Appendix 6: Summary of environmental monitoring data

The following tables outline the available environmental monitoring data for "MCCPs" in surface water, sediment and biota taken from EA (2019), and relevant literature. It should be noted that that data prior to 1995 rely on semi-quantitative analytical methods, so the specific values should be treated with caution.

Table 20: Summary of levels of "MCCPs" in air in remote regions

Location	Comment	Units	Concentration	Reference	Dominant homologue (relative abundance % where stated)
Shergyla Mountain (Tibetan Plateau)	Air samples (n=82) 2012 2013 2014 2015	pg/m^3	Range: 50 – 690 131 337 429 421 (annual mean)	Wu *et al.* (2019)	C_{14} and C_{15} Cl_{7-8}
King George Island, Fildes Peninsula of Antarctica (Great Wall Station)	2013 24 air samples (at 48-h intervals): Gaseous phase: Particulates:	pg/m^3	3.0 to 4.5 (average: 3.8) 0.5 to 0.9 (average: 0.7)	Ma *et al.* (2014)	C_{14} Cl_4; C_{15}, C_{16} and C_{17}, Cl_4 in the gas phase; C_{14} $Cl_{7–10}$ in the particle phase
King George Island, Fildes Peninsula of Antarctica (Great Wall Station)	monthly air samples: 2014	pg/m^3	2.47 (annual average)	Jiang *et al.* (2021)	$Cl_{7–8}$ congeners accounted for up to 70.8% in the particle phase and $Cl_{6–7}$ congeners accounted for up to 60.8% in the gas phase.
King George Island, Fildes Peninsula of Antarctica (Great Wall Station)	monthly air samples: 2015	pg/m^3	5.54 (annual average)	Jiang *et al.* (2021	C_{14} and C_{15} Cl_{7-8}
King George Island, Fildes Peninsula of Antarctica (Great Wall Station)	monthly air samples: 2016	pg/m^3	6.46 (annual average)	Jiang *et al.* (2021	
King George Island, Fildes Peninsula of Antarctica (Great Wall Station)	monthly air samples: 2017	pg/m^3	15.1 (annual average)	Jiang *et al.* (2021	C_{14} with Cl_7, Cl_8, Cl_9 most abundant
King George Island, Fildes Peninsula of Antarctica (Great Wall Station)	monthly air samples: 2018	pg/m^3	10.2 (annual average)	Jiang *et al.* (2021	

Location	Comment	Units	Concentration	Reference	Dominant homologue (relative abundance % where stated)
Zeppelin (Svalbard, Norway)	Air samples* (2013) weekly	pg/m3	3 – 42 (monthly averages) Annual mean: 23	Bohlin-Nizzetto *et al.* (2014)	
Zeppelin (Svalbard, Norway)	Air samples* (2014) weekly	pg/m3	<3 – 224 (monthly averages) Annual mean: 31	Bohlin-Nizzetto *et al.* (2015)	
Zeppelin (Svalbard, Norway)	Air samples* (2015) weekly	pg/m3	20 – 595[a] (monthly averages) Annual mean: 130	Bohlin-Nizzetto & Aas (2016	
Zeppelin (Svalbard, Norway)	Air samples* (2016) weekly	pg/m3	10 – 380 (monthly averages) Annual mean: 70	Bohlin-Nizzetto *et al.* (2017)	
Zeppelin (Svalbard, Norway)	Air samples* (2017) weekly	pg/m3	10 – 380 (monthly averages) Annual mean: 70	Bohlin-Nizzetto *et al.* (2018)	
Zeppelin (Svalbard, Norway)	Air samples* (2018) weekly	pg/m3	10 – 380 (monthly averages) Annual mean: 70	Bohlin-Nizzetto *et al.* (2019)	
Zeppelin (Svalbard, Norway)	Air samples* (2019) weekly	pg/m^3	<44 to 3 900 (mean: 270[b])	Bohlin-Nizzetto *et al.* (2020)	

*Described as "semi-quantitative" measurements due to the high analytical limit of detection.
[a] 60% of the data was below the detection limit.
[b] If two outliers are excluded, the values are: <44 to 720 pg/m^3 (monthly average), or annual mean of 170 pg/m^3.

Table 22: Summary of levels of "MCCPs" in air from other regions

Location	Comment	Units	Concentration	Reference	Dominant homologue (relative abundance % where stated)
Dongjiang River, China	2010 Air samples	µg/sampler	4.1	Wang *et al.* (2013)	C_{14} Cl_{6-7}
Dongjiang River, China	2010 Atmospheric depositions (wet and dry) at 11 sites	µg/(m²d)	5.3	Wang *et al.* (2013)	C_{14} Cl_{7-8}
Shenzhen, Guangzhou Province, China	Air samples (28 samples collected over 4 seasons, September 2013 to August 2014)	ng/m³	0.70–12.2	Li *et al.* (2018b)	C_{14} centred around Cl_6 to Cl_9 were the predominant homologue groups (19.9%)
Lhasa city (Tibet)	Air samples 2012-2015	pg/m³	Range: 800 – 6700	Wu *et al.* (2019)	C_{14} and C_{15} Cl_{7-8}
Chinese Bohai Sea	2016 20 gaseous phase samples; 20 particulates samples	pg/m³	460 to 1 900 560 to 4 900	Ma *et al.* (2018)	
India	2006 Air samples (average)	ng/m³	3.62	Chaemfa *et al.* (2014)	C_{14} with Cl_7, Cl_8, Cl_9 most abundant
Pakistan	2011 Air samples (average)	ng/m³	4.21	Chaemfa *et al.* (2014)	
Birkenes (Southern Norway)	Air samples (2017) Monthly	pg/m³	15 – 772 (monthly samples) 160 (annual mean)	Bohlin-Nizzetto *et al.* (2018)	
Birkenes (Southern Norway)	Air samples (2018) Monthly	pg/m³	100 – 3754 (monthly samples) 960 (annual mean)	Bohlin-Nizzetto *et al.* (2019)	
Birkenes (Norway)	Air samples (2019) Monthly	pg/m³	<95 to 1 500 (mean: 330)	Bohlin-Nizzetto *et al.* (2020)	
Aspvreten and Råö, Sweden	Air (2012 – 2017) "four months evenly distributed throughout the year"	ng/m³	0.011 - 0.91 0.006 - 0.024	IVL, 2018	

Location	**Comment**	**Units**	**Concentration**	**Reference**	**Dominant homologue (relative abundance % where stated)**
Aspvreten and Råö, Sweden	Air (deposit) 2012 – 2017 Annual average, based on 4 measurements / year	ng/m^3	4.3 to 1150 5.5 to 270	IVL, 2018	
Zurich city centre	n=2 Summer 2012	ng/m^3	1.32 - 25.9	Bogdal *et al.* (2015)	83% contribution from 42% Cl wt. MCCPs reference standard
Norway, NILU report 2020	2020 n=5	ng/day	<LOD	Heimstad *et al.* (2021)	
Bavaria, Germany	2011 n=9 house dust samples	µg/g	9-892	Hilger *et al.* (2012)	C_{14} highest, roughly 50% of MCCPs
Pretoria, South-Africa	2020 n=20 house dust samples	µg/g	13-498	Brits *et al.*(2020)	C_{14}=C_{15} dominant Cl_6 dominant
Norway	2013&2014 n=61 Household air samples	ng/m^3	<0.35-13 (median 1.2)	Yuan *et al.* 2021	Detection frequency = 95% Mean Cl wt = 48
Norway	2013&2014 n=61 Settled dust samples	µg/g	2.3-840	Yuan *et al.* 2021	Detection frequency = 100% Mean Cl wt = 54%
Norway	2013&2014 n=13 Human personal air samples	ng/m^3	<1.8-59 (median 4.5)	Yuan *et al.* 2021	Detection frequency = 92% Mean Cl wt = 48%

Table 22: Summary of levels of "MCCPs" in surface water and STP (including sludge)

Location	Year/Comment	Units	Concentration	Reference
Derwent Reservoir	1986	µg/L	1.46	ICI (1992)
River Trent, Newark	1986	µg/L	0.86	ICI (1992)
Trent Mersey Canal	1986	µg/L	0.62	ICI (1992)
River Derwent, Derby	1986	µg/L	0.64	ICI (1992)
Walton on Trent	1986	µg/L	1.07	ICI (1992)
River Ouse, Goole	1986	µg/L	0.94	ICI (1992)
River Don, Rotherham	1986	µg/L	1.13	ICI (1992)
River Aire/Ouse	1986	µg/L	1.13	ICI (1992)
River Ouse, York	1986	µg/L	1.36	ICI (1992)
River Cover, Wilton	1986	µg/L	0.84	ICI (1992)
River Ure, Mickley3+	1986	µg/L	1.46	ICI (1992)
River Trent, Gainsborough	1986	µg/L	2.49	ICI (1992)
River Trent, Burton	1986	µg/L	2.46	ICI (1992)
River Rother	1986	µg/L	2.11	ICI (1992)
River Trent, Humber	1986	µg/L	3.75	ICI (1992)
Hull Docks	1986	µg/L	2.69	ICI (1992)
River Lech at Augsburg	1987	µg/L		Ballschmiter (1994)
River Lech at Augsburg	1994	µg/L	<0.05	Ballschmiter (1994)
River Lech at Gersthofen (upstream from a CP production site)	1987	µg/L	4.5	Ballschmiter (1994)
River Lech at Gersthofen (upstream from a CP production site)	1994	µg/L	0.094	Ballschmiter (1994)
River Lech at Langweid (downstream from a CP production site)	1987	µg/L	4	Ballschmiter (1994)
River Lech at Langweid (downstream from a CP production site)	1994	µg/L	0.185	Ballschmiter (1994)
River Lech at Rain	1987	µg/L		Ballschmiter (1994)
River Lech at Rain	1994	µg/L	0.170	Ballschmiter (1994)
River Danube at Marxheim (downstream from the mouth of the River Lech)	1987	µg/L	20	Ballschmiter (1994)
River Danube at Marxheim (downstream from the mouth of the River Lech)	1994	µg/L	0.072	Ballschmiter (1994)

Location	Year/Comment	Units	Concentration	Reference
River Danube at Marxheim (upstream from the mouth of the River Lech)	1987	µg/L	4	Ballschmiter (1994)
River Danube at Marxheim (upstream from the mouth of the River Lech)	1994	µg/L	≤0.055	Ballschmiter (1994)
Irish Sea: Site a	Relates to C_{10-20}	µg/L	1	Campbell and McConnell (1980)
Irish Sea: Site b	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Irish Sea: Site c	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Irish Sea: Site d	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Irish Sea: Site e	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
Irish Sea: Site f	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
Barmouth Harbour	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Menai Straights (Caernarvon)	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Tremadoc Bay (Llandanwg)	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
North Minch: Ardmair	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
North Minch: Port Bùn á Ghlinne	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
North Minch: Port of Ness	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Goile Chròic (Lewis)	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Sound of Taransay (Harris)	Relates to C_{10-20}	µg/L	4.0	Campbell and McConnell (1980)
Sound of Arisaig	Relates to C_{10-20}	µg/L	1.0	Campbell and McConnell (1980)
North Sea: N55° 5.7' W1° 9.3'	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
North Sea: N57° 26.2' W1° 17.0'	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
North Sea: N57° 56.5' W1° 22.0'	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
River Banwy, Llangadfan	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
River Lea, Welwyn	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
River Lea, Batford	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
River Clwyd, Ruthin	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
Bala Lake	Relates to C_{10-20}	µg/L	1.0	Campbell and McConnell (1980)
River Dee, Corwen	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)

Location	Year/Comment	Units	Concentration	Reference
River Wnion, Merioneth	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Firth of Lorne, Ganevan	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Loch Linnhe, Corran Narrows	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
Firth of Clyde, Ashcraig	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
Firth of Clyde, Girvan	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
An Garbh Allt	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
Five drinking water reservoirs, Manchester area	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
River Aire, Leeds	Relates to C_{10-20}	µg/L	2.0	Campbell and McConnell (1980)
River Aire, Woodlesford	Relates to C_{10-20}	µg/L	2.0	Campbell and McConnell (1980)
River Ouse, Boothberry edge	Relates to C_{10-20}	µg/L	1 - 2	Campbell and McConnell (1980)
River Trent, West Bromwich	Relates to C_{10-20}	µg/L	1 - 2	Campbell and McConnell (1980)
River Trent, Walton-upon-Trent	Relates to C_{10-20}	µg/L	2 - 3	Campbell and McConnell (1980)
River Trent, Swarkestone	Relates to C_{10-20}	µg/L	1 - 2	Campbell and McConnell (1980)
River Trent, Newark	Relates to C_{10-20}	µg/L	4.0	Campbell and McConnell (1980)
River Trent, Gainsborough	Relates to C_{10-20}	µg/L	2.0	Campbell and McConnell (1980)
River Trent, confluence with Humber	Relates to C_{10-20}	µg/L	6.0	Campbell and McConnell (1980)
Humber Estuary, Hull	Relates to C_{10-20}	µg/L	1 - 2	Campbell and McConnell (1980)
Humber Estuary, Grimsby	Relates to C_{10-20}	µg/L	3.0	Campbell and McConnell (1980)
Mersey Estuary, New Brighton	Relates to C_{10-20}	µg/L	3.0	Campbell and McConnell (1980)
Mersey Estuary, Liverpool Pier Head	Relates to C_{10-20}	µg/L	4.0	Campbell and McConnell (1980)
River Thames, Oxford	Relates to C_{10-20}	µg/L	2.0	Campbell and McConnell (1980)
River Thames, Sanford	Relates to C_{10-20}	µg/L	1 - 2	Campbell and McConnell (1980)
Wyre Estuary	Relates to C_{10-20}	µg/L	not detected - 1.5	Campbell and McConnell (1980)
River Tees, Low Dinsdale	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
River Tees, North Gare breakwater	Relates to C_{10-20}	µg/L	0.5	Campbell and McConnell (1980)
River Tees, Middlesbrough	Relates to C_{10-20}	µg/L	not detected	Campbell and McConnell (1980)
Sugar Creek, upstream of discharge		µg/L (particulate)	not detected	Murray *et al.* (1987a and 1987b)

Location	Year/Comment	Units	Concentration	Reference
Sugar Creek, just upstream of discharge		µg/L (particulate)	0.05 - 0.17	Murray *et al.* (1987a and 1987b)
Sugar Creek, just downstream of discharge		µg/L (particulate)	0.16 - 0.2	Murray *et al.* (1987a and 1987b)
Sugar Creek, downstream of discharge		µg/L (particulate)	0.20 - 0.24	Murray *et al.* (1987a and 1987b)
Upstream of sewage treatment plant, Germany		µg/L	not detected	Rieger and Ballschmiter (1995)
Downstream of sewage treatment plant, Germany		µg/L	not detected	Rieger and Ballschmiter (1995)
Tributary, upstream of sewage treatment plant, Germany		µg/L	not detected	Rieger and Ballschmiter (1995)
Downstream of a chlorinated paraffin manufacturing plant, Canada		µg/L	<1	Tomy *et al.* (1998)
Surface water near to industrial sites, UK	1998	µg/L	<0.1	Cefas (1999)
Water samples from Norway	Two samples. Concentration refers to total (dissolved + particulate) in one sample. The concentrations present in the other sample was much lower (shown graphically only but was probably <0.1 µg/L.	µg/L	1.49	Petersen *et al.* (2006)
Snow (melted) from urban areas of Gothenburg, Sweden	8 Samples. "MCCPs" detectable in 2 samples (the concentrations may relate to SCCPs + "MCCPs" in the samples)	µg/L	0.33 - 32	Björklund *et al.* (2011)
Great Lakes Basin	Mean concentration based on an analysis of published studies	µg/L	9×10^{-7}	Klečka *et al.* (2010)
Shanghai river system, China	2016 (n=74) mean (min-max)	ng/L	939 (40.3 - 3 870)	Wang *et al.* (2019)
Xiaoqing River/ Laizhou Bay, China	2014 (n=30) water column mean (min-max)	ng/L	27 (4.0–120)	Pan *et al.* (2018)
Chinese Bohai Sea seawater samples: (1) dissolved phase; (2) particulate phase	Means May 2016 (n=16) August 2016 (n=18)	ng/L	(1) 3.8 and 19.8 (2) 10 and 9.4	Ma *et al.* (2018)

Location	Year/Comment	Units	Concentration	Reference
Filtered river water samples, Europe	8 Samples filtered using a membrane glass fibre filter before analysis	µg/L	<0.10	Coelhan (2009 & 2010)
Influent to wastewater treatment plants, Europe	15 Samples. "MCCPs" detectable in 12 samples.	µg/L (particulate)	not detected – 4.6	Coelhan (2009 & 2010)
Effluent from wastewater treatment plants, Norway	Samples from 8 wastewater treatment plants (4 samples from each location). "MCCPs" detectable in 13% of samples analysed.	µg/L	not detected – 0.942	Thomas *et al.* (2011)
Dewatered sludge from wastewater treatment plants, Norway	Samples from 8 wastewater treatment plants (4 samples from each location). "MCCPs" detectable in all samples.	µg/kg	14 - 7 000 (median 385)	Thomas *et al.* (2011)
Norway	2017 Storm water	µg/L	0.0685	Ruus *et al.* (2018)
Inner Oslofjord Norway	2017 Storm water	µg/L	0.0685	Ruus *et al.* (2018)
Sludge Norway	2017/2018 average (minimum-maximum)	µg/kg	4 031 (120-17 000)	Norsk Vann (2018)
Sludge Norway	average (minimum-maximum)	µg/kg	3 964 (77-11 800)	Fjeld (2005)
Effluent water, Bekkelaget STP, Norway	2017	µg/L	0.08	Ruus *et al.* (2018)
Sludge, Bekkelaget STP, Norway	2017	ng/g dw	2470-2500	Ruus *et al.* (2018)
Australia (Sewage sludge)	2017	ng/g dw	542 - 3645	Brandsma *et al.* (2017)
Swiss sewage sludge from 7 WWTPs	2007 n = 7	ng/g dw	1070 - 8960	Bogdal *et al.* (2015)
Sludge from 10 Swedish STPs of varying size	2004-2010 (single composite samples)	µg/kg d.w.	3800 (median)	Olofsson *et al.* (2012)
UK sewage sludge from 14 WWTPs	Single sample from each WWTP	µg/kg d.w.	30 – 9700 (range) 1800 (mean) 540 (median)	Stevens *et al.* (2003)

Table 23: MCCPs detected in biota

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Mussel	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	3 250			Campbell and McConnell (1980)
Plaice *Pleuronectes platessa*	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	30			Campbell and McConnell (1980)
Pouting *Trisopterus luscus*	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	100			Campbell and McConnell (1980)
Pike *Esox lucius*	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	25			Campbell and McConnell (1980)
Grey Seal *Halichoerus grypus*	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	75 (liver and blubber)			Campbell and McConnell (1980)
Grey Heron *Ardea cinerea*	United Kingdom	Relates to C_{10-20}	µg/kg	100 - 1 200 (liver)			Campbell and McConnell (1980)
Common Guillemot *Uria aalge*	United Kingdom	Relates to C_{10-20}	µg/kg	100 - 1 100 (liver)			Campbell and McConnell (1980)
Herring Gull *Larus argentatus*	United Kingdom	Relates to C_{10-20}	µg/kg	200 – 900 (liver)			Campbell and McConnell (1980)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Seabirds' eggs	United Kingdom	Relates to C_{10-20}	µg/kg	up to 2 000			Campbell and McConnell (1980
Domestic Sheep *Ovis aries*	United Kingdom, remote from industry	Relates to C_{10-20}	µg/kg	not detected in liver, brain kidney, mesenteric fat			Campbell and McConnell (1980)
Domestic Sheep *Ovis aries*	United Kingdom, close to chlorinated paraffin production site	Relates to C_{10-20}	µg/kg	200 (liver); 50 (mesenteric fat); 50 (kidney); not detected in heart, lung or perinephritic fat			Campbell and McConnell (1980)
Mussel	Upstream of CP production site		µg/kg	<7			Murray *et al.* (1987a)
Mussel	Downstream of CP production site		µg/kg	170			Murray *et al.* (1987a)
Mackerel			µg/kg lw	46			Greenpeace (1995)
Herring oil			µg/kg lw	12			Greenpeace (1995)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Common Porpoise *Phocoena phocoena*			µg/kg lw	3 - 7			Greenpeace (1995)
Fin Whale *Balaenoptera physalus*			µg/kg lw	144			Greenpeace (1995)
Rabbit *Oryctolagus cuniculus*	Revingehed, Skåne, Sweden 1986	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	2 900 (muscle)			Jansson *et al.* (1993)
Moose *Alces alces*	Grimsö, Västtmanland, Sweden 1985 - 86	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	4 400 (muscle)			Jansson *et al.* (1993)
Reindeer *Rangifer tarandus*	Ottsjö, Jämtland, Sweden 1986	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	140 (suet)			Jansson *et al.* (1993)
Osprey *Pandion haliaetus*	Sweden, 1982 - 1986	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	530 (muscle)			Jansson *et al.* (1993)
Arctic Char *Salvelinus alpinus*	Lake Vättern, Central Sweden, 1987	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	570 (muscle)			Jansson *et al.* (1993)

Sample	**Location**	**Comment**	**Units**	**Level**	**Dominant homologue (relative abundance %)**	**Associated congener (relative abundance)**	**Reference**
Whitefish *Coregonus spp.*	Lake Storvindeln, Lapland, 1986	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	1 000 (muscle)			Jansson *et al.* (1993)
Herring *Clupea harengus*	Bothnian Sea, Sweden 1986	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	1 400 (muscle)			Jansson *et al.* (1993)
Herring *Clupea harengus*	Baltic proper, Sweden 1987	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	1 500 (muscle)			Jansson *et al.* (1993)
Herring *Clupea harengus*	Skagerrak, Sweden 1987	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	1 600 (muscle)			Jansson *et al.* (1993)
Ringed Seal *Pusa hispida*	Kongsfjorden, Svalbard 1981	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	130 (blubber)			Jansson *et al.* (1993)
Grey Seal *Halichoerus grypus*	Baltic Sea, Sweden 1979 - 85	Unspecified chain length, with 6-16 chlorine atoms/molecule	µg/kg lw	280 (blubber)			Jansson *et al.* (1993)
Benthos	Industrial areas of the United	Highest concentration - tentatively	µg/kg	800			Cefas (1999)

Sample	**Location**	**Comment**	**Units**	**Level**	**Dominant homologue (relative abundance %)**	**Associated congener (relative abundance)**	**Reference**
	Kingdom 1998	identified as MCCPs					
Fish	Industrial areas of the United Kingdom 1998	Highest concentration - tentatively identified as MCCPs	µg/kg	2 800 (pike liver)			Cefas (1999)
Beluga Whale *Delphinapterus leucas*	St. Lawrence River, Canada	Blubber samples from 15 females	µg/kg ww	79 000 (max.)			Bennie *et al.* (2000)
Beluga Whale *Delphinapterus leucas*	St. Lawrence River, Canada	Blubber samples from 10 males	µg/kg ww	80 000 (max.)			Bennie *et al.* (2000)
Beluga Whale *Delphinapterus leucas*	St. Lawrence River, Canada	Liver samples from 3 females	µg/kg ww	20 900 (max.)			Bennie *et al.* (2000)
Beluga Whale *Delphinapterus leucas*	St. Lawrence River, Canada	Liver samples from 3 males	µg/kg ww	5 820 (max.)			Bennie *et al.* (2000)
Carp	Lake Ontario, Canada	Whole body homogenates from 3 individuals	µg/kg ww	563 (max.)			Bennie *et al.* (2000)
Trout	Lake Ontario, Canada	Whole body homogenates from 10 individuals	µg/kg ww	4 390 (max.)			Bennie *et al.* (2000)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Mussel	Close to a chlorinated paraffin manufacturing plant in Australia		µg/kg lw	23 200			Kemmlein *et al.* (2002)
Crabs	Close to a chlorinated paraffin manufacturing plant in Australia		µg/kg lw	30 500			Kemmlein *et al.* (2002)
Lake Trout *Salvelinus namaycush*	Lake Ontario	Archived samples from 1998	µg/kg	25			Ismail *et al.* (2009)
Lake Trout *Salvelinus namaycush*	Lake Ontario	Archived samples from 2004	µg/kg	8			
Diporeia spp.	Lake Ontario	Mean concentration, 2001	µg/kg	12			Muir *et al.* (2002)
Rainbow Smelt *Osmerus mordax*	Lake Ontario	Mean concentration, 2001	µg/kg	109			Muir *et al.* (2002)
Slimy Sculpin *Cottus cognatus*	Lake Ontario	Mean concentration, 2001	µg/kg	108			Muir *et al.* (2002)

Sample	**Location**	**Comment**	**Units**	**Level**	**Dominant homologue (relative abundance %)**	**Associated congener (relative abundance)**	**Reference**
Alewife *Alosa pseudoharengus*	Lake Ontario	Mean concentration, 2001	µg/kg	35			Muir *et al.* (2002)
Lake Trout *Salvelinus namaycush*	Lake Ontario	Mean concentration, 2001	µg/kg	15			Muir *et al.* (2002)
Plankton	Lake Ontario	Mean concentration, 1999 - 2004	µg/kg	not detected			Houde *et al.* (2008)
Plankton	Lake Michigan	Mean concentration, 1999 - 2004	µg/kg	not detected			Houde *et al.* (2008)
Diporeia spp	Lake Ontario	Mean concentration, 1999 - 2004	µg/kg	4.2			Houde *et al.* (2008)
Diporeia spp	Lake Michigan	Mean concentration, 1999 - 2004	µg/kg	not detected			
Mysis spp	Lake Ontario	Mean concentration, 1999 - 2004	µg/kg	not detected			Houde *et al.* (2008)
Mysis spp	Lake Michigan	Mean concentration, 1999 - 2004	µg/kg	not detected			

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Rainbow Smelt *Osmerus mordax*	Lake Ontario	Mean concentration, 1999 - 2004	µg/kg	109			Houde *et al.* (2008)
Rainbow Smelt *Osmerus mordax*	Lake Michigan	Mean concentration, 1999 - 2004	µg/kg	not detected			
Slimy Sculpin *Cottus cognatus*	Lake Ontario	Mean concentration, 1999 - 2004	µg/kg	108			Houde *et al.* (2008)
Slimy Sculpin *Cottus cognatus*	Lake Michigan	Mean concentration, 1999 - 2004	µg/kg	2.9			
Alewife *Alosa pseudoharengus*	Lake Ontario	Mean concentration, 1999 - 2004	µg/kg	35			Houde *et al.* (2008)
Alewife *Alosa pseudoharengus*	Lake Michigan	Mean concentration, 1999 - 2004	µg/kg	5.6			Houde *et al.* (2008)
Lake Trout *Salvelinus namaycush*	Lake Ontario	Mean concentration, 1999 - 2004	µg/kg	24			Houde *et al.* (2008)
Lake Trout *Salvelinus namaycush*	Lake Michigan	Mean concentration, 1999 - 2004	µg/kg	5.6			Houde *et al.* (2008)

Sample	**Location**	**Comment**	**Units**	**Level**	**Dominant homologue (relative abundance %)**	**Associated congener (relative abundance)**	**Reference**
Dab, cod and flounder	North and Baltic Sea	Highest	µg/kg	260 (liver)			Reth *et al.* (2005)
Atlantic Cod *Gadus morhua*	Iceland and Norway	Highest concentration	µg/kg	47 (liver)			Reth *et al.* (2006)
Arctic Char *Salvelinus alpinus*	Bear Island	Highest concentration	µg/kg	43 (liver)			Reth *et al.* (2006)
Arctic Char *Salvelinus alpinus*	Bear Island	Highest concentration	µg/kg	47 (muscle)			Reth *et al.* (2006)
Little Auk *Alle alle*	Bear Island	Highest concentration	µg/kg	370 (liver)			Reth *et al.* (2006)
Little Auk *Alle alle*	Bear Island	Highest concentration	µg/kg	55 (muscle)			Reth *et al.* (2006)
Black-legged Kittiwake *Rissa tridactyla*	Bear Island	Highest concentration	µg/kg	39 (liver)			Reth *et al.* (2006)
Black-legged Kittiwake *Rissa tridactyla*	Bear Island	Highest concentration	µg/kg	38 (muscle)			Reth *et al.* (2006)
"Biota"	Great Lakes Basin	Mean concentration based on an	µg/kg	21			Klečka *et al.* (2010)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
		analysis of published studies					
Finless porpoises *Neophocaena phocaenoides*	Hong Kong, South China	2004 – 2014 (n=50) blubber	µg/kg dw	320 – 8 600	C_{14} (44%) C_{15} (27%) C_{16} (18%) C_{17} (11%)	Cl_{6-8}	Zeng *et al.* (2015)
Indo-Pacific humpback dolphins *Sousa chinensis*	Hong Kong, South China	2004 – 2014 (n=25) blubber	µg/kg dw	530 – 23 000	C_{14} (56%) C_{15} (15%) C_{16} (15%) C_{17} (14%)	Cl_{6-8}	Zeng *et al.* (2015)
Bastard halibut *Paralichthys olivaceus*	Liaodong Bay, North China	2017 (n=5)	ng/g lw	706.5 ± 240.2	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Turbot *Scophthalmus maximus*	Liaodong Bay, North China	2017 (n=1)	ng/g lw	5 097 ± 2 242	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Ray	Liaodong Bay, North China	2017 (n=8)	ng/g lw	109.0 ± 44.6	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Navodon septentrionalis	Liaodong Bay, North China	2017 (n=3)	ng/g lw	375.9 ± 120.2	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Yellow croaker *Larimichthys polyactis*	Liaodong Bay, North China	2017 (n=15)	ng/g lw	55.19 ± 23.73	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Bass	Liaodong Bay, North China	2017 (n=2)120	ng/g lw	24.57 ± 10.31	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Capelin *Mallotus villosus* (O. F. Müller, 1776)	Liaodong Bay, North China	2017 (n=3)	ng/g lw	30.26 ± 11.49	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Spanish Mackerel *Scomberomorus maculatus*	Liaodong Bay, North China	2017 (n=3)	ng/g lw	53.92 ± 22.64	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Abalone *Haliotis asinina*	Liaodong Bay, North China	2017 (n=10)	ng/g lw	63.48 ± 24.75	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Cod	Liaodong Bay, North China	2017 (n=3)	ng/g lw	22.37 ± 9.17	C_{14} (60.7-96.5%) C_{15} (6.7-24.0%)	Cl_{7-9} (90.1%) $C_{14}Cl_7$ and $C_{14}Cl_8$	Huang *et al.* (2017)
Jelly fish	Liaodong Bay, North China	2017 (n=3)	ng/g lw	448.2			Huang *et al.* (2017)
Conch neptunea	Liaodong Bay, North China	2017 (n=10)	ng/g lw	64.97			Huang *et al.* (2017)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Clam	Liaodong Bay, North China	2017 (n=33)	ng/g lw	185.1			Huang *et al.* (2017)
Scallop *Patinopecten yessoensis*	Liaodong Bay, North China	2017 (n=20)	ng/g lw	335.8			Huang *et al.* (2017)
Mantis shrimp *Odontodactylus scyllarus*	Liaodong Bay, North China	2017 (n=12)	ng/g lw	16.72			Huang *et al.* (2017)
Common Barbel *Barbus barbus*	Chéran River (mean) (n=3)	2019	µg/kg lw	7 123	C_{14} (37.8 ± 16.3%) C_{15} (24.8 ± 4.0%) C_{16} (18.7 ± 3.2%) C_{17} (13.4 ± 4.6%)	Cl_{7-9}	Labadie *et al.* (2019)
Common Barbel *Barbus barbus*	Usses River (mean) (n=5)	2019	µg/kg lw	4 615	C_{14} (43.6 ± 8.9%) C_{15} (27.0 ± 4.2%) C_{16} (16.8 ± 4.4%) C_{17} (12.7 ± 2.9%)	Cl_{7-9}	Labadie *et al.* (2019)
Common Barbel *Barbus barbus*	Combeauté River (mean) (n=4)	2019	µg/kg lw	5 423	C_{14} (40.4 ± 4.3%) C_{15} (26.4 ± 2.4%) C_{16} (17.2 ± 3.5%) C_{17} (16.0 ± 6.4%)	Cl_{7-9}	Labadie *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Common Barbel *Barbus barbus*	Rhône River (mean) (n=5)	2019	µg/kg lw	904	C_{14} (51.1 ± 7.1%) C_{15} (27.7 ± 1.3%) C_{16} (12.5 ± 2.6%) C_{17} (8.7 ± 6.0%)	Cl_{7-9}	Labadie *et al.* (2019)
Common Barbel *Barbus barbus*	Morge Canal (mean) (n=5)	2019	µg/kg lw	3 292	C_{14} (46.0 ± 9.7%) C_{15} (23.1 ± 1.3%) C_{16} (17.1 ± 3.6%) C_{17} (13.8 ± 5.5 %)	Cl_{7-9}	Labadie *et al.* (2019)
Earthworms *Lumbricus spp.*	Oslo, Norway	2017	µg/kg ww	Mean: 37 Median: 39 Minimum: 25 Maximum: 46			Heimstad *et al.* (2018)
Fieldfare *Turdus pilaris*	Oslo, Norway	2017, eggs	µg/kg ww	Mean: 21 Median: 7.35 Minimum: 4.70 Maximum: 135			Heimstad *et al.* (2018)
Eurasian Sparrowhawk *Accipter nisus*	Oslo, Norway	2017, eggs	µg/kg ww	Mean: 12.2 Median: <LOD			Heimstad *et al.* (2018)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
				Minimum: <LOD Maximum: 74.0			
Tawny Owl *Strix aluco*	Oslo, Norway	2017, eggs	µg/kg ww	Mean: <LOD Median: <LOD Minimum: <LOD Maximum: <LOD			Heimstad *et al.* (2018)
Rat *Rattus norvegicus*	Oslo, Norway	2017, liver	µg/kg ww	Mean: 183 Median: 177 Minimum: 81.0 Maximum: 327			Heimstad *et al.* (2018)
Red Fox *Vulpes vulpes*	Oslo, Norway	2017, liver	µg/kg ww	Mean: 68.1 Median: 61 Minimum: 23 Maximum: 130			Heimstad *et al.* (2018)
Badger *Meles meles*	Oslo, Norway	2017, liver	µg/kg ww	Mean: 43 Median: 41			Heimstad *et al.* (2018)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
				Minimum: 37 Maximum: 51			
Blue Mussel *Mytilus edulis*	Gressholmen, Inner Oslofjord, Norway	2017 and 2018	µg/kg ww	2017 Median: 11.9 2018 Median: 2.81			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Færder, Outer Oslofjord, Norway	2017 and 2018	µg/kg ww	2017 Median: 9.89 2018 Median: 34.4			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Singlekalven, Hvaler, Norway	2017 and 2018	µg/kg ww	2017 Median: 5.82 2018 Median: 7.21			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Bjørkøya, Langesund-fjord, Norway	2017 and 2018	µg/kg ww	2017 Median: 22.7 2018 No samples			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Sylterøya, Langesund-fjord, Norway	2017 and 2018	µg/kg ww	2017 Median: 10.5 2018 Median: 42.4			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Nordnes, Bergen harbour, Norway	2017 and 2018	µg/kg ww	2017 Median: 44.9 2018 Median: 87.1			Green *et al.* (2018) and Green *et al.*, (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Blue Mussel *Mytilus edulis*	Vågsvåg, Outer Nordfjord, Norway	2017 and 2018	µg/kg ww	2017 Median: 27.3 2018 Median: 11.5			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Ålesund harbour, Norway	2017 and 2018	µg/kg ww	2017 Median: 41.6 2018 Median: 21.7			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Ørland area, Outer Trondheims-fjord, Norway	2017 and 2018	µg/kg ww	2017 Median: 4.46 2018 Median: 28.1			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Bodø harbour, Norway	2017 and 2018	µg/kg ww	2017 Median: 52.4 2018 Median: 170.0			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Mjelle, Bodø area, Norway	2017 and 2018	µg/kg ww	2017 Median: 17.3 2018 Median: 7.61			Green *et al.* (2018) and Green *et al.*, (2019)
Blue Mussel *Mytilus edulis*	Svolvær airport area, Norway	2017 and 2018	µg/kg ww	2017 Median: 22.2 2018 Median: 53.1			Green *et al.* (2018) and Green *et al.*, (2019)
Atlantic Cod *Gadus morhua*	Inner Oslofjord, Norway	2017, liver	µg/kg ww	2017 Median: 498.0 2018 Median: 105.5			Green *et al.* (2018) and Green *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Atlantic Cod *Gadus morhua*	Tjøme, Outer Oslofjord, Norway	2017, liver	µg/kg ww	2017 Median: 35.15 2018 Median: 65.9			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Kirkøy, Hvaler, Norway	2017, liver	µg/kg ww	2017 Median: 77.2 2018 Median: 60.95			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Stathelle area, Langesund-fjord, Norway	2017, liver	µg/kg ww	2017 Median: 143.0 2018 Median: 108.0			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Kristiansand harbour area, Norway	2017, liver	µg/kg ww	2017 Median: 226.5 2018 Median: 77.8			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Inner Sørfjord, Norway	2017, liver	µg/kg ww	2017 Median: 100.0 2018 Median: 99.6			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Bømlo, Outer Selbjørnfjord, Norway	2017, liver	µg/kg ww	2017 Median: 74.6 2018 Median: 69.5			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Bergen harbour area, Norway	2017, liver	µg/kg ww	2017 Median: 310.0 2018 Median: 80.8			Green *et al.* (2018) and Green *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Atlantic Cod *Gadus morhua*	Ålesund harbour area, Norway	2017, liver	µg/kg ww	2017 Median: 842.0 2018 Median: 114.0			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Trondheim harbour, Norway	2017, liver	µg/kg ww	2017 Median: 102.0 2018 Median: 107.0			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Austnesfjord, Lofoten, Norway	2017, liver	µg/kg ww	2017 Median: 71.6 2018 Median: 124.5			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Tromsø harbour area, Norway	2017, liver	µg/kg ww	2017 Median: 123.0 2018 Median: 77.0			Green *et al.* (2018) and Green *et al.* (2019)
Atlantic Cod *Gadus morhua*	Isfjorden, Svalbard, Norway	2017, liver	µg/kg ww	2017 Median: 35.4 2018 Median: 56.6			Green *et al.* (2018) and Green *et al.* (2019)
Common Eider *Somateria mollissima*	Breøyane, Kongsfjorden, Svalbard, Norway	2017 and 2018 Blood	µg/kg ww	2017 Median: 2.5 2018 Median: 34.6			Green *et al.* (2018) and Green *et al.* (2019)
Common Eider *Somateria mollissima*	Breøyane, Kongsfjorden, Svalbard, Norway	2017 and 2018 Egg	µg/kg ww	2017 Median: 8.6 2018 Median: 14.0			Green *et al.* (2018) and Green *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Herring *Clupea harengus*	Scandinavia	2011, female 4–6 years, muscle (n=12)	µg/kg lw	44	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Herring *Clupea harengus*	Scandinavia	2014, female 4–5 years, muscle (n=12)	µg/kg lw	30	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Herring *Clupea harengus*	Scandinavia	2017, female 3–5 years, muscle (n=13)	µg/kg lw	51	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-7}	Yuan *et al.* (2019)
Herring *Clupea harengus*	Scandinavia	2014, female and male 7 – 13 years, liver (n=38)	µg/kg lw	140	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Herring *Clupea harengus*	Scandinavia	2014 female and male, 7–13 years, muscle (n=40)	µg/kg lw	120	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Herring *Clupea harengus*	Scandinavia	2016 female and male, 6 – 12 years, liver (n=38)	µg/kg lw	170	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Herring *Clupea harengus*	Scandinavia	2016, female and male 6 – 12 years, muscle (n=40)	µg/kg lw	140	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Common Eider *Somateria mollissima*	Scandinavia	2015, female adults, liver (n=5)	µg/kg lw	440	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Common Eider	Scandinavia	2015, egg (n=5)	µg/kg lw	140	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-7}	Yuan *et al.* (2019)

Sample	**Location**	**Comment**	**Units**	**Level**	**Dominant homologue (relative abundance %)**	**Associated congener (relative abundance)**	**Reference**
Somateria mollissima							
Common Eider *Somateria mollissima*	Scandinavia	2015, female adults, liver (n=5)	µg/kg lw	290	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Common Eider *Somateria mollissima*	Scandinavia	2015, egg (n=5)	µg/kg lw	200	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-7}	Yuan *et al.* (2019)
Common Guillemot *Uria aalge*	Scandinavia	2016, egg	µg/kg lw	58-67	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-5}	Yuan *et al.* (2019)
White-tailed Sea-eagle *Haliaeetus albicilla*	Scandinavia	2015, egg	µg/kg lw	140-250	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-6}	Yuan *et al.* (2019)
Grey Seal *Halichoerus grypus*	Scandinavia	2006 – 2008, males juveniles (0 – 1 year)	µg/kg lw	210 (liver)	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Grey Seal *Halichoerus grypus*	Scandinavia	2006 – 2008, males juveniles (0 – 1 year)	µg/kg lw	83 (blubber)	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Grey Seal	Scandinavia	2009 – 2010, males adults (8 – 11 year)	µg/kg lw	230 (liver)	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-7}	Yuan *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Halichoerus grypus							
Grey Seal *Halichoerus grypus*	Scandinavia	2009 – 2010, males adults (8 – 11 year)	µg/kg lw	32 (blubber)	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Grey Seal *Halichoerus grypus*	Scandinavia	2014 – 2015, juveniles	µg/kg lw	540 (liver)	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Harbour Seal *Phoca vitulina*	Scandinavia	2014 – 2015, juveniles, blubber	µg/kg lw	100	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Harbour Seal *Phoca vitulina*	Scandinavia	2012 – 2016, adults	µg/kg lw	230 (liver)	$C_{14} > C_{15} > C_{16} > C_{17}$	$Cl_{5\text{-}7}$	Yuan *et al.* (2019)
Harbour Seal *Phoca vitulina*	Scandinavia		µg/kg lw	64 (blubber)	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Harbour Seal *Phoca vitulina*	Scandinavia	2006 – 2012, 3 females and 1 male adults, liver	µg/kg lw	140 (liver)	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Harbour Porpoise *Phocoena phocoena*	Scandinavia	2006 – 2012, 3 females and 1 male adults	µg/kg lw	36 (blubber)	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Harbour Porpoise	Scandinavia	2008, 1 female and 1 male	µg/kg lw	440 (liver)	$C_{14} > C_{15} > C_{16} > C_{17}$	$Cl_{4\text{-}8}$	Yuan *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Phocoena phocoena		adults					
Harbour Porpoise *Phocoena phocoena*	Scandinavia	2008, 1 female and 1 male adults	µg/kg lw	59 (blubber)	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{7-8}	Yuan *et al.* (2019)
Moose *Alces alces*	Scandinavia	2012 – 2015, female and male adults, muscle	µg/kg lw	1 600	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-7}	Yuan *et al.* (2019)
Bank Vole *Myodes glareolus*	Scandinavia	2014, female and male adults, muscle	µg/kg lw	370	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-7}	Yuan *et al.* (2019)
Eurasian Lynx *Lynx lynx*	Scandinavia	2012 – 2016 female and male adults, muscle	µg/kg lw	750	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-7}	Yuan *et al.* (2019)
Grey Wolf *Canis lupus*	Scandinavia	2012 – 2016 female and male adults, muscle	µg/kg lw	830	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-7}	Yuan *et al.* (2019)
Starling *Sturnus vulgaris*	Scandinavia	2012 – 2015, female and male fledglings, muscle	µg/kg lw	310	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Common Kestrel *Falco tinnunculus*	Scandinavia	2014, egg	µg/kg lw	85	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-7}	Yuan *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Tawny Owl *Strix aluco*	Scandinavia	2014, egg	µg/kg lw	87	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Eagle Owl *Bubo bubo*	Scandinavia	2013 – 2017, female and male adults, muscle	µg/kg lw	720	$C_{14} > C_{15} > C_{16} > C_{17}$	$Cl_{5\text{-}8}$	Yuan *et al.* (2019)
Marsh Harrier *Circus aeruginosus*	Scandinavia	2012 – 2015 female and male adults, muscle	µg/kg lw	180	$C_{14} > C_{15} > C_{16} > C_{17}$	$Cl_{5\text{-}8}$	Yuan *et al.* (2019)
Golden Eagle *Aquila chrysaetos*	Scandinavia	2012 – 2016 female and male adults, muscle	µg/kg lw	360	$C_{14} > C_{15} > C_{16} > C_{17}$		Yuan *et al.* (2019)
Peregrine Falcon *Falco peregrinus*	Scandinavia	2012 – 2016 female and male adults, muscle	µg/kg lw	410	$C_{14} > C_{15} > C_{16} > C_{17}$	$Cl_{8\text{-}10}$	Yuan *et al.* (2019)
Pond Loach *Misgurnus anguillicaudatus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	2 500 (1 400 – 2 600)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Pond Loach *Misgurnus anguillicaudatus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg dw	270 (170 – 430)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%)	Du *et al.* (2018)/Zhou *et al.* (2016)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
						Cl_5 (20.8%)	
Rice Field Eel *Monopterus albus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	2 600 (820 – 3 700)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Rice Field Eel *Monopterus albus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg dw	140 (50 – 270)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Red-backed Rat Snake *Elaphe rufodorsata*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	3 800 (2 100 – 7 900)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Red-backed Rat Snake *Elaphe rufodorsata*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg dw	170 (100 – 330)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Red-banded Snake *Dinodon rufozonatum*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	13 000	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Red-banded Snake *Dinodon rufozonatum*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg dw	570	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Short-tailed Mamushi *Gloydius brevicaudus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	17 000 (7 400 – 19 000)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 56.6-57.5% Cl wt. (Cl_{7-8}) Cl_7 (25.7%) Cl_8 (22.5%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Short-tailed Mamushi *Gloydius brevicaudus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg dw	990 (450 – 1 300)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 56.6-57.5% Cl wt. (Cl_{7-8}) Cl_7 (25.7%) Cl_8 (22.5%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Yellow Weasel *Mustela sibirica*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	12 000 (6 700 – 33 000)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 56.6-57.5% Cl wt. (Cl_{7-8}) Cl_7 (25.7%) Cl_8 (22.5%)	Du *et al.* (2018)/Zhou *et al.* (2016)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Yellow Weasel *Mustela sibirica*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg dw	990 (640 – 2 900)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 56.6-57.5% Cl wt. (Cl_{7-8}) Cl_7 (25.7%) Cl_8 (22.5%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Peregrine Falcon *Falco peregrinus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	2 100 (1 300 – 29 000)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Peregrine Falcon *Falco peregrinus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg dw	260 (190 – 4 700)	C_{14} (43.8%) C_{15} (25.7%) C_{16} (18.2%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Collared Scops-owl *Otus lettia*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	270 (96 – 440)	C_{14} (64.4%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Collared Scops-owl *Otus lettia*	Paddy fields in the Yangtze	(Sampling date not specified)	µg/kg dw	74 (39 – 110)	C_{14} (64.4%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%)	Du *et al.* (2018)/Zhou *et al.* (2016)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
	River Delta, China	(Sampling date not specified) Median (min-max)				Cl_7 (22.1%) Cl_5 (20.8%)	
Common Cuckoo *Cuculus canorus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg lw	200 (<170 – 1 400)	C_{14} (64.4%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Common Cuckoo *Cuculus canorus*	Paddy fields in the Yangtze River Delta, China	(Sampling date not specified) Median (min-max)	µg/kg dw	25 (<12 – 92)	C_{14} (64.4%)	Average chlorination level 51.0 - 53% Cl wt. (Cl_6) Cl_6 (25.9%) Cl_7 (22.1%) Cl_5 (20.8%)	Du *et al.* (2018)/Zhou *et al.* (2016)
Fish (no further information provided)	Bohai Bay, China	n=5 Range	µg/kg dw	42.1 – 5 307	C_{14} (88.5 – 91.9%) C_{15} (5.6 – 9.7%) C_{16} (1.5 – 3.4%) C_{17} (0.7 – 1.0%)	Cl_{7-8}	Xia *et al.* (2016)
Polychaetes spp.	Inner Oslofjord	3 pooled samples (whole individuals)	µg/kg ww	Average: 12			Ruus *et al.* (2018)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Blue Mussel *Mytilus edulis*	Inner Oslofjord	3 pooled samples (soft tissue)	µg/kg ww	Average: 10			Ruus *et al.* (2018)
Krill *Euphausiacea spp.*	Inner Oslofjord	3 pooled samples (whole individuals)	µg/kg ww	60			Ruus *et al.* (2018)
Prawn *Pandalus borealis*	Inner Oslofjord	3 pooled samples (tail soft tissue)	µg/kg ww	2			Ruus *et al.* (2018)
Herring *Clupea harengus*	Inner Oslofjord	3 pooled samples (muscle)	µg/kg ww	Average: 17			Ruus *et al.* (2018)
Atlantic Cod *Gadus morhua*	Inner Oslofjord	Liver (detected in all 15 samples)	µg/kg ww	Arithmetic mean 216 (range: 51-1050)			Ruus *et al.* (2018)
Herring Gull *Larus argentatus*	Inner Oslofjord	Blood (detected in all 15 samples)	µg/kg ww	Arithmetic mean 28.23 (range: 8.2-76)			Ruus *et al.* (2018)/ Knudzton (2021)
Herring Gull	Outer Oslofjord	Blood (detected in all 15 samples)	µg/kg ww	Arithmetic mean 38.87 (range: 5.8-200)			Ruus *et al.* (2018)/ Knudzton (2021)
Larus argentatus	Inner Oslofjord	Egg (detected in all 15 samples)	µg/kg ww	Arithmetic mean 29.14 (range: 6.1-68)			Ruus *et al.* (2018)/ Knudzton (2021)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Herring Gull	Outer Oslofjord	Egg (detected in all 15 samples)	µg/kg ww	Arithmetic mean 69.58 (range: 3.1-630)			Ruus *et al.* (2018)/ Knudzton (2021)
Chinese Pond Heron *Ardeola bacchus*	Paddy fields, Yangtze River Delta	Muscle (n=3)	ng/g lw	830, 5 000, 9 300			Zhou *et al.* (2016)
Peregrine Falcon *Falco peregrinus*	Paddy fields, Yangtze River Delta	Muscle (n=3)	ng/g lw	8 000, 130 000, 59 000			Zhou *et al.* (2016)
Short-tailed mamushi snake *Gloydius brevicaudus*	Paddy fields, Yangtze River Delta	Muscle (n=3)	ng/g lw	340 000, 220 000, 200 000			Zhou *et al.* (2016)
Asiatic toad *Bufo gargarizans*	Paddy fields, Yangtze River Delta	Pooled muscle (n=8)	ng/g lw	970 000			Zhou *et al.* (2016)
Dark-spotted frog *Pelophylax nigromaculatus*	Paddy fields, Yangtze River Delta	Pooled muscle (n=5)	ng/g lw	n.d.			Zhou *et al.* (2016)
Rice field eel *Monopterus albus*	Paddy fields, Yangtze River Delta	Pooled muscle (n=5)	ng/g lw	7 000			Zhou *et al.* (2016)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Black-spotted frog *Pelophylax nigromaculatus*	Paddy fields, Yangtze River Delta	Pooled liver - female (n=12)	ng/g ww	Mean 69 (range: 190-910)	C_{14} (63.9%) > C_{15} (19.0%)	Cl_5 (31.9%) > Cl_6 (25.8%) > Cl_4 (15.4%)	Du *et al.* (2019)
Black-spotted frog *Pelophylax nigromaculatus*	Paddy fields, Yangtze River Delta	Pooled liver - male (n=12)	ng/g ww	Mean 68 (range: 5.5-180)	C_{14} (63.9%) > C_{15} (19.0%)	Cl_5 (31.9%) > Cl_6 (25.8%) > Cl_4 (15.4%)	Du *et al.* (2019)
Black-spotted frog *Pelophylax nigromaculatus*	Paddy fields, Yangtze River Delta	Pooled egg (n=12)	ng/g ww	Mean 16 (range: < LOQ - 52)	C_{14} (63.9%) > C_{15} (19.0%)	Cl_5 (31.9%) > Cl_6 (25.8%) > Cl_4 (15.4%)	Du *et al.* (2019)
Black-spotted frog *Pelophylax nigromaculatus*	Paddy fields, Yangtze River Delta	Pooled muscle - female (n=3)	ng/g ww	Mean 5 (range: 2 - 8)	C_{14} (63.9%) > C_{15} (19.0%)	Cl_5 (31.9%) > Cl_6 (25.8%) > Cl_4 (15.4%)	Du *et al.* (2019)
Black-spotted frog *Pelophylax nigromaculatus*	Paddy fields, Yangtze River Delta	Pooled muscle - male (n=3)	ng/g ww	Range: 25 - 50	C_{14} (63.9%) > C_{15} (19.0%)	Cl_5 (31.9%) > Cl_6 (25.8%) > Cl_4 (15.4%)	Du *et al.* (2019)
Short-tailed mamushi snake *Gloydius brevicaudus*	Paddy fields, Yangtze River Delta	Pooled liver (n=7)	ng/g lw	mean ± sd (min-max) 1 800 ± 1 800 (<LOQ-5 100)	Average total tissues C_{14} (54%) > C_{15} (22%) Average liver only C_{14} (69%)	54.0±0.7% Cl wt. (mean)	Du *et al.* (2020)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Short-tailed mamushi snake *Gloydius brevicaudus*	Paddy fields, Yangtze River Delta	Pooled muscle (n=7)	ng/g lw	mean ± sd (min-max) 14 000 ± 5 700 (7 400 – 220 000)	Average total tissues C_{14} (54%) > C_{15} (22%) Average muscle + adipose C_{14} (46%)	57.0±0.2% Cl wt. (mean) Cl_7 (25%) > Cl_8 (22%)	Du *et al.* (2020)
Short-tailed mamushi snake *Gloydius brevicaudus*	Paddy fields, Yangtze River Delta	Pooled adipose (n=7)	ng/g lw	mean ± sd (min-max) 170 ± 110 (44-290)	Average total tissues C_{14} (54%) > C_{15} (22%) Average muscle + adipose C_{14} (46%)	54.7±0.9% Cl wt. (mean) Cl_7 (25%) > Cl_8 (22%)	Du *et al.* (2020)
Red-backed rat snake *Elaphe rufodorsata*	Paddy fields, Yangtze River Delta	Pooled liver (n=9)	ng/g lw	mean ± sd (min-max) 1 500 ± 970 (<LOQ – 3 500)	Average total tissues C_{14} (54%) > C_{15} (22%) Average liver only C_{14} (69%)	53.1±0.4% Cl wt. (mean) Cl_5 (32%)	Du *et al.* (2020)
Red-backed rat snake *Elaphe rufodorsata*	Paddy fields, Yangtze River Delta	Pooled muscle (n=9)	ng/g lw	mean ± sd (min-max) 5 500 ± 3 500 (3 100 – 11 000)	Average total tissues C_{14} (54%) > C_{15} (22%) Average muscle + adipose C_{14} (46%)	52.3±0.4% Cl wt. (mean) Cl_6 (28%)	Du *et al.* (2020)
Red-backed rat snake *Elaphe rufodorsata*	Paddy fields, Yangtze River Delta	Pooled adipose (n=9)	ng/g lw	mean ± sd (min-max) 230 ± 420 (<LOQ-1 300)	Average total tissues C_{14} (54%) > C_{15} (22%) Average muscle + adipose C_{14} (46%)	54.4±1.4% Cl wt. (mean)	Du *et al.* (2020)
Snake-head fish *Channa argus*	Dianshan Lake,	Whole muscle (n=1)	ng/g lw	500			Zhou *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
	Yangtze River Delta						
Bigmouth Grenadier Anchovy. *Coilia ectenes*	Dianshan Lake, Yangtze River Delta	Pooled Muscle (n=40)	ng/g lw	mean (min-max) 360 (270-440)			Zhou *et al.* (2019)
Yellow catfish *Pelteobagrus fulvidraco*	Dianshan Lake, Yangtze River Delta	Whole muscle (n=1)	ng/g lw	mean (min-max) 1 800 (760-2 800)			Zhou *et al.* (2019)
Grass carp *Ctenopharyngo-don idella*	Dianshan Lake, Yangtze River Delta	Whole muscle (n=1)	ng/g lw	340			Zhou *et al.* (2019)
Crucian carp *Carassius auratus*	Dianshan Lake, Yangtze River Delta	Whole muscle (n=1)	ng/g lw	1 200			Zhou *et al.* (2019)
Predatory carp *Erythroculter ilishaeformis*	Dianshan Lake, Yangtze River Delta	Whole muscle (n=2)	ng/g lw	mean (min-max) 1 900 (610-3 100)			Zhou *et al.* (2019)
Common carp *Cyprinius carpio*	Dianshan Lake, Yangtze River Delta	Whole muscle (n=1)	ng/g lw	2 000			Zhou *et al.* (2019)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Freshwater snail *Bellamya aeruginosa*	Dianshan Lake, Yangtze River Delta	Pooled soft tissue (n=150)	ng/g lw	mean (min-max) 3 000 (210-5 500)			Zhou *et al.* (2019)
Freshwater mussel/clam *Corbicula aurea Heude*	Dianshan Lake, Yangtze River Delta	Pooled soft tissue (n=100)	ng/g lw	mean (min-max) 1 500 (770-2 200)			Zhou *et al.* (2019)
Chinese pond heron *Ardeola bacchus*	Paddy fields, Yangtze River Deltav	Pectoral muscle (n=5)	ng/g lw	mean (min-max) 1 500 (290-4 600)			Zhou *et al.* (2019)
Chicken Egg *Gallus gallus domesticus*	Paddy fields, Yangtze River Delta	Egg (n=1)	ng/g lw	370			Zhou *et al.* (2019)
Duck Egg *Anas platyrhynchos*	Paddy fields, Yangtze River Delta	Egg (n=1)	ng/g lw	120			Zhou *et al.* (2019)
Mantis *Tenodera sinensis*	Longtang Town, Guangdong Province	Whole body pooled (n=28)	ng/g lw	mean (min-max) 5 100 (1 500-7 700)	C_{14} (34-48%)	Cl_{7-9} (60-71%)	Liu *et al.* (2020)
Dragonfly larvae (ditch)	Longtang Town,	Whole body pooled (n=80)	ng/g lw	mean (min-max)	C_{14} (34-48%)	Cl_{7-9} (60-71%)	Liu *et al.* (2020)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
	Guangdong Province			1 100 (950-3 200)			
Dragonfly larvae (pond)	Longtang Town, Guangdong Province	Whole body pooled (n=250)	ng/g lw	mean (min-max) 7 500 (2 000-19 000)	C_{14} (34-48%)	Cl_{7-9} (60-71%)	Liu *et al.* (2020)
Dragonfly 1 *Aeshnidae rambur*	Longtang Town, Guangdong Province	Whole body pooled (n=65)	ng/g lw	mean (min-max) 5 500 (3 600-8 800)	C_{14} (34-48%)	Cl_{7-9} (60-71%)	Liu *et al.* (2020)
Dragonfly 2 *Libellilidae rambur*	Longtang Town, Guangdong Province	Whole body pooled (n=100)	ng/g lw	mean (min-max) 19 000 (14 000-27 000)	C_{14} (34-48%)	Cl_{7-9} (60-71%)	Liu *et al.* (2020)
Grasshopper larvae *Oxya chinensis*	Longtang Town, Guangdong Province	Whole body pooled (n=95)	ng/g lw	mean (min-max) 6 000 (4 000-6 600)	C_{14} (34-48%)	Cl_{7-9} (60-71%)	Liu *et al.* (2020)
Grasshopper *Oxya chinensis*	Longtang Town, Guangdong Province	Whole body pooled (n=78)	ng/g lw	mean (min-max) 6 500 (6 000-8 400)	C_{14} (34-48%)	Cl_{7-9} (60-71%)	Liu *et al.* (2020)
Cricket	Longtang Town,	Whole body pooled (n=55)	ng/g lw	mean (min-max)	C_{14} (34-48%)	Cl_{7-9} (60-71%)	Liu *et al.* (2020)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Gryllulus chinensis	Guangdong Province			3 600 (1 600-4 600)			
Mole cricket *Grylltopia orientalis*	Longtang Town, Guangdong Province	Whole body pooled (n=63)	ng/g lw	mean (min-max) 3 200 (2 600-5 400)	C_{14} (34-48%)	$Cl_{7\text{-}9}$ (60-71%)	Liu *et al.* (2020)
Beetle *Anomola corpulenta*	Longtang Town, Guangdong Province	Whole body pooled (n=63)	ng/g lw	mean (min-max) 990 (110-1 100)	C_{14} (34-48%)	$Cl_{7\text{-}9}$ (60-71%)	Liu *et al.* (2020)
Long-tailed shrike *Lanius schach*	Longtang Town, Guangdong Province	Muscle (n=2)	ng/g lw	mean (min-max) 2 000, 3 000			Liu *et al.* (2020)
Eurasian blackbird *Turdus merula*	Longtang Town, Guangdong Province	Muscle (n=1)	ng/g lw	mean (min-max) 13 000			Liu *et al.* (2020)
Oriental magpie robin *Copsychus saularis*	Longtang Town, Guangdong Province	Muscle (n=3)	ng/g lw	mean (min-max) 18 000 (10 000-33 000)			Liu *et al.* (2020)
Oriental garden lizard	Longtang Town,	Muscle (n=9)	ng/g lw	mean (min-max)			Liu *et al.* (2020)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Calotes versicolor	Guangdong Province			9 100 (5 400-21 000)			
Asian painted frog *Kaloula pulchra*	Longtang Town, Guangdong Province	Muscle (n=9)	ng/g lw	mean (min-max) 9 300 (4 600-17 000)			Liu *et al.* (2020)
Black spectacled toad *Duttaphyrynus elanostictus*	Longtang Town, Guangdong Province	Muscle (n=6)	ng/g lw	mean (min-max) 7 200 (5 300-11 000)			Liu *et al.* (2020)
Tadpole frog and toad	Longtang Town, Guangdong Province	Whole body pooled (n=60)	ng/g lw	mean (min-max) 20 000 (19 000-22 000)			Liu *et al.* (2020)
Grass Leaves *Gramineae spp*	Longtang Town, Guangdong Province	n=3	ng/g dw	mean (min-max) 450 (430-600)			Liu *et al.* (2020)
Guava Leaves *Psidium guajava*	Longtang Town, Guangdong Province	n=3	ng/g dw	mean (min-max) 420 (380-650)			Liu *et al.* (2020)
Soil (corn- and paddy fields)	Longtang Town,	n=6	ng/g dw	mean (min-max) 220 (57-390)			Liu *et al.* (2020)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
	Guangdong Province						
Common reed *Phragmites australis*	Constructed wetland eco-system, Beijing Olympic Forest Park	Emergent plant	ng/g dw	235-435			Wang *et al.* (2021)
Common reed *Phragmites australis* Manchurian wild rice *Zizania latifola* *Acorus calamus Linn.* Soft-stem bulrush *Scirpus validus* *Lythrum salicaria Linn.* Pygmy water lily *Nymphaea tetragona* Common duckweed *Lemna minor* Green algae	Constructed wetland eco-system, Beijing Olympic Forest Park	Emergent, Submerged and Floating plant	ng/g dw	mean ± sd (min-max) 289 ± 148 (21 - 785)			Wang *et al.* (2021)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Enteromorpha prolifera, O.F.Müller Water-shield *Brasenia schreberi,* J.F.Gmel. Water thyme *Hydrilla verticillata* *Vallisneria natans* (Lour.) Hara							
Southern Hemisphere Humpback Whale *Megaptera novaeangliae*	Western and Eastern Australian Coast	Blubber samples (n=9 individuals; 2 g)	ng	> 33 ng (absolute mass)			Casa *et al.* (2019)
Broad-banded Cardinalfish *Apogon fasciatus*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	3 800	C_{14} (41%) C_{15} (28%) C_{16} (19%) C_{17} (11%)	Cl_{6}-7	Zeng *et al.* (2017)
Chinese gizzard shad	South China Sea	Pool (n=13)	ng/g lw	mean ± sd 1 960 ± 677	C_{14} (50-54%) C_{15} (18-22%)	$C_{14}Cl_{6-7}$ $C_{15-17}Cl_{5-6}$	Zeng *et al.* (2017)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Clupanodon thrissa					C_{16} (15-19%) C_{17} (8-12%)		
Large-scale tonguesole *Cynoglossus arel*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	810	C_{14} (43%) C_{15} (20%) C_{16} (20%) C_{17} (18%)		Zeng *et al.* (2017)
Goatee croaker *Dendrophysa russelii*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	2 090	C_{14} (44%) C_{15} (18%) C_{16} (22%) C_{17} (15%)		Zeng *et al.* (2017)
Crimson sea-bream *Evynnis cardinali*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	1 000	C_{14} (38%) C_{15} (18%) C_{16} (23%) C_{17} (21%)		Zeng *et al.* (2017)
Japanese flathead *Inegocia japonica*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	2 590	C_{14} (43%) C_{15} (26%) C_{16} (19%) C_{17} (12%)		Zeng *et al.* (2017)
Large-scale croaker	South China Sea	Pool (n=4)	ng/g lw	mean ± sd 1 660 ± 561	C_{14} (39-41%) C_{15} (18-21%)	Cl_{5-6}	Zeng *et al.* (2017)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Johnius heterolepis					C_{16} (24-27%) C_{17} (14-16%)		
Shortnose ponyfish *Leiognathus brevirostris*	South China Sea	Pool (n=6)	ng/g lw	mean ± sd 1 540 ± 630	C_{14} (43-46%) C_{15} (21-24%) C_{16} (18-21%) C_{17} (12-16%)	Cl_{5-6}	Zeng *et al.* (2017)
Red big-eye *Priacanthus macracanthus*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	1 230	C_{14} (35%) C_{15} (21%) C_{16} (23%) C_{17} (21%)		Zeng *et al.* (2017)
Silver croaker *Pennahia argentata*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	1 260	C_{14} (42%) C_{15} (22%) C_{16} (22%) C_{17} (13%)		Zeng *et al.* (2017)
Black-spotted threadfin *Polydactylus sextarius*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	1 470	C_{14} (40%) C_{15} (23%) C_{16} (22%) C_{17} (15%)		Zeng *et al.* (2017)
Bartail flathead	South China Sea	Pool	ng/g lw	2 370	C_{14} (40%) C_{15} (22%)		Zeng *et al.* (2017)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Platycephalus indicus		(n=3-10 individuals)			C_{16} (20%) C_{17} (18%)		
Richard's dragonet *Repomucenus richardsonii*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	1 320	C_{14} (40%) C_{15} (26%) C_{16} (21%) C_{17} (13%)		Zeng *et al.* (2017)
White-spotted spinefoot *Signaus canaliculatus*	South China Sea	Pool (n=7)	ng/g lw	mean ± sd 2 040 ± 1 320	C_{14} (40-43%) C_{15} (21-25%) C_{16} (21-24%) C_{17} (12-16%)		Zeng *et al.* (2017)
Ovate sole *Solea ovata*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	1 320	C_{14} (41%) C_{15} (18%) C_{16} (25%) C_{17} (16%)		Zeng *et al.* (2017)
Redy goby fish *Trypaucehn vagina*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	1 480	C_{14} (43%) C_{15} (22%) C_{16} (23%) C_{17} (11%)		Zeng *et al.* (2017)
Squillid mantis shrimp	South China Sea	Pool (n=4)	ng/g lw	mean ± sd 975 ± 330	C_{14} (43-46%) C_{15} (22-24%)	Cl_{5-6}	Zeng *et al.* (2017)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Harpiosquilla harpax					C_{16} (16-17%) C_{17} (14-16%)		
Jinga shrimp *Metapenaeus affinis*	South China Sea	Pool (n=5)	ng/g lw	mean ± sd 503 ± 272	C_{14} (39-41%) C_{15} (22-24%) C_{16} (22-23%) C_{17} (14-15%)		Zeng *et al.* (2017)
Small-eyed squillid mantis shrimp *Miyakea nepa*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	471	C_{14} (41%) C_{15} (19%) C_{16} (28%) C_{17} (12%)		Zeng *et al.* (2017)
Greasyback shrimp *Meapenaeus ensis*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	525	C_{14} (40%) C_{15} (18%) C_{16} (29%) C_{17} (13%)		Zeng *et al.* (2017)
Three-spotted crab *Portunus sanguinolentus*	South China Sea	Pool (n=5)	ng/g lw	mean ± sd 496 ± 151	C_{14} (40-42%) C_{15} (21-23%) C_{16} (24-27%) C_{17} (12-14%)		Zeng *et al.* (2017)
Blue swimmer crab	South China Sea	Pool	ng/g lw	855	C_{14} (47%) C_{15} (23%)		Zeng *et al.* (2017)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Portunus pelagicus		(n=3-10 individuals)			C_{16} (15%) C_{17} (15%)		
Swimming crab *Portunus trituberculatus*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	392	C_{14} (50%) C_{15} (18%) C_{16} (20%) C_{17} (12%)		Zeng *et al.* (2017)
Rusty ark *Anadara ferruginea*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	596	C_{14} (39%) C_{15} (23%) C_{16} (15%) C_{17} (15%)		Zeng *et al.* (2017)
Common frog shell *Bufonaria rana*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	754	C_{14} (41%) C_{15} (22%) C_{16} (23%) C_{17} (14%)		Zeng *et al.* (2017)
Rare-spined murex *Murex trapa*	South China Sea	Pool (n=3-10 individuals)	ng/g lw	563	C_{14} (40%) C_{15} (18%) C_{16} (27%) C_{17} (15%)	Cl_{5-6}	Zeng *et al.* (2017)
Turreted sea snail	South China Sea	Pool	ng/g lw	515	C_{14} (44%) C_{15} (16%)		Zeng *et al.* (2017)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Turritella bacillum		(n=3-10 individuals)			C_{16} (22%) C_{17} (18%)		
Black tailed gulls *Larus marinus*	Baekryeong-do Korea & China	2012 Egg (n=5)	ng/g lw	1 287	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus marinus*	Baekryeong-do Korea & China	2013 Egg (n=5)	ng/g lw	1 629	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus marinus*	Baekryeong-do Korea & China	2014 Egg (n=5)	ng/g lw	2 676	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus crassirostris*	Baekryeong-do Korea & China	2015 Egg (n=5)	ng/g lw	2 698	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus crassirostris*	Baekryeong-do Korea & China	2016 Egg (n=5)	ng/g lw	2 984	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls	Baekryeong-do	2017 Egg	ng/g lw	3 591	C_{14-15} (55%)		Choo *et al.* (2022)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Larus crassirostris	Korea & China	(n=5)					
Black tailed gulls *Larus crassirostris*	Baekryeong-do Korea & China	2018 Egg (n=5)	ng/g lw	4 898	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus crassirostris*	Hong-do South Korea & Japan	2012 Egg (n=5)	ng/g lw	1 263	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus crassirostris*	Hong-do South Korea & Japan	2013 Egg (n=5)	ng/g lw	1 034	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus crassirostris*	Hong-do South Korea & Japan	2014 Egg (n=5)	ng/g lw	1 302	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus crassirostris*	Hong-do South Korea & Japan	2015 Egg (n=5)	ng/g lw	1 722	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus crassirostris*	Hong-do South Korea & Japan	2016 Egg (n=5)	ng/g lw	2 268	C_{14-15} (55%)		Choo *et al.* (2022)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Black tailed gulls *Larus crassirostris*	Hong-do South Korea & Japan	2017 Egg (n=5)	ng/g lw	3 075	C_{14-15} (55%)		Choo *et al.* (2022)
Black tailed gulls *Larus crassirostris*	Hong-do South Korea & Japan	2018 Egg (n=5)	ng/g lw	2 737	C_{14-15} (55%)		Choo *et al.* (2022)
Herring Gulls *Larus argentatus*	Inner Oslofjord, Norway	Female whole blood (n=15)	ng/g ww	28.3 ± 23.8 8.0-76.0			Knudzton (2021) Data also reported in Ruus *et al.* (2018)
Herring Gulls *Larus argentatus*	Inner Oslofjord, Norway	Egg (n=15)	ng/g ww	29.1 ± 19.8 6.0-68.0			Knudzton (2021) Data also reported in Ruus *et al.* (2018)
Herring Gulls *Larus argentatus*	Outer Oslofjord, Norway	Female whole blood (n=15)	ng/g ww	38.9 ± 64.6 6.0-200.0			Knudzton (2021) Data also reported in Ruus *et al.* (2018)
Herring Gulls *Larus argentatus*	Outer Oslofjord, Norway	Egg (n=15)	ng/g ww	69.6 ± 160.0 3.0-630.0			Knudzton (2021) Data also reported in Ruus *et al.* (2018)
Narwhal *Monodon monoceros*	Melville, Greenland	2018 Adult males (n=2) Muscle	ng/g lw	< MDL			Yuan *et al.* (2021)
Narwhal *Monodon monoceros*	Melville, Greenland	2018 Adult males (n=2) Blubber	ng/g lw	< MDL			Yuan *et al.* (2021)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Harbour porpoise *Phocoena phocoena*	Maniitsoq, Greenland	2018 Calf-adult (n=5) Blubber	ng/g lw	< MDL	$C_{14} > C_{15} > C_{16} \approx C_{17}$	Cl_{5-7}	Yuan *et al.* (2021)
Blue mussel *Mytilus edulis*	Nuuk, Greenland	2020 Soft tissue pooled (n=2)	ng/g lw	87-250	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-8}	Yuan *et al.* (2021)
Iceland scallop *Chlamys islandica*	Nuuk, Greenland	2018 Soft tissue pooled (n=1)	ng/g lw	120			Yuan *et al.* (2021)
Killer whale *Orcinus orca*	Tasiilaq, Greenland	2016 Adult female Muscle (n=1)	ng/g lw	35	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-7}	Yuan *et al.* (2021)
Killer whale *Orcinus orca*	Tasiilaq, Greenland	2016 Adult female Blubber (n=1)	ng/g lw	< MDL	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-7}	Yuan *et al.* (2021)
Minke whale *Balaenoptera acutorostrata*	Tasiilaq, Greenland	2017 Foetus Female Muscle (n=1)	ng/g lw	19	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-7}	Yuan *et al.* (2021)
Minke whale *Balaenoptera acutorostrata*	Tasiilaq, Greenland	2017 Adult Female Muscle (n=1)	ng/g lw	85	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-7}	Yuan *et al.* (2021)
Pilot whale *Globicephala melas*	Tasiilaq, Greenland	2018 Calf-adult Muscle (n=3)	ng/g lw	8-32			Yuan *et al.* (2021)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Pilot whale *Globicephala melas*	Tasiilaq, Greenland	2018 Calf-adult Blubber (n=3)	ng/g lw	< MDL - 17			Yuan *et al.* (2021)
Greenland shark *Somniosus microcephalus*	Waters around Iceland	2001-2003 Adult female Liver (n=2)	ng/g lw	5.0	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-8}	Yuan *et al.* (2021)
Killer whale *Orcinus orca*	Mollösund, Sweden	2018 Adult male Muscle (n=1)	ng/g lw	270	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{4-8}	Yuan *et al.* (2021)
Killer whale *Orcinus orca*	Mollösund, Sweden	2018 Adult male Blubber (n=1)	ng/g lw	74	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{5-7}	Yuan *et al.* (2021)
Harbour porpoise *Phocoena phocoena*	Öresund, Sweden	2016-2018 Adult (both sexes) Blubber (n=3)	ng/g lw	14-18	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_{7-9}	Yuan *et al.* (2021)
Ringed Seal *Pusa hispida*	Norwegian Arctic	2010 serum Detected in all samples (n=10)	µg/kg lw.	100 - 740			Harju *et al.,* 2013
Polar Bear *Ursus maritimus*	Norwegian Arctic	2012 serum 19 samples >LOD (n=20)	µg/kg lw.	< LOD - 600			Harju *et al.,* 2013

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Kittiwake *Rissa tridactyla*	Norwegian Arctic	2012 egg Detected in all samples (n=12)	ng/g ww	0.26 – 17.31 Mean: 4.91			Harju *et al.,* 2013
Common eider *Somateria mollissima*	Norwegian Arctic	2012 egg Detected in all samples (n=12)	ng/g ww	1.10 – 16.62 Mean: 4.24			Harju *et al.,* 2013
Glaucous gull *Larus hyperboreus*	Norwegian Arctic	2012 plasma 8 samples >LOD (n=12)	ng/ml µg/g lw	< LOD – 27.02 (mean 8.87) < LOD – 1 300			Harju *et al.,* 2013
Atlantic Cod *Gadus morhua*	Norwegian Arctic	2012 liver 2 samples>LOD (n=11)	ng/g ww	< LOD – 0.94 Mean: 0.94			Harju *et al.,* 2013
Polar cod *Boreogadus saida*	Norwegian Arctic	2012 (n=10) whole pooled fish	ng/g ww	Mean: 1.51			Harju *et al.,* 2013
Pine tree bark	Tibetan plateau	n=17 SCCP **MCCP**	µg/g lw	2.9-7.0 **1.8-5.7**	C_{10-11} $\mathbf{C_{14-15}}$	Cl_{7-8} $\mathbf{Cl_{7-8}}$	Wu *et al.* (2020)
Pine needles	Tibetan plateau	n=18 SCCP **MCCP**	µg/g lw	2.4-6.4 **1.6-5.0**	C_{10-11} $\mathbf{C_{14-15}}$	Cl_{7-8} $\mathbf{Cl_{7-8}}$	Wu *et al.* (2020)
Lichen *Usnea longissimi Ach*	Tibetan plateau	n=26 SCCP **MCCP**	µg/g lw	1.4-6.4 **0.7-4.0**	C_{10-11} $\mathbf{C_{14-15}}$	Cl_{7-8} $\mathbf{Cl_{7-8}}$	Wu *et al.* (2020)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Moss *Bryopsida spp*	Tibetan plateau	n=92 SCCP **MCCP**	µg/g lw	1.5-5.3 **0.9-4.0**	C_{10-11} $\mathbf{C_{14-15}}$	Cl_{7-8} $\mathbf{Cl_{7-8}}$	Wu *et al.* (2020)
Spruce needles	The Alps	Eight samples collected in October 2004. Concentrations refer to "MCCPs".	µg/kg	5.2 - 95			Iozza *et al.* (2009a)
Spruce needles	The Alps	Samples from various altitudes from 7 locations collected in Autumn 2004. Concentrations refer to total CPs	µg/kg	26 - 450			Iozza *et al.* (2009b)
Masson pine needles	Shanghai, China	2016	µg/kg	12.4 – 33 500			Wang *et al.* (2016)
Coniferous leaves	China	2013 -2014 (n=25) g	ng/g dw	337.8 – 4388.4	C14 C15-17 (more abundant than corresponding soils)	Industry Cl7-8 Ambient Cl6-7	Xu *et al.* (2016)
Common eider *Somateria mollissima*	Svalbard, Norwegian artctic	2017 Egg (n=5)	ng/g ww	Average (min-max) 31 (13-59)			Schlabach *et al.* (2018)
European shag *Phalacrocorax aristotelis*	Røst Norwegian, arctic	2017 Egg (n=5)	ng/g ww	Average (min-max) 150 (7.8-366)			Schlabach *et al.* (2018)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Kittiwake *Rissa tridactyla*	Svalbard, Norwegian arctic	2017 Egg (n=5)	ng/g ww	Average (min-max) 40 (9.3-96)			Schlabach *et al.* (2018)
Glaucous gull *Larus hyperboreus*	Svalbard, Norwegian arctic	2017 Egg (n=5)	ng/g ww	Average (min-max) 36 (8.6-49)			Schlabach *et al.* (2018)
Polar bear *Ursus maritimus*	Svalbard, Norwegian arctic	2017 Blood (n=10)	ng/g ww	Average (min-max) 41 (5.1-93)			Schlabach *et al.* (2018)
Mink *Mustela lutreola*	Hillesøy/Sommerøy Troms County Norway	2017 Liver (n=5)	ng/g ww	Average (min-max) 41 (5.1-93)			Schlabach *et al.* (2018)
Common gull *Larus canus*	Tromsø Norway	2017 Egg (n=5)	ng/g ww	Average (min-max) 40 (9.4-87)			Schlabach *et al.* (2018)
Lake trout *Salvelinus namaycush*	Lake Kusawa, Canada	2010-2011 (n=10) Age: 3.2 ± 1.2 (years)	ng/g ww	1.1 ± 0.8	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Lake trout *Salvelinus namaycush*	Lake Kusawa, Canada	2010-2011 (n=10) Age: 3.2 ± 1.2 (years)	ng/g lw	13.4 ± 11.0	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Walleye *Sander vitreus*	Columbia River, Canada	2010-2011 (n=9) Age: 4.5 ± 0.8 (years)	ng/g ww	1.3 ± 0.8	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Walleye *Sander vitreus*	Columbia River, Canada	2010-2011 (n=9) Age: 4.5 ± 0.8 (years)	ng/g lw	28.8 ± 23.5	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Lake trout *Salvelinus namaycush*	Lake Athabasca, Canada	2010-2011 (n=10) Age: 20.5 ± 4.9 (years)	ng/g ww	5.2 ± 2.8	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Lake trout *Salvelinus namaycush*	Lake Athabasca, Canada	2010-2011 (n=10) Age: 20.5 ± 4.9 (years)	ng/g lw	45.2 ± 16.6	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Lake trout	Lake Superior, Canada	2010-2011 (n=9)	ng/g ww	3.9 ± 1.0	C_{14} (60-85%) C_{15} (14-30%)	Cl_{6-7}	Basconcillo *et al.*, (2015)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Salvelinus namaycush		Age: 5.6 ± 0.5 (years)			C_{17} – not detected		
Lake trout *Salvelinus namaycush*	Lake Superior, Canada	2010-2011 (n=9) Age: 5.6 ± 0.5 (years)	ng/g lw	32.1 ± 28.8	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Lake trout *Salvelinus namaycush*	Lake Huron, Canada	2010-2011 (n=9) Age: 11.0 ± 0.9 (years)	ng/g ww	12.2 ± 15.1	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Lake trout *Salvelinus namaycush*	Lake Huron, Canada	2010-2011 (n=9) Age: 11.0 ± 0.9 (years)	ng/g lw	100.1 ± 118.8	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Lake trout *Salvelinus namaycush*	Lake Erie, Canada	2010-2011 (n=8) Age: 4.6 ± 0.5 (years)	ng/g ww	11.3 ± 7.7	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{7-8}	Basconcillo *et al.*, (2015)
Lake trout *Salvelinus namaycush*	Lake Erie, Canada	2010-2011 (n=8) Age: 4.6 ± 0.5 (years)	ng/g lw	57.1 ± 39.2	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{7-8}	Basconcillo *et al.*, (2015)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Lake trout *Salvelinus namaycush*	Lake Ontario, Canada	2010-2011 (n=10) Age: 4.3 ± 0.5 (years)	ng/g ww	11.6 ± 7.1	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{7-8}	Basconcillo *et al.*, (2015)
Lake trout *Salvelinus namaycush*	Lake Ontario, Canada	2010-2011 (n=10) Age: 4.3 ± 0.5 (years)	ng/g lw	91.4 ± 41.9	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{7-8}	Basconcillo *et al.*, (2015)
Walleye *Sander vitreus*	St. Lawrence River, Canada	2010-2011 (n=9) Age: 2.3 ± 1.2 (years)	ng/g ww	6.0 ± 6.2	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{7-8}	Basconcillo *et al.*, (2015)
Walleye *Sander vitreus*	St. Lawrence River, Canada	2010-2011 (n=9) Age: 2.3 ± 1.2 (years)	ng/g lw	88.4 ± 79.4	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{7-8}	Basconcillo *et al.*, (2015)
Brook trout *Salmo fontinalis*	Kejimikujik Lake, Canada	2010-2011 (n=10) Age: 3.2 ± 0.7 (years)	ng/g ww	4.7 ± 4.6	C_{14} (60-85%) C_{15} (14-30%) C_{17} – not detected	Cl_{6-7}	Basconcillo *et al.*, (2015)
Brook trout *Salmo fontinalis*	Kejimikujik Lake, Canada	2010-2011 (n=10)	ng/g lw	129.6 ± 160.5	C_{14} (60-85%) C_{15} (14-30%)	Cl_{6-7}	Basconcillo *et al.*, (2015)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
		Age: 3.2 ± 0.7 (years)			C_{17} – not detected		
Common eider *Somateria mollissima*	Sklinna, Norway	2012 egg 2 × n=3 pooled samples	ng/g ww	1.00 0.97			Huber *et al.* (2015)
Common eider *Somateria mollissima*	Røst, Norway	2012 egg 4 × n=3 pooled samples	ng/g ww	1.07 17.5 1.70 0.79			Huber *et al.* (2015)
European shag *Phalacrocorax aristotelis*	Sklinna, Norway	2012 egg 2 × n=3 pooled samples	ng/g ww	<0.76 0.97			Huber *et al.* (2015)
European shag *Phalacrocorax aristotelis*	Røst, Norway	2012 egg 4 × n=3 pooled samples	ng/g ww	7.12 2.71 1.76 0.80			Huber *et al.* (2015)
Herring gull *Larus argentatus*	Sklinna, Norway	2012 egg 2 × n=3 pooled samples	ng/g ww	1.21 1.18			Huber *et al.* (2015)
Herring gull *Larus argentatus*	Røst, Norway	2012 egg 4 × n=3 pooled samples	ng/g ww	1.19 <0.76 <0.76 <0.76			Huber *et al.* (2015)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Herring gull *Larus argentatus*	Skulfjord, Troms, Northern Norway	2017 Liver (n=10) five adults of both sexes	ng/g ww	Average: 87.8 Min: <63 Max: 372			Herzke *et al.* (2019)
Herring gull *Larus argentatus*	German ESB[1]	Egg n=2 pooled 2018	ng/g lw	48 - 61	$C_{14}=C_{15}>C_{16-17}$	Mean 52% Cl wt.	Yuan *et al.* 2022
Eelpout *Zoarces viviparus*	German ESB	Musculature n=1 pooled 2018	ng/g lw	59	$C_{14}=C_{15}>C_{16-17}$	Mean 54% Cl wt.	Yuan *et al.* 2022
Blue mussel *Mytilus edulis complex*	German ESB	Soft tissue n=1 pooled 2018	ng/g lw	1 800	$C_{14}=C_{15}>C_{16-17}$	Mean 49% Cl wt.	Yuan *et al.* 2022
Spruce *Picea abies*	German ESB	Shoots n=4 pooled 2017-2018	ng/g lw	100 (< MDL-150)	$C_{14}=C_{15}>C_{16-17}$	Mean 53% Cl wt.	Yuan *et al.* 2022
Pine *Pinus sylvestris*	German ESB	Shoots n=1 pooled 2018	ng/g lw	140	$C_{14}=C_{15}>C_{16-17}$	Mean 49% Cl wt.	Yuan *et al.* 2022

[1] Environmental specimen bank

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Lombardy poplar *Populus nigra*	German ESB	Leaves n=2 pooled 2018	ng/g lw	810-1 000	C_{14}=C_{15}>C_{16-17}	Mean 53% Cl wt.	Yuan *et al.* 2022
Beech *Fagus sylvatica*	German ESB	Leaves n=3 pooled 2017-2018	ng/g lw	310 (220-1 500)	C_{14}=C_{15}>C_{16-17}	Mean 52% Cl wt.	Yuan *et al.* 2022
Roe deer (yearling); *Capreolus capreolus*	German ESB	Liver n=4 pooled samples 2017-2018	ng/g lw	45 (33-64)	C_{14}=C_{15}>C_{16-17}	Mean 52% Cl wt.	Yuan *et al.* 2022
Earthworm *Aporrectodea longa*	German ESB	Worms without gut content n=1 pooled sample 2017	ng/g lw	67	C_{14}=C_{15}>C_{16-17}	Mean 52% Cl wt.	Yuan *et al.* 2022
Earthworm *Aporrectodea longa*	German ESB	Droppings (gut content) n=1 pooled sample 2017	ng/g dw	11	C_{14}=C_{15}>C_{16-17}	Mean 56% Cl wt.	Yuan *et al.* 2022
Earthworm *Lumbricus terrestris*	German ESB	Worms without gut content n=4 pooled sample 2017-2018	ng/g lw	200 (130-260)	C_{14}=C_{15}>C_{16-17}	Mean 51% Cl wt.	Yuan *et al.* 2022

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Earthworm *Lumbricus terrestris*	German ESB	Droppings (gut contents) n=4 pooled samples 2017-2018	ng/g dw	25 (10-1 000)	C_{14}=C_{15}>C_{16-17}	Mean 56% Cl wt.	Yuan *et al.* 2022
Bream *Abramis brama*	German ESB	Musculature n=8 pooled samples 2017-2019	ng/g lw	210 (100-3 300)	C_{14}=C_{15}>C_{16-17}	Mean 54% Cl wt.	Yuan *et al.* 2022
Bream *Abramis brama*	German ESB	Musculature n=14 samples 1995 – 2019	ng/g lw	970 (570-4 000)	C_{14}=C_{15}>C_{16-17}	Mean 55% Cl wt.	Yuan *et al.* 2022
Barbel *Barbus barbus*	German ESB	Musculature n=1 pooled sample 2018	ng/g lw	160	C_{14}=C_{15}>C_{16-17}	Mean 53% Cl wt.	Yuan *et al.* 2022
Zebra mussel *Dreissena polymorpha*	German ESB	Soft tissue n=4 pooled samples 2018	ng/g lw	680 (170-1 300)	C_{14}=C_{15}>C_{16-17}	Mean 53% Cl wt.	Yuan *et al.* 2022
Quagga mussel *Dreissena rostriformis*	German ESB	Soft tissue n=1 pooled sample	ng/g lw	2 400	C_{14}=C_{15}>C_{16-17}	Mean 55% Cl wt.	Yuan *et al.* 2022

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
		2018					
Branched and massive corral species	South China Sea (Luhuitou, Sanya and Dongjiao, Wengchang)	n=55 samples	**ng/g dw** ng/g lw	**204 (73-712)** 1 490 (305-14 800)	C_{14} (59%) > C_{15} (21%) > C_{16} (13%) > C_{17} (7%)	Cl_7 and Cl_8 dominant	Chen *et al.* 2021
Tree bark *Salix matsudana* and *Cedrus brevifolia*	33 sites between Zhengzhou city and 31 km northwest of city	Sites located within 6 km of CP plant (sites 1-18)	ng/g lw	198-21 800	C_{14} dominant	$Cl_{5\text{-}7}$ dominant Average Cl =57.3%	Niu *et al.* 2022
Tree bark *Salix matsudana* and *Cedrus brevifolia*	33 sites between Zhengzhou city and 31 km northwest of city	Urban-rural sites (Sites 19, 20, 24, 25, 26)	ng/g lw	1 410-7 160	C_{14} dominant	$Cl_{5\text{-}7}$ dominant Average Cl = 56.9%	Niu *et al.* 2022
Tree bark *Salix matsudana* and *Cedrus brevifolia*	33 sites between Zhengzhou city and 31 km northwest of city	Urban sites (Sites 29, 30, 31, 32, 33)	ng/g lw	1 480-4 490	C_{14} dominant	$Cl_{5\text{-}7}$ dominant Average Cl = 56.3%	Niu *et al.* 2022
Tree bark	33 sites between Zhengzhou city and 31	Rural sites (Sites 21, 22, 23, 27, 28)	ng/g lw	195-2 750	C_{14} dominant	$Cl_{5\text{-}7}$ dominant Average Cl = 56.8%	Niu *et al.* 2022

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Salix matsudana and *Cedrus brevifolia*	km northwest of city						
Atlantic Cod *Gadus morhua*	Inner Oslo Fjord, Norway	2020 (n=40) 15 × pooled liver samples	ng/g ww	Mean 30.9 (<62.1 – 365)			Grung, *et al.*, (2021)
Herring Gull *Larus argentatus*	Inner Oslo Fjord, Norway	2020 blood 15 individuals	ng/g ww	Mean: 3.57 (<2.68-29.5)			Grung, *et al.*, (2021)
Herring Gull *Larus argentatus*	Inner Oslo Fjord, Norway	2020 egg (n=14)	ng/g ww	Mean: 28.9 (6.64-107)			Grung, *et al.*, (2021)
Herring Gull *Larus argentatus*	Inner Oslo Fjord, Norway	2018 blood 15 individuals	ng/g ww	Mean: 35.30 (15.26-128.91)			Ruus, 2019
Herring Gull *Larus argentatus*	Inner Oslo Fjord, Norway	2018 egg (n=15)	ng/g ww	Mean 231.29 (15.81-1 111)			Ruus, 2019
Atlantic Cod (*Gadus morhua*)	Inner Oslo Fjord, Norway	2017 (n=40)	ng/g ww	Mean: 216 (51.0 – 1 050)			Ruus, 2018

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
		15 × pooled liver samples					
Herring Gull *Larus argentatus*	Inner Oslo Fjord, Norway	2017 blood 15 individuals	ng/g ww	Mean: 28.23 (8.2-76.0)			Ruus, 2018
Herring Gull *Larus argentatus*	Inner Oslo Fjord, Norway	2017 egg (n=15)	ng/g ww	Mean 29.14 (6.10-68.0)			Ruus, 2018
Herring Gull *Larus argentatus*	Outer Oslo Fjord, Norway	2017 blood 15 individuals	ng/g ww	Mean: 38.87 (5.8-200.0)			Ruus, 2018
Herring Gull *Larus argentatus*	Outer Oslo Fjord, Norway	2017 egg (n=15)	ng/g ww	Mean 69.58 (3.10-630)			Ruus, 2018
Blue mussel *Mytilus edulis*	Norway coastal waters	Soft tissue 3 pooled samples (n=20) per site (8 sites)	µg/kg ww	2.4-17.9			Green et al 2013
Atlantic cod *Gadus morhua*	Norway coastal waters	15 individual cod liver samples (occasionally pooled if too	µg/kg ww	32.3-931.5			Green et al 2013

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
		small) samples per site (11 sites)					
Blue mussel *Mytilus edulis*	Norway coastal waters	Soft tissue 3 pooled samples (n=20) per site (8 sites)	µg/kg ww	1.3-104.0			Green et al 2014
Atlantic cod *Gadus morhua*	Norway coastal waters	15 individual cod liver samples (occasionally pooled if too small) samples per site (11 sites)	µg/kg ww	12.1-187			Green et al 2014
Blue mussel *Mytilus edulis*	Norway coastal waters	Soft tissue 3 pooled samples (n=20) per site (10 sites)	µg/kg ww	3.3-54.8			Green et al 2015
Atlantic cod *Gadus morhua*	Norway coastal waters	15 individual cod liver samples (occasionally pooled if too small) samples per site (10 sites)	µg/kg ww	40.2-262.5			Green et al 2015
Blue mussel *Mytilus edulis*	Norway coastal waters	Soft tissue 3 pooled samples (n=20) per site (10 sites)	µg/kg ww	13.0-62.0			Green et al 2020
Atlantic cod *Gadus morhua*	Norway coastal waters	15 individual cod liver samples (occasionally	µg/kg ww	98.0-320			Green et al 2020

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
		pooled if too small) samples per site (13 sites)					
Eider blood	Svalbard	Whole blood 14 samples	µg/kg ww	22.2-55.5			Green et al 2020
Eider egg	Svalbard	15 individual homogenised whole egg samples	µg/kg ww	19.49-98.02			Green et al 2020
Fieldfare *Turdus pilaris*	Norway NILU report 2020	8 Pooled egg samples	ng/g ww ng/g lw	21-132 671-4 218			Heimstad et al 2021
Tawny Owl *Strix aluco*	Norway NILU report 2020	eggs n=10 MCCP detected in 50%	ng/g ww ng/g lw	<LOD - 26 230 (<LOD - 544)			Heimstad et al 2021
Red fox *Vulpes vulpes*	Norway NILU report 2020	Liver n=10 MCCP detected in 50%	ng/g ww ng/g lw	<LOD-9 293 (<LOD-573)			Heimstad et al 2021
Brown rat *Rattus norvegicus*	Norway NILU report 2020	Liver n=7 individual and 3 pooled MCCP detected in 60%	ng/g ww	<LOD-66			Heimstad et al 2021
Human milk			µg/kg lw	7			Greenpeace (1995)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Human milk	Lancaster and London, UK	Highest concentration	µg/kg lw	61			Thomas and Jones (2002)
Human milk	Lancaster and London, UK	95th percentile	µg/kg lw	127.5			Thomas *et al.* (2006)
Human milk	Bavaria	60 Samples. “MCCPs” detected in 58% of the samples. Range reflects the quantified levels.	µg/kg lw	9.6 - 903 [median 115.4]			Hilger *et al.* (2011b) Conference paper
Human milk	China	2007 (median value)	µg/kg lw	60.4			Xia *et al.* (2017)
Human milk	China	2011 (median value)	µg/kg lw	64.3			Xia *et al.* (2017)
Human milk	Norway, China and Sweden		ng/g fat	Norway 48.1 China 78.8 Sweden 27.4			Yihui Zhou *et al* 2022
Human milk	China		ng/g lipid	94-1714	C_{14} (60.5%)	Cl_7 and Cl_8 (26.5 and 31.2%)	Chi Xu *et al* (2021)
Human milk	China		ng/g lipid	22.3-1501	C_{14} (70%)	Cl_7 and Cl_8	Dan Xia *et al* (2022)

Sample	**Location**	**Comment**	**Units**	**Level**	**Dominant homologue (relative abundance %)**	**Associated congener (relative abundance)**	**Reference**
						(34 and 40%)	
Paired human milk and serum	Sweden	n=25 women median 2020	ng/g lw	SCCP/MCCP/LCCP serum: 790/ 520/16 Milk: 36/63/ 6.0			Bergman *et al.* (2022)
Human blood	China	2017	µg/kg lw	130 - 3200			Li *et al.* (2017)
Human placenta	China	2018	µg/kg lw	80.8 - 954			Wang *et al.* (2018)
Human serum	China		ng/g ww.	3.76– 31.8	C_{14} (54.1%–62.4% of MCCP)	Cl_7 and Cl_8	Lin Quio *et al* (2018)
Human Maternal serum Cord serum Placenta	China		ng/mL ng/g ww	maternal serum 29.33-1006 cord serum 13.6-90.2 placenta 24.8-642.3	C_{14}/C_{15} 69% 80% 65%	Cl_4-Cl_7 Cl_4 Cl_4-Cl_6	Muhammad Aamir *et al* (2019)
Human serum	Norway		µg/L wet weight	0.15-0.36	C_{14}		Shanshan Xu *et al* (2022)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Human serum	Czech Republic		ng/g lipid wet weight	<200-2 600	C14		Tomasko *et al* (2021)
Human blood	China		ng/g ww	6.3−320			Tong Li *et al* 2022
Human serum	Australia		ng/g ww	1-1.3			Louise M. van Mourik *et al* (2020)
Human serum Cord serum Milk Placenta	China		ng/mL ng/g (ww)	38.9 25.6 26.1 19.0	C1$_4$ 44 % 44 % 46 % 36 %	Cl_5, with around 49% reported in maternal serum and placenta	Yingxue Liua *et al* (2020)
Human blood Cord blood Placenta	China		ng/ mL ng/g (ww)	1.26-4.2 1.13-2.15 1.46-4.02	C_{14} in all samples (>64%)		Hui Chen *et al* 2020

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Human hair and nails	China		ng/g dry weight	Hair 16.9–893 Nails 61.0-47			Xu Han *et al* (2021)
Baby Food	Germany	MCCPs could only be quantified in two samples	ng/g lipids	26 and 32			Kratschmer *et al* (2021)
Baby Food	22 countries	dry cereal and porridge samples showed the highest MCCPs (C14 Cl6–7) and pentadecanes (C15 Cl6–7) were the most dominant MCCPs.	ng/g	2.3			Perkons *et al* (2022)
Baby Food	China		ng/g fresh weight	skimmed milk, 1.67-3.45 whole milk 3.04-20.9 pure cereal 1.21-8 pure cereal 1.21-8.24.24	C_{14} (27 %)	Cl_{6-8} (no abundance information)	Xu Han *et al* (2021)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
				meat puree 1.24-5.41 vegetable puree 0.53-1.2 fruit puree 0.53-3.31			
Cereal	19 Chinese provinces	1 710 cereal samples giving 19 pooled samples	µg/kg ww	Mean: 213	C_{14} (67%) C_{15} (15%)	Cl_6 (26%) Cl_7 (33%)	Wang *et al.* (2019)
Legume	19 Chinese provinces	1 710 legume samples giving 19 pooled samples	µg/kg ww	Mean: 184	C_{14} (54%) C_{15} (20%)	Cl_6 (27%) Cl_7 (27%)	Wang *et al.* (2019)
Margarine containing fish oil			µg/kg lw	28			Greenpeace (1995)
Pork			µg/kg lw	11			Greenpeace (1995)
Cow's milk			µg/kg lw	16			Greenpeace (1995)
Salmon (caught for human consumption)	Southern Germany	2014 - 2017, 122 farmed and 11 wild salmon samples	µg/kg ww	1.1 - 79	$C_{14} > C_{15} > C_{16} > C_{17}$		Krätschmer *et al.* (2019)
Cows' milk	Lancaster, UK		µg/kg lw	63			Thomas and Jones (2002)

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Butter	Denmark		µg/kg lw	11			Thomas and Jones (2002)
Butter	Wales		µg/kg lw	8.8			Thomas and Jones (2002)
Butter	Ireland		µg/kg lw	52			Thomas and Jones (2002)
Dairy products	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	300			Campbell and McConnell (1980)
Vegetable oils and derivatives	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	150			Campbell and McConnell (1980)
Fruit and vegetables	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	5			Campbell and McConnell (1980)
Beverages	United Kingdom	Mean concentration – relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)

Table 25: Summary of levels of "MCCPs" in sediment and soil

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
River Lech, upstream from chlorinated paraffin production plant	1987	µg/kg dw	2200			Unpublished (1987) [reference no longer attributable]
	1994	µg/kg dw	<10			Ballschmiter (1994)
River Lech, downstream from chlorinated paraffin production plant	1987	µg/kg dw	1 700			Unpublished (1987) [reference no longer attributable]
	1994	µg/kg dw	325			Ballschmiter (1994)
Bodensee (middle) - 0 to 5 cm depth	1994	µg/kg dw	70			Ballschmiter (1994)
River Rhein (141 km) at Rheinfelden	1994	µg/kg dw	60			Ballschmiter (1994)
River Rhein (152 km) at Rheinfelden, upper layer	1994	µg/kg dw	140			Ballschmiter (1994)
River Rhein (152 km) at Rheinfelden, lower layer	1994	µg/kg dw	85			Ballschmiter (1994)
River Rhein (853.8 km), near German-Dutch border	1994	µg/kg dw	205			Ballschmiter (1994)
River Rhein (863.8 km), near German-Dutch border	1994	µg/kg dw	145			Ballschmiter (1994)
River Main (16.2 km)	1994	µg/kg dw	260			Ballschmiter (1994)
River Main (at Griesheim)	1994	µg/kg dw	190			Ballschmiter (1994)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
River Main (55 km)	1994	µg/kg dw	160			Ballschmiter (1994)
Outer Alster, Hamburg	1994	µg/kg dw	370			Ballschmiter (1994)
River Elbe, Hamburg (610 km)	1994	µg/kg dw	130			Ballschmiter (1994)
River Elbe, Hamburg (629.9 km)	1994	µg/kg dw	230			Ballschmiter (1994)
River Danube, downstream of the confluence with the River Lech		µg/kg dw	1800			BUA (1992)
Irish Sea: Site a	Relates to C_{10-20}	µg/kg	100			Campbell and McConnell (1980)
Irish Sea: Site b	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
Irish Sea: Site c	Relates to C_{10-20}	µg/kg	not measured			Campbell and McConnell (1980)
Irish Sea: Site d	Relates to C_{10-20}	µg/kg	100			Campbell and McConnell (1980)
Irish Sea: Site e	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
Irish Sea: Site f	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
Barmouth Harbour	Relates to C_{10-20}	µg/kg	500			Campbell and McConnell (1980)
Menai Straights (Caernarvon)	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
Tremadoc Bay (Llandanwg)	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
North Minch: Ardmair	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
North Minch: Port Bùn á Ghlinne	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
North Minch: Port of Ness	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
Goile Chròic (Lewis)	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
Sound of Taransay (Harris)	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
Sound of Arisaig	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
North Sea: N55° 5.7' W1° 9.3'	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
North Sea: N57° 26.2' W1° 17.0'	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
North Sea: N57° 56.5' W1° 22.0'	Relates to C_{10-20}	µg/kg	50			Campbell and McConnell (1980)
River Banwy, Llangadfan	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
River Lea, Batford	Relates to C_{10-20}	µg/kg	1 000			Campbell and McConnell (1980)
River Clwyd, Ruthin	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
River Dee, Corwen	Relates to C_{10-20}	µg/kg	300			Campbell and McConnell (1980)
River Wnion, Merioneth	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
Five drinking water reservoirs, Manchester area	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
River Aire, Leeds	Relates to C_{10-20}	µg/kg	10 000			Campbell and McConnell (1980)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
River Ouse, Goole	Relates to C_{10-20}	µg/kg	2 000			Campbell and McConnell (1980)
River Trent, West Bromwich	Relates to C_{10-20}	µg/kg	6 000			Campbell and McConnell (1980)
River Trent, Walton-upon-Trent	Relates to C_{10-20}	µg/kg	1 000			Campbell and McConnell (1980)
River Trent, Swarkestone	Relates to C_{10-20}	µg/kg	14 000			Campbell and McConnell (1980)
River Trent, Newark	Relates to C_{10-20}	µg/kg	8 000			Campbell and McConnell (1980)
River Trent, Gainsborough	Relates to C_{10-20}	µg/kg	3 000			Campbell and McConnell (1980)
Humber Estuary, Hull	Relates to C_{10-20}	µg/kg	2 000			Campbell and McConnell (1980)
Humber Estuary, Stone Creek	Relates to C_{10-20}	µg/kg	2 000			Campbell and McConnell (1980)
Mersey Estuary, New Brighton	Relates to C_{10-20}	µg/kg	3 000			Campbell and McConnell (1980)
Mersey Estuary, Liverpool Pier Head	Relates to C_{10-20}	µg/kg	8 000			Campbell and McConnell (1980)
River Thames, Sanford	Relates to C_{10-20}	µg/kg	1 000			Campbell and McConnell (1980)
Wyre Estuary	Relates to C_{10-20}	µg/kg	not detected - 1 600			Campbell and McConnell (1980)
Mersey Estuary, 14 sediment samples	Relates to C_{10-20}	µg/kg	not detected			Campbell and McConnell (1980)
River Tees, Low Dinsdale	Relates to C_{10-20}	µg/kg	300			Campbell and McConnell (1980)
River Tees, North Gare breakwater	Relates to C_{10-20}	µg/kg	50			Campbell and McConnell (1980)
River Tees, Middlesbrough	Relates to C_{10-20}	µg/kg	15 000			Campbell and McConnell (1980)

Location	**Year/ Comment**	**Units**	**Concentration**	**Dominant homologue (carbon chain) (relative abundance %)**	**Associated congener (chlorination) (relative abundance)**	**Reference**
Japan	1979 – no information on type	µg/kg	600 - 10 000			Environment Agency Japan (1991)
Japan	1980 – no information on type	µg/kg	500 - 8 500			Environment Agency Japan (1991)
Downstream of production site, US		µg/kg dw	6.8 - 8.2			Murray *et al.* (1987a and 1987b)
Rotterdam harbour mud		µg/kg	7 - 10			Greenpeace (1995)
Hamburg harbour mud		µg/kg	8			Greenpeace (1995)
Mud flats, Kaiser Wilhelm Koog		µg/kg	98			Greenpeace (1995)
Mud flats, Den Helder		µg/kg	3			Greenpeace (1995)
St. Lawrence River, Canada, downstream of a chlorinated paraffin manufacturing plant		µg/kg dw	<3 500			Tomy *et al.* (1998)
Industrial areas of the UK	A total of 77 samples from 1998. Highest concentration, downstream of a lubricant blending/metal working site.	µg/kg dw	65 000			Cefas (1999)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Mersey and Seine estuaries	Mean levels of total CPs - predominantly LCCPs (only traces of "MCCPs" present)	µg/kg dw	10.5			van Zeijl (1997)
Schelde estuary	Mean levels of total CPs - predominantly LCCPs (only traces of "MCCPs" present)	µg/kg dw	5.5			van Zeijl (1997)
Liffey River estuary	Mean levels of total CPs - predominantly LCCPs (only traces of "MCCPs" present)	µg/kg dw	4.8			van Zeijl (1997)
Forth estuary	Mean levels of total CPs - predominantly LCCPs (only traces of "MCCPs" present)	µg/kg dw	3.3			van Zeijl (1997)
Humber estuary	Mean levels of total CPs - predominantly LCCPs (only traces of "MCCPs" present)	µg/kg dw	1.2			van Zeijl (1997)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Sediment core, Lake St. Francois, St. Lawrence River	1972	µg/kg dw	1 200			Muir *et al.* (2002)
Sediment core, Lake St. Francois, St. Lawrence River	1976	µg/kg dw	1 000			Muir *et al.* (2002)
Sediment core, Lake St. Francois, St. Lawrence River	1981	µg/kg dw	700			Muir *et al.* (2002)
Sediment core, Lake St. Francois, St. Lawrence River	1986	µg/kg dw	750			Muir *et al.* (2002)
Sediment core, Lake St. Francois, St. Lawrence River	1990	µg/kg dw	400			Muir *et al.* (2002)
Sediment core, Lake St. Francois, St. Lawrence River	1995	µg/kg dw	700			Muir *et al.* (2002)
Lake Zürich		µg/kg	5			Schmid and Müller (1985)
Close to chlorinated paraffin manufacturing site, Australia	Sample I	µg/kg dw	1 108			Kemmlein *et al.* (2002)
Close to chlorinated paraffin manufacturing site, Australia	Sample II	µg/kg dw	1 168			Kemmlein *et al.* (2002)
Close to chlorinated paraffin manufacturing site, Australia	Sample II	µg/kg dw	3 108			Kemmlein *et al.* (2002)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Close to chlorinated paraffin manufacturing site, Australia	Sample IV	µg/kg dw	16 403			Kemmlein *et al.* (2002)
Lake Thun, Switzerland	Sediment core, surface layer corresponding to around 2004	µg/kg dw	26			Iozza *et al.* (2008)
Czech Republic	Highest concentration	µg/kg	5 575			Pribylová *et al.* (2006)
North and Baltic Sea	Sample 1 (relates to C_{14-15} CPs)	µg/kg dw	87			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 2 (MCCP relates to C_{14-15} CPs)	µg/kg dw	48			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 3 (MCCP relates to C_{14-15} CPs)	µg/kg dw	34			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 4 (MCCP relates to C_{14-15}CPs)	µg/kg dw	149			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 5 (MCCP relates to C_{14-15} CPs)	µg/kg dw	23			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 6 (MCCP relates to C_{14-15} CPs)	µg/kg dw	43			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 7 (MCCP relates to C_{14-15} CPs)	µg/kg dw	85			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 8 (MCCP relates to C_{14-15} CPs)	µg/kg dw	72			Hüttig and Oehme, (2006)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
North and Baltic Sea	Sample 9 (MCCP relates to C_{14-15} CPs)	µg/kg dw	39			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 10 (MCCP relates to C_{14-15} CPs)	µg/kg dw	22			Hüttig and Oehme, (2006)
North and Baltic Sea	Sample 11 (MCCP relates to $C_{14-15\ CPs}$)	µg/kg dw	33			Hüttig and Oehme, (2006)
North and Baltic Sea	Highest concentration - relates to SCCP+MCCP (MCCP/SCCP ratio 1.7 - 2.4)	µg/kg dw	499			Hüttig and Oehme, (2005)
Firth of Clyde, Scotland	"MCCPs" detected but not quantified		detected			Hussy *et al.* (2012)
Sediments from Norway	Twenty sediments analysed	µg/kg dw	50 - 3 240			Petersen *et al.* (2006)
Pearl River Delta, South China	Range	µg/kg dw	880 to 38 000			Chen *et al.* (2011)
Pearl River Delta, South China. Pond sediments in the vicinity of an electronic waste recycling area	Mean	µg/kg dw	21 000			Chen *et al.* (2011)
Pearl River Delta, South China. River sediments from industrialised areas.	Mean	µg/kg dw	3 900			Chen *et al.* (2011)
Yellow River, China	2018 (mean, normal season)	ng/g	35			Li *et al.* (2018a)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Yellow River, China	2018 (mean, wet season)	ng/g	89			Li *et al.* (2018a)
Yellow River, China	2018 (mean, dry season)	ng/g	167			Li *et al.* (2018a)
Yellow River, China	2016	ng/g dw	8.33 - 168	C_{14} (85.8-97.4%)	Cl_{7-8} (65.6 – 87.6%)	Qiao *et al.* (2016)
Mid-lower reach of the Yellow River and tributaries, China	2014 (n = 69) surface sediment mean ± sd (min-max)	ng/g	97.1 ± 227 (1.56 - 1 558)	C_{14} (59.2%) C_{15} (20.3%) C_{16} (15.3%) C_{17} (5.26%)	Cl_{6-7} (74% of congeners) $Cl_7 > Cl_6 > Cl_8 > Cl_9 > Cl_{10}$ $Cl_7 > Cl_6 > Cl_9 > Cl_{10} > Cl_8$ $Cl_6 > Cl_7 > Cl_9 > Cl_8 > Cl_{10}$ $Cl_6 > Cl_7 > Cl_8 > Cl_9 > Cl_{10}$	Li *et al.* (2018a)
Mid-lower reach of the Yellow River and tributaries, China	2014 (n = 68) suspended particulate matter mean ± sd (min-max)	ng/g	2573 ± 3250 (28.6 - 14 428)	C_{14} (63.5%) C_{15} (18.9%) C_{16} (11.9%) C_{17} (5.73%)	Cl_{6-7} (76.7% of congeners) $Cl_7 > Cl_6 > Cl_8 > Cl_9 > Cl_{10}$ $Cl_6 > Cl_7 > Cl_8 > Cl_9 > Cl_{10}$ $Cl_6 > Cl_7 > Cl_9 > Cl_8 > Cl_{10}$ $Cl_6 > Cl_8 > Cl_7 > Cl_9 > Cl_{10}$	Li *et al.* (2018a)
Pearl River Delta, China	2017 (n=16)	ng/g dw	1720 ± 2050 102 - 6650	C_{14} (66.8%) C_{15} (15.3%) C_{16} (9.2%) C_{17} (8.7%)	$Cl_8 > Cl_7 > Cl_9 > Cl_{10} > Cl_6 > Cl_5$ $Cl_8 > Cl_9 > Cl_7 > Cl_6 > Cl_{10} > Cl_5$ $Cl_8 > Cl_7 > Cl_6 > Cl_5 > Cl_9 > Cl_{10}$ $Cl_8 > Cl_6 > Cl_7 > Cl_5 > Cl_9$	Zeng *et al.* (2017)
Shenzhen, China	2017 (n=8)	ng/g dw	960 ± 955 10.9 - 2500	C_{14} (57.2%) C_{15} (19.6%) C_{16} (14.4%) C_{17} (10.8%)	$Cl_8 > Cl_7 > Cl_9 > Cl_{10} > Cl_6 > Cl_5$ $Cl_8 > Cl_7 > Cl_9 > Cl_6 > Cl_5 > Cl_{10}$ $Cl_7 > Cl_8 > Cl_5 > Cl_6 > Cl_9 > Cl_{10}$ $Cl_5 > Cl_6 > Cl_7 > Cl_5 > Cl_9$	Zeng *et al.* (2017)
Hong Kong, China	2017 (n=35)	ng/g dw	58.7 ± 84.7 <LOD - 286	C_{14} (49.0%) C_{15} (24.9%) C_{16} (15.7%) C_{17} (10.4%)	$Cl_7 > Cl_8 > Cl_6 > Cl_9 > Cl_5 > Cl_{10}$ $Cl_7 > Cl_8 > Cl_6 > Cl_9 > Cl_5 > Cl_{10}$ $Cl_7 > Cl_8 > Cl_6 > Cl_9 > Cl_5$ $Cl_7 > Cl_8 > Cl_6 > Cl_9 > Cl_5$	Zeng *et al.* (2017)
Tokyo Bay. Japan	2017 (n=8)	ng/g dw	19.2 ± 17.2 3.2 - 56.8	C_{14} (52.6%) C_{15} (28.1%) C_{16} (12.3%) C_{17} (7.0%)	$Cl_7 > Cl_6 > Cl_8 > Cl_5 > Cl_9 > Cl_{10}$ $Cl_7 > Cl_8 > Cl_6 > Cl_5 > Cl_9$ $Cl_7 > Cl_5 > Cl_8 > Cl_9 > Cl_6$ $Cl_5 > Cl_7 > Cl_6 > Cl_8$	Zeng *et al.* (2017)
Hong Kong, China	2004 sediment core	ng/g dw	< LOD - 20.3 (SY 2004)			Zeng *et al.* (2017)

Location	**Year/ Comment**	**Units**	**Concentration**	**Dominant homologue (carbon chain) (relative abundance %)**	**Associated congener (chlorination) (relative abundance)**	**Reference**
Tokyo Bay. Japan	2012 sediment core	ng/g dw	8.0 (SY 1959) - 29.3 (SY 2010) max - 61.3 (SY 1991)			Zeng *et al.* (2017)
Tokyo Bay. Japan	2012 sediment core	ng/g dw	11.0 (SY 1940) - 7.9 (SY 2010) max – 180 (SY 1989)			Zeng *et al.* (2017)
Laizhou Bay, China	2009 (n = 26)	ng/g dw	6 - 63	C_{14} (69.6 ± 4.5%) C_{15} (17.5 ± 1.9%) C_{16} (8.1 ± 2.1%) C_{17} (4.9 ± 1.5%)	$Cl_{6\text{-}8}$	Pan *et al.* (2018)
Rivers around Laizhou Bay, China	2009 (n = 14)	ng/g dw	1.8 - 3200	C_{14} (61.6 ± 11.1%) C_{15} (20.3 ± 4.4%) C_{16} (11.1 ± 4.7%) C_{17} (7.0 ± 3.3%)	$Cl_{6\text{-}8}$	Pan *et al.* (2018)
Xiaoqing River, China	2014 (n=22) surface sediment mean (min-max)	ng/g dw	6 020 (130 - 27 000)	C_{14} (46.2%±6.3%)	$Cl_{7–8} > Cl_6 > Cl_9$	Pan *et al.* (2021)
Laizhou Bay, China	2014 (n=22) surface sediment mean (min-max)	ng/g dw	13 (2.4 - 9.0)	C_{14} (46.2%±6.3%)	$Cl_{7–8} > Cl_6 > Cl_9$	Pan *et al.* (2021)
Inner Oslofjord, Norway	2017	mg/kg dw	0.14			Ruus *et al.* (2018)
Oslo, Norway	Soil	ng/g dw	Mean = 183 Median = 193 Minimum = 57 Maximum = 282			Heimstad *et al.* (2018)

Location	**Year/ Comment**	**Units**	**Concentration**	**Dominant homologue (carbon chain) (relative abundance %)**	**Associated congener (chlorination) (relative abundance)**	**Reference**
Chongming Island, China	Soil	ng/g	Minimum = 2.56 Maximum = 96.3 Median = 7.32		a	Sun *et al.* (2013).
Jiaojiang River, China	Soil samples within 5 km of the e-waste dismantling centres	ng/g dw	507 to 4.40 × 106	C_{14} (50.8 - 70.7%) C_{15} (17.4 - 22.7%) C_{16} (7.32 - 14.2%) C_{17} (2.98 - 13.2%)	Cl_{7-8} (43.4 - 71.0% of ∑MCCPs)	Xu *et al.* (2019)
Jiaojiang River, China	Sediment samples from the surrounding area	ng/g dw	271 – 2.72 × 104	C_{14} (35.6 - 85.9%) C_{15} (9.6 - 26.8%) C_{16} (3.58 - 21.2%) C_{17} (0.97 - 18.4%)	Cl_{6-7} (47.0 - 69.5% of ∑MCCPs)	Xu *et al.* (2019)
Yangtze River, China	Sediments from the middle reaches of the Yangtze River	ng/g dw	Not detected to 14.6 ng/g dw	C_{14} (57.3 – 88.8%) C_{15} (8.13 – 21.0%) C_{16} (1.52 – 14.6%) C_{17} (1.17 – 12.9%)	Cl_{7-8} (44.6 – 79.2% of ∑MCCPs)	Qiao *et al.* (2017)
Yellow River, China	(n=5) Sediment samples from the middle reaches of the Yellow River	ng/g dw	20.5 – 93.7	C_{14} (87.0 – 93.4%) C_{15} (5.2 – 9.5%) C_{16} (1.0 – 2.5%) C_{17} (0.4 – 1.0%)	Cl_{7-8}	Xia *et al.* (2016)
Shanghai river system, China	2016 (n=74) sediment mean (min-max)	ng/g	947 (10.1 - 10 8000)	$C_{14}Cl_{6–8}$	Two defined clusters of chlorination identified: Cl_7 and Cl_8; and Cl_5, Cl_6 and Cl_7	Wang *et al.* (2019)
Lake Bosten, China	2014 surface sediment (min - max)	ng/g dw	35 - 76	C_{14} (44-55%) C_{15} (23-28%) C_{17} (9-17%)	Cl_7 (24-33%) and Cl_8 (26-31%)	Zhang *et al.* (2019)
Lake Quinghai, China	2014 surface sediment	ng/g dw	120	C_{14} (44-55%) C_{15} (23-28%) C_{17} (9-17%)	Cl_7 (24-33%) and Cl_8 (26-31%)	Zhang *et al.* (2019)
Lake Hongfeng, China	2018 surface sediment (min - max)	ng/g dw	420 - 430	C_{14} (44-55%) C_{15} (23-28%) C_{17} (9-17%)	Cl_7 (24-33%) and Cl_8 (26-31%)	Zhang *et al.* (2019)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Lake Chaohu, China	2011 & 2014 surface sediment	ng/g dw	12 (SY 2011) & 30 (SY 2014)	C_{14} (44-55%) C_{15} (23-28%) C_{17} (9-17%)	Cl_7 (24-33%) and Cl_8 (26-31%)	Zhang *et al.* (2019)
Lake Taihu, China	2014 surface sediment (min - max)	ng/g dw	260 - 690	C_{14} (44-55%) C_{15} (23-28%) C_{17} (9-17%)	Cl_7 (24-33%) and Cl_8 (26-31%)	Zhang *et al.* (2019)
Lake Dianchi, China	2014 surface sediment (min - max)	ng/g dw	360 - 450	C_{14} (44-55%) C_{15} (23-28%) C_{17} (9-17%)	Cl_7 (24-33%) and Cl_8 (26-31%)	Zhang *et al.* (2019)
Lake Erhai, China	2014 surface sediment (min - max)	ng/g dw	230 - 1 500	C_{14} (44-55%) C_{15} (23-28%) C_{17} (9-17%)	Cl_7 (24-33%) and Cl_8 (26-31%)	Zhang *et al.* (2019)
Lake Chengai, China	2006 surface sediment	ng/g dw	2 700	C_{17} (36%) C_{14-16}		Zhang *et al.* (2019)
Lake Bosten, China	2006 (100 years) sediment core	ng/g dw	20 (SY 1935) – max 40 (sedimentation year 2006)			Zhang *et al.* (2019)
Lake Quinghai, China	2006 (151 years) sediment core	ng/g dw	20 (SY 1869) – max 86 (SY 2006)			Zhang *et al.* (2019)
Lake Hongfeng, China	2006 (37 years) sediment core	ng/g dw	38 (SY 1969) – max 430 (SY 2006)			Zhang *et al.* (2019)
Lake Hongfeng, China	2019 (25 years) sediment core	ng/g dw	280 (SY 1994) - max 430 (SY 2019)			Zhang *et al.* (2019)
Lake Sihailongwan, China	2006 (241 years) sediment core	ng/g dw	23 (SY 1841) - max 270 (SY 2006)			Zhang *et al.* (2019)
Lake Chaohu, China	2006 (100 years) sediment core	ng/g dw	16 (SY 1965) - 25 (SY 2006) max - 31 (SY year 1991)			Zhang *et al.* (2019)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Lake Chaohu, China	2011 (70 years) sediment core	ng/g dw	11 (SY 1978) - 20 (SY 2011) max - 44 (SY 2000)			Zhang *et al.* (2019)
Lake Taihu, China	2006 (56 years) sediment core	ng/g dw	15 (SY 1972) - 200 (SY 2006) max - 230 (SY 1986)			Zhang *et al.* (2019)
Lake Taihu, China	2017 sediment core	ng/g dw	110 (SY 1980) - max 850 (SY 2017)			Zhang *et al.* (2019)
Lake Chengai, China	2006 sediment core	ng/g dw	23 (SY 1970) - max 2 700 (SY 2006)			Zhang *et al.* (2019)
Lake Dianchi, China	2006 sediment core	ng/g dw	30 (SY 1927) - max 280 (SY 2006)			Zhang *et al.* (2019)
Lake Dianchi. China	2018 sediment core	ng/g dw	12 (SY 1961) - max 350 (SY 2018)			Zhang *et al.* (2019)
Lake Erhai, China	2012 sediment core	ng/g dw	30 (SY 1863) - max 470 (SY 2006)			Zhang *et al.* (2019)
Himmerfjärden, Sweden	2015 (135 years) sediment core - emission source sewage treatment plant	ng/g dw	< LOQ (SY 1881) - 10 (SY 2015) max - 15.0 (SY 1991)	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_6 (51% Cl wt. average)	Yuan *et al.* (2017)
Umeå, Sweden	2015 (61 years) sediment core - emission source wood industry	ng/g dw	< LOQ (SY 1954) - max 93 (SY 2015)	$C_{14} > C_{15} > C_{16} > C1_7$	Cl_6 (51% Cl wt. average)	Yuan *et al.* (2017)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Nyköping , Sweden	2008 (126 years) sediment core - emission source steel factory	ng/g dw	< LOQ (SY 1917) - max 1200 (SY 2008)	$C_{14} > C_{15} > C_{16} > C_{17}$	Cl_6 (51% Cl wt. average)	Yuan *et al.* (2017)
Dongguan City, Pearl River Delta	2011 (n=17) reservoir sediment samples industrial zones mean (min-max)	ng/g	206 (29.1 - 601)	C_{14} (64.2%) C_{15} (21.2%) C_{16} (9.0%) C_{17} (5.5%)	Cl_{7-8} (62.0% of congeners)	Wu *et al.* 2020
Dongguan City, Pearl River Delta	2011 (n=17) river sediment samples industrial zones mean (min-max)	ng/g	694 (14.0 - 1 581)	C_{14} (64.2%) C_{15} (21.2%) C_{16} (9.0%) C_{17} (5.5%)	Cl_{7-8} (62.0% of congeners)	Wu *et al.* 2020
Oceanic marine sediments MAREANO programme: Svalbard	2009 – 2015 10 samples LOD 19 µg/kg dw	µg/kg	<LOD			Boitsov *et al.,* 2016
Oceanic marine sediments MAREANO programme: Eastern Barents Sea	2017 (n=5) 1 of 5 samples contained MCCPs > LOD (655 µg/kg)	mg/kg	2.8			Boitsov and Klungsøyr, 2018
Oceanic marine sediments MAREANO programme: Svalbard	2018 (n=8) 2 of 8 samples contained MCCP > LOD (334 µg/kg)	ng/g	1. 410 Kongsfjorden 2. 536 Rijpfjorden 3. 1376 Svalbard (2017 samples) 4. 655 Svalbard (2017 samples)			Boitsov *et al.* 2019

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Oceanic marine sediments MAREANO programme: Bjørnøya and Svalbard	2019 (n=10) LOD = 6.9 µg/kg dw	ng/g	< LOD in all sediments			Boitsov and Sanden, 2020
Akvaplan-NIVA project Barents Sea	2006-7 (n=11) marine surface samples >LOD in 1 sample	µg/kg dw	4.8			Bakke *et al.* (2008)
Pearl River Delta, South China	Soil	ng/g	Minimum = 1.95 Maximum = 188 Median = 7.98			Wang *et al.* (2014)
Switzerland	Soil Six sites (n=25 pooled sub-samples) 1989-2014 (5 sites) 1988-2013 (1 site)	ng/g	5.1 – 160			Bogdal *et al.* (2017)
China	(n=121) Surface soils from Chinese nation-wide agricultural lands	ng/g dw	127 – 1 969 (50.2% - 57.3% Cl wt.)	C_{14} (33.1%) C_{15} (27.1%) C_{16} (21.2%) C_{17} (18.6%)	Cl_5 (27.8%) > Cl_7 (22.2%) > Cl_6 (18.6%) > Cl_8 (17.8%) > Cl_9 (9.9%) > Cl_{10} (3.5%)	Aamir *et al.* (2019)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
China	(n=24) Soil cores from Chinese nation-wide agricultural lands	∑MCCPs (%)	Top 69.2% Middle 19.5% Bottom 11.3%		[the medium chain congener groups ($C_{14-17}Cl_{5-10}$) are more restricted in penetrating deeper into the soil column due to their lower water solubility and higher KOW values. Similarly, the proportion of higher chlorinated congeners (Cl_{8-10}) exponentially decreased with the increase of soil depth]	Aamir *et al.* (2019)
Dongjiang River, China	Topsoils (0−5 cm) at 60 sites	ng/g	59.3			Wang *et al.* (2013)
China	2013 – 2014 (n=25) Surface soils (uncultivated land)	ng/g dw	19.3 – 2074.8	C_{14}	Industry Cl_{8-9} Ambient Cl_{6-7}	Xu *et al.* (2016)
Shanghai, China	Suburb soils, 2017	ng/g dw	ND – 666			Wang *et al.* (2017)
Shanghai, China	2011 (n=42) farmland soil median	ng/g	15.0	Two clusters identified relating to the source of the CP Cluster 1 (n=30) C_{14} (54.0%) C_{15} (16.5%) C_{16} (15.2%) C_{17} (14.3%) Cluster 2 (n=71) C_{14} (30.2%) C_{15} (27.5%) C_{16} (19.3%) C_{17} (23.0%)	Cl_{7-9}	Wang *et al.* 2017
Shanghai, China	2011 (n=16) wasteland soil median	ng/g	13.8		Cl_{7-9}	Wang *et al.* 2017

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
Shanghai, China	2011 (n=27) green-land soil median	ng/g	20.4		Cl_{7-9}	Wang *et al.* 2017
Shanghai, China	2011 (n=16) wetland soil median	ng/g	15.4		Cl_{7-9}	Wang *et al.* 2017
Yangkou Chemical Industrial Park, Jiangsu Province, China	2018 (n=20) Total soil (min-max)	ng/g	15.1 - 739.6	C14 (53-73.8%) C15 (16-29.1%) C16 (4.7-13.0%) C17 (1.5-5.5%)	Cl_7 (17.4-44.5%) Cl_8 (31.1-46.3%) Cl_9 (11.0-28.6%)	Huang *et al.* 2020
Yangkou Chemical Industrial Park, Jiangsu Province, China	2018 (n=4) STP soil mean (min-max)	ng/g	282 (83.1 - 591)	C14 (64.6%) C15 (23.3%) C16 (8.7%) C17 (3.4%)	Cl_7 (17.4-44.5%) Cl8 (31.1-46.3%) Cl9 (11.0-28.6%)	Huang *et al.* 2020
Yangkou Chemical Industrial Park, Jiangsu Province, China	2018 (n=3) Canal soil (min-max)	ng/g	100 – 740	C14 (59.8%) C15 (26.2%) C16 (10.1%) C17 (3.9%)	Cl7 (17.4-44.5%) Cl8 (31.1-46.3%) Cl9 (11.0-28.6%)	Huang *et al.* 2020
Yangkou Chemical Industrial Park, Jiangsu Province, China	2018 (n=13) Road soil mean (min-max)	ng/g	133 (15.1 - 295)	C14 (66.6%) C15 (21.8%) C16 (7.8%) C17 (3.8%)	Cl7 (17.4-44.5%) Cl8 (31.1-46.3%) Cl9 (11.0-28.6%)	Huang *et al.* 2020
Dongguan City, Pearl River Delta, China	2011 (n=49) surface soil samples industrial zones mean (min-max)	ng/g	369 (23.9 - 2 427)	C14 (70.1%) C15 (18.0%) C16 (7.6%) C17 (4.3%)	Cl6-8 (78.7% of congeners)	Wu *et al.* 2020
Tibetan plateau soil	n=83 SCCP **MCCP**	µg/g TOC	1.0-4.3 (2.4) **0.8-3.3**	C_{10-11} $\mathbf{C_{14-15}}$	Cl_{7-8} $\mathbf{Cl_{7-8}}$	Wu *et al.* (2020)

Location	Year/ Comment	Units	Concentration	Dominant homologue (carbon chain) (relative abundance %)	Associated congener (chlorination) (relative abundance)	Reference
German ESB Soil	Root felt, overlay or topsoil n=8 pooled samples 2018-2019	ng/g dw	18 (11-49)	C_{14}=C_{15}>C_{16-17}	Mean 57% Cl wt.	Yuan *et al.* 2022
Norway NILU report 2020	Soil	ng/g dw	<LOD			Heimstad et al 2021
German ESB Suspended particulate matter	n=8 pooled samples 2018	ng/g dw	170 (110-520)	C_{14}=C_{15}>C_{16-17}	Mean 54% Cl wt.	Yuan *et al.* 2022
German ESB Soil	Root felt, overlay, or topsoil n=8 pooled samples 2018-2019	ng/g dw	18 (11-49)	C_{14}=C_{15}>C_{16-17}	Mean 57% Cl wt.	Yuan *et al.* 2022
Tibetan plateau Soil	n=83 SCCP **MCCP**	µg/g TOC	1.0-4.3 (2.4) **0.8-3.3**	C_{10-11} **C_{14-15}**	Cl_{7-8} **Cl_{7-8}**	Wu *et al.* (2020)

Table 26: MCCPs detected in sources of human exposure of concern, not included in EFSA 2020

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Baby food	22 countries	Median concentrations n=86	ng/g ww ng/g lw	1.6 64	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*
Baby food Fruit or Vegetable puree	22 countries	Median concentrations n=23 Detection frequency=100%	ng/g ww ng/g lw	1.8 438	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*
Baby food Ready to eat cereal and porridge	22 countries	Median concentrations n=8 Detection frequency=100%	ng/g ww ng/g lw	1.2 120	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*
Baby food Pureed dessert	22 countries	Median concentrations n=11 Detection frequency=82%	ng/g ww ng/g lw	0.6 2.2	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*
Baby food Meat or fish based meal	22 countries	Median concentrations n=8 Detection frequency=87%	ng/g ww ng/g lw	1.6 48	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
Baby food Dry cereal and porridge	22 countries	Median concentrations n=19 Detection frequency=95%	ng/g ww ng/g lw	2.1 32	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*
Baby food Biscuits, wafers and crisps	22 countries	Median concentrations n=9 Detection frequency=89%	ng/g ww ng/g lw	1.9 13	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*
Baby food Infant formula	22 countries	Median concentrations n=2 Detection frequency=100%	ng/g ww ng/g lw	2.3 20	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*
Baby food Yoghurt or yoghurt-related	22 countries	Median concentrations n=6 Detection frequency=100%	ng/g ww ng/g lw	0.9 21	$C_{14}Cl_{6-7}$ and $C_{15}Cl_{6-7}$ most abundant	Cl_{6-7}	Perkons *et al.* (2022)*
Hand blender leachate in foods	N/A	n=16 hand blenders Blended cooking oil/water mixture 1mL oil mixed with 100mL water	µg/g oil median (range)	0.972 (<LOD-40.89)	C_{14} most abundant	52-56% Cl wt.	Yuan *et al.* 2017*

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
		12/16 CPs above LOQ MCCPs dominant in 8/12					
Vitamin supplements	Germany	25 dietary supplements CPs detected in 12/25 MCCPs detection frequency 44% >35 000 in all 6 supplements containing palm oil	ng/g lw	310-151 000 (<100 in 13)			Sprengel *et al.* 2019
Home-produced chicken eggs	South-China (near e-waste site)	2013 and 2016 samples Range median 2013; median 2016	ng/g lw	125-91100 (1030; 999)	C_{14} 41% of MCCPs	Cl_{7-9} dominant	Zeng *et al.* 2018
Household baking oven doors	Germany	21 ovens CPs detected in 10/21 of samples. Either very high concentrations or <LOD	µg/g	100 000; 1100 (2200-93299)	C_{14} 59-70% C_{15} 26-33%	Cl_{6-7} dominant	Gallistl *et al.* 2018

Sample	Location	Comment	Units	Level	Dominant homologue (relative abundance %)	Associated congener (relative abundance)	Reference
		Geometric mean; median (range in detected samples)					
Household use dishcloths		n=19 dishcloths Used for 14 days in household kithcen MCCPs>>> than other polyhalogenated contaminants CPs detected in 58% of samples Mean; Median (Range)	ng/dish cloth	4 600; 1100 (<1.4-55 400)			Gallistl *et al.* 2017

* median concentration calculated by Environment Agency from data in the paper