

Supporting Information

Design, synthesis and antibacterial evaluation of a novel series of biaryloxazolidinone derivatives against antibiotic-susceptible and antibiotic-resistant Gram-positive bacteria

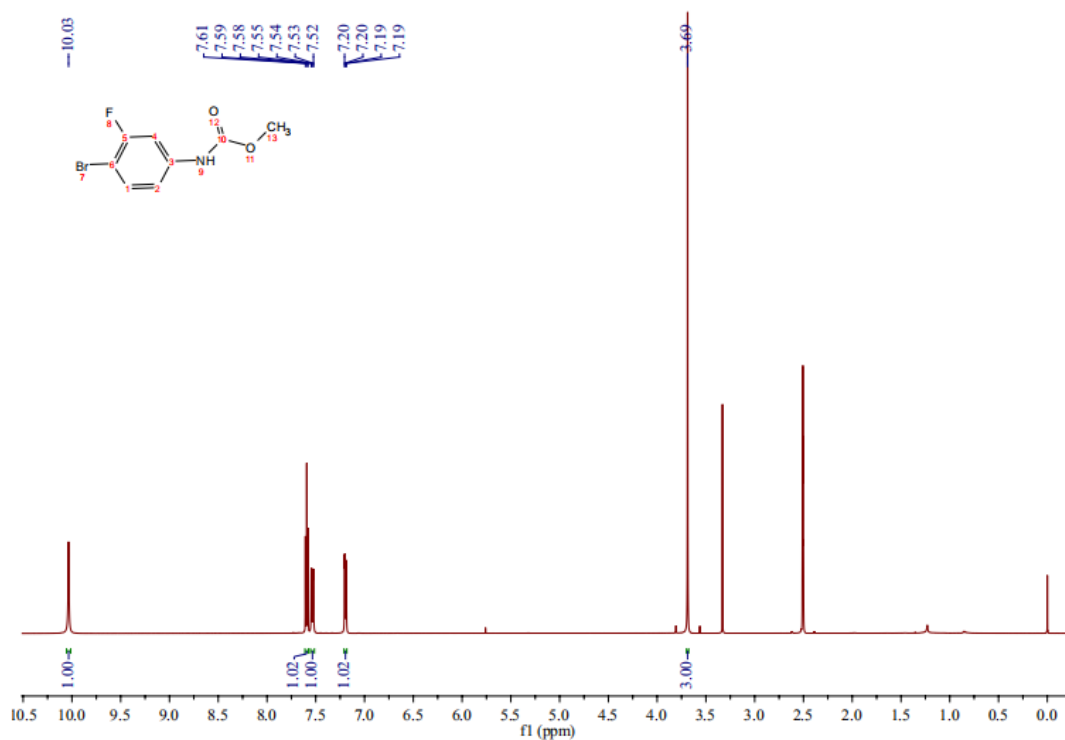
Yinliang Qi ^a, Xiudong Ding ^b, Kun Wang ^a, Pinzhen Yan ^a, Xinxin Guo ^a, Shiwei Ma ^a, Mingfei Xiao ^a, Pengrui Sun ^b, Siyu Liu ^a, Yunlei Hou ^{a,*}, Yanfang Zhao ^{a,*}

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^b Department of Clinical Laboratory, The Eighth Medical Center of PLA General Hospital, Beijing 100091, China

1. ¹H-NMR Spectra

Compound 9

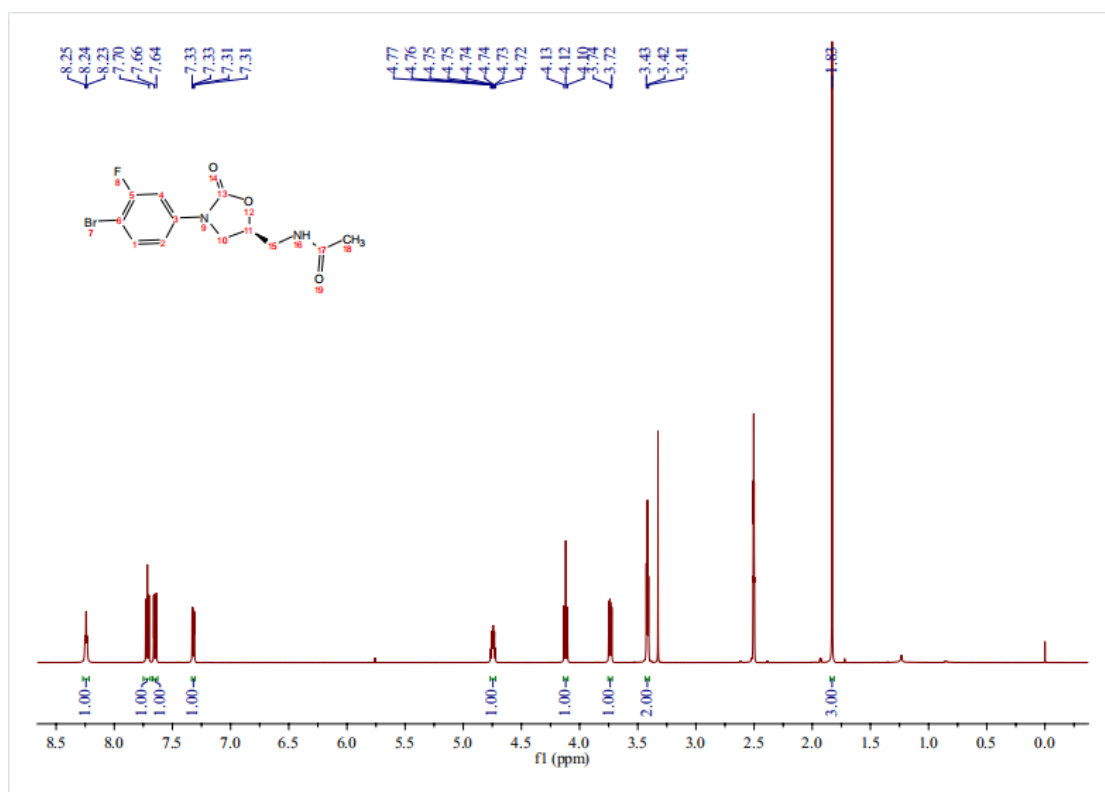


Compound 10

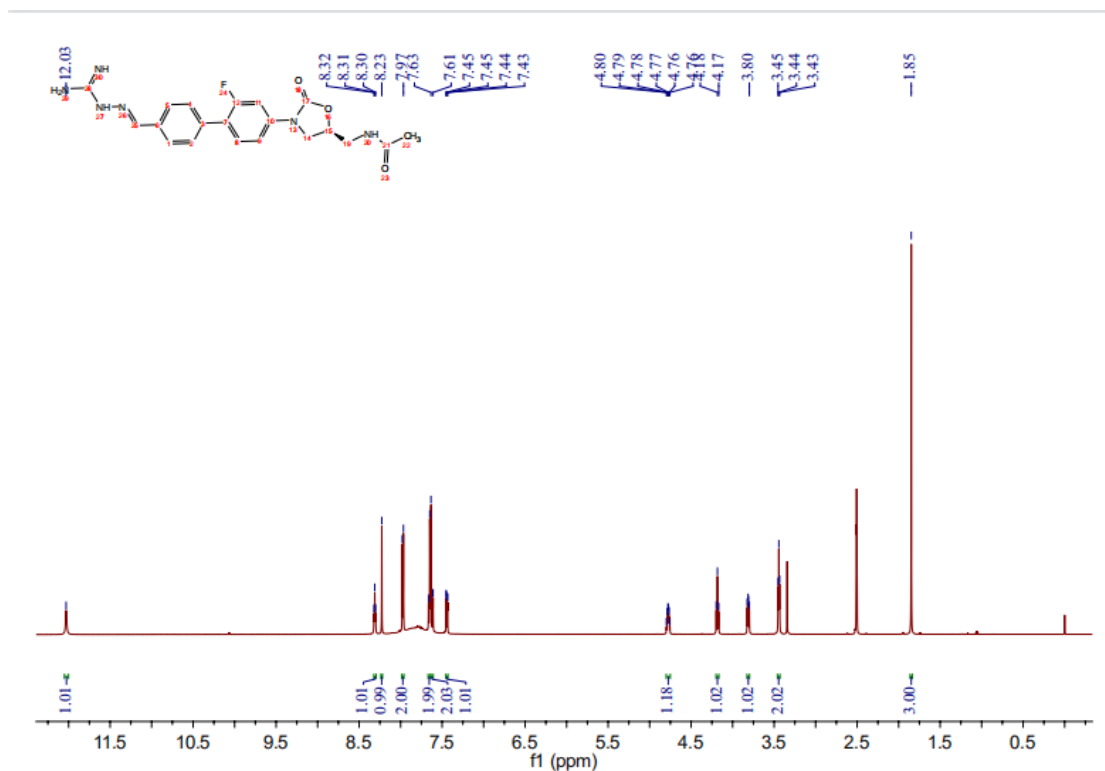
* Corresponding author

** Corresponding author

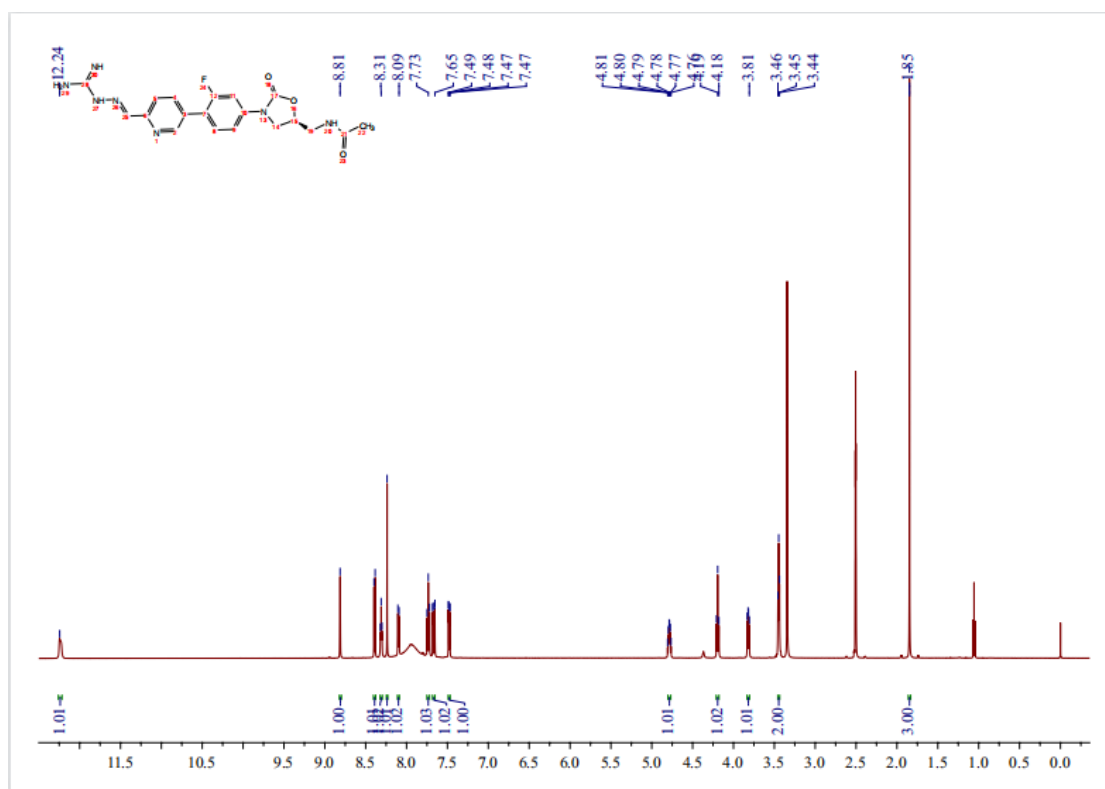
E-mail addresses: houyunlei901202@163.com (Y. Hou), yanfangzhao@126.com (Y. Zhao).



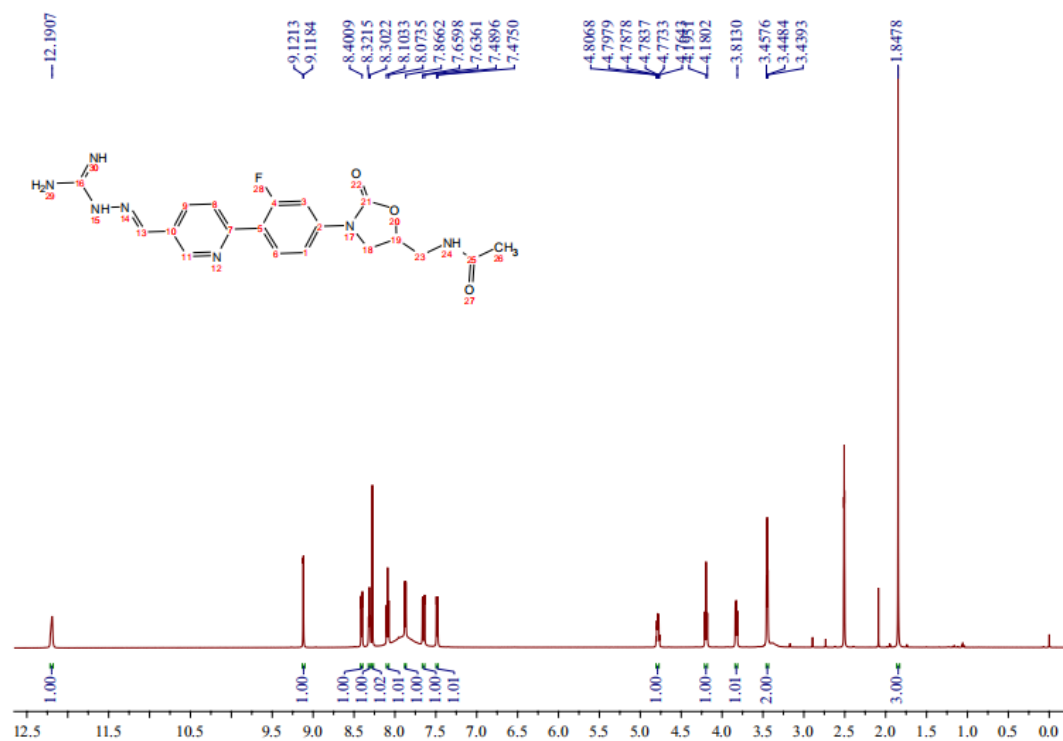
Compound 13a-1



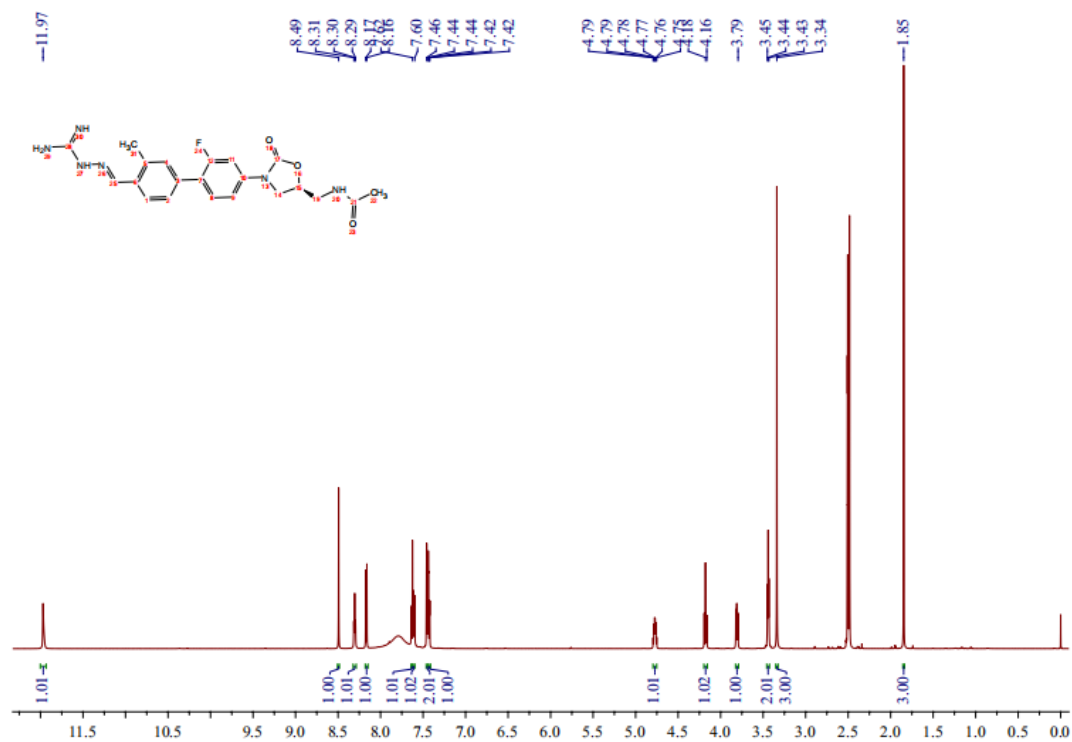
Compound 13a-2



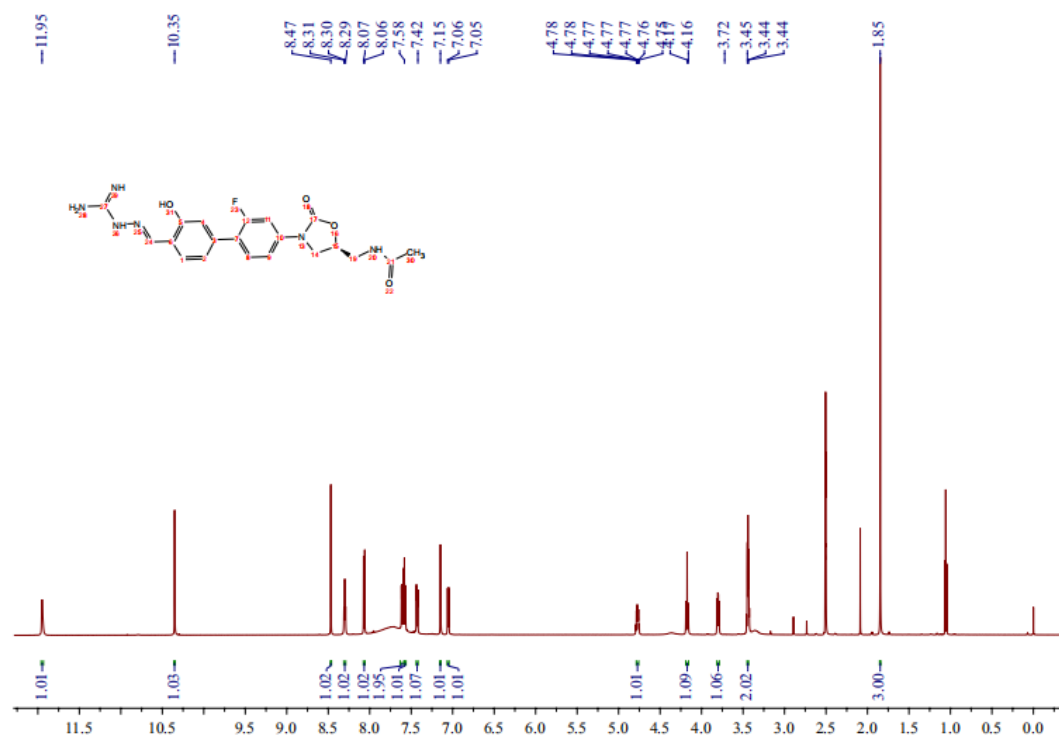
Compound 13a-3



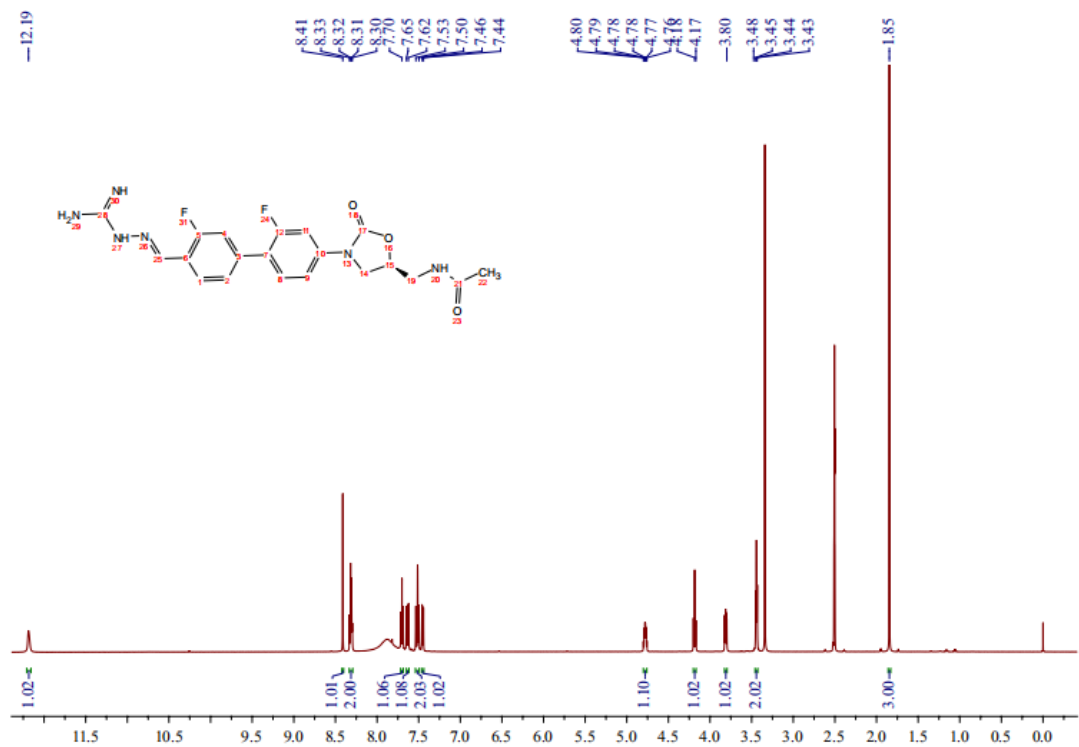
Compound 13a-4



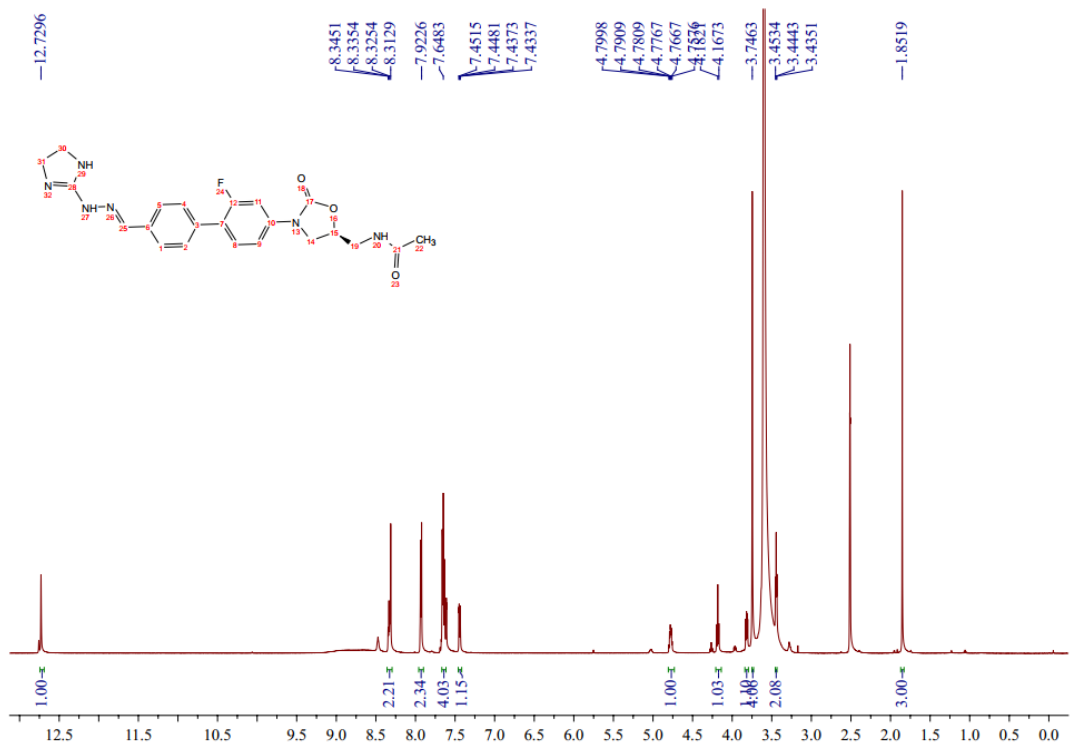
Compound 13a-5



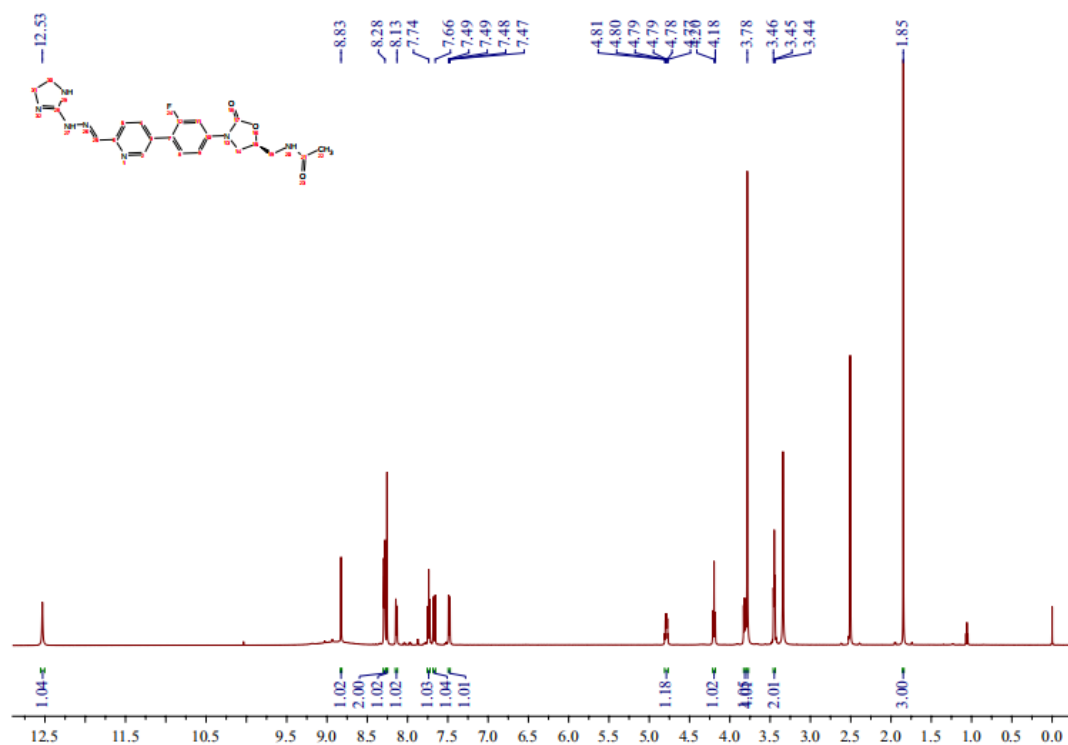
Compound 13a-6



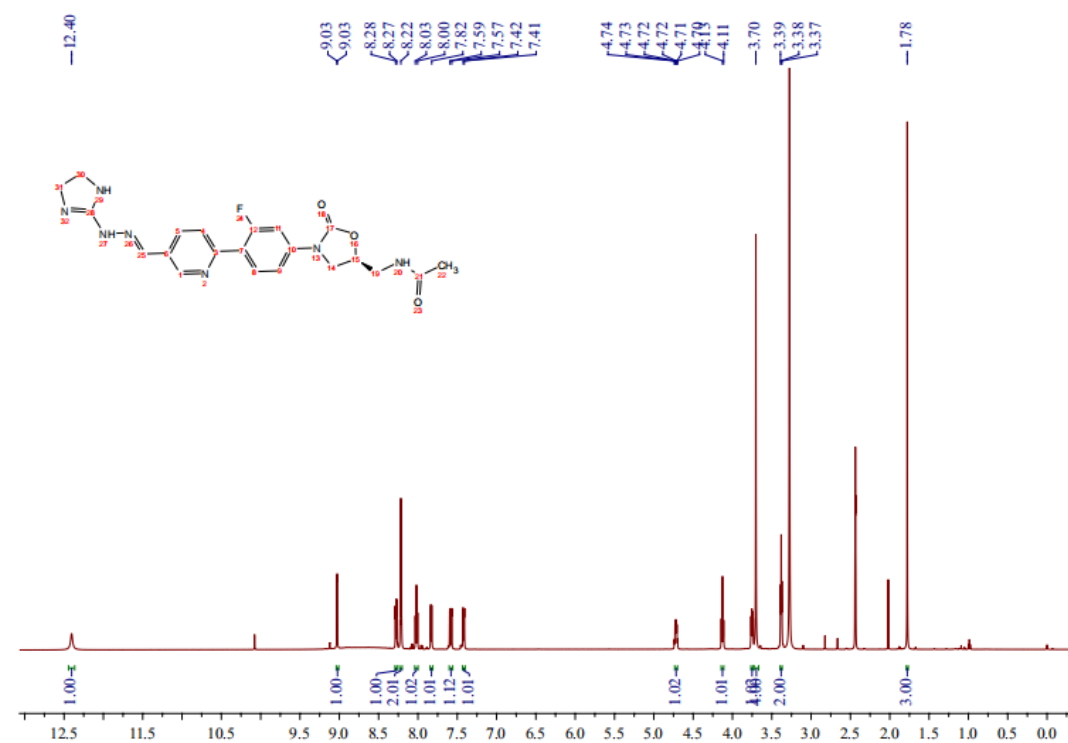
Compound 13b-1



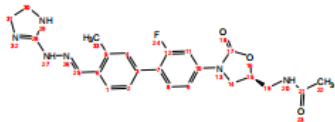
Compound 13b-2



Compound 13b-3



Compound 13b-4

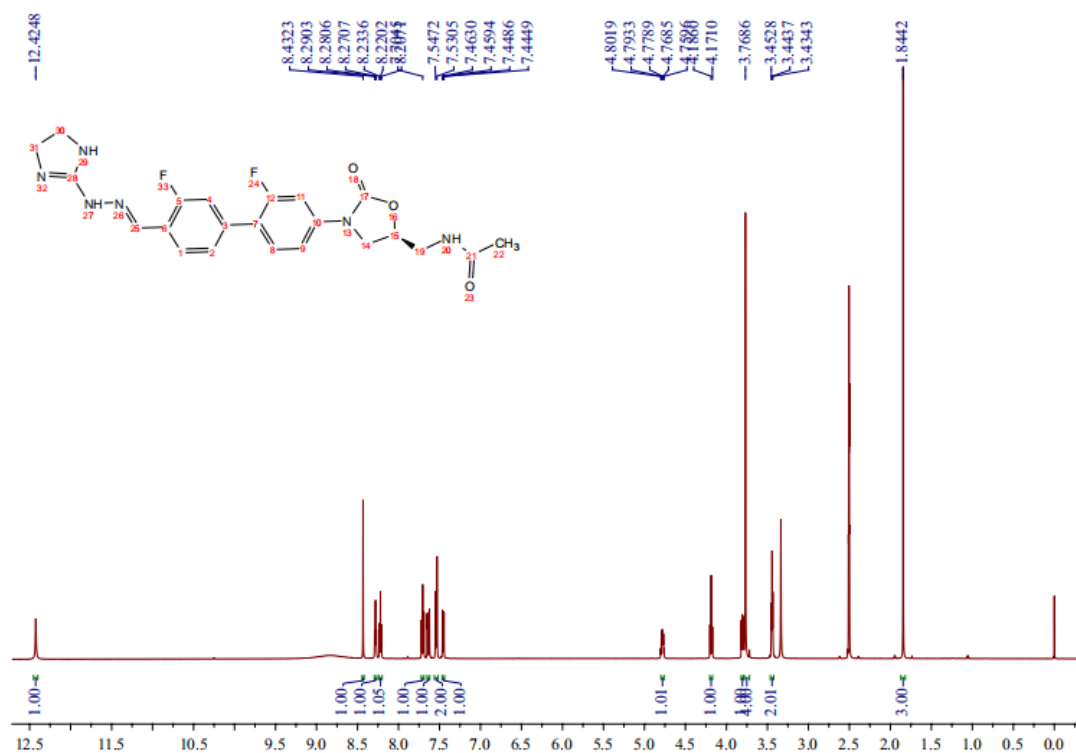


Chemical structure of 10: CC(=O)O[C@H]1O[C@@H](c2cc(O)c(O[C@H]3O[C@H](CO)O[C@H]3)c(F)c2)[C@H](O)[C@H](O)[C@H]1O

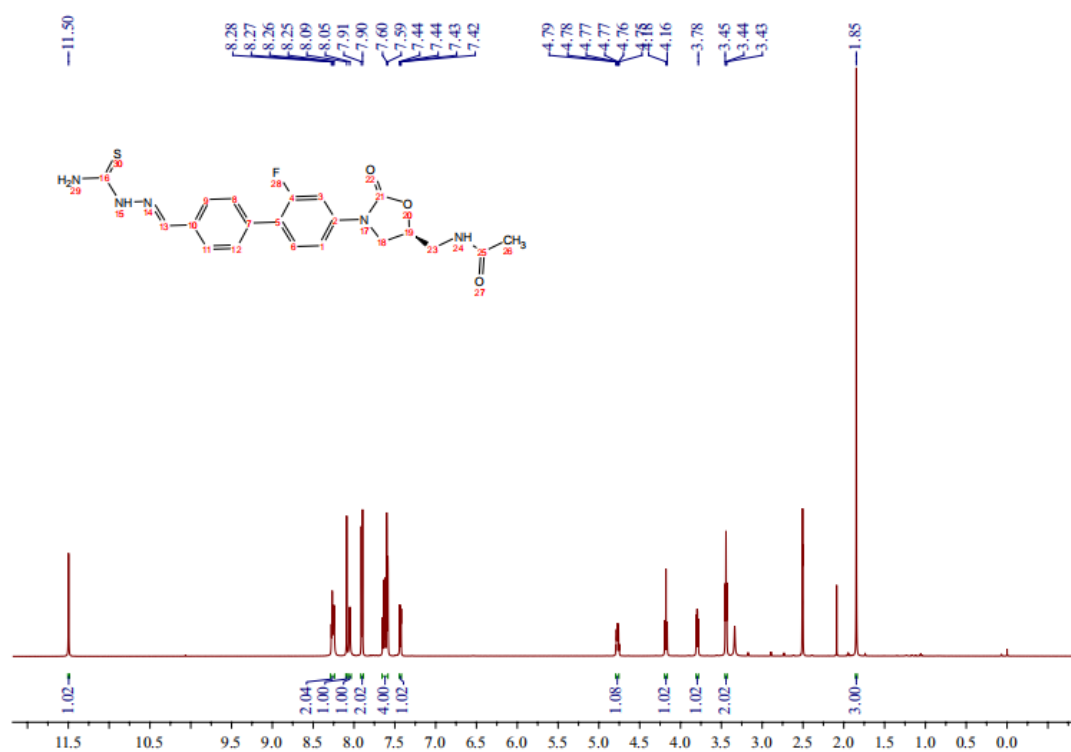
¹H NMR spectrum (DMSO-d₆):

Chemical Shift (ppm)	Integration
12.17	1.00
10.21	1.00
8.45	1.03
8.23	1.04
8.21	1.03
7.92	1.04
7.35	1.01
7.07	1.02
7.02	1.01
7.01	1.02
4.72	1.05
4.71	1.02
4.71	1.02
4.70	4.02
4.69	2.00
4.69	2.00
4.09	2.00
3.67	2.00
3.38	2.00
3.37	2.00
3.36	2.00
1.78	3.00

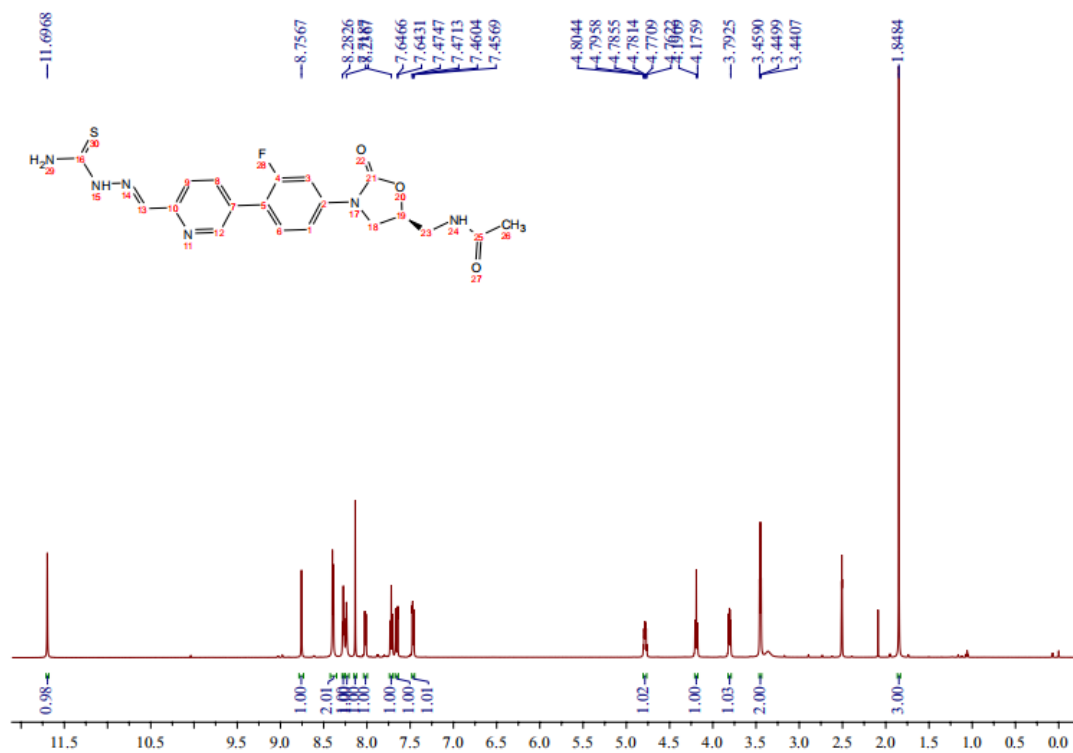
Compound 13b-6



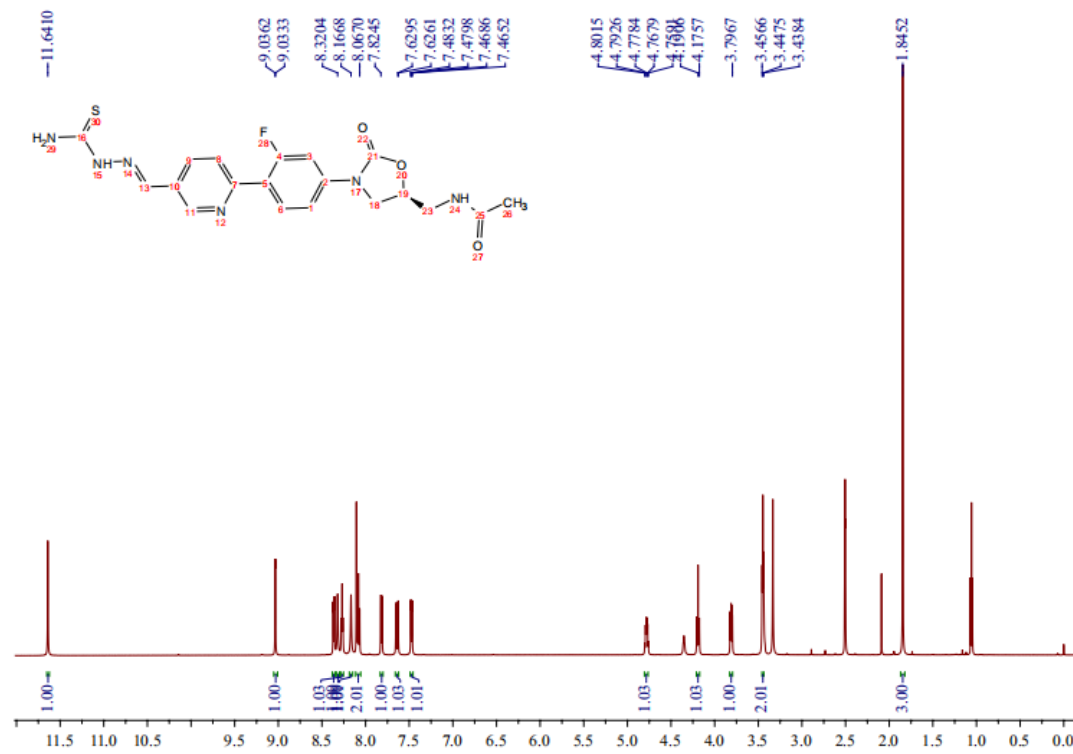
Compound 14a-1



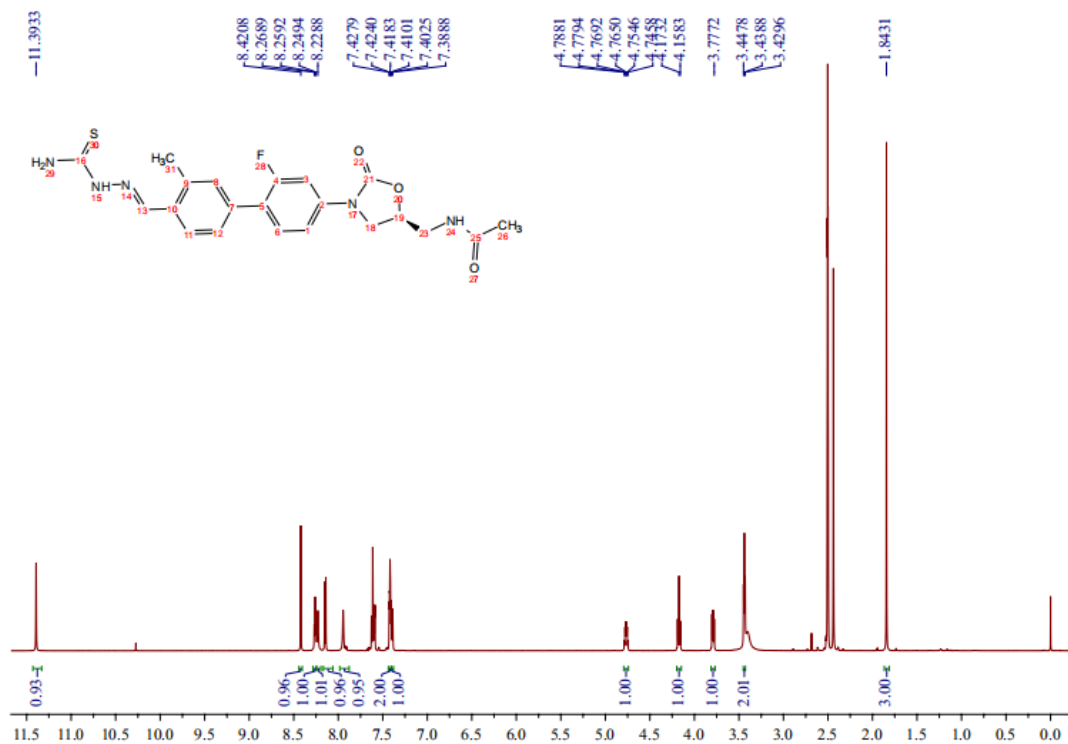
Compound 14a-2



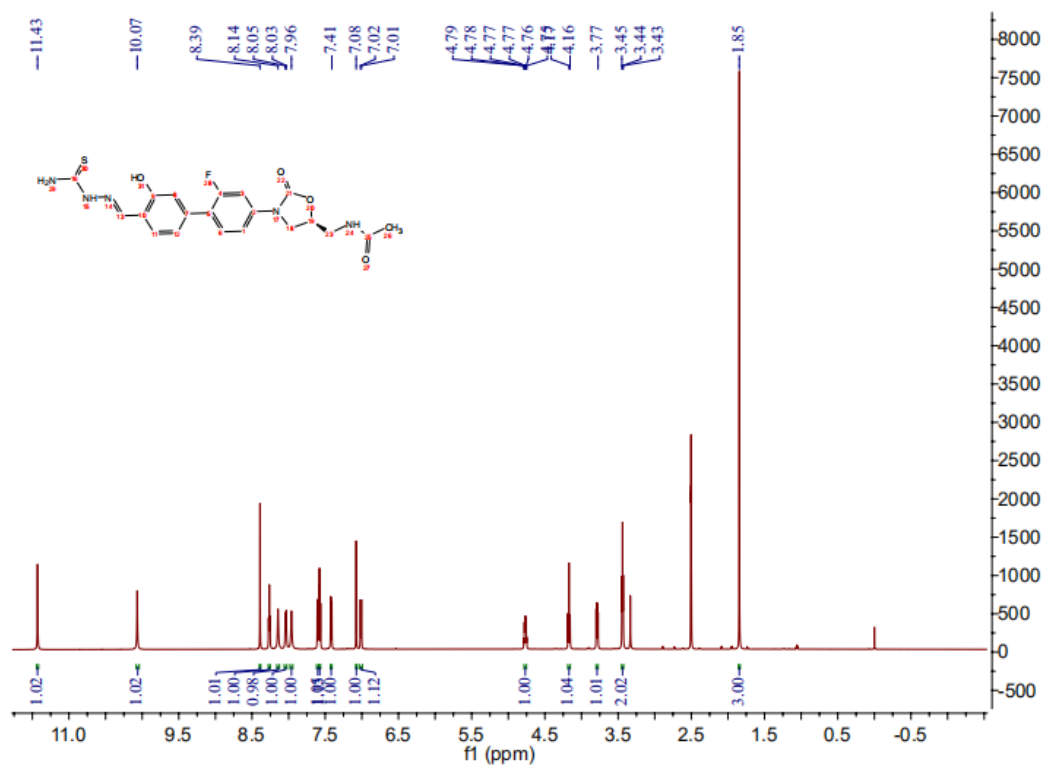
Compound 14a-3



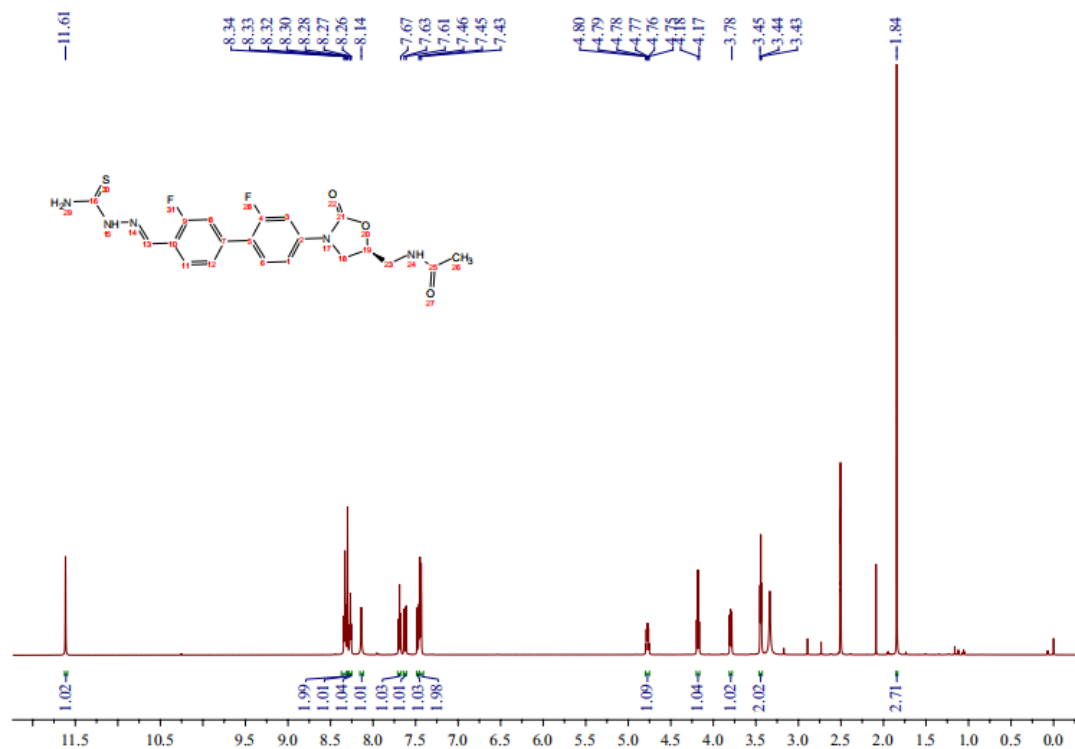
Compound 14a-4



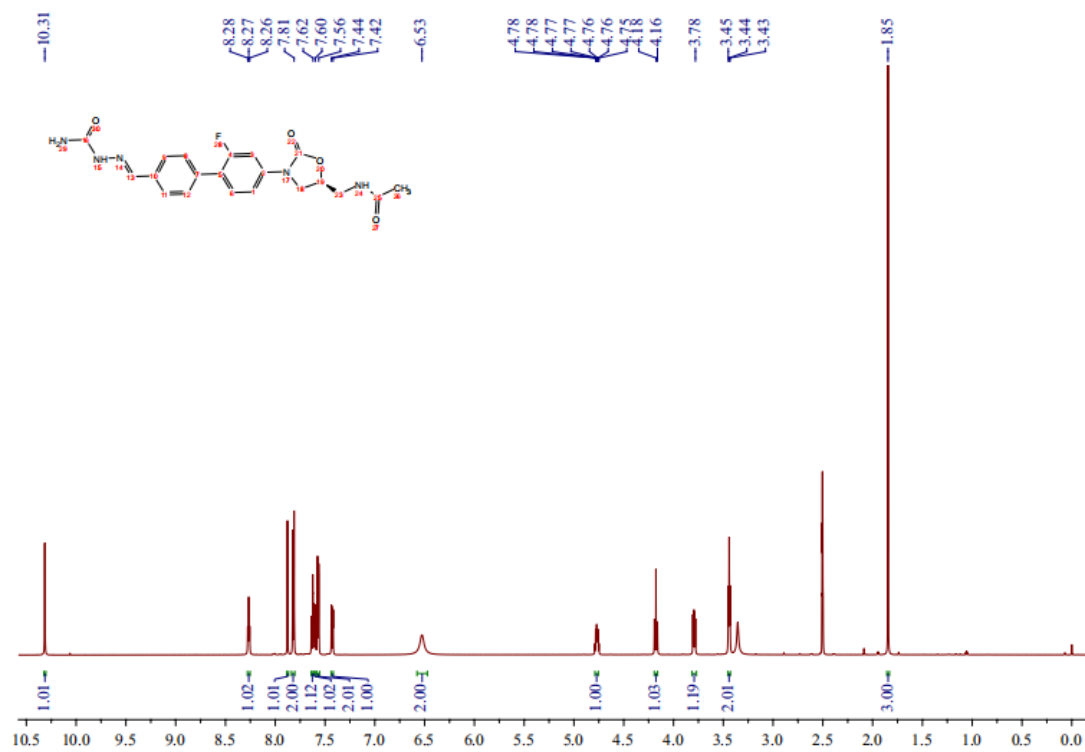
Compound 14a-5



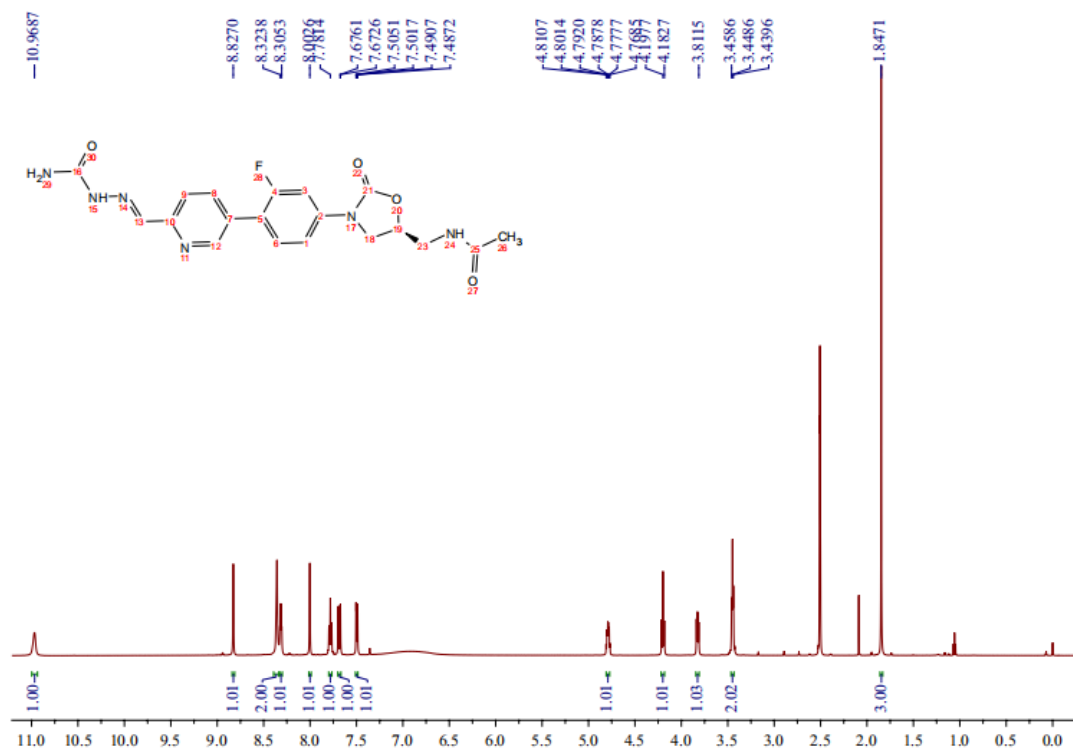
Compound 14a-6



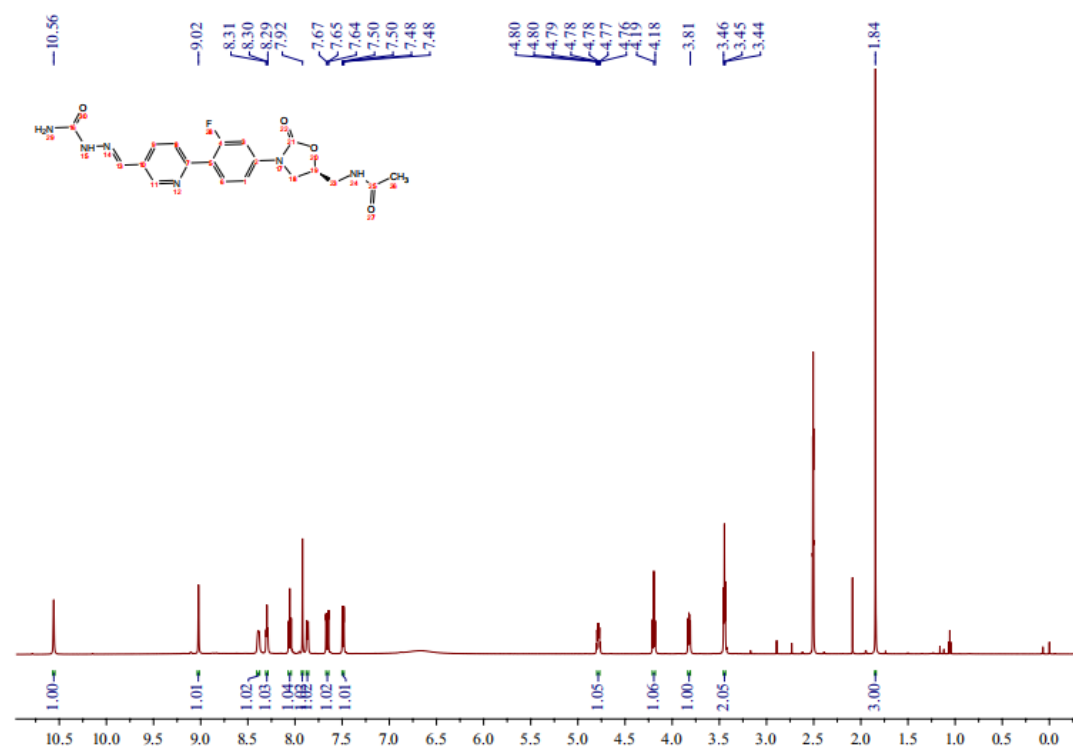
Compound 14b-1



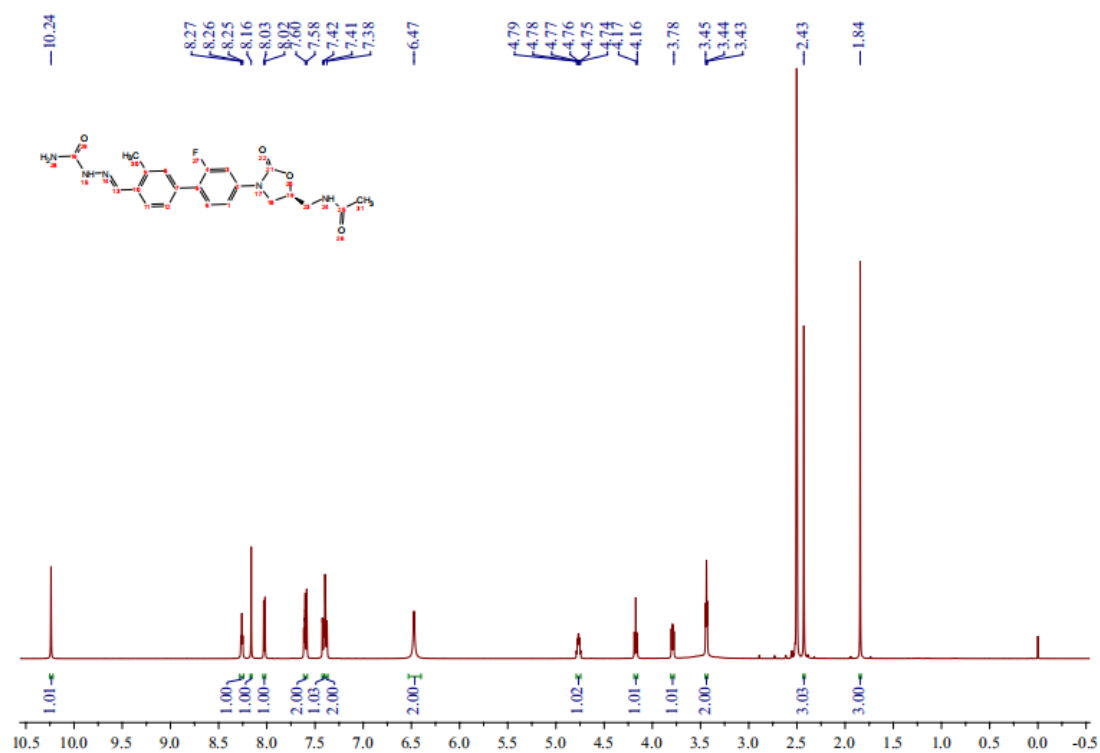
Compound 14b-2



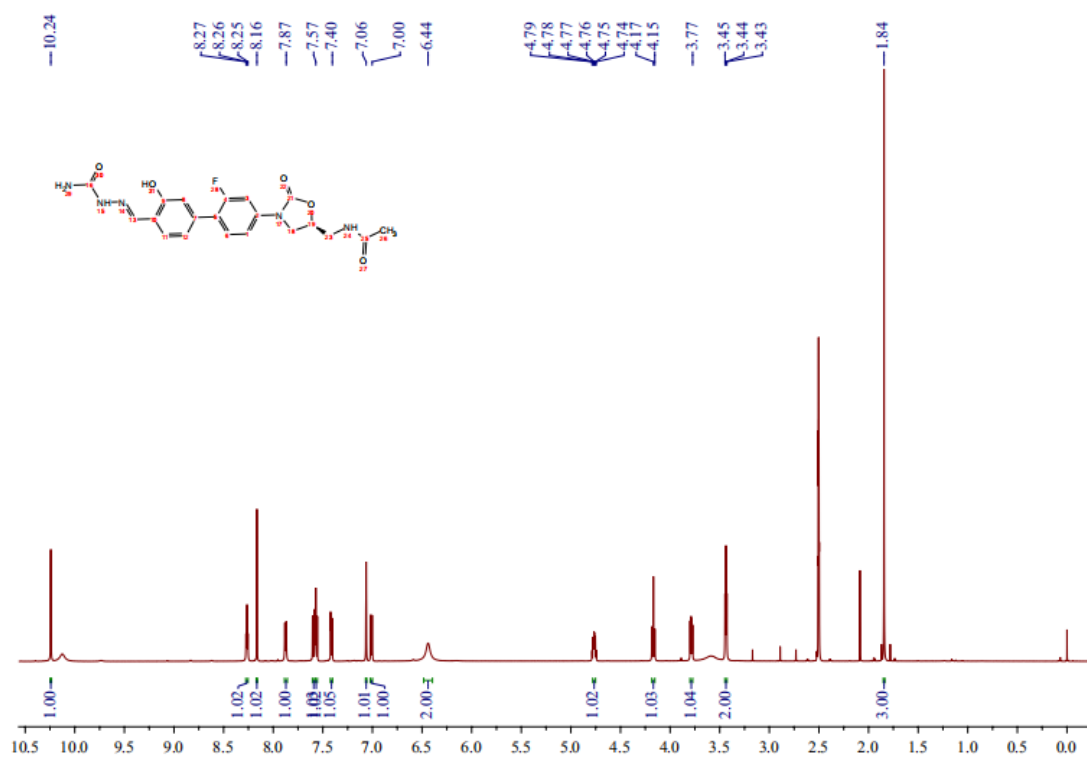
Compound 14b-3



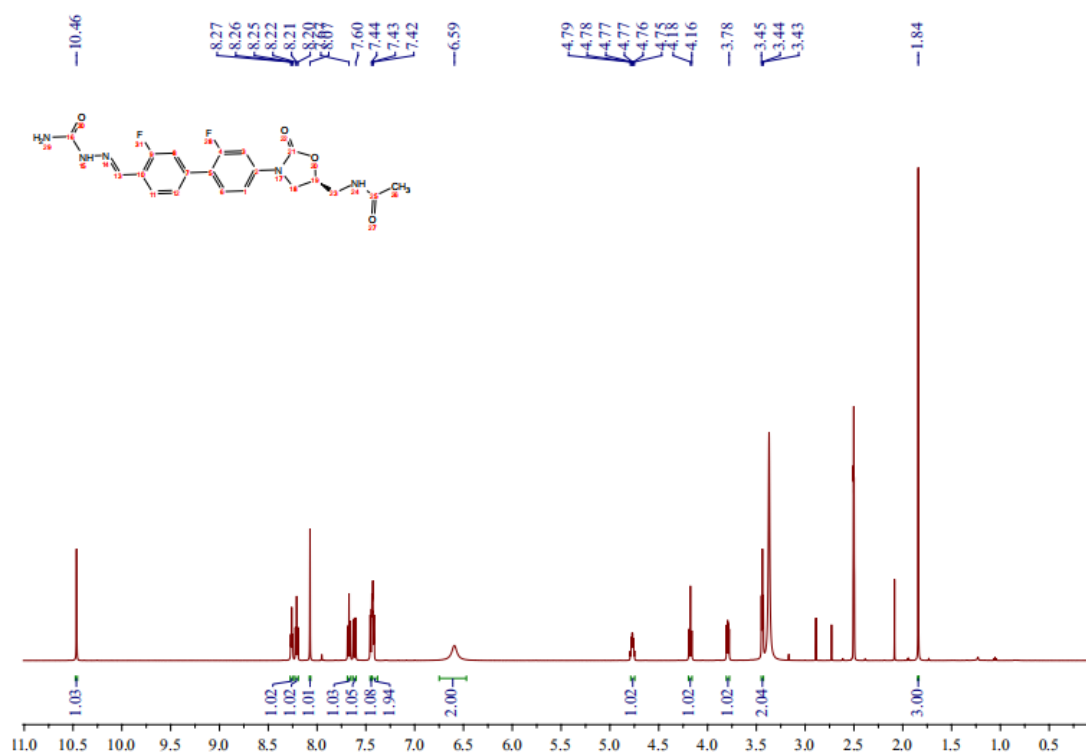
Compound 14b-4



Compound 14b-5

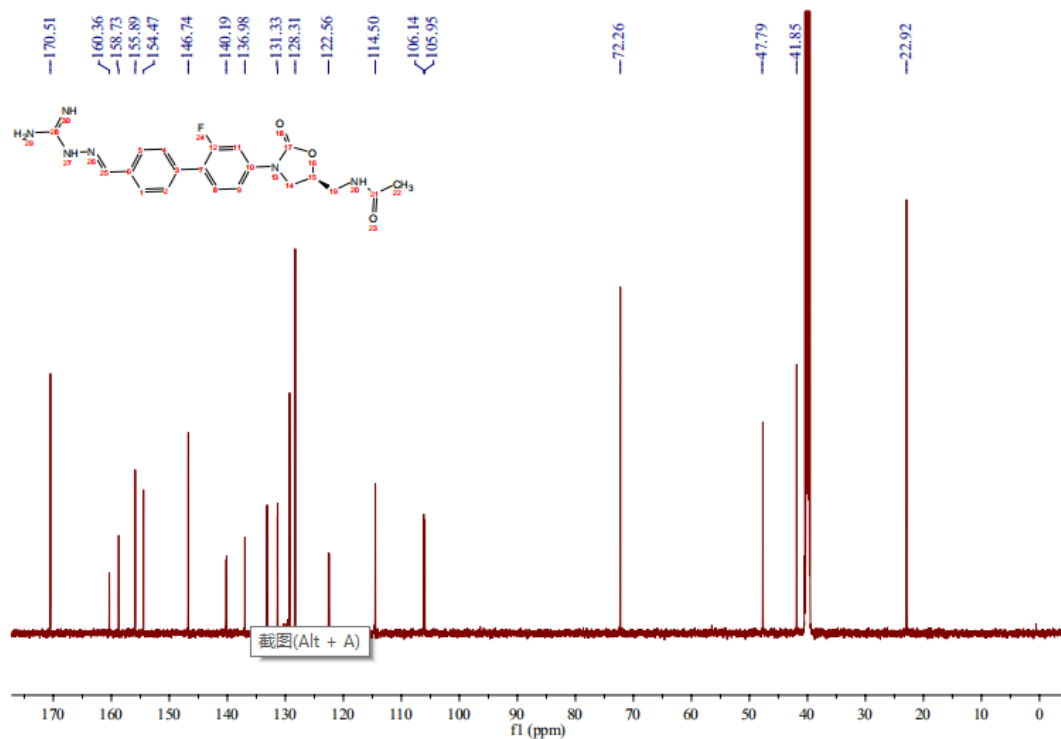


Compound 14b-6

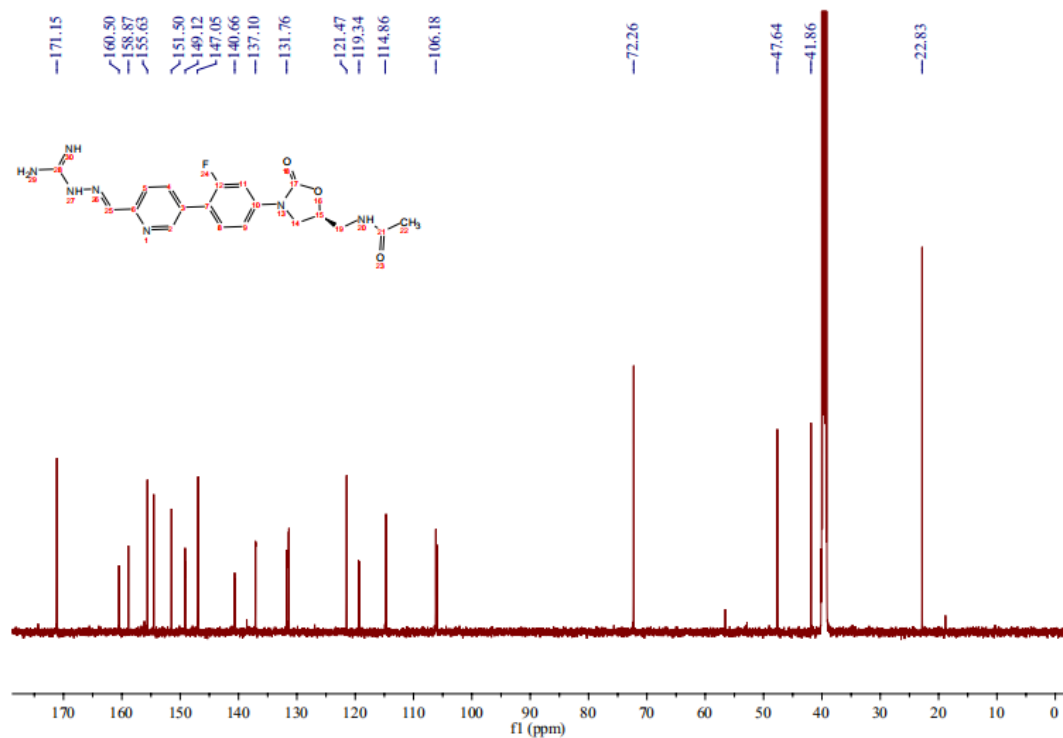


2. ¹³C-NMR Spectra

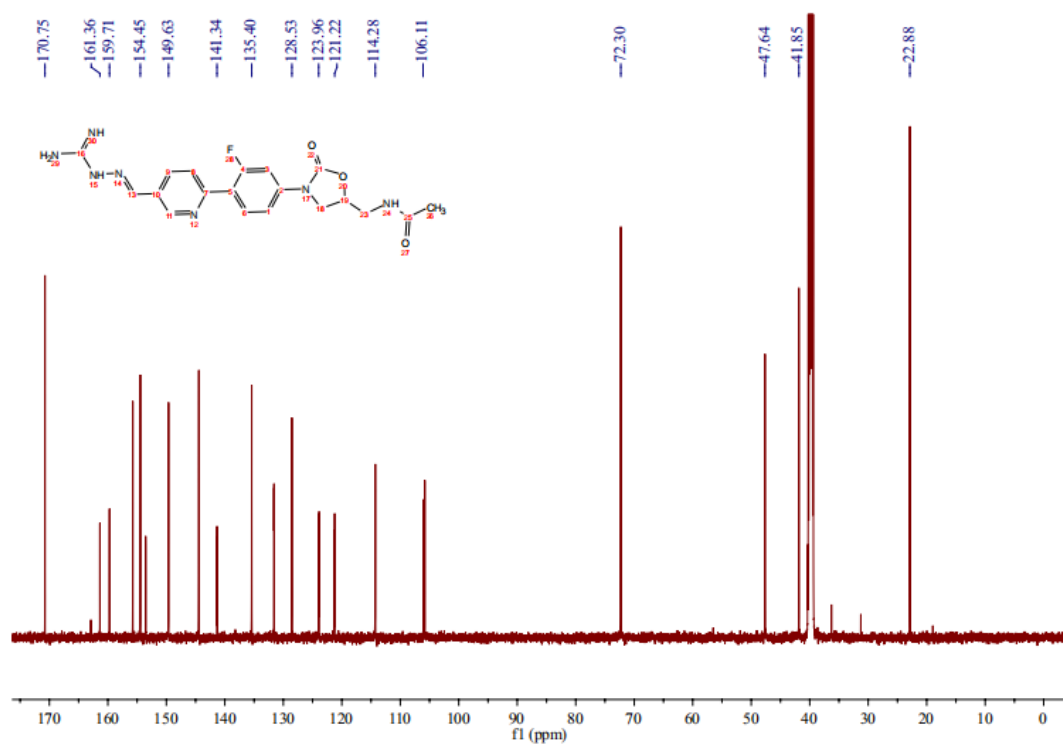
Compound 13a-1



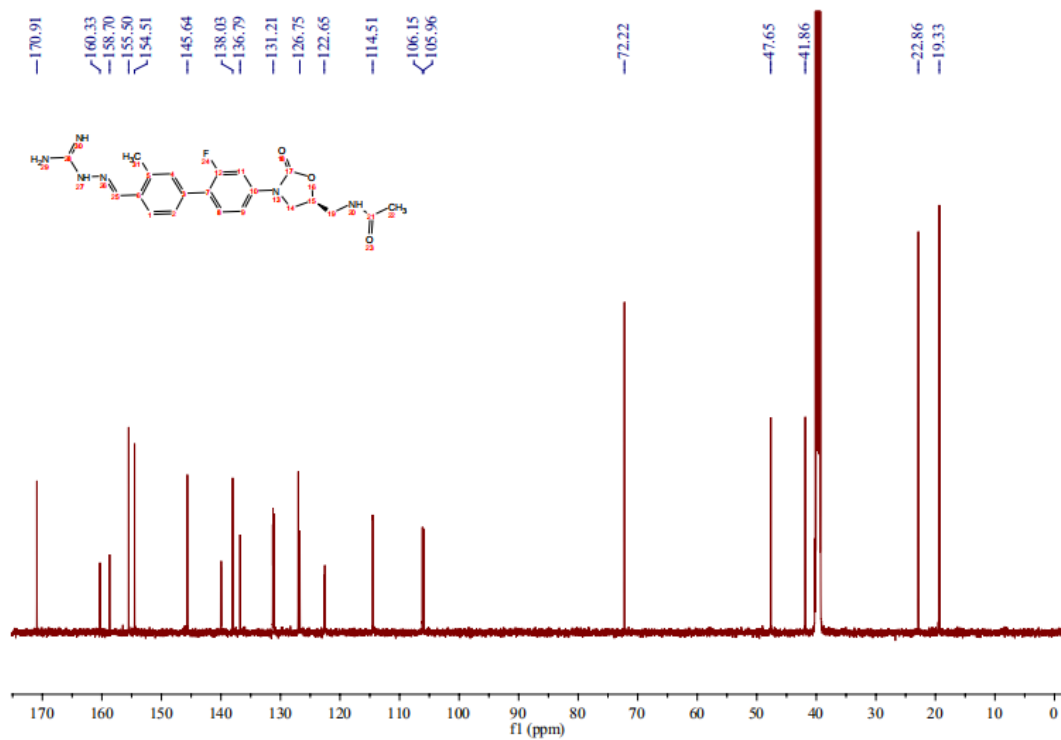
Compound 13a-2



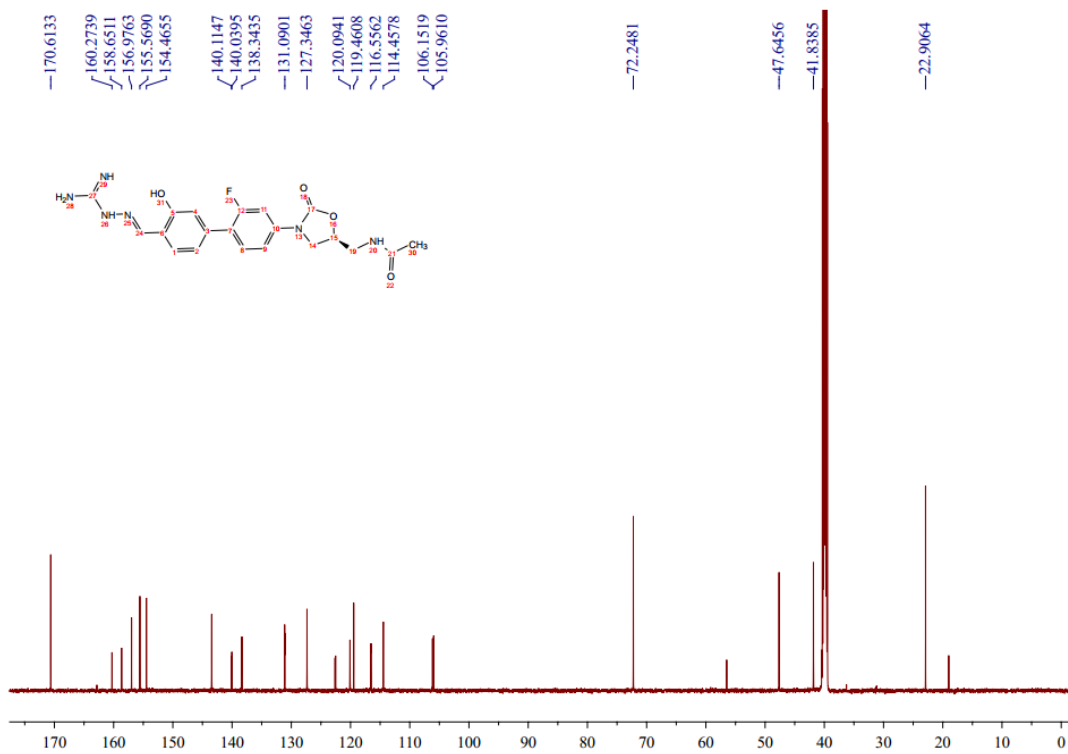
Compound 13a-3



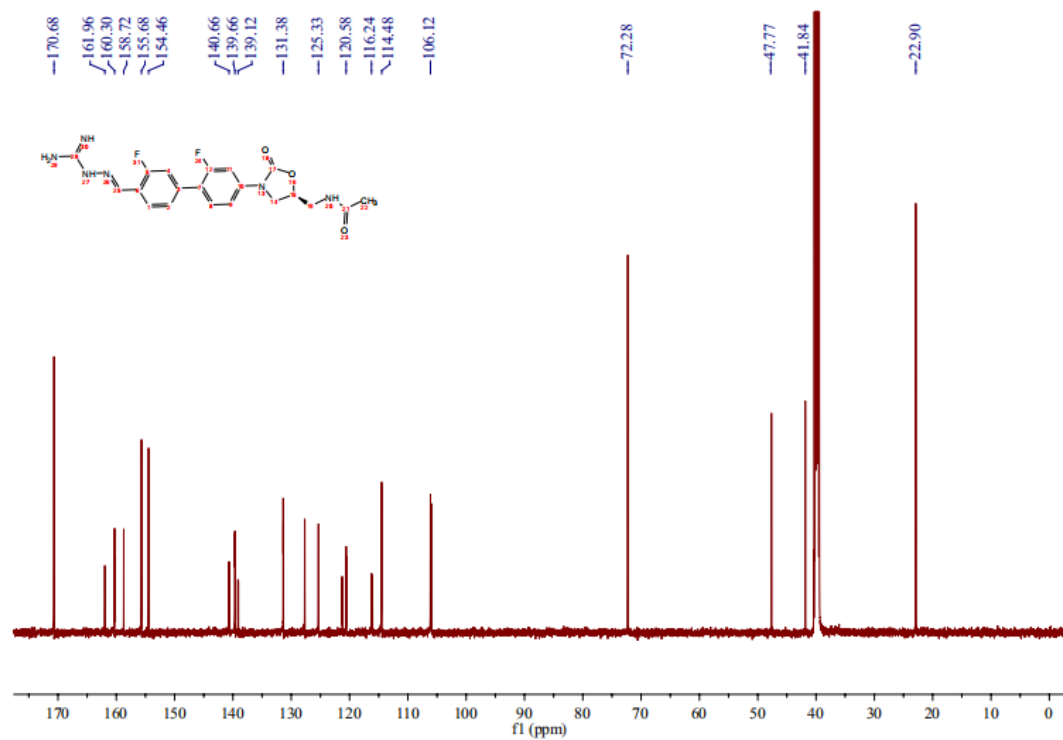
Compound 13a-4



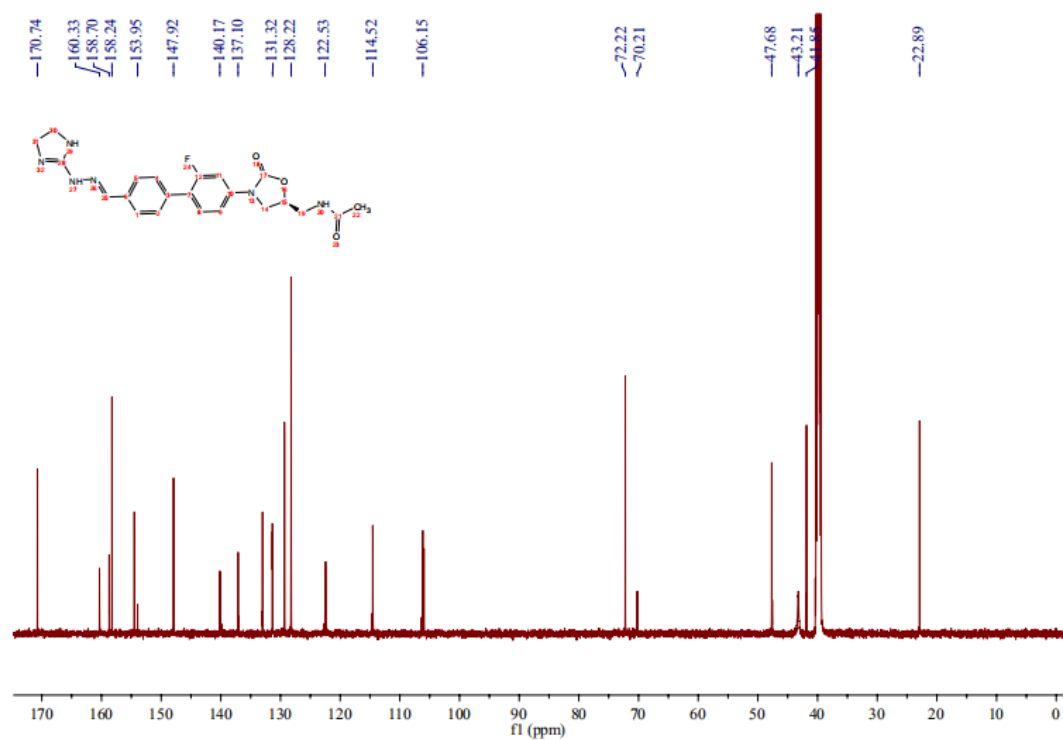
Compound 13a-5



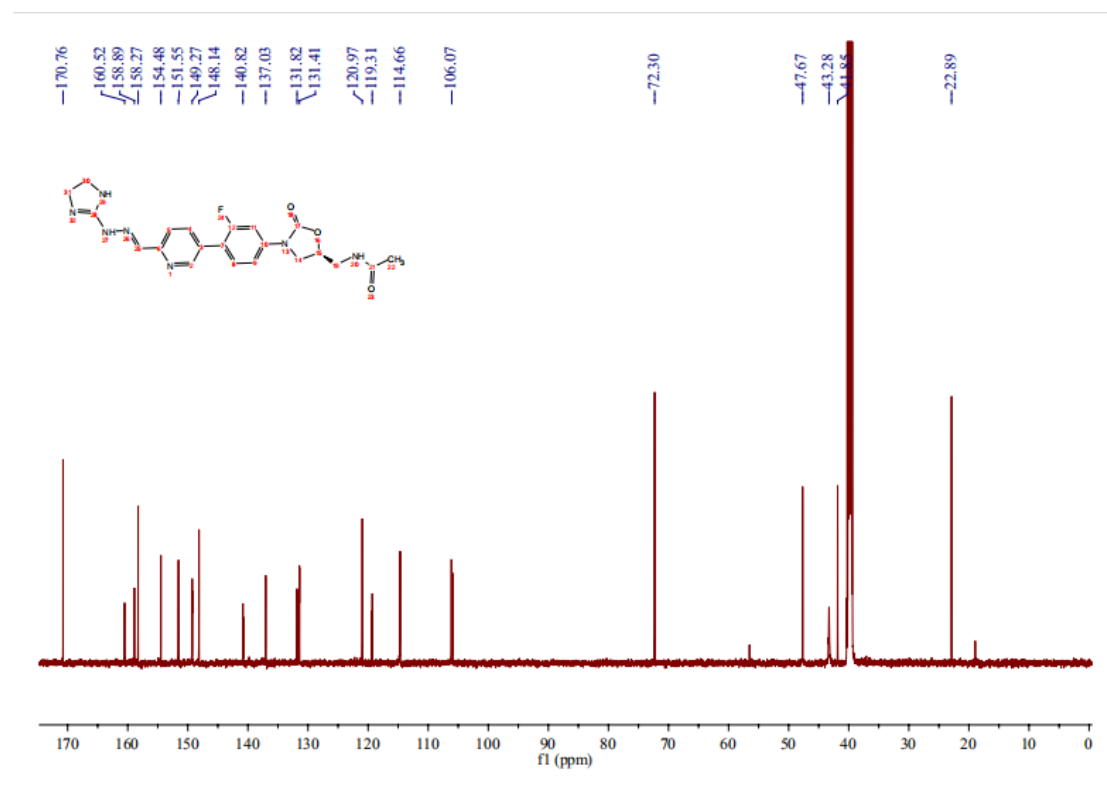
Compound 13a-6



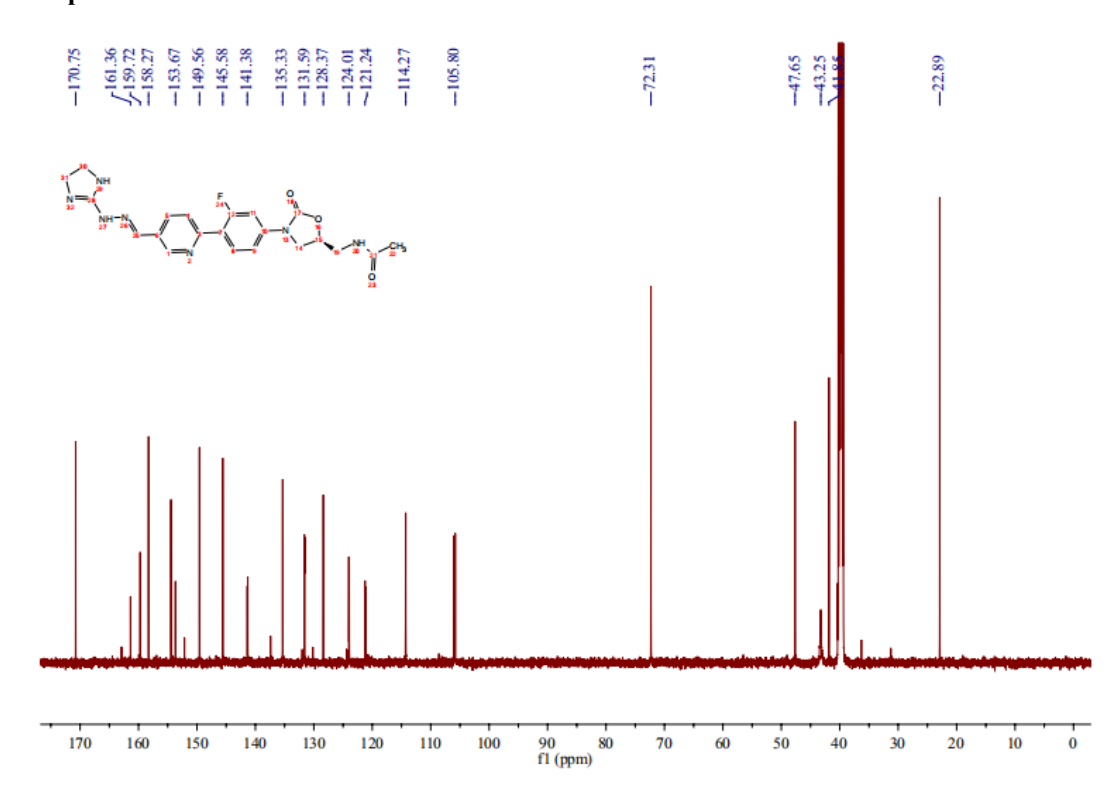
Compound 13b-1



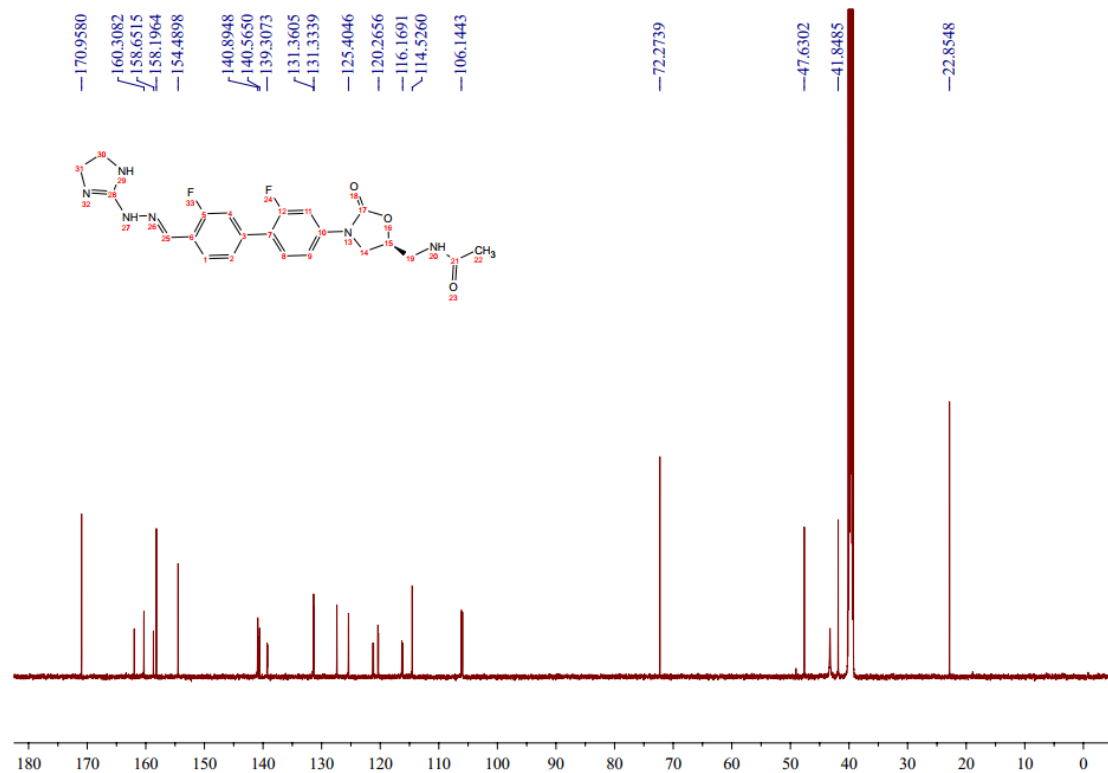
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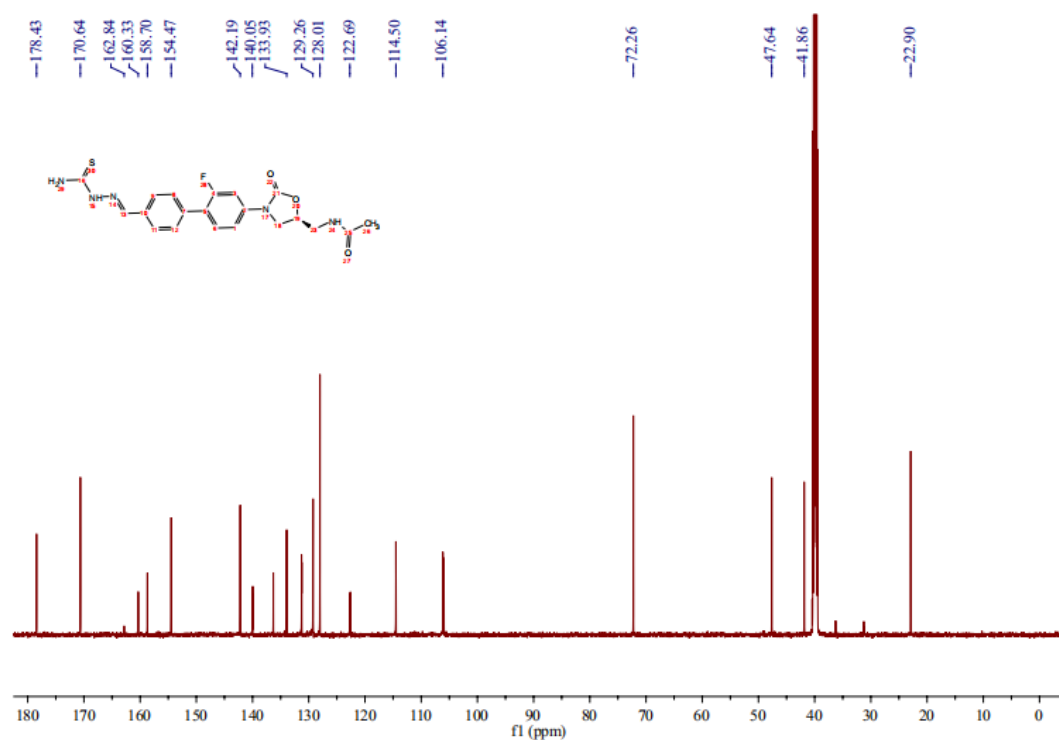
Compound 13b-3



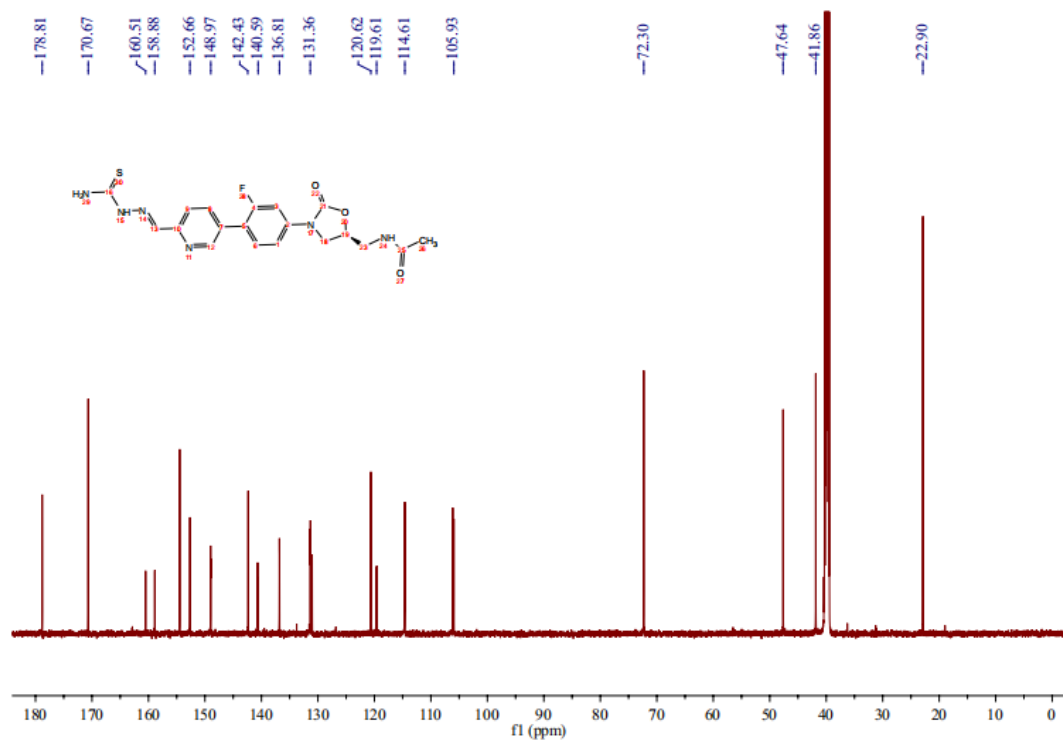
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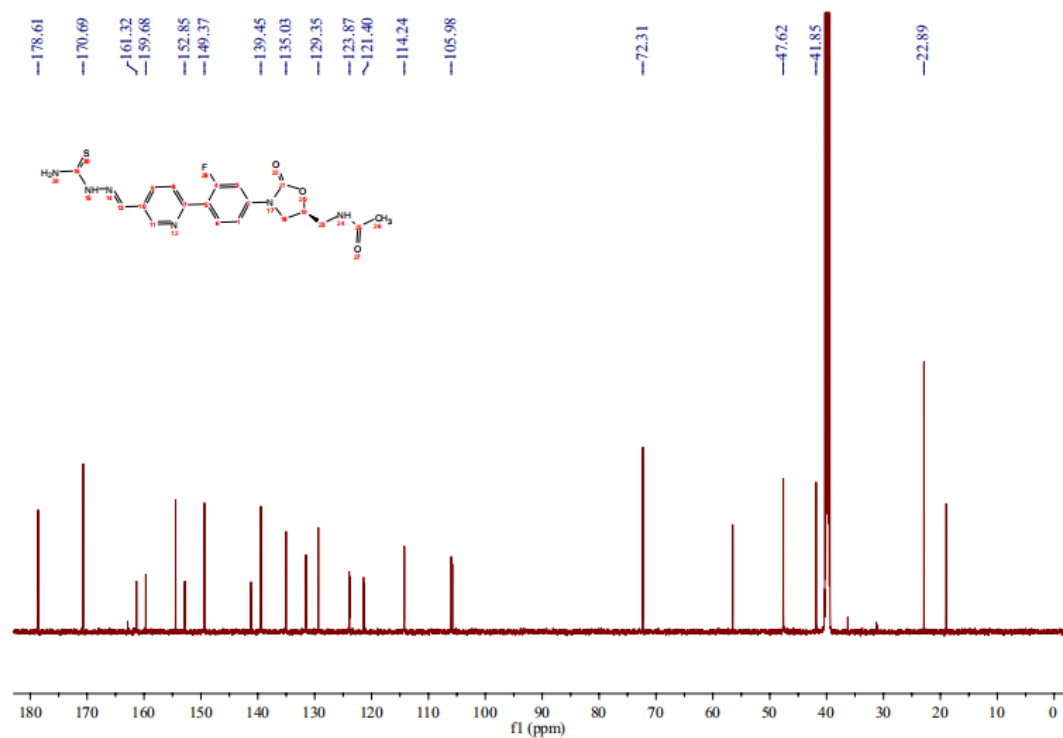
Compound 14a-1



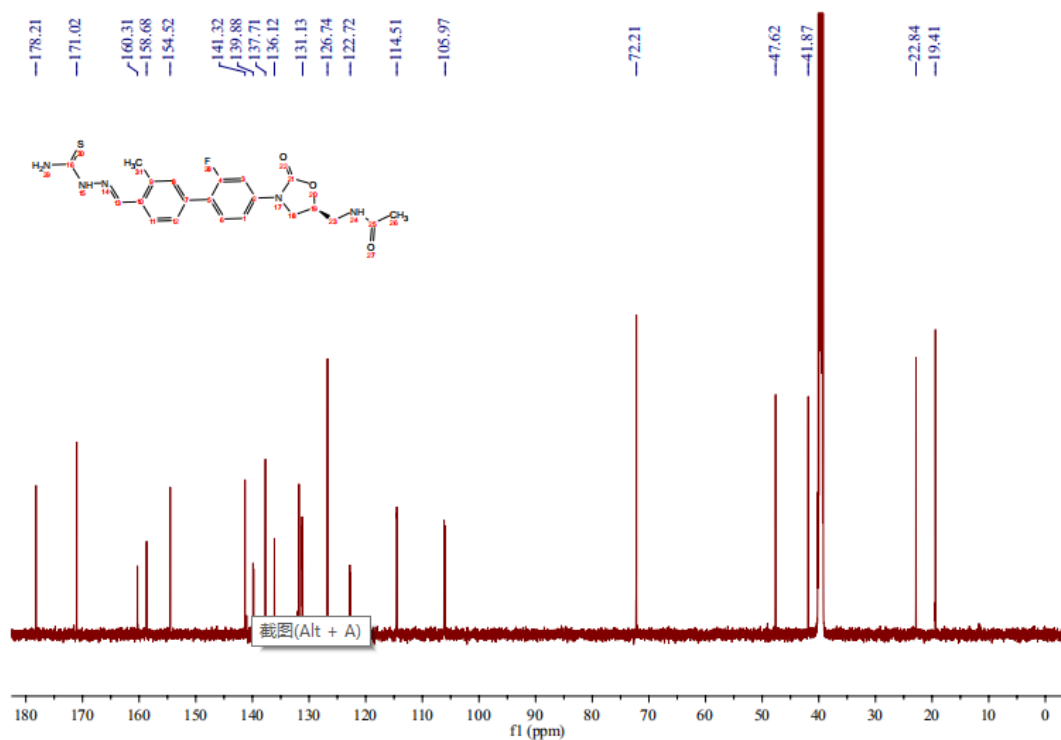
Compound 14a-2



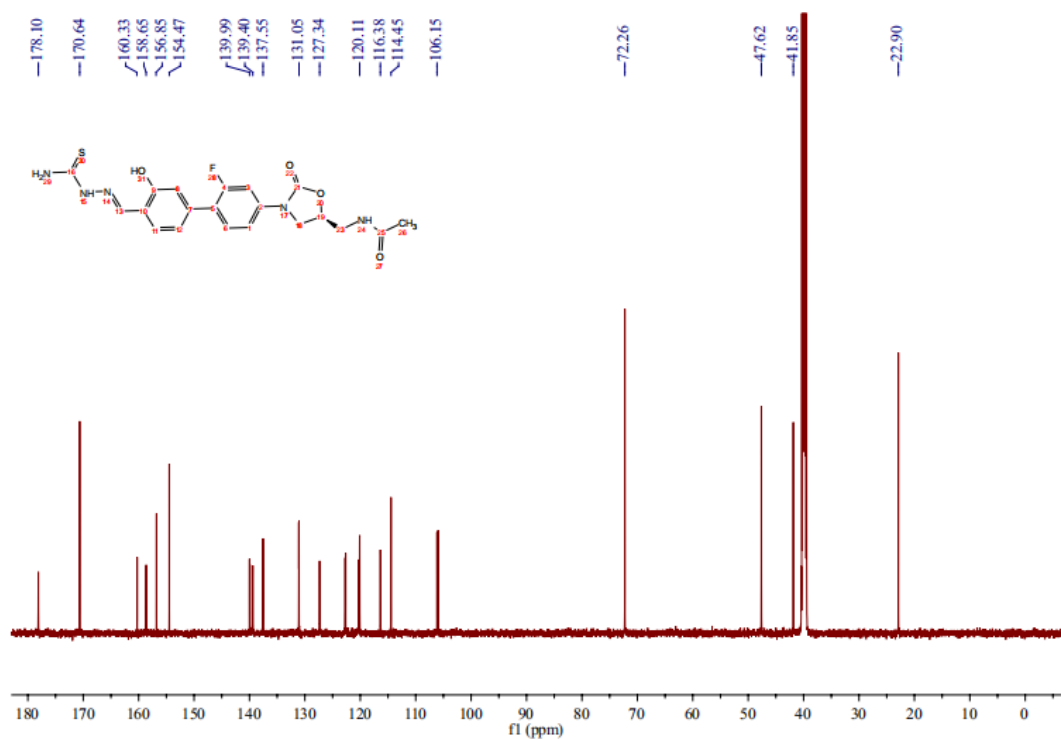
Compound 14a-3



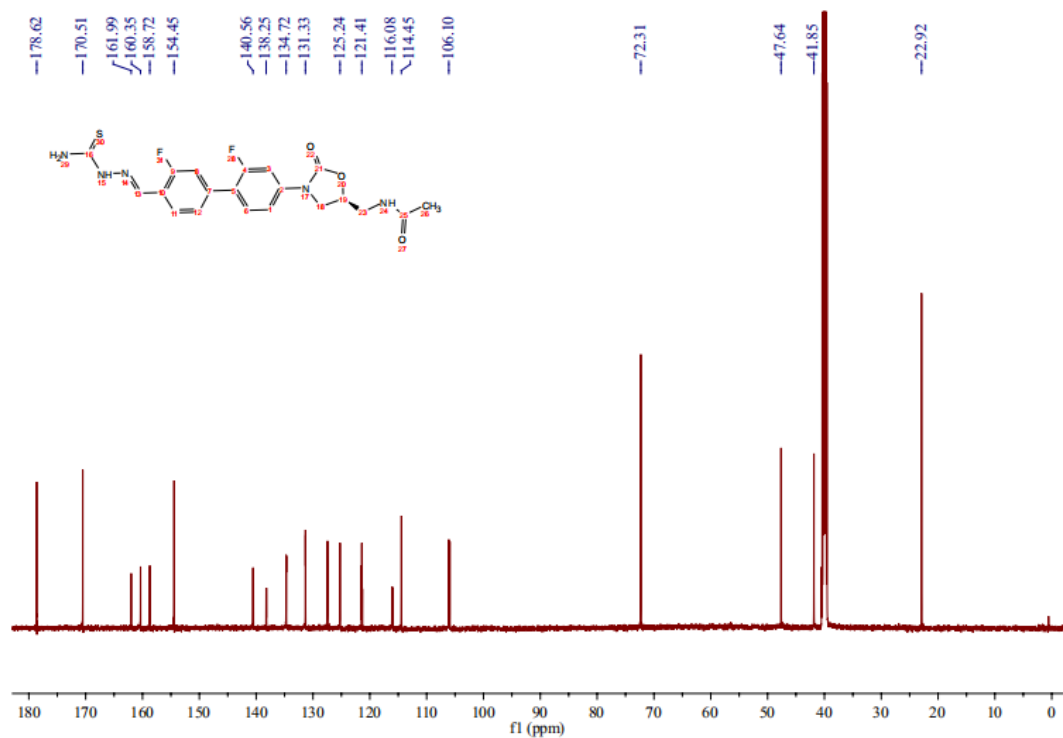
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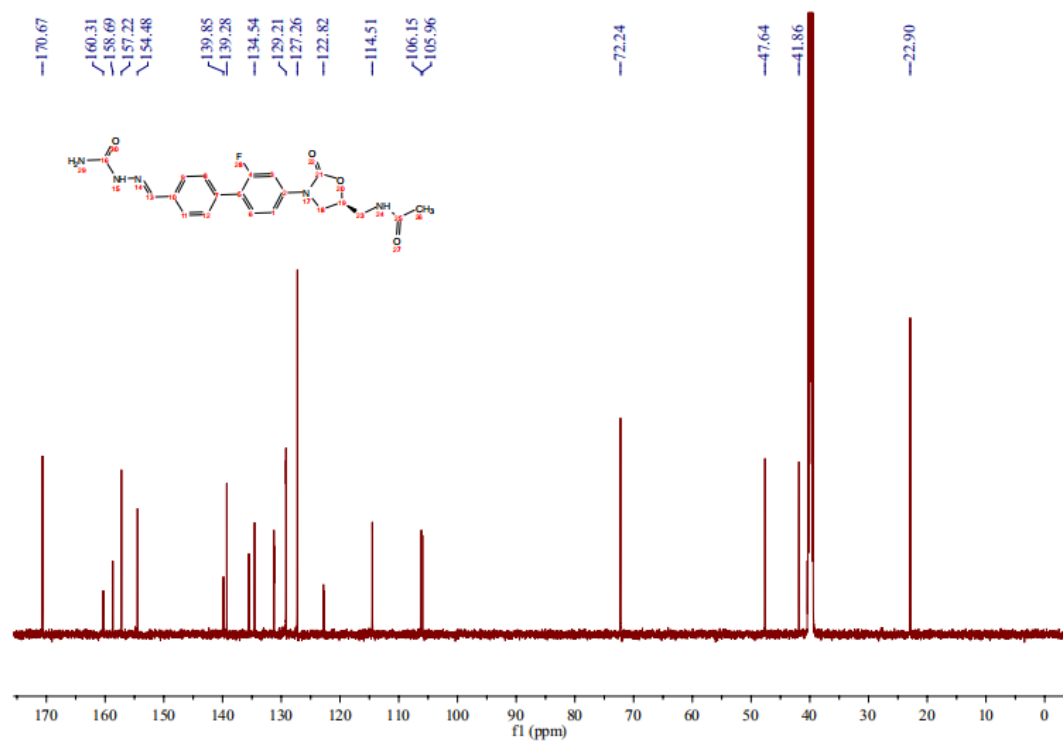
Compound 14a-5



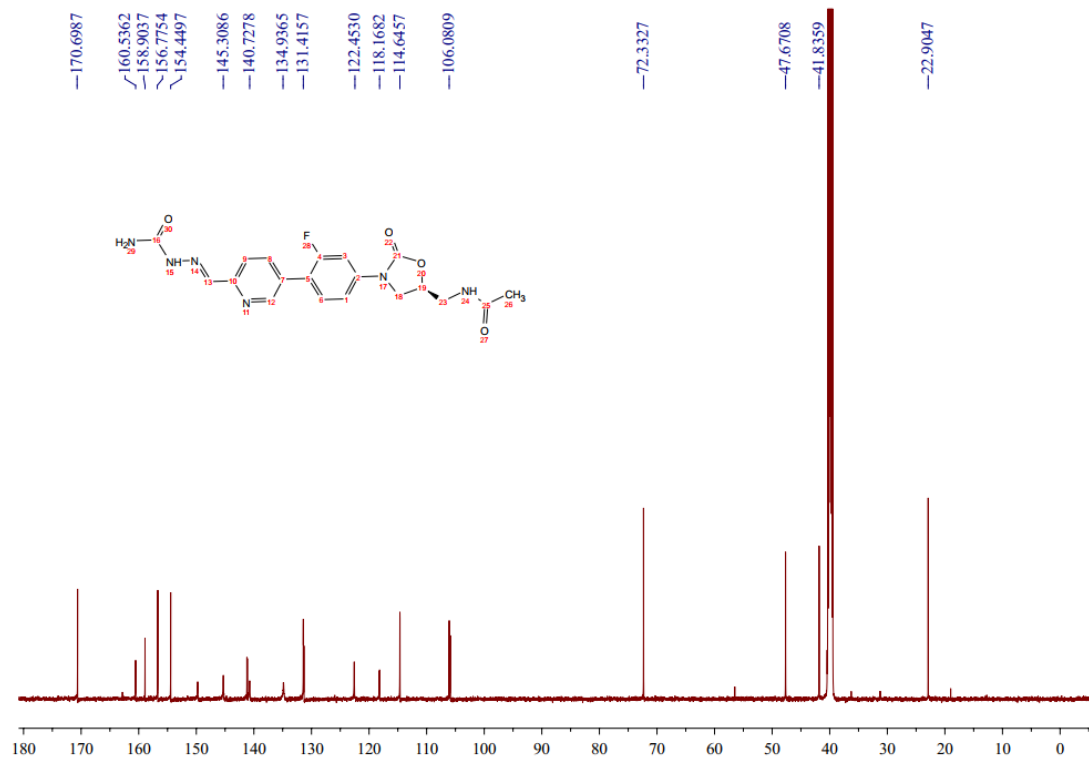
Compound 14a-6



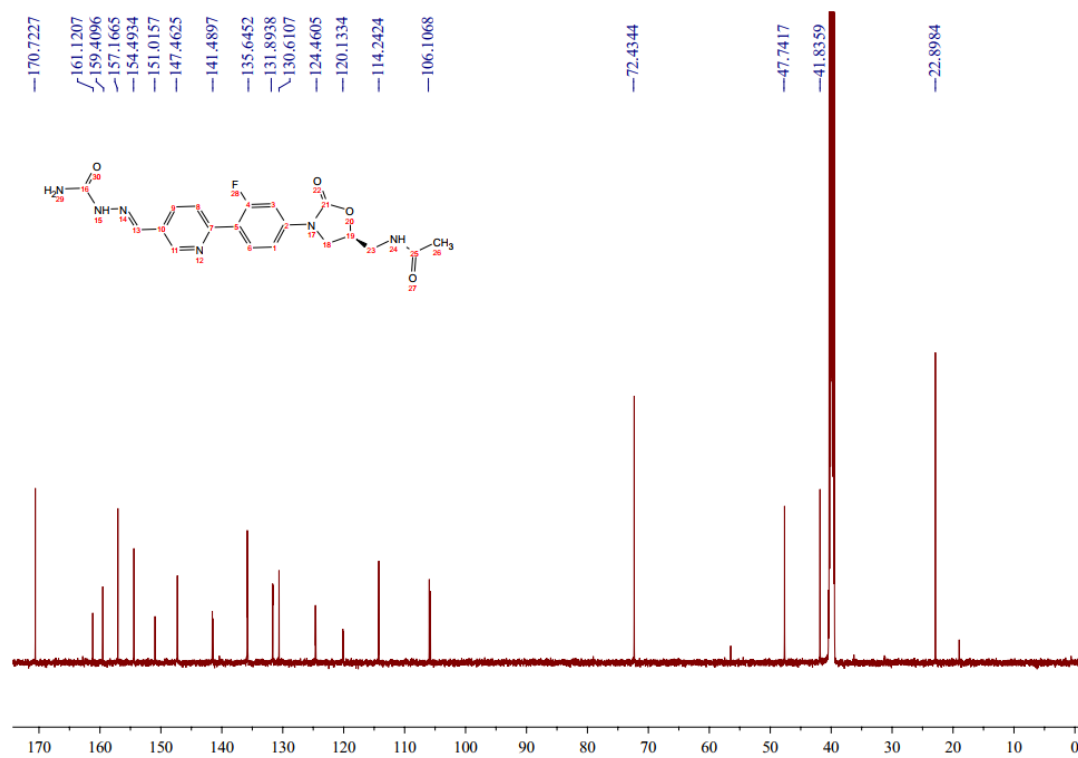
Compound 14b-1



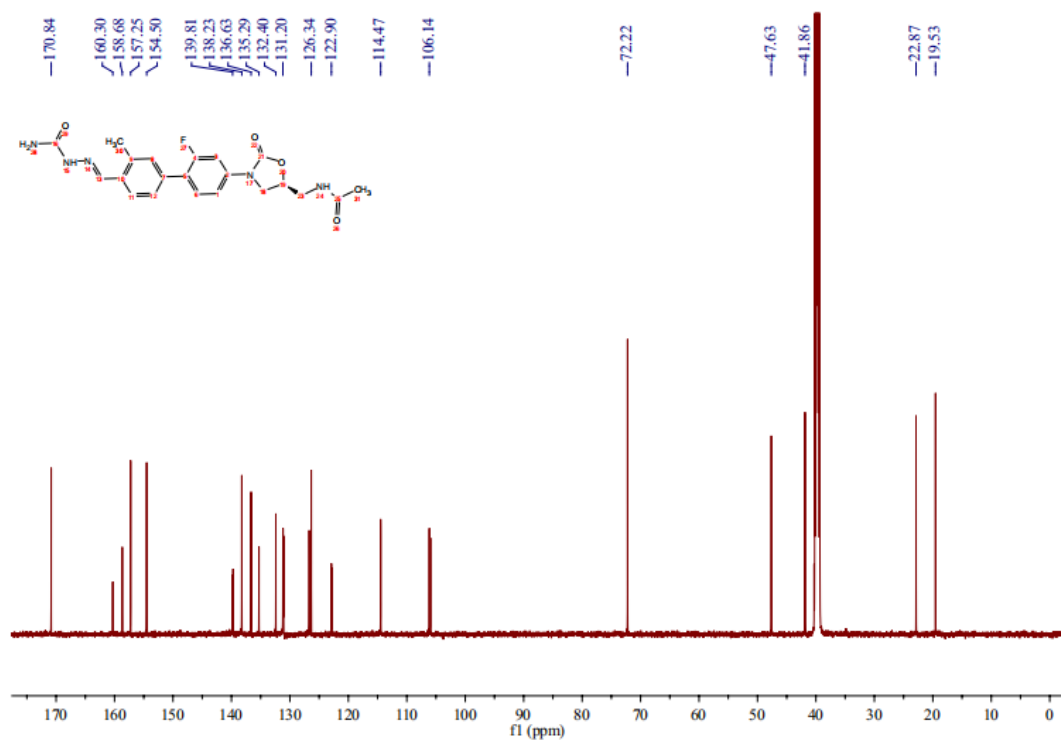
Compound 14b-2



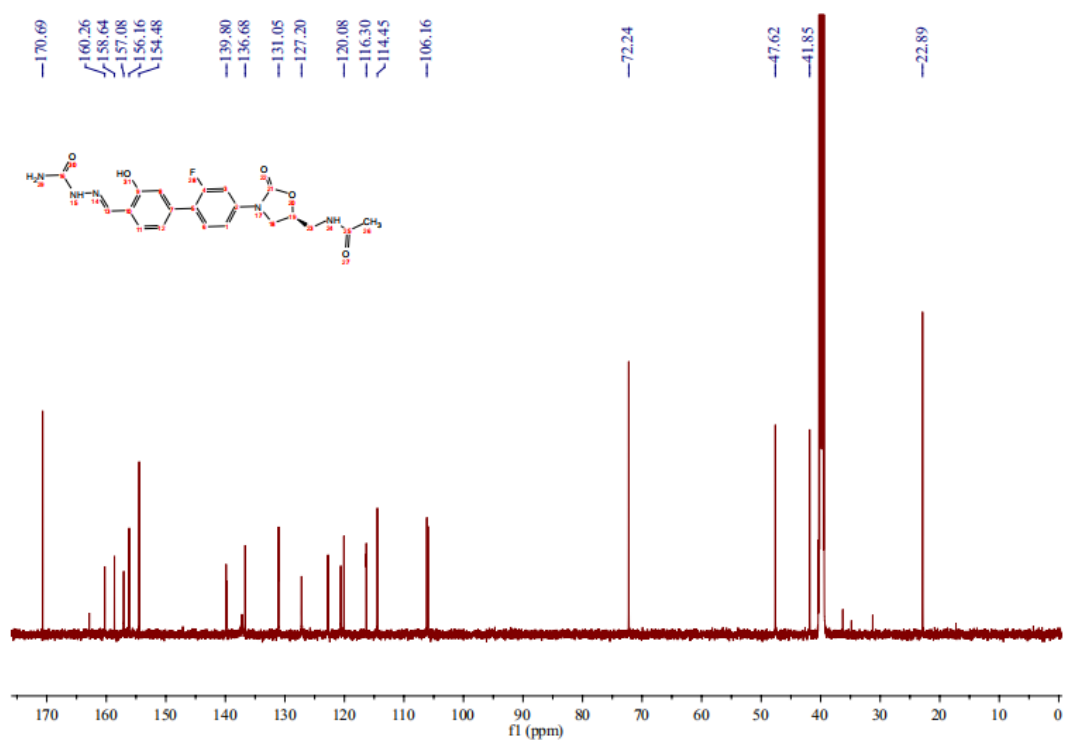
Compound 14b-3



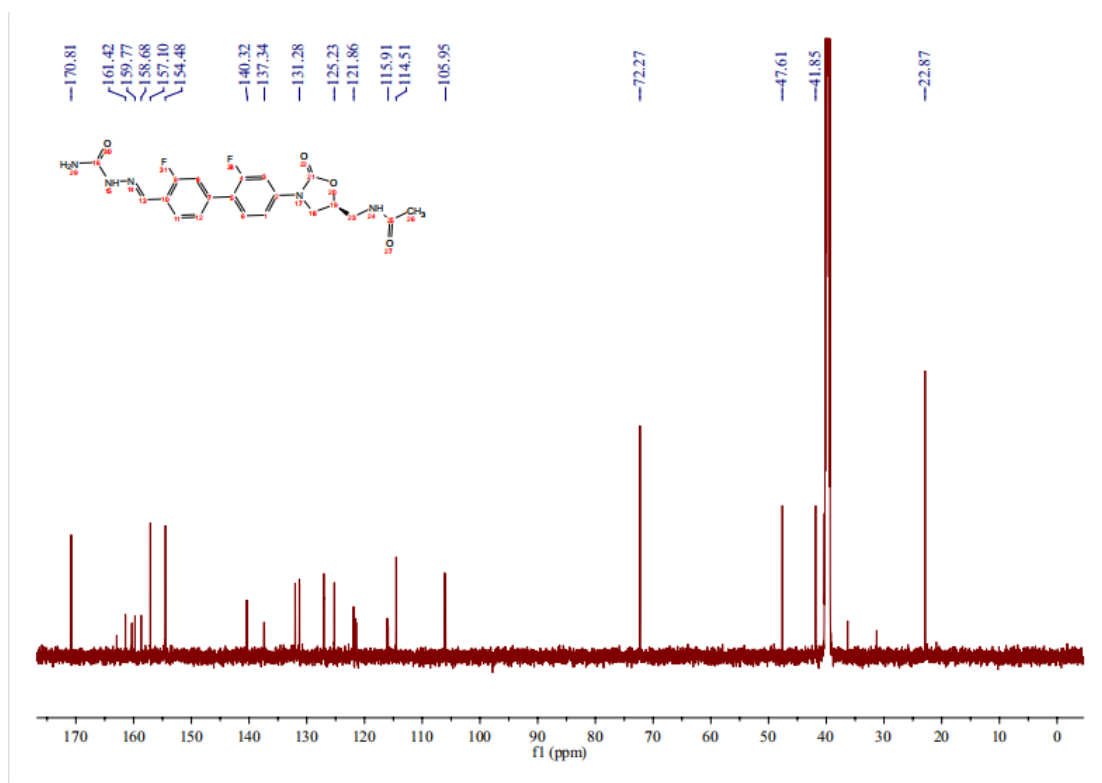
Compound 14b-4



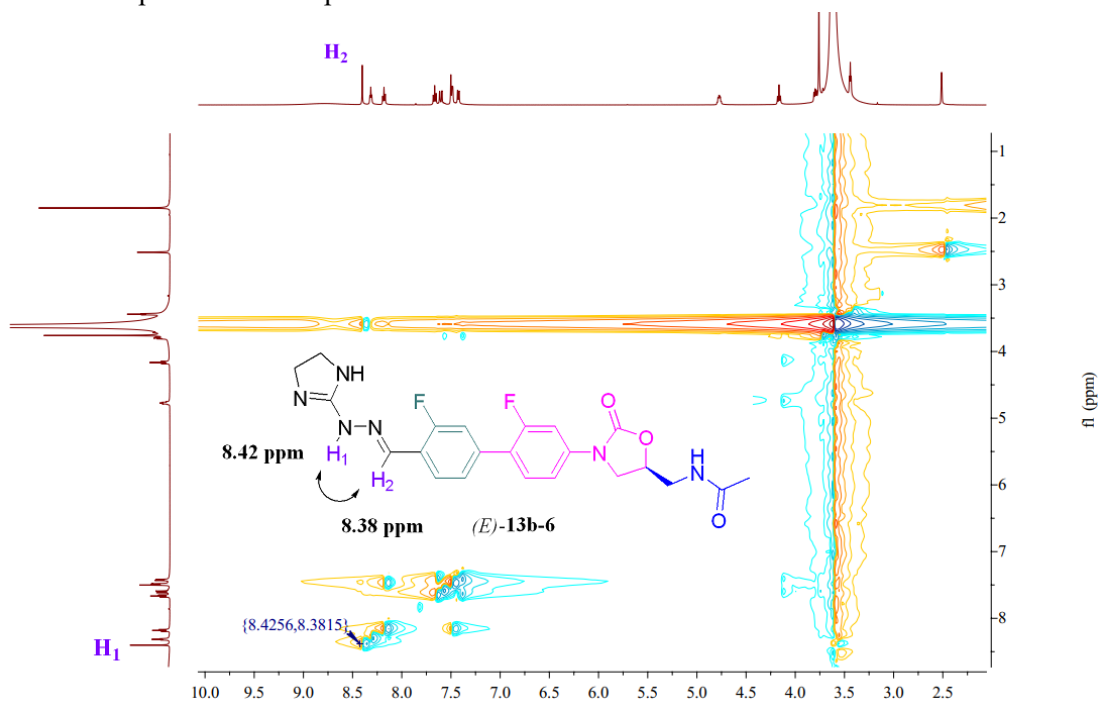
Compound 14b-5



Compound 14b-6



3. NOESY spectrum of compound 13b-6



4. MS spectrum Compound 13a-1

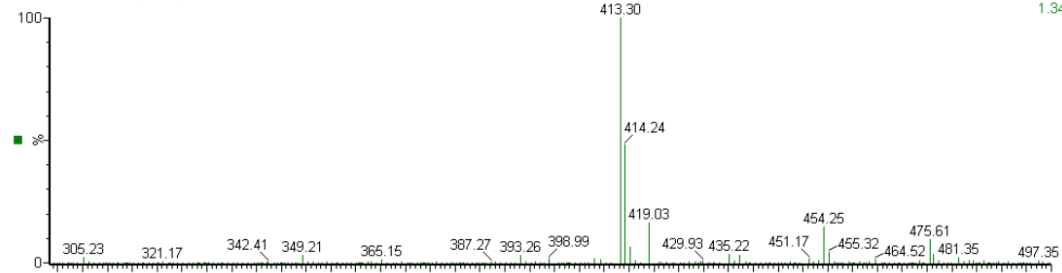
30-Sep-2019

11:22:26
QUATTROZQUATTROZQ

1:A,3

QYL 412 0930 21 (0.414)

1: Scan ES+
1.34e8



Compound 13a-2

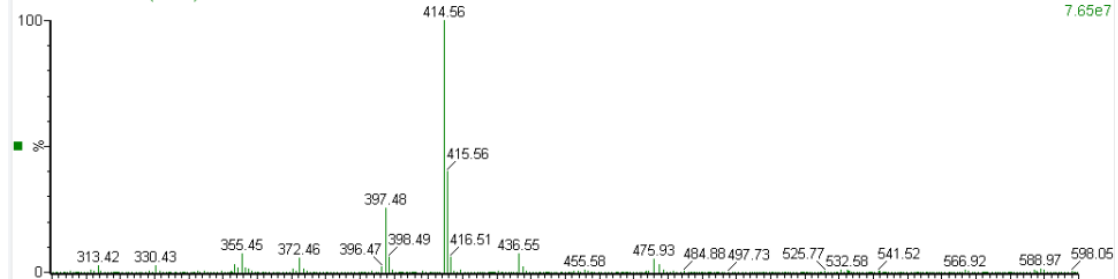
17-Sep-2019

12:18:46
QUATTROZQUATTROZQ

1:B,7

QYLA 413 0917 18 (0.354)

1: Scan ES+
7.65e7



Compound 13a-3

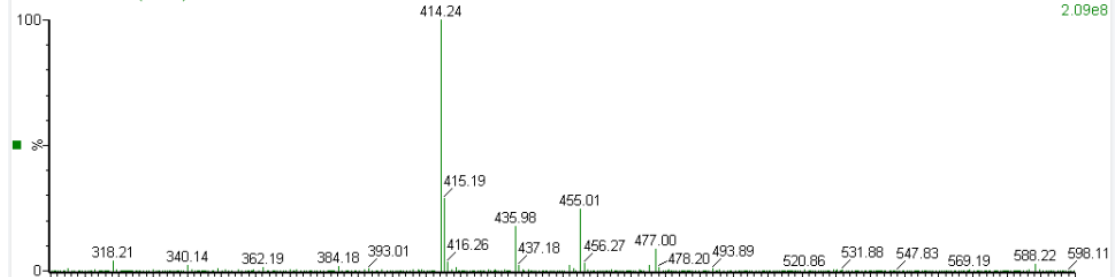
11-Nov-2019

14:29:07
QUATTROZQUATTROZQ

1:E,1

QYL 413 1111 25 (0.495)

1: Scan ES+
2.09e8



Compound 13a-4

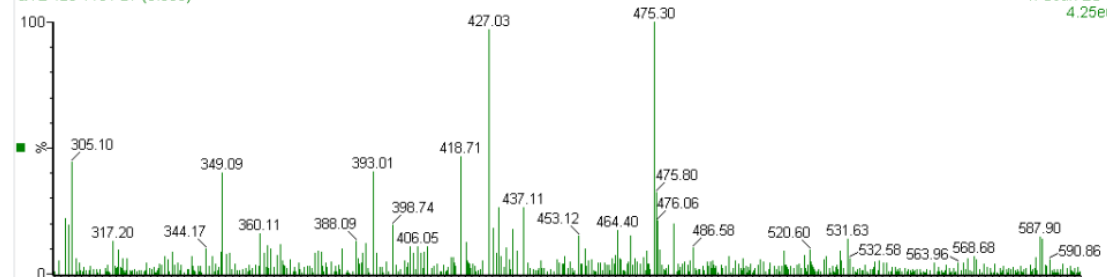
01-Nov-2019

17:04:04
QUATTROZQUATTROZQ

1:B,5

QYL 426 1101 27 (0.535)

1: Scan ES+
4.25e6



Compound 13a-5

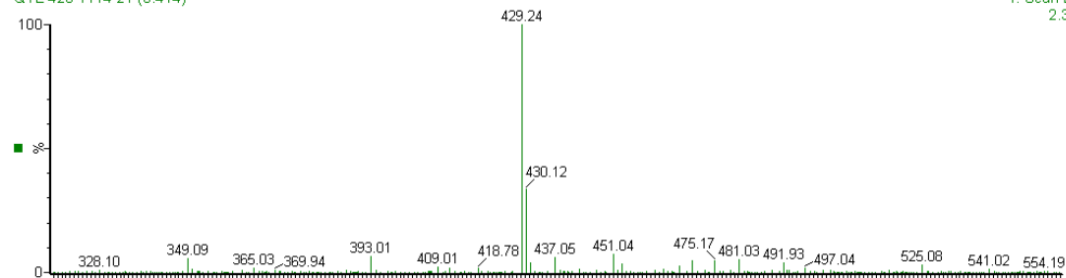
14-Nov-2019

14:48:47
QUATTROZQUATTROZQ

1:E,5

QYL 428 1114 21 (0.414)

1: Scan ES+
2.30e8



Compound 13a-6

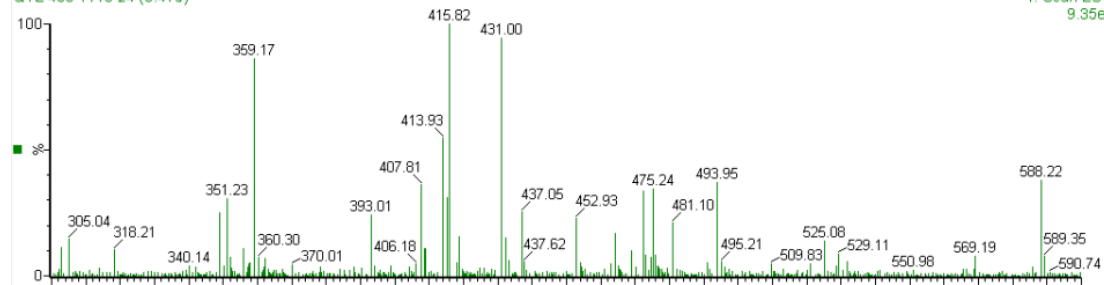
13-Nov-2019

12:23:31
QUATTROZQUATTROZQ

1:C,3

QYL 430 1113 24 (0.475)

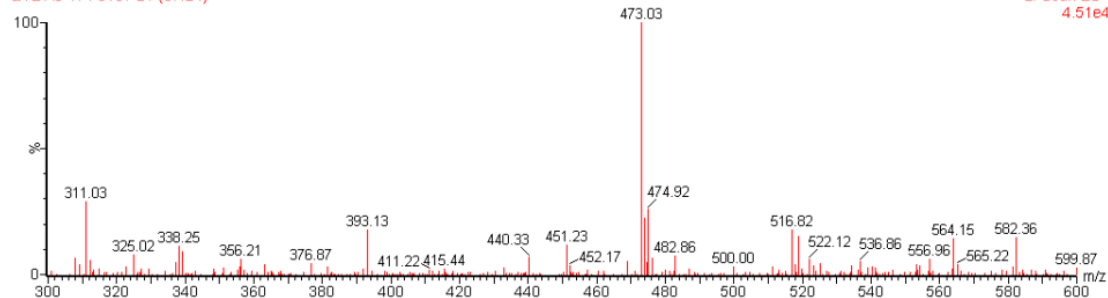
1: Scan ES+
9.35e6



Compound 13b-1

QYL A5 474 0107 21 (0.424)

2: Scan ES-
4.51e4



Compound 13b-2

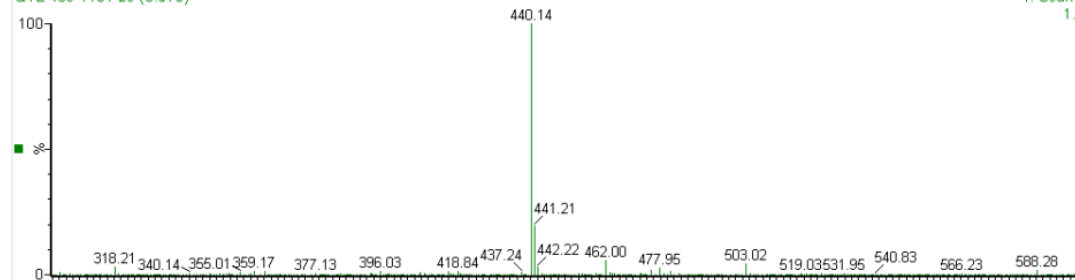
01-Nov-2019

17:27:51
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1:C,1

QYL 439 1101 29 (0.576)

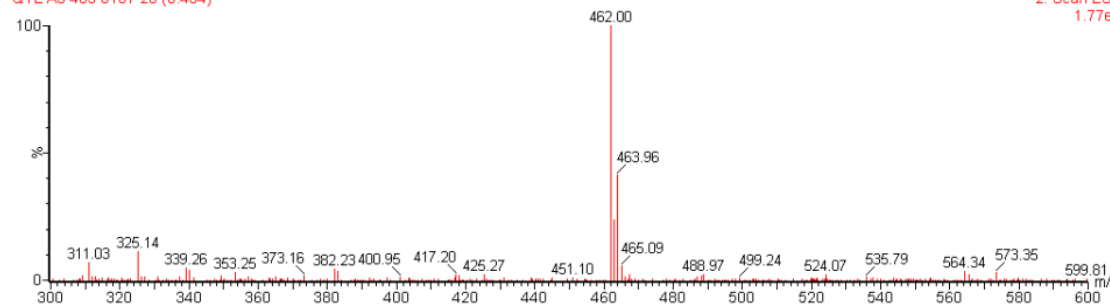
1: Scan ES+
1.71e8



Compound 13b-3

QYL A3 463 0107 20 (0.404)

2: Scan ES-
1.77e5



Compound 13b-4

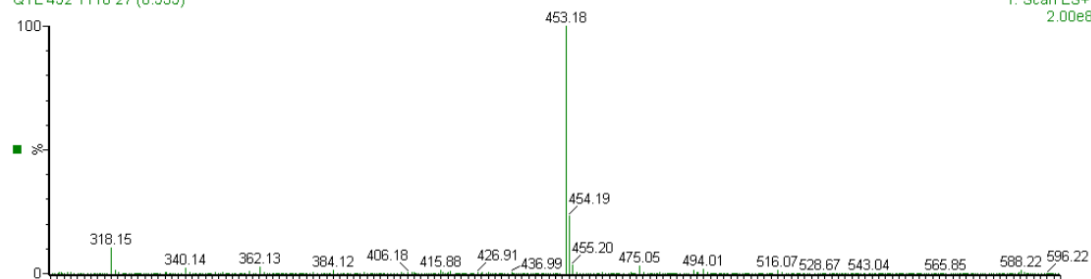
18-Nov-2019

14:29:28
QUATTROZQUATTROZQ

1:E,3

QYL 452 1118 27 (0.535)

1: Scan ES+
2.00e8



Compound 13b-5

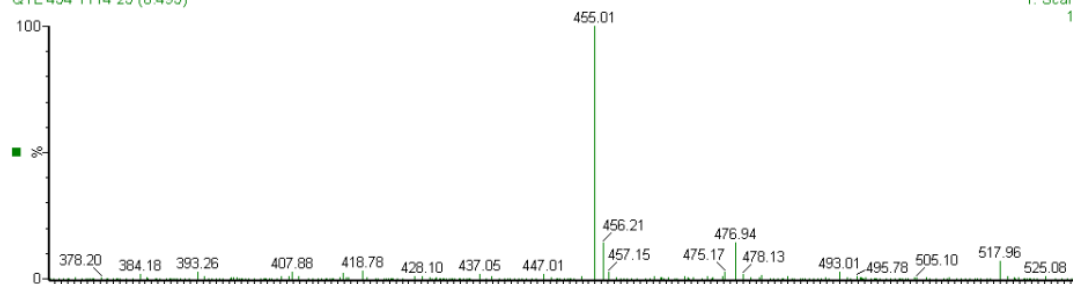
14-Nov-2019

14:54:43
QUATTROZQUATTROZQ

1:E,6

QYL 454 1114 25 (0.495)

1: Scan ES+
1.48e8



Compound 13b-6

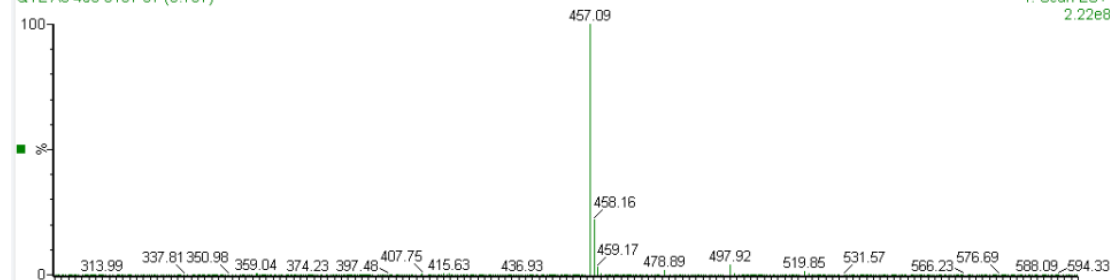
07-Jan-2020

12:35:50
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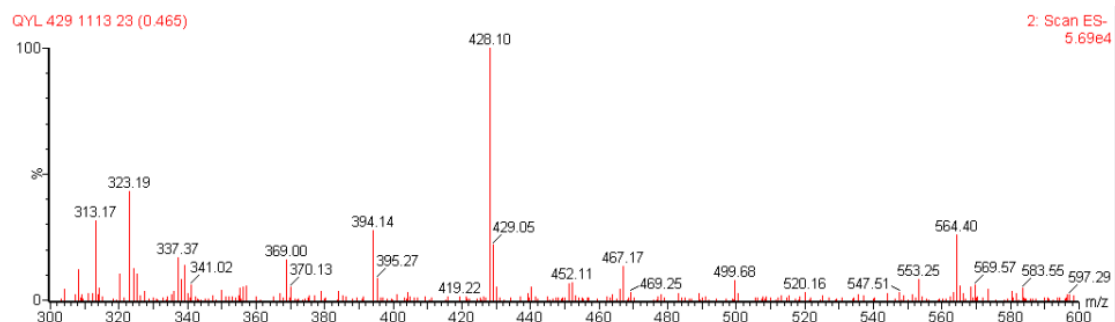
1:B,6

QYL A8 456 0107 37 (0.737)

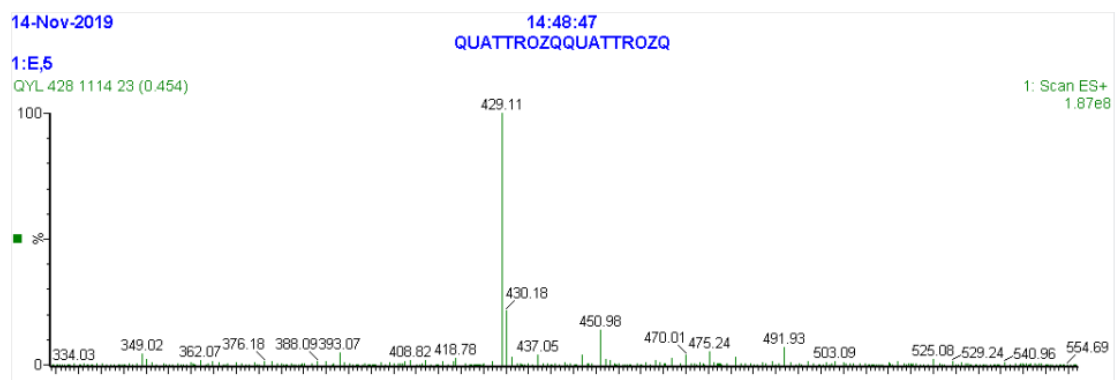
1: Scan ES+
2.22e8



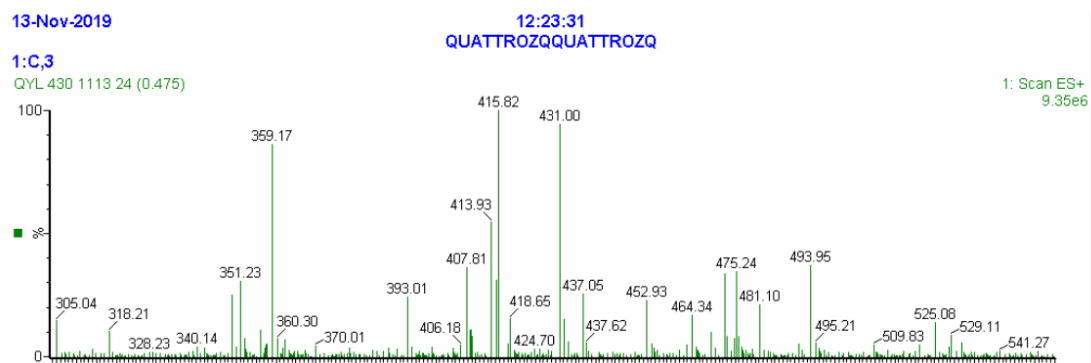
Compound 14a-1



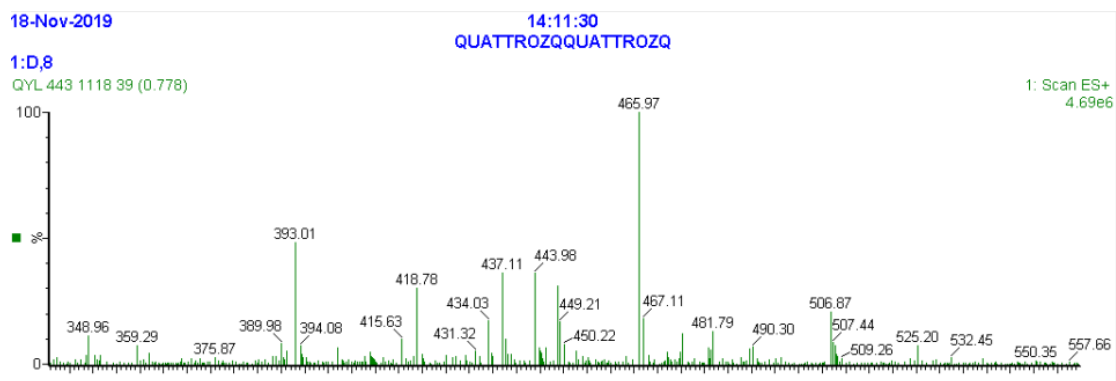
Compound 14a-2



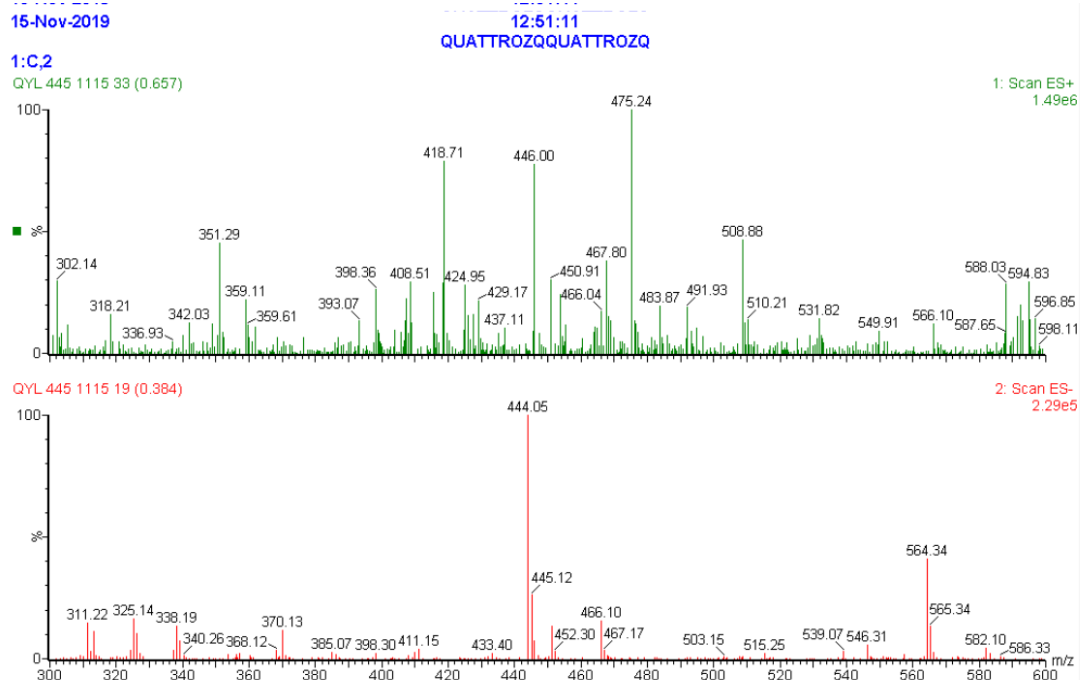
Compound 14a-3



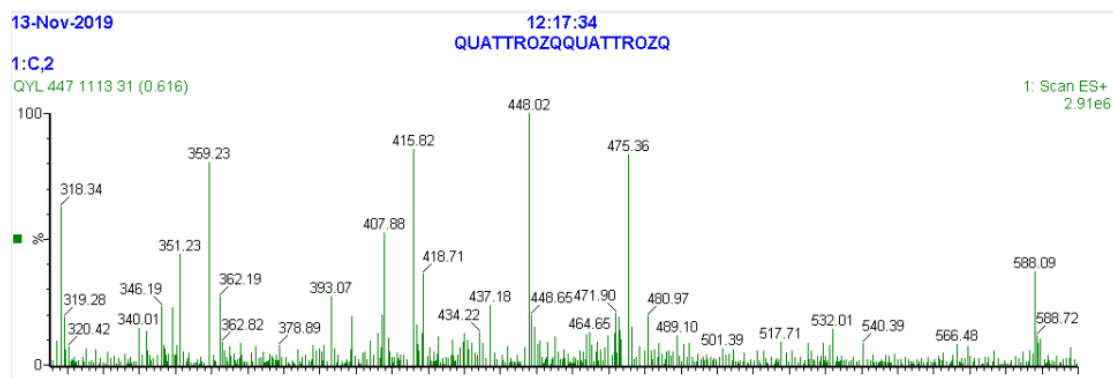
Compound 14a-4



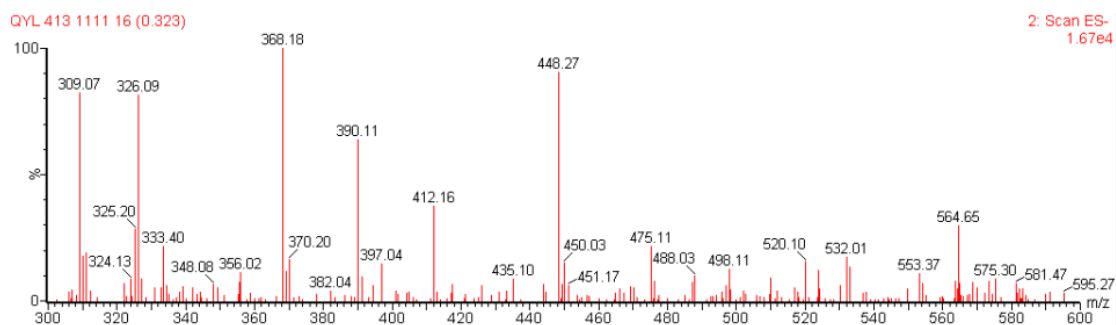
Compound 14a-5



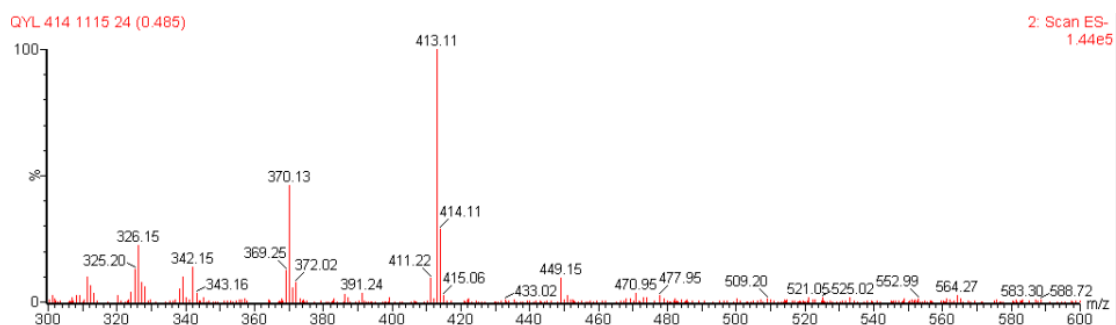
Compound 14a-6



Compound 14b-1



Compound 14b-2



Compound 14b-3

15-Nov-2019

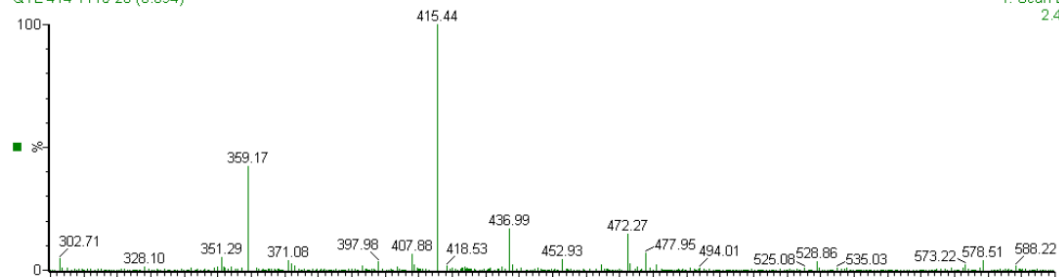
12:45:14

QUATTROZQQUATTROZQ

1:C,1

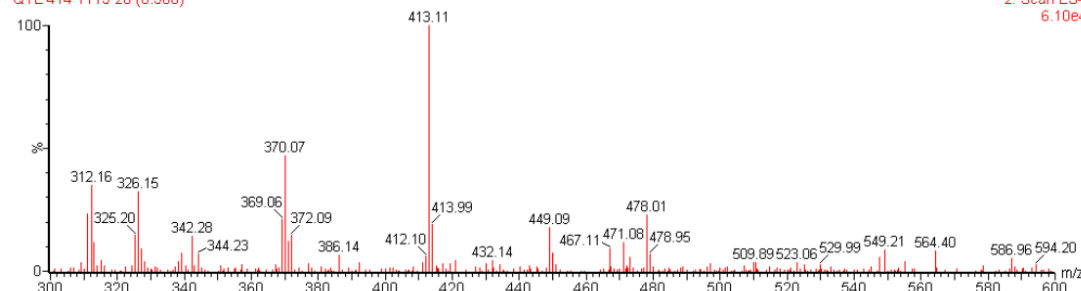
QYL 414 1115 20 (0.394)

1: Scan ES+
2.45e8

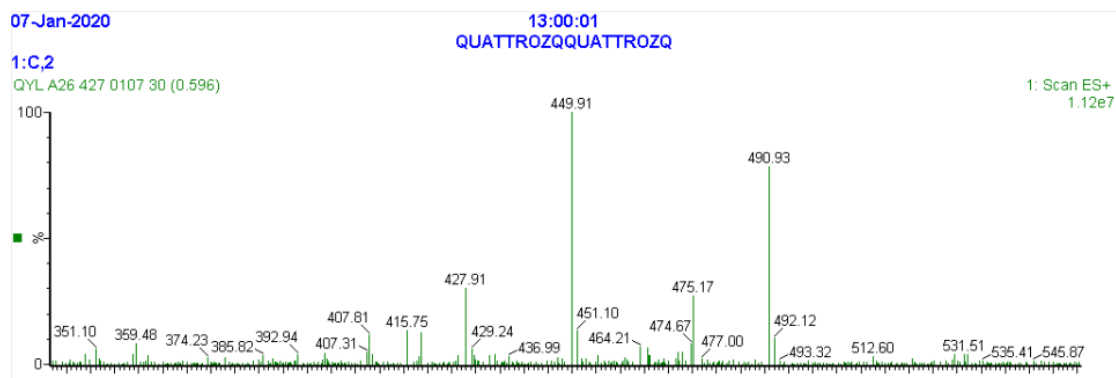


QYL 414 1115 28 (0.566)

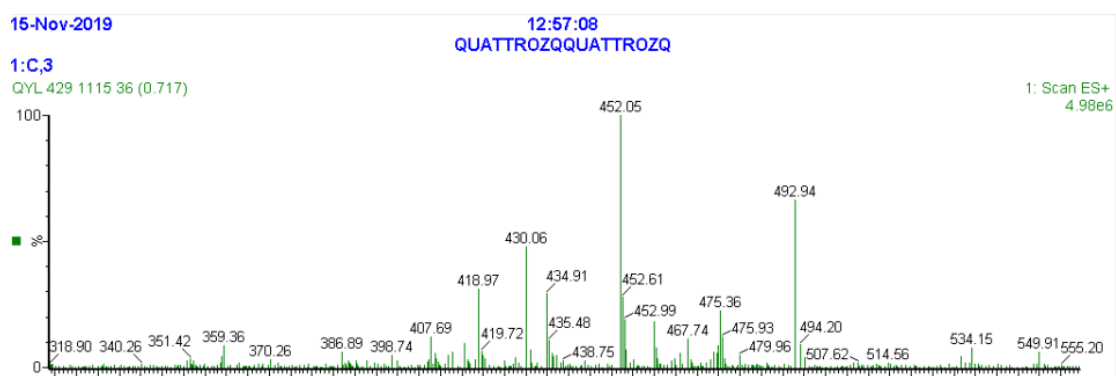
2: Scan ES-
6.10e4



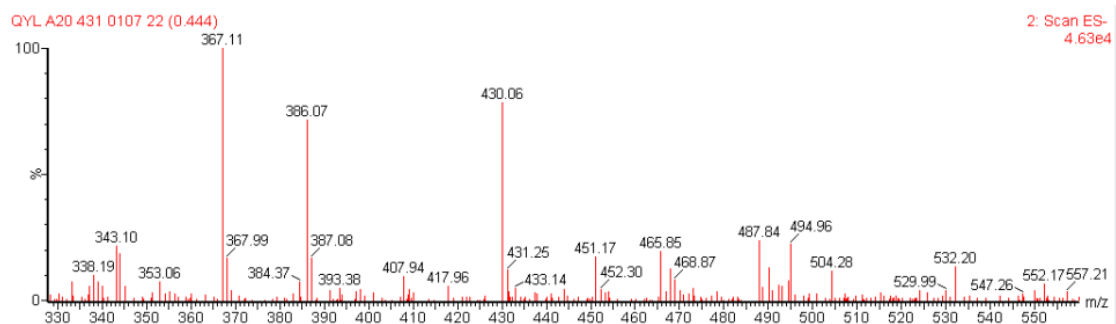
Compound 14b-4



Compound 14b-5



Compound 14b-6



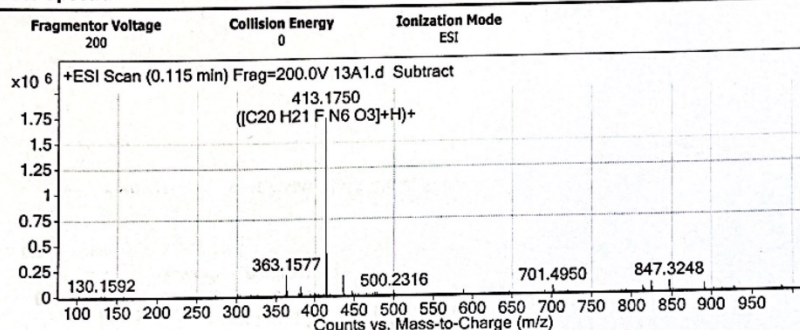
Compound 13a-1

Qualitative Analysis Report

Data Filename: 13A1.d Sample Name: 13A1
Sample Type: Sample Position: P1-D6
Instrument Name: Instrument 1 User Name:
Acq Method: ZHENG100-1000.m Acquired Time: 12/18/2021 9:07:13 AM
IRM Calibration Status: Success DA Method: 20170311.m
Comment:

Sample Group: Info.
Acquisition SW: 6200 series TOF/6500 series
Version: Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1577	1	198729.25		
381.168	1	83921.41		
413.175	1	1737364.88	C ₂₀ H ₂₁ F N ₆ O ₃	(M+H) ⁺
414.1783	1	405704.5	C ₂₀ H ₂₁ F N ₆ O ₃	(M+H) ⁺
415.1801	1	49235.4	C ₂₀ H ₂₁ F N ₆ O ₃	(M+H) ⁺
435.1572	1	189675.69		
701.495	1	60968.27		
825.3427	1	79738.38		
847.3248	1	96803.23		
890.4175	1	63313.89		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C ₂₀ H ₂₁ F N ₆ O ₃	FALSE	412.1678	412.1659	-4.57	C ₂₀ H ₂₂ F N ₆ O ₃	91.32

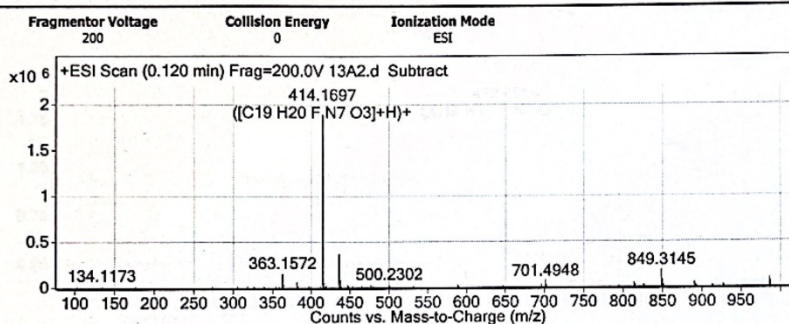
--- End Of Report ---

Compound 13a-2

Qualitative Analysis Report

Data Filename: 13A2.d Sample Name: 13A2
Sample Type: Sample Position: P1-D7
Instrument Name: Instrument 1 User Name:
Acq Method: ZHENG100-1000.m Acquired Time: 12/18/2021 9:10:09 AM
IRM Calibration Status: Success DA Method: 20170311.m
Comment:
Sample Group: Info.
Acquisition SW: 6200 series TOF/6500 series
Version: Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1572	1	153184.36		
381.1668	1	58807.92		
414.1697	1	1902151.25	C19 H20 F N7 O3	(M+H)+
415.1728	1	432729.94	C19 H20 F N7 O3	(M+H)+
436.1521	1	362744.38		
437.1554	1	75795.52		
701.4948	1	63117.52		
849.3145	1	179315.47		
850.316	1	77845.45		
985.7147	1	87618.44		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C19 H20 F N7 O3	TRUE	413.1625	413.1612	-3.12	C19 H21 F N7 O3	95.59

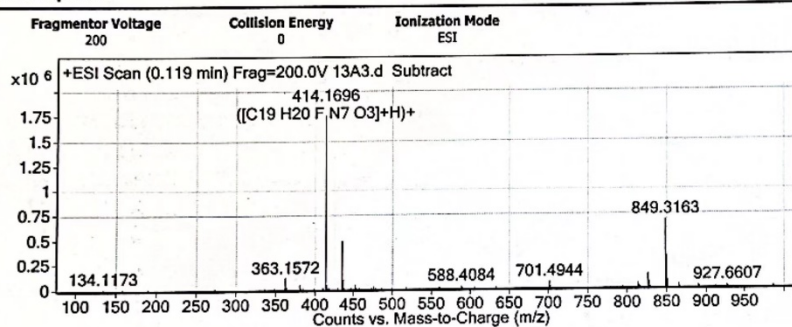
--- End Of Report ---

Compound 13a-3

Qualitative Analysis Report

Data Filename	13A3.d	Sample Name	13A3
Sample Type	Sample	Position	P1-D8
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:13:05 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			
Sample Group	Info.		
Acquisition SW	6200 series TOF/6500 series		
Version	Q-TOF B.05.01 (B5125.2)		

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1572	1	114615.47		
414.1696	1	1763697.63	C19 H20 F N7 O3	(M+H)+
415.1732	1	390626.94	C19 H20 F N7 O3	(M+H)+
436.1522	1	483977.97		
437.1559	1	99911.38		
701.4944	1	64110.41		
827.3321	1	135149.81		
849.3163	1	688056.5		
850.3187	1	318098.16		
851.3188	1	70966.66		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C19 H20 F N7 O3	TRUE	413.1625	413.1612	-3.12	C19 H21 F N7 O3	94.65

--- End Of Report ---

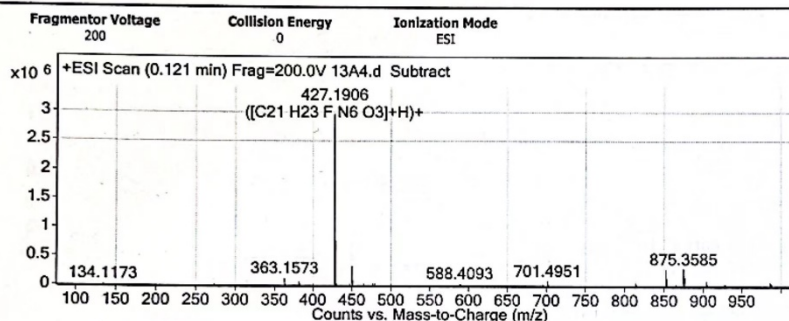
Compound 13a-4

Qualitative Analysis Report

Data Filename: 13A4.d Sample Name: 13A4
 Sample Type: Sample Position: P1-D9
 Instrument Name: Instrument 1 User Name:
 Acq Method: ZHENG100-1000.m Acquired Time: 12/18/2021 9:16:02 AM
 IRM Calibration Status: Success DA Method: 20170311.m
 Comment:

Sample Group: Info.
 Acquisition SW: 6200 series TOF/6500 series
 Version: Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1573	1	111885.45		
427.1906	1	2973149.75	C21 H23 F N6 O3	(M+H)+
427.3464		200681.03		
428.1942	1	757066.56	C21 H23 F N6 O3	(M+H)+
429.1959	1	97924.82	C21 H23 F N6 O3	(M+H)+
449.173	1	319175.38		
853.3757	1	268360.16		
854.3769	1	127333.49		
875.3585	1	279387.84		
876.36	1	136366.22		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C21 H23 F N6 O3	FALSE	426.1835	426.1816	-4.45	C21 H24 F N6 O3	91.32

--- End Of Report ---

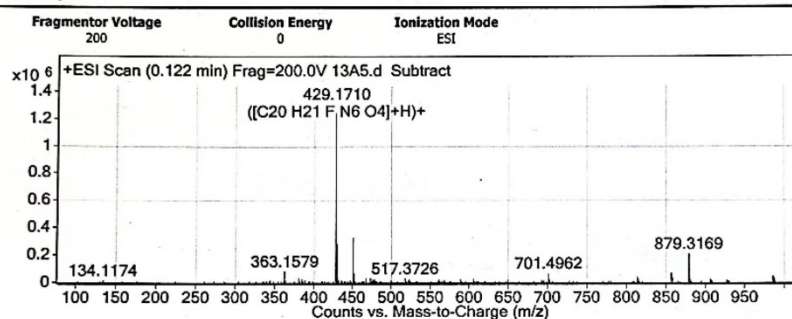
Compound 13a-5

Qualitative Analysis Report

Data Filename: 13A5.d Sample Name: 13A5
Sample Type: Sample Position: P1-E1
Instrument Name: Instrument 1 User Name:
Acq Method: ZHENG100-1000.m Acquired Time: 12/18/2021 9:18:56 AM
IRM Calibration Status: Success DA Method: 20170311.m
Comment:

Sample Group: Info.
Acquisition SW: 6200 series TOF/6500 series
Version: Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1579	1	79253.57		
429.171	1	1243426.88	C20 H21 F N6 O4	(M+H)+
429.3247	1	97262.33		
430.174	1	282953.06	C20 H21 F N6 O4	(M+H)+
451.153	1	328334.16		
452.1545	1	68005.76		
701.4962	1	63157.16		
857.333	1	70285.61		
879.3169	1	206611.66		
880.3186	1	94164.09		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C20 H21 F N6 O4	FALSE	428.1638	428.1608	-6.85	C20 H22 F N6 O4	82.4

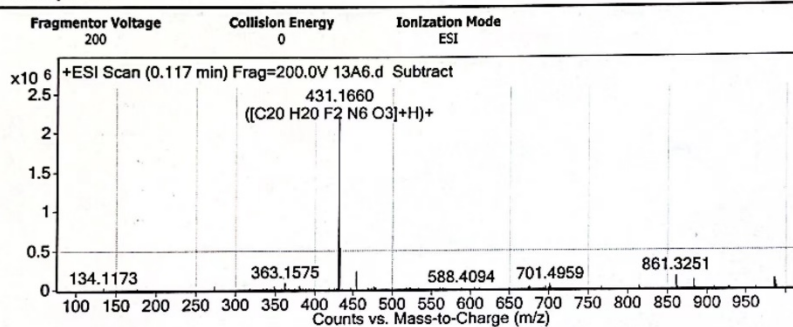
--- End Of Report ---

Compound 13a-6

Qualitative Analysis Report

Data Filename	13A6.d	Sample Name	13A6
Sample Type	Sample	Position	P1-E2
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:21:53 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			
Sample Group	Info.		
Acquisition SW	6200 series TOF/6500 series		
Version	Q-TOF B.05.01 (B5125.2)		

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1575	1	81944.73		
431.166	1	2232066.75	C ₂₀ H ₂₀ F ₂ N ₆ O ₃	(M+H) ⁺
432.1696	1	536882.81	C ₂₀ H ₂₀ F ₂ N ₆ O ₃	(M+H) ⁺
433.1756	1	66417.86	C ₂₀ H ₂₀ F ₂ N ₆ O ₃	(M+H) ⁺
453.1483	1	230929.38		
861.3251	1	163516.08		
862.3271	1	70253.58		
883.3073	1	110482.97		
985.7164	1	117258.66		
986.7189	1	75622.13		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	2	2

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C ₂₀ H ₂₀ F ₂ N ₆ O ₃	FALSE	430.159	430.1565	-5.76	C ₂₀ H ₂₁ F ₂ N ₆ O ₃	85.83

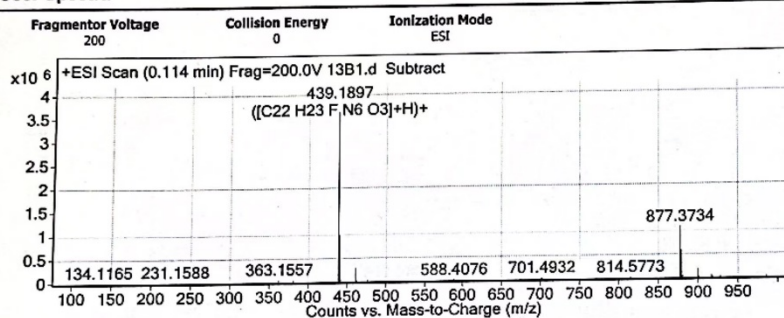
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Compound 13b-1

Qualitative Analysis Report

Data Filename	13B1.d	Sample Name	13B1
Sample Type	Sample	Position	P1-E3
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:24:50 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			
Sample Group	Info.		
Acquisition SW	6200 series TOF/6500 series		
Version	Q-TOF B.05.01 (B5125.2)		

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
439.1897	1	3637362.75	C22 H23 F N6 O3	(M+H)+
440.1929	1	997847.75	C22 H23 F N6 O3	(M+H)+
441.1998	1	222824.33	C22 H23 F N6 O3	(M+H)+
461.1722	1	284863.44		
462.1742	1	64856.43		
877.3734	1	1085296.88		
878.3767	1	590897.81		
879.3806	1	200894.66		
899.3552	1	171019.92		
900.3566	1	86397.9		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C22 H23 F N6 O3	TRUE	438.1828	438.1816	-2.72	C22 H24 F N6 O3	92.44

--- End Of Report ---

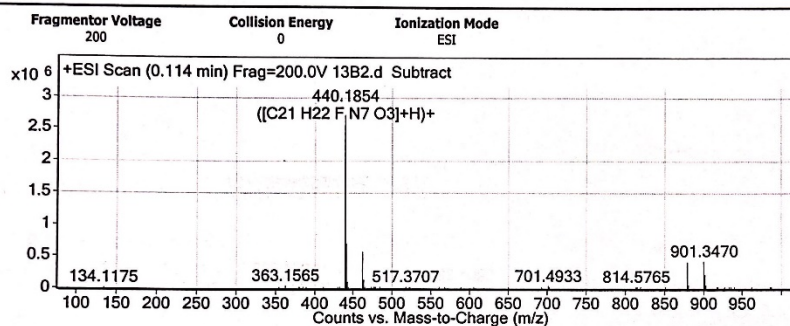
Compound 13b-2

Qualitative Analysis Report

Data Filename	13B2.d	Sample Name	13B2
Sample Type	Sample	Position	P1-E4
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:27:46 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			

Sample Group	Info.
Acquisition SW	6200 series TOF/6500 series
Version	Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
440.1854	1	2718939.75	C21 H22 F N7 O3	(M+H)+
441.1892	1	700480.69	C21 H22 F N7 O3	(M+H)+
442.1906	1	90884.5	C21 H22 F N7 O3	(M+H)+
462.1678	1	562085.31		
463.1698	1	128785.03		
879.3648	1	410518.78		
880.3671	1	202576.11		
901.347	1	424521.16		
902.3493	1	206448.8		
903.3498	1	50881.78		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C21 H22 F N7 O3	FALSE	439.1784	439.1768	-3.51	C21 H23 F N7 O3	93.66

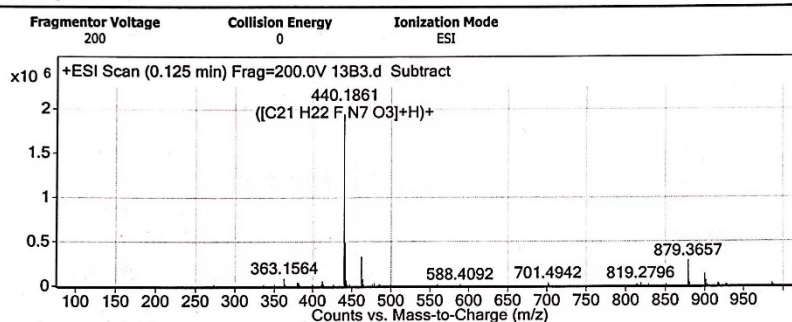
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Compound 13b-3

Qualitative Analysis Report

Data Filename	13B3.d	Sample Name	13B3
Sample Type	Sample	Position	P1-E5
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:30:43 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			
Sample Group	Info.		
Acquisition SW	6200 series TOF/6500 series		
Version	Q-TOF B.05.01 (B5125.2)		

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1564	1	82760.33		
440.1861	1	1943522.88	C21 H22 F N7 O3	(M+H)+
441.1893	1	486017.22	C21 H22 F N7 O3	(M+H)+
442.1903	1	63089.89	C21 H22 F N7 O3	(M+H)+
462.1681	1	320570.69		
463.1701	1	74666.16		
879.3657	1	277727.31		
880.3679	1	136823.73		
901.347	1	130375.75		
902.3488	1	62166.71		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C21 H22 F N7 O3	FALSE	439.1789	439.1768	-4.81	C21 H23 F N7 O3	90.08

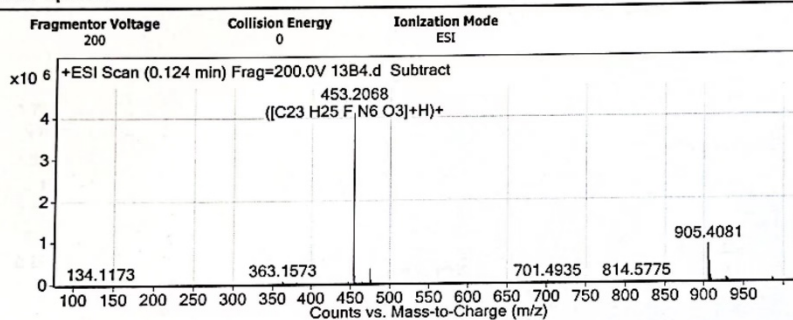
--- End Of Report ---

Compound 13b-4

Qualitative Analysis Report

Data Filename	13B4.d	Sample Name	13B4
Sample Type	Sample	Position	P1-E6
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:33:39 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			
Sample Group	Info.		
Acquisition SW	6200 series TOF/6500 series		
Version	Q-TOF B.05.01 (B5125.2)		

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1573	1	59242.88		
453.2068	1	4113850.5	C23 H25 F N6 O3	(M+H)+
454.2098	1	1158621.5	C23 H25 F N6 O3	(M+H)+
455.2126	1	171343.09	C23 H25 F N6 O3	(M+H)+
475.1892	1	338735.31		
476.1912	1	78905.31		
905.4081	1	886842.19		
906.4108	1	473592.84		
907.4119	1	128916.54		
927.388	1	77905.8		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C23 H25 F N6 O3	FALSE	452.1996	452.1972	-5.17	C23 H26 F N6 O3	88.78

--- End Of Report ---

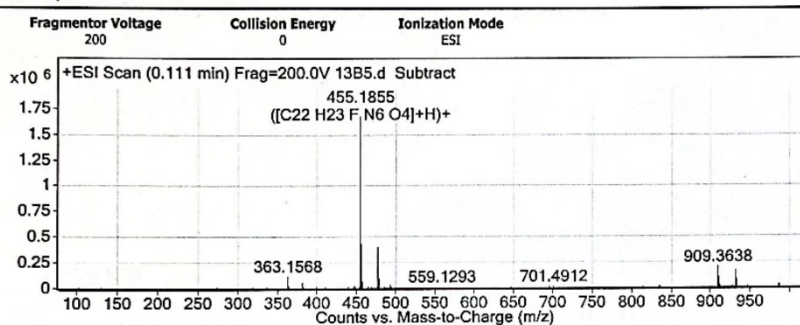
Compound 13b-5

Qualitative Analysis Report

Data Filename	1385.d	Sample Name	1385
Sample Type	Sample	Position	P1-E7
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:36:36 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			

Sample Group	Info.
Acquisition SW	6200 series TOF/6500 series
Version	Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1568	1	110080.06		
455.1855	1	1679279.75	C ₂₂ H ₂₃ F N ₆ O ₄	(M+H) ⁺
456.1885	1	435122.19	C ₂₂ H ₂₃ F N ₆ O ₄	(M+H) ⁺
457.1891	1	61238.46	C ₂₂ H ₂₃ F N ₆ O ₄	(M+H) ⁺
477.1675	1	400454.44		
478.1694	1	95284.05		
909.3638	1	196912.97		
910.3665	1	97425.66		
931.3461	1	156739.23		
932.3514	1	80171.13		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C ₂₂ H ₂₃ F N ₆ O ₄	FALSE	454.1782	454.1765	-3.68	C ₂₂ H ₂₄ F N ₆ O ₄	93.68

--- End Of Report ---

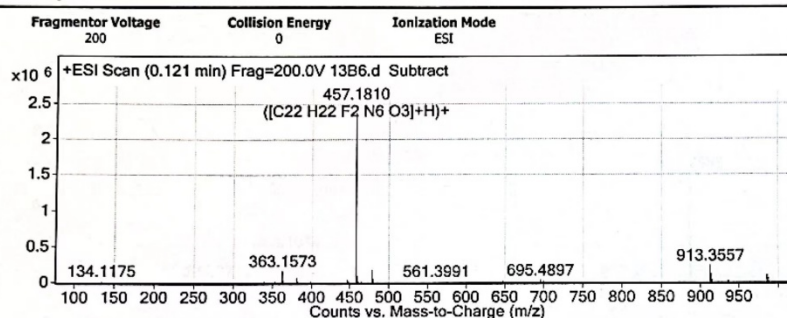
Compound 13b-6

Qualitative Analysis Report

Data Filename	13B6.d	Sample Name	13B6
Sample Type	Sample	Position	P1-E8
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:39:33 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			

Sample Group	Info.
Acquisition SW	6200 series TOF/6500 series
Version	Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund	Formula	Ion
363.1573	1	152427.61		
381.1677	1	63828.09		
457.181	1	2374091.5	C22 H22 F2 N6 O3	(M+H)+
458.1847	1	623355.88	C22 H22 F2 N6 O3	(M+H)+
459.1867	1	82105.44	C22 H22 F2 N6 O3	(M+H)+
479.1637	1	170425.77		
913.3557	1	222924.61		
914.3575	1	110910.73		
985.715	1	99292.59		
986.717	1	62713.73		

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	2	2

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C22 H22 F2 N6 O3	FALSE	456.1739	456.1721	-3.89	C22 H23 F2 N6 O3	92.65

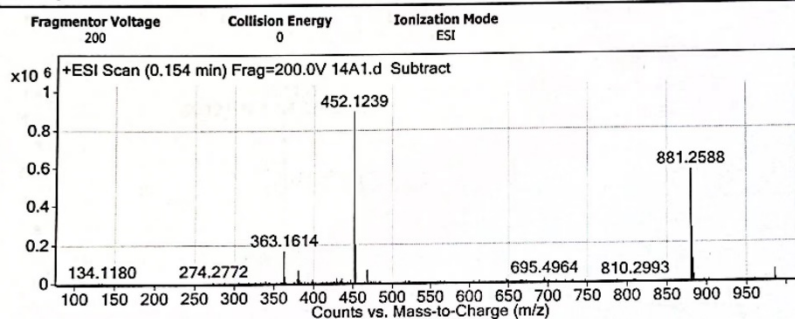
--- End Of Report ---

Compound 14a-1

Qualitative Analysis Report

Data Filename	14A1.d	Sample Name	14A1
Sample Type	Sample	Position	P1-A3
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/17/2021 7:33:21 PM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			
Sample Group	Info.		
Acquisition SW	6200 series TOF/6500 series		
Version	Q-TOF B.05.01 (B5125.2)		

User Spectra



Peak List

m/z	z	Abund
363.1614	1	166778.67
381.171	1	62431.75
452.1239	1	896078.38
453.1267	1	198570.2
454.1231	1	54907.35
468.0965	1	65137.32
881.2588	1	579139.56
882.261	1	274355.19
883.2587	1	111827.21
985.725	1	52005.89

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	1	1

--- End Of Report ---

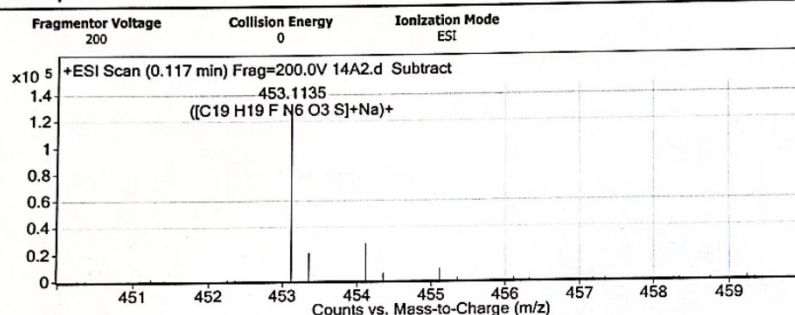
Compound 14a-2

Qualitative Analysis Report

Data Filename	14A2.d	Sample Name	14A2
Sample Type	Sample	Position	P1-F1
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:42:29 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			

Sample Group	Info.
Acquisition SW	6200 series TOF/6500 series
Version	Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund
274.2752	1	880201.25
318.3019	1	631956.88
475.3283	2	789562.69
588.4122	1	1445558.13
589.4162	1	501825
701.497	1	2697659.25
702.5001	1	1181877.88
703.5032	1	273883
814.5823	1	1371627.75
815.5858	1	680633.13

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C19 H19 F N6 O3 S	TRUE	430.124	430.1223	-3.9	C19 H19 F N6 Na O3 S	90.35

--- End Of Report ---

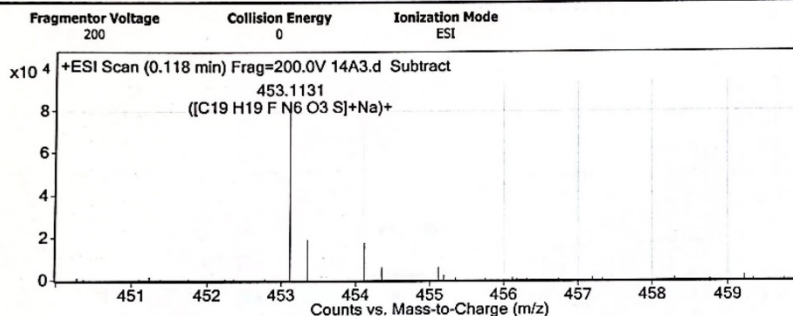
Compound 14a-3

Qualitative Analysis Report

Data Filename	14A3.d	Sample Name	14A3
Sample Type	Sample	Position	P1-F2
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:45:24 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			

Sample Group	Info.
Acquisition SW	6200 series TOF/6500 series
Version	Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund
274.2752	1	805906.75
318.3016	1	603440.56
475.3277	2	829456.31
588.4116	1	1487310.38
589.4152	1	515069.84
701.4963	1	2830297.75
702.4995	1	1229214.75
703.5029	1	287015.81
814.5816	1	1509447.38
815.5855	1	748071.38

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C19 H19 F N6 O3 S	TRUE	430.1238	430.1223	-3.38	C19 H19 F N6 O3 S	92.93

--- End Of Report ---

Compound 14a-4

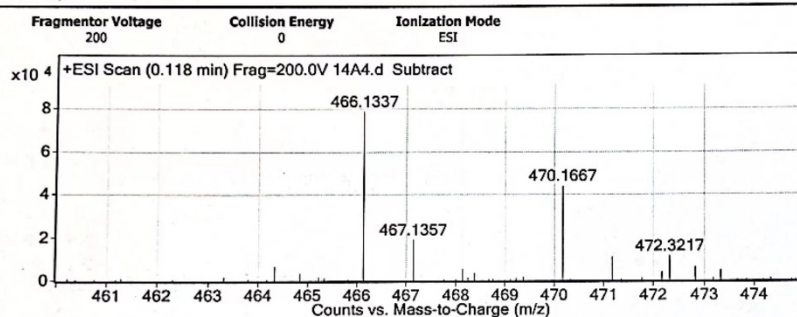
Qualitative Analysis Report

Data Filename: 14A4.d Sample Name: 14A4
Sample Type: Sample Position: P1-F3
Instrument Name: Instrument 1 User Name:
Acq Method: ZHENG100-1000.m Acquired Time: 12/18/2021 9:48:21 AM
IRM Calibration Status: Success DA Method: 20170311.m
Comment:

Sample Group: Info.

Acquisition SW: 6200 series TOF/6500 series
Version: Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund
274.2753	1	1013364.5
318.302	1	709357.56
475.3283	2	914926.75
588.4124	1	1628655
589.4164	1	572134.81
701.4973	1	2998258.25
702.5004	1	1313458.38
703.5039	1	306086.88
814.5825	1	1540120.63
815.5864	1	772077.19

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	1	1

--- End Of Report ---

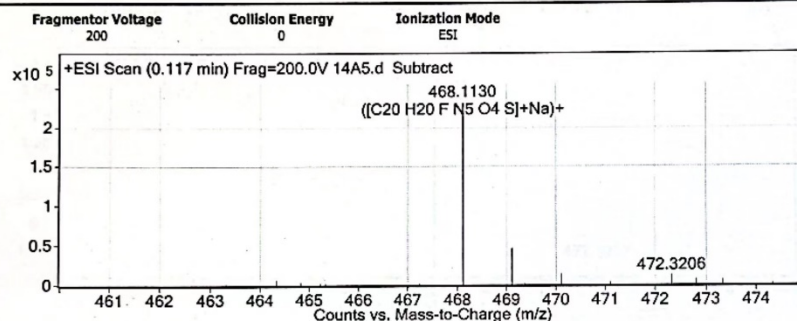
Compound 14a-5

Qualitative Analysis Report

Data Filename: 14A5.d Sample Name: 14A5
 Sample Type: Sample Position: P1-F4
 Instrument Name: Instrument 1 User Name:
 Acq Method: ZHENG100-1000.m Acquired Time: 12/18/2021 9:51:18 AM
 IRM Calibration Status: Success DA Method: 20170311.m
 Comment:

Sample Group: Info.
 Acquisition SW: 6200 series TOF/6500 series
 Version: Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund
274.2752	1	999895.94
318.3017	1	665345.69
340.2834	1	304752.38
475.3278	2	741801.88
588.412	1	1374273.25
589.4157	1	472936.34
701.4965	1	2644920.75
702.4997	1	1144999.75
814.5817	1	1319037.13
815.5854	1	651833.63

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C20 H20 F N5 O4 S	FALSE	445.1236	445.122	-3.48	C20 H20 F N5 Na O4 S	91.15

--- End Of Report ---

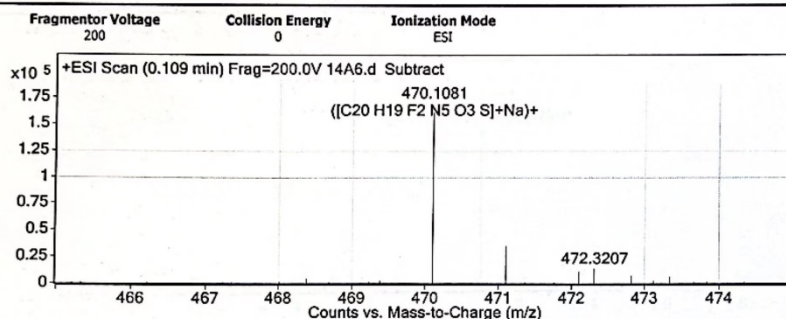
Compound 14a-6

Qualitative Analysis Report

Data Filename: 14A6.d Sample Name: 14A6
 Sample Type: Sample Position: P1-F5
 Instrument Name: Instrument 1 User Name:
 Acq Method: ZHENG100-1000.m Acquired Time: 12/18/2021 9:54:15 AM
 IRM Calibration Status: Success DA Method: 20170311.m
 Comment:

Sample Group: Info.
 Acquisition SW: 6200 series TOF/6500 series
 Version: Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund
274.2749	1	952946.69
318.3015	1	640031.5
475.3276	2	881883.25
588.4115	1	1572009.13
589.4151	1	549769.88
701.4961	1	3168274.75
702.4995	1	1379356.88
814.5813	1	1688069
815.5851	1	856933.81
927.6666	1	346751.56

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	2	2
S	1	1

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C20 H19 F2 N5 O3 S	TRUE	447.1187	447.1177	-2.42	C20 H19 F2 N5 Na O3 S	95.05

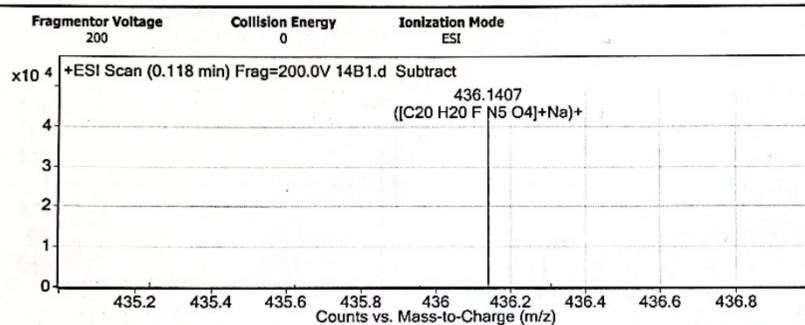
--- End Of Report ---

Compound 14b-1

Qualitative Analysis Report

Data Filename	14B1.d	Sample Name	14B1
Sample Type	Sample	Position	P1-F6
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 9:57:11 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			
Sample Group	Info.		
Acquisition SW	6200 series TOF/6500 series		
Version	Q-TOF B.05.01 (B5125.2)		

User Spectra



Peak List

m/z	z	Abund
274.2756	1	940386.5
318.3025	1	640912.25
475.3288	2	921775.19
588.413	1	1616366.13
589.4169	1	565004.56
701.498	1	3043929.75
702.5012	1	1326821.75
814.5834	1	1599978.88
815.5873	1	799718.94
927.6688	1	314654.5

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	0	0

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C20 H20 F N5 O4	FALSE	413.1515	413.1499	-3.68	C20 H20 F N5 Na O4	42.35

--- End Of Report ---

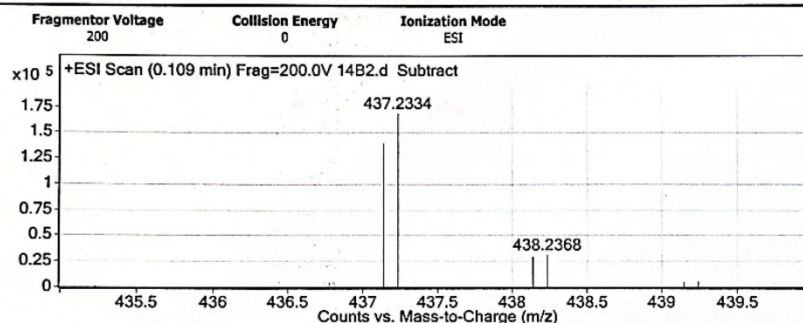
Compound 14b-2

Qualitative Analysis Report

Data Filename	14B2.d	Sample Name	14B2
Sample Type	Sample	Position	P1-F7
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/18/2021 10:00:08 AM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			

Sample Group		Info.
Acquisition SW	6200 series TOF/6500 series	
Version	Q-TOF B.05.01 (B5125.2)	

User Spectra



Peak List

m/z	z	Abund
274.2756	1	842026.44
318.3019	1	572126.56
475.3283	2	981313.25
588.4123	1	1740758.38
589.4162	1	615434.06
701.497	1	3221402.75
702.5004	1	1397455
814.5823	1	1725972.75
815.5859	1	882205.88
927.6679	1	362921.09

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	0	0

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C19 H19 F N6 O4	FALSE	414.1487	414.1452	-8.45	C19 H19 F N6 Na O4	71.24

--- End Of Report ---

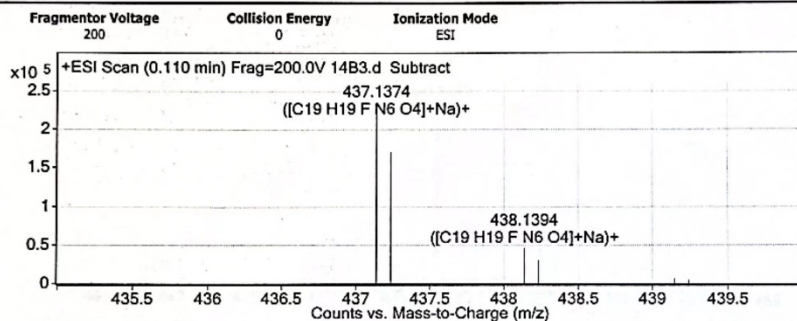
Compound 14b-3

Qualitative Analysis Report

Data Filename: 14B3.d Sample Name: 14B3
Sample Type: Sample Position: P1-F8
Instrument Name: Instrument 1 User Name:
Acq Method: ZHENG100-1000.m Acquired Time: 12/18/2021 10:03:04 AM
IRM Calibration Status: Success DA Method: 20170311.m
Comment:

Sample Group: Info.
Acquisition SW: 6200 series TOF/6500 series
Version: Q-TOF B.05.01 (B5125.2)

User Spectra



Peak List

m/z	z	Abund
274.2756	1	733396.81
318.302	1	537000.38
475.3283	2	842461.13
588.4124	1	1506011.88
589.416	1	527113.63
701.4973	1	2950452.75
702.5003	1	1297365.5
814.5826	1	1642104.75
815.5861	1	829665.94
927.6681	1	352693.91

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	0	0

Formula Calculator Results

Formula	Best	Mass	Tgt Mass	Diff (ppm)	Ion Species	Score
C ₁₉ H ₁₉ F N ₆ O ₄	FALSE	414.148	414.1452	-6.89	C ₁₉ H ₁₉ F N ₆ Na O ₄	81.81

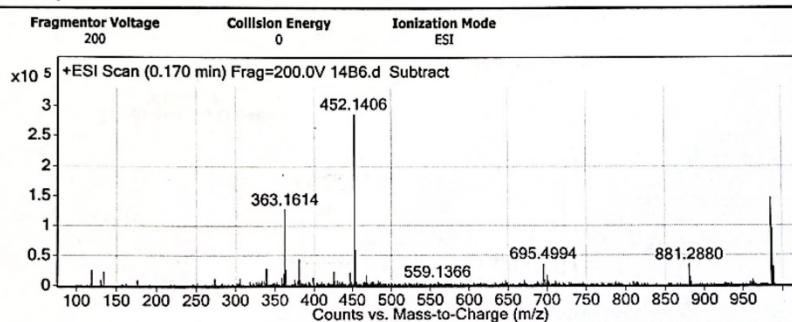
--- End Of Report ---

Compound 14b-5

Qualitative Analysis Report

Data Filename	14B6.d	Sample Name	14B6
Sample Type	Sample	Position	P1-A2
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/17/2021 7:30:24 PM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			
Sample Group	Info.		
Acquisition SW	6200 series TOF/6500 series		
Version	Q-TOF B.05.01 (B5125.2)		

User Spectra



Peak List

m/z	z	Abund
339.2349	1	28188.79
363.1614	1	126276.76
381.1713	1	42973.77
452.1406	1	287194.75
453.1437	1	58531.06
695.4994	1	34942.29
881.288	1	33666.73
985.7261	1	145446.08
986.7291	1	94219.14
987.7296	1	30126.18

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	2	2
S	0	0

--- End Of Report ---

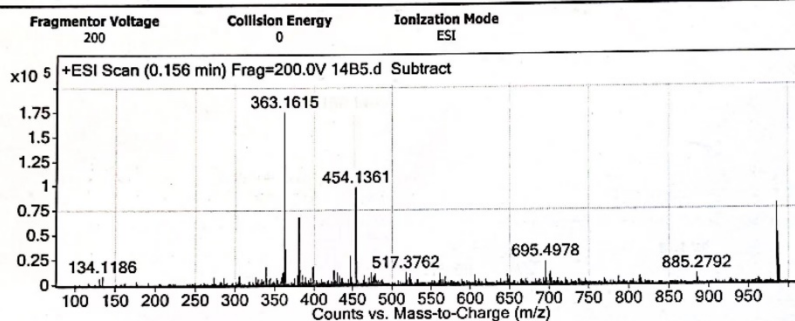
Compound 14b-6

Qualitative Analysis Report

Data Filename	14B5.d	Sample Name	14B5
Sample Type	Sample	Position	P1-A1
Instrument Name	Instrument 1	User Name	
Acq Method	ZHENG100-1000.m	Acquired Time	12/17/2021 7:27:27 PM
IRM Calibration Status	Success	DA Method	20170311.m
Comment			

Sample Group		Info.
Acquisition SW	6200 series TOF/6500 series	
Version	Q-TOF B.05.01 (B5125.2)	

User Spectra



Peak List

m/z	z	Abund
363.1615	1	175003.34
364.1637	1	35270.89
381.1712	1	68031.12
399.1844	1	18222.71
447.2053	1	28160.41
454.1361	1	97984.98
455.1431	1	23152.24
695.4978	1	22431.54
985.7253	1	79402.95
986.7271	1	50751.21

Formula Calculator Element Limits

Element	Min	Max
C	3	60
H	0	120
O	0	30
N	0	30
F	1	1
S	0	0

--- End Of Report ---