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Design, Synthesis, *In silico* docking studies and biological evaluation of novel quinoxaline-hydrazide hydrazone-1,2,3-triazole hybrids as α -glucosidase inhibitors, antioxidants

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E-Mail: cvrsvu@gmail.com, Tel: +91 9849605140, Fax: +918772289555.

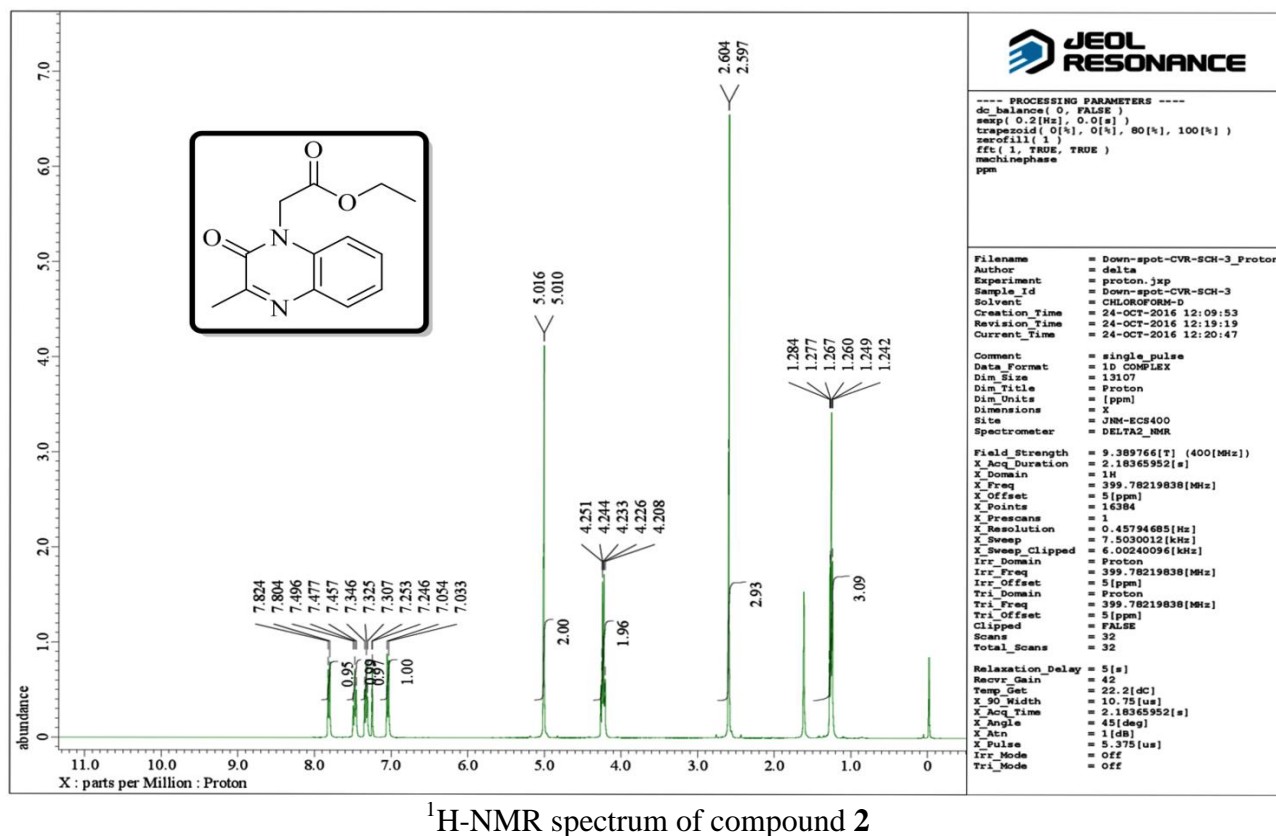
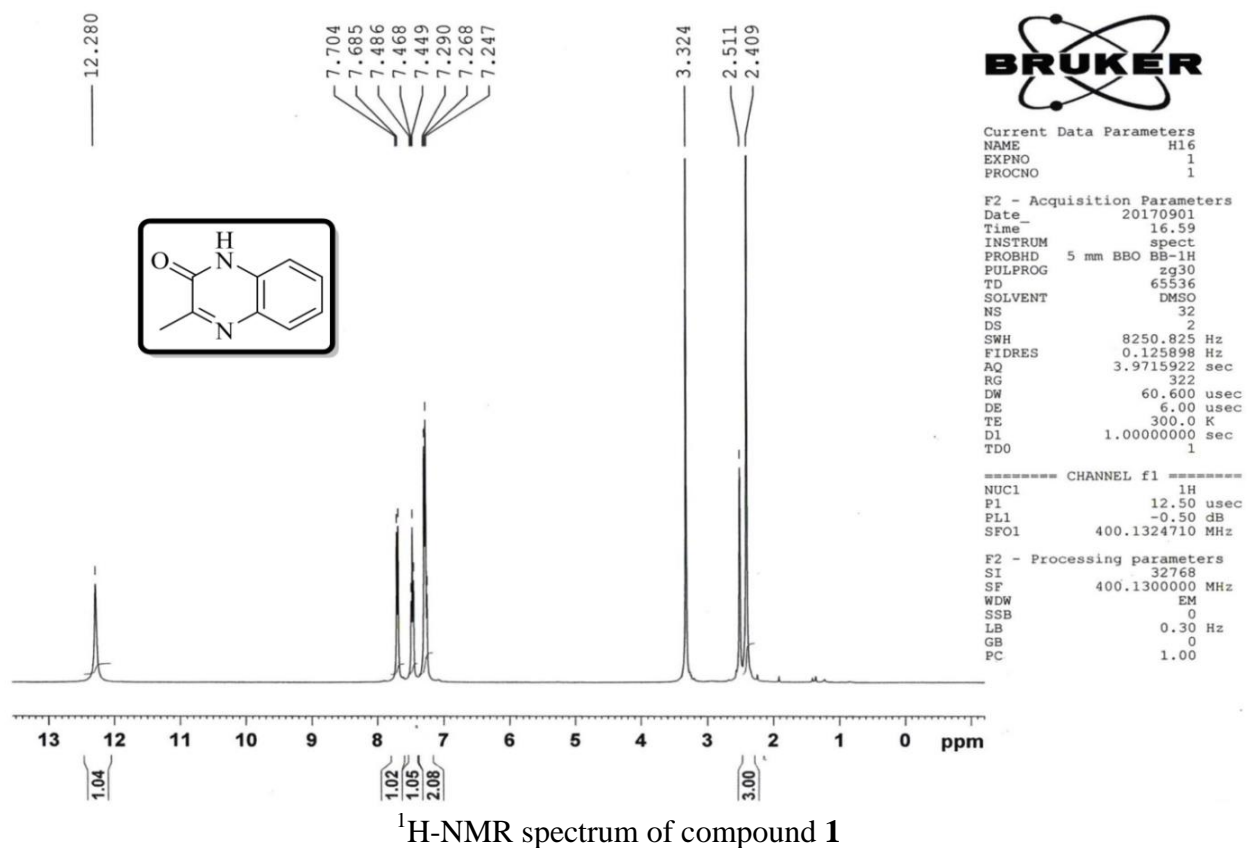
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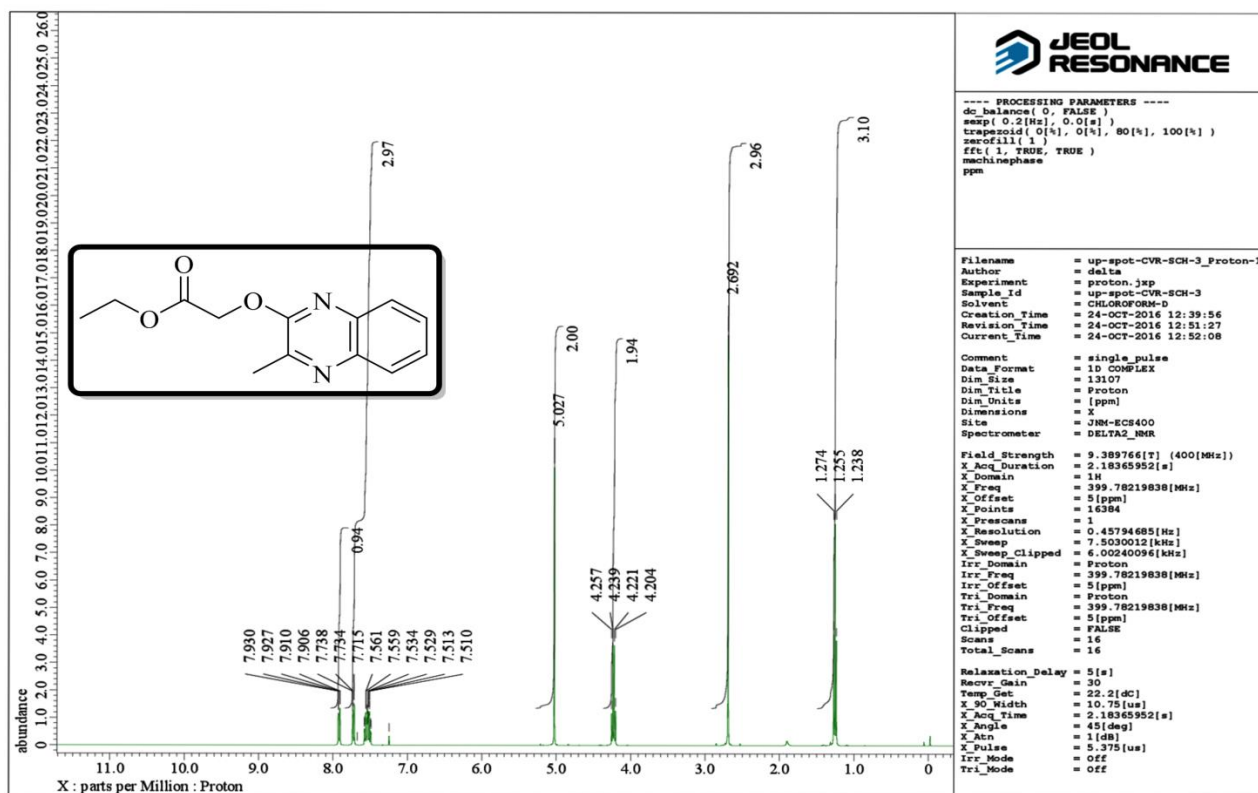
First author: Dr. Settypalli Triloknadh

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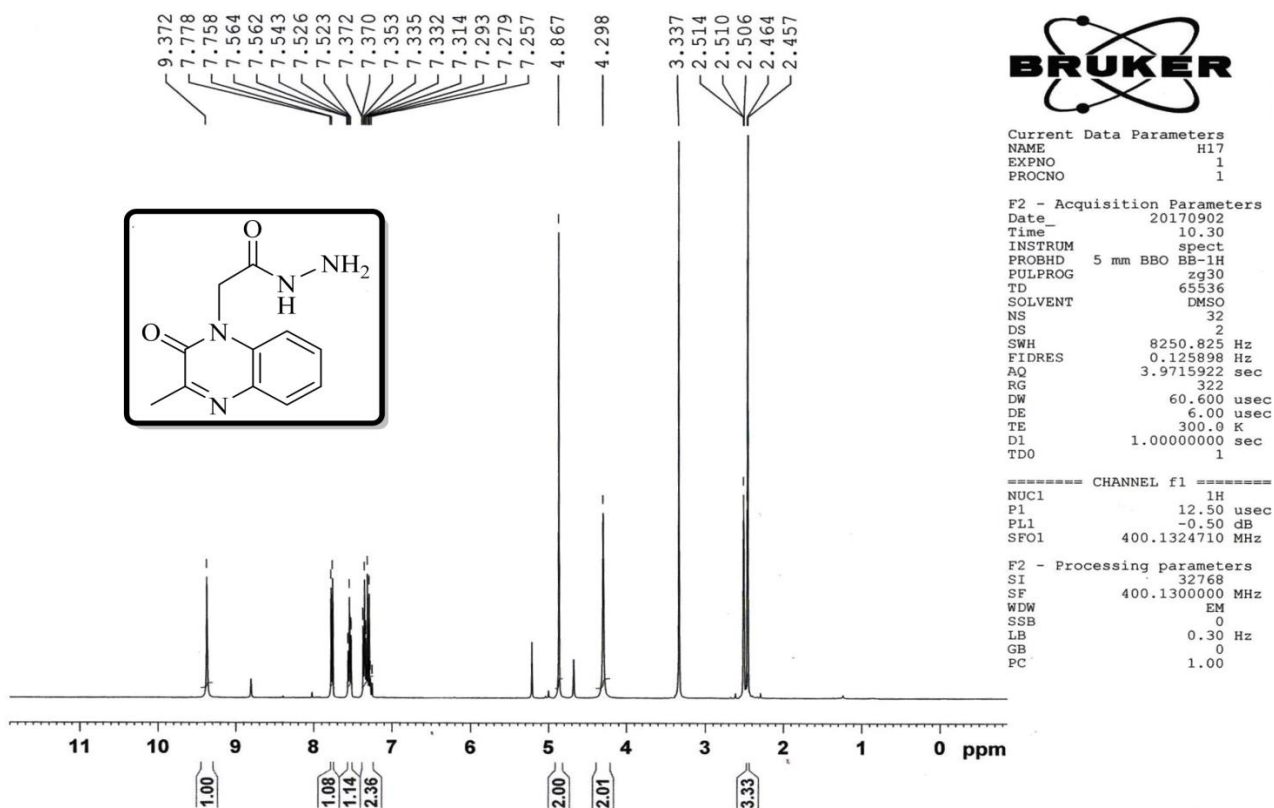
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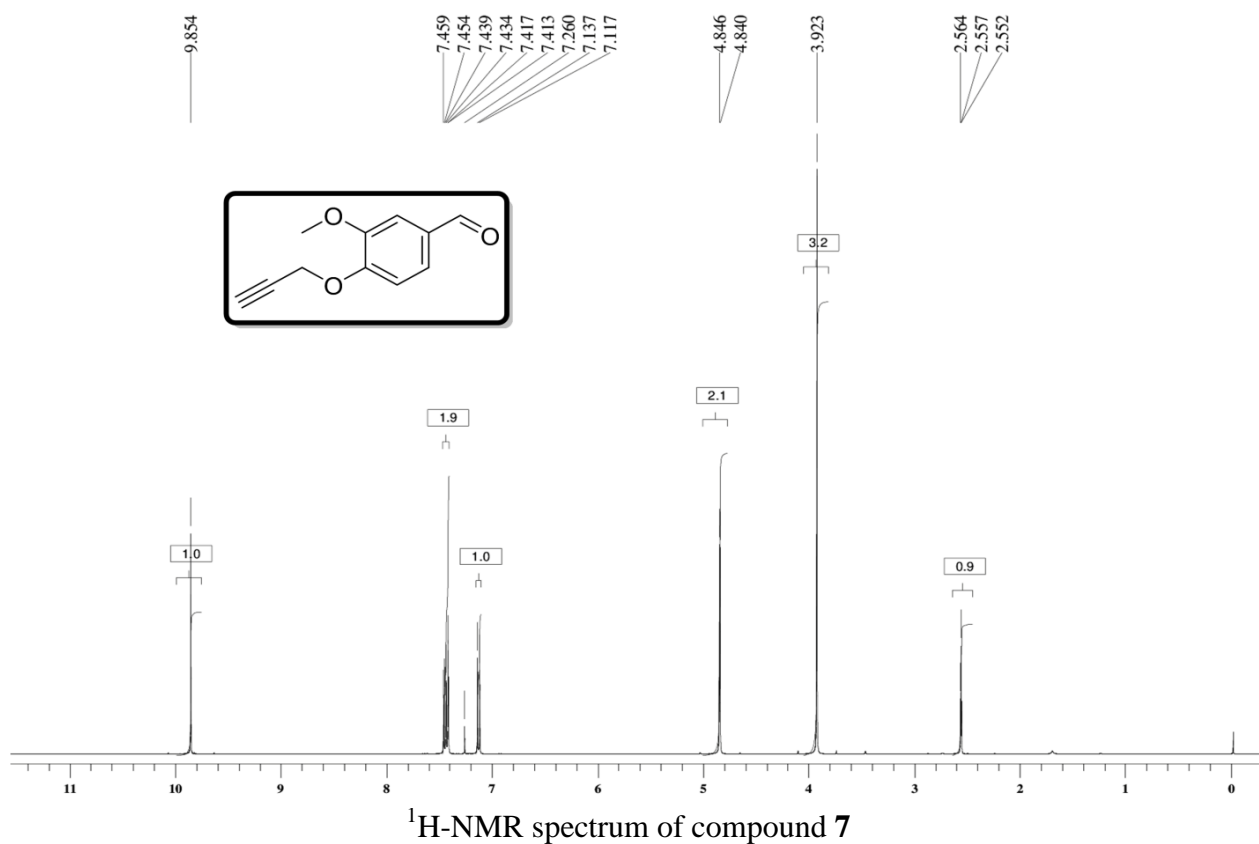
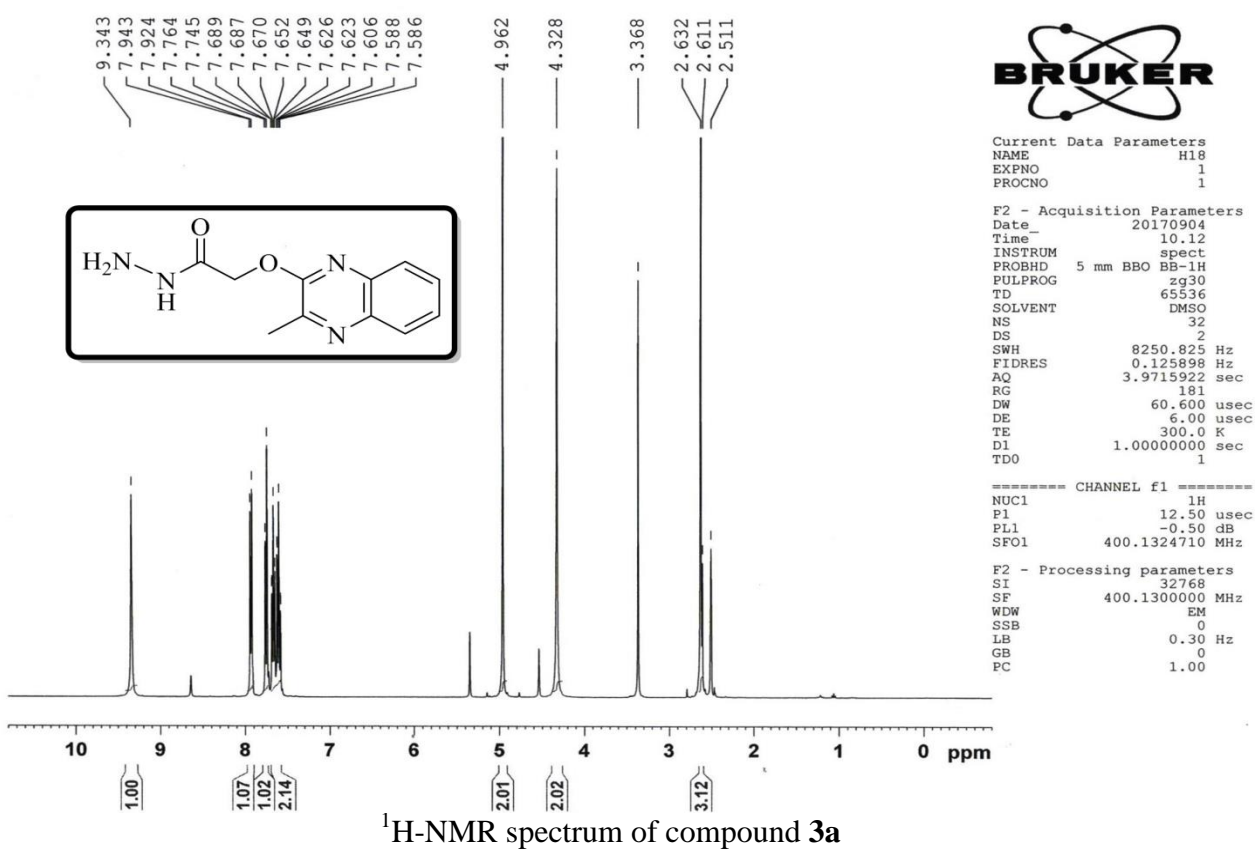


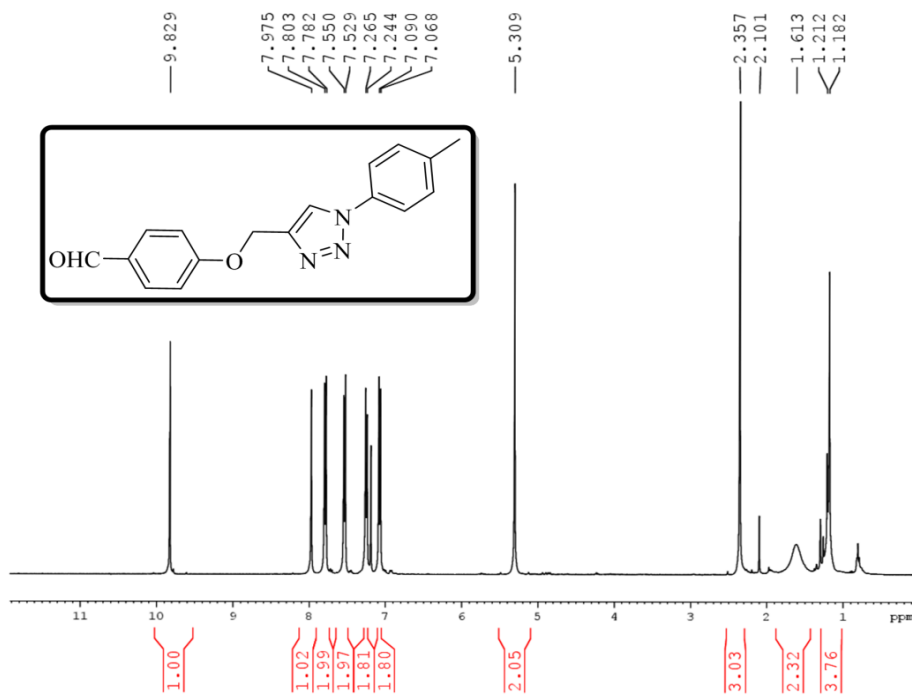


¹H-NMR spectrum of compound 2a



¹H-NMR spectrum of compound 3



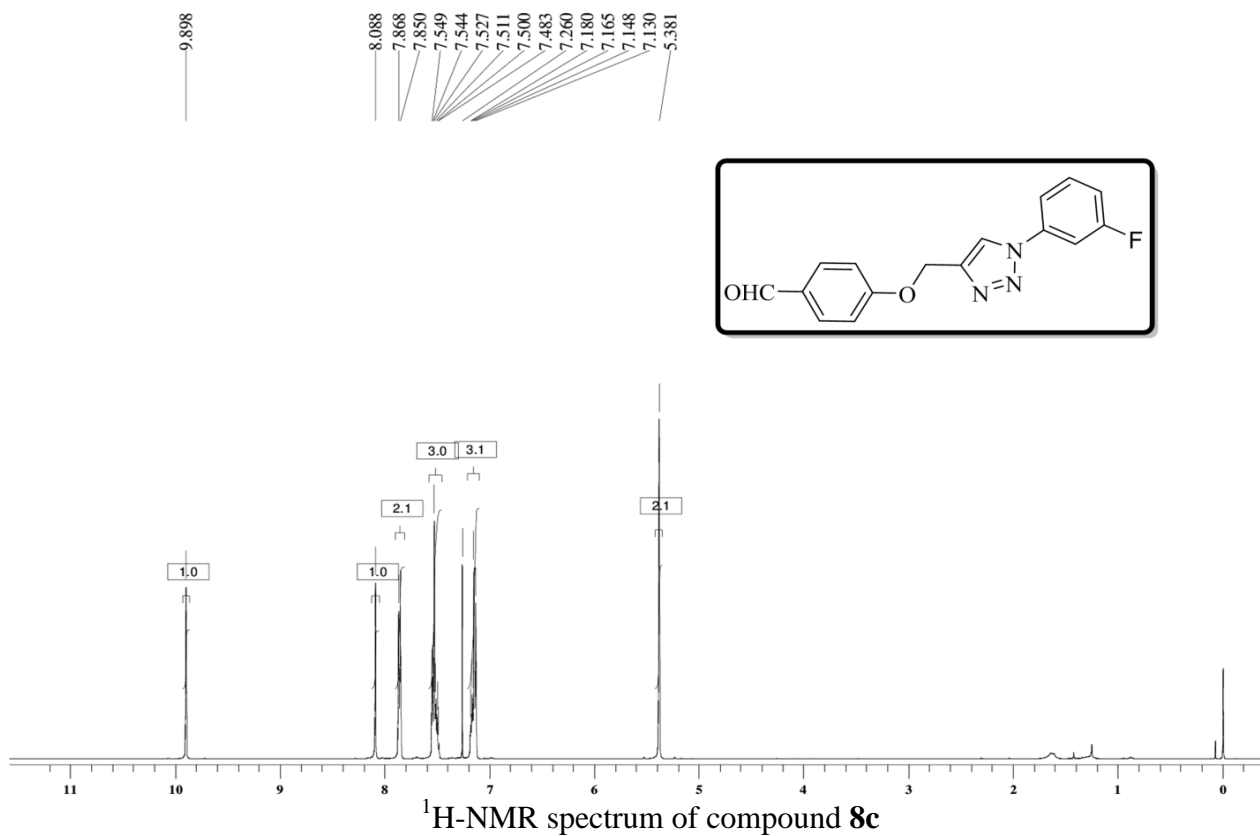


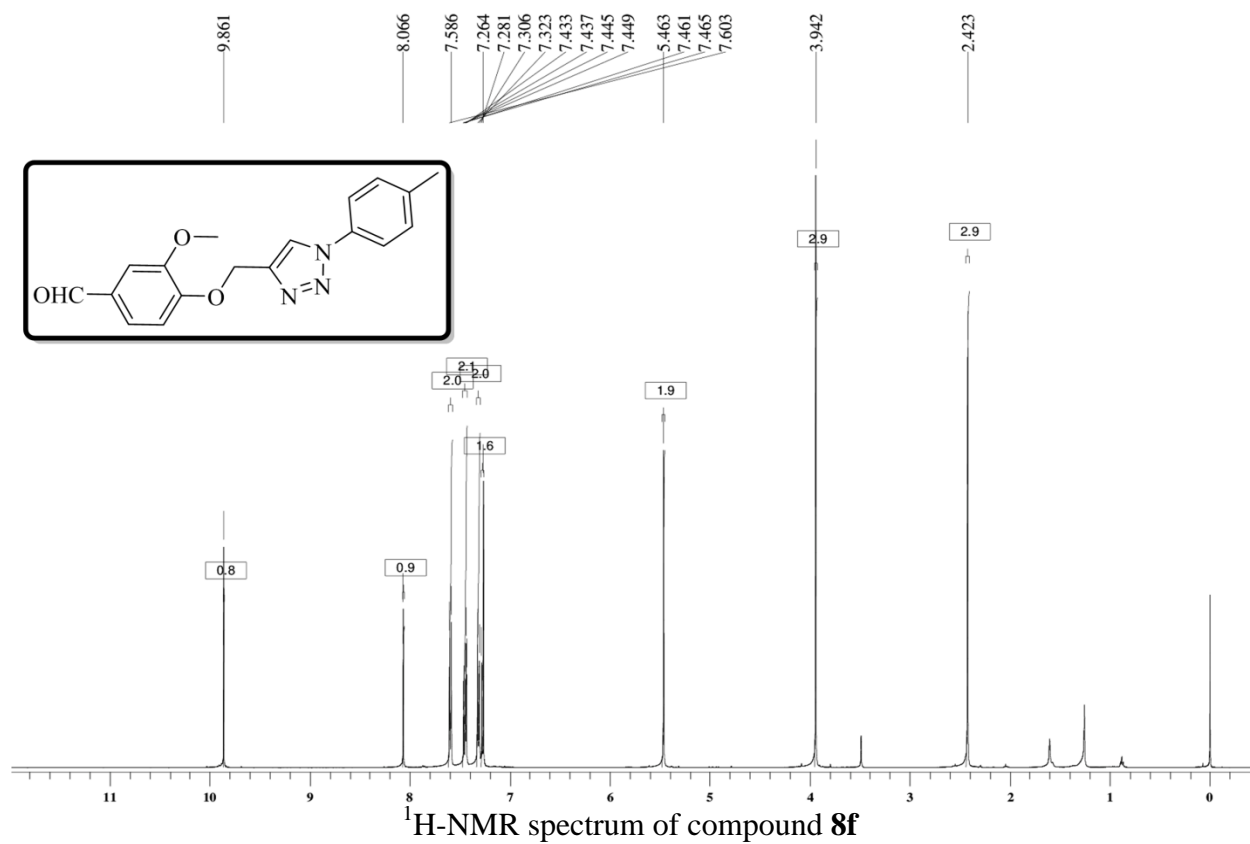
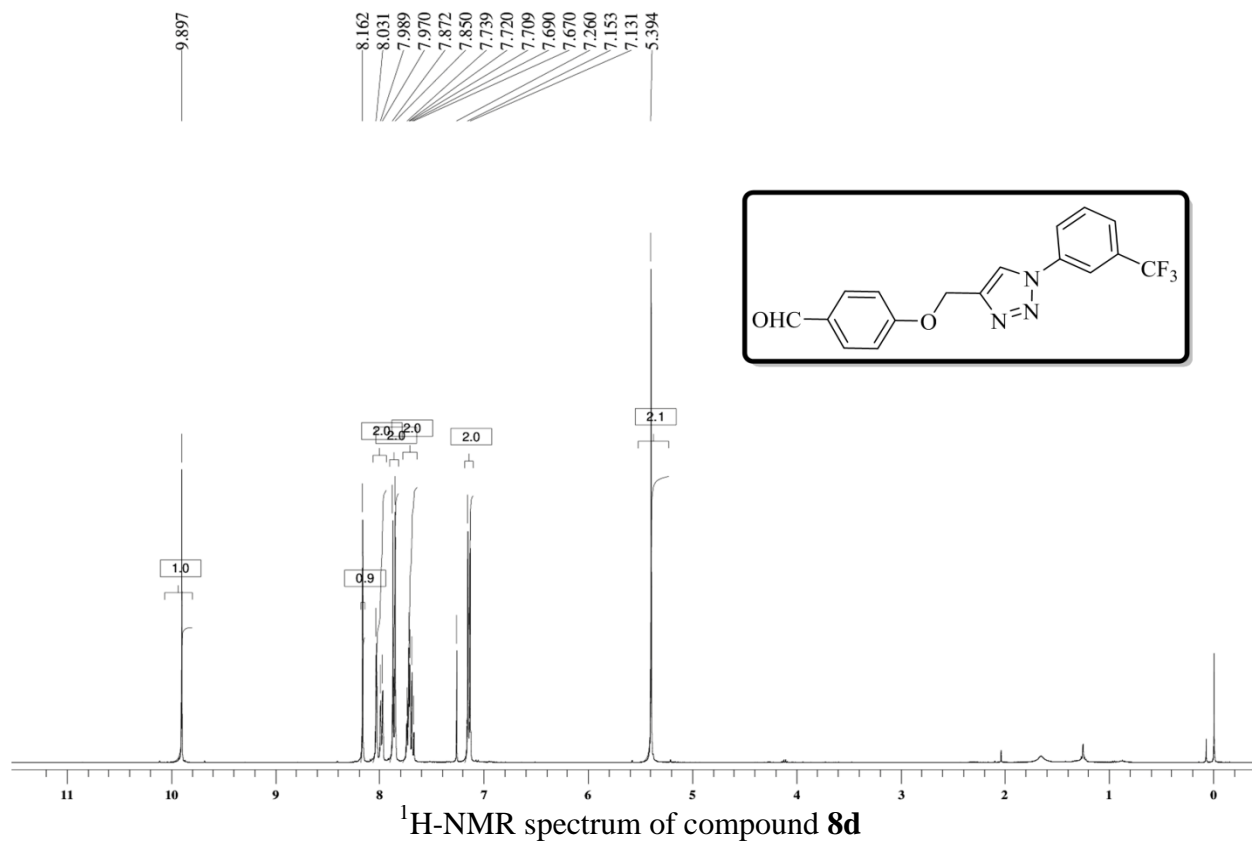
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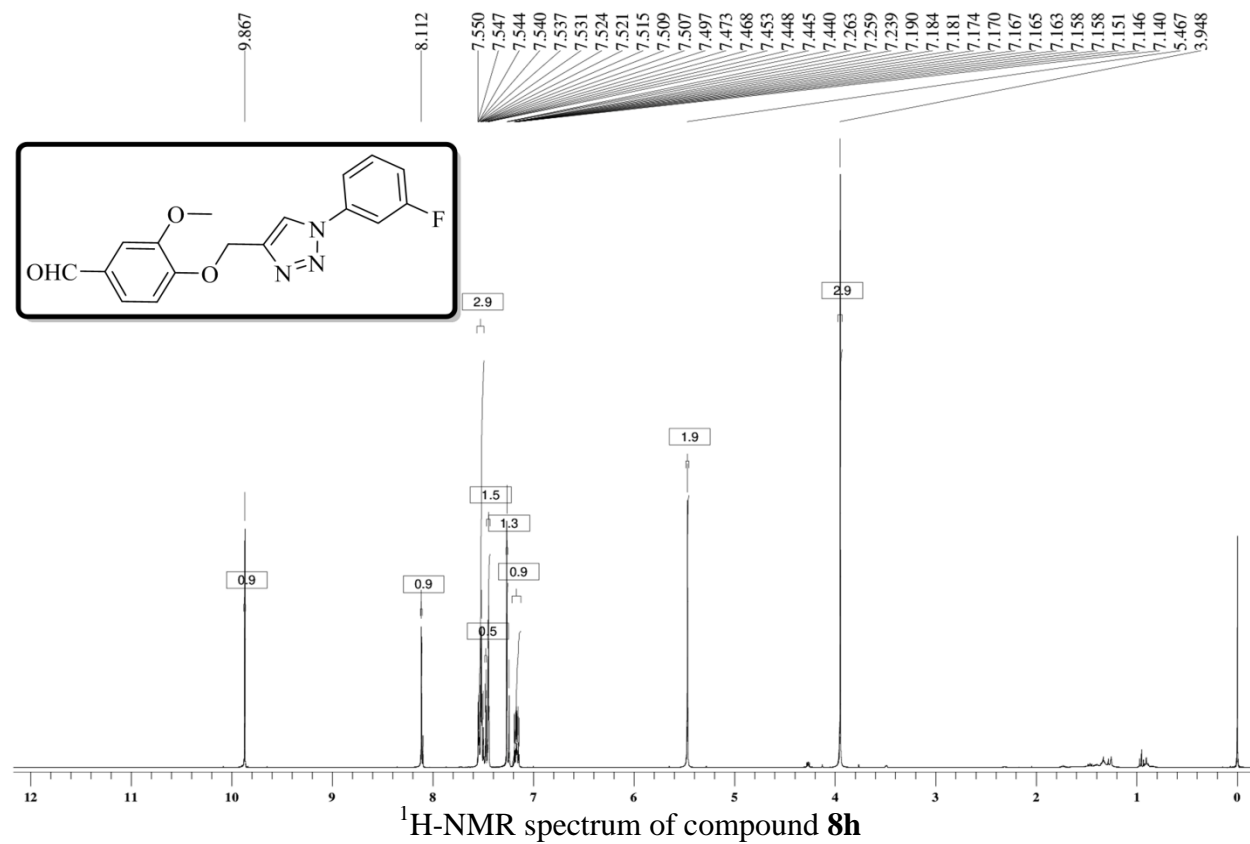
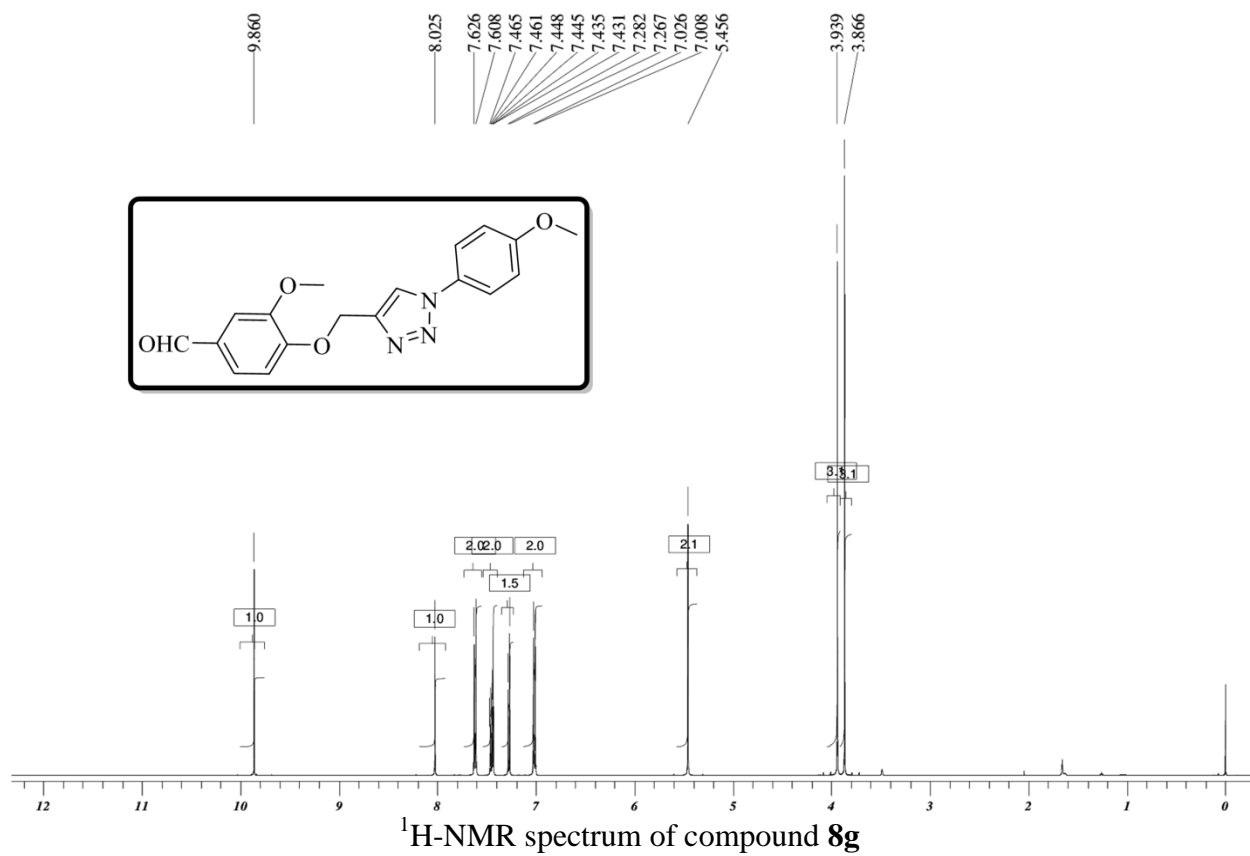
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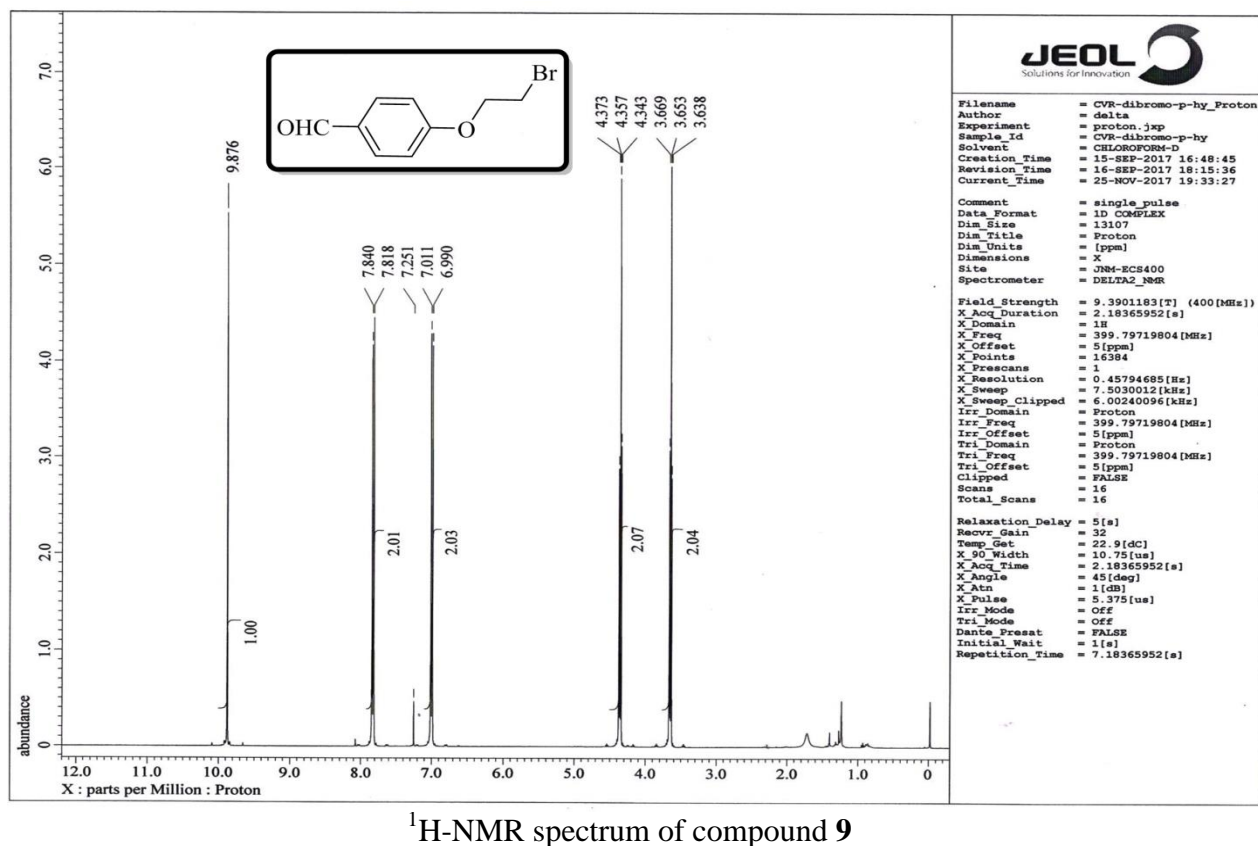
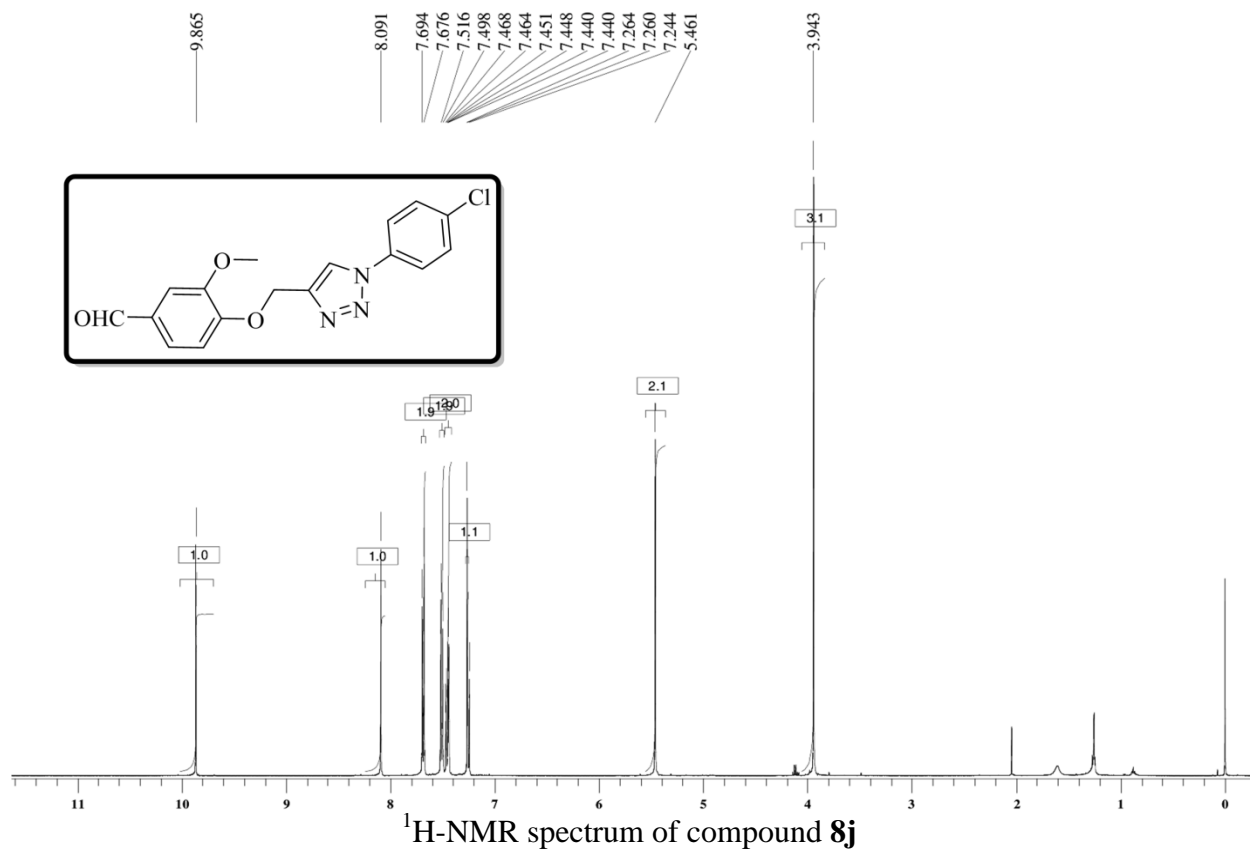
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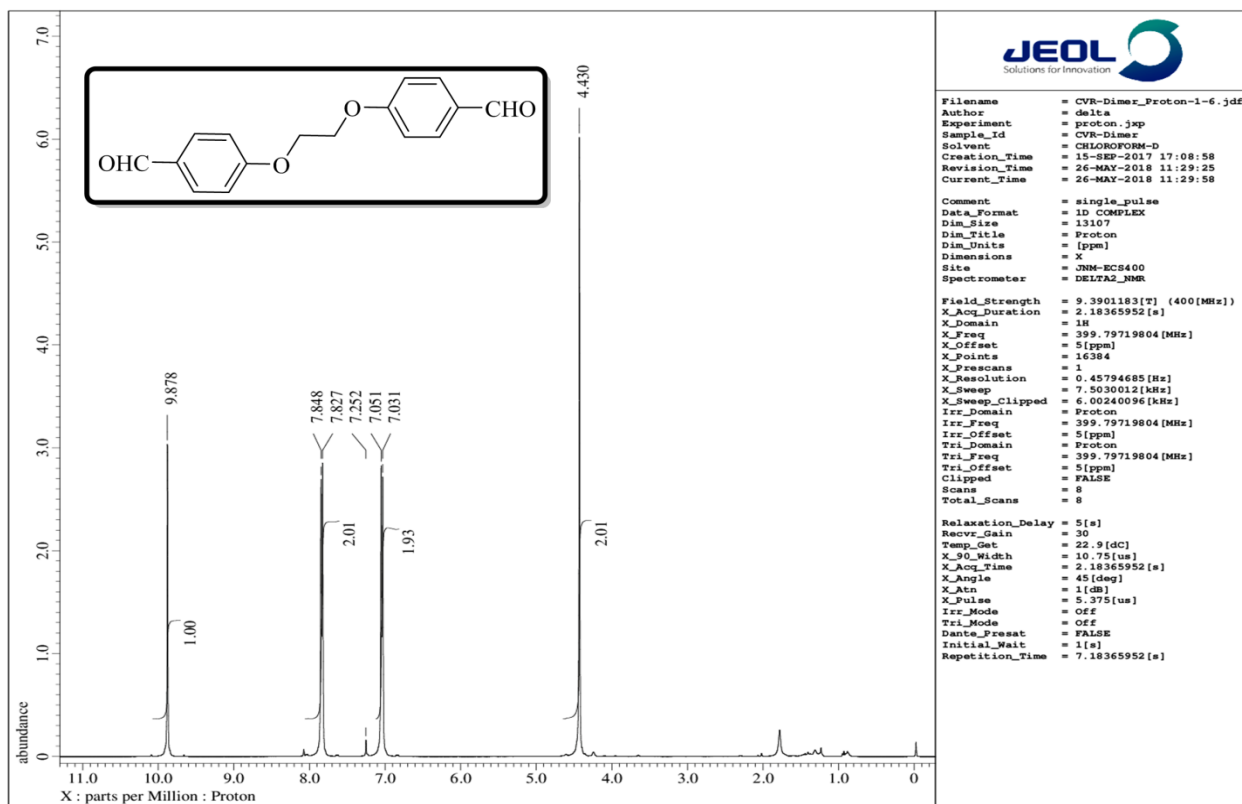
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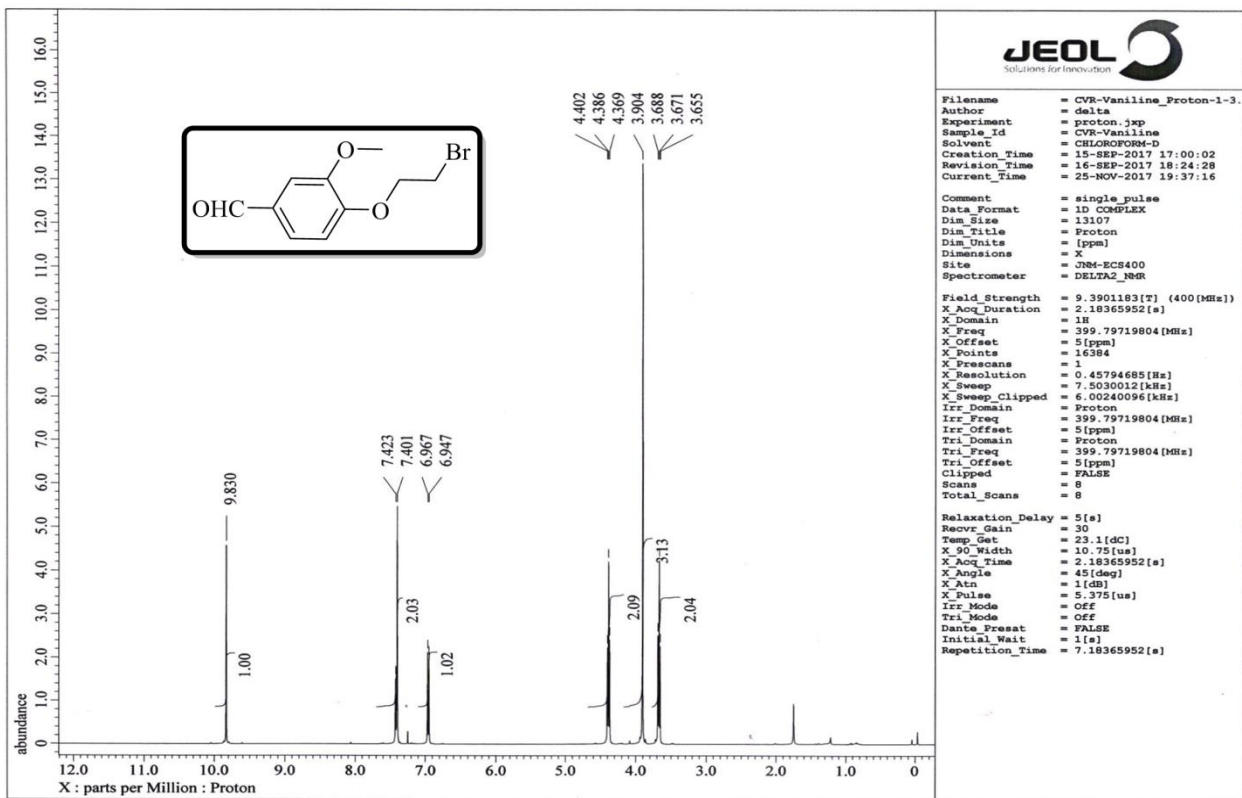




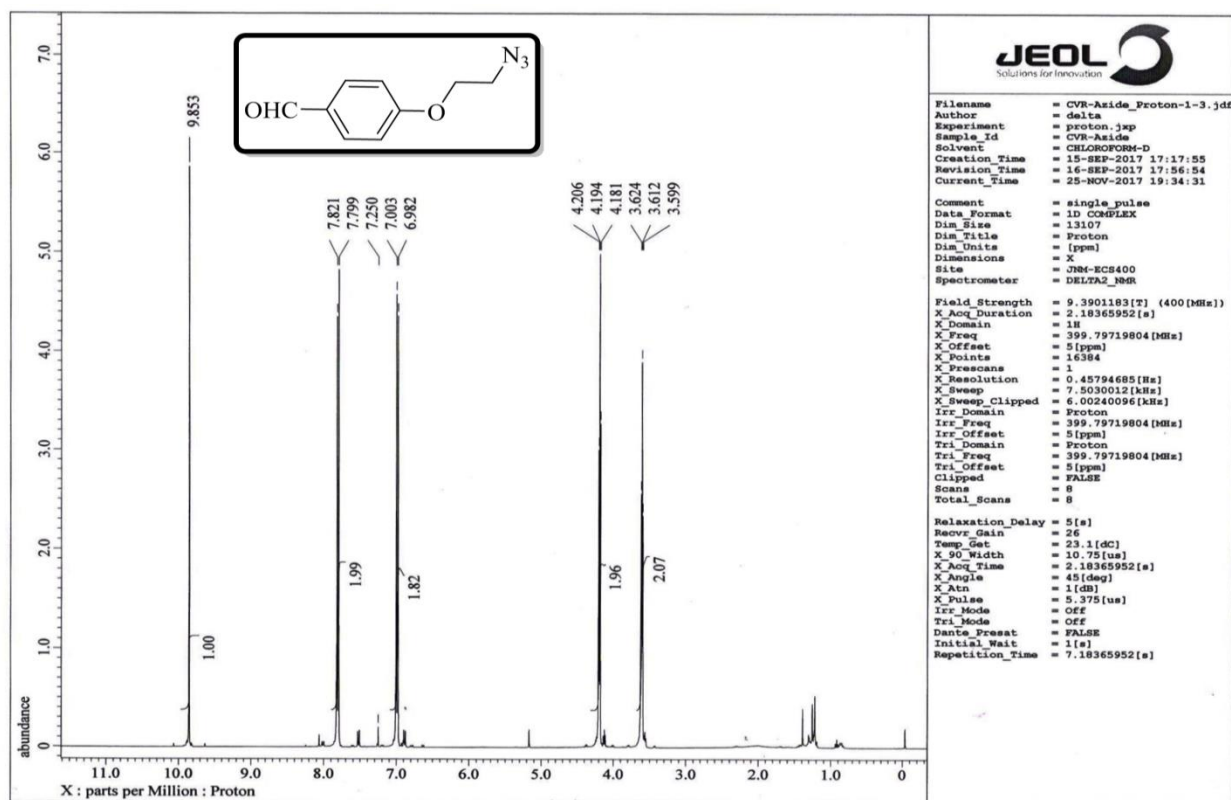




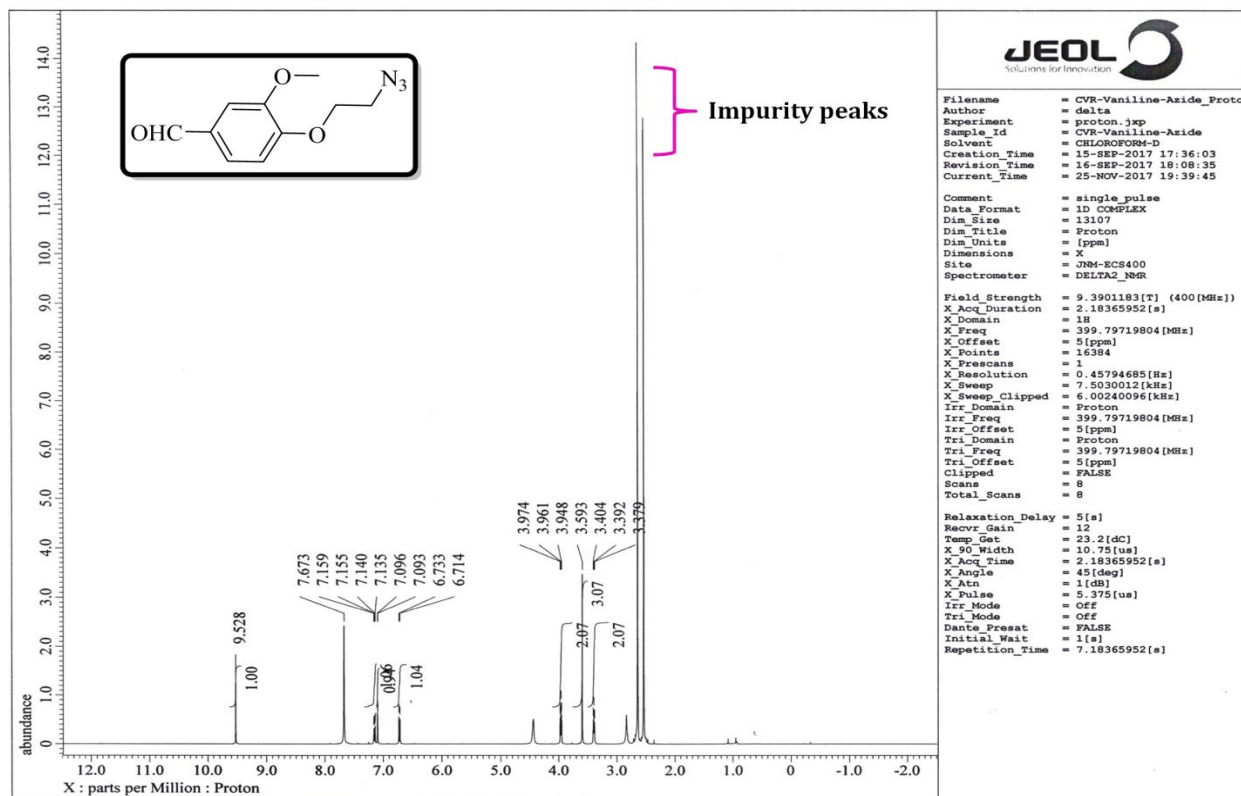
¹H-NMR spectrum of compound 9a



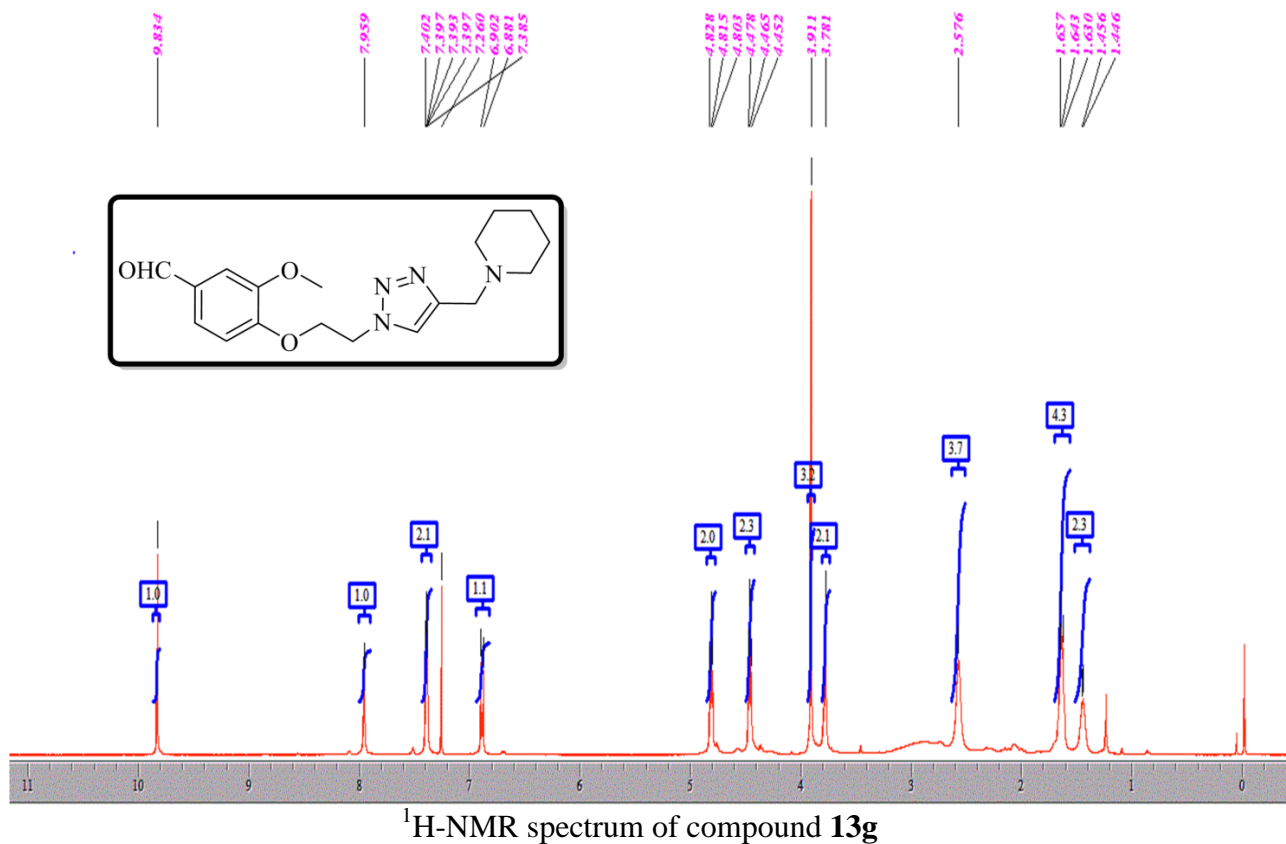
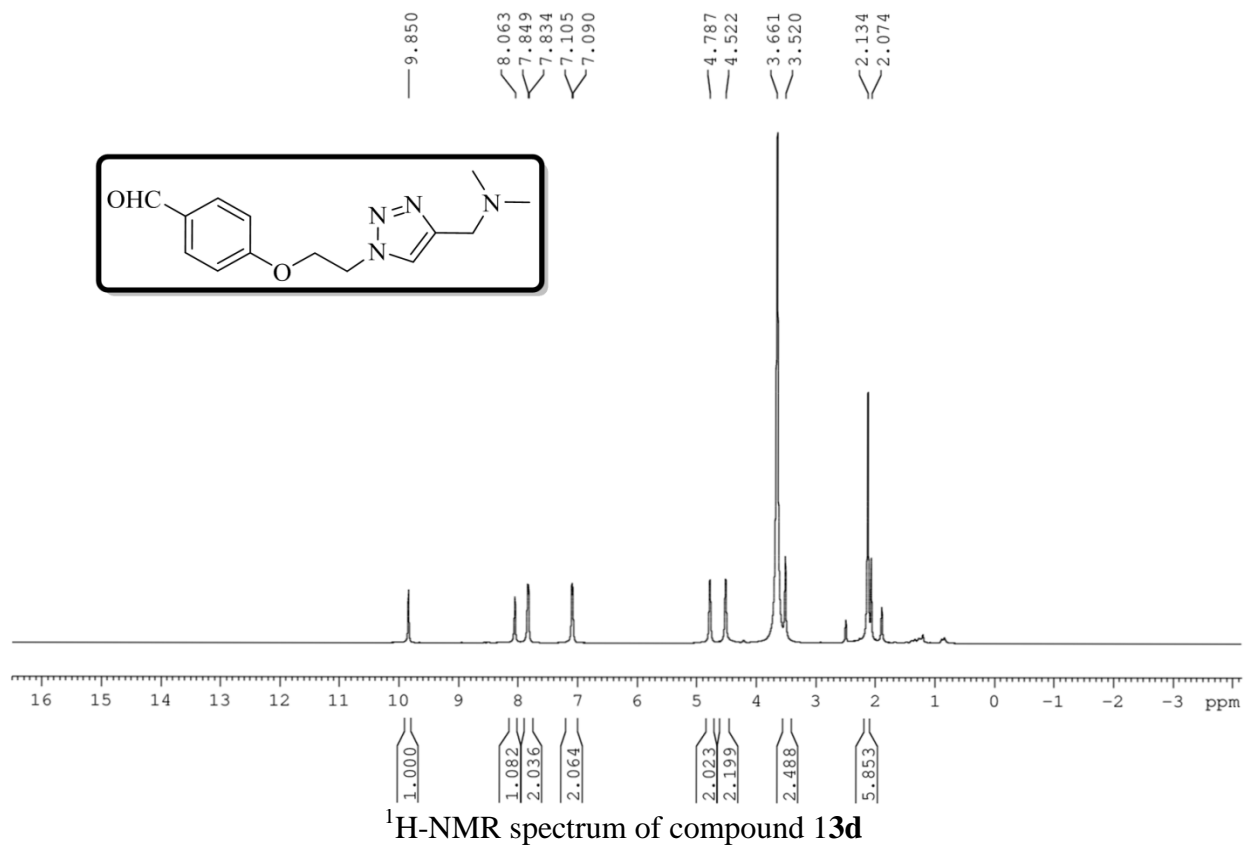
¹H-NMR spectrum of compound 10

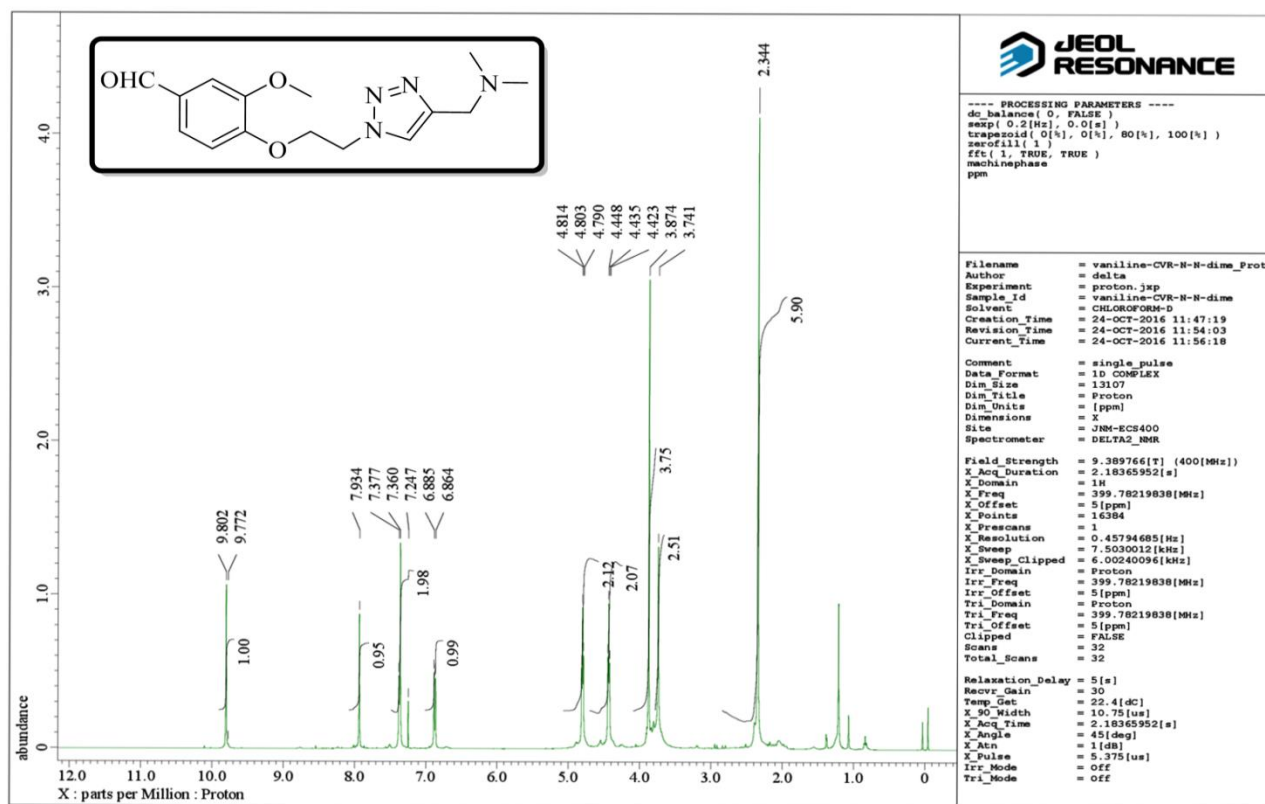


¹H-NMR spectrum of compound 11

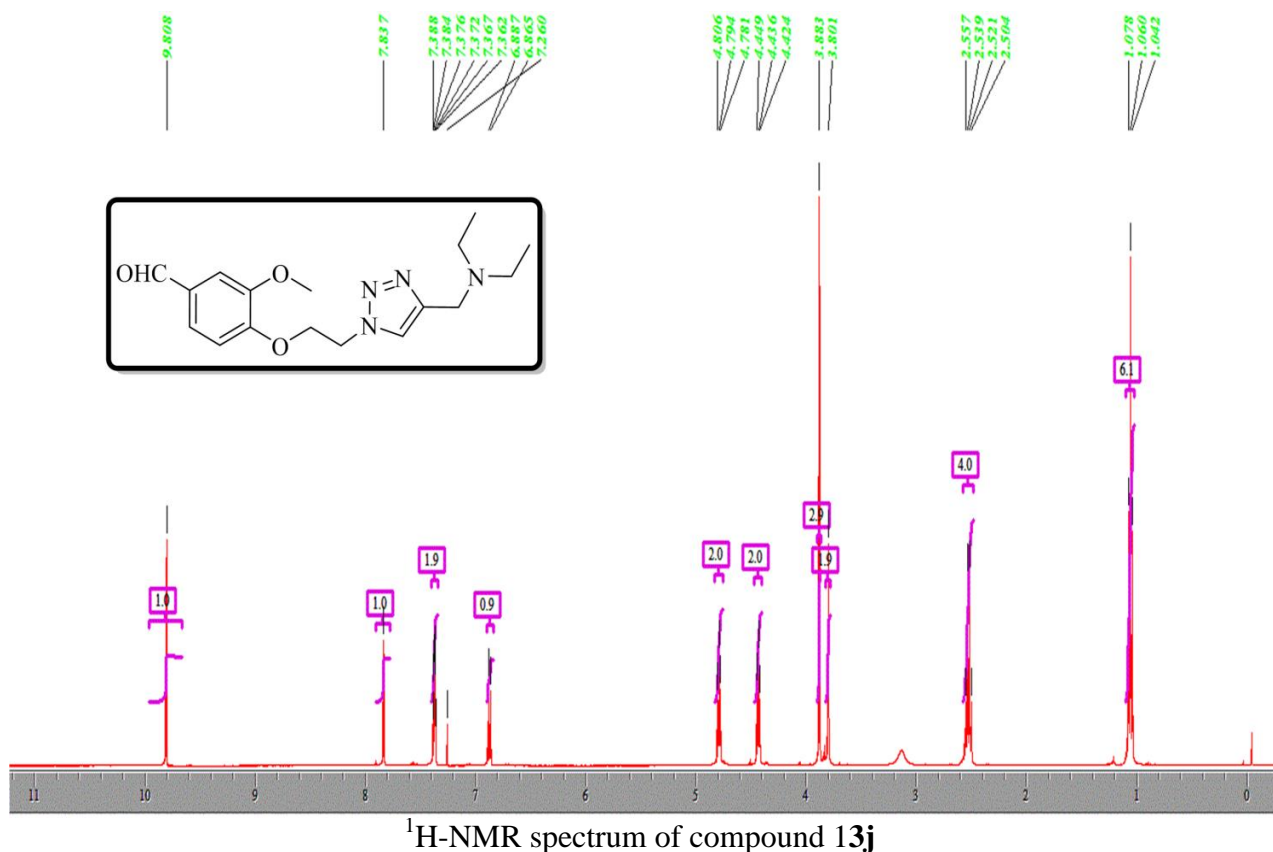


¹H-NMR spectrum of compound 12





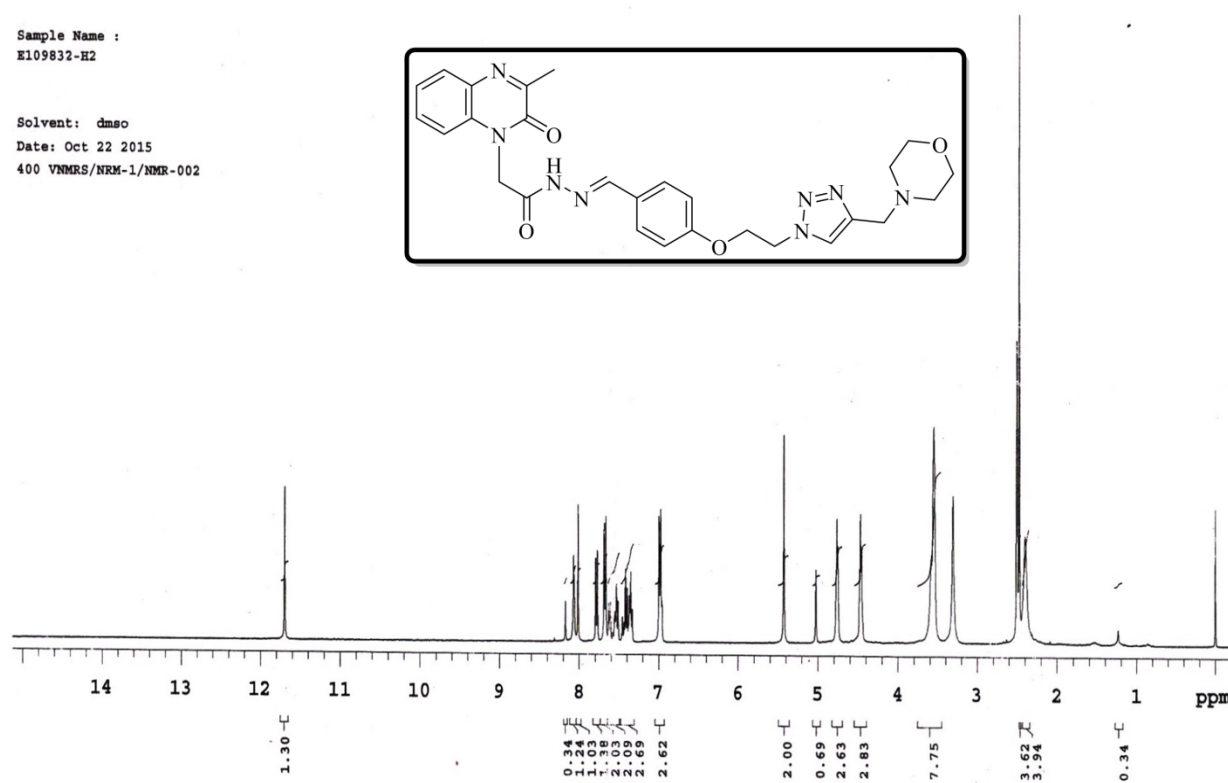
¹H-NMR spectrum of compound 13i



¹H-NMR spectrum of compound 13j

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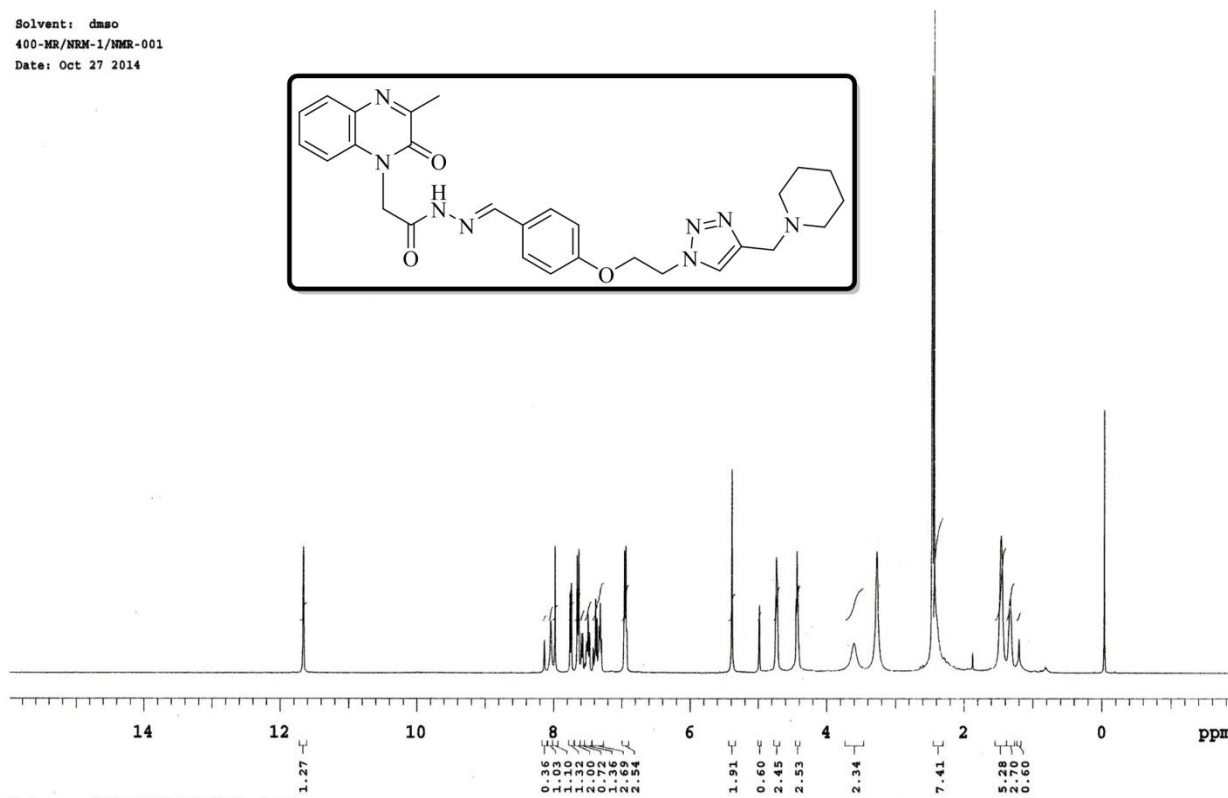
Solvent: dmsc
Date: Oct 22 2015
400 VNMR5/NRM-1/NMR-002



Plotname: 021510C3884_PROTON_01_plot01

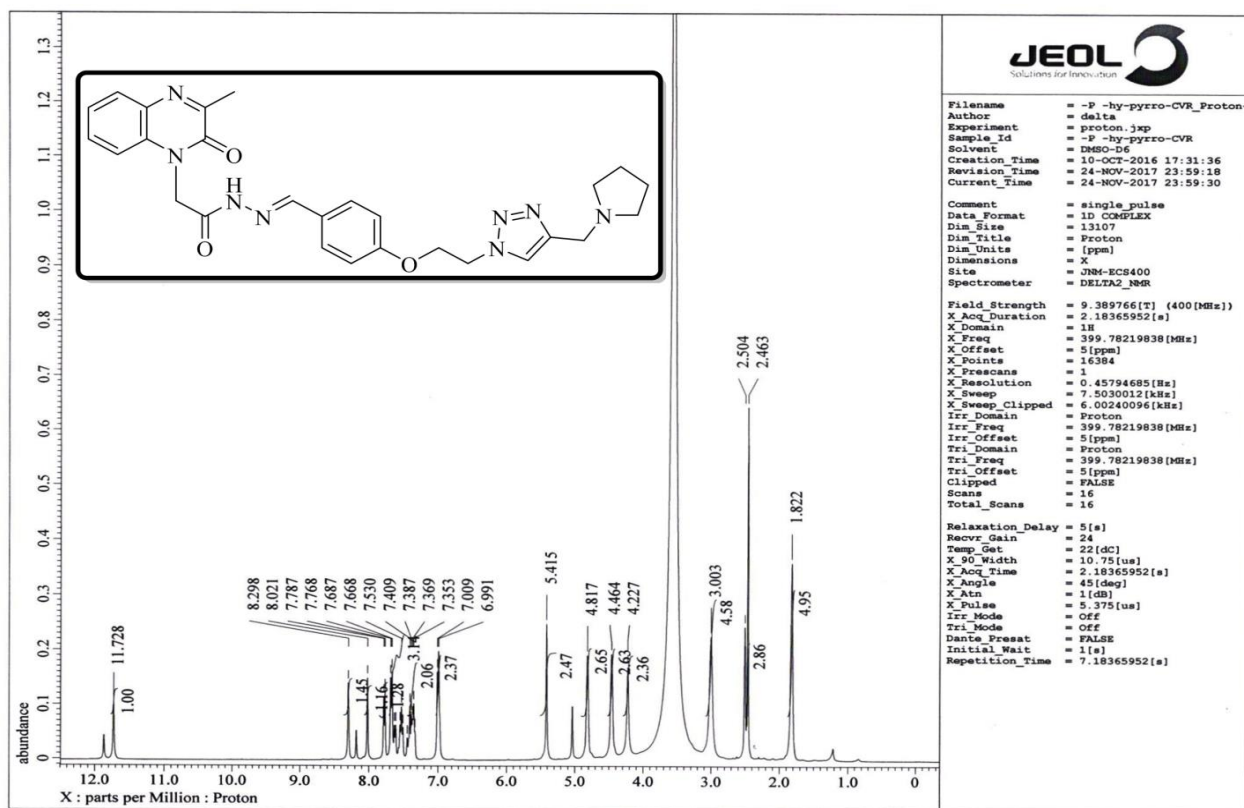
¹H-NMR spectrum of compound **14a**

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400-MR/NRM-1/NMR-001
Date: Oct 27 2014

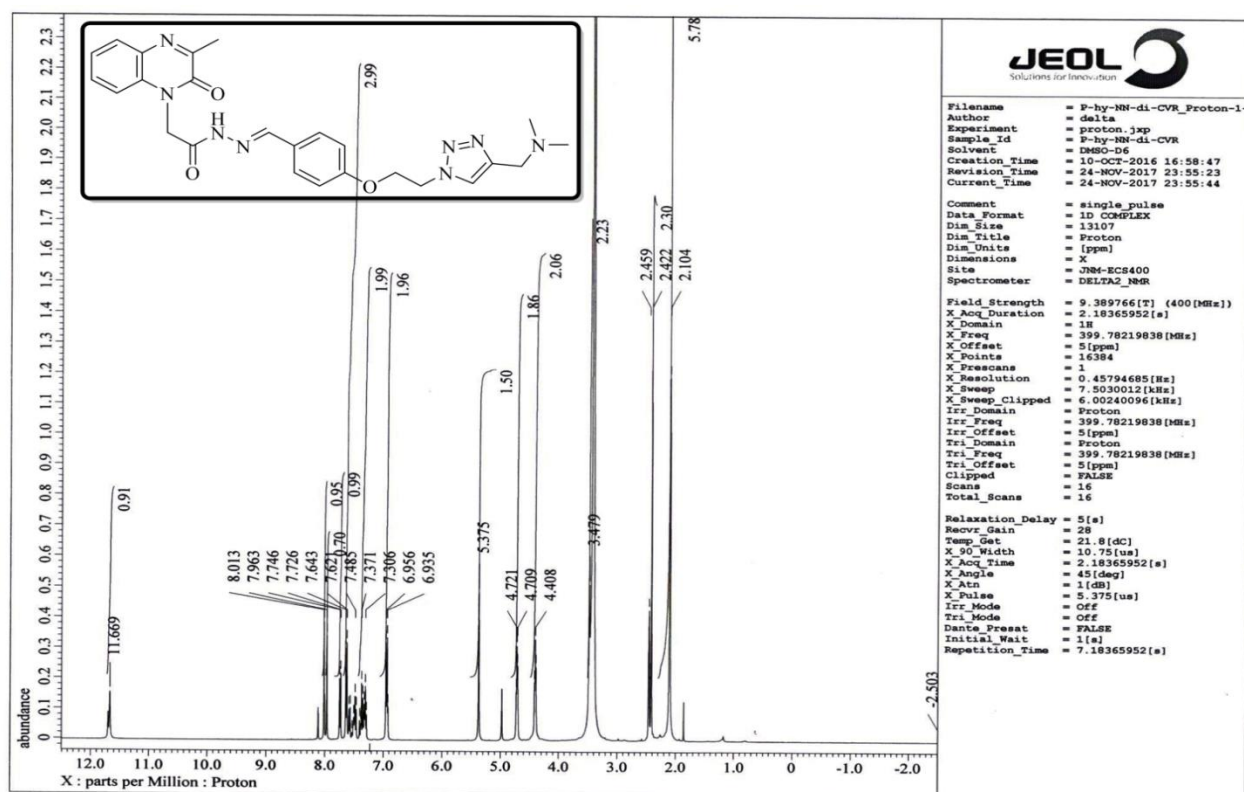


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¹H-NMR spectrum of compound **14b**

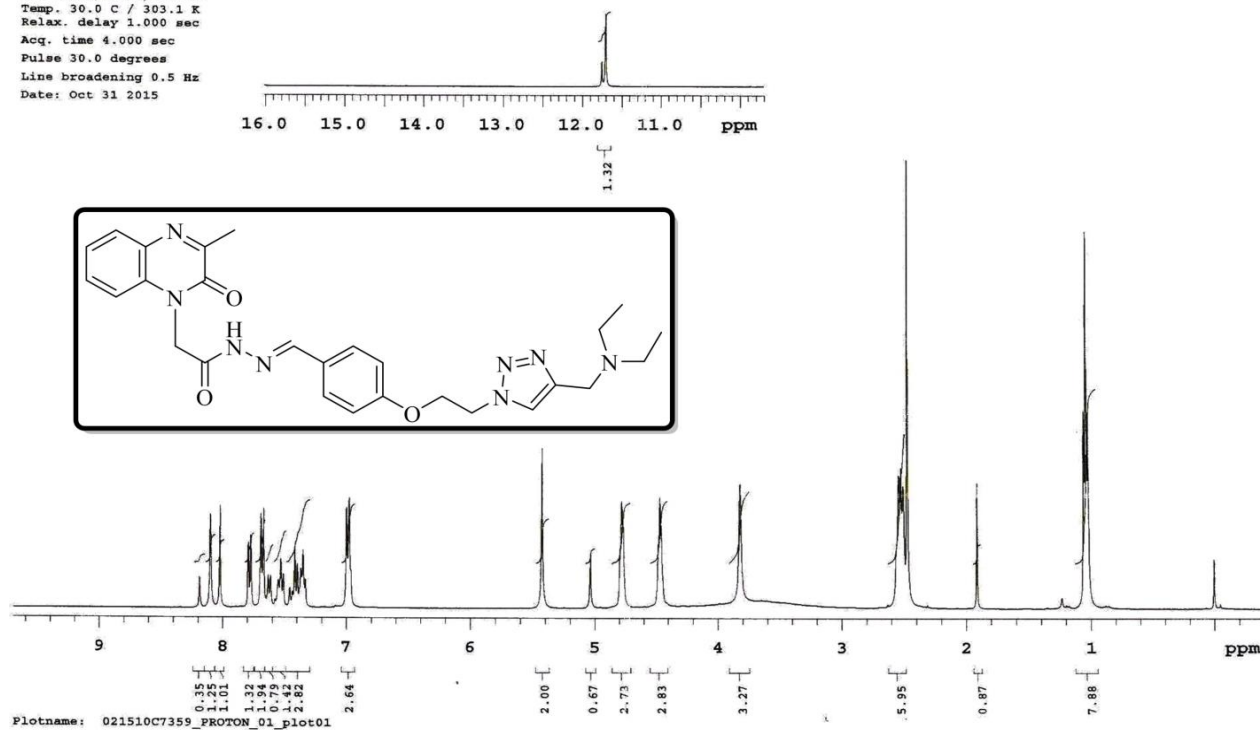


¹H-NMR spectrum of compound 14c

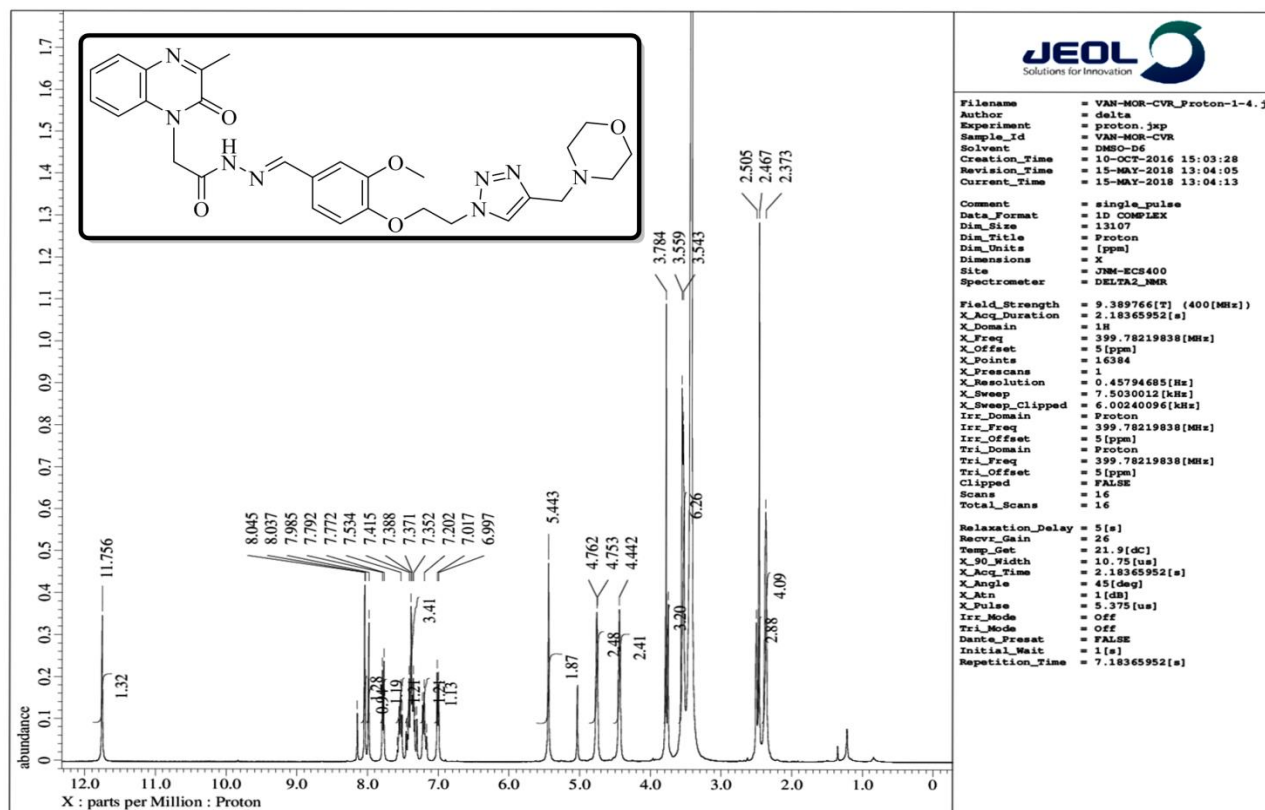


¹H-NMR spectrum of compound 14d

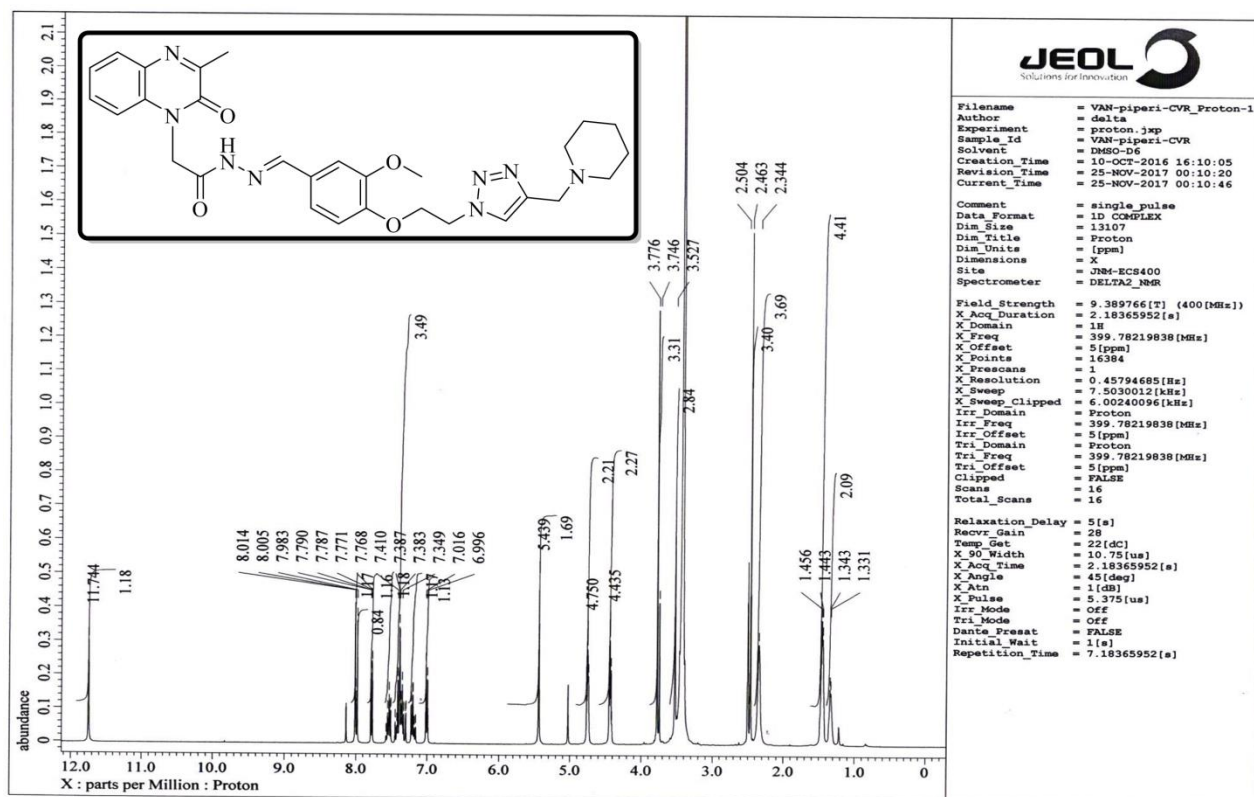
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Relax. delay 1.000 sec
Acq. time 4.000 sec
Pulse 30.0 degrees
Line broadening 0.5 Hz
Date: Oct 31 2015



¹H-NMR spectrum of compound **14e**

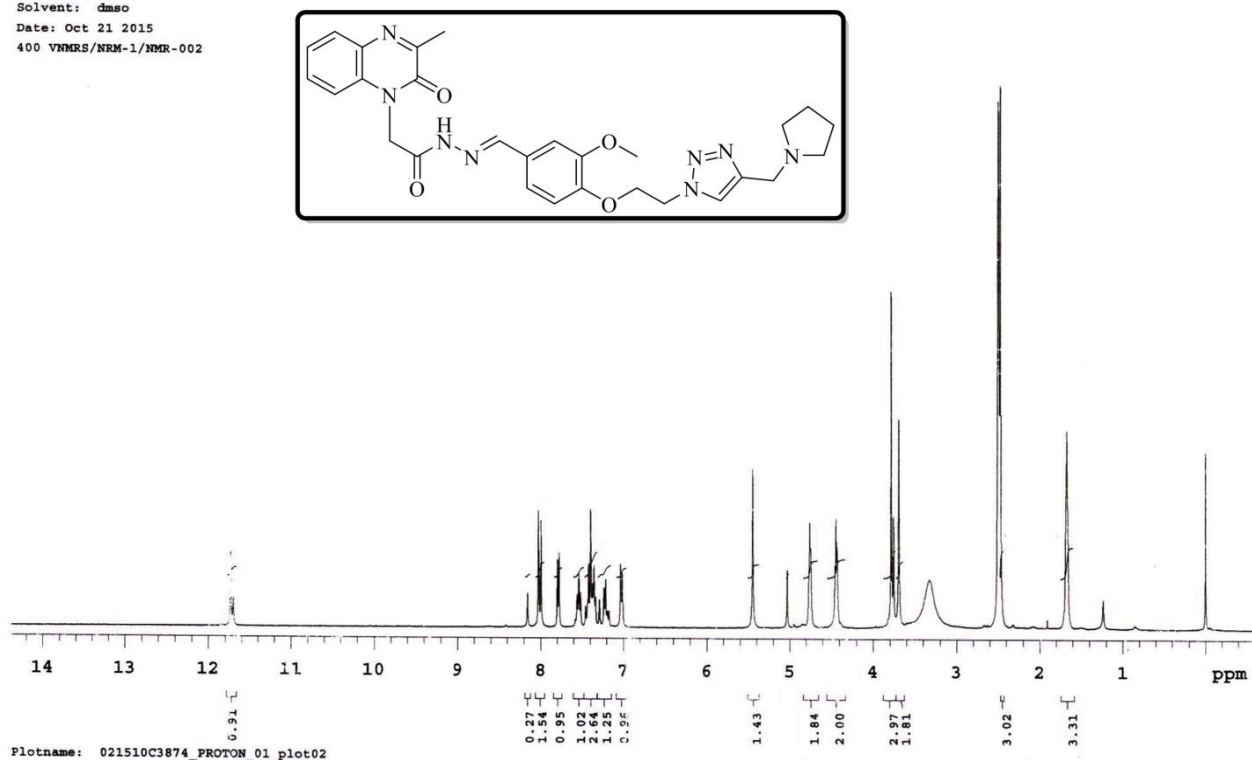


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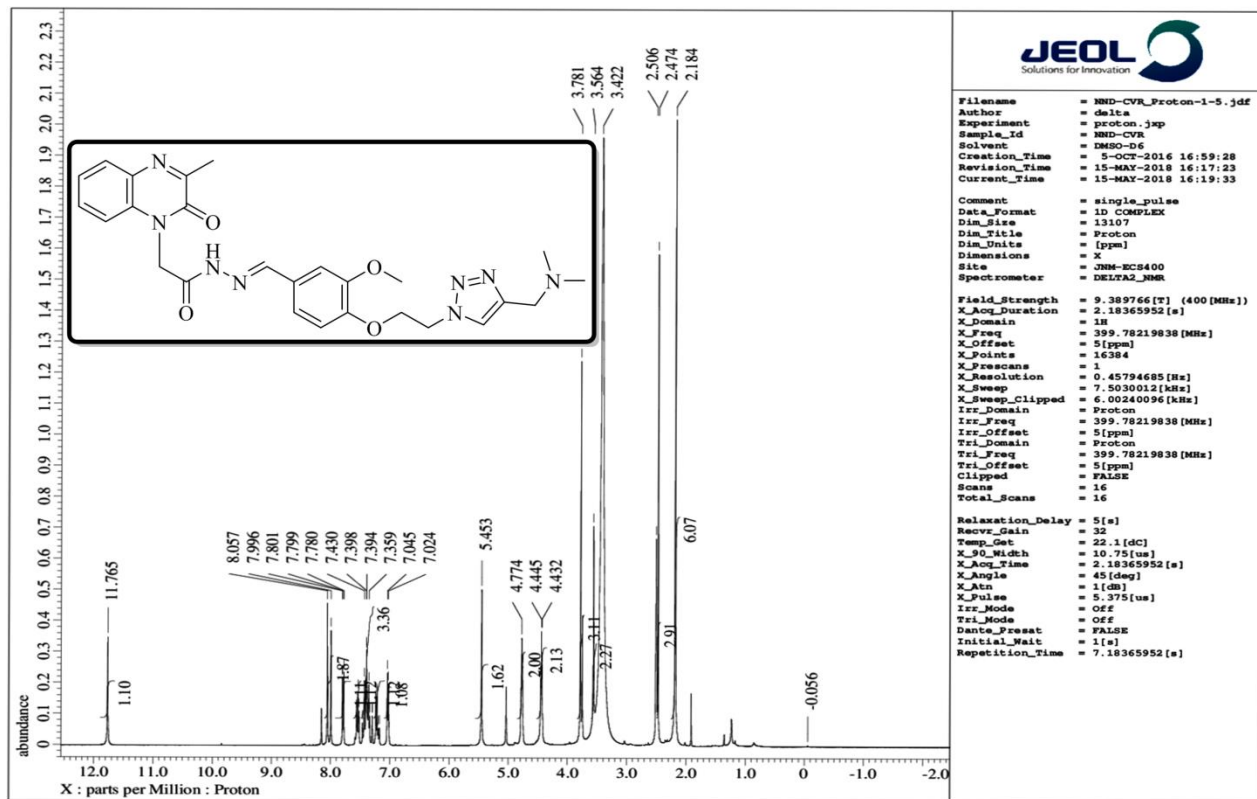


¹H-NMR spectrum of compound **14g**

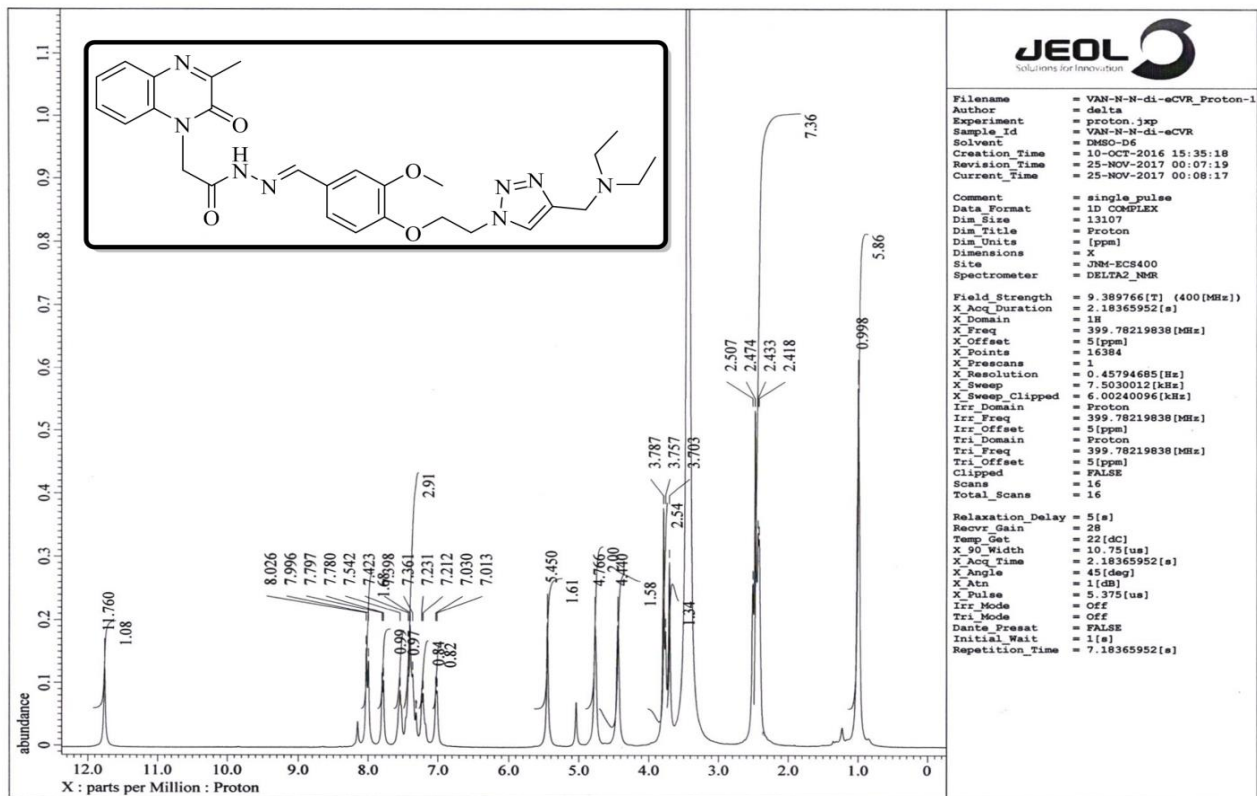
Sample Name :
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Solvent: dmsc
Date: Oct 21 2015
400 VNMR5/NMR-1/NMR-002



¹H-NMR spectrum of compound **14h**

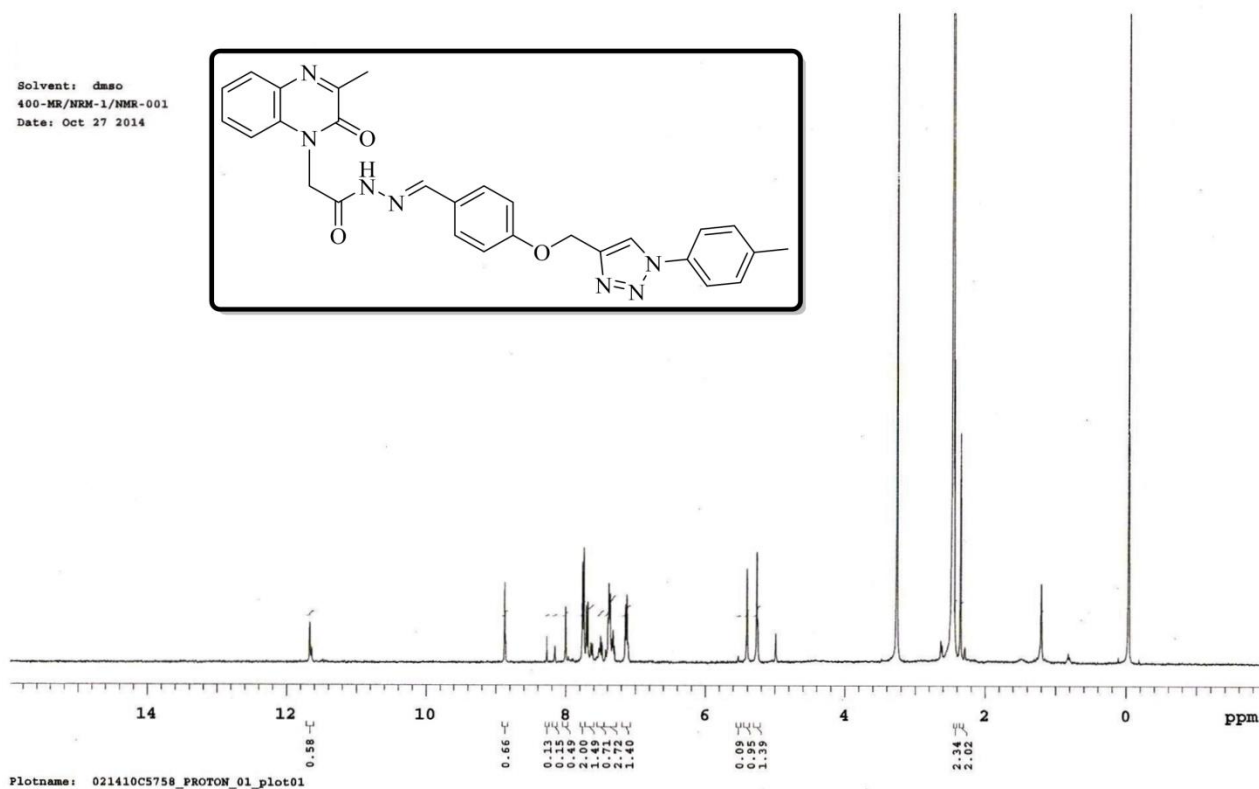
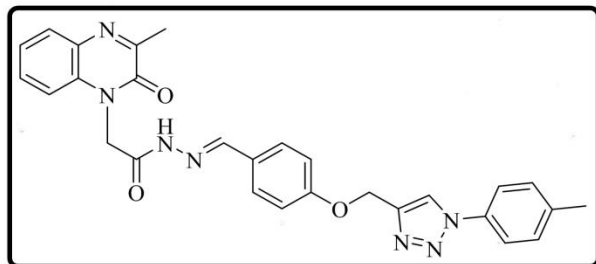


¹H-NMR spectrum of compound **14i**

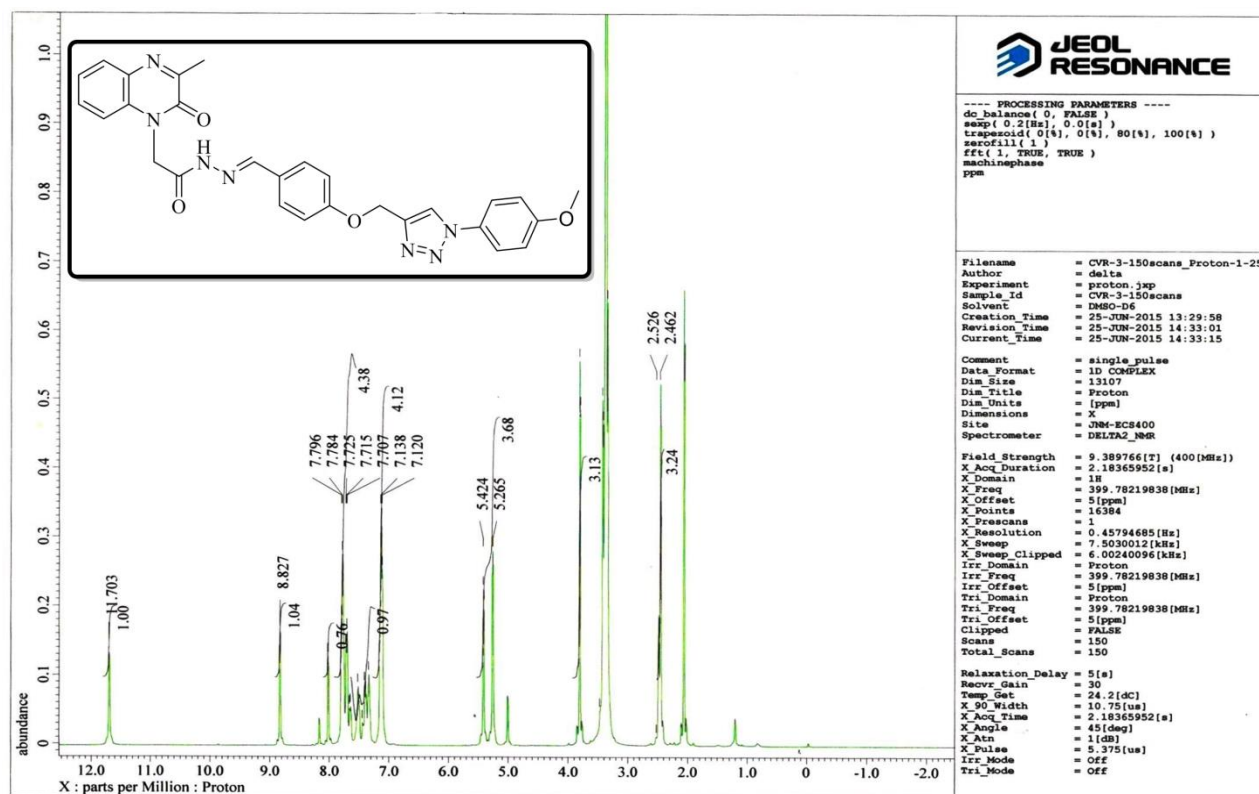


¹H-NMR spectrum of compound **14j**

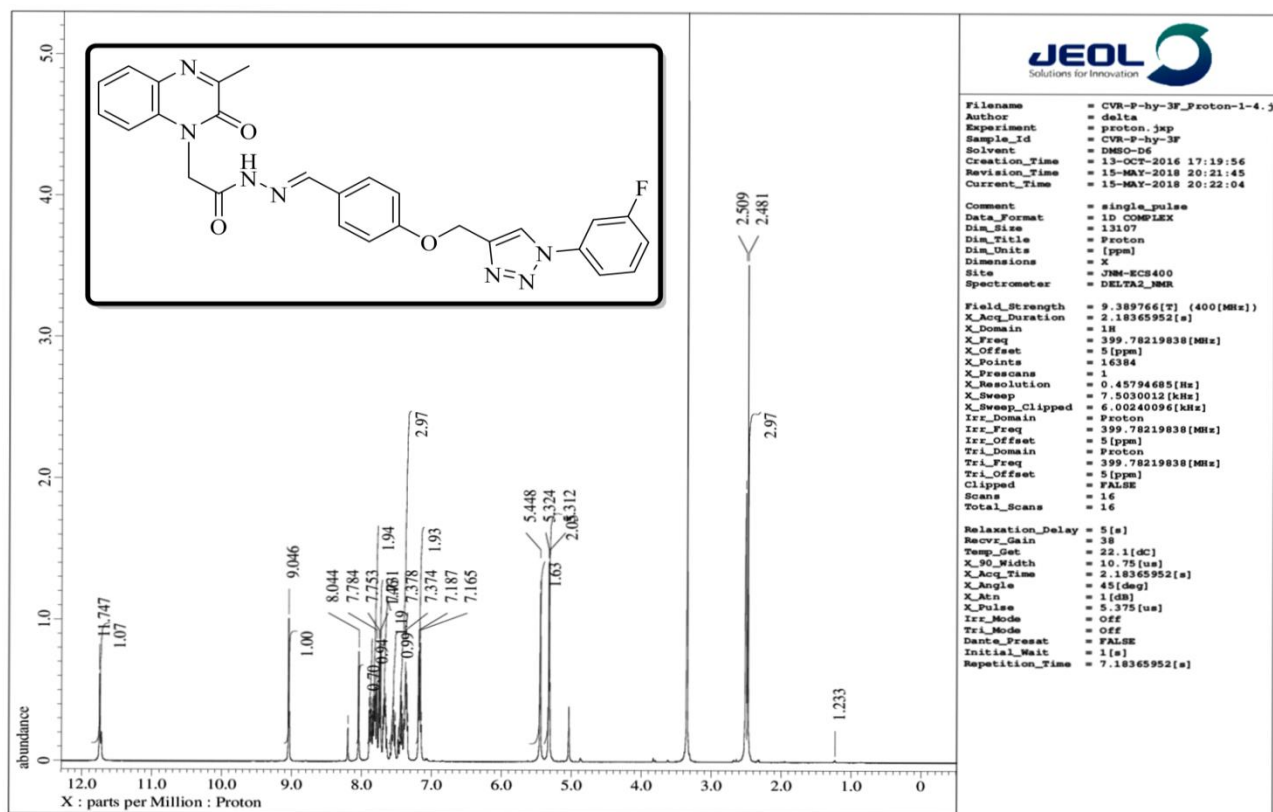
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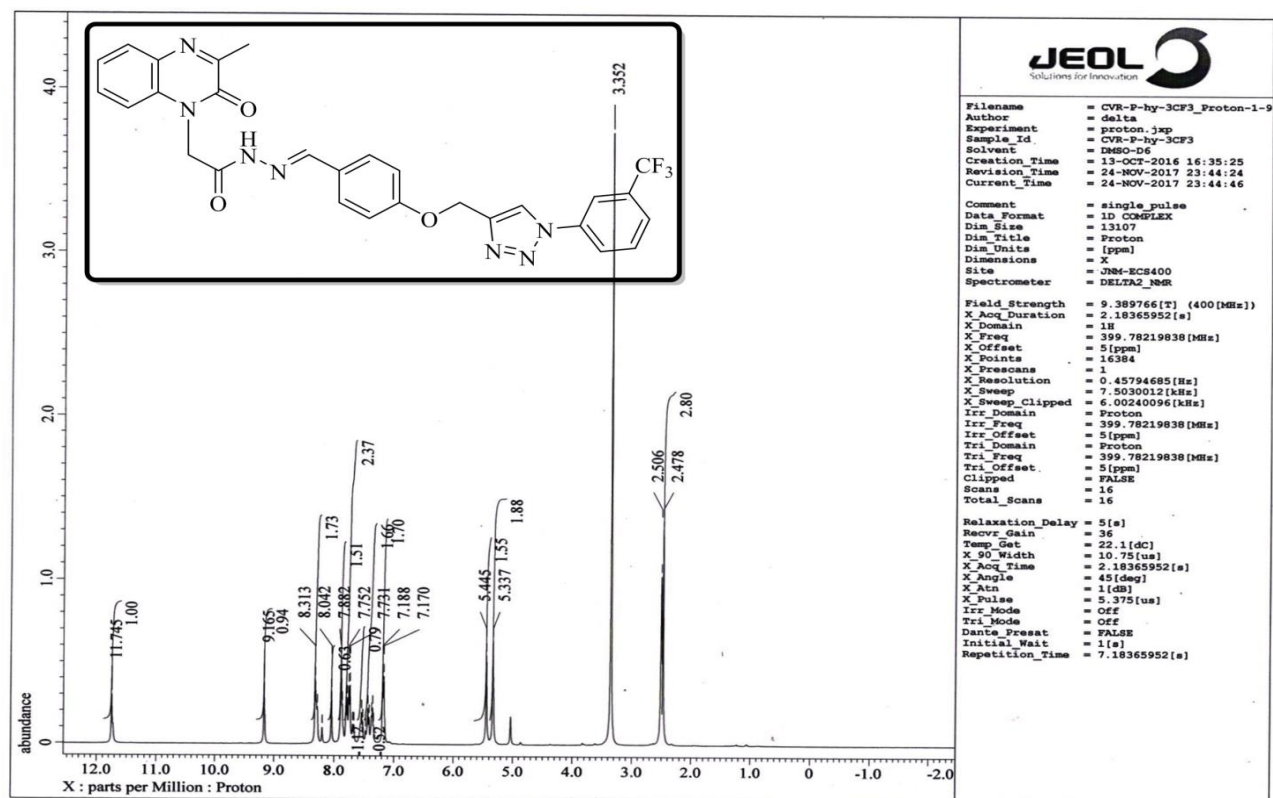
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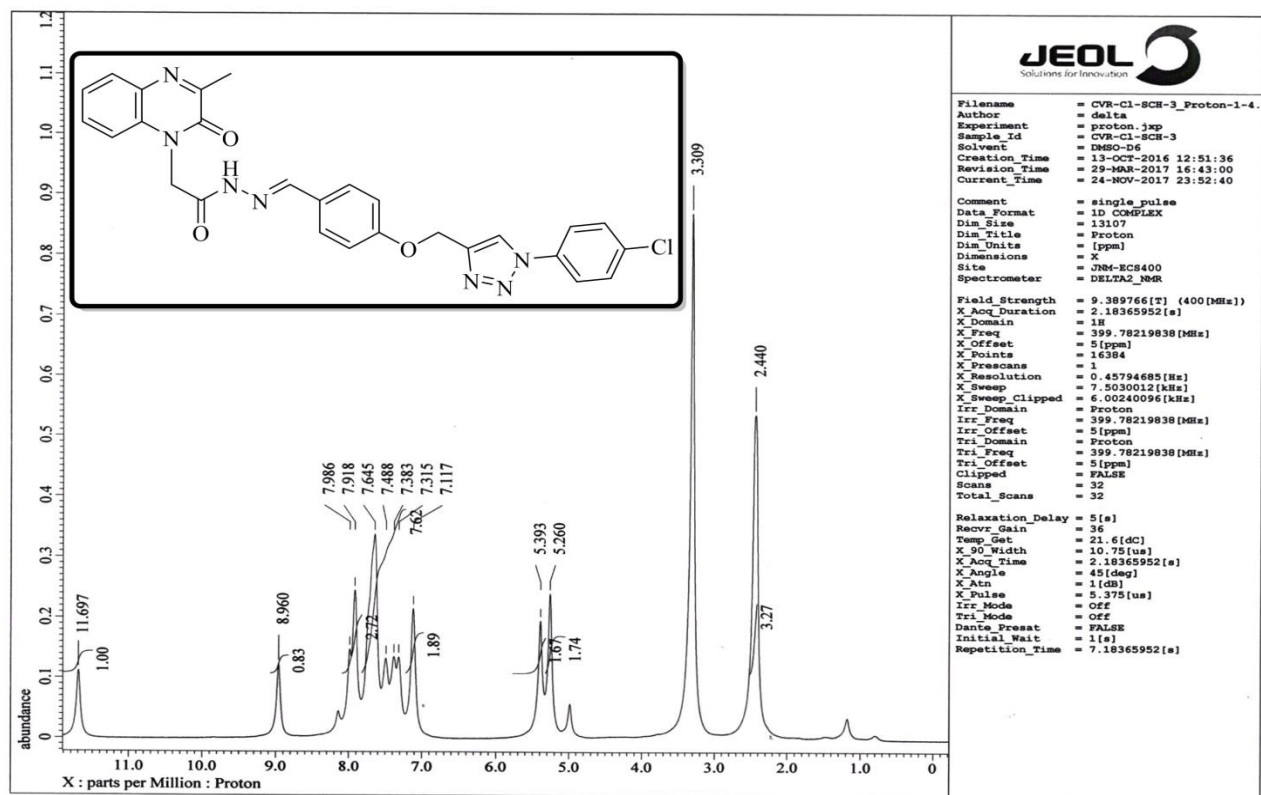
¹H-NMR spectrum of compound **15b**



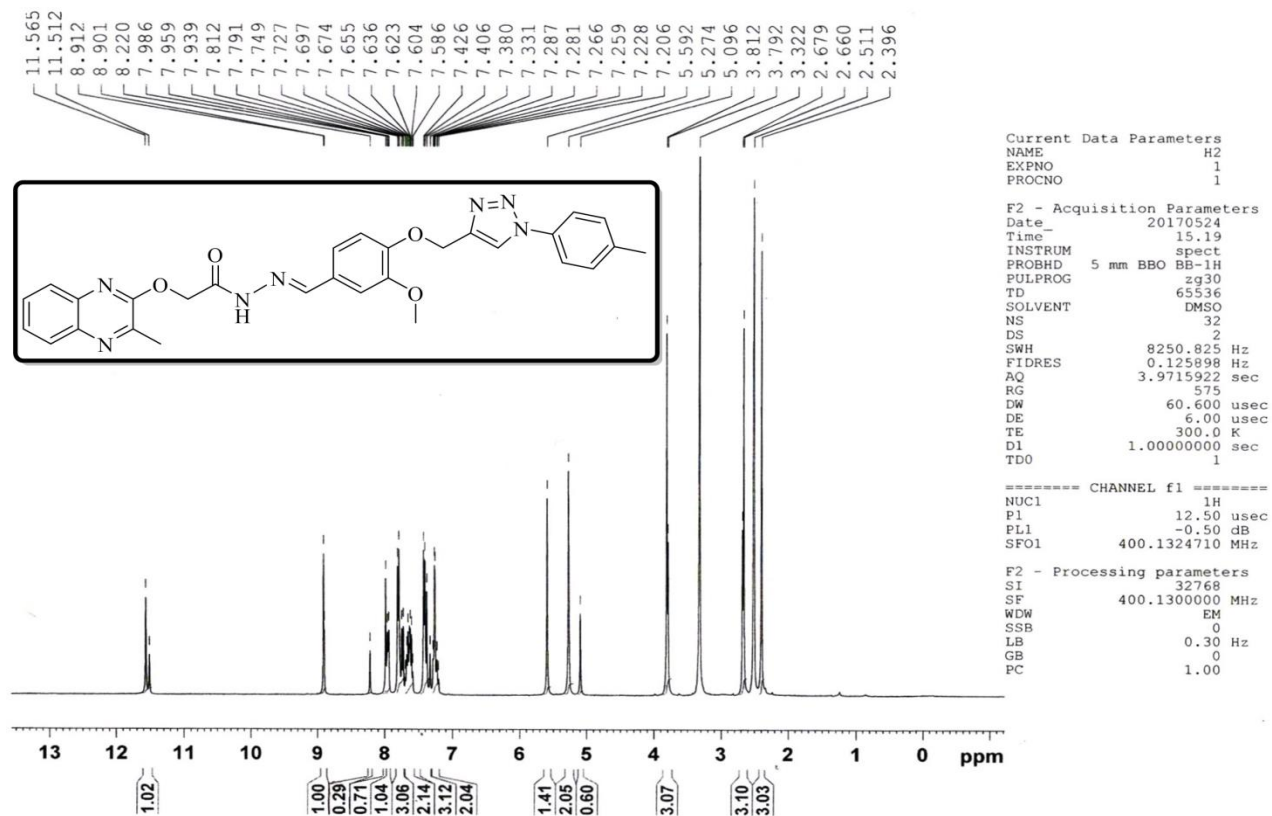
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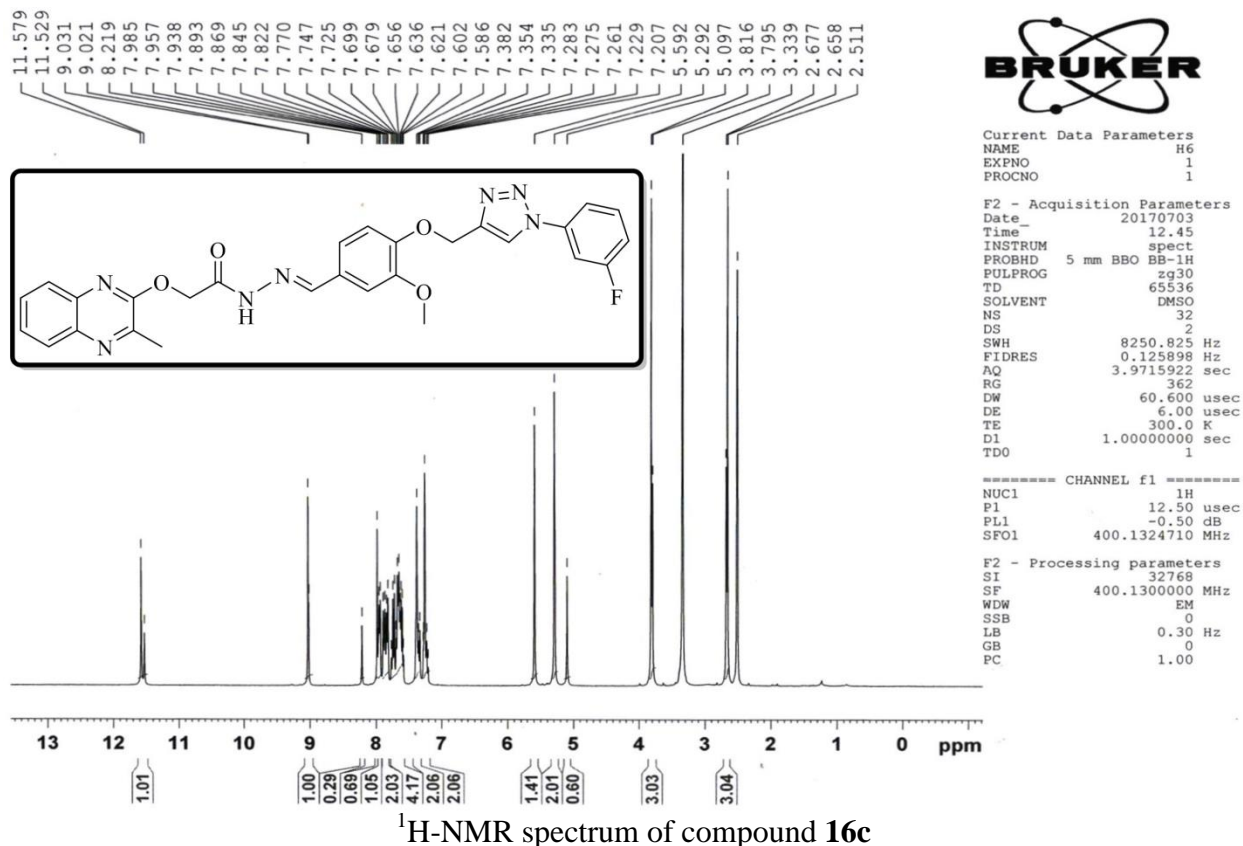
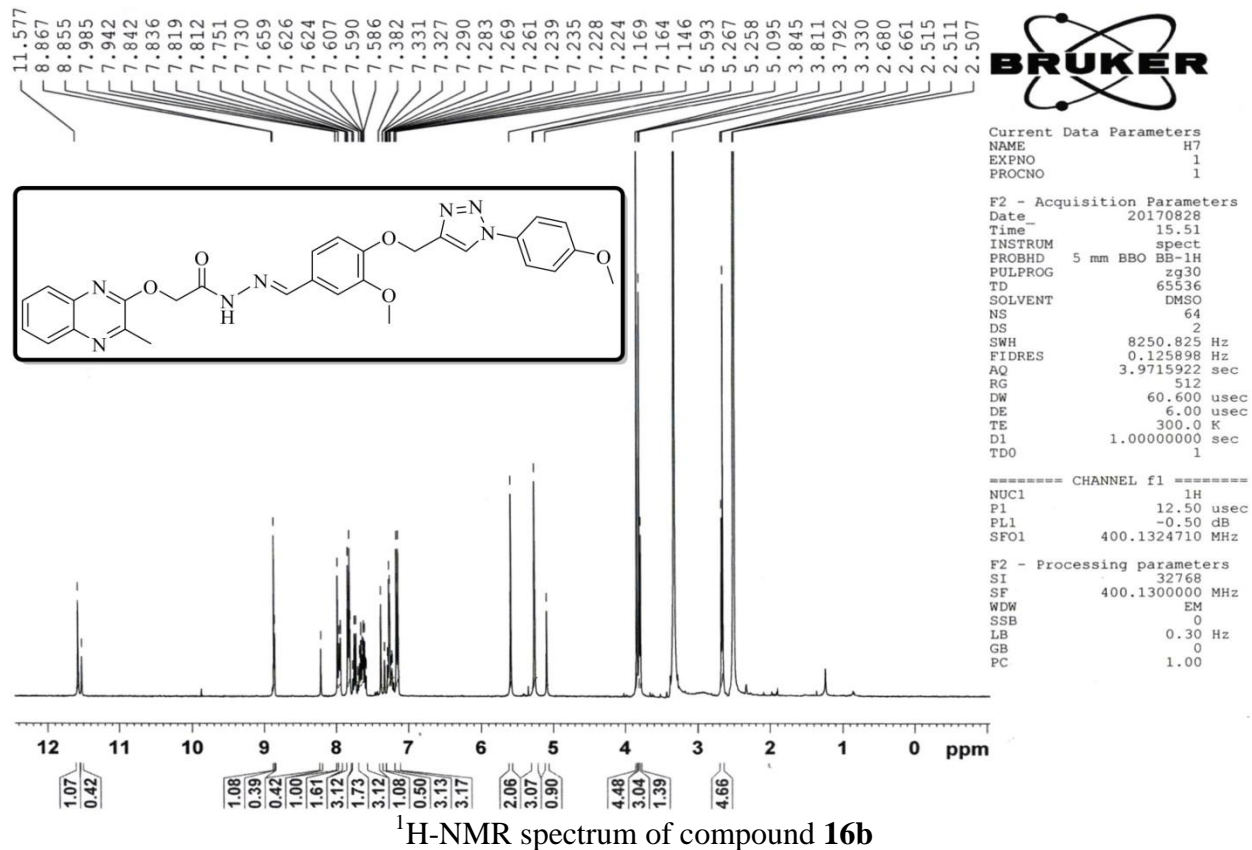
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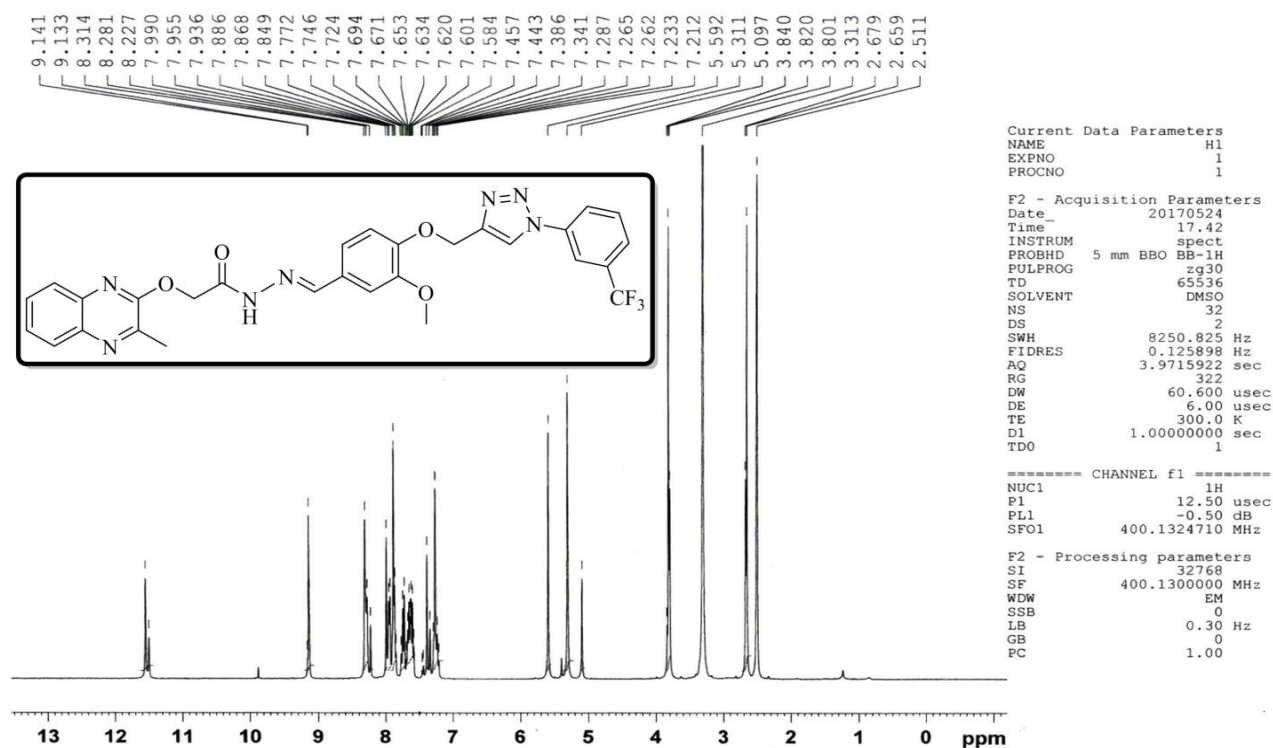


¹H-NMR spectrum of compound 15e

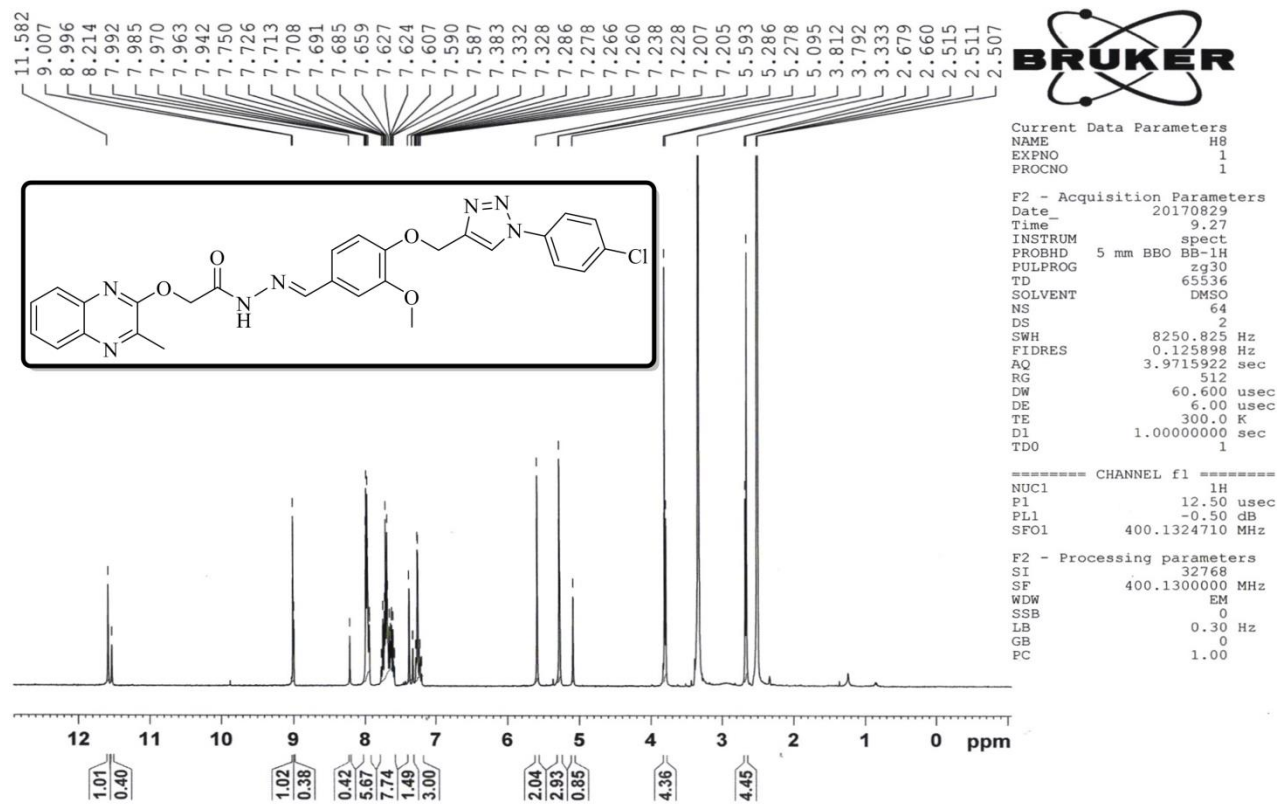


¹H-NMR spectrum of compound 16a

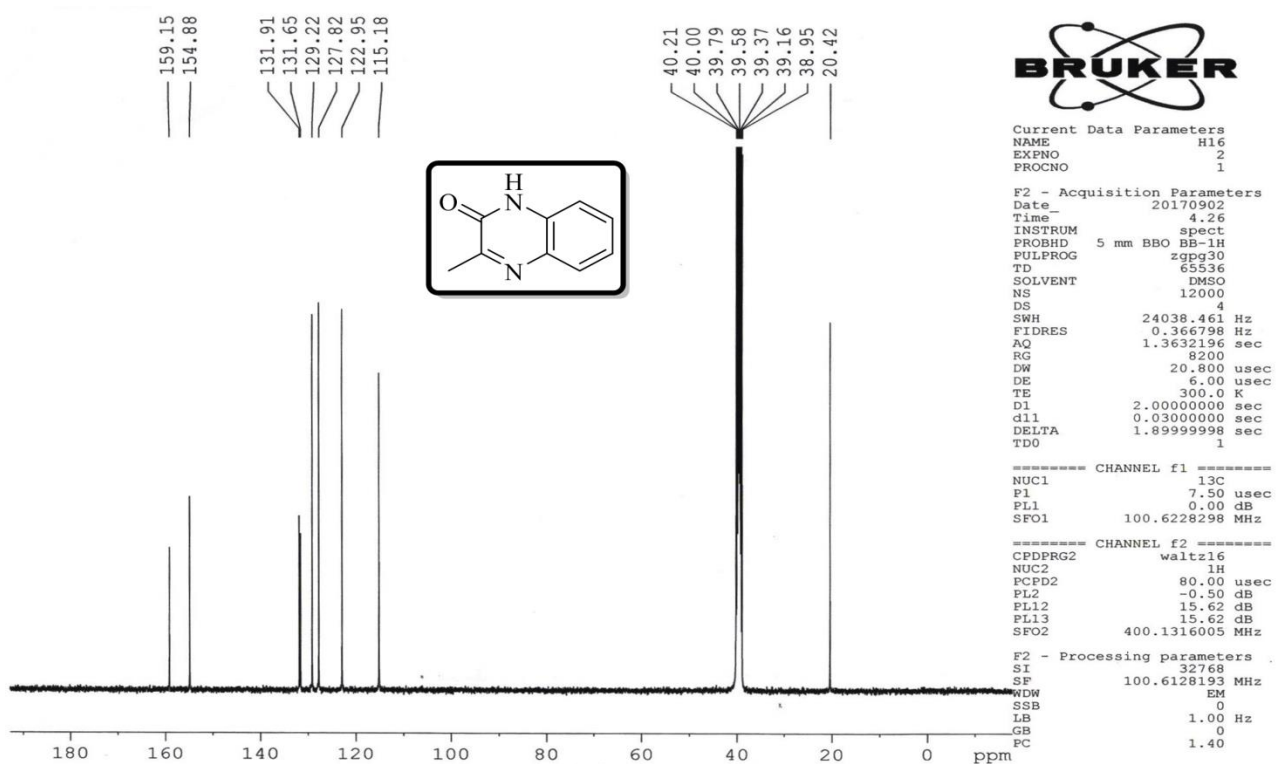




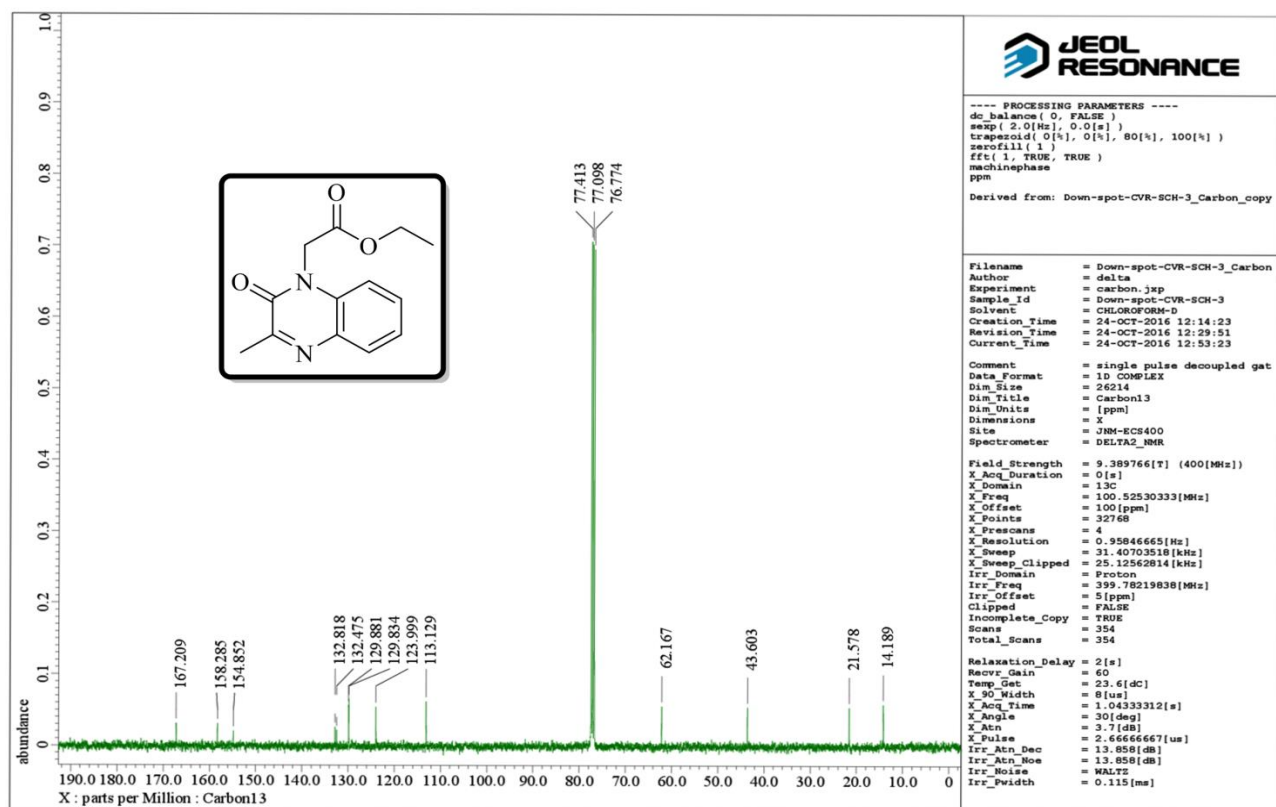
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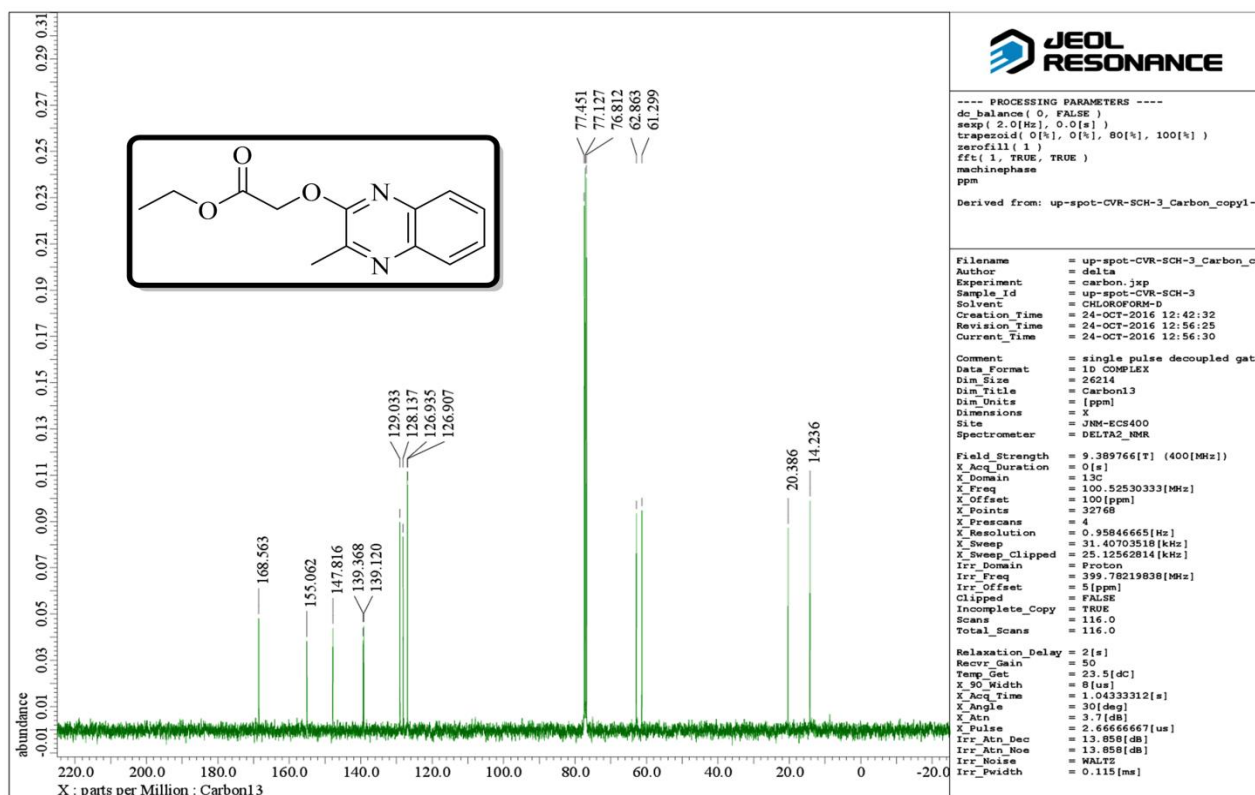
¹H-NMR spectrum of compound **16e**



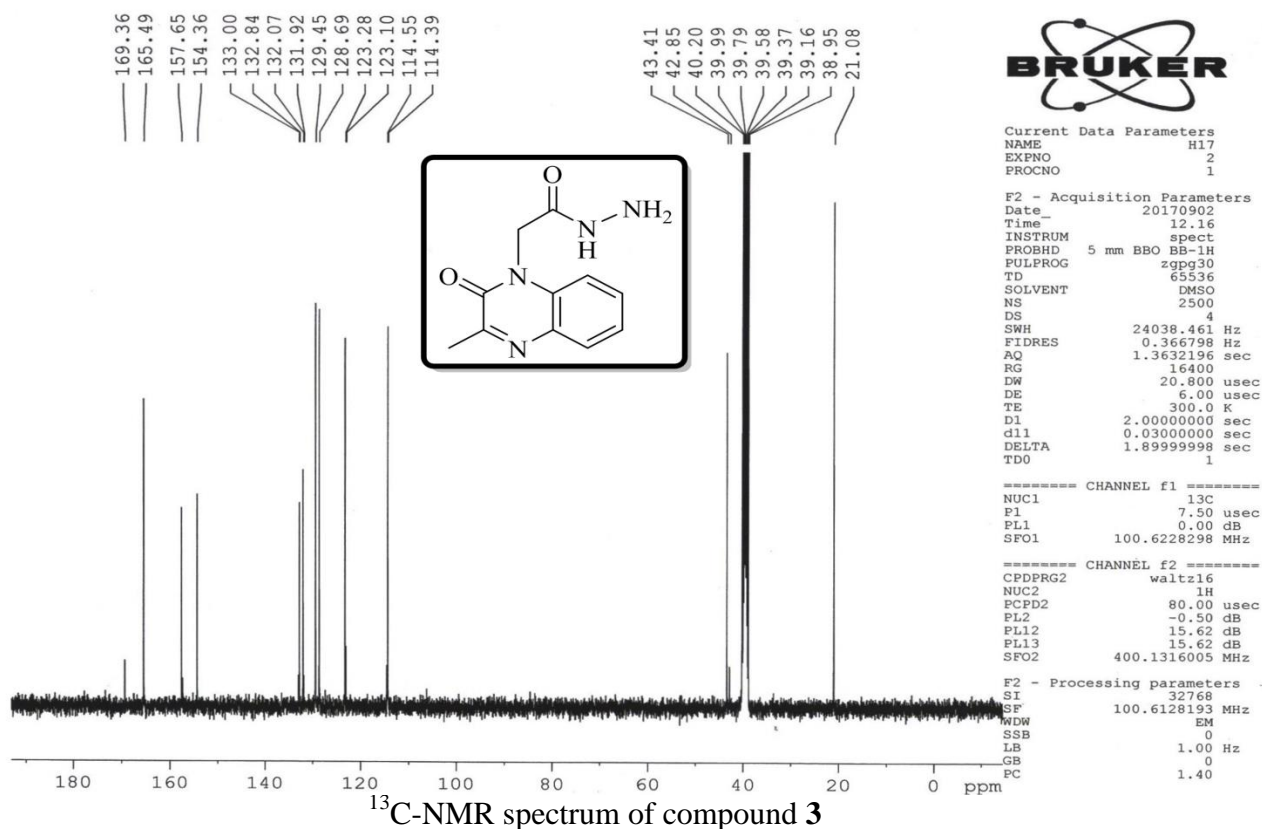
^{13}C -NMR spectrum of compound 1



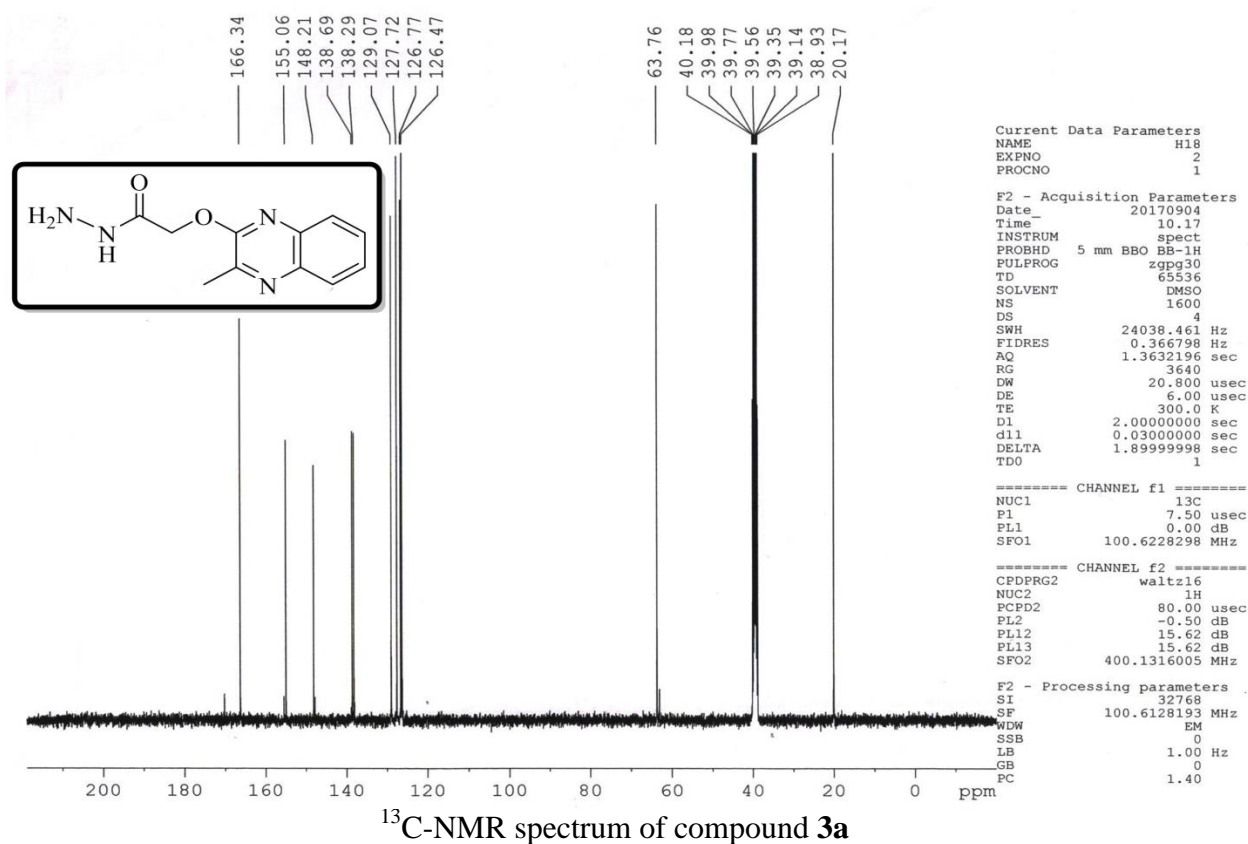
^{13}C -NMR spectrum of compound 2



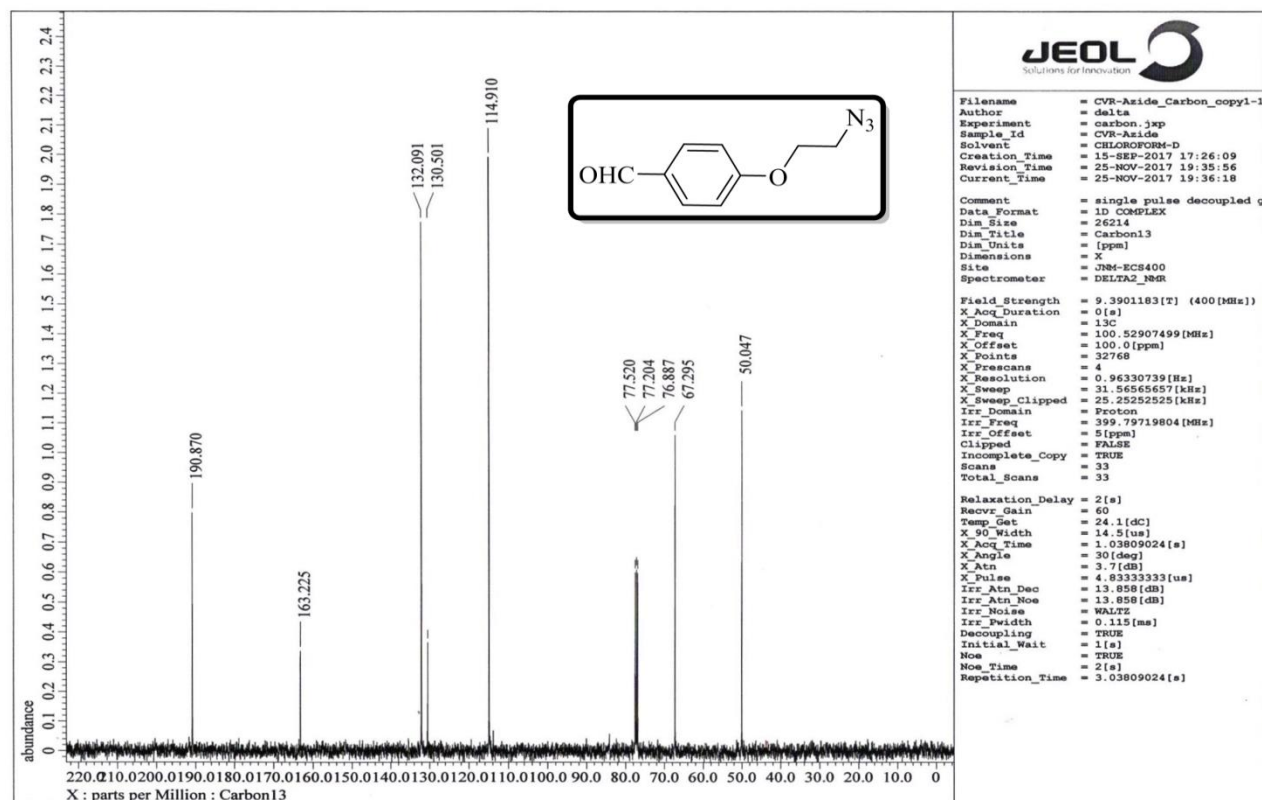
¹³C-NMR spectrum of compound 2a



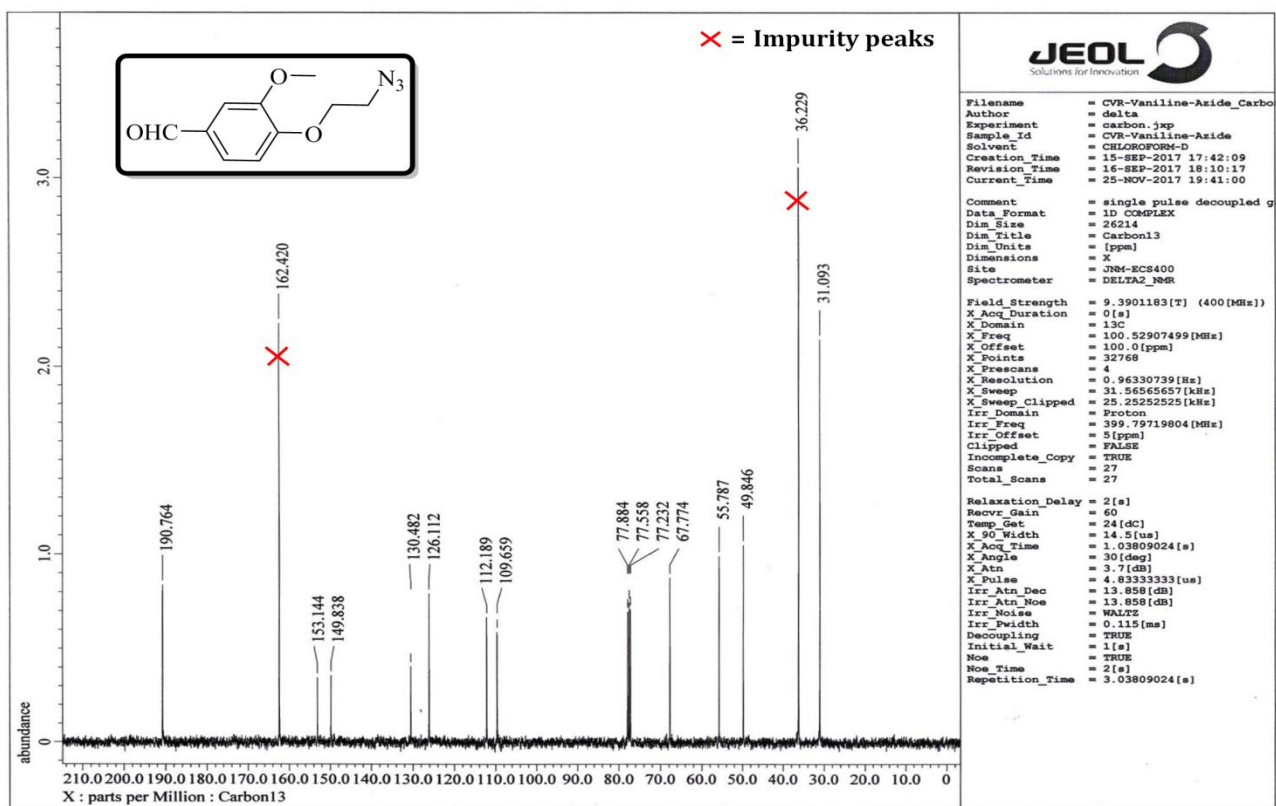
¹³C-NMR spectrum of compound 3



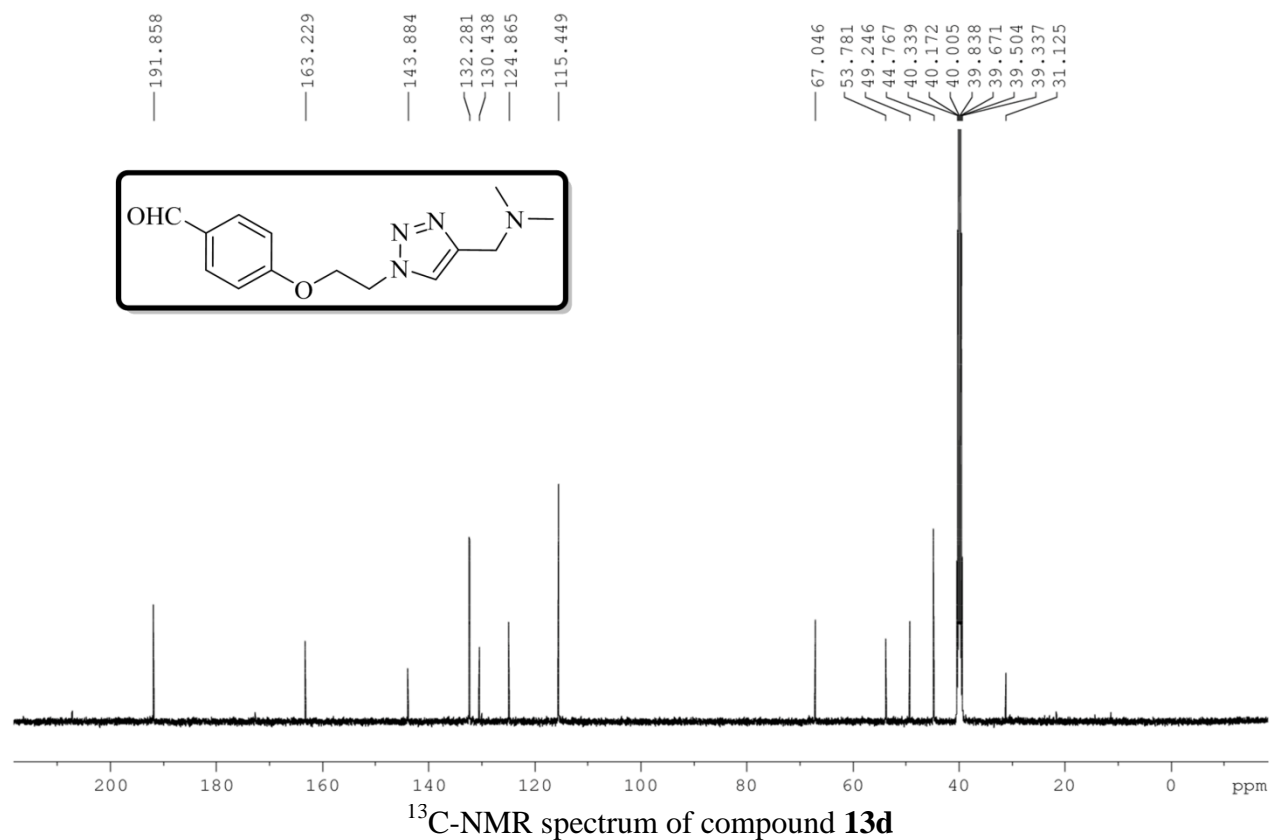
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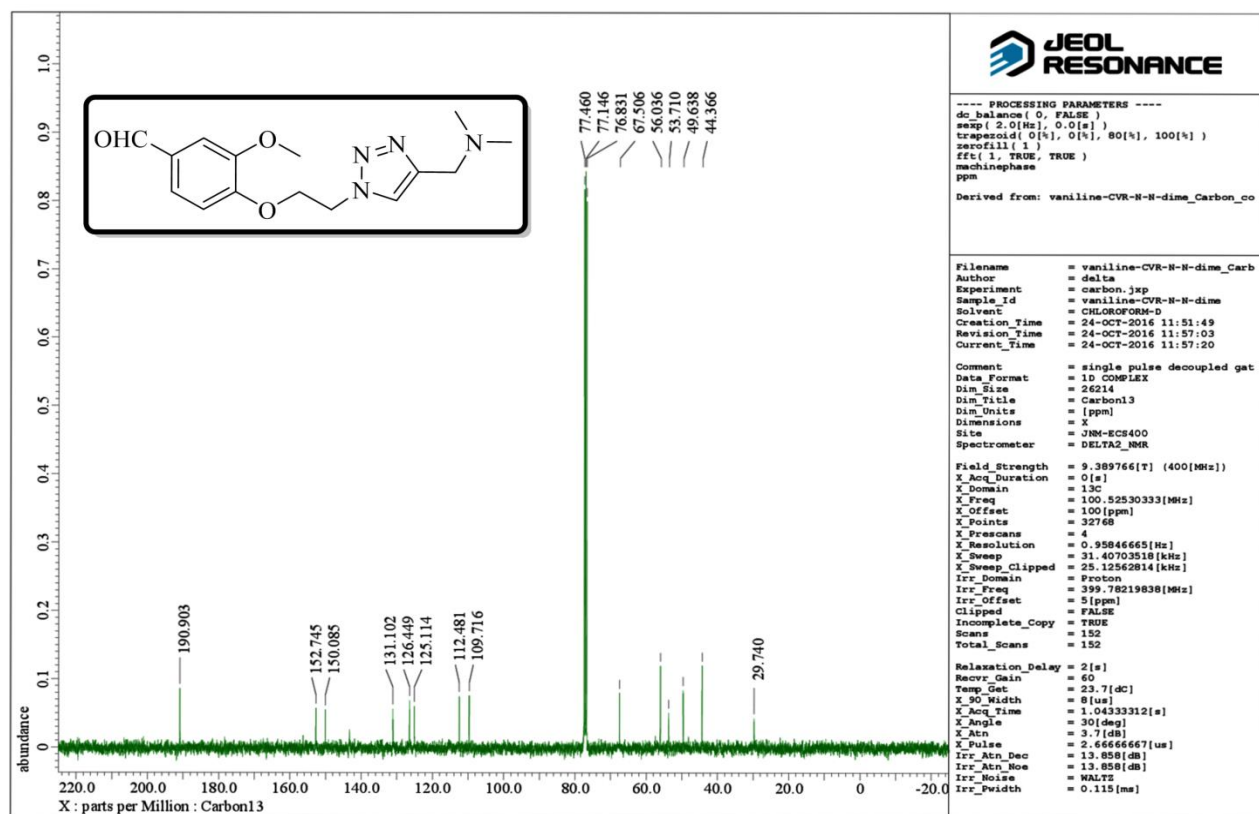
¹³C-NMR spectrum of compound 11



¹³C-NMR spectrum of compound 12

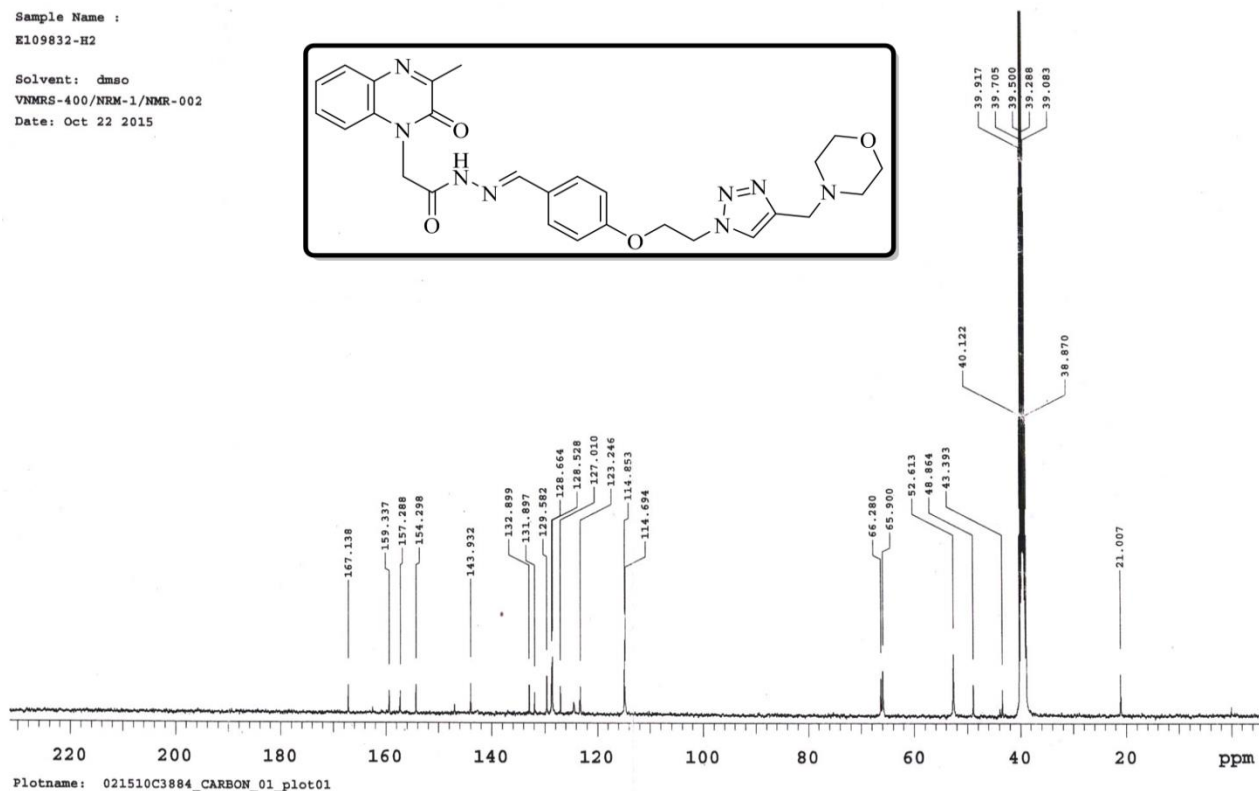


¹³C-NMR spectrum of compound 13d

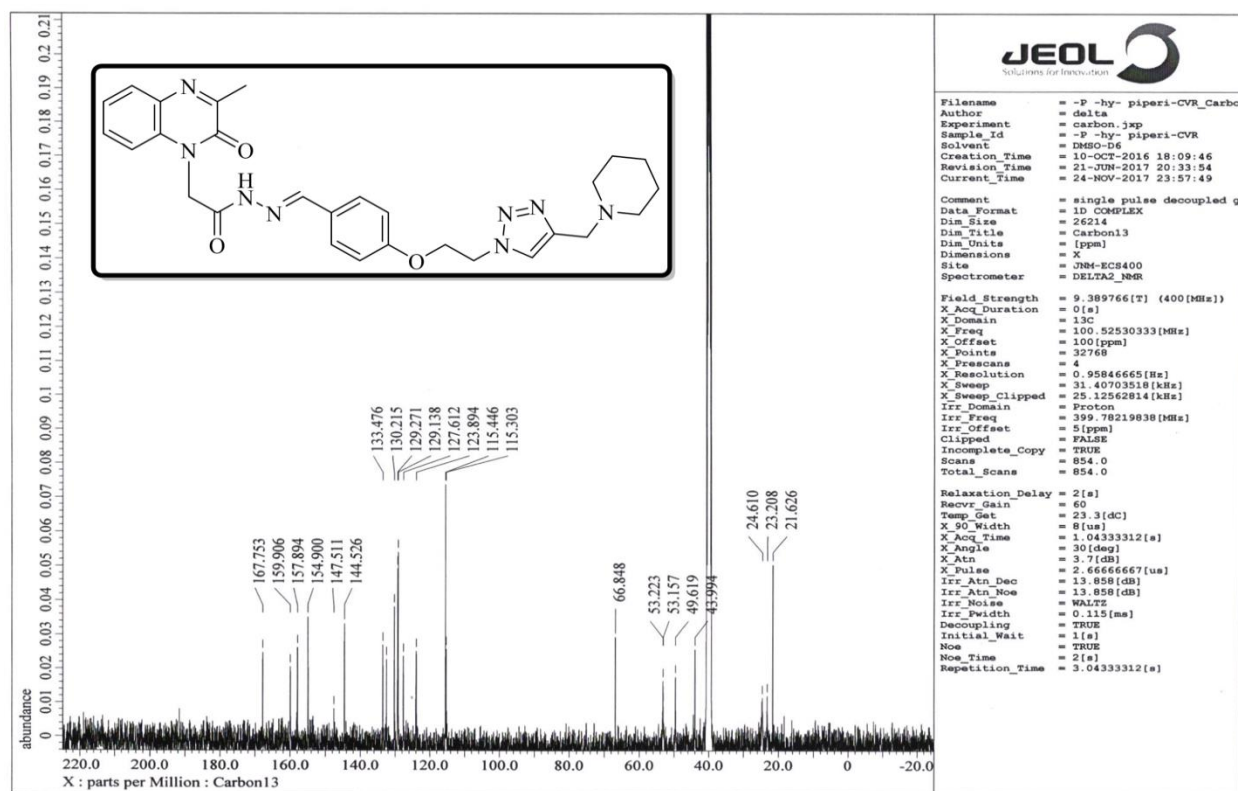


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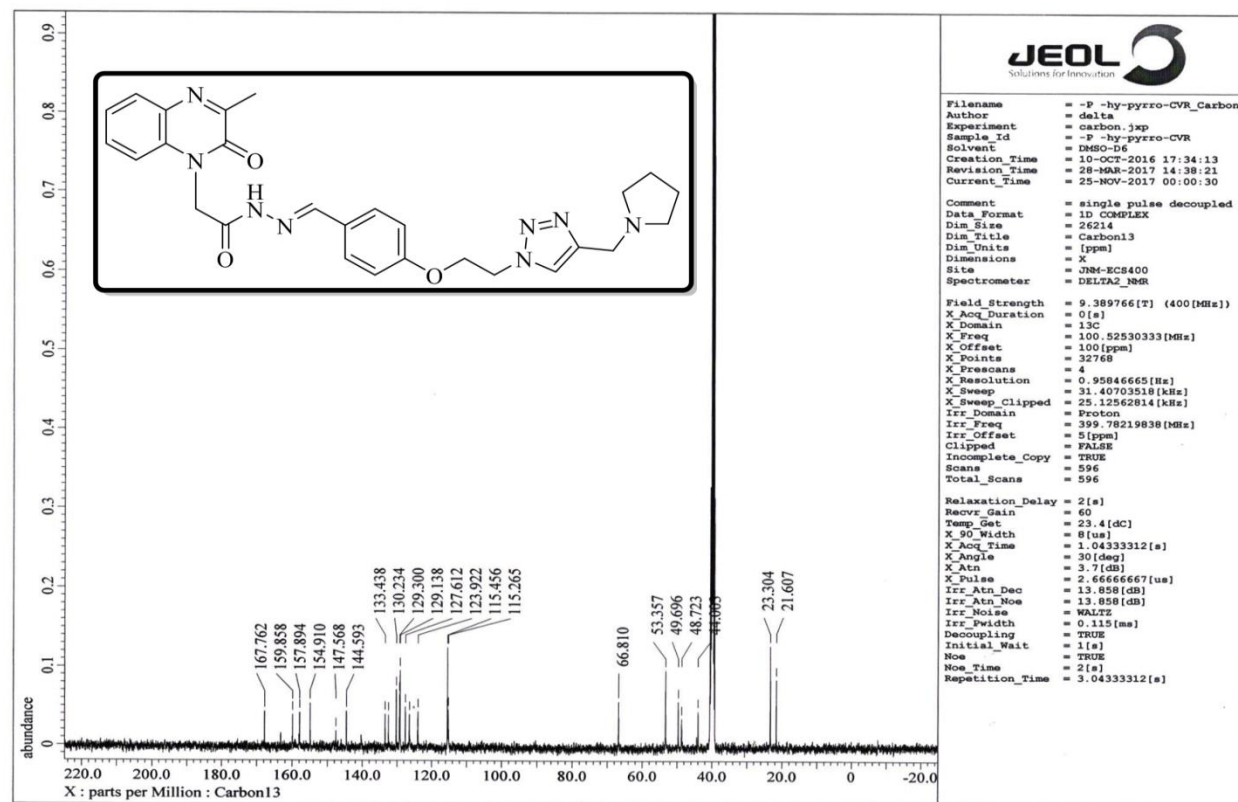
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 Date: Oct 22 2015



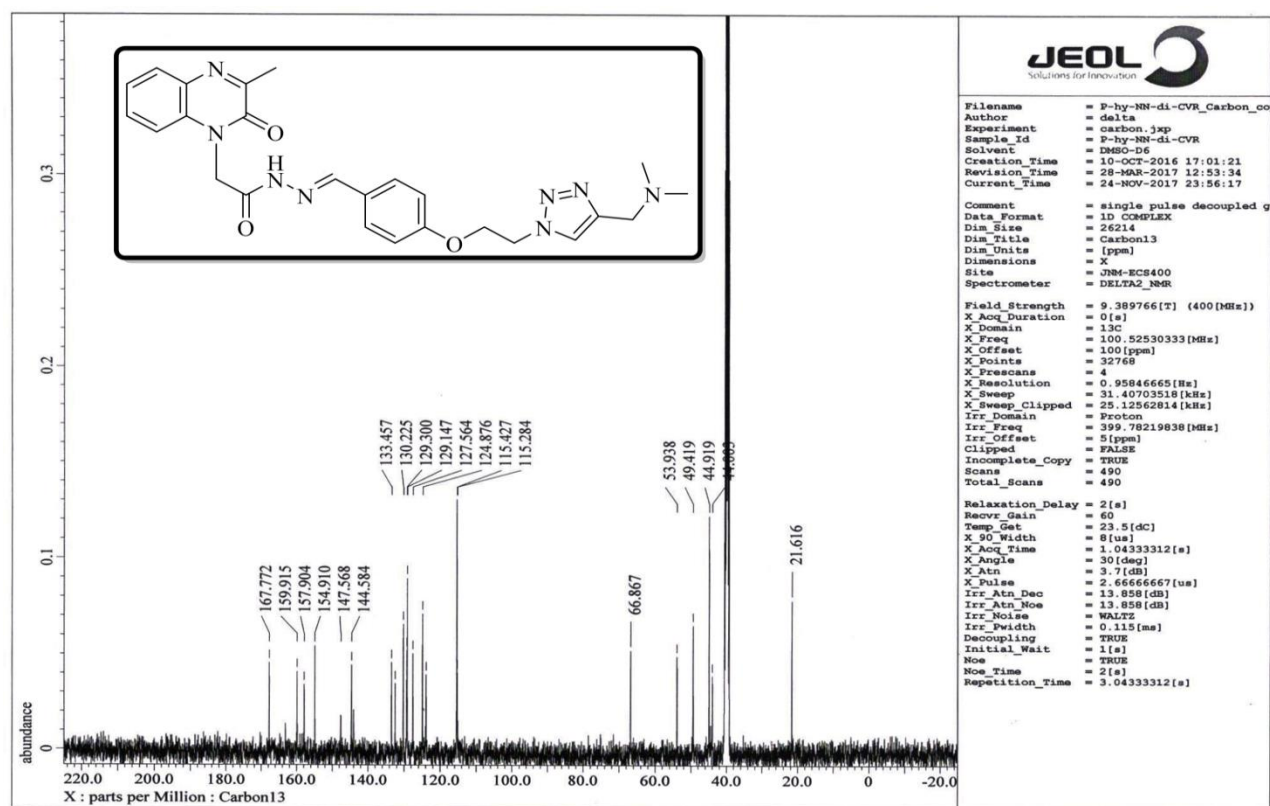
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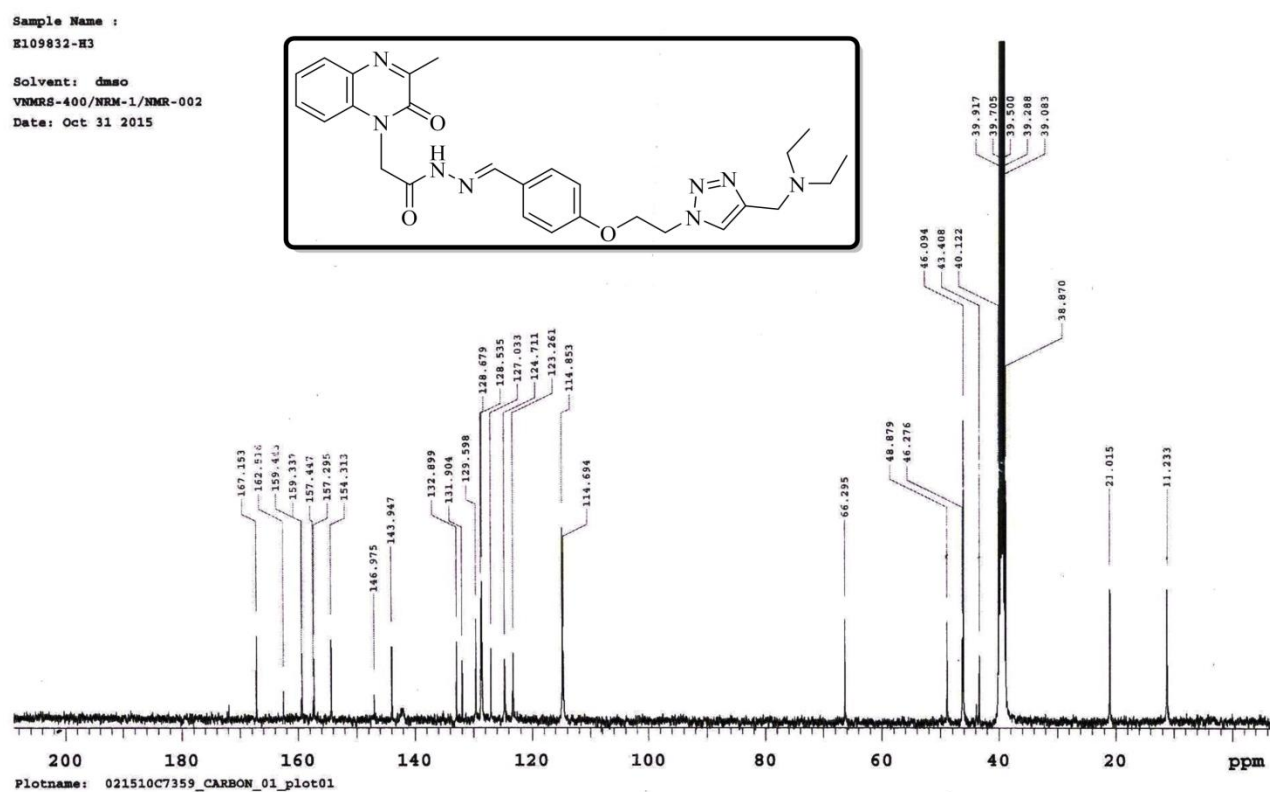
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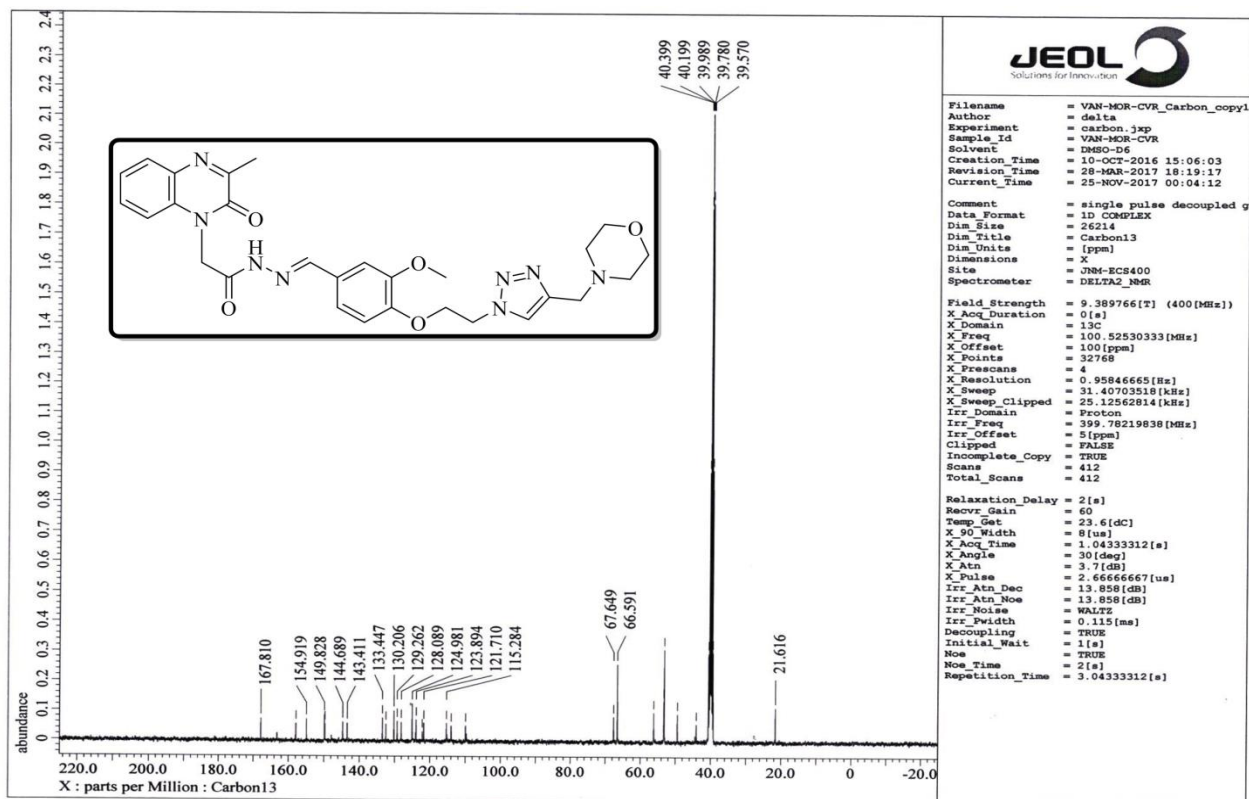
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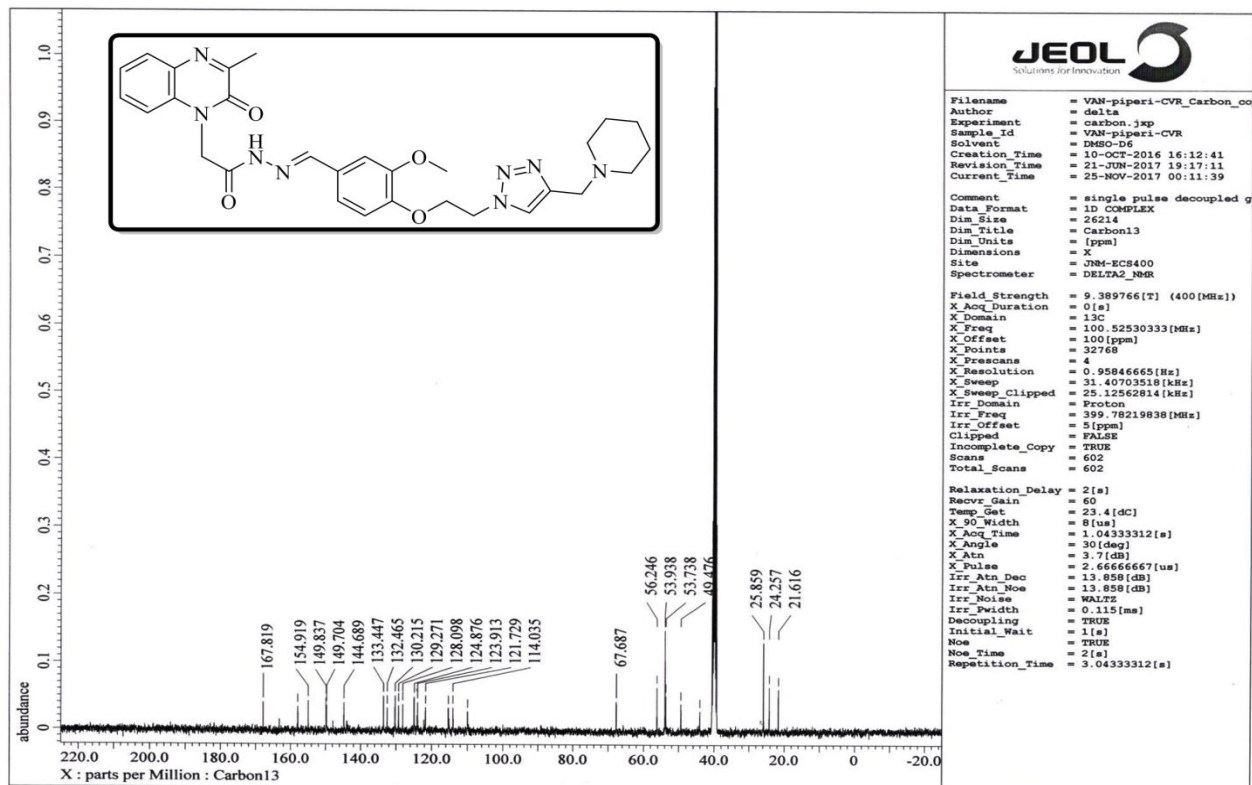
¹³C-NMR spectrum of compound **14d**



¹³C-NMR spectrum of compound **14e**

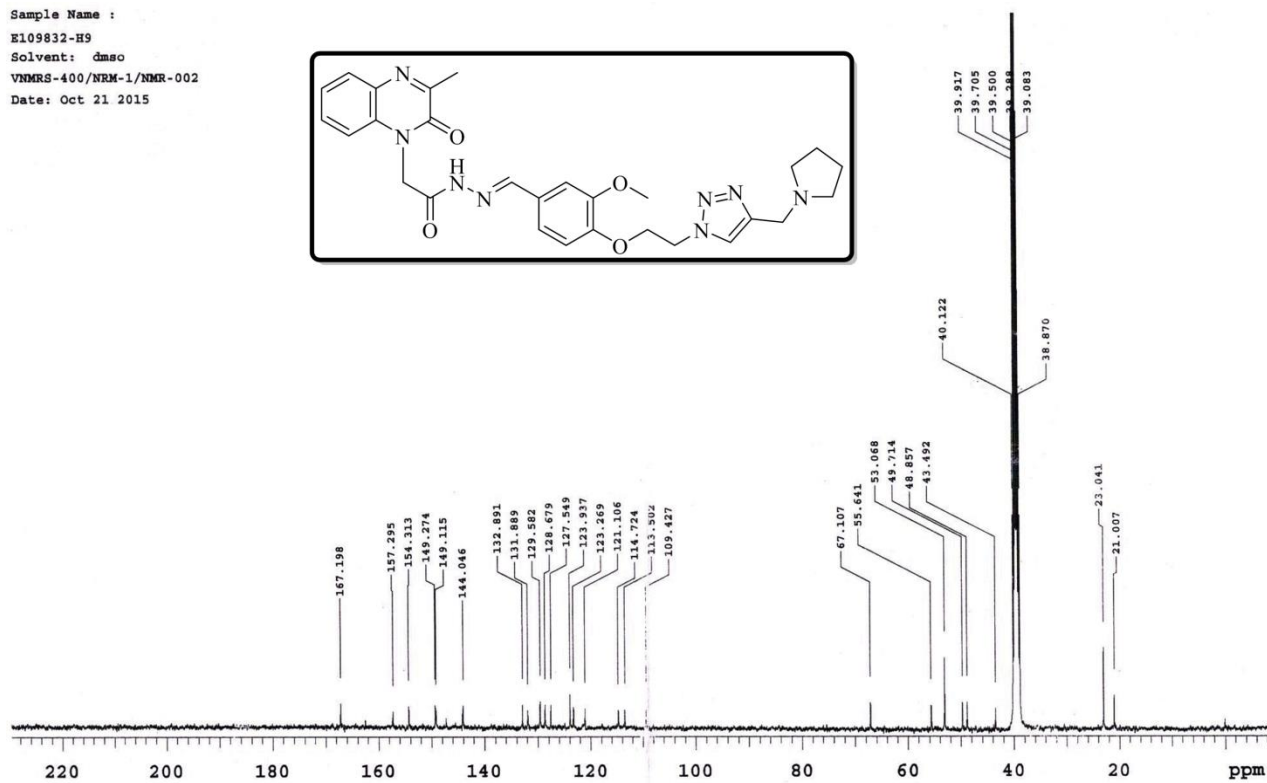


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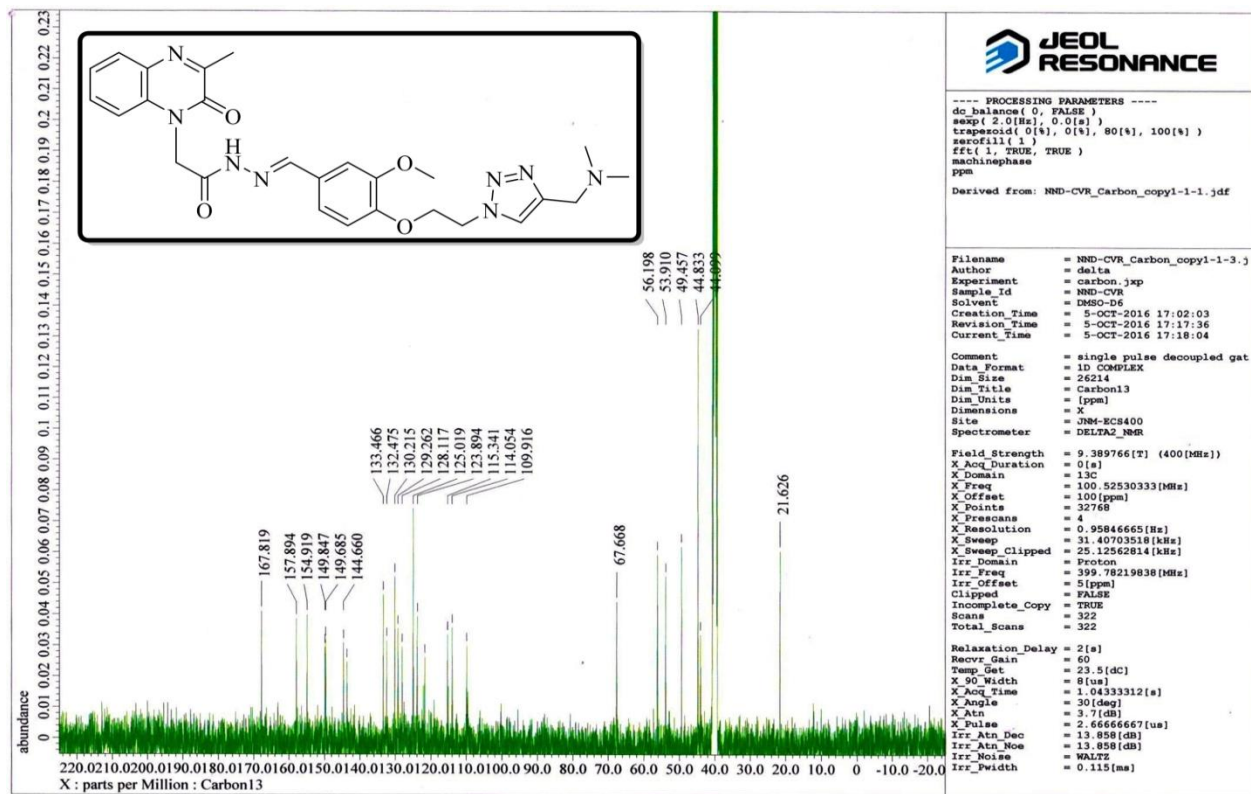


¹³C-NMR spectrum of compound **14g**

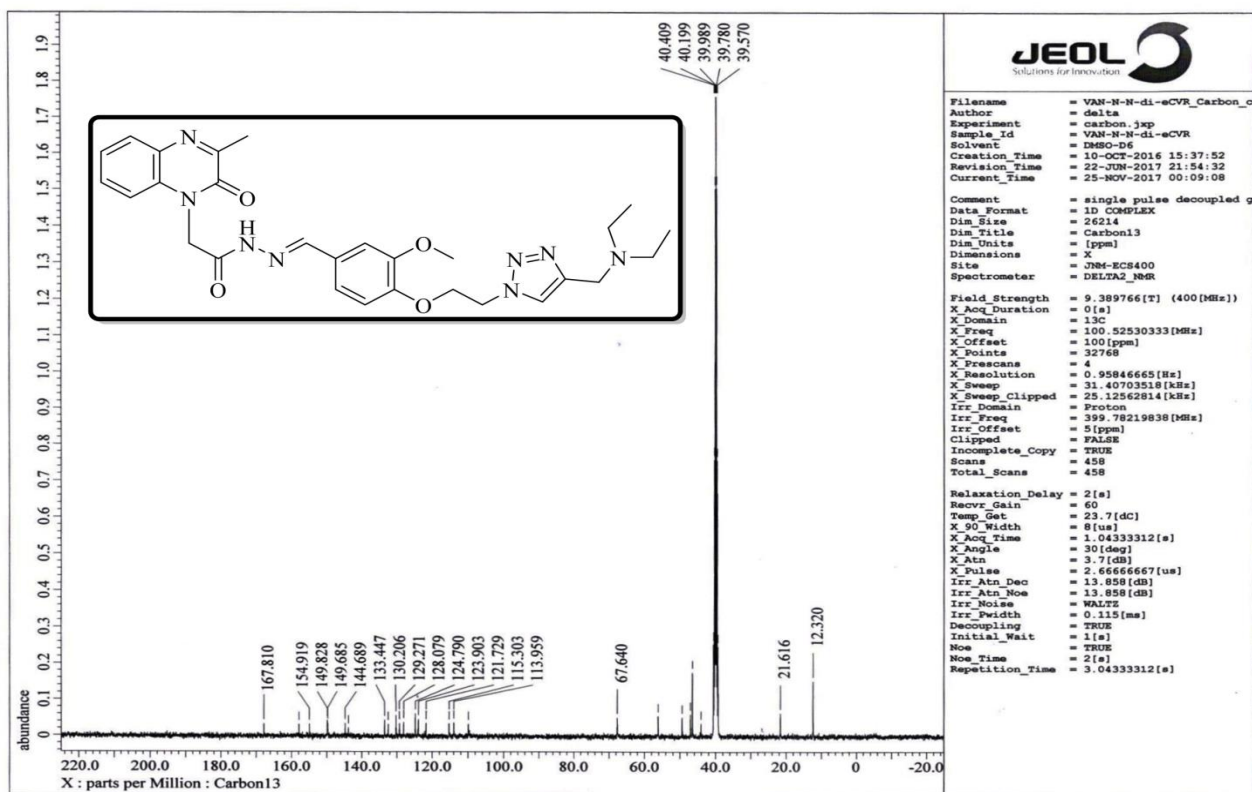
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Solvent: dmsc
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Date: Oct 21 2015



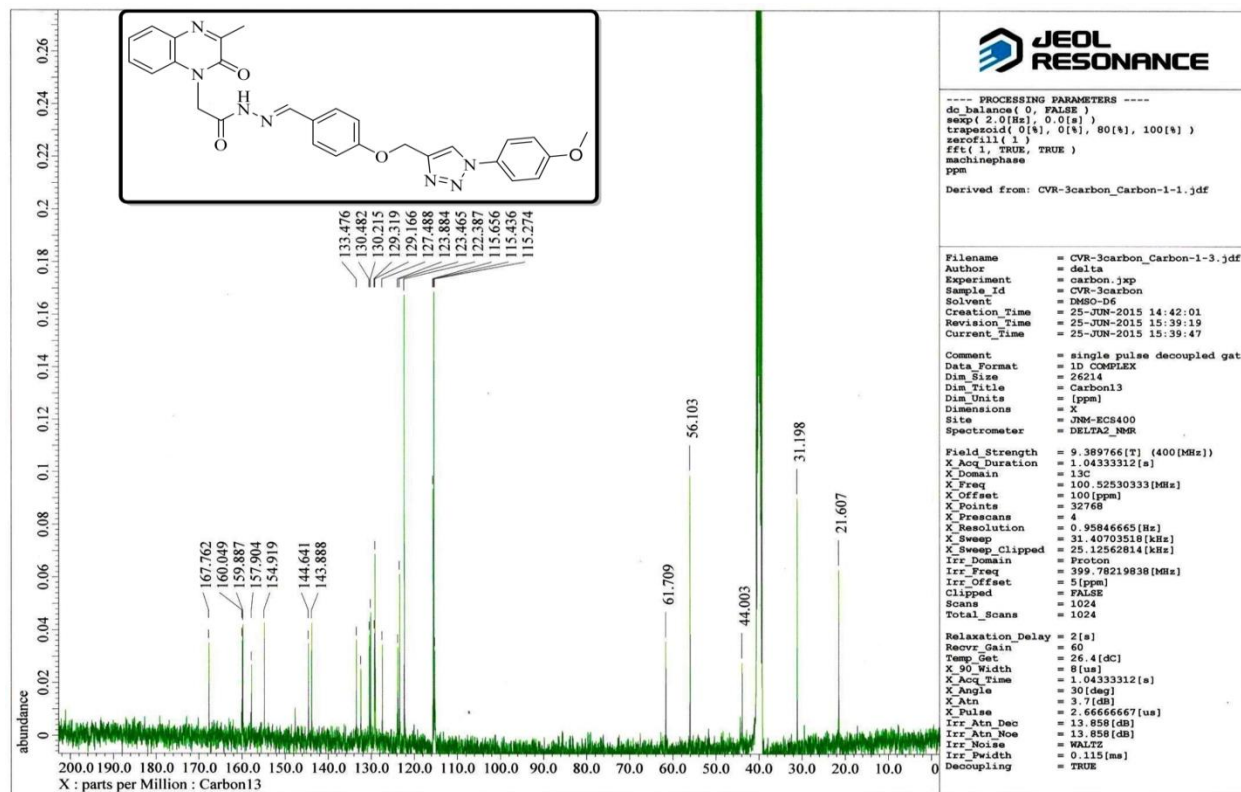
^{13}C -NMR spectrum of compound **14h**



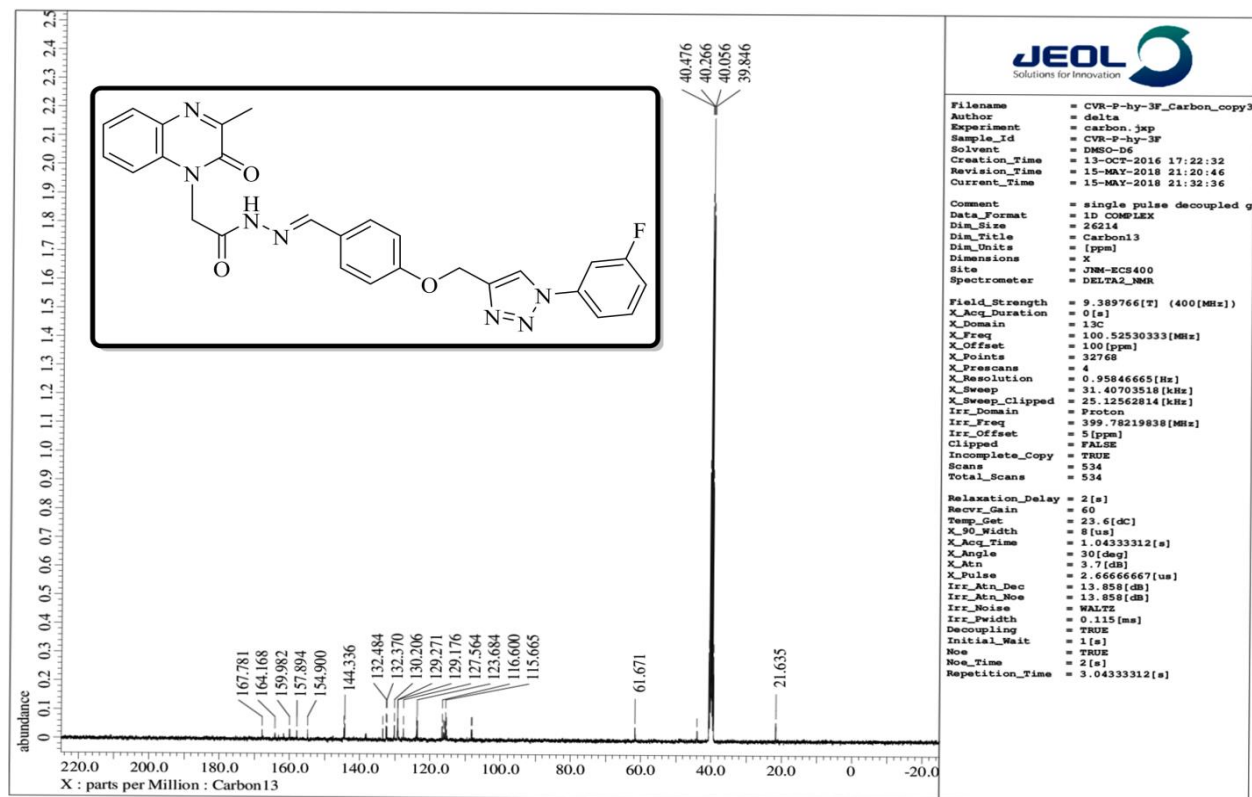
^{13}C -NMR spectrum of compound **14i**



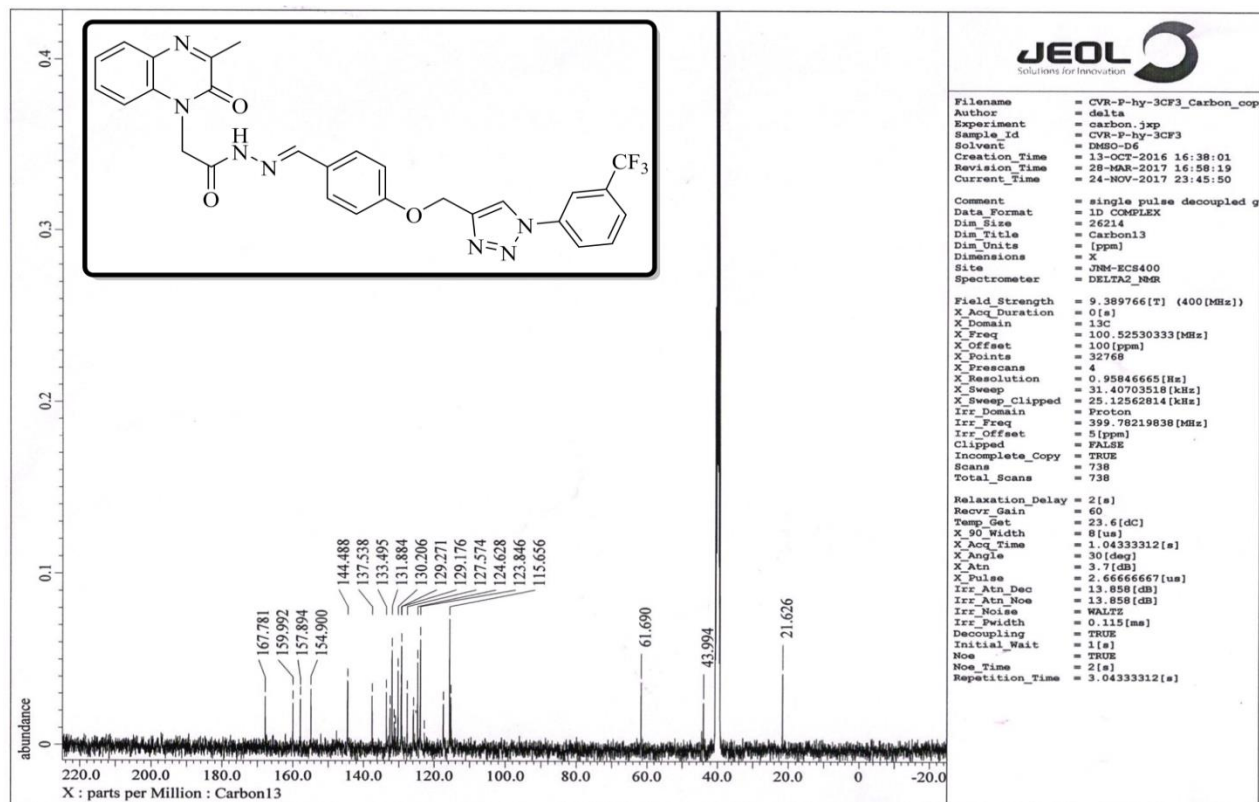
¹³C-NMR spectrum of compound 14j



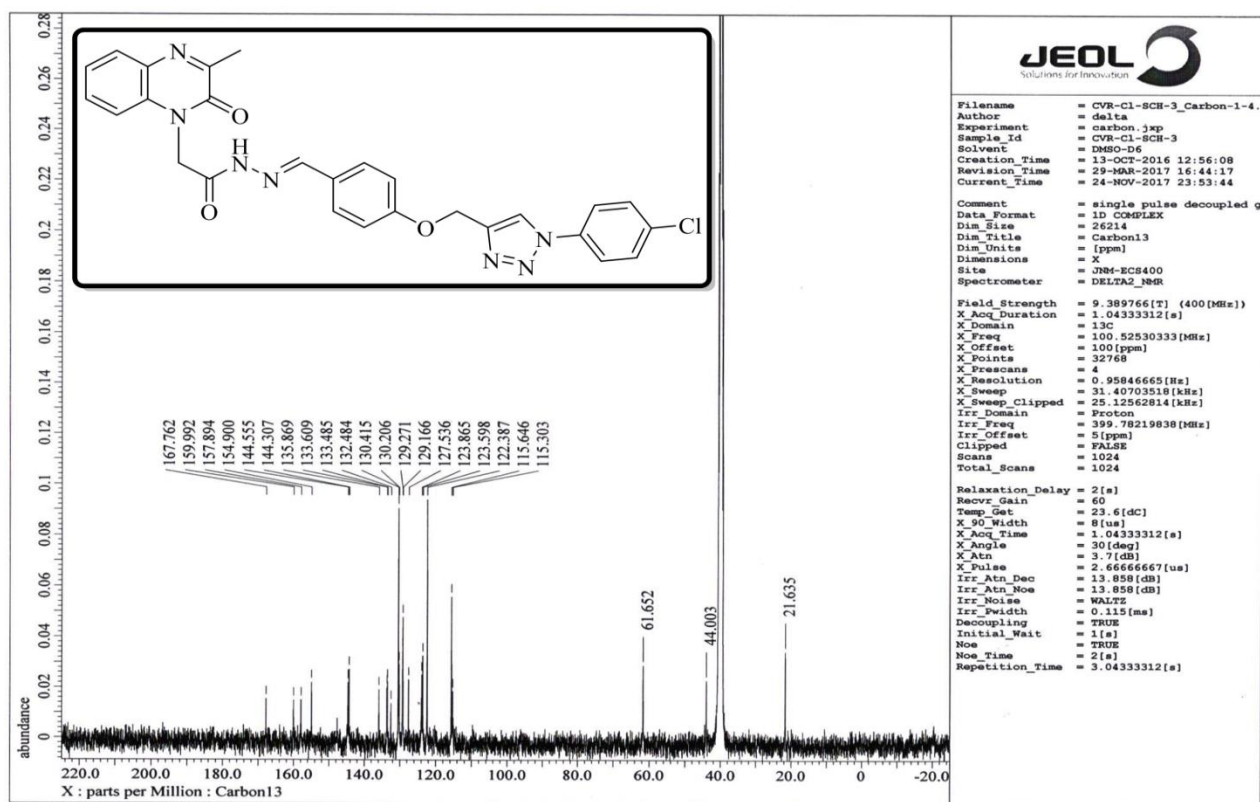
¹³C-NMR spectrum of compound 15b



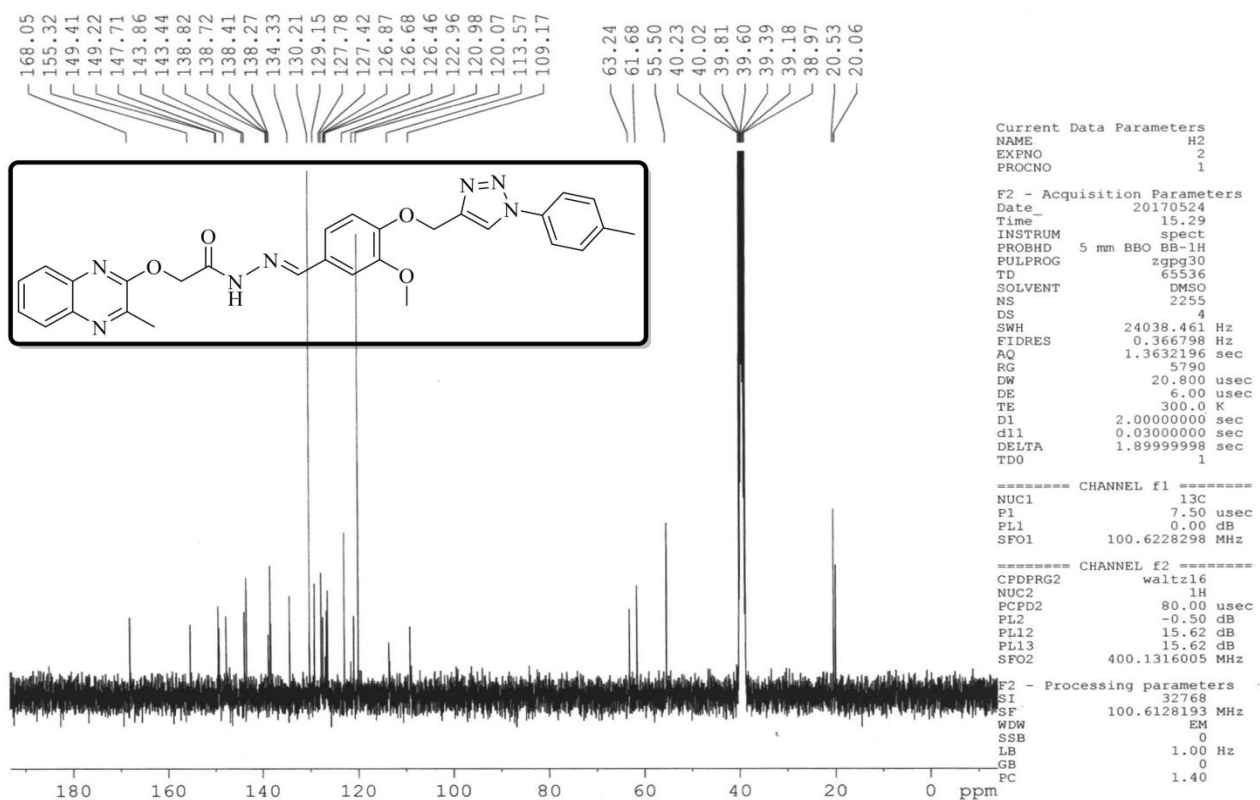
¹³C-NMR spectrum of compound **15c**



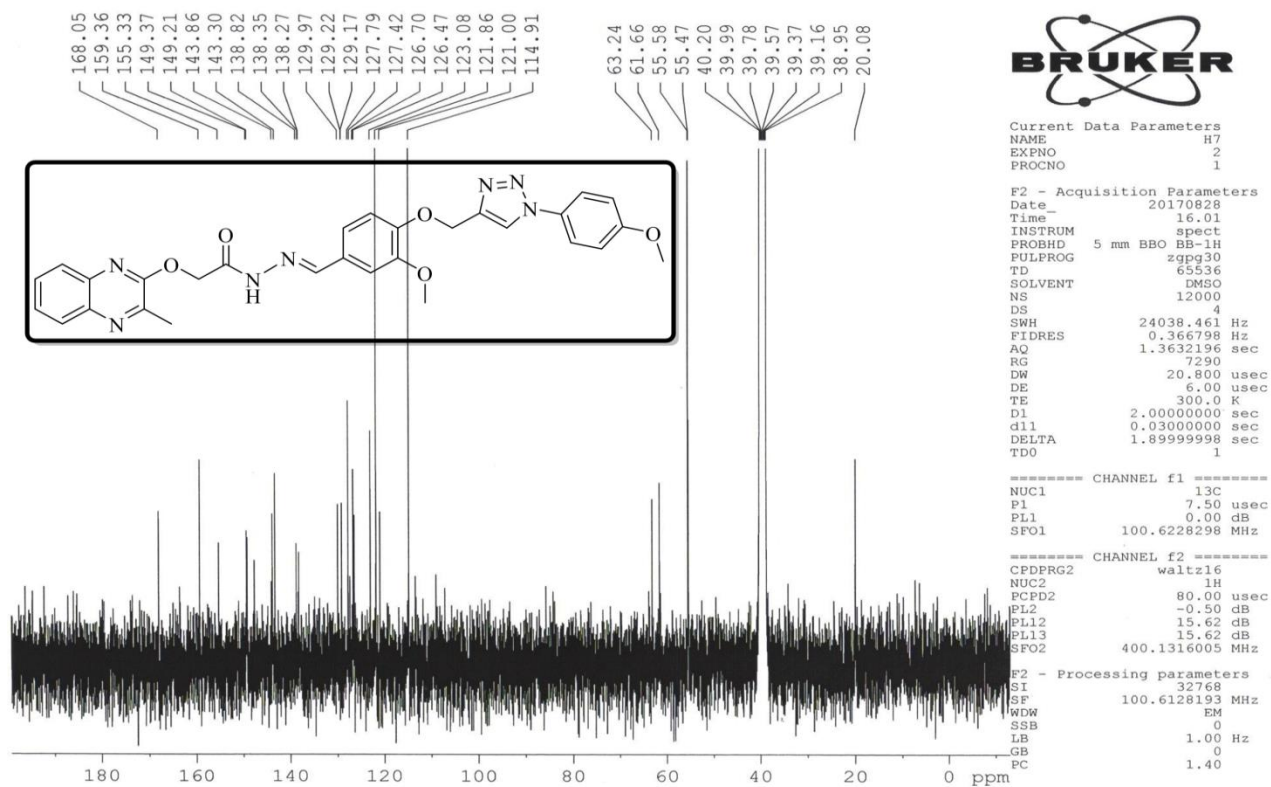
¹³C-NMR spectrum of compound **15d**



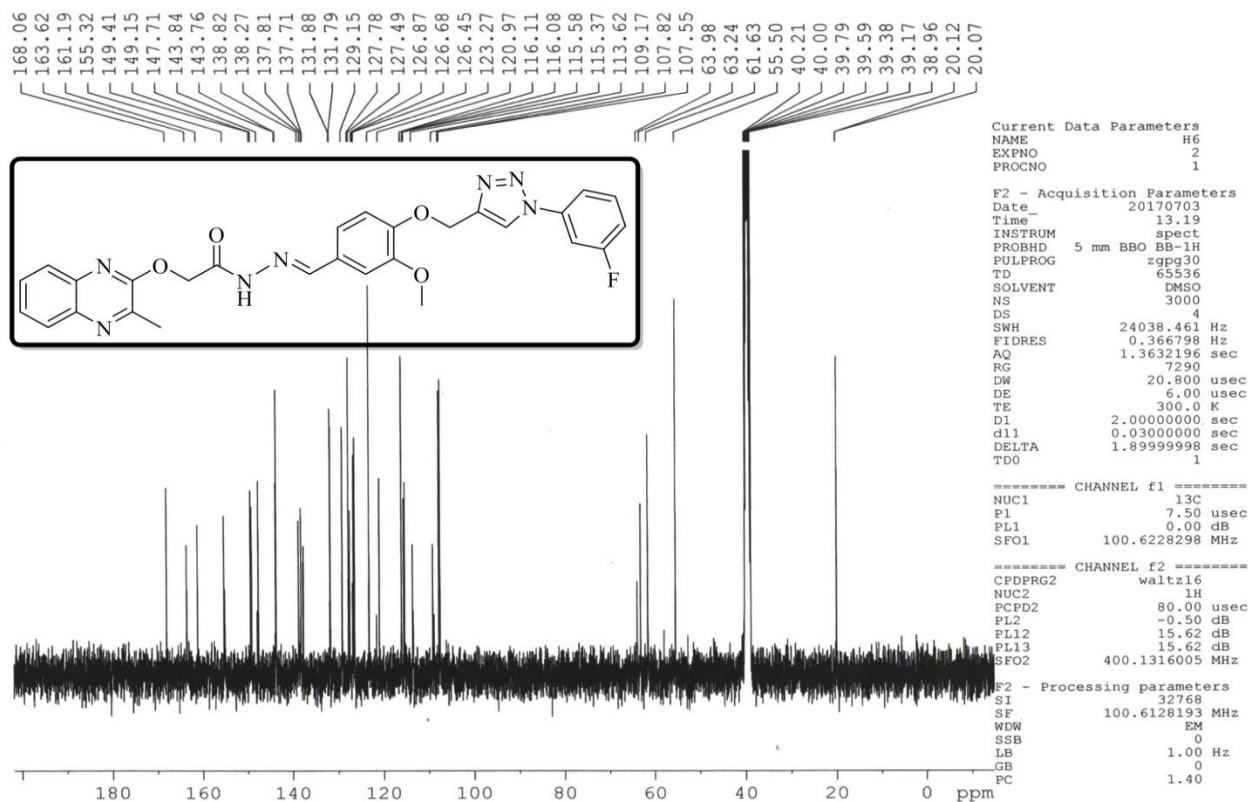
¹³C-NMR spectrum of compound 15e



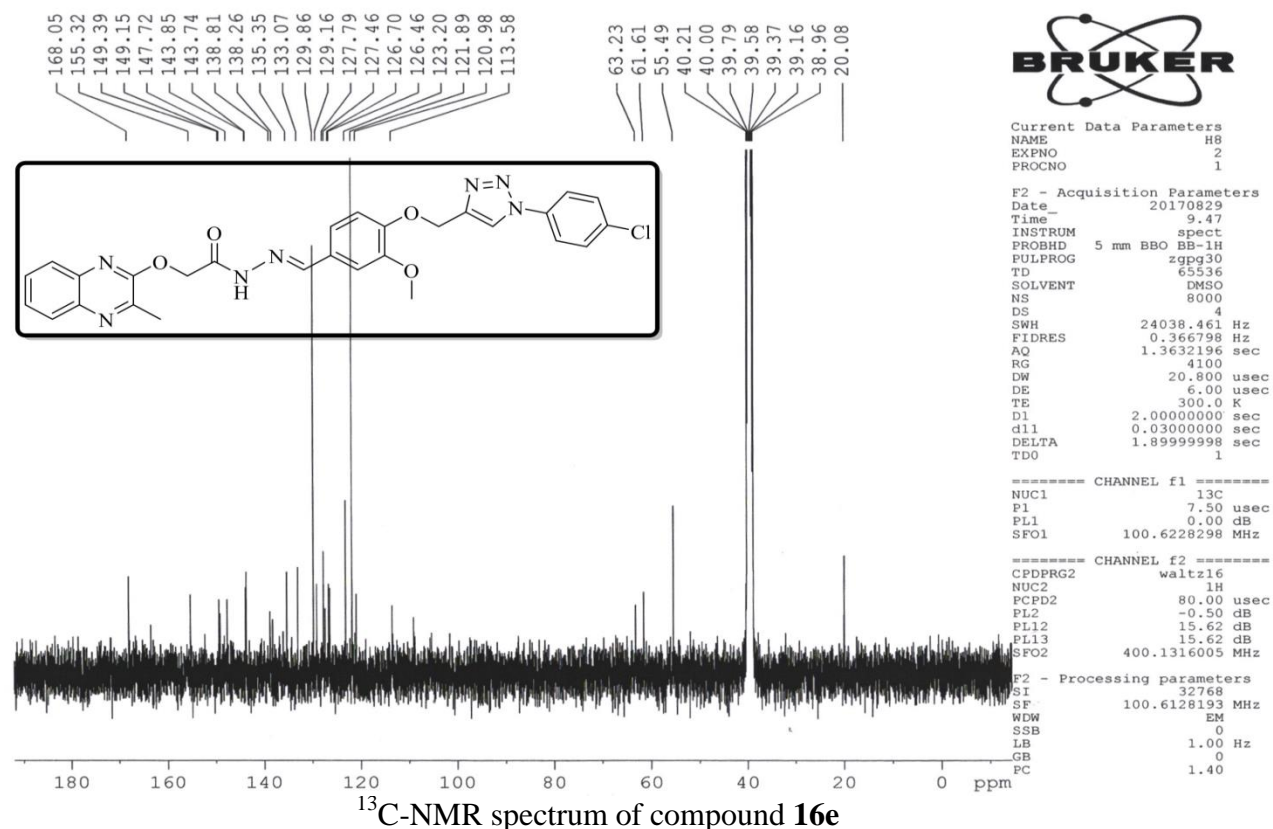
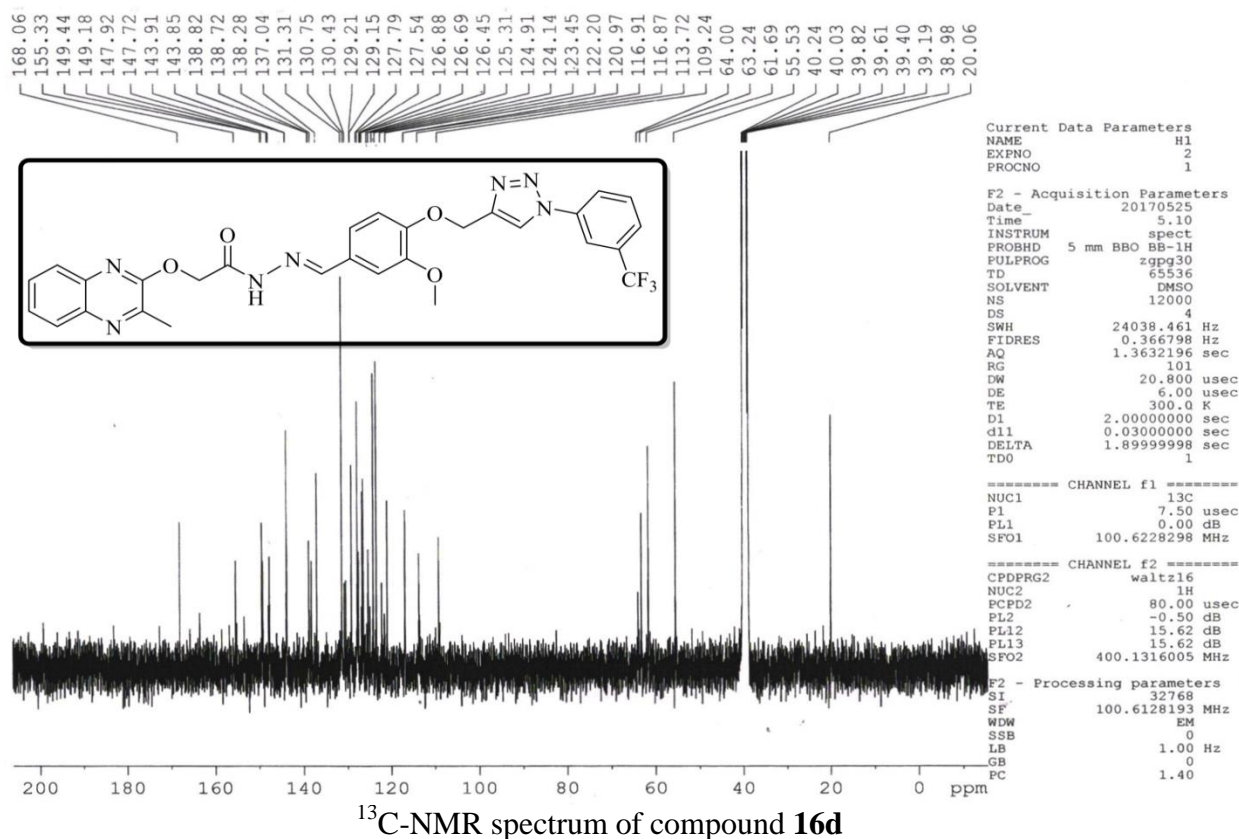
¹³C-NMR spectrum of compound 16a



¹³C-NMR spectrum of compound **16b**

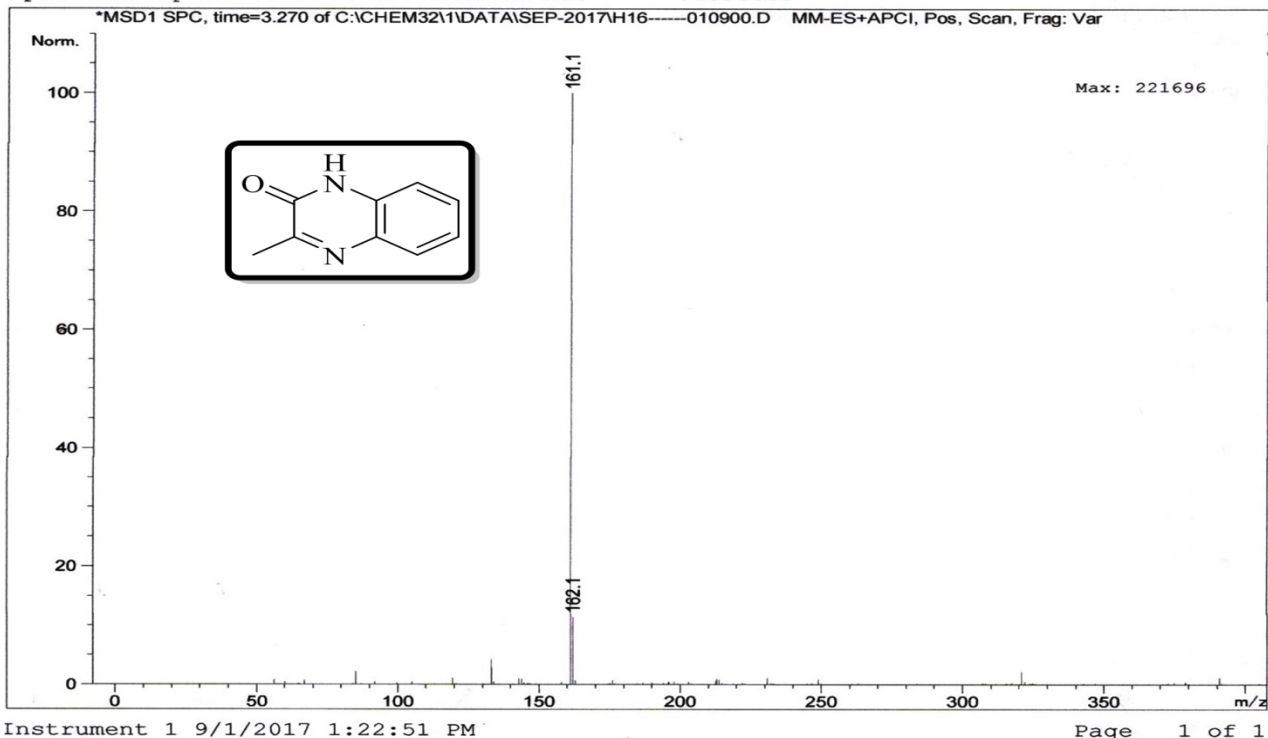


¹³C-NMR spectrum of compound **16c**



Print of window 79: Apex Mass Spectrum of Peak 3.275 of H16-----010900.D

Apex Mass Spectrum of Peak 3.275 of H16-----010900.D



Mass spectrum of compound 1

==== Shimadzu LabSolutions Data Report ====

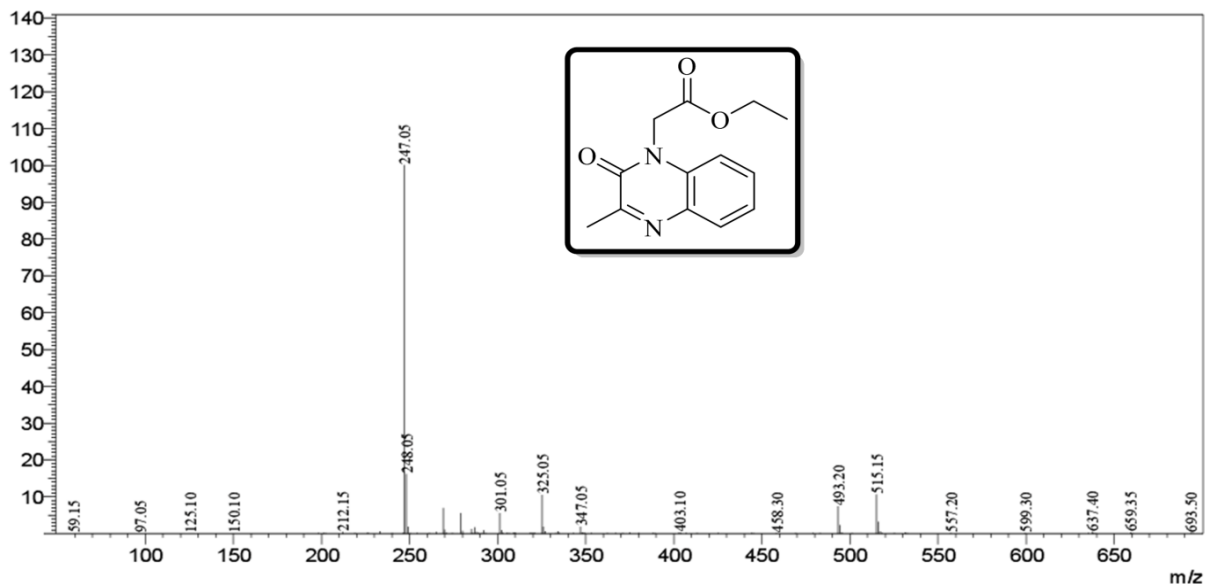
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RawMode: Averaged 0.700-1.633(43-99) BasePeak: 247.05(3695471)

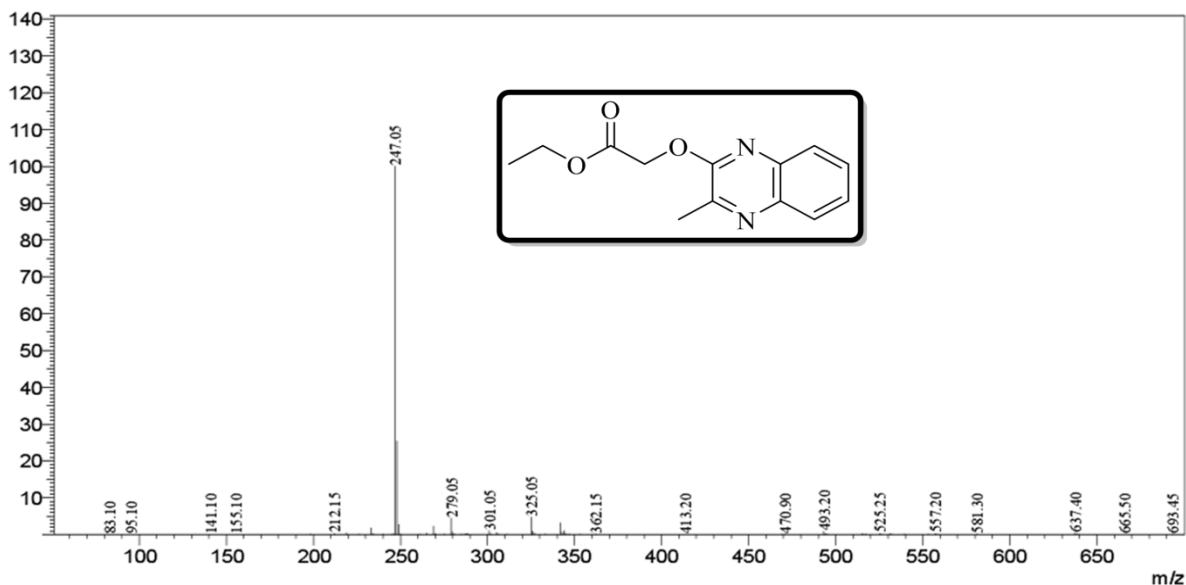
BG Mode: Averaged 0.000-0.733(1-45) Segment 1 - Event 1



==== Shimadzu LabSolutions Data Report ====

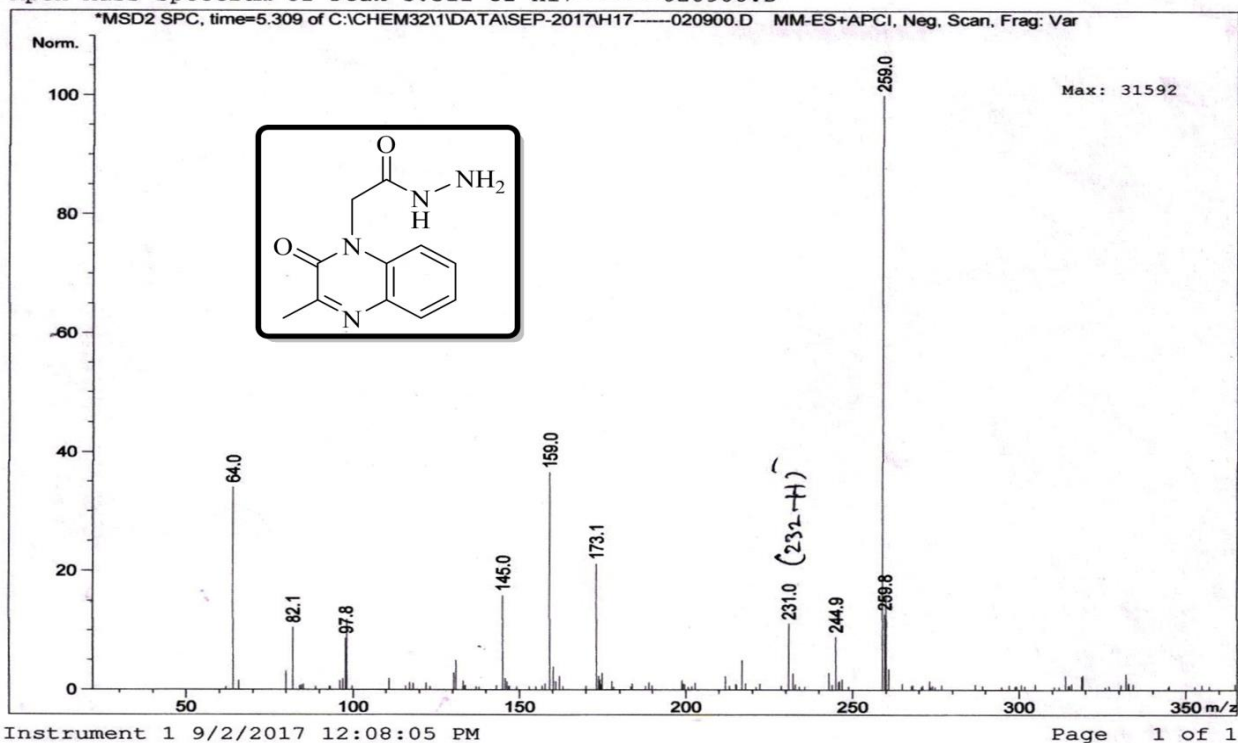
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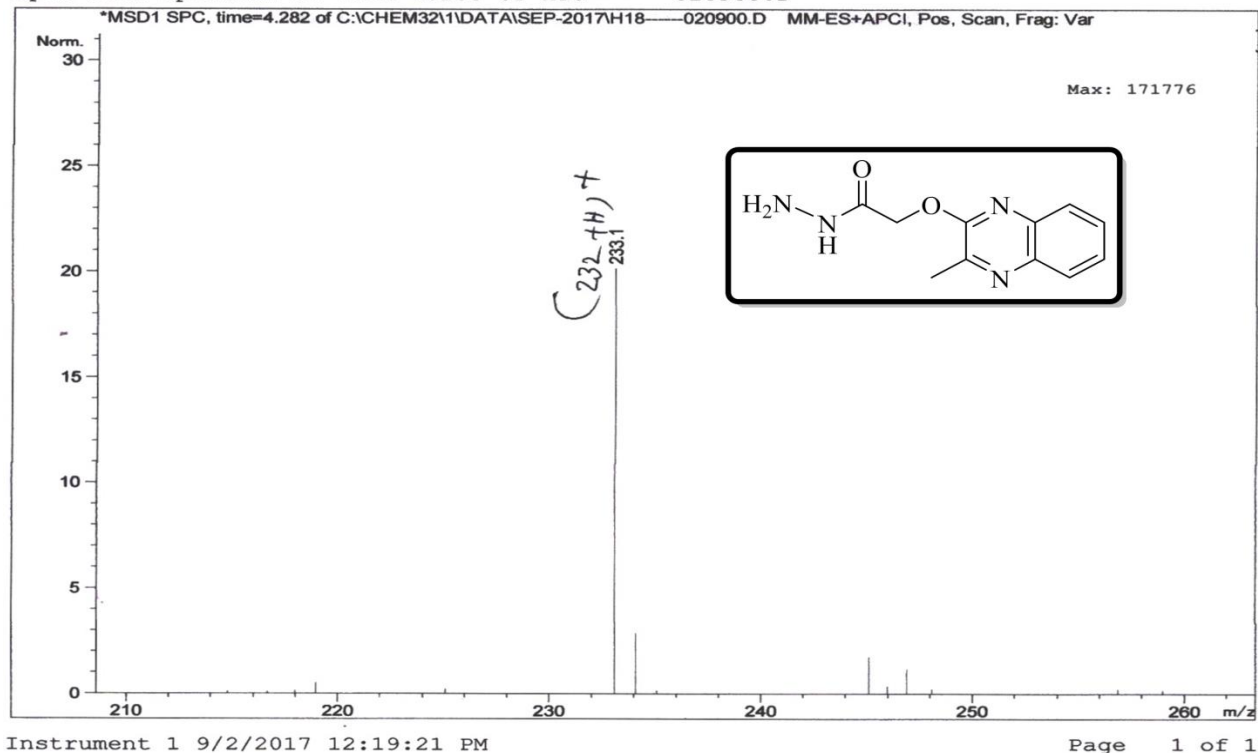
Mass spectrum of compound 2a

Print of window 79: Apex Mass Spectrum of Peak 5.311 of H17-----020900.D
Apex Mass Spectrum of Peak 5.311 of H17-----020900.D



Mass spectrum of compound 3

Print of window 79: Apex Mass Spectrum of Peak 4.285 of H18-----020900.D
 Apex Mass Spectrum of Peak 4.285 of H18-----020900.D

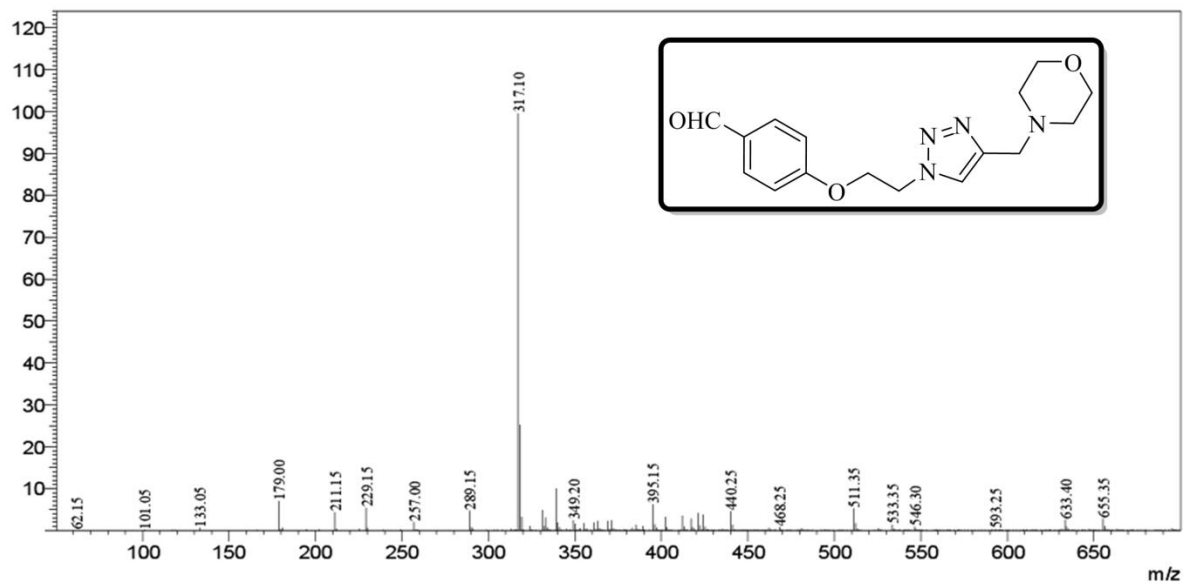


Mass spectrum of compound 3a

==== Shimadzu LabSolutions Data Report =====

<Spectrum>

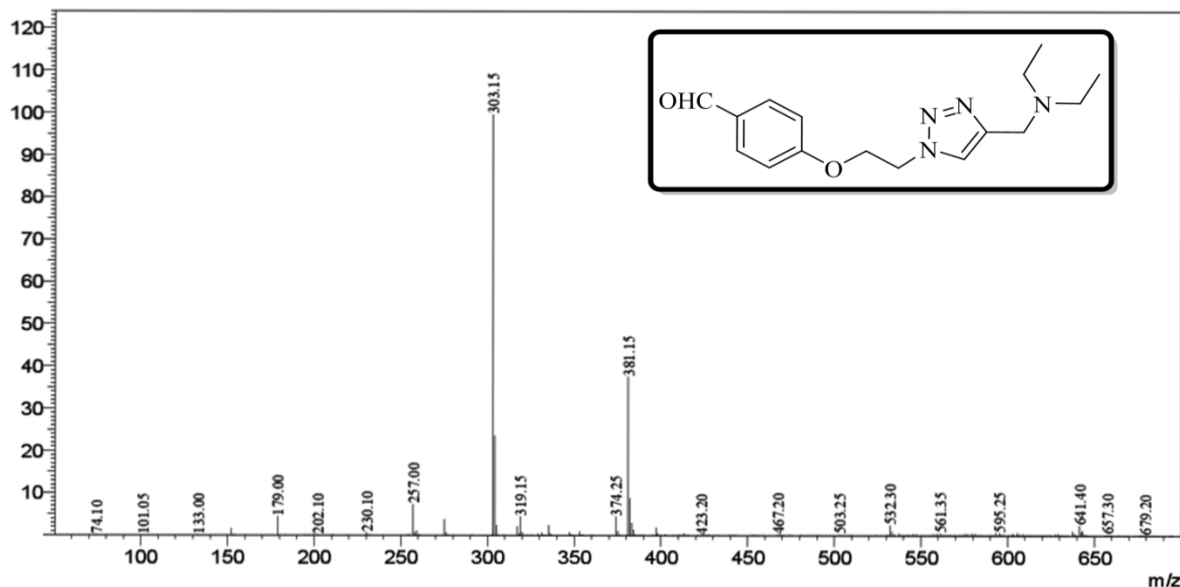
Line# 1 R.Time:1.067(Scan#65)
 MassPeaks:477
 RawMode:Averaged 0.600-1.667(37-101) BasePeak:317.10(6178998)
 BG Mode:Averaged 0.000-0.667(1-41) Segment 1 - Event 1



==== Shimadzu LabSolutions Data Report =====

<Spectrum>

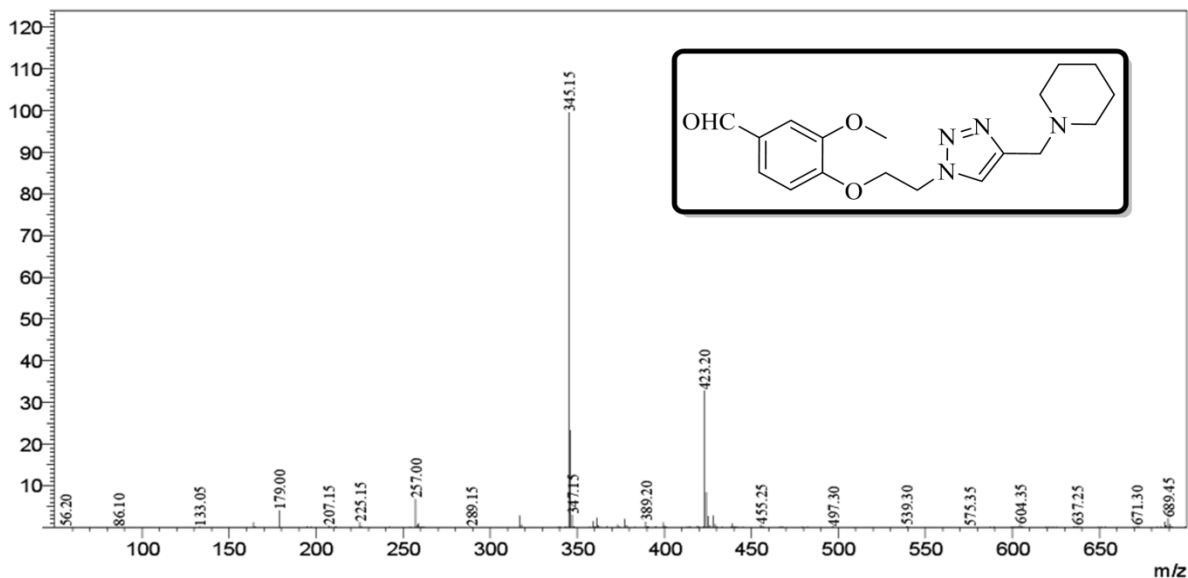
Line#:1 R.Time:1.100(Scan#:67)
 MassPeaks:531
 RawMode:Averaged 0.700-1.767(43-107) BasePeak:303.15(5868517)
 BG Mode:Averaged 0.000-0.667(1-41) Segment 1 - Event 1



==== Shimadzu LabSolutions Data Report =====

<Spectrum>

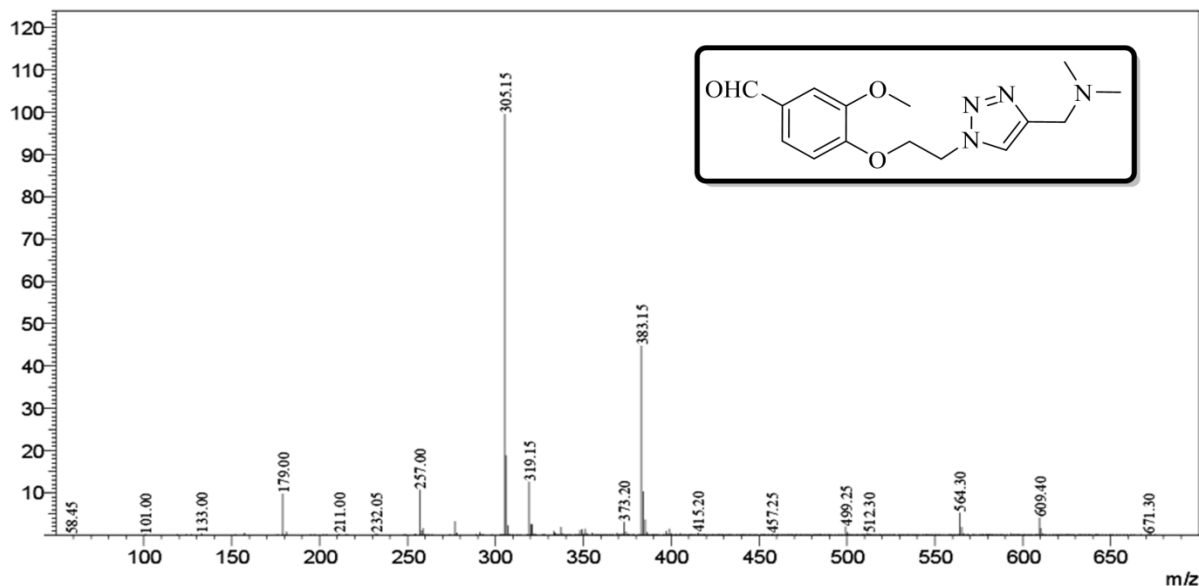
Line#:1 R.Time:1.100(Scan#:67)
 MassPeaks:489
 RawMode:Averaged 0.667-1.767(41-107) BasePeak:345.15(5152477)
 BG Mode:Averaged 0.000-0.633(1-39) Segment 1 - Event 1



==== Shimadzu LabSolutions Data Report ====

<Spectrum>

Line#: 1 R.Time: 1.067(Scan#: 65)
MassPeaks: 555
RawMode: Averaged 0.700-1.867(43-113) BasePeak: 305.15(5102817)
BG Mode: Averaged 0.000-0.667(1-41) Segment 1 - Event 1

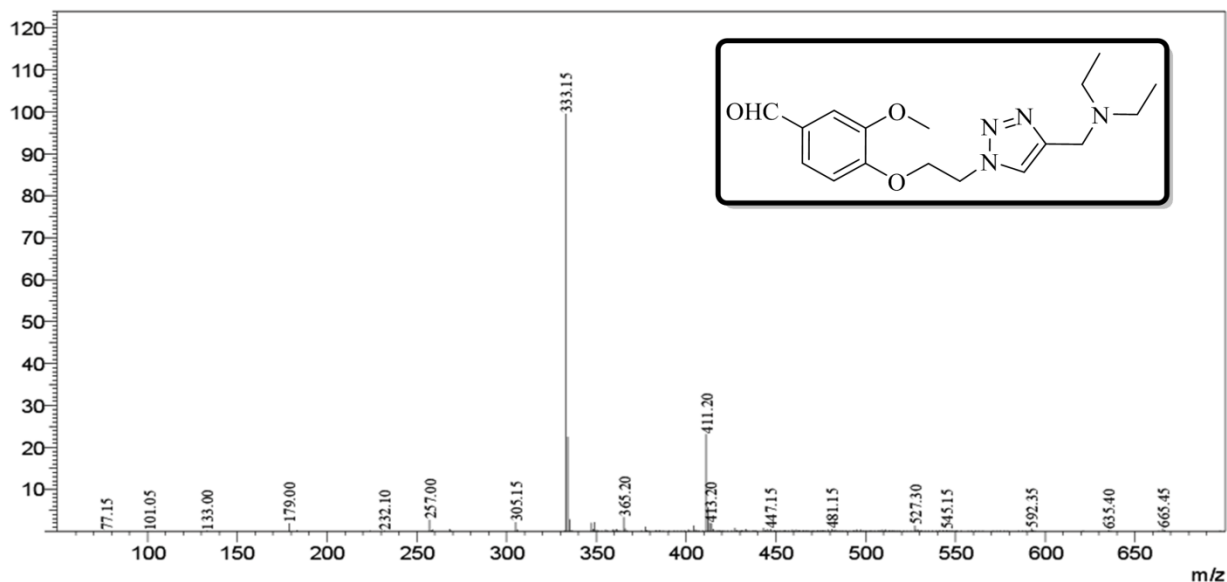


Mass spectrum of compound 13i

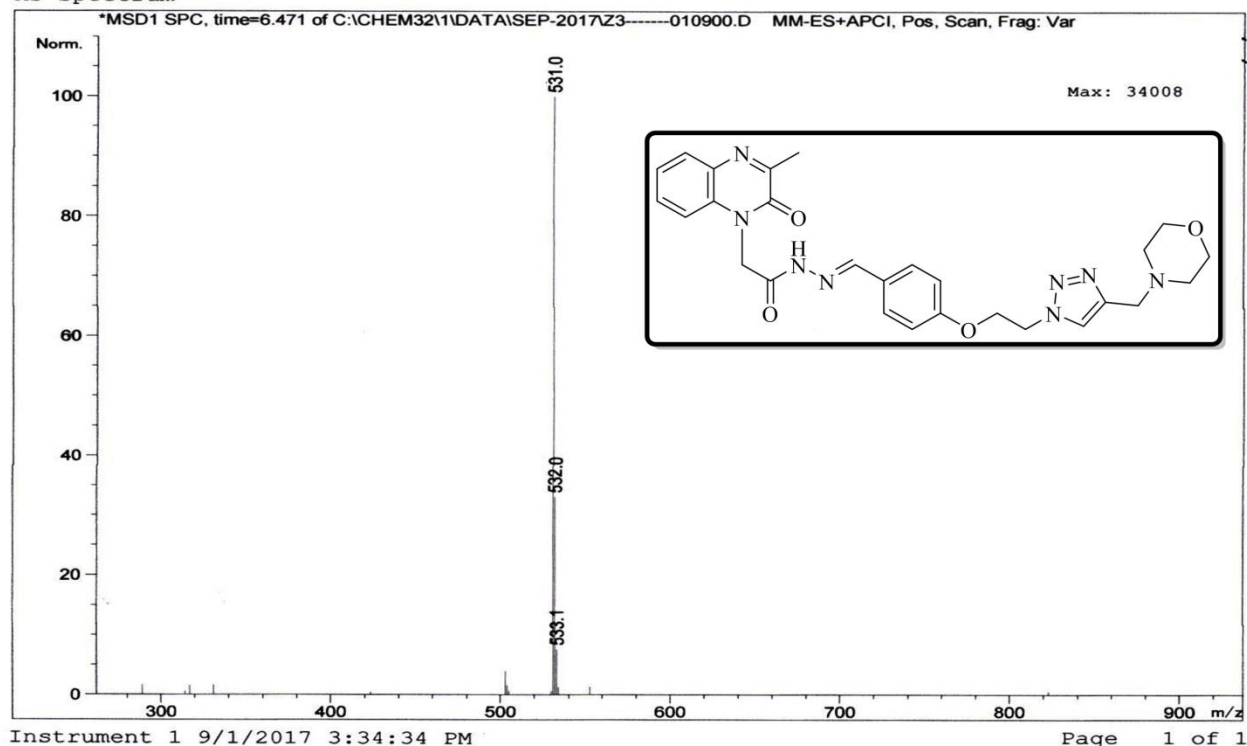
==== Shimadzu LabSolutions Data Report ====

<Spectrum>

Line#: 1 R.Time: 1.100(Scan#: 67)
MassPeaks: 470
RawMode: Averaged 0.667-1.833(41-111) BasePeak: 333.15(5498728)
BG Mode: Averaged 0.000-0.633(1-39) Segment 1 - Event 1



Mass spectrum of compound 13j

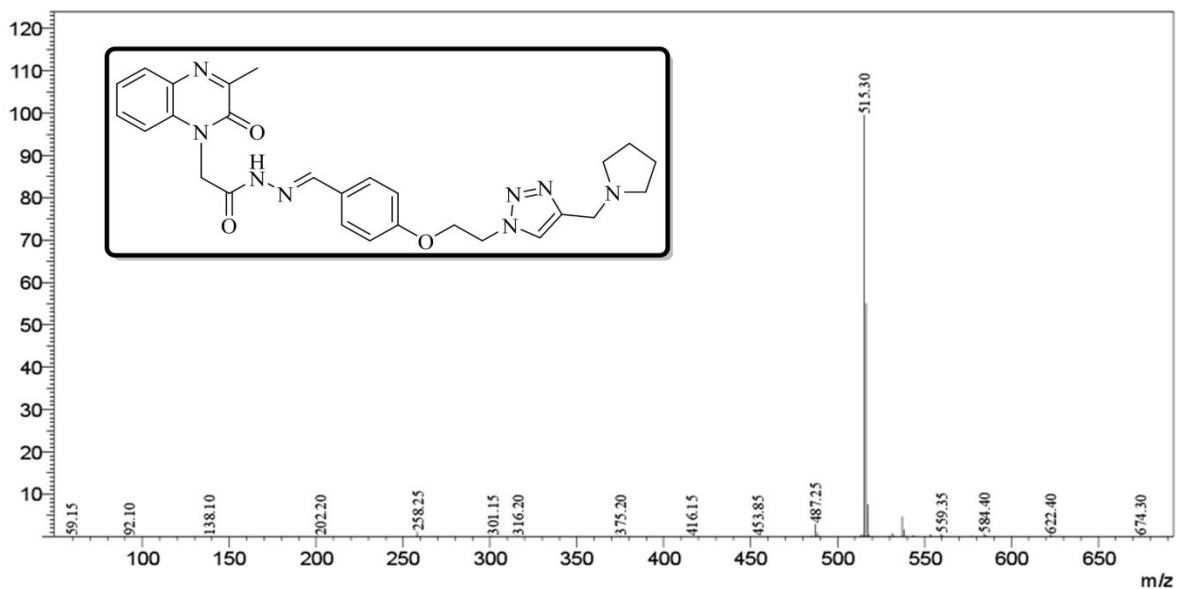


Mass spectrum of compound **14a**

==== Shimadzu LabSolutions Data Report ====

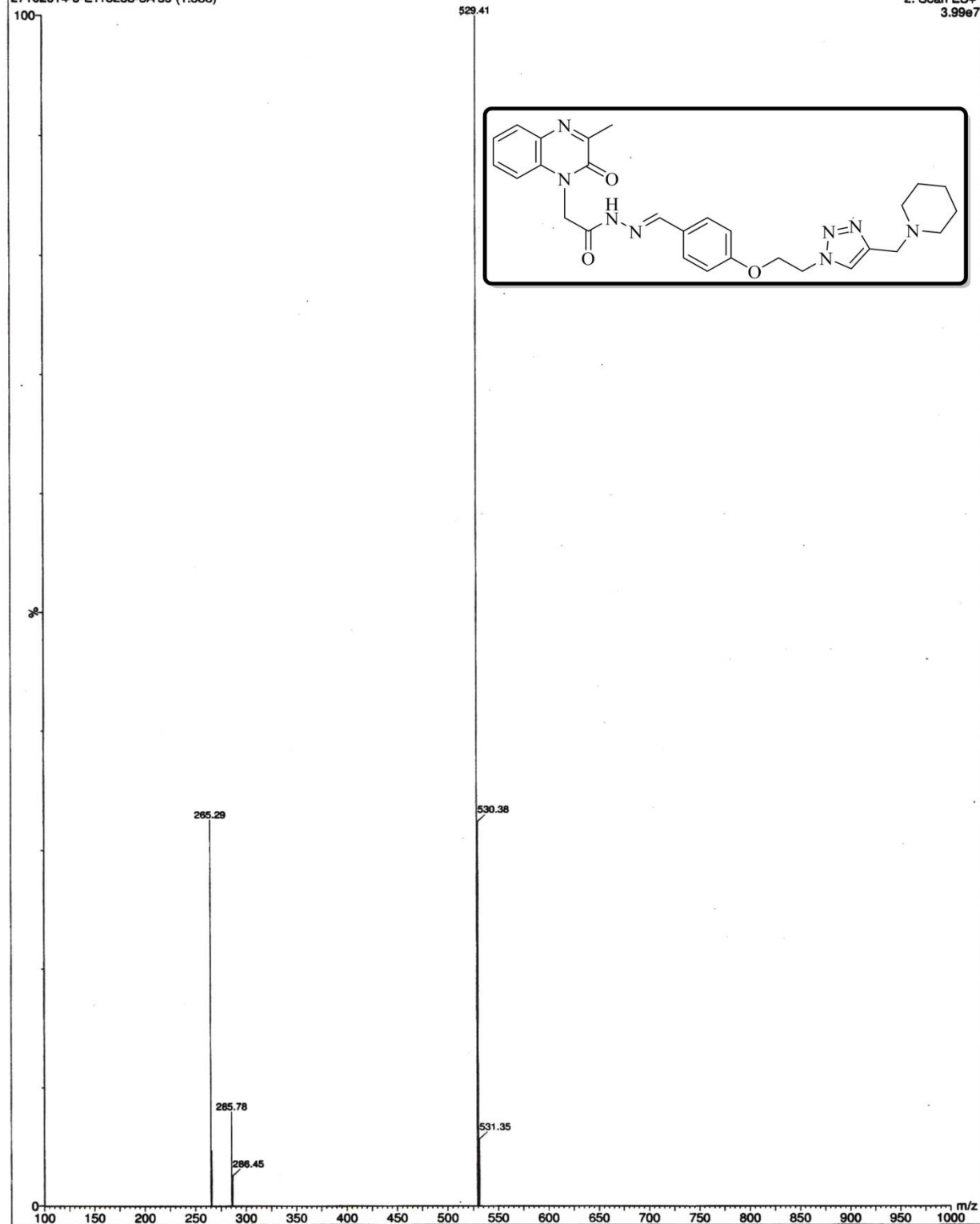
<Spectrum>

Line# 1 R.Time:0.933(Scan#:57)
MassPeaks:103
RawMode:Averaged 0.633-1.767(39-107) BasePeak:515.30(7625470)
BG Mode:Averaged 0.000-0.667(1-41) Segment 1 - Event 1



Sample ID :3-E118238-5
Acq.Method :RND-FA-4-5MIN
27102014-3-E118238-5A 59 (1.538)

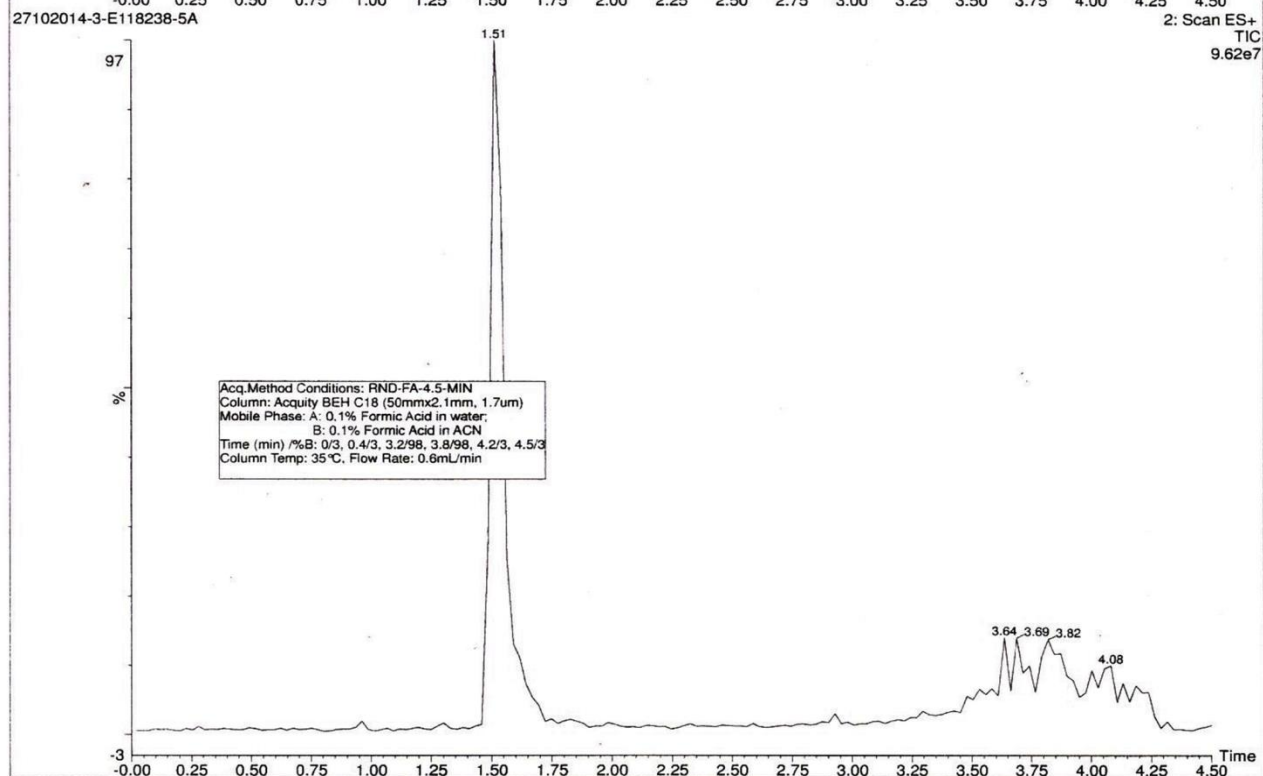
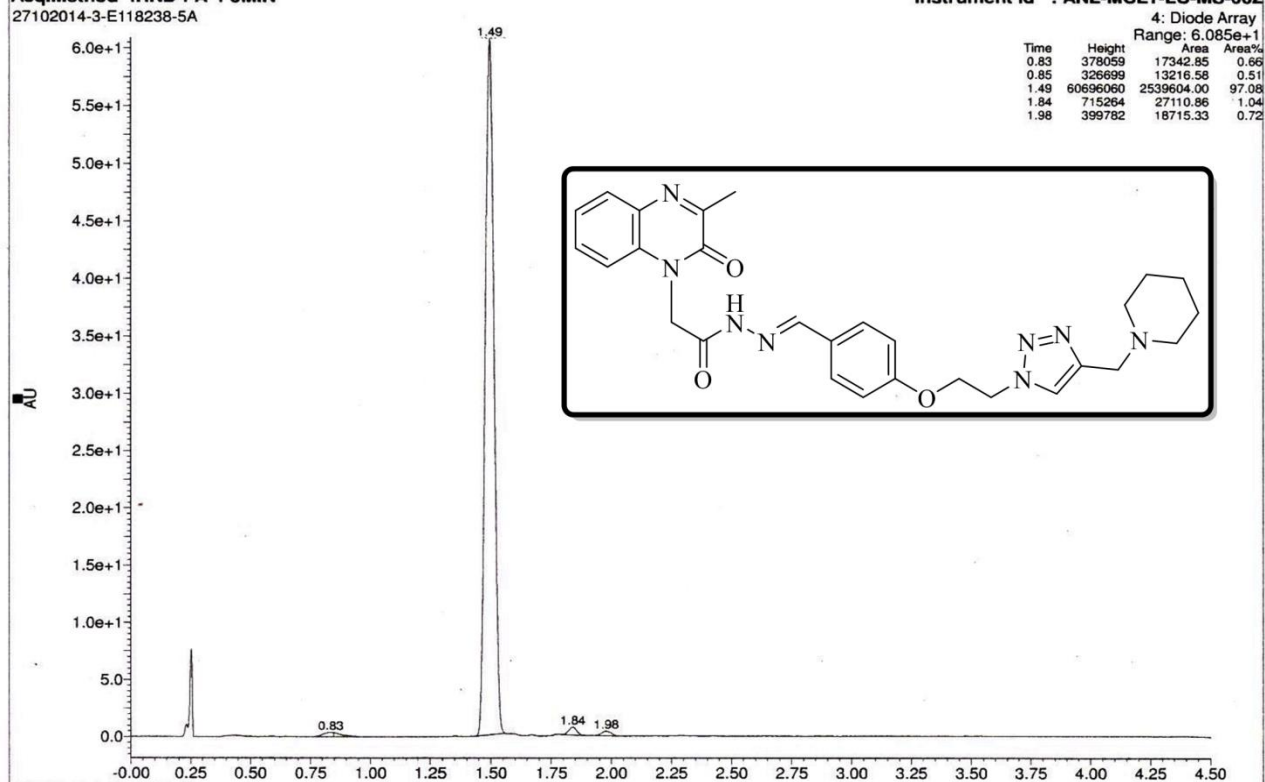
Date of Analysis :27-Oct-2014;20:58:54
Instrument Id :ANL-MCL1-LC-MS-002
2: Scan ES+
3.99e7



Mass spectrum of compound 14b

Sample ID :3-E118238-5
Acq.Method :RND-FA-4-5MIN
27102014-3-E118238-5A

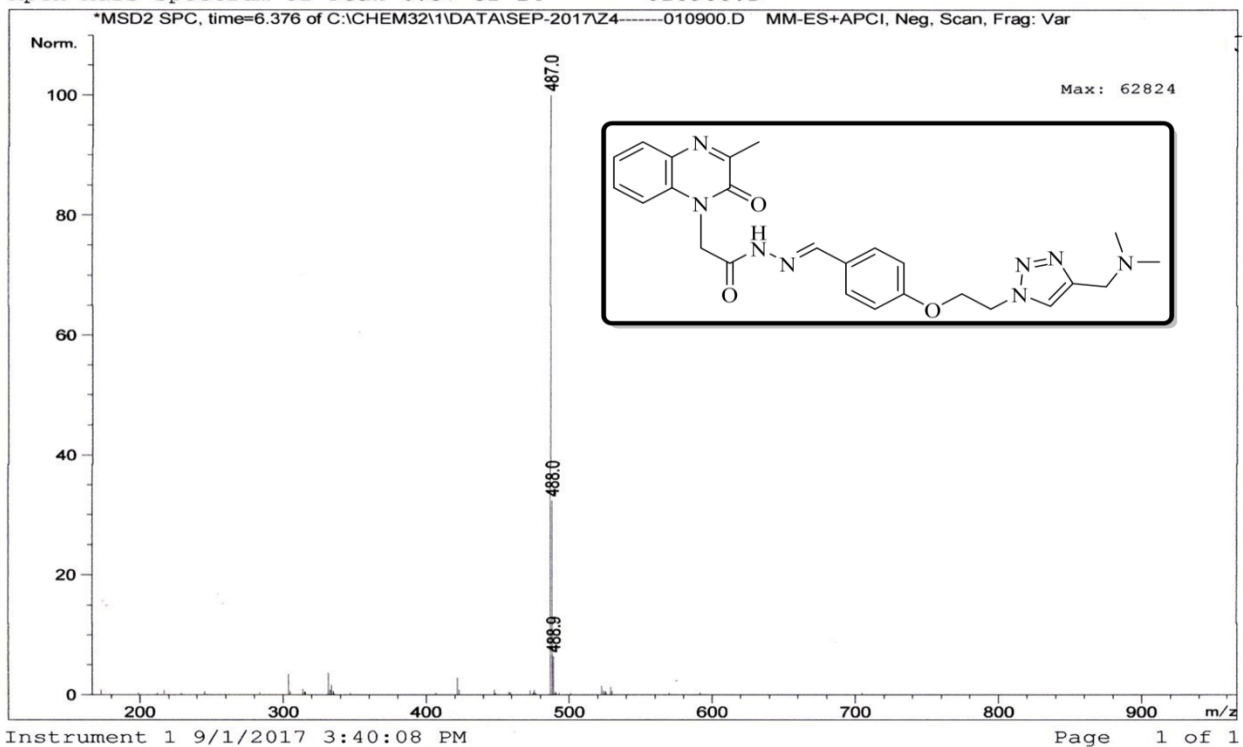
Date of Analysis :20:58:54;27-Oct-2014
Instrument Id : ANL-MCL1-LC-MS-002



Mass spectrum of compound **14b**

Print of window 79: Apex Mass Spectrum of Peak 6.37 of Z4-----010900.D

Apex Mass Spectrum of Peak 6.37 of Z4-----010900.D



==== Shimadzu LabSolutions Data Report =====

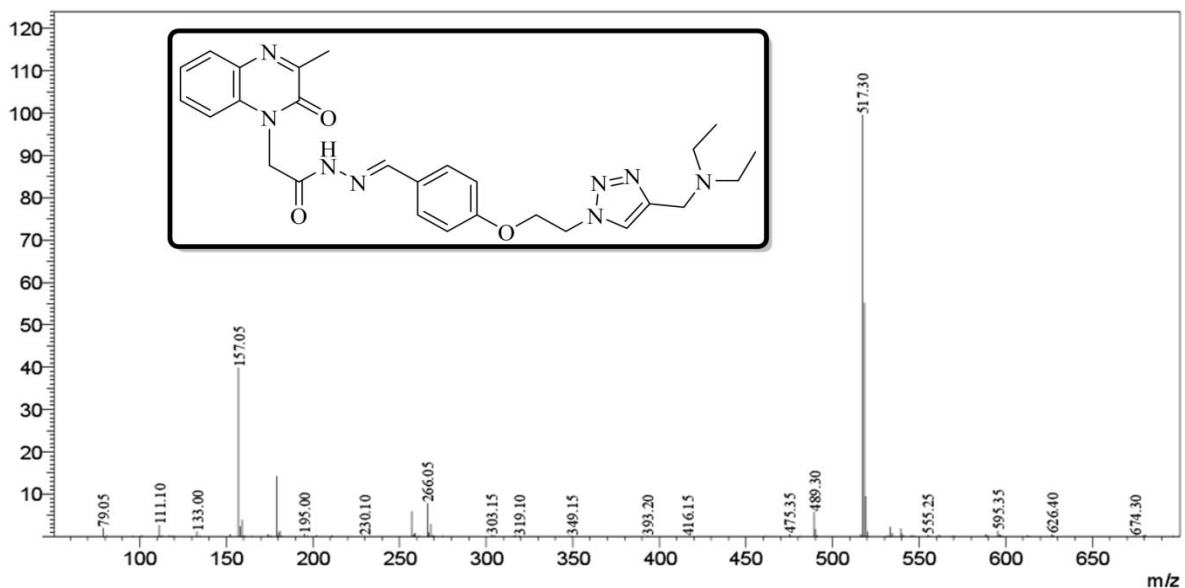
<Spectrum>

Line#:1 R.Time:1.033(Scan#:63)

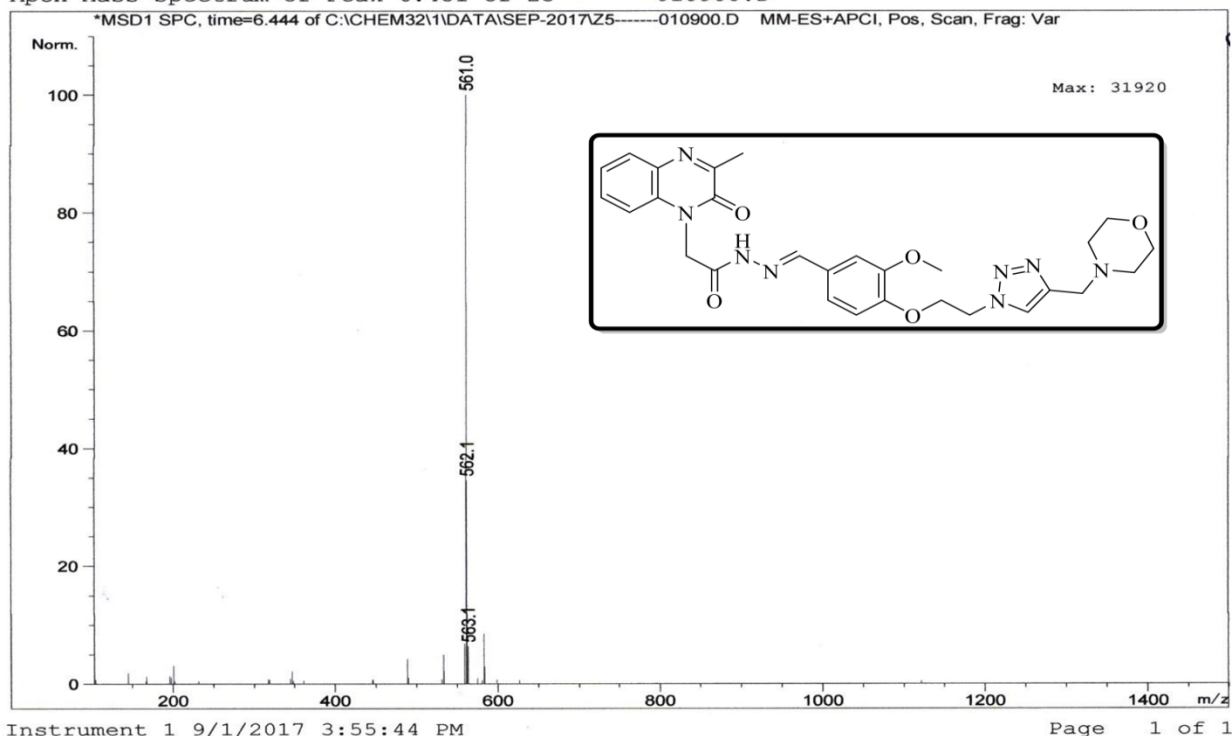
MassPeaks:284

RawMode:Averaged 0.633-1.633(39-99) BasePeak:517.30(7249564)

BG Mode:Averaged 0.000-0.600(1-37) Segment 1 - Event 1

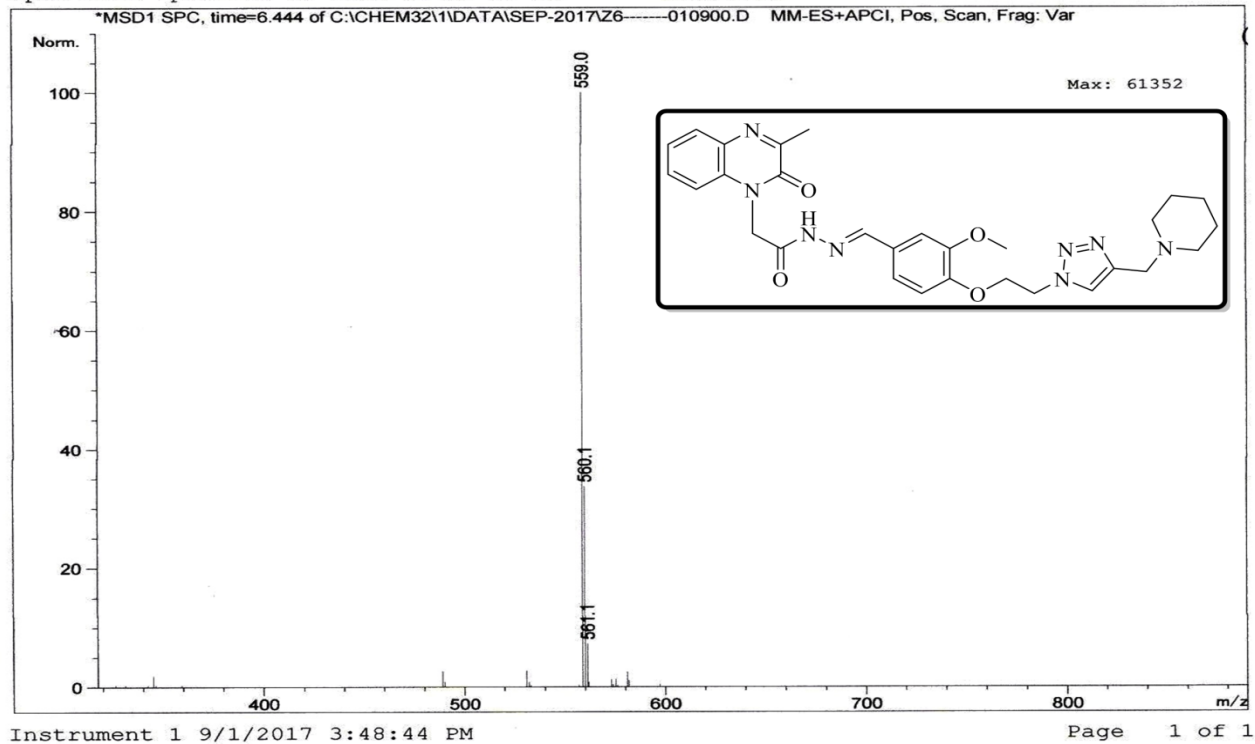


Print of window 79: Apex Mass Spectrum of Peak 6.451 of Z5-----010900.D
 Apex Mass Spectrum of Peak 6.451 of Z5-----010900.D



Mass spectrum of compound **14f**

Print of window 79: Apex Mass Spectrum of Peak 6.438 of Z6-----010900.D
 Apex Mass Spectrum of Peak 6.438 of Z6-----010900.D

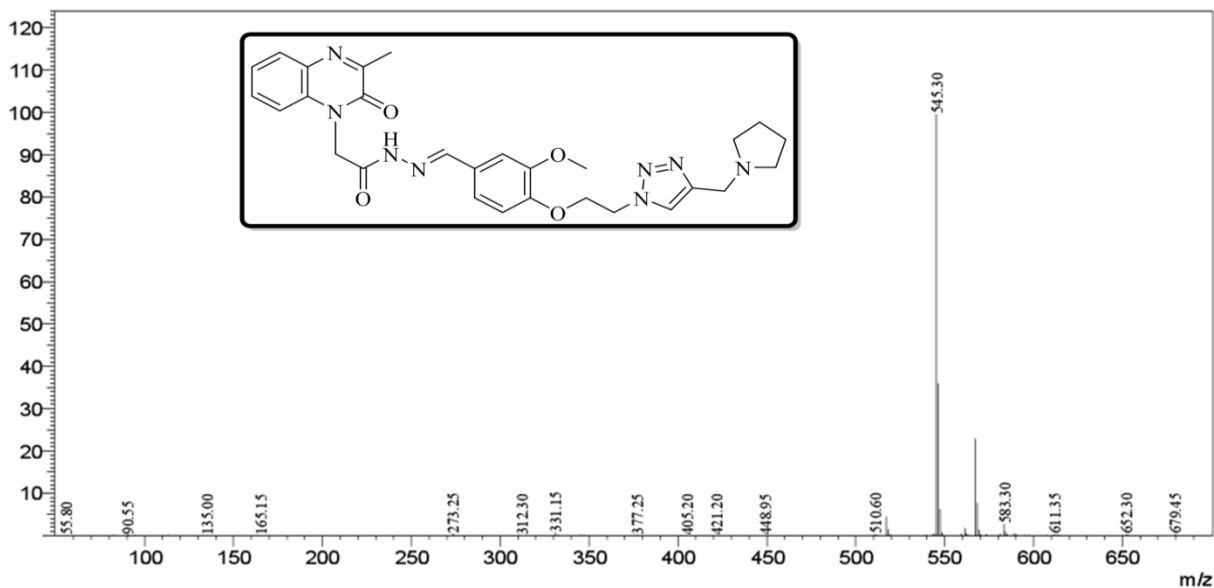


Mass spectrum of compound **14g**

==== Shimadzu LabSolutions Data Report ====

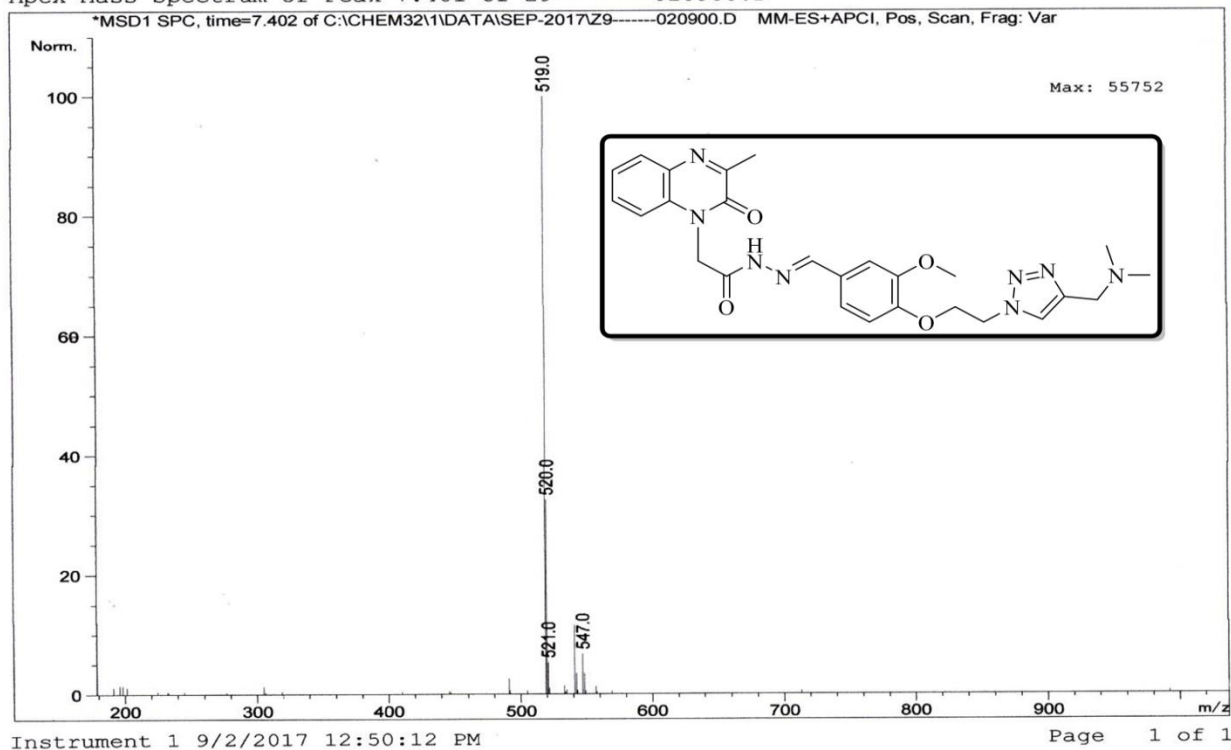
<Spectrum>

Line#:1 R.Time:1.200(Scan#:73)
MassPeaks:214
RawMode:Averaged 0.733-1.800(45-109) BasePeak:545.30(649505)
BG Mode:Averaged 0.000-0.700(1-43) Segment 1 - Event 1



Mass spectrum of compound 14h

Print of window 79: Apex Mass Spectrum of Peak 7.401 of Z9-----020900.D
Apex Mass Spectrum of Peak 7.401 of Z9-----020900.D



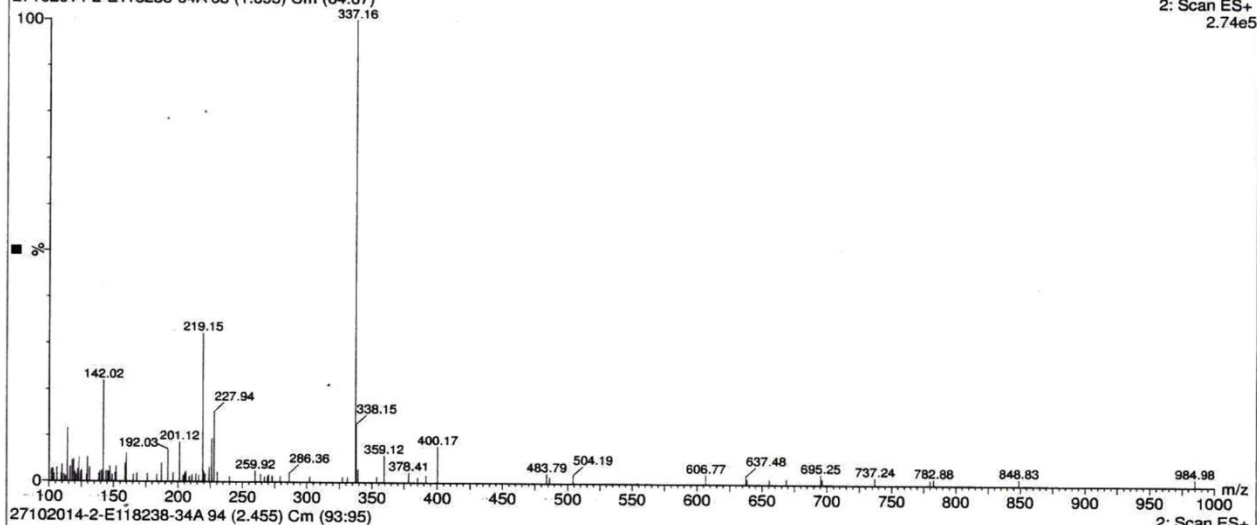
Mass spectrum of compound 14i

Sample ID :2-E118238-34
Acq.Method :RND-FA-4-5MIN

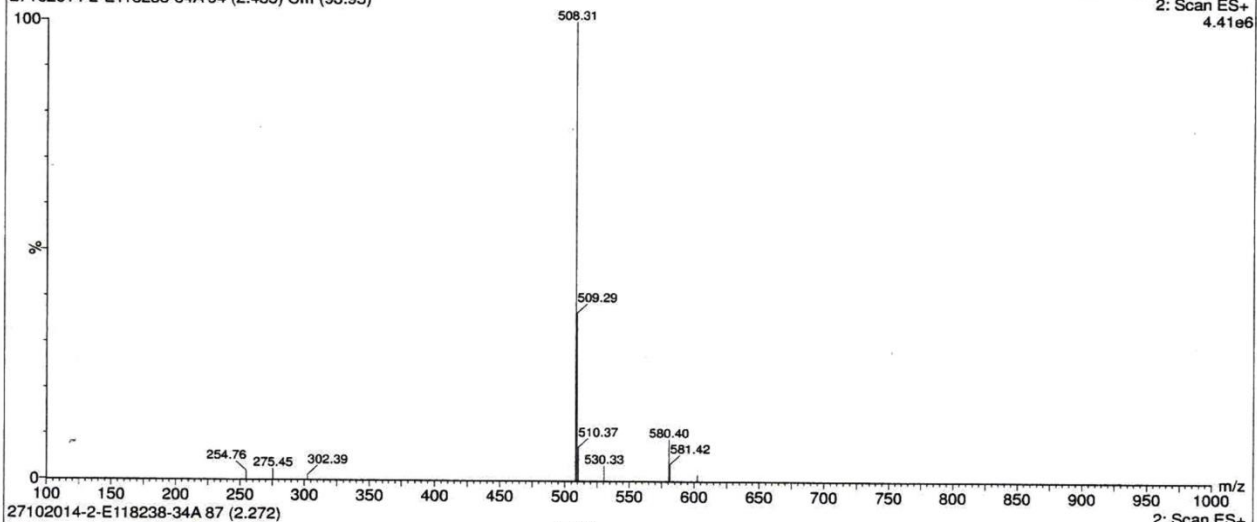
Date of Analysis :27-Oct-2014;20:52:06
Instrument Id :ANL-MCL1-LC-MS-002

27102014-2-E118238-34A 65 (1.695) Cm (64:67)

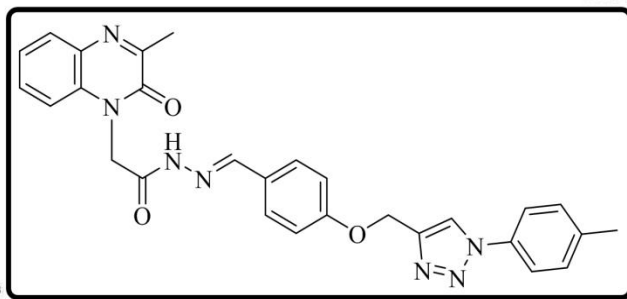
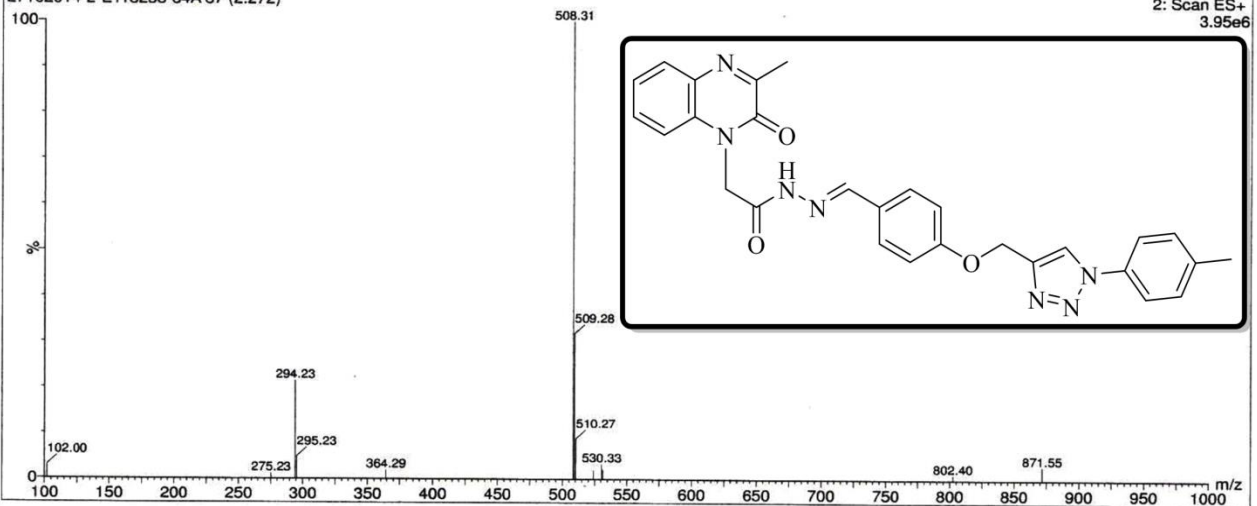
2: Scan ES+
2.74e5



2: Scan ES+
4.41e6



2: Scan ES+
3.95e6



Mass spectrum of compound **15a**

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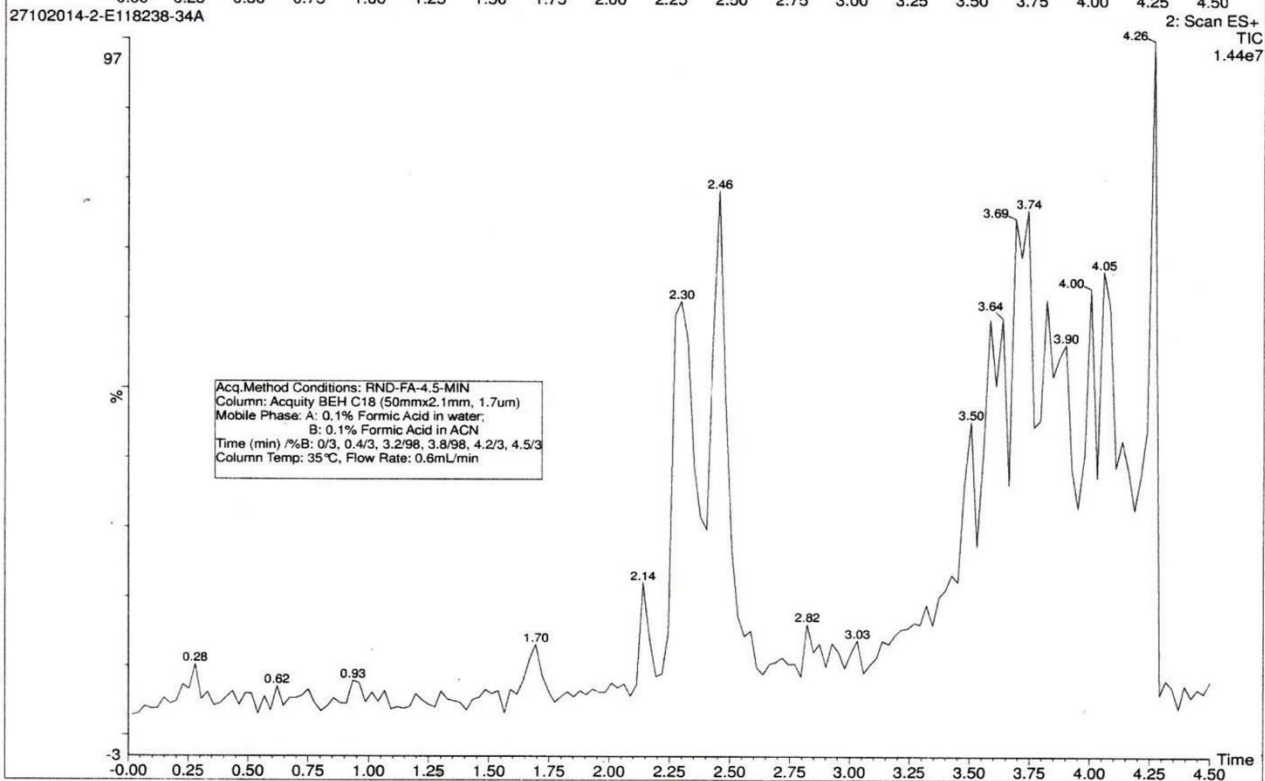
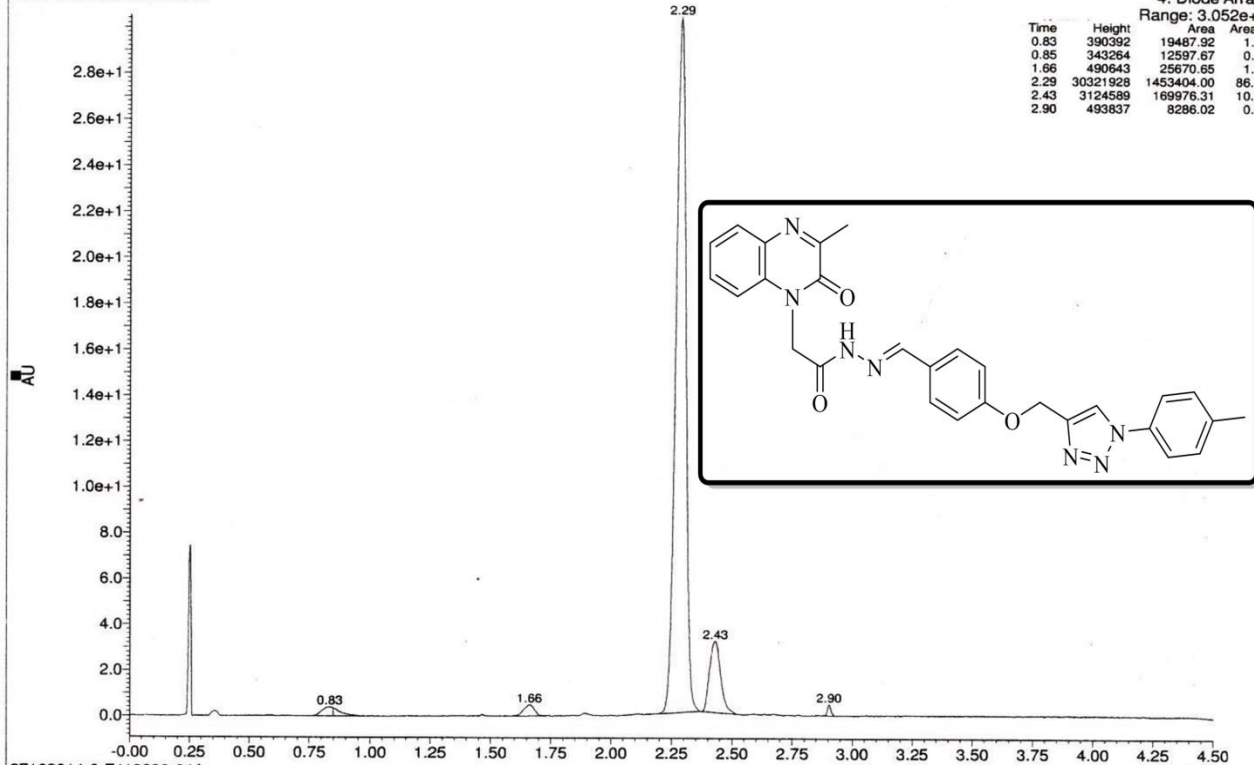
Sample ID :2-E118238-34
Acq.Method :RND-FA-4-5MIN
27102014-2-E118238-34A

Date of Analysis :20:52:06;27-Oct-2014
Instrument Id : ANL-MCL1-LC-MS-002

4: Diode Array

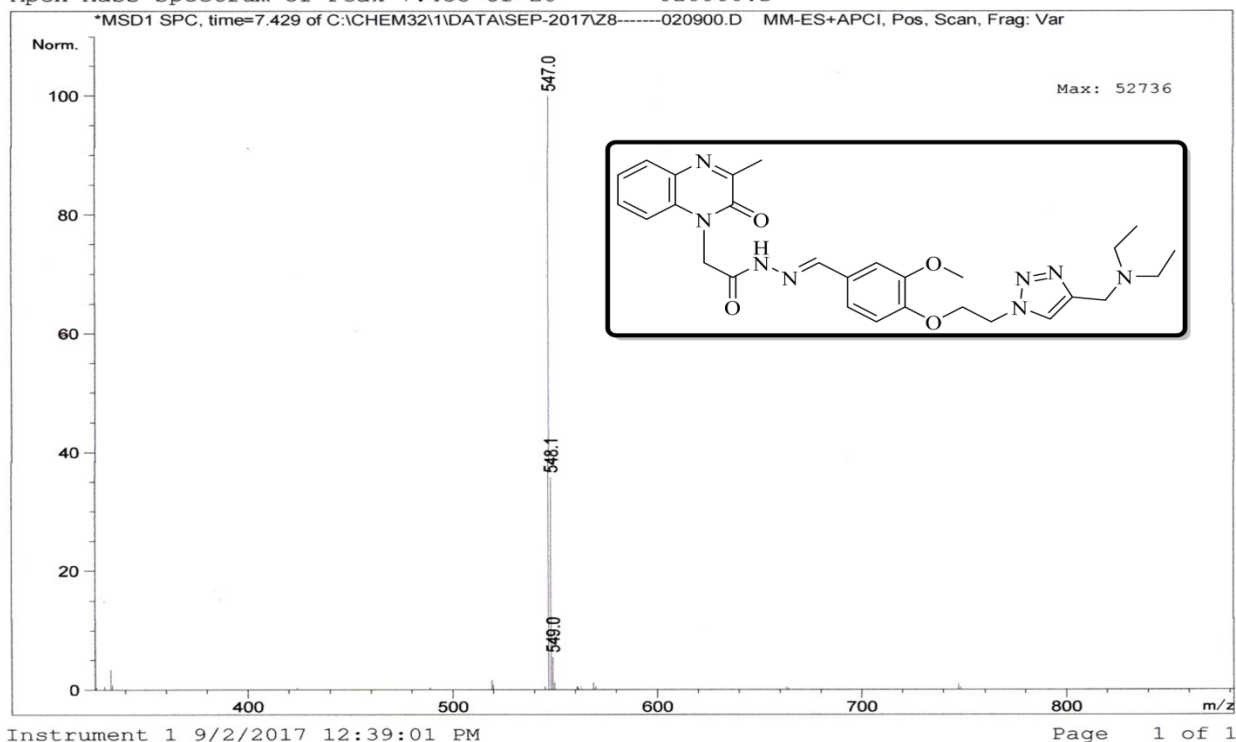
Range: 3.052e+1

Time	Height	Area	Area%
0.83	390392	19487.32	1.15
0.85	343284	12597.67	0.75
1.66	490643	25670.65	1.52
2.29	30321928	1453404.00	86.03
2.43	3124589	169976.31	10.06
2.90	493837	8286.02	0.49



Mass spectrum of compound 15a

Print of window 79: Apex Mass Spectrum of Peak 7.433 of Z8-----020900.D
 Apex Mass Spectrum of Peak 7.433 of Z8-----020900.D

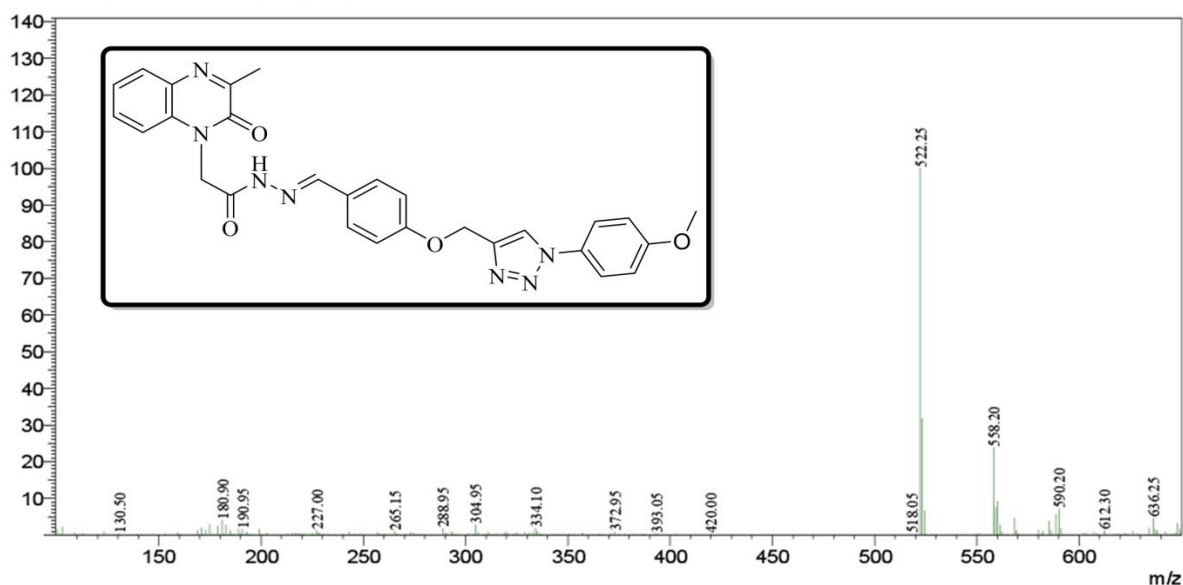


Mass spectrum of compound **14j**

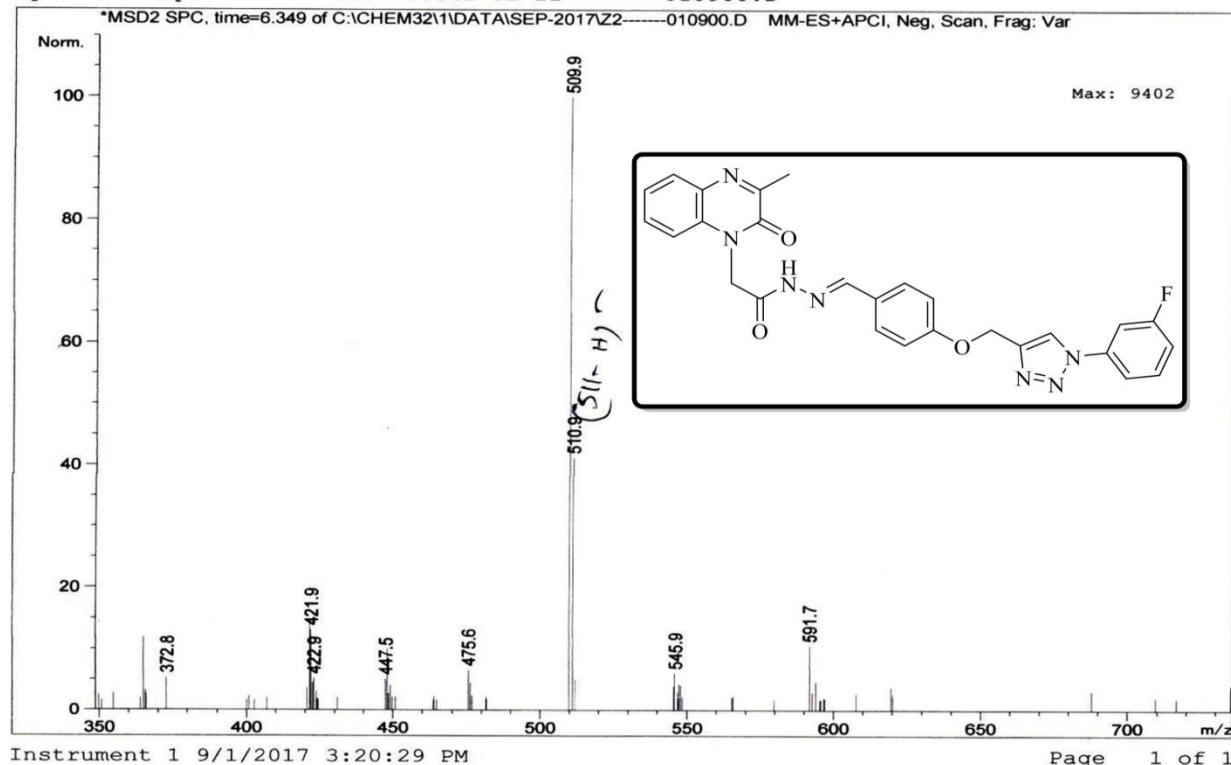
==== Shimadzu LabSolutions Data Report =====

<Spectrum>

Line#:2 R.Time:0.983(Scan#:60)
 MassPeaks:285
 RawMode:Averaged 0.850-1.383(52-84) BasePeak:522.25(55302)
 BG Mode:Averaged 0.016-0.850(2-52) Segment 1 - Event 2

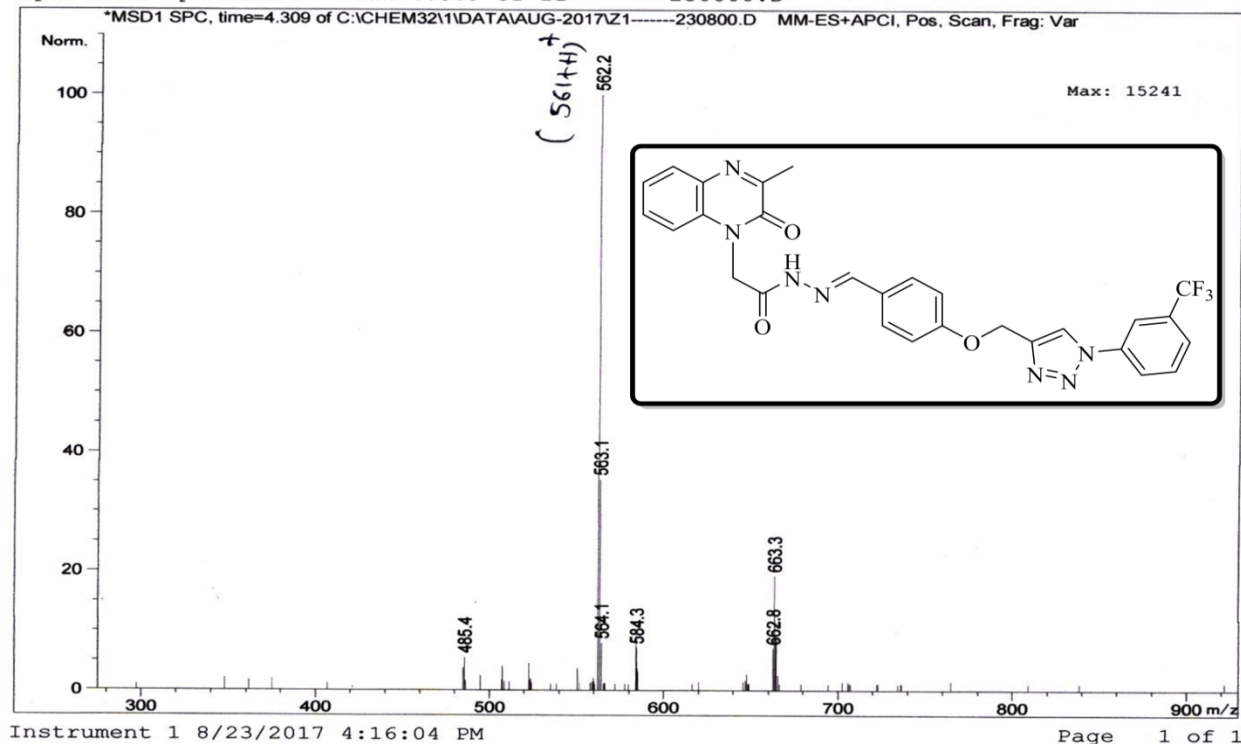


Print of window 79: Apex Mass Spectrum of Peak 6.342 of Z2-----010900.D
 Apex Mass Spectrum of Peak 6.342 of Z2-----010900.D



Mass spectrum of compound **15c**

Print of window 79: Apex Mass Spectrum of Peak 4.309 of Z1-----230800.D
 Apex Mass Spectrum of Peak 4.309 of Z1-----230800.D

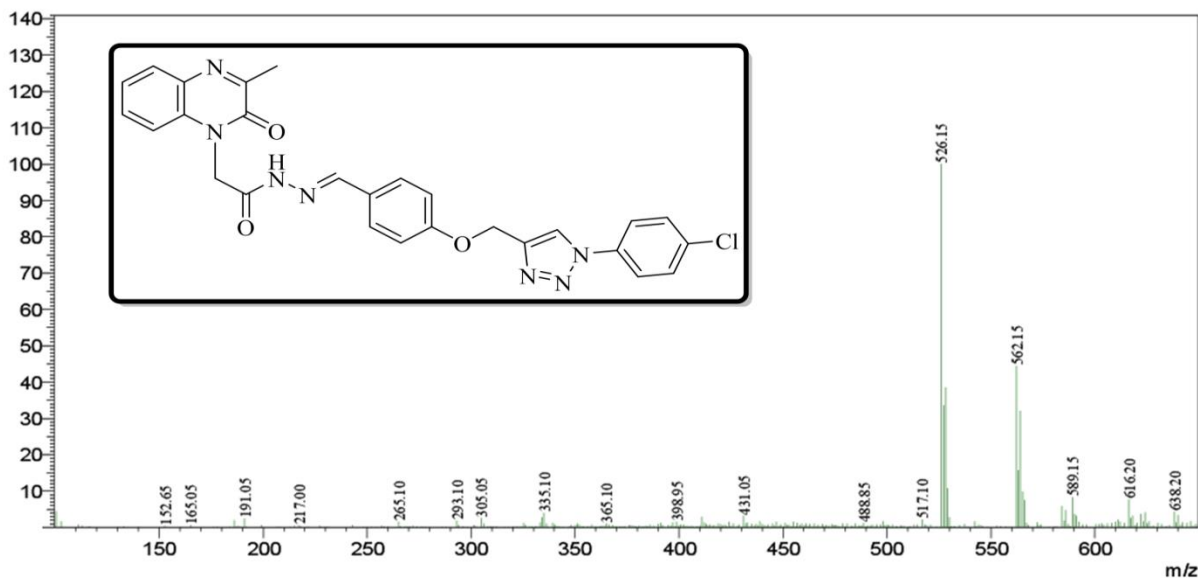


Mass spectrum of compound **15d**

==== Shimadzu LabSolutions Data Report ====

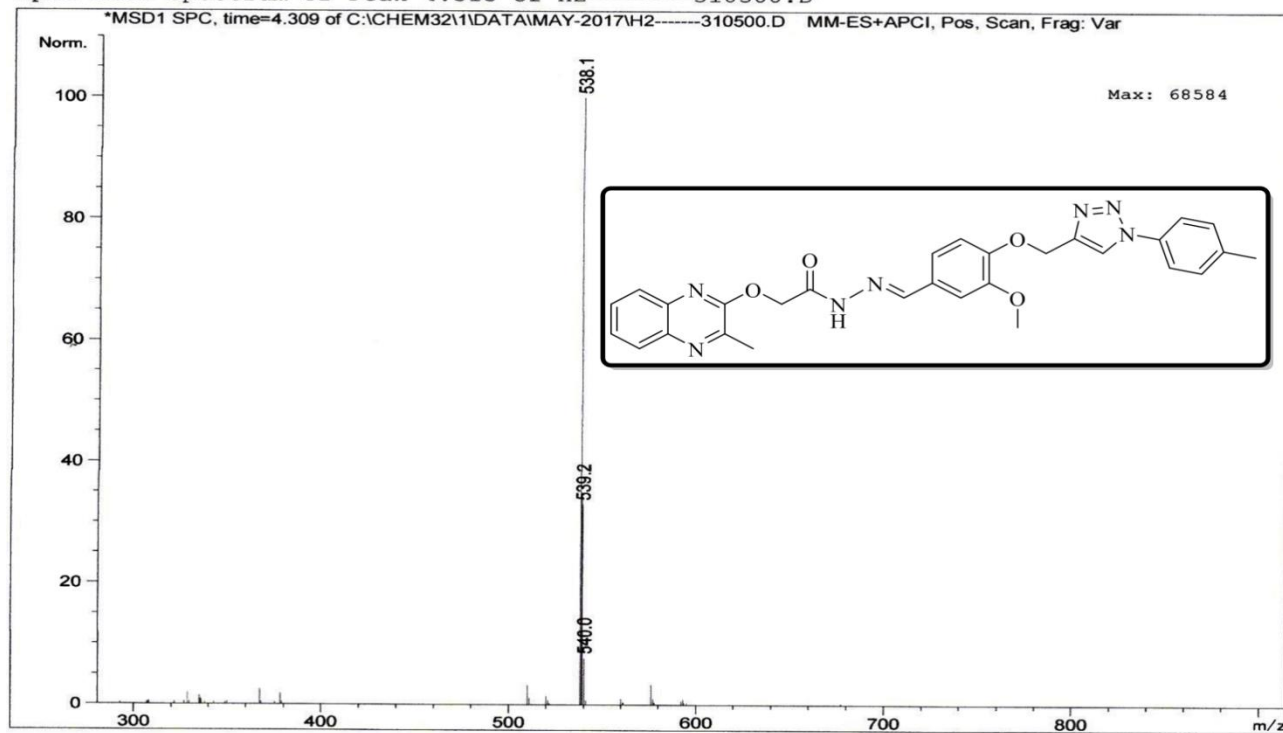
<Spectrum>

Line#:2 R.Time:0.983(Scan#:60)
 MassPeaks:362
 RawMode:Averaged 0.650-1.650(40-100) BasePeak:526.15(40683)
 BG Mode:Averaged 0.016-0.650(2-40) Segment 1 - Event 2



Mass spectrum of compound 15e

Print of window 79: Apex Mass Spectrum of Peak 4.315 of H2-----310500.D
 Apex Mass Spectrum of Peak 4.315 of H2-----310500.D

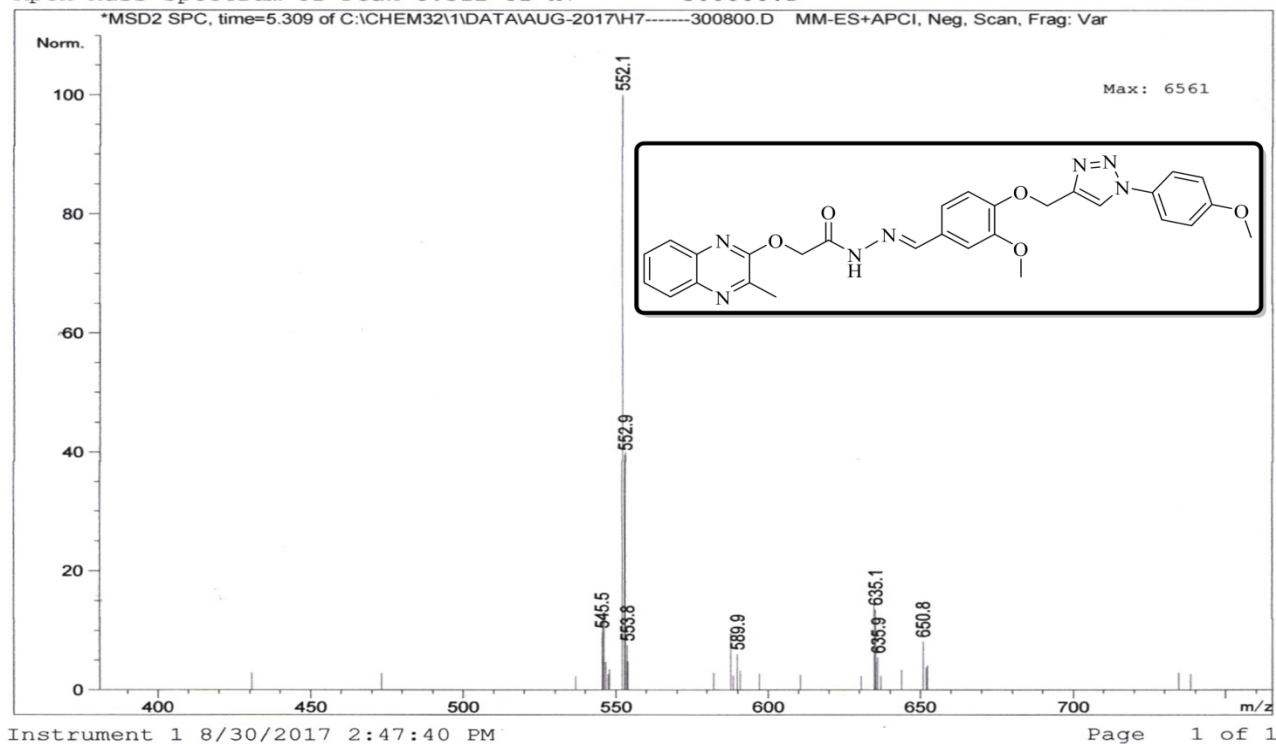


Instrument 1 5/31/2017 4:22:13 PM

Page 1 of 1

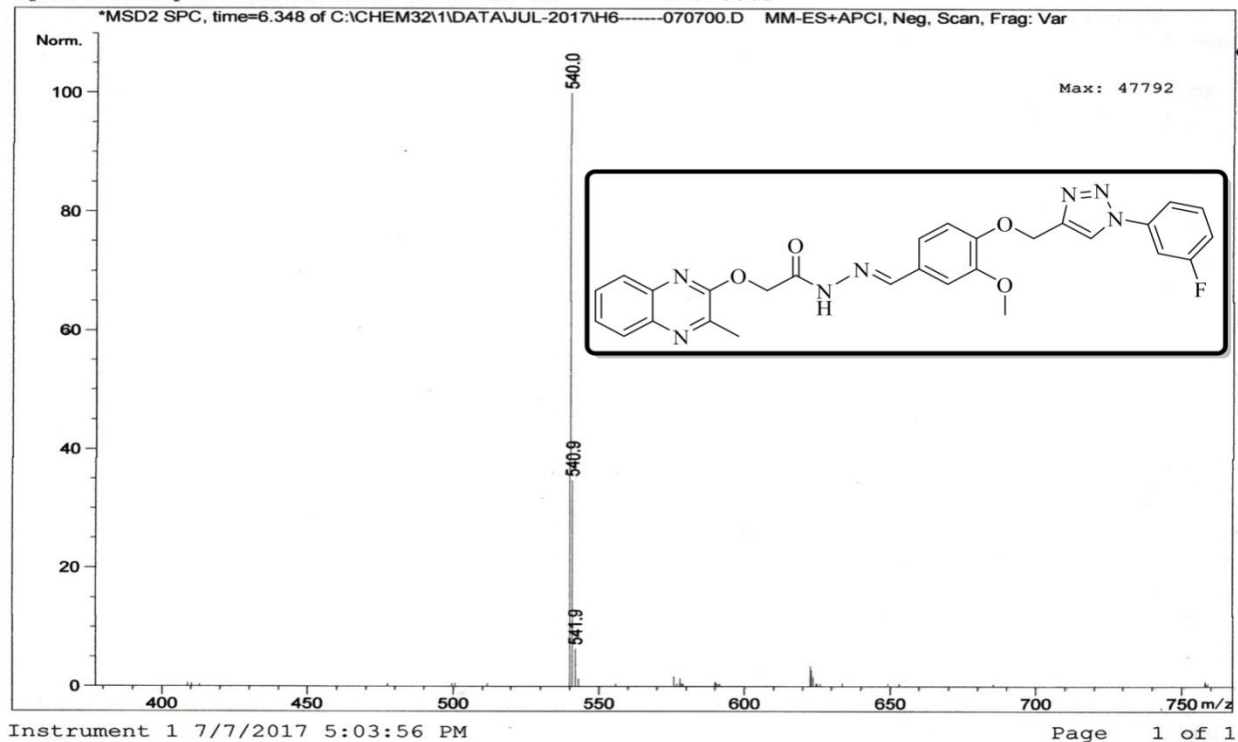
Mass spectrum of compound 16a

Print of window 79: Apex Mass Spectrum of Peak 5.312 of H7-----300800.D
 Apex Mass Spectrum of Peak 5.312 of H7-----300800.D



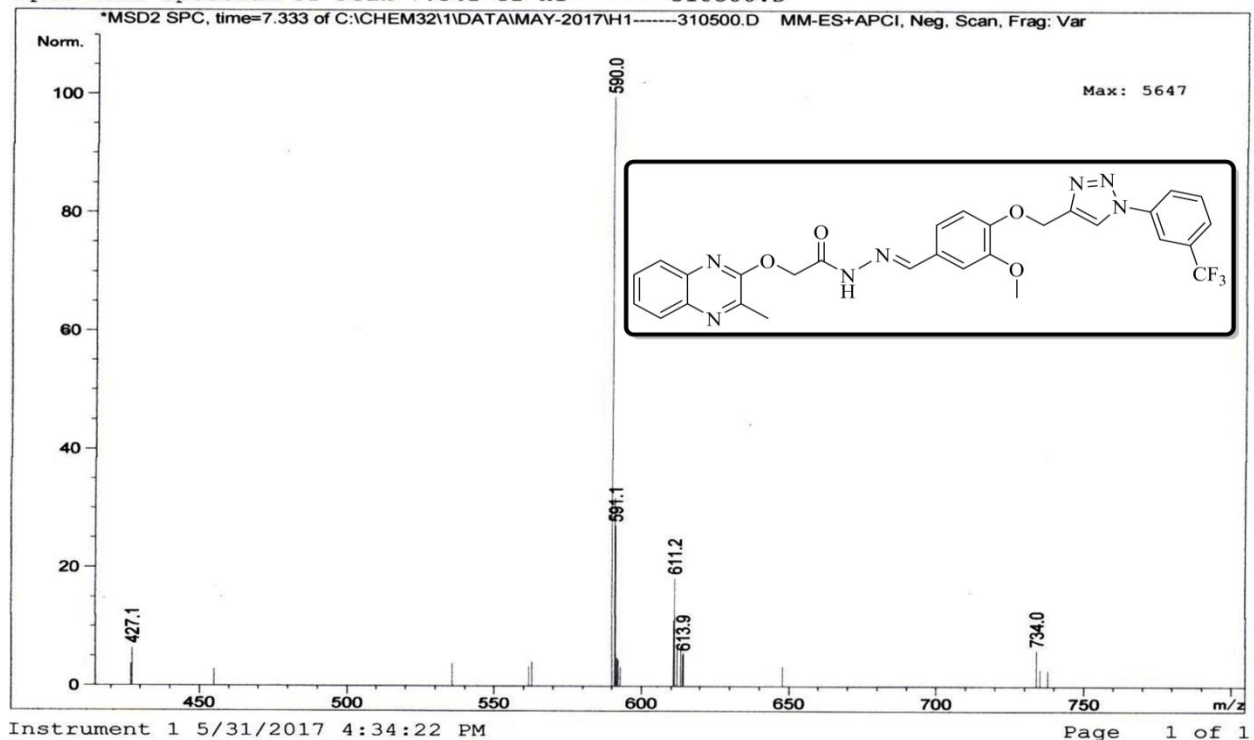
Mass spectrum of compound **16b**

Print of window 79: Apex Mass Spectrum of Peak 6.346 of H6-----070700.D
 Apex Mass Spectrum of Peak 6.346 of H6-----070700.D



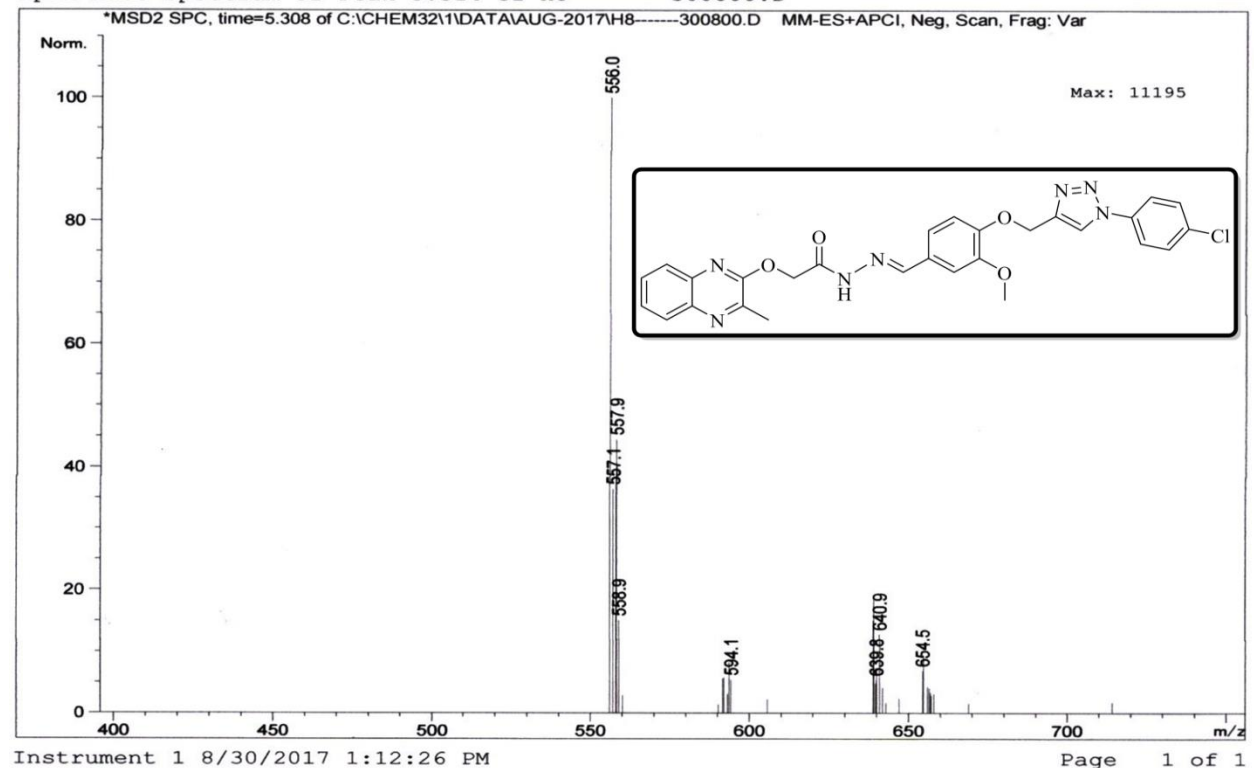
Mass spectrum of compound **16c**

Print of window 79: Apex Mass Spectrum of Peak 7.341 of H1-----310500.D
 Apex Mass Spectrum of Peak 7.341 of H1-----310500.D



Mass spectrum of compound 16d

Print of window 79: Apex Mass Spectrum of Peak 5.314 of H8-----300800.D
 Apex Mass Spectrum of Peak 5.314 of H8-----300800.D



Mass spectrum of compound 16e