Table. 2 Detected SCCPs and their relative standard deviations (RSDs) of repeated injections (n = 5) for each concentration level

Compositional formula	m/z	5.8 ppm	12 ppm	29 ppm	58 ppm
$C_{10}H_{17}Cl_5$	279.0	2.9	3.5	1.6	2.3
$C_{11}H_{19}Cl_5$	293.0	3.5	3.2	2.0	2.7
$C_{10}H_{16}Cl_6$	312.9	3.0	3.2	1.7	3.2
$C_{11}H_{18}Cl_6$	327.0	4.0	4.0	1.1	3.0
$C_{12}H_{20}Cl_6$	341.0	3.4	4.1	1.7	3.2
$C_{10}H_{15}Cl_7$	346.9	3.5	3.8	1.9	3.1
$C_{11}H_{17}Cl_7$	360.9	3.8	4.2	2.1	3.3
$C_{12}H_{19}Cl_7$	374.9	3.7	4.6	2.5	2.7
$C_{12}H_{18}Cl_8$	408.9	3.3	5.3	2.2	2.8

Table. 3 Method quantification limits (MQL) of the detected SCCPs

Compositional formula	MQL-∑SCCPs (ppm) [1]	MQL-indvidual (ppm) [2]
$C_{10}H_{17}Cl_5$	1.67	0.075
$C_{11}H_{19}Cl_5$	2.01	0.35
$C_{10}H_{16}Cl_6$	1.71	0.053
$C_{11}H_{18}Cl_6$	2.34	0.19
$C_{12}H_{20}Cl_6$	2.00	0.17
$C_{10}H_{15}Cl_7$	2.01	0.027
$C_{11}H_{17}Cl_7$	2.23	0.14
$C_{12}H_{19}Cl_7$	2.15	0.22
$C_{12}H_{18}Cl_8$	1.90	0.085

[1] Based on the total SCCP conversion of the technical mixture (58%)
[2] Based on the analytical value of the individual m/z of SCCPs (analyzed by GC–Orbitrap–MS)

Table. 4 Comparisons of method quantification limits (MQL) with other published methods (ppb)

	This study	GC-HRMS[1]	GC-NCI-QToFMS[1]	GC-Orbitrap-MS[1]
MQL (ppb)	27-350	0.50-58	2.5-40	0.10–6.7
Target SCCPs (Individual)	Individual SCCPs (C10-13, Cl5-9)	C10-13, Cl5-9	C10-13, Cl5-9	C10-13, Cl5-9
References		3	6	7

	This study	GC-APCI-QToFMS[1]	GC-NCI-QToFMS[1]	LC-Orbitrap-MS[1]
MQL (ppb)	1700	330-3300	79-270	13-90
Target SCCPs (Total)	Total SCCPs	49, 60, 70%Cl	52, 56, 63%Cl	52, 56, 63%Cl
References		4	6	8

[1] Based on 3.3 times the instrumental detection limit