Supporting Information

Parallel, Large Scale and Long Synthetic Oligodeoxynucleotide Purification Using the Catching Full-Length Sequence by Polymerization Technique

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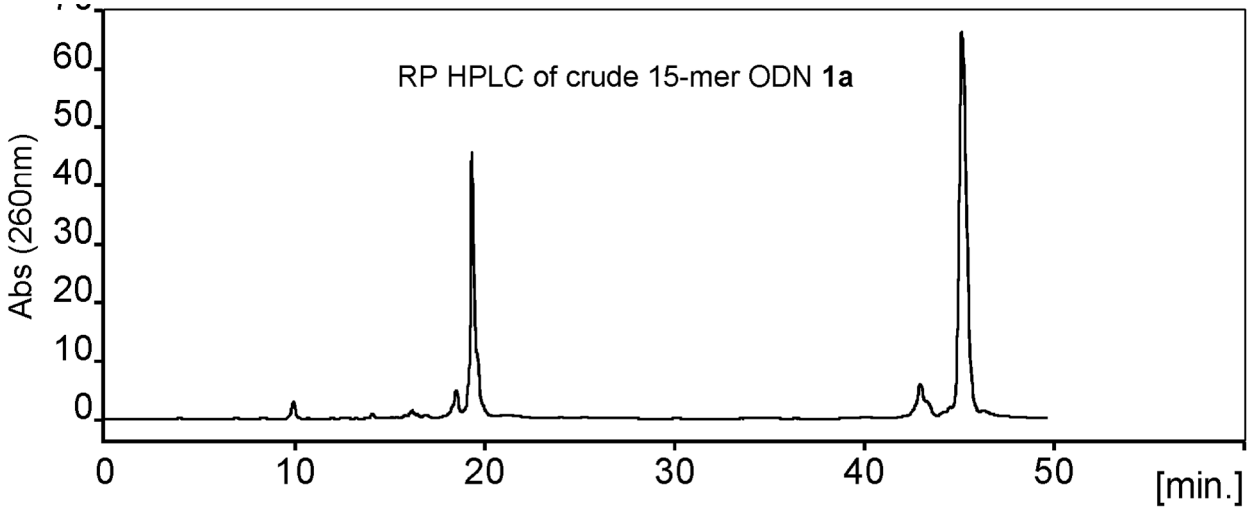
Table S1. ODN sequences

ODN	length	sequence
1a	15-mer	TTT ATT CCC CAA CAT
1b	21-mer	CAA AGT AGC GTG CAC TTT TGC
1c	23-mer	TCA CAT GAT ACC ATT CTC CTA AT
1d	19-mer	TCG GCA TAC CAT GAT TAC T
1e	20-mer	TAC TTG CTG CTT AGA CCG CT
1f	20-mer	CCC ACG TTT TAG CGC TTC GT
1g	20-mer	CTG TGT CGC ATG TAA AAG GT
1h	21-mer	CAC GCT TCA TGA TAT AAC CCT
1i	21-mer	TTG CCA TGA TTG ACA ACC AAT
1j	22-mer	CAA TGG AAG TAC CAT TGA TAC T
1k	26-mer	TAG ACC TAC TAG ATA GGT TCC CAC GT
1l	28-mer	TAA TGG AAG TAC CAT TGA TAC TAC CAT T
1m	32-mer	TAG TTT TAT AAT TTC ATC AGC AGT GTT ACC GT
1n	43-mer	TCG GCT CAA CTC AAA CCTATC AAA CTT GTA ACC CCT CGG CGC T
1o	64-mer	TAT TAT AGC ATA CTC TGT AAT AGT TGT CAA ACA TTA ATA GTT AAT TCT CCC ATT CTA AAA CGA T
1p	80-mer	TAC TCA TAA TAC TGT TTA CCG TCA TCA TCT TGA AGC AAC ATT GTC ACA TCG TAT GAG TCA ACA AAA TCA TTT TGC ACC AT
1q	90-mer	TAT TAT AGC ATA CTC TGT AAT AGT TGT CAA ACA TTA ATA GTT AAT TCT CCC ATT CTA AAA CGA TTT GAT CGT TTA TTT CTA CAA TTA GAT
1r	110-mer	CAT TAT AGC ATA CTC TGT AAT AGT TGT CAA ACA TTA ATA GTT AAT TCT CCC ATT CTA AAA CGA TTT GAT CGT TTA TTT CTA CAA TTA GAT GGA CTC CAT TTG TAC CGA AT
1s	151-mer	TCA ACA AAA TCA TTT TGC ACC ATG TGG AGC ACC TCC AAA TAA CAC CTT TAT AAC CCA TGT GGC GTA ATC ATT GTT TTC CAT CCT AGA AAG CTC ATA CAA TGC GTT TTT CAT GAG TTT ATT TTC ATG CTC TAG TTT AGT CAT CTT CTT TTC T
1t	197-mer	CCC CAA CAT ACA CAT GAC AAT GGA AGT ACC GTA CCA TTG ATA CTA CCA TTA TAG CAT ACT CTG TAA TAG TTG TCA AAC ATT AAT

		AGT TAA TTC TCC CAT TCT AAA ACG ATT TGA TCG TTT ATT TCT ACA ATT AGA TGG ACT CCA TTT GTA CCG AAT GGA TGG ACT TGT AAC TTT ATC GTA CCA TCT TTA AAC ATA TT
1u	203-mer	TTT AAT CCC CAA CAT ACA CAT GAC AAT GGA AGT ACC GTA CCA TTG ATA CTA CCA TTA TAG CAT ACT CTG TAA TAG TTG TCA AAC ATT AAT AGT TAA TTC TCC CAT TCT AAA ACG ATT TGA TCG TTT ATT TCT ACA ATT AGA TGG ACT CCA TTT GTA CCG AAT GGA TGG ACT TGT AAC TTT ATC GTA CCA TCT TTA AAC ATA TT
1v	225-mer	TTT AAT CCC CAA CAT ACA CAT GAC AAT GGA AGT ACC GTA CCA TTG ATA CTA CCA TTA TAG CAT ACT CTG TAA TAG TTG TCA AAC ATT AAT AGT TAA TTC TCC CAT TCT AAA ACG ATT TGA TCG TTT ATT TCT ACA ATT AGA TGG ACT CCA TTT GTA CCG AAT GGA TGG ACT TGT AAC TTT ATC GTA CCA TCT TTA AAC ATA TTC GCA ATA TGT TCT TCT AAC TCT
1w	251-mer	TTT AAT CCC CAA CAT ACA CAT GAC AAT GGA AGT ACC GTA CCA TTG ATA CTA CCA TTA TAG CAT ACT CTG TAA TAG TTG TCA AAC ATT AAT AGT TAA TTC TCC CAT TCT AAA ACG ATT TGA TCG TTT ATT TCT ACA ATT AGA TGG ACT CCA TTT GTA CCG AAT GGA TGG ACT TGT AAC TTT ATC GTA CCA TCT TTA AAC ATA TTC GCA ATA TGT TCT TCT AAC TCT GCA CGC TTC ATG ATA TAA CCC TCC TT
1x	275-mer	TTT AAT CCC CAA CAT ACA CAT GAC AAT GGA AGT ACC GTA CCA TTG ATA CTA CCA TTA TAG CAT ACT CTG TAA TAG TTG TCA AAC ATT AAT AGT TAA TTC TCC CAT TCT AAA ACG ATT TGA TCG TTT ATT TCT ACA ATT AGA TGG ACT CCA TTT GTA CCG AAT GGA TGG ACT TGT AAC TTT ATC GTA CCA TCT TTA AAC ATA TTC GCA ATA TGT TCT TCT AAC TCT GCA CGC TTC ATG ATA TAA CCC TCC TTA TCA GAT GTC AAA TAT AGT TTT CT
1y	303-mer	TTT AAT CCC CAA CAT ACA CAT GAC AAT GGA AGT ACC GTA CCA TTG ATA CTA CCA TTA TAG CAT ACT CTG TAA TAG TTG TCA AAC ATT AAT AGT TAA TTC TCC CAT TCT AAA ACG ATT TGA TCG TTT ATT TCT ACA ATT AGA TGG ACT CCA TTT GTA CCG AAT GGA TGG ACT TGT AAC TTT ATC GTA CCA TCT TTA AAC ATA TTC GCA ATA TGT TCT TCT AAC TCT GCA CGC TTC ATG ATA TAA CCC TCC TTA TCA GAT GTC AAA TAT AGT TTT CTC ACG GCT CAA CTC AAA CCT ATC AAA CTT


RP HPLC of crude 15-mer ODN **1a**
Abs (260nm)
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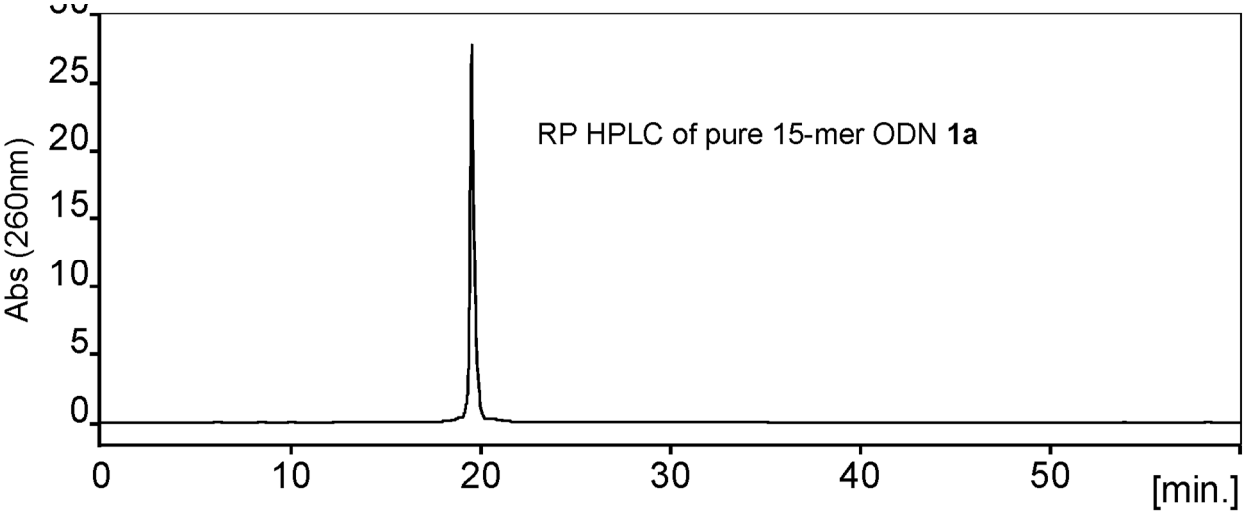
50
40
30
20
10
0
0
10
20
30
40
50
[min.]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Abs (260nm)
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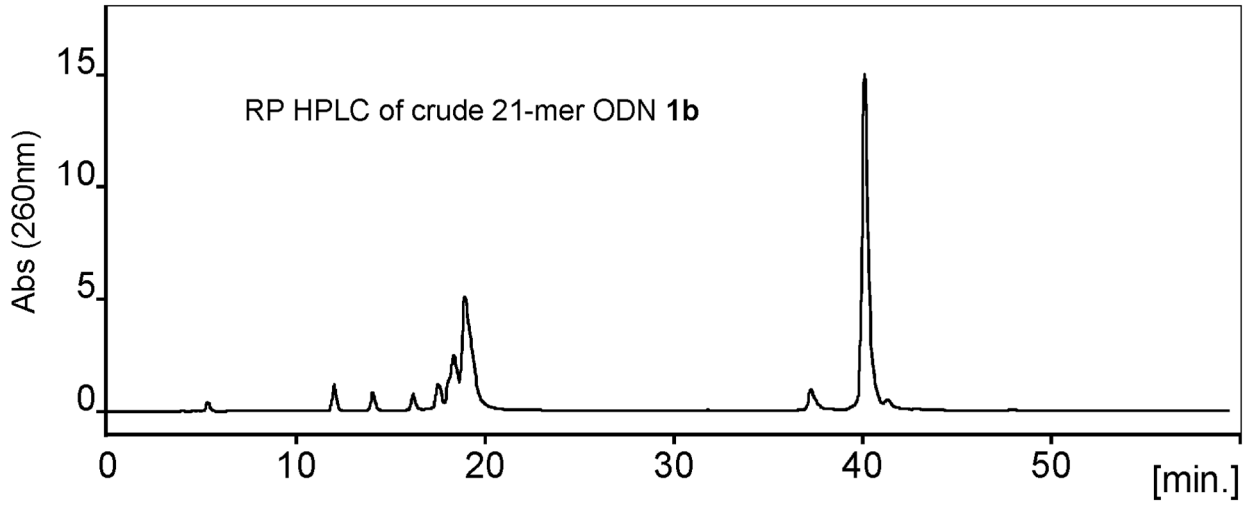
20
15
10
5
0
0
10
20
30
40
50
[min.]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0
10
20
30
40
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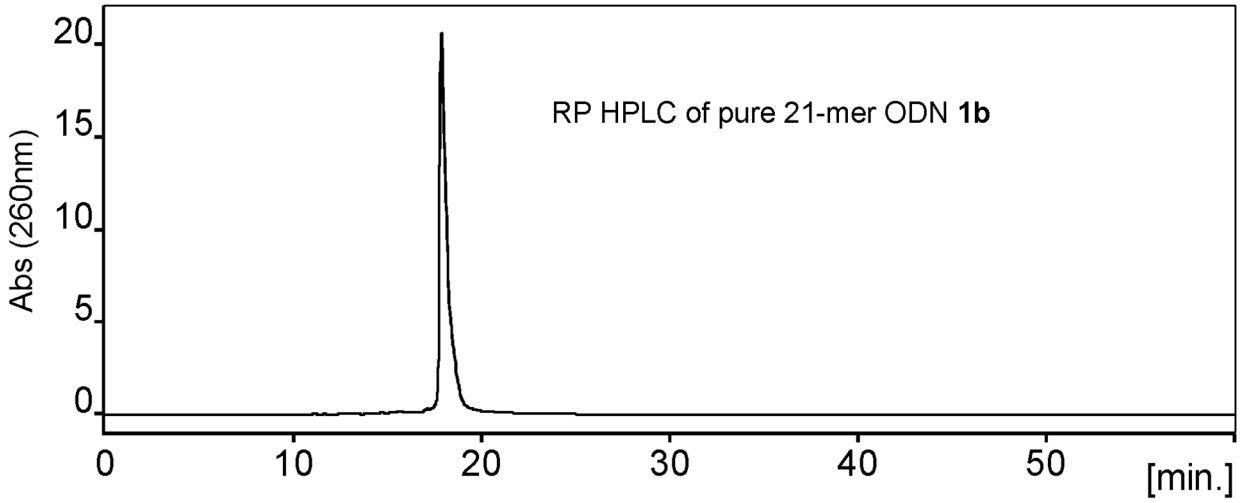
RP HPLC of pure 21-mer ODN **1b**
Abs (260nm)
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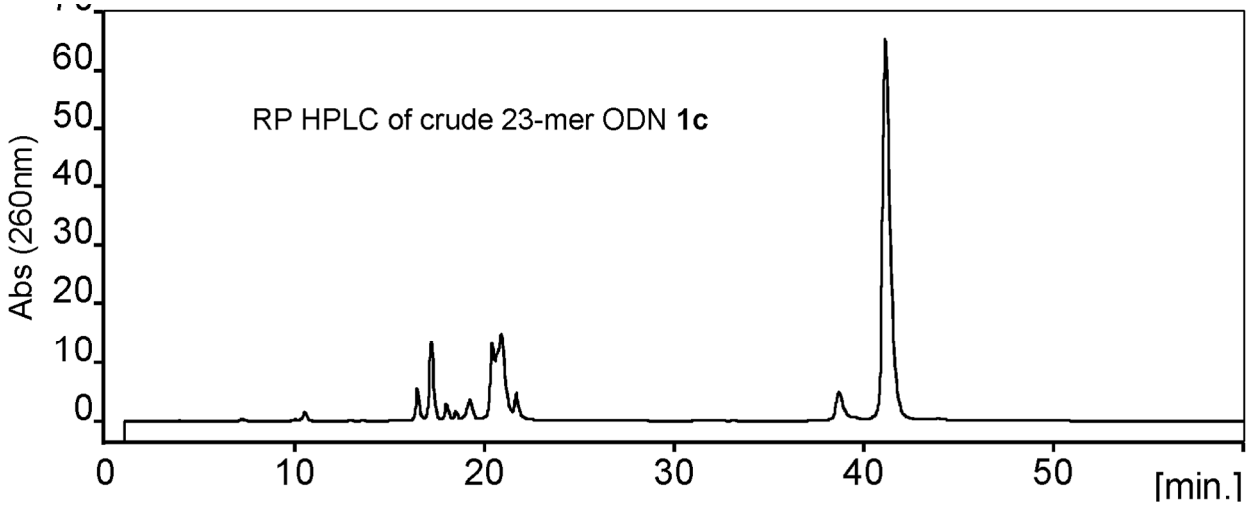
15
10
5
0
0
10
20
30
40
50
[min.]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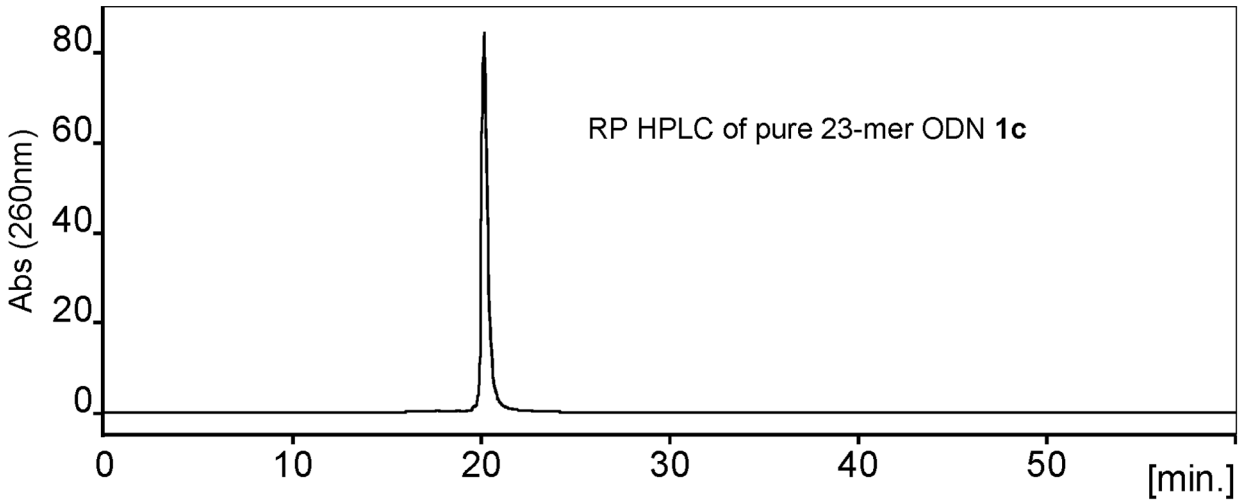
0
10
20
30
40
50
[min.]


RP HPLC of pure 23-mer ODN **1c**
Abs (260nm)
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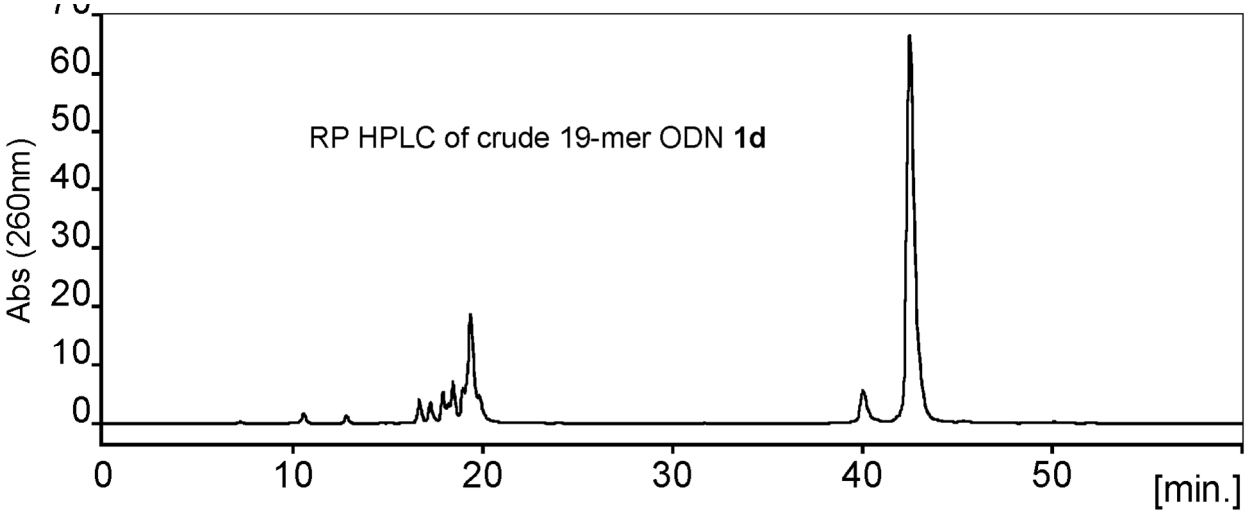
60
40
20
0
0
10
20
30
40
50
[min.]


RP HPLC of crude 19-mer ODN **1d**
Abs (260nm)
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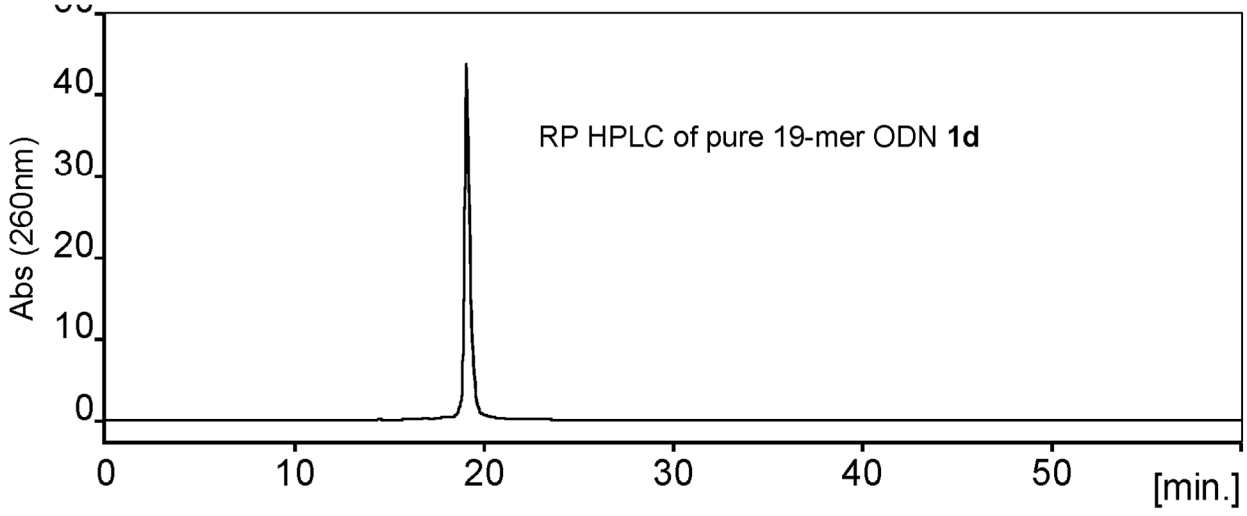
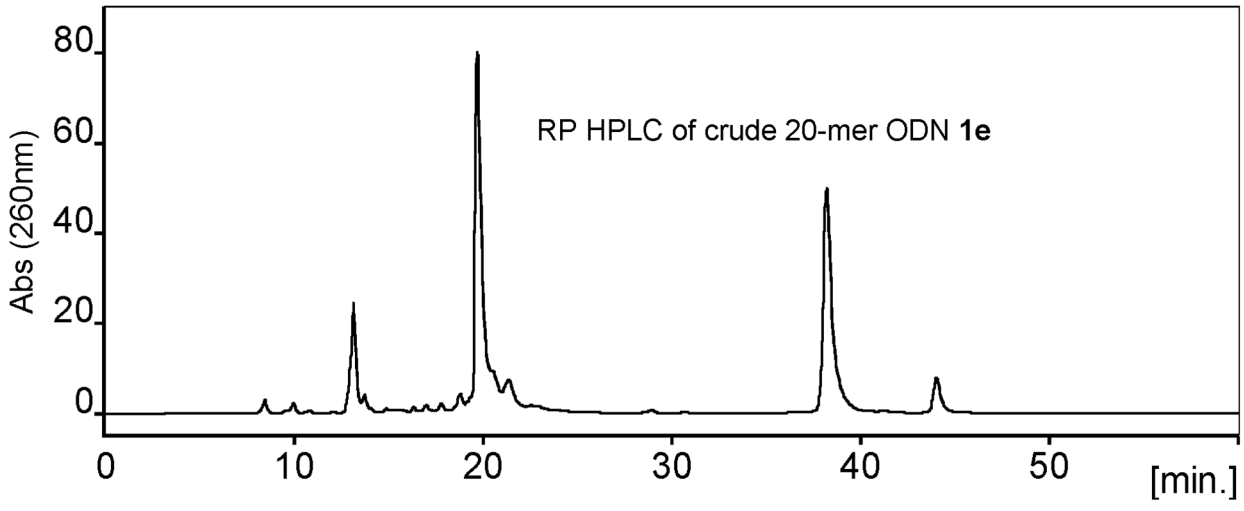
50
40
30
20
10
0
0
10
20
30
40
50
[min.]


RP HPLC of pure 19-mer ODN **1d**
Abs (260nm)
40
30
20
10
0
0
10
20
30
40
50
[min.]


RP HPLC of crude 20-mer ODN **1e**
Abs (260nm)
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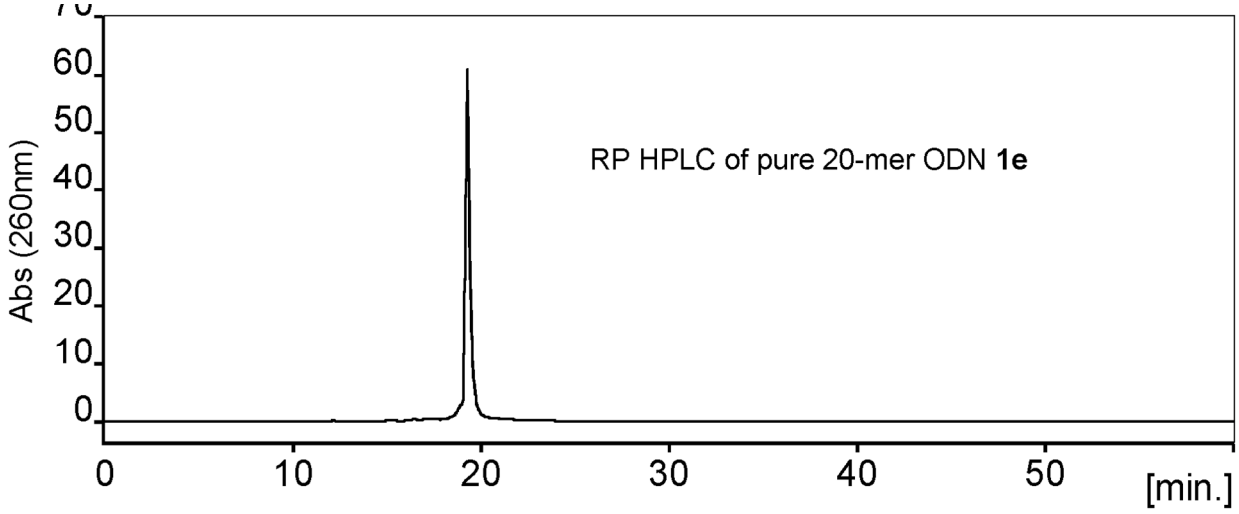
60
40
20
0
0
10
20
30
40
50
[min.]


RP HPLC of pure 20-mer ODN **1e**
Abs (260nm)
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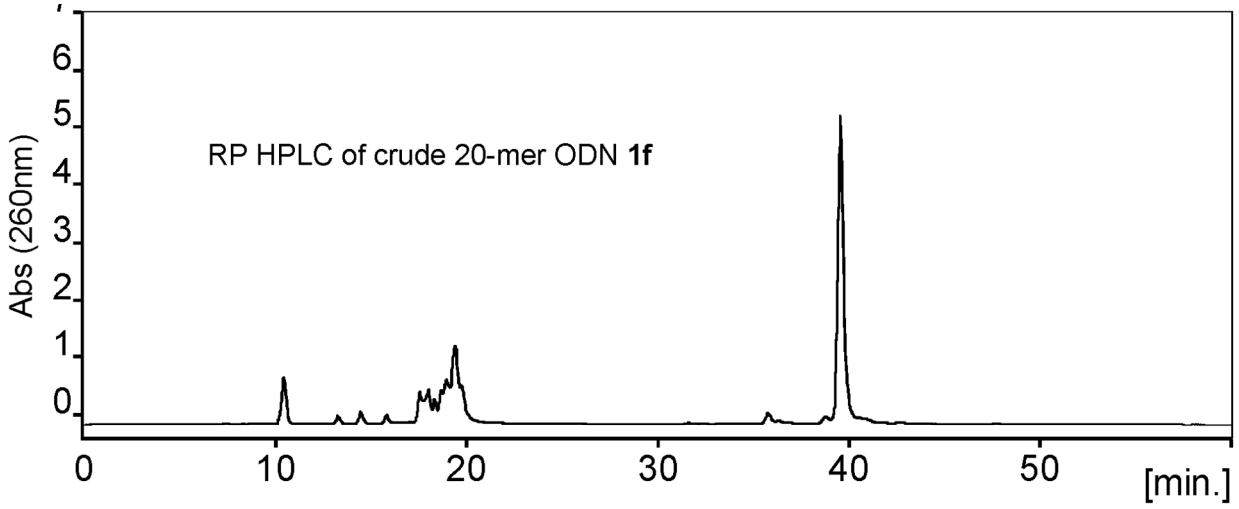
50
40
30
20
10
0
0
10
20
30
40
50
[min.]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Abs (260nm)
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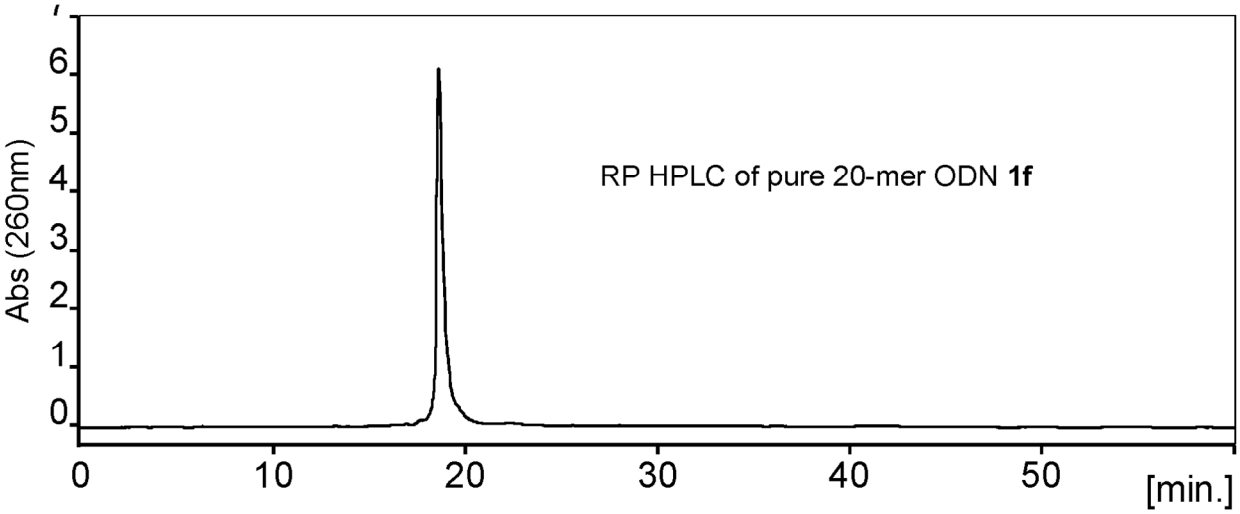
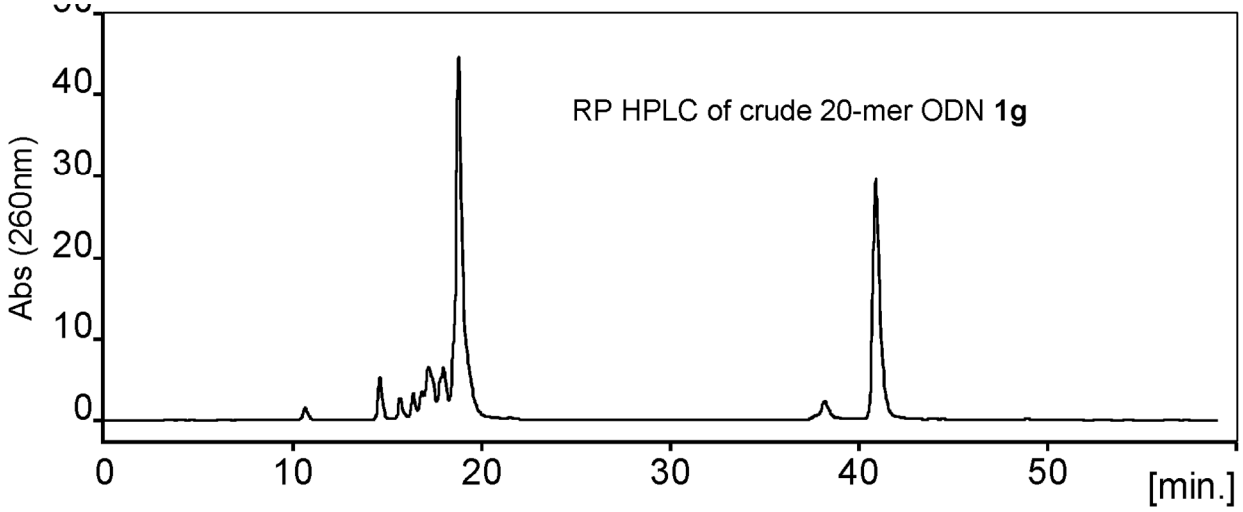
5
4
3
2
1
0
0
10
20
30
40
50
[min.]


RP HPLC of pure 20-mer ODN **1f**
Abs (260nm)
6
5
4
3
2
1
0
0
10
20
30
40
50
[min.]


RP HPLC of crude 20-mer ODN **1g**
Abs (260nm)
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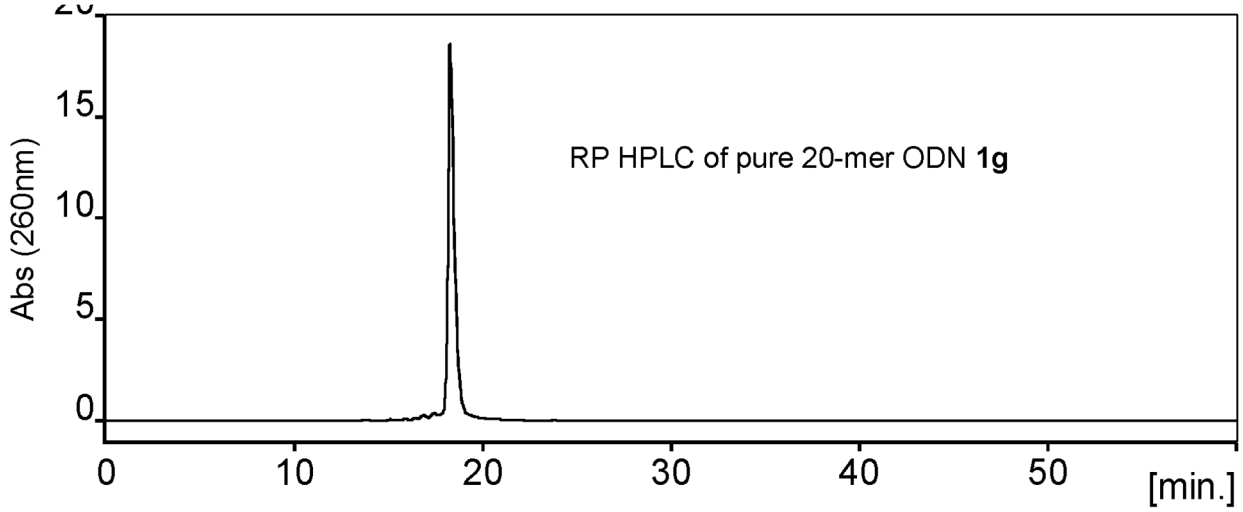
30
20
10
0
0
10
20
30
40
50
[min.]


RP HPLC of pure 20-mer ODN **1g**
Abs (260nm)
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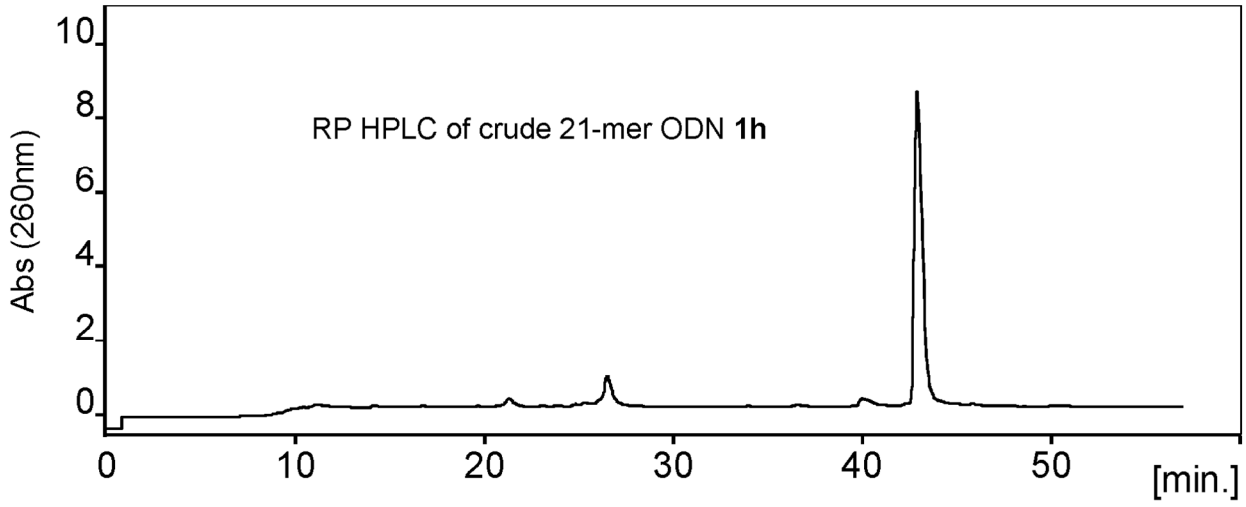
10
5
0
0
10
20
30
40
50
[min.]


RP HPLC of crude 21-mer ODN **1h**
Abs (260nm)
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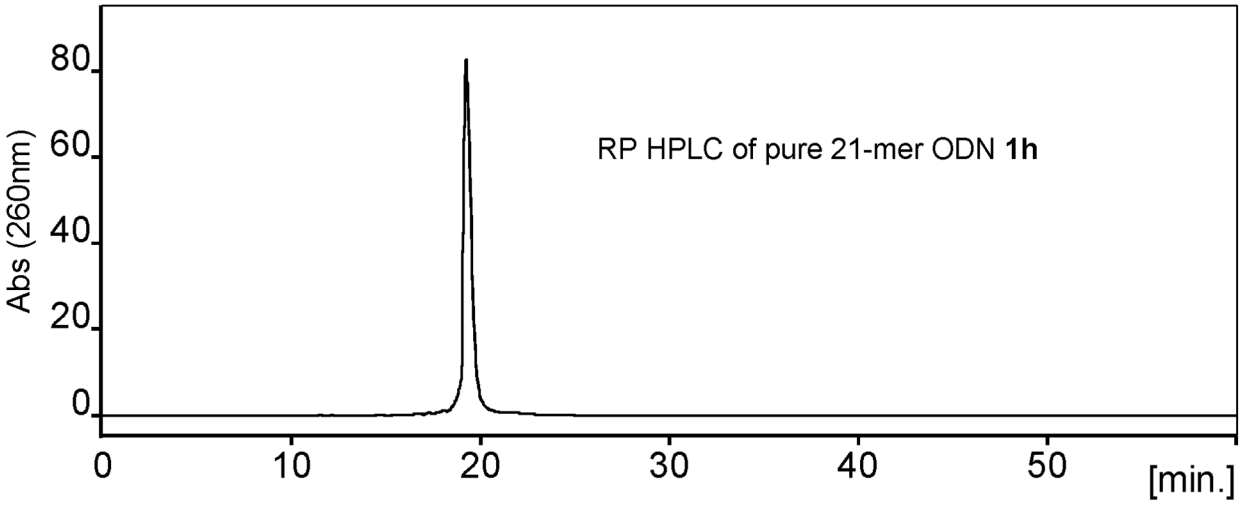
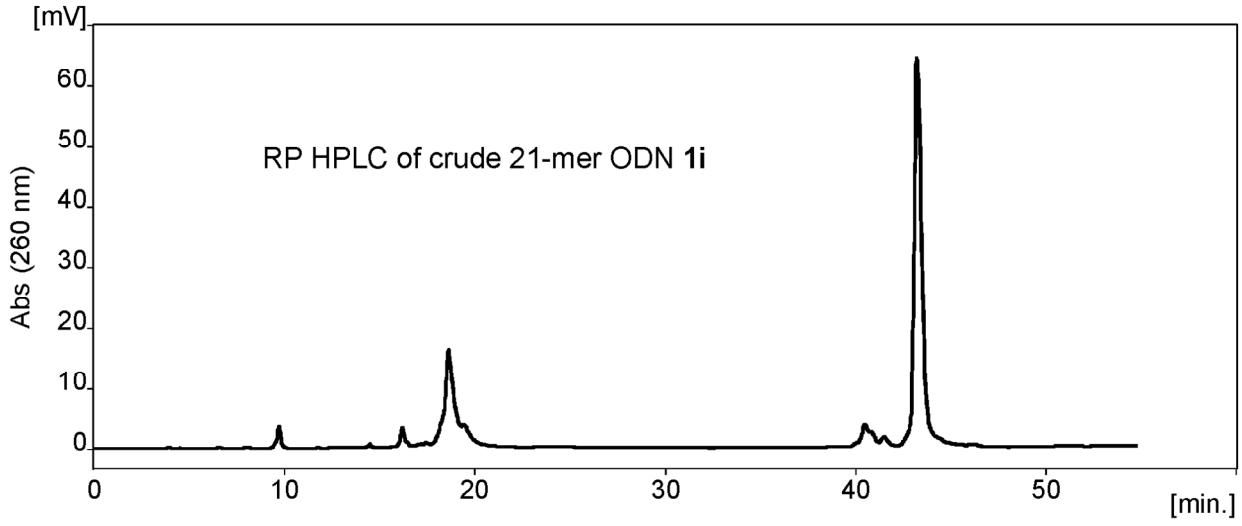
8
6
4
2
0
0
10
20
30
40
50
[min.]


RP HPLC of pure 21-mer ODN **1h**
Abs (260nm)
80
60
40
20
0
0
10
20
30
40
50
[min.]


RP HPLC of crude 21-mer ODN **1i**
[mV]
Abs (260 nm)
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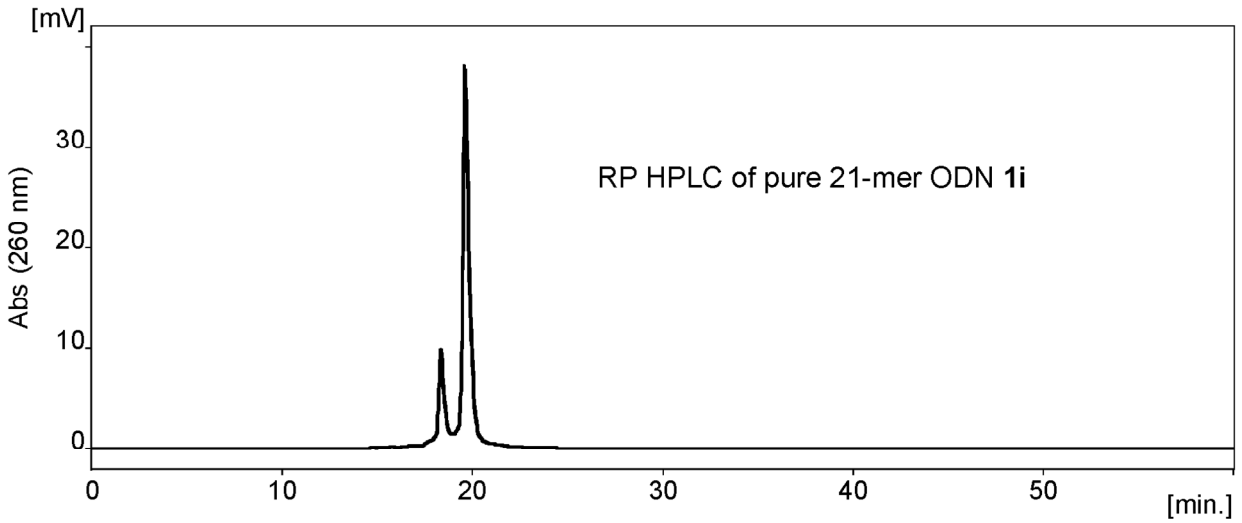
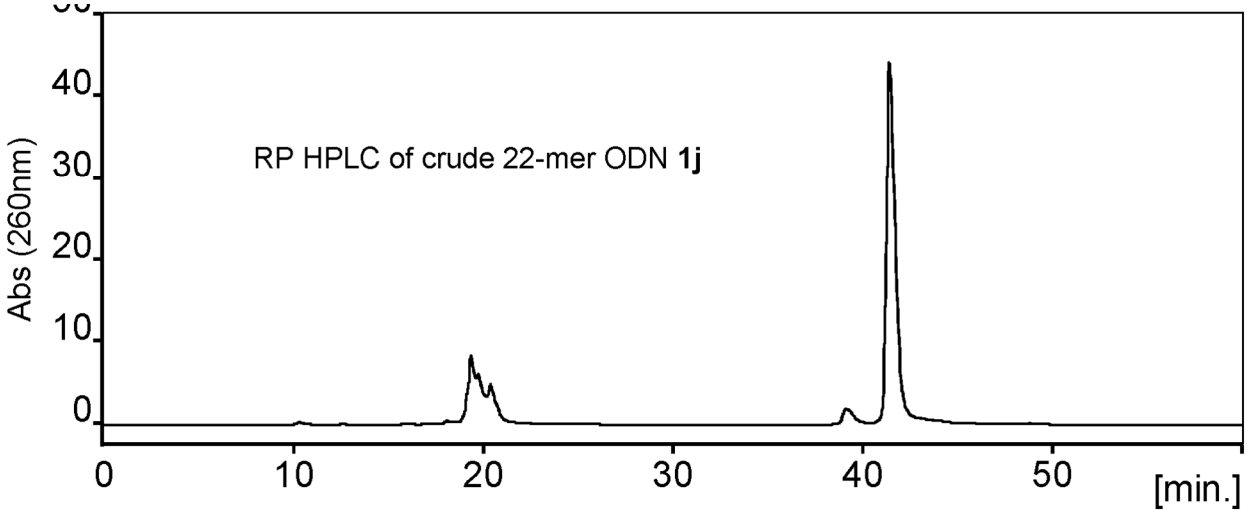
50
40
30
20
10
0
0
10
20
30
40
50
[min.]


RP HPLC of pure 21-mer ODN **1i**
[mV]
Abs (260 nm)
30
20
10
0
0
10
20
30
40
50
[min.]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Abs (260nm)
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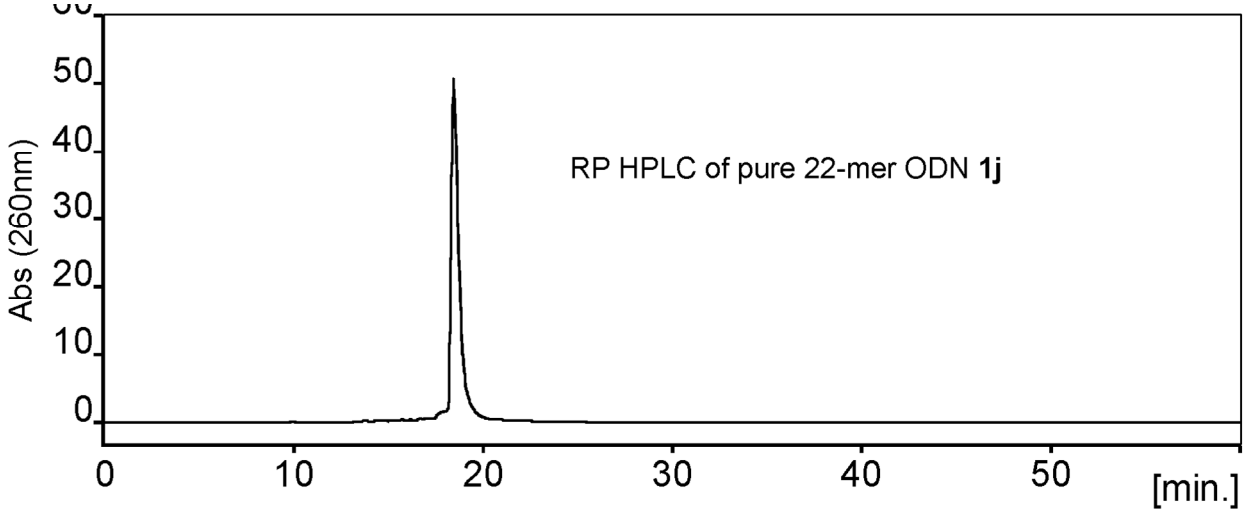
20
30
40
0
10
20
30
40
50
[min.]


RP HPLC of pure 22-mer ODN **1j**
Abs (260nm)
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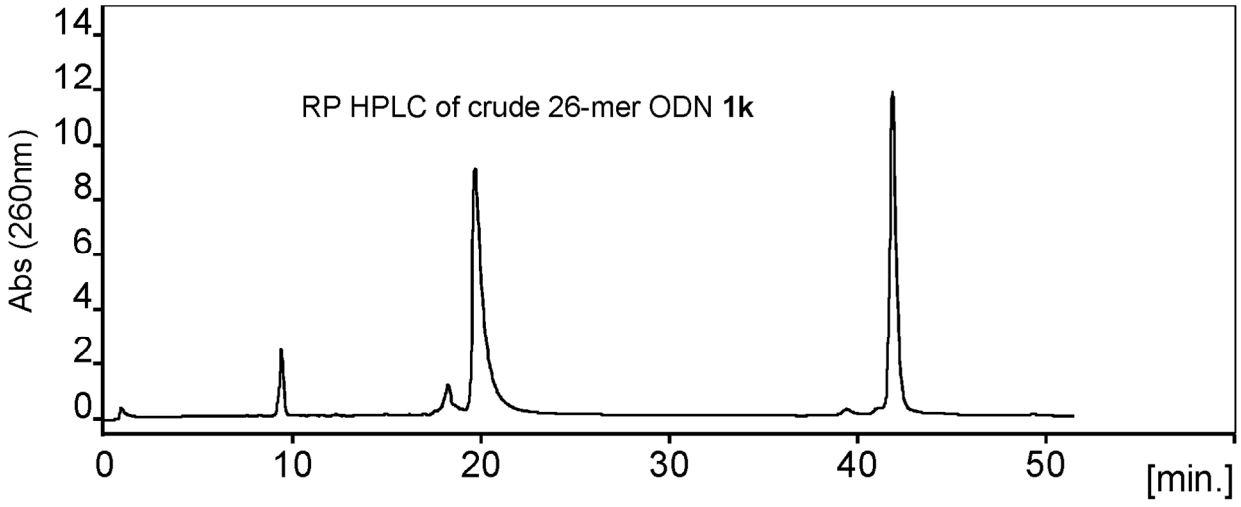
10
20
30
40
50
0
10
20
30
40
50
[min.]


RP HPLC of crude 26-mer ODN **1k**
Abs (260nm)
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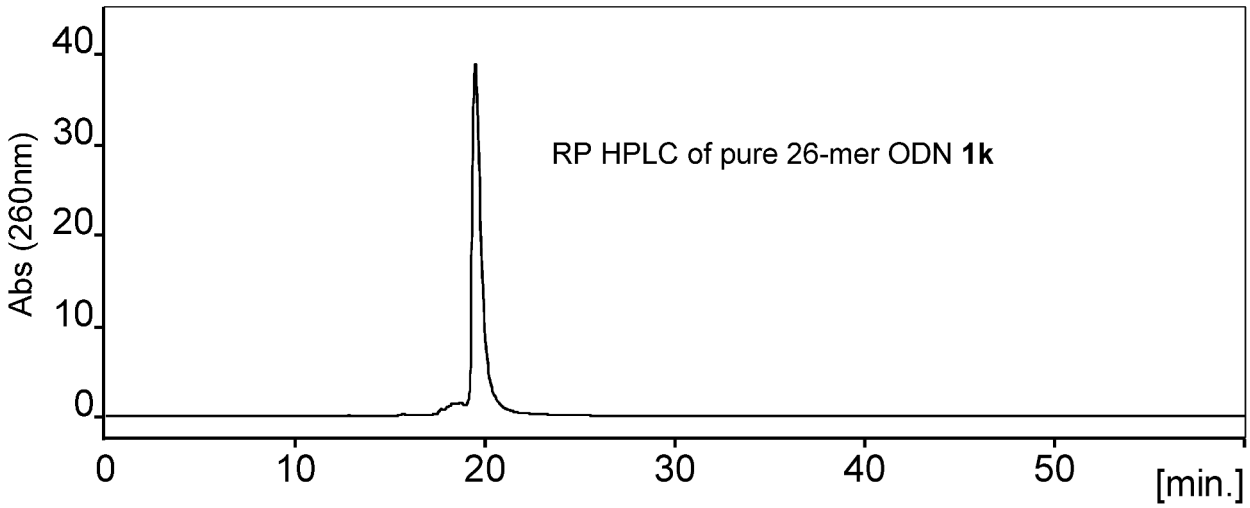
2
4
6
8
10
12
14
0
10
20
30
40
50
[min.]


RP HPLC of pure 26-mer ODN **1k**
Abs (260nm)
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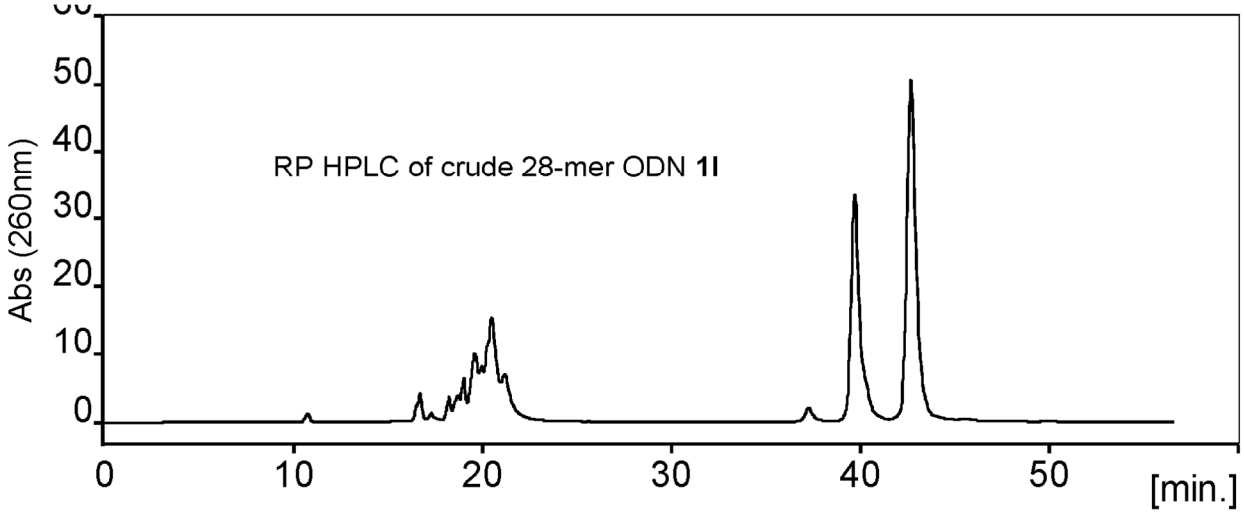
30
20
10
0
0
10
20
30
40
50
[min.]


RP HPLC of crude 28-mer ODN **1l**
Abs (260nm)
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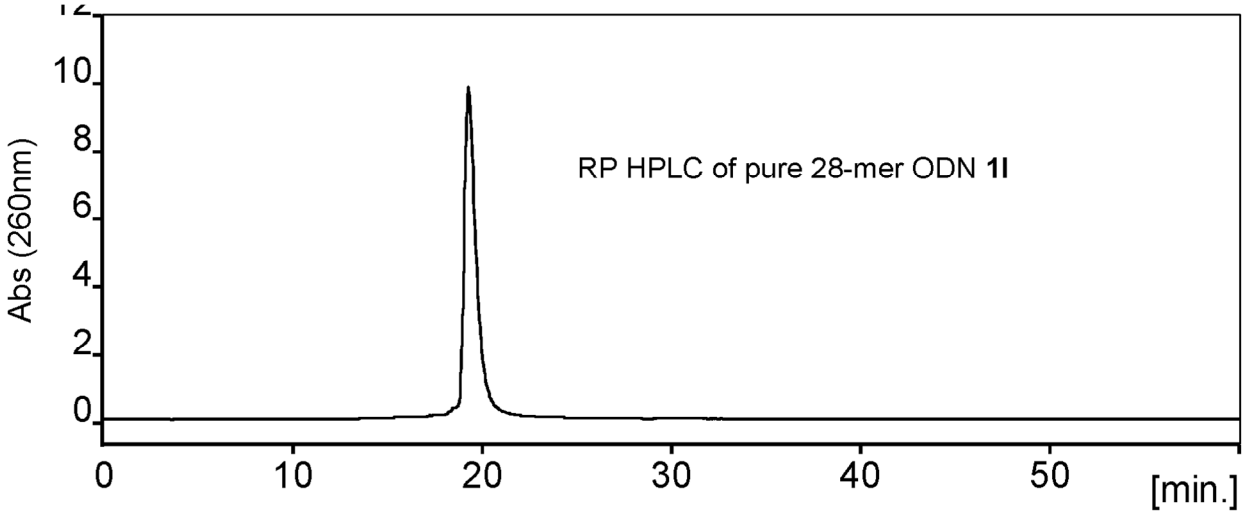
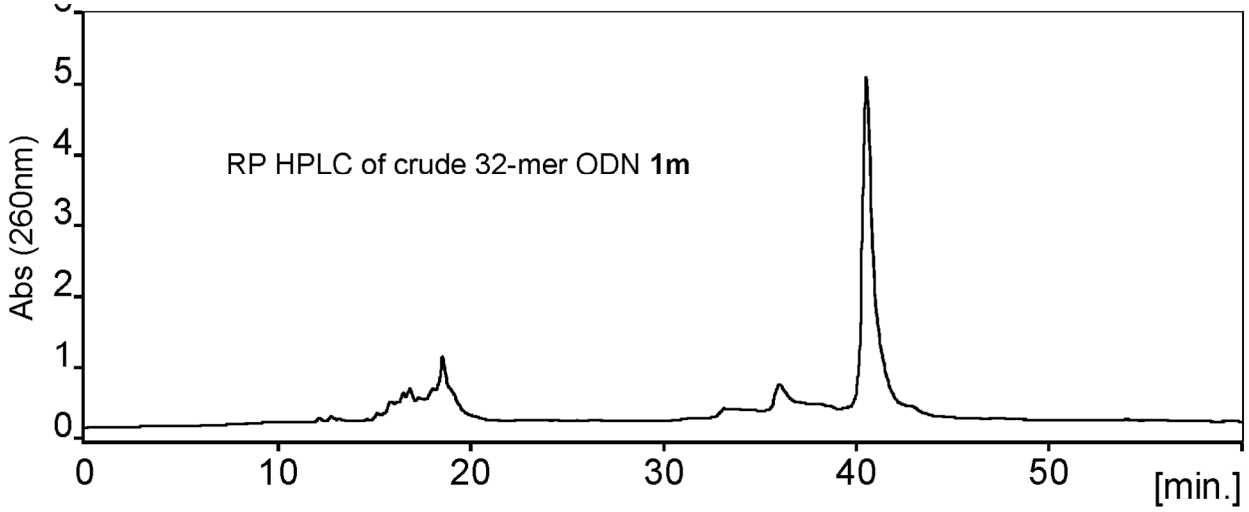
40
30
20
10
0
0
10
20
30
40
50
[min.]


RP HPLC of pure 28-mer ODN **1l**
Abs (260nm)
10
8
6
4
2
0
0
10
20
30
40
50
[min.]


RP HPLC of crude 32-mer ODN **1m**
Abs (260nm)
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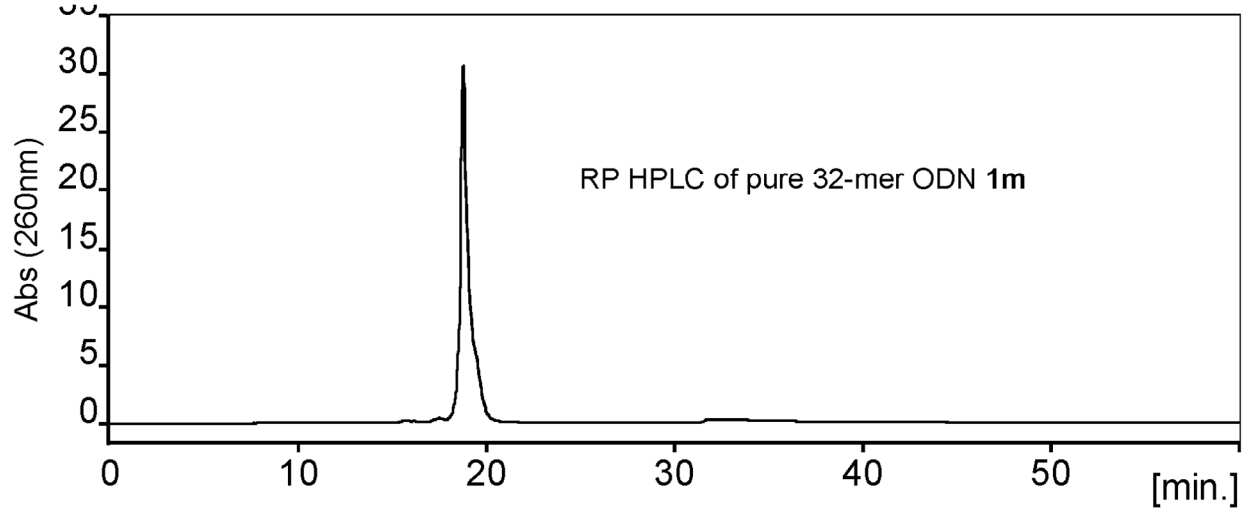
1
2
3
4
5
0
10
20
30
40
50
[min.]


RP HPLC of pure 32-mer ODN **1m**
Abs (260nm)
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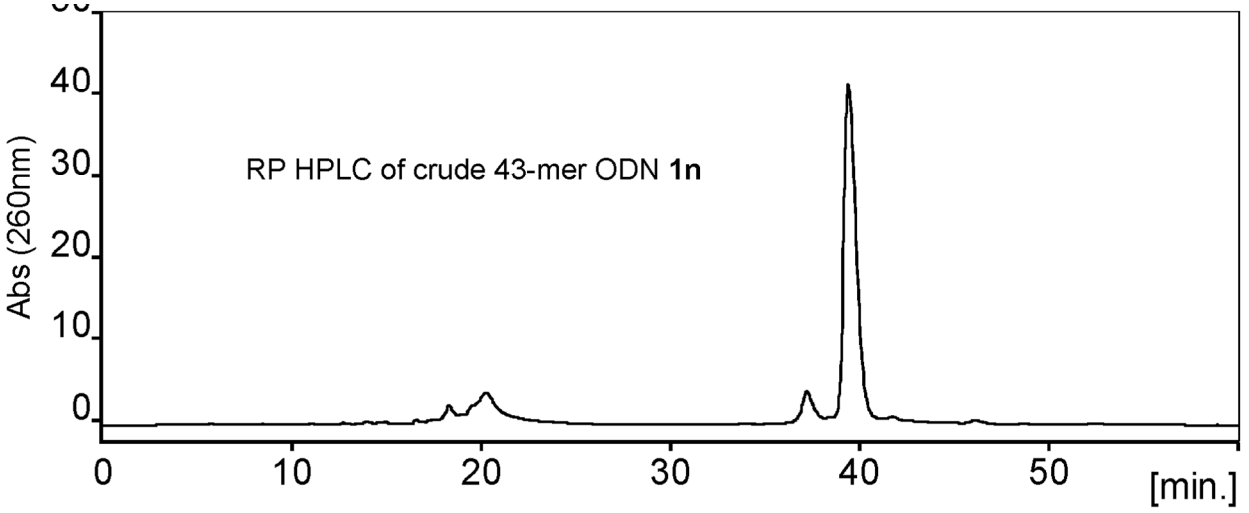
5
10
15
20
25
30
0
10
20
30
40
50
[min.]


RP HPLC of crude 43-mer ODN **1n**
Abs (260nm)
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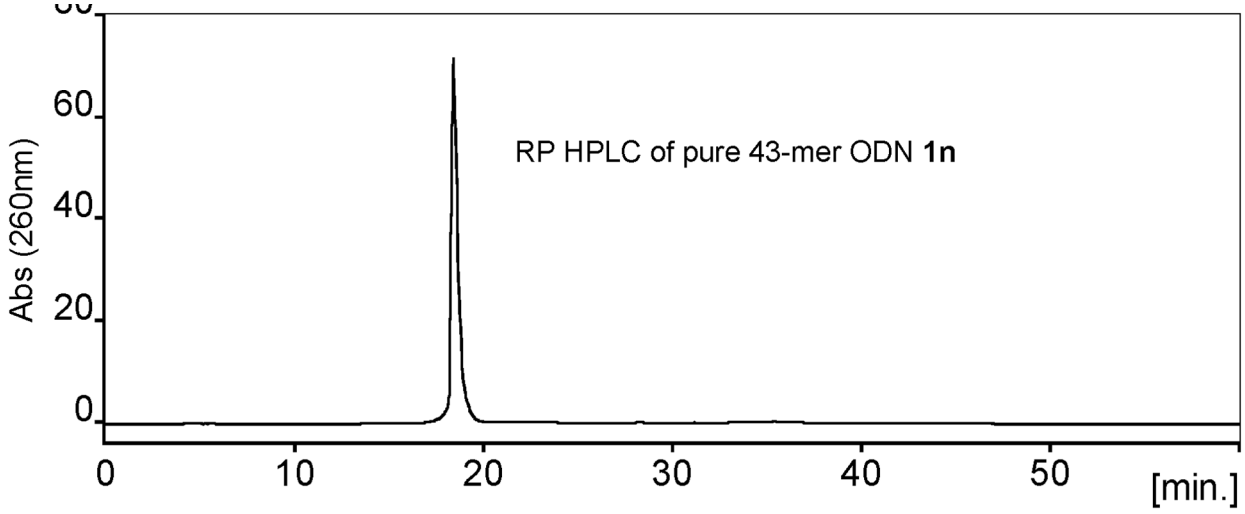
10
20
30
40
0
10
20
30
40
50
[min.]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Abs (260nm)
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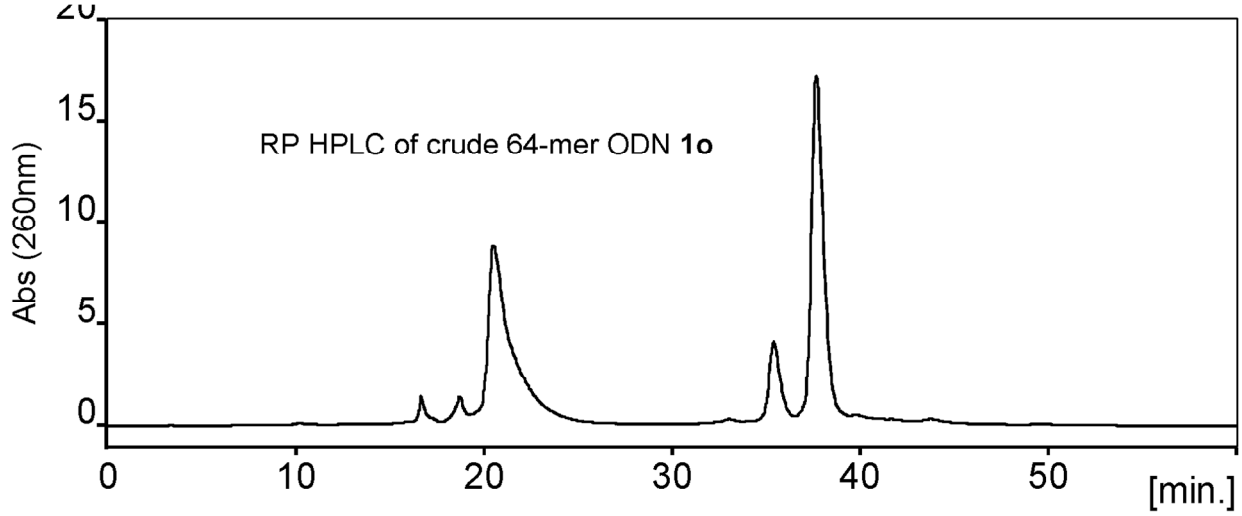
20
40
60
0
10
20
30
40
50
[min.]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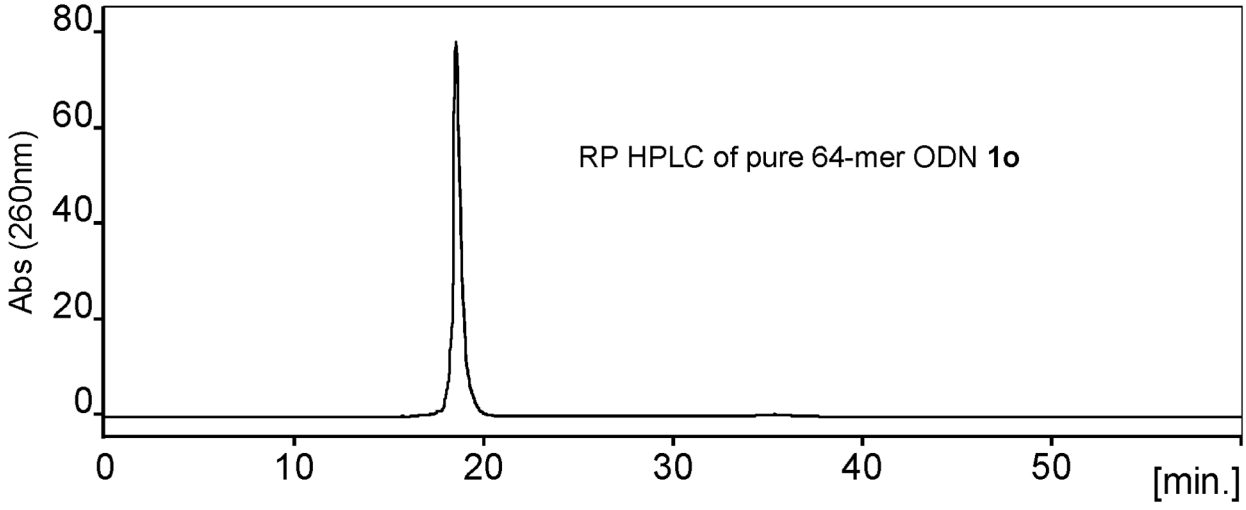
10
15
0
10
20
30
40
50
[min.]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Abs (260nm)
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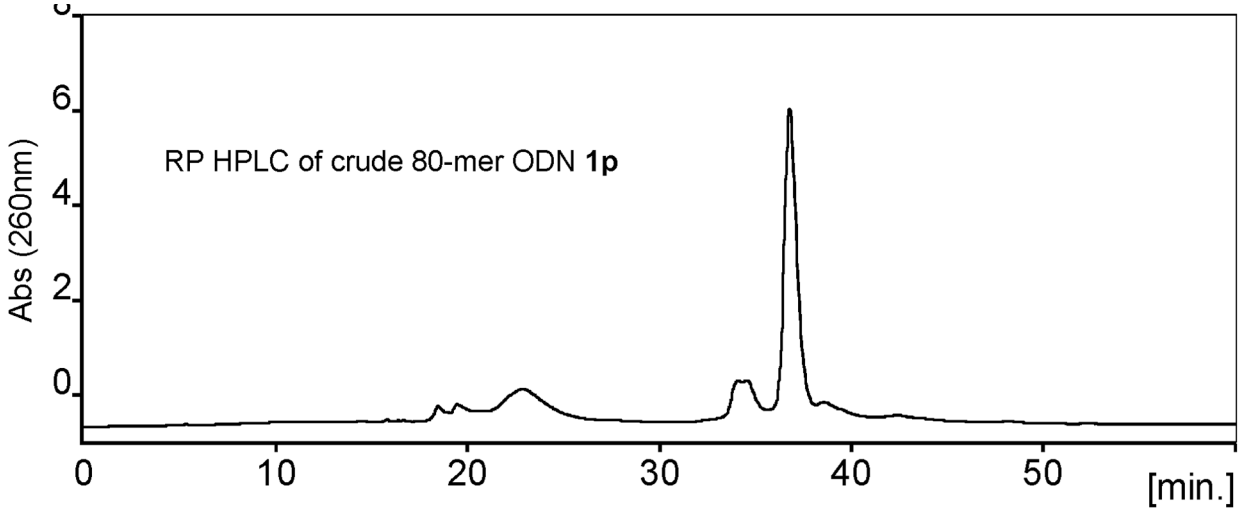
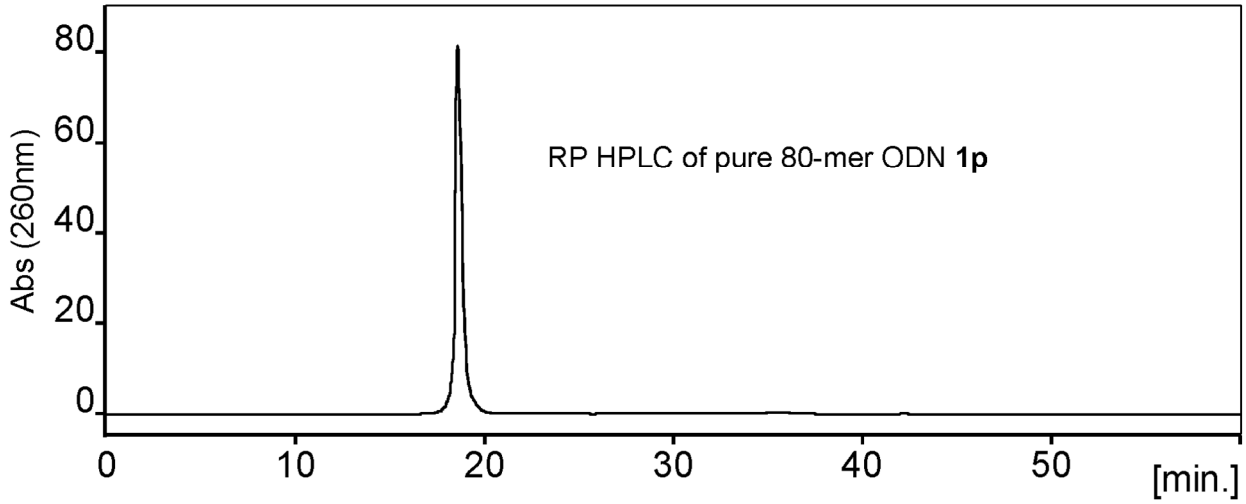
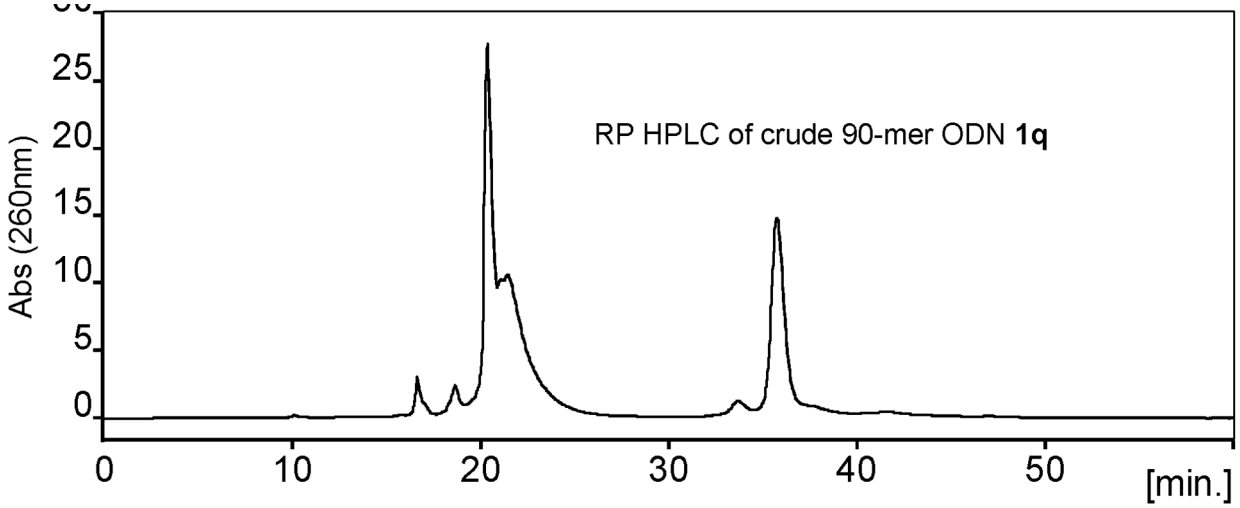
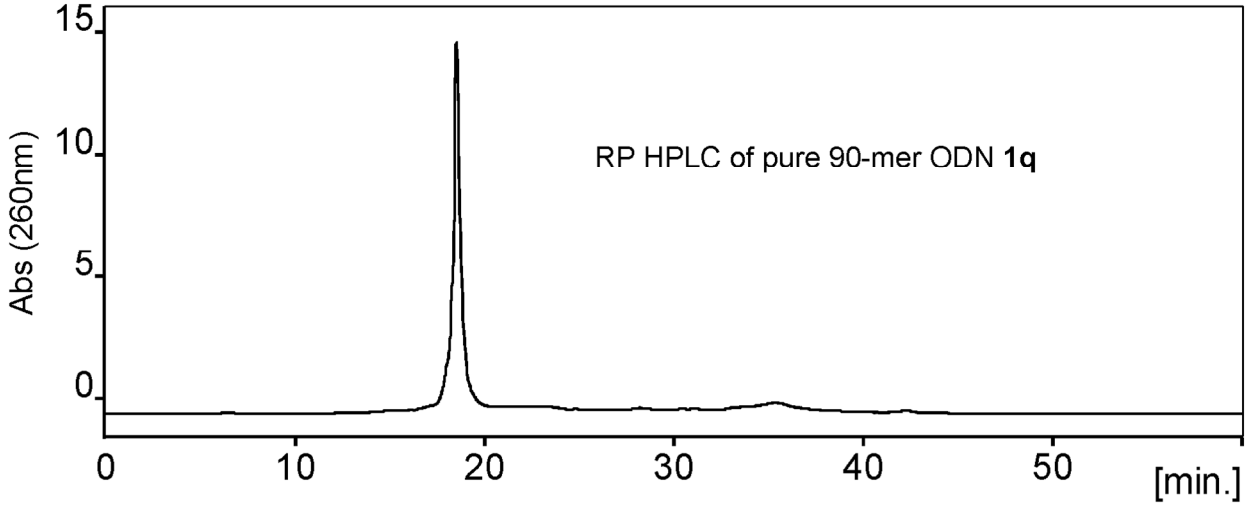
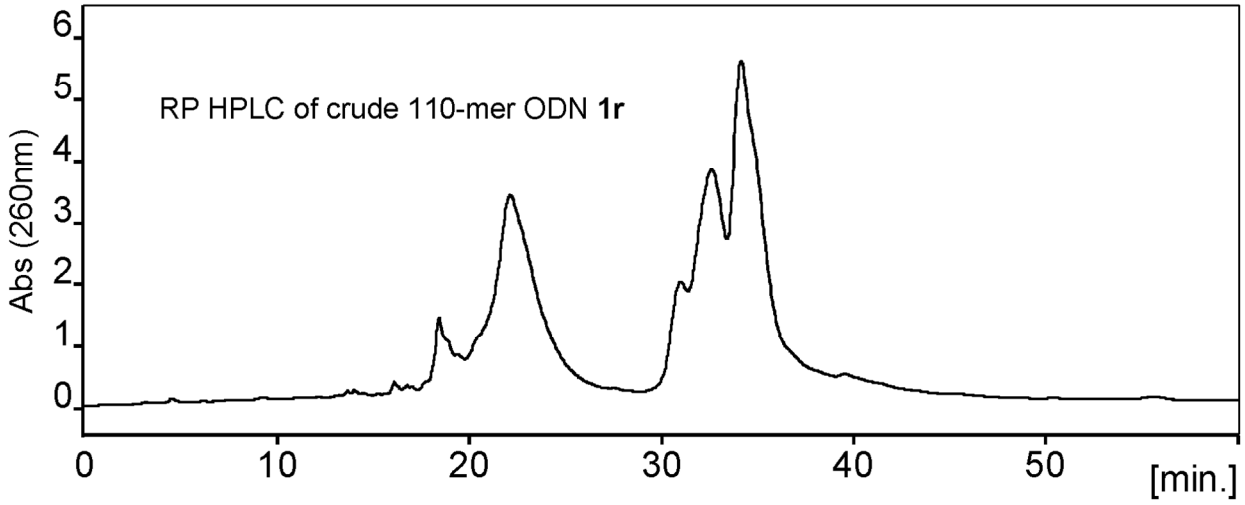
20
40
60
80
0
10
20
30
40
50
[min.]

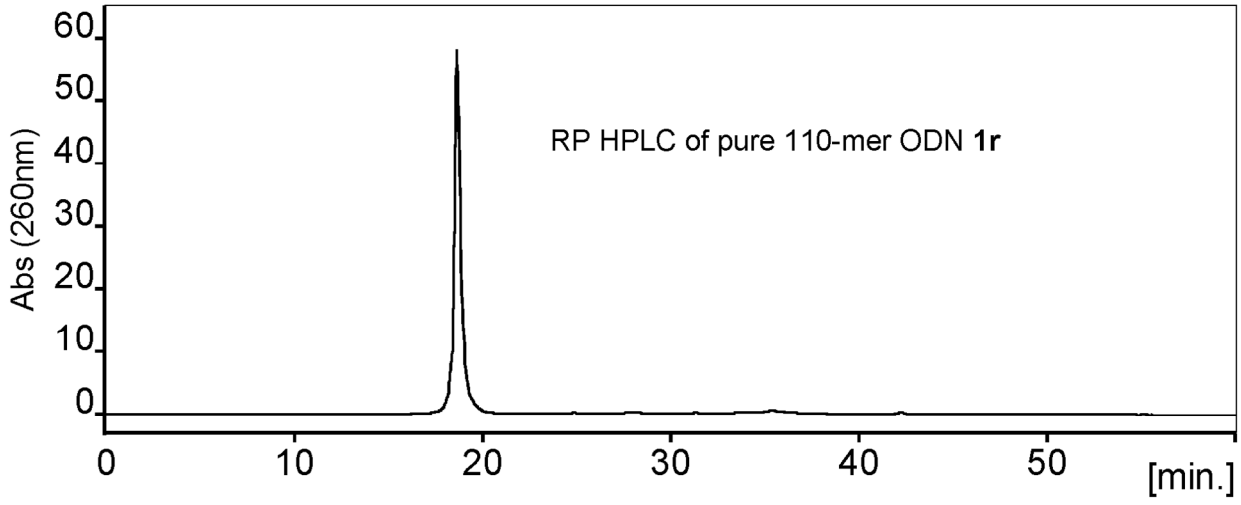

RP HPLC of crude 80-mer ODN **1p**
Abs (260nm)
6
4
2
0
0
10
20
30
40
50
[min.]

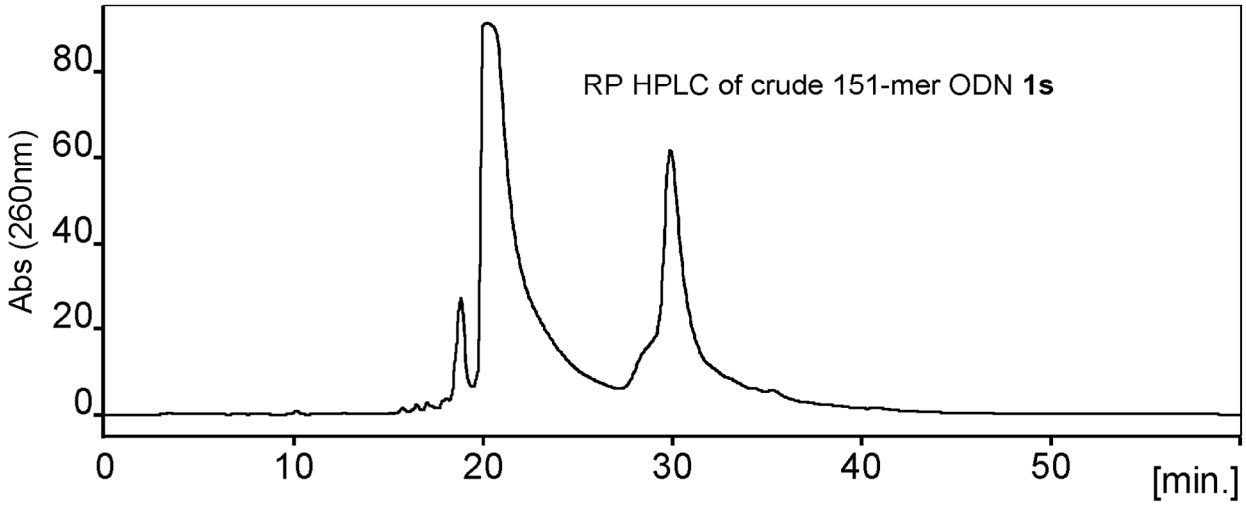

RP HPLC of pure 80-mer ODN **1p**
Abs (260nm)
80
60
40
20
0
0
10
20
30
40
50
[min.]

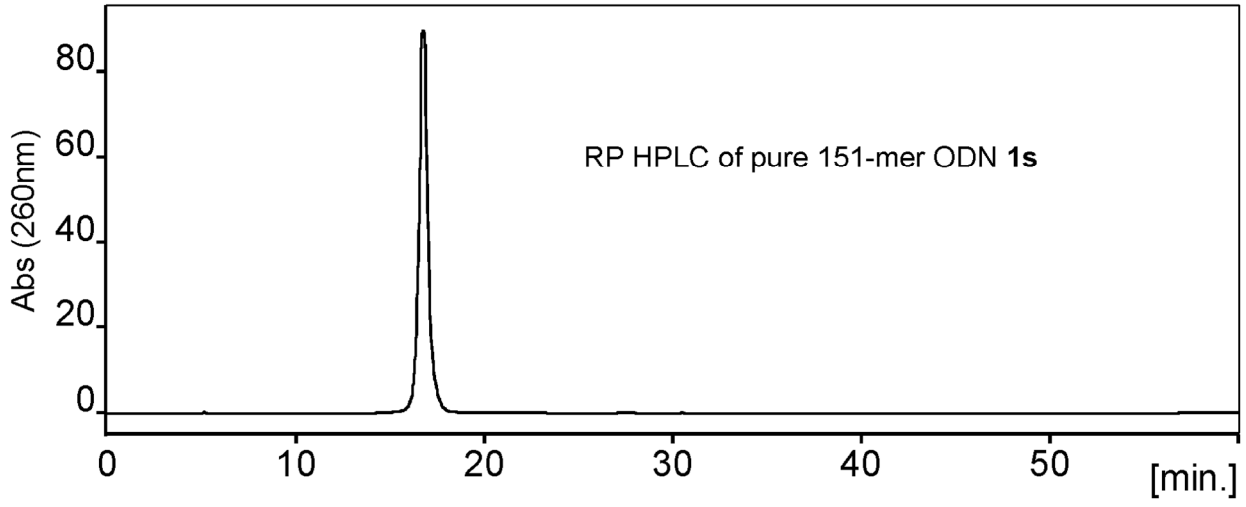

RP HPLC of crude 90-mer ODN **1q**
Abs (260nm)
25
20
15
10
5
0
0
10
20
30
40
50
[min.]

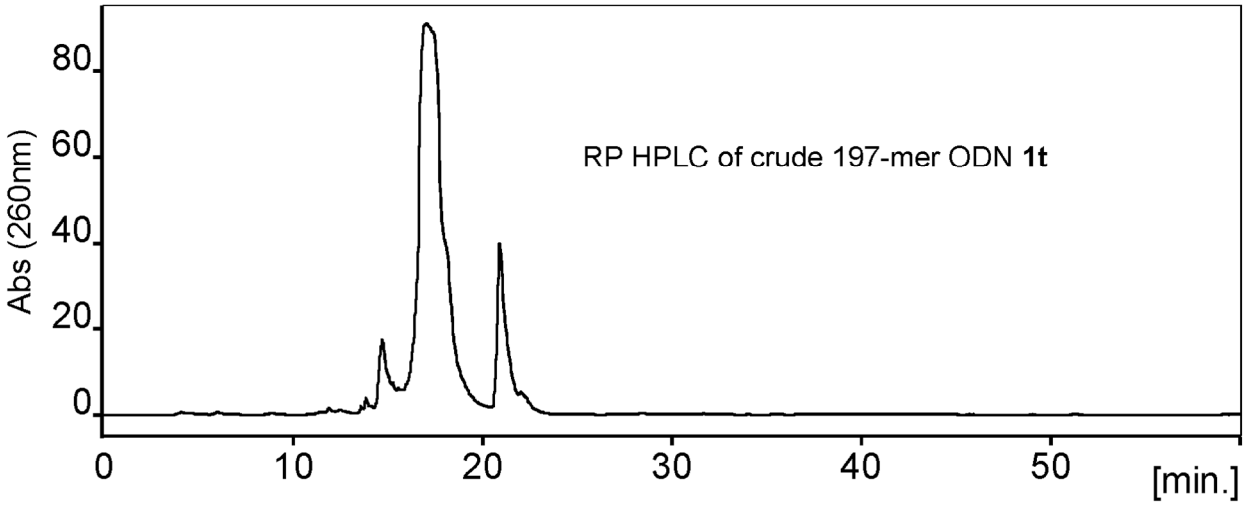

RP HPLC of pure 90-mer ODN **1q**
Abs (260nm)
15
10
5
0
0
10
20
30
40
50
[min.]

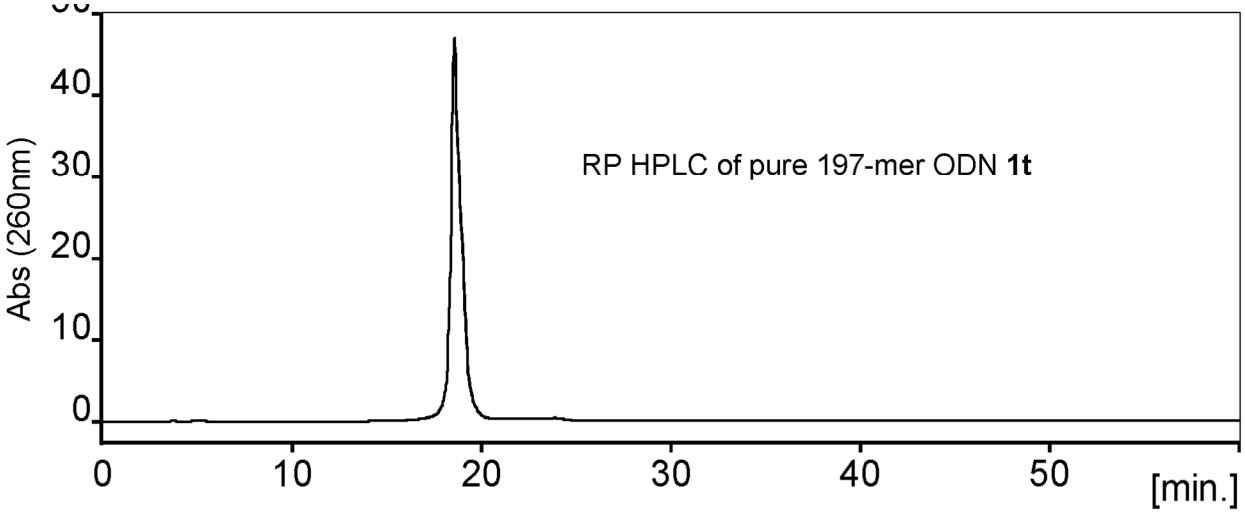

RP HPLC of crude 110-mer ODN **1r**
Abs (260nm)
6
5
4
3
2
1
0
0
10
20
30
40
50
[min.]

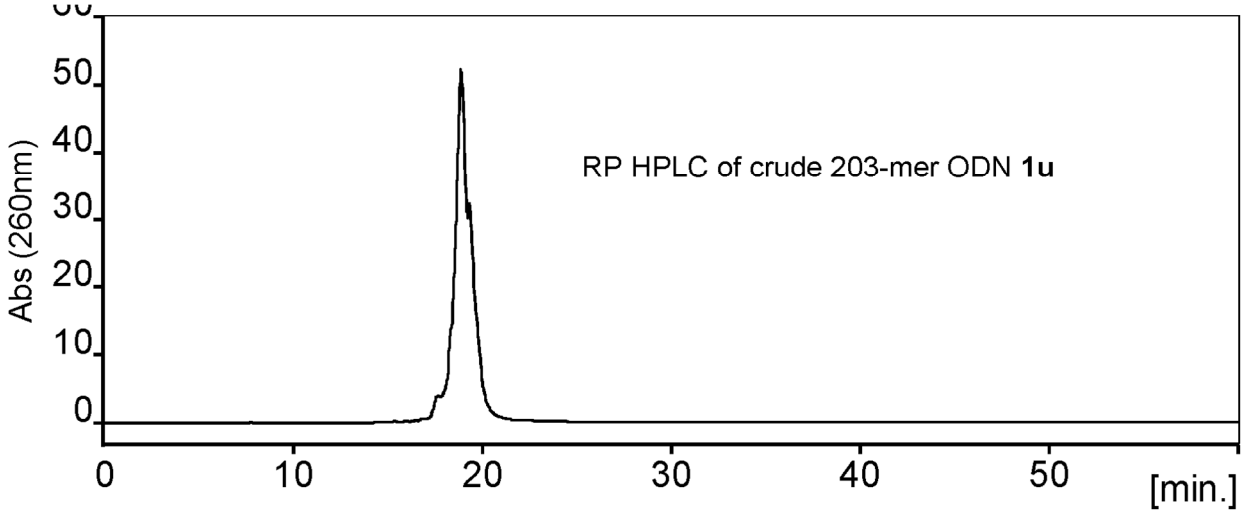

RP HPLC of pure 110-mer ODN **1r**
Abs (260nm)
60
50
40
30
20
10
0
0
10
20
30
40
50
[min.]

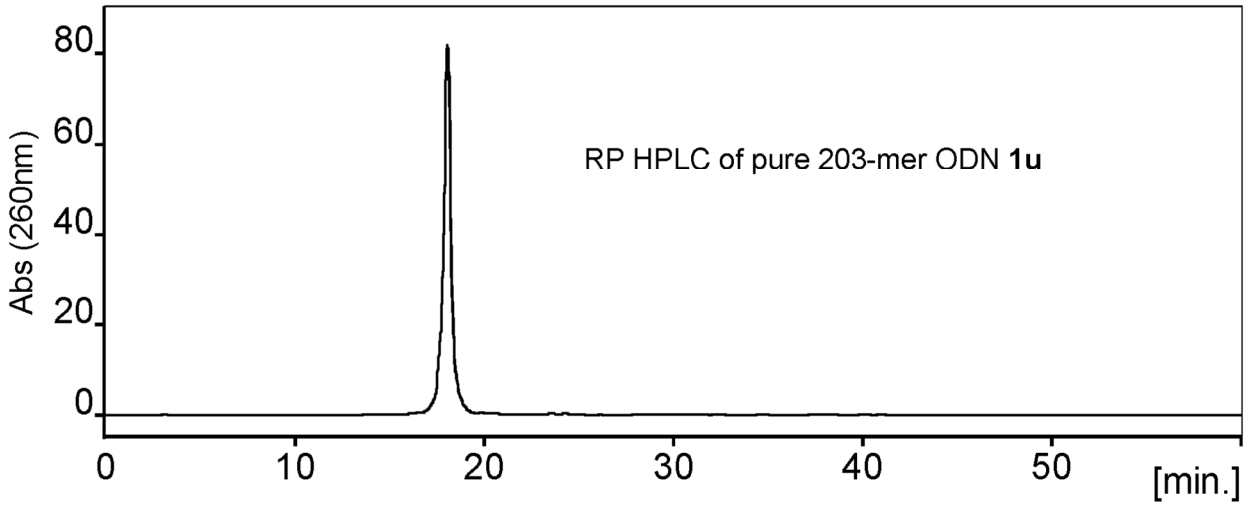

RP HPLC of crude 151-mer ODN **1s**
Abs (260nm)
80
60
40
20
0
0
10
20
30
40
50
[min.]

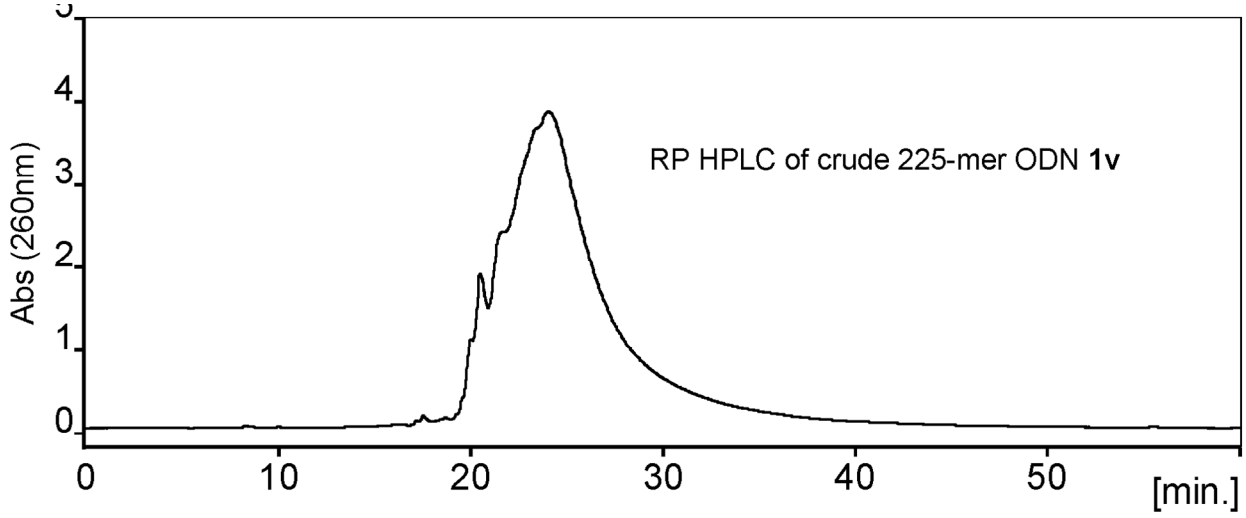

RP HPLC of pure 151-mer ODN **1s**
Abs (260nm)
80
60
40
20
0
0
10
20
30
40
50
[min.]

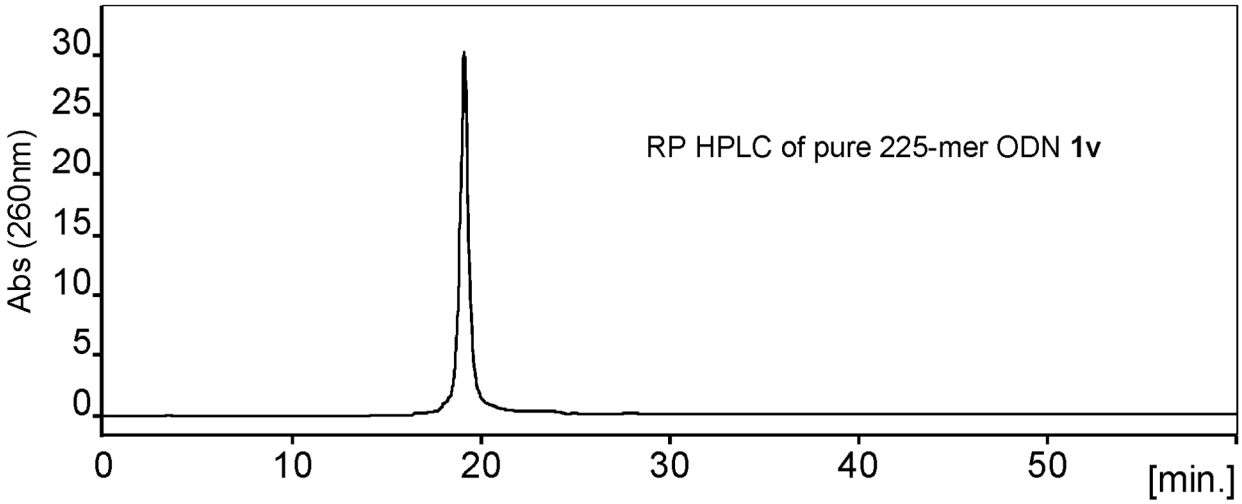

RP HPLC of crude 197-mer ODN **1t**
Abs (260nm)
80
60
40
20
0
0
10
20
30
40
50
[min.]

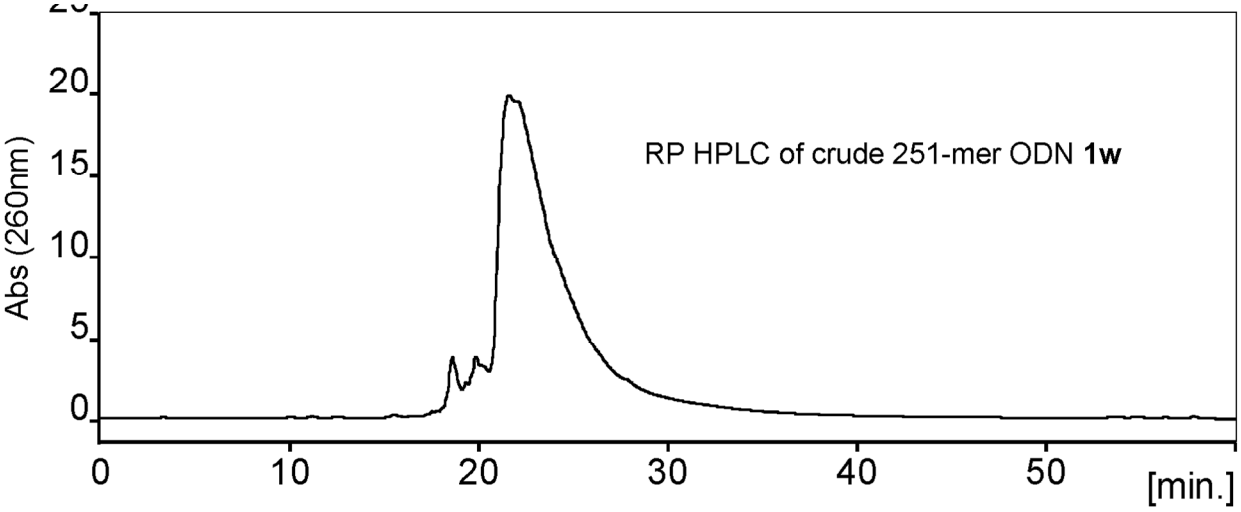

RP HPLC of pure 197-mer ODN **1t**
Abs (260nm)
0
10
20
30
40
0
10
20
30
40
50
[min.]

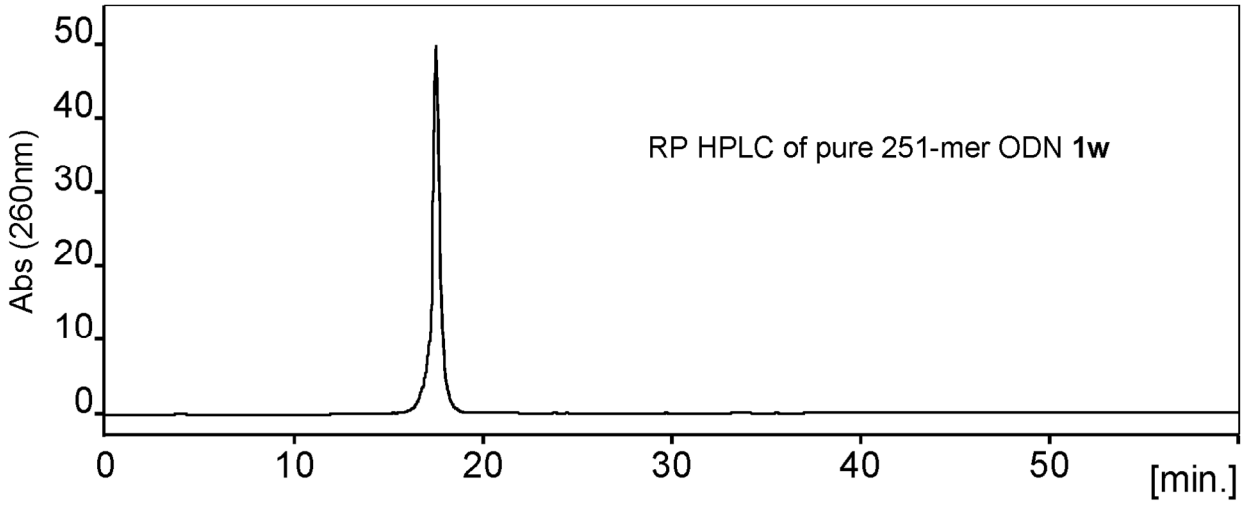

RP HPLC of crude 203-mer ODN **1u**
Abs (260nm)
0
10
20
30
40
50
0
10
20
30
40
50
[min.]

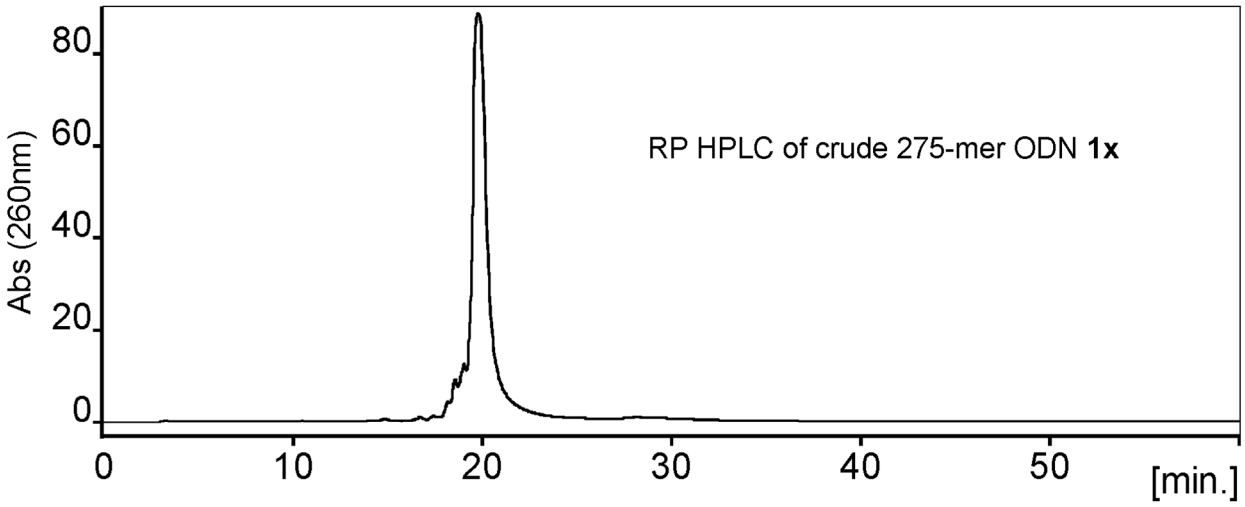

RP HPLC of pure 203-mer ODN **1u**
Abs (260nm)
0
20
40
60
80
0
10
20
30
40
50
[min.]

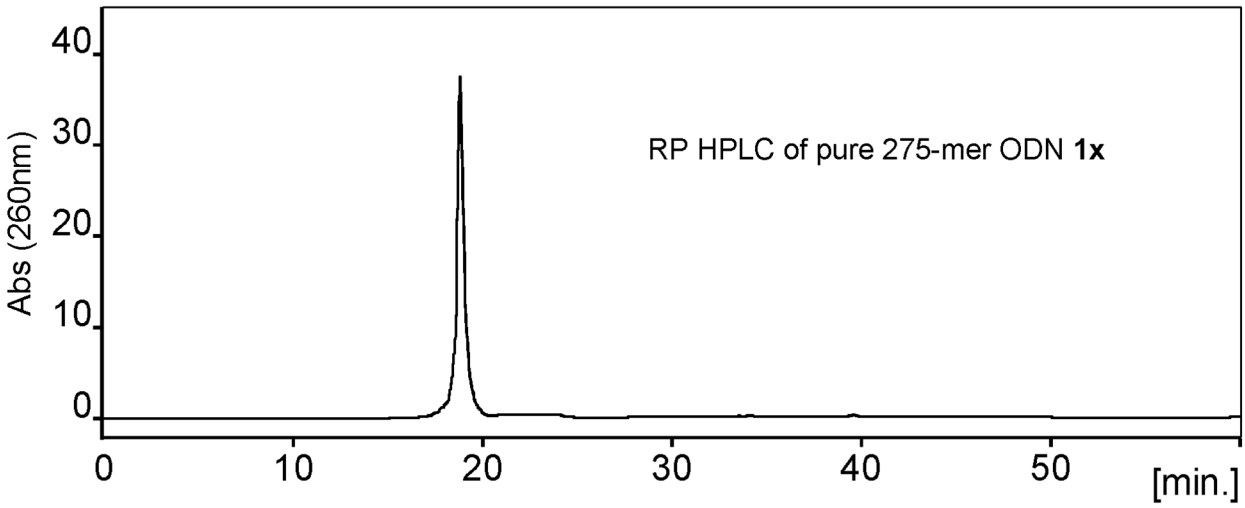

RP HPLC of crude 225-mer ODN **1v**
Abs (260nm)
0
1
2
3
4
0
10
20
30
40
50
[min.]

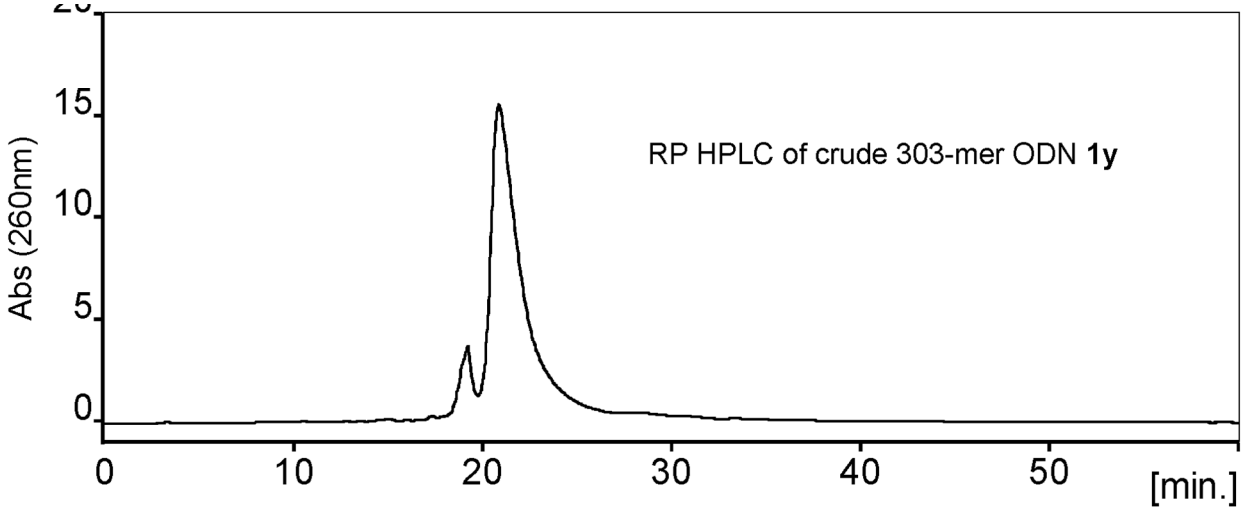

RP HPLC of pure 225-mer ODN **1v**
Abs (260nm)
0
5
10
15
20
25
30
0
10
20
30
40
50
[min.]

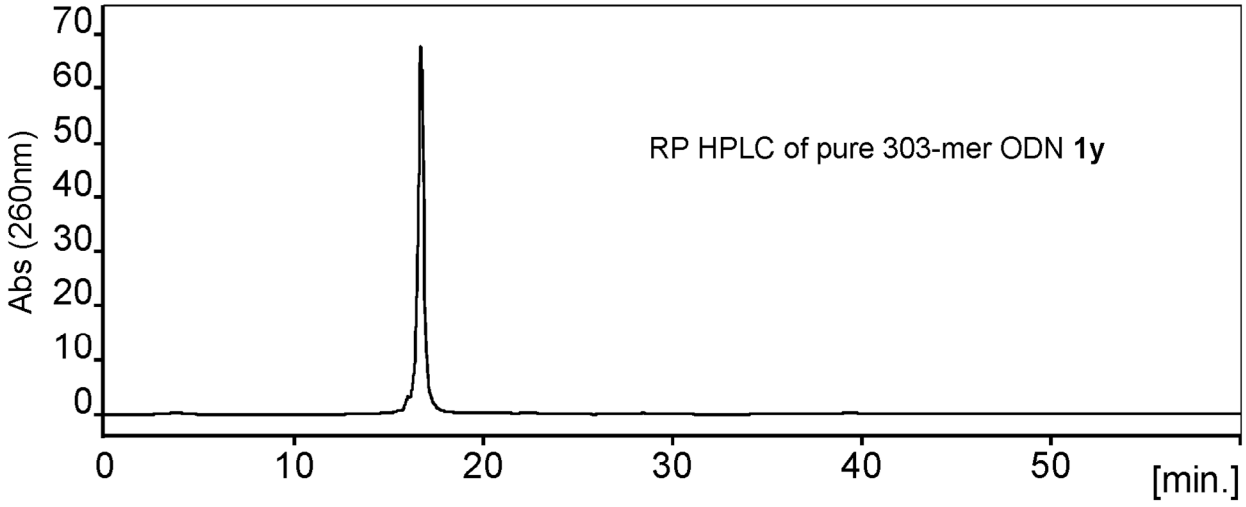

RP HPLC of crude 251-mer ODN **1w**
Abs (260nm)
0
5
10
15
20
0
10
20
30
40
50
[min.]

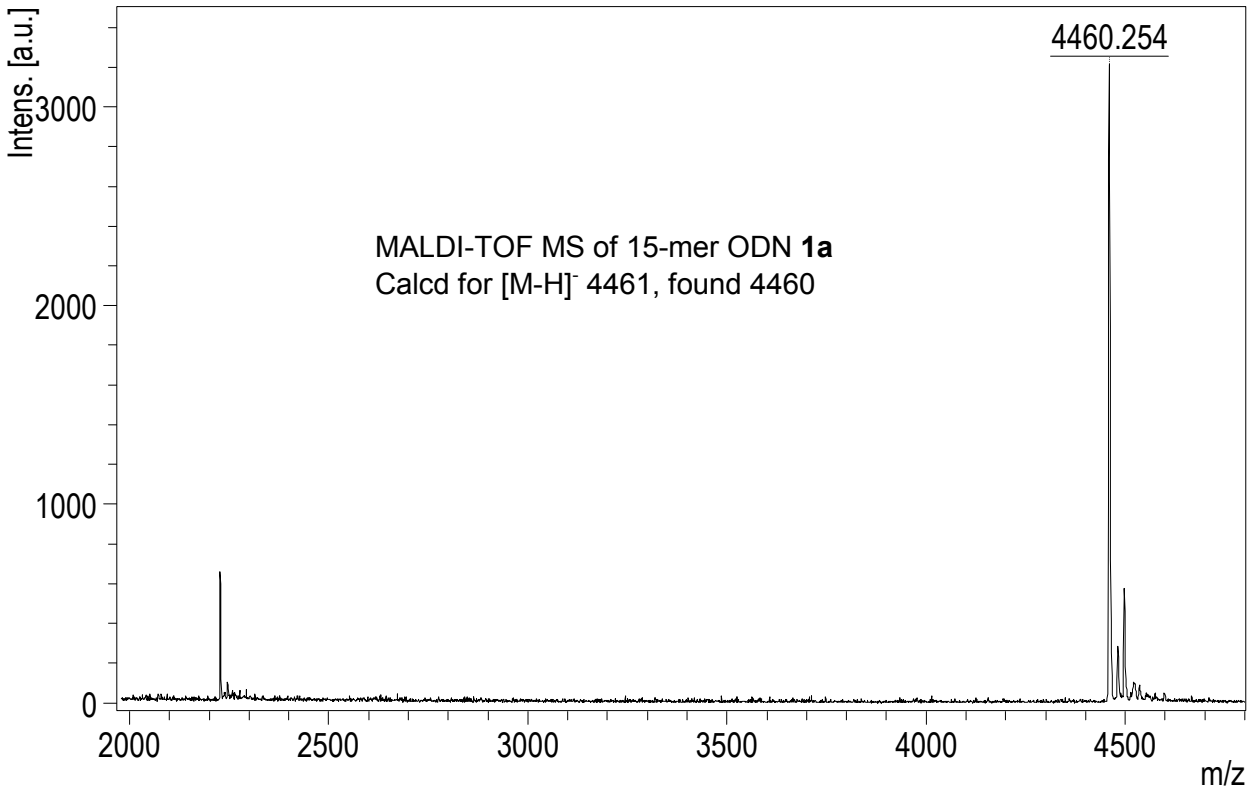

RP HPLC of pure 251-mer ODN **1w**
Abs (260nm)
50
40
30
20
10
0
0
10
20
30
40
50
[min.]

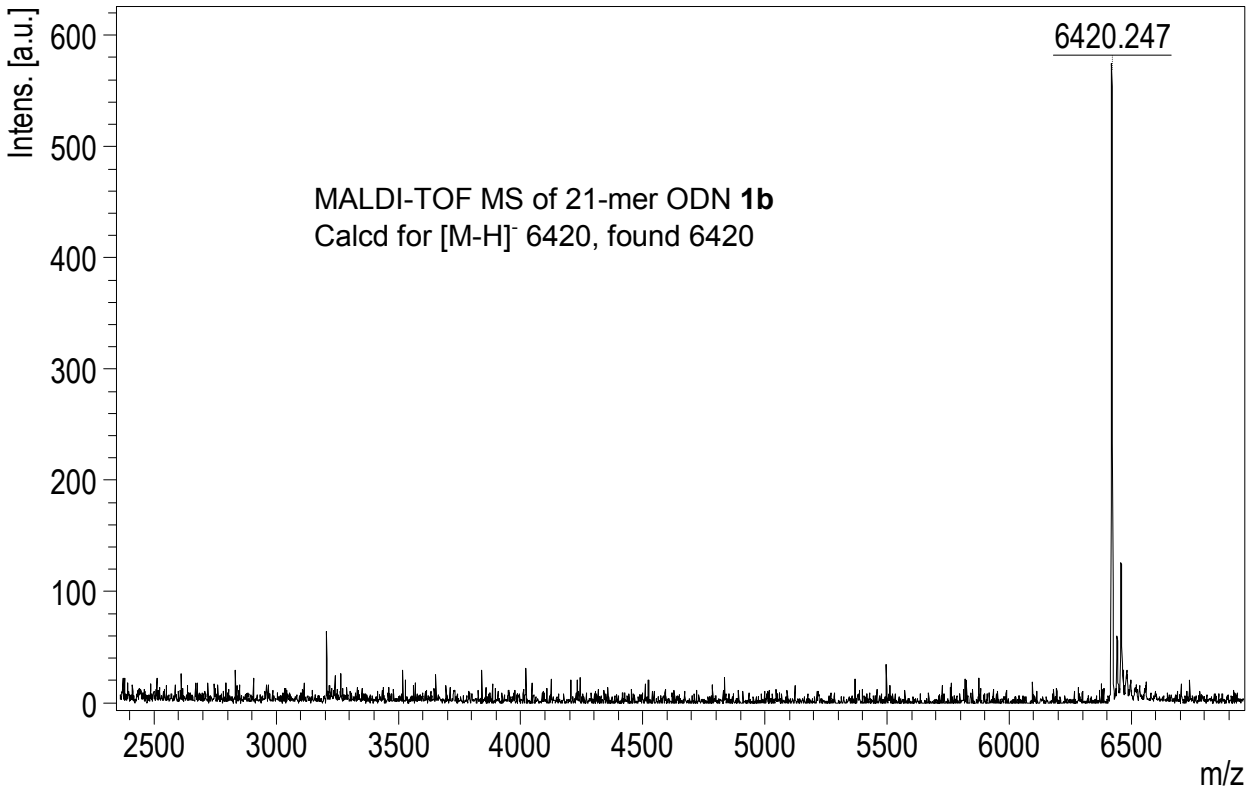

RP HPLC of crude 275-mer ODN **1x**
Abs (260nm)
80
60
40
20
0
0
10
20
30
40
50
[min.]

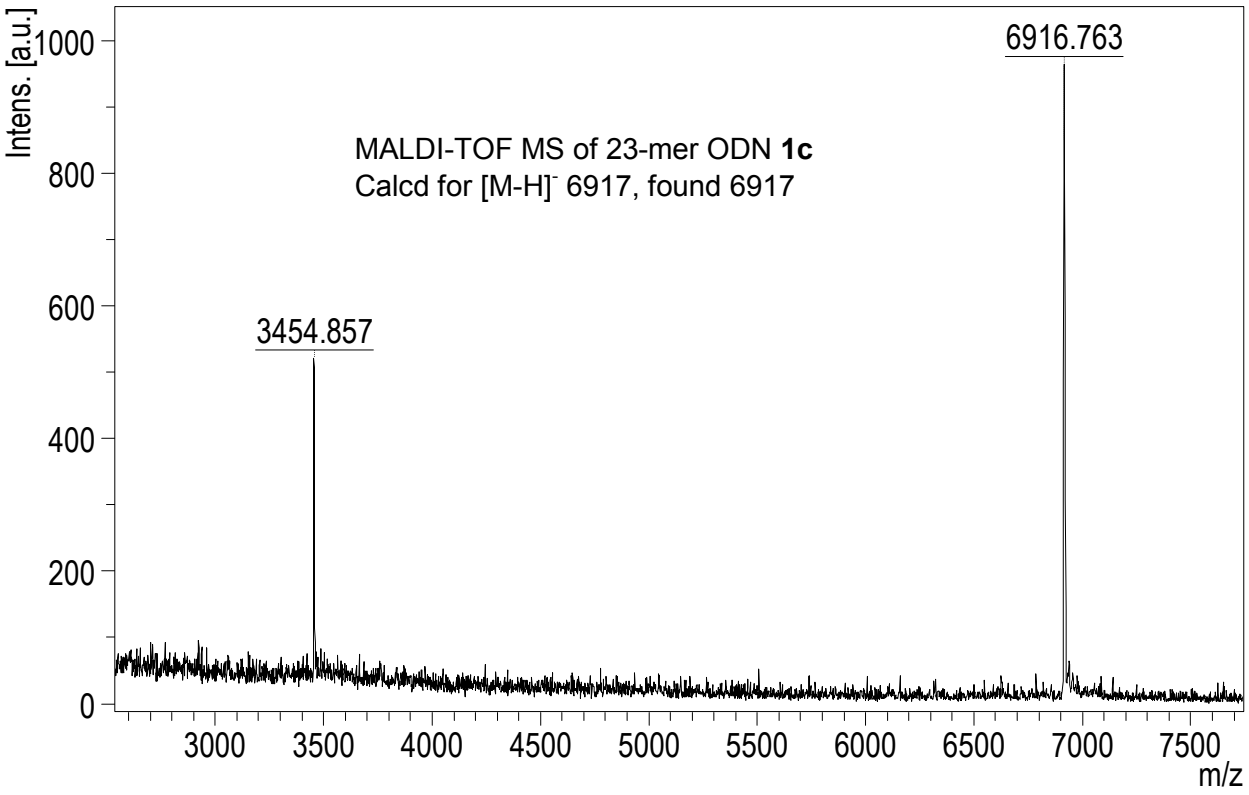

RP HPLC of pure 275-mer ODN **1x**
Abs (260nm)
40
30
20
10
0
0
10
20
30
40
50
[min.]

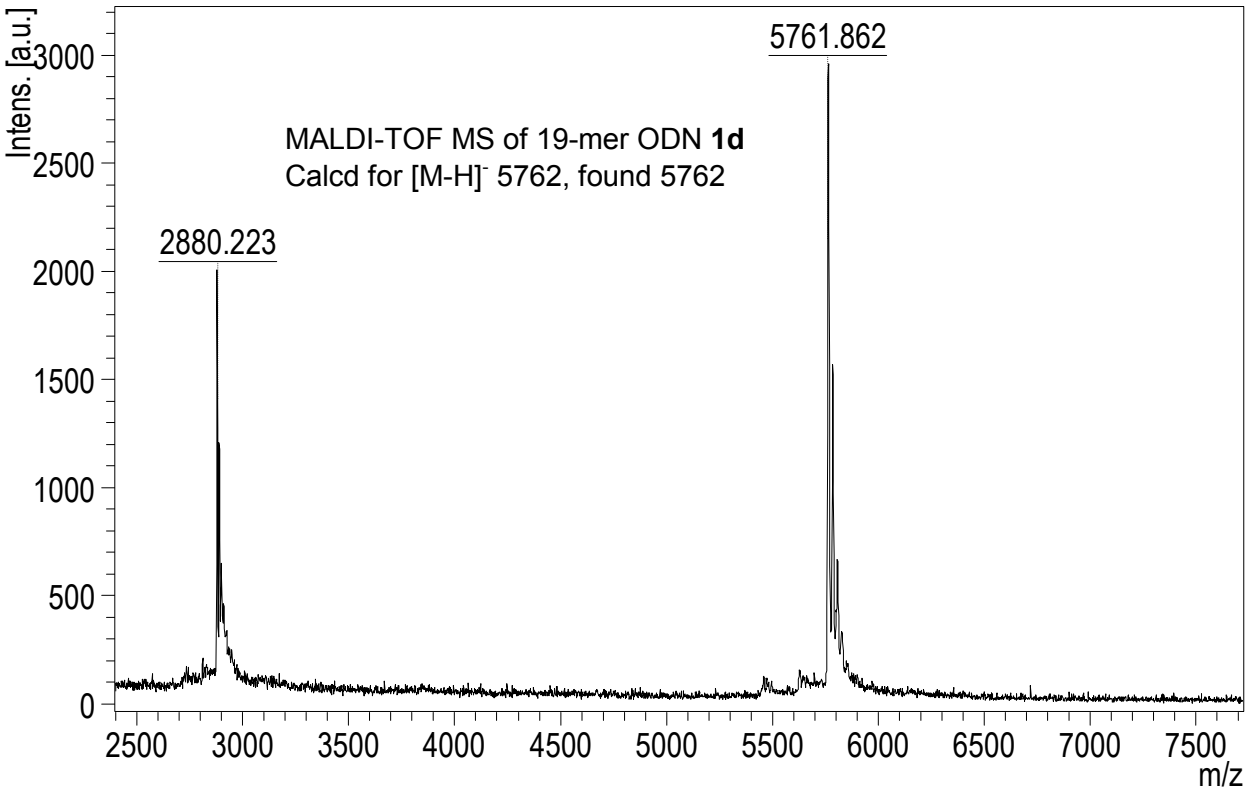

RP HPLC of crude 303-mer ODN **1y**
Abs (260nm)
15
10
5
0
0
10
20
30
40
50
[min.]

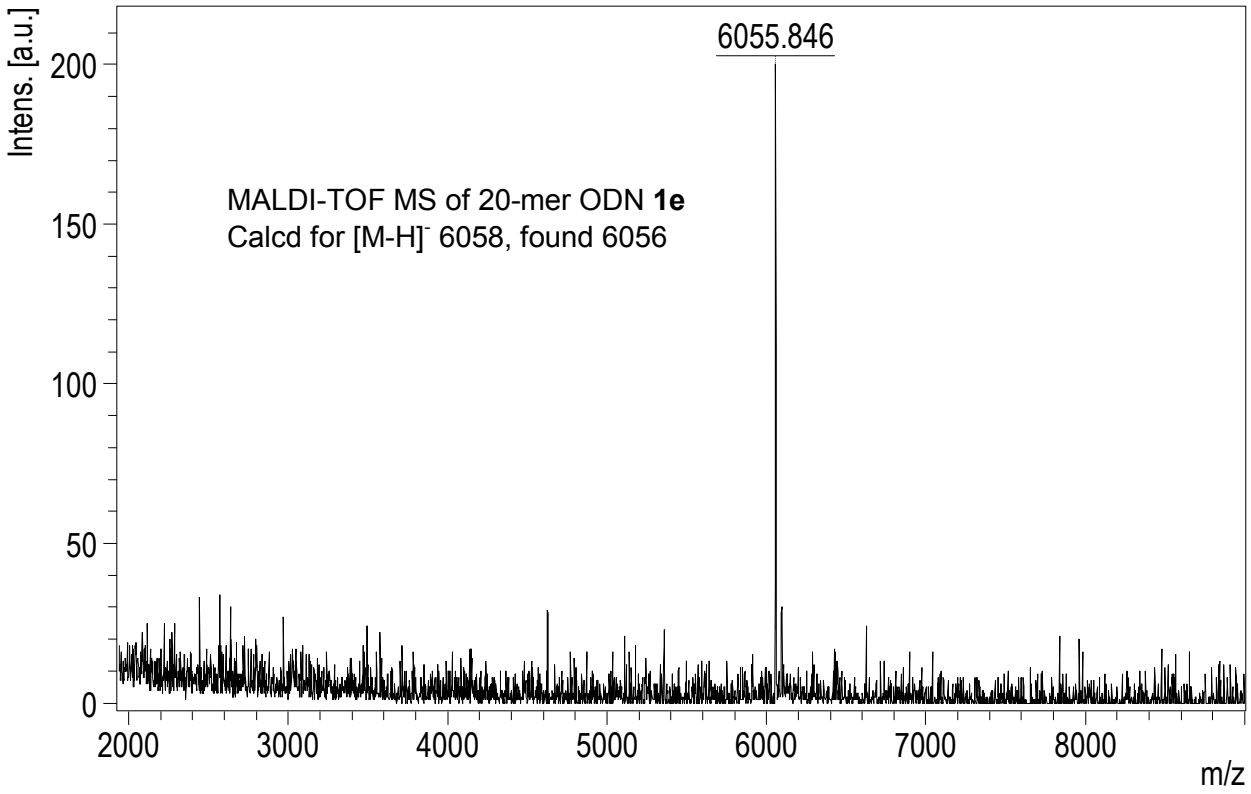

RP HPLC of pure 303-mer ODN **1y**
Abs (260nm)
70
60
50
40
30
20
10
0
0
10
20
30
40
50
[min.]

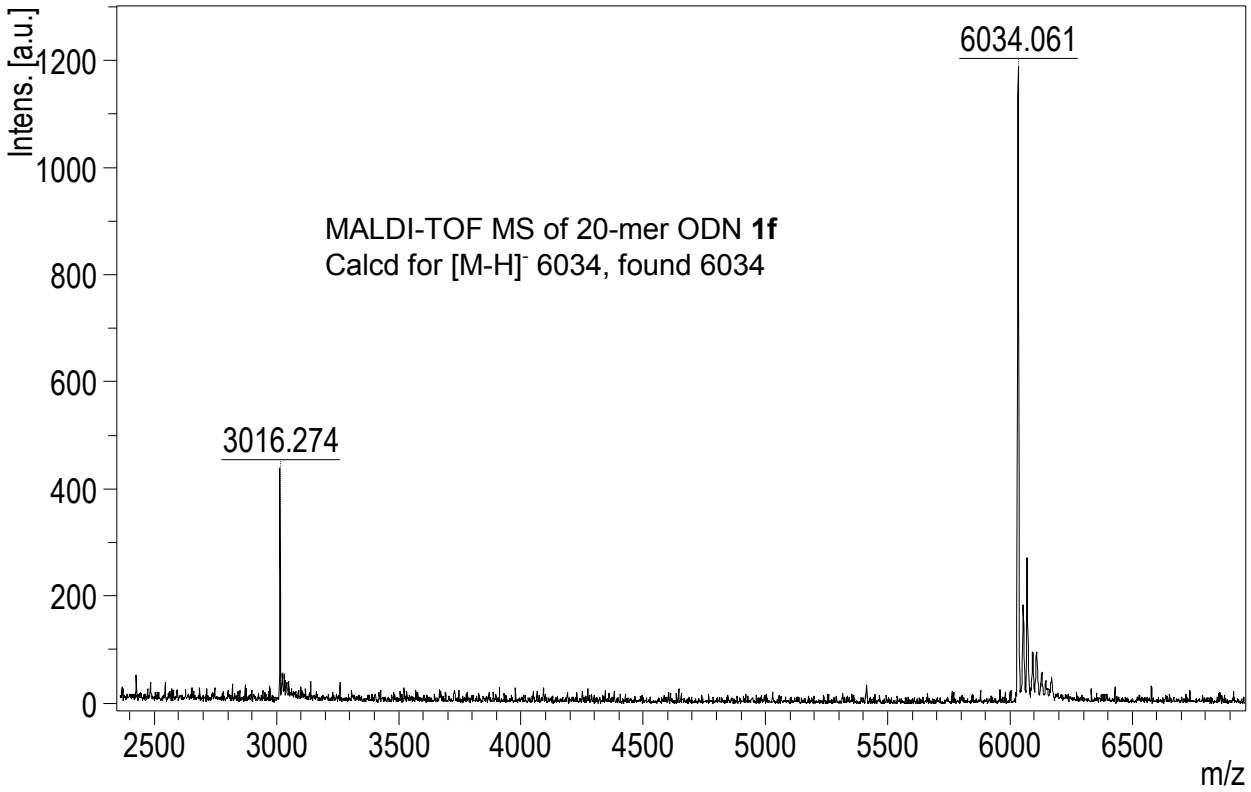

4460.254
MALDI-TOF MS of 15-mer ODN **1a**
Calcd for [M-H]- 4461, found 4460
Intens. [a.u.]
3000
2000
1000
0
2000
2500
3000
3500
4000
4500
m/z

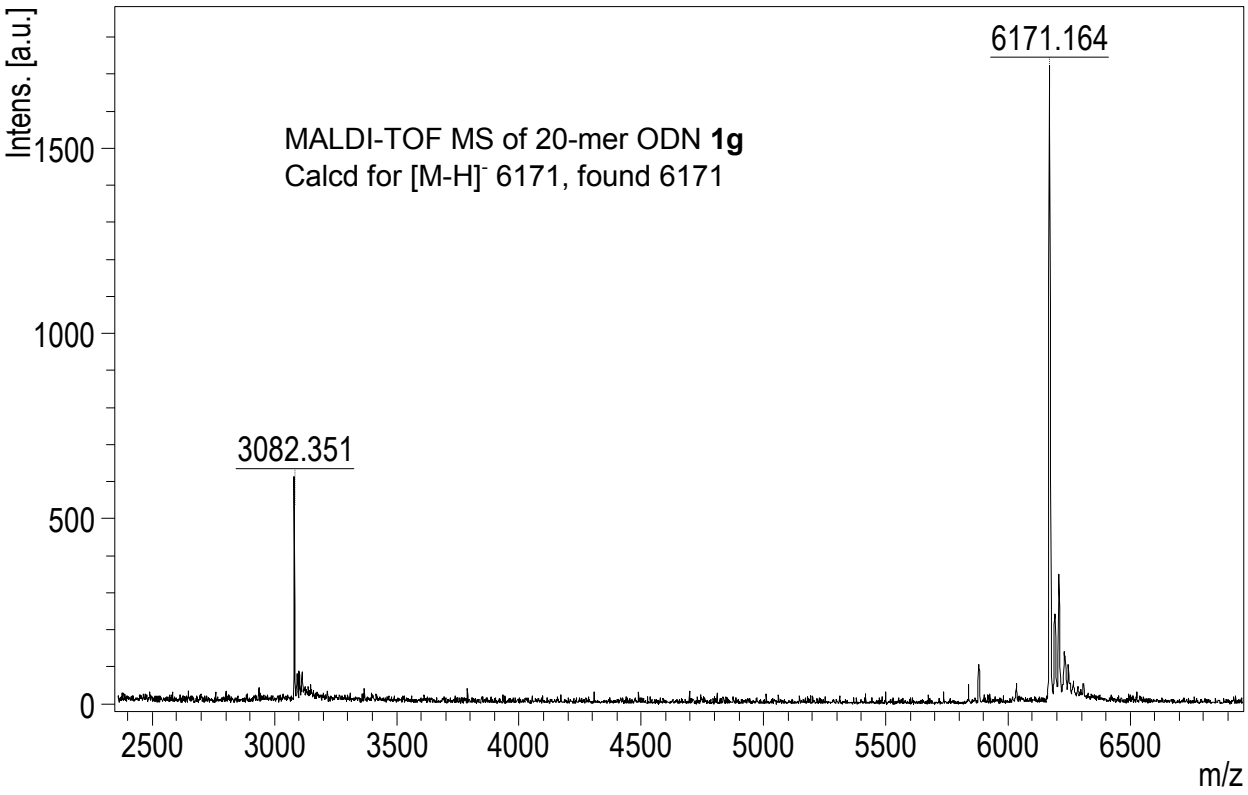

6420.247
MALDI-TOF MS of 21-mer ODN **1b**
Calcd for [M-H]- 6420, found 6420
Intens. [a.u.]
600
500
400
300
200
100
0
2500
3000
3500
4000
4500
5000
5500
6000
6500
m/z

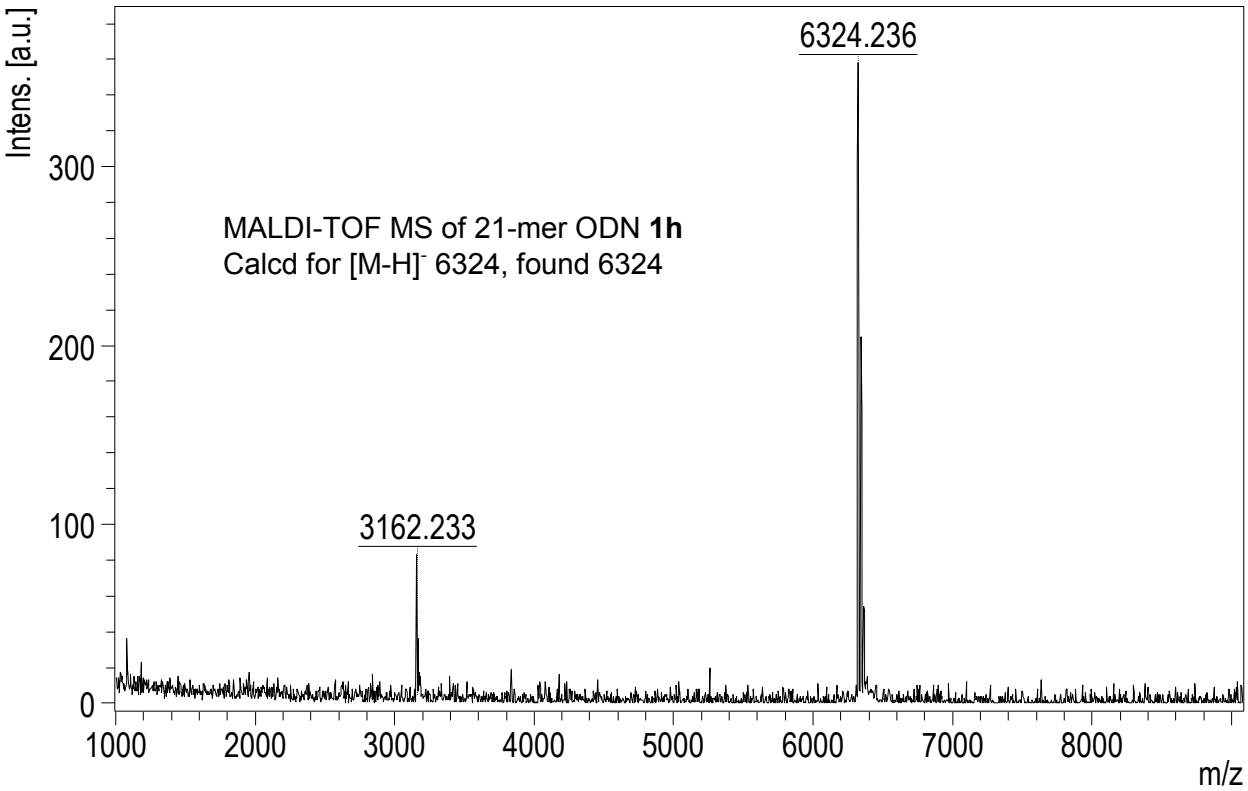

Intens. [a.u.]
1000
800
600
400
200
0
6916.763
MALDI-TOF MS of 23-mer ODN **1c**
Calcd for [M-H]- 6917, found 6917
3454.857
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
m/z

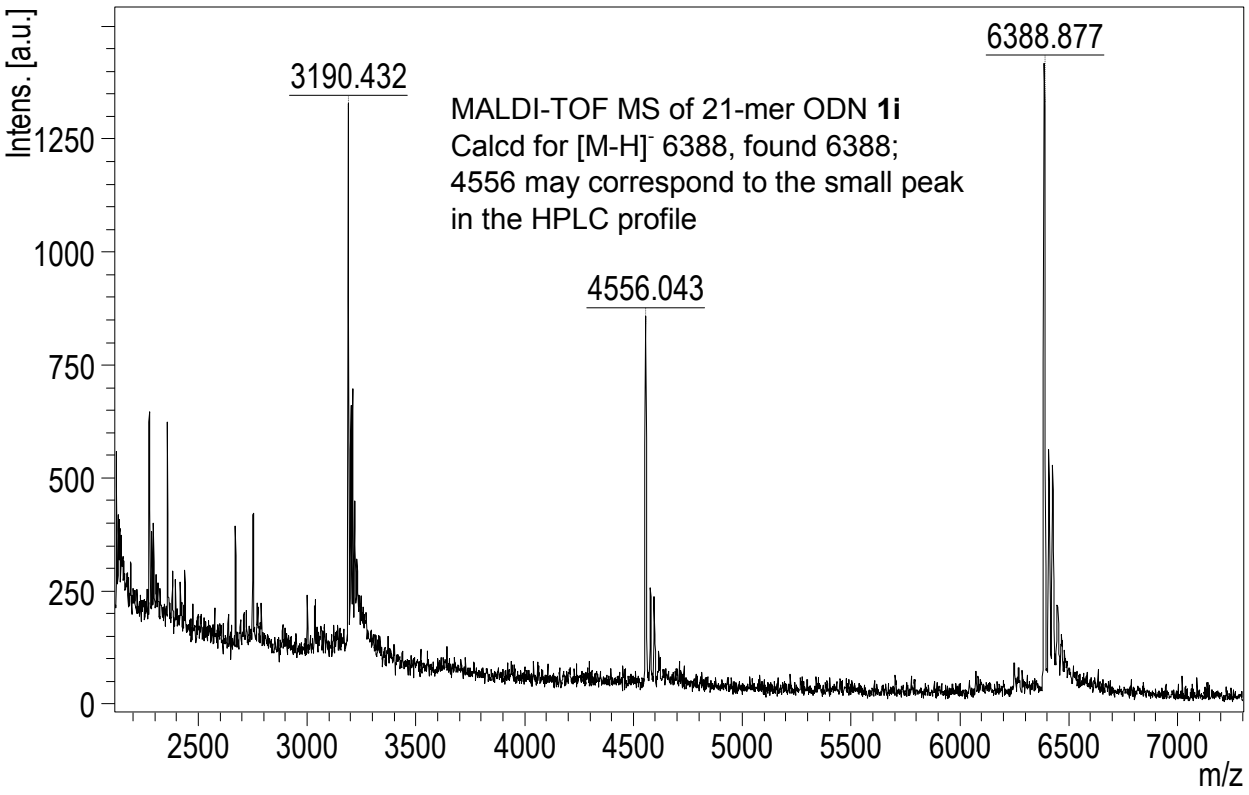

Intens. [a.u.]
3000
2500
2000
1500
1000
500
0
5761.862
MALDI-TOF MS of 19-mer ODN **1d**
Calcd for [M-H]- 5762, found 5762
2880.223
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
m/z

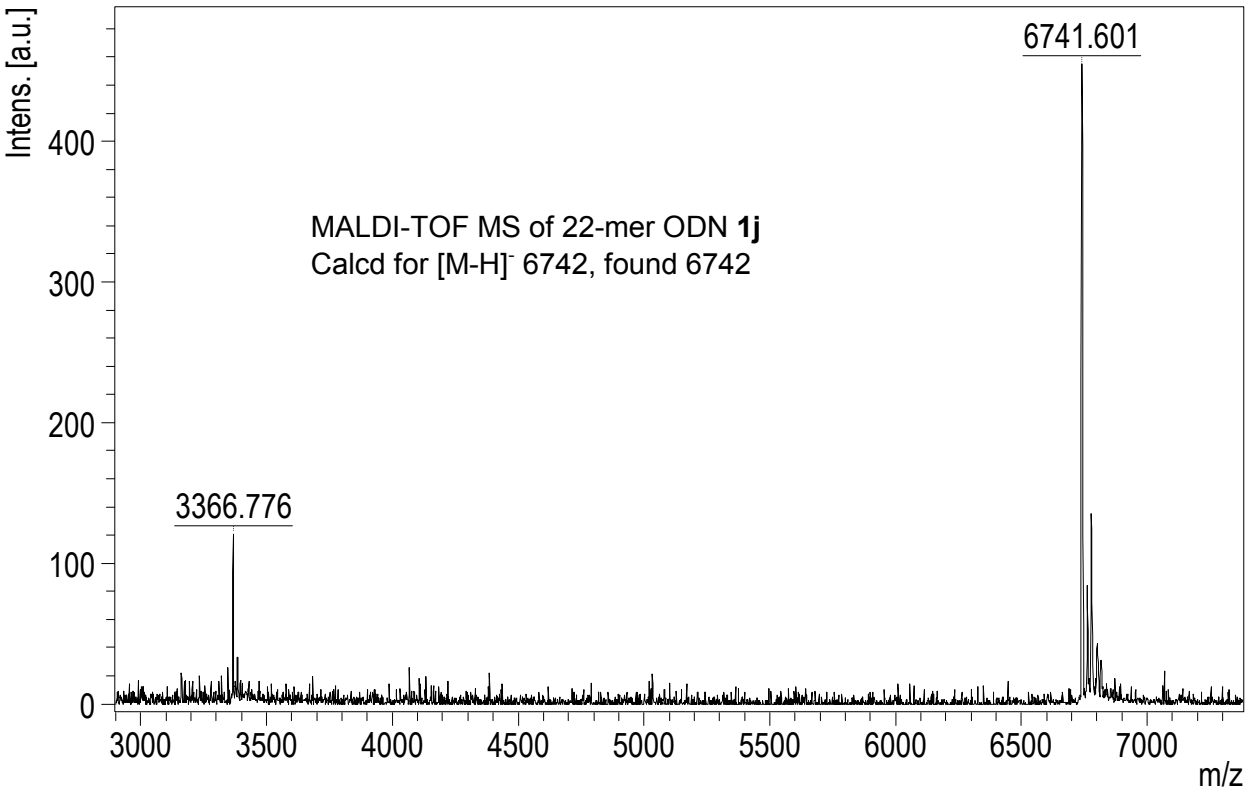

6055.846
MALDI-TOF MS of 20-mer ODN **1e**
Calcd for [M-H]- 6058, found 6056
Intens. [a.u.]
200
150
100
50
0
2000
3000
4000
5000
6000
7000
8000
m/z

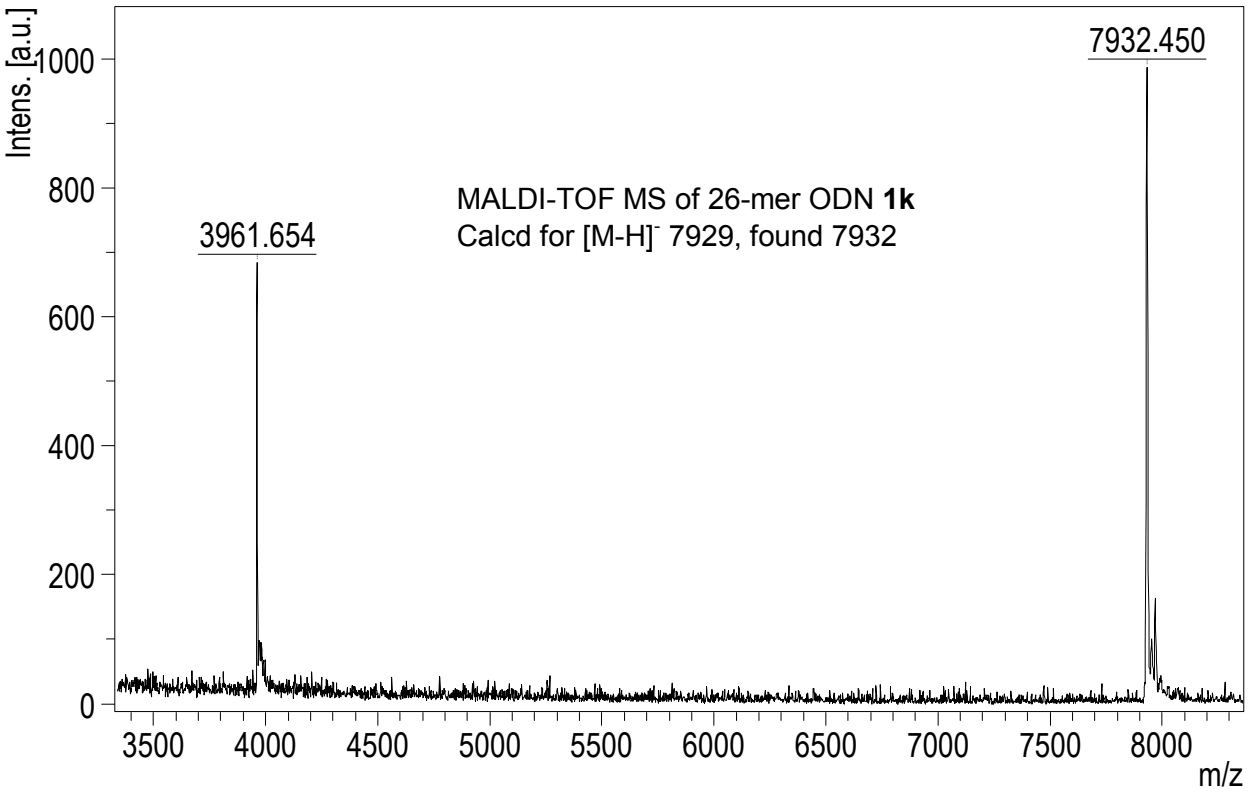

6034.061
3016.274
MALDI-TOF MS of 20-mer ODN **1f**
Calcd for [M-H]- 6034, found 6034
Intens. [a.u.]
1200
1000
800
600
400
200
0
2500
3000
3500
4000
4500
5000
5500
6000
6500
m/z

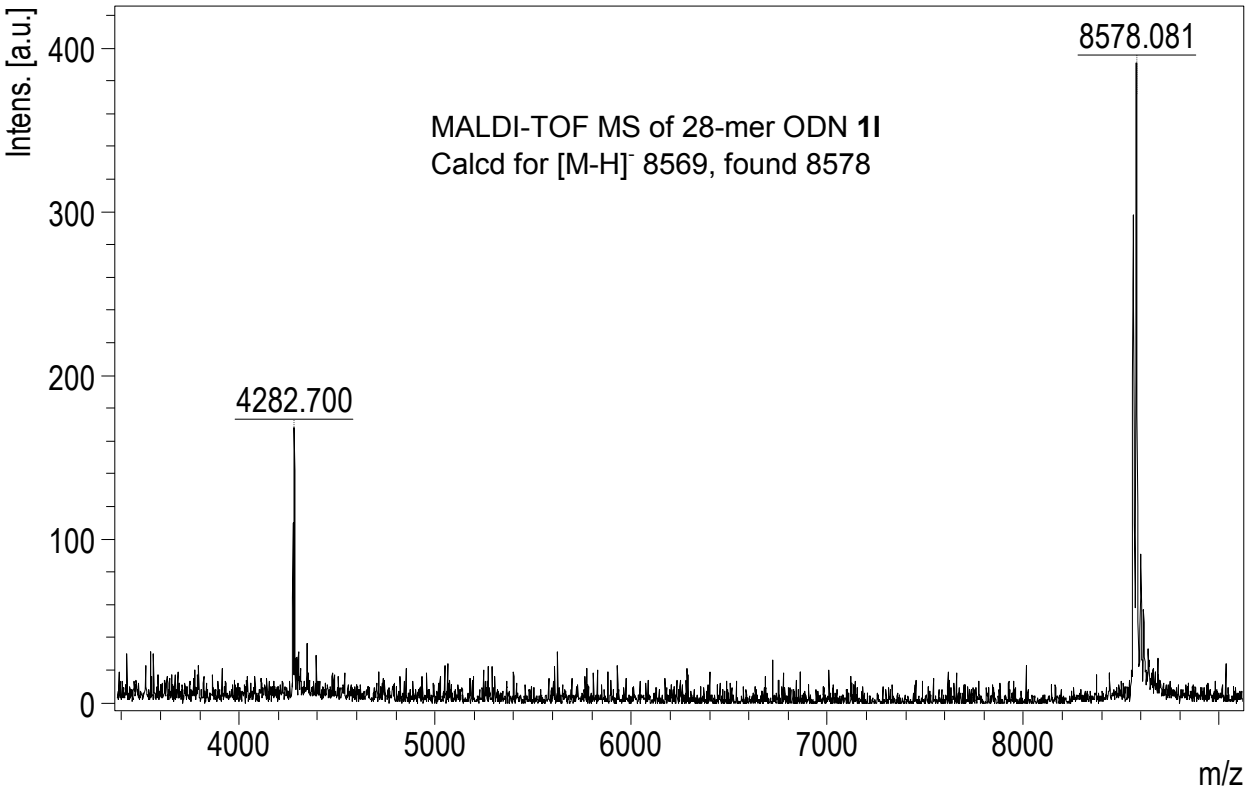

Intens. [a.u.]
1500
1000
500
0
6171.164
MALDI-TOF MS of 20-mer ODN **1g**
Calcd for [M-H]- 6171, found 6171
3082.351
2500
3000
3500
4000
4500
5000
5500
6000
6500
m/z

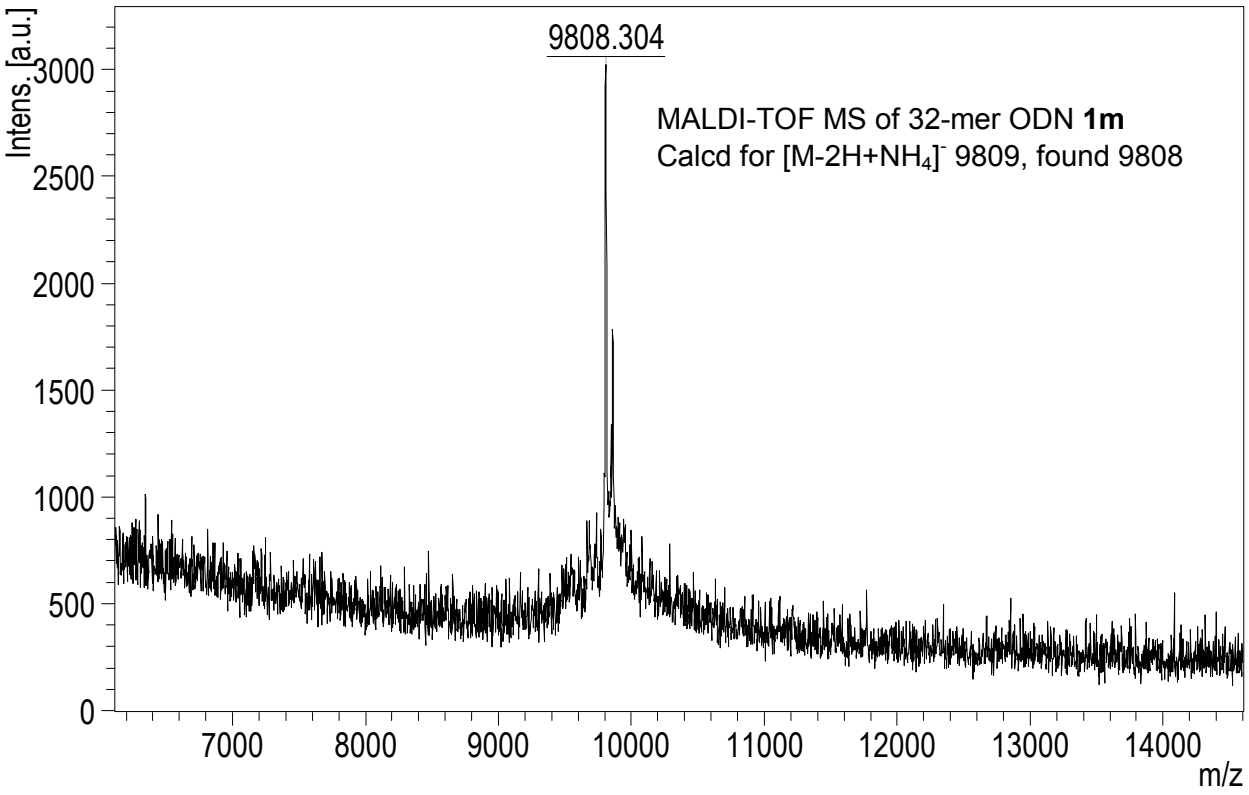

Intens. [a.u.]
300
200
100
0
6324.236
MALDI-TOF MS of 21-mer ODN **1h**
Calcd for [M-H]- 6324, found 6324
3162.233
1000
2000
3000
4000
5000
6000
7000
8000
m/z

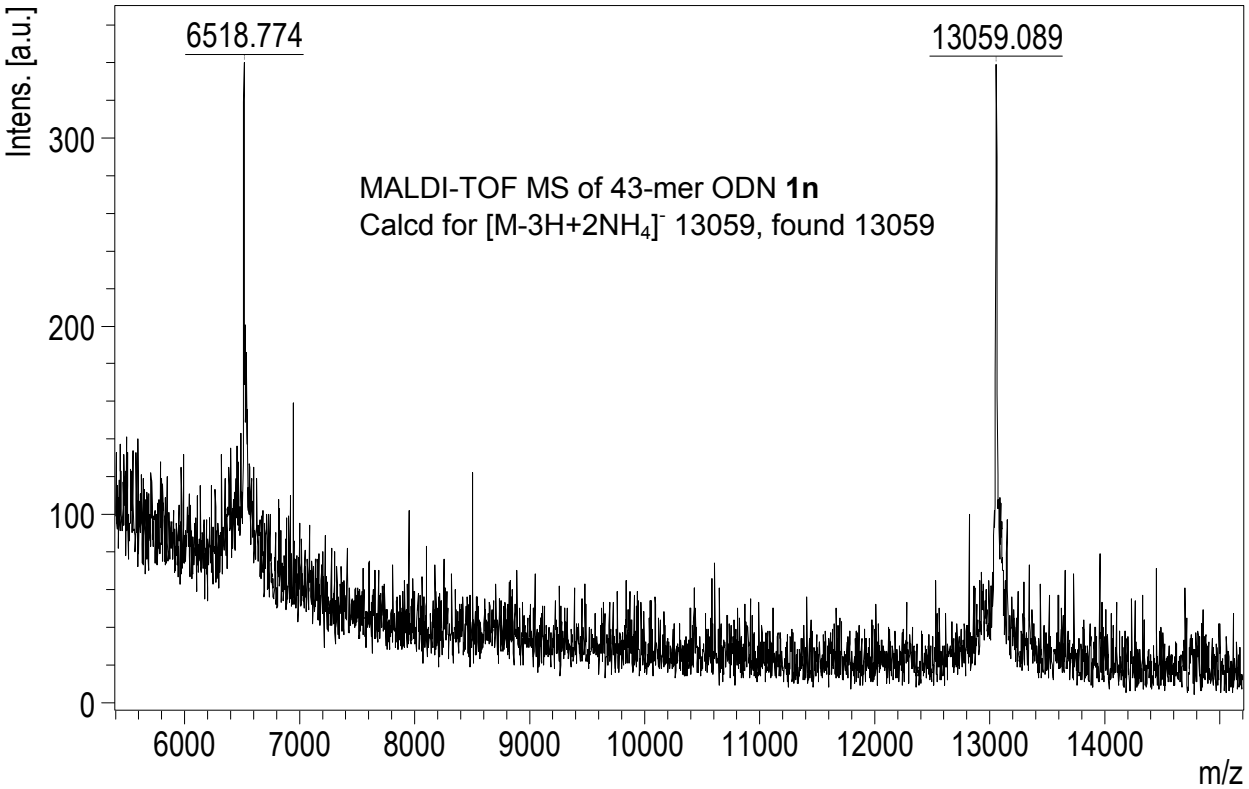

Intens. [a.u.]
1250
1000
750
500
250
0
3190.432
6388.877
4556.043
MALDI-TOF MS of 21-mer ODN **1i**
Calcd for [M-H]- 6388, found 6388;
4556 may correspond to the small peak
in the HPLC profile
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
m/z


Intens. [a.u.]
400
300
200
100
0
6741.601
3366.776
MALDI-TOF MS of 22-mer ODN **1j**
Calcd for [M-H]- 6742, found 6742
3000
3500
4000
4500
5000
5500
6000
6500
7000
m/z


Intens. [a.u.]
1000
800
600
400
200
0
7932.450
3961.654
MALDI-TOF MS of 26-mer ODN **1k**
Calcd for [M-H]⁻ 7929, found 7932
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
m/z


Intens. [a.u.]
400
300
200
100
0
8578.081
4282.700
MALDI-TOF MS of 28-mer ODN **1l**
Calcd for [M-H]⁻ 8569, found 8578
4000
5000
6000
7000
8000
m/z


9808.304
MALDI-TOF MS of 32-mer ODN **1m**
Calcd for [M-2H+NH4]- 9809, found 9808
Intens. [a.u.]
3000
2500
2000
1500
1000
500
0
7000
8000
9000
10000
11000
12000
13000
14000
m/z


6518.774
13059.089
MALDI-TOF MS of 43-mer ODN **1n**
Calcd for [M-3H+2NH4]- 13059, found 13059
Intens. [a.u.]
300
200
100
0
6000
7000
8000
9000
10000
11000
12000
13000
14000
m/z

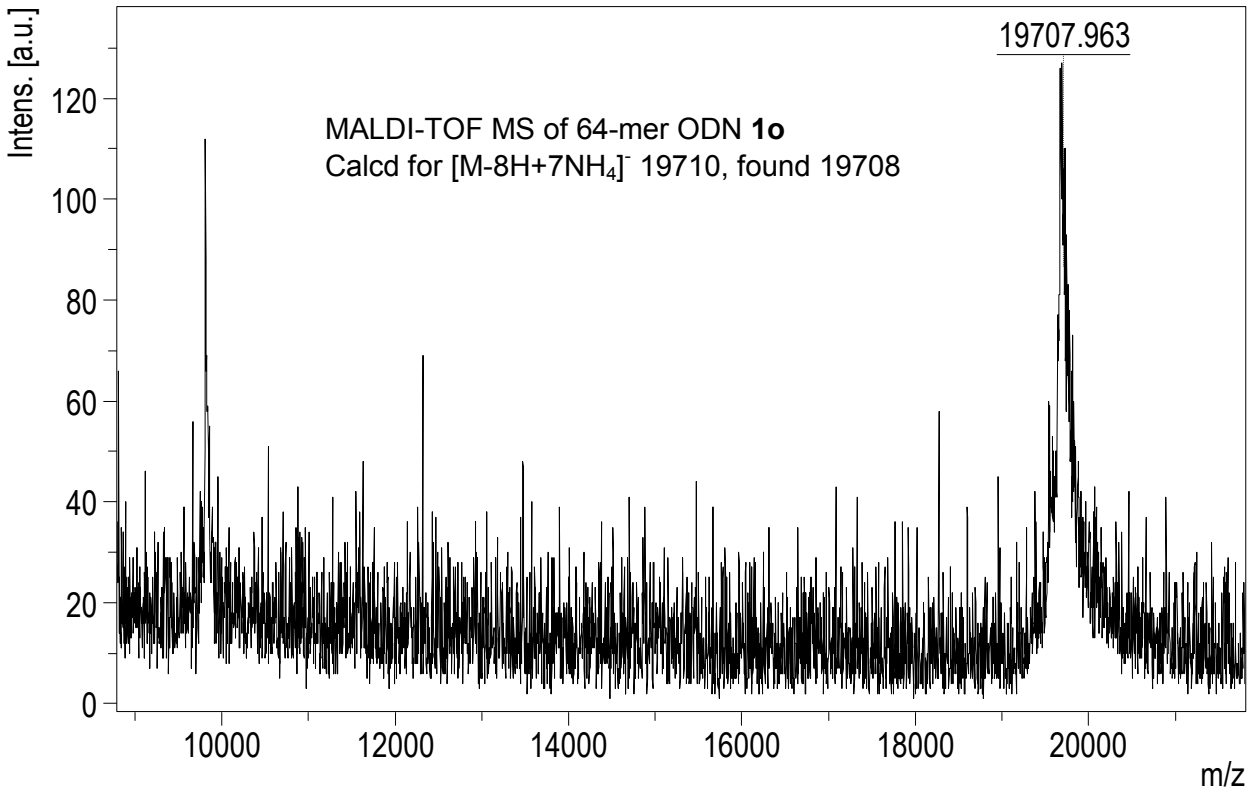
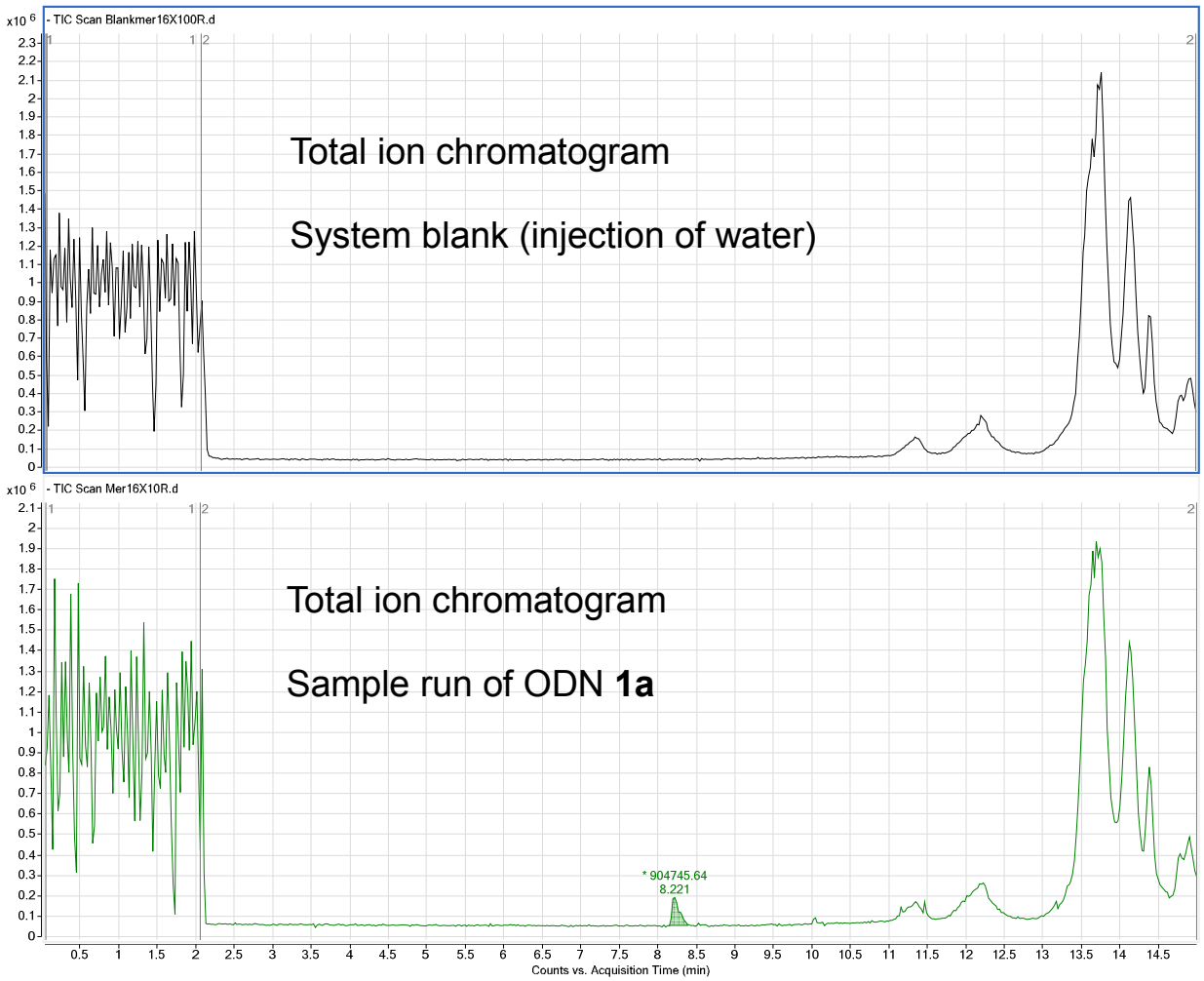
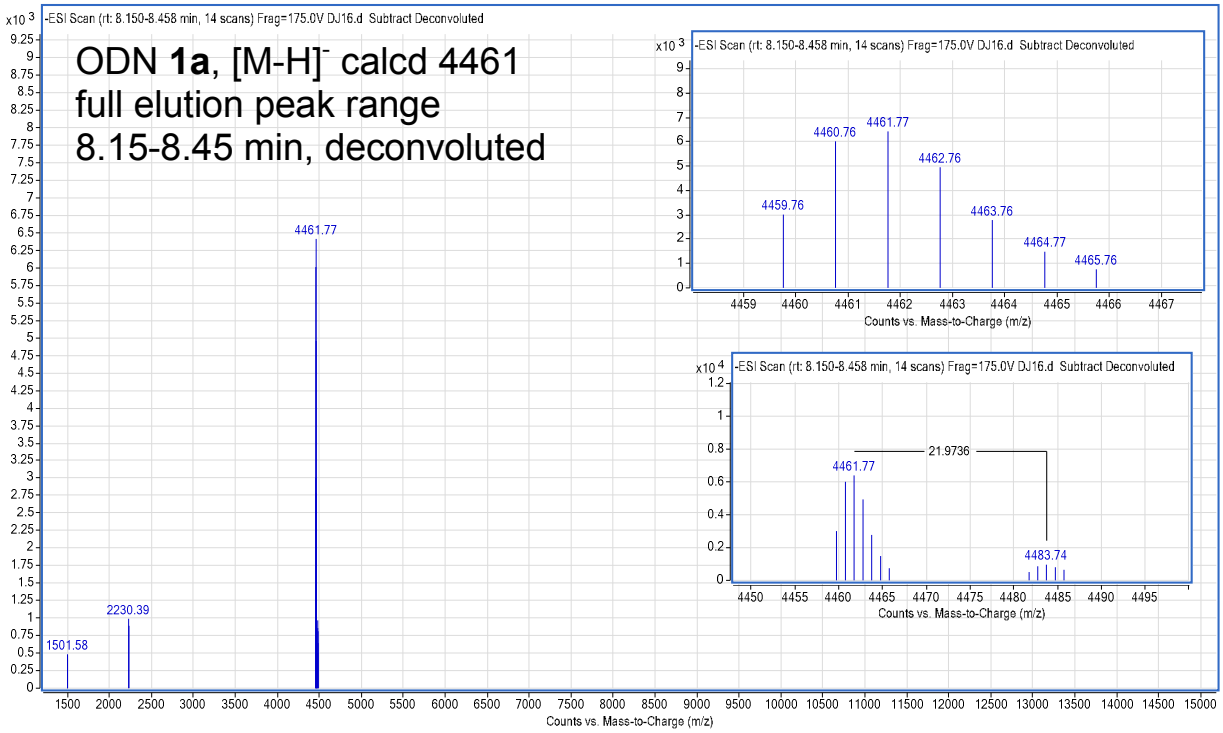


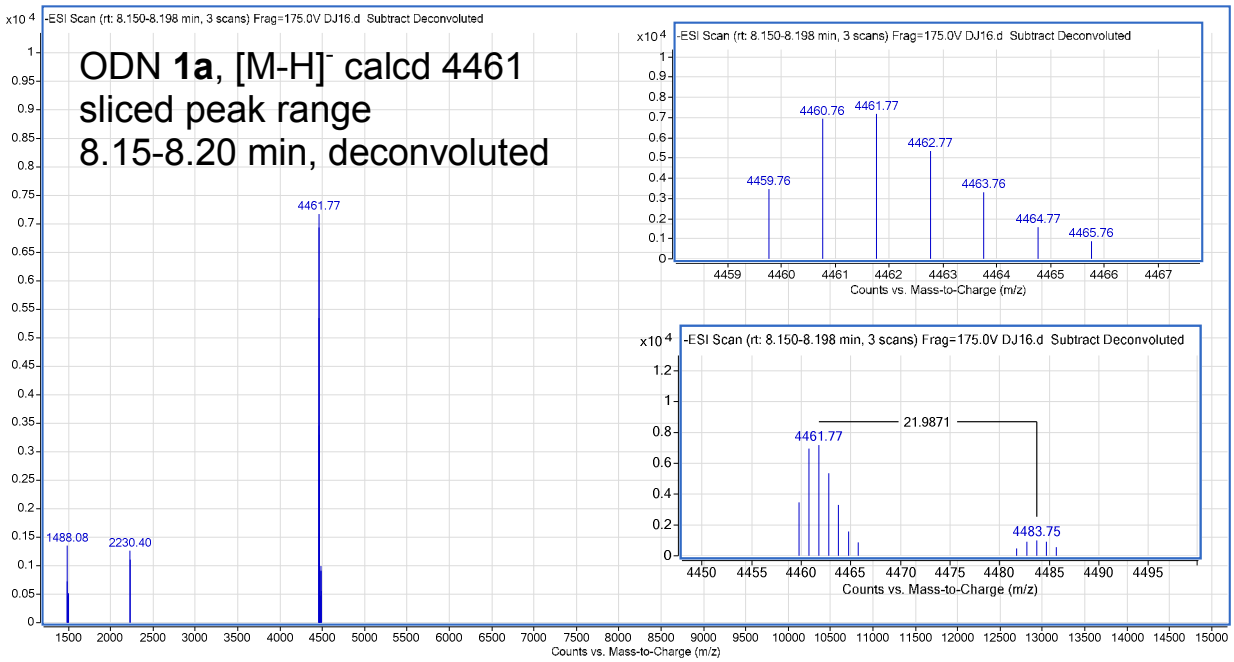
Photo of ODN 1m from large scale purification using the catching full-length sequence by polymerization technology

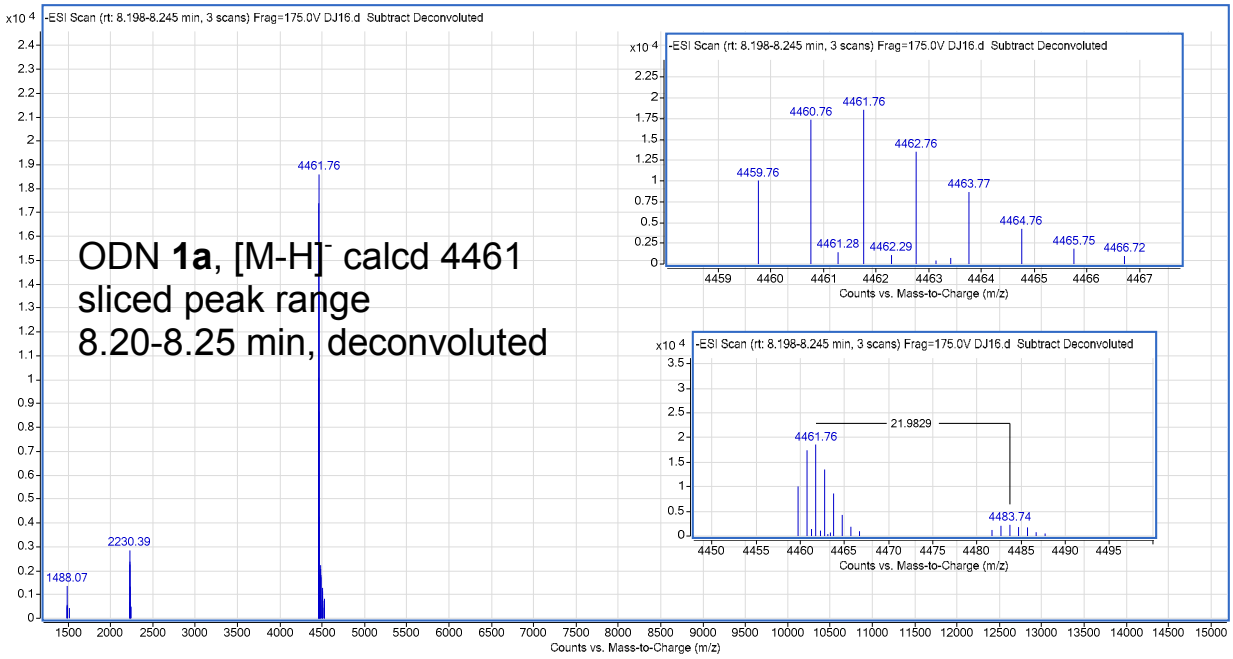
The following pages (S29-S34) contain LC-MS data for ODN 1a

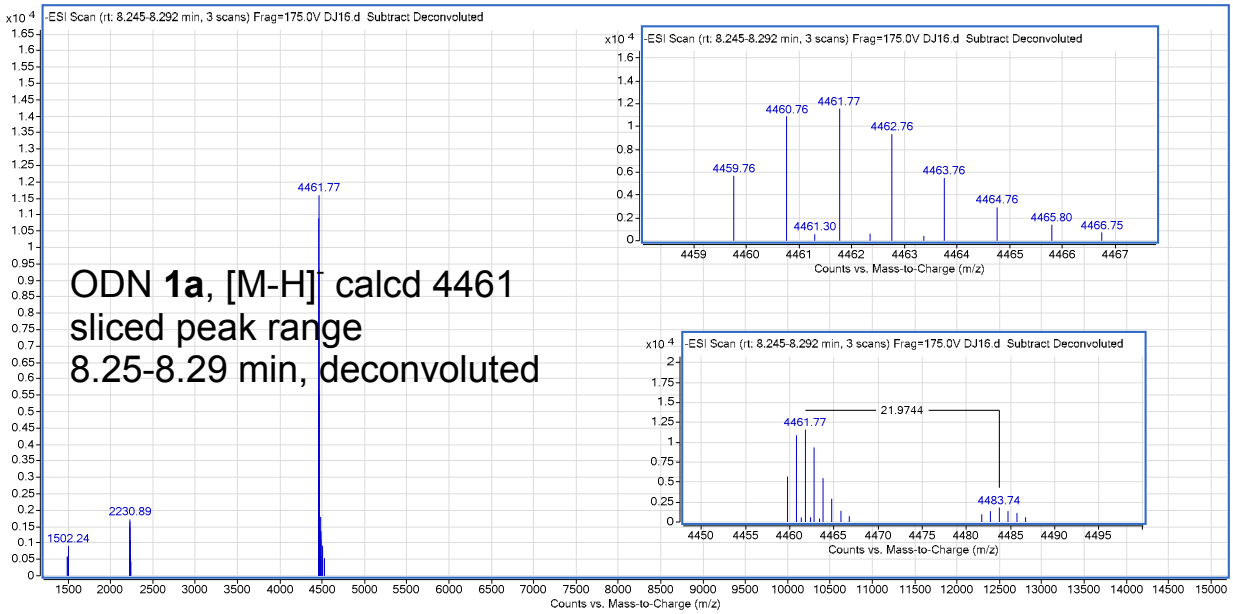
Column	**Agilent Extended C-18, 1.8 µm, 50 × 2.1 mm**
Mobile phase	A: 200 mM HFIP, 8.1 mM TEA in water B: Methanol
Gradient	Time: 0-1-11-11.5-14.5-15 (min) B%: 10-10-70-90-90-10 Post run: 10 min
Flow rate: (mL/min)	0.2
Column temp	40 ^{o}C
Injection Volume	2 uL
Detection	Agilent 1200 Series HPLC with Agilent 6224 Time-of-Flight LC/MS Electrospray Ionization (ESI), Negative Mode, 400-3200 mAu, data collection started at 2 min after injection.

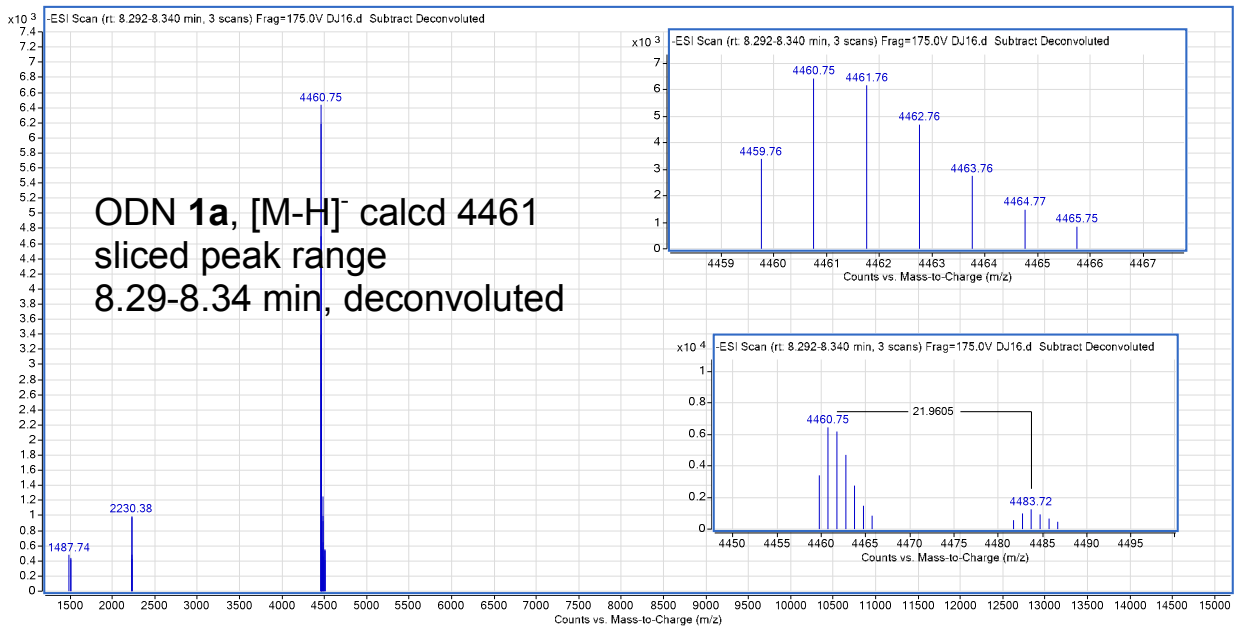

- TIC Scan Blankmer16X100R.d
Total ion chromatogram
System blank (injection of water)
- TIC Scan Mer16X10R.d
Total ion chromatogram
Sample run of ODN 1a
* 904745.64
8.221
Counts vs. Acquisition Time (min)


-ESI Scan (rt: 8.150-8.458 min, 14 scans) Frag=175.0V DJ16.d Subtract Deconvoluted
ODN 1a, [M-H]- calcd 4461
full elution peak range
8.15-8.45 min, deconvoluted
4461.77
2230.39
1501.58
Counts vs. Mass-to-Charge (m/z)
4460.76
4459.76
4462.76
4463.76
4464.77
4465.76
21.9736
4483.74

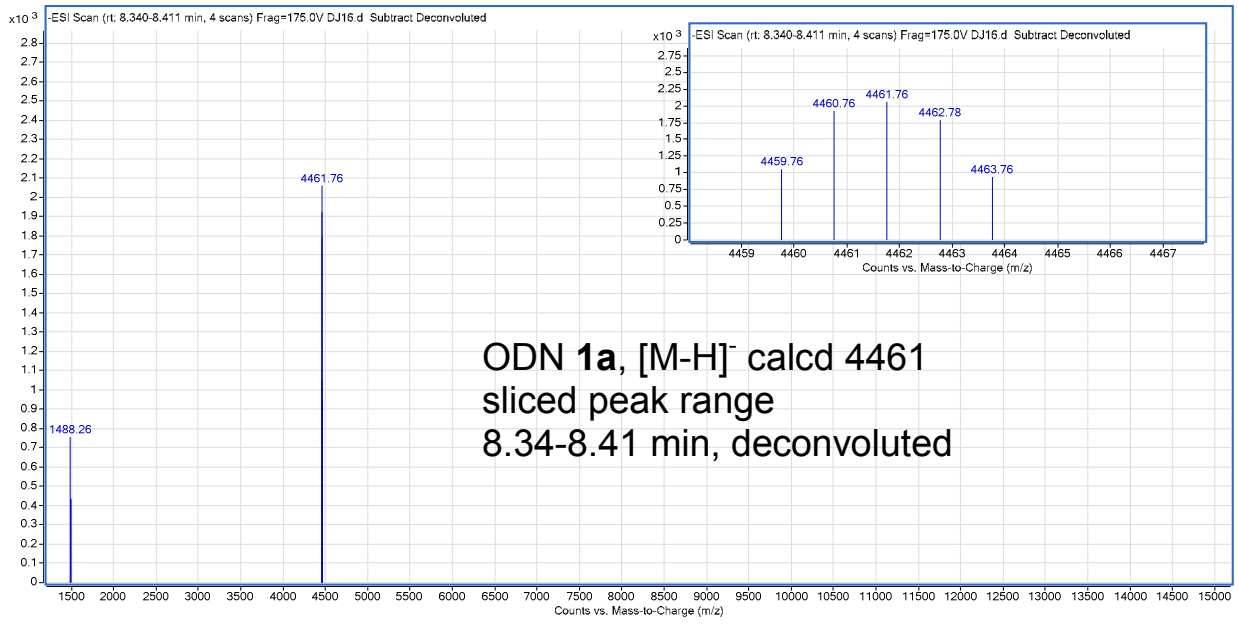

-ESI Scan (rt: 8.150-8.198 min, 3 scans) Frag=175.0V DJ16.d Subtract Deconvoluted
ODN 1a, [M-H]- calcd 4461
sliced peak range
8.15-8.20 min, deconvoluted
4461.77
1488.08
2230.40
Counts vs. Mass-to-Charge (m/z)
4460.76
4459.76
4462.77
4463.76
4464.77
4465.76
21.9871
4483.75


-ESI Scan (rt: 8.198-8.245 min, 3 scans) Frag=175.0V DJ16.d Subtract Deconvoluted
ODN 1a, [M-H]- calcd 4461
sliced peak range
8.20-8.25 min, deconvoluted
4461.76
2230.39
1488.07
4460.76
4461.76
4462.76
4459.76
4463.77
4464.76
4465.75
4466.72
4461.28
4462.29
21.9829
4483.74
Counts vs. Mass-to-Charge (m/z)

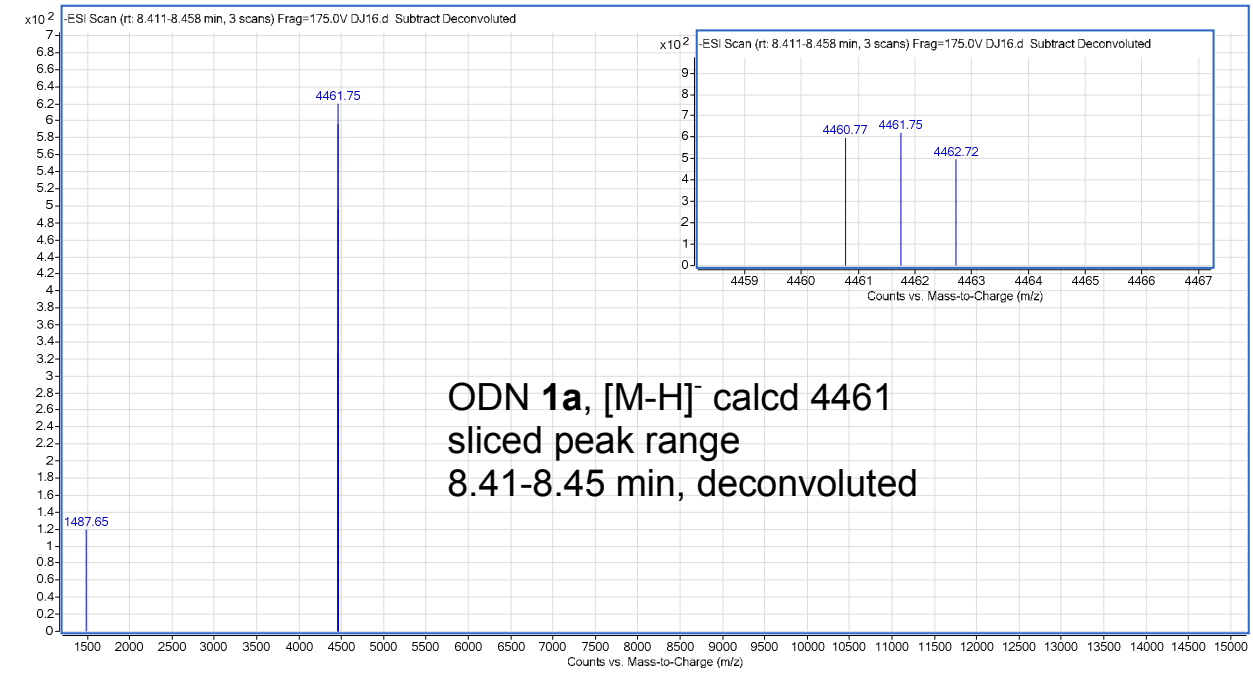

-ESI Scan (rt: 8.245-8.292 min, 3 scans) Frag=175.0V DJ16.d Subtract Deconvoluted
ODN 1a, [M-H]- calcd 4461
sliced peak range
8.25-8.29 min, deconvoluted
4461.77
2230.89
1502.24
4460.76
4461.77
4462.76
4459.76
4463.76
4464.76
4465.80
4466.75
4461.30
21.9744
4483.74
Counts vs. Mass-to-Charge (m/z)



ODN **1a**, [M-H]$^-$ calcd 4461
sliced peak range
8.29-8.34 min, deconvoluted

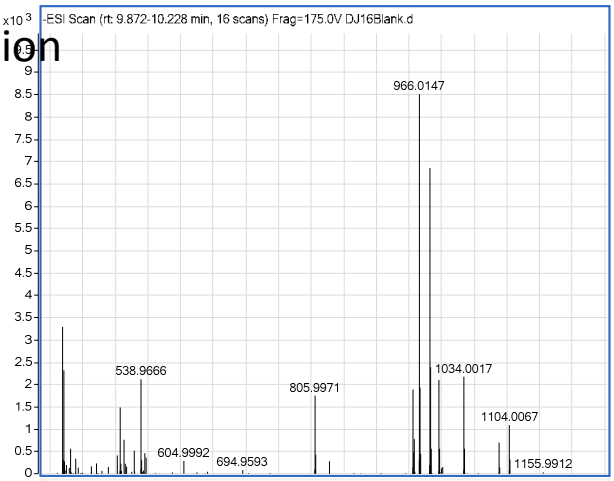


ODN **1a**, [M-H]$^-$ calcd 4461
sliced peak range
8.34-8.41 min, deconvoluted



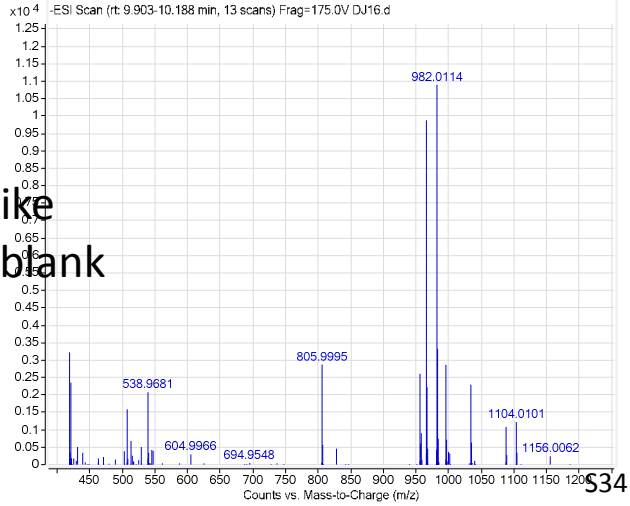
ODN **1a**, $[M-H]^-$ calcd 4461
sliced peak range
8.41-8.45 min, deconvoluted

System blank (injection of water)



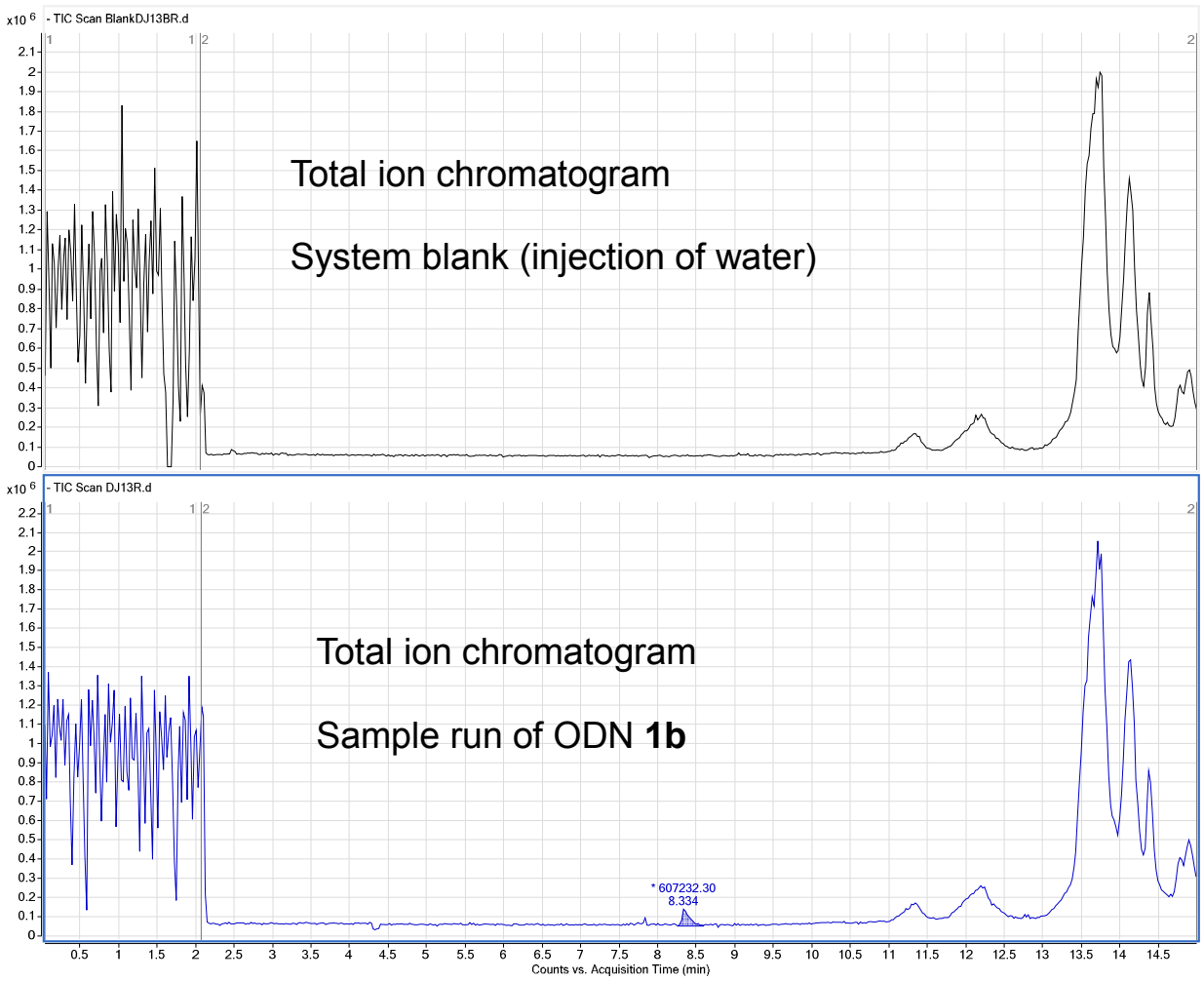
Sample DJ16

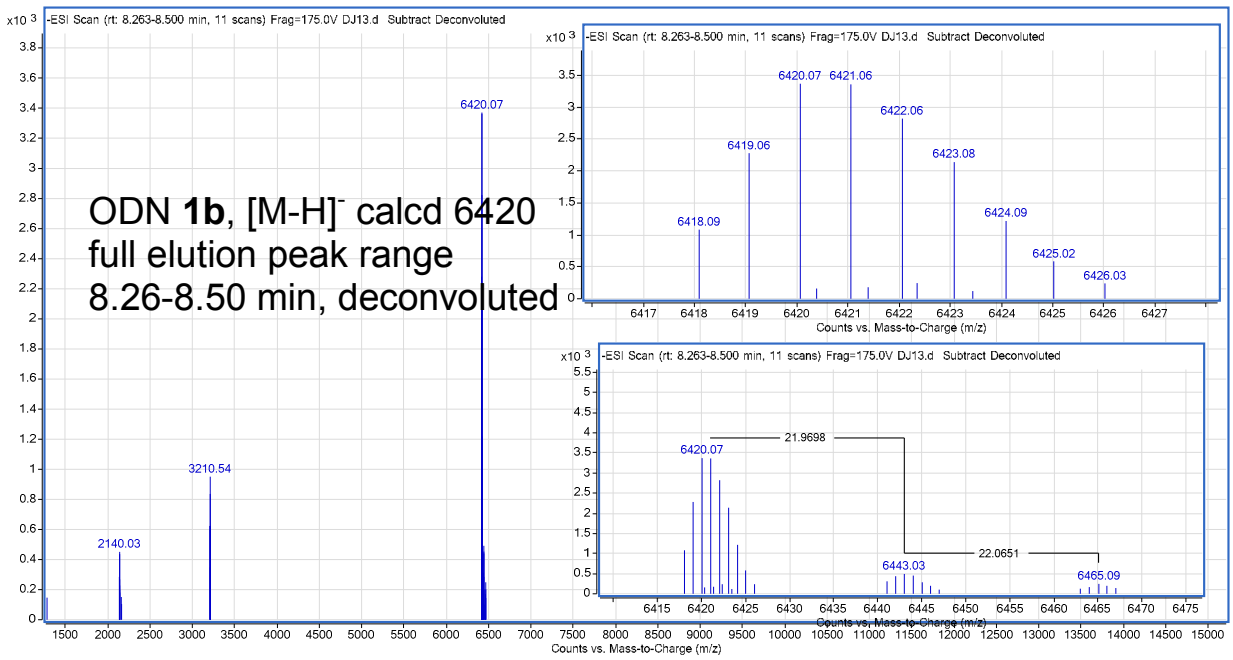
Just a system spike
Same ions as in blank



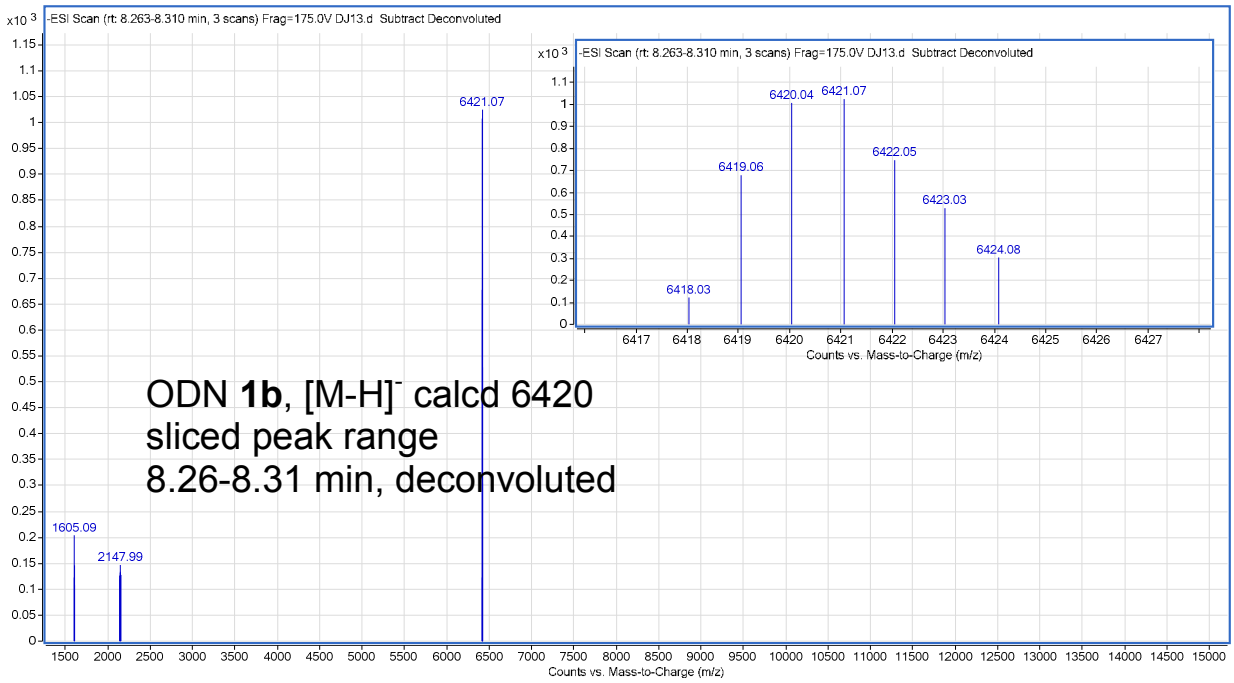
The following pages (S35-S39) contain LC-MS data for ODN 1b

Column	**Agilent Extended C-18, 1.8 µm, 50 × 2.1 mm**
Mobile phase	A: 200 mM HFIP, 8.1 mM TEA in water B: Methanol
Gradient	Time: 0-1-11-11.5-14.5-15 (min) B%: 10-10-70-90-90-10 Post run: 10 min
Flow rate: (mL/min)	0.2
Column temp	40 ^{o}C
Injection Volume	2 uL
Detection	Agilent 1200 Series HPLC with Agilent 6224 Time-of-Flight LC/MS Electrospray Ionization (ESI), Negative Mode, 400-3200 mAu, data collection started at 2 min after injection.

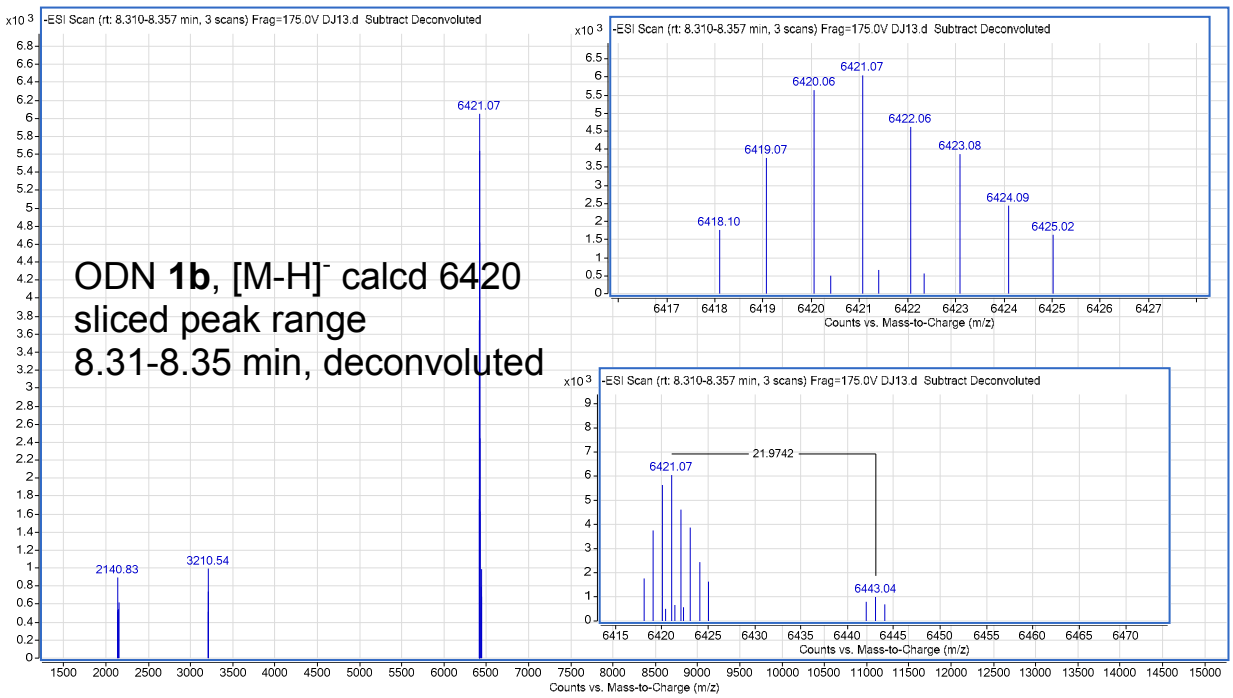

x10 6 - TIC Scan BlankDJ13BR.d
Total ion chromatogram
System blank (injection of water)
x10 6 - TIC Scan DJ13R.d
Total ion chromatogram
Sample run of ODN 1b
* 607232.30
8.334
Counts vs. Acquisition Time (min)

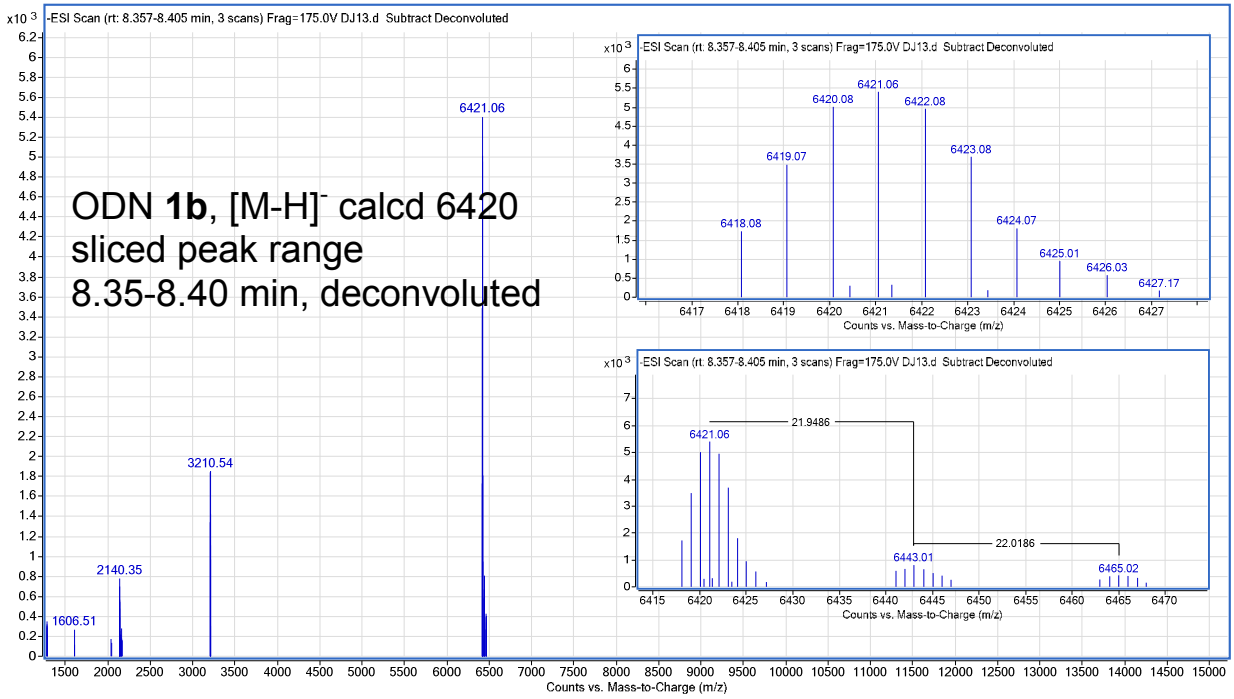


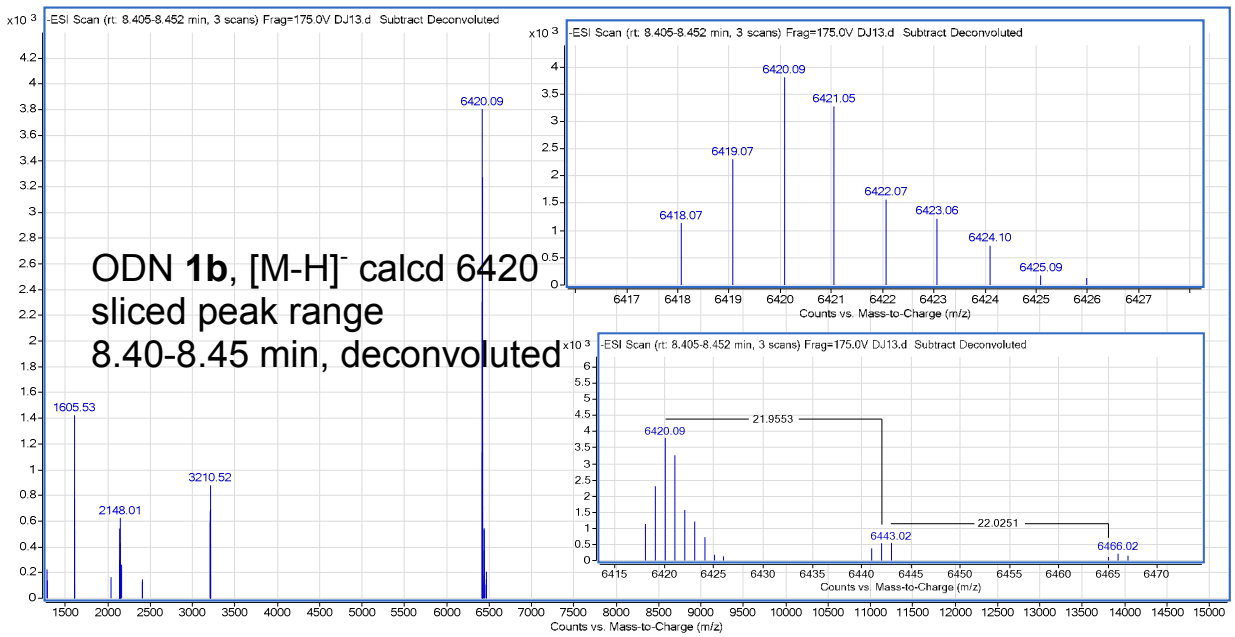
ODN **1b**, [M-H]$^-$ calcd 6420
full elution peak range
8.26-8.50 min, deconvoluted



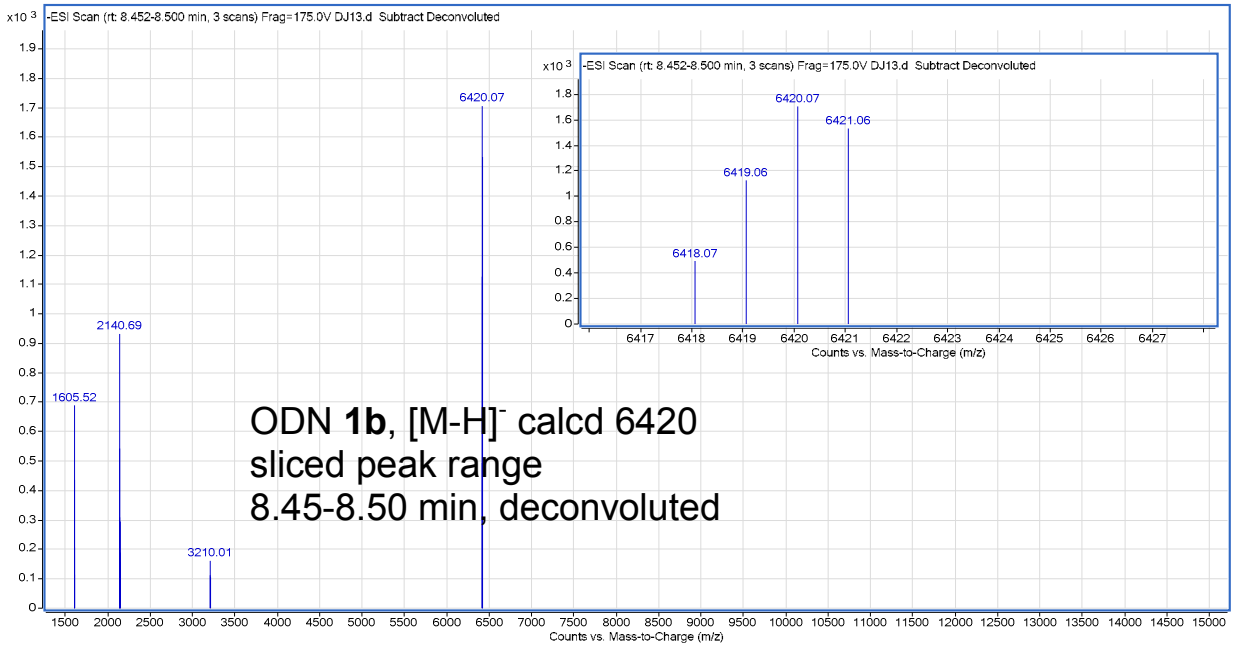
ODN **1b**, [M-H]$^-$ calcd 6420
sliced peak range
8.26-8.31 min, deconvoluted


-ESI Scan (rt: 8.310-8.357 min, 3 scans) Frag=175.0V DJ13.d Subtract Deconvoluted
6421.07
2140.83
3210.54
Counts vs. Mass-to-Charge (m/z)
ODN 1b, [M-H]- calcd 6420
sliced peak range
8.31-8.35 min, deconvoluted
6421.07
6420.06
6422.06
6419.07
6423.08
6424.09
6418.10
6425.02
21.9742
6443.04


-ESI Scan (rt: 8.357-8.405 min, 3 scans) Frag=175.0V DJ13.d Subtract Deconvoluted
6421.06
3210.54
2140.35
1606.51
Counts vs. Mass-to-Charge (m/z)
ODN 1b, [M-H]- calcd 6420
sliced peak range
8.35-8.40 min, deconvoluted
6421.06
6420.08
6422.08
6419.07
6423.08
6418.08
6424.07
6425.01
6426.03
6427.17
21.9486
22.0186
6443.01
6465.02



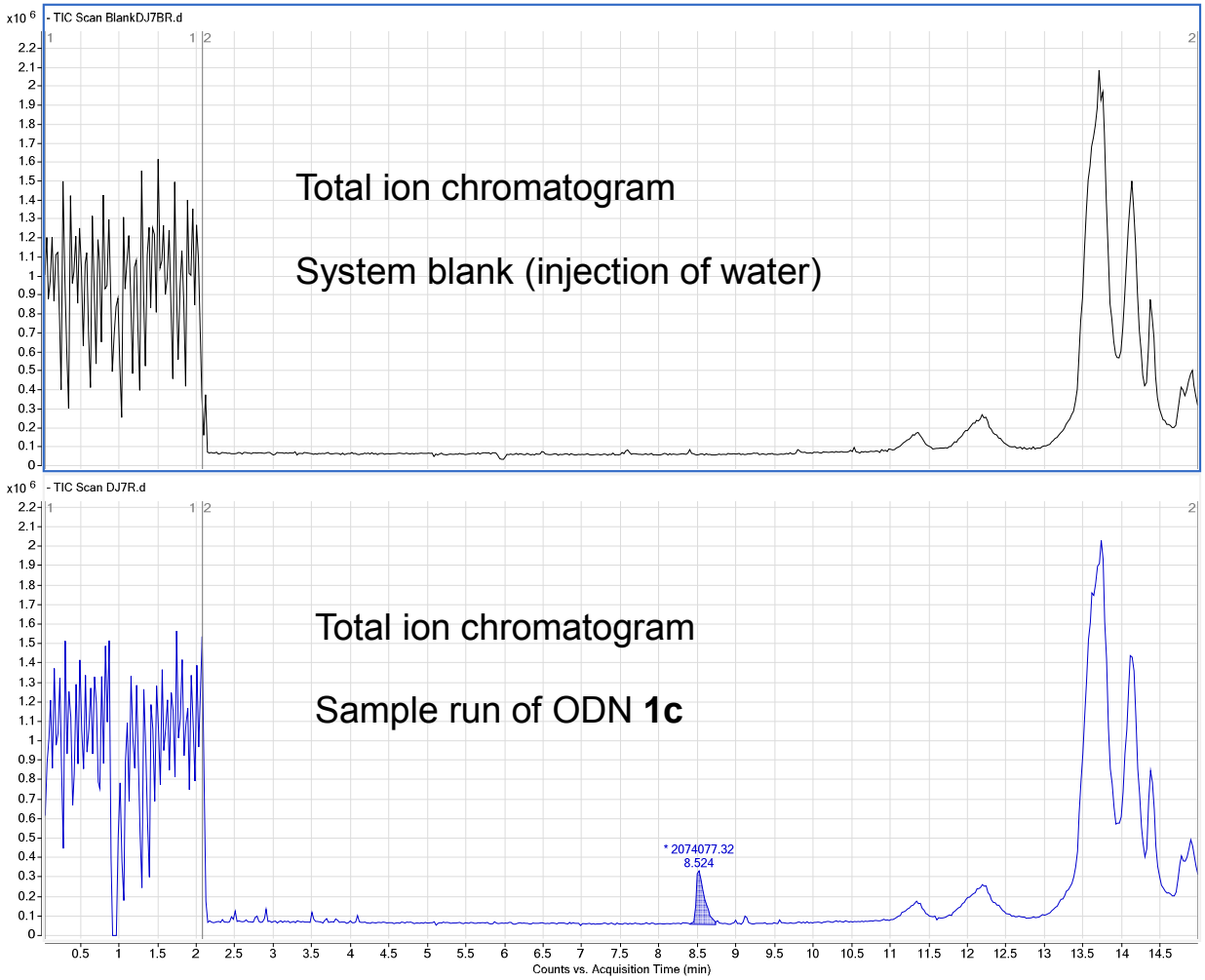
ODN **1b**, [M-H]$^-$ calcd 6420
sliced peak range
8.40-8.45 min, deconvoluted

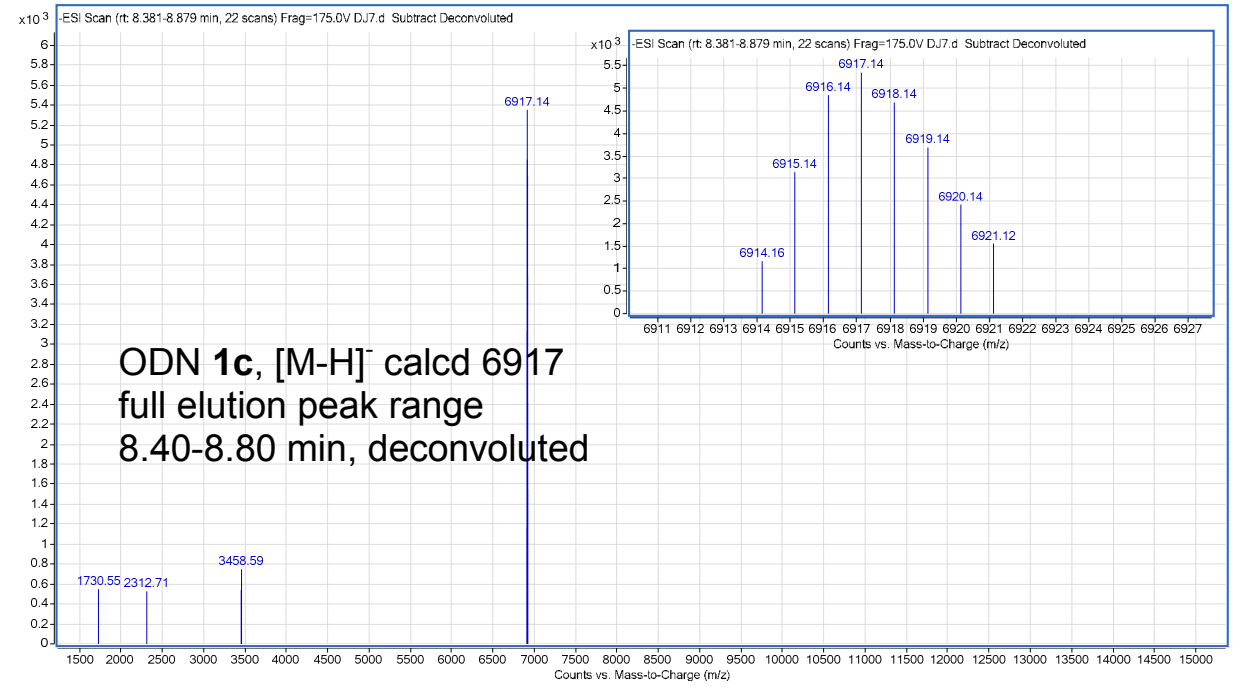


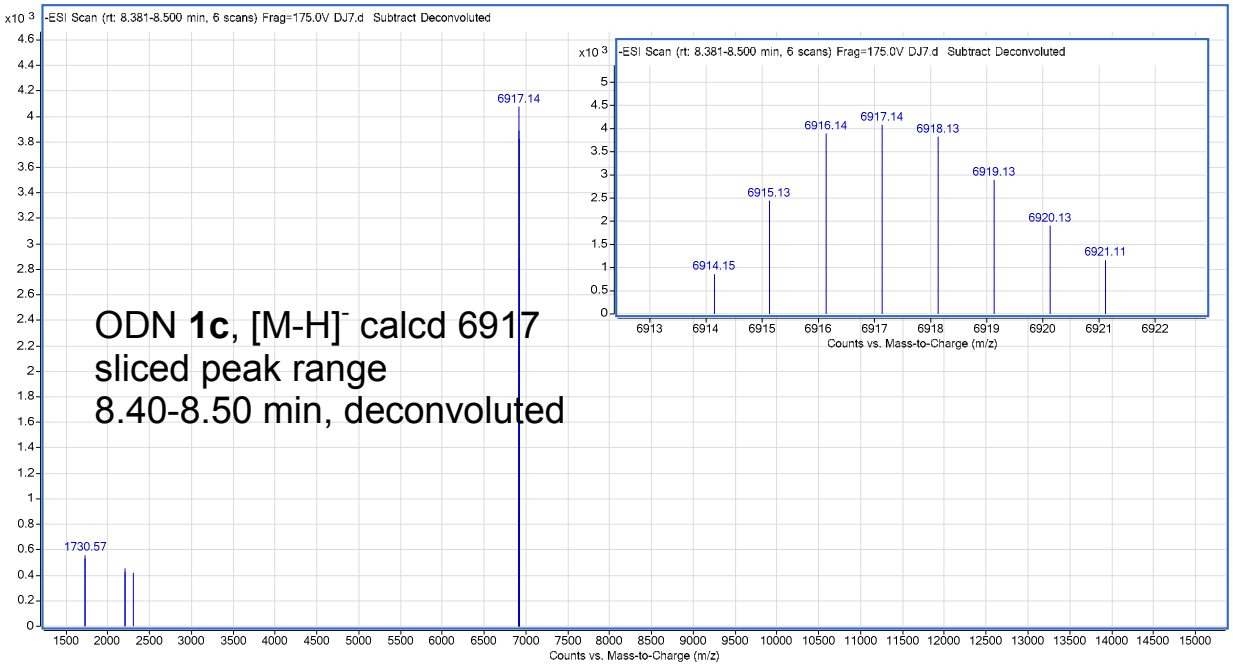
ODN **1b**, [M-H]$^-$ calcd 6420
sliced peak range
8.45-8.50 min, deconvoluted

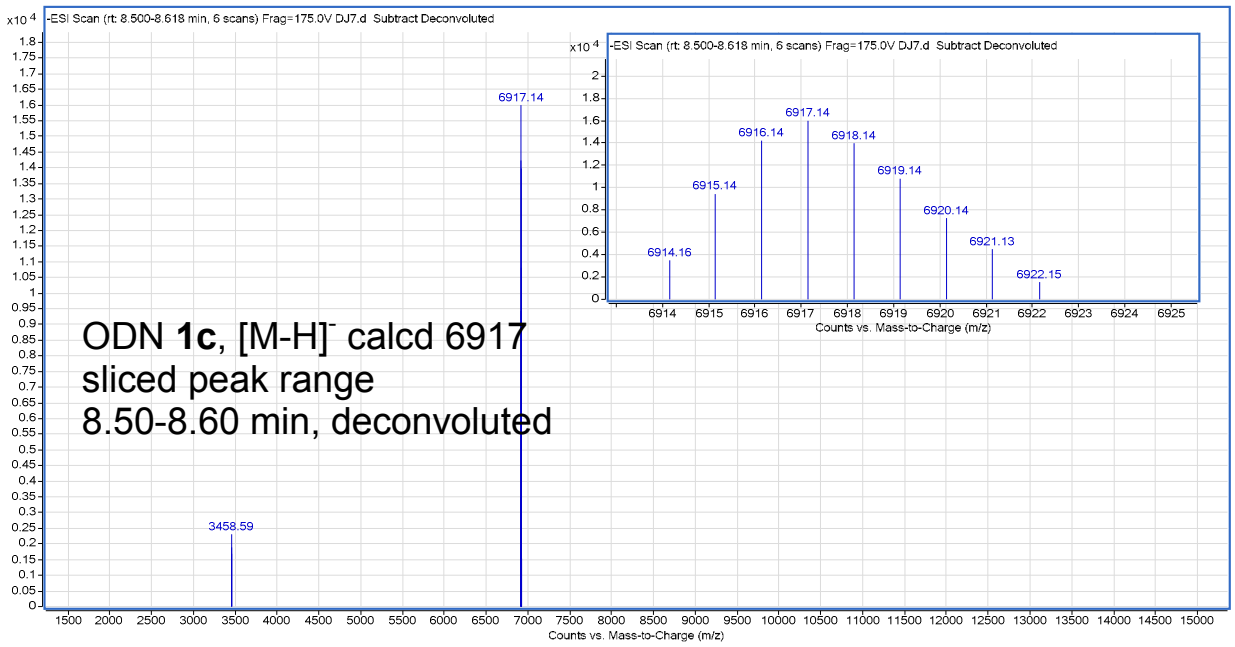
The following pages (S40-S45) contain LC-MS data for ODN 1c

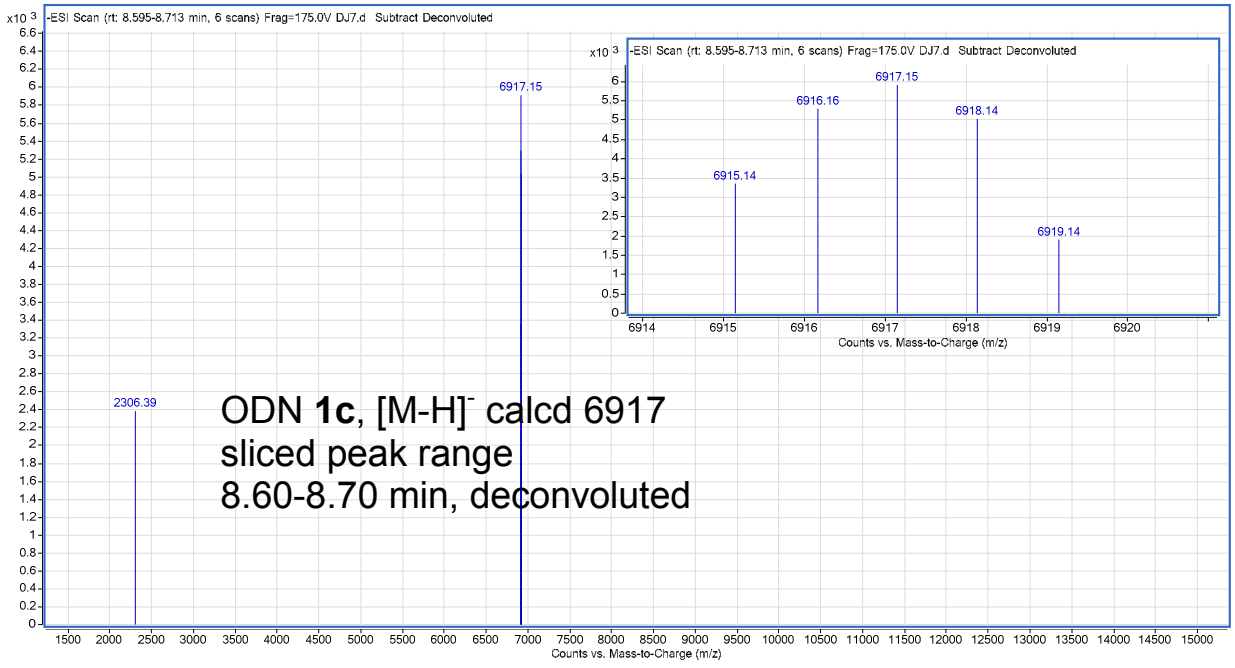
Column	**Agilent Extended C-18, 1.8 µm, 50 × 2.1 mm**
Mobile phase	A: 200 mM HFIP, 8.1 mM TEA in water B: Methanol
Gradient	Time: 0-1-11-11.5-14.5-15 (min) B%: 10-10-70-90-90-10 Post run: 10 min
Flow rate: (mL/min)	0.2
Column temp	40 ^{o}C
Injection Volume	2 uL
Detection	Agilent 1200 Series HPLC with Agilent 6224 Time-of-Flight LC/MS Electrospray Ionization (ESI), Negative Mode, 400-3200 mAu, data collection started at 2 min after injection.

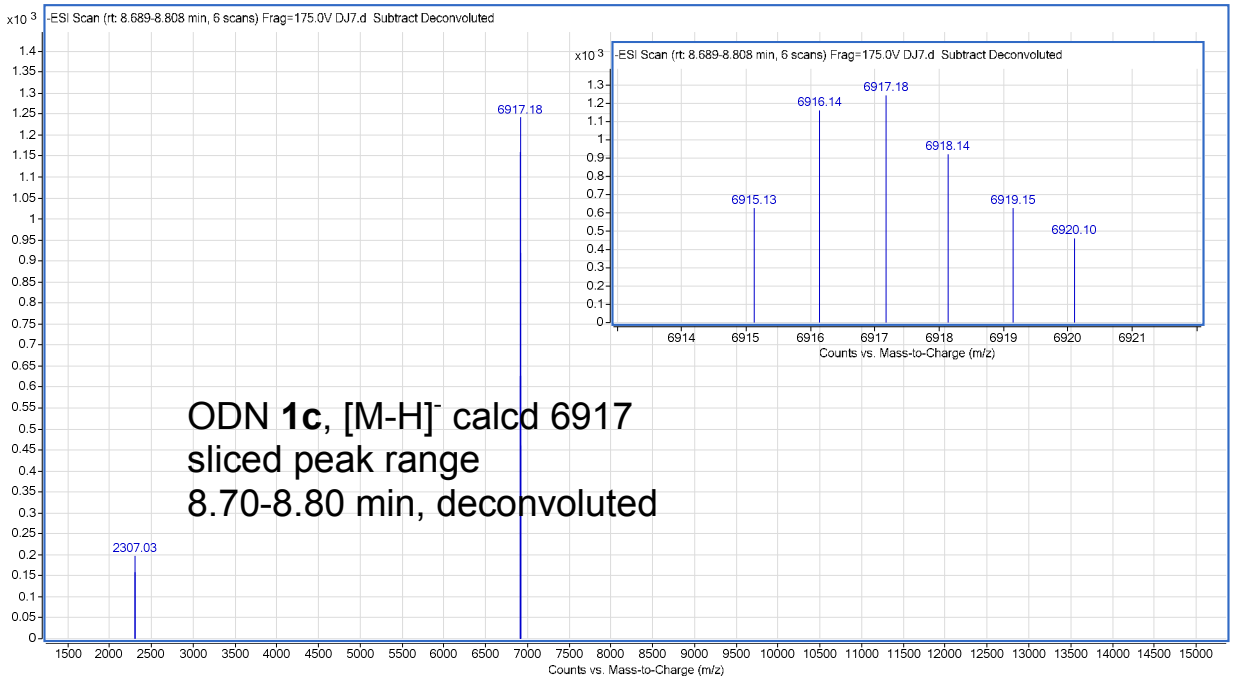

x10 6
- TIC Scan BlankDJ7BR.d
Total ion chromatogram
System blank (injection of water)
x10 6
- TIC Scan DJ7R.d
Total ion chromatogram
Sample run of ODN 1c
* 2074077.32
8.524
Counts vs. Acquisition Time (min)


-ESI Scan (rt: 8.381-8.879 min, 22 scans) Frag=175.0V DJ7.d Subtract Deconvoluted
6917.14
3458.59
1730.55
2312.71
Counts vs. Mass-to-Charge (m/z)
ODN 1c, [M-H]- calcd 6917
full elution peak range
8.40-8.80 min, deconvoluted
6914.16
6915.14
6916.14
6917.14
6918.14
6919.14
6920.14
6921.12

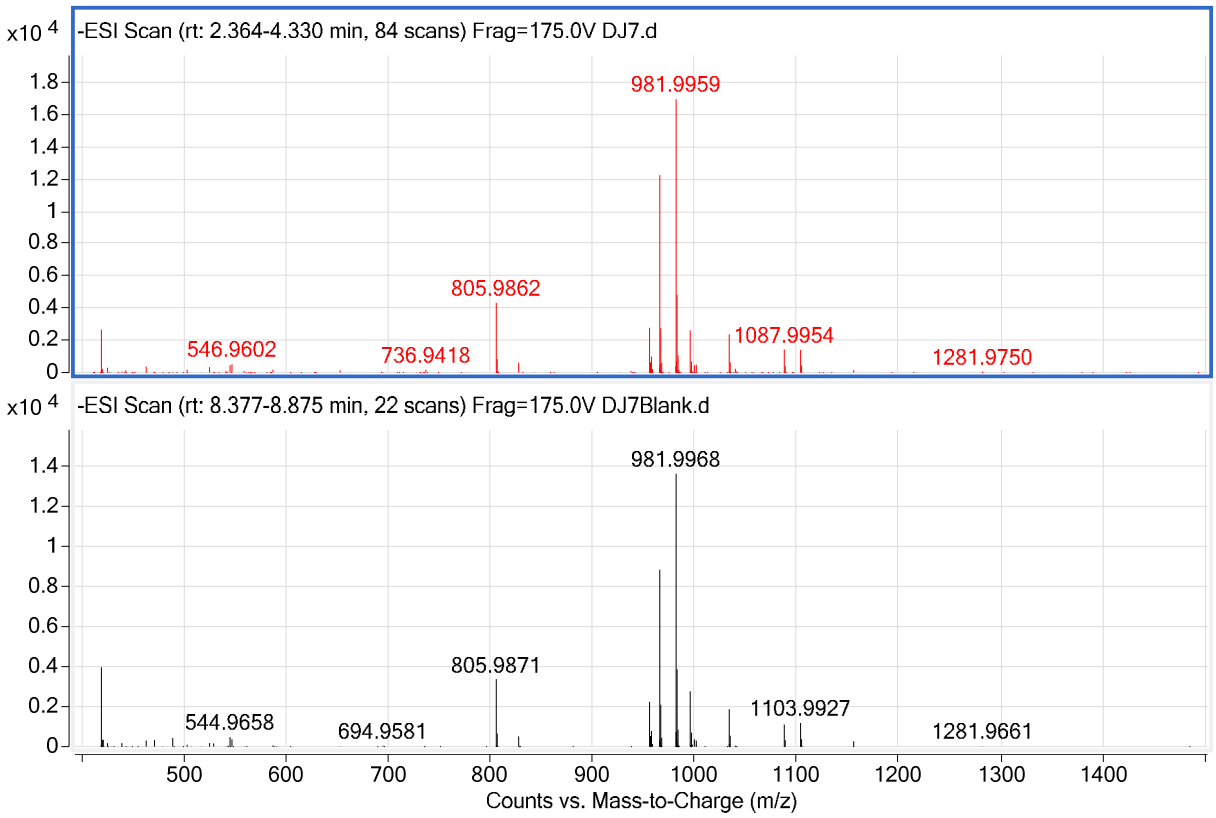

-ESI Scan (rt: 8.381-8.500 min, 6 scans) Frag=175.0V DJ7.d Subtract Deconvoluted
6917.14
1730.57
Counts vs. Mass-to-Charge (m/z)
ODN 1c, [M-H]- calcd 6917
sliced peak range
8.40-8.50 min, deconvoluted
6914.15
6915.13
6916.14
6917.14
6918.13
6919.13
6920.13
6921.11

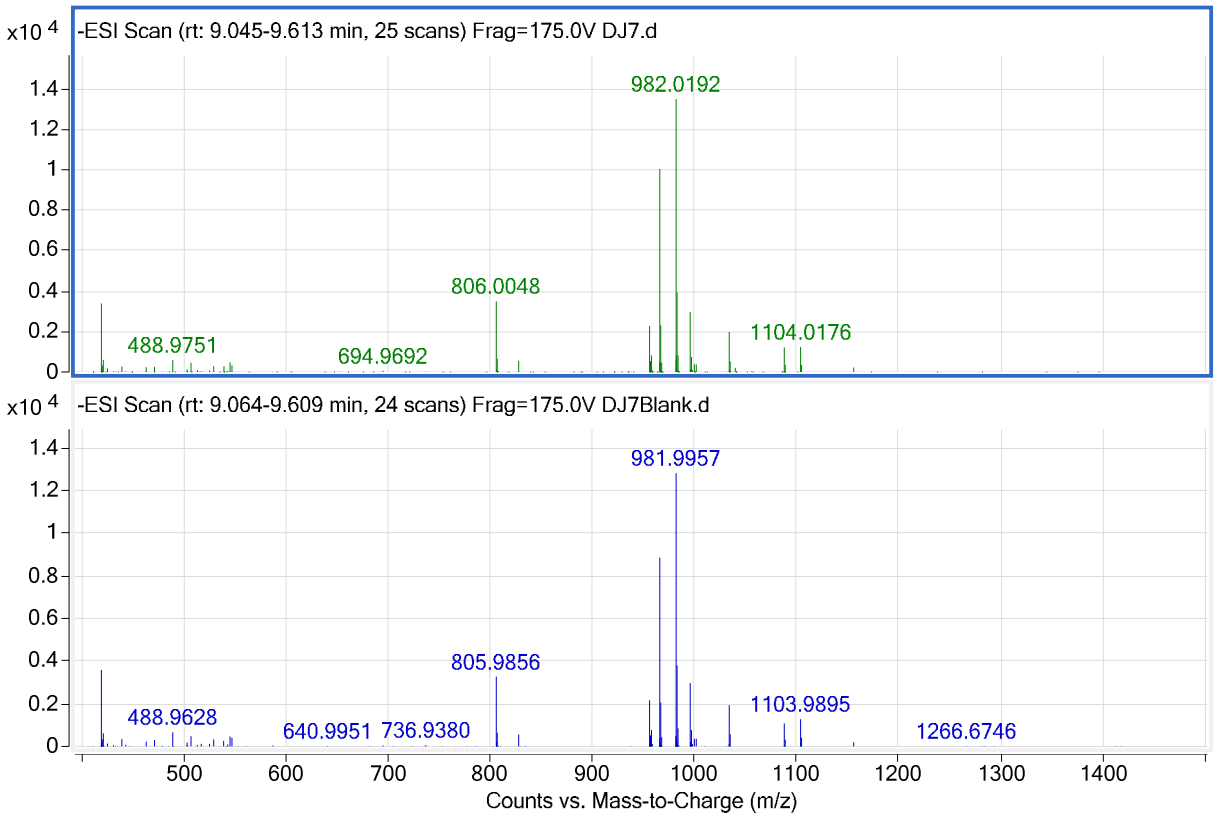

-ESI Scan (rt: 8.500-8.618 min, 6 scans) Frag=175.0V DJ7.d Subtract Deconvoluted
6917.14
3458.59
ODN 1c, [M-H]- calcd 6917
sliced peak range
8.50-8.60 min, deconvoluted
Counts vs. Mass-to-Charge (m/z)
-ESI Scan (rt: 8.500-8.618 min, 6 scans) Frag=175.0V DJ7.d Subtract Deconvoluted
6914.16
6915.14
6916.14
6917.14
6918.14
6919.14
6920.14
6921.13
6922.15
Counts vs. Mass-to-Charge (m/z)

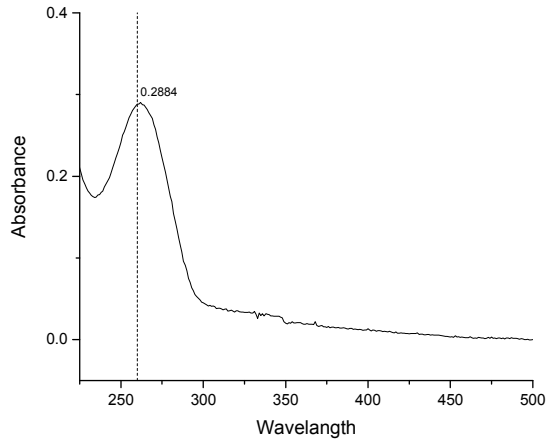

-ESI Scan (rt: 8.595-8.713 min, 6 scans) Frag=175.0V DJ7.d Subtract Deconvoluted
6917.15
2306.39
ODN 1c, [M-H]- calcd 6917
sliced peak range
8.60-8.70 min, deconvoluted
Counts vs. Mass-to-Charge (m/z)
-ESI Scan (rt: 8.595-8.713 min, 6 scans) Frag=175.0V DJ7.d Subtract Deconvoluted
6915.14
6916.16
6917.15
6918.14
6919.14
Counts vs. Mass-to-Charge (m/z)



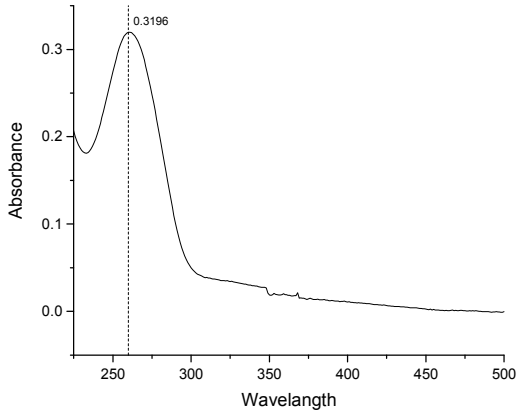
Other small elution peaks: same ions as in solvent blank



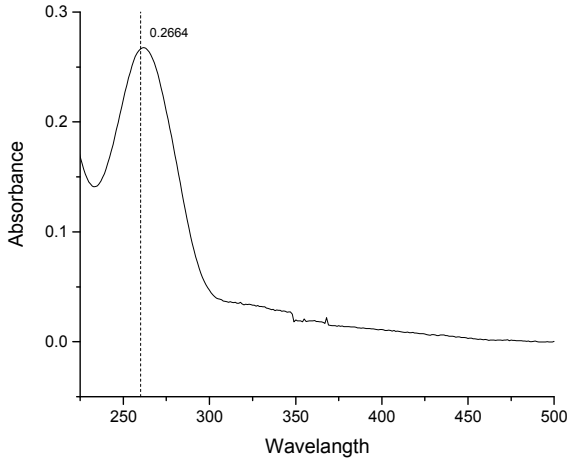

x10 4
-ESI Scan (rt: 9.045-9.613 min, 25 scans) Frag=175.0V DJ7.d
982.0192
806.0048
1104.0176
488.9751
694.9692
x10 4
-ESI Scan (rt: 9.064-9.609 min, 24 scans) Frag=175.0V DJ7Blank.d
981.9957
805.9856
1103.9895
488.9628
640.9951
736.9380
1266.6746
Counts vs. Mass-to-Charge (m/z)



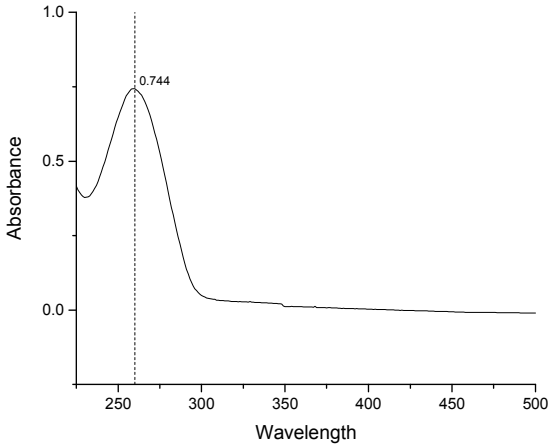
UV of 15-mer ODN **1a**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 28.84 (0.2884 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



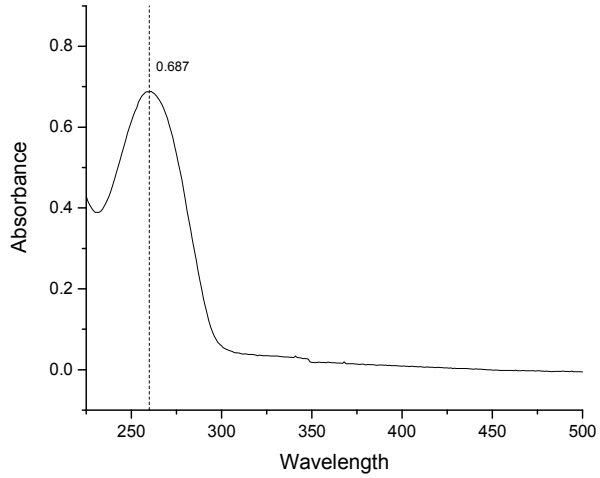
UV of 21-mer ODN **1b**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 31.98 (0.3198 × 5 × 100 μL ÷10 μL × 2 mL ÷ 1 mL).



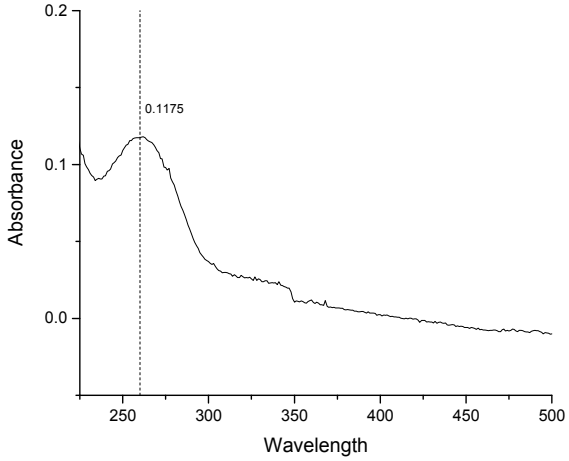
UV of 23-mer ODN **1c**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 26.64 (0.2664 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



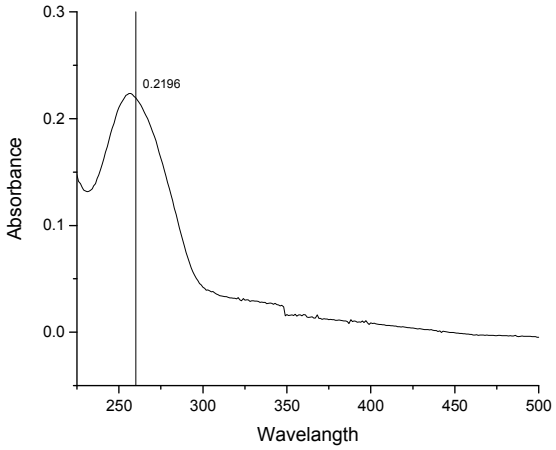
UV of 19-mer ODN **1d**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 74.4 (0.744 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



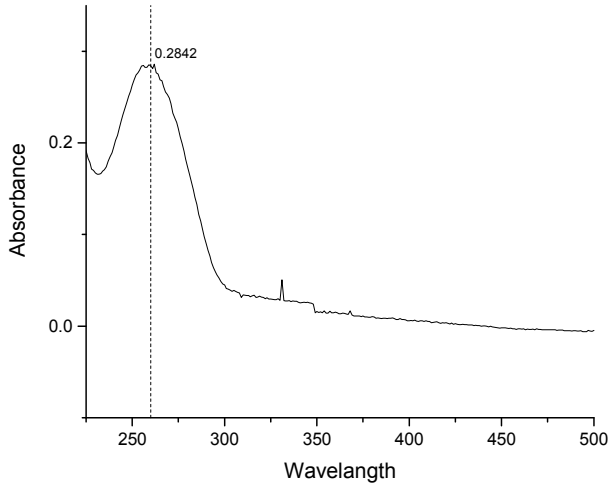
UV of 20-mer ODN **1e**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 68.7 (0.687 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



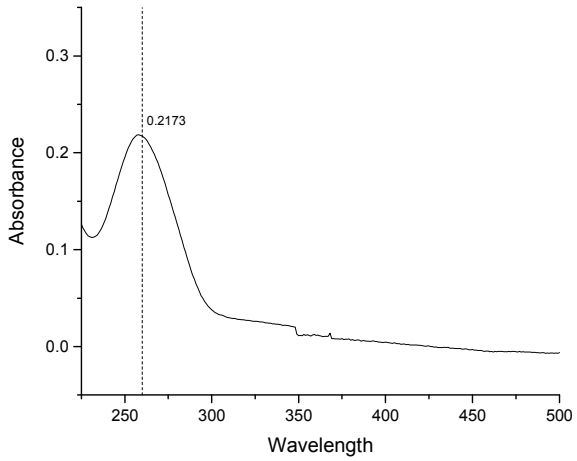
UV of 20-mer ODN **1f**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 11.75 (0.1175 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



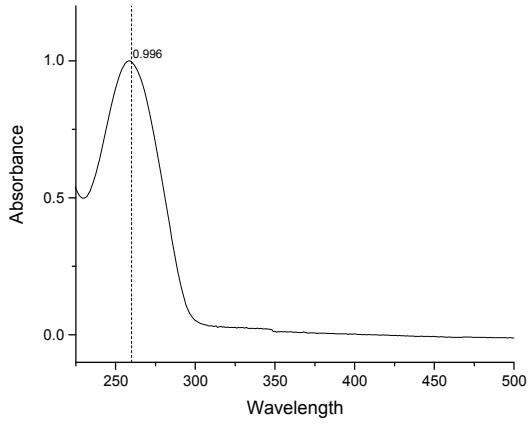
UV of 20-mer ODN **1g**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 21.96 (0.2196 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



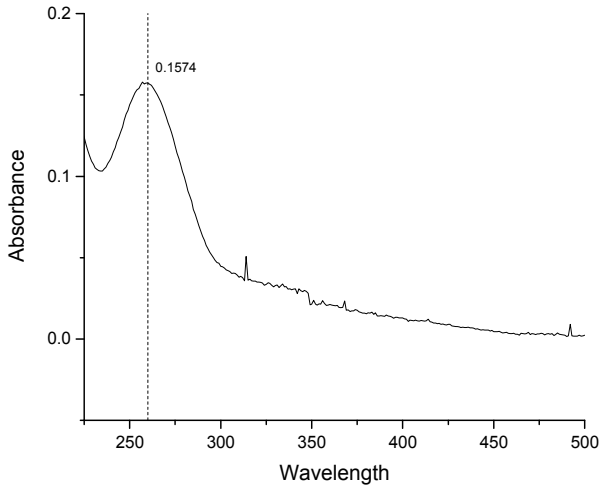
UV of 20-mer ODN **1h**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 28.42 (0.2842 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



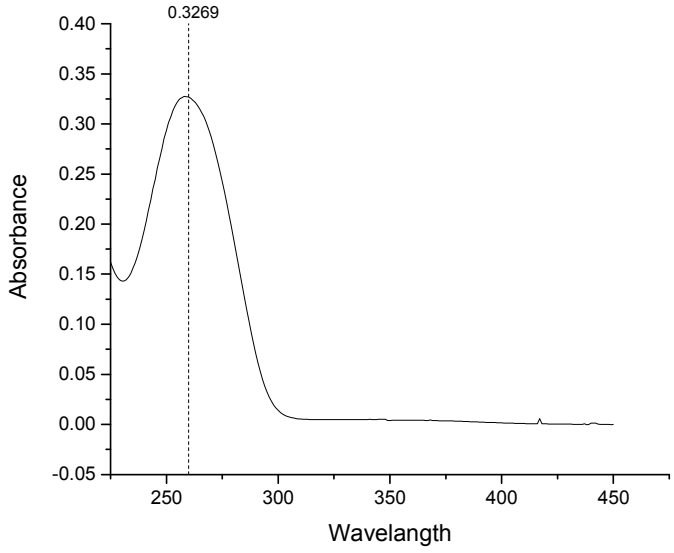
UV of 22-mer ODN **1j**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 21.73 (0.2173 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



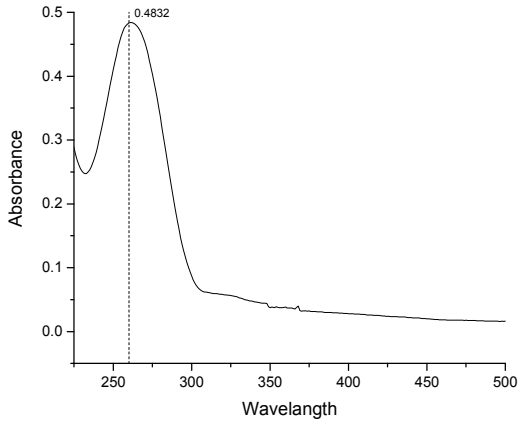
UV of 26-mer ODN **1k**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 99.6 (0.996 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



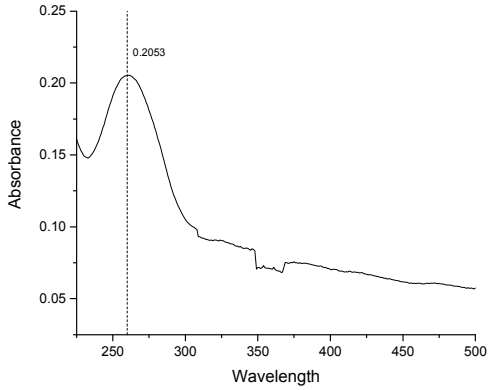
UV of 28-mer ODN **1l**. The ODN was synthesized on a 1 μmol scale. One fifth of the CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 100 μL of water, and 10 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 1 μmol synthesis and purification was calculated to be 15.74 (0.1574 × 5 × 100 μL ÷ 10 μL × 2 mL ÷ 1 mL).



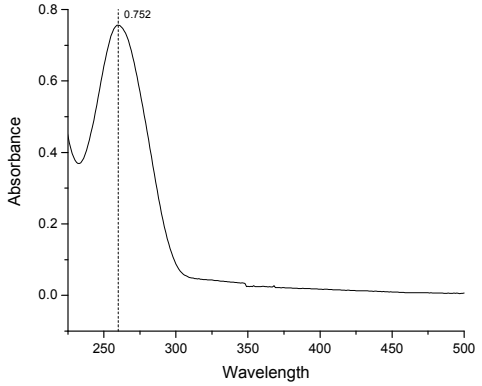
UV of 32-mer ODN **1m**. The ODN was synthesized on a 60 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 5 mL of water, and 5 μL was taken out and diluted to 40 mL to obtain the UV spectrum. The OD_{260} of the 60 μmol synthesis and purification was calculated to be 13,076 (0.3269 × 5 mL ÷ 5 μL × 40 mL ÷ 1 mL).



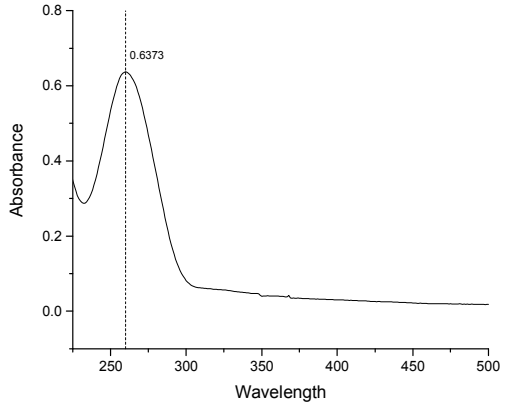
UV of 43-mer ODN **1n**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 9.664 (0.4832 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



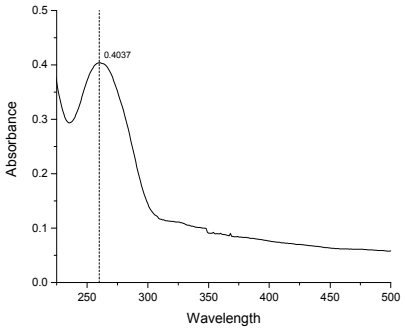
UV of 64-mer ODN **1o**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 4.106 (0.2053 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



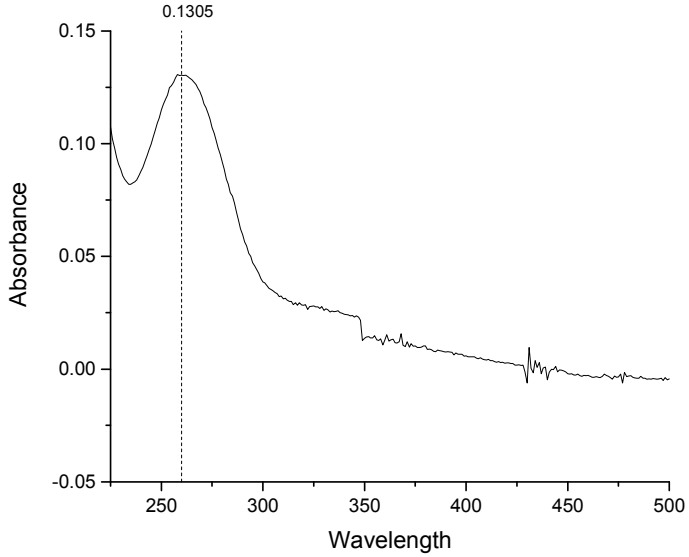
UV of 80-mer ODN **1p**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 15.04 (0.7520 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



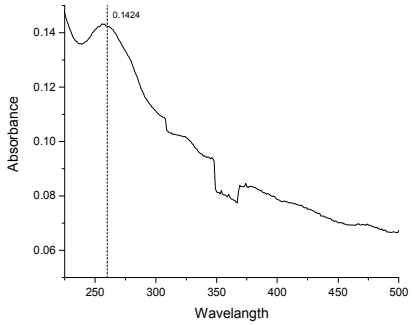
UV of 90-mer ODN **1q**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be12.746 (0.6373 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



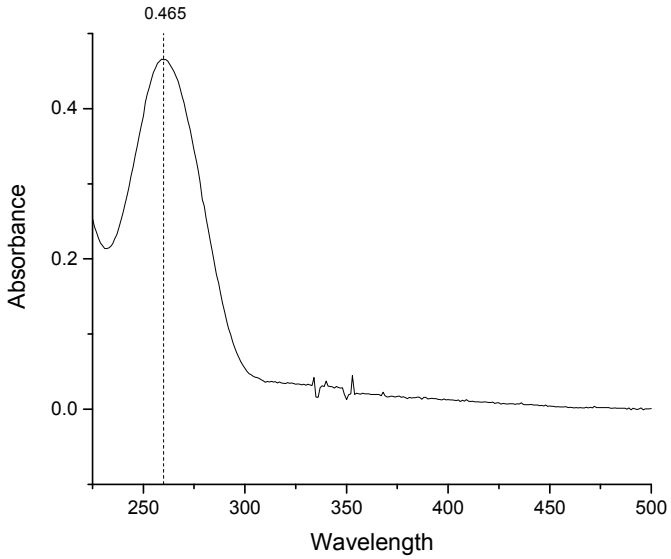
UV of 110-mer ODN **1r**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 8.074 (0.4037 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



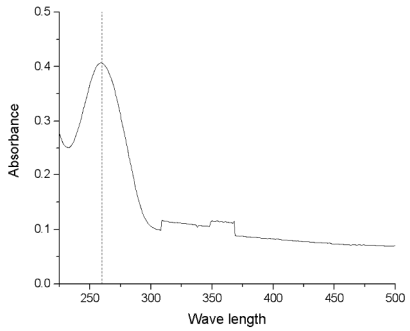
UV of 151-mer ODN **1s**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 2.61(0.1305 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



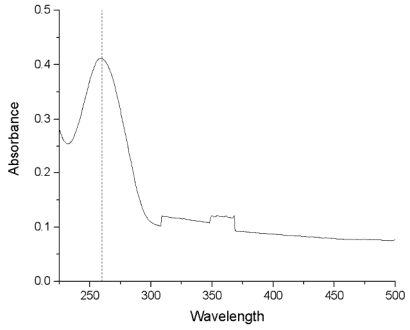
UV of 197-mer ODN **1t**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 2.848 (0.1424 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



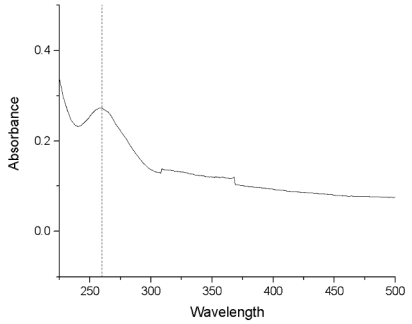
UV of 203-mer ODN **1u**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 9.3 (0.465 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



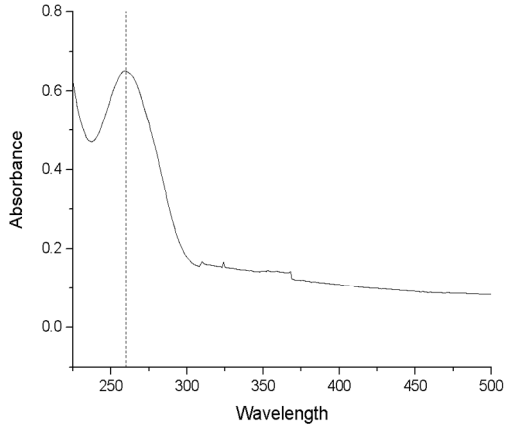
UV of 225-mer ODN **1v**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 6.688 (0.3344 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



UV of 251-mer ODN **1w**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 7.316 (0.3658 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



UV of 275-mer ODN **1x**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 5.456 (0.2728 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).



UV of 303-mer ODN **1y**. The ODN was synthesized on a 0.2 μmol scale. All CPG was subjected to deprotection and cleavage. The purified ODN was dissolved in 200 μL of water, and 20 μL was taken out and diluted to 2 mL to obtain the UV spectrum. The OD_{260} of the 0.2 μmol synthesis and purification was calculated to be 13.012 (0.6506 × 200 μL ÷ 20 μL × 2 mL ÷ 1 mL).