

Temporal trends in concentrations and total serum burdens of organochlorine compounds from birth until adolescence and the role of breastfeeding

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Table A. Percentage of detection (can include LOD and LOQ) and levels of the main organochlorine compounds detected in cord blood (years 1997-1999), and in child serum at the age of 4 (year 2001-2003) and 14 years (year 2012) in the birth cohort of Ribera d'Ebre (ng/mL).

	Original cohort Ribera d'Ebre						New children in Ribera d'Ebre	
	Cord blood (N=70)		4 years (N=58)		14 years (N=36)		14 years (N=15)	
	%>LOQ	Median (25 th , 75 th)	%>LOQ	Median (25 th , 75 th)	%>LOQ	Median (25 th , 75 th)	%>LOQ	Median (25 th , 75 th)
PeCB	1.4	0.01 (0.01, 0.01)	32.8	0.01 (0.01, 0.07)	0	0.003 (0.003, 0.003)	0	0.003 (0.003, 0.003)*
α-HCH	15.1	0.01 (0.01, 0.01)	3.4	0.01 (0.01, 0.01)	13.9	0.003 (0.003, 0.003)	6.7	0.003 (0.003, 0.003)
β-HCH	67.1	0.54 (0.03, 1.07)	89.7	0.31 (0.19, 0.48)	50.0	0.02 (0.01, 0.04)	73.3	0.03 (0.01, 0.04)
δ-HCH	19.0	0.01 (0.01, 0.03)	0	0.01 (0.01, 0.01)	0	0.03 (0.03, 0.03)	0	0.03 (0.03, 0.03)*
γ-HCH	23.2	0.03 (0.01, 0.03)	0	0.01 (0.01, 0.01)	50.0	0.01 (0.003, 0.02)	40.0	0.003 (0.003, 0.02)
HCB	100	1.13 (0.80, 1.69)	100	0.98 (0.66, 1.48)	100	0.16 (0.10, 0.25)	93.3	0.13 (0.06, 0.56)
4,4'-DDT	12.3	0.03 (0.01, 0.03)	22.4	0.01 (0.01, 0.01)	16.7	0.003 (0.003, 0.01)	40.0	0.01 (0.003, 0.02)*
4,4'-DDE	97.3	0.86 (0.50, 1.68)	100	0.75 (0.38, 1.32)	86.1	0.12 (0.09, 0.19)	86.7	0.15 (0.11, 0.28)
PCB28	1.4	0.01 (0.01, 0.01)	39.7	0.01 (0.01, 0.11)	2.8	0.003 (0.003, 0.003)	0	0.003 (0.003, 0.003)
PCB52	8.2	0.01 (0.01, 0.01)	0	0.01 (0.01, 0.01)	2.8	0.01 (0.01, 0.01)	13.3	0.01 (0.01, 0.01)
PCB101	1.4	0.01 (0.01, 0.01)	3.4	0.01 (0.01, 0.01)	8.3	0.01 (0.01, 0.01)	0	0.01 (0.01, 0.01)
PCB118	0	0.01 (0.01, 0.03)	31.0	0.01 (0.01, 0.08)	22.2	0.005 (0.005, 0.01)	6.7	0.005 (0.005, 0.01)
PCB138	27.4	0.03 (0.03, 0.19)	65.6	0.13 (0.01, 0.22)	75	0.04 (0.02, 0.06)	53.3	0.03 (0.01, 0.07)
PCB153	20.5	0.03 (0.03, 0.03)	82.8	0.24 (0.11, 0.47)	100	0.11 (0.07, 0.14)	100	0.07 (0.05, 0.14)
PCB180	23.3	0.03 (0.03, 0.03)	69.0	0.18 (0.01, 0.36)	66.7	0.02 (0.01, 0.06)	53.3	0.02 (0.01, 0.04)
Σ ₇ PCBs	NA	0.14 (0.10, 0.47)	NA	0.81 (0.20, 1.21)	NA	0.20 (0.12, 0.28)	NA	0.14 (0.10, 0.29)

LODs and LOQs <0.05 (depending on the year of analysis and the compound analyzed).

*Significant differences ($p \leq 0.05$) between children belonging to the original birth cohort and those who joined the study at the age of 14 years.

Table B. Percentage of detection (can include LOD and LOQ) and levels of the main organochlorine compounds detected in cord blood (years 1997-1998), and in child serum at the age of 4 (years 2001-2002) and 14 years (year 2012) in the birth cohort of Menorca (ng/mL).

	Cord blood (N=405)		4 years (N=285)		14 years (N=43)	
	%>LOQ	Median (25 th , 75 th)	%>LOQ	Median (25 th , 75 th)	%>LOQ	Median (25 th , 75 th)
PeCB	9.1	0.21 (0.21, 0.21)	12.6	0.02 (0.02, 0.03)	0	0.003 (0.003, 0.003)
α-HCH	0	0.004 (0.004, 0.004)	0	0.01 (0.01, 0.01)	20.9	0.01 (0.01, 0.01)
β-HCH	25.9	0.16 (0.16, 0.52)	87.0	0.20 (0.11, 0.30)	51.2	0.02 (0.01, 0.03)
δ-HCH	0.5	0.02 (0.02, 0.02)	1.4	0.01 (0.01, 0.01)	0	0.03 (0.03, 0.03)
γ-HCH	3.0	0.02 (0.02, 0.02)	0.3	0.05 (0.05, 0.05)	25.6	0.01 (0.01, 0.02)
HCB	71.8	0.68 (0.40, 1.02)	98.9	0.31 (0.19, 0.50)	93.0	0.04 (0.02, 0.06)
4,4'-DDT	91.8	0.08 (0.04, 0.20)	43.5	0.08 (0.05, 0.12)	90.7	0.03 (0.03, 0.05)
4,4'-DDE	100	1.03 (0.57, 1.94)	99.3	0.81 (0.44, 1.77)	100	0.33 (0.23, 0.58)
PCB28	4.9	0.06 (0.06, 0.06)	4.6	0.02 (0.02, 0.02)	7	0.003 (0.003, 0.003)
PCB52	10.6	0.03 (0.03, 0.03)	16.5	0.03 (0.03, 0.06)	0	0.02 (0.02, 0.02)
PCB101	28.1	0.05 (0.02, 0.06)	67.4	0.12 (0.07, 0.12)	7	0.004 (0.004, 0.004)
PCB118	75.3	0.07 (0.05, 0.10)	83.2	0.10 (0.07, 0.13)	72.1	0.05 (0.02, 0.06)
PCB138	94.8	0.14 (0.10, 0.20)	93.3	0.18 (0.11, 0.28)	100	0.06 (0.05, 0.08)
PCB153	97.5	0.18 (0.13, 0.26)	97.9	0.25 (0.14, 0.41)	100	0.12 (0.09, 0.14)
PCB180	94.3	0.13 (0.10, 0.19)	77.5	0.12 (0.06, 0.21)	90.7	0.06, 0.03, 0.09)
Σ7PCBs	NA	0.71 (0.53, 0.97)	NA	0.82 (0.58, 1.23)	NA	0.31 (0.24, 0.42)

LODs and LOQs <0.05 (depending on the year of analysis and the compound analyzed).