

Electronic Supporting Information

An environmentally benign regioselective synthesis of 2-benzyl-4-arylquinoline derivatives using aryl amines, styrene oxides and aryl acetylenes

Saghir Ali and Abu T. Khan*

Department of Chemistry, Indian Institute of Technology Guwahati, Guwahati-781039, Assam, India.

Tel.: +91 361 2582305, Fax: +91 361 2582349

Corresponding Author: atk@iitg.ac.in

Title page	S1
Copies of ¹H NMR, ¹³C NMR and HRMS spectra of all the Compounds	S2–S82

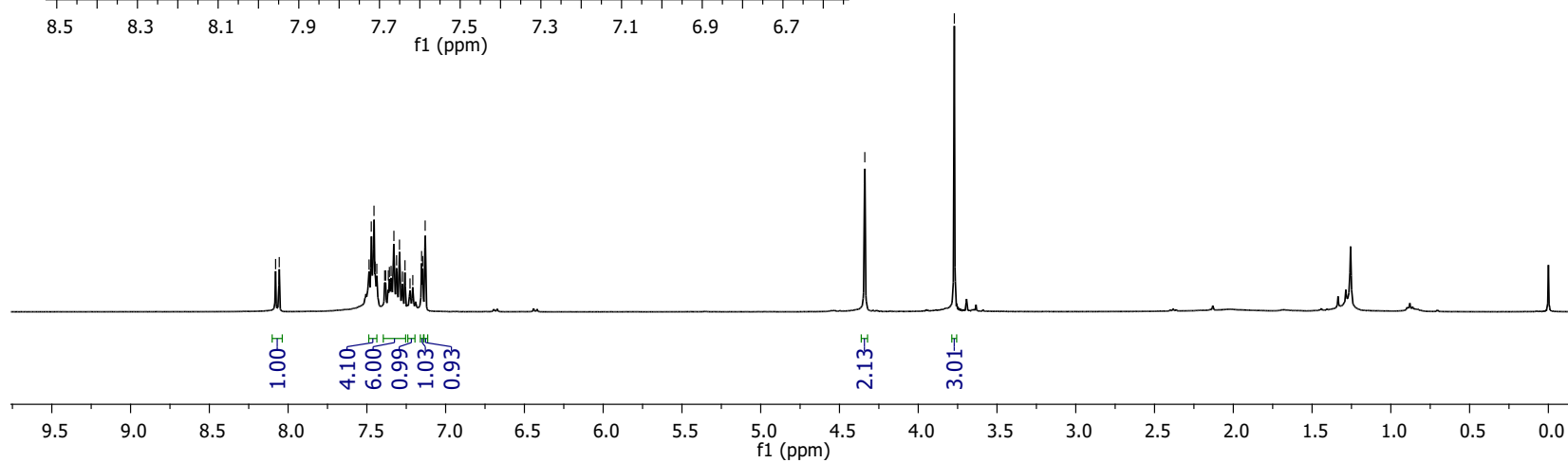
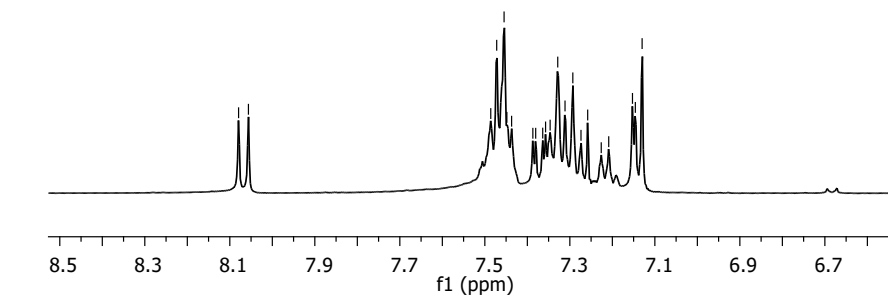
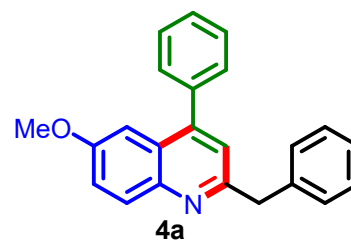
¹H NMR spectrum of compound: 4a

ATK-SA-4OME-ST-AC-A-1H
ATK-SA-4OME-ST-AC-A-1H



— 4.34

— 3.77



¹³C NMR spectrum of compound: 4a

ATK-SA-4OME-ST-AC-A-13C
ATK-SA-4OME-ST-AC-A-13C

158.45
157.73

147.87
144.46

139.63
138.62

130.92
129.51

129.39
128.81

128.79
128.47

126.62
126.41

122.27
121.72

104.06

77.55
77.23
76.91

55.64

45.44

130.92

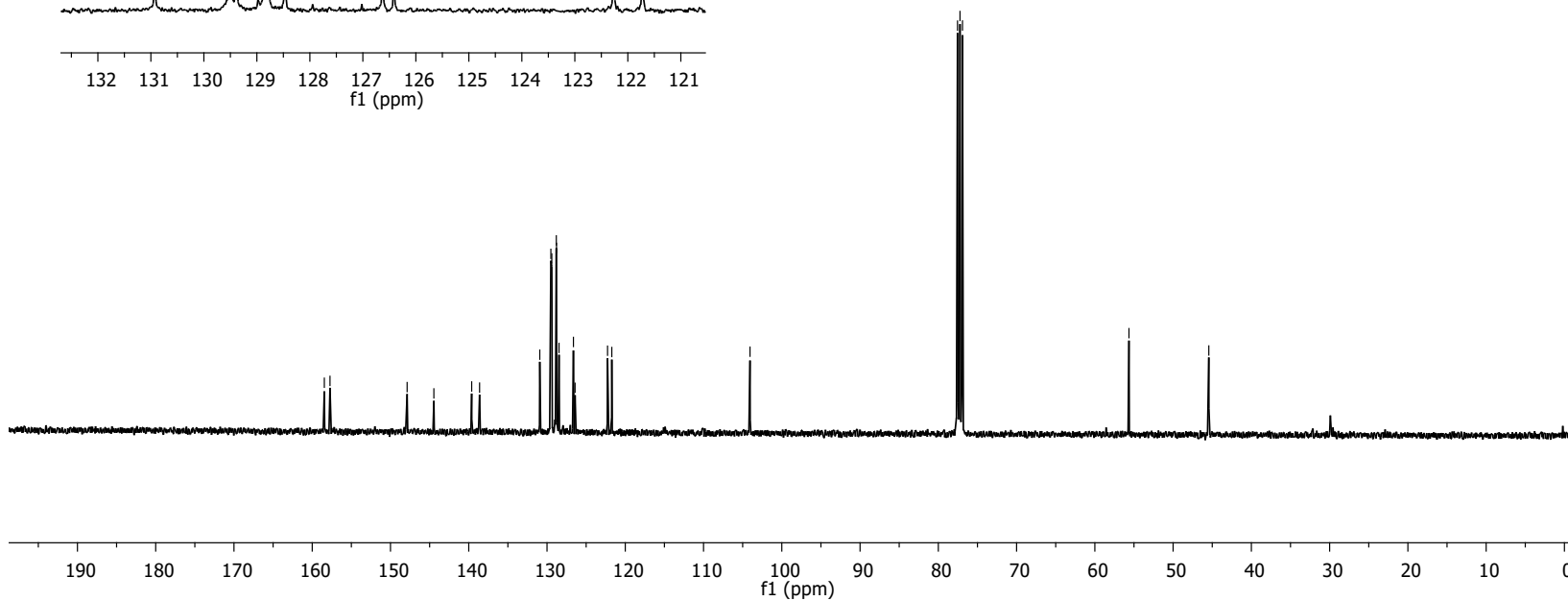
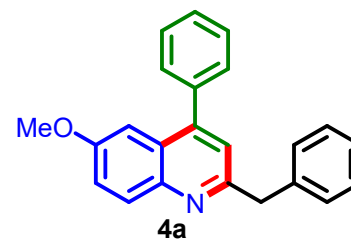
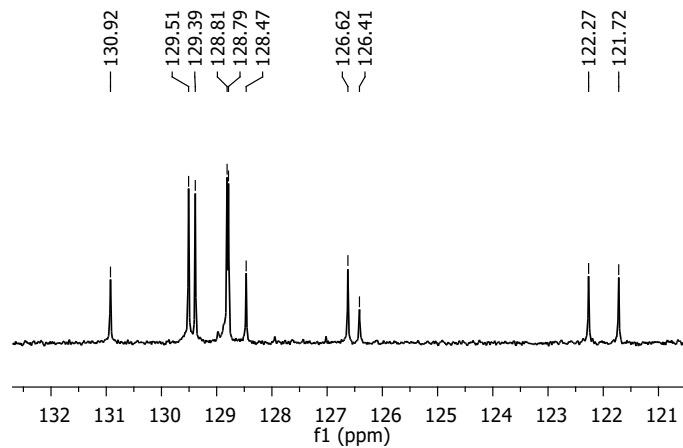
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129.39

128.81
128.79

128.47

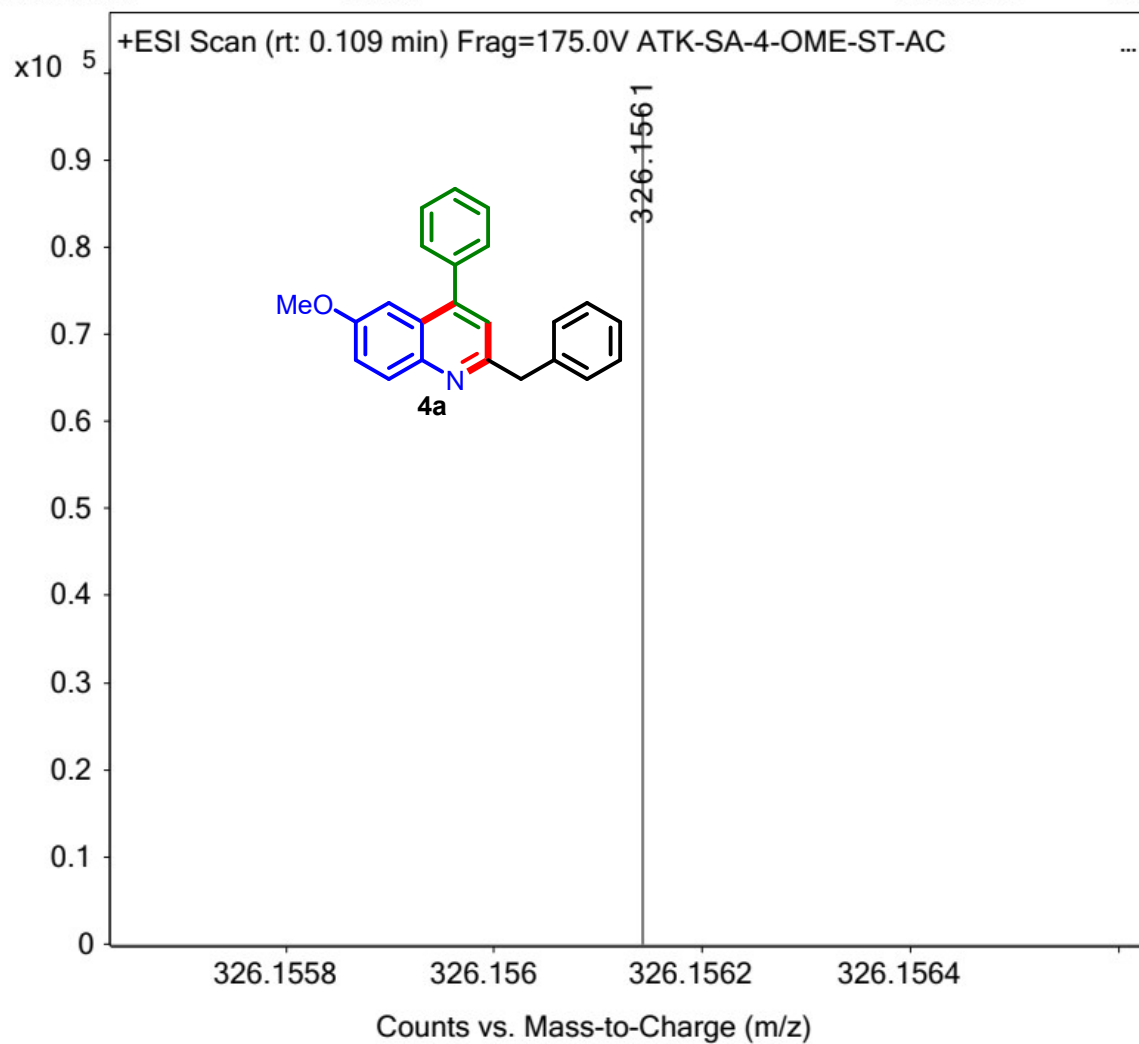
126.62
126.41

122.27
121.72



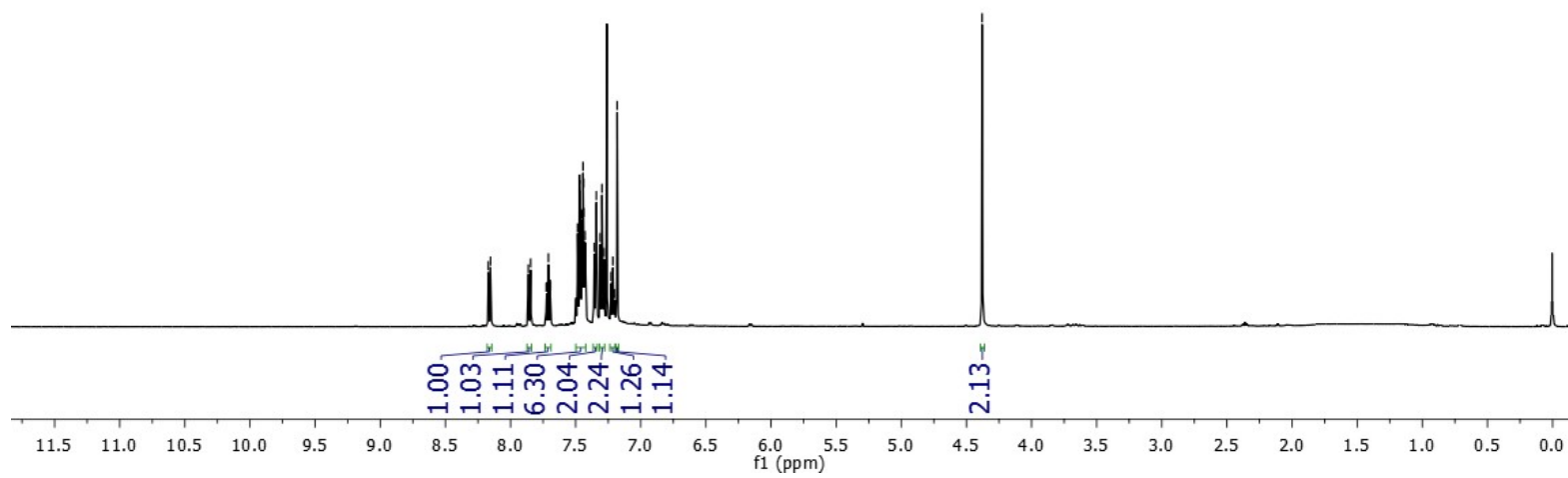
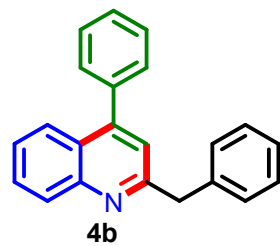
HRMS spectrum of compound: 4a

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User Name		Inj Vol	20	InjPosition	
Sample Type	Sample	IRM Calibration Status	Success	Data Filename	ATK-SA-4-OME-ST-AC.d
ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	20-01-2021 13:35:13 (UTC+05:30)

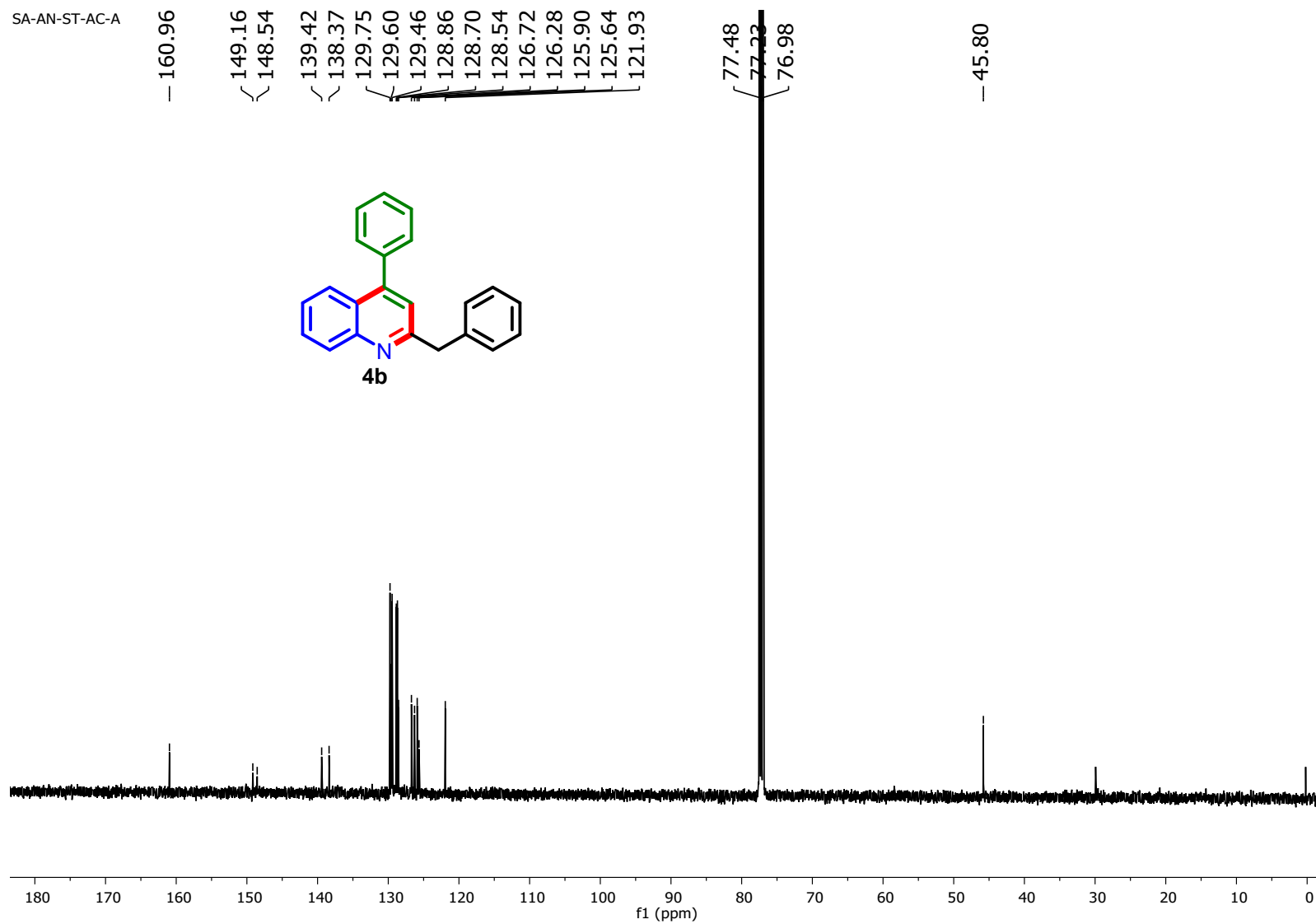


¹H NMR spectrum of compound: 4b

SA-AN-5110-01
8.115
8.115
7.866
7.85
7.71
7.71
7.70
7.49
7.48
7.48
7.47
7.47
7.47
7.46
7.45
7.45
7.45
7.44
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7.36
7.34
7.31
7.30
7.28
7.21
7.18

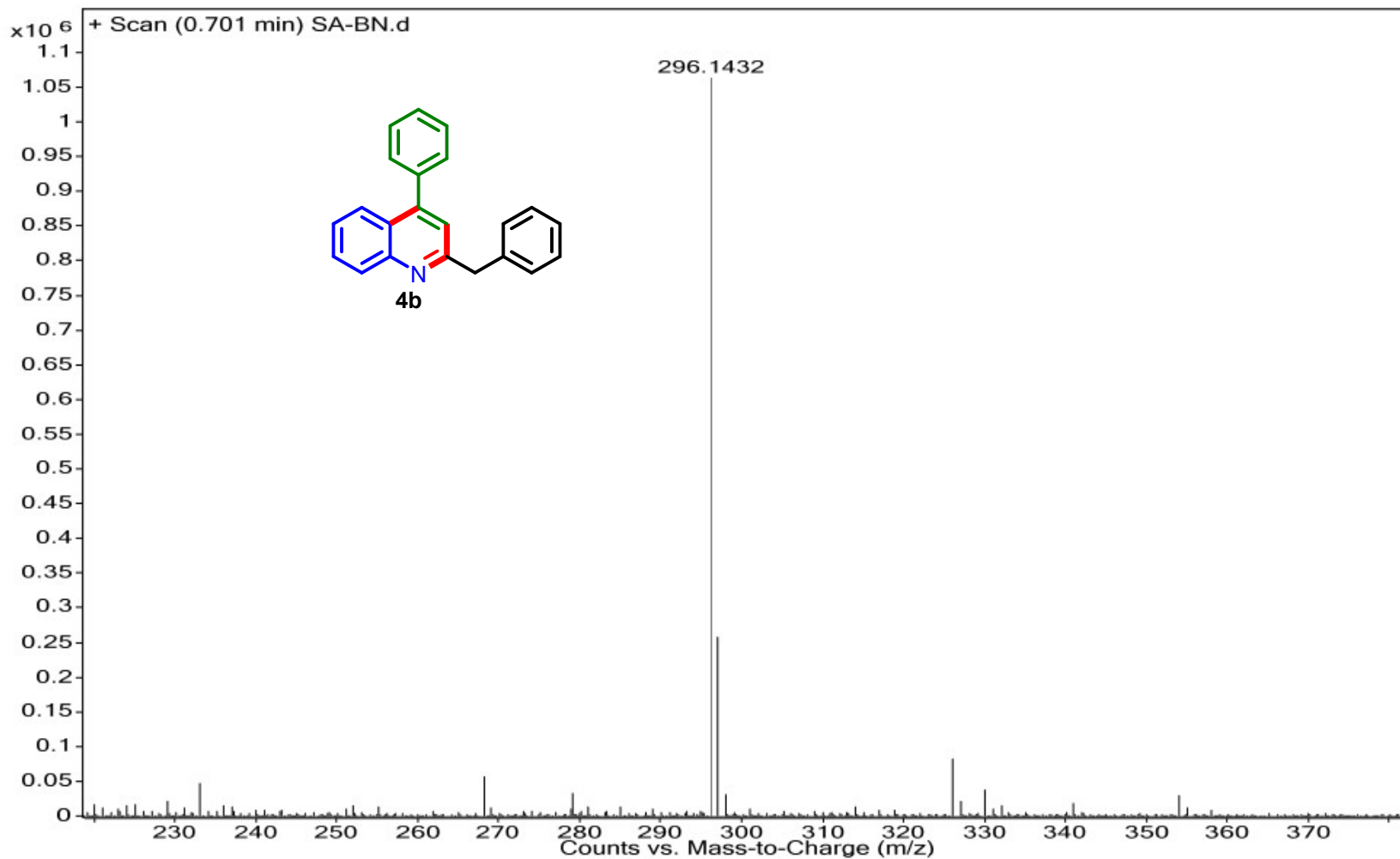


¹³C NMR spectrum of compound: 4b

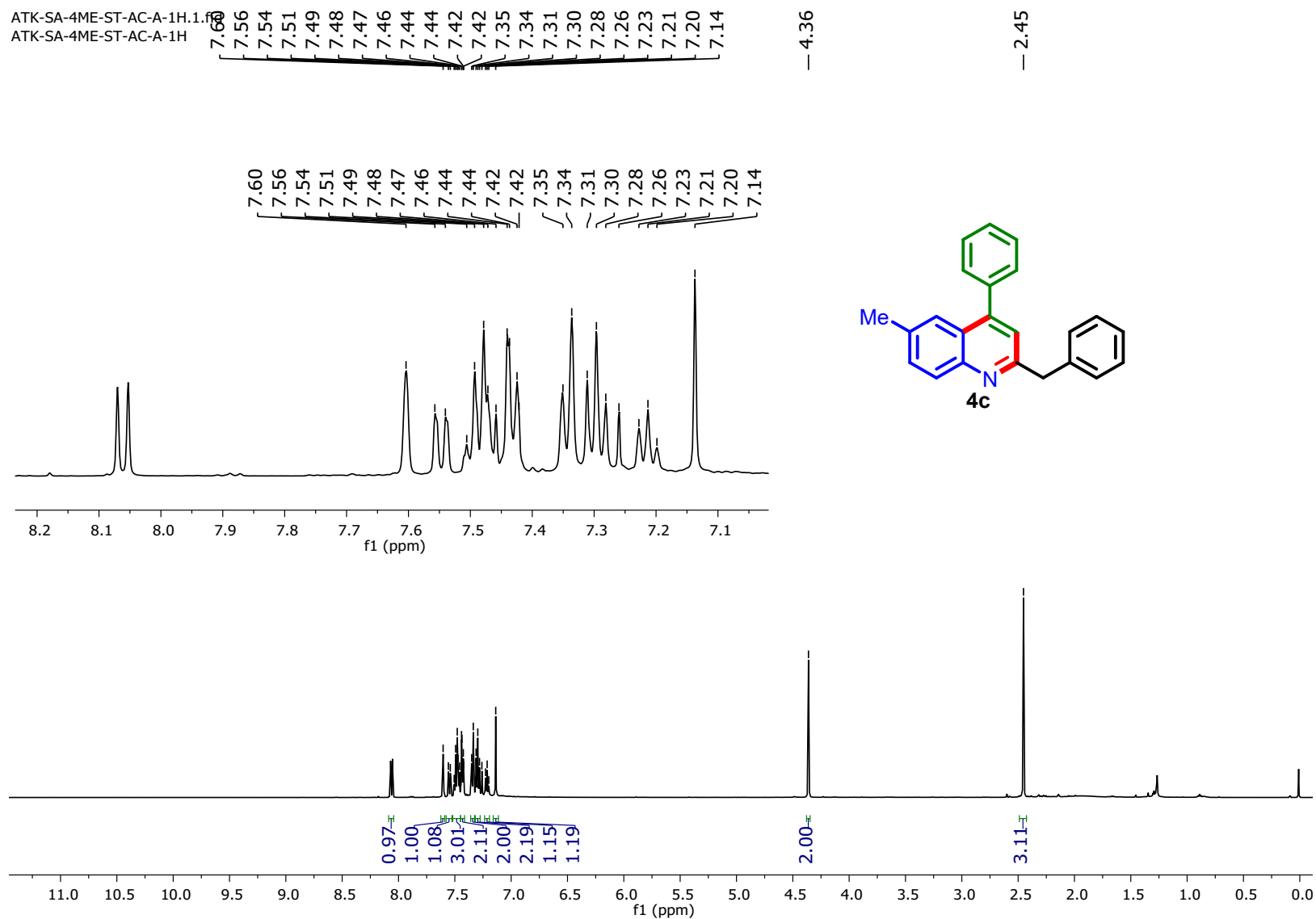


HRMS spectrum of compound: 4b

Sample Name	SA-AN	Position	P1-B10	Instrument Name	Instrument 1	User Name	
Inj Vol	5	InjPosition		SampleType	Sample	IRM Calibration Status	Success
Data Filename	SA-BN.d	ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	7/28/2021 2:37:43 PM



¹H NMR spectrum of compound: 4c



¹³C NMR spectrum of compound: 4c

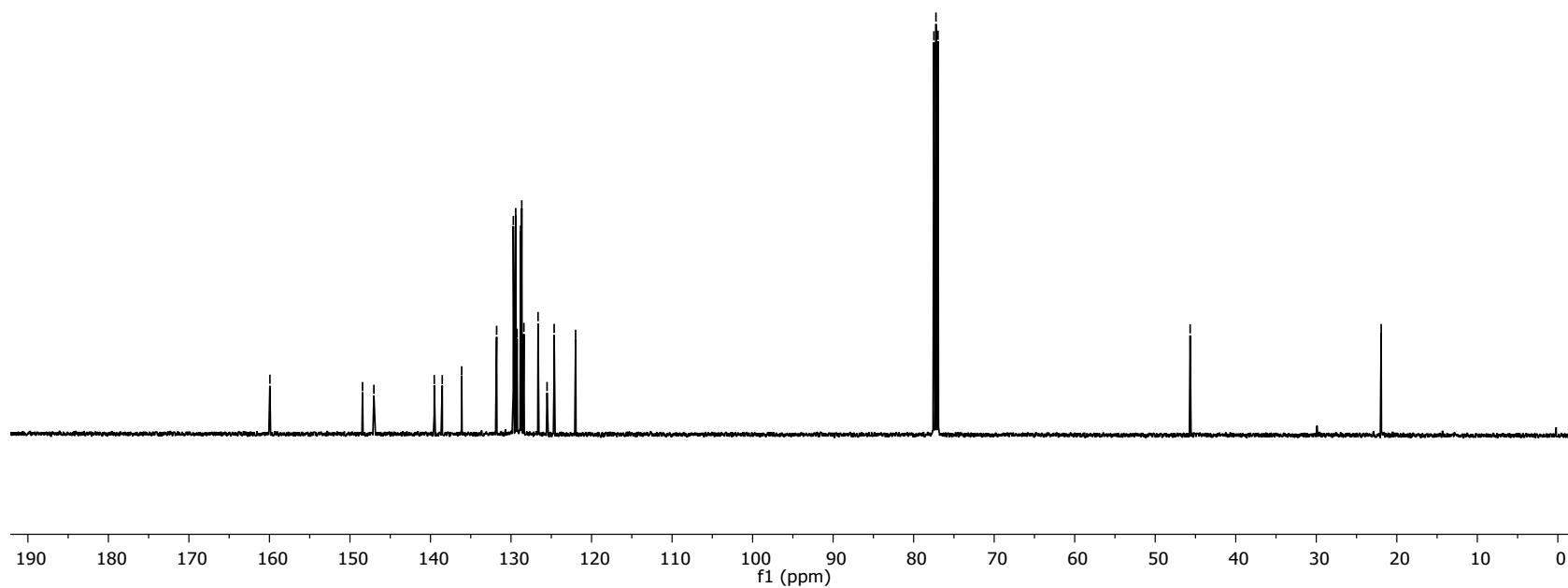
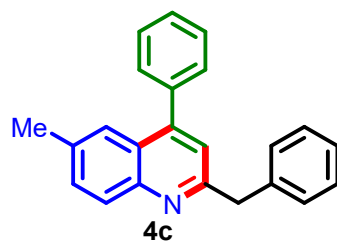
ATK-SA-4Me-ST-AC-AC

— 159.94
~ 148.44
~ 147.03
/ 139.53
/ 138.54
~ 136.13
— 131.79
~ 129.71
~ 129.42
~ 129.25
~ 128.81
~ 128.67
~ 128.40
~ 126.64
~ 125.53
~ 124.64
~ 121.98

77.49
77.23
76.98

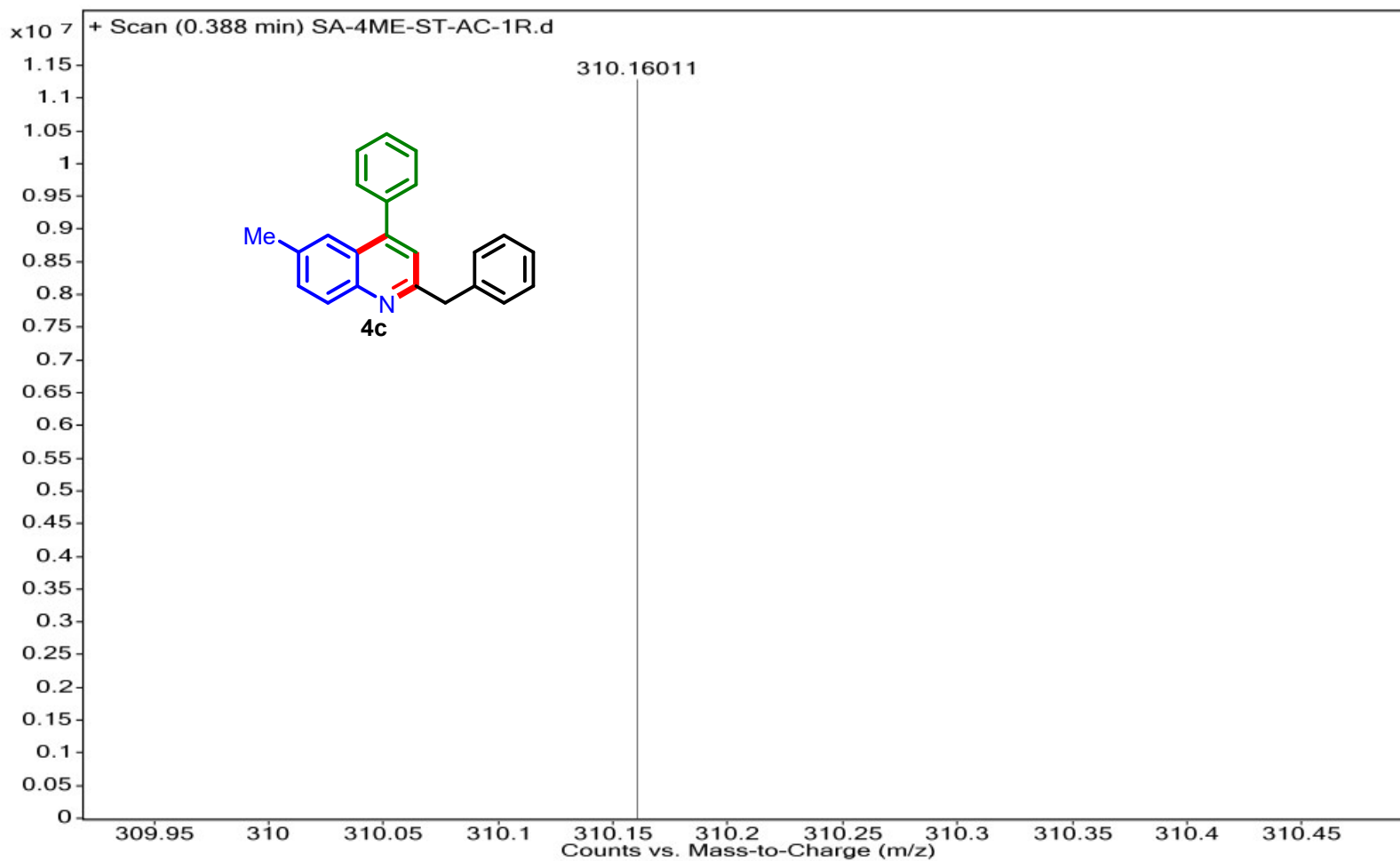
— 45.66

— 21.94

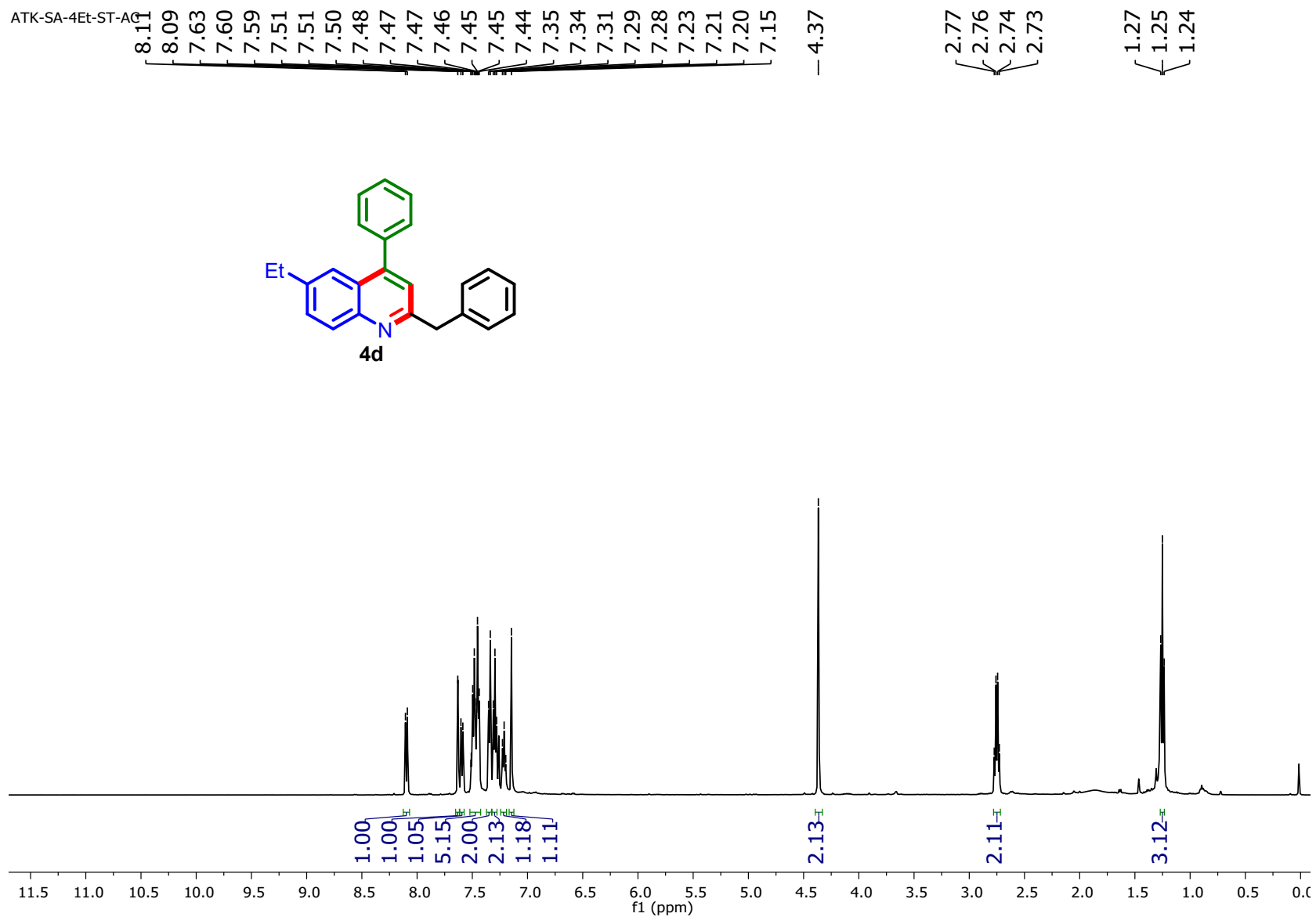


HRMS spectrum of compound: 4c

Sample Name	SAMPLE 11	Position	P1-A8	Instrument Name	Instrument 1	User Name	
Inj Vol	20	InjPosition		SampleType	Sample	IRM Calibration Status	Success
Data Filename	SA-4ME-ST-AC-1R.d	ACQ Method	ESI ALS 100-500.m	Comment		Acquired Time	2/11/2021 12:39:30 PM



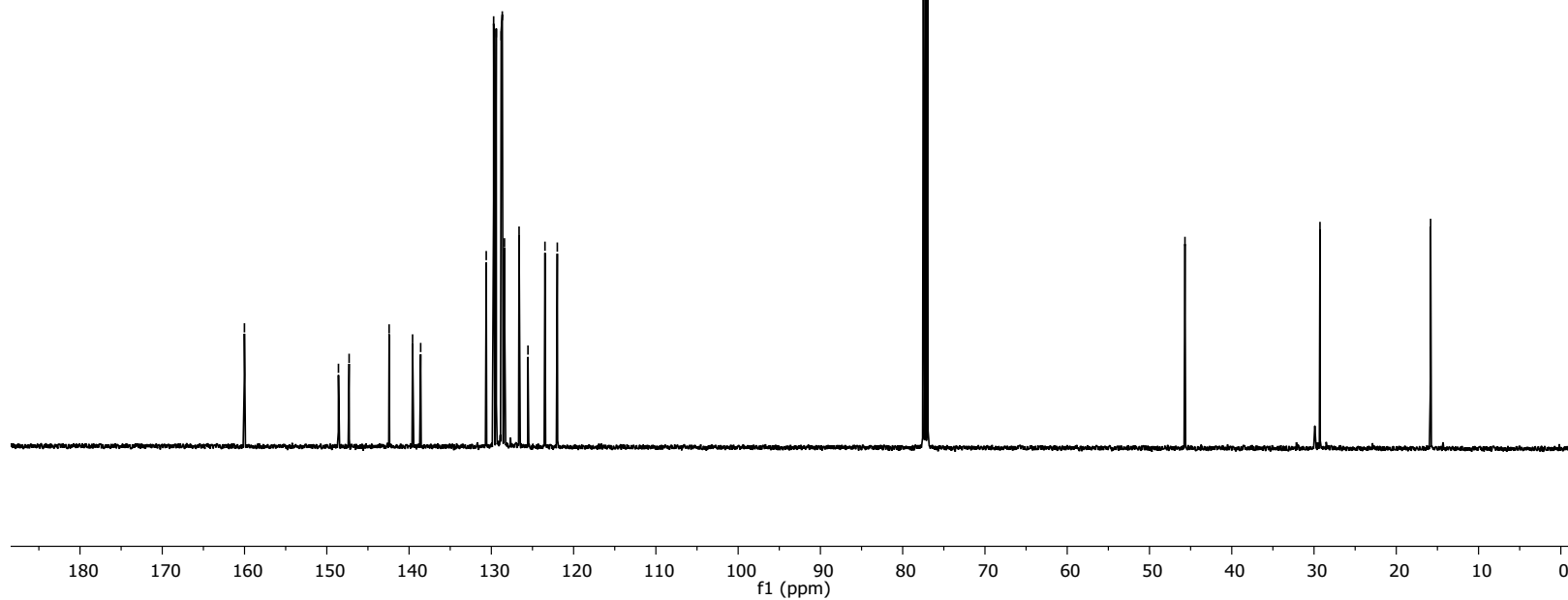
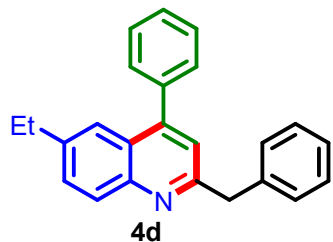
¹H NMR spectrum of compound: 4d



¹³C NMR spectrum of compound: 4d

ATK-SA-4Et-ST-AC-13C

— 160.01
148.58
147.29
142.42
139.57
138.59
130.62
129.72
129.45
129.40
128.80
128.67
128.40
126.63
125.55
123.48
121.98
77.48
77.23
76.98
— 45.69
— 29.27
— 15.83



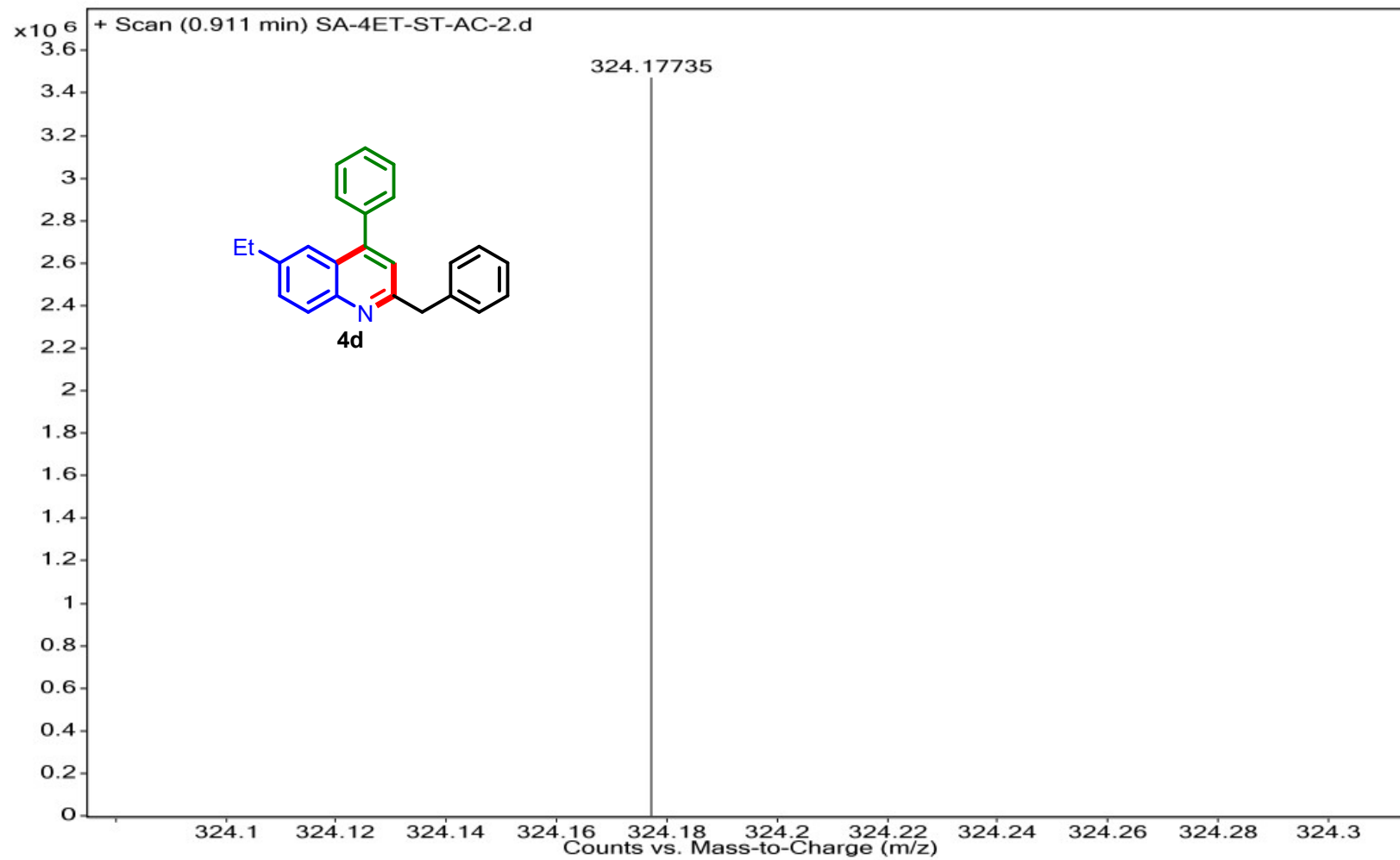
HRMS spectrum of compound: 4d

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

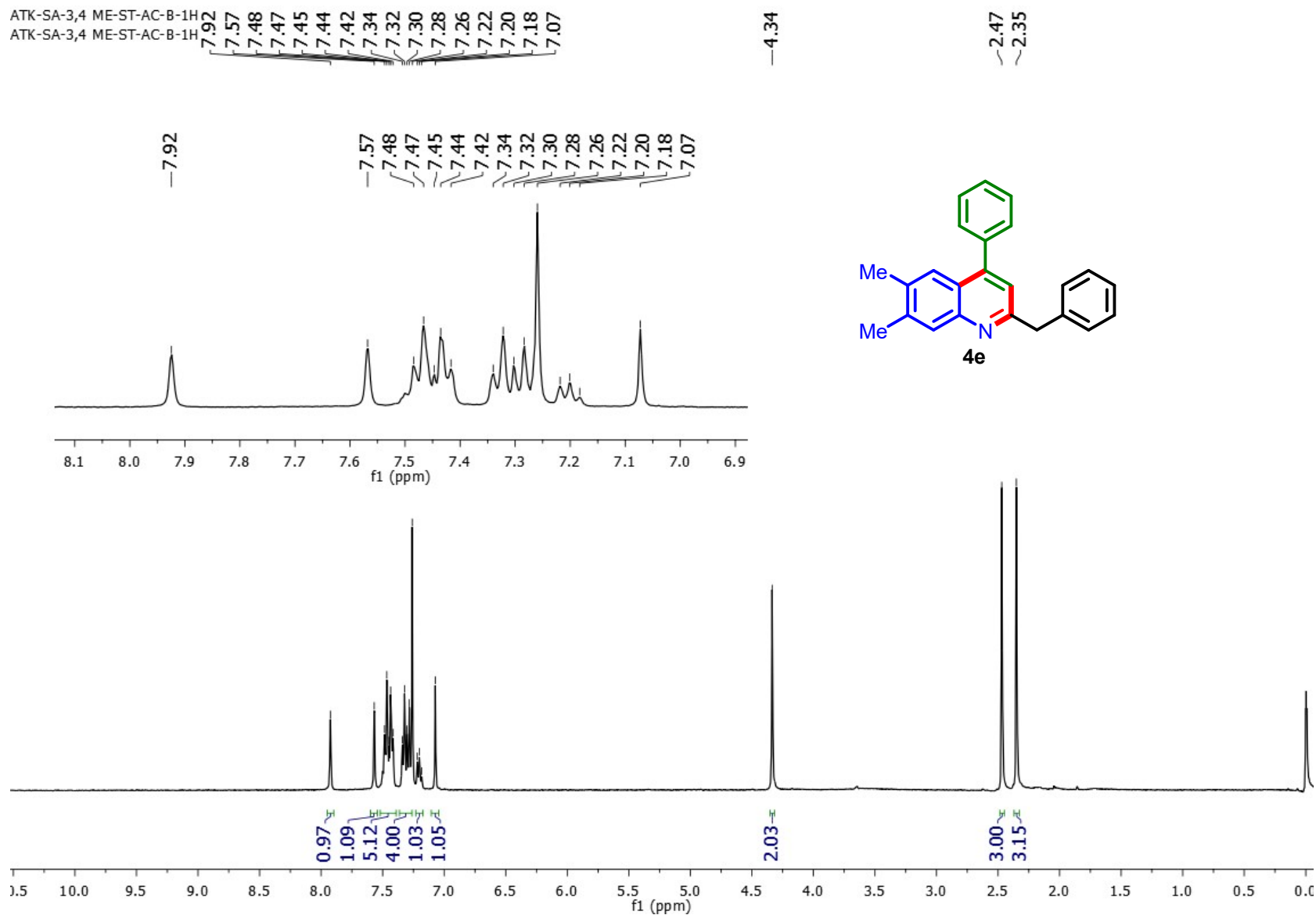
Instrument Name
SampleType
Comment

User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 4e

ATK-SA-3,4 ME-ST-AC-B-1H
ATK-SA-3,4 ME-ST-AC-B-1H



¹³C NMR spectrum of compound: 4e

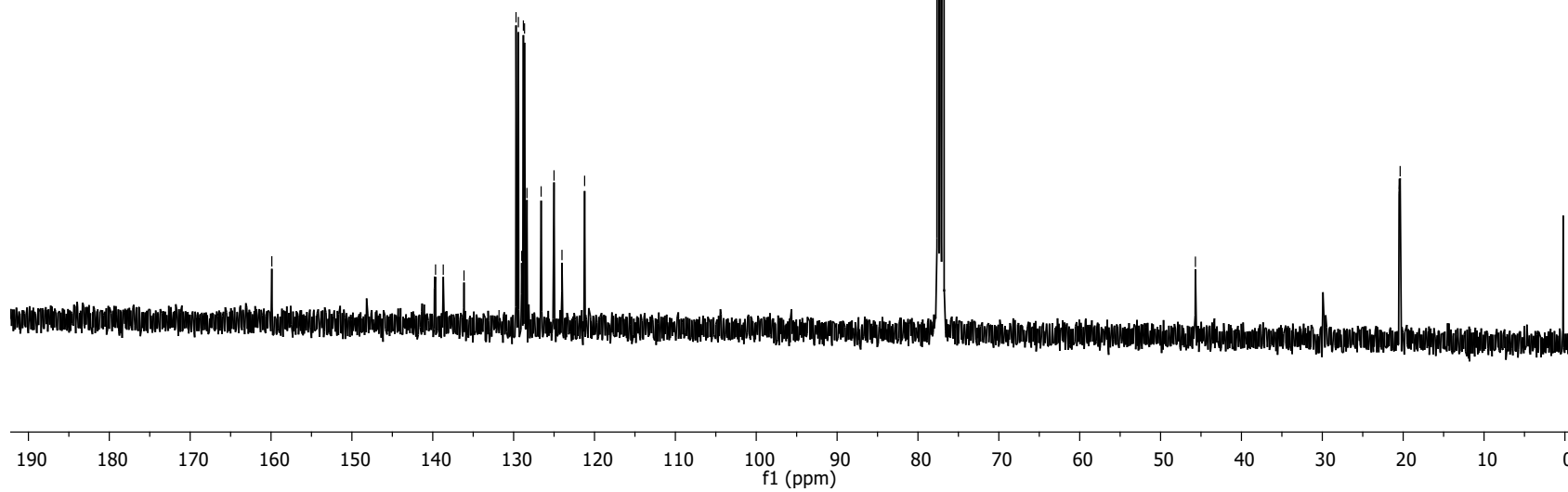
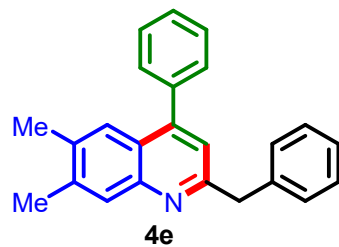
ATK-SA-34ME-ST-AC-B-13C
ATK-SA-34ME-ST-AC-B-13C

159.90
148.24
139.79
139.65
138.70
136.14
131.81
129.70
129.41
129.00
128.79
128.65
128.35
126.60
125.00
124.02
121.22

77.55
77.00
76.91

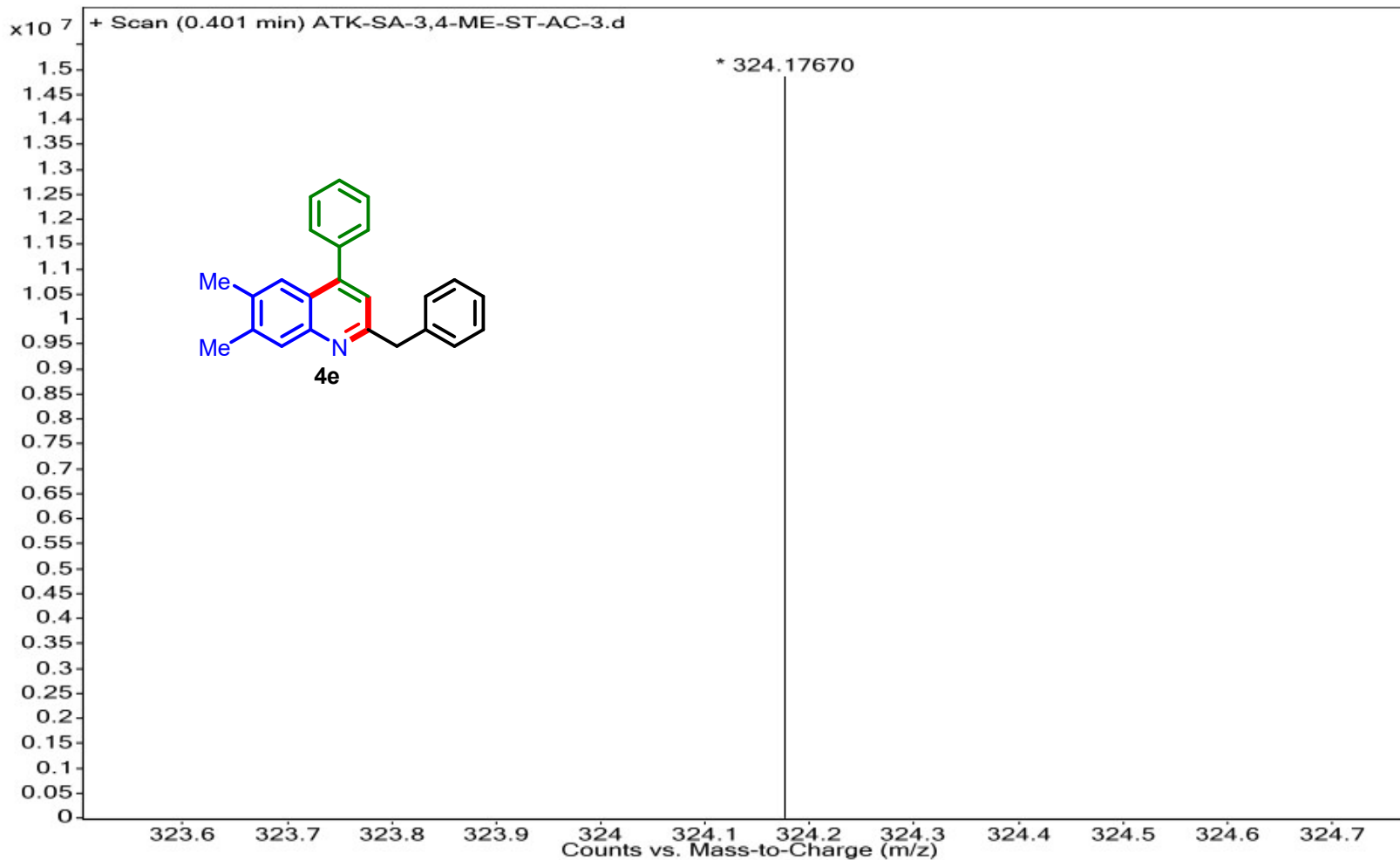
45.69

20.50
20.37

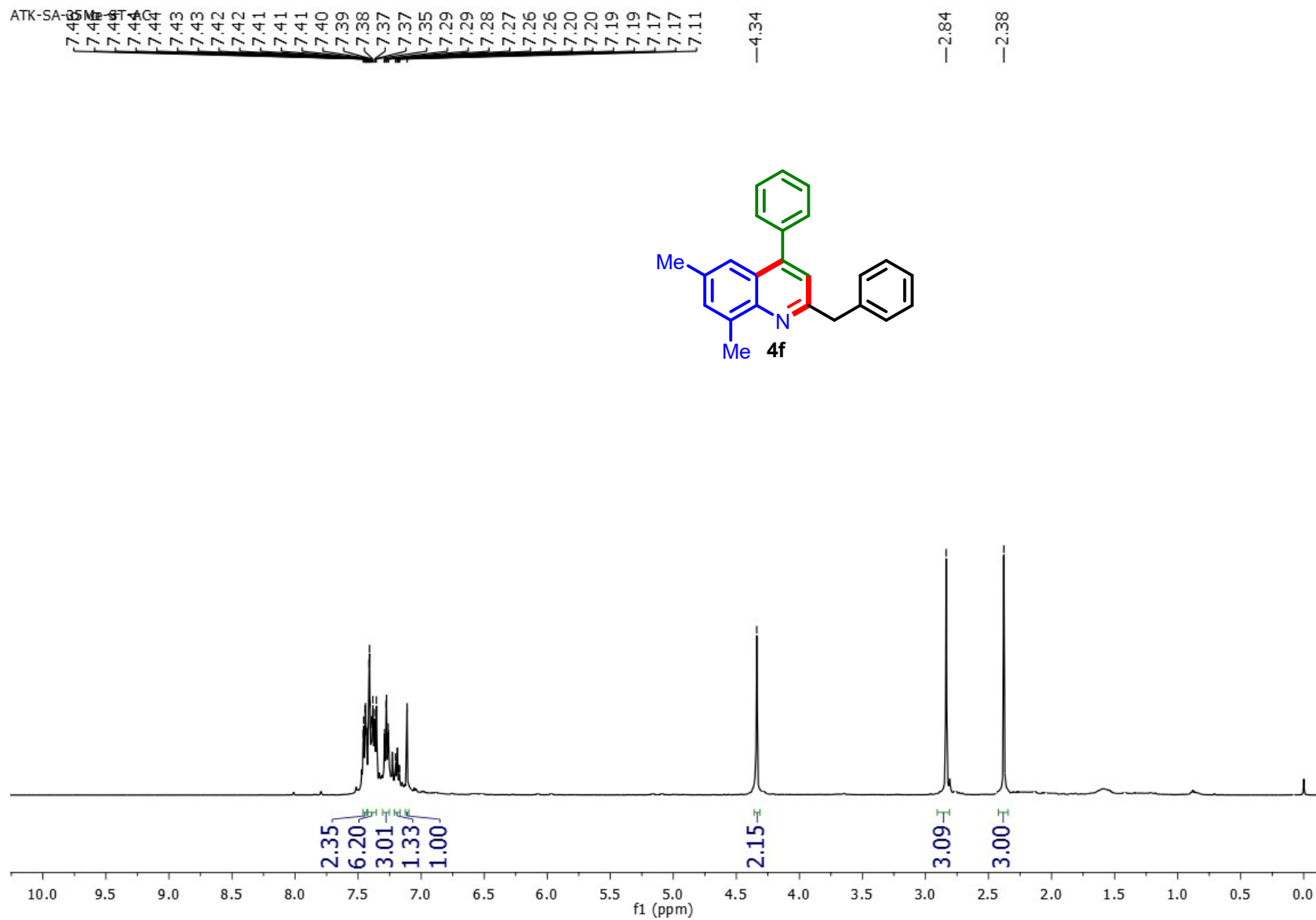


HRMS spectrum of compound: 4e

Sample Name	ATK-SA-3,4-ME-ST-AC-	Position	P1-A4	Instrument Name	Instrument 1	User Name	
Inj Vol	20	InjPosition		SampleType	Sample	IRM Calibration Status	Success
Data Filename	ATK-SA-3,4-ME-ST-AC-	ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	2/3/2021 11:22:53 AM



¹H NMR spectrum of compound: 4f



¹³C NMR spectrum of compound: 4f

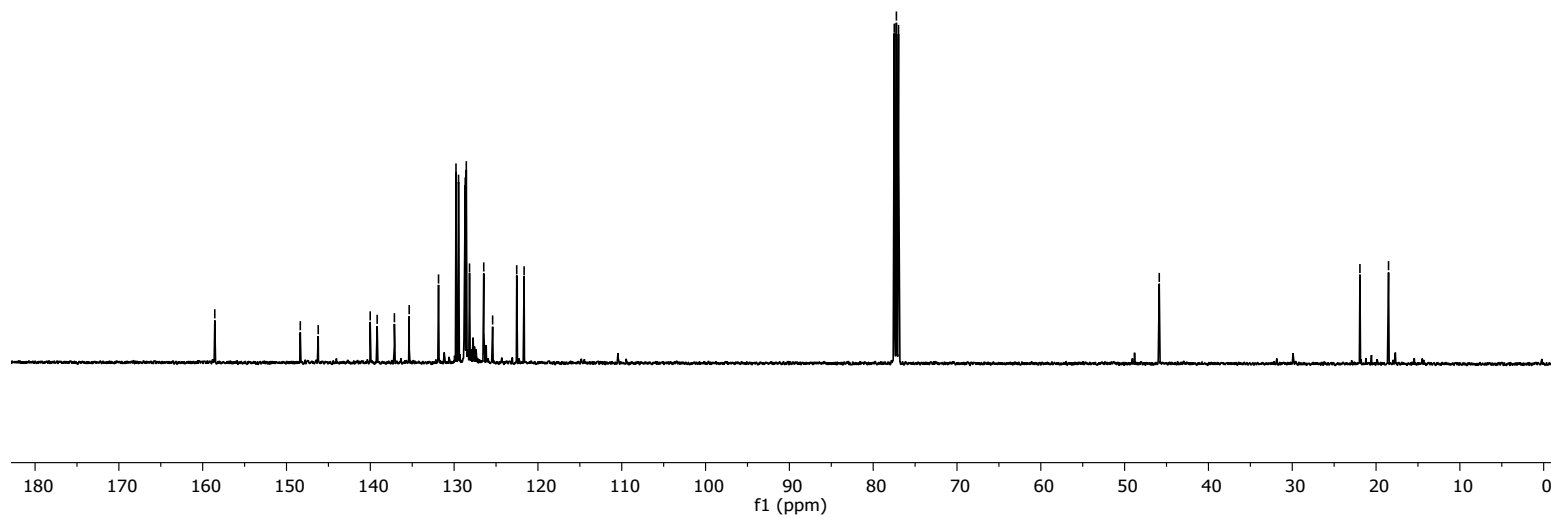
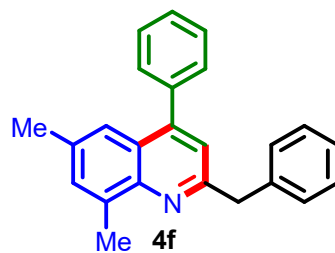
ATK-SA-24Me-ST-AC

158.56
148.36
146.22
140.01
139.18
137.13
135.36
131.86
129.78
129.47
128.68
128.55
128.16
126.47
125.41
122.53
121.65

77.48
77.23
76.98

45.87

21.92
18.51



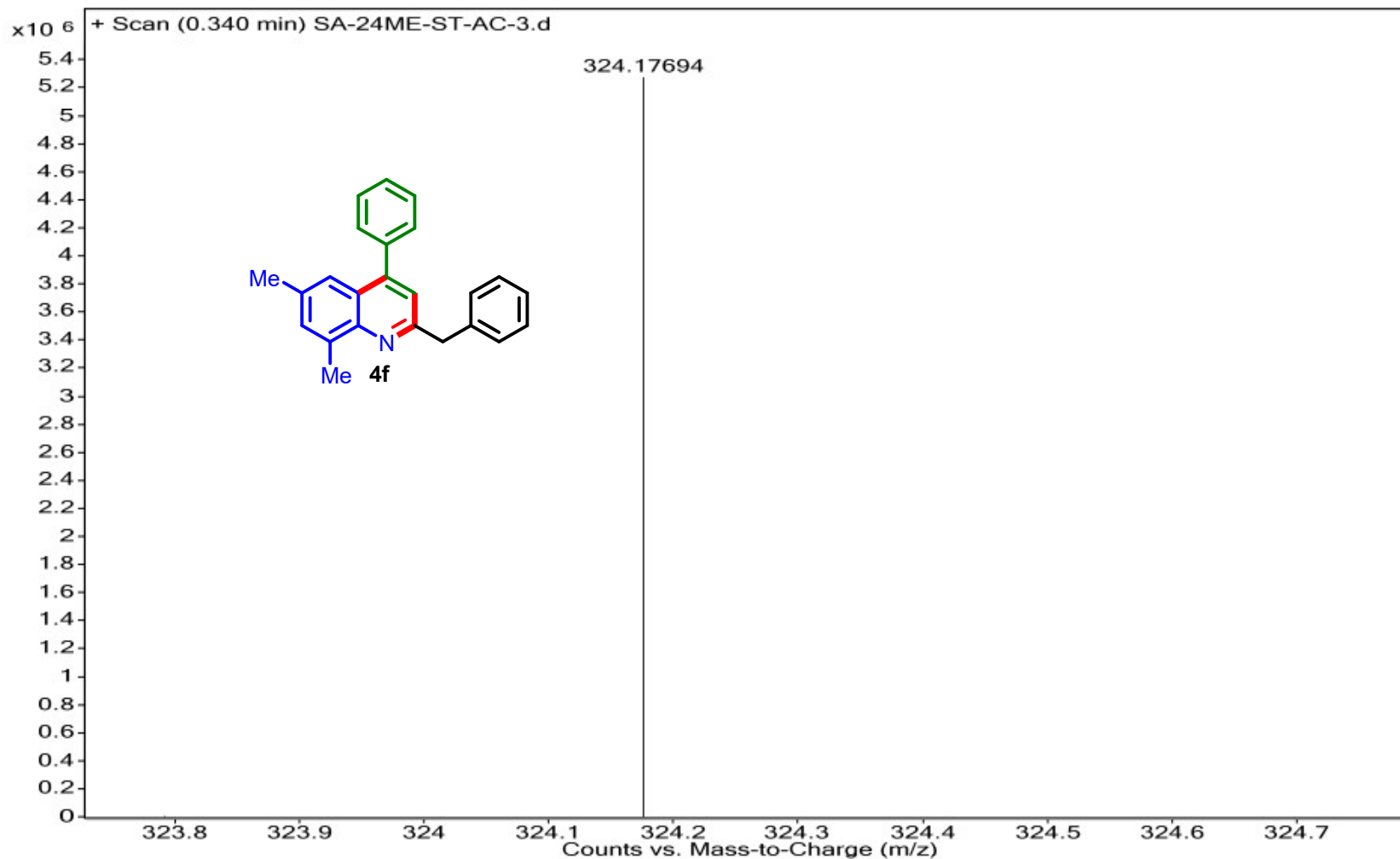
HRMS spectrum of compound: 4f

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

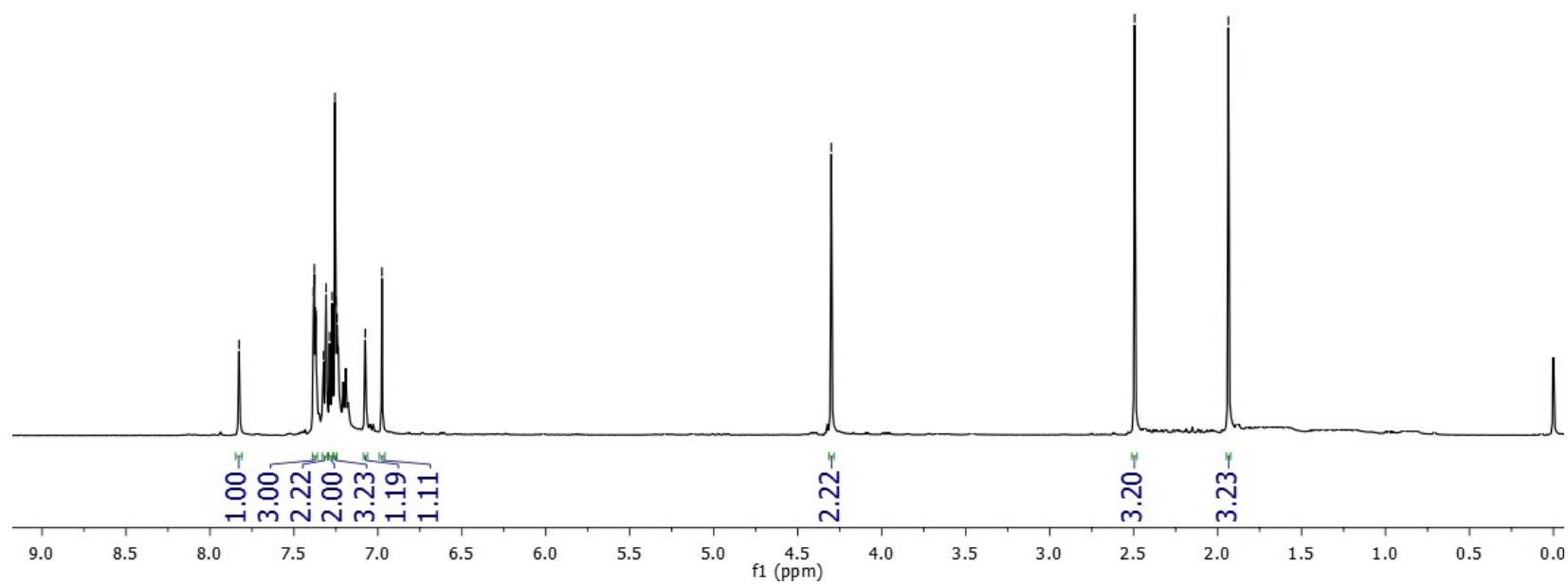
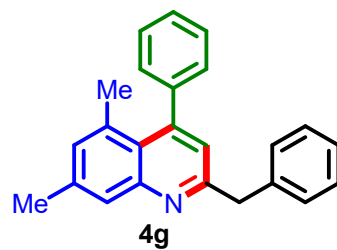
User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 4g

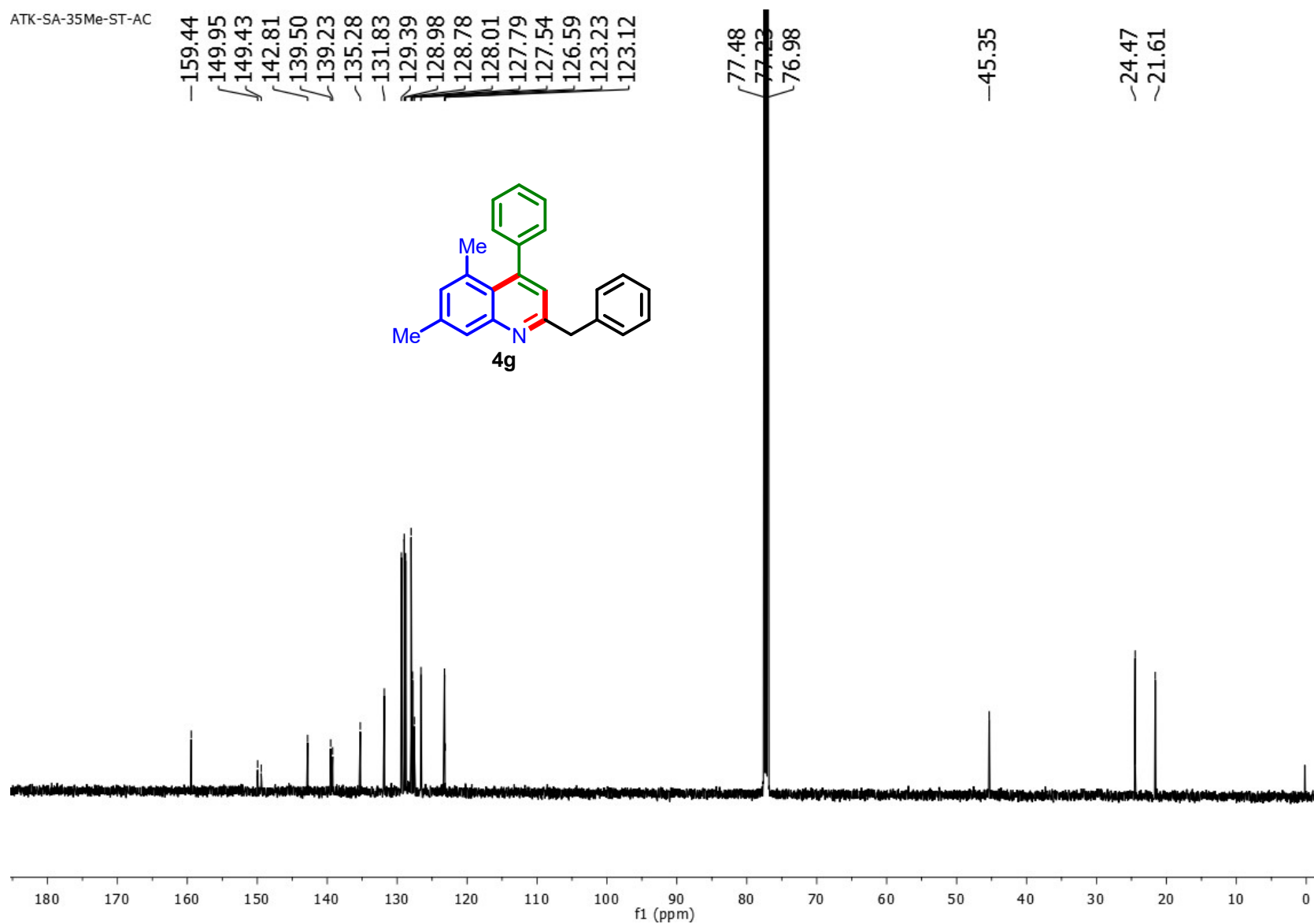
ATK-SA-35Me-ST-AC

7.83
7.38
7.38
7.37
7.37
7.32
7.31
7.29
7.27
7.26
7.25
7.24
7.08
6.98
-4.30
-2.49
-1.94



¹³C NMR spectrum of compound: 4g

ATK-SA-35Me-ST-AC



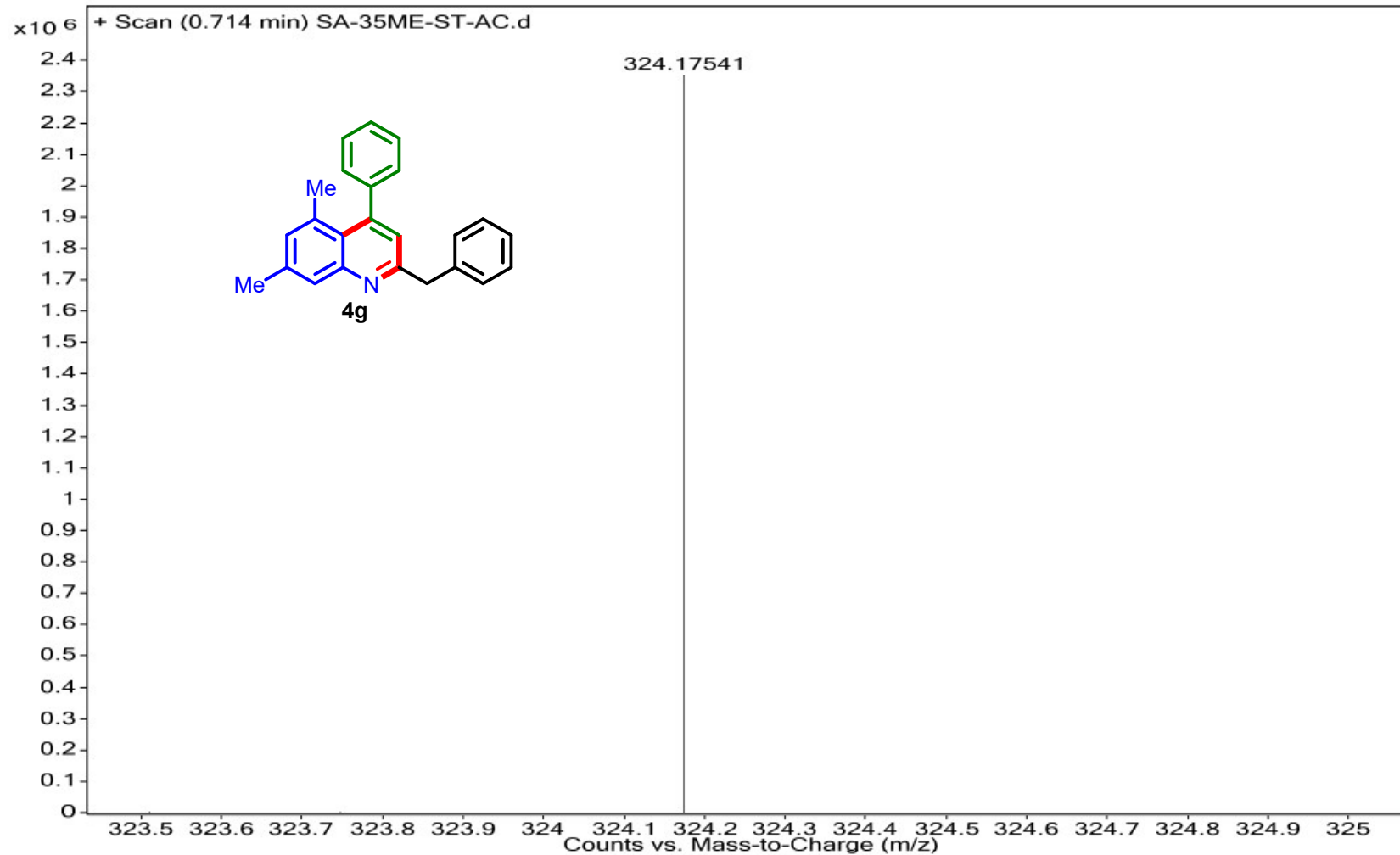
HRMS spectrum of compound: 4g

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

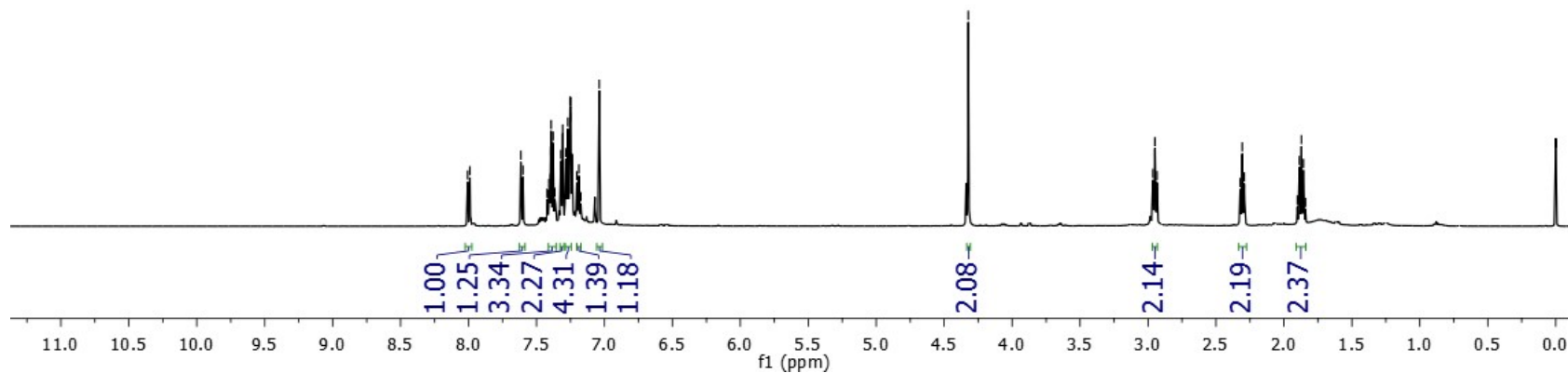
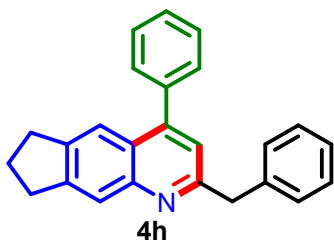
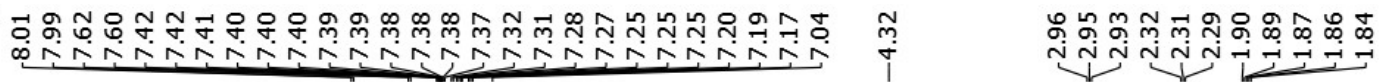
Instrument Name
SampleType
Comment

User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 4h

SA-5IND-ST-AC



¹³C NMR spectrum of compound: 4h

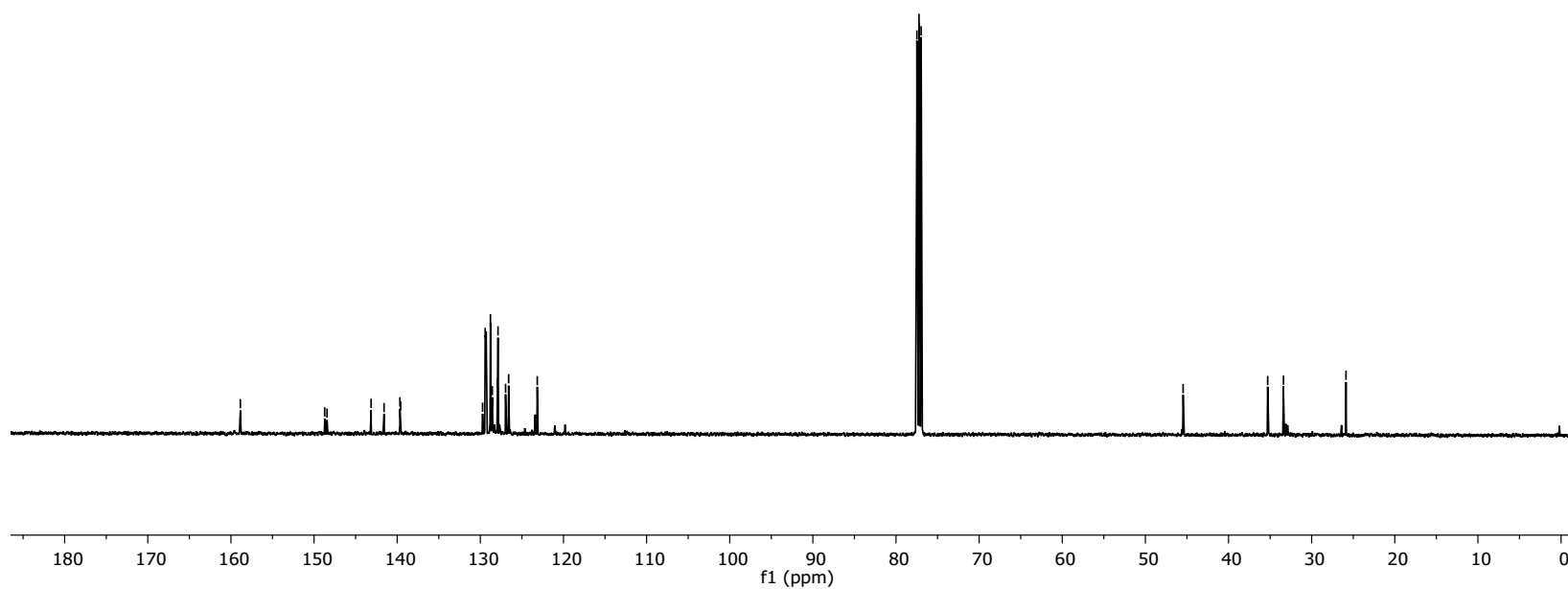
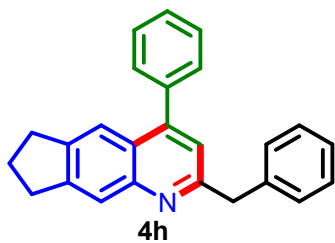
SA-5IND-ST-AC

158.87
148.72
148.44
143.14
141.58
139.67
139.59
129.73
129.41
129.29
128.78
128.56
127.96
127.87
126.96
126.59
123.15

77.48
77.23
76.98

45.46

35.29
33.39
25.87



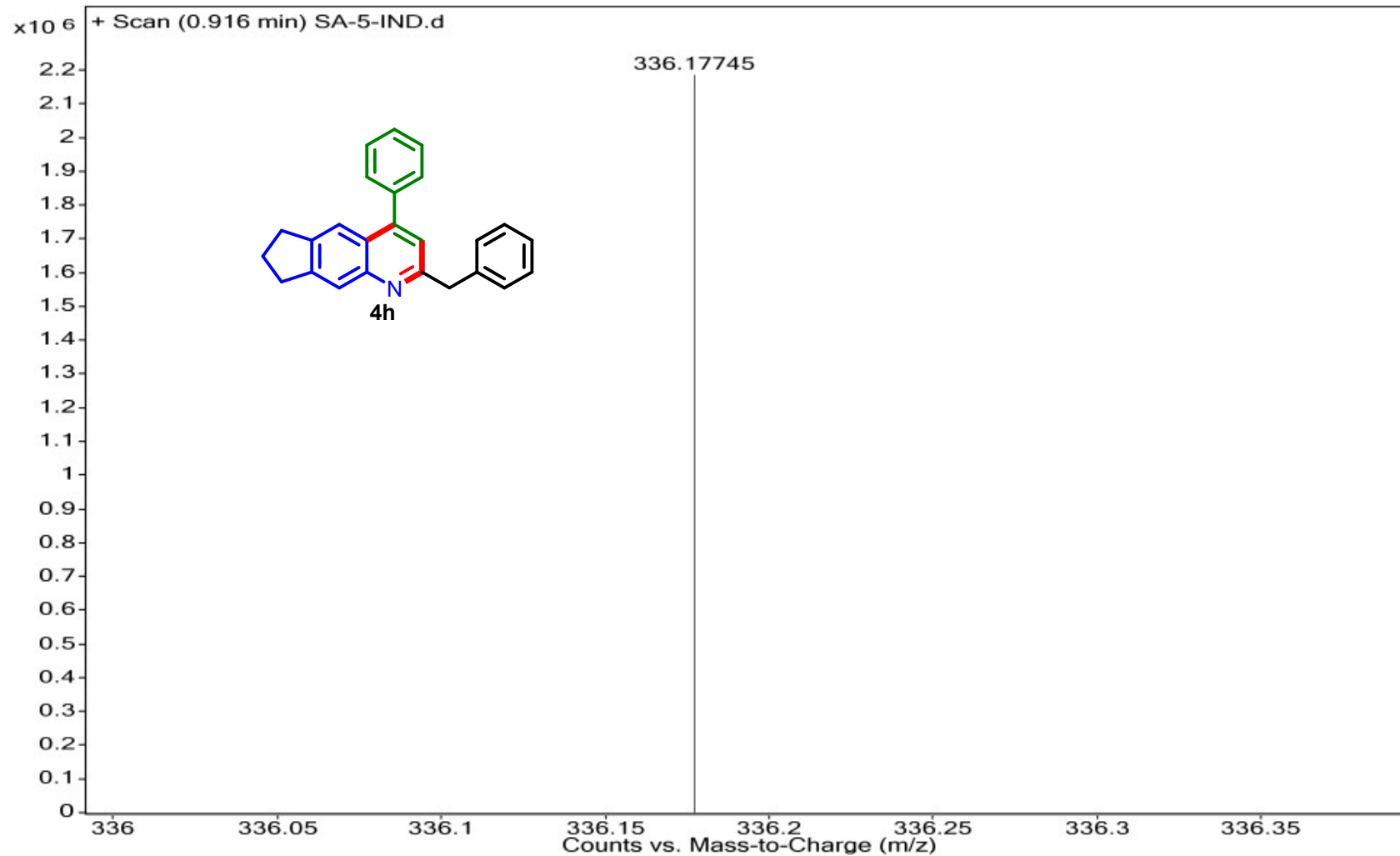
HRMS spectrum of compound: 4h

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

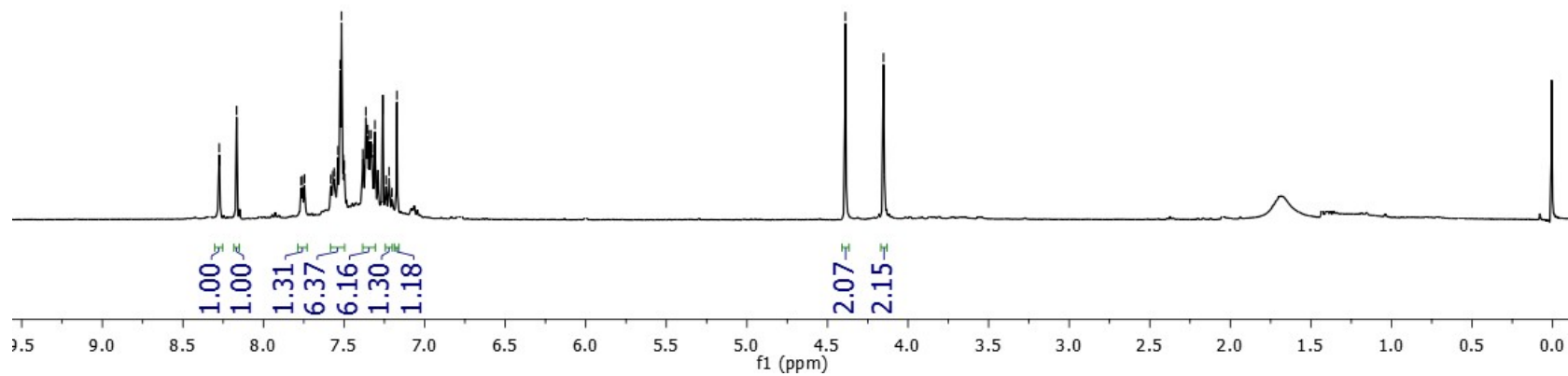
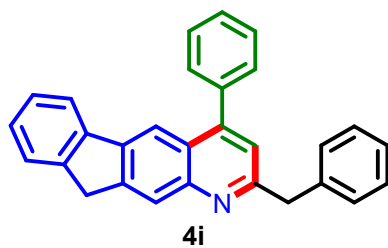
User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 4i

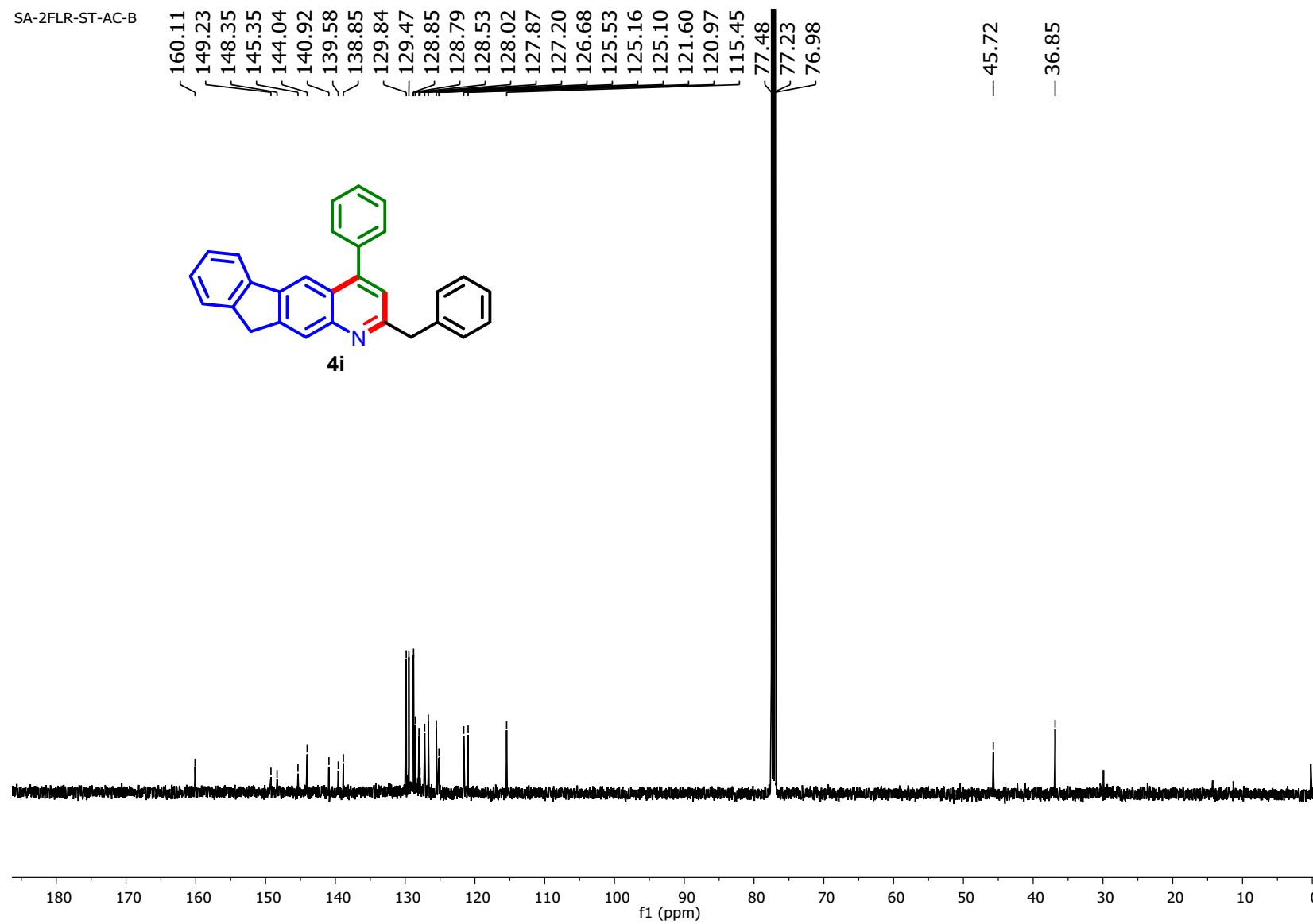
SA-2FLR-ST-AC-B

8.27
8.17
7.77
7.76
7.75
7.58
7.57
7.56
7.54
7.54
7.52
7.52
7.50
7.50
7.38
7.36
7.35
7.34
7.34
7.33
7.33
7.31
7.24
7.22
7.20
7.17
4.39
4.15



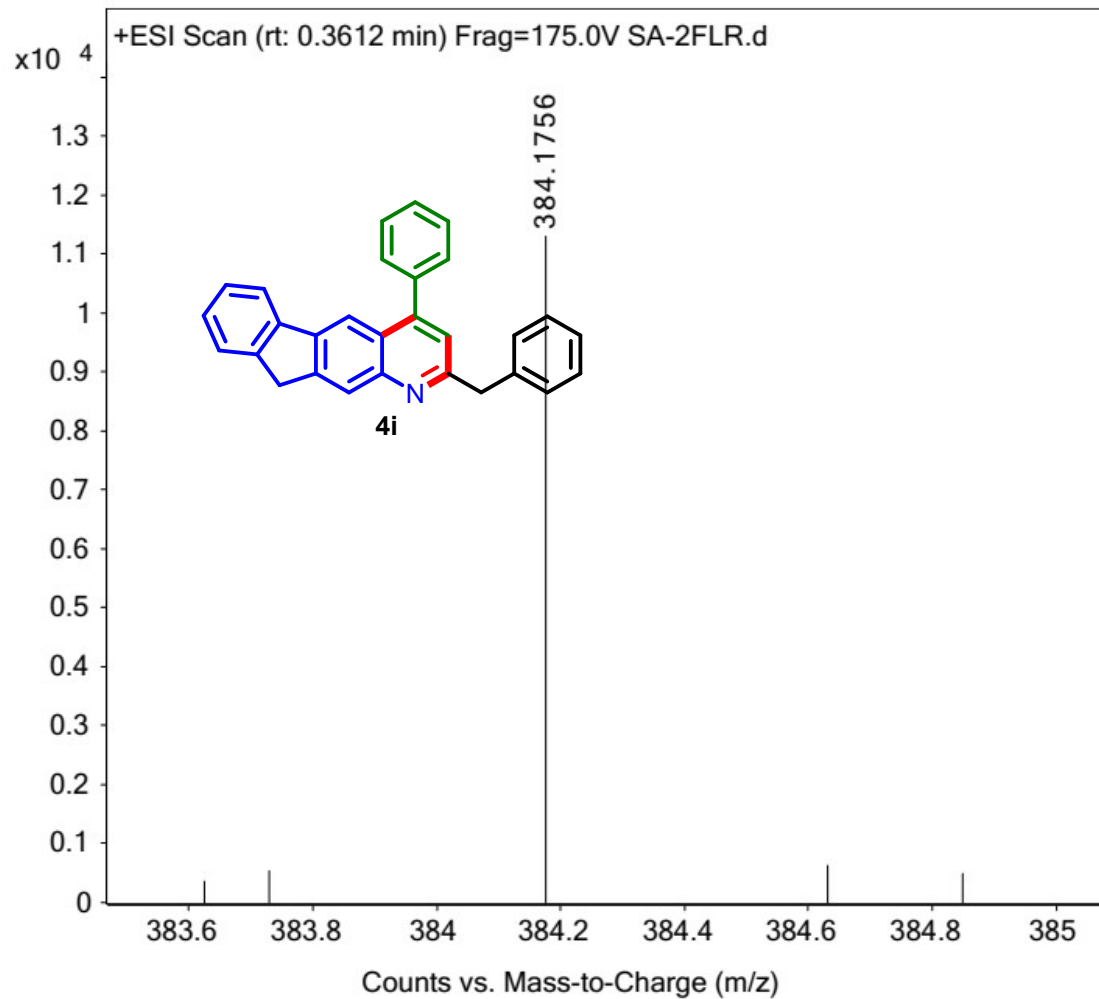
¹³C NMR spectrum of compound: 4i

SA-2FLR-ST-AC-B



HRMS spectrum of compound: 4i

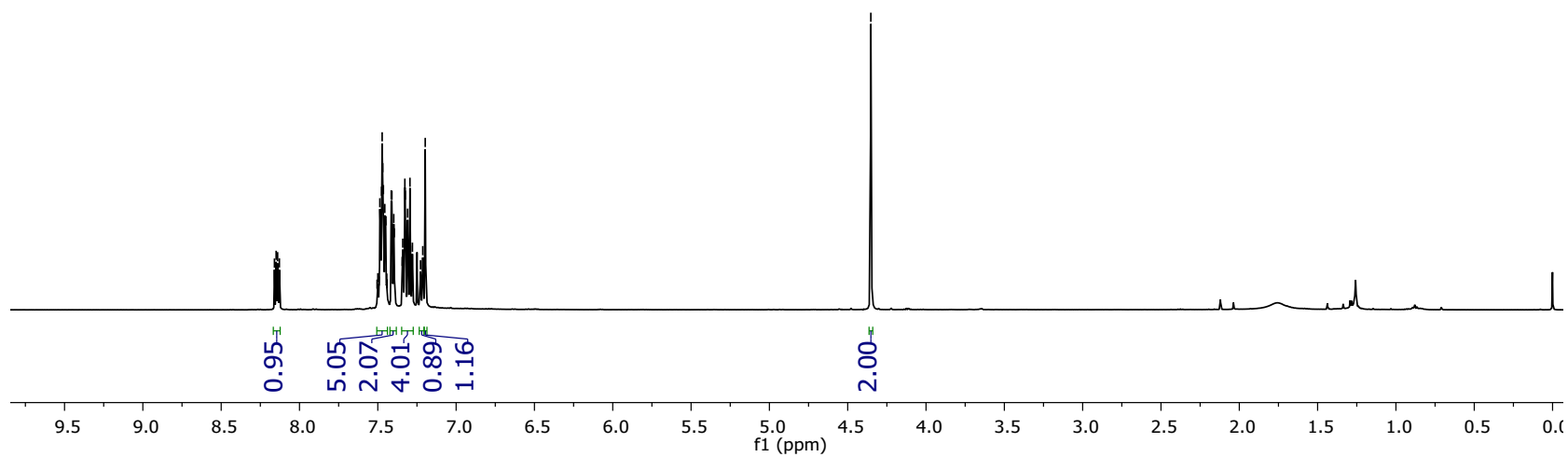
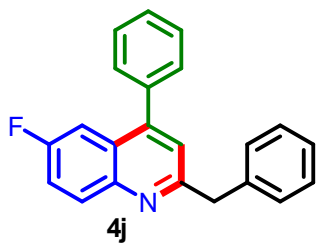
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User Name		Inj Vol	5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Success	Data Filename	SA-2FLR.d
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¹H NMR spectrum of compound: 4j

SA-4F-ST-AC-A

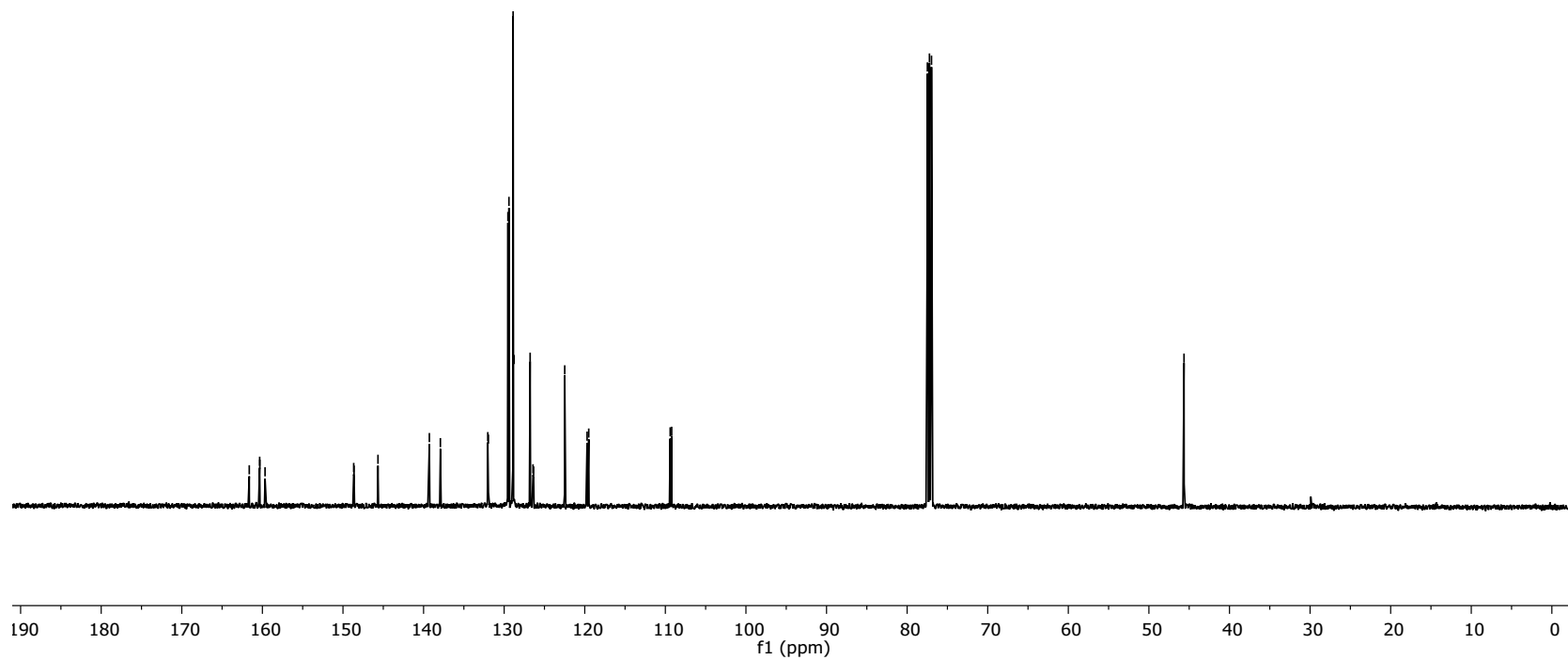
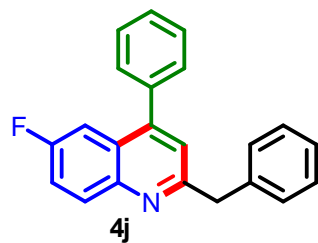
8.16
8.15
8.14
8.13
7.50
7.50
7.49
7.49
7.48
7.48
7.48
7.47
7.47
7.46
7.46
7.45
7.45
7.44
7.44
7.41
7.41
7.40
7.40
7.40
7.34
7.34
7.33
7.32
7.31
7.29
7.29
7.28
7.23
7.21
7.20
4.35



¹³C NMR spectrum of compound: 4j

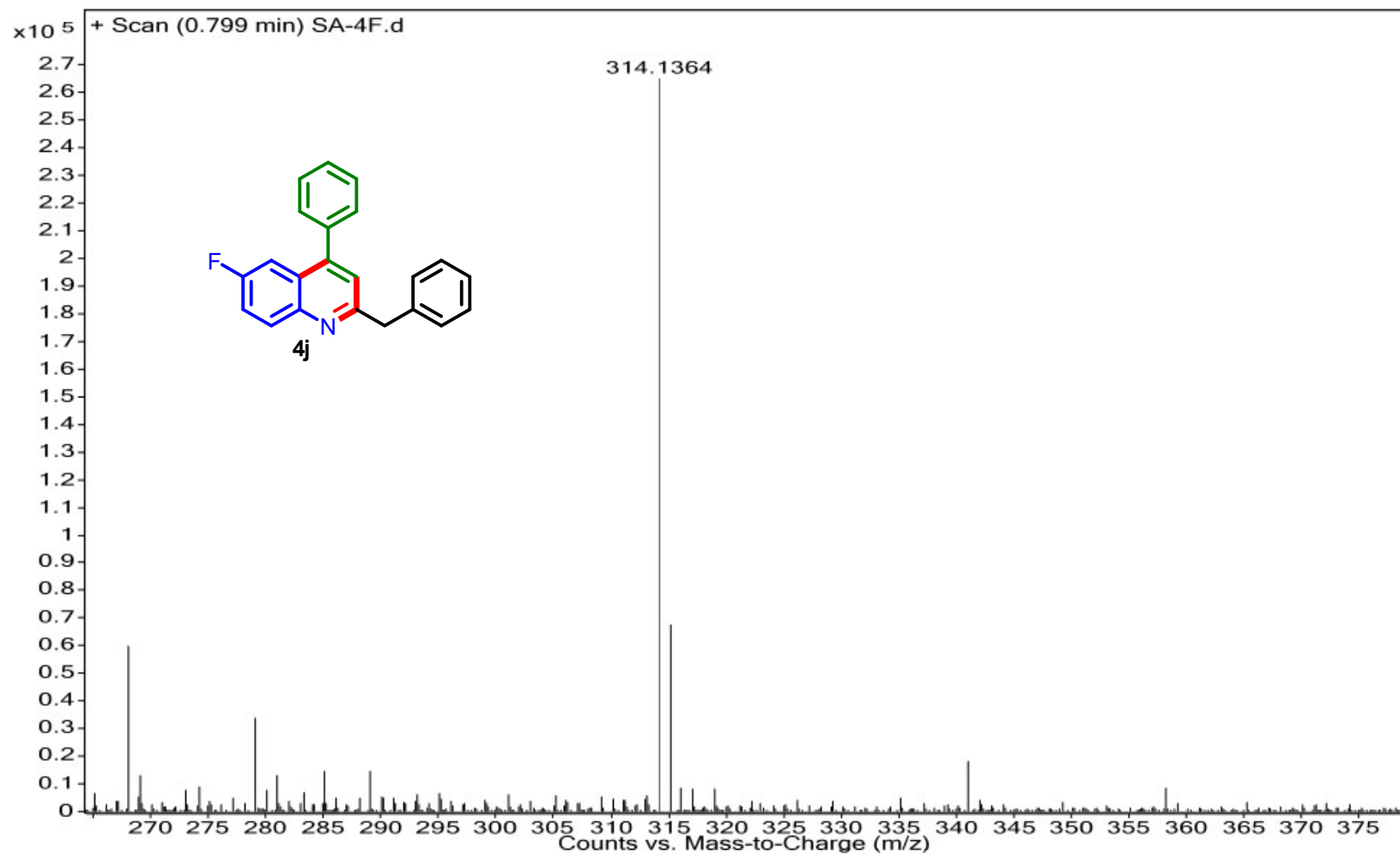
SA-4F-ST-AC-A

161.63
160.34
160.32
159.67
148.67
148.63
145.66
139.28
137.91
132.03
131.96
129.53
129.41
128.89
128.77
126.78
126.42
126.35
122.49
119.71
119.51
109.40
109.21
77.48
77.23
76.98
— 45.64



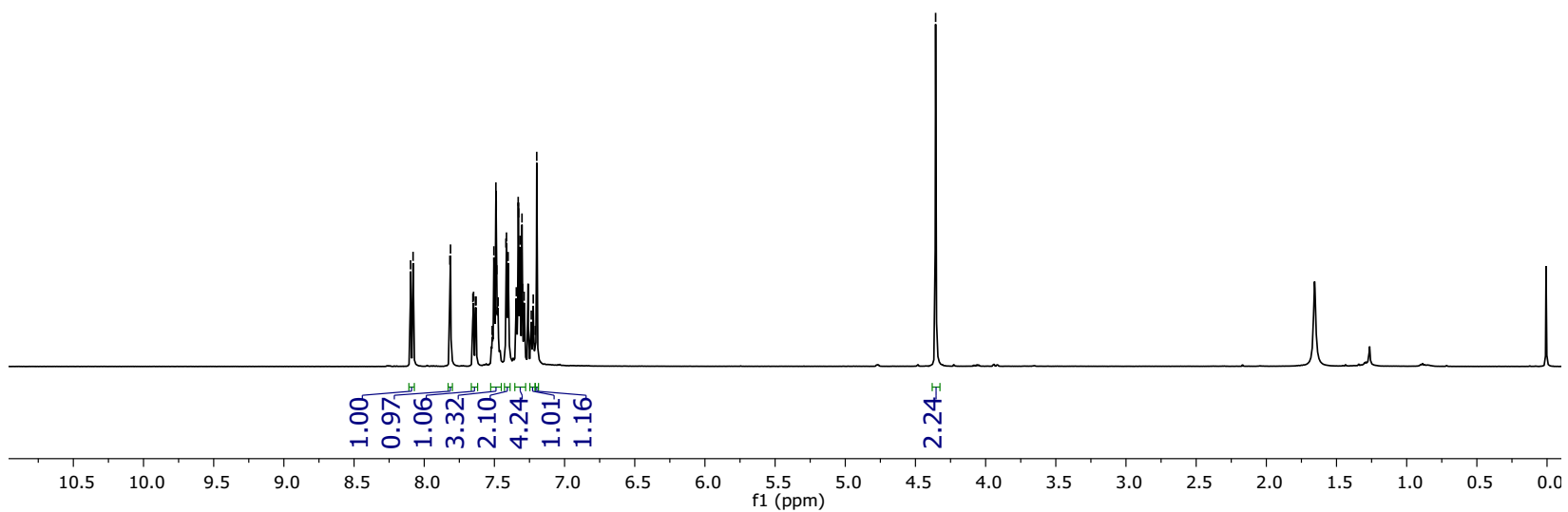
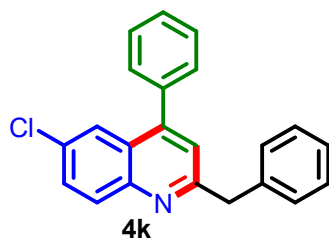
HRMS spectrum of compound: 4j

Sample Name	SA-4F	Position	P1-B5	Instrument Name	Instrument 1	User Name	
Inj Vol	5	InjPosition		SampleType	Sample	IRM Calibration Status	Success
Data Filename	SA-4F.d	ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	7/28/2021 1:57:16 PM



¹H NMR spectrum of compound: 4k

SA-4Cl-ST-AC
8.10
8.08
7.82
7.81
7.65
7.65
7.64
7.63
7.52
7.51
7.50
7.50
7.50
7.49
7.49
7.48
7.48
7.47
7.42
7.41
7.40
7.34
7.33
7.33
7.32
7.31
7.30
7.30
7.29
7.24
7.22
7.21
7.20
4.36



¹³C NMR spectrum of compound: 4k

SA-4Cl-ST-AC

— 161.31

148.38

147.01

139.14

137.71

132.19

131.28

130.45

129.62

129.43

128.92

128.83

126.82

126.40

124.73

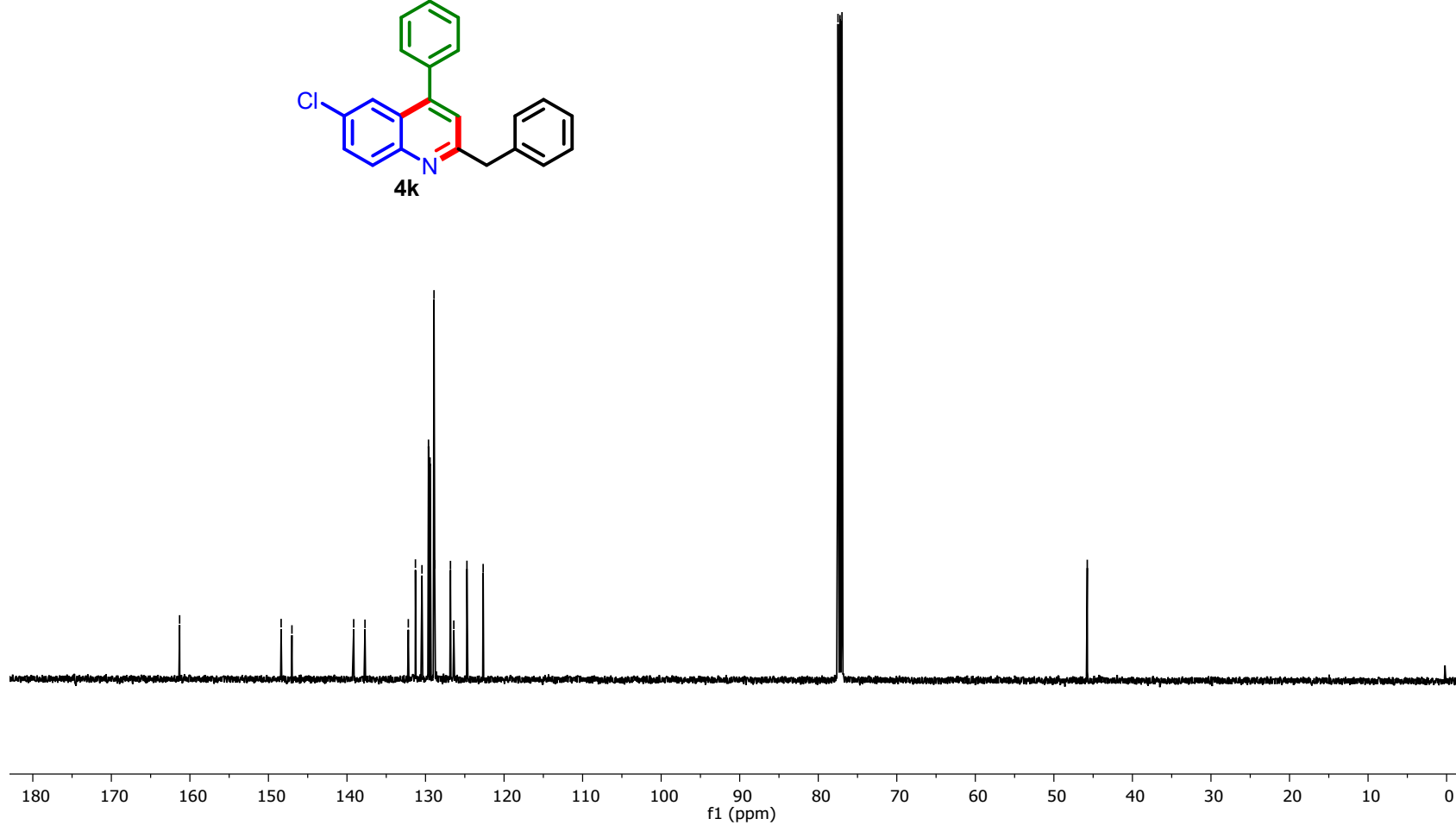
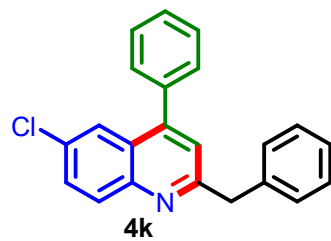
122.66

77.48

77.23

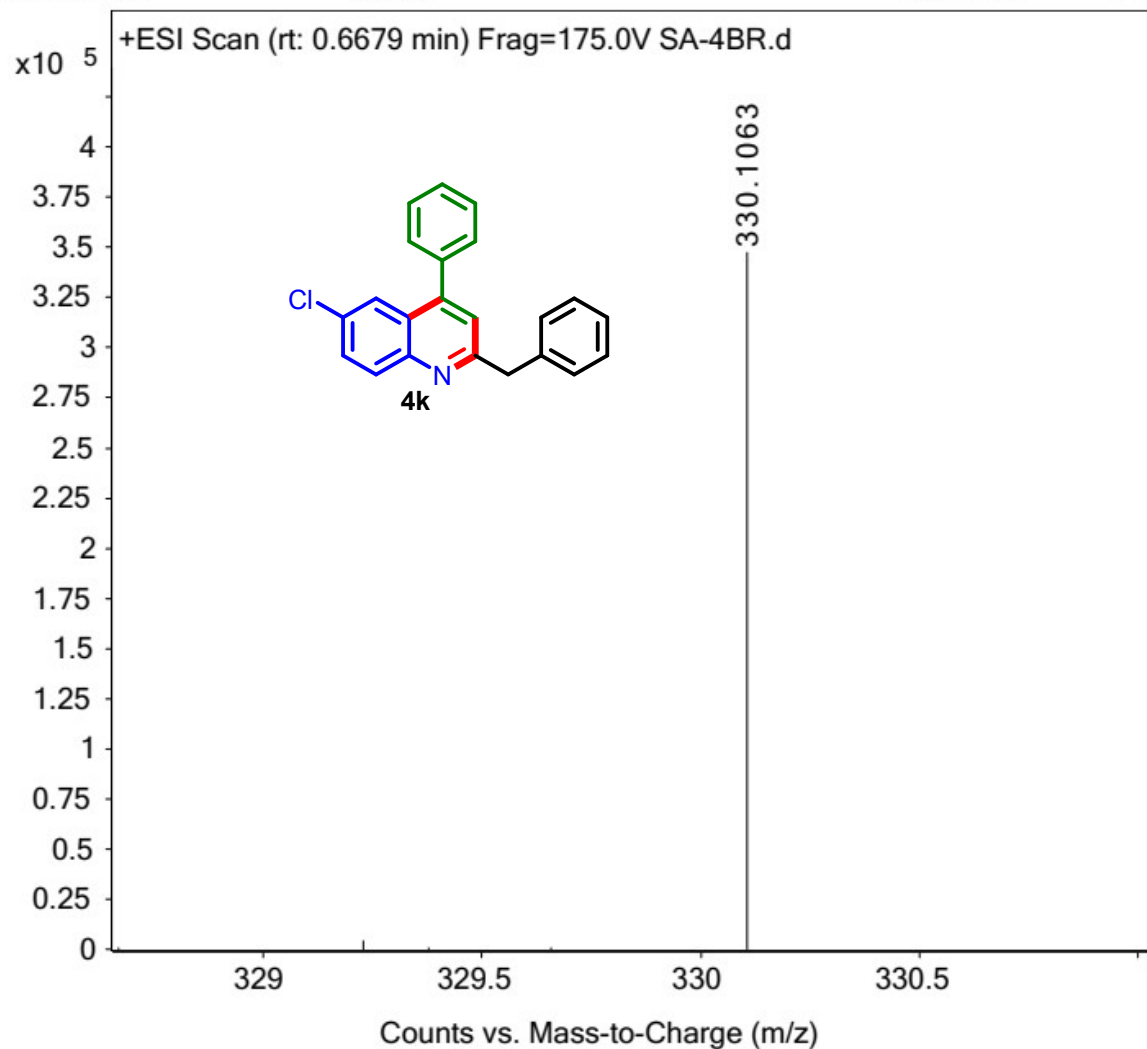
76.98

— 45.75



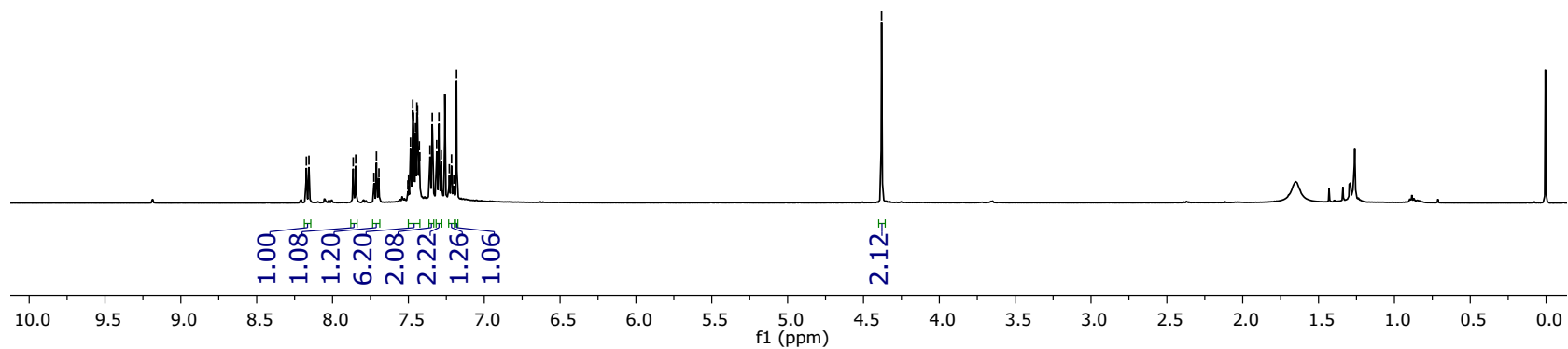
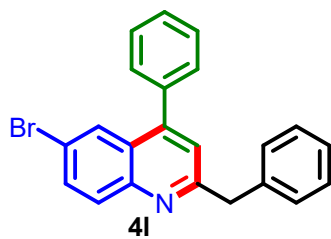
HRMS spectrum of compound: 4k

Sample Name	SA-4BR	Position	P1-B7	Instrument Name	Instrument 1
User Name		Inj Vol	5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Success	Data Filename	SA-4BR.d
ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	28-07-2021 14:11:55 (UTC+05:30)



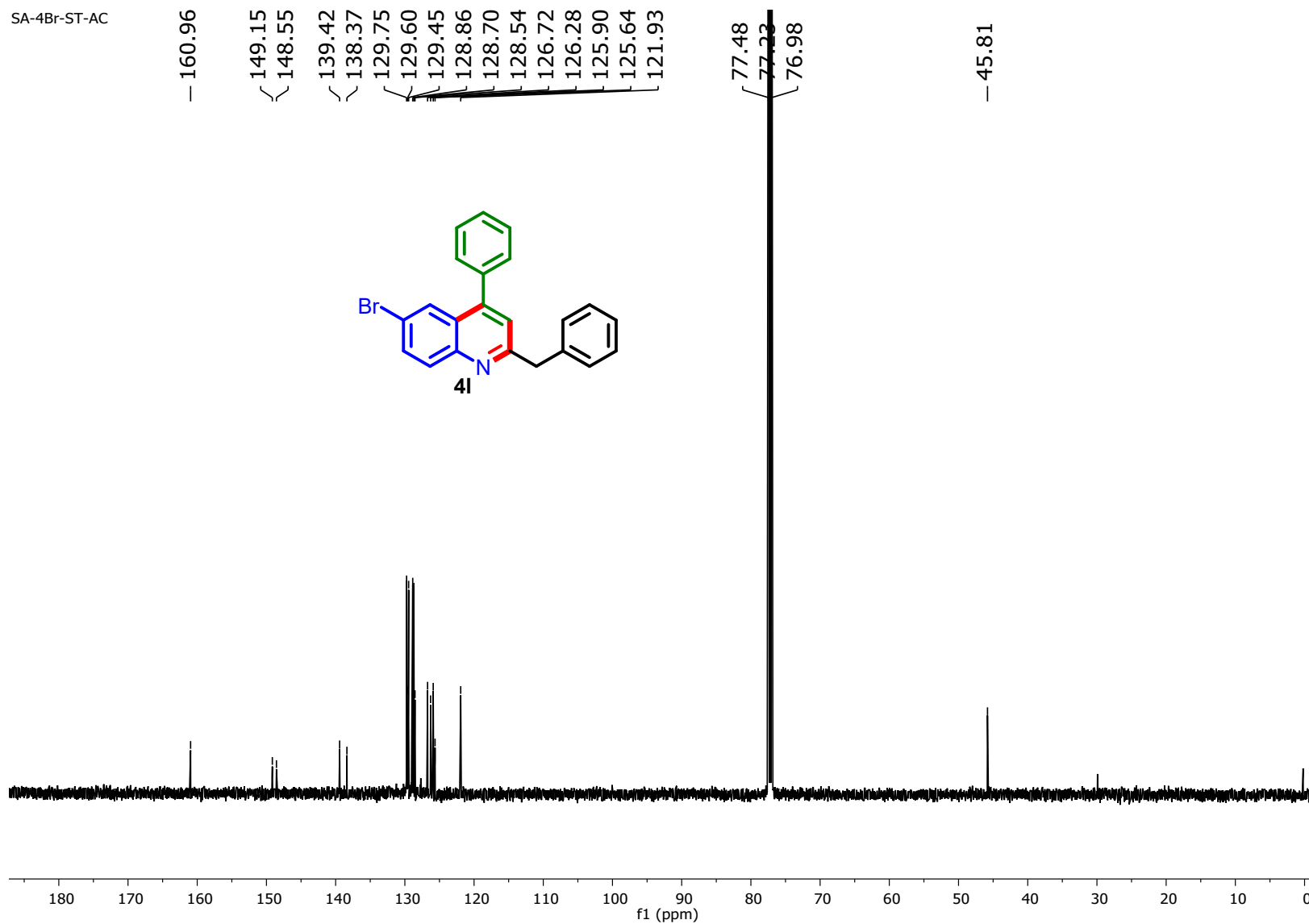
¹H NMR spectrum of compound: 4l

SA-4Br
8.17
8.16
7.86
7.85
7.73
7.71
7.69
7.50
7.50
7.49
7.48
7.47
7.47
7.46
7.45
7.45
7.44
7.44
7.44
7.43
7.42
7.36
7.34
7.31
7.30
7.28
7.23
7.22
7.20
7.18
4.38



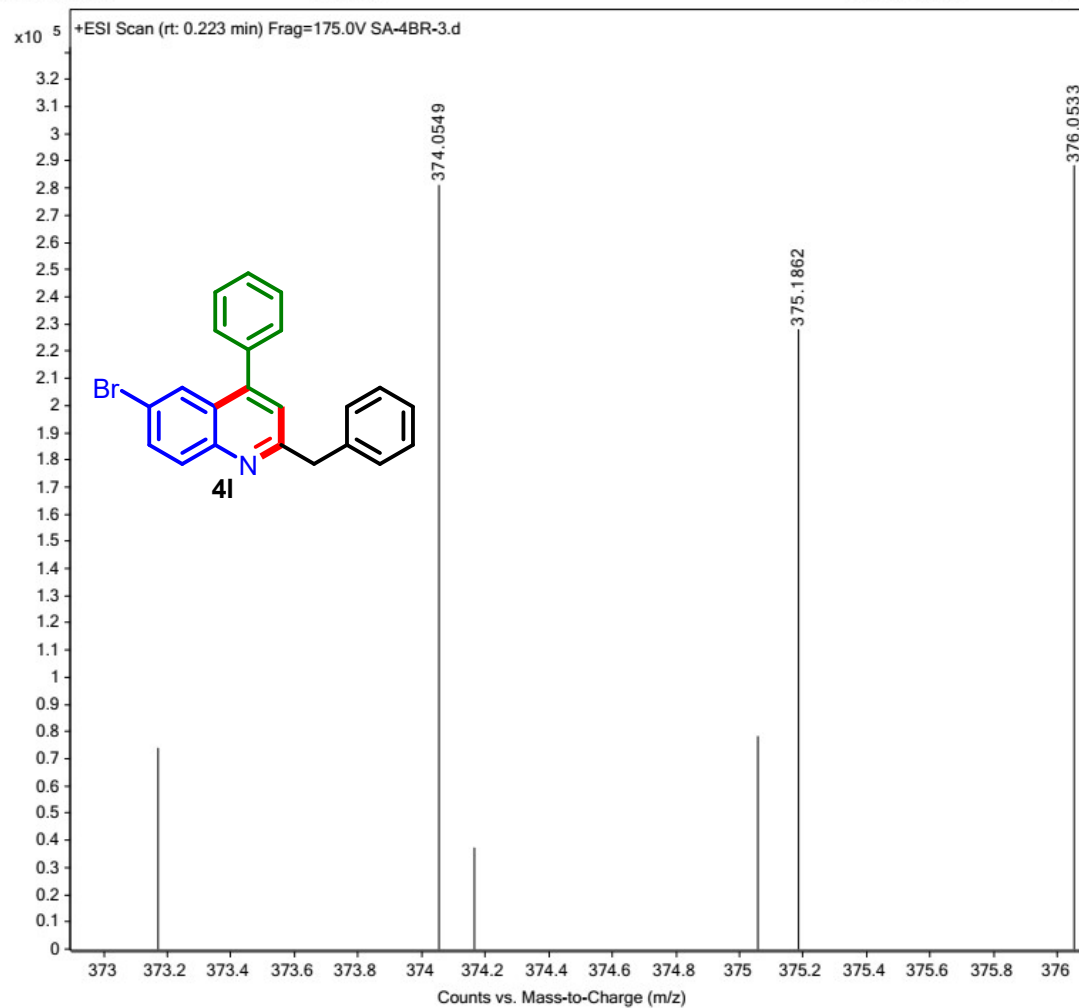
¹³C NMR spectrum of compound: 4l

SA-4Br-ST-AC



HRMS spectrum of compound: 4l

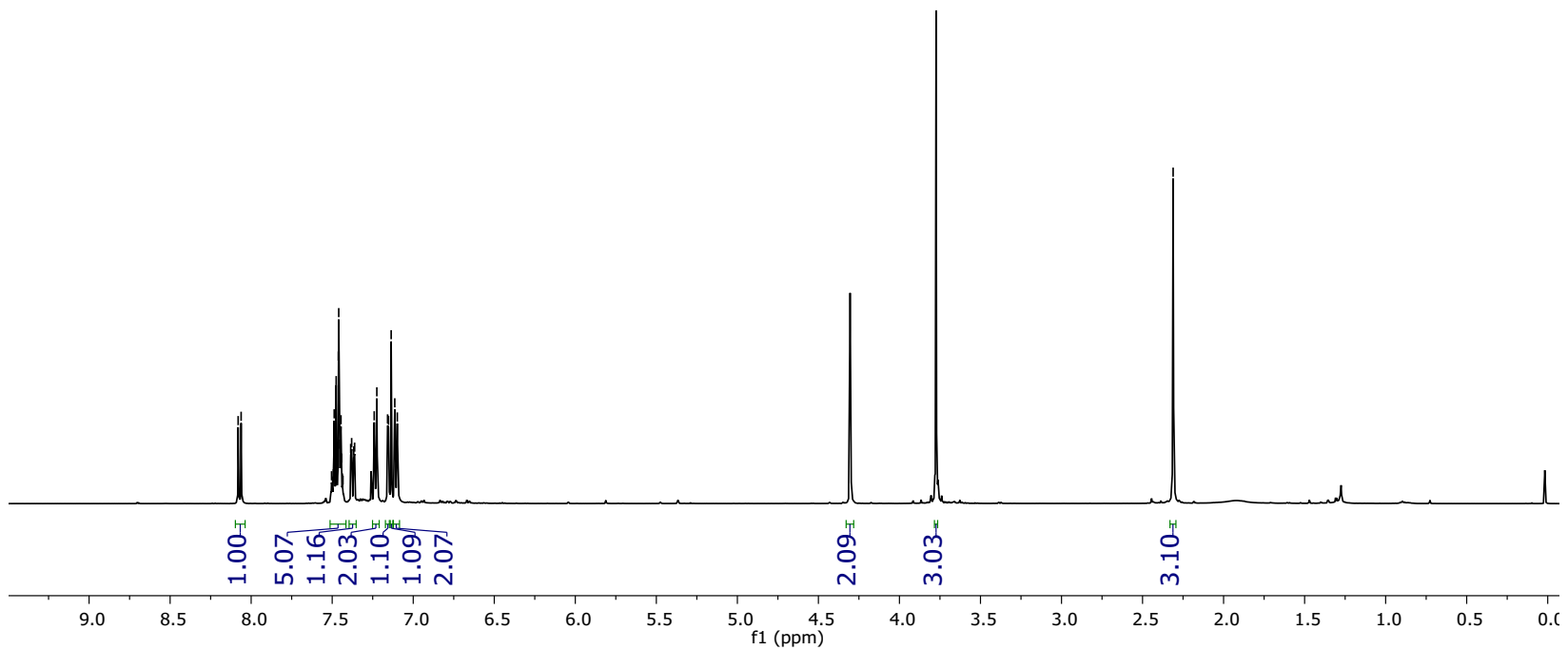
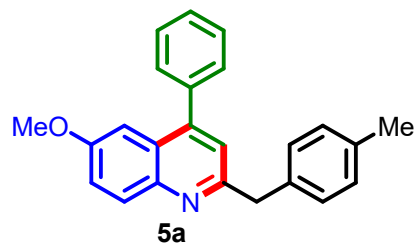
Sample Name	SAMPLE	Position	P1-C8	Instrument Name	Instrument 1
User Name		Inj Vol	20	InjPosition	
Sample Type	Sample	IRM Calibration Status	Success	Data Filename	SA-4BR-3.d
ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	05-08-2021 12:48:11 (UTC+05:30)



¹H NMR spectrum of compound: 5a

SA-4OMe-4MeST-AC

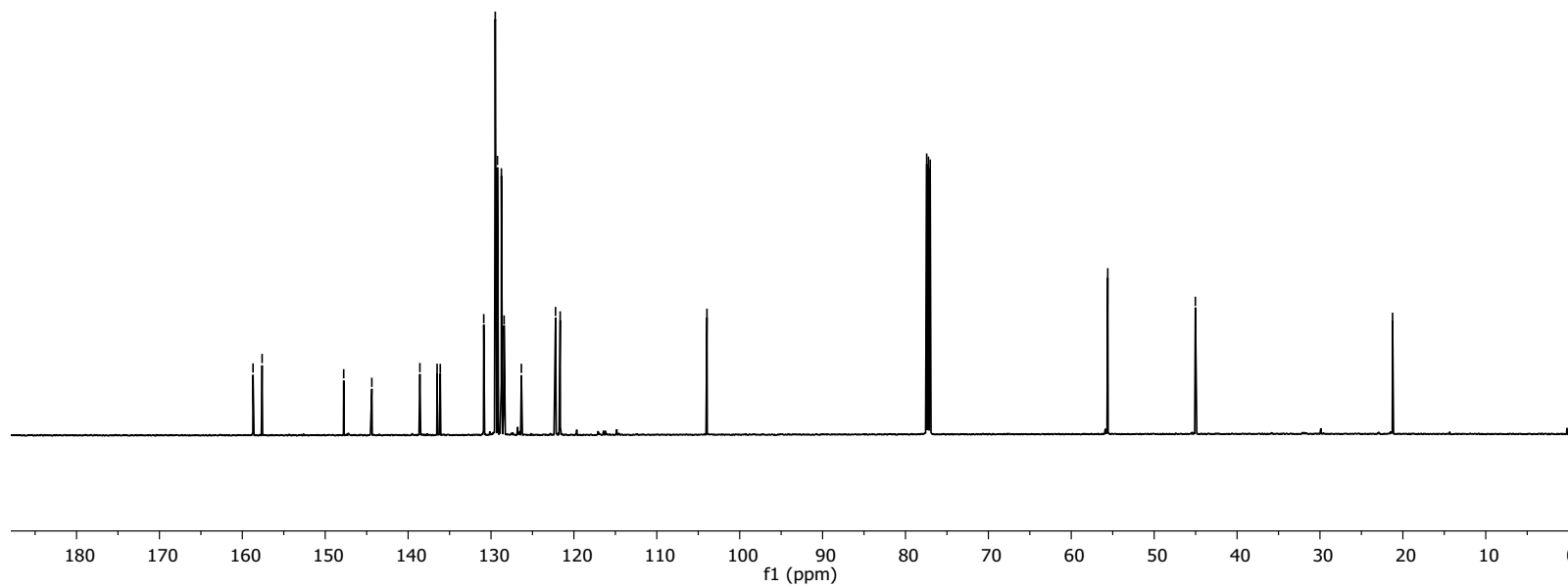
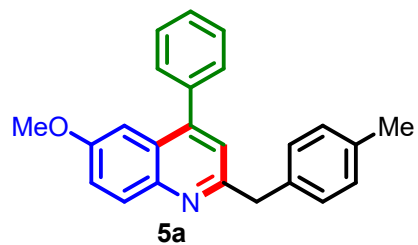
8.08
8.06
7.50
7.50
7.49
7.49
7.49
7.48
7.48
7.47
7.46
7.46
7.45
7.45
7.45
7.44
7.44
7.43
7.39
7.38
7.37
7.36
7.24
7.22
7.16
7.15
7.14
7.11
7.10
— 2.31



¹³C NMR spectrum of compound: 5a

SA-4OMe-4MeST-AC

158.71
157.61
147.77
144.38
138.58
136.50
136.12
130.88
129.49
129.23
128.75
128.42
126.34
122.21
121.66
103.95
77.44
77.23
77.02
55.60
45.03
21.24



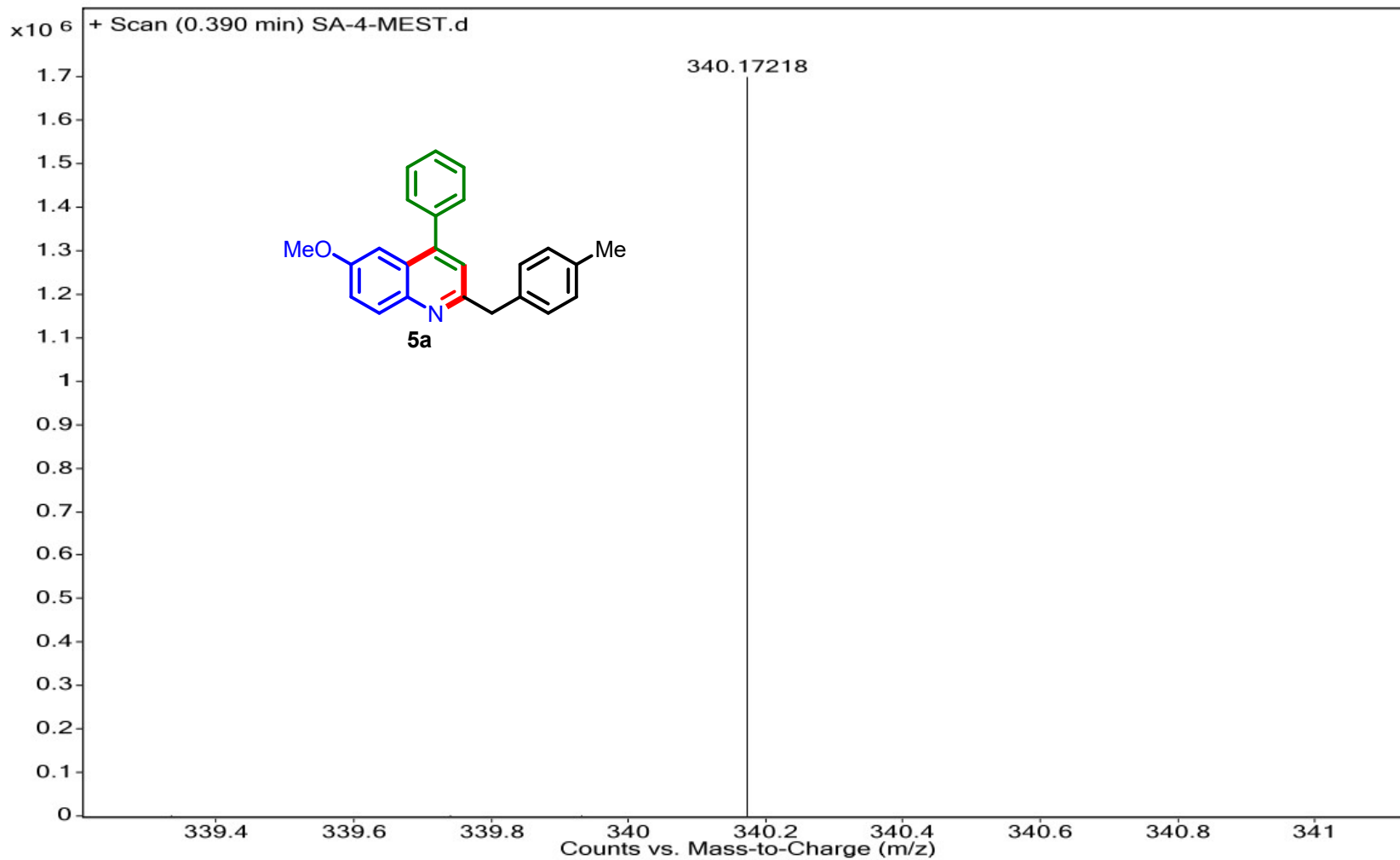
HRMS spectrum of compound: 5a

Sample Name
Inj Vol
Data Filename

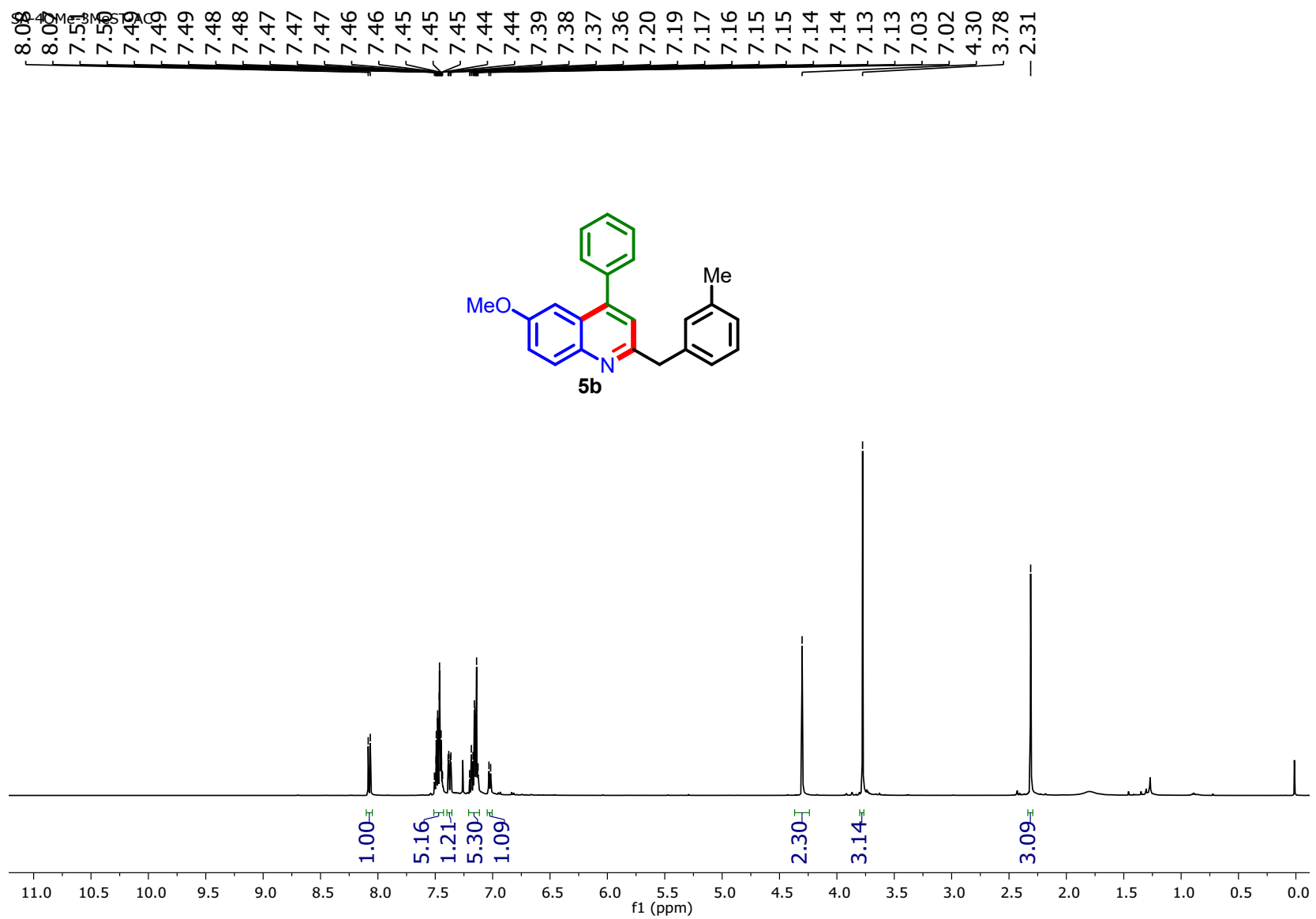
Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

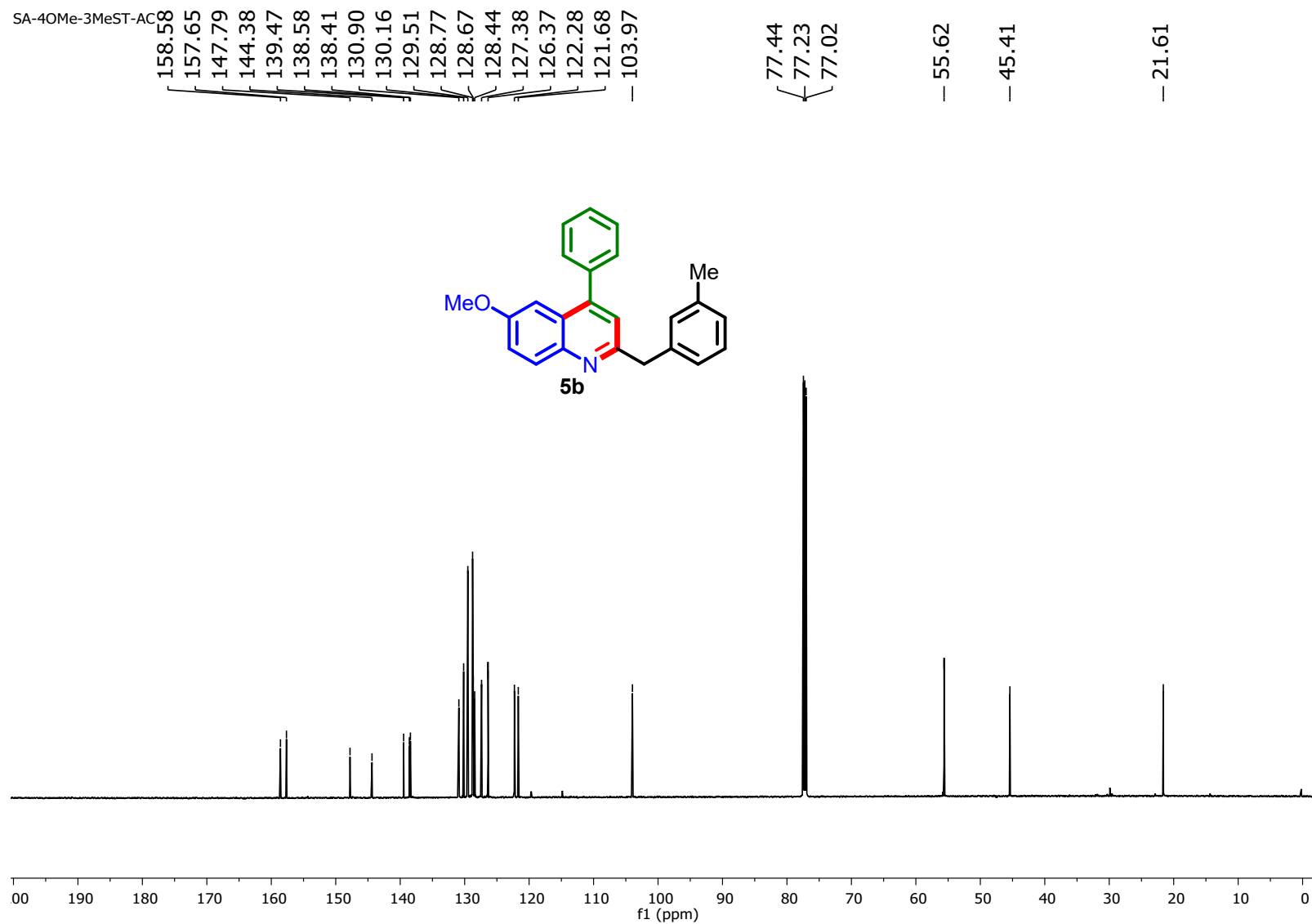
User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 5b



¹³C NMR spectrum of compound: 5b



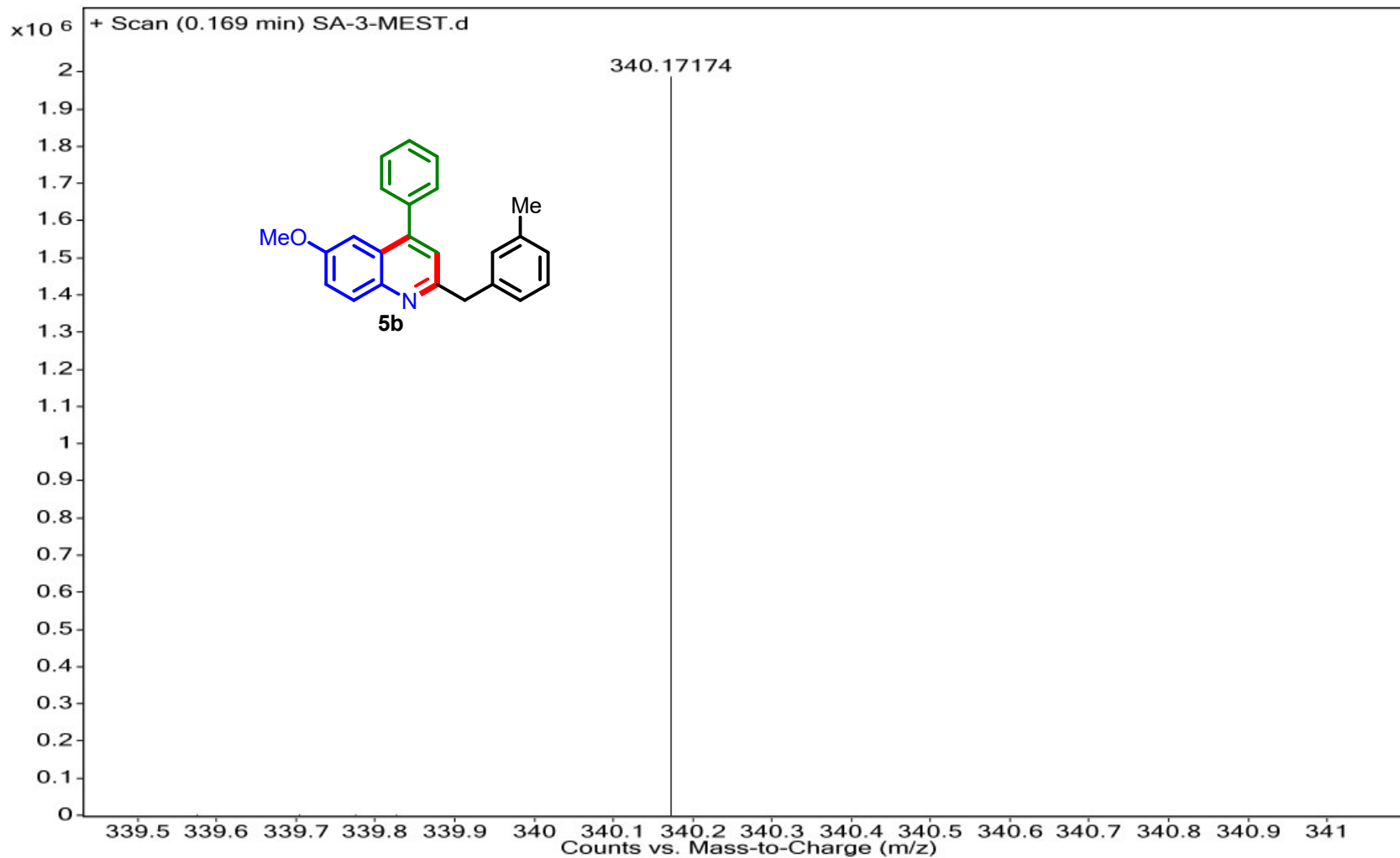
HRMS spectrum of compound: 5b

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

User Name
IRM Calibration Status
Acquired Time



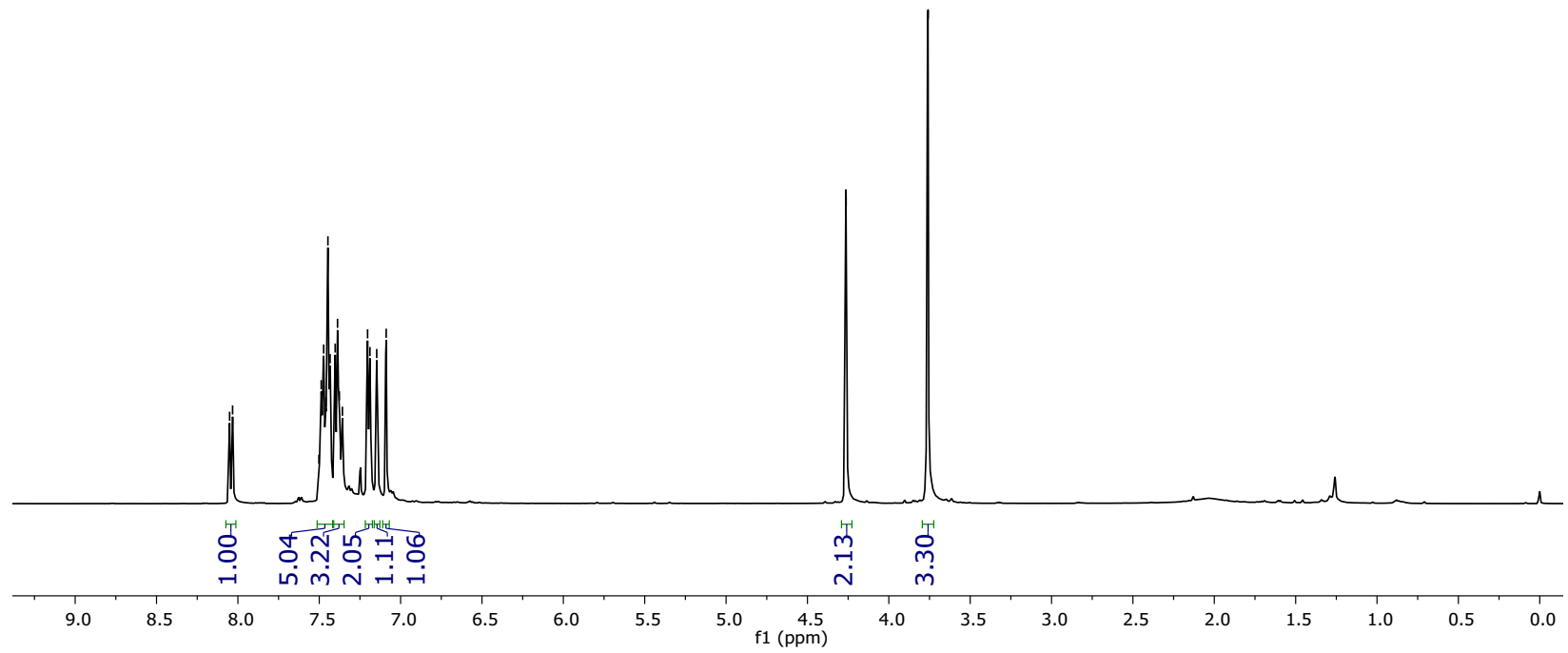
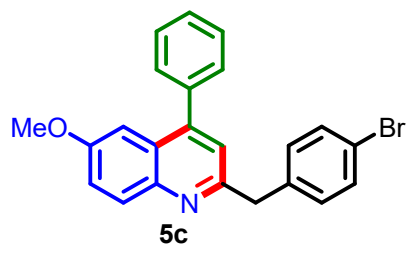
¹H NMR spectrum of compound: 5c

SA-4OMe-4BrST-AC

8.05
8.03
7.50
7.49
7.47
7.46
7.45
7.43
7.40
7.39
7.38
7.36
7.20
7.19
7.15
7.09

4.26

3.76



¹³C NMR spectrum of compound: 5c

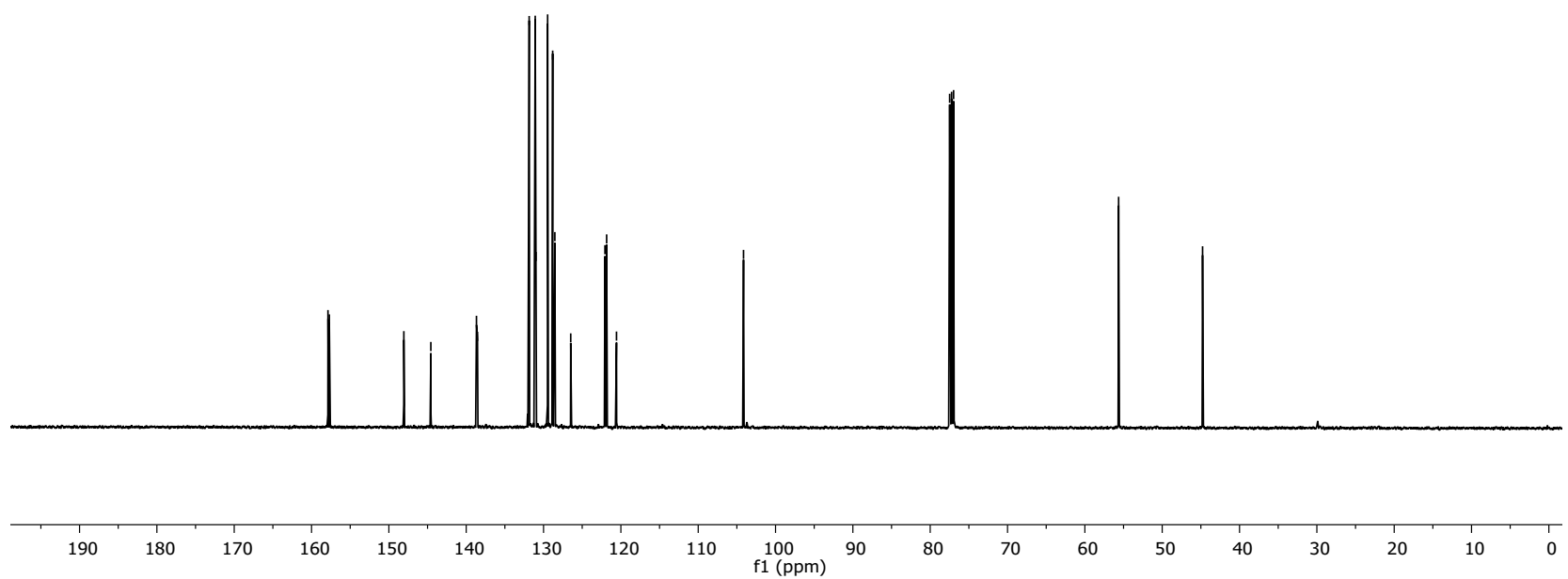
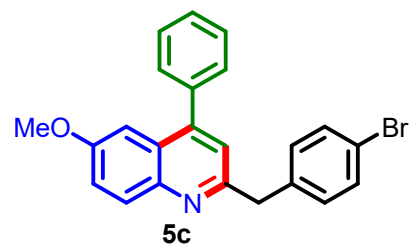
SA-4OMe-4BrST-AC

157.87
157.70
148.06
144.57
138.67
138.54
131.86
131.08
130.98
129.47
128.82
128.54
126.49
122.06
121.84
120.57
— 104.14

77.48
77.23
76.98

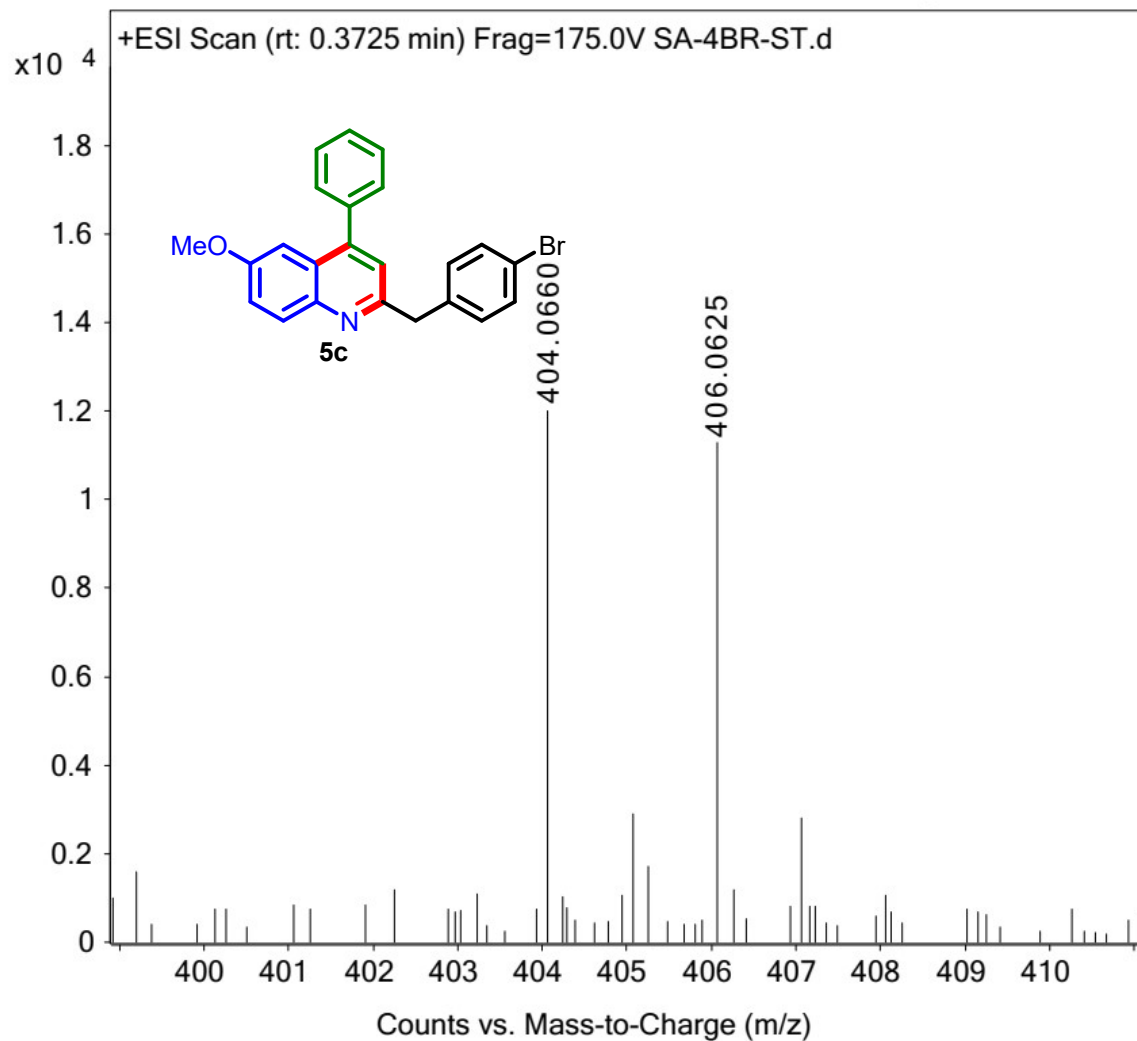
— 55.63

— 44.78

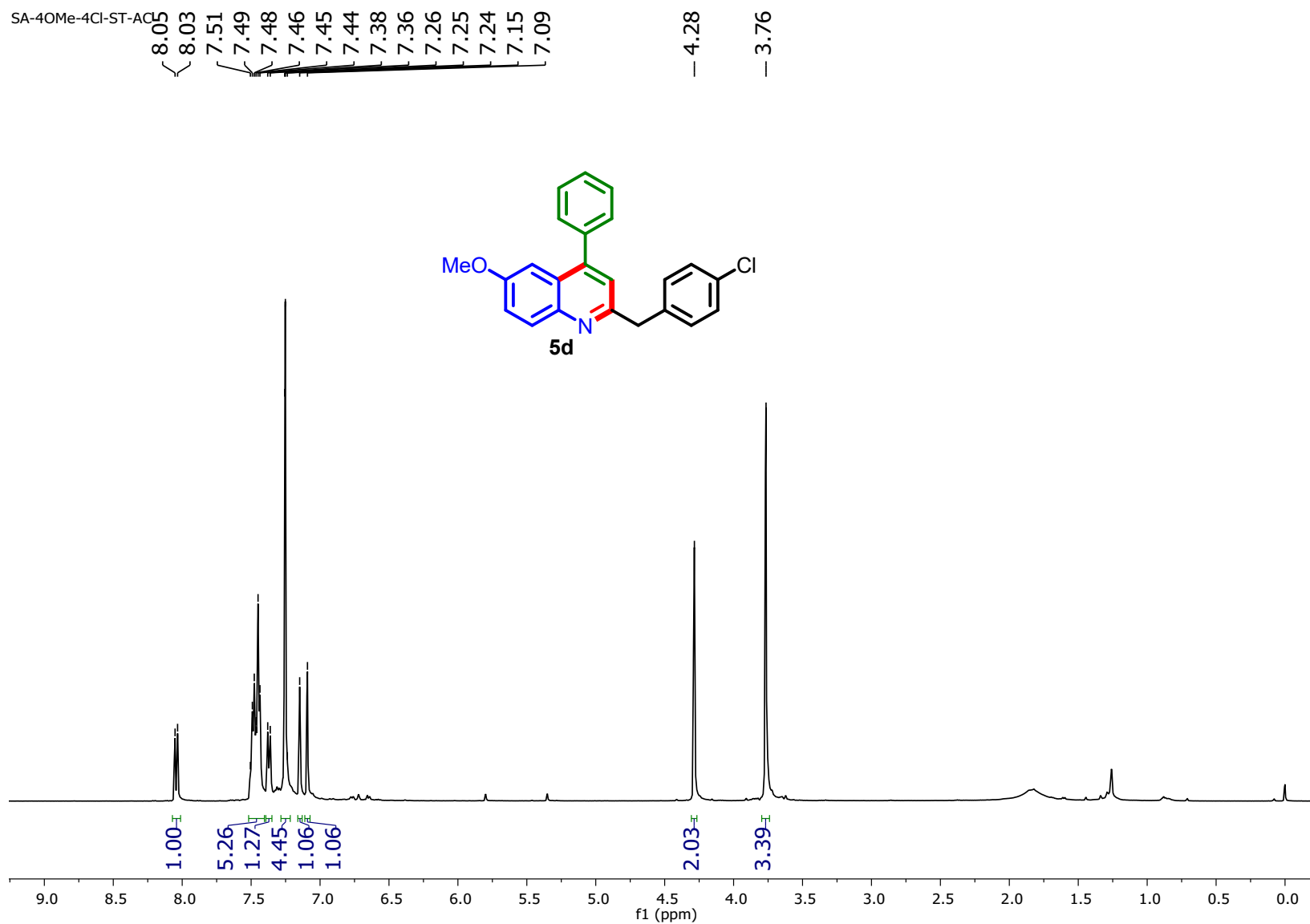


HRMS spectrum of compound: 5c

Sample Name	SAMPLE	Position	P1-D7	Instrument Name	Instrument 1
User Name		Inj Vol	5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Success	Data Filename	SA-4BR-ST.d
ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	26-07-2021 12:56:08 (UTC+05:30)



¹H NMR spectrum of compound: 5d



¹³C NMR spectrum of compound: 5d

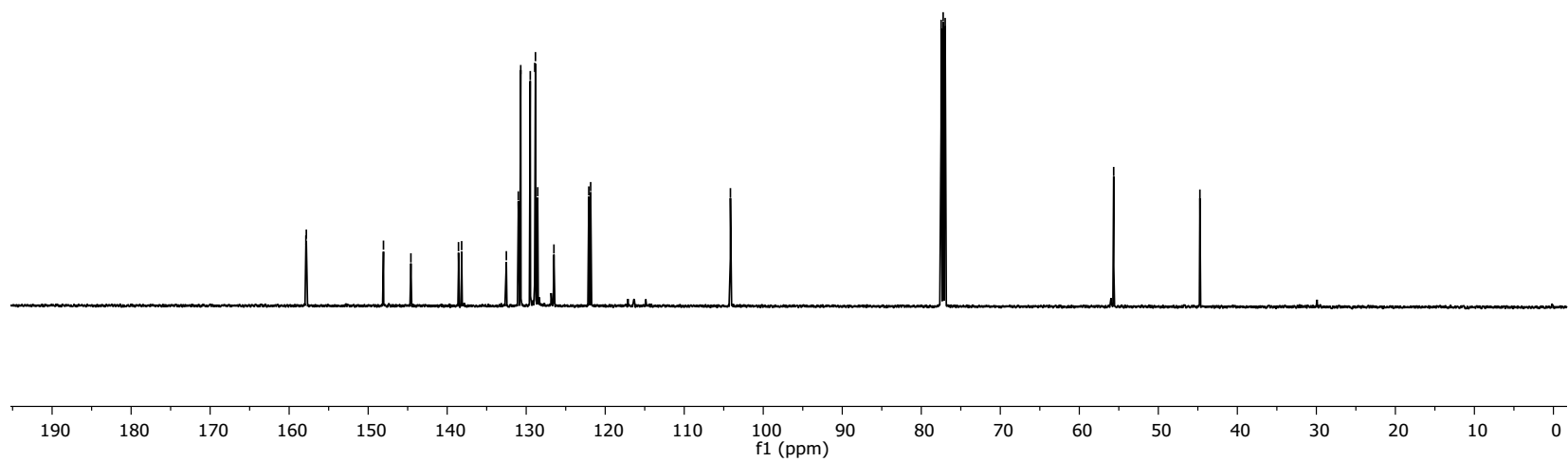
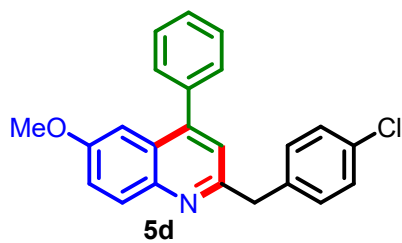
SA-4OMe-4Cl-ST-AC

157.88
157.83
148.06
144.59
138.57
138.17
132.51
131.00
130.69
129.49
128.92
128.83
128.54
126.49
122.08
121.84
— 104.15

77.48
77.23
76.98

— 55.65

— 44.74



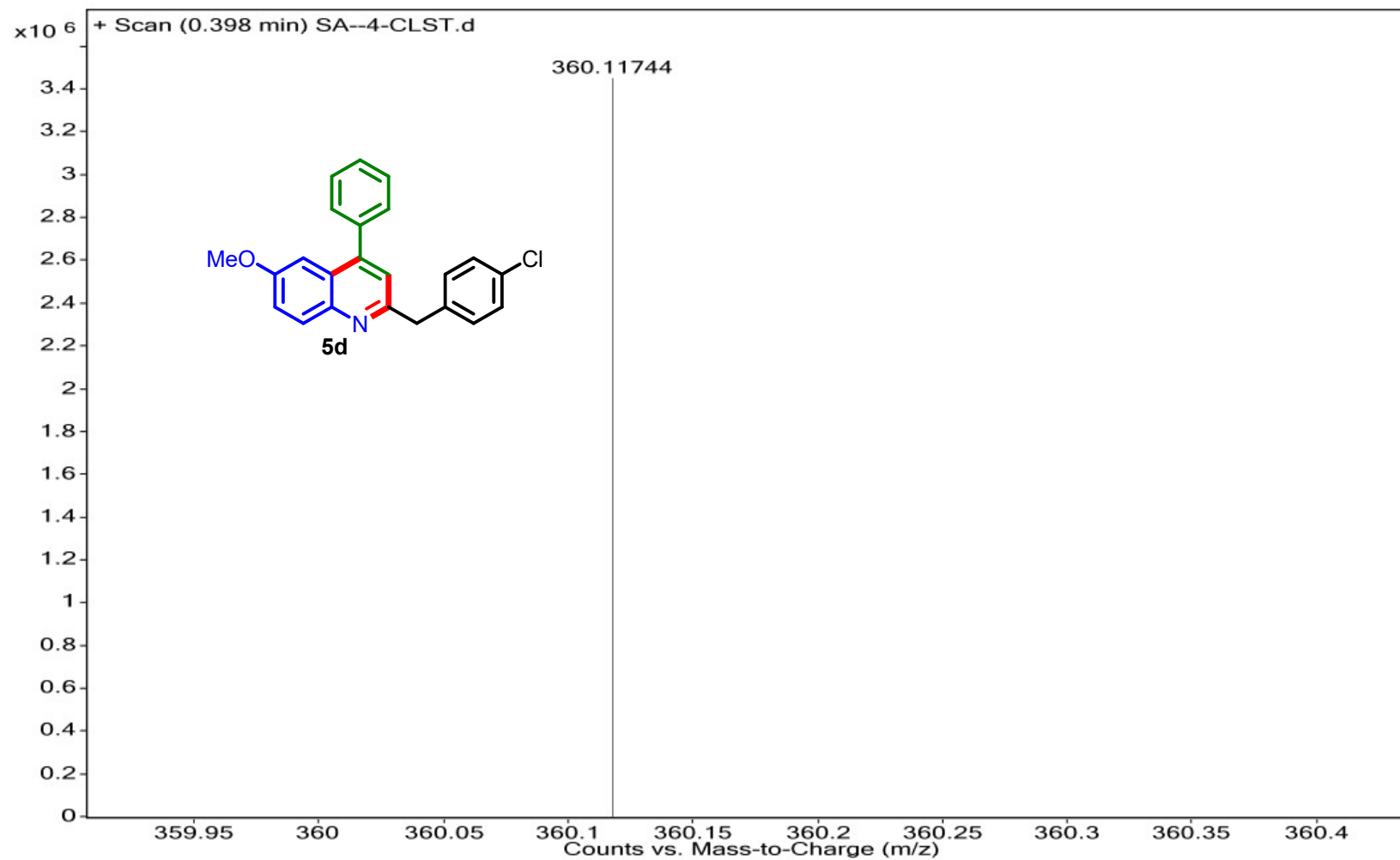
HRMS spectrum of compound: 5d

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

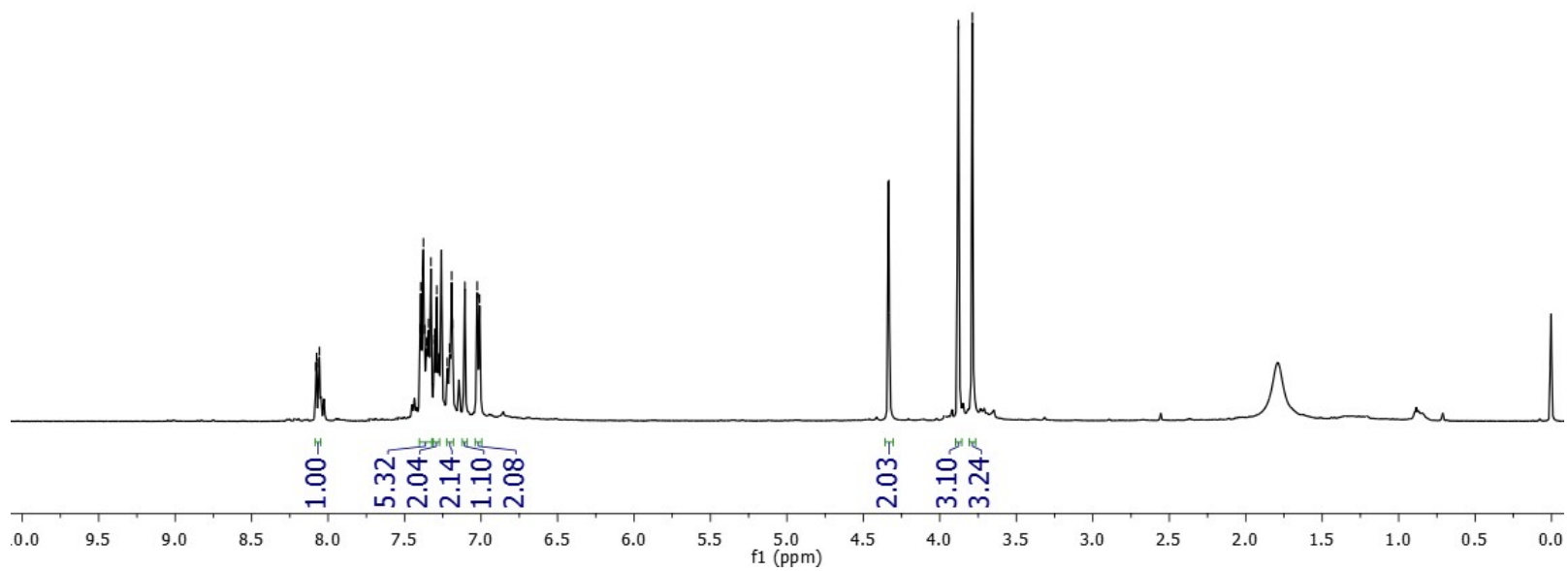
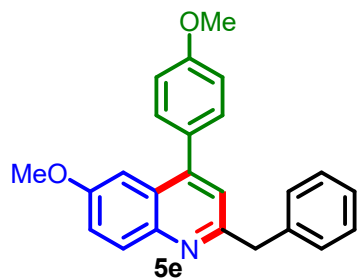
User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 5e

SA-4OMe-ST-4OMe

8.08
8.07
8.06
8.06
7.40
7.39
7.38
7.38
7.37
7.36
7.35
7.34
7.33
7.31
7.30
7.29
7.22
7.21
7.19
7.19
7.11
7.02
7.01
4.33
3.88
3.79

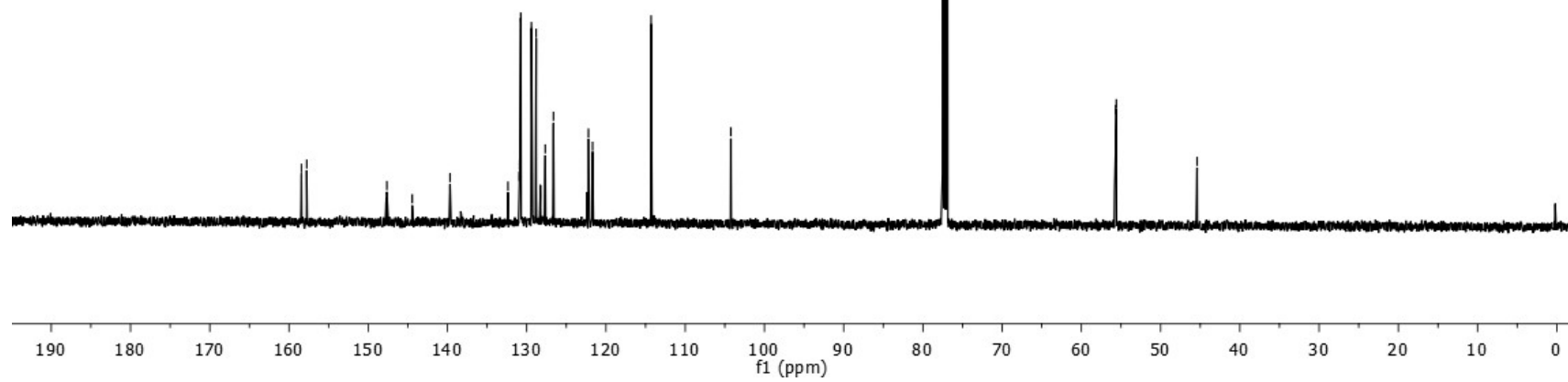
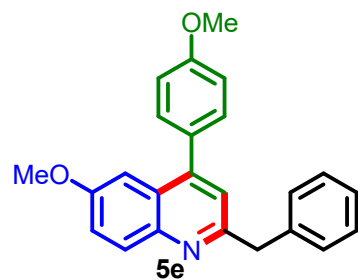


¹³C NMR spectrum of compound: 5e

SA-4OMe-ST-4OMeAC

158.42
157.76
147.65
144.45
139.68
132.36
130.94
130.89
130.75
129.41
128.81
127.66
126.62
122.20
121.69
114.30
-104.23

77.48
77.23
76.98
55.68
55.59
-45.40



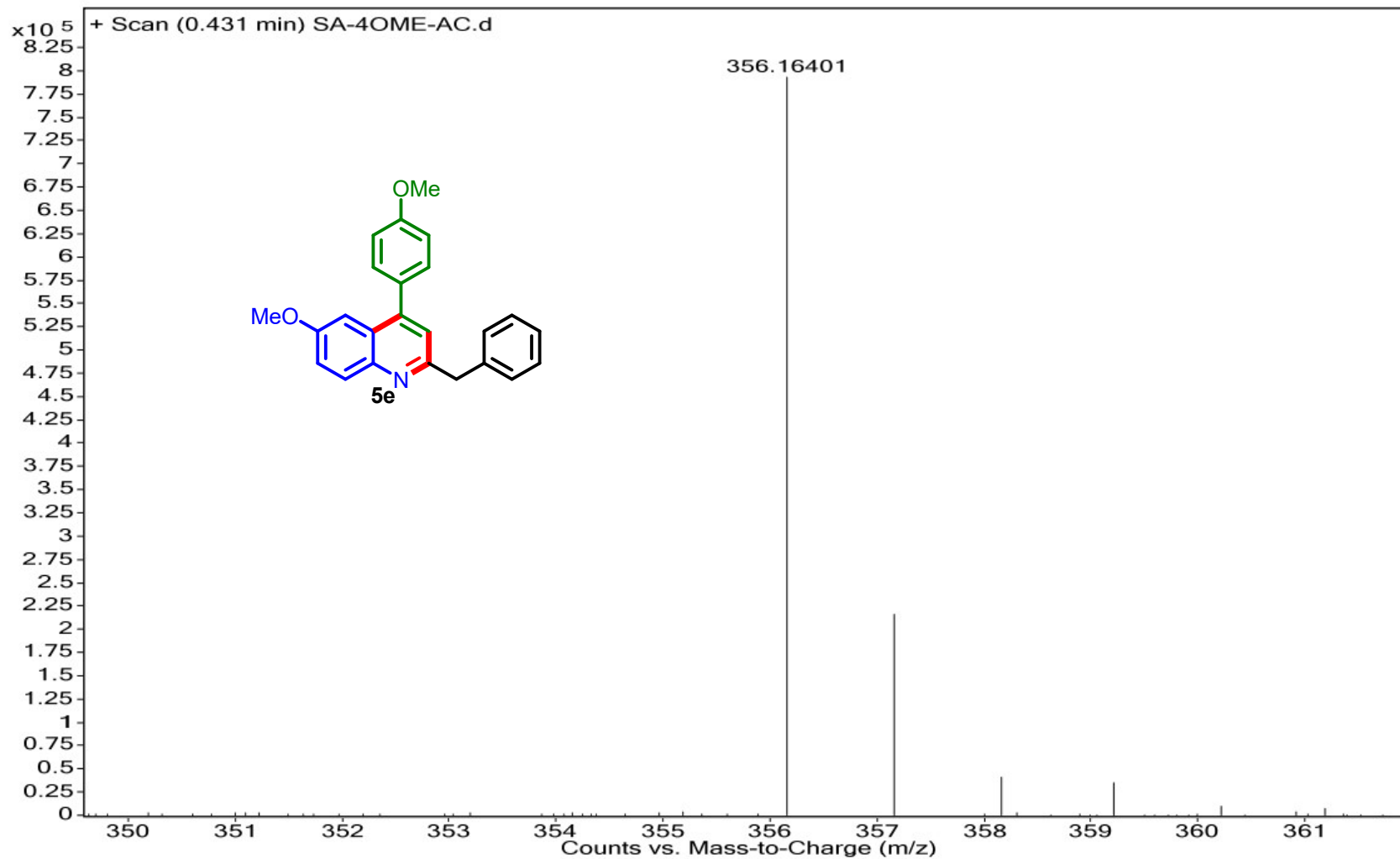
HRMS spectrum of compound: 5e

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

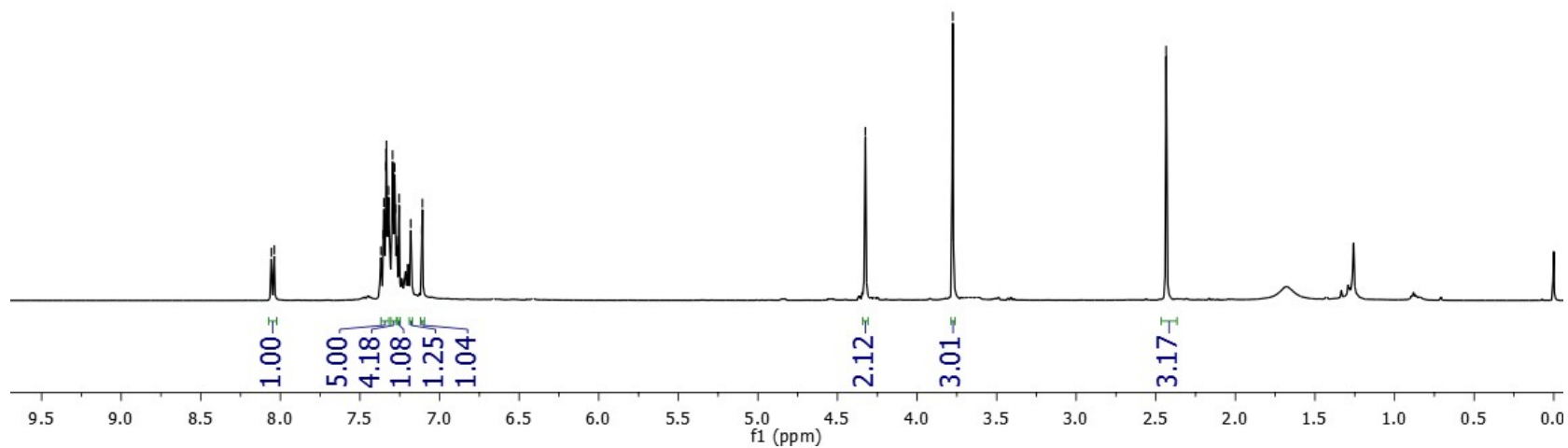
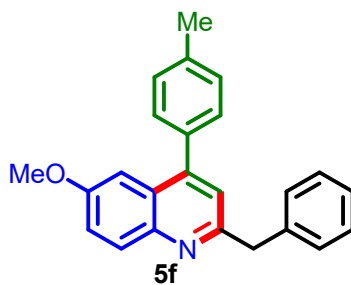
User Name
IRM Calibration Status
Acquired Time



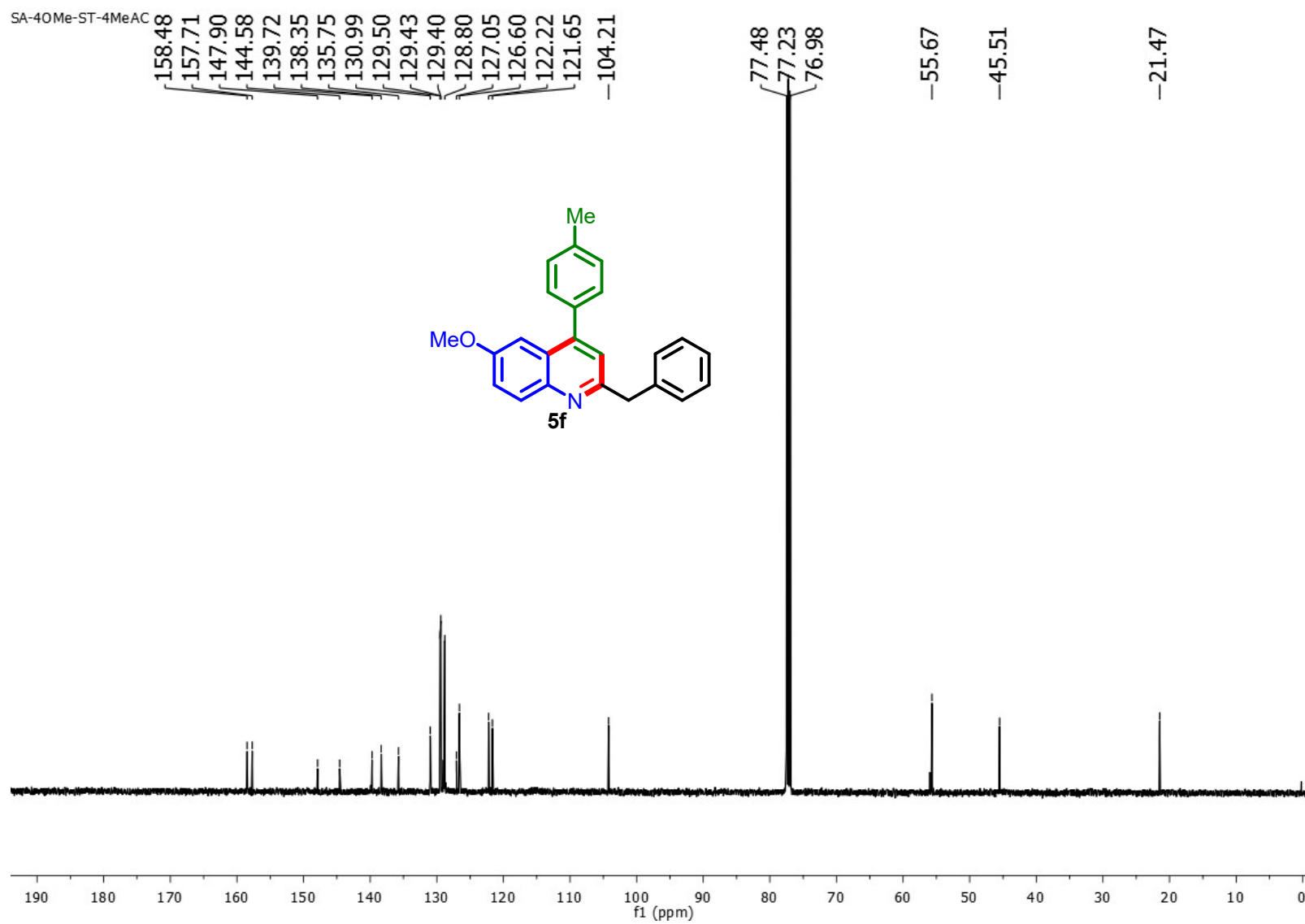
¹H NMR spectrum of compound: 5f

SA-4OMe-ST-4MeAC-1H

8.06
8.04
7.37
7.35
7.35
7.35
7.34
7.33
7.32
7.30
7.28
7.28
7.27
7.27
7.25
7.18
7.11
7.11
-4.32
-3.78
-2.43



¹³C NMR spectrum of compound: 5f



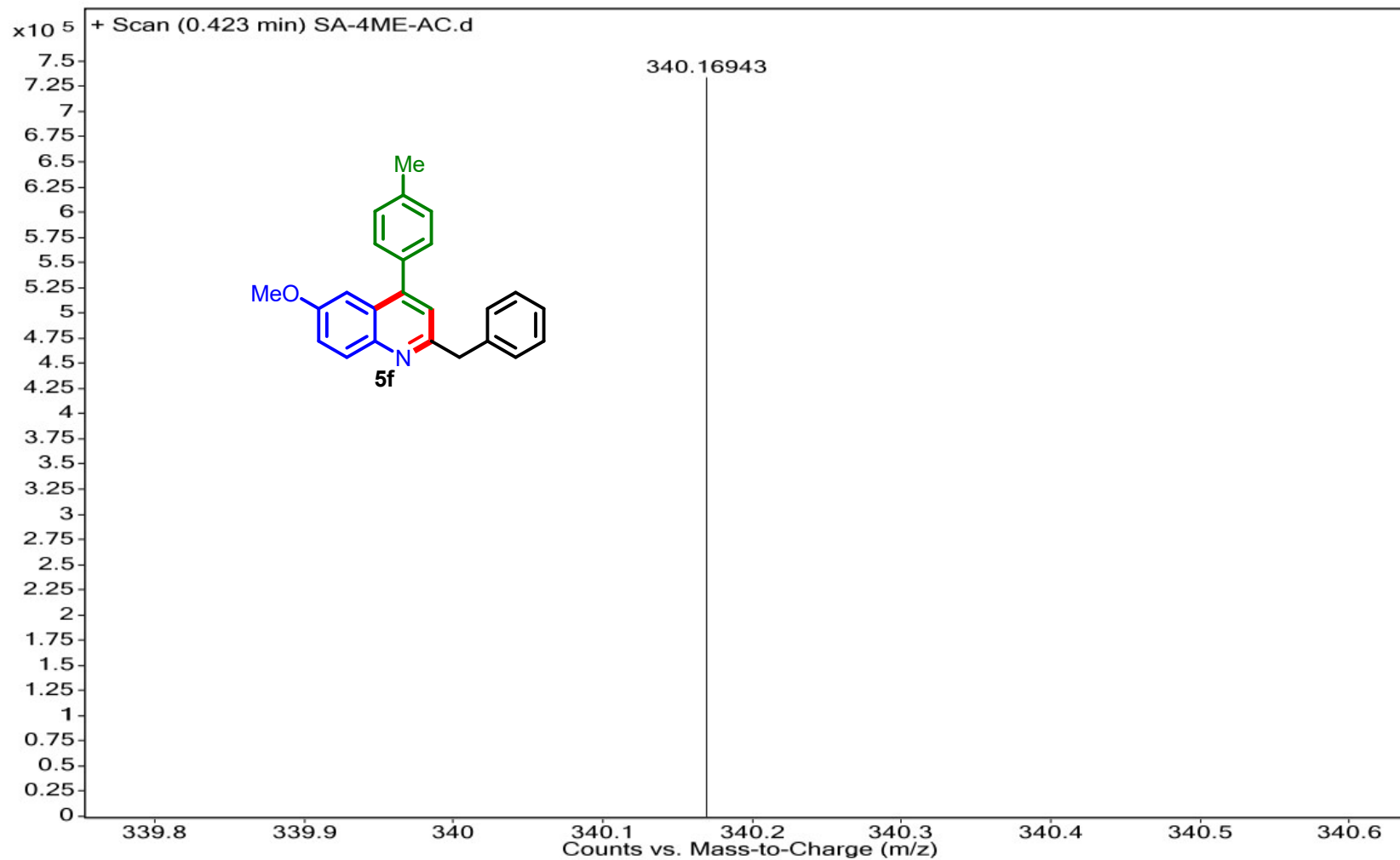
HRMS spectrum of compound: 5f

Sample Name
Inj Vol
Data Filename

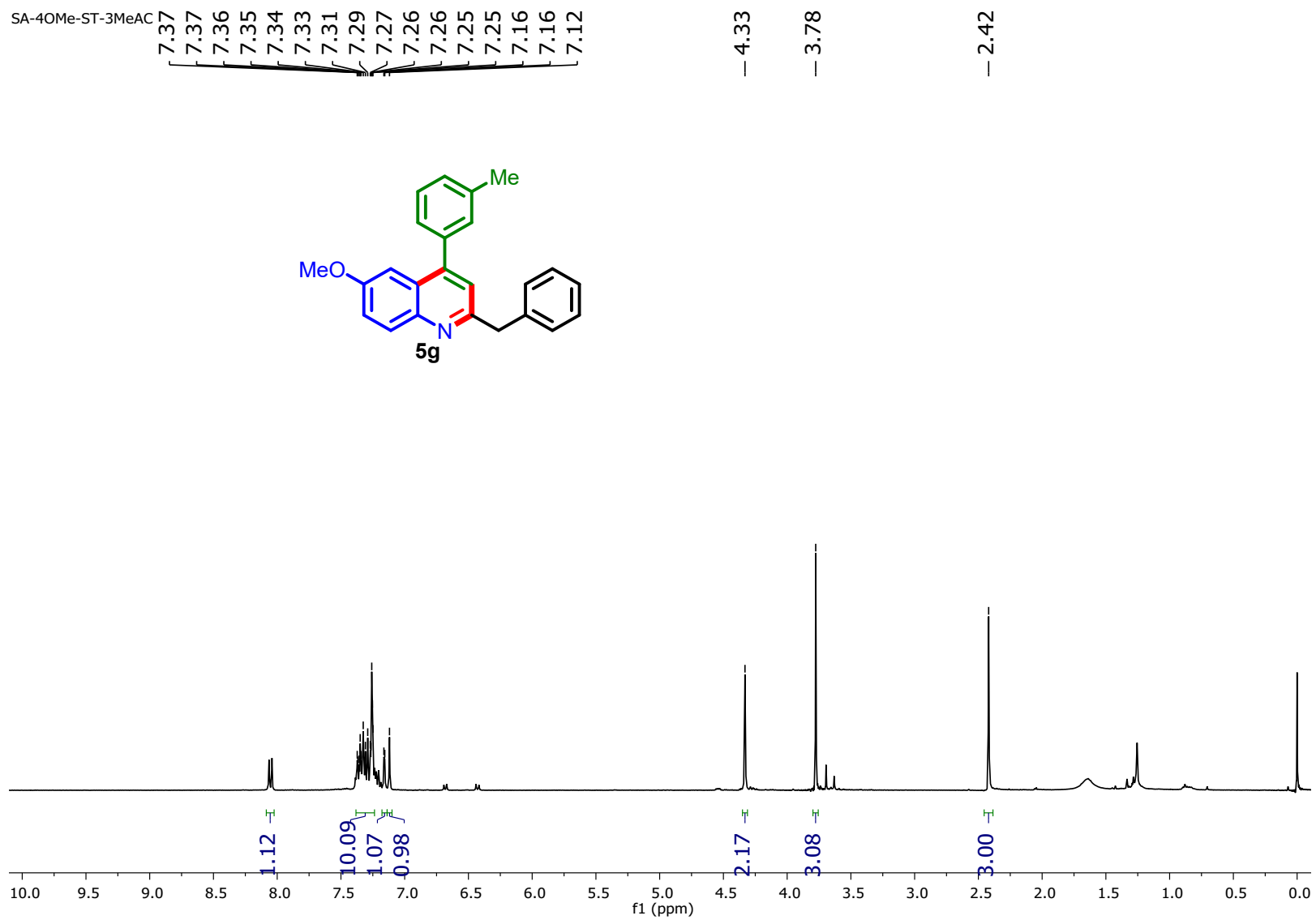
Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

User Name
IRM Calibration Status
Acquired Time

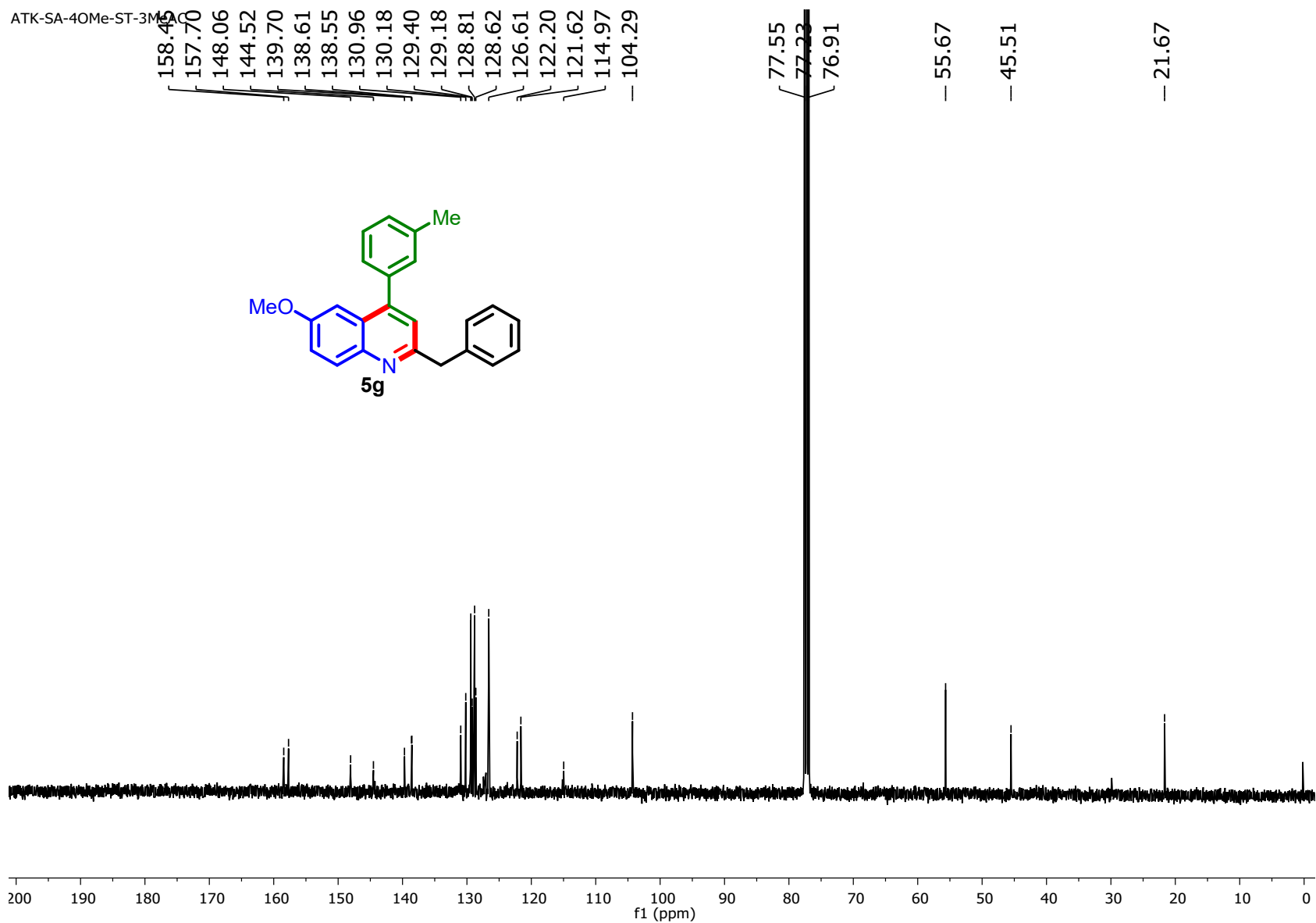


¹H NMR spectrum of compound: 5g



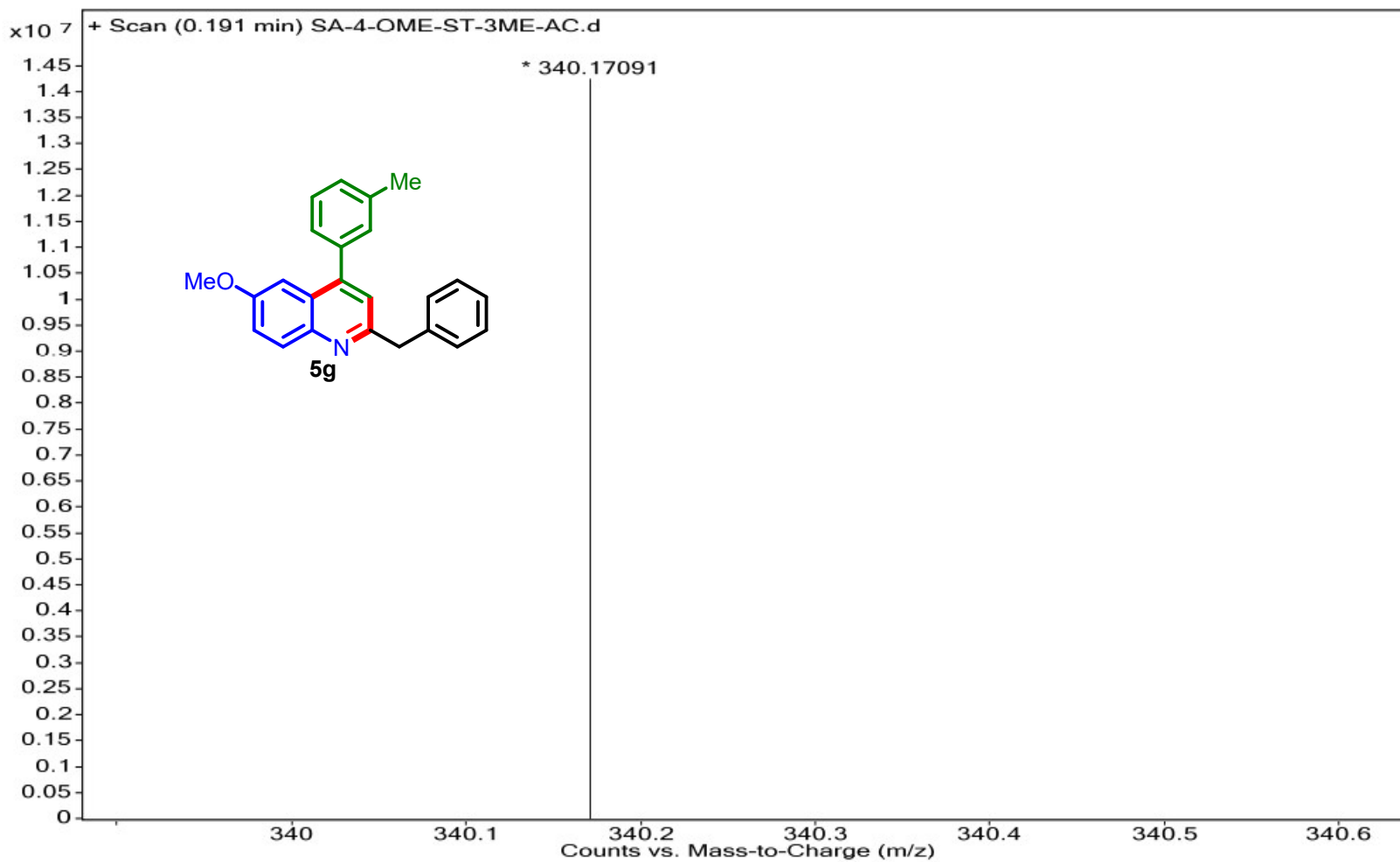
¹³C NMR spectrum of compound: 5g

ATK-SA-4OMe-ST-3M

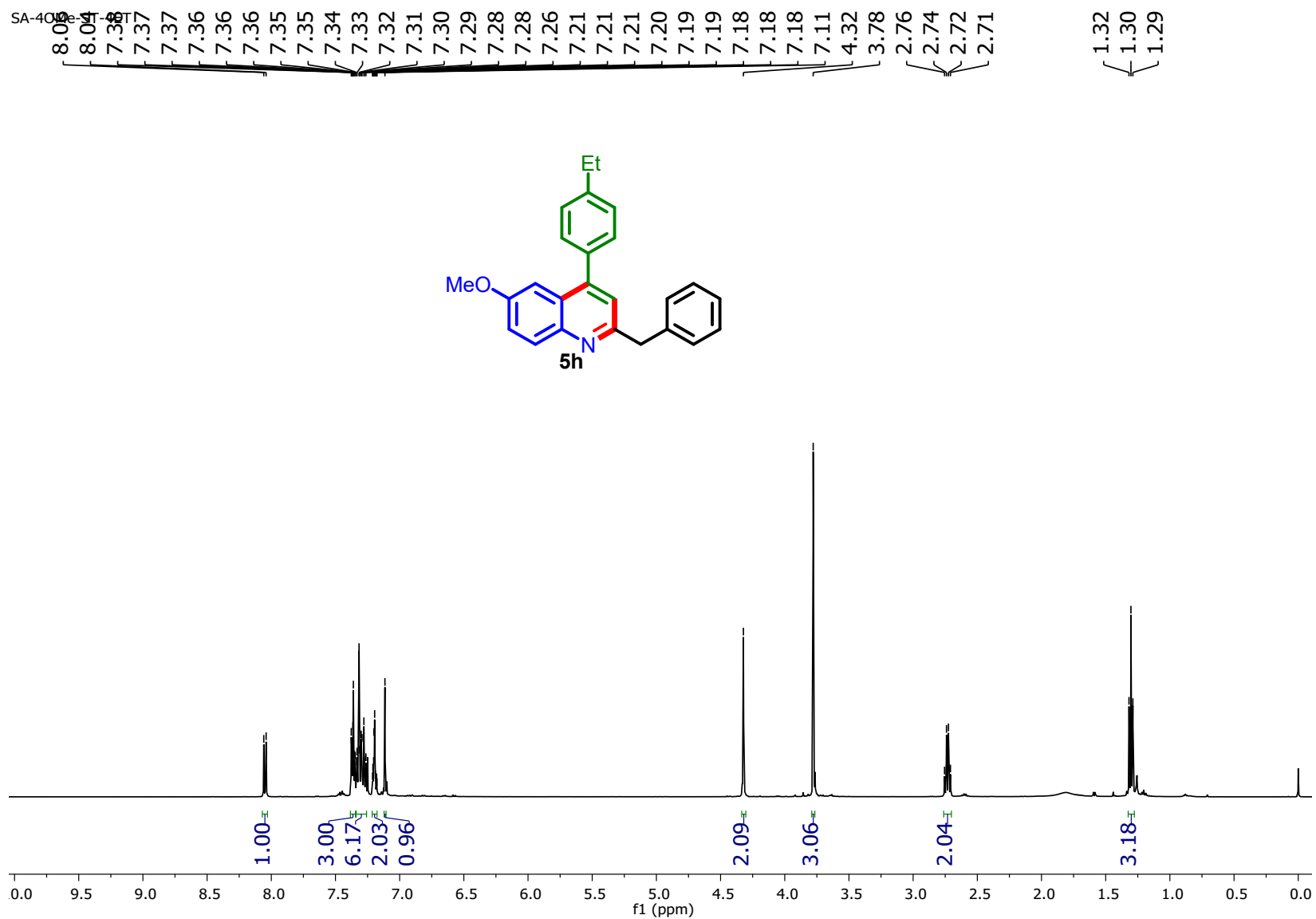


HRMS spectrum of compound: 5g

Sample Name	WASH	Position	P1-B2	Instrument Name	Instrument 1	User Name	
Inj Vol	20	InjPosition		SampleType	Sample	IRM Calibration Status	Success
Data Filename	SA-4-OME-ST-3ME-AC.d	ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	3/1/2021 12:58:28 PM



¹H NMR spectrum of compound: 5h



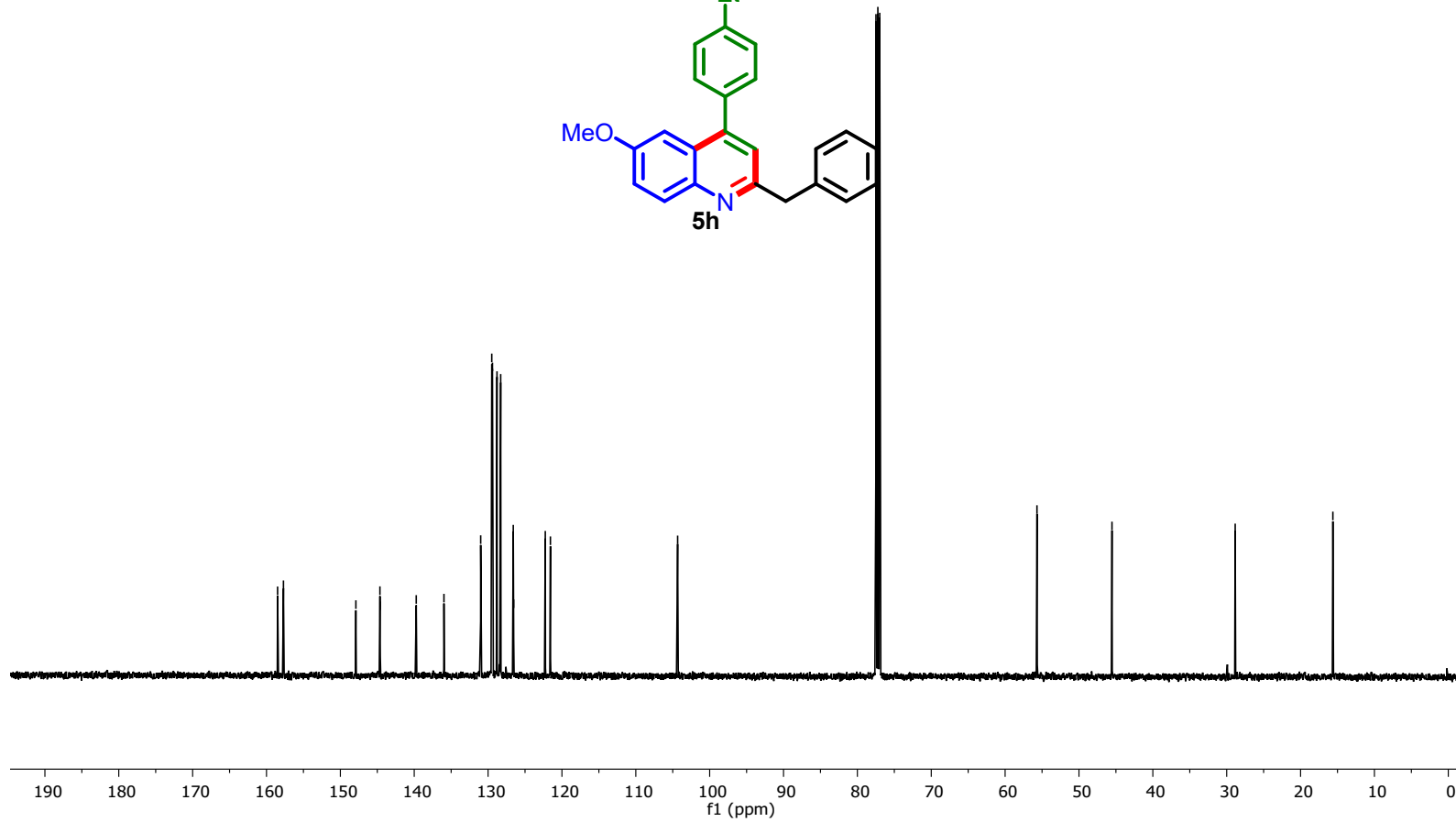
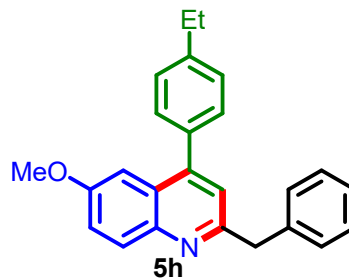
¹³C NMR spectrum of compound: 5h

SA-4OMe-ST-4ET

158.50
157.70
147.90
144.64
144.60
139.73
135.97
131.00
129.50
129.41
128.79
128.29
126.59
126.54
122.26
121.56
— 104.34

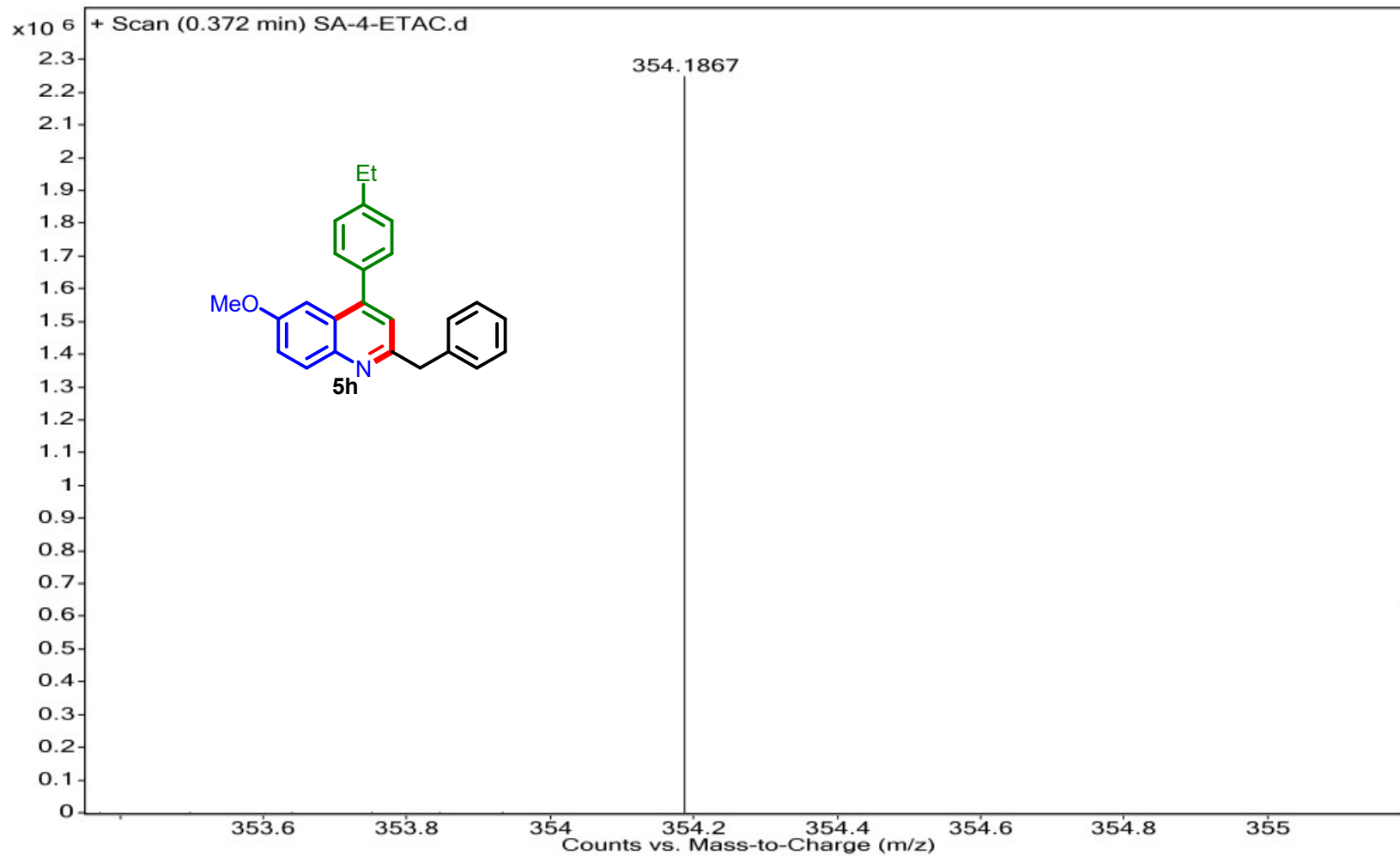
77.48
77.23
76.98

— 55.69
— 45.53
— 28.85
— 15.63



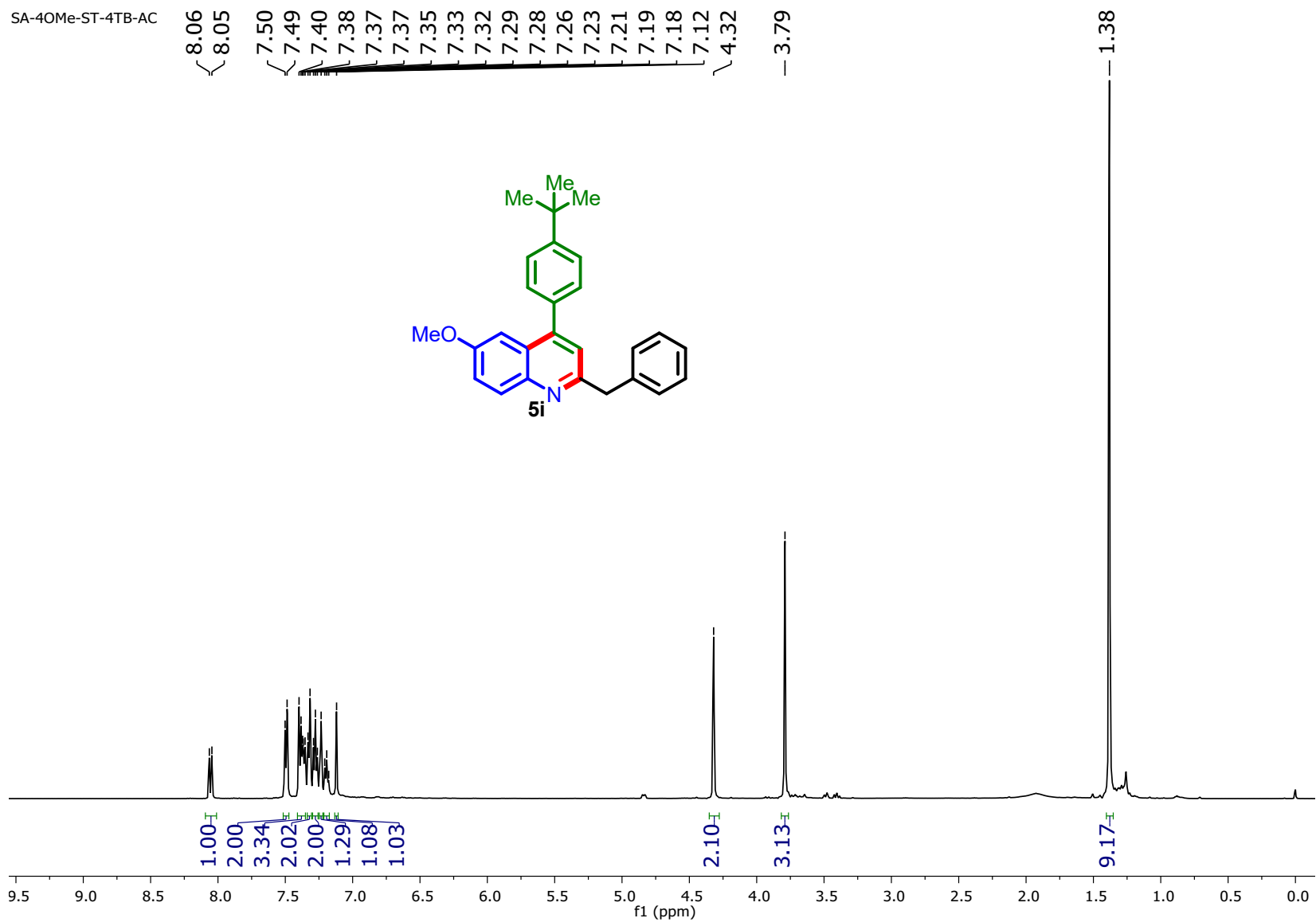
HRMS spectrum of compound: 5h

Sample Name	SA-4-ETAC	Position	P1-B8	Instrument Name	Instrument 1	User Name	
Inj Vol	5	InjPosition		SampleType	Sample	IRM Calibration Status	Success
Data Filename	SA-4-ETAC.d	ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	7/28/2021 2:21:10 PM



¹H NMR spectrum of compound: 5i

SA-4OMe-ST-4TB-AC



¹³C NMR spectrum of compound: 5i

SA-4OMe-ST-4TB-AC

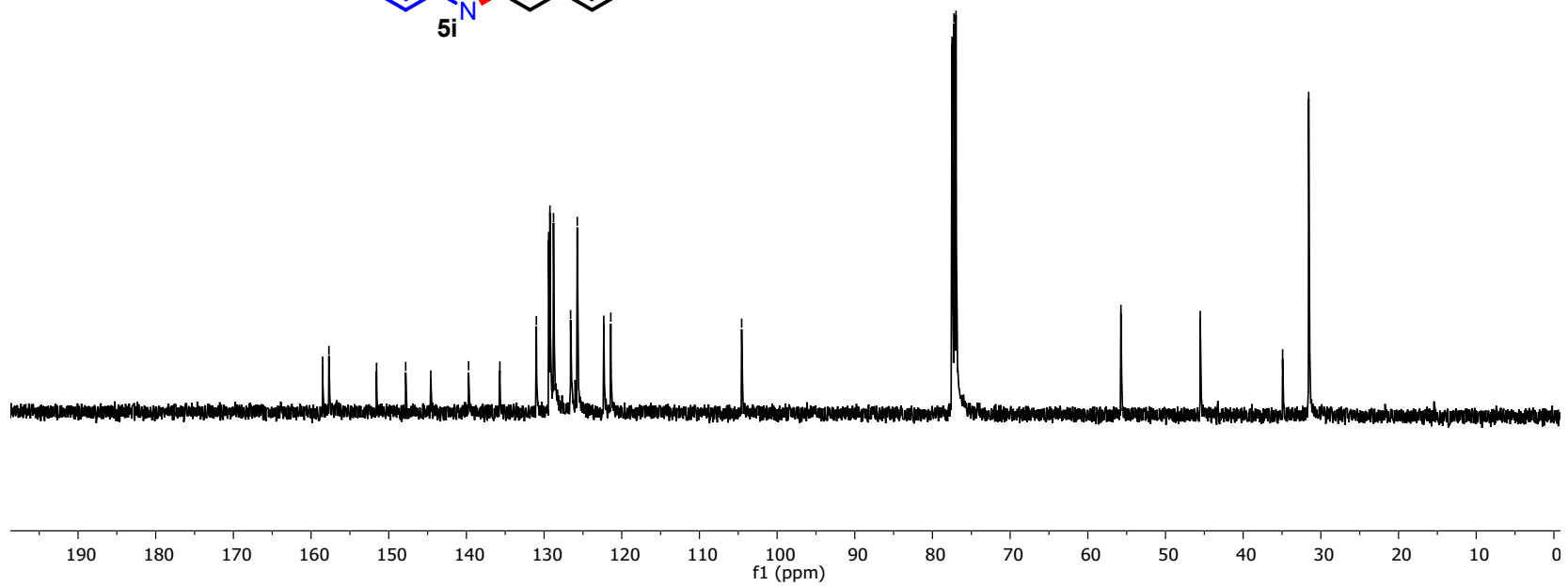
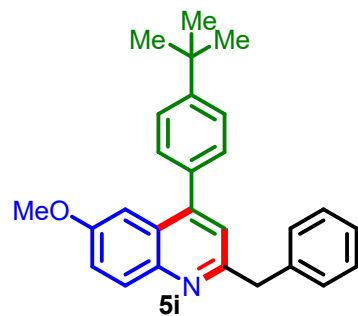
158.51
157.70
151.57
147.82
144.59
139.72
135.70
131.00
129.41
129.25
128.79
126.59
126.51
125.73
122.31
121.42
— 104.56

77.48
77.23
76.97

— 55.74

— 45.53

~ 34.92
~ 31.57



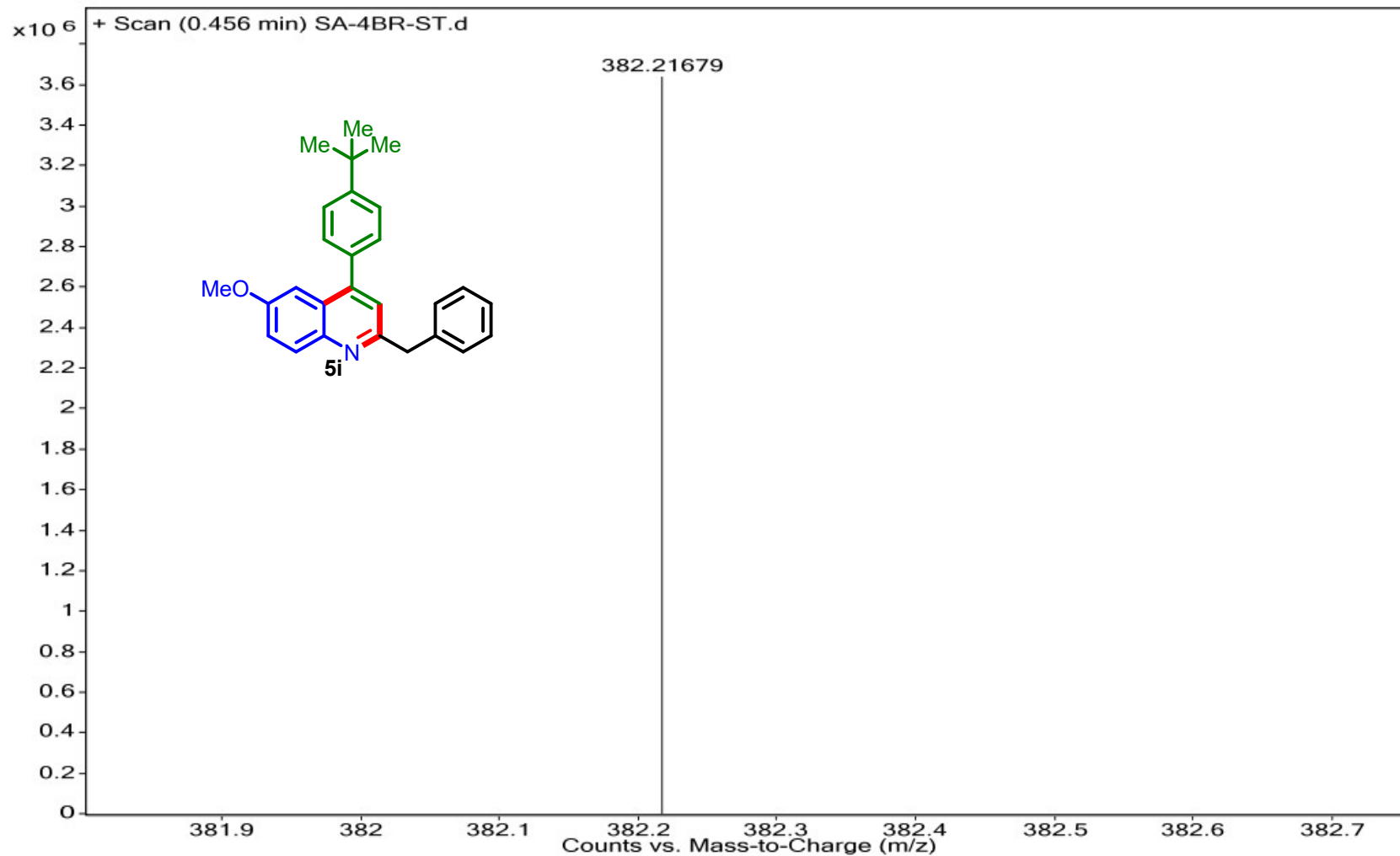
HRMS spectrum of compound: 5i

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

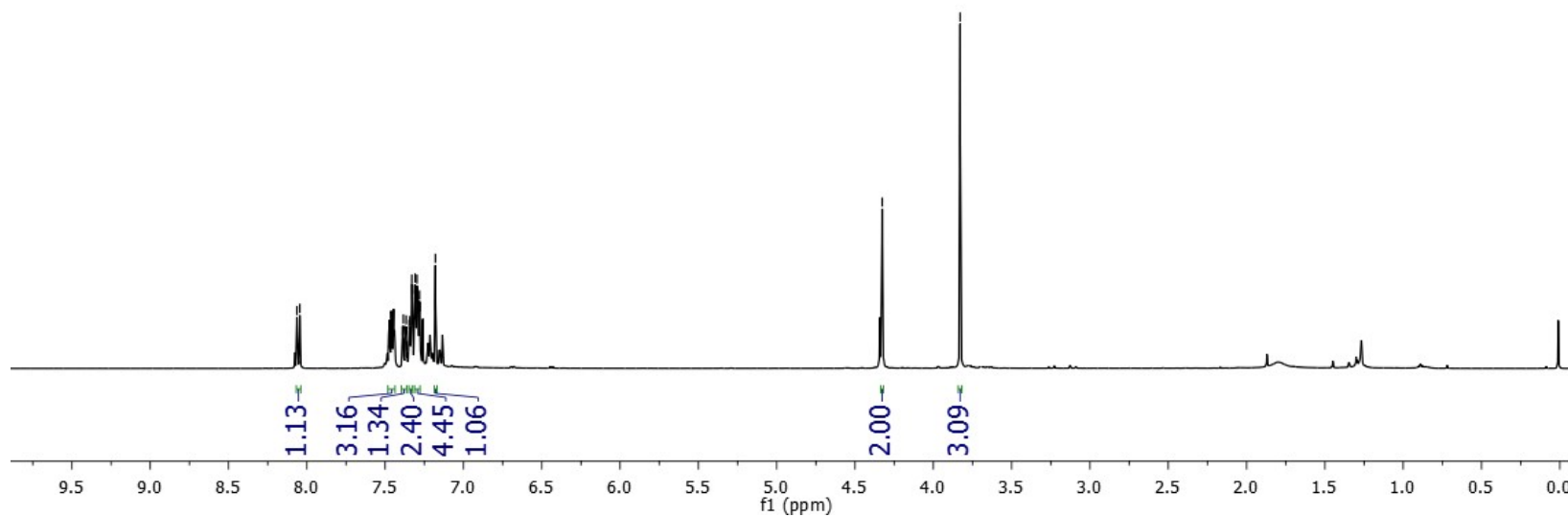
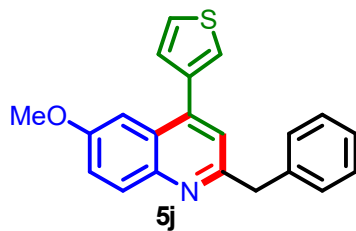
User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 5j

SA-40Me-ST-3TF-AC

8.06
8.05
7.39
7.38
7.38
7.37
7.37
7.36
7.35
7.34
7.33
7.33
7.31
7.31
7.30
7.30
7.29
7.29
7.29
7.28
7.28
7.18
4.33
3.83



¹³C NMR spectrum of compound: 5j

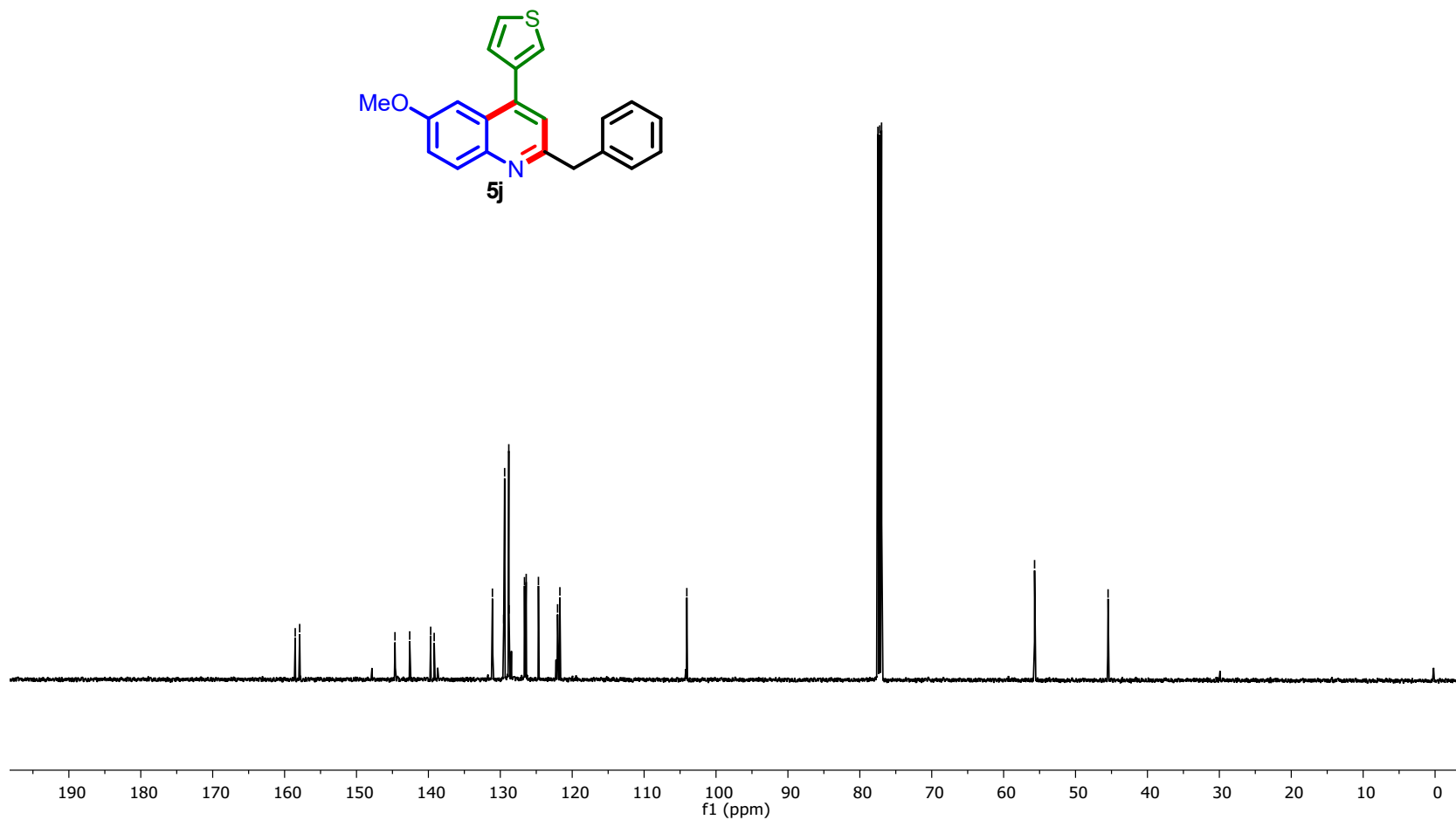
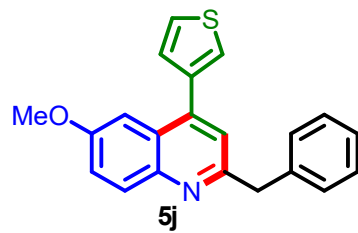
SA-4OMe-ST-3TF-AC

158.52
157.90
144.65
142.60
139.68
139.19
131.09
129.53
129.40
128.82
128.78
126.64
126.40
124.70
122.03
121.71
— 104.06

77.48
77.23
76.98

— 55.70

— 45.47



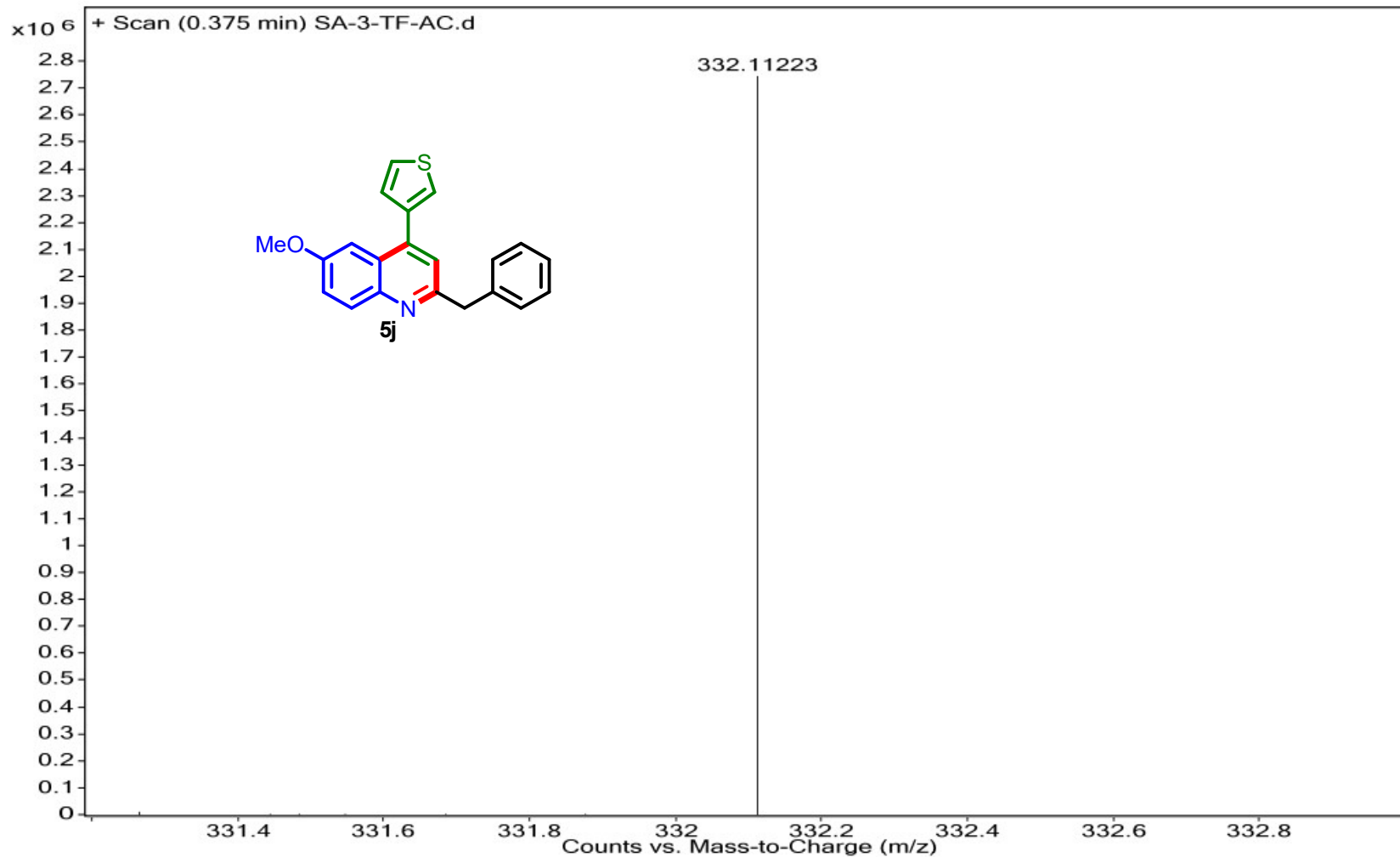
HRMS spectrum of compound: 5j

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

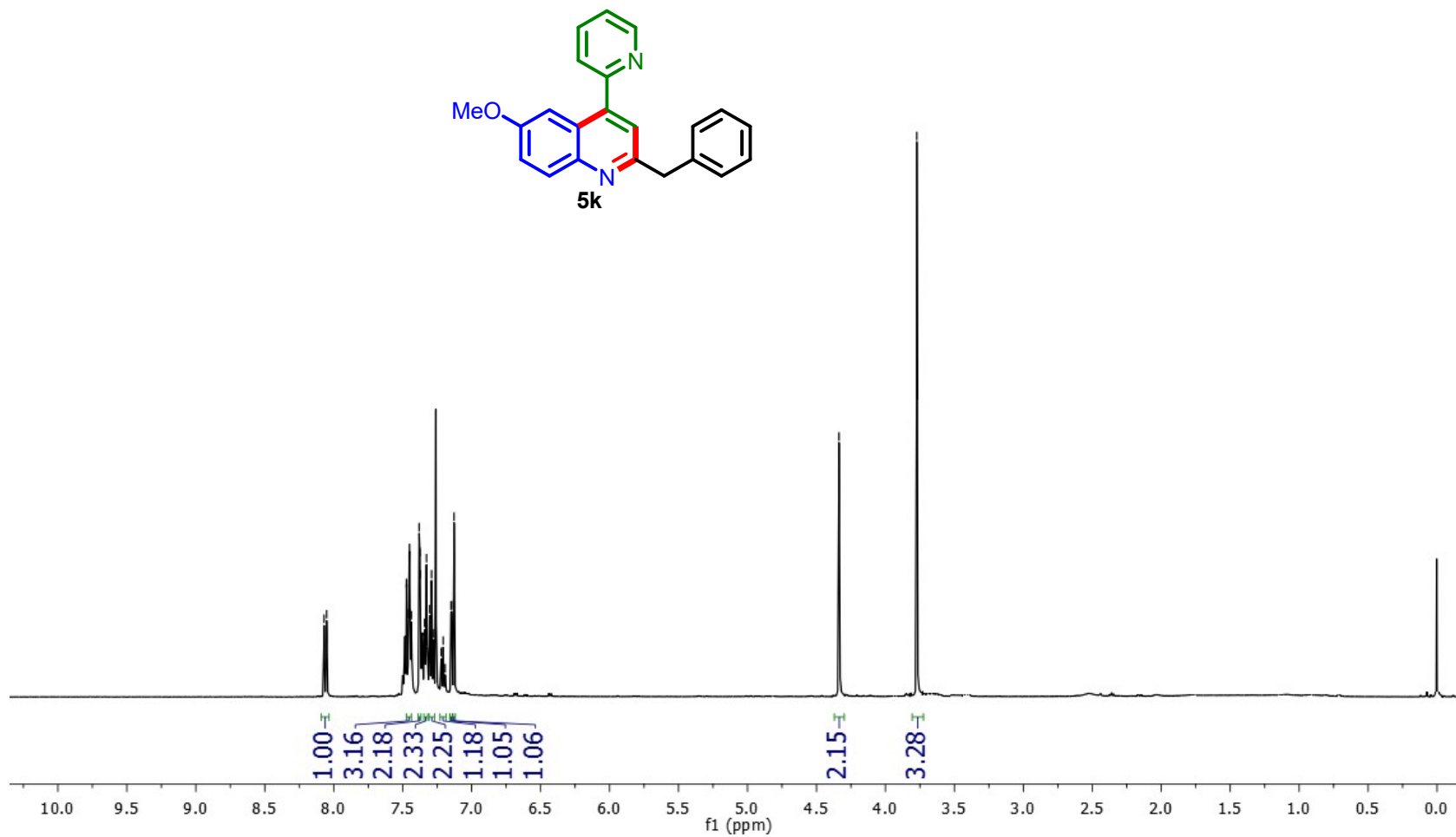
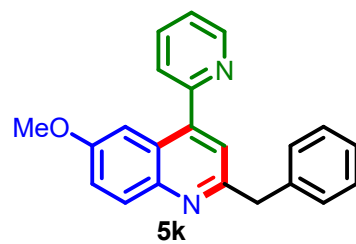
User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 5k

SA-4OMe-ST-2PyAC

8.07
8.05
7.47
7.47
7.46
7.45
7.45
7.45
7.44
7.38
7.37
7.37
7.34
7.33
7.31
7.29
7.27
7.22
7.21
7.19
7.15
7.14
7.13
4.34
3.77



¹³C NMR spectrum of compound: 5k

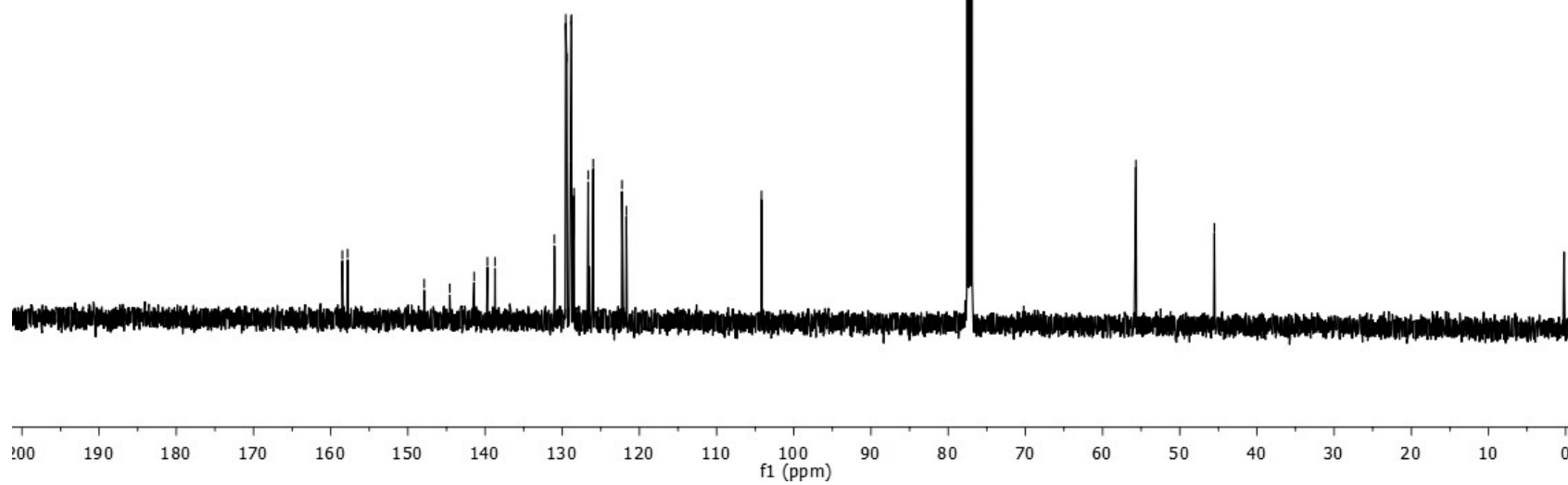
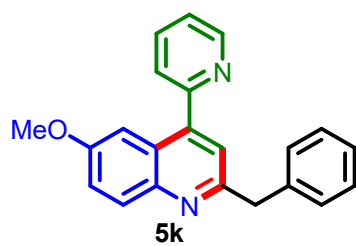
SA-4OMe-ST-2Py

158.49
157.80
147.89
144.57
141.40
139.69
138.71
131.03
129.54
129.41
128.82
128.80
128.47
126.63
125.98
122.26
121.69
104.19

77.48
77.23
76.98

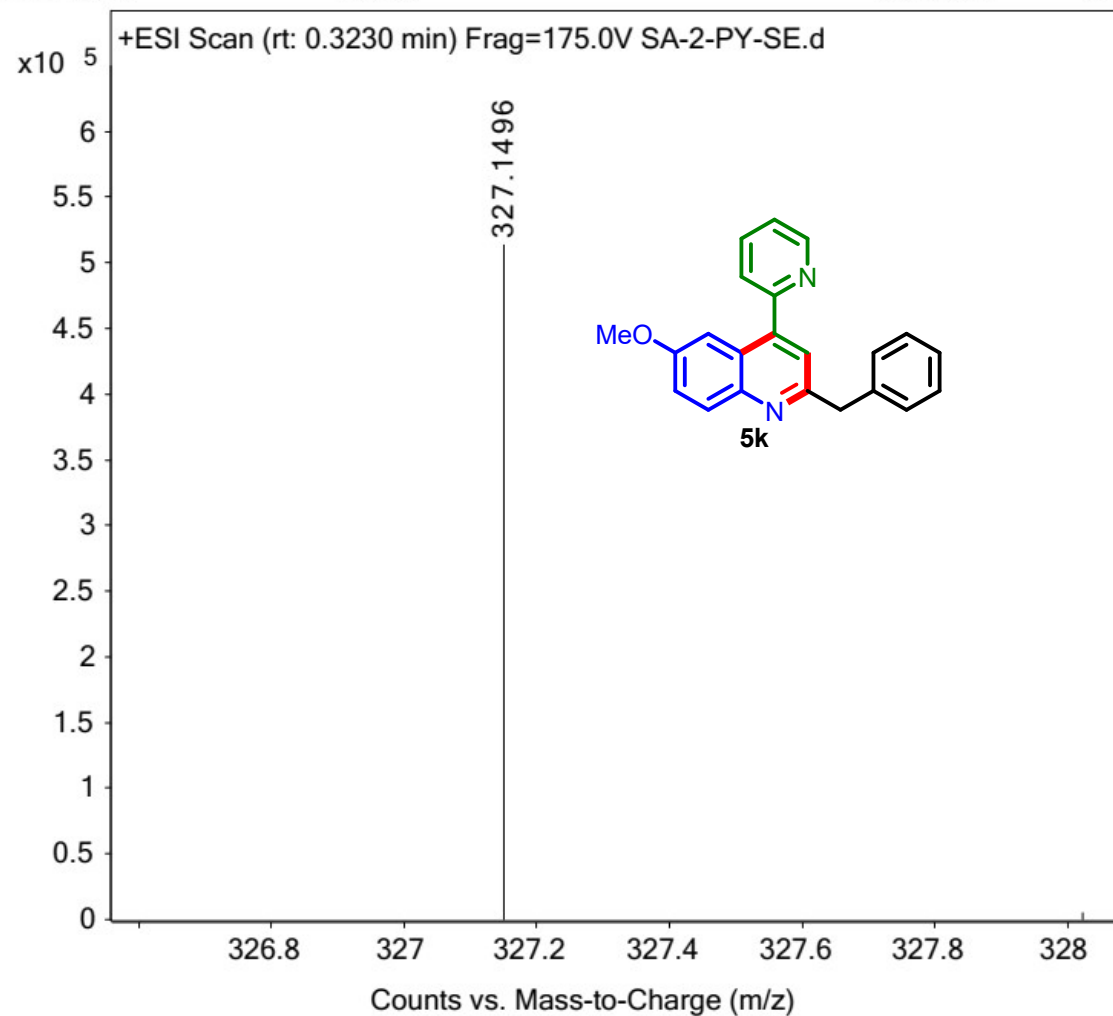
55.67

45.51

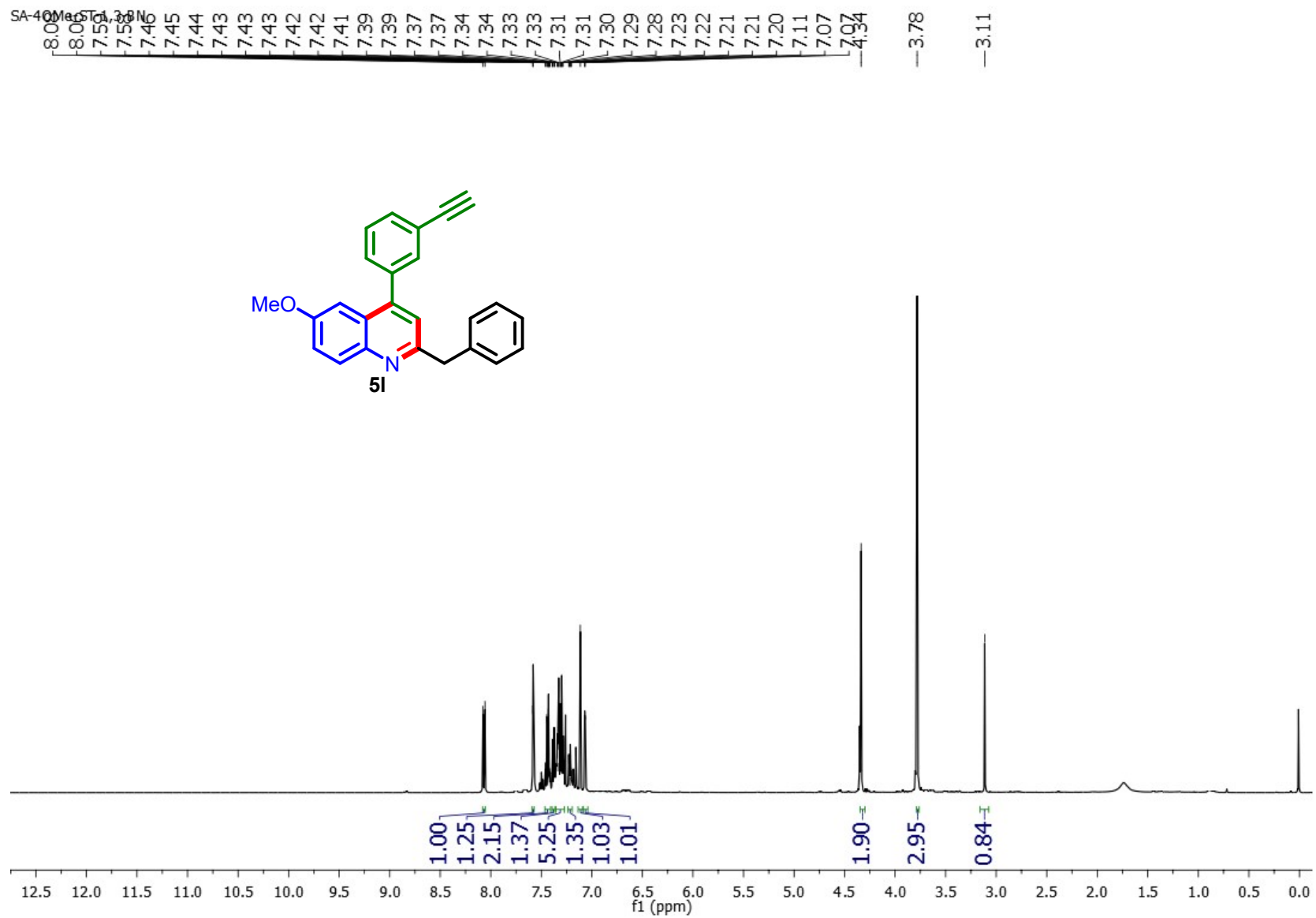


HRMS spectrum of compound: 5k

Sample Name	SAMPLE	Position	P1-F4	Instrument Name	Instrument 1
User Name		Inj Vol	20	InjPosition	
Sample Type	Sample	IRM Calibration Status	Success	Data Filename	SA-2-PY-SE.d
ACQ Method	ESI ALS 100-500.m	Comment		Acquired Time	29-07-2021 15:59:37 (UTC+05:30)



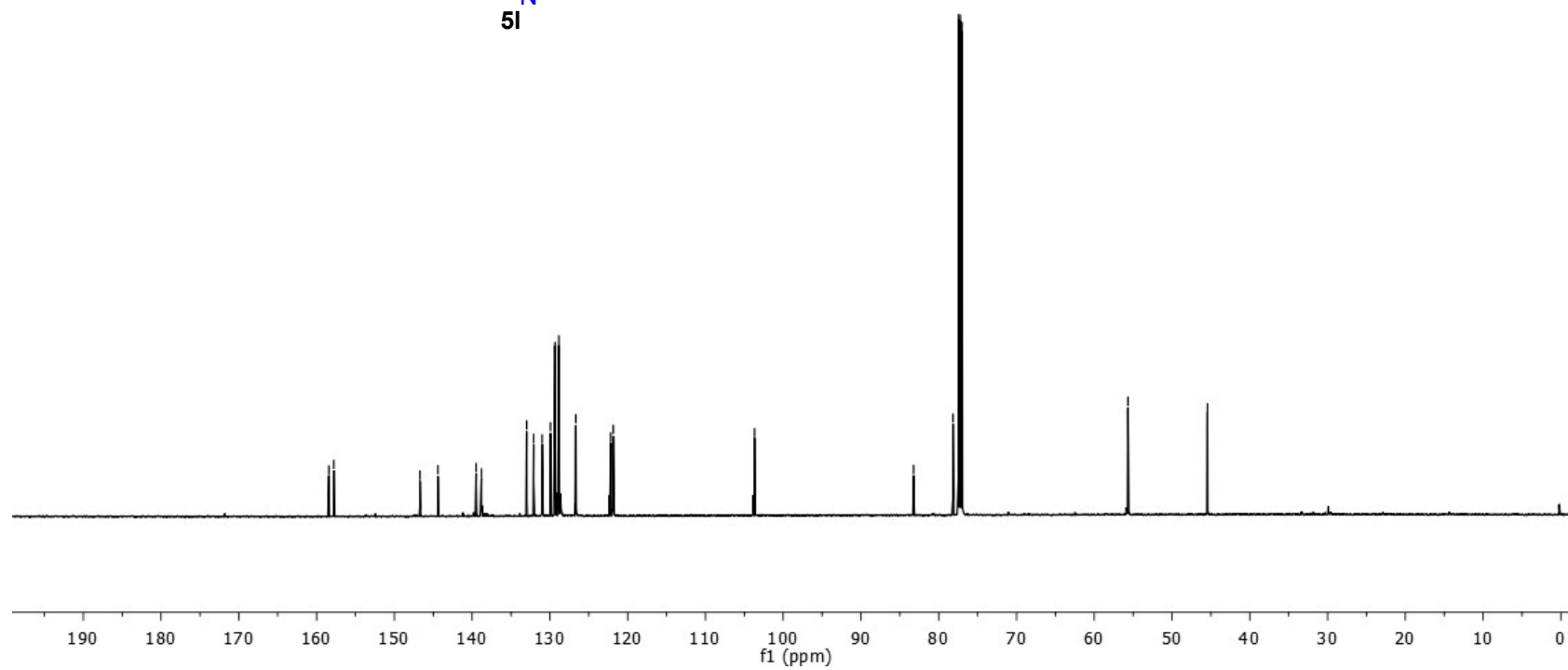
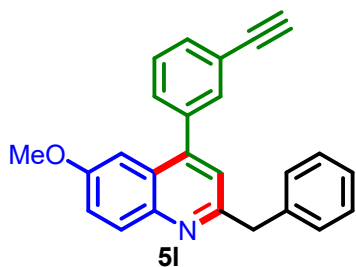
¹H NMR spectrum of compound: 5I



¹³C NMR spectrum of compound: 5l

SA-4OMe-ST-1,3-BN

158.42
157.79
146.71
144.40
139.50
138.80
132.98
132.10
131.00
129.92
129.34
128.84
128.81
126.67
122.18
121.86
-103.69
83.23
78.17
77.44
77.23
77.02
-55.67
-45.44



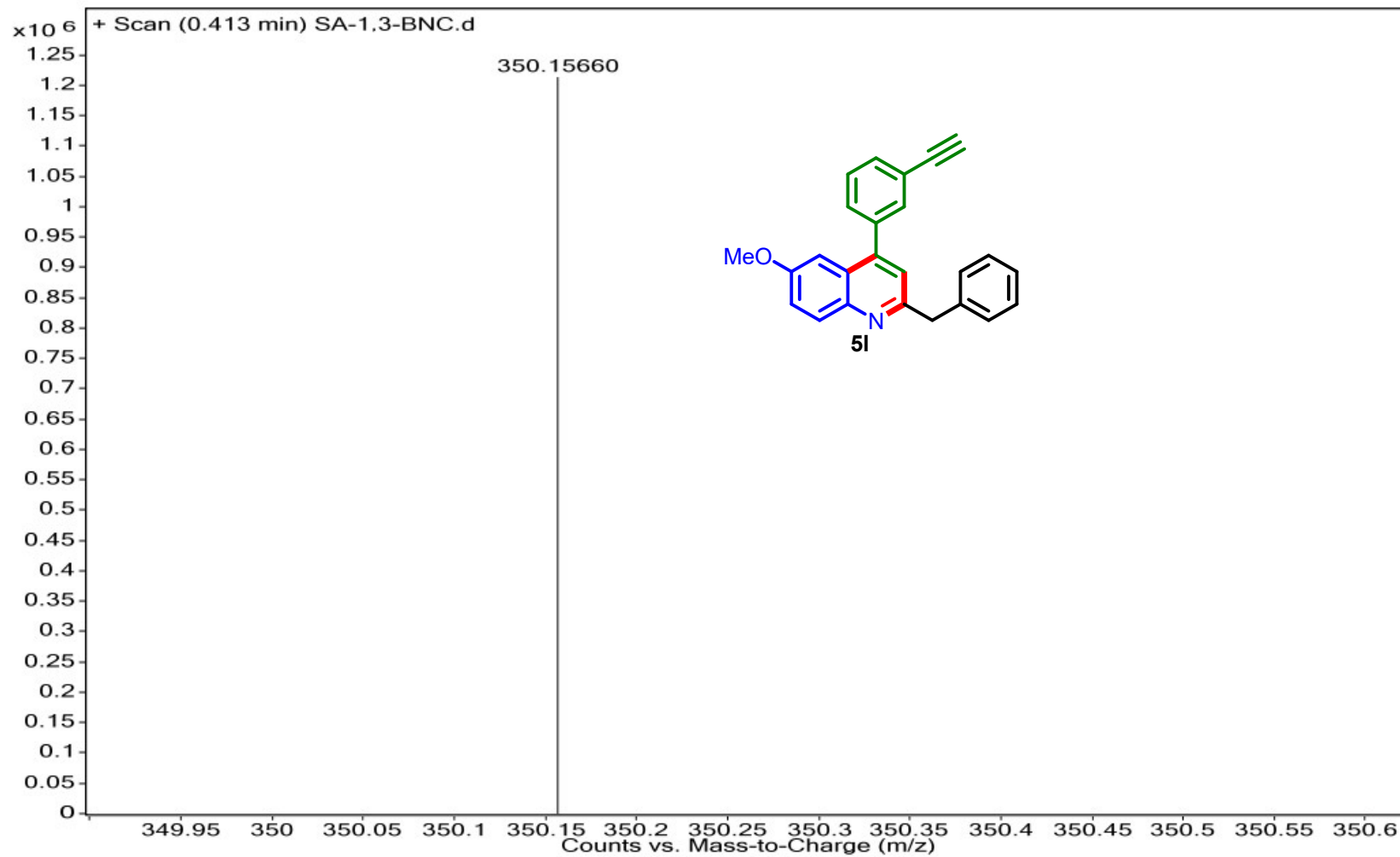
HRMS spectrum of compound: 5l

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

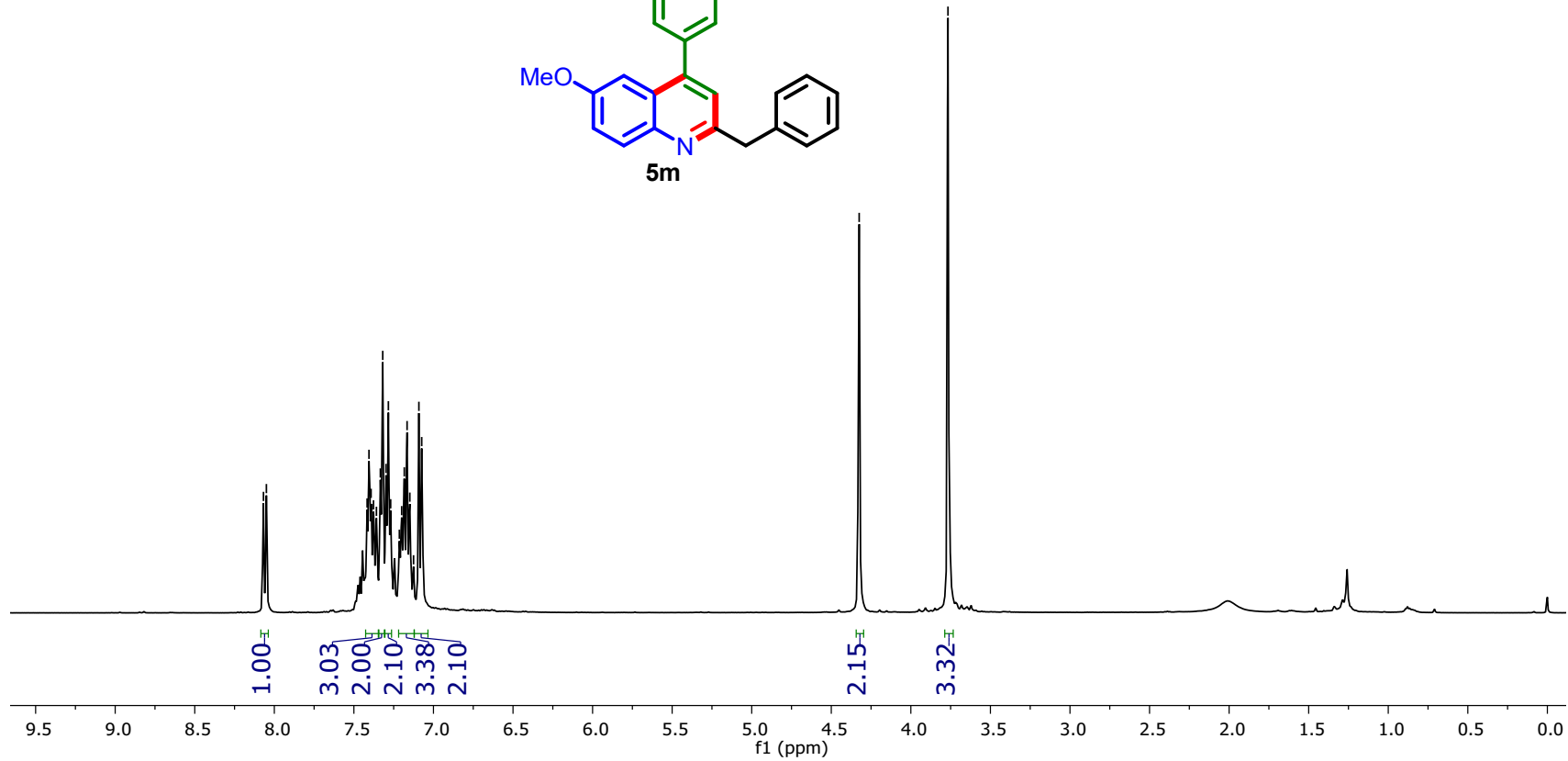
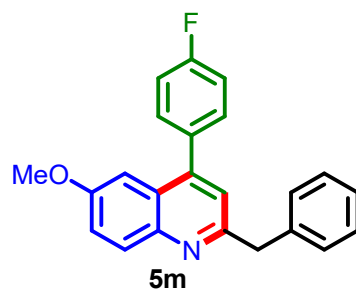
User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 5m

SA-4OMe-ST-4FAC

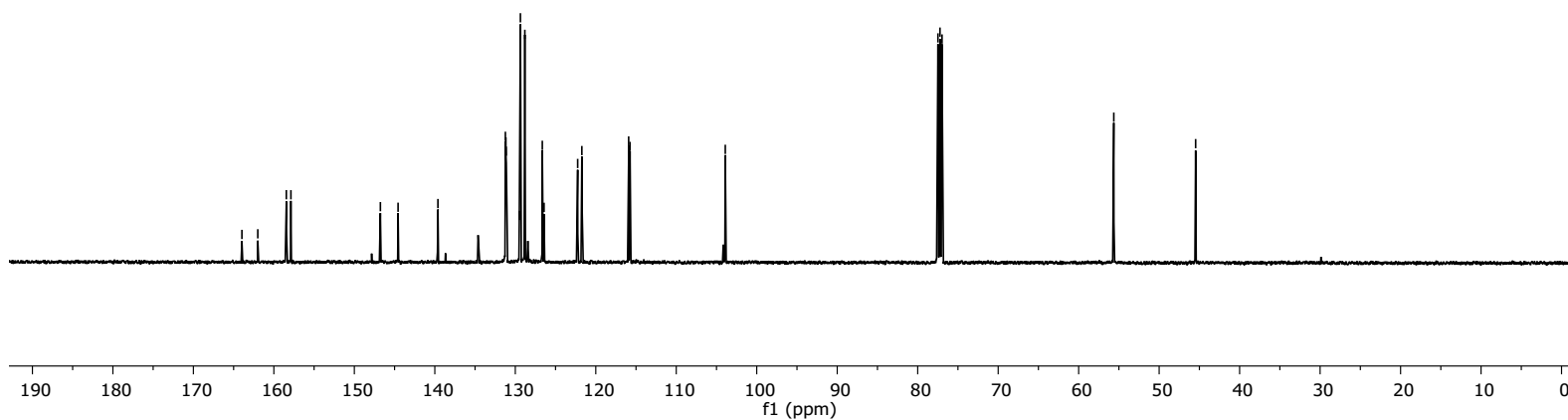
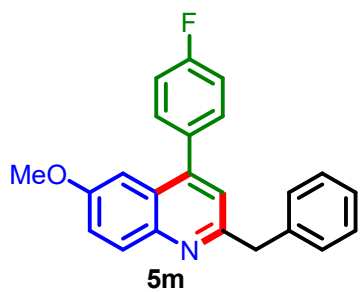
8.07
8.05
7.42
7.41
7.39
7.38
7.36
7.33
7.32
7.30
7.28
7.27
7.21
7.20
7.18
7.17
7.15
7.13
7.09
7.07
4.32
3.77



¹³C NMR spectrum of compound: 5m

SA-4OMe-ST-4F-AC

- 163.97
- 162.00
- 158.45
- 157.88
- 146.76
- 144.56
- 139.61
- 131.23
- 131.17
- 131.12
- 129.51
- 129.37
- 128.81
- 126.64
- 126.43
- 122.25
- 121.73
- 115.91
- 115.74
- 103.91
- 77.48
- 77.23
- 76.98
- 55.63
- 45.47



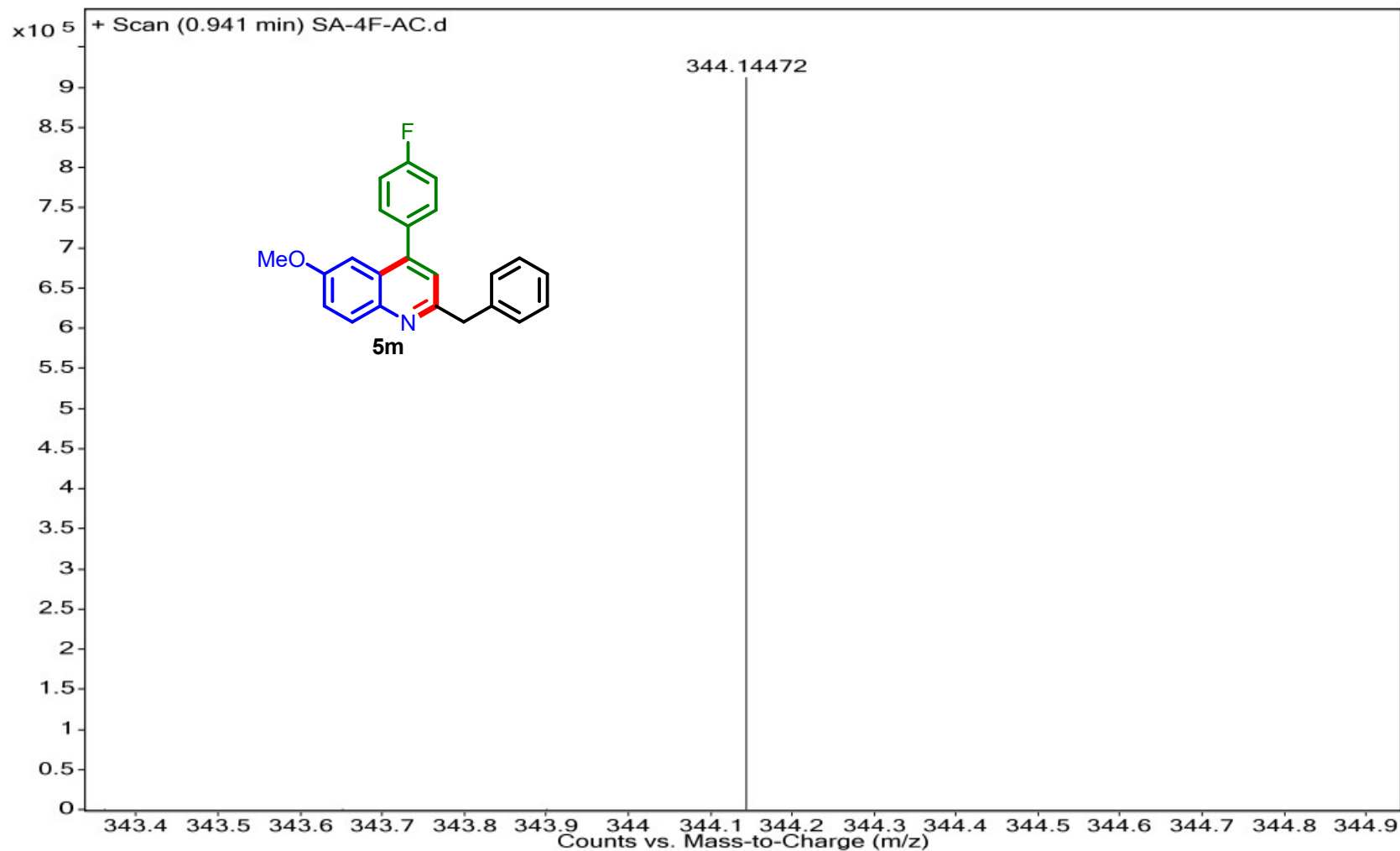
HRMS spectrum of compound: 5m

Sample Name
Inj Vol
Data Filename

Position
InjPosition
ACQ Method

Instrument Name
SampleType
Comment

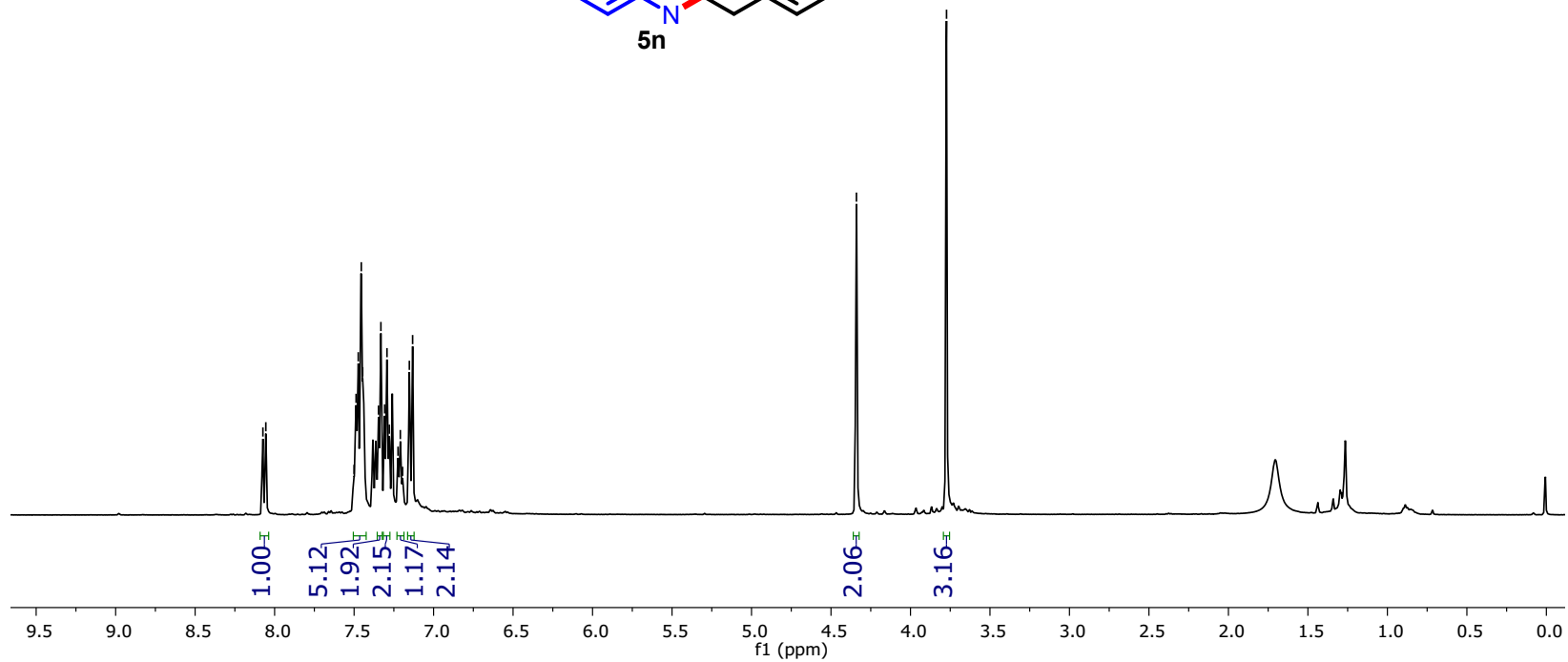
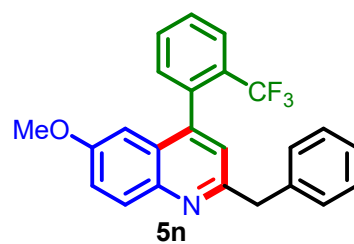
User Name
IRM Calibration Status
Acquired Time



¹H NMR spectrum of compound: 5n

SA-4OMe-ST-2CF3-AC

8.07
8.06
7.50
7.49
7.47
7.45
7.45
7.35
7.33
7.31
7.29
7.28
7.22
7.21
7.20
7.15
7.13
— 4.34
— 3.77



¹³C NMR spectrum of compound: 5n

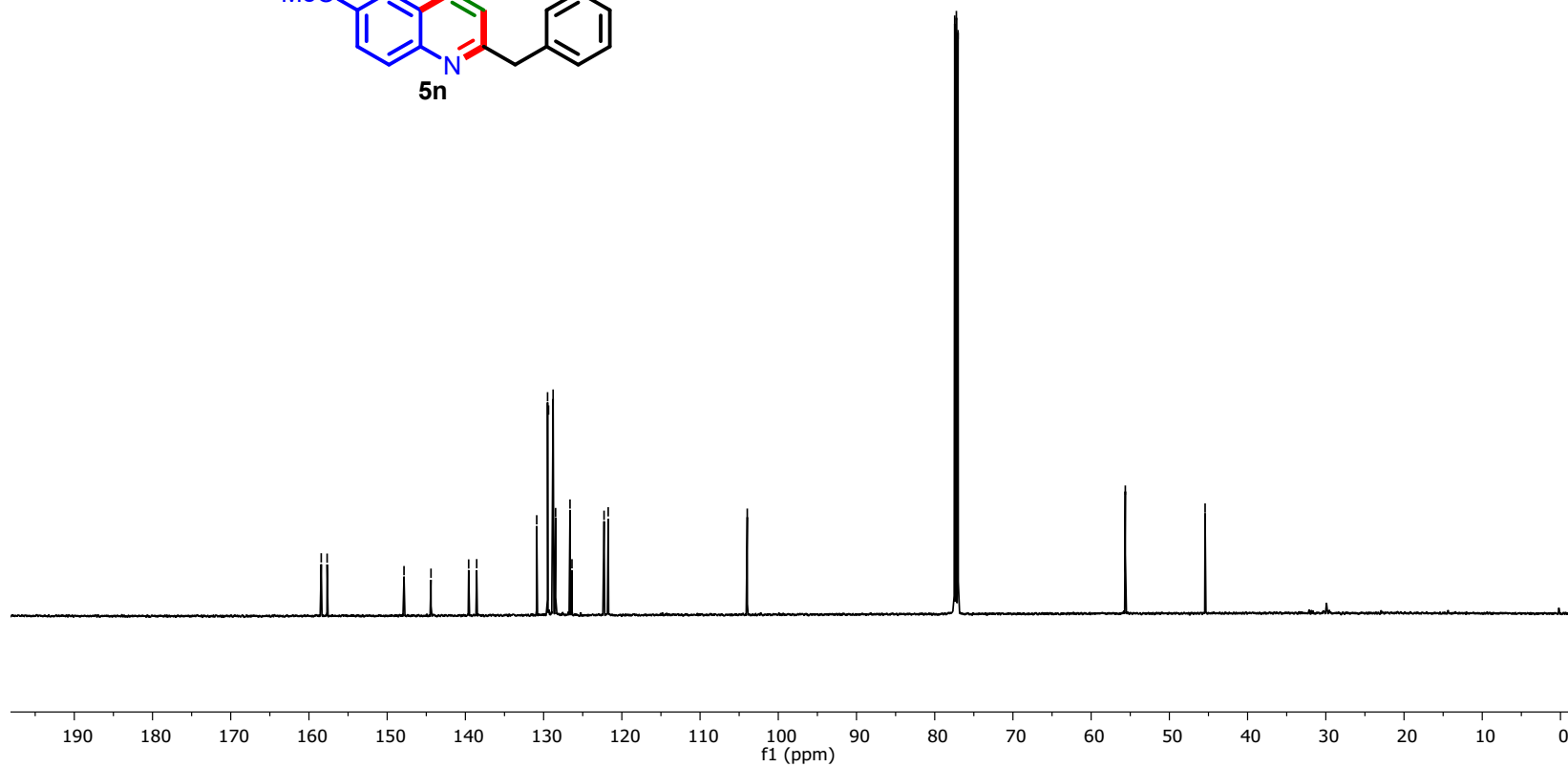
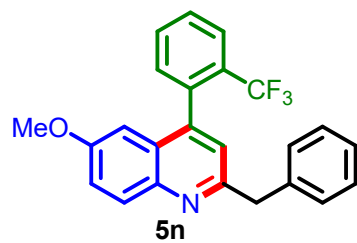
SA-4OMe-ST-2CF3AC

158.43
157.67
147.85
144.40
139.58
138.56
130.88
129.49
129.37
128.81
128.79
128.47
126.62
126.37
122.27
121.74
— 103.96

77.44
77.23
77.02

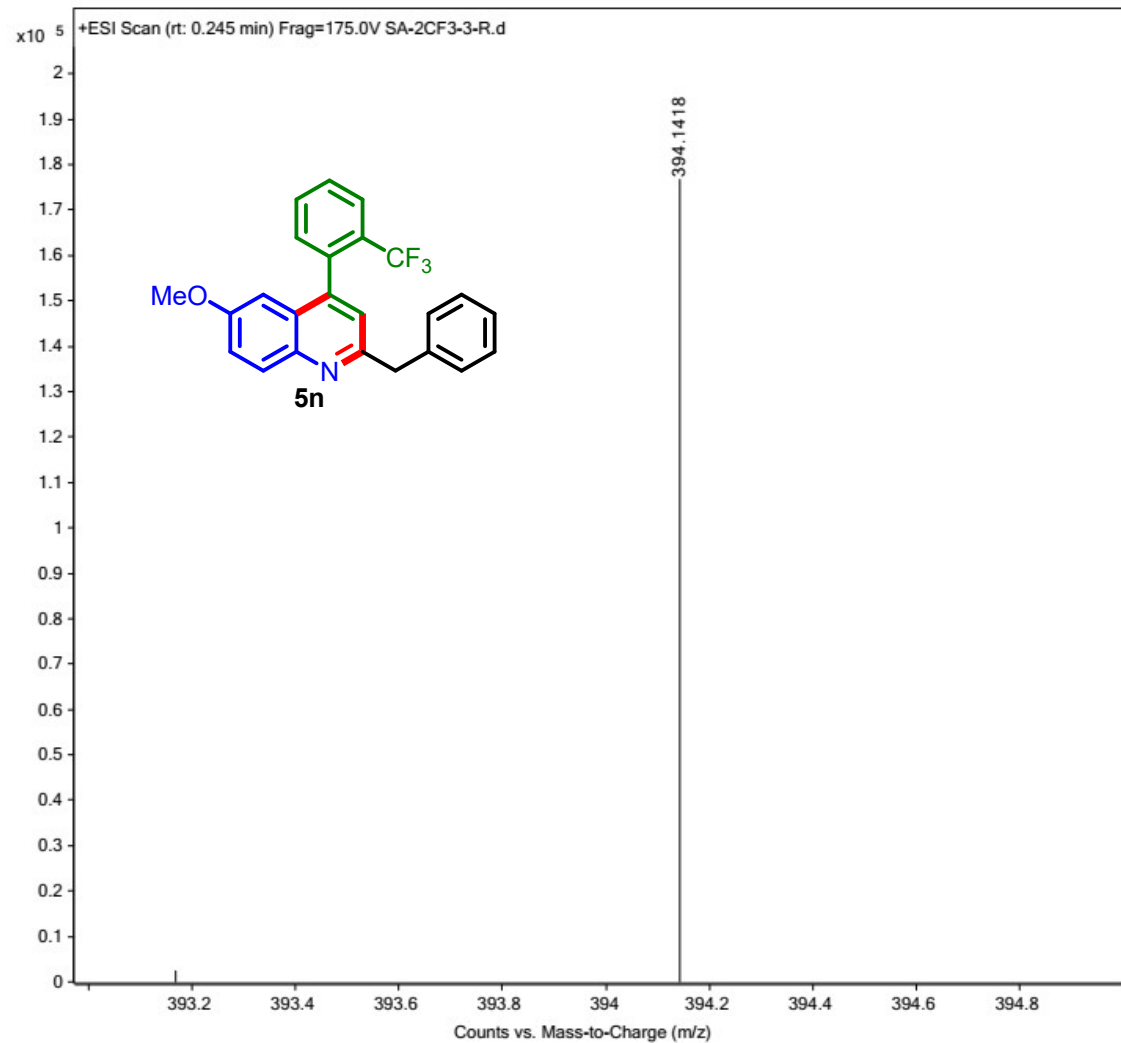
— 55.63

— 45.43



HRMS spectrum of compound: 5n

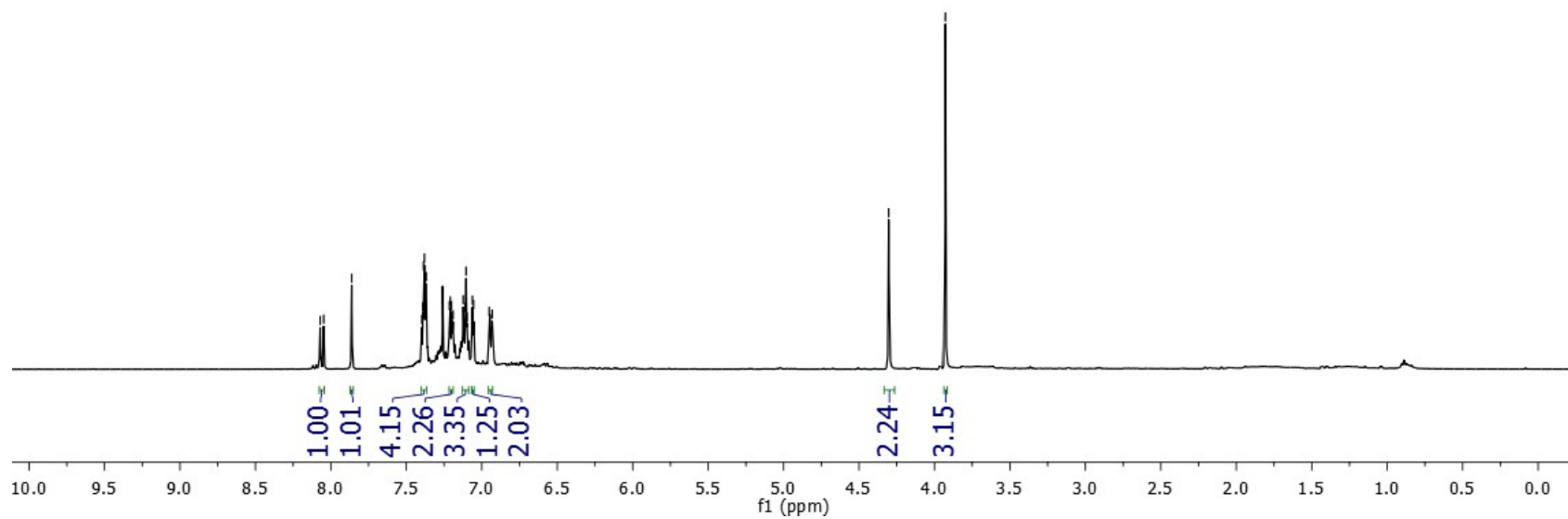
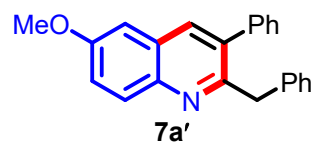
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User Name		Inj Vol	20	InjPosition	
Sample Type	Sample	IRM Calibration Status	Success	Data Filename	SA-2CF3-3-R.d
ACQ Method	ESI ALS 100-1000.m	Comment		Acquired Time	05-08-2021 12:44:28 (UTC+05:30)



¹H NMR spectrum of compound: 7a'

ATK-SA-4-OMe-1H

8.07
8.05
7.86
7.40
7.39
7.39
7.38
7.37
7.37
7.21
7.21
7.20
7.19
7.12
7.12
7.11
7.10
7.10
7.06
7.05
6.95
6.93
4.30
3.93



¹³C NMR spectrum of compound: 7a'

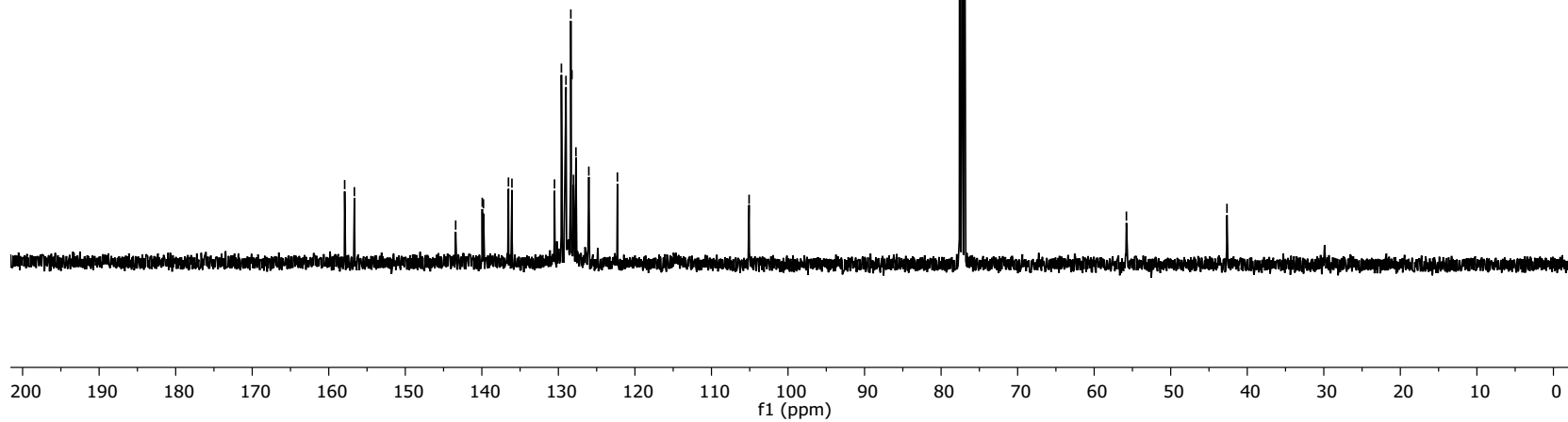
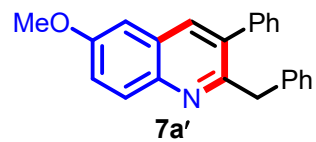
ATK-SA-4OMe-13C

157.92
156.65
143.42
139.95
139.79
136.52
136.07
130.51
129.61
129.01
128.37
128.23
128.03
127.71
126.02
122.29
— 105.08

77.55
77.23
76.91

— 55.79

— 42.65



HRMS spectrum of compound: 7a'

Sample Name	SA-4-OME-21	Position	P1-B5	Instrument Name	Instrument 1	User Name	
Inj Vol	20	InjPosition		SampleType	Sample	IRM Calibration Status	Success
Data Filename	SA-4-OME-21.d	ACQ Method	ESI ALS 100-500.m	Comment		Acquired Time	17-9-2021 11:07:34 AM

