Supplementary Materials

Occurrence, distribution and health risk of short-chain chlorinated paraffins (SCCPs) in China: A critical review

Xufeng Zhang [1,2,3], Ru Fan [1], Yang Xu [1], Yun-Ze Gao [1], Aaron Bizimana [4], Anastacia Rochelle Naidoo [5], Bao-Cang Han [1], Xiang-Zhou Meng [1,3,4,*]

[1] State Key Laboratory of Pollution Control and Resources Reuse, College of Environmental Science and Engineering, Tongji University, Shanghai 200092, China

[2] Modern Agriculture Branch, Jiaxing Vocational and Technical College, 547 Tongxiang Road, Jiaxing 314036, Zhejiang Province, China

[3] Jiaxing-Tongji Environmental Research Institute, 1994 Linggongtang Road, Jiaxing 314051, Zhejiang Province, China

[4] UNEP-Tongji Institute of Environment for Sustainable Development (IESD), College of Environmental Science and Engineering, Tongji University, Shanghai 200092, China

[5] English Language Centre, School of Languages, Xi'an Jiaotong-Liverpool University, 111 Ren'ai Road, Su-zhou Industrial Park, Suzhou, Jiangsu Province, 215123, China

[*] Corresponding author email: xzmeng@tongji.edu.cn (X.-Z. Meng).

Number of Table: 16; Number of Figure: 6

Southern China; NW: Northwestern China; SW: Southwestern China; CS: China sea areas; BA: Background area.

Table S1. Concentrations of SCCPs in air samples in China.

Region	Location	Sampling time	Sample	Matrice	Concentration (ng/m^3)	Reference
China	18 Chinese cities[a]	2008	Ambient air	Gas phase	13.5–517	[1]
	10 Chinese cities[b]	2013–2014	Ambient air	Particle phase ($PM_{2.5}$)	1.98–274	[2]
Northeastern China	Dalian	2010 and 2016	Ambient air	Gas and particle phases	15.1–66.4 (2010); 65.3–91.0 (2016)	[3]
	Dalian	2016	Ambient air	Gas and particle phases	16.2–168	[4]
	Dalian	2016–2017	Ambient air	Gas phase	4.04–78.0	[5]
Northern China	Beijing	2011	Ambient air	Gas and particle phases	1.90–332	[6]
	Beijing	2013–2014	Indoor air	Gas phase	60.0–1350	[7]
	Beijing	2016	Indoor air	Gas phase	9.77–966	[8]
	Beijing	2016	Indoor and outdoor air	Particle phase (PM_{10})	38.3–87.7 (indoor); 16.9–28.8 (outdoor)	[9]
Eastern China	Jinan	2016	Ambient air	Particle phase ($PM_{2.5}$)	9.80–105	[10]
	Zibo	2016	Inside and outside a CP production plant	Gas and particle phases	129–1442 (inside); 89.0–333 (outside)	[11]
	3 cities in the YRD[c]	2011–2012	Ambient air	Gas phase	6.08–63.2	[12]
Southern China	Guangzhou	2017	Indoor air	Particle phase	6.20–17.8	[13]
	Shenzhen	2013–2014	Ambient air	Gas and particle phases	1.11–39.8	[14]
	3 cities in the PRD[d]	2009–2010	Ambient air	Gas phase	0.95–106	[15]
	9 cities in the PRD[e]	2017	Indoor and outdoor air	Particle phase	2.90–51.8 (indoor); 1.60–32.5 (outdoor)	[16]
Southwestern China	Lhasa	2012–2015	Ambient air	Gas phase	1.10–14.4	[17]
China sea areas	Bohai Sea	2016	Ambient air	Gas and particle phases	3.31–30.4	[18]
Background area	Shergyla Mountain	2012–2015	Ambient air	Gas phase	0.13–1.27	[17]

[a]Changchun, Shenyang, Beijing, Tianjin, Huade, Qingdao, Taiyuan, Xi'an, Wuhan, Shanghai, Hangzhou, Xiamen, Taizhong, Guangzhou, Hongkong, Nanning, Kunming and Jianfeng Mountain.

[b]Beijing, Chengdu, Lanzhou, Wuhan, Taiyuan, Guiyang, Xinxiang, Guangzhou, Nanjing and Shanghai.

[c]Suzhou, Wuxi and Nantong.

[d]Guangzhou, Dongguan and Huizhou.

[e]Guangzhou, Shenzhen, Dongguan, Foshan, Zhongshan, Zhuhai, Huizhou, Zhaoqing and Jiangmen.

PRD: Pearl River Delta.

YRD: Yangtze River Delta.

Table S2. Concentrations of SCCPs in dust samples in China.

Region	Location	Sampling time	Sample	Concentration (μg/g dw)	Reference
China	China	2008–2014	Indoor dust	106–808	[19]
	4 major e-waste recycling sites[a]	2013	Indoor dust	1.80–240	[20]
Northeastern China	Harbin	2013	Indoor dust	10.1–173	[21]
	Dalian	2015	Indoor dust	16.0–361	[22]
Northern China	Beijing	2015	Indoor and outdoor dust	254–12,585 (indoor); 13.0–49,118 (outdoor)	[23]
	Beijing	2016	Indoor dust	5.35–1022	[8]
Eastern China	A CP production plant in Zibo	2016	Indoor dust	440–16,688	[11]
Southern China	A mega e-waste recycling industrial park in Qingyuan	2017	Indoor dust	246–19,900	[24]

[a]Taizhou, Guiyu, Dali and Qingyuan.

Table S3. Concentrations of SCCPs in water samples in China.

Region	Location	Sampling time	Sample	Concentration (ng/L)	Reference
Northeastern China	Liaodong Bay	2012	Seawater	4.10–13.1	[25]
	Pulandian Bay	2012	Seawater	494–1490	[26]
Northern China	Beijing	2010	Lake water	162–176	[27]
	Beijing	2016	Drinking water	20.0–26.0	[8]
	Sewage treatment plant	2010	Wastewater	364–4700	[27]
	Sewage treatment plant	2012	Wastewater	27.0–184	[28]
	Baiyangdian Lake[a]	2016	Lake water	1563-56,306	[29]
Eastern China	The intertidal zone of Shandong Peninsula	2017	Seawater	370–548 (Yellow Sea); 573–1978 (Bohai Sea)	[30]
	Shanghai	2016	River water	15.0–1640	[31]
Central China	The middle reaches of Yangtze River[a]	2016	River water	1131–65,640	[29]
Southern China	Pearl River Estuary	2012–2013	Seawater	180–460	[32]
	An enclosed freshwater pond[b]	2014	Pond water	61.0 ± 5.50	[33]
China sea areas	Bohai Sea	2016	Seawater	11.0–110	[18]

[a]these concentrations were extremely high and would not be analyzed in this paper.

[b]near an e-waste recycling site in Qingyuan.

Table S4. Concentrations of SCCPs in soil samples in China.

Region	Location	Sampling time	Sample	Concentration (ng/g dw)	Reference
China	31 provinces of China	2016	Agricultural soil	38.7–1609	[34]
Northeastern China	Liaohe River Basin	2010	Agricultural soil	56.9–189	[35]
	A CP production plant in Dalian	2013–2014	Ambient and industrial soil	1018–1824 (in plant); 24.8–482 (surrounding environment)	[36]
Northern China	Beijing	2010	Agricultural soil	160–1450	[37]
Eastern China	A CP production plant in Zibo	2016	Ambient and industrial soil	27,508-554,161 (in plant); 102–441 (surrounding environment)	[11]
	The intertidal zone of the Shandong Peninsula	2017	Ambient soil	50.1–266	[30]
	Yangkou chemical industrial park in Jiangsu province	2018	Ambient and industrial soil	37.5–996	[38]
	Shanghai	2011	Ambient soil (background)	0.42–420	[39]
	Shanghai	2011	Ambient soil (urban)	ND–615	[40]
	Shanghai	2011	Ambient soil (suburban)	ND–697	[41]
	An e-waste dismantling area in Taizhou	2008 and 2010	Agricultural soil	30.4–530	[42]
	An e-waste dismantling area in Taizhou	2011	Ambient soil	226–755	[43]
	An e-waste dismantling area in Taizhou	2008–2009	Ambient soil	48.0–1298	[44]
	An e-waste dismantling area in Taizhou	2017	Ambient and agricultural soil	68.5–220,000	[45]
Southern China	Guangzhou	2012	Ambient and agricultural soil	6.80–541	[46]
	Guangzhou	2009–2010	Ambient and agricultural soil	1.45–25.5	[47]
	Pearl River Delta	2009–2010	Ambient soil	1.90–236	[15]
	A CP production plant brownfield site in Guangzhou	2018	Industrial soil	ND–5090	[48]
Southwestern China	Chengdu	2014	Ambient and agricultural soil	0.22–3.26	[49]
	Yunnan	2016	Ambient soil	79.0–948	[50]
Background area	Tibetan Plateau	2012–2014	Ambient soil	81.6 ± 31.1	[51]
	Tibetan Plateau	2010–2016	Ambient soil	1.00–4.30[a]	[52]

[a]μg/g TOC.

Table S5. Concentrations of SCCPs in sediment samples in China.

Region	Location	Sampling time	Sample	Concentration (ng/g dw)	Reference
China	China Coastal Estuaries	2011	Marine sediment	242–1450	[26]
	Nine lakes	2006–2019	Lake sediment	28.0–400 (2006); 59.0–650 (2013–2019)	[53]
Northeastern China	Liaohe River Basin	2010	River sediment	39.8–480	[35]
	Liaohe Estuary	2009	Marine sediment	64.9–407	[54]
	Liaohe Estuary	2010	Marine sediment	64.9–1683	[55]
	Liaodong Bay	2012	Marine sediment	65.0–541	[25]
	Jinzhou Bay	2011	Marine sediment	ND–1680	[26]
	Dalian Bay	2011	Marine sediment	227–13,800	[26]
Northern China	Beijing	2010	Lake sediment	1100–8700	[27]
Eastern China	Laizhou Bay	2016	River and marine sediment	8.40–2000 (river sediment); 5.10–22.0 (marine sediment)	[56]
	The intertidal zone of the Shandong Peninsula	2017	Marine sediment	17.6–453	[30]
	Shanghai	2016	River sediment	ND–2020	[31]
	Qiantang River	2011	River sediment	46.0–670	[43]
	An e-waste dismantling area in Taizhou	2017	River sediment	32.5–12,900	[45]
Central China	The middle reaches of the Yellow River	2015	River sediment	11.6–9760	[57]
	Henan section of the Yellow River	2014	River sediment	11.8–2792	[58]
	The middle reaches of the Yangtze River	2015	River sediment	4.19–41.6	[59]
Southern China	Pearl River Delta	2009–2010	River sediment	320–6600	[60]
	Pearl River Delta	2009–2010	River sediment	224–3800	[61]
	PRD, Shenzhen and Hong Kong	2012–2013	Marine sediment	ND–1540[b]	[62]
	Pearl River Estuary	2012–2013	Marine sediment	180–620	[32]
	Longtang, Qingyuan	2010	Pond sediment	3200–13,700	[63]
	An enclosed freshwater pond[a]	2014	Pond sediment	82.0–350,000	[33]
China sea areas	Bohai Sea	2010	Marine sediment	97.4–1757	[64]
	Bohai and Yellow Seas	2012	Marine sediment	11.6–196	[65]
	East China Sea	2011	Marine sediment	9.00–37.2	[66]
	East China Sea	2011	Marine sediment	4.40–64.8	[67]
	East China Sea	2012	Marine sediment	9.38–41.6	[68]

[a]near an e-waste recycling site in Qingyuan.

[b]46.3–1540 (PRD); 14.7–574 (Shenzhen coastal zone); ND–75.9 (Hong Kong waters).

Table S6. Concentrations of SCCPs in biota samples in China.

Region	Location	Sampling time	Sample	Concentration (ng/g dw)	Reference
Northeastern China	Liaohe Estuary	2009	Zooplankton, shellfish, shrimp and fish	759–17,000	[26]
	Liaohe Estuary	2010	Mollusk	1550–11,900	[55]
	Liaodong Bay	2009	Zooplankton, benthonic animal and fish	660–20,320	[69]
	Liaodong Bay	2012	Organisms	1600–17,000	[25]
	Liaodong Bay	2014	Fish	374–8430	[70]
	A CP production plant in Dalian	2013–2014	Coniferous leave	1281–2197 (in plant); 219–1742 (surrounding	[36]
Northern China	Beijing	2011	Pine needle and bark	320–4270 (pine bark); 400–4010 (pine needle)	[71]
	Beijing	2010	Fish	1000–3500	[27]
Eastern China	Yangtze River Delta	2011	Snake	1900–19,000 (liver); 1900–22,000 (muscle);	[72]
	Yangtze River Delta	2017	Wildlife species	69.0–360 (fish); 110–1400 (reptile); 710–3700	[73]
	Dianshan Lake, Shanghai	2014	Fish	810–30,000	[74]
	Shanghai	2015	Pine needle	ND–13,600	[75]
	An e-waste dismantling area in Taizhou	2008 and 2010	Snail	137–821	[42]
Southern China	Dongjiang	2012	Fish	53.0–614	[76]
	Pearl River Estuary	2013	Marine organisms	61.0–930	[77]
	Pearl River Estuary	2012–2013	Marine biota	74.0–2000	[32]
	Hong Kong water	2012	Marine organisms	15.3–569 (fish); 11.1–72.2 (crustacean);	[78]
	An e-waste recycling site in Qingyuan	2011–2012	Terrestrial bird species	620–17,000[a]	[79]
	An e-waste contaminated pond in Qingyuan	2016	Aquatic organisms	1200–250,000[a]	[80]
	An e-waste recycling site in Guiyu	2013	Catfish and pigeon	11,400–70,400 (catfish); 4700–11,000	[81]
China sea areas	Bohai Sea	2009	Mollusk	64.9–5510	[82]
	Bohai Sea	2010	Bivalve	476–3270	[64]
	South China Sea (Hong Kong)	2004–2014	Marine mammals	280–3900 (porpoises); 430–9100 (dolphins)	[83]
	Yellow Sea (YS), East China Sea (ECS), and	2008–2012	Fish	13.5–60.0 (YS); 15.4–63.2 (ECS); 9.30–38.0	[84]
Background area	Tibetan Plateau	2007–2010	Fish	3.90–107	[85]
	Tibetan Plateau	2010–2016	Bark, needle, lichen and moss	2900–7000 (bark); 2400–6400 (needle);	[52]
	Tibetan Plateau	2012–2014	Plant, plateau pika and eagle	173 ± 70.3 (plant); 258 ± 126 (plateau pika);	[51]

[a]lipid weight (lw).

Table S7. Comparison of the concentrations (ng/m^3) and compositional profiles (%) of SCCPs in air.

Region	Location	Range (mean/median)	C_{10}	C_{11}	C_{12}	C_{13}	Cl_5	Cl_6	Cl_7	Cl_8	Cl_9	Cl_{10}	Reference
China	18 Chinese cities, urban (G)[a]	16.0–517 (149/120)	42.20	37.20	12.70	7.88	30.60	42.40	22.30	3.95	0.70	0.03	[1]
	18 Chinese cities, remote (G)[a]	13.5–70.7 (43.7/-)	41.10	38.70	13.60	6.59	38.30	41.30	16.40	3.13	0.53	0.32	[1]
Northeastern China	Dalian (G, 2010)	6.12–64.3 (26.9/17.8)	51.08	26.82	12.48	9.62	14.14	56.74	19.15	8.20	1.40	0.36	[3]
	Dalian (P, 2010)	0.52–10.5 (3.38/2.18)	23.04	30.88	20.48	25.60	6.75	16.23	23.82	29.01	17.74	6.45	[3]
	Dalian (G, 2016)	63.6–89.1 (76.3/-)	55.71	21.63	12.21	10.45	13.79	54.60	22.12	7.77	1.46	0.27	[3]
	Dalian (P, 2016)	1.72–1.95 (1.84/-)	25.22	27.30	20.29	27.19	5.73	19.32	28.94	28.21	13.49	4.31	[3]
	Dalian (G, summer)	21.1–78.0 (43.0/37.1)	44.57	30.35	12.52	12.57	8.75	36.20	33.42	14.88	4.62	2.14	[5]
	Dalian (G, winter)	4.04–10.0 (7.28/5.82)	31.91	26.09	18.07	23.94	3.40	15.51	31.67	27.00	13.78	8.65	[5]
	Dalian (G, October 2016)	14.9–165 (89.1/-)	53.13	21.07	13.39	12.41	15.70	54.82	20.35	7.13	1.61	0.38	[4]
	Dalian (G, November 2016)	18.0–33.2 (25.2/-)	54.22	18.26	11.42	16.10	24.34	51.04	13.25	7.44	2.86	1.07	[4]
	Dalian (P, October 2016)	1.30–2.57 (1.95/-)	26.31	27.14	19.30	27.24	6.81	19.00	26.97	27.50	14.53	5.19	[4]
	Dalian (P, November 2016)	1.57–4.05 (2.68/-)	34.15	27.65	15.61	22.59	9.46	26.91	25.19	22.56	11.55	4.34	[4]
Northern China	Beijing (G, summer)	108–316 (189/-)	67.70	22.80	6.70	2.80	19.20	53.60	23.50	3.60	0.10	0.00	[6]
	Beijing (P, summer)	4.10–25.0 (11.0/-)	22.70	30.00	23.20	24.10	49.50	13.90	25.00	9.50	2.10	0.10	[6]
	Beijing (G, winter)	0.40–9.70 (2.40/-)	69.20	20.50	7.10	3.20	30.00	51.30	16.00	2.40	0.30	0.00	[6]
	Beijing (P, winter)	1.40–23.0 (5.20/-)	36.40	35.00	17.50	11.10	11.80	37.30	35.10	13.90	1.95	0.00	[6]
	Beijing (G, indoor air)	60.0–1350 (230/-)	69.30	24.10	4.50	2.10	18.60	50.50	25.50	5.20	0.20	0.00	[7]
	Beijing (G, indoor air)	9.77–966 (181/71.9)	61.00	29.00	7.50	2.50	6.00	48.00	38.00	6.00	1.80	0.20	[8]
	Beijing (P, indoor air)	38.3–87.7 (61.1/-)	49.01	25.53	6.74	8.65	-	-	-	-	-	-	[9]
	Beijing (P, outdoor air)	16.9–28.8 (23.9/-)	45.90	27.96	6.96	6.01	-	-	-	-	-	-	[9]
	Beijing (P)	6.17–48.1 (24.2/-)	18.90	43.20	20.40	17.50	3.16	18.60	32.80	23.30	15.40	6.72	[2]
Eastern China	Suzhou, Wuxi and Nantong (G, summer)	6.08–63.2 (59.1/64.8)	52.20	28.10	13.10	6.60	10.00	46.20	32.50	10.40	0.85	0.05	[12]
	Suzhou, Wuxi and Nantong (G, winter)	6.22–41.8 (19.1/15.8)	60.10	18.70	9.70	11.50	12.70	46.00	29.30	10.60	1.10	0.30	[12]
	Shanghai (P)	2.86–20.1 (8.00/-)	13.80	44.70	21.40	20.10	2.40	17.20	29.70	22.50	19.30	8.78	[2]
	Nanjing (P)	2.36–19.0 (8.23/-)	14.60	43.40	21.50	20.50	2.35	16.60	30.90	23.00	18.90	8.22	[2]
	Jinan (P, spring)	21.1–69.9 (37.7/37.7)	34.40	23.30	19.80	22.50	-	-	-	-	-	-	[10]
	Jinan (P, summer)	9.80–45.3 (29.7/29.7)	29.40	24.40	21.40	24.90	-	-	-	-	-	-	[10]
	Jinan (P, autumn)	10.1–46.4 (32.8/33.2)	34.30	22.50	19.90	23.20	-	-	-	-	-	-	[10]
	Jinan (P, winter)	27.0–105 (54.8/53.3)	39.80	21.40	17.60	21.20	-	-	-	-	-	-	[10]

	Zibo (G, inside a CP production plant)	97.7–988 (447/255)	63.00	14.60	9.80	12.50	-	-	-	-	-	-	[11]
	Zibo (P, inside a CP production plant)	31.7–454 (183/64.8)	40.40	29.20	16.60	13.70	-	-	-	-	-	-	[11]
	Zibo (G, outside a CP production plant)	81.7–316 (140/91.6)	60.70	18.60	9.90	10.90	-	-	-	-	-	-	[11]
	Zibo (P, outside a CP production plant)	7.40–16.5 (10.9/9.70)	47.70	28.60	12.50	11.20	-	-	-	-	-	-	[11]
Central China	Wuhan (P)	2.98–89.4 (25.8/-)	14.70	43.90	22.10	19.30	2.58	18.40	32.40	23.50	16.10	7.05	[2]
	Xinxiang (P)	8.41–85.2 (42.8/-)	17.90	46.80	18.70	16.50	2.75	17.70	31.70	24.40	16.90	6.63	[2]
	Taiyuan (P)	10.5–78.2 (28.8/-)	19.30	43.30	19.70	17.60	3.63	20.10	31.60	23.10	15.00	6.58	[2]
Southern China	Guangzhou, Dongguan and Huizhou (G)	0.95–106 (17.7/7.36)	34.00	34.00	20.00	12.00	8.44	40.10	35.60	11.40	2.90	1.61	[15]
	9 cities in the Pearl River Delta (P, indoor air)[b]	2.90–51.8 (12.9/12.6)	17.31	32.52	24.13	26.05	13.30	24.10	34.30	19.60	6.60	2.00	[16]
	9 cities in the Pearl River Delta (P, outdoor air)[b]	1.60–32.5 (6.10/5.75)	14.37	27.77	26.02	31.84	11.30	21.30	32.60	21.50	9.40	3.90	[16]
	Guangzhou (P)	3.47–23.3 (12.7/-)	12.90	42.30	23.50	21.30	2.77	17.90	30.20	22.00	18.00	9.12	[2]
	Guangzhou (P, indoor air)	6.20–17.8 (13.8/13.8)	31.00	31.00	18.00	20.00	-	-	-	-	-	-	[13]
	Shenzhen (T)	1.11–39.8 (5.06/-)	-	-	-	-	-	-	-	-	-	-	[14]
Northwestern China	Lanzhou (P)	4.36–27.5 (14.7/-)	19.20	49.40	17.30	14.10	2.80	18.20	32.20	23.80	16.20	6.81	[2]
Southwestern China	Lhasa (G)	1.10–14.4 (5.53/5.53)	59.80	25.56	9.03	5.61	9.34	58.80	28.16	3.28	0.40	0.02	[17]
	Chengdu (P)	3.82–25.8 (11.8/-)	16.30	50.80	16.50	16.50	2.77	18.10	30.00	22.70	18.70	7.73	[2]
	Guiyang (P)	11.4–39.9 (23.6/-)	18.00	42.70	20.40	18.90	2.53	17.60	32.00	21.50	17.90	8.36	[2]
China sea areas	Bohai Sea (G, May 2016)	2.80–11.0 (5.60/-)	62.95	21.58	7.91	7.55	5.85	43.86	30.70	14.62	4.97	0.00	[18]
	Bohai Sea (P, May 2016)	0.51–3.60 (1.40/-)	18.06	23.61	20.83	37.50	0.00	9.78	31.55	37.85	18.30	2.52	[18]
	Bohai Sea (G, August 2016)	7.60–29.0 (17.0/-)	59.17	25.44	8.88	6.51	7.08	38.75	32.08	16.25	5.42	0.42	[18]
	Bohai Sea (P, August 2016)	0.31–1.40 (0.68/-)	29.41	26.47	16.18	27.94	0.00	14.84	35.16	37.50	12.50	0.00	[18]
Background area	Shergyla Mountain (G)	0.13–1.27 (0.46/0.44)	66.07	22.32	7.18	4.43	12.00	38.85	36.10	12.20	0.80	0.05	[17]

[a]Changchun, Shenyang, Beijing, Tianjin, Huade, Qingdao, Taiyuan, Xi'an, Wuhan, Shanghai, Hangzhou, Xiamen, Taizhong, Guangzhou, Hongkong, Nanning, Kunming and Jianfeng Mountain.

[b]Guangzhou, Shenzhen, Dongguan, Foshan, Zhongshan, Zhuhai, Huizhou, Zhaoqing and Jiangmen.

G: gas phase.

P: particle phase.

T: gas and particle phases.

-: data not available.

Table S8. Comparison of the concentrations (ng/L) and compositional profiles (%) of SCCPs in water.

Region	Location	Range (mean/median)	C_{10}	C_{11}	C_{12}	C_{13}	Cl_5	Cl_6	Cl_7	Cl_8	Cl_9	Cl_{10}	Reference
Northeastern China	Liaodong Bay (Seawater)	4.10–13.1 (7.70/-)	42.00	40.60	13.00	4.30	44.20	30.70	19.50	4.10	1.30	0.20	[25]
	Pulandian Bay (Seawater)	494–1490 (953/834)	23.60	32.10	23.30	21.30	13.40	24.60	31.50	20.60	7.49	2.66	[26]
Northern China	Beijing (STP[a] influent)	4200–4700 (4450/-)	21.70	32.20	27.50	18.60	2.00	12.00	35.90	32.10	13.50	4.50	[27]
	Beijing (STP[a] effluent)	364–416 (390/-)	16.20	34.70	35.10	14.00	8.50	23.70	29.60	24.40	9.55	4.30	[27]
	Beijing (Lake water)	162–176 (169/-)	15.20	35.00	35.00	14.80	8.47	19.00	32.90	25.80	10.20	3.73	[27]
	Beijing (STP[a] raw)	-(184/-)	39.10	27.20	17.20	16.50	8.65	30.30	33.50	17.30	7.57	2.70	[28]
	Beijing (STP[a] primary)	-(154/-)	35.00	30.80	18.60	15.60	5.84	25.30	37.00	20.10	9.09	2.60	[28]
	Beijing (STP[a] anaerobic)	-(52.0/-)	44.80	30.20	14.60	10.40	9.38	35.40	37.50	13.50	3.13	1.04	[28]
	Beijing (STP[a] secondary)	-(37.0/-)	50.80	29.00	13.10	7.10	18.90	43.20	27.00	8.11	2.70	0.00	[28]
	Beijing (STP[a] tertiary)	-(27.0/-)	47.20	30.80	13.40	8.60	18.50	40.70	29.60	7.41	3.70	0.00	[28]
	Baiyangdian Lake (Lake water)	1563–56,306 (7223/3169)	-	-	-	-	-	-	-	-	-	-	[29]
Eastern China	Shanghai (River water)	15.0–1640 (448/278)	17.81	17.72	21.89	42.58	12.29	20.45	25.40	16.85	14.00	10.99	[31]
	Shandong Peninsula (Seawater, Bohai Sea)	573–1978 (1256/-)	28.31	27.06	19.50	25.13	9.68	22.20	27.11	26.24	8.89	5.87	[30]
	Shandong Peninsula (Seawater, Yellow Sea)	370–548 (449/-)	33.33	23.76	18.73	24.17	7.51	19.72	26.85	26.96	12.19	6.78	[30]
Central China	Yangtze River (River water)	1131–65,640 (18,989/14,691)	-	-	-	-	-	-	-	-	-	-	[29]
Southern China	Pearl River Estuary (Seawater)	180–460 (270/-)	41.70	26.20	18.30	13.80	21.50	31.10	28.80	11.90	4.70	2.00	[32]
	Qingyuan (Pond water)	-(61.0/-)	26.70	28.90	22.30	22.10	6.60	13.80	38.20	24.10	12.70	4.60	[33]
China sea areas	Bohai Sea (Seawater, G, May 2016)	7.10–21.0 (14.0/-)	20.83	52.78	15.28	11.11	3.45	14.22	42.12	29.54	9.85	0.82	[18]
	Bohai Sea (Seawater, P, May 2016)	3.90–19.0 (8.60/-)	32.56	29.07	19.77	18.60	4.25	14.93	39.55	29.10	11.19	0.97	[18]
	Bohai Sea (Seawater, G, August 2016)	18.0–81.0 (44.0/-)	56.69	24.94	6.80	11.56	9.65	33.27	46.57	8.98	1.41	0.12	[18]
	Bohai Sea (Seawater, P, August 2016)	9.40–29.0 (19.0/-)	27.37	28.42	21.58	22.63	6.40	25.26	46.25	18.14	3.56	0.39	[18]

[a]sewage treatment plant.

-: data not available.

Table S9. Comparison of the concentrations (ng/g dw) and compositional profiles (%) of SCCPs in soil.

Region	Location	Range (mean/median)	C_{10}	C_{11}	C_{12}	C_{13}	Cl_5	Cl_6	Cl_7	Cl_8	Cl_9	Cl_{10}	Reference
China	31 provinces (Agricultural soil)	38.7–1609 (374/256)	30.60	28.40	21.10	19.90	27.20	18.10	21.20	13.90	11.60	7.90	[34]
Northeastern China	Liaohe River Basin (Paddy soil)	56.9–171 (109/110)	41.30	40.10	13.90	4.70	35.70	35.00	20.30	7.00	1.60	0.40	[35]
	Liaohe River Basin (Upland soil)	83.5–189 (124/112)	42.70	38.70	14.70	3.90	36.00	32.60	21.10	8.60	1.50	0.20	[35]
	Dalian (In-plant soil)	1018–1824 (1421/1421)	40.88	35.04	10.22	13.87	2.00	5.50	16.50	28.00	30.00	18.00	[36]
	Dalian (Ambient soil)	24.8–482 (142/107)	40.00	24.62	16.15	19.23	6.00	25.00	28.00	22.00	13.00	6.00	[36]
Northern China	Beijing (Farmland soil, wastewater irrigation)	305–1450 (702/588)	37.90	24.90	19.00	18.30	20.40	34.70	23.70	12.30	5.83	3.00	[37]
	Beijing (Farmland soil, mixed irrigation)	160–292 (229/233)	56.00	23.40	12.60	8.13	26.10	45.90	19.00	6.63	1.83	0.55	[37]
	Beijing (Farmland soil, groundwater irrigation)	-(200/-)	58.00	25.50	10.50	6.00	20.50	50.70	20.70	5.80	2.30	0.00	[37]
Eastern China	Chongming Island (Farmland soil)	1.20–210 (24.9/4.20)	25.50	22.60	23.10	29.00	9.87	16.70	21.70	22.20	15.80	13.80	[39]
	Chongming Island (Woodland soil)	0.42–14.0 (7.27/7.40)	14.20	34.20	16.00	36.40	10.60	17.20	21.40	21.30	15.40	14.10	[39]
	Chongming Island (Roadside soil)	31.0–420 (202/160)	19.40	25.90	19.40	35.30	8.87	17.00	21.80	21.50	17.60	13.30	[39]
	Shanghai (Background soil)	0.42–420 (62.3/9.60)	22.80	24.60	21.50	31.20	9.73	16.80	21.70	21.90	16.10	13.70	[39]
	Shanghai (Urban soil)	ND–615 (39.4/15.7)	16.30	36.50	17.20	29.90	21.70	17.60	22.10	17.30	12.30	8.96	[40]
	Shanghai (Suburban soil)	ND–697 (18.8/3.52)	13.66	20.04	14.41	51.89	6.28	17.13	34.79	23.99	11.06	6.76	[41]
	Zibo (In-plant soil)	27,508–554,161 (306,740/322,645)	16.40	21.50	29.80	32.30	0.80	5.70	16.80	25.60	19.80	31.30	[11]
	Zibo (Farmland and village soil)	102–441 (248/241)	26.60	23.70	23.30	26.30	13.30	20.00	24.00	22.70	9.40	10.60	[11]
	Shandong Peninsula (Coastal soil)	50.1–266 (94.0/79.3)	29.30	22.70	21.20	26.80	-	-	-	-	-	-	[30]
	Jiangsu (Canal soil, chemical industrial park)	137–996 (456/234)	28.80	17.40	19.50	34.30	5.50	25.50	38.50	22.00	7.00	1.50	[38]
	Jiangsu (STP[a] soil, chemical industrial park)	210–706 (353/248)	30.00	29.50	14.30	26.20	7.00	24.50	39.00	21.00	7.50	1.00	[38]
	Jiangsu (Road soil, chemical industrial park)	37.5–321 (133/104)	37.60	21.50	15.20	25.70	6.50	28.00	38.50	21.00	5.50	0.50	[38]
	Taizhou (Ambient soil, e-waste dismantling area)	226–755 (423/332)	34.00	22.00	26.00	18.00	1.00	8.00	16.00	27.00	25.00	23.00	[43]
	Taizhou (Ambient soil, e-waste dismantling area)	48.0–1298 (277/135)	38.60	26.90	17.30	17.20	0.00	43.10	32.40	17.10	5.72	1.64	[44]
	Taizhou (Paddy soil, e-waste dismantling area)	30.4–530 (80.2/-)	32.10	31.90	20.50	15.50	25.10	40.50	26.50	5.80	1.20	0.90	[42]

	Taizhou (Farmland soil, e-waste dismantling area)	156–1160 (658/-)	19.90	27.00	25.00	28.10	3.50	13.00	26.00	30.00	16.00	11.50	[45]
	Taizhou (Woodland soil, e-waste dismantling area)	68.5 (-/-)	33.30	24.30	18.00	24.40	6.00	24.00	30.00	22.00	10.00	8.00	[45]
	Taizhou (Roadside soil, e-waste dismantling area)	1900–220,000 (63,528/3975)	7.56	19.58	27.07	45.78	1.10	10.00	29.00	34.00	17.30	8.60	[45]
Southern China	Guangzhou (Background soil)	-(7.00/-)	26.00	28.90	22.20	13.70	9.85	22.90	22.10	18.40	12.30	14.70	[86]
	Guangzhou (Paddy soil)	20.0–206 (113/-)	28.40	30.20	19.80	21.50	17.30	27.20	25.90	14.00	8.70	6.90	[86]
	Guangzhou (Vegetable soil)	9.00–541 (104/16.0)	29.90	29.10	23.30	17.60	14.00	21.10	23.40	20.10	12.10	9.40	[86]
	Guangzhou (Woodland soil)	18.0–116 (59.3/51.0)	29.30	26.00	23.40	22.00	10.30	22.50	24.70	18.20	13.50	10.90	[86]
	Guangzhou (Woodland soil)	2.96–23.6 (10.4/-)	32.20	25.90	20.70	21.20	3.70	19.30	26.20	20.80	16.60	13.40	[47]
	Guangzhou (Vegetable soil)	1.45–372 (34.2/-)	31.70	35.00	21.50	21.70	5.30	18.90	28.70	20.70	15.80	10.60	[47]
	Guangzhou (Paddy soil)	2.97–23.1 (11.8/-)	33.20	25.10	20.20	21.50	4.50	21.40	29.70	20.30	15.30	7.80	[47]
	Guangzhou (Brownfield site soil)	ND–5090 (1017/430)	21.30	21.10	21.50	36.10	0.30	13.20	29.00	27.50	17.70	12.30	[48]
	Dongjiang River Basin (Urban and rural soil)	1.90–236 (18.3/-)	17.00	22.00	33.00	28.00	9.24	31.60	33.20	16.60	5.94	3.47	[15]
Southwestern China	Chengdu (Background soil)	0.62–0.85 (0.73/-)	30.40	24.70	19.50	25.30	3.40	21.90	32.60	23.10	13.80	5.25	[49]
	Chengdu (Paddy soil)	1.14–1.54 (1.30/-)	28.40	26.60	21.20	24.00	3.05	15.90	27.00	23.50	17.40	13.30	[49]
	Chengdu (Vegetable soil)	0.22–2.29 (1.16/-)	28.60	26.30	20.80	24.30	3.84	18.20	30.30	25.80	16.90	5.05	[49]
	Chengdu (Woodland soil)	0.32–1.74 (1.05/-)	31.10	26.00	19.20	23.90	4.45	20.80	30.20	26.30	13.80	4.45	[49]
	Chengdu (Green belt soil)	1.02–3.26 (2.02/-)	25.10	25.40	23.40	26.20	0.85	8.20	21.00	25.70	23.40	20.90	[49]
	Chengdu (Soil core)	0.42–2.29 (0.77/-)	-	-	-	-	-	-	-	-	-	-	[49]
	Yunnan (Ambient soil)	79.0–948 (348/317)	64.75	21.93	6.71	6.62	11.30	47.20	26.10	10.20	4.70	0.50	[50]
Background area	Nam Co Lake Basin (Grassland soil)	-(81.6/-)	59.80	26.00	8.50	5.70	15.90	33.00	28.20	17.30	4.40	1.20	[51]
	Ngari	1.00–4.30 (2.70)[b]	55.30	28.10	9.60	7.00	0.20	11.50	29.70	42.30	15.10	1.20	[52]
	Nyingchi	1.10–2.60 (1.90)[b]	58.80	25.70	7.40	7.10	0.40	12.00	30.30	41.40	15.80	2.10	[52]
	Namco	2.10–4.30 (3.20)[b]	52.30	27.20	11.50	9.00	0.30	7.40	28.20	44.40	18.20	1.50	[52]
	Shergyla Mountain	1.30–3.60 (2.40)[b]	39.20	21.60	22.50	16.70	2.50	22.20	39.70	28.60	6.40	0.60	[52]

[a]sewage treatment plant.

[b]μg/g TOC.

ND: not detected.

-: data not available.

Table S10. Comparison of the concentrations (ng/g dw) and compositional profiles (%) of SCCPs in sediment.

Region	Location	Range (mean/median)	C_{10}	C_{11}	C_{12}	C_{13}	Cl_5	Cl_6	Cl_7	Cl_8	Cl_9	Cl_{10}	Reference
China	China Coastal Estuaries (Marine sediment)	242–1450 (720/-)	31.90	26.90	19.60	21.60	26.80	21.70	20.50	16.30	10.70	4.00	[26]
	Nine Lakes (Lake sediment, 2006)	28.0–400 (178/160)	-	-	-	-	-	-	-	-	-	-	[53]
	Seven Lakes (Lake sediment, 2013-2014)	59.0–360 (172/100)	-	-	-	-	-	-	-	-	-	-	[53]
Northeastern China	Liaohe River (River sediment)	39.8–480 (216/193)	40.30	39.30	15.50	4.90	33.10	32.40	24.10	8.00	2.00	0.40	[35]
	Liaohe River (Marine sediment)	64.9–407 (186/144)	35.20	35.40	22.70	6.70	-	-	-	-	-	-	[54]
	Liaodong Bay (Marine sediment)	65.0–541 (299/-)	34.60	34.90	23.70	6.70	26.20	30.90	27.60	8.80	4.90	1.60	[25]
	Liaohe estuary (Marine sediment)	64.9–1680 (420/345)	34.60	34.90	23.70	6.70	26.10	30.60	27.70	8.65	5.40	3.70	[55]
	Jinzhou Bay (Marine sediment)	ND–1680 (667/-)	33.20	27.90	22.90	16.00	31.30	25.00	17.70	15.80	8.68	1.50	[26]
	Dalian Bay (Marine sediment)	227–13,800 (4040/-)	38.90	26.70	17.40	16.90	36.20	24.80	15.80	12.50	8.38	2.37	[26]
Northern China	Gaobeidian Lake (Surface sediment)	1100–8700 (5769/7370)	20.90	29.50	26.80	22.70	3.25	16.10	36.80	26.90	12.80	4.18	[27]
	Gaobeidian Lake (Upstream sediment core)	690–4670 (1700/1090)	27.50	23.50	22.50	26.50	5.96	16.00	28.70	23.00	17.30	9.06	[27]
	Gaobeidian Lake (Downstream sediment core)	730–9120 (4030/2250)	24.20	26.40	25.20	24.20	4.39	14.70	31.30	26.00	16.10	7.39	[27]
Eastern China	Qiantang River (River sediment)	46.0–670 (212/168)	17.00	27.00	29.00	27.00	5.30	14.70	30.00	32.00	13.00	5.00	[43]
	Shanghai (River sediment)	ND–2020 (308/89.3)	15.27	19.33	19.92	45.48	18.31	19.63	22.08	16.19	13.48	10.32	[31]
	Shandong Peninsula (Marine sediment, Bohai Sea)	69.5–453 (220/203)	-	-	-	-	-	-	-	-	-	-	[30]
	Shandong Peninsula (Marine sediment, Yellow Sea)	17.6–138 (60.8/52.3)	-	-	-	-	-	-	-	-	-	-	[30]
	Laizhou Bay (River sediment)	8.40–2000 (160/30.0)	-	-	-	-	-	-	-	-	-	-	[56]
	Laizhou Bay (Marine sediment)	5.10–22.0 (11.0/10.2)	33.20	31.30	18.90	17.50	8.50	34.00	34.90	16.00	4.20	2.40	[56]
	Taizhou (River sediment, e-waste dismantling area)	32.5–12,900 (3643/247)	18.42	15.74	13.82	52.01	3.40	18.70	35.50	24.40	8.80	9.20	[45]
Central China	Yellow River (River sediment)	11.6–9760 (903/80.0)	77.44	13.97	4.86	3.74	3.84	42.86	40.48	10.36	1.89	0.56	[57]
	Yellow River (River sediment)	11.8–2792 (262/71.5)	40.00	31.30	14.50	14.20	16.80	30.10	28.70	15.00	5.40	4.00	[58]
	Yangtze River (River sediment)	4.19–41.6 (20.8/19.2)	74.66	15.80	4.76	4.77	-	-	-	-	-	-	[59]
Southern China	Beijiang River (River sediment, low industrial areas)	480–810 (610/-)	30.30	26.30	22.90	20.60	8.75	23.40	22.80	20.90	13.60	10.60	[60]

Xijiang River (River sediment, low industrial areas)	320–700 (530/-)	30.30	26.30	22.90	20.60	8.75	23.40	22.80	20.90	13.60	10.60	[60]
Dongguan (River sediment, high industrial areas)	530–4700 (1200/-)	23.20	26.70	25.30	24.90	4.64	7.80	12.60	20.20	22.00	32.80	[60]
Guangzhou (River sediment, high industrial areas)	580–2500 (1100/-)	23.20	26.70	25.30	24.90	4.64	7.80	12.60	20.20	22.00	32.80	[60]
Shunde (River sediment, high industrial areas)	510–3700 (1100/-)	23.20	26.70	25.30	24.90	4.64	7.80	12.60	20.20	22.00	32.80	[60]
Dayan River (River sediment, e-waste dismantling area)	600–1100 (830/-)	31.30	24.00	23.80	20.80	7.83	16.20	20.70	23.70	18.40	13.10	[60]
Dayan River (River sediment, upper reaches)	600–690 (645/-)	28.70	26.10	23.40	21.80	9.25	22.70	22.40	20.80	15.40	9.55	[60]
Dayan River (River sediment, lower reaches)	910–1100 (1000/-)	34.30	21.50	24.30	19.70	6.20	8.70	18.80	27.10	22.00	17.20	[60]
Ponds (Pond sediment, e-waste dismantling area)	320–6600 (2800/-)	35.20	19.80	24.20	20.80	3.95	7.55	13.80	27.70	22.90	24.10	[60]
Pearl River Estuary (Marine sediment)	320–6600 (1700/-)	32.50	30.00	24.40	13.10	6.50	15.80	26.00	25.50	17.10	9.15	[60]
Pearl River Estuary (Sediment core, upper segments)	670–1100 (822/750)	24.00	28.60	24.90	22.50	-	-	-	-	-	-	[60]
Pearl River Estuary (Sediment core, deeper segments)	290–680 (454/458)	19.60	26.20	28.00	26.20	-	-	-	-	-	-	[60]
Dongguan section of the Dongjiang River (Sediment core)	290–1200 (-/-)	-	-	-	-	-	-	-	-	-	-	[61]
Dongguan section of the Dongjiang River (Sediment core, upper segments)	-(770/-)	24.10	28.70	25.20	22.00	-	-	-	-	-	-	[61]
Dongguan section of the Dongjiang River (Sediment core, deeper segments)	-(1500/-)	20.10	25.90	28.30	25.70	-	-	-	-	-	-	[61]
Guangzhou section of the Pearl River (Sediment core)	400–3800 (-/-)	-	-	-	-	-	-	-	-	-	-	[61]
The middle section of the Beijiang River (Sediment core)	270–730 (-/-)	-	-	-	-	-	-	-	-	-	-	[61]
The middle section of the Beijiang River	-	25.20	29.70	24.00	21.10	-	-	-	-	-	-	[61]

	(Sediment core, upper segments)												
	The middle section of the Beijiang River (Sediment core, deeper segments)	-	22.10	25.00	27.10	25.80	-	-	-	-	-	-	[61]
	Xijiang River Estuary (Sediment core)	224–624 (-/-)	-	-	-	-	-	-	-	-	-	-	[61]
	Xijiang River Estuary (Sediment core, upper segments)	-	25.20	29.70	24.00	21.10	-	-	-	-	-	-	[61]
	Xijiang River Estuary (Sediment core, deeper segments)	-	22.10	25.00	27.10	25.80	-	-	-	-	-	-	[61]
	Pearl River Delta (River sediment)	46.3–1540 (334/173)	20.70	19.10	21.30	38.90	6.90	10.30	20.80	28.20	20.00	13.80	[62]
	Shenzhen (Marine sediment)	14.7–574 (317/401)	25.20	22.00	21.90	30.80	10.60	12.50	21.10	27.20	17.90	10.70	[62]
	Hong Kong (Marine sediment)	ND–75.9 (22.0/12.2)	51.40	30.30	11.70	6.60	34.40	43.50	17.70	3.30	0.90	0.20	[62]
	Pearl River Estuary (Marine sediment)	180–620 (500/-)	29.50	27.50	20.00	23.00	2.00	10.00	21.00	24.00	22.00	21.00	[32]
	Qingyuan (Pond sediment, e-waste dismantling area)	3200–13,700 (7200/-)	30.50	25.70	23.10	20.70	8.30	22.50	23.40	22.80	13.20	9.80	[63]
	Dayan River (River sediment, background site)	590–1230 (823/-)	32.80	27.00	24.20	16.00	9.50	20.00	22.30	23.30	14.50	10.40	[63]
	Qingyuan (Pond sediment, e-waste dismantling area)	82.0–350,000 (100,000/-)	6.50	27.40	38.20	27.90	2.60	7.20	22.60	25.80	25.00	16.80	[33]
China sea areas	Bohai Sea (Marine sediment)	97.4–1757 (650/-)	37.40	31.90	20.10	10.50	20.00	35.20	27.30	10.50	5.26	1.62	[64]
	Bohai and Yellow Seas (Marine sediment)	14.5–85.2 (38.4/33.0)	44.90	28.90	15.90	10.30	19.30	41.20	25.90	8.12	3.89	1.61	[65]
	Yellow Sea (Sediment core)	11.6–196 (43.8/23.4)	54.30	28.90	11.00	5.90	19.90	47.40	23.80	5.78	2.48	0.63	[65]
	East China Sea (Marine sediment)	9.00–37.2 (24.0/24.7)	50.20	26.90	13.80	9.13	28.50	38.10	23.40	6.89	2.84	0.26	[66]
	East China Sea (Marine sediment)	5.80–64.8 (25.9/23.2)	49.40	28.00	13.70	8.90	-	-	-	-	-	-	[67]
	East China Sea (Sediment core, central-shelf mud)	15.9–46.5 (27.5/24.1)	40.70	27.50	16.80	15.00	-	-	-	-	-	-	[67]
	East China Sea (Sediment core, inner-shelf mud)	4.40–25.7 (10.3/9.10)	53.90	22.30	12.40	11.40	-	-	-	-	-	-	[67]
	East China Sea (Marine sediment, Zhejiang-Fujian mud area)	9.38–41.6 (22.9/21.5)	44.30	27.60	14.80	13.30	21.80	35.70	23.30	10.50	6.05	2.64	[68]

ND: not detected.

-: data not available.

Table S11. Comparison of the concentrations (ng/g dw) and compositional profiles (%) of SCCPs in biota.

Region	Location	Range (mean/median)	C_{10}	C_{11}	C_{12}	C_{13}	Cl_5	Cl_6	Cl_7	Cl_8	Cl_9	Cl_{10}	Reference
Northeastern China	Liaohe Estuary (Mollusk)	1550–11,900 (6140/5880)	36.50	40.40	16.10	6.95	31.60	25.10	27.00	12.10	3.80	3.70	[55]
	Liaohe Estuary (Zooplankton)	-(5600/-)	42.40	40.10	10.90	6.70	49.40	25.70	20.20	3.80	0.90	0.00	[26]
	Liaohe Estuary (Shellfish)	1550–11,900 (6140/5880)	34.50	36.50	18.70	10.30	36.90	26.60	22.30	10.30	3.00	0.90	[26]
	Liaohe Estuary (Shrimp/crab)	4040–8000 (6020/-)	37.20	37.60	16.20	9.00	48.80	23.40	17.30	7.20	2.40	0.87	[26]
	Liaohe Estuary (Fish)	759–17,000 (7040/-)	35.60	41.60	14.70	8.10	44.00	29.40	16.20	6.60	2.60	1.08	[26]
	Liaodong Bay (Organism)	660–20,320 (6350/5090)	37.50	44.90	13.30	4.33	–	–	–	–	–	–	[69]
	Liaodong Bay (Organism)	1600–17,000 (6680/-)	37.40	44.90	12.50	5.20	45.90	25.20	19.50	6.96	2.15	0.30	[25]
	Liaodong Bay (Zooplankton)	-(5600/-)	47.30	42.70	7.60	2.40	53.90	21.90	20.30	2.70	1.20	0.00	[25]
	Liaodong Bay (Invertebrates)	1600–11,900 (5960/-)	42.10	39.40	13.10	5.43	44.10	23.30	21.00	8.39	2.76	0.43	[25]
	Liaodong Bay (Fish)	4300–17,000 (7450/-)	34.00	46.40	14.40	5.23	47.40	27.20	17.90	5.70	1.59	0.18	[25]
	Liaodong Bay (Bastard halibut)	-(8430/-)	42.08	30.51	14.11	13.30	-	-	-	-	-	-	[70]
	Liaodong Bay (Turbot)	-(3998/-)	32.43	23.32	15.46	28.78	-	-	-	-	-	-	[70]
	Liaodong Bay (Ray)	-(2215/-)	65.85	22.03	8.16	3.95	-	-	-	-	-	-	[70]
	Liaodong Bay (Navodon septentrionalis)	-(1741/-)	28.70	21.95	23.70	25.65	-	-	-	-	-	-	[70]
	Liaodong Bay (Yellow croaker)	-(1287/-)	87.98	8.73	1.54	1.75	-	-	-	-	-	-	[70]
	Liaodong Bay (Bass)	-(946/-)	81.54	13.49	2.85	2.12	-	-	-	-	-	-	[70]
	Liaodong Bay (Capelin)	-(784/-)	30.78	24.57	26.45	18.21	-	-	-	-	-	-	[70]
	Liaodong Bay (Spanish mackerel)	-(632/-)	71.19	18.29	4.73	5.80	-	-	-	-	-	-	[70]
	Liaodong Bay (Abalone)	-(437/-)	37.07	24.98	21.97	15.98	-	-	-	-	-	-	[70]
	Liaodong Bay (Cod)	-(374/-)	78.21	14.78	3.43	3.57	-	-	-	-	-	-	[70]
	Dalian (Coniferous leaves, in-plant)	1281–2197 (1739/1739)	40.30	28.36	13.43	17.91	4.00	15.00	23.00	26.00	21.00	11.00	[36]
	Dalian (Coniferous leaves, ambient)	219–1742 (701/627)	50.79	12.70	19.05	17.46	15.00	35.00	23.00	15.00	8.00	4.00	[36]
Northern China	Gaobeidian Lake (Spirogyra)	-(4700/-)	27.00	23.20	22.00	27.80	3.88	10.70	25.10	21.80	22.70	15.90	[27]
	Gaobeidian Lake (Coccid)	-(3600/-)	23.30	26.10	25.40	25.20	5.40	12.60	29.20	22.40	18.40	12.10	[27]
	Gaobeidian Lake (Fish)	1000–3500 (1940/-)	17.10	33.00	33.40	16.50	6.64	14.90	34.80	27.30	12.40	3.98	[27]
	Beijing (Pine bark, winter)	320–4270 (980/-)	23.00	25.00	25.00	27.00	6.50	28.40	37.10	22.40	4.70	0.90	[71]
	Beijing (Pine bark, summer)	320–4270 (980/-)	39.00	30.00	17.00	14.00	8.40	36.70	34.60	17.10	2.60	0.60	[71]
	Beijing (Pine needle, winter)	400–4010 (1090/-)	29.00	27.00	22.00	22.00	5.10	23.50	38.90	25.20	6.40	0.90	[71]
	Beijing (Pine needle, summer)	400–4010 (1090/-)	41.00	30.00	16.00	13.00	7.70	42.20	32.80	14.80	2.00	0.50	[71]

Eastern China	Shanghai (Pine needle)	ND–13,600 (63.7/75.2)	25.08	24.60	21.22	29.10	7.21	24.95	29.16	18.31	11.92	8.46	[75]
	Yangtze River Delta (Red-backed rat snake, liver)	3800–19,000 (9000/-)[a]	-	-	-	-	-	-	-	-	-	-	[72]
	Yangtze River Delta (Red-backed rat snake, muscle)	1900–7700 (4400/-)[a]	-	-	-	-	-	-	-	-	-	-	[72]
	Yangtze River Delta (Red-backed rat snake, adipose)	ND–155 (52/-)[a]	-	-	-	-	-	-	-	-	-	-	[72]
	Yangtze River Delta (Short-tailed mamushi, liver)	1900–13,000 (5200/-)[a]	-	-	-	-	-	-	-	-	-	-	[72]
	Yangtze River Delta (Short-tailed mamushi, muscle)	8900–22,000 (16,000/-)[a]	-	-	-	-	-	-	-	-	-	-	[72]
	Yangtze River Delta (Short-tailed mamushi, adipose)	ND–160 (73.0/-)[a]	-	-	-	-	-	-	-	-	-	-	[72]
	Yangtze River Delta (Pond loach, fish)	140–360 (-/250)	-	-	-	-	-	-	-	-	-	-	[73]
	Yangtze River Delta (Rice field eel, fish)	69.0–160 (-/86.0)	-	-	-	-	-	-	-	-	-	-	[73]
	Yangtze River Delta (Red-backed rat, Reptile)	110–270 (-/140)	-	-	-	-	-	-	-	-	-	-	[73]
	Yangtze River Delta (Red-banded snake, Reptile)	-(-/280)	-	-	-	-	-	-	-	-	-	-	[73]
	Yangtze River Delta (Short-tailed mamushi, Reptile)	580–1400 (-/1100)	-	-	-	-	-	-	-	-	-	-	[73]
	Yangtze River Delta (Yellow weasel, Mammal)	710–3700 (-/1000)	-	-	-	-	-	-	-	-	-	-	[73]
	Yangtze River Delta (Peregrine falcon, Bird)	120–2300 (-/170)	-	-	-	-	-	-	-	-	-	-	[73]
	Yangtze River Delta (Collared scops owl, Bird)	<44.0–110 (-/60)	-	-	-	-	-	-	-	-	-	-	[73]
	Yangtze River Delta (Common cuckoo, Bird)	<28.0–160 (-/35)	-	-	-	-	-	-	-	-	-	-	[73]
	Dianshan Lake (Grass carp)	2900–7400 (4600/-)	59.00	28.00	9.00	4.00	22.00	42.00	26.00	8.00	2.00	0.00	[74]
	Dianshan Lake (Bighead carp)	1200–7200 (3300/-)	34.00	30.00	17.00	19.00	9.00	28.00	35.00	22.00	5.00	1.00	[74]
	Dianshan Lake (Silver carp)	1100–1600 (1300/-)	44.00	28.00	19.00	9.00	9.50	31.50	36.50	18.50	4.00	0.00	[74]
	Dianshan Lake (Crucian carp)	2600–21,000 (8900/-)	50.00	26.00	13.00	11.00	15.00	40.00	30.00	11.00	3.50	0.50	[74]
	Dianshan Lake (Common carp)	1100–30,000 (7600/-)	43.00	31.00	14.00	22.00	14.00	38.00	32.00	13.00	2.90	0.10	[74]
	Dianshan Lake (Snakehead)	810–5400 (2100/-)	41.00	27.00	16.00	16.00	20.00	39.00	25.00	11.00	4.50	0.50	[74]
	Dianshan Lake (Predatory carp)	2400–11,000 (4500/-)	44.00	31.00	13.00	22.00	14.00	34.00	32.00	15.00	4.60	0.40	[74]
	Dianshan Lake (Yellow catfish)	2800–10,000 (6000/-)	48.00	26.00	13.00	11.00	14.00	36.00	32.00	14.00	3.70	0.30	[74]
	Dianshan Lake (Rosy bitterling)	2000–7600 (3500/-)	29.00	25.00	20.00	26.00	9.00	21.00	29.00	25.00	13.00	3.00	[74]
	Dianshan Lake (Stone moroko)	1300–2300 (1800/-)	39.00	27.00	15.00	19.00	12.00	29.00	31.00	20.00	6.50	1.50	[74]
	Dianshan Lake (Bigmouth grenadier anchovy)	2600–4800 (3900/-)	46.00	27.00	13.00	14.00	9.00	31.00	35.00	19.00	5.00	1.00	[74]
	Dianshan Lake (Clam)	4800–25,000 (14,400/-)	55.00	24.00	10.00	11.00	16.00	40.00	29.00	11.00	3.70	0.30	[74]
	Dianshan Lake (Snail)	7800–16,000 (12,100/-)	48.00	25.00	13.00	14.00	14.00	39.00	31.00	12.00	3.80	0.20	[74]
	Dianshan Lake (Shrimp)	2000–3400 (2600/-)	61.00	28.00	7.00	4.00	24.00	50.00	20.00	6.00	0.00	0.00	[74]
	Taizhou (Hull, e-waste dismantling area)	47.6–387 (95.2/-)	39.70	33.80	15.70	10.80	21.10	43.20	29.60	4.50	1.40	0.20	[42]

	Taizhou (Rice, e-waste dismantling area)	4.90–55.1 (17.6/-)	35.90	34.20	17.80	12.20	27.60	38.40	23.10	8.70	1.70	0.50	[42]
	Taizhou (Snail, e-waste dismantling area)	137–821 (314/-)	31.80	35.50	16.00	16.70	18.60	39.00	29.50	9.10	2.30	1.50	[42]
Southern China	Dongjiang (Fish)	53.0–614 (180/-)	35.10	28.20	19.40	17.50	5.13	29.00	37.70	21.50	6.45	0.29	[76]
	Pearl River Estuary (Chinese herring)	79.0–240 (-/95.0)	21.60	24.60	24.80	29.00	7.60	19.40	29.10	25.50	12.10	6.30	[77]
	Pearl River Estuary (Sardine)	73.0–160 (-/110)	21.50	21.50	27.50	28.50	7.70	17.00	27.60	24.50	15.40	7.80	[77]
	Pearl River Estuary (Silver pomfret)	101–270 (-/130)	21.80	20.30	25.90	32.00	9.30	21.90	25.50	23.20	14.00	6.10	[77]
	Pearl River Estuary (Tapertail anchovy)	62.0–150 (-/89.0)	25.10	24.00	24.70	26.20	10.00	22.90	27.20	23.60	11.00	5.30	[77]
	Pearl River Estuary (Bombay duck)	61.0–120 (-/73.0)	17.30	24.30	27.00	31.40	8.50	17.60	25.20	26.10	15.70	6.90	[77]
	Pearl River Estuary (Shiba shrimp)	390–930 (-/670)	15.50	23.60	32.20	28.70	1.90	10.00	29.60	33.20	17.50	7.80	[77]
	Pearl River Estuary (Sword prawn)	100–140 (-/130)	16.20	22.60	29.60	31.60	9.30	15.50	27.90	26.40	13.90	7.00	[77]
	Pearl River Estuary (Japanese stone crab)	98–190 (-/130)	20.30	28.20	26.60	24.90	9.20	19.60	26.30	25.40	13.10	6.40	[77]
	Pearl River Estuary (Asiatic hard clam)	120–760 (-/200)	14.60	18.10	30.20	37.20	8.10	20.20	27.20	23.50	13.80	7.20	[77]
	Pearl River Estuary (Manila clam)	190–230 (-/215)	16.60	21.10	29.30	33.00	12.20	22.80	25.70	22.00	11.30	6.00	[77]
	Pearl River Estuary (Squid)	76.0–93.0 (-/90.0)	22.20	27.70	23.10	27.10	11.50	24.60	26.30	21.60	10.70	5.30	[77]
	Pearl River Estuary (Light maigre)	94.0–350 (220/-)	33.00	31.00	15.00	21.00	21.00	24.00	34.50	14.50	4.00	2.00	[32]
	Pearl River Estuary (Gizzard shad)	150–370 (230/-)	32.00	31.00	19.00	18.00	6.00	17.00	32.00	25.00	15.00	5.00	[32]
	Pearl River Estuary (Largescale mullet)	250–270 (260/-)	31.00	26.00	20.00	23.00	10.00	14.00	25.50	22.50	17.00	11.00	[32]
	Pearl River Estuary (Yellowfin porgy)	74.0 (-/-)	41.00	37.00	12.00	10.00	15.00	23.00	32.00	20.00	7.00	3.00	[32]
	Pearl River Estuary (Japanese sea perch)	170 (-/-)	42.00	30.00	15.00	13.00	16.00	22.50	35.50	19.00	6.00	1.00	[32]
	Pearl River Estuary (Sea catfish)	230 (-/-)	31.50	32.00	20.50	16.00	41.00	9.00	22.50	13.50	8.00	6.00	[32]
	Pearl River Estuary (Ridgetail white prawn)	100–810 (380/-)	31.00	29.00	20.50	19.50	29.70	17.30	31.00	17.00	4.50	0.50	[32]
	Pearl River Estuary (Mangrove crab)	1200–2000 (1600/-)	31.00	38.00	18.00	13.00	58.00	14.00	23.00	5.00	0.00	0.00	[32]
	Pearl River Estuary (Oyster)	1000–1600 (1200/-)	27.50	36.50	19.00	17.00	13.00	20.00	37.50	20.00	7.50	2.00	[32]
	Hong Kong waters (*A. fasciatus*)	41.7–50.0 (45.8/45.8)	43.30	30.80	18.90	7.00	-	-	-	-	-	-	[78]
	Hong Kong waters (*C. thrissa*)	156–569 (298/268)	27.00	26.10	21.70	25.20	-	-	-	-	-	-	[78]
	Hong Kong waters (*C. arel*)	47.2 (-/-)	34.00	28.00	22.00	16.00	-	-	-	-	-	-	[78]
	Hong Kong waters (*D. russelii*)	73.6 (-/-)	36.00	31.00	20.00	13.00	-	-	-	-	-	-	[78]
	Hong Kong waters (*E. cardinalis*)	97.2–114 (106/106)	36.00	30.00	21.00	13.00	-	-	-	-	-	-	[78]
	Hong Kong waters (*I. japonica*)	15.3 (-/-)	37.00	31.00	20.00	12.00	-	-	-	-	-	-	[78]
	Hong Kong waters (*J. heterolepis*)	25.0–118 (64.2/57.0)	36.80	31.40	20.60	11.20	-	-	-	-	-	-	[78]
	Hong Kong waters (*L. brevirostris*)	59.7–83.3 (69.4/68.8)	39.10	30.60	19.70	10.60	-	-	-	-	-	-	[78]

Hong Kong waters (*P. macracanthus*)	15.3–48.6 (31.9/31.9)	31.00	33.00	23.00	13.00	-	-	-	-	-	-	[78]
Hong Kong waters (*P. argentata*)	54.2 (-/-)	35.00	30.00	19.00	16.00	-	-	-	-	-	-	[78]
Hong Kong waters (*P. sextarius*)	51.4–129 (90.3/90.3)	38.00	29.00	21.00	12.00	-	-	-	-	-	-	[78]
Hong Kong waters (*P. indicus*)	37.5–83.3 (53.7/40.3)	36.00	31.00	20.00	13.00	-	-	-	-	-	-	[78]
Hong Kong waters (*R. richardsonii*)	20.8–41.7 (31.3/31.3)	38.00	31.00	19.00	13.00	-	-	-	-	-	-	[78]
Hong Kong waters (*S. canaliculatus*)	50.2–186 (85.0/69.4)	32–26	28–32	17–21	13–17	-	-	-	-	-	-	[78]
Hong Kong waters (*S. ovata*)	43.1–69.4 (56.3/56.3)	32.00	30.00	25.00	13.00	-	-	-	-	-	-	[78]
Hong Kong waters (*T. vagina*)	22.2–34.7 (28.5/28.5)	37.00	33.00	18.00	12.00	-	-	-	-	-	-	[78]
Hong Kong waters (*H. harpax*)	34.7–72.2 (52.4/51.4)	40.50	27.80	17.90	13.80	-	-	-	-	-	-	[78]
Hong Kong waters (*M. affinis*)	11.1–41.7 (23.6/22.2)	40–42	32–34	15–17	8–10	-	-	-	-	-	-	[78]
Hong Kong waters (*M. nepa*)	11.1 (-/-)	35.00	32.00	19.00	14.00	-	-	-	-	-	-	[78]
Hong Kong waters (*M. ensis*)	15.3–20.8 (18.1/18.1)	42.00	32.00	17.00	9.00	-	-	-	-	-	-	[78]
Hong Kong waters (*P. sanguinolentus*)	12.5–48.6 (21.9/16.7)	41–43	32–34	15–17	8–11	-	-	-	-	-	-	[78]
Hong Kong waters (*P. pelagicus*)	20.8 (-/-)	41.00	30.00	17.00	12.00	-	-	-	-	-	-	[78]
Hong Kong waters (*P. trituberculatus*)	16.7–33.3 (26.9/30.6)	38.00	32.00	20.00	11.00	-	-	-	-	-	-	[78]
Hong Kong waters (*A. ferruginea*)	38.9 (-/-)	31.00	36.00	19.00	13.00	-	-	-	-	-	-	[78]
Hong Kong waters (*B. rana*)	34.7–54.2 (44.4/44.4)	35.00	31.00	20.00	14.00	-	-	-	-	-	-	[78]
Hong Kong waters (*M. trapa*)	19.4–26.4 (21.8/19.4)	32.80	28.80	21.20	17.20	-	-	-	-	-	-	[78]
Hong Kong waters (*T. bacillum*)	13.9–23.6 (18.8/18.8)	34.00	30.00	23.00	14.00	-	-	-	-	-	-	[78]
Qingyuan (White wagtail, e-waste dismantling area)	4700–13,000 (7600/-)[a]	27.00	29.00	27.00	17.00	-	-	-	-	-	-	[79]
Qingyuan (Long-tailed shrike, e-waste dismantling area)	4300–9900 (6300/-)[a]	31.00	26.00	21.00	22.00	-	-	-	-	-	-	[79]
Qingyuan (Red-flanked bluetail, e-waste dismantling area)	870–1700 (1200/-)[a]	28.00	27.00	24.00	20.00	-	-	-	-	-	-	[79]
Qingyuan (Grey-backed thrush, e-waste dismantling area)	620–1900 (1200/-)[a]	31.00	29.00	24.00	16.00	-	-	-	-	-	-	[79]
Qingyuan (Great tit, e-waste dismantling area)	6400–11,000 (8200/-)[a]	23.00	22.00	29.00	26.00	-	-	-	-	-	-	[79]
Qingyuan (Oriental magpie-robin, e-waste dismantling area)	4000–5400 (4900/-)[a]	24.00	25.00	26.00	25.00	-	-	-	-	-	-	[79]
Qingyuan (Goldfinch, e-waste dismantling area)	9100–17,000 (12,000/-)[a]	30.00	27.00	25.00	18.00	-	-	-	-	-	-	[79]
Qingyuan (Watersnake muscle, e-waste dismantling area)	29,000–250,000 (70,000/-)[a]	20.00	36.00	30.00	14.00	-	-	-	-	-	-	[80]
Qingyuan (Watersnake egg, e-waste dismantling area)	8400–81,000 (18,000/-)[a]	23.00	42.00	26.50	8.50	-	-	-	-	-	-	[80]
Qingyuan (Fish, e-waste dismantling area)	27,000–29,000 (28,000/-)[a]	33.10	37.60	19.10	10.20	-	-	-	-	-	-	[80]
Qingyuan (Prawn, e-waste dismantling area)	6100–9500 (7800/-)[a]	31.40	36.80	21.00	10.80	-	-	-	-	-	-	[80]
Qingyuan (Warerbird egg, e-waste dismantling area)	1200–2500 (1800/-)[a]	33.80	23.20	29.60	13.30	-	-	-	-	-	-	[80]

	Guiyu (Pigeon, e-waste dismantling area)	4700–11,000 (7600/-)[a]	-	-	-	-	-	-	-	-	-	-	[81]
	Guiyu (Catfish, e-waste dismantling area)	11,400–70,400 (30,800)[a]	-	-	-	-	-	-	-	-	-	-	[81]
China sea areas	Bohai Sea (Mollusk)	64.9–5510 (1410/-)	30.20	33.70	18.00	18.10	2.05	41.70	34.60	17.50	3.02	1.11	[82]
	Bohai Sea (Gastropod)	158–1460 (592/-)	34.30	33.50	16.90	15.40	4.40	50.70	30.90	11.40	1.92	0.66	[82]
	Bohai Sea (Bivalve)	64.9–5510 (1850/-)	28.70	33.70	18.40	19.20	1.17	38.30	36.00	19.80	3.44	1.28	[82]
	Bohai Sea (Bivalve)	476–3270 (1710/-)	28.70	37.70	19.40	14.20	2.73	38.50	35.60	15.93	4.65	2.61	[64]
	Yellow Sea (Fish)	13.5–60.0 (-/-)	-	-	-	-	-	-	-	-	-	-	[84]
	East China Sea (Fish)	15.4–63.2 (-/-)	-	-	-	-	-	-	-	-	-	-	[84]
	South China Sea (Fish)	9.30–38.0 (-/-)	-	-	-	-	-	-	-	-	-	-	[84]
	South China Sea (Porpoises)	280–3900 (1800/1800)	37.10	28.70	21.30	12.90	-	-	-	-	-	-	[83]
	South China Sea (Dolphins)	430–9100 (2500/1900)	25.50	27.50	23.90	23.10	-	-	-	-	-	-	[83]
Background area	Qinghai Lake (Fish)	3.90–10.9 (6.50/-)	36.00	27.00	20.00	17.00	21.10	36.00	24.80	10.20	5.90	2.00	[85]
	Basum Lake (Fish)	38.1–79.4 (64.6/-)	37.00	26.00	19.00	16.00	19.60	34.90	26.70	12.20	5.20	1.40	[85]
	Palgon Lake (Fish)	4.40–35.0 (14.6/-)	45.00	22.00	20.00	13.00	25.30	38.90	23.80	9.60	1.70	0.70	[85]
	Yamdro Lake (Fish)	5.00–55.6 (17.5/-)	46.00	26.00	17.00	11.00	20.20	35.10	27.90	11.50	4.60	0.70	[85]
	Manasarovar Lake (Fish)	38.8–107 (58.5/-)	50.00	23.00	15.00	12.00	16.20	34.40	31.20	13.10	4.30	0.80	[85]
	Lhasa River (Fish)	20.0–48.8 (40.9/-)	35.00	26.00	22.00	17.00	18.60	24.70	22.80	16.00	10.20	7.70	[85]
	Tibetan Plateau (Plant)	71.1–300 (173/-)	66.60	18.90	6.80	7.70	6.70	28.20	36.50	20.80	5.60	2.20	[51]
	Tibetan Plateau (Plateau pika)	-(258/-)	48.30	23.00	13.20	15.50	10.30	31.10	31.70	15.70	7.30	3.90	[51]
	Tibetan Plateau (Eagle)	-(108/-)	53.80	20.30	13.20	12.70	9.90	24.80	31.30	22.50	7.70	3.80	[51]
	Shergyla Mountain (Bark)	2900–7000 (5000/5500)[a]	34.90	30.30	12.50	22.30	0.50	23.70	40.60	23.30	9.40	2.50	[52]
	Shergyla Mountain (Needle)	2400–6400 (4400/3900)[a]	35.30	29.10	14.40	21.20	0.40	12.80	37.70	32.80	13.60	2.70	[52]
	Shergyla Mountain (Lichen)	2000–6100 (4100/5100)[a]	44.70	33.30	12.20	9.80	0.40	16.60	37.10	26.20	15.90	3.80	[52]
	Shergyla Mountain (Mosse)	1500–4400 (3000/3200)[a]	45.00	25.20	13.60	16.20	1.20	21.80	33.30	27.40	13.60	2.70	[52]
	Nyingchi (Lichen)	1400–4800 (3100/2800)[a]	59.20	25.50	8.20	7.10	0.30	14.80	34.50	34.60	13.60	2.20	[52]
	Ngari (Mosse)	1600–5200 (2700/3500)[a]	55.40	29.70	9.40	5.50	0.30	17.50	34.70	33.20	12.50	1.80	[52]
	Namco (Mosse)	3900–5300 (4600/4500)[a]	50.20	29.60	12.30	7.90	0.60	13.20	32.00	36.60	14.50	3.10	[52]

[a]lipid weight (lw).

ND: not detected.

-: data not available.

Table S12. Concentrations of SCCPs in food.

Sampling area	Sampling time	Sample	Concentration (ng/g lw)	Reference
Beijing	1990s and 2007–2009	Diet	<0.20–0.60 (1993); 8.50–28.0 (2009)[b]	[87]
Beijing	2016	Diet and milk powder	24.4–546 (diet); 16.2–20.5 (milk powder)[b]	[8]
Beijing	2018	Meat and seafood	620–8400[b]	[88]
Beijing	2014–2016	Diet	3.26–52.1 (raw food); 0.67–10.8 (cooked food)[a]	[89]
Shanghai	2012	Fish	36.0–801[b]	[90]
Dalian	2012	Seafood	77.0–8250[b]	[91]
Jinan	2019	Supermarket fresh products	149–7666	[92]
5 cities in China[c]	2010 and 2012	Cooking oil, fried confectioner and raw seeds	<2.00–1200[a]	[93]
20 provinces of China[d]	2011	Meat	15.7–469[a]	[94]
18 Chinese provinces[e]	2017	Aquatic foods	215–4200[a]	[95]
19 Chinese provinces[f]	2011	Cereal and legume	51.6–981 (cereal); 47.1–801 (legume)[a]	[96]
9 cities in the northern China[g]	2016	Diet	2.30–496[a]	[97]
5 Chinese provinces[h]	2018	Raw milk	130–5770	[98]
PRD and YRD	2011–2012	Fish	3000–41,000 (PRD); 220–51,000 (YRD)	[99]
China	2016	Fish meal	4200–16,000	[100]
An e-waste recycling area in Guiyu	2013	Chicken and goose eggs	2300–6800 (chicken eggs); ND–150,000 (goose eggs)	[101]
An e-waste dismantling area in Taizhou	2008 and 2010	Rice	4.90–55.1[b]	[42]
An e-waste polluted area in Qingyuan	2013 and 2016	Eggs	477–111,000	[102]
A mega e-waste recycling industrial park in Qingyuan	2017	Local food	892–605,000	[24]
Longtang town in Qingyuan	2011–2012	Chicken	460–13,000[b]	[103]

[a]wet weight (ww).

[b]dry weight (dw).

[c]Beijing, Fushun, Hong Kong, Shanghai and Shenyang.

[d]Beijing, Shanghai, Hebei, Henan, Liaoning, Jilin, Heilongjiang, Hunan, Fujian, Zhejiang, Jiangsu, Jiangxi, Ningxia, Guangdong, Neimenggu, Shanxi, Hubei, Guangxi, Sichuan, Qinghai.

[e]Beijing, Fujian, Guangdong, Guangxi, Hebei, Henan, Heilongjiang, Hubei, Hunan, Jilin, Jiangsu, Liaoning, Neimenggu, Ningxia, Qinghai, Shanxi, Shanghai, Sichuan.

[f]Fujian, Guangdong, Guangxi, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Neimenggu, Ningxia, Qinghai, Shanghai, Shanxi, Sichuan and Zhejiang.

[g]Beijing, Shijiangzhuang, Zhangjiakou, Chengde, Qinhuangdao, Langfang, Xingtai, Tangshan and Hulunbeier.

[h]Neimenggu, Hebei, Shandong, Henan and Hubei.

Table S13. Comparison of the concentrations (ng/g lw) and compositional profiles (%) of SCCPs in food.

Region	Location	Range (mean/median)	C_{10}	C_{11}	C_{12}	C_{13}	Cl_5	Cl_6	Cl_7	Cl_8	Cl_9	Cl_{10}	Reference
Northeastern China	Dalian (Shellfish)	111–12,200 (3840/-)[b]	36.50	31.80	18.00	13.70	3.43	23.40	41.30	24.60	5.72	1.51	[91]
	Dalian (Shrimp/crab)	583–7260 (3710/-)[b]	19.40	21.20	26.40	32.90	1.30	19.70	45.40	26.40	6.53	0.60	[91]
	Dalian (Fish)	100–5370 (1210/-)[b]	31.30	28.20	22.20	18.40	11.60	27.10	34.30	19.60	5.86	1.50	[91]
	Dalian (Other)	405–10,100 (6220/-)[b]	31.60	29.90	21.60	17.00	1.67	23.30	41.70	25.40	7.30	0.67	[91]
	Fushun (Cooking oil, 2010)	<9.00–800 (-/105)[b]	16.06	28.00	22.38	33.56	29.84	31.21	27.23	9.77	1.94	0.00	[93]
	Fushun (Cooking oil, 2012)	<20.0–1200 (-/<20.0)[b]	13.40	15.11	33.83	37.66	58.88	14.59	12.44	9.63	4.46	0.00	[93]
	Fushun (Fried confectionery)	31.0–1000 (-/80.0)[b]	29.40	30.57	17.18	22.85	45.07	26.62	16.77	8.81	2.73	0.00	[93]
	Shenyang (Cooking oil)	<20.0–210 (-/<20.0)[b]	14.60	15.17	29.93	40.30	56.50	13.74	11.40	13.23	5.14	0.00	[93]
	Shenyang (Fried confectionery)	19.0–89.0 (-/34.0)[b]	24.48	32.29	23.18	20.05	40.77	25.00	16.92	12.31	5.00	0.00	[93]
	Shenyang and Fushun (Raw seeds)	<2.00–68.0 (-/22.0)[b]	26.20	34.40	18.90	20.60	64.81	22.68	9.01	2.46	1.04	0.00	[93]
	Liaoning (Meat)	-(140/-)[a]	66.81	25.97	4.65	2.58	-	-	-	-	-	-	[94]
	Liaoning (Aquatic foods)	-(2913/-)[a]	63.02	29.25	6.63	1.11	-	-	-	-	-	-	[95]
	Liaoning (Cereals)	-(669/-)[a]	17.20	11.37	9.50	61.93	-	-	-	-	-	-	[96]
	Liaoning (Legumes)	-(423/-)[a]	90.13	7.78	0.97	1.11	-	-	-	-	-	-	[96]
	Jilin (Meat)	-(40.6/-)[a]	79.56	18.23	1.72	0.49	-	-	-	-	-	-	[94]
	Jilin (Aquatic foods)	-(503/-)[a]	55.47	28.23	7.69	8.61	-	-	-	-	-	-	[95]
	Jilin (Cereals)	-(275/-)[a]	80.20	12.10	3.97	3.72	-	-	-	-	-	-	[96]
	Jilin (Legumes)	-(143/-)[a]	57.63	16.88	11.48	14.01	-	-	-	-	-	-	[96]
	Heilongjiang (Meat)	-(21.6/-)[a]	89.27	10.18	0.46	0.09	-	-	-	-	-	-	[94]
	Heilongjiang (Aquatic foods)	-(730/-)[a]	72.80	21.39	3.61	2.21	-	-	-	-	-	-	[95]
	Heilongjiang (Cereals)	-(585/-)[a]	86.06	10.68	1.86	1.40	-	-	-	-	-	-	[96]
	Heilongjiang (Legumes)	-(579/-)[a]	79.25	12.14	3.57	5.04	-	-	-	-	-	-	[96]
Northern China	Beijing (Diet, 1993)	<0.20–0.60 (-/-)[b]	-	-	-	-	-	-	-	-	-	-	[87]
	Beijing (Diet, 2009)	8.50–28.0 (-/15.0)[b]	29.70	29.70	18.30	22.30	31.40	35.70	23.30	8.00	1.60	0.00	[87]
	Beijing (Diet)	24.4–546 (113/79.3)[b]	14.51	27.17	25.93	32.39	0.13	11.43	41.28	33.30	12.93	0.93	[8]
	Beijing (Milk powder)	16.2–20.5 (18.3/18.1 [b]	0.88	20.36	27.64	51.12	0.05	6.46	45.98	40.45	7.01	0.05	[8]
	Beijing (Drinking water)	20.0–26.0 (23.0/23.0)[c]	32.28	61.17	2.69	3.86	0.54	54.83	31.31	8.62	4.69	0.00	[8]
	Beijing (Shellfish)	37.4–1690 (294/-)[b]	37.00	27.00	18.40	17.60	10.20	27.50	36.00	20.80	4.93	0.56	[104]
	Beijing (Fish)	50.0–300 (143/-)[b]	44.70	28.70	14.40	12.20	7.90	29.90	36.70	20.50	4.52	0.39	[104]

Beijing (Meat)	31.3–1850 (355/-)[b]	33.00	27.70	19.70	19.60	10.70	28.90	34.40	20.50	4.84	0.58	[104]
Beijing (Liver)	45.0–250 (95.8/-)[b]	40.40	26.40	15.60	17.60	16.50	31.60	31.00	16.40	4.14	0.34	[104]
Beijing (Vegetable)	43.4–375 (212/-)[b]	31.10	46.80	11.90	10.20	7.43	24.00	29.30	35.80	3.29	0.25	[104]
Beijing (Fruit)	18.4–244 (106/-)[b]	36.80	34.60	12.50	16.20	19.30	26.40	32.10	17.90	4.11	0.08	[104]
Beijing (Fish)	8400 (-/-)[b]	-	-	-	-	-	-	-	-	-	-	[88]
Beijing (Clams)	6300 (-/-)[b]	-	-	-	-	-	-	-	-	-	-	[88]
Beijing (Prawns)	5200 (-/-)[b]	-	-	-	-	-	-	-	-	-	-	[88]
Beijing (Pork)	720 (-/-)[b]	-	-	-	-	-	-	-	-	-	-	[88]
Beijing (Beef)	620 (-/-)[b]	-	-	-	-	-	-	-	-	-	-	[88]
Beijing (Chicken)	880 (-/-)[b]	-	-	-	-	-	-	-	-	-	-	[88]
Beijing (Raw food)	3.26–52.1 (-/-)[a]	-	-	-	-	-	-	-	-	-	-	[89]
Beijing (Cooked food)	0.67–10.8 (-/-)[a]	-	-	-	-	-	-	-	-	-	-	[89]
Beijing (Cooking oil)	18.0–1100 (-/520)[b]	16.33	44.76	9.31	29.60	24.29	37.94	27.14	8.43	2.21	0.00	[93]
Beijing (Fried confectionery)	11.0–160 (-/100)[b]	19.07	27.94	18.91	34.09	33.16	33.32	24.31	7.69	1.52	0.00	[93]
Beijing (Meat)	-(118/-)[a]	73.33	21.68	3.98	1.02	-	-	-	-	-	-	[94]
Beijing (Aquatic foods)	-(934/-)[a]	74.40	22.69	1.81	1.10	-	-	-	-	-	-	[95]
Beijing (Legumes)	-(197/-)[a]	74.62	13.71	5.89	5.79	-	-	-	-	-	-	[96]
Hebei (Meat)	-(207/-)[a]	61.18	29.38	6.02	3.42	-	-	-	-	-	-	[94]
Hebei (Aquatic foods)	-(215/-)[a]	72.76	22.06	3.64	1.54	-	-	-	-	-	-	[95]
Hebei (Cereals)	-(981/-)[a]	23.24	11.21	8.67	56.87	-	-	-	-	-	-	[96]
Hebei (Legumes)	-(801/-)[a]	90.85	7.87	0.51	0.76	-	-	-	-	-	-	[96]
Hebei (Milk)	1420–3210 (2174/1860)	-	-	-	-	-	-	-	-	-	-	[98]
Neimenggu (Meat)	-(171/-)[a]	78.99	19.19	1.35	0.47	-	-	-	-	-	-	[94]
Neimenggu (Aquatic foods)	-(1053/-)[a]	73.17	23.57	1.92	1.35	-	-	-	-	-	-	[95]
Neimenggu (Cereals)	-(336/-)[a]	89.61	8.13	1.31	0.95	-	-	-	-	-	-	[96]
Neimenggu (Legumes)	-(92.2/-)[a]	70.14	16.07	5.43	8.36	-	-	-	-	-	-	[96]
Neimenggu-A (Milk)	490–1870 (1088/1040)	-	-	-	-	-	-	-	-	-	-	[98]
Neimenggu-B (Milk)	130–700 (490/535)	-	-	-	-	-	-	-	-	-	-	[98]
Beijing, Hebei and Neimenggu (Tubers)	14.5–242 (61.5/51.5)[a]	-	-	-	-	-	-	-	-	-	-	[97]
Beijing, Hebei and Neimenggu (Vegetables)	16.4–78.3 (48.9/48.6)[a]	-	-	-	-	-	-	-	-	-	-	[97]
Beijing, Hebei and Neimenggu (Cereals)	7.95–214 (77.0/60.0)[a]	-	-	-	-	-	-	-	-	-	-	[97]

	Beijing, Hebei and Neimenggu (Legumes)	41.7–260 (118/109)[a]	-	-	-	-	-	-	-	-	-	-	[97]
	Beijing, Hebei and Neimenggu (Eggs)	13.6–116 (86.6/103)[a]	-	-	-	-	-	-	-	-	-	-	[97]
	Beijing, Hebei and Neimenggu (Milk)	2.30–39.6 (25.6/33.1)[a]	-	-	-	-	-	-	-	-	-	-	[97]
	Beijing, Hebei and Neimenggu (Meat)	28.6–496.5 (154/113)[a]	-	-	-	-	-	-	-	-	-	-	[97]
	Beijing, Hebei and Neimenggu (Fruits)	6.34–168 (60.2/42.9)[a]	-	-	-	-	-	-	-	-	-	-	[97]
	Beijing, Hebei and Neimenggu (Aquatic foods)	15.0–123 (62.4/51.3)[a]	-	-	-	-	-	-	-	-	-	-	[97]
Eastern China	Shanghai (Fish)	36.0–801 (162/-)[b]	40.60	27.60	16.80	15.00	6.43	32.60	36.80	19.30	5.91	3.70	[90]
	Shanghai (Cooking oil)	<9.00–240 (-/<9.00)[b]	12.94	19.57	25.17	42.31	44.51	30.45	14.71	7.05	3.28	0.00	[93]
	Shanghai (Meat)	-(58.0/-)[a]	84.97	13.64	1.04	0.35	-	-	-	-	-	-	[94]
	Shanghai (Aquatic foods)	-(2778/-)[a]	75.11	21.77	2.17	0.95	-	-	-	-	-	-	[95]
	Shanghai (Cereals)	-(87.1/-)[a]	73.48	17.22	5.17	4.13	-	-	-	-	-	-	[96]
	Shanghai (Legumes)	-(419/-)[a]	87.89	8.43	1.12	2.56	-	-	-	-	-	-	[96]
	Shandong (Milk)	930–2720 (1355/1190)	-	-	-	-	-	-	-	-	-	-	[98]
	Jinan (Vegetables)	86.1–601 (268/194)[b]	37.00	23.00	22.00	18.00	5.00	24.50	31.00	22.50	11.00	6.00	[92]
	Jinan (Fruit)	79.8–244 (134/120)[b]	36.00	24.00	22.00	18.00	5.00	23.00	31.00	22.00	12.00	7.00	[92]
	Jinan (Grains)	58.6–154 (104/105)[b]	45.00	24.00	15.50	15.50	7.50	30.50	30.00	18.00	9.00	5.00	[92]
	Jinan (Meat)	224–399 (349/387)[b]	29.50	21.00	26.00	23.50	4.00	19.00	31.00	25.00	13.00	8.00	[92]
	Jinan (Seafood)	144–1977 (699/552)[b]	30.00	22.50	24.00	23.50	4.00	18.00	30.00	25.50	13.50	9.00	[92]
	Fujian (Meat)	-(121/-)[a]	72.62	22.17	3.72	1.49	-	-	-	-	-	-	[94]
	Fujian (Aquatic foods)	-(880/-)[a]	62.59	28.22	5.14	4.05	-	-	-	-	-	-	[95]
	Fujian (Cereals)	-(244/-)[a]	75.79	14.34	5.37	4.51	-	-	-	-	-	-	[96]
	Fujian (Legumes)	-(324/-)[a]	77.87	13.07	4.82	4.23	-	-	-	-	-	-	[96]
	Zhejiang (Meat)	-(469/-)[a]	37.89	36.40	18.60	7.11	-	-	-	-	-	-	[94]
	Zhejiang (Cereals)	-(625/-)[a]	44.97	10.67	6.27	38.09	-	-	-	-	-	-	[96]
	Zhejiang (Legumes)	-(243/-)[a]	75.31	14.24	5.64	4.81	-	-	-	-	-	-	[96]
	Jiangsu (Meat)	-(62.3/-)[a]	67.74	26.65	4.33	1.28	-	-	-	-	-	-	[94]
	Jiangsu (Aquatic foods)	-(1362/-)[a]	72.05	23.28	3.33	1.34	-	-	-	-	-	-	[95]
	Jiangsu (Cereals)	-(194/-)[a]	35.74	33.26	19.41	11.59	-	-	-	-	-	-	[96]
	Jiangsu (Legumes)	-(264/-)[a]	84.66	8.73	2.73	3.87	-	-	-	-	-	-	[96]
	Jiangxi (Meat)	-(15.7/-)[a]	85.26	12.82	1.28	0.64	-	-	-	-	-	-	[94]
	Jiangxi (Cereals)	-(120/-)[a]	54.15	24.25	12.04	9.55	-	-	-	-	-	-	[96]

	Yangtze River Delta (Crucian carp)	75.0–380 (190/-)[b]	43.00	30.00	15.00	11.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Bream)	36.0–540 (140/-)[b]	42.00	26.00	16.00	15.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Yellow catfish)	21.0–800 (200/-)[b]	41.00	24.00	18.00	16.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Silver carp)	76.0–290 (170/-)[b]	44.00	25.00	16.00	16.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Black carp)	94.0–250 (150/-)[b]	35.00	29.00	18.00	18.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Brown croaker)	41.0–280 (123/-)[b]	42.00	27.00	16.00	16.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Large yellow croaker)	73.0–170 (110/-)[b]	37.00	22.00	20.00	21.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Ribbon fish)	46.0–140 (91.0/-)[b]	35.00	28.00	20.00	17.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Daggertooth pike conger)	80.0–85.0 (83.0/-)[b]	33.00	26.00	18.00	22.00	-	-	-	-	-	-	[99]
	Yangtze River Delta (Japanese Spanish mackerel)	78.0–140 (110/-)[b]	34.00	26.00	18.00	22.00	-	-	-	-	-	-	[99]
	Taizhou (Rice, e-waste dismantling area)	4.90–55.1 (17.6/-)[b]	35.90	34.20	17.80	12.20	27.60	38.40	23.10	8.70	1.70	0.50	[42]
Central China	Henan (Meat)	-(260/-)[a]	68.05	28.10	3.19	0.65	-	-	-	-	-	-	[94]
	Henan (Aquatic foods)	-(551/-)[a]	62.60	25.77	6.80	4.83	-	-	-	-	-	-	[95]
	Henan (Cereals)	-(238/-)[a]	68.34	18.91	6.96	5.79	-	-	-	-	-	-	[96]
	Henan (Legumes)	-(47.1/-)[a]	59.70	22.39	10.02	7.89	-	-	-	-	-	-	[96]
	Henan (Milk)	1140–1610 (1363/1330)	-	-	-	-	-	-	-	-	-	-	[98]
	Hunan (Meat)	-(43.6/-)[a]	81.42	16.51	1.61	0.46	-	-	-	-	-	-	[94]
	Hunan (Aquatic foods)	-(3476/-)[a]	78.62	18.47	2.24	0.67	-	-	-	-	-	-	[95]
	Hunan (Cereals)	-(114/-)[a]	59.00	22.29	9.88	8.83	-	-	-	-	-	-	[96]
	Hunan (Legumes)	-(242/-)[a]	86.26	9.57	1.77	2.39	-	-	-	-	-	-	[96]
	Hubei (Meat)	-(68.6/-)[a]	85.59	13.39	0.73	0.29	-	-	-	-	-	-	[94]
	Hubei (Aquatic foods)	-(385/-)[a]	79.00	15.90	3.38	1.72	-	-	-	-	-	-	[95]
	Hubei (Cereals)	-(51.6/-)[a]	58.80	22.63	9.86	8.70	-	-	-	-	-	-	[96]
	Hubei (Legumes)	-(247/-)[a]	42.63	20.94	19.12	17.31	-	-	-	-	-	-	[96]
	Hubei (Milk)	1200–5770 (2519/2260)	-	-	-	-	-	-	-	-	-	-	[98]
Southern China	Hong Kong (Cooking oil)	<9.0–230 (-/170)[b]	12.55	35.48	25.32	26.66	28.37	32.93	27.54	9.42	1.74	0.00	[93]
	Guangdong (Meat)	-(152/-)[a]	79.00	18.50	1.78	0.72	-	-	-	-	-	-	[94]
	Guangdong (Aquatic foods)	-(1379/-)[a]	47.68	33.45	10.89	7.98	-	-	-	-	-	-	[95]
	Guangdong (Cereals)	-(300/-)[a]	77.97	14.60	4.23	3.20	-	-	-	-	-	-	[96]
	Guangdong (Legumes)	-(692/-)[a]	68.33	19.65	7.50	4.52	-	-	-	-	-	-	[96]

Guangxi (Meat)	-(43.8/-)[a]	72.37	22.60	3.65	1.37	-	-	-	-	-	-	[94]
Guangxi (Aquatic foods)	-(4200/-)[a]	46.71	35.57	12.83	4.88	-	-	-	-	-	-	[95]
Guangxi (Cereals)	-(595/-)[a]	26.93	12.64	8.94	51.50	-	-	-	-	-	-	[96]
Guangxi (Legumes)	-(753/-)[a]	85.08	9.01	2.39	3.52	-	-	-	-	-	-	[96]
Dongjiang River (Bream)	190–370 (310/-)[b]	31.00	32.00	22.00	15.00	-	-	-	-	-	-	[99]
Dongjiang River (Japanese sea perch)	120–370 (270/-)[b]	38.00	33.00	18.00	11.00	-	-	-	-	-	-	[99]
Dongjiang River (Keeled mullet)	130–610 (290/-)[b]	33.00	31.00	23.00	13.00	-	-	-	-	-	-	[99]
Dongjiang River (Tilapia)	53.0–130 (84.0/-)[b]	36.00	32.00	20.00	12.00	-	-	-	-	-	-	[99]
Guiyu (Chicken egg, 2 km from e-waste dismantling area)	2300–5500 (3400/3100)	-	-	-	-	-	-	-	-	-	-	[101]
Guiyu (Chicken egg, 2.5 km from e-waste dismantling area)	2600–6800 (4000/3400)	-	-	-	-	-	-	-	-	-	-	[101]
Guiyu (Goose egg, 2 km from e-waste dismantling area)	ND–150,000 (60,000/ND)	-	-	-	-	-	-	-	-	-	-	[101]
Guiyu (Goose egg, 2.5 km from e-waste dismantling area)	ND–11,000 (4600/1700)	-	-	-	-	-	-	-	-	-	-	[101]
Qingyuan (Eggs, e-waste dismantling area, 2013)	477–26,200 (2680/926)	23.00	26.00	25.00	26.00	15.40	24.90	29.70	12.50	9.80	7.70	[102]
Qingyuan (Eggs, e-waste dismantling area, 2016)	611–111,000 (10,100/1490)	36.00	33.00	19.00	12.00	20.00	31.50	24.70	12.10	7.70	4.00	[102]
Qingyuan (Mrigal carp, e-waste dismantling area)	285,000–487,000 (408,000/416,000)	-	-	-	-	-	-	-	-	-	-	[24]
Qingyuan (Yellow catfish, e-waste dismantling area)	94,300–148,000 (118,000/114,000)	-	-	-	-	-	-	-	-	-	-	[24]
Qingyuan (White amur bream, e-waste dismantling area)	113,000–163,000 (132,000/119,000)	-	-	-	-	-	-	-	-	-	-	[24]
Qingyuan (Asian clam, e-waste dismantling area)	37,100–66,900 (49,800/45,500)	-	-	-	-	-	-	-	-	-	-	[24]
Qingyuan (River prawn, e-waste dismantling area)	76,500–118,000 (94,300/87,900)	-	-	-	-	-	-	-	-	-	-	[24]
Qingyuan (Pork, e-waste dismantling area)	37,200–58,600	-	-	-	-	-	-	-	-	-	-	[24]

		(49,200/50,300)											
	Qingyuan (Chicken, e-waste dismantling area)	25,300–84,200 (43,400/32,000)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Duck, e-waste dismantling area)	40,700–88,300 (66,100/67,700)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Chicken egg, e-waste dismantling area)	3370–6840 (4840/4940)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Duck egg, e-waste dismantling area)	1620–2910 (2040/1950)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Mustard, e-waste dismantling area)	132,000–167,000 (148,000/145,000)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Lettuce, e-waste dismantling area)	493,000–541,000 (519,000/524,000)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Sweet potato, e-waste dismantling area)	247,000-263,000 (256,000/258,000)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Chinese radish, e-waste dismantling area)	236,000–605,000 (402,000/394,000)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Rice, e-waste dismantling area)	37,200–88,600 (62,800/67,400)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Peanut oil, e-waste dismantling area)	892–1320 (1100/1090)	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Well water, e-waste dismantling area)	54.2–80.4 (67.2/68.1)[c]	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Tap water, e-waste dismantling area)	29.6–45.3 (37.2/39.0)[c]	-	-	-	-	-	-	-	-	-	-	[24]
	Qingyuan (Rice)	-(63.0/-)[b]	18.80	31.40	30.20	19.60	7.60	21.10	44.60	18.60	5.60	2.40	[103]
	Qingyuan (Wheat)	-(110/-)[b]	18.50	30.80	27.30	23.40	3.30	14.20	40.10	25.60	13.20	3.60	[103]
	Qingyuan (Bran)	-(150/-)[b]	9.10	25.60	37.70	27.60	6.30	13.40	36.60	23.70	14.30	5.70	[103]
	Qingyuan (Chicken muscle)	-(6200/-)	19.90	25.60	29.10	25.50	10.64	19.56	34.20	20.32	10.75	4.54	[103]
	Qingyuan (Chicken liver)	-(1100/-)	19.90	23.50	28.70	27.80	13.18	19.62	29.90	19.70	12.15	5.45	[103]
	Qingyuan (Chicken fat)	-(2400/-)	15.60	21.10	32.70	30.60	6.35	11.59	28.00	28.16	18.23	7.67	[103]
Northwestern	Ningxia (Meat)	-(139/-)[a]	69.76	25.13	3.53	1.58	-	-	-	-	-	-	[94]
China	Ningxia (Aquatic foods)	-(238/-)[a]	65.86	24.16	5.12	4.87	-	-	-	-	-	-	[95]
	Ningxia (Cereals)	-(98.5/-)[a]	69.88	16.84	7.40	5.88	-	-	-	-	-	-	[96]

	Ningxia (Legumes)	-(165/-)[a]	84.14	9.99	2.24	3.63	-	-	-	-	-	-	[96]
	Shanxi (Meat)	-(121/-)[a]	80.08	17.59	1.83	0.50	-	-	-	-	-	-	[94]
	Shanxi (Aquatic foods)	-(2795/-)[a]	70.98	22.79	4.44	1.79	-	-	-	-	-	-	[95]
	Shanxi (Cereals)	-(159/-)[a]	75.52	15.17	5.10	4.22	-	-	-	-	-	-	[96]
	Shanxi (Legumes)	-(224/-)[a]	90.34	8.14	0.76	0.76	-	-	-	-	-	-	[96]
	Qinghai (Meat)	-(107/-)[a]	76.64	20.37	1.59	1.40	-	-	-	-	-	-	[94]
	Qinghai (Aquatic foods)	-(1172/-)[a]	61.88	27.48	6.33	4.31	-	-	-	-	-	-	[95]
	Qinghai (Cereals)	-(315/-)[a]	74.26	15.77	5.81	4.16	-	-	-	-	-	-	[96]
	Qinghai (Legumes)	-(148/-)[a]	91.46	8.00	0.34	0.20	-	-	-	-	-	-	[96]
Southwestern	Sichuan (Meat)	-(222/-)[a]	71.24	25.29	2.66	0.81	-	-	-	-	-	-	[94]
China	Sichuan (Aquatic foods)	-(935/-)[a]	62.67	31.55	3.43	2.35	-	-	-	-	-	-	[95]
	Sichuan (Cereals)	-(521/-)[a]	24.55	11.43	8.59	55.43	-	-	-	-	-	-	[96]
	Sichuan (Legumes)	-(234/-)[a]	90.02	8.79	0.55	0.64	-	-	-	-	-	-	[96]

[a]wet weight (ww).

[b]dry weight (dw).

[c]ng/L.

-: data not available.

Table S14. Concentrations of SCCPs in human tissue.

Sampling area	Sampling time	Sample	Concentration (ng/g lw)	Reference
Beijing	2007 and 2010	Breast milk	<20.0–54.0	[105]
Shijiazhuang	2014–2015	Breast milk	210–16,120	[106]
Rural China	2007 and 2011	Breast milk	68.0–1580 (2007); 65.6–2310 (2011)	[107]
Shenzhen	2012	Human blood	370–35,000	[108]
Urban China	2007 and 2011	Mothers' milk	170–6150 (2007); 131–16,100 (2011)	[109]
Henan province	2016	Human placenta	98.5–3771	[110]
Beijing	2013	Maternal and cord serum	2570–57,800 (maternal serum); 3750–40,500 (cord serum)	[111]
Wuhan	2015–2016	Maternal and cord serum; placenta	15.9–584 (maternal serum)[b]; 8.46–223 (cord serum)[b]; 10.2–132 (placenta)[a]	[112]
Guangzhou	2018	Human serum	1.00–5.45[b]	[113]
Dalian	2015	Human plasma	<MDL–203[a]	[114]
3 cities in Yangtze River Delta[c]	2010–2016	Human milk	<LOD–676	[115]
Mianyang	2018	Maternal serum, placenta, cord serum and breast milk	51.0–620 (maternal serum)[b]; 14.3–108 (placenta)[a]; 13.3–242 (cord serum)[b]; 29.2–271 (breast milk)[b]	[116]
Jinan	2019	Serum	1670–42,700	[117]

[a]wet weight (ww).

[b]ng/mL.

[c]Shanghai, Jiaxing and Shaoxing.

Table S15. Comparison of the concentrations (ng/g lw) and compositional profiles (%) of SCCPs in human tissue.

Region	Location	Range (mean/median)	C_{10}	C_{11}	C_{12}	C_{13}	Cl_5	Cl_6	Cl_7	Cl_8	Cl_9	Cl_{10}	Reference
China	Rural China (Breast milk, 2007)	68.0–1580 (572/304)	51.00	28.00	-	-	-	-	-	-	-	-	[107]
	Rural China (Breast milk, 2010)	65.6–2310 (607/360)	51.00	28.00	-	-	-	-	-	-	-	-	[107]
	Urban China (Breast milk, 2007)	170–6150 (1300/681)	44.26	30.56	14.16	11.01	-	31.00	43.00	-	-	-	[109]
	Urban China (Breast milk, 2011)	131–16,100 (2280/733)	46.05	34.34	12.63	6.97	-	31.00	43.00	-	-	-	[109]
Northeastern China	Dalian (Human plasma)	ND–203 (32.0/26.4)[a]	41.20	30.90	14.10	13.80	11.90	32.40	35.30	14.20	5.20	1.00	[114]
Northern China	Beijing (Breast milk)	<20.0–54.0 (-/<20.0)	14.29	19.05	28.57	38.10	45.38	21.61	18.15	9.77	5.10	0.00	[105]
	Beijing (Maternal serum)	2570–57,800 (18,105/16,100)	77.3–85.6	-	-	-	-	37.1–45.5	28.9–34.8	-	-	-	[111]
	Beijing (Cord serum)	3750–40,500 (11,546/8830)	77.3–85.6	-	-	-	-	37.1–45.5	28.9–34.8	-	-	-	[111]
	Shijiazhuang (Breast milk)	210–16,120 (2510/1460)	29.10	28.80	34.90	7.20	-	39.10	27.60	33.30	0.00	0.00	[106]
Eastern China	Shanghai (Breast milk)	14.8–676 (161/35.0)	-	-	-	-	-	-	-	-	-	-	[115]
	Jiaxing (Breast milk)	ND–642 (191/28.6)	-	-	-	-	-	-	-	-	-	-	[115]
	Shaoxing (Breast milk)	ND–124 (51.7/37.9)	-	-	-	-	-	-	-	-	-	-	[115]
	Jinan (Human serum)	1670–42,700 (-/13,800)	22.20	19.90	18.40	39.40	-	-	36.90	27.80	-	-	[117]
Central China	Henan province (Human placenta)	98.5–3771 (593/379)	58.70	35.59	2.04	3.67	0.74	38.99	52.21	5.82	0.74	1.50	[110]
	Wuhan (Maternal serum)	15.9–584 (103/66.2)[b]	33.91	26.16	17.73	22.19	21.26	23.07	22.58	15.59	11.21	6.30	[112]
	Wuhan (Cord serum)	8.46–223 (49.9/36.7)[b]	37.44	30.83	13.17	18.56	27.02	27.19	22.49	10.49	7.84	4.97	[112]
	Wuhan (Placenta)	10.2–132 (42.4/33.1)[a]	33.95	27.82	17.99	20.25	25.97	30.04	21.05	12.17	6.74	4.04	[112]
Southern China	Shenzhen (Human blood)	370–35,000 (-/3500)	7.00	16.00	17.00	59.00	-	17.85	36.26	29.07	14.20	2.62	[108]
	Guangzhou (Human serum)	1.00–5.45 (2.28/1.73)[b]	0.47	21.10	13.50	64.50	-	0.40	20.30	39.20	27.90	10.00	[113]
Southwestern China	Mianyang (Maternal serum)	51.0–620 (202/117)[b]	36.35	37.05	12.28	14.31	48.74	23.33	15.70	8.22	2.67	1.34	[116]
	Mianyang (Placenta)	14.3–108 (41.8/30.3)[a]	37.32	35.41	13.64	13.64	36.12	30.14	20.57	9.33	2.63	1.20	[116]
	Mianyang (Cord serum)	13.3–242 (88.0/70.0)[b]	37.84	34.77	12.39	15.00	44.71	27.87	16.61	8.19	1.71	0.91	[116]
	Mianyang (Breast milk)	29.2–271 (117/82.6)[b]	35.73	34.53	13.16	16.58	45.56	24.23	17.32	9.04	2.39	1.45	[116]

[a]wet weight (ww).

[b]ng/mL.

Table S16. Estimated daily intake (EDI) of SCCPs via various exposure routes.

Exposure pathway	Region	Location	Year	Medium	Population	EDI (ng/kg bw/day)		Reference
						Mean	95th percentile	
Inhalation exposure	Northeastern China	Dalian	2010	Outdoor air	Adults	8.65	19.0	[3]
		Dalian	2010	Outdoor air	Children	15.7	34.6	[3]
		Dalian	2016	Outdoor air	Adults	22.3	-	[3]
		Dalian	2016	Outdoor air	Children	39.6	-	[3]
	Northern China	Beijing	2016	Indoor air	Adults	20.6	-	[8]
		Beijing	2016	Indoor air	Children	51.7	-	[8]
	Eastern China	Jinan	2016	Outdoor air	Adults	175	199	[10]
	Southern China	PRD	2017	Indoor and outdoor $PM_{2.5}$	Male	2.66	7.23	[16]
		PRD	2017	Indoor and outdoor $PM_{2.5}$	Female	2.85	7.72	[16]
		Guangzhou	2017	Indoor PM	Adults	1.81	3.72	[13]
	Emission Region	CP production plant	2016	Indoor air[a]	Industrial employees	270	-	[11]
		CP production plant	2016	Indoor air[b]	Industrial employees	10.0	-	[11]
		CP production plant	2016	Outdoor air[c]	Local residents (adults)	94.0	-	[11]
		CP production plant	2016	Outdoor air[c]	Local residents (children)	253	-	[11]
		CP production plant	2016	Outdoor air[d]	Local residents (adults)	11.7	-	[11]
		CP production plant	2016	Outdoor air[d]	Local residents (children)	39.7	-	[11]
Ingestion and dermal exposure	Northeastern China	Harbin	2013	Indoor dust	Infants	198	540	[21]
		Harbin	2013	Indoor dust	Toddlers	266	727	[21]
		Harbin	2013	Indoor dust	Children	83.0	226	[21]
		Harbin	2013	Indoor dust	Teenagers	53.0	144	[21]
		Harbin	2013	Indoor dust	Adults	45.0	122	[21]
		Dalian	2015	Indoor dust[e]	Adults	212	609	[22]
		Dalian	2015	Indoor dust[e]	Toddlers	602	3249	[22]
		Dalian	2015	Indoor dust[f]	Adults	74.0	252	[22]
		Dalian	2015	Indoor dust[f]	Toddlers	210	1345	[22]

	Northern China	Beijing	2016	Indoor dust	Adults	179	1159	[8]
		Beijing	2016	Indoor dust	Children	1519	4324	[8]
	Emission Region	E-waste dismantling area	2017	Indoor dust	Occupational workers	4640	20,400	[24]
		E-waste dismantling area	2017	Indoor dust	Local residents (adults)	600	2280	[24]
		E-waste dismantling area	2017	Indoor dust	Local residents (children)	4130	15,800	[24]
Dietary	China	20 provinces	2011	Meat and meat products	Adults	130	560	[94]
exposure		18 provinces	2017	Aquatic foods	Adults	872	-	[95]
		19 provinces	2011	Cereals	Adults	5185	-	[96]
		19 provinces	2011	Legumes	Adults	529	-	[96]
		5 provinces	2018	Milk	Adults	29.7	-	[98]
	Northern China	Beijing	2007	Diet	Adults	660	1200	[87]
		Beijing	2014-2016	Diet	Male adults	221	747	[89]
		Beijing	2014-2016	Diet	Female adults	227	725	[89]
		Beijing	2014-2016	Cooked food	Adults	145	-	[89]
	Eastern China	Jinan	2019	Vegetables	Adults	97.0	145	[92]
		Jinan	2019	Fruit	Adults	36.9	52.9	[92]
		Jinan	2019	Grains	Adults	1390	1749	[92]
		Jinan	2019	Meat	Adults	155	237	[92]
		Jinan	2019	Seafood	Adults	35.3	48.4	[92]
		Shanghai	2011	Farmed freshwater fish	Adults	49.0	-	[99]
		Shanghai	2011	Sea fish	Adults	32.0	-	[99]
	Southern China	Guangdong	2011	River fish	Adults	47.0	-	[99]
	Emission Region	E-waste dismantling area	2013	Eggs	Adults	65.4	-	[102]
		E-waste dismantling area	2013	Eggs	Children	281	-	[102]
		E-waste dismantling area	2016	Eggs	Adults	274	-	[102]
		E-waste dismantling area	2016	Eggs	Children	1180	-	[102]
		E-waste dismantling area	2017	Diet	Occupational workers	15,400	20,300	[24]
		E-waste dismantling area	2017	Diet	Local residents (adults)	15,400	20,300	[24]

		E-waste dismantling area	2017	Diet	Local residents (children)	34,100	46,400	[24]
Lactational	Rural China	8 provinces	2007	Breast milk	Infants	1310	6320	[107]
exposure		16 provinces	2011	Breast milk	Infants	1520	8650	[107]
	Northern China	Beijing	2007–2009	Breast milk	Infants	337	-	[105]
		Shijiazhuang	2014–2015	Breast milk	Infants (1 month)	13,000	18,700	[106]
		Shijiazhuang	2014–2015	Breast milk	Infants (3 month)	7100	9600	[106]
		Shijiazhuang	2014–2015	Breast milk	Infants (6 month)	2500	3500	[106]
	Eastern China	YRD	2015–2016	Breast milk	Infants	166	2580	[115]
	Southwestern China	Mianyang	2018	Breast milk	Neonates	17,400	-	[116]

[a]production hall.

[b]office area.

[c]farmland.

[d]village.

[e]shopping mall.

[f]building material mall.

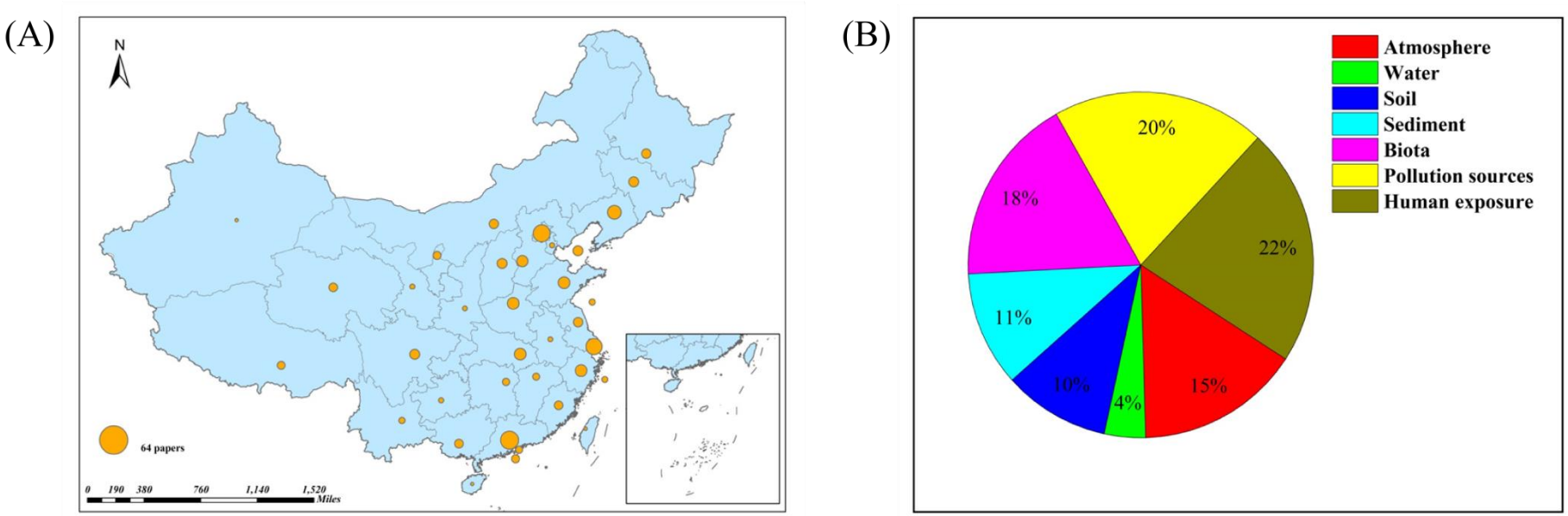

Figure S1. Regional distribution (A) and domain proportion (B) of SCCP research in China over the past decade.

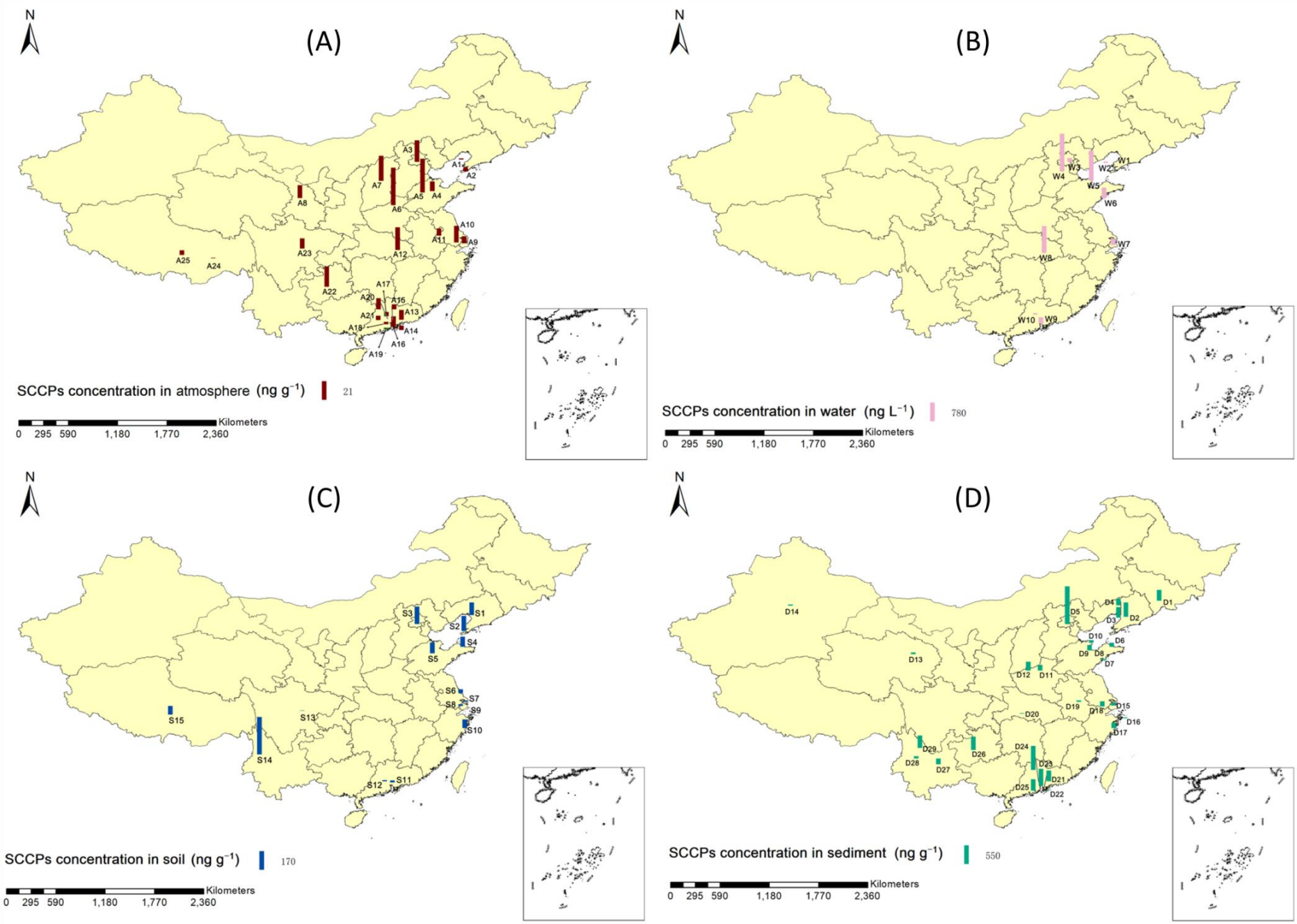
(A)
N
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
A20
A21
A22
A23
A24
A25
SCCPs concentration in atmosphere (ng g⁻¹)
21
Kilometers
0 295 590 1,180 1,770 2,360
(B)
N
W1
W2
W3
W4
W5
W6
W7
W8
W9
W10
SCCPs concentration in water (ng L⁻¹)
780
Kilometers
0 295 590 1,180 1,770 2,360
(C)
N
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
SCCPs concentration in soil (ng g⁻¹)
170
Kilometers
0 295 590 1,180 1,770 2,360
(D)
N
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
D20
D21
D22
D23
D24
D25
D26
D27
D28
D29
SCCPs concentration in sediment (ng g⁻¹)
550
Kilometers
0 295 590 1,180 1,770 2,360

Figure S2. Concentrations of SCCPs (mean value) in environmental matrices in China. (A) The concentrations of SCCPs in atmosphere (A1: Bohai Sea; A2: Dalian; A3: Beijing; A4: Zibo; A5: Jinan; A6: Xinxiang; A7: Taiyuan; A8: Lanzhou; A9: Shanghai; A10: Suzhou; A11: Nanjing; A12: Wuhan; A13: Huizhou; A14: Shenzhen; A15: Dongguan; A16: Zhuhai; A17: Foshan; A18: Jiangmen; A19: Zhongshan; A20: Guangzhou; A21: Zhaoqing; A22: Guiyang; A23: Chengdu; A24: Shergyla Mountain; A25: Lhasa). The data in Dalian, Bohai Sea and Zibo were the SCCPs concentrations in PM; the data in Suzhou was the SCCPs concentration in gas phase; the data in Lhasa, Shergyla Mountain and Shenzhen were the sum of SCCPs concentrations in the gas and particle phases; the data in the remaining cities were the SCCPs concentrations in $PM_{2.5}$. (B) The concentrations of SCCPs in water (W1: Liaodong Bay; W2: Bohai Sea; W3: Gaobeidian Lake; W4: Baiyangdian Lake; W5: Yellow River Estuary; W6: Yellow Sea; W7: Shanghai; W8: Middle reaches of Yangtze River; W9: Pearl River Estuary; W10: Qingyuan). (C) The concentrations of SCCPs in soil (S1: Liaohe River Basin; S2: Dalian; S3: Beijing; S4: Shandong Peninsula; S5: Zibo; S6: Nantong; S7: Chongming Island; S8: Shanghai (urban); S9: Shanghai (suburban); S10: Taizhou; S11: Pearl River Delta; S12: Guangzhou; S13: Chengdu; S14: Yunnan; S15: Tibetan Plateau). (D) The concentrations of SCCPs in sediment (D1: Lake Sihailongwan maar; D2: Liaohe Estuary; D3: Liaodong Bay; D4: Liaohe River Basin; D5: Gaobeidian Lake; D6: Shandong Peninsula; D7: Yellow Sea; D8: Laizhou Bay (marine sediment); D9: Laizhou Bay (river sediment); D10: Bohai Sea; D11: Middle reaches of Yellow River; D12: Henan section of Yellow River; D13: Lake Qinghai; D14: Lake Bosten; D15: Shanghai; D16: East China Sea; D17: Taizhou; D18: Lake Taihu; D19: Lake Chaohu; D20: Middle reaches of Yangtze River; D21: Shenzhen; D22: Hong Kong; D23: Pearl River Estuary; D24: Pearl River Delta (river sediment); D25: Pearl River Delta (marine sediment); D26: Lake Hongfeng; D27: Lake Dianchi; D28: Lake Erhai; D29: Lake Chenghai).

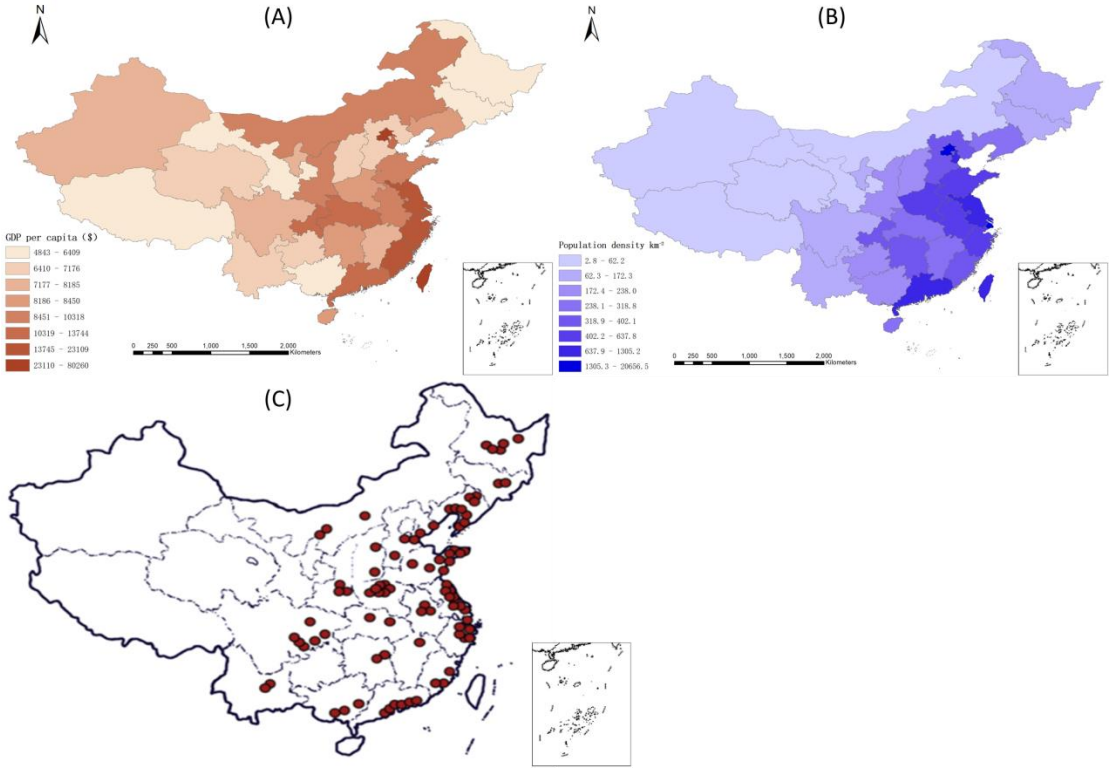

Figure S3. GDP per capita (A), population density (B) and distribution of CP manufacturing plants (C) in China [118].

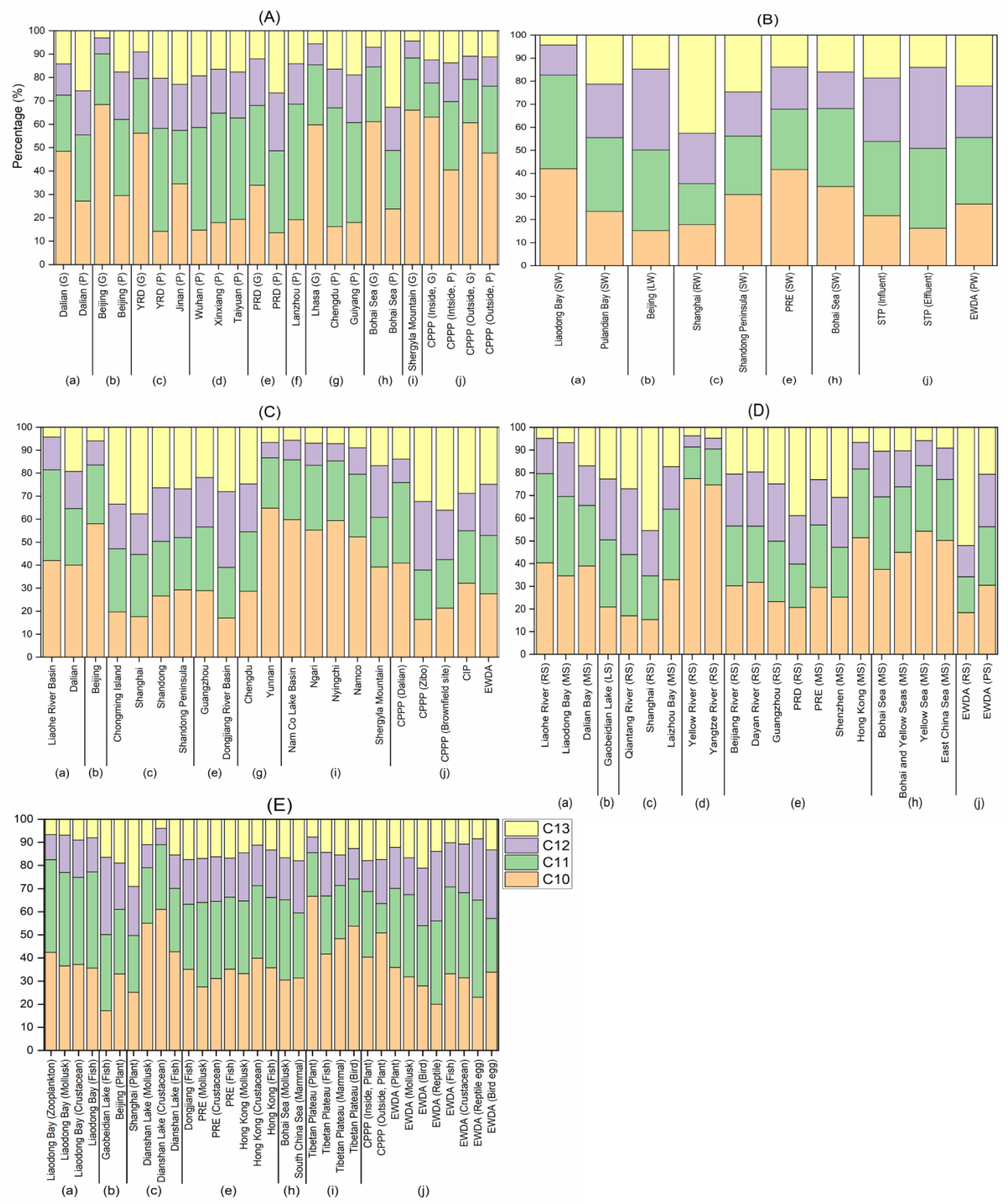

Figure S4. Carbon composition profiles of SCCP congeners in different environmental matrices in China. (A) The congener composition of SCCPs in air. (B) The congener composition of SCCPs in water. (C) The congener composition of SCCPs in soil. (D) The congener composition of SCCPs in sediment. (E) The congener composition of SCCPs in biota. (a), (b), (c), (d), (e), (f), (g), (h), (i) and (j) represent Northeastern China, Northern China, Eastern China, Central China, Southern China, Northwestern China, Southwestern China, China sea areas, Background area and Emission region, respectively. G: gas phase; P: particle phase; SW: seawater; LW: lake water; RW: river water; PW: pond water; RS: river sediment; MS: marine sediment; LS: lake sediment; PS: pond sediment; YRD: Yangtze River Delta; PRD: Pearl River Delta; CPPP: CP production plant; PRE: Pearl River Estuary; STP: sewage treatment plant; EWDA: e-waste dismantling area; CIP: chemical industrial park.

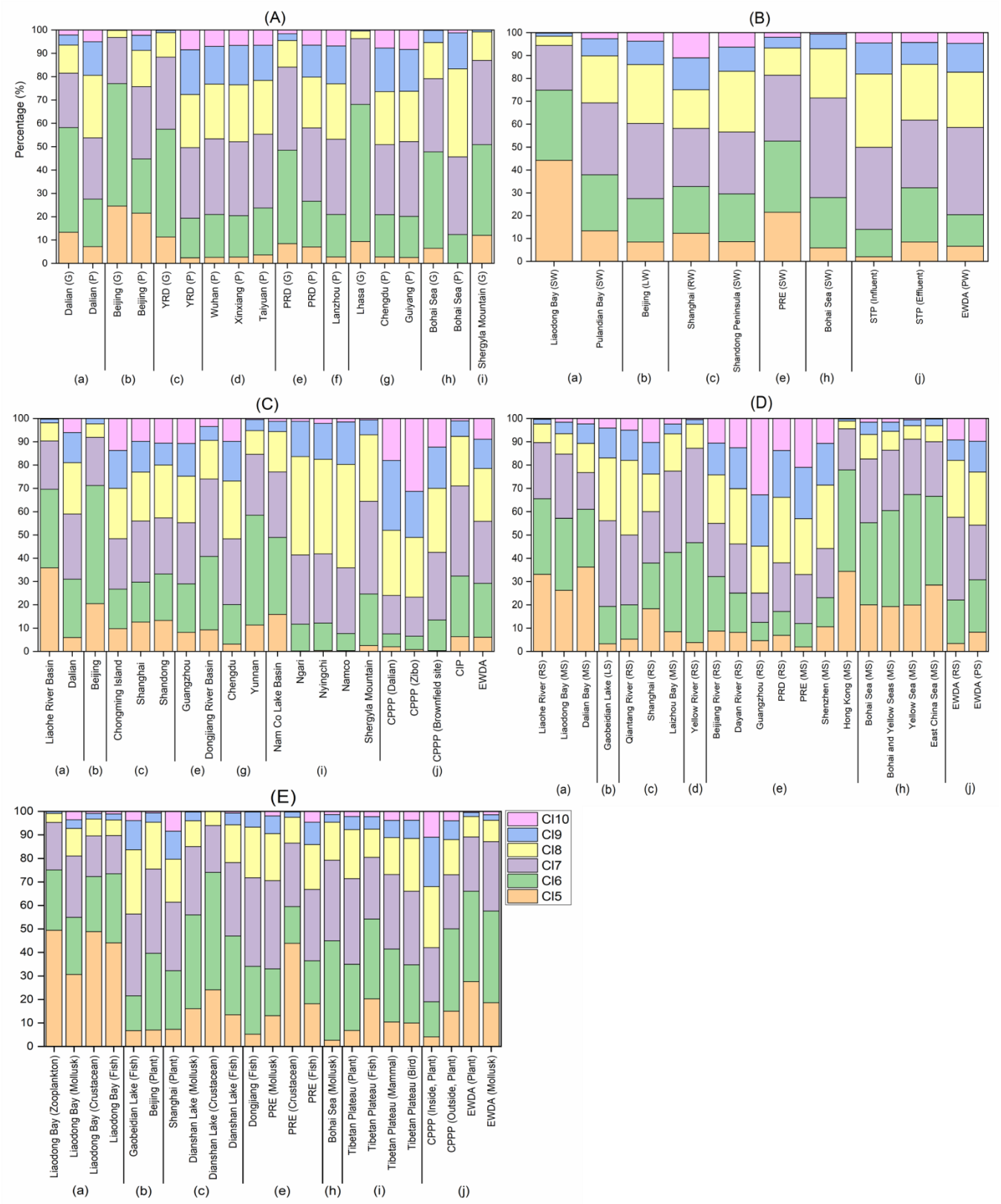

Figure S5. Chlorine composition profiles of SCCP congeners in different environmental matrices in China. (A) The chlorine abundance of SCCP congeners in air. (B) The chlorine abundance of SCCP congeners in water. (C) The chlorine abundance of SCCP congeners in soil. (D) The chlorine abundance of SCCP congeners in sediment. (E) The chlorine abundance of SCCP congeners in biota. (a), (b), (c), (d), (e), (f), (g), (h), (i) and (j) represent Northeastern China, Northern China, Eastern China, Central China, Southern China, Northwestern China, Southwestern China, China sea areas, Background area and Emission region, respectively. G: gas phase; P: particle phase; SW: seawater; LW: lake water; RW: river water; PW: pond water; RS: river sediment; MS: marine sediment; LS: lake sediment; PS: pond sediment; YRD: Yangtze River Delta; PRD: Pearl River Delta; CPPP: CP production plant; PRE: Pearl River Estuary; STP: sewage treatment plant; EWDA: e-waste dismantling area; CIP: chemical industrial park.

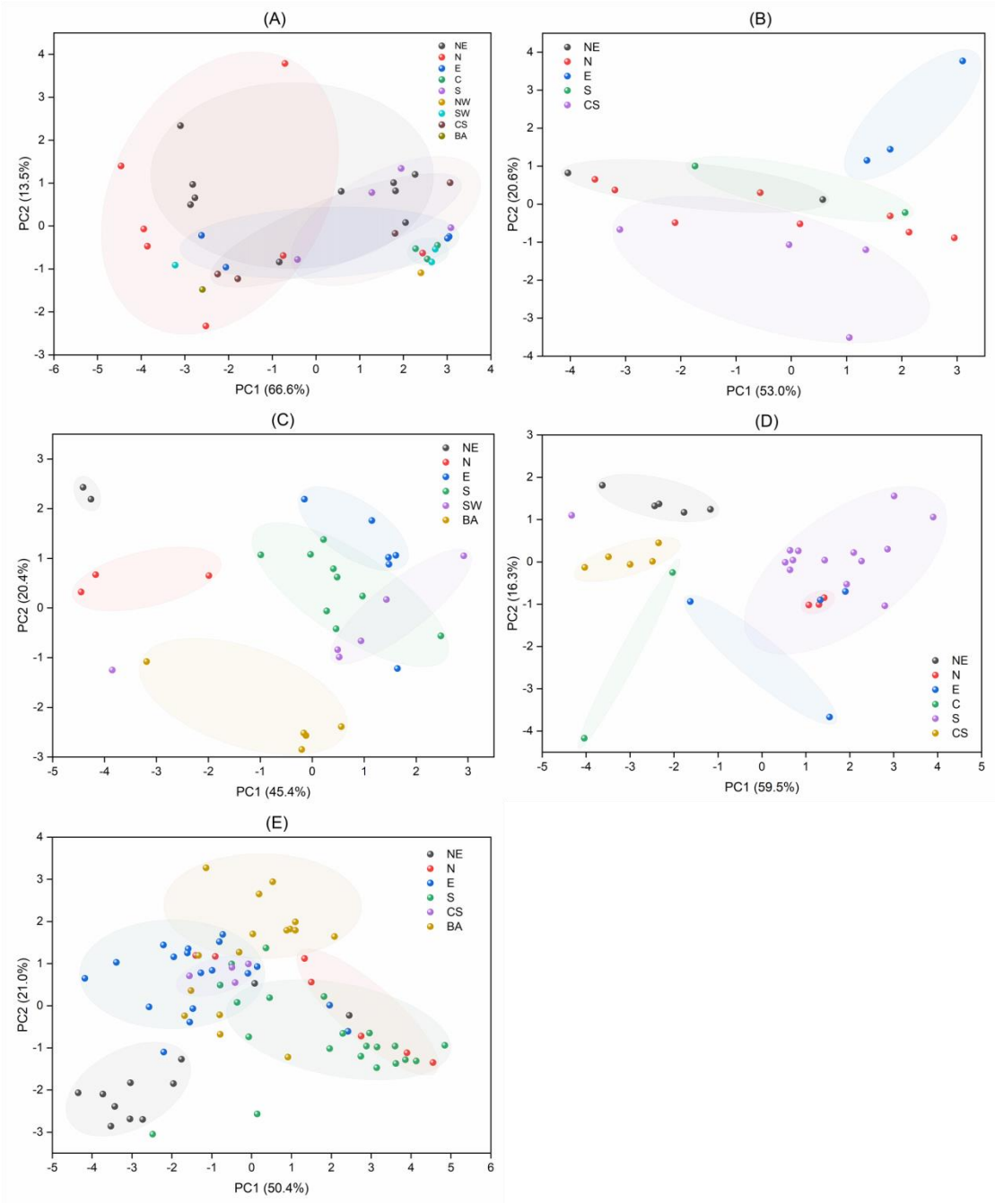

Figure S6. PCA of SCCP congeners in different regions of China. (A) PCA of SCCP congeners in air. (B) PCA of SCCP congeners in water. (C) PCA of SCCP congeners in soil. (D) PCA of SCCP congeners in sediment. (E) PCA of SCCP congeners in biota. NE: Northeastern China; N: Northern China; E: Eastern China; C: Central China; S: Southern China; NW: Northwestern China; SW: Southwestern China; CS: China sea areas; BA: Background area.

Reference

1. Li, Q.; Li, J.; Wang, Y.; Xu, Y.; Pan, X.; Zhang, G.; Luo, C.; Kobara, Y.; Nam, J.-J.; Jones, K. C., Atmospheric Short-Chain Chlorinated Paraffins in China, Japan, and South Korea. *Environ. Sci. Technol.* **2012,** 46, (21), 11948-11954.
2. Liu, D.; Li, Q.; Cheng, Z.; Li, K.; Li, J.; Zhang, G., Spatiotemporal variations of chlorinated paraffins in PM2.5 from Chinese cities: Implication of the shifting and upgrading of its industries. *Environ. Pollut.* **2020,** 259, 113853.
3. Zhu, X.; Bai, H.; Gao, Y.; Chen, J.; Yuan, H.; Wang, L.; Wang, W.; Dong, X.; Li, X., Concentrations and inhalation risk assessment of short-chain polychlorinated paraffins in the urban air of Dalian, China. *Environ. Sci. Pollut. Res.* **2017,** 24, (26), 21203-21212.
4. Bai, H.; Zhu, X.; Gao, Y.; Chen, J.; Wang, L.; Yuan, H.; Li, X.; Wang, W.; Dong, X., Gas-particle partitioning behavior of short-chain chlorinated paraffins in urban air of Dalian. *Journal of Dalian Jiaotong University* **2017,** 38, (6), 78-84 (in Chinese).
5. Wang, Y.; Zhu, X.; Gao, Y.; Bai, H.; Wang, P.; Chen, J.; Yuan, H.; Wang, L.; Li, X.; Wang, W., Monitoring gas- and particulate-phase short-chain polychlorinated paraffins in the urban air of Dalian by a self-developed passive sampler. *Journal of Environmental Sciences* **2019,** 80, 287-295.
6. Wang, T.; Han, S.; Yuan, B.; Zeng, L.; Li, Y.; Wang, Y.; Jiang, G., Summer-winter concentrations and gas-particle partitioning of short chain chlorinated paraffins in the atmosphere of an urban setting. *Environ. Pollut.* **2012,** 171, 38-45.
7. Gao, W.; Wu, J.; Wang, Y.; Jiang, G., Distribution and congener profiles of short-chain chlorinated paraffins in indoor/outdoor glass window surface films and their film-air partitioning in Beijing, China. *Chemosphere* **2016,** 144, 1327-1333.
8. Gao, W.; Cao, D.; Wang, Y.; Wu, J.; Wang, Y.; Wang, Y.; Jiang, G., External Exposure to Short- and Medium-Chain Chlorinated Paraffins for the General Population in Beijing, China. *Environ. Sci. Technol.* **2018,** 52, (1), 32-39.
9. Huang, H.; Gao, L.; Xia, D.; Qiao, L.; Wang, R.; Su, G.; Liu, W.; Liu, G.; Zheng, M., Characterization of short- and medium-chain chlorinated paraffins in outdoor/indoor PM10/PM2.5/PM1.0 in Beijing, China. *Environ. Pollut.* **2017,** 225, 674-680.
10. Li, H.; Li, J.; Li, H.; Yu, H.; Yang, L.; Chen, X.; Cai, Z., Seasonal variations and inhalation risk assessment of short-chain chlorinated paraffins in PM2.5 of Jinan, China. *Environ. Pollut.* **2019,** 245, 325-330.
11. Wang, P.; Zhao, N.; Cui, Y.; Jiang, W.; Wang, L.; Wang, Z.; Chen, X.; Jiang, L.; Ding, L., Short-chain chlorinated paraffin (SCCP) pollution from a CP production plant in China: Dispersion, congener patterns and health risk assessment. *Chemosphere* **2018,** 211, 456-464.
12. Niu, S.; Chen, R.; Zou, Y.; Dong, L.; Hai, R.; Huang, Y., Spatial distribution and profile of atmospheric short-chain chlorinated paraffins in the Yangtze River Delta. *Environ. Pollut.* **2020,** 259, 113958.
13. Zhou, W.; Shen, M.; Lam, J. C. W.; Zhu, M.; Liu, L.; Chen, H.; Du, B.; Zeng, L.; Zeng, E. Y., Size-dependent distribution and inhalation exposure characteristics of particle-bound chlorinated paraffins in indoor air in Guangzhou, China. *Environ. Int.* **2018,** 121, 675-682.
14. Li, T.; Gao, S.; Ben, Y.; Zhang, H.; Kang, Q.; Wan, Y., Screening of Chlorinated Paraffins and Unsaturated Analogues in Commercial Mixtures: Confirmation of Their Occurrences in the Atmosphere. *Environ. Sci. Technol.* **2018,** 52, (4), 1862-1870.

15. Wang, Y.; Li, J.; Cheng, Z.; Li, Q.; Pan, X.; Zhang, R.; Liu, D.; Luo, C.; Liu, X.; Katsoyiannis, A.; Zhang, G., Short- and Medium-Chain Chlorinated Paraffins in Air and Soil of Subtropical Terrestrial Environment in the Pearl River Delta, South China: Distribution, Composition, Atmospheric Deposition Fluxes, and Environmental Fate. *Environ. Sci. Technol.* **2013,** 47, (6), 2679-2687.
16. Zhuo, M.; Ma, S.; Li, G.; Yu, Y.; An, T., Chlorinated paraffins in the indoor and outdoor atmospheric particles from the Pearl River Delta: Characteristics, sources, and human exposure risks. *Sci. Total Environ.* **2019,** 650, 1041-1049.
17. Wu, J.; Gao, W.; Liang, Y.; Fu, J.; Gao, Y.; Wang, Y.; Jiang, G., Spatiotemporal Distribution and Alpine Behavior of Short Chain Chlorinated Paraffins in Air at Shergyla Mountain and Lhasa on the Tibetan Plateau of China. *Environ. Sci. Technol.* **2017,** 51, (19), 11136-11144.
18. Ma, X.; Wang, Y.; Gao, W.; Wang, Y.; Wang, Z.; Yao, Z.; Jiang, G., Air-Seawater Gas Exchange and Dry Deposition of Chlorinated Paraffins in a Typical Inner Sea (Liaodong Bay), North China. *Environ. Sci. Technol.* **2018,** 52, (14), 7729-7735.
19. Wong, F.; Suzuki, G.; Michinaka, C.; Yuan, B.; Takigami, H.; de Wit, C. A., Dioxin-like activities, halogenated flame retardants, organophosphate esters and chlorinated paraffins in dust from Australia, the United Kingdom, Canada, Sweden and China. *Chemosphere* **2017,** 168, 1248-1256.
20. Zeng, Y.-H.; Tang, B.; Luo, X.-J.; Zheng, X.-B.; Peng, P.-A.; Mai, B.-X., Organohalogen pollutants in surface particulates from workshop floors of four major e-waste recycling sites in China and implications for emission lists. *Sci. Total Environ.* **2016,** 569, 982-989.
21. Liu, L.-H.; Ma, W.-L.; Liu, L.-Y.; Huo, C.-Y.; Li, W.-L.; Gao, C.-J.; Li, H.-L.; Li, Y.-F.; Chan, H. M., Occurrence, sources and human exposure assessment of SCCPs in indoor dust of northeast China. *Environ. Pollut.* **2017,** 225, 232-243.
22. Shi, L.; Gao, Y.; Zhang, H.; Geng, N.; Xu, J.; Zhan, F.; Ni, Y.; Hou, X.; Chen, J., Concentrations of short- and medium-chain chlorinated paraffins in indoor dusts from malls in China: Implications for human exposure. *Chemosphere* **2017,** 172, 103-110.
23. Cao, D.; Gao, W.; Wu, J.; Lv, K.; Xin, S.; Wang, Y.; Jiang, G., Occurrence and Human Exposure Assessment of Short- and Medium-Chain Chlorinated Paraffins in Dusts from Plastic Sports Courts and Synthetic Turf in Beijing, China. *Environ. Sci. Technol.* **2019,** 53, (1), 443-451.
24. Chen, H.; Lam, J. C. W.; Zhu, M.; Wang, F.; Zhou, W.; Du, B.; Zeng, L.; Zeng, E. Y., Combined Effects of Dust and Dietary Exposure of Occupational Workers and Local Residents to Short- and Medium-Chain Chlorinated Paraffins in a Mega E-Waste Recycling Industrial Park in South China. *Environ. Sci. Technol.* **2018,** 52, (20), 11510-11519.
25. Ma, X.; Zhang, H.; Wang, Z.; Yao, Z.; Chen, J.; Chen, J., Bioaccumulation and Trophic Transfer of Short Chain Chlorinated Paraffins in a Marine Food Web from Liaodong Bay, North China. *Environ. Sci. Technol.* **2014,** 48, (10), 5964-5971.
26. Yu, G., Study on method and application for analysis of short chain chlorinated paraffins in marine environment. *Dlian Maritime University, Dalian, Liaoning, China* **2012**, p. 74 (in Chinese).
27. Zeng, L.; Wang, T.; Wang, P.; Liu, Q.; Han, S.; Yuan, B.; Zhu, N.; Wang, Y.; Jiang, G., Distribution and Trophic Transfer of Short-Chain Chlorinated Paraffins in an Aquatic Ecosystem Receiving Effluents from a Sewage Treatment Plant. *Environ. Sci. Technol.* **2011,** 45,

(13), 5529-5535.

28. Zeng, L.; Li, H.; Wang, T.; Gao, Y.; Xiao, K.; Du, Y.; Wang, Y.; Jiang, G., Behavior, Fate, and Mass Loading of Short Chain Chlorinated Paraffins in an Advanced Municipal Sewage Treatment Plant. *Environ. Sci. Technol.* **2013,** 47, (2), 732-740.
29. Wan, W., Distribution characteristics of short-chain chlorinated paraffin in Baiyangdian Lake and the middle reaches of the Yangtze River. *Shijiazhuang: Hebei Normal University* **2017** 24-50 (in Chinese).
30. Zhao, N.; Cui, Y.; Wang, P.; Li, S.; Jiang, W.; Luo, N.; Wang, Z.; Chen, X.; Ding, L., Short-chain chlorinated paraffins in soil, sediment, and seawater in the intertidal zone of Shandong Peninsula, China: Distribution and composition. *Chemosphere* **2019,** 220, 452-458.
31. Wang, X.-T.; Jia, H.-H.; Hu, B.-P.; Cheng, H.-X.; Zhou, Y.; Fu, R., Occurrence, sources, partitioning and ecological risk of short- and medium-chain chlorinated paraffins in river water and sediments in Shanghai. *Sci. Total Environ.* **2019,** 653, 475-484.
32. Huang, Y.; Chen, L.; Jiang, G.; He, Q.; Ren, L.; Gao, B.; Cai, L., Bioaccumulation and biomagnification of short-chain chlorinated paraffins in marine organisms from the Pearl River Estuary, South China. *Sci. Total Environ.* **2019,** 671, 262-269.
33. Sun, R.; Luo, X.; Tang, B.; Chen, L.; Liu, Y.; Mai, B., Bioaccumulation of short chain chlorinated paraffins in a typical freshwater food web contaminated by e-waste in south china: Bioaccumulation factors, tissue distribution, and trophic transfer. *Environ. Pollut.* **2017,** 222, 165-174.
34. Aamir, M.; Yin, S.; Zhou, Y.; Xu, C.; Liu, K.; Liu, W., Congener-specific C-10-C-13 and C-14-C-17 chlorinated paraffins in Chinese agricultural soils: Spatio-vertical distribution, homologue pattern and environmental behavior. *Environ. Pollut.* **2019,** 245, 789-798.
35. Gao, Y.; Zhang, H.; Su, F.; Tian, Y.; Chen, J., Environmental Occurrence and Distribution of Short Chain Chlorinated Paraffins in Sediments and Soils from the Liaohe River Basin, P. R. China. *Environ. Sci. Technol.* **2012,** 46, (7), 3771-3778.
36. Xu, J.; Gao, Y.; Zhang, H.; Zhan, F.; Chen, J., Dispersion of Short- and Medium-Chain Chlorinated Paraffins (CPs) from a CP Production Plant to the Surrounding Surface Soils and Coniferous Leaves. *Environ. Sci. Technol.* **2016,** 50, (23), 12759-12766.
37. Zeng, L.; Wang, T.; Han, W.; Yuan, B.; Liu, Q.; Wang, Y.; Jiang, G., Spatial and Vertical Distribution of Short Chain Chlorinated Paraffins in Soils from Wastewater Irrigated Farmlands. *Environ. Sci. Technol.* **2011,** 45, (6), 2100-2106.
38. Huang, D.; Gao, L.; Qiao, L.; Cui, L.; Xu, C.; Wang, K.; Zheng, M., Concentrations of and risks posed by short-chain and medium-chain chlorinated paraffins in soil at a chemical industrial park on the southeast coast of China. *Environ. Pollut.* **2020,** 258, 113704.
39. Wang, X.-T.; Zhang, Y.; Miao, Y.; Ma, L.-L.; Li, Y.-C.; Chang, Y.-Y.; Wu, M.-H., Short-chain chlorinated paraffins (SCCPs) in surface soil from a background area in China: occurrence, distribution, and congener profiles. *Environ. Sci. Pollut. Res.* **2013,** 20, (7), 4742-4749.
40. Wang, X.-T.; Wang, X.-K.; Zhang, Y.; Chen, L.; Sun, Y.-F.; Li, M.; Wu, M.-H., Short- and medium-chain chlorinated paraffins in urban soils of Shanghai: Spatial distribution, homologue group patterns and ecological risk assessment. *Sci. Total Environ.* **2014,** 490, 144-152.
41. Wang, X.-T.; Xu, S.-Y.; Wang, X.-K.; Hu, B.-P.; Jia, H.-H., Occurrence, homologue patterns and source apportionment of short- and medium-chain chlorinated paraffins in suburban soils of Shanghai, China. *Chemosphere* **2017,** 180, 302-311.

42. Yuan, B.; Fu, J.; Wang, Y.; Jiang, G., Short-chain chlorinated paraffins in soil, paddy seeds (Oryza sativa) and snails (Ampullariidae) in an e-waste dismantling area in China: Homologue group pattern, spatial distribution and risk assessment. *Environ. Pollut.* **2017,** 220, 608-615.
43. Xia, Q., The research about SCCPs level in the Zhejiang Province soil and sediments. *Zhejiang University of Technology, Hangzhou, China* **2012**, p. 71 (in Chinese).
44. Chen, R.; Wang, Y.; Wang, P.; Jiang, G., Spatial distribution of short chain chlorinated paraffins in soils from Taizhou, an e-waste dismantling area. *Environmental Chemistry* **2014,** 33, (6), 873-879 (in Chinese).
45. Xu, C.; Zhang, Q.; Gao, L.; Zheng, M.; Qiao, L.; Cui, L.; Wang, R.; Cheng, J., Spatial distributions and transport implications of short- and medium-chain chlorinated paraffins in soils and sediments from an e-waste dismantling area in China. *Sci. Total Environ.* **2019,** 649, 821-828.
46. Han, S.; Huang, Y.; Chen, L.; Ye, Z.; Feng, Y.; Zhang, S., The short-chain chlorinated paraffins content and distribution in soil of Guangzhou. *Sichuan Environment* **2012,** 31, (4), 56-60 (in Chinese).
47. Huang, Y.; Chen, L.; Feng, Y.; Ye, Z.; He, Q.; Feng, Q.; Qing, X.; Liu, M.; Gao, B., Short-chain chlorinated paraffins in the soils of two different Chinese cities: Occurrence, homologue patterns and vertical migration. *Sci. Total Environ.* **2016,** 557, 644-651.
48. Wu, Y.; Wu, J.; Tan, H.; Song, Q.; Zhang, J.; Zhong, X.; Zhou, J.; Wu, W.; Cai, X.; Zhang, W.; Liu, X., Distributions of chlorinated paraffins and the effects on soil microbial community structure in a production plant brownfield site. *Environ. Pollut.* **2020,** 262, 114328.
49. Feng, Y.; Chen, L.; Huang, Y.; Ye, Z.; Jiang, G.; Wang, X., Preliminary study on short-chain chlorinated paraffins in different types of soils of Chengdu. *Environ. Sci. Technol.* **2014,** 37, (1), 33-37 (in Chinese).
50. Wang, K.; Gao, L.; Zhu, S.; Cui, L.; Qiao, L.; Xu, C.; Huang, D.; Zheng, M., Spatial distributions and homolog profiles of chlorinated nonane paraffins, and short and medium chain chlorinated paraffins in soils from Yunnan, China. *Chemosphere* **2020,** 247, 125855.
51. Li, H.; Bu, D.; Fu, J.; Gao, Y.; Cong, Z.; Zhang, G.; Wang, Y.; Chen, X.; Zhang, A.; Jiang, G., Trophic Dilution of Short-Chain Chlorinated Paraffins in a Plant-Plateau Pika-Eagle Food Chain from the Tibetan Plateau. *Environ. Sci. Technol.* **2019,** 53, (16), 9472-9480.
52. Wu, J.; Gao, W.; Liang, Y.; Fu, J.; Shi, J.; Lu, Y.; Wang, Y.; Jiang, G., Short- and medium-chain chlorinated paraffins in multi-environmental matrices in the Tibetan Plateau environment of China: A regional scale study. *Environ. Int.* **2020,** 140, 105767.
53. Zhang, C.; Chang, H.; Wang, H.; Zhu, Y.; Zhao, X.; He, Y.; Sun, F.; Wu, F., Spatial and Temporal Distributions of Short-, Medium-, and Long-Chain Chlorinated Paraffins in Sediment Cores from Nine Lakes in China. *Environ. Sci. Technol.* **2019,** 53, (16), 9462-9471.
54. Gao, Y.; Wang, C.; Zhang, H.-j.; Zou, L.-l.; Tian, Y.-z.; Chen, J.-p., Analysis of short-chain chlorinated paraffins in sediment samples from the mouth of the Daliao River by HRGC/ECNI-LRMS. *Environmental Science* **2010,** 31, (8), 1904-1908 (in Chinese).
55. Chen, C.; Ma, X.; Guo, W.; Zhao, Y.; Jingcai, L. U.; Wang, Z.; Yao, Z., Congener specific distribution and bioaccumulation of short-chain chlorinated paraffins in Liao estuary. *Chin. Sci. Bull.* **2014,** 59, (7), 578-585 (in Chinese).
56. Pan, X.; Tang, J.; Tian, C.; Li, J.; Zhang, G., Short- and medium-chain chlorinated paraffins in sediments from the Laizhou Bay area, North China: Implications for transportation from rivers

to marine environment. *Environ. Pollut.* **2018,** 243, 1460-1468.

57. Qiao, L.; Xia, D.; Gao, L.; Huang, H.; Zheng, M., Occurrences, sources and risk assessment of short- and medium-chain chlorinated paraffins in sediments from the middle reaches of the Yellow River, China. *Environ. Pollut.* **2016,** 219, 483-489.
58. Li, Q.; Cheng, X.; Cui, Y.; Sun, J.; Li, J.; Zhang, G., Short- and medium-chain chlorinated paraffins in the Henan section of the Yellow River: Occurrences, fates, and fluxes. *Sci. Total Environ.* **2018,** 640, 1312-1319.
59. Qiao, L.; Gao, L.; Xia, D.; Huang, H.; Zheng, M., Short- and medium-chain chlorinated paraffins in sediments from the middle reaches of the Yangtze River: Spatial distributions, source apportionment and risk assessment. *Sci. Total Environ.* **2017,** 575, 1177-1182.
60. Chen, M.-Y.; Luo, X.-J.; Zhang, X.-L.; He, M.-J.; Chen, S.-J.; Mi, B.-X., Chlorinated Paraffins in Sediments from the Pearl River Delta, South China: Spatial and Temporal Distributions and Implication for Processes. *Environ. Sci. Technol.* **2011,** 45, (23), 9936-9943.
61. Chen, M.; Lu, F.; Chen, J.; Luo, X.; Mai, B., Temporal distributions of chlorinated paraffins in sediments core from the pearl river delta. *Environmental Chemistry* **2014,** 33, (5), 832-836 (in Chinese).
62. Zeng, L.; Lam, J. C. W.; Horii, Y.; Li, X.; Chen, W.; Qiu, J.-W.; Leung, K. M. Y.; Yamazaki, E.; Yamashita, N.; Lam, P. K. S., Spatial and temporal trends of short- and medium-chain chlorinated paraffins in sediments off the urbanized coastal zones in China and Japan: A comparison study. *Environ. Pollut.* **2017,** 224, 357-367.
63. Lu, F.; Chen, M.; Chen, Y.; Liu, F.; Luo, X.; Mai, B., Distribution of chlorinated paraffins and polychlorinated biphenyls in e-waste,residues and sediment from e-waste areas of Qingyuan. *Environmental Chemistry* **2015,** 34, (7), 1297-1303 (in Chinese).
64. Ma, X.; Chen, C.; Zhang, H.; Gao, Y.; Wang, Z.; Yao, Z.; Chen, J.; Chen, J., Congener-specific distribution and bioaccumulation of short-chain chlorinated paraffins in sediments and bivalves of the Bohai Sea, China. *Mar. Pollut. Bull.* **2014,** 79, (1-2), 299-304.
65. Zeng, L.; Chen, R.; Zhao, Z.; Wang, T.; Gao, Y.; Li, A.; Wang, Y.; Jiang, G.; Sun, L., Spatial Distributions and Deposition Chronology of Short Chain Chlorinated Paraffins in Marine Sediments across the Chinese Bohai and Yellow Seas. *Environ. Sci. Technol.* **2013,** 47, (20), 11449-11456.
66. Zhao, Z.; Li, H.; Wang, Y.; Li, G.; Cao, Y.; Zeng, L.; Lan, J.; Wang, T.; Jiang, G., Source and Migration of Short-Chain Chlorinated Paraffins in the Coastal East China Sea Using Multiproxies of Marine Organic Geochemistry. *Environ. Sci. Technol.* **2013,** 47, (10), 5013-5022.
67. Zeng, L.; Zhao, Z.; Li, H.; Thanh, W.; Liu, Q.; Xiao, K.; Du, Y.; Wang, Y.; Jiang, G., Distribution of Short Chain Chlorinated Paraffins in Marine Sediments of the East China Sea: Influencing Factors, Transport and Implications. *Environ. Sci. Technol.* **2012,** 46, (18), 9898-9906.
68. Li, H.; Lan, J.; Zeng, L.; Cao, Y.; Zhao, Z., Sedimentary records of short chain chlorinated paraffins in the Zhejiang-Fujian mud area of the East China Sea. *Fresenius Environ. Bull.* **2014,** 23, (1), 105-112.
69. Wang, C.; Gao, Y.; Zhang, H.; Fan, J.; Chen, J., Bioaccumulation characteristics of short-chain chlorinated paraffinsin Liaodong Bay, Northeast China. *Environmental Chemistry* **2011,** 30, (1), 44-49 (in Chinese).

70. Huang, H.; Gao, L.; Xia, D.; Qiao, L., Bioaccumulation and biomagnification of short and medium chain polychlorinated paraffins in different species of fish from Liaodong Bay, North China. *Scientific Reports* **2017,** 7, (1), 1-9.
71. Wang, T.; Yu, J.; Han, S.; Wang, Y.; Jiang, G., Levels of short chain chlorinated paraffins in pine needles and bark and their vegetation-air partitioning in urban areas. *Environ. Pollut.* **2015,** 196, 309-312.
72. Du, X.; Yuan, B.; Zhou, Y.; de Wit, C. A.; Zheng, Z.; Yin, G., Chlorinated Paraffins in Two Snake Species from the Yangtze River Delta: Tissue Distribution and Biomagnification. *Environ. Sci. Technol.* **2020,** 54, (5), 2753-2762.
73. Du, X.; Yuan, B.; Zhou, Y.; Benskin, J. P.; Qiu, Y.; Yin, G.; Zhao, J., Short-, Medium-, and Long-Chain Chlorinated Paraffins in Wildlife from Paddy Fields in the Yangtze River Delta. *Environ. Sci. Technol.* **2018,** 52, (3), 1072-1080.
74. Zhou, Y.; Yin, G.; Du, X.; Xu, M.; Qiu, Y.; Ahlqvist, P.; Chen, Q.; Zhao, J., Short-chain chlorinated paraffins (SCCPs) in a freshwater food web from Dianshan Lake: Occurrence level, congener pattern and trophic transfer. *Sci. Total Environ.* **2018,** 615, 1010-1018.
75. Wang, X.-T.; Zhou, J.; Lei, B.-L.; Zhou, J.-M.; Xu, S.-Y.; Hu, B.-P.; Wang, D.-Q.; Zhang, D.-P.; Wu, M.-H., Atmospheric occurrence, homologue patterns and source apportionment of short- and medium-chain chlorinated paraffins in Shanghai, China: Biomonitoring with Masson pine (Pinus massoniana L.) needles. *Sci. Total Environ.* **2016,** 560, 92-100.
76. Jiang, G., The contamination characteristic of short-chain chlorinated paraffins in edible fish and preliminary study on their rish exposure. *Taiyuan Uniersity of Science and Technology, Taiyuan, Shanxi, China* **2013**, p. 59 (in Chinese).
77. Sun, R.; Luo, X.; Tang, B.; Li, Z.; Huang, L.; Wang, T.; Mai, B., Short-chain chlorinated paraffins in marine organisms from the Pearl River Estuary in South China: Residue levels and interspecies differences. *Sci. Total Environ.* **2016,** 553, 196-203.
78. Zeng, L.; Lam, J. C. W.; Chen, H.; Du, B.; Leung, K. M. Y.; Lam, P. K. S., Tracking Dietary Sources of Short- and Medium-Chain Chlorinated Paraffins in Marine Mammals through a Subtropical Marine Food Web. *Environ. Sci. Technol.* **2017,** 51, (17), 9543-9552.
79. Luo, X.-J.; Sun, Y.-X.; Wu, J.-P.; Chen, S.-J.; Mai, B.-X., Short-chain chlorinated paraffins in terrestrial bird species inhabiting an e-waste recycling site in South China. *Environ. Pollut.* **2015,** 198, 41-46.
80. Guan, K.-L.; Liu, Y.; Luo, X.-J.; Zeng, Y.-H.; Mai, B.-X., Short- and medium-chain chlorinated paraffins in aquatic organisms from an e-waste site: Biomagnification and maternal transfer. *Sci. Total Environ.* **2020,** 708, 134840.
81. Ren, Z.; Zeng, Y.; Tang, B.; Luo, X.; Huang, C.; Mai, B., Bioaccumulative Characteristics of Halogenated Flame Retardants in Aquatic and Terrestrial Biotas: A Case Study of Catfish and Pigeons. *Asian Journal of Ecotoxicology* **2018,** 13, (1), 163-168 (in Chinese).
82. Yuan, B.; Thanh, W.; Zhu, N.; Zhang, K.; Zeng, L.; Fu, J.; Wang, Y.; Jiang, G., Short Chain Chlorinated Paraffins in Mollusks from Coastal Waters in the Chinese Bohai Sea. *Environ. Sci. Technol.* **2012,** 46, (12), 6489-6496.
83. Zeng, L.; Lam, J. C. W.; Wang, Y.; Jiang, G.; Lam, P. K. S., Temporal Trends and Pattern Changes of Short- and Medium-Chain Chlorinated Paraffins in Marine Mammals from the South China Sea over the Past Decade. *Environ. Sci. Technol.* **2015,** 49, (19), 11348-11355.
84. Jiang, W.; Chen, H.; Huang, T.; Lian, L.; Li, J.; Jia, C.; Gao, H.; Mao, X.; Ma, J., Tagged

sources of short-chain chlorinated paraffins in China's marine environment and fish. *Chemosphere* **2019,** 229, 358-365.

85. Du, B.; Ge, J.; Yang, R.; Han, X.; Chen, H.; Li, J.; Zeng, L., Altitude-dependent accumulation of short chain chlorinated paraffins in fish from alpine lakes and Lhasa river on the Tibetan Plateau. *Environ. Pollut.* **2019,** 250, 594-600.
86. Chen, L.; Huang, Y.; Han, S.; Feng, Y.; Jiang, G.; Tang, C.; Ye, Z.; Zhan, W.; Liu, M.; Zhang, S., Sample pretreatment optimization for the analysis of short chain chlorinated paraffins in soil with gas chromatography-electron capture negative ion-mass spectrometry. *J. Chromatogr. A* **2013,** 1274, 36-43.
87. Harada, K. H.; Takasuga, T.; Hitomi, T.; Wang, P.; Matsukami, H.; Koizumi, A., Dietary Exposure to Short-Chain Chlorinated Paraffins Has Increased in Beijing, China. *Environ. Sci. Technol.* **2011,** 45, (16), 7019-7027.
88. Cui, L.; Gao, L.; Zheng, M.; Li, J.; Zhang, L.; Wu, Y.; Qiao, L.; Xu, C.; Wang, K.; Huang, D., Bioaccessibility of short chain chlorinated paraffins in meat and seafood. *Sci. Total Environ.* **2019,** 668, 996-1003.
89. Gao, W.; Cao, D.; Lv, K.; Wu, J.; Wang, Y.; Wang, C.; Wang, Y.; Jiang, G., Elimination of short-chain chlorinated paraffins in diet after Chinese traditional cooking-a cooking case study. *Environ. Int.* **2019,** 122, 340-345.
90. Jiang, G.; Chen, L.-g.; He, Q.-s.; Meng, X.-z.; Feng, Y.-b.; Huang, Y.-m.; Tang, C.-m., Contamination characteristics of short-chain chlorinated paraffins in edible fish of Shanghai. *Environmental Science* **2013,** 34, (9), 3374-3380 (in Chinese).
91. Yu, J.; Wang, T.; Wang, Y.; Meng, M.; Chen, R.; Jiang, G., Levels and Distribution of Short Chain Chlorinated Paraffins in Seafood from Dalian, China. *Environmental Science* **2014,** 35, (5), 1955-1961 (in Chinese).
92. Li, H.; Gao, S.; Yang, M.; Zhang, F.; Cao, L.; Xie, H.; Chen, X.; Cai, Z., Dietary exposure and risk assessment of short-chain chlorinated paraffins in supermarket fresh products in Jinan, China. *Chemosphere* **2020,** 244, 125393.
93. Cao, Y.; Harada, K. H.; Liu, W.; Yan, J.; Zhao, C.; Niisoe, T.; Adachi, A.; Fujii, Y.; Nouda, C.; Takasuga, T.; Koizumi, A., Short-chain chlorinated paraffins in cooking oil and related products from China. *Chemosphere* **2015,** 138, 104-111.
94. Huang, H.; Gao, L.; Zheng, M.; Li, J.; Zhang, L.; Wu, Y.; Wang, R.; Xia, D.; Qiao, L.; Cui, L.; Su, G.; Liu, W.; Liu, G., Dietary exposure to short- and medium-chain chlorinated paraffins in meat and meat products from 20 provinces of China. *Environ. Pollut.* **2018,** 233, 439-445.
95. Wang, R.; Gao, L.; Zheng, M.; Tian, Y.; Li, J.; Zhang, L.; Wu, Y.; Huang, H.; Qiao, L.; Liu, W.; Su, G.; Liu, G.; Liu, Y., Short- and medium-chain chlorinated paraffins in aquatic foods from 18 Chinese provinces: Occurrence, spatial distributions, and risk assessment. *Sci. Total Environ.* **2018,** 615, 1199-1206.
96. Wang, R.; Gao, L.; Zheng, M.; Li, J.; Zhang, L.; Wu, Y.; Wang, G.; Xiong, L.; Ding, D.; Lu, D.; Qiao, L.; Cui, L.; Xu, C., Characterization of short- and medium-chain chlorinated paraffins in cereals and legumes from 19 Chinese provinces. *Chemosphere* **2019,** 226, 282-289.
97. Chen, H.; Shen, J.; Wang, X.; Yang, L., Dietary Pollution Status and Exposure Risk Assessment of Short-Chain Chlorinated Paraffins. *Food Science* **2019,** 40, (21), 143-149 (in Chinese).
98. Dong, S.; Zhang, S.; Li, X.; Wei, S.; Li, T.; Zou, Y.; Zhang, W.; Cheng, J.; Wang, R.; Wang, P.; Su, X., Occurrence of short- and medium-chain chlorinated paraffins in raw dairy cow milk

from five Chinese provinces. *Environ. Int.* **2020,** 136, 105466.

99. Huang, Y.; Qing, X.; Jiang, G.; Chen, L.; He, Q.; Meng, X.-Z.; Gao, B., Short-chain chlorinated paraffins in fish from two developed regions of China: Occurrence, influencing factors and implication for human exposure via consumption. *Chemosphere* **2019,** 236.
100. Dong, S.; Li, X.; Su, X.; Wang, P., Concentrations and congener group profiles of short-and medium-chain chlorinated paraffins in animal feed materials. *Sci. Total Environ.* **2019,** 647, 676-681.
101. Zeng, Y.-H.; Luo, X.-J.; Tang, B.; Mai, B.-X., Habitat- and species-dependent accumulation of organohalogen pollutants in home-produced eggs from an electronic waste recycling site in South China: Levels, profiles, and human dietary exposure. *Environ. Pollut.* **2016,** 216, 64-70.
102. Zeng, Y.; Huang, C.; Luo, X.; Liu, Y.; Ren, Z.; Mai, B., Polychlorinated biphenyls and chlorinated paraffins in home-produced eggs from an e-waste polluted area in South China: Occurrence and human dietary exposure. *Environ. Int.* **2018,** 116, 52-59.
103. Sun, R.; Chen, J.; Shao, H.; Tang, L.; Zheng, X.; Li, Q. X.; Wang, Y.; Luo, X.; Mai, B., Bioaccumulation of short-chain chlorinated paraffins in chicken (Gallus domesticus): Comparison to fish. *J. Hazard. Mater.* **2020,** 396, 122590.
104. Chen, R., Environmental behavior of short-chain chlorinated paraffins in multi-medium. *Shandong University, Jinan, Shandong, China* **2014**, p. 72 (in Chinese).
105. Cao, Y.; Harada, K. H.; Hitomi, T.; Niisoe, T.; Wang, P.; Shi, Y.; Yang, H.-R.; Takasuga, T.; Koizumi, A., Lactational exposure to short-chain chlorinated paraffins in China; Korea, and Japan. *Chemosphere* **2017,** 173, 43-48.
106. Yang, L.; Wang, Z.; Li, J.; Ma, Y.; Kong, L.; Yang, H.; Wang, L.; Liu, Y.; Lu, Y.; Zhang, J., Evaluation of short chain chlorinated paraffins in human milk and their intake by infants in Hebei Province, China. *Food Additives and Contaminants Part a-Chemistry Analysis Control Exposure & Risk Assessment* **2018,** 35, (10), 2011-2021.
107. Xia, D.; Gao, L.-R.; Zheng, M.-H.; Li, J.-G.; Zhang, L.; Wu, Y.-N.; Qiao, L.; Tian, Q.-C.; Huang, H.-T.; Liu, W.-B.; Su, G.-J.; Liu, G.-R., Health risks posed to infants in rural China by exposure to short- and medium-chain chlorinated paraffins in breast milk. *Environ. Int.* **2017,** 103, 1-7.
108. Li, T.; Wan, Y.; Gao, S.; Wang, B.; Hu, J., High-Throughput Determination and Characterization of Short-, Medium-, and Long-Chain Chlorinated Paraffins in Human Blood. *Environ. Sci. Technol.* **2017,** 51, (6), 3346-3354.
109. Xia, D.; Gao, L.; Zheng, M.; Li, J.; Zhang, L.; Wu, Y.; Tian, Q.; Huang, H.; Qiao, L., Human Exposure to Short- and Medium-Chain Chlorinated Paraffins via Mothers' Milk in Chinese Urban Population. *Environ. Sci. Technol.* **2017,** 51, (1), 608-615.
110. Wang, Y.; Gao, W.; Wang, Y.; Jiang, G., Distribution and Pattern Profiles of Chlorinated Paraffins in Human Placenta of Henan Province, China. *Environmental Science & Technology Letters* **2018,** 5, (1), 9-13.
111. Qiao, L.; Gao, L.; Zheng, M.; Xia, D.; Li, J.; Zhang, L.; Wu, Y.; Wang, R.; Cui, L.; Xu, C., Mass Fractions, Congener Group Patterns, and Placental Transfer of Short- and Medium-Chain Chlorinated Paraffins in Paired Maternal and Cord Serum. *Environ. Sci. Technol.* **2018,** 52, (17), 10097-10103.
112. Aamir, M.; Yin, S.; Guo, F.; Liu, K.; Xu, C.; Liu, W., Congener-Specific Mother-Fetus Distribution, Placental Retention, and Transport of C10-13 and C14-17 Chlorinated Paraffins in

Pregnant Women. *Environ. Sci. Technol.* **2019,** 53, (19), 11458-11466.

113. Zhou, X.; Wu, H.; Huang, X.; Hang, F.; Luo, H., Development a simple and rapid HPLC-ESI-Q-TOF/MS method for determination of short- and medium-chain chlorinated paraffins in human serum. *Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences* **2019,** 1126, 121722.

114. Xu, J.; Guo, W.; Wei, L.; Gao, Y.; Zhang, H.; Zhang, Y.; Sun, M.; Chen, J., Validation of a HRGC-ECNI/LRMS method to monitor short-chain chlorinated paraffins in human plasma. *Journal of Environmental Sciences* **2019,** 75, 289-295.

115. Zhou, Y.; Yuan, B.; Nyberg, E.; Yin, G.; Bignert, A.; Glynn, A.; Odland, J. O.; Qu, Y.; Sun, Y.; Wu, Y.; Xiao, Q.; Yin, D.; Zhu, Z.; Zhao, J.; Bergman, A., Chlorinated Paraffins in Human Milk from Urban Sites in China, Sweden, and Norway. *Environ. Sci. Technol.* **2020,** 54, (7), 4356-4366.

116. Liu, Y.; Aamir, M.; Li, M.; Liu, K.; Hu, Y.; Liu, N.; Xu, Y.; Du, J.; Xu, J.; Liu, W., Prenatal and postnatal exposure risk assessment of chlorinated paraffins in mothers and neonates: Occurrence, congener profile, and transfer behavior. *J. Hazard. Mater.* **2020,** 395, 122660.

117. Ding, L.; Luo, N.; Liu, Y.; Fang, X.; Zhang, S.; Li, S.; Jiang, W.; Zhao, N., Short and medium -chain chlorinated paraffins in serum from residents aged from 50 to 84 in Jinan, China: Occurrence, composition and associ- ation with hematologic parameters. *Sci. Total Environ.* **2020,** 728, 137998.

118. Zeng, L.; Wang, T.; Ruan, T.; Liu, Q.; Wang, Y.; Jiang, G., Levels and distribution patterns of short chain chlorinated paraffins in sewage sludge of wastewater treatment plants in China. *Environ. Pollut.* **2012,** 160, 88-94.