

BLOOD DIOXIN CONCENTRATIONS: Weighted TEQ by region

Number of Participants: 946

Sample Type: blood (lipid adjusted)

Notes: TEQ is the TEF-weighted average of the 17 dioxin congeners (excluding the PCBs) based on WHO 1998 TEFs

Survey Sampling Weight: wt_final_blood

Zone	N	TEQ (ppt)						
		Mean	S.E.	Median	75th %ile	95th %ile	Min.	Max.
Overall	946	20.1	0.7	17.1	24.3	45.7	3	182.9
M/S FP	251	22.6	1	19.8	27.4	45	3.8	182.9
M/S Near FP	197	21.3	1.2	18.4	28.1	45.4	3.7	107
M/S Out FP	199	22.8	1.3	19.2	29.6	48.5	3.8	104.2
M/S Plume	48	18.9	1.9	14.5	18.9	50.9	3	67.4
Jackson/Calhoun	251	17.8	0.7	16	21.1	38.6	4.4	77.1

M/S: Midland/Saginaw

FP: Floodplain

SAS program: Get_table1_figure1.sas

Created by: BH & XJ

Last Update: XZ 06/05/2008

BLOOD DIOXIN CONCENTRATIONS: Weighted TEQ by region

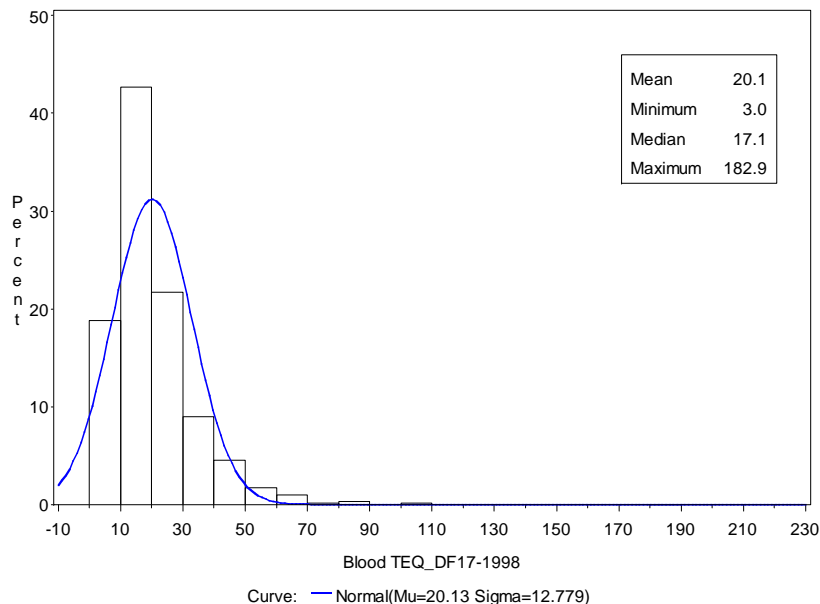
Number of Participants: 946

Sample Type: blood (lipid adjusted)

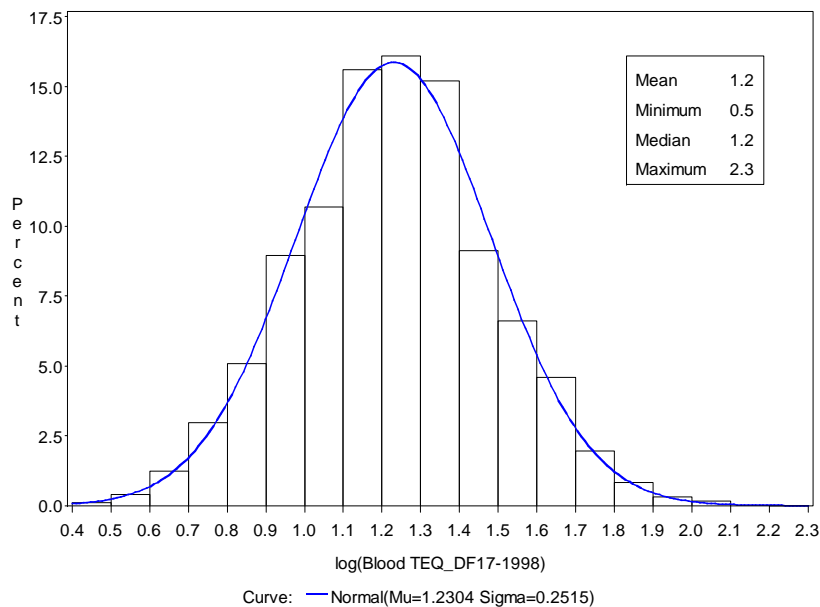
Notes: TEQ is the TEF-weighted average of the 17 dioxin congeners (excluding the PCBs) based on WHO 1998 TEFs

Survey Sampling Weight: wt_final_blood

Overall Distribution of TEQ_DF17-1998 (N=946)



Overall Distribution of log10(TEQ_DF17-1998)(N=946)



SAS program: Get_table1_figure1.sas

Created by: BH & XJ

Last Update: XZ 06/05/2008

BLOOD DIOXIN CONCENTRATIONS: Weighted TEQ by Age group and region

Number of Participants: 946

Sample Type: blood (lipid adjusted)

Notes: TEQ is the TEF-weighted average of the 17 dioxin congeners (excluding the PCBs) based on WHO 1998 TEFs

Survey Sampling Weight: wt_final_blood

Age Group	Zone	N	TEQ (ppt)						
			Mean	S.E.	Median	75th %ile	95th %ile	Min.	Max.
Age_18_29	Overall	55	7.2	0.3	7.2	8.5	10.4	3.7	15.3
	M/S FP	11	5.9	0.5	6.0	6.5	10.4	4.2	10.4
	M/S Near FP	12	7.9	1.0	7.0	9.4	15.3	3.7	15.3
	M/S Out FP	13	7.9	0.5	8.1	9.3	11.0	3.8	14.1
	M/S Plume	3	5.7	0.6	5.4	5.4	8.5	5.1	8.5
	Jackson/Calhoun	16	6.7	0.5	7.0	7.7	9.7	4.4	11.4
Age_30_44	Overall	200	12.9	0.6	11.9	15.3	19.8	3.8	36.6
	M/S FP	40	14.4	0.9	14.1	16.8	23.2	6.4	33.9
	M/S Near FP	41	15.8	2.1	14.1	19.5	31.4	4.8	31.4
	M/S Out FP	44	13.3	1.0	11.9	15.1	19.8	3.8	36.6
	M/S Plume	9	11.7	0.7	11.3	12.9	13.8	6.7	27.1
	Jackson/Calhoun	66	12.7	0.7	12.2	15.9	20.2	4.4	23.9
Age_45_59	Overall	378	19.6	0.8	18.0	22.4	35.6	3.0	55.2
	M/S FP	103	19.8	0.9	19.0	23.4	33.8	3.8	40.9
	M/S Near FP	86	19.5	1.1	18.7	21.8	34.6	8.5	49.8
	M/S Out FP	74	21.6	1.3	19.5	27.9	38.7	7.8	47.7
	M/S Plume	17	17.8	2.6	18.1	18.6	50.9	3.0	50.9
	Jackson/Calhoun	98	18.4	1.1	17.6	21.0	30.1	5.5	55.2
Age_60_more	Overall	313	32.4	1.4	29.4	39.8	60.2	8.1	182.9
	M/S FP	97	33.8	1.9	28.8	40.3	60.0	8.1	182.9
	M/S Near FP	58	33.0	2.3	32.5	38.2	58.0	10.3	107.0
	M/S Out FP	68	35.6	2.2	32.4	44.2	63.8	11.6	104.2
	M/S Plume	19	33.7	2.8	30.6	39.1	64.6	12.7	67.4
	Jackson/Calhoun	71	28.1	1.3	25.7	33.4	46.7	9.4	77.1

M/S: Midland/Saginaw

FP: Floodplain

SAS program: Get_table_TEQ_age.sas

Created by: BH & XJ

Last Update: XZ 06/05/2008

BLOOD DIOXIN CONCENTRATIONS: Test results for comparing weighted TEQ among regions

Number of Participants: 946

Sample Type: blood (lipid adjusted)

Notes: TEQ is the TEF-weighted average of the 17 dioxin congeners (excluding the PCBs) based on WHO 1998 TEFs

Survey Sampling Weight: wt_final_blood

Summary statistics for blood weighted TEQ concentration for region comparisons

Region	Mean of log ₁₀ TEQ	% > Jackson/Calhoun's 75 th percentile, which is 21.1 ppt	% > Jackson/Calhoun's 95 th percentile, which is 38.6 ppt
1-M/S FP (n=251)	1.2793	43.9%	10.7%
2-M/S Near FP (n=197)	1.2570	36.7%	8.2%
3-M/S Out FP (n=199)	1.2767	41.1%	13.7%
4-M/S Plume (n=48)	1.1958	24.2%	8.7%
5-Jackson/Calhoun (n=251)	1.1905	24.3%	4.7%

M/S: Midland / Saginaw; FP: Floodplain

Pair-wise comparisons for blood TEQ between regions (Each cell contains the p-value and effect direction)

This table shows the results of 1) t-tests (SAS PROC Surveyreg) for comparisons of the means of log₁₀TEQ between each combination of two regions; 2) Wald chi-square tests (SAS PROC Surveylogistic) for comparisons of the odds of subjects being above the 75th percentile TEQ for Jackson/Calhoun Counties between each combination of two regions; and 3) Wald chi-square tests (SAS PROC Surveylogistic) for comparisons of the odds of subjects being above the 95th percentile TEQ for Jackson/Calhoun Counties between each combination of two regions.

"+" after p-value: the row-region has higher mean or higher odds of being above the selected cut-point than the column-region.

"-" after p-value: the row-region has lower mean or lower odds of being above the selected cut-point than the column-region.

P-value	1-M/S FP	2-M/S Near FP			3-M/S Out FP			4-M/S Plume			5-Jackson/Calhoun		
		Mean of log ₁₀ TEQ	%>J/C's 75 th	%>J/C's 95 th	Mean of log ₁₀ TEQ	%>J/C's 75 th	%>J/C's 95 th	Mean of log ₁₀ TEQ	%>J/C's 75 th	%>J/C's 95 th	Mean of log ₁₀ TEQ	%>J/C's 75 th	%>J/C's 95 th
1-M/S FP													
Unadjusted		0.4795 +	0.2490 +	0.4532 +	0.9317 +	0.6333 +	0.4897 -	0.0805 +	0.0323 +	0.6969 +	0.0003 +	0.0002 +	0.0329 +
Adjusted		0.5054 -	0.9813 +	0.9450 -	0.6610 -	0.9083 +	0.6190 -	0.2081 +	0.1236 +	0.6733 -	0.0101 +	0.0062 +	0.0748 +
2-M/S Near FP													
Unadjusted					0.5682 -	0.5013 -	0.1988 -	0.2186 +	0.1811 +	0.9087 -	0.0188 +	0.0343 +	0.2088 +
Adjusted					0.7326 +	0.9365 +	0.7352 -	0.1180 +	0.1535 +	0.7311 -	0.0045 +	0.0201 +	0.1225 +
3-M/S Out FP													
Unadjusted								0.1039 +	0.0691 +	0.4168 +	0.0023 +	0.0024 +	0.0118 +
Adjusted								0.1385 +	0.1538 +	0.8996 -	0.0004 +	0.0148 +	0.0232 +
4-M/S Plume													
Unadjusted											0.9065 +	0.9905 -	0.3029 +
Adjusted											0.8484 -	0.8838 +	0.1331 +

Unadjusted: Region Only;

Adjusted: Region + Age + Age² + BMI;

J/C: Jackson/Calhoun

SAS program: Get_blood_region_compare.sas

Created by: BH & WC

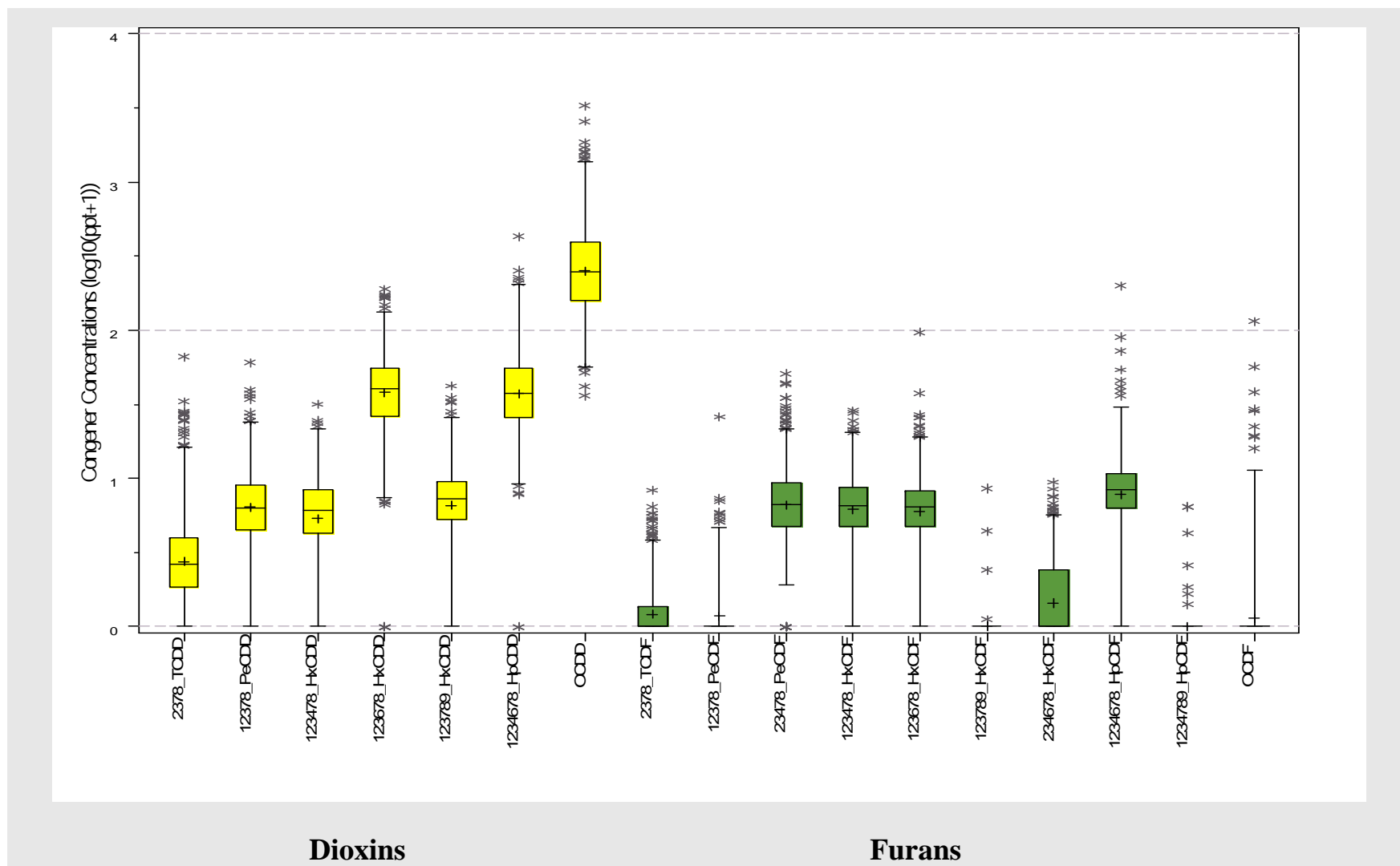
Last Update: XZ 06/16/2008

WEIGHTED BLOOD CONCENTRATIONS: Distribution of each dioxin and furan congener concentration, shown using box plots on the log₁₀ scale.

Number of Participants: 946

Sample Type: blood (lipid adjusted)

Survey Sampling Weight: wt_final_blood



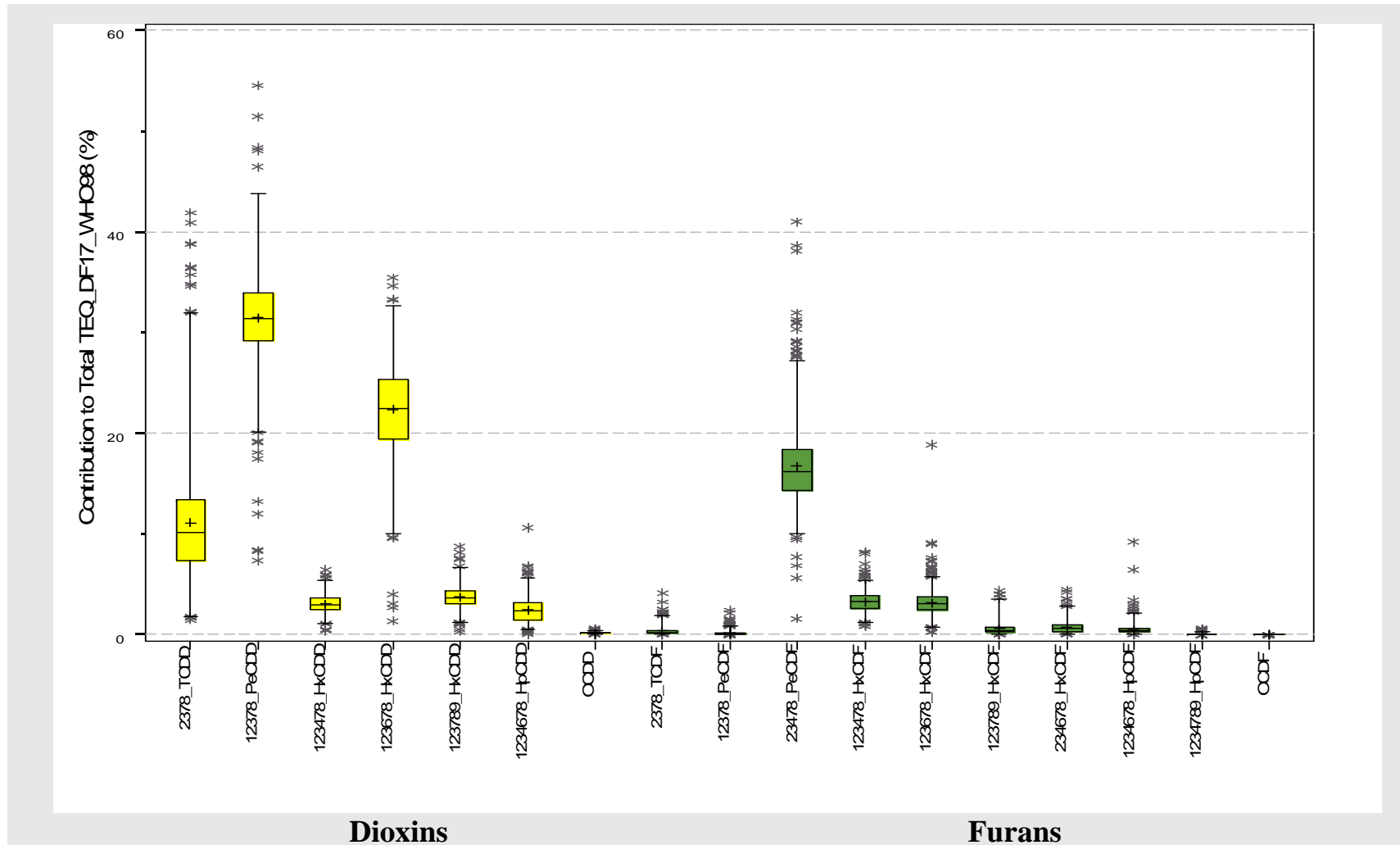
WEIGHTED BLOOD CONCENTRATIONS: Contribution of each congener to the total TEQ, shown using box plots

Number of Participants: 946

Sample Type: blood (lipid adjusted)

Notes: TEQ is the TEF-weighted average of the 17 dioxin congeners (excluding the PCBs) based on WHO 1998 TEFs

Survey Sampling Weight: wt_final_blood



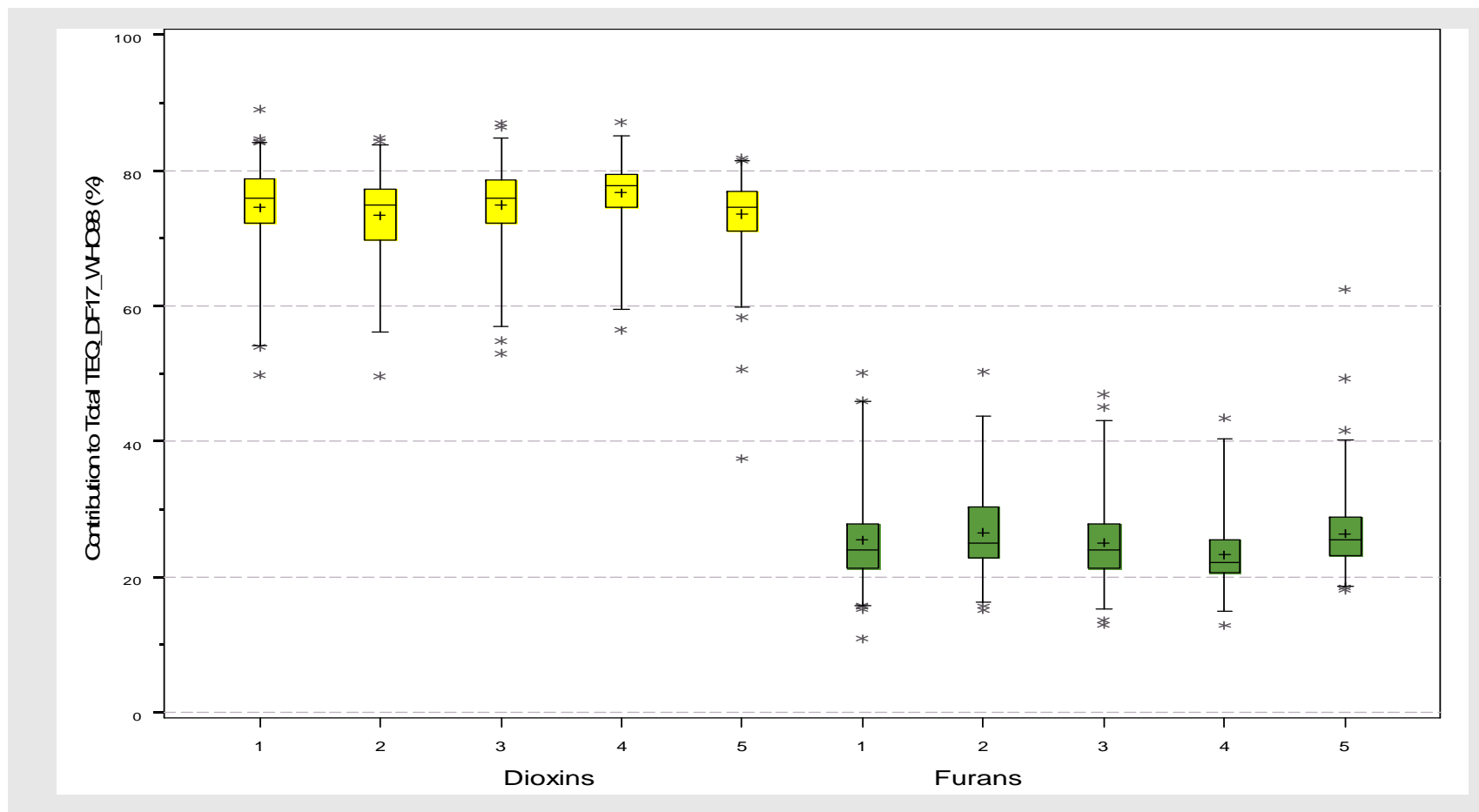
WEIGHTED BLOOD CONCENTRATIONS: Percent contribution to total TEQ for dioxins and furans, by region, shown using box plots

Number of Participants: 946

Sample Type: blood (lipid adjusted)

Notes: TEQ is the TEF-weighted average of the 17 dioxin congeners (excluding the PCBs) based on WHO 1998 TEFs

Survey Sampling Weight: wt_final_blood



Region* 1-Midland/Saginaw FP; 2-Midland/Saginaw Near FP; 3-Midland/Saginaw Out FP;
 4-Midland/Saginaw Plume; 5-Jackson/Calhoun

SAS program: Get_boxplot_Figure3_4_TEQ98_17.sas

Created by: BH

Last Update: XZ 07/07/2008