

Supplementary Materials

Synthesis and antisense properties of 2'-F-arabinouridine modified oligonucleotides with 4'-C-OMe substituent

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Table s1 The mass spectra data and HPLC purity of modified oligonucleotides, (**X** = 2'-F,4'-C-OMe-araU, **Y** = 2'-F-araU, **Ts** = 3'-phosphorothioate-T).

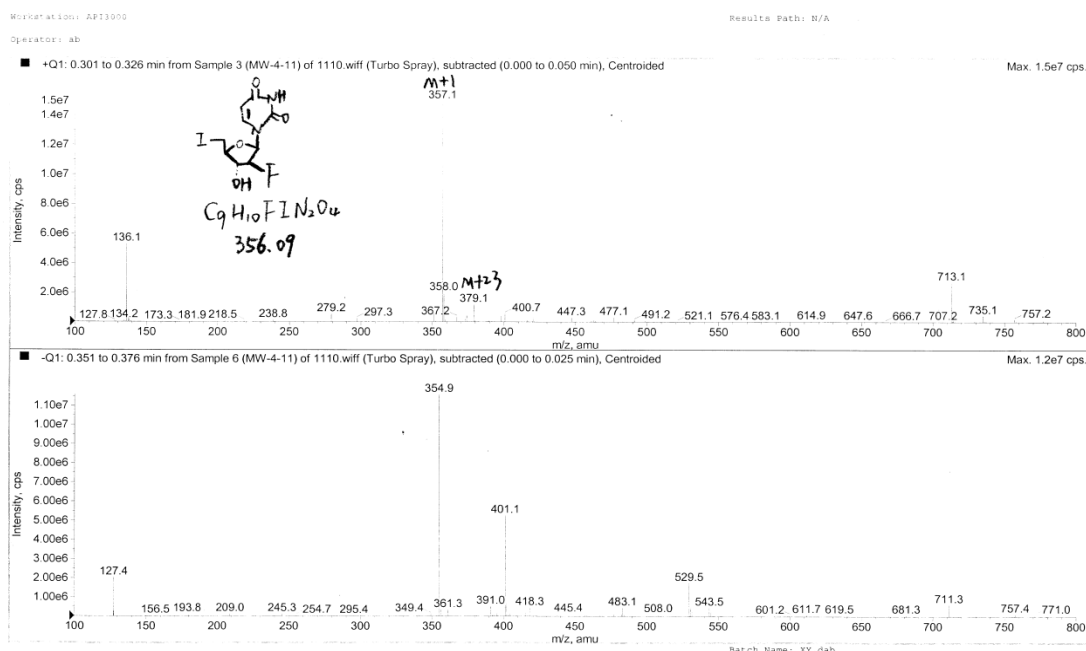
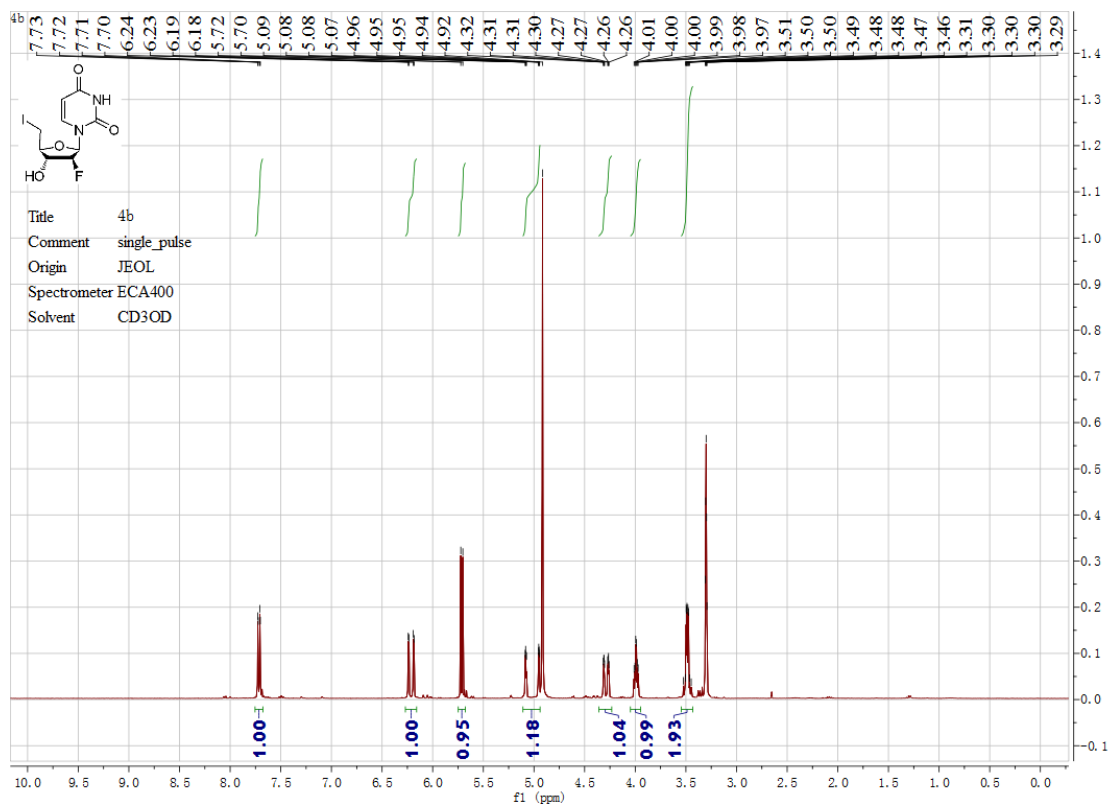
#	Sequence	UV purity/%	Mass Calcd. [M-H] ⁻	Mass Found [M-H] ⁻
ON2	5'-d(GCGTTXTTTGCT)-3'	95.49	3666.4	3666.4
ON3	5'-d(GCGTTYTTTGCT)-3'	97.33	3636.3	3639.3
ON4	5'-d(GCGTTXTXTGCT)-3'	97.67	3700.3	3705.0
ON5	5'-d(GCGXTXTXTGCT)-3'	95.79	3734.3	3739.1
ON7	5'-d(GCGTXGTTTGCT)-3'	99.75	3692.4	3694.7
ON8	5'-d(GCGTTGXTTTGCT)-3'	95.18	3692.4	3693.0
ON10	5'-d(GCGTXATTTGCT)-3'	97.84	3676.4	3676.4
ON11	5'-d(GCGTTAXTTTGCT)-3'	98.56	3676.4	3677.4
ON12	5'-d(TTTTTTTTXXT)-3'	99.28	3013.0	3016.0
ON13	5'-d(TTTTTTTTTYT)-3'	99.22	3058.0	3055.5
ON14	5'-d(TTTTTTTTTTsT)-3'	99.70	2995.0	2998.7

Table s2 ¹H-¹H and ¹H-¹⁹F coupling constant values for 2'-F,4'-C-OMe-araU and 2'-F-araU at 25 °C in D₂O (400 MHz).

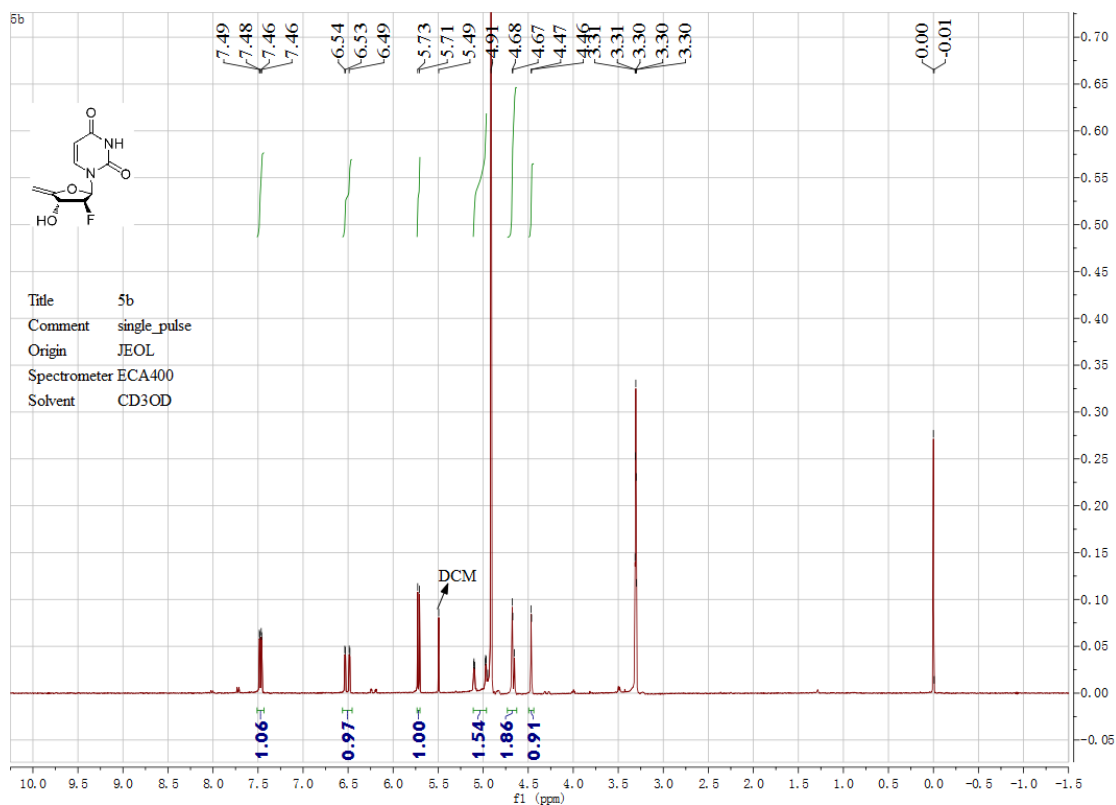
<i>J</i> (Hz) (±0.2)	2'-F,4'-C-OMe-araU	2'-F-araU
H1'-H2''	5.8	4.0
H1'-F2''	9.0	17.5
H2''-H3'	5.6	3.0
H3'-F2'	24.0	21.5
H3'-X4'	-	5.0

NMR spectra of intermediates and phosphoramidite

Compound 2



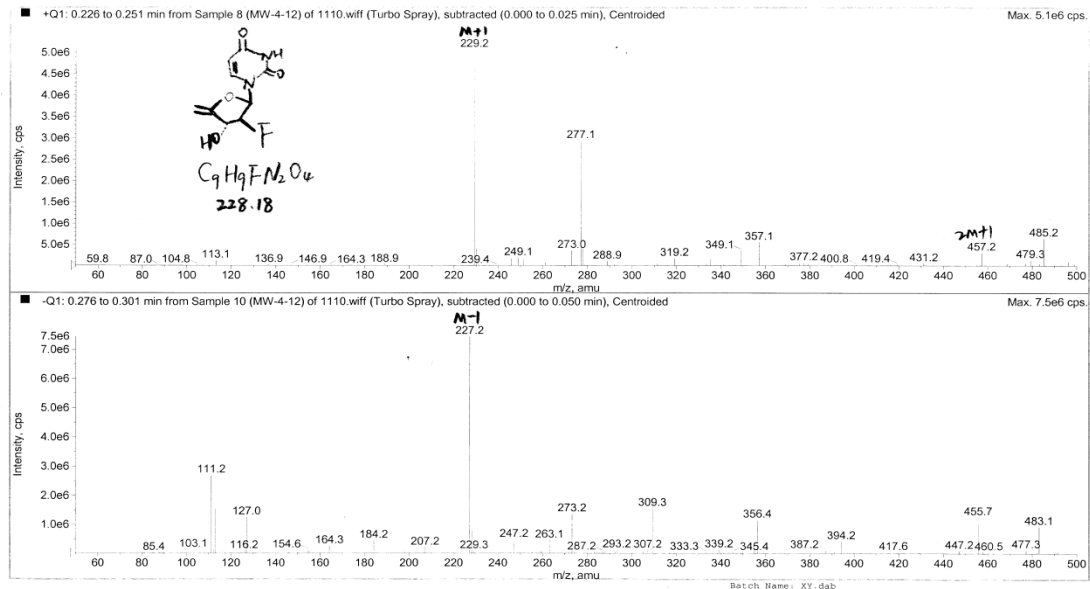
Compound 3



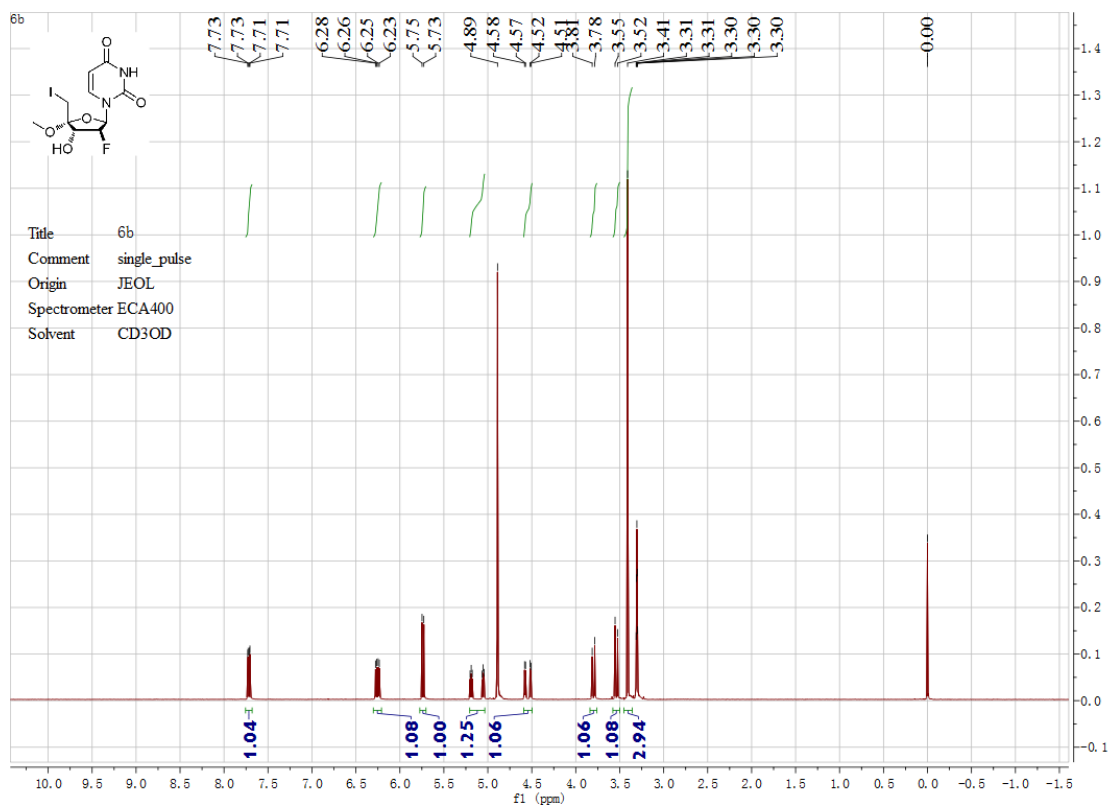
Workstation: API3000

Results Path: N/A

Operator: ab



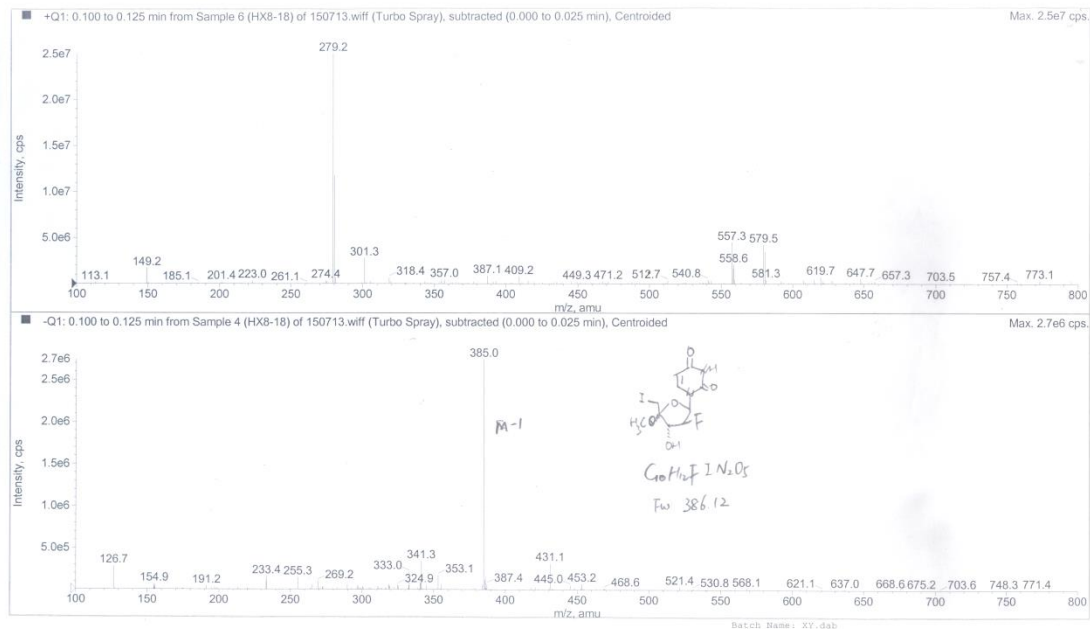
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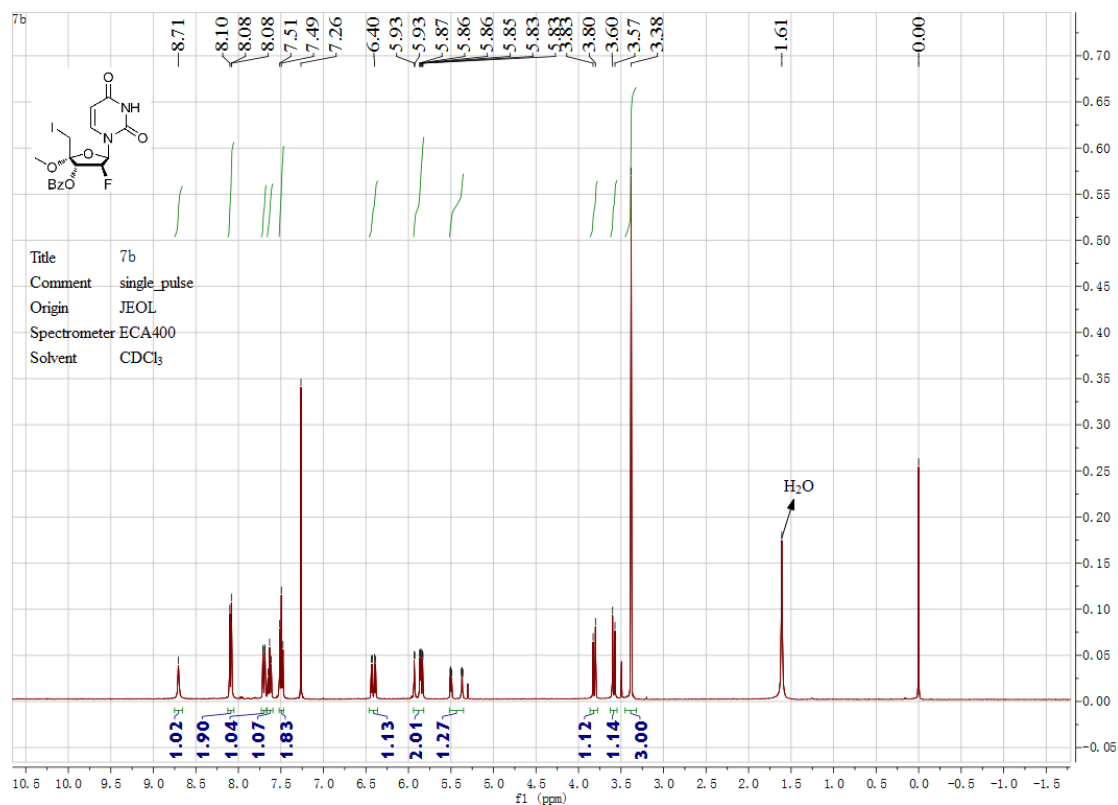
Workstation: AP33000

Results Path: N/A

Operator: ab

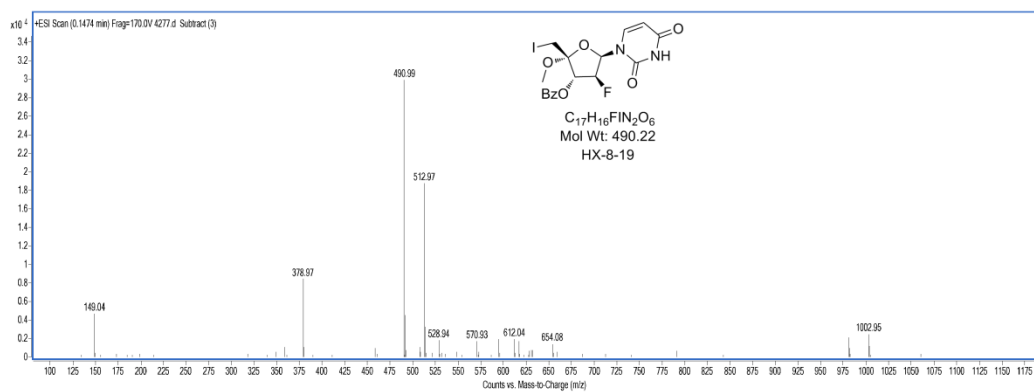


Compound 5

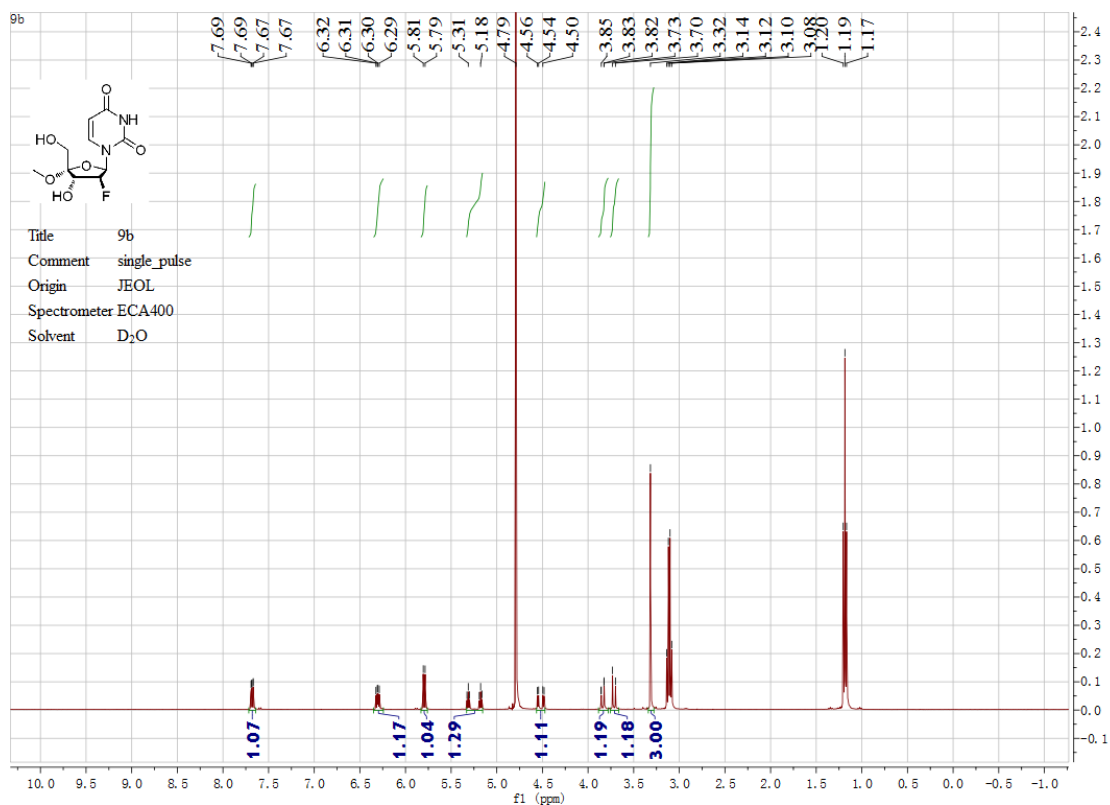


Qualitative Analysis Report

Data Filename	4277.d	Sample Name	HX-8-19A
Instrument Name	TOF G6230A	Acquired Time	2018-08-15
Acq Method	YCL.M	Acquired SW	6200 series TOF/6500 series
IRM Calibration Status	Success		
User Chromatograms			

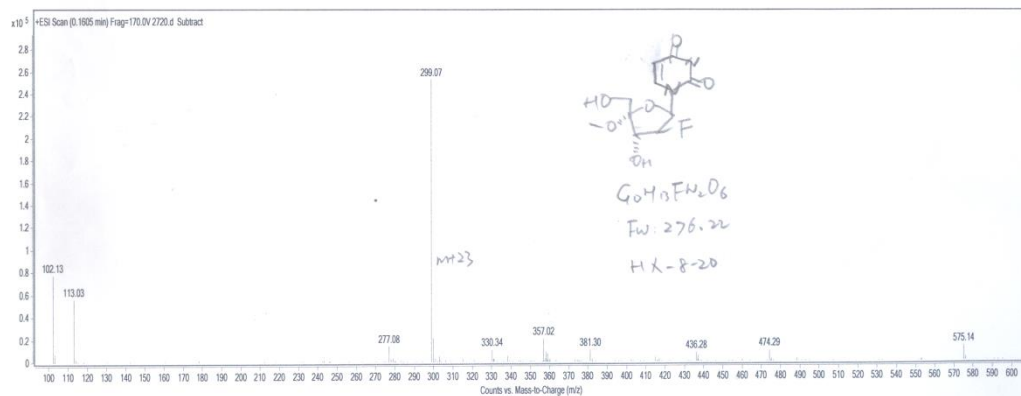


Compound 6

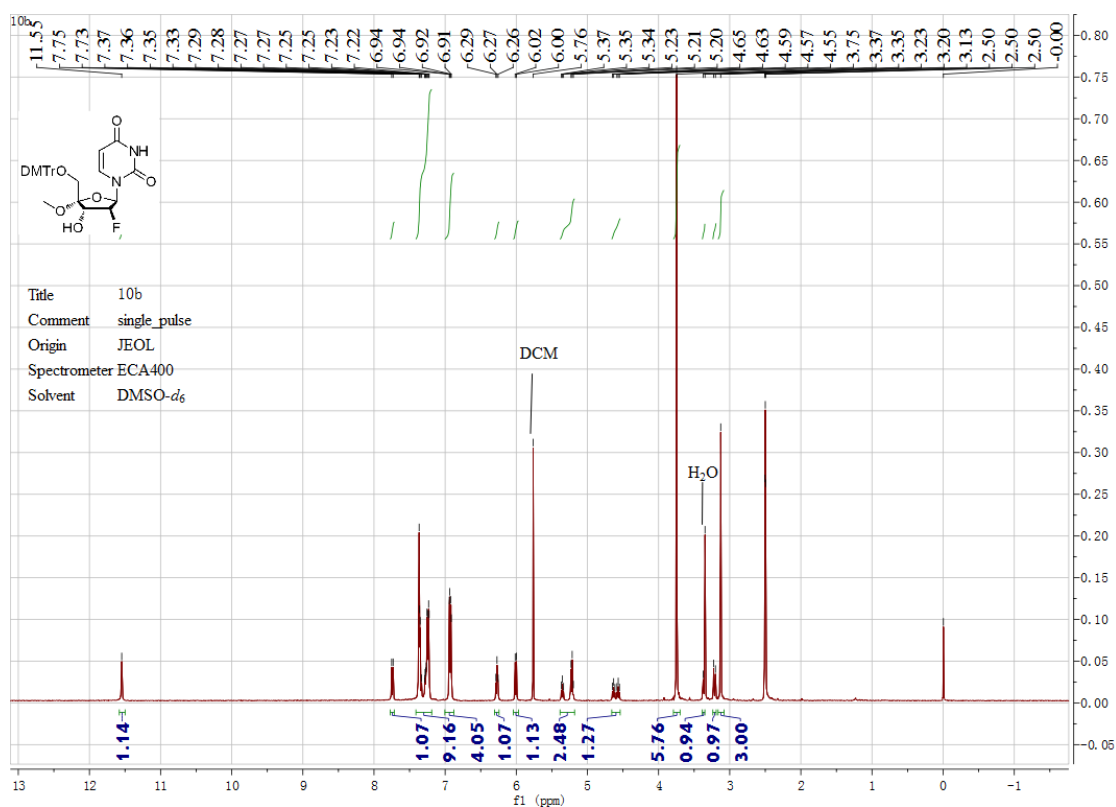


Qualitative Analysis Report

Data Filename	2720.d	Sample Name	HX-8-20
Instrument Name	TOF G6230A	Acquired Time	2015-09-29
Acq Method	YCL.M	Acquired SW	6200 series TOF/6500 series
IRM Calibration Status	Success		
User Chromatograms			



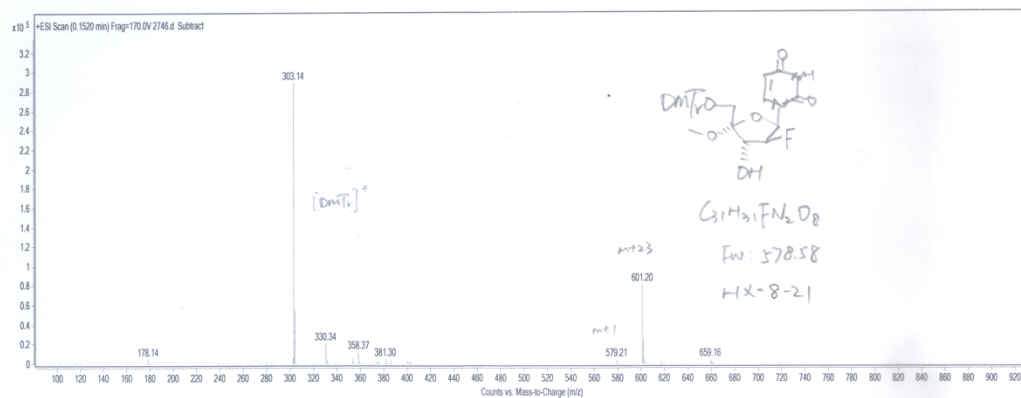
Compound 7



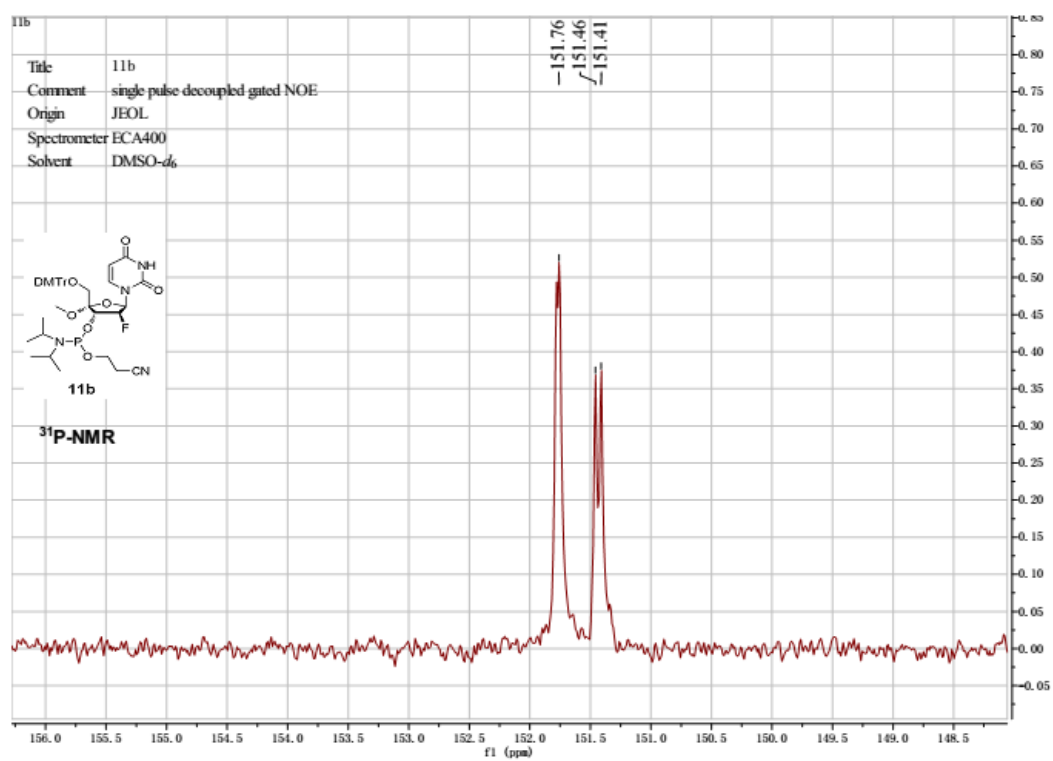
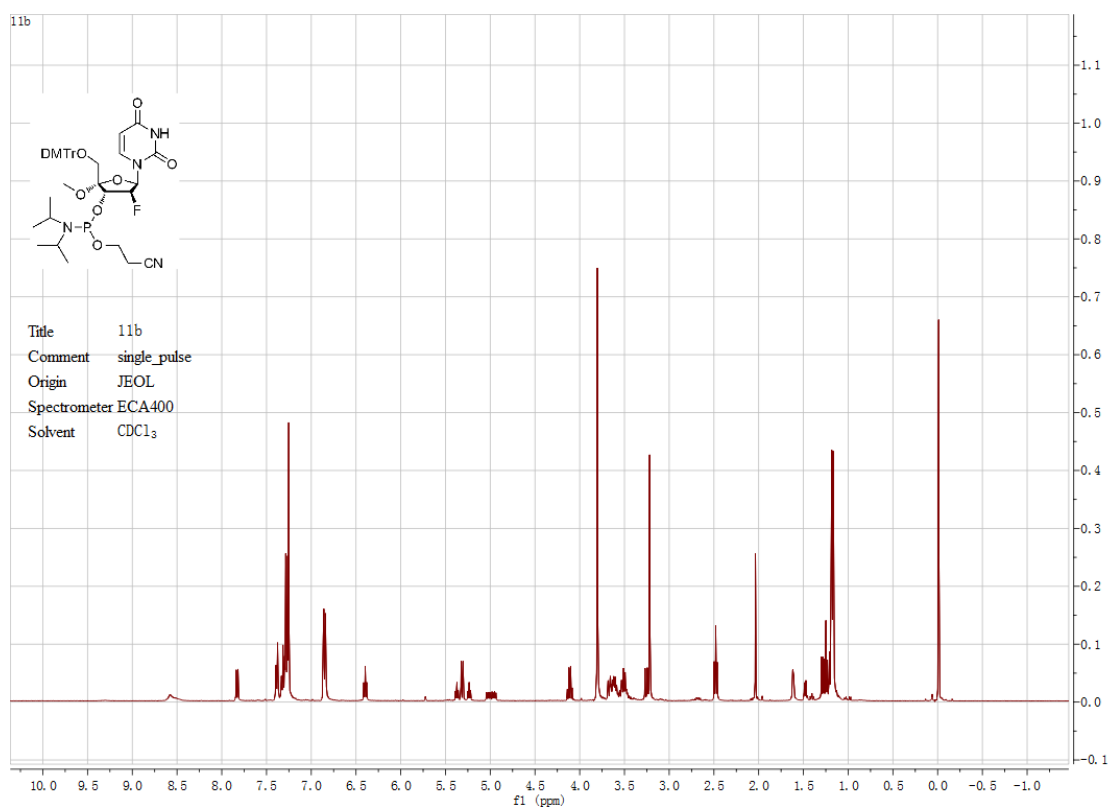
Qualitative Analysis Report

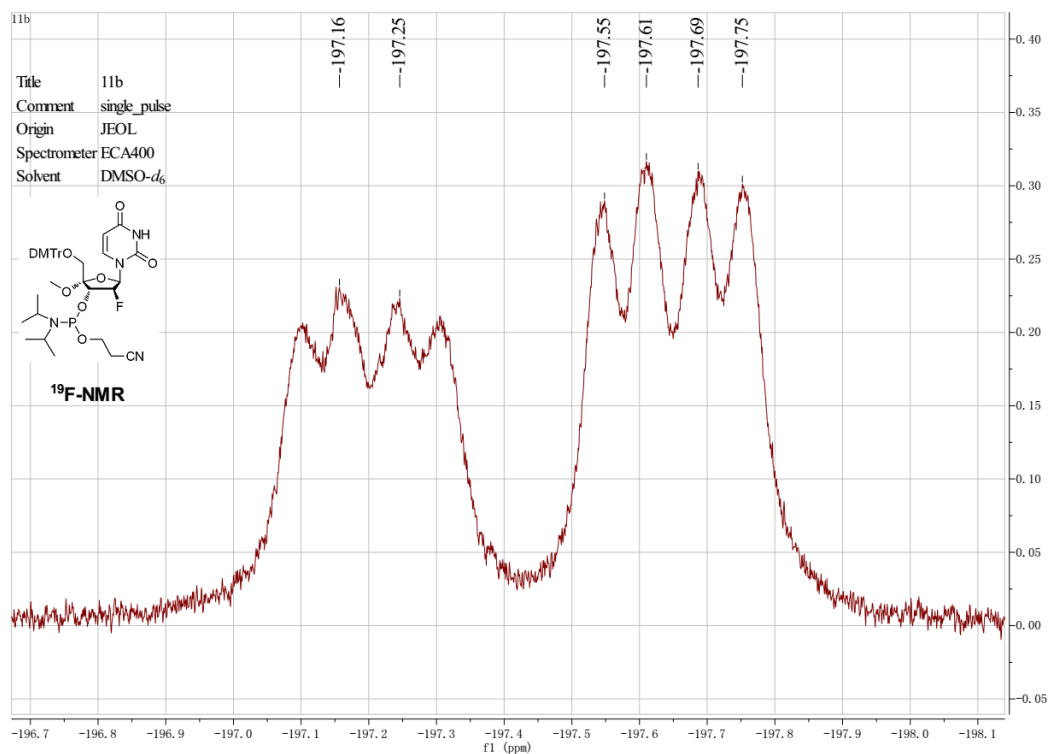
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Acq Method: YCLM
IRM Calibration Status: Success
User Chromatograms:

Sample Name: HX-8-21
Acquired Time: 2015-10-09
Acquired SW: 6200 series TOF/6500 series



Compound 8

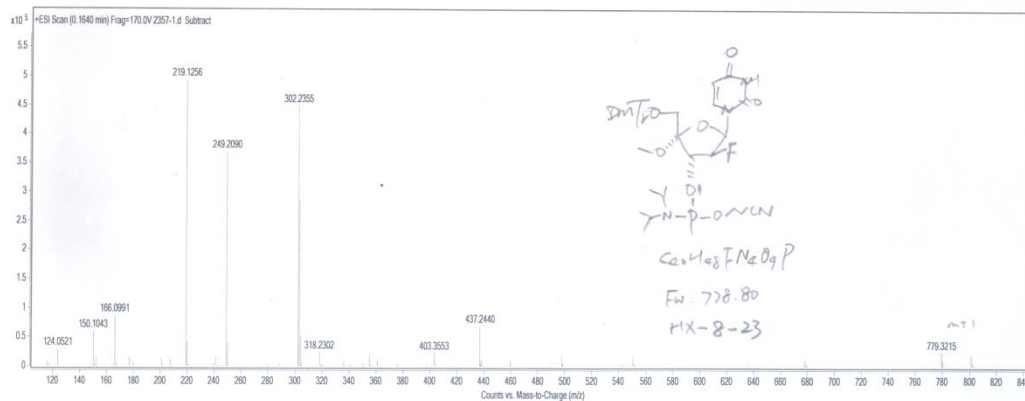




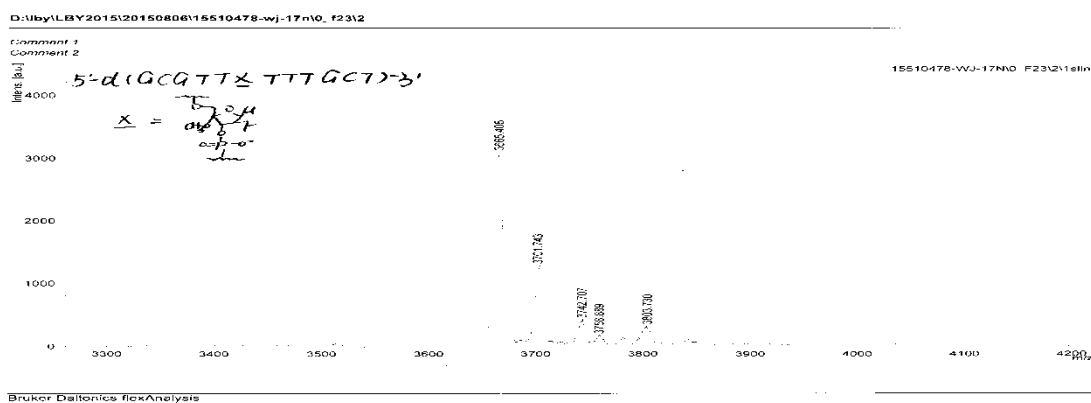
Qualitative Analysis Report

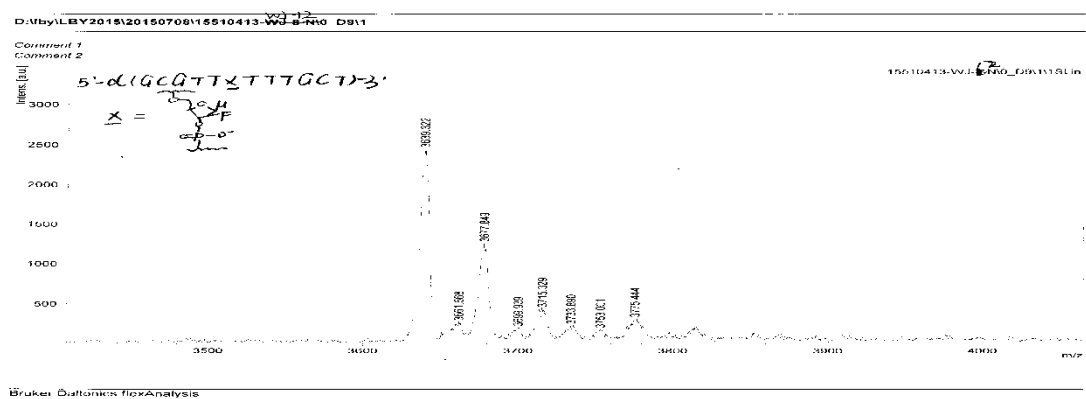
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 Instrument Name TOF G6230A
 Acq Method YCLM
 IRM Calibration Status Success
 User Chromatograms

Sample Name WJ-26
 Acquired Time 2015-08-04
 Acquired SW 6200 series TOF/6500 series

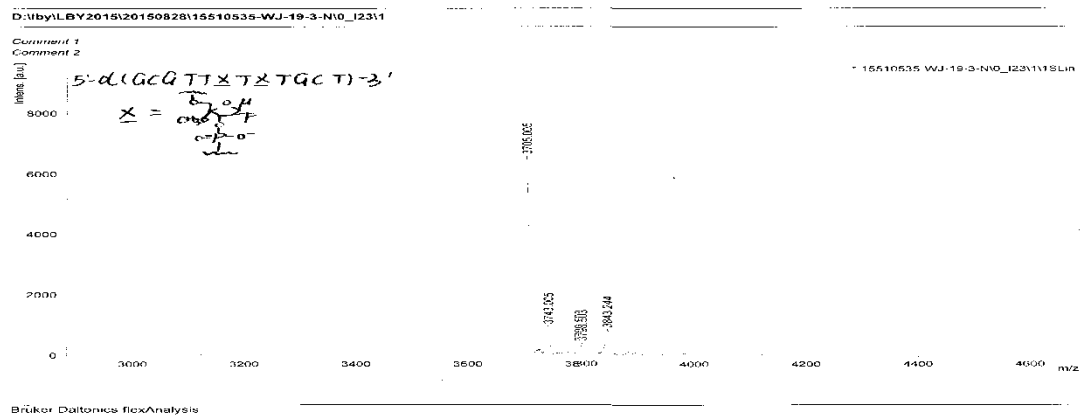
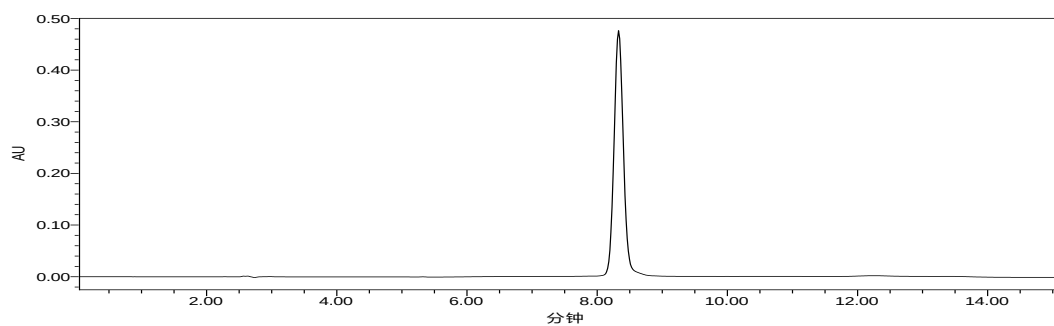


ON2 5'-d(GCGTTXTTTGCT)-3' (X=2'-F-4'-OMe-araU) Purity 95.49%

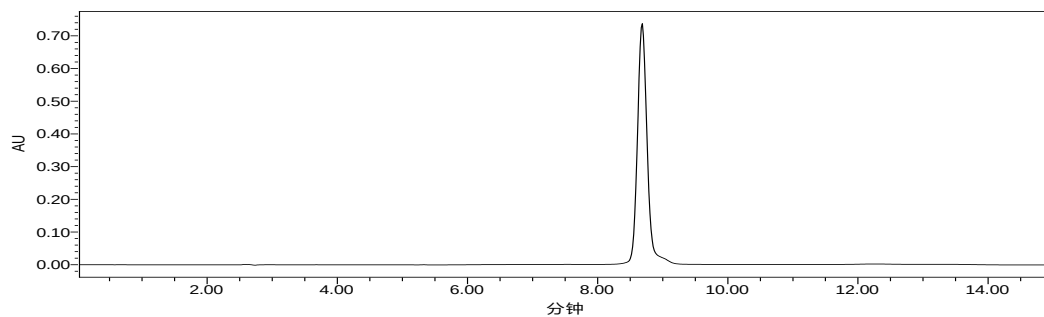




ON4 5'-d(GCGTTXTTGTGCT)-3' (X=2'-F-4'-OMe-araU) Purity 97.67%



ON5 5'-d(GCGTTXTTGTGCT)-3' (X=2'-F-4'-OMe-araU) Purity 95.79%



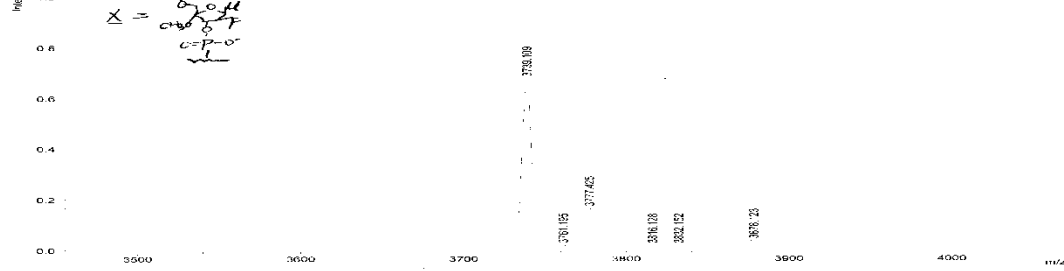
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Comment 1

Comment 2

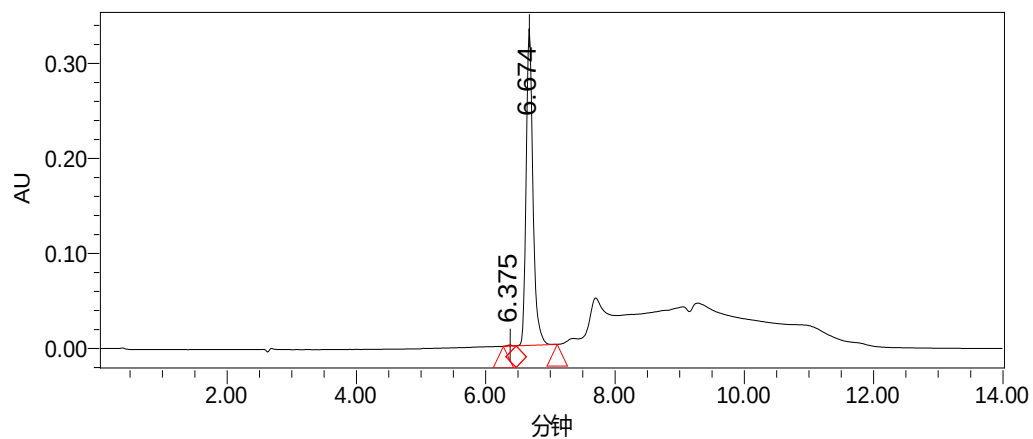
5'-d(GCGTXXTTGT)-3'

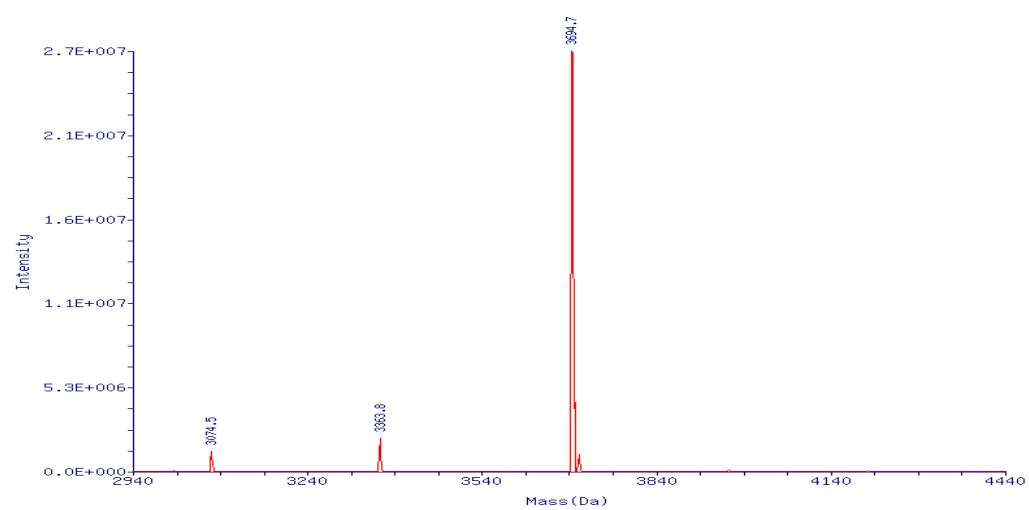
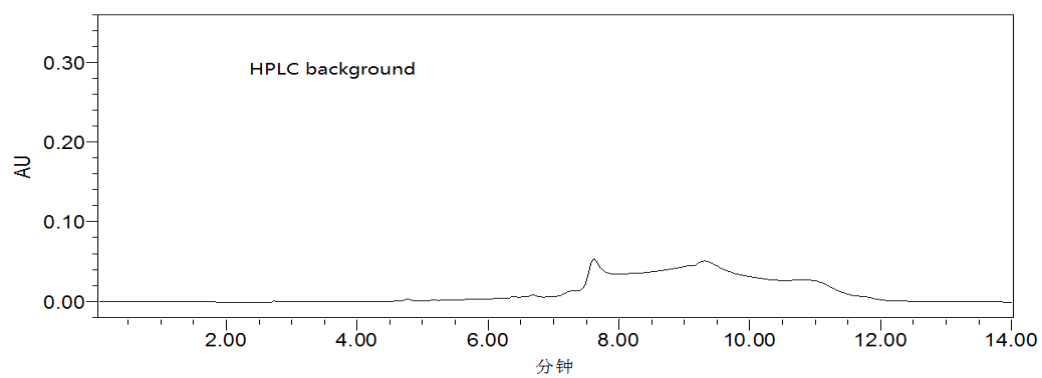
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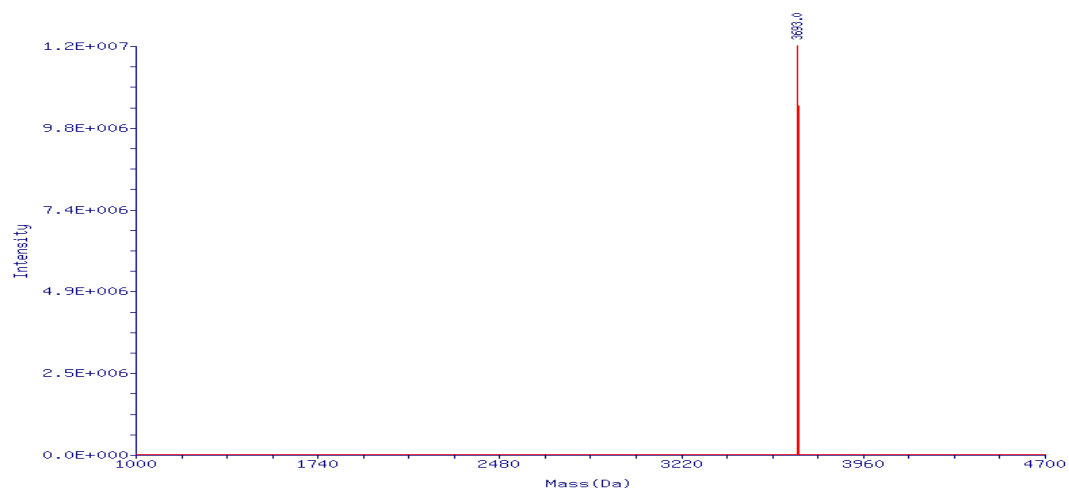
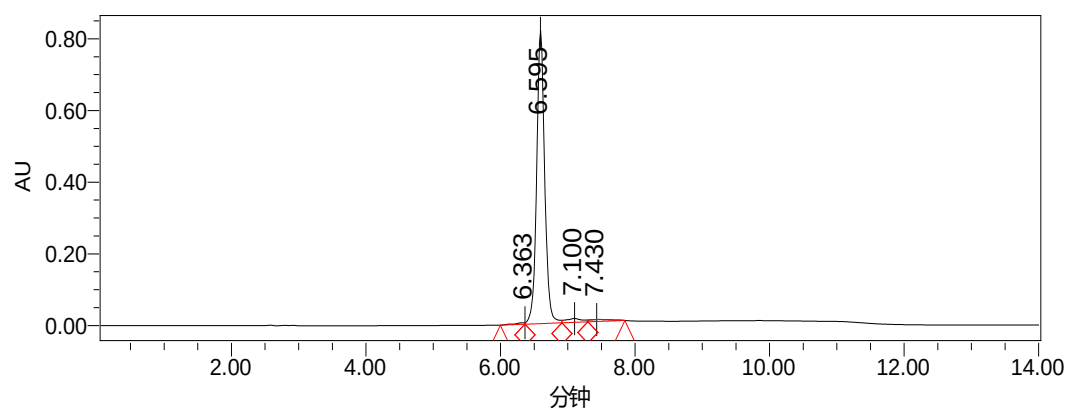
Bruker Daltonics flexAnalysis

ON7 5'-d(GCGTXGTTTGCT)-3' (X=2'-F-4'-OMe-araU) purity: 99.75%

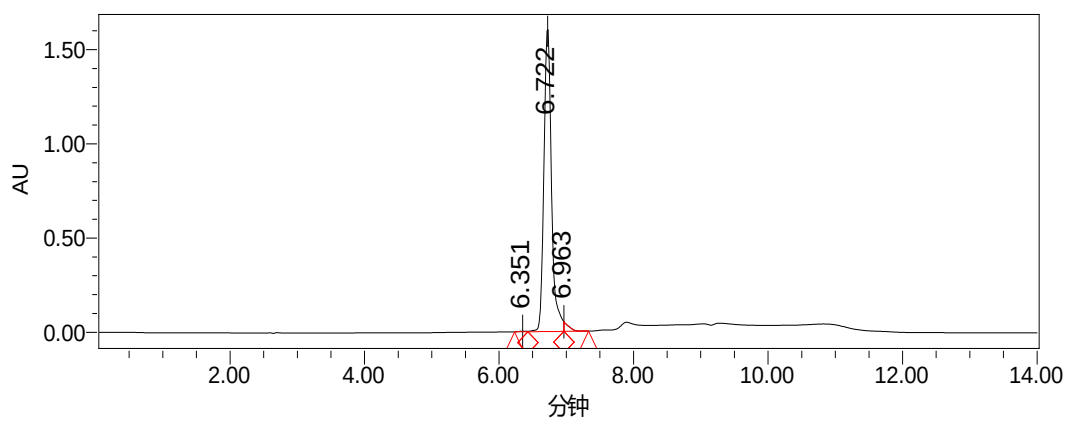


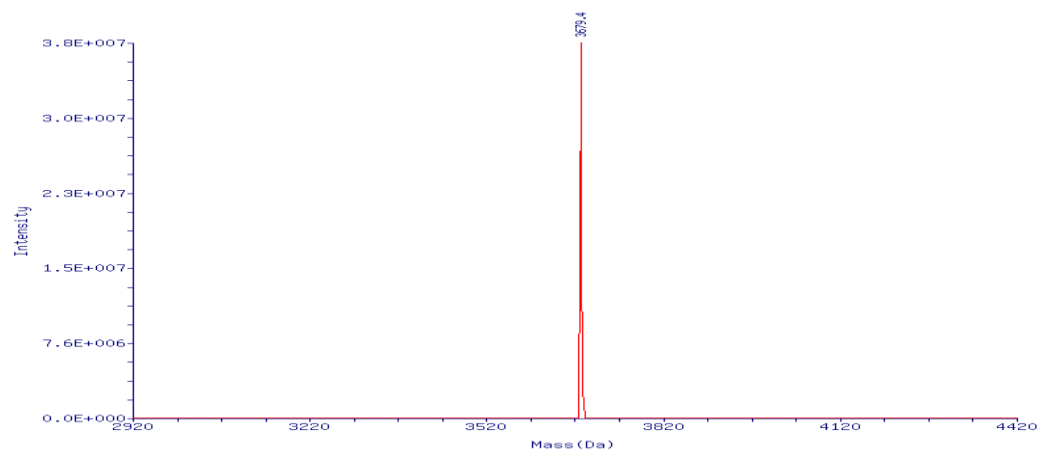


ON8 5'-d(GCGTTGXTTGCT)-3' (X=2'-F-4'-OMe-araU) purity: 95.18%

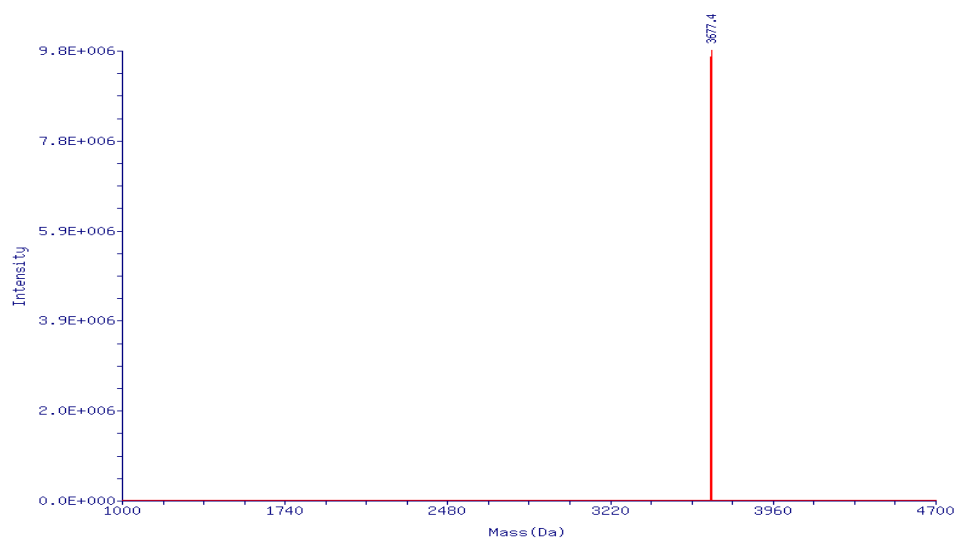
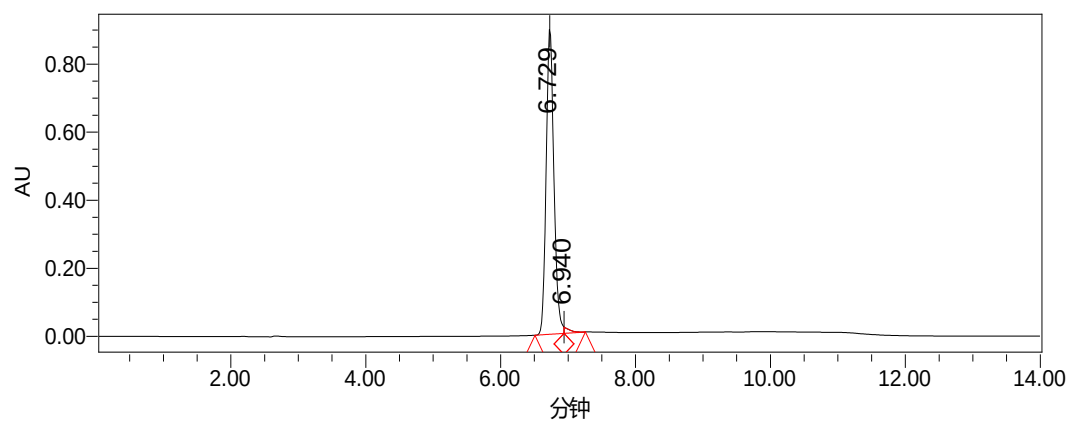


ON10 5'-d(GCGTXATTGCT)-3' (X=2'-F-4'-OMe-araU) purity: 97.84%

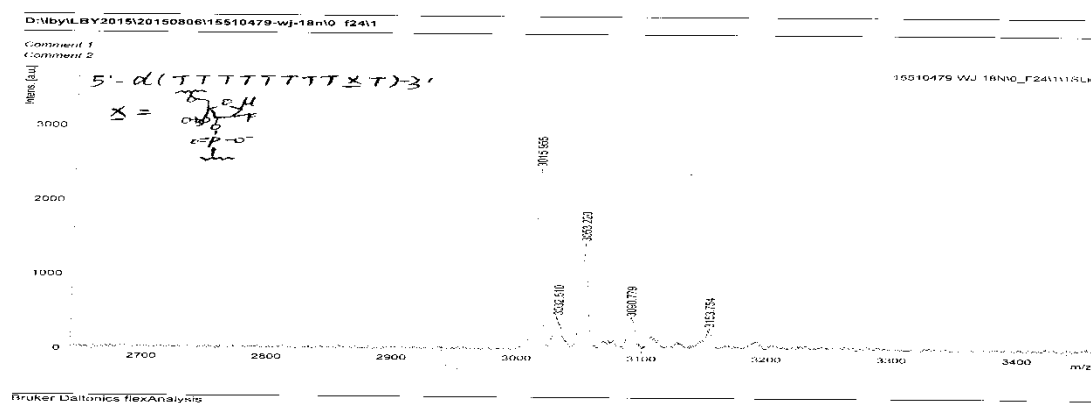
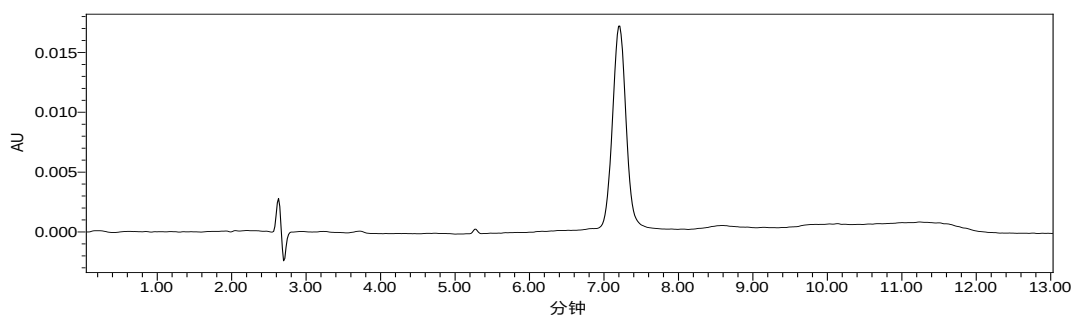




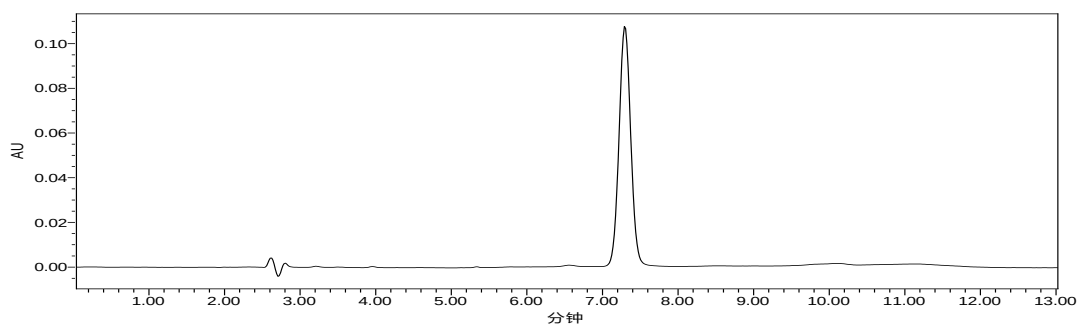
ON11 5'-d(GCGTTAXTTGCT)-3' (X=2'-F-4'-OMe-araU) purity: 98.56%

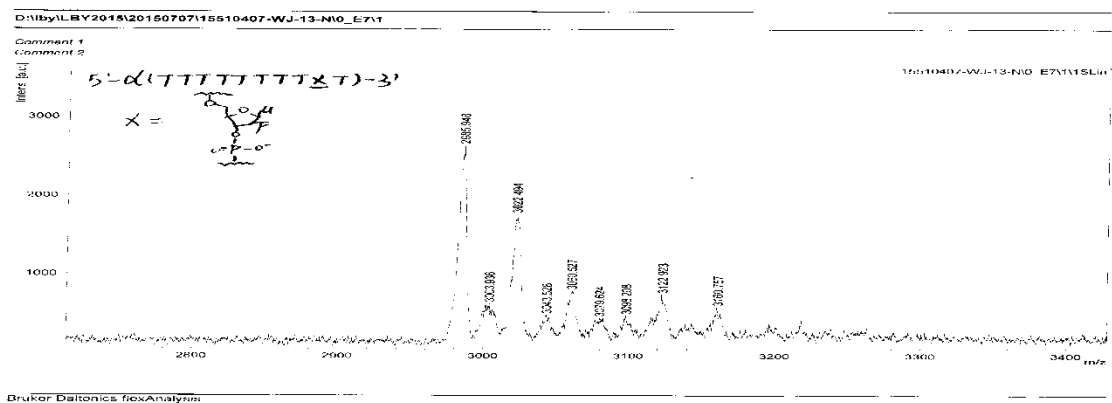


ON12 5'-d(TTTTTTTT~~X~~T)-3' (X=2'-F-4'-OMe-araU) Purity 99.28%



ON13 5'-d(TTTTTTTT~~Y~~T)-3' (Y = 2'-F-araU) Purity 99.22%





ON14 5'-d(TTTTTTTTT_sT)-3' (Ts = 3'-phosphorothioate-T) Purity 99.70%

