SUPPORTING INFORMATION | Quantification of the actual composition of polymeric nanocapsules. A quality control analysis

Supplementary Table 1. Validation of the calibration curves for each quantified substance and formulation

Formulation	Molecule	RT (min) (mean) (n=3)	Calibration curve range (ppb)	r^2 (mean ± StD) (n=3)	Precision (pooled RStD%) (%)	Accuracy (RE%) (%) (low; mid; high range)	LoQ (ppb) (mean ± StD) (n=3)
SD-*l*-PEG-HA	Benzethonium chloride	2.6	8.0 – 80.0	0.9959 ± 0.0016	4.4	3.9; -0.3; 2.4	0.70 ± 0.38
	TPGS	4.0	64.0 – 640.0	0.9854 ± 0.0040	8.6	1.9; -1.0; 2.5	1.90 ± 0.86
	DL-α-tocopherol	4.9	216.0 – 2160.0	0.9948 ± 0.0040	4.9	-1.6; 2.6; 0.0	1.16 ± 0.47
	Hyaluronic acid (whole)	4.9	19,590.0 – 68,570.0	0.9897 ± 0.0009	4.0	3.5; 1.0; 1.0	22.51 ± 9.16
	Hyaluronic acid (supernatant)	4.9	15,670.0 – 78,370.0	0.9889 ± 0.0039	4.3	5.3; 3.6; 3.6	26.65 ± 6.62
	Hyaluronic acid (infranatant)	4.9	17,140.0 – 58,780.0	0.9840 ± 0.0056	4.8	5.6; 1.7; 1.7	34.42 ± 14.95
SD-noPEG-HA	CTAB	1.6	43.2 – 144.0	0.9985 ± 0.0009	1.0	2.0; -0.2; 1.1	0.27 ± 0.13
	C_8-C_8-C_8 Triglyceride	1.8	881.3 – 2937.6 (*)	0.9880 ± 0.0016	3.2	5.9; -2.7; 3.4	5.99 ± 2.76
	C_8-C_8-C_{10} Triglyceride	1.9	881.3 – 2937.6 (*)	0.9859 ± 0.0040	3.0	6.1; -2.0; 4.3	8.22 ± 2.40
	C_8-C_{10}-C_{10} Triglyceride	2.0	881.3 – 2937.6 (*)	0.9852 ± 0.0031	3.7	5.6; -3.5; 3.7	8.18 ± 1.66
	C_{10}-C_{10}-C_{10} Triglyceride	2.0	881.3 – 2937.6 (*)	0.9792 ± 0.0036	5.0	4.2; -2.7; 3.1	1.63 ± 0.31
	Phosphatidylcholine 756.6 Da	2.0	216.0 – 720.0 (**)	0.9887 ± 0.0074	1.6	2.8; 5.4; -4.7	0.62 ± 0.44
	Phosphatidylcholine 758.6 Da	2.0	216.0 – 720.0 (**)	0.9812 ± 0.0018	3.4	4.2; 5.3; -4.1	0.14 ± 0.01
	Phosphatidylcholine 780.6 Da	2.0	216.0 – 720.0 (**)	0.9908 ± 0.0052	1.2	1.8; 4.8; -4.2	0.24 ± 0.19
	Phosphatidylcholine 782.5 Da	2.1	216.0 – 720.0 (**)	0.9880 ± 0.0086	1.2	2.6; 6.1; -4.9	0.06 ± 0.01
	Hyaluronic acid (whole)	4.9	6,120.0 – 10,200.0	0.9383 ± 0.0652	4.0	3.7; 1.3; 1.3	19.18 ± 2.49
	Hyaluronic acid (supernatant)	4.9	20,000.0 – 98,000.0	0.9876 ± 0.0039	4.8	8.1; 6.0; 6.0	32.28 ± 9.41
	Hyaluronic acid (infranatant)	4.9	10,000.0 – 29,000.0	0.9852 ± 0.0052	4.3	1.8; 2.4; 2.4	15.35 ± 1.82
SD-noPEG-PSA	CTAB	1.6	43.2 – 144.0	0.9952 ± 0.0015	1.5	3.7; -0.2; 0.5	0.20 ± 0.01
	C_8-C_8-C_8 Triglyceride	1.8	881.3 – 2937.6 (*)	0.9814 ± 0.0025	3.3	8.5; -1.6; 2.5	6.46 ± 1.65
	C_8-C_8-C_{10} Triglyceride	1.9	881.3 – 2937.6 (*)	0.9801 ± 0.0017	3.8	8.4; -2.1; 2.8	9.44 ± 2.86
	C_8-C_{10}-C_{10} Triglyceride	2.0	881.3 – 2937.6 (*)	0.9848 ± 0.0008	4.0	5.2; -0.8; 2.3	7.59 ± 1.38
	C_{10}-C_{10}-C_{10} Triglyceride	2.0	881.3 – 2937.6 (*)	0.9697 ± 0.0165	5.9	4.6; -2.8; 3.1	1.08 ± 0.05
	Phosphatidylcholine 756.6 Da	2.0	216.0 – 720.0 (**)	0.9611 ± 0.0100	2.9	7.8; 4.7; -11.6	0.91± 0.14
	Phosphatidylcholine 758.6 Da	2.0	216.0 – 720.0 (**)	0.9552 ± 0.0114	4.7	8.1; 3.2; -11.9	0.15± 0.02
	Phosphatidylcholine 780.6 Da	2.0	216.0 – 720.0 (**)	0.9720 ± 0.0092	1.7	7.1; 4.8; -9.1	0.31 ± 0.14
	Phosphatidylcholine 782.5 Da	2.1	216.0 – 720.0 (**)	0.9628 ± 0.0116	2.2	8.0; 4.8; -11.8	0.08 ± 0.01
	Polysialic acid (whole)	5.1	6,150.0 – 10,870.0	0.9788 ± 0.0115	1.4	2.4; 0.7; 0.7	86.30 ± 32.47
	Polysialic acid (supernatant)	5.1	4,900.0 – 81,630.0	0.9867 ± 0.0061	2.8	3.6; 12.8; 12.8	413.54 ± 424.46
	Polysialic acid (infranatant)	5.1	7,350.0 – 29,390.0	0.9929 ± 0.0054	1.7	3.6; 3.6; 3.6	245.55 ± 134.63

SUPPORTING INFORMATION | Quantification of the actual composition of polymeric nanocapsules. A quality control analysis

Supplementary Table 1. Validation of the calibration curves for each quantified substance and formulation (continuation)

Formulation	Molecule	RT (min) (mean) (n=3)	Calibration curve range (ppb)	r^2 (mean ± StD) (n=3)	Precision (pooled RStD%) (%)	Accuracy (RE%) (%) (low; mid; high range)	LoQ (ppb) (mean ± StD) (n=3)
SE-*b*-PEG-HA	Benzethonium chloride	2.5	1.0 – 9.6	0.9997 ± 0.0002	1.1	0.5; -4.7; 0.1	0.24 ± 0.03
	Macrogol-15-hydroxystearate	3.2	6.0 – 120.0 (***)	0.9992 ± 0.0001	2.0	-1.8; -0.6; -1.5	2.25 ± 1.74
	Polysorbate 80	4.4	487.2 – 2784.0	0.9990 ± 0.0002	0.8	3.9; -1.6; 1.4	11.61 ± 0.36
	C_8-C_8-C_8 Triglyceride	8.3	849.6 – 2832.0 (*)	0.9939 ± 0.0028	2.5	3.0; -2.1; 1.1	3.32 ± 1.59
	C_8-C_8-C_{10} Triglyceride	8.7	849.6 – 2832.0 (*)	0.9895 ± 0.0027	3.8	3.9; -1.5; 1.0	2.51 ± 1.14
	C_8-C_{10}-C_{10} Triglyceride	8.9	849.6 – 2832.0 (*)	0.9895 ± 0.0030	3.7	4.8; 4.7; 0.7	2.15 ± 1.82
	C_{10}-C_{10}-C_{10} Triglyceride	9.0	849.6 – 2832.0 (*)	0.9889 ± 0.0046	3.6	2.5; -4.4; 2.1	1.88 ± 1.17
	Hyaluronic acid (whole)	4.9	6,730.0 – 17,140.0	0.9863 ± 0.0004	2.4	3.2; 1.7; 1.7	15.53 ± 6.42
	Hyaluronic acid (retentate)	4.9	2,450.0 – 9,180.0	0.9658 ± 0.0164	3.3	8.7; 8.4; 8.4	14.21 ± 5.29
	Hyaluronic acid (permeate)	4.9	7,000.0 – 28,000.0	0.9901 ± 0.0049	3.9	4.0; 1.1; 1.1	35.22 ± 3.82
SD-noPEG-PEG·PGA	DL-α-tocopherol	2.9	288.8 – 2,887.5	0.9958 ± 0.0009	2.5	-7.5; 2.8; -3.5	6.33 ± 0.58
	1,2-dioleoyl-3-trimethylammoniumpropane chloride	3.6	7.5 – 75.0	0.9984 ± 0.0010	1.7	-2.5; -0.3; -0.8	1.26 ± 0.49
	PEG·PGA (whole)	9.8	23,700 – 132,200	0.9978 ± 0.0012	1.1	3.8; 1.0; 1.0	432.10 ± 360.61
	PEG·PGA (supernatant)	9.8	7,700 – 184,800	0.9976 ± 0.0017	1.3	2.8; 4.6; 4.6	666.06 ± 970.38
	PEG-PGA (infranatant)	9.8	4,800 – 113,300	0.9984 ± 0.0012	1.9	2.5; 1.1; 1.1	69.37 ± 39.55

SD-*l*-PEG-HA: lineal-polyethylene glycol-containing hyaluronic acid nanocapsules formulated by solvent displacement. SD-noPEG-HA: non-PEGylated hyaluronic acid nanocapsules formulated by solvent displacement. SD-noPEG-PSA: non-PEGylated polysialic acid nanocapsules formulated by solvent displacement. SE-*b*-PEG-HA: Self-emulsifying branched-polyethylene glycol-containing hyaluronic acid nanocapsules. SD-noPEG-PEG·PGA: Solvent displacement nanocapsules not containing PEGylated surfactants and with an outer shell of polyethylene glycol polyglutamic acid. StD: standard deviation. RT: retention time. RStD%: Relative standard deviation of the responses for each concentration level. RE%: relative differences between the estimated concentrations and the actual standard concentration. LoQ: limit of quantification. TPGS: D-α-tocopherol polyethylene glycol 1000 succinate. CTAB: Hexadecyltrimethylammonium bromide. (*): C_8-C_8-C_8, C_8-C_8-C_{10}, C_8-C_{10}-C_{10}, and C_{10}-C_{10}-C_{10} triglycerides calibration curves were built based on the amount of Miglyol® 812N. (**): Phosphatidylcholines' calibration curves were built based on the amount of Epikuron™ 145V. (***): macrogol-15-hydroxystearate calibration curves were built based on the amount of Kolliphor® HS15.

Supplementary Table 2. Chromatographic method for the analysis of non-polymeric substances

Formulation	Time (min)	A (%)	B (%)	C (%)	D (%)
SD-*l*-PEG-HA	0.00	70	30	0	0
	1.00	70	30	0	0
	1.10	0	100	0	0
	6.90	0	100	0	0
	7.00	0	0	100	0
	10.40	0	0	100	0
	10.50	70	30	0	0
	12.00	70	30	0	0
SD-noPEG-HA and SD-noPEG-PSA	0.00	90	10	0	0
	0.10	90	10	0	0
	0.11	0	40	0	60
	2.90	0	40	0	60
	2.95	0	0	100	0
	4.00	0	0	100	0
	4.05	90	10	0	0
	5.00	90	10	0	0
SE-*b*-PEG-HA	0.00	70	30	0	0
	0.20	70	30	0	0
	0.30	40	60	0	0
	5.30	24	76	0	0
	6.80	0	100	0	0
	8.50	0	30	0	70
	9.50	0	30	0	70
	9.60	0	0	100	0
	14.00	0	0	100	0
	14.10	70	30	0	0
	16.00	70	30	0	0
SD-noPEG-PEG·PGA	0.00	70	30	0	0
	1.00	70	30	0	0
	1.10	0	50	0	50
	3.00	0	50	0	50
	3.10	0	0	100	0
	4.50	0	0	100	0
	4.60	70	30	0	0
	6.00	70	30	0	0

A: 50 mM formic acid and 2 mM ammonium formate in water. B. 95 % acetonitrile and 5 % 2 mM ammonium formate aqueous solution (v/v) 50 mM formic acid. C: water. D: isopropyl alcohol. SD-*l*-PEG-HA: lineal-polyethylene glycol-containing hyaluronic acid nanocapsules formulated by solvent displacement. SD-noPEG-HA: non-PEGylated hyaluronic acid nanocapsules formulated by solvent displacement. SD-noPEG-PSA: non-PEGylated polysialic acid nanocapsules formulated by solvent displacement. SE-*b*-PEG-HA: Self-emulsifying branched-polyethylene glycol-containing hyaluronic acid nanocapsules.

Supplementary Table 3. Chromatographic method for the analysis of digested hyaluronic and polysialic acids

Time (min)	%A	%B
0.00	98	2
2.00	98	2
3.00	60	40
4.00	60	40
4.10	20	80
8.00	20	80
9.00	98	2
13.00	98	2

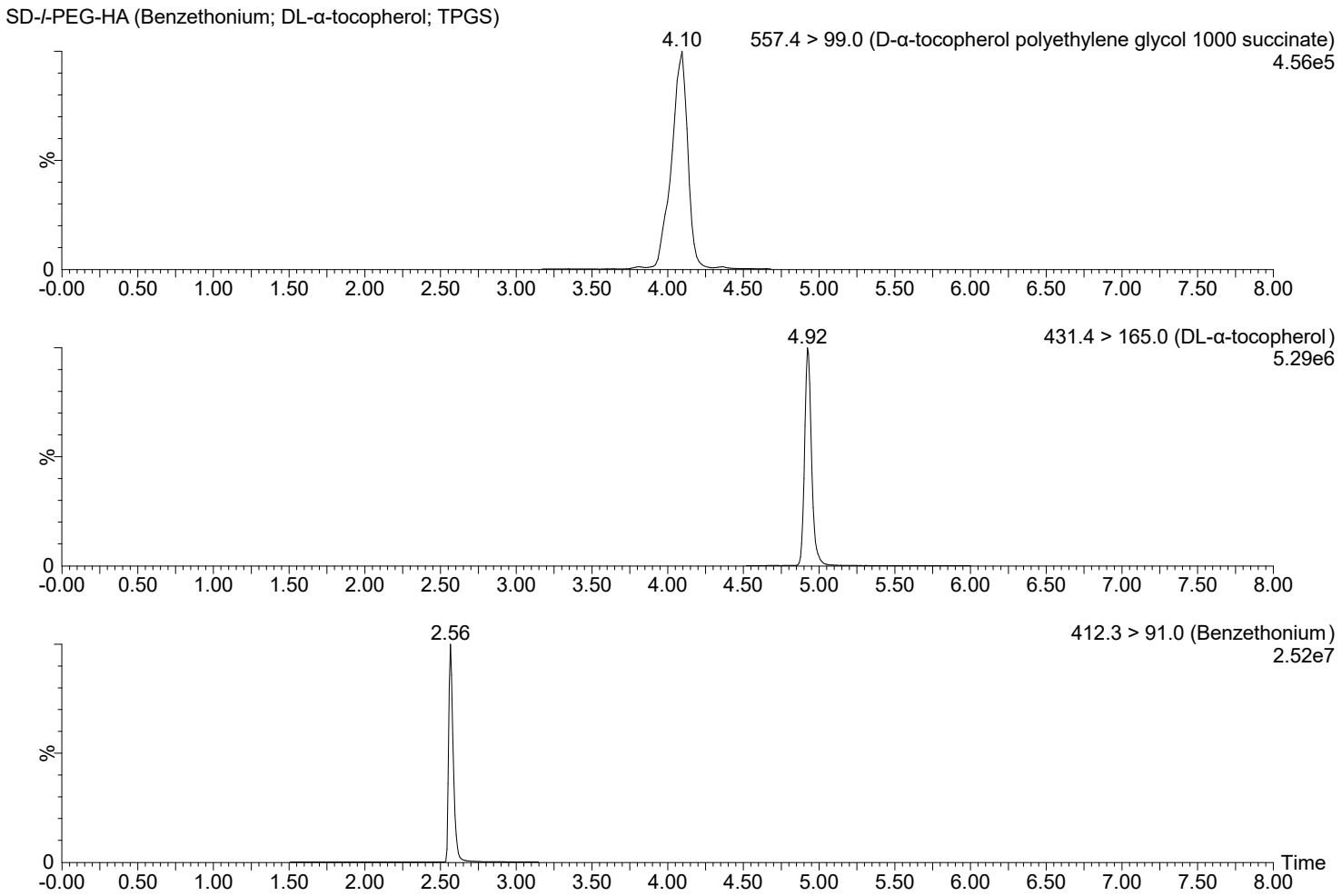
A: 50 mM formic acid and 2 mM ammonium formate in water, and B. methanol. The flow was diverted to waste from minute 0.00 to 3.90 to avoid the non-volatile salt Na_2SO_4 from entering the detector.

Supplementary Table 4. Chromatographic method for the analysis of digested PEG·PGA

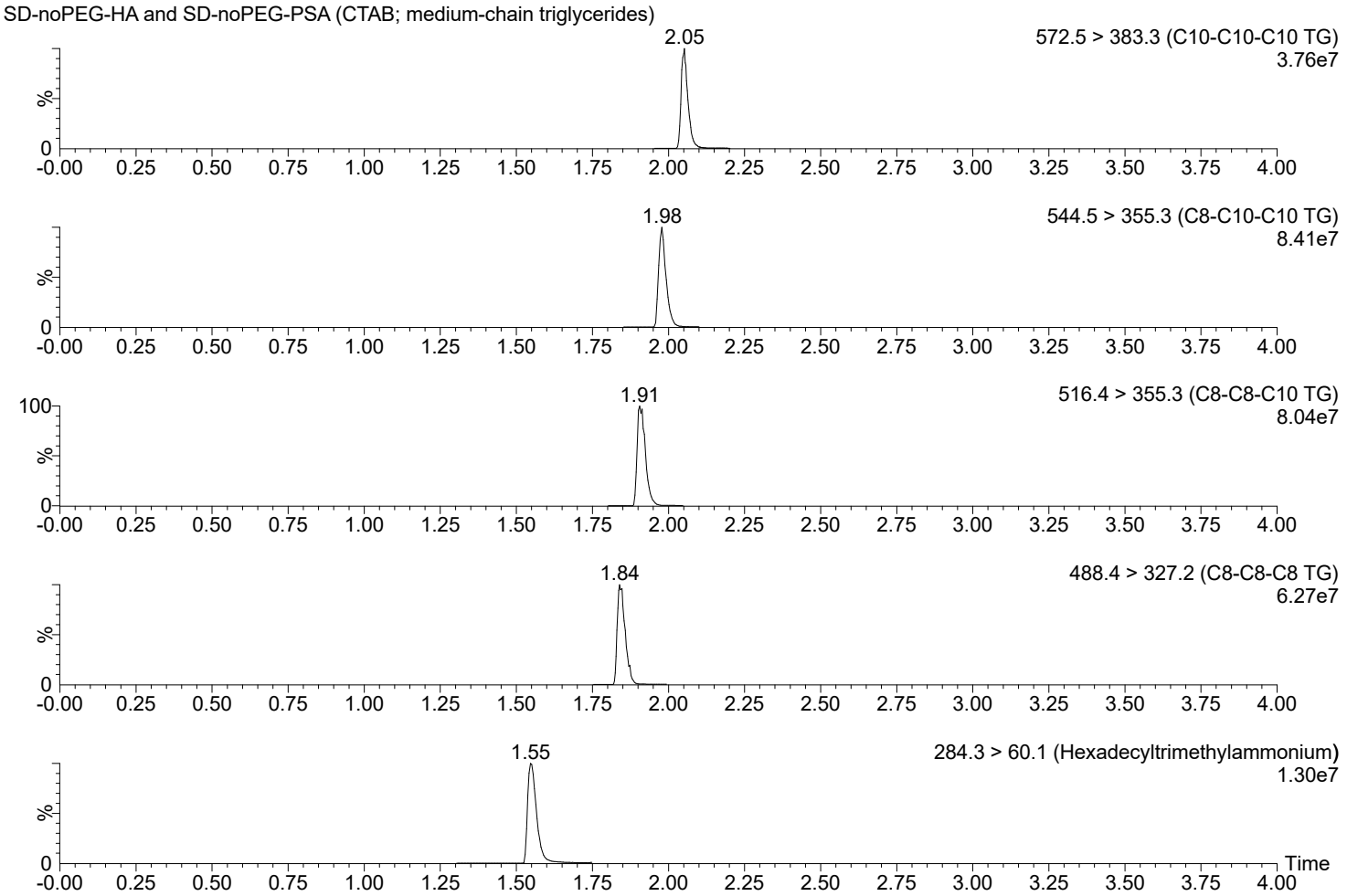
Time (min)	%A	%B
0.00	0	100
6.00	0	100
6.10	5.9	94.1
10.00	17.6	82.4
12.00	29.4	70.6
12.10	0	100
15.50	0	100

A: 75 mM formic acid and 5 mM ammonium formate in water, and B: 75 mM formic acid and 5 mM ammonium formate in acetonitrile (90 %) and water (10 %) mixture (v/v). The flow was diverted to waste from minute 0.00 to 9.00 to avoid the non-volatile salt Na_2SO_4 from entering the detector.

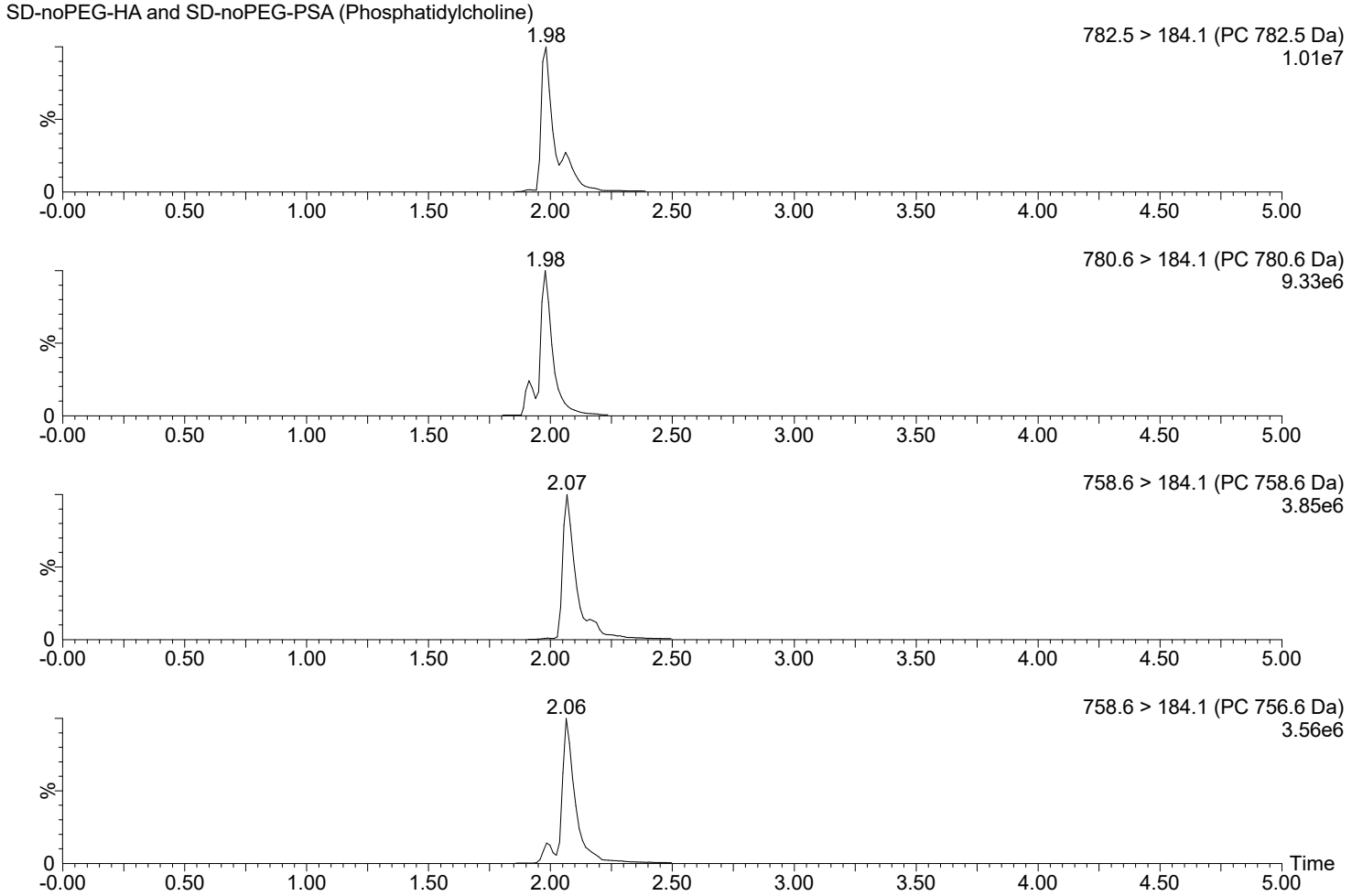
Supplementary Table 5. Chromatograms of all the chromatographic methods and quantified molecules

Chromatographic method	Chromatogram
Hydrophobic substances of SD-*l*-PEG-HA	

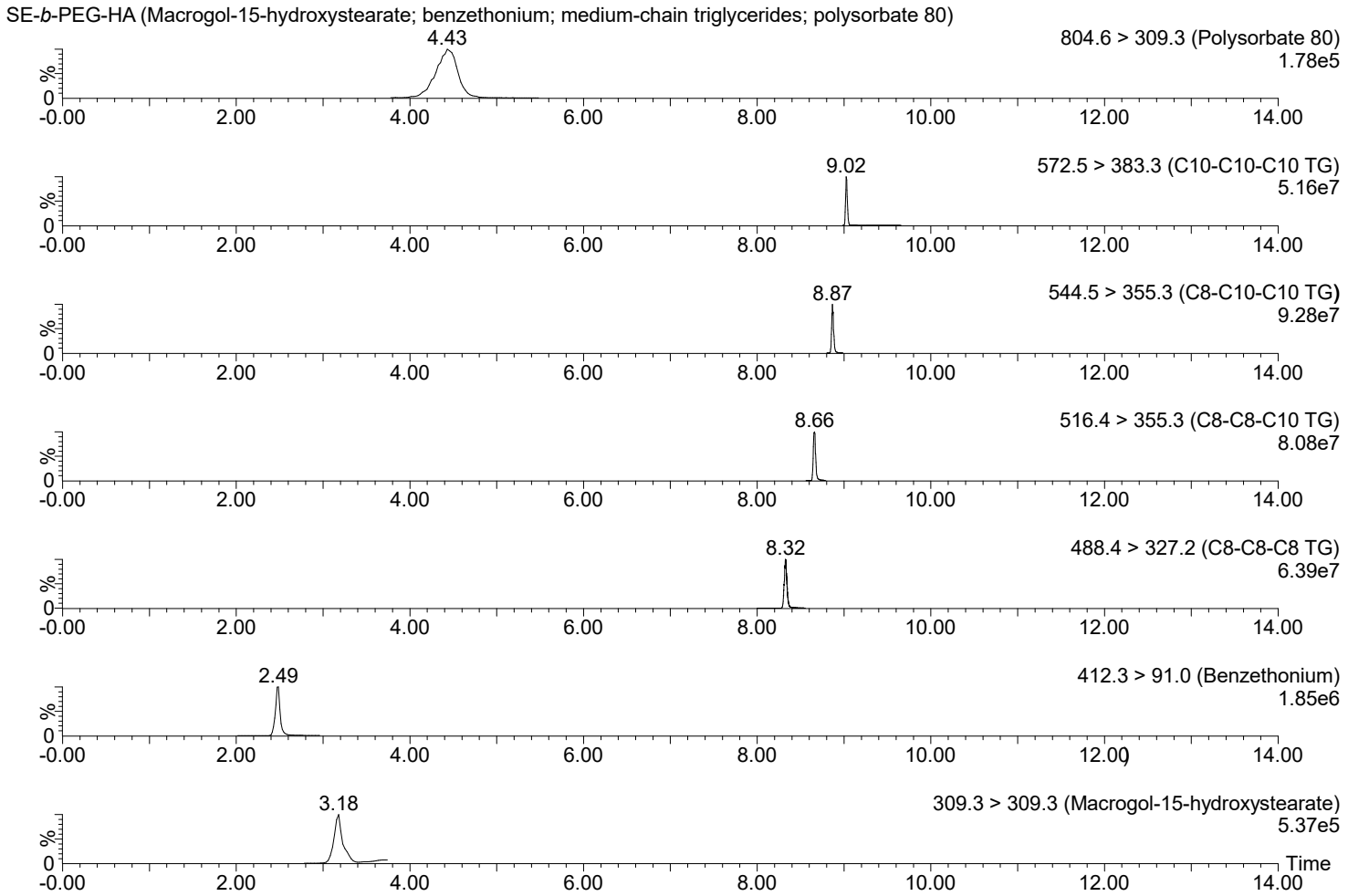
Supplementary Table 5. Chromatograms of all the chromatographic methods and quantified molecules (continuation)

Chromatographic event	Chromatogram
Hydrophobic substances of SD-noPEG-HA and SD-noPEG-PSA (run #1; CTAB and Miglyol® 812N)	

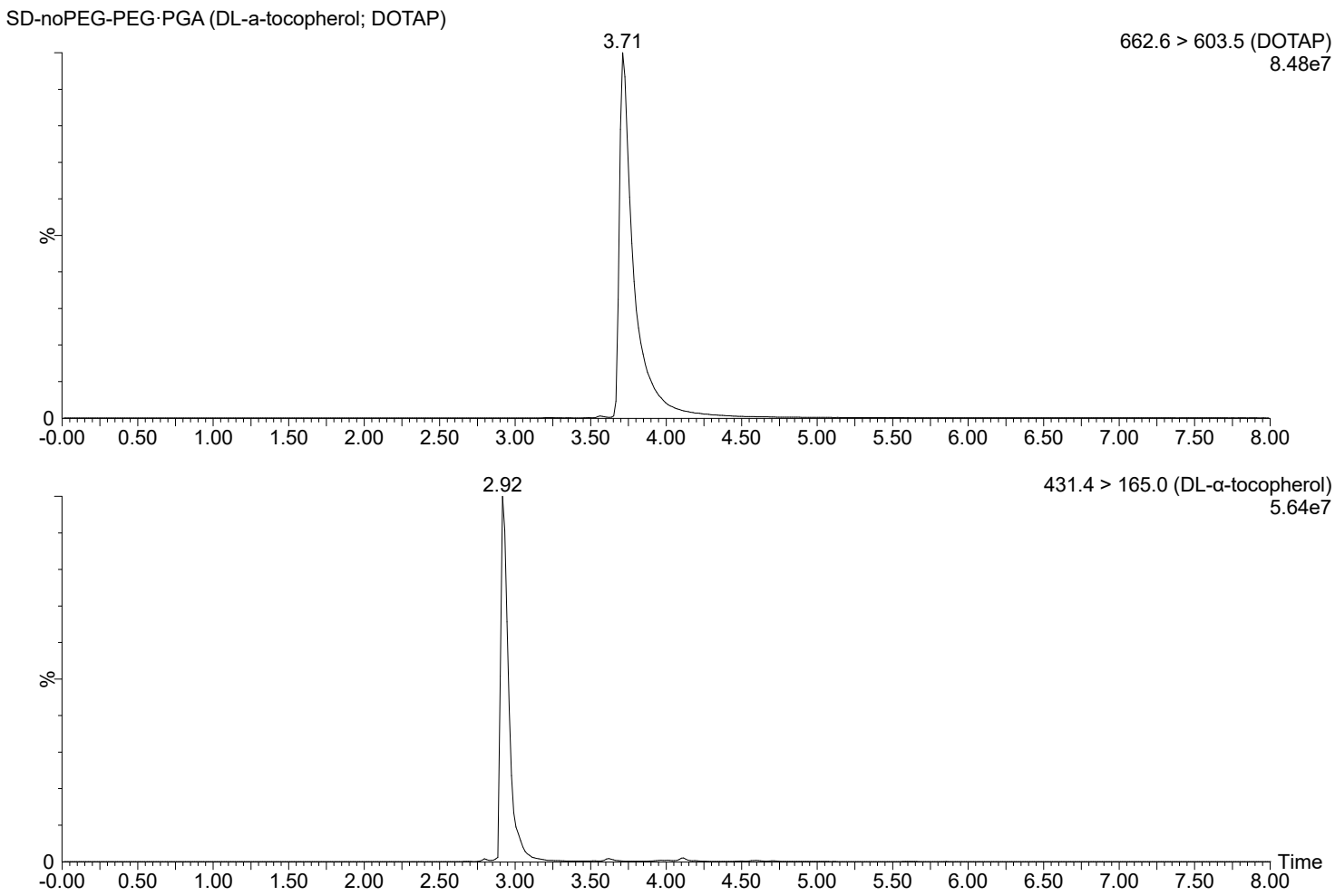
Supplementary Table 5. Chromatograms of all the chromatographic methods and quantified molecules (continuation)

Chromatographic event	Chromatogram
Hydrophobic substances of SD-noPEG-HA and SD-noPEG-PSA (run #2; Phosphatidylcholine)	

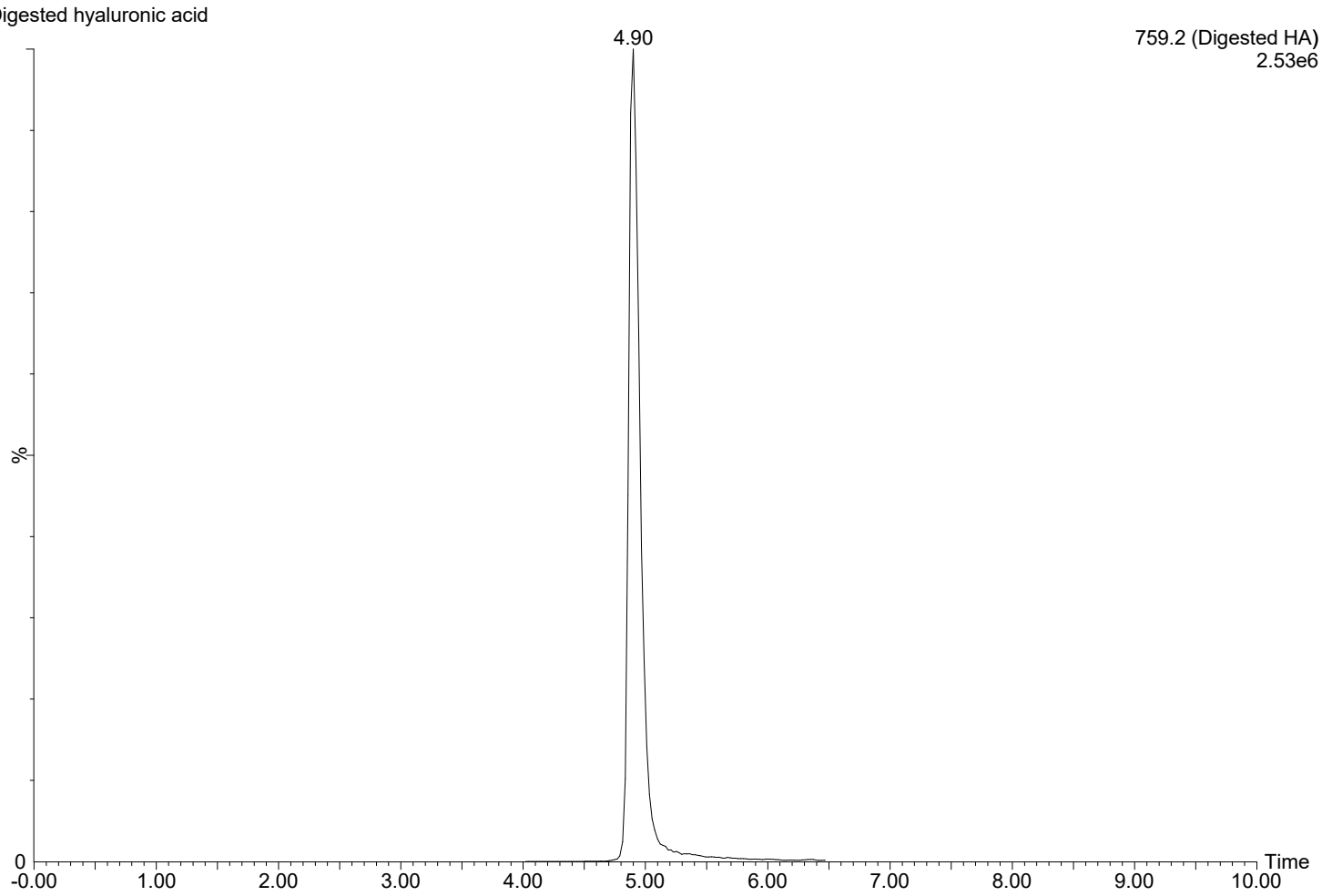
Supplementary Table 5. Chromatograms of all the chromatographic methods and quantified molecules (continuation)

Chromatographic event	Chromatogram
Hydrophobic substances of SE-*b*-PEG-HA	

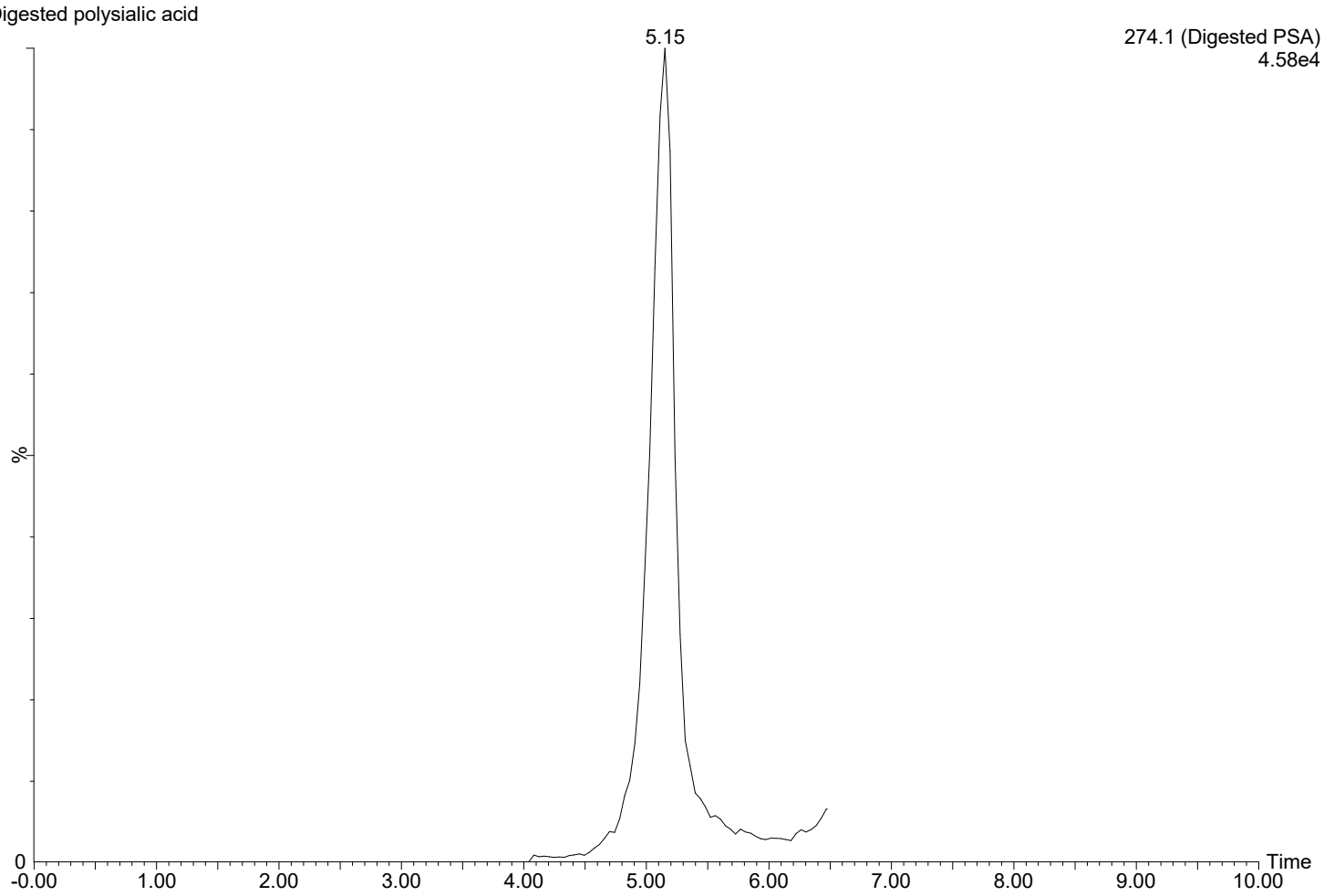
Supplementary Table 5. Chromatograms of all the chromatographic methods and quantified molecules (continuation)

Chromatographic event	Chromatogram
Hydrophobic substances of SD-noPEG-PEG·PGA	

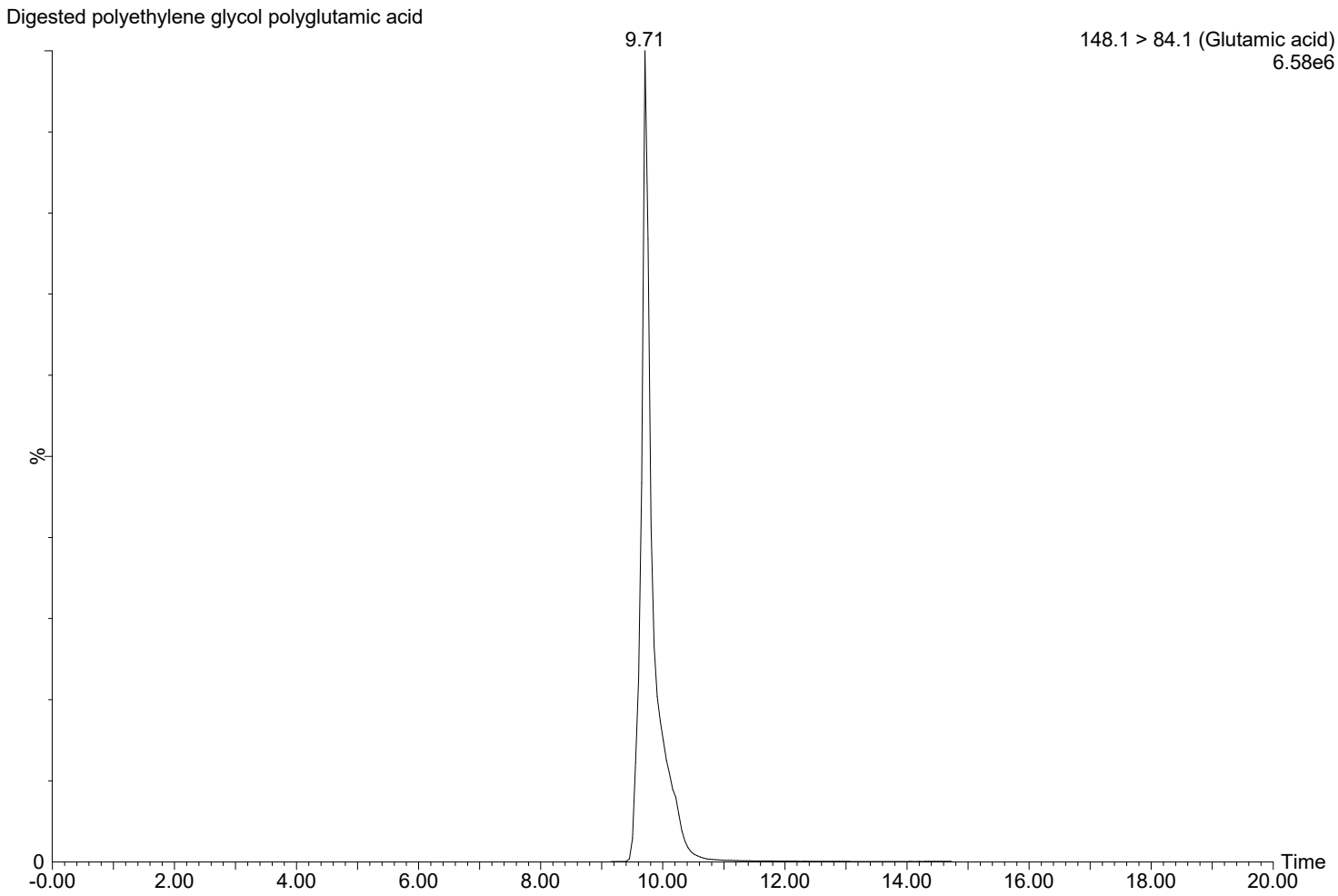
Supplementary Table 5. Chromatograms of all the chromatographic methods and quantified molecules (continuation)

Chromatographic event	Chromatogram
Digested hyaluronic acid	

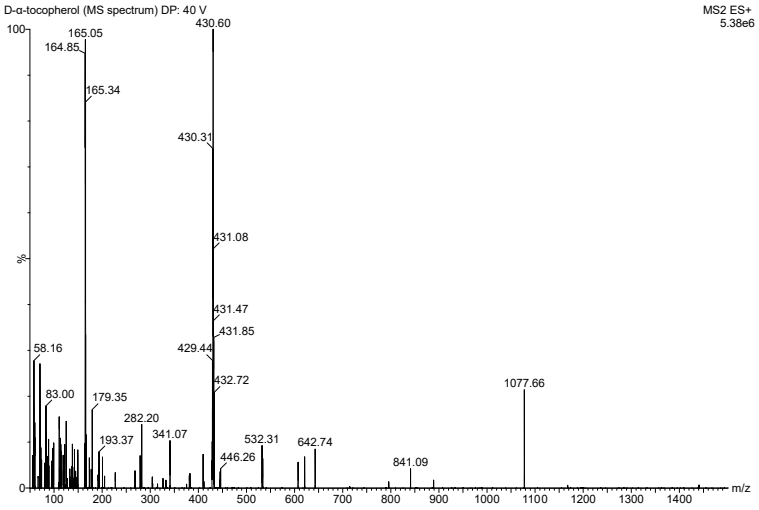
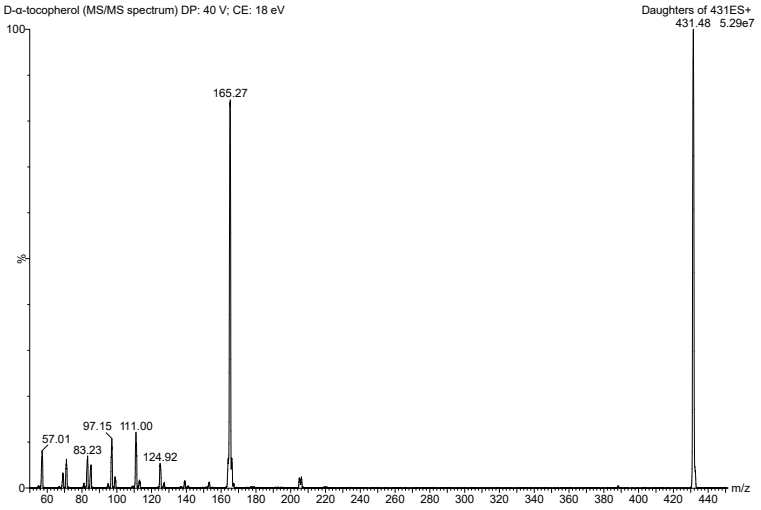
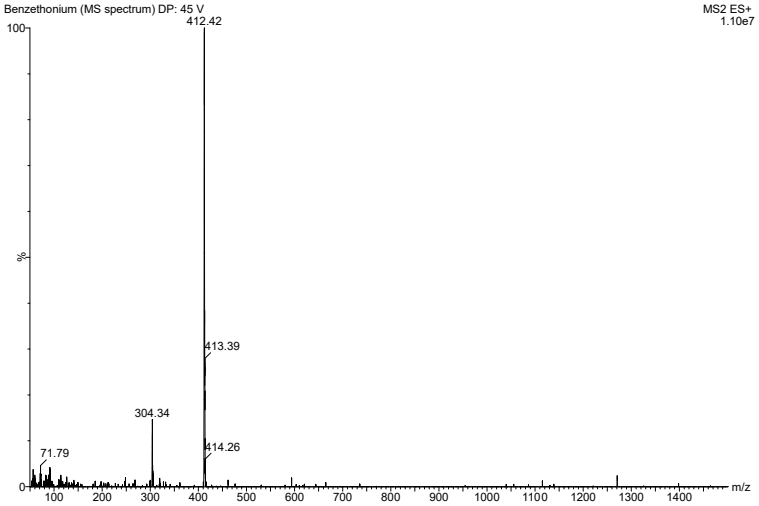
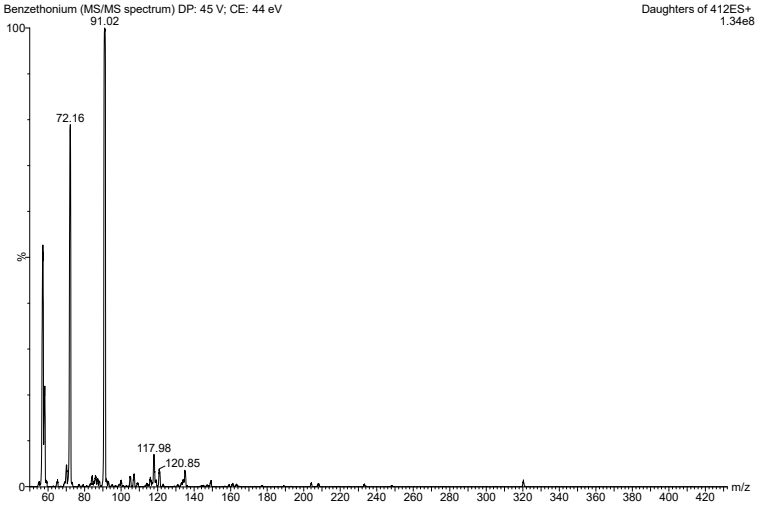
Supplementary Table 5. Chromatograms of all the chromatographic methods and quantified molecules (continuation)

Chromatographic event	Chromatogram
Digested polysialic acid	

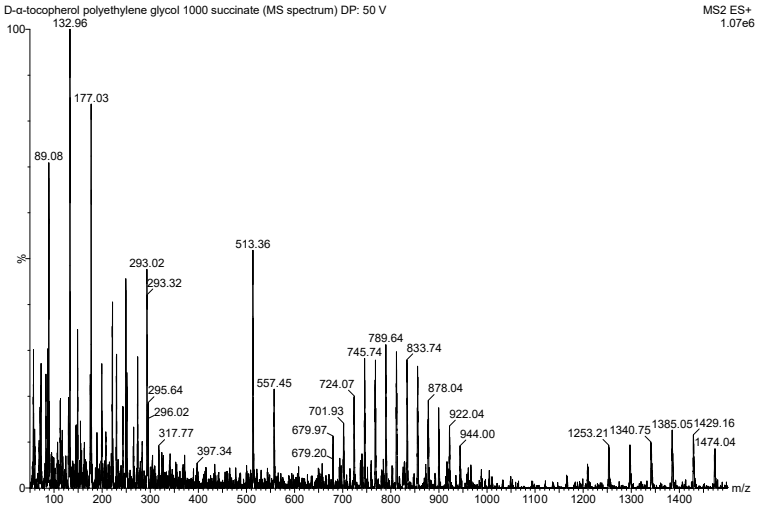
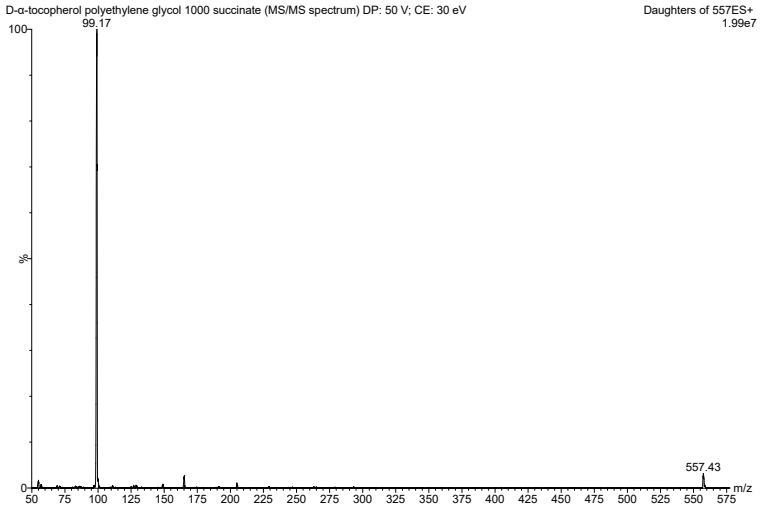
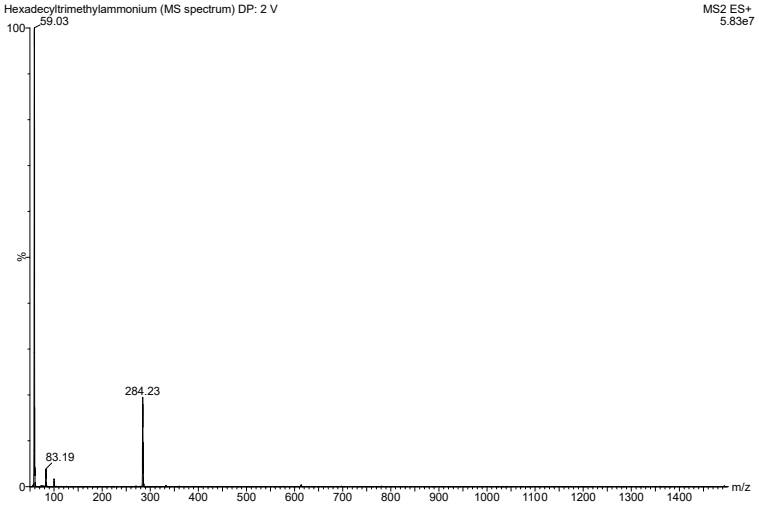
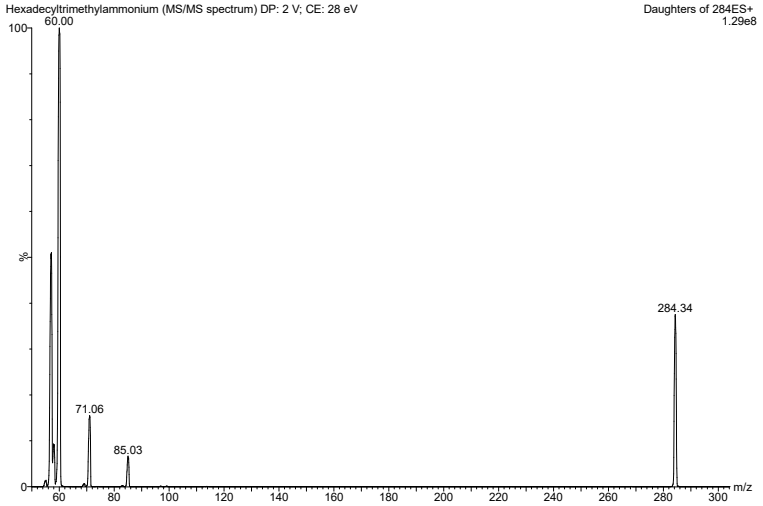
Supplementary Table 5. Chromatograms of all the chromatographic methods and quantified molecules (continuation)

Chromatographic event	Chromatogram
Digested polyethylene glycol poly-glutamic acid	

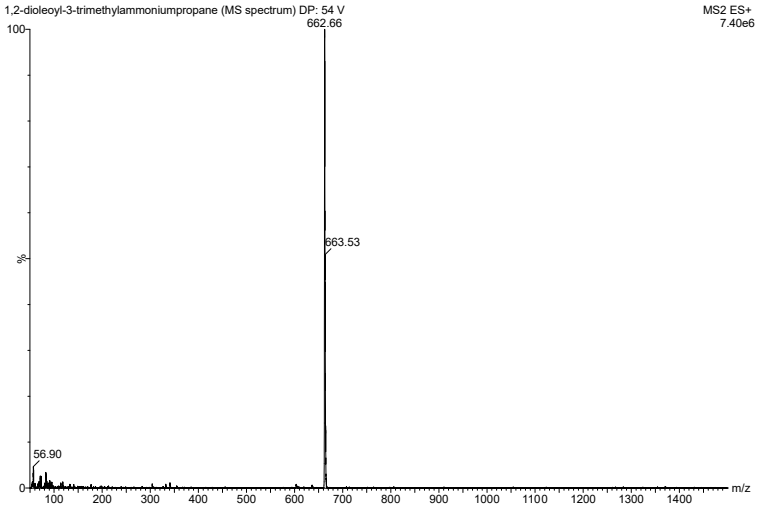
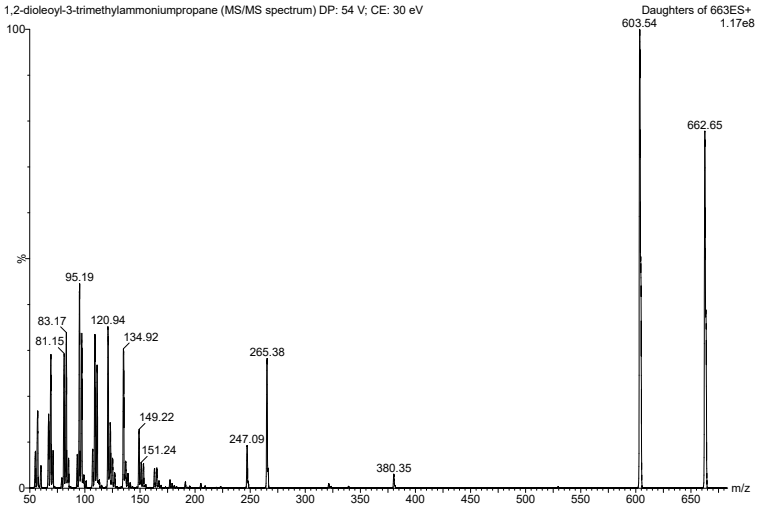
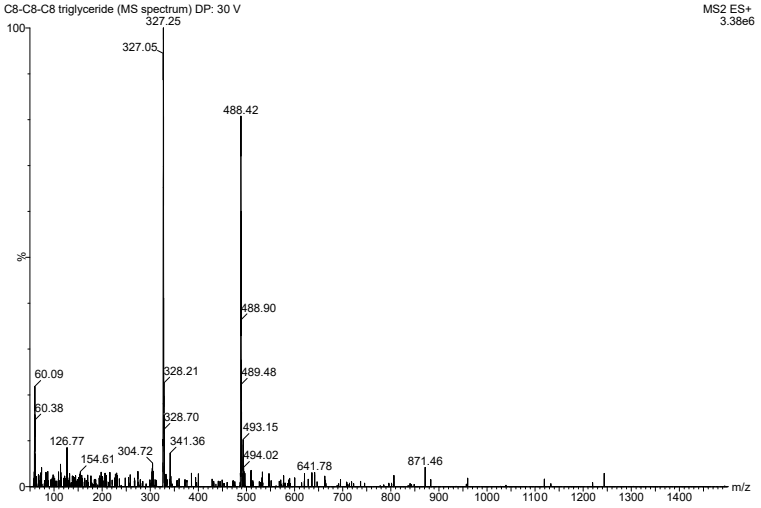
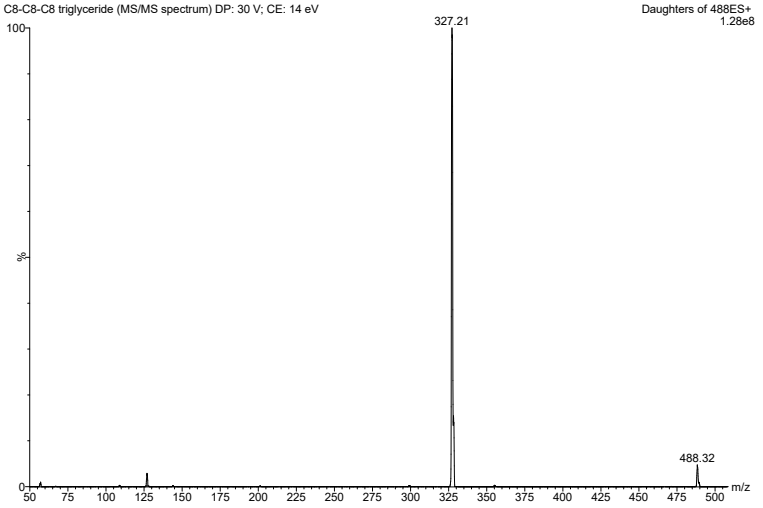
Supplementary Table 6. MS and MS/MS spectra for all the quantified substances

Substance	MS spectra	MS/MS spectra
DL-α-tocopherol		
Benzethonium		

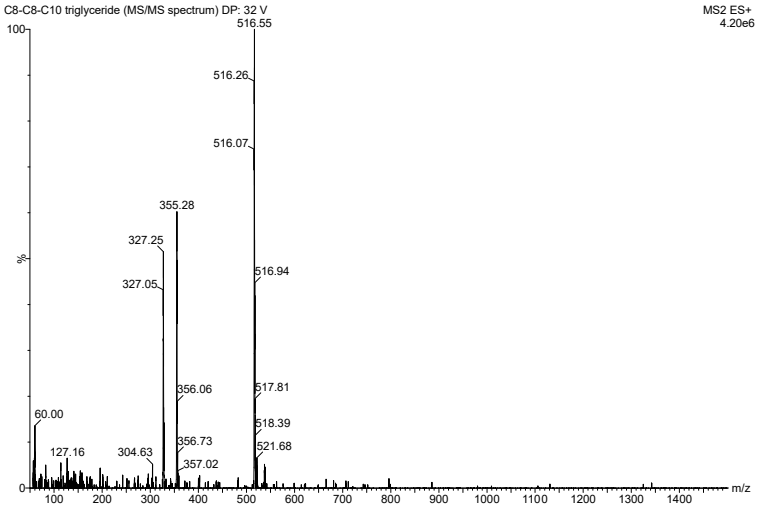
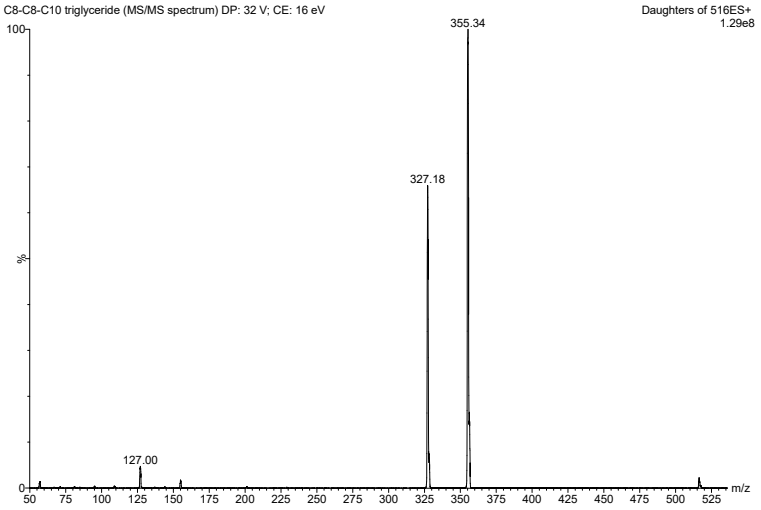
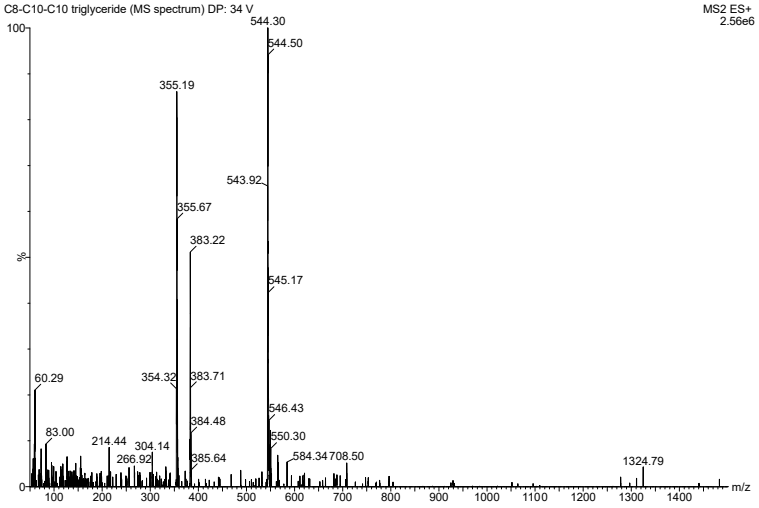
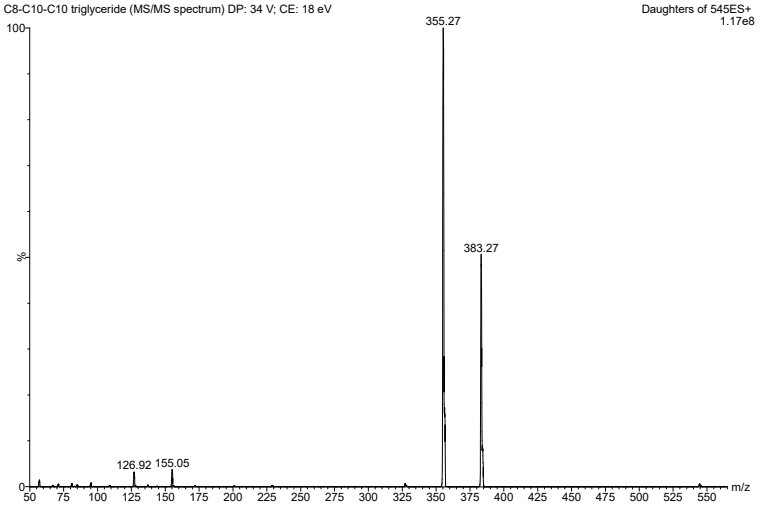
Supplementary Table 6. MS and MS/MS spectra for all the quantified substances (continuation)

Substance	MS spectra	MS/MS spectra
D-α-tocopherol polyethylene glycol 1000 succinate		
Hexadecyltrimethylammonium		

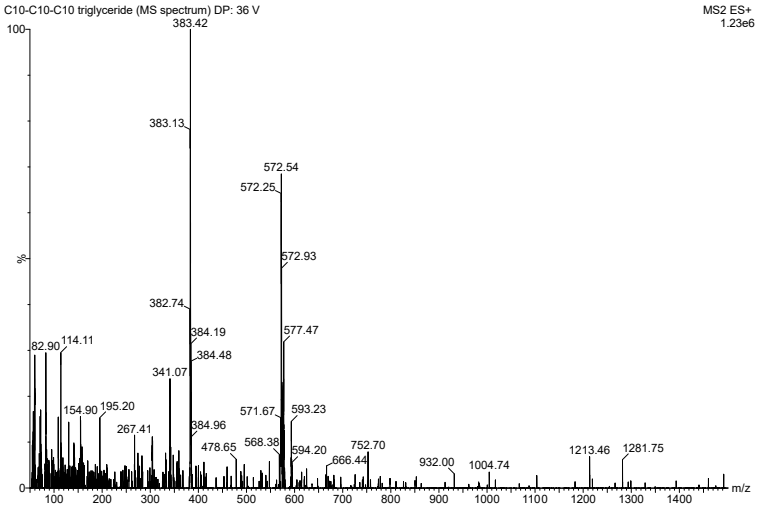
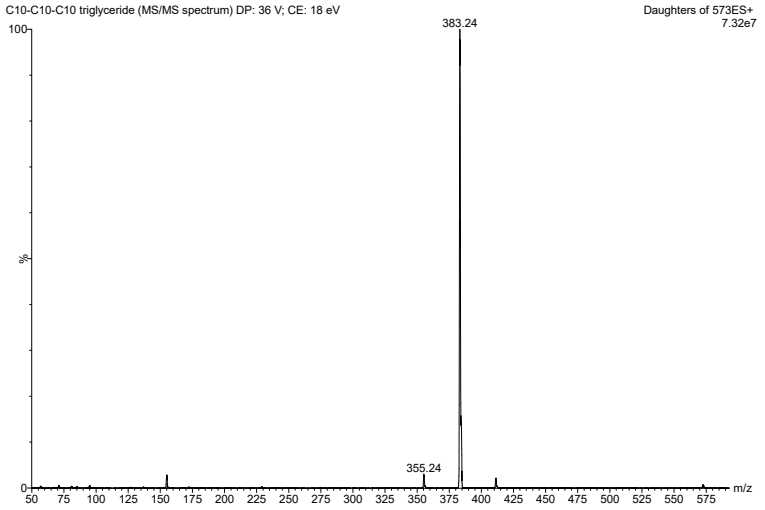
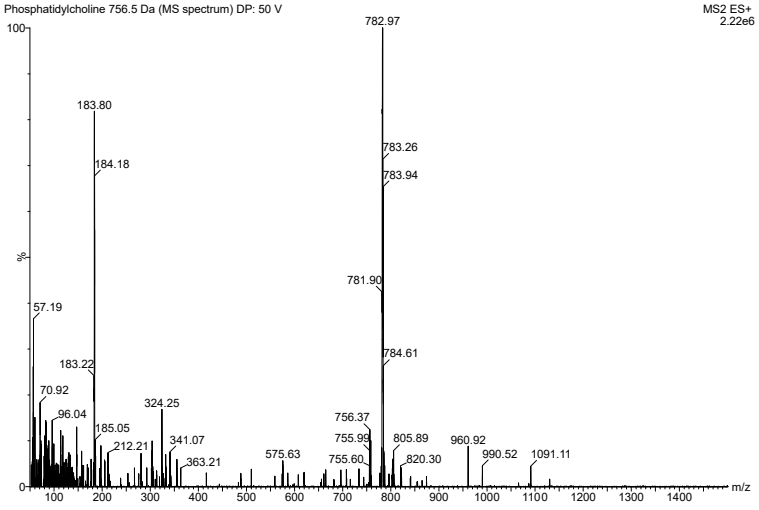
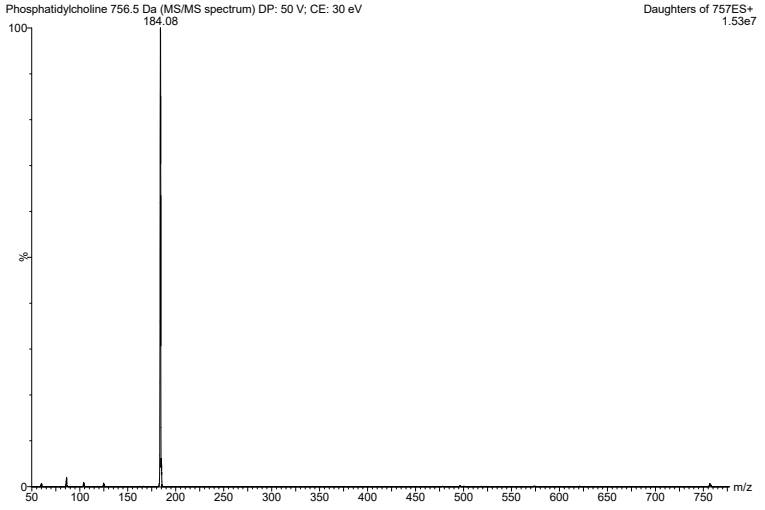
Supplementary Table 6. MS and MS/MS spectra for all the quantified substances (continuation)

Substance	MS spectra	MS/MS spectra
1,2-dioleoyl-3-trimethylammoniumpropane		
C_8-C_8-C_8 trigyleride (Miglyol® 812N)		

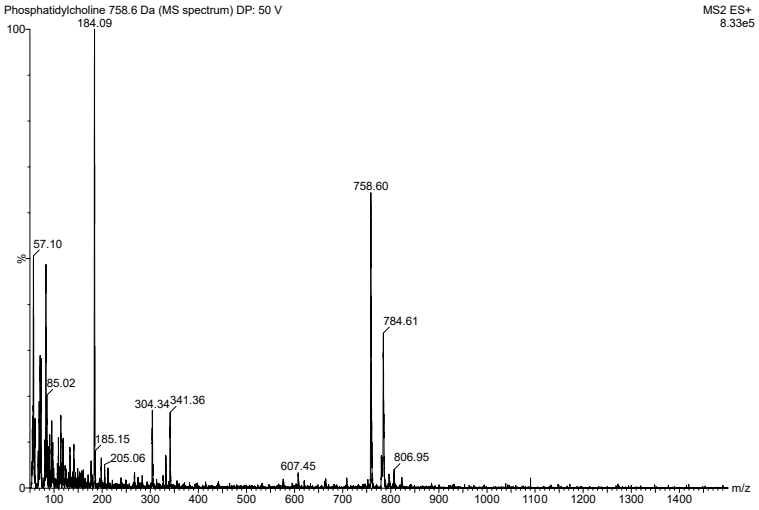
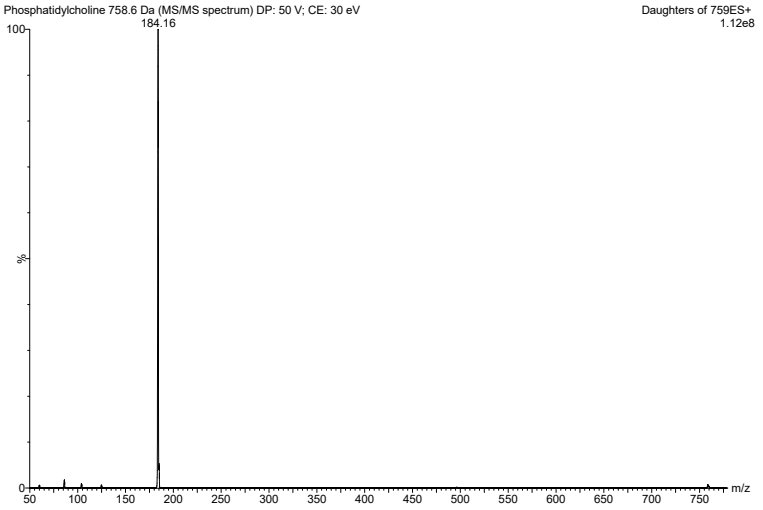
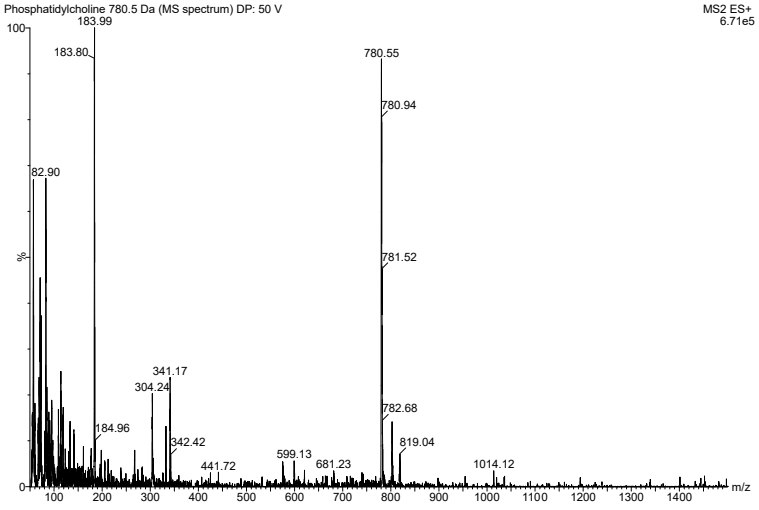
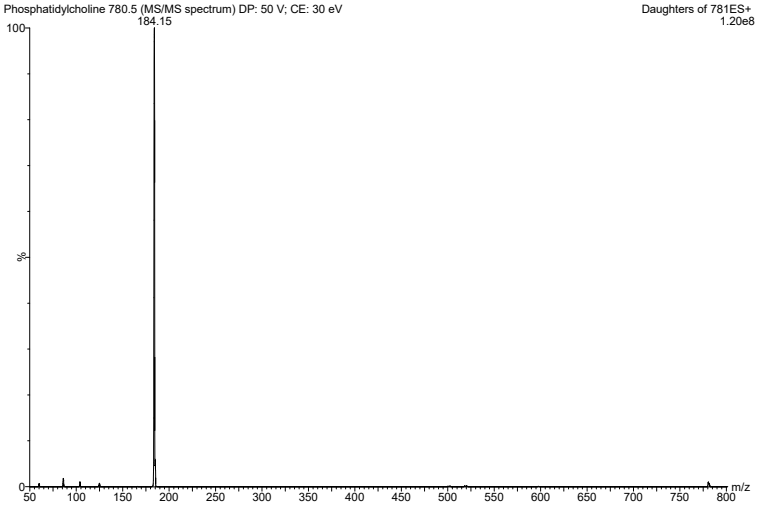
Supplementary Table 6. MS and MS/MS spectra for all the quantified substances (continuation)

Substance	MS spectra	MS/MS spectra
C_8-C_8-C_{10} trigyleride (Miglyol® 812N)		
C_8-C_{10}-C_{10} trigyleride (Miglyol® 812N)		

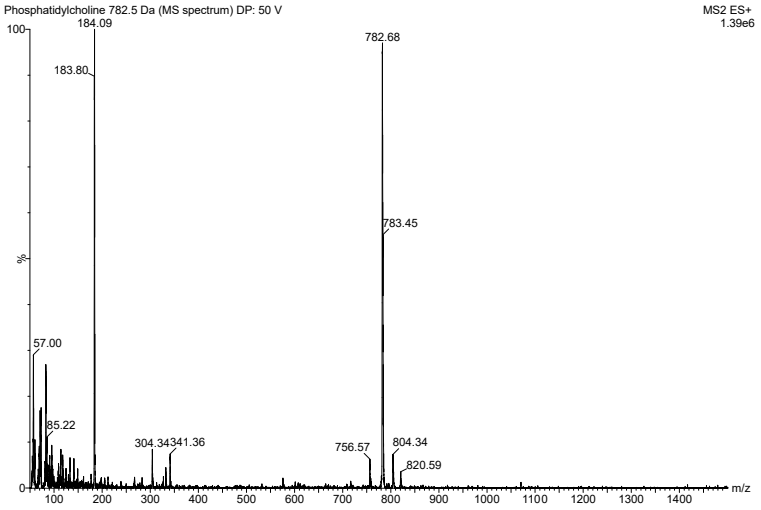
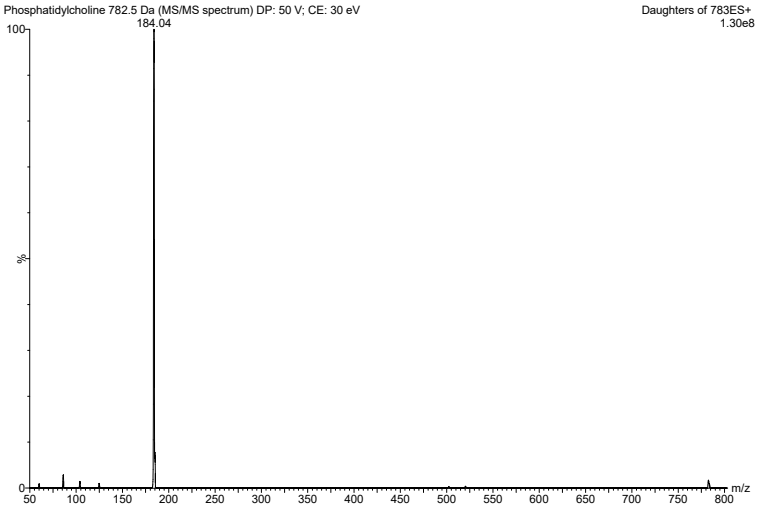
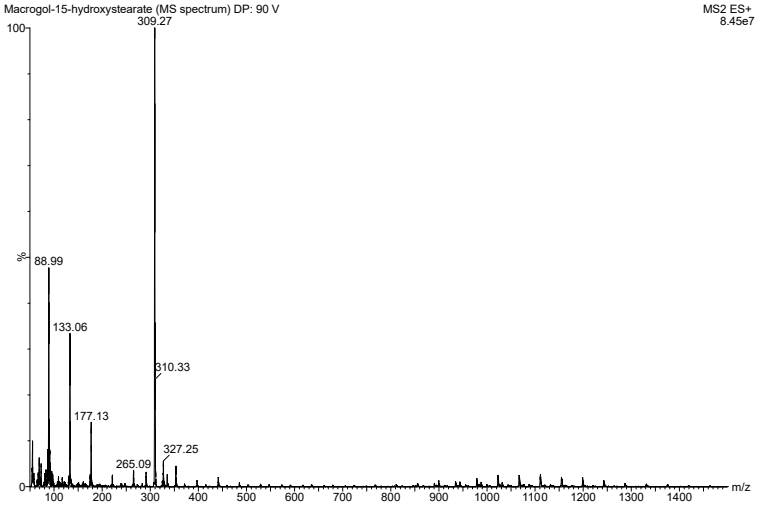
Supplementary Table 6. MS and MS/MS spectra for all the quantified substances (continuation)

Substance	MS spectra	MS/MS spectra
C_{10}-C_{10}-C_{10} trigyleride (Miglyol® 812N)		
Phosphatidylcholine 756.5 Da		
Phosphatidylcholine 760.5 Da		

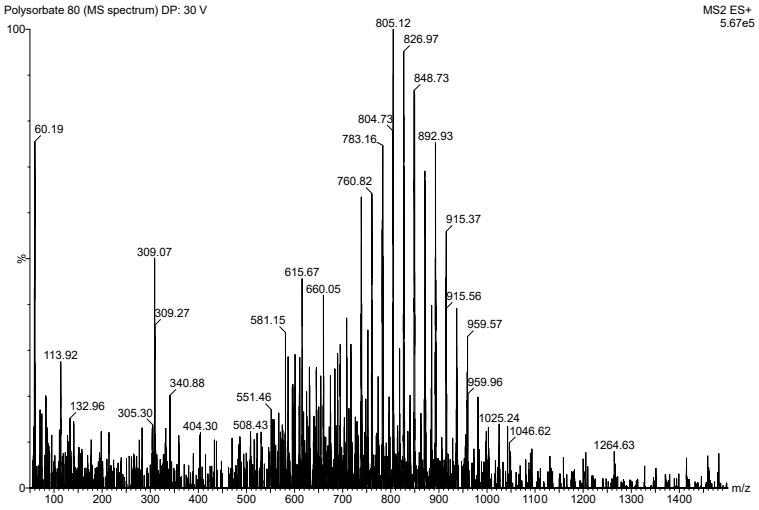
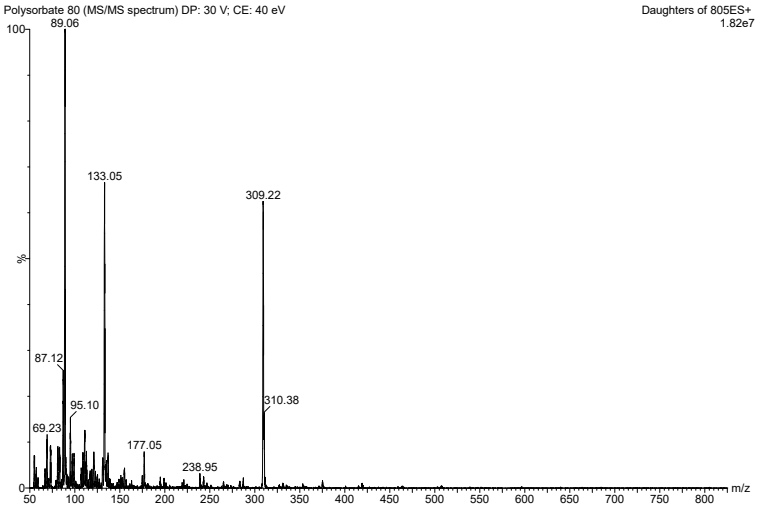
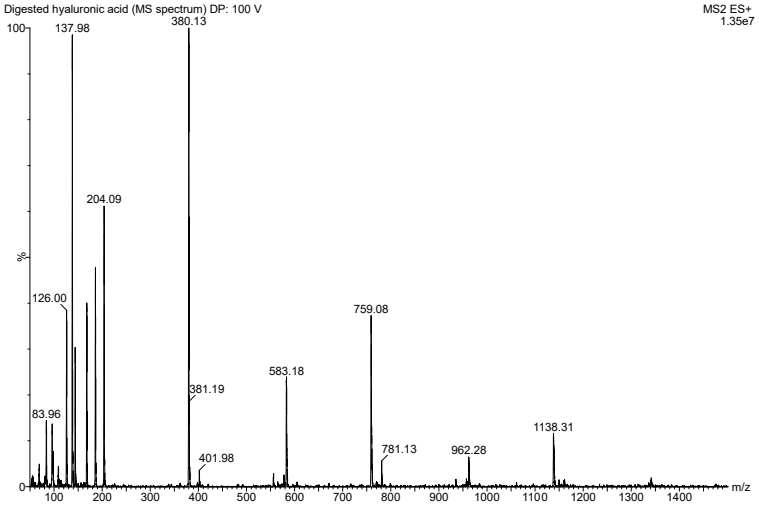
Supplementary Table 6. MS and MS/MS spectra for all the quantified substances (continuation)

Substance	MS spectra	MS/MS spectra
Phosphatidylcholine 758.5 Da		
Phosphatidylcholine 780.5 Da		

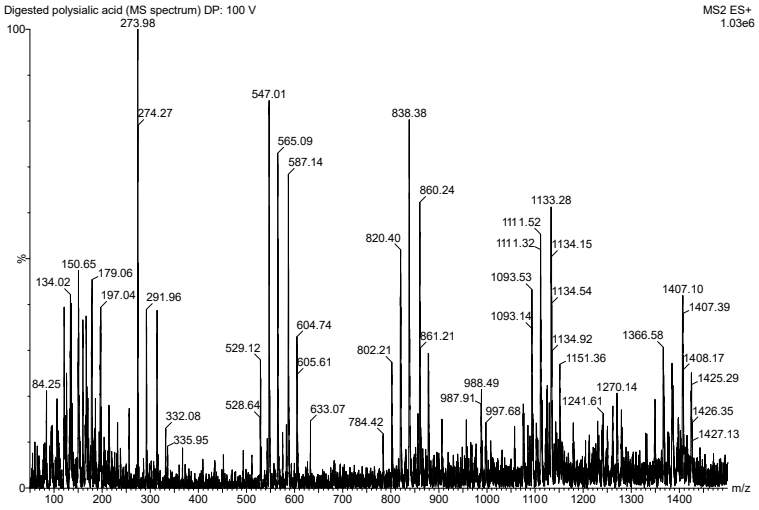
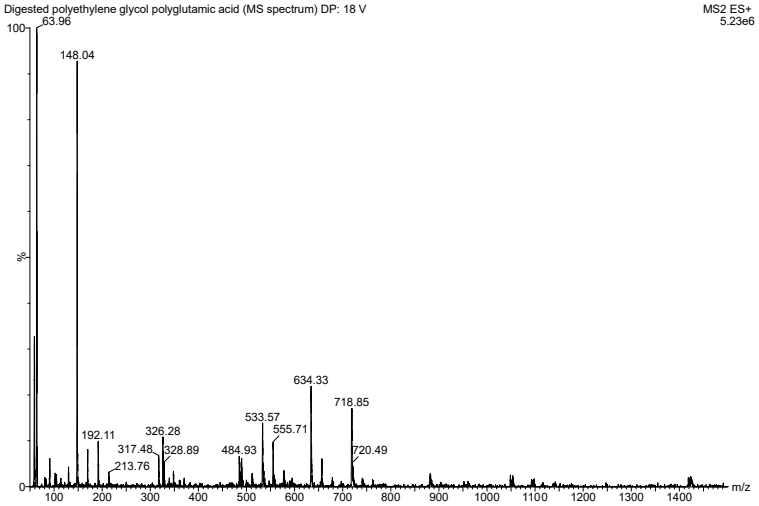
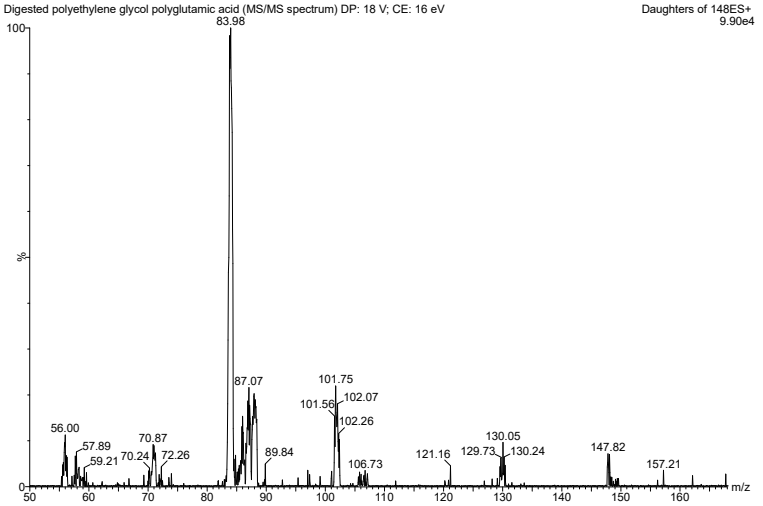
Supplementary Table 6. MS and MS/MS spectra for all the quantified substances (continuation)

Substance	MS spectra	MS/MS spectra
Phosphatidylcholine 782.5 Da		
Macrogol-15-hydroxys-tearate		N/A

Supplementary Table 6. MS and MS/MS spectra for all the quantified substances (continuation)

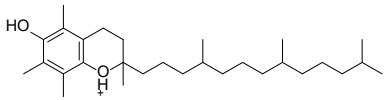
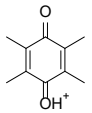
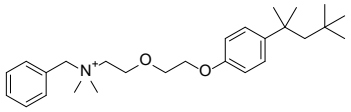
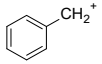
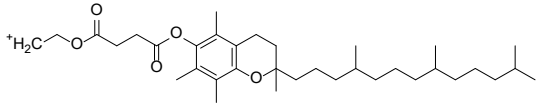
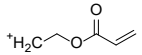
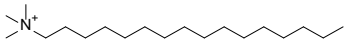
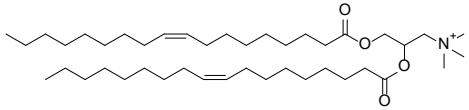
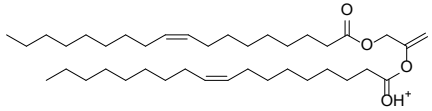
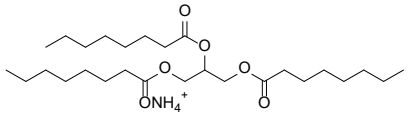
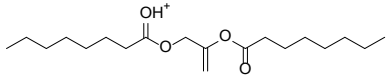
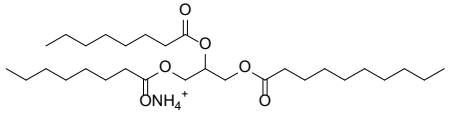
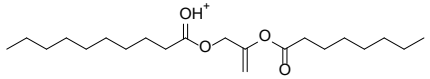
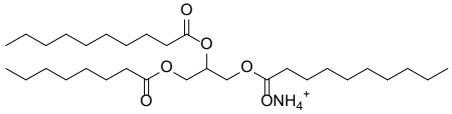
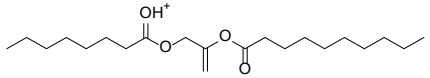
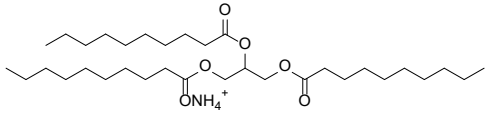
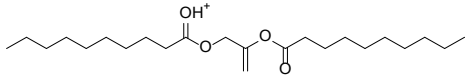
Substance	MS spectra	MS/MS spectra
Polysorbate 80		
Digested hyaluronic acid		N/A

Supplementary Table 6. MS and MS/MS spectra for all the quantified substances (continuation)

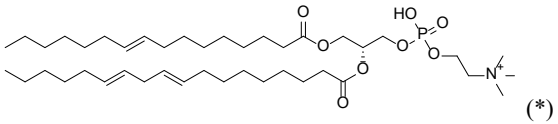
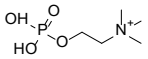
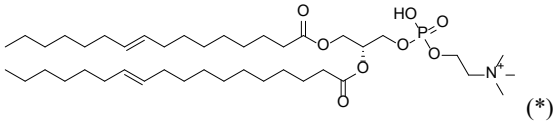
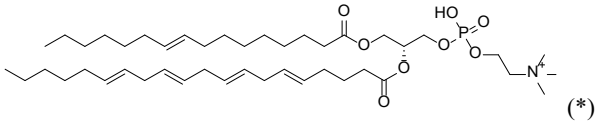
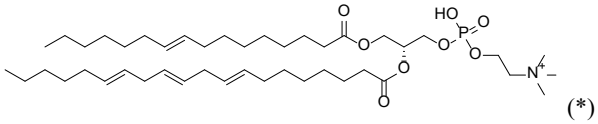
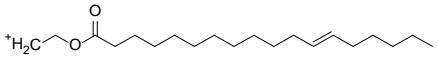
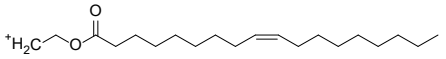
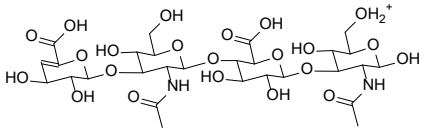
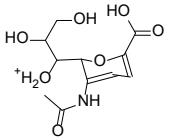
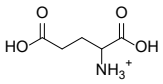
Substance	MS spectra	MS/MS spectra
Digested polysialic acid		N/A
Digested polyethylene glycol polyglutamic acid		

DP: declustering potential. CE: collision energy. N/A: not applicable. MS spectra were registered with the same DP as the one in the analytical method. MS/MS spectra were registered with the same DP and CE as the ones in the analytical method.

Supplementary Table 7. Mass spectrometry methodology and fragmentation pattern of the NCs' components

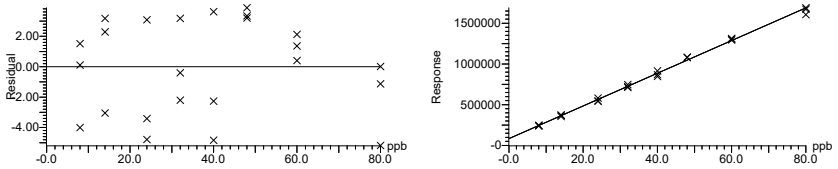
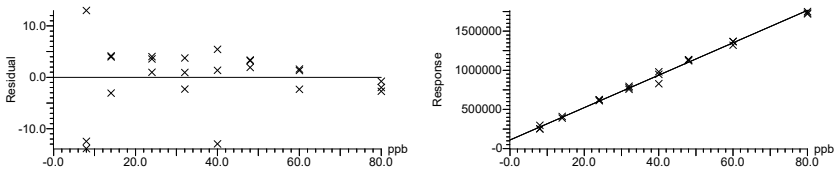
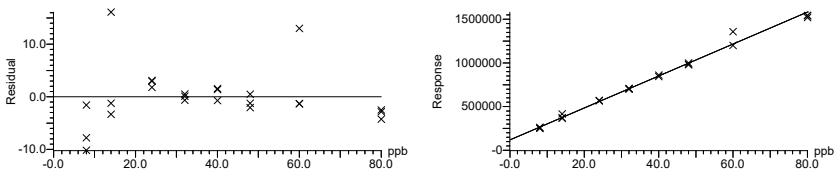
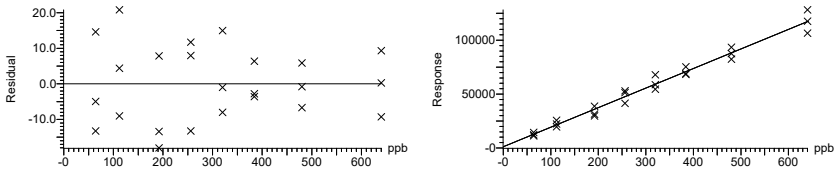
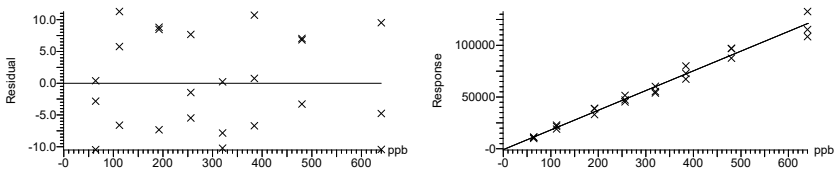
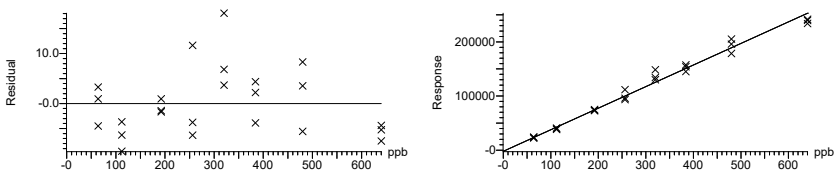
Substance	Method	Parent	Daughter	Ref.
DL-α-tocopherol	MRM, *m/z* 431.4 → 165.0, DP: 40 V, CE: 18 eV			1,2
Benzethonium chloride	MRM, *m/z* 412.3 → 91.0, DP: 45 V, CE: 44 eV			3,4
D-α-tocopherol polyethylene glycol 1000 succinate	MRM, *m/z* 557.4 → 99.0, DP: 50 V, CE: 30 eV			-
Hexadecyltrimethylammonium bromide	MRM, *m/z* 284.3 → 60.1, DP: 2 V, CE: 28 eV			5
1,2-dioleoyl-3-trimethylammoniumpropane chloride	MRM, *m/z* 662.6 → 603.5, DP: 54 V, CE: 30 eV			6
Miglyol® 812N	MRM, *m/z* 488.4 → 327.2, DP: 30 V, CE: 14 eV			7
	MRM, *m/z* 516.4 → 355.3, DP: 32 V, CE: 16 eV			7
	MRM, *m/z* 544.5 → 355.3, DP: 34 V, CE: 18 eV			7
	MRM, *m/z* 572.5 → 383.3, DP: 36 V, CE: 18 eV			7

Supplementary Table 7. Mass spectrometry methodology and fragmentation pattern of the NCs' components (continuation)

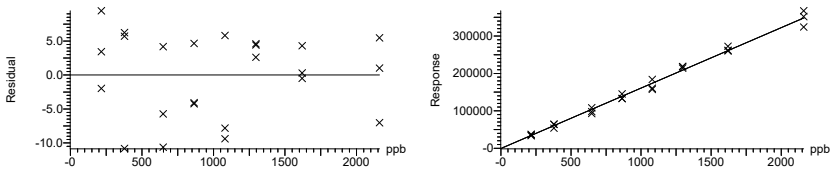
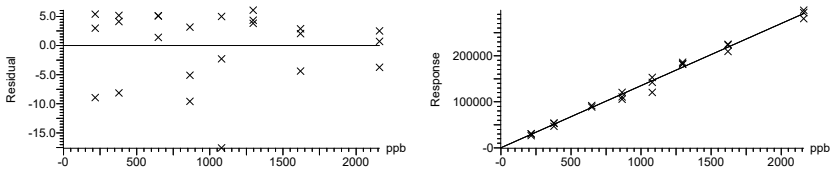
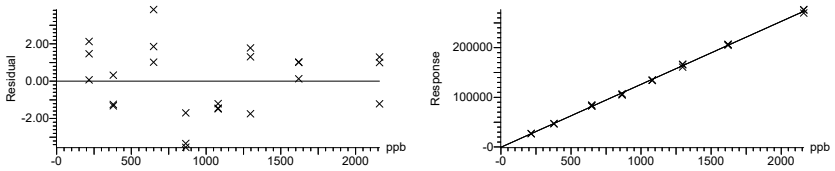
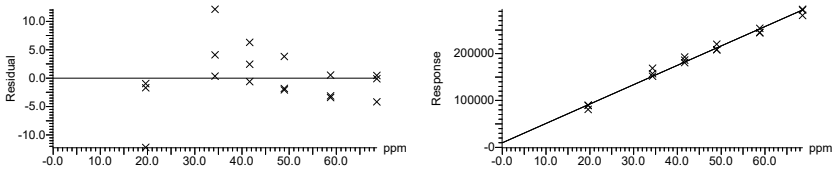
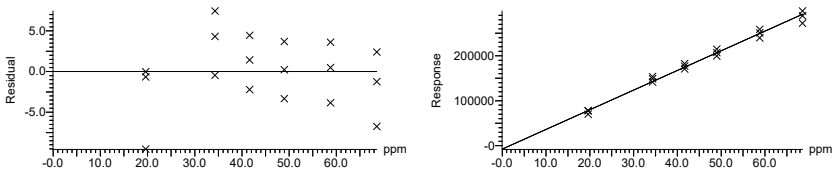
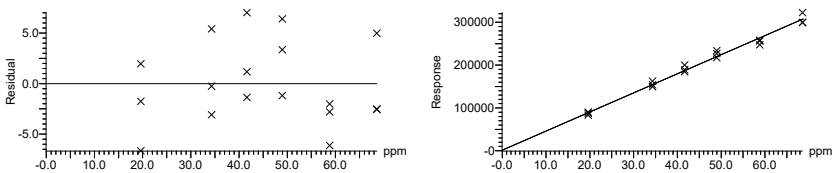
Substance	Method	Parent	Daughter	Ref.
Phosphatidylcholines (Epikuron™ 145V)	MRM, *m/z* 756.6 → 184.1, DP: 50 V, CE: 30 eV	 (*)		8
	MRM, *m/z* 758.6 → 184.1, DP: 50 V, CE: 30 eV	 (*)		
	MRM, *m/z* 780.6 → 184.1, DP: 50 V, CE: 30 eV	 (*)		
	MRM, *m/z* 782.5 → 184.1, DP: 50 V, CE: 30 eV	 (*)		
Macrogol-15-hydroxystearate (Kolliphor® HS15)	PseudoMRM, *m/z* 309.3 → 309.3, DP: 90 V, CE: 5 eV		N/A	9
Polysorbate 80	MRM, *m/z* 804.6 → 309.3, DP: 30 V, CE: 40 eV	N/D		10
Digested hyaluronic acid	SIM, *m/z* 759.2, DP: 100 V		N/A	11–13
Digested polysialic acid	SIM, *m/z* 274.1, DP: 100 V		N/A	14,15
Digested polyethylene glycol poly-glutamic acid	MRM, *m/z* 148.1 → 84.1, DP: 18 V, CE: 16 eV		 (*)	16

MRM: multiple reaction monitoring. SIM: Selected ion monitoring. DP: declustering potential. CE: collision energy. N/A: not applicable. N/D: not determined. (*): A possible structure; other molecules with the same m/z may co-exist.

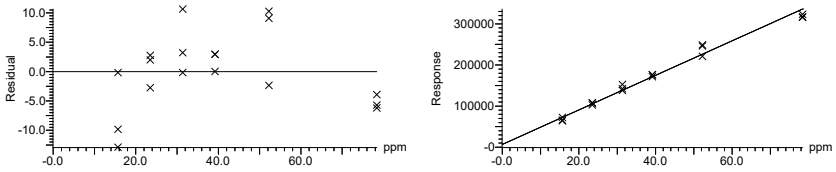
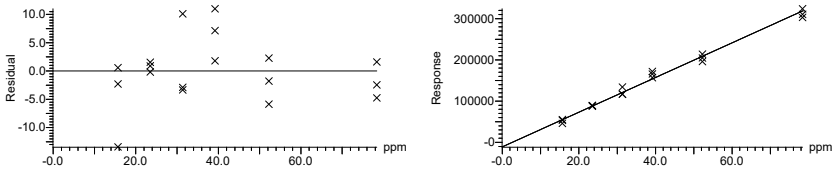
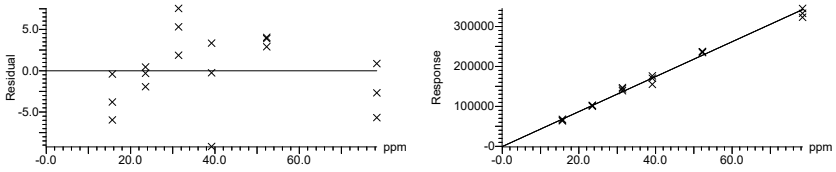
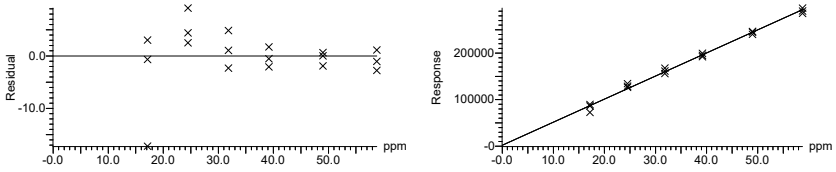
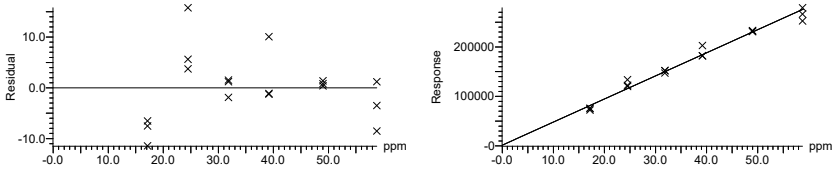
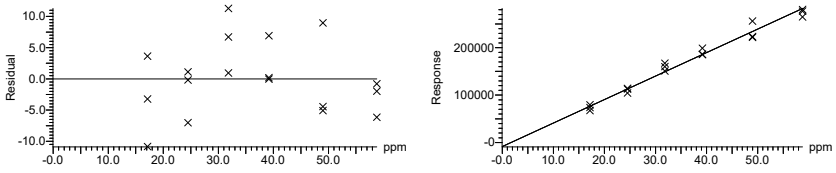
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-/-PEG-HA	Benzethonium	1	Compound name: benzethonium Correlation coefficient: r = 0.998880, r^2 = 0.997761 Calibration curve: 20062.6 * x + 84251.2 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: benzethonium Correlation coefficient: r = 0.997675, r^2 = 0.995356 Calibration curve: 20667.3 * x + 109777 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: benzethonium Correlation coefficient: r = 0.997362, r^2 = 0.994731 Calibration curve: 18278.7 * x + 118770 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	D-a-tocopherol polyethylene glycol 1000 succinate	1	Compound name: D-α-tocopherol polyethylene glycol 1000 succinate Correlation coefficient: r = 0.990478, r^2 = 0.981047 Calibration curve: 181.548 * x + 1133.68 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: D-α-tocopherol polyethylene glycol 1000 succinate Correlation coefficient: r = 0.993116, r^2 = 0.986279 Calibration curve: 190.369 * x + -843.895 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: D-α-tocopherol polyethylene glycol 1000 succinate Correlation coefficient: r = 0.994383, r^2 = 0.988797 Calibration curve: 398.723 * x + -2160.03 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

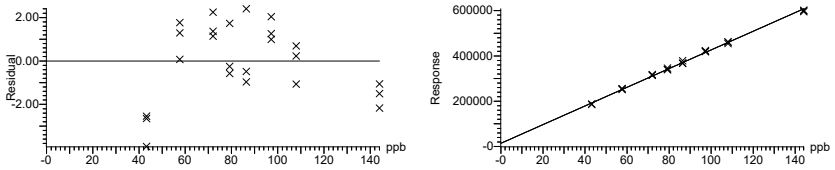
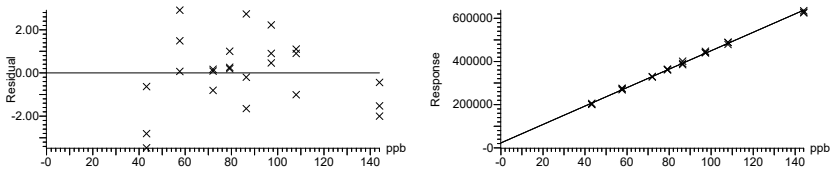
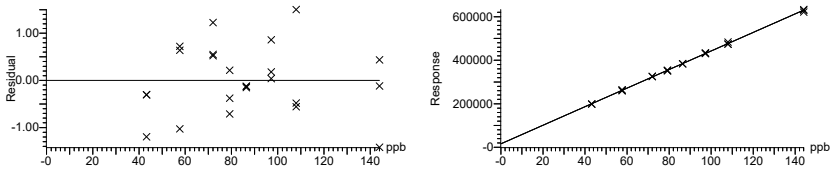
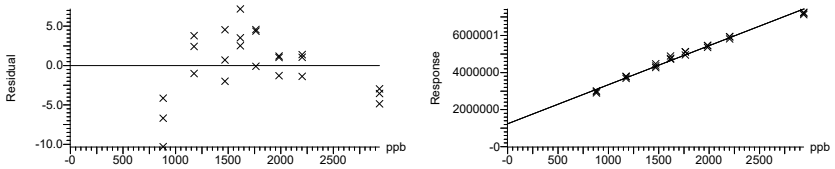
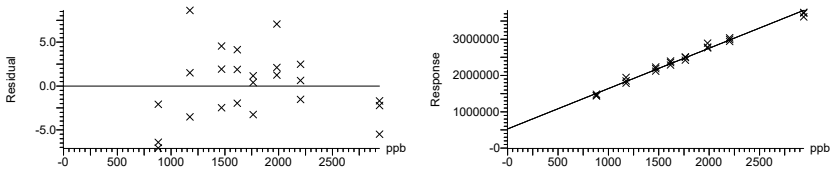
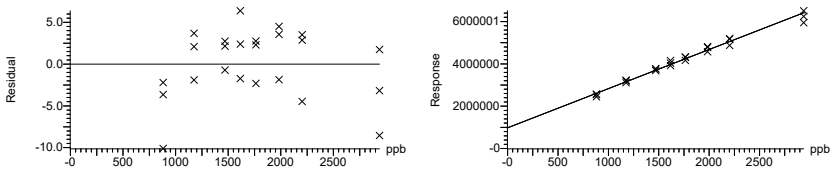
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-/-PEG-HA (continuation)	D-α-tocopherol	1	Compound name: DL-α-tocopherol Correlation coefficient: r = 0.996368, r^2 = 0.992749 Calibration curve: 161.6 * x + -621.845 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: DL-α-tocopherol Correlation coefficient: r = 0.996091, r^2 = 0.992198 Calibration curve: 134.842 * x + 259.387 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: DL-α-tocopherol Correlation coefficient: r = 0.999656, r^2 = 0.999312 Calibration curve: 126.766 * x + -621.553 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Hyaluronic acid (whole)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.994386, r^2 = 0.988803 Calibration curve: 4130.13 * x + 9837.9 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.995225, r^2 = 0.990474 Calibration curve: 4373.25 * x + -7479.95 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.994960, r^2 = 0.989945 Calibration curve: 4461.42 * x + 1376.84 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

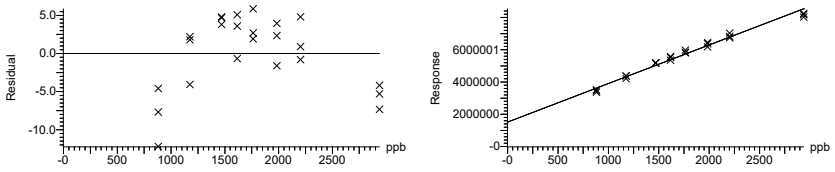
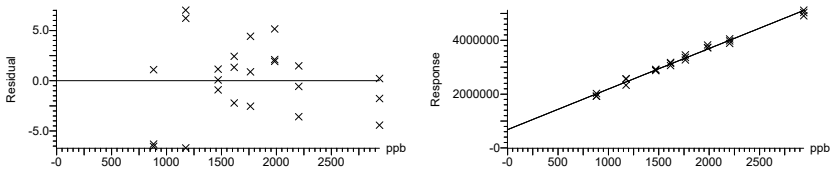
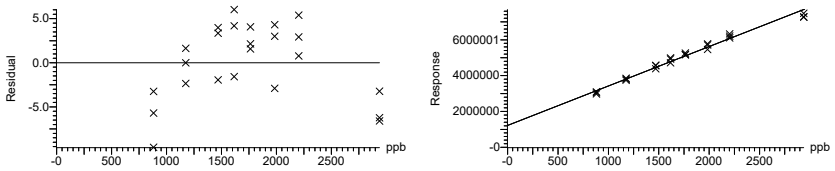
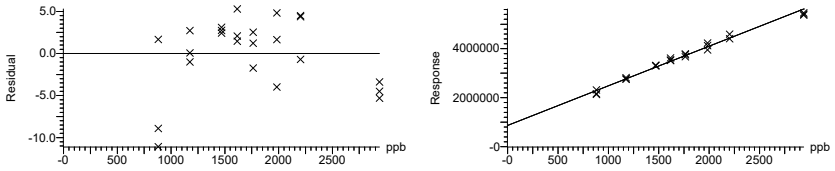
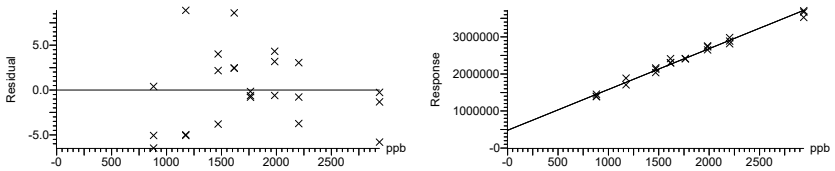
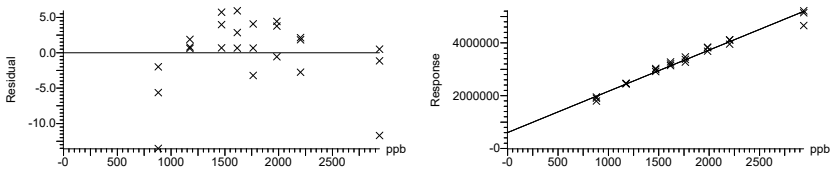
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-/-PEG-HA (continuation)	Hyaluronic acid (supernatant)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.992396, r^2 = 0.984849 Calibration curve: 4199.58 * x + 6712.82 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.994621, r^2 = 0.989270 Calibration curve: 4207 * x + -11030.1 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.996289, r^2 = 0.992591 Calibration curve: 4373.41 * x + -583.121 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Hyaluronic acid (infranatant)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.995210, r^2 = 0.990444 Calibration curve: 4956.23 * x + 2094.75 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.990110, r^2 = 0.980318 Calibration curve: 4668.12 * x + 1446.87 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.990600, r^2 = 0.981288 Calibration curve: 4955.03 * x + -8467.49 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

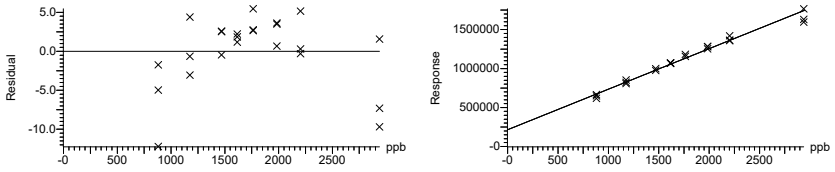
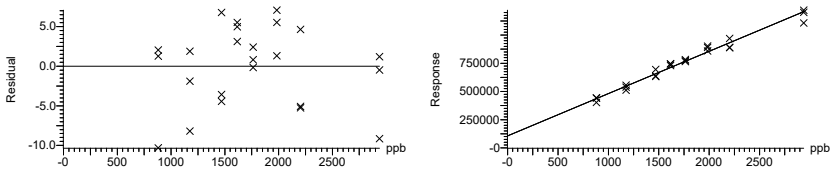
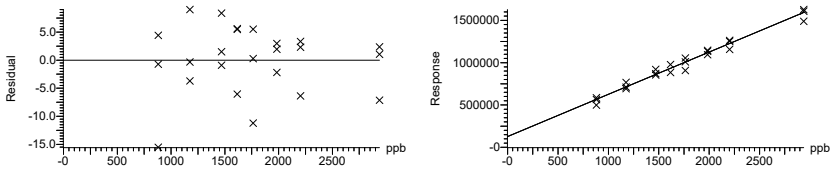
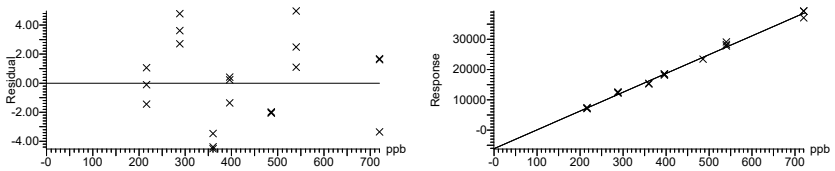
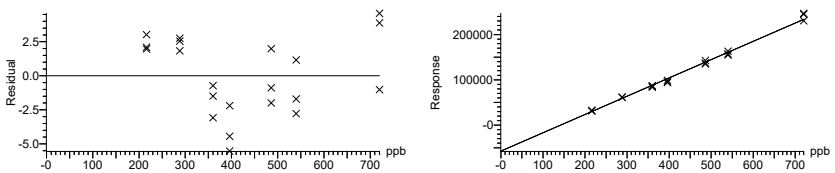
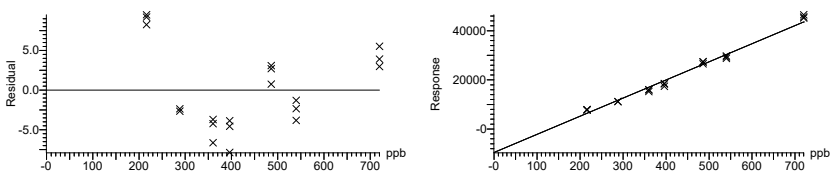
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-HA	CTAB	1	Compound name: hexadecyltrimethylammonium Correlation coefficient: r = 0.998943, r^2 = 0.997887 Calibration curve: 4126.68 * x + 13983.3 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: hexadecyltrimethylammonium Correlation coefficient: r = 0.999078, r^2 = 0.998157 Calibration curve: 4266.63 * x + 22962.8 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: hexadecyltrimethylammonium Correlation coefficient: r = 0.999769, r^2 = 0.999538 Calibration curve: 4265.8 * x + 15844.5 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	C_8-C_8-C_8 Triglyceride	1	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.994379, r^2 = 0.988791 Calibration curve: 2109.29 * x + 1.23567e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.994465, r^2 = 0.988961 Calibration curve: 1111.31 * x + 527248 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.993040, r^2 = 0.986129 Calibration curve: 1850.95 * x + 977854 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

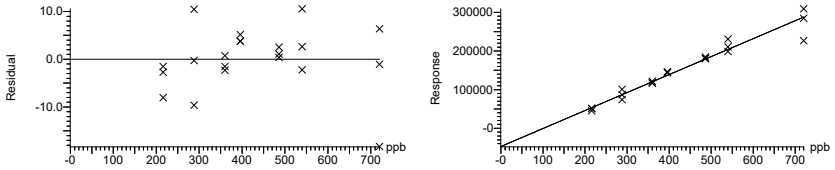
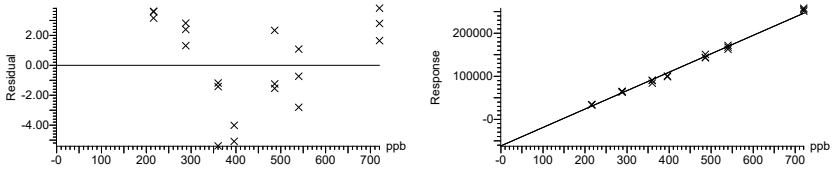
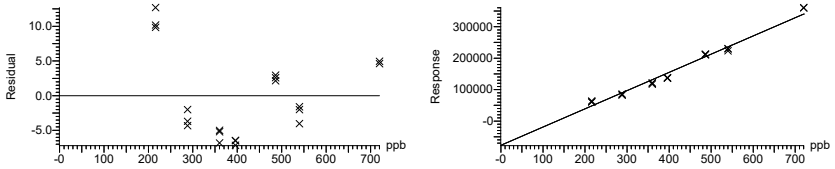
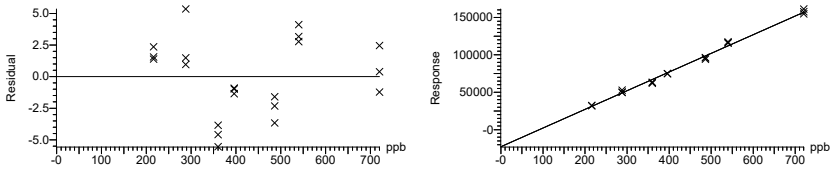
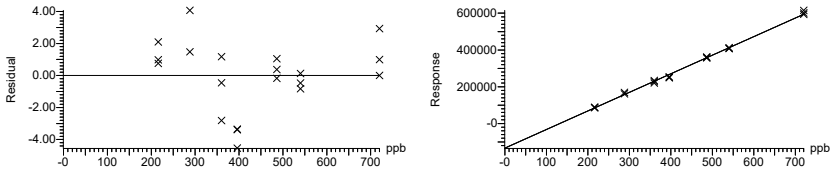
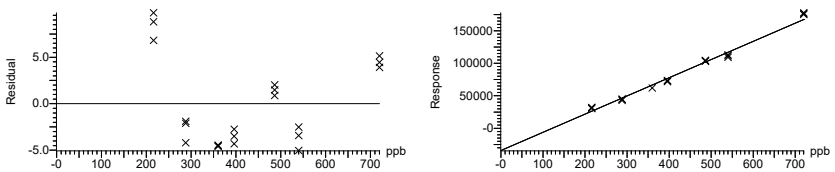
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-HA (continuation)	C_8-C_8-C_{10} Triglyceride	1	Compound name: C8-C8-C10 TG Correlation coefficient: r = 0.991232, r^2 = 0.982542 Calibration curve: 2391.65 * x + 1.51379e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C8-C10 TG Correlation coefficient: r = 0.995155, r^2 = 0.990334 Calibration curve: 1508.44 * x + 679958 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C8-C10 TG Correlation coefficient: r = 0.992451, r^2 = 0.984958 Calibration curve: 2200.96 * x + 1.22044e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	C_8-C_{10}-C_{10} Triglyceride	1	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.993350, r^2 = 0.986744 Calibration curve: 1618.69 * x + 866952 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.993628, r^2 = 0.987296 Calibration curve: 1101.43 * x + 479398 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.990811, r^2 = 0.981706 Calibration curve: 1562.36 * x + 603095 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

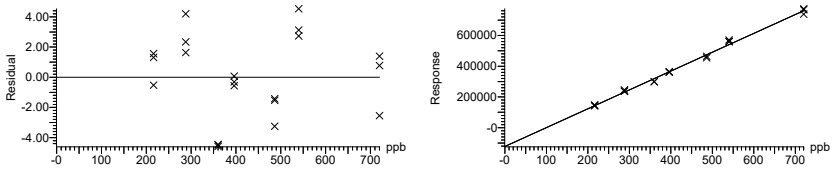
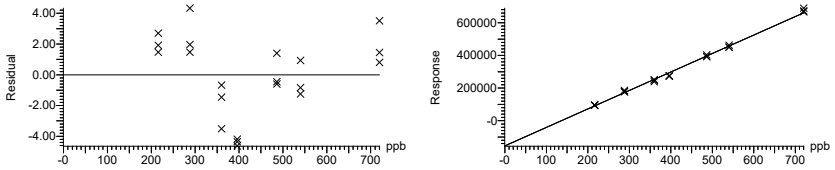
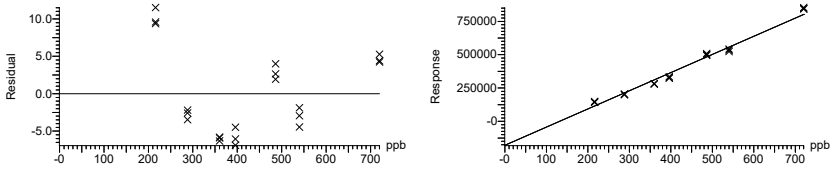
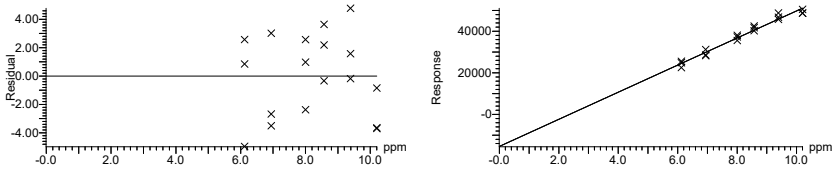
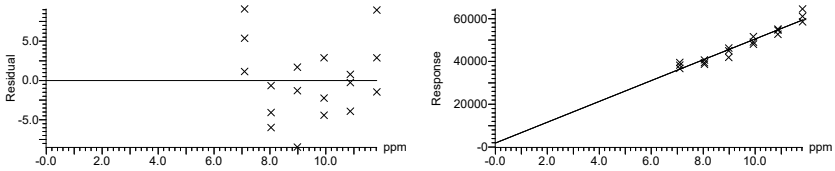
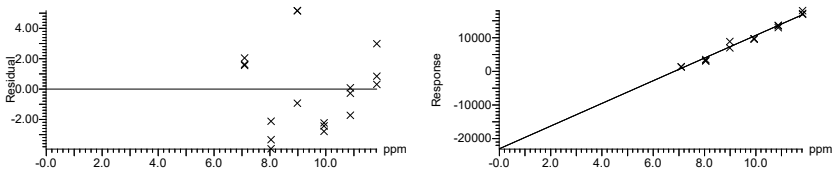
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-HA (continuation)	C_{10}-C_{10}-C_{10} Triglyceride	1	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.991252, r^2 = 0.982581 Calibration curve: 520.173 * x + 215015 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.989802, r^2 = 0.979709 Calibration curve: 374.753 * x + 106561 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.987630, r^2 = 0.975413 Calibration curve: 498.949 * x + 127026 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Phosphatidylcholine 756.6 Da	1	Compound name: PC_756.5 Correlation coefficient: r = 0.997083, r^2 = 0.994175 Calibration curve: 62.1519 * x + -6144.89 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: PC_756.5 Correlation coefficient: r = 0.996890, r^2 = 0.993789 Calibration curve: 403.916 * x + -57356.6 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: PC_756.5 Correlation coefficient: r = 0.992193, r^2 = 0.984448 Calibration curve: 73.7867 * x + -9540.06 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

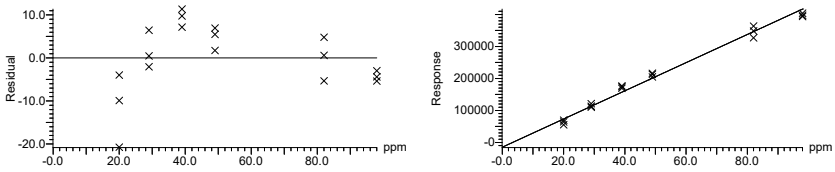
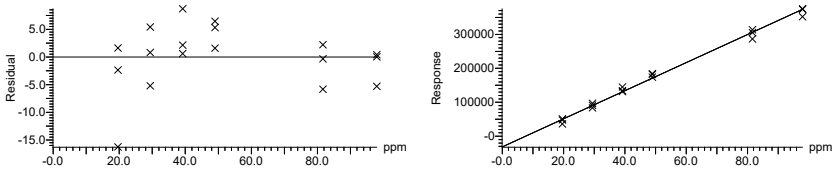
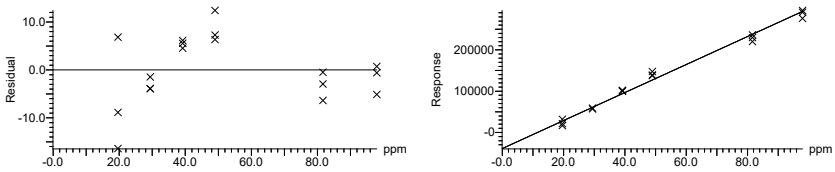
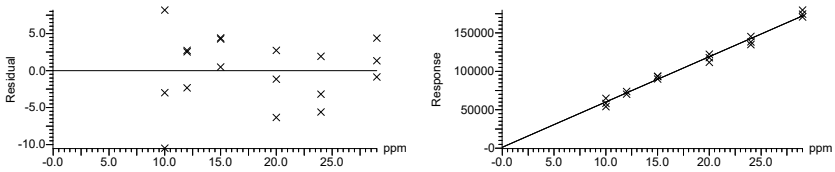
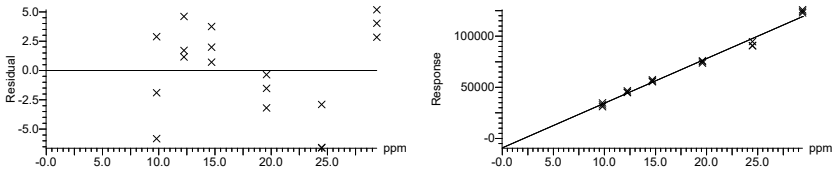
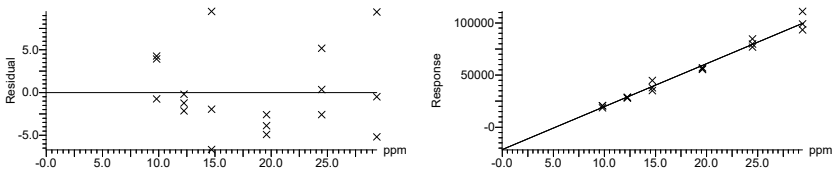
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-HA (continuation)	Phosphatidylcholine 758.6 Da	1	Compound name: PC_758.5 Correlation coefficient: r = 0.981541, r^2 = 0.963422 Calibration curve: 465.7 * x + -47279.4 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: PC_758.5 Correlation coefficient: r = 0.996625, r^2 = 0.993262 Calibration curve: 427.877 * x + -61715.9 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: PC_758.5 Correlation coefficient: r = 0.989484, r^2 = 0.979078 Calibration curve: 579.431 * x + -77046.3 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Phosphatidylcholine 780.6 Da	1	Compound name: PC_780.5 Correlation coefficient: r = 0.996934, r^2 = 0.993877 Calibration curve: 249.502 * x + -22763.5 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: PC_780.5 Correlation coefficient: r = 0.998443, r^2 = 0.996889 Calibration curve: 1010.34 * x + -133621 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: PC_780.5 Correlation coefficient: r = 0.993020, r^2 = 0.986089 Calibration curve: 279.912 * x + -34205.1 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

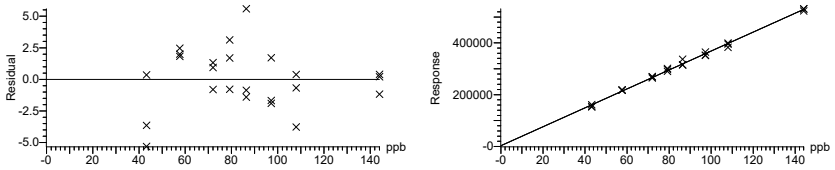
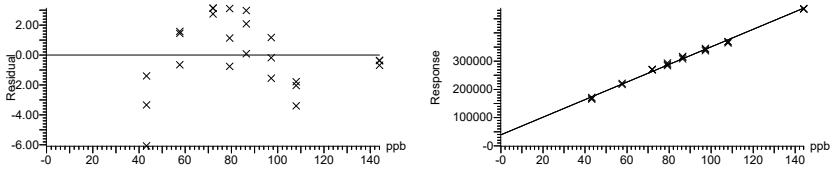
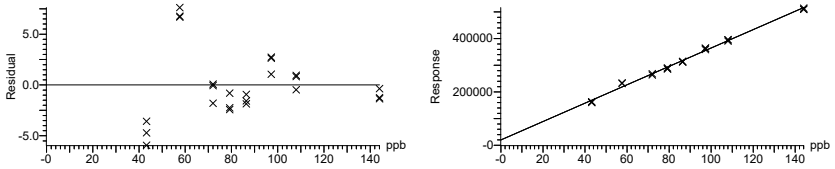
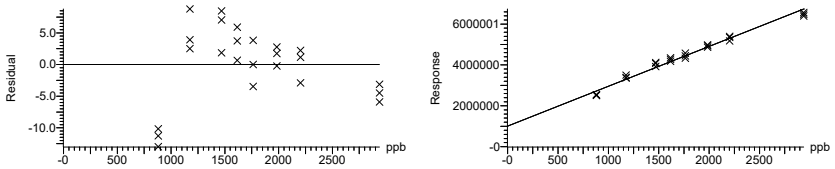
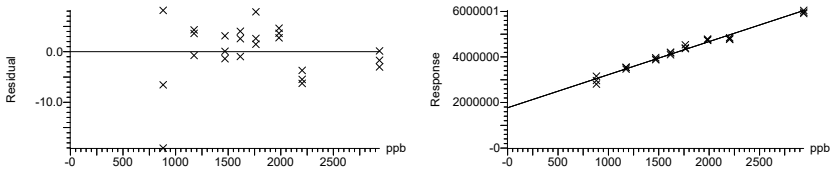
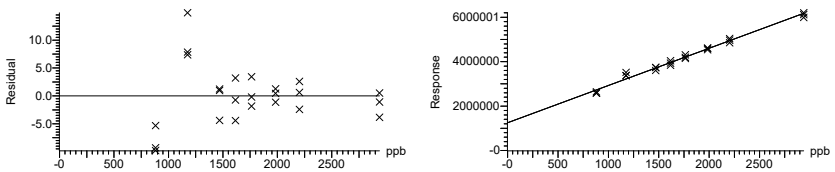
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-HA (continuation)	Phosphatidylcholine 782.5 Da	1	Compound name: PC_782.5 Correlation coefficient: r = 0.997218, r^2 = 0.994443 Calibration curve: 1226.51 * x + -122120 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: PC_782.5 Correlation coefficient: r = 0.997761, r^2 = 0.995526 Calibration curve: 1131.64 * x + -154034 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: PC_782.5 Correlation coefficient: r = 0.990150, r^2 = 0.980398 Calibration curve: 1362.81 * x + -179537 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Hyaluronic acid (whole)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.986828, r^2 = 0.973829 Calibration curve: 6523.57 * x + -15392.9 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.967398, r^2 = 0.935858 Calibration curve: 4864.8 * x + 1886.82 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.988969, r^2 = 0.978060 Calibration curve: 3370.43 * x + -22997 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

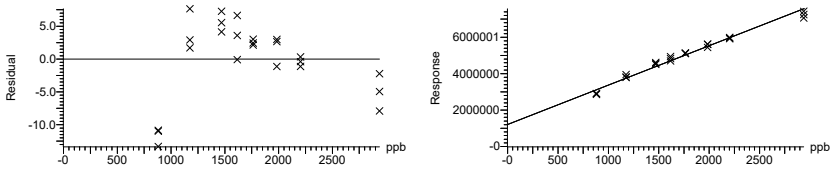
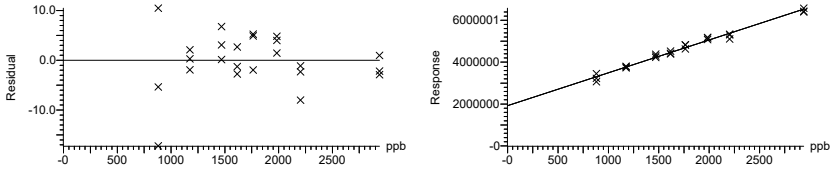
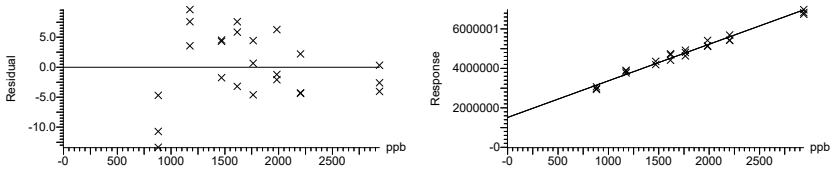
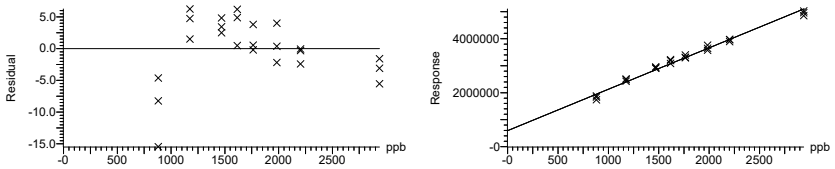
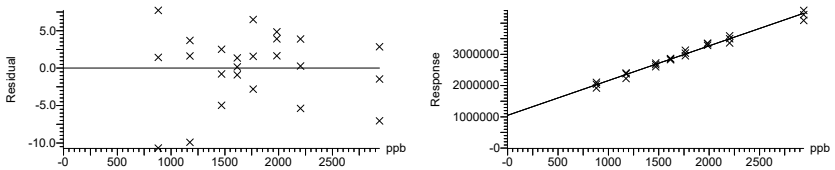
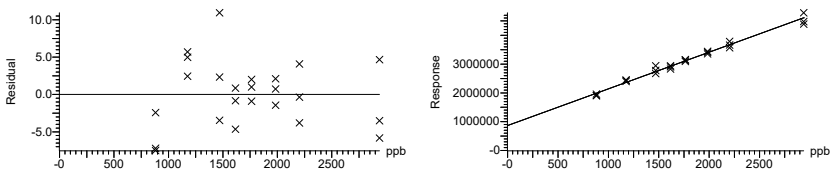
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-HA (continuation)	Hyaluronic acid (supernatant)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.992565, r^2 = 0.985185 Calibration curve: 4404.76 * x + -14916.4 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.996035, r^2 = 0.992085 Calibration curve: 4135.47 * x + -31361.2 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.993772, r^2 = 0.987583 Calibration curve: 3391.73 * x + -39008.5 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Hyaluronic acid (infranatant)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.993810, r^2 = 0.987659 Calibration curve: 5893.24 * x + 1224.65 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.994331, r^2 = 0.988695 Calibration curve: 4370.09 * x + -9223.01 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.991640, r^2 = 0.983349 Calibration curve: 4115.71 * x + -21346.5 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

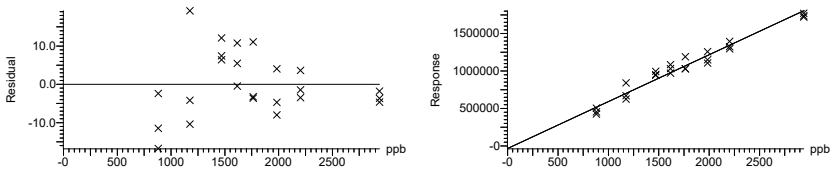
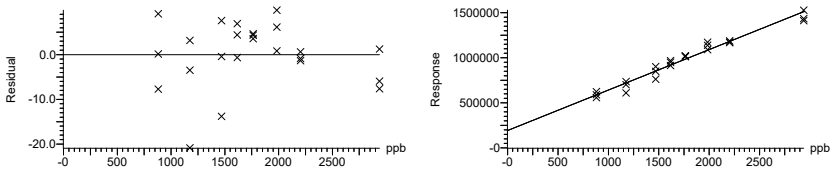
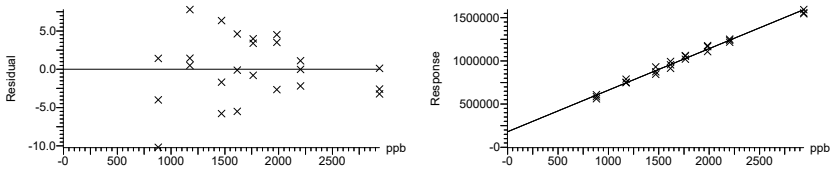
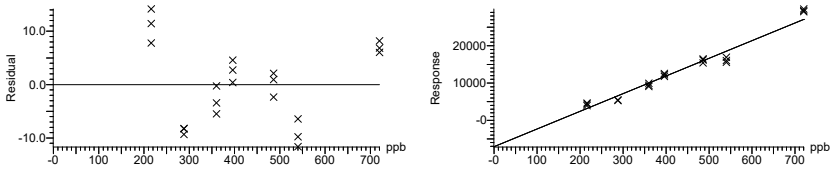
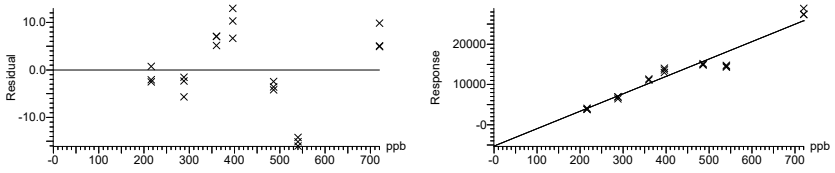
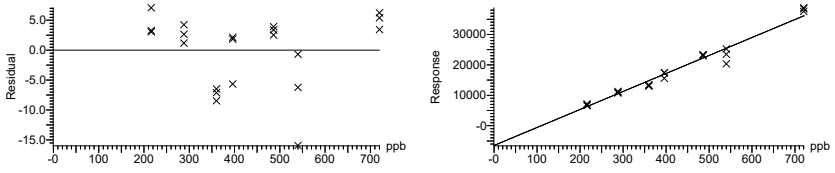
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PSA	CTAB	1	Compound name: hexadecyltrimethylammonium Correlation coefficient: r = 0.997990, r^2 = 0.995984 Calibration curve: 3657.04 * x + 2984.29 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: hexadecyltrimethylammonium Correlation coefficient: r = 0.998108, r^2 = 0.996219 Calibration curve: 3114.3 * x + 39261.4 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: hexadecyltrimethylammonium Correlation coefficient: r = 0.996723, r^2 = 0.993458 Calibration curve: 3447.94 * x + 20029.8 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	C_8-C_8-C_8 Triglyc-eride	1	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.989550, r^2 = 0.979210 Calibration curve: 1951.37 * x + 1.00607e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.990411, r^2 = 0.980914 Calibration curve: 1452.6 * x + 1.77029e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.992065, r^2 = 0.984193 Calibration curve: 1676.78 * x + 1.24921e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

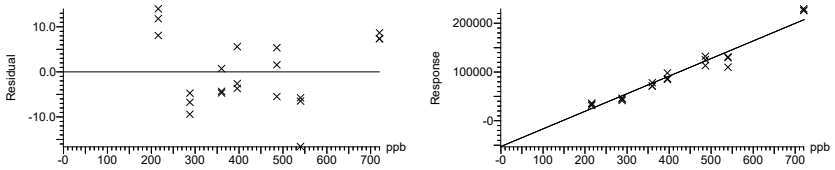
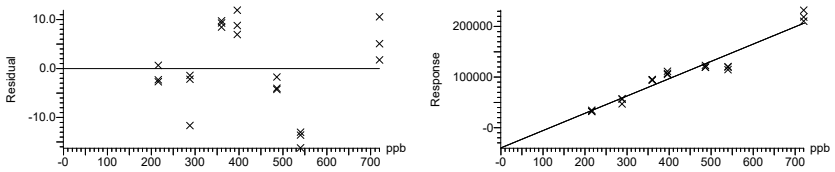
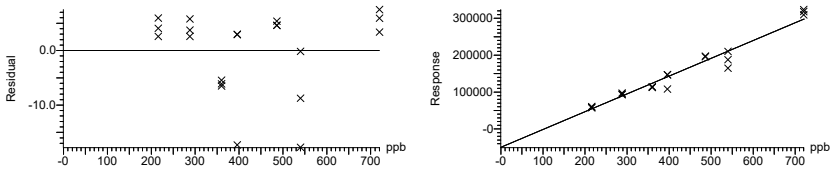
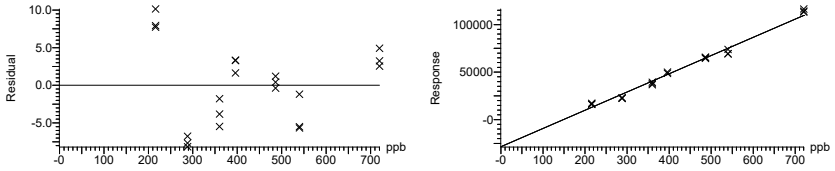
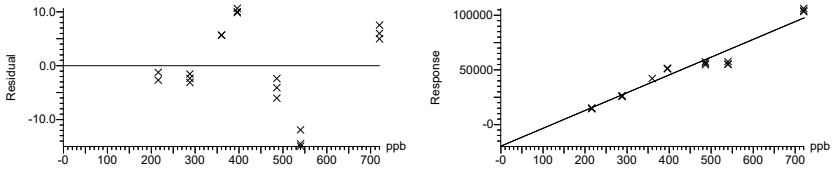
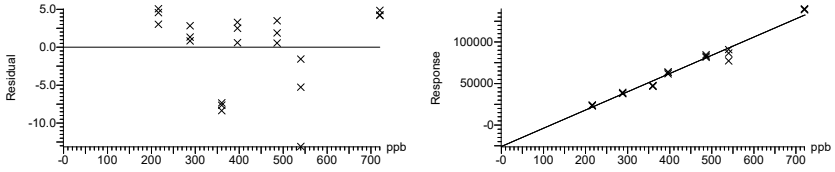
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PSA (continuation)	C_8-C_8-C_{10} Triglyceride	1	Compound name: C8-C8-C10 TG Correlation coefficient: r = 0.989462, r^2 = 0.979035 Calibration curve: 2163.78 * x + 1.20952e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C8-C10 TG Correlation coefficient: r = 0.990996, r^2 = 0.982073 Calibration curve: 1569.23 * x + 1.92218e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C8-C10 TG Correlation coefficient: r = 0.989581, r^2 = 0.979271 Calibration curve: 1854.36 * x + 1.51298e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	C_8-C_{10}-C_{10} Triglyceride	1	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.992471, r^2 = 0.984999 Calibration curve: 1534.99 * x + 593742 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.991897, r^2 = 0.983860 Calibration curve: 1112.18 * x + 1.04842e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.992729, r^2 = 0.985511 Calibration curve: 1274.23 * x + 866565 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

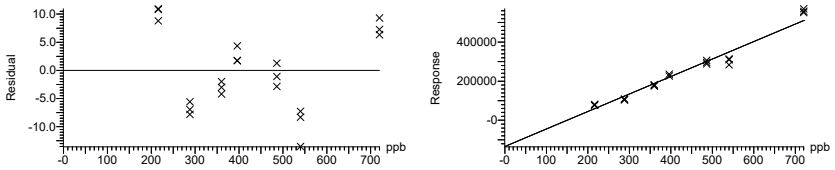
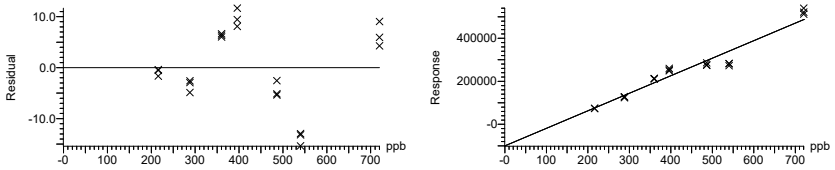
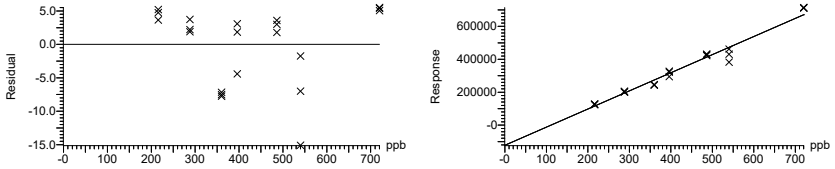
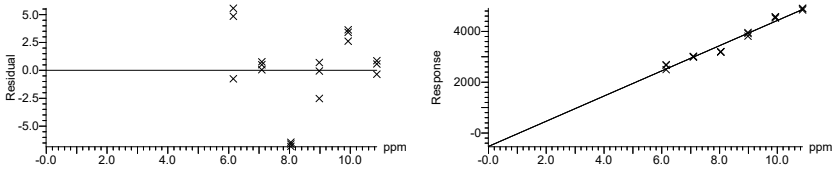
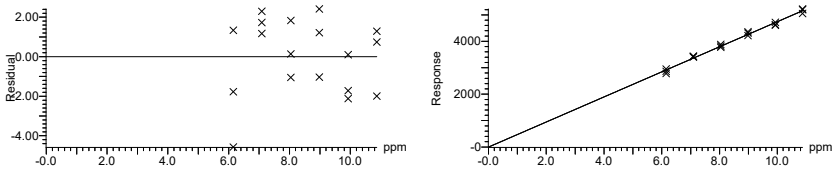
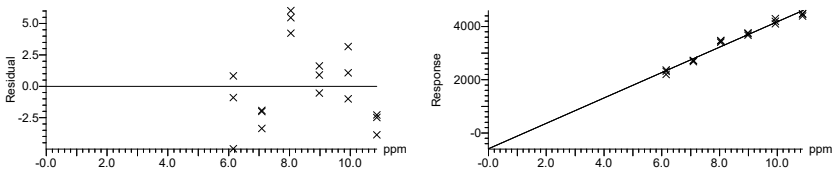
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PSA (continuation)	C_{10}-C_{10}-C_{10} Triglyceride	1	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.978117, r^2 = 0.956712 Calibration curve: 626.111 * x + -34775.9 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.981912, r^2 = 0.964152 Calibration curve: 448.743 * x + 192818 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.994138, r^2 = 0.988311 Calibration curve: 480.788 * x + 180271 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Phosphatidylcholine 756.6 Da	1	Compound name: PC_756.5 Correlation coefficient: r = 0.981717, r^2 = 0.963769 Calibration curve: 47.4852 * x + -7090.4 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: PC_756.5 Correlation coefficient: r = 0.971896, r^2 = 0.944581 Calibration curve: 43.2079 * x + -5281.14 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: PC_756.5 Correlation coefficient: r = 0.986049, r^2 = 0.972293 Calibration curve: 59.1599 * x + -6493.77 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

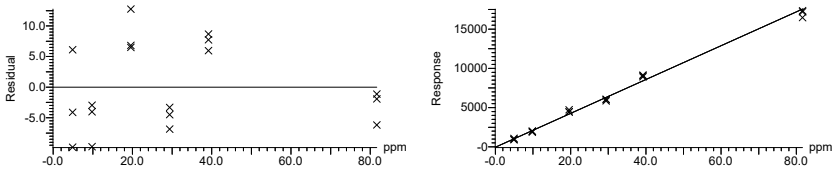
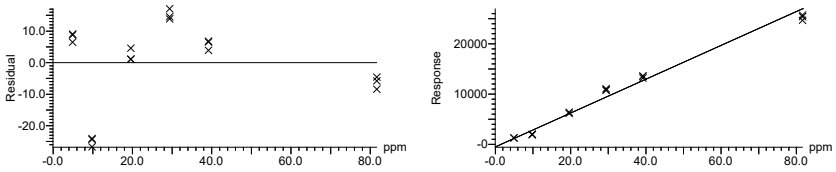
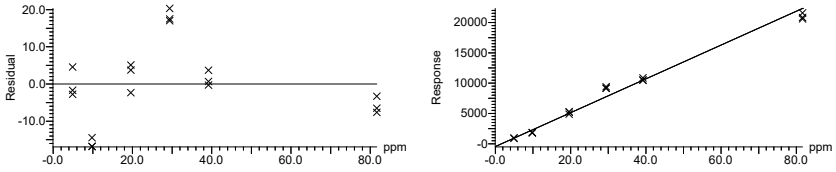
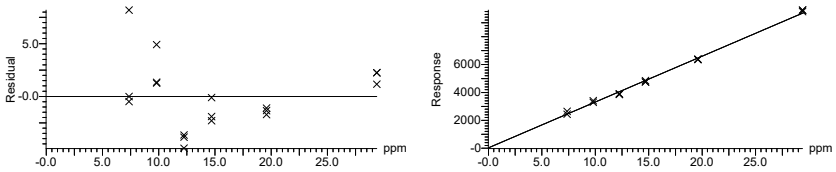
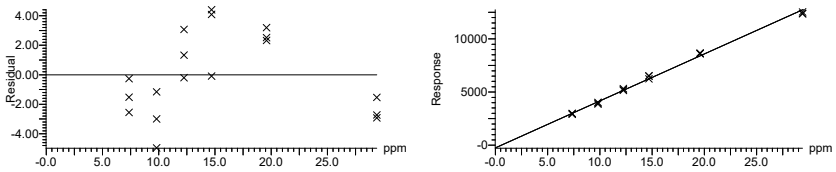
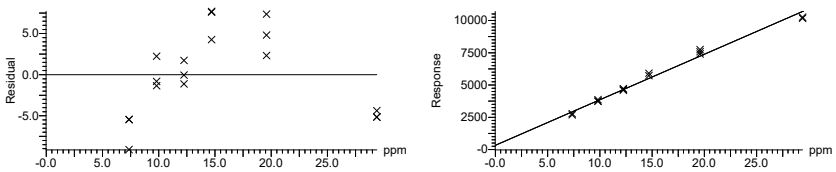
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PSA (continuation)	Phosphatidylcholine 758.6 Da	1	Compound name: PC_758.5 Correlation coefficient: r = 0.978454, r^2 = 0.957372 Calibration curve: 360.953 * x + -52734.3 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: PC_758.5 Correlation coefficient: r = 0.971378, r^2 = 0.943575 Calibration curve: 341.841 * x + -39868.1 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: PC_758.5 Correlation coefficient: r = 0.978576, r^2 = 0.957611 Calibration curve: 482.411 * x + -49778.1 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Phosphatidylcholine 780.6 Da	1	Compound name: PC_780.5 Correlation coefficient: r = 0.991907, r^2 = 0.983880 Calibration curve: 191.822 * x + -28502.3 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: PC_780.5 Correlation coefficient: r = 0.975548, r^2 = 0.951693 Calibration curve: 162.687 * x + -19690.5 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: PC_780.5 Correlation coefficient: r = 0.989517, r^2 = 0.979145 Calibration curve: 219.467 * x + -25771.8 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

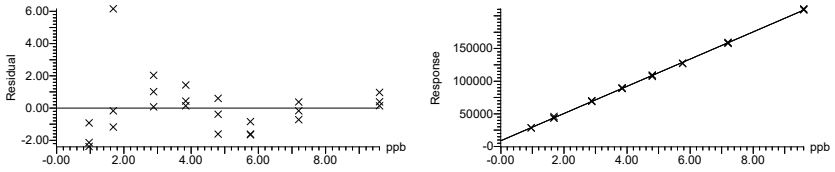
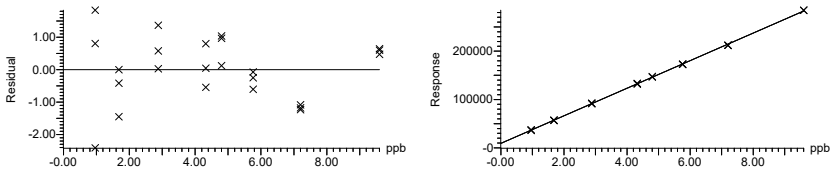
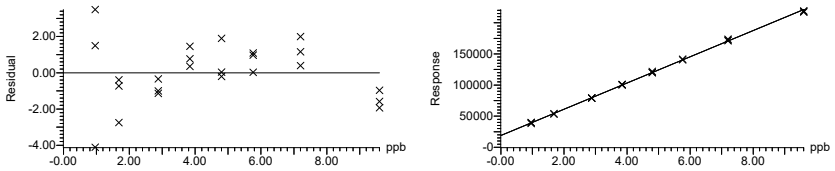
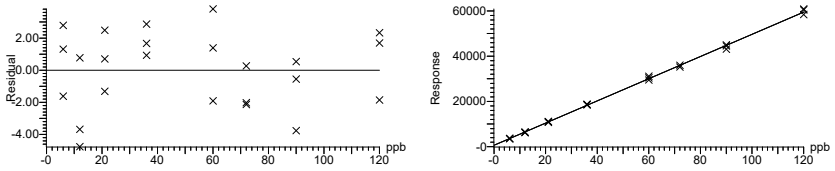
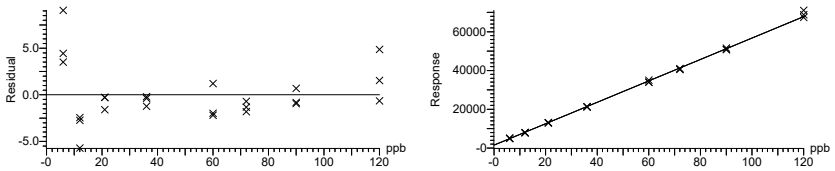
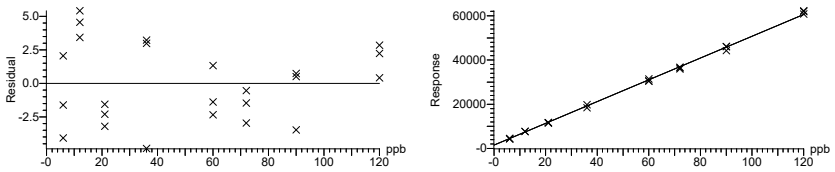
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PSA (continuation)	Phosphatidylcholine 782.5 Da	1	Compound name: PC_782.5 Correlation coefficient: r = 0.982009, r^2 = 0.964341 Calibration curve: 895.531 * x + -134281 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: PC_782.5 Correlation coefficient: r = 0.974672, r^2 = 0.949985 Calibration curve: 815.527 * x + -100263 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: PC_782.5 Correlation coefficient: r = 0.986556, r^2 = 0.973292 Calibration curve: 1101.46 * x + -122320 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Polysialic acid (whole)	1	Compound name: Digested polysialic acid Correlation coefficient: r = 0.984542, r^2 = 0.969323 Calibration curve: 495.967 * x + -528.657 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested polysialic acid Correlation coefficient: r = 0.995783, r^2 = 0.991583 Calibration curve: 474.707 * x + -2.33855 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested polysialic acid Correlation coefficient: r = 0.987737, r^2 = 0.975625 Calibration curve: 477.285 * x + -592.32 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

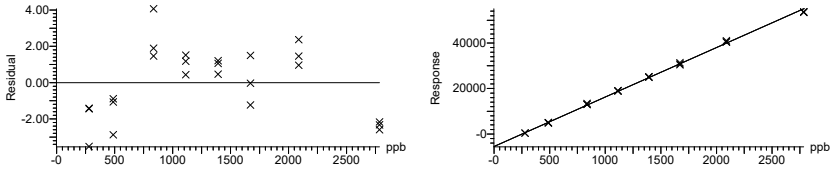
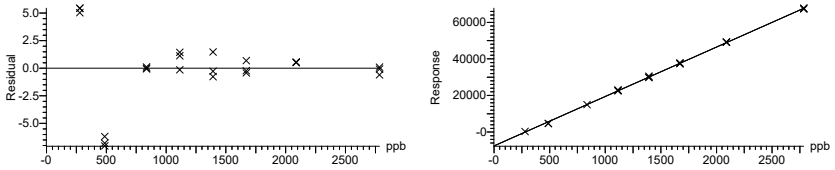
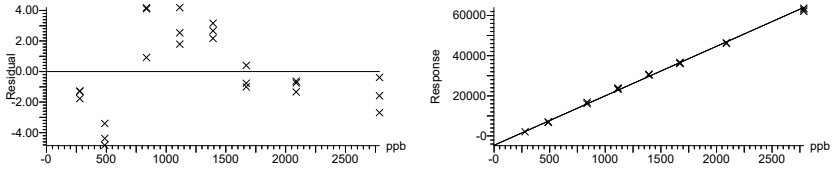
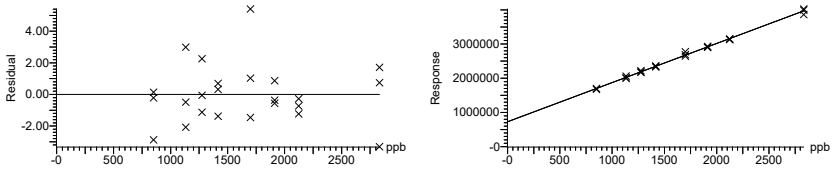
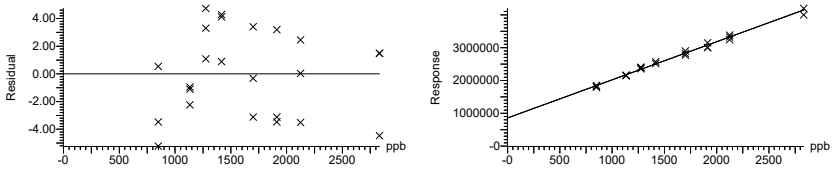
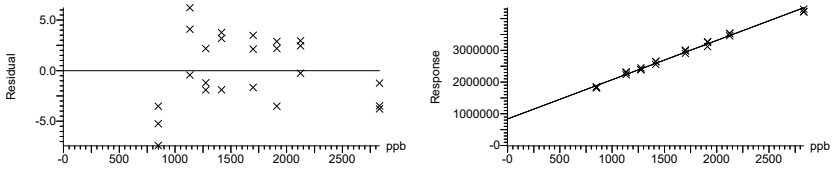
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PSA (continuation)	Polysialic acid (supernatant)	1	Compound name: Digested polysialic acid Correlation coefficient: r = 0.996813, r^2 = 0.993635 Calibration curve: 215.458 * x + -41.1843 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested polysialic acid Correlation coefficient: r = 0.991058, r^2 = 0.982196 Calibration curve: 336.608 * x + -508.845 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested polysialic acid Correlation coefficient: r = 0.992138, r^2 = 0.984337 Calibration curve: 278.905 * x + -449.887 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Polysialic acid (infranatant)	1	Compound name: Digested polysialic acid Correlation coefficient: r = 0.998050, r^2 = 0.996104 Calibration curve: 328.803 * x + 27.6584 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested polysialic acid Correlation coefficient: r = 0.997997, r^2 = 0.995998 Calibration curve: 441.915 * x + -248.6 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested polysialic acid Correlation coefficient: r = 0.993285, r^2 = 0.986614 Calibration curve: 352.887 * x + 329.055 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

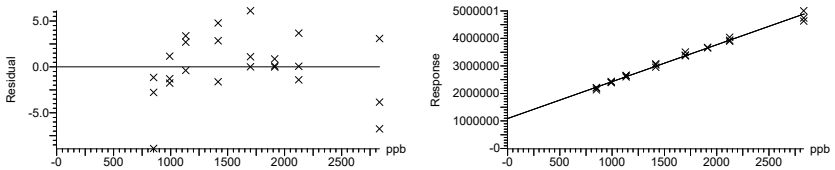
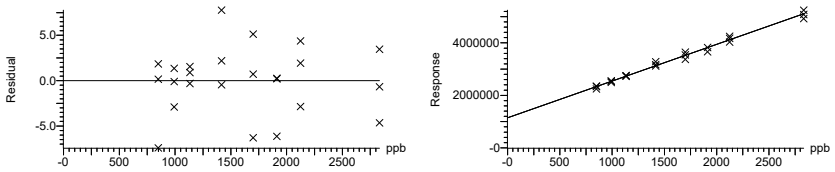
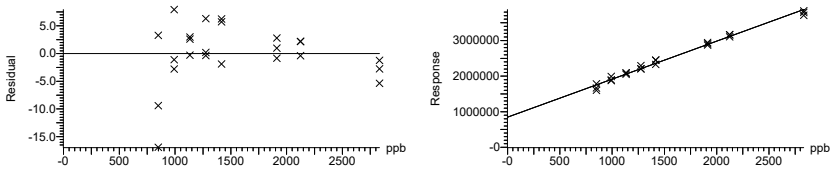
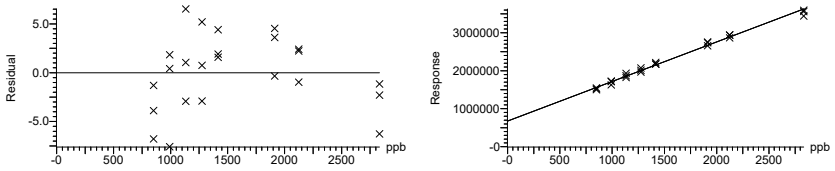
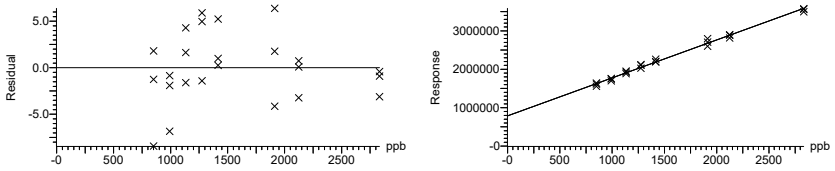
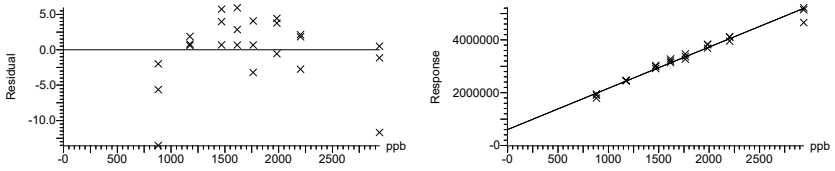
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SE-*b*-PEG-HA	Benzethonium	1	Compound name: benzethonium Correlation coefficient: r = 0.999809, r^2 = 0.999617 Calibration curve: 20837.2 * x + 8846.54 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: benzethonium Correlation coefficient: r = 0.999915, r^2 = 0.999830 Calibration curve: 28497.7 * x + 9350.55 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: benzethonium Correlation coefficient: r = 0.999769, r^2 = 0.999538 Calibration curve: 21075.3 * x + 18948 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Macrogol-15-hydroxystearate	1	Compound name: macrogol-15-hydroxystearate Correlation coefficient: r = 0.999616, r^2 = 0.999233 Calibration curve: 490.537 * x + 621.962 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: macrogol-15-hydroxystearate Correlation coefficient: r = 0.999613, r^2 = 0.999226 Calibration curve: 552.297 * x + 1523.58 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: macrogol-15-hydroxystearate Correlation coefficient: r = 0.999533, r^2 = 0.999066 Calibration curve: 492.173 * x + 1525.34 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

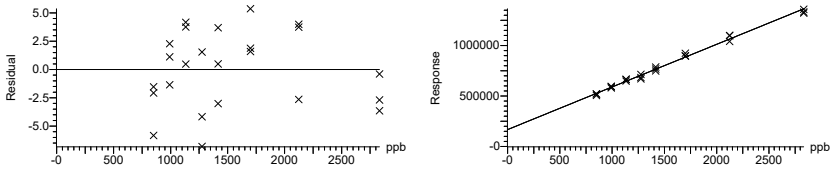
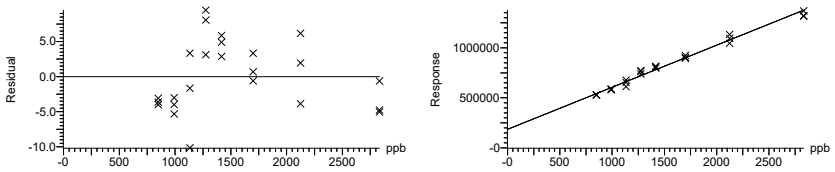
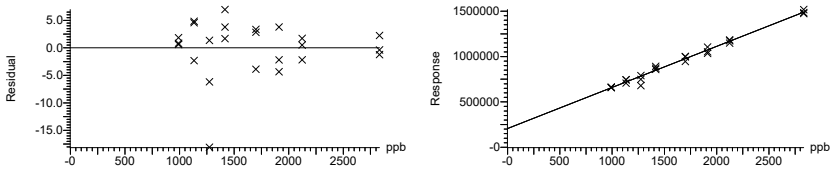
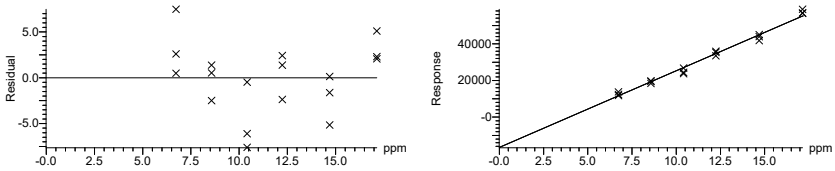
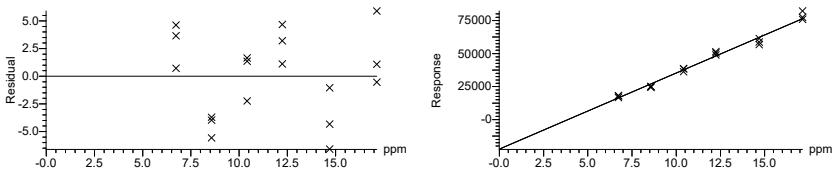
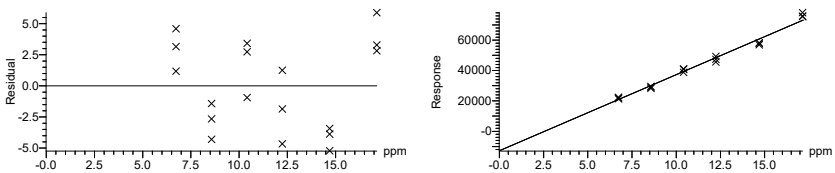
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SE-*b*-PEG-HA (continuation)	Polysorbate 80	1	Compound name: polysorbate 80 Correlation coefficient: r = 0.999571, r^2 = 0.999142 Calibration curve: 21.7494 * x + -5484.45 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: polysorbate 80 Correlation coefficient: r = 0.999600, r^2 = 0.999200 Calibration curve: 27.0221 * x + -7565.95 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: polysorbate 80 Correlation coefficient: r = 0.999386, r^2 = 0.998773 Calibration curve: 24.6304 * x + -4631.83 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	C_8-C_8-C_8 Triglyceride	1	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.998555, r^2 = 0.997112 Calibration curve: 1143.7 * x + 729914 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.996395, r^2 = 0.992802 Calibration curve: 1161.24 * x + 857869 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C8-C8 TG Correlation coefficient: r = 0.995926, r^2 = 0.991868 Calibration curve: 1236.69 * x + 836793 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

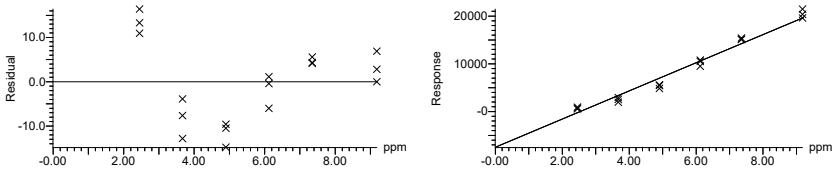
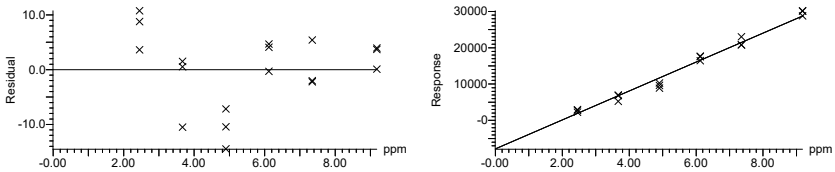
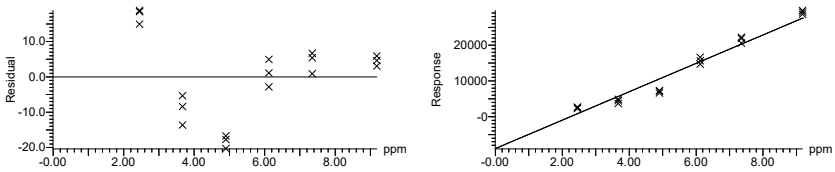
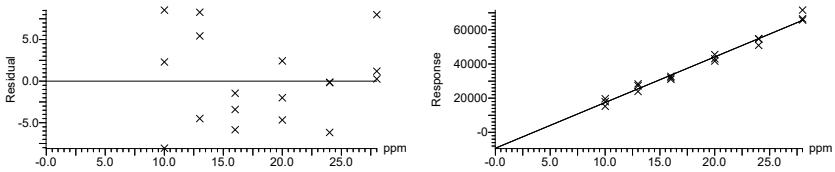
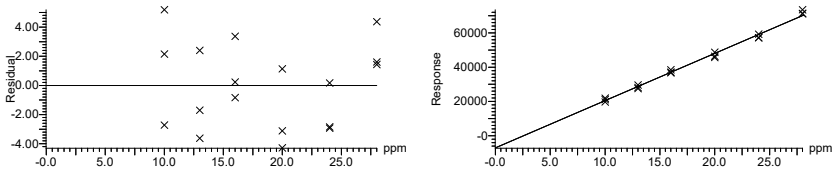
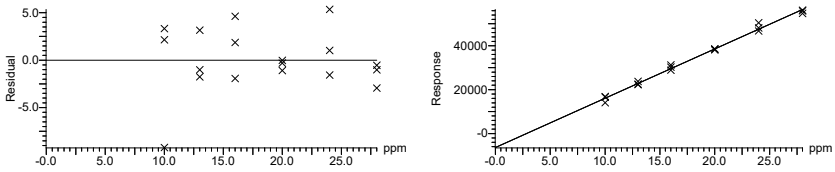
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SE-*b*-PEG-HA (continuation)	C_8-C_8-C_{10} Triglyceride	1	Compound name: C8-C8-C10 TG Correlation coefficient: r = 0.995759, r^2 = 0.991536 Calibration curve: 1340.75 * x + 1.08877e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C8-C10 TG Correlation coefficient: r = 0.995234, r^2 = 0.990491 Calibration curve: 1399.21 * x + 1.14637e+006 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.992999, r^2 = 0.986048 Calibration curve: 1067.63 * x + 847138 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	C_8-C_{10}-C_{10} Triglyceride	1	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.995371, r^2 = 0.990763 Calibration curve: 1042.33 * x + 675228 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.995793, r^2 = 0.991604 Calibration curve: 987.866 * x + 787402 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C8-C10-C10 TG Correlation coefficient: r = 0.990811, r^2 = 0.981706 Calibration curve: 1562.36 * x + 603095 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

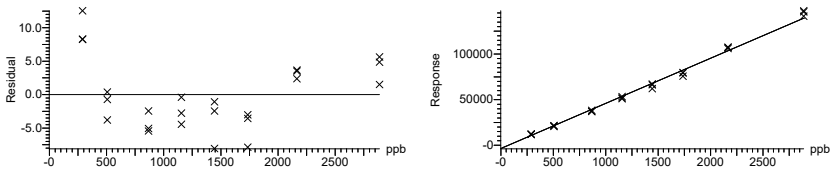
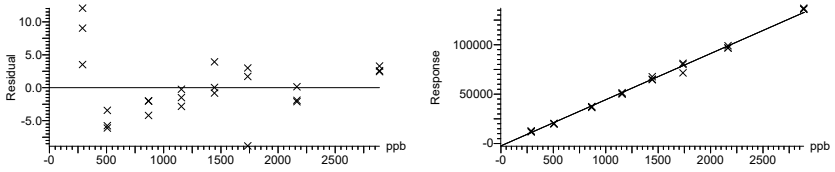
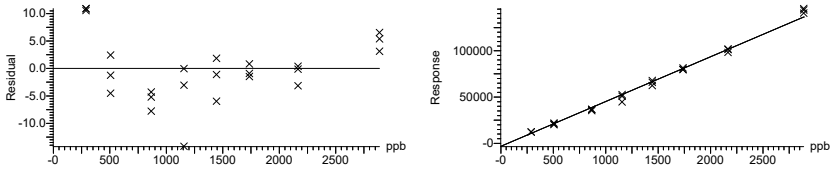
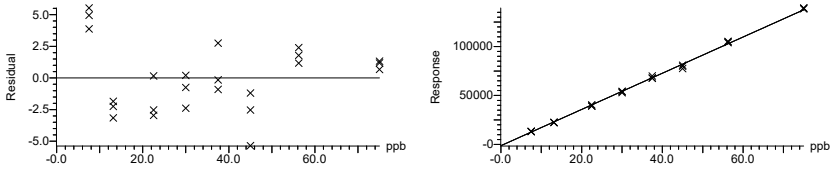
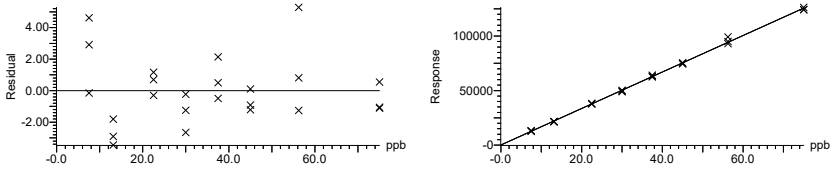
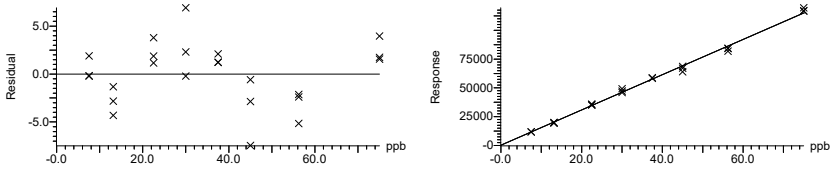
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SE-*b*-PEG-HA (continuation)	C_{10}-C_{10}-C_{10} Triglyceride	1	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.995952, r^2 = 0.991921 Calibration curve: 422.591 * x + 167207 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.991788, r^2 = 0.983644 Calibration curve: 420.378 * x + 185286 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: C10-C10-C10 TG Correlation coefficient: r = 0.990394, r^2 = 0.980880 Calibration curve: 452.742 * x + 206773 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Hyaluronic acid (whole)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.993235, r^2 = 0.986517 Calibration curve: 4187.56 * x + -16548 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.992919, r^2 = 0.985888 Calibration curve: 5760.23 * x + -22313.5 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.993213, r^2 = 0.986472 Calibration curve: 5010.39 * x + -12794.7 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

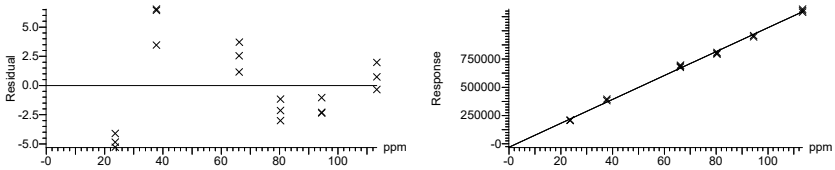
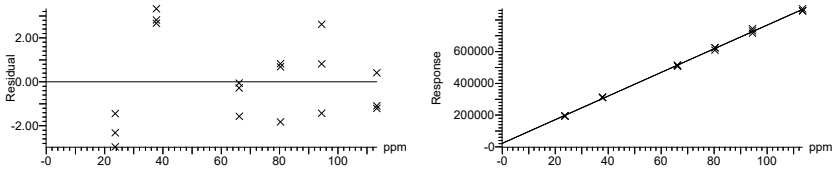
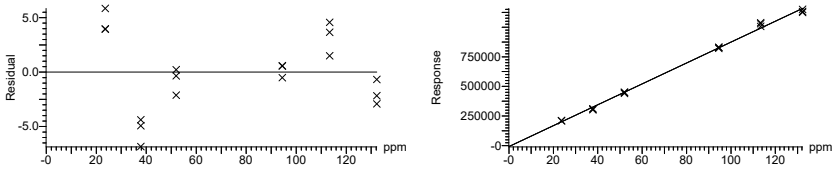
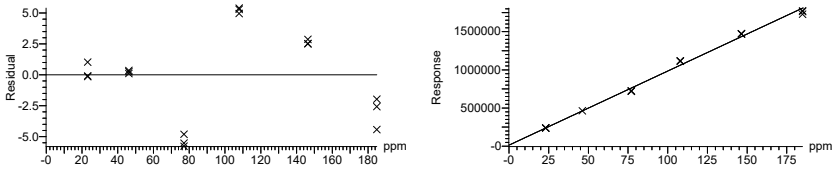
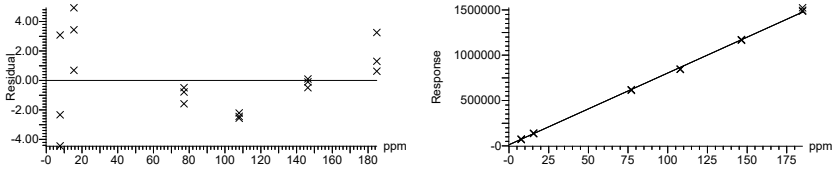
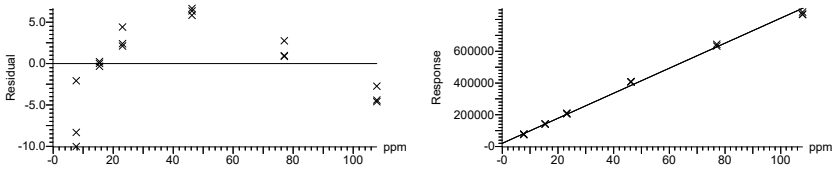
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SE-*b*-PEG-HA (continuation)	Hyaluronic acid (retentate)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.984484, r^2 = 0.969209 Calibration curve: 2948.95 * x + -7474 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.990093, r^2 = 0.980285 Calibration curve: 3985.69 * x + -7849.32 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.973670, r^2 = 0.948034 Calibration curve: 3972.57 * x + -8904.86 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	Hyaluronic acid (permeate)	1	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.990870, r^2 = 0.981823 Calibration curve: 2674.08 * x + -9315.04 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.996754, r^2 = 0.993519 Calibration curve: 2756.76 * x + -7074.99 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested hyaluronic acid Correlation coefficient: r = 0.996494, r^2 = 0.993000 Calibration curve: 2247.5 * x + -6382.66 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

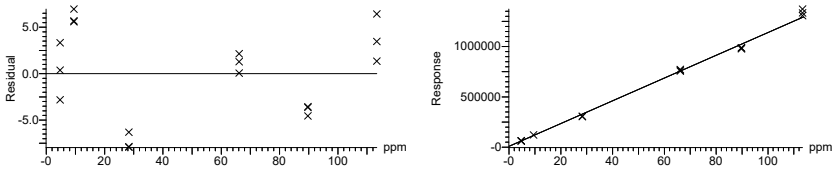
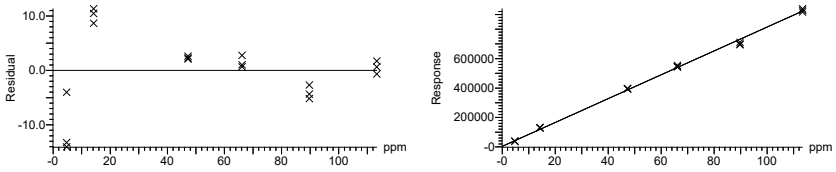
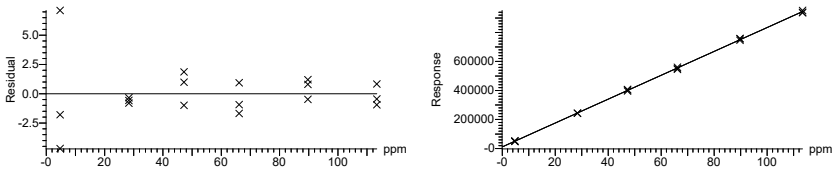
Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PEG·PGA	DL-α-tocopherol	1	Compound name: DL-α-tocopherol Correlation coefficient: r = 0.997469, r^2 = 0.994945 Calibration curve: 49.4472 * x + -3461.7 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: DL-α-tocopherol Correlation coefficient: r = 0.998434, r^2 = 0.996871 Calibration curve: 46.7148 * x + -2340.53 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: DL-α-tocopherol Correlation coefficient: r = 0.997046, r^2 = 0.994100 Calibration curve: 48.3276 * x + -3138.24 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	DOTAP	1	Compound name: 1,2-dioleoyl-3-trimethylammoniumpropane Correlation coefficient: r = 0.999393, r^2 = 0.998787 Calibration curve: 1851.7 * x + -1312.06 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: 1,2-dioleoyl-3-trimethylammoniumpropane Correlation coefficient: r = 0.999553, r^2 = 0.999106 Calibration curve: 1673.68 * x + 86.2758 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: 1,2-dioleoyl-3-trimethylammoniumpropane Correlation coefficient: r = 0.998635, r^2 = 0.997271 Calibration curve: 1530.23 * x + 253.64 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PEG·PGA (continuation)	PEG·PGA (whole)	1	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.998487, r^2 = 0.996977 Calibration curve: 10575.9 * x + -30283.5 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.999504, r^2 = 0.999009 Calibration curve: 7449.11 * x + 22416.1 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.998669, r^2 = 0.997340 Calibration curve: 8812.53 * x + -7182.38 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
	PEG·PGA (supernatant)	1	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.998201, r^2 = 0.996404 Calibration curve: 9707.07 * x + 13837.7 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.999767, r^2 = 0.999534 Calibration curve: 7914.54 * x + 12392.4 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.998509, r^2 = 0.997020 Calibration curve: 7881.39 * x + 20487.5 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

Supplementary Table 8. Calibration curves and residual plots of all the quantified substances (continuation)

Formulation	Molecule	Rep.	Residual plots and calibration curves
SD-noPEG-PEG·PGA (continuation)	PEG·PGA (infranatant)	1	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.998736, r^2 = 0.997474 Calibration curve: 11304.1 * x + 8801.48 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		2	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.999069, r^2 = 0.998139 Calibration curve: 8114.2 * x + 3596.93 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 
		3	Compound name: Digested polyethylene glycol polyglutamic acid Correlation coefficient: r = 0.999902, r^2 = 0.999803 Calibration curve: 8230.45 * x + 11492.7 Response type: External Std, Area Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None 

SD-*l*-PEG-HA: lineal-polyethylene glycol-containing hyaluronic acid nanocapsules formulated by solvent displacement. SD-noPEG-HA: non-PEGylated hyaluronic acid nanocapsules formulated by solvent displacement. SD-noPEG-PSA: non-PEGylated polysialic acid nanocapsules formulated by solvent displacement. SE-*b*-PEG-HA: Self-emulsifying branched-polyethylene glycol-containing hyaluronic acid nanocapsules. SD-noPEG-PEG·PGA: Solvent displacement nanocapsules not containing PEGylated surfactants and with an outer shell of polyethylene glycol polyglutamic acid. Residuals were plotted as percentual relative residuals (%RRES) vs. concentration, while calibration curves, response vs. concentration. In both cases, a weighting factor of 1/x was applied. In all cases, the mean of the triplicates of the %RRES for each concentration level was found to be in the range of – 20 % to 20 %, confirming the linearity of the calibration curve. In general, residuals followed a random distribution around the value %RRES = 0. Rep.: replicates.

Supplementary Table 9. Mass percentage detected in each fraction relative to the theoretical amount added to the formulation

Formulation	Substance	Recovery before isolation (%)	Supernatant / retentate recovery (%)	Infranatant / permeate recovery (%)	Sum of the fractions' recoveries (%)
SD-*l*-PEG-HA	Benzethonium	92 ± 10	39 ± 5	56 ± 4	95 ± 9
	DL-α-tocopherol	106 ± 10	72 ± 5	30 ± 5	102 ± 10
	D-α-tocopherol polyethylene glycol 1000 succinate	103 ± 10	58 ± 6	43 ± 6	101 ± 12
	Hyaluronic acid	100 ± 5	18 ± 3	86 ± 2	104 ± 5
SD-noPEG-HA	Hexadecyltrimethylammonium	99 ± 19	35 ± 8	42 ± 9	77 ± 16
	C_8-C_8-C_8 Triglyceride	113 ± 8	52 ± 3	24 ± 3	75 ± 6
	C_8-C_8-C_{10} Triglyceride	109 ± 7	53 ± 4	25 ± 4	78 ± 7
	C_8-C_{10}-C_{10} Triglyceride	109 ± 8	53 ± 4	24 ± 4	77 ± 7
	C_{10}-C_{10}-C_{10} Triglyceride	110 ± 10	54 ± 5	23 ± 4	77 ± 9
	Phosphatidylcholine 756.5 Da	96 ± 14	16 ± 3	27 ± 9	43 ± 11
	Phosphatidylcholine 758.5 Da	98 ± 18	16 ± 3	27 ± 9	43 ± 12
	Phosphatidylcholine 780.5 Da	97 ± 12	16 ± 3	25 ± 10	42 ± 13
	Phosphatidylcholine 782.5 Da	97 ± 14	16 ± 3	27 ± 9	44 ± 12
	Hyaluronic acid	105 ± 7	14 ± 2	80 ± 7	95 ± 8
SD-noPEG-PSA	Hexadecyltrimethylammonium	103 ± 11	31 ± 4	59 ± 6	90 ± 9
	C_8-C_8-C_8 Triglyceride	101 ± 10	68 ± 8	28 ± 5	95 ± 13
	C_8-C_8-C_{10} Triglyceride	100 ± 12	66 ± 8	28 ± 5	94 ± 13
	C_8-C_{10}-C_{10} Triglyceride	99 ± 11	66 ± 8	28 ± 4	94 ± 13
	C_{10}-C_{10}-C_{10} Triglyceride	98 ± 12	64 ± 7	30 ± 5	94 ± 12
	Phosphatidylcholine 756.5 Da	96 ± 8	17 ± 3	40 ± 8	57 ± 11
	Phosphatidylcholine 758.5 Da	94 ± 9	18 ± 3	40 ± 8	58 ± 11
	Phosphatidylcholine 780.5 Da	98 ± 9	18 ± 2	41 ± 9	59 ± 11
	Phosphatidylcholine 782.5 Da	97 ± 7	17 ± 3	40 ± 8	58 ± 11
	Polysialic acid	103 ± 2	14 ± 1	91 ± 3	104 ± 4
SE-*b*-PEG-HA	Polyethylene glycol	103 ± 9	< 10	96 ± 13	N/A
	Benzethonium	109 ± 4	51 ± 12	51 ± 8	102 ± 20
	Macrogol-15-hydroxystearate	99 ± 6	39 ± 5	54 ± 11	93 ± 16
	Polysorbate 80	111 ± 4	24 ± 9	63 ± 6	87 ± 15
	C_8-C_8-C_8 Triglyceride	106 ± 5	95 ± 7	< 10	N/A
	C_8-C_8-C_{10} Triglyceride	108 ± 6	95 ± 6	< 10	N/A
	C_8-C_{10}-C_{10} Triglyceride	107 ± 6	94 ± 6	< 10	N/A
	C_{10}-C_{10}-C_{10} Triglyceride	104 ± 10	89 ± 8	< 10	N/A
	Hyaluronic acid	91 ± 3	43 ± 4	53 ± 3	96 ± 7
SD-noPEG-PEG·PGA	DL-α-tocopherol	96 ± 4	95 ± 6	9 ± 3	103 ± 8
	1,2-dioleoyl-3-trimethylammoniumpropane	84 ± 8	89 ± 3	12 ± 3	101 ± 6
	PEG·PGA	109 ± 11	34 ± 9	67 ± 5	101 ± 15

SD-*l*-PEG-HA: lineal-polyethylene glycol-containing hyaluronic acid nanocapsules formulated by solvent displacement. SD-noPEG-HA: non-PEGylated hyaluronic acid nanocapsules formulated by solvent displacement. SD-noPEG-PSA: non-PEGylated polysialic acid nanocapsules formulated by solvent displacement. SE-*b*-PEG-HA: Self-emulsifying branched-polyethylene glycol-containing hyaluronic acid nanocapsules. N/A: not applicable. n = 3. Data are shown as mean ± standard deviation.

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