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## **Analyses of cadmium, dioxins, furans and biphenyls in meat, liver and kidney from cattle**

**Report for the UK Food Standards Agency (FS102047)**

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# Analyses of cadmium, dioxins, furans and biphenyls in meat, liver and kidney from cattle

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## Summary

441 samples of muscle, liver and kidney from 147 cattle were taken directly from slaughterhouses throughout the UK between December 2013 and March 2014. The sampling included cattle from three different age groups: 48 cattle aged < 30 months, 51 cattle aged 30 to ≤ 72 months and 48 cattle aged over 72 months.

All samples were analysed for cadmium and other elements of interest (lead, arsenic, copper and selenium) using inductively coupled plasma-mass spectrometry (ICP-MS). 25 of the muscle and 25 of the liver samples (paired meat and liver from the same animal) were also analysed for dioxins, furans and biphenyls using high resolution gas chromatography-mass spectrometry (GC-MS). The methodologies used for the analyses were UKAS accredited to ISO 17025.

The highest Cd levels were found in kidney samples from the oldest age group (over 72 months), where seventeen (17) of these kidney samples contained Cd > 1.0 mg/kg, with an average level for this group of 0.89 mg/kg. Cattle from the youngest age group (< 30 months of age) contained the lowest Cd levels, with an average of 0.19 mg/kg and only one contained Cd > 1 mg/kg. The average Cd level for the middle age group (30 to ≤ 72 months) was 0.41 mg/kg and two contained Cd > 1 mg/kg. The middle age group also had the highest individual sample at 4.15 mg/kg.

Levels of dioxins, furans and biphenyls in the matched muscle and liver samples tested were all below the maximum permitted levels. On a fat weight basis, the liver samples were found to have a higher WHO-TEQ<sub>2005</sub> than their paired muscle samples.

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## Abbreviations

ICP-MS	Inductively Coupled Plasma-Mass Spectrometry
LoD	Limit of Detection
LoQ	Limit of Quantitation
QA	Quality Assurance
QC	Quality Control
UKAS	United Kingdom Accreditation Service
FAPAS	Food Analysis Performance Assessment Scheme
PCDD/Fs	Polychlorinated dibenzodioxins / dibenzofurans
PCBs	polychlorinated biphenyls

## 1. Introduction

Cadmium (Cd) is a toxic heavy metal found both naturally in the environment and also as a result of industrial and agricultural processes. It enters the food chain via uptake by plants from contaminated soil or water, which in turn are consumed by animals. Due to its slow excretion, Cd accumulates overtime, primarily in the kidneys and liver, which can lead to renal dysfunction and bone demineralisation (EFSA, 2009).

Maximum regulatory limits for Cd levels in bovine muscle, liver and kidneys are set by the European Union Commission Regulation 1881/2006 (amended by No. 629/2008) at 0.05, 0.5 and 1.0 mg/kg wet weight, respectively. In recent studies on Cd levels in bovine kidneys in the Republic of Ireland (2012, information supplied by FSA) and Belgium (Waegeneers et al 2009) the EU limit was exceeded in over half the animals tested in each study. Both studies showed that Cd concentrations in cattle kidneys increased with increasing animal age.

The last survey of dioxins (PCDD/F) and biphenyls (PCB) occurrence in offal, carried out by the Food Standards Agency in 2005, found relatively (to the existing European limit at the time) elevated levels of dioxins in the liver of most ruminants, including ox (Fernandes et al 2010). It was suggested at the time, that the limit established by the European Commission in 2002 had been set inappropriately, due to a lack of representative data (Mortimer et al 2008). Risk assessment indicated that the levels found were unlikely to have any significant impact on overall dietary exposure to dioxins. It was noted that the dioxin/PCB ratios for the liver were higher than those normally seen in carcass meat and it was postulated that this may be as a result of preferential sequestration in the liver of certain congeners, notably furans, through protein binding. The samples analysed in the 2005 study were randomly-purchased retail samples, for which there was very little additional information. There was no evidence that the samples with elevated levels in liver had come from animals raised in localized contamination hotspots. More recent data from other studies which included matched cattle muscle tissue and liver from the same animals (Fernandes et al 2012), supports the view that the relative amounts of PCDD/Fs and PCBs in muscle tissue and liver is likely to be a physiological characteristic of ruminants.

This project aimed to gather more data on Cd levels (and other elements of interest: lead, arsenic, copper and selenium) in cattle from UK farms, to determine if there is a similar level of non-compliance in UK cattle and to also investigate the relationship between animal age and Cd concentration in tissues from these cattle. In addition, selected samples of muscle and liver obtained in this investigation were analysed for dioxins, furans and biphenyls, to gain a better understanding of the contamination trends.

## **2. Methodology**

### **2.1 Sample preparation**

Samples of bovine muscle, kidney and liver were collected directly from slaughterhouses throughout the UK by FSA Operations staff. The samples were labelled by the samplers with unique LIMS codes supplied by Fera and stored frozen prior to sending to Fera for analysis.

Upon receipt, samples were homogenised using a Buchi B-400 mixer and stored at -20°C until analysis. Those identified as requiring organic contaminant analysis were freeze-dried, ground to a powder and stored at ambient temperature. All sample information such as animal age, eartag number etc. was logged into an excel spreadsheet.

### **2.2 Trace element analysis – Cd, Pb, As, Cu and Se**

The analytical procedure used in this study is UKAS-accredited (ISO17025). To minimize background contribution, deionized (18.2 MΩ cm) water, metal analysis grade reagents and acid cleaned plasticware were used throughout.

Aliquots of the homogenised sample were weighed into allotted digestion vessels and a mixture (4:1) of nitric acid and hydrochloric acid added. The vessels were capped and the contents digested under high temperature and pressure using a single reaction chamber microwave digester system (Ultrawave, Milestone). Reagent blanks, certified reference materials and a spiked sample were also taken through the procedure. The resulting solutions were transferred to pre-marked acid-clean plastic test tubes and diluted to 10 ml with deionised water. The digest solutions,

together with a set of standards covering the expected concentration range, were internally standardised with indium and rhodium in dilute nitric acid (1 %v/v). Measurements were made using an Agilent 7700x ICP-MS with collision cell.

### **2.3 Organic contaminant analysis – Dioxins, furans and biphenyls**

The following analytes were determined: Dioxins - all 17, 2378-Cl substituted PCDDs and PCDFs. Dioxin-like PCBs - IUPAC numbers 77, 81, 105, 114, 118, 123, 126, 156, 157, 167, 169, and 189. Non Dioxin-like PCBs - IUPAC numbers 18, 28, 31, 47, 49, 51, 52, 99, 101, 128, 138, 153 and 180. The analysis is UKAS-accredited to ISO 17025.

The method used for the preparation, extraction and analysis of samples has been reported previously (Fernandes et al 2004) and forms a module of the CEN method – EN16215:2012 for PCDD/F and PCB analysis. In brief, samples were fortified with <sup>13</sup>C-labelled analogues of target compounds and exhaustively extracted using mixed organic solvents. Ortho substituted PCBs were separated from non-ortho substituted PCBs and PCDD/Fs by fractionation on activated carbon. The two fractions were further purified using adsorption chromatography on alumina. Analytical measurement was carried out using high resolution gas chromatography-high resolution mass spectrometry (HRGC-HRMS) for all analytes apart from the ortho substituted PCBs which were analysed by high resolution gas chromatography-unit resolution mass spectrometry (HRGC-LRMS).

## **3. Quality Procedures**

### **3.1 Trace element QC – Cd, Pb, As, Cu and Se**

A 10 % audit (in duplicate) was performed within the study and any samples found to contain levels exceeding the maximum regulations for Cd and Pb were repeated for confirmation. Each analytical batch contained a minimum of 3 procedural blanks, a spiked sample (for recovery estimate purposes) and certified reference materials. Regular, successful participation in FAPAS proficiency tests during the study period provides further confidence in the data. QA/QC criteria are summarised below.

#### **3.1.1 LoD and LoQ**

The LoD was defined as three times the standard deviation of the signal from reagent blanks (taken through the entire analytical procedure) when subsequently corrected



for sample weight and dilution. The LoQ was defined as ten times the standard deviation of the signal from reagent blanks (taken through the entire analytical procedure) when subsequently corrected for sample weight and dilution.

### **3.1.2 Instrument stability**

Analyses included re-measurement of a calibration standard at regular intervals during the analytical run. To pass this check, the results for the re-measured standard had to be within  $\pm 20\%$  of the initial value.

### **3.1.3 Spike recovery**

Data accepted if the recovery of spike for each analyte was within the 80 to 120 %.

### **3.1.4 Reference material data**

Accepted results had to be within the certified range, or 25 % of the quoted value, whichever was greater. Where indicative values were shown on certificates, measured concentrations had to be within a factor of 2 of the quoted value. Data were accepted if results for the majority of reference materials passed the criteria above.

### **3.1.5 Replicate agreement**

Replicate values for a given sample had to have a relative standard deviation  $\leq 20\%$  or a standard deviation of  $\leq$  LoQ, whichever was greater.

## **3.2 Organic contaminant QC – Dioxins, furans and biphenyls**

An in-house reference material, and method blanks were included in analytical batches and evaluated prior to reporting of sample data. Further quality assurance measures included the successful participation in available international inter-comparison exercises such as Dioxins in Food-2012 to 2013, on dioxins and PCBs. Additionally, quality control evaluation for the accompanying data followed the criteria specified for chlorinated dioxins and PCBs (Commission Regulation 252/2012).

## **4. Results**

Table 2 shows the trace element QA/QC data obtained during this study including CRM results, spike recoveries, detection limits and measurement uncertainty. Table

3 shows z-scores from Fera's participation in proficiency testing schemes during the study. The trace element sample results are reported in Table 5. All reported data satisfied the QA/QC criteria described in section 3 of this report. Element concentrations that are above the LoD but below the LoQ are pre-fixed with '~' to indicate that they are semi-quantitative results. 'N/R' in the results tables, indicates that the information was not recorded by the samplers.

Table 4 shows the organic contaminant QC data obtained during this study. The organic contaminant results are reported in Tables 6.1 to 6.3 and summarised in Table 6.4.

The highest Cd levels were found in kidney samples from the oldest age group (over 72 months), where seventeen (17) of these kidney samples contained Cd > 1.0 mg/kg, with an average level for this group of 0.89 mg/kg. Cattle from the youngest age group (< 30 months of age) contained the lowest Cd levels, with an average of 0.19 mg/kg and only one contained Cd > 1 mg/kg. The average Cd level for the middle age group (30 to ≤ 72 months) was 0.41 mg/kg and two contained Cd > 1 mg/kg. The middle age group also had the highest individual sample at 4.15 mg/kg.

All of the meat and liver samples tested for dioxins, furans and biphenyls were within maximum permitted levels. On a fat weight basis, the liver samples were consistently found to have a higher WHO-TEQ<sub>2005</sub> than their paired muscle samples, but the ratio between matched pairs varied within a range of approximately 3 and 20.

## 5. References

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**Table 1 ICP-MS operating conditions**

<b>Parameter</b>	<b>Agilent 7700x</b>
ICP Power (W)	1550
Nebuliser gas flow rate (L/min)	1.05
Plasma mode	General purpose
Tuning*	Autotune
Nebuliser type	Glass Concentric
Interface cones	Nickel
Spray chamber temp (°C)	2
Peri-pump speed (rpm)	0.1
MS Acquisition setting	
Scan mode	Peak hopping
<u>Cell mode</u>	
No-gas	<sup>111</sup> Cd, <sup>202</sup> Hg, <sup>208</sup> Pb.
Helium	<sup>63</sup> Cu, <sup>75</sup> As
'High Energy' Helium	<sup>78</sup> Se
Internal standards	<sup>103</sup> Rh, <sup>115</sup> In

**Table 2 Trace element QA/QC data obtained during the survey**

			<b>Cu</b>	<b>As</b>	<b>Se</b>	<b>Cd</b>	<b>Pb</b>
BCR185r	Measured	mg/kg	244	0.027	1.43	0.510	0.149
Bovine liver	<b>Reference</b>		<b>277</b>	<b>0.033</b>	<b>1.68</b>	<b>0.544</b>	<b>0.172</b>
BVL-LVU	Measured	mg/kg	30.4	0.717	1.65	0.153	0.466
Liver	<b>Reference</b>		<b>30.6</b>	<b>0.764</b>	<b>1.72</b>	<b>0.159</b>	<b>0.459</b>
DORM4	Measured	mg/kg	15.5	6.92	3.57	0.318	0.486
Fish protein	<b>Reference</b>		<b>15.9</b>	<b>6.80</b>	<b>3.56</b>	<b>0.306</b>	<b>0.416</b>
ZC73016	Measured	mg/kg	1.24	0.122	0.543	0.003	0.054
Chicken	<b>Reference</b>		<b>1.46</b>	<b>0.109</b>	<b>0.490</b>	<b>~0.005</b>	<b>0.110</b>
Limit of detection		mg/kg	0.01	0.0005	0.001	0.0005	0.0005
Recovery		[%]	103	107	104	103	100
Measurement Uncertainty (UM)		[%]	10	17	11	18	14

\* Based on performance in proficiency tests, using a coverage factor of 2 (95% confidence level)

**Table 3 Trace element proficiency data (last 12 months).**

Date	Matrix	FAPAS Round (unless stated)	Cu	As	Se	Cd	Pb
Mar-13	Powdered rice	07187		0.2		0.1	
Mar-13	Energy drink	1870			-0.6		
Apr-13	Vegetable puree	07188				0.1	-0.1
May-13	Milk powder	07190		-0.6		-0.1	0.0
Jun-13	Soft drink	07191	-0.1	0.0		0.1	
Jun-13	Canned crab meat	07192		0.2		0.5	0.0
Jul-13	Tomato paste	07193				0.5	1.2
Aug-13	Canned fish	07194		-0.5		0.3	
Sep-13	Infant Formula	07195			-0.3		
Oct-13	Edible oil	07198	-0.1	0.1			0.0
Oct-13	Mushrooms	IMEP-116		-0.7		-0.2	-0.5
Oct-13	Compound feed	IMEP-117		-0.4		0.0	0.1
Dec-13	Milk Powder	07201		-0.5		-0.3	-0.1
Mar-14	Vegetable puree	07207				0.7	0.4
May-14	Grapefruit juice	07210				0.1	-0.3

'nv' no z-score issued to participants

**Table 4 Organic contaminant QC – Dioxins, furans and biphenyls**

		Units	Units	Mean	Acceptable User Range	19680 Cod Liver Oil IHRM (Non Certified)				
Dioxins and Furans	2,3,7,8-TCDD	ng/kg	<b>0.45</b>	<b>0.42 - 0.51</b>	0.44	0.47	0.45	0.50	0.50	
	1,2,3,7,8- 1,2,3,6,7,8- 1,2,3,7,8,9-	ng/kg	<b>0.27</b>	<b>0.24 - 0.30</b>	0.29	0.30	0.28	0.30	0.25	
	1,2,3,6,7,8- 1,2,3,7,8,9-	ng/kg	<b>0.83</b>	<b>0.77 - 0.95</b>	0.83	0.94	0.85	0.95	0.80	
	1,2,3,7,8,9-	ng/kg	<b>0.17</b>	<b>0.15 - 0.21</b>	0.18	0.19	0.17	0.20	0.18	
	2,3,7,8-TCDF	ng/kg	<b>17.33</b>	<b>16.6 - 18.2</b>	17.85	17.74	17.48	18.17	17.2	
	1,2,3,7,8- 2,3,4,7,8- 1,2,3,4,7,8- 1,2,3,6,7,8- 2,3,4,6,7,8- 1,2,3,4,6,7,8-	ng/kg	<b>2.79</b>	<b>2.62 - 3.03</b>	2.56i	2.91	2.67	2.90	2.95	
		ng/kg	<b>1.71</b>	<b>1.6 - 1.86</b>	1.76	1.79	1.76	1.85	1.74	
		ng/kg	<b>0.49</b>	<b>0.45 - 0.54</b>	0.47	0.47	0.51	0.52	0.52	
		ng/kg	<b>0.85</b>	<b>0.8 - 0.92</b>	0.80	0.91	0.85	0.91	0.83	
		ng/kg	<b>0.86</b>	<b>0.81 - 0.95</b>	0.86	0.90	0.89	0.93	0.84	
		ng/kg	<b>0.27</b>	<b>0.24 - 0.32</b>	0.30	0.31	0.27	0.31	0.25	
non-ortho PCBs	PCB 77	ng/kg	<b>190.30</b>	<b>182 - 206</b>	184.23	179.07	179.06	182.34	175.28	
	PCB 126	ng/kg	<b>112.90</b>	<b>106 - 128</b>	100.84	111.43	103.80	107.35	99.59	
	PCB 169	ng/kg	<b>41.93</b>	<b>39.5 - 46.7</b>	39.67	37.99	39.34	40.84	37.22	
PCBs	PCB 28	ug/kg	<b>3.33</b>	<b>3.19 - 3.47</b>	3.41	3.29	3.25	3.19	3.22	
	PCB 52	ug/kg	<b>10.74</b>	<b>10.27 - 11.21</b>	11.18	11.17	10.71	10.59	10.42	
	PCB 101	ug/kg	<b>17.56</b>	<b>16.8 - 18.32</b>	18.40i	18.49i	18.26	18.73i	17.91	
	PCB 105	ug/kg	<b>5.64</b>	<b>5.04 - 6.24</b>	6.20	6.19	6.14	5.19	5.89	
	PCB 118	ug/kg	<b>18.9</b>	<b>15.89 - 21.91</b>	21.90	21.55	21.39	20.35	20.64	
	PCB 138	ug/kg	<b>32.39</b>	<b>29.4 - 35.38</b>	34.21	32.38	34.99	34.74	34.62	
	PCB 153	ug/kg	<b>41.43</b>	<b>39.47 - 43.39</b>	43.36	42.74	43.38	42.72	44.02i	
	PCB 156	ug/kg	<b>1.69</b>	<b>1.56 - 1.82</b>	1.75	1.76	1.74	1.73	1.72	
	PCB 180	ug/kg	<b>10.72</b>	<b>10.36 - 11.08</b>	11.08	11.02	10.40	10.67	10.33i	

i - indicative value

**Table 5 Organic contaminants proficiency data (last 12 months).**

Inter-comparison Exercise	Organiser	Matrices Tested	Fera Performance as Z score			Literature reference
			PCDD/PCDF	Diox + PCBs (PCBs)		
"Dioxins in Food" 2013	Norwegian Institute Of Public Health	Crab meat Egg	-0.90 -0.63	-0.71 -0.59	0.049 -0.41	"Interlaboratory Comparison on dioxins in food – Fourteenth round - Available at: <a href="http://www.fhi.no/ilc">www.fhi.no/ilc</a>
EURL PT 2013 Feed	EU – CRL	Animal Feed – feed fat	-0.3	1.1	0.1	<a href="https://fis-vl.bund.de/Members/irc/fis-vl/crl-dioxin/library?l=/proficiency_tests/2013_1_feed_fat/preliminary_results">https://fis-vl.bund.de/Members/irc/fis-vl/crl-dioxin/library?l=/proficiency_tests/2013_1_feed_fat/preliminary_results</a>



**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063905	17/12/2013	M	Under 30 months	20/06/2011	Muscle	~0.0007	0.0032	~0.0006	0.052	1.73
S13-063904	17/12/2013	M	Under 30 months	20/06/2011	Liver	0.286	0.225	0.0064	0.152	18.6
S13-063903	17/12/2013	M	Under 30 months	20/06/2011	Kidney	1.38	0.551	0.0078	1.17	4.09
S13-063767	27/12/2013	M	Under 30 months	28/06/2011	Muscle	<0.0005	~0.0005	~0.0009	0.078	1.91
S13-063766	27/12/2013	M	Under 30 months	28/06/2011	Liver	0.044	0.0329	0.0024	0.185	16
S13-063765	27/12/2013	M	Under 30 months	28/06/2011	Kidney	0.238	0.0713	0.0056	1.31	4.47
S13-063620	11/12/2013	M	Under 30 months	09/07/2011	Muscle	<0.0005	<0.0005	~0.0009	0.116	1.89
S13-063619	11/12/2013	M	Under 30 months	09/07/2011	Liver	0.0234	0.0102	0.0017	0.315	41.2
S13-063618	11/12/2013	M	Under 30 months	09/07/2011	Kidney	0.257	0.0269	0.0046	1.48	4.42
S13-063798	15/01/2014	F	Under 30 months	19/07/2011	Muscle	<0.0005	~0.0007	~0.0009	0.126	1.91
S13-063799	15/01/2014	F	Under 30 months	19/07/2011	Liver	0.0288	0.0127	0.0022	0.577	133
S13-063800	15/01/2014	F	Under 30 months	19/07/2011	Kidney	0.176	0.0282	0.0029	1.25	4.38
S13-063758	17/12/2013	M	Under 30 months	31/07/2011	Muscle	<0.0005	~0.0005	~0.0016	0.064	1.92
S13-063757	17/12/2013	M	Under 30 months	31/07/2011	Liver	0.0252	0.0169	0.0058	0.235	19.6
S13-063756	17/12/2013	M	Under 30 months	31/07/2011	Kidney	0.158	0.034	0.0169	1.24	4.35
S13-063581	19/12/2013	N/R	Under 30 months	05/08/2011	Muscle	<0.0005	~0.0009	0.0088	0.164	1.44
S13-063580	19/12/2013	N/R	Under 30 months	05/08/2011	Liver	0.0307	0.0249	0.0236	0.339	4.81
S13-063579	19/12/2013	N/R	Under 30 months	05/08/2011	Kidney	0.149	0.0451	0.107	1.42	3.23
S13-063833	17/12/2013	F	Under 30 months	04/09/2011	Muscle	<0.0005	~0.0007	0.0022	0.125	1.14
S13-063832	17/12/2013	F	Under 30 months	04/09/2011	Liver	0.021	0.032	0.0062	0.534	125
S13-063831	17/12/2013	F	Under 30 months	04/09/2011	Kidney	0.148	0.0685	0.0227	1.62	3.81
S13-063560	30/12/2013	F	Under 30 months	11/09/2011	Muscle	<0.0005	0.0074	<0.0005	0.079	2.07
S13-063558	30/12/2013	F	Under 30 months	11/09/2011	Liver	0.0433	0.0454	0.0034	0.224	19.7
S13-063559	30/12/2013	F	Under 30 months	11/09/2011	Kidney	0.368	0.0802	0.0074	1.27	3.78
S13-063557	30/12/2013	F	Under 30 months	17/09/2011	Muscle	~0.0005	~0.0011	~0.0009	0.049	2.22
S13-063556	30/12/2013	F	Under 30 months	17/09/2011	Liver	0.0267	0.0325	0.0051	0.172	28
S13-063555	30/12/2013	F	Under 30 months	17/09/2011	Kidney	0.193	0.0754	0.01	1.13	3.63
S13-063830	17/12/2013	F	Under 30 months	27/09/2011	Muscle	<0.0005	<0.0005	~0.0014	0.158	1.41
S13-063829	17/12/2013	F	Under 30 months	27/09/2011	Liver	0.0366	0.0164	0.0043	0.515	105

**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063828	17/12/2013	F	Under 30 months	27/09/2011	Kidney	0.109	0.0304	0.0105	1.09	3.19
S13-063782	17/12/2013	F	Under 30 months	15/10/2011	Muscle	<0.0005	~0.0007	~0.0008	0.055	1.64
S13-063781	17/12/2013	F	Under 30 months	15/10/2011	Liver	0.0317	0.0348	0.0022	0.139	18.4
S13-063780	17/12/2013	F	Under 30 months	15/10/2011	Kidney	0.205	0.0617	0.0054	1.34	3.75
S13-063626	11/12/2013	M	Under 30 months	20/10/2011	Muscle	<0.0005	<0.0005	~0.0007	0.092	2.01
S13-063625	11/12/2013	M	Under 30 months	20/10/2011	Liver	0.0256	0.0123	0.0019	0.228	15.6
S13-063624	11/12/2013	M	Under 30 months	20/10/2011	Kidney	0.189	0.0274	0.0057	1.2	3.57
S13-063911	17/12/2013	M	Under 30 months	21/10/2011	Muscle	<0.0005	<0.0005	0.002	0.04	1.25
S13-063910	17/12/2013	M	Under 30 months	21/10/2011	Liver	0.0256	0.0241	0.0059	0.104	2.53
S13-063909	17/12/2013	M	Under 30 months	21/10/2011	Kidney	0.0544	0.0466	0.0133	0.868	3.72
S13-063578	19/12/2013	M	Under 30 months	23/10/2011	Muscle	<0.0005	0.0017	<0.0005	0.137	2.25
S13-063577	19/12/2013	M	Under 30 months	23/10/2011	Liver	0.0287	0.0175	0.0022	0.358	55.2
S13-063576	19/12/2013	M	Under 30 months	23/10/2011	Kidney	0.135	0.0225	0.0101	1.36	3.72
S13-063665	31/12/2013	F	Under 30 months	24/10/2011	Muscle	<0.0005	<0.0005	~0.0014	0.13	1.77
S13-063664	31/12/2013	F	Under 30 months	24/10/2011	Liver	0.0239	0.0244	0.0048	0.501	131
S13-063663	31/12/2013	F	Under 30 months	24/10/2011	Kidney	0.126	0.0327	0.0101	1.2	4.98
S13-063692	03/01/2014	M	Under 30 months	25/10/2011	Muscle	<0.0005	<0.0005	~0.0007	0.029	1.44
S13-063691	03/01/2014	M	Under 30 months	25/10/2011	Liver	0.0203	0.0188	0.0017	0.066	34.8
S13-063690	03/01/2014	M	Under 30 months	25/10/2011	Kidney	0.115	0.0333	0.0032	1.04	3.13
S13-063735	07/01/2014	M	Under 30 months	16/11/2011	Muscle	<0.0005	<0.0005	<0.0005	0.074	1.62
S13-063737	07/01/2014	M	Under 30 months	16/11/2011	Liver	0.0235	0.0122	0.0021	0.267	68.9
S13-063736	07/01/2014	M	Under 30 months	16/11/2011	Kidney	0.123	0.024	0.0049	1.18	3.65
S13-063920	07/01/2014	M	Under 30 months	20/11/2011	Muscle	<0.0005	0.0018	0.0025	0.092	1.55
S13-063919	07/01/2014	M	Under 30 months	20/11/2011	Liver	0.0307	0.134	0.0051	0.386	82.3
S13-063918	07/01/2014	M	Under 30 months	20/11/2011	Kidney	0.12	0.247	0.0083	1.19	3.41
S13-063638	09/01/2014	F	Under 30 months	29/11/2011	Muscle	<0.0005	~0.0007	~0.0012	0.131	1.34
S13-063637	09/01/2014	F	Under 30 months	29/11/2011	Liver	0.0219	0.0037	0.003	0.755	184
S13-063636	09/01/2014	F	Under 30 months	29/11/2011	Kidney	0.153	0.0121	0.0074	1.17	3.57
S13-063926	17/12/2013	F	Under 30 months	03/12/2011	Muscle	<0.0005	~0.0008	~0.0015	0.034	1.66

**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063925	17/12/2013	F	Under 30 months	03/12/2011	Liver	0.0206	0.0464	0.0049	0.077	2.42
S13-063924	17/12/2013	F	Under 30 months	03/12/2011	Kidney	0.0817	0.0967	0.0135	1.09	4.19
S13-063845	09/01/2014	M	Under 30 months	10/12/2011	Muscle	<0.0005	0.002	0.004	0.114	1.91
S13-063844	09/01/2014	M	Under 30 months	10/12/2011	Liver	0.0354	0.0141	0.013	0.473	65.4
S13-063843	09/01/2014	M	Under 30 months	10/12/2011	Kidney	0.137	0.0284	0.0237	1.25	4.82
S13-063698	03/01/2014	M	Under 30 months	26/12/2011	Muscle	<0.0005	<0.0005	~0.0012	0.074	1.46
S13-063697	03/01/2014	M	Under 30 months	26/12/2011	Liver	0.0382	0.0164	0.0029	0.206	55.1
S13-063696	03/01/2014	M	Under 30 months	26/12/2011	Kidney	0.159	0.0375	0.0055	0.934	3.37
S13-063707	19/12/2013	F	Under 30 months	28/12/2011	Muscle	<0.0005	<0.0005	<0.0005	0.05	1.24
S13-063706	19/12/2013	F	Under 30 months	28/12/2011	Liver	0.0311	0.0183	~0.0013	0.124	15.8
S13-063705	19/12/2013	F	Under 30 months	28/12/2011	Kidney	0.184	0.0419	~0.0014	1.44	3.96
S13-063575	19/12/2013	M	Under 30 months	01/01/2012	Muscle	<0.0005	0.0038	0.0091	0.095	1.89
S13-063574	19/12/2013	M	Under 30 months	01/01/2012	Liver	0.0371	0.1	0.0217	0.29	61.2
S13-063573	19/12/2013	M	Under 30 months	01/01/2012	Kidney	0.129	0.239	0.0887	1.45	2.97
S14-012812	05/03/2014	F	Under 30 months	21/02/2012	Muscle	~0.0005	0.0048	~0.0009	0.118	2.01
S14-012811	05/03/2014	F	Under 30 months	21/02/2012	Liver	0.103	0.176	~0.0015	0.373	73.3
S14-012810	05/03/2014	F	Under 30 months	21/02/2012	Kidney	0.692	0.478	0.0068	1.19	3.85
S13-063704	03/01/2014	M	Under 30 months	23/02/2012	Muscle	<0.0005	<0.0005	~0.0013	0.116	1.55
S13-063703	03/01/2014	M	Under 30 months	23/02/2012	Liver	0.0359	0.0199	0.0023	0.457	87.2
S13-063702	03/01/2014	M	Under 30 months	23/02/2012	Kidney	0.154	0.0488	0.0079	1.37	3.53
S13-063608	11/12/2013	M	Under 30 months	01/03/2012	Muscle	<0.0005	<0.0005	0.0006	0.087	1.55
S13-063607	11/12/2013	M	Under 30 months	01/03/2012	Liver	0.0629	0.0266	0.0029	0.197	198
S13-063606	11/12/2013	M	Under 30 months	01/03/2012	Kidney	0.25	0.0397	~0.0082	1.18	3.2
S13-063683	06/01/2014	F	Under 30 months	22/03/2012	Muscle	<0.0005	<0.0005	0.0008	0.075	1.62
S13-063682	06/01/2014	F	Under 30 months	22/03/2012	Liver	0.0363	0.0333	0.0023	0.24	58.5
S13-063681	06/01/2014	F	Under 30 months	22/03/2012	Kidney	0.27	0.0655	~0.0080	1.27	4.08
S13-063917	07/01/2014	M	Under 30 months	29/03/2012	Muscle	<0.0005	0.0006	0.0011	0.074	1.49
S13-063916	07/01/2014	M	Under 30 months	29/03/2012	Liver	0.0271	0.0147	0.0037	0.268	54.5
S13-063915	07/01/2014	M	Under 30 months	29/03/2012	Kidney	0.0779	~0.0270	~0.0042	1.1	3.39

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S13-063686	06/01/2014	F	Under 30 months	31/03/2012	Muscle	<0.0005	0.001	0.0029	0.137	2.21
S13-063685	06/01/2014	F	Under 30 months	31/03/2012	Liver	0.0493	0.0405	0.0071	0.294	47.3
S13-063684	06/01/2014	F	Under 30 months	31/03/2012	Kidney	0.182	~0.0673	0.0127	1.26	3.52
S13-063749	20/12/2013	F	Under 30 months	06/04/2012	Muscle	<0.0005	<0.0005	0.0006	0.101	1.7
S13-063748	20/12/2013	F	Under 30 months	06/04/2012	Liver	0.0232	0.0121	0.0024	0.207	22.8
S13-063747	20/12/2013	F	Under 30 months	06/04/2012	Kidney	0.137	0.0333	~0.0062	1.31	4.54
S13-063887	18/12/2013	M	Under 30 months	06/04/2012	Muscle	<0.0005	0.0006	0.0022	0.108	1.35
S13-063886	18/12/2013	M	Under 30 months	06/04/2012	Liver	0.0164	0.0148	0.0057	0.482	139
S13-063885	18/12/2013	M	Under 30 months	06/04/2012	Kidney	0.0559	~0.0470	0.0109	1.21	4.28
S13-063695	03/01/2014	M	Under 30 months	15/04/2012	Muscle	<0.0005	<0.0005	0.001	0.112	1.94
S13-063694	03/01/2014	M	Under 30 months	15/04/2012	Liver	0.0189	0.011	0.0025	0.487	131
S13-063693	03/01/2014	M	Under 30 months	15/04/2012	Kidney	0.0992	0.0314	~0.0053	1.23	4.02
S13-063794	14/01/2014	M	Under 30 months	16/04/2012	Muscle	<0.0005	0.0012	<0.0005	0.062	1.2
S13-063793	14/01/2014	M	Under 30 months	16/04/2012	Liver	0.0338	0.0242	0.0009	0.183	50.1
S13-063792	14/01/2014	M	Under 30 months	16/04/2012	Kidney	0.211	~0.0525	0.0023	1.34	4.15
S13-063738	07/01/2014	F	Under 30 months	24/04/2012	Muscle	<0.0005	<0.0005	~0.0007	0.147	1.92
S13-063740	07/01/2014	F	Under 30 months	24/04/2012	Liver	0.0352	0.0185	0.0017	0.394	70.6
S13-063739	07/01/2014	F	Under 30 months	24/04/2012	Kidney	0.146	0.0463	0.0048	1.33	4.38
S13-063725	30/12/2013	M	Under 30 months	10/05/2012	Muscle	<0.0005	0.0007	<0.0005	0.111	1.82
S13-063724	30/12/2013	M	Under 30 months	10/05/2012	Liver	0.0162	0.0123	0.0014	0.44	174
S13-063723	30/12/2013	M	Under 30 months	10/05/2012	Kidney	0.0651	~0.0209	0.003	1.38	5.04
S13-063752	20/12/2013	M	Under 30 months	12/05/2012	Muscle	<0.0005	0.0005	0.0009	0.074	1.5
S13-063751	20/12/2013	M	Under 30 months	12/05/2012	Liver	0.0187	0.0198	0.0038	0.263	49.8
S13-063750	20/12/2013	M	Under 30 months	12/05/2012	Kidney	0.104	~0.0461	~0.0094	1.11	4.18
S13-063914	07/01/2014	M	Under 30 months	21/05/2012	Muscle	<0.0005	<0.0005	~0.0008	0.104	1.4
S13-063913	07/01/2014	M	Under 30 months	21/05/2012	Liver	0.0509	0.0194	0.0014	0.5	103
S13-063912	07/01/2014	M	Under 30 months	21/05/2012	Kidney	0.304	0.0403	~0.0034	1.15	3.92
S13-063629	09/12/2013	M	Under 30 months	04/06/2012	Muscle	<0.0005	<0.0005	0.0018	0.066	1.74
S13-063628	09/12/2013	M	Under 30 months	04/06/2012	Liver	0.0342	0.0102	0.0045	0.211	23.4

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S13-063627	09/12/2013	M	Under 30 months	04/06/2012	Kidney	0.261	0.0224	0.0071	1.23	4.69
S13-063728	07/01/2014	F	Under 30 months	16/07/2012	Muscle	<0.0005	0.0009	0.0009	0.125	1.47
S13-063727	07/01/2014	F	Under 30 months	16/07/2012	Liver	0.0183	0.0131	0.0019	0.482	202
S13-063726	07/01/2014	F	Under 30 months	16/07/2012	Kidney	0.123	~0.0417	~0.0049	1.52	5.56
S13-063701	03/01/2014	F	Under 30 months	27/07/2012	Muscle	<0.0005	<0.0005	<0.0005	0.105	1.67
S13-063700	03/01/2014	F	Under 30 months	27/07/2012	Liver	0.025	0.0142	0.0019	0.701	178
S13-063699	03/01/2014	F	Under 30 months	27/07/2012	Kidney	0.106	0.0401	0.0048	1.53	4.14
S14-022895	04/12/2013	M	Under 30 months	08/08/2012	Muscle	<0.0005	<0.0005	0.0015	0.097	1.8
S14-022894	04/12/2013	M	Under 30 months	08/08/2012	Liver	0.0303	0.0137	0.0038	0.235	36.8
S14-022893	04/12/2013	M	Under 30 months	08/08/2012	Kidney	0.187	0.0183	~0.0100	0.988	3.66
S13-063722	30/12/2013	M	Under 30 months	24/08/2012	Muscle	<0.0005	0.0009	0.0012	0.089	1.22
S13-063721	30/12/2013	M	Under 30 months	24/08/2012	Liver	0.0483	0.0288	0.003	0.535	101
S13-063720	30/12/2013	M	Under 30 months	24/08/2012	Kidney	0.0852	~0.0583	~0.0086	1.5	4.81
S13-063734	17/12/2013	M	Under 30 months	21/09/2012	Muscle	<0.0005	0.0026	0.0013	0.119	1.92
S13-063733	17/12/2013	M	Under 30 months	21/09/2012	Liver	0.0405	0.0692	0.0035	0.429	155
S13-063732	17/12/2013	M	Under 30 months	21/09/2012	Kidney	0.101	0.131	~0.0053	1.18	3.77
S13-063617	22/01/2014	M	Under 30 months	23/09/2012	Muscle	<0.0005	<0.0005	0.0008	0.132	1.94
S13-063616	22/01/2014	M	Under 30 months	23/09/2012	Liver	0.0159	0.0047	0.002	0.434	201
S13-063615	22/01/2014	M	Under 30 months	23/09/2012	Kidney	0.0428	0.0115	~0.0027	1.27	4.11
S13-063647	19/12/2013	M	Under 30 months	30/09/2012	Muscle	<0.0005	<0.0005	~0.0010	0.126	1.68
S13-063646	19/12/2013	M	Under 30 months	30/09/2012	Liver	0.0177	0.0068	0.0015	0.69	126
S13-063645	19/12/2013	M	Under 30 months	30/09/2012	Kidney	0.121	0.021	~0.0068	1.3	4.29
S13-063777	17/12/2013	M	Under 30 months	22/10/2012	Muscle	<0.0005	~0.0008	~0.0009	0.128	1.39
S13-063778	17/12/2013	M	Under 30 months	22/10/2012	Liver	0.0376	0.0447	0.0025	0.719	150
S13-063779	17/12/2013	M	Under 30 months	22/10/2012	Kidney	0.141	0.149	0.0049	1.28	3.82
S13-063713	31/12/2013	F	Under 30 months	10/06/2013	Muscle	<0.0005	~0.0015	0.0042	0.114	2.03
S13-063712	31/12/2013	F	Under 30 months	10/06/2013	Liver	0.021	0.0237	0.005	0.468	255
S13-063711	31/12/2013	F	Under 30 months	10/06/2013	Kidney	0.135	0.0348	0.0132	1.17	4.09
S13-063524	17/12/2013	F	30 - 72 months	16/05/2008	Muscle	<0.0005	~0.0010	0.0019	0.092	1.16

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S13-063523	17/12/2013	F	30 - 72 months	16/05/2008	Liver	0.0659	0.0261	0.0048	0.249	96.3
S13-063522	17/12/2013	F	30 - 72 months	16/05/2008	Kidney	0.403	0.0442	0.0139	1.23	2.79
S13-063851	09/01/2014	F	30 - 72 months	13/06/2008	Muscle	<0.0005	~0.0007	0.0024	0.073	1.28
S13-063850	09/01/2014	F	30 - 72 months	13/06/2008	Liver	0.0748	0.0444	0.0069	0.203	48.6
S13-063849	09/01/2014	F	30 - 72 months	13/06/2008	Kidney	0.462	0.0593	0.011	1.18	4.02
S13-063650	19/12/2013	F	30 - 72 months	28/08/2008	Muscle	<0.0005	<0.0005	~0.0009	0.148	1.87
S13-063649	19/12/2013	F	30 - 72 months	28/08/2008	Liver	0.0302	0.0042	~0.0010	0.4	124
S13-063648	19/12/2013	F	30 - 72 months	28/08/2008	Kidney	0.322	0.0162	0.003	1.05	4.31
S13-063512	16/012/13	F	30 - 72 months	29/01/2009	Muscle	~0.0007	~0.0007	0.0024	0.102	1.82
S13-063511	16/012/13	F	30 - 72 months	29/01/2009	Liver	0.0839	0.0234	0.0085	0.355	138
S13-063510	16/012/13	F	30 - 72 months	29/01/2009	Kidney	0.786	0.0872	0.0315	1.82	4.36
S13-063565	31/12/2013	F	30 - 72 months	03/02/2009	Muscle	<0.0005	~0.0006	~0.0015	0.027	1.47
S13-063566	31/12/2013	F	30 - 72 months	03/02/2009	Liver	0.0636	0.0366	0.0053	0.065	31.8
S13-063564	31/12/2013	F	30 - 72 months	03/02/2009	Kidney	0.318	0.0826	0.0132	0.879	4.45
S13-063521	16/12/2013	F	30 - 72 months	13/02/2009	Muscle	~0.0014	0.0017	0.0022	0.121	1.46
S13-063520	16/12/2013	F	30 - 72 months	13/02/2009	Liver	0.0876	0.0833	0.0095	0.418	187
S13-063519	16/12/2013	F	30 - 72 months	13/02/2009	Kidney	0.737	0.141	0.022	1.29	3.16
S13-063527	17/12/2013	F	30 - 72 months	14/02/2009	Muscle	<0.0005	0.002	0.0021	0.088	1.19
S13-063526	17/12/2013	F	30 - 72 months	14/02/2009	Liver	0.0408	0.081	0.0063	0.274	60.7
S13-063525	17/12/2013	F	30 - 72 months	14/02/2009	Kidney	0.281	0.236	0.0247	11.5	4.08
S13-063848	09/01/2014	F	30 - 72 months	24/02/2009	Muscle	<0.0005	~0.0007	0.0017	0.116	1.69
S13-063847	09/01/2014	F	30 - 72 months	24/02/2009	Liver	0.031	0.0207	0.008	0.469	157
S13-063846	09/01/2014	F	30 - 72 months	24/02/2009	Kidney	0.13	0.0377	0.0207	1.29	3.11
S13-063761	18/12/2013	F	30 - 72 months	14/03/2009	Muscle	<0.0005	~0.0012	~0.0008	0.153	2.35
S13-063760	18/12/2013	F	30 - 72 months	14/03/2009	Liver	0.0466	0.0105	0.0044	0.676	97.5
S13-063759	18/12/2013	F	30 - 72 months	14/03/2009	Kidney	0.28	0.0201	0.0113	1.48	3.83
S13-063562	31/12/2013	F	30 - 72 months	10/06/2009	Muscle	<0.0005	~0.0008	~0.0011	0.089	1.59
S13-063561	31/12/2013	F	30 - 72 months	10/06/2009	Liver	0.0396	0.0362	0.0046	0.225	1.87
S13-063563	31/12/2013	F	30 - 72 months	10/06/2009	Kidney	0.212	0.0996	0.0124	1.22	4

**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063815	03/03/2014	F	30 - 72 months	14/08/2009	Muscle	<0.0005	~0.0006	~0.0009	0.078	1
S13-063814	03/03/2013	F	30 - 72 months	14/08/2009	Liver	0.0427	0.0311	0.0068	0.21	3.64
S13-063813	03/03/2014	F	30 - 72 months	14/08/2009	Kidney	0.166	0.0588	0.0065	1.25	5.75
S13-063674	06/01/2014	F	30 - 72 months	28/09/2009	Muscle	<0.0005	~0.0011	~0.0007	0.082	1.38
S13-063673	06/01/2014	F	30 - 72 months	28/09/2009	Liver	0.0597	0.0501	0.0026	0.221	2.95
S13-063672	06/01/2014	F	30 - 72 months	28/09/2009	Kidney	0.33	0.0556	0.0029	1.08	2.89
S13-063875	08/01/2014	F	30 - 72 months	07/11/2009	Muscle	<0.0005	<0.0005	~0.0007	0.108	1.65
S13-063874	08/01/2014	F	30 - 72 months	07/11/2009	Liver	0.0794	0.0103	0.0023	0.507	174
S13-063873	08/01/2014	F	30 - 72 months	07/11/2009	Kidney	0.301	0.0418	0.0048	1.3	3.88
S13-063668	31/12/2013	F	30 - 72 months	09/11/2009	Muscle	<0.0005	<0.0005	~0.0008	0.136	1.62
S13-063667	31/12/2013	F	30 - 72 months	09/11/2009	Liver	0.0253	0.0028	0.0024	0.991	262
S13-063666	31/12/2013	F	30 - 72 months	09/11/2009	Kidney	0.21	0.0124	0.0121	1.51	4.82
S13-063947	07/01/2014	F	30 - 72 months	10/11/2009	Muscle	~0.0008	<0.0005	~0.0006	0.101	1.33
S13-063946	07/01/2014	F	30 - 72 months	10/11/2009	Liver	0.155	0.0183	0.0021	0.654	262
S13-063945	07/01/2014	F	30 - 72 months	10/11/2009	Kidney	4.15	0.0587	0.0025	0.919	3.52
S14-012806	07/03/2013	F	30 - 72 months	22/11/2009	Muscle	~0.0008	~0.0014	0.0018	0.109	1.73
S14-012805	07/03/2014	F	30 - 72 months	22/11/2009	Liver	0.14	0.0862	0.0089	0.383	205
S14-012804	07/03/2014	F	30 - 72 months	22/11/2009	Kidney	0.854	0.158	0.0429	1.09	3.78
S13-063953	07/01/2014	F	30 - 72 months	08/12/2009	Muscle	~0.0006	~0.0014	0.0063	0.087	1.82
S13-063952	07/01/2014	F	30 - 72 months	08/12/2009	Liver	0.0451	0.0156	0.0116	0.192	42.8
S13-063951	07/01/2014	F	30 - 72 months	08/12/2009	Kidney	0.259	0.0309	0.074	1.27	3.87
S13-063806	16/01/2014	F	30 - 72 months	24/12/2009	Muscle	<0.0005	~0.0008	~0.0011	0.092	1.74
S13-063805	16/01/2014	F	30 - 72 months	24/12/2009	Liver	0.0447	0.0233	0.0023	0.281	126
S13-063804	16/01/2014	F	30 - 72 months	24/12/2009	Kidney	0.272	0.0494	0.0064	1.08	3.46
S13-063968	03/03/2014	F	30 - 72 months	07/01/2010	Muscle	<0.0005	~0.0013	~0.0014	0.198	1.85
S13-063967	03/03/2014	F	30 - 72 months	07/01/2010	Liver	0.051	0.0193	0.0031	0.399	33.8
S13-063966	03/03/2014	F	30 - 72 months	07/01/2010	Kidney	0.433	0.0348	0.0161	1.39	4.39
S13-063610	22/01/2014	F	30 - 72 months	01/03/2010	Muscle	<0.0005	~0.0006	0.0019	0.092	1.89
S13-063609	22/01/2014	F	30 - 72 months	01/03/2010	Liver	0.0556	0.0207	0.0102	0.19	45.8

**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063611	22/01/2014	F	30 - 72 months	01/03/2010	Kidney	0.542	0.0566	0.0602	1.08	4.08
S13-063731	07/01/2014	F	30 - 72 months	17/03/2010	Muscle	~0.0005	0.009	~0.0008	0.144	1.72
S13-063730	07/01/2014	F	30 - 72 months	17/03/2010	Liver	0.0557	0.0066	~0.0012	0.703	234
S13-063729	07/01/2014	F	30 - 72 months	17/03/2010	Kidney	0.418	0.0628	0.0051	4.36	3.71
S13-063551	17/12/2013	F	30 - 72 months	14/04/2010	Muscle	<0.0005	<0.0005	~0.0016	0.103	1.73
S13-063550	17/12/2013	F	30 - 72 months	14/04/2010	Liver	0.0581	0.0324	0.005	0.311	214
S13-063549	17/12/2013	F	30 - 72 months	14/04/2010	Kidney	0.25	0.0578	0.0143	1.24	3.53
S13-063641	09/01/2014	F	30 - 72 months	16/04/2010	Muscle	~0.0010	~0.0007	~0.0015	0.138	1.41
S13-063640	09/01/2014	F	30 - 72 months	16/04/2010	Liver	0.078	0.0192	0.006	0.873	188
S13-063639	09/01/2014	F	30 - 72 months	16/04/2010	Kidney	1.37	0.0681	0.0249	1.22	3.59
S13-063956	07/01/2014	F	30 - 72 months	28/05/2010	Muscle	<0.0005	~0.0013	0.0113	0.116	1.54
S13-063955	07/01/2014	F	30 - 72 months	28/05/2010	Liver	0.0532	0.0514	0.0365	0.248	24.4
S13-063954	07/01/2014	F	30 - 72 months	28/05/2010	Kidney	0.233	0.133	0.142	6.63	3.5
S13-063605	11/12/2013	F	30 - 72 months	10/06/2010	Muscle	<0.0005	~0.0005	<0.0005	0.086	1.53
S13-063604	11/12/2013	F	30 - 72 months	10/06/2010	Liver	0.0455	0.0177	0.0034	0.353	80.9
S13-063603	11/12/2013	F	30 - 72 months	10/06/2010	Kidney	0.404	0.0303	0.0041	1.32	3.84
S13-063584	19/12/2013	M	30 - 72 months	28/06/2010	Muscle	<0.0005	~0.0011	0.0029	0.135	1.8
S13-063583	19/12/2013	M	30 - 72 months	28/06/2010	Liver	0.0468	0.0117	0.0053	0.583	207
S13-063582	19/12/2013	M	30 - 72 months	28/06/2010	Kidney	0.157	0.034	0.0177	1.05	3.7
S13-063770	30/12/2013	M	30 - 72 months	07/08/2010	Muscle	<0.0005	~0.0007	<0.0005	0.04	2.04
S13-063769	30/12/2013	M	30 - 72 months	07/08/2010	Liver	0.0461	0.024	0.0036	0.121	12.8
S13-063768	30/12/2013	M	30 - 72 months	07/08/2010	Kidney	0.217	0.0428	0.0058	1.15	3.78
S13-063714	19/12/2013	F	30 - 72 months	01/09/2010	Muscle	<0.0005	~0.0010	~0.0011	0.076	1.76
S13-063715	19/12/2013	F	30 - 72 months	01/09/2010	Liver	0.0153	0.0143	0.0023	0.323	108
S13-063716	19/12/2013	F	30 - 72 months	01/09/2010	Kidney	0.189	0.0432	0.0059	1.11	4.37
S13-063854	09/01/2014	M	30 - 72 months	22/09/2010	Muscle	<0.0005	0.0031	0.006	0.078	1.5
S13-063853	09/01/2014	M	30 - 72 months	22/09/2010	Liver	0.0607	0.0924	0.0169	0.182	2.36
S13-063852	09/01/2014	M	30 - 72 months	22/09/2010	Kidney	0.226	0.23	0.0687	0.937	3.37
S13-063689	06/01/2014	F	30 - 72 months	02/10/2010	Muscle	<0.0005	0.0019	~0.0008	0.113	1.6



**Table 6 Trace element concentrations – mg/kg**

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S13-063688	06/01/2014	F	30 - 72 months	02/10/2010	Liver	0.0669	0.0579	0.0035	0.427	130
S13-063687	06/01/2014	F	30 - 72 months	02/10/2010	Kidney	0.638	0.169	0.0112	1.56	4.08
S13-063899	31/01/2014	F	30 - 72 months	29/10/2010	Muscle	<0.0005	0.01	0.0035	0.083	1.56
S13-063898	31/01/2014	F	30 - 72 months	29/10/2010	Liver	0.0849	0.652	0.0095	0.14	114
S13-063897	31/01/2014	F	30 - 72 months	29/10/2010	Kidney	0.329	1.13	0.0489	0.947	3.21
S13-063959	07/01/2014	F	30 - 72 months	30/10/2010	Muscle	<0.0005	0.0022	0.0024	0.123	1.46
S13-063958	07/01/2014	F	30 - 72 months	30/10/2010	Liver	0.039	0.0433	0.0061	0.544	219
S13-063957	07/01/2014	F	30 - 72 months	30/10/2010	Kidney	0.325	0.135	0.0153	1.12	4.31
S13-063827	17/12/2013	F	30 - 72 months	12/11/2010	Muscle	<0.0005	~0.0009	0.0041	0.135	1.62
S13-063826	17/12/2013	F	30 - 72 months	12/11/2010	Liver	0.0357	0.0282	0.0033	0.466	158
S13-063825	17/12/2013	F	30 - 72 months	12/11/2010	Kidney	0.179	0.031	0.0121	1.03	3.38
S13-063554	17/12/2013	F	30 - 72 months	28/11/2010	Muscle	<0.0005	~0.0009	~0.0012	0.064	1.35
S13-063553	17/12/2013	F	30 - 72 months	28/11/2010	Liver	0.0472	0.0555	0.0023	0.144	59.7
S13-063552	17/12/2013	F	30 - 72 months	28/11/2010	Kidney	0.353	0.0754	0.018	0.867	3.94
S14-022901	04/12/2013?	F	30 - 72 months	03/01/2011	Muscle	<0.0005	<0.0005	0.0018	0.143	1.75
S14-022900	04/12/2013?	F	30 - 72 months	03/01/2011	Liver	0.0358	0.0129	0.0048	0.407	50.6
S14-022899	04/12/2013?	F	30 - 72 months	03/01/2011	Kidney	0.155	0.0212	0.0106	1.58	4.01
S13-063632	09/12/2013	F	30 - 72 months	11/01/2011	Muscle	<0.0005	<0.0005	~0.0011	0.153	1.71
S13-063631	09/12/2013	F	30 - 72 months	11/01/2011	Liver	0.0539	0.0157	0.005	0.699	97.8
S13-063630	09/12/2013	F	30 - 72 months	11/01/2011	Kidney	0.417	0.0477	0.0116	1.63	5.54
S13-063890	18/12/2013	F	30 - 72 months	25/01/2011	Muscle	<0.0005	~0.0013	0.0026	0.078	1.69
S13-063889	18/12/2013	F	30 - 72 months	25/01/2011	Liver	0.0417	0.111	0.0043	0.156	13.7
S13-063888	18/12/2013	F	30 - 72 months	25/01/2011	Kidney	0.257	0.178	0.0142	0.932	3.75
S13-063776	03/01/2014	M	30 - 72 months	08/02/2011	Muscle	<0.0005	~0.0015	~0.0013	0.081	1.65
S13-063775	03/01/2014	M	30 - 72 months	08/02/2011	Liver	0.0332	0.0378	0.0034	0.323	48.7
S13-063774	03/01/2014	M	30 - 72 months	08/02/2011	Kidney	0.42	0.0969	0.0112	1.44	4.3
S13-063818	03/03/2014	M	30 - 72 months	11/02/2011	Muscle	<0.0005	~0.0009	<0.0005	0.063	2.17
S13-063817	03/03/2014	M	30 - 72 months	11/02/2011	Liver	0.0368	0.0261	0.0017	0.161	78
S13-063816	03/03/2014	M	30 - 72 months	11/02/2011	Kidney	0.272	0.0497	0.0032	0.9	3.77

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S13-063892	31/01/2014	M	30 - 72 months	12/02/2011	Muscle	<0.0005	~0.0006	~0.0008	0.087	1.66
S13-063891	31/01/2014	M	30 - 72 months	12/02/2011	Liver	0.0589	0.0349	0.0028	0.163	7.3
S13-063893	31/01/2014	M	30 - 72 months	12/02/2011	Kidney	0.162	0.0662	0.0053	0.825	3.62
S13-063746	20/12/2013	F	30 - 72 months	26/03/2011	Muscle	<0.0005	0.0065	0.0042	0.02	1.88
S13-063745	20/12/2013	F	30 - 72 months	26/03/2011	Liver	0.0593	0.864	0.0097	0.044	22.7
S13-063744	20/12/2013	F	30 - 72 months	26/03/2011	Kidney	0.34	1.41	0.0286	0.765	3.82
S13-063884	18/12/2013	F	30 - 72 months	07/04/2011	Muscle	<0.0005	~0.0006	~0.0011	0.084	1.53
S13-063883	18/12/2013	F	30 - 72 months	07/04/2011	Liver	0.121	0.0287	0.0022	0.345	68
S13-063882	18/12/2013	F	30 - 72 months	07/04/2011	Kidney	0.706	0.0526	0.0074	1.24	4.46
S13-063934	30/12/2013	M	30 - 72 months	08/04/2011	Muscle	<0.0005	~0.0008	0.0181	0.098	1.55
S13-063935	30/12/2013	M	30 - 72 months	08/04/2011	Liver	0.0361	0.0311	0.0585	0.174	2.56
S13-063933	30/12/2013	M	30 - 72 months	08/04/2011	Kidney	0.171	0.0839	0.243	1.23	3.37
S13-063938	17/12/2013	F	30 - 72 months	12/04/2011	Muscle	<0.0005	~0.0012	~0.0013	0.069	1.73
S13-063937	17/12/2013	F	30 - 72 months	12/04/2011	Liver	0.0266	0.0219	0.0031	0.183	50.8
S13-063936	17/12/2013	F	30 - 72 months	12/04/2011	Kidney	0.18	0.0387	0.0095	0.995	3.74
S13-063923	07/01/2014	M	30 - 72 months	27/04/2011	Muscle	<0.0005	0.0019	0.0026	0.116	1.77
S13-063922	07/01/2014	M	30 - 72 months	27/04/2011	Liver	0.0409	0.084	0.0075	0.617	131
S13-063921	07/01/2014	M	30 - 72 months	27/04/2011	Kidney	0.22	0.17	0.0213	1.15	3.08
S13-063623	11/12/2013	M	30 - 72 months	28/04/2011	Muscle	<0.0005	<0.0005	<0.0005	0.112	1.87
S13-063622	11/12/2013	M	30 - 72 months	28/04/2011	Liver	0.0291	0.0064	~0.0011	0.362	35.2
S13-063621	11/12/2013	M	30 - 72 months	28/04/2011	Kidney	0.133	0.0157	0.0024	1.2	4.55
S13-063680	06/01/2014	F	30 - 72 months	04/05/2011	Muscle	<0.0005	~0.0011	~0.0013	0.099	1.2
S13-063679	06/01/2014	F	30 - 72 months	04/05/2011	Liver	0.0575	0.075	0.0043	0.321	59.3
S13-063678	06/01/2014	F	30 - 72 months	04/05/2011	Kidney	0.314	0.14	0.0117	1.11	3.5
S13-063809	16/01/2014	M	30 - 72 months	20/06/2011	Muscle	<0.0005	0.0027	0.0021	0.087	1.78
S13-063808	16/01/2014	M	30 - 72 months	20/06/2011	Liver	0.0293	0.0993	0.0043	0.395	101
S13-063807	16/01/2014	M	30 - 72 months	20/06/2011	Kidney	0.118	0.186	0.0098	1.27	3.07
S13-063786	06/01/2014	F	30 - 72 months	23/06/2011	Muscle	<0.0005	<0.0005	~0.0014	0.037	1.44
S13-063787	06/01/2014	F	30 - 72 months	23/06/2011	Liver	0.0193	0.0318	0.0055	0.116	2.67

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S13-063788	06/01/2014	F	30 - 72 months	23/06/2011	Kidney	0.155	0.0518	0.0189	1.07	3.62
S13-063901	27/02/2014	M	30 - 72 months	24/07/2011	Muscle	<0.0005	~0.0009	0.0188	0.129	1.94
S13-063900	27/02/2014	M	30 - 72 months	24/07/2011	Liver	0.0303	0.0532	0.0495	0.244	65
S13-063902	27/02/2014	M	30 - 72 months	24/07/2011	Kidney	0.14	0.124	0.204	1.05	3.99
S13-063784	20/01/2014	M	30 - 72 months	26/08/2011	Muscle	<0.0005	0.0019	~0.0016	0.151	1.59
S13-063783	20/01/2014	M	30 - 72 months	26/08/2011	Liver	0.0392	0.129	0.0044	0.422	81.8
S13-063785	20/01/2014	M	30 - 72 months	26/08/2011	Kidney	0.149	0.229	0.011	1.21	3.03
S13-063542	17/12/2013	F	Over 72 months	15/12/1998	Muscle	~0.0011	~0.0009	0.0046	0.186	1.62
S13-063541	17/12/2013	F	Over 72 months	15/12/1998	Liver	0.0423	0.0131	0.0031	0.238	11.8
S13-063540	17/12/2013	F	Over 72 months	15/12/1998	Kidney	0.426	0.0221	0.0053	0.85	2.87
S13-063802	15/01/2014	F	Over 72 months	02/08/1999	Muscle	~0.0015	0.0062	0.008	0.068	1.49
S13-063803	15/01/2014	F	Over 72 months	02/08/1999	Liver	0.165	0.365	0.023	0.125	16.2
S13-063801	15/01/2014	F	Over 72 months	02/08/1999	Kidney	1.11	0.514	0.0609	1.09	2.69
S13-063869	09/01/2014	F	Over 72 months	06/10/2000	Muscle	<0.0005	~0.0006	0.0078	0.1	1.63
S13-063868	09/01/2014	F	Over 72 months	06/10/2000	Liver	0.0524	0.0157	0.0213	0.317	17.9
S13-063867	09/01/2014	F	Over 72 months	06/10/2000	Kidney	0.389	0.0424	0.0479	1.08	4.1
S13-063719	30/12/2013	F	Over 72 months	19/10/2000	Muscle	~0.0014	~0.0015	~0.0013	0.088	1.92
S13-063718	30/12/2013	F	Over 72 months	19/10/2000	Liver	0.0541	0.0151	0.0025	0.263	55.6
S13-063717	30/12/2013	F	Over 72 months	19/10/2000	Kidney	1.76	0.0331	0.0045	0.949	4.28
S13-063944	07/01/2014	F	Over 72 months	08/11/2000	Muscle	0.0025	~0.0010	~0.0009	0.053	1.82
S13-063943	07/01/2014	F	Over 72 months	08/11/2000	Liver	0.175	0.0409	~0.0015	0.133	39.8
S13-063942	07/01/2014	F	Over 72 months	08/11/2000	Kidney	1.04	0.0542	0.0053	1.94	3.93
S13-063644	09/01/2014	F	Over 72 months	19/12/2000	Muscle	~0.0010	<0.0005	0.0022	0.14	1.31
S13-063643	09/01/2014	F	Over 72 months	19/12/2000	Liver	0.0844	0.0116	0.0043	0.351	101
S13-063642	09/01/2014	F	Over 72 months	19/12/2000	Kidney	0.855	0.0293	0.0112	1.17	3.06
S13-063614	22/01/2014	F	Over 72 months	11/05/2001	Muscle	~0.0011	~0.0008	~0.0011	0.083	1.8
S13-063613	22/01/2014	F	Over 72 months	11/05/2001	Liver	0.0661	0.0128	0.0031	0.143	34.8
S13-063612	22/01/2014	F	Over 72 months	11/05/2001	Kidney	1.3	0.0357	0.0056	0.94	3.8
S13-063941	07/01/2014	F	Over 72 months	16/06/2001	Muscle	0.0022	0.005	0.0034	0.093	1.87

**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063940	07/01/2014	F	Over 72 months	16/06/2001	Liver	0.402	0.282	0.0037	0.21	18.2
S13-063939	07/01/2014	F	Over 72 months	16/06/2001	Kidney	2.68	0.453	0.0076	0.695	2.64
S13-063860	09/01/2014	F	Over 72 months	19/08/2001	Muscle	~0.0010	0.0018	0.0111	0.056	1.49
S13-063859	09/01/2014	F	Over 72 months	19/08/2001	Liver	0.0446	0.14	0.0334	0.145	3.03
S13-063858	09/01/2014	F	Over 72 months	19/08/2001	Kidney	1.44	0.131	0.102	0.765	3.5
S13-063587	19/12/2013	F	Over 72 months	26/08/2001	Muscle	~0.0010	0.0026	0.0056	0.077	1.74
S13-063586	19/12/2013	F	Over 72 months	26/08/2001	Liver	0.0636	0.121	0.0109	0.12	48.6
S13-063585	19/12/2013	F	Over 72 months	26/08/2001	Kidney	0.404	0.11	0.0289	0.847	3.61
S13-063671	31/12/2013	F	Over 72 months	06/01/2002	Muscle	~0.0010	~0.0007	~0.0015	0.193	2.15
S13-063670	31/12/2013	F	Over 72 months	06/01/2002	Liver	0.133	0.0172	0.003	0.364	87
S13-063669	31/12/2013	F	Over 72 months	06/01/2002	Kidney	0.825	0.0277	0.0145	1.06	3.69
S13-063797	14/01/2014	F	Over 72 months	09/07/2002	Muscle	~0.0010	0.002	~0.0007	0.309	2.07
S13-063796	14/01/2014	F	Over 72 months	09/07/2002	Liver	0.0661	0.045	0.0029	0.594	3.19
S13-063795	14/01/2014	F	Over 72 months	09/07/2002	Kidney	0.732	0.115	0.0029	1.11	3.27
S13-063965	17/12/2013	F	Over 72 months	11/07/2002	Muscle	<0.0005	~0.0008	0.0107	0.09	1.34
S13-063964	17/12/2013	F	Over 72 months	11/07/2002	Liver	0.0517	0.0737	0.045	0.217	19.5
S13-063963	17/12/2013	F	Over 72 months	11/07/2002	Kidney	0.564	0.105	0.186	1.11	4.73
S13-063515	16/12/2013	F	Over 72 months	25/09/2002	Muscle	0.0017	<0.0005	0.0023	0.132	1.72
S13-063514	16/12/2013	F	Over 72 months	25/09/2002	Liver	0.122	0.0235	0.0048	0.495	117
S13-063513	16/12/2013	F	Over 72 months	25/09/2002	Kidney	1.14	0.178	0.0182	3.29	3.43
S13-063602	11/12/2013	F	Over 72 months	01/12/2002	Muscle	~0.0012	0.0022	0.0037	0.049	1.42
S13-063601	11/12/2013	F	Over 72 months	01/12/2002	Liver	0.101	0.124	0.0132	0.11	14.2
S13-063600	11/12/2013	F	Over 72 months	01/12/2002	Kidney	1.06	0.0946	0.0304	0.696	2.75
S13-063929	18/12/2013	F	Over 72 months	15/02/2003	Muscle	~0.0006	~0.0007	~0.0014	0.123	1.84
S13-063928	18/12/2013	F	Over 72 months	15/02/2003	Liver	0.107	0.0252	0.0028	0.347	94.6
S13-063927	18/12/2013	F	Over 72 months	15/02/2003	Kidney	0.625	0.0606	0.007	3.36	3.22
S13-063950	07/01/2014	F	Over 72 months	13/04/2003	Muscle	0.0017	~0.0013	~0.0006	0.067	1.78
S13-063949	07/01/2014	F	Over 72 months	13/04/2003	Liver	0.248	0.0138	~0.0016	0.151	44.9
S13-063948	07/01/2014	F	Over 72 months	13/04/2003	Kidney	2.68	0.0235	0.0025	0.899	3.26

**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063548	17/12/2013	F	Over 72 months	08/11/2003	Muscle	~0.0016	~0.0010	~0.0015	0.09	1.76
S13-063547	17/12/2013	F	Over 72 months	08/11/2003	Liver	0.216	0.0292	0.0043	0.274	161
S13-063546	17/12/2013	F	Over 72 months	08/11/2003	Kidney	1.29	0.175	0.012	3.54	3.85
S13-063710	27/12/2013	F	Over 72 months	26/01/2004	Muscle	~0.0009	0.0141	~0.0009	0.106	2.23
S13-063708	27/12/2013	F	Over 72 months	26/01/2004	Liver	0.0718	0.0122	0.002	0.704	238
S13-063709	27/12/2013	F	Over 72 months	26/01/2004	Kidney	0.826	0.0239	0.0038	1.13	4.08
S13-063824	16/12/2013	F	Over 72 months	16/04/2004	Muscle	<0.0005	0.0019	~0.0014	0.078	1.89
S13-063823	16/12/2013	F	Over 72 months	16/04/2004	Liver	0.0397	0.0568	0.0063	0.174	2.65
S13-063822	16/12/2013	F	Over 72 months	16/04/2004	Kidney	1.09	0.0669	0.0272	1.13	3.77
S13-063653	19/12/2013	F	Over 72 months	19/04/2004	Muscle	<0.0005	<0.0005	~0.0014	0.118	1.76
S13-063652	19/12/2013	F	Over 72 months	19/04/2004	Liver	0.0628	0.0138	0.004	0.385	62.2
S13-063651	19/12/2013	F	Over 72 months	19/04/2004	Kidney	0.522	0.025	0.0045	1.01	3.93
S13-063863	09/01/2014	F	Over 72 months	29/08/2004	Muscle	~0.0012	~0.0016	0.0099	0.06	1.33
S13-063862	09/01/2014	F	Over 72 months	29/08/2004	Liver	0.105	0.0766	0.0266	0.151	3.37
S13-063861	09/01/2014	F	Over 72 months	29/08/2004	Kidney	1.99	0.0936	0.0492	0.744	3.21
S13-063932	18/12/2013	F	Over 72 months	07/10/2004	Muscle	~0.0008	~0.0006	0.0031	0.143	1.6
S13-063931	18/12/2013	F	Over 72 months	07/10/2004	Liver	0.0717	0.0126	0.0059	0.666	266
S13-063930	18/12/2013	F	Over 72 months	07/10/2004	Kidney	0.727	0.0298	0.0312	0.996	3.27
S13-063812	03/03/2014	F	Over 72 months	12/10/2004	Muscle	~0.0005	~0.0006	~0.0006	0.094	1.17
S13-063811	03/03/2014	F	Over 72 months	12/10/2004	Liver	0.0438	0.0208	~0.0016	0.243	10.3
S13-063810	03/03/2014	F	Over 72 months	12/10/2004	Kidney	1.45	0.0608	~0.0016	1.28	4.08
S13-063536	17/12/2013	F	Over 72 months	14/10/2004	Muscle	~0.0007	~0.0009	~0.0008	0.036	1.44
S13-063535	17/12/2013	F	Over 72 months	14/10/2004	Liver	0.155	0.0226	0.003	0.086	2.91
S13-063534	17/12/2013	F	Over 72 months	14/10/2004	Kidney	1.1	0.0427	0.0056	0.712	3.27
S13-063570	N/R	F	Over 72 months	02/12/2004	Muscle	<0.0005	0.0498	~0.0010	0.083	0.9
S13-063571	N/R	F	Over 72 months	02/12/2004	Liver	0.0345	0.0362	0.0035	0.381	76.3
S13-063572	N/R	F	Over 72 months	02/12/2004	Kidney	0.477	0.088	0.0035	1.03	3.76
S13-063791	N/R	F	Over 72 months	26/01/2005	Muscle	<0.0005	~0.0012	0.0027	0.126	1.76
S13-063790	N/R	F	Over 72 months	26/01/2005	Liver	0.0412	0.044	0.0097	0.418	76.9

**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063789	N/R	F	Over 72 months	26/01/2005	Kidney	0.337	0.131	0.0276	1.3	3.47
S13-063568	30/12/2013	F	Over 72 months	17/03/2005	Muscle	<0.0005	~0.0008	~0.0012	0.081	1.6
S13-063569	30/12/2013	F	Over 72 months	17/03/2005	Liver	0.0235	0.0306	0.0038	0.215	52.9
S13-063567	30/12/2013	F	Over 72 months	17/03/2005	Kidney	0.121	0.0624	0.0136	1.28	3.4
S13-063881	19/12/2013	F	Over 72 months	23/03/2005	Muscle	<0.0005	<0.0005	0.002	0.136	1.42
S13-063880	19/12/2013	F	Over 72 months	23/03/2005	Liver	0.115	0.031	0.0064	0.559	164
S13-063879	19/12/2013	F	Over 72 months	23/03/2005	Kidney	0.658	0.127	0.0144	6.71	2.79
S13-063821	18/12/2013	F	Over 72 months	11/04/2005	Muscle	~0.0005	0.0043	<0.0005	0.097	1.47
S13-063820	18/12/2013	F	Over 72 months	11/04/2005	Liver	0.0593	0.126	0.0025	0.373	102
S13-063819	18/12/2013	F	Over 72 months	11/04/2005	Kidney	0.896	0.37	0.0046	1.47	4.06
S13-063872	08/01/2014	F	Over 72 months	03/11/2005	Muscle	<0.0005	<0.0005	~0.0010	0.127	1.75
S13-063871	08/01/2014	F	Over 72 months	03/11/2005	Liver	0.0205	0.0069	0.0023	0.437	103
S13-063870	08/01/2014	F	Over 72 months	03/11/2005	Kidney	0.234	0.149	0.0063	8.75	4.17
S13-063764	24/12/2013	F	Over 72 months	07/01/2006	Muscle	~0.0007	~0.0009	~0.0012	0.109	1.93
S13-063763	24/12/2013	F	Over 72 months	07/01/2006	Liver	0.107	0.0222	0.0026	0.182	37.3
S13-063762	24/12/2013	F	Over 72 months	07/01/2006	Kidney	1.45	0.0415	0.0042	0.978	3.57
S14-022898	04/12/2013?	F	Over 72 months	14/01/2006	Muscle	~0.0005	0.0021	~0.0011	0.11	1.78
S14-022897	04/12/2013?	F	Over 72 months	14/01/2006	Liver	0.0455	0.013	0.0029	0.328	40.2
S14-022896	04/12/2013?	F	Over 72 months	14/01/2006	Kidney	0.307	0.0758	0.0084	21.2	4.48
S13-063533	17/12/2013	F	Over 72 months	26/03/2006	Muscle	~0.0009	~0.0008	~0.0009	0.075	1.64
S13-063532	17/12/2013	F	Over 72 months	26/03/2006	Liver	0.0844	0.0181	0.0057	0.152	2.82
S13-063531	17/12/2013	F	Over 72 months	26/03/2006	Kidney	0.328	0.0397	0.0253	1.13	3.22
S13-063677	06/01/2014	F	Over 72 months	02/04/2006	Muscle	~0.0010	~0.0012	~0.0013	0.098	1.82
S13-063676	06/01/2014	F	Over 72 months	02/04/2006	Liver	0.0892	0.06	0.0043	0.258	18.9
S13-063675	06/01/2014	F	Over 72 months	02/04/2006	Kidney	1.81	0.103	0.026	1	2.99
S13-063590	19/12/2013	F	Over 72 months	16/08/2006	Muscle	~0.0012	~0.0008	~0.0010	0.121	1.59
S13-063589	19/12/2013	F	Over 72 months	16/08/2006	Liver	0.0503	0.0124	0.0028	0.279	61.3
S13-063588	19/12/2013	F	Over 72 months	16/08/2006	Kidney	0.63	0.178	0.0082	8.13	3.97
S13-063896	31/01/2014	F	Over 72 months	22/08/2006	Muscle	<0.0005	~0.0006	~0.0011	0.031	1.66

**Table 6 Trace element concentrations – mg/kg**

FERA LIMS code	Date of sampling	Sex (M/F)	Age group	Date of Birth (dd/mm/yyyy)	Tissue	Cd (mg/kg)	Pb (mg/kg)	As (total) (mg/kg)	Se (mg/kg)	Cu (mg/kg)
S13-063895	31/01/2014	F	Over 72 months	22/08/2006	Liver	0.0999	0.0868	0.0053	0.093	19
S13-063894	31/01/2014	F	Over 72 months	22/08/2006	Kidney	0.518	0.0898	0.0062	0.692	3.34
S13-063530	17/12/2013	F	Over 72 months	31/08/2006	Muscle	~0.0010	0.002	0.0026	0.149	1.58
S13-063529	17/12/2013	F	Over 72 months	31/08/2006	Liver	0.121	0.104	0.0296	0.65	235
S13-063528	17/12/2013	F	Over 72 months	31/08/2006	Kidney	0.581	0.133	0.0853	1.44	3.92
S13-063635	09/21/2013	F	Over 72 months	24/10/2006	Muscle	<0.0005	~0.0008	0.0017	0.138	2.04
S13-063634	09/12/2013	F	Over 72 months	24/10/2006	Liver	0.0547	0.0119	0.0044	0.603	119
S13-063633	09/12/2013	F	Over 72 months	24/10/2006	Kidney	0.708	0.0333	0.0126	1.19	3.95
S13-063857	09/01/2014	F	Over 72 months	29/12/2006	Muscle	<0.0005	~0.0011	0.0042	0.128	1.82
S13-063856	09/01/2014	F	Over 72 months	29/12/2006	Liver	0.0286	0.0199	0.0097	0.627	99
S13-063855	09/01/2014	F	Over 72 months	29/12/2006	Kidney	0.375	0.0497	0.0222	1.26	4.6
S13-063518	16/12/2013	F	Over 72 months	31/12/2006	Muscle	~0.0013	~0.0009	0.0018	0.132	1.52
S13-063517	16/12/2013	F	Over 72 months	31/12/2006	Liver	0.0637	0.0191	0.0044	0.372	62.8
S13-063516	16/12/2013	F	Over 72 months	31/12/2006	Kidney	0.511	0.0835	0.0093	8.55	3.97
S13-063545	17/12/2013	F	Over 72 months	18/01/2007	Muscle	~0.0013	~0.0008	0.0018	0.121	1.49
S13-063544	17/12/2013	F	Over 72 months	18/01/2007	Liver	0.0914	0.0171	0.0029	0.62	206
S13-063543	17/12/2013	F	Over 72 months	18/01/2007	Kidney	0.69	0.0636	0.0178	2.19	3.2
S13-063866	09/01/2014	M	Over 72 months	17/05/2007	Muscle	~0.0012	0.0089	0.0135	0.071	1.14
S13-063865	09/01/2014	M	Over 72 months	17/05/2007	Liver	0.11	0.189	0.0471	0.171	3.28
S13-063864	09/01/2014	M	Over 72 months	17/05/2007	Kidney	1.32	0.183	0.107	0.832	3.09
S13-063878	08/01/2014	F	Over 72 months	19/09/2007	Muscle	~0.0011	<0.0005	~0.0007	0.109	1.6
S13-063877	08/01/2014	F	Over 72 months	19/09/2007	Liver	0.0603	0.0063	0.0028	0.384	156
S13-063876	08/01/2014	F	Over 72 months	19/09/2007	Kidney	0.428	0.061	0.0057	2.57	3.25
S13-063539	17/12/2013	F	Over 72 months	11/10/2007	Muscle	~0.0011	~0.0009	~0.0006	0.105	1.71
S13-063538	17/12/2013	F	Over 72 months	11/10/2007	Liver	0.0532	0.0095	0.0019	0.394	161
S13-063537	17/12/2013	F	Over 72 months	11/10/2007	Kidney	0.864	0.0265	0.0053	1.06	3.14
S13-063743	08/01/2014	F	Over 72 months	22/10/2007	Muscle	~0.0005	<0.0005	~0.0009	0.172	2.07
S13-063742	08/01/2014	F	Over 72 months	22/10/2007	Liver	0.0396	0.0174	0.0024	0.621	150
S13-063741	08/01/2014	F	Over 72 months	22/10/2007	Kidney	0.529	0.0985	0.0068	4.14	4.62

**Table 6 Trace element concentrations – mg/kg**

<b>FERA LIMS code</b>	<b>Date of sampling</b>	<b>Sex (M/F)</b>	<b>Age group</b>	<b>Date of Birth (dd/mm/yyyy)</b>	<b>Tissue</b>	<b>Cd (mg/kg)</b>	<b>Pb (mg/kg)</b>	<b>As (total) (mg/kg)</b>	<b>Se (mg/kg)</b>	<b>Cu (mg/kg)</b>
S14-012809	07/03/2014	F	Over 72 months	17/12/2007	Muscle	<0.0005	~0.0012	~0.0012	0.071	0.87
S14-012808	07/03/2014	F	Over 72 months	17/12/2007	Liver	0.0454	0.0758	0.003	0.17	91.5
S14-012807	07/03/2014	F	Over 72 months	17/12/2007	Kidney	0.212	0.104	0.0079	5.1	5.14
S13-063773	31/12/2013	F	Over 72 months	22/12/2007	Muscle	~0.0012	~0.0006	0.002	0.15	1.92
S13-063772	31/12/2013	F	Over 72 months	22/12/2007	Liver	0.0943	0.0203	0.0071	0.965	406
S13-063771	31/12/2013	F	Over 72 months	22/12/2007	Kidney	0.888	0.195	0.0153	20.7	5.7



**Table 7 PCDD/Fs (dioxins) concentrations - Lipid weight**

Fera LIMS Sample No. Sample Type	S13-063556 Liver	S13-063557 Muscle	S13-063558 Liver	S13-063560 Muscle	S13-063574 Liver	S13-063575 Muscle	S13-063577 Liver	S13-063578 Muscle	S13-063708 Liver
<b>Lipid weight [%]</b>	2.88	7.41	3.37	6.46	2.87	9.16	3.04	8.82	3.11
<b>ng/kg</b>									
2,3,7,8-TCDD	<0.08	0.05	0.19	0.02	0.12	0.04	<0.08	0.03	0.09
1,2,3,7,8-PeCDD	0.30	0.07	0.41	0.03	0.48	0.11	0.09	0.06	0.17
1,2,3,4,7,8-HxCDD	0.80i	0.06	0.84	0.03	0.76	0.06	0.35	<0.03	0.19
1,2,3,6,7,8-HxCDD	10.67	0.97	9.13	1.24	0.85	0.18	0.30	0.07	0.31
1,2,3,7,8,9-HxCDD	5.30	0.24	5.49	0.27	0.56	0.06	0.28	0.02	0.23
1,2,3,4,6,7,8-HpCDD	162.17	1.85	167.16	2.37	9.81	0.31	7.02	0.10	3.39
OCDD	617.17	1.77	703.71	2.51	26.84	0.71	44.45	0.24	20.37
2,3,7,8-TCDF	<0.08	0.03	0.21	0.03	0.12	0.02	<0.09	0.02	<0.07
1,2,3,7,8-PeCDF	<0.06	<0.03	0.11	<0.03	<0.07	<0.03	<0.06	<0.03	<0.06
2,3,4,7,8-PeCDF	1.28	0.21	0.81	0.13	1.50	0.31	0.79	0.13	0.38
1,2,3,4,7,8-HxCDF	1.41	0.12	1.24	0.10	1.13	0.12	0.53	0.08	0.48
1,2,3,6,7,8-HxCDF	0.61	0.08	0.64	0.08i	0.68	0.09	0.32	0.05	0.26
1,2,3,7,8,9-HxCDF	<0.08	<0.02	0.11	<0.02	<0.08	<0.01	<0.08	<0.01	<0.07
2,3,4,6,7,8-HxCDF	0.93	0.08	0.92	0.08	0.65	0.10	0.53	0.06	0.31
1,2,3,4,6,7,8-HpCDF	17.07	0.55	16.31	0.63	2.32	0.14	2.05	<0.05	1.00
1,2,3,4,7,8,9-HpCDF	0.73	0.03	0.92	0.04	0.15	<0.02	<0.08	<0.02	0.10
OCDF	20.51	0.13	19.34	0.17	1.99	0.11	0.64	<0.08	0.77
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>4.65</b>	<b>0.37</b>	<b>4.77</b>	<b>0.30</b>	<b>1.66</b>	<b>0.31</b>	<b>0.66</b>	<b>0.16</b>	<b>0.60</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>4.74</b>	<b>0.37</b>	<b>4.77</b>	<b>0.31</b>	<b>1.67</b>	<b>0.31</b>	<b>0.76</b>	<b>0.17</b>	<b>0.62</b>
<b>Whole Weight</b>									
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.13</b>	<b>0.03</b>	<b>0.16</b>	<b>0.02</b>	<b>0.05</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.14</b>	<b>0.03</b>	<b>0.16</b>	<b>0.02</b>	<b>0.05</b>	<b>0.03</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>

i - indicative value

**Table 7 PCDD/Fs (dioxins) concentrations - Lipid weight**

Fera LIMS Sample No.	S13-063710	S13-063712	S13-063713	S13-063718	S13-063719	S13-063742	S13-063743	S13-063769	S13-063770	
Sample Type	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	
<u>Lipid weight</u> ng/kg	[%]	15.29	2.00	9.13	1.77	8.17	2.55	7.80	2.86	13.87
2,3,7,8-TCDD	<0.01	<0.49	0.02	<0.49	0.02	<0.39	0.02	<0.3	0.03	
1,2,3,7,8-PeCDD	0.02	0.26	0.03	0.23	0.04	0.21	0.04i	0.16	0.06	
1,2,3,4,7,8-HxCDD	<0.01	1.31	0.03	0.45	<0.02	1.14	0.03	0.39	0.04	
1,2,3,6,7,8-HxCDD	0.03	1.93	0.08	0.47	0.04	0.73	0.06	0.22	0.08	
1,2,3,7,8,9-HxCDD	<0.01	0.64	0.03	<0.48	0.01	0.52	0.02	<0.29	0.03	
1,2,3,4,6,7,8-HpCDD	0.06	24.13	0.12	12.30	0.17	16.48	0.18	3.08	0.09	
OCDD	0.13	77.87	0.32	57.89	0.36	131.96	0.34	5.95	0.15	
2,3,7,8-TCDF	0.01	<0.41	0.02	<0.42	0.02	<0.33	0.03	<0.25	0.01	
1,2,3,7,8-PeCDF	<0.01	<0.57	<0.03	<0.57	<0.01	<0.46	<0.03	<0.35	<0.02	
2,3,4,7,8-PeCDF	0.05	1.14	0.09	<0.74	0.07	0.87	0.07	0.82	0.19	
1,2,3,4,7,8-HxCDF	0.03	2.48	0.08	0.57	0.06	0.80	0.04	0.51	0.08	
1,2,3,6,7,8-HxCDF	0.02	1.16	0.04i	0.34	0.04	0.49	0.03	0.36	0.07	
1,2,3,7,8,9-HxCDF	<0.01	<0.53	<0.01	<0.53	<0.01	<0.42	<0.01	<0.32	<0.01	
2,3,4,6,7,8-HxCDF	0.02	1.52	0.06	0.53	0.04	0.55	0.04i	0.40	0.07	
1,2,3,4,6,7,8-HpCDF	0.03	9.44	0.11	2.64	0.09	1.67	<0.06	1.23	0.13	
1,2,3,4,7,8,9-HpCDF	<0.01	0.49	<0.02	0.15	<0.02	0.15	<0.02	0.10	0.02	
OCDF	<0.04	7.11	<0.08	3.79	<0.06	1.20	<0.09	0.67	0.07	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.05</b>	<b>1.87</b>	<b>0.11</b>	<b>0.64</b>	<b>0.10</b>	<b>1.12</b>	<b>0.11</b>	<b>0.64</b>	<b>0.19</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.06</b>	<b>2.47</b>	<b>0.12</b>	<b>1.51</b>	<b>0.11</b>	<b>1.60</b>	<b>0.11</b>	<b>1.04</b>	<b>0.19</b>	
<b><u>Whole Weight</u></b>										
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.01</b>	<b>0.04</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.01</b>	<b>0.05</b>	<b>0.01</b>	<b>0.03</b>	<b>0.01</b>	<b>0.04</b>	<b>0.01</b>	<b>0.03</b>	<b>0.03</b>	

i - indicative value

**Table 7 PCDD/Fs (dioxins) concentrations - Lipid weight**

Fera LIMS Sample No.	S13-063823	S13-063824	S13-063904	S13-063905	S13-063940	S13-063941	S13-063850	S13-063851	S13-063928
Sample Type	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver
Lipid weight [%]	2.50	10.01	2.52	12.87	2.43	8.29	3.37	18.01	3.39
ng/kg									
2,3,7,8-TCDD	<0.35	0.11	<0.39	0.10	<0.37	0.15	<0.09	0.04	<0.04
1,2,3,7,8-PeCDD	0.60	0.20	0.69	0.27	1.65	0.36	0.62	0.13	<0.11
1,2,3,4,7,8-HxCDD	1.36	0.13	2.33	0.13i	5.31	0.18	1.38	0.06	0.47
1,2,3,6,7,8-HxCDD	1.54	0.22	2.42	0.49	6.40	0.67	1.04	0.17	0.40
1,2,3,7,8,9-HxCDD	0.50	0.12	0.96	0.11	2.76	0.16	0.71	0.06	0.27
1,2,3,4,6,7,8-HpCDD	8.78	0.21	33.11	0.68	37.09	0.58	13.98	0.20	6.76
OCDD	13.57	0.38	122.30	0.66	39.18	0.32	33.70	0.20	19.29
2,3,7,8-TCDF	<0.3	0.11	<0.33	0.02	<0.32	0.03	<0.21	0.03	<0.2
1,2,3,7,8-PeCDF	<0.41	0.09	<0.45	0.02	<0.44	0.04	<0.16	<0.02	<0.16
2,3,4,7,8-PeCDF	3.60	0.49	4.03	0.83	8.33	0.95	1.63	0.28	0.67
1,2,3,4,7,8-HxCDF	2.92	0.23	4.15	0.44	6.98	0.40	1.97	0.13	0.51
1,2,3,6,7,8-HxCDF	1.21	0.20	1.67	0.30	3.57	0.31	1.14	0.13	0.36i
1,2,3,7,8,9-HxCDF	<0.38	<0.01	<0.42	<0.01	<0.4	<0.01	<0.06	<0.01	<0.06
2,3,4,6,7,8-HxCDF	2.01	0.19	2.11	0.37	5.28	0.37	1.78	0.13	0.36
1,2,3,4,6,7,8-HpCDF	1.18	0.12	5.08	0.34	3.37	0.13	2.09	0.09	1.36
1,2,3,4,7,8,9-HpCDF	0.16	0.09	0.54	0.02	0.60	0.04	<0.26	0.02	<0.25
OCDF	0.48	0.19	4.18	0.06	1.48	<0.04	0.82	<0.05	0.74
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>2.74</b>	<b>0.58</b>	<b>3.69</b>	<b>0.82</b>	<b>7.60</b>	<b>1.02</b>	<b>2.08</b>	<b>0.33</b>	<b>0.53</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>3.17</b>	<b>0.59</b>	<b>4.17</b>	<b>0.82</b>	<b>8.06</b>	<b>1.02</b>	<b>2.21</b>	<b>0.33</b>	<b>0.71</b>
<b>Whole Weight</b>									
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.07</b>	<b>0.06</b>	<b>0.09</b>	<b>0.11</b>	<b>0.19</b>	<b>0.09</b>	<b>0.07</b>	<b>0.06</b>	<b>0.02</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.08</b>	<b>0.06</b>	<b>0.11</b>	<b>0.11</b>	<b>0.20</b>	<b>0.09</b>	<b>0.07</b>	<b>0.06</b>	<b>0.02</b>

i - indicative value

**Table 7 PCDD/Fs (dioxins) concentrations - Lipid weight**

Fera LIMS Sample No.	S13-063929	S13-063514	S13-063515	S13-063529	S13-063530	S13-063532	S13-063533	S13-063541	S13-063542
Sample Type	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle
Lipid weight [%]	6.26	3.13	7.92	3.11	3.57	3.08	8.33	2.80	10.20
ng/kg									
2,3,7,8-TCDD	0.03	<0.32	0.03	<0.3	0.06	<0.31	0.13	<0.07	0.05
1,2,3,7,8-PeCDD	0.06	0.32	0.06	1.12	0.17	1.34	0.30	0.45	0.11
1,2,3,4,7,8-HxCDD	0.03	0.78	0.05	2.88	0.09	2.09	0.11	1.24	0.06i
1,2,3,6,7,8-HxCDD	0.09	0.73	0.09	3.13	0.28	2.58	0.39	0.90	0.13
1,2,3,7,8,9-HxCDD	0.04	0.61	0.03	1.87	0.10	1.30	0.11	0.74	0.05
1,2,3,4,6,7,8-HpCDD	0.19	9.87	0.27	19.51	0.47	28.71	0.55	12.80	0.24
OCDD	0.29	107.20	1.06	31.82	1.53	81.27	1.25	26.10	0.49
2,3,7,8-TCDF	0.05	0.60	0.03	<0.25	0.06	0.48	0.02	<0.24	0.02
1,2,3,7,8-PeCDF	<0.03	<0.37	0.03i	<0.35	0.04	<0.36	0.02	<0.19	0.02
2,3,4,7,8-PeCDF	0.13	1.13	0.15	4.91	0.37	3.50	0.61	1.02	0.19
1,2,3,4,7,8-HxCDF	0.07	0.65i	0.09	4.92	0.24	1.75	0.23	1.01	0.11
1,2,3,6,7,8-HxCDF	0.06	0.69	0.08	2.95	0.23	1.46	0.21	1.10	0.13
1,2,3,7,8,9-HxCDF	<0.02	<0.34	<0.01	<0.32	<0.02	<0.33	<0.01	<0.23	<0.01
2,3,4,6,7,8-HxCDF	0.06	0.63	0.07	3.70	0.23	2.14	0.22	1.21	0.12
1,2,3,4,6,7,8-HpCDF	0.10	1.10	0.06	5.45	0.18	3.83	0.15	1.42	0.08
1,2,3,4,7,8,9-HpCDF	<0.03	0.18	<0.02	0.82	<0.04	0.43	<0.03	<0.3	<0.02
OCDF	<0.11	0.72	0.06	1.55	<0.11	3.30	0.06	<0.52	<0.04
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.17</b>	<b>1.27</b>	<b>0.18</b>	<b>4.81</b>	<b>0.47</b>	<b>3.93</b>	<b>0.75</b>	<b>1.53</b>	<b>0.28</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.18</b>	<b>1.64</b>	<b>0.18</b>	<b>5.17</b>	<b>0.47</b>	<b>4.28</b>	<b>0.75</b>	<b>1.65</b>	<b>0.28</b>
<b>Whole Weight</b>									
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.01</b>	<b>0.04</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.12</b>	<b>0.06</b>	<b>0.04</b>	<b>0.03</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.01</b>	<b>0.05</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.13</b>	<b>0.06</b>	<b>0.05</b>	<b>0.03</b>

i - indicative value

**Table 7 PCDD/Fs (dioxins) concentrations - Lipid weight**

Fera LIMS Sample No.	S13-063550	S13-063551	S13-063561	S13-063562	S13-063685	S13-063686	S13-063943	S13-063944	S13-063949
Sample Type	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver
Lipid weight [%]	2.64	7.78	2.17	9.48	4.16	15.84	3.19	10.06	2.41
ng/kg									
2,3,7,8-TCDD	<0.06	0.04	<0.09	0.06	<0.05	0.02	<0.05	0.04	<0.08
1,2,3,7,8-PeCDD	0.50	0.10	0.52	0.14	0.24	0.06	<0.16	0.12	0.17
1,2,3,4,7,8-HxCDD	1.00	0.05	1.16	0.08i	0.73	0.03i	0.56	0.05	0.27
1,2,3,6,7,8-HxCDD	0.90	0.11	0.85	0.21	0.60	0.14	0.46	0.16	0.25
1,2,3,7,8,9-HxCDD	0.50	0.04	0.39	0.08	0.23	0.03	0.24	0.05	<0.31
1,2,3,4,6,7,8-HpCDD	10.97	0.18	11.72	0.29	7.49	0.15	5.56	0.18	<3.33
OCDD	73.07	0.59	22.41	0.48	17.87	0.53	10.75	0.27	5.81
2,3,7,8-TCDF	<0.27	0.03	<0.32	0.03	<0.16	0.02	<0.21	0.02	<0.28
1,2,3,7,8-PeCDF	<0.21	0.02	<0.25	0.03	<0.12	0.01	<0.16	<0.01	<0.22
2,3,4,7,8-PeCDF	1.46	0.19	2.03	0.33	1.10	0.22	1.11	0.28	0.75
1,2,3,4,7,8-HxCDF	1.09	0.12	1.51	0.17	1.11	0.10	0.70	0.11	0.63
1,2,3,6,7,8-HxCDF	0.60	0.09i	0.87	0.15	0.47	0.08	0.43	0.09	<0.43
1,2,3,7,8,9-HxCDF	<0.08	0.02	<0.1	0.02	<0.05	<0.01	<0.18	<0.01	<0.11
2,3,4,6,7,8-HxCDF	0.87	0.09	1.12	0.15	0.77	0.09	0.73	0.11	0.61
1,2,3,4,6,7,8-HpCDF	1.18	0.07	1.73	0.14	1.36	0.06	0.73	0.04	1.39
1,2,3,4,7,8,9-HpCDF	<0.34	<0.02	<0.41	0.03	<0.2	<0.01	<0.26	<0.01	<0.36
OCDF	0.68	0.06	0.91	0.10	0.88	<0.03	<0.45	<0.04	<0.61
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>1.58</b>	<b>0.26</b>	<b>1.86</b>	<b>0.39</b>	<b>1.06</b>	<b>0.20</b>	<b>0.71</b>	<b>0.31</b>	<b>0.59</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>1.68</b>	<b>0.26</b>	<b>2.00</b>	<b>0.39</b>	<b>1.13</b>	<b>0.20</b>	<b>0.97</b>	<b>0.31</b>	<b>0.82</b>
<b>Whole Weight</b>									
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.04</b>	<b>0.02</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.03</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.04</b>	<b>0.02</b>	<b>0.04</b>	<b>0.04</b>	<b>0.05</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	<b>0.02</b>

i - indicative value

**Table 7 PCDD/Fs (dioxins) concentrations - Lipid weight**

Fera LIMS Sample No.	S13-063950	S13-063952	S13-063953	S13-063569	S13-063568
Sample Type	Muscle	Liver	Muscle	Liver	Muscle
<u>Lipid weight</u> ng/kg	[%]				
2,3,7,8-TCDD	0.02	<0.06	0.06	<0.05	0.03
1,2,3,7,8-PeCDD	0.04	0.87	0.12	0.17	0.10
1,2,3,4,7,8-HxCDD	0.03	2.33	0.05	0.72	0.05
1,2,3,6,7,8-HxCDD	0.06	2.01	0.12i	0.68	0.17
1,2,3,7,8,9-HxCDD	0.01	1.35	0.10	0.34	0.03
1,2,3,4,6,7,8-HpCDD	0.06	24.21	0.25	28.68	0.51
OCDD	0.15	52.43	0.52	196.24	0.78
2,3,7,8-TCDF	0.01	<0.29	<0.03	<0.17	0.04
1,2,3,7,8-PeCDF	0.01	<0.22	<0.02	<0.13	<0.02
2,3,4,7,8-PeCDF	0.09	4.05	0.27	0.53	0.22
1,2,3,4,7,8-HxCDF	0.03	2.78	0.15	0.55i	0.11
1,2,3,6,7,8-HxCDF	0.04i	2.12	0.12	0.48	0.10
1,2,3,7,8,9-HxCDF	<0.01	<0.09	<0.02	<0.08	<0.01
2,3,4,6,7,8-HxCDF	0.04	2.59	0.12	0.57	0.09
1,2,3,4,6,7,8-HpCDF	0.06	2.94	0.07	2.72	0.15
1,2,3,4,7,8,9-HpCDF	<0.01	<0.37	0.03	0.35	<0.01
OCDF	<0.03	1.01	0.05	4.57	0.04
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.11</b>	<b>3.69</b>	<b>0.33</b>	<b>1.04</b>	<b>0.26</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.11</b>	<b>3.80</b>	<b>0.34</b>	<b>1.12</b>	<b>0.26</b>
<b><u>Whole Weight</u></b>					
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>0.04</b>	<b>0.03</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>0.04</b>	<b>0.03</b>

i - indicative value

**Table 8 Non-ortho PCB concentrations - Lipid weight**

<b>FERA LIMS Sample No.</b>	S13-063556	S13-063557	S13-063558	S13-063560	S13-063574	S13-063575	S13-063577	S13-063578	S13-063708
<b>Sample type</b>	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver
<b><u>Lipid weight</u></b> [%]	2.88	7.41	3.37	6.46	2.87	9.16	3.04	8.82	3.11
<b>ng/kg</b>									
PCB77	10.70	5.76	9.13	4.00	8.85	2.67	11.92	2.59	7.77
PCB81	0.64	0.19	0.56	0.17	0.54	0.21	0.44	0.10	<0.35
PCB126	6.21	2.06	4.40	1.60	6.97	2.67	3.14	1.45	1.90
PCB169	1.06	0.96	0.79	0.64	0.77	0.68	0.49	0.49	0.27
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.65</b>	<b>0.24</b>	<b>0.46</b>	<b>0.18</b>	<b>0.72</b>	<b>0.29</b>	<b>0.33</b>	<b>0.16</b>	<b>0.20</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.65</b>	<b>0.24</b>	<b>0.46</b>	<b>0.18</b>	<b>0.72</b>	<b>0.29</b>	<b>0.33</b>	<b>0.16</b>	<b>0.20</b>
<b><u>Whole Weight</u></b>									
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>

i - indicative value

**Table 8 Non-ortho PCB concentrations - Lipid weight**

<b>FERA LIMS Sample No.</b>	S13-063710	S13-063712	S13-063713	S13-063718	S13-063719	S13-063742	S13-063743	S13-063769	S13-063770	
<b>Sample type</b>	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	
<b><u>Lipid weight</u></b>	<b>[%]</b>	15.29	2.00	9.13	1.77	8.17	2.55	7.80	2.86	13.87
<b>ng/kg</b>										
PCB77	0.71	20.82	1.32	15.25	1.04	12.19	1.46	11.56	1.14	
PCB81	0.04	0.66	0.06	<0.53	0.07	0.53	0.09	0.40	0.12	
PCB126	0.48	9.76	0.70	4.02	0.65	3.54	0.47	2.96	1.48	
PCB169	0.13	1.41	0.44	<0.65	0.29	<0.53	0.14	0.60	0.45	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.05</b>	<b>1.02</b>	<b>0.08</b>	<b>0.40</b>	<b>0.07</b>	<b>0.36</b>	<b>0.05</b>	<b>0.32</b>	<b>0.16</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.05</b>	<b>1.02</b>	<b>0.08</b>	<b>0.42</b>	<b>0.07</b>	<b>0.37</b>	<b>0.05</b>	<b>0.32</b>	<b>0.16</b>	
<b><u>Whole Weight</u></b>										
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	<b>0.02</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	<b>0.02</b>	

i - indicative value



**Table 8 Non-ortho PCB concentrations - Lipid weight**

<b>FERA LIMS Sample No.</b>	S13-063823	S13-063824	S13-063904	S13-063905	S13-063940	S13-063941	S13-063850	S13-063851	S13-063928	
<b>Sample type</b>	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	
<b><u>Lipid weight</u></b>	<b>[%]</b>	2.50	10.01	2.52	12.87	2.43	8.29	3.37	18.01	3.39
<b>ng/kg</b>										
PCB77	15.56	1.69	11.98	0.82	8.17	2.20	<5.25	0.86	5.55	
PCB81	1.11	0.47	0.85	0.39	1.42	0.64	0.70	0.38	<0.31	
PCB126	13.50	3.69	16.93	6.30	31.37	8.44	10.96	3.64	2.66	
PCB169	2.01	1.18	2.29	2.20	3.73	2.57	1.35	1.20	<0.26	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>1.41</b>	<b>0.40</b>	<b>1.76</b>	<b>0.70</b>	<b>3.25</b>	<b>0.92</b>	<b>1.14</b>	<b>0.40</b>	<b>0.27</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>1.41</b>	<b>0.40</b>	<b>1.76</b>	<b>0.70</b>	<b>3.25</b>	<b>0.92</b>	<b>1.14</b>	<b>0.40</b>	<b>0.27</b>	
<b><u>Whole Weight</u></b>										
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.09</b>	<b>0.08</b>	<b>0.08</b>	<b>0.04</b>	<b>0.07</b>	<b>0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.09</b>	<b>0.08</b>	<b>0.08</b>	<b>0.04</b>	<b>0.07</b>	<b>0.01</b>	

i - indicative value

**Table 8 Non-ortho PCB concentrations - Lipid weight**

<b>FERA LIMS Sample No.</b>	S13-063929	S13-063514	S13-063515	S13-063529	S13-063530	S13-063532	S13-063533	S13-063541	S13-063542	
<b>Sample type</b>	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	
<b><u>Lipid weight</u></b>	<b>[%]</b>	6.26	3.13	7.92	3.11	3.57	3.08	8.33	2.80	10.20
<b>ng/kg</b>										
PCB77	<1.22	21.46	3.30	15.36	4.62	22.76	1.68	12.32	1.05	
PCB81	0.17	0.82	0.15	0.99	0.51	1.24	0.47	0.78	0.57	
PCB126	1.06	3.81	0.89	11.37	2.63	19.30	8.32	7.30	3.19	
PCB169	0.22	0.65	0.32	1.83	0.85	2.95	2.92	1.17	1.01	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.11</b>	<b>0.40</b>	<b>0.10</b>	<b>1.19</b>	<b>0.29</b>	<b>2.02</b>	<b>0.92</b>	<b>0.77</b>	<b>0.35</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.11</b>	<b>0.40</b>	<b>0.10</b>	<b>1.19</b>	<b>0.29</b>	<b>2.02</b>	<b>0.92</b>	<b>0.77</b>	<b>0.35</b>	
<b><u>Whole Weight</u></b>										
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.01</b>	<b>0.06</b>	<b>0.08</b>	<b>0.02</b>	<b>0.04</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.01</b>	<b>0.06</b>	<b>0.08</b>	<b>0.02</b>	<b>0.04</b>	

i - indicative value

**Table 8 Non-ortho PCB concentrations - Lipid weight**

<b>FERA LIMS Sample No.</b>	S13-063550	S13-063551	S13-063561	S13-063562	S13-063685	S13-063686	S13-063943	S13-063944	S13-063949	
<b>Sample type</b>	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	
<b><u>Lipid weight</u></b>	<b>[%]</b>	2.64	7.78	2.17	9.48	4.16	15.84	3.19	10.06	2.41
<b>ng/kg</b>										
PCB77	13.27	1.20	15.26	1.16	8.24	0.75	6.83	2.38	<7.2	
PCB81	0.50	0.25	0.84	0.50	0.31	0.13	0.34	0.19	0.53	
PCB126	5.72	1.51	11.47	3.95	3.60	1.51	4.72	2.30	6.01	
PCB169	0.96	0.56	1.18	1.04	0.57	0.46	0.77	0.73	0.45	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.60</b>	<b>0.17</b>	<b>1.18</b>	<b>0.43</b>	<b>0.38</b>	<b>0.16</b>	<b>0.50</b>	<b>0.25</b>	<b>0.61</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.60</b>	<b>0.17</b>	<b>1.18</b>	<b>0.43</b>	<b>0.38</b>	<b>0.16</b>	<b>0.50</b>	<b>0.25</b>	<b>0.62</b>	
<b><u>Whole Weight</u></b>										
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.02</b>	<b>0.01</b>	<b>0.03</b>	<b>0.04</b>	<b>0.02</b>	<b>0.03</b>	<b>0.02</b>	<b>0.03</b>	<b>0.02</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.02</b>	<b>0.01</b>	<b>0.03</b>	<b>0.04</b>	<b>0.02</b>	<b>0.03</b>	<b>0.02</b>	<b>0.03</b>	<b>0.02</b>	

i - indicative value

**Table 8 Non-ortho PCB concentrations - Lipid weight**

<b>FERA LIMS Sample No.</b>	S13-063950	S13-063952	S13-063953	S13-063569	S13-063568	
<b>Sample type</b>	Muscle	Liver	Muscle	Liver	Muscle	
<b><u>Lipid weight</u></b>	<b>[%]</b>	11.33	2.19	7.12	3.83	12.69
<b>ng/kg</b>						
PCB77	1.60	10.85	2.36	8.41	1.92	
PCB81	0.19	0.64	0.21	0.32	0.25	
PCB126	1.53	12.92	2.11	5.35	2.64	
PCB169	0.33	1.33	0.50	0.63	0.86	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.16</b>	<b>1.33</b>	<b>0.23</b>	<b>0.55</b>	<b>0.29</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.16</b>	<b>1.33</b>	<b>0.23</b>	<b>0.55</b>	<b>0.29</b>	
<b><u>Whole Weight</u></b>						
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.02</b>	<b>0.03</b>	<b>0.02</b>	<b>0.02</b>	<b>0.04</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.02</b>	<b>0.03</b>	<b>0.02</b>	<b>0.02</b>	<b>0.04</b>	

i - indicative value

**Table 9 Ortho PCB concentrations - Lipid weight**

FERA LIMS Sample No.	S13-063556	S13-063557	S13-063558	S13-063560	S13-063574	S13-063575	S13-063577	S13-063578	S13-063708	
Sample type	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	
<u>Lipid weight</u> µg/kg	[%]	2.88	7.41	3.37	6.46	2.87	9.16	3.04	8.82	3.11
PCB18	<0.16	<0.01	<0.14	<0.01	<0.16	<0.01	<0.15	<0.01	<0.14	
PCB28	0.11i	<0.03	0.10	<0.03	0.11	<0.02	0.12	<0.02	0.10i	
PCB31	0.09	<0.04	<0.07	<0.05	<0.13	<0.04	<0.13	<0.04	<0.12	
PCB47	<0.16	0.08	<0.14	0.06	<0.17	0.04	<0.16	0.03	<0.15	
PCB49	<0.06	0.01	<0.05	<0.01	0.08	<0.01	<0.06	<0.01	0.06	
PCB51	<0.03	<0.01	<0.03	<0.01	<0.03	<0.01	<0.03	<0.01	<0.03	
PCB52	<0.27	0.01	<0.23	0.01	<0.27	0.01	<0.27	<0.01	<0.24	
PCB99	0.32	0.22	0.36	0.23	0.25	0.13	0.23	0.10	0.17	
PCB101	<0.07	0.02	<0.06	0.02	<0.07	0.02	<0.07	<0.01	<0.06	
PCB105	0.08	0.06	0.08	0.06	0.09	0.04	0.04	0.02	0.04	
PCB114	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	
PCB118	0.33	0.35	0.40	0.38	0.24	0.20	0.18	0.12	0.09	
PCB123	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB128	0.10	0.05	0.10	0.05	0.06	0.03	0.03	0.02	0.04	
PCB138	1.85	0.59	2.84	0.69	1.39	0.30	1.06	0.16	0.47	
PCB153	1.73	0.85	2.77	1.01	1.34	0.42	0.99	0.25	0.44	
PCB156	0.03	0.05	0.06	0.07	0.08	0.02	0.04i	0.01	0.08	
PCB157	<0.01	0.01i	<0.01	0.01	<0.02	<0.01	<0.01	<0.01	<0.01	
PCB167	0.02	0.02i	0.02	0.03i	0.03	0.02i	<0.01	<0.01	<0.01	
PCB180	0.85	0.46	1.74	0.78	0.45	0.17	0.26	0.08	0.27	
PCB189	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
<b>SUM of ICES 6(µg/kg) lower</b>	<b>4.54</b>	<b>1.93</b>	<b>7.45</b>	<b>2.51</b>	<b>3.29</b>	<b>0.92</b>	<b>2.43</b>	<b>0.49</b>	<b>1.28</b>	
<b>SUM of ICES 6(µg/kg) upper</b>	<b>4.88</b>	<b>1.96</b>	<b>7.74</b>	<b>2.54</b>	<b>3.63</b>	<b>0.94</b>	<b>2.77</b>	<b>0.53</b>	<b>1.58</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.01</b>	<b>0.01</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	
<b><u>Whole Weight</u></b>										
<b>SUM of ICES 6(ug/kg) lower</b>	<b>0.13</b>	<b>0.14</b>	<b>0.25</b>	<b>0.16</b>	<b>0.09</b>	<b>0.08</b>	<b>0.07</b>	<b>0.04</b>	<b>0.04</b>	
<b>SUM of ICES 6(ug/kg) upper</b>	<b>0.14</b>	<b>0.15</b>	<b>0.26</b>	<b>0.16</b>	<b>0.10</b>	<b>0.09</b>	<b>0.08</b>	<b>0.05</b>	<b>0.05</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	

i - indicative value

**Table 9 Ortho PCB concentrations - Lipid weight**

FERA LIMS Sample No.	S13-063710	S13-063712	S13-063713	S13-063718	S13-063719	S13-063742	S13-063743	S13-063769	S13-063770	
Sample type	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	
<u>Lipid weight</u> µg/kg	[%]	15.29	2.00	9.13	1.77	8.17	2.55	7.80	2.86	13.87
PCB18	<0.01	<0.17	<0.01	<0.17	<0.01	<0.14	<0.01	<0.1	<0.01	
PCB28	<0.01	<0.5	<0.02	<0.5	0.01	<0.4	<0.02	<0.31	<0.02	
PCB31	<0.01	<0.12	<0.04	<0.12	0.01	<0.09	<0.04	<0.07	<0.02	
PCB47	0.02	<0.87	0.03	<0.88	<0.02	<0.7	0.03	<0.53	0.03	
PCB49	<0.01	<0.81	0.01	<0.82	<0.01	<0.66	<0.01	<0.5	<0.01	
PCB51	<0.01	<0.51	<0.01	<0.51	<0.01	<0.41	<0.01	<0.31	<0.01	
PCB52	<0.01	<1.2	0.01	<1.21	0.02	<0.97	0.01	<0.74	<0.01	
PCB99	0.10i	<0.66	0.12i	<0.66	0.11i	<0.53	0.03i	<0.4	0.10	
PCB101	<0.01	<0.79	0.01	<0.79	0.01	<0.64	<0.01	<0.48	<0.01	
PCB105	<0.01	<0.17	0.01	<0.17	0.01	<0.13	0.01	<0.1	0.02	
PCB114	<0.01	<0.24	<0.01	<0.24	<0.01	<0.19	<0.01	<0.15	<0.01	
PCB118	0.05	<0.47	0.14	<0.48	0.07	<0.38	0.04	<0.29	0.13	
PCB123	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB128	0.01	<0.13	<0.01	<0.13	0.01	<0.1	<0.01	<0.08	0.01i	
PCB138	0.08	0.80	0.17	<0.49	0.09	<0.39	0.06	0.36	0.18	
PCB153	0.12	<0.93	0.23	<0.93	0.14	<0.75	0.08	<0.57	0.29	
PCB156	<0.01	<0.03	0.01	<0.03	<0.01	<0.02	<0.01	<0.02	0.02	
PCB157	<0.01	<0.04	<0.01	<0.04	<0.01	<0.03	<0.01	<0.02	<0.01	
PCB167	<0.01	<0.14	<0.01	<0.14	<0.01	<0.11	<0.01	<0.09	<0.01	
PCB180	0.07	0.24	0.08	0.15	0.05	0.14	0.04	<0.13	0.09	
PCB189	<0.01	<0.1	<0.01	<0.09	<0.01	<0.07	<0.01	<0.06	<0.01	
<b>SUM of ICES 6(µg/kg) lower</b>	<b>0.27</b>	<b>1.04</b>	<b>0.50</b>	<b>0.15</b>	<b>0.32</b>	<b>0.14</b>	<b>0.19</b>	<b>0.36</b>	<b>0.56</b>	
<b>SUM of ICES 6(µg/kg) upper</b>	<b>0.30</b>	<b>4.46</b>	<b>0.52</b>	<b>4.07</b>	<b>0.32</b>	<b>3.29</b>	<b>0.22</b>	<b>2.59</b>	<b>0.60</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>&lt;0.01</b>	<b>0.04</b>	<b>0.01</b>	<b>0.04</b>	<b>&lt;0.01</b>	<b>0.03</b>	<b>&lt;0.01</b>	<b>0.02</b>	<b>0.01</b>	
<b><u>Whole Weight</u></b>										
<b>SUM of ICES 6(ug/kg) lower</b>	<b>0.04</b>	<b>0.02</b>	<b>0.05</b>	<b>&lt;0.01</b>	<b>0.03</b>	<b>&lt;0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>0.08</b>	
<b>SUM of ICES 6(ug/kg) upper</b>	<b>0.05</b>	<b>0.09</b>	<b>0.05</b>	<b>0.07</b>	<b>0.03</b>	<b>0.08</b>	<b>0.02</b>	<b>0.07</b>	<b>0.08</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	

i - indicative value

**Table 9 Ortho PCB concentrations - Lipid weight**

FERA LIMS Sample No.	S13-063823	S13-063824	S13-063904	S13-063905	S13-063940	S13-063941	S13-063850	S13-063851	S13-063928	
Sample type	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	
<u>Lipid weight</u> µg/kg	[%]	2.50	10.01	2.52	12.87	2.43	8.29	3.37	18.01	3.39
PCB18	<0.12	<0.01	<0.13	<0.01	<0.13	<0.03	<0.09	<0.01	<0.09	
PCB28	<0.36	<0.02	<0.4	<0.01	<0.38	0.02	<0.09	<0.01	<0.09	
PCB31	<0.08	<0.03	<0.09	<0.01	<0.09	0.02	<0.05	<0.02	<0.05	
PCB47	<0.63	0.05	<0.69	0.06	<0.67	0.09	0.06	0.04	0.07	
PCB49	<0.59	<0.01	<0.65	<0.01	<0.62	0.01	<0.05	<0.01	<0.05	
PCB51	<0.37	<0.01	<0.4	<0.01	<0.39	<0.01	<0.02	<0.01	<0.02	
PCB52	<0.87	<0.01	<0.96	0.01	<0.92	<0.05	<0.28	0.01	<0.28	
PCB99	0.58	0.21	0.89	0.37	0.67	0.34	0.14	0.09	0.13	
PCB101	<0.57	0.01	<0.63	0.02	<0.6	0.02	<0.26	0.01	<0.25	
PCB105	<0.12	0.06	<0.13	0.06	0.17	0.10	<0.05	0.03	<0.05	
PCB114	<0.17	<0.01	<0.19	0.01	<0.18	0.01	<0.01	<0.01	<0.01	
PCB118	0.49	0.36	0.81	0.56	0.76	0.62	0.15	0.14	0.14	
PCB123	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB128	0.14	0.04	0.26	0.14	0.14	0.07	<0.03	0.02	<0.03	
PCB138	3.20	0.46	4.40	0.67	2.53	0.71	0.76	0.17	0.45	
PCB153	2.96	0.62	3.79	0.93	2.20	0.89	0.63	0.21	0.40	
PCB156	<0.04	0.04	0.08	0.07	<0.02	0.07	<0.02	0.02	<0.02	
PCB157	<0.03	0.01	<0.05	0.02	<0.1	0.01	<0.02	<0.01	<0.01	
PCB167	<0.1	0.02	<0.11	0.04	<0.11	0.04	<0.01	<0.01	<0.01	
PCB180	0.84	0.23	1.40	0.45	0.68	0.33	0.17	0.09	0.10	
PCB189	<0.07	<0.01	<0.18	<0.01	<0.27	<0.01	<0.03	<0.01	<0.02	
<b>SUM of ICES 6(µg/kg) lower</b>	<b>7.00</b>	<b>1.32</b>	<b>9.59</b>	<b>2.08</b>	<b>5.41</b>	<b>1.97</b>	<b>1.56</b>	<b>0.49</b>	<b>0.95</b>	
<b>SUM of ICES 6(µg/kg) upper</b>	<b>8.80</b>	<b>1.35</b>	<b>11.58</b>	<b>2.09</b>	<b>7.31</b>	<b>2.02</b>	<b>2.19</b>	<b>0.50</b>	<b>1.57</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	<b>0.02</b>	<b>0.03</b>	<b>0.03</b>	<b>&lt;0.01</b>	<b>0.01</b>	<b>&lt;0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.03</b>	<b>0.02</b>	<b>0.05</b>	<b>0.02</b>	<b>0.05</b>	<b>0.03</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	
<b><u>Whole Weight</u></b>										
<b>SUM of ICES 6(ug/kg) lower</b>	<b>0.18</b>	<b>0.13</b>	<b>0.24</b>	<b>0.27</b>	<b>0.13</b>	<b>0.16</b>	<b>0.05</b>	<b>0.09</b>	<b>0.03</b>	
<b>SUM of ICES 6(ug/kg) upper</b>	<b>0.22</b>	<b>0.14</b>	<b>0.29</b>	<b>0.27</b>	<b>0.18</b>	<b>0.17</b>	<b>0.07</b>	<b>0.09</b>	<b>0.05</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	

i - indicative value

**Table 9 Ortho PCB concentrations - Lipid weight**

FERA LIMS Sample No.	S13-063929	S13-063514	S13-063515	S13-063529	S13-063530	S13-063532	S13-063533	S13-063541	S13-063542	
Sample type	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	
<u>Lipid weight</u> µg/kg	[%]	6.26	3.13	7.92	3.11	3.57	3.08	8.33	2.80	10.20
PCB18	<0.02	<0.11	<0.01	<0.41	<0.02	<0.11	<0.01	<0.1	<0.01	
PCB28	<0.03	<0.32	0.01	<0.3	0.02	<0.32	0.01	<0.07	<0.01	
PCB31	<0.05	<0.08	0.01	<1.81	0.02	<0.12	0.01	<0.06	0.01	
PCB47	0.04	<0.56	0.03	<0.53	0.05	<0.56	0.06	<0.06	0.04	
PCB49	0.01	<0.53	<0.01	<0.5	<0.02	<0.52	<0.01	<0.06	<0.01	
PCB51	<0.01	<0.33	<0.01	<0.31	<0.01	<0.32	<0.01	<0.03	<0.01	
PCB52	0.02	<0.78	0.01	<0.73	<0.02	<0.77	<0.01	<0.33	<0.01	
PCB99	0.06i	<0.43	0.11i	<0.4	0.22i	0.90	0.48	0.08	0.11i	
PCB101	0.02	<0.51	0.01	<0.48	<0.02	<0.5	0.02	<0.3	0.01	
PCB105	0.02	<0.11	0.02	<0.1	0.05	0.21	0.12	<0.06	0.03	
PCB114	<0.01	<0.16	<0.01	<0.15	<0.01	<0.15	0.01	<0.01	<0.01	
PCB118	0.09	<0.31	0.09	<0.29	0.21	1.00	0.73	0.11	0.09	
PCB123	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB128	<0.01	<0.08	0.02	0.10	0.05	0.22	0.15	<0.03	0.02	
PCB138	0.13	0.54	0.11	1.15	0.31	4.78	1.00	0.31	0.12	
PCB153	0.16	<0.6	0.13	0.95	0.36	4.29	1.46	0.28	0.16	
PCB156	0.01i	<0.02	<0.01	<0.02	0.02i	0.05	0.11	<0.03	0.02	
PCB157	<0.01	<0.07	<0.01	<0.03	<0.01	<0.02	0.03	<0.01	<0.01	
PCB167	0.01	<0.09	0.01	<0.13	0.02	<0.09	0.05	<0.02	<0.01	
PCB180	0.07	0.10	0.06	0.42	0.19	2.23	1.00	0.13	0.09	
PCB189	<0.01	<1.44	<0.01	<0.79	<0.01	<10.2	<0.01	<0.03	<0.01	
<b>SUM of ICES 6(µg/kg) lower</b>	<b>0.40</b>	<b>0.64</b>	<b>0.33</b>	<b>2.52</b>	<b>0.88</b>	<b>11.30</b>	<b>3.49</b>	<b>0.72</b>	<b>0.38</b>	
<b>SUM of ICES 6(µg/kg) upper</b>	<b>0.43</b>	<b>2.85</b>	<b>0.33</b>	<b>4.03</b>	<b>0.92</b>	<b>12.89</b>	<b>3.50</b>	<b>1.42</b>	<b>0.40</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	<b>0.04</b>	<b>0.03</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.01</b>	<b>0.07</b>	<b>0.01</b>	<b>0.05</b>	<b>0.01</b>	<b>0.35</b>	<b>0.03</b>	<b>0.01</b>	<b>0.01</b>	
<b><u>Whole Weight</u></b>										
<b>SUM of ICES 6(ug/kg) lower</b>	<b>0.03</b>	<b>0.02</b>	<b>0.03</b>	<b>0.08</b>	<b>0.03</b>	<b>0.35</b>	<b>0.29</b>	<b>0.02</b>	<b>0.04</b>	
<b>SUM of ICES 6(ug/kg) upper</b>	<b>0.03</b>	<b>0.09</b>	<b>0.03</b>	<b>0.13</b>	<b>0.03</b>	<b>0.40</b>	<b>0.29</b>	<b>0.04</b>	<b>0.04</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	

i - indicative value



**Table 9 Ortho PCB concentrations - Lipid weight**

FERA LIMS Sample No.	S13-063550	S13-063551	S13-063561	S13-063562	S13-063685	S13-063686	S13-063943	S13-063944	S13-063949	
Sample type	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	
Lipid weight µg/kg	[%]	2.64	7.78	2.17	9.48	4.16	15.84	3.19	10.06	2.41
PCB18	<0.11	<0.01	<0.14	<0.01	<0.07	<0.01	<0.09	<0.02	<0.12	
PCB28	<0.07	0.01i	<0.22	<0.01	<0.06	0.02	<0.09	0.02i	<0.08	
PCB31	<0.06	0.01	<0.08	<0.01	<0.04	0.01	0.05	0.02	<0.07	
PCB47	0.08	0.05	0.12	0.05	0.05	0.03	0.08	0.05	0.12	
PCB49	<0.07	<0.01	<0.09	<0.01	<0.04	0.01	<0.05	0.01	<0.08	
PCB51	<0.03	<0.01	<0.04	<0.01	<0.02	<0.01	<0.02	<0.01	<0.03	
PCB52	<0.37	<0.01	<0.44	<0.01	<0.22	0.04	<0.28	<0.04	<0.39	
PCB99	0.10	0.08i	0.51	0.25i	0.17	0.22i	0.21	0.13	0.38	
PCB101	<0.34	0.01	<0.41	0.01	<0.2	0.07	<0.26	0.01	<0.36	
PCB105	<0.06	0.02	<0.08	0.05	0.04	0.06	<0.05	0.03	0.07	
PCB114	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB118	0.11	0.08	0.44	0.30	0.20	0.27	0.22	0.21	0.28	
PCB123	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB128	<0.03	0.02	0.10	0.06	0.03	0.06	0.05	0.03	0.06	
PCB138	0.38	0.13	2.86	0.47	0.70	0.39	0.95	0.33	1.78	
PCB153	0.37	0.18	3.06	0.74	0.74	0.50	0.95	0.46	1.67	
PCB156	<0.04	0.02	<0.04	0.04	0.02	0.03	<0.02	0.03	<0.03	
PCB157	<0.01	<0.01	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.07	
PCB167	<0.04	0.01	<0.03	0.02	<0.01	0.01	<0.01	0.01	<0.01	
PCB180	0.17	0.12	1.96	0.61	0.20	0.15	0.29	0.17	0.51	
PCB189	<0.04	<0.01	<0.06	<0.01	<0.02	<0.01	<0.03	<0.01	<0.51	
<b>SUM of ICES 6(µg/kg) lower</b>	<b>0.92</b>	<b>0.45</b>	<b>7.88</b>	<b>1.83</b>	<b>1.64</b>	<b>1.17</b>	<b>2.19</b>	<b>0.99</b>	<b>3.96</b>	
<b>SUM of ICES 6(µg/kg) upper</b>	<b>1.70</b>	<b>0.46</b>	<b>8.95</b>	<b>1.85</b>	<b>2.12</b>	<b>1.17</b>	<b>2.82</b>	<b>1.03</b>	<b>4.79</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.01</b>	<b>0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	<b>0.03</b>	
<b>Whole Weight</b>										
<b>SUM of ICES 6(ug/kg) lower</b>	<b>0.02</b>	<b>0.04</b>	<b>0.17</b>	<b>0.17</b>	<b>0.07</b>	<b>0.19</b>	<b>0.07</b>	<b>0.10</b>	<b>0.10</b>	
<b>SUM of ICES 6(ug/kg) upper</b>	<b>0.05</b>	<b>0.04</b>	<b>0.19</b>	<b>0.18</b>	<b>0.09</b>	<b>0.19</b>	<b>0.09</b>	<b>0.10</b>	<b>0.12</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	

i - indicative value

**Table 9 Ortho PCB concentrations - Lipid weight**

FERA LIMS Sample No.	S13-063950	S13-063952	S13-063953	S13-063569	S13-063568	
Sample type	Muscle	Liver	Muscle	Liver	Muscle	
<u>Lipid weight</u> µg/kg	[%]	11.33	2.19	7.12	3.83	12.69
PCB18	<0.02	<0.13	<0.03	<0.07	<0.02	
PCB28	0.02	0.10	0.03i	<0.09	0.02	
PCB31	<0.01	<0.08	<0.02	<0.04	0.02	
PCB47	0.03	0.16	0.05	0.04	0.04	
PCB49	<0.01	0.08	0.01	<0.05	0.01	
PCB51	<0.01	<0.03	<0.01	<0.02	<0.01	
PCB52	<0.04	<0.4	<0.06	<0.24	<0.03	
PCB99	0.08	0.47	0.14	0.10	0.11	
PCB101	0.01	<0.37	0.02	<0.22	0.01	
PCB105	0.02	0.09	0.04	<0.04	0.03	
PCB114	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB118	0.11	0.42	0.19	0.14	0.19	
PCB123	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB128	0.01	0.09	0.03	0.02	0.02	
PCB138	0.18	1.76	0.29	0.50	0.31	
PCB153	0.25	1.74	0.38	0.47	0.42	
PCB156	0.01	<0.03	0.02	0.02	0.03	
PCB157	<0.01	<0.05	<0.01	<0.01	<0.01	
PCB167	<0.01	<0.02	<0.01	<0.01	0.01	
PCB180	0.10	0.44	0.12	0.24	0.22	
PCB189	<0.01	<0.12	<0.01	<0.02	<0.01	
<b>SUM of ICES 6(µg/kg) lower</b>	<b>0.56</b>	<b>4.04</b>	<b>0.84</b>	<b>1.21</b>	<b>0.98</b>	
<b>SUM of ICES 6(µg/kg) upper</b>	<b>0.60</b>	<b>4.81</b>	<b>0.90</b>	<b>1.76</b>	<b>1.01</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>0.01</b>	<b>0.02</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>	
<b><u>Whole Weight</u></b>						
<b>SUM of ICES 6(ug/kg) lower</b>	<b>0.06</b>	<b>0.09</b>	<b>0.06</b>	<b>0.05</b>	<b>0.12</b>	
<b>SUM of ICES 6(ug/kg) upper</b>	<b>0.07</b>	<b>0.11</b>	<b>0.06</b>	<b>0.07</b>	<b>0.13</b>	
<b>WHO-TEQ 2005 (ng/kg) lower</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	
<b>WHO-TEQ 2005 (ng/kg) upper</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	

i - indicative value

**Table 10 Summary of PCDD/F, PCB WHO-TEQ, ICES-6 concentrations**

<b>FERA LIMS Sample No.</b>	S13-063556	S13-063557	S13-063558	S13-063560	S13-063574	S13-063575	S13-063577	S13-063578	S13-063708
<b>Sample Details:</b>	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver
<b>Fat content (% whole)</b>	2.88	7.41	3.37	6.46	2.87	9.16	3.04	8.82	3.11
<b>WHO TEQ 2005 ng/kg Whole</b>									
Dioxin	0.14	0.03	0.16	0.02	0.05	0.03	0.02	0.02	0.02
non ortho-PCB	0.02	0.02	0.02	0.01	0.02	0.03	0.01	0.01	0.01
ortho-PCB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.16</b>	<b>0.05</b>	<b>0.18</b>	<b>0.03</b>	<b>0.07</b>	<b>0.06</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>
<b>WHO TEQ 2005 ng/kg Fat</b>									
Dioxin	4.74	0.37	4.77	0.31	1.67	0.31	0.76	0.17	0.62
non ortho-PCB	0.65	0.24	0.46	0.18	0.72	0.29	0.33	0.16	0.20
ortho-PCB	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
<b>Sum of WHO TEQs (upper)</b>	<b>5.41</b>	<b>0.63</b>	<b>5.25</b>	<b>0.51</b>	<b>2.40</b>	<b>0.61</b>	<b>1.10</b>	<b>0.34</b>	<b>0.83</b>
<b>SUM of ICES 6 µg/kg whole (upper)</b>	<b>0.14</b>	<b>0.15</b>	<b>0.26</b>	<b>0.16</b>	<b>0.10</b>	<b>0.09</b>	<b>0.08</b>	<b>0.05</b>	<b>0.05</b>
<b>SUM of ICES 6 µg/kg fat (upper)</b>	<b>4.9</b>	<b>2.0</b>	<b>7.7</b>	<b>2.5</b>	<b>3.6</b>	<b>0.9</b>	<b>2.8</b>	<b>0.5</b>	<b>1.6</b>

i - indicative value

**Table 10 Summary of PCDD/F, PCB WHO-TEQ, ICES-6 concentrations**

<b>FERA LIMS Sample No.</b>	S13-063710	S13-063712	S13-063713	S13-063718	S13-063719	S13-063742	S13-063743	S13-063769	S13-063770
<b>Sample Details:</b>	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle
<b>Fat content (% whole)</b>	15.29	2.00	9.13	1.77	8.17	2.55	7.80	2.86	13.87
<b>WHO TEQ 2005 ng/kg Whole</b>									
Dioxin	0.01	0.05	0.01	0.03	0.01	0.04	0.01	0.03	0.03
non ortho-PCB	0.01	0.02	0.01	0.01	0.01	0.01	<0.01	0.01	0.02
ortho-PCB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.02</b>	<b>0.07</b>	<b>0.02</b>	<b>0.03</b>	<b>0.01</b>	<b>0.05</b>	<b>0.01</b>	<b>0.04</b>	<b>0.05</b>
<b>WHO TEQ 2005 ng/kg Fat</b>									
Dioxin	0.06	2.47	0.12	1.51	0.11	1.60	0.11	1.04	0.19
non ortho-PCB	0.05	1.02	0.08	0.42	0.07	0.37	0.05	0.32	0.16
ortho-PCB	<0.01	0.04	0.01	0.04	<0.01	0.03	<0.01	0.02	0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.11</b>	<b>3.53</b>	<b>0.21</b>	<b>1.97</b>	<b>0.18</b>	<b>2.00</b>	<b>0.16</b>	<b>1.38</b>	<b>0.36</b>
<b>SUM of ICES 6 µg/kg whole (upper)</b>	<b>0.05</b>	<b>0.09</b>	<b>0.05</b>	<b>0.07</b>	<b>0.03</b>	<b>0.08</b>	<b>0.02</b>	<b>0.07</b>	<b>0.08</b>
<b>SUM of ICES 6 µg/kg fat (upper)</b>	<b>0.3</b>	<b>4.5</b>	<b>0.5</b>	<b>4.1</b>	<b>0.3</b>	<b>3.3</b>	<b>0.2</b>	<b>2.6</b>	<b>0.6</b>

i - indicative value

**Table 10 Summary of PCDD/F, PCB WHO-TEQ, ICES-6 concentrations**

<b>FERA LIMS Sample No.</b>	S13-063823	S13-063824	S13-063904	S13-063905	S13-063940	S13-063941	S13-063850	S13-063851	S13-063928
<b>Sample Details:</b>	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver
<b>Fat content (% whole)</b>	2.50	10.01	2.52	12.87	2.43	8.29	3.37	18.01	3.39
<b>WHO TEQ 2005 ng/kg Whole</b>									
Dioxin	0.08	0.06	0.11	0.11	0.20	0.09	0.07	0.06	0.02
non ortho-PCB	0.04	0.04	0.04	0.09	0.08	0.08	0.04	0.07	0.01
ortho-PCB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.12</b>	<b>0.10</b>	<b>0.15</b>	<b>0.20</b>	<b>0.28</b>	<b>0.16</b>	<b>0.11</b>	<b>0.13</b>	<b>0.03</b>
<b>WHO TEQ 2005 ng/kg Fat</b>									
Dioxin	3.17	0.59	4.17	0.82	8.06	1.02	2.21	0.33	0.71
non ortho-PCB	1.41	0.40	1.76	0.70	3.25	0.92	1.14	0.40	0.27
ortho-PCB	0.03	0.02	0.05	0.02	0.05	0.03	0.01	0.01	0.01
<b>Sum of WHO TEQs (upper)</b>	<b>4.61</b>	<b>1.01</b>	<b>5.98</b>	<b>1.54</b>	<b>11.36</b>	<b>1.97</b>	<b>3.36</b>	<b>0.74</b>	<b>0.99</b>
<b>SUM of ICES 6 µg/kg whole (upper)</b>	<b>0.22</b>	<b>0.14</b>	<b>0.29</b>	<b>0.27</b>	<b>0.18</b>	<b>0.17</b>	<b>0.07</b>	<b>0.09</b>	<b>0.05</b>
<b>SUM of ICES 6 µg/kg fat (upper)</b>	<b>8.8</b>	<b>1.4</b>	<b>11.6</b>	<b>2.1</b>	<b>7.3</b>	<b>2.0</b>	<b>2.2</b>	<b>0.5</b>	<b>1.6</b>

i - indicative value

**Table 10 Summary of PCDD/F, PCB WHO-TEQ, ICES-6 concentrations**

<b>FERA LIMS Sample No.</b>	S13-063929	S13-063514	S13-063515	S13-063529	S13-063530	S13-063532	S13-063533	S13-063541	S13-063542
<b>Sample Details:</b>	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle
<b>Fat content (% whole)</b>	6.26	3.13	7.92	3.11	3.57	3.08	8.33	2.80	10.20
<b>WHO TEQ 2005 ng/kg Whole</b>									
Dioxin	0.01	0.05	0.01	0.16	0.02	0.13	0.06	0.05	0.03
non ortho-PCB	0.01	0.01	0.01	0.04	0.01	0.06	0.08	0.02	0.04
ortho-PCB	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.02</b>	<b>0.07</b>	<b>0.02</b>	<b>0.20</b>	<b>0.03</b>	<b>0.20</b>	<b>0.14</b>	<b>0.07</b>	<b>0.07</b>
<b>WHO TEQ 2005 ng/kg Fat</b>									
Dioxin	0.18	1.64	0.18	5.17	0.47	4.28	0.75	1.65	0.28
non ortho-PCB	0.11	0.40	0.10	1.19	0.29	2.02	0.92	0.77	0.35
ortho-PCB	0.01	0.07	0.01	0.05	0.01	0.35	0.03	0.01	0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.30</b>	<b>2.11</b>	<b>0.29</b>	<b>6.41</b>	<b>0.77</b>	<b>6.65</b>	<b>1.70</b>	<b>2.43</b>	<b>0.64</b>
<b>SUM of ICES 6 µg/kg whole (upper)</b>	<b>0.03</b>	<b>0.09</b>	<b>0.03</b>	<b>0.13</b>	<b>0.03</b>	<b>0.40</b>	<b>0.29</b>	<b>0.04</b>	<b>0.04</b>
<b>SUM of ICES 6 µg/kg fat (upper)</b>	<b>0.4</b>	<b>2.9</b>	<b>0.3</b>	<b>4.0</b>	<b>0.9</b>	<b>12.9</b>	<b>3.5</b>	<b>1.4</b>	<b>0.4</b>

i - indicative value

**Table 10 Summary of PCDD/F, PCB WHO-TEQ, ICES-6 concentrations**

<b>FERA LIMS Sample No.</b>	S13-063550	S13-063551	S13-063561	S13-063562	S13-063685	S13-063686	S13-063943	S13-063944	S13-063949
<b>Sample Details:</b>	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver	Muscle	Liver
<b>Fat content (% whole)</b>	2.64	7.78	2.17	9.48	4.16	15.84	3.19	10.06	2.41
<b>WHO TEQ 2005 ng/kg Whole</b>									
Dioxin	0.04	0.02	0.04	0.04	0.05	0.03	0.03	0.03	0.02
non ortho-PCB	0.02	0.01	0.03	0.04	0.02	0.03	0.02	0.03	0.02
ortho-PCB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.06</b>	<b>0.03</b>	<b>0.07</b>	<b>0.08</b>	<b>0.06</b>	<b>0.06</b>	<b>0.05</b>	<b>0.06</b>	<b>0.04</b>
<b>WHO TEQ 2005 ng/kg Fat</b>									
Dioxin	1.68	0.26	2.00	0.39	1.13	0.20	0.97	0.31	0.82
non ortho-PCB	0.60	0.17	1.18	0.43	0.38	0.16	0.50	0.25	0.62
ortho-PCB	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.03
<b>Sum of WHO TEQs (upper)</b>	<b>2.29</b>	<b>0.44</b>	<b>3.20</b>	<b>0.83</b>	<b>1.52</b>	<b>0.37</b>	<b>1.48</b>	<b>0.57</b>	<b>1.47</b>
<b>SUM of ICES 6 µg/kg whole (upper)</b>	<b>0.05</b>	<b>0.04</b>	<b>0.19</b>	<b>0.18</b>	<b>0.09</b>	<b>0.19</b>	<b>0.09</b>	<b>0.10</b>	<b>0.12</b>
<b>SUM of ICES 6 µg/kg fat (upper)</b>	<b>1.7</b>	<b>0.5</b>	<b>9.0</b>	<b>1.9</b>	<b>2.1</b>	<b>1.2</b>	<b>2.8</b>	<b>1.0</b>	<b>4.8</b>

i - indicative value

**Table 10 Summary of PCDD/F, PCB WHO-TEQ, ICES-6 concentrations**

<b>FERA LIMS Sample No.</b>	S13-063950	S13-063952	S13-063953	S13-063569	S13-063568
<b>Sample Details:</b>	Muscle	Liver	Muscle	Liver	Muscle
<b>Fat content (% whole)</b>	11.33	2.19	7.12	3.83	12.69
<b>WHO TEQ 2005 ng/kg Whole</b>					
Dioxin	0.01	0.08	0.02	0.04	0.03
non ortho-PCB	0.02	0.03	0.02	0.02	0.04
ortho-PCB	<0.01	<0.01	<0.01	<0.01	<0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.03</b>	<b>0.11</b>	<b>0.04</b>	<b>0.06</b>	<b>0.07</b>
<b>WHO TEQ 2005 ng/kg Fat</b>					
Dioxin	0.11	3.80	0.34	1.12	0.26
non ortho-PCB	0.16	1.33	0.23	0.55	0.29
ortho-PCB	0.01	0.02	0.01	0.01	0.01
<b>Sum of WHO TEQs (upper)</b>	<b>0.28</b>	<b>5.15</b>	<b>0.58</b>	<b>1.68</b>	<b>0.56</b>
<b>SUM of ICES 6 µg/kg whole (upper)</b>	<b>0.07</b>	<b>0.11</b>	<b>0.06</b>	<b>0.07</b>	<b>0.13</b>
<b>SUM of ICES 6 µg/kg fat (upper)</b>	<b>0.6</b>	<b>4.8</b>	<b>0.9</b>	<b>1.8</b>	<b>1.0</b>

i - indicative value