Electronic Supplementary Material (ESI) for Analytical Methods.

ELECTRONIC SUPPLEMENTARY INFORMATION

Automated sample preparation and GC-API-MS/MS as powerful tool for analysis of legacy POPs in serum and plasma

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Table S1: Overview on standards used for the method implementation

Native Standards / Analyte	Abbreviation	CAS-number	Mass labelled standards / internal standards	Manufacturer
α-Hexachlorocyclohexane	α-HCH	319-84-6	$^{13}C_6$ α-HCH	CIL
β-Hexachlorocyclohexane	β-HCH	319-85-7	$^{13}C_6$ β-HCH	CIL
γ-Hexachlorocyclohexane	γ-HCH	58-89-9	$^{13}C_6$ γ-HCH	CIL
Heptachlor		76-44-8	$^{13}C_{10}$ Heptachlor	CIL
cis-Heptachlor epoxide		1024-57-3	$^{13}C_{10}$ cis-Heptachlor epoxide	CIL
Oxychlordane	oxy-CD	27304-13-8	$^{13}C_{10}$ Oxychlordane	CIL
cis-Chlordane	cis-CD	5103–71–9	$^{13}C_{10}$ cis-Chlordane	CIL
trans-Chlordane	trans-CD	5103–74–2	$^{13}C_{10}$ trans-Chlordane	CIL
cis-Nonachlor	cis-NC	5103–73–1	$^{13}C_{10}$ cis-Nonachlor	CIL
trans-Nonachlor	trans-NC	39765–80–5	$^{13}C_{10}$ trans-Nonachlor	CIL
1-chloro-2-[2,2-dichloro-1-(4-chlorophenyl)ethyl]benzene	o,p'-DDD	53-19-0	$^{13}C_{12}$ o,p'-DDD	CIL
1-chloro-4-[2,2-dichloro-1-(4-chlorophenyl)ethyl]benzene	p,p'-DDD	72-54-8	$^{13}C_{12}$ p,p'-DDD	CIL
1-chloro-2-[2,2-dichloro-1-(4-chlorophenyl)ethenyl]benzene	o,p'-DDE	3424-82-6	$^{13}C_{12}$ o,p'-DDE	CIL
1-chloro-4-[2,2-dichloro-1-(4-chlorophenyl)ethenyl]benzene	p,p'-DDE	72-55-9	$^{13}C_{12}$ p,p'-DDE	CIL
1-chloro-2-[2,2,2-trichloro-1-(4-chlorophenyl)ethyl]benzene	o,p'-DDT	789-02-6	$^{13}C_{12}$ o,p'-DDT	CIL
1-chloro-4-[2,2,2-trichloro-1-(4-chlorophenyl)ethyl]benzene	p,p'-DDT	50-29-3	$^{13}C_{12}$ p,p'-DDT	CIL
Octachlorostyrene	OCS	29082-74-4	$^{13}C_8$ Octachlorostyrene	CIL
Hexachlorobenzene	HCB	118-74-1	$^{13}C_6$ Hexachlorobenzene	CIL
2,4,4'-Trichlorobiphenyl	CB-28	7012-37-5	2,4,4'-Trichloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,2',5,5'-Tetrachlorobiphenyl	CB-52	35693-99-3	2,2',5,5'-Tetrachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,4,4',5-Tetrachlorobiphenyl	CB-74	32690-93-0		ChemService
2,2',4,4',5-Pentachlorobiphenyl	CB-99	38380-01-7		ChemService
2,2',4,5,5'-Pentachlorobiphenyl	CB-101	37680-73-2	2,2',4,5,5'-Pentachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories

Native Standards / Analyte	Abbreviation	CAS-number	Mass labelled standards / internal standards	Manufacturer
2,3,3',4,4'-Pentachlorobiphenyl	CB-105	32598-14-4	2,3,3',4,4'-Pentachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,3',4,4',5-Pentachlorobiphenyl	CB-118	31508-00-6	2,3',4,4',5-Pentachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,2',3,3',4,4'-Hexachlorobiphenyl	CB-128	38380-07-3	2,2',3,3',4,4'-Hexachloro[$^{13}C_{12}$]biphenyl	ChemService/ CIL
2,2',3,4,4',5'-Hexachlorobiphenyl	CB-138	31508-00-6	2,2',3,4,4',5'-Hexachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,2',3,4',5',6-Hexachlorobiphenyl	CB-149	38380-04-0		ChemService
2,2',4,4',5,5'-Hexachlorobiphenyl	CB-153	35065-28-2	2,2',4,4',5,5'-Hexachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,3,3',4,4',5-Hexachlorobiphenyl	CB-156	38380-08-4	2,3,3',4,4',5-Hexachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,3,3',4,4',5'-Hexachlorobiphenyl	CB-157	69782-90-7	2,3,3',4,4',5'-Hexachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,3',4,4',5,5'-Hexachlorobiphenyl	CB-167	52663-72-6	2,3',4,4',5,5'-Hexachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
3,3',4,4',5,5'-Hexachlorobiphenyl	CB-169	32774-16-6	3,3',4,4',5,5'-Hexachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,2',3,3',4,4',5-Heptachlorobiphenyl	CB-170	35065-30-6	2,2',3,3',4,4',5-Heptachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,2',3,4,4',5,5'-Heptachlorobiphenyl	CB-180	35065-27-1	2,2',3,4,4',5,5'-Heptachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,2',3,4,4',5',6-Heptachlorobiphenyl	CB-183	52663-69-1		ChemService

Native Standards / Analyte	Abbreviation	CAS-number	Mass labelled standards / internal standards	Manufacturer
2,2',3,4',5,5',6-Heptachlorobiphenyl	CB-187	52663-68-0		ChemService
2,3,3',4,4',5,5'-Heptachlorobiphenyl	CB-189	39635-31-9	2,3,3',4,4',5,5'-Heptachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	CB-194	35694-08-7	2,2',3,3',4,4',5,5'-Octachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	CB-206	40186-72-9	2,2',3,3',4,4',5,5',6-Nonachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
Decachlorobiphenyl	CB-209	2051-24-3	Decachloro[$^{13}C_{12}$]biphenyl	ChemService/ Wellington Laboratories
2,4,4'Tribromodiphenyl ether	BDE-28	63387-28-0	2,4,4'Tribromo[$^{13}C_{12}$]diphenyl ether	Wellington Laboratories
3′,4′,4-Tribromodiphenyl ether	BDE-37	147217-81-0		Wellington Laboratories
2,2',4,4'-Tetrabromodiphenyl ether	BDE-47	5436-43-1	2,2',4,4'-Tetrabromo[$^{13}C_{12}$]diphenyl ether	Wellington Laboratories
2,2',4,5'-Tetrabromodiphenyl ether	BDE-49	243982-82-3		Wellington Laboratories
2,3',4,4'-Tetrabromodiphenyl ether	BDE-66	189084-61-5		Wellington Laboratories
2,2',3,4,4'-Pentabromodiphenyl ether	BDE-85	182346-21-0		Wellington Laboratories
2,2',4,4',5-Pentabromodiphenyl ether	BDE-99	60348-60-9	2,2',4,4',6-Pentabromo[$^{13}C_{12}$]diphenyl ether	Wellington Laboratories
2,2',4,4',6-Pentabromodiphenyl ether	BDE-100	189084-64-8	2,2',4,4',6-Pentabromo[$^{13}C_{12}$]diphenyl ether	Wellington Laboratories
2,2',3,4,4',5'-Hexabromodiphenyl ether	BDE-138	182677-30-1	2,2',3,4,4',5'-Hexabromo[$^{13}C_{12}$]diphenyl ether	Wellington Laboratories

Native Standards / Analyte	Abbreviation	CAS-number	Mass labelled standards / internal standards	Manufacturer
2,2',4,4',5,5'-Hexabromodiphenyl ether	BDE-153	68631-49-2	2,2',4,4',5,5'-Hexabromo[$^{13}C_{12}$]diphenyl ether	Wellington Laboratories
2,2',4,4',5,6'-Hexabromodiphenyl ether	BDE-154	207122-15-4	2,2',4,4',5,6'-Hexabromo[$^{13}C_{12}$]diphenyl ether	Wellington Laboratories
2,2',3,4,4',5',6-Heptabromodiphenyl ether	BDE-183	207122-16-5	2,2',3,4,4',5',6-Heptabromo[$^{13}C_{12}$]diphenyl ether	Wellington Laboratories

	Abbreviation		Mass labelled standards / recovery standard	Manufacturer
	RSTD		2,3,3',4,5,5'-Hexachloro[$^{13}C_{12}$]biphenyl	Wellington Laboratories

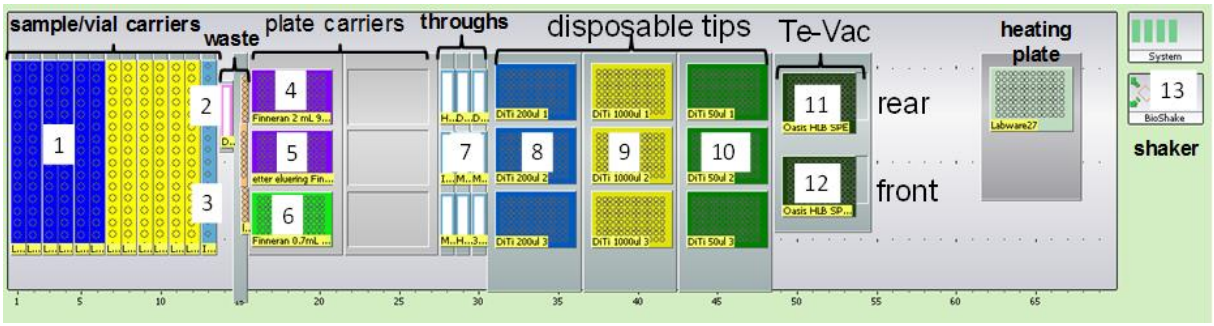

Figure S1: Worktable on the Tecan Freedom Evo 200: **1** samples, **2** internal standards, **3** recovery standards, **4** Finneran Topas 96 well multi plate system with 2 mL borosilicate glass tubes (samples prior to extraction), **5** Finneran Topas 96 well multi plate system with 2 mL borosilicate glass tubes (extracts), **6** Finneran Topas 96 well multi plate system with GC-vials, **7** solvents and reagents, **8** 200 µL disposable tips, **9** 1 mL disposable tips, **10** 50 µL disposable tips, **11** 96-well-SPE-plate or florisil/Na_2SO_4 columns for conditioning, **12** 96-well-SPE-plate or florisil/Na_2SO_4 columns for elution combined with Finneran Topas 96 well multi plate system with 2 mL borosilicate glass tubes, **13** shaker.

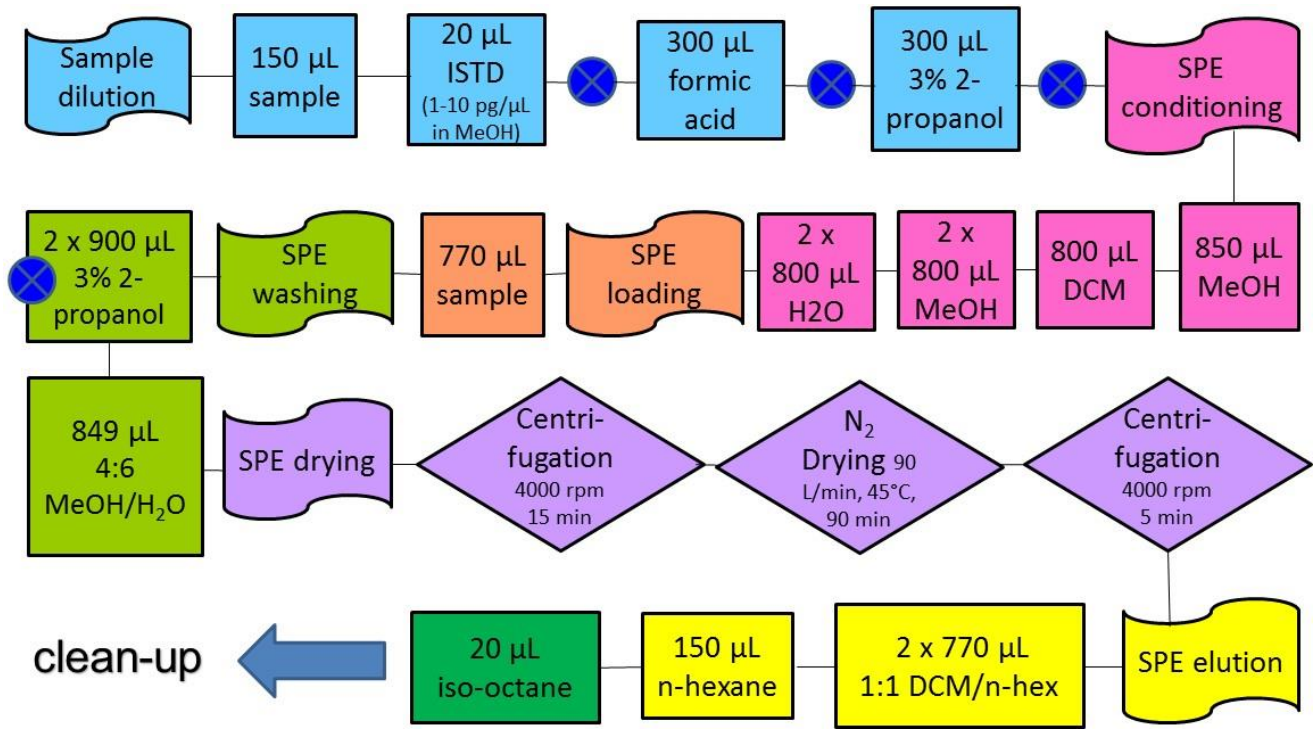

Figure S2: Workflow of the sample extraction on day 1. ⊗ Indicates transfer to the shaker and shaking.

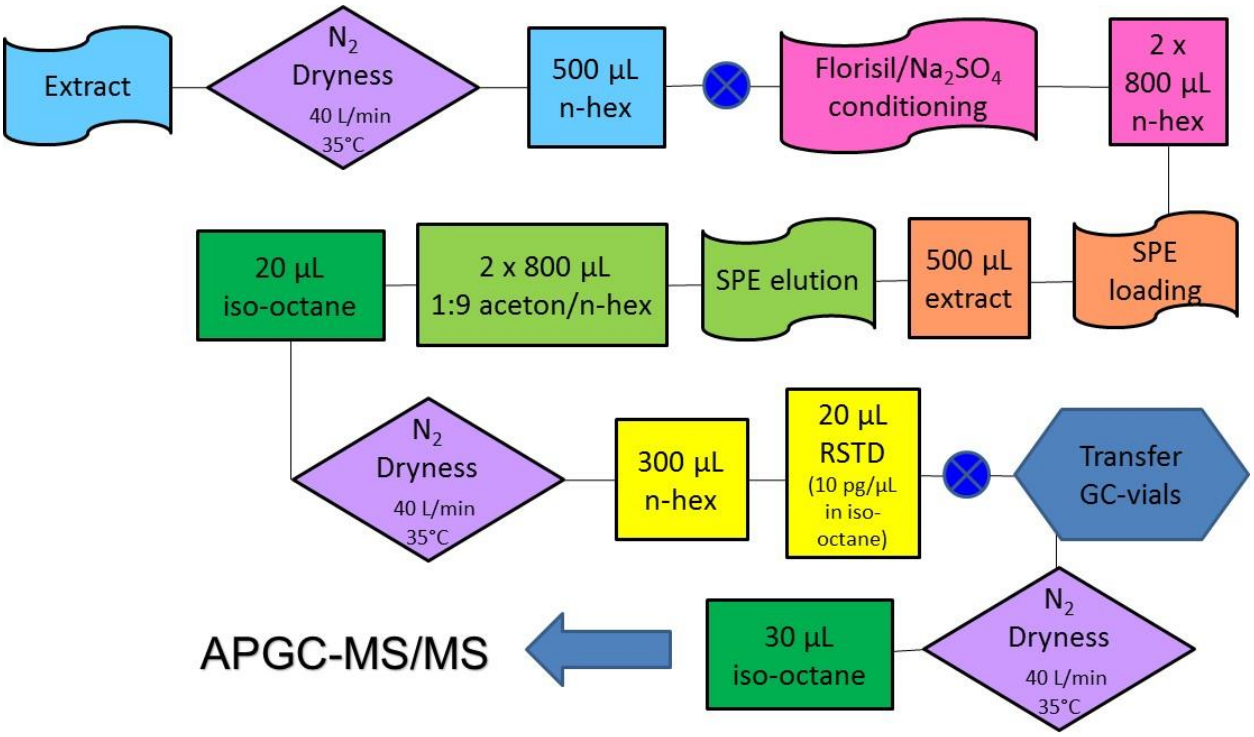

Figure S3: Workflow of the sample clean-up on day 2. ⊗ Indicates transfer to the shaker and shaking.

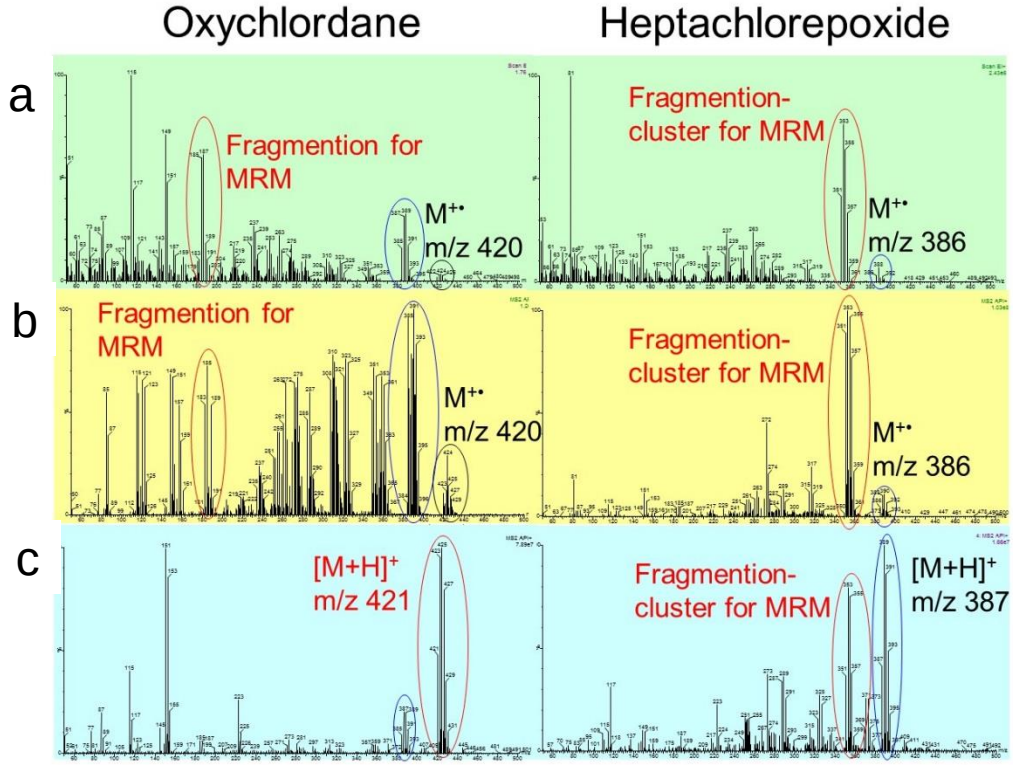

Figure S4: Full scan mass spectra of oxychlordane and heptachlorepoxide recorded with a) traditional GC-EI ionisation, b) atmospheric pressure ionisation under proton transfer conditions and c) atmospheric pressure ionisation under charge transfer conditions with H_2O as modifier. The ionisation

under charge transfer shows, compared to proton transfer and EI, a higher intensity and selectivity with regard to the $[M+H]^+$ and fragment ion clusters.

Table S2: Details on the MRM parameters with parent ions, monitored transitions, cone voltages and collision energies together with information on corresponding internal mass labelled standard used for quantification.

	Quantifier transition				**Qualifier transition**					**^{13}C mass labelled Quantifier transition**				**^{13}C mass labelled Qualifier transition**			
Analyte	Parent ion [m/z]	Daughter ion [m/z]	Cone volt. [V]	Coll. energy [eV]	Parent ion [m/z]	Daughter ion [m/z]	Cone voltage [V]	Collision energy [eV]	Compound Internal standard	Parent ion	Daughter ion	Cone voltage [V]	Collision energy [eV]	Parent ion	Daughter ion	Cone voltage [V]	Collision energy [eV]
α-HCH	181.0	145.0	10	20	183.1	147.0	10	20	^{13}C α-HCH	187.0	151.0	10	20	189.0	153.1	10	20
β-HCH	181.0	145.0	10	20	183.1	147.0	10	20	^{13}C β-HCH	187.0	151.0	10	20	189.0	153.1	10	20
γ-HCH	181.0	145.0	10	20	183.1	147.0	10	20	^{13}C γ-HCH	187.0	151.0	10	20	189.0	153.1	10	20
Heptachlor	269.7	234.7	20	20	271.7	236.7	20	20	^{13}C Heptachlor	276.7	241.8	20	20	278.7	243.8	20	20
cis-Heptachl. epoxide	355.0	265.0	10	30	353.0	282.0	10	30	^{13}C cis-Heptachl. epoxide	365.0	272.0	10	30	363.0	270.0	10	30
oxy-CD	386.7	286.8	10	20	388.7	288.7	10	20	^{13}C oxy-CD	397.0	296.0	10	20	399.0	298.0	10	20
cis-CD	375.0	266.1	20	20	373.0	266.0	20	20	^{13}C cis-CD	385.0	276.1	20	20	383.0	276.0	20	20
trans-CD	375.0	266.1	20	20	373.0	266.0	20	20	^{13}C trans-CD	385.0	276.1	20	20	383.0	276.0	20	20
cis-NC	409.0	300.0	10	20	407.0	300.0	10	30	^{13}C cis-NC	419.0	310.0	10	30	417.0	310.0	10	20
trans-NC	409.0	300.0	10	30	407.0	300.0	10	20	^{13}C trans-NC	419.0	310.0	10	30	417.0	310.0	10	20
o,p'-DDD	235.0	165.0	30	30	237.0	165.0	30	30	^{13}C o,p'-DDD	247.0	177.0	30	30	249.0	177.0	30	30
p,p'-DDD	235.0	165.0	30	30	237.0	165.0	30	30	^{13}C p,p'-DDD	247.0	177.0	30	30	249.0	177.0	30	30
o,p'-DDE	316.0	246.0	30	30	318.0	248.0	30	30	^{13}C o,p'-DDE	328.0	258.0	30	30	330.0	260.0	30	30
p,p'-DDE	316.0	246.0	30	30	318.0	248.0	30	30	^{13}C p,p'-DDE	328.0	258.0	30	30	330.0	260.0	30	30
o,p'-DDT	235.0	165.0	30	30	237.0	165.0	30	30	^{13}C o,p'-DDT	247.0	177.0	30	30	249.0	177.0	30	30
p,p'-DDT	235.0	165.0	30	30	237.0	165.0	30	30	^{13}C p,p'-DDT	247.0	177.0	30	30	249.0	177.0	30	30
OCS	377.7	307.8	40	30	379.7	309.8	40	30	^{13}C OCS	386.0	316.0	40	30	388.0	318.0	40	30
HCB	284.0	249.0	30	40	286.0	251.0	30	20	^{13}C HCB	290.0	255.0	30	40	292.0	257.0	30	20
PeCB	252.1	217.0	60	20	250.1	215.0	60	40	^{13}C PeCB	258.0	223.0	60	20	256.0	221.0	60	40
CB-28	255.9	186.0	40	30	257.9	188.0	40	40	^{13}C CB-28	268.0	198.3	40	30	270.0	200.0	40	40
CB-52	289.9	220.0	50	35	291.9	221.9	50	35	^{13}C CB-52	301.9	232.0	50	35	303.9	234.0	50	35
CB-74	289.9	220.0	50	35	291.9	221.9	50	35	^{13}C CB-52	301.9	232.0	50	35	303.9	234.0	50	35
CB-99	325.8	255.9	50	30	252.8	255.9	50	30	^{13}C CB-101	337.9	267.9	50	30	339.9	269.9	50	30

	Quantifier transition				**Qualifier transition**					**^{13}C mass labelled Quantifier transition**				**^{13}C mass labelled Qualifier transition**			
Analyte	Parent ion [m/z]	Daughter ion [m/z]	Cone volt. [V]	Coll. energy [eV]	Parent ion [m/z]	Daughter ion [m/z]	Cone voltage [V]	Collision energy [eV]	Compound Internal standard	Parent ion	Daughter ion	Cone voltage [V]	Collision energy [eV]	Parent ion	Daughter ion	Cone voltage [V]	Collision energy [eV]
CB-101	325.8	255.9	50	30	252.8	255.9	50	30	^{13}C CB-101	337.9	267.9	50	30	339.9	269.9	50	30
CB-105	325.8	255.9	50	30	252.8	255.9	50	30	^{13}C CB-105	337.9	267.9	50	30	339.9	269.9	50	30
CB-118	325.8	255.9	50	30	252.8	255.9	50	30	^{13}C CB-118	337.9	267.9	50	30	339.9	269.9	50	30
CB-128	359.8	289.8	50	40	361.7	291.9	50	40	^{13}C CB-128	371.9	301.9	50	40	373.9	303.9	50	40
CB-138	359.8	289.8	50	35	361.7	291.9	50	35	^{13}C CB-138	371.9	301.9	50	35	373.9	303.9	50	35
CB-149	359.8	289.8	50	35	361.7	291.9	50	35	^{13}C CB-153	371.9	301.9	50	35	373.9	303.9	50	35
CB-153	359.8	289.8	50	35	361.7	291.9	50	35	^{13}C CB-153	371.9	301.9	50	35	373.9	303.9	50	35
CB-156	359.8	289.8	50	40	361.7	291.9	50	40	^{13}C CB-156	371.9	301.9	50	40	373.9	303.9	50	40
CB-157	359.8	289.8	50	40	361.7	291.9	50	40	^{13}C CB-157	371.9	301.9	50	40	373.9	303.9	50	40
CB-167	359.8	289.8	50	40	361.7	291.9	50	40	^{13}C CB-167	371.9	301.9	50	40	373.9	303.9	50	40
CB-169	359.8	289.8	50	40	361.7	291.9	50	40	^{13}C CB-169	371.9	301.9	50	40	373.9	303.9	50	40
CB-170	393.7	323.8	50	40	395.7	325.8	50	30	^{13}C CB-170	405.8	335.9	50	40	407.8	337.9	50	30
CB-180	393.7	323.8	50	40	395.7	325.8	50	30	^{13}C CB-180	405.8	335.9	50	40	407.8	337.9	50	30
CB-183	393.7	323.8	50	40	395.7	325.8	50	30	^{13}C CB-180	405.8	335.9	50	40	407.8	337.9	50	30
CB-187	393.7	323.8	50	40	395.7	325.8	50	30	^{13}C CB-180	405.8	335.9	50	40	407.8	337.9	50	30
CB-189	393.7	323.8	50	40	395.7	325.8	50	30	^{13}C CB-189	405.8	335.9	50	40	407.8	337.9	50	30
CB-194	427.7	357.7	50	35	429.7	359.7	50	45	^{13}C CB-194	439.8	369.8	50	35	441.8	371.8	50	45
CB-206	463.7	428.7	40	35	461.7	426.7	40	35	^{13}C CB-206	475.8	405.8	40	35	473.8	403.8	40	35
CB-209	497.6	427.7	40	40	499.6	429.7	40	45	^{13}C CB-209	509.7	439.7	40	40	511.7	441.7	40	45
BDE-28	405.7	245.9	30	45	407.7	247.9	30	50	^{13}C BDE-28	417.8	258	30	45	419.8	260	30	50
BDE-37	405.7	245.9	30	45	407.7	247.9	30	50	^{13}C BDE-28	417.8	258	30	45	419.8	260	30	50
BDE-47	485.7	325.8	40	35	483.6	323.8	40	35	^{13}C BDE-47	497.7	337.8	40	35	495.7	335.8	40	35
BDE-49	485.7	325.8	40	35	483.6	323.8	40	35	^{13}C BDE-47	497.7	337.8	40	35	495.7	335.8	40	35
BDE-66	485.7	325.8	40	35	483.6	323.8	40	35	^{13}C BDE-47	497.7	337.8	40	35	495.7	335.8	40	35
BDE-85	563.5	403.7	30	45	565.6	405.7	30	45	^{13}C BDE-99	577.7	417.8	30	45	575.7	415.8	30	45
BDE-99	563.5	403.7	30	45	565.6	405.7	30	45	^{13}C BDE-99	577.7	417.8	30	45	575.7	415.8	30	45
BDE-100	565.6	405.7	40	45	563.5	403.7	40	45	^{13}C BDE-100	577.7	417.8	40	45	575.7	415.8	40	45

	Quantifier transition				**Qualifier transition**					**^{13}C mass labelled Quantifier transition**				**^{13}C mass labelled Qualifier transition**			
Analyte	Parent ion [m/z]	Daughter ion [m/z]	Cone volt. [V]	Coll. energy [eV]	Parent ion [m/z]	Daughter ion [m/z]	Cone voltage [V]	Collision energy [eV]	Compound Internal standard	Parent ion	Daughter ion	Cone voltage [V]	Collision energy [eV]	Parent ion	Daughter ion	Cone voltage [V]	Collision energy [eV]
BDE-138	643.4	483.6	30	35	641.5	481.6	30	45	^{13}C BDE-138	655.6	495.7	30	35	653.6	493.7	30	45
BDE-153	643.4	483.6	30	35	641.5	481.6	30	45	^{13}C BDE-153	655.6	495.7	30	35	653.6	493.7	30	45
BDE-154	643.4	483.6	30	35	641.5	481.6	30	45	^{13}C BDE-154	655.6	495.7	30	35	653.6	493.7	30	45
BDE-183	721.3	561.5	40	45	723.2	563.5	40	45	^{13}C BDE-183	733.5	573.6	40	45	735.5	575.6	40	45
RSTD-Pesticides	372.0	302.0	20	30	374.0	302.0	20	40									
RSTD-PCBs, PBDEs, OCS	371.9	301.9	50	40	373.9	303.9	50	40									

Table S3: Intra-day performance with accuracy and precision of the method for three different concentration levels (low 75 pg/mL, medium with 450 pg/mL and high with 1250 pg/mL) in bovine sera in eight parallel samples.

	low		medium		high	
	Recovery %	RSD %	Recovery %	RSD %	Recovery %	RSD %
α-HCH	90	5	89	4	89	4
β-HCH	104	6	93	7	93	4
γ-HCH	103	6	94	5	98	4
Heptachlor	103	9	97	4	99	6
cis-Heptachlorepoxide	116	6	96	4	99	4
Oxychlordane	92	10	97	4	100	6
trans-CD	99	8	97	6	97	5
cis-CD	96	9	94	4	97	3
trans-NC	92	7	95	6	98	5
cis-NC	103	5	100	5	100	3
o,p'-DDE	99	4	97	5	100	4
p,p'-DDE	101	5	96	2	102	4
o,p'-DDD	105	4	93	5	93	2
p,p'-DDD	107	5	98	4	97	2
o,p'-DDT	103	2	95	3	97	3
p,p'-DDT	103	4	98	4	100	5
HCB	< MDL		94	12	100	8
OCS (Pesticides)	102	3	97	4	103	4
OCS (PCB PBDE)	105	4	98	4	103	3
CB-28	95	12	96	3	98	3
CB-52	107	6	106	3	108	3
CB-74	149	13	137	5	149	6
CB-99	106	5	103	3	107	3
CB-101	107	4	105	3	108	3
CB-105	104	3	100	3	102	3
CB-118	105	5	100	3	102	3
CB-128	107	5	99	3	104	3
CB-138	105	5	100	3	102	3
CB-149	105	5	101	3	107	3
CB-153	101	5	96	3	100	3
CB-156	103	6	96	4	100	3
CB-157	100	4	92	4	99	3
CB-167	104	4	99	3	103	3
CB-169	101	3	92	4	98	3
CB-170	106	4	98	4	102	2
CB-180	106	6	98	4	104	3
CB-183	104	4	97	4	102	3
CB-187	102	5	98	3	101	3
CB-189	106	5	98	5	104	2
CB-194	102	4	94	5	100	3
CB-206	113	24	78	11	69	10

	low		medium		high	
	Recovery %	RSD %	Recovery %	RSD %	Recovery %	RSD %
CB-209	106	6	89	5	93	3
BDE-28	103	9	101	4	99	4
BDE-37	107	18	100	7	100	4
BDE-47	102	4	98	4	99	4
BDE-49	100	4	98	3	99	3
BDE-66	103	5	99	3	100	3
BDE-85	99	4	97	3	100	3
BDE-99	106	8	95	4	98	4
BDE-100	94	5	87	6	98	14
BDE-138	106	7	96	4	100	2
BDE-153	104	5	96	4	99	3
BDE-154	113	12	95	5	99	3
BDE-183	118	4	99	4	102	2

Table S4: Concentrations of detected POPs in sera of the general population from Tromsø, Norway

	Concentration [pg/mL]			Detection
Compound	**median**	**min**	**max**	**frequency [%]**
α-HCH	6.67	< MDL	145	13
β-HCH	20.2	< MDL	1160	70
γ-HCH	< MDL	< MDL	< MDL	0
Heptachlor	< MDL	< MDL	< MDL	0
cis-Heptachlorepoxide	23.2	< MDL	27.4	5
Oxychlordane	47.1	< MDL	160	50
trans-CD	< MDL	< MDL	< MDL	0
cis-CD	< MDL	< MDL	< MDL	0
trans-NC	39.2	3.80	392	100
cis-NC	16.3	< MDL	113	78
o,p'-DDE	0.866	< MDL	0.866	3
p,p'-DDE	265	24.0	6570	100
o,p'-DDD	< MDL	< MDL	< MDL	0
p,p'-DDD	< MDL	< MDL	< MDL	0
o,p'-DDT	26.9	< MDL	26.9	3
p,p'-DDT	25.6	< MDL	122	20
HCB	176	131	389	100
OCS (Pesticides)	2.68	< MDL	4.28	55
OCS (PCB, PBDE)	2.68	1.40	4.97	100
CB-28	49.7	< MDL	52.4	5
CB-52	16.7	< MDL	16.7	3
CB-74	27.7	< MDL	104	70
CB-99	22.3	< MDL	161	95
CB-101	18.7	< MDL	18.7	3
CB-105	9.91	< MDL	93.7	93
CB-118	41.3	< MDL	463	95
CB-128	3.05	< MDL	10.5	65
CB-138	109	18.0	1070	100
CB-149	11.5	< MDL	12.4	5
CB-153	170	< MDL	1400	98
CB-156	25.2	< MDL	124	95

Compound	Concentration [pg/mL] median	min	max	Detection frequency [%]
CB-157	7.21	< MDL	40.5	85
CB-167	9.00	< MDL	73.9	78
CB-169	< MDL	< MDL	< MDL	0
CB-170	79.6	3.71	399	100
CB-180	203	10.12	1270	100
CB-183	12.6	< MDL	127	98
CB-187	44.6	< MDL	236	98
CB-189	11.3	< MDL	17.5	55
CB-194	26.0	1.793	116	100
CB-206	< MDL	< MDL	< MDL	0
CB-209	17.0	< MDL	31.2	48
BDE-28	< MDL	< MDL	< MDL	0
BDE-37	< MDL	< MDL	< MDL	0
BDE-47	10.2	< MDL	38.9	30
BDE-49	< MDL	< MDL	< MDL	0
BDE-66	< MDL	< MDL	< MDL	0
BDE-85	< MDL	< MDL	< MDL	0
BDE-99	34.8	< MDL	62.2	5
BDE-100	5.49	< MDL	13.1	23
BDE-138	< MDL	< MDL	< MDL	0
BDE-153	19.7	< MDL	27.6	15
BDE-154	< MDL	< MDL	< MDL	0
BDE-183	< MDL	< MDL	< MDL	0