

Supporting Information

Gold-Catalyzed Homo- and Cross-Annulation of Alkynyl Carboxylic Acids: Facile Access to Substituted 4-Hydroxy 2H-Pyrones and Total Synthesis of Pseudopyronine A

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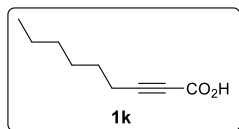
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*Chemical Sciences Division, Academy of Scientific & Innovative Research (AcSIR),
Ghaziabad-201002, U.P. India*

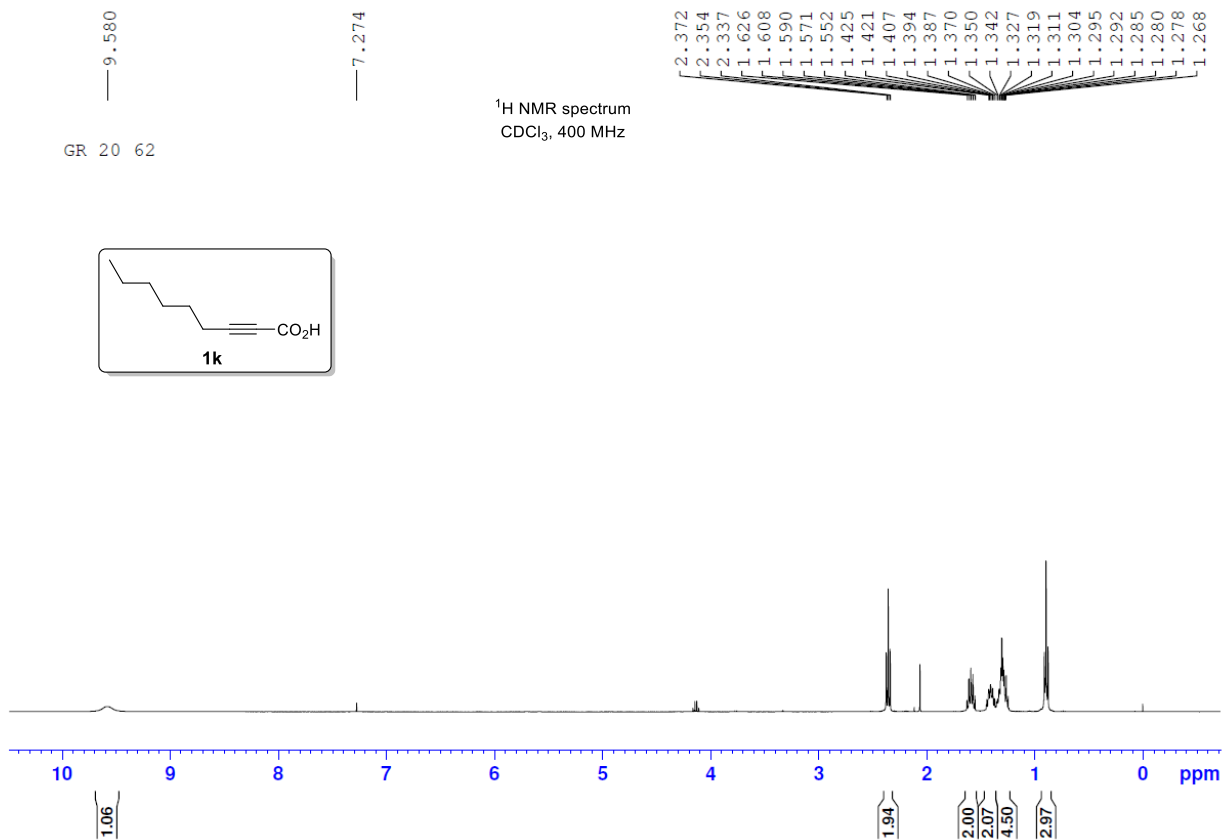
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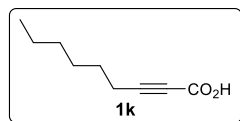
GR 20 62



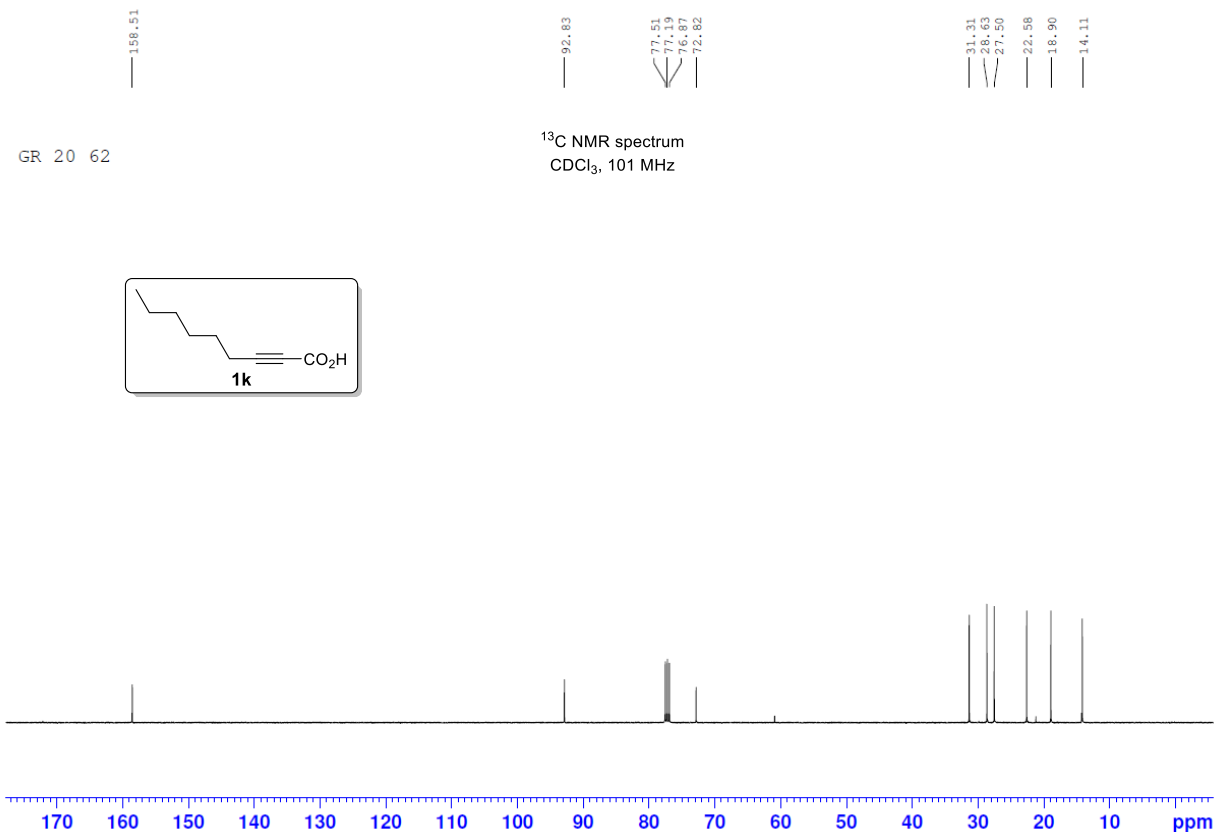
¹H NMR spectrum
CDCl₃, 400 MHz



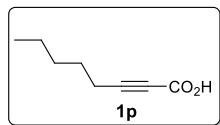
GR 20 62



¹³C NMR spectrum
CDCl₃, 101 MHz



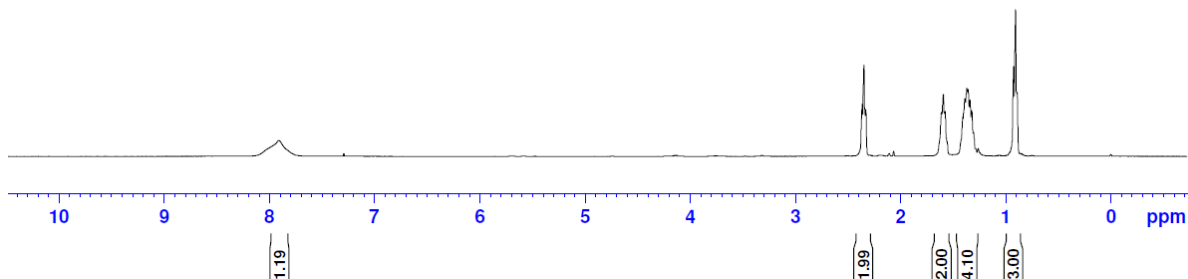
GR 20 60



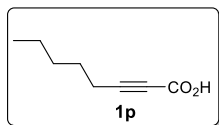
— 7.911
— 7.293

¹H NMR spectrum
CDCl₃, 400 MHz

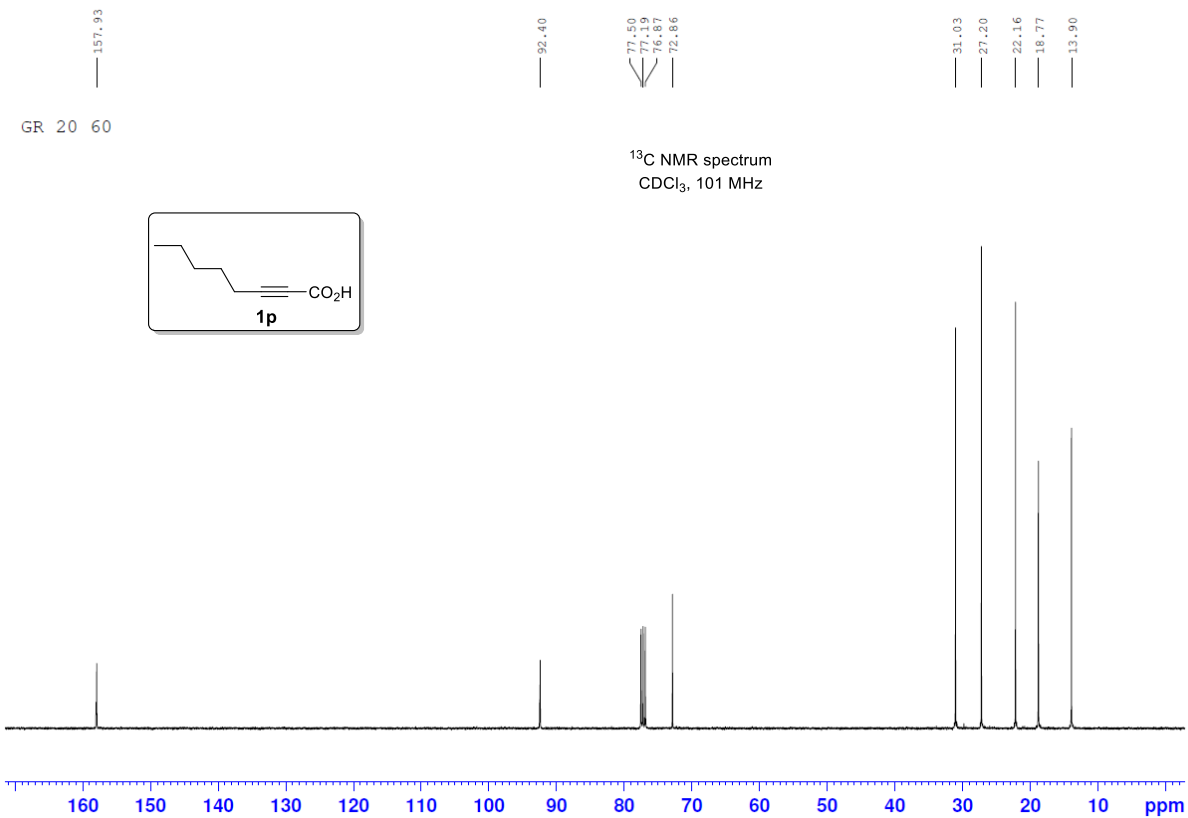
2.365
2.355
2.348
2.339
2.331
2.331
1.610
1.594
1.582
1.577
1.409
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1.363
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1.357
1.341
1.324
0.925
0.908
0.895
0.892

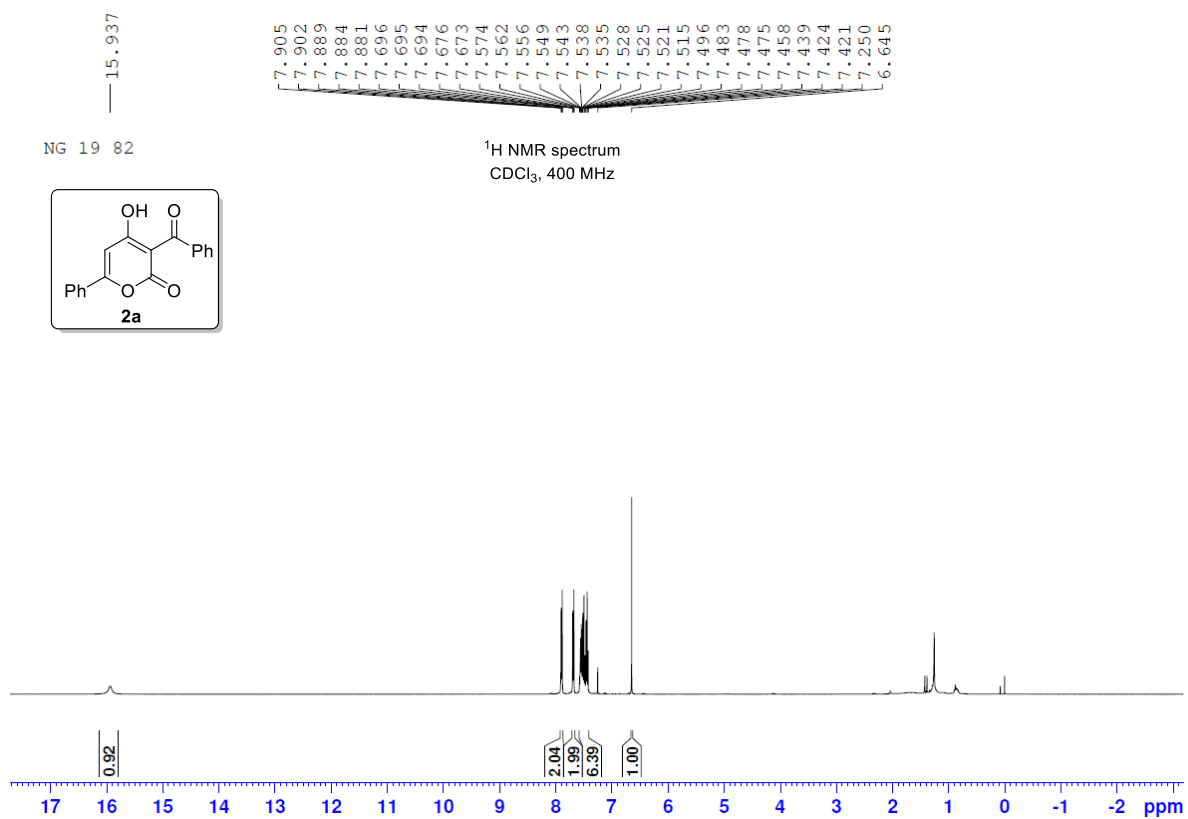


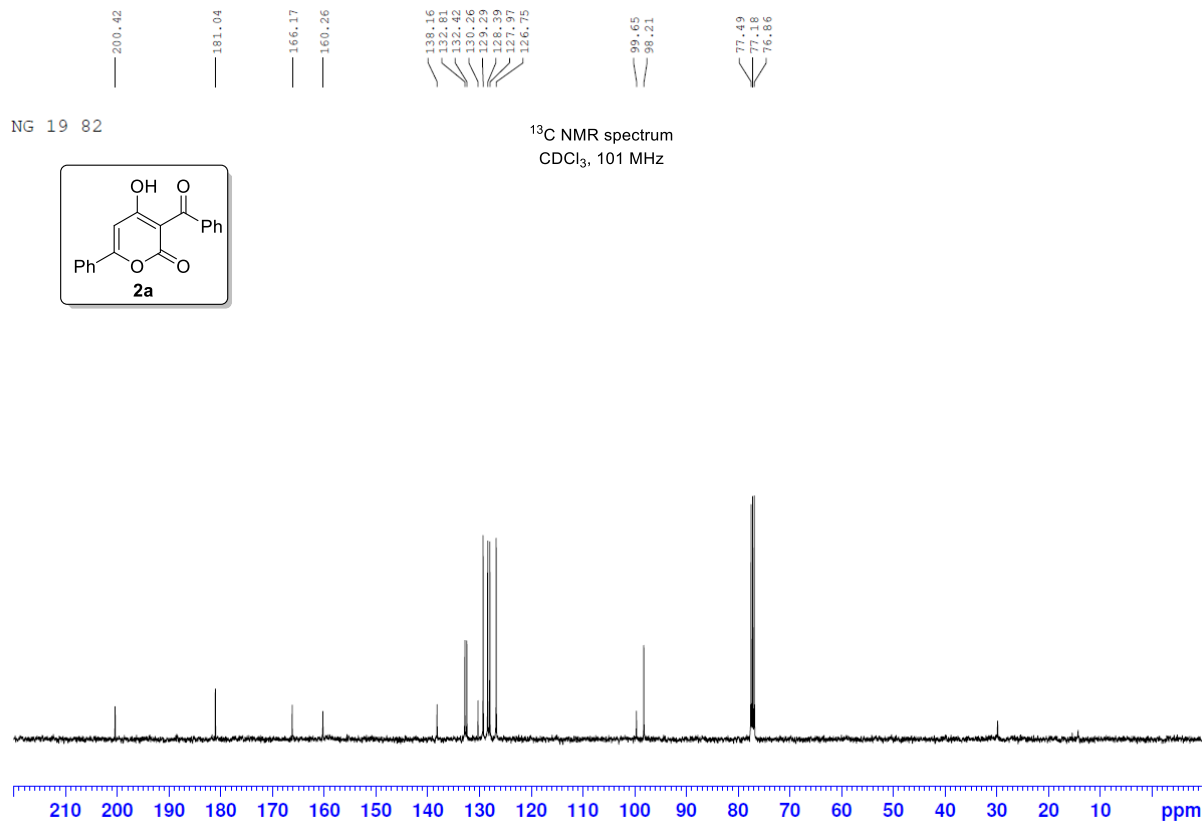
GR 20 60



¹³C NMR spectrum
CDCl₃, 101 MHz





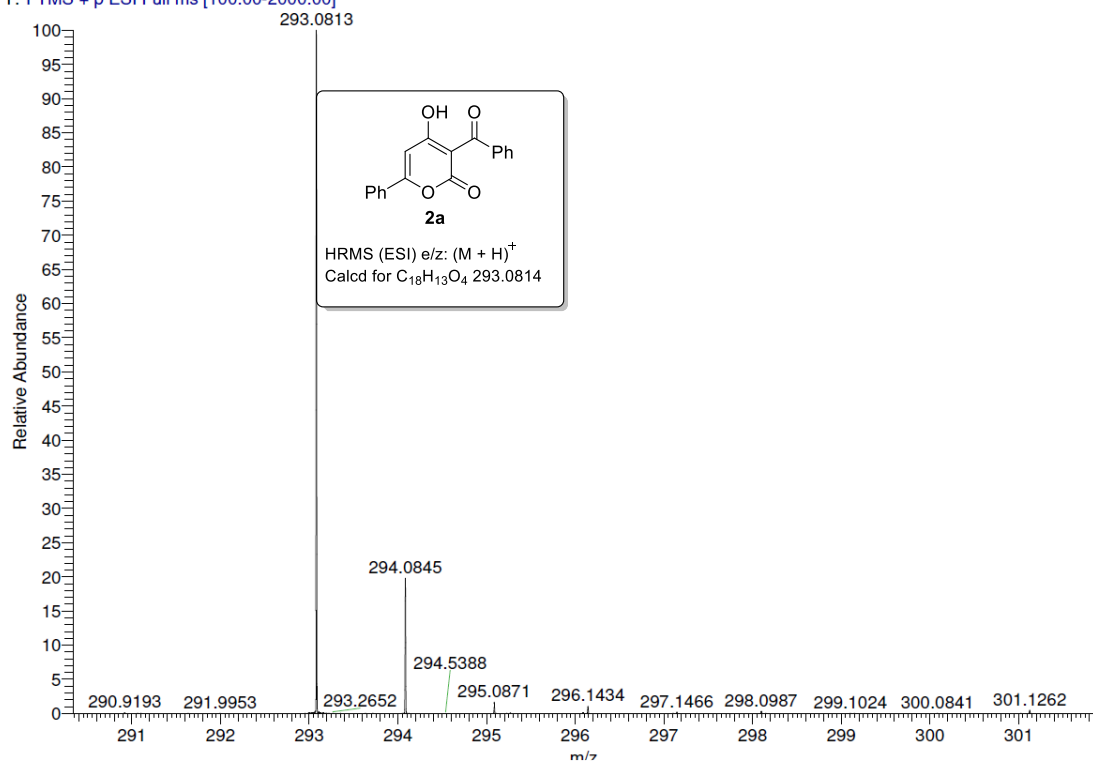


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8/23/2019 12:47:11 PM

NG-19-72

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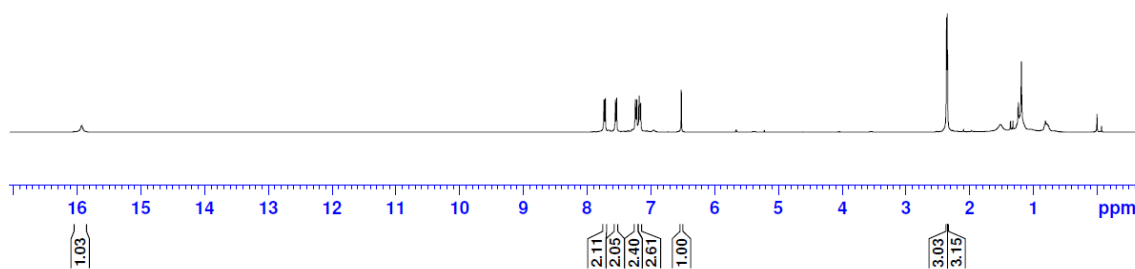
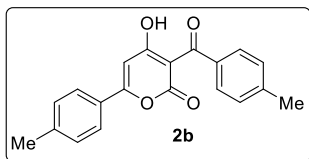


GR 19 23
15.925

7.733
7.713
7.555
7.535
7.240
7.220
7.184
7.177
7.157
6.520

2.359
2.347

¹H NMR spectrum
CDCl₃, 400 MHz



199.96
181.05
166.25
160.51
143.73
143.32
135.40
128.77
128.69
127.62
126.77

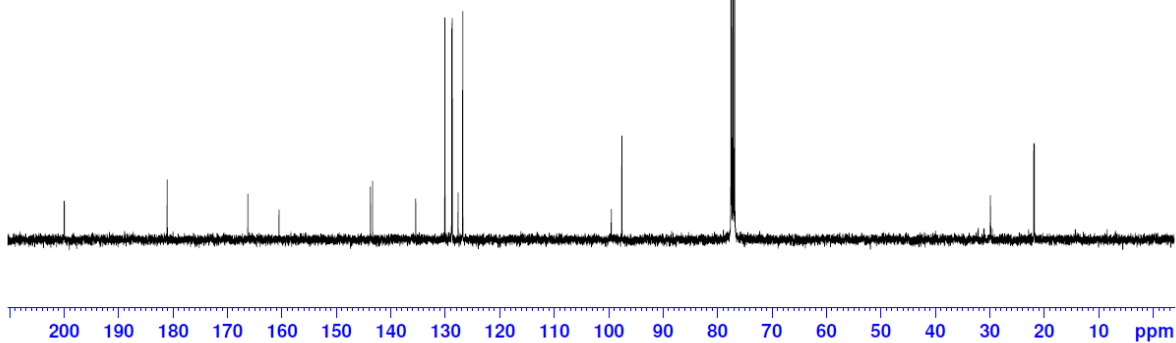
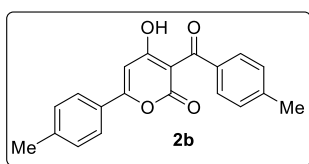
99.48
97.55

77.49
77.02
76.85

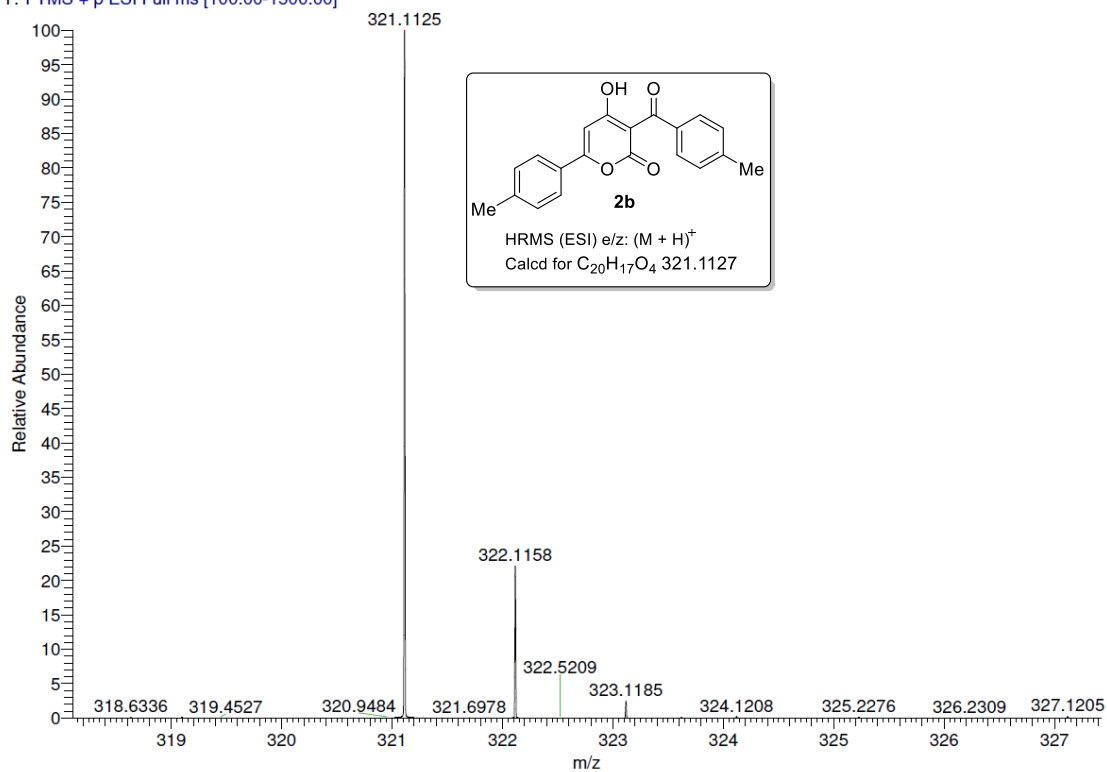
21.90
21.80

GR 19 23

¹³C NMR spectrum
CDCl₃, 101 MHz



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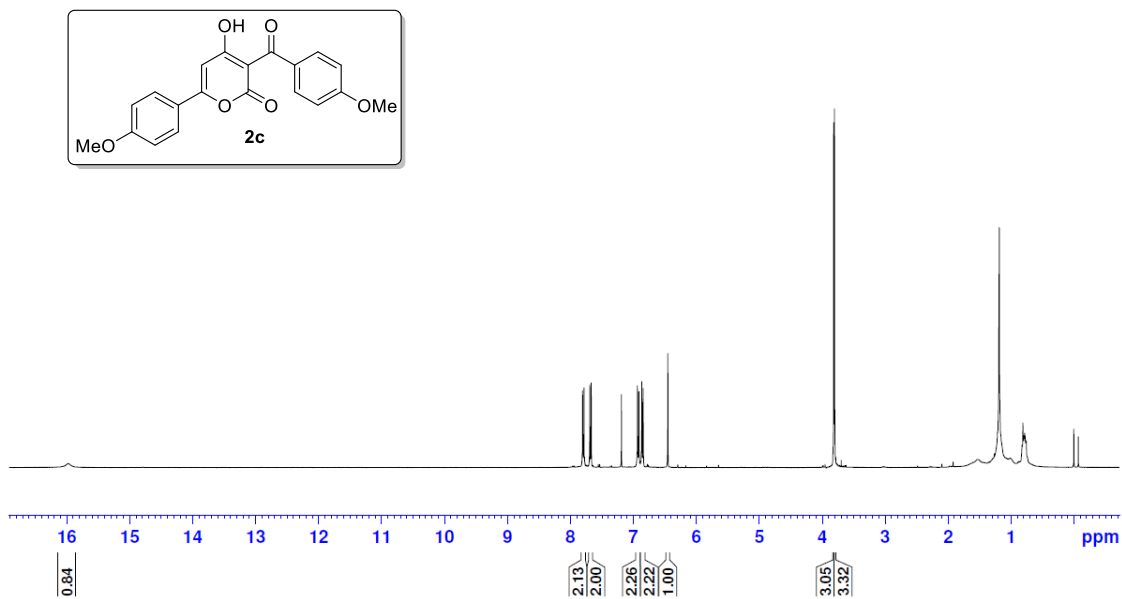


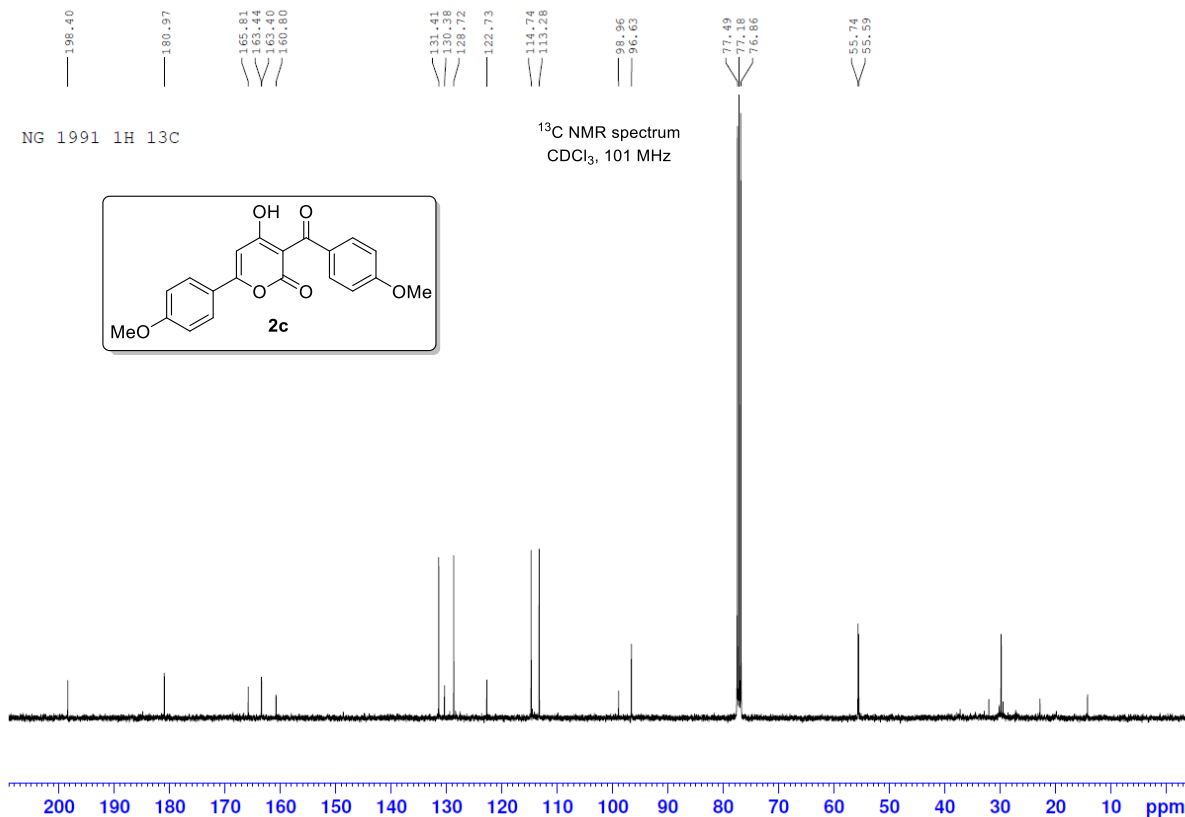
15.973
NG 1991 1H

7.805
7.782
7.689
7.667
7.187
6.933
6.911
6.864
6.842
6.450

3.815
3.802

¹H NMR spectrum
CDCl₃, 400 MHz



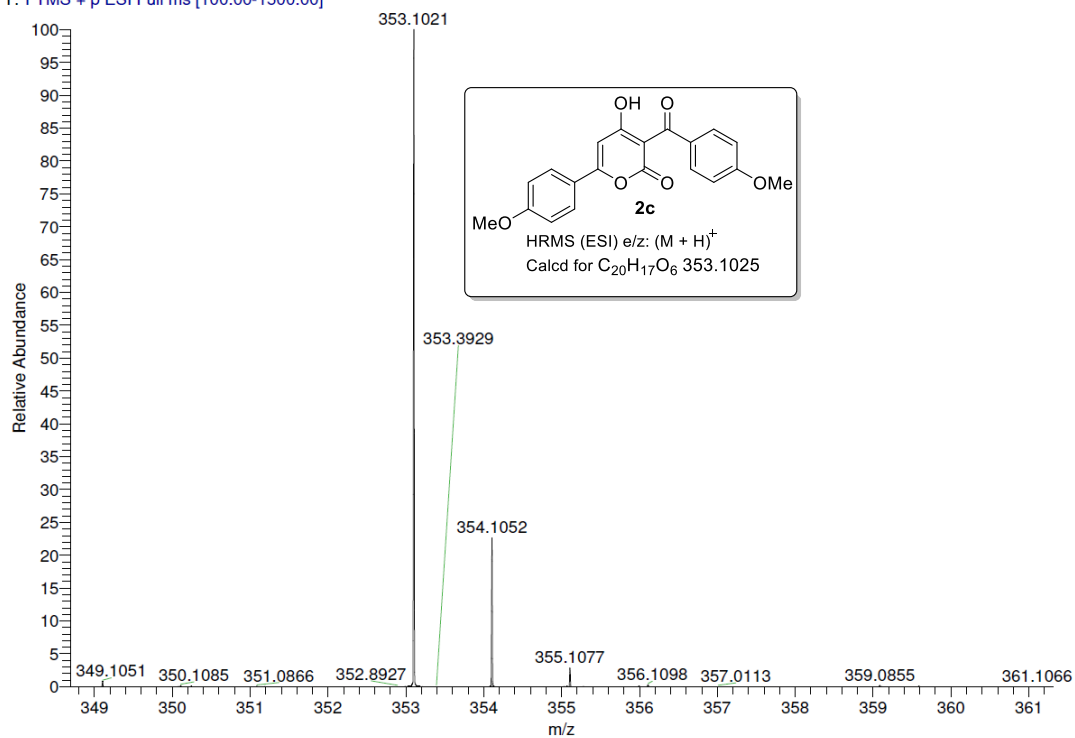


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12/4/2019 6:50:50 PM

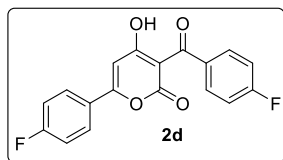
NG-19-91

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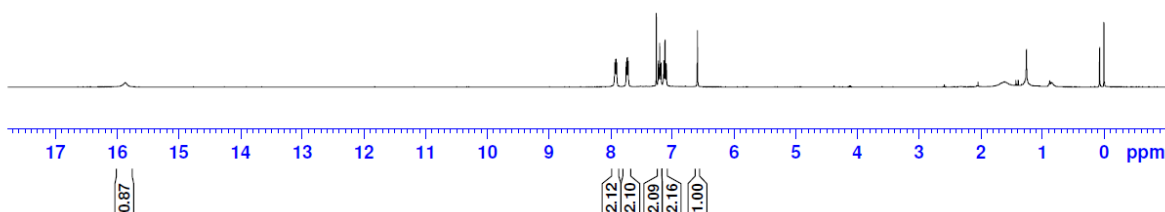
GR-19-25

15.870



7.935
7.922
7.917
7.913
7.900
7.748
7.743
7.735
7.726
7.713
7.259
7.226
7.205
7.184
7.140
7.118
7.096
6.593

¹H NMR spectrum
CDCl₃, 400 MHz



198.81

181.09

166.88

165.21

164.22

160.21

134.19

131.37

131.28

129.25

129.16

126.54

116.85

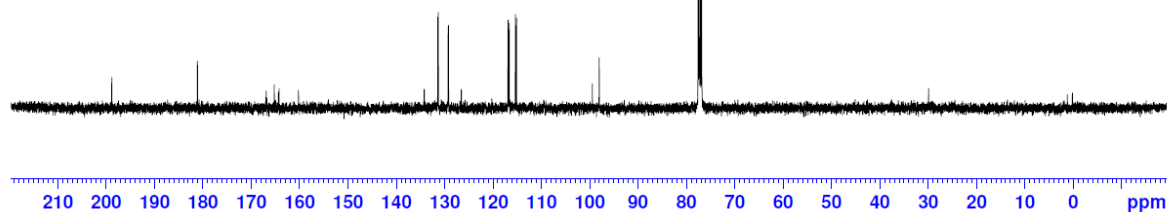
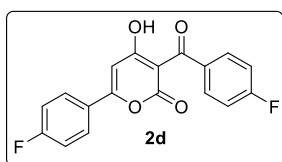
116.65

115.93

115.11

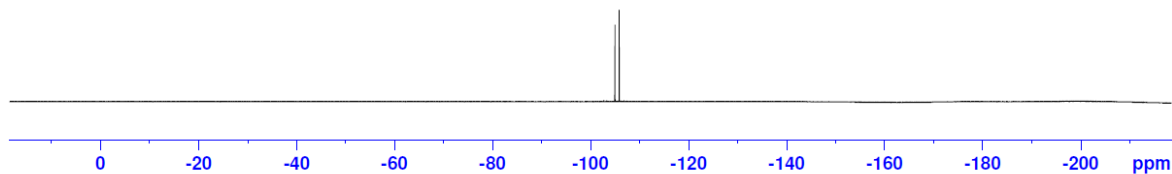
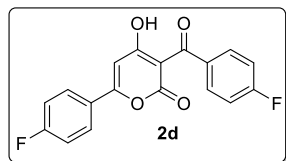
¹³C NMR spectrum
CDCl₃, 101 MHz

GR 19 25



GR-19-25

^{19}F NMR spectrum
 CDCl_3 , 376 MHz

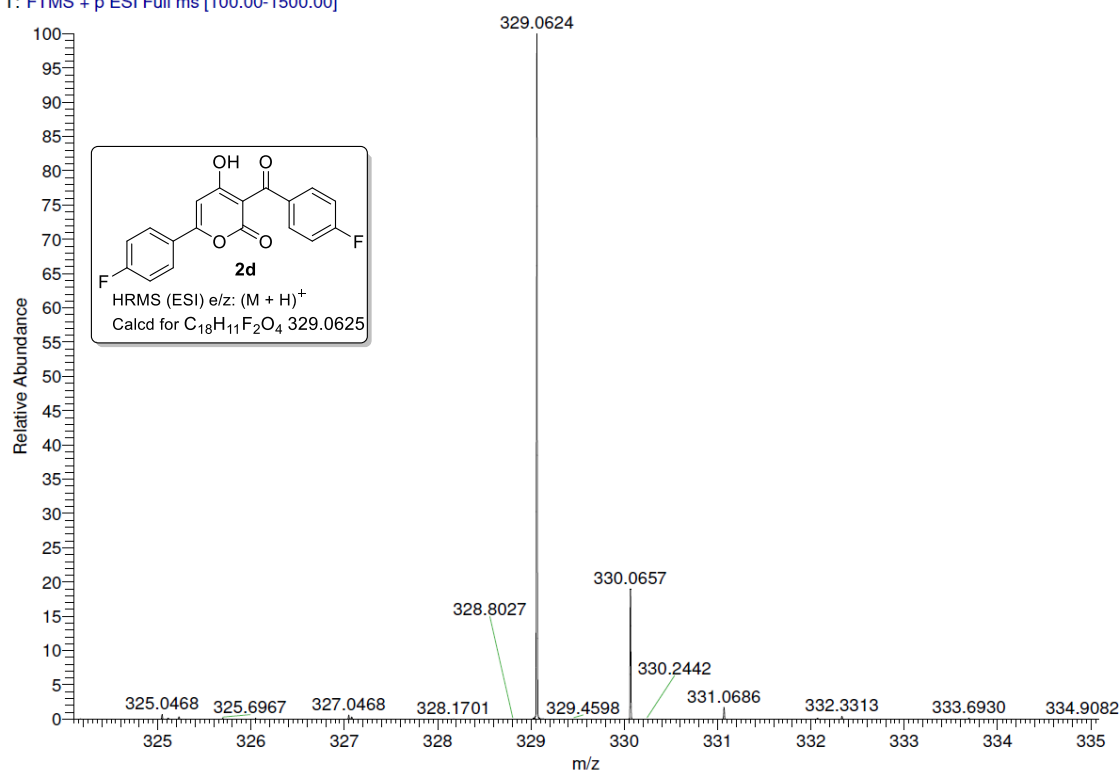


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GR-19-25

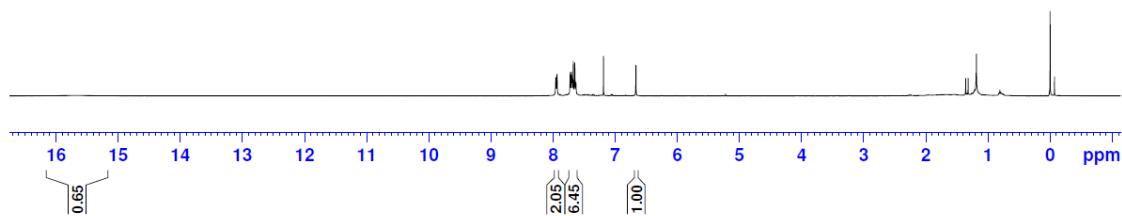
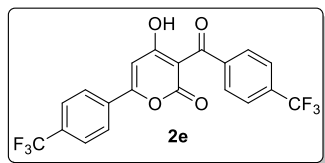
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GR 19 29

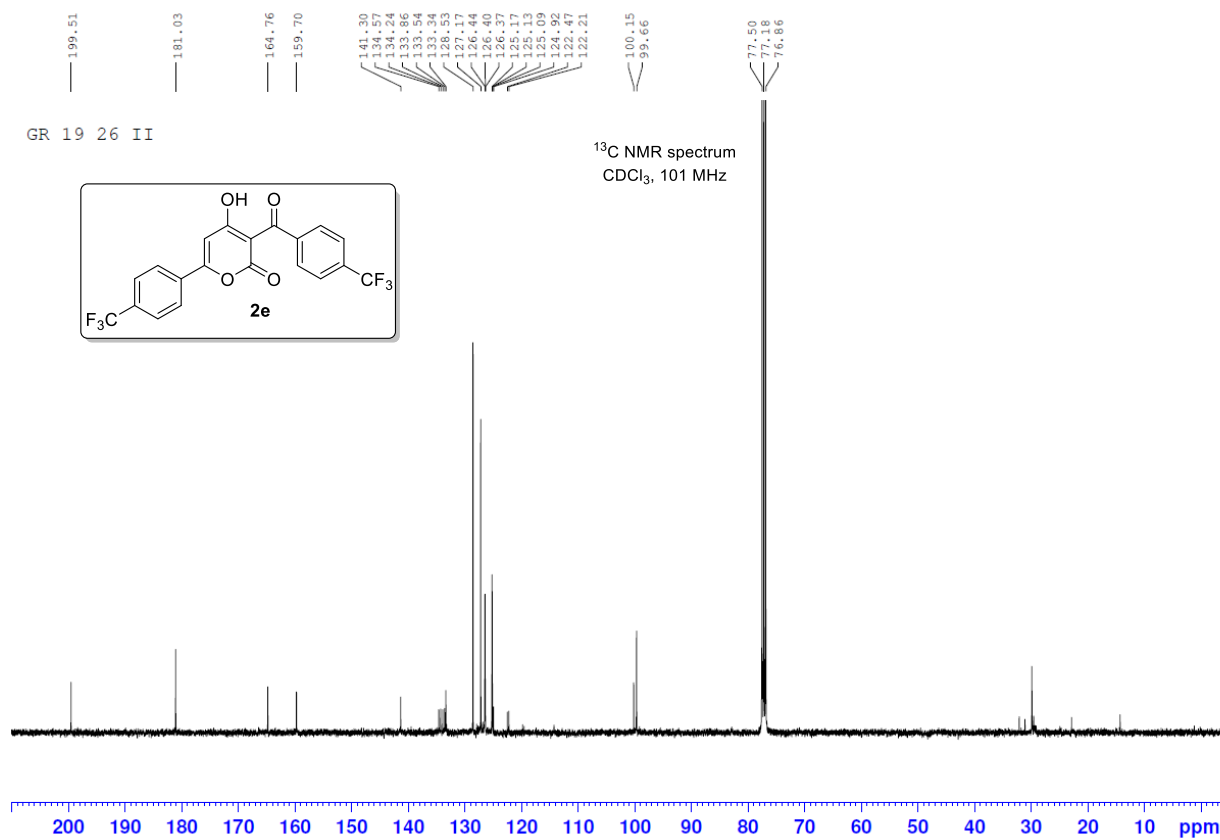
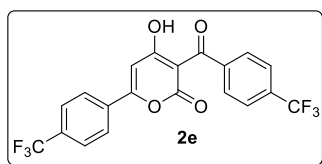
7.955
7.935
7.724
7.702
7.675
7.651
7.630
7.187
6.666

¹H NMR spectrum
CDCl₃, 400 MHz



GR 19 26 II

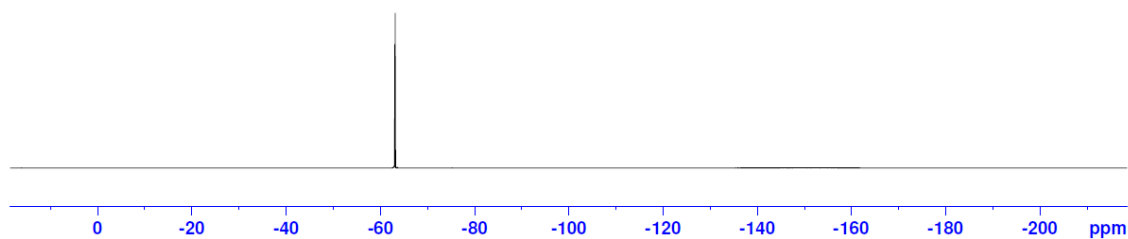
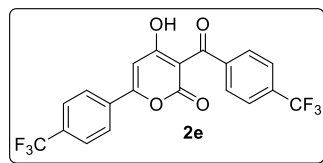
¹³C NMR spectrum
CDCl₃, 101 MHz



GR 19 29

-63.08
-63.21

¹⁹F NMR spectrum
CDCl₃, 376 MHz

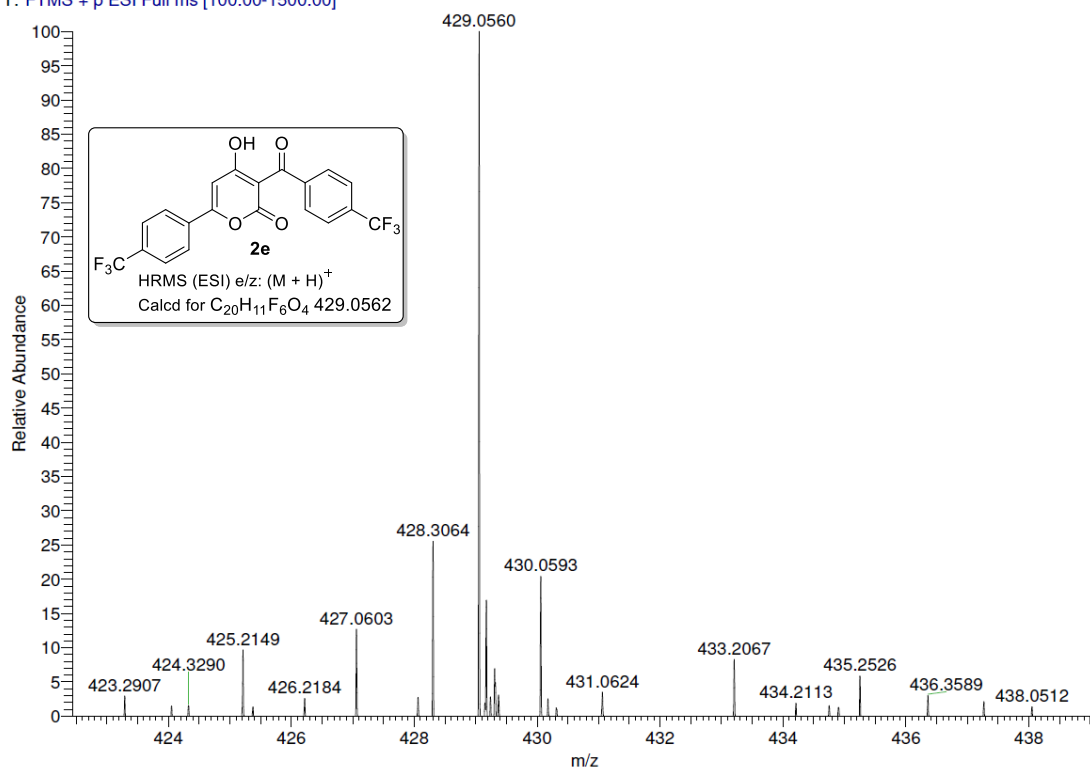


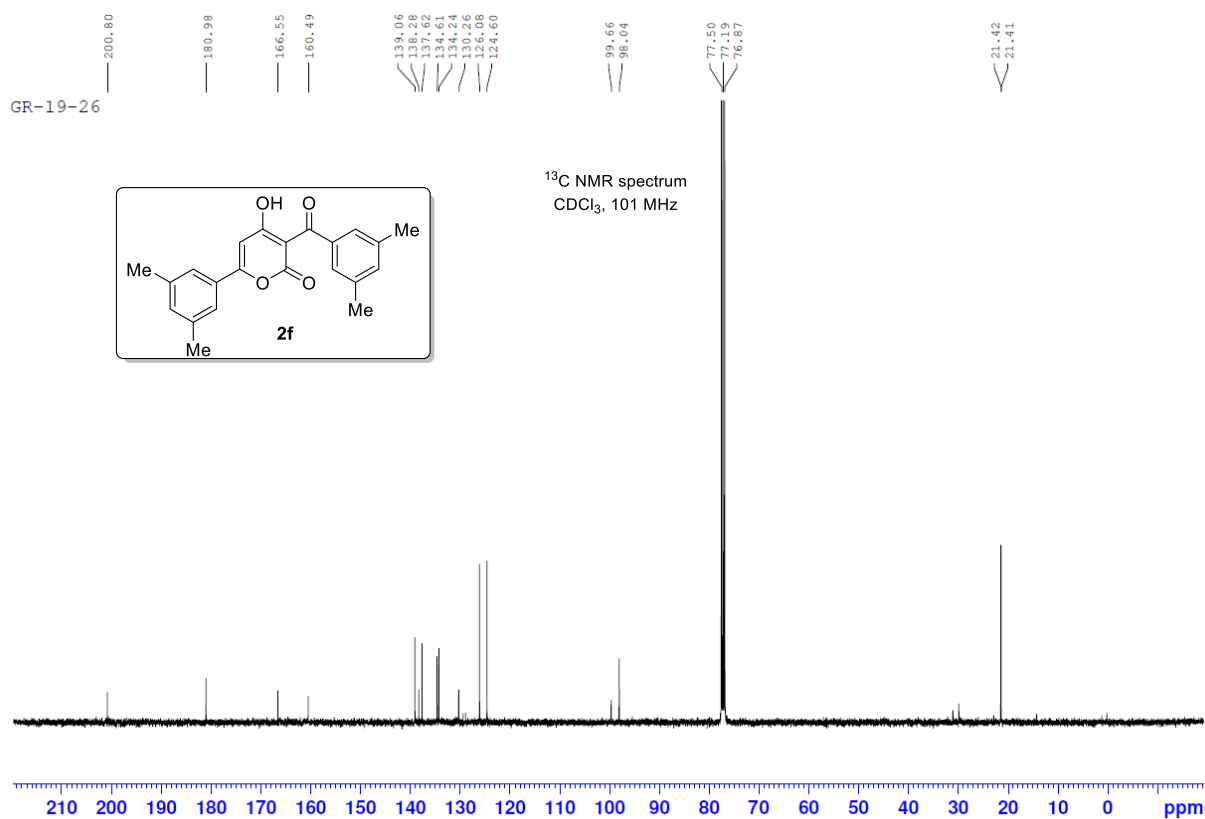
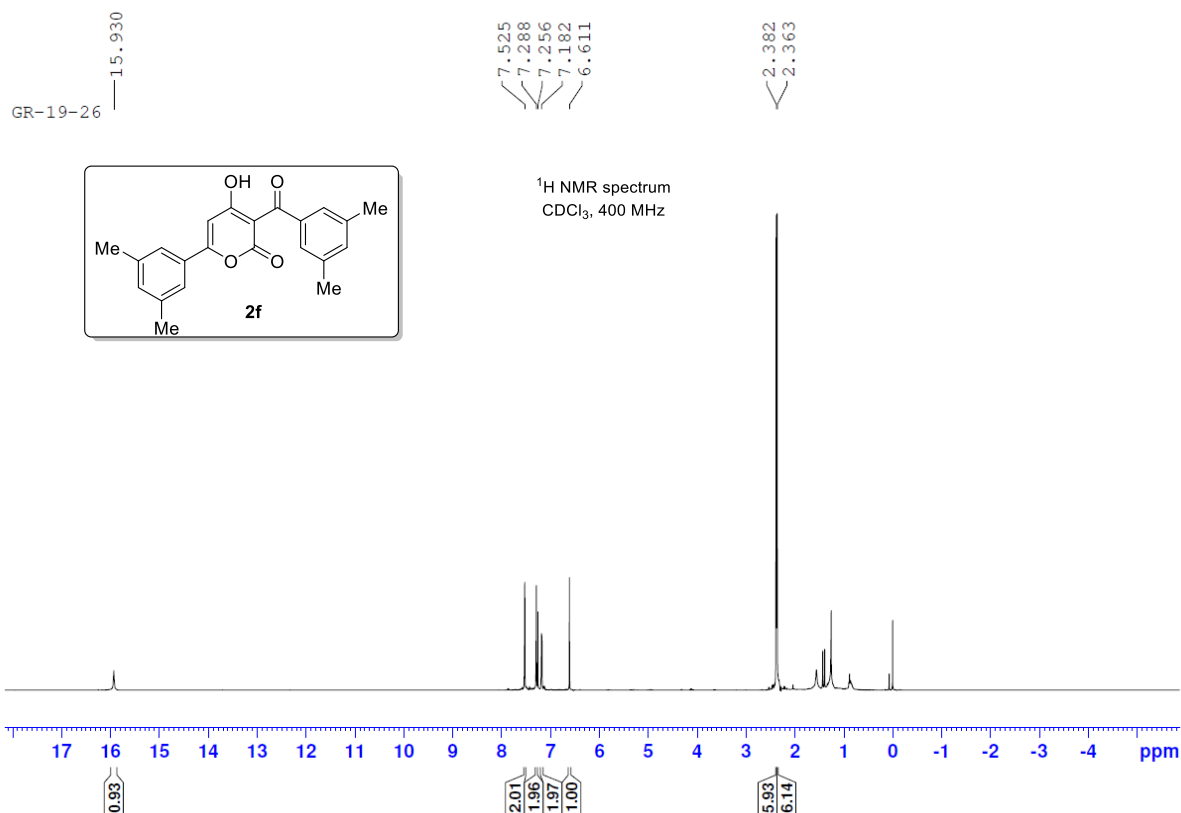
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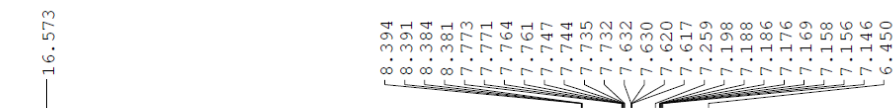
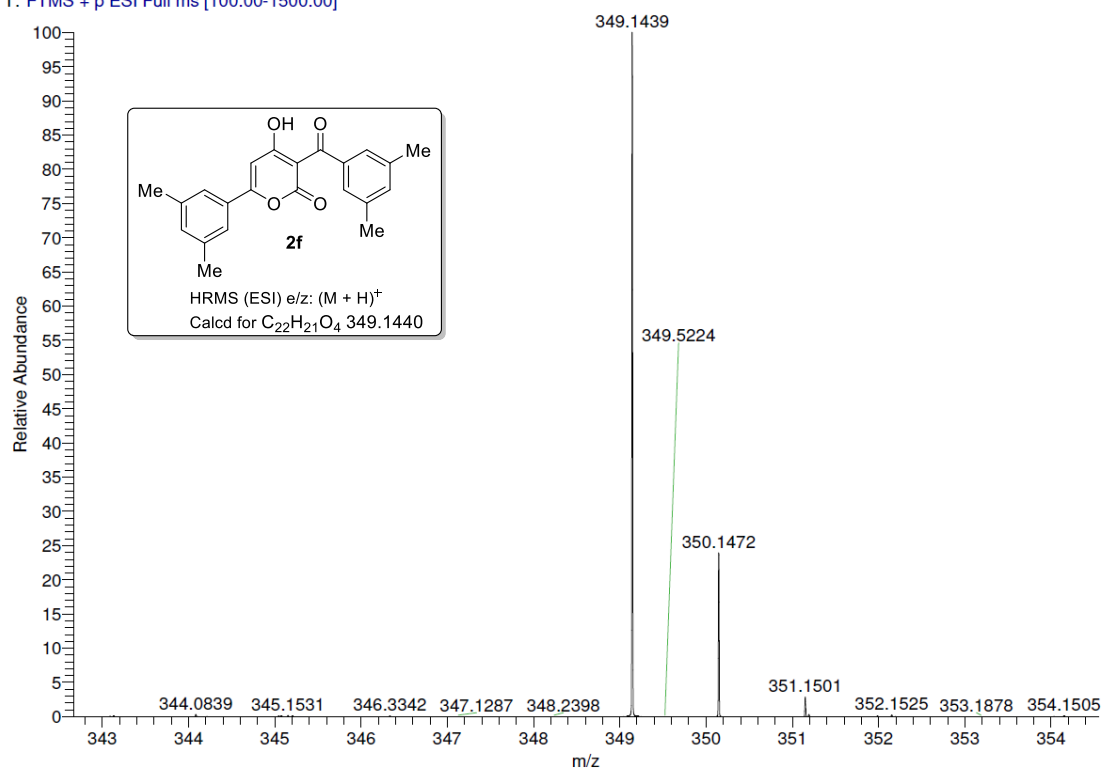
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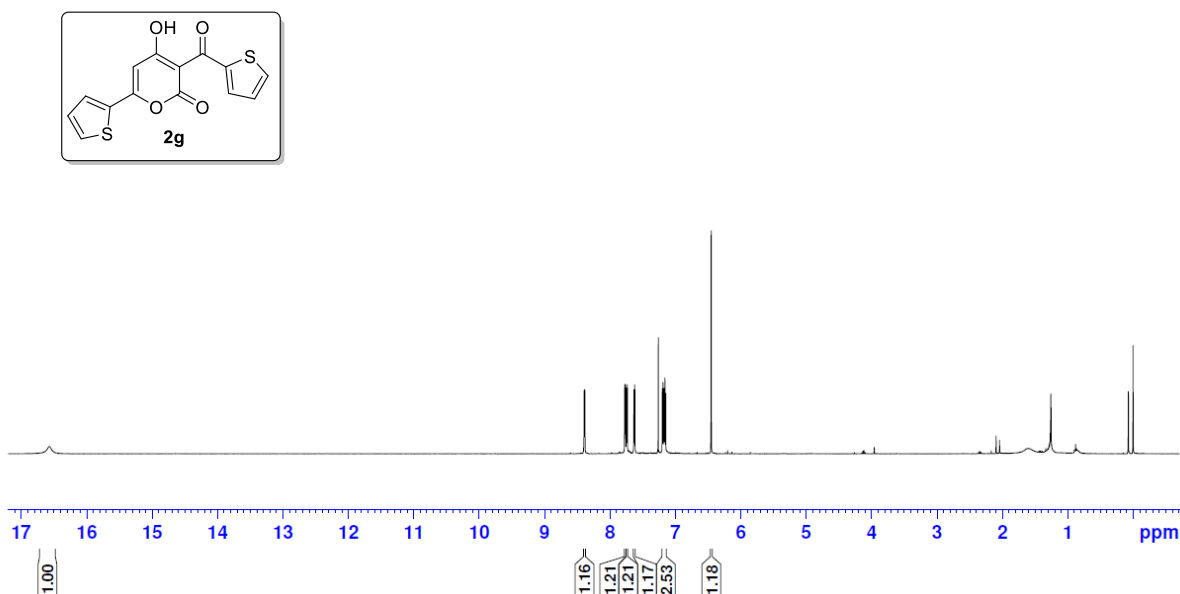


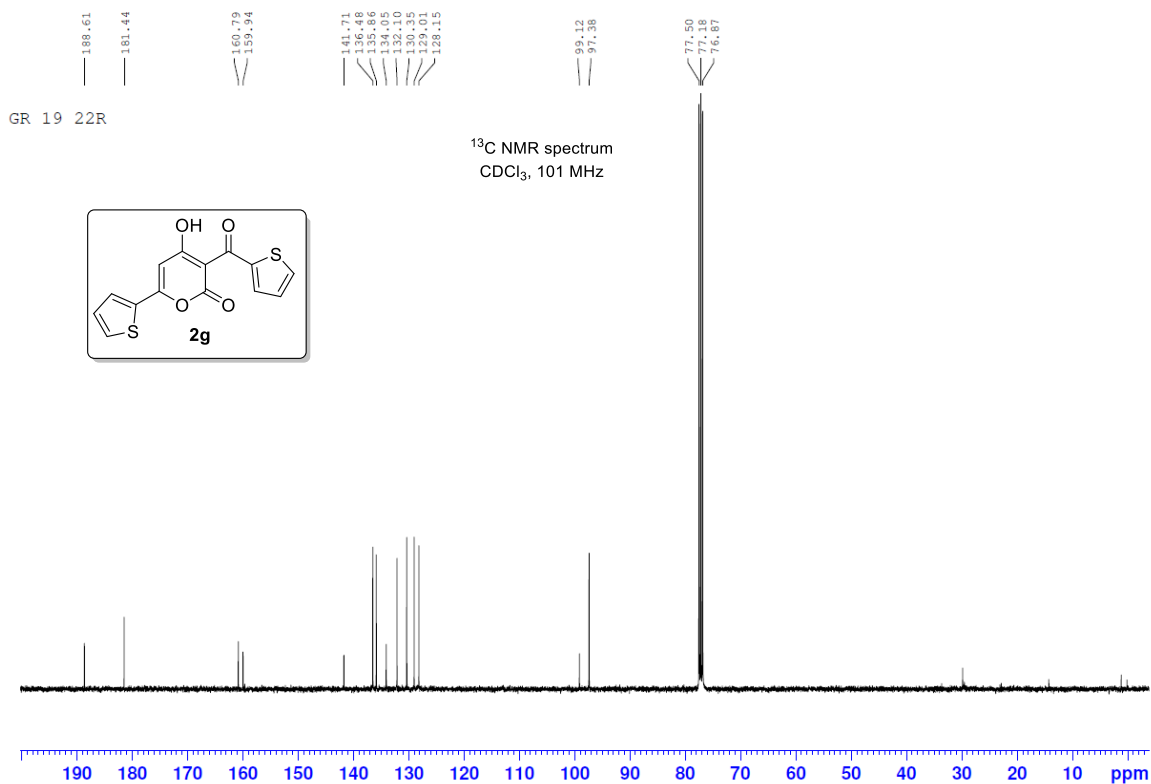
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GR-19-22R

¹H NMR spectrum
CDCl₃, 400 MHz



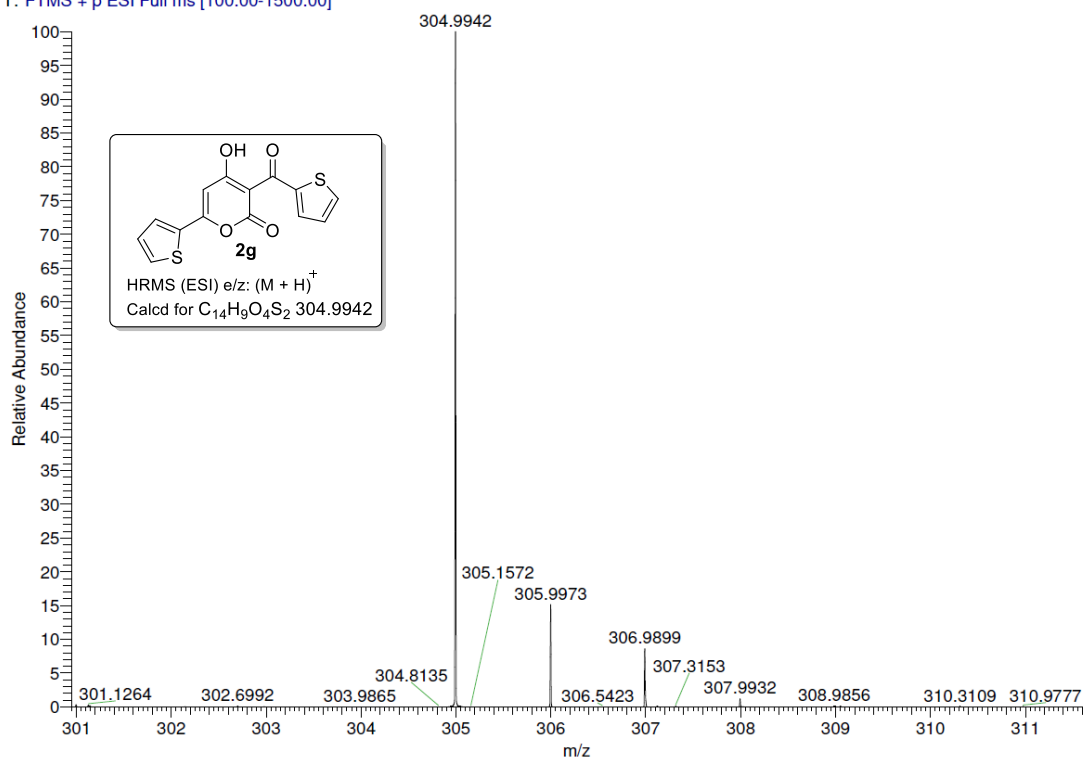


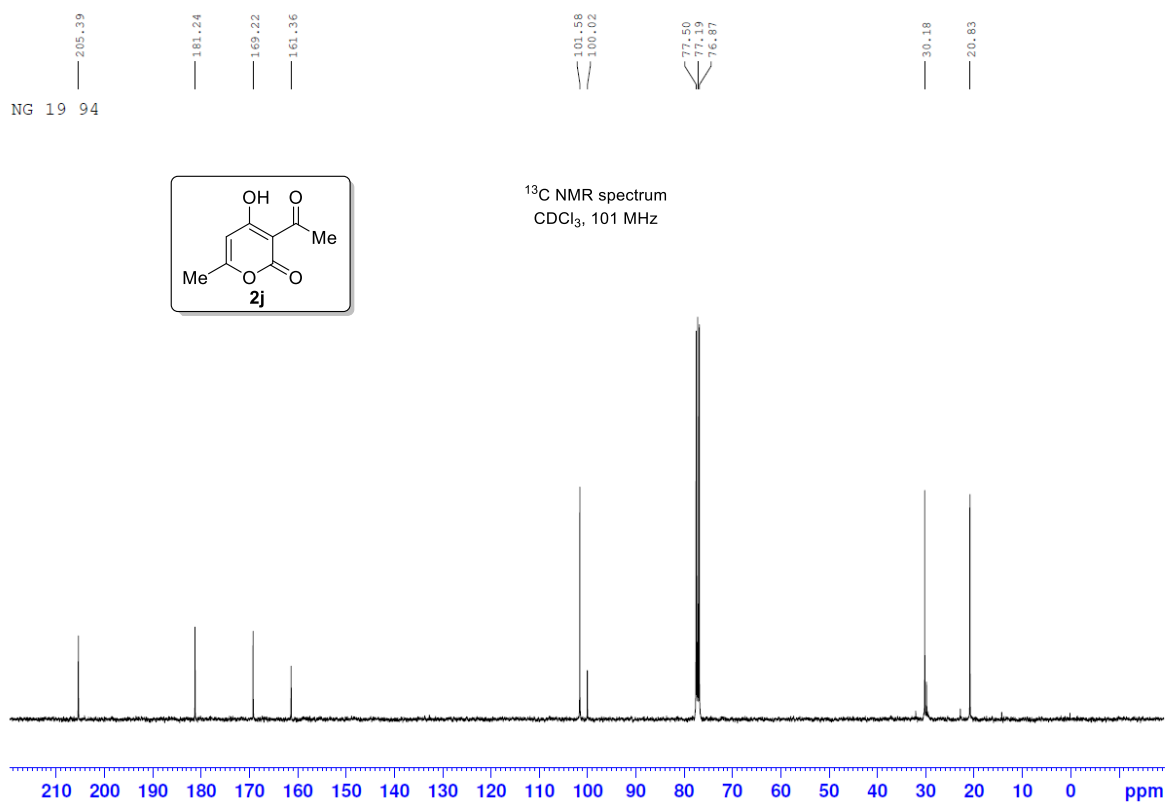
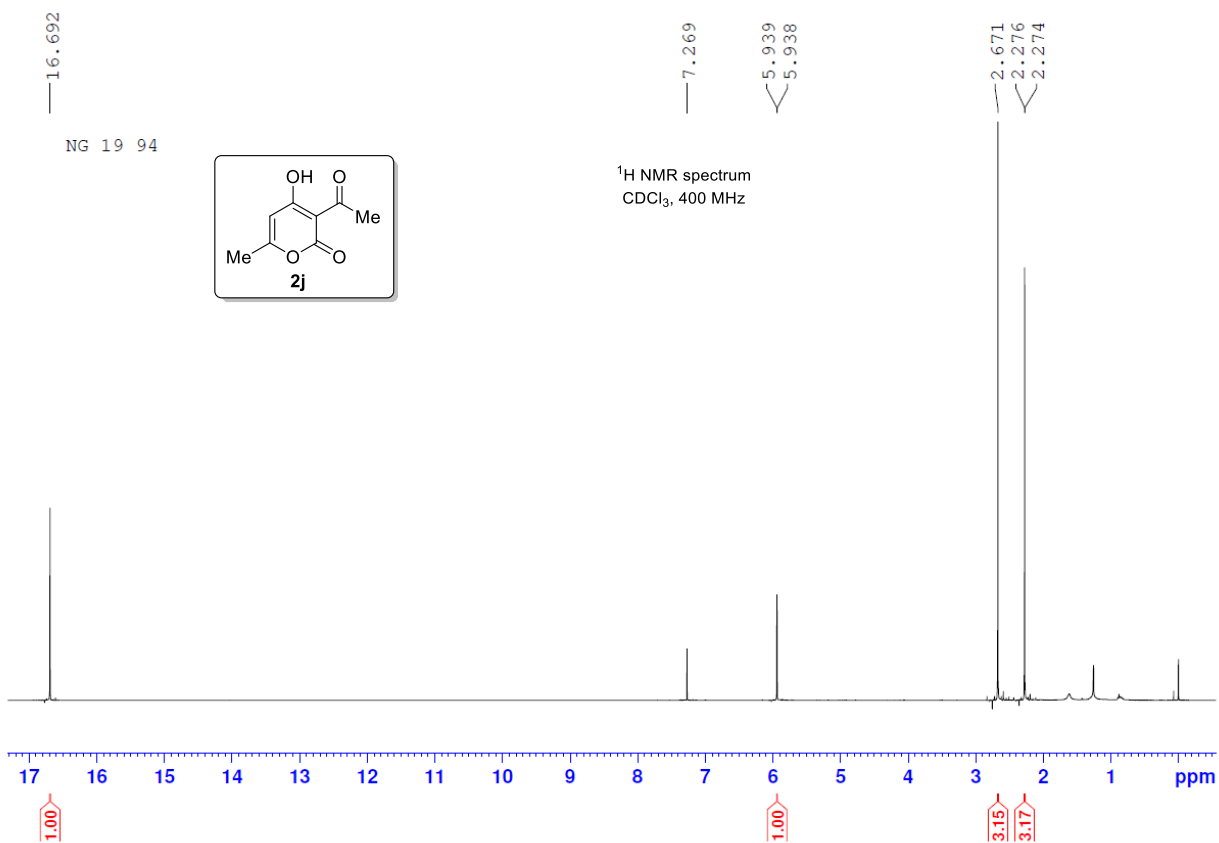
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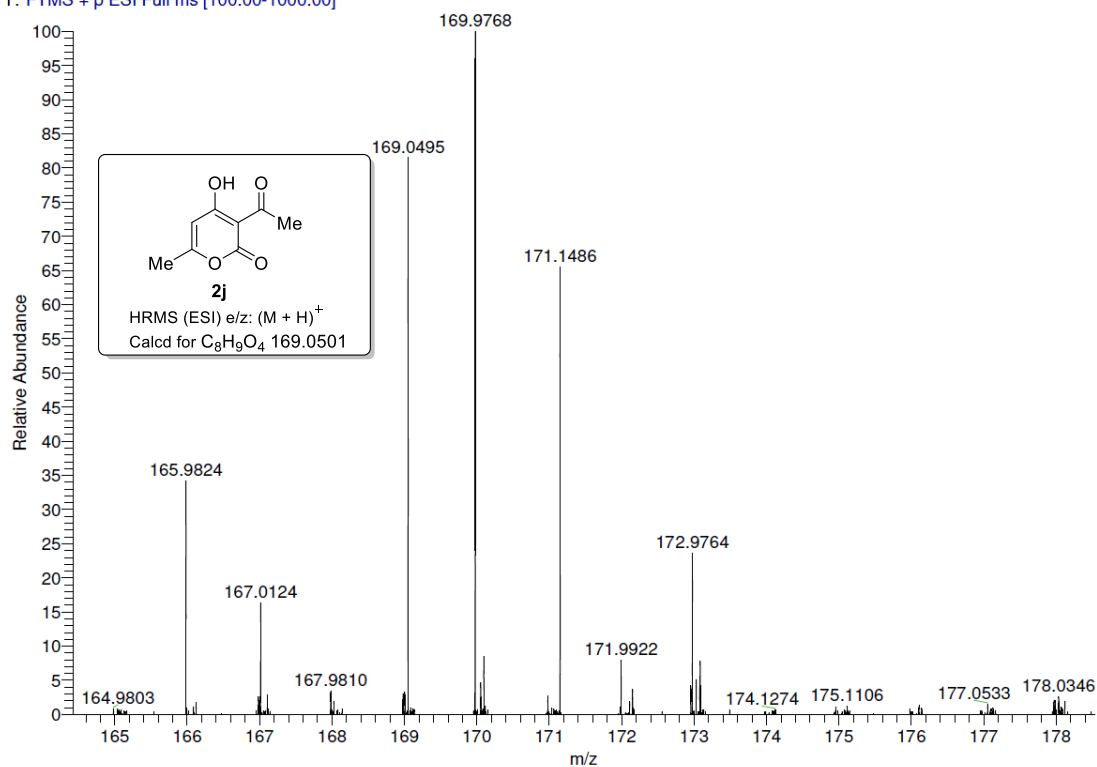
GR-19-22

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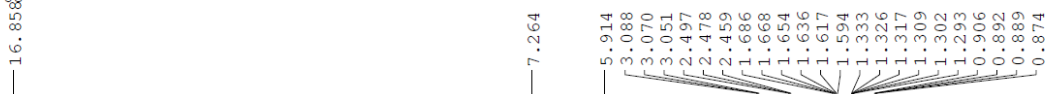




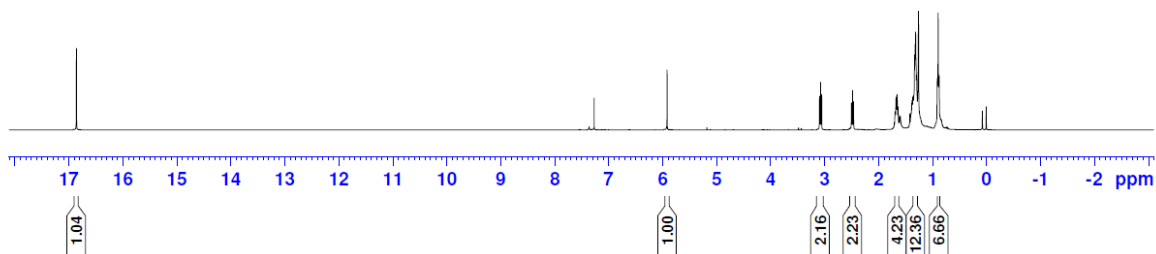
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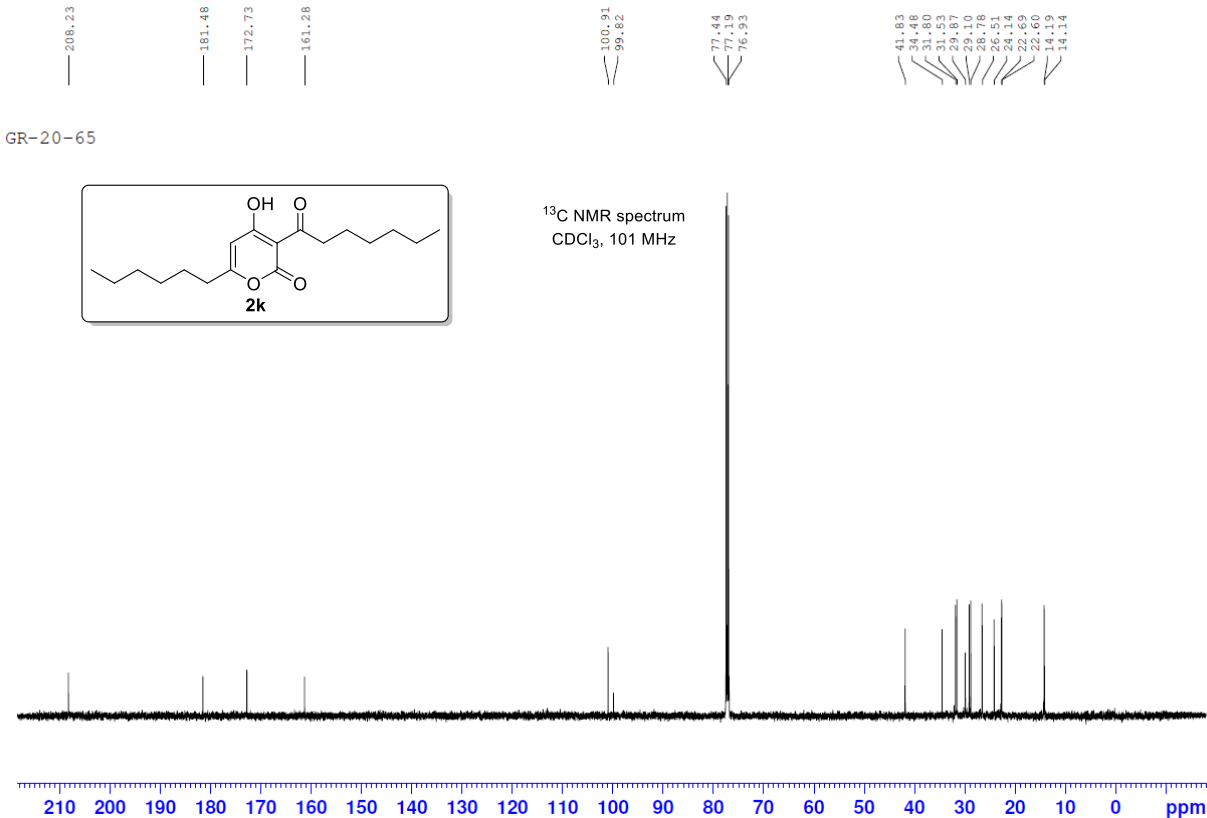


GR 20 65



1H NMR spectrum
 $CDCl_3$, 400 MHz



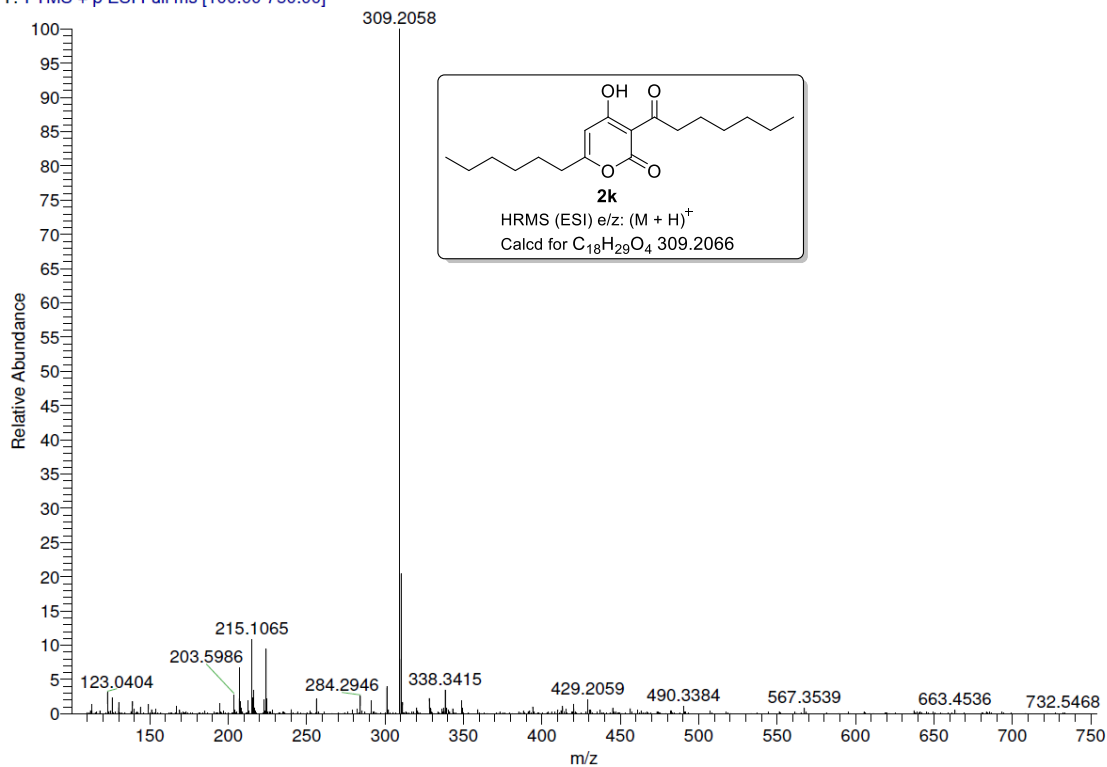


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5/11/2020 12:11:58 PM

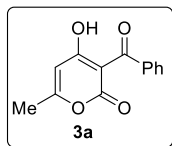
GR-20-65

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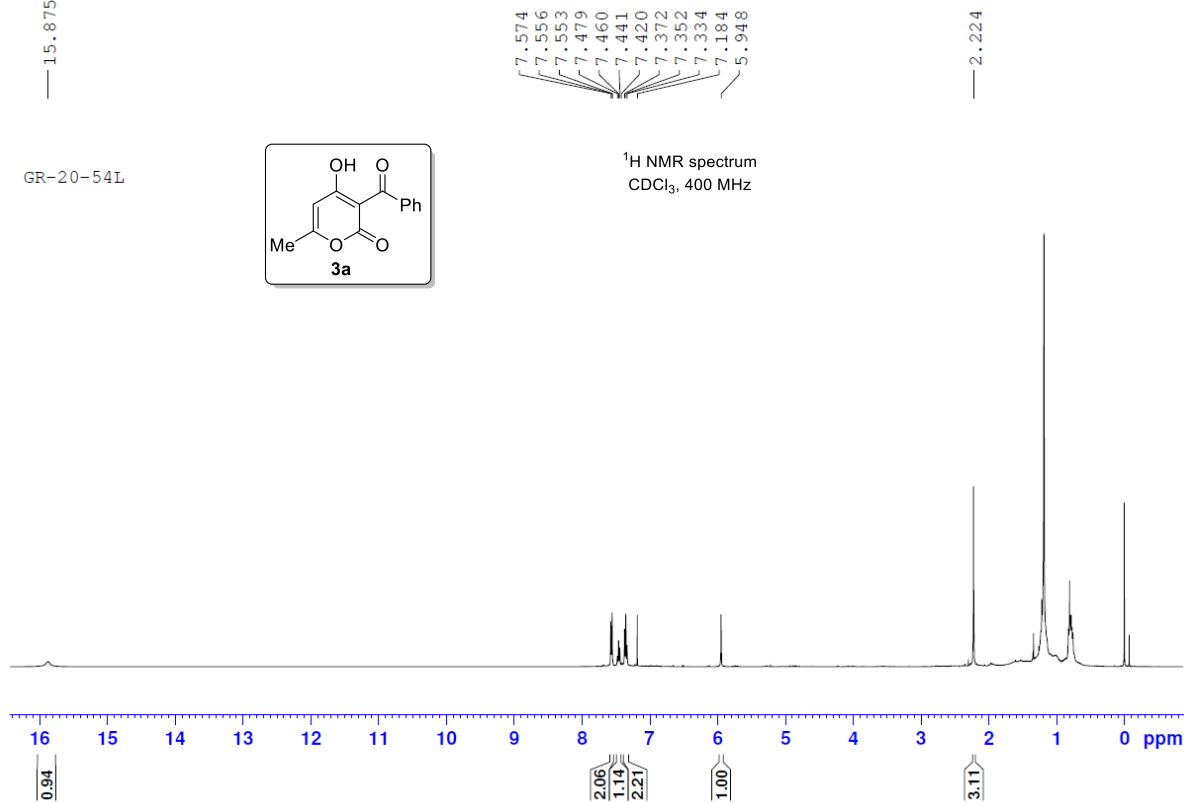


— 15.875

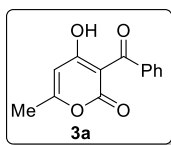
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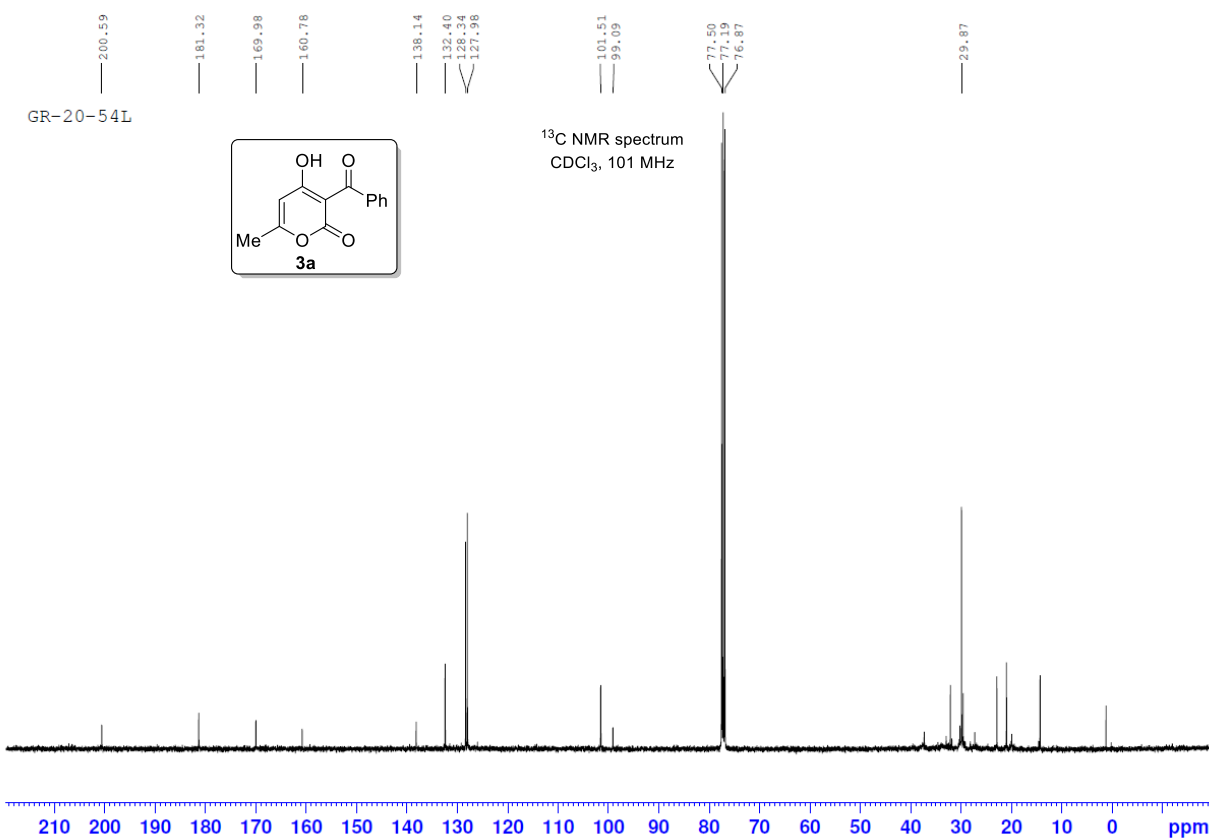
¹H NMR spectrum
CDCl₃, 400 MHz



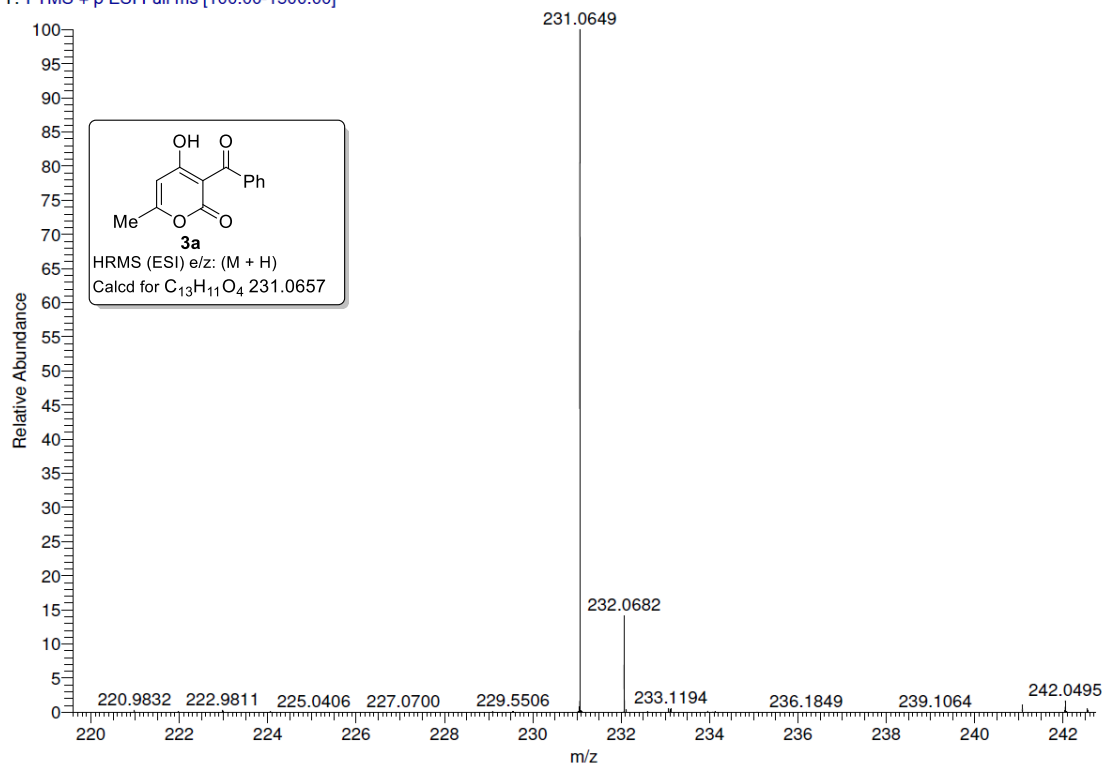
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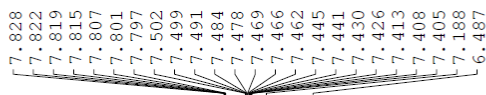
¹³C NMR spectrum
CDCl₃, 101 MHz



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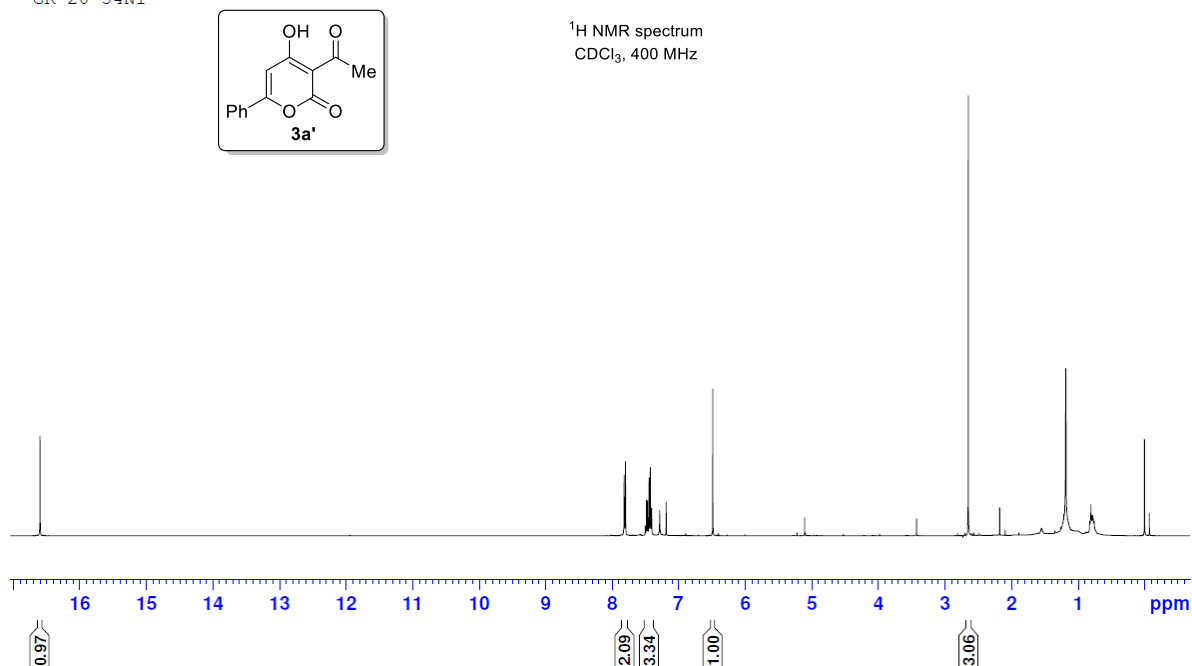


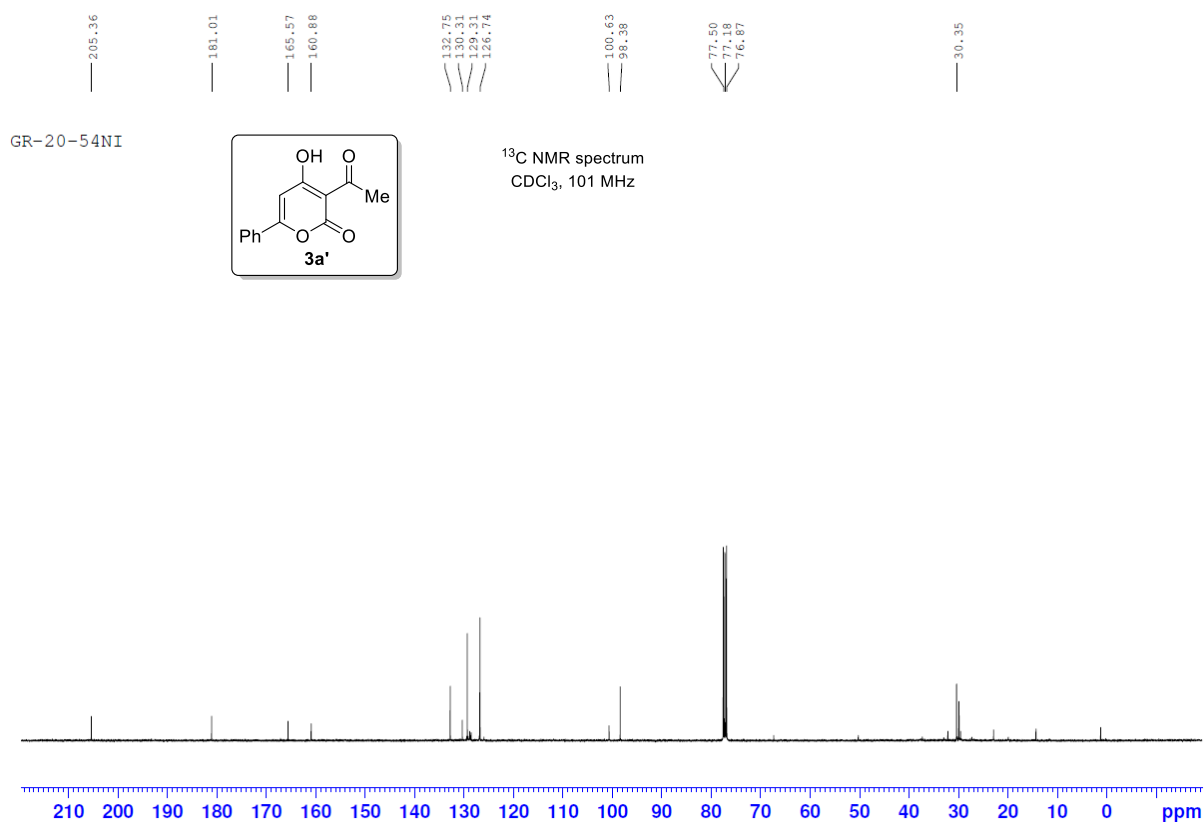
16.598



2.648

GR-20-54NI



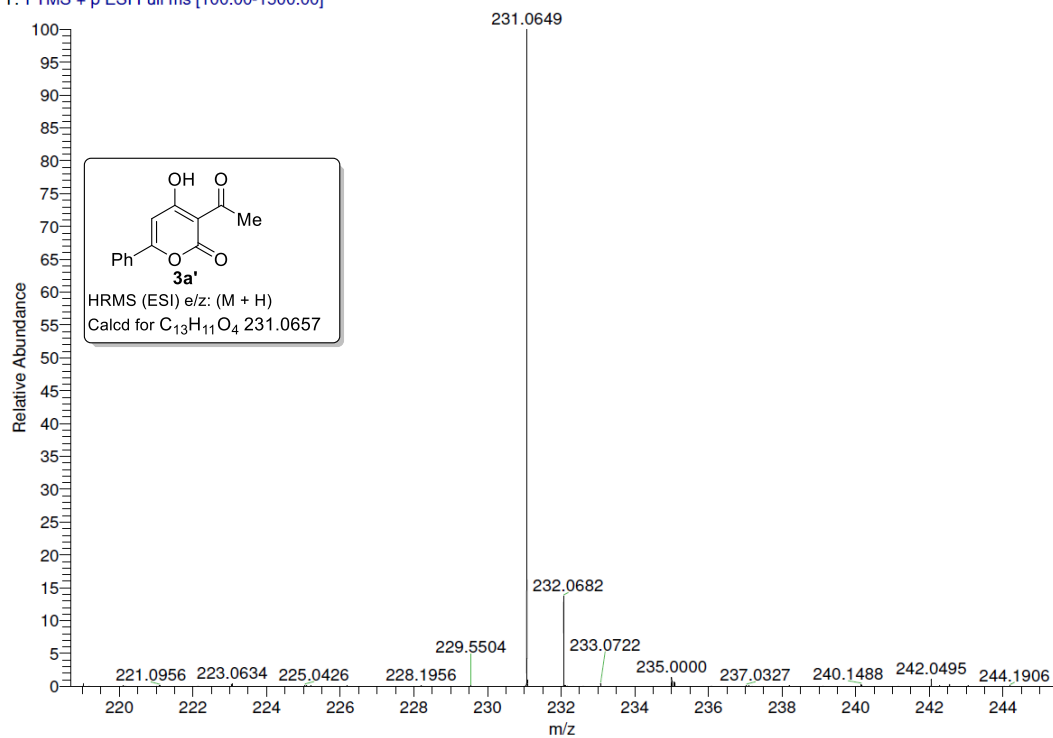


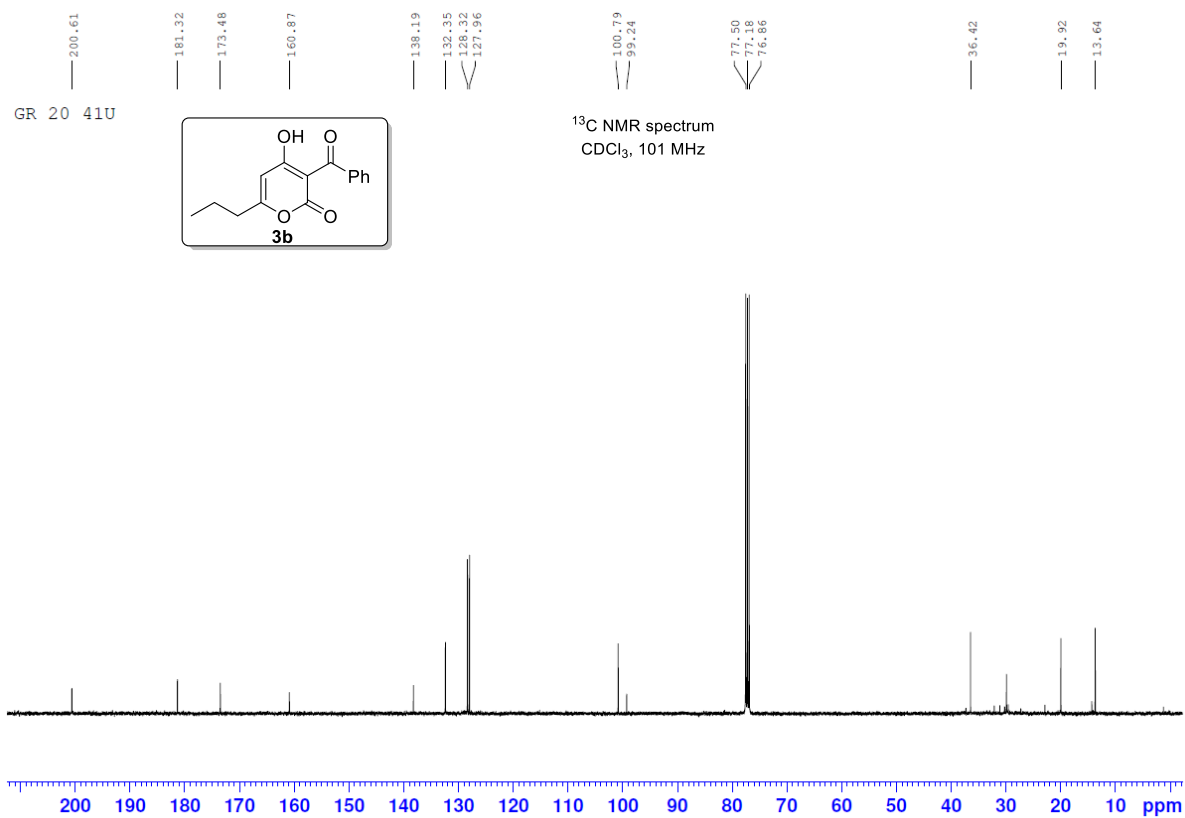
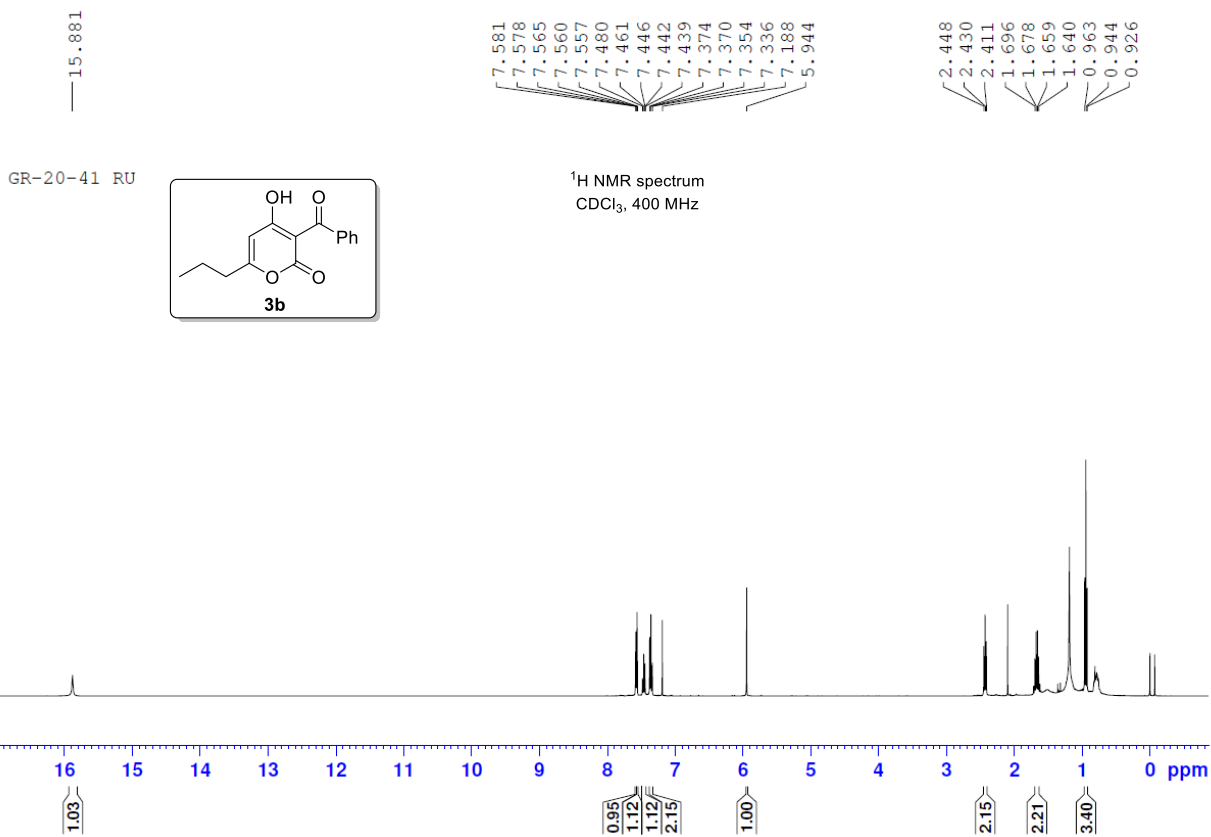
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3/2/2020 11:37:33 AM

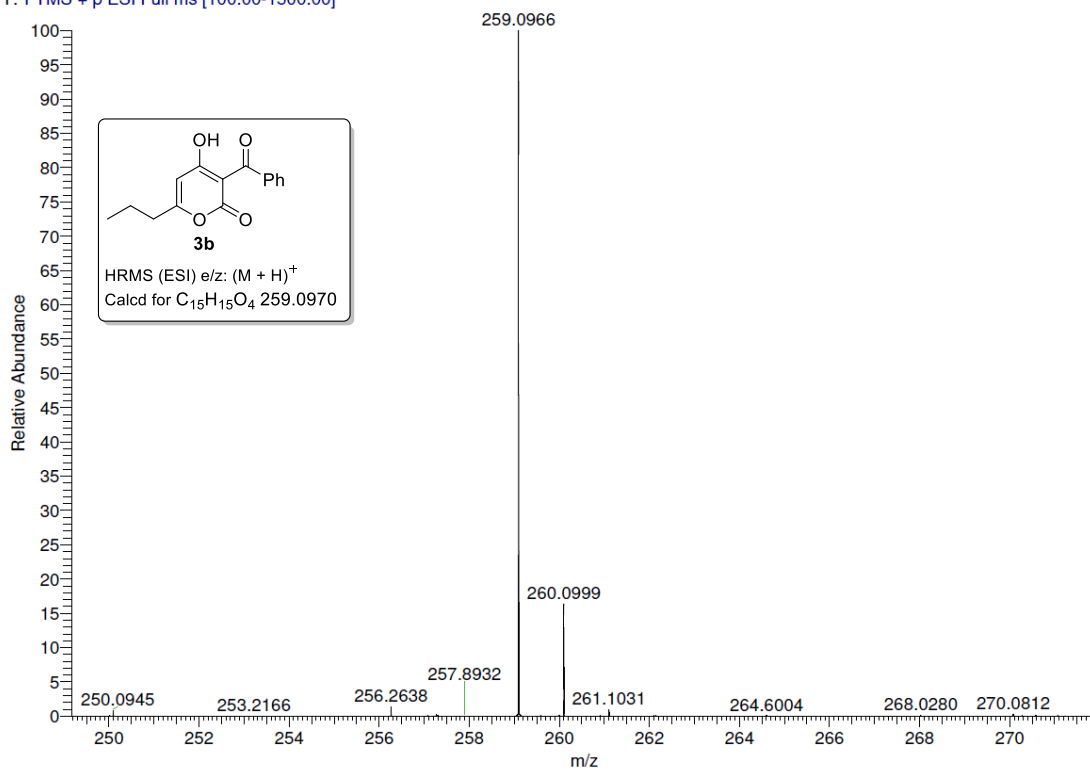
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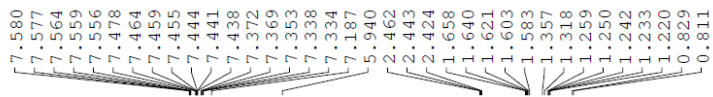




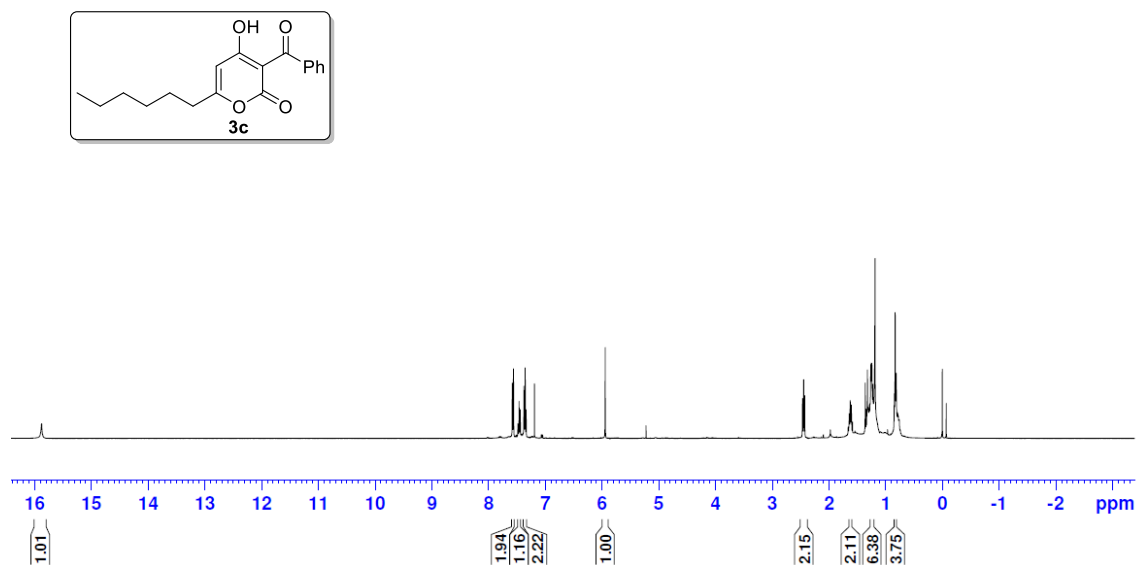
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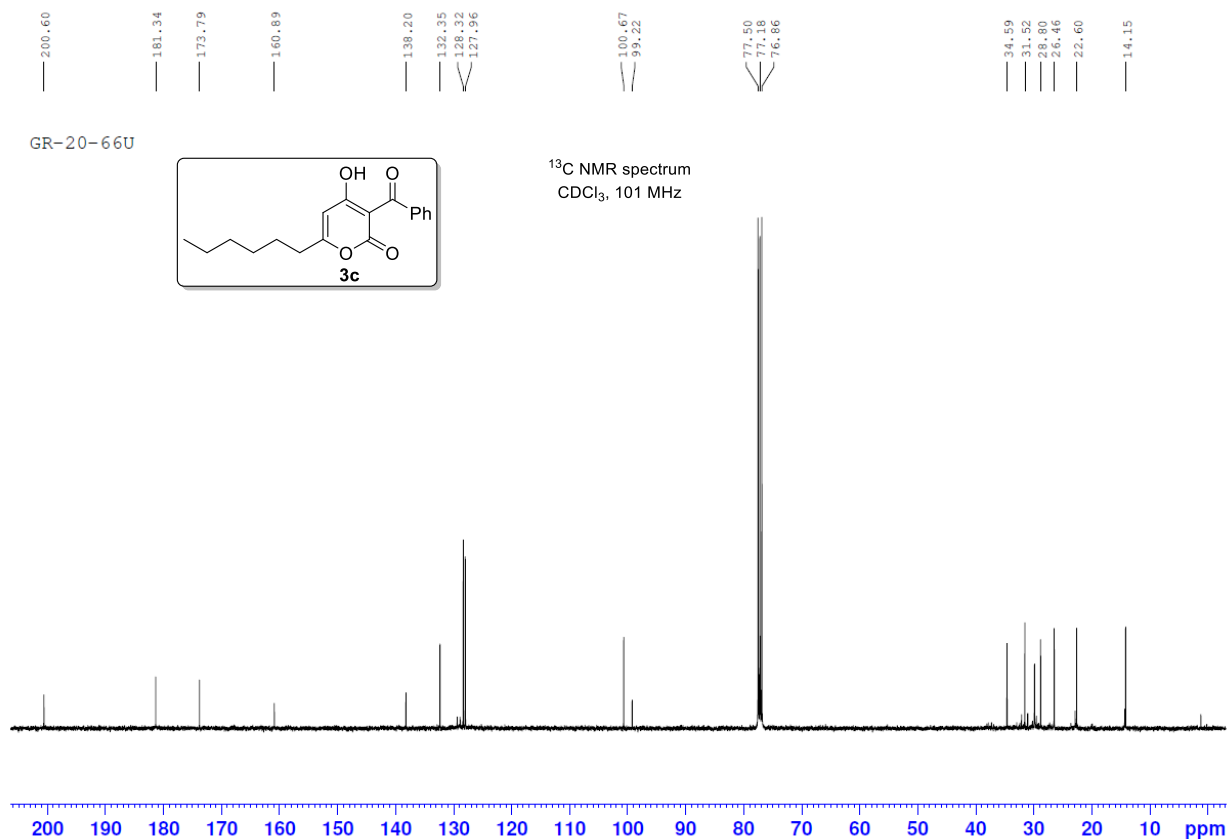


15.878



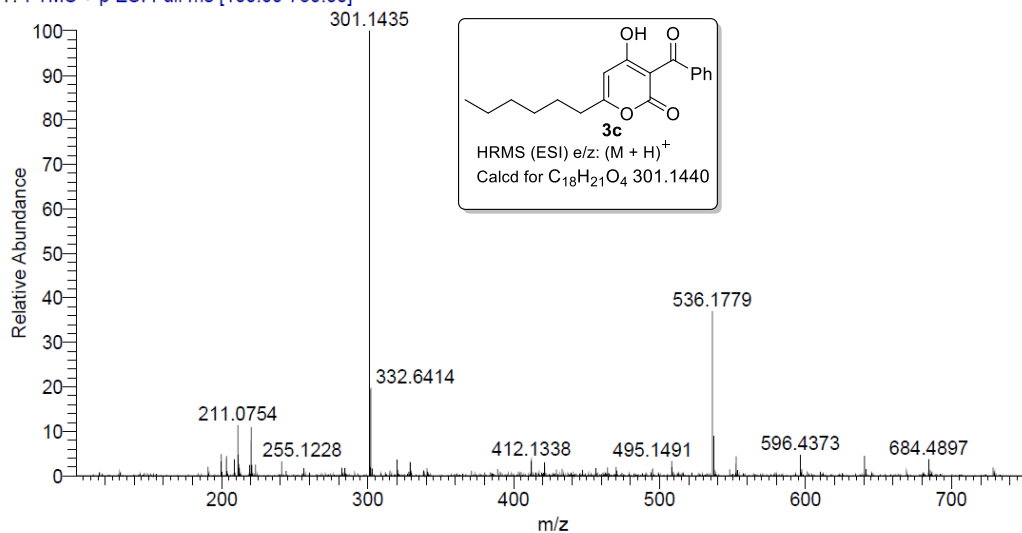
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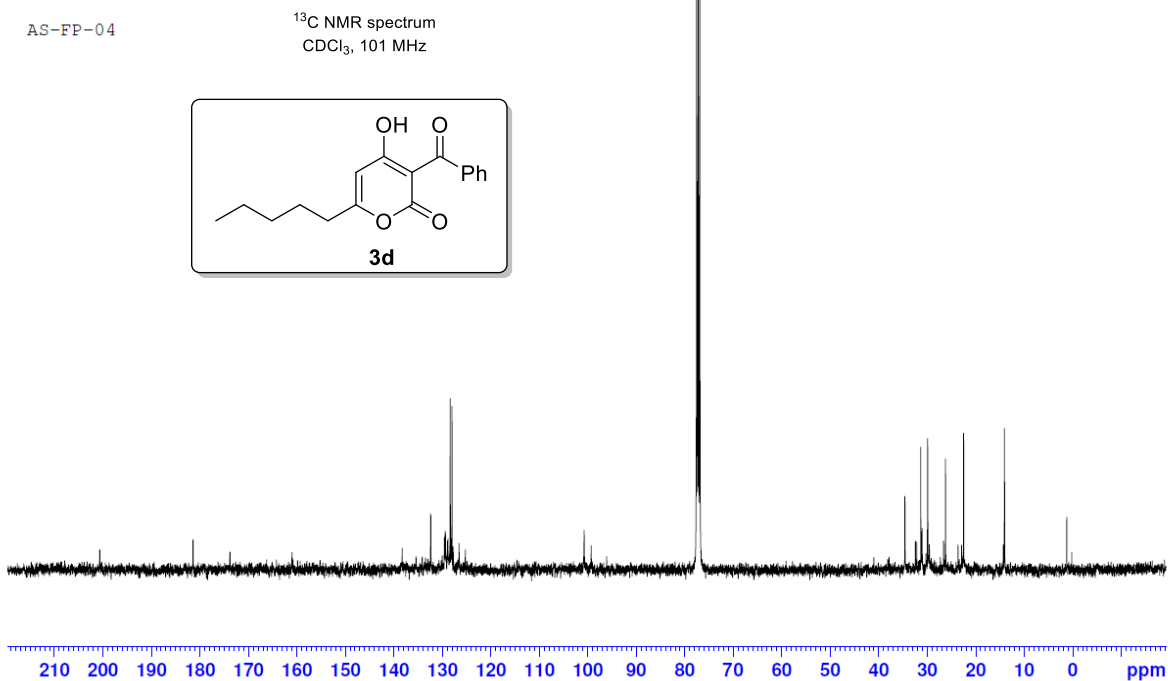
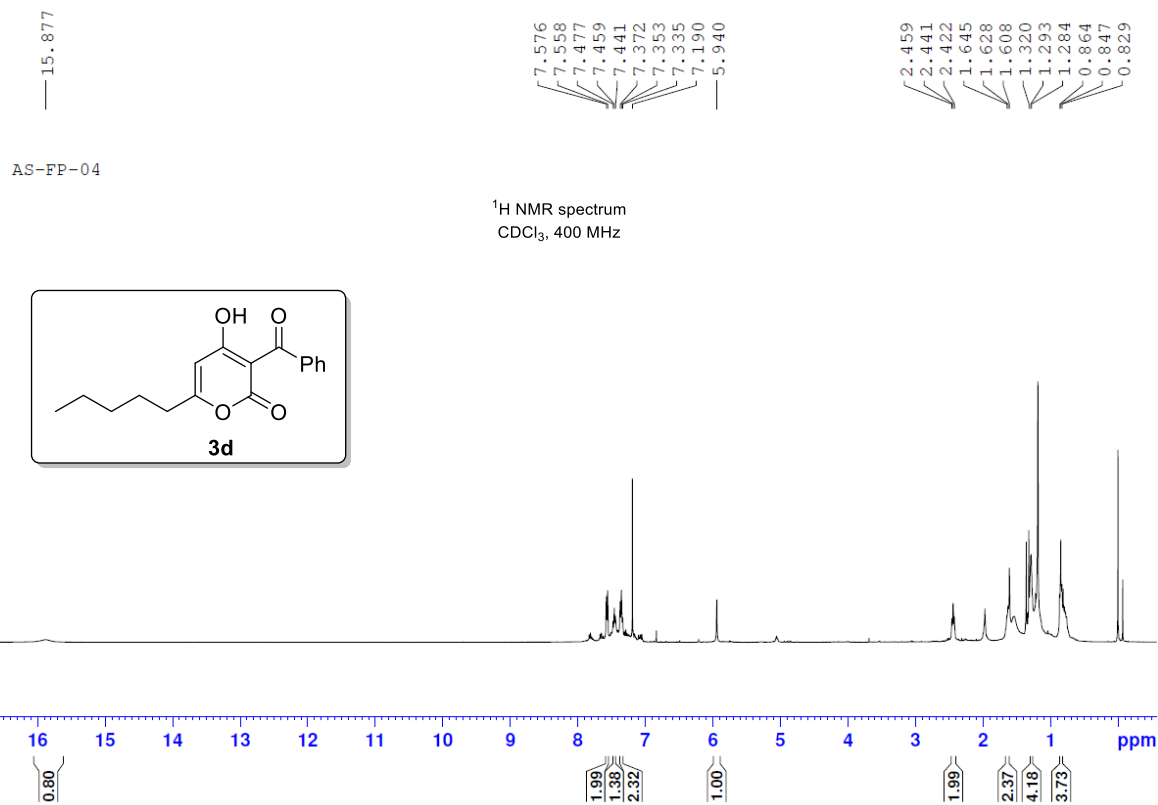




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Vial:	CStk1-01:01	Injection Volume(μl):	1.00

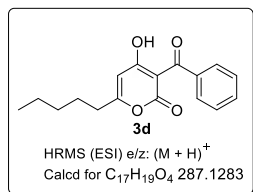
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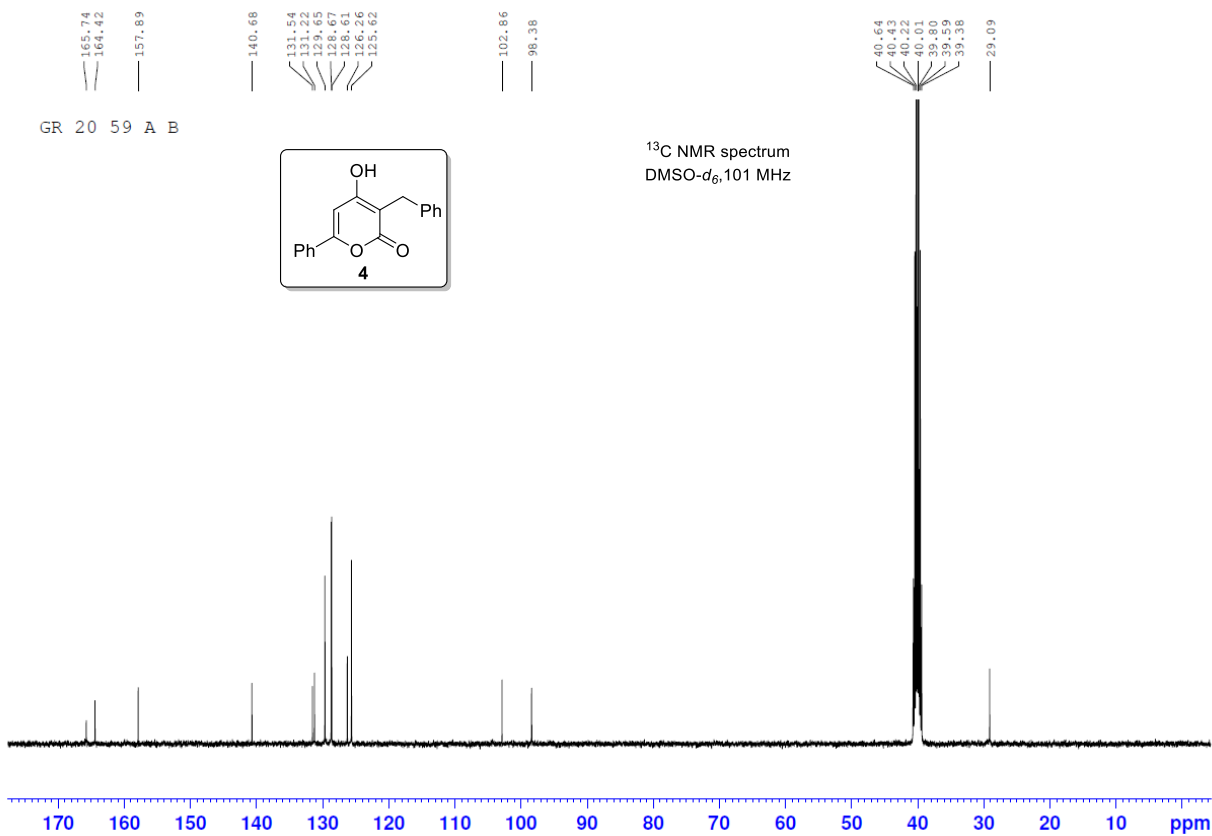
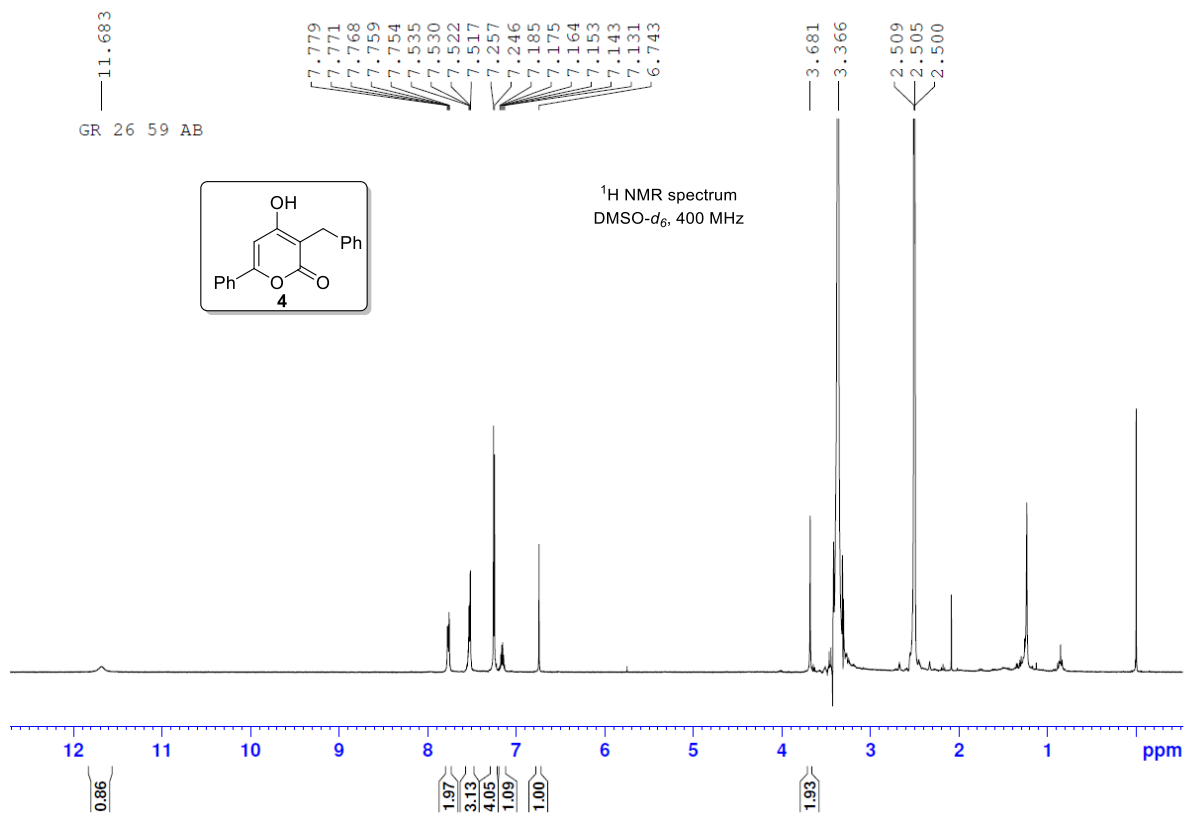




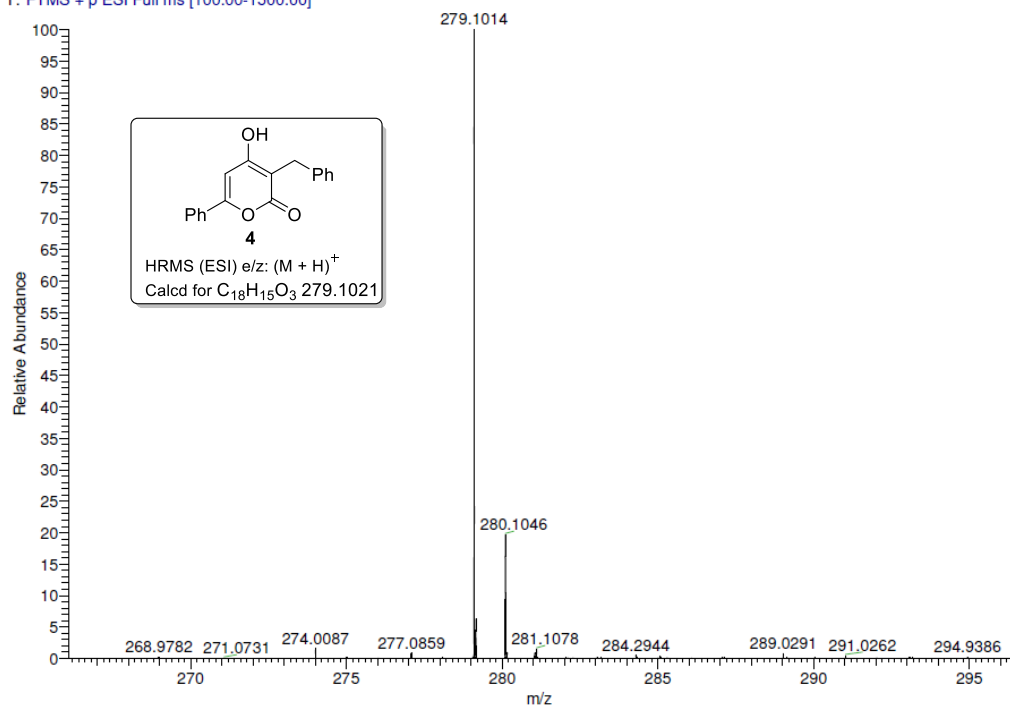
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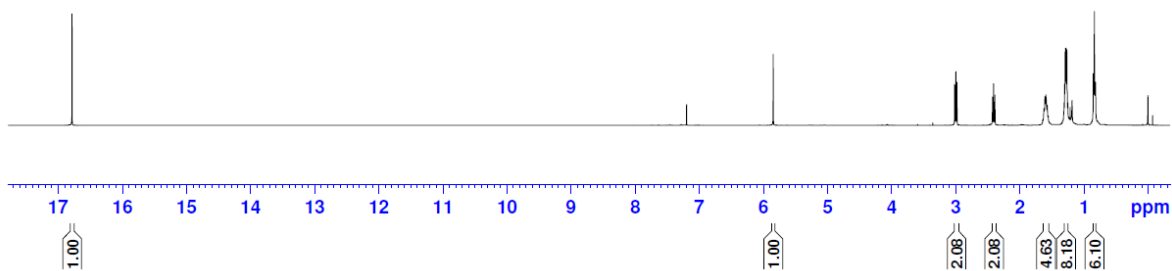
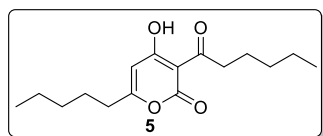


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T: FTMS + p ESI Full ms [100.00-1500.00]



GR 20 61 U
16.784

¹H NMR spectrum
CDCl₃, 400 MHz



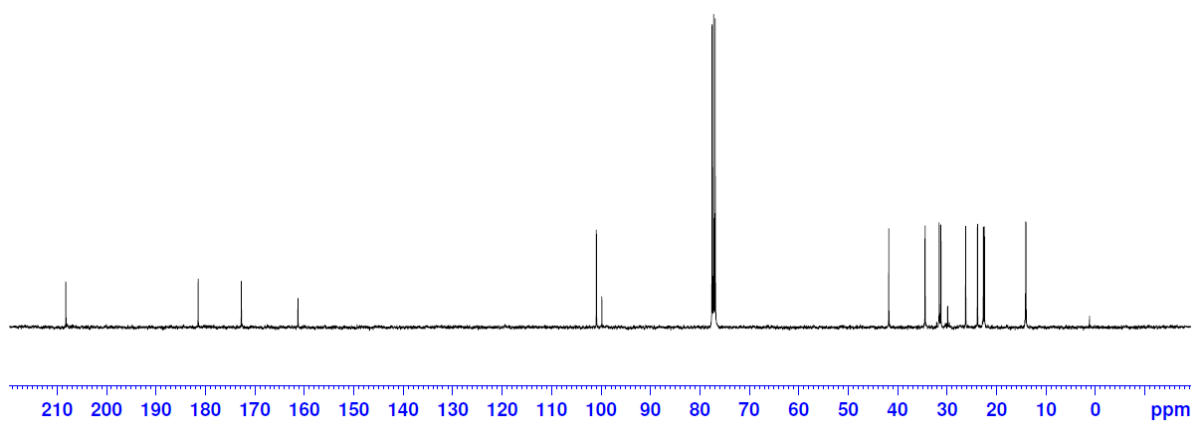
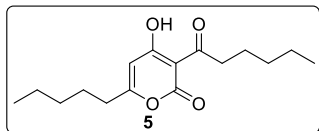
208.20
181.44
172.70
161.26

100.89
99.79
77.50
77.18
76.86

41.77
34.42
31.56
31.22
26.21
25.83
22.64
22.42
14.08
14.00

GR 20 61 R

¹³C NMR spectrum
CDCl₃, 101 MHz

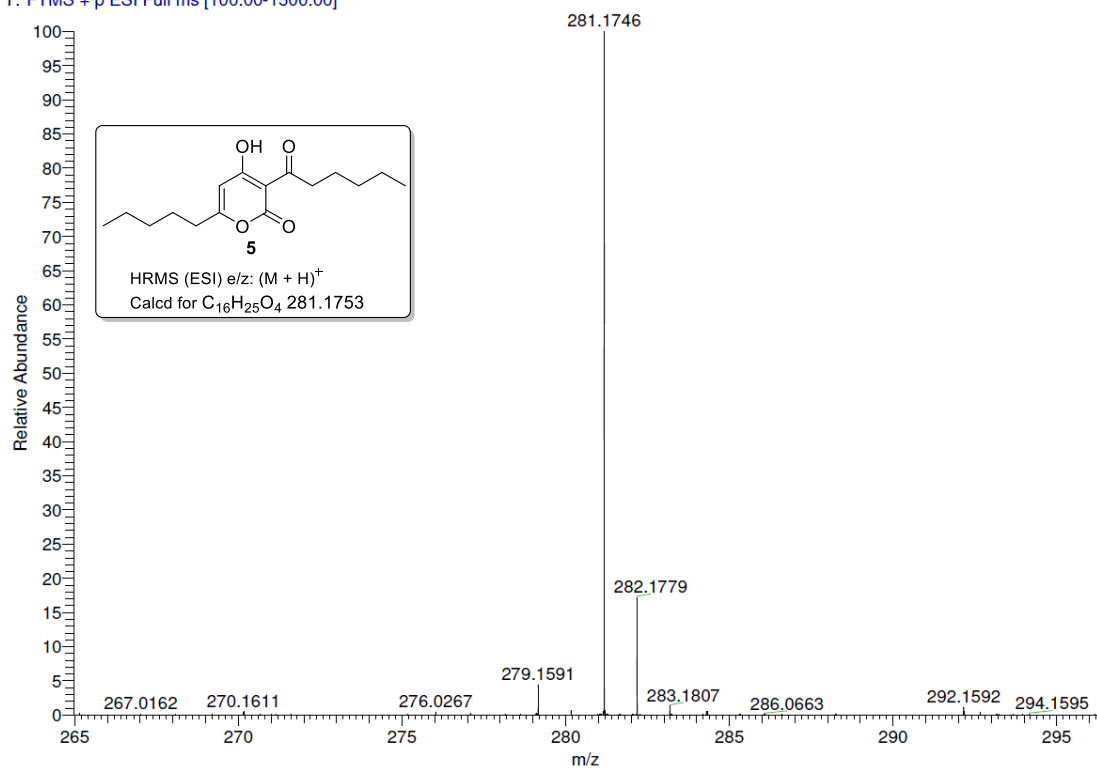


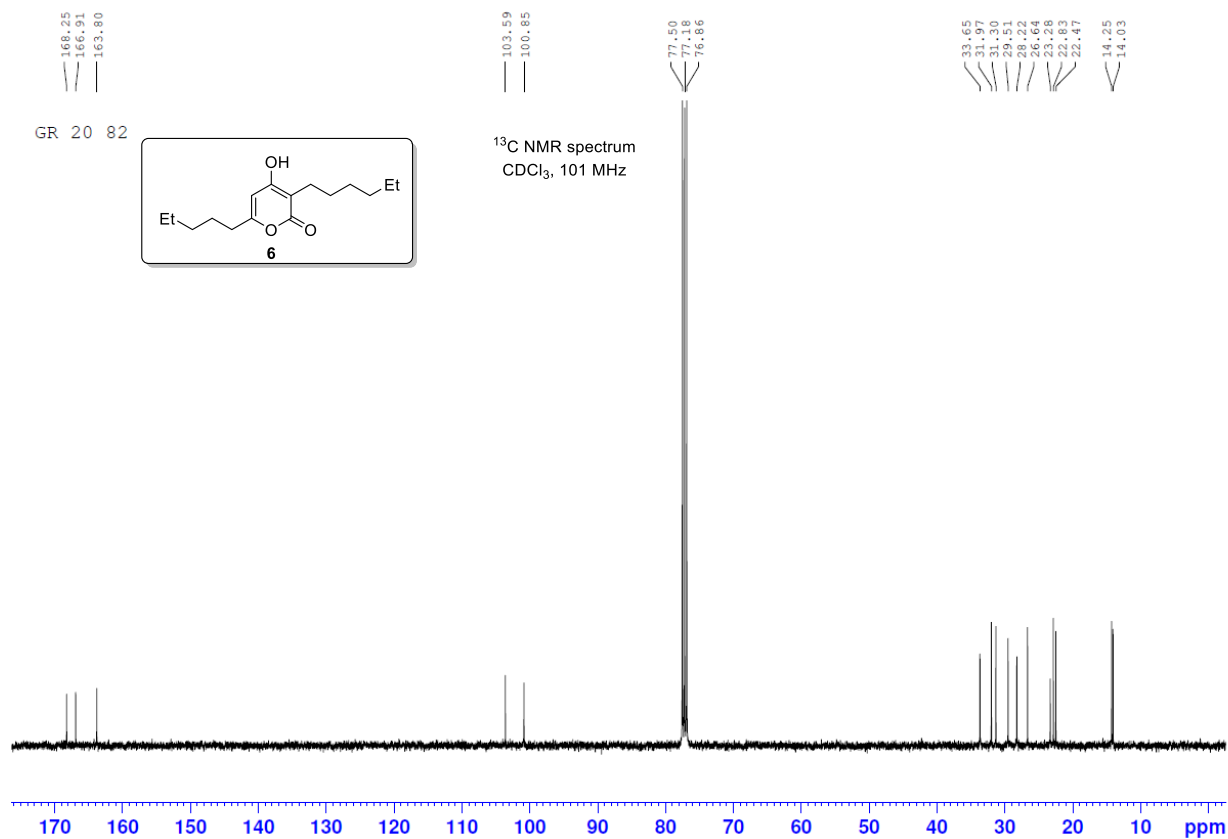
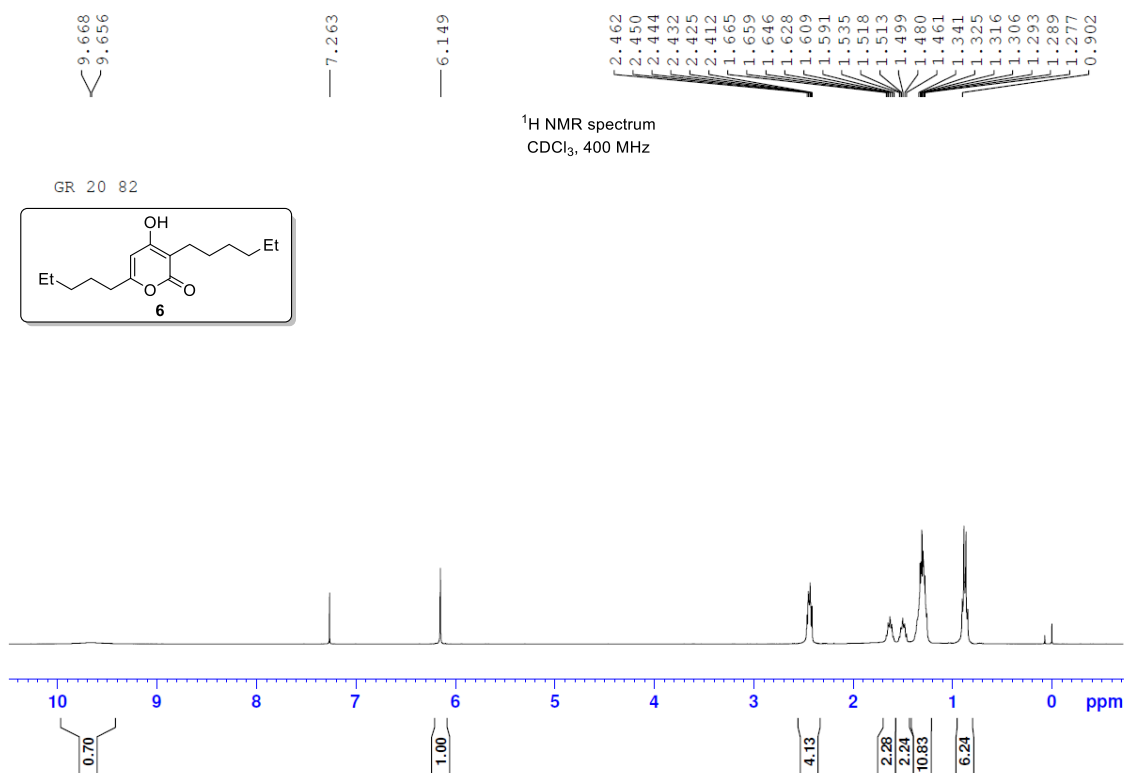
D:\INTERNALS\2020\Mar2020\HRMS20113MAR01

3/13/2020 11:19:08 AM

GR-20-61

HRMS20113MAR01 #25 RT: 0.18 AV: 1 NL: 4.10E6
T: FTMS + p ESI Full ms [100.00-1500.00]

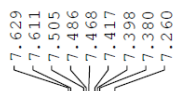
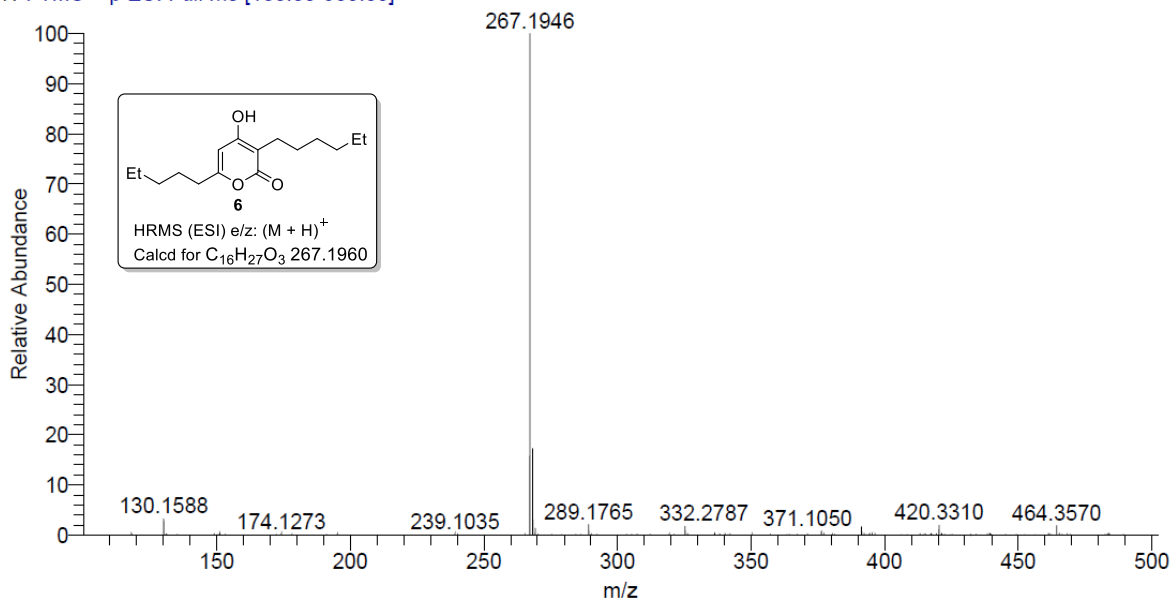




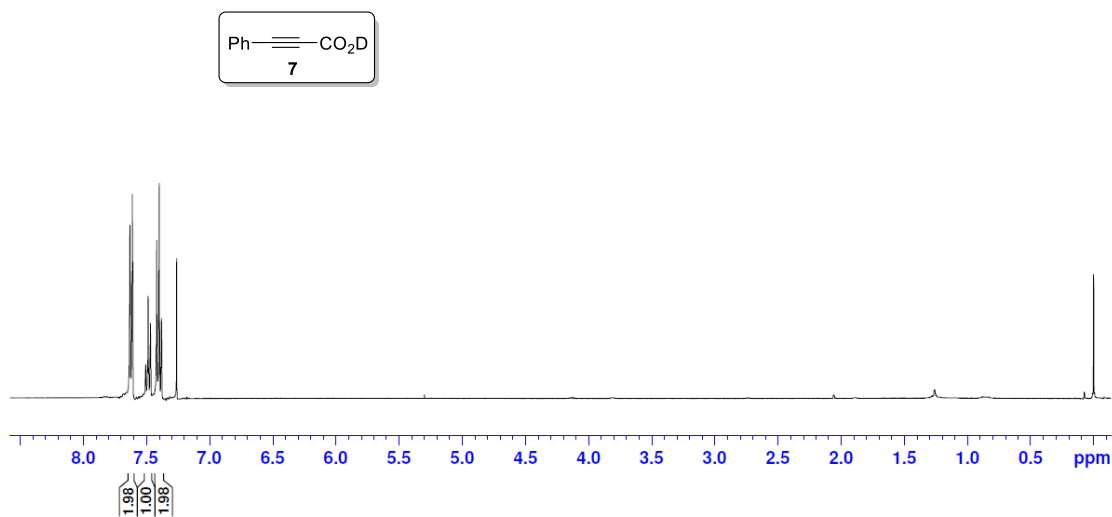
SAIF [HRMS Report]

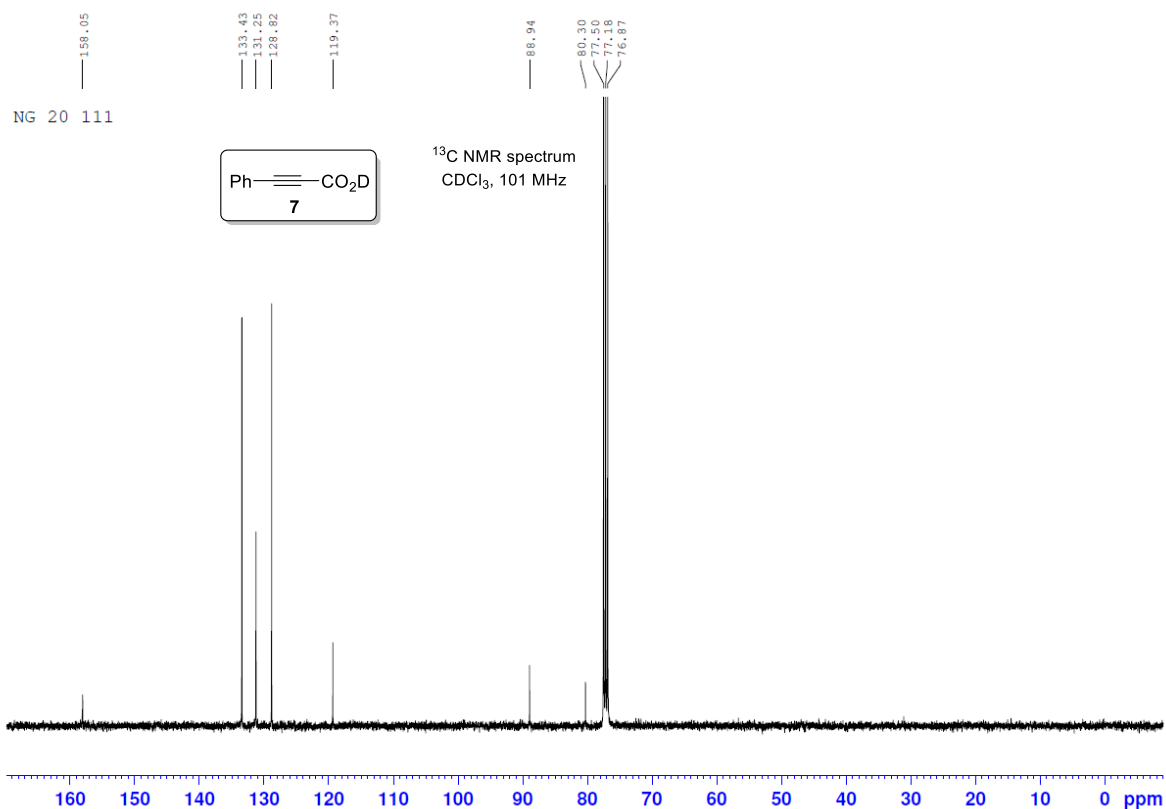
Data File:	HRMS20I20MAY24	Original Data Path:	D:\INTERNAL NEW\2020\MAY 2020
Sample ID:	GR-20-82	Sample Name:	
Acquisition Date:	05/20/20 11:49:13 AM	Run Time(min):	0.00
Vial:	CStk1-01:24	Injection Volume(μl):	1.00

HRMS20I20MAY24 #11-25 RT: 0.11-0.21 AV: 15 SB: 1 0.01 NL: 9.63E6
T: FTMS + p ESI Full ms [100.00-500.00]

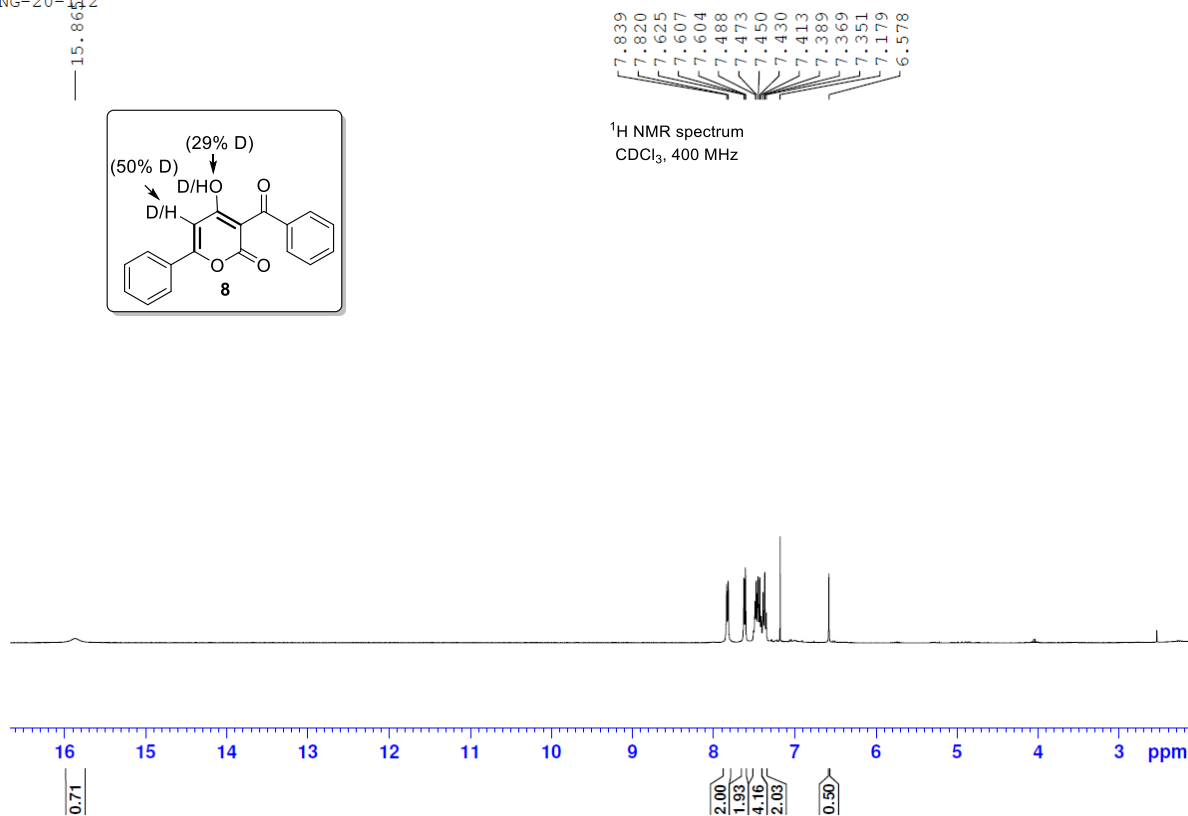


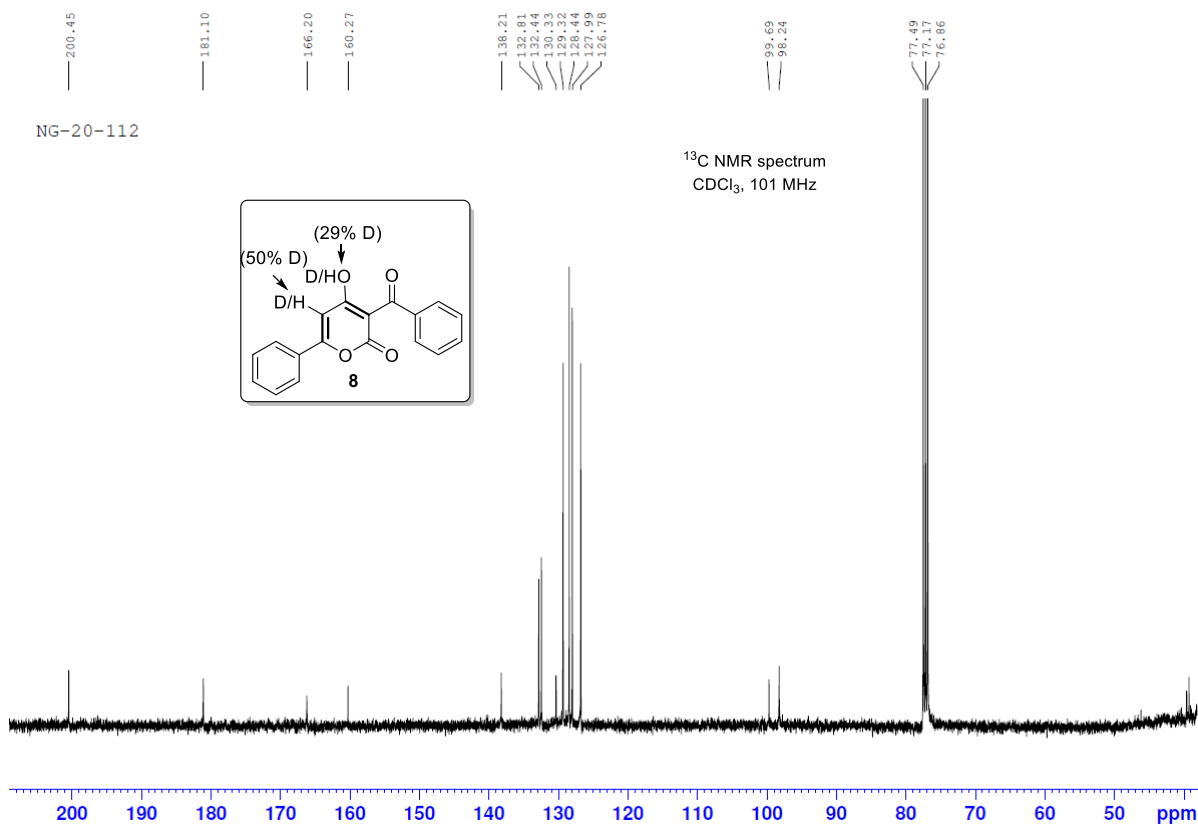
NG-20-111B





NG-20-112





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2/5/2020 11:57:53 AM

NG-20-112

HRMS20I05FEB19 #18-35 RT: 0.14-0.27 AV: 18 SB: 7 0.02-0.07 NL: 6.24E4
T: FTMS + p ESI Full ms [100.00-1500.00]

