

Supplementary Material

Table S1. Informed Detection Limit (DL) of the method and the percentage of recovery of each congener of dioxin-like polychlorinated biphenyls (DL-PCBs), polychlorinated dibenzodioxins (PCDD) and polychlorinated dibenzofurans (PCDF) analyzed (Laboratory of Veterinary Pharmacology of Universidad de Chile). The equivalent toxic concentrations (WHO-TEQ) values were calculated based on WHO Toxic Equivalency Factors (TEF) (2005) and the levels found (pg/g) in the breast milk samples.

Congener name	TEF WHO 2005		Arica				Coltauco				Molina			
	Level	%	DL	pg TEQ	Level	%	DL	pg TEQ	Level	%	DL	pg TEQ		
	pg/g	Recovery	pg/g	WHO/g	pg/g	Recovery	pg/g	WHO/g	pg/g	Recovery	pg/g	WHO/g		
Furans														
2,3,7,8-TCDF	0.1	0.021	53	0.006	0.002	0.006	55	0.002	0.0006	0.007	45	0.002	0.0007	
1,2,3,7,8-PeCDF	0.03	0.033	58	0.008	0.001	0.015	69	0.003	0.0005	0.016	59	0.004	0.0005	
2,3,4,7,8-PeCDF	0.3	0.087	63	0.007	0.03	0.138	73	0.002	0.04	0.098	62	0.004	0.03	
1,2,3,4,7,8-HxCDF	0.1	0.048	55	0.004	0.005	0.053	58	0.002	0.005	0.055	35	0.004	0.006	
1,2,3,6,7,8-HxCDF	0.1	0.042	58	0.004	0.004	0.055	58	0.002	0.006	0.056	35	0.004	0.006	
2,3,4,6,7,8-HxCDF	0.1	0.015	57	0.004	0.002	0.025	57	0.002	0.003	0.026	35	0.004	0.003	
1,2,3,7,8,9-HxCDF	0.1	0.028	49	0.006	0.003	0.003	64	0.002	0.0003	0.005	42	0.004	0.0005	
1,2,3,4,6,7,8-HpCDF	0.01	0.017	53	0.003	0.0002	0.028	60	0.001	0.0003	0.04	39	0.001	0.0004	
1,2,3,4,7,8,9-HpCDF	0.01	ND	49	0.006	0.00003	0.002	62	0.002	0.00002	0.004	42	0.002	0.00004	
OCDF	0.0003	ND	52	0.009	0.000001	ND	52	0.003	0.000005	ND	37	0.003	0.000005	

Dioxins													
2,3,7,8-TCDD	1	ND	70	0.005	0.003	0.014	72	0.002	0.01	0.005	51	0.002	0.005
1,2,3,7,8-PeCDD	1	0.038	67	0.006	0.04	0.054	72	0.003	0.05	0.045	60	0.003	0.05
1,2,3,4,7,8-HxCDD	0.1	0.026	54	0.005	0.003	0.036	53	0.002	0.004	0.03	32	0.002	0.003
1,2,3,6,7,8-HxCDD	0.1	0.095	57	0.005	0.01	0.074	57	0.002	0.007	0.107	36	0.002	0.01
1,2,3,7,8,9-HxCDD	0.1	0.016	56	0.005	0.002	0.018	55	0.002	0.002	0.033	34	0.003	0.003
1,2,3,4,6,7,8-HpCDD	0.01	0.077	56	0.004	0.0008	0.076	57	0.002	0.0008	0.123	37	0.002	0.001
OCDD	0.0003	0.281	52	0.011	0.00008	0.251	52	0.003	0.00008	0.55	37	0.003	0.0002
PCBs													
PCB 81	0.0003	ND	30	0.048	0.00001	ND	62	0.07	1	ND	48	0.069	0.00001
PCB 77	0.0001	ND	28	0.057	0.000003	ND	66	0.065	3	ND	52	0.067	0.000003
PCB 123	0.00003	0.265	36	0.039	0.00001	0.602	49	0.05	2	0.615	40	0.069	0.00002
PCB 118	0.00003	21.784	34	0.040	0.0007	35.142	44	0.052	1	36.936	39	0.068	0.001
PCB 114	0.00003	1.135	35	0.043	0.00004	1.685	49	0.049	5	1.904	43	0.062	0.000060
PCB 105	0.00003	5.985	36	0.032	0.0002	5.413	33	0.043	2	5.293	28	0.071	0.0002
PCB 126	0.1	0.173	29	0.04	0.02	0.168	30	0.05	0.02	0.154	25	0.085	0.02
PCB 167	0.00003	2.561	38	0.028	0.00001	3.89	50	0.043	1	3.923	41	0.067	0.001
PCB 156	0.00003	11.949	34	0.032	0.0004	15.937	47	0.05	5	17.971	39	0.071	0.0005
PCB 157	0.00003	2.022	34	0.033	0.00006	2.549	46	0.053	8	2.954	39	0.073	0.00009
PCB 169	0.03	0.062	28	0.032	0.002	0.108	26	0.036	3	ND	25	0.035	0.0005
PCB 189	0.049	0.779	34	0.028	0.00002	1.131	46	0.036	3	1.066	37	0.049	0.00003

ND = Not detectable

Table S2. Estimated daily intake (EDI) in pg TEQ/kg bw/day of dioxin-like polychlorinated biphenyls (DL-PCBs), polychlorinated dibenzodioxins (PCDD) and polychlorinated dibenzofurans (PCDF) and their sum (PCDD/F+PCB) by infants of different ages (months).

City	Age ¹ / EDI ²	PCDD/F	PCB	PCDD/F+P CB	PCDD/F+PCB (mean fat: 2.75%)
Arica Fat: 2.09%	0 - 2 m	18.31	4.07	22.38	29.45
	3 - 4 m	15.19	3.37	18.56	24.42
	5 - 6 m	13.76	3.06	16.81	22.12
	7 - 12 m	7.45	1.65	9.10	11.98
	13 - 24 m	5.49	1.22	6.71	8.83
Coltauco Fat: 3.59%	0 - 2 m	22.04	4.24	26.28	20.13
	3 - 4 m	18.28	3.51	21.79	16.69
	5 - 6 m	16.56	3.18	19.74	15.12
	7 - 12 m	8.97	1.72	10.69	8.19
	13 - 24 m	6.61	1.27	7.88	6.04
Molina Fat: 2.58%	0 - 2 m	20.18	5.02	24.07	25.66
	3 - 4 m	16.73	4.17	20.90	22.28
	5 - 6 m	15.16	3.77	18.93	20.18
	7 - 12 m	8.21	2.04	10.25	10.92
	13 - 24 m	6.05	1.51	7.56	8.05

¹ Age in months; ²EDI in pg TEQ/kg bw/day

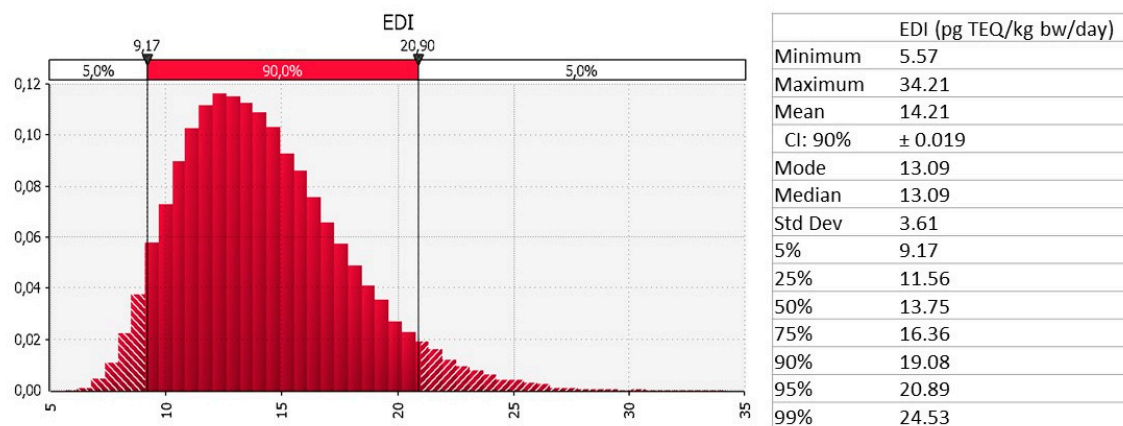


Figure S1. Estimated daily intake (EDI) in pg TEQ/kg bw/day of the sum of dioxin-like polychlorinated biphenyls (DL-PCBs), polychlorinated dibenzodioxins (PCDD) and polychlorinated dibenzofurans (PCDF) in Chilean infants by breast milk consumption.