	ND			

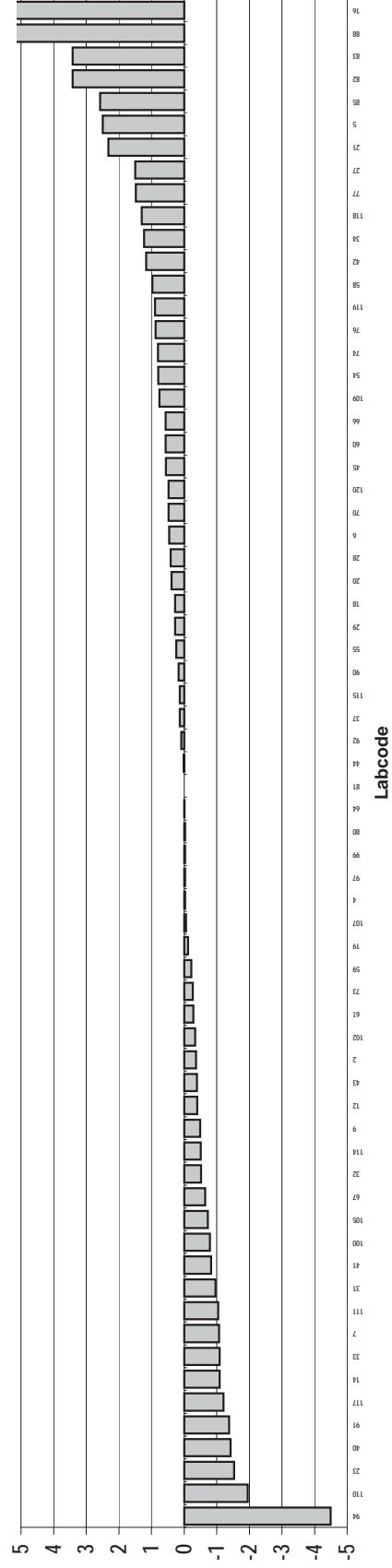
Consensus statistics

Consensus median, pg/g	0.59
Median all values pg/g	0.60
Consensus mean, pg/g	0.61
Standard deviation, pg/g	0.15
Relative standard deviation, %	24
No. of values reported	67
No. of values removed	2
No. of reported non-detects	2

PCB 126



Z-score: PCB 126



Poultry

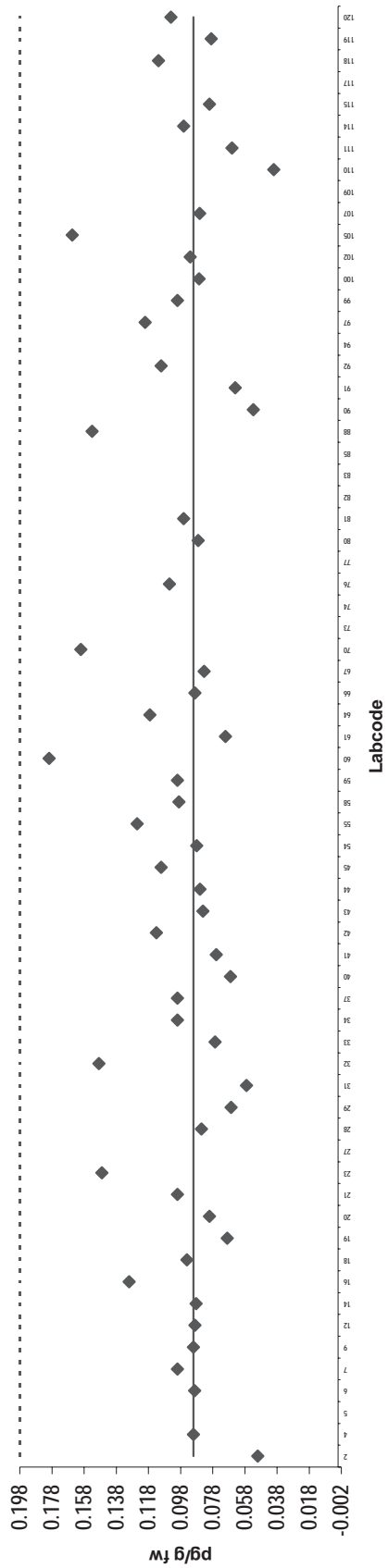
Congener: PCB 169

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.050		83	1.0	Outlier,ND
4	0.090		85	0.50	Outlier,ND
5	0.20	Outlier,ND	88	0.15	
6	0.089		90	0.053	
7	0.10	ND	91	0.064	
9	0.090		92	0.11	ND
12	0.089		94	0.39	Outlier
14	0.088		97	0.12	
16	0.13		99	0.10	
18	0.094		100	0.086	
19	0.069		102	0.092	
20	0.080		105	0.17	ND
21	0.10	ND	107	0.086	
23	0.15		109	0.37	Outlier,ND
27	0.21	Outlier	110	0.040	ND
28	0.085		111	0.066	
29	0.067		114	0.096	
31	0.057		115	0.080	
32	0.15		117	2.0	Outlier,ND
33	0.077		118	0.11	
34	0.10		119	0.079	
37	0.10		120	0.10	
40	0.067				
41	0.076				
42	0.11				
43	0.084				
44	0.086				
45	0.11				
54	0.088				
55	0.13				
58	0.099				
59	0.10	ND			
60	0.18	ND			
61	0.070				
64	0.12				
66	0.089				
67	0.083				
70	0.16				
73	0.26	Outlier,ND			
74	0.62	Outlier,ND			
76	0.11				
77	1.6	Outlier			
80	0.087				
81	0.096				
82	1.0	Outlier,ND			

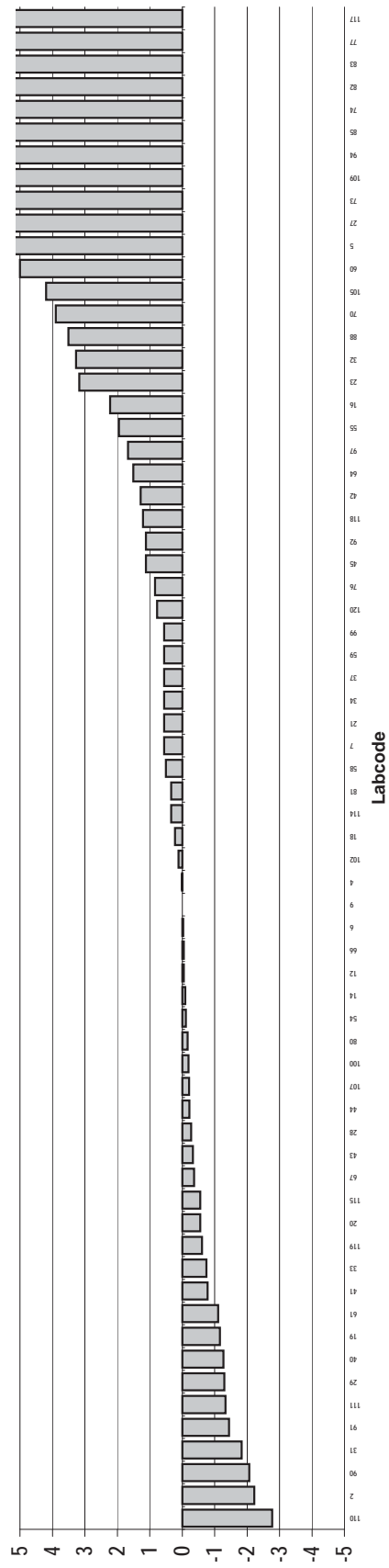
Consensus statistics

Consensus median, pg/g	0.090
Median all values pg/g	0.099
Consensus mean, pg/g	0.096
Standard deviation, pg/g	0.029
Relative standard deviation, %	30
No. of values reported	67
No. of values removed	11
No. of reported non-detects	15

PCB 169



Z-score: PCB 169

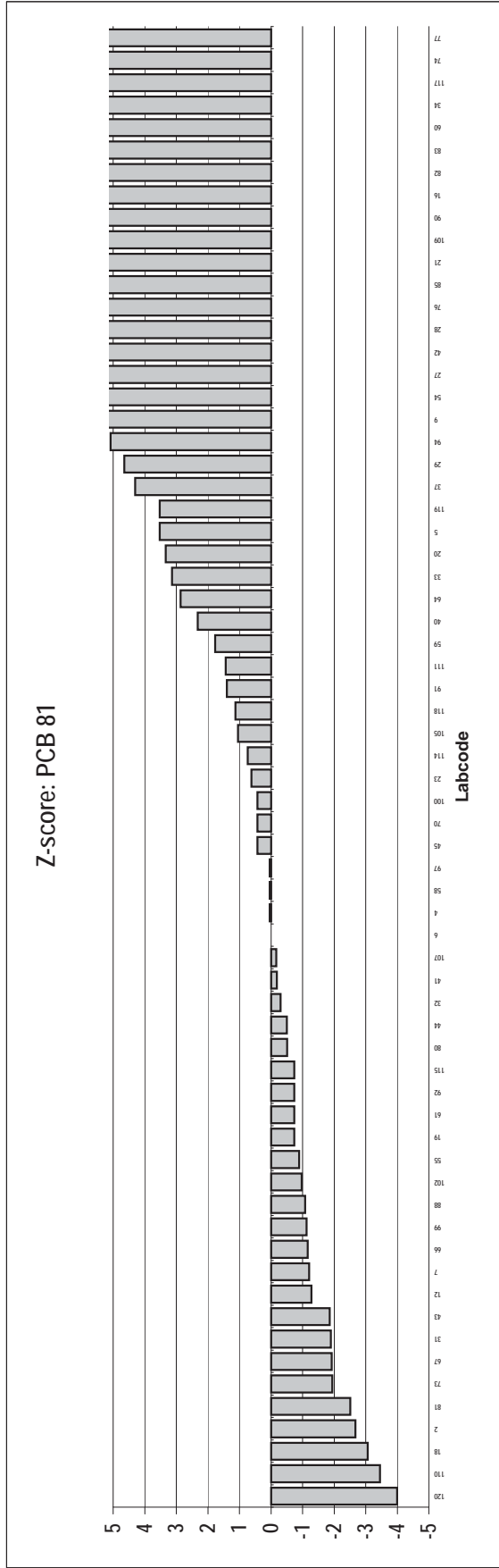
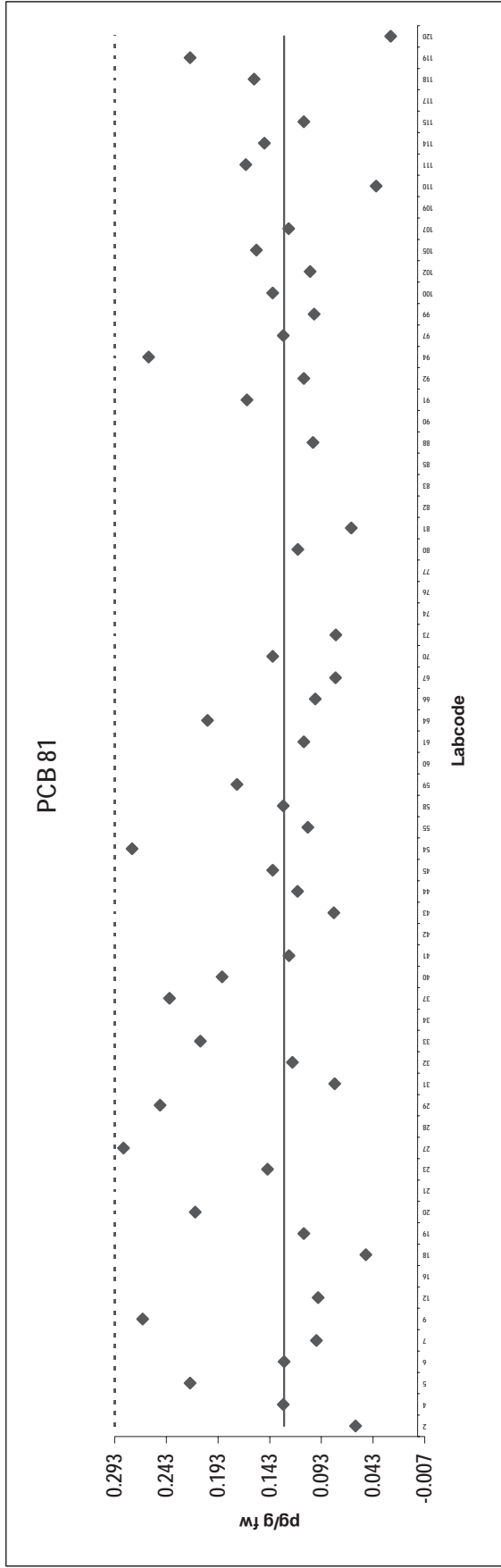


Poultry Congener: PCB 81

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.060	ND	85	0.40	Outlier,ND
4	0.13		88	0.10	
5	0.22		90	0.53	Outlier
6	0.13		91	0.17	
7	0.098		92	0.11	ND
9	0.27		94	0.26	
12	0.096		97	0.13	
16	1.0		99	0.10	
18	0.050		100	0.14	
19	0.11		102	0.10	
20	0.22		105	0.16	
21	0.41		107	0.12	
23	0.15		109	0.46	Outlier
27	0.28		110	0.040	ND
28	0.37		111	0.17	
29	0.25		114	0.15	
31	0.080		115	0.11	
32	0.12		117	2.0	Outlier,ND
33	0.21		118	0.16	
34	1.2		119	0.22	
37	0.24		120	0.026	ND
40	0.19				
41	0.12				
42	0.31				
43	0.081				
44	0.12				
45	0.14				
54	0.28				
55	0.11				
58	0.13				
59	0.17				
60	1.0				
61	0.11				
64	0.20				
66	0.099				
67	0.079				
70	0.14				
73	0.079				
74	3.0				
76	0.39				
77	4.8				
80	0.12				
81	0.064				
82	1.0				
83	1.0				

Consensus statistics

Consensus median, pg/g	0.13
Median all values pg/g	0.15
Consensus mean, pg/g	0.14
Standard deviation, pg/g	0.063
Relative standard deviation, %	45
No. of values reported	66
No. of values removed	15
No. of reported non-detects	12

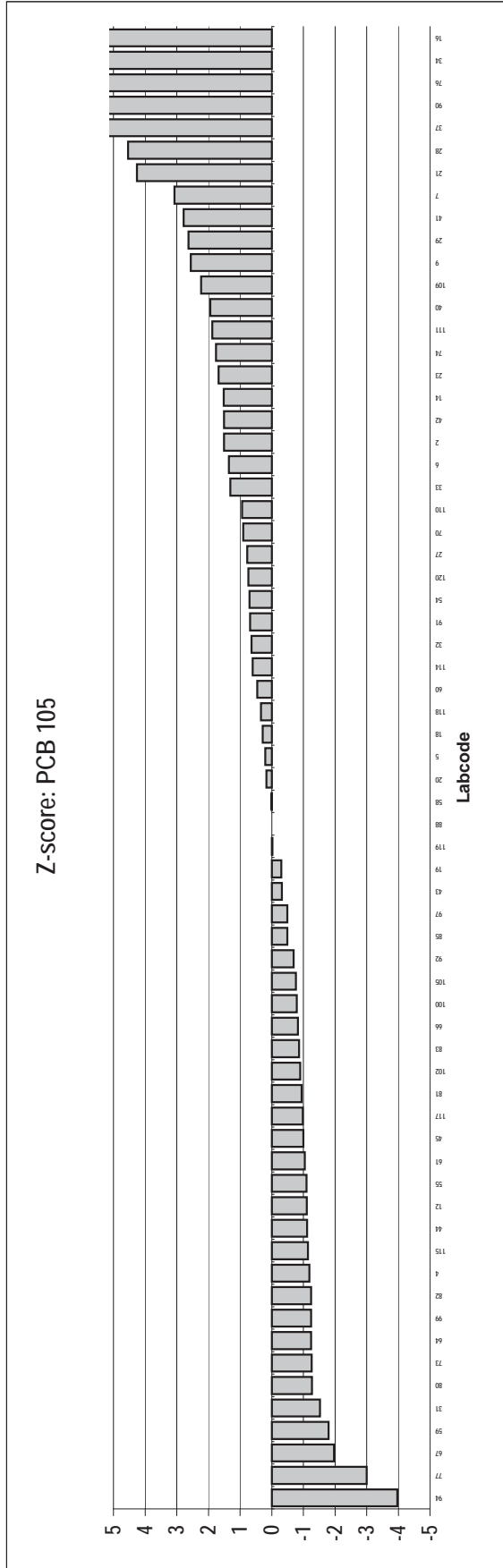
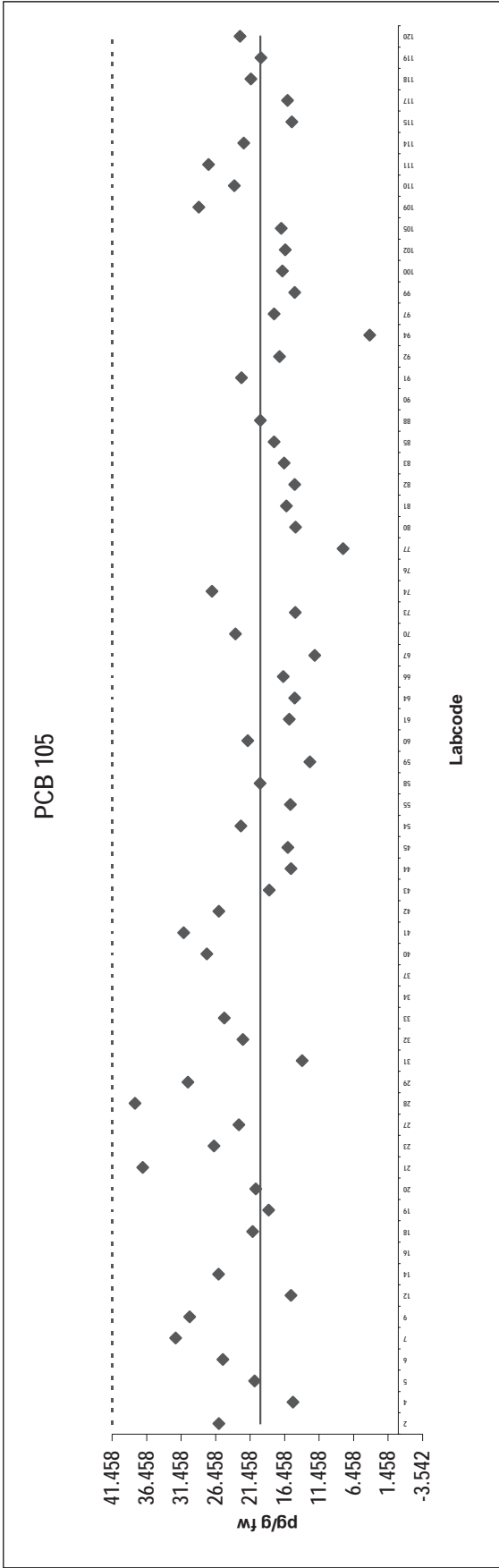


Poultry
Congener: PCB 105

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	26		83	17	
4	15		85	18	
5	21		88	20	
6	25		90	43	Outlier
7	32		91	23	
9	30		92	17	
12	16		94	4.1	
14	26		97	18	
16	192		99	15	
18	21	Outlier	100	17	
19	19		102	16	
20	21		105	17	
21	37		109	29	
23	27		110	24	
27	23		111	28	
28	38		114	22	
29	30		115	15	
31	14		117	16	
32	23		118	21	
33	25		119	20	
34	126	Outlier	120	23	
37	42	Outlier			
40	28				
41	31				
42	26				
43	19				
44	16				
45	16				
54	23				
55	16				
58	20				
59	13				
60	22				
61	16				
64	15				
66	17				
67	12				
70	24				
73	15				
74	27				
76	57	Outlier			
77	8.0	ND			
80	15				
81	16				
82	15				

Consensus statistics

Consensus median, pg/g	20
Median all values pg/g	21
Consensus mean, pg/g	21
Standard deviation, pg/g	6.5
Relative standard deviation, %	32
No. of values reported	66
No. of values removed	5
No. of reported non-detects	1



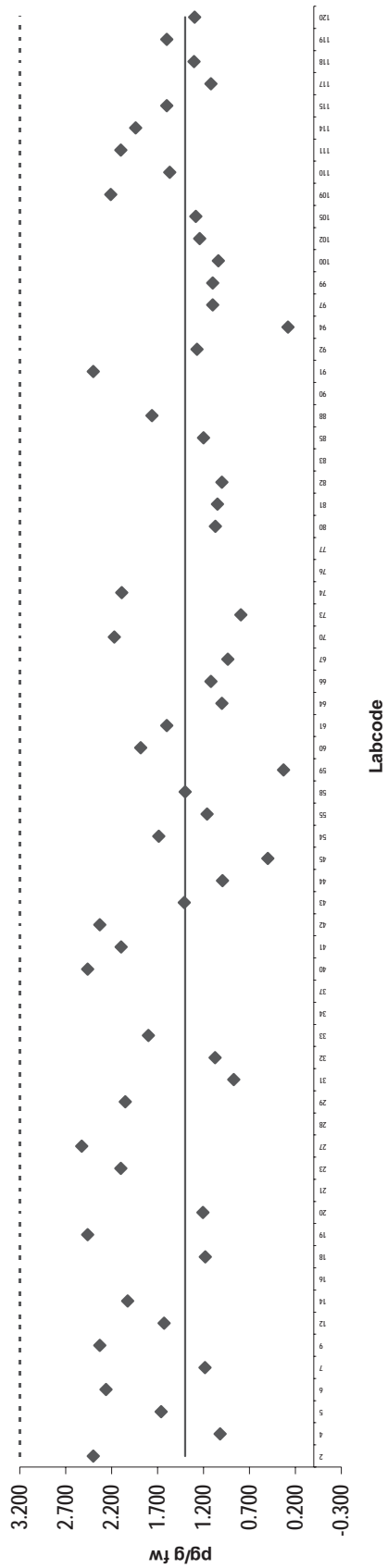
Poultry
Congener: PCB 114

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	2.4		83	10	Outlier,ND
4	1.0		85	1.2	
5	1.7		88	1.8	
6	2.3		90	4.0	Outlier
7	1.2		91	2.4	ND
9	2.3		92	1.3	
12	1.6		94	0.28	
14	2.0		97	1.1	
16	1.1		99	1.1	
18	1.2	Outlier	100	1.0	
19	2.5		102	1.2	
20	1.2		105	1.3	
21	3.4	Outlier	109	2.2	
23	2.1		110	1.6	
27	2.5		111	2.1	
28	3.9	Outlier	114	1.9	
29	2.1		115	1.6	
31	0.87		117	1.1	
32	1.1		118	1.3	
33	1.8		119	1.6	
34	1.1	Outlier	120	1.3	
37	3.6	Outlier			
40	2.5				
41	2.1				
42	2.3				
43	1.4				
44	0.99				
45	0.50				
54	1.7				
55	1.2				
58	1.4				
59	0.33				
60	1.9				
61	1.6				
64	1.0				
66	1.1				
67	0.93				
70	2.2				
73	0.79				
74	2.1				
76	5.2	Outlier			
77	90	Outlier			
80	1.1				
81	1.0				
82	1.0	ND			

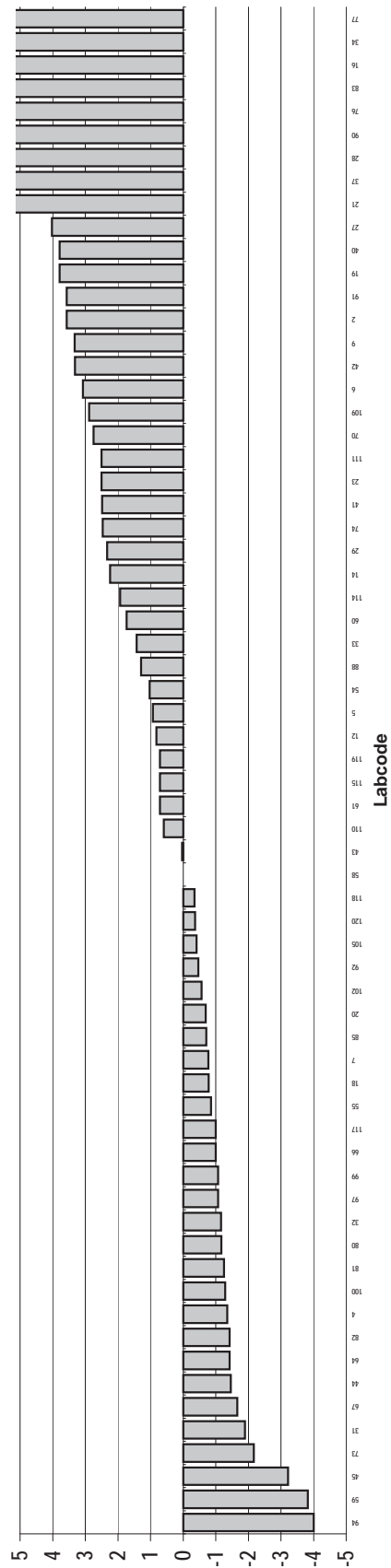
Consensus statistics

Consensus median, pg/g	1.4
Median all values pg/g	1.6
Consensus mean, pg/g	1.5
Standard deviation, pg/g	0.57
Relative standard deviation, %	38
No. of values reported	66
No. of values removed	9
No. of reported non-detects	3

PCB 114



Z-score: PCB 114

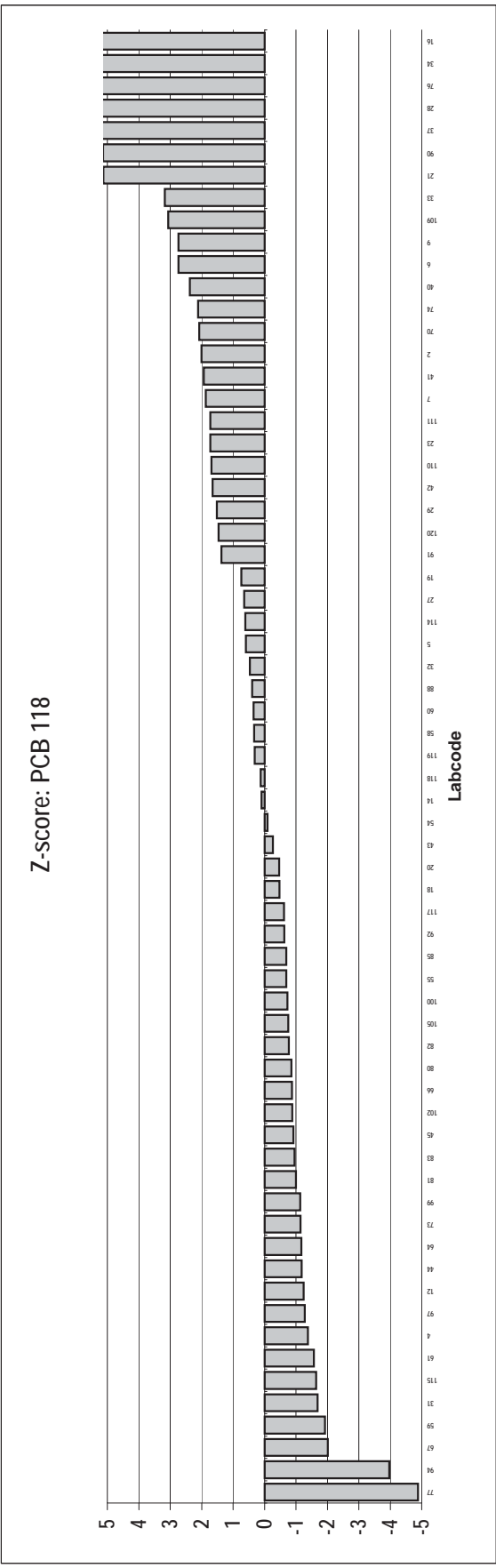
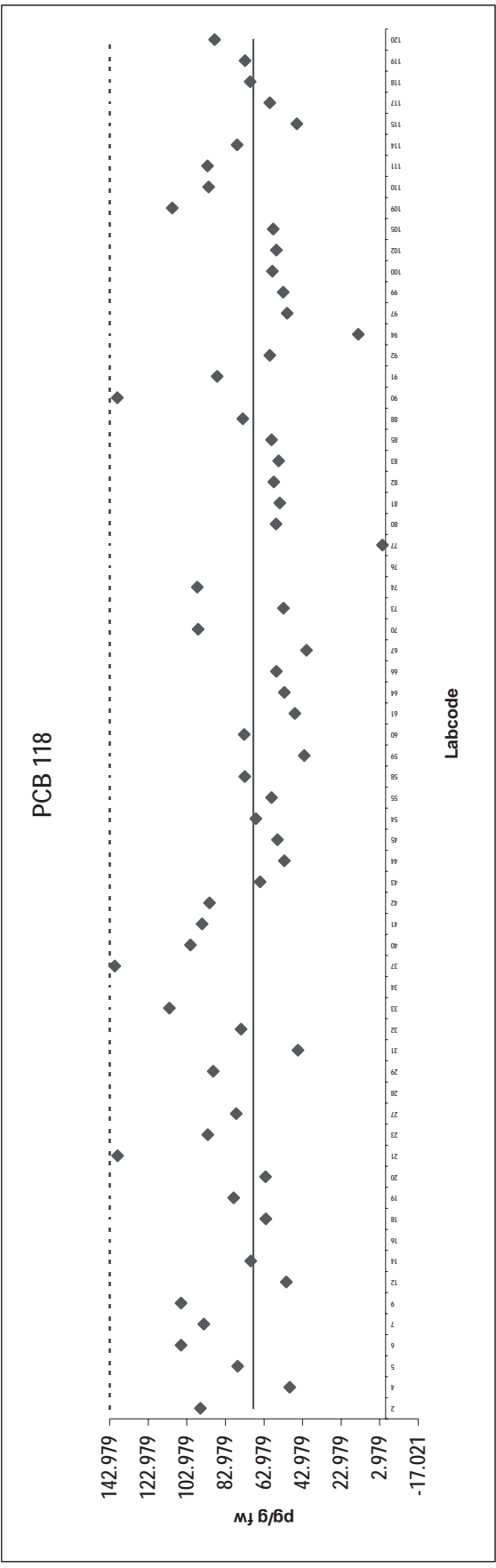


Poultry
Congener: PCB 118

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	96		83	55	
4	50		85	59	
5	77		88	74	
6	106		90	139	
7	94		91	87	
9	106		92	60	
12	51		94	14	
14	70		97	51	
16	578	Outlier	99	53	
18	62		100	59	
19	79		102	56	
20	62		105	58	
21	139		109	111	
23	92		110	92	
27	77		111	77	
28	158	Outlier	114	77	
29	89		115	46	
31	45		117	60	
32	75		118	70	
33	112		119	73	
34	461	Outlier	120	89	
37	140				
40	101				
41	95				
42	91				
43	65				
44	52				
45	56				
54	67				
55	59				
58	73				
59	42				
60	73				
61	47				
64	53				
66	57				
67	41				
70	97				
73	53				
74	98				
76	203	Outlier			
77	1.6				
80	57				
81	55				
82	58				

Consensus statistics

Consensus median, pg/g	69
Median all values pg/g	71
Consensus mean, pg/g	72
Standard deviation, pg/g	27
Relative standard deviation, %	37
No. of values reported	66
No. of values removed	4
No. of reported non-detects	0



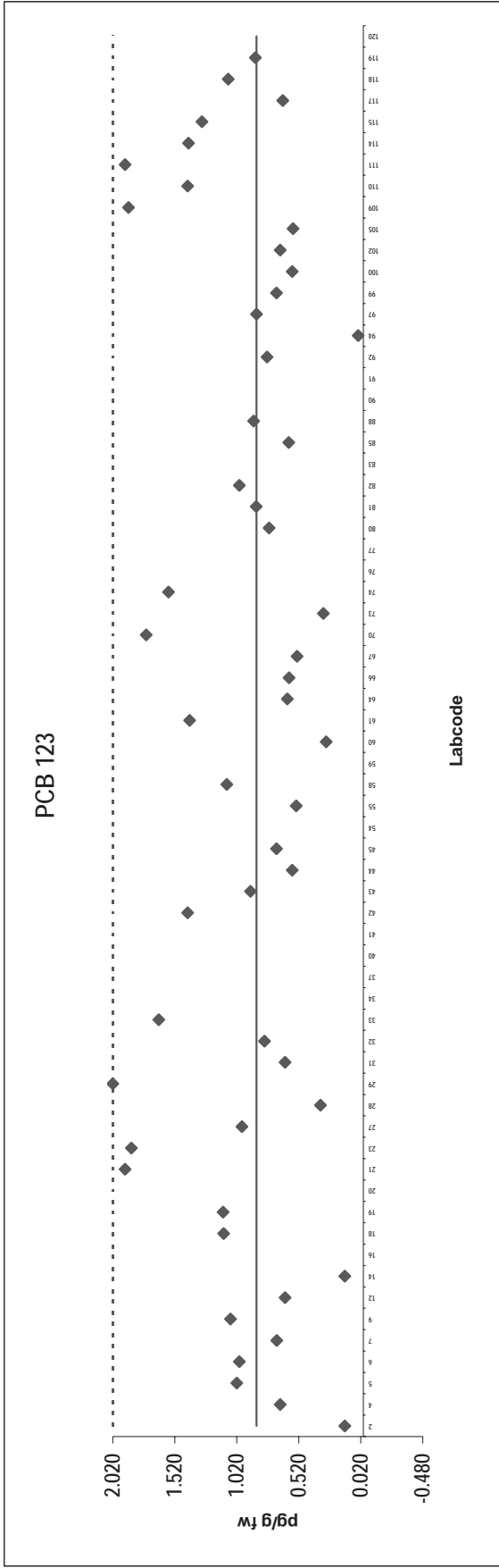
Poultry

Congener: PCB 123

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.15	ND	83	5.0	Outlier,ND
4	0.67		85	0.60	
5	1.0		88	0.89	
6	1.0	ND	90	2.5	Outlier
7	0.70		91	2.5	Outlier,ND
9	1.1		92	0.78	
12	0.63		94	0.040	
14	0.15	ND	97	0.86	
16	11	Outlier	99	0.70	
18	1.1		100	0.57	
19	1.1		102	0.67	
20	6.1	Outlier	105	0.57	
21	1.9		109	1.9	
23	1.9		110	1.4	
27	0.98		111	1.9	
28	0.34		114	1.4	
29	2.0	ND	115	1.3	
31	0.63		117	0.65	
32	0.80		118	1.1	
33	1.7		119	0.87	
34	7.9	Outlier	120	5.2	Outlier
37	3.0	Outlier			
40	2.2	Outlier			
41	13	Outlier			
42	1.4				
43	0.91				
44	0.57				
45	0.70				
54	2.8	Outlier			
55	0.54				
58	1.1				
59	3.4	Outlier			
60	0.30	ND			
61	1.4				
64	0.61				
66	0.60				
67	0.53				
70	1.8				
73	0.32				
74	1.6				
76	3.2	Outlier			
77	23	Outlier			
80	0.76				
81	0.86				
82	1.0	ND			

Consensus statistics

Consensus median, pg/g	0.86
Median all values pg/g	1.0
Consensus mean, pg/g	0.94
Standard deviation, pg/g	0.50
Relative standard deviation, %	53
No. of values reported	66
No. of values removed	14
No. of reported non-detects	8



Poultry
Congener: PCB 156

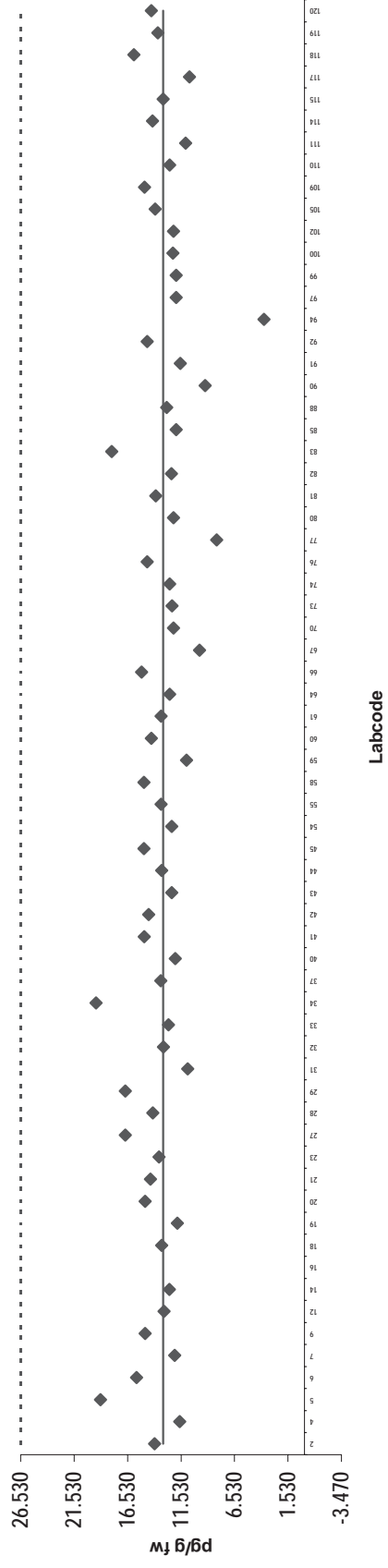
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	14		83	18	
4	12		85	12	
5	19		88	13	
6	16		90	9.3	
7	12		91	12	
9	15		92	15	
12	13		94	3.8	
14	13		97	12	
16	44		99	12	
18	13		100	12	
19	12		102	12	
20	15		105	14	
21	14		109	15	
23	14		110	13	
27	17		111	11	
28	14		114	14	
29	17		115	13	
31	11		117	11	
32	13		118	16	
33	13		119	14	
34	19		120	14	
37	13				
40	12				
41	15				
42	15				
43	12				
44	13				
45	15				
54	12				
55	13				
58	15				
59	11				
60	14				
61	13				
64	13				
66	15				
67	9.8				
70	12				
73	12				
74	13				
76	15				
77	8.2				
80	12				
81	14				
82	12				

Outlier

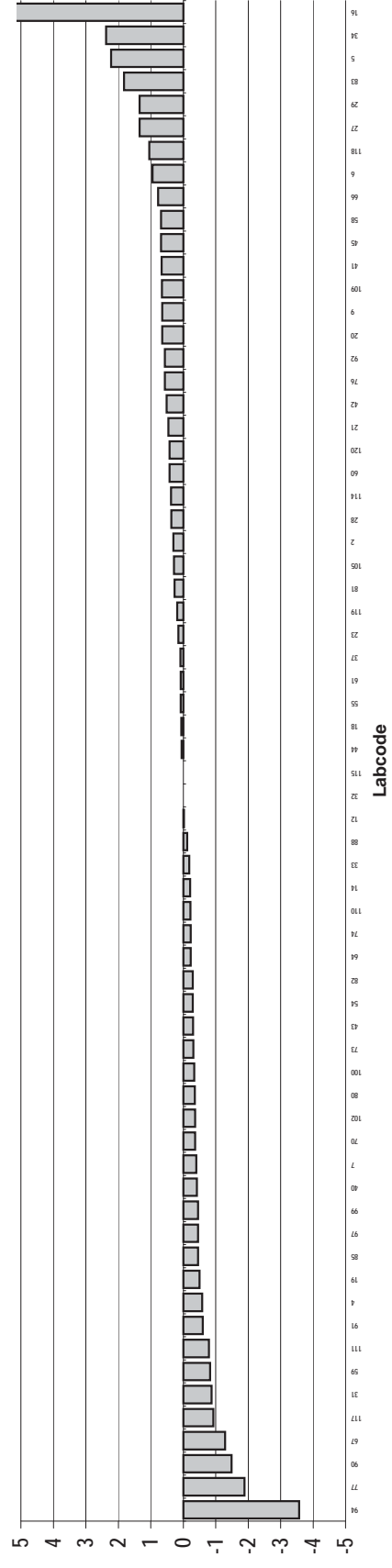
Consensus statistics

Consensus median, pg/g	13
Median all values pg/g	13
Consensus mean, pg/g	13
Standard deviation, pg/g	2.4
Relative standard deviation, %	18
No. of values reported	66
No. of values removed	1
No. of reported non-detects	0

PCB 156



Z-score: PCB 156



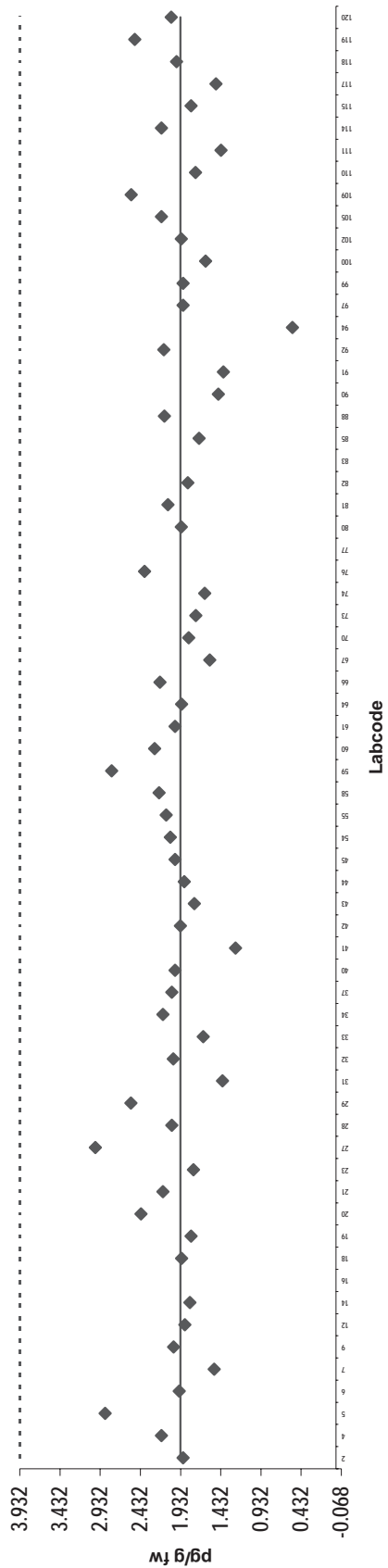
Poultry
Congener: PCB 157

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	1.9		83	5.0	Outlier,ND
4	2.2		85	1.7	
5	2.9		88	2.1	
6	2.0		90	1.5	
7	1.5		91	1.4	
9	2.0		92	2.1	
12	1.9		94	0.54	
14	1.8		97	1.9	
16	8.7	Outlier	99	1.9	
18	1.9		100	1.6	
19	1.8		102	1.9	
20	2.4		105	2.2	
21	2.2		109	2.5	
23	1.8		110	1.7	
27	3.0		111	1.4	
28	2.0		114	2.2	
29	2.5		115	1.8	
31	1.4		117	1.5	
32	2.0		118	2.0	
33	1.7		119	2.5	
34	2.2		120	2.0	
37	2.0				
40	2.0				
41	1.2				
42	1.9				
43	1.8				
44	1.9				
45	2.0				
54	2.1				
55	2.1				
58	2.2				
59	2.8				
60	2.3				
61	2.0				
64	1.9				
66	2.2				
67	1.6				
70	1.8				
73	1.7				
74	1.6				
76	2.4				
77	1.8	Outlier			
80	1.9				
81	2.1				
82	1.8				

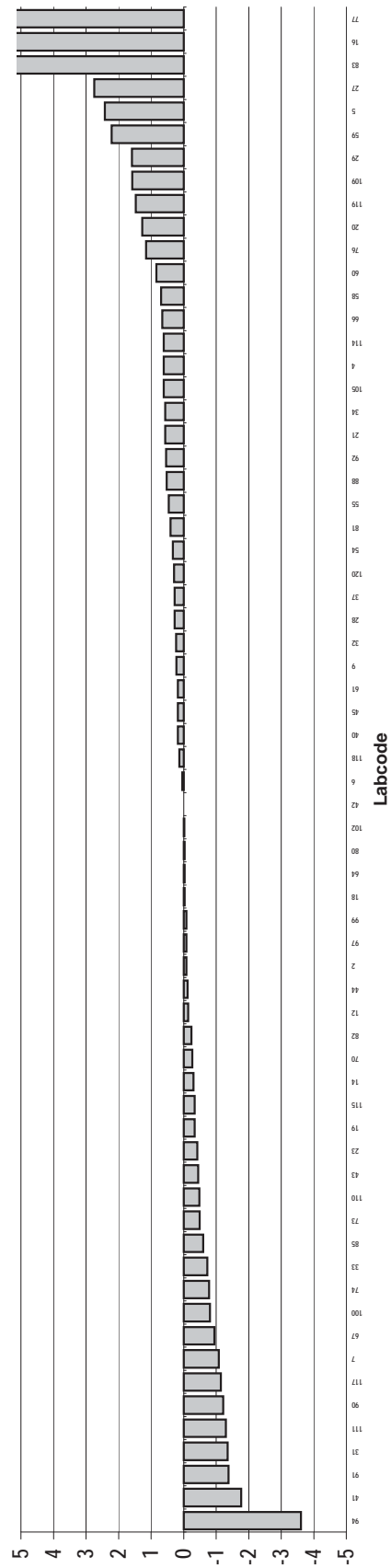
Consensus statistics

Consensus median, pg/g	1.9
Median all values pg/g	2.0
Consensus mean, pg/g	2.0
Standard deviation, pg/g	0.39
Relative standard deviation, %	20
No. of values reported	66
No. of values removed	3
No. of reported non-detects	1

PCB 157



Z-score: PCB 157



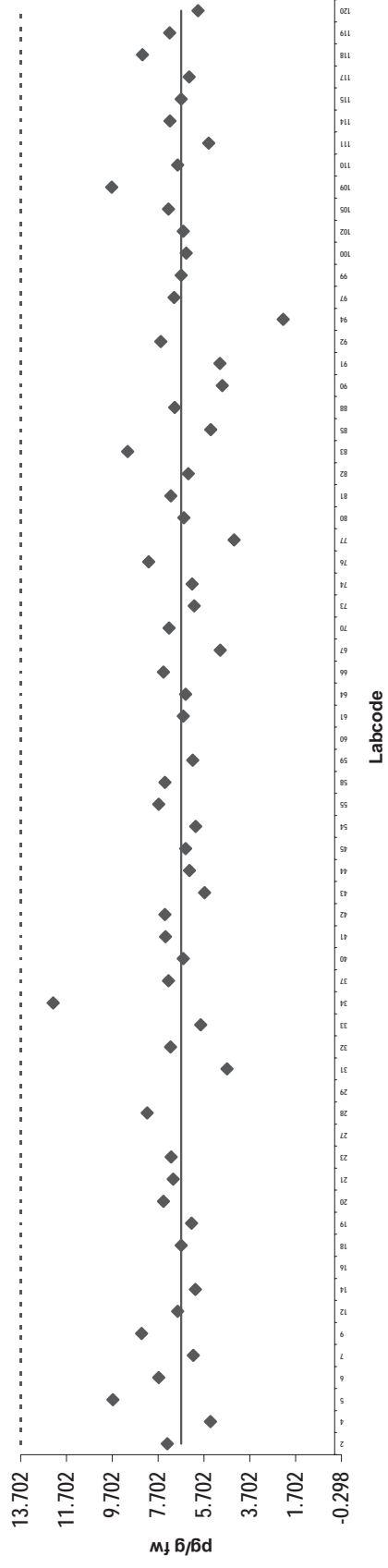
Poultry
Congener: PCB 167

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	7.3		83	9.0	
4	5.4		85	5.4	
5	9.7		88	7.0	
6	7.7		90	4.9	
7	6.2		91	5.0	
9	8.4		92	7.6	
12	6.9		94	2.2	
14	6.1		97	7.0	
16	22	Outlier	99	6.7	
18	6.7		100	6.5	
19	6.2		102	6.6	
20	7.5		105	7.3	
21	7.0		109	9.7	
23	7.1		110	6.9	
27	14	Outlier	111	5.5	
28	8.2		114	7.2	
29	19	Outlier	115	6.7	
31	4.7		117	6.4	
32	7.2		118	8.4	
33	5.9		119	7.2	
34	12		120	6.0	
37	7.3				
40	6.6				
41	7.4				
42	7.4				
43	5.7				
44	6.3				
45	6.5				
54	6.1				
55	7.7				
58	7.4				
59	6.2				
60	23	Outlier			
61	6.6				
64	6.5				
66	7.5				
67	5.0				
70	7.2				
73	6.1				
74	6.2				
76	8.1				
77	4.4				
80	6.6				
81	7.1				
82	6.4				

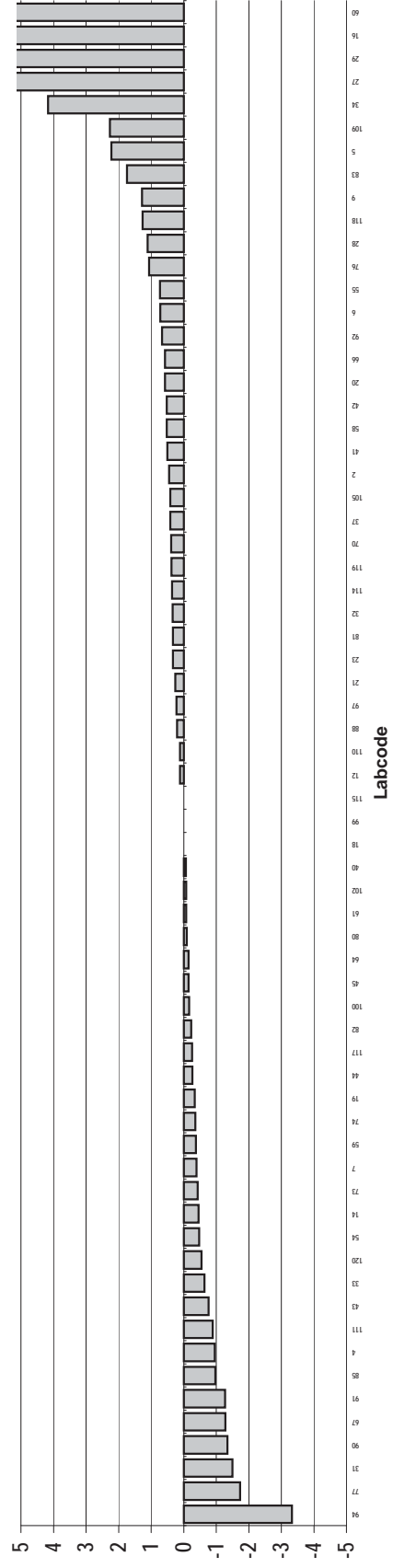
Consensus statistics

Consensus median, pg/g	6.7
Median all values pg/g	6.9
Consensus mean, pg/g	6.8
Standard deviation, pg/g	1.4
Relative standard deviation, %	21
No. of values reported	66
No. of values removed	4
No. of reported non-detects	0

PCB 167



Z-score: PCB 167



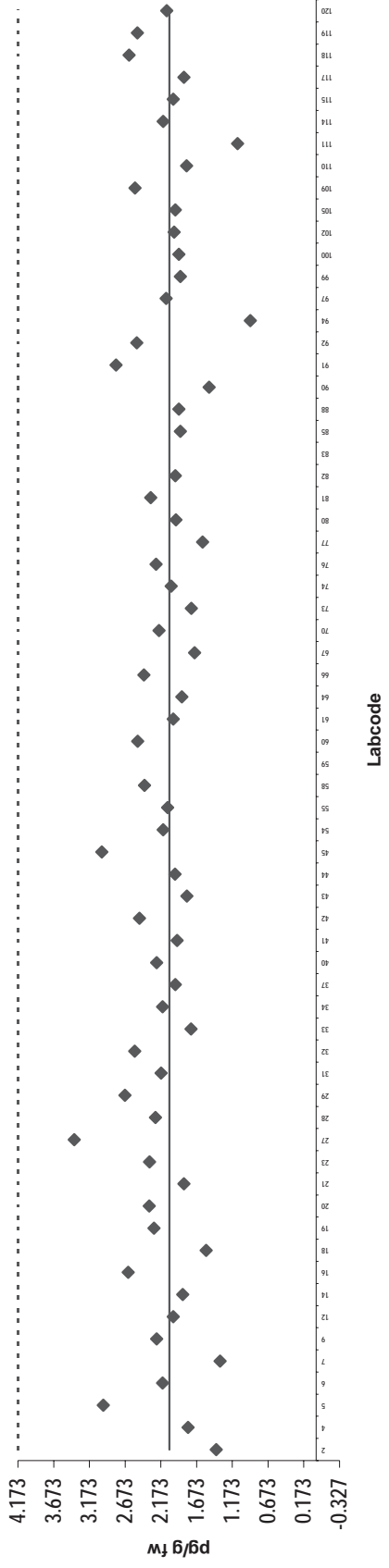
Poultry
Congener: PCB 189

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	1.4		83	5.0	Outlier,ND
4	1.8		85	1.9	
5	3.0		88	1.9	
6	2.2		90	1.5	
7	1.3		91	2.8	
9	2.2		92	2.5	
12	2.0		94	0.92	
14	1.9		97	2.1	
16	2.6		99	1.9	
18	1.5		100	1.9	
19	2.3		102	2.0	
20	2.3		105	2.0	
21	1.9		109	2.5	
23	2.3		110	1.8	
27	3.4		111	1.1	
28	2.3		114	2.1	
29	2.7		115	2.0	
31	2.2		117	1.9	
32	2.5		118	2.6	
33	1.8		119	2.5	
34	2.2		120	2.1	
37	2.0				
40	2.2				
41	1.9				
42	2.5				
43	1.8				
44	2.0				
45	3.0				
54	2.1				
55	2.1				
58	2.4				
59	4.4				
60	2.5				
61	2.0				
64	1.9				
66	2.4				
67	1.7				
70	2.2				
73	1.7				
74	2.0				
76	2.2				
77	1.6				
80	2.0				
81	2.3				
82	2.0				

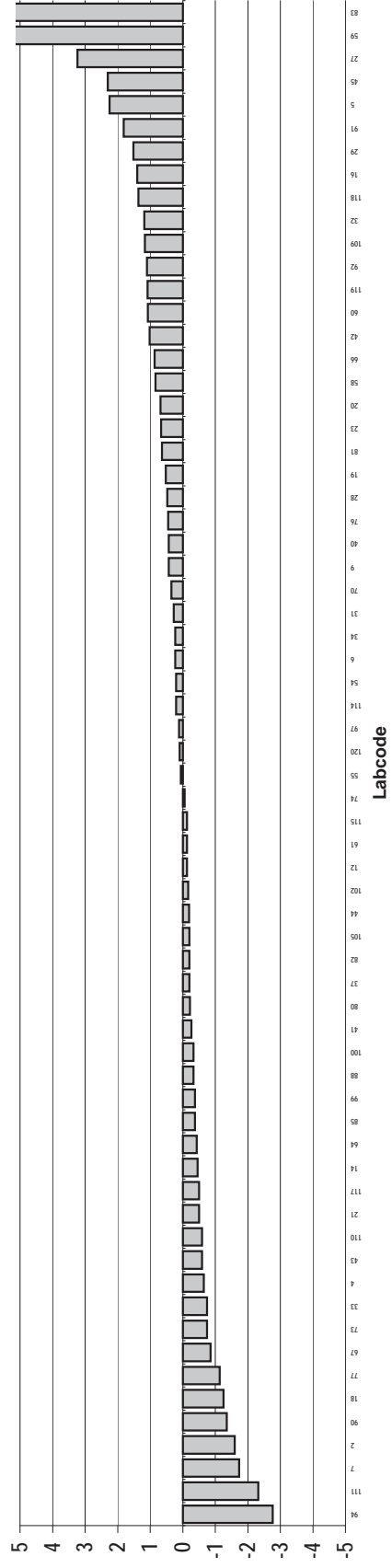
Outlier

Consensus statistics	
Consensus median, pg/g	2.1
Median all values pg/g	2.1
Consensus mean, pg/g	2.1
Standard deviation, pg/g	0.43
Relative standard deviation, %	21
No. of values reported	66
No. of values removed	2
No. of reported non-detects	1

PCB 189



Z-score: PCB 189

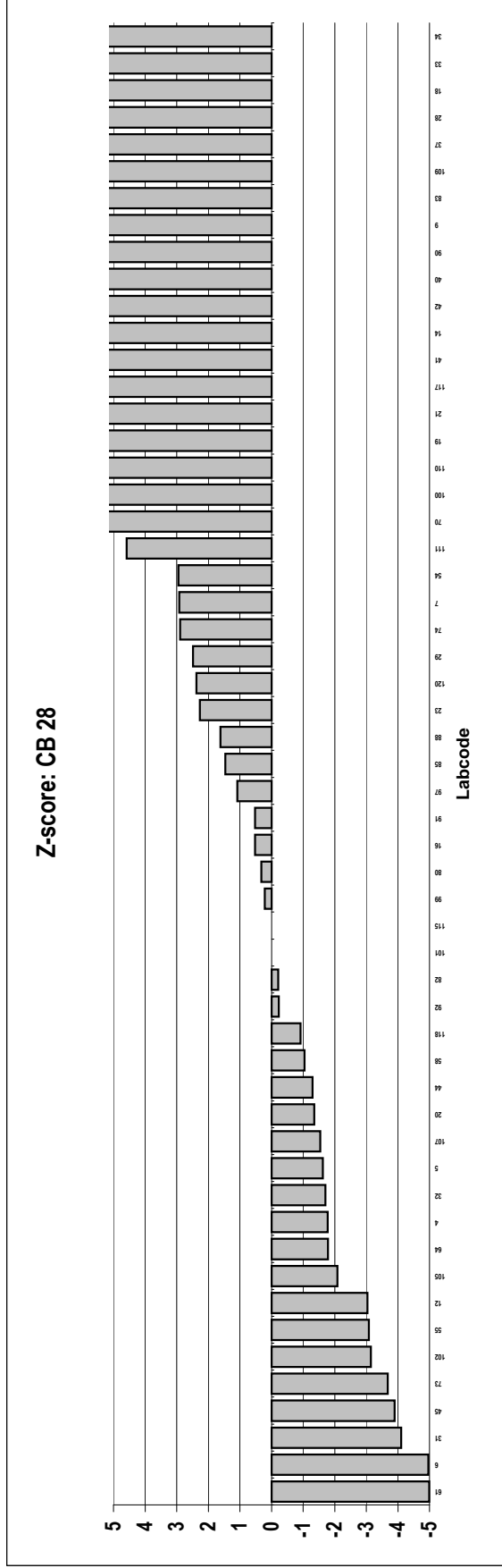
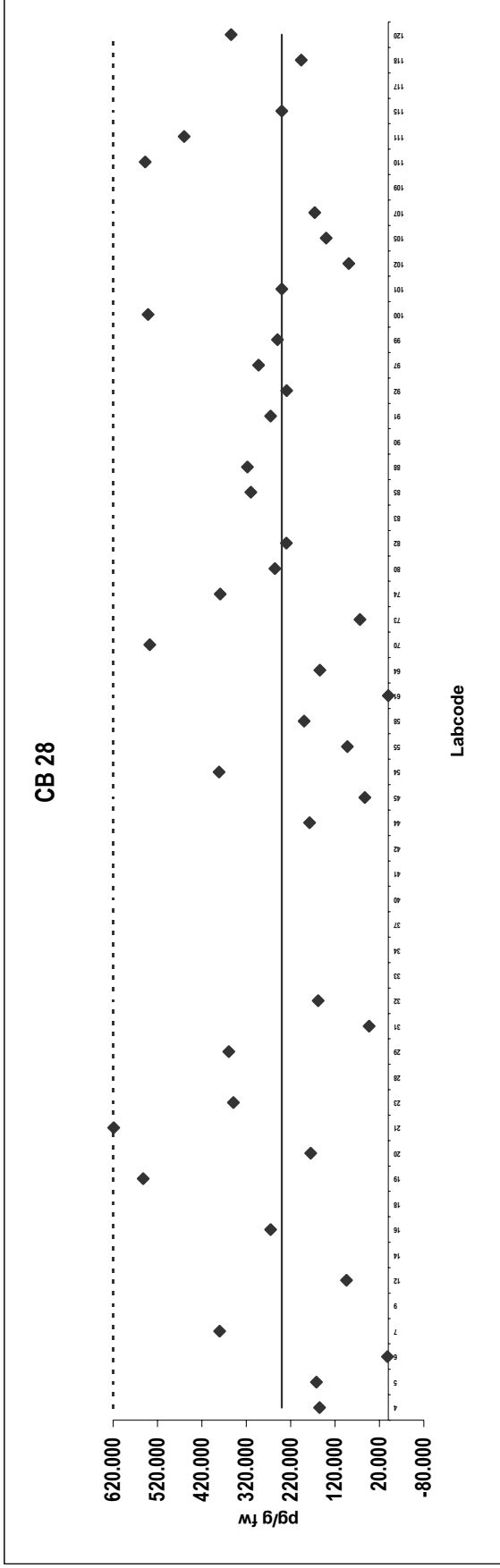


Congener: CB 28

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	155		102	89	
5	162		105	140	
6	1.7		107	166	
7	380		109	1051	Outlier
9	873	Outlier	110	548	
12	94		111	460	
14	724		115	240	
16	265	Outlier	117	655	Outlier
18	1140	Outlier	118	196	
19	552		120	354	
20	175				
21	619				
23	349				
28	1091				
29	359	Outlier			
31	43				
32	158				
33	1150	Outlier			
34	2492	Outlier			
37	1060	Outlier			
40	777	Outlier			
41	698	Outlier			
42	757	Outlier			
44	178	Outlier			
45	53				
54	382				
55	92				
58	190				
61	0.22				
64	154				
70	538				
73	64				
74	379				
80	255				
82	230				
83	1000	Outlier,ND			
85	310				
88	318				
90	844	Outlier			
91	265				
92	229				
97	292				
99	250				
100	541				
101	240				

Consensus statistics

Consensus median, pg/g	240
Median all values pg/g	310
Consensus mean, pg/g	255
Standard deviation, pg/g	159
Relative standard deviation, %	62
No. of values reported	55
No. of values removed	14
No. of reported non-detects	1

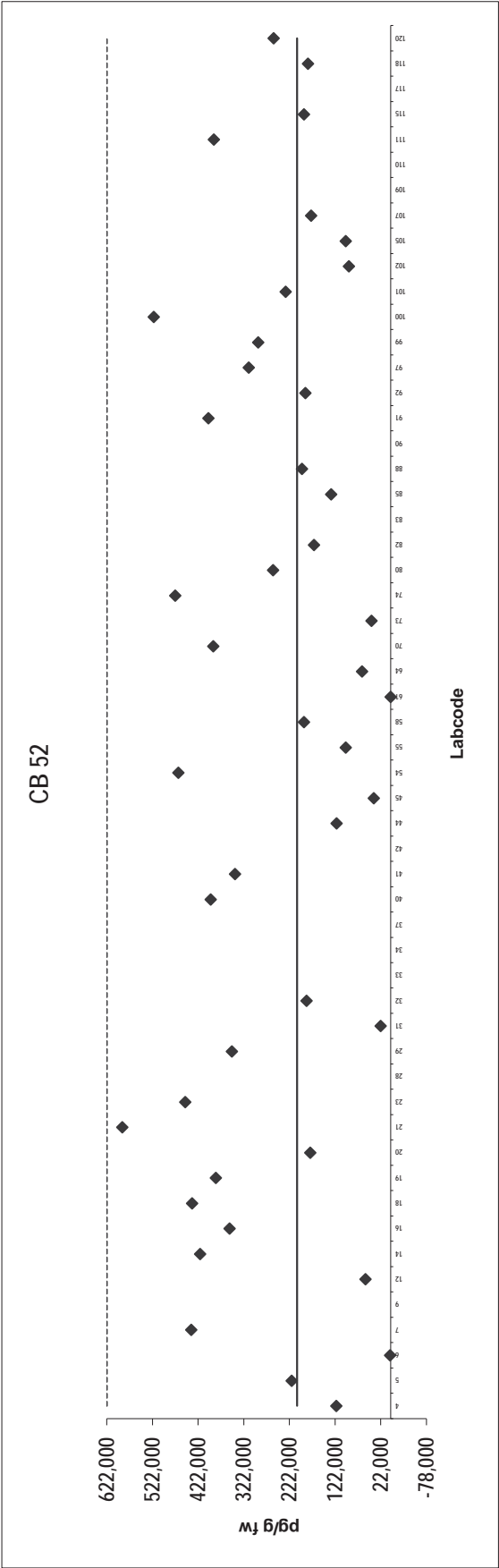


Poultry
Congener: CB 52

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	119		102	91	
5	217		105	99	
6	0,97		107	174	
7	437		109	1203	Outlier
9	971	Outlier	110	635	Outlier
12	55		111	387	
14	417		115	190	
16	353		117	691	Outlier
18	435		118	181	
19	383		120	256	
20	176				
21	588				
23	450				
28	766				
29	347	Outlier			
31	22				
32	184				
33	690	Outlier			
34	2699	Outlier			
37	759	Outlier			
40	394	Outlier			
41	341				
42	982	Outlier			
44	118				
45	37				
54	465				
55	98				
58	190				
61	0,20				
64	62				
70	389				
73	42				
74	472				
80	257				
82	168				
83	1000	Outlier,ND			
85	130				
88	194				
90	1203	Outlier			
91	399				
92	187				
97	311				
99	290				
100	519				
101	230				

Consensus statistics

Consensus median, pg/g	205
Median all values pg/g	311
Consensus mean, pg/g	247
Standard deviation, pg/g	156
Relative standard deviation, %	63
No. of values reported	55
No. of values removed	11
No. of reported non-detects	1

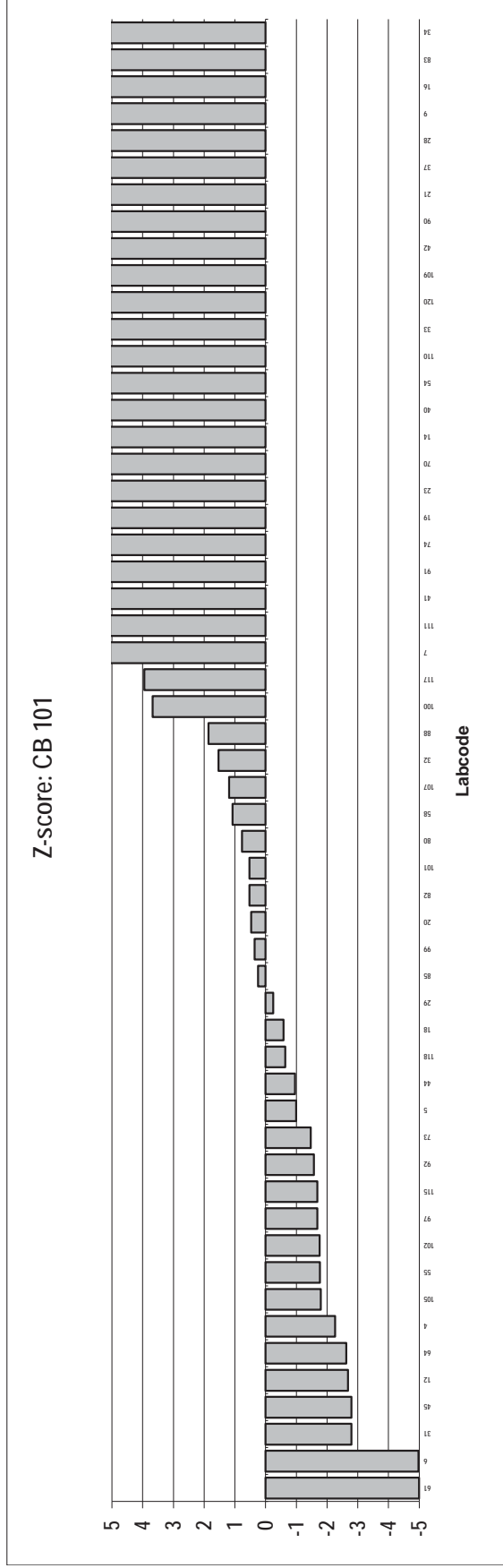
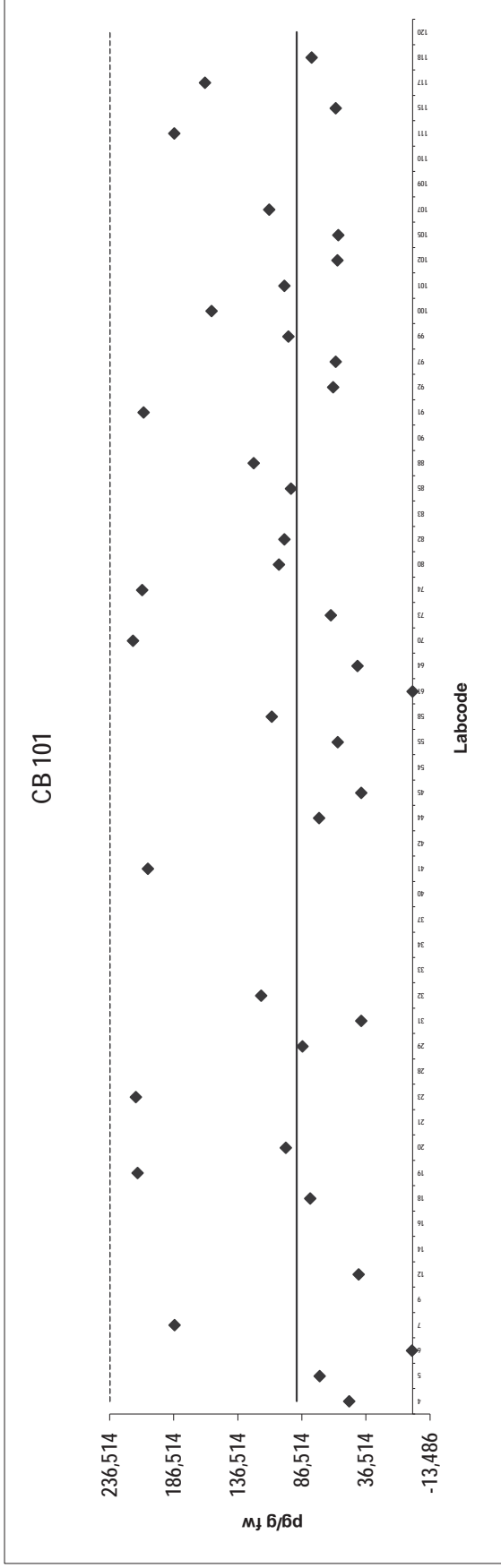


Poultry
Congener: CB 101

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	50		102	59	
5	73		105	58	
6	0,50		107	112	
7	186		109	380	Outlier
9	473	Outlier	110	313	Outlier
12	42		111	186	
14	239	Outlier	115	60	
16	484	Outlier	117	162	
18	80		118	79	
19	215		120	353	Outlier
20	99				
21	440	Outlier			
23	216				
28	450	Outlier			
29	86				
31	40				
32	118				
33	351	Outlier			
34	1634	Outlier			
37	445	Outlier			
40	242	Outlier			
41	207				
42	412	Outlier			
44	73				
45	40				
54	262	Outlier			
55	59				
58	110				
61	0,090				
64	43				
70	218				
73	64				
74	211				
80	104				
82	100				
83	1000	ND			
85	95	Outlier,ND			
88	124				
90	413	Outlier			
91	210				
92	62				
97	60				
99	97				
100	157				
101	100				

Consensus statistics

Consensus median, pg/g	90
Median all values pg/g	118
Consensus mean, pg/g	104
Standard deviation, pg/g	63
Relative standard deviation, %	60
No. of values reported	55
No. of values removed	16
No. of reported non-detects	2



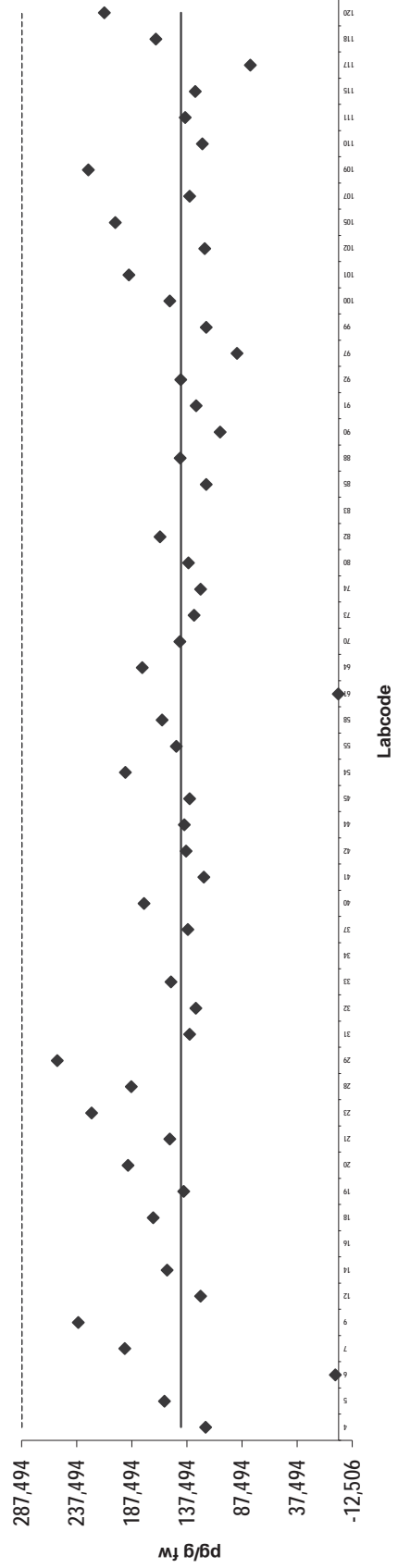
Poultry
Congener: CB 138

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	120		102	121	
5	158		105	203	
6	3.0	ND	107	135	
7	194		109	227	
9	236		110	123	
12	125		111	139	
14	155		115	130	
16	534	Outlier	117	80	
18	168		118	166	
19	140		120	212	
20	191				
21	153				
23	224				
28	188				
29	255				
31	135				
32	129				
33	152				
34	325	Outlier			
37	137				
40	176				
41	122				
42	138				
44	140				
45	135				
54	193				
55	147				
58	160				
61	0,15				
64	178				
70	144				
73	131				
74	125				
80	136				
82	162				
83	1000	Outlier,ND			
85	120				
88	144				
90	107				
91	129				
92	143				
97	92				
99	120				
100	153				
101	190				

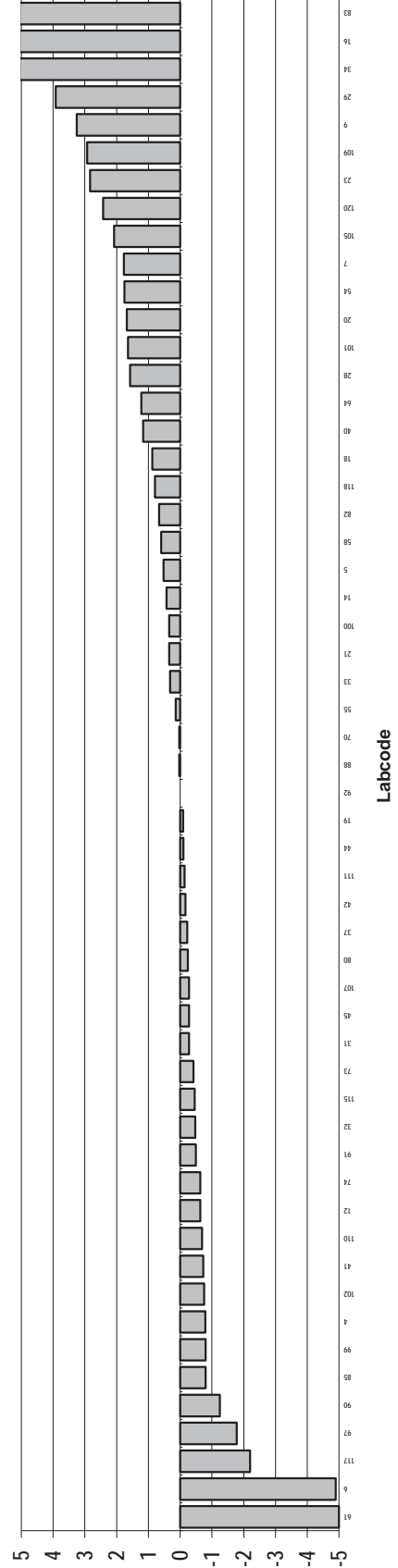
Consensus statistics

Consensus median, pg/g	143
Median all values pg/g	144
Consensus mean, pg/g	148
Standard deviation, pg/g	47
Relative standard deviation, %	32
No. of values reported	55
No. of values removed	3
No. of reported non-detects	2

CB 138



Z-score: CB 138



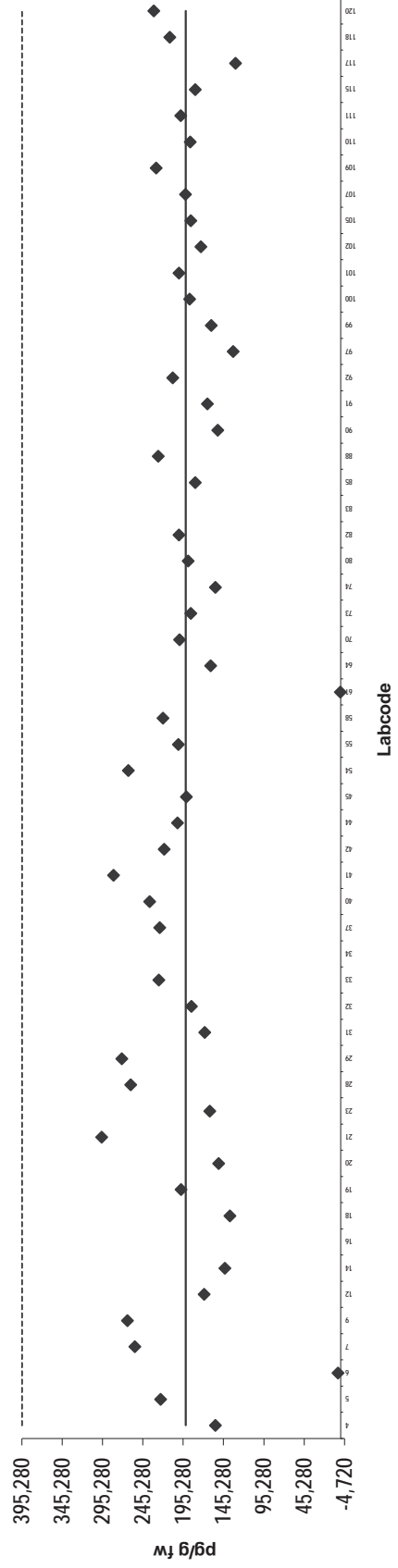
Poultry
Congener: CB 153

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	155		102	173	
5	223		105	185	
6	3.0	ND	107	192	
7	255		109	229	
9	264		110	186	
12	169		111	198	
14	143		115	180	
16	660	Outlier	117	130	
18	137		118	211	
19	198		120	231	
20	151				
21	296				
23	162				
28	260				
29	271				
31	168				
32	185				
33	225				
34	574				
37	224	Outlier			
40	236				
41	281				
42	218				
44	202				
45	191				
54	263				
55	201				
58	220				
61	0,19				
64	161				
70	199				
73	185				
74	155				
80	189				
82	200				
83	1000	Outlier,ND			
85	180				
88	226				
90	152				
91	165				
92	208				
97	133				
99	160				
100	187				
101	200				

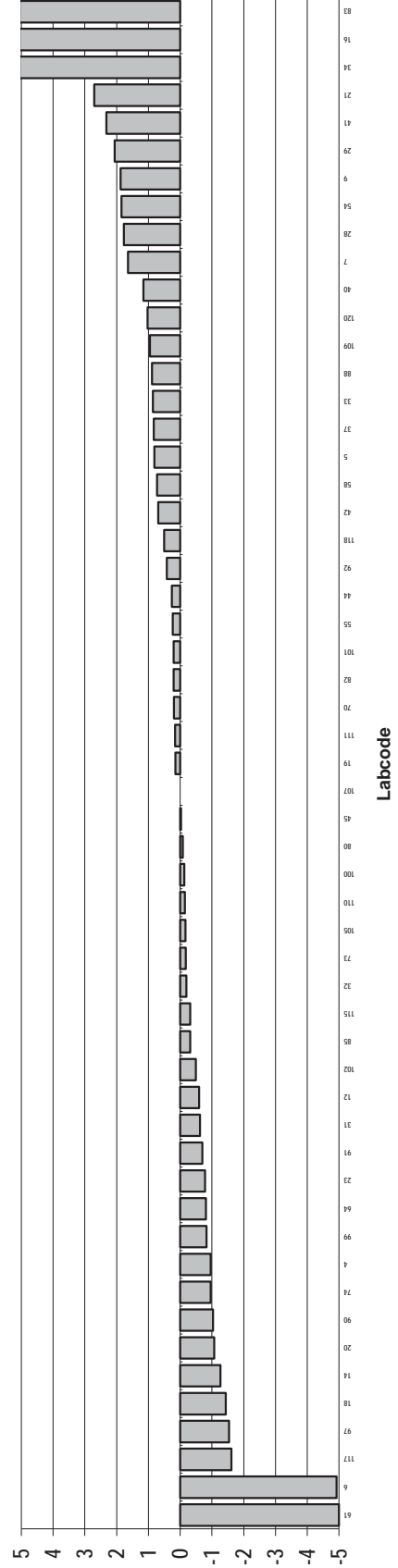
Consensus statistics

Consensus median, pg/g	192
Median all values pg/g	198
Consensus mean, pg/g	191
Standard deviation, pg/g	55
Relative standard deviation, %	29
No. of values reported	55
No. of values removed	3
No. of reported non-detects	2

CB 153



Z-score: CB 153

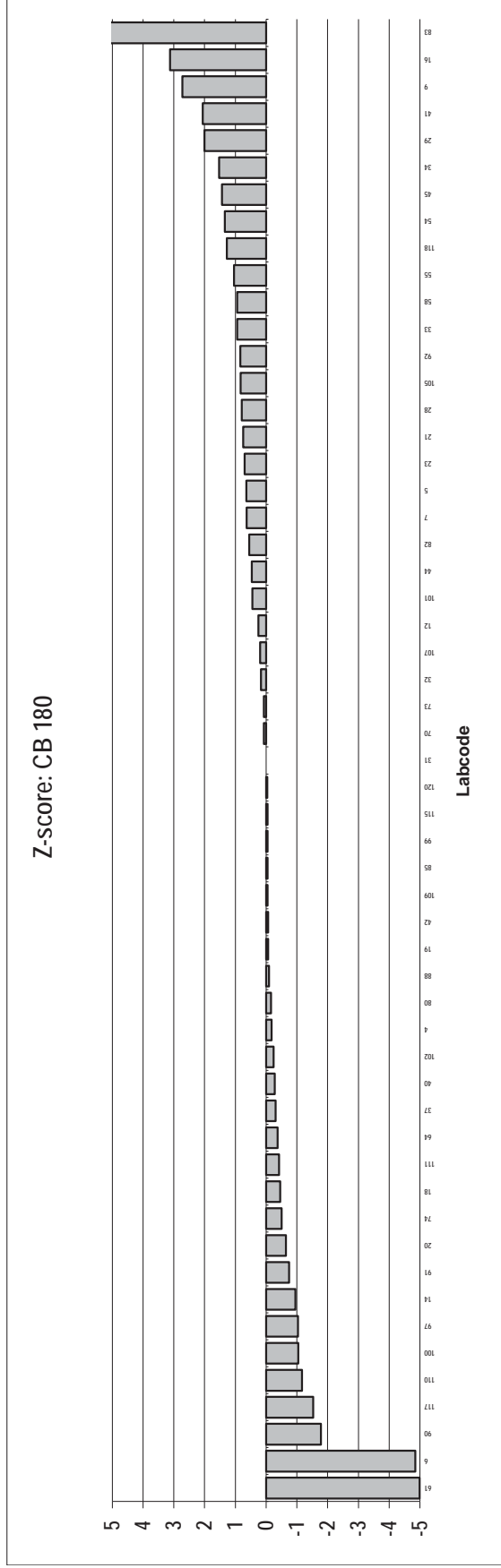
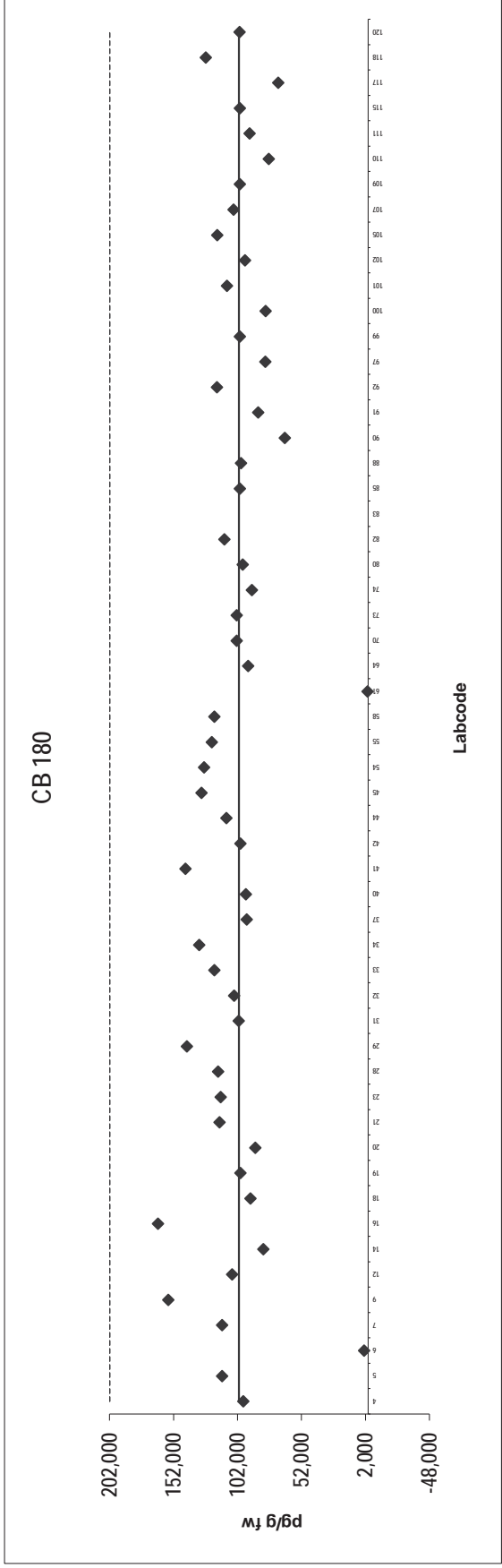


Poultry
Congener: CB 180

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	97		102	96	
5	114		105	118	
6	3.0		107	105	
7	114	ND	109	100	
9	156		110	78	
12	106		111	92	
14	82		115	100	
16	164		117	70	
18	92		118	127	
19	100		120	100	
20	88				
21	116				
23	115				
28	117				
29	142				
31	101				
32	104				
33	120				
34	132				
37	95				
40	95				
41	143				
42	100				
44	110				
45	130				
54	128				
55	122				
58	120				
61	0,10				
64	94				
70	102				
73	102				
74	91				
80	98				
82	112				
83	1000				
85	100				
88	99				
90	65				
91	86				
92	118				
97	80				
99	100				
100	80				
101	110				

Consensus statistics

Consensus median, pg/g	101
Median all values pg/g	101
Consensus mean, pg/g	102
Standard deviation, pg/g	28
Relative standard deviation, %	27
No. of values reported	55
No. of values removed	1
No. of reported non-detects	2

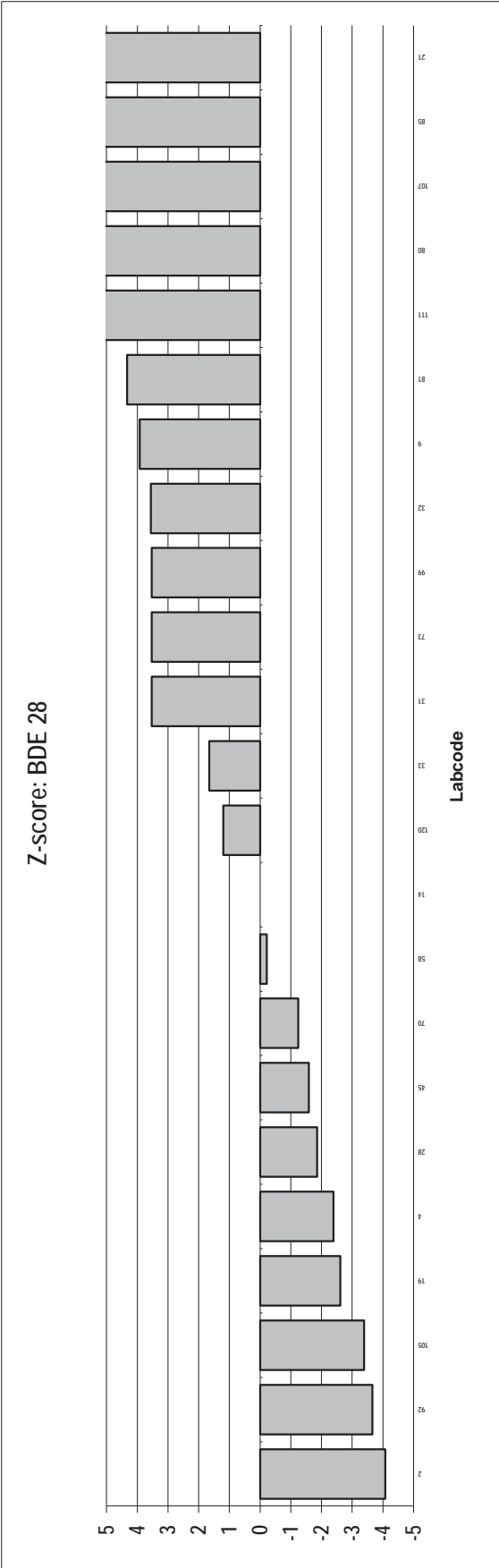
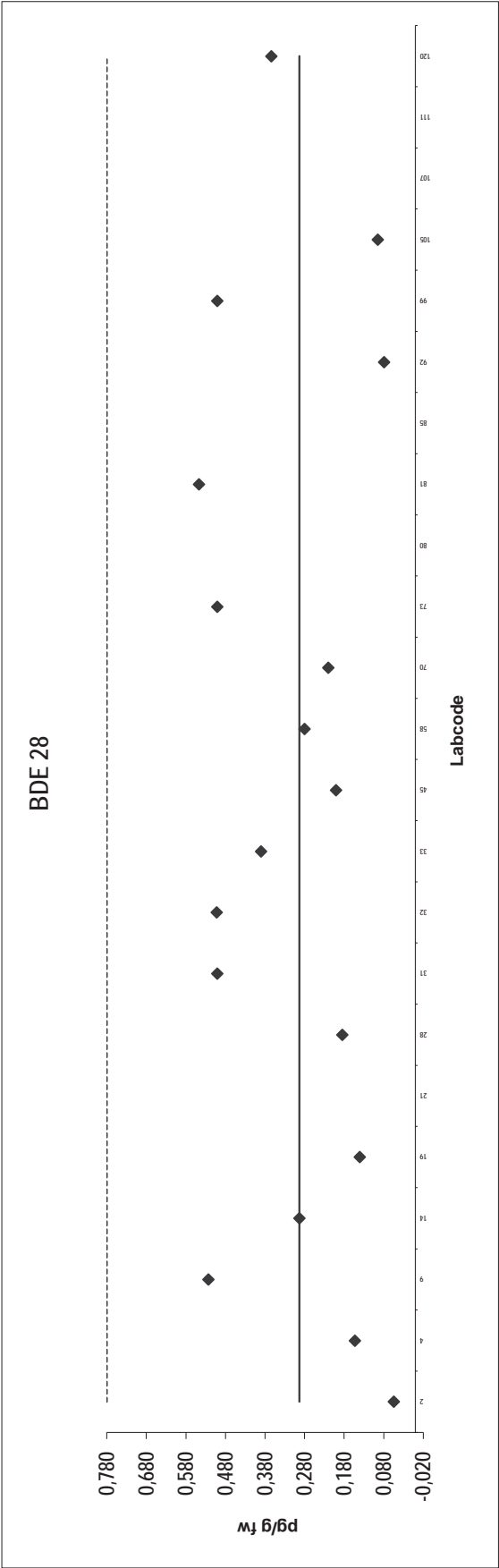


Poultry
Congener: BDE 28

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0,054	ND			
4	0,15	ND			
9	0,52				
14	0,29				
19	0,14				
21	157	Outlier			
28	0,18				
31	0,50	ND			
32	0,50				
33	0,39				
45	0,20				
58	0,28	ND			
70	0,22				
73	0,50	ND			
80	1,5	Outlier			
81	0,55				
85	2,0	Outlier,ND			
92	0,078				
99	0,50	ND			
105	0,095	ND			
107	2,0	Outlier			
111	1,0	Outlier,ND			
120	0,36				

Consensus statistics

Consensus median, pg/g	0,29
Median all values pg/g	0,39
Consensus mean, pg/g	0,31
Standard deviation, pg/g	0,17
Relative standard deviation, %	57
No. of values reported	23
No. of values removed	5
No. of reported non-detects	9

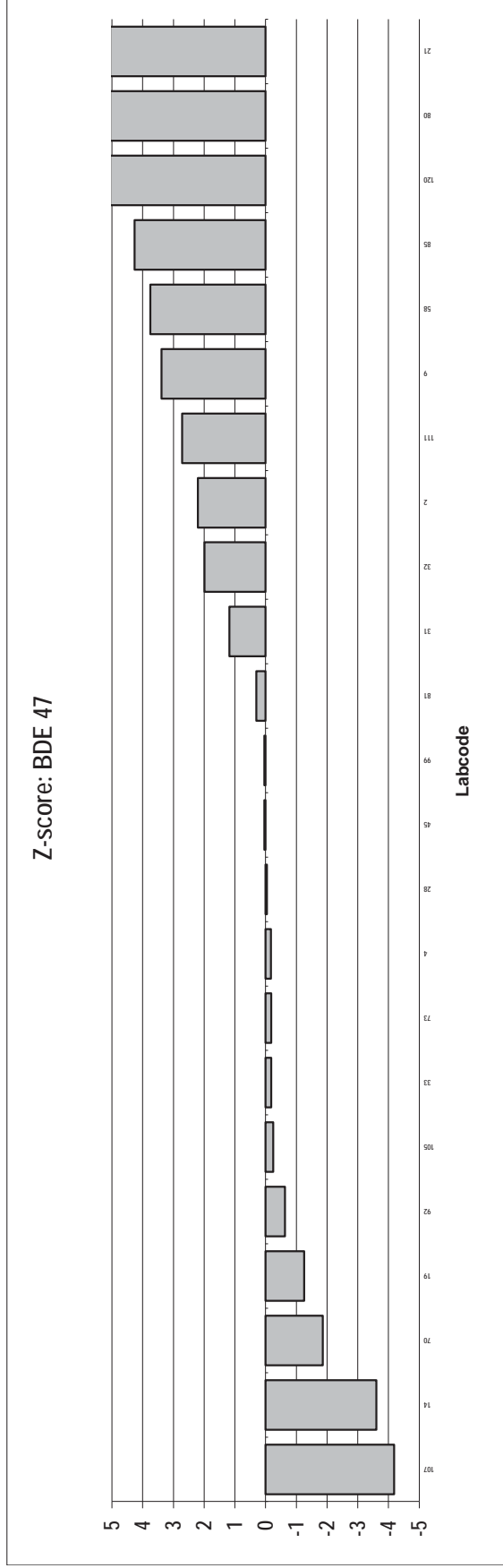
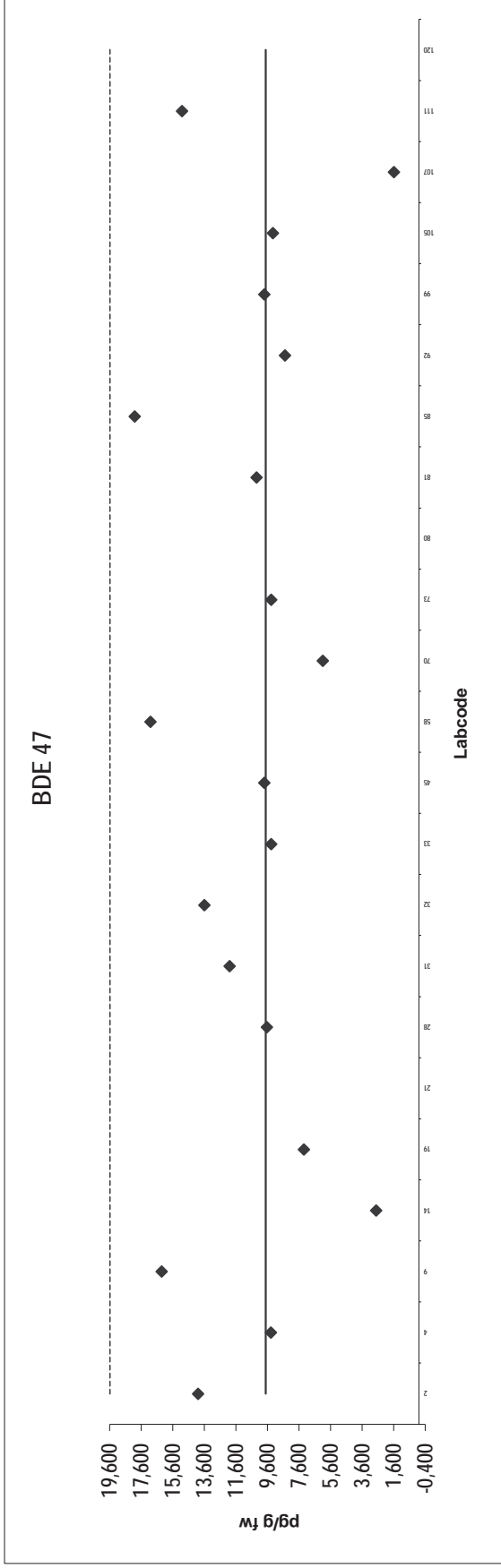


Poultry
Congener: BDE 47

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	14				
4	9,4				
9	16				
14	2,7				
19	7,3				
21	10400	Outlier			
28	9,6				
31	12				
32	14				
33	9,4				
45	9,8				
58	17				
70	6,1				
73	9,4				
80	29	Outlier			
81	10				
85	18				
92	8,5				
99	9,8				
105	9,2				
107	1,6	ND			
111	15	ND			
120	24	Outlier			

Consensus statistics

Consensus median, pg/g	9,7
Median all values pg/g	9,8
Consensus mean, pg/g	10
Standard deviation, pg/g	4,3
Relative standard deviation, %	42
No. of values reported	23
No. of values removed	3
No. of reported non-detects	2

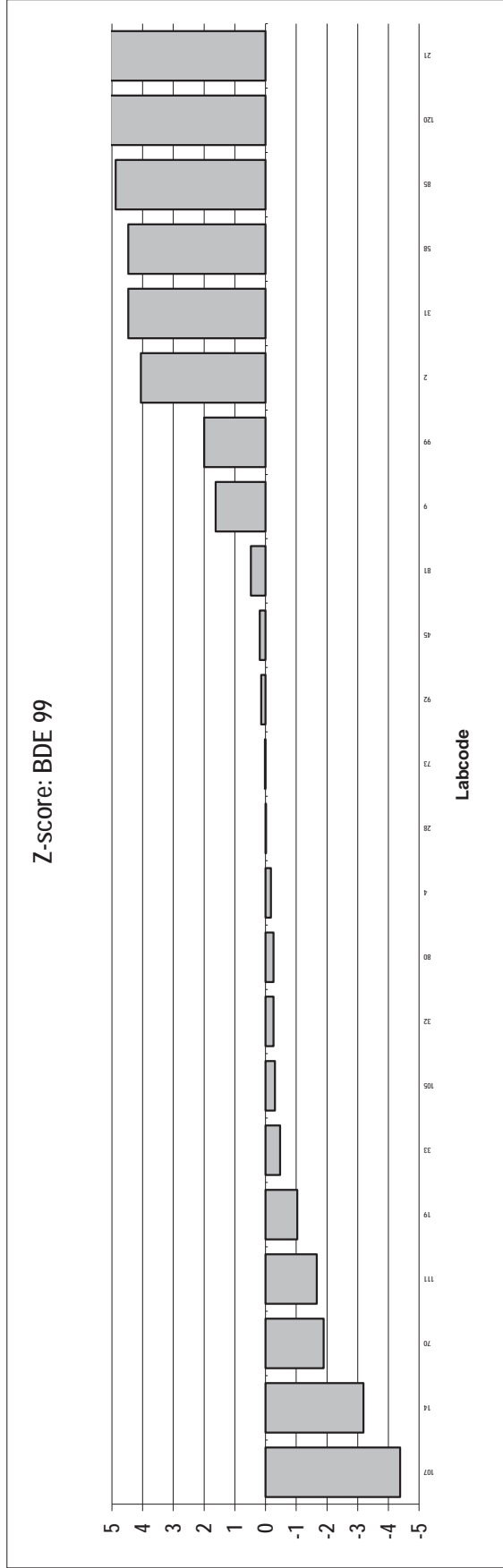
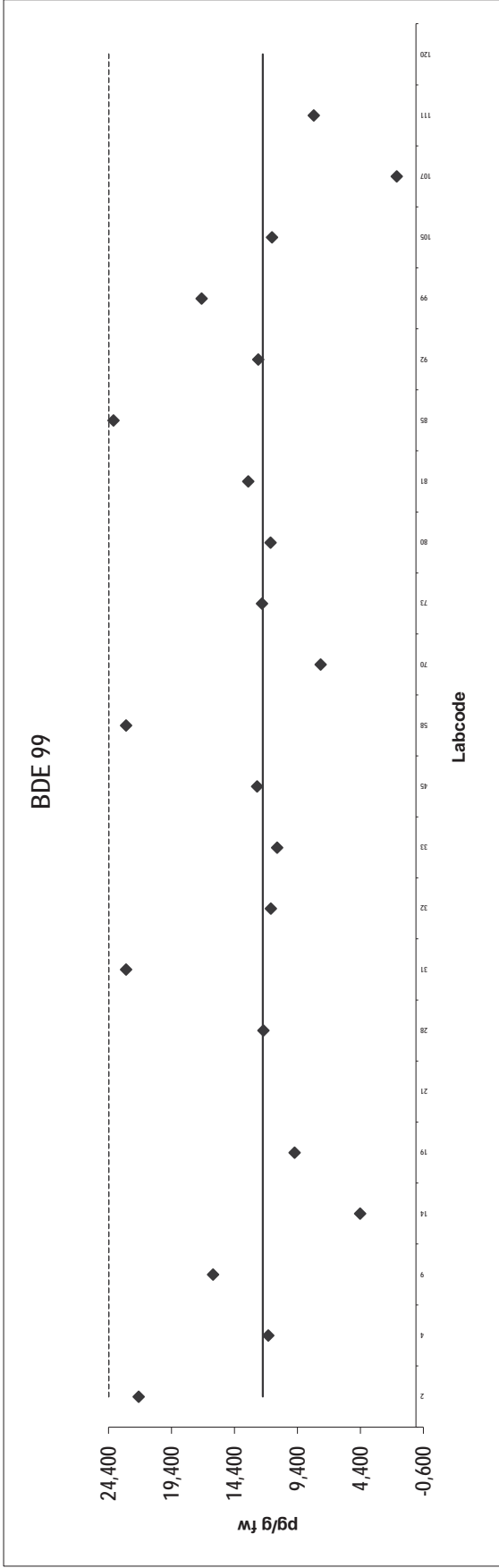


Poultry
Congener: BDE 99

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	22				
4	12				
9	16				
14	4,4				
19	9,6				
21	9800	Outlier			
28	12				
31	23				
32	12				
33	11				
45	13				
58	23				
70	7,6				
80	12				
81	13				
85	24				
92	13				
99	17				
105	11				
107	1,5	ND			
111	8,1				
120	37	Outlier			

Consensus statistics

Consensus median, pg/g	12
Median all values pg/g	12
Consensus mean, pg/g	13
Standard deviation, pg/g	6,0
Relative standard deviation, %	45
No. of values reported	23
No. of values removed	2
No. of reported non-detects	1

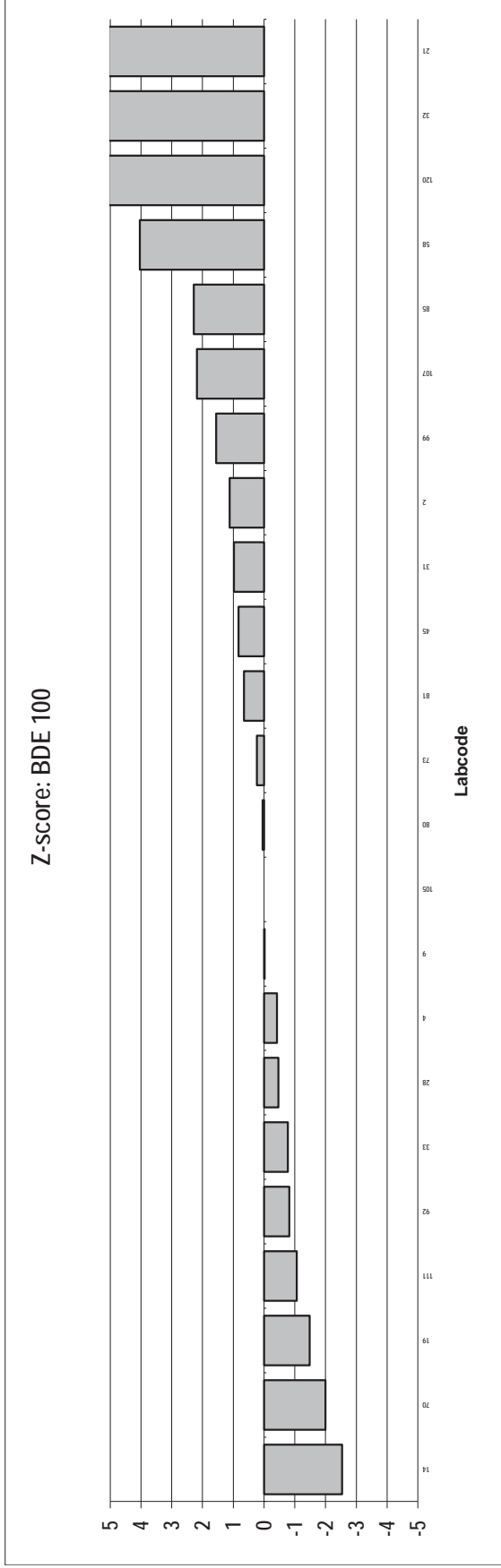
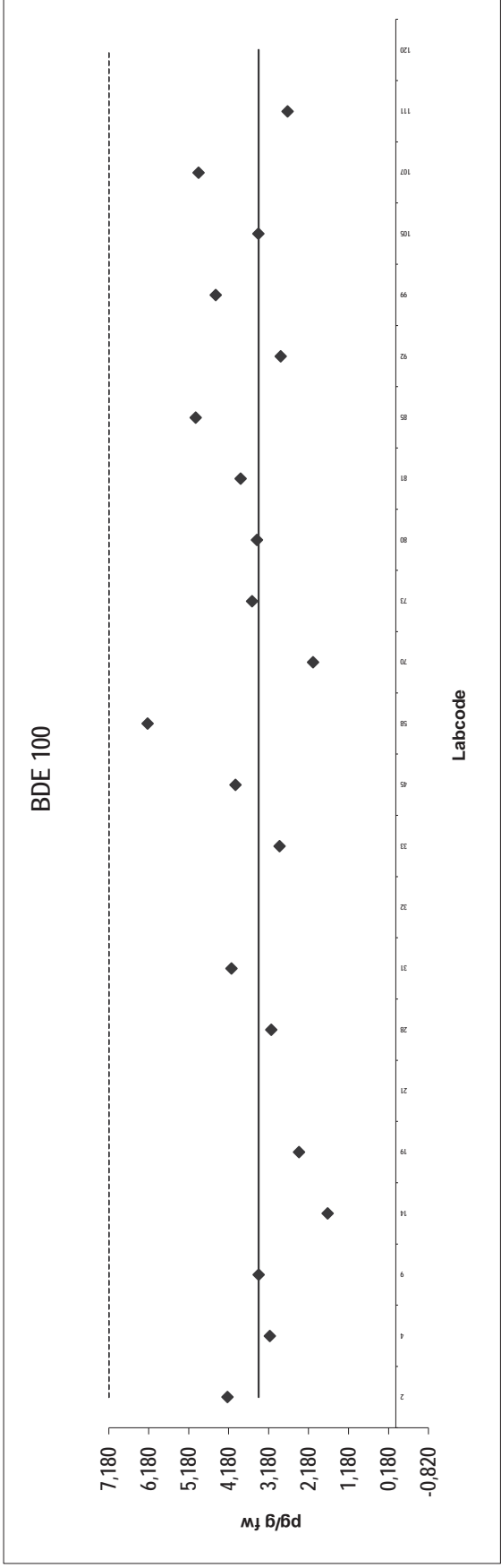


Poultry
Congener: BDE 100

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4,2				
4	3,1				
9	3,4				
14	1,7				
19	2,4				
21	1930				
28	3,1	Outlier			
31	4,1				
32	8,6	Outlier			
33	2,9				
45	4,0				
58	6,2				
70	2,1				
73	3,6				
80	3,5				
81	3,9				
85	5,0	ND			
92	2,9				
99	4,5				
105	3,4				
107	4,9				
111	2,7				
120	8,4	Outlier			

Consensus statistics

Consensus median, pg/g	3,4
Median all values pg/g	3,6
Consensus mean, pg/g	3,6
Standard deviation, pg/g	1,1
Relative standard deviation, %	30
No. of values reported	23
No. of values removed	3
No. of reported non-detects	1

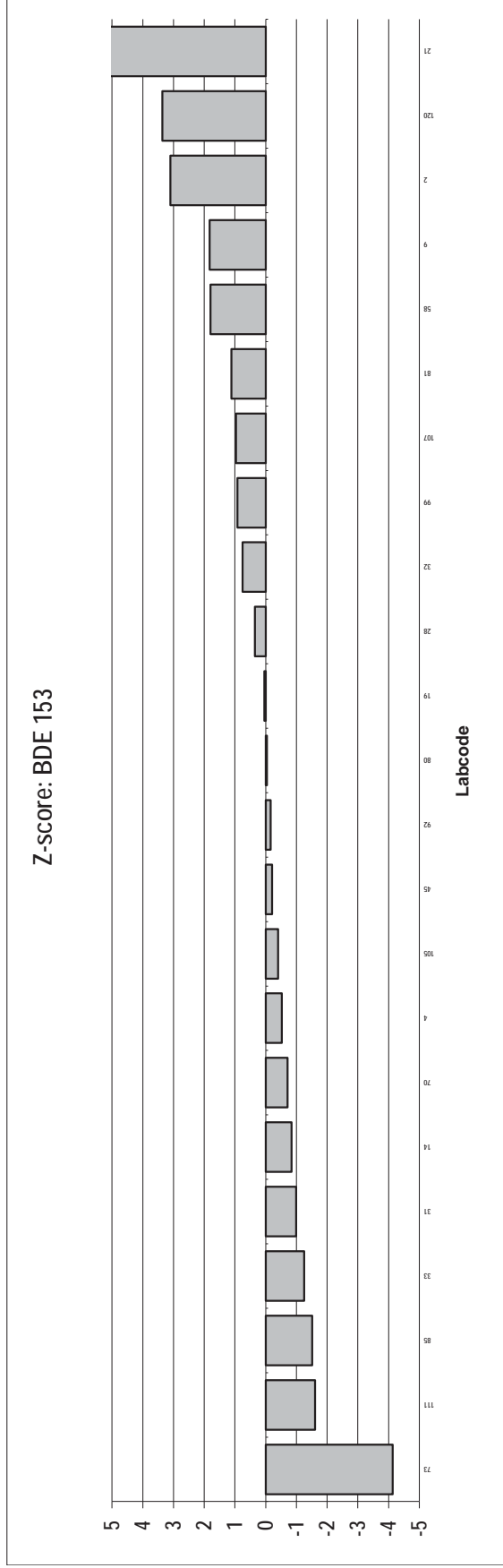
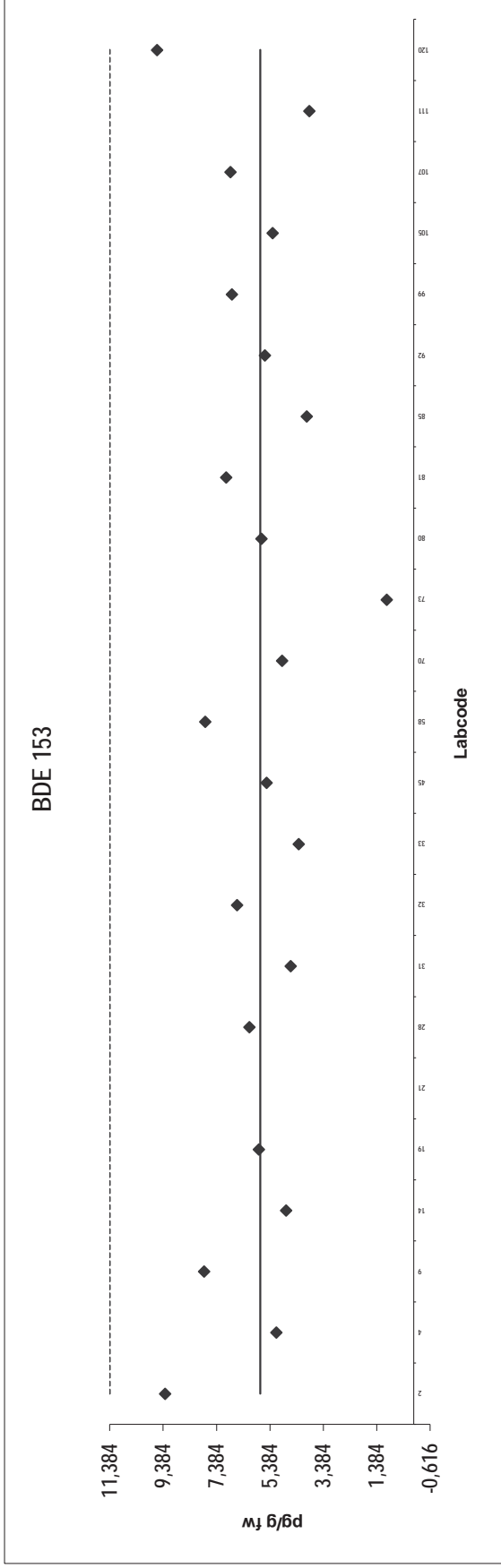


Poultry
Congener: BDE 153

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	9,3				
4	5,1				
9	7,8				
14	4,8				
19	5,8				
21	688	Outlier			
28	6,1				
31	4,6				
32	6,6				
33	4,3				
45	5,5				
58	7,8				
70	4,9				
73	1,0	ND			
80	5,7				
81	7,0				
85	4,0	ND			
92	5,6				
99	6,8				
105	5,3				
107	6,9				
111	3,9				
120	9,6				

Consensus statistics

Consensus median, pg/g	5,7
Median all values pg/g	5,7
Consensus mean, pg/g	5,8
Standard deviation, pg/g	1,9
Relative standard deviation, %	32
No. of values reported	23
No. of values removed	1
No. of reported non-detects	2



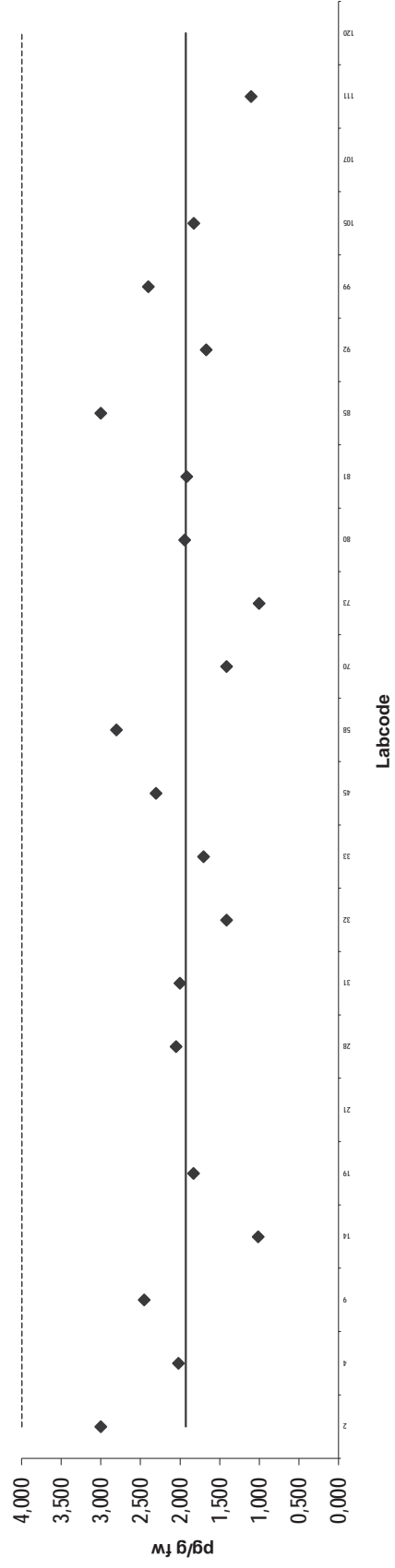
Poultry
Congener: BDE 154

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	3,0				
4	2,0				
9	2,5				
14	1,0				
19	1,8				
21	723	Outlier			
28	2,1				
31	2,0				
32	1,4				
33	1,7				
45	2,3				
58	2,8				
70	1,4				
73	1,0	ND			
80	1,9				
81	1,9				
85	3,0	ND			
92	1,7				
99	2,4				
105	1,8				
107	6,0	Outlier,ND			
111	1,1				
120	5,0	Outlier			

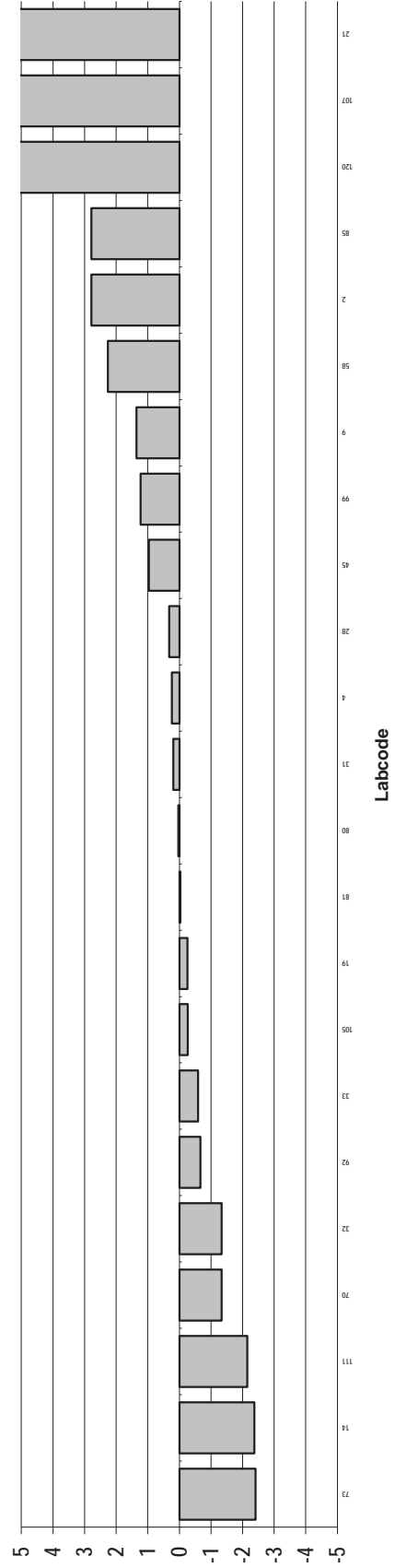
Consensus statistics

Consensus median, pg/g	1,9
Median all values pg/g	2,0
Consensus mean, pg/g	1,9
Standard deviation, pg/g	0,60
Relative standard deviation, %	31
No. of values reported	23
No. of values removed	3
No. of reported non-detects	3

BDE 154



Z-score: BDE 154

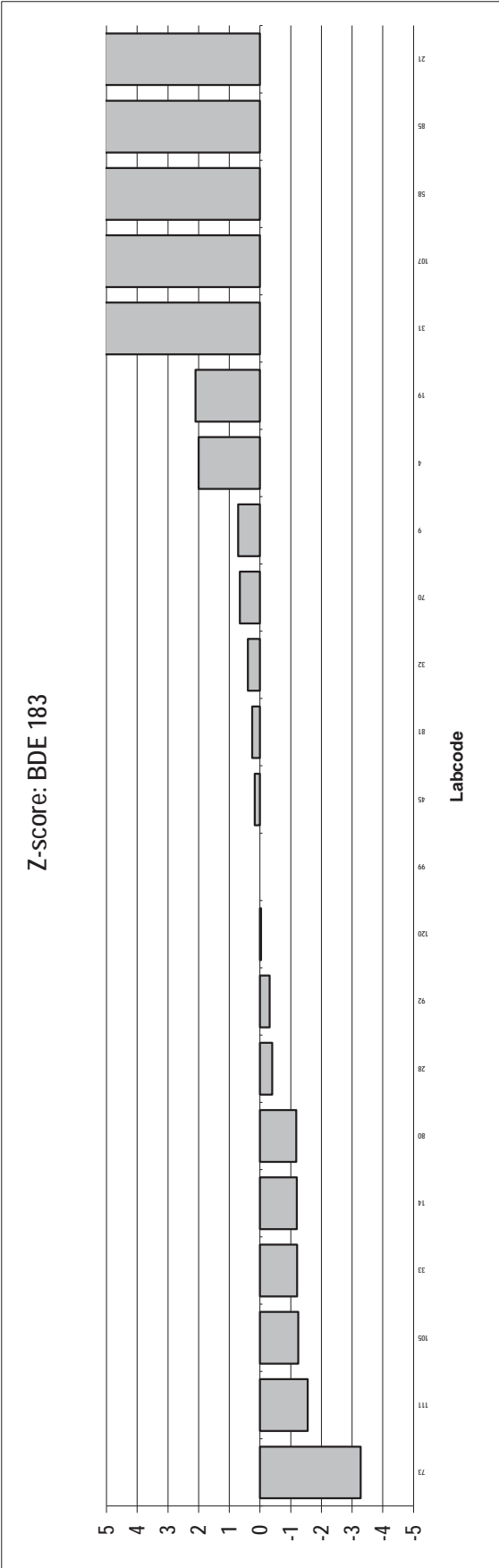
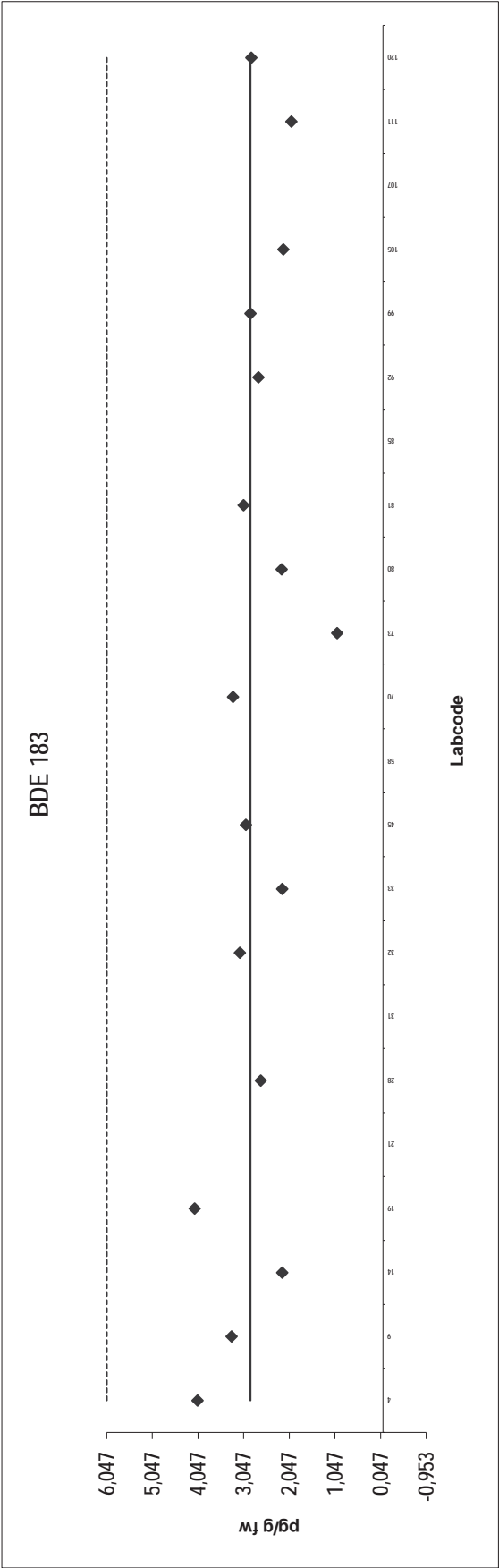


Poultry
Congener: BDE 183

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	4,1				
9	3,3				
14	2,2				
19	4,1				
21	220	Outlier			
28	2,7				
31	6,9	Outlier			
32	3,1				
33	2,2				
45	3,0				
58	8,3	Outlier			
70	3,3				
73	1,0	ND			
80	2,2				
81	3,0				
85	9,0	Outlier,ND			
92	2,7				
99	2,9				
105	2,2				
107	7,4	Outlier,ND			
111	2,0	ND			
120	2,9				

Consensus statistics

Consensus median, pg/g	2,9
Median all values pg/g	3,0
Consensus mean, pg/g	2,8
Standard deviation, pg/g	0,77
Relative standard deviation, %	28
No. of values reported	22
No. of values removed	5
No. of reported non-detects	4

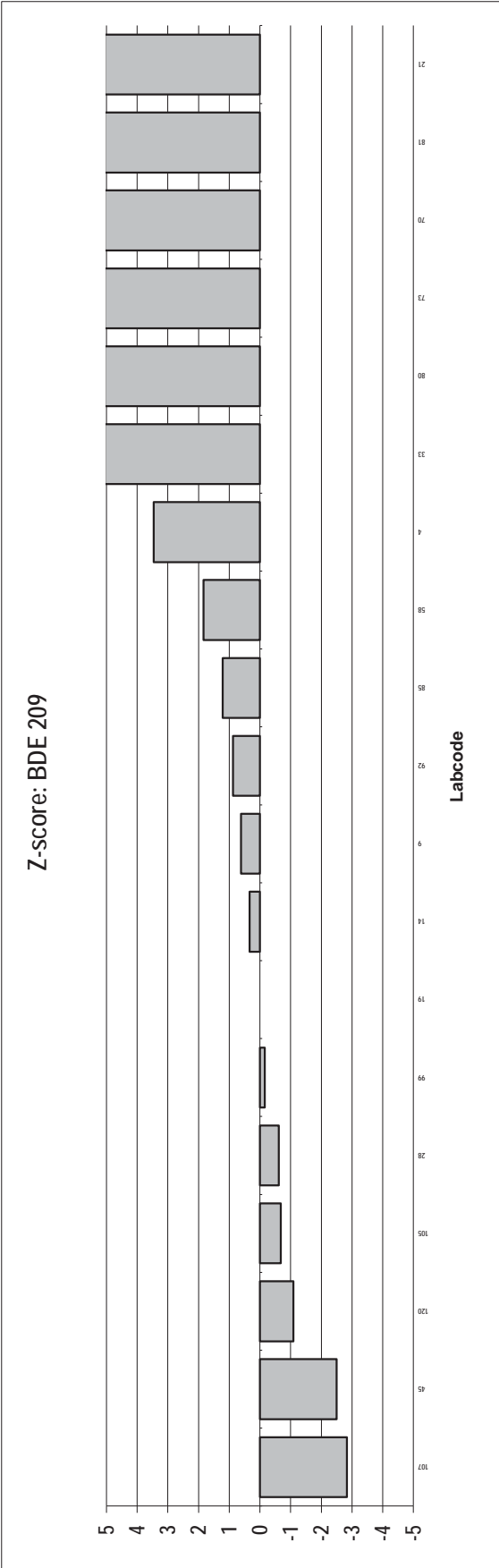
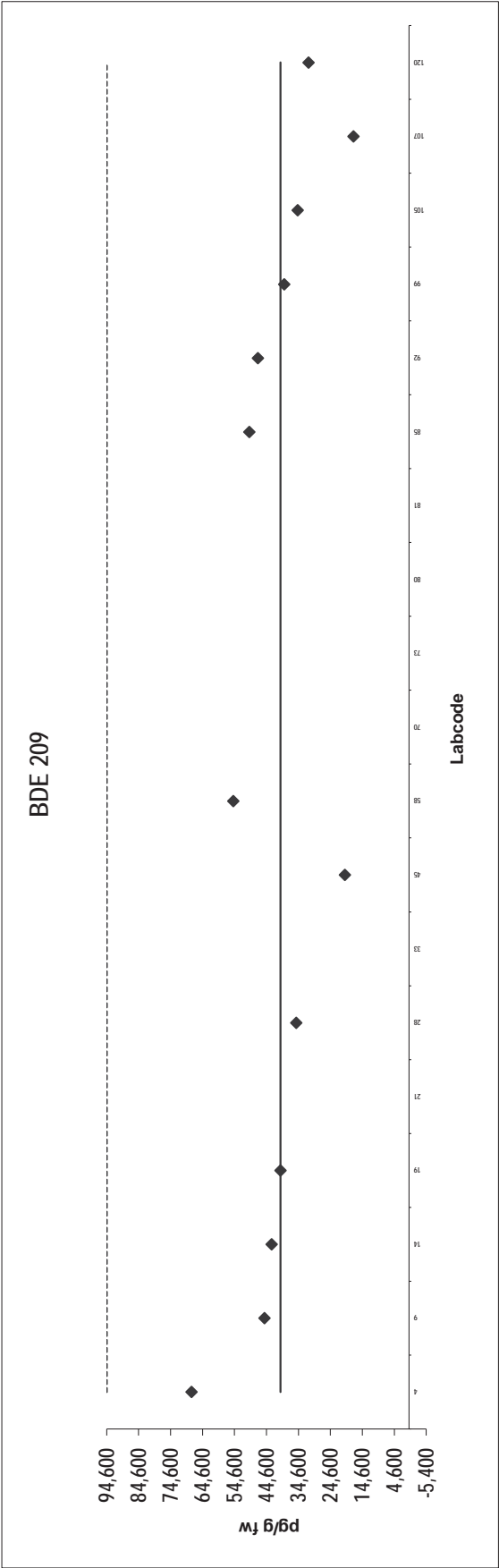


Poultry
Congener: BDE 209

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	68				
9	45				
14	43				
19	40				
21	17400	Outlier			
28	35				
33	97	Outlier			
45	20				
58	55				
70	134	Outlier			
73	104	Outlier			
80	99	Outlier			
81	339	Outlier			
85	50	ND			
92	47				
99	39				
105	35				
107	17				
120	31	ND			

Consensus statistics

Consensus median, pg/g	40
Median all values pg/g	47
Consensus mean, pg/g	41
Standard deviation, pg/g	14
Relative standard deviation, %	34
No. of values reported	19
No. of values removed	6
No. of reported non-detects	2

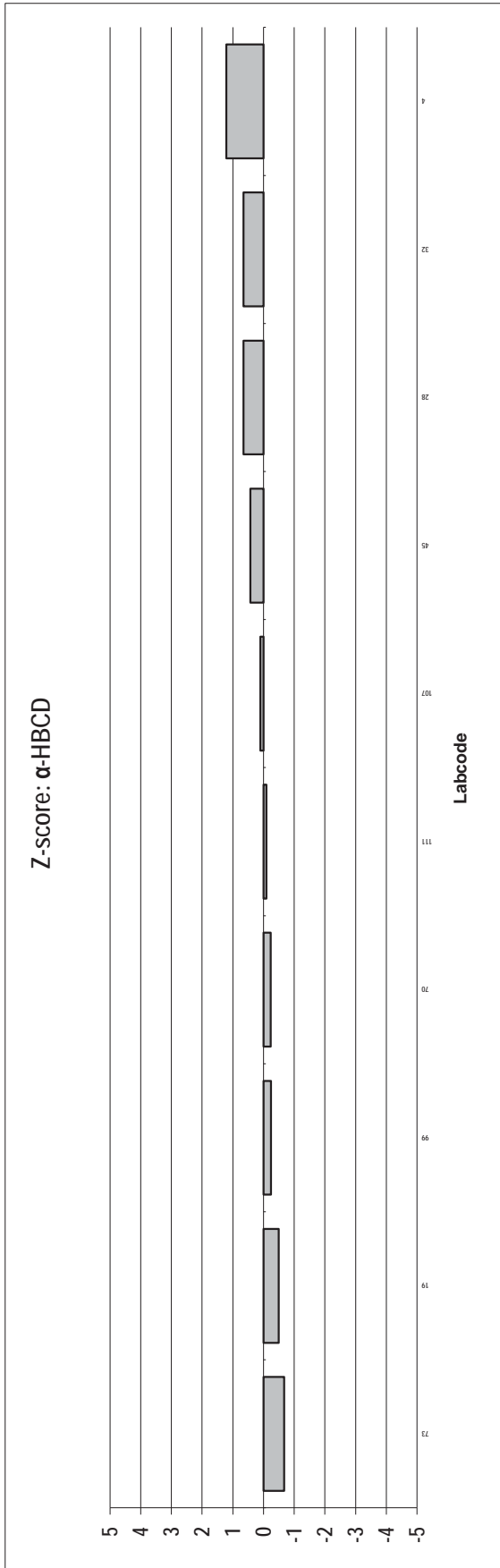
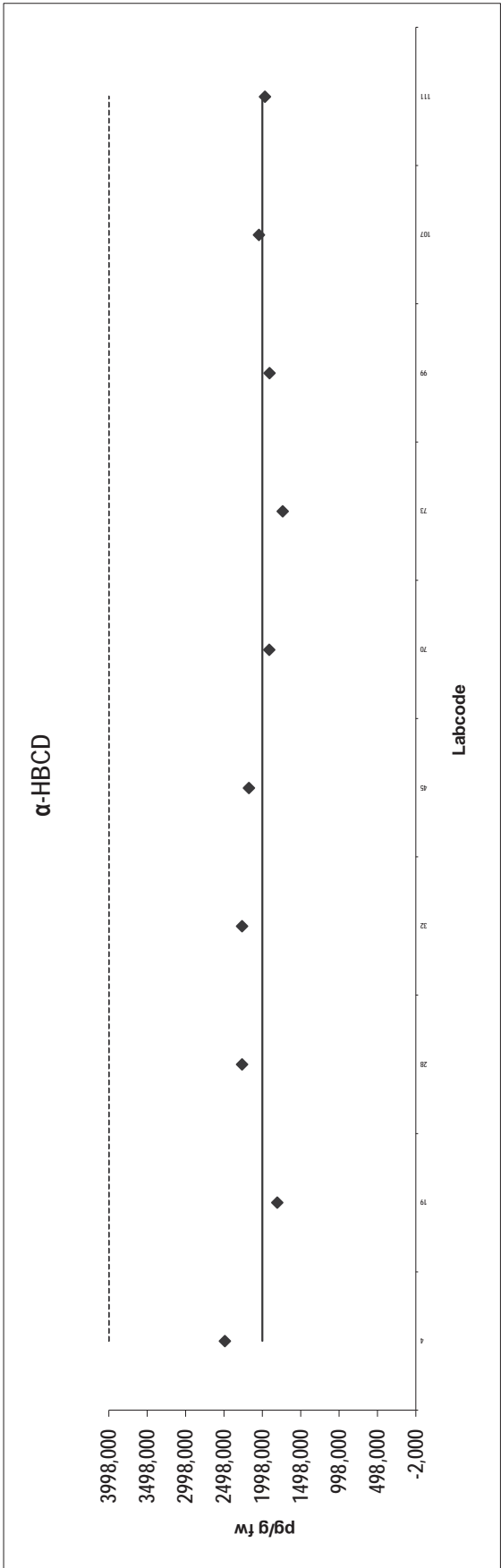


Poultry
Congener: α -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	2484				
19	1801				
28	2258				
32	2258				
45	2170				
70	1904				
73	1731				
99	1900				
107	2038				
111	1960				

Consensus statistics

Consensus median, pg/g	1999
Median all values pg/g	1999
Consensus mean, pg/g	2050
Standard deviation, pg/g	237
Relative standard deviation, %	12
No. of values reported	10
No. of values removed	0
No. of reported non-detects	0

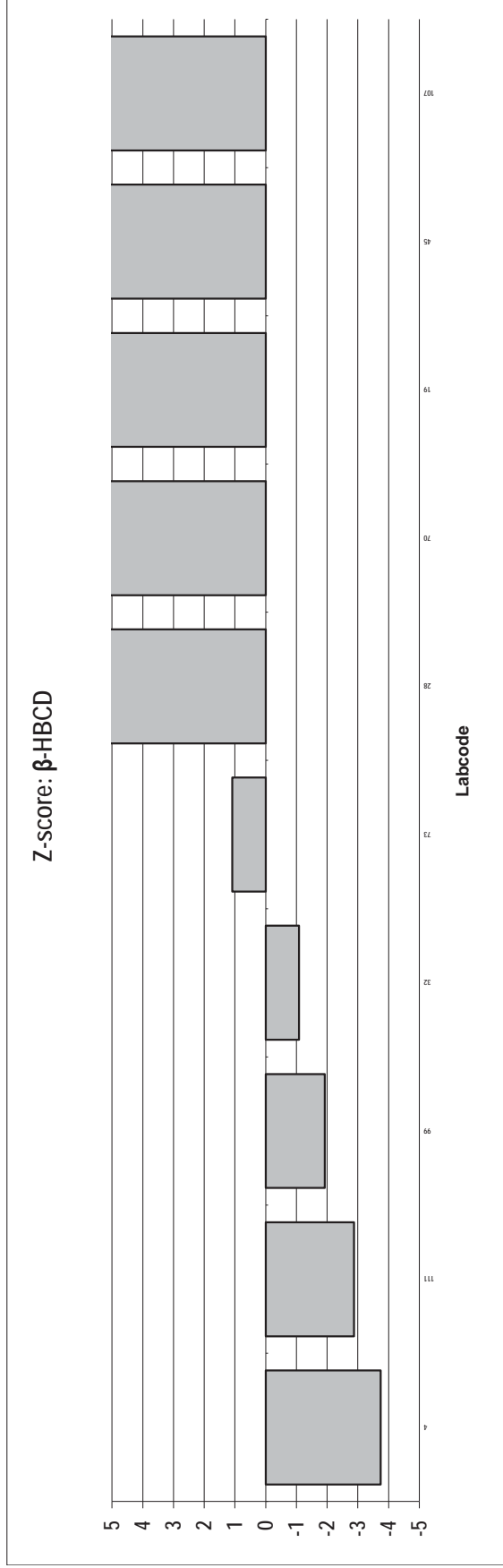
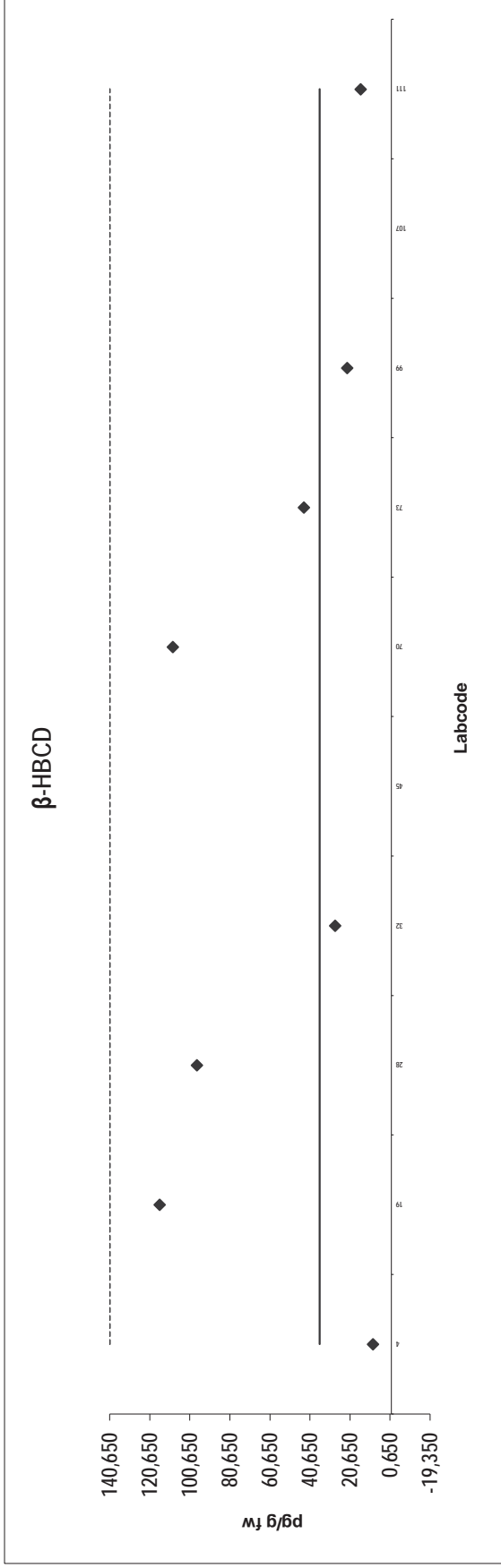


Poultry
Congener: β -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	9,0				
19	116				
28	97				
32	28				
45	142	Outlier			
70	109				
73	44				
99	22				
107	311	Outlier,ND			
111	15				

Consensus statistics

Consensus median, pg/g	36
Median all values pg/g	70
Consensus mean, pg/g	55
Standard deviation, pg/g	45
Relative standard deviation, %	81
No. of values reported	10
No. of values removed	2
No. of reported non-detects	1

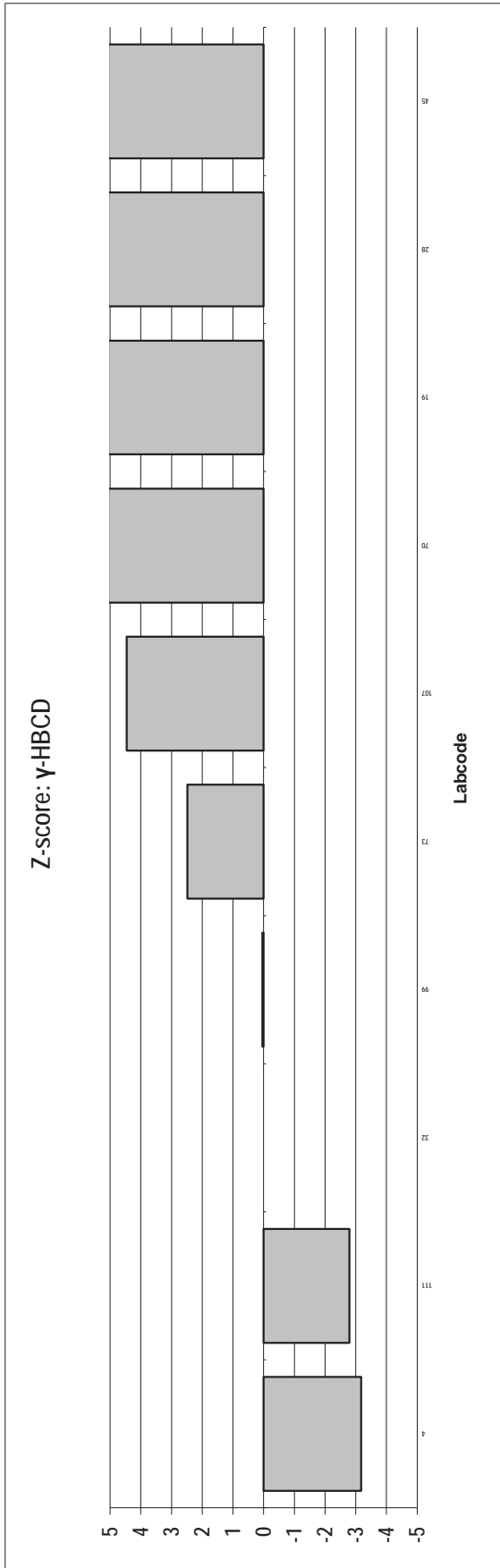
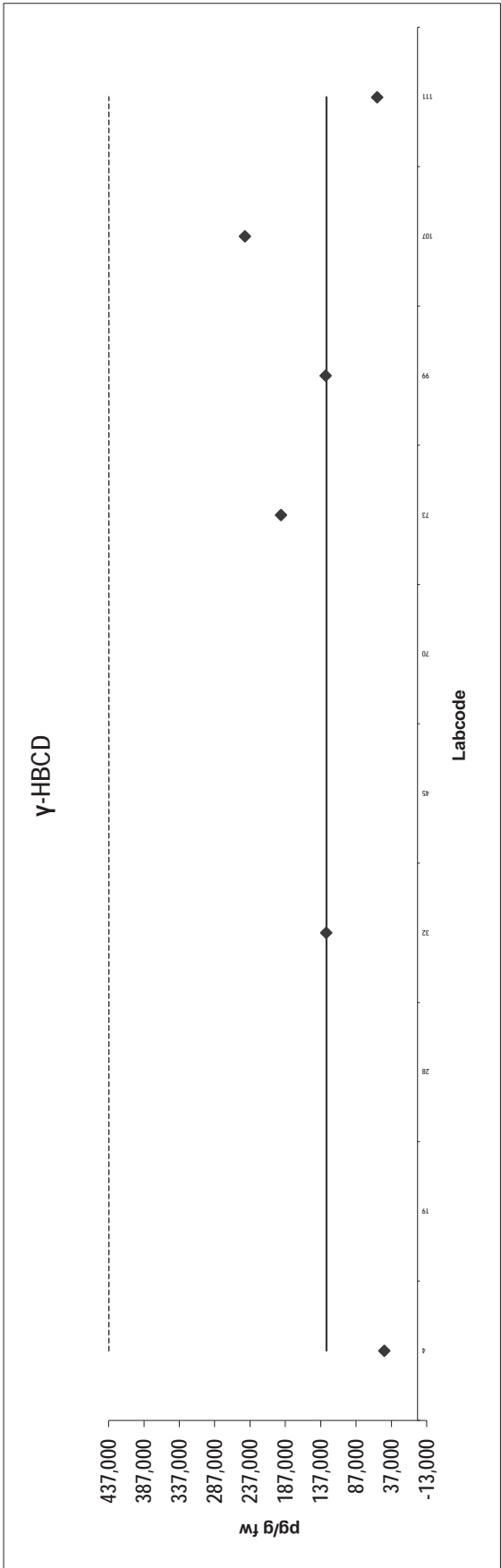


Poultry
Congener: γ -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	47				
19	635	Outlier			
28	653	Outlier			
32	129				
45	783	Outlier			
70	630	Outlier			
73	193				
99	130				
107	244	ND			
111	57				

Consensus statistics

Consensus median, pg/g	129
Median all values pg/g	219
Consensus mean, pg/g	133
Standard deviation, pg/g	76
Relative standard deviation, %	57
No. of values reported	10
No. of values removed	4
No. of reported non-detects	1

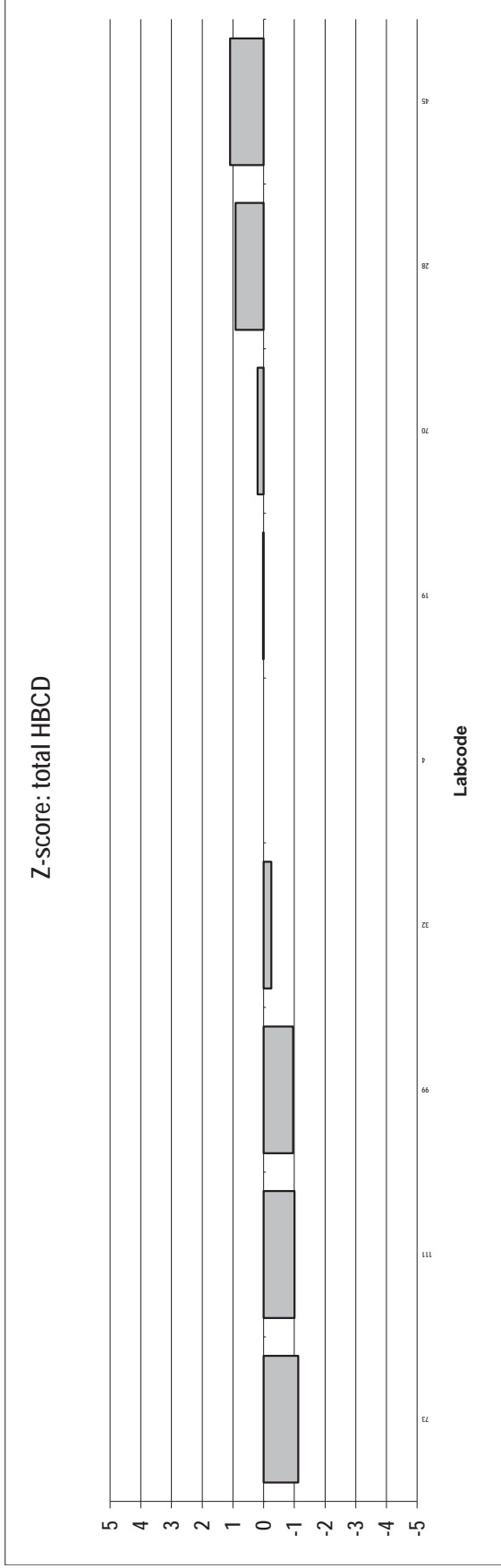
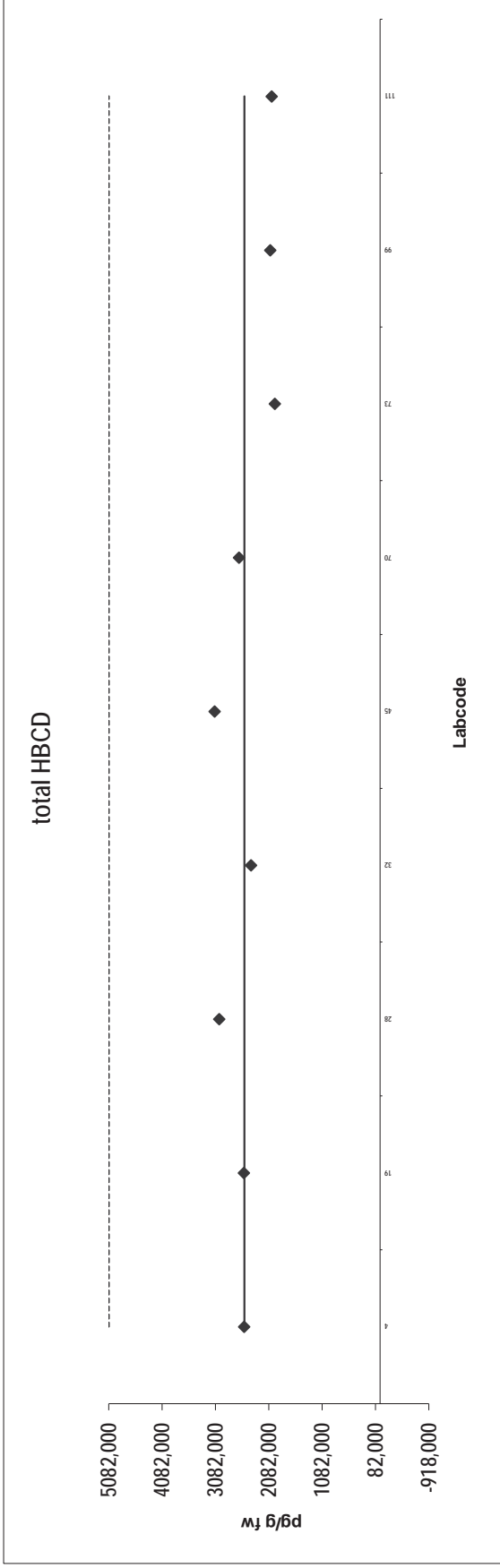


Poultry
Congener: total HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	2541				
19	2551				
28	3008				
32	2415				
45	3095				
70	2643				
73	1968				
99	2052				
111	2030				

Consensus statistics

Consensus median, pg/g	2541
Median all values pg/g	2541
Consensus mean, pg/g	2478
Standard deviation, pg/g	410
Relative standard deviation, %	17
No. of values reported	9
No. of values removed	0
No. of reported non-detects	0



Appendix 3:

Presentation of results
for crab meat

Appendix 3: Presentation of results: Crab meat

Statistic calculations for PCDDs, PCDFs and dioxin-like PCBs

For each congener, the outliers were removed and the consensus calculated according to the following procedure:

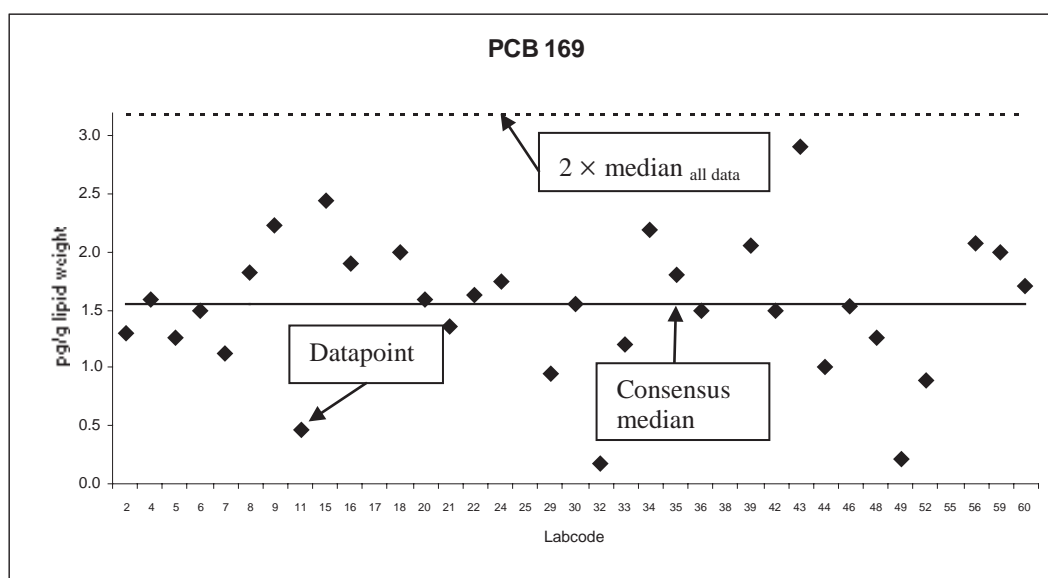
1. The median was calculated from all the reported data, using the detection limit as concentration for non-detected congeners.
2. Values exceeding $2 \times$ this median were defined as outliers and removed from the data set.
3. Median, mean and standard deviation were re-calculated from the remaining data. This second median was called consensus.

Statistic calculations for indicator PCBs, PBDEs and HBCD

For each congener, the outliers were removed and the consensus calculated according to the following procedure:

1. The median was calculated from all the reported data, using the detection limit as concentration for non-detected congeners (NDs).
2. Values exceeding $2 \times$ this median were defined as outliers and removed from the data set. The NDs were also removed.
3. Median, mean and standard deviation were re-calculated from the remaining data. This second median was called consensus.
4. For comparison, median, mean and standard deviation were also calculated without removing NDs.

The diagram shows the reported data up to approximately the limit for outliers ($2 \times$ the first median).



Z-Scores of individual congeners

Z-scores of each congener were calculated for each laboratory according to the following equation:

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

where x = reported value; X = assigned value (consensus); σ = target value for standard deviation. A σ of 20% of the consensus was used, i.e. z-scores between +1 and -1 reflect a deviation of $\pm 20\%$ from the consensus value.

Crab meat

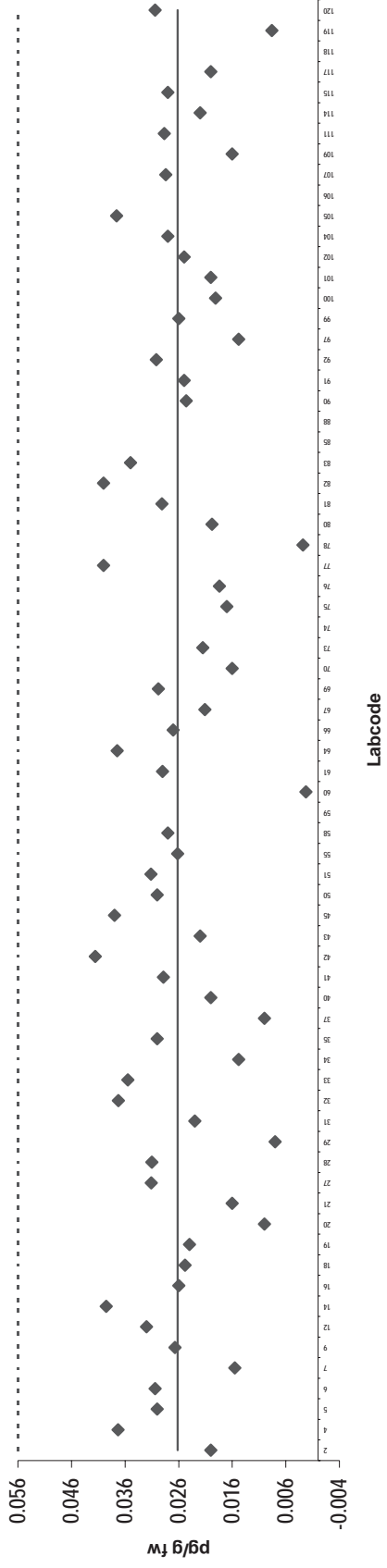
Congener: 2,3,7,8 TCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.020	ND	80	0.020	
4	0.037		81	0.029	
5	0.030		82	0.040	ND
6	0.030	ND	83	0.035	
7	0.016		85	0.20	Outlier,ND
9	0.027		88	0.14	Outlier
12	0.032		90	0.025	
14	0.040		91	0.025	
16	0.026		92	0.030	
18	0.025		97	0.015	
19	0.024		99	0.026	
20	0.010		100	0.019	
21	0.016		101	0.020	
27	0.031		102	0.025	
28	0.031		104	0.028	
29	0.0080	ND	105	0.038	
31	0.023		106	0.25	Outlier
32	0.037		107	0.028	
33	0.036		109	0.016	ND
34	0.015		111	0.029	
35	0.030		114	0.022	
37	0.010		115	0.028	
40	0.020		117	0.020	ND
41	0.029		118	0.059	Outlier
42	0.042		119	0.0086	ND
43	0.022		120	0.030	
45	0.038				
50	0.030	ND			
51	0.031				
55	0.026				
58	0.028				
59	0.18	Outlier			
60	0.0023	ND			
61	0.029				
64	0.038				
66	0.027				
67	0.021				
69	0.030				
70	0.016				
73	0.021				
74	0.25	Outlier,ND			
75	0.017				
76	0.018				
77	0.040				
78	0.0028				

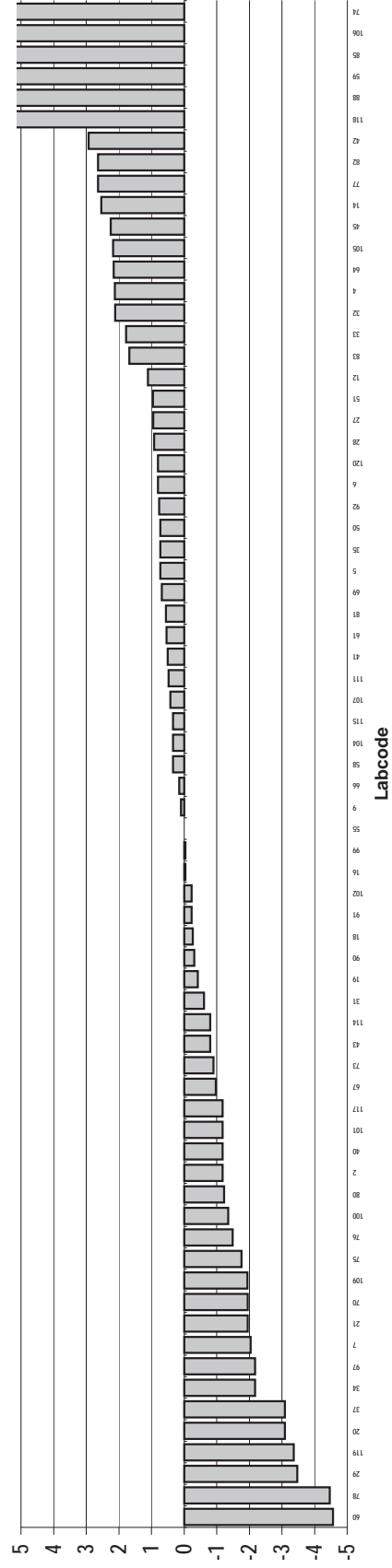
Consensus statistics

Consensus median, pg/g	0.026
Median all values pg/g	0.028
Consensus mean, pg/g	0.025
Standard deviation, pg/g	0.0091
Relative standard deviation, %	36
No. of values reported	71
No. of values removed	6
No. of reported non-detects	11

2,3,7,8 TCDD



Z-score: 2,3,7,8 TCDD



Crab meat

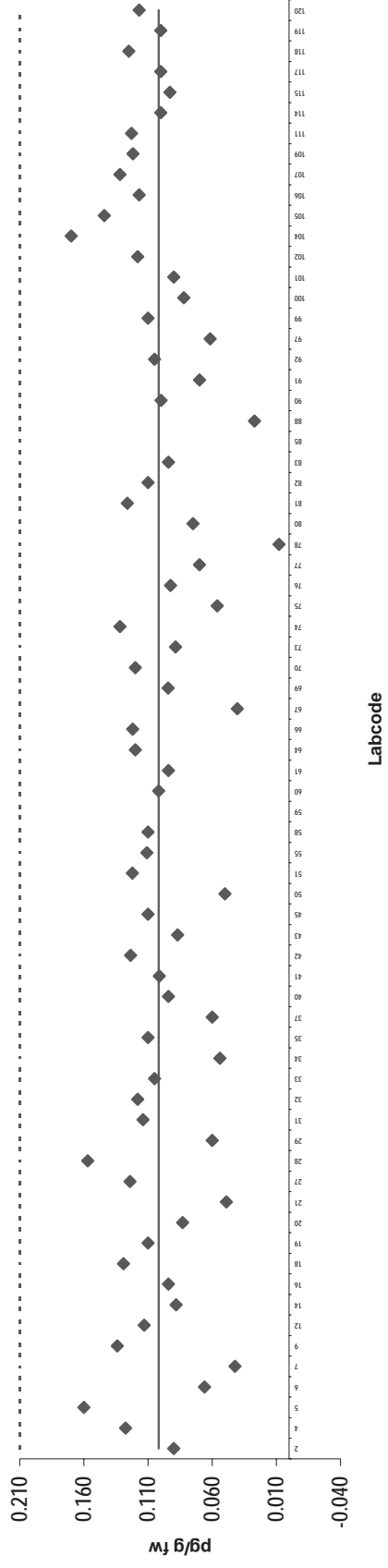
Congener: 1,2,3,7,8 PeCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.090		80	0.075	
4	0.13		81	0.13	
5	0.16		82	0.11	
6	0.066		83	0.094	
7	0.042		85	0.37	Outlier
9	0.13		88	0.027	
12	0.11		90	0.100	
14	0.088		91	0.070	
16	0.094		92	0.11	
18	0.13		97	0.062	
19	0.11		99	0.11	
20	0.083		100	0.082	
21	0.049		101	0.090	
27	0.12		102	0.12	
28	0.16		104	0.17	
29	0.060		105	0.14	
31	0.11		106	0.12	
32	0.12		107	0.13	
33	0.11		109	0.12	
34	0.054		111	0.12	
35	0.11		114	0.10	
37	0.060		115	0.093	
40	0.094		117	0.10	
41	0.10		118	0.13	
42	0.12		119	0.10	
43	0.087		120	0.12	
45	0.11				
50	0.050	ND			
51	0.12				
55	0.11				
58	0.11				
59	0.28				
60	0.10	Outlier			
61	0.094				
64	0.12				
66	0.12				
67	0.040				
69	0.094				
70	0.12				
73	0.088				
74	0.13				
75	0.056				
76	0.092				
77	0.070				
78	0.0079				

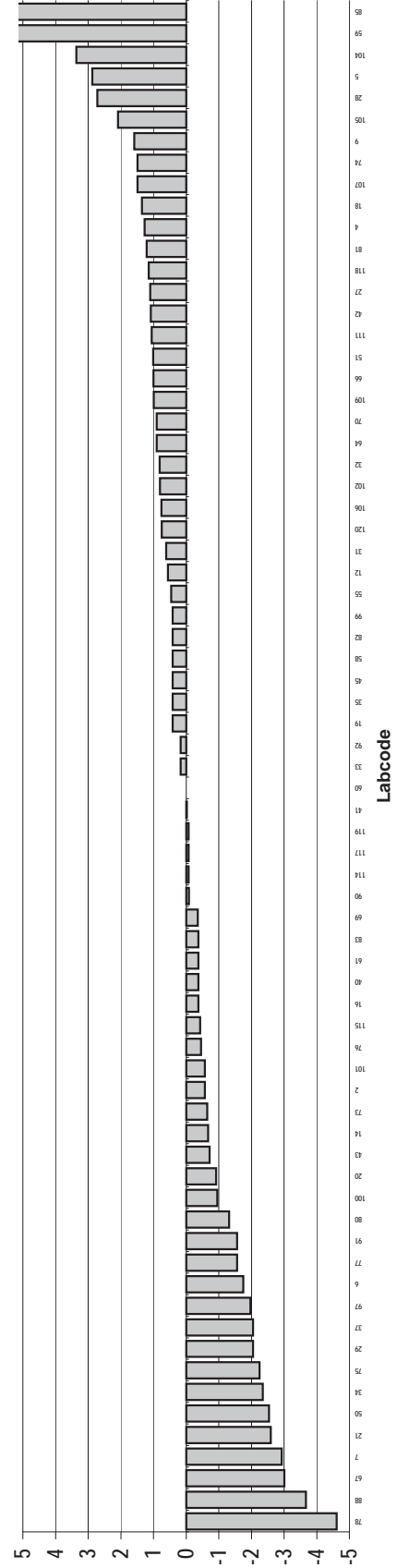
Consensus statistics

Consensus median, pg/g	0.10
Median all values pg/g	0.11
Consensus mean, pg/g	0.099
Standard deviation, pg/g	0.031
Relative standard deviation, %	31
No. of values reported	71
No. of values removed	2
No. of reported non-detects	1

1,2,3,7,8 PeCDD



Z-score: 1,2,3,7,8 PeCDD



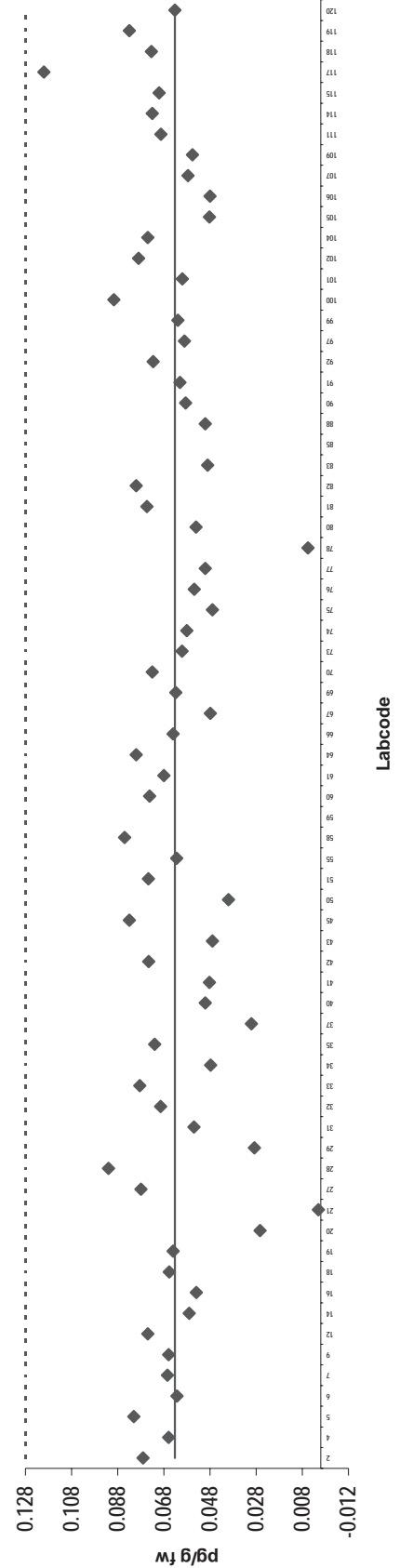
Crab meat
Congener: 1,2,3,4,7,8 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.077		80	0.054	
4	0.066		81	0.075	
5	0.081		82	0.080	ND
6	0.062		83	0.049	
7	0.067		85	0.24	Outlier
9	0.066		88	0.050	ND
12	0.075		90	0.059	
14	0.057		91	0.061	
16	0.054		92	0.073	
18	0.066		97	0.059	
19	0.064		99	0.062	
20	0.026		100	0.090	
21	0.0010		101	0.060	
27	0.078		102	0.079	
28	0.092		104	0.075	
29	0.029		105	0.048	
31	0.055		106	0.048	
32	0.069		107	0.058	
33	0.079		109	0.056	
34	0.048		111	0.069	
35	0.072		114	0.073	
37	0.030		115	0.070	
40	0.050		117	0.12	
41	0.048		118	0.073	
42	0.075		119	0.083	
43	0.047		120	0.063	
45	0.083				
50	0.040				
51	0.075	ND			
55	0.063				
58	0.085				
59	0.19				
60	0.074	Outlier			
61	0.068				
64	0.080				
66	0.064				
67	0.048				
69	0.063				
70	0.073				
73	0.060				
74	0.058				
75	0.047				
76	0.055				
77	0.050	ND			
78	0.0055				

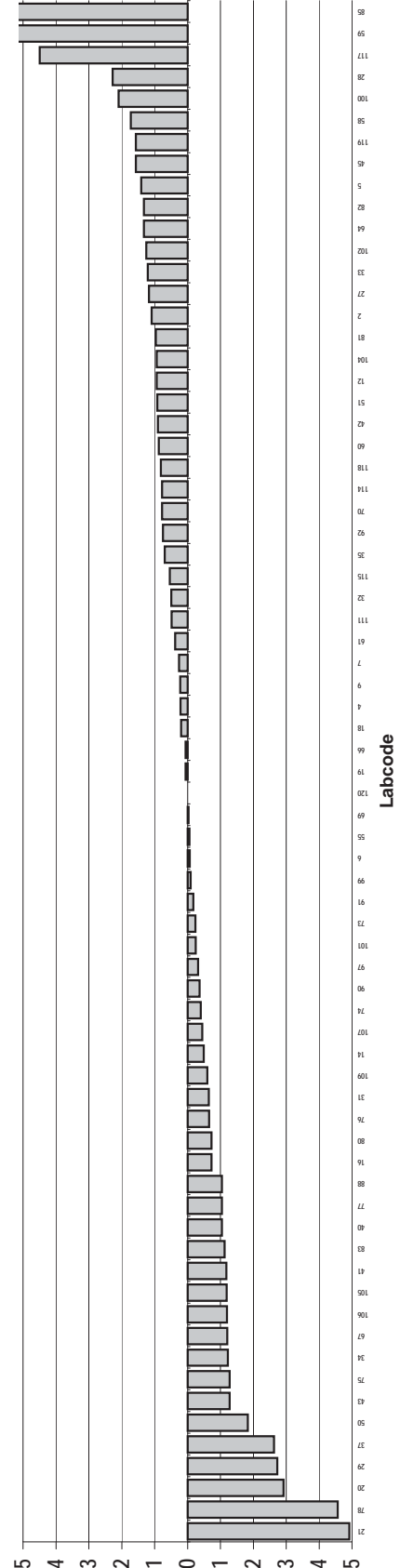
Consensus statistics

Consensus median, pg/g	0.063
Median all values pg/g	0.064
Consensus mean, pg/g	0.062
Standard deviation, pg/g	0.019
Relative standard deviation, %	30
No. of values reported	71
No. of values removed	2
No. of reported non-detects	5

1,2,3,4,7,8 HxCDD



Z-score: 1,2,3,4,7,8 HxCDD



Crab meat
Congener: 1,2,3,6,7,8 HxCDD

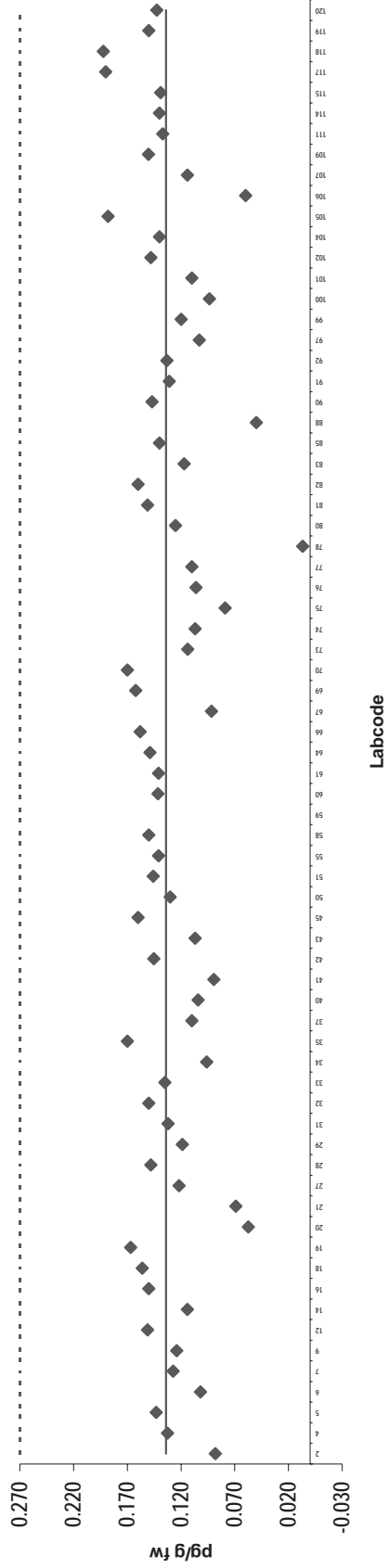
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.088		80	0.13	
4	0.13		81	0.15	
5	0.14		82	0.16	
6	0.10		83	0.12	
7	0.13		85	0.14	
9	0.12		88	0.050	ND
12	0.15		90	0.15	
14	0.11		91	0.13	
16	0.15		92	0.13	
18	0.16		97	0.10	
19	0.17		99	0.12	
20	0.058		100	0.094	
21	0.069		101	0.11	
27	0.12		102	0.15	
28	0.15		104	0.14	
29	0.12		105	0.19	
31	0.13		106	0.060	ND
32	0.15		107	0.11	
33	0.14		109	0.15	
34	0.096		111	0.14	
35	0.17		114	0.14	
37	0.11		115	0.14	
40	0.10		117	0.19	
41	0.089		118	0.19	
42	0.15		119	0.15	
43	0.11		120	0.14	
45	0.16				
50	0.13				
51	0.15				
55	0.14				
58	0.15				
59	0.28				
60	0.14				
61	0.14				
64	0.15				
66	0.16				
67	0.092				
69	0.16				
70	0.17				
73	0.11				
74	0.11				
75	0.079				
76	0.11				
77	0.11				
78	0.0067				

Outlier

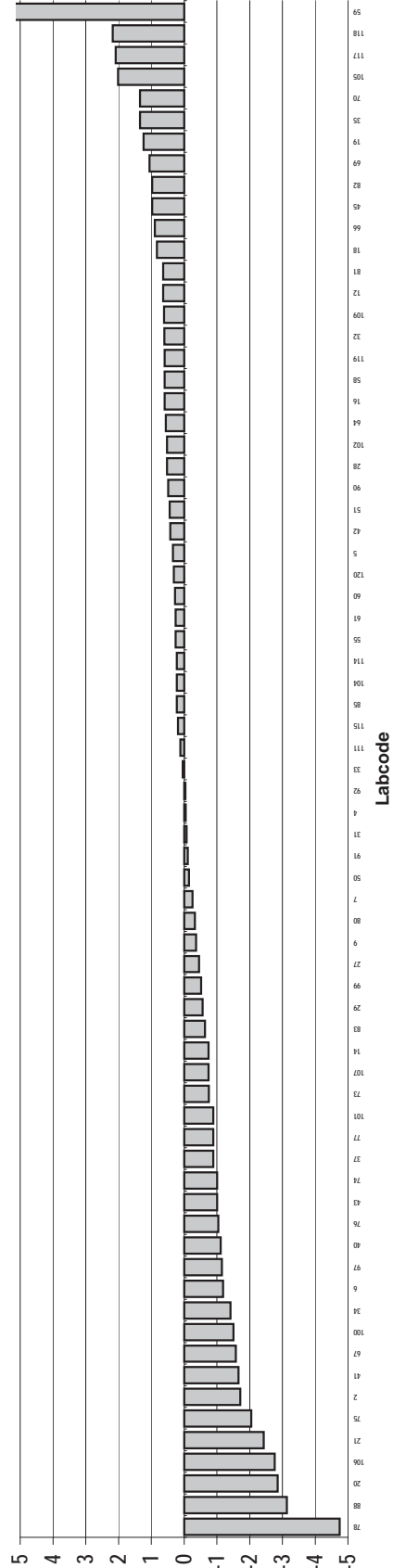
Consensus statistics

Consensus median, pg/g	0.13
Median all values pg/g	0.14
Consensus mean, pg/g	0.13
Standard deviation, pg/g	0.033
Relative standard deviation, %	26
No. of values reported	71
No. of values removed	1
No. of reported non-detects	2

1,2,3,6,7,8 HxCDD



Z-score: 1,2,3,6,7,8 HxCDD



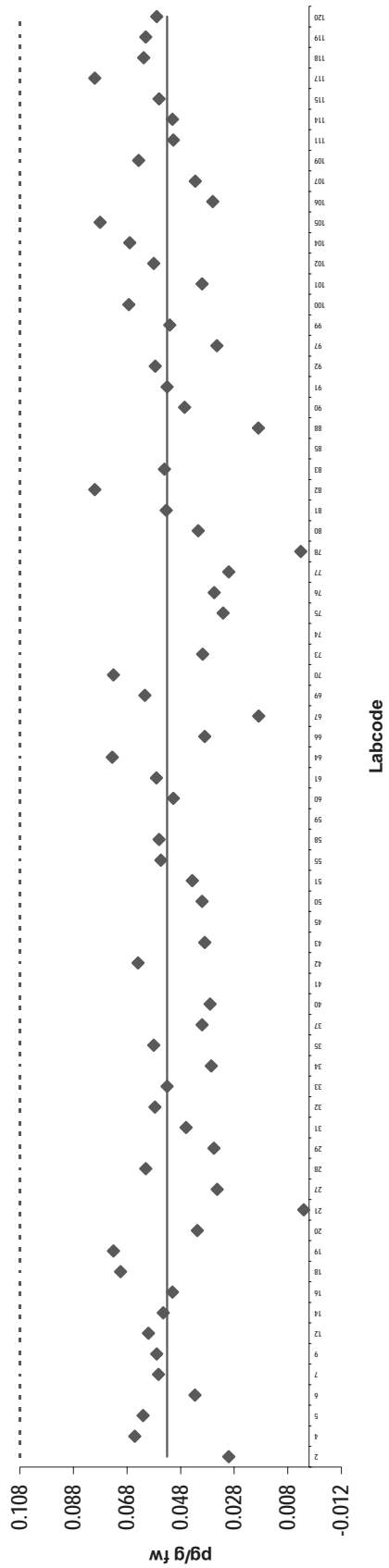
Crab meat

Congener: 1,2,3,7,8,9 HxCDD

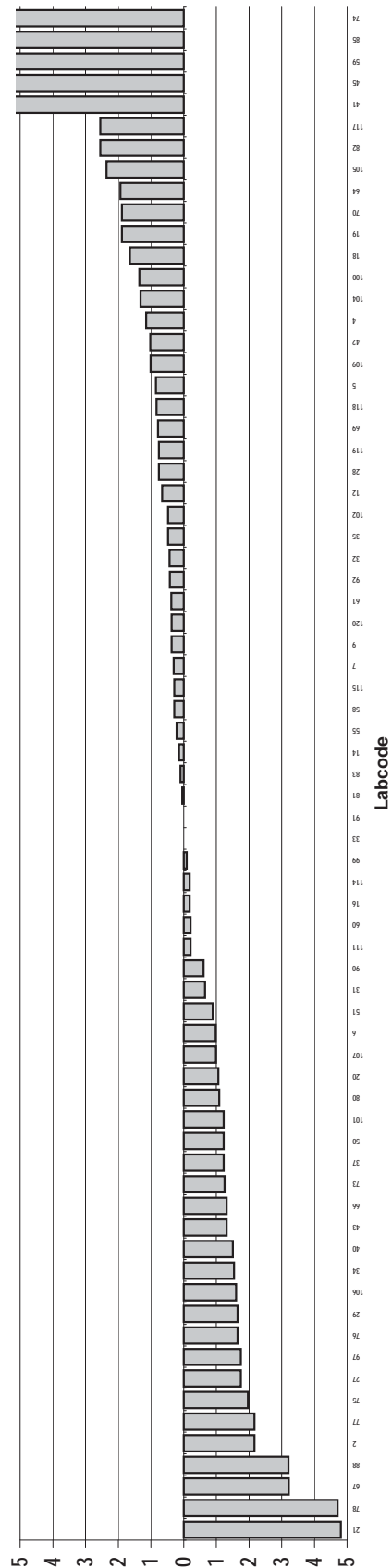
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.030	ND	80	0.041	
4	0.065		81	0.053	
5	0.062		82	0.080	ND
6	0.043		83	0.054	
7	0.056		85	0.15	Outlier
9	0.057		88	0.019	
12	0.060		90	0.047	
14	0.055		91	0.053	
16	0.051		92	0.058	
18	0.070		97	0.034	
19	0.073		99	0.052	
20	0.042		100	0.067	
21	0.0020		101	0.040	
27	0.034		102	0.058	
28	0.061		104	0.067	
29	0.036		105	0.078	
31	0.046		106	0.036	
32	0.058		107	0.043	
33	0.053		109	0.064	
34	0.037		111	0.051	
35	0.058		114	0.051	
37	0.040		115	0.056	
40	0.037		117	0.080	
41	0.11	Outlier	118	0.062	
42	0.064		119	0.061	
43	0.039	Outlier	120	0.057	
45	0.12	Outlier			
50	0.040	ND			
51	0.044				
55	0.055				
58	0.056				
59	0.13	Outlier			
60	0.051				
61	0.057				
64	0.074				
66	0.039				
67	0.019				
69	0.061				
70	0.073				
73	0.040				
74	1.3	Outlier,ND			
75	0.032				
76	0.036				
77	0.030				
78	0.0031				

Consensus statistics	
Consensus median, pg/g	0.053
Median all values pg/g	0.054
Consensus mean, pg/g	0.050
Standard deviation, pg/g	0.016
Relative standard deviation, %	32
No. of values reported	71
No. of values removed	5
No. of reported non-detects	5

1,2,3,7,8,9 HxCDD



Z-score: 1,2,3,7,8,9 HxCDD



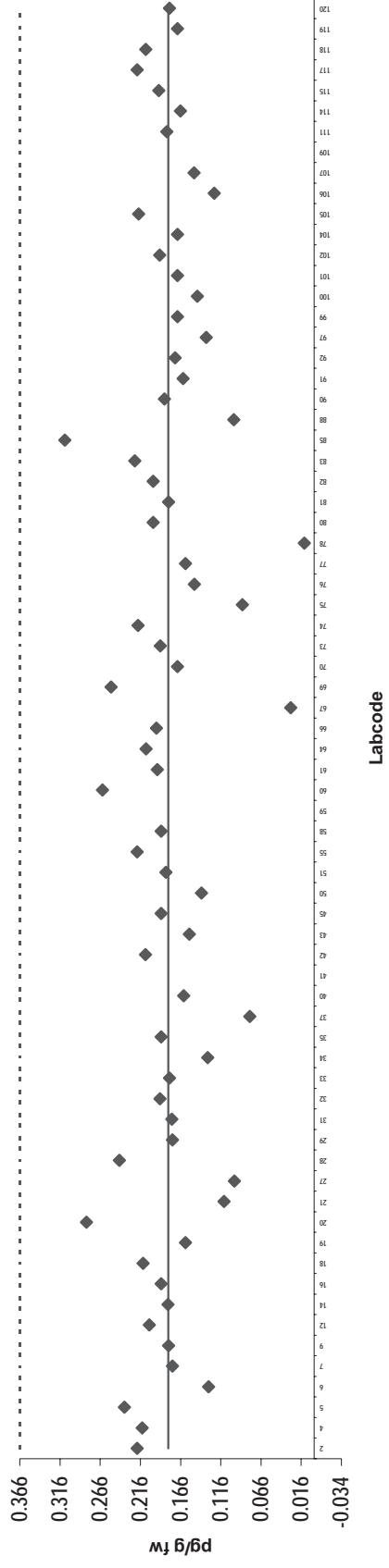
Crab meat
Congener: 1,2,3,4,6,7,8 HpCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.22		80	0.20	
4	0.21		81	0.18	
5	0.24		82	0.20	
6	0.13		83	0.22	
7	0.18		85	0.31	
9	0.18		88	0.10	
12	0.21		90	0.19	
14	0.18		91	0.16	
16	0.19		92	0.17	
18	0.21		97	0.13	
19	0.16		99	0.17	
20	0.28		100	0.15	
21	0.11		101	0.17	
27	0.099		102	0.19	
28	0.24		104	0.17	
29	0.18		105	0.22	
31	0.18		106	0.12	
32	0.19		107	0.15	
33	0.18		109	0.46	
34	0.13		111	0.18	
35	0.19		114	0.17	
37	0.080		115	0.19	
40	0.16		117	0.22	
41	0.48	Outlier	118	0.21	
42	0.21		119	0.17	
43	0.16		120	0.18	
45	0.19				
50	0.14				
51	0.18				
55	0.22				
58	0.19				
59	0.50				
60	0.26				
61	0.20				
64	0.21				
66	0.20				
67	0.029				
69	0.25				
70	0.17				
73	0.19				
74	0.22				
75	0.089				
76	0.15				
77	0.16				
78	0.012				

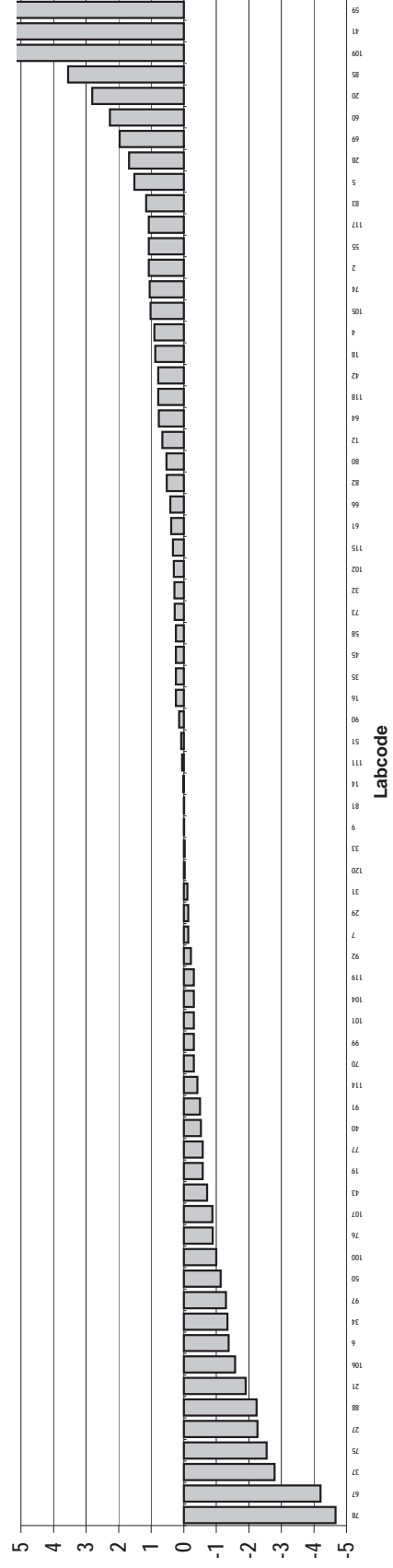
Consensus statistics

Consensus median, pg/g	0.18
Median all values pg/g	0.18
Consensus mean, pg/g	0.18
Standard deviation, pg/g	0.050
Relative standard deviation, %	28
No. of values reported	71
No. of values removed	3
No. of reported non-detects	1

1,2,3,4,6,7,8 HpCDD



Z-score: 1,2,3,4,6,7,8 HpCDD



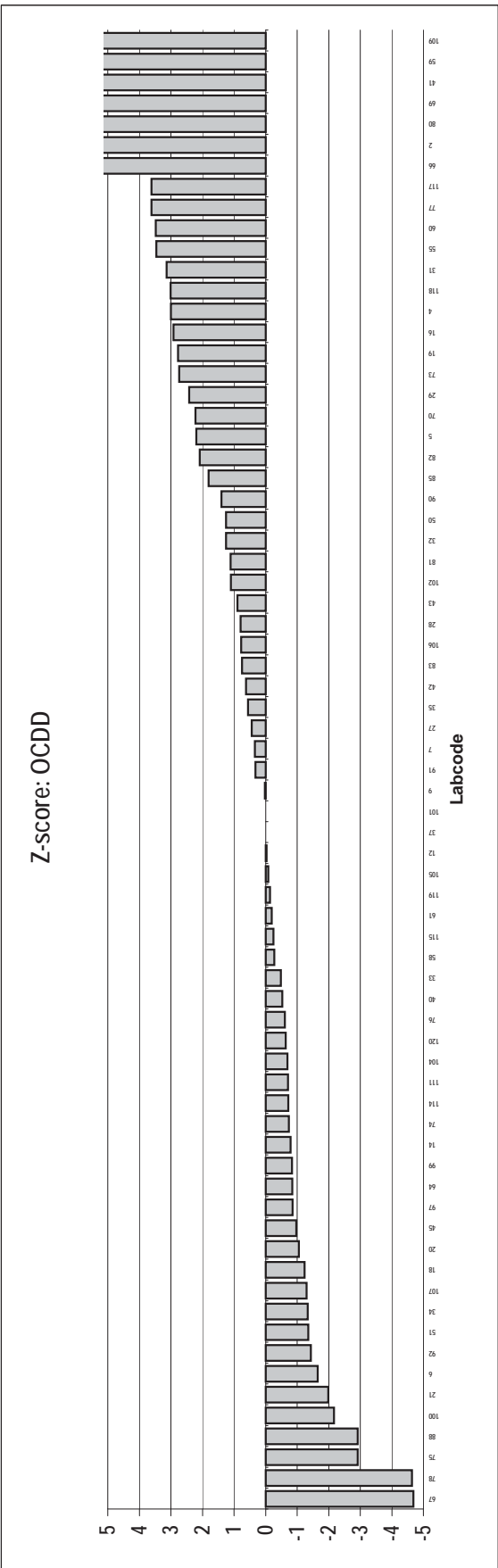
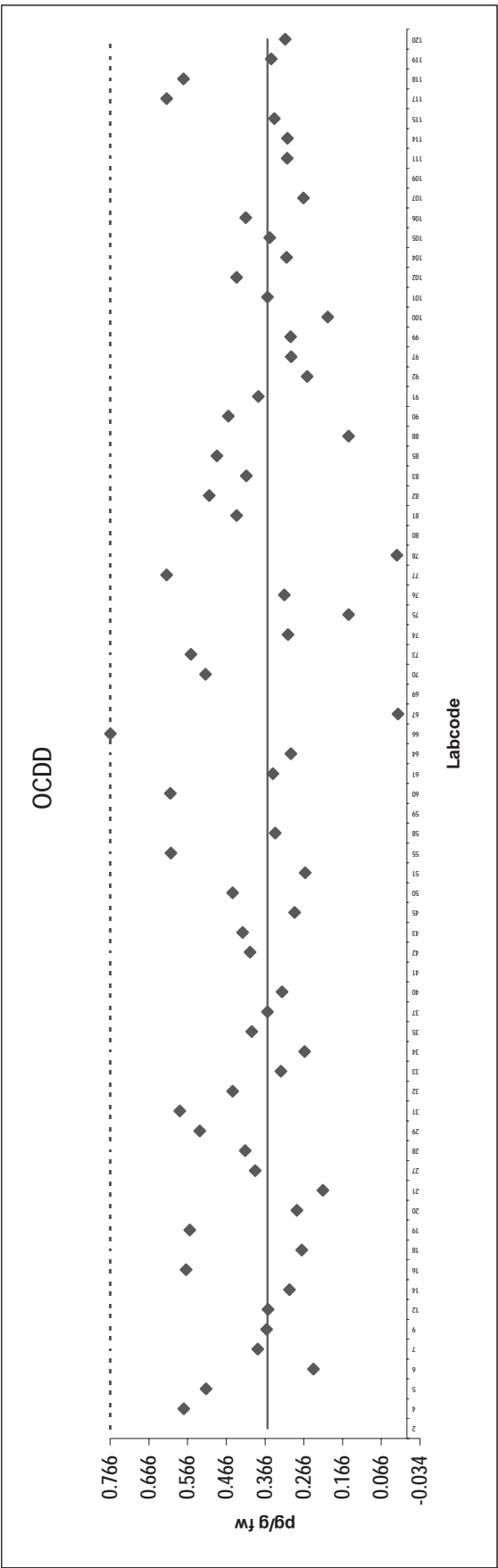
Crab meat

Congener: OCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.77	Outlier,ND	80	0.91	Outlier
4	0.58		81	0.44	
5	0.52		82	0.51	
6	0.24		83	0.41	
7	0.38		85	0.49	
9	0.36		88	0.15	ND
12	0.36		90	0.46	
14	0.30		91	0.38	
16	0.57		92	0.26	
18	0.27		97	0.30	
19	0.56		99	0.30	
20	0.28		100	0.20	
21	0.22		101	0.36	
27	0.39		102	0.44	
28	0.42		104	0.31	
29	0.53		105	0.35	
31	0.59		106	0.42	
32	0.45		107	0.27	
33	0.33		109	3.1	Outlier
34	0.26		111	0.31	
35	0.40		114	0.31	
37	0.36		115	0.34	
40	0.32		117	0.62	
41	1.7	Outlier	118	0.58	
42	0.40		119	0.35	
43	0.42		120	0.31	
45	0.29				
50	0.45				
51	0.26				
55	0.61				
58	0.34				
59	1.8	Outlier			
60	0.61				
61	0.35				
64	0.30				
66	0.77				
67	0.023				
69	1.0	Outlier			
70	0.52				
73	0.56				
74	0.31				
75	0.15				
76	0.32				
77	0.62				
78	0.026				

Consensus statistics

Consensus median, pg/g	0.36
Median all values pg/g	0.38
Consensus mean, pg/g	0.38
Standard deviation, pg/g	0.14
Relative standard deviation, %	37
No. of values reported	71
No. of values removed	6
No. of reported non-detects	2



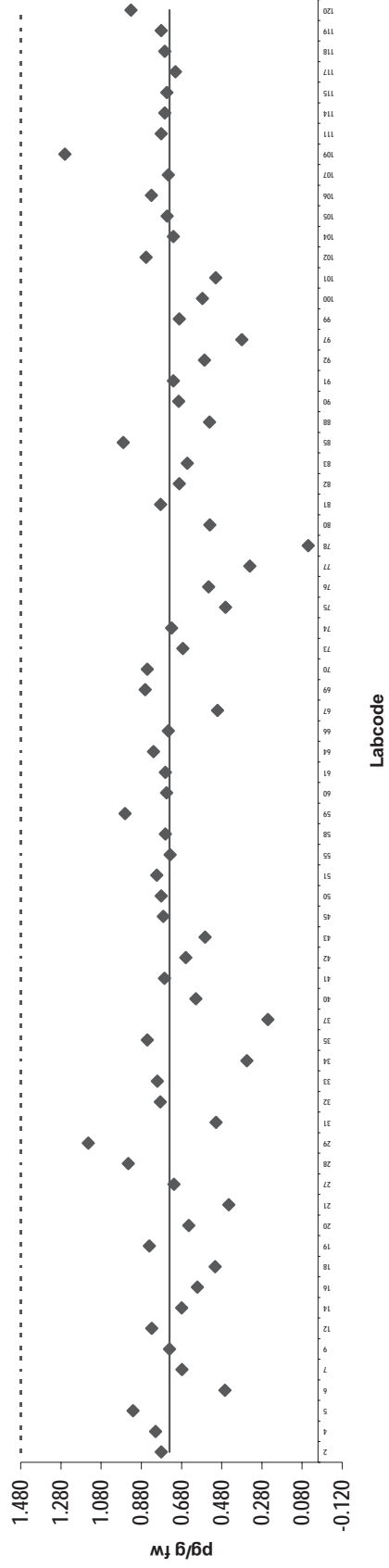
Crab meat
Congener: 2,3,7,8 TCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.78		80	0.54	
4	0.81		81	0.78	
5	0.92		82	0.69	
6	0.46		83	0.65	
7	0.68		85	0.97	
9	0.74		88	0.54	
12	0.83		90	0.69	
14	0.68		91	0.72	
16	0.60		92	0.57	
18	0.51		97	0.38	
19	0.84		99	0.69	
20	0.64		100	0.58	
21	0.45		101	0.51	
27	0.72		102	0.86	
28	0.94		104	0.72	
29	1.1		105	0.75	
31	0.51		106	0.83	
32	0.78		107	0.74	
33	0.80		109	1.3	
34	0.36		111	0.78	
35	0.85		114	0.76	
37	0.25		115	0.75	
40	0.61		117	0.71	
41	0.76		118	0.76	
42	0.66		119	0.78	
43	0.56		120	0.93	
45	0.77				
50	0.78				
51	0.80				
55	0.74				
58	0.76				
59	0.96				
60	0.75				
61	0.76				
64	0.82				
66	0.75				
67	0.50				
69	0.86				
70	0.85				
73	0.67				
74	0.73				
75	0.46				
76	0.55				
77	0.34				
78	0.049				

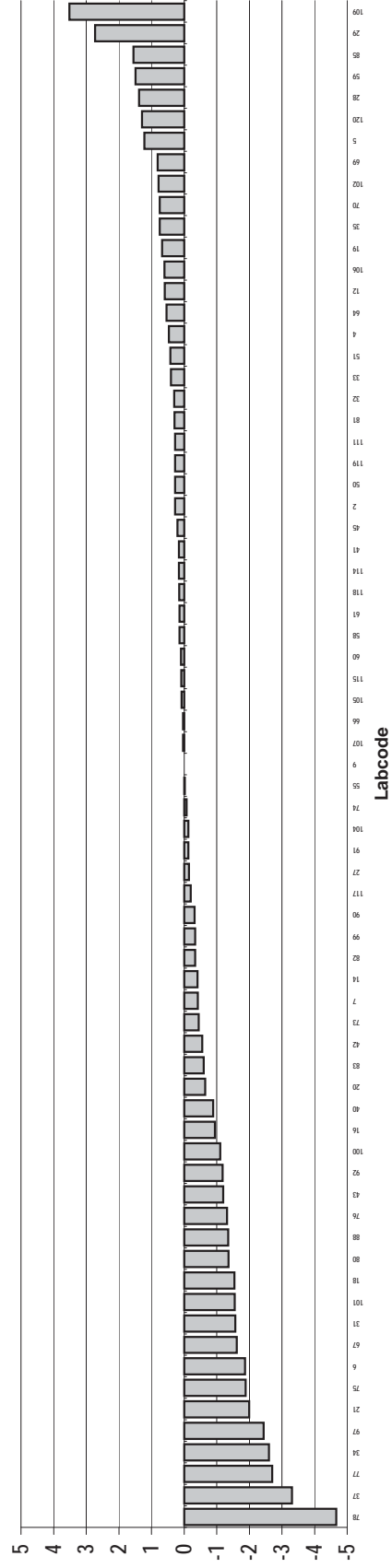
Consensus statistics

Consensus median, pg/g	0.74
Median all values pg/g	0.74
Consensus mean, pg/g	0.70
Standard deviation, pg/g	0.19
Relative standard deviation, %	27
No. of values reported	71
No. of values removed	0
No. of reported non-detects	0

2,3,7,8 TCDF



Z-score: 2,3,7,8 TCDF



Crab meat

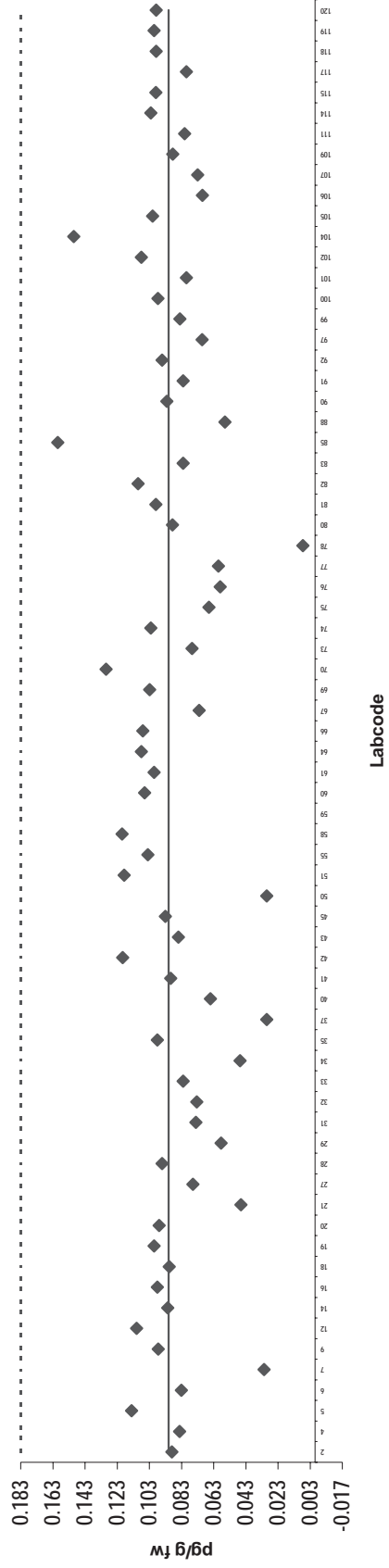
Congener: 1,2,3,7,8 PeCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.089		80	0.089	
4	0.084		81	0.099	
5	0.11		82	0.11	
6	0.083		83	0.082	
7	0.032		85	0.16	
9	0.098		88	0.056	
12	0.11		90	0.092	
14	0.092		91	0.082	
16	0.098		92	0.095	
18	0.091		97	0.070	
19	0.10		99	0.084	
20	0.097		100	0.098	
21	0.046		101	0.080	
27	0.076		102	0.11	
28	0.095		104	0.15	
29	0.058		105	0.10	
31	0.074		106	0.070	
32	0.074		107	0.073	
33	0.082		109	0.088	
34	0.047		111	0.081	
35	0.098		114	0.10	
37	0.030		115	0.099	
40	0.065		117	0.080	
41	0.090		118	0.099	
42	0.12		119	0.10	
43	0.085		120	0.099	
45	0.093				
50	0.030	ND			
51	0.12				
55	0.10				
58	0.12				
59	0.42	Outlier			
60	0.11				
61	0.10				
64	0.11				
66	0.11				
67	0.072				
69	0.10				
70	0.13				
73	0.076				
74	0.10				
75	0.066				
76	0.059				
77	0.060				
78	0.0075	ND			

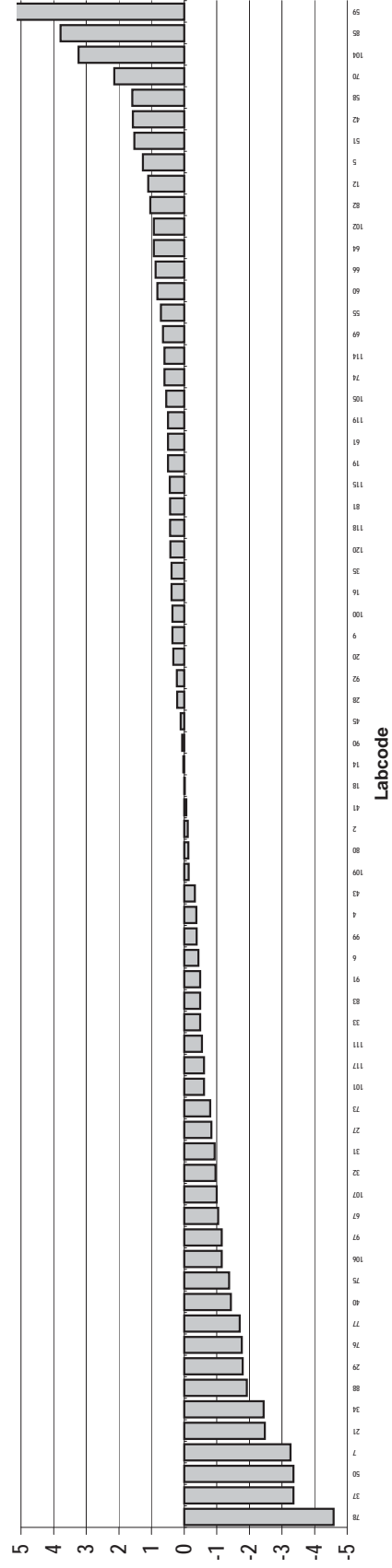
Consensus statistics

Consensus median, pg/g	0.091
Median all values pg/g	0.092
Consensus mean, pg/g	0.088
Standard deviation, pg/g	0.026
Relative standard deviation, %	29
No. of values reported	71
No. of values removed	1
No. of reported non-detects	2

1,2,3,7,8 PeCDF



Z-score: 1,2,3,7,8 PeCDF



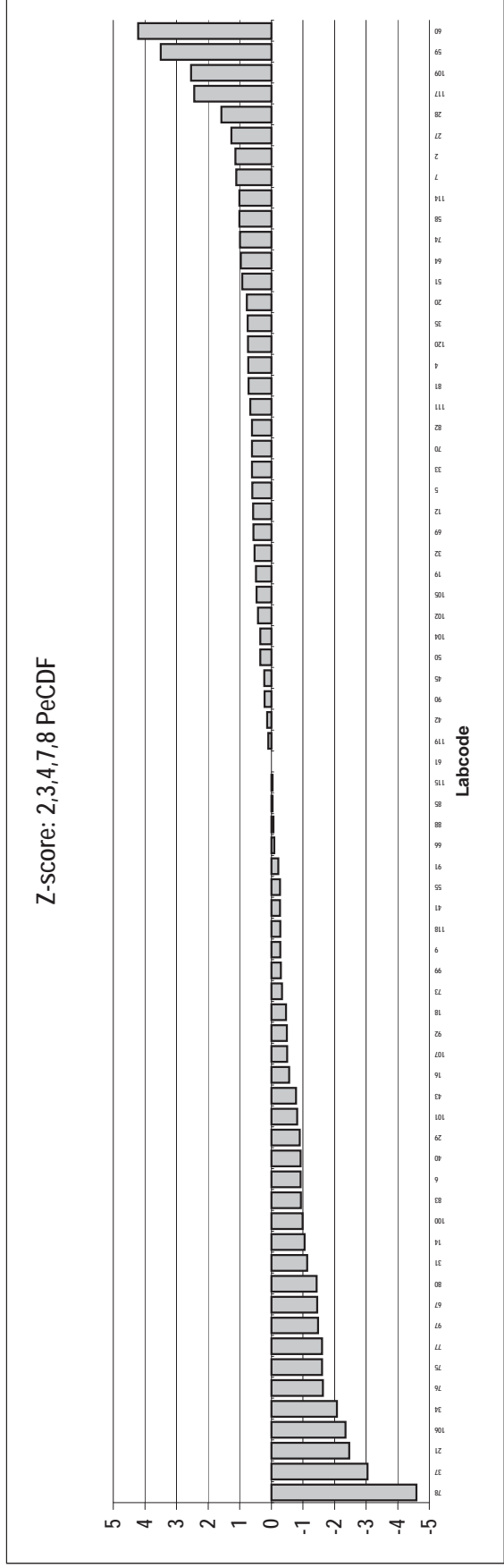
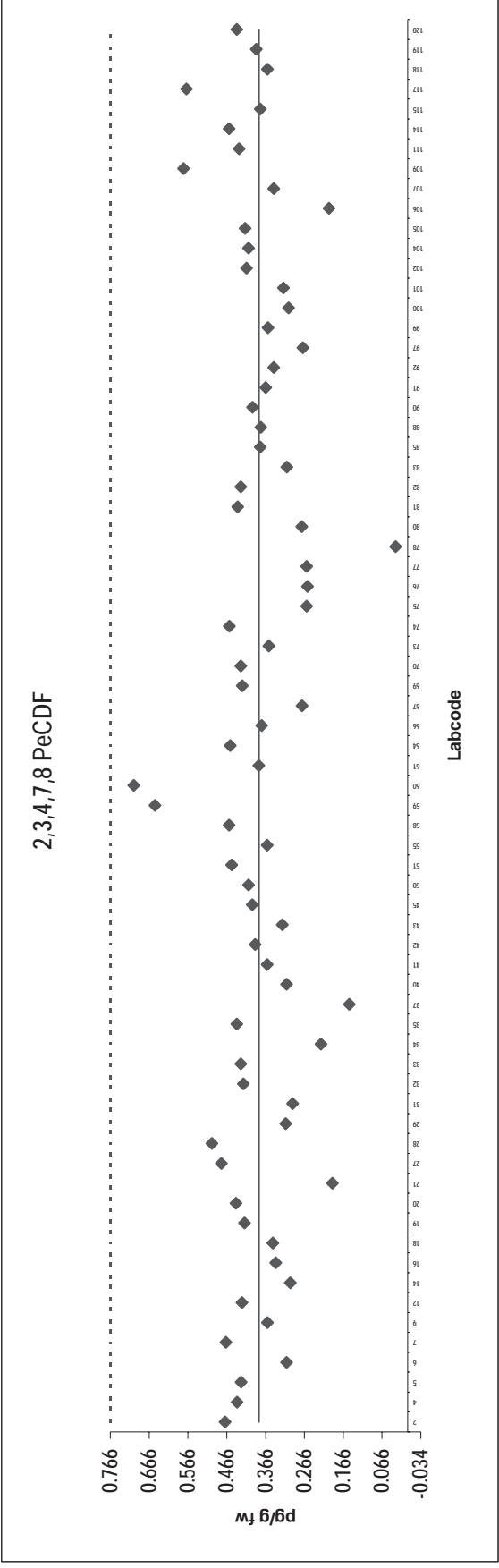
Crab meat

Congener: 2,3,4,7,8 PeCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.47		80	0.27	
4	0.44		81	0.44	
5	0.43		82	0.43	
6	0.31		83	0.31	
7	0.47		85	0.38	
9	0.36		88	0.38	
12	0.43		90	0.40	
14	0.30		91	0.37	
16	0.34		92	0.35	
18	0.35		97	0.27	
19	0.42		99	0.36	
20	0.44		100	0.31	
21	0.19		101	0.32	
27	0.48		102	0.42	
28	0.50		104	0.41	
29	0.31		105	0.42	
31	0.30		106	0.20	
32	0.42		107	0.34	
33	0.43		109	0.58	
34	0.22		111	0.43	
35	0.44		114	0.46	
37	0.15		115	0.38	
40	0.31		117	0.57	
41	0.36		118	0.36	
42	0.39		119	0.39	
43	0.32		120	0.44	
45	0.40				
50	0.41				
51	0.45				
55	0.36				
58	0.46				
59	0.65				
60	0.71				
61	0.38				
64	0.46				
66	0.38				
67	0.27				
69	0.43				
70	0.43				
73	0.36				
74	0.46				
75	0.26				
76	0.26				
77	0.26				
78	0.031				

Consensus statistics

Consensus median, pg/g	0.38
Median all values pg/g	0.38
Consensus mean, pg/g	0.38
Standard deviation, pg/g	0.10
Relative standard deviation, %	28
No. of values reported	71
No. of values removed	0
No. of reported non-detects	0



Crab meat

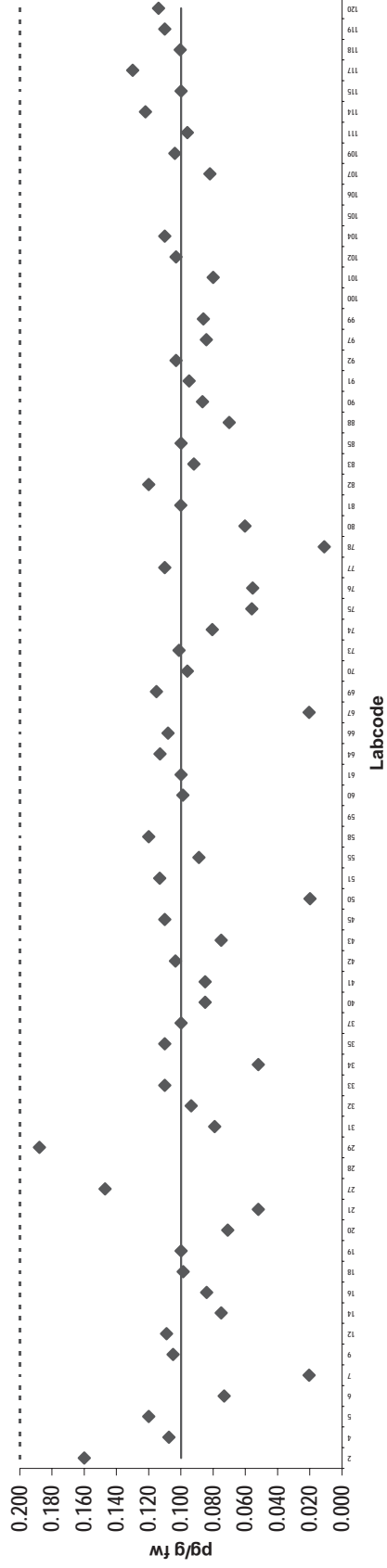
Congener: 1,2,3,4,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.16		80	0.060	
4	0.11		81	0.10	
5	0.12		82	0.12	
6	0.073		83	0.092	
7	0.021		85	0.10	ND
9	0.10		88	0.070	
12	0.11		90	0.087	
14	0.075		91	0.095	
16	0.084		92	0.10	
18	0.099		97	0.084	
19	0.10		99	0.086	
20	0.071		100	0.21	
21	0.052		101	0.080	Outlier
27	0.15		102	0.10	
28	0.30		104	0.11	
29	0.19		105	0.26	
31	0.079		106	0.36	Outlier
32	0.094		107	0.082	Outlier
33	0.11		109	0.10	
34	0.052		111	0.096	
35	0.11		114	0.12	
37	0.10		115	0.10	
40	0.085		117	0.13	
41	0.085		118	0.10	
42	0.10		119	0.11	
43	0.075		120	0.11	
45	0.11				
50	0.020				
51	0.11				
55	0.089				
58	0.12				
59	0.34				
60	0.099				
61	0.10				
64	0.11				
66	0.11				
67	0.020				
69	0.12				
70	0.096				
73	0.10				
74	0.081				
75	0.056				
76	0.056				
77	0.11				
78	0.011				

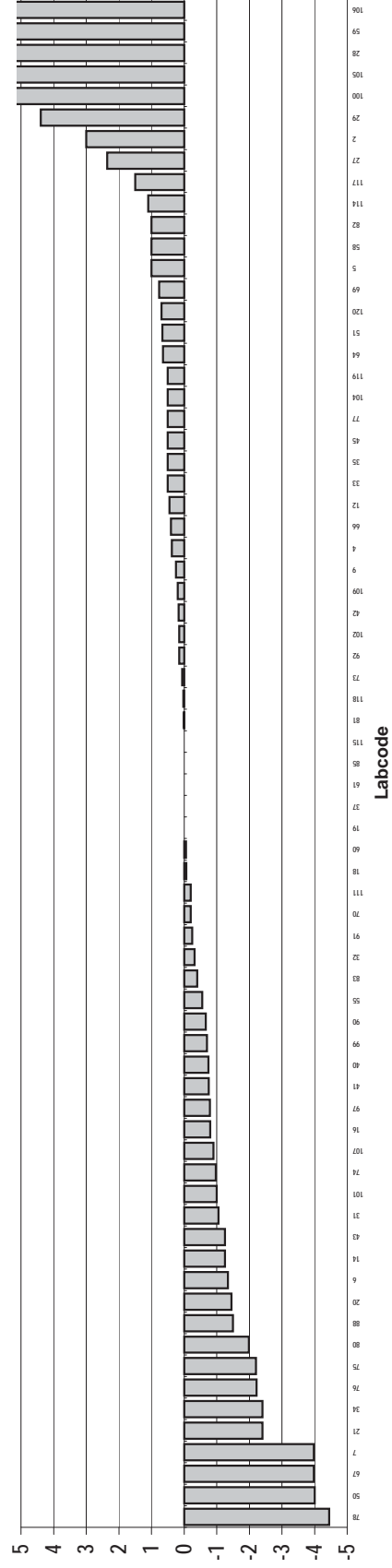
Consensus statistics

Consensus median, pg/g	0.10
Median all values pg/g	0.10
Consensus mean, pg/g	0.093
Standard deviation, pg/g	0.030
Relative standard deviation, %	32
No. of values reported	71
No. of values removed	5
No. of reported non-detects	2

1,2,3,4,7,8 HxCDF



Z-score: 1,2,3,4,7,8 HxCDF



Crab meat

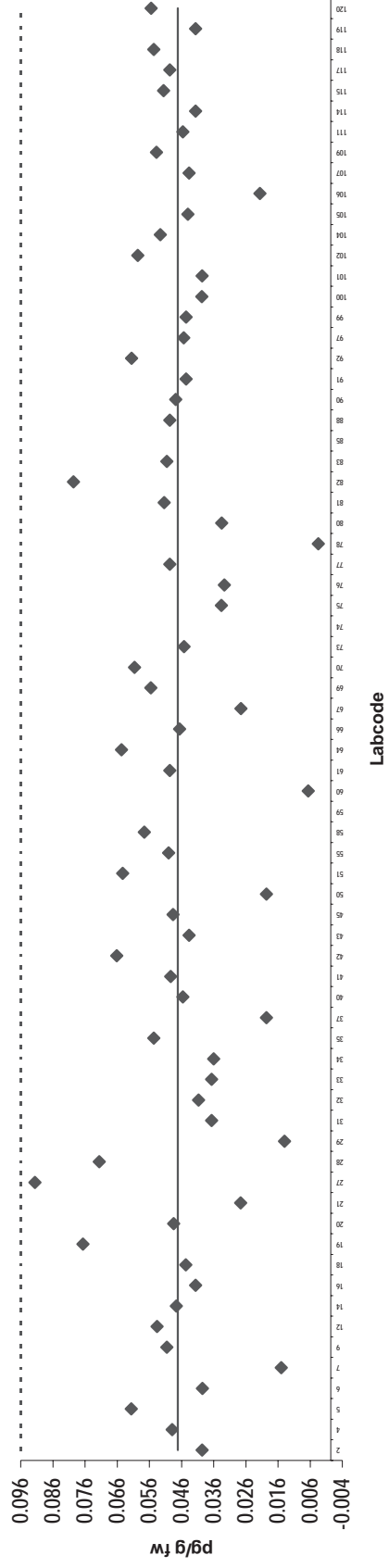
Congener: 1,2,3,6,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.040		80	0.034	
4	0.049		81	0.052	
5	0.062		82	0.080	ND
6	0.040		83	0.051	
7	0.015		85	0.10	Outlier,ND
9	0.051		88	0.050	ND
12	0.054		90	0.048	
14	0.048		91	0.045	
16	0.042		92	0.062	
18	0.045		97	0.046	
19	0.077		99	0.045	
20	0.049		100	0.040	
21	0.028		101	0.040	
27	0.092		102	0.060	
28	0.072		104	0.053	
29	0.014		105	0.044	
31	0.037		106	0.022	
32	0.041		107	0.044	
33	0.037		109	0.054	
34	0.036		111	0.046	
35	0.055		114	0.042	
37	0.020		115	0.052	
40	0.046		117	0.050	
41	0.050		118	0.055	
42	0.067		119	0.042	
43	0.044		120	0.056	
45	0.049				
50	0.020	ND			
51	0.065				
55	0.050				
58	0.058				
59	0.27	Outlier			
60	0.0070	ND			
61	0.050				
64	0.065				
66	0.047				
67	0.028				
69	0.056				
70	0.061				
73	0.046				
74	1.3	Outlier,ND			
75	0.034				
76	0.033				
77	0.050				
78	0.0039				

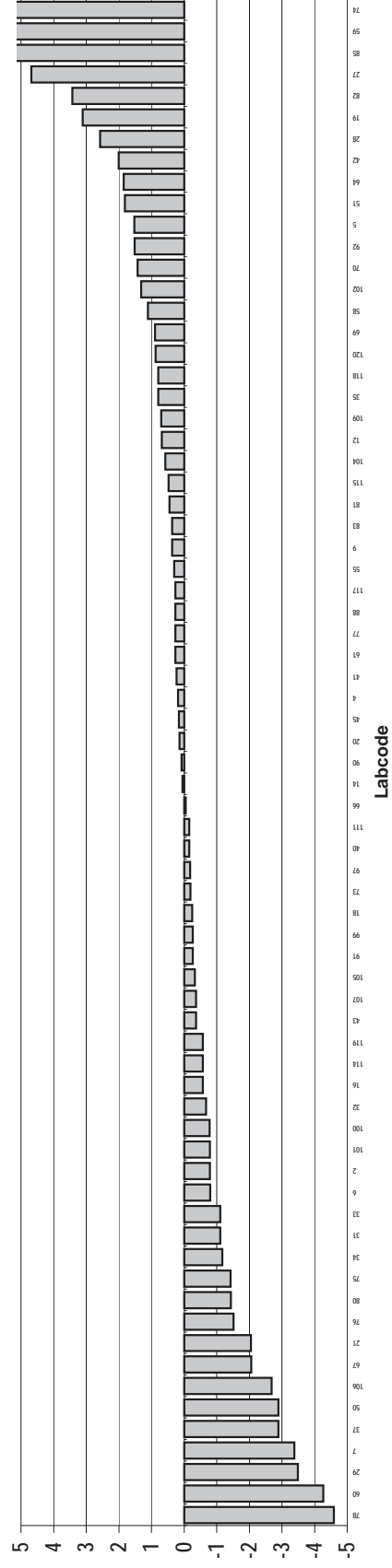
Consensus statistics

Consensus median, pg/g	0.048
Median all values pg/g	0.048
Consensus mean, pg/g	0.046
Standard deviation, pg/g	0.016
Relative standard deviation, %	34
No. of values reported	71
No. of values removed	3
No. of reported non-detects	6

1,2,3,6,7,8 HxCDF



Z-score: 1,2,3,6,7,8 HxCDF



Crab meat

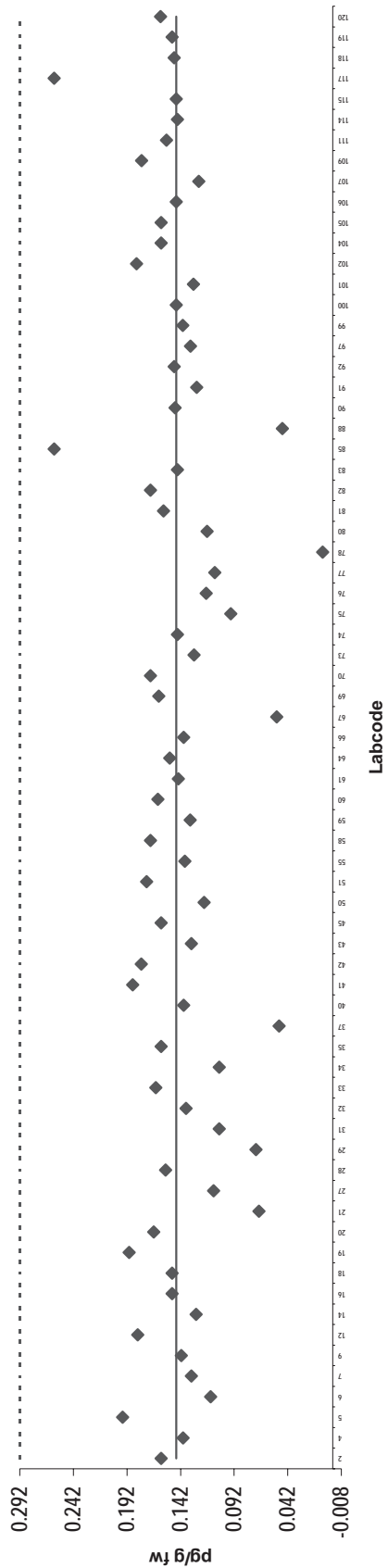
Congener: 2,3,4,6,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.16		80	0.12	
4	0.14		81	0.16	
5	0.20		82	0.17	
6	0.11		83	0.15	
7	0.13		85	0.26	
9	0.14		88	0.047	
12	0.18		90	0.15	
14	0.13		91	0.13	
16	0.15		92	0.15	
18	0.15		97	0.13	
19	0.19		99	0.14	
20	0.17		100	0.15	
21	0.069		101	0.13	
27	0.11		102	0.18	
28	0.16		104	0.16	
29	0.072		105	0.16	
31	0.11		106	0.15	
32	0.14		107	0.13	
33	0.17		109	0.18	
34	0.11		111	0.16	
35	0.16		114	0.15	
37	0.050		115	0.15	
40	0.14		117	0.26	
41	0.19		118	0.15	
42	0.18		119	0.15	
43	0.13		120	0.16	
45	0.16				
50	0.12				
51	0.17				
55	0.14				
58	0.17				
59	0.13				
60	0.16				
61	0.14				
64	0.15				
66	0.14				
67	0.052				
69	0.16				
70	0.17				
73	0.13				
74	0.15				
75	0.095				
76	0.12				
77	0.11				
78	0.0094				

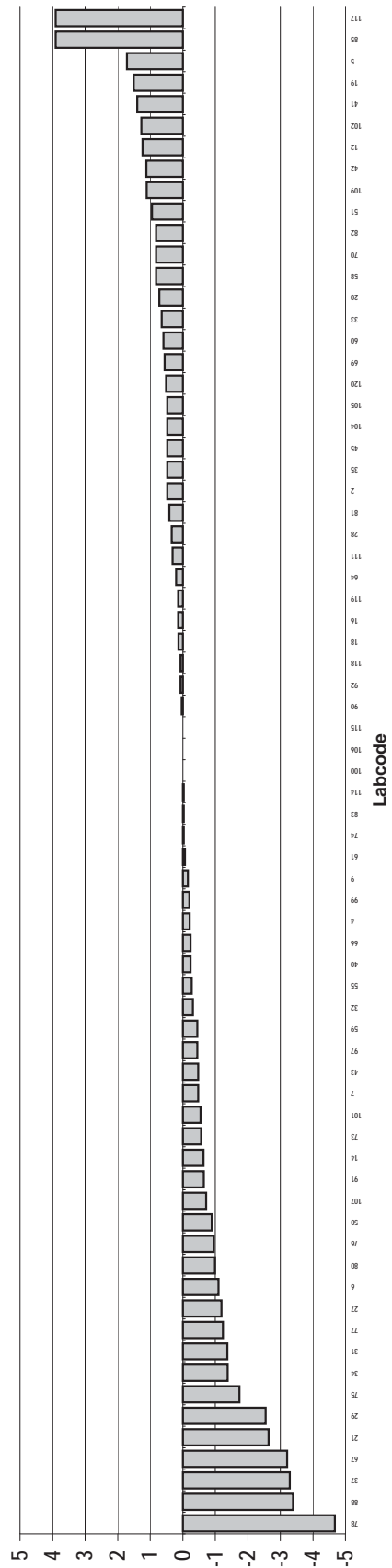
Consensus statistics

Consensus median, pg/g	0.15
Median all values pg/g	0.15
Consensus mean, pg/g	0.14
Standard deviation, pg/g	0.040
Relative standard deviation, %	28
No. of values reported	71
No. of values removed	0
No. of reported non-detects	0

2,3,4,6,7,8 HxCDF



Z-score: 2,3,4,6,7,8 HxCDF



Crab meat

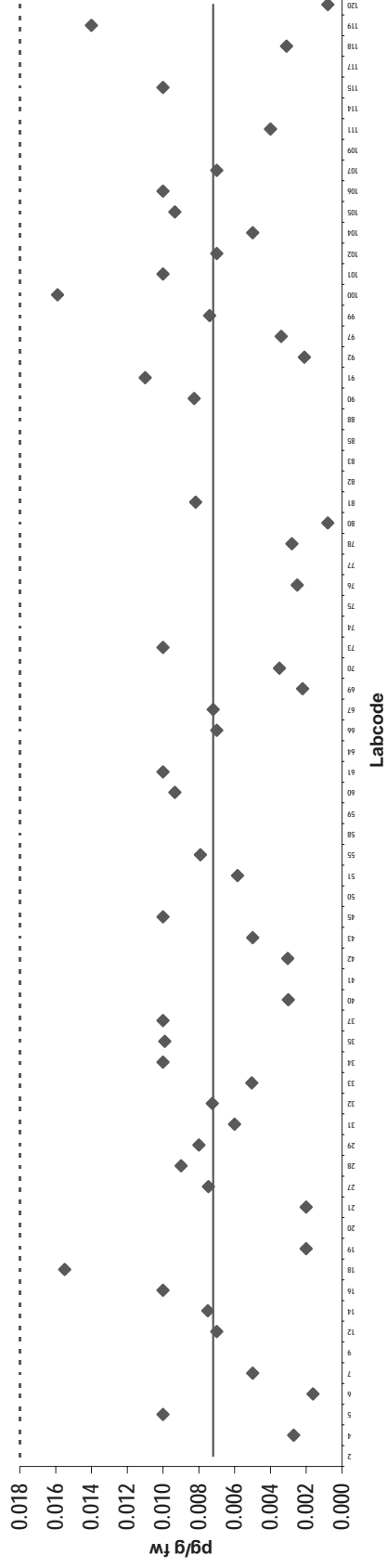
Congener: 1,2,3,7,8,9 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.35	Outlier,ND	80	0.00079	
4	0.0027		81	0.0082	Outlier,ND
5	0.010	ND	82	0.080	Outlier,ND
6	0.0016		83	0.050	Outlier,ND
7	0.0050	ND	85	0.20	Outlier,ND
9	0.019	Outlier	88	0.050	Outlier,ND
12	0.0070	ND	90	0.0083	
14	0.0075	ND	91	0.011	ND
16	0.010	ND	92	0.0021	
18	0.016		97	0.0034	
19	0.0020	ND	99	0.0074	
20	0.021	Outlier	100	0.016	
21	0.0020		101	0.010	ND
27	0.0075		102	0.0070	
28	0.0090		104	0.0050	ND
29	0.0080	ND	105	0.0093	ND
31	0.0060		106	0.010	ND
32	0.0073		107	0.0070	ND
33	0.0051	ND	109	0.032	Outlier,ND
34	0.010	ND	111	0.0040	ND
35	0.0099	ND	114	0.019	Outlier
37	0.010		115	0.010	ND
40	0.0030		117	0.050	Outlier,ND
41	0.14	Outlier	118	0.0031	
42	0.0030		119	0.014	
43	0.0050		120	0.00080	ND
45	0.010	ND			
50	0.030	Outlier,ND			
51	0.0058				
55	0.0079				
58	0.020	Outlier			
59	0.37	Outlier			
60	0.0093	ND			
61	0.010	ND			
64	0.044	Outlier,ND			
66	0.0070				
67	0.0072	ND			
69	0.0022				
70	0.0035	ND			
73	0.010	ND			
74	1.3	Outlier,ND			
75	0.024	Outlier,ND			
76	0.0025	ND			
77	0.020	Outlier			
78	0.0028				

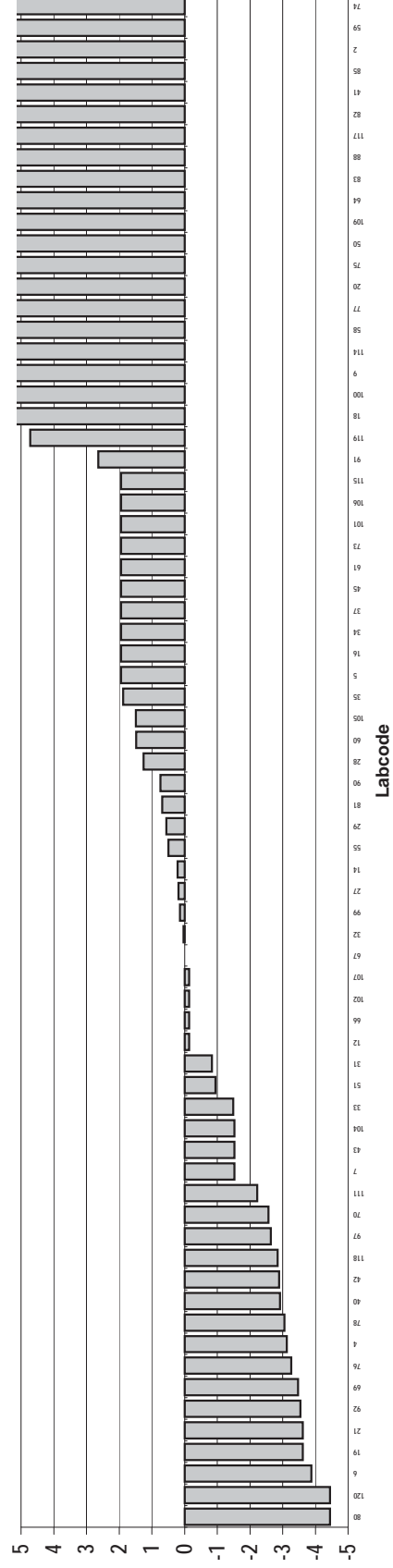
Consensus statistics

Consensus median, pg/g	0.0072
Median all values pg/g	0.0090
Consensus mean, pg/g	0.0068
Standard deviation, pg/g	0.0036
Relative standard deviation, %	53
No. of values reported	71
No. of values removed	18
No. of reported non-detects	38

1,2,3,7,8,9 HxCDF



Z-score: 1,2,3,7,8,9 HxCDF



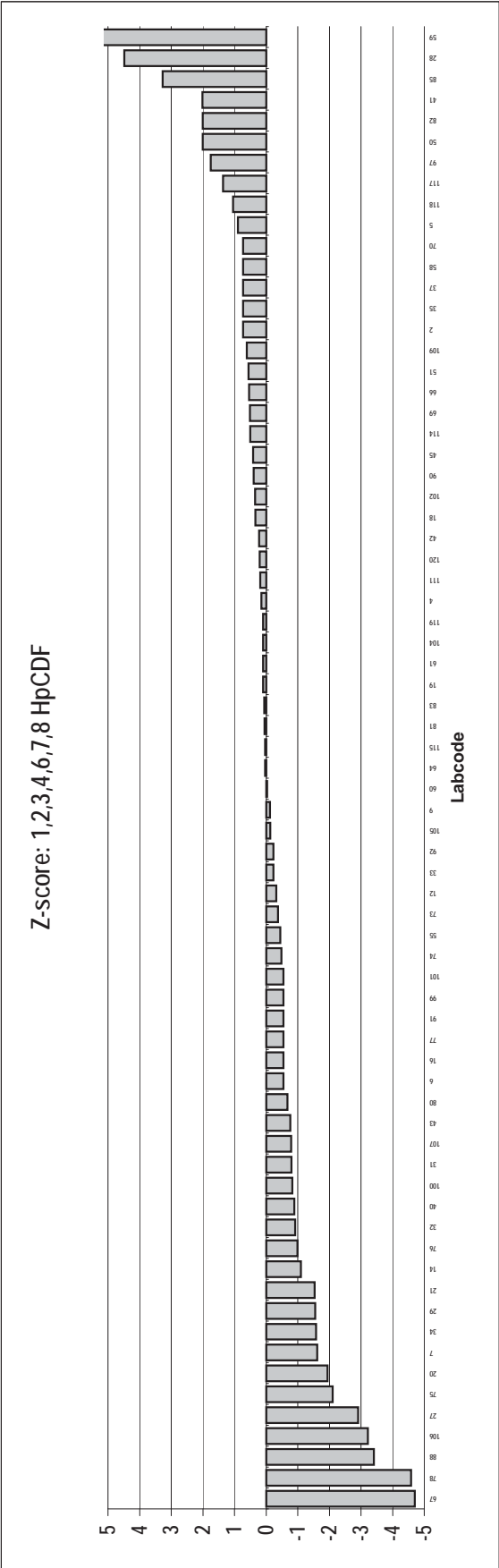
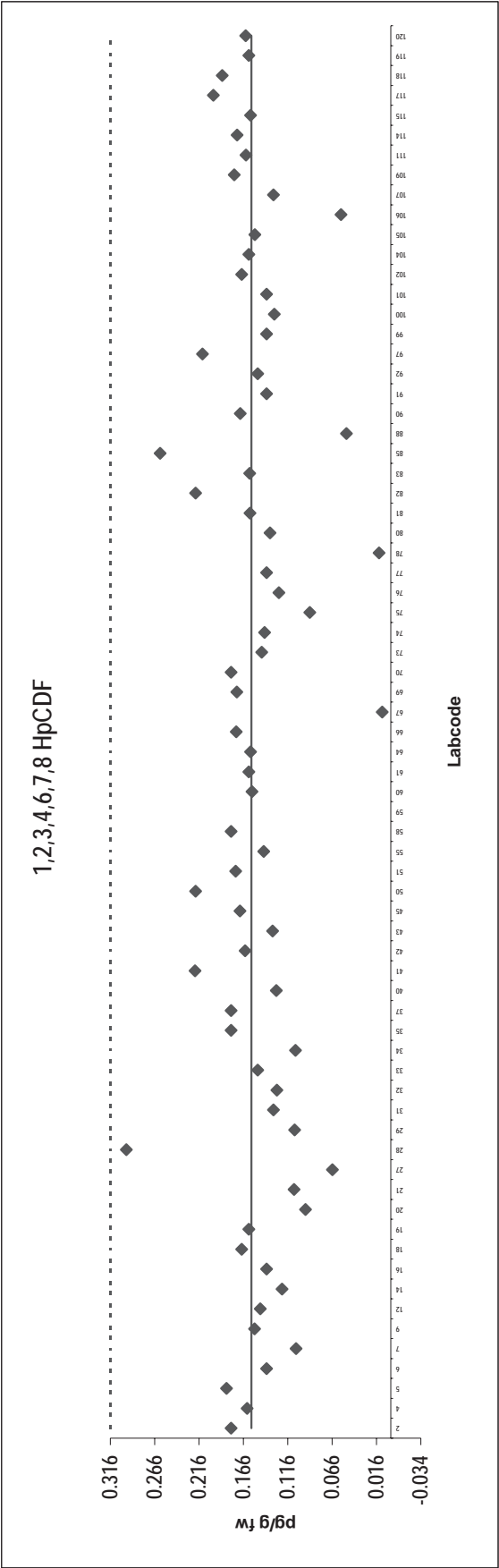
Crab meat
Congener: 1,2,3,4,6,7,8 HpCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.18		80	0.14	
4	0.16		81	0.16	
5	0.19		82	0.22	
6	0.14		83	0.16	
7	0.11		85	0.26	
9	0.15		88	0.050	ND
12	0.15		90	0.17	
14	0.12		91	0.14	
16	0.14		92	0.15	
18	0.17		97	0.21	
19	0.16		99	0.14	
20	0.096		100	0.13	
21	0.11		101	0.14	
27	0.066		102	0.17	
28	0.30		104	0.16	
29	0.11		105	0.15	
31	0.13		106	0.056	
32	0.13		107	0.13	
33	0.15		109	0.18	
34	0.11		111	0.16	
35	0.18		114	0.17	
37	0.18		115	0.16	
40	0.13		117	0.20	
41	0.22		118	0.19	
42	0.16		119	0.16	
43	0.13		120	0.16	
45	0.17				
50	0.22				
51	0.17				
55	0.14				
58	0.18				
59	0.48				
60	0.16				
61	0.16				
64	0.16				
66	0.17				
67	0.0094				
69	0.17				
70	0.18				
73	0.15				
74	0.14				
75	0.091				
76	0.13				
77	0.14				
78	0.013				

Outlier

Consensus statistics

Consensus median, pg/g	0.16
Median all values pg/g	0.16
Consensus mean, pg/g	0.15
Standard deviation, pg/g	0.047
Relative standard deviation, %	31
No. of values reported	71
No. of values removed	1
No. of reported non-detects	1



Crab meat

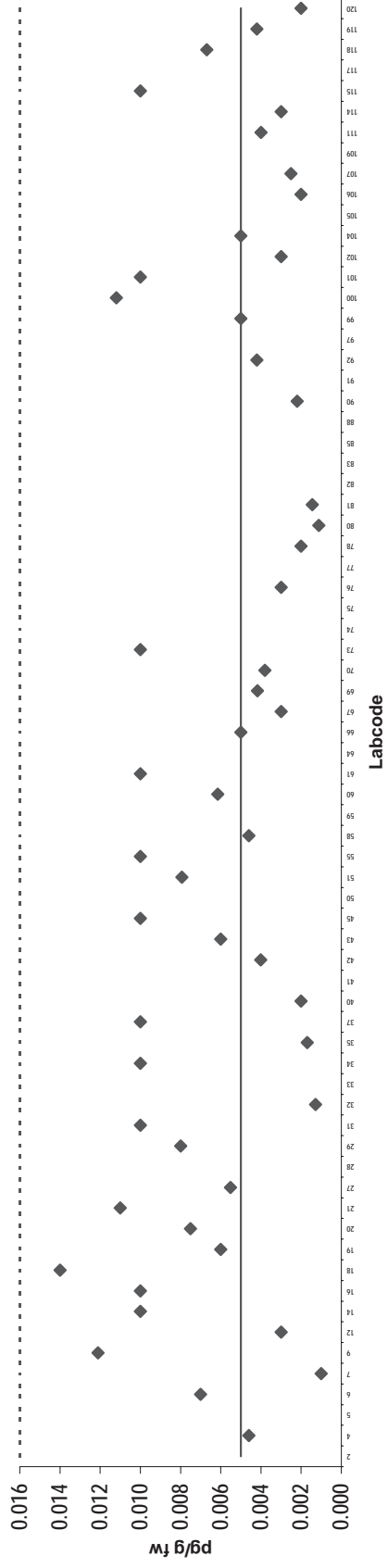
Congener: 1,2,3,4,7,8,9 HpCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.36	Outlier,ND	80	0.0011	
4	0.0046		81	0.0014	Outlier,ND
5	0.020	Outlier,ND	82	0.12	Outlier,ND
6	0.0070		83	0.15	Outlier,ND
7	0.0010	ND	85	0.20	Outlier,ND
9	0.012		88	0.050	Outlier,ND
12	0.0030	ND	90	0.0022	
14	0.010	ND	91	0.021	Outlier
16	0.010	ND	92	0.0042	ND
18	0.014		97	0.024	Outlier
19	0.0060		99	0.0050	ND
20	0.0075		100	0.011	ND
21	0.011	ND	101	0.010	ND
27	0.0055		102	0.0030	ND
28	0.063	Outlier	104	0.0050	ND
29	0.0080	ND	105	0.020	Outlier,ND
31	0.010	ND	106	0.0020	
32	0.0013		107	0.0025	ND
33	0.017	Outlier,ND	109	0.039	Outlier,ND
34	0.010	ND	111	0.0040	ND
35	0.0017	ND	114	0.0030	
37	0.010		115	0.010	ND
40	0.0020	ND	117	0.050	Outlier,ND
41	0.029	Outlier	118	0.0067	
42	0.0040		119	0.0042	ND
43	0.0060	ND	120	0.0020	
45	0.010	ND			
50	0.030	Outlier,ND			
51	0.0079				
55	0.010	ND			
58	0.0046	ND			
59	0.14	Outlier			
60	0.0061	ND			
61	0.010	ND			
64	0.042	Outlier,ND			
66	0.0050				
67	0.0030	ND			
69	0.0042				
70	0.0038				
73	0.010	ND			
74	1.3	Outlier,ND			
75	0.019	Outlier,ND			
76	0.0030	ND			
77	0.020	Outlier			
78	0.0020	ND			

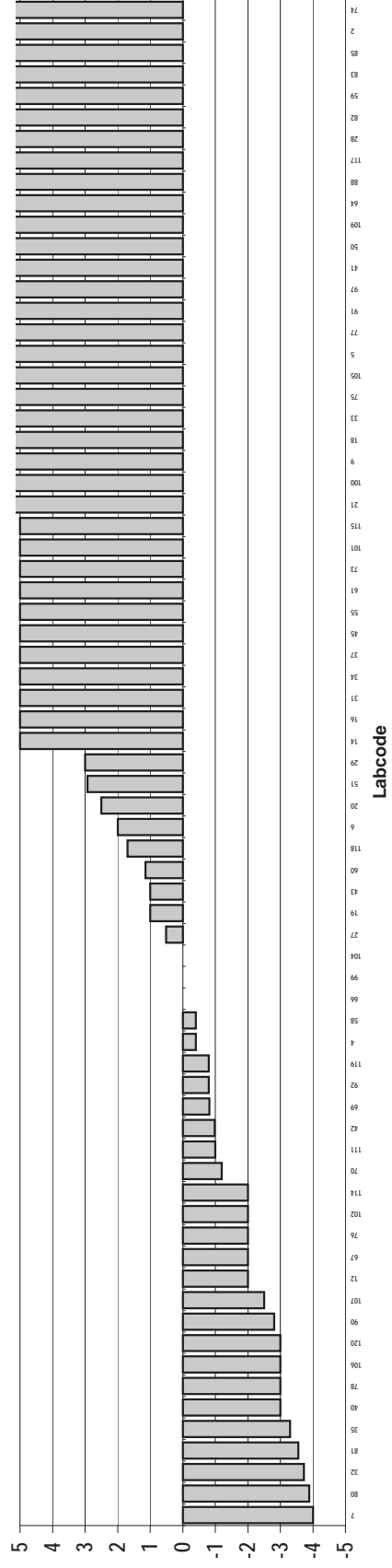
Consensus statistics

Consensus median, pg/g	0.0050
Median all values pg/g	0.0080
Consensus mean, pg/g	0.0059
Standard deviation, pg/g	0.0035
Relative standard deviation, %	59
No. of values reported	71
No. of values removed	20
No. of reported non-detects	44

1,2,3,4,7,8,9 HpCDF



Z-score: 1,2,3,4,7,8,9 HpCDF



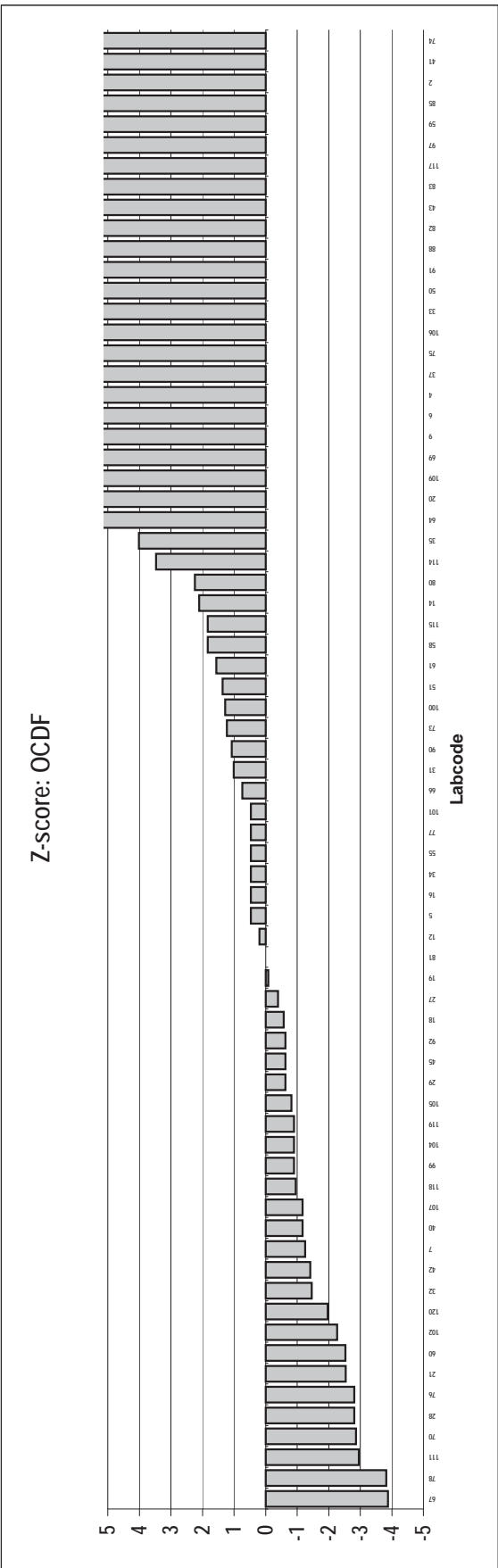
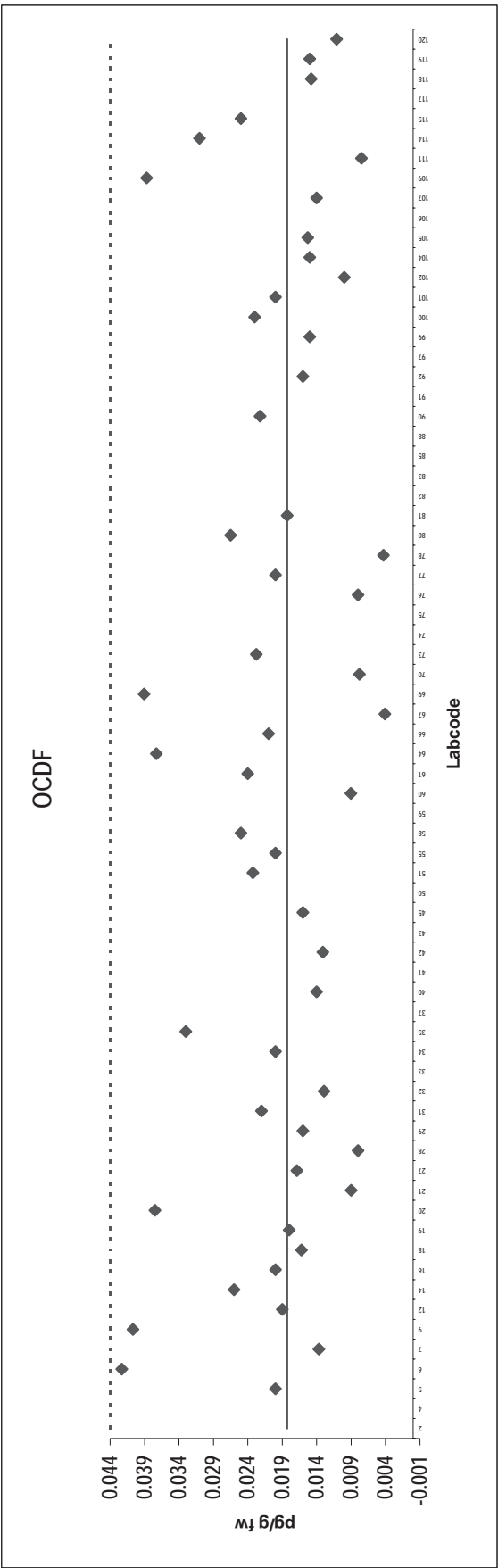
Crab meat

Congener: OCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.83	Outlier,ND	80	0.026	
4	0.049	Outlier	81	0.018	Outlier,ND
5	0.020	ND	82	0.16	Outlier,ND
6	0.042		83	0.20	Outlier,ND
7	0.014		85	0.40	Outlier,ND
9	0.041		88	0.10	Outlier,ND
12	0.019		90	0.022	
14	0.026		91	0.081	Outlier
16	0.020	ND	92	0.016	
18	0.016		97	0.26	Outlier
19	0.018		99	0.015	
20	0.038		100	0.023	
21	0.0090		101	0.020	
27	0.017	ND	102	0.010	ND
28	0.0080	ND	104	0.015	ND
29	0.016	ND	105	0.015	ND
31	0.022		106	0.051	Outlier
32	0.013		107	0.014	ND
33	0.054	Outlier,ND	109	0.039	ND
34	0.020	ND	111	0.0075	
35	0.033	ND	114	0.031	
37	0.050	Outlier	115	0.025	
40	0.014		117	0.20	
41	1.9	Outlier	118	0.015	Outlier,ND
42	0.013		119	0.015	
43	0.19	Outlier	120	0.011	
45	0.016				
50	0.060	Outlier			
51	0.023				
55	0.020	ND			
58	0.025				
59	0.35	Outlier			
60	0.0091	ND			
61	0.024				
64	0.037	ND			
66	0.021				
67	0.0041	ND			
69	0.039				
70	0.0078				
73	0.023				
74	2.5	Outlier,ND			
75	0.050	Outlier,ND			
76	0.0080				
77	0.020				
78	0.0043	ND			

Consensus statistics

Consensus median, pg/g	0.018
Median all values pg/g	0.022
Consensus mean, pg/g	0.020
Standard deviation, pg/g	0.0094
Relative standard deviation, %	48
No. of values reported	71
No. of values removed	18
No. of reported non-detects	25



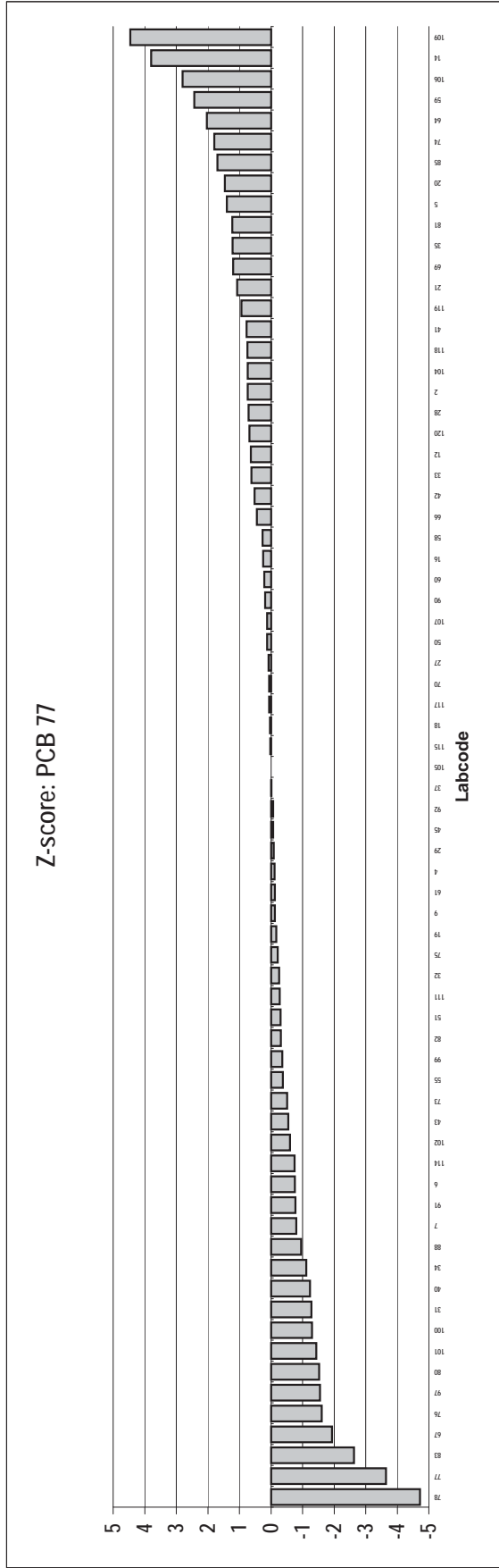
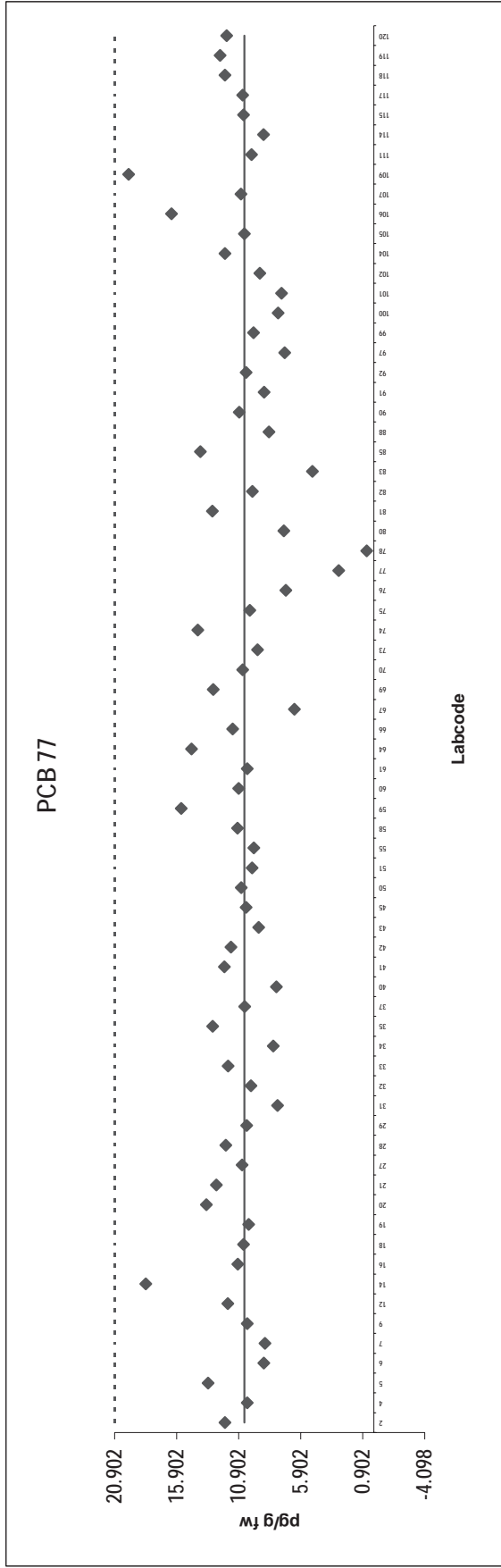
Crab meat

Congener: PCB 77

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	12		80	7.3	
4	10		81	13	
5	13		82	9.8	
6	8.9		83	5.0	
7	8.8		85	14	
9	10		88	8.4	
12	12		90	11	
14	18		91	8.8	
16	11		92	10	
18	11		97	7.2	
19	10		99	9.7	
20	14		100	7.7	
21	13		101	7.5	
27	11		102	9.2	
28	12		104	12	
29	10		105	10	
31	7.8		106	16	
32	9.9		107	11	
33	12		109	20	
34	8.1		111	9.9	
35	13		114	8.9	
37	10		115	11	
40	7.9		117	11	
41	12		118	12	
42	12		119	12	
43	9.3		120	12	
45	10				
50	11				
51	9.8				
55	9.7				
58	11				
59	16				
60	11				
61	10				
64	15				
66	11				
67	6.4				
69	13				
70	11				
73	9.4				
74	14				
75	10				
76	7.1				
77	2.8				
78	0.59				

Consensus statistics

Consensus median, pg/g	10
Median all values pg/g	10
Consensus mean, pg/g	11
Standard deviation, pg/g	3.0
Relative standard deviation, %	28
No. of values reported	71
No. of values removed	0
No. of reported non-detects	0

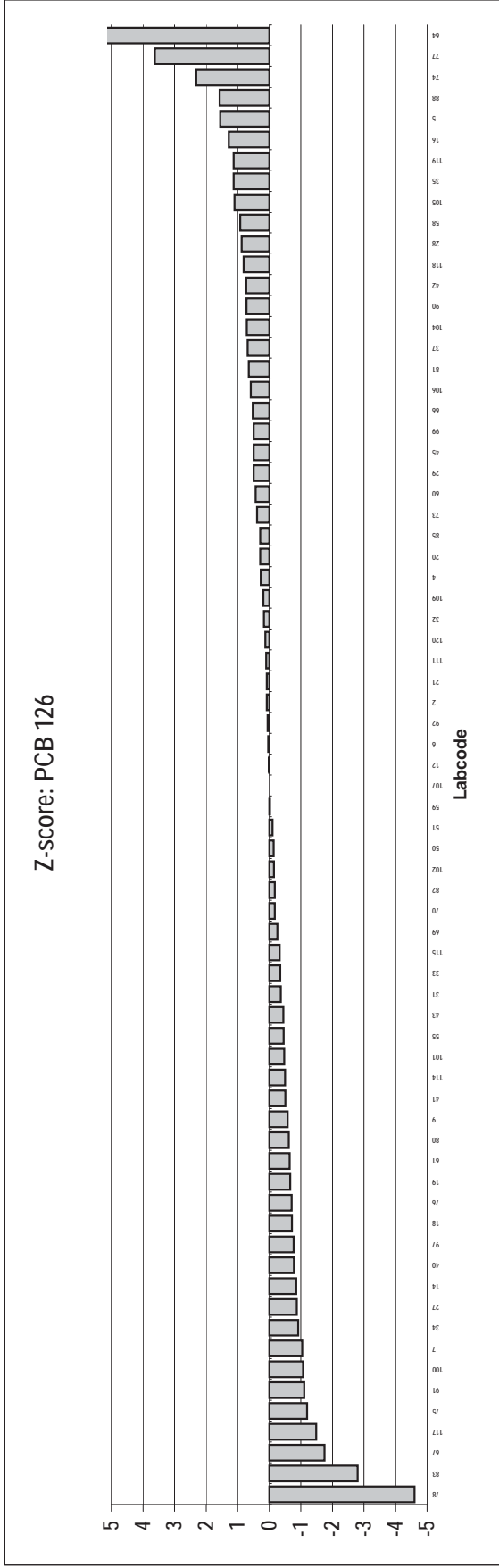
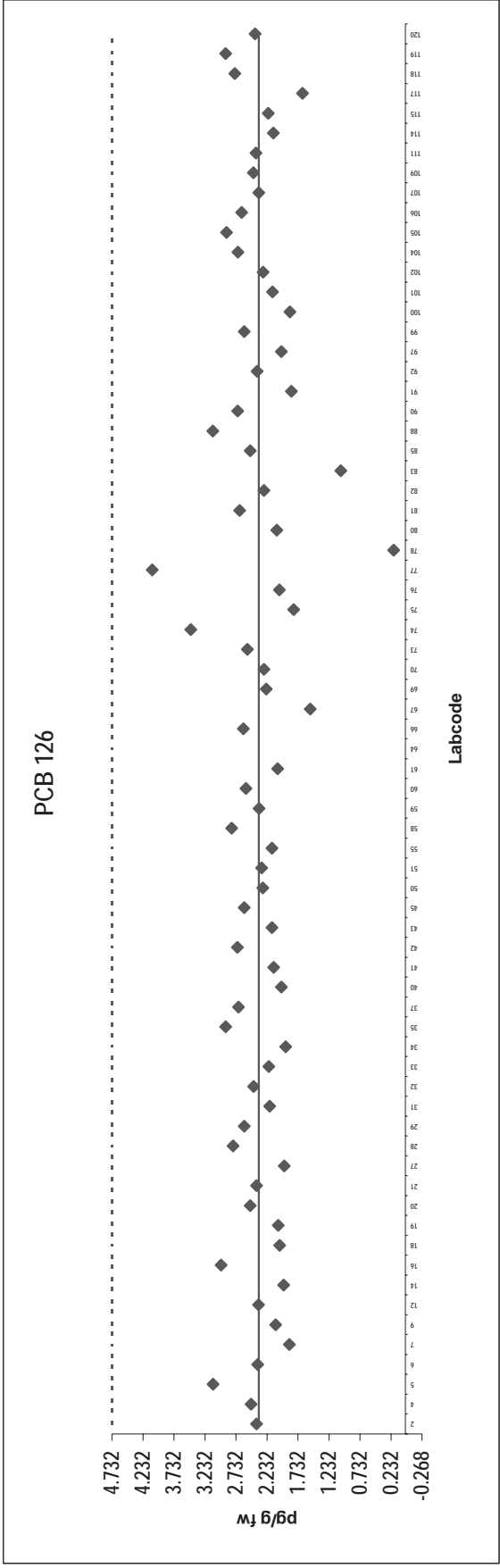


Crab meat
Congener: PCB 126

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	2.4		80	2.1	
4	2.5		81	2.7	
5	3.1		82	2.3	
6	2.4		83	1.0	
7	1.9		85	2.5	
9	2.1		88	3.1	
12	2.4		90	2.7	
14	2.0		91	1.8	
16	3.0		92	2.4	
18	2.0		97	2.0	
19	2.1		99	2.6	
20	2.5		100	1.9	
21	2.4		101	2.1	
27	2.0		102	2.3	
28	2.8		104	2.7	
29	2.6		105	2.9	
31	2.2		106	2.6	
32	2.2		107	2.4	
33	2.2		109	2.5	
34	1.9		111	2.4	
35	2.9		114	2.1	
37	2.7		115	2.2	
40	2.0		117	1.7	
41	2.1		118	2.7	
42	2.7		119	2.9	
43	2.2		120	2.4	
45	2.6				
50	2.3				
51	2.3				
55	2.2				
58	2.8				
59	2.4				
60	2.6				
61	2.1				
64	4.9	Outlier			
66	2.6				
67	1.5				
69	2.2				
70	2.3				
73	2.5				
74	3.5				
75	1.8				
76	2.0				
77	4.1				
78	0.19				

Consensus statistics

Consensus median, pg/g	2.4
Median all values pg/g	2.4
Consensus mean, pg/g	2.3
Standard deviation, pg/g	0.52
Relative standard deviation, %	22
No. of values reported	71
No. of values removed	1
No. of reported non-detects	0

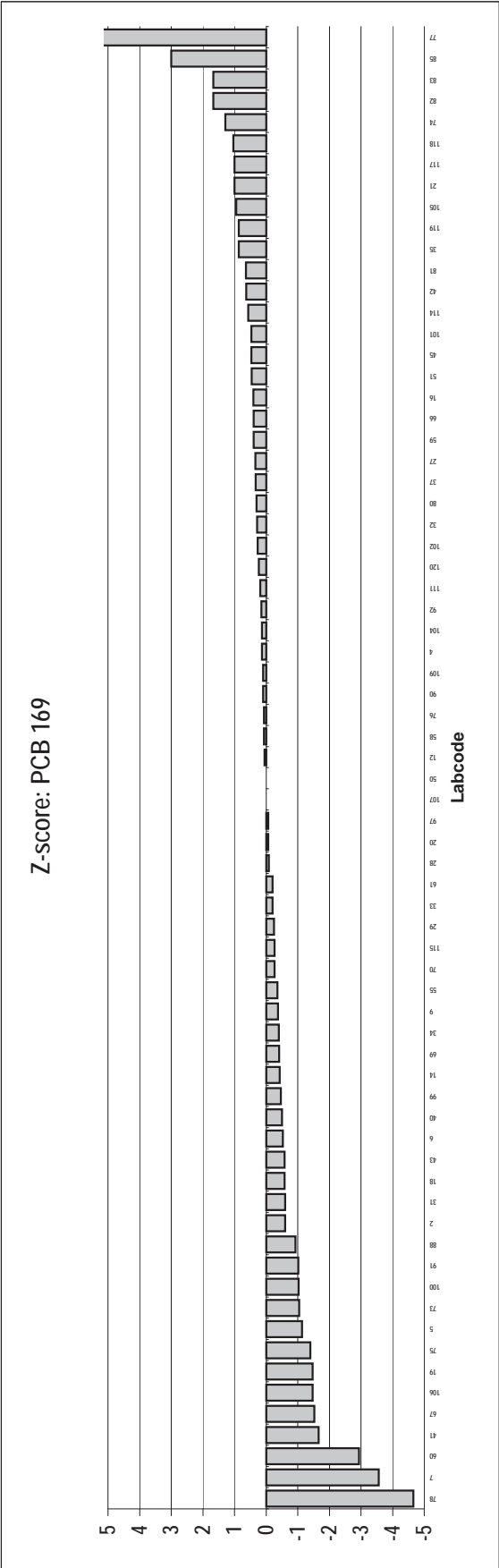
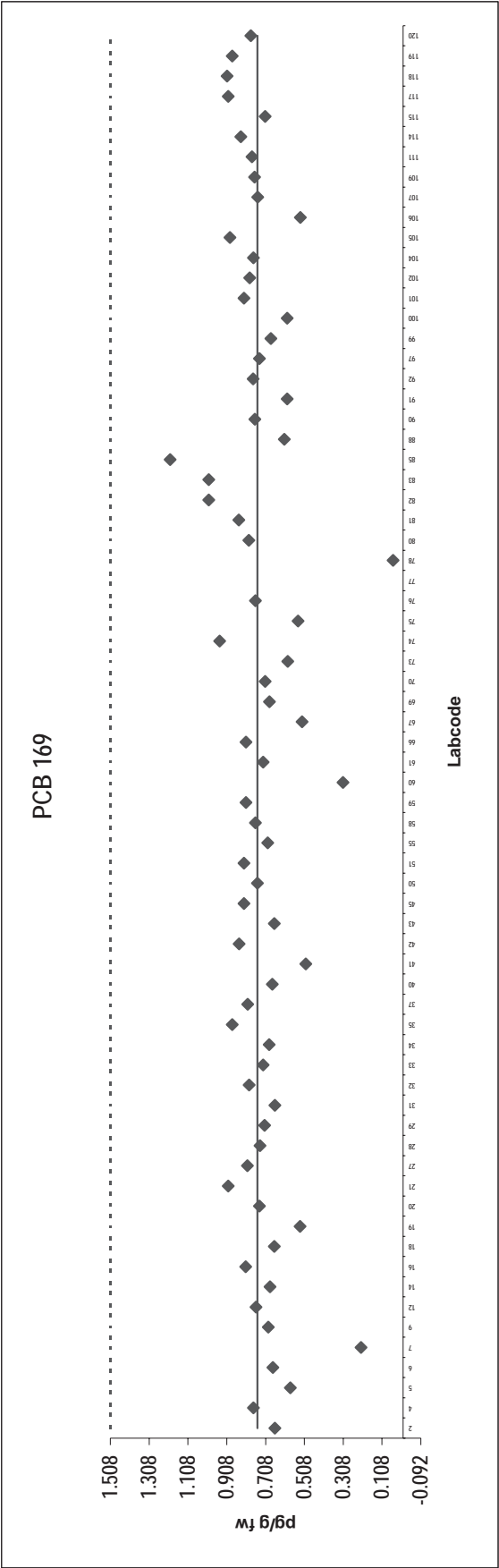


Crab meat
Congener: PCB 169

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.66		81	0.85	
4	0.77		82	1.0	ND
5	0.58		83	1.0	ND
6	0.67		85	1.2	
7	0.22		88	0.61	
9	0.69		90	0.76	
12	0.76		91	0.60	
14	0.69		92	0.77	
16	0.81		97	0.74	
18	0.66		99	0.68	
19	0.53		100	0.60	
20	0.74		101	0.82	
21	0.90		102	0.79	
27	0.80		104	0.77	
28	0.74		105	0.89	
29	0.71		106	0.53	
31	0.66		107	0.75	
32	0.79		109	0.76	
33	0.72		111	0.78	
34	0.69		114	0.84	
35	0.88		115	0.71	
37	0.80		117	0.90	
40	0.67		118	0.91	
41	0.50		119	0.88	
42	0.84		120	0.78	
43	0.66				
45	0.82				
50	0.75				
51	0.82				
55	0.70				
58	0.76				
59	0.81				
60	0.31				
61	0.72				
66	0.81				
67	0.52				
69	0.69				
70	0.71				
73	0.59				
74	0.94				
75	0.54				
76	0.76				
77	4.8	Outlier			
78	0.051				
80	0.79				

Consensus statistics

Consensus median, pg/g	0.75
Median all values pg/g	0.75
Consensus mean, pg/g	0.73
Standard deviation, pg/g	0.17
Relative standard deviation, %	23
No. of values reported	70
No. of values removed	1
No. of reported non-detects	3



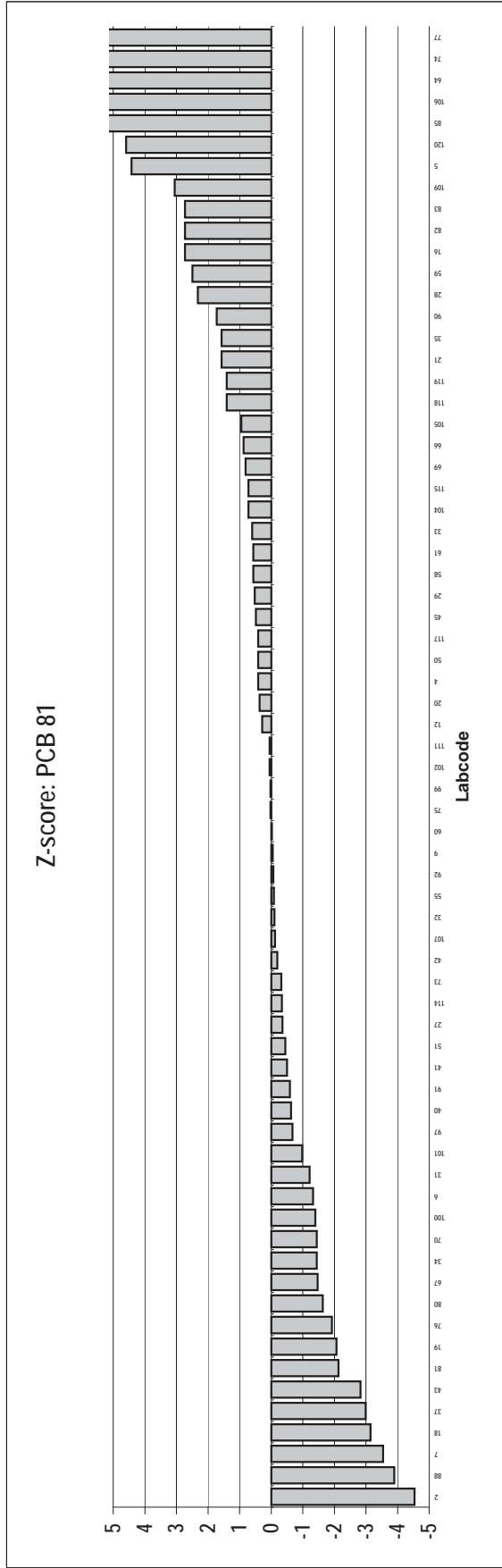
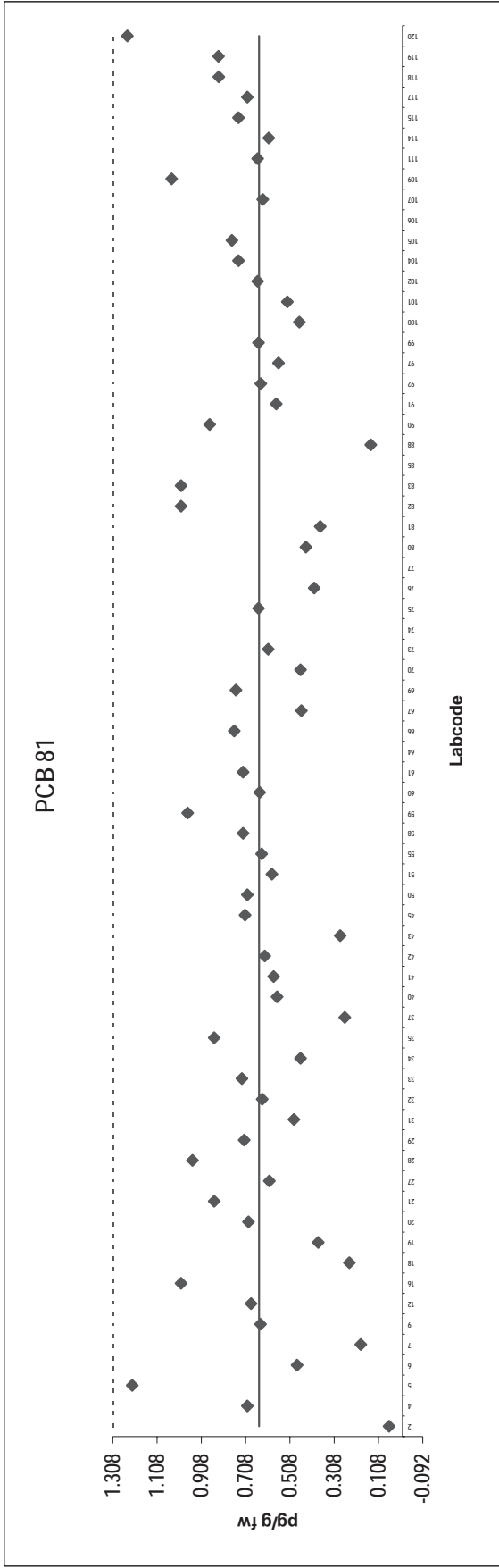
Crab meat

Congener: PCB 81

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.060	ND	82	1.0	ND
4	0.70		83	1.0	ND
5	1.2		85	1.4	Outlier
6	0.48		88	0.14	
7	0.19		90	0.87	
9	0.64		91	0.57	
12	0.68		92	0.64	
16	1.0	ND	97	0.56	
18	0.24		99	0.65	
19	0.38		100	0.47	
20	0.70		101	0.52	
21	0.85		102	0.65	
27	0.60		104	0.74	
28	0.95		105	0.77	
29	0.71		106	1.4	Outlier
31	0.49		107	0.63	
32	0.63		109	1.0	
33	0.73		111	0.65	
34	0.46		114	0.60	
35	0.85		115	0.74	
37	0.26		117	0.70	
40	0.57		118	0.83	
41	0.58		119	0.83	
42	0.62		120	1.2	ND
43	0.28				
45	0.71				
50	0.70				
51	0.59				
55	0.64				
58	0.72				
59	0.97				
60	0.64				
61	0.72				
64	1.5	Outlier			
66	0.76				
67	0.46				
69	0.75				
70	0.46				
73	0.61				
74	5.9	Outlier			
75	0.65				
76	0.40				
77	17	Outlier			
80	0.44				
81	0.37				

Consensus statistics

Consensus median, pg/g	0.65
Median all values pg/g	0.65
Consensus mean, pg/g	0.65
Standard deviation, pg/g	0.23
Relative standard deviation, %	36
No. of values reported	69
No. of values removed	5
No. of reported non-detects	5

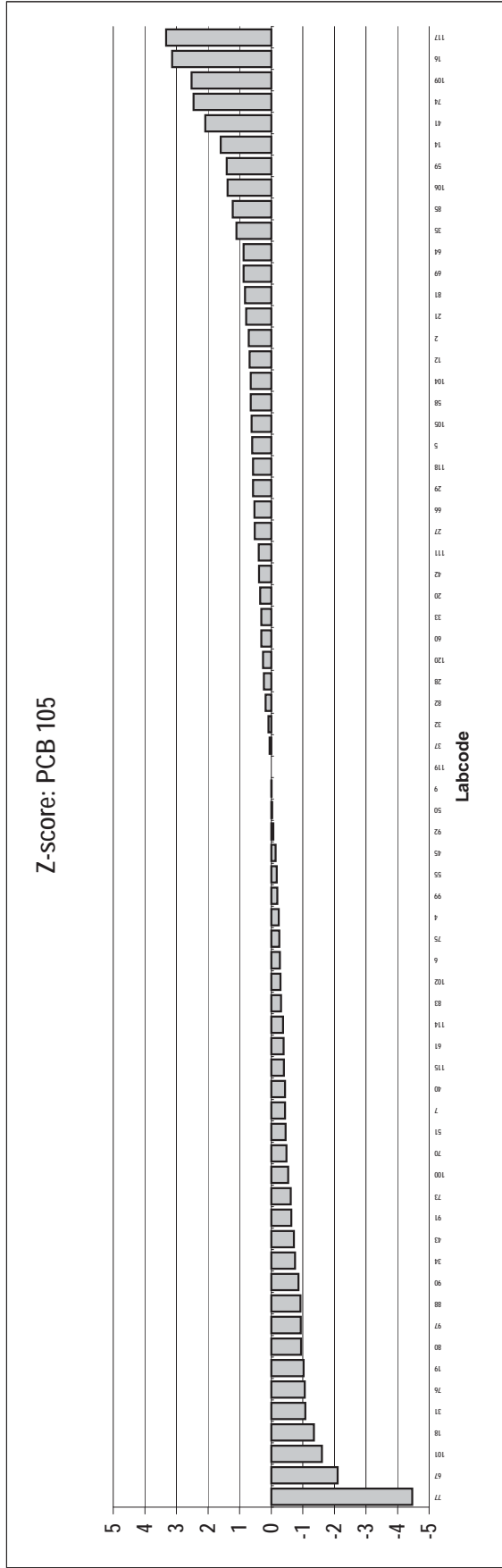
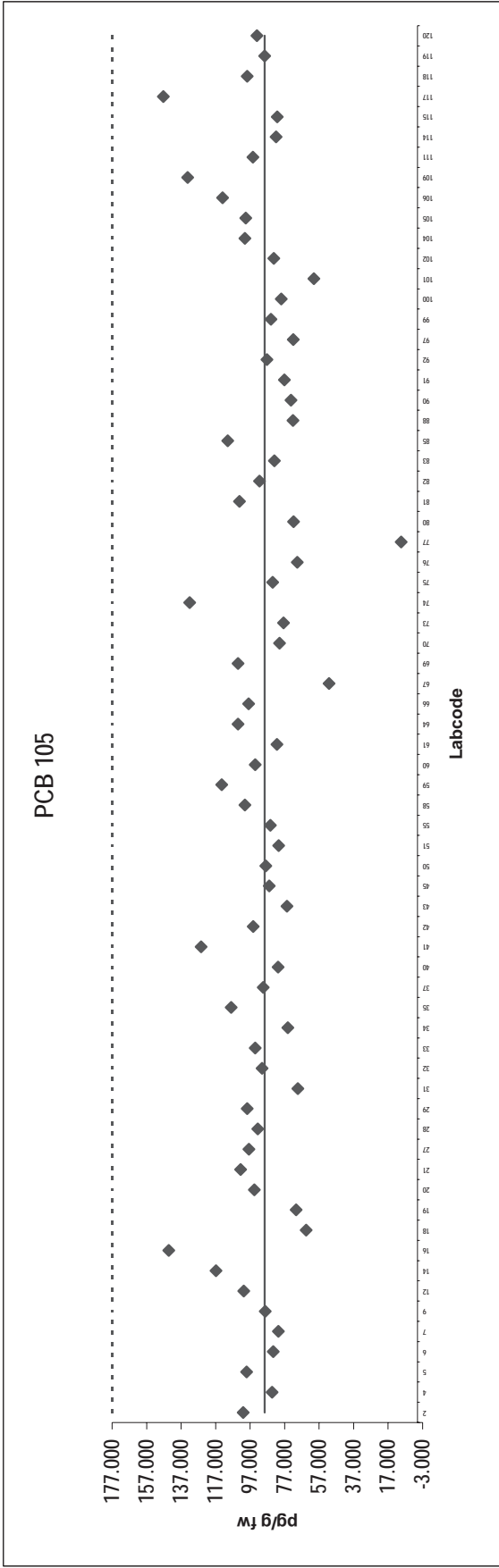


Crab meat
Congener: PCB 105

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	101		81	103	
4	84		82	92	
5	99		83	83	
6	84		85	110	
7	81		88	72	
9	88		90	73	
12	101		91	77	
14	117		92	87	
16	144		97	72	
18	65		99	85	
19	70		100	79	
20	95		101	60	
21	103		102	83	
27	98		104	100	
28	93		105	100	
29	99		106	113	
31	69		109	133	
32	90		111	95	
33	94		114	82	
34	75		115	81	
35	108		117	147	
37	89		118	99	
40	81		119	89	
41	125		120	93	
42	95				
43	76				
45	86				
50	88				
51	80				
55	85				
58	100				
59	113				
60	94				
61	82				
64	104				
66	98				
67	51				
69	104				
70	80				
73	78				
74	132				
75	84				
76	70				
77	9,5				
80	72				

Consensus statistics

Consensus median, pg/g	89
Median all values pg/g	89
Consensus mean, pg/g	90
Standard deviation, pg/g	21
Relative standard deviation, %	23
No. of values reported	69
No. of values removed	0
No. of reported non-detects	0



Crab meat

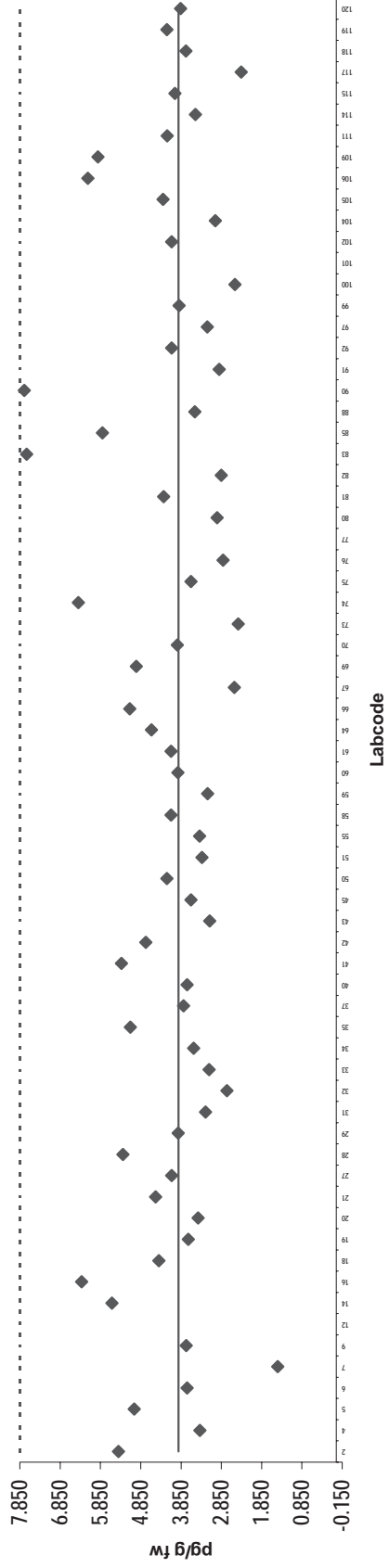
Congener: PCB 114

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	5.4		81	4.3	
4	3.4		82	2.9	
5	5.0		83	7.7	
6	3.7		85	5.8	
7	1.4		88	3.5	
9	3.7		90	7.7	
12	8.5		91	2.9	
14	5.6		92	4.1	
16	6.3		97	3.2	
18	4.4		99	3.9	
19	3.7		100	2.5	
20	3.4		101	10	
21	4.5		102	4.1	
27	4.1		104	3.0	
28	5.3		105	4.3	
29	3.9		106	6.2	
31	3.2		109	5.9	
32	2.7		111	4.2	
33	3.2		114	3.5	
34	3.5		115	4.0	
35	5.1		117	2.4	
37	3.8		118	3.7	
40	3.7		119	4.2	
41	5.3		120	3.9	
42	4.7				
43	3.1				
45	3.6				
50	4.2				
51	3.3				
55	3.4				
58	4.1				
59	3.2				
60	3.9				
61	4.1				
64	4.6				
66	5.1				
67	2.5				
69	5.0				
70	3.9				
73	2.4				
74	6.4				
75	3.6				
76	2.8				
77	418	Outlier			
80	3.0				

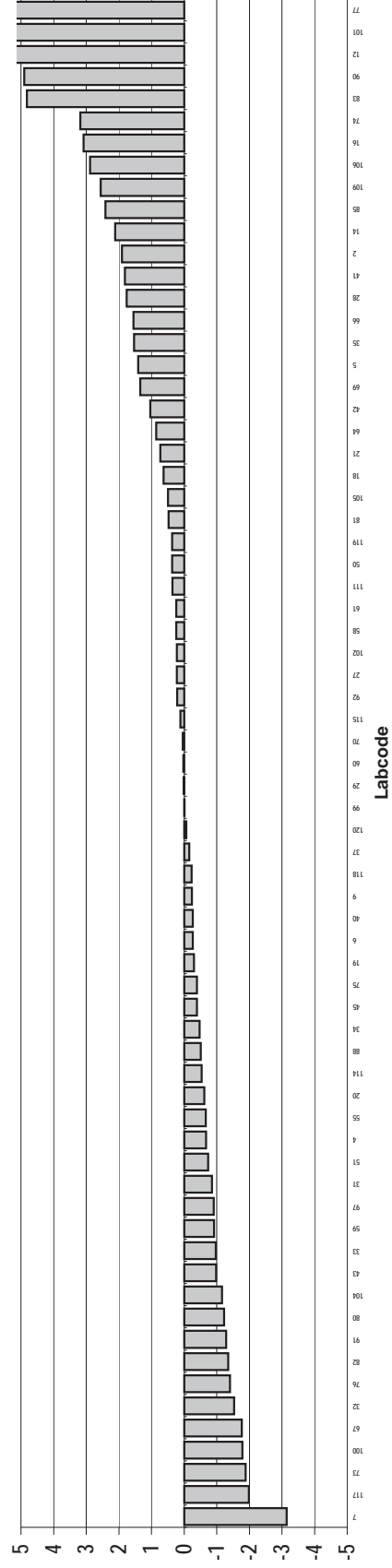
Consensus statistics

Consensus median, pg/g	3.9
Median all values pg/g	3.9
Consensus mean, pg/g	4.1
Standard deviation, pg/g	1.2
Relative standard deviation, %	29
No. of values reported	69
No. of values removed	3
No. of reported non-detects	1

PCB 114



Z-score: PCB 114



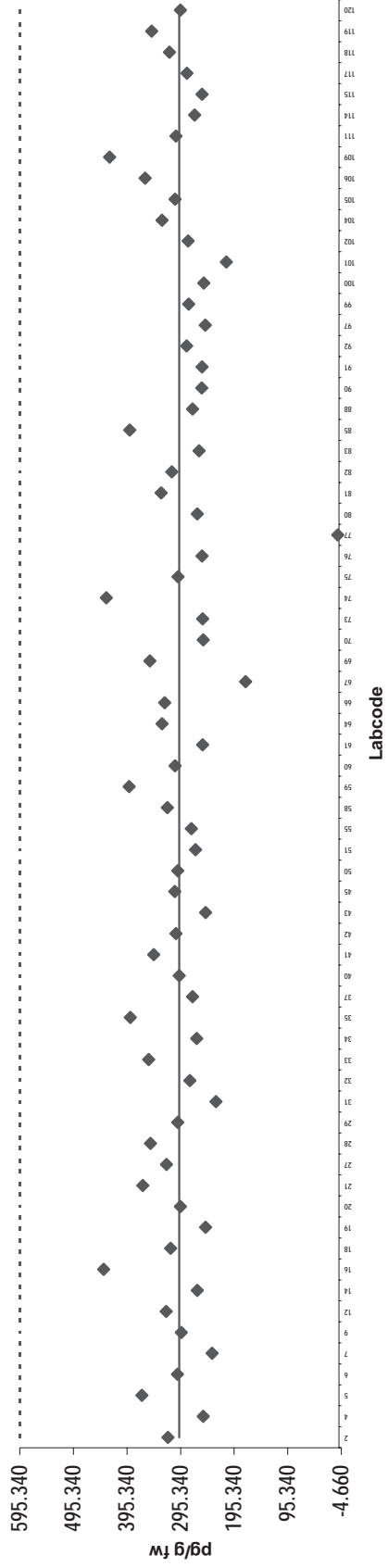
Crab meat
Congener: PCB 118

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	319		81	331	
4	253		82	312	
5	368		83	261	
6	301		85	390	
7	236		88	273	
9	294		90	256	
12	322		91	255	
14	264		92	284	
16	439		97	249	
18	314		99	280	
19	249		100	252	
20	296		101	210	
21	366		102	281	
27	322		104	330	
28	352		105	306	
29	301		106	362	
31	229		109	428	
32	278		111	304	
33	355		114	269	
34	265		115	255	
35	389		117	284	
37	273		118	316	
40	298		119	349	
41	345		120	295	
42	304				
43	249				
45	306				
50	300				
51	267				
55	275				
58	320				
59	391				
60	306				
61	254				
64	330				
66	325				
67	174				
69	353				
70	253				
73	254				
74	434				
75	300				
76	255				
77	2.1				
80	264				

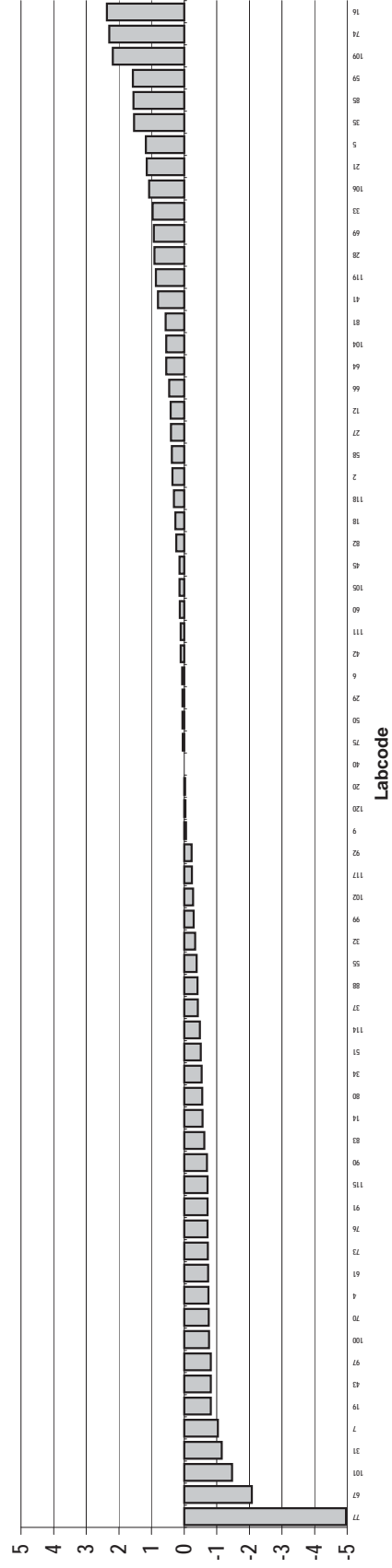
Consensus statistics

Consensus median, pg/g	298
Median all values pg/g	298
Consensus mean, pg/g	297
Standard deviation, pg/g	63
Relative standard deviation, %	21
No. of values reported	69
No. of values removed	0
No. of reported non-detects	0

PCB 118



Z-score: PCB 118



Crab meat

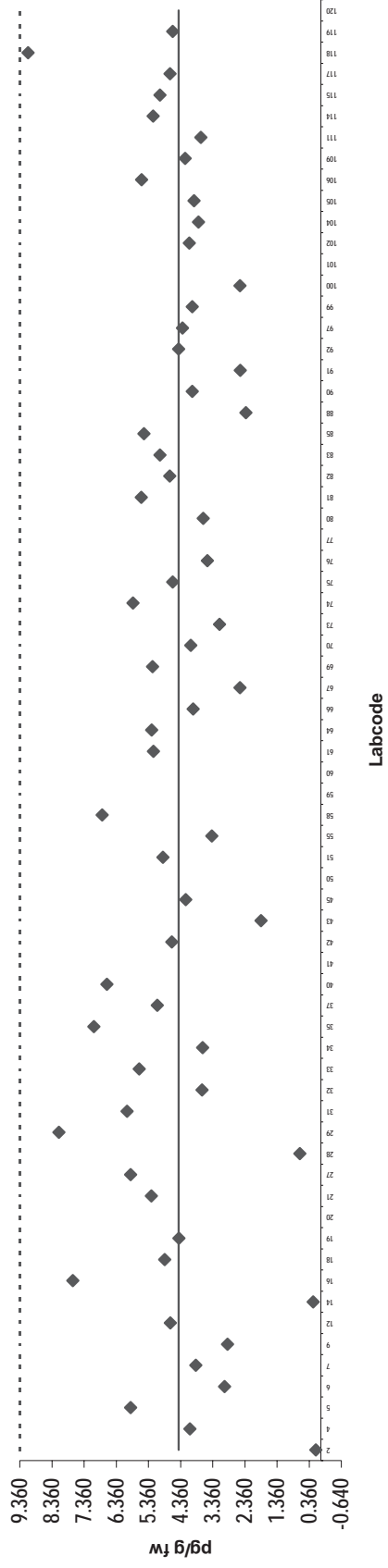
Congener: PCB 123

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.15	ND	81	5.6	
4	4.1		82	4.7	
5	5.9		83	5.0	ND
6	3.0		85	5.5	
7	3.9		88	2.3	
9	2.9		90	4.0	
12	4.7		91	2.5	ND
14	0.24		92	4.4	
16	7.7		97	4.3	
18	4.9		99	4.0	
19	4.4		100	2.5	
20	36		101	10	Outlier,ND
21	5.3		102	4.1	
27	5.9		104	3.8	
28	0.65		105	3.9	
29	8.1		106	5.6	
31	6.0		109	4.2	
32	3.7		111	3.7	
33	5.7		114	5.2	
34	3.7		115	5.0	
35	7.1		117	4.7	
37	5.1		118	9.1	
40	6.7		119	4.6	
41	17		120	10	Outlier
42	4.6				
43	1.9				
45	4.2				
50	9.7				
51	4.9	Outlier			
55	3.4				
58	6.8				
59	44	Outlier			
60	12	Outlier			
61	5.2				
64	5.3				
66	4.0				
67	2.5				
69	5.2				
70	4.0				
73	3.1				
74	5.8				
75	4.6				
76	3.5				
77	132	Outlier			
80	3.7				

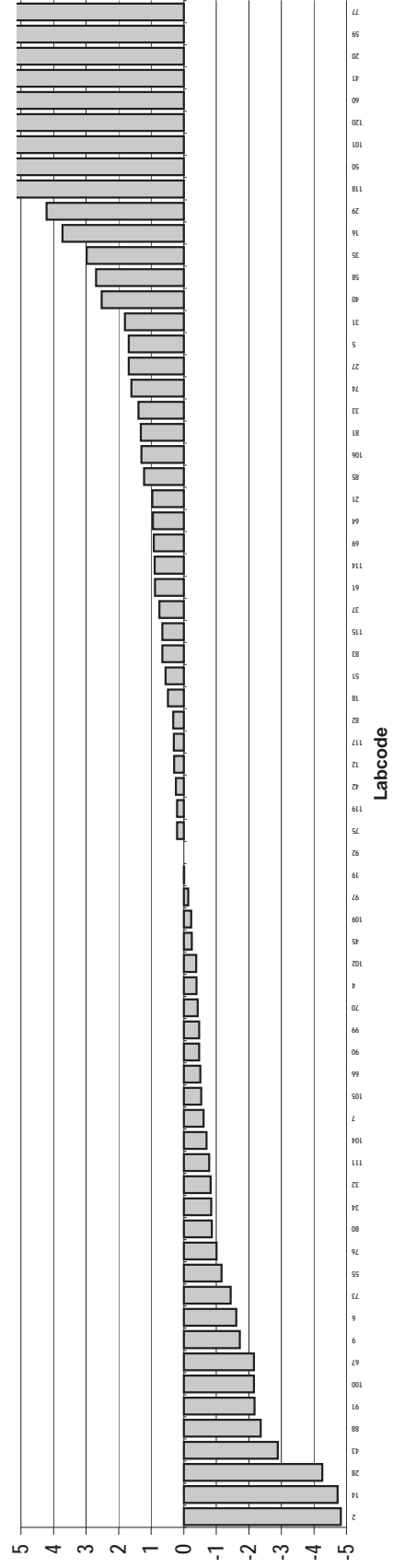
Consensus statistics

Consensus median, pg/g	4.4
Median all values pg/g	4.7
Consensus mean, pg/g	4.4
Standard deviation, pg/g	1.7
Relative standard deviation, %	38
No. of values reported	69
No. of values removed	8
No. of reported non-detects	6

PCB 123



Z-score: PCB 123

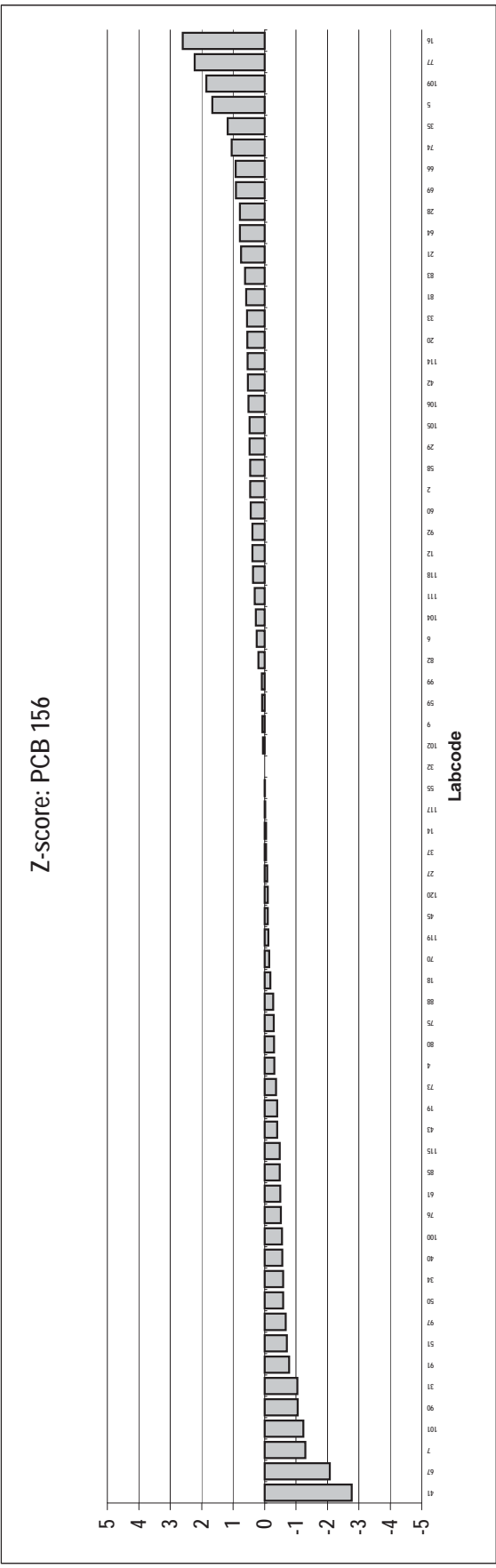
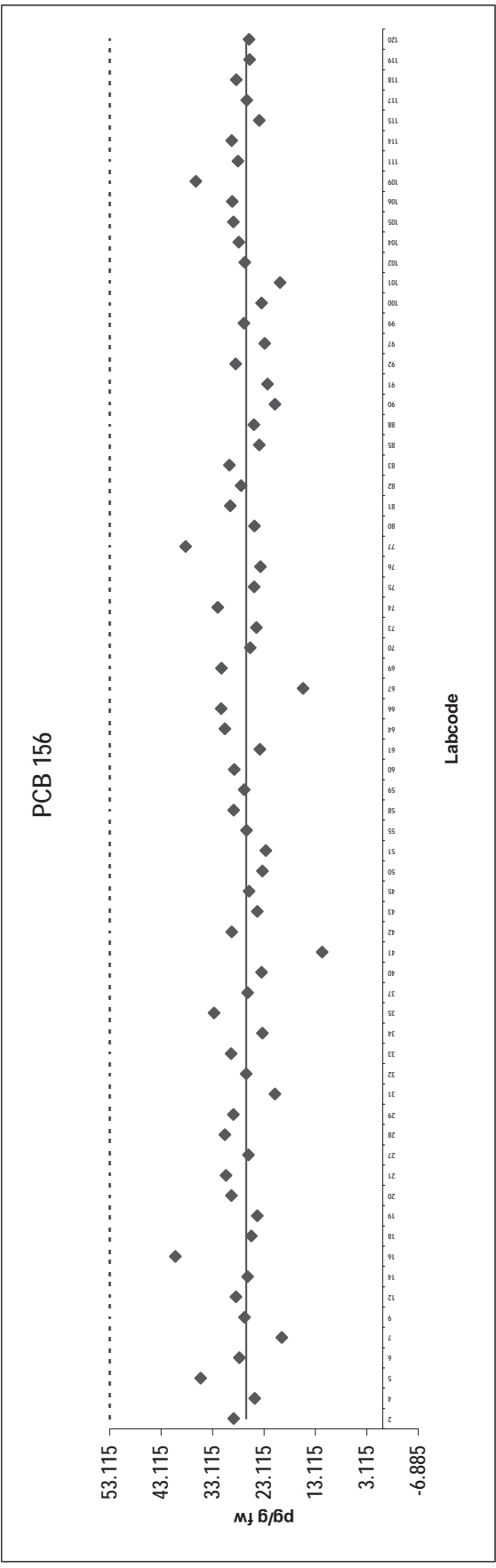


Crab meat
Congener: PCB 156

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	29		81	30	
4	25		82	28	
5	35		83	30	
6	28		85	24	
7	20		88	25	
9	27		90	21	
12	29		91	22	
14	26		92	29	
16	40		97	23	
18	26		99	27	
19	24		100	24	
20	29		101	20	
21	31		102	27	
27	26		104	28	
28	31		105	29	
29	29		106	29	
31	21		109	36	
32	27		111	28	
33	30		114	29	
34	23		115	24	
35	33		117	26	
37	26		118	28	
40	24		119	26	
41	12		120	26	
42	29				
43	24				
45	26				
50	23				
51	23				
55	27				
58	29				
59	27				
60	29				
61	24				
64	31				
66	31				
67	16				
69	31				
70	26				
73	25				
74	32				
75	25				
76	24				
77	38				
80	25				

Consensus statistics

Consensus median, pg/g	27
Median all values pg/g	27
Consensus mean, pg/g	27
Standard deviation, pg/g	4.5
Relative standard deviation, %	17
No. of values reported	69
No. of values removed	0
No. of reported non-detects	0

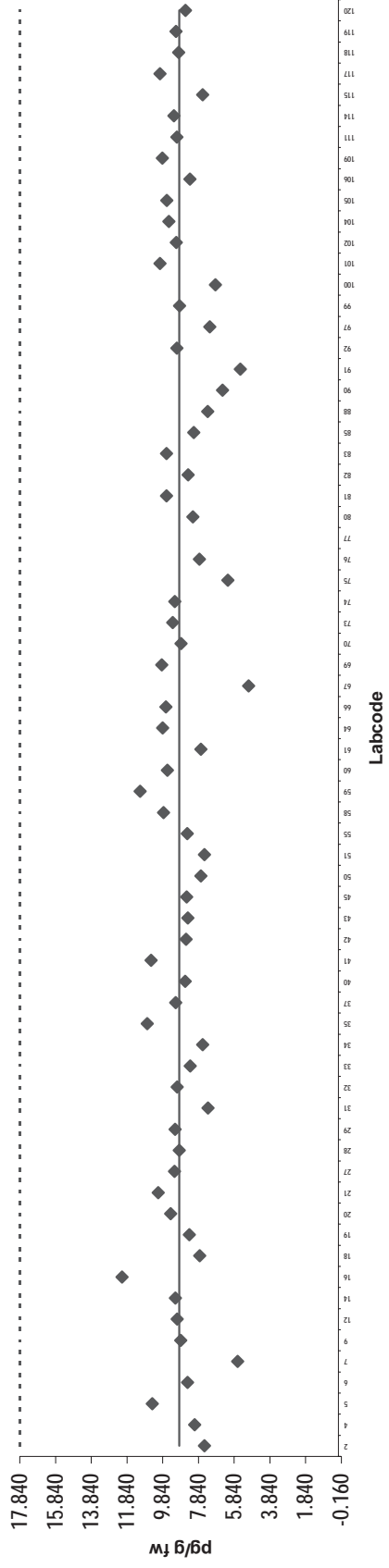


Crab meat
Congener: PCB 157

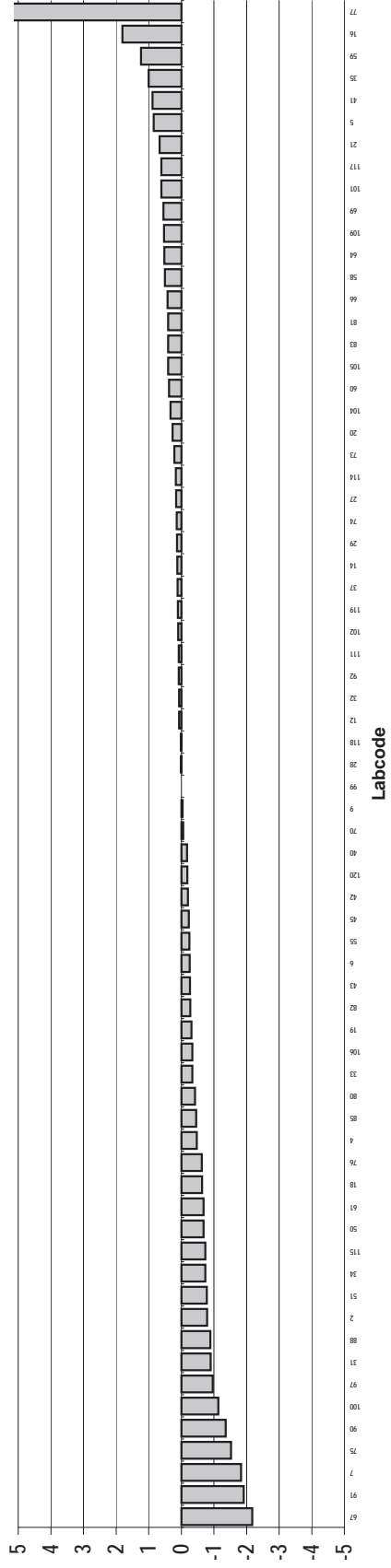
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	7.5		81	9.6	
4	8.1		82	8.4	
5	10		83	9.6	
6	8.5		85	8.1	
7	5.7		88	7.3	
9	8.8		90	6.5	
12	9.0		91	5.5	
14	9.1		92	9.0	
16	12		97	7.2	
18	7.8		99	8.9	
19	8.4		100	6.9	
20	9.4		101	10	ND
21	10		102	9.1	
27	9.2		104	9.5	
28	8.9		105	9.6	
29	9.1		106	8.3	
31	7.3		109	9.9	
32	9.0		111	9.1	
33	8.3		114	9.2	
34	7.6		115	7.6	
35	11		117	10	ND
37	9.1		118	8.9	
40	8.6		119	9.1	
41	10		120	8.6	
42	8.5				
43	8.4				
45	8.5				
50	7.7				
51	7.5				
55	8.5				
58	9.8				
59	11				
60	9.6				
61	7.7				
64	9.8				
66	9.7				
67	5.0				
69	9.9				
70	8.8				
73	9.3				
74	9.2				
75	6.2				
76	7.8				
77	33	Outlier			
80	8.2				

Consensus statistics	
Consensus median, pg/g	8.9
Median all values pg/g	8.9
Consensus mean, pg/g	8.7
Standard deviation, pg/g	1.3
Relative standard deviation, %	15
No. of values reported	69
No. of values removed	1
No. of reported non-detects	2

PCB 157



Z-score: PCB 157



Crab meat
Congener: PCB 167

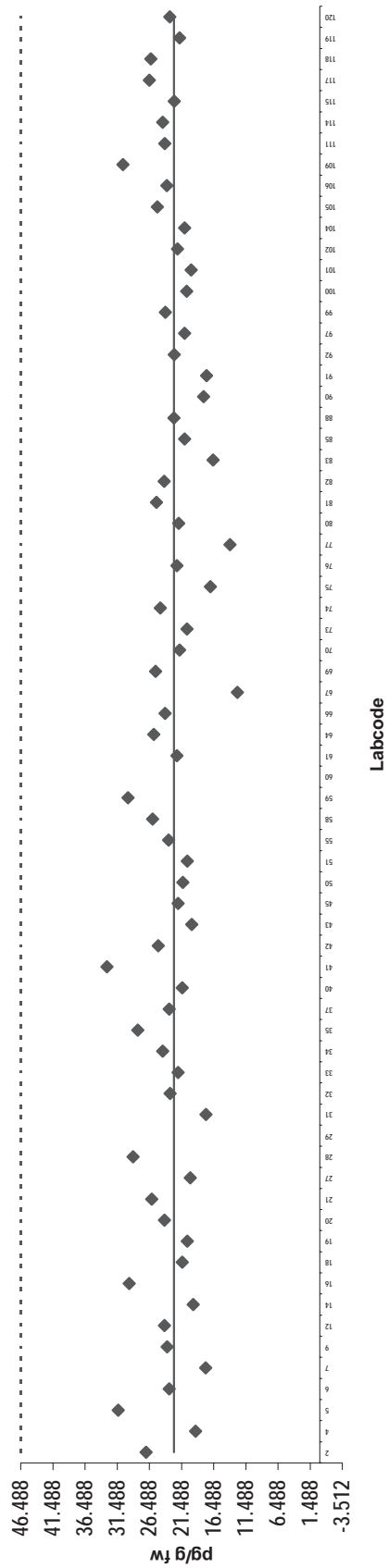
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	27		81	25	
4	19		82	24	
5	31		83	17	
6	23		85	21	
7	18		88	23	
9	24		90	18	
12	24		91	18	
14	20		92	23	
16	30		97	21	
18	21		99	24	
19	21		100	21	
20	24		101	20	
21	26		102	22	
27	20		104	21	
28	29		105	25	
29	48		106	24	
31	18		109	31	
32	23		111	24	
33	22		114	24	
34	24		115	23	
35	28		117	27	
37	23		118	26	
40	21		119	22	
41	33		120	23	
42	25				
43	20				
45	22				
50	21				
51	21				
55	24				
58	26				
59	30				
60	80				
61	22				
64	26				
66	24				
67	13				
69	26				
70	22				
73	21				
74	25				
75	17				
76	22				
77	14				
80	22				

Outlier

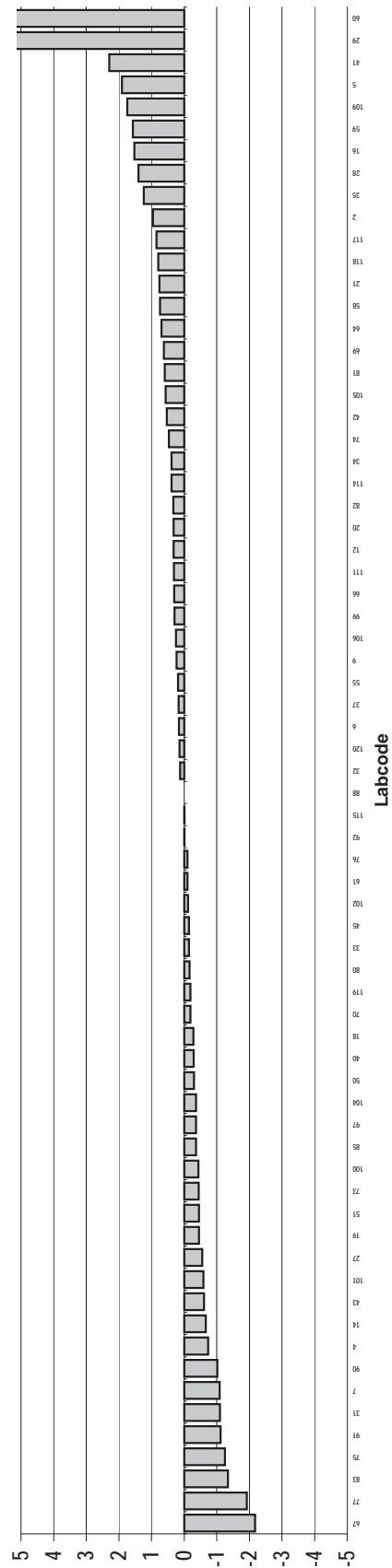
Outlier

Consensus statistics	
Consensus median, pg/g	23
Median all values pg/g	23
Consensus mean, pg/g	23
Standard deviation, pg/g	3.8
Relative standard deviation, %	17
No. of values reported	69
No. of values removed	2
No. of reported non-detects	0

PCB 167



Z-score: PCB 167

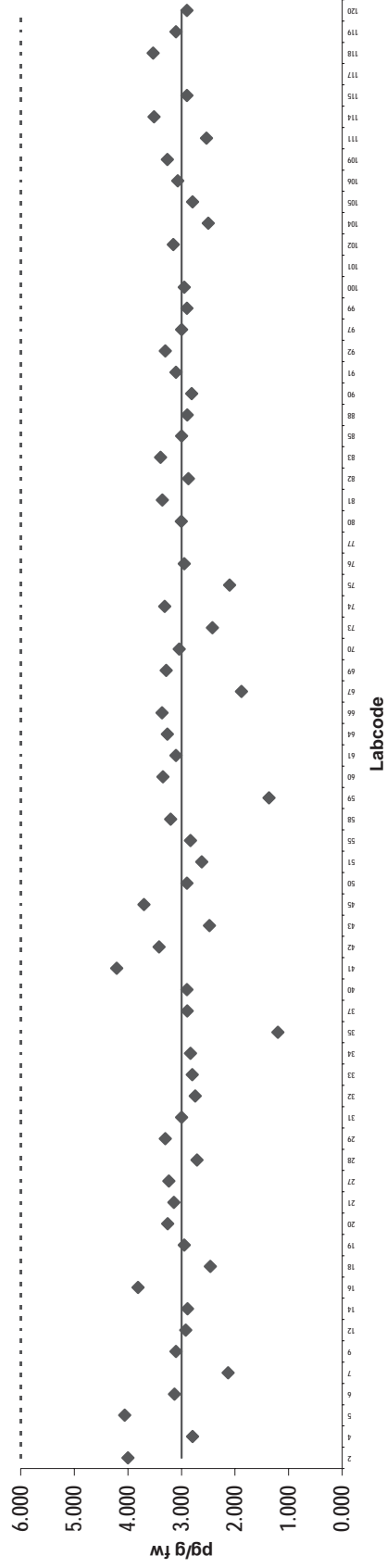


Crab meat
Congener: PCB 189

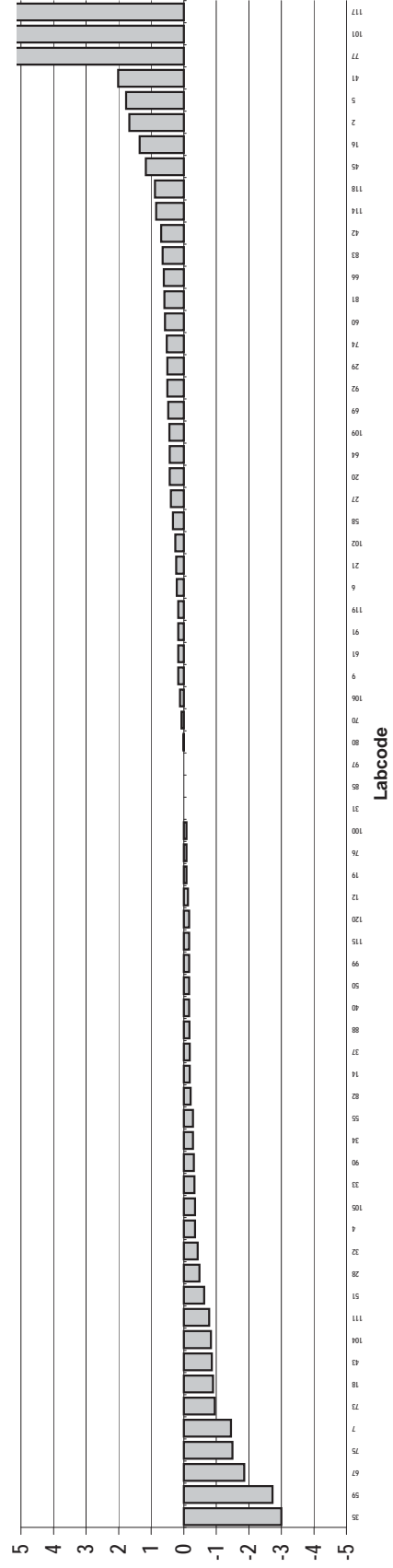
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.0		81	3.4	
4	2.8		82	2.9	
5	4.1		83	3.4	
6	3.1		85	3.0	
7	2.1		88	2.9	
9	3.1		90	2.8	
12	2.9		91	3.1	
14	2.9		92	3.3	
16	3.8		97	3.0	
18	2.5		99	2.9	
19	3.0		100	3.0	
20	3.3		101	10	Outlier,ND
21	3.1		102	3.2	
27	3.2		104	2.5	
28	2.7		105	2.8	
29	3.3		106	3.1	
31	3.0		109	3.3	
32	2.7		111	2.5	
33	2.8		114	3.5	
34	2.8		115	2.9	
35	1.2		117	10	Outlier,ND
37	2.9	ND	118	3.5	
40	2.9		119	3.1	
41	4.2		120	2.9	
42	3.4				
43	2.5				
45	3.7				
50	2.9				
51	2.6				
55	2.8				
58	3.2				
59	1.4				
60	3.3				
61	3.1				
64	3.3				
66	3.4				
67	1.9				
69	3.3				
70	3.0				
73	2.4				
74	3.3				
75	2.1				
76	3.0				
77	8.0	Outlier,ND			
80	3.0				

Consensus statistics	
Consensus median, pg/g	3.0
Median all values pg/g	3.0
Consensus mean, pg/g	3.0
Standard deviation, pg/g	0.52
Relative standard deviation, %	17
No. of values reported	69
No. of values removed	3
No. of reported non-detects	4

PCB 189



Z-score: PCB 189



Crab meat

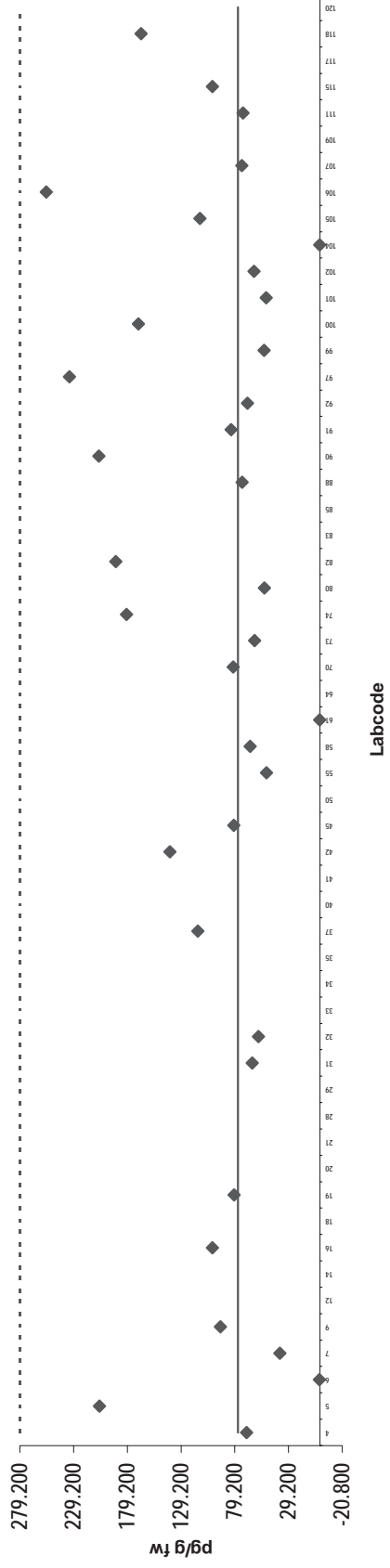
Congener: CB 28

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	68		104	0.20	
5	205		105	112	
6	0.50	ND	106	255	
7	37		107	73	
9	93		109	817	Outlier
12	334	Outlier	111	72	
14	284	Outlier	115	100	
16	100	ND	117	303	Outlier
18	2200	Outlier	118	167	
19	80		120	340	Outlier
20	388	Outlier			
21	381	Outlier			
28	444	Outlier			
29	300	Outlier			
31	63				
32	57				
33	320	Outlier			
34	375	Outlier			
35	401	Outlier			
37	114				
40	361	Outlier			
41	979	Outlier			
42	140				
45	80				
50	421	Outlier			
55	50				
58	65				
61	0.10				
64	345	Outlier			
70	81				
73	61				
74	180				
80	52				
82	190				
83	1000	Outlier,ND			
85	1400	Outlier			
88	72				
90	206				
91	83				
92	68				
97	233				
99	52				
100	169				
101	50				
102	61				

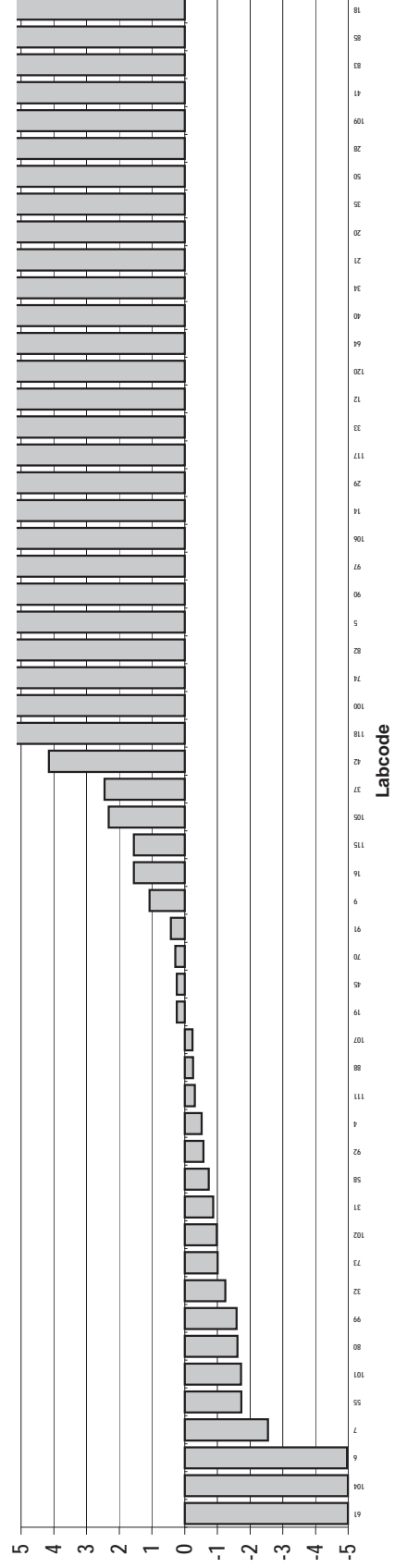
Consensus statistics

Consensus median, pg/g	76
Median all values pg/g	140
Consensus mean, pg/g	97
Standard deviation, pg/g	65
Relative standard deviation, %	67
No. of values reported	55
No. of values removed	19
No. of reported non-detects	3

CB 28



Z-score: CB 28



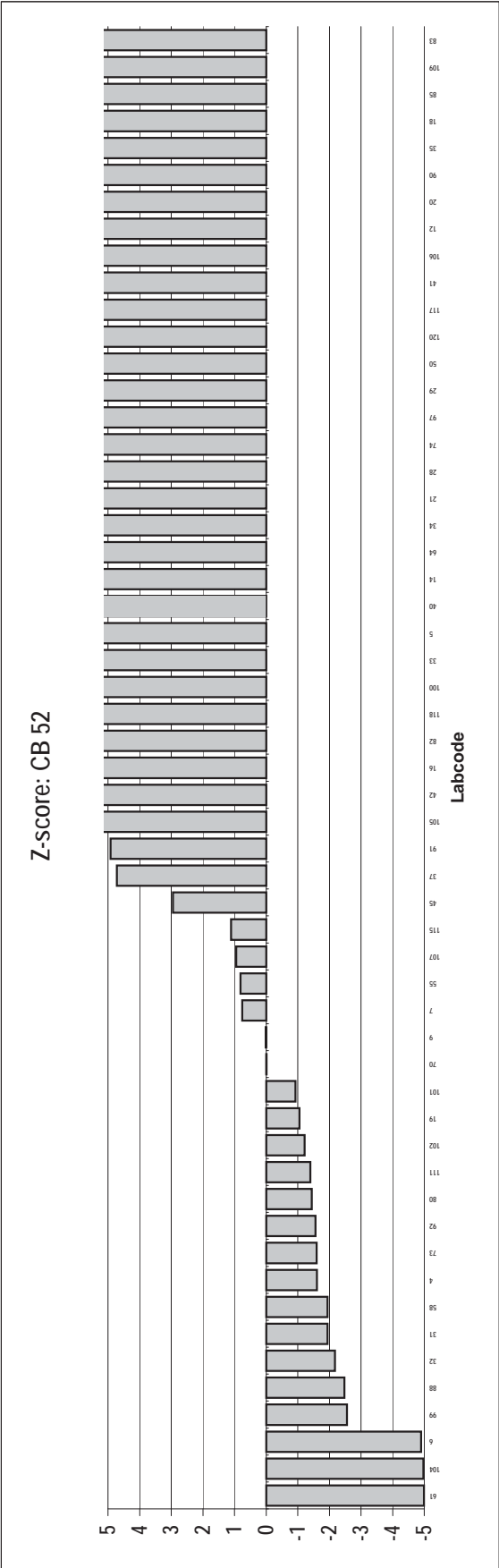
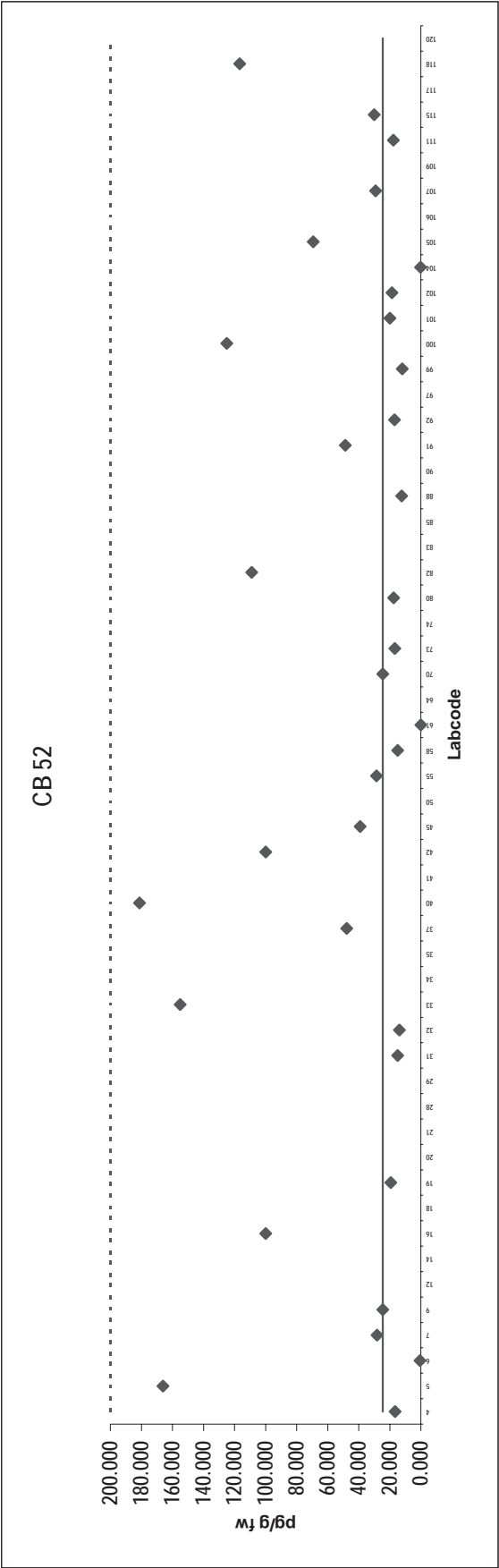
Crab meat

Congener: CB 52

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	17		104	0,14	
5	166		105	69	
6	0,50	ND	106	367	Outlier
7	28		107	29	
9	25		109	938	Outlier
12	379	Outlier	111	18	
14	217	Outlier	115	30	
16	100	ND	117	334	Outlier
18	474	Outlier	118	117	
19	19		120	328	Outlier
20	382	Outlier			
21	283	Outlier			
28	289	Outlier			
29	307	Outlier			
31	15				
32	14				
33	155				
34	268	Outlier			
35	432	Outlier			
37	48				
40	181				
41	350	Outlier			
42	100				
45	39				
50	314	Outlier			
55	29				
58	15				
61	0,030				
64	252	Outlier			
70	24				
73	17				
74	297	Outlier			
80	17				
82	109				
83	1000	Outlier,ND			
85	840	Outlier			
88	12				
90	405	Outlier			
91	49				
92	17				
97	300	Outlier			
99	12				
100	125				
101	20				
102	19				

Consensus statistics

Consensus median, pg/g	25
Median all values pg/g	100
Consensus mean, pg/g	48
Standard deviation, pg/g	51
Relative standard deviation, %	106
No. of values reported	55
No. of values removed	21
No. of reported non-detects	3



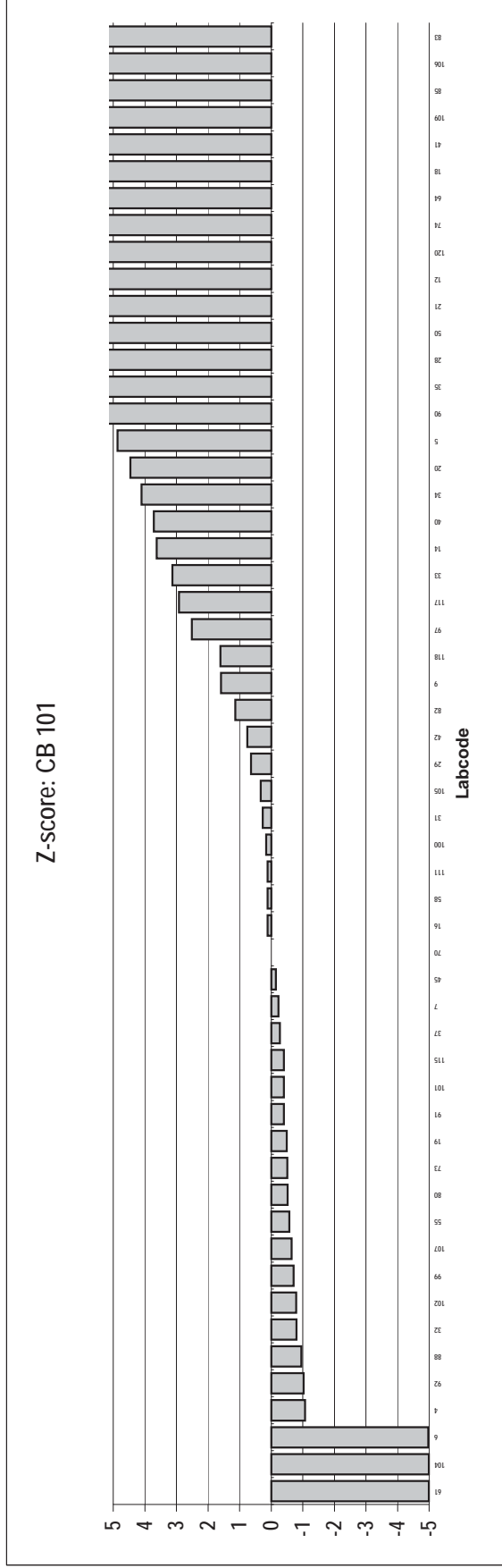
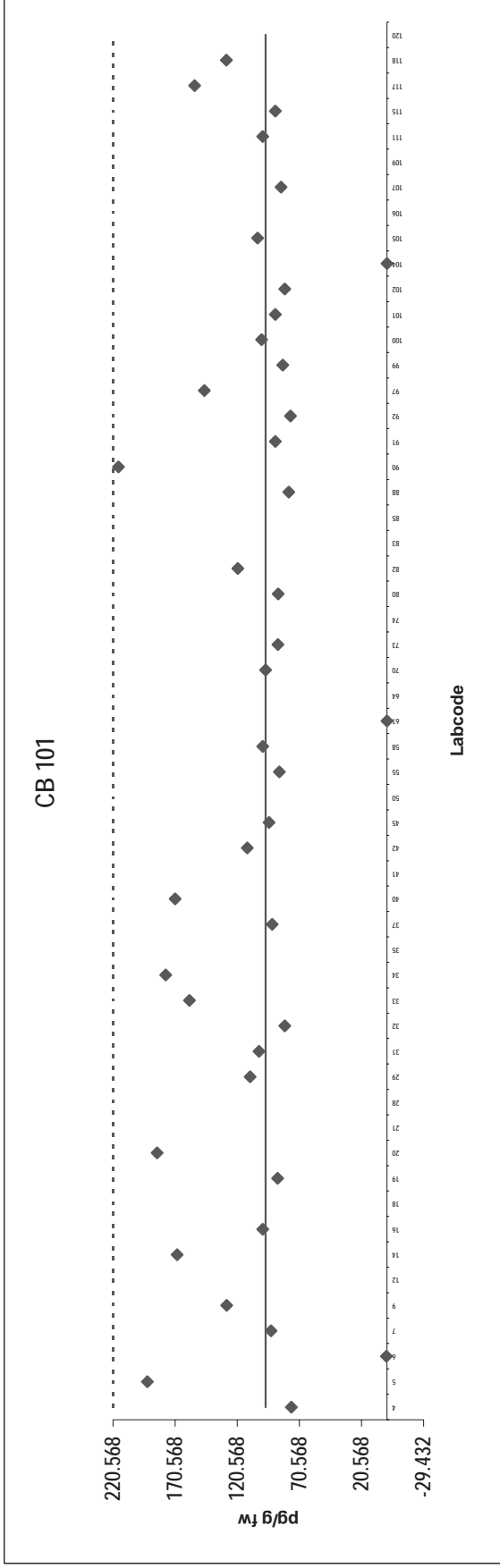
Crab meat

Congener: CB 101

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	77		104	0.13	
5	193		105	104	
6	0.50	ND	106	548	Outlier
7	93		107	85	
9	129		109	458	Outlier
12	261	Outlier	111	100	
14	169		115	90	
16	100	ND	117	155	
18	302	Outlier	118	129	
19	88		120	261	Outlier
20	185				
21	252	Outlier			
28	235	Outlier			
29	110				
31	103				
32	82				
33	159				
34	178				
35	228	Outlier			
37	92				
40	171				
41	444	Outlier			
42	113				
45	95				
50	235	Outlier			
55	87				
58	100				
61	0.090				
64	280	Outlier			
70	98				
73	88				
74	277	Outlier			
80	88				
82	120				
83	1000	Outlier,ND			
85	470	Outlier			
88	79				
90	216				
91	90				
92	78				
97	147				
99	84				
100	101				
101	90				
102	82				

Consensus statistics

Consensus median, pg/g	98
Median all values pg/g	110
Consensus mean, pg/g	106
Standard deviation, pg/g	47
Relative standard deviation, %	44
No. of values reported	55
No. of values removed	14
No. of reported non-detects	3



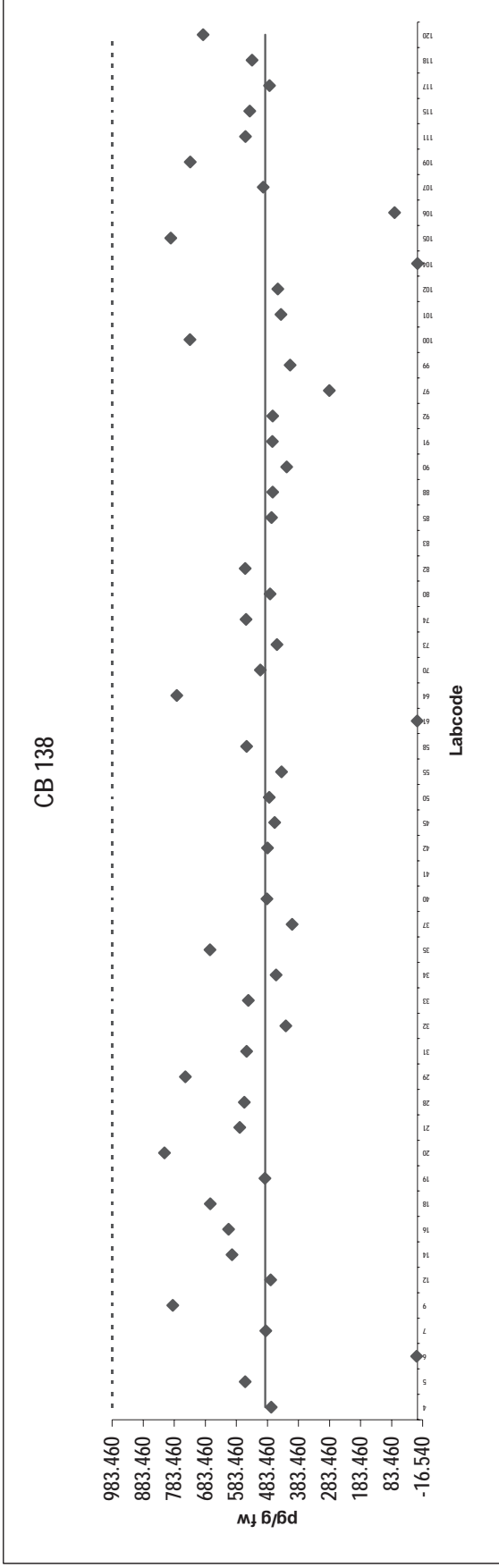
Crab meat

Congener: CB 138

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	471		104	0,50	
5	555		105	795	
6	3,0	ND	106	74	
7	489		107	497	
9	788		109	731	
12	473		111	554	
14	597		115	540	
16	608		117	477	
18	667		118	533	
19	492		120	691	
20	815				
21	572				
28	558				
29	748				
31	550				
32	424				
33	545				
34	455				
35	668				
37	404				
40	485				
41	1370	Outlier			
42	483				
45	460				
50	478				
55	438				
58	550				
61	0,53				
64	775				
70	506				
73	452				
74	552				
80	475				
82	555				
83	1000	Outlier,ND			
85	470				
88	467				
90	421				
91	467				
92	466				
97	284				
99	410				
100	733				
101	440				
102	449				

Consensus statistics

Consensus median, pg/g	490
Median all values pg/g	492
Consensus mean, pg/g	502
Standard deviation, pg/g	180
Relative standard deviation, %	36
No. of values reported	55
No. of values removed	2
No. of reported non-detects	2



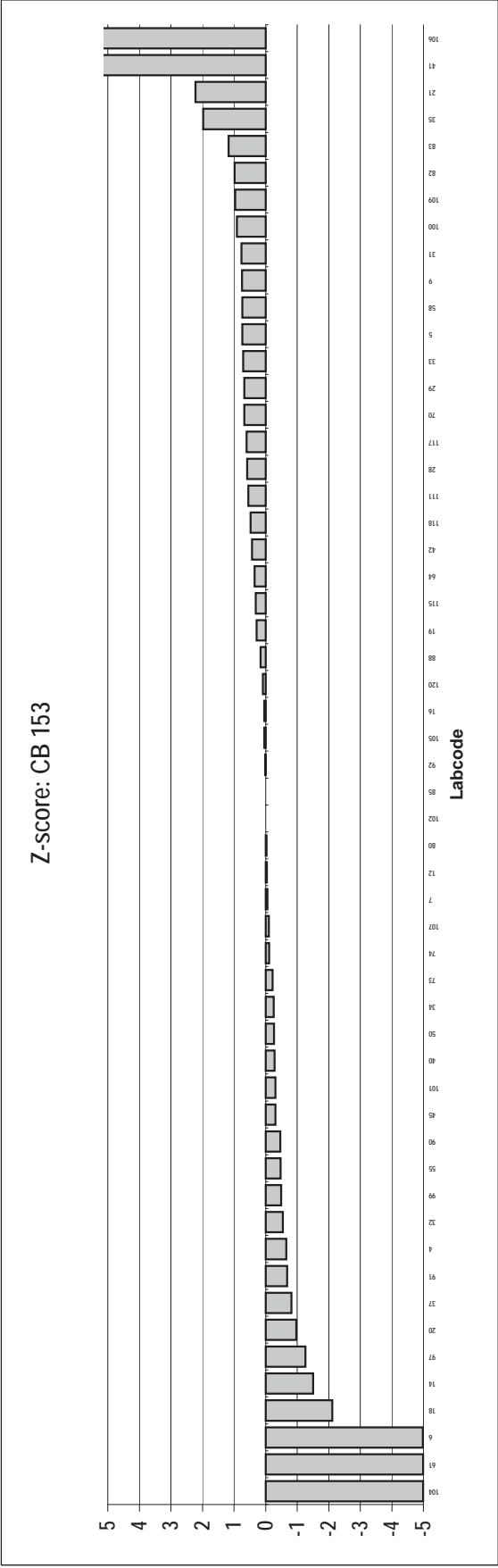
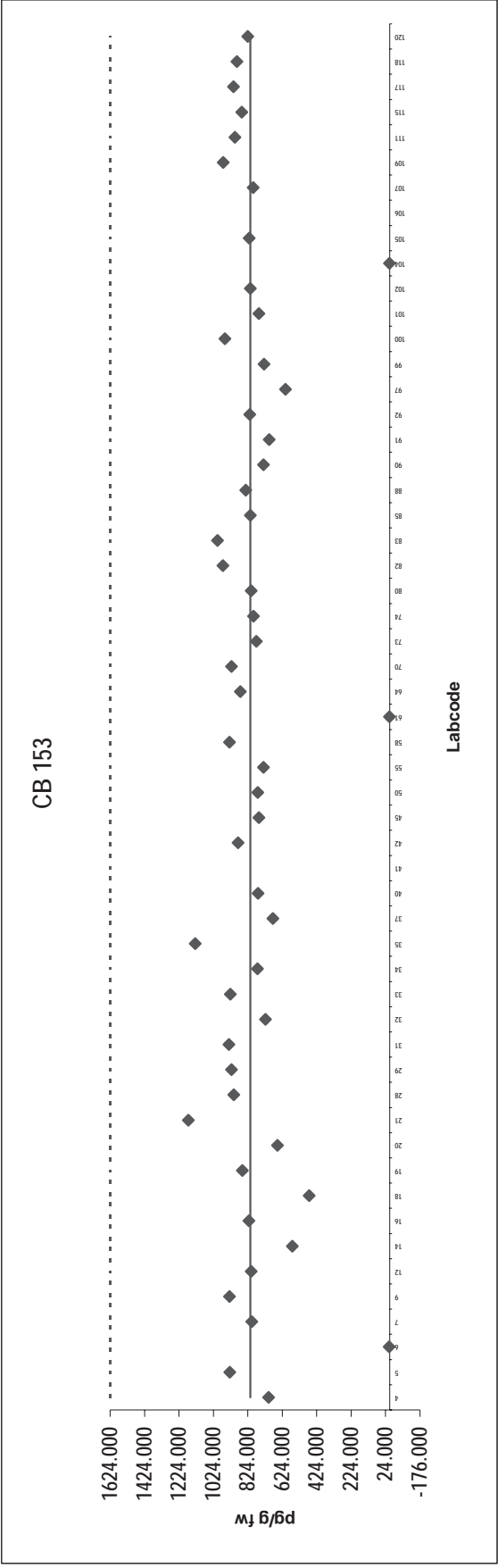
Crab meat

Congener: CB 153

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	704		104	0.81	
5	929		105	817	
6	3.0	ND	106	1964	Outlier
7	801		107	793	
9	931		109	966	
12	804		111	899	
14	565		115	860	
16	817		117	907	
18	467		118	887	
19	857		120	824	
20	652				
21	1170				
28	905				
29	920				
31	934				
32	721				
33	925				
34	769				
35	1130				
37	678				
40	764	Outlier			
41	1694				
42	880				
45	760				
50	766				
55	733				
58	930				
61	0.85				
64	867				
70	919				
73	774				
74	792				
80	805				
82	969				
83	1000				
85	810	ND			
88	836				
90	734				
91	700				
92	812				
97	606				
99	730				
100	957				
101	760				
102	810				

Consensus statistics

Consensus median, pg/g	810
Median all values pg/g	812
Consensus mean, pg/g	780
Standard deviation, pg/g	229
Relative standard deviation, %	29
No. of values reported	55
No. of values removed	2
No. of reported non-detects	2



Crab meat

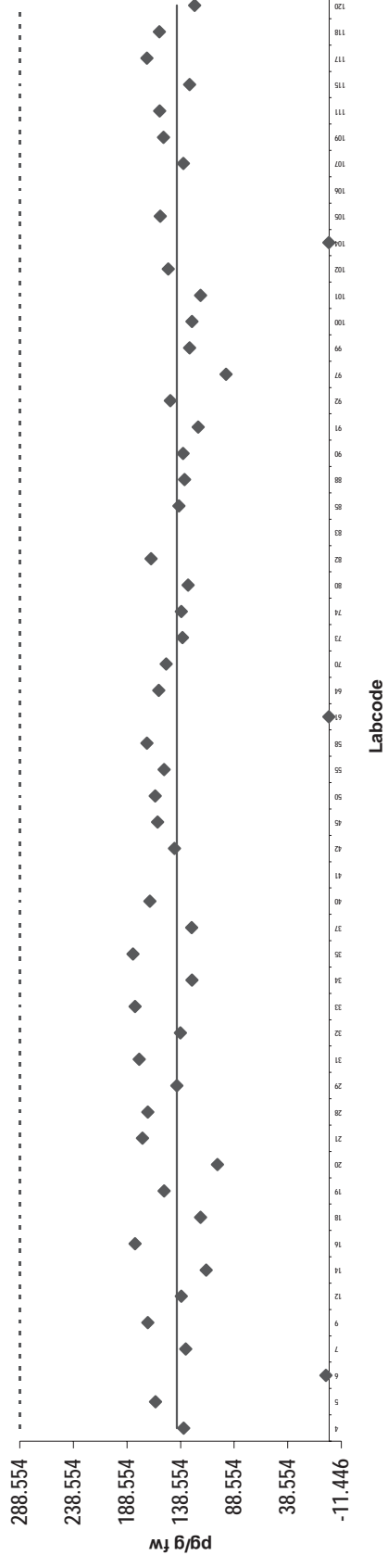
Congener: CB 180

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	136		104	0,16	
5	162		105	157	
6	3,0	ND	106	348	Outlier
7	134		107	136	
9	169		109	154	
12	138		111	158	
14	115		115	130	
16	181		117	170	
18	120		118	158	
19	154		120	125	
20	104				
21	174				
28	169				
29	142				
31	177				
32	139				
33	181				
34	128				
35	183				
37	128				
40	167				
41	344	Outlier			
42	144				
45	160				
50	162				
55	154				
58	170				
61	0,13				
64	159				
70	152				
73	137				
74	138				
80	132				
82	166				
83	1000	Outlier,ND			
85	140				
88	135				
90	136				
91	122				
92	148				
97	96				
99	130				
100	128				
101	120				
102	150				

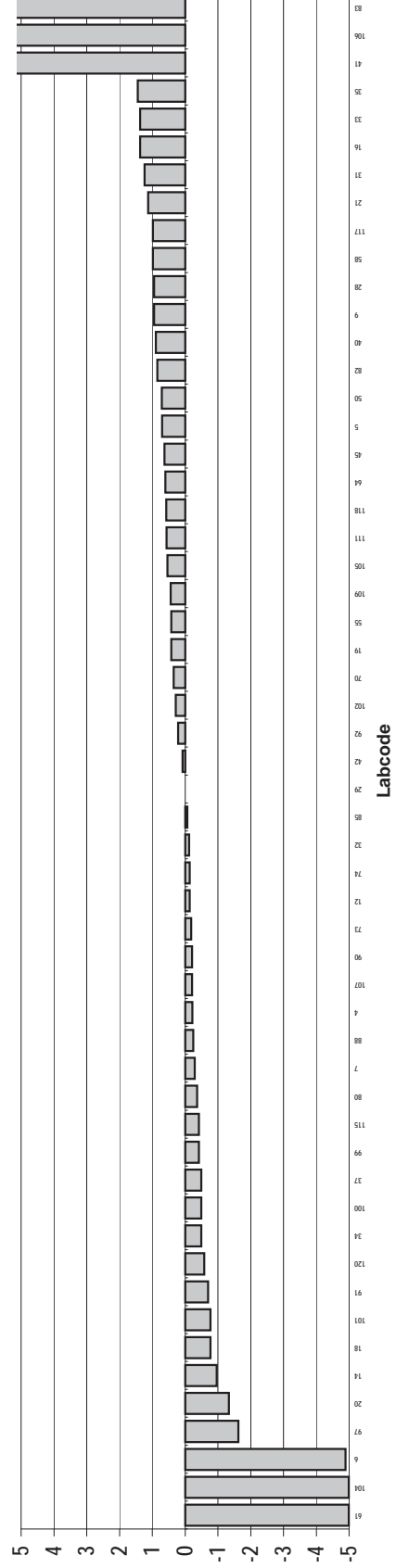
Consensus statistics

Consensus median, pg/g	142
Median all values pg/g	144
Consensus mean, pg/g	138
Standard deviation, pg/g	40
Relative standard deviation, %	29
No. of values reported	55
No. of values removed	3
No. of reported non-detects	2

CB 180



Z-score: CB 180



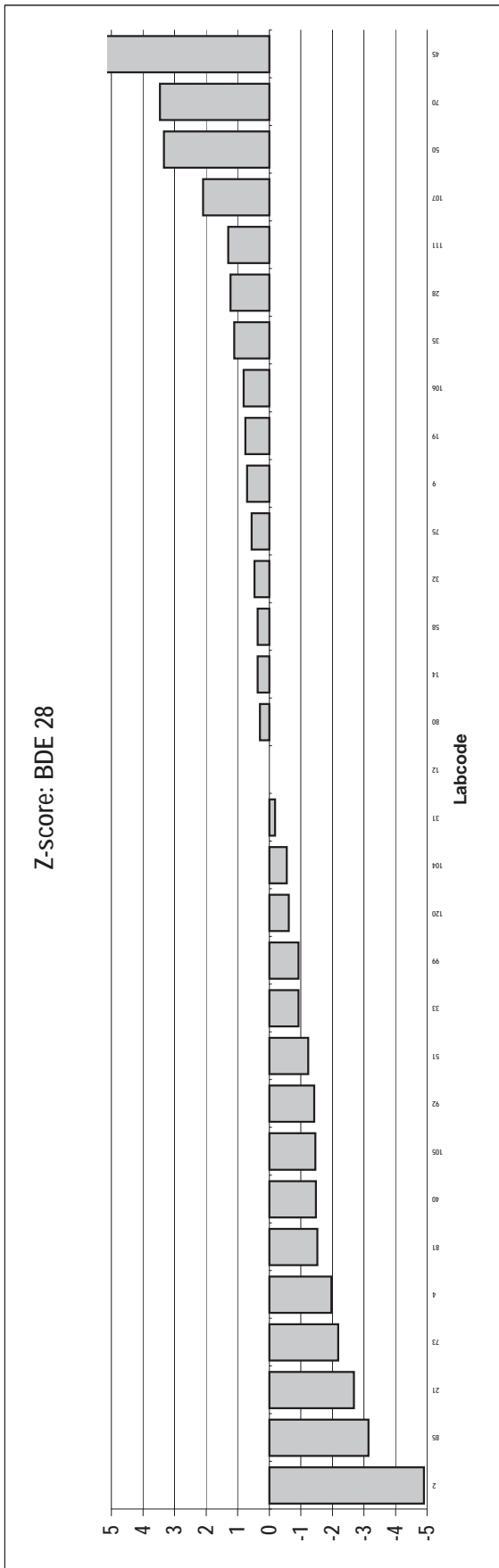
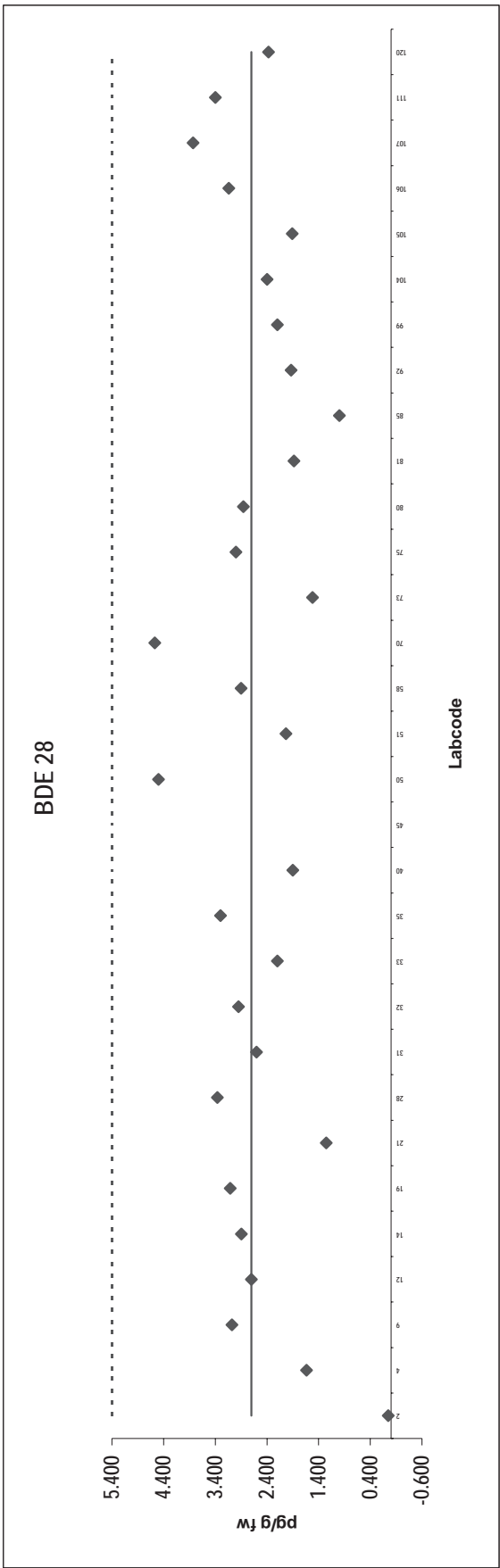
Crab meat

Congener: BDE 28

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.054	ND			
4	1.6				
9	3.1				
12	2.7				
14	2.9				
19	3.1				
21	1.3				
28	3.4				
31	2.6				
32	3.0				
33	2.2				
35	3.3				
40	1.9				
45	6.0	Outlier			
50	4.5				
51	2.0				
58	2.9				
70	4.6				
73	1.5				
75	3.0	ND			
80	2.9				
81	1.9				
85	1.0	ND			
92	1.9				
99	2.2				
104	2.4				
105	1.9				
106	3.1				
107	3.8				
111	3.4				
120	2.4				

Consensus statistics

Consensus median, pg/g	2.7
Median all values pg/g	2.7
Consensus mean, pg/g	2.5
Standard deviation, pg/g	0.98
Relative standard deviation, %	38
No. of values reported	31
No. of values removed	1
No. of reported non-detects	3



Crab meat

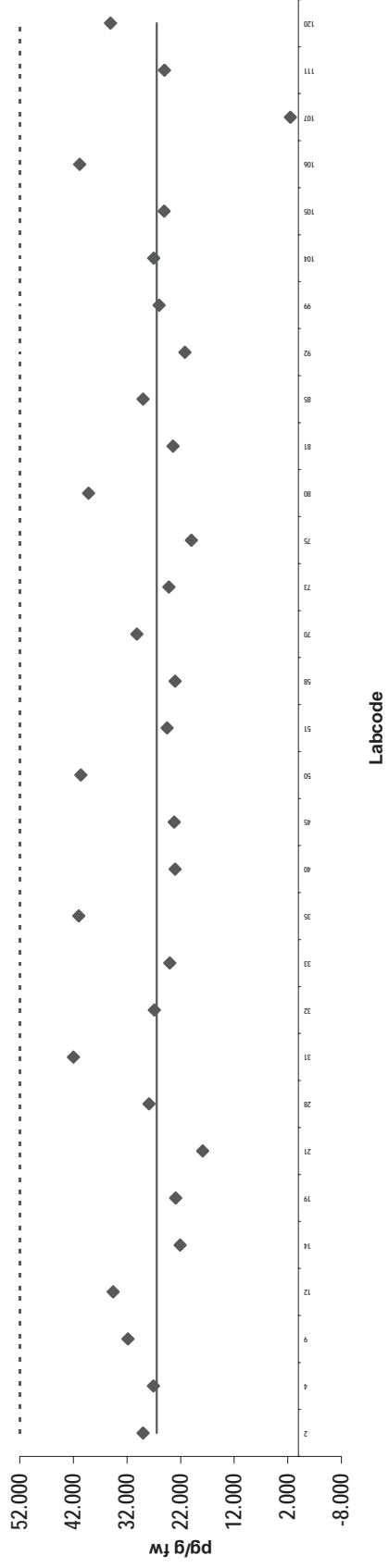
Congener: BDE 47

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	29				
4	27				
9	32				
12	35				
14	22				
19	23				
21	18				
28	28				
31	42				
32	27				
33	24				
35	41				
40	23				
45	23				
50	41				
51	25				
58	23				
70	30				
73	24				
75	20				
80	39				
81	23				
85	29				
92	21				
99	26				
104	27				
105	25				
106	41				
107	1.5	ND			
111	25				
120	35				

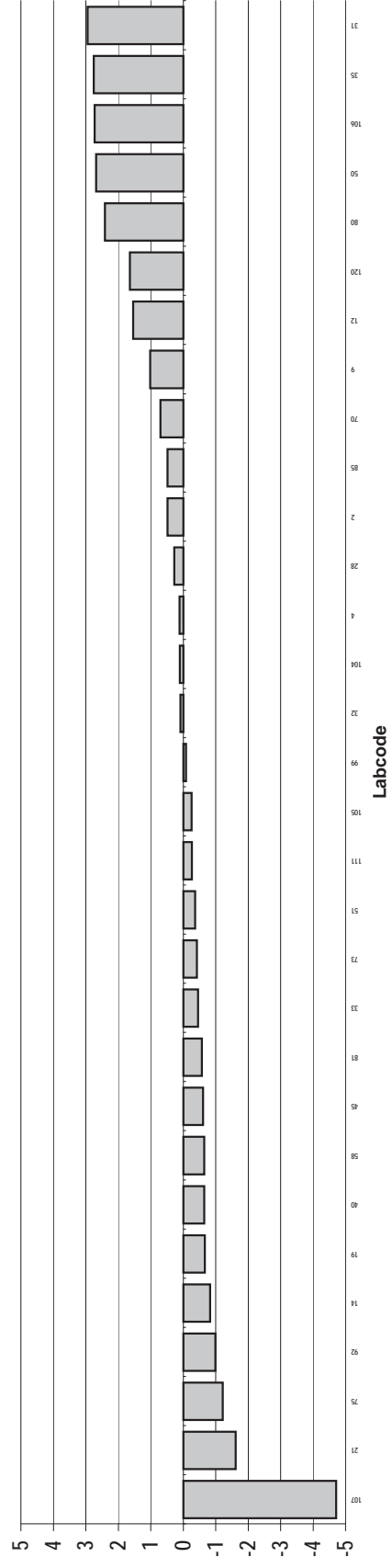
Consensus statistics

Consensus median, pg/g	26
Median all values pg/g	26
Consensus mean, pg/g	27
Standard deviation, pg/g	8.3
Relative standard deviation, %	30
No. of values reported	31
No. of values removed	0
No. of reported non-detects	1

BDE 47



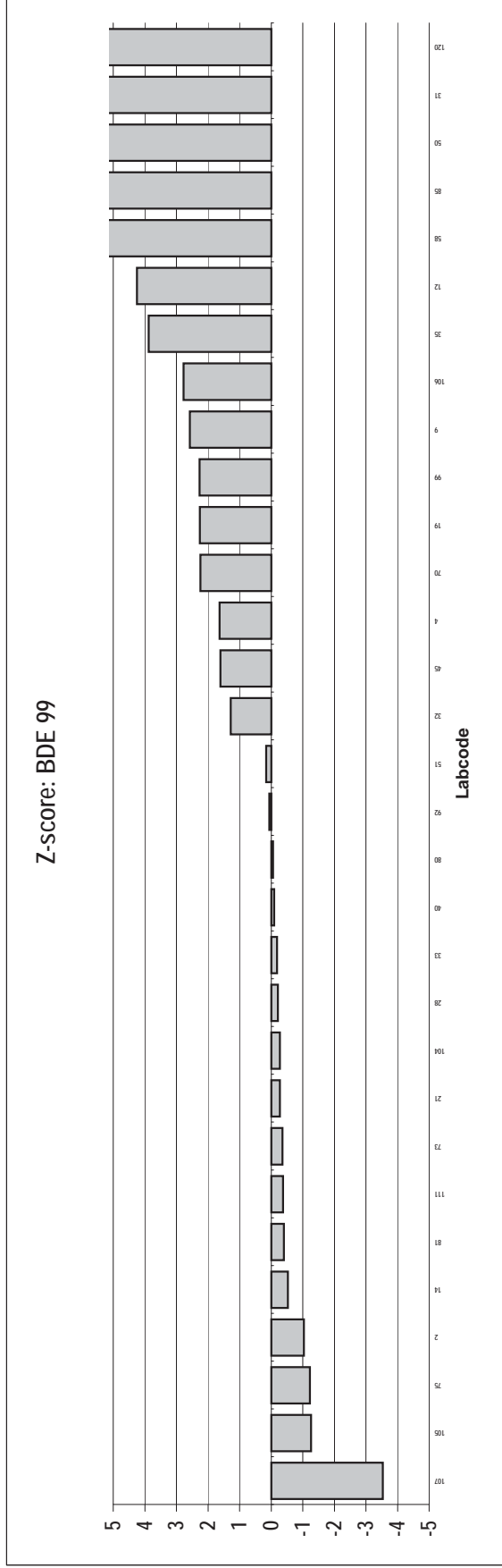
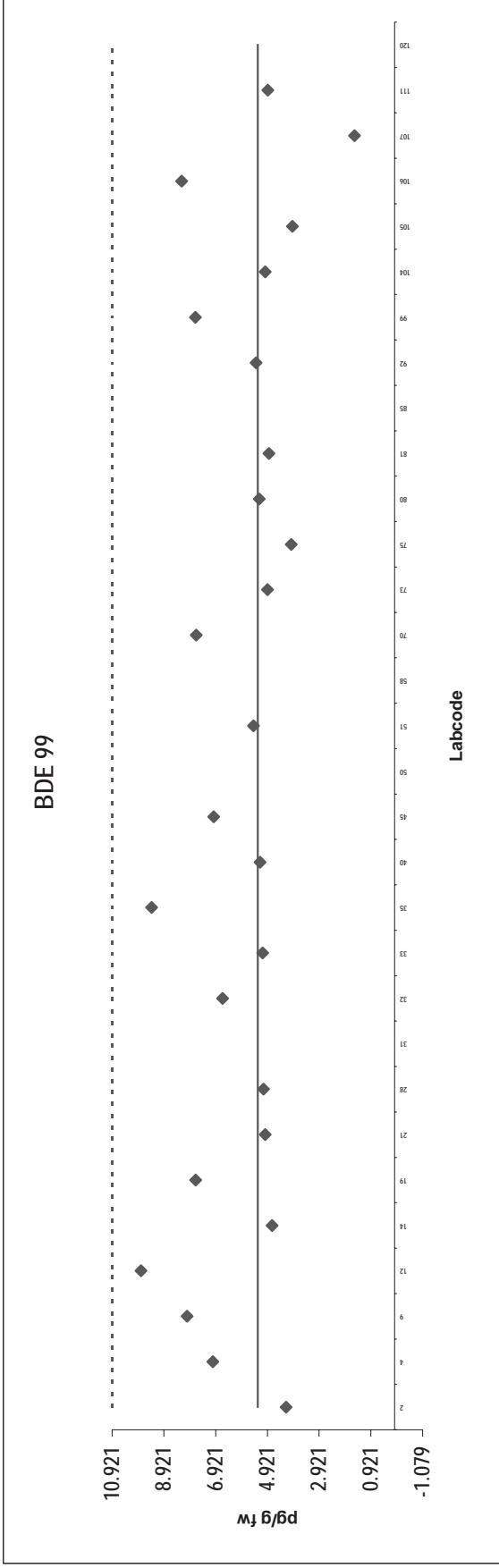
Z-score: BDE 47



Crab meat
Congener: BDE 99

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	4.2				
4	7.0				
9	8.0				
12	9.8				
14	4.7				
19	7.7				
21	5.0				
28	5.1				
31	27	Outlier			
32	6.6				
33	5.1				
35	9.4				
40	5.2				
45	7.0				
50	18	Outlier			
51	5.5	Outlier			
58	11				
70	7.7				
73	4.9				
75	4.0	ND			
80	5.2				
81	4.9				
85	12	Outlier			
92	5.4				
99	7.7				
104	5.0				
105	4.0				
106	8.2				
107	1.6	ND			
111	4.9				
120	34	Outlier			

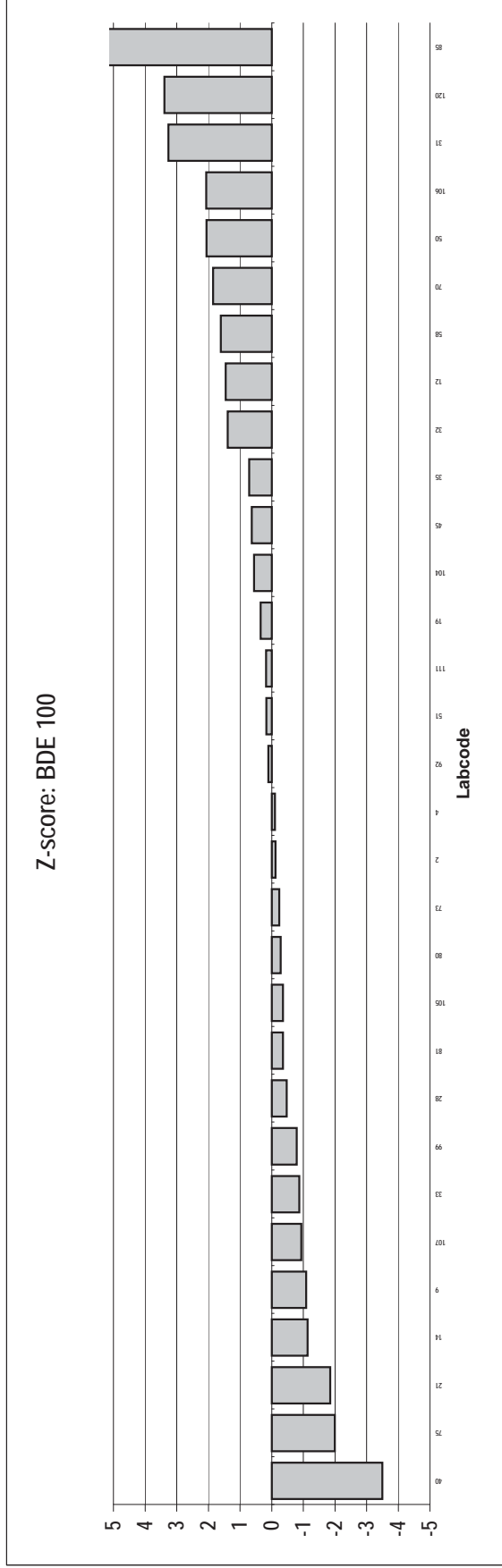
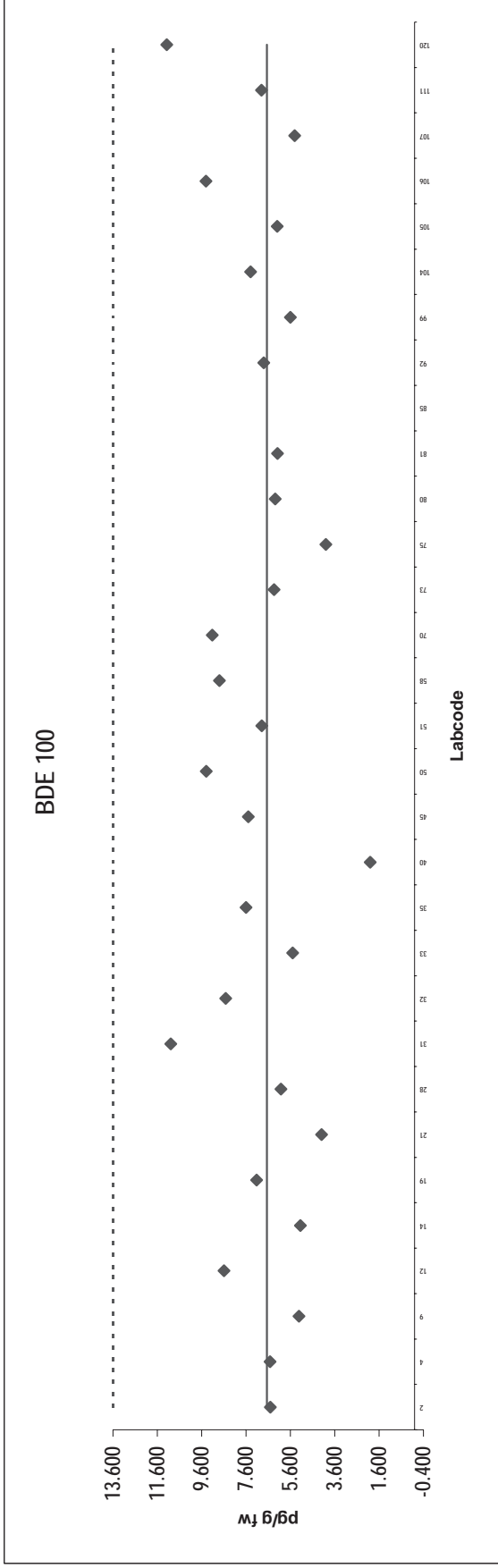
Consensus statistics	
Consensus median, pg/g	5.3
Median all values pg/g	5.5
Consensus mean, pg/g	5.9
Standard deviation, pg/g	1.9
Relative standard deviation, %	32
No. of values reported	31
No. of values removed	5
No. of reported non-detects	2



Crab meat
Congener: BDE 100

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	6.5				
4	6.5				
9	5.2				
12	8.6				
14	5.1				
19	7.1				
21	4.2				
28	6.0				
31	11				
32	8.5				
33	5.5				
35	7.6				
40	2.0				
45	7.5				
50	9.4				
51	6.9				
58	8.8				
70	9.1				
73	6.3				
75	4.0				
80	6.3				
81	6.2				
85	15	Outlier			
92	6.8				
99	5.6				
104	7.4				
105	6.2				
106	9.4				
107	5.4				
111	6.9				
120	11				

Consensus statistics	
Consensus median, pg/g	6.7
Median all values pg/g	6.8
Consensus mean, pg/g	6.9
Standard deviation, pg/g	2.0
Relative standard deviation, %	29
No. of values reported	31
No. of values removed	1
No. of reported non-detects	0



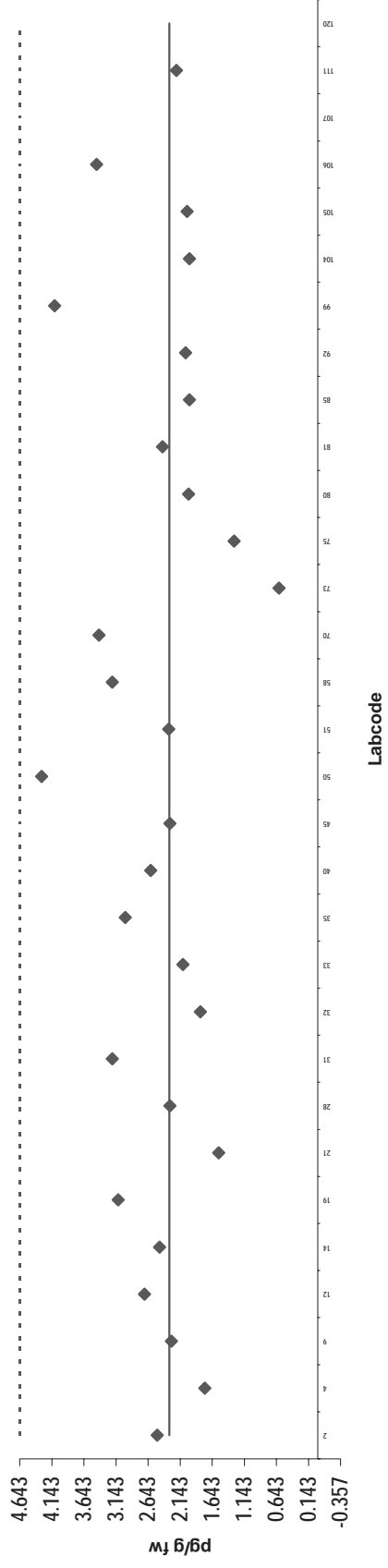
Crab meat
Congener: BDE 153

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	2.5				
4	1.8				
9	2.3				
12	2.7				
14	2.5				
19	3.1				
21	1.5				
28	2.3				
31	3.2				
32	1.8				
33	2.1				
35	3.0	ND			
40	2.6				
45	2.3				
50	4.3				
51	2.3				
58	3.2				
70	3.4				
73	0.60	ND			
75	1.3				
80	2.0				
81	2.4				
85	2.0	ND			
92	2.1				
99	4.1				
104	2.0				
105	2.0				
106	3.4				
107	6.4	Outlier,ND			
111	2.2				
120	6.3	Outlier			

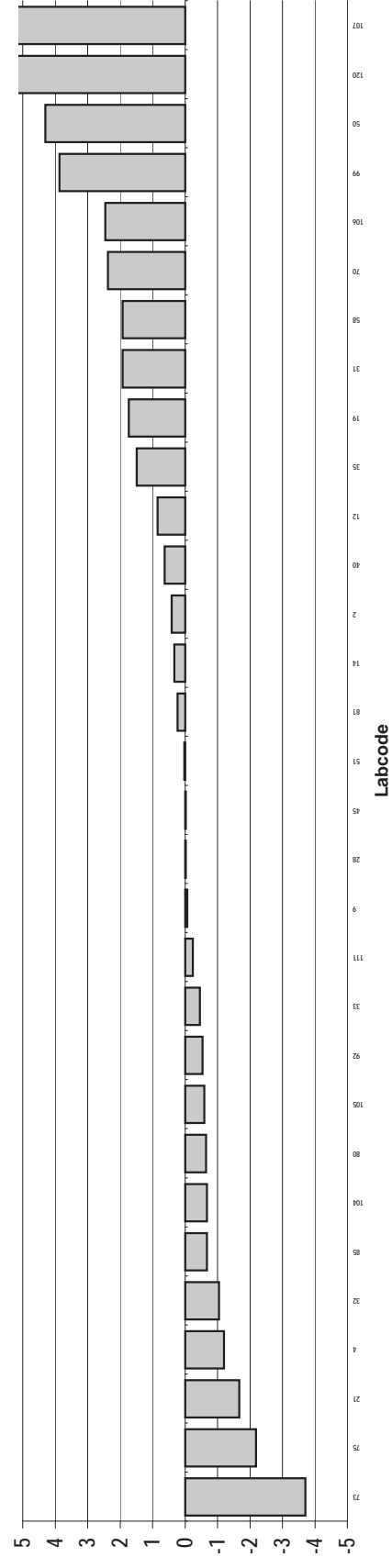
Consensus statistics

Consensus median, pg/g	2.3
Median all values pg/g	2.3
Consensus mean, pg/g	2.5
Standard deviation, pg/g	0.79
Relative standard deviation, %	32
No. of values reported	31
No. of values removed	2
No. of reported non-detects	4

BDE 153



Z-score: BDE 153



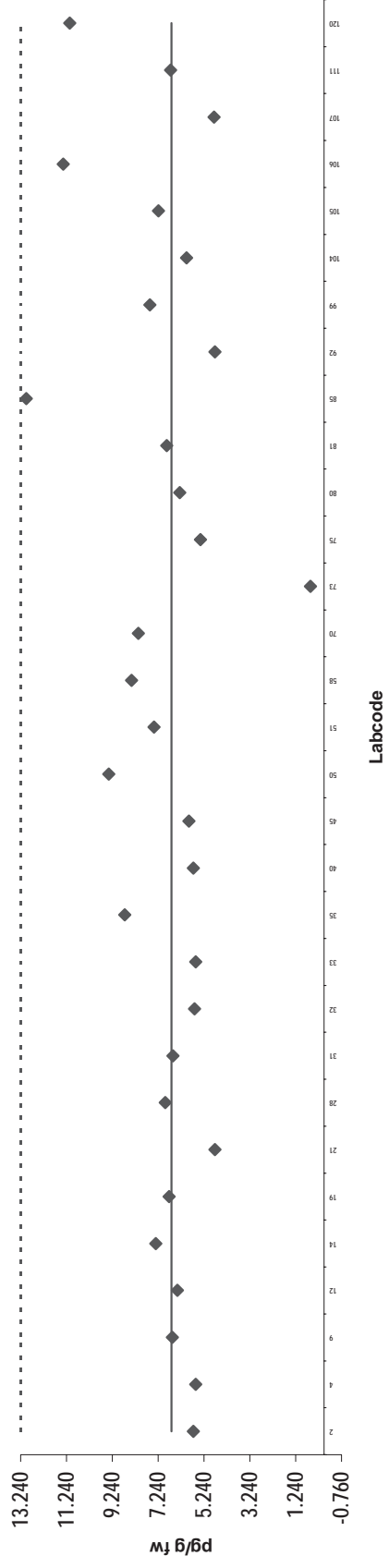
Crab meat
Congener: BDE 154

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	5.7				
4	5.6				
9	6.6				
12	6.4				
14	7.3				
19	6.8				
21	4.8				
28	6.9				
31	6.6				
32	5.7				
33	5.6				
35	8.7				
40	5.7				
45	5.9				
50	9.4				
51	7.4				
58	8.4				
70	8.1				
73	0.60	ND			
75	5.4				
80	6.3				
81	6.9				
85	13				
92	4.8				
99	7.6				
104	6.0				
105	7.2				
106	11				
107	4.8				
111	6.7				
120	11				

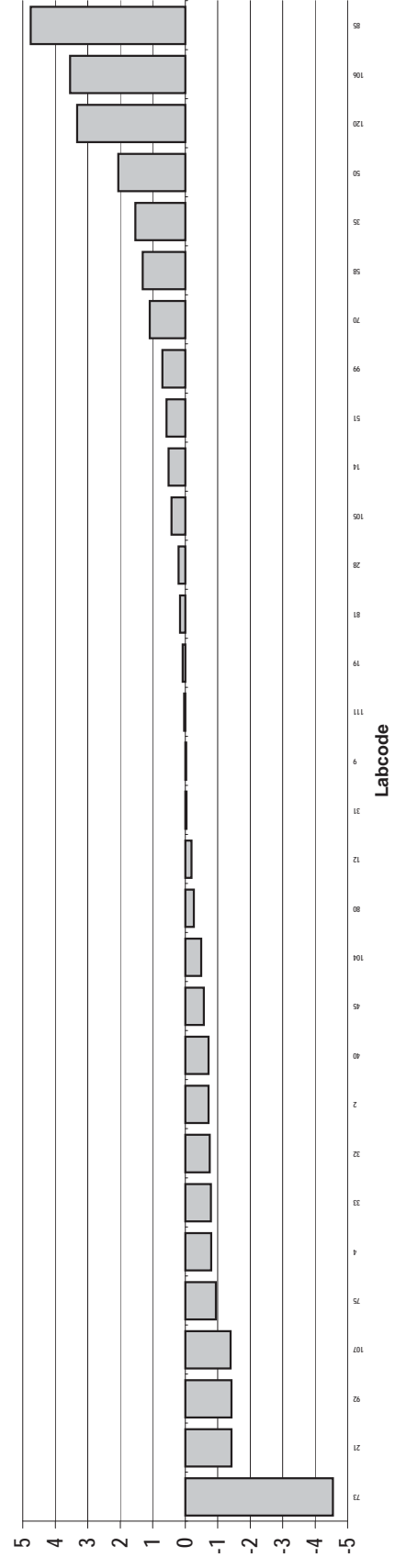
Consensus statistics

Consensus median, pg/g	6.7
Median all values pg/g	6.6
Consensus mean, pg/g	6.9
Standard deviation, pg/g	2.3
Relative standard deviation, %	33
No. of values reported	31
No. of values removed	0
No. of reported non-detects	1

BDE 154



Z-score: BDE 154

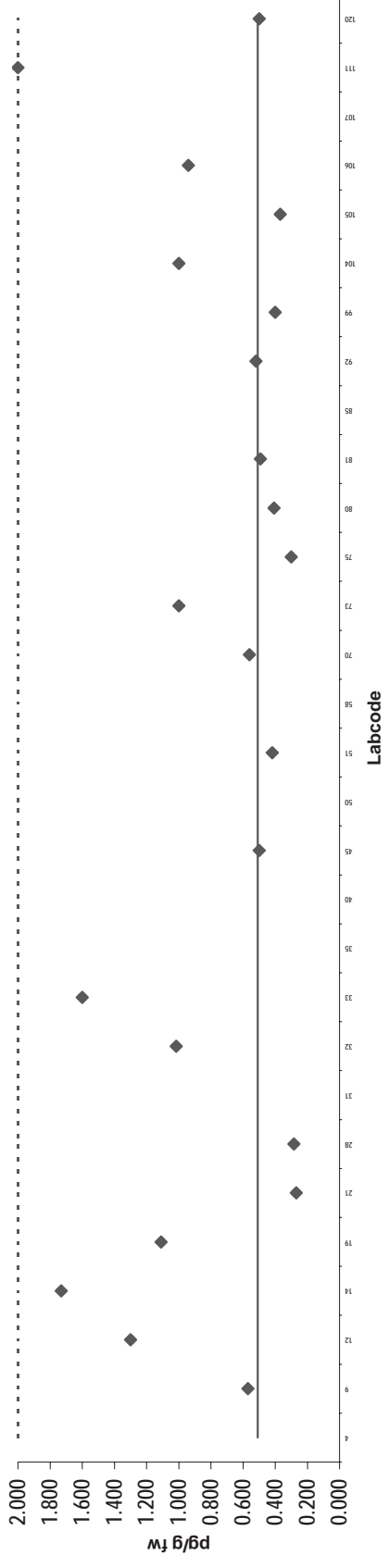


Crab meat
Congener: BDE 183

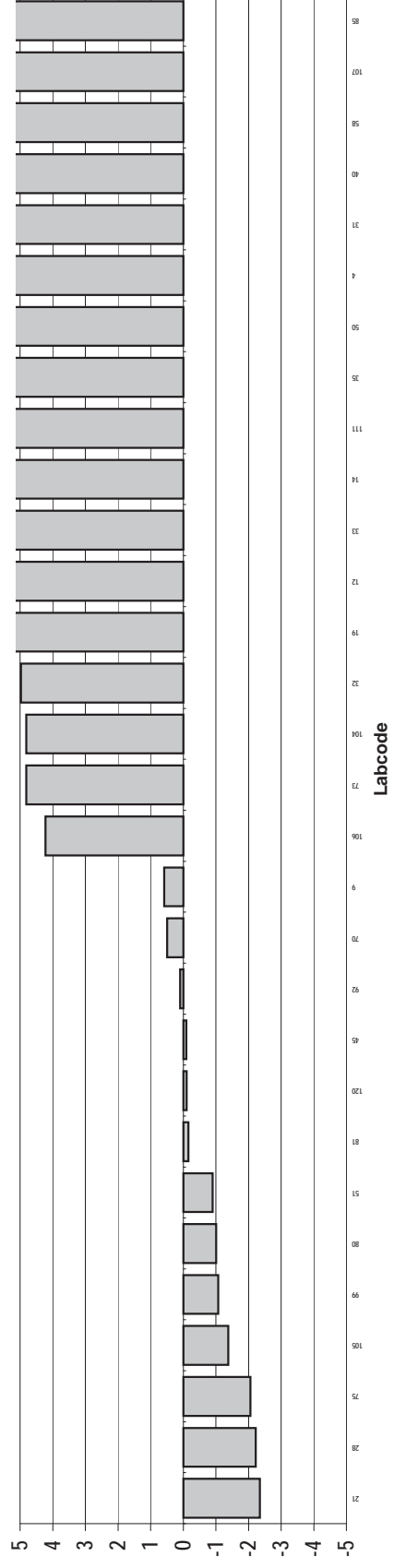
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	3.4	Outlier,ND			
9	0.57				
12	1.3				
14	1.7				
19	1.1				
21	0.27				
28	0.28				
31	3.9	Outlier			
32	1.0				
33	1.6				
35	2.6				
40	3.9	Outlier,ND			
45	0.50	Outlier			
50	2.7				
51	0.42				
58	4.0	Outlier			
70	0.56				
73	1.0	ND			
75	0.30	ND			
80	0.41				
81	0.49				
85	6.0				
92	0.52	Outlier,ND			
99	0.40				
104	1.0	ND			
105	0.37				
106	0.94				
107	4.7	Outlier,ND			
111	2.0	ND			
120	0.50				

Consensus statistics	
Consensus median, pg/g	0.51
Median all values pg/g	1.0
Consensus mean, pg/g	0.79
Standard deviation, pg/g	0.50
Relative standard deviation, %	64
No. of values reported	30
No. of values removed	8
No. of reported non-detects	8

BDE 183



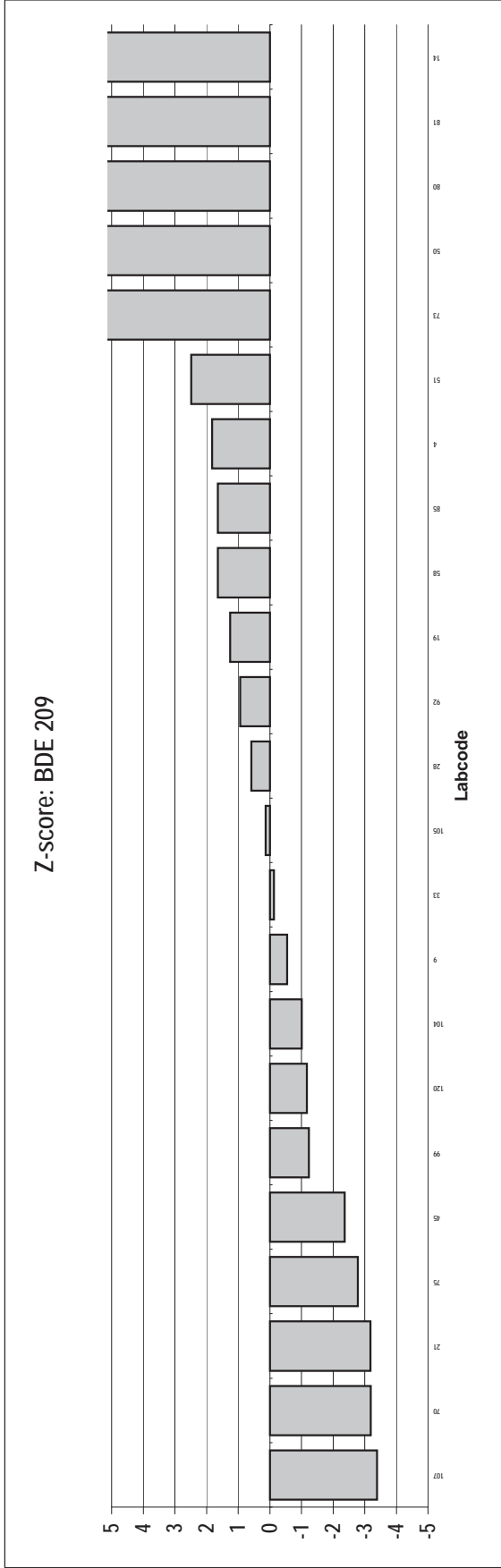
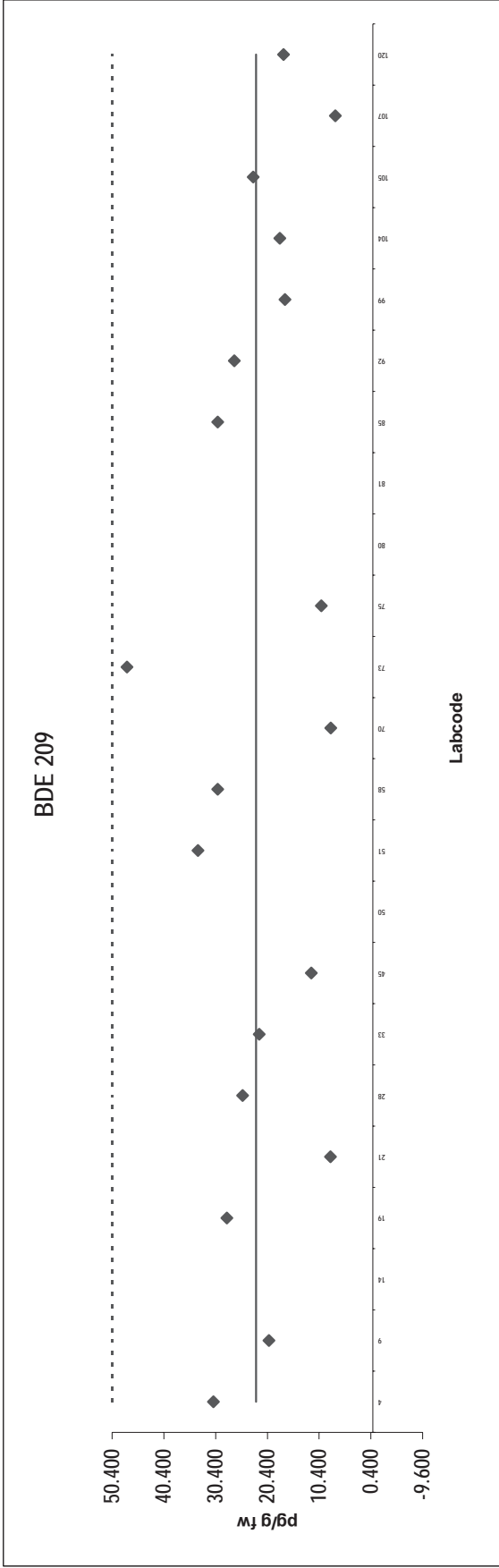
Z-score: BDE 183



Crab meat
Congener: BDE 209

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	31				
9	20				
14	650				
19	28	Outlier			
21	8.2				
28	25				
33	22				
45	12				
50	133	Outlier			
51	34				
58	30				
70	8.2				
73	48				
75	10	ND			
80	219	Outlier			
81	629	Outlier			
85	30	ND			
92	27				
99	17				
104	18				
105	23				
107	7.3				
120	17	ND			

Consensus statistics	
Consensus median, pg/g	23
Median all values pg/g	25
Consensus mean, pg/g	22
Standard deviation, pg/g	10
Relative standard deviation, %	48
No. of values reported	23
No. of values removed	4
No. of reported non-detects	3

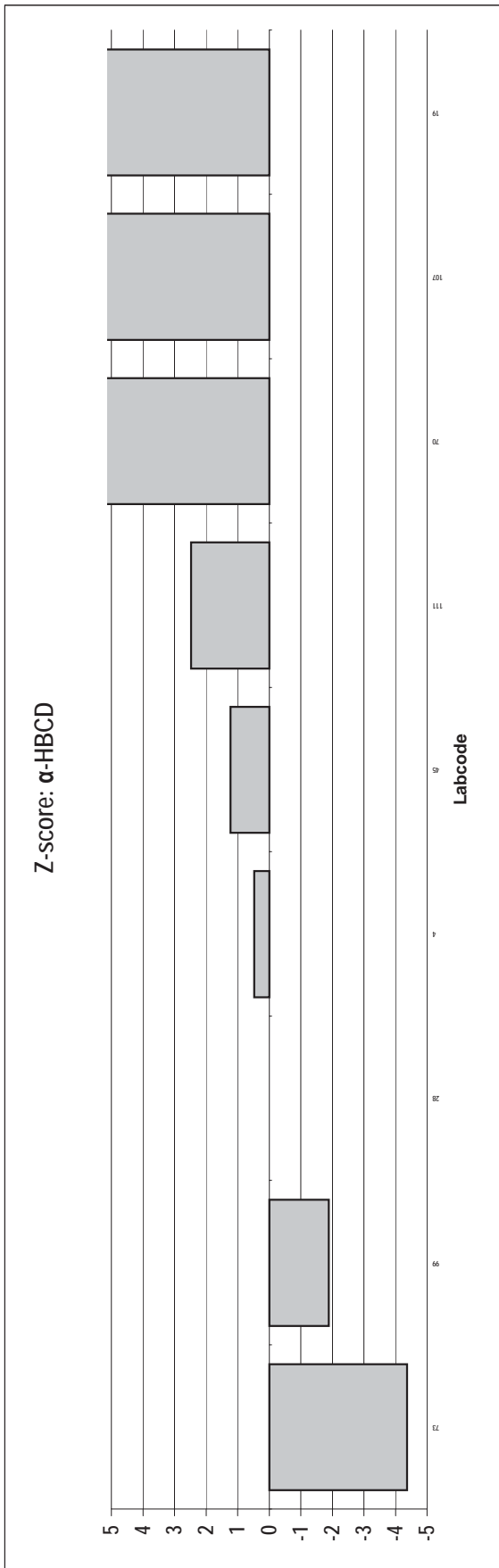
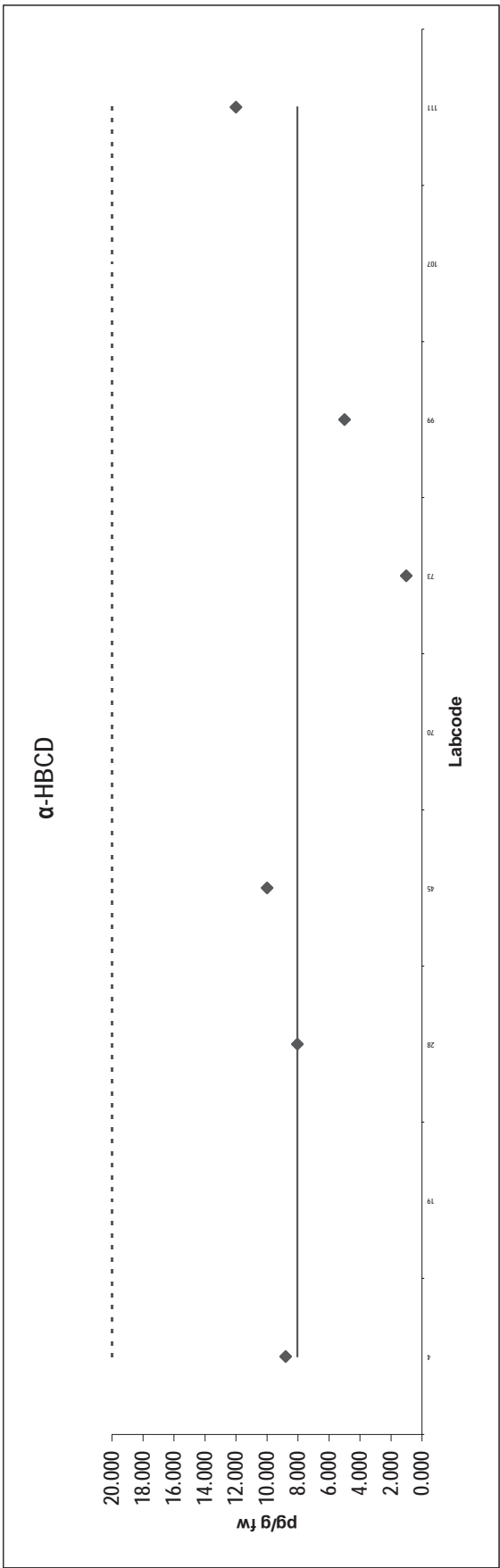


Crab meat
Congener: α -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	8.8				
19	32	Outlier			
28	8.0				
45	10	ND			
70	30	Outlier			
73	1.0	ND			
99	5.0				
107	30	Outlier,ND			
111	12	ND			

Consensus statistics

Consensus median, pg/g	8.0
Median all values pg/g	10
Consensus mean, pg/g	7.5
Standard deviation, pg/g	3.9
Relative standard deviation, %	52
No. of values reported	9
No. of values removed	3
No. of reported non-detects	4

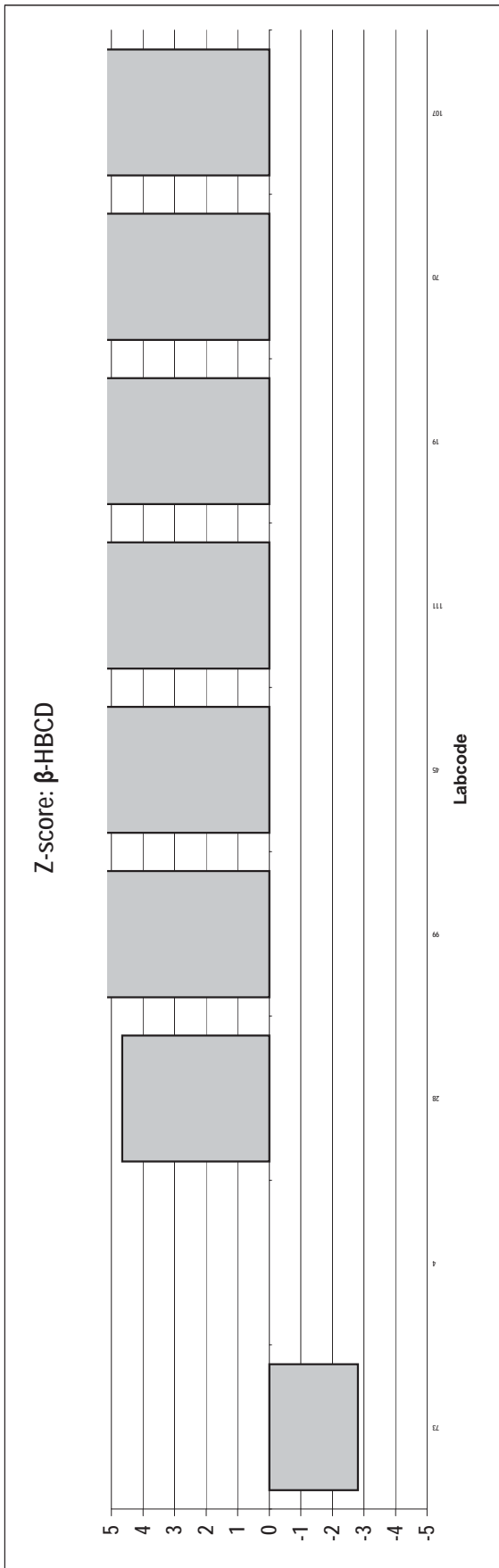
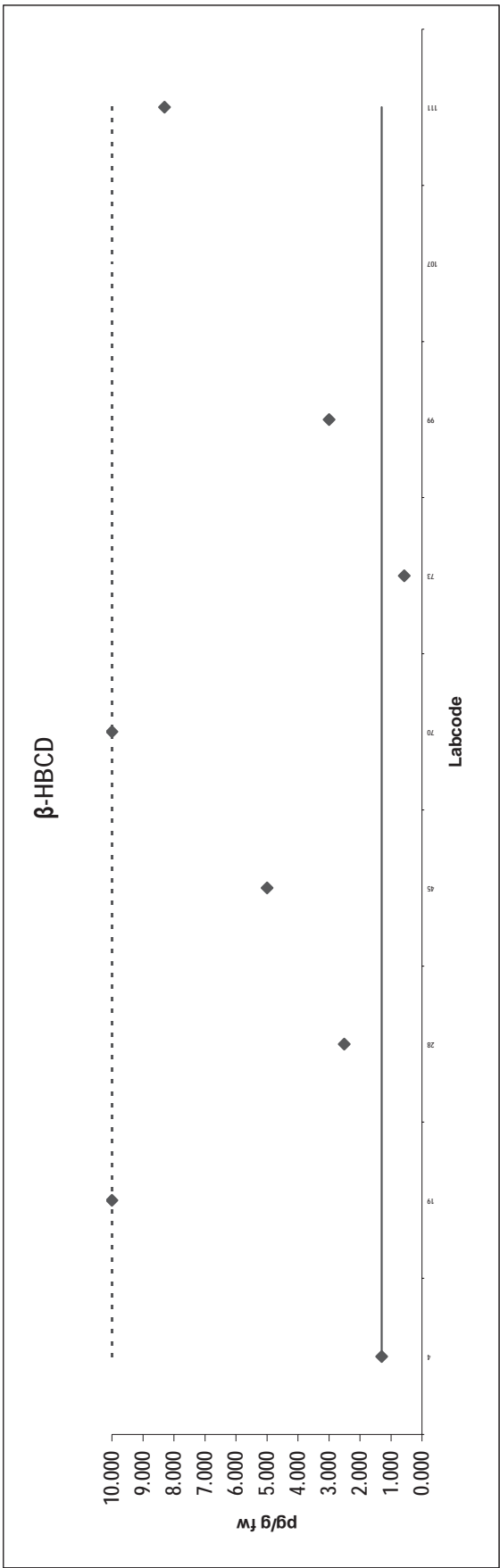


Crab meat

Congener: β -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	1.3				
19	10	ND			
28	2.5	ND			
45	5.0	ND			
70	10	ND			
73	0.57	ND			
99	3.0	ND			
107	82	Outlier,ND			
111	8.3	ND			

Consensus statistics	
Consensus median, pg/g	1.3
Median all values pg/g	5.0
Consensus mean, pg/g	5.1
Standard deviation, pg/g	3.9
Relative standard deviation, %	76
No. of values reported	9
No. of values removed	1
No. of reported non-detects	8

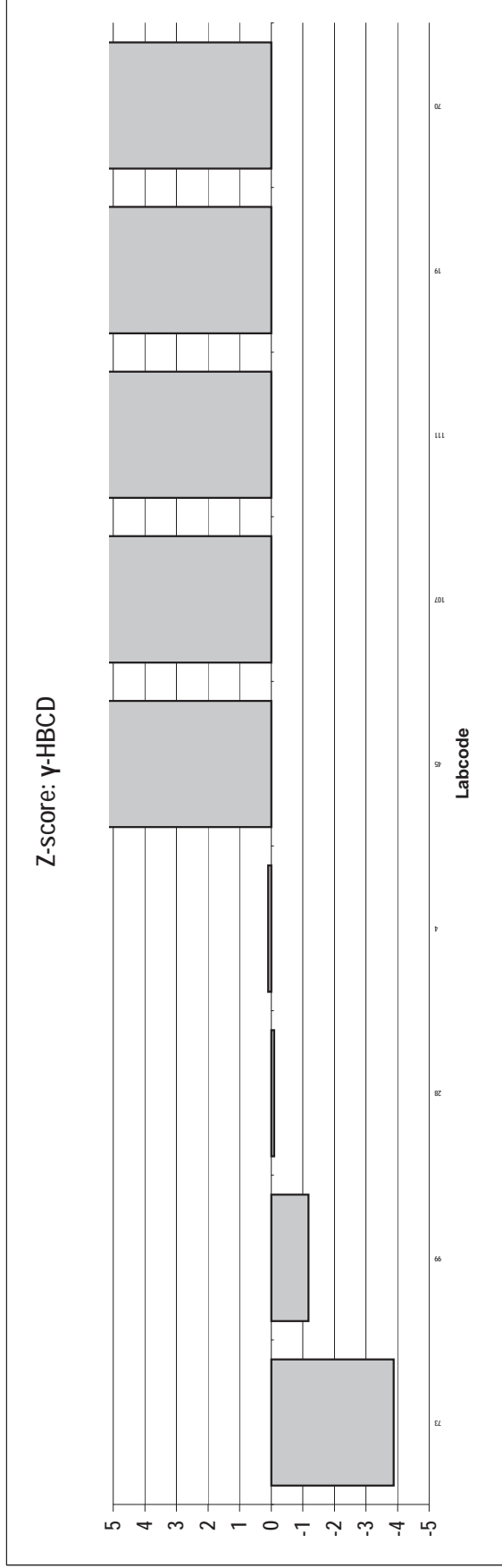
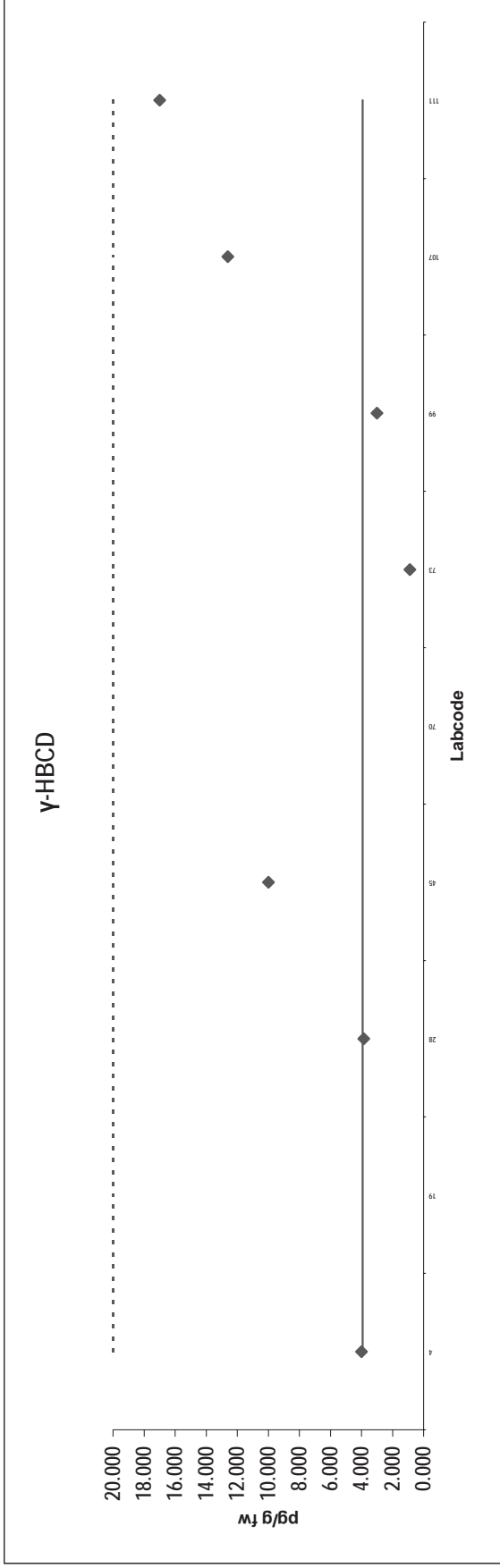


Crab meat

Congener: γ -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	4.0				
19	40	Outlier,ND			
28	3.9				
45	10	ND			
70	40	Outlier,ND			
73	0.88	ND			
99	3.0	ND			
107	13	ND			
111	17	ND			

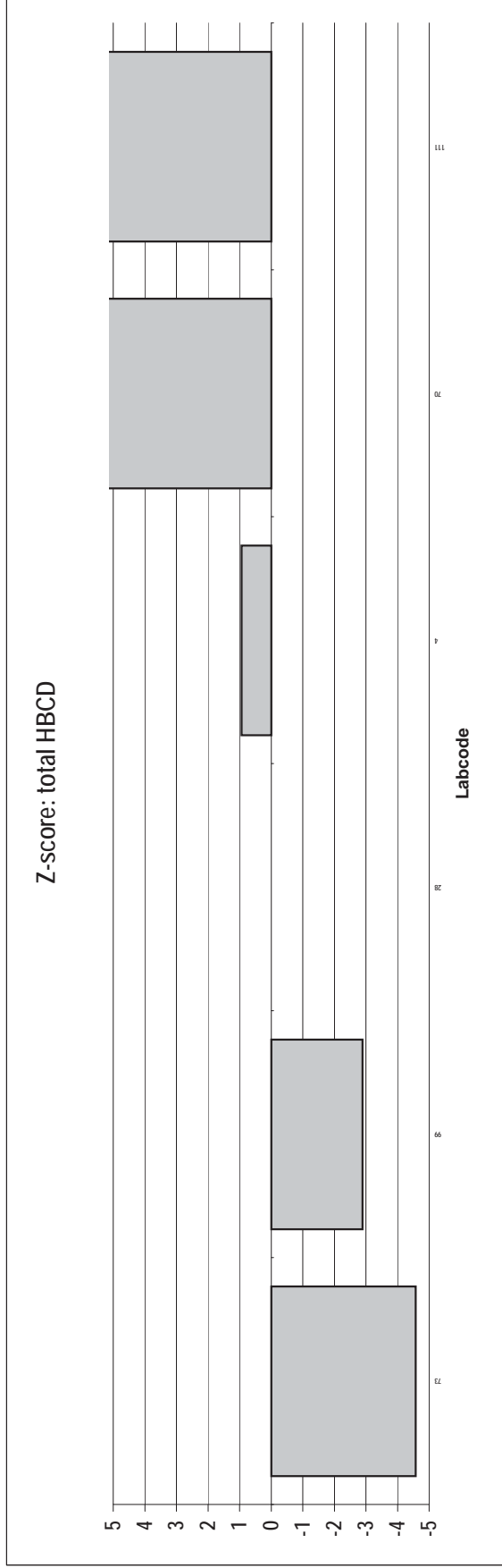
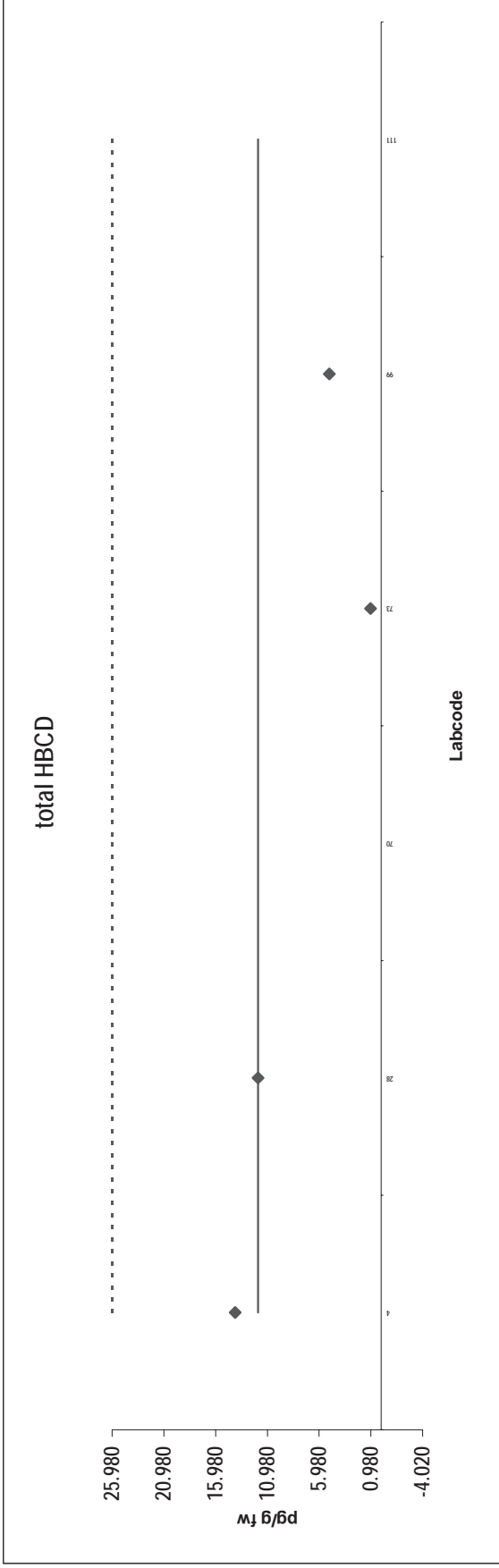
Consensus statistics	
Consensus median, pg/g	3.9
Median all values pg/g	10
Consensus mean, pg/g	7.3
Standard deviation, pg/g	5.9
Relative standard deviation, %	81
No. of values reported	9
No. of values removed	2
No. of reported non-detects	7



Crab meat
Congener: total HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	14				
28	12				
70	30	Outlier			
73	1.0	ND			
99	5.0				
111	38	Outlier,ND			

Consensus statistics	
Consensus median, pg/g	12
Median all values pg/g	13
Consensus mean, pg/g	8.0
Standard deviation, pg/g	6.1
Relative standard deviation, %	76
No. of values reported	6
No. of values removed	2
No. of reported non-detects	2



Appendix 4:

Presentation of results
for egg

Appendix 2: Presentation of results: Egg

Statistic calculations for PCDDs, PCDFs and dioxin-like PCBs

For each congener, the outliers were removed and the consensus calculated according to the following procedure:

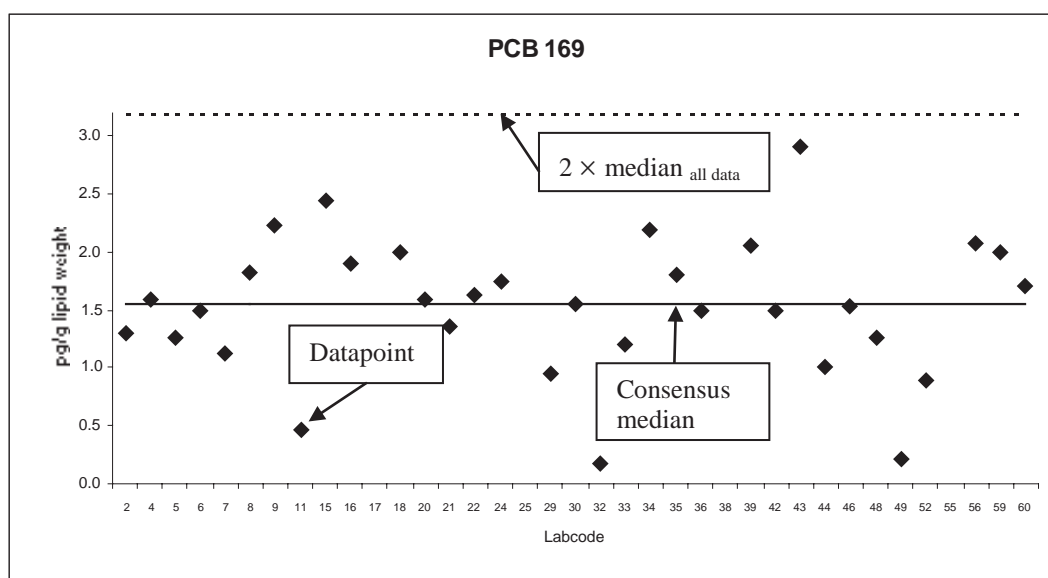
1. The median was calculated from all the reported data, using the detection limit as concentration for non-detected congeners.
2. Values exceeding $2 \times$ this median were defined as outliers and removed from the data set.
3. Median, mean and standard deviation were re-calculated from the remaining data. This second median was called consensus.

Statistic calculations for indicator PCBs, PBDEs and HBCD

For each congener, the outliers were removed and the consensus calculated according to the following procedure:

1. The median was calculated from all the reported data, using the detection limit as concentration for non-detected congeners (NDs).
2. Values exceeding $2 \times$ this median were defined as outliers and removed from the data set. The NDs were also removed.
3. Median, mean and standard deviation were re-calculated from the remaining data. This second median was called consensus.
4. For comparison, median, mean and standard deviation were also calculated without removing NDs.

The diagram shows the reported data up to approximately the limit for outliers ($2 \times$ the first median).



Z-Scores of individual congeners

Z-scores of each congener were calculated for each laboratory according to the following equation:

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

where x = reported value; X = assigned value (consensus); σ = target value for standard deviation. A σ of 20% of the consensus was used, i.e. z-scores between +1 and -1 reflect a deviation of $\pm 20\%$ from the consensus value.

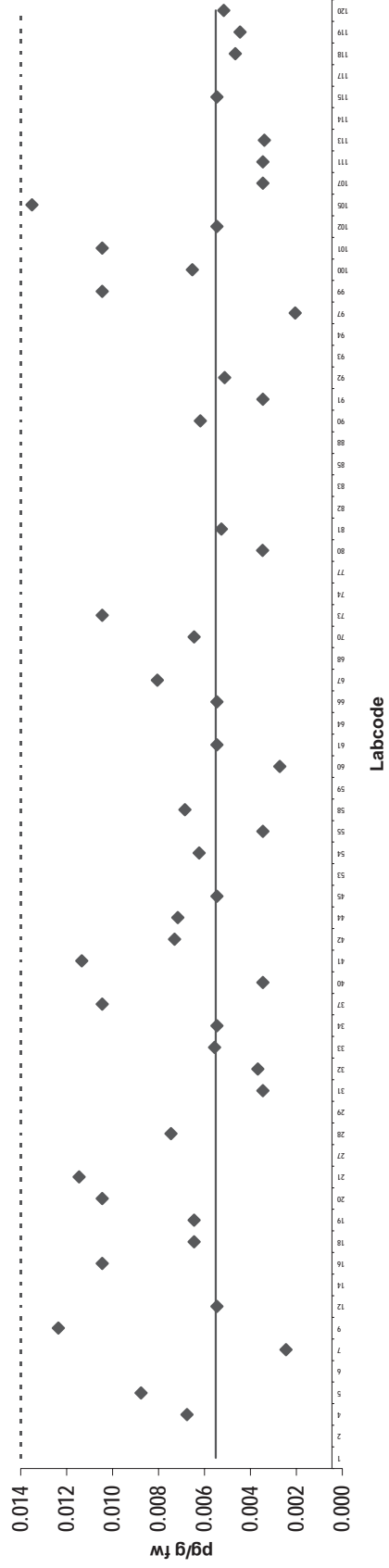
Egg Congener: 2,3,7,8 TCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.050	Outlier	83	0.040	Outlier,ND
2	0.020	Outlier,ND	85	0.40	Outlier,ND
4	0.0063		88	0.050	Outlier,ND
5	0.0083		90	0.0057	
6	0.031	Outlier,ND	91	0.0030	ND
7	0.0020	ND	92	0.0047	
9	0.012		93	0.015	Outlier,ND
12	0.0050	ND	94	0.022	Outlier,ND
14	0.037	Outlier,ND	97	0.0016	
16	0.010		99	0.010	ND
18	0.0060		100	0.0061	
19	0.0060		101	0.010	ND
20	0.010		102	0.0050	
21	0.011	ND	105	0.013	
27	0.031	Outlier	107	0.0030	ND
28	0.0070		111	0.0030	ND
29	0.019	Outlier,ND	113	0.0029	ND
31	0.0030		114	0.11	Outlier
32	0.0032		115	0.0050	ND
33	0.0051		117	0.020	Outlier,ND
34	0.0050	ND	118	0.0042	ND
37	0.010		119	0.0040	ND
40	0.0030		120	0.0047	
41	0.011	ND			
42	0.0068				
44	0.0067				
45	0.0050	ND			
53	0.015	Outlier			
54	0.0058				
55	0.0030	ND			
58	0.0064	ND			
59	0.11	Outlier			
60	0.0023	ND			
61	0.0050	ND			
64	0.016	Outlier,ND			
66	0.0050				
67	0.0076	ND			
68	0.024	Outlier,ND			
70	0.0060				
73	0.010	ND			
74	0.25	Outlier,ND			
77	0.040	Outlier			
80	0.0030				
81	0.0048				
82	0.040	Outlier,ND			

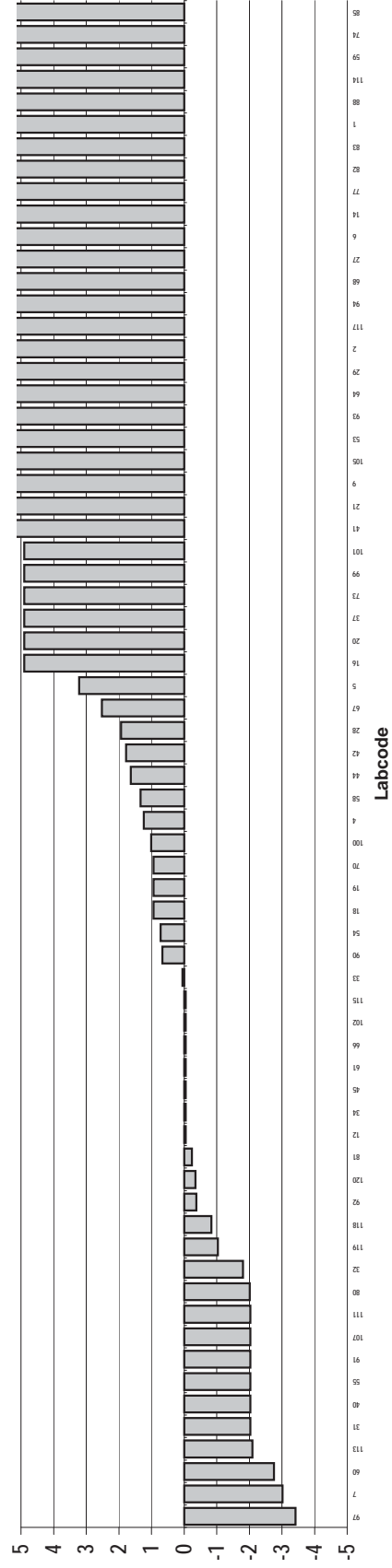
Consensus statistics

Consensus median, pg/g	0.0051
Median all values pg/g	0.0068
Consensus mean, pg/g	0.0060
Standard deviation, pg/g	0.0029
Relative standard deviation, %	48
No. of values reported	68
No. of values removed	20
No. of reported non-detects	35

2,3,7,8 TCDD



Z-score: 2,3,7,8 TCDD



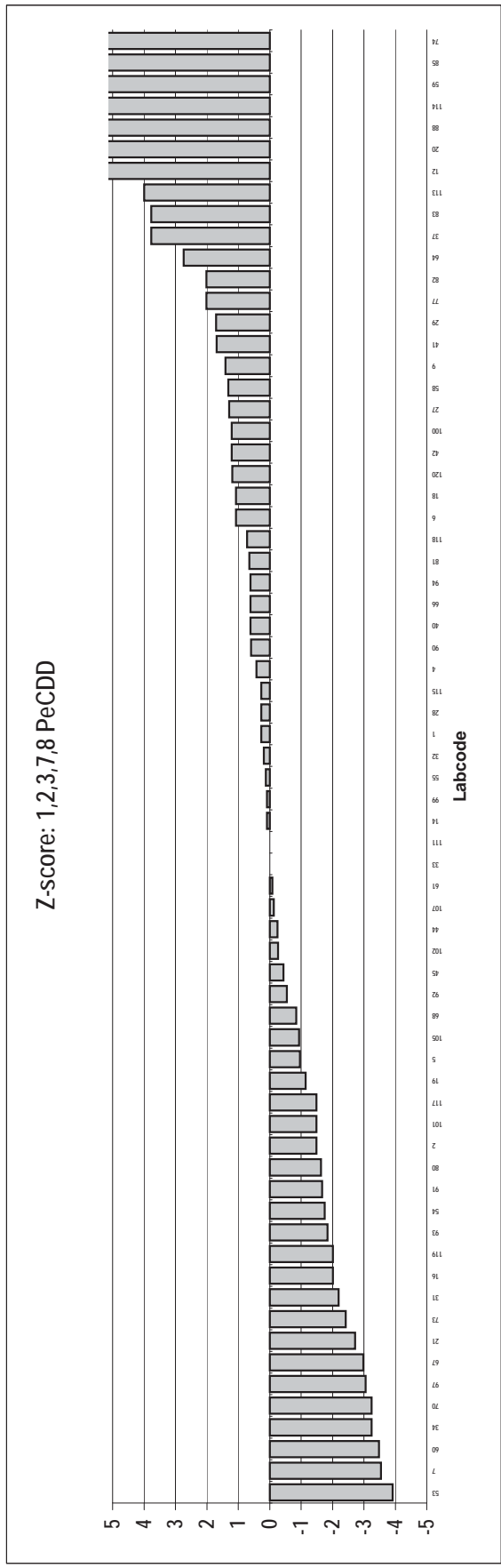
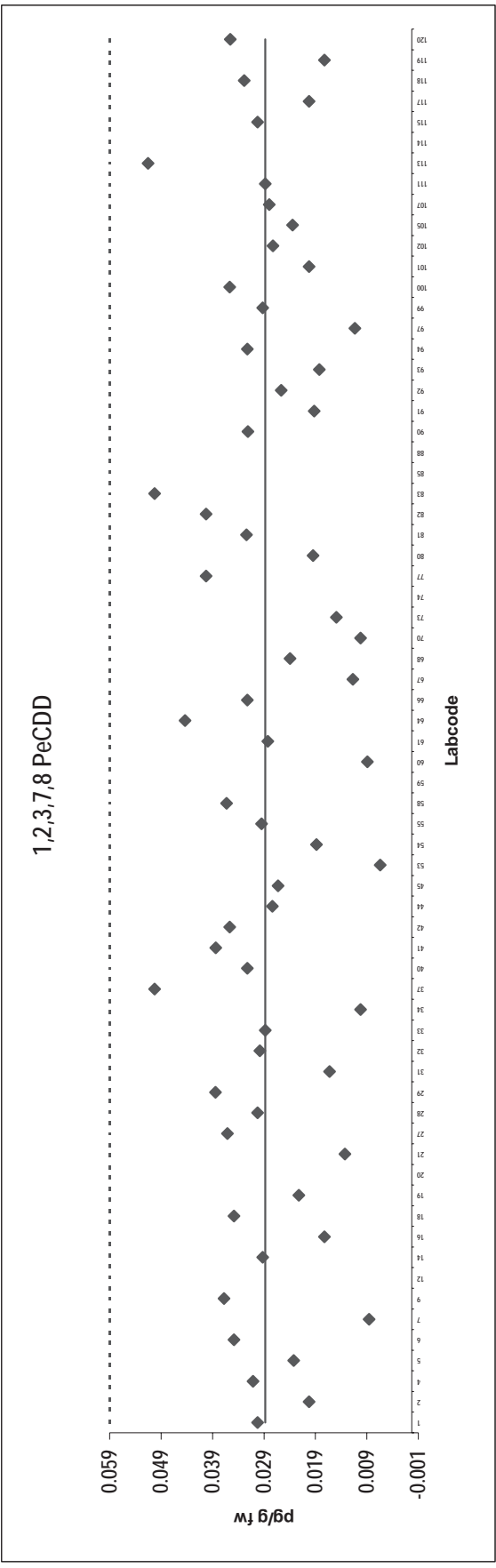
Egg

Congener: 1,2,3,7,8 PeCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.030		83	0.050	ND
2	0.020	ND	85	0.37	Outlier
4	0.031		88	0.26	Outlier
5	0.023		90	0.032	
6	0.035	ND	91	0.019	
7	0.0083		92	0.025	
9	0.037		93	0.018	ND
12	0.068	Outlier	94	0.032	ND
14	0.029	ND	97	0.011	
16	0.017		99	0.029	
18	0.035		100	0.035	
19	0.022		101	0.020	
20	0.098	Outlier	102	0.027	
21	0.013	ND	105	0.023	ND
27	0.036		107	0.028	
28	0.030		111	0.029	
29	0.038		113	0.051	
31	0.016		114	0.29	
32	0.030		115	0.030	
33	0.029		117	0.020	
34	0.010	ND	118	0.033	
37	0.050		119	0.017	
40	0.032		120	0.035	
41	0.038				
42	0.035				
44	0.027				
45	0.026				
53	0.0062				
54	0.019				
55	0.029				
58	0.036				
59	0.33	Outlier			
60	0.0086	ND			
61	0.028	ND			
64	0.044	ND			
66	0.032				
67	0.012				
68	0.024	ND			
70	0.010				
73	0.015				
74	1.3	Outlier,ND			
77	0.040				
80	0.019				
81	0.032				
82	0.040	ND			

Consensus statistics

Consensus median, pg/g	0.029
Median all values pg/g	0.029
Consensus mean, pg/g	0.027
Standard deviation, pg/g	0.011
Relative standard deviation, %	39
No. of values reported	68
No. of values removed	7
No. of reported non-detects	14



Egg

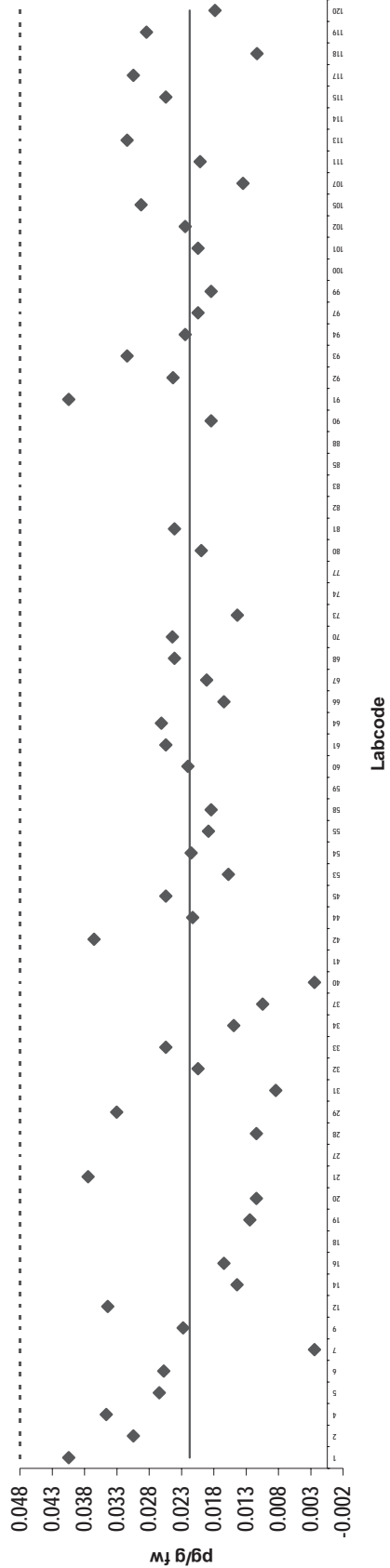
Congener: 1,2,3,4,7,8 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.040	ND	83	0.050	Outlier,ND
2	0.030	ND	85	0.30	Outlier,ND
4	0.034		88	0.59	Outlier
5	0.026		90	0.018	
6	0.025		91	0.040	
7	0.0020	ND	92	0.024	
9	0.022		93	0.031	
12	0.034		94	0.022	
14	0.014	ND	97	0.020	
16	0.016		99	0.018	
18	0.051	Outlier	100	0.051	Outlier
19	0.012		101	0.020	
20	0.011	ND	102	0.022	
21	0.037	ND	105	0.029	ND
27	0.061	Outlier	107	0.013	
28	0.011	ND	111	0.020	
29	0.033		113	0.031	ND
31	0.0080		114	0.050	Outlier
32	0.020	ND	115	0.025	
33	0.025		117	0.030	
34	0.015		118	0.011	
37	0.010		119	0.028	
40	0.0020		120	0.017	
41	1.5	Outlier			
42	0.036				
44	0.021				
45	0.025				
53	0.015				
54	0.021				
55	0.018				
58	0.018				
59	0.19	Outlier			
60	0.022	ND			
61	0.025				
64	0.026	ND			
66	0.016				
67	0.019				
68	0.024	ND			
70	0.024				
73	0.014				
74	1.3	Outlier,ND			
77	0.050	Outlier,ND			
80	0.019				
81	0.024				
82	0.080	Outlier,ND			

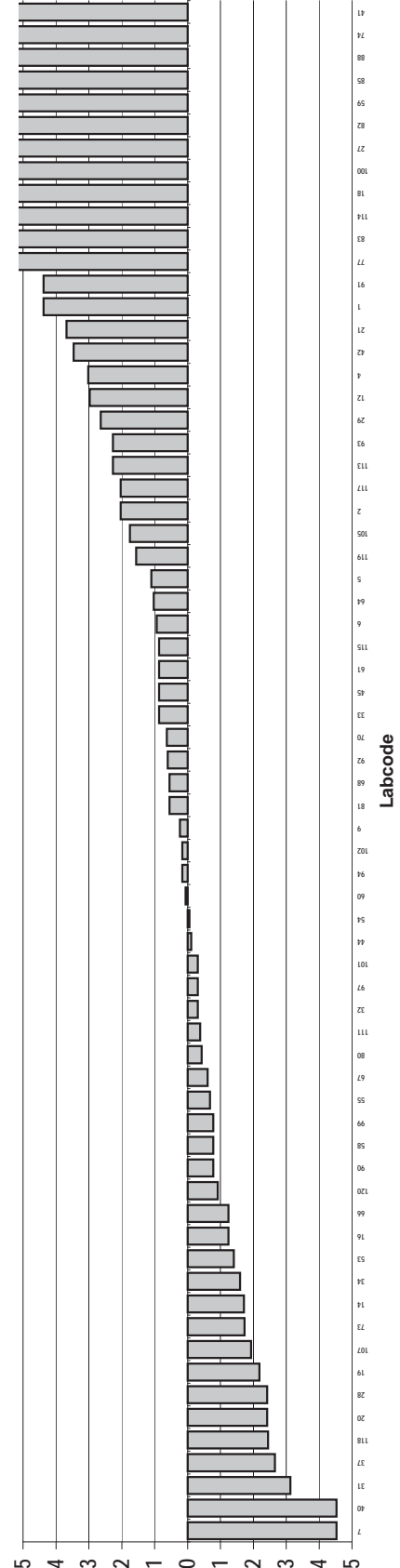
Consensus statistics

Consensus median, pg/g	0.021
Median all values pg/g	0.024
Consensus mean, pg/g	0.022
Standard deviation, pg/g	0.0086
Relative standard deviation, %	40
No. of values reported	68
No. of values removed	12
No. of reported non-detects	18

1,2,3,4,7,8 HxCDD



Z-score: 1,2,3,4,7,8 HxCDD



Egg

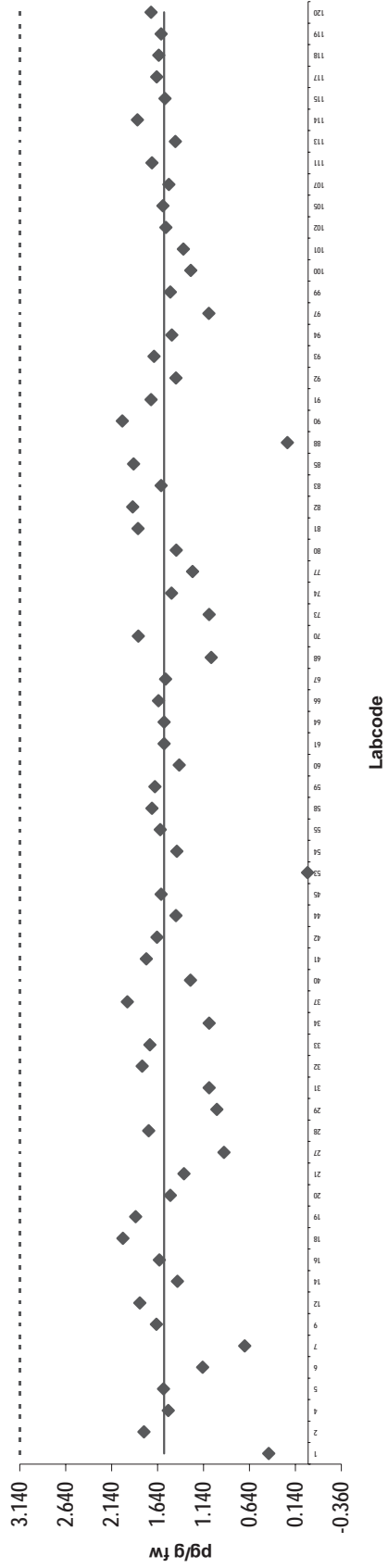
Congener: 1,2,3,6,7,8 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.43		83	1.6	
2	1.8		85	1.9	
4	1.5		88	0.23	
5	1.6		90	2.0	
6	1.2		91	1.7	
7	0.69		92	1.4	
9	1.7		93	1.7	
12	1.8		94	1.5	
14	1.4		97	1.1	
16	1.6		99	1.5	
18	2.0		100	1.3	
19	1.9		101	1.4	
20	1.5		102	1.6	
21	1.4		105	1.6	
27	0.92		107	1.5	
28	1.7		111	1.7	
29	1.00		113	1.4	
31	1.1		114	1.9	
32	1.8		115	1.6	
33	1.7		117	1.7	
34	1.1		118	1.6	
37	2.0		119	1.6	
40	1.3		120	1.7	
41	1.8				
42	1.6				
44	1.4				
45	1.6				
53	0.0078				
54	1.4				
55	1.6				
58	1.7				
59	1.7				
60	1.4				
61	1.6				
64	1.6				
66	1.6				
67	1.6				
68	1.1				
70	1.9				
73	1.1				
74	1.5				
77	1.3				
80	1.4				
81	1.9				
82	1.9				

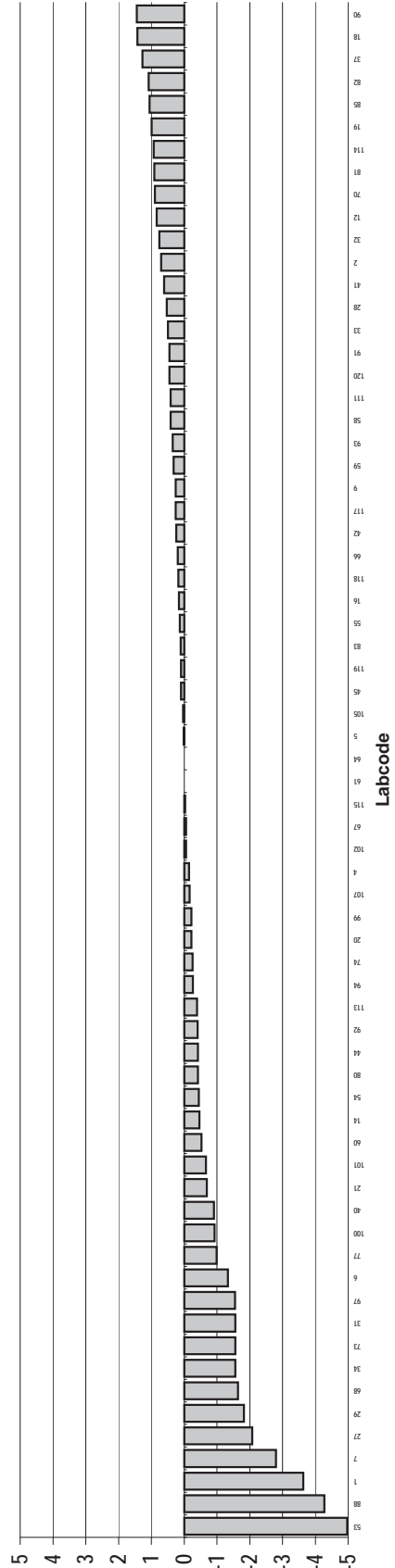
Consensus statistics

Consensus median, pg/g	1.6
Median all values pg/g	1.6
Consensus mean, pg/g	1.5
Standard deviation, pg/g	0.39
Relative standard deviation, %	26
No. of values reported	68
No. of values removed	0
No. of reported non-detects	0

1,2,3,6,7,8 HxCDD



Z-score: 1,2,3,6,7,8 HxCDD



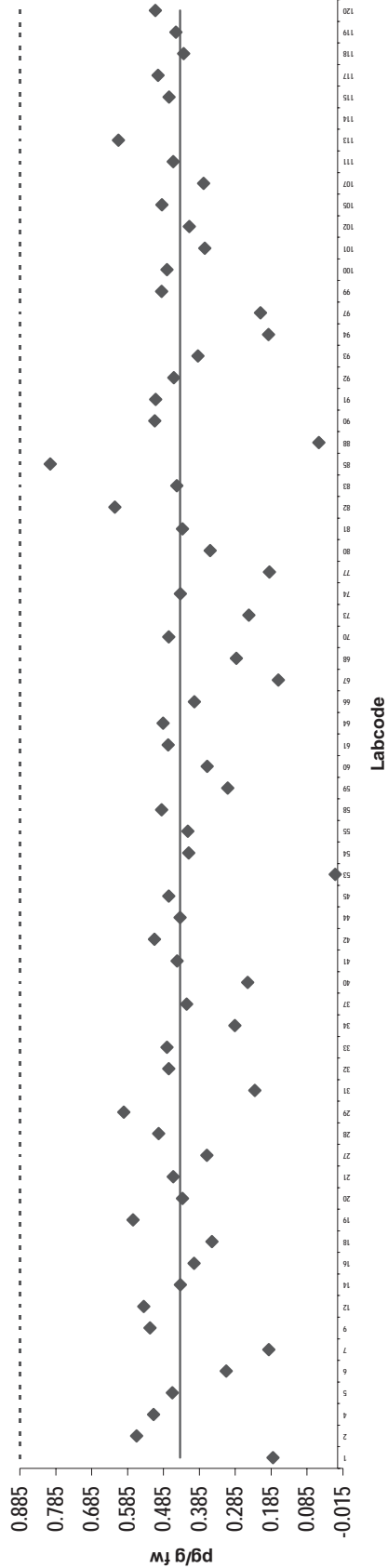
Egg
Congener: 1,2,3,7,8,9 HxCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.18		83	0.45	
2	0.56		85	0.80	
4	0.51		88	0.052	
5	0.46		90	0.51	
6	0.31		91	0.51	
7	0.19		92	0.46	
9	0.52		93	0.39	
12	0.54		94	0.19	
14	0.44		97	0.21	
16	0.40		99	0.49	
18	0.35		100	0.48	
19	0.57		101	0.37	
20	0.43		102	0.41	
21	0.46		105	0.49	
27	0.36		107	0.37	
28	0.50		111	0.46	
29	0.60		113	0.61	
31	0.23		114	0.93	
32	0.47		115	0.47	
33	0.48		117	0.50	
34	0.29		118	0.43	
37	0.42		119	0.45	
40	0.25		120	0.51	
41	0.45				
42	0.51				
44	0.44				
45	0.47				
53	0.0065				
54	0.41				
55	0.42				
58	0.49				
59	0.31				
60	0.36				
61	0.47				
64	0.49				
66	0.40				
67	0.16				
68	0.28				
70	0.47				
73	0.25				
74	0.44				
77	0.19				
80	0.36				
81	0.43				
82	0.62				Outlier

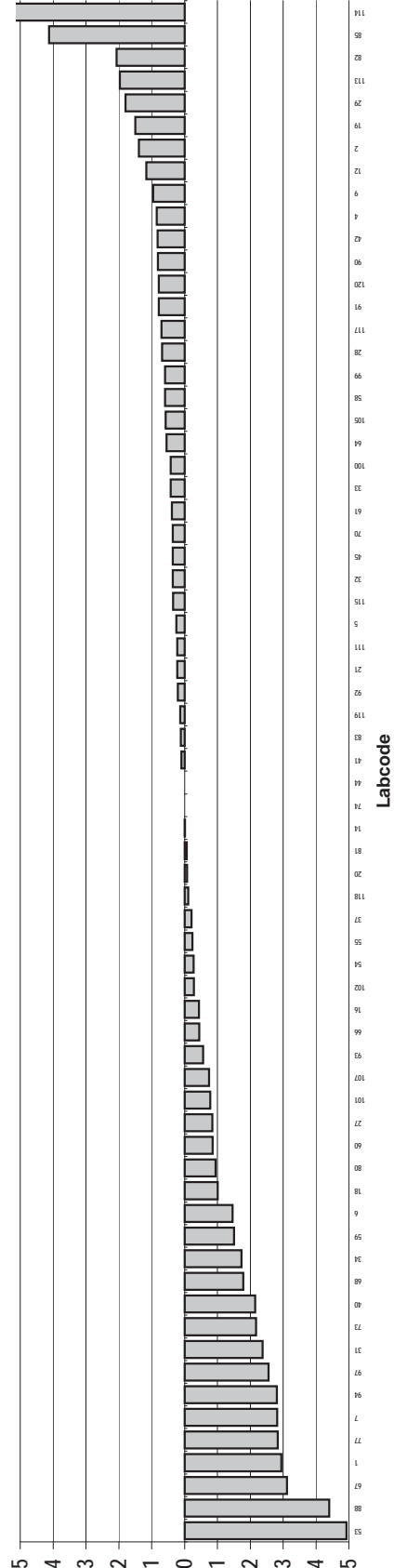
Consensus statistics

Consensus median, pg/g	0.44
Median all values pg/g	0.44
Consensus mean, pg/g	0.41
Standard deviation, pg/g	0.14
Relative standard deviation, %	33
No. of values reported	68
No. of values removed	1
No. of reported non-detects	0

1,2,3,7,8,9 HxCDD



Z-score: 1,2,3,7,8,9 HxCDD



Egg

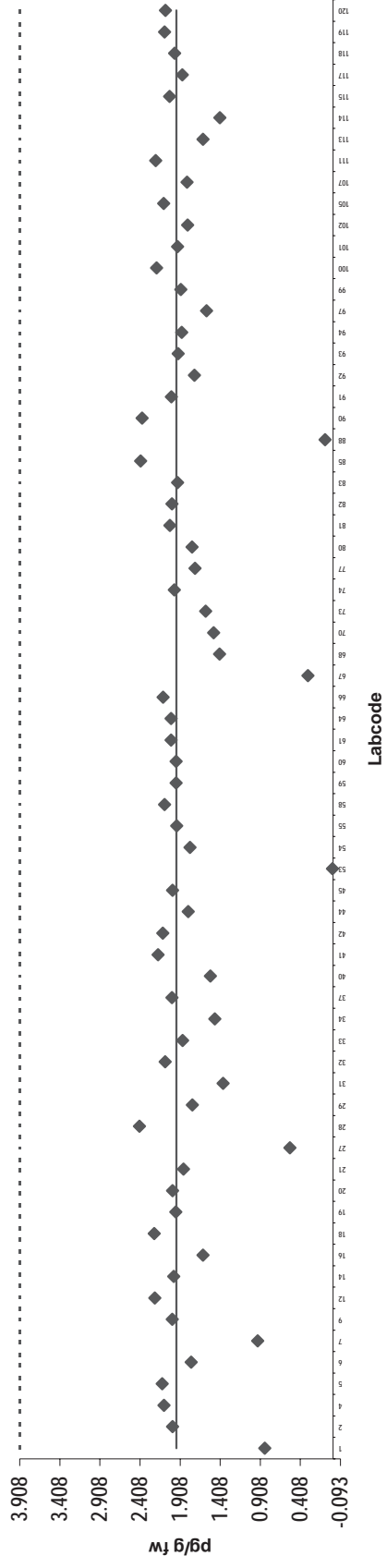
Congener: 1,2,3,4,6,7,8 HpCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.85		83	1.9	
2	2.0		85	2.4	
4	2.1		88	0.10	ND
5	2.1		90	2.4	
6	1.8		91	2.0	
7	0.94		92	1.7	
9	2.0		93	1.9	
12	2.2		94	1.9	
14	2.0		97	1.6	
16	1.6		99	1.9	
18	2.2		100	2.2	
19	2.0		101	1.9	
20	2.0		102	1.8	
21	1.9		105	2.1	
27	0.54		107	1.8	
28	2.4		111	2.2	
29	1.8		113	1.6	
31	1.4		114	1.4	
32	2.1		115	2.0	
33	1.9		117	1.9	
34	1.5		118	2.0	
37	2.0		119	2.1	
40	1.5		120	2.1	
41	2.2				
42	2.1				
44	1.8				
45	2.0				
53	0.0061				
54	1.8				
55	2.0				
58	2.1				
59	2.0				
60	2.0				
61	2.0				
64	2.0				
66	2.1				
67	0.31				
68	1.4				
70	1.5				
73	1.6				
74	2.0				
77	1.7				
80	1.8				
81	2.0				
82	2.0				

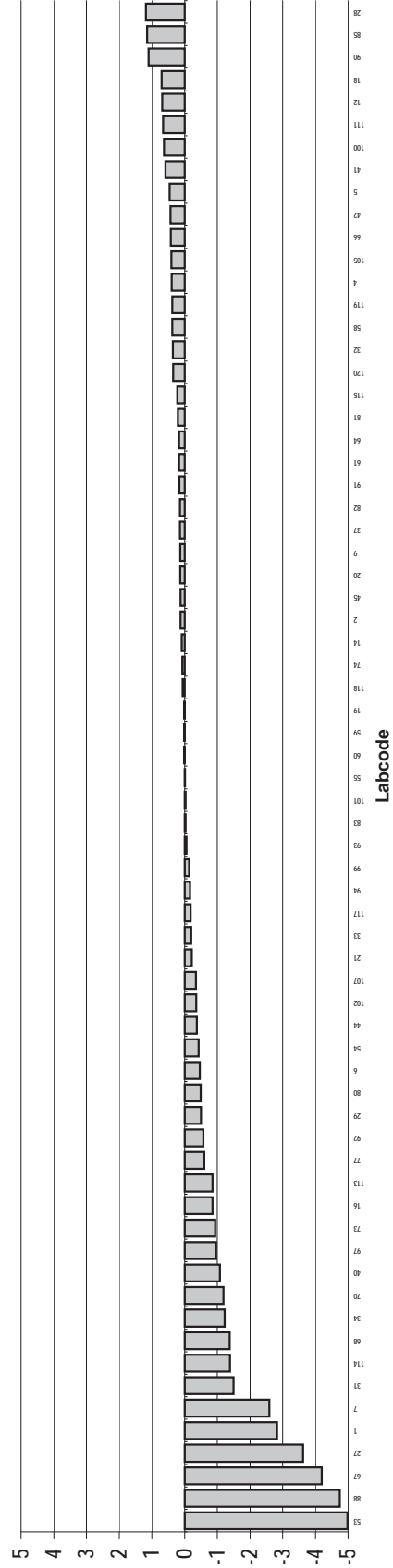
Consensus statistics

Consensus median, pg/g	2.0
Median all values pg/g	2.0
Consensus mean, pg/g	1.8
Standard deviation, pg/g	0.49
Relative standard deviation, %	27
No. of values reported	68
No. of values removed	0
No. of reported non-detects	1

1,2,3,4,6,7,8 HpCDD



Z-score: 1,2,3,4,6,7,8 HpCDD

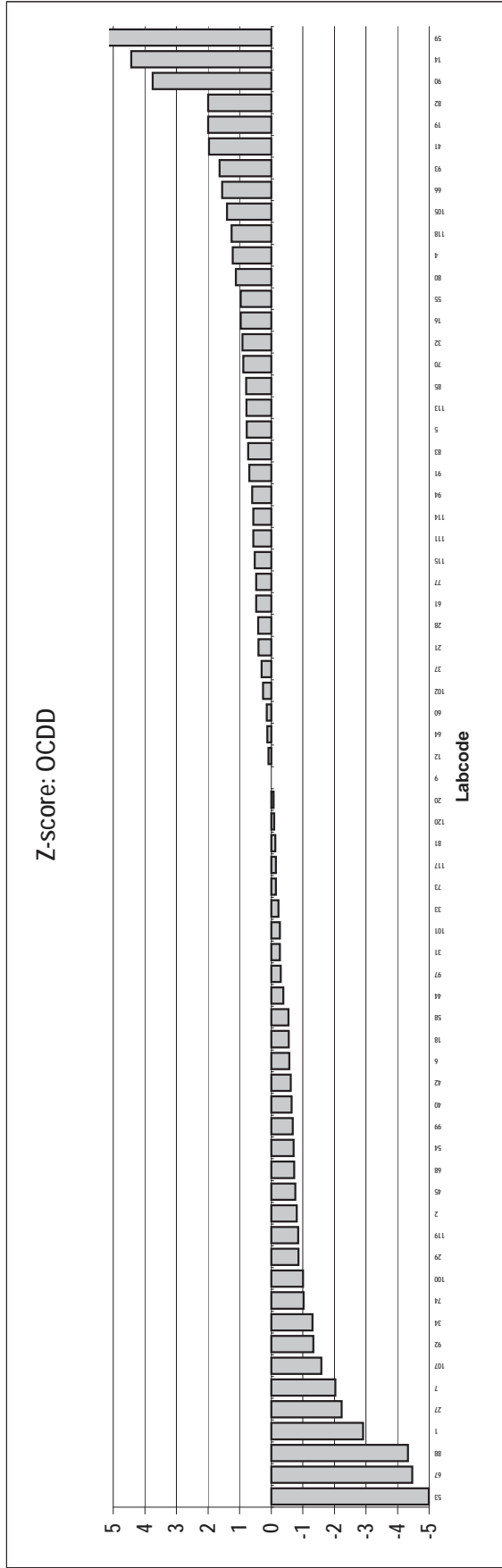
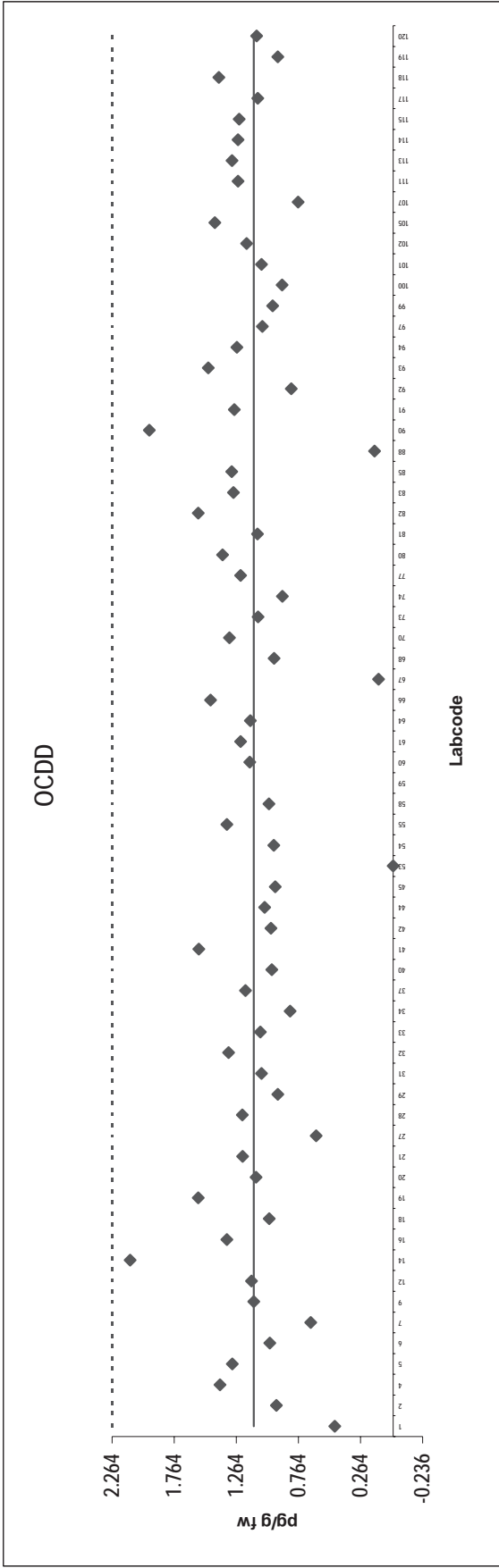


Egg Congener: OCDD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.47		83	1.3	
2	0.94		85	1.3	
4	1.4		88	0.15	
5	1.3		90	2.0	ND
6	0.99		91	1.3	
7	0.67		92	0.82	
9	1.1		93	1.5	
12	1.1		94	1.3	
14	2.1		97	1.1	
16	1.3		99	0.97	
18	1.00		100	0.90	
19	1.6		101	1.1	
20	1.1		102	1.2	
21	1.2		105	1.4	
27	0.62		107	0.77	
28	1.2		111	1.3	
29	0.93		113	1.3	
31	1.1		114	1.3	
32	1.3		115	1.2	
33	1.1		117	1.1	
34	0.83		118	1.4	
37	1.2		119	0.93	
40	0.98		120	1.1	
41	1.6				
42	0.98				
44	1.0				
45	0.95				
53	0.0016				
54	0.96				
55	1.3				
58	1.0				
59	2.7	Outlier			
60	1.2				
61	1.2				
64	1.2				
66	1.5				
67	0.12				
68	0.96				
70	1.3				
73	1.1				
74	0.89				
77	1.2				
80	1.4				
81	1.1				
82	1.6				

Consensus statistics

Consensus median, pg/g	1.1
Median all values pg/g	1.1
Consensus mean, pg/g	1.1
Standard deviation, pg/g	0.35
Relative standard deviation, %	32
No. of values reported	68
No. of values removed	1
No. of reported non-detects	1



Egg

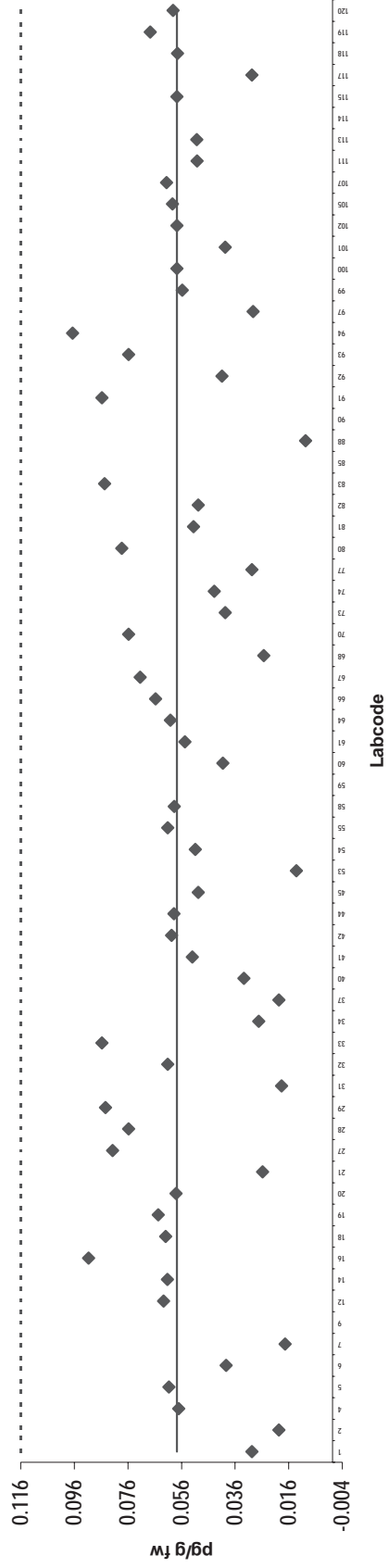
Congener: 2,3,7,8 TCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.030		83	0.085	
2	0.020		85	0.30	Outlier,ND
4	0.057	ND	88	0.010	ND
5	0.061		90	0.18	Outlier
6	0.040		91	0.086	
7	0.018		92	0.041	
9	0.14		93	0.076	
12	0.063	Outlier	94	0.097	
14	0.062		97	0.030	
16	0.091		99	0.056	
18	0.062		100	0.058	
19	0.065		101	0.040	
20	0.058		102	0.058	
21	0.026		105	0.060	
27	0.082	ND	107	0.062	
28	0.076		111	0.051	
29	0.085		113	0.051	
31	0.019		114	0.23	
32	0.061		115	0.058	
33	0.086		117	0.030	
34	0.028		118	0.058	
37	0.020		119	0.068	
40	0.033		120	0.059	
41	0.052				
42	0.060				
44	0.059				
45	0.050				
53	0.013				
54	0.051				
55	0.061				
58	0.059				
59	0.27				
60	0.041	Outlier			
61	0.055				
64	0.061				
66	0.066				
67	0.072				
68	0.026				
70	0.076				
73	0.040				
74	0.044				
77	0.030	ND			
80	0.079				
81	0.052				
82	0.050				

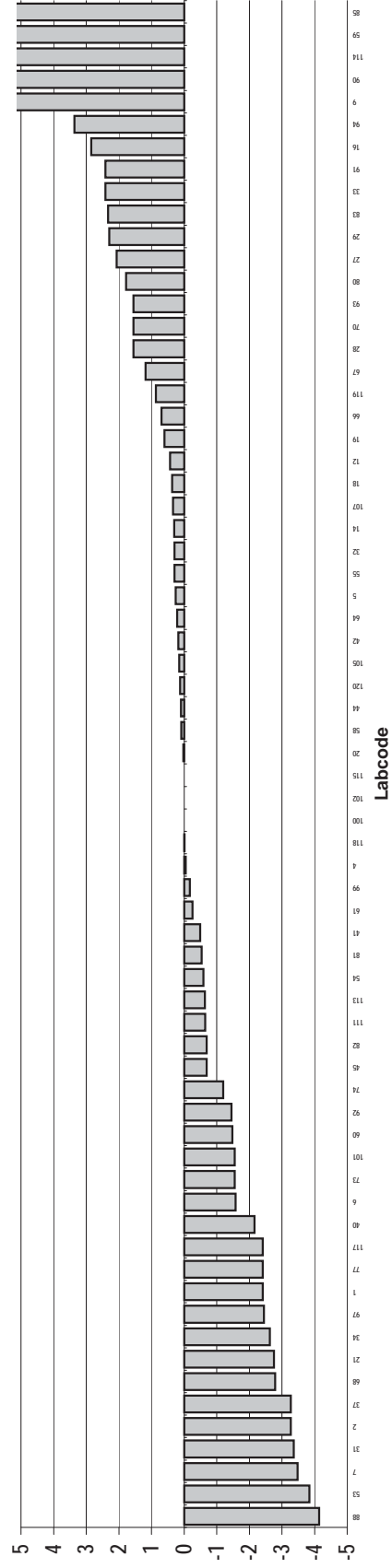
Consensus statistics

Consensus median, pg/g	0.058
Median all values pg/g	0.058
Consensus mean, pg/g	0.054
Standard deviation, pg/g	0.021
Relative standard deviation, %	38
No. of values reported	68
No. of values removed	5
No. of reported non-detects	5

2,3,7,8 TCDF



Z-score: 2,3,7,8 TCDF



Egg

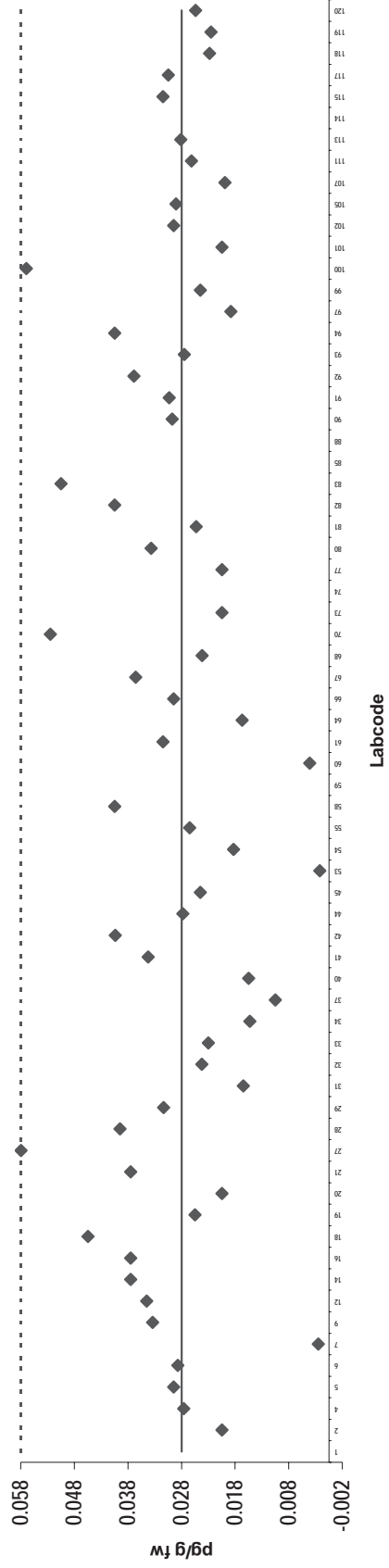
Congener: 1,2,3,7,8 PeCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.060	Outlier	83	0.050	ND
2	0.020	ND	85	0.20	Outlier,ND
4	0.027		88	0.46	Outlier
5	0.029		90	0.029	
6	0.028		91	0.030	
7	0.0020	ND	92	0.036	
9	0.033		93	0.027	
12	0.034		94	0.040	
14	0.037		97	0.018	
16	0.037		99	0.024	
18	0.045		100	0.057	
19	0.025		101	0.020	
20	0.020		102	0.029	
21	0.037		105	0.029	
27	0.057		107	0.019	
28	0.039		111	0.026	
29	0.031		113	0.028	
31	0.016		114	0.11	
32	0.024		115	0.031	
33	0.023		117	0.030	
34	0.015		118	0.022	
37	0.010		119	0.022	
40	0.015		120	0.025	
41	0.034				
42	0.040				
44	0.027				
45	0.024				
53	0.0018				
54	0.018				
55	0.026				
58	0.040				
59	0.33	Outlier			
60	0.0036	ND			
61	0.031	ND			
64	0.016	ND			
66	0.029				
67	0.036				
68	0.024	ND			
70	0.052				
73	0.020	ND			
74	1.3	Outlier,ND			
77	0.020				
80	0.033				
81	0.025				
82	0.040	ND			

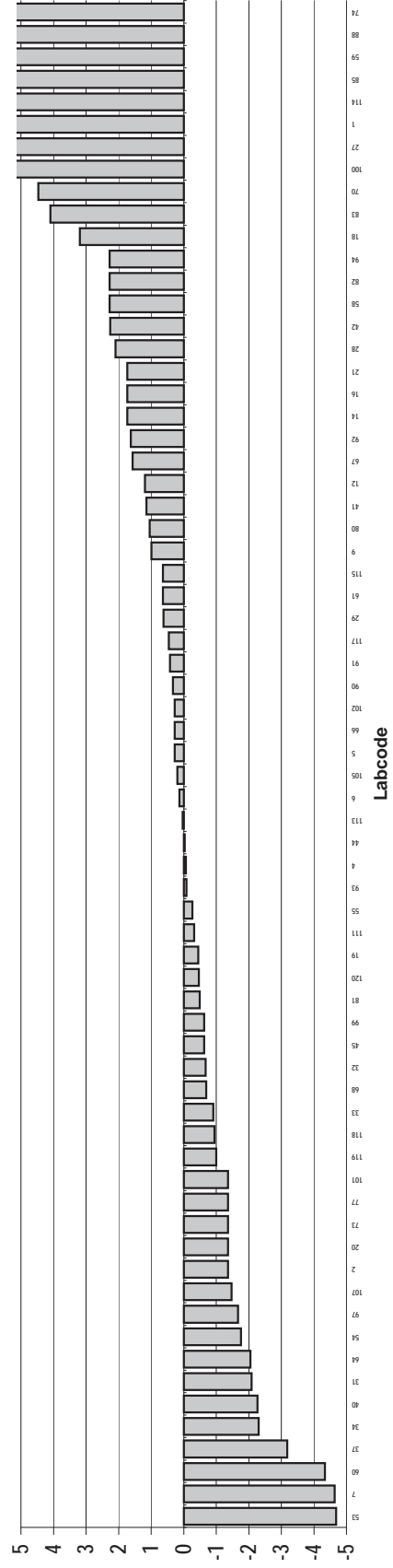
Consensus statistics

Consensus median, pg/g	0.027
Median all values pg/g	0.029
Consensus mean, pg/g	0.028
Standard deviation, pg/g	0.011
Relative standard deviation, %	41
No. of values reported	68
No. of values removed	6
No. of reported non-detects	10

1,2,3,7,8 PeCDF



Z-score: 1,2,3,7,8 PeCDF



Egg

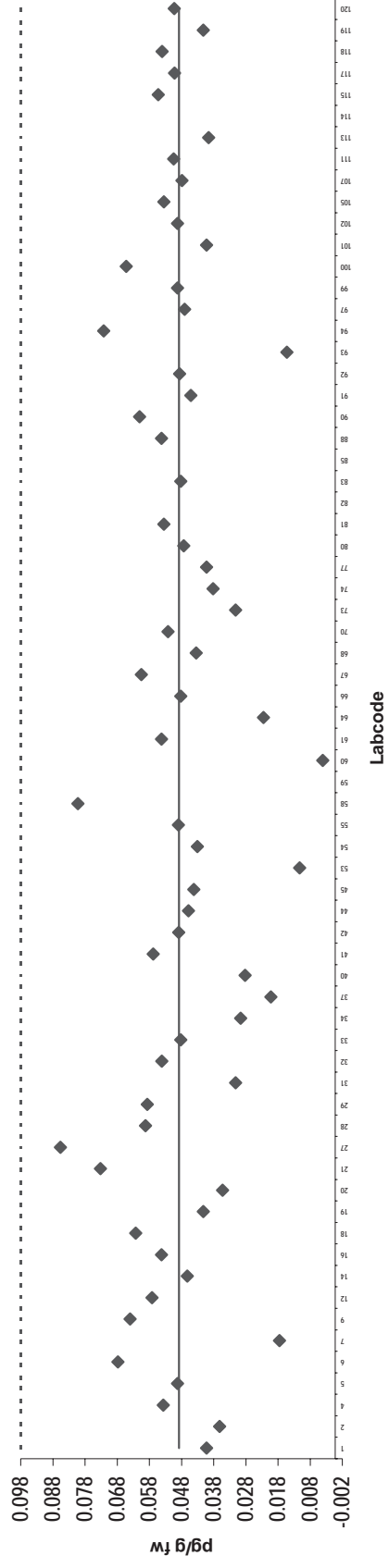
Congener: 2,3,4,7,8 PeCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.040		83	0.048	
2	0.036		85	0.30	Outlier,ND
4	0.054		88	0.054	
5	0.049		90	0.061	
6	0.068		91	0.045	
7	0.017		92	0.048	
9	0.064		93	0.015	ND
12	0.057		94	0.072	
14	0.046		97	0.047	
16	0.054		99	0.049	
18	0.062		100	0.065	
19	0.041		101	0.040	
20	0.035		102	0.049	
21	0.073		105	0.053	
27	0.085		107	0.048	
28	0.059		111	0.050	
29	0.058		113	0.039	
31	0.031		114	0.18	Outlier
32	0.054		115	0.055	
33	0.048		117	0.050	
34	0.029		118	0.054	
37	0.020		119	0.041	
40	0.028		120	0.050	
41	0.057				
42	0.049				
44	0.046				
45	0.044				
53	0.011				
54	0.043				
55	0.049				
58	0.080				
59	0.41	Outlier			
60	0.0039	ND			
61	0.054				
64	0.022	ND			
66	0.048				
67	0.060				
68	0.043				
70	0.052				
73	0.031				
74	0.038				
77	0.040				
80	0.047				
81	0.053				
82	0.11	Outlier			

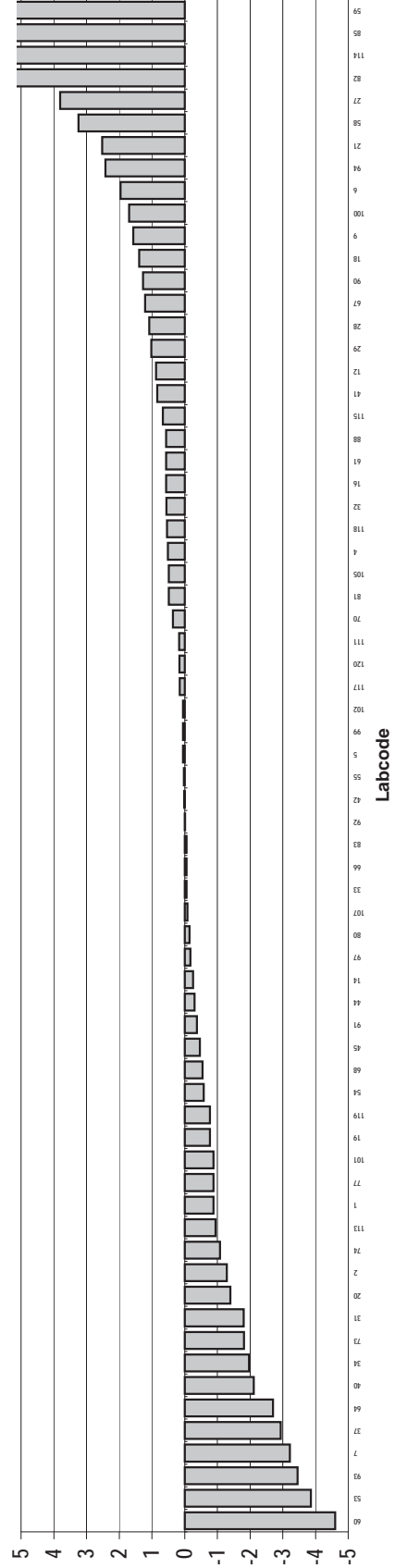
Consensus statistics

Consensus median, pg/g	0.049
Median all values pg/g	0.049
Consensus mean, pg/g	0.047
Standard deviation, pg/g	0.015
Relative standard deviation, %	32
No. of values reported	68
No. of values removed	4
No. of reported non-detects	4

2,3,4,7,8 PeCDF



Z-score: 2,3,4,7,8 PeCDF



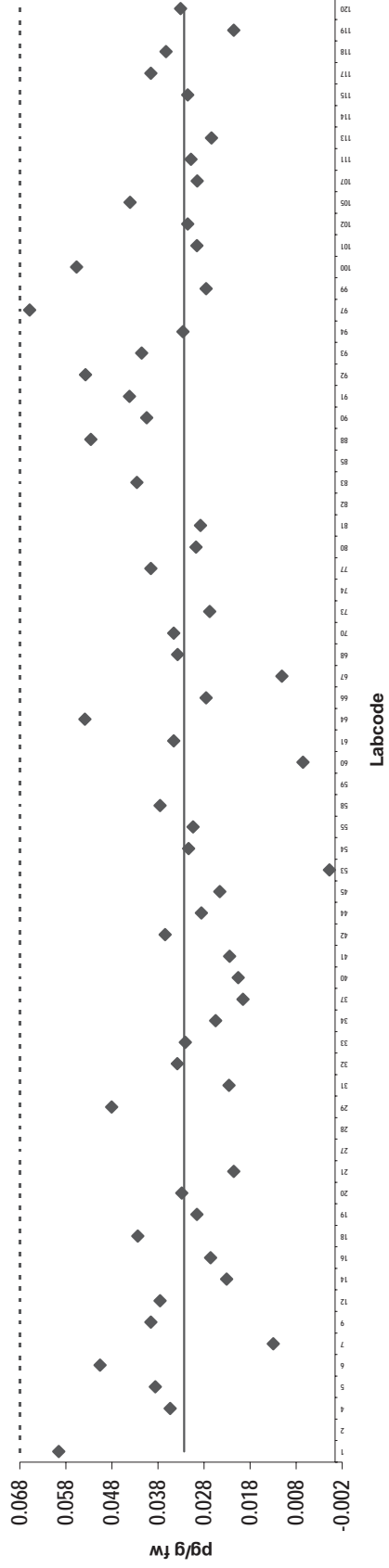
Egg
Congener: 1,2,3,4,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.060		83	0.043	
2	0.071		85	0.20	Outlier,ND
4	0.036	Outlier,ND	88	0.053	
5	0.039		90	0.041	
6	0.051		91	0.045	
7	0.013		92	0.054	
9	0.040		93	0.042	
12	0.038		94	0.033	
14	0.024		97	0.066	
16	0.027		99	0.028	
18	0.043		100	0.056	
19	0.030		101	0.030	
20	0.033		102	0.032	
21	0.022		105	0.044	
27	0.086	Outlier	107	0.030	
28	0.12	Outlier	111	0.031	
29	0.048		113	0.027	
31	0.023		114	0.34	Outlier
32	0.034		115	0.032	
33	0.033		117	0.040	
34	0.026		118	0.037	
37	0.020		119	0.022	
40	0.021		120	0.034	
41	0.023				
42	0.037				
44	0.029				
45	0.025				
53	0.0012				
54	0.032				
55	0.031				
58	0.038				
59	0.33	Outlier			
60	0.0070	ND			
61	0.035				
64	0.054				
66	0.028				
67	0.012				
68	0.034				
70	0.035				
73	0.027				
74	1.3	Outlier,ND			
77	0.040				
80	0.030				
81	0.029				
82	0.080	Outlier,ND			

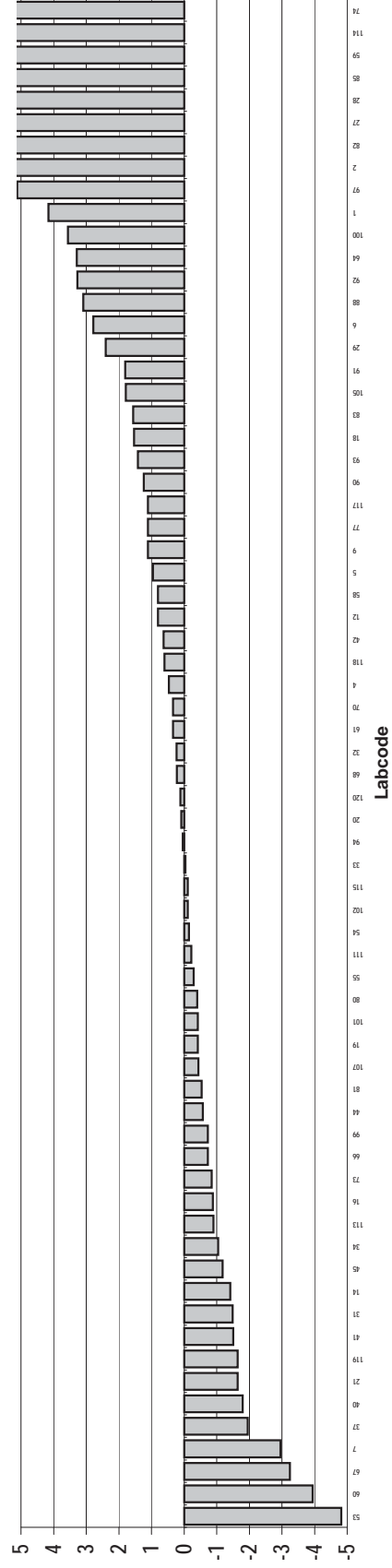
Consensus statistics

Consensus median, pg/g	0.033
Median all values pg/g	0.034
Consensus mean, pg/g	0.034
Standard deviation, pg/g	0.012
Relative standard deviation, %	36
No. of values reported	68
No. of values removed	8
No. of reported non-detects	5

1,2,3,4,7,8 HxCDF



Z-score: 1,2,3,4,7,8 HxCDF



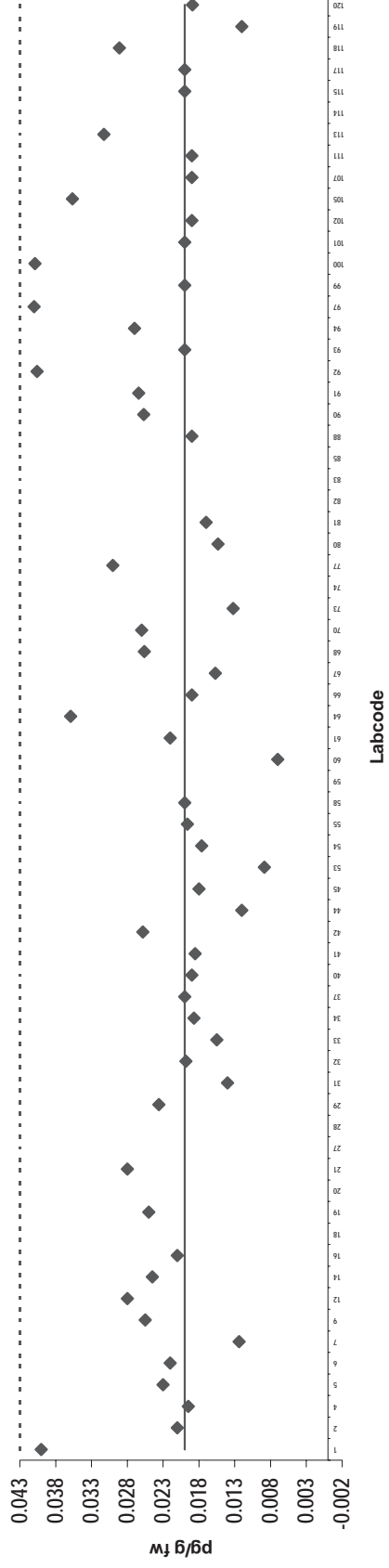
Egg
Congener: 1,2,3,6,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.040	ND	83	0.050	Outlier,ND
2	0.021		85	0.20	Outlier,ND
4	0.020		88	0.019	
5	0.023		90	0.026	
6	0.022		91	0.026	
7	0.012		92	0.041	
9	0.026		93	0.020	
12	0.028		94	0.027	
14	0.025		97	0.041	
16	0.021		99	0.020	
18	0.057	Outlier	100	0.041	
19	0.025		101	0.020	
20	0.083	Outlier	102	0.019	
21	0.028		105	0.036	
27	0.063	Outlier	107	0.019	
28	0.046	Outlier	111	0.019	
29	0.024		113	0.031	
31	0.014		114	0.11	Outlier
32	0.020		115	0.020	
33	0.016		117	0.020	
34	0.019		118	0.029	
37	0.020		119	0.012	
40	0.019		120	0.019	
41	0.019				
42	0.026				
44	0.012				
45	0.018				
53	0.0089				
54	0.018				
55	0.020				
58	0.020				
59	0.26	Outlier			
60	0.0070	ND			
61	0.022				
64	0.036				
66	0.019				
67	0.016				
68	0.026				
70	0.026				
73	0.013				
74	1.3	Outlier,ND			
77	0.030				
80	0.015				
81	0.017				
82	0.080	Outlier,ND			

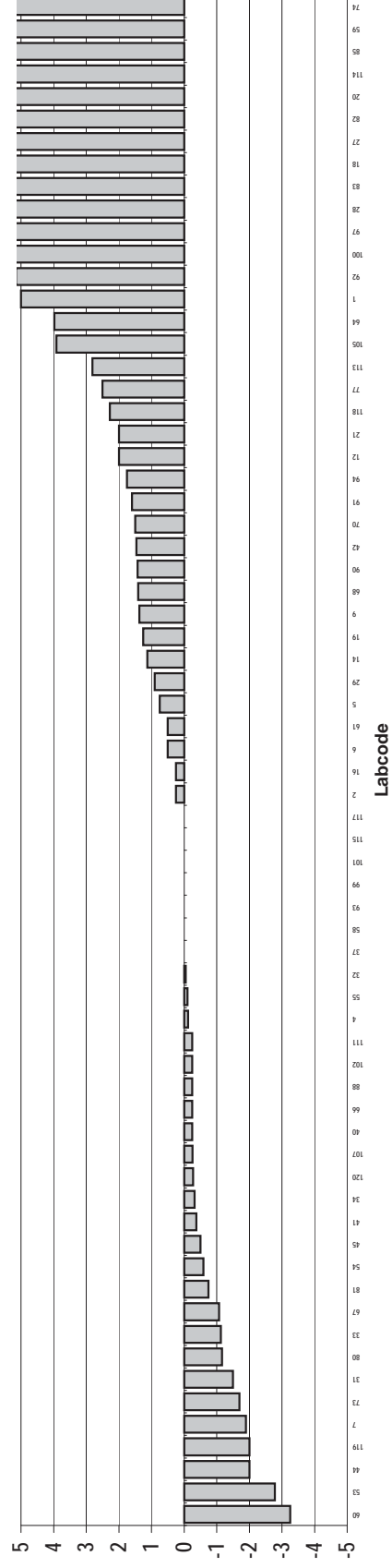
Consensus statistics

Consensus median, pg/g	0.020
Median all values pg/g	0.022
Consensus mean, pg/g	0.022
Standard deviation, pg/g	0.0076
Relative standard deviation, %	34
No. of values reported	68
No. of values removed	10
No. of reported non-detects	6

1,2,3,6,7,8 HxCDF



Z-score: 1,2,3,6,7,8 HxCDF



Egg

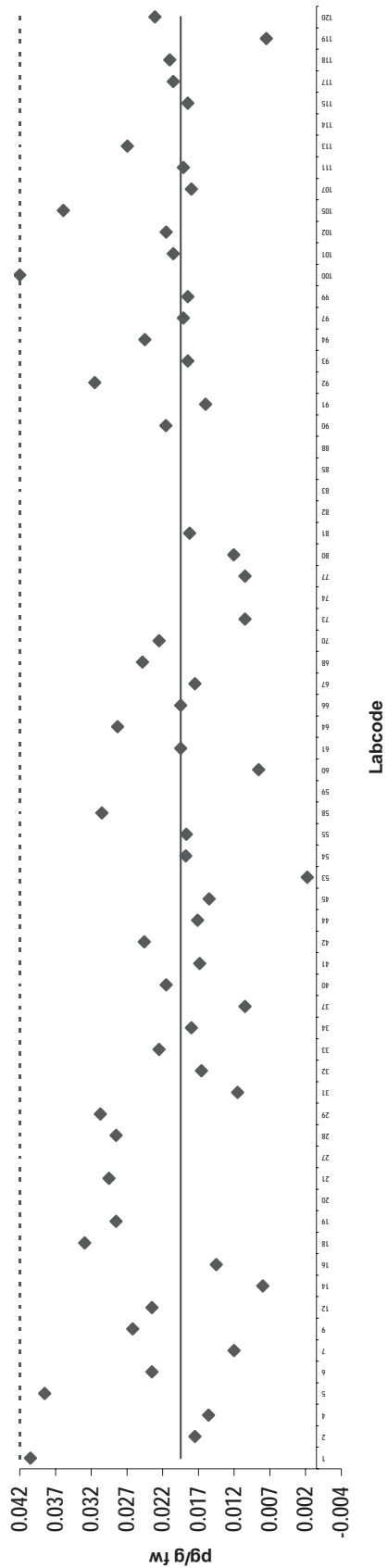
Congener: 2,3,4,6,7,8 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.040	ND	83	0.050	Outlier,ND
2	0.017		85	0.30	Outlier,ND
4	0.015		88	0.092	Outlier
5	0.038		90	0.021	
6	0.023		91	0.016	
7	0.012		92	0.031	
9	0.026		93	0.018	
12	0.023		94	0.024	ND
14	0.0075		97	0.019	
16	0.014		99	0.018	
18	0.032		100	0.042	
19	0.028		101	0.020	
20	0.047	Outlier	102	0.021	
21	0.029		105	0.035	
27	0.043	Outlier	107	0.018	
28	0.028		111	0.019	
29	0.030		113	0.026	
31	0.011		114	0.25	Outlier
32	0.016		115	0.018	
33	0.022		117	0.020	
34	0.018		118	0.021	
37	0.010		119	0.0070	ND
40	0.021		120	0.023	
41	0.016				
42	0.024				
44	0.017				
45	0.015				
53	0.0013				
54	0.018	ND			
55	0.018				
58	0.030				
59	0.19	Outlier			
60	0.0081	ND			
61	0.019				
64	0.028	ND			
66	0.019				
67	0.017				
68	0.024				
70	0.022				
73	0.010	ND			
74	1.3	Outlier,ND			
77	0.010				
80	0.012				
81	0.018				
82	0.080	Outlier,ND			

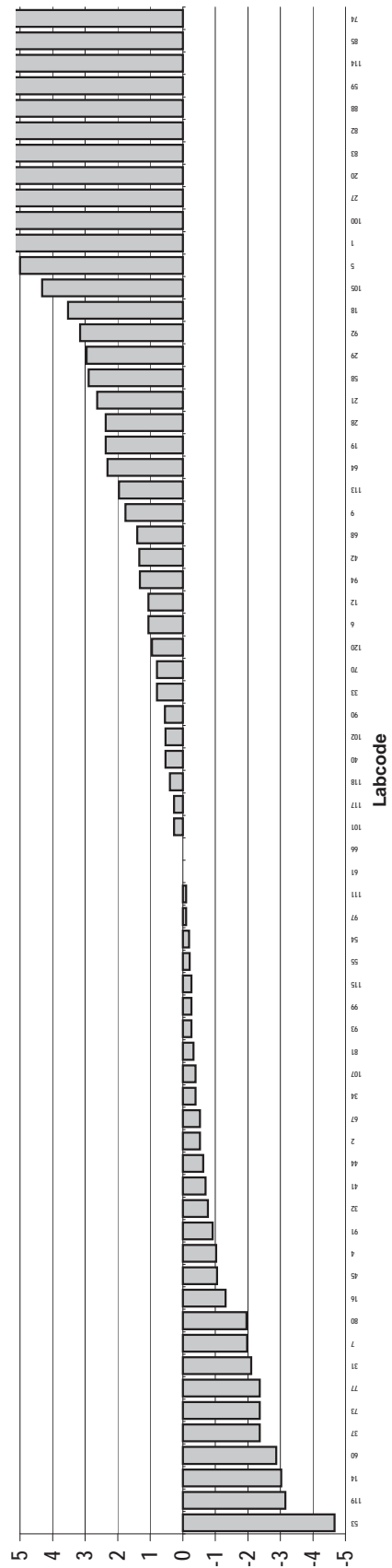
Consensus statistics

Consensus median, pg/g	0.019
Median all values pg/g	0.021
Consensus mean, pg/g	0.020
Standard deviation, pg/g	0.0082
Relative standard deviation, %	40
No. of values reported	68
No. of values removed	9
No. of reported non-detects	12

2,3,4,6,7,8 HxCDF



Z-score: 2,3,4,6,7,8 HxCDF



Egg

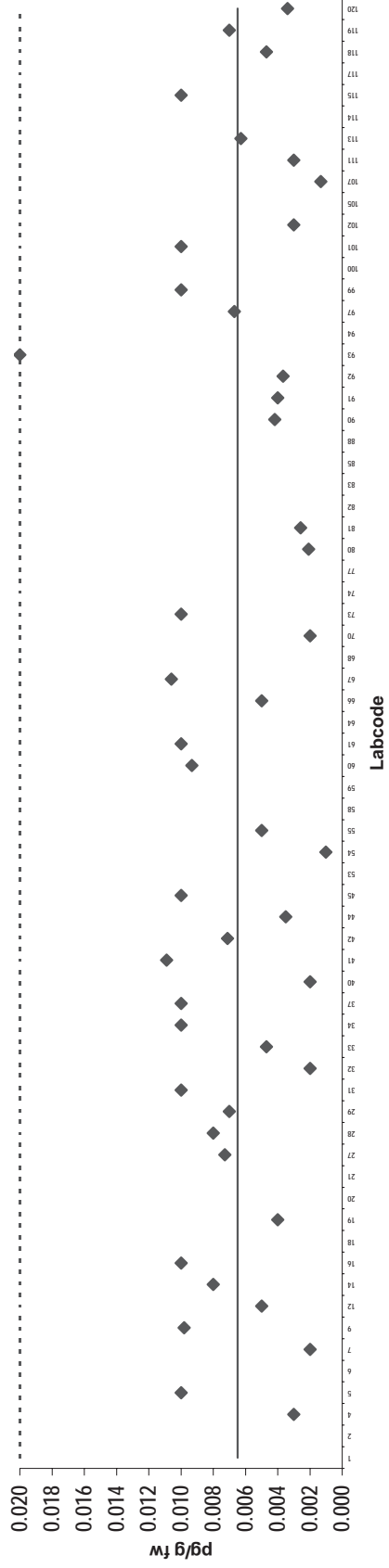
Congener: 1,2,3,7,8,9 HxCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.040	Outlier,ND	83	0.050	Outlier,ND
2	0.35	Outlier,ND	85	0.30	Outlier,ND
4	0.0030		88	0.076	Outlier
5	0.010	ND	90	0.0042	
6	0.021	Outlier,ND	91	0.0040	ND
7	0.0020	ND	92	0.0037	ND
9	0.0098	ND	93	0.020	Outlier,ND
12	0.0050	ND	94	0.028	
14	0.0080	ND	97	0.0067	
16	0.010	ND	99	0.010	ND
18	0.026	Outlier	100	0.022	Outlier
19	0.0040		101	0.010	ND
20	0.043	Outlier	102	0.0030	ND
21	0.034	Outlier	105	0.035	Outlier,ND
27	0.0073		107	0.0013	ND
28	0.0080	ND	111	0.0030	ND
29	0.0070	ND	113	0.0063	ND
31	0.010	ND	114	0.68	Outlier
32	0.0020	ND	115	0.010	ND
33	0.0047	ND	117	0.050	Outlier,ND
34	0.010	ND	118	0.0047	ND
37	0.010		119	0.0070	ND
40	0.0020		120	0.0034	
41	0.011	ND			
42	0.0071	ND			
44	0.0035	ND			
45	0.010	ND			
53	0.42	Outlier			
54	0.0010				
55	0.0050	ND			
58	0.032	Outlier			
59	0.30	Outlier			
60	0.0093	ND			
61	0.010	ND			
64	0.032	Outlier,ND			
66	0.0050				
67	0.011	ND			
68	0.024	Outlier,ND			
70	0.0020				
73	0.010	ND			
74	1.3	Outlier,ND			
77	0.060	Outlier			
80	0.0021				
81	0.0026				
82	0.080	Outlier,ND			

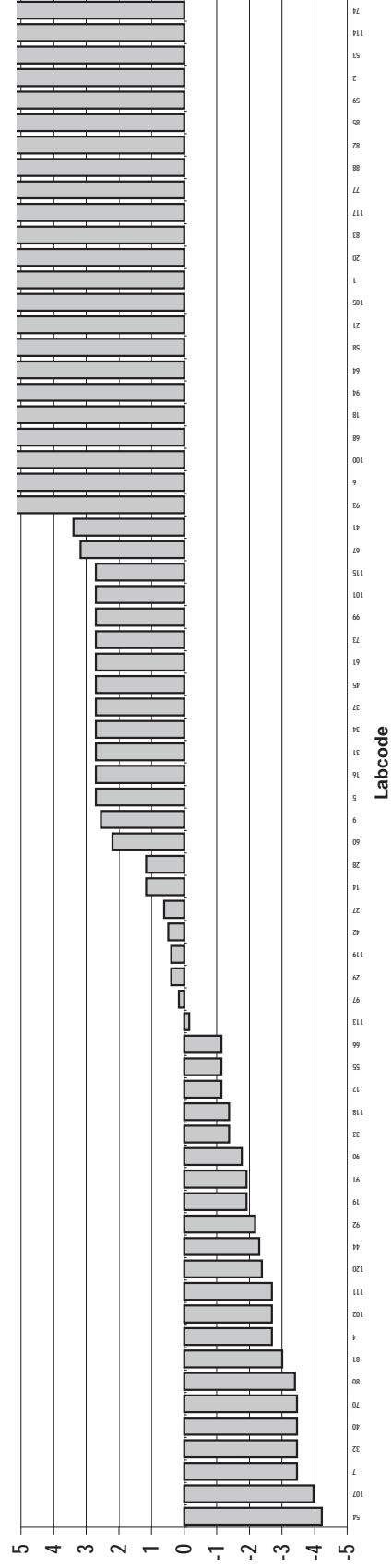
Consensus statistics

Consensus median, pg/g	0.0065
Median all values pg/g	0.010
Consensus mean, pg/g	0.0065
Standard deviation, pg/g	0.0038
Relative standard deviation, %	58
No. of values reported	68
No. of values removed	22
No. of reported non-detects	43

1,2,3,7,8,9 HxCDF



Z-score: 1,2,3,7,8,9 HxCDF



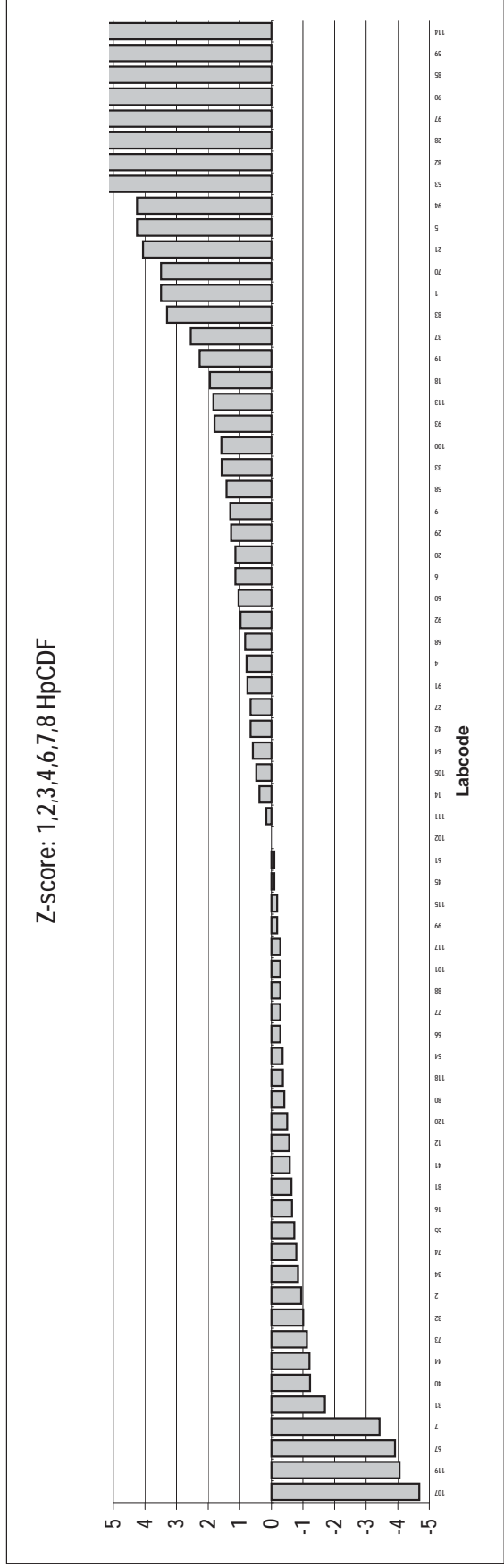
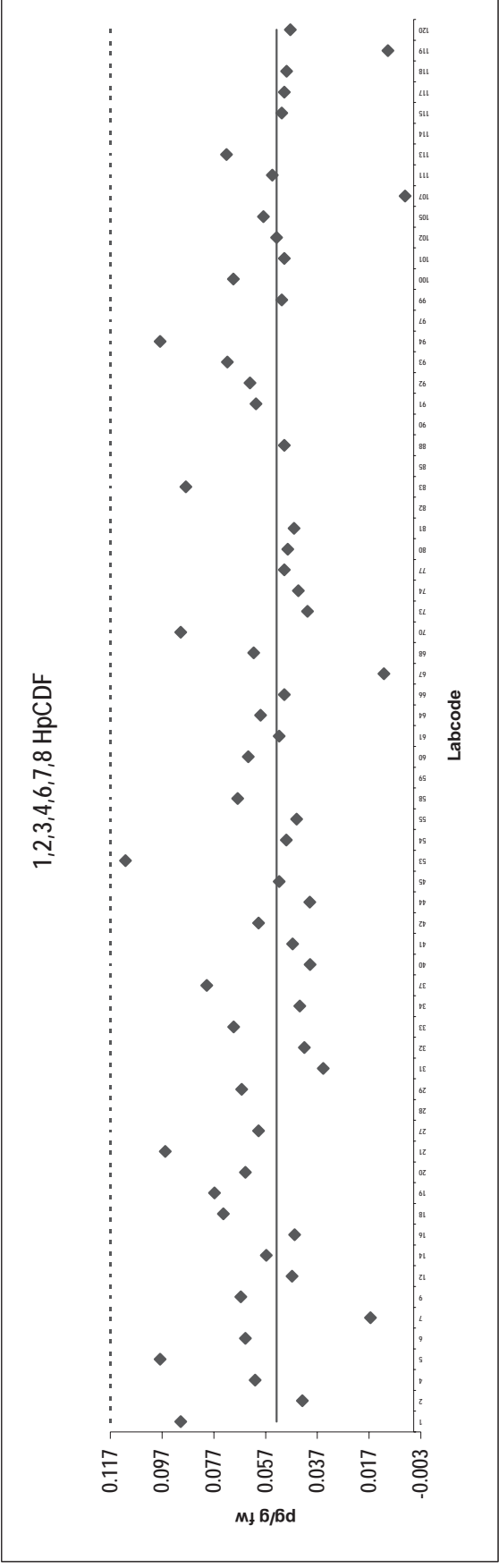
Egg

Congener: 1,2,3,4,6,7,8 HpCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.090		83	0.088	
2	0.043		85	0.20	Outlier,ND
4	0.061		88	0.050	ND
5	0.098		90	0.18	Outlier
6	0.065		91	0.061	
7	0.017		92	0.063	
9	0.067		93	0.072	
12	0.047		94	0.098	
14	0.057		97	0.16	Outlier
16	0.046		99	0.051	
18	0.074		100	0.070	
19	0.077		101	0.050	
20	0.065		102	0.053	
21	0.096		105	0.058	
27	0.060		107	0.0033	ND
28	0.14		111	0.055	
29	0.066		113	0.072	
31	0.035		114	0.61	Outlier
32	0.042		115	0.051	
33	0.070		117	0.050	
34	0.044		118	0.049	
37	0.080		119	0.010	ND
40	0.040		120	0.048	
41	0.047				
42	0.060				
44	0.040				
45	0.052				
53	0.11				
54	0.049				
55	0.045				
58	0.068				
59	0.46				
60	0.064				Outlier
61	0.052				
64	0.059				ND
66	0.050				
67	0.012				
68	0.062				
70	0.090				
73	0.041				
74	0.045				
77	0.050				
80	0.049				
81	0.046				
82	0.12	Outlier			

Consensus statistics

Consensus median, pg/g	0.053
Median all values pg/g	0.059
Consensus mean, pg/g	0.057
Standard deviation, pg/g	0.021
Relative standard deviation, %	36
No. of values reported	68
No. of values removed	7
No. of reported non-detects	5



Egg

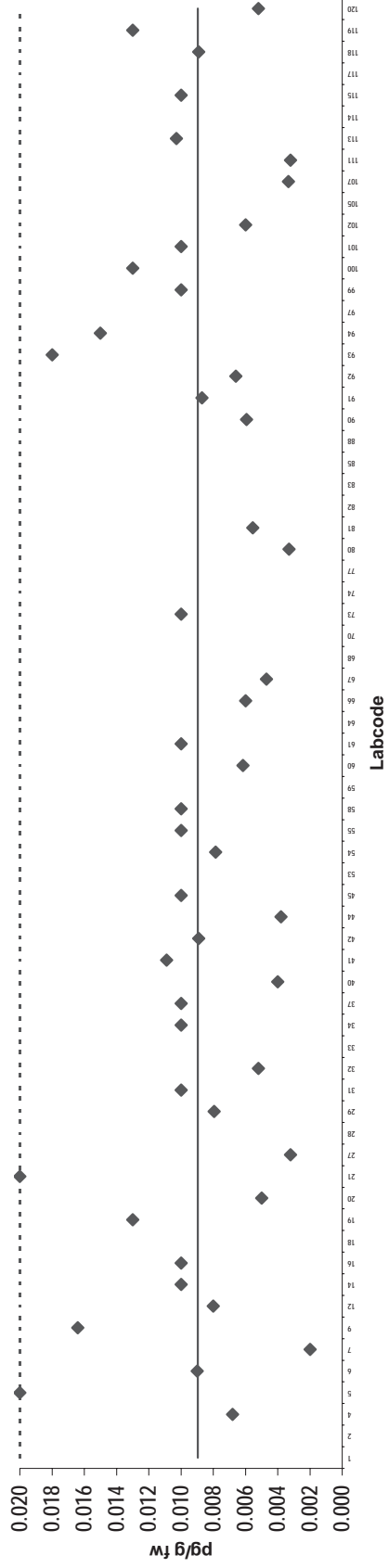
Congener: 1,2,3,4,7,8,9 HpCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.040	Outlier,ND	83	0.15	Outlier,ND
2	0.36	Outlier,ND	85	0.30	Outlier,ND
4	0.0068		88	0.050	Outlier,ND
5	0.020	ND	90	0.0059	
6	0.0090		91	0.0087	ND
7	0.0020	ND	92	0.0066	ND
9	0.016		93	0.018	ND
12	0.0080	ND	94	0.015	
14	0.010	ND	97	0.047	Outlier
16	0.010	ND	99	0.010	ND
18	0.024	Outlier	100	0.013	
19	0.013		101	0.010	ND
20	0.0050		102	0.0060	
21	0.020	ND	105	0.053	Outlier,ND
27	0.0032		107	0.0033	ND
28	0.058	Outlier	111	0.0032	
29	0.0080		113	0.010	ND
31	0.010	ND	114	0.40	Outlier
32	0.0052		115	0.010	ND
33	0.022	Outlier,ND	117	0.050	Outlier,ND
34	0.010	ND	118	0.0089	
37	0.010		119	0.013	
40	0.0040	ND	120	0.0052	ND
41	0.011	ND			
42	0.0089				
44	0.0038	ND			
45	0.010	ND			
53	0.53	Outlier			
54	0.0078				
55	0.010	ND			
58	0.010	ND			
59	0.16	Outlier			
60	0.0061	ND			
61	0.010	ND			
64	0.090	Outlier,ND			
66	0.0060				
67	0.0047	ND			
68	0.024	Outlier,ND			
70	0.025	Outlier			
73	0.010	ND			
74	1.3	Outlier,ND			
77	0.10	Outlier,ND			
80	0.0033				
81	0.0055				
82	0.12	Outlier,ND			

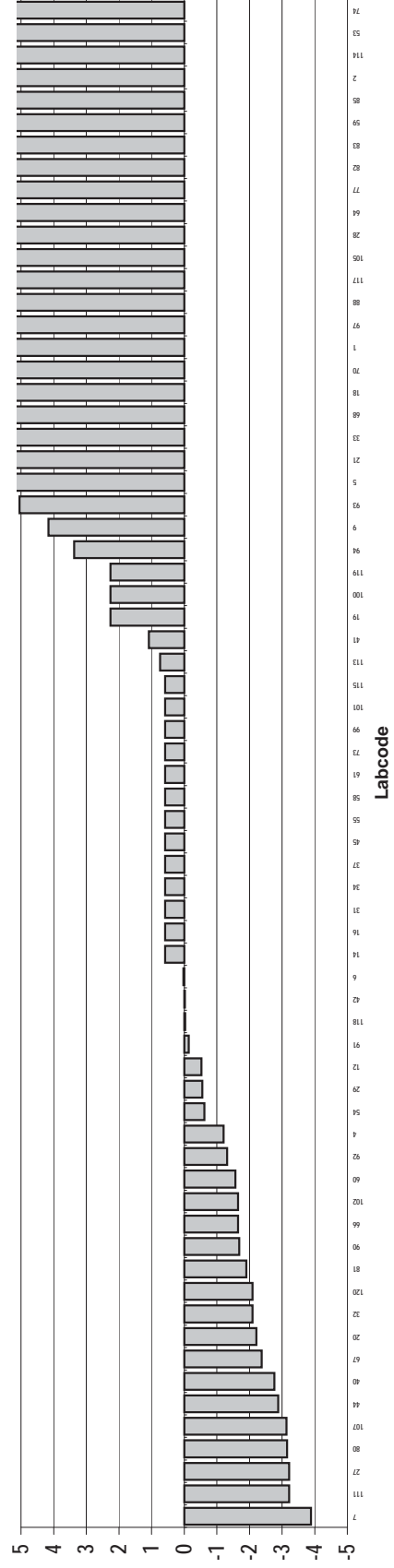
Consensus statistics

Consensus median, pg/g	0.009
Median all values pg/g	0.010
Consensus mean, pg/g	0.0089
Standard deviation, pg/g	0.0042
Relative standard deviation, %	48
No. of values reported	68
No. of values removed	20
No. of reported non-detects	40

1,2,3,4,7,8,9 HpCDF



Z-score: 1,2,3,4,7,8,9 HpCDF

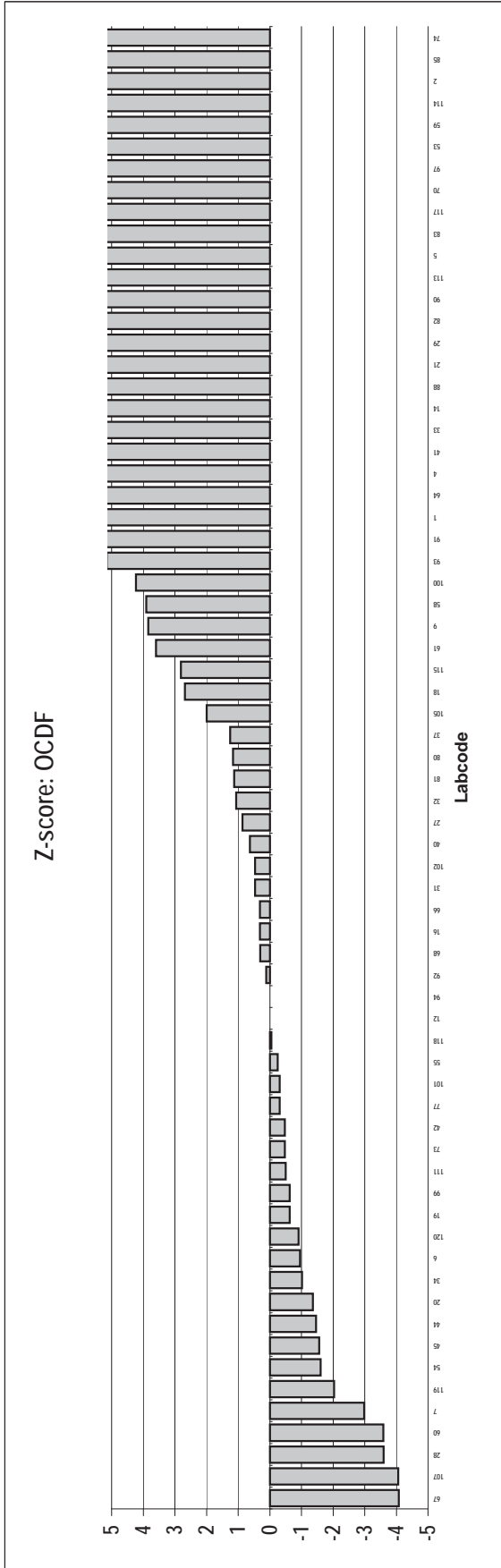
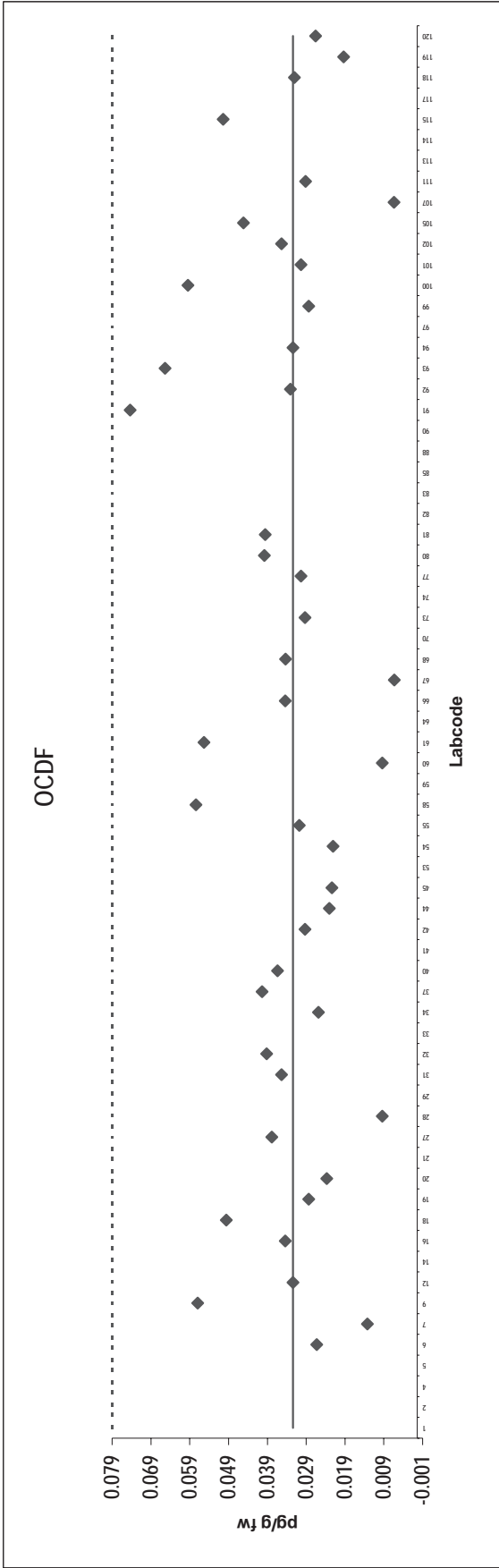


Egg Congener: OCDF

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
1	0.080	Outlier,ND	83	0.20	Outlier,ND
2	0.83	Outlier,ND	85	1.0	Outlier,ND
4	0.082	Outlier	88	0.10	Outlier,ND
5	0.18	Outlier	90	0.16	Outlier
6	0.026		91	0.074	
7	0.013		92	0.033	
9	0.057		93	0.065	
12	0.032		94	0.032	
14	0.092	Outlier	97	0.29	Outlier
16	0.034		99	0.028	
18	0.049		100	0.059	
19	0.028		101	0.030	
20	0.023		102	0.035	
21	0.12	Outlier	105	0.045	ND
27	0.038		107	0.0060	ND
28	0.0090	ND	111	0.029	
29	0.13	Outlier	113	0.17	Outlier
31	0.035		114	0.80	Outlier
32	0.039		115	0.050	
33	0.088		117	0.20	
34	0.026	Outlier	118	0.032	
37	0.040		119	0.019	
40	0.036		120	0.026	
41	0.084	Outlier			
42	0.029				
44	0.023				
45	0.022				
53	0.32				
54	0.022	Outlier			
55	0.030				
58	0.057				
59	0.40	Outlier			
60	0.0091	ND			
61	0.055				
64	0.082	Outlier,ND			
66	0.034				
67	0.0059	ND			
68	0.034				
70	0.24	Outlier			
73	0.029				
74	2.5	Outlier,ND			
77	0.030				
80	0.039				
81	0.039				
82	0.16	Outlier,ND			

Consensus statistics

Consensus median, pg/g	0.032
Median all values pg/g	0.039
Consensus mean, pg/g	0.033
Standard deviation, pg/g	0.015
Relative standard deviation, %	45
No. of values reported	68
No. of values removed	23
No. of reported non-detects	14



Egg Congener: PCB 77

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	2.7		85	3.0	
4	2.5		88	1.9	
5	3.3		90	14	Outlier
6	2.6		91	2.8	
7	0.018		92	2.3	
9	3.2		93	3.1	
12	3.0		94	0.21	
14	13	Outlier	97	2.0	
16	6.2	Outlier	99	2.6	
18	2.7		100	2.5	
19	3.3		101	2.1	
20	3.8		102	2.4	
21	21	Outlier	105	2.8	
27	4.1		107	3.0	
28	2.8		111	2.5	
29	2.8		113	2.6	
31	1.3		114	32	
32	2.7		115	2.9	
33	2.6		117	2.6	
34	1.8		118	2.7	
37	2.9		119	3.5	
40	1.4		120	2.6	
41	2.2				
42	3.0				
44	2.5				
45	2.6				
53	0.64				
54	2.6				
55	2.7				
58	2.6				
59	3.1				
60	2.8				
61	2.9				
64	3.0				
66	3.0				
67	2.3				
68	1.3				
70	3.0				
73	1.8				
74	1.9				
77	0.85				
80	1.8				
81	2.6				
82	2.6				
83	1.9				

Consensus statistics

Consensus median, pg/g	2.6
Median all values pg/g	2.6
Consensus mean, pg/g	2.5
Standard deviation, pg/g	0.76
Relative standard deviation, %	31
No. of values reported	67
No. of values removed	5
No. of reported non-detects	0

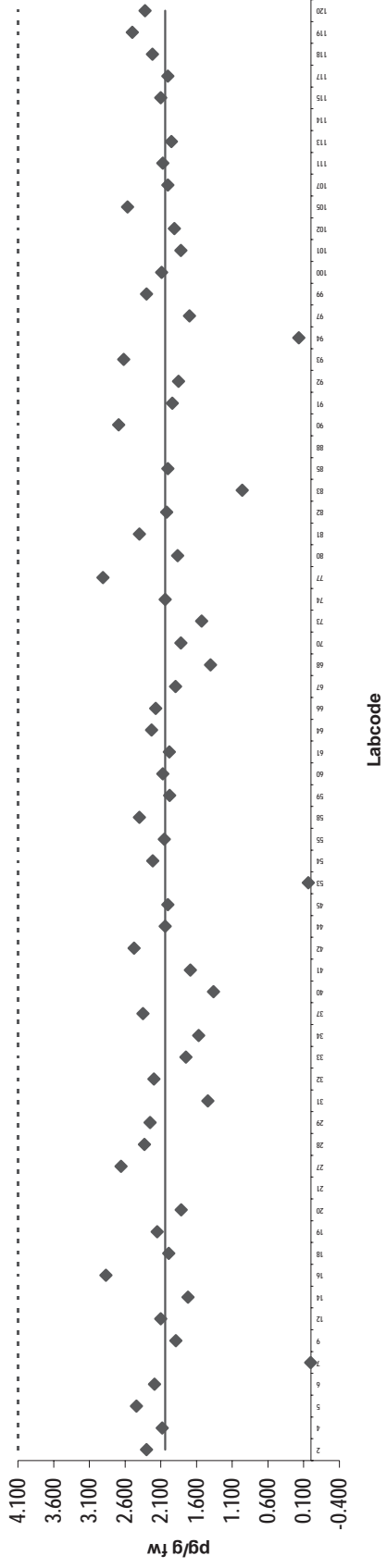
Egg Congener: PCB 126

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	2.3		85	2.0	
4	2.1		88	5.5	Outlier
5	2.4		90	2.7	
6	2.2		91	1.9	
7	0.0020	ND	92	1.9	
9	1.9		93	2.6	
12	2.1		94	0.17	
14	1.7		97	1.7	
16	2.9		99	2.3	
18	2.0		100	2.1	
19	2.2		101	1.8	
20	1.8		102	1.9	
21	4.9	Outlier	105	2.6	
27	2.7		107	2.0	
28	2.3		111	2.1	
29	2.2		113	2.0	
31	1.4		114	14	Outlier
32	2.2		115	2.1	
33	1.8		117	2.0	
34	1.6		118	2.2	
37	2.4		119	2.5	
40	1.4		120	2.3	
41	1.7				
42	2.5				
44	2.0				
45	2.0				
53	0.034				
54	2.2				
55	2.1				
58	2.4				
59	2.0				
60	2.1				
61	2.0				
64	2.2				
66	2.2				
67	1.9				
68	1.4				
70	1.8				
73	1.5				
74	2.0				
77	2.9				
80	1.9				
81	2.4				
82	2.0				
83	0.96				

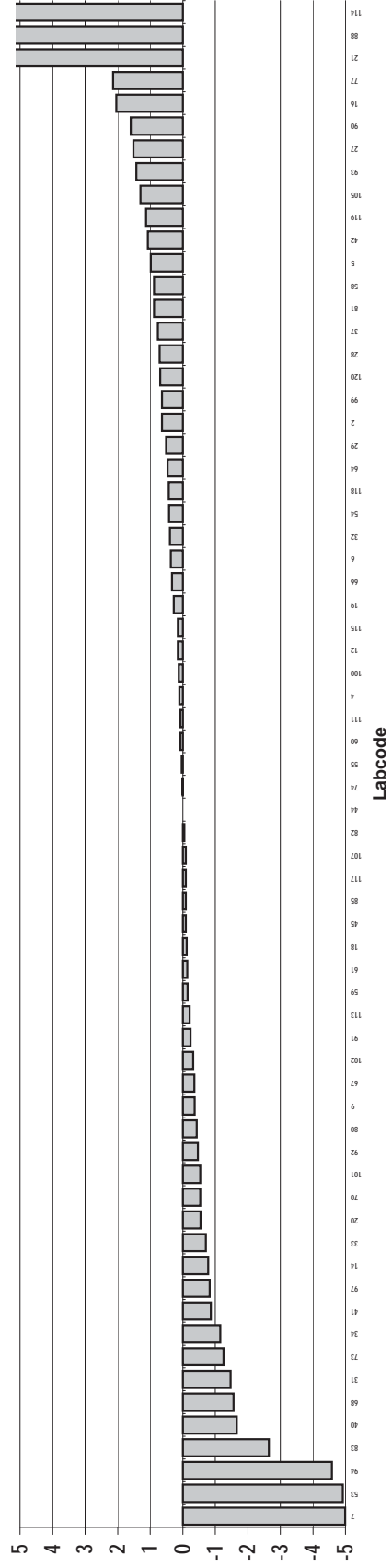
Consensus statistics

Consensus median, pg/g	2.0
Median all values pg/g	2.1
Consensus mean, pg/g	2.0
Standard deviation, pg/g	0.55
Relative standard deviation, %	28
No. of values reported	67
No. of values removed	3
No. of reported non-detects	1

PCB 126



Z-score: PCB 126



Egg

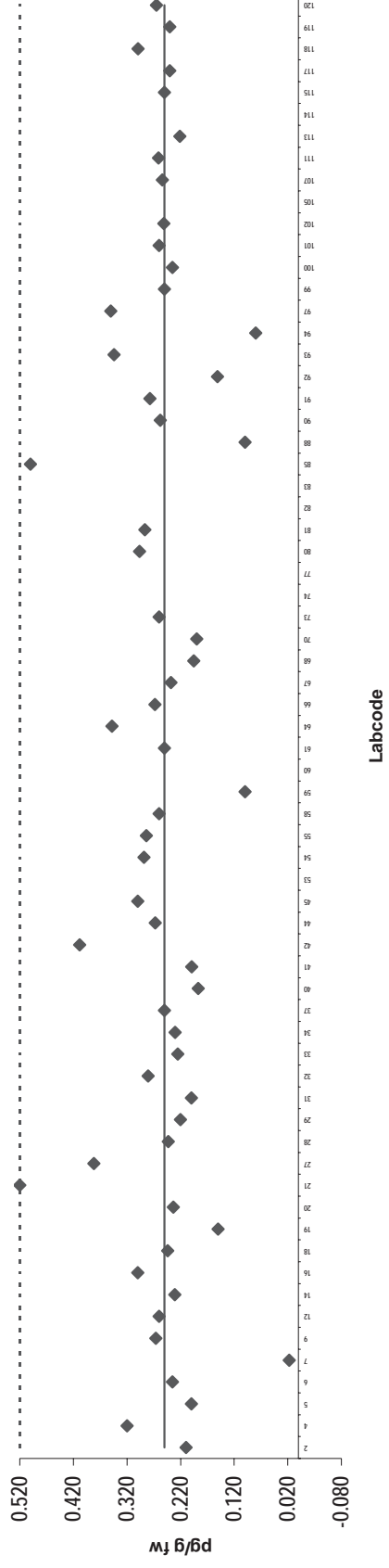
Congener: PCB 169

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.21		85	0.50	ND
4	0.32		88	0.10	ND
5	0.20		90	0.26	
6	0.24	ND	91	0.28	
7	0.017		92	0.15	
9	0.27		93	0.34	
12	0.26		94	0.080	
14	0.23		97	0.35	
16	0.30		99	0.25	
18	0.24		100	0.24	
19	0.15		101	0.26	
20	0.23		102	0.25	
21	0.52		105	0.52	Outlier,ND
27	0.38		107	0.25	
28	0.24		111	0.26	
29	0.22		113	0.22	
31	0.20		114	2.3	Outlier
32	0.28		115	0.25	
33	0.23		117	0.24	
34	0.23		118	0.30	
37	0.25		119	0.24	
40	0.19		120	0.27	
41	0.20				
42	0.41				
44	0.27				
45	0.30				
53	0.60				
54	0.29	Outlier			
55	0.28				
58	0.26				
59	0.10				
60	1.0	ND			
61	0.25	Outlier,ND			
64	0.35				
66	0.27				
67	0.24				
68	0.20				
70	0.19				
73	0.26	ND			
74	0.62	Outlier,ND			
77	3.0	Outlier,ND			
80	0.30				
81	0.29				
82	1.0	Outlier,ND			
83	1.0	Outlier,ND			

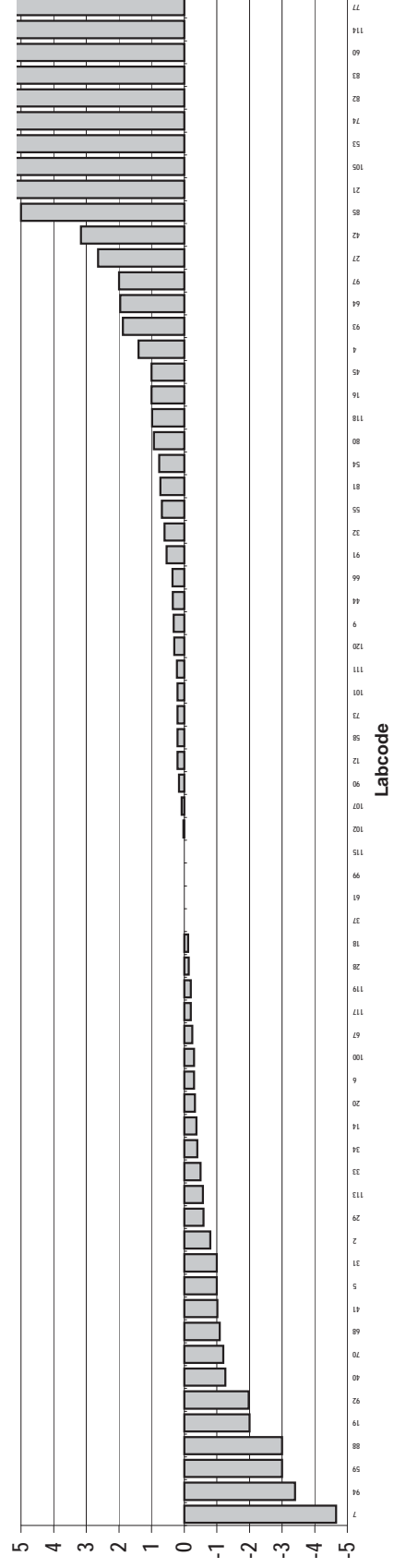
Consensus statistics

Consensus median, pg/g	0.25
Median all values pg/g	0.26
Consensus mean, pg/g	0.25
Standard deviation, pg/g	0.083
Relative standard deviation, %	33
No. of values reported	67
No. of values removed	8
No. of reported non-detects	11

PCB 169



Z-score: PCB 169



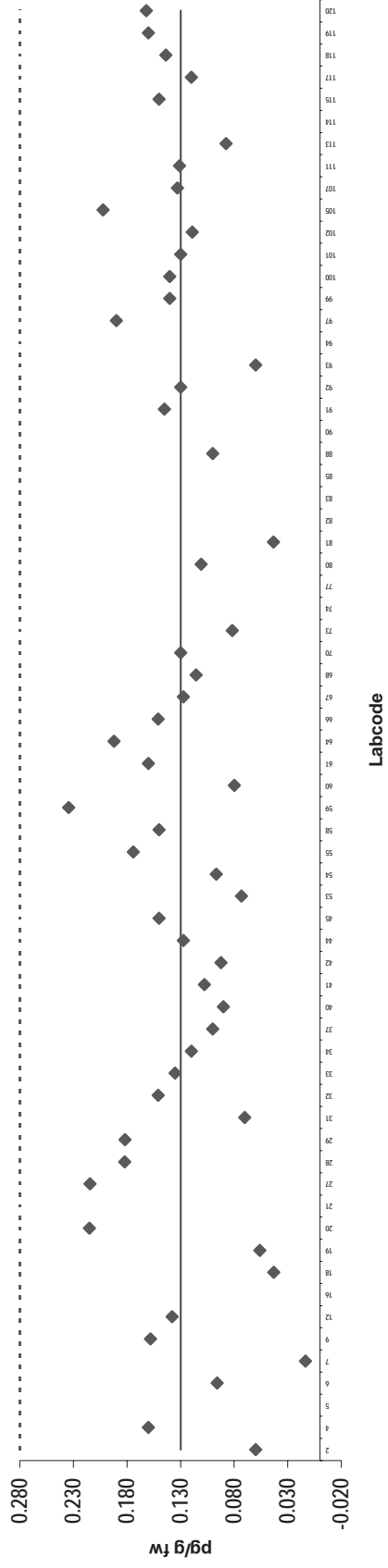
Egg Congener: PCB 81

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.060	ND	88	0.10	
4	0.16		90	0.64	Outlier
5	0.29	Outlier	91	0.15	
6	0.096		92	0.13	ND
7	0.013		93	0.060	ND
9	0.16		94	0.90	Outlier
12	0.14		97	0.19	
16	1.0	Outlier,ND	99	0.14	
18	0.043		100	0.14	
19	0.056		101	0.13	
20	0.22		102	0.12	
21	4.1	Outlier	105	0.20	ND
27	0.21		107	0.13	
28	0.18		111	0.13	
29	0.18		113	0.087	
31	0.070		114	0.78	
32	0.15		115	0.15	Outlier
33	0.14		117	0.12	
34	0.12		118	0.14	
37	0.10		119	0.16	
40	0.090		120	0.16	
41	0.11				
42	0.092				
44	0.13				
45	0.15				
53	0.073				
54	0.097				
55	0.17				
58	0.15				
59	0.23				
60	0.080	ND			
61	0.16				
64	0.19				
66	0.15				
67	0.13				
68	0.12				
70	0.13				
73	0.082				
74	0.38	Outlier			
77	5.3	Outlier			
80	0.11				
81	0.043				
82	1.0	Outlier,ND			
83	1.0	Outlier,ND			
85	0.40	Outlier,ND			

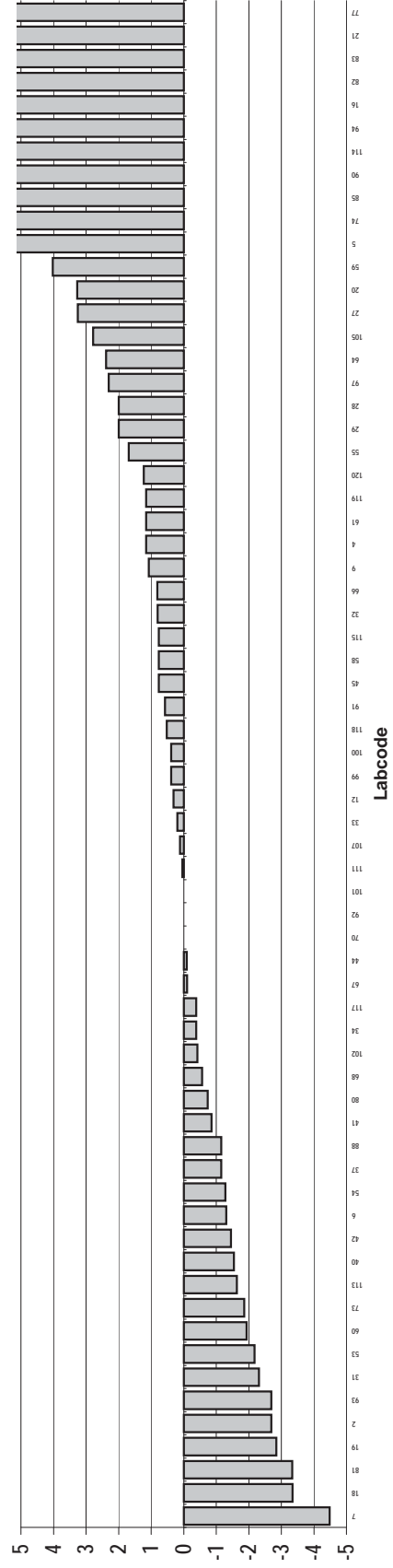
Consensus statistics

Consensus median, pg/g	0.13
Median all values pg/g	0.14
Consensus mean, pg/g	0.13
Standard deviation, pg/g	0.047
Relative standard deviation, %	37
No. of values reported	66
No. of values removed	11
No. of reported non-detects	9

PCB 81



Z-score: PCB 81



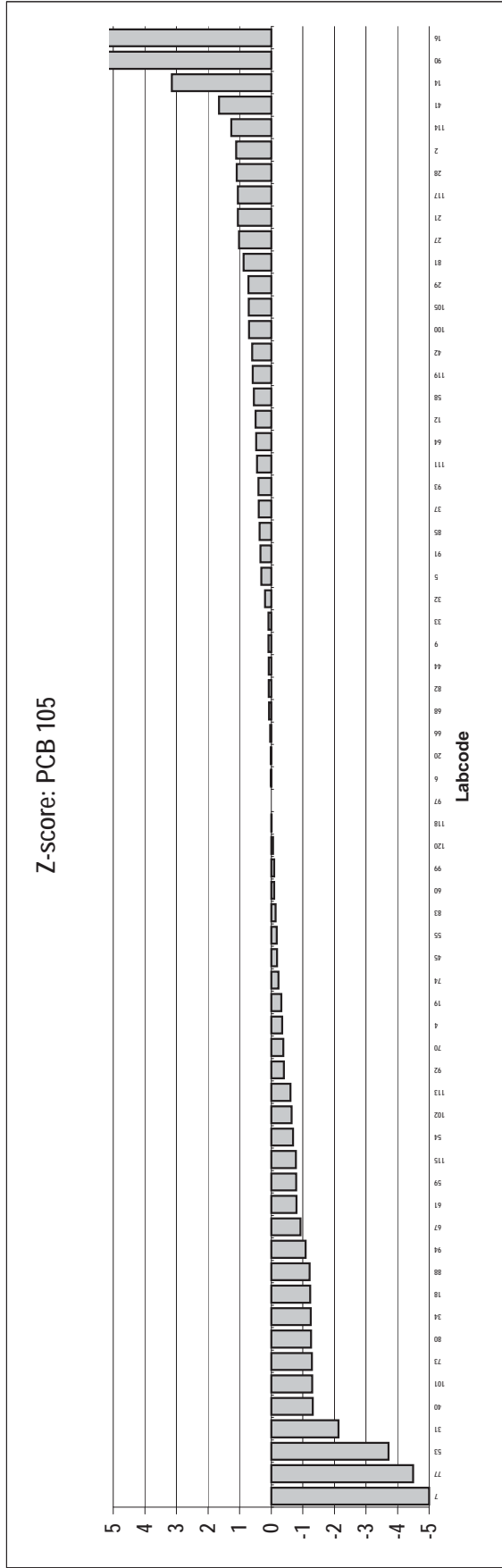
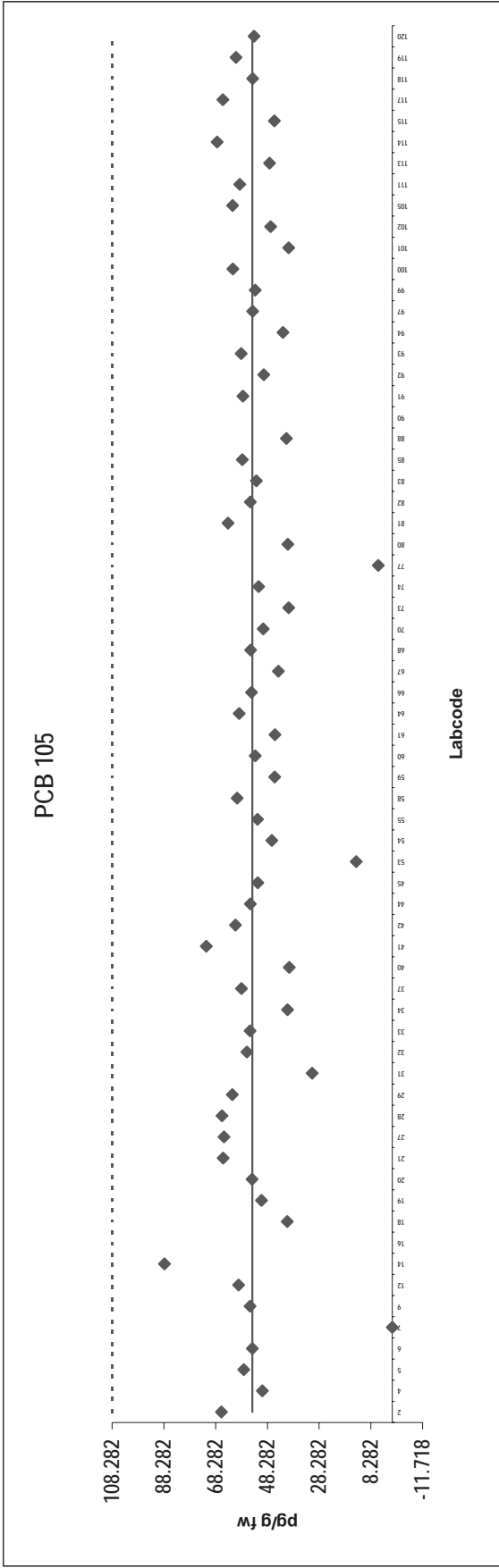
Egg

Congener: PCB 105

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	66		85	58	
4	50		88	41	
5	57		90	122	Outlier
6	54		91	58	
7	0.012		92	50	
9	55		93	58	
12	59		94	42	
14	88		97	54	
16	207		99	53	
18	41	Outlier	100	62	
19	51		101	40	
20	54		102	47	
21	65		105	62	
27	65		111	59	
28	66		113	47	
29	62		114	68	
31	31		115	46	
32	56		117	65	
33	55		118	54	
34	40		119	60	
37	58		120	53	
40	40				
41	72				
42	61				
44	55				
45	52				
53	14				
54	47				
55	52				
58	60				
59	45				
60	53				
61	45				
64	59				
66	54				
67	44				
68	55				
70	50				
73	40				
74	52				
77	5.5				
80	40				
81	63				
82	55				
83	53				

Consensus statistics

Consensus median, pg/g	54
Median all values pg/g	54
Consensus mean, pg/g	52
Standard deviation, pg/g	14
Relative standard deviation, %	27
No. of values reported	66
No. of values removed	2
No. of reported non-detects	0



Egg

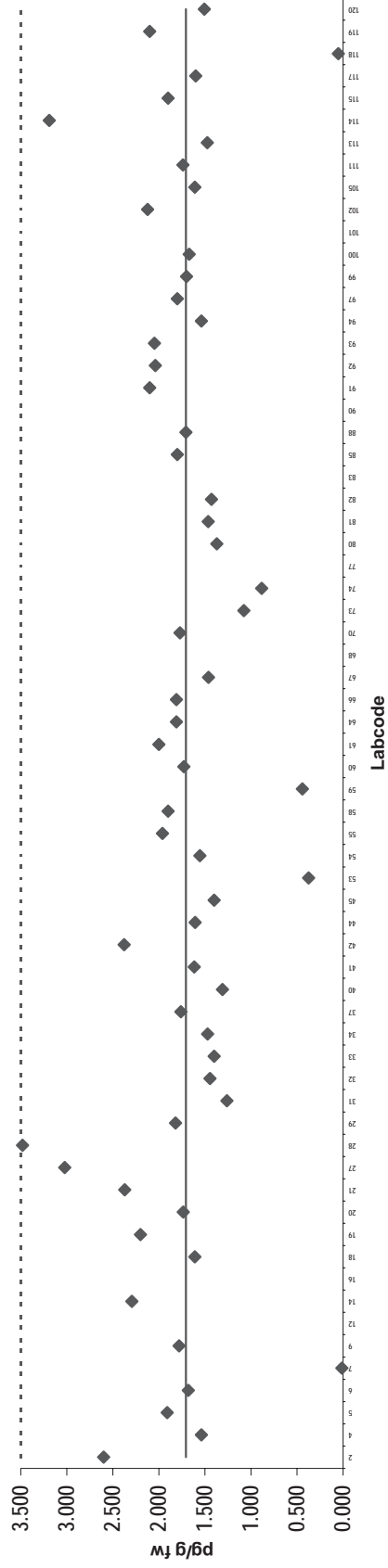
Congener: PCB 114

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	2.6		85	1.8	
4	1.5		88	1.7	
5	1.9		90	9.7	Outlier
6	1.7		91	2.1	ND
7	0.012		92	2.0	
9	1.8		93	2.1	
12	5.5	Outlier	94	1.5	
14	2.3		97	1.8	
16	9.5	Outlier	99	1.7	
18	1.6		100	1.7	
19	2.2		101	10	Outlier,ND
20	1.7		102	2.1	
21	2.4		105	1.6	
27	3.0		111	1.7	
28	3.5	ND	113	1.5	
29	1.8		114	3.2	
31	1.3		115	1.9	
32	1.4		117	1.6	
33	1.4		118	0.050	ND
34	1.5		119	2.1	
37	1.8		120	1.5	
40	1.3				
41	1.6				
42	2.4				
44	1.6				
45	1.4				
53	0.37				
54	1.6				
55	2.0				
58	1.9				
59	0.44				
60	1.7				
61	2.0				
64	1.8				
66	1.8				
67	1.5				
68	4.7	Outlier,ND			
70	1.8				
73	1.1				
74	0.89				
77	275	Outlier			
80	1.4				
81	1.5				
82	1.4				
83	10	Outlier,ND			

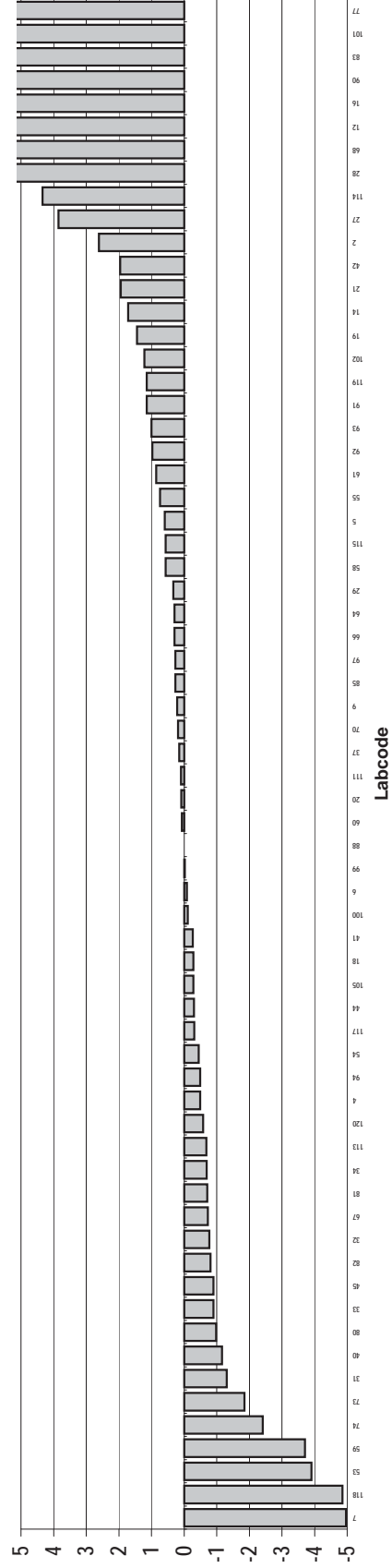
Consensus statistics

Consensus median, pg/g	1.7
Median all values pg/g	1.8
Consensus mean, pg/g	1.7
Standard deviation, pg/g	0.61
Relative standard deviation, %	36
No. of values reported	66
No. of values removed	7
No. of reported non-detects	6

PCB 114



Z-score: PCB 114



Egg

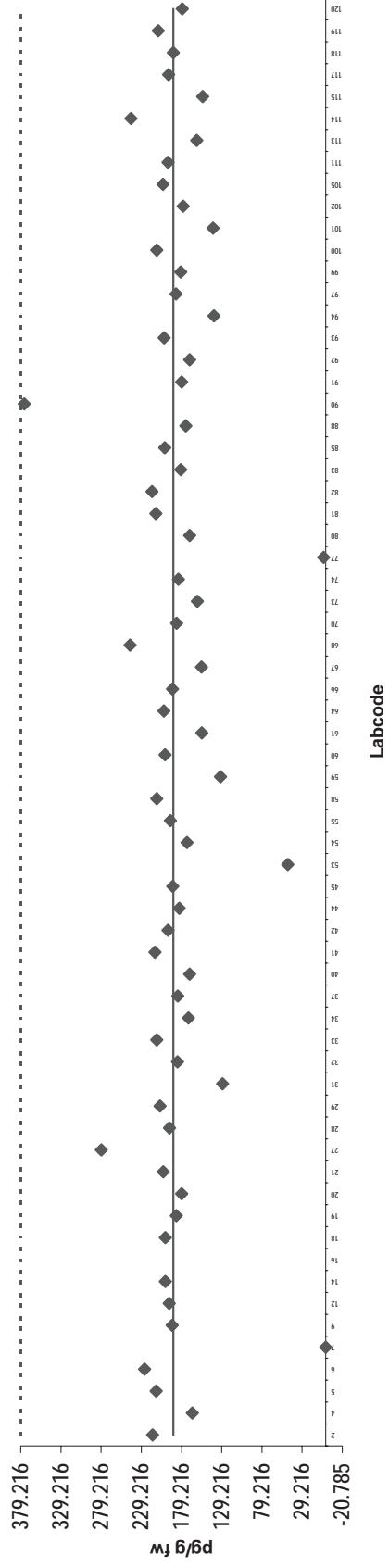
Congener: PCB 118

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	215		85	200	
4	166		88	174	
5	211		90	375	
6	225		91	179	
7	0.0020	ND	92	169	
9	191		93	201	
12	195		94	139	
14	199		97	186	
16	695	Outlier	99	180	
18	199		100	210	
19	186		101	140	
20	179		102	177	
21	202		105	202	
27	279		111	196	
28	194		113	160	
29	206		114	242	
31	128		115	153	
32	184		117	195	
33	210		118	189	
34	171		119	208	
37	184		120	178	
40	169				
41	212				
42	196				
44	182				
45	190				
53	47				
54	172				
55	193				
58	210				
59	131				
60	200				
61	154				
64	201				
66	191				
67	154				
68	243				
70	185				
73	160				
74	183				
77	2.6				
80	169				
81	211				
82	216				
83	180				

Consensus statistics

Consensus median, pg/g	189
Median all values pg/g	190
Consensus mean, pg/g	184
Standard deviation, pg/g	51
Relative standard deviation, %	28
No. of values reported	66
No. of values removed	1
No. of reported non-detects	1

PCB 118



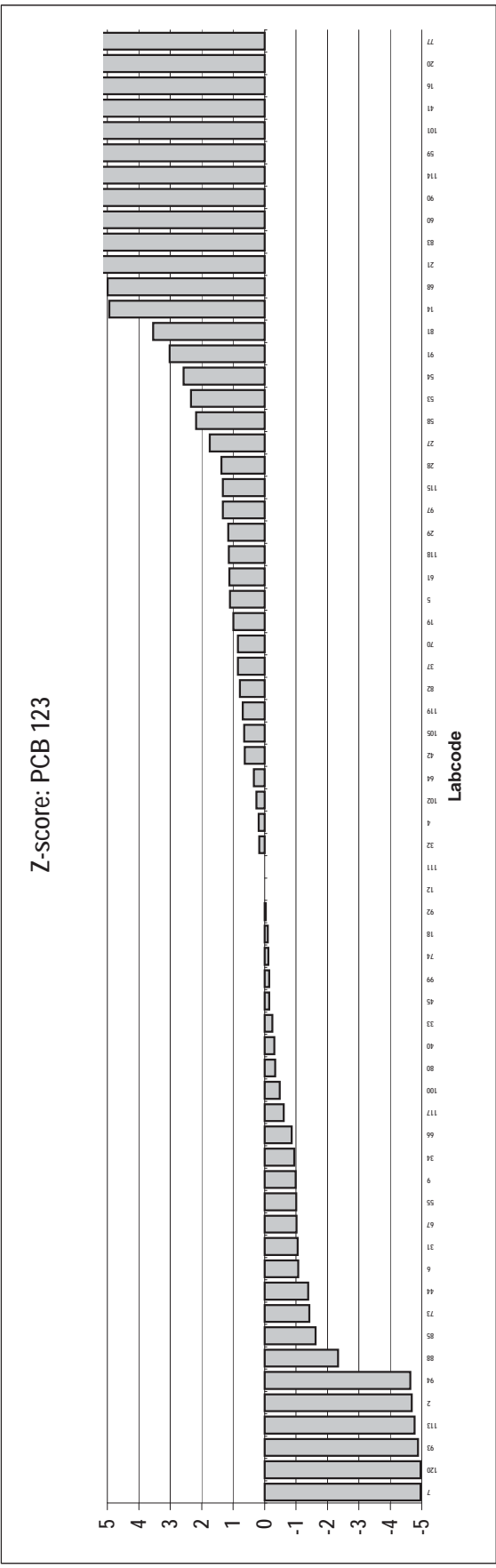
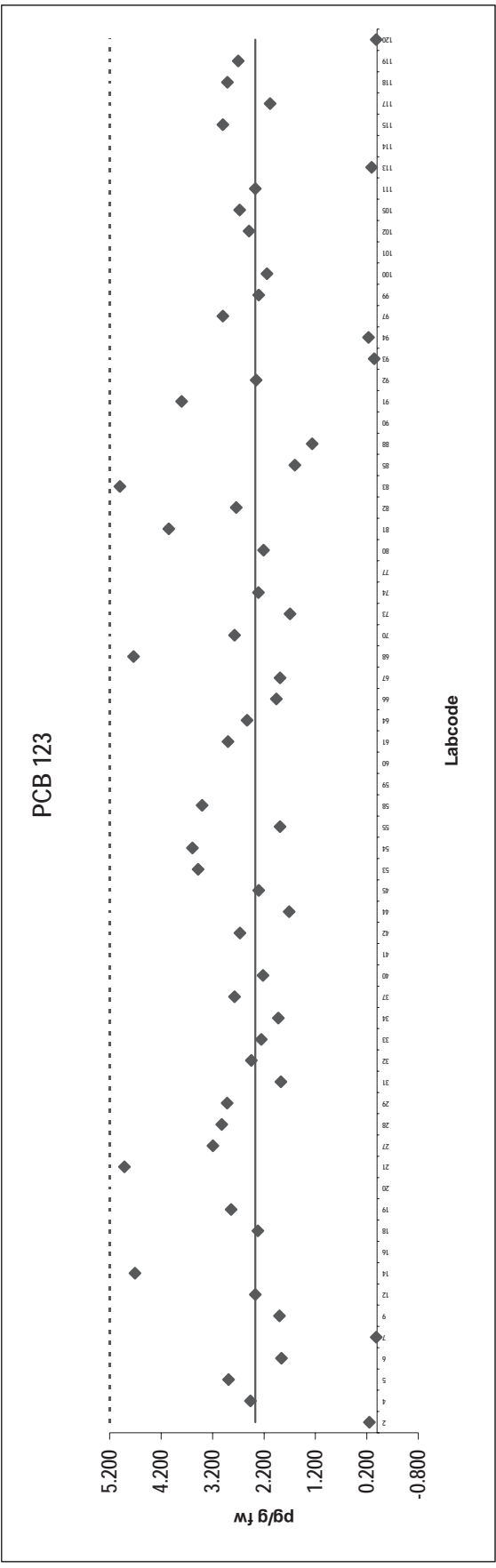
Egg

Congener: PCB 123

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.15	ND	85	1.6	
4	2.5		88	1.3	
5	2.9		90	6.5	Outlier
6	1.9		91	3.8	
7	0.017		92	2.4	
9	1.9		93	0.055	ND
12	2.4		94	0.17	
14	4.7		97	3.0	
16	13	ND	99	2.3	
18	2.3	Outlier	100	2.1	
19	2.8		101	10	Outlier,ND
20	14		102	2.5	
21	4.9	Outlier	105	2.7	
27	3.2		111	2.4	
28	3.0	ND	113	0.11	ND
29	2.9		114	7.9	Outlier
31	1.9		115	3.0	
32	2.4		117	2.1	
33	2.3		118	2.9	
34	1.9		119	2.7	
37	2.8		120	0.019	ND
40	2.2				
41	12				
42	2.7	Outlier			
44	1.7				
45	2.3				
53	3.5				
54	3.6				
55	1.9				
58	3.4				
59	9.7				
60	6.0	Outlier			
61	2.9	Outlier			
64	2.5				
66	2.0				
67	1.9				
68	4.7	ND			
70	2.8				
73	1.7				
74	2.3				
77	74				
80	2.2	Outlier			
81	4.1				
82	2.7				
83	5.0	ND			

Consensus statistics

Consensus median, pg/g	2.4
Median all values pg/g	2.6
Consensus mean, pg/g	2.4
Standard deviation, pg/g	1.1
Relative standard deviation, %	47
No. of values reported	66
No. of values removed	9
No. of reported non-detects	9



Egg

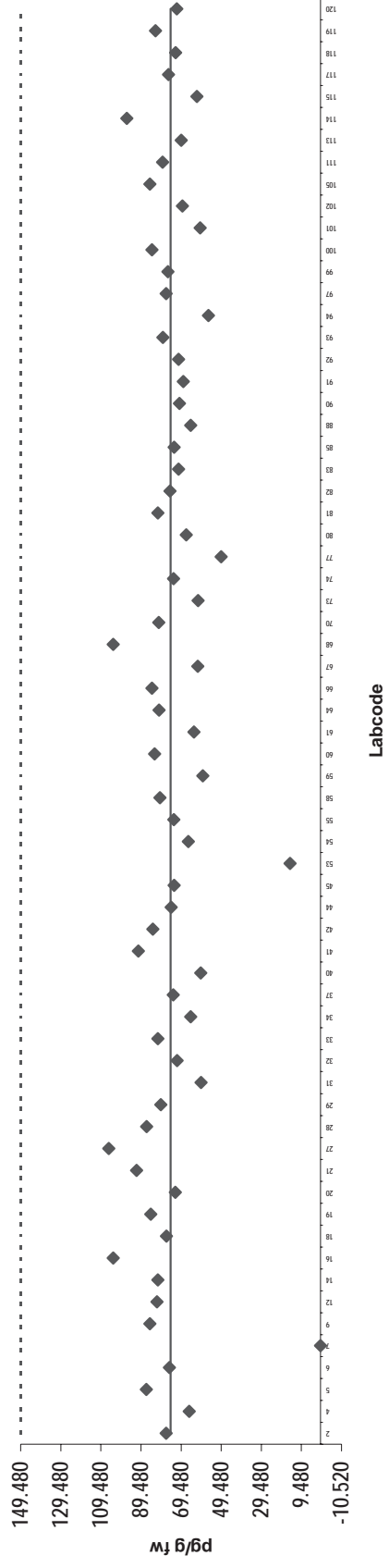
Congener: PCB 156

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	77		85	73	
4	65		88	65	
5	87		90	70	
6	75		91	68	
7	0.0020	ND	92	71	
9	85		93	79	
12	82		94	56	
14	81		97	77	
16	103		99	76	
18	77		100	84	
19	85		101	60	
20	72		102	69	
21	92		105	85	
27	105		111	79	
28	87		113	69	
29	80		114	97	
31	60		115	62	
32	72		117	76	
33	81		118	72	
34	65		119	82	
37	73		120	72	
40	60				
41	91				
42	83				
44	74				
45	73				
53	15				
54	66				
55	73				
58	80				
59	59				
60	83				
61	63				
64	81				
66	84				
67	61				
68	103				
70	81				
73	61				
74	73				
77	49				
80	67				
81	81				
82	75				
83	71				

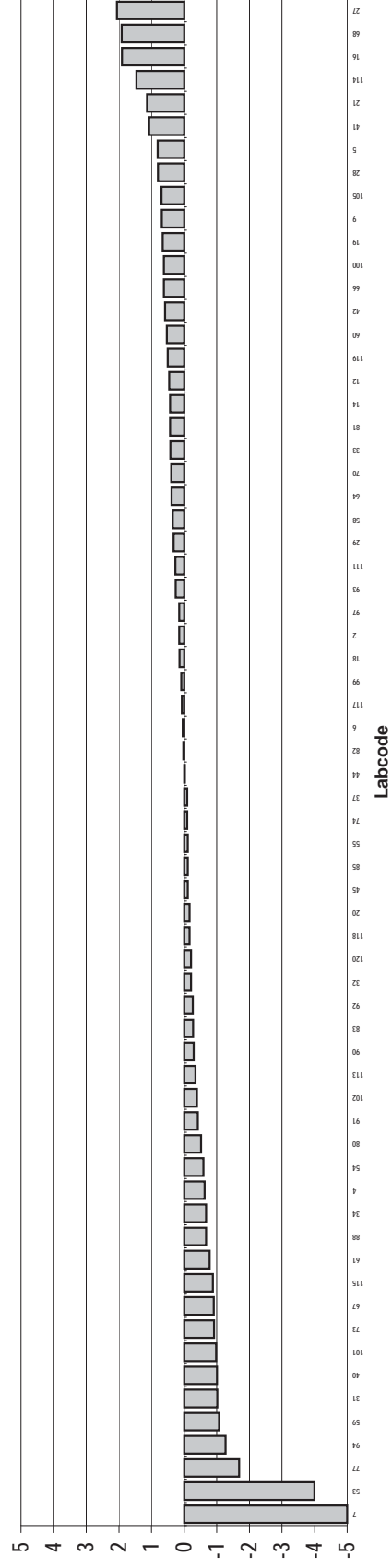
Consensus statistics

Consensus median, pg/g	75
Median all values pg/g	75
Consensus mean, pg/g	73
Standard deviation, pg/g	16
Relative standard deviation, %	22
No. of values reported	66
No. of values removed	0
No. of reported non-detects	1

PCB 156



Z-score: PCB 156



Egg

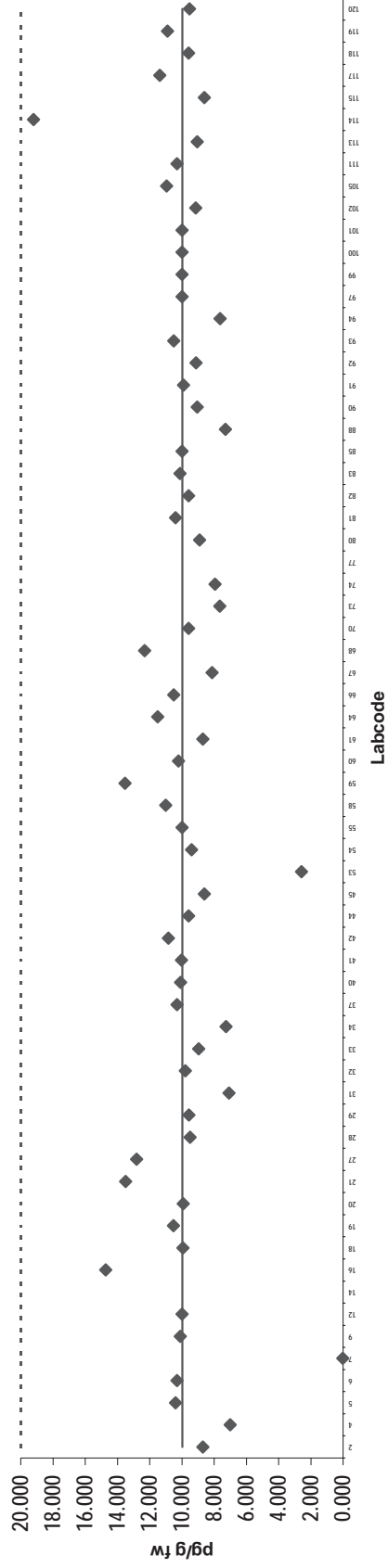
Congener: PCB 157

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	8.7		85	10	
4	7.0		88	7.3	
5	10		90	9.0	
6	10		91	9.9	
7	0.013		92	9.1	
9	10		93	11	
12	10		94	7.6	
14	88	Outlier	97	10	
16	15		99	10	
18	9.9		100	10	
19	11		101	10	ND
20	9.9		102	9.1	
21	14		105	11	
27	13		111	10	
28	9.5		113	9.0	
29	9.6		114	19	
31	7.1		115	8.6	
32	9.8		117	11	
33	9.0		118	9.6	
34	7.3		119	11	
37	10		120	9.5	
40	10				
41	10				
42	11				
44	9.6				
45	8.6				
53	2.6				
54	9.4				
55	10				
58	11				
59	14				
60	10				
61	8.7				
64	12				
66	11				
67	8.1				
68	12				
70	9.6				
73	7.6				
74	8.0				
77	105	Outlier			
80	8.9				
81	10				
82	9.6				
83	10				

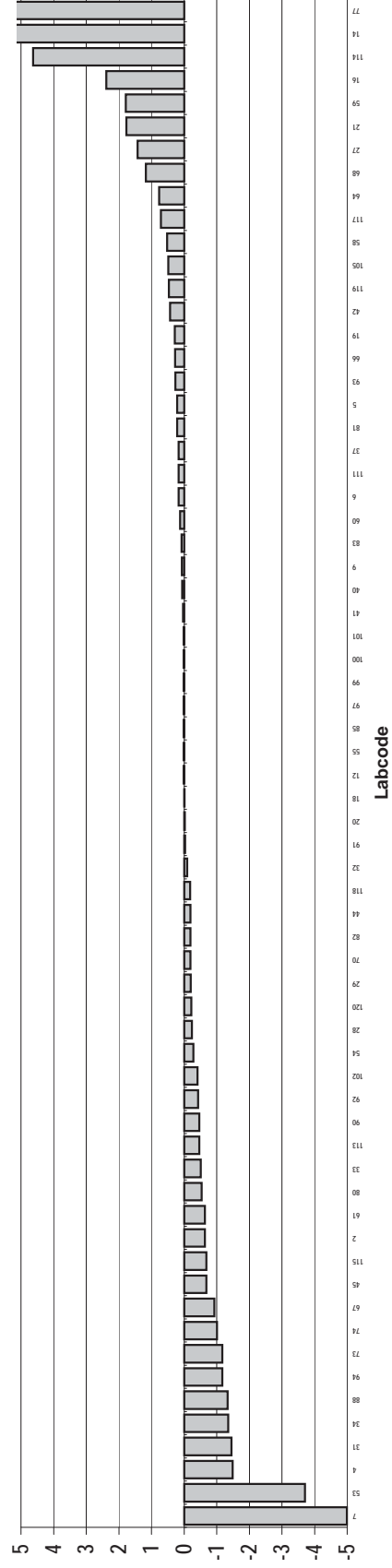
Consensus statistics

Consensus median, pg/g	10
Median all values pg/g	10
Consensus mean, pg/g	10
Standard deviation, pg/g	2.4
Relative standard deviation, %	25
No. of values reported	66
No. of values removed	2
No. of reported non-detects	1

PCB 157



Z-score: PCB 157



Egg

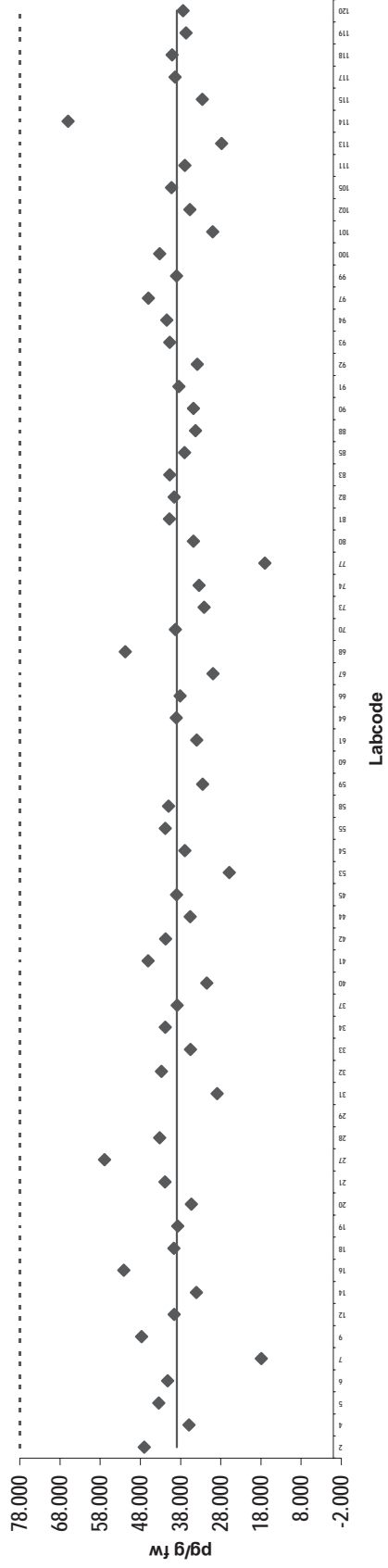
Congener: PCB 167

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	47		85	37	
4	36		88	34	
5	43		90	35	
6	41		91	38	
7	18		92	34	
9	48		93	41	
12	40		94	41	
14	34		97	46	
16	52		99	39	
18	40		100	43	
19	39		101	30	
20	35		102	36	
21	42		105	40	
27	57		111	37	
28	43		113	28	
29	80		114	66	
31	29		115	33	
32	43		117	39	
33	36		118	40	
34	42		119	37	
37	39		120	37	
40	32				
41	46				
42	42				
44	36				
45	39				
53	26				
54	37				
55	42				
58	41				
59	33				
60	115	Outlier			
61	34				
64	39				
66	38				
67	30				
68	52				
70	39				
73	32				
74	33				
77	17				
80	35				
81	41				
82	40				
83	41				

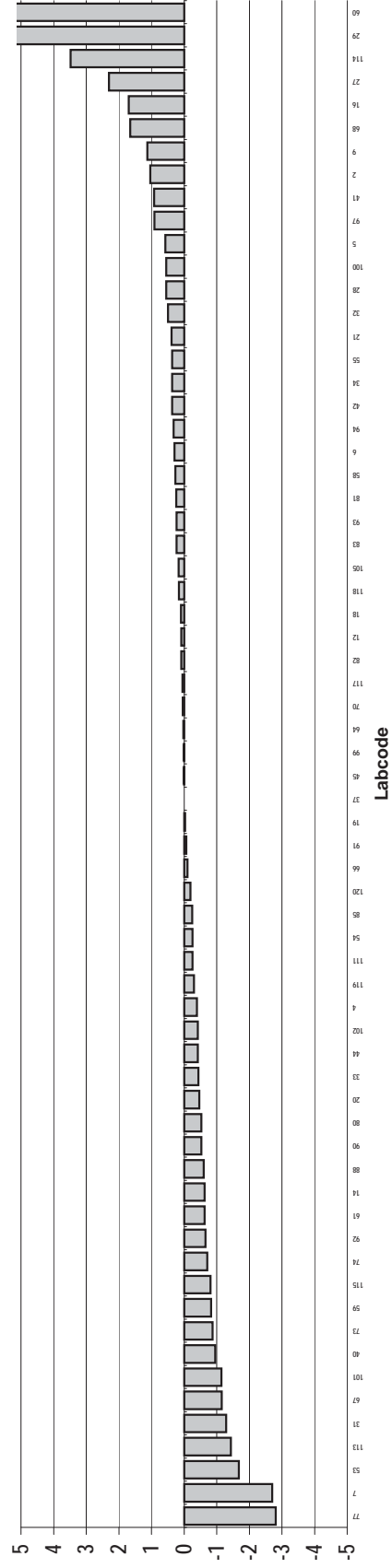
Consensus statistics

Consensus median, pg/g	39
Median all values pg/g	39
Consensus mean, pg/g	38
Standard deviation, pg/g	7.6
Relative standard deviation, %	20
No. of values reported	66
No. of values removed	2
No. of reported non-detects	0

PCB 167



Z-score: PCB 167



Egg Congener: PCB 189

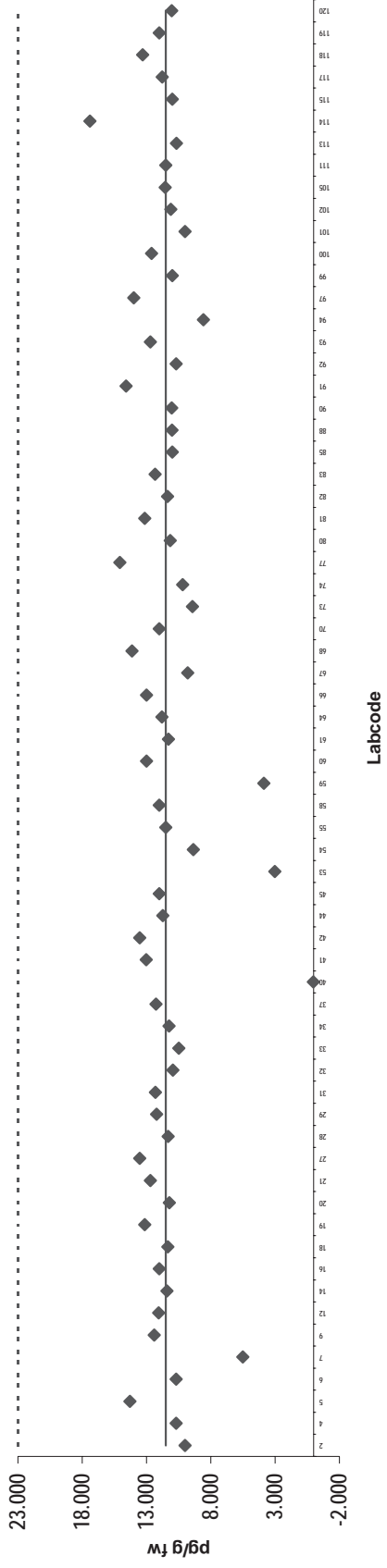
Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	10		85	11	
4	11		88	11	
5	14		90	11	
6	11		91	15	
7	5.5		92	11	
9	12		93	13	
12	12		94	8.6	
14	11		97	14	
16	12		99	11	
18	11		100	13	
19	13		101	10	
20	11		102	11	
21	13		105	12	
27	14		111	12	
28	11		113	11	
29	12		114	17	
31	12		115	11	
32	11		117	12	
33	11		118	13	
34	11		119	12	
37	12		120	11	
40	0.030				
41	13				
42	14				
44	12				
45	12				
53	3.0				
54	9.4				
55	12				
58	12				
59	3.9				
60	13				
61	11				
64	12				
66	13				
67	9.8				
68	14				
70	12				
73	9.4				
74	10				
77	15				
80	11				
81	13				
82	11				
83	12				

ND

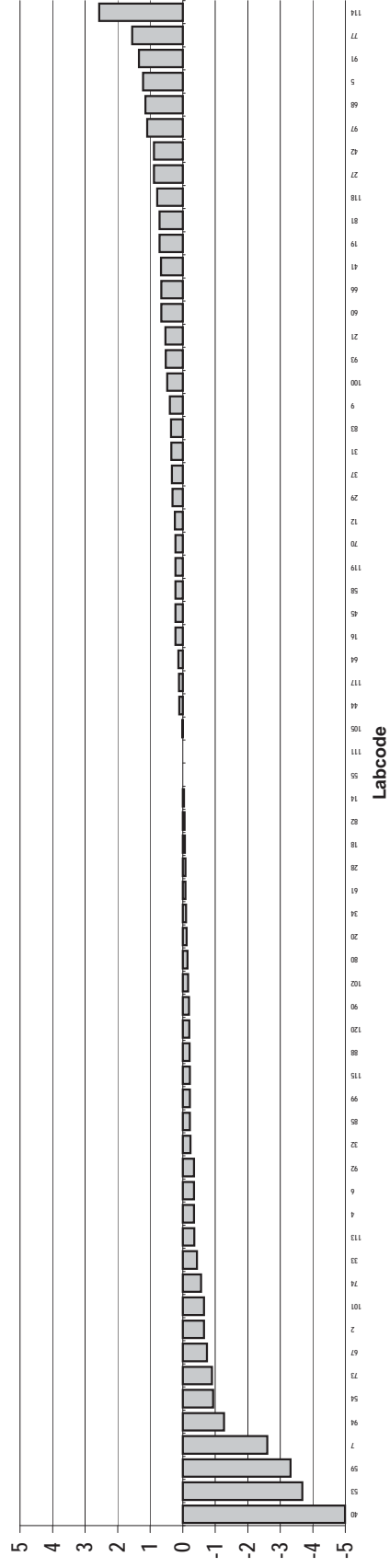
Consensus statistics

Consensus median, pg/g	12
Median all values pg/g	12
Consensus mean, pg/g	11
Standard deviation, pg/g	2.6
Relative standard deviation, %	23
No. of values reported	66
No. of values removed	0
No. of reported non-detects	1

PCB 189



Z-score: PCB 189



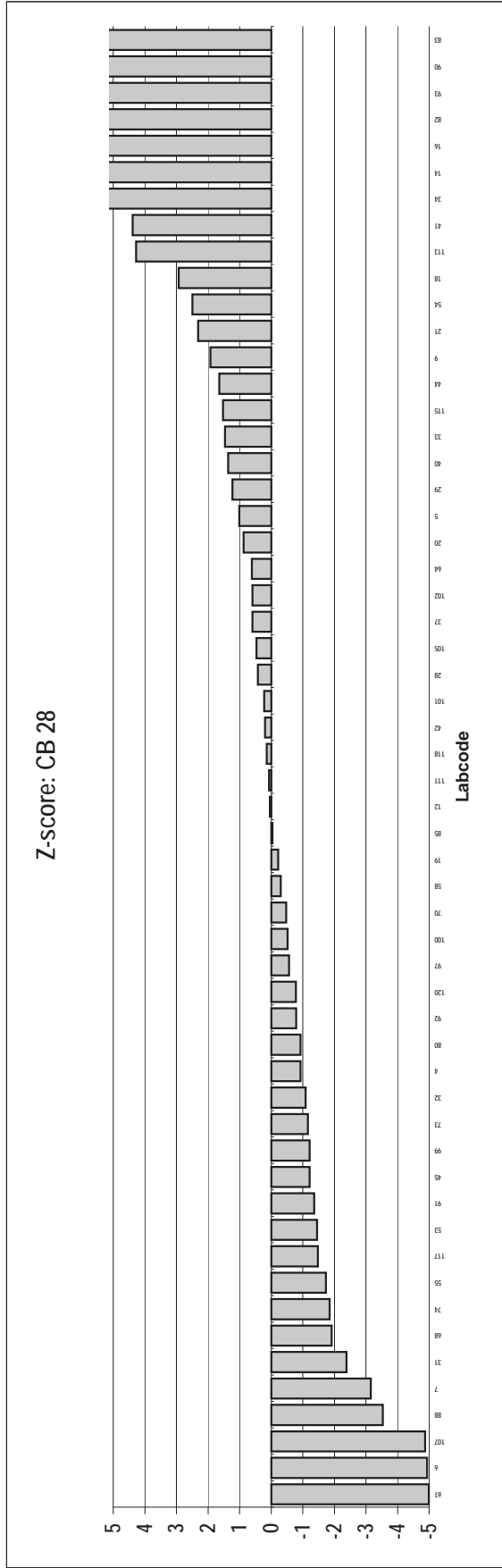
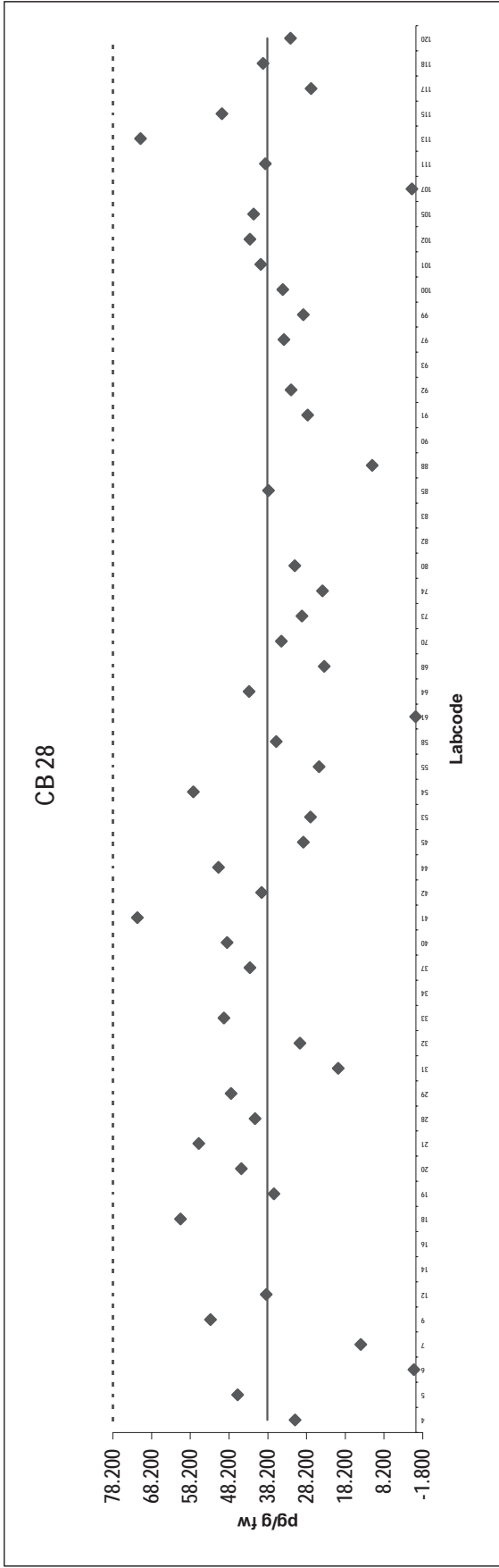
Egg

Congener: CB 28

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	31		100	34	
5	46		101	40	
6	0.50	ND	102	43	
7	14		105	42	
9	53		107	0.98	ND
12	39		111	39	
14	93	Outlier	113	71	
16	100	Outlier,ND	115	50	
18	61		117	27	
19	37		118	39	
20	45		120	32	
21	56				
28	42				
29	48				
31	20				
32	30				
33	50				
34	79				
37	43	Outlier			
40	49				
41	72				
42	40				
44	51				
45	29				
53	27				
54	57				
55	25				
58	36				
61	0.040				
64	43				
68	24				
70	35	ND			
73	29				
74	24				
80	31				
82	100	Outlier,ND			
83	1000	Outlier,ND			
85	38				
88	11				
90	583	Outlier			
91	28				
92	32				
93	127	Outlier,ND			
97	34				
99	29				

Consensus statistics

Consensus median, pg/g	38
Median all values pg/g	39
Consensus mean, pg/g	36
Standard deviation, pg/g	16
Relative standard deviation, %	43
No. of values reported	56
No. of values removed	7
No. of reported non-detects	7



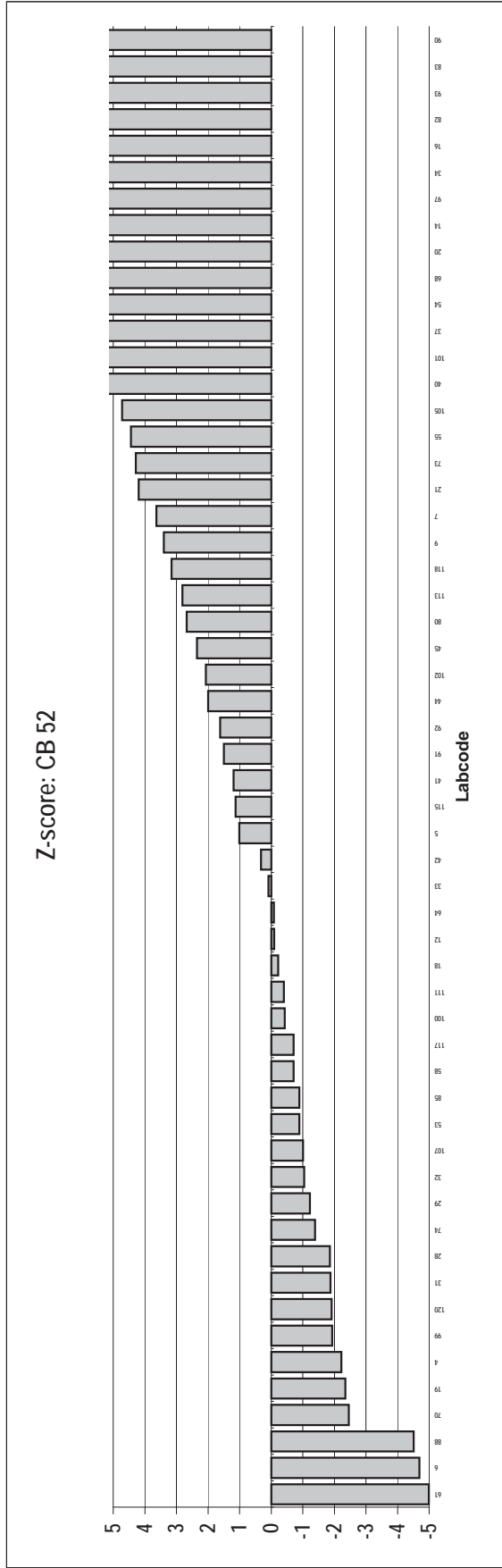
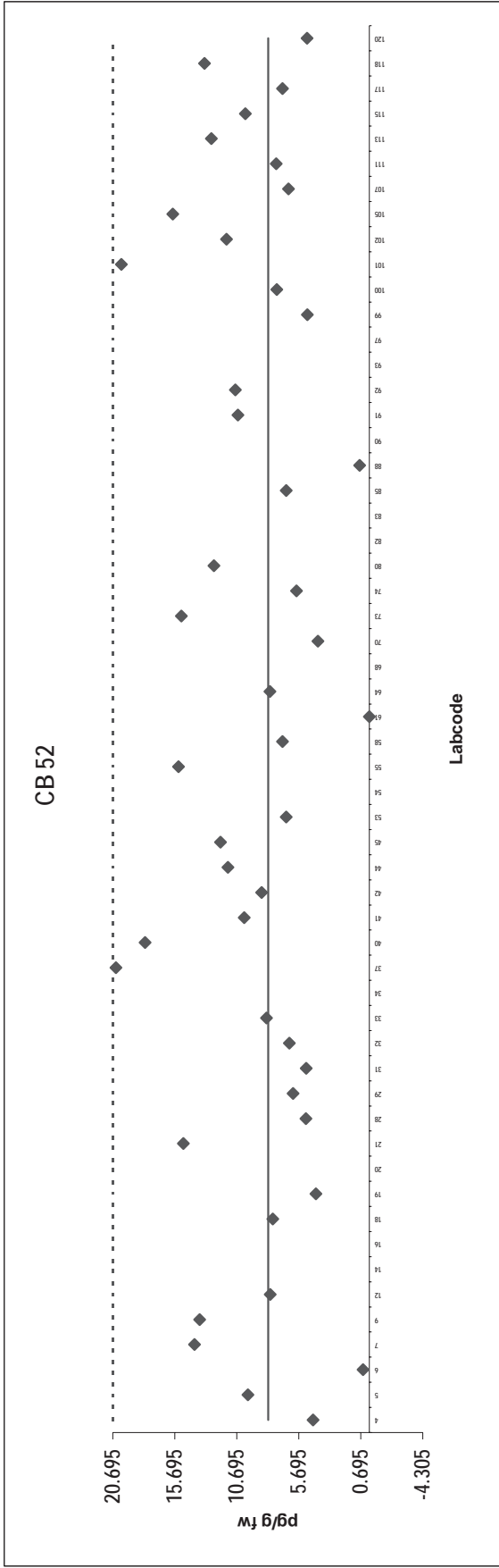
Egg

Congener: CB 52

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	4.5		100	7.5	
5	9.8		101	20	ND
6	0.50	ND	102	12	
7	14		105	16	
9	14		107	6.5	
12	8.0		111	7.5	
14	26	Outlier	113	13	
16	100	Outlier,ND	115	10	
18	7.8		117	7.0	
19	4.3		118	13	
20	24	Outlier	120	5.0	
21	15				
28	5.1				
29	6.2				
31	5.1				
32	6.4				
33	8.3				
34	74	Outlier			
37	20				
40	18				
41	10				
42	8.7				
44	11				
45	12				
53	6.7				
54	21	Outlier			
55	15				
58	7.0				
61	0.010	ND			
64	8.0				
68	24	Outlier,ND			
70	4.2				
73	15				
74	5.9				
80	13				
82	100	Outlier,ND			
83	1000	Outlier,ND			
85	6.7				
88	0.79				
90	1668	Outlier			
91	11				
92	11				
93	270	Outlier			
97	61	Outlier			
99	5.0				

Consensus statistics

Consensus median, pg/g	8.2
Median all values pg/g	10
Consensus mean, pg/g	9.2
Standard deviation, pg/g	4.8
Relative standard deviation, %	52
No. of values reported	56
No. of values removed	11
No. of reported non-detects	7



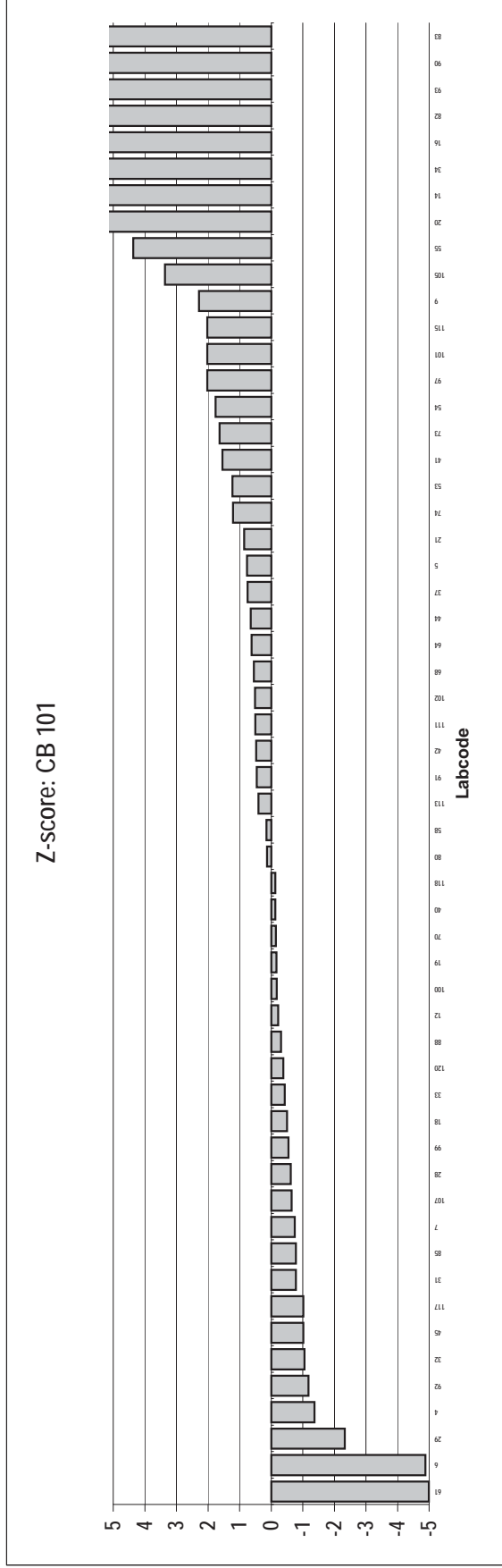
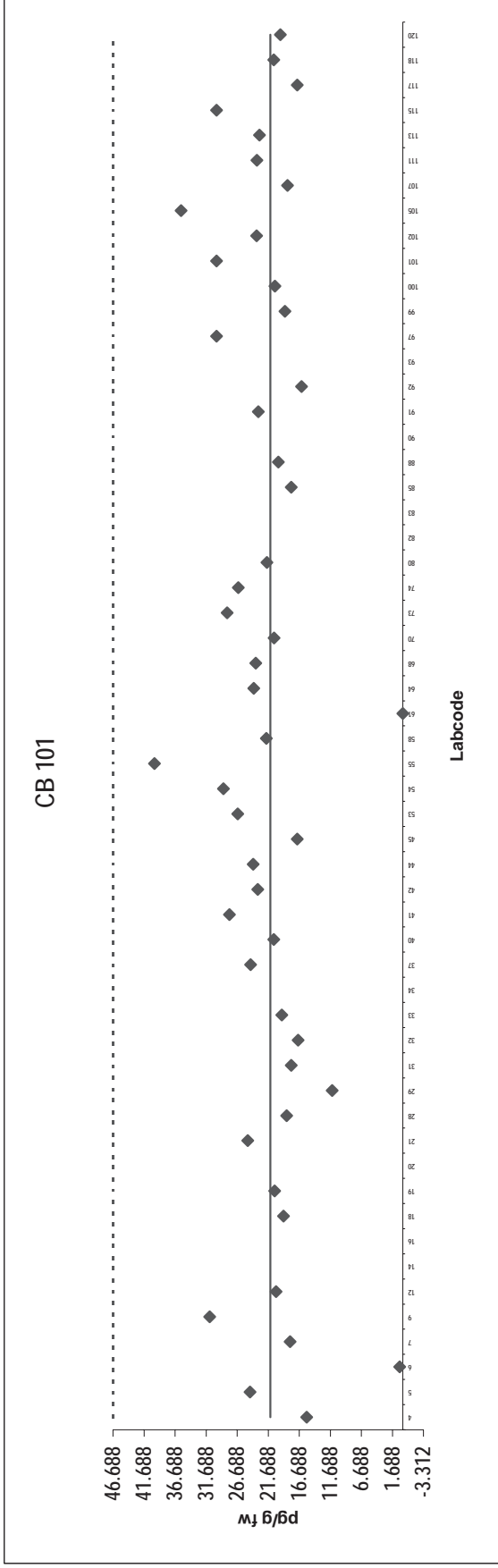
Egg

Congener: CB 101

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	15		100	21	
5	25		101	30	
6	0.50	ND	102	24	
7	18		105	36	
9	31		107	19	
12	20		111	24	
14	54		113	23	
16	100	Outlier	115	30	
18	19	Outlier,ND	117	17	
19	21		118	21	
20	54	Outlier	120	20	
21	25				
28	19				
29	11				
31	18				
32	17				
33	20				
34	60	Outlier			
37	25				
40	21				
41	28				
42	23				
44	24				
45	17				
53	27				
54	29				
55	40				
58	22				
61	0.020				
64	24				
68	24				
70	21	ND			
73	28				
74	27				
80	22				
82	100	Outlier,ND			
83	1000	Outlier,ND			
85	18				
88	20				
90	600	Outlier			
91	23				
92	16				
93	140	Outlier,ND			
97	30				
99	19				

Consensus statistics

Consensus median, pg/g	21
Median all values pg/g	23
Consensus mean, pg/g	22
Standard deviation, pg/g	7.0
Relative standard deviation, %	32
No. of values reported	56
No. of values removed	8
No. of reported non-detects	6



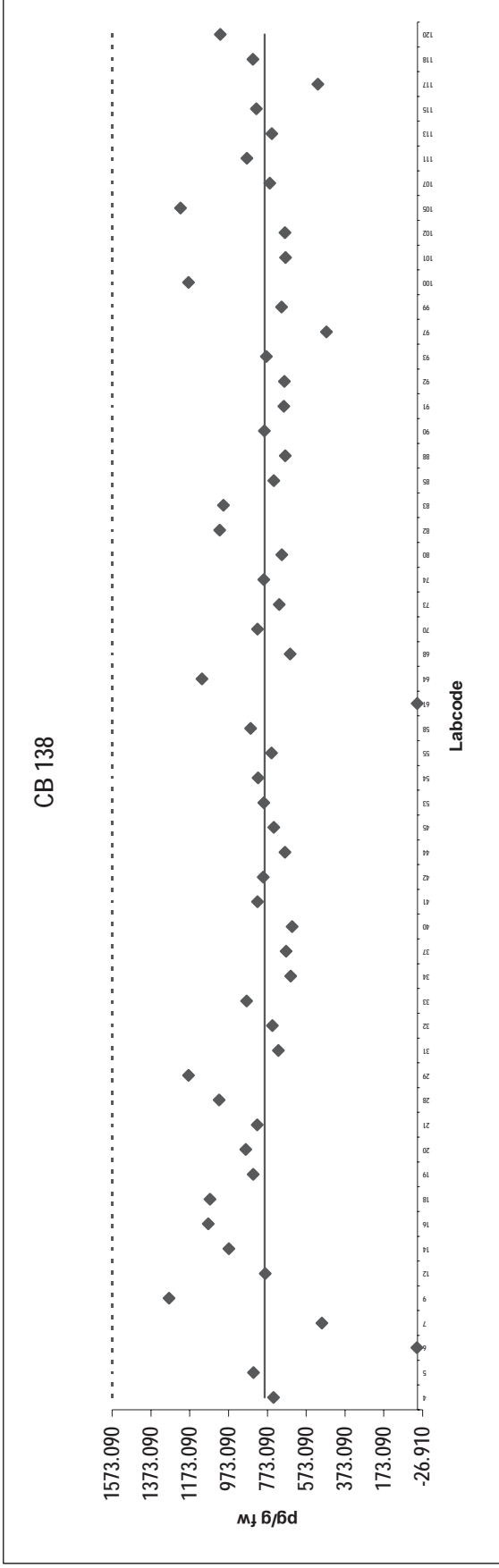
Egg

Congener: CB 138

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	741		100	1180	
5	844		101	680	
6	3.0	ND	102	682	
7	492		105	1221	
9	1280		107	761	
12	784		111	878	
14	972		113	750	
16	1077		115	830	
18	1069		117	513	
19	846		118	847	
20	884		120	1015	
21	826				
28	1021				
29	1179				
31	717				
32	747				
33	880				
34	652				
37	677				
40	646				
41	824				
42	794				
44	682				
45	740				
53	792				
54	821				
55	751				
58	860				
61	0.84				
64	1110				
68	656				
70	824				
73	712				
74	792				
80	698				
82	1018				
83	1000	ND			
85	740				
88	681				
90	789				
91	689				
92	685				
93	778				
97	468				
99	700				

Consensus statistics

Consensus median, pg/g	787
Median all values pg/g	787
Consensus mean, pg/g	791
Standard deviation, pg/g	232
Relative standard deviation, %	29
No. of values reported	56
No. of values removed	0
No. of reported non-detects	2



Egg

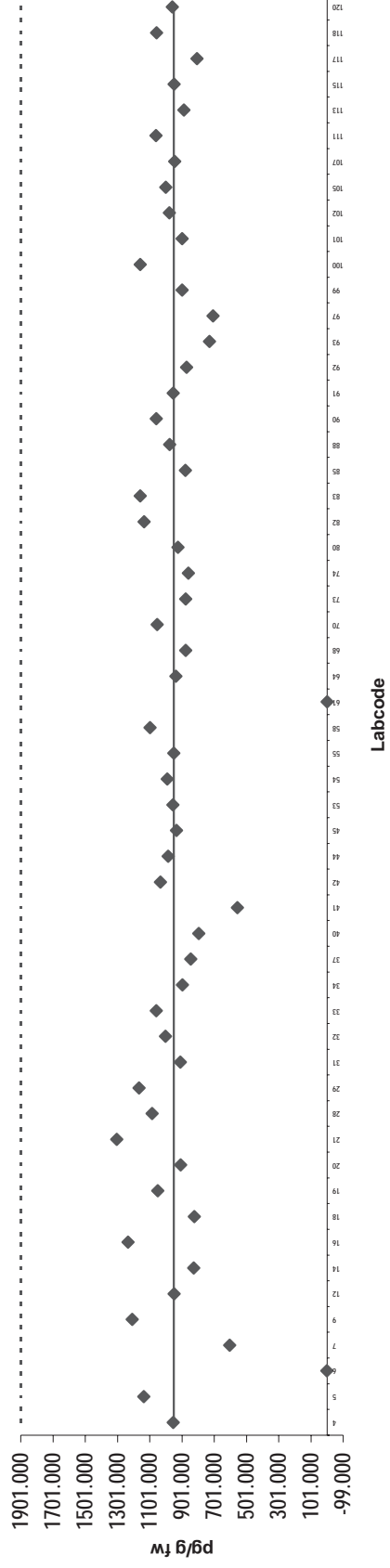
Congener: CB 153

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	955		100	1160	
5	1138		101	900	
6	3.0	ND	102	979	
7	605		105	1002	
9	1210		107	946	
12	949		111	1062	
14	828		113	888	
16	1235		115	950	
18	824		117	808	
19	1051		118	1059	
20	910		120	961	
21	1306				
28	1087				
29	1167				
31	912				
32	1003				
33	1060				
34	899				
37	847				
40	796				
41	557				
42	1035				
44	987				
45	935				
53	957				
54	992				
55	951				
58	1100				
61	1.0				
64	939				
68	877				
70	1054				
73	878				
74	861				
80	926				
82	1136				
83	1160				
85	880				
88	977				
90	1061				
91	955				
92	873				
93	731				
97	708				
99	900				

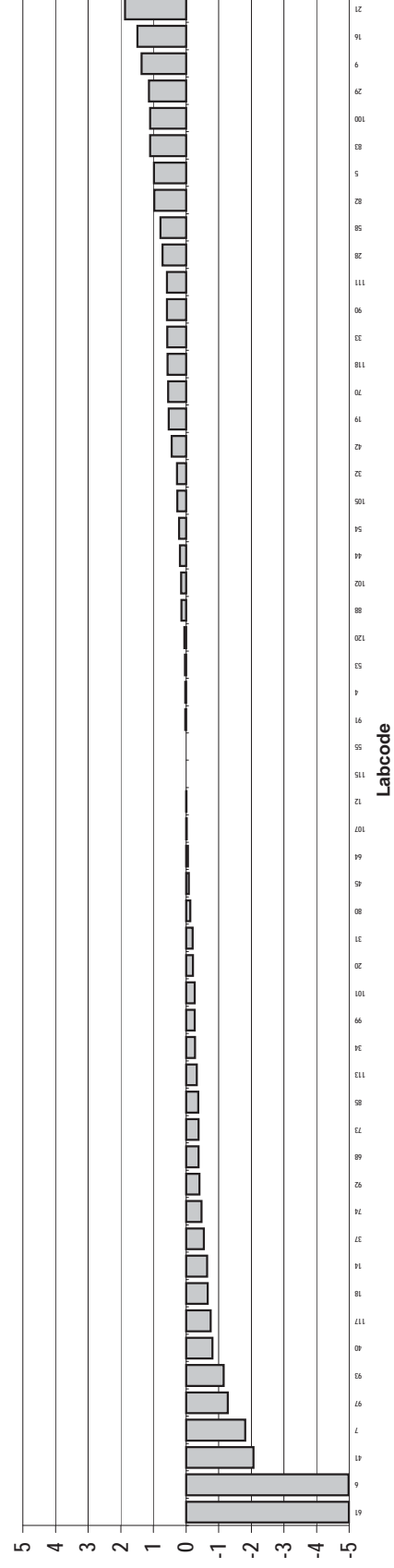
Consensus statistics

Consensus median, pg/g	951
Median all values pg/g	951
Consensus mean, pg/g	927
Standard deviation, pg/g	229
Relative standard deviation, %	25
No. of values reported	56
No. of values removed	0
No. of reported non-detects	1

CB 153



Z-score: CB 153



Egg

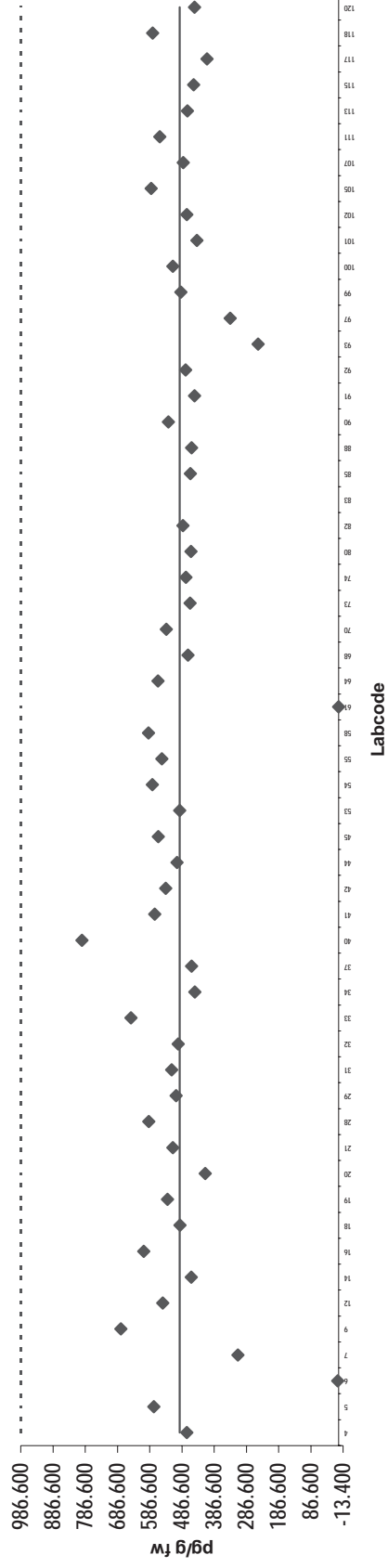
Congener: CB 180

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	471		100	515	
5	574		101	440	
6	3.0	ND	102	472	
7	313		105	582	
9	676		107	482	
12	546		111	555	
14	458		113	469	
16	605		115	450	
18	493		117	409	
19	531		118	578	
20	414		120	448	
21	515				
28	589				
29	504				
31	518				
32	498				
33	645				
34	446				
37	457				
40	796				
41	571				
42	537				
44	502				
45	560				
53	494				
54	578				
55	549				
58	590				
61	0.47				
64	561				
68	467				
70	535				
73	462				
74	474				
80	458				
82	483				
83	1000	Outlier,ND			
85	460				
88	457				
90	528				
91	447				
92	475				
93	250				
97	337				
99	490				

Consensus statistics

Consensus median, pg/g	493
Median all values pg/g	493
Consensus mean, pg/g	486
Standard deviation, pg/g	127
Relative standard deviation, %	26
No. of values reported	56
No. of values removed	1
No. of reported non-detects	2

CB 180



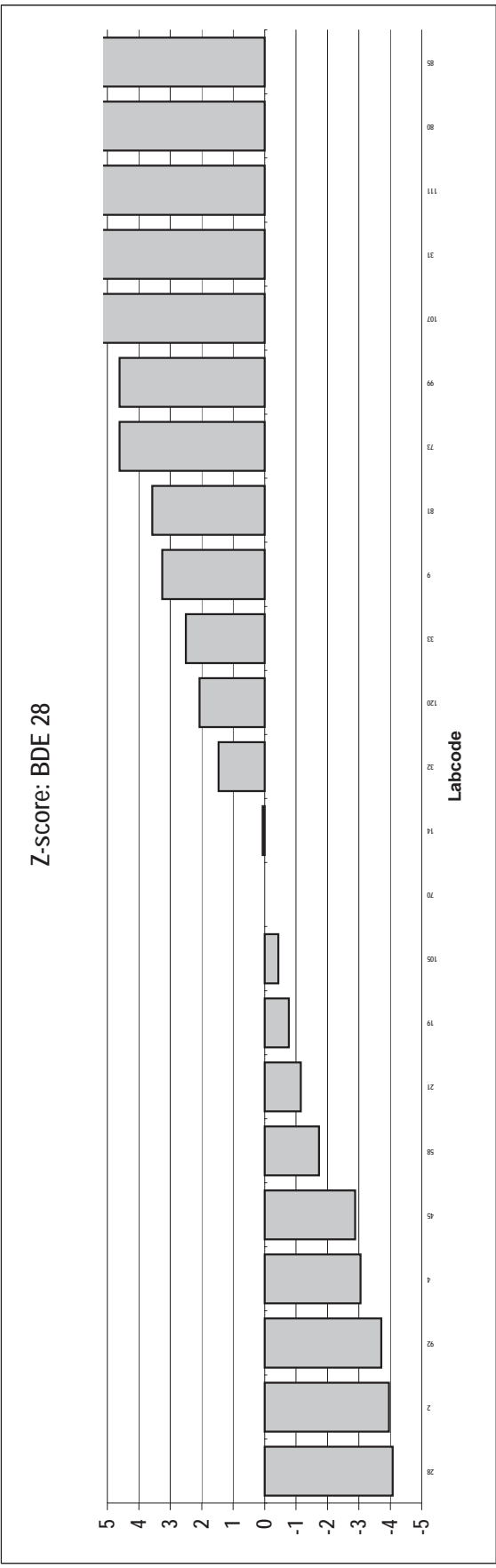
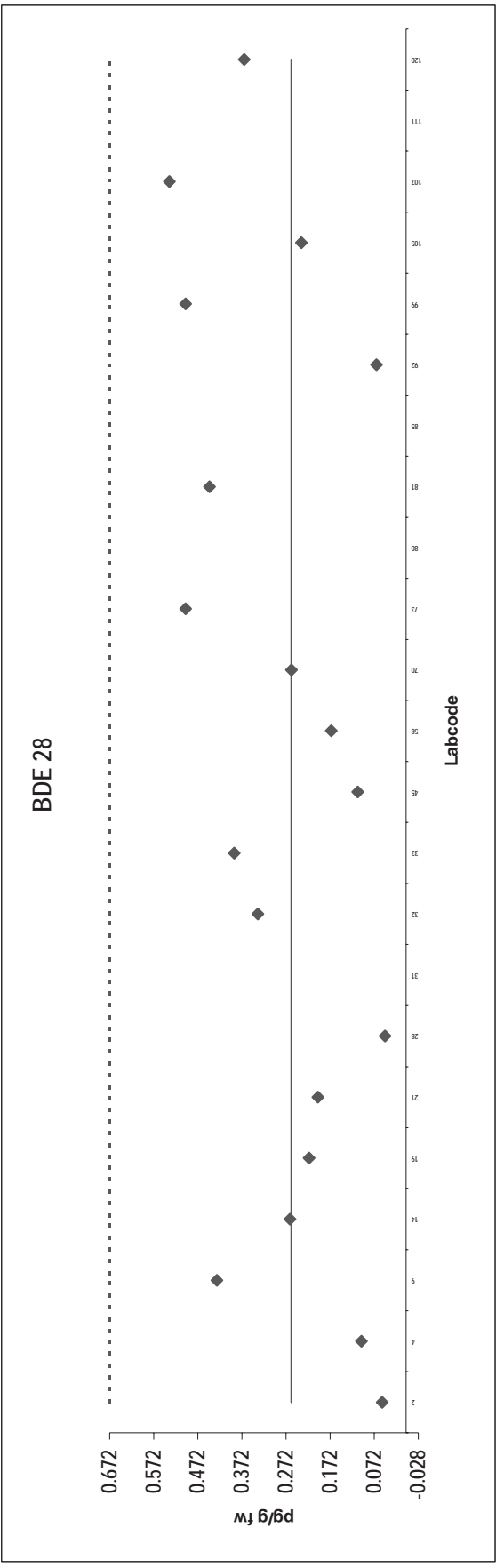
Egg

Congener: BDE 28

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	0.054	ND			
4	0.10				
9	0.43				
14	0.26				
19	0.22				
21	0.20				
28	0.048				
31	0.90	Outlier			
32	0.34				
33	0.39				
45	0.11				
58	0.17				
70	0.26				
73	0.50	ND			
80	1.3	Outlier			
81	0.45				
85	3.0	Outlier,ND			
92	0.067	ND			
99	0.50	ND			
105	0.24	ND			
107	0.54	ND			
111	1.0	Outlier,ND			
120	0.37				

Consensus statistics

Consensus median, pg/g	0.26
Median all values pg/g	0.34
Consensus mean, pg/g	0.28
Standard deviation, pg/g	0.16
Relative standard deviation, %	59
No. of values reported	23
No. of values removed	4
No. of reported non-detects	8



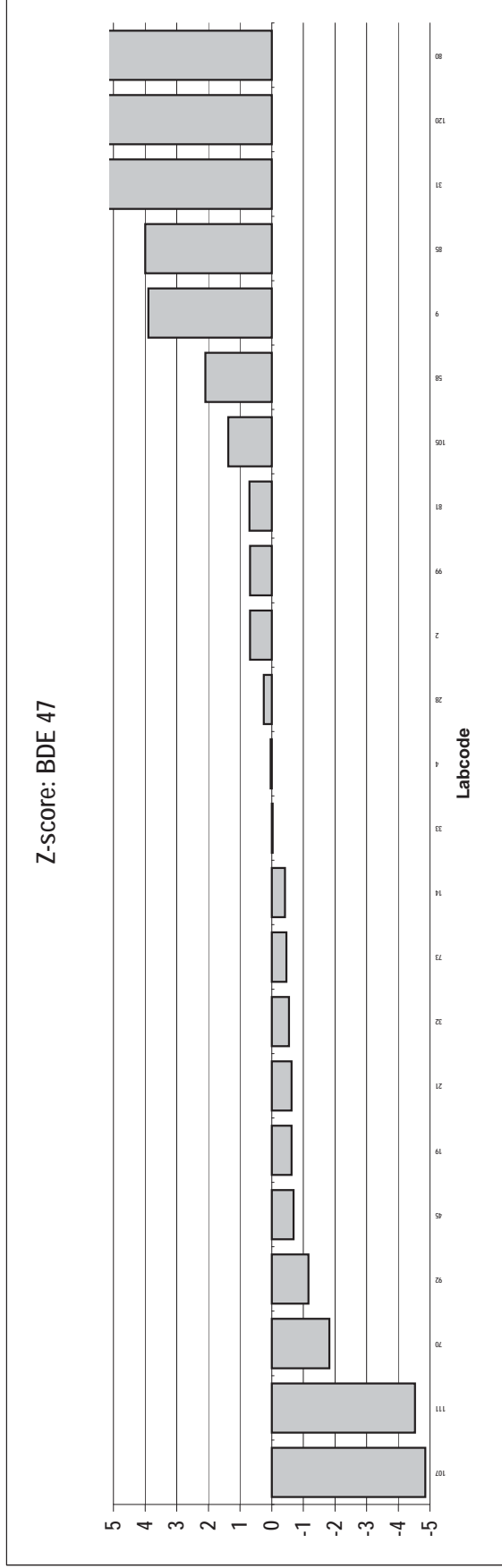
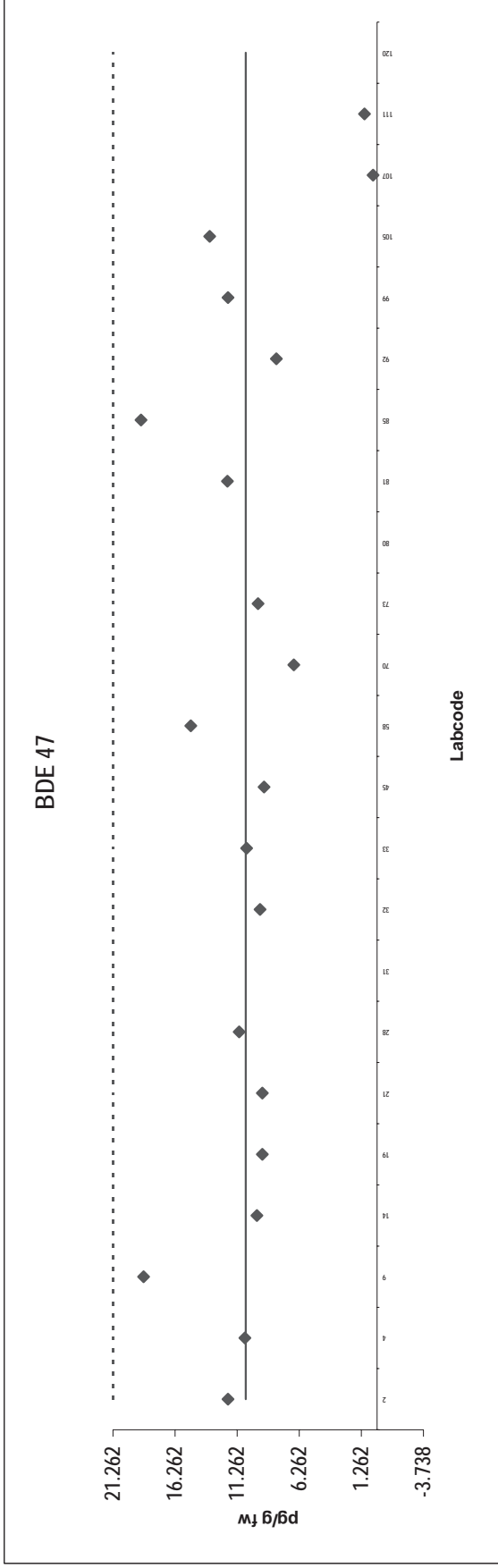
Egg

Congener: BDE 47

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	12				
4	11				
9	19				
14	9.7				
19	9.2				
21	9.2				
28	11				
31	26				
32	9.4				
33	11	Outlier			
45	9.1				
58	15				
70	6.7				
73	9.6				
80	49				
81	12	Outlier			
85	19				
92	8.1				
99	12				
105	13				
107	0.31	ND			
111	1.0	ND			
120	30	Outlier			

Consensus statistics

Consensus median, pg/g	11
Median all values pg/g	11
Consensus mean, pg/g	10
Standard deviation, pg/g	4.6
Relative standard deviation, %	44
No. of values reported	23
No. of values removed	3
No. of reported non-detects	2

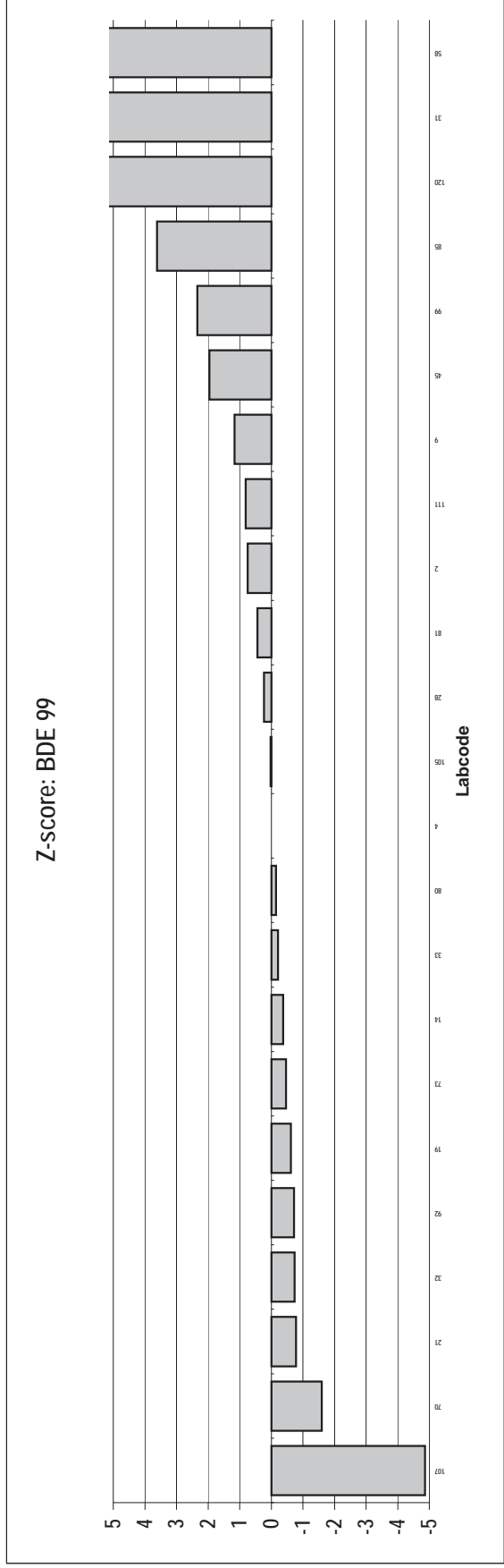
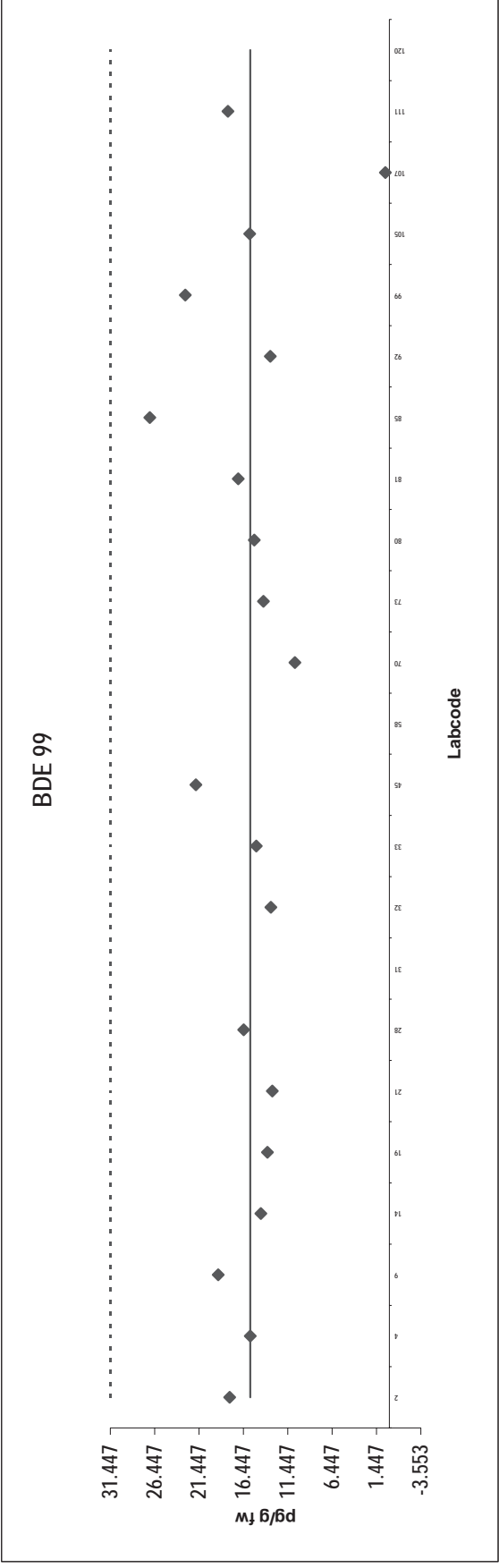


Egg
Congener: BDE 99

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	18				
4	16				
9	19				
14	14				
19	14				
21	13				
28	16				
31	37	Outlier			
32	13				
33	15				
45	22				
58	40	Outlier			
70	11				
73	14				
80	15				
81	17				
85	27				
92	13				
99	23				
105	16				
107	0.44	ND			
111	18				
120	32	Outlier			

Consensus statistics

Consensus median, pg/g	16
Median all values pg/g	16
Consensus mean, pg/g	16
Standard deviation, pg/g	5.3
Relative standard deviation, %	33
No. of values reported	23
No. of values removed	3
No. of reported non-detects	1

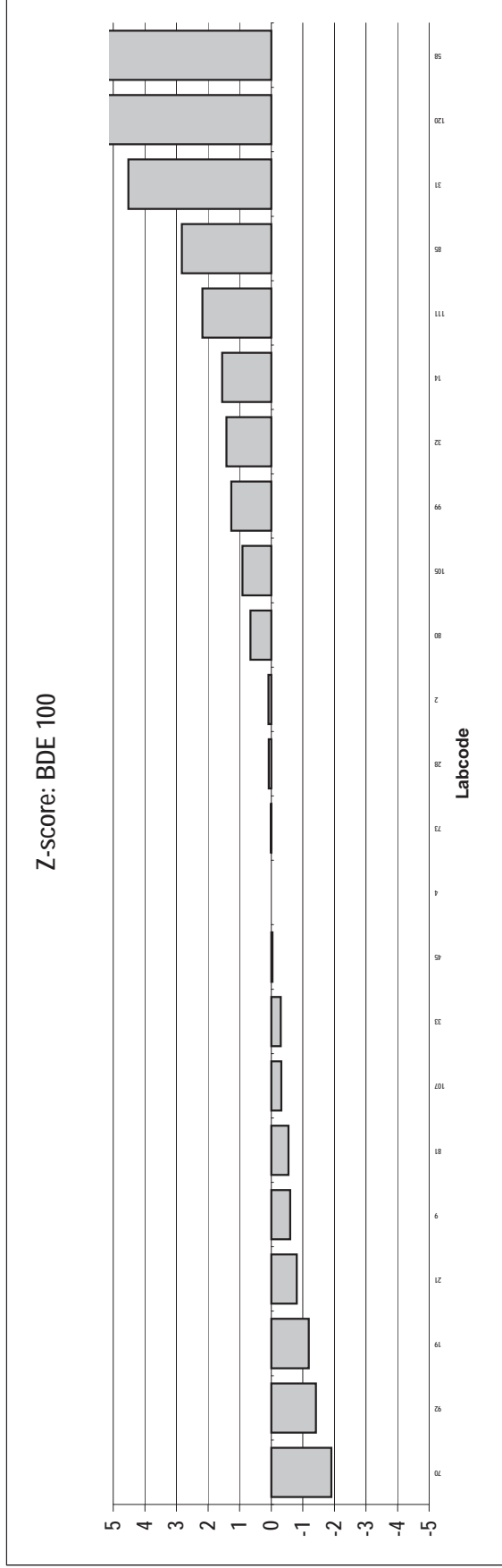
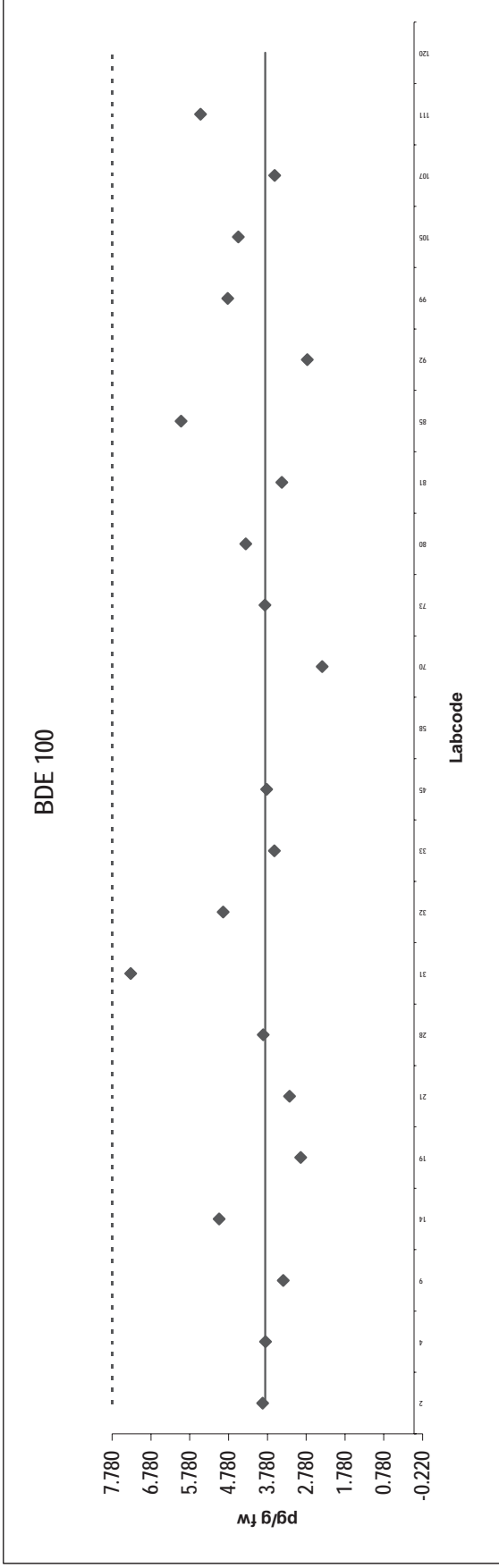


Egg
Congener: BDE 100

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	3.9				
4	3.8				
9	3.4				
14	5.0				
19	2.9				
21	3.2				
28	3.9				
31	7.3				
32	4.9				
33	3.6				
45	3.8				
58	10	Outlier			
70	2.4				
73	3.8				
80	4.3				
81	3.4				
85	6.0	ND			
92	2.8				
99	4.8				
105	4.5				
107	3.6				
111	5.5				
120	7.9	Outlier			

Consensus statistics

Consensus median, pg/g	3.8
Median all values pg/g	3.9
Consensus mean, pg/g	4.1
Standard deviation, pg/g	1.2
Relative standard deviation, %	28
No. of values reported	23
No. of values removed	2
No. of reported non-detects	1



Egg

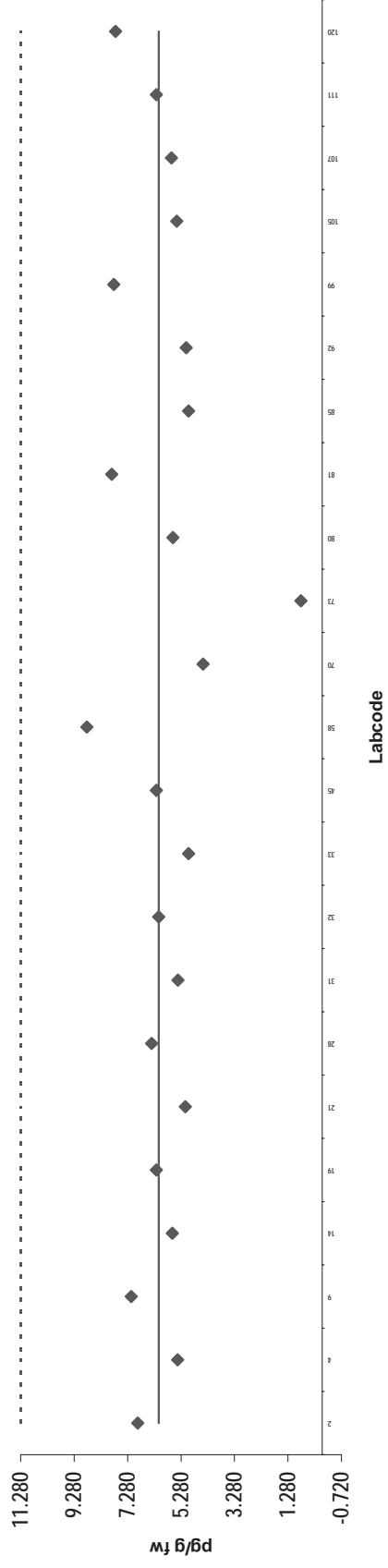
Congener: BDE 153

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	6.9				
4	5.4				
9	7.1				
14	5.6				
19	6.2				
21	5.1				
28	6.4				
31	5.4				
32	6.1				
33	5.0				
45	6.2				
58	8.8				
70	4.5				
73	0.80	ND			
80	5.6				
81	7.9				
85	5.0	ND			
92	5.1				
99	7.8				
105	5.4				
107	5.6				
111	6.2				
120	7.7				

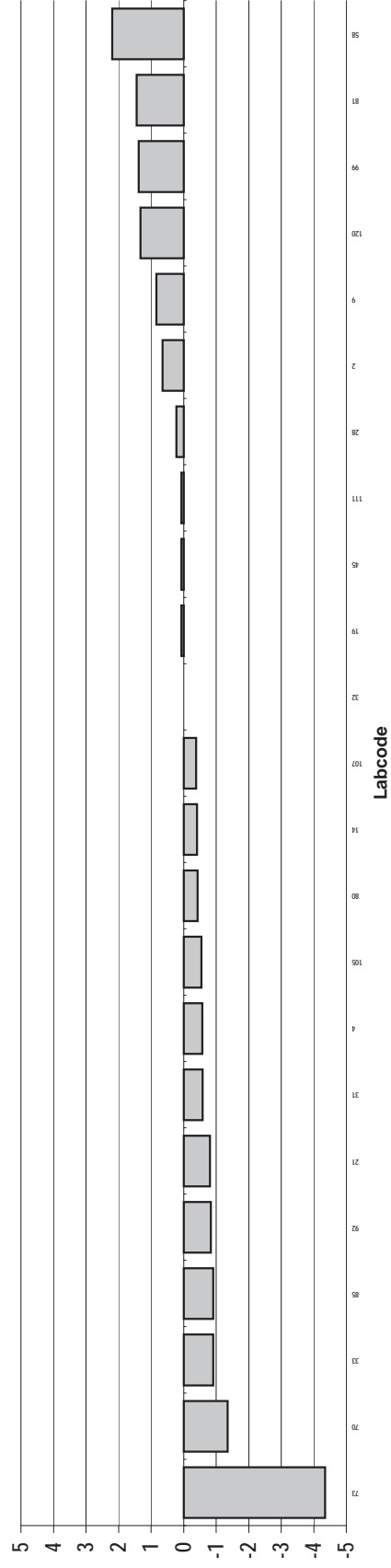
Consensus statistics

Consensus median, pg/g	6.1
Median all values pg/g	5.6
Consensus mean, pg/g	5.9
Standard deviation, pg/g	1.6
Relative standard deviation, %	27
No. of values reported	23
No. of values removed	0
No. of reported non-detects	2

BDE 153



Z-score: BDE 153



Egg

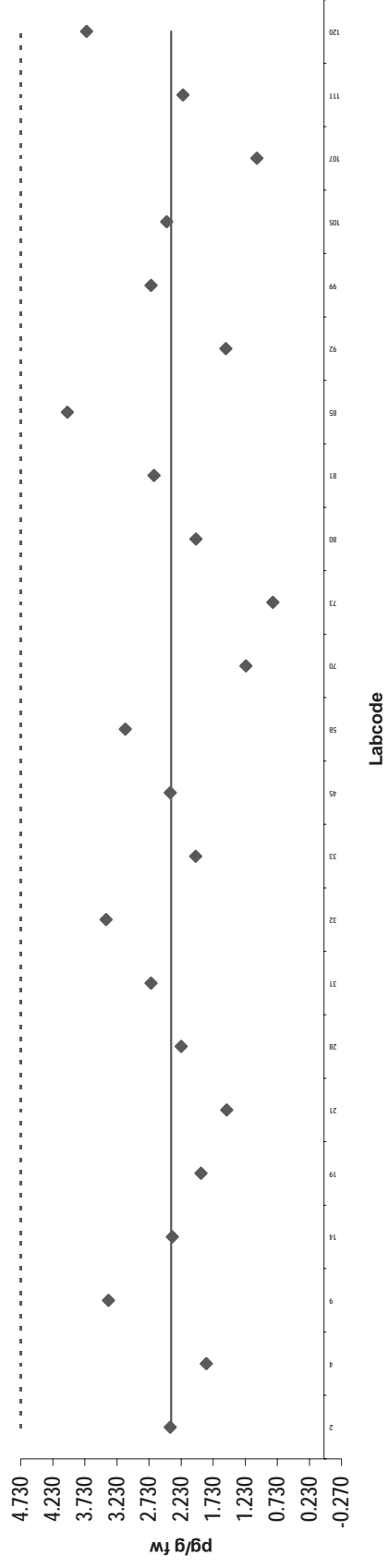
Congener: BDE 154

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
2	2.4				
4	1.8				
9	3.4				
14	2.4				
19	1.9				
21	1.5				
28	2.2				
31	2.7				
32	3.4				
33	2.0				
45	2.4				
58	3.1				
70	1.2				
73	0.80	ND			
80	2.0				
81	2.7				
85	4.0	ND			
92	1.5				
99	2.7				
105	2.5				
107	1.1	ND			
111	2.2				
120	3.7				

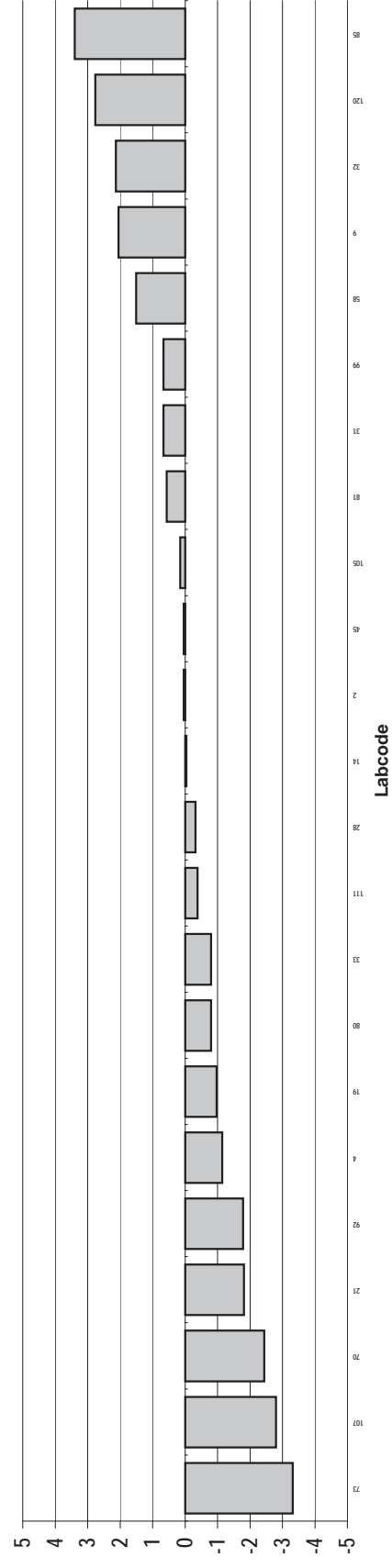
Consensus statistics

Consensus median, pg/g	2.4
Median all values pg/g	2.4
Consensus mean, pg/g	2.3
Standard deviation, pg/g	0.83
Relative standard deviation, %	36
No. of values reported	23
No. of values removed	0
No. of reported non-detects	3

BDE 154



Z-score: BDE 154



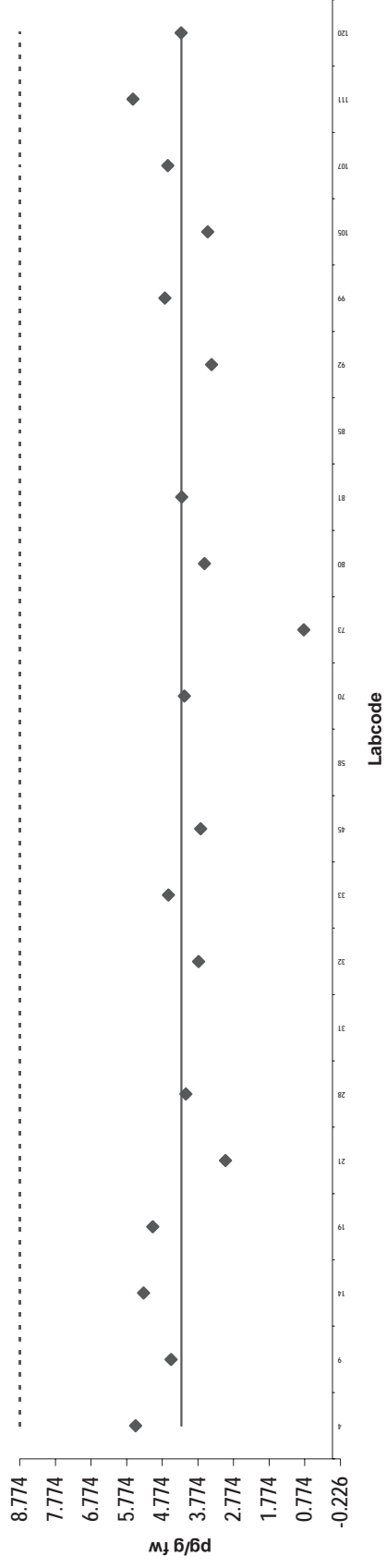
Egg
Congener: BDE 183

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	5.5				
9	4.5				
14	5.3				
19	5.0				
21	3.0				
28	4.1				
31	1.1	Outlier			
32	3.8				
33	4.6				
45	3.7				
58	1.1	Outlier			
70	4.2				
73	0.80	ND			
80	3.6				
81	4.2				
85	10				
92	3.4	Outlier,ND			
99	4.7				
105	3.5				
107	4.6				
111	5.6				
120	4.2				

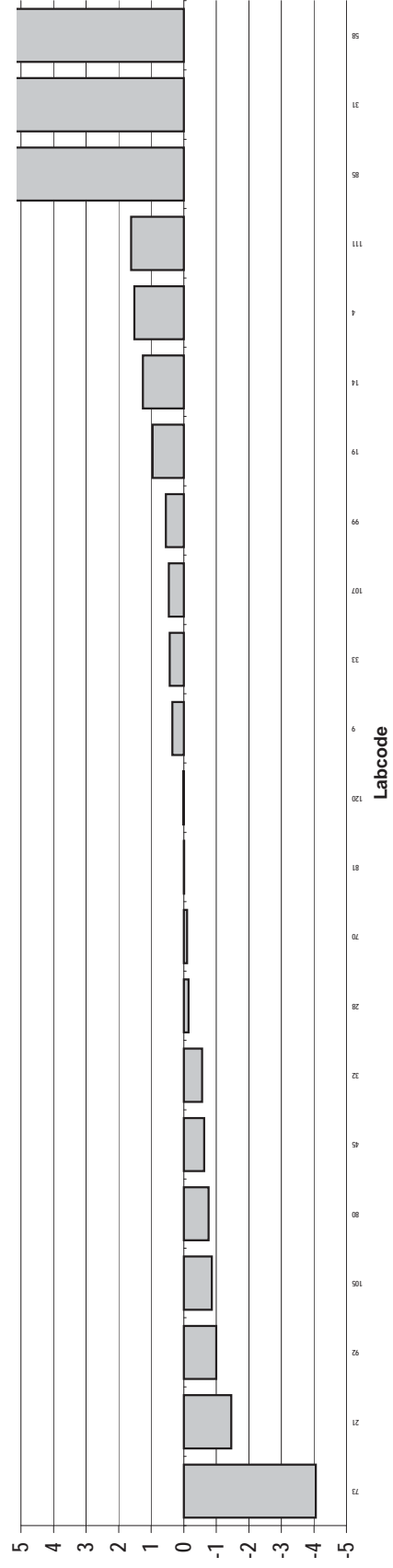
Consensus statistics

Consensus median, pg/g	4.2
Median all values pg/g	4.4
Consensus mean, pg/g	4.1
Standard deviation, pg/g	1.1
Relative standard deviation, %	26
No. of values reported	22
No. of values removed	3
No. of reported non-detects	2

BDE 183



Z-score: BDE 183

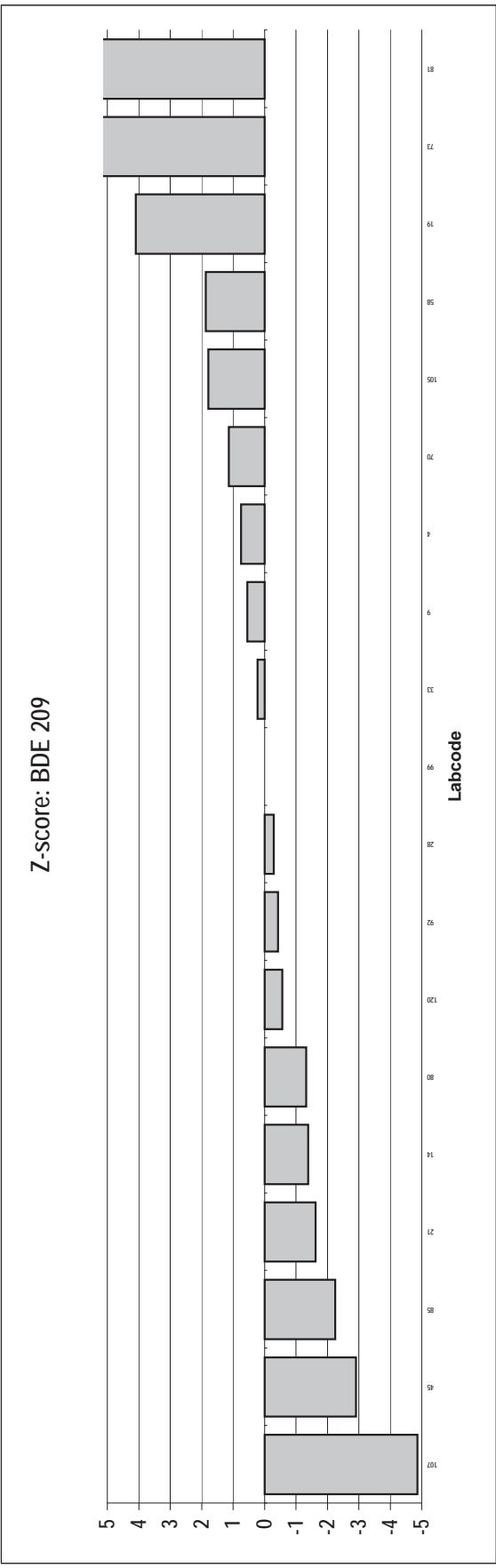
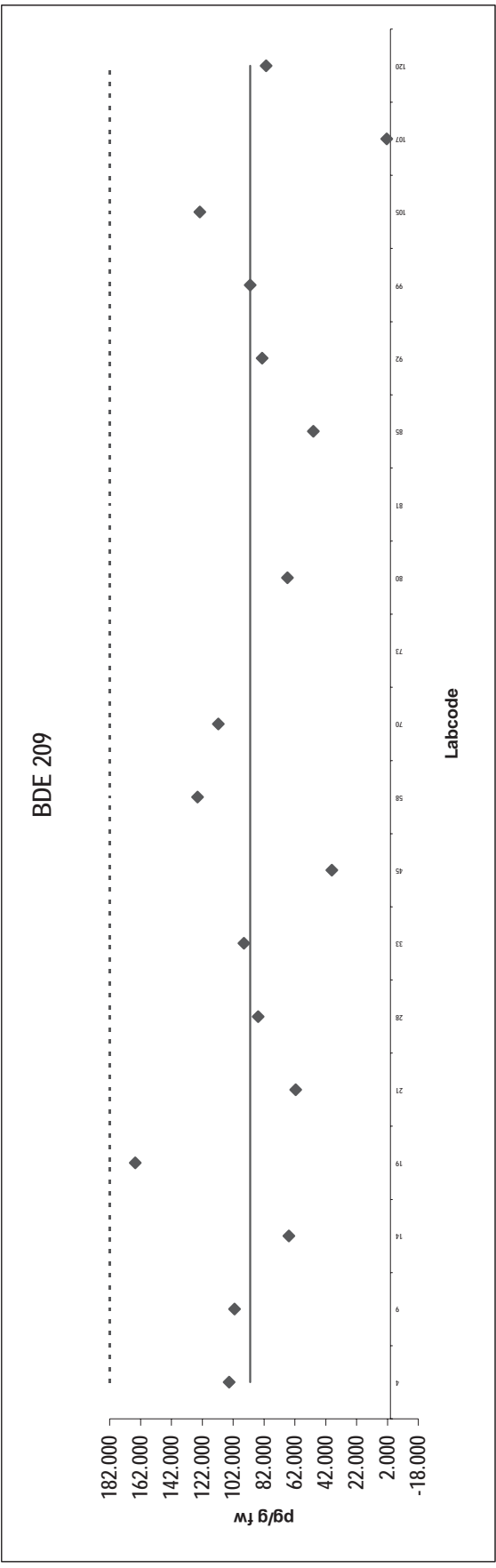


Egg

Congener: BDE 209

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	105				
9	101				
14	66				
19	166				
21	61				
28	86				
33	95				
45	38				
58	125				
70	112				
73	220	Outlier			
80	67				
81	345	Outlier			
85	50	ND			
92	83				
99	91				
105	124				
107	2.5				
120	81	ND			

Consensus statistics	
Consensus median, pg/g	91
Median all values pg/g	91
Consensus mean, pg/g	85
Standard deviation, pg/g	38
Relative standard deviation, %	44
No. of values reported	19
No. of values removed	2
No. of reported non-detects	2



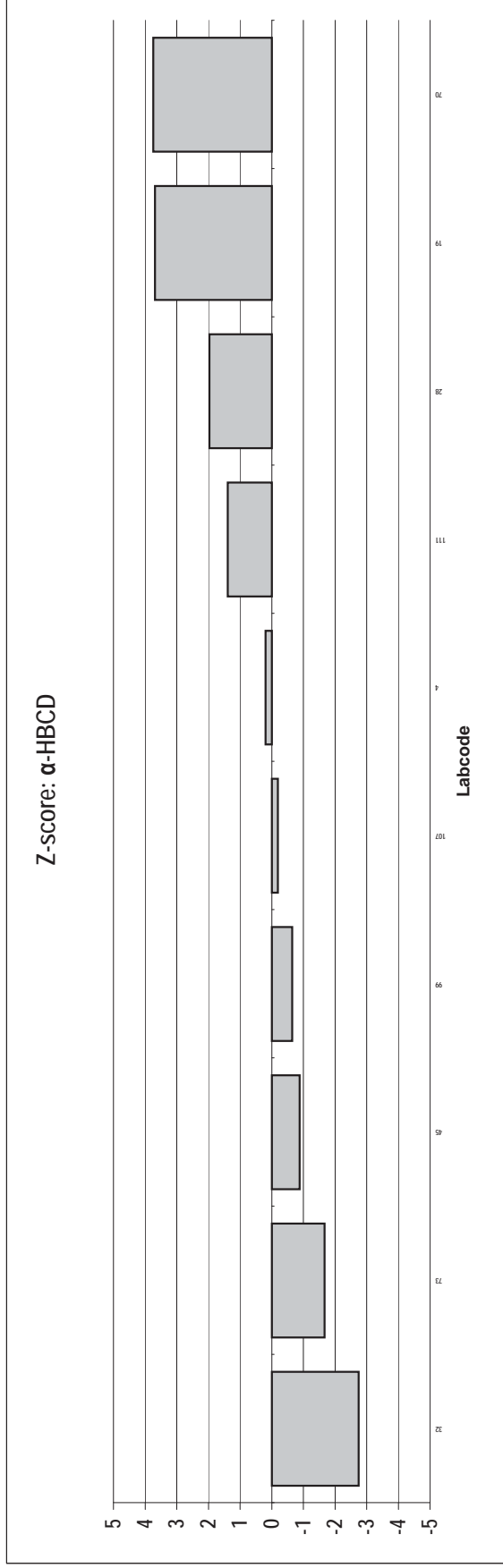
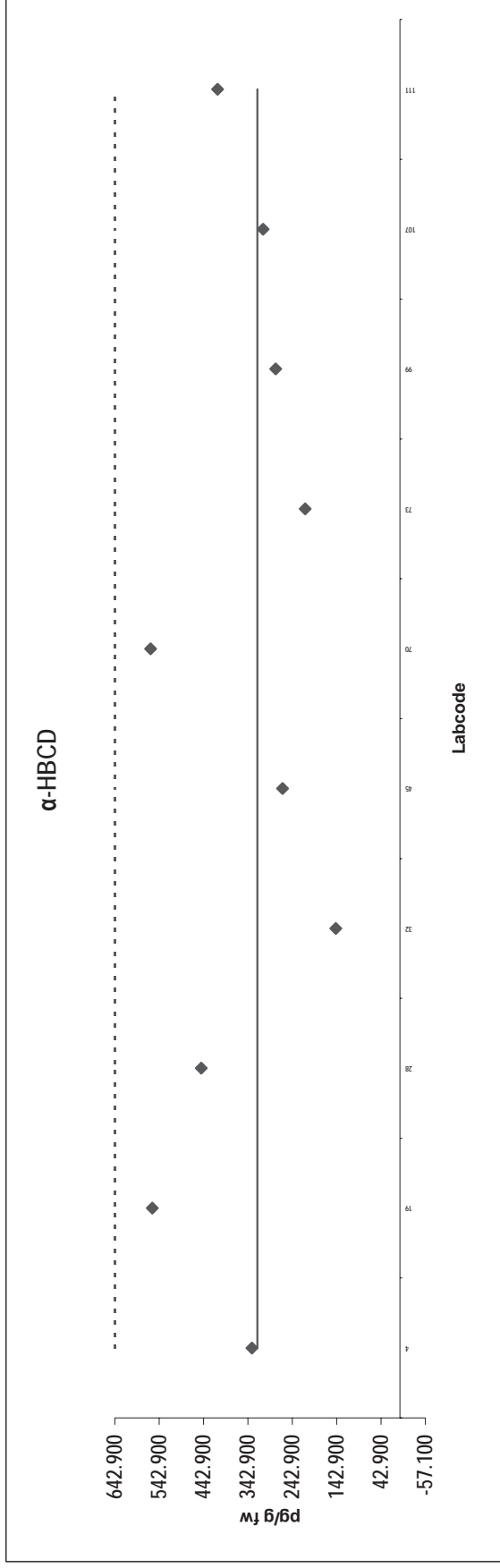
Egg

Congener: α -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	334				
19	559				
28	448				
32	145				
45	265				
70	562				
73	214				
99	280				
107	309				
111	411				

Consensus statistics

Consensus median, pg/g	321
Median all values pg/g	321
Consensus mean, pg/g	353
Standard deviation, pg/g	140
Relative standard deviation, %	40
No. of values reported	10
No. of values removed	0
No. of reported non-detects	0

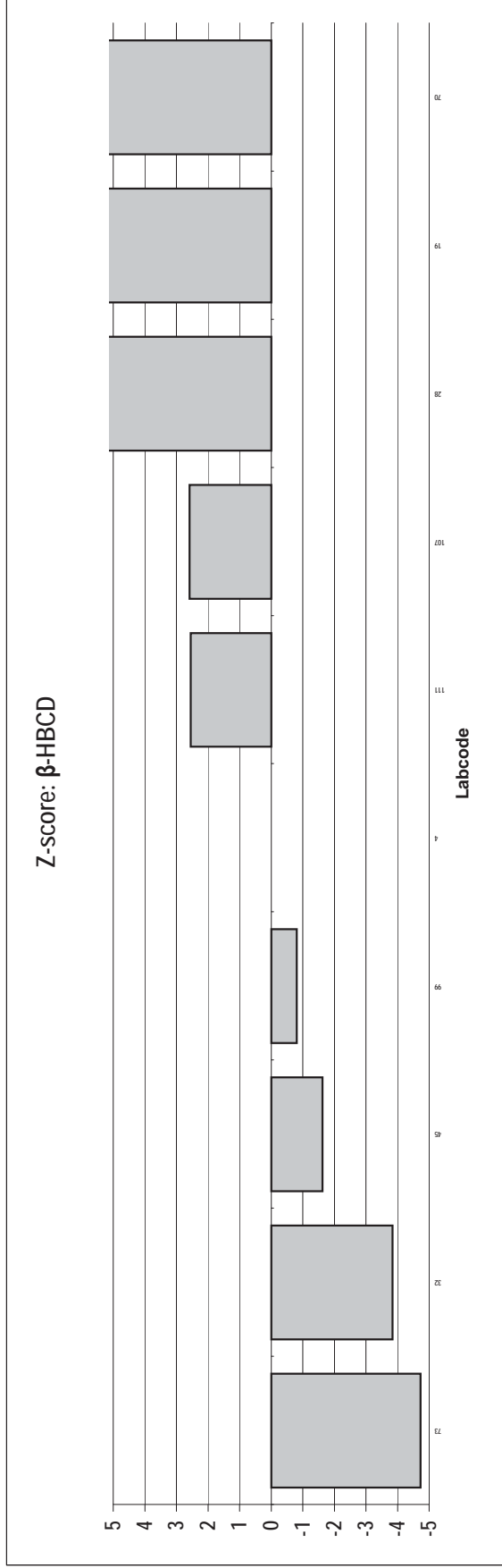
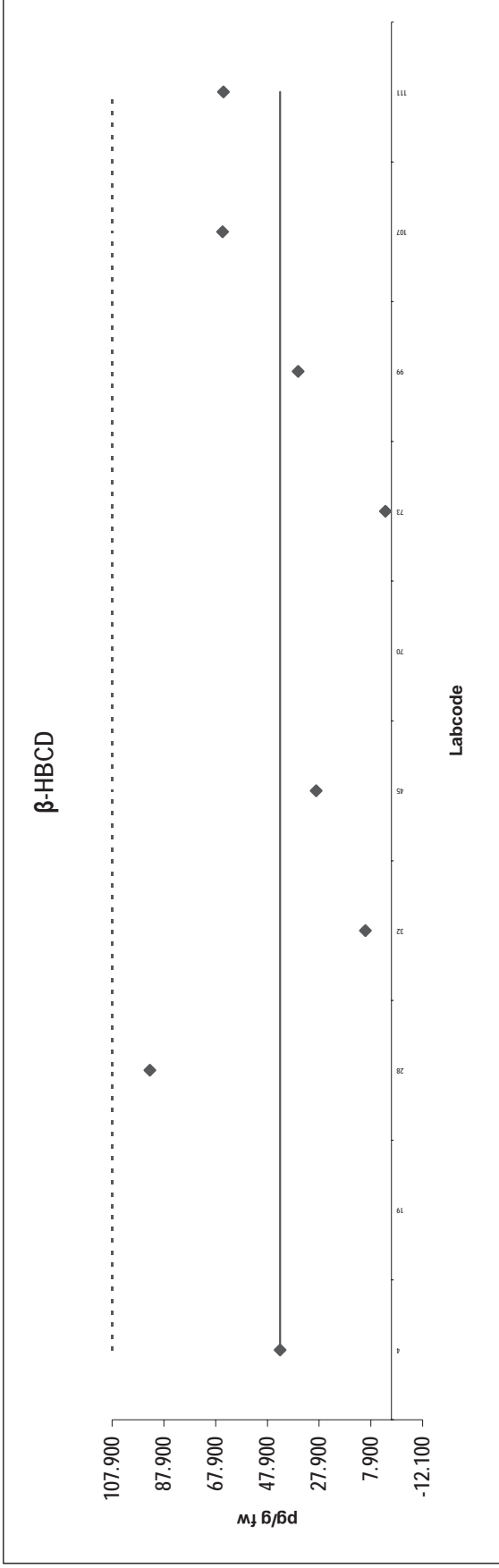


Egg Congener: β -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	43				
19	223	Outlier			
28	93				
32	10	ND			
45	29				
70	238	Outlier			
73	2.3	ND			
99	36				
107	65	ND			
111	65				

Consensus statistics

Consensus median, pg/g	43
Median all values pg/g	54
Consensus mean, pg/g	43
Standard deviation, pg/g	30
Relative standard deviation, %	71
No. of values reported	10
No. of values removed	2
No. of reported non-detects	3

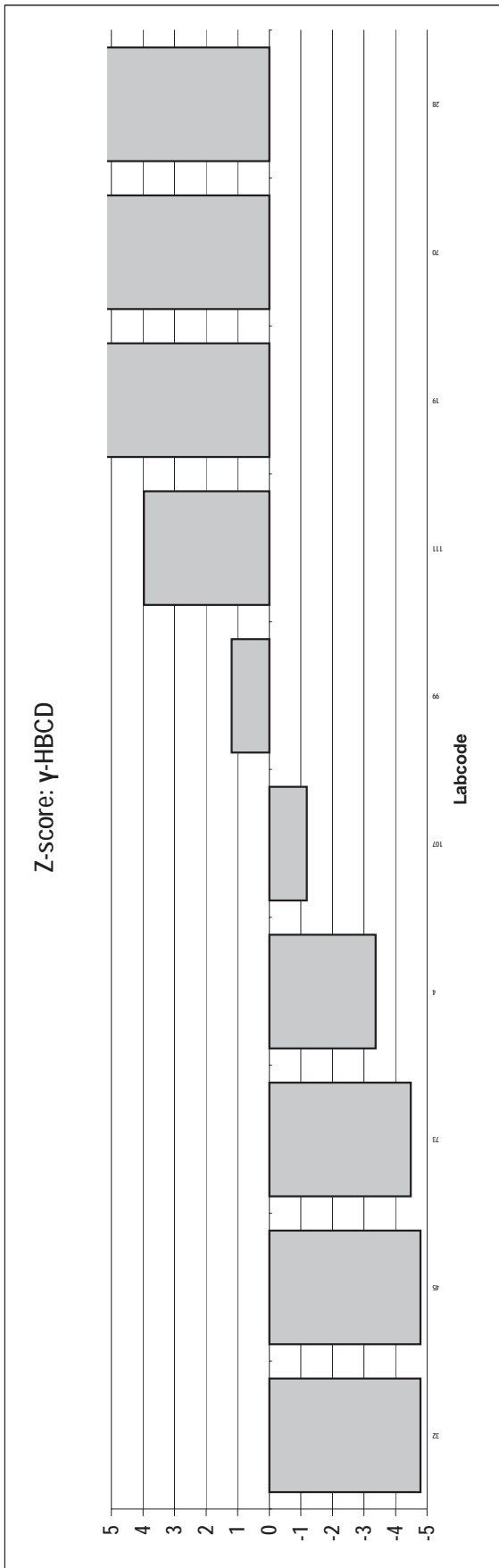
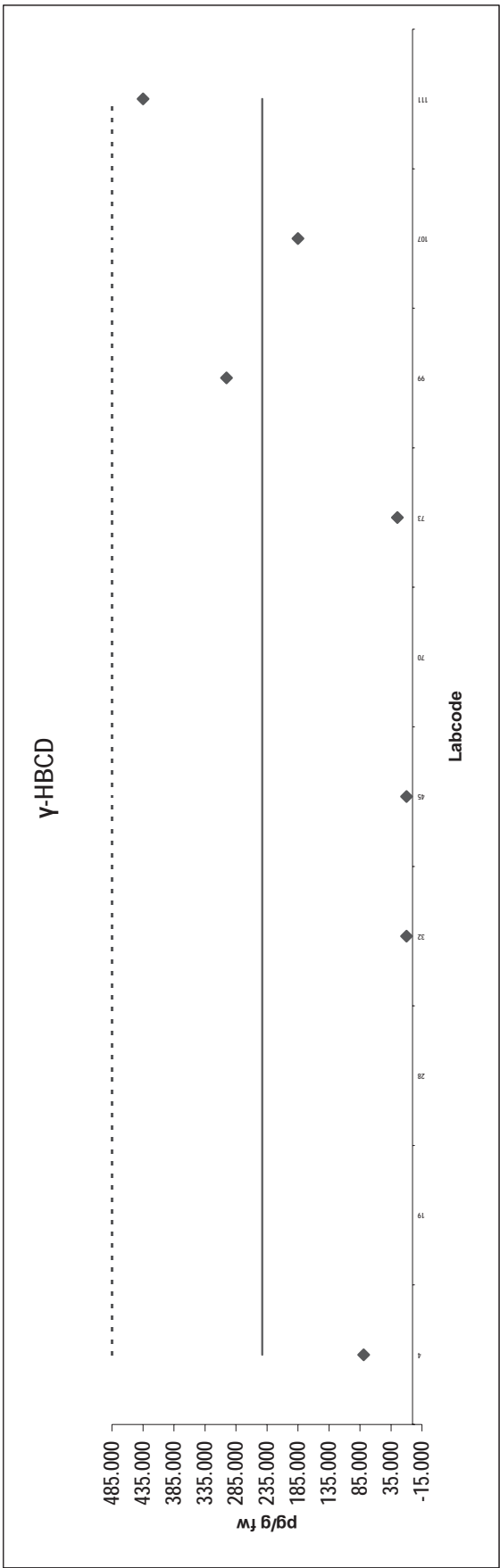


Egg

Congener: γ -HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	79				
19	595	Outlier			
28	834	Outlier			
32	10	ND			
45	10	ND			
70	660	Outlier			
73	25	ND			
99	300				
107	185				
111	435				

Consensus statistics	
Consensus median, pg/g	243
Median all values pg/g	243
Consensus mean, pg/g	149
Standard deviation, pg/g	166
Relative standard deviation, %	111
No. of values reported	10
No. of values removed	3
No. of reported non-detects	3



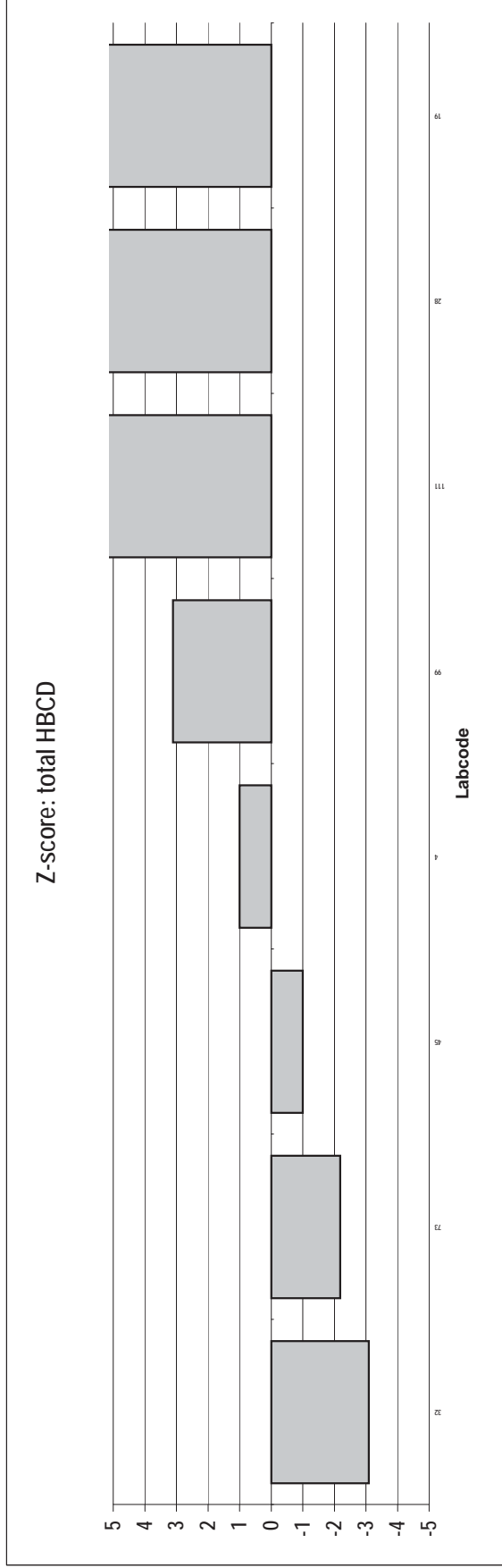
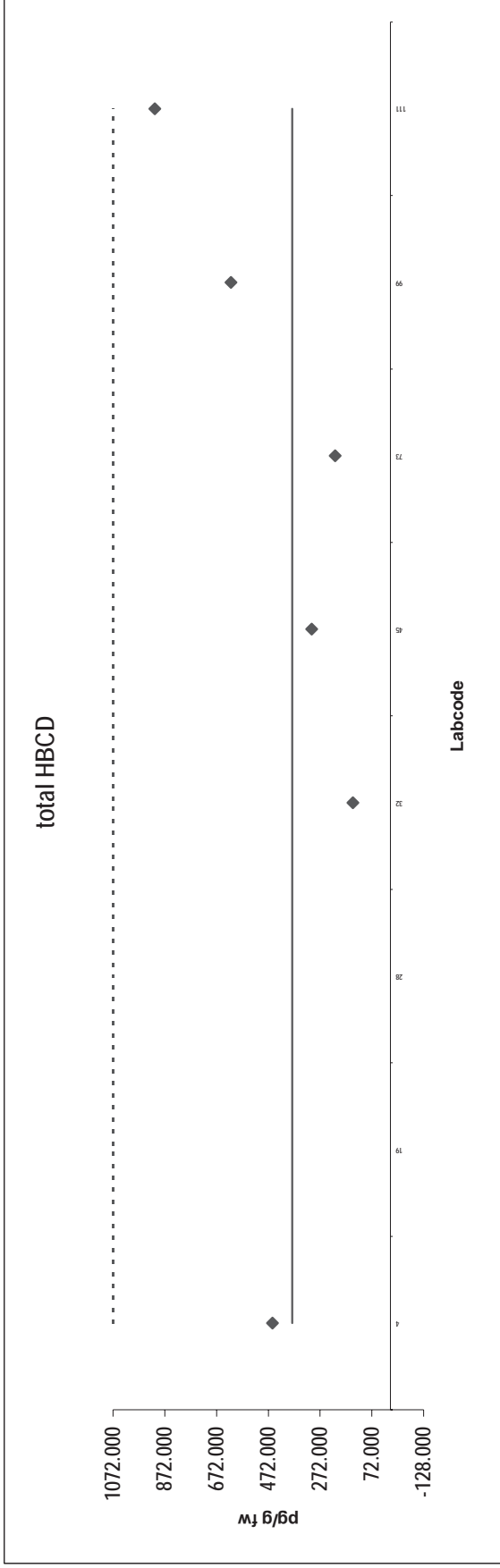
Egg

Congener: total HBCD

Lab code	Conc. pg/g fw.	Notes	Lab code	Conc. pg/g fw.	Notes
4	456				
19	1376	Outlier			
28	1375	Outlier			
32	145				
45	304				
73	214				
99	616				
111	910				

Consensus statistics

Consensus median, pg/g	380
Median all values pg/g	536
Consensus mean, pg/g	441
Standard deviation, pg/g	286
Relative standard deviation, %	65
No. of values reported	8
No. of values removed	2
No. of reported non-detects	0



Appendix 5:

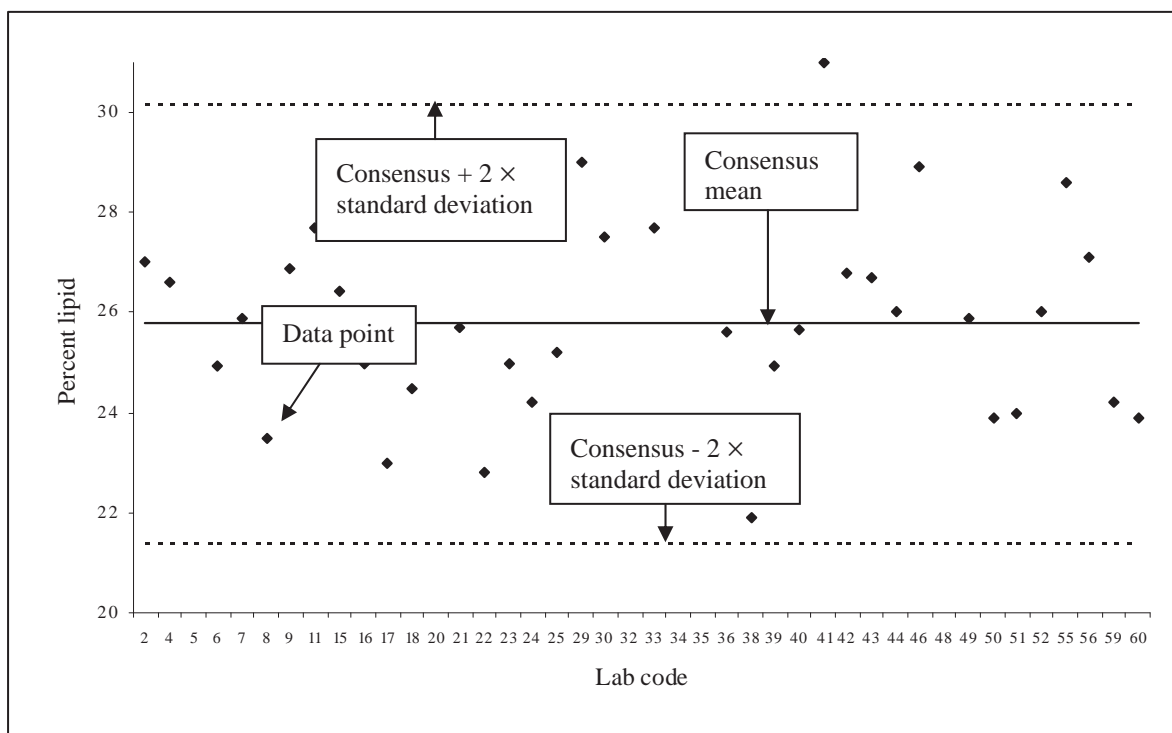
Presentation of results
for lipid determination

Presentation of results for lipid determination

Removal of outliers and calculation of consensus were done by the following procedure:

1. The mean was calculated from all the reported data.
2. Values outside a range of $\pm 2 \times$ the standard deviation of this mean were defined as outliers and removed from the data set.
3. Mean, standard deviation and median were re-calculated from the remaining data. This mean was called consensus.

The diagram shows the reported data with consensus and consensus \pm the new standard deviation $\times 2$.



Z-Scores of lipid content

Z-scores of lipid content were calculated for each laboratory according to the following equation:

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

where x = reported value; X = assigned value (consensus); σ = target value for standard deviation. A σ of 20% of the consensus was used, i.e. z-scores between +1 and -1 reflect a deviation of $\pm 20\%$ from the consensus value.

Lipid determination for Poultry

Lab code	% lipid	Notes	Lab code	% lipid	Notes	Lab code	% lipid	Notes
2	9.00		82	8.60				
4	8.92		83	11.5				
5	9.29		85	9.24				
6	9.87		88	11.0				
7	8.70		90	6.55				
9	7.85		91	6.40				
12	8.00		92	9.00				
14	6.90		94	7.90				
15	7.50		97	9.70				
16	8.85		99	9.32				
18	8.20		100	9.70				
19	8.44		101	9.16				
20	8.39		102	9.30				
21	6.80		105	9.04				
23	9.40		107	8.80				
27	10.3		109	11.2				
28	8.96		110	8.70				
29	9.40		111	7.10				
31	8.85		114	7.82				
32	8.50		115	8.44				
33	8.89		117	11.6				
34	9.78		118	9.29				
37	8.50		119	9.10				
40	7.30		120	8.79				
41	9.14							
42	9.56							
43	9.60							
44	7.90							
45	10.1							
47	8.50							
54	8.82							
55	8.74							
58	9.37							
59	9.44							
60	9.06							
61	8.30							
64	0.069	outlier						
66	8.85							
67	7.59							
70	8.52							
73	9.85							
74	8.29							
76	6.99							
77	9.63							
80	8.30							
81	10.08							

Mean	Standard deviation	Relative standard deviation	Median
8.8	1.06	12.0	8.9

Lipid determination for Crab meat

Lab code	% lipid	Notes	Lab code	% lipid	Notes	Lab code	% lipid	Notes
2	3.20		80	2.65				
4	3.57		81	3.16				
5	2.58		82	2.50				
6	3.50		83	3.42				
7	3.10		85	3.80				
9	2.73		88	3.00				
12	1.86		90	6.55	outlier			
14	2.40		91	2.00				
15	3.60		92	3.57				
16	3.41		97	3.50				
18	2.94		99	3.70				
19	3.55		100	3.67				
20	3.16		101	3.61				
21	3.40		102	3.50				
27	2.82		104	2.80				
28	2.90		105	3.35				
29	4.63		106	2.93				
31	3.38		107	2.90				
32	2.90		109	3.35				
33	4.10		111	3.70				
34	3.08		114	1.39				
35	1.70		115	1.54				
37	3.10		117	7.22	outlier			
40	3.80		118	3.50				
41	1.62		119	3.20				
42	3.69		120	3.16				
43	3.50							
45	3.30							
50	1.80							
51	2.64							
55	3.00							
58	3.44							
59	4.10							
60	3.32							
61	2.40							
63	3.83							
64	2.95							
66	2.78							
67	2.00							
69	3.72							
70	3.00							
73	3.79							
74	3.14							
75	2.24							
76	2.29							
77	4.60							

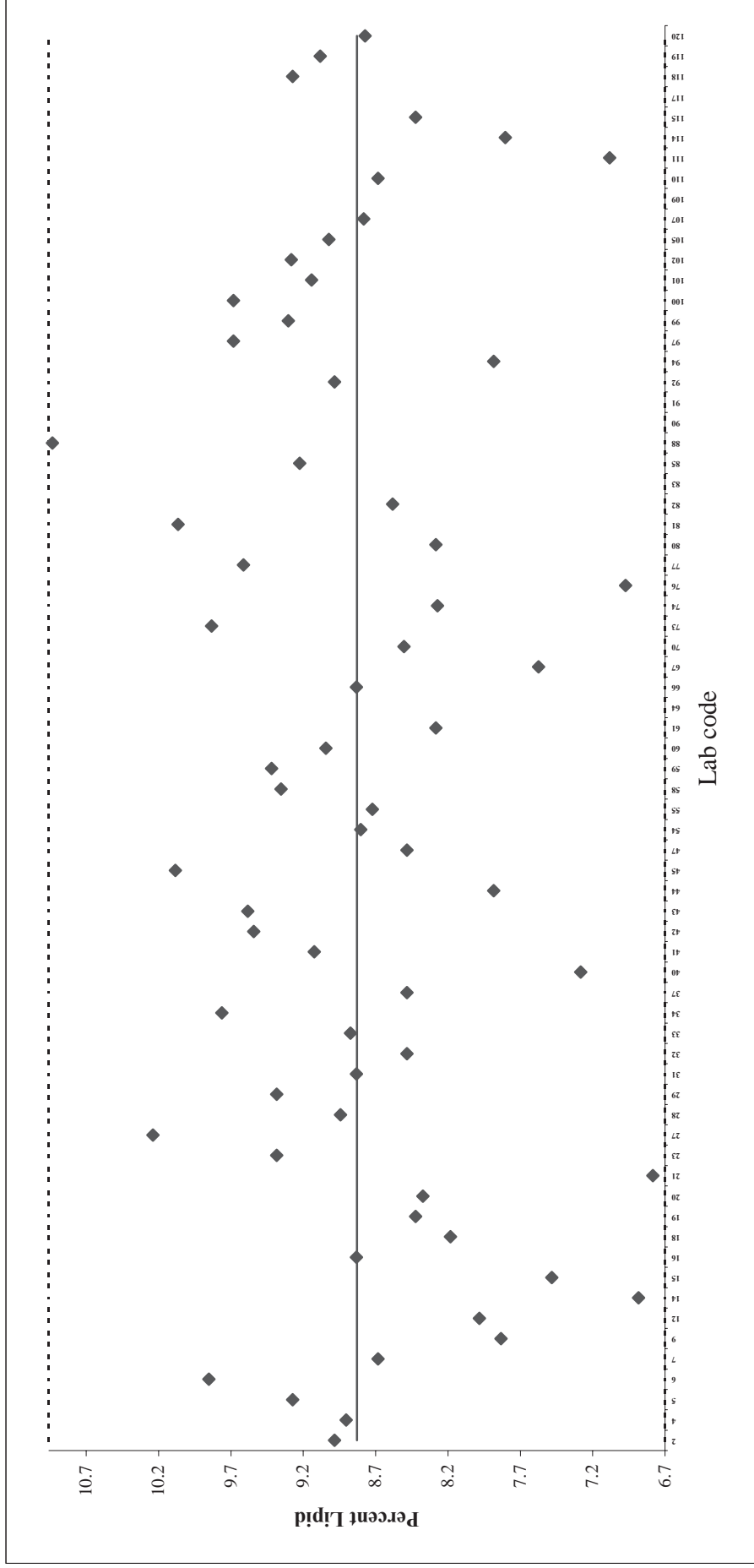
Mean	Standard deviation	Relative standard deviation	Median
3.1	0.68	22.1	3.2

Lipid determination for Egg

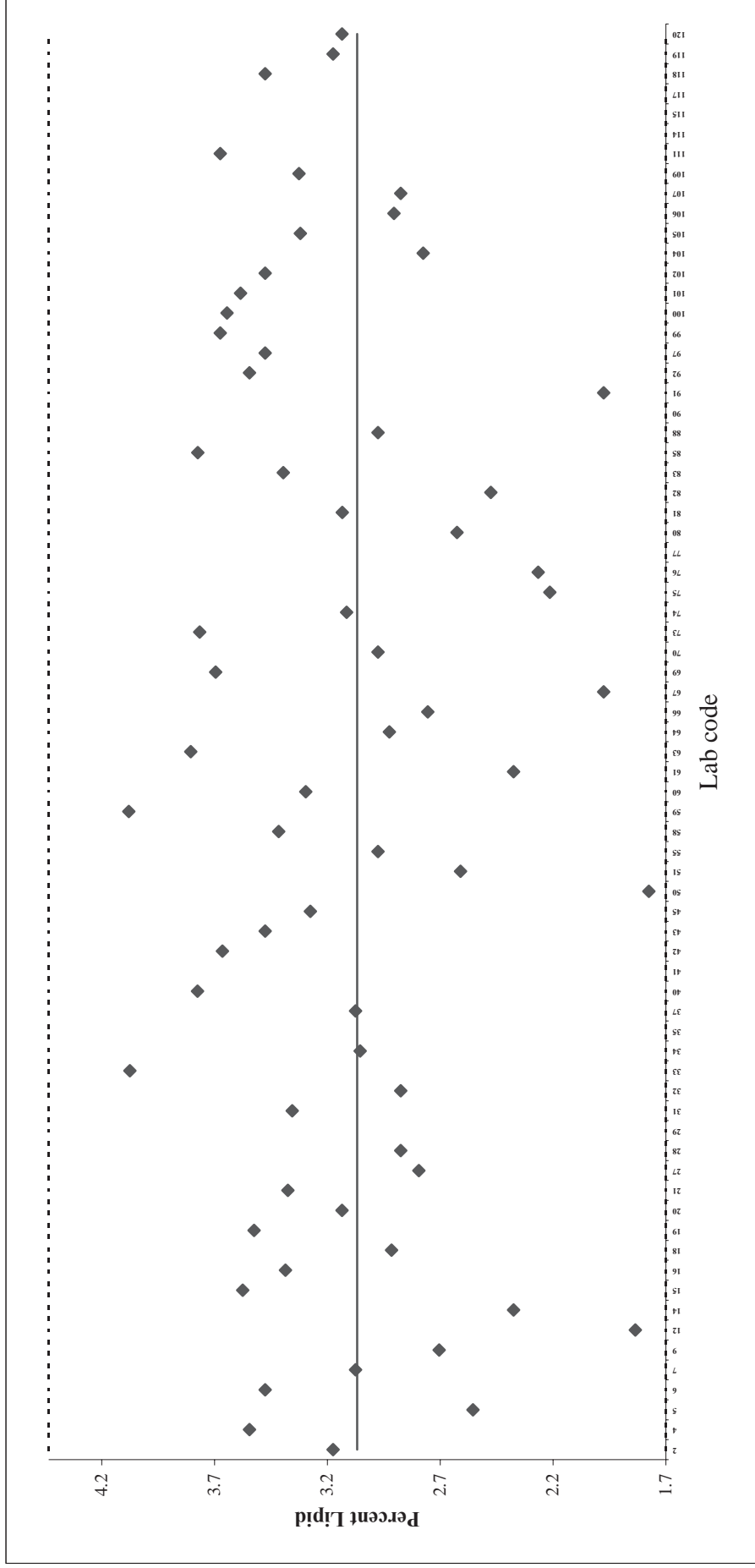
Lab code	% lipid	Notes	Lab code	% lipid	Notes	Lab code	% lipid	Notes
1	9.77		82	9.40				
2	11.0		83	10.6				
4	10.4		85	10.2				
5	9.16		88	10.4				
6	11.6		90	10.3				
7	9.30		91	43.9	outlier			
9	9.03		92	9.20				
12	9.88		93	9.50				
14	8.60		94	13.8				
15	9.00		97	10.6				
16	8.85		99	10.5				
18	9.90		100	10.1				
19	9.93		101	9.74				
20	8.60		102	9.70				
21	8.00		105	9.75				
27	11.7		107	9.85				
28	9.61		111	10.1				
29	9.80		113	9.62				
31	9.73		114	4.41				
32	9.80		115	9.70				
33	10.6		117	17.8				
34	10.3		118	10.1				
37	8.95		119	9.90				
40	10.1		120	9.63				
41	10.9							
42	10.0							
44	10.8							
45	10.5							
53	8.72							
54	9.55							
55	9.65							
58	10.2							
59	11.6							
60	10.3							
61	11.6							
63	11.1							
64	10.2							
66	9.80							
67	8.90							
68	10.0							
70	9.25							
73	10.3							
74	10.6							
77	14.8							
80	9.35							
81	7.44							

Mean	Standard deviation	Relative standard deviation	Median
10.1	1.60	15.9	9.9

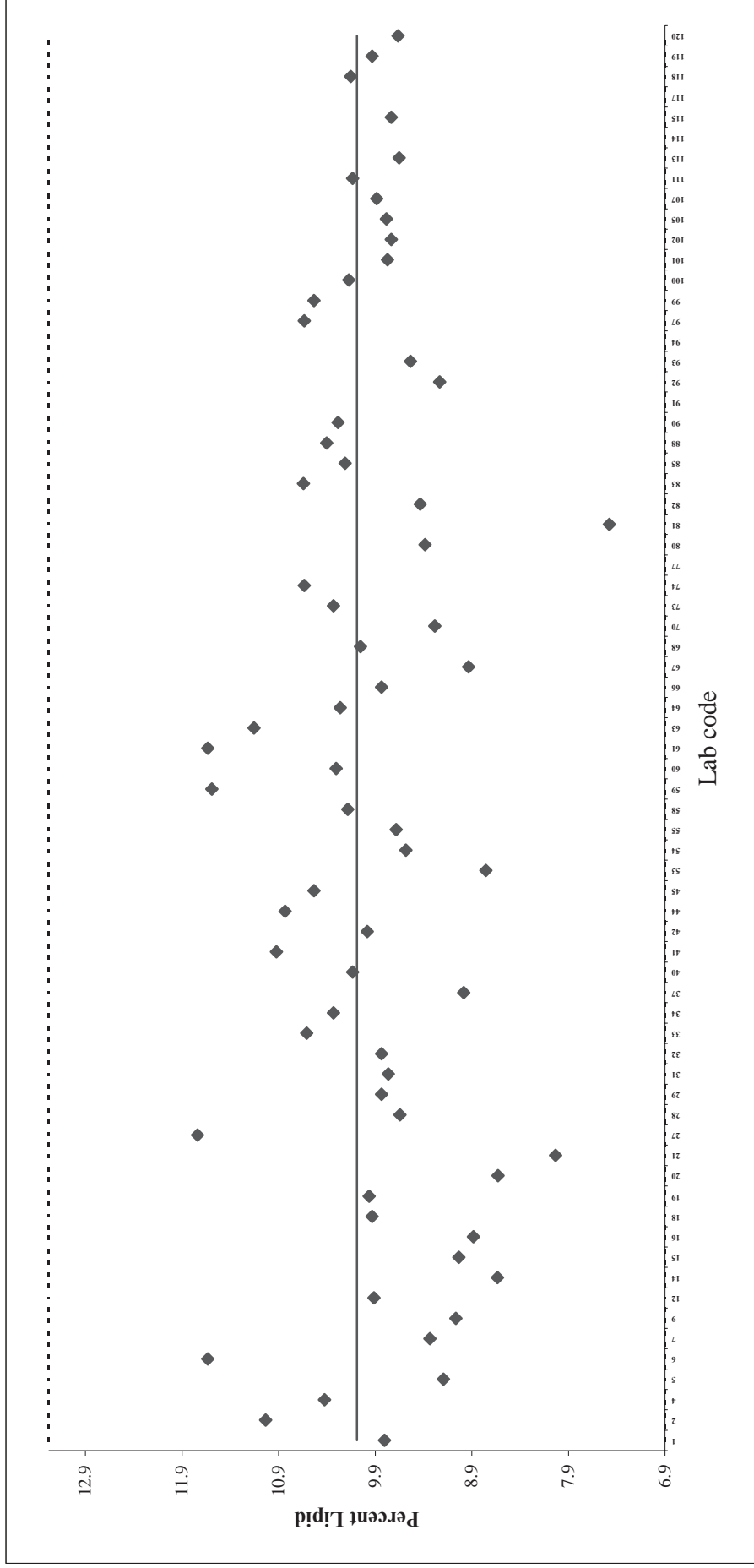
Lipid determination; Poultry



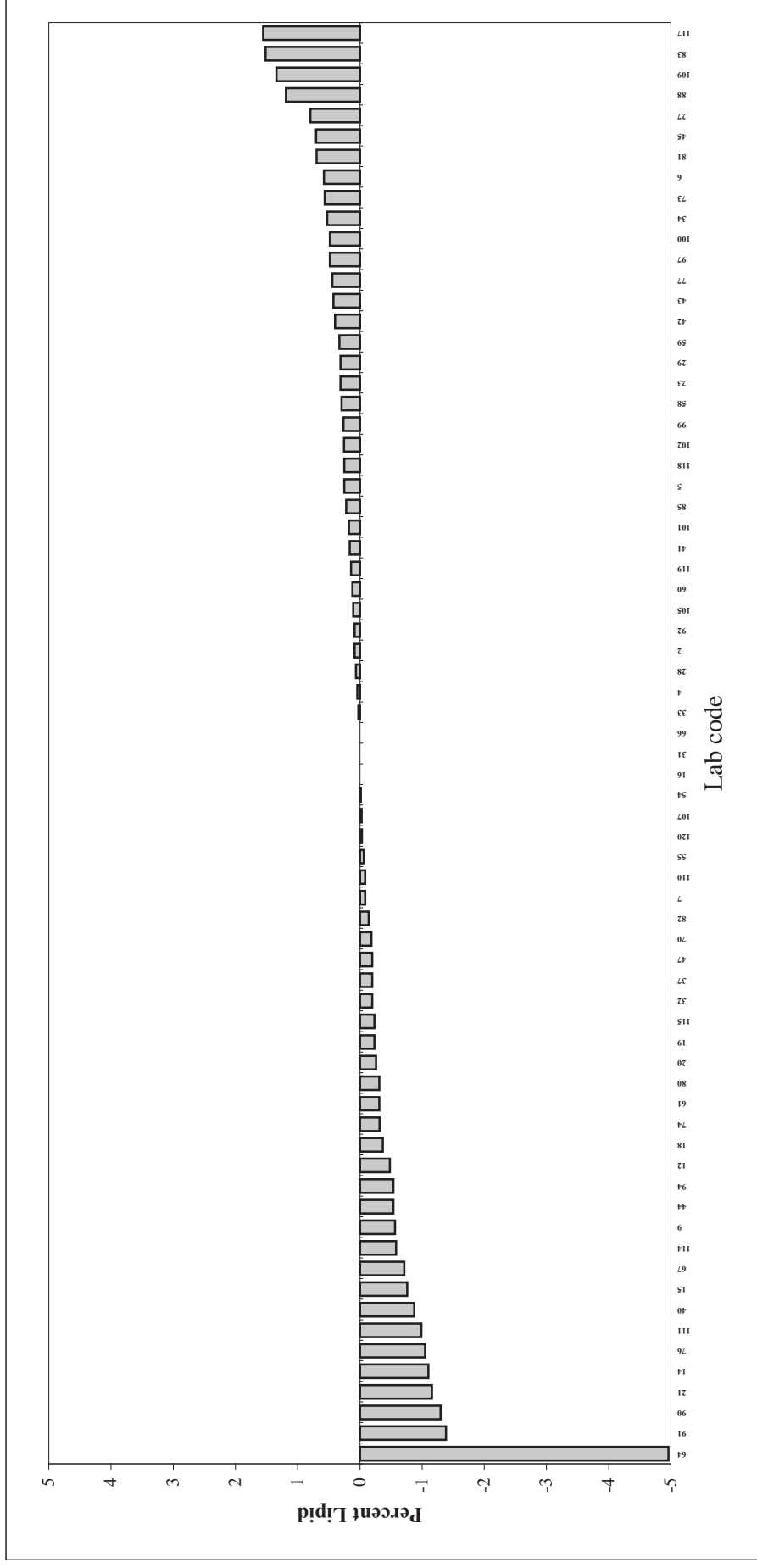
Lipid determination; Crab meat



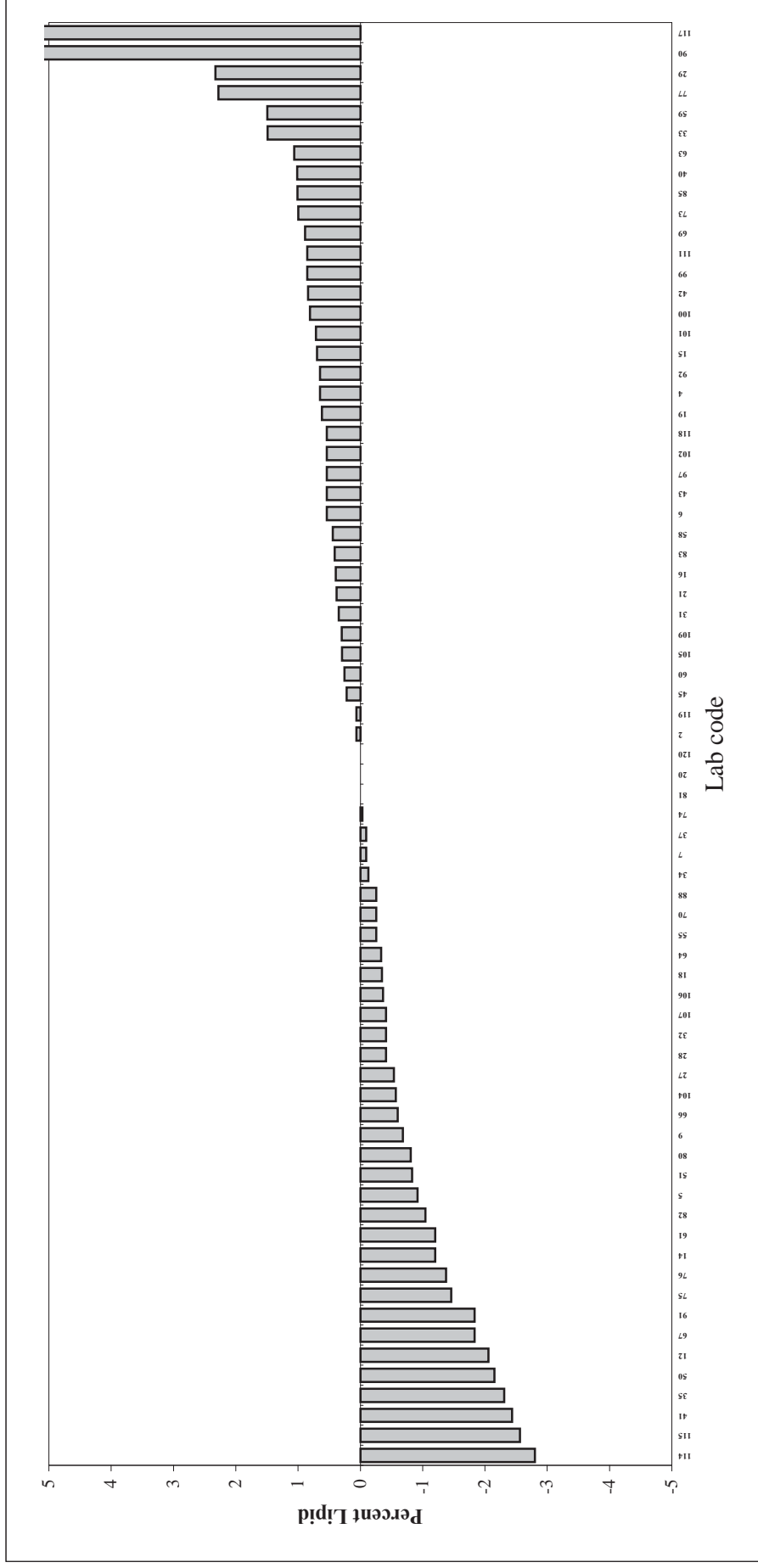
Lipid determination; Egg



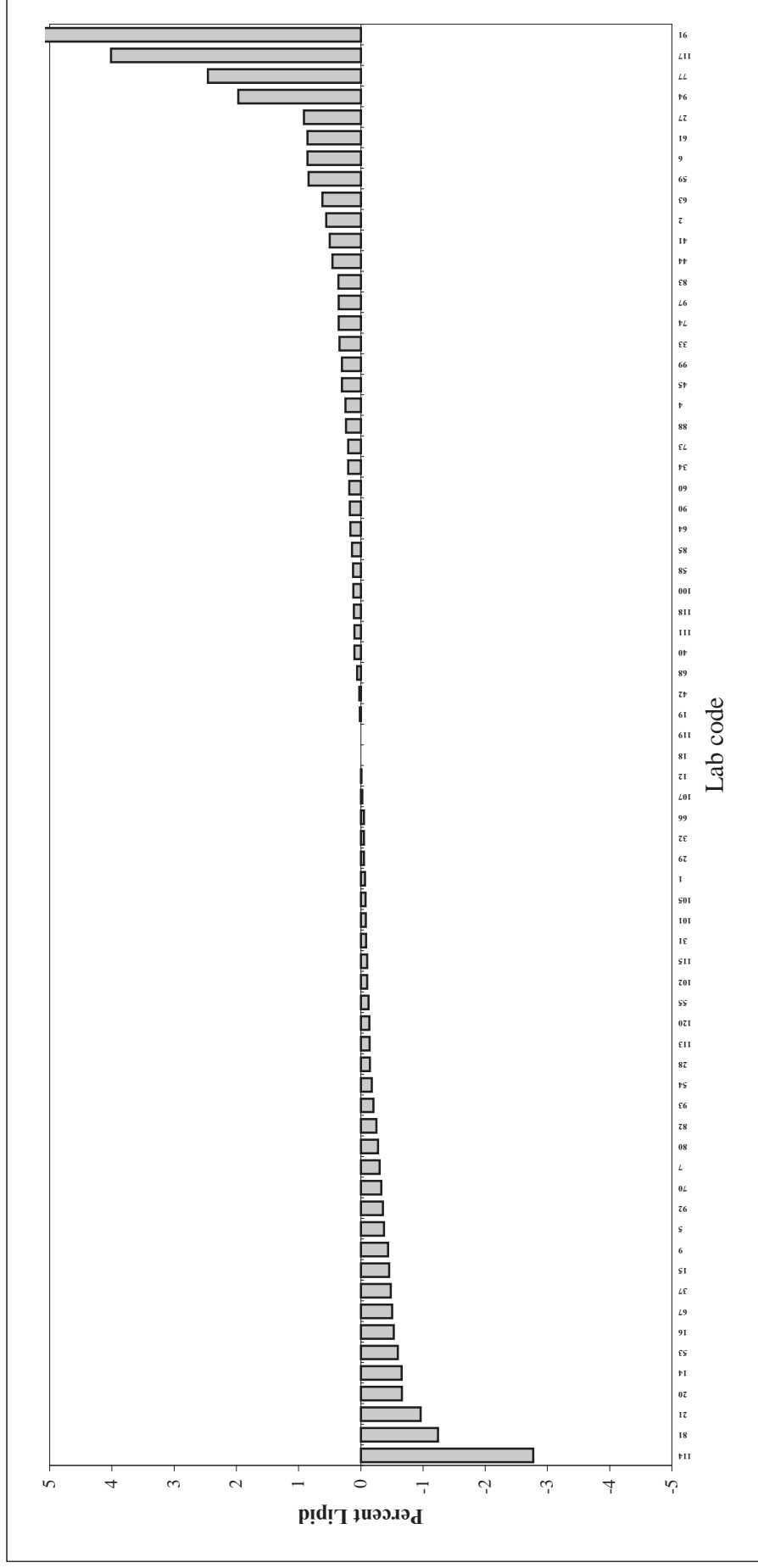
Z-score lipid determination; Poultry



Z-score lipid determination; Crab meat



Z-score lipid determination; Egg



Published by Norwegian Institute of Public Health

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ISBN: 978-82-8082-595-7 (electronic version)

ISSN 1503-1403