

Supporting Information of
Site-selective Conversion of Azido Groups at Carbonyl α -Positions
to Diazo Groups in Di- and Triazido Compounds

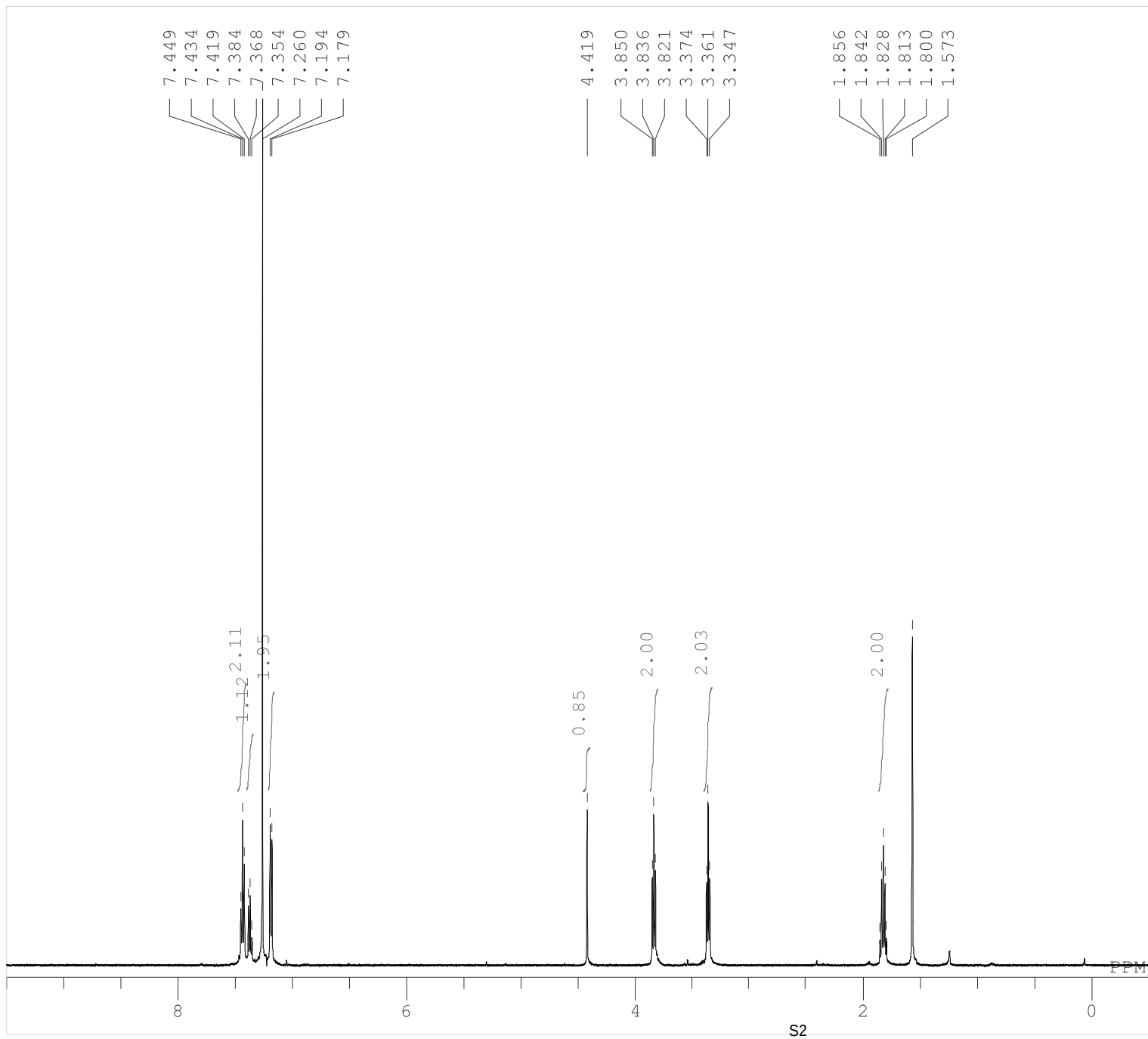
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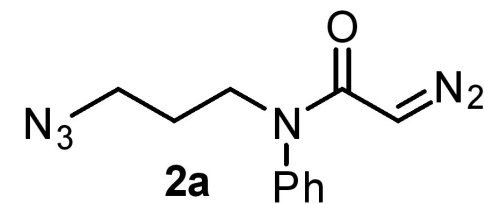
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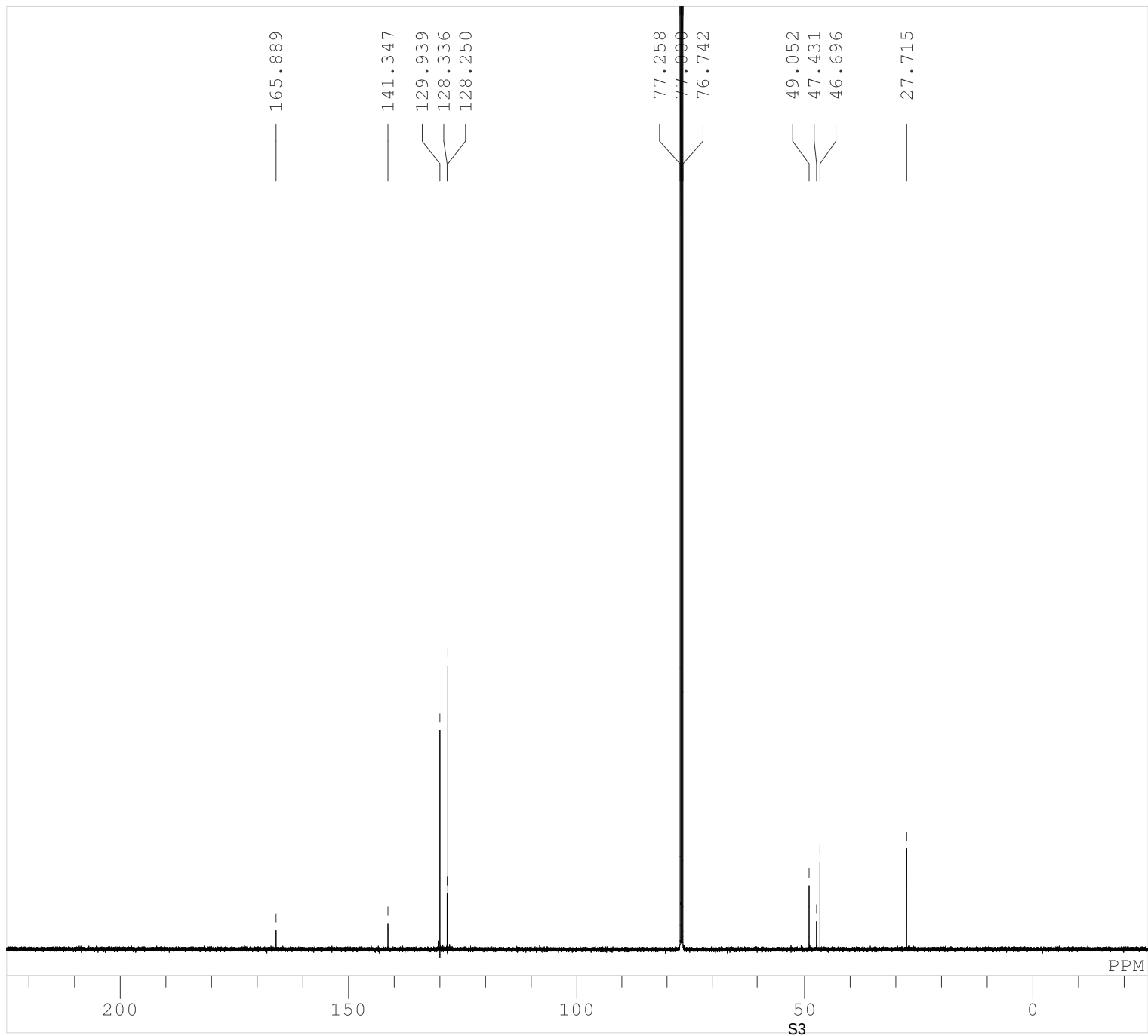


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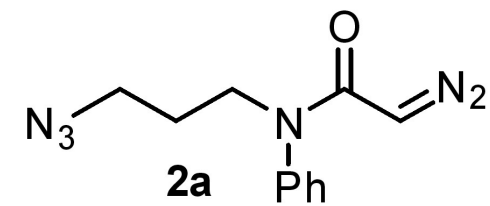
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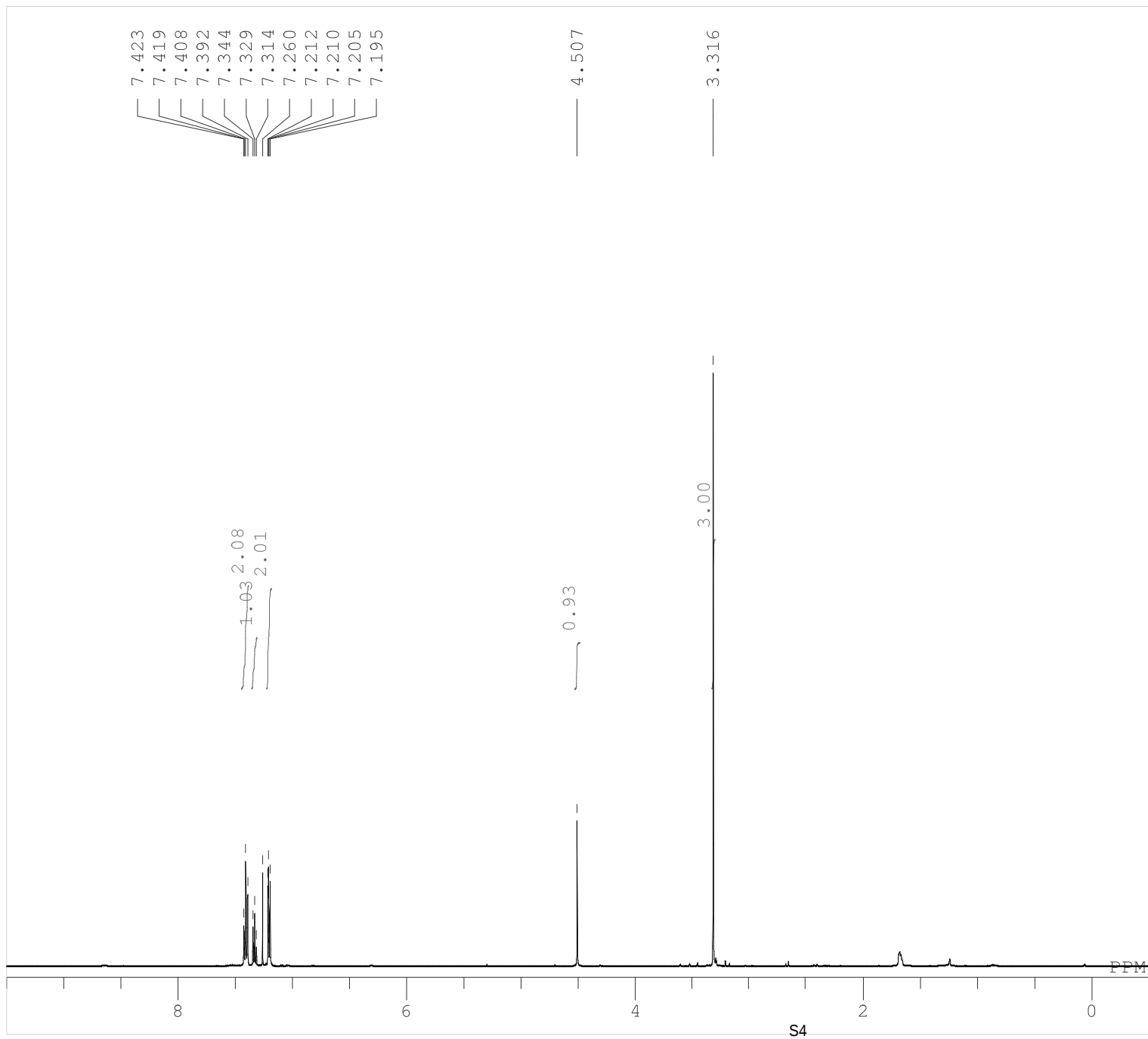
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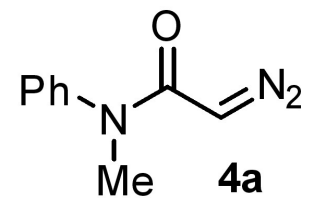


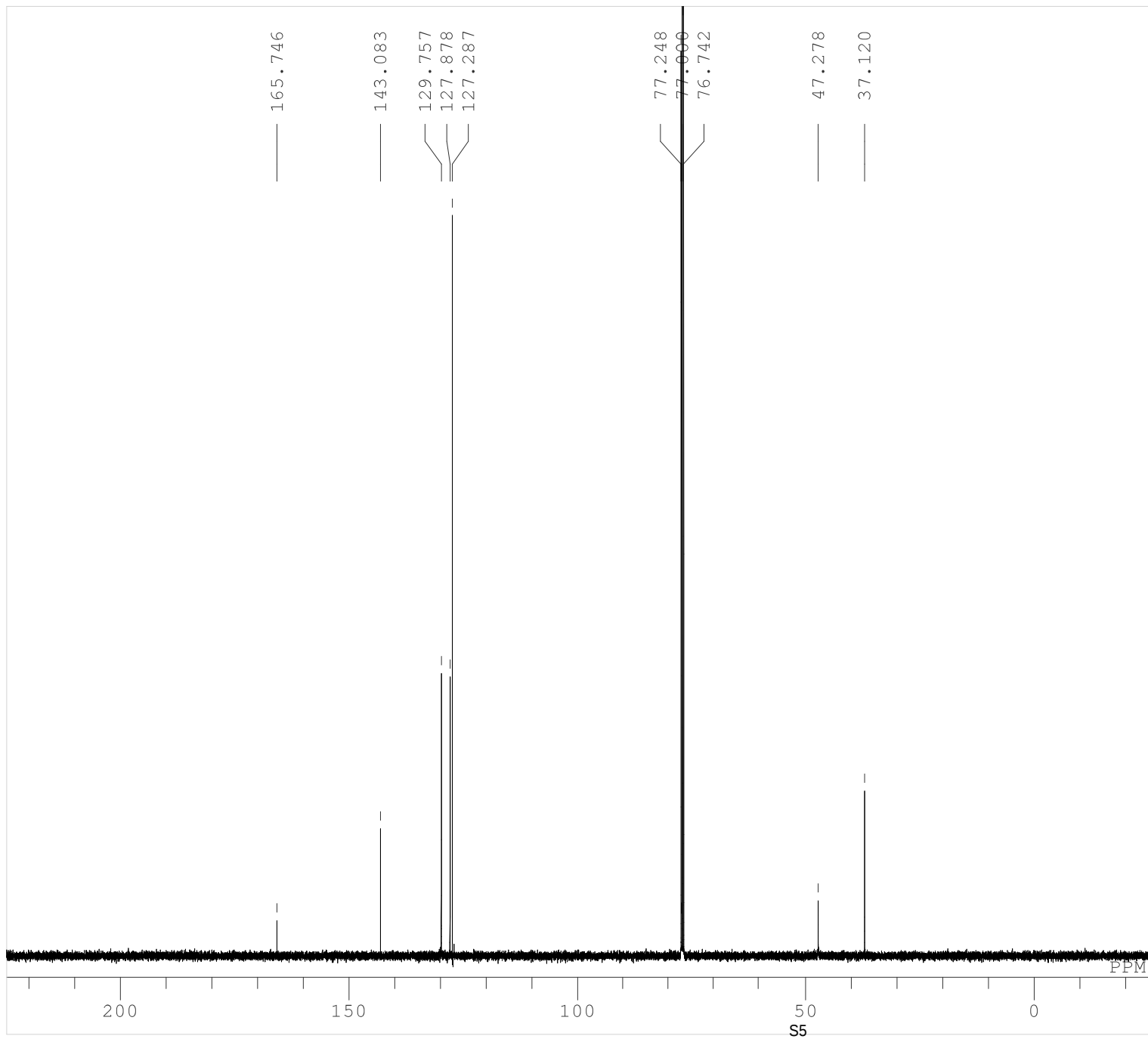
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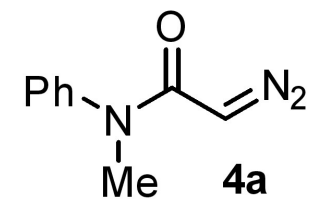


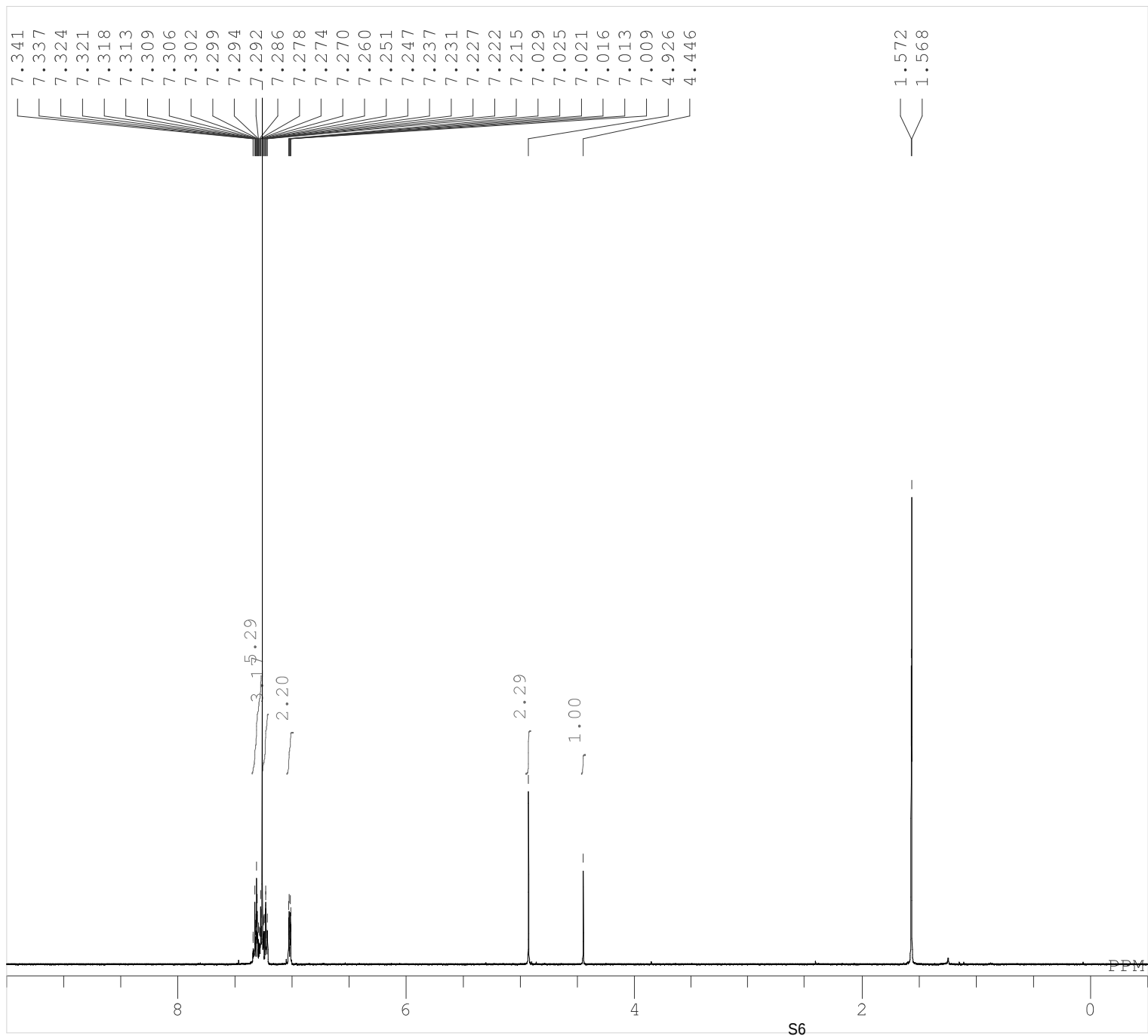
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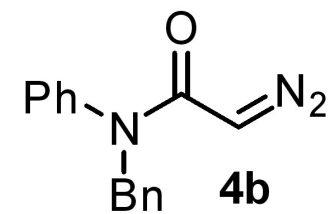
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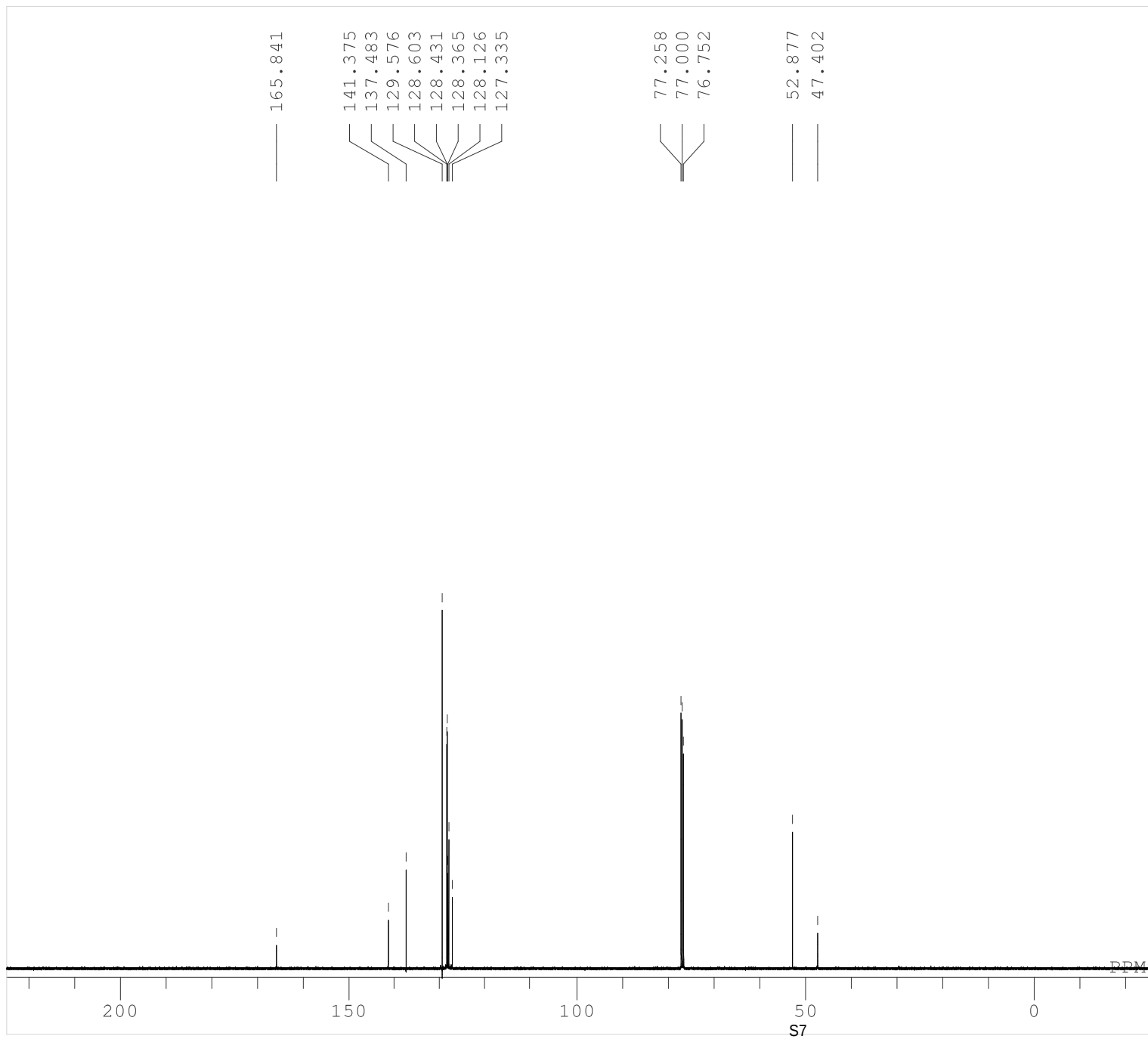




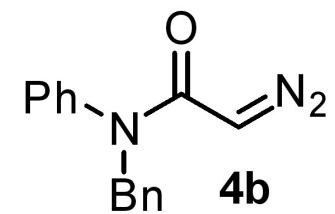
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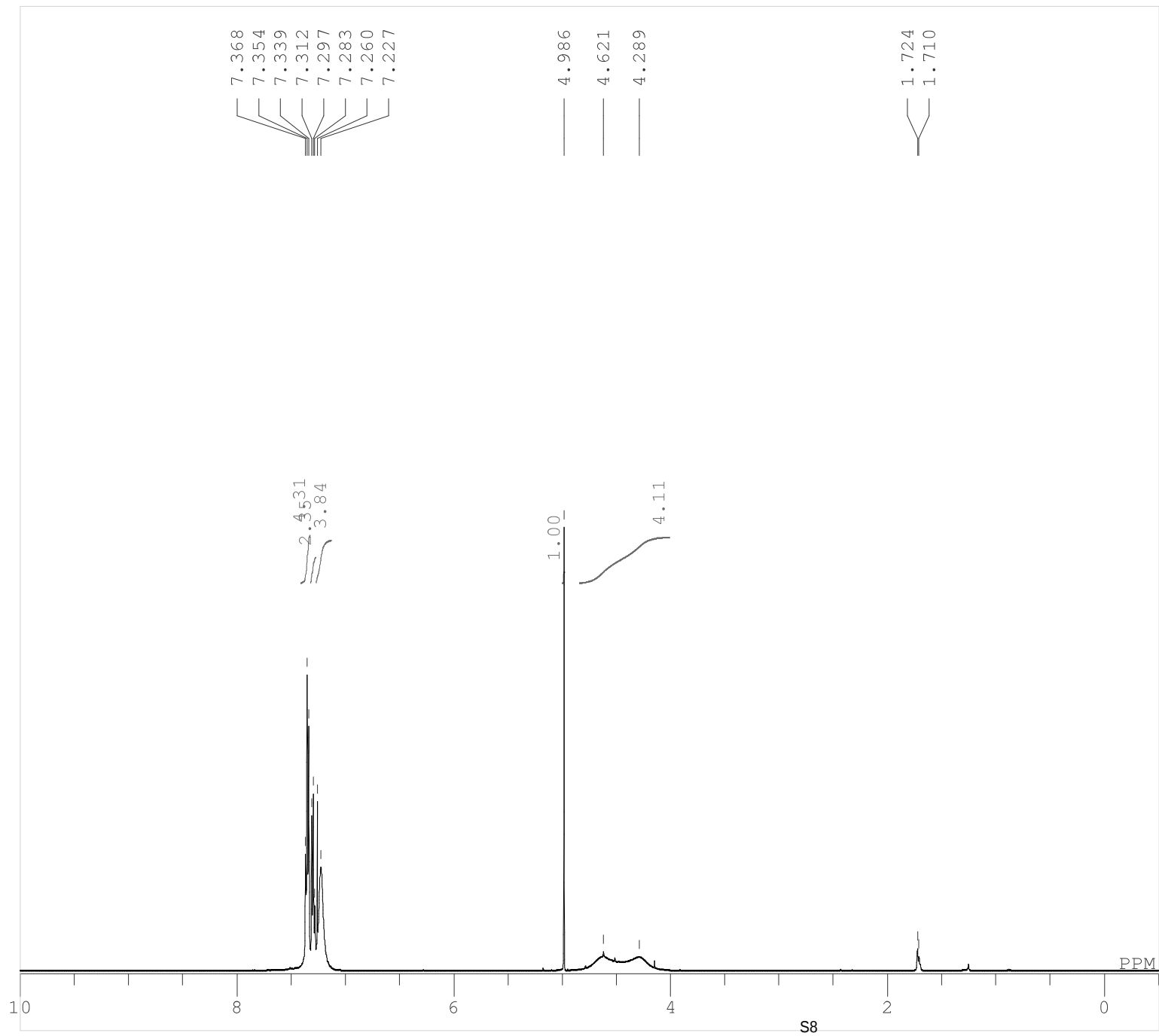
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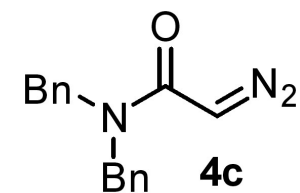


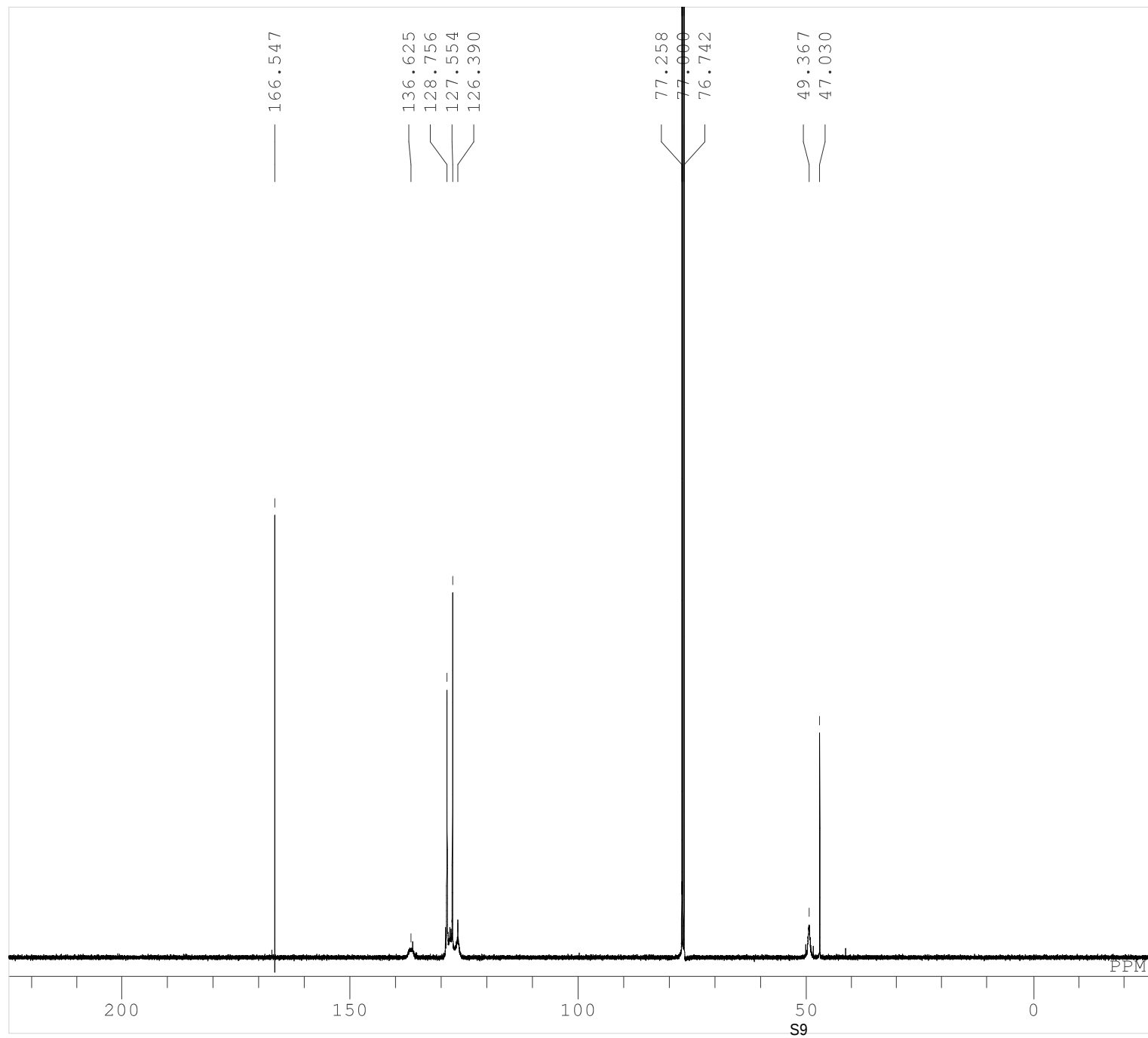
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ACQTM 0.8336 sec
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RGAIN 60





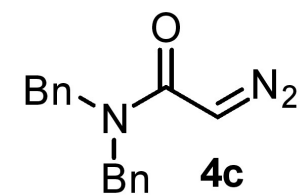
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 BF 0.10 Hz
 RGAIN 36

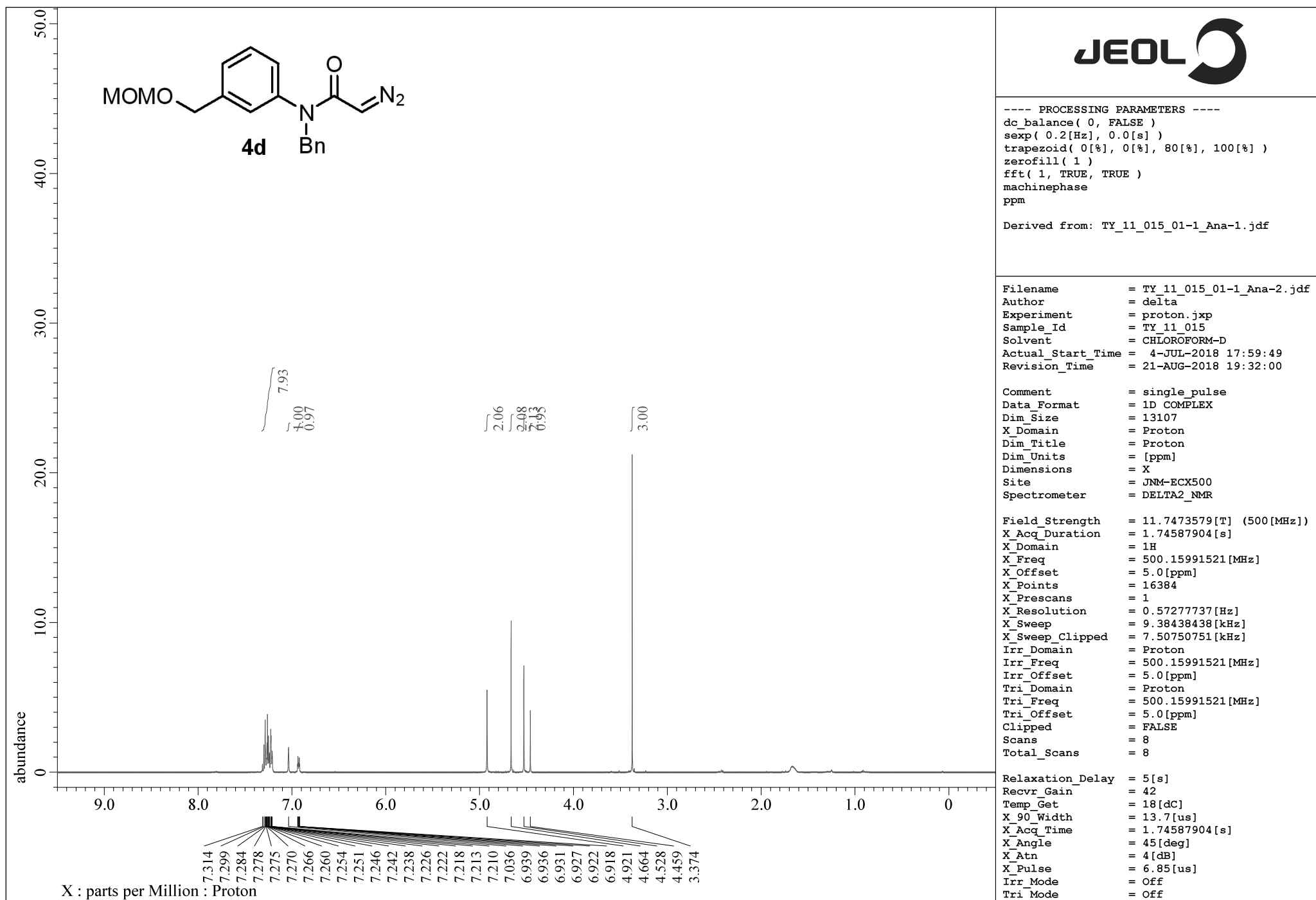


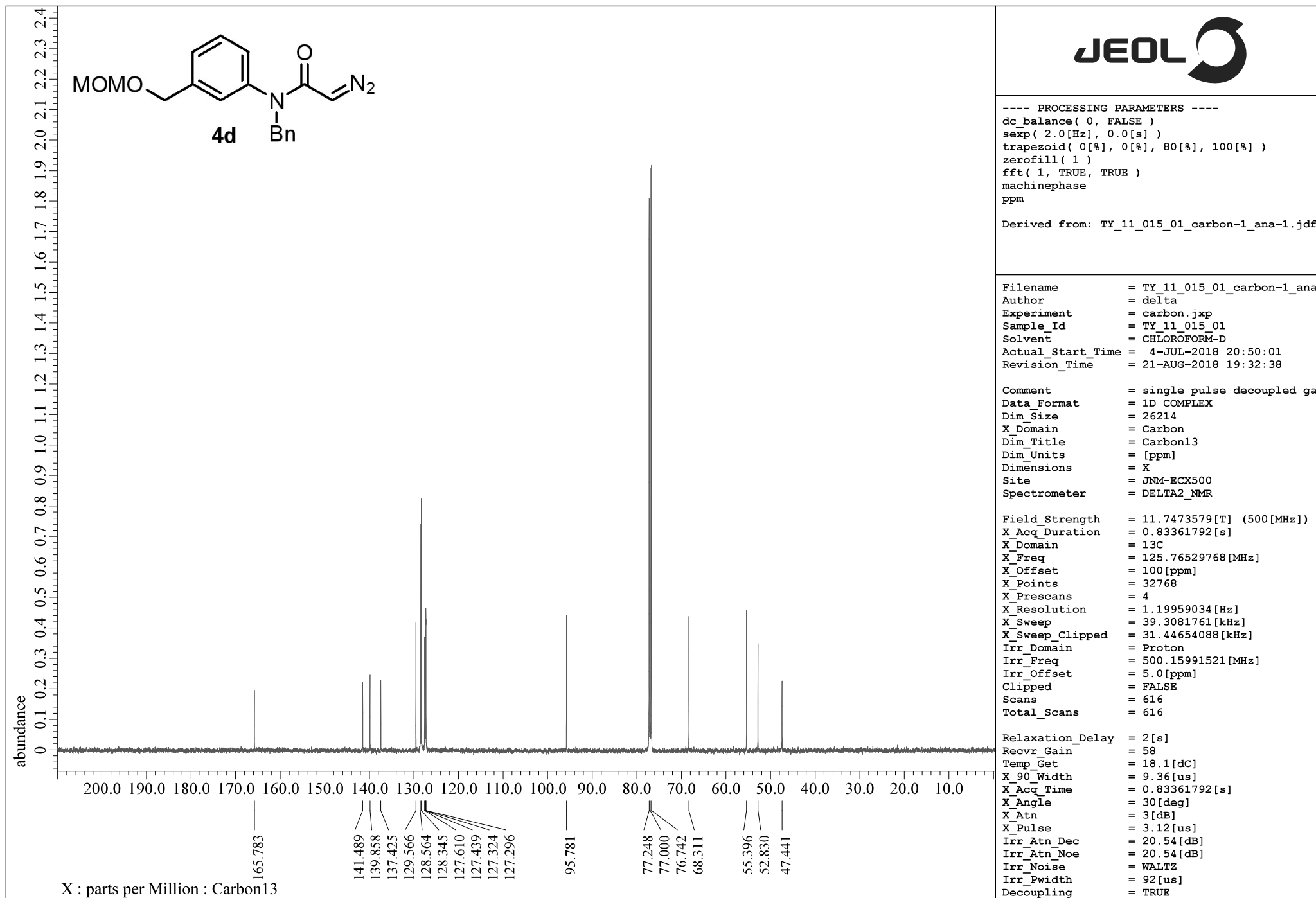


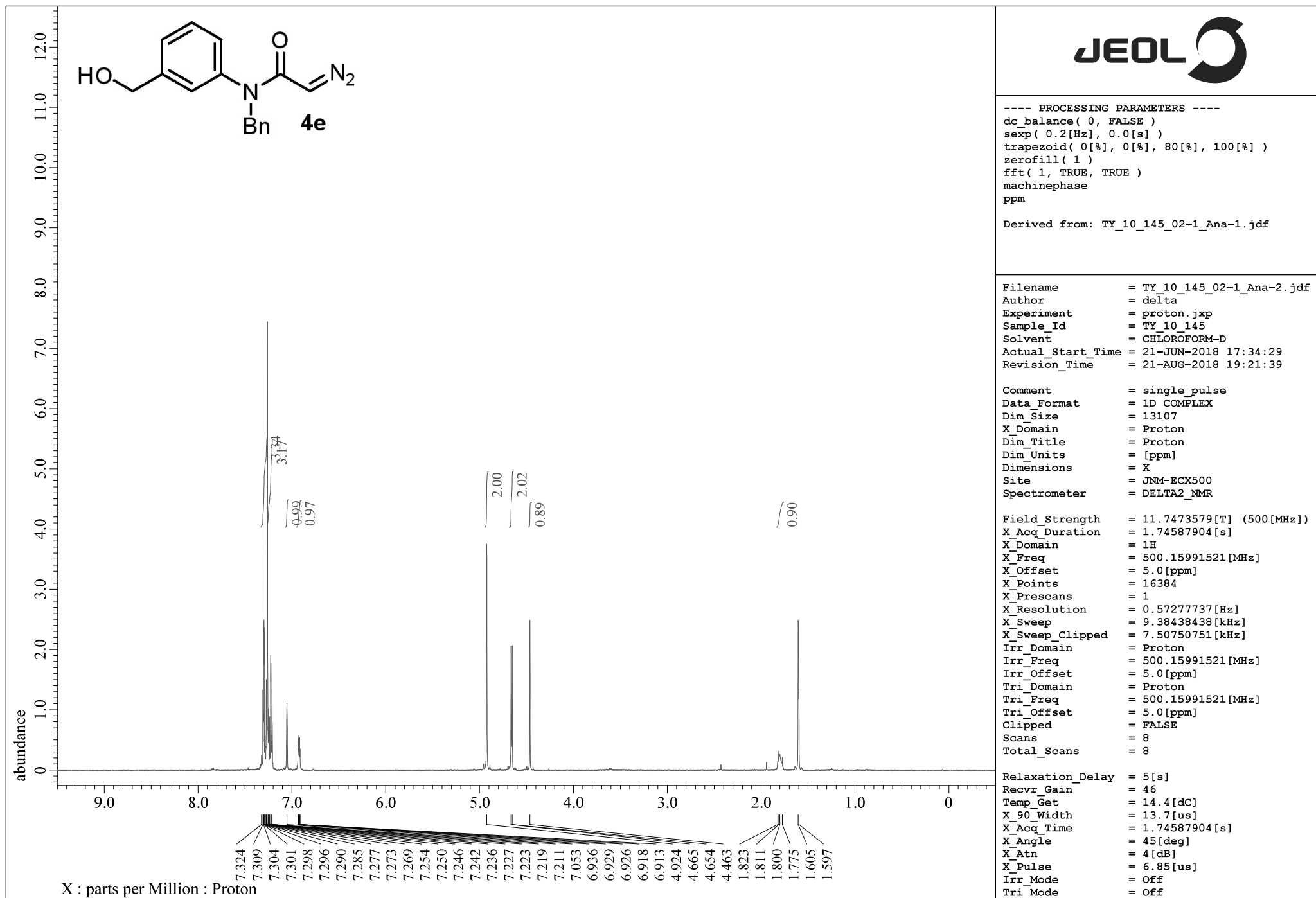
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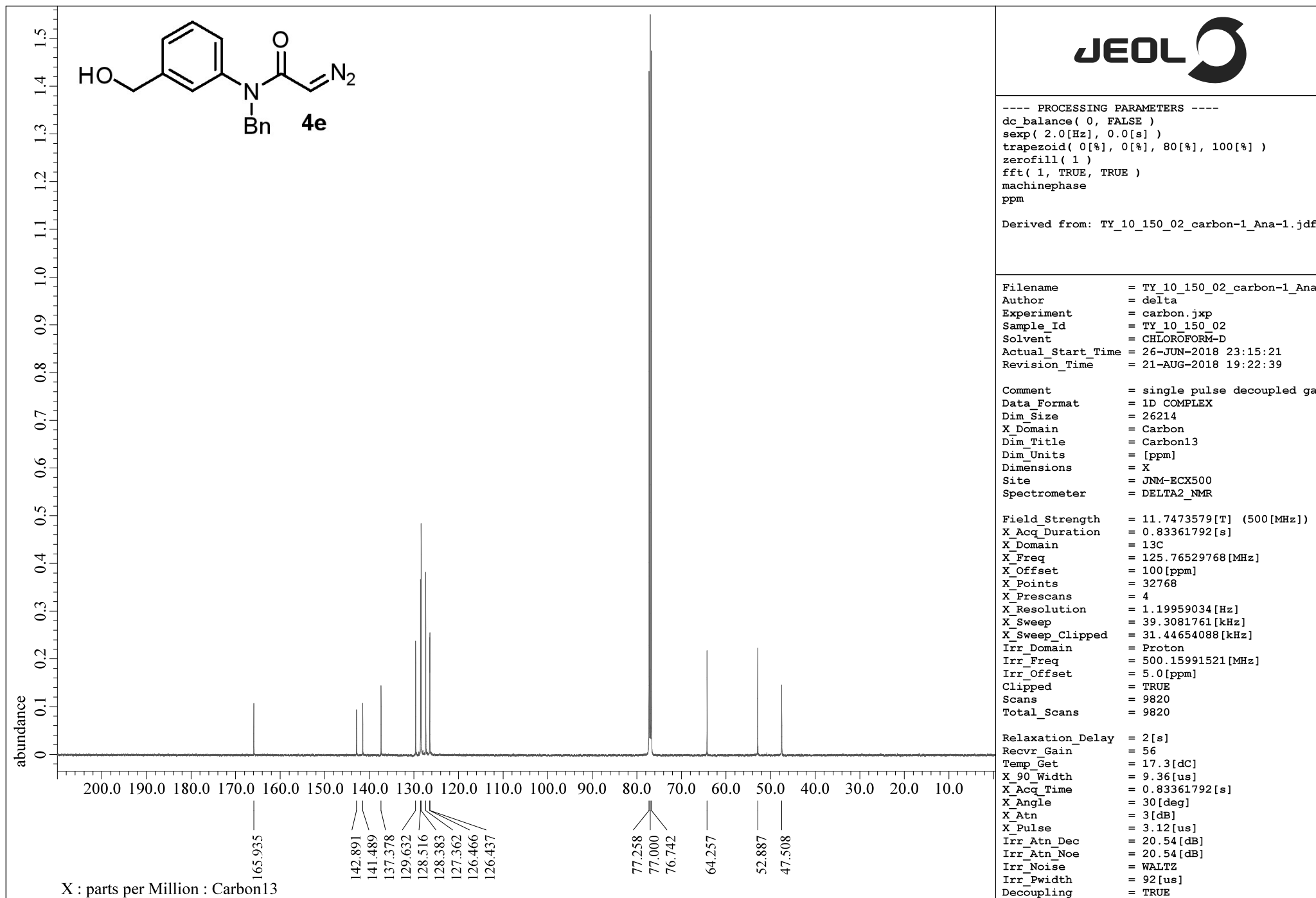
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FREQU    31446.54 Hz
SCANS     3603
ACQTM    0.8336 sec
PD       10.0000 sec
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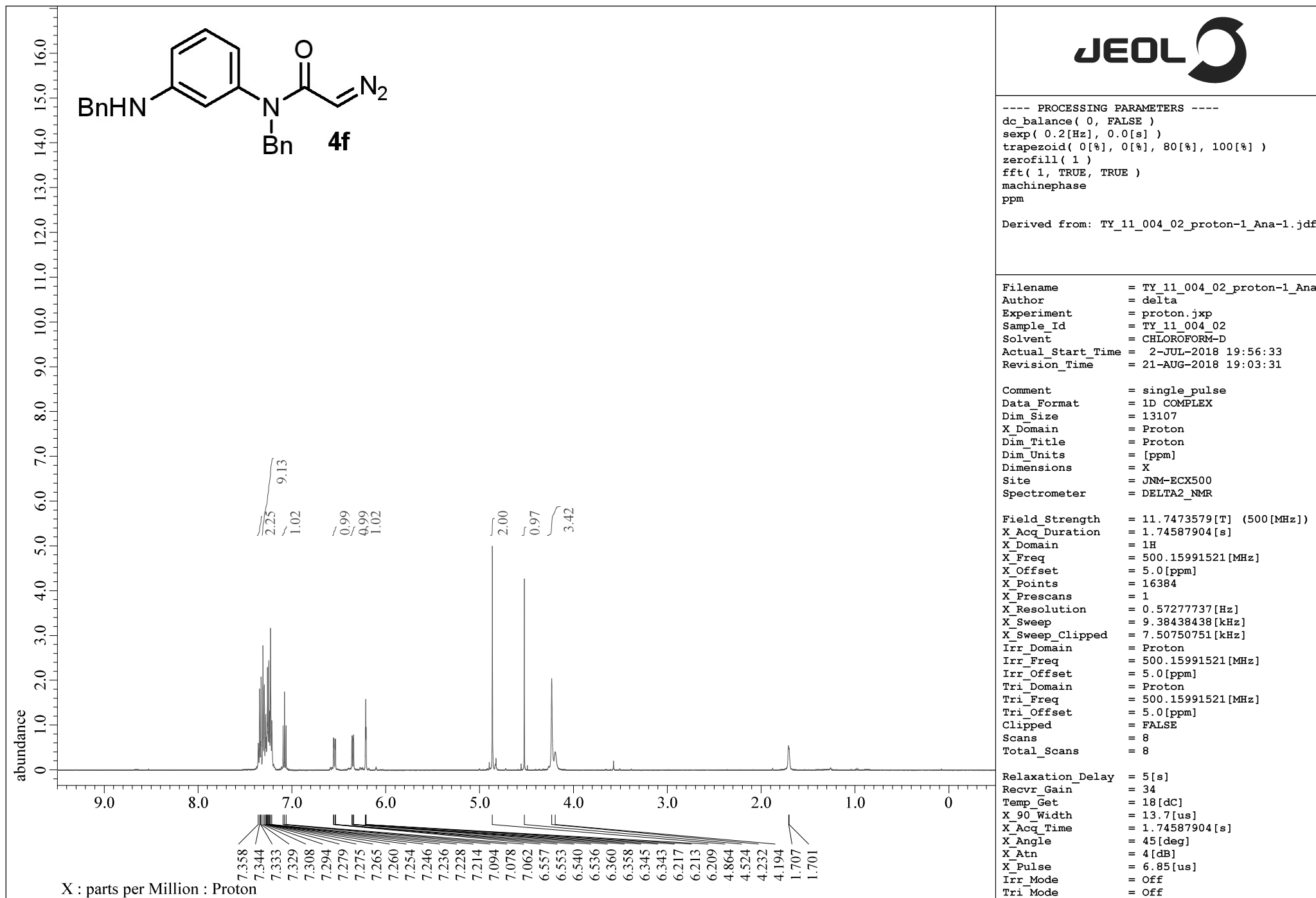


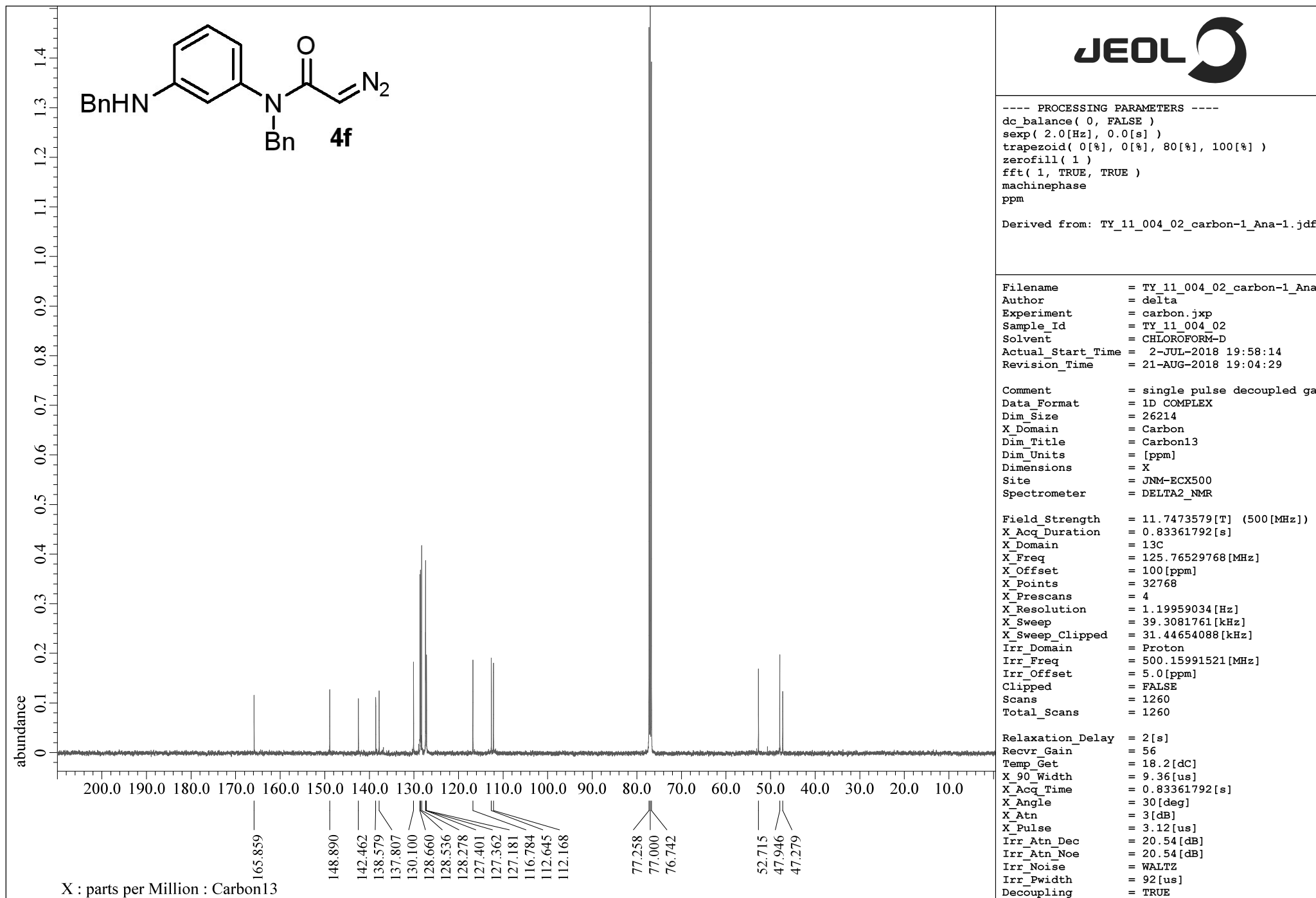


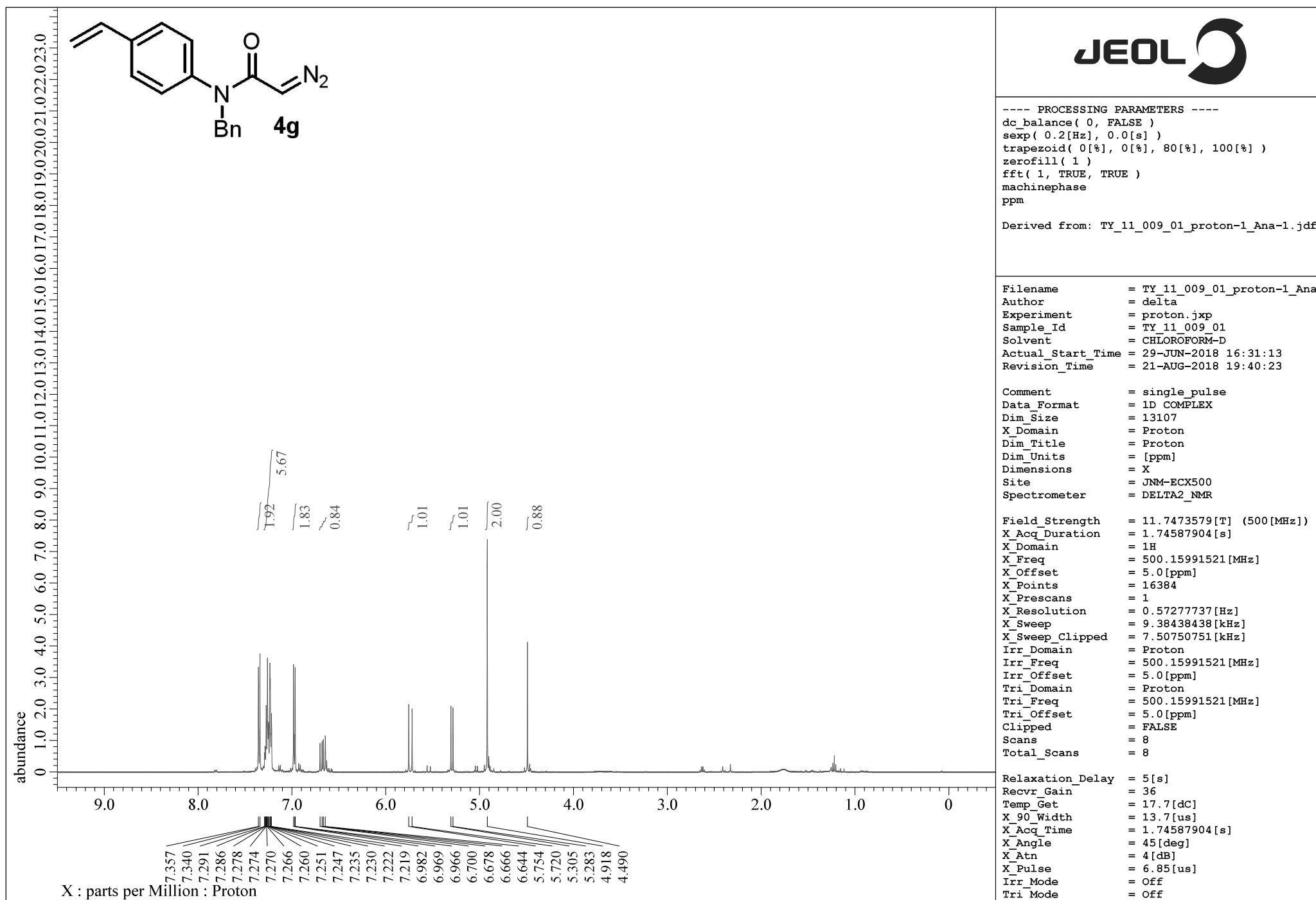


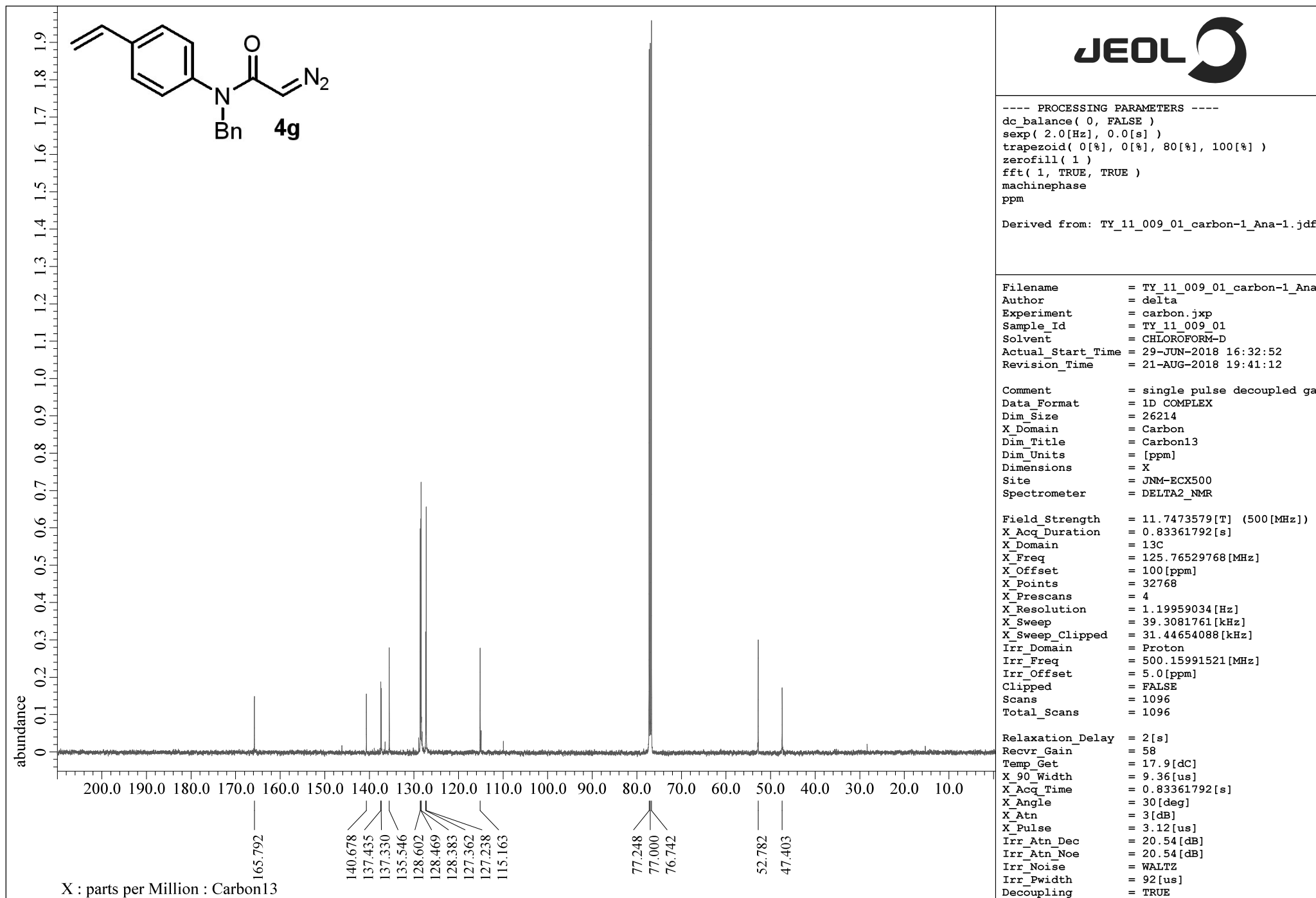


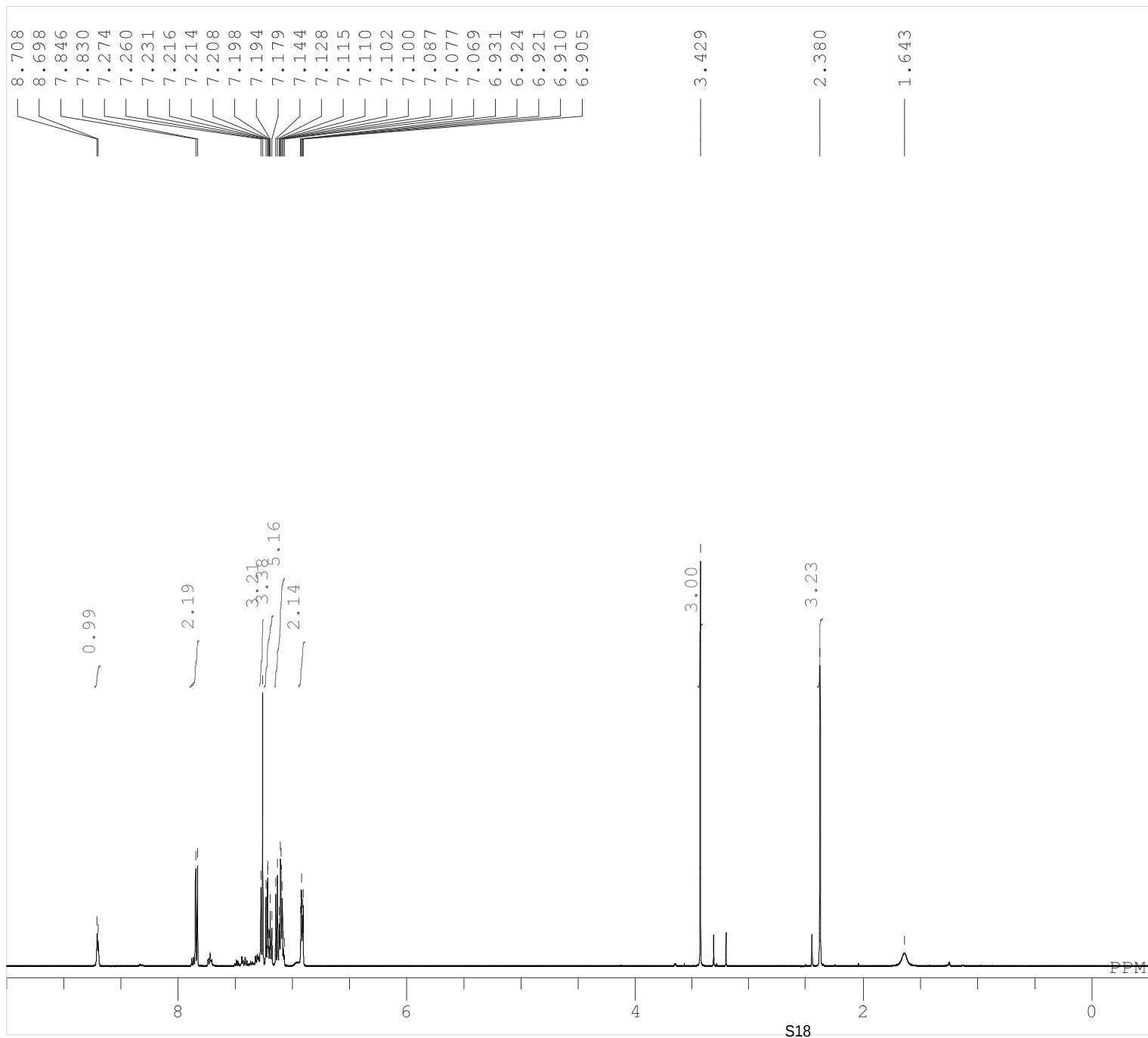




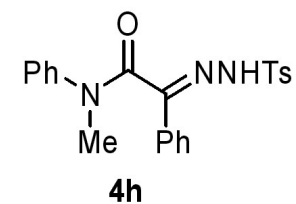


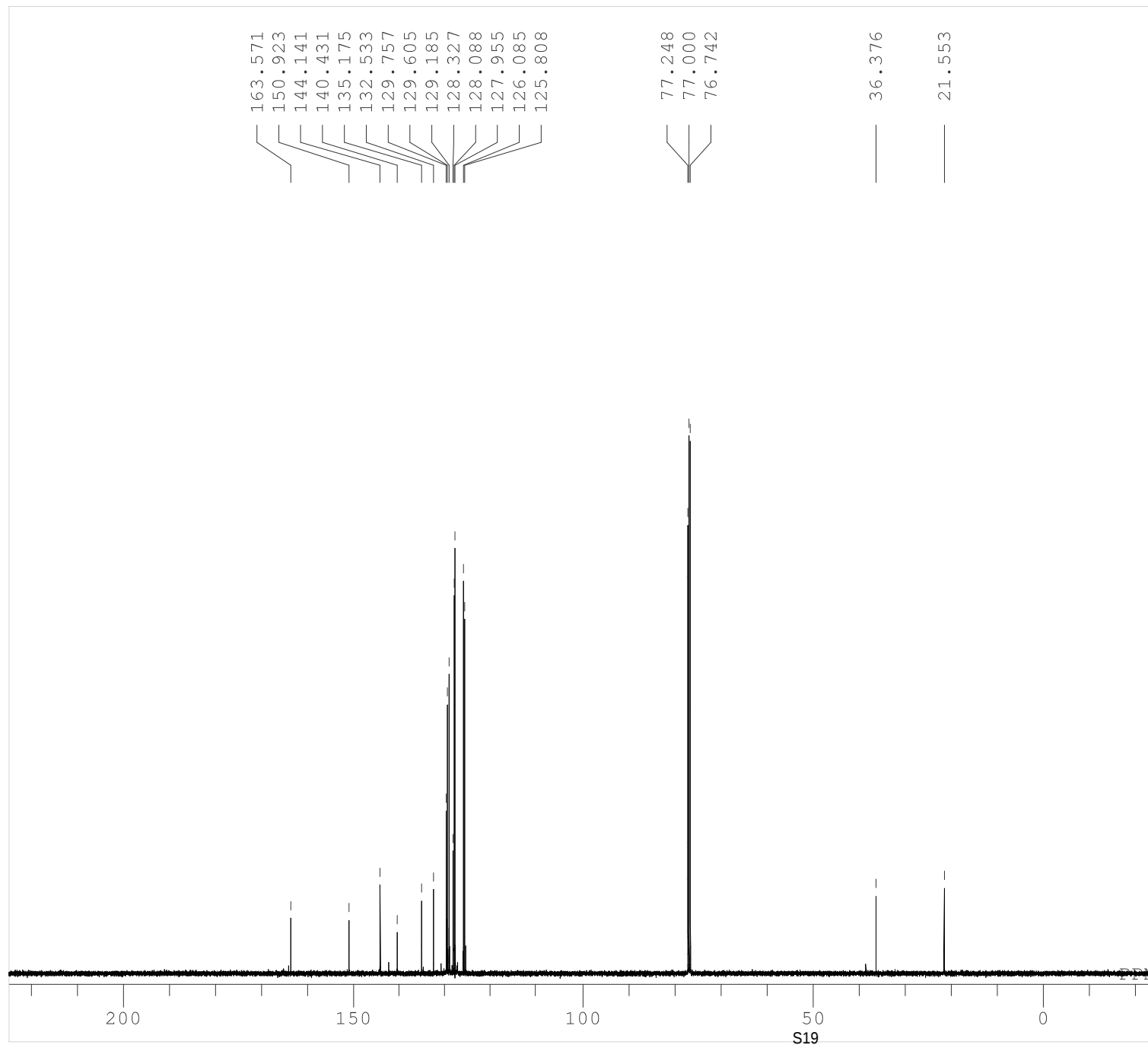






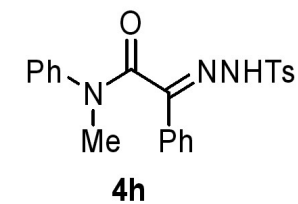
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 RGAIN 40

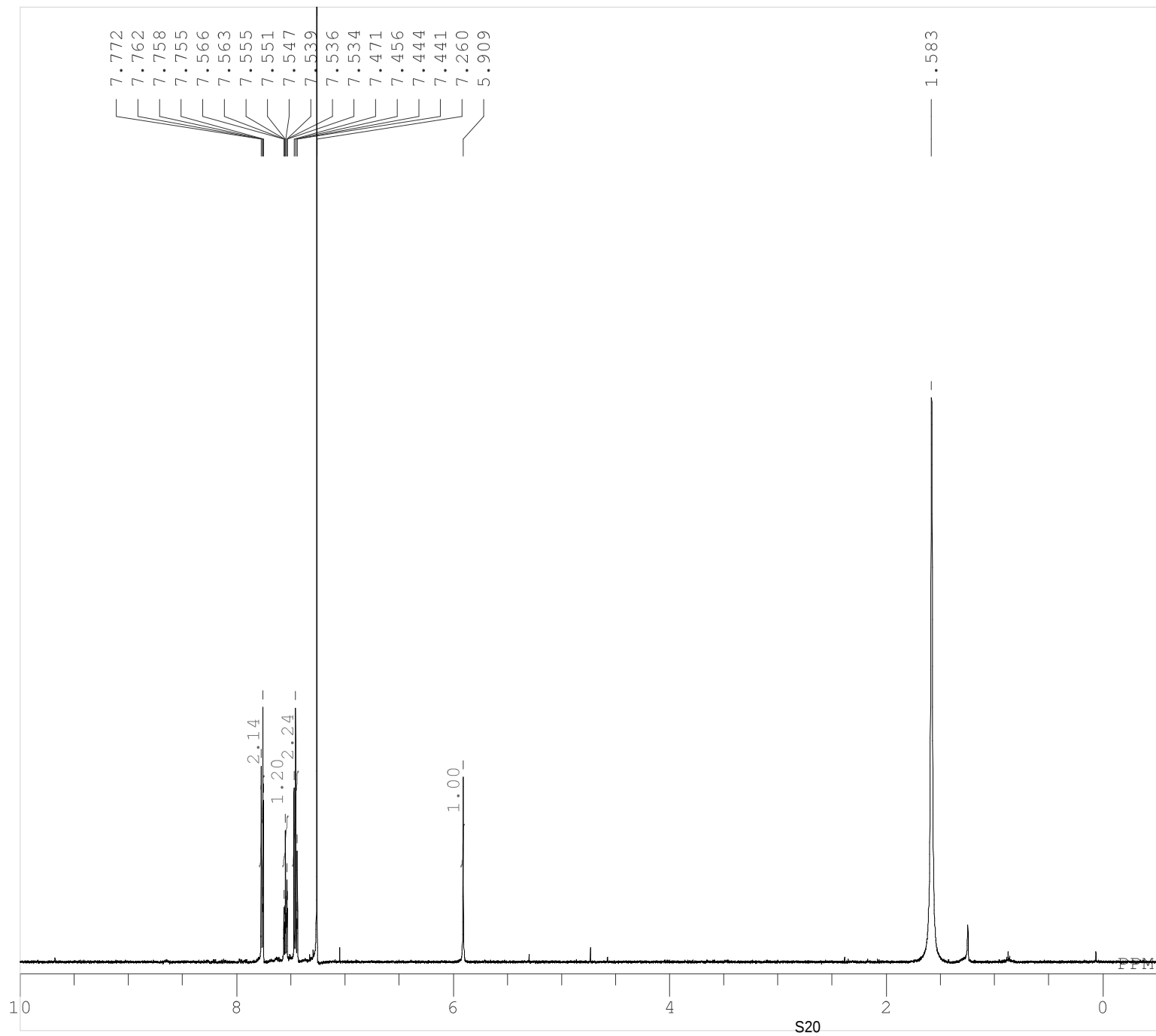




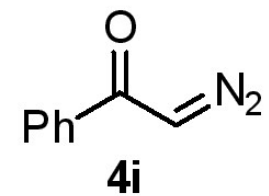
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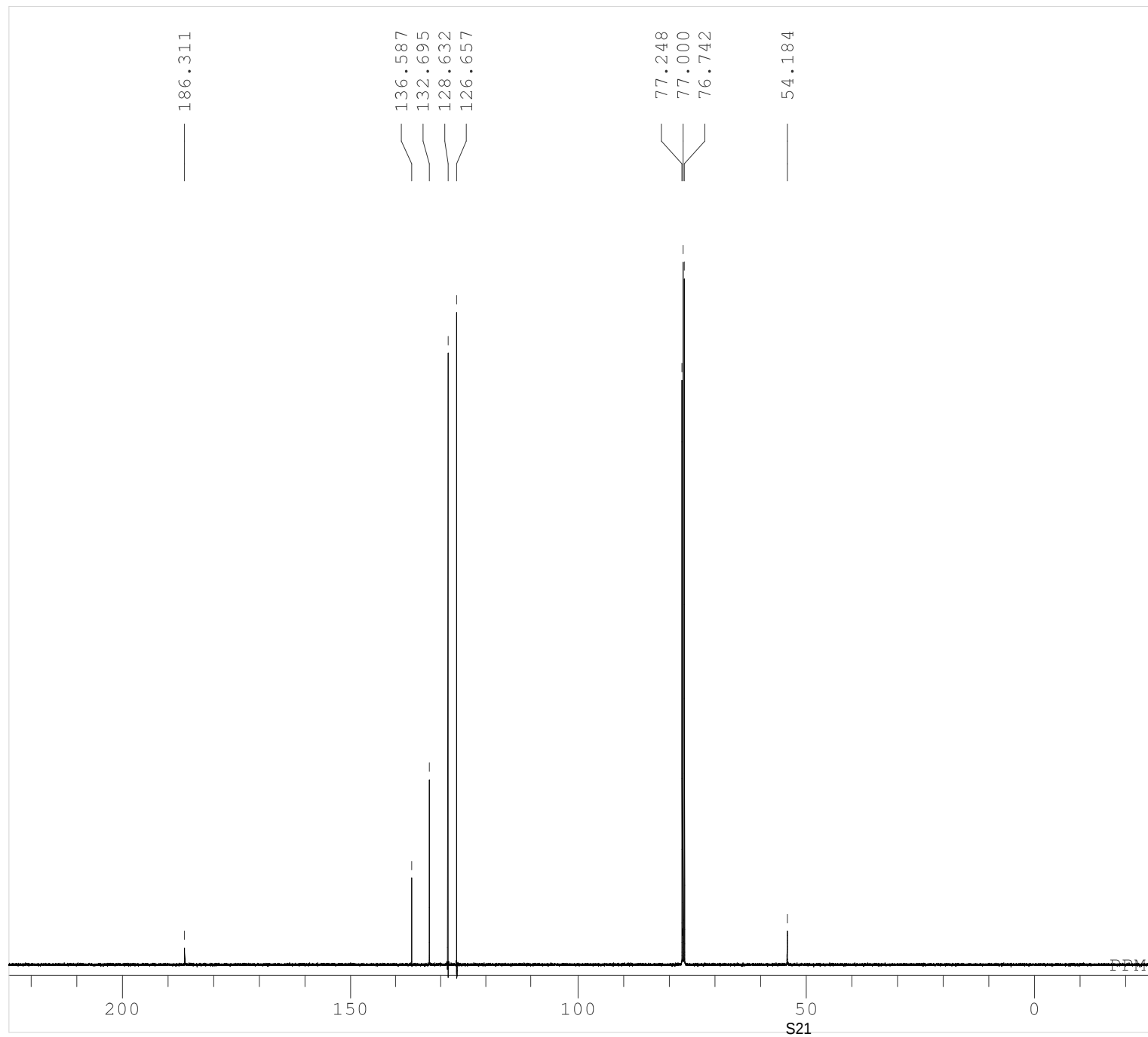
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OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS    1260
ACQTM    0.8336 sec
PD        2.0000 sec
PW1       3.12 usec
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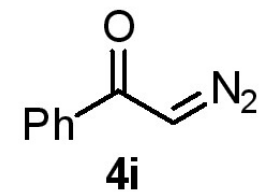


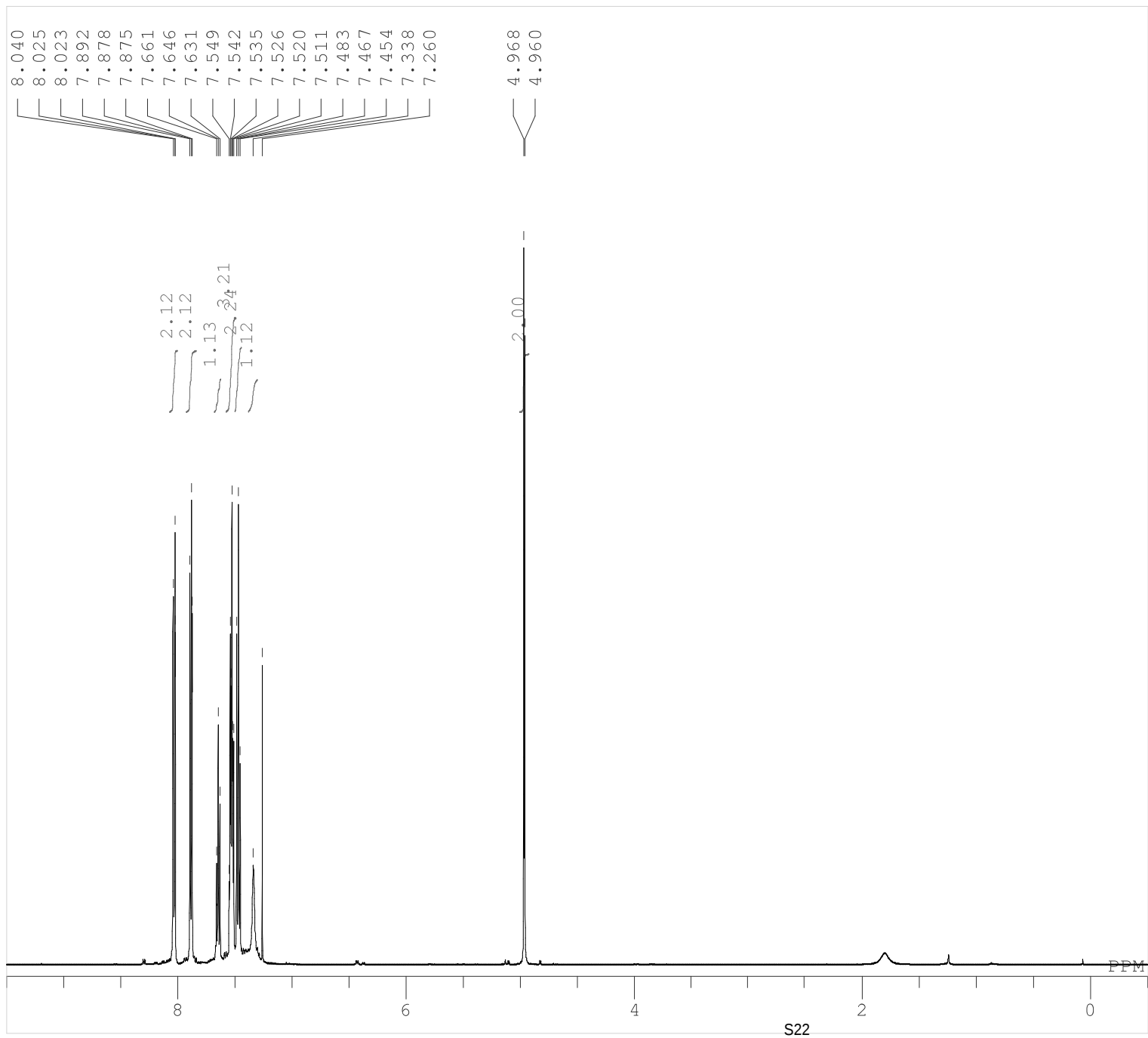
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 ACQTM 1.7459 sec
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 BF 0.10 Hz
 RGAIN 48





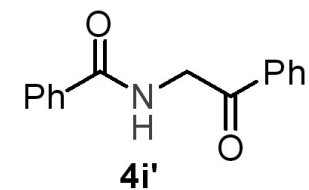
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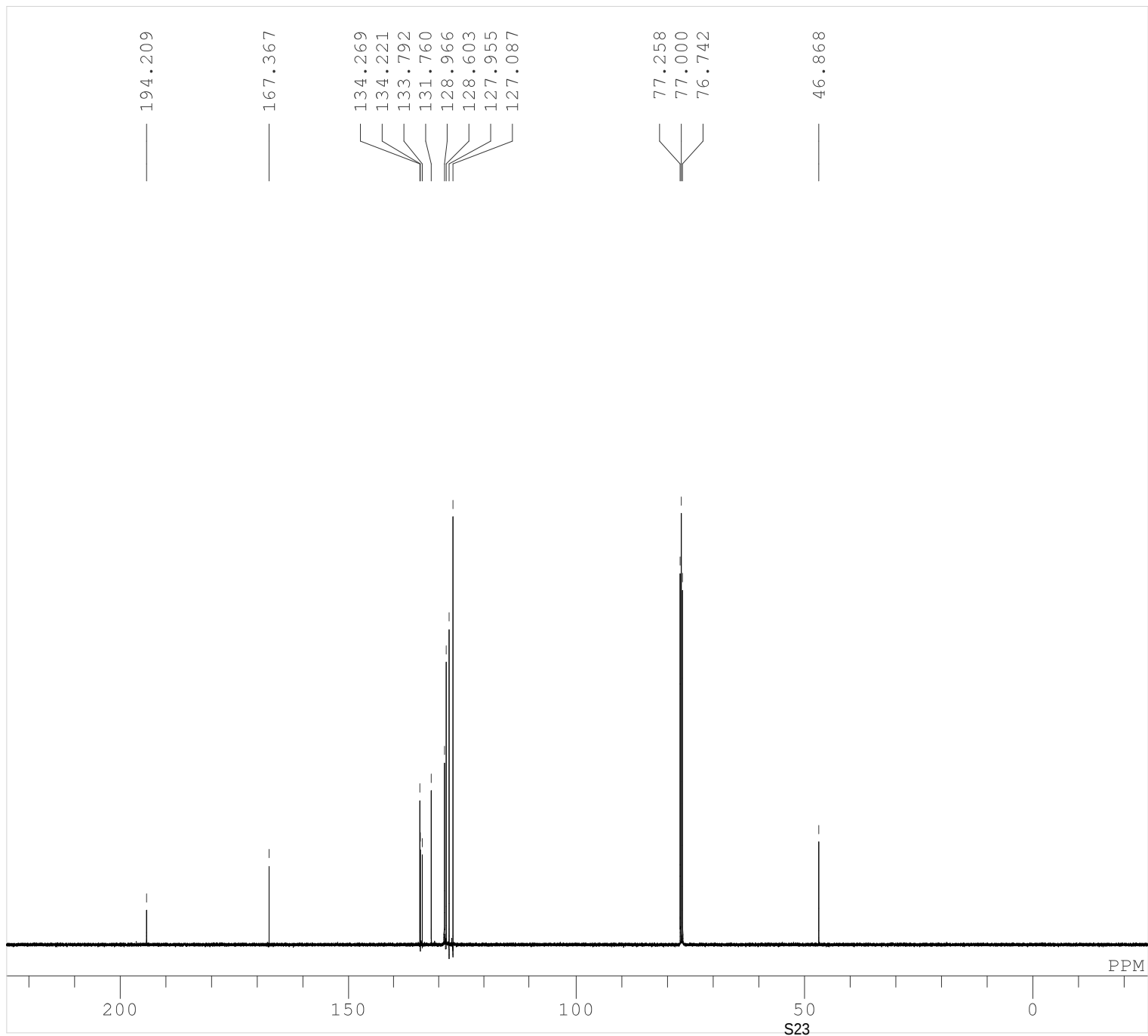




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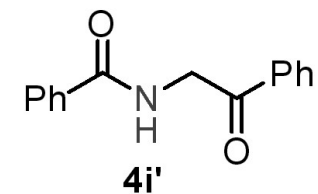
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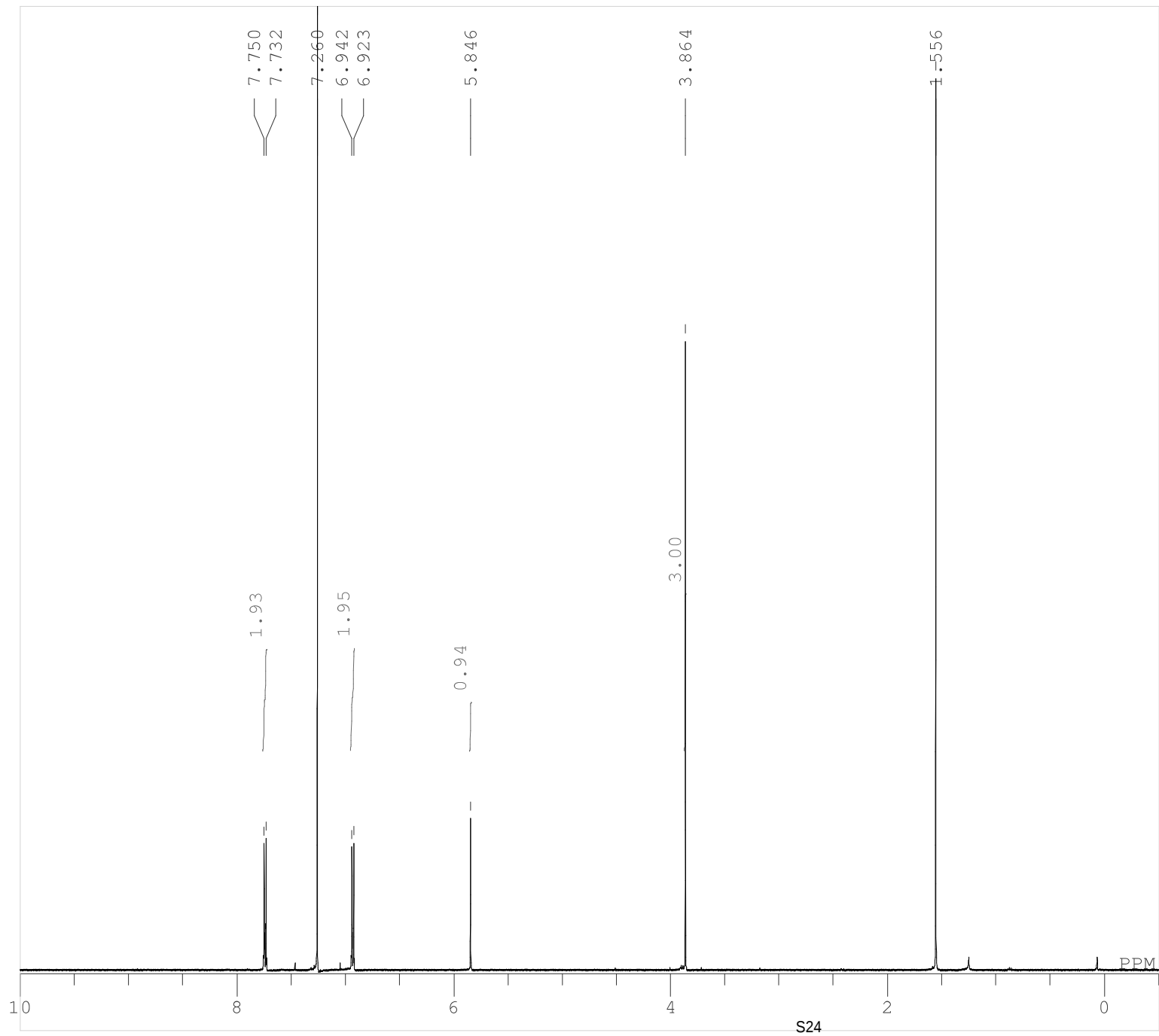




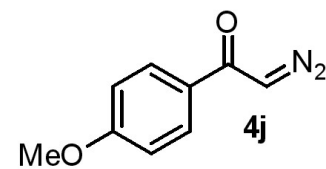
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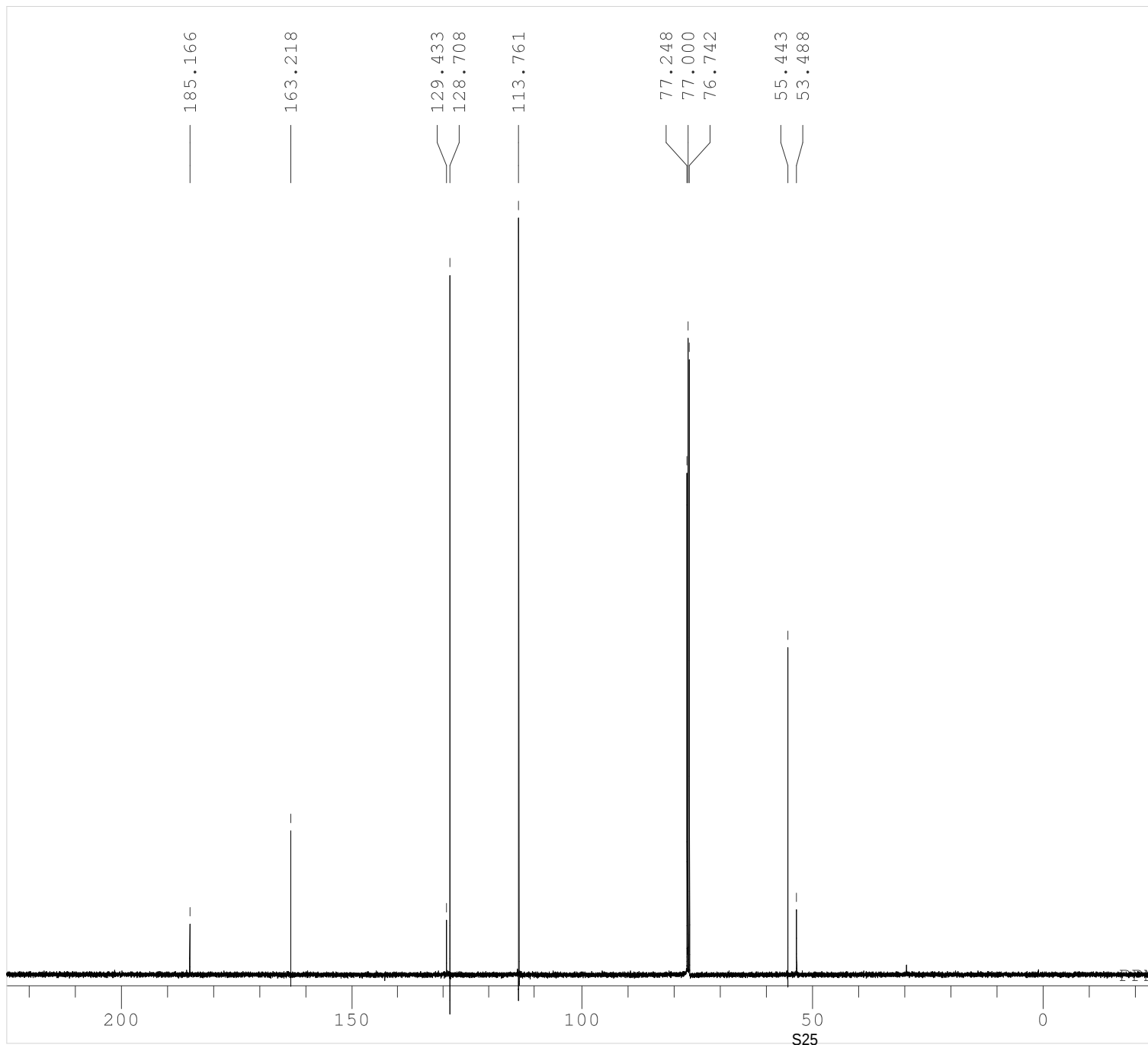
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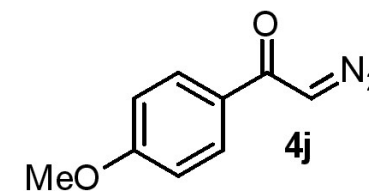


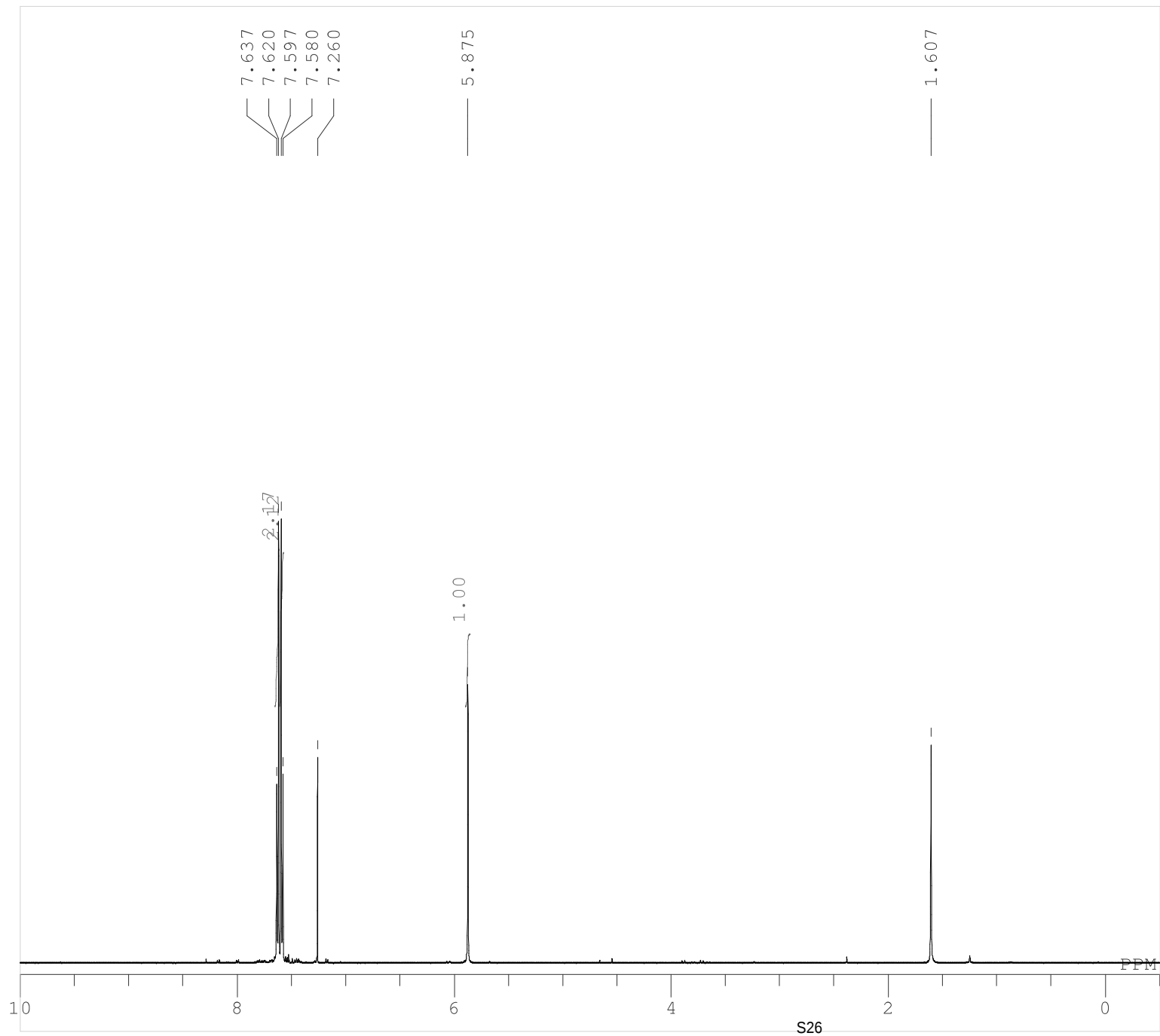
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ACQTM 1.7459 sec
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BF 0.10 Hz
RGAIN 50



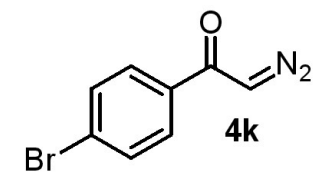


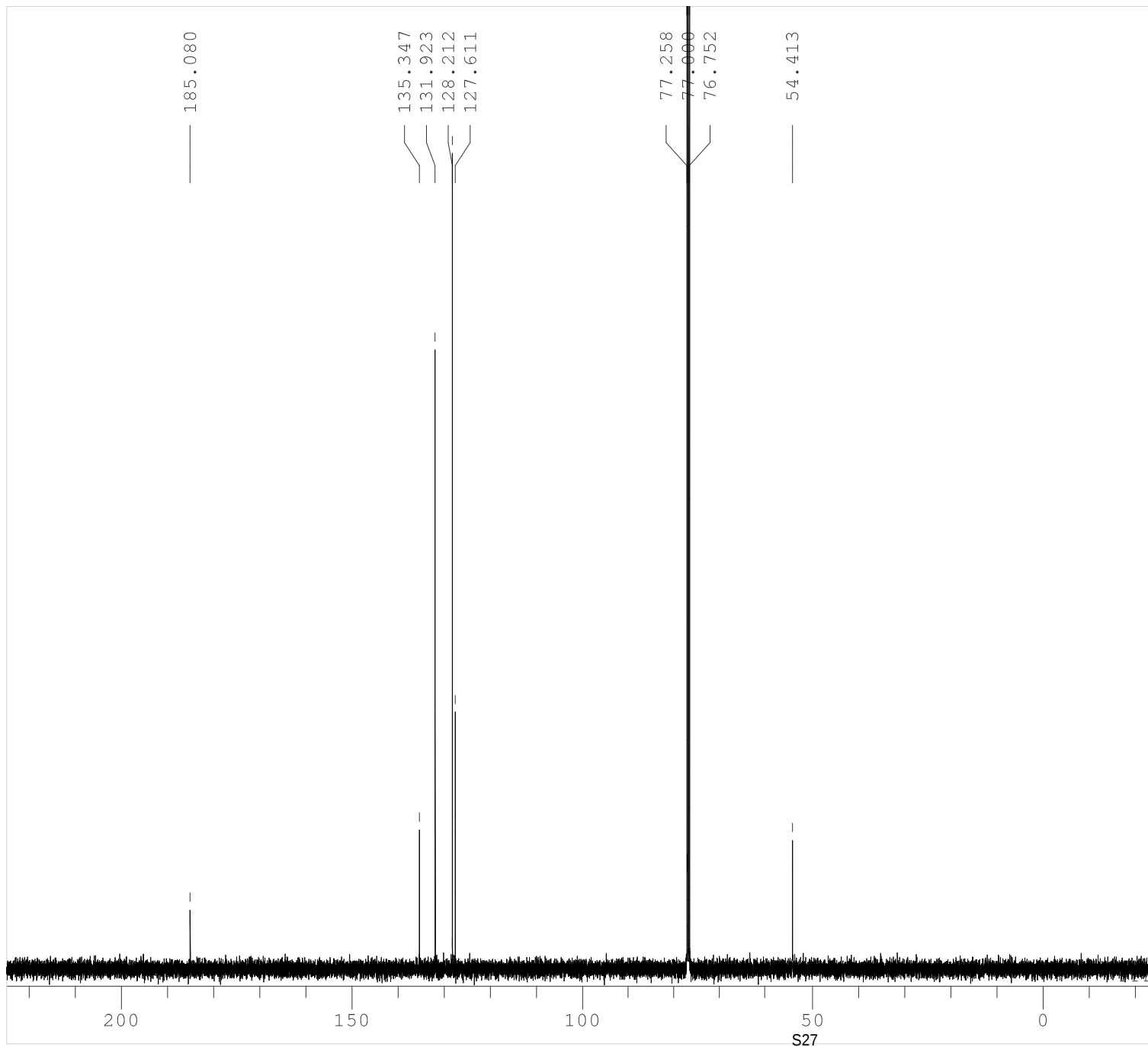
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BF 0.10 Hz
RGAIN 60



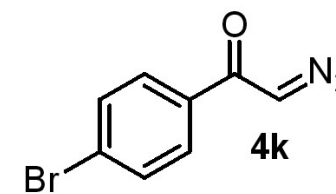


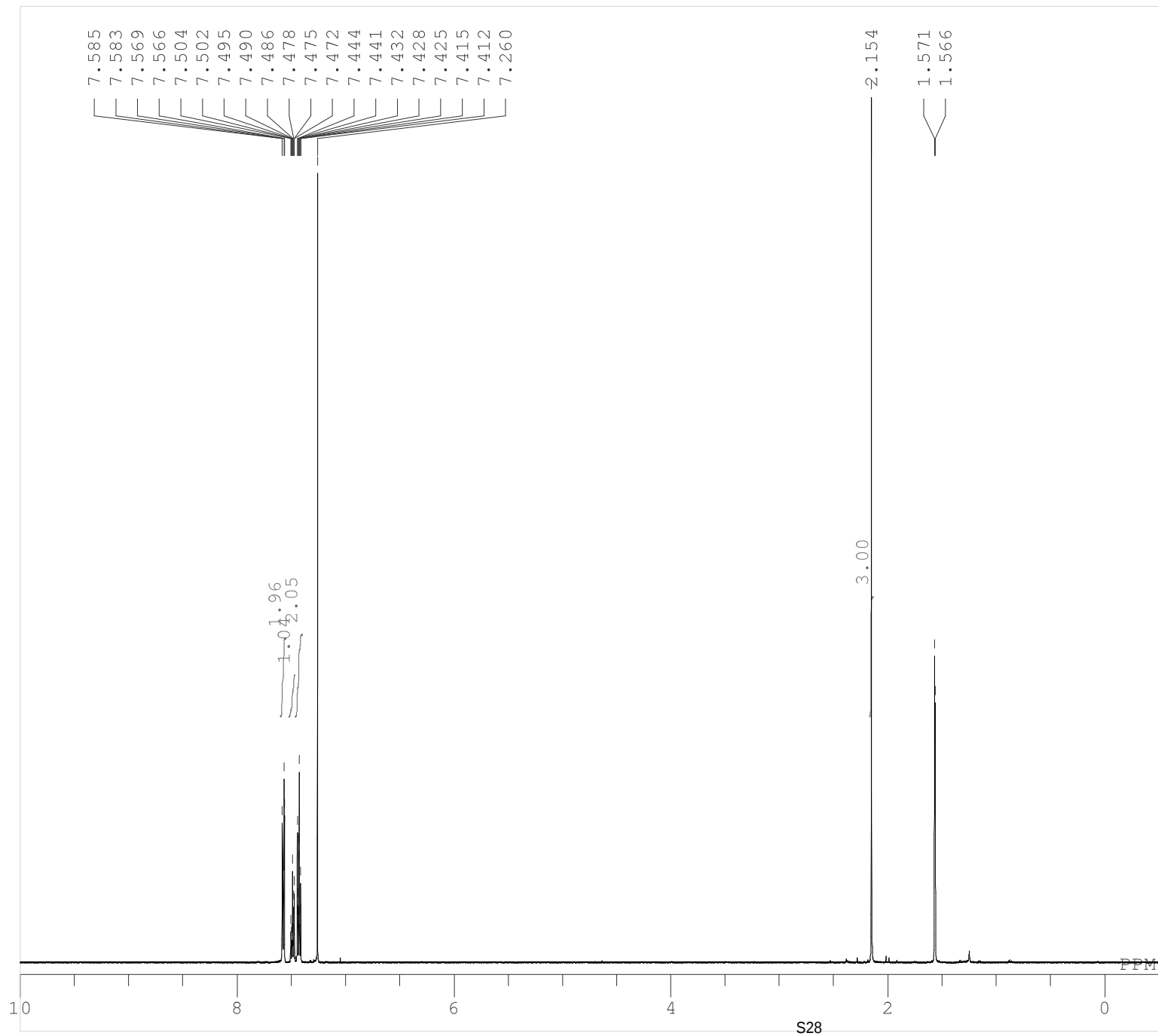
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 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
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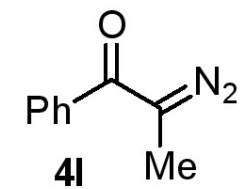


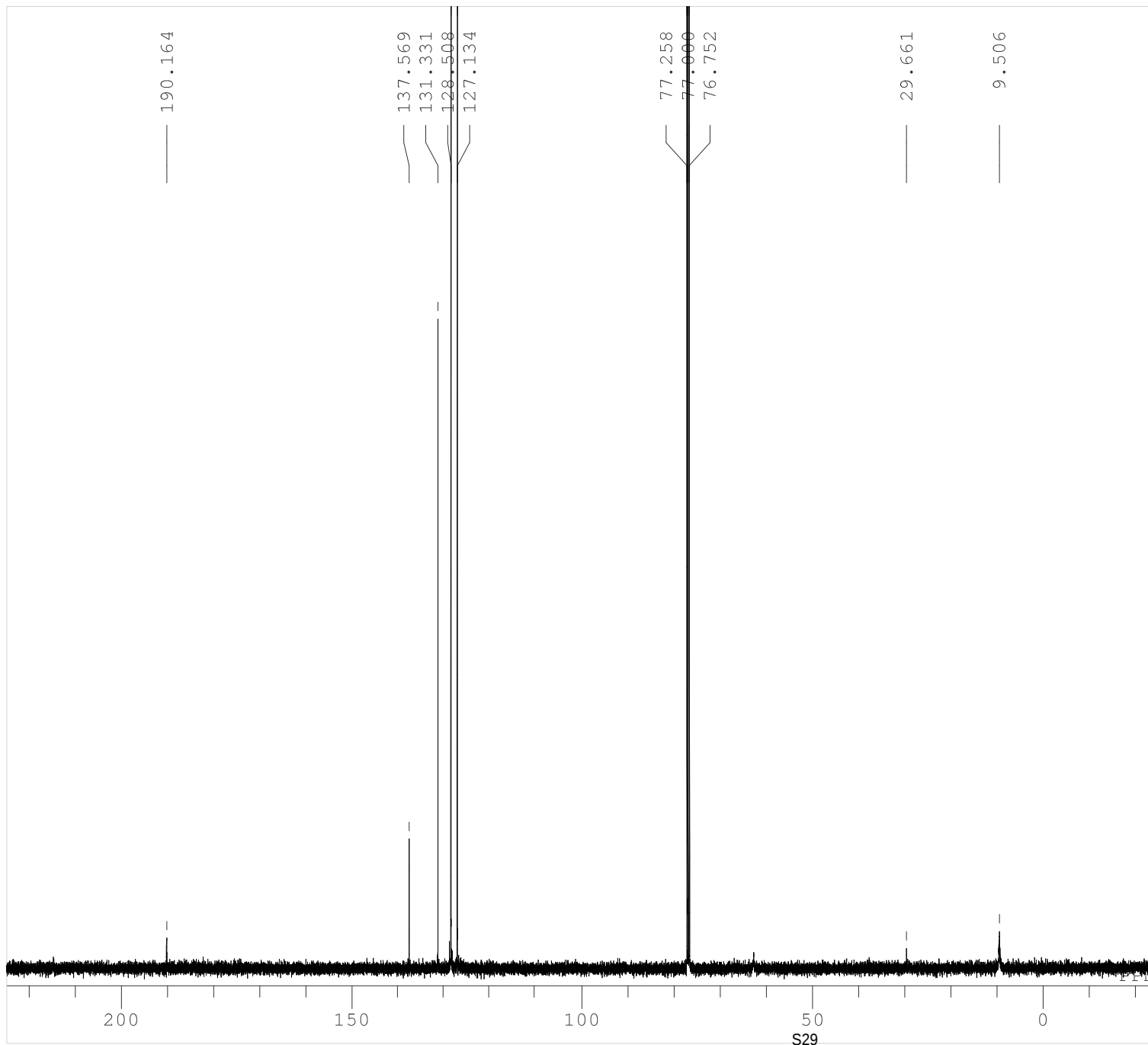
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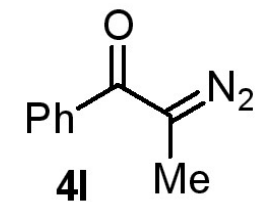


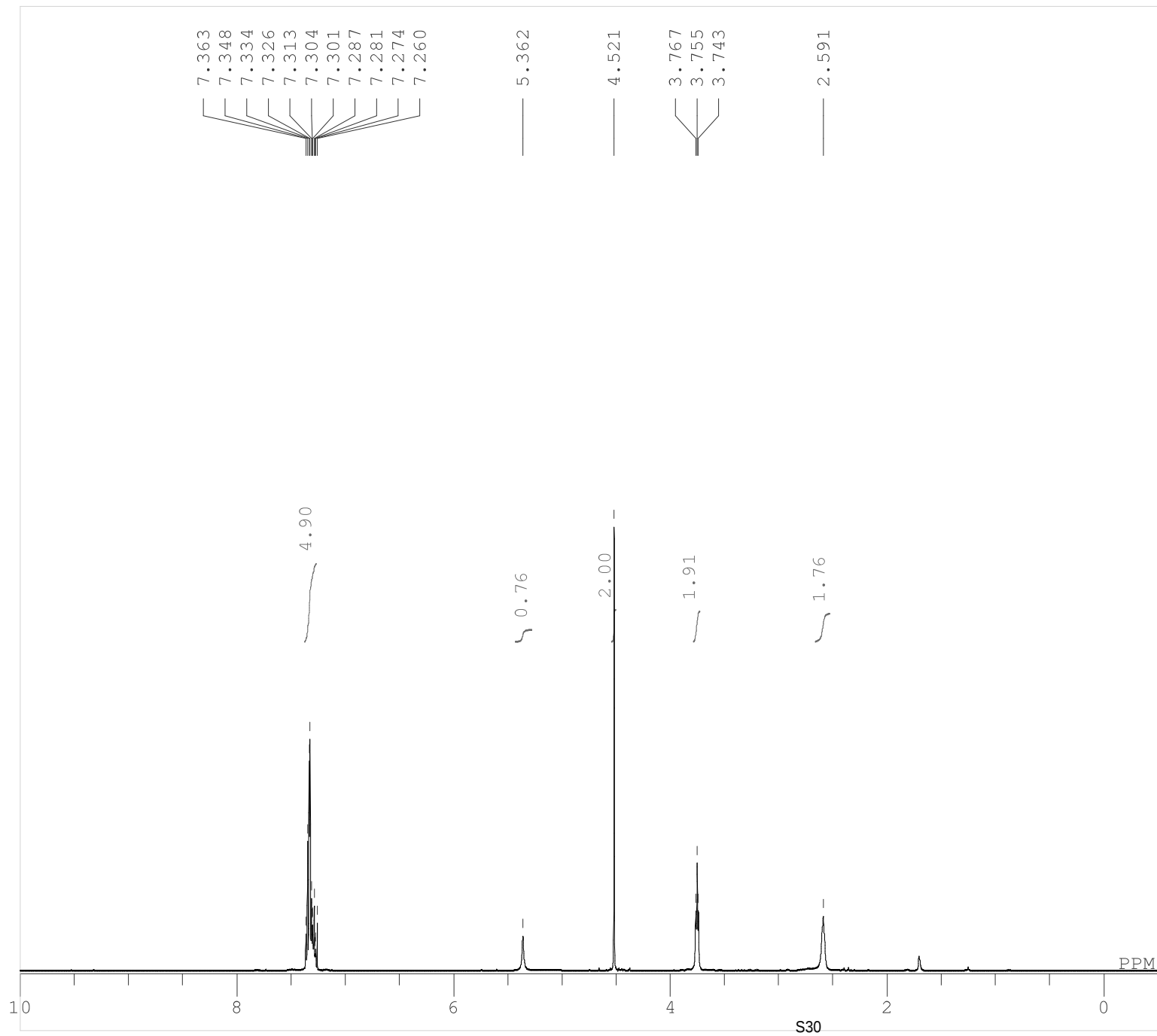
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 FREQU 7507.51 Hz
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 ACQTM 1.7459 sec
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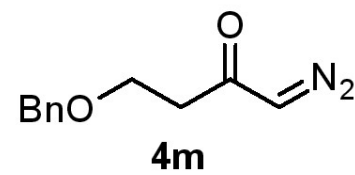


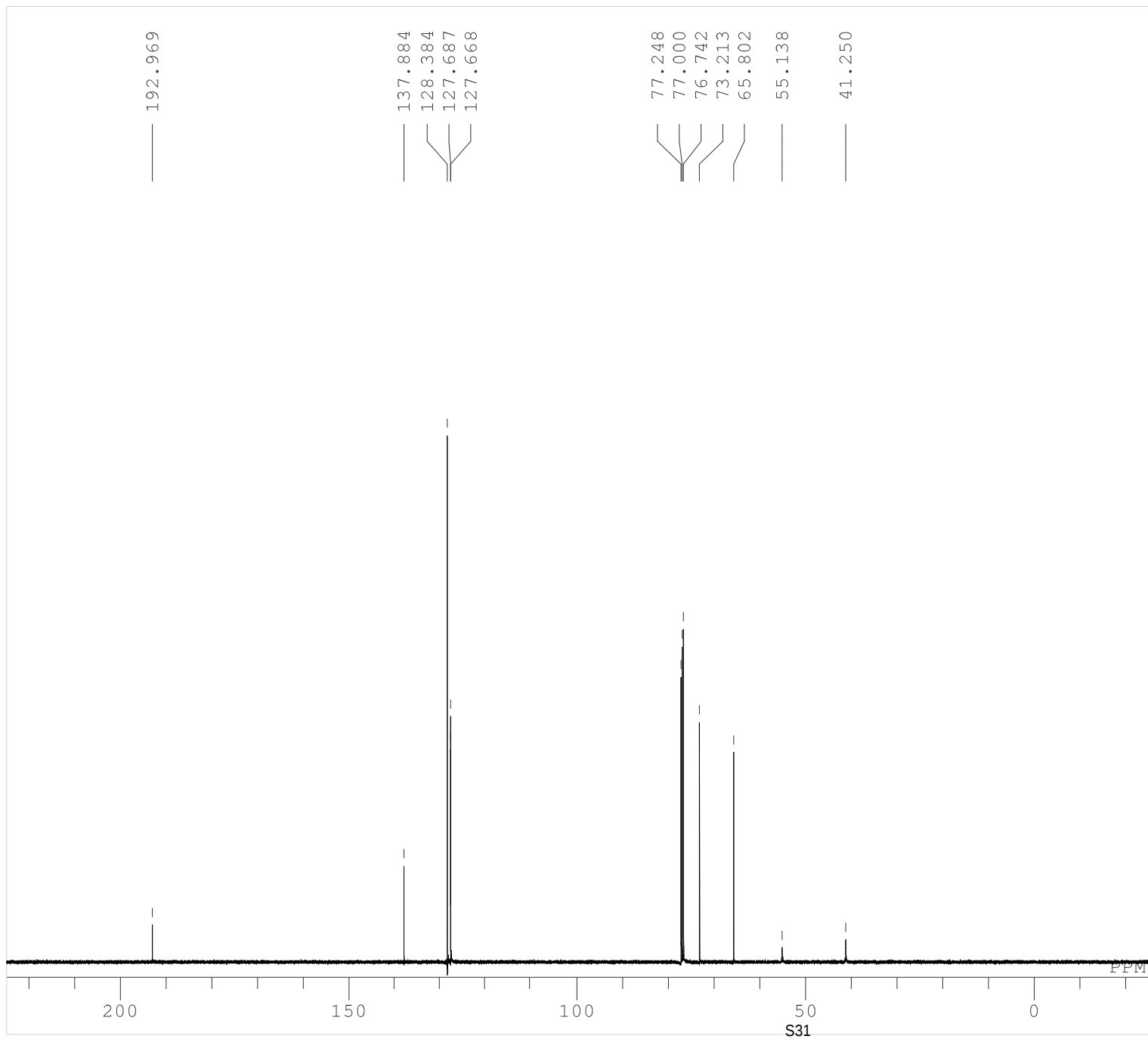
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POINT 26214
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PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 18.5 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



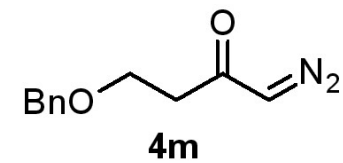


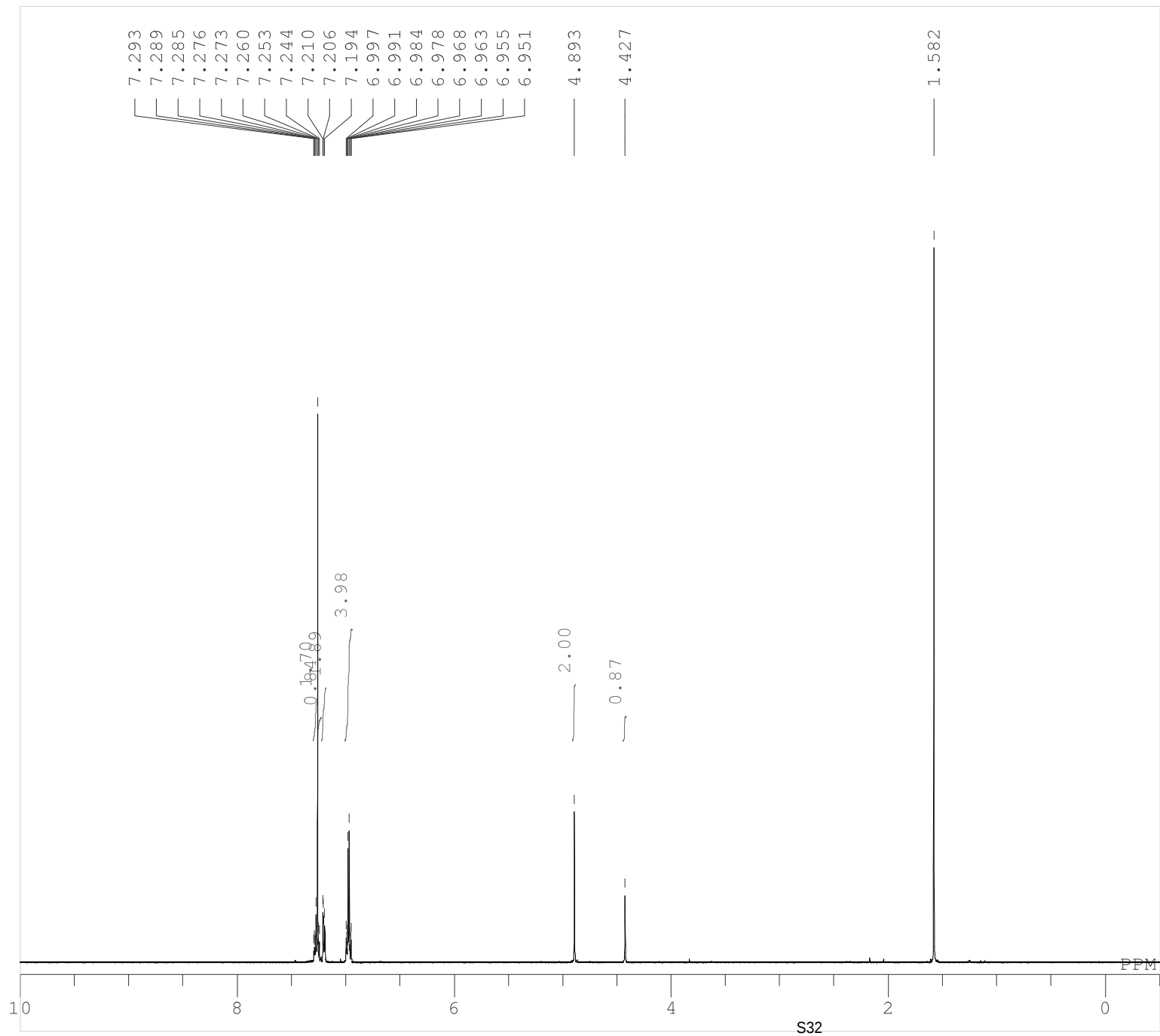
DFILE TY_09_037_02_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-07-24 10:13:46
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.1 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 36



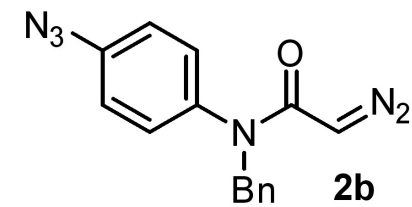


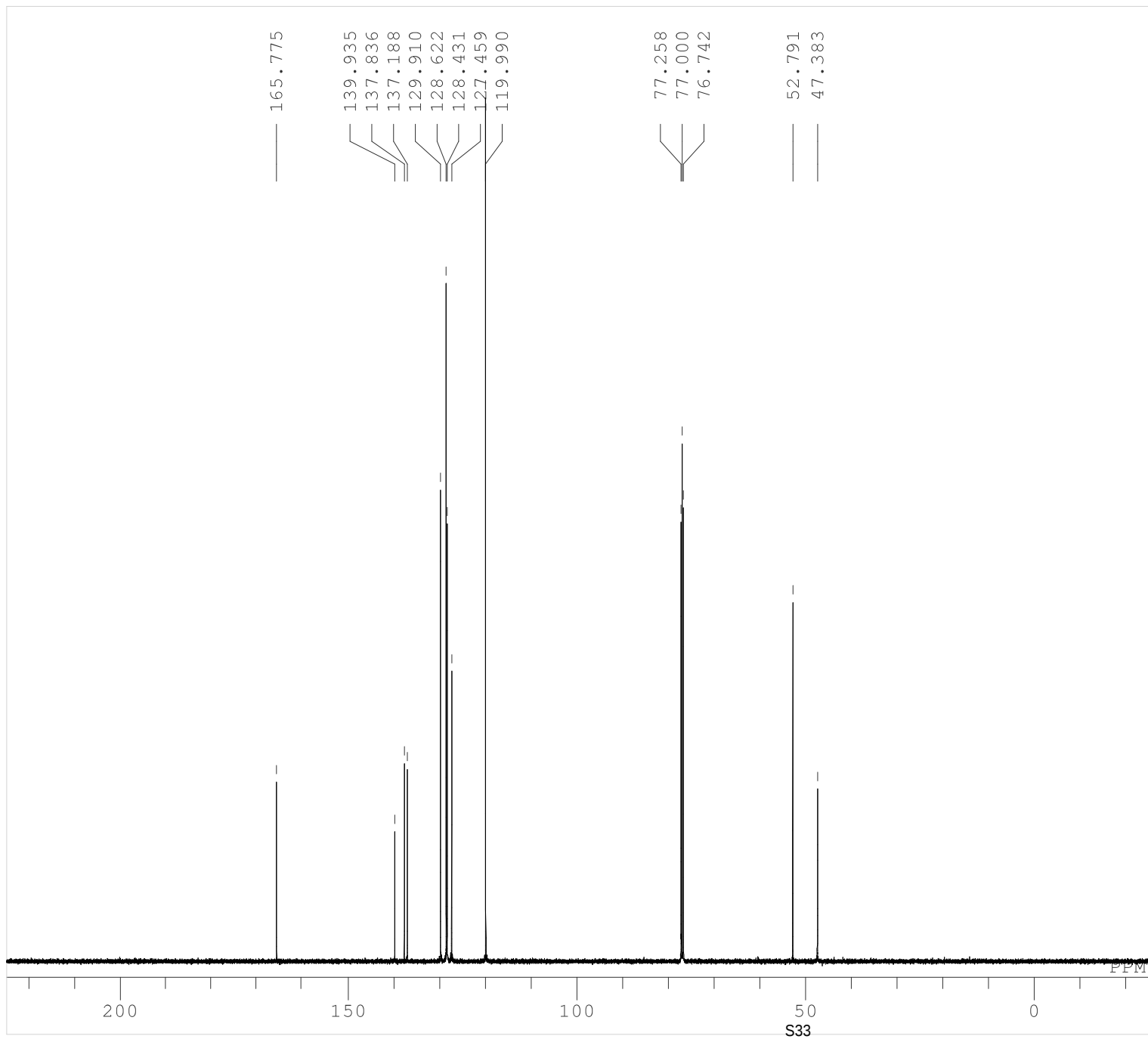
DFILE TY_09_037_02_carbon-1-1.als
COMNT single pulse decoupled gated
DATIM 2017-07-24 10:15:44
OBNUC 13C
EXMOD carbon.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1260
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 18.6 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



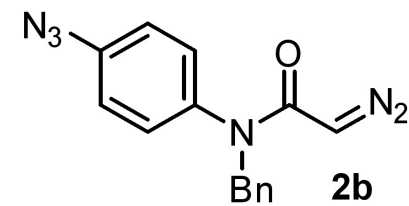


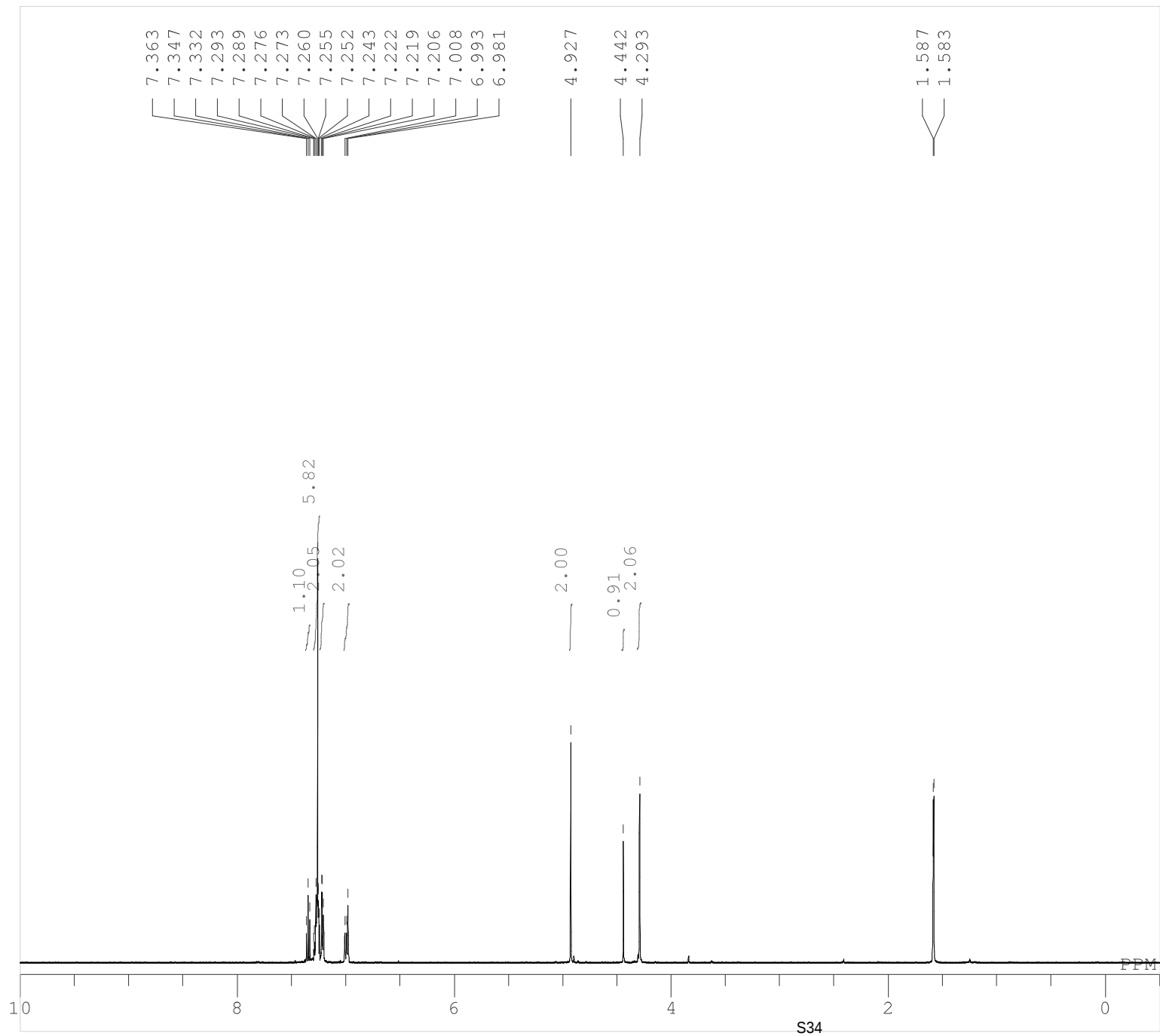
DFILE TY_09_056_05-1-1.als
 COMNT dazo-azide
 DATIM 2017-08-18 17:15:26
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.2 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 48





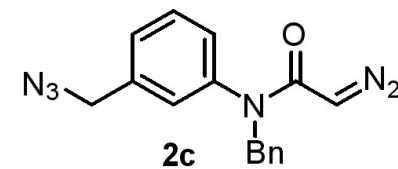
DFILE TY_09_056_05_carbon-1-1.als
COMNT single pulse decoupled gated
DATIM 2017-08-19 10:46:46
OBNUC 13C
EXMOD carbon.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1780
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 18.4 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60

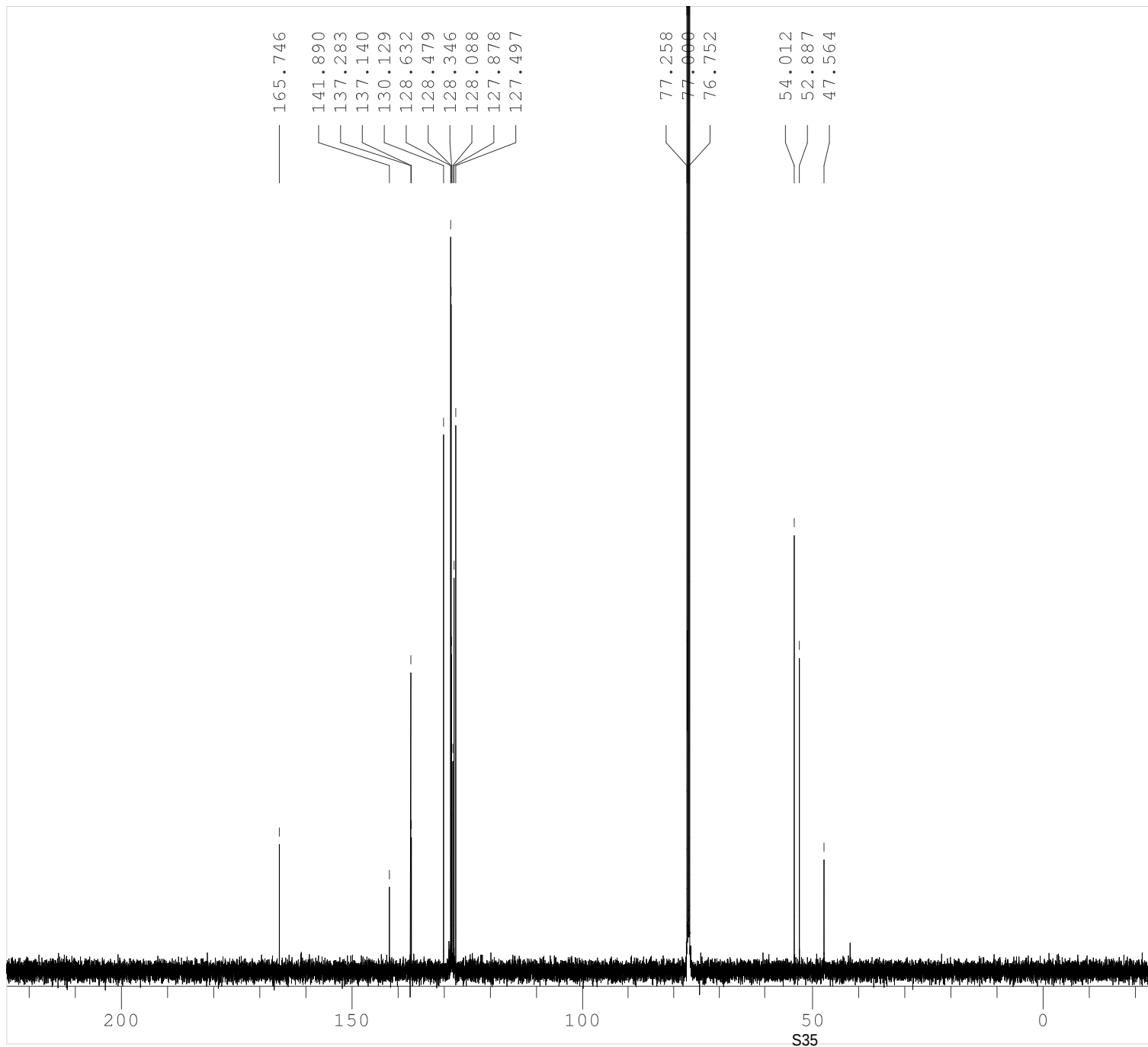




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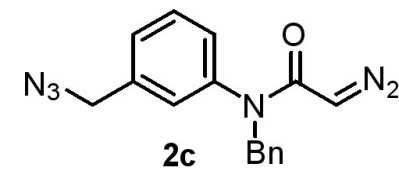
DFILE  TY_09_123_02_proton-1-1.als
COMNT  single_pulse
DATIM  2017-10-23 23:11:42
OBNUC  1H
EXMOD  proton.jxp
OBFRQ   500.16 MHz
OBSET    2.41 KHz
OBFIN    6.01 Hz
POINT    13107
FREQU    7507.51 Hz
SCANS      8
ACQTM    1.7459 sec
PD        5.0000 sec
PW1       6.85 usec
IRNUC    1H
CTEMP    16.8 c
SLVNT    CDCL3
EXREF    7.26 ppm
BF        0.10 Hz
RGAIN    46
  
```

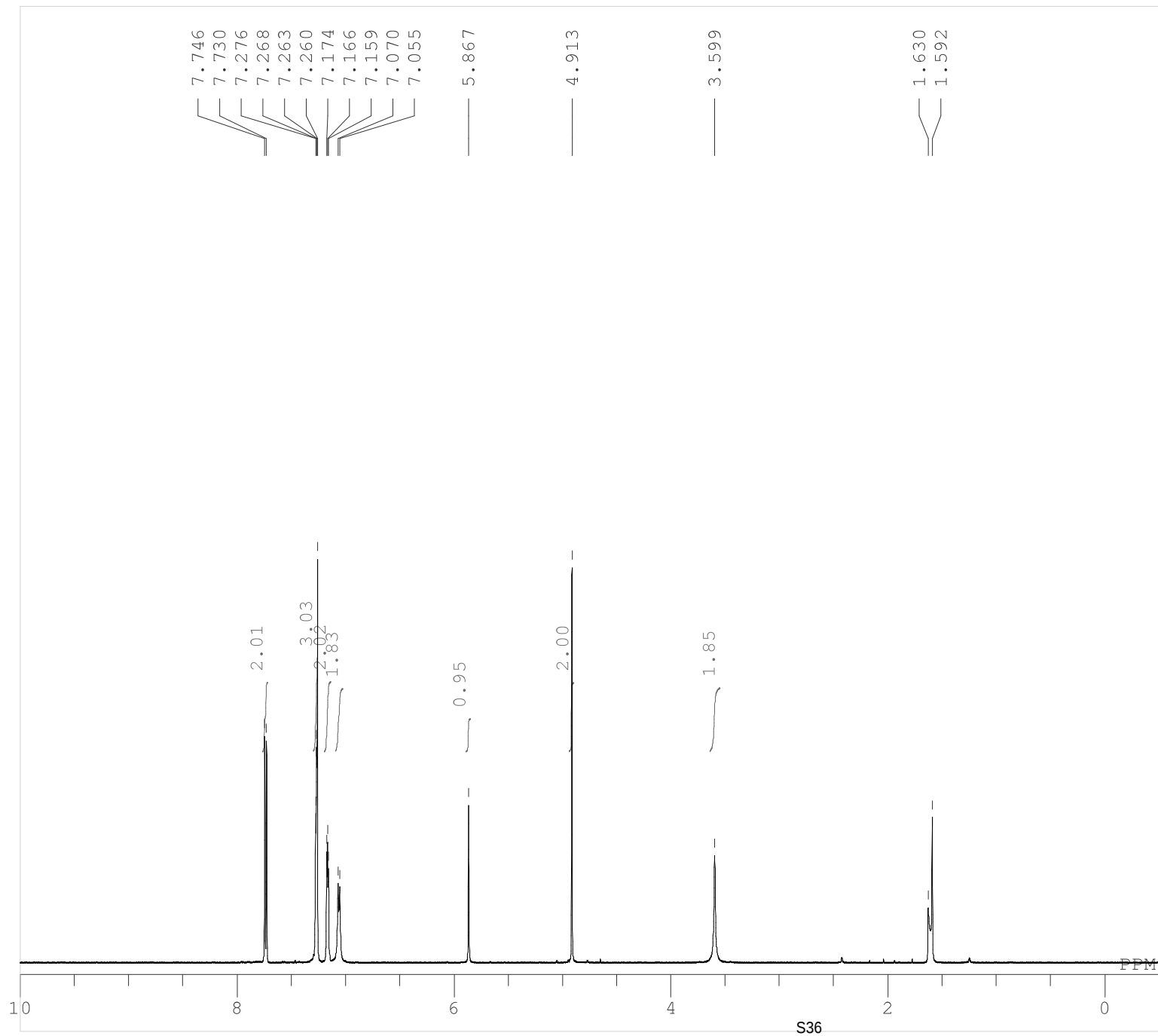




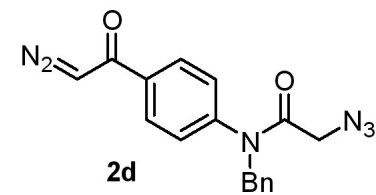
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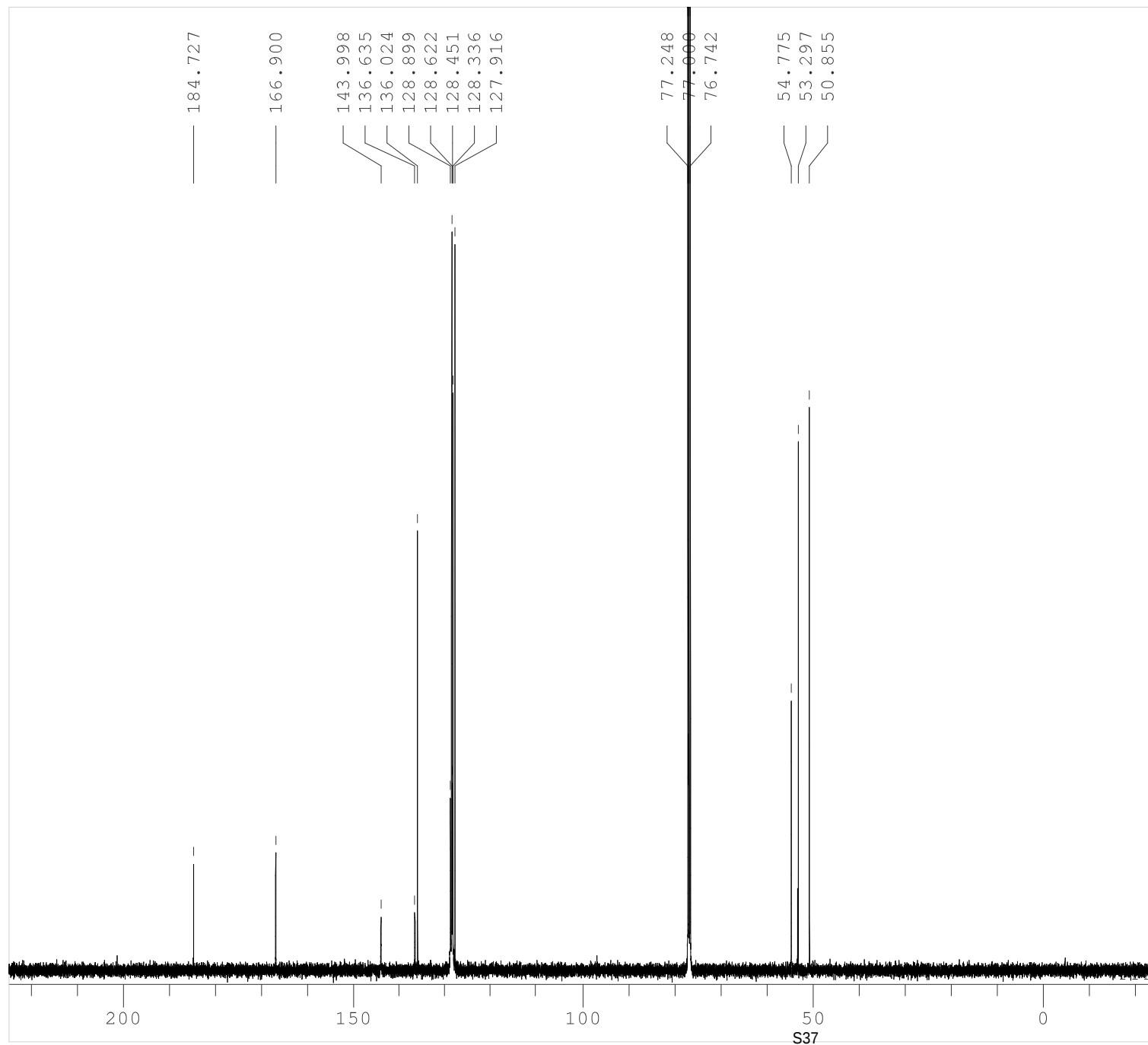
DFILE  TY_09_123_02_carbon-1-1.als
COMNT  single pulse decoupled gated
DATIM  2017-10-23 23:13:21
OBNUC  13C
EXMOD  carbon.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT   26214
FREQU   31446.54 Hz
SCANS    8460
ACQTM   0.8336 sec
PD       2.0000 sec
PW1      3.12 usec
IRNUC   1H
CTEMP    17.8 c
SLVNT   CDCL3
EXREF    77.00 ppm
BF       0.10 Hz
RGAIN    60
  
```



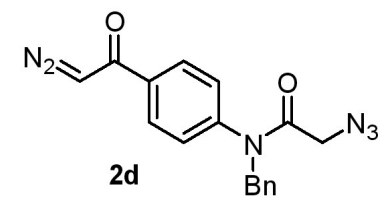


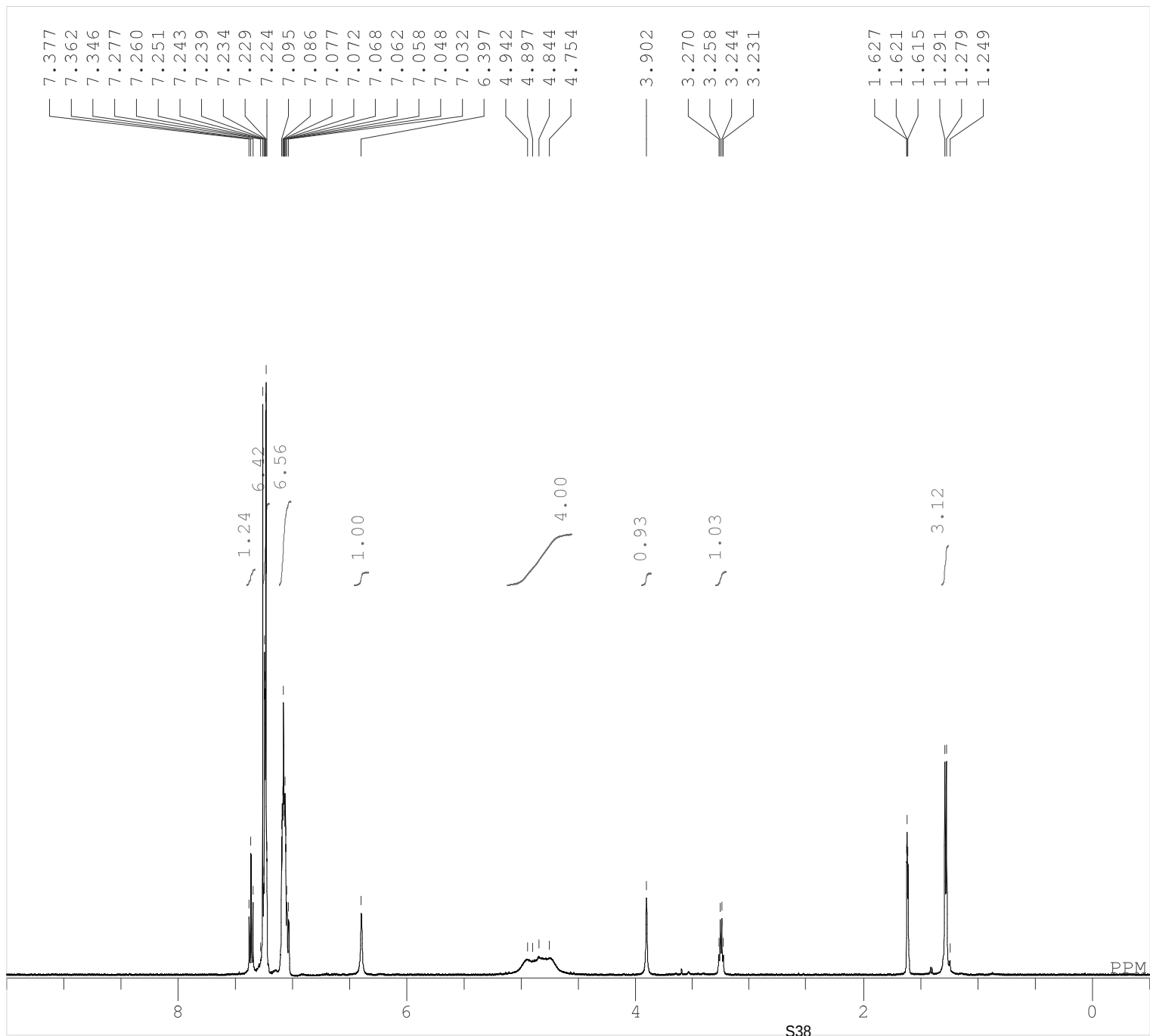
DFILE TY09_055_02_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-08-06 14:51:11
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 19.6 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 44





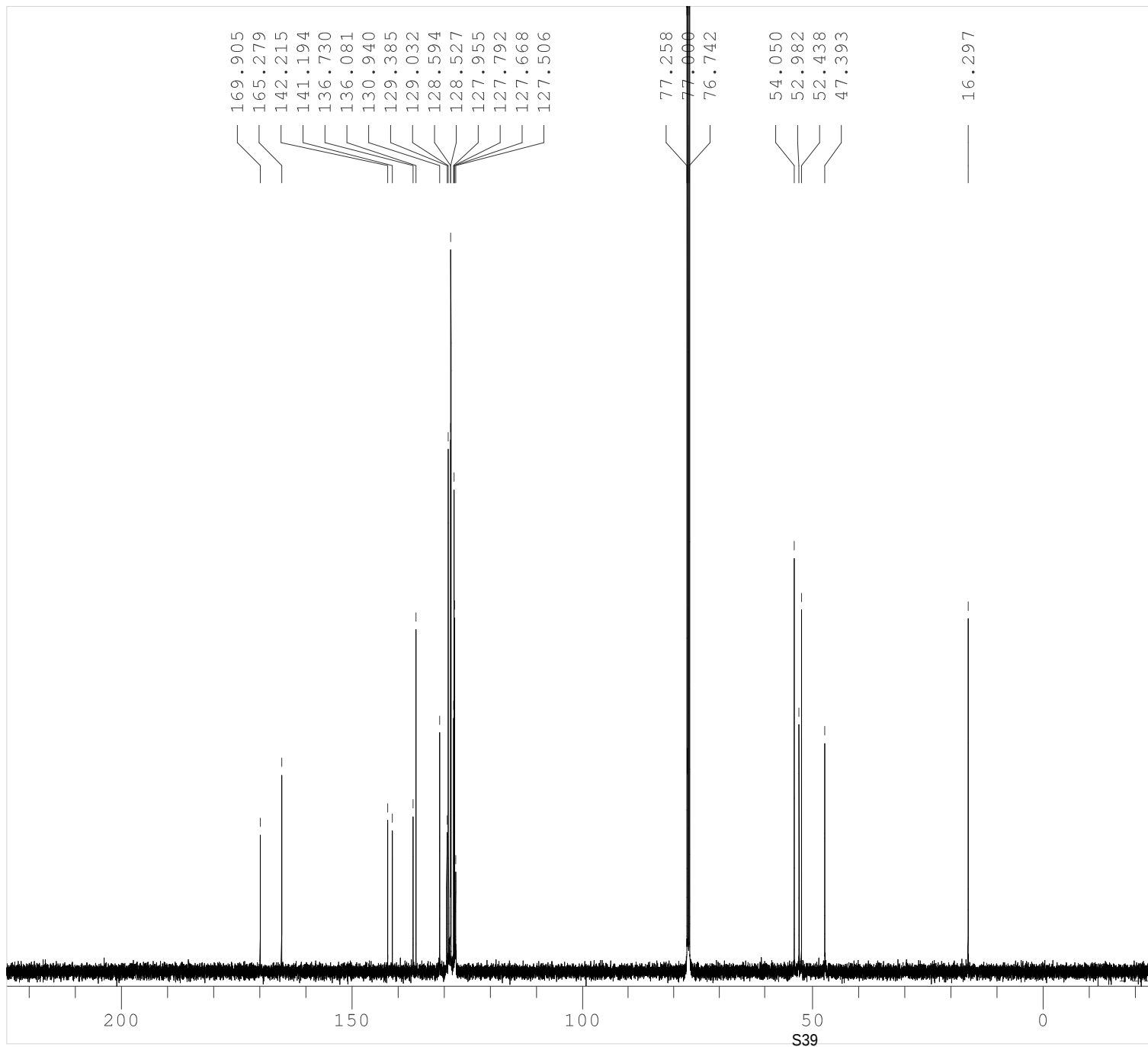
DFILE TY_09_055_02_2_carbon-1-1.als
 COMNT single pulse decoupled gated
 DATIM 2017-08-17 23:05:07
 OBNUC ¹³C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 26214
 FREQU 31446.54 Hz
 SCANS 3438
 ACQTM 0.8336 sec
 PD 10.0000 sec
 PW1 3.12 usec
 IRNUC ¹H
 CTEMP 17.9 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60





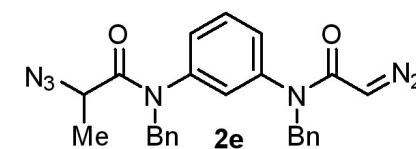
DFILE TY_09_121_04_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-10-24 23:12:57
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 17.9 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 40

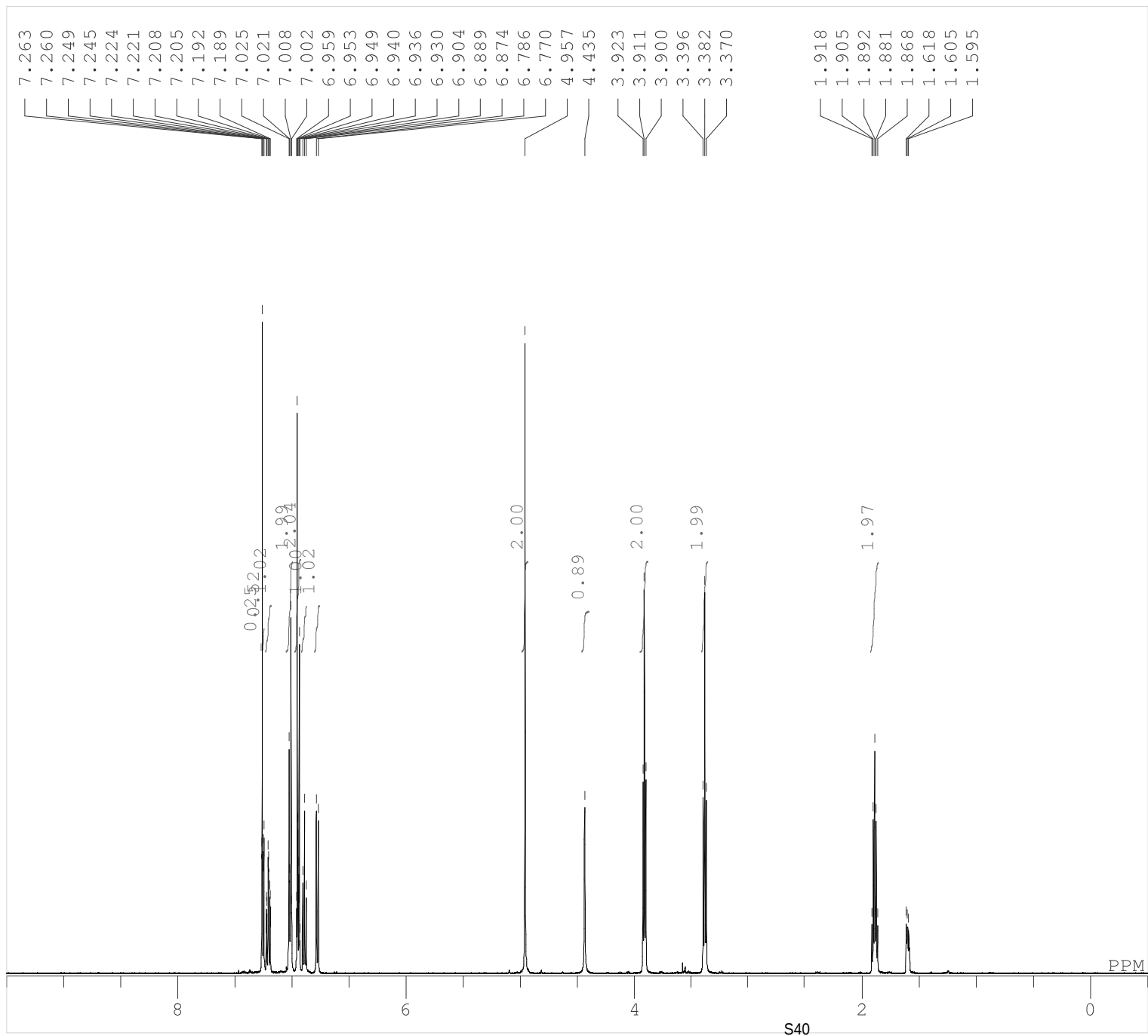




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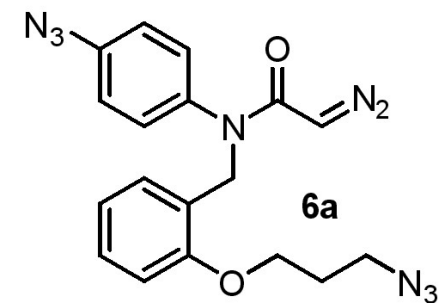
DFILE  TY_09_121_04_carbon-1-1.als
COMNT  single pulse decoupled gated
DATIM  2017-10-24 23:14:28
OBNUC  13C
EXMOD  carbon.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS    8860
ACQTM    0.8336 sec
PD        2.0000 sec
PW1       3.12 usec
IRNUC    1H
CTEMP    19.2 c
SLVNT    CDCL3
EXREF    77.00 ppm
BF        0.10 Hz
RGAIN    60
  
```

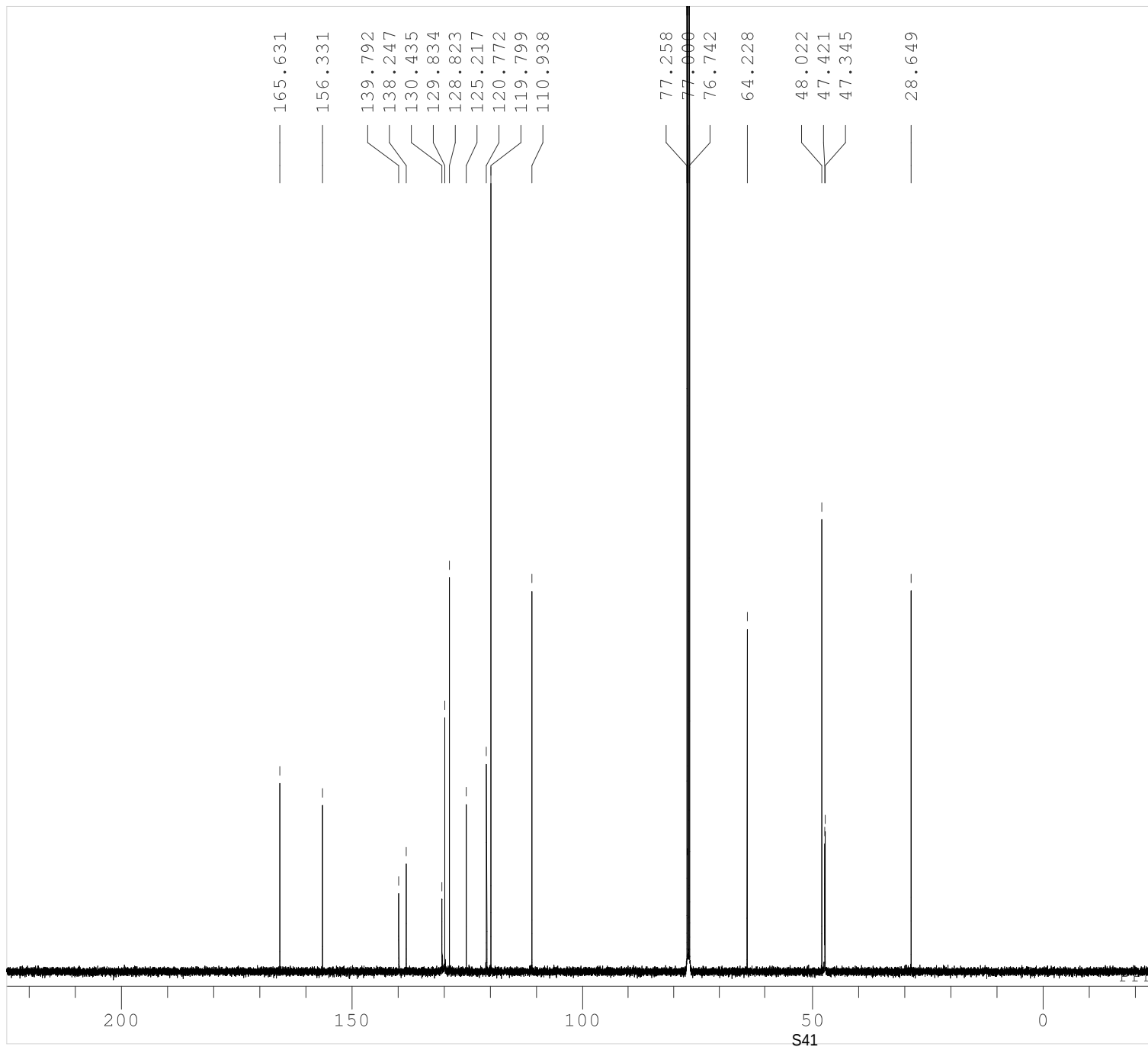




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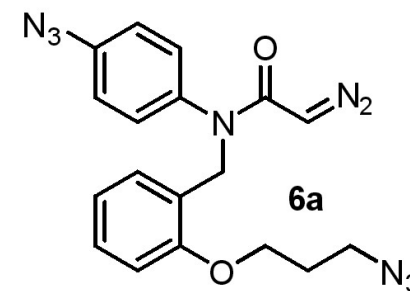
DFILE  TY_10_042_02_proton-1-1.als
COMNT  single_pulse
DATIM  2018-01-10 23:09:05
OBNUC  1H
EXMOD  proton.jxp
OBFRQ   500.16 MHz
OBSET    2.41 KHz
OBFIN    6.01 Hz
POINT   13107
FREQU    7507.51 Hz
SCANS      8
ACQTM    1.7459 sec
PD       5.0000 sec
PW1      6.85 usec
IRNUC    1H
CTEMP    17.2 c
SLVNT    CDCL3
EXREF    7.26 ppm
BF       0.10 Hz
RGAIN    44
  
```

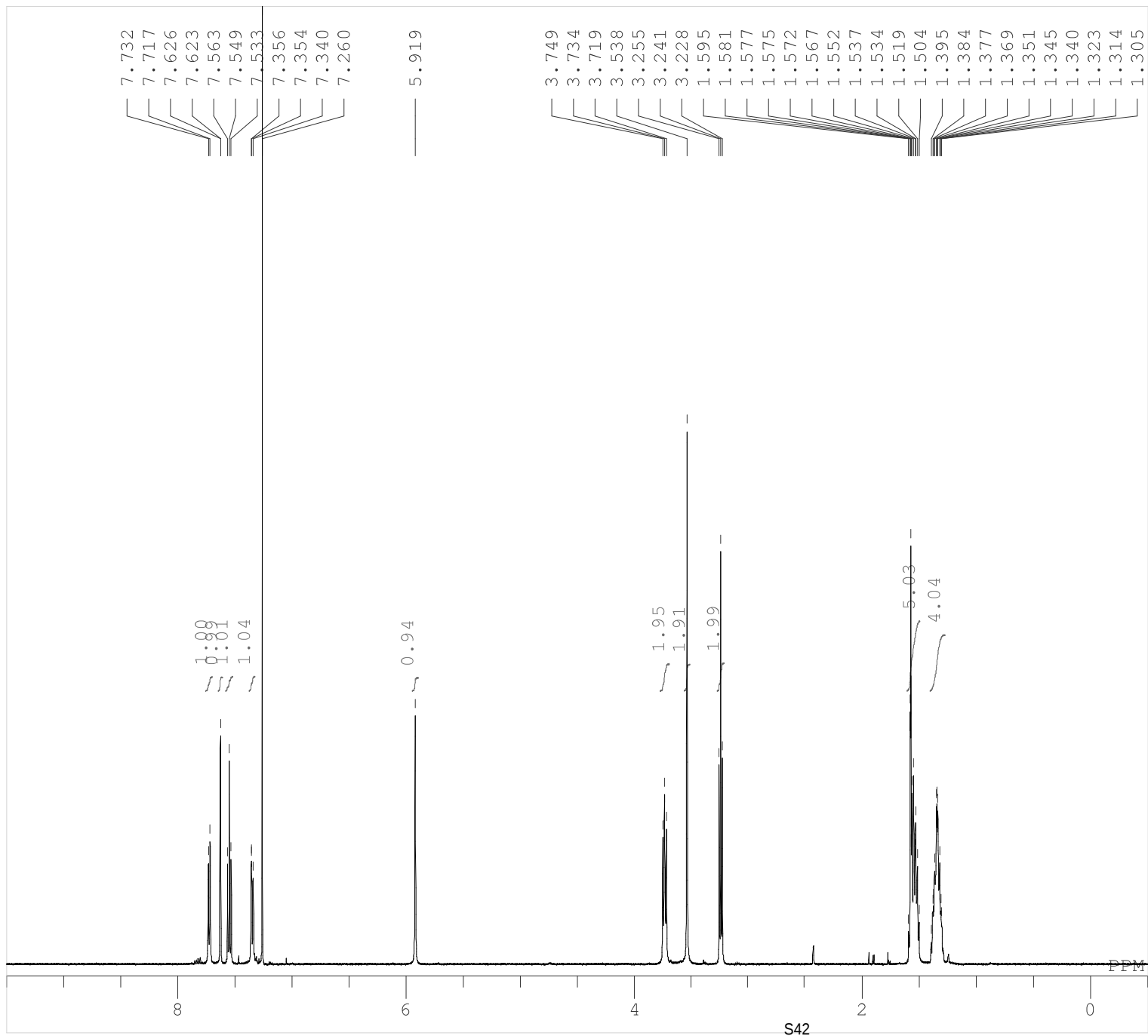




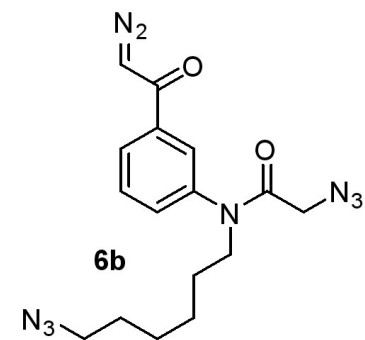
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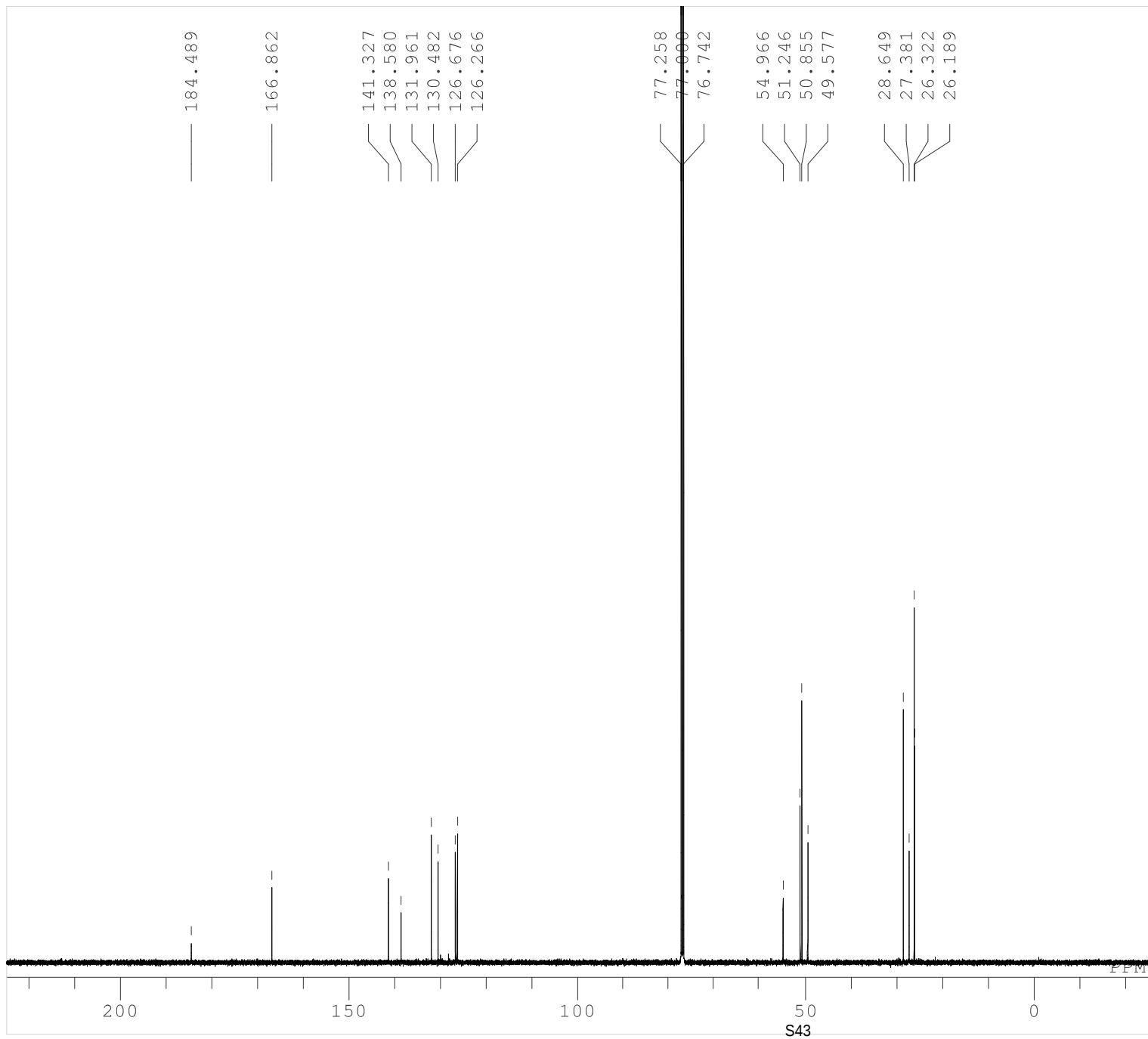
DFILE  TY_10_042_02_carbon-1-1.als
COMNT  single pulse decoupled gated
DATIM  2018-01-10 23:10:36
OBNUC  13C
EXMOD  carbon.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS    9000
ACQTM    0.8336 sec
PD        2.0000 sec
PW1       3.12 usec
IRNUC    1H
CTEMP    18.2 c
SLVNT    CDCL3
EXREF    77.00 ppm
BF        0.10 Hz
RGAIN    60
  
```





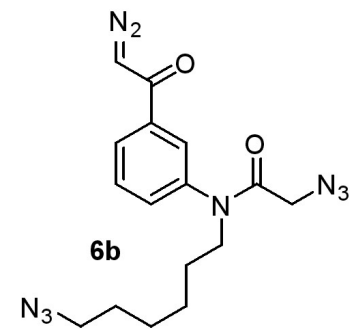
DFILE TY_09_136_03-1-1.als
 COMNT dazo-dazide
 DATIM 2017-11-06 14:24:51
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 17.4 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 44

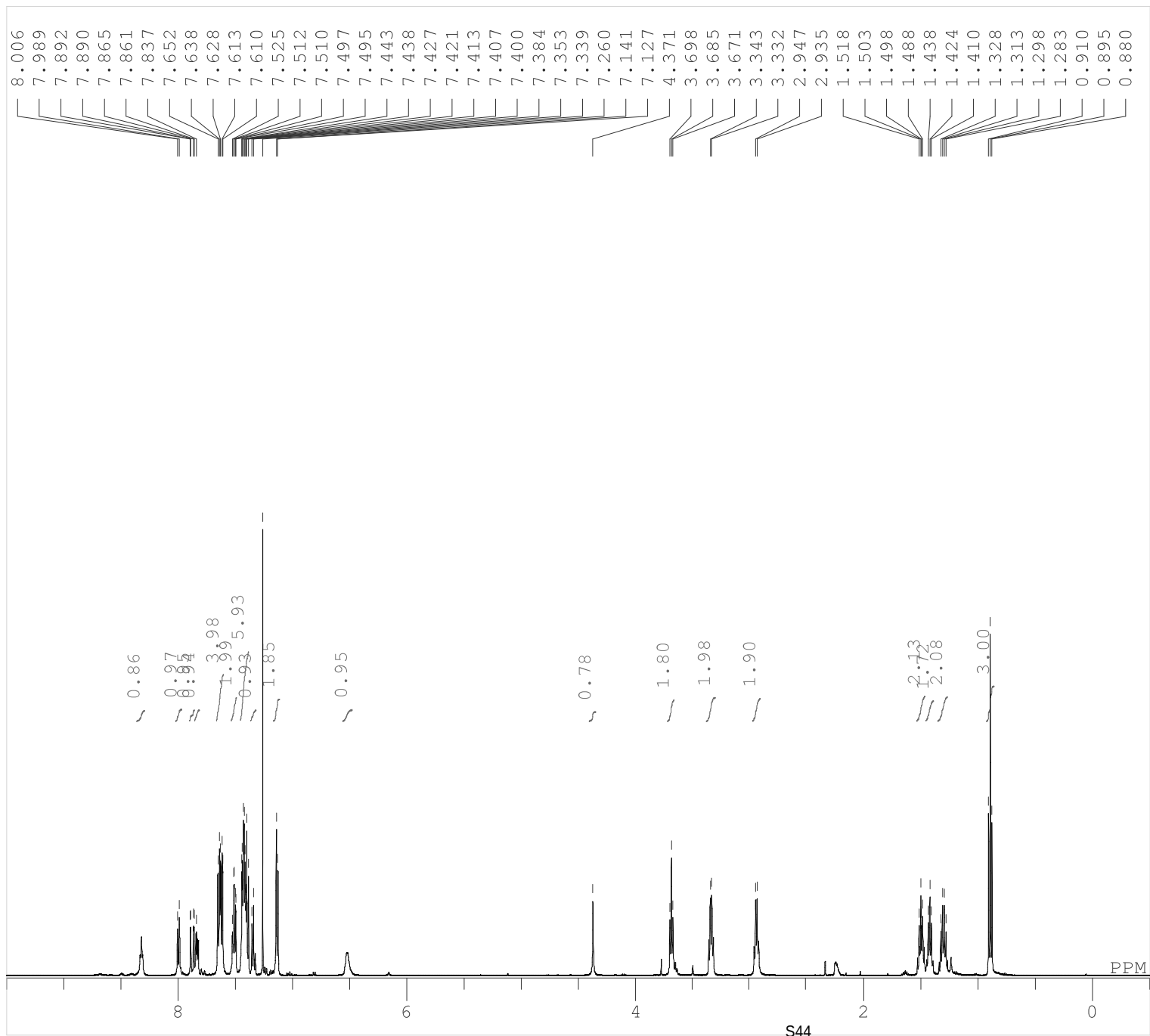




```

DFILE  TY_09_136_01_carbon-1-1.als
COMNT  single pulse decoupled gated
DATIM  2017-10-30 23:16:35
OBNUC  13C
EXMOD  carbon.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS     8920
ACQTM    0.8336 sec
PD        2.0000 sec
PW1       3.12 usec
IRNUC    1H
CTEMP    19.6 c
SLVNT    CDCL3
EXREF    77.00 ppm
BF        0.10 Hz
RGAIN     60
  
```

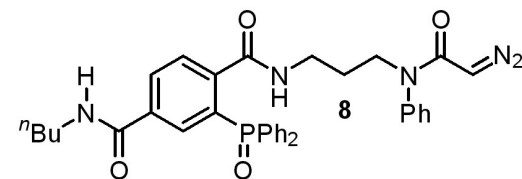


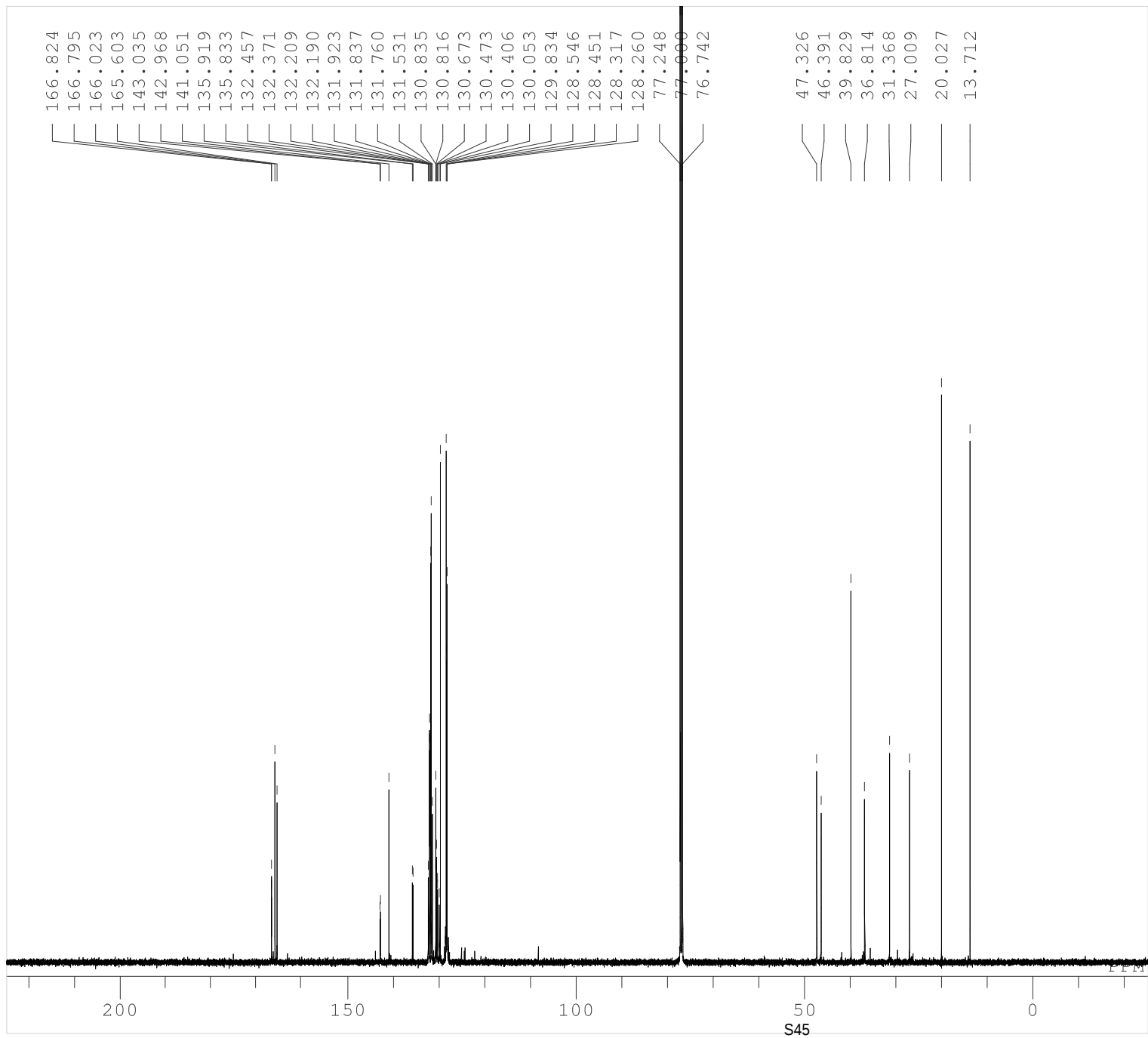


```

DFILE TY_09_095_04_proton-1-1.als
COMNT single_pulse
DATIM 2018-02-14 23:16:20
OBNUC 1H
EXMOD proton.jxp
OBFRQ 500.16 MHz
OBSET 2.41 KHz
OBFIN 6.01 Hz
POINT 13107
FREQU 7507.51 Hz
SCANS 8
ACQTM 1.7459 sec
PD 5.0000 sec
PW1 6.85 usec
IRNUC 1H
CTEMP 14.8 c
SLVNT CDCL3
EXREF 7.26 ppm
BF 0.10 Hz
RGAIN 34

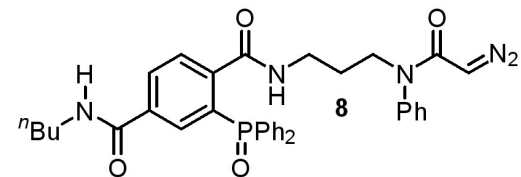
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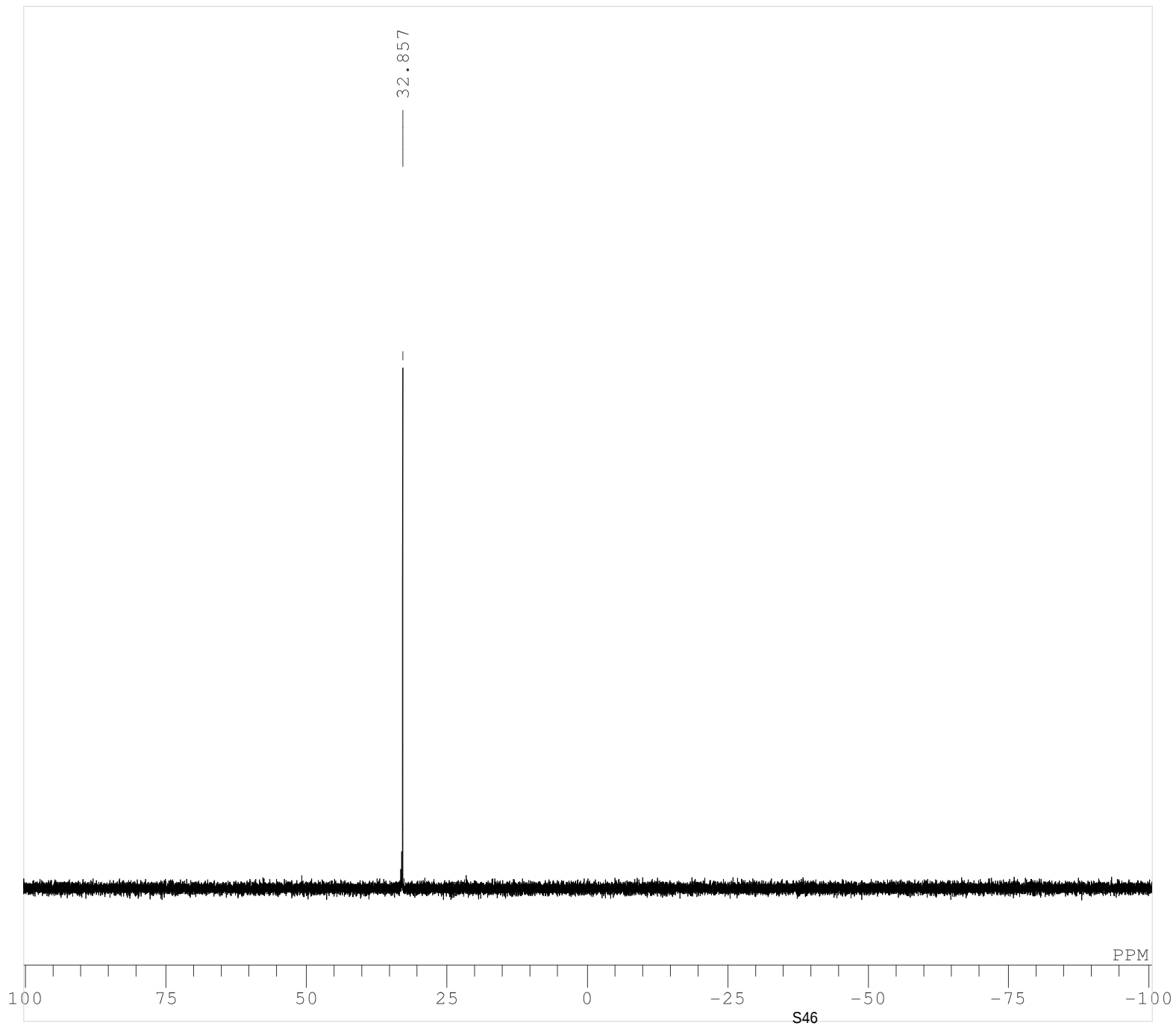




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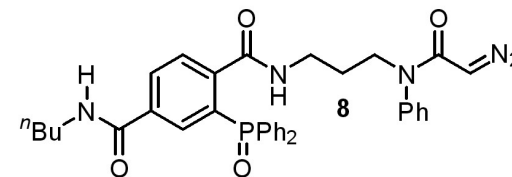
DFILE  TY_09_095_04_carbon-1-1.als
COMNT  single pulse decoupled gated
DATIM  2018-02-14 23:18:56
OBNUC  13C
EXMOD  carbon.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT   26214
FREQU   31446.54 Hz
SCANS    8900
ACQTM   0.8336 sec
PD       2.0000 sec
PW1      3.12 usec
IRNUC   1H
CTEMP    16.0 c
SLVNT   CDCL3
EXREF    77.00 ppm
BF       0.10 Hz
RGAIN    58
  
```

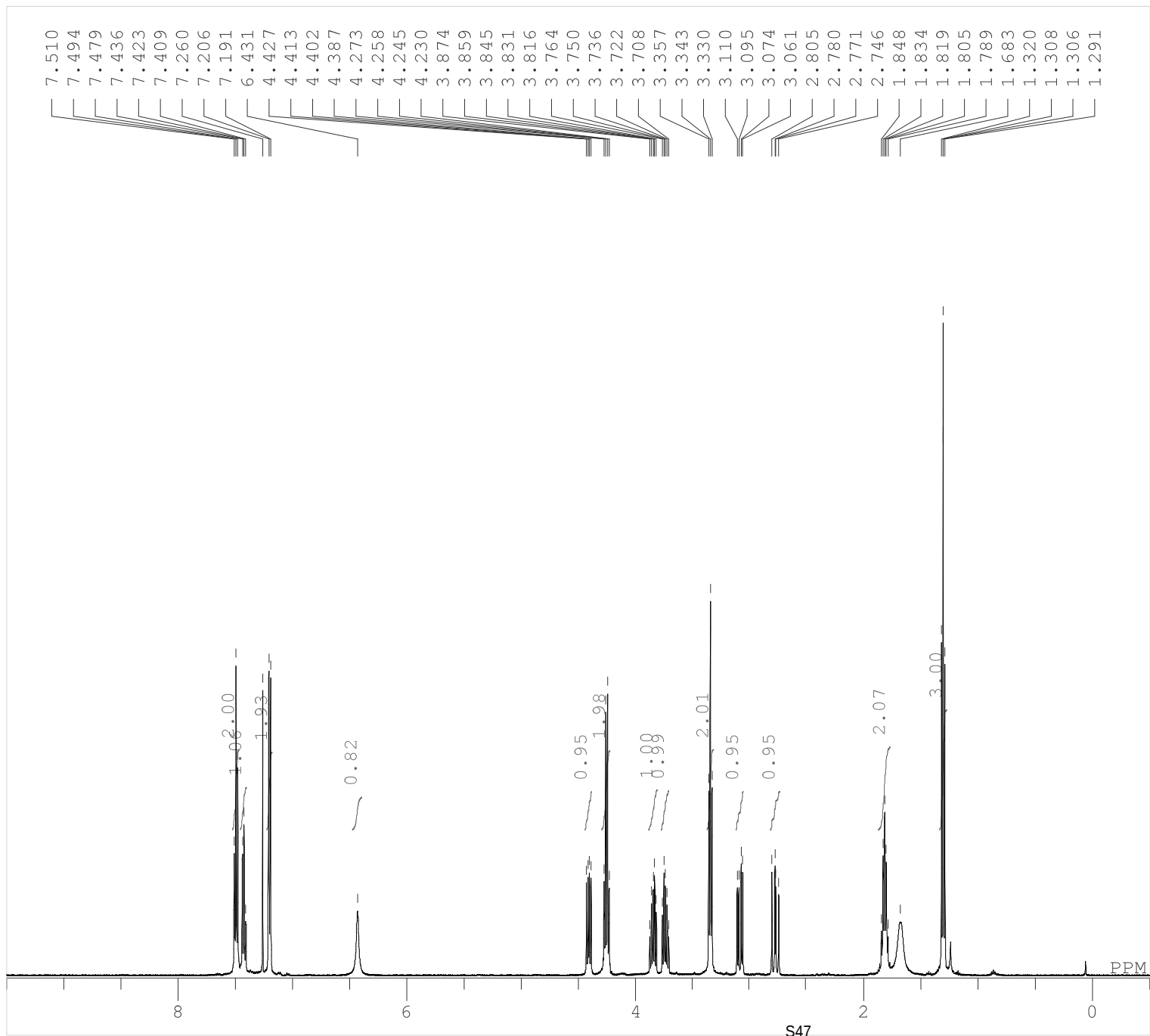




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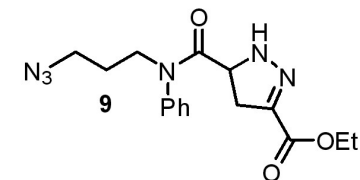
DFILE  TY_09_095_04_phosphorus-1-1.a
COMNT  single pulse decoupled gated
DATIM  2018-02-22 15:57:34
OBNUC  31P
EXMOD  carbon.jxp
OBFRQ  202.46 MHz
OBSET  8.31 KHz
OBFIN  0.75 Hz
POINT  26214
FREQU  40650.41 Hz
SCANS  10
ACQTM  0.6449 sec
PD  2.0000 sec
PW1  3.88 usec
IRNUC  1H
CTEMP  15.1 c
SLVNT  C6D6
EXREF  0.00 ppm
BF  0.10 Hz
RGAIN  58
  
```

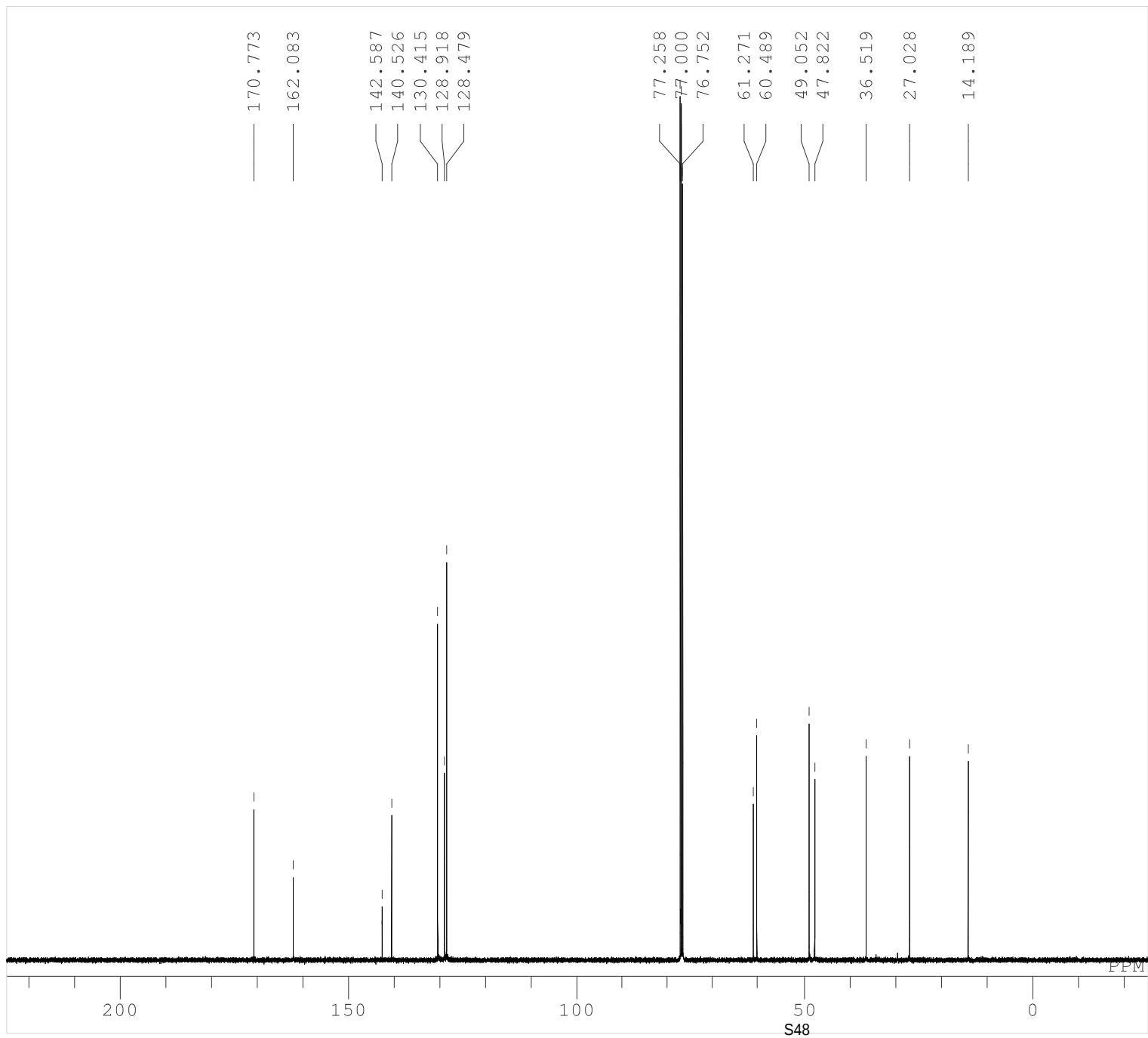




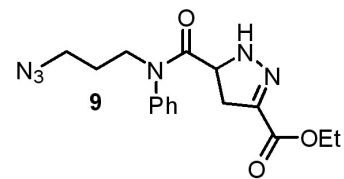
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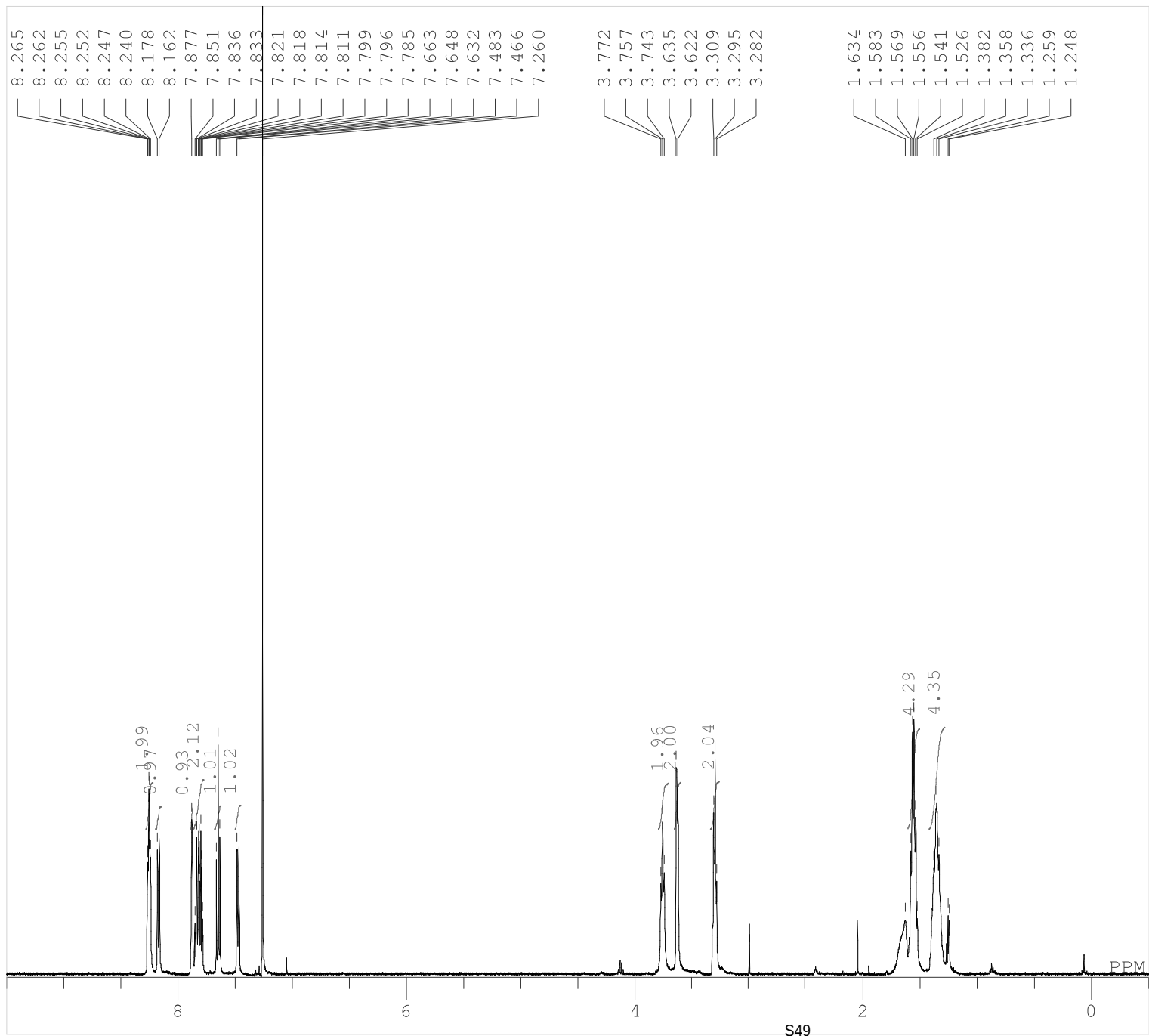
DFILE  TY_09_064_01_proton-1-1.als
COMNT  single_pulse
DATIM  2017-08-23 23:08:18
OBNUC  1H
EXMOD  proton.jxp
OBFRQ   500.16 MHz
OBSET    2.41 KHz
OBFIN    6.01 Hz
POINT   13107
FREQU   7507.51 Hz
SCANS     8
ACQTM   1.7459 sec
PD       5.0000 sec
PW1      6.85 usec
IRNUC   1H
CTEMP   18.4 c
SLVNT   CDCL3
EXREF   7.26 ppm
BF       0.10 Hz
RGAIN   38
  
```



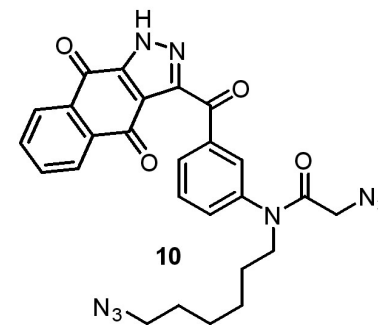


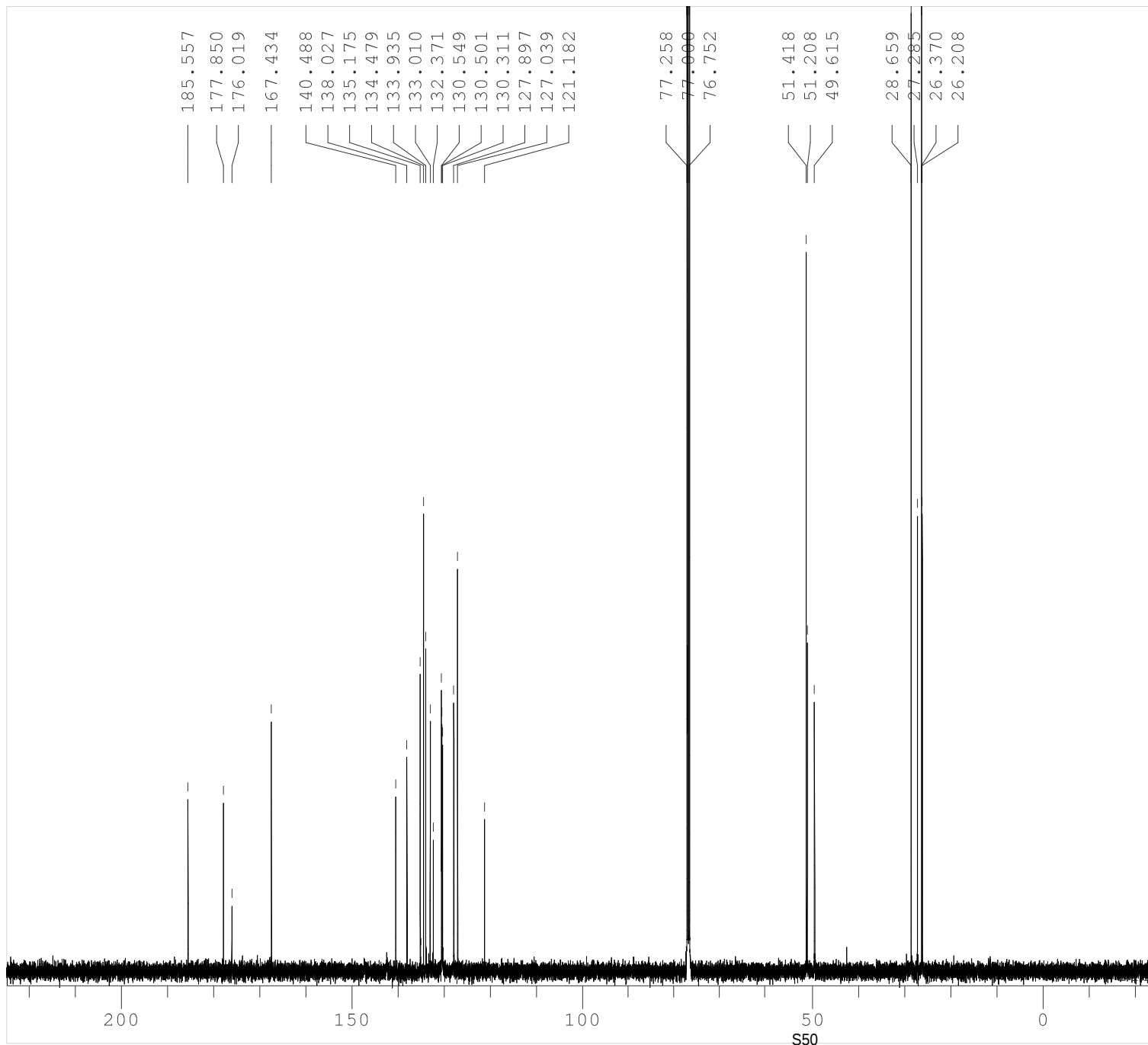
DFILE TY_09_064_01_carbon-1-1.als
 COMNT single pulse decoupled gated
 DATIM 2017-08-23 23:10:02
 OBNUC 13C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 26214
 FREQU 31446.54 Hz
 SCANS 8880
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC 1H
 CTEMP 18.4 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60





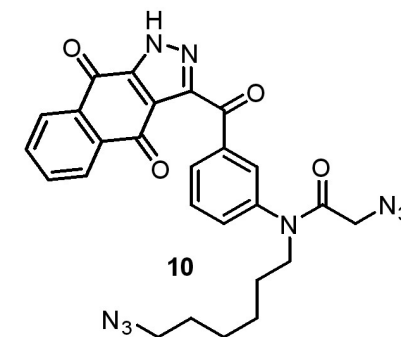
DFILE TY_10_033_01-1-1.als
 COMNT dsired
 DATIM 2017-12-14 15:44:38
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.6 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 46

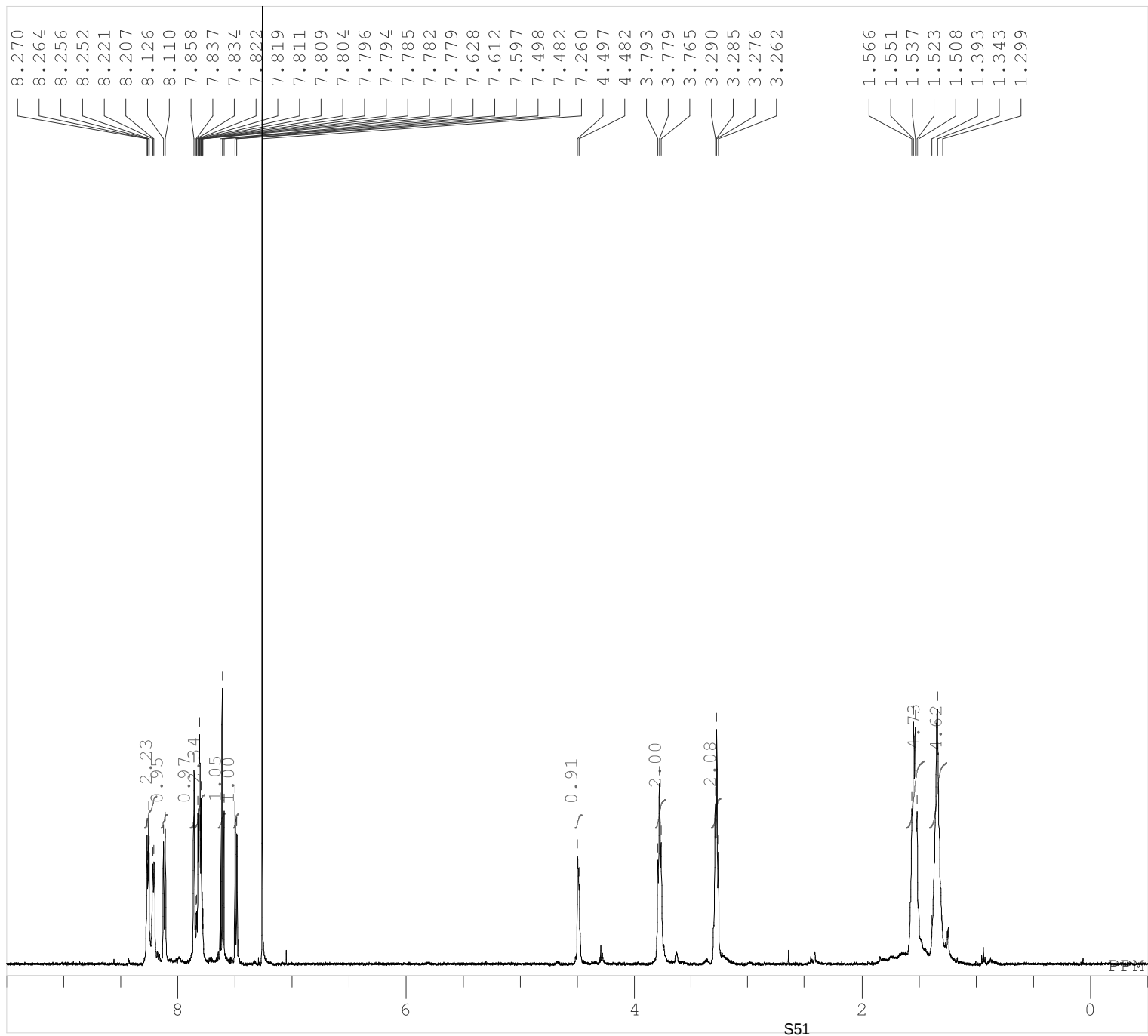




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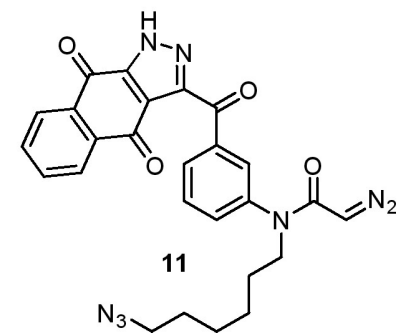
DFILE  TY_10_033_01_carbon-1-1.als
COMNT  single pulse decoupled gated
DATIM  2017-12-18 23:19:47
OBNUC  13C
EXMOD  carbon.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS    8680
ACQTM    0.8336 sec
PD        2.0000 sec
PW1       3.12 usec
IRNUC    1H
CTEMP    19.9 c
SLVNT    CDCL3
EXREF    77.00 ppm
BF        0.10 Hz
RGAIN    60
  
```

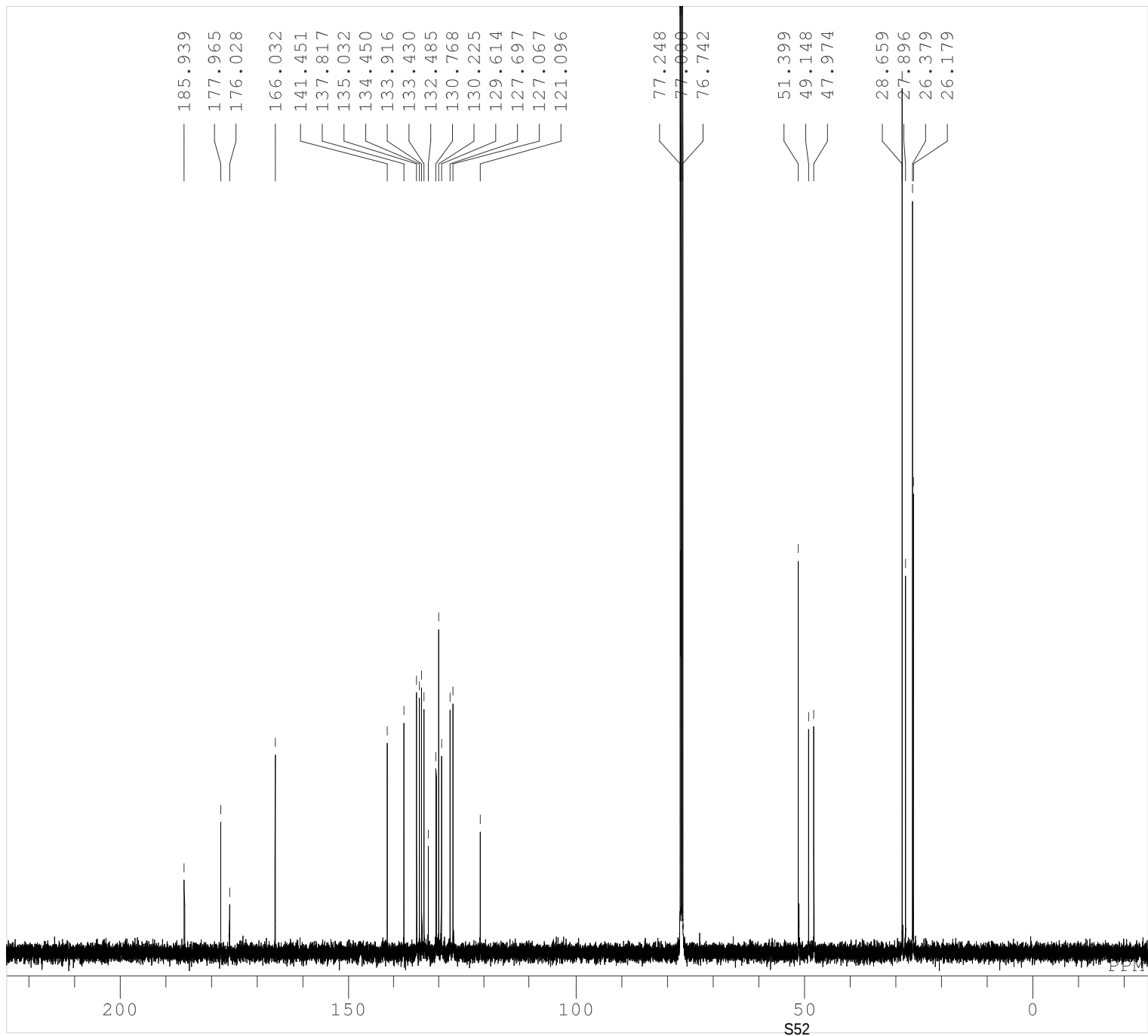




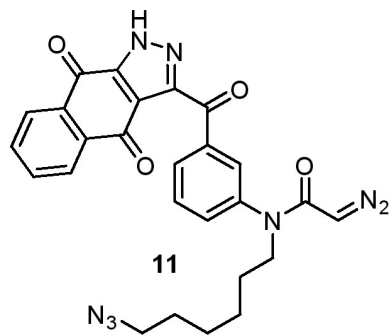
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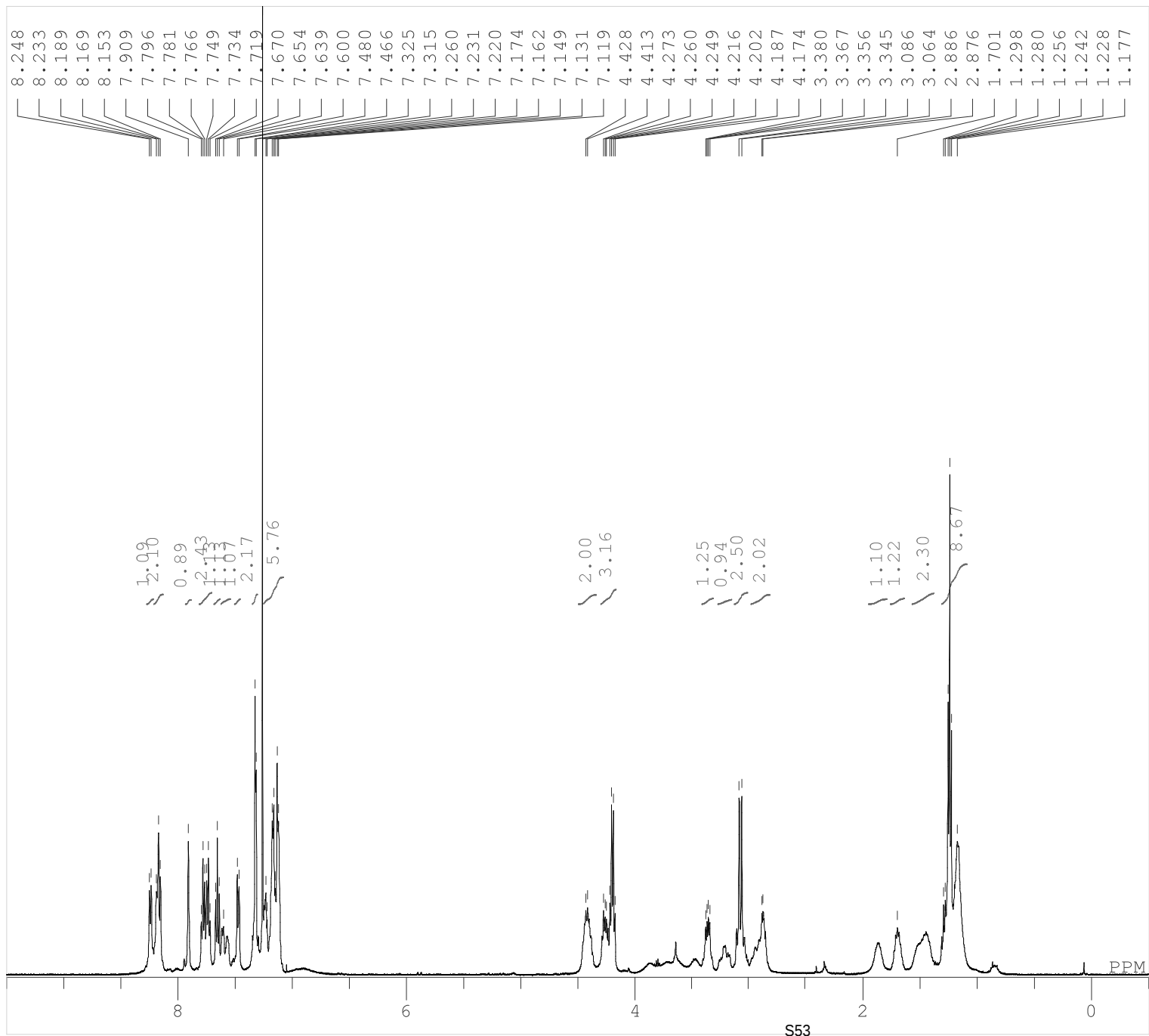
DFILE   TY_10_051_01-1-1.als
COMNT   dazo
DATIM    2018-02-01  21:17:19
OBNUC    1H
EXMOD    proton.jxp
OBFRQ      500.16 MHz
OBSET      2.41 KHz
OBFIN      6.01 Hz
POINT     13107
FREQU      7507.51 Hz
SCANS      8
ACQTM      1.7459 sec
PD         5.0000 sec
PW1        6.85 usec
IRNUC     1H
CTEMP      17.6 c
SLVNT     CDCL3
EXREF      7.26 ppm
BF         0.10 Hz
RGAIN      46
  
```



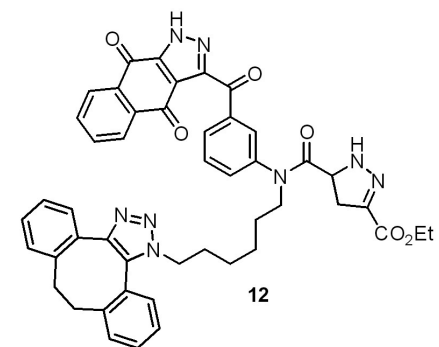


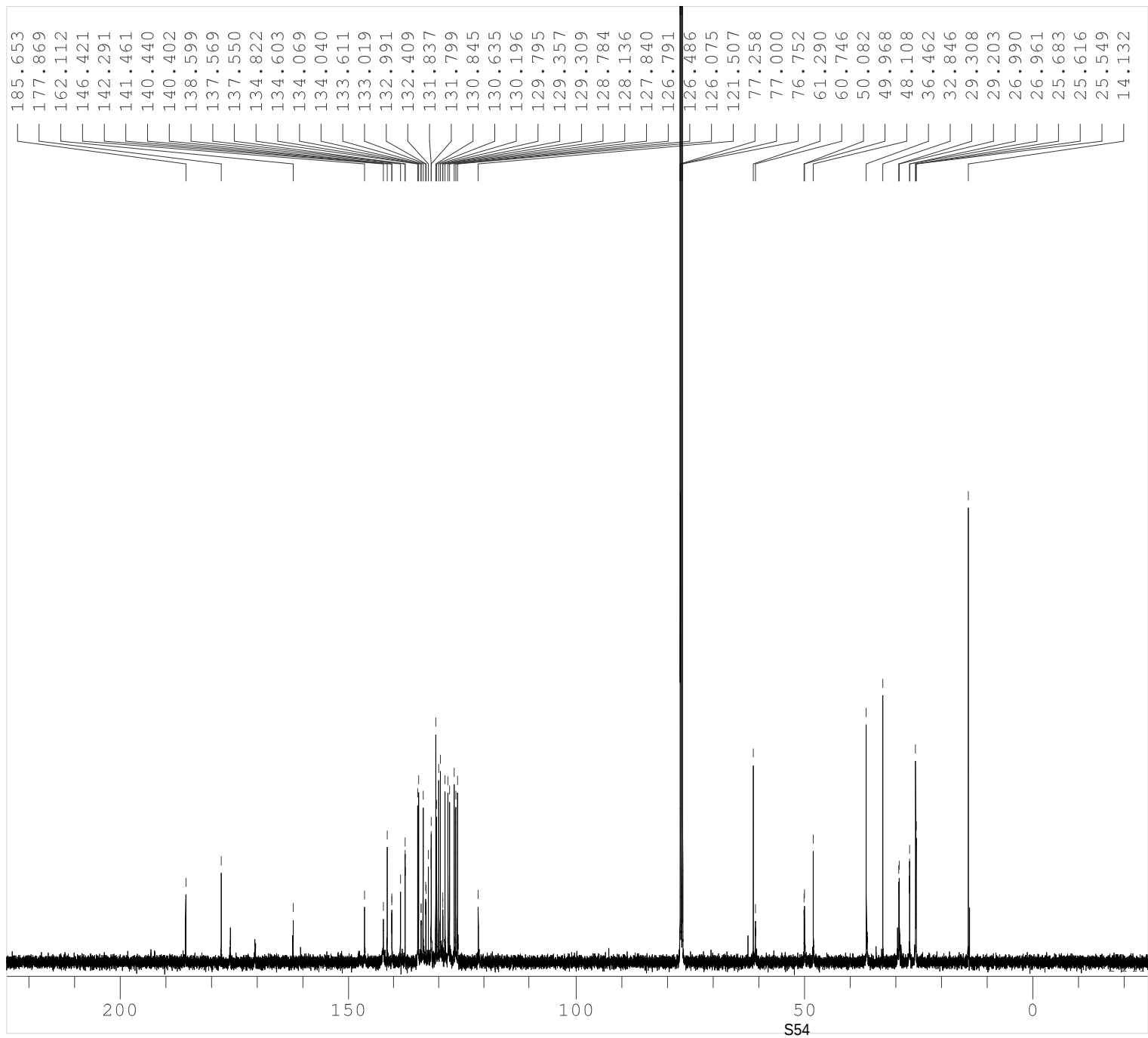
DFILE TY_10_051_01_carbon-1-1.als
 COMNT single pulse decoupled gated
 DATIM 2018-02-05 23:15:43
 OBNUC 13C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 26214
 FREQU 31446.54 Hz
 SCANS 8860
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC 1H
 CTEMP 18.9 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 58



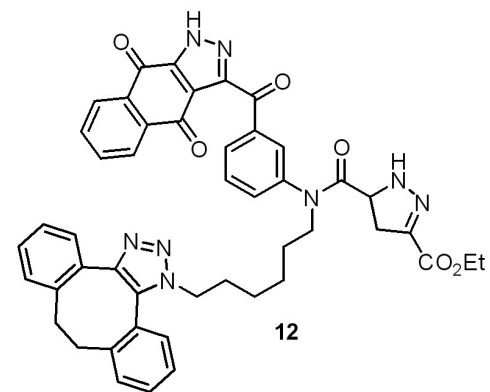


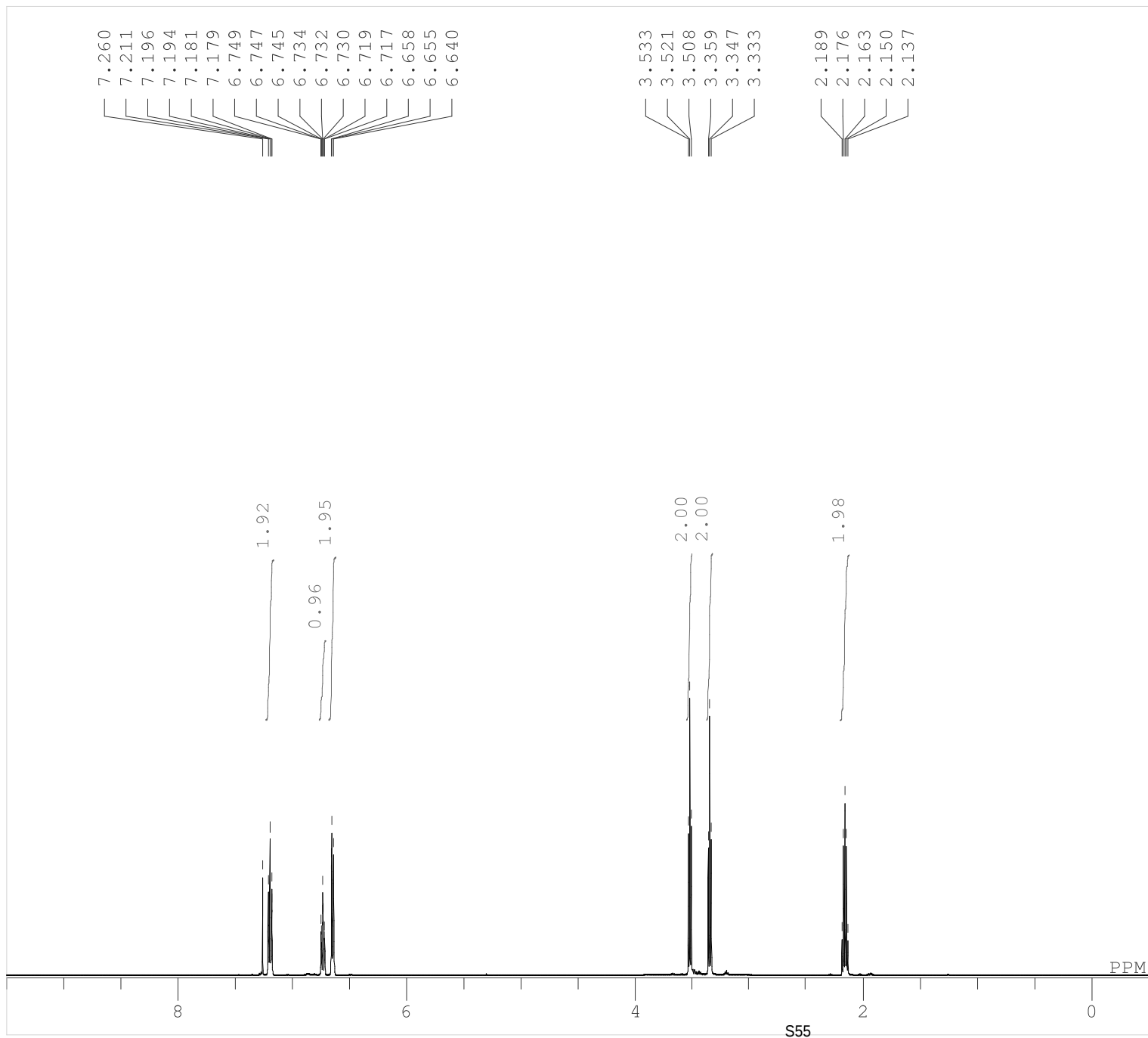
DFILE TY_10_061_02_proton-1-1.als
 COMNT single_pulse
 DATIM 2018-04-06 23:22:52
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 16.5 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 30





DFILE TY_10_061_02_carbon-1-1.als
 COMNT single pulse decoupled gated
 DATIM 2018-04-06 23:24:27
 OBNUC 13C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 26214
 FREQU 31446.54 Hz
 SCANS 8900
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC 1H
 CTEMP 18.2 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60

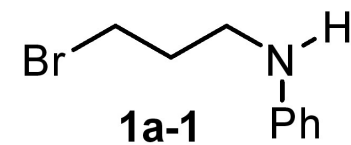


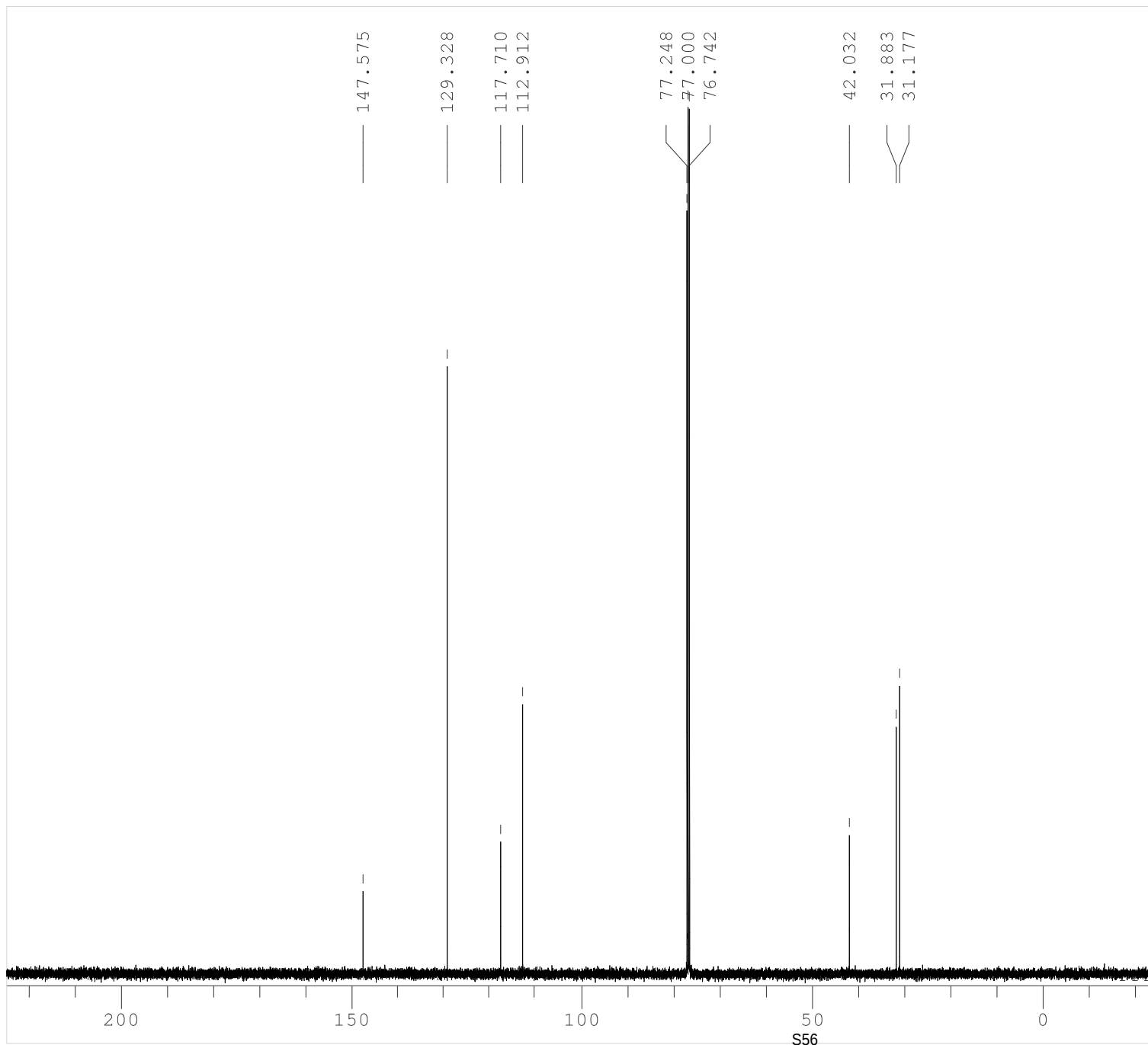


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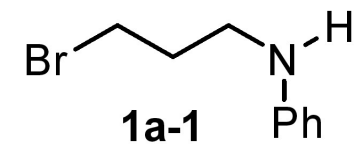
DFILE TY_07_067_03_proton-1-1.als
COMNT single_pulse
DATIM 2016-09-26 17:49:12
OBNUC 1H
EXMOD proton.jxp
OBFRQ 500.16 MHz
OBSET 2.41 KHz
OBFIN 6.01 Hz
POINT 13107
FREQU 7507.51 Hz
SCANS 8
ACQTM 1.7459 sec
PD 5.0000 sec
PW1 6.85 usec
IRNUC 1H
CTEMP 18.3 c
SLVNT CDCL3
EXREF 7.26 ppm
BF 0.10 Hz
RGAIN 40

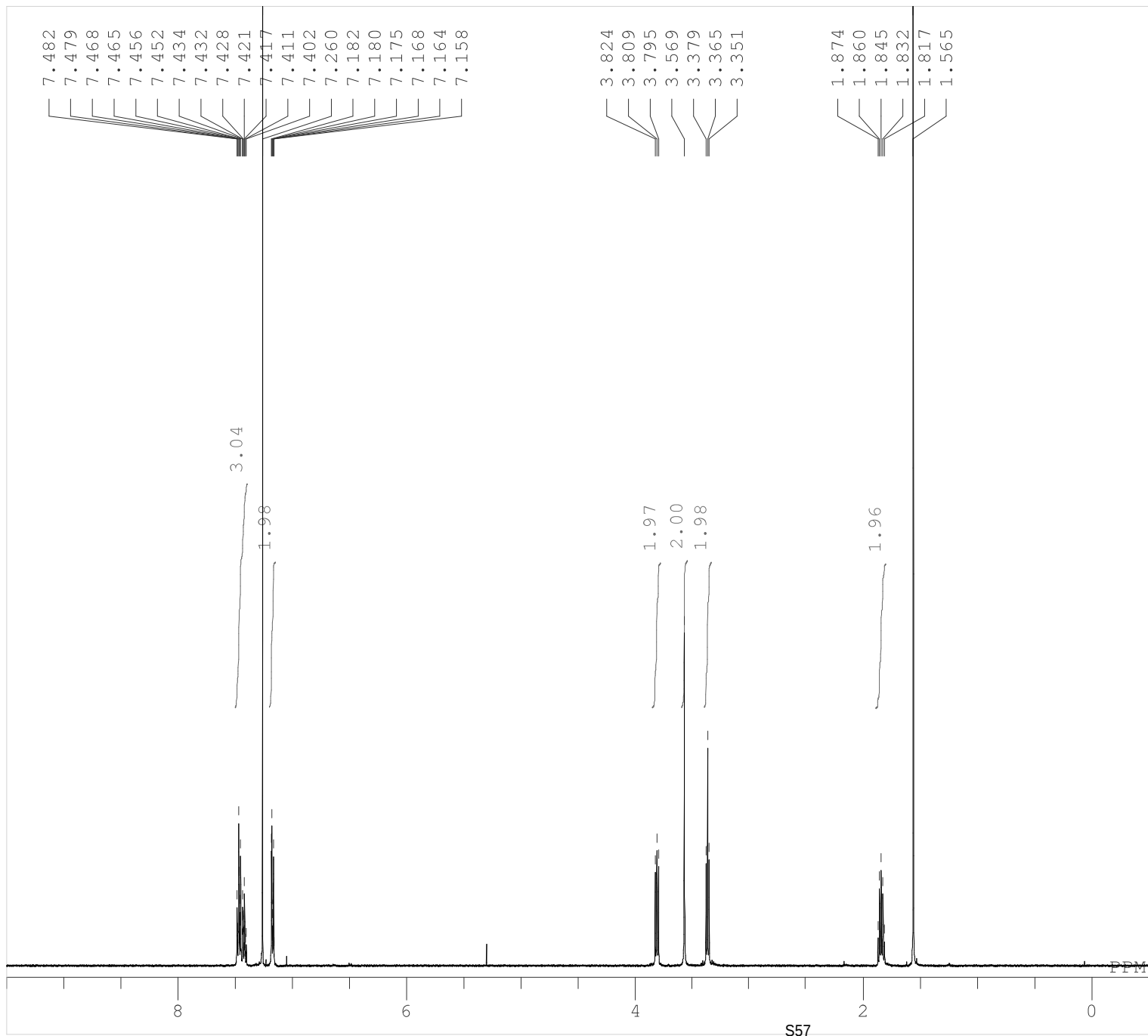
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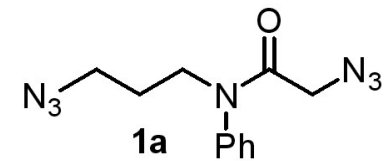


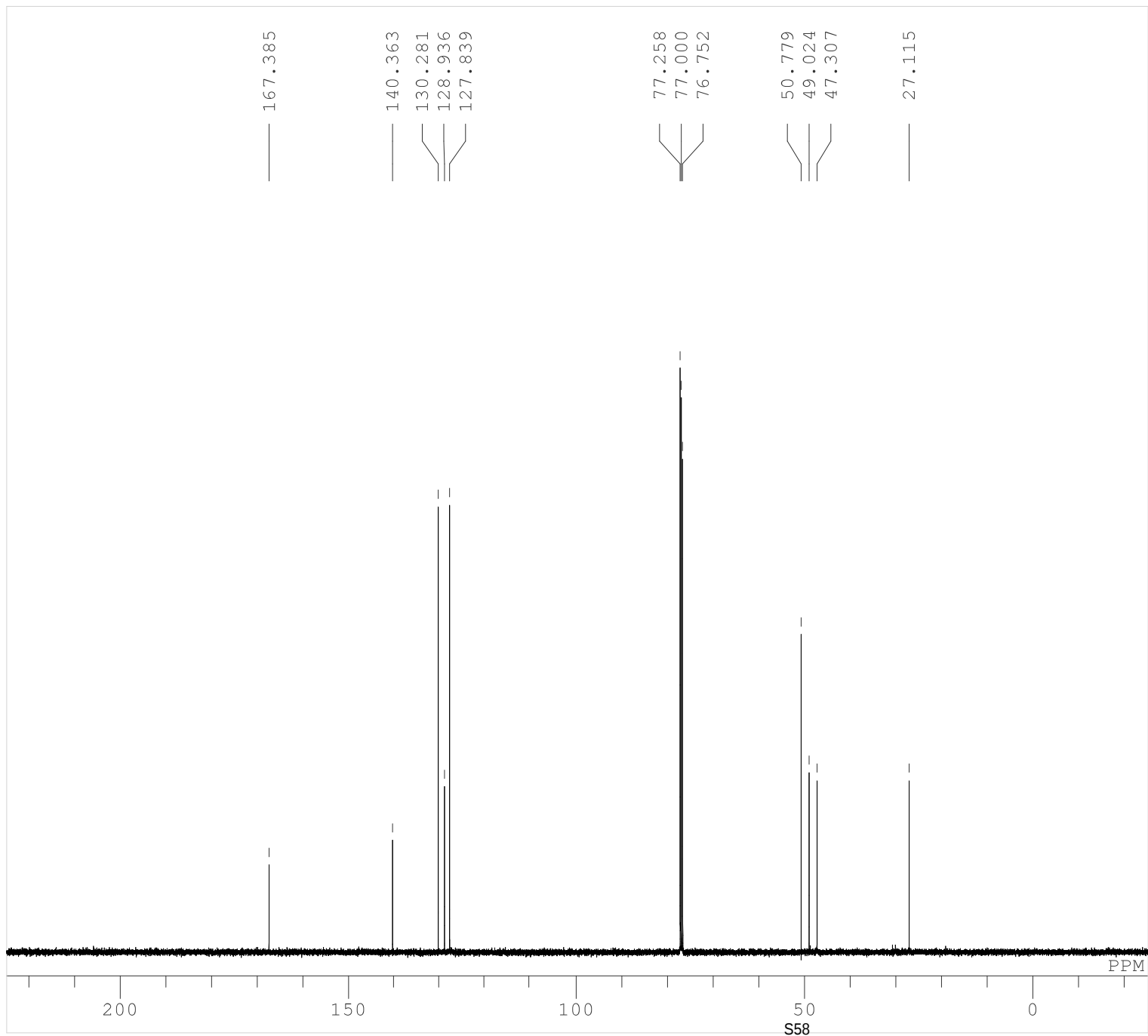
DFILE TY_07_067_03_carbon-1-1.als
COMNT single pulse decoupled gated
DATIM 2016-09-26 17:51:11
OBNUC 13C
EXMOD carbon.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 620
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 18.8 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 58



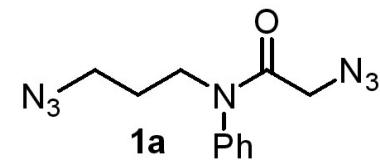


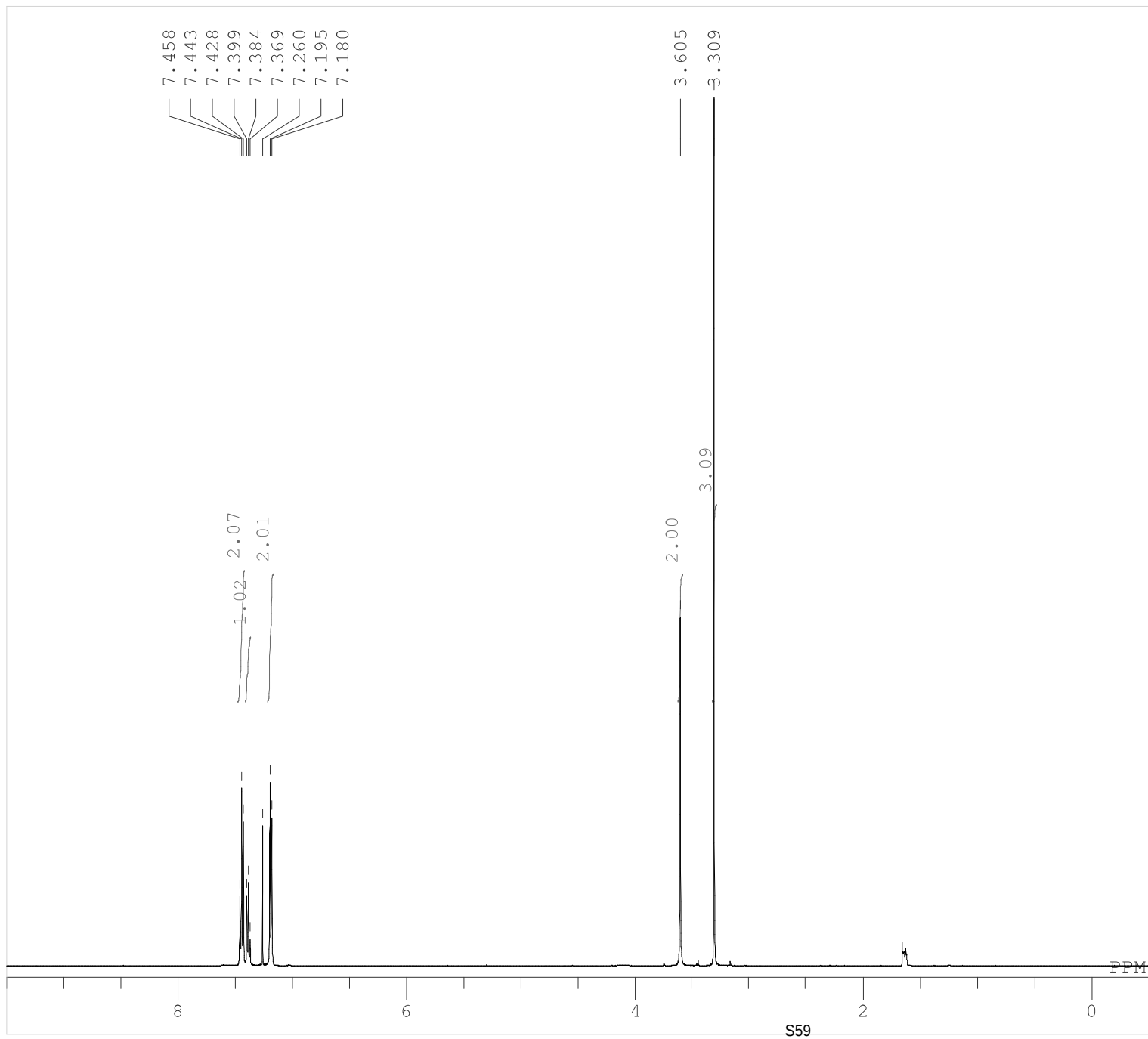
DFILE TY_07_069_02-1-1.als
 COMNT dazid
 DATIM 2016-09-27 15:59:16
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.8 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 48



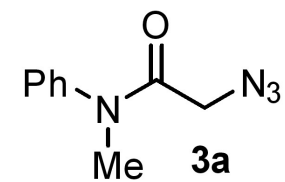


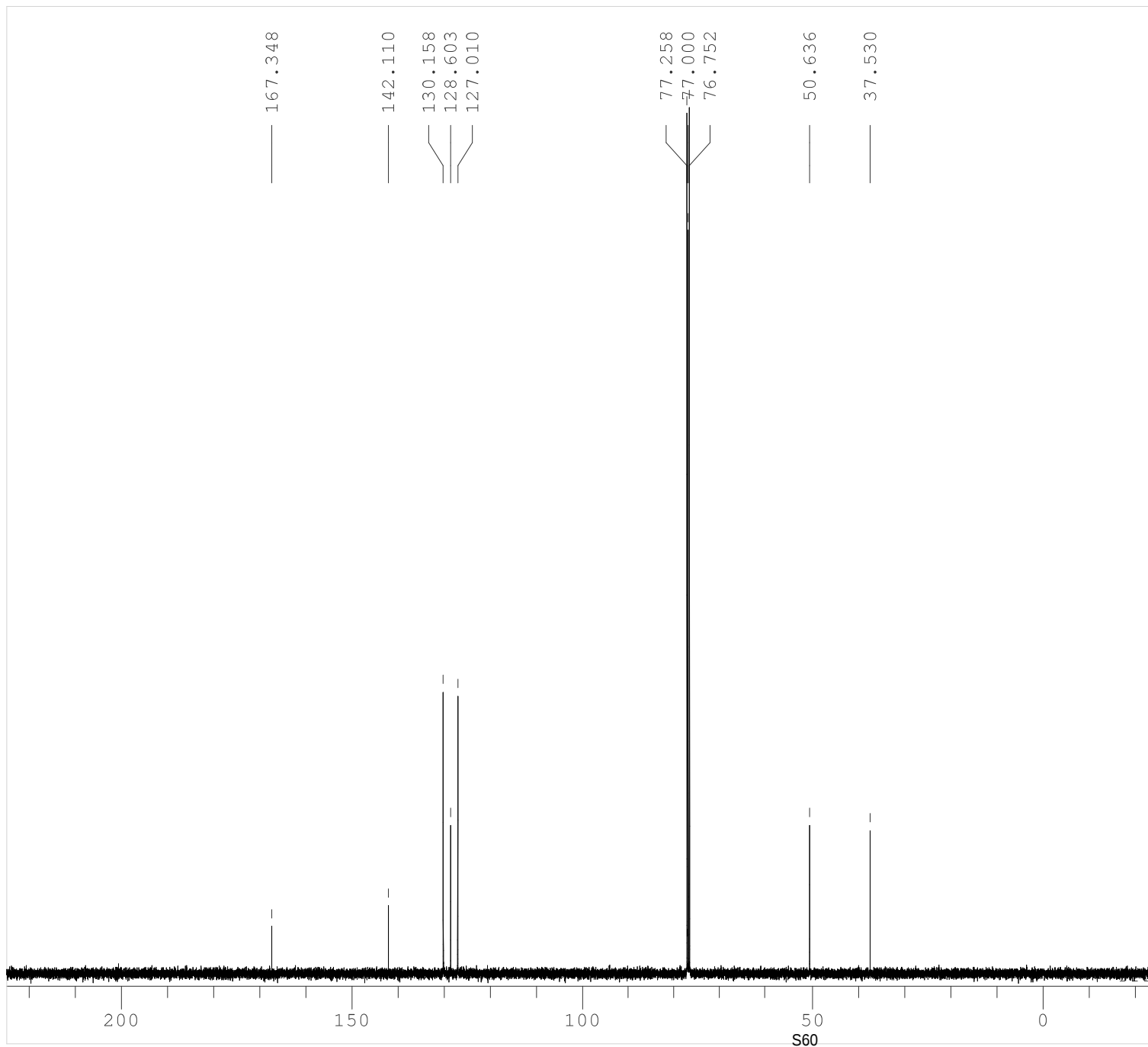
DFILE TY_07_015_04_carbon-1-1.jdf
COMNT single pulse decoupled gated
DATIM 2016-09-21 18:22:35
OBNUC 13C
EXMOD carbon.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 32767
FREQU 39308.18 Hz
SCANS 620
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 18.9 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



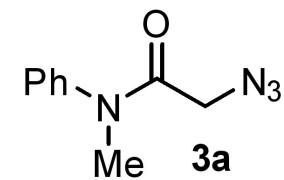


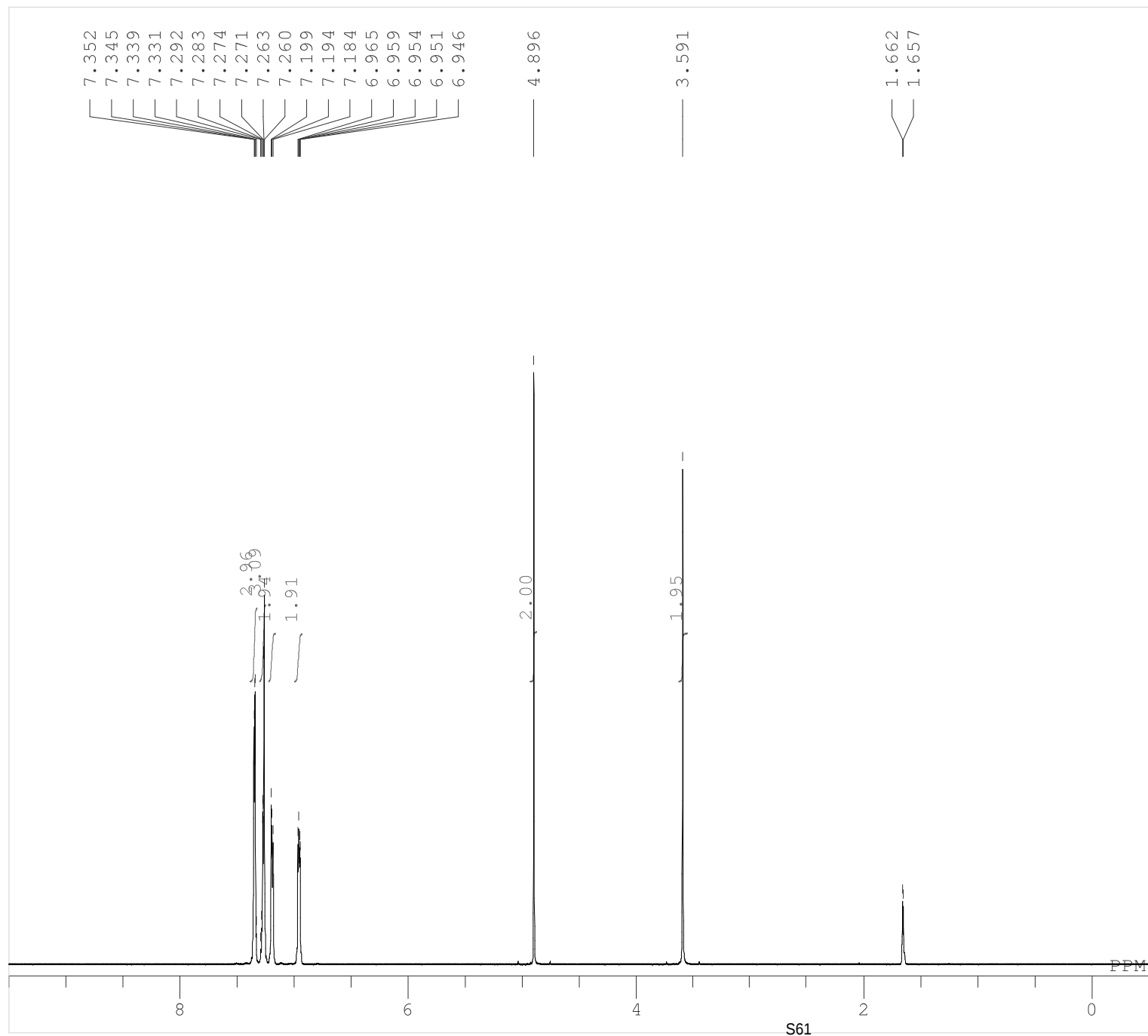
DFILE TY_07_048_02_proton-1-1.als
 COMNT single_pulse
 DATIM 2016-09-24 15:10:01
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.7 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 40



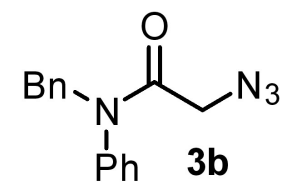


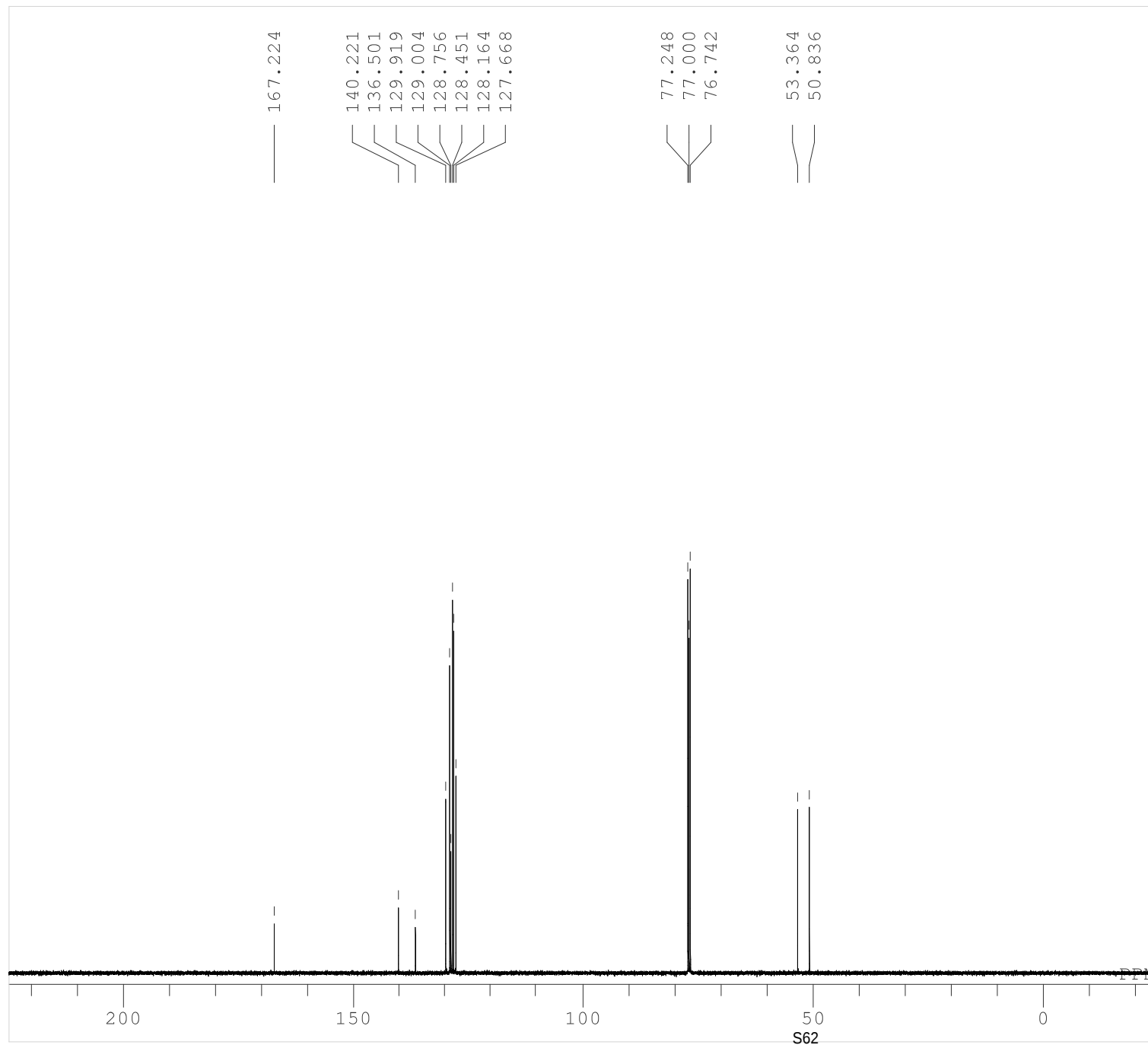
DFILE TY_07_048_02_carbon-1-1.als
COMNT single pulse decoupled gated
DATIM 2016-09-24 15:11:50
OBNUC 13C
EXMOD carbon.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 620
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 19.0 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



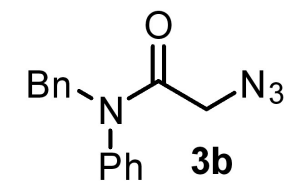


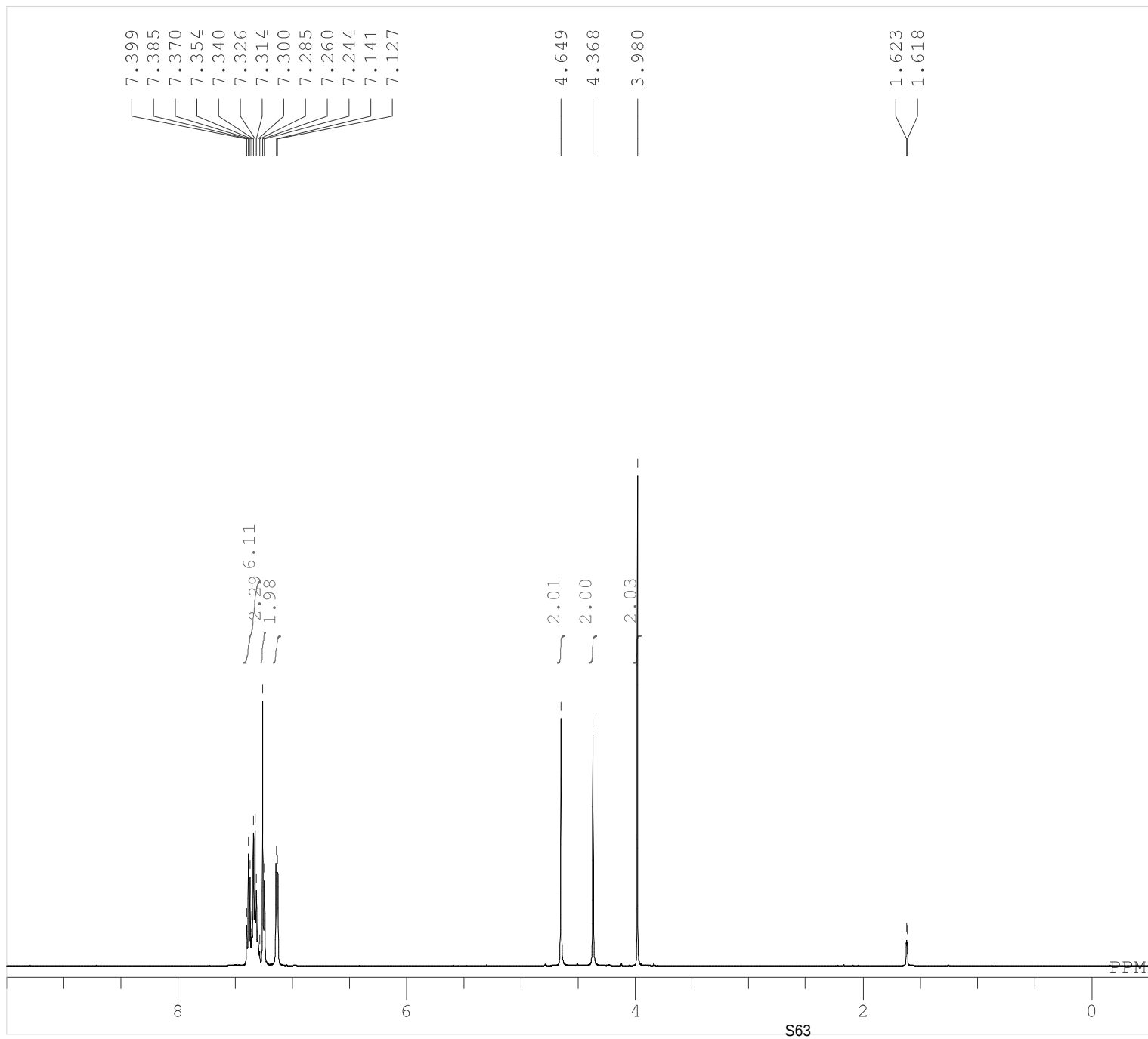
DFILE TY_08_137_01_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-07-01 10:05:41
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 16.8 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 36



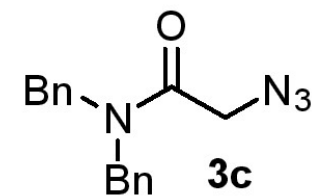


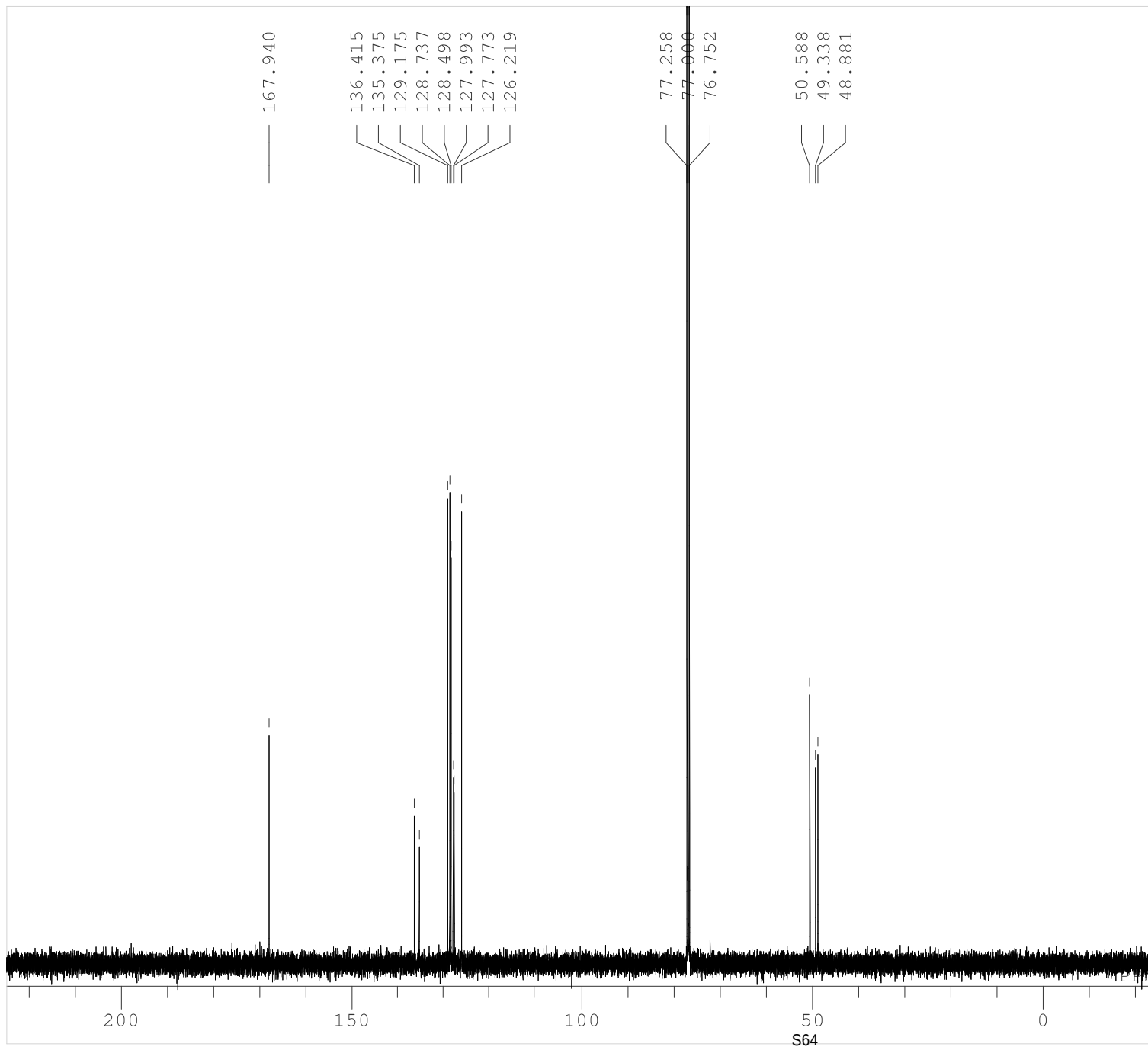
DFILE TY_08_137_01_carbon-1-1.als
 COMNT single pulse decoupled gated
 DATIM 2017-07-01 10:07:16
 OBNUC ¹³C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 26214
 FREQU 31446.54 Hz
 SCANS 1260
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC ¹H
 CTEMP 17.4 c
 SLVNT CDCL₃
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60



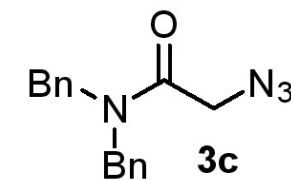


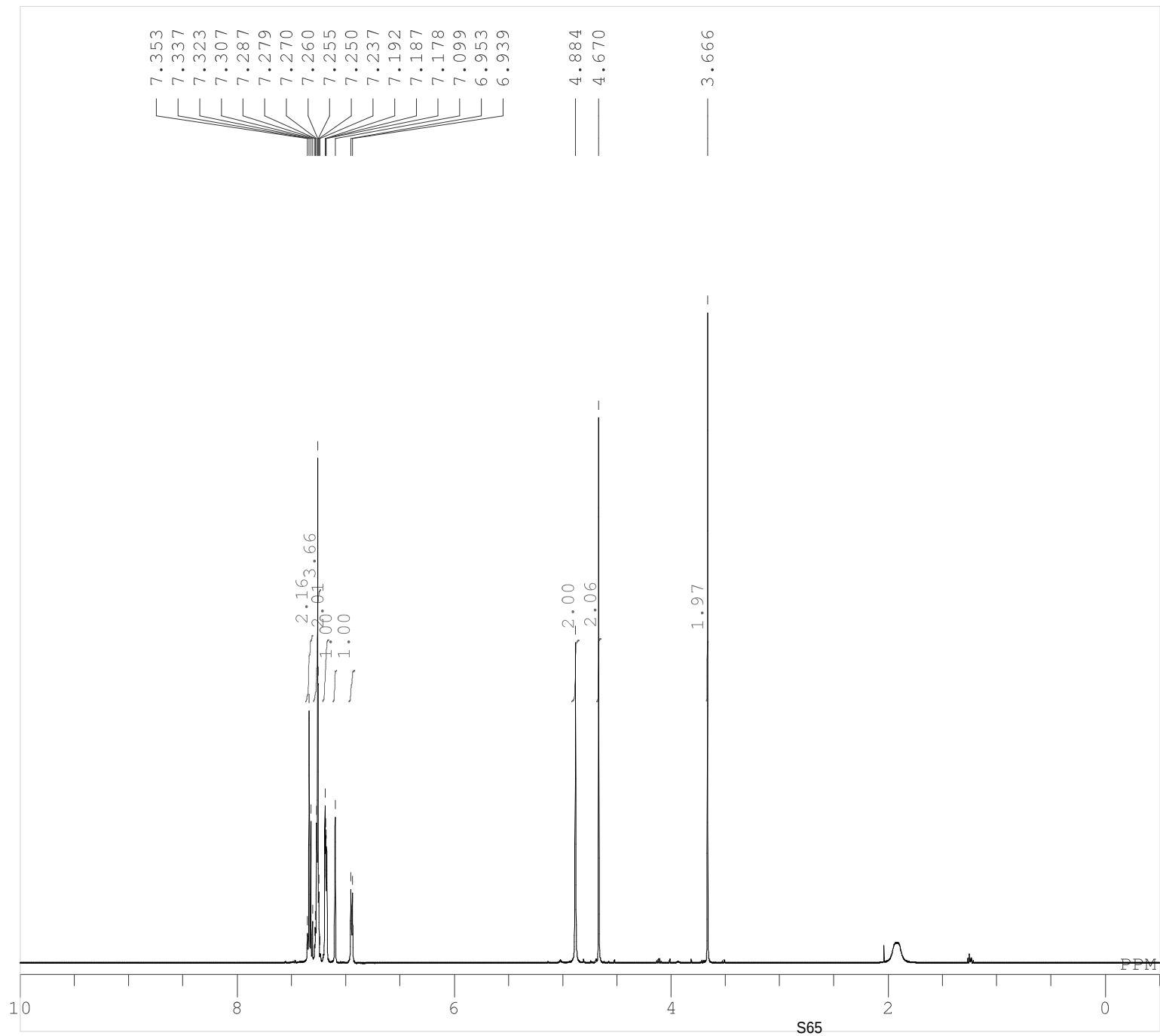
DFILE TY_07_106_02_proton-1-1.als
 COMNT single_pulse
 DATIM 2016-10-18 14:58:27
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.2 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 38



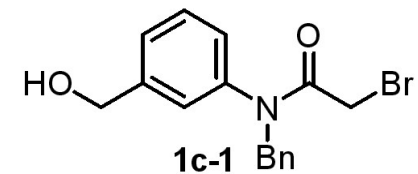


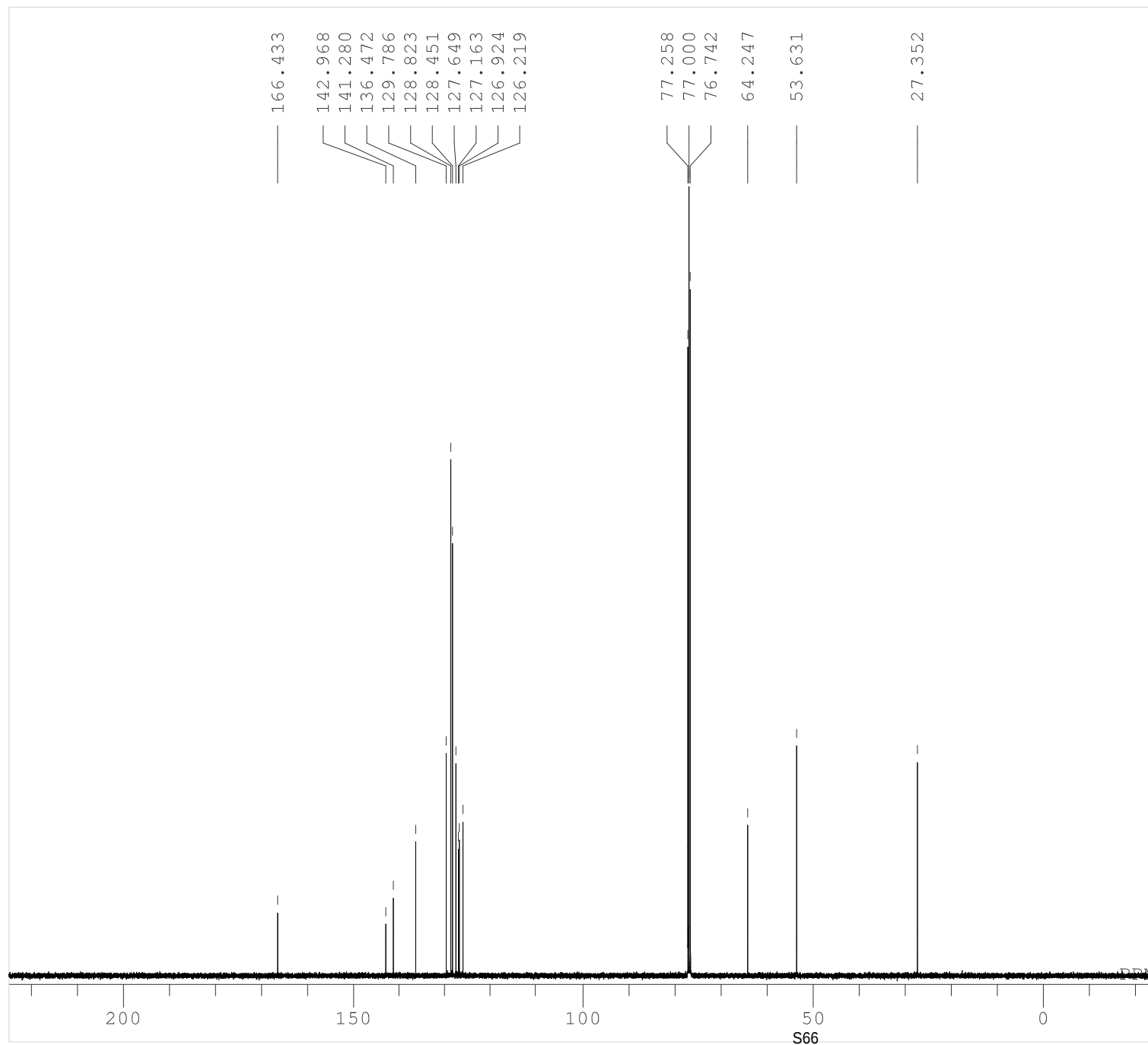
DFILE TY_07_106_02_carbon-1-1.als
COMNT single pulse decoupled gated
DATIM 2016-10-18 15:00:36
OBNUC 13C
EXMOD carbon.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 620
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 19.1 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 56





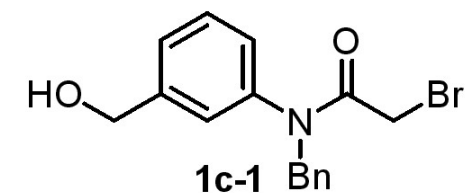
DFILE TY_09_099_01_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-09-30 11:55:25
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 14.2 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 38

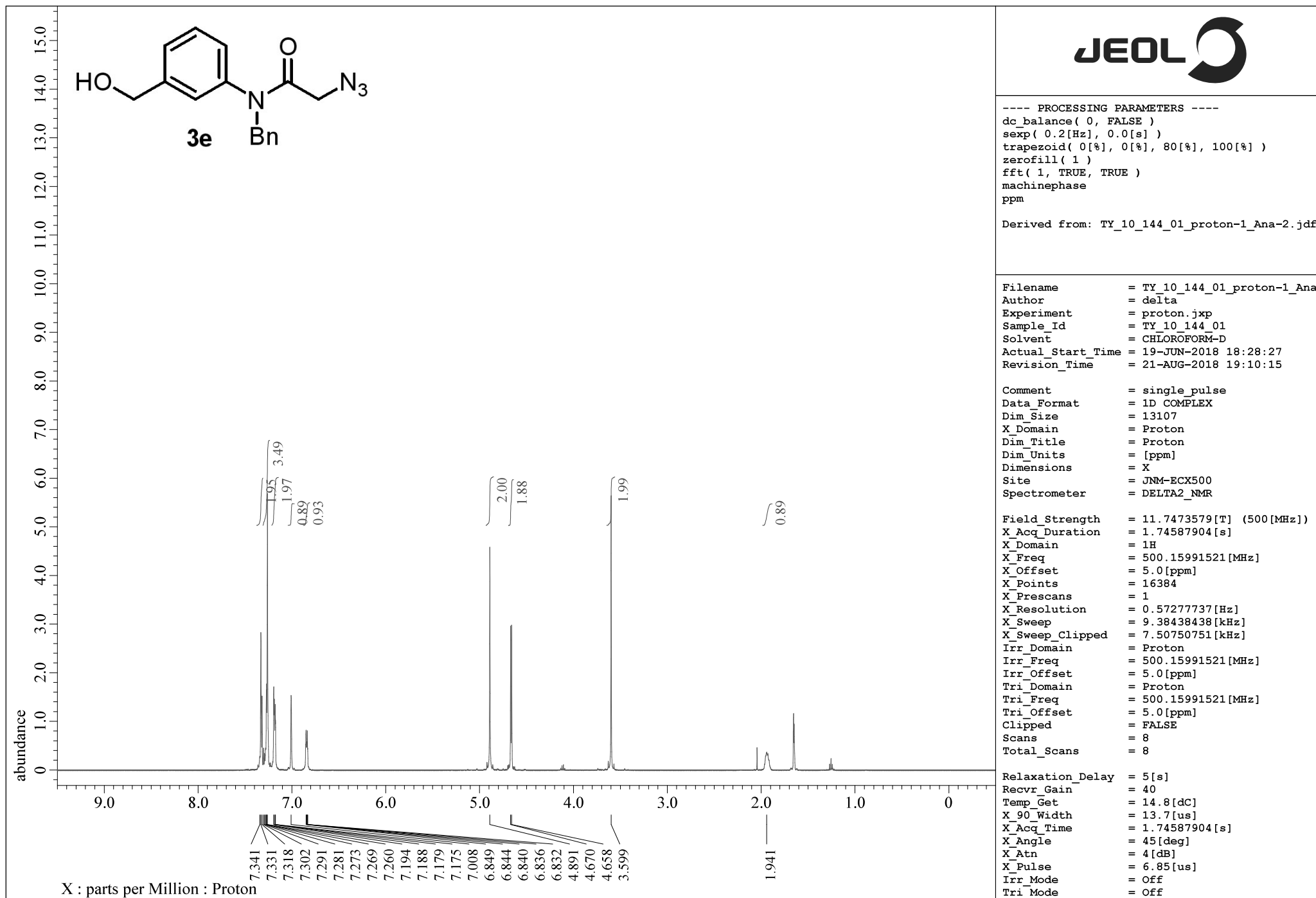


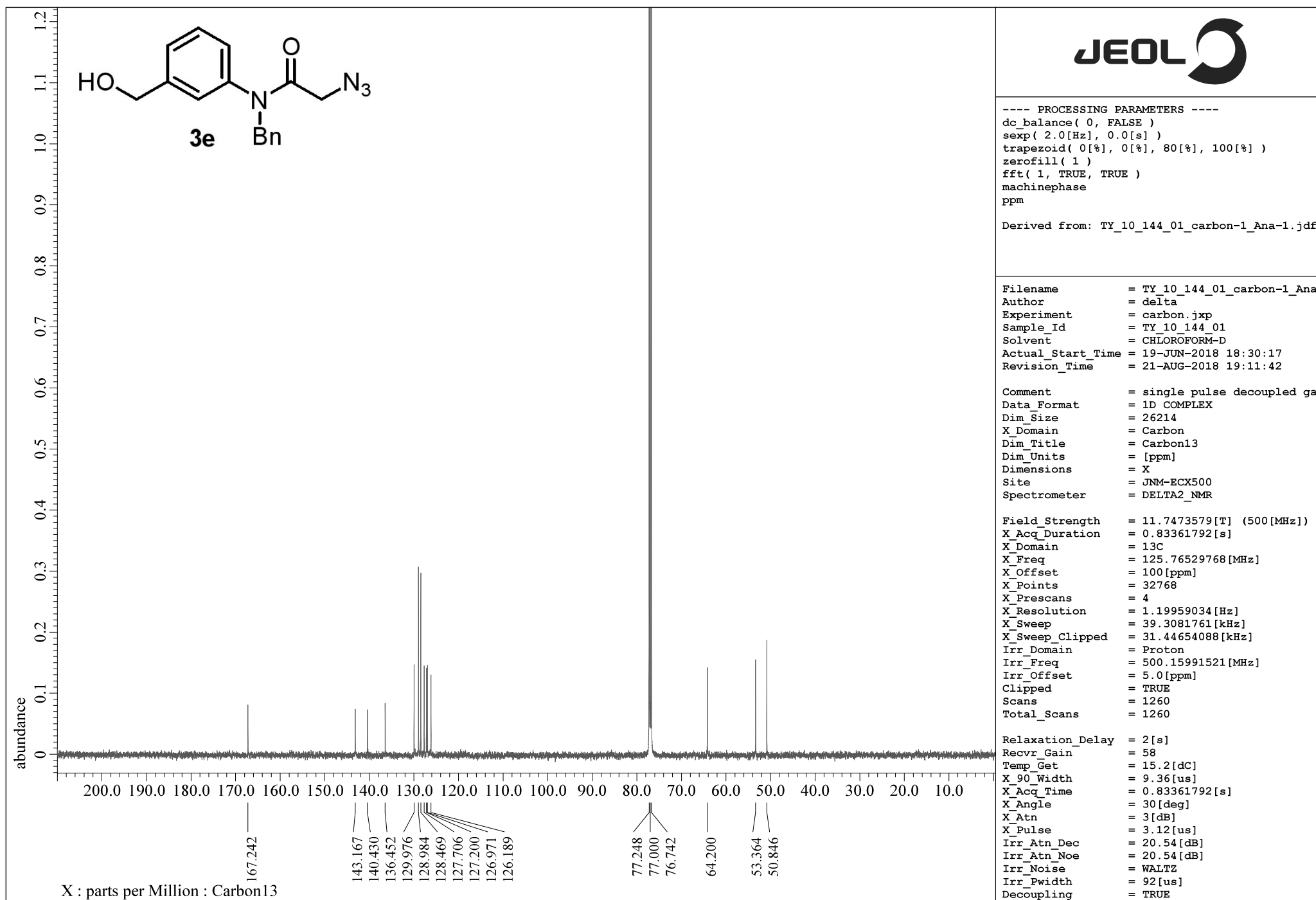


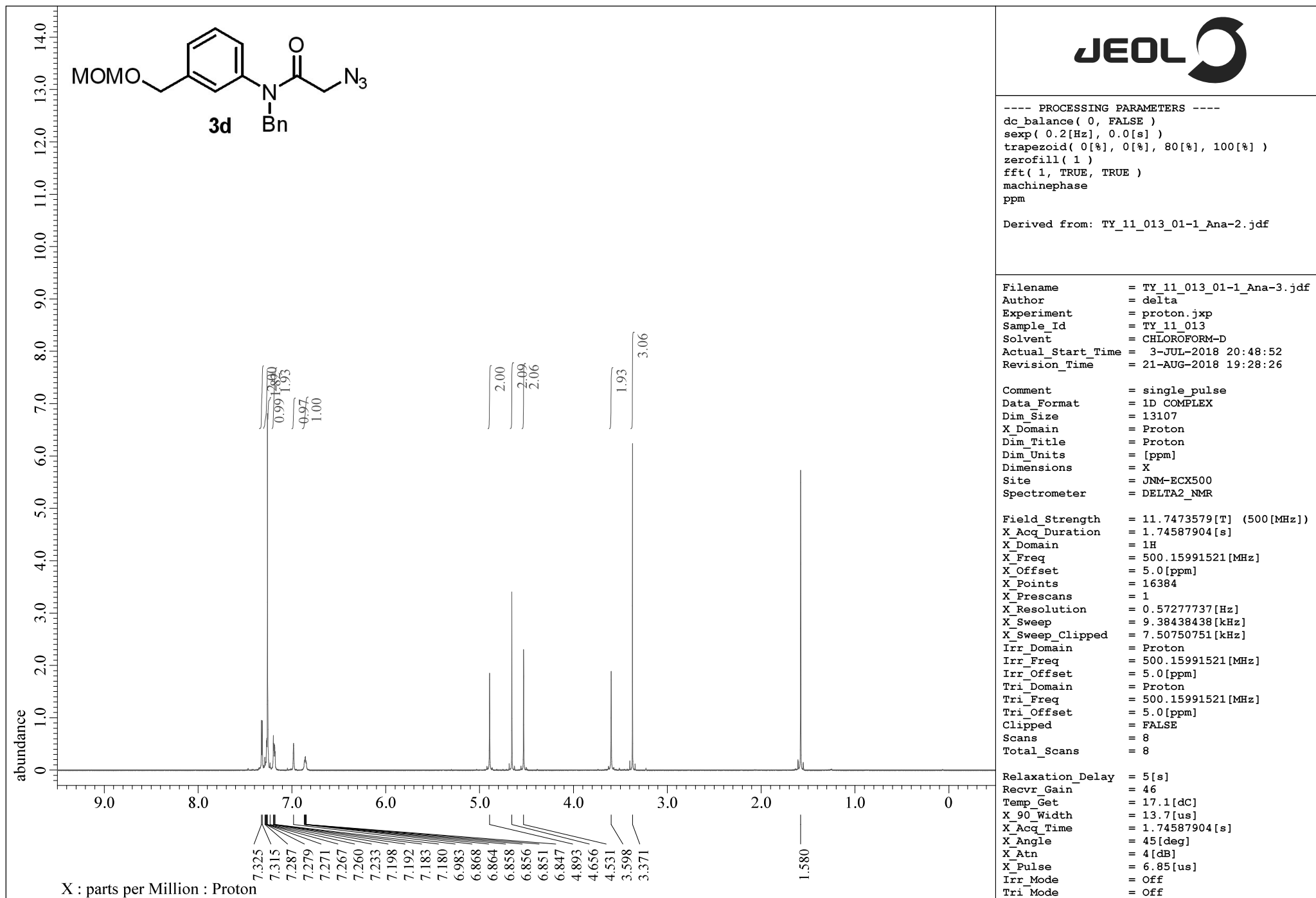
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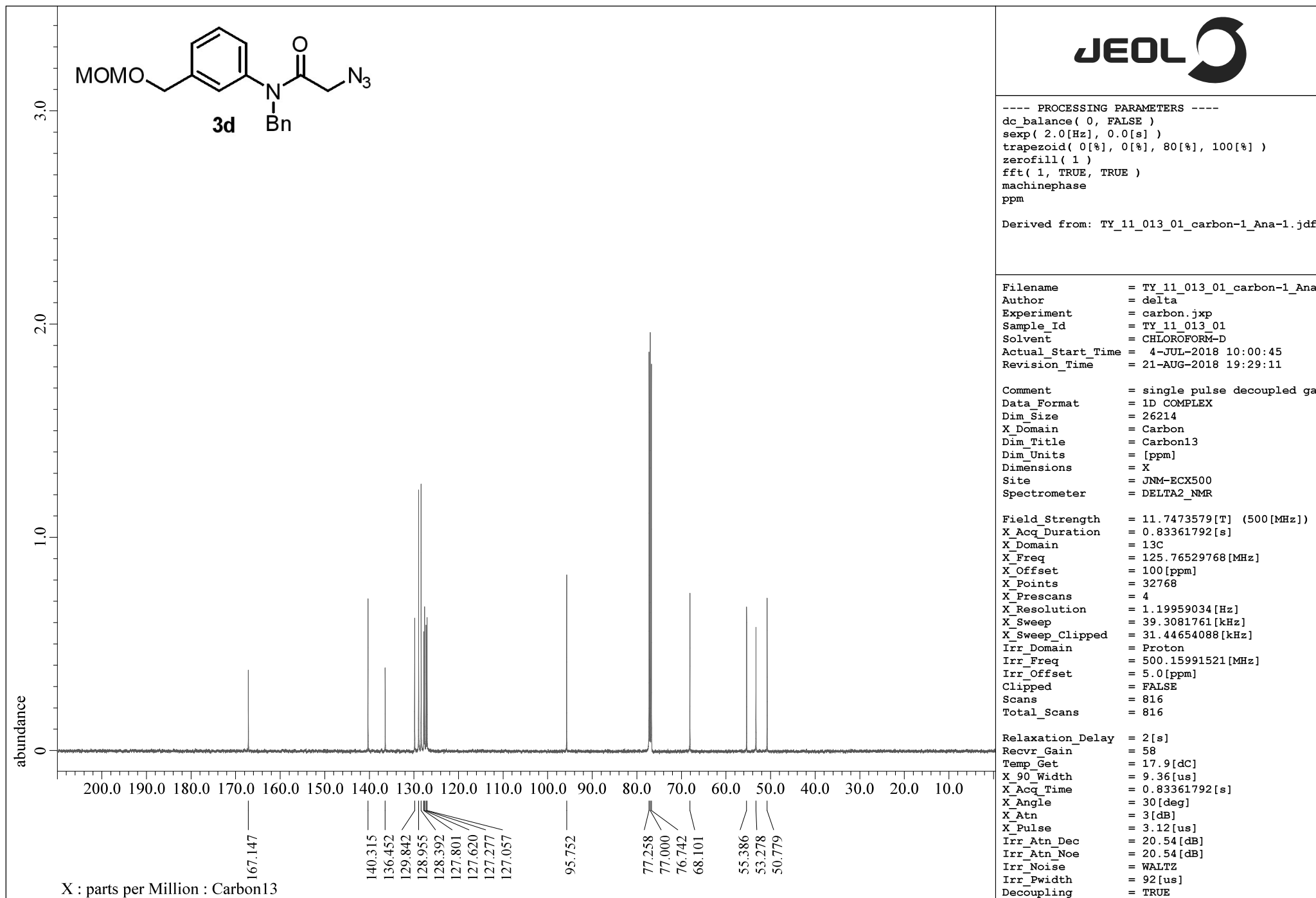
DFILE  TY_09_099_01_carbon-1-1.als
COMNT  single pulse decoupled gated
DATIM  2017-09-30 11:57:05
OBNUC  13C
EXMOD  carbon.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS    1680
ACQTM    0.8336 sec
PD       2.0000 sec
PW1      3.12 usec
IRNUC   1H
CTEMP    14.2 c
SLVNT   CDCL3
EXREF    77.00 ppm
BF       0.10 Hz
RGAIN    58
  
```

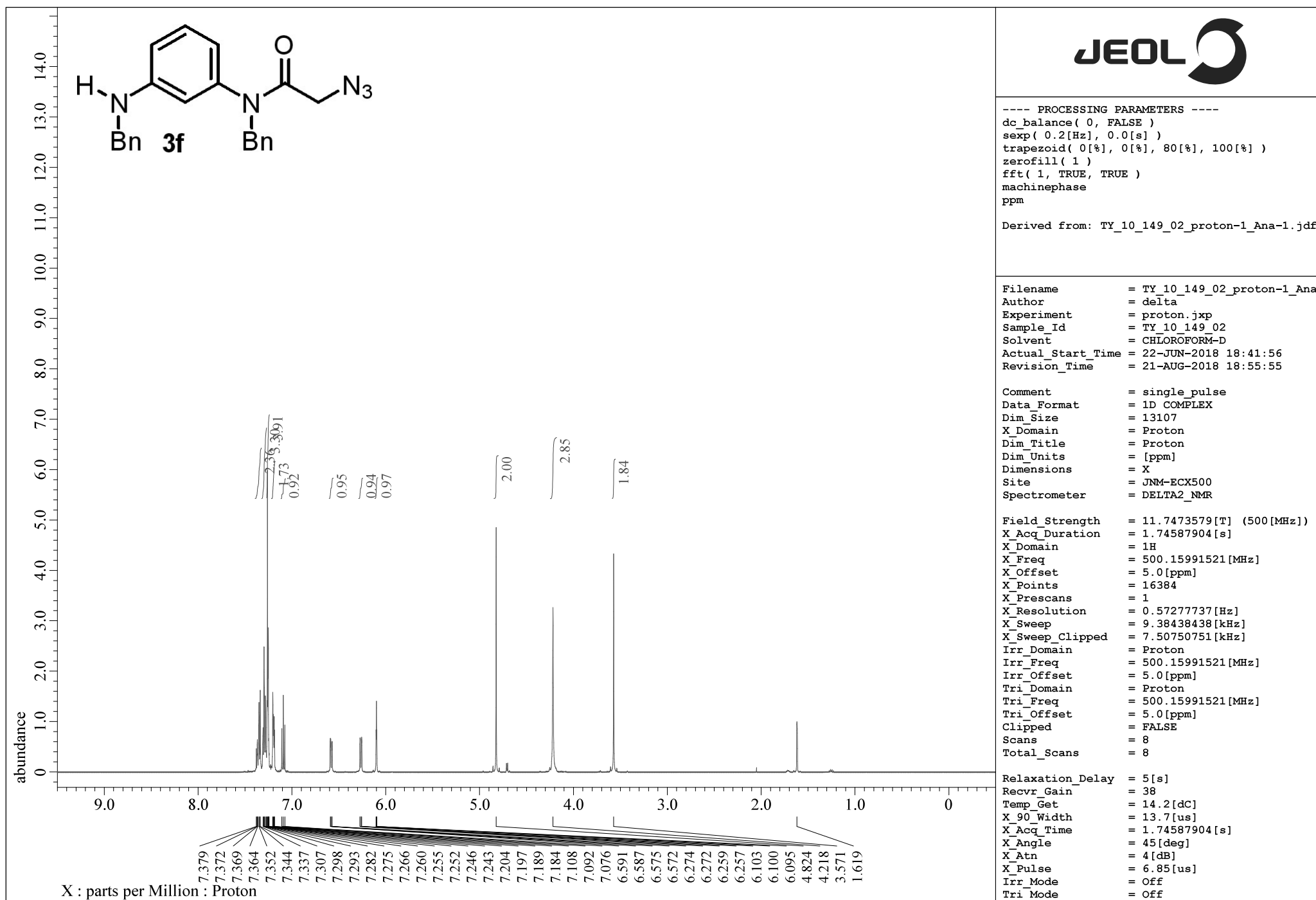


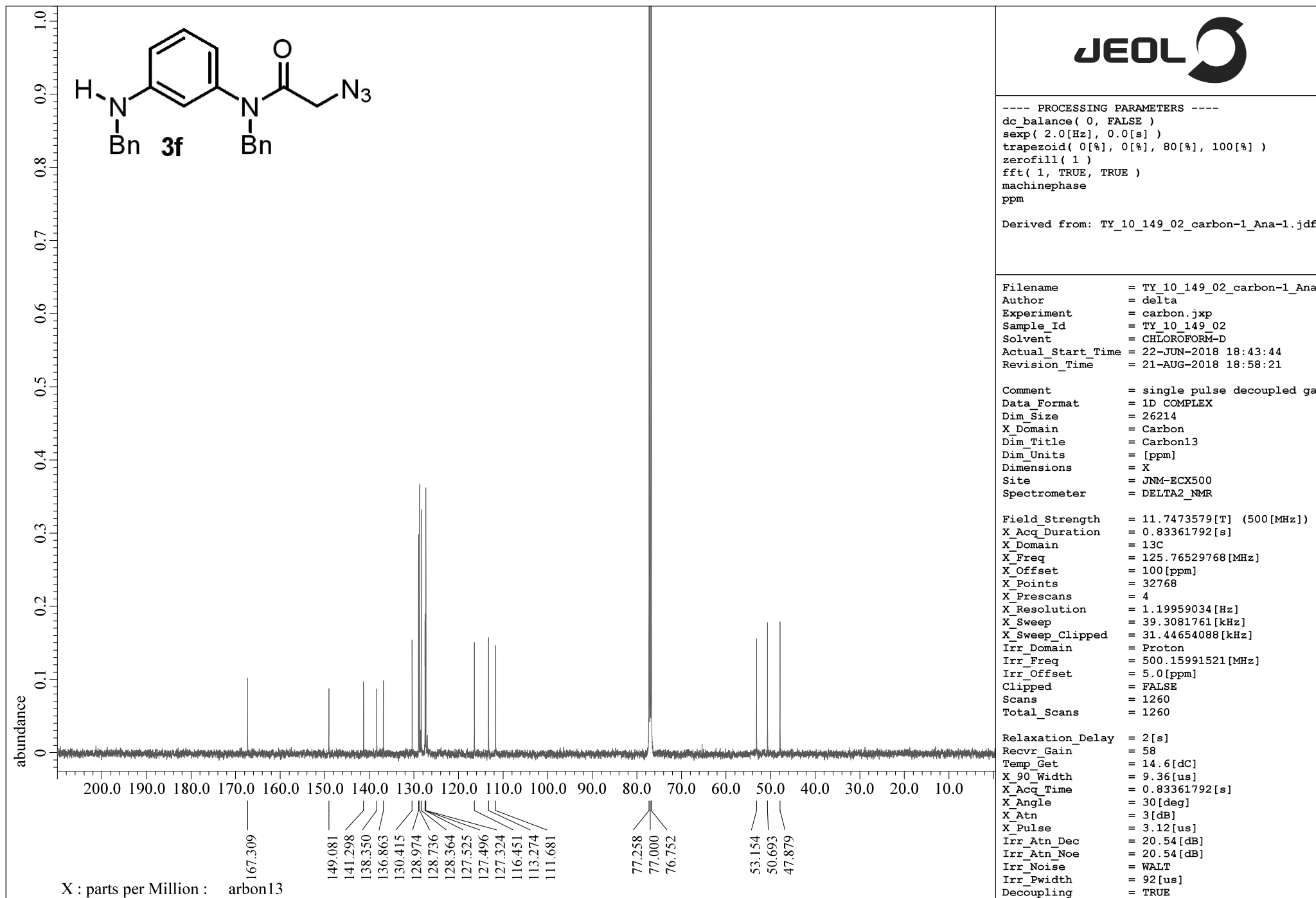


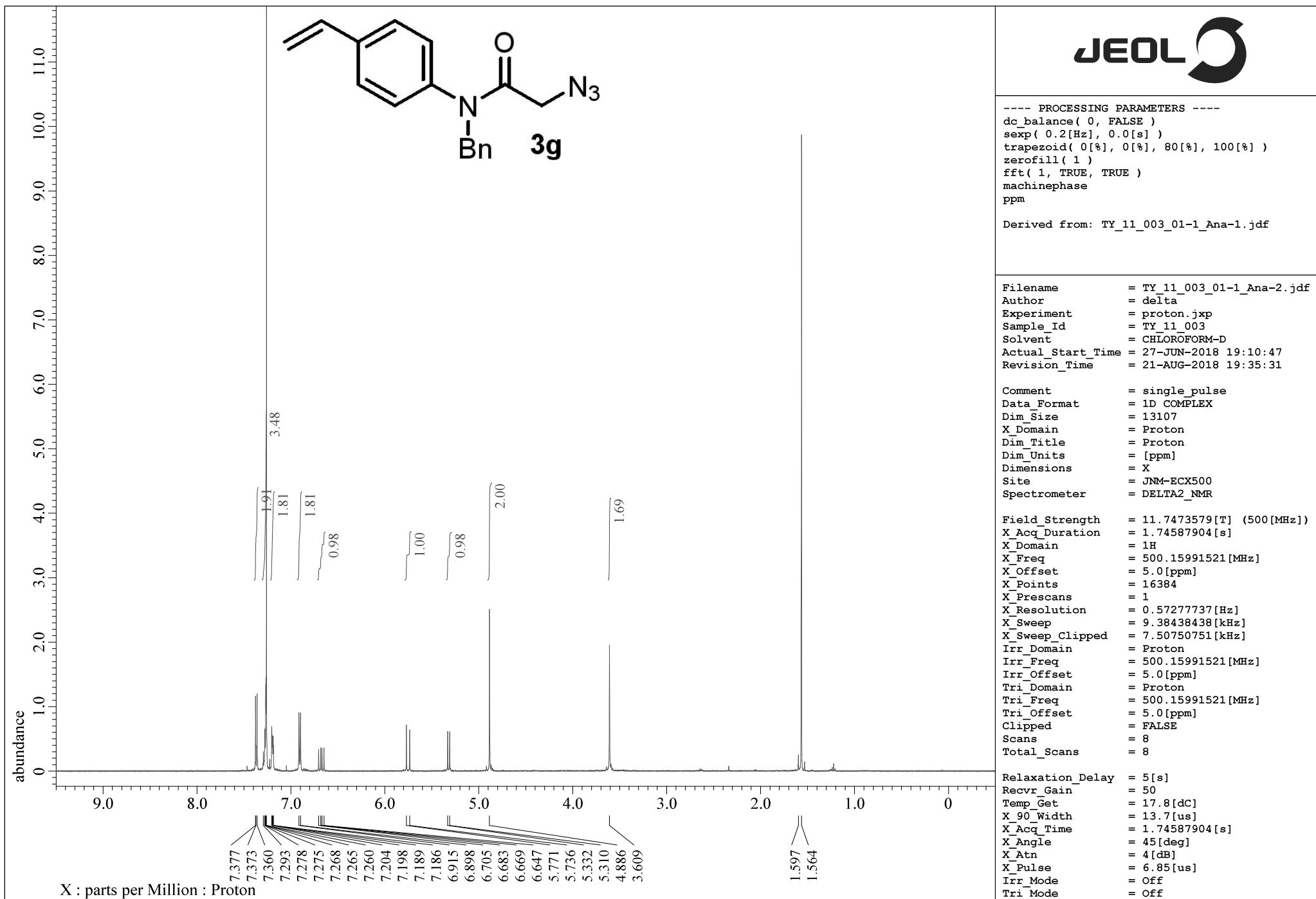


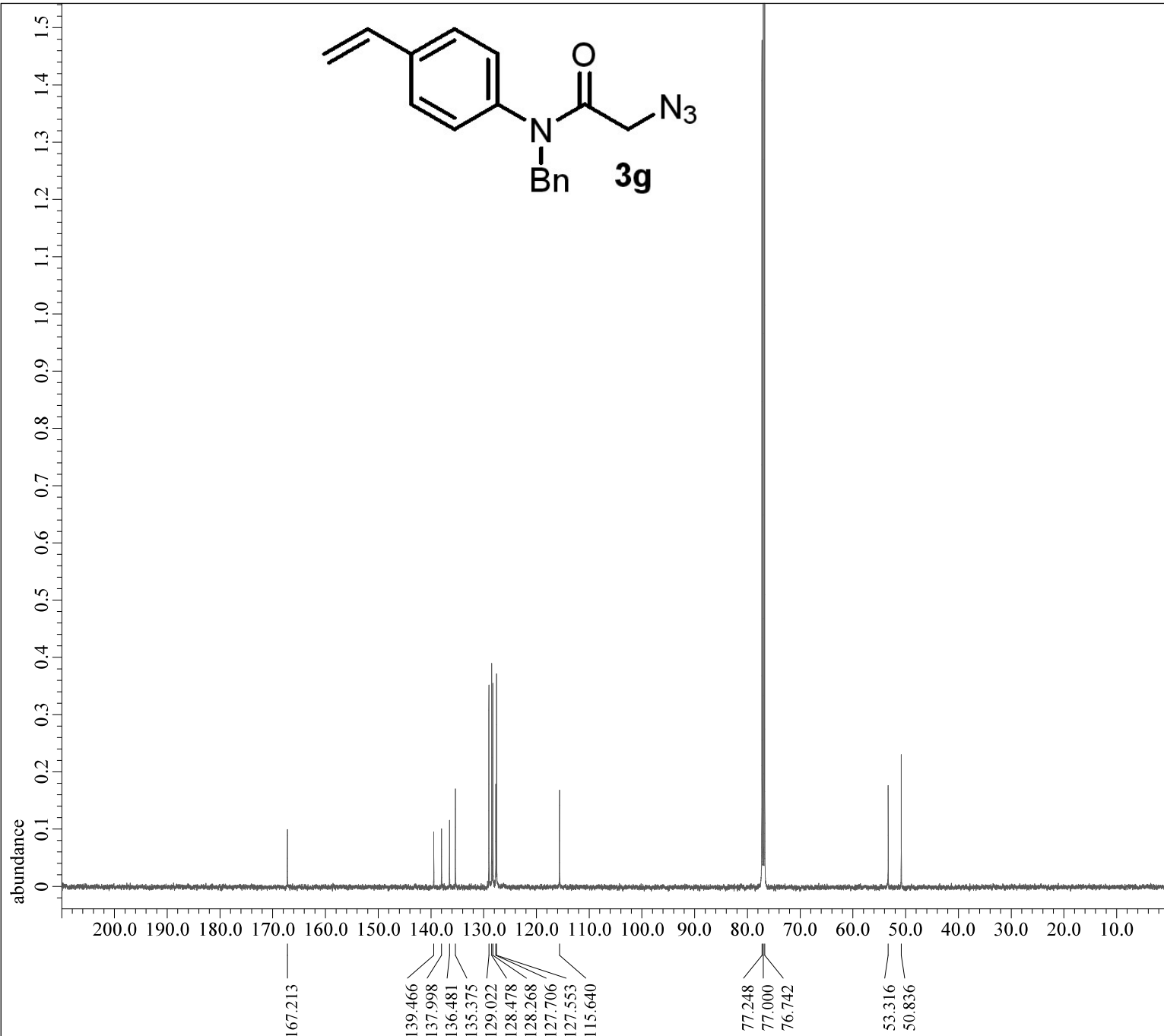
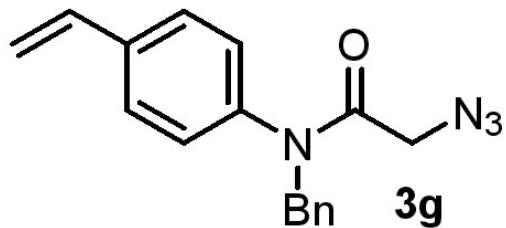












X : parts per Million : Carbon13



----- PROCESSING PARAMETERS -----
 dc_balance(0, FALSE)
 sexp(2.0[Hz], 0.0[s])
 trapezoid(0[%], 0[%], 80[%], 100[%])
 zerofill(1)
 fft(1, TRUE, TRUE)
 machinephase
 ppm

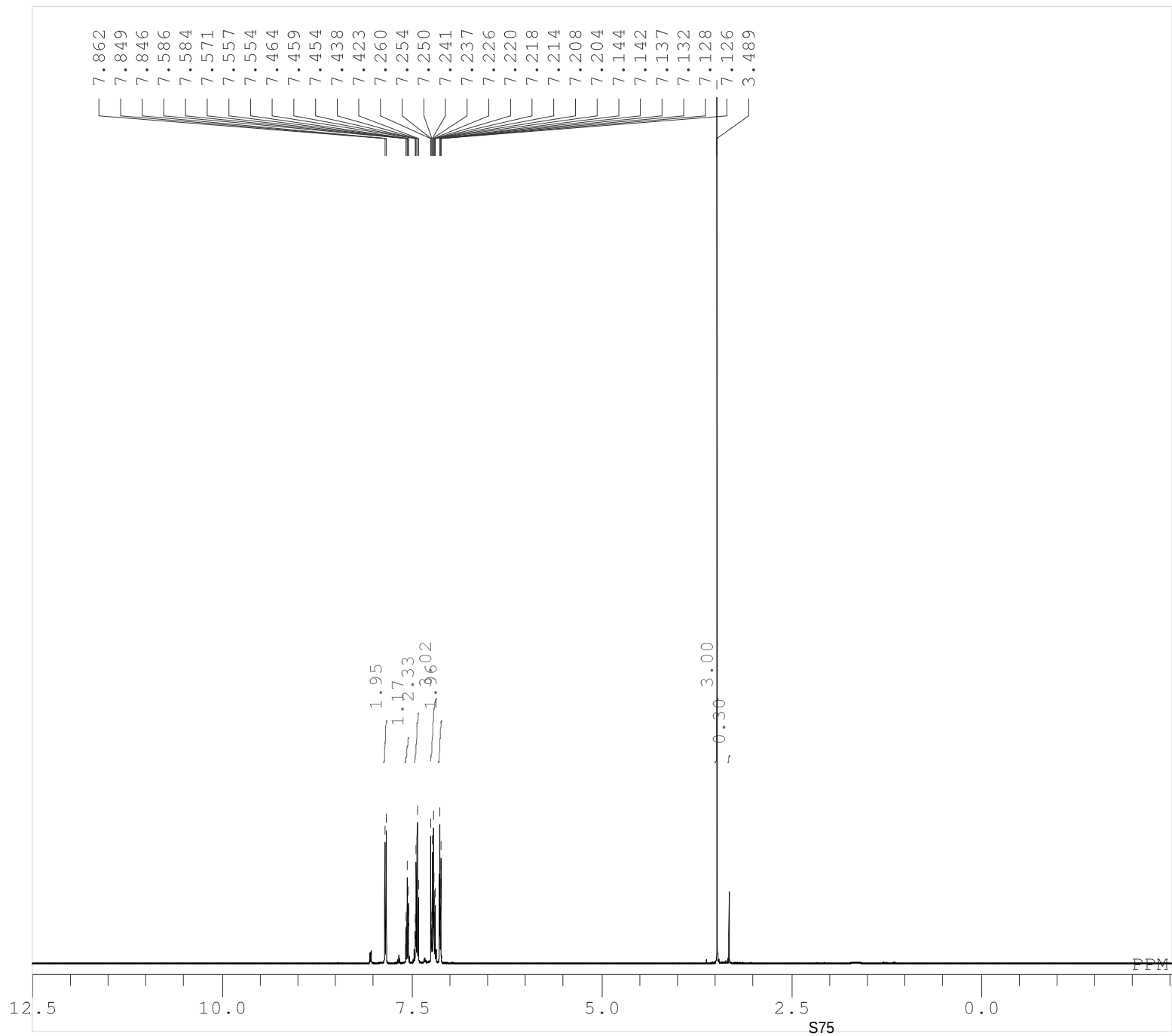
Derived from: TY_11_003_01_carbon-1-1.jdf

Filename = TY_11_003_01_carbon-1-2.j
 Author = delta
 Experiment = carbon.jxp
 Sample_Id = TY_11_003_01
 Solvent = CHLOROFORM-D
 Actual_Start_Time = 28-JUN-2018 09:55:59
 Revision_Time = 21-AUG-2018 19:36:54

Comment = single pulse decoupled ga
 Data_Format = 1D COMPLEX
 Dim_Size = 26214
 X_Domain = Carbon
 Dim_Title = Carbon13
 Dim_Units = [ppm]
 Dimensions = X
 Site = JNM-ECX500
 Spectrometer = DELTA2_NMR

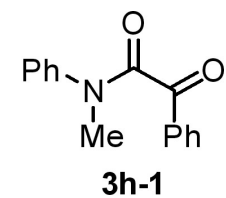
Field_Strength = 11.7473579[T] (500[MHz])
 X_Acq_Duration = 0.83361792[s]
 X_Domain = 13C
 X_Freq = 125.76529768[MHz]
 X_Offset = 100[ppm]
 X_Points = 32768
 X_Prescans = 4
 X_Resolution = 1.19959034[Hz]
 X_Sweep = 39.3081761[kHz]
 X_Sweep_Clippped = 31.44654088[kHz]
 Irr_Domain = Proton
 Irr_Freq = 500.15991521[MHz]
 Irr_Offset = 5.0[ppm]
 Clipped = TRUE
 Scans = 1260
 Total_Scans = 1260

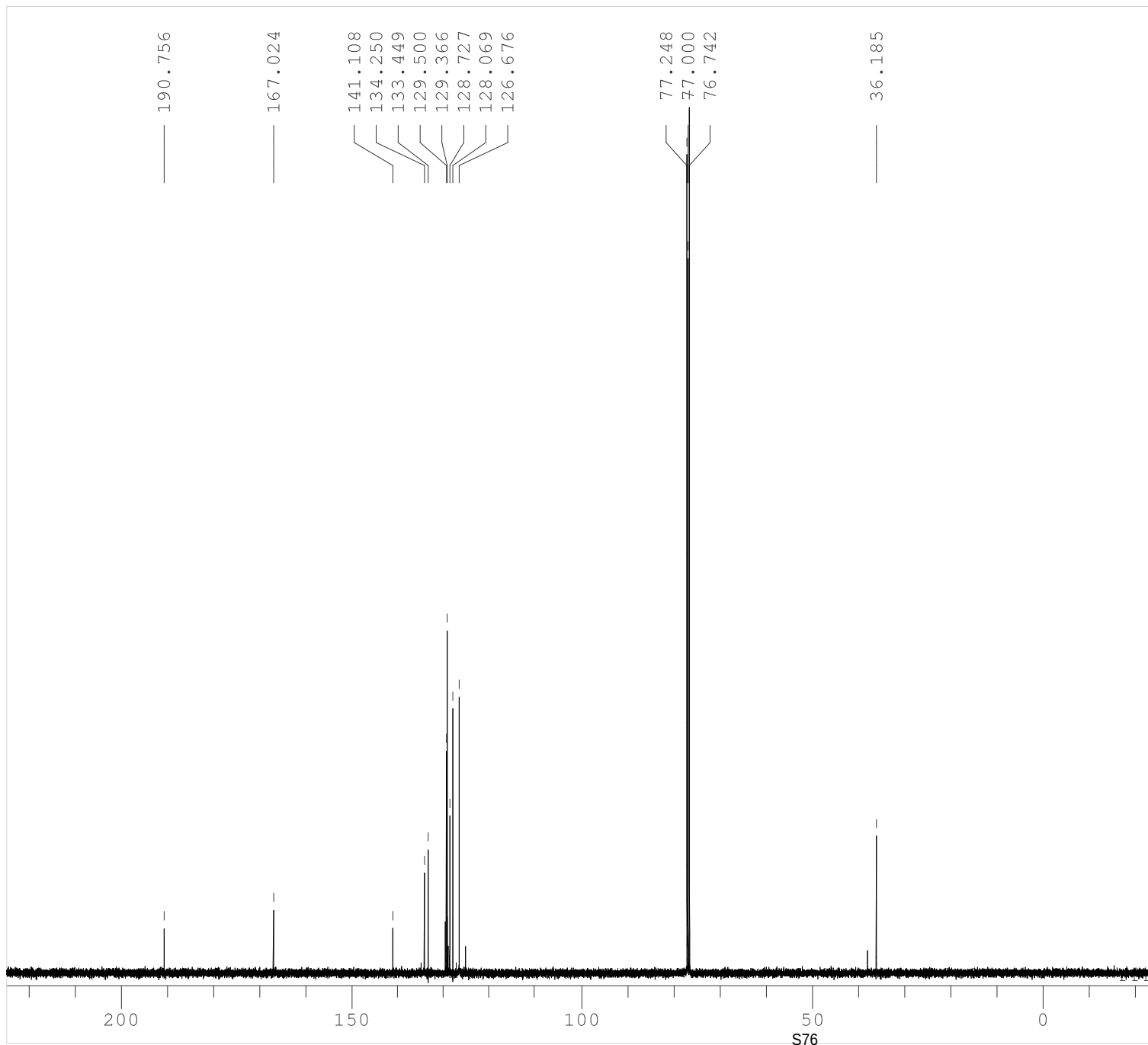
Relaxation_Delay = 2[s]
 Recvr_Gain = 56
 Temp_Get = 18.1[dc]
 X_90_Width = 9.36[us]
 X_Acq_Time = 0.83361792[s]
 X_Angle = 30[deg]
 X_Atn = 3[dB]
 X_Pulse = 3.12[us]
 Irr_Atn_Dec = 20.54[dB]
 Irr_Atn_Noe = 20.54[dB]
 Irr_Noise = WALTZ
 Irr_Pwidth = 92[us]
 Decoupling = TRUE



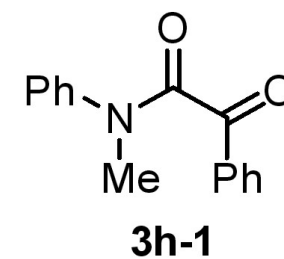
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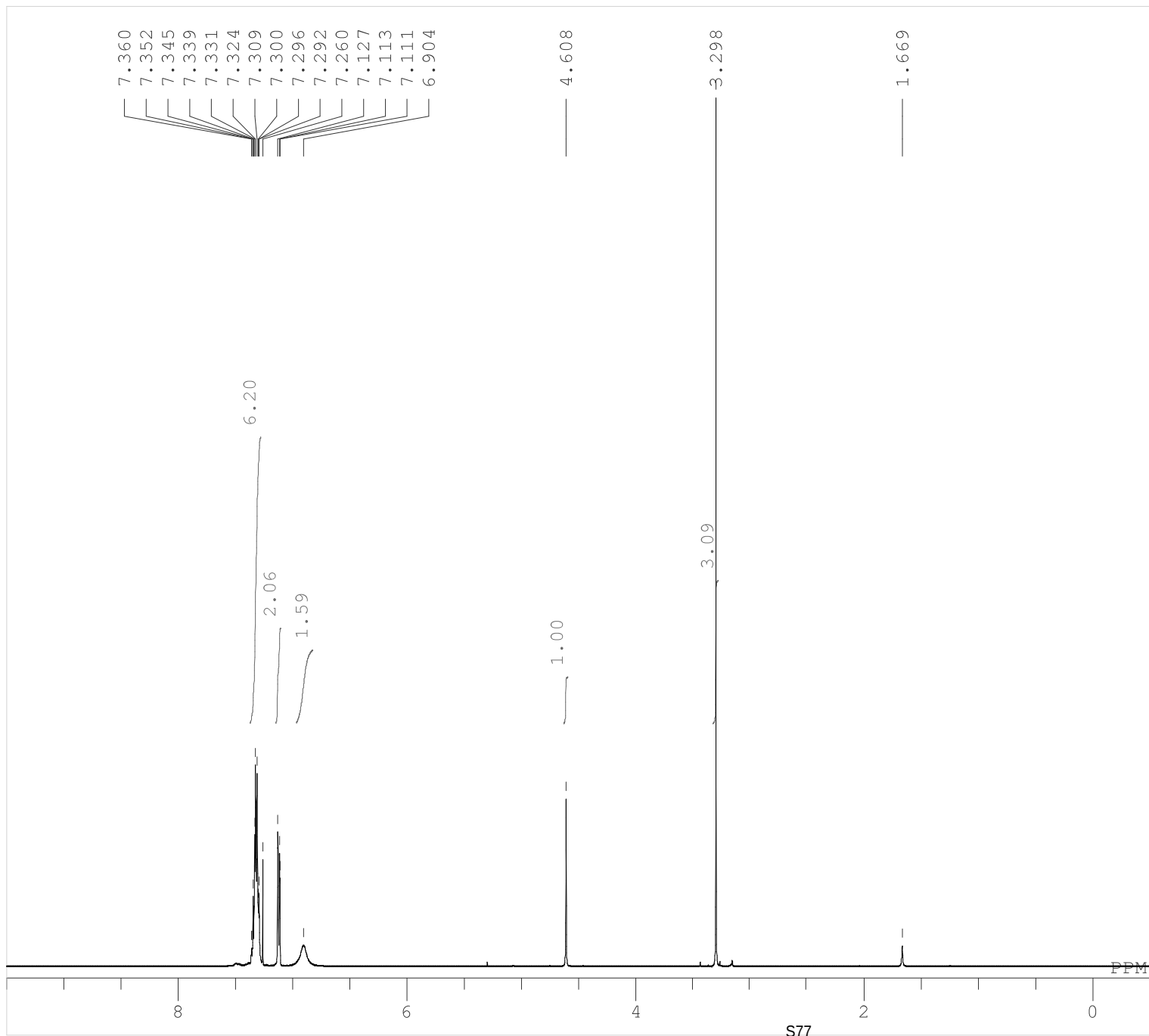
DFILE TY_07_097_02_proton-1-1.als
COMNT single_pulse
DATIM 2016-10-13 19:17:49
OBNUC 1H
EXMOD proton.jxp
OBFRQ 500.16 MHz
OBSET 2.41 KHz
OBFIN 6.01 Hz
POINT 13107
FREQU 7507.51 Hz
SCANS 8
ACQTM 1.7459 sec
PD 5.0000 sec
PW1 6.85 usec
IRNUC 1H
CTEMP 17.7 c
SLVNT CDCL3
EXREF 7.26 ppm
BF 0.10 Hz
RGAIN 38
  
```



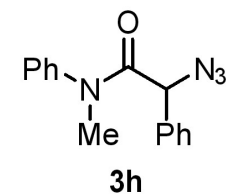


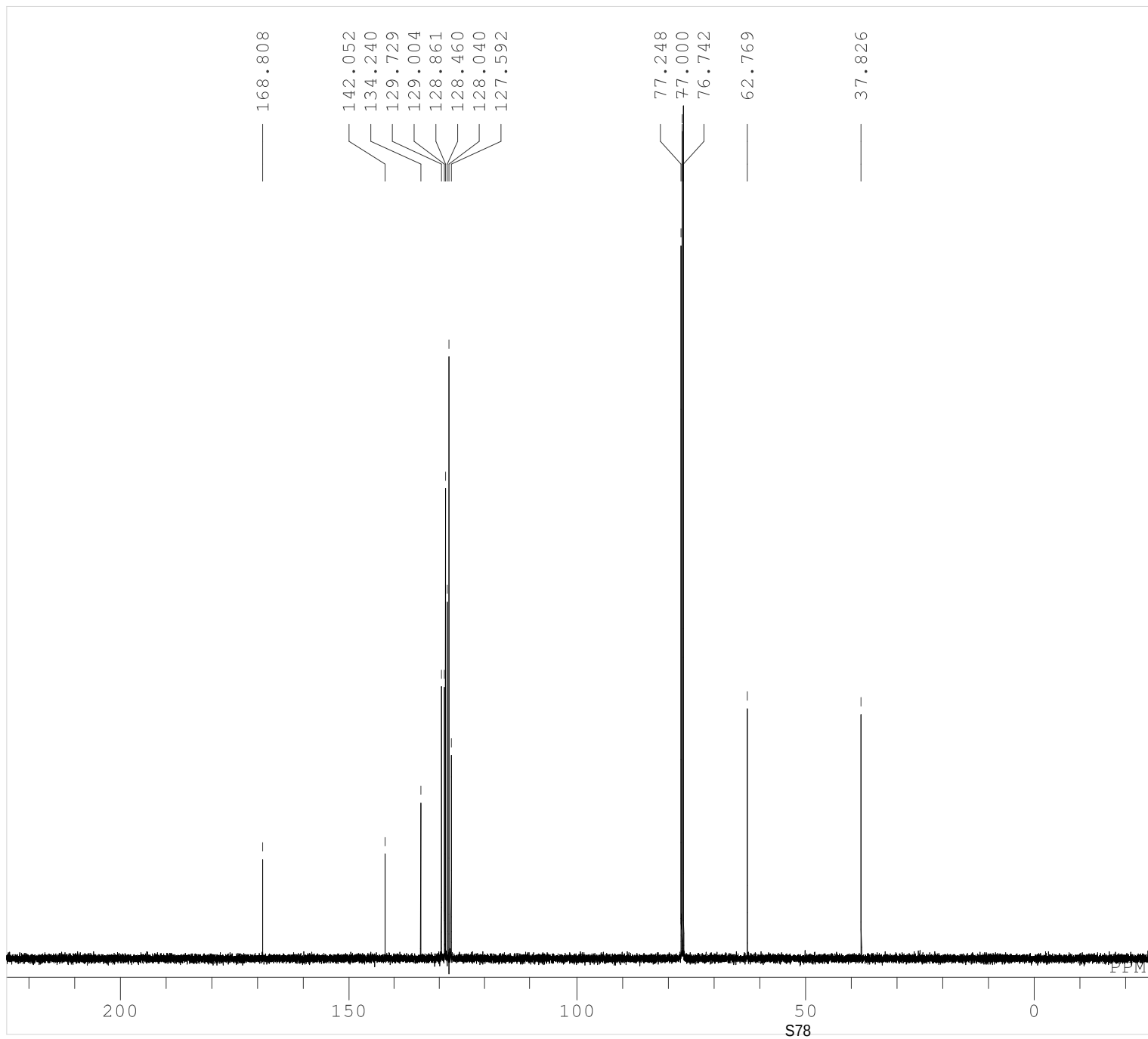
DFILE TY_07_097_02_carbon-1-1.als
COMNT single pulse decoupled gated
DATIM 2016-10-13 19:19:53
OBNUC 13C
EXMOD carbon.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 620
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 17.4 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 56



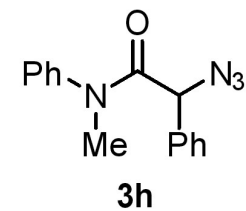


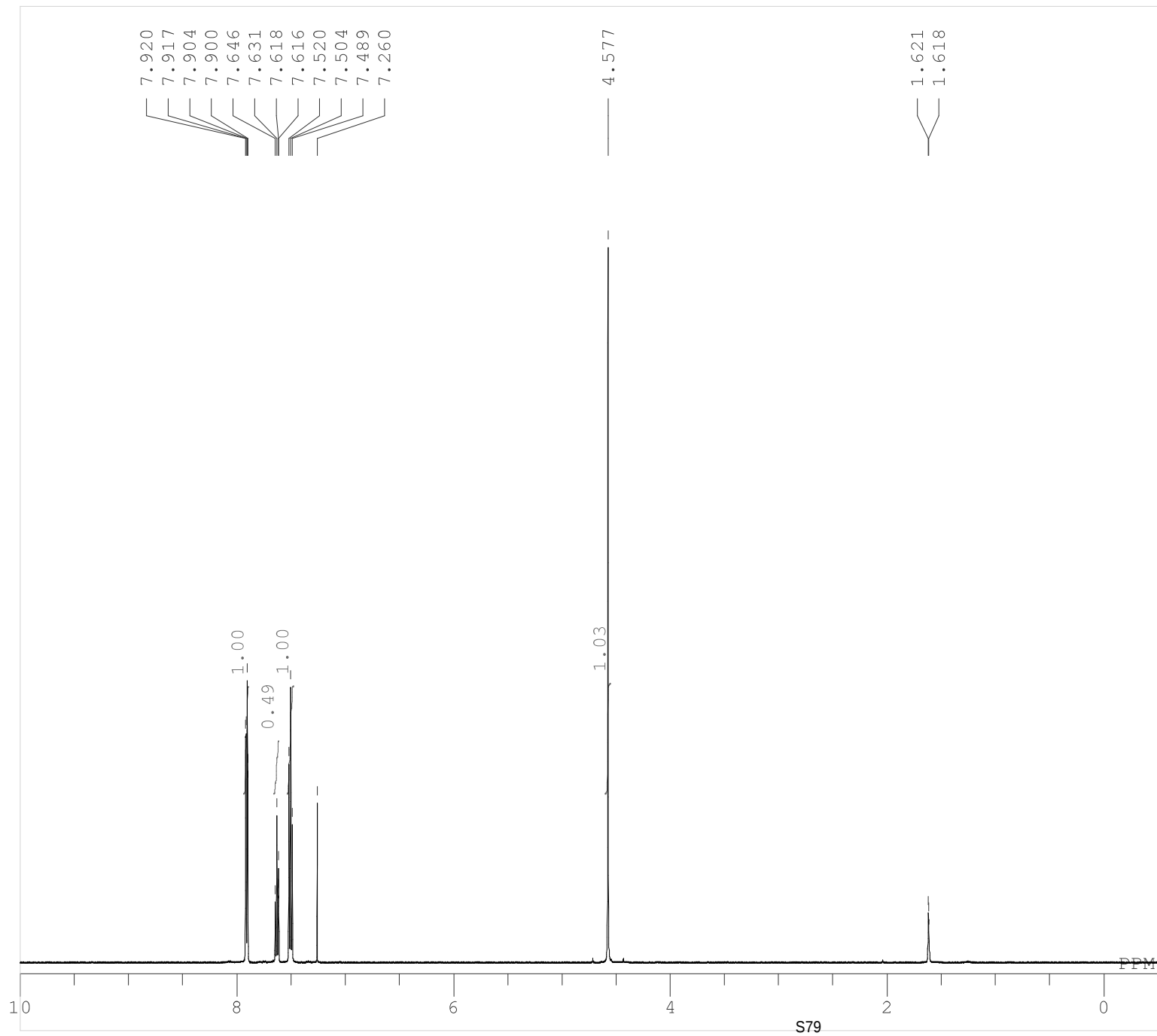
DFILE TY_08_026_02_proton-1-1.als
 COMNT single_pulse
 DATIM 2016-12-09 20:16:58
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 14.5 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 36



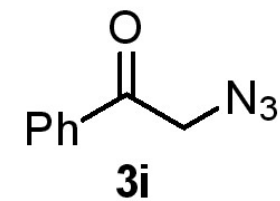


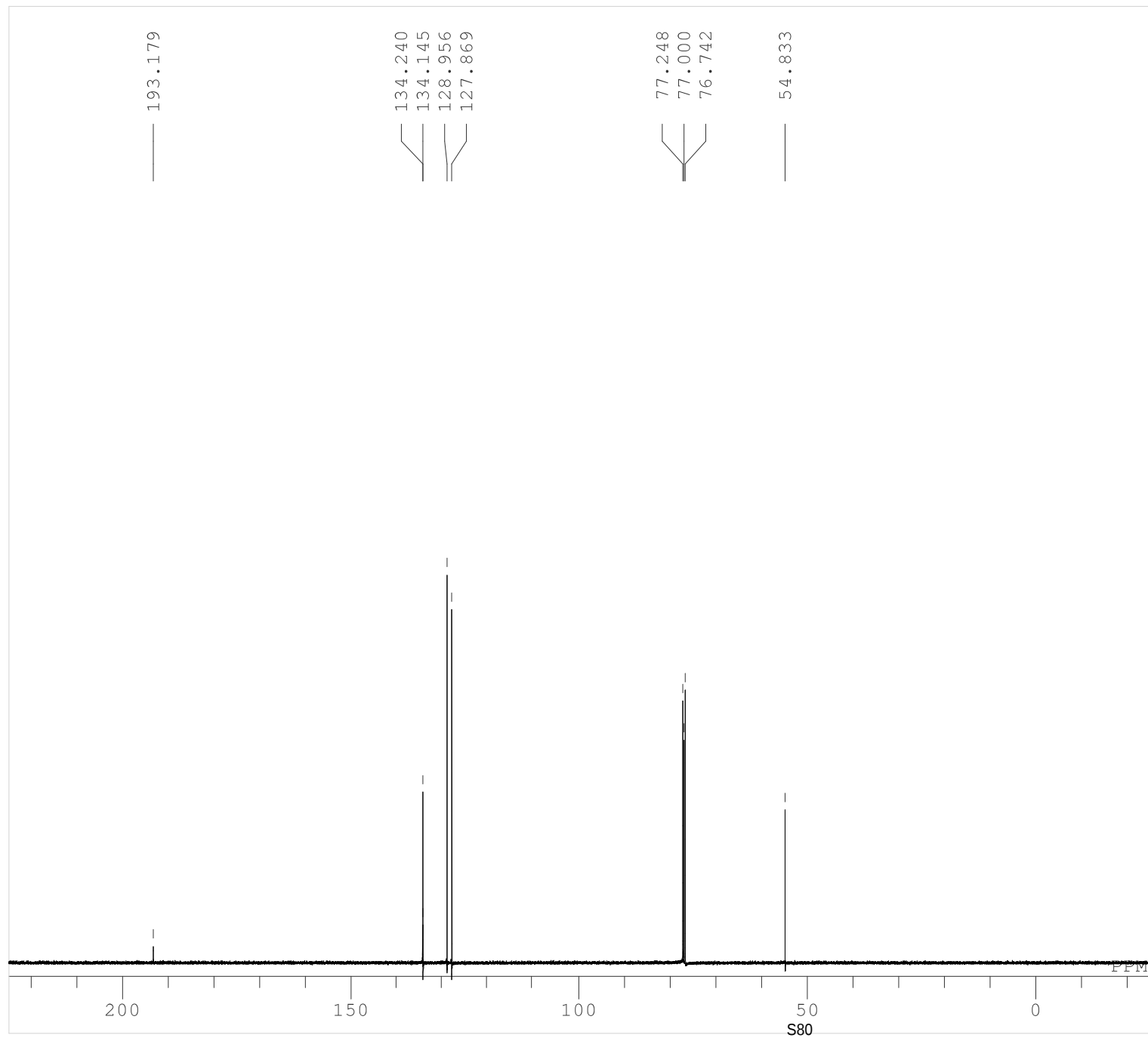
DFILE TY_08_026_02_carbon-1-1.als
COMNT single pulse decoupled gated
DATIM 2016-12-09 20:21:10
OBNUC 13C
EXMOD carbon.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 620
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 15.3 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



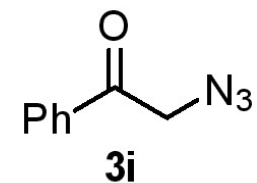


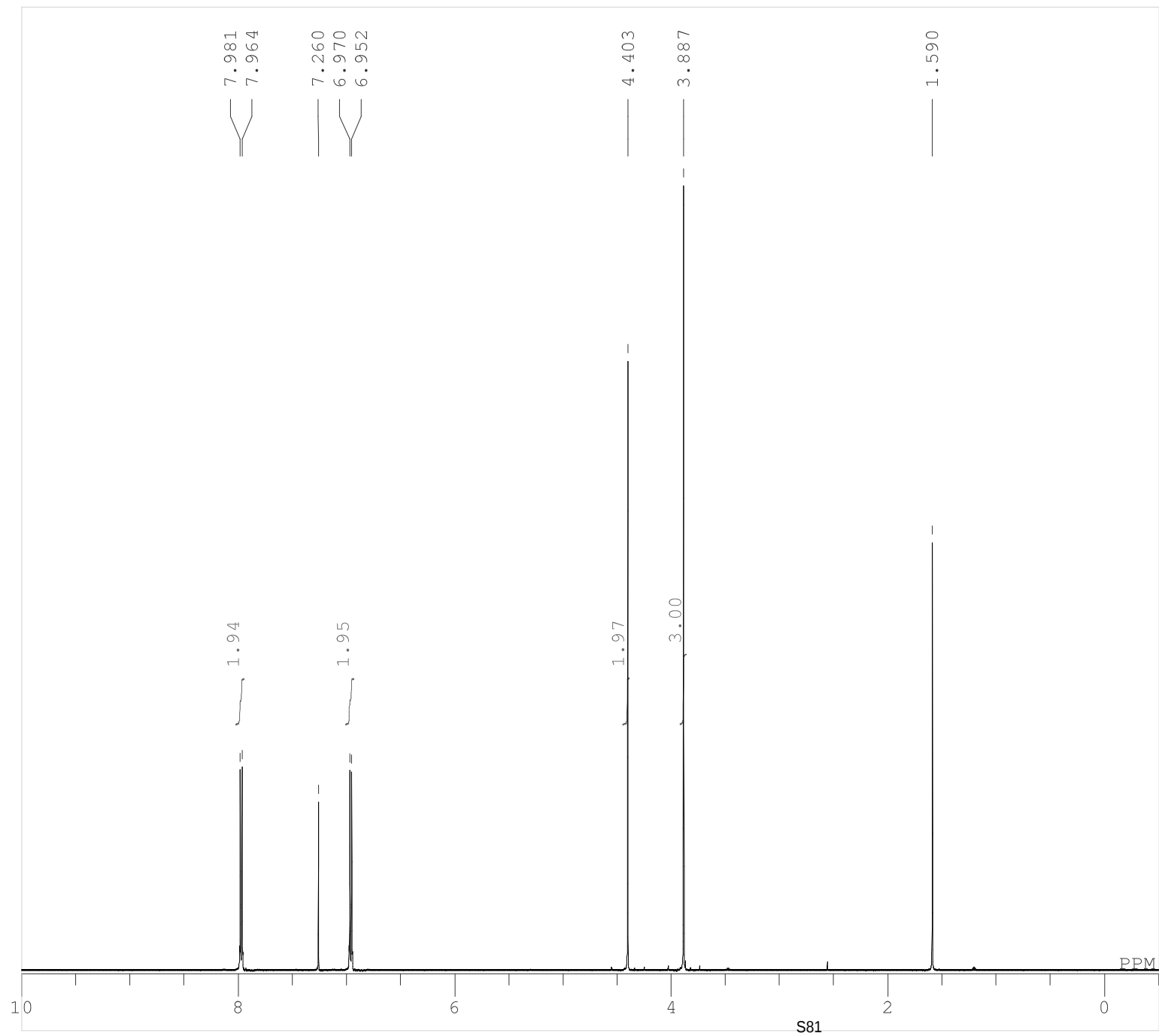
DFILE TY_08_069_00_proton-1-1.als
COMNT single_pulse
DATIM 2017-05-25 20:13:05
OBNUC 1H
EXMOD proton.jxp
OBFRQ 500.16 MHz
OBSET 2.41 KHz
OBFIN 6.01 Hz
POINT 13107
FREQU 7507.51 Hz
SCANS 8
ACQTM 1.7459 sec
PD 5.0000 sec
PW1 6.85 usec
IRNUC 1H
CTEMP 13.5 c
SLVNT CDCL3
EXREF 7.26 ppm
BF 0.10 Hz
RGAIN 40



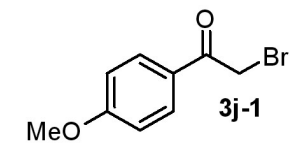


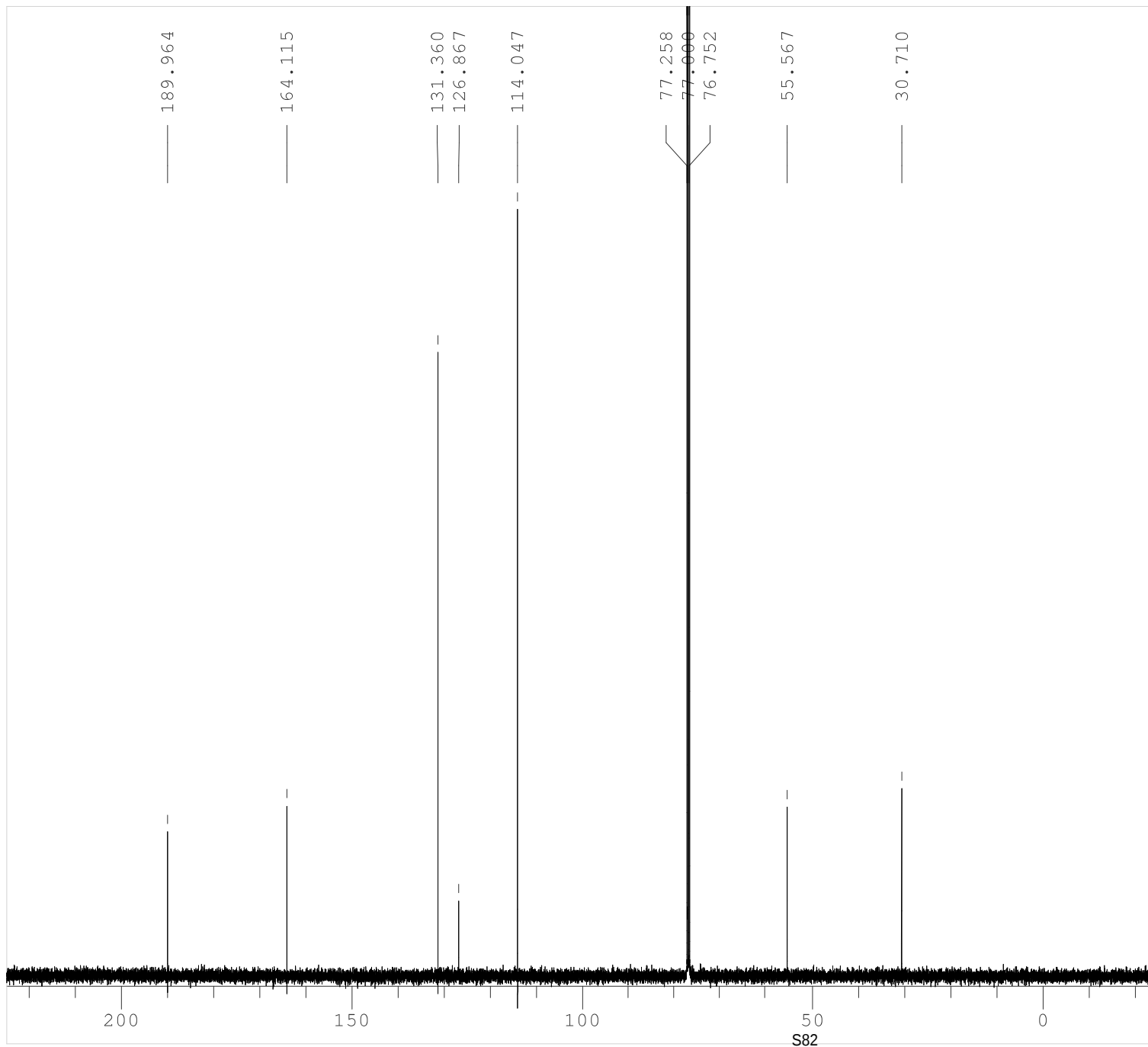
DFILE TY_08_069_00_carbn-1-1.als
COMNT single pulse decoupled gated
DATIM 2017-05-25 20:15:17
OBNUC 13C
EXMOD carbn.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 840
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 14.0 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



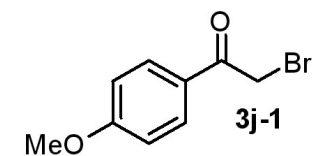


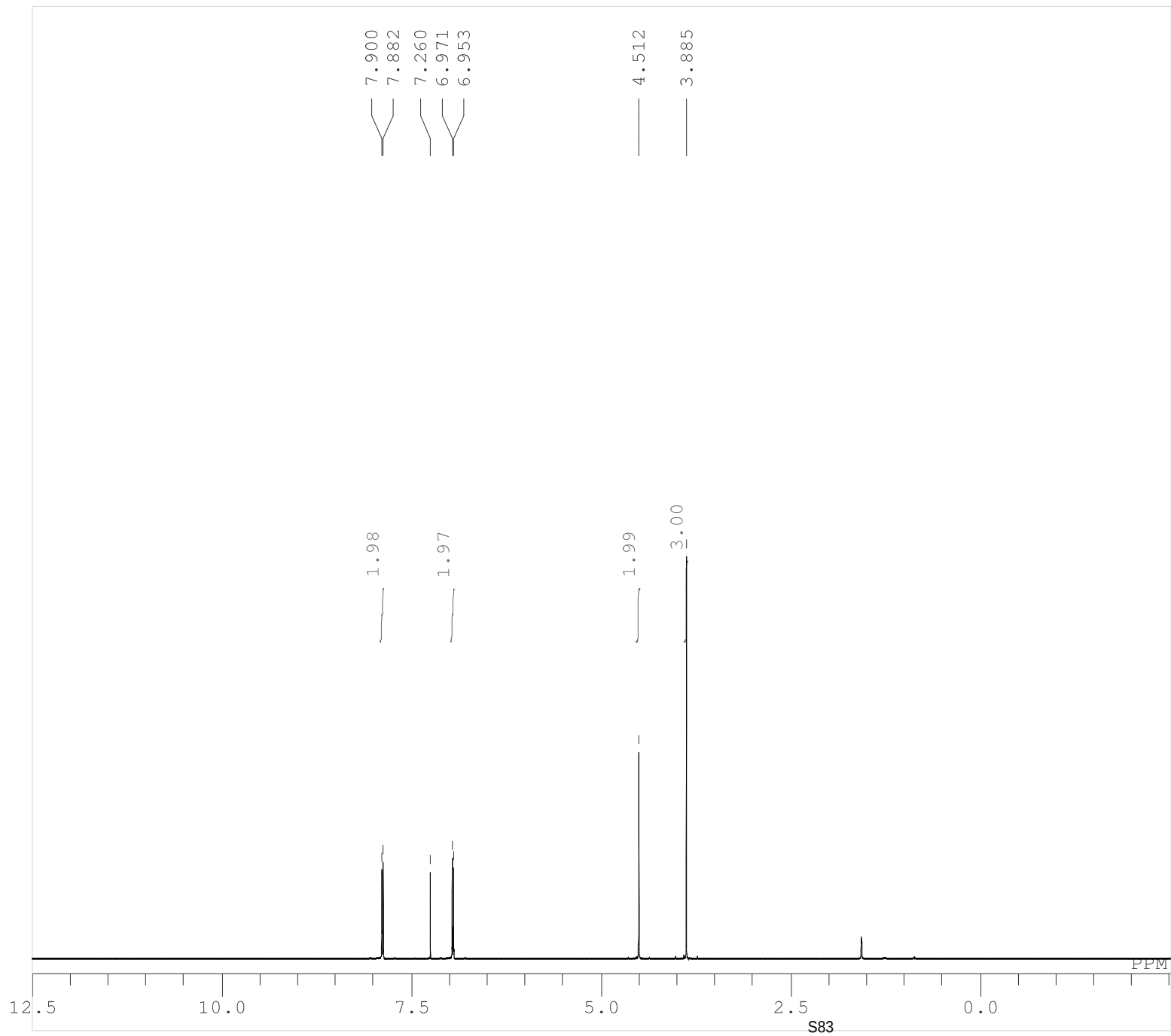
DFILE TY_09_020_01_proton-1-1.als
COMNT single_pulse
DATIM 2017-07-14 16:17:33
OBNUC 1H
EXMOD proton.jxp
OBFRQ 500.16 MHz
OBSET 2.41 KHz
OBFIN 6.01 Hz
POINT 13107
FREQU 7507.51 Hz
SCANS 8
ACQTM 1.7459 sec
PD 5.0000 sec
PW1 6.85 usec
IRNUC 1H
CTEMP 18.8 c
SLVNT CDCL3
EXREF 7.26 ppm
BF 0.10 Hz
RGAIN 44



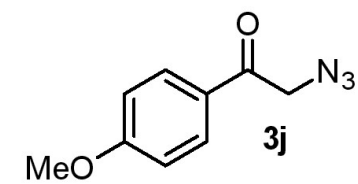


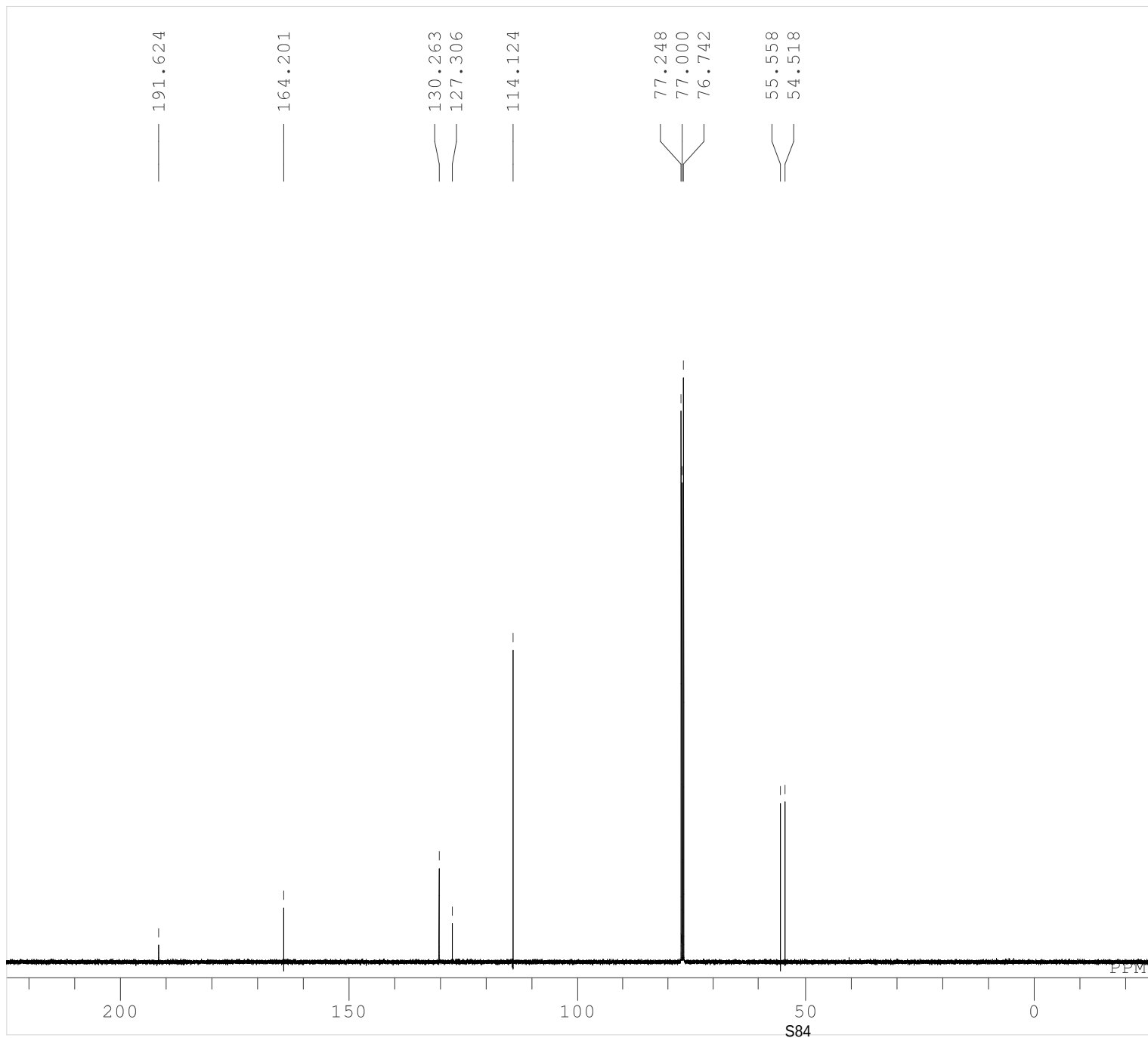
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COMNT single pulse decoupled gated
DATIM 2017-07-14 16:19:06
OBNUC 13C
EXMOD carbn.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1260
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 19.0 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



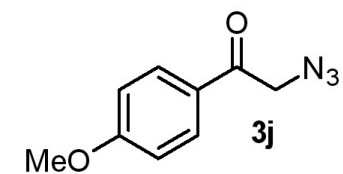


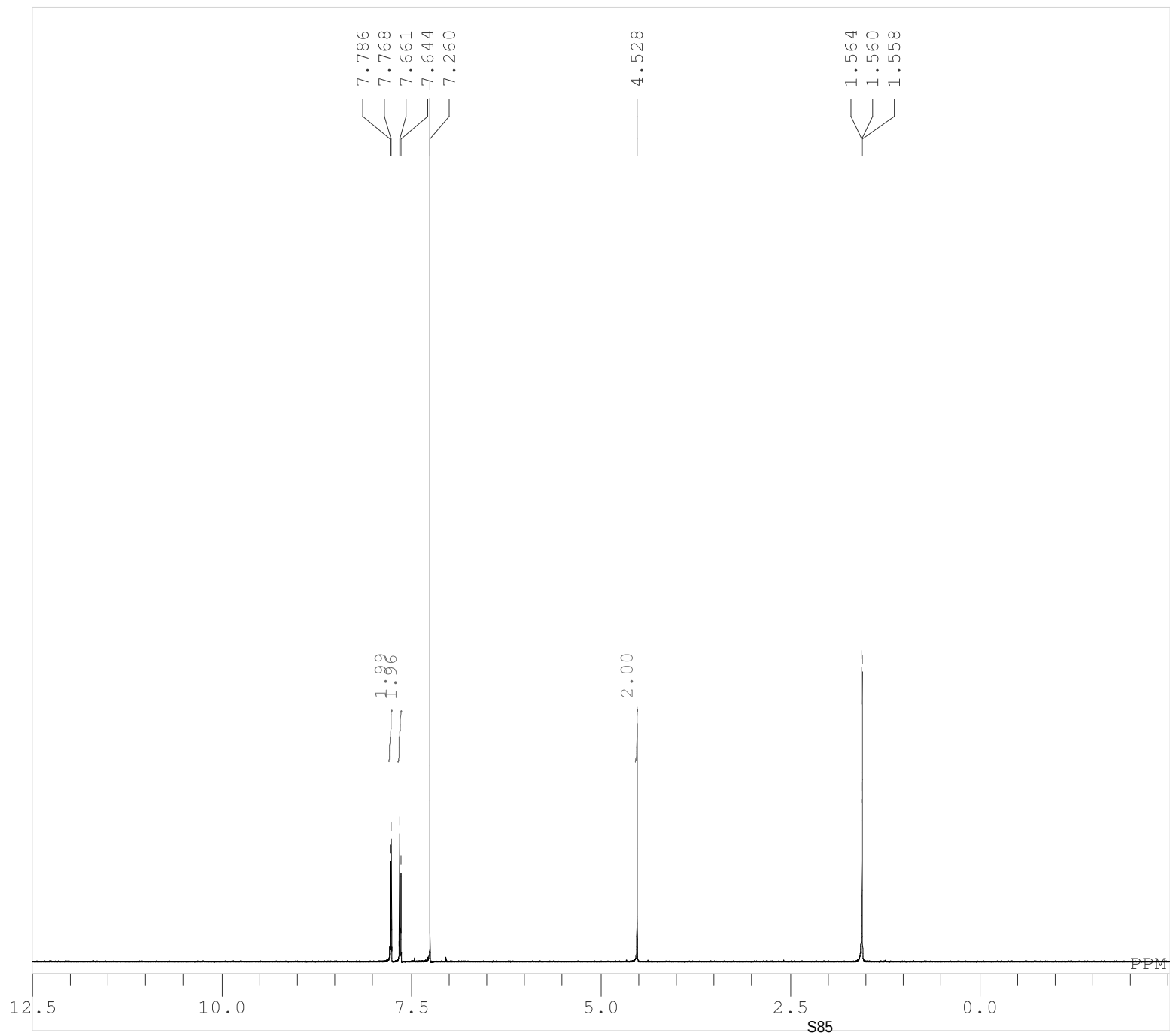
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COMNT single_pulse
DATIM 2017-07-19 09:54:13
OBNUC 1H
EXMOD proton.jxp
OBFRQ 500.16 MHz
OBSET 2.41 KHz
OBFIN 6.01 Hz
POINT 13107
FREQU 7507.51 Hz
SCANS 8
ACQTM 1.7459 sec
PD 5.0000 sec
PW1 6.85 usec
IRNUC 1H
CTEMP 17.7 c
SLVNT CDCL3
EXREF 7.26 ppm
BF 0.10 Hz
RGAIN 46



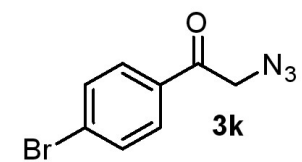


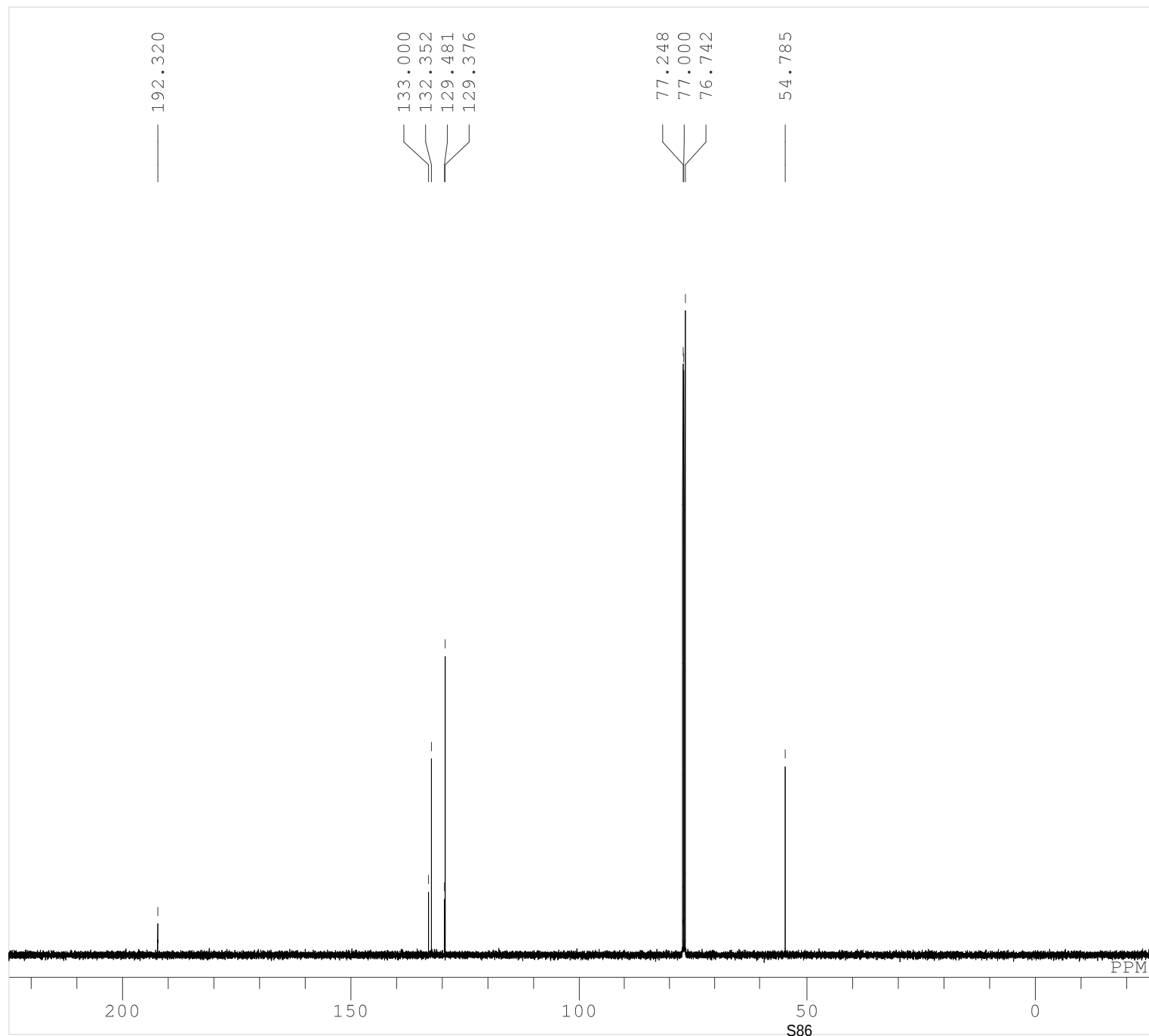
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COMNT single pulse decoupled gated
DATIM 2017-07-19 09:56:02
OBNUC 13C
EXMOD carbn.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1680
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 18.5 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



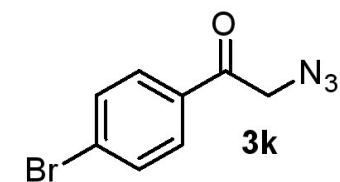


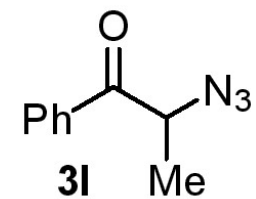
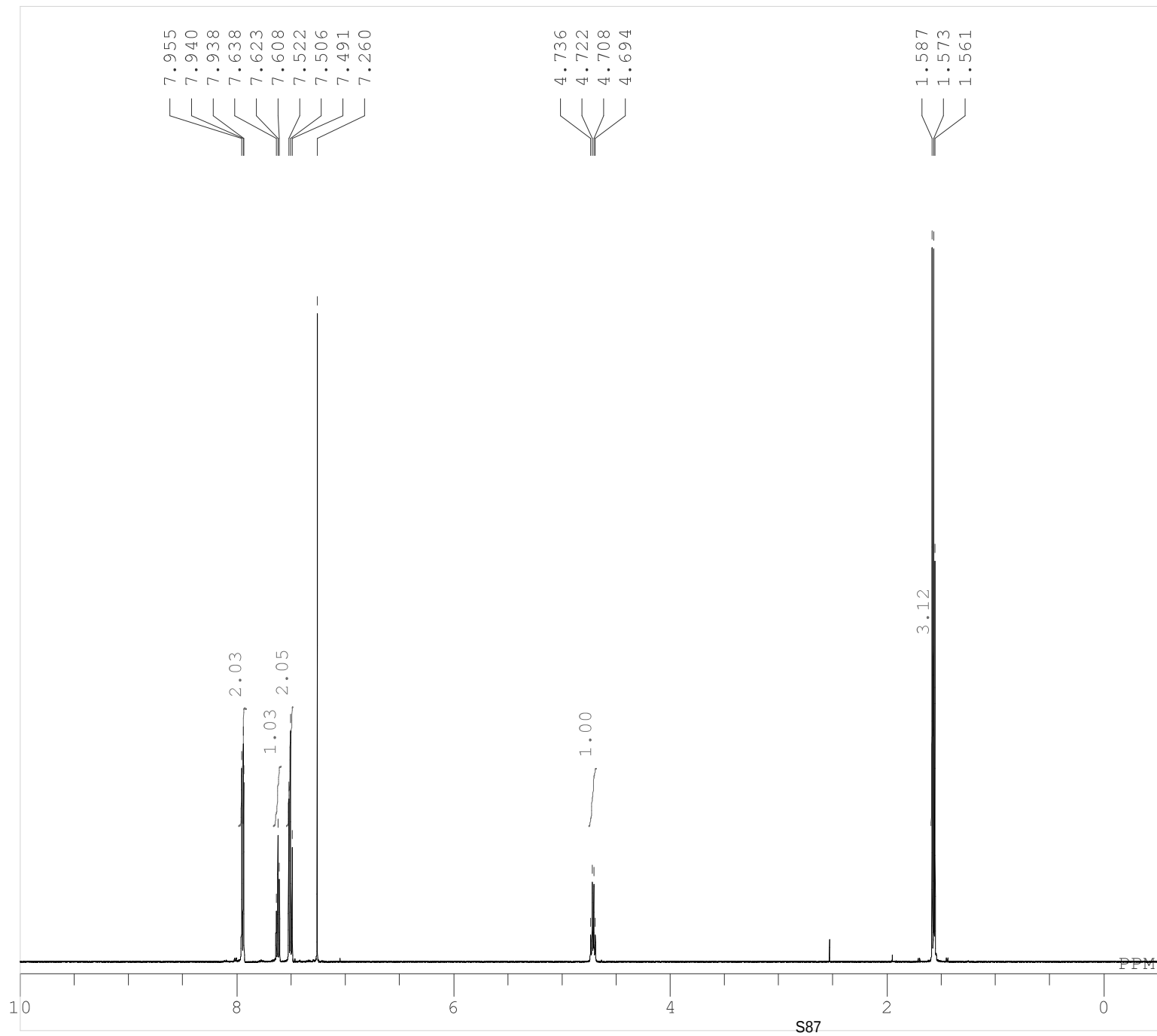
DFILE TY_09_048_01-1-1.als
 COMNT azide
 DATIM 2017-08-01 16:34:23
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 19.0 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 50

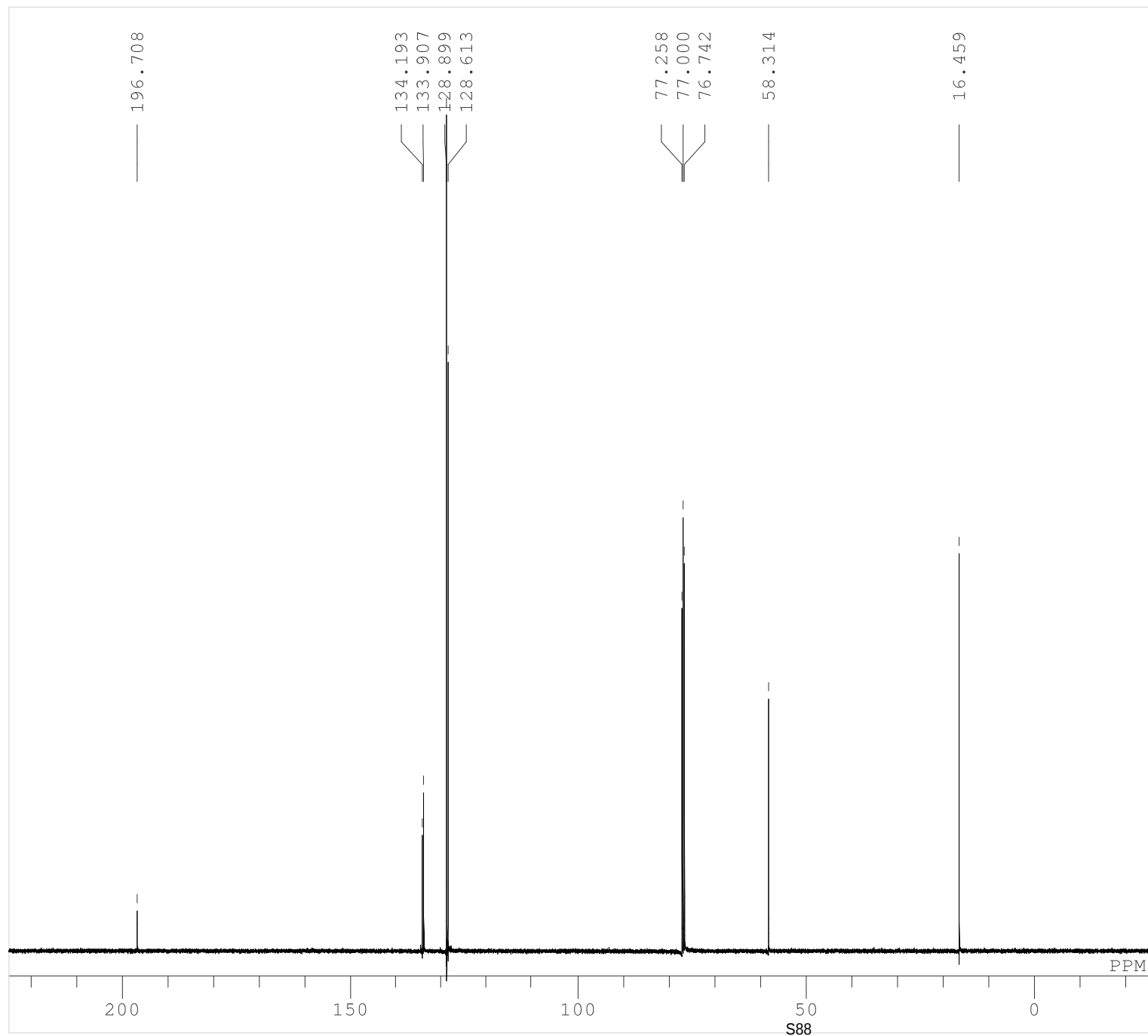




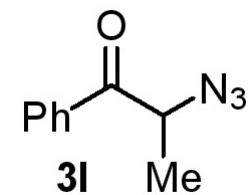
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COMNT single pulse decoupled gated
DATIM 2017-08-01 17:44:57
OBNUC 13C
EXMOD carbn.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1360
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 19.0 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60

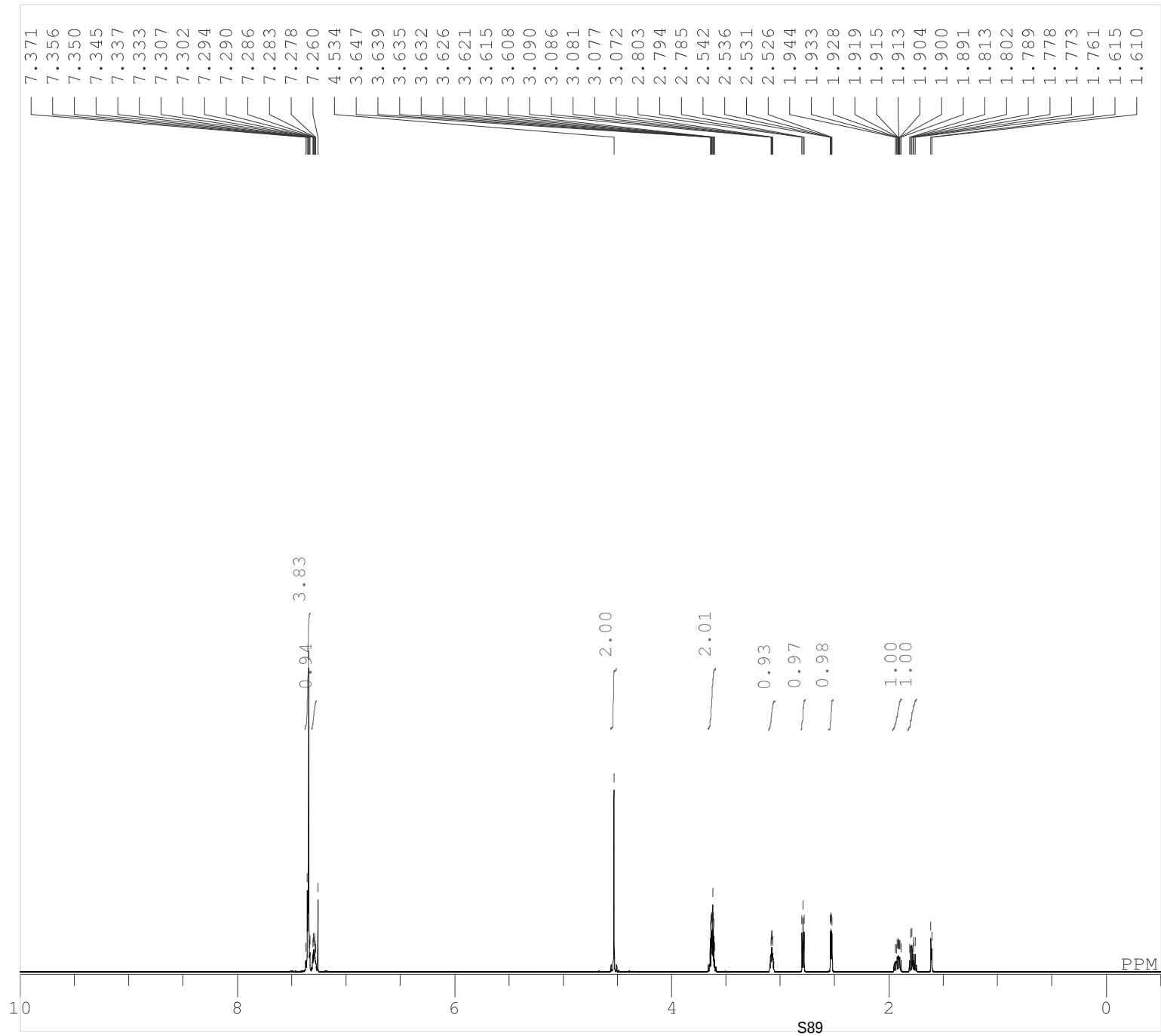




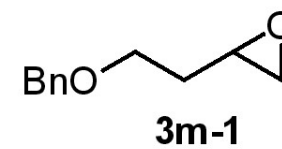


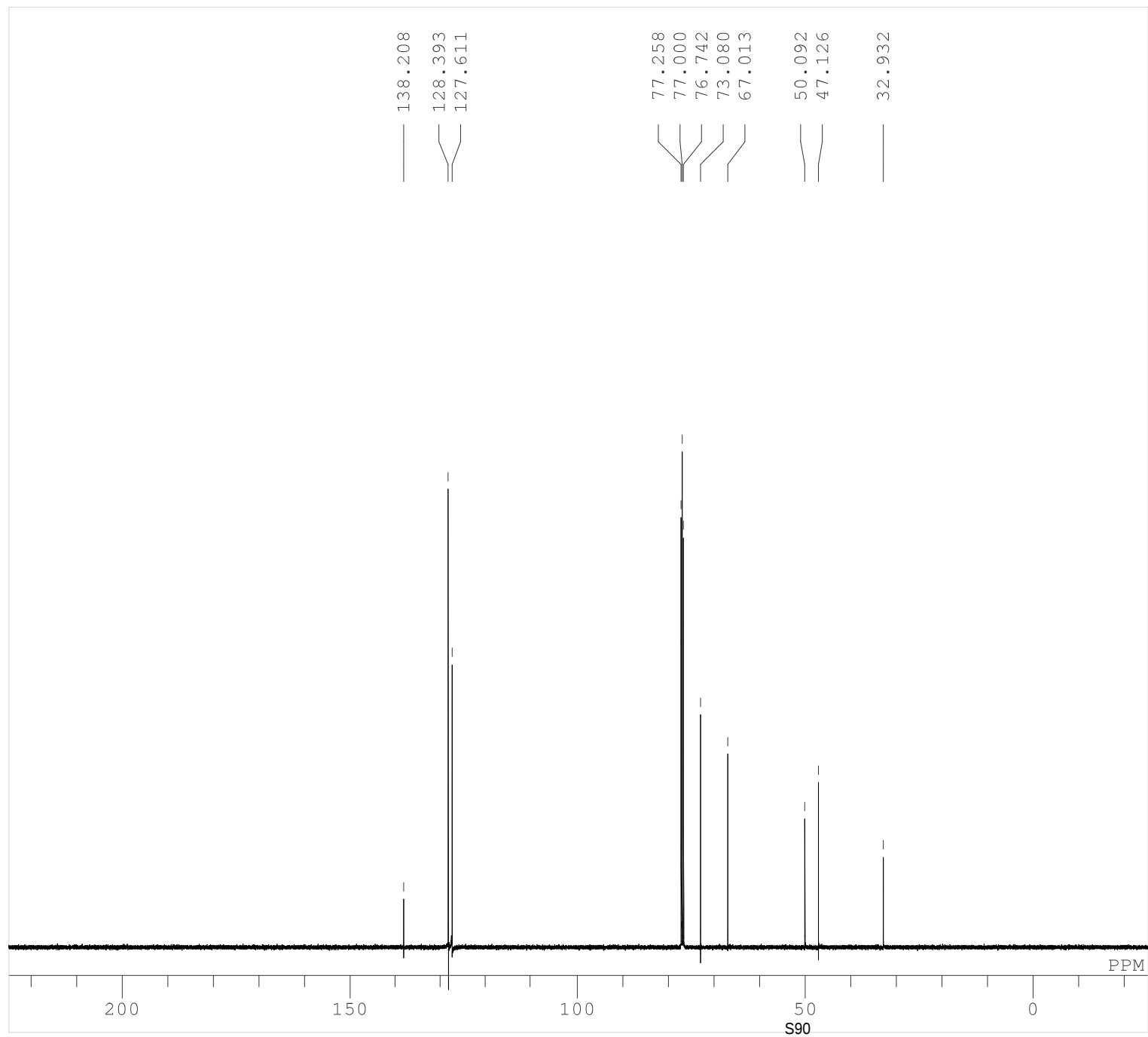
DFILE TY_09_033_03_carbn-1-1.als
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DATIM 2017-07-20 14:16:28
OBNUC 13C
EXMOD carbn.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1260
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 19.2 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



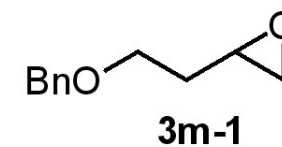


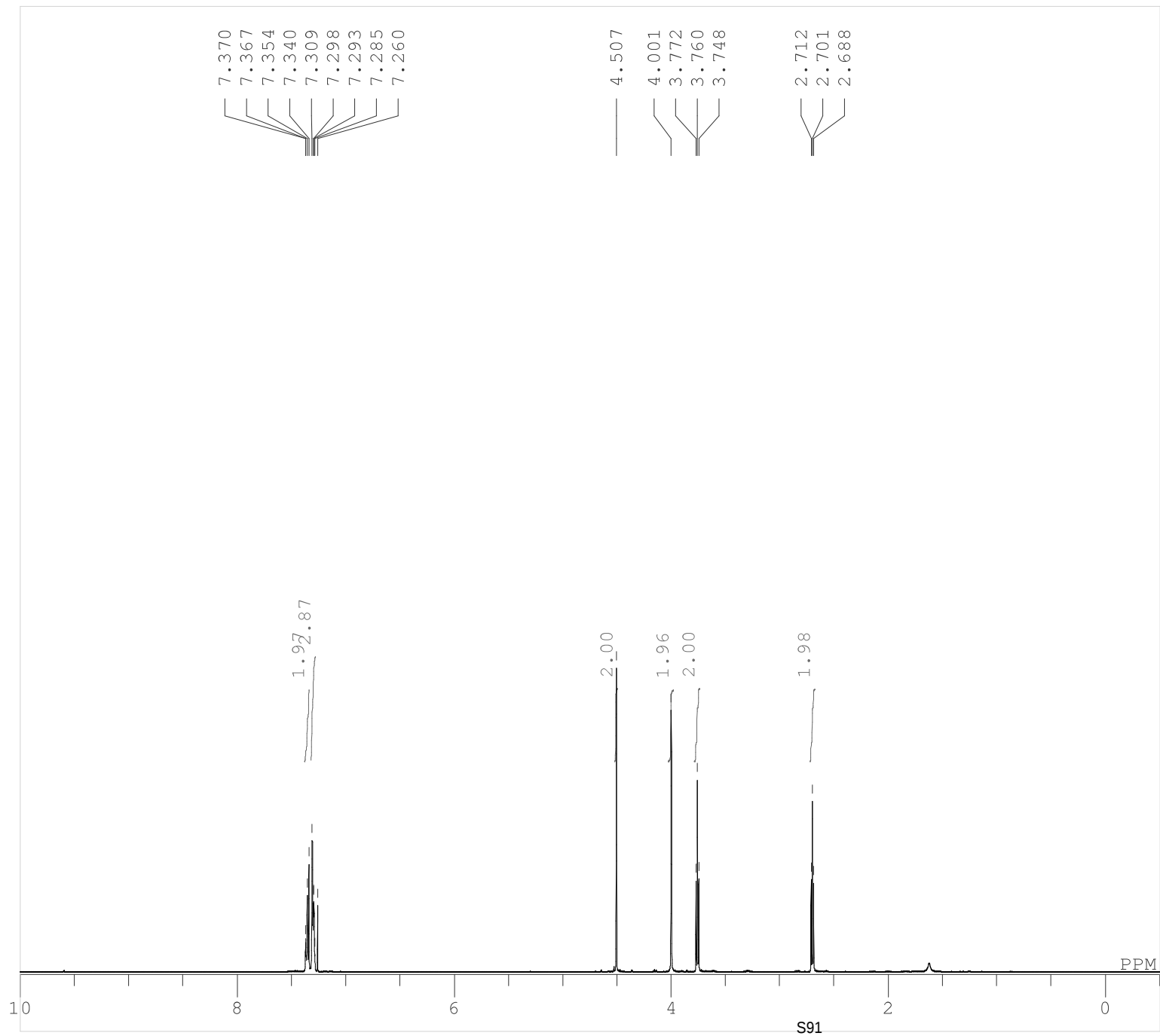
DFILE TY_08_094_01_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-06-08 10:26:51
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 16.3 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 38



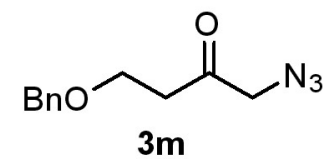


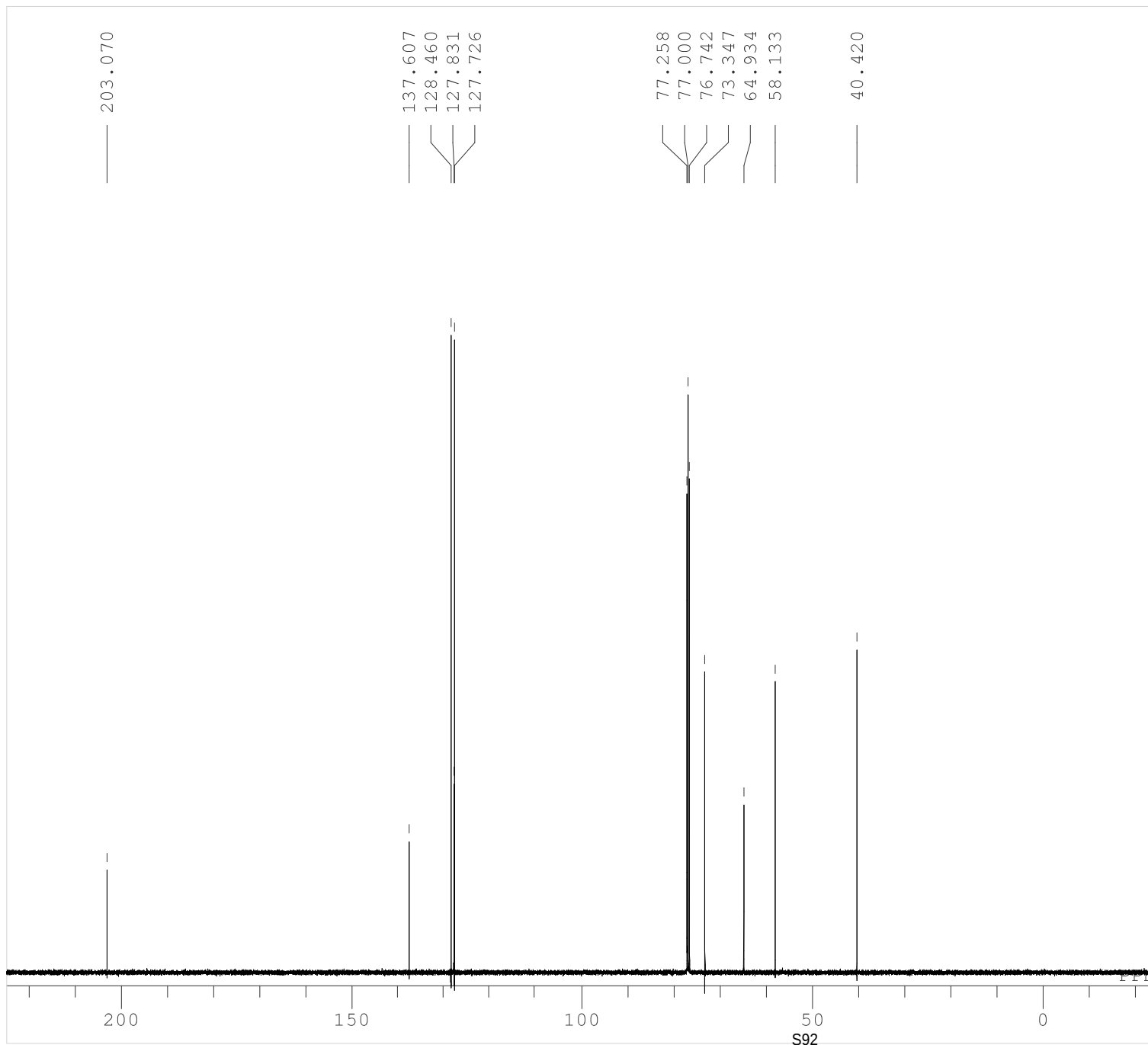
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COMNT single pulse decoupled gated
DATIM 2017-06-08 10:29:07
OBNUC 13C
EXMOD carbn.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1260
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 16.6 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



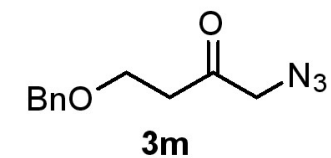


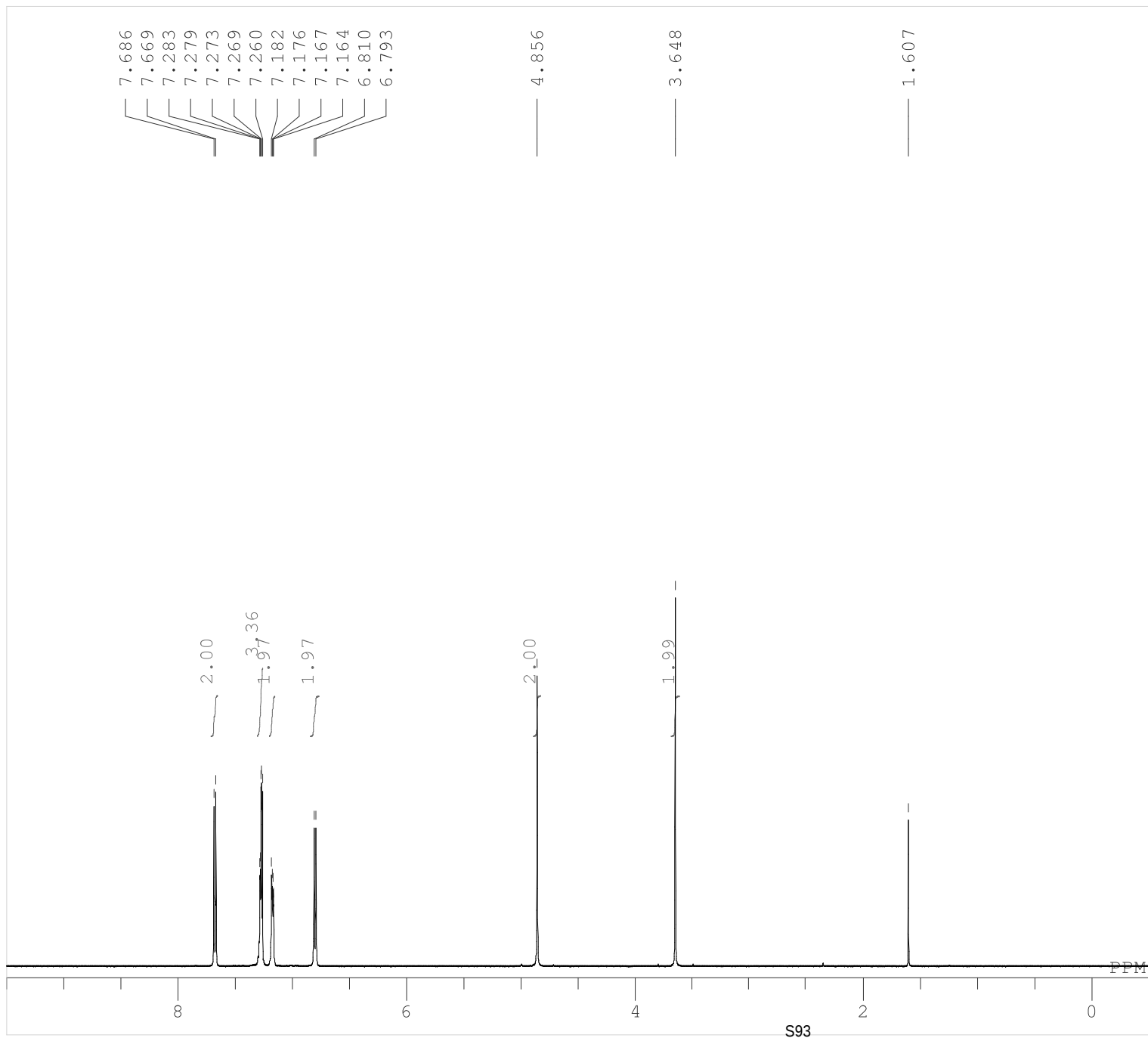
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 COMNT single_pulse
 DATIM 2017-06-16 10:02:48
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 13.1 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 38



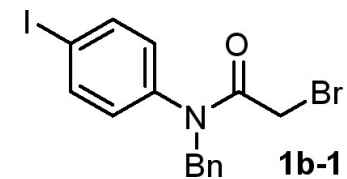


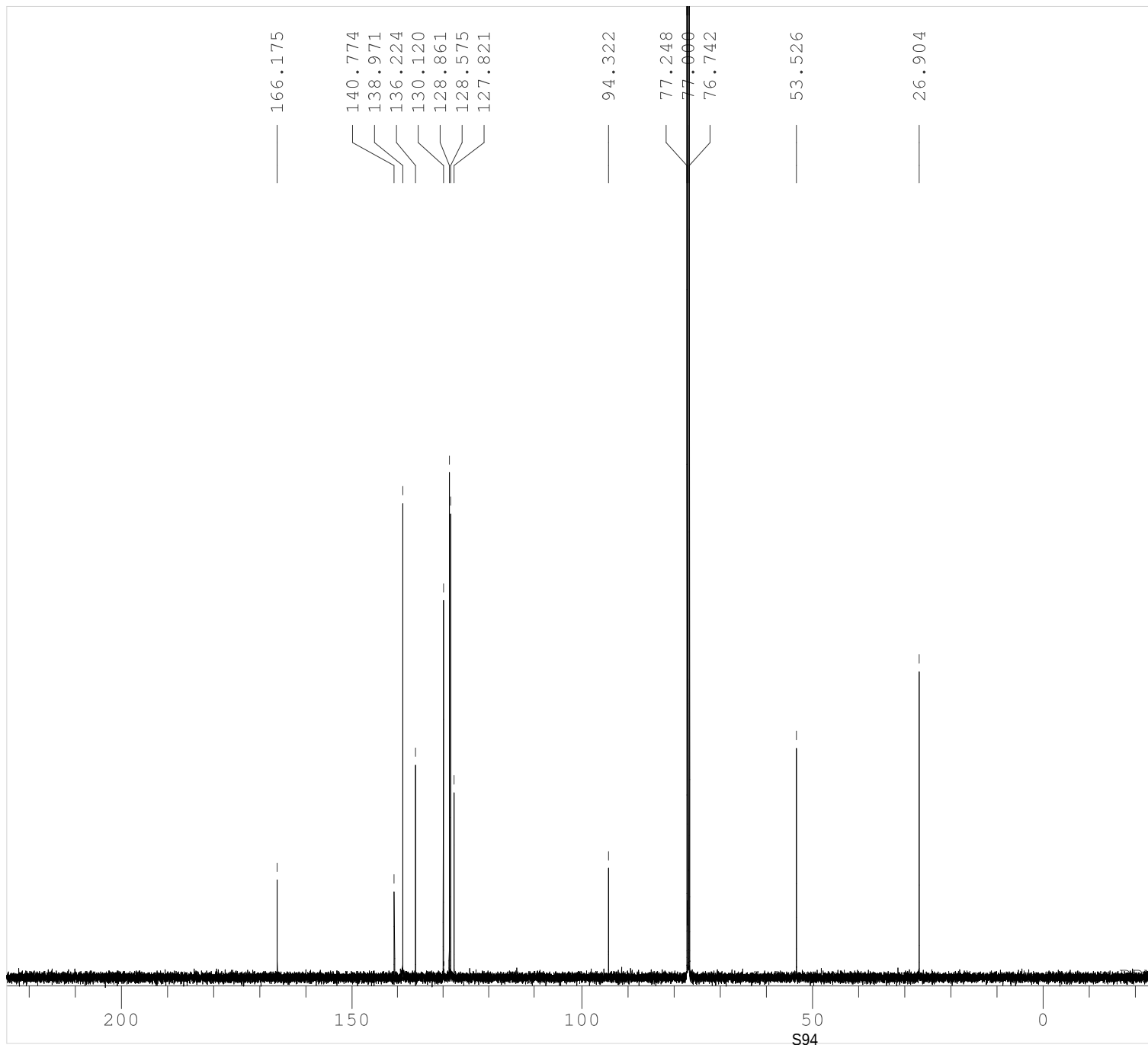
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COMNT single pulse decoupled gated
DATIM 2017-06-16 10:04:47
OBNUC 13C
EXMOD carbn.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1260
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 13.8 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



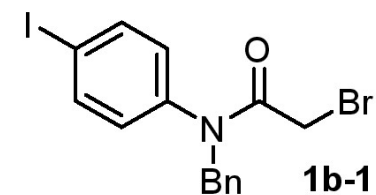


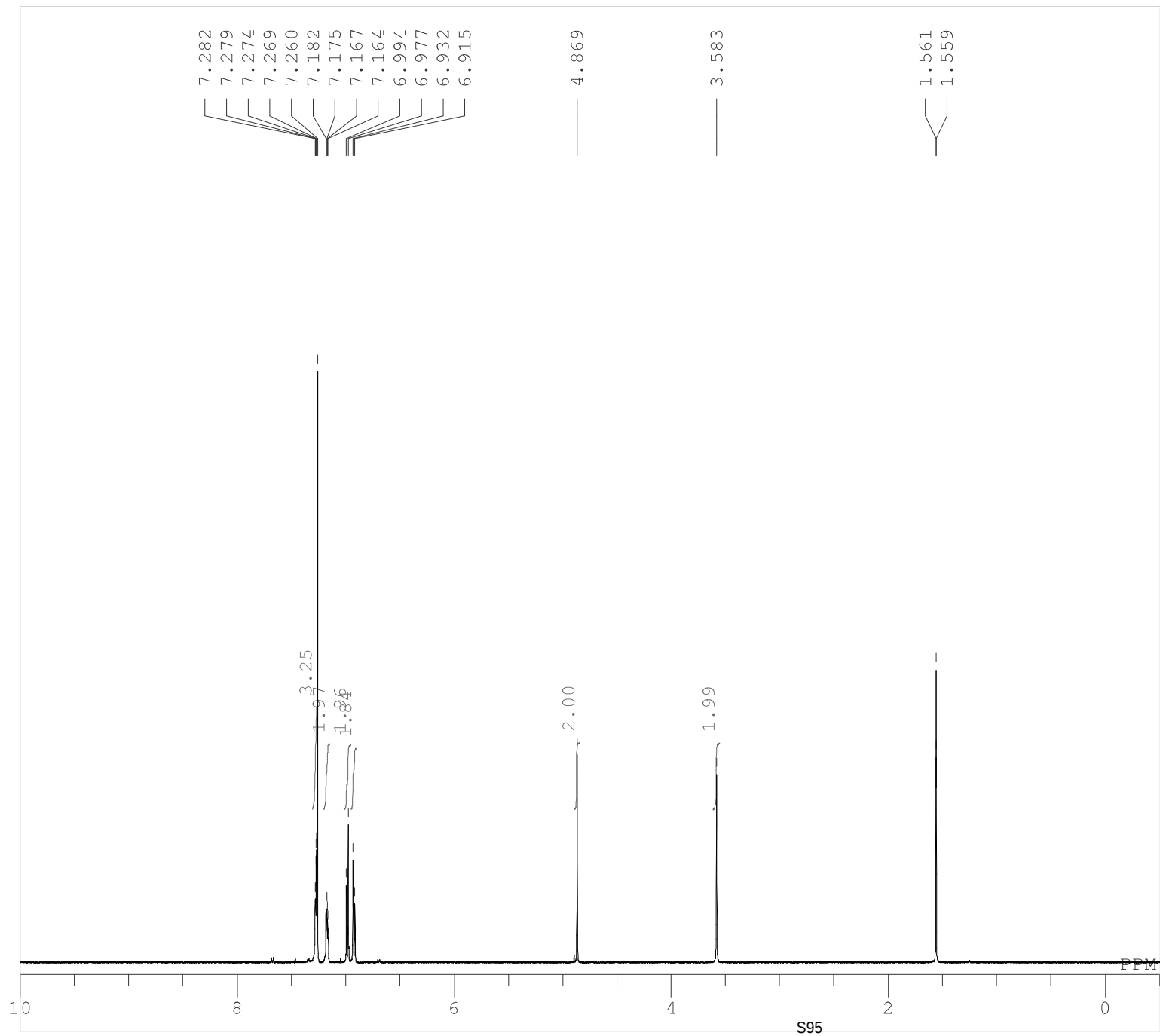
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 COMNT single_pulse
 DATIM 2017-07-26 09:56:09
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 17.9 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 40



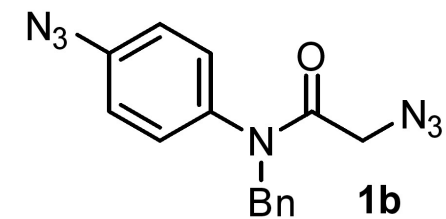


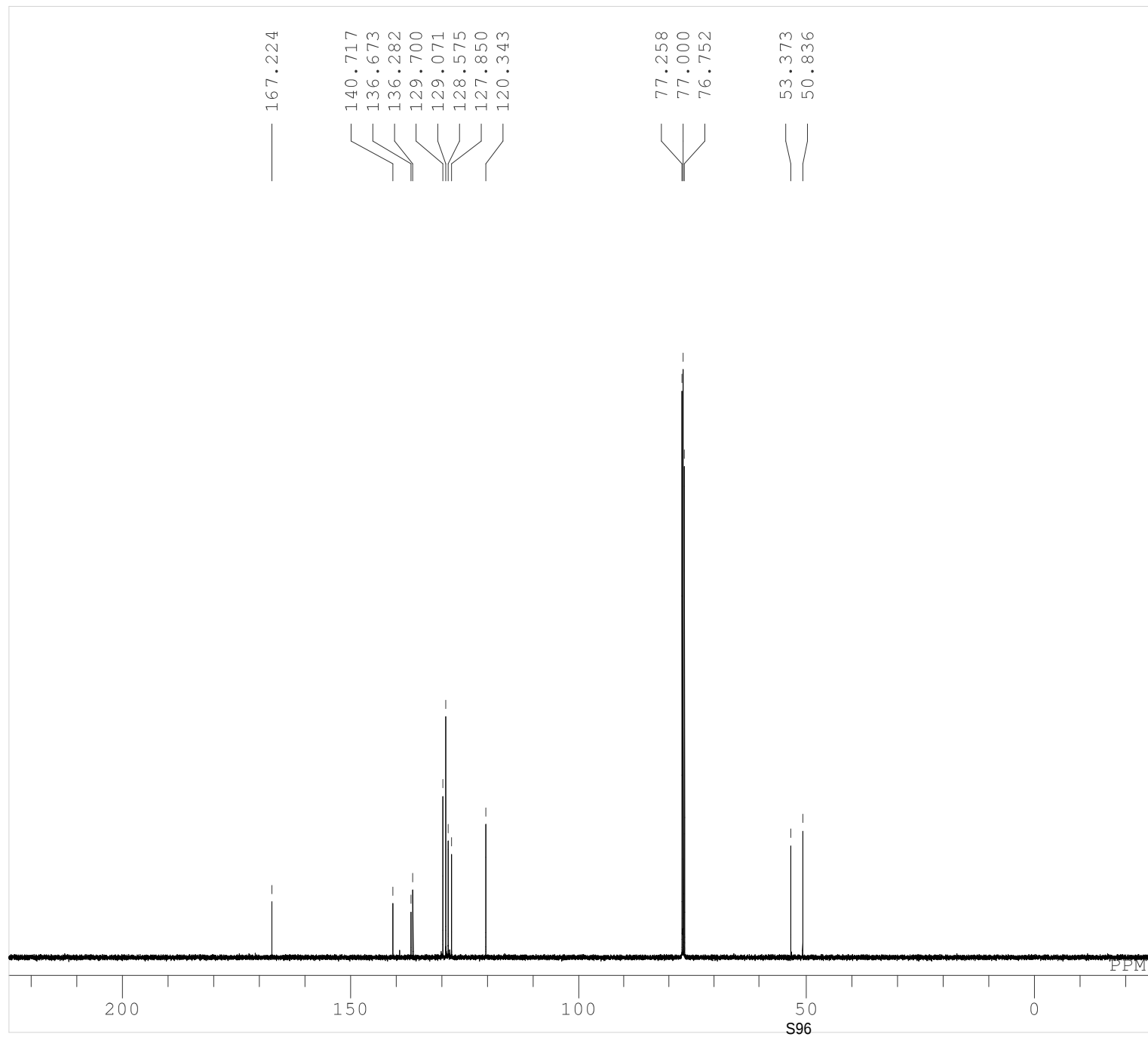
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DATIM 2017-07-26 10:01:44
OBNUC 13C
EXMOD carbn.jxp
OBFRQ 125.77 MHz
OBSET 7.87 KHz
OBFIN 4.21 Hz
POINT 26214
FREQU 31446.54 Hz
SCANS 1680
ACQTM 0.8336 sec
PD 2.0000 sec
PW1 3.12 usec
IRNUC 1H
CTEMP 18.9 c
SLVNT CDCL3
EXREF 77.00 ppm
BF 0.10 Hz
RGAIN 60



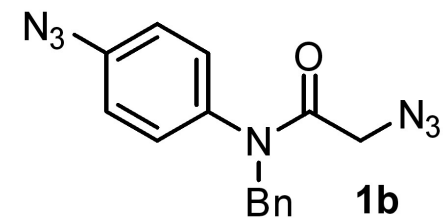


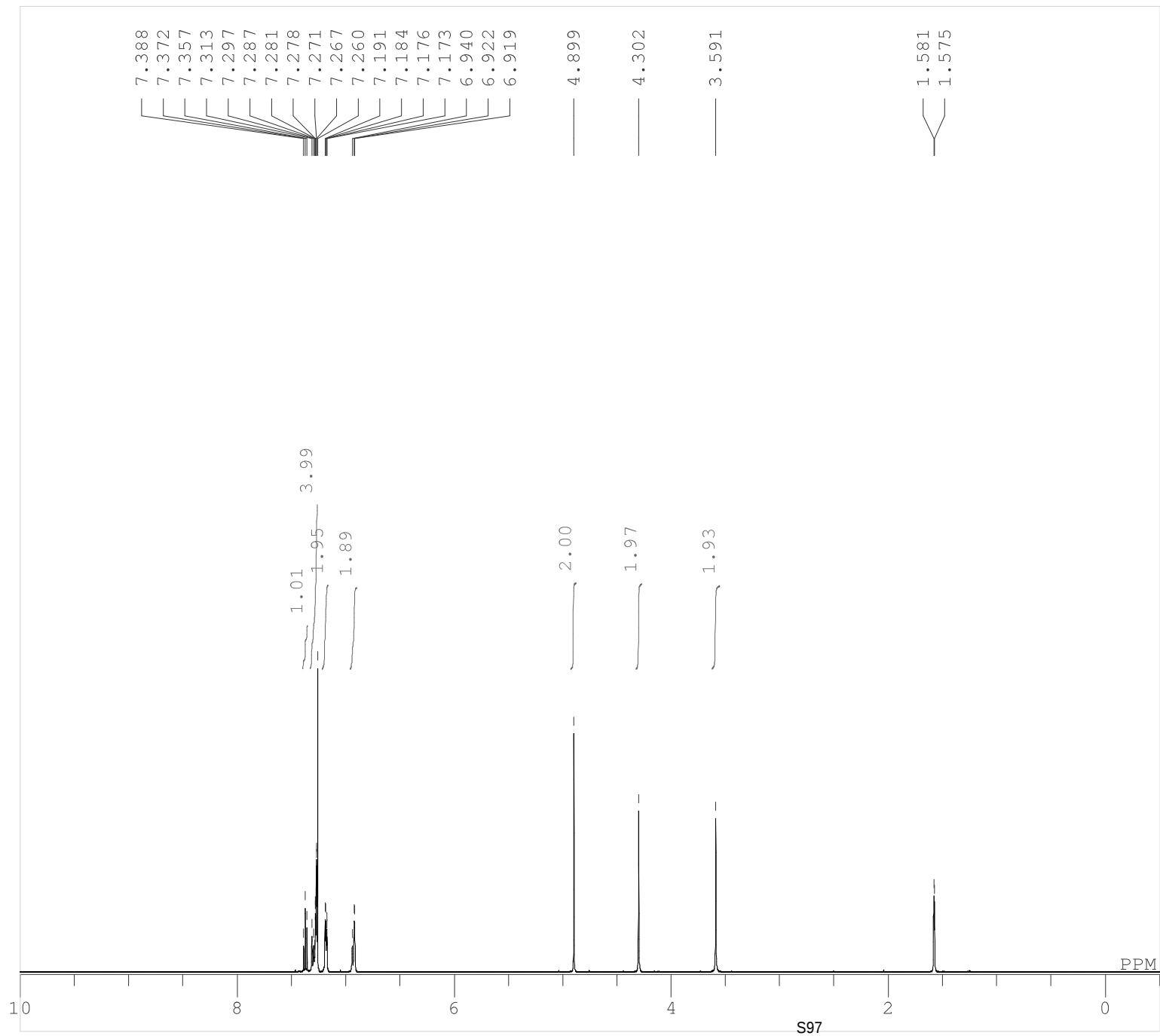
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 COMNT dazid
 DATIM 2017-07-26 12:13:20
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.7 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 48



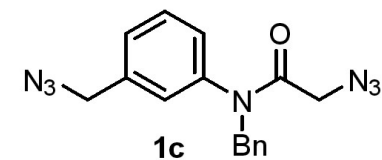


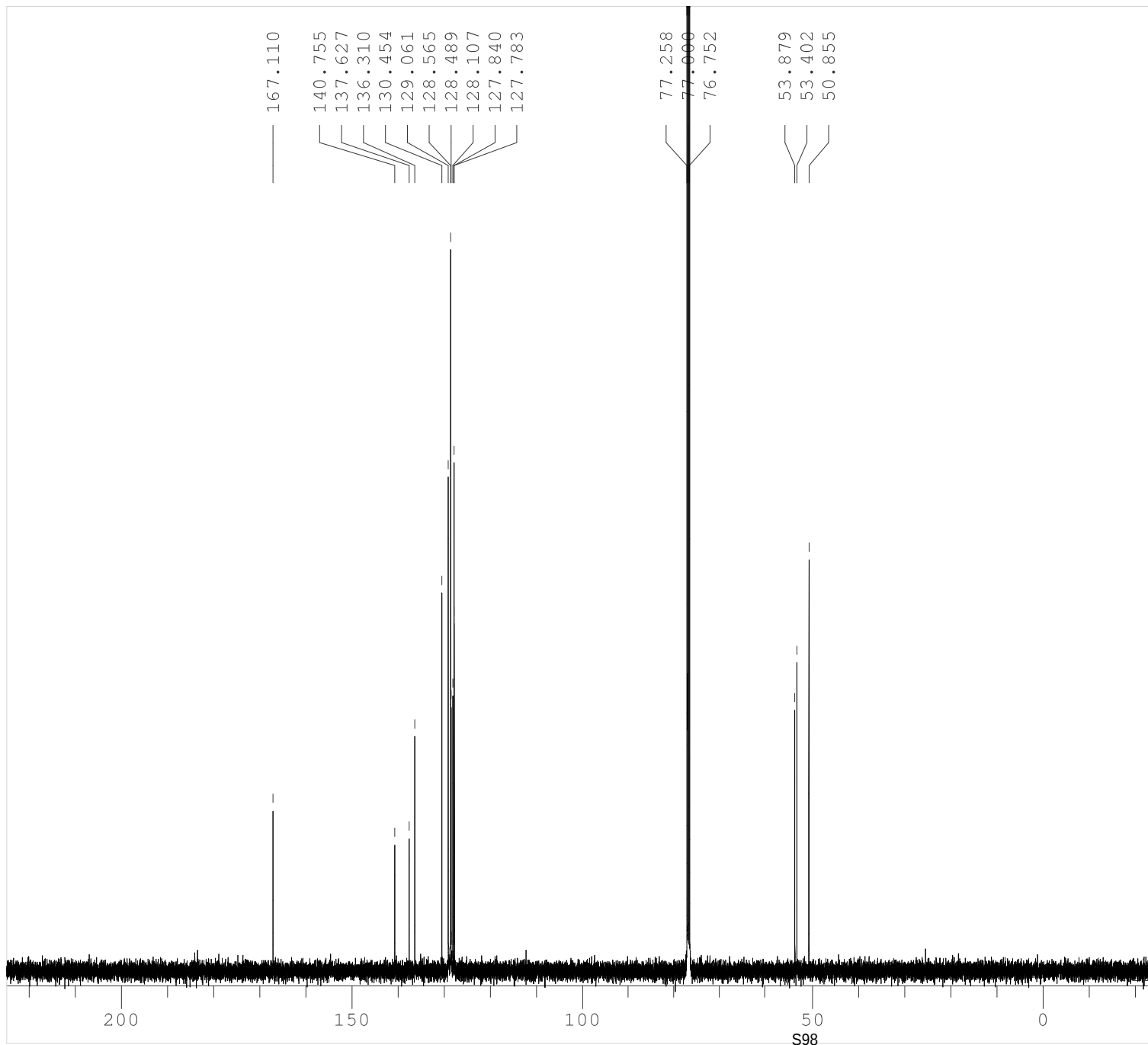
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 DATIM 2017-07-27 09:55:36
 OBNUC ¹³C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 26214
 FREQU 31446.54 Hz
 SCANS 1680
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC ¹H
 CTEMP 19.0 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60





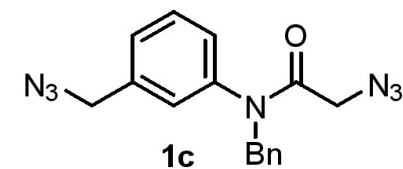
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 COMNT single_pulse
 DATIM 2017-10-17 23:17:24
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.4 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 44

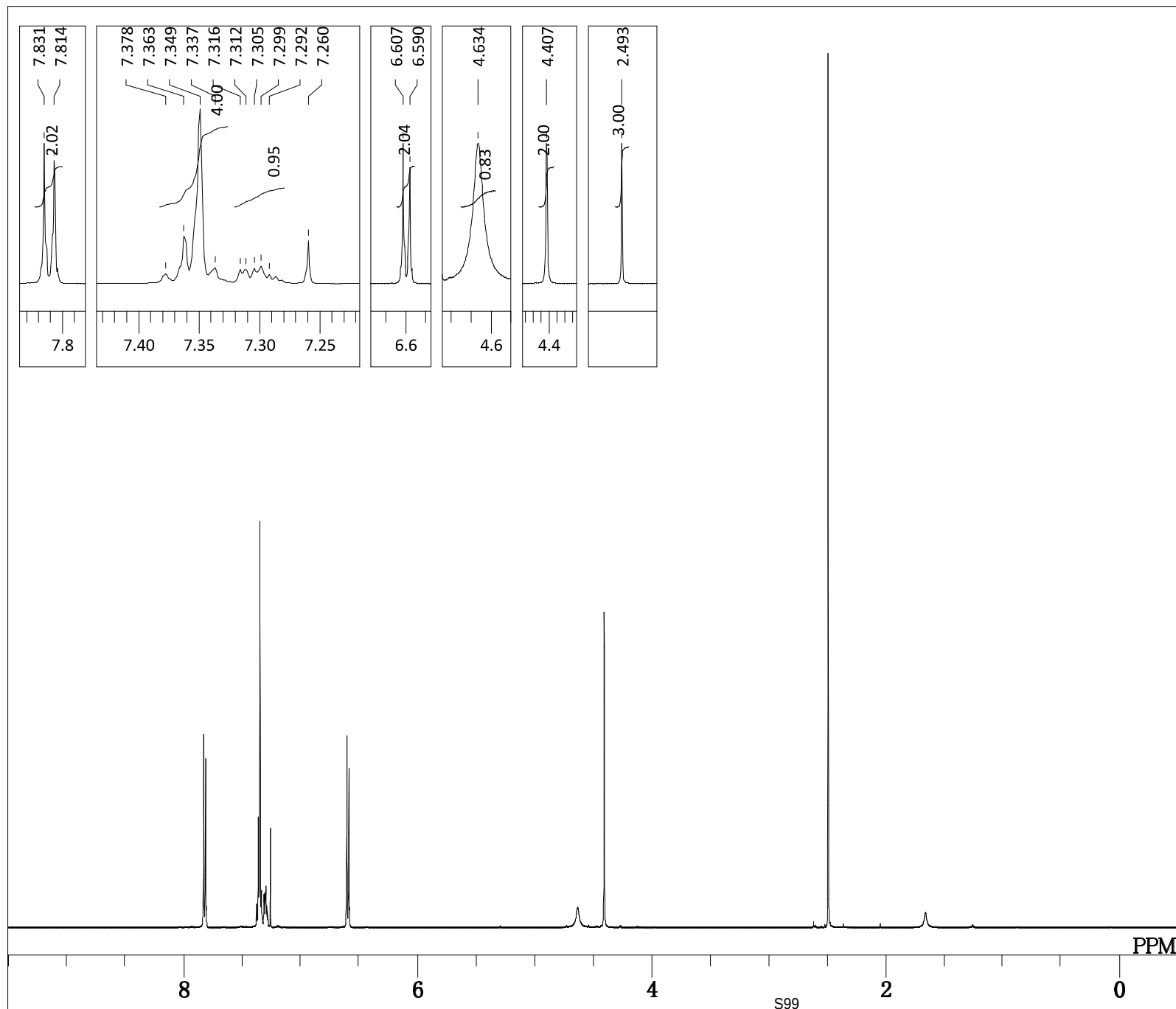




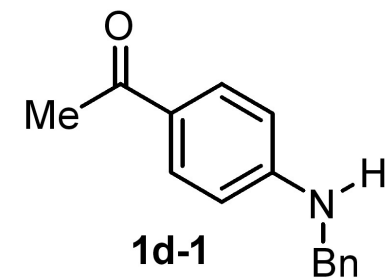
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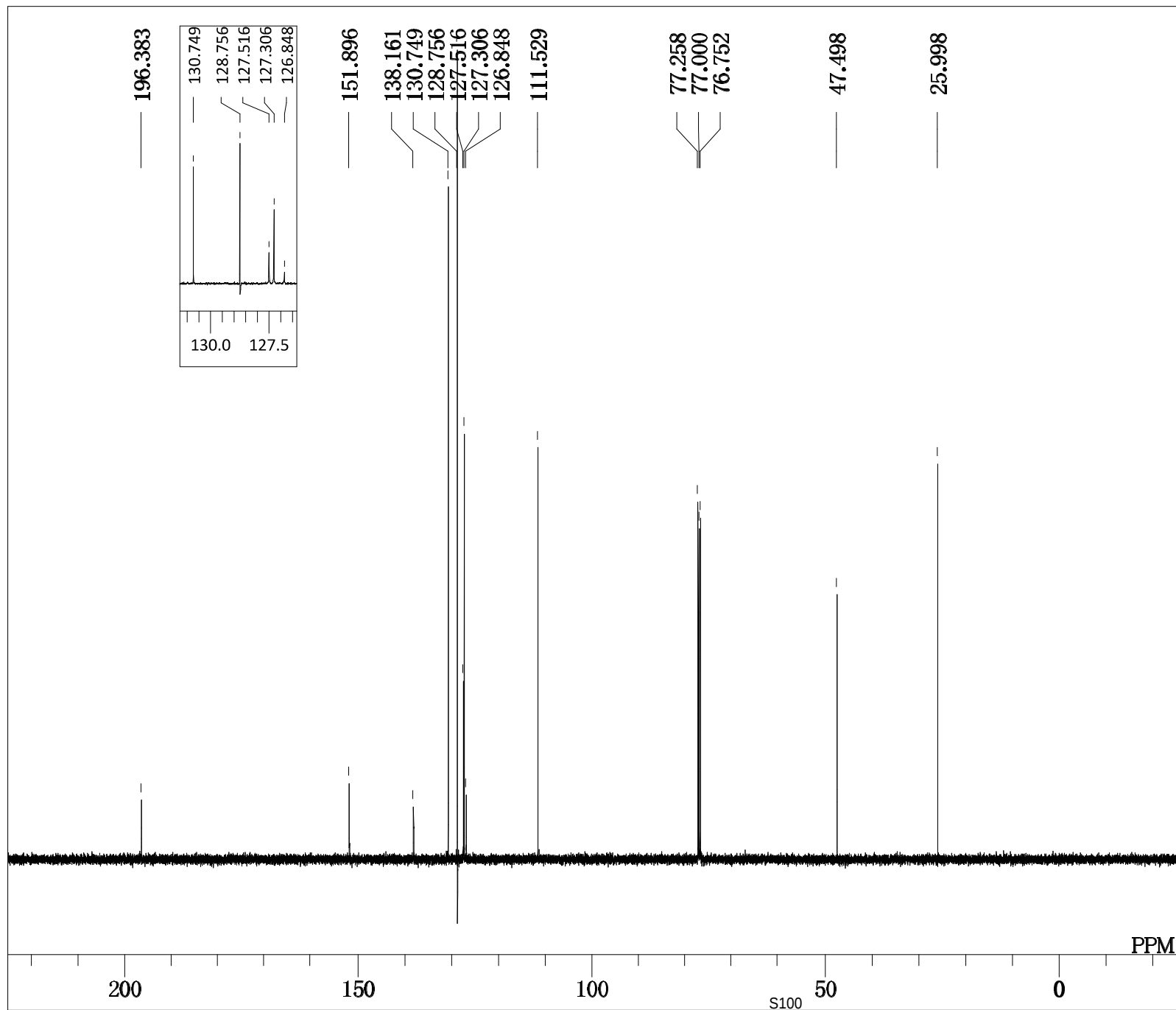
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COMNT  single pulse decoupled gated
DATIM  2017-10-17 23:19:05
OBNUC  13C
EXMOD  carbn.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS     8460
ACQTM    0.8336 sec
PD        2.0000 sec
PW1       3.12 usec
IRNUC    1H
CTEMP    19.2 c
SLVNT    CDCL3
EXREF    77.00 ppm
BF        0.10 Hz
RGAIN    60
  
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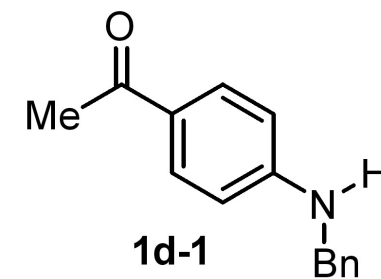


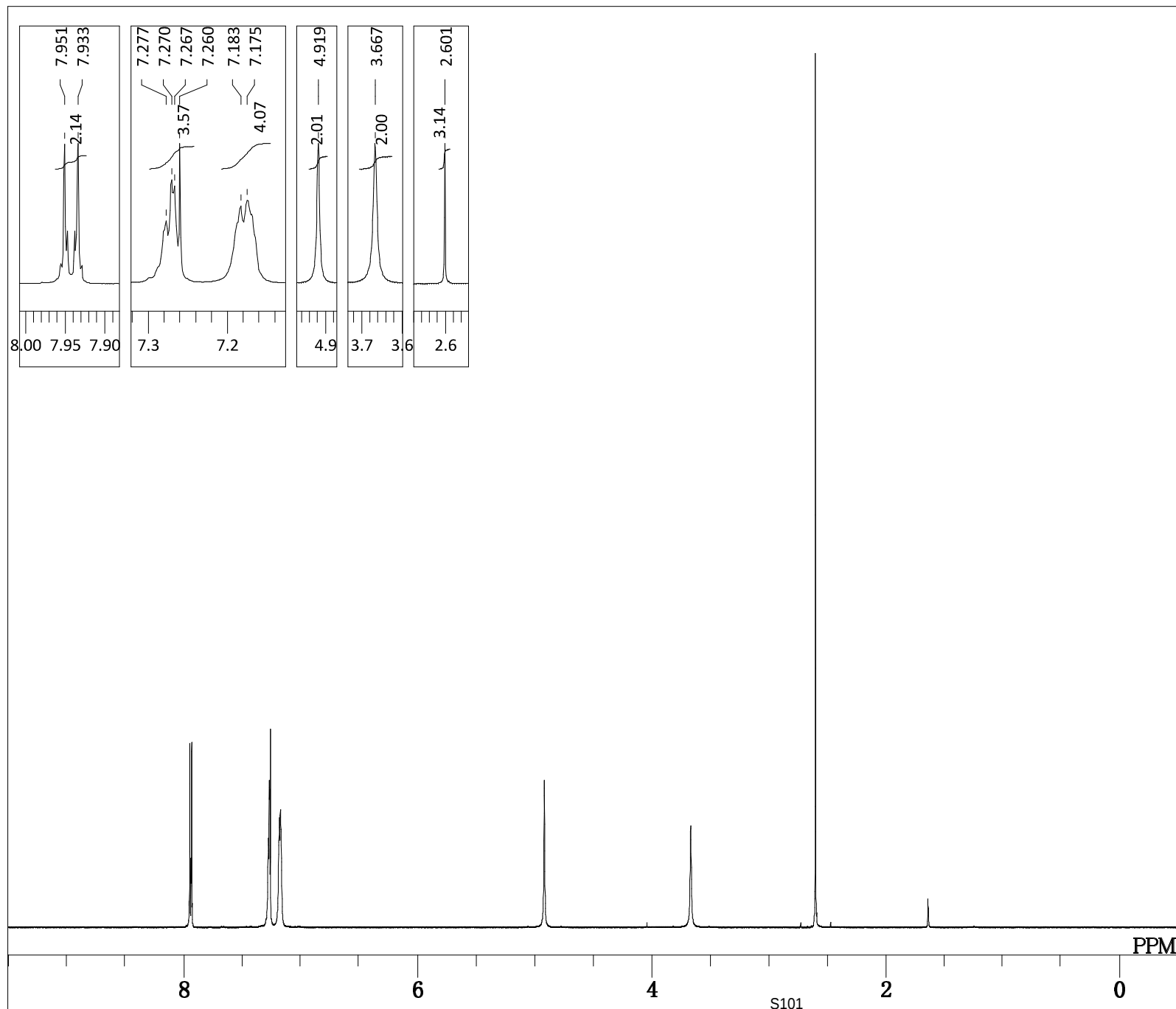
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 DATIM 2017-08-04 11:09:13
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 17.9 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 38



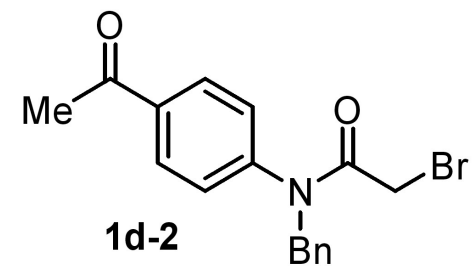


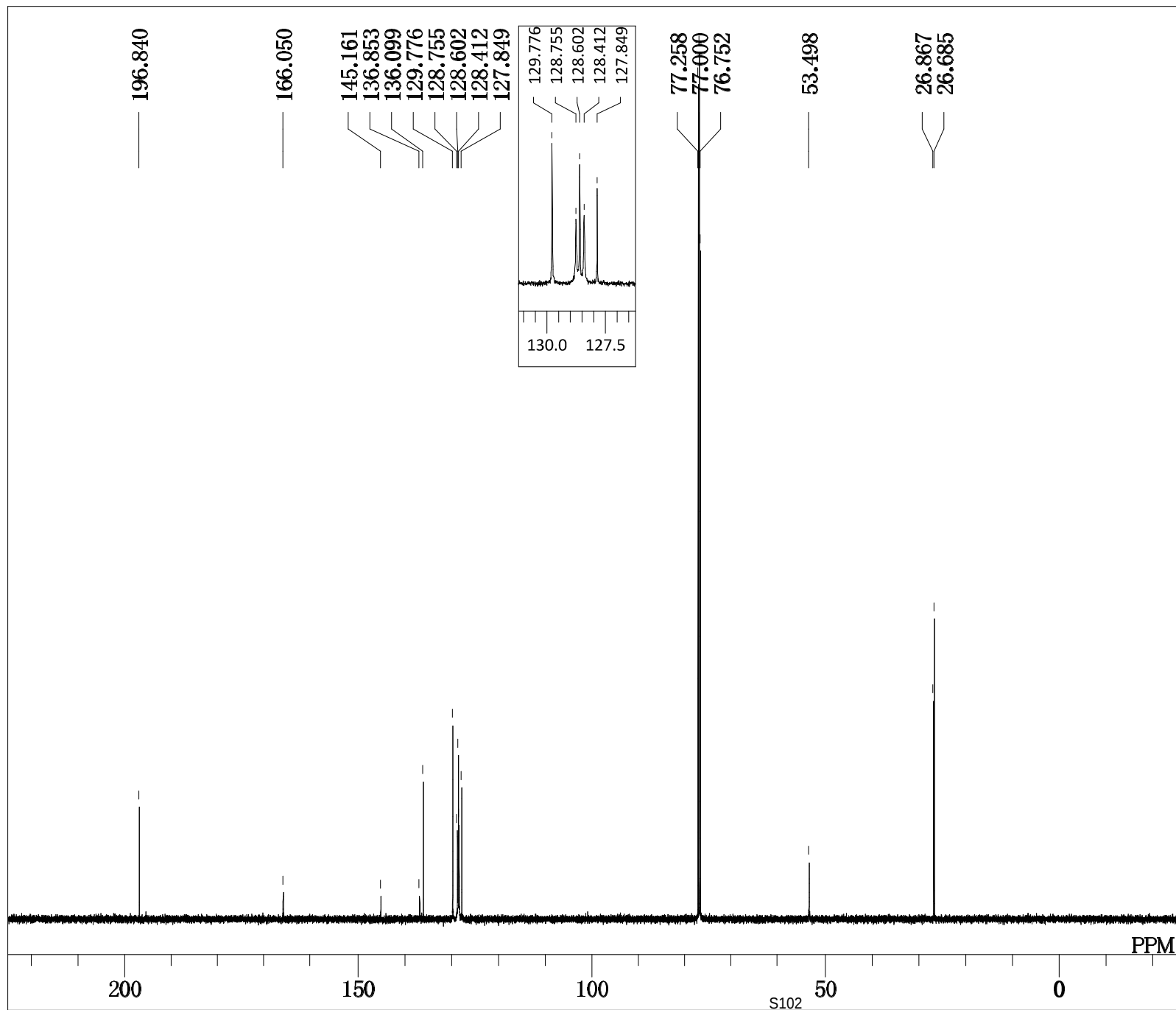
DFILE TU-02-057-1 170808_carbon-1-
 COMNT single pulse decoupled gated NO
 DATIM 2017-08-08 15:12:13
 OBNUC 13C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 26214
 FREQU 31446.54 Hz
 SCANS 256
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC 1H
 CTEMP 18.0 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60



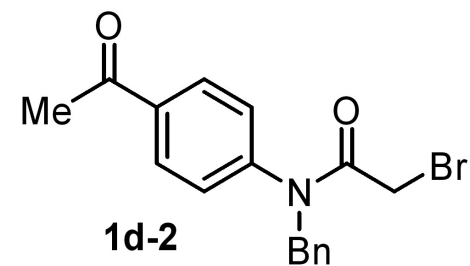


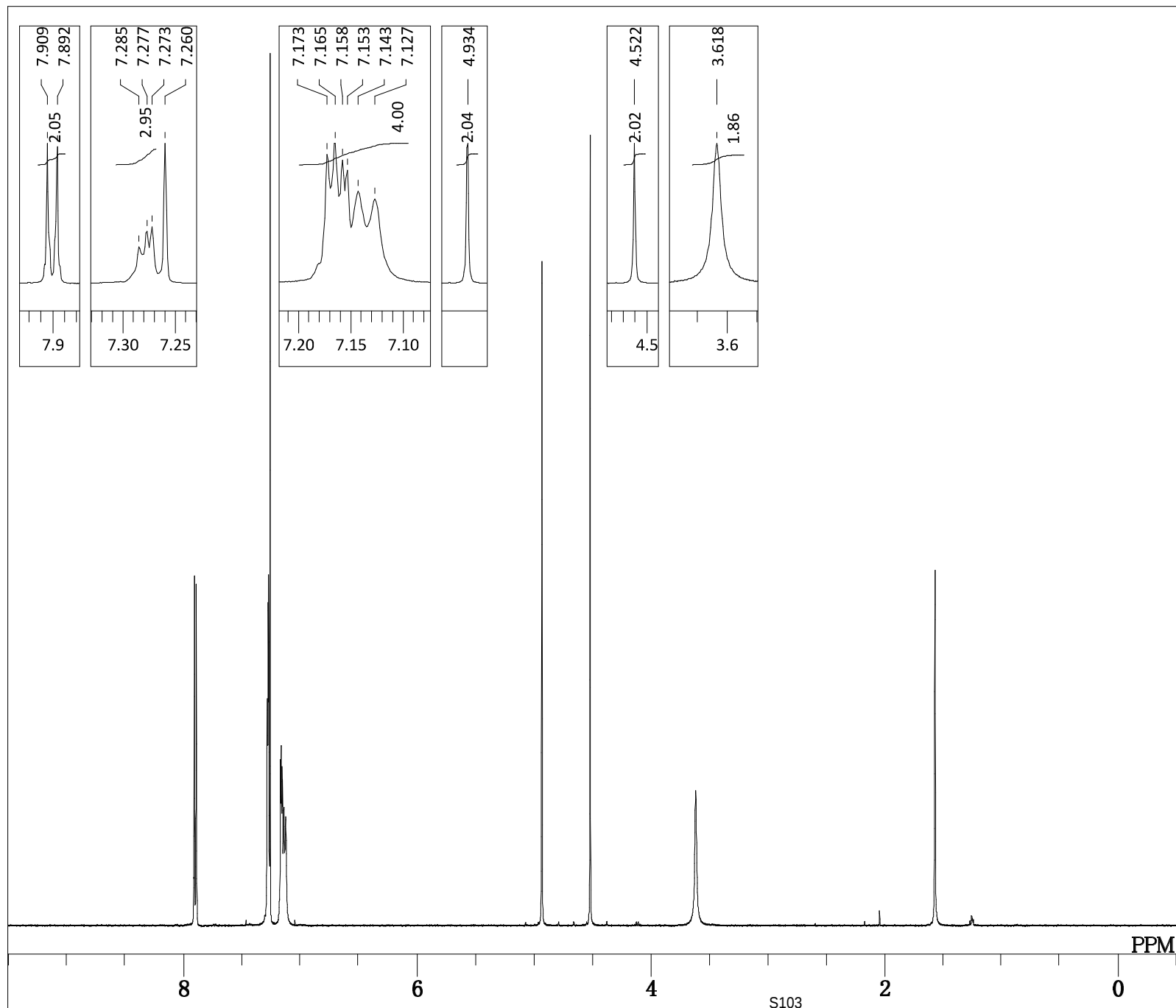
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 COMNT single_pulse
 DATIM 2018-02-15 18:50:56
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 15.0 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 40



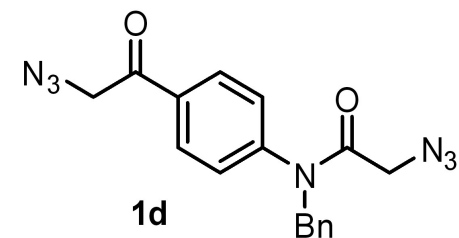


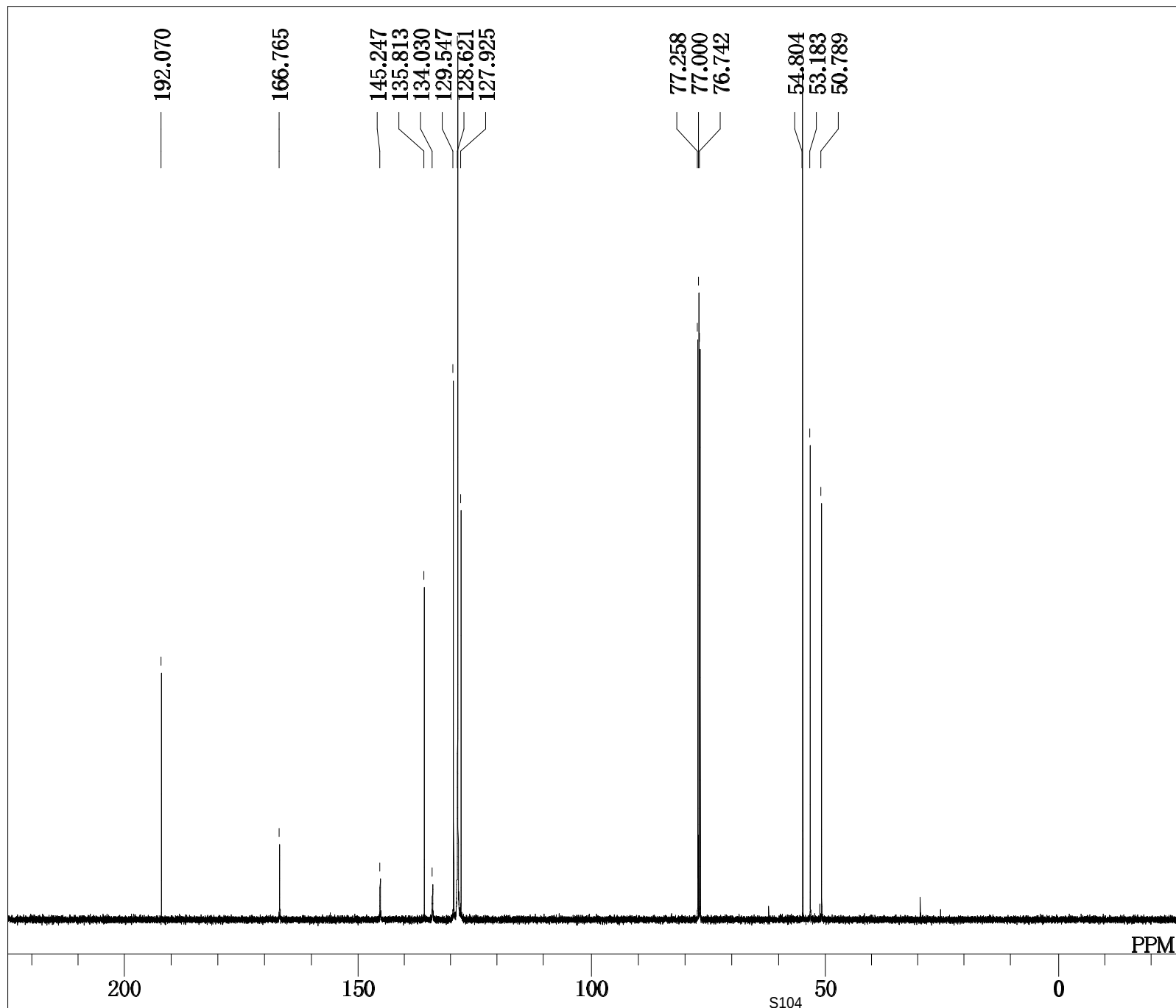
DFILE TU-02-060-3 180216_carbon-1-
 COMNT single pulse decoupled gated NO
 DATIM 2018-02-16 20:29:26
 OBNUC 13C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 32767
 FREQU 39308.18 Hz
 SCANS 1024
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC 1H
 CTEMP 14.7 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60



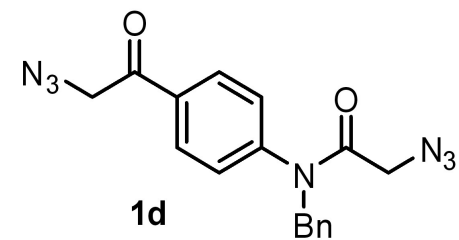


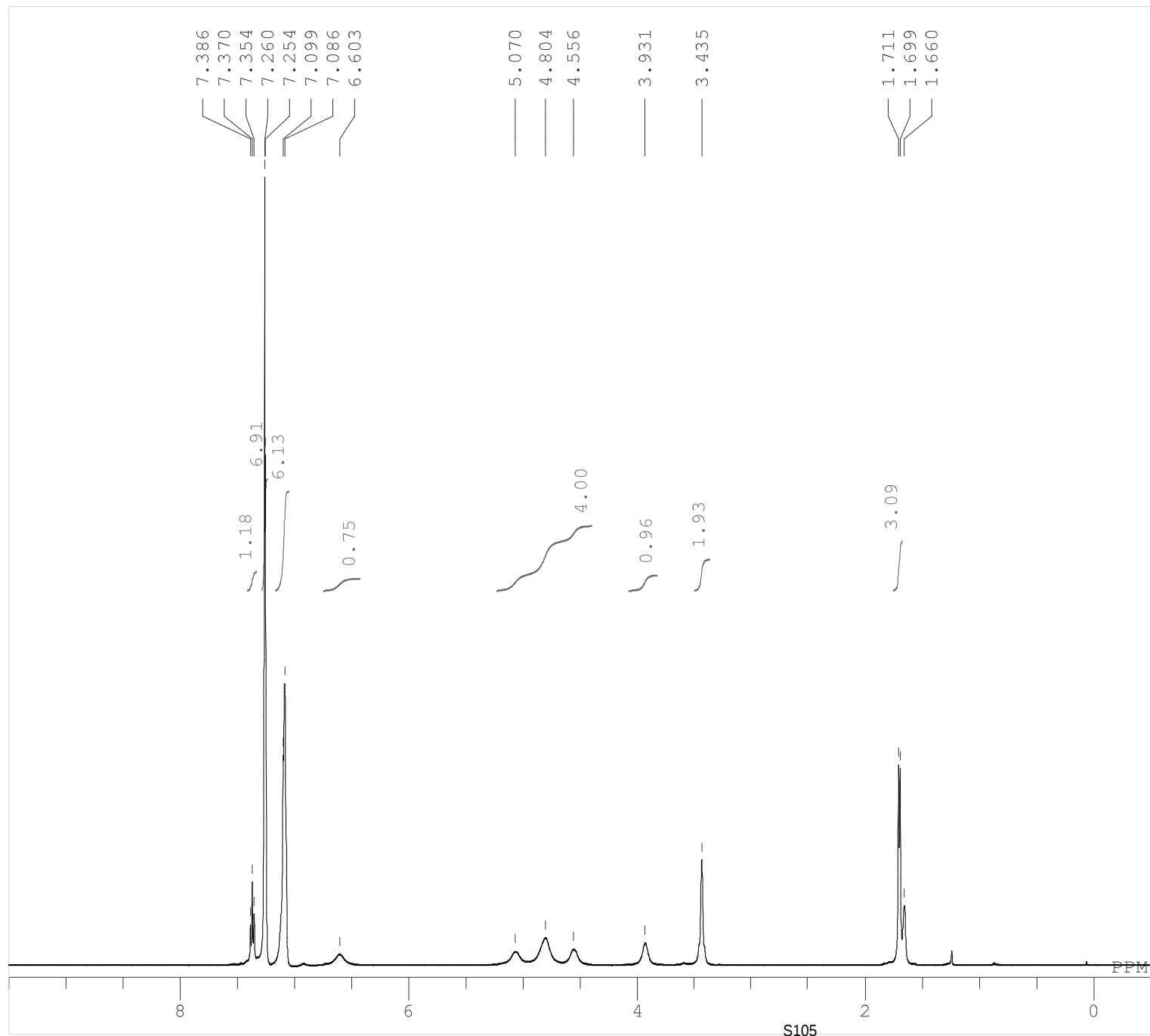
DFILE TU-02-056-2 dry_proton-1-1.al
 COMNT single_pulse
 DATIM 2017-07-28 17:07:56
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.9 c
 SLVNT CDCL₃
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 44



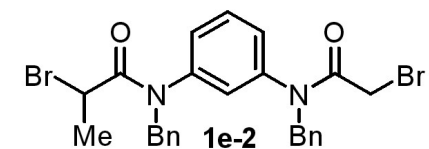


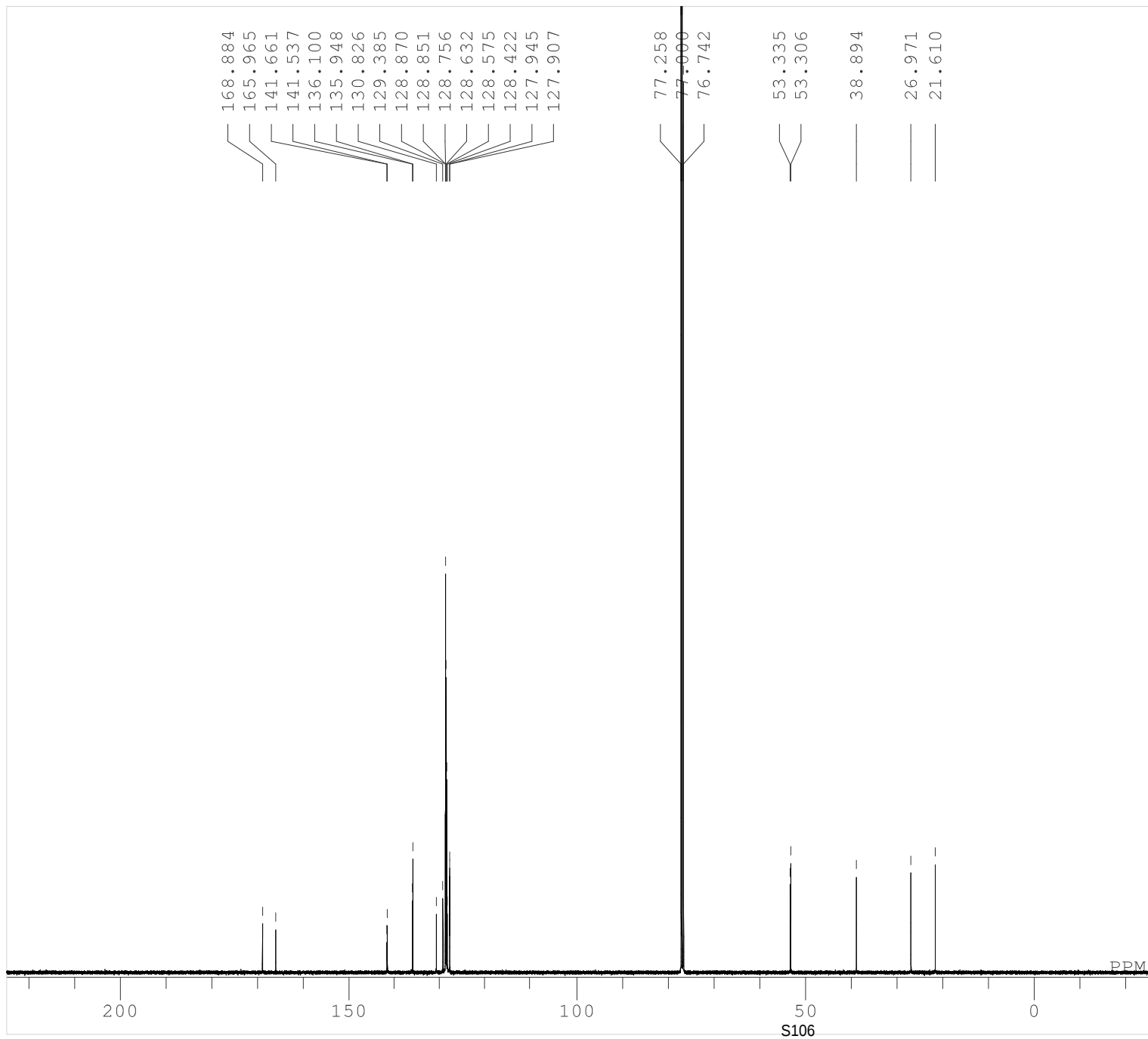
DFILE TU-02-055-2 170808_carbon-1-
 COMNT single pulse decoupled gated NO
 DATIM 2017-08-08 19:59:57
 OBNUC ¹³C
 EXMOD carbon.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 32767
 FREQU 39308.18 Hz
 SCANS 1024
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC ¹H
 CTEMP 17.6 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60



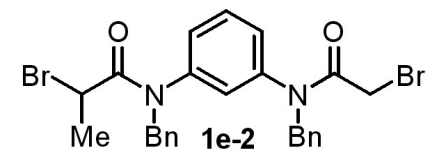


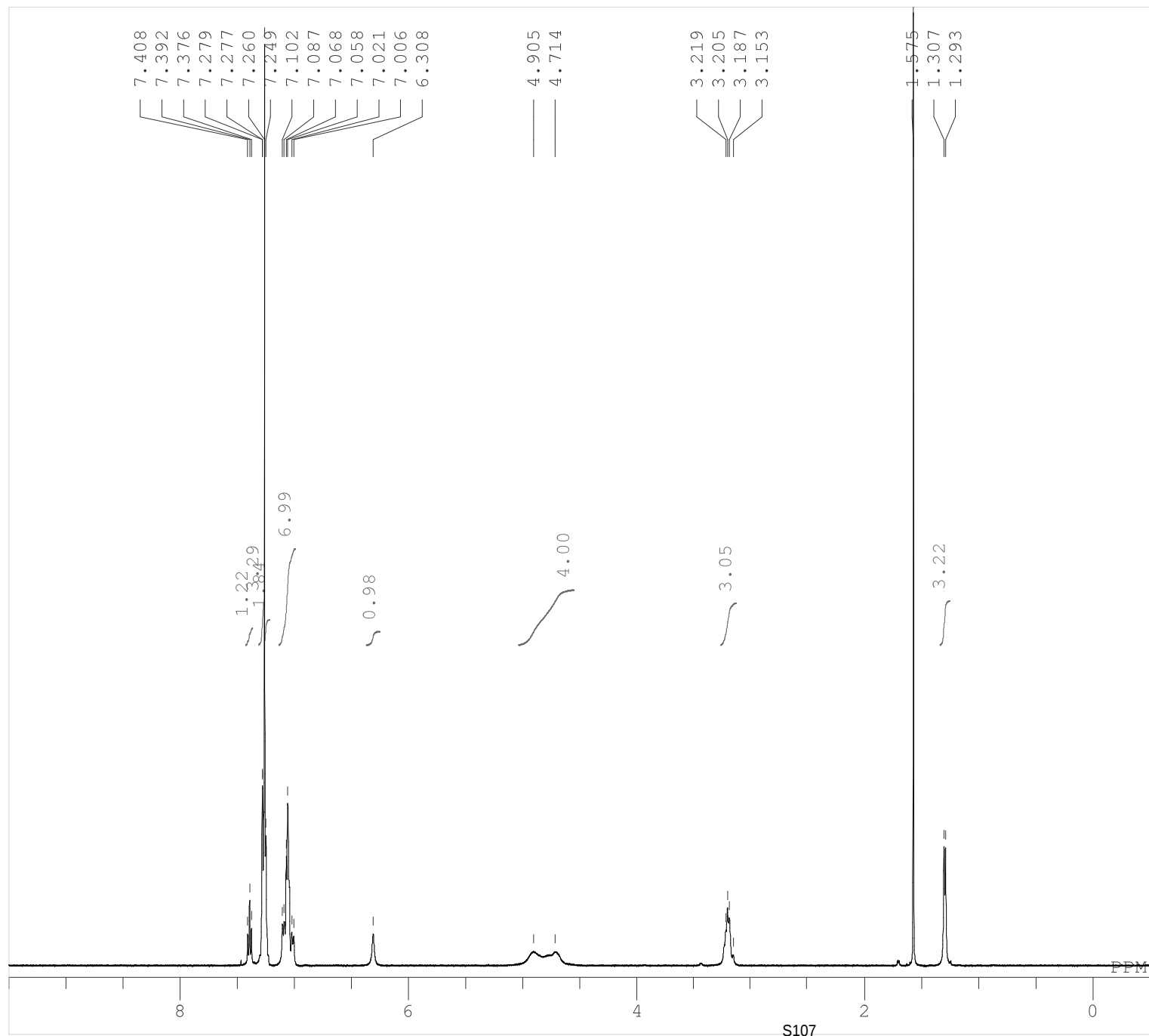
DFILE TY_09_106_01_2_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-10-11 23:19:13
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 14.9 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 38



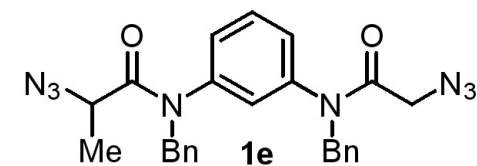


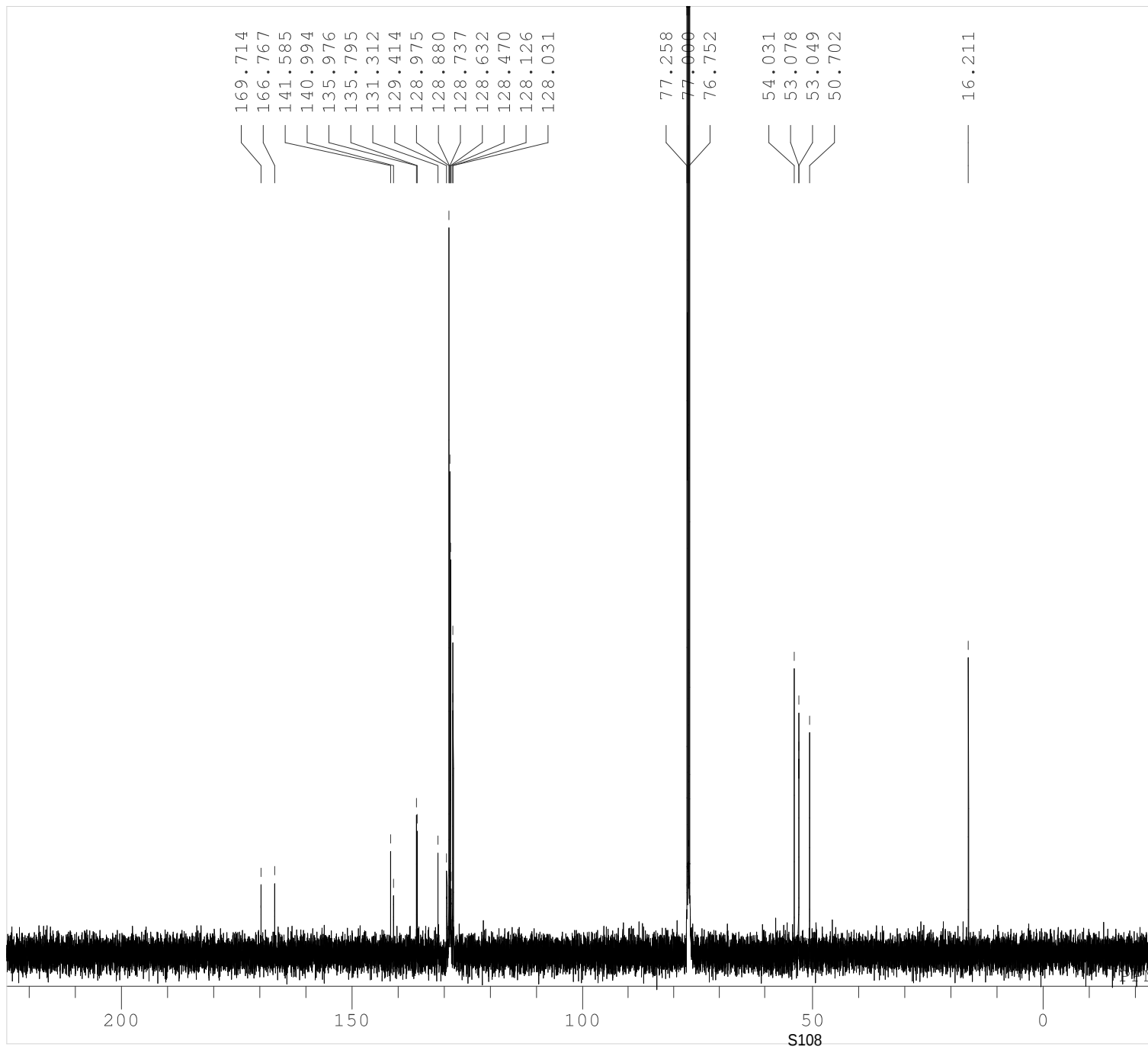
DFILE TY_09_106_01_2_carbn-1-1.als
 COMNT single pulse decoupled gated
 DATIM 2017-10-11 23:20:47
 OBNUC ¹³C
 EXMOD carbn.jxp
 OBFRQ 125.77 MHz
 OBSET 7.87 KHz
 OBFIN 4.21 Hz
 POINT 26214
 FREQU 31446.54 Hz
 SCANS 8840
 ACQTM 0.8336 sec
 PD 2.0000 sec
 PW1 3.12 usec
 IRNUC ¹H
 CTEMP 14.6 c
 SLVNT CDCL₃
 EXREF 77.00 ppm
 BF 0.10 Hz
 RGAIN 60





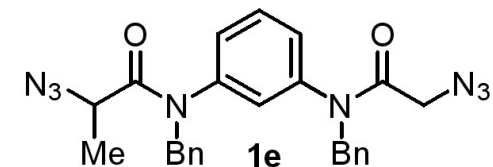
DFILE TY_09_109_01_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-10-18 23:11:59
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 17.3 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 46

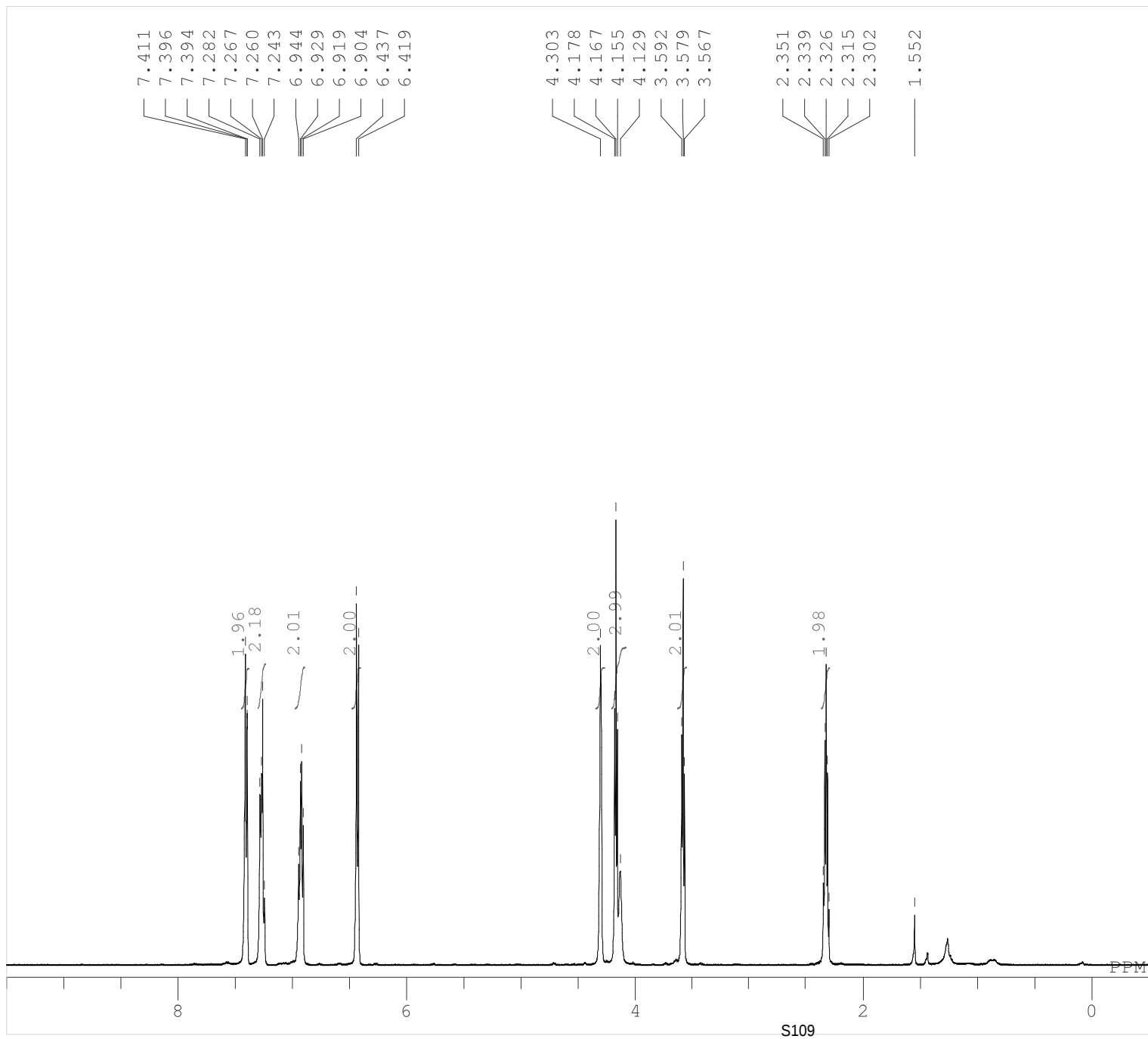




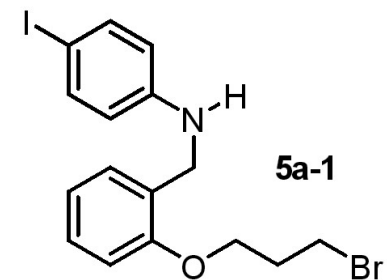
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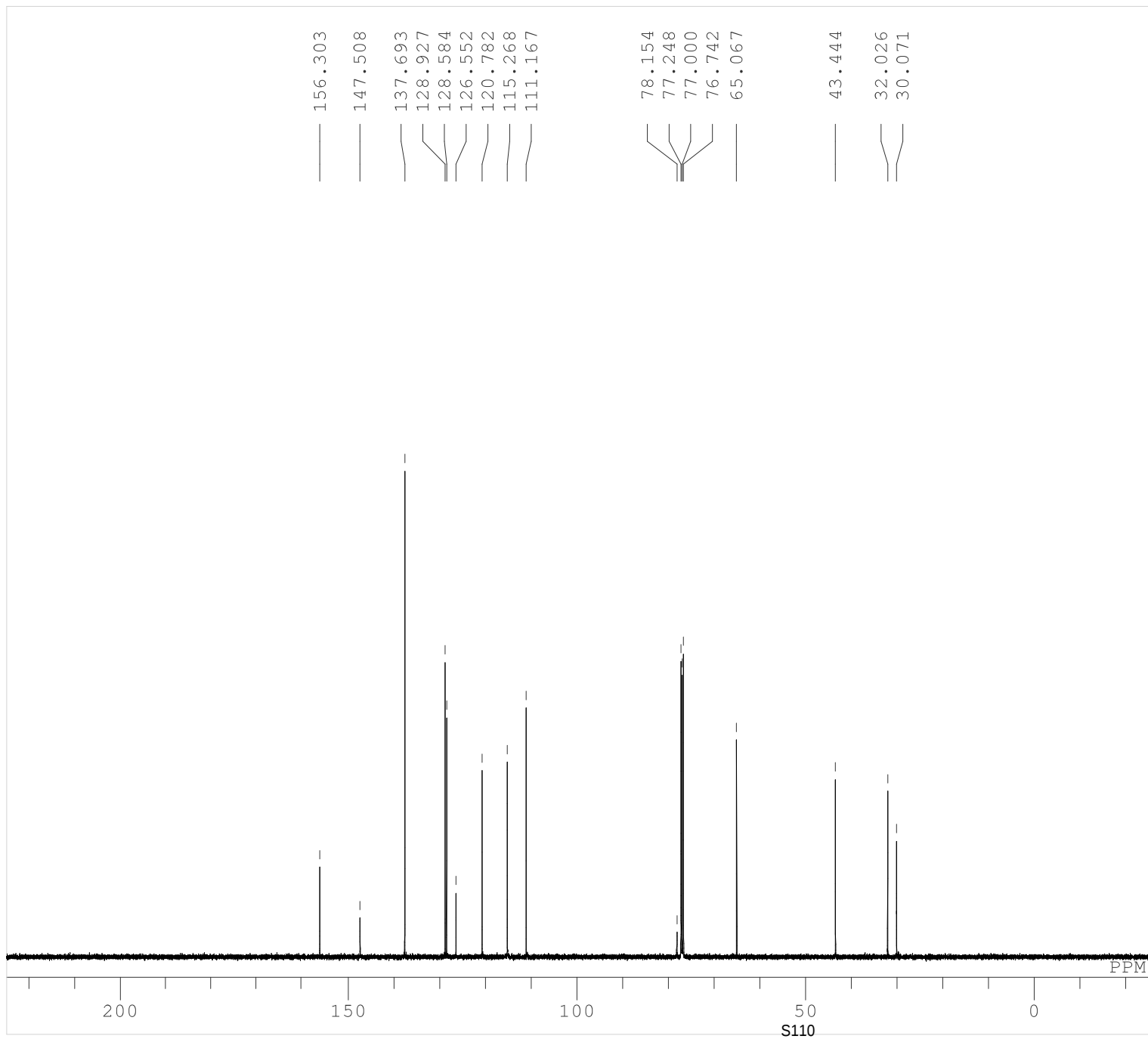
DFILE  TY_09_109_01_carbn-1-1.als
COMNT  single pulse decoupled gated
DATIM  2017-10-18 23:13:37
OBNUC  13C
EXMOD  carbn.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS     8680
ACQTM    0.8336 sec
PD        2.0000 sec
PW1       3.12 usec
IRNUC    1H
CTEMP     18.1 c
SLVNT    CDCL3
EXREF     77.00 ppm
BF        0.10 Hz
RGAIN     60
  
```





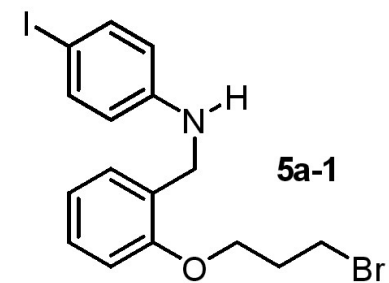
DFILE TY_10_029_01_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-12-14 10:10:51
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 19.9 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 36

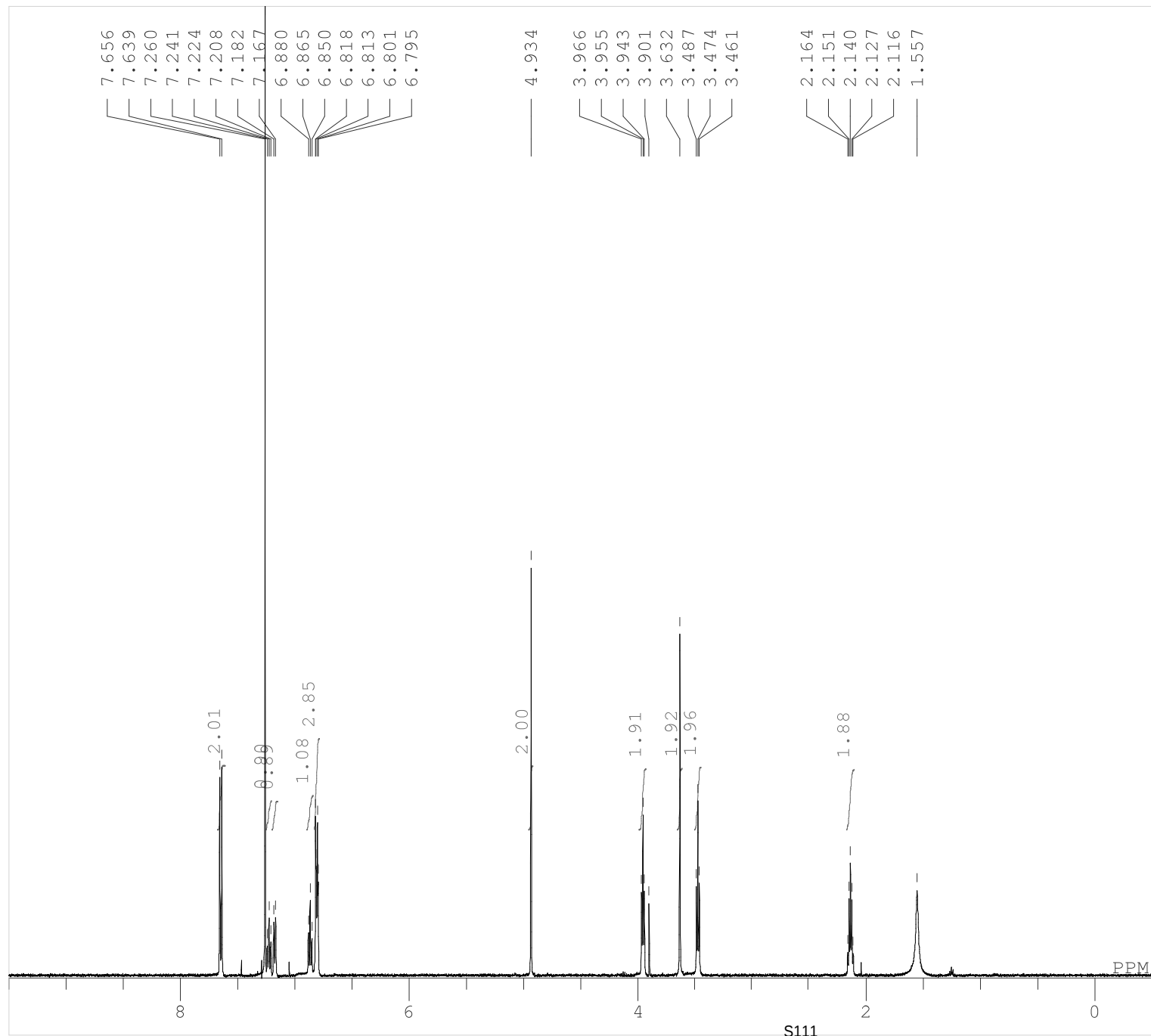




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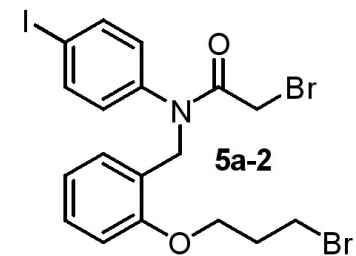
DFILE  TY_10_029_01_2_carbn-1-1.als
COMNT  single pulse decoupled gated
DATIM  2018-02-13 15:52:32
OBNUC  13C
EXMOD  carbn.jxp
OBFRQ  125.77 MHz
OBSET  7.87 KHz
OBFIN  4.21 Hz
POINT  26214
FREQU  31446.54 Hz
SCANS  1256
ACQTM  0.8336 sec
PD      2.0000 sec
PW1     3.12 usec
IRNUC  1H
CTEMP  16.2 c
SLVNT  CDCL3
EXREF  77.00 ppm
BF      0.10 Hz
RGAIN  60
  
```

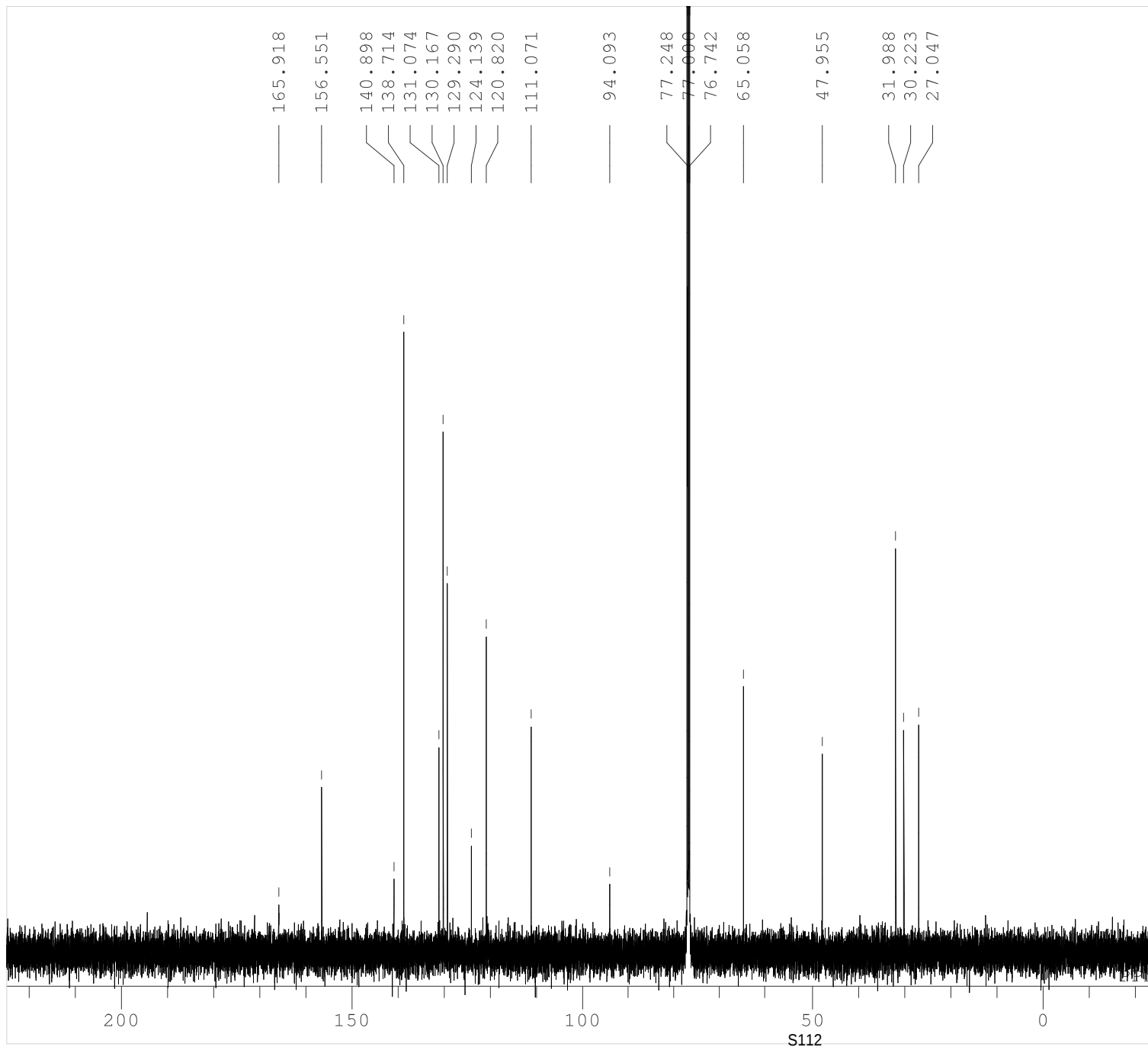




S111

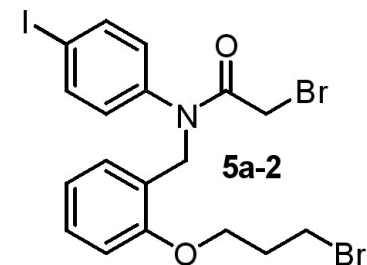
DFILE TY_10_038_01_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-12-21 00:50:35
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.4 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 50

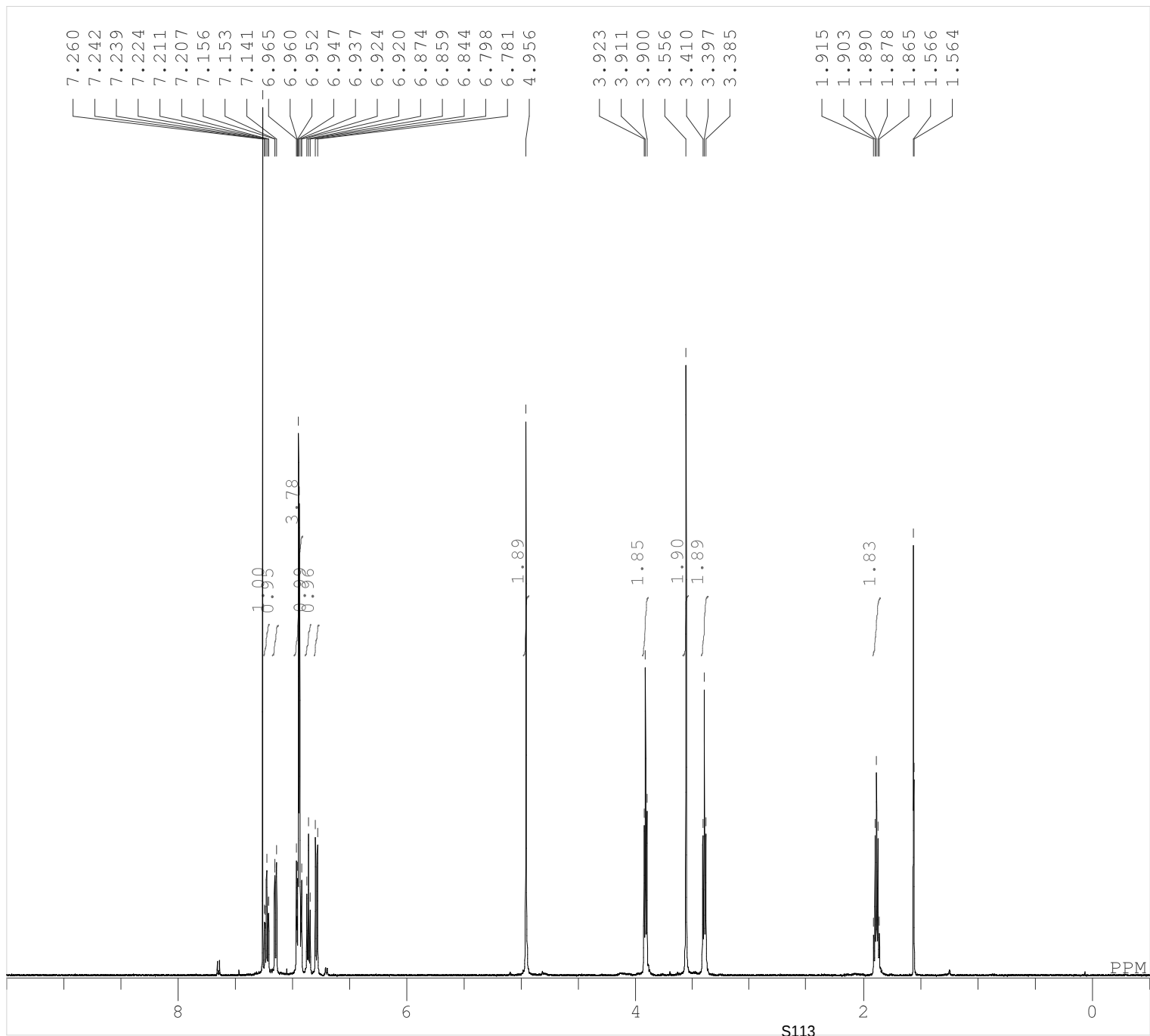




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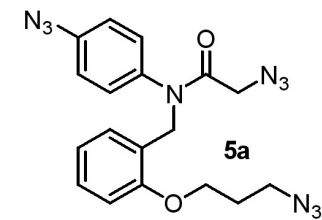
DFILE  TY_10_038_01_carbn-1-1.als
COMNT  single pulse decoupled gated
DATIM  2017-12-21 00:52:01
OBNUC  13C
EXMOD  carbn.jxp
OBFRQ  125.77 MHz
OBSET  7.87 KHz
OBFIN  4.21 Hz
POINT  26214
FREQU  31446.54 Hz
SCANS  6980
ACQTM  0.8336 sec
PD      2.0000 sec
PW1     3.12 usec
IRNUC  1H
CTEMP  19.7 c
SLVNT  CDCL3
EXREF  77.00 ppm
BF      0.10 Hz
RGAIN  60
  
```

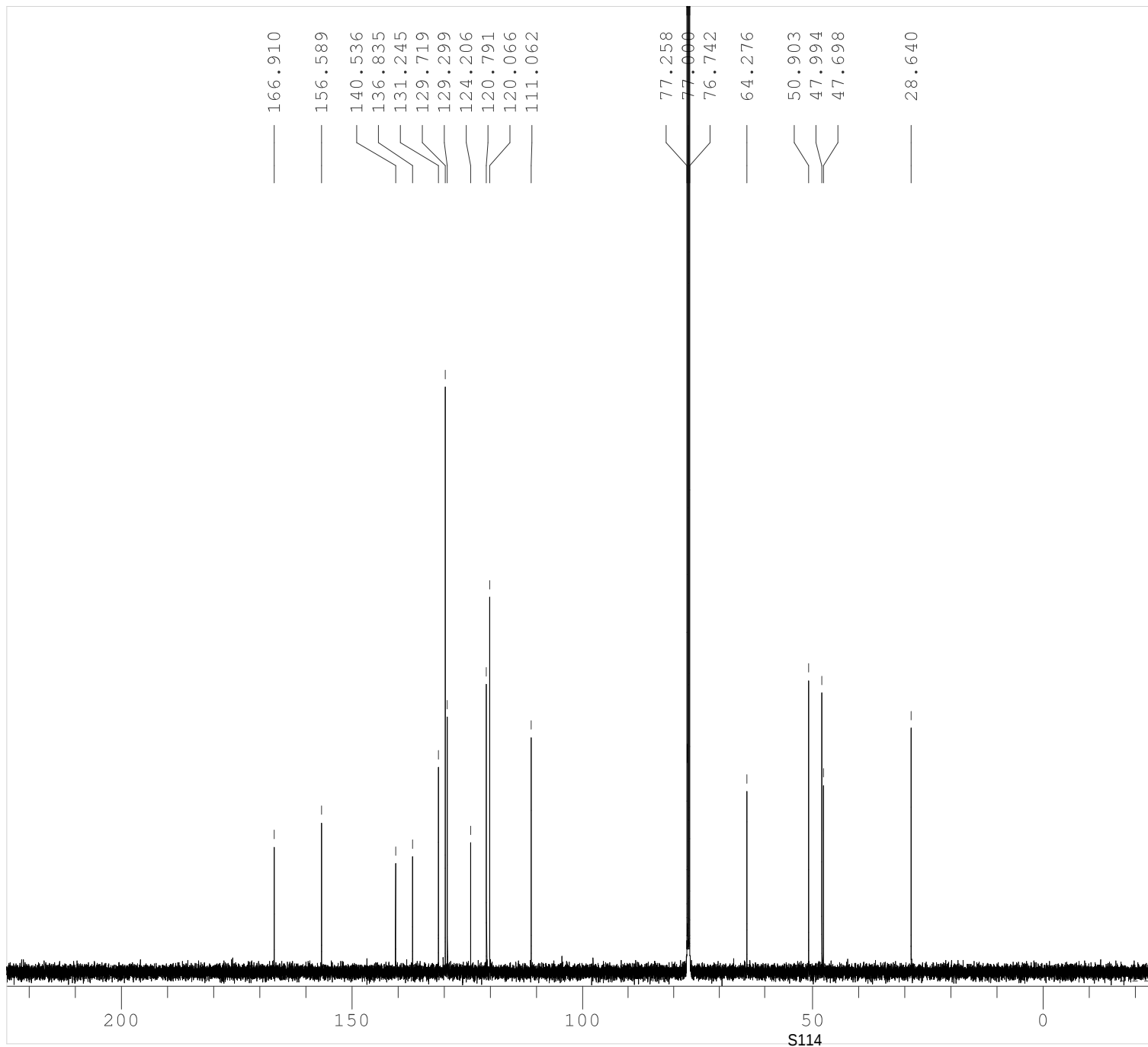




S113

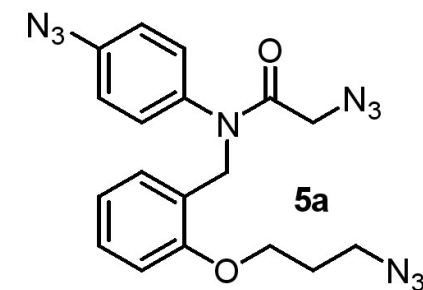
DFILE TY_10_039_02_proton-1-1.als
 COMNT single_pulse
 DATIM 2017-12-21 23:12:23
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 18.5 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 48

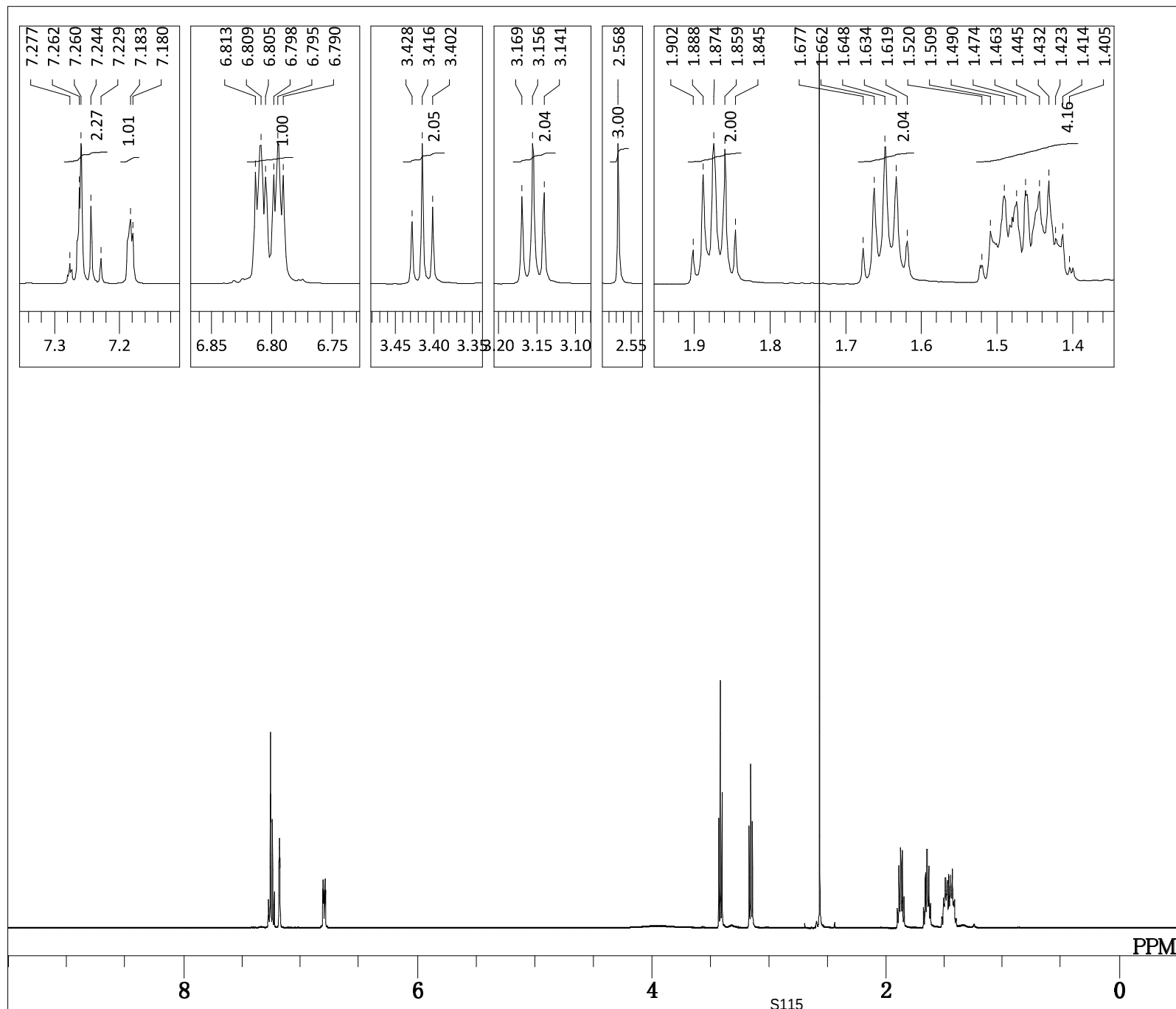




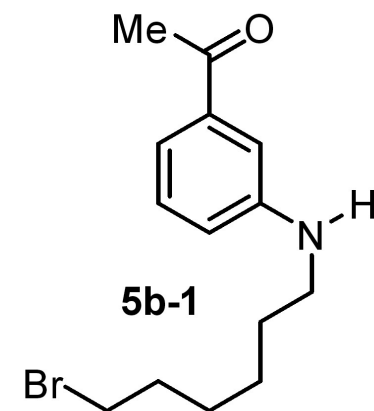
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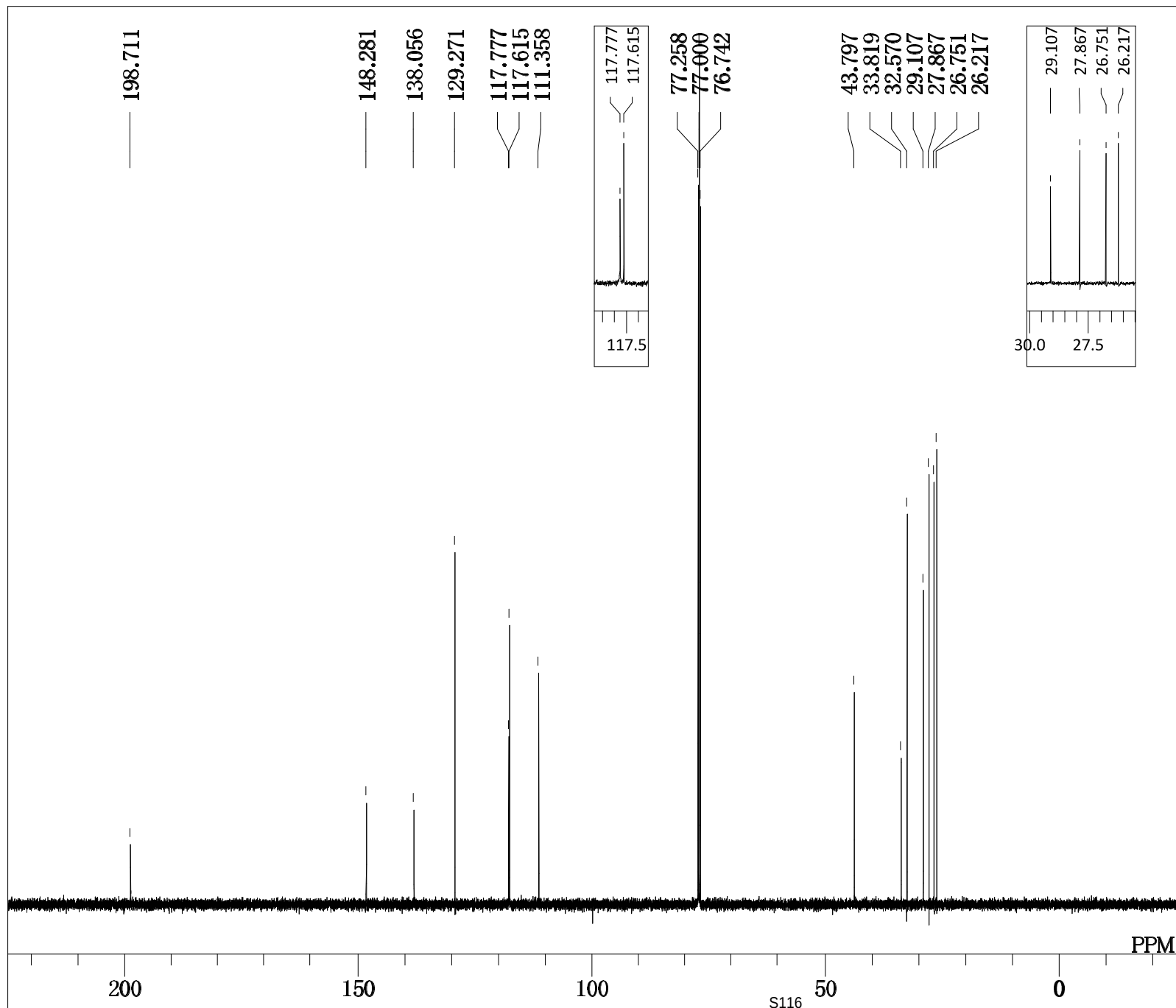
DFILE  TY_10_039_02_carbn-1-1.als
COMNT  single pulse decoupled gated
DATIM  2017-12-21 23:13:55
OBNUC  13C
EXMOD  carbn.jxp
OBFRQ  125.77 MHz
OBSET  7.87 KHz
OBFIN  4.21 Hz
POINT  26214
FREQU  31446.54 Hz
SCANS  8920
ACQTM  0.8336 sec
PD      2.0000 sec
PW1     3.12 usec
IRNUC  1H
CTEMP  19.7 c
SLVNT  CDCL3
EXREF  77.00 ppm
BF      0.10 Hz
RGAIN  50
  
```





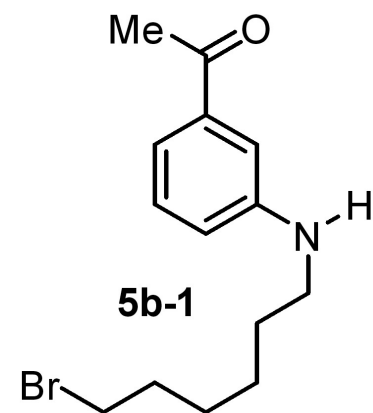
DFILE TU-02-080-2 180215_proton-1-
 COMNT single_pulse
 DATIM 2018-02-15 14:43:58
 OBNUC ¹H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC ¹H
 CTEMP 15.5 c
 SLVNT CDCL₃
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 34

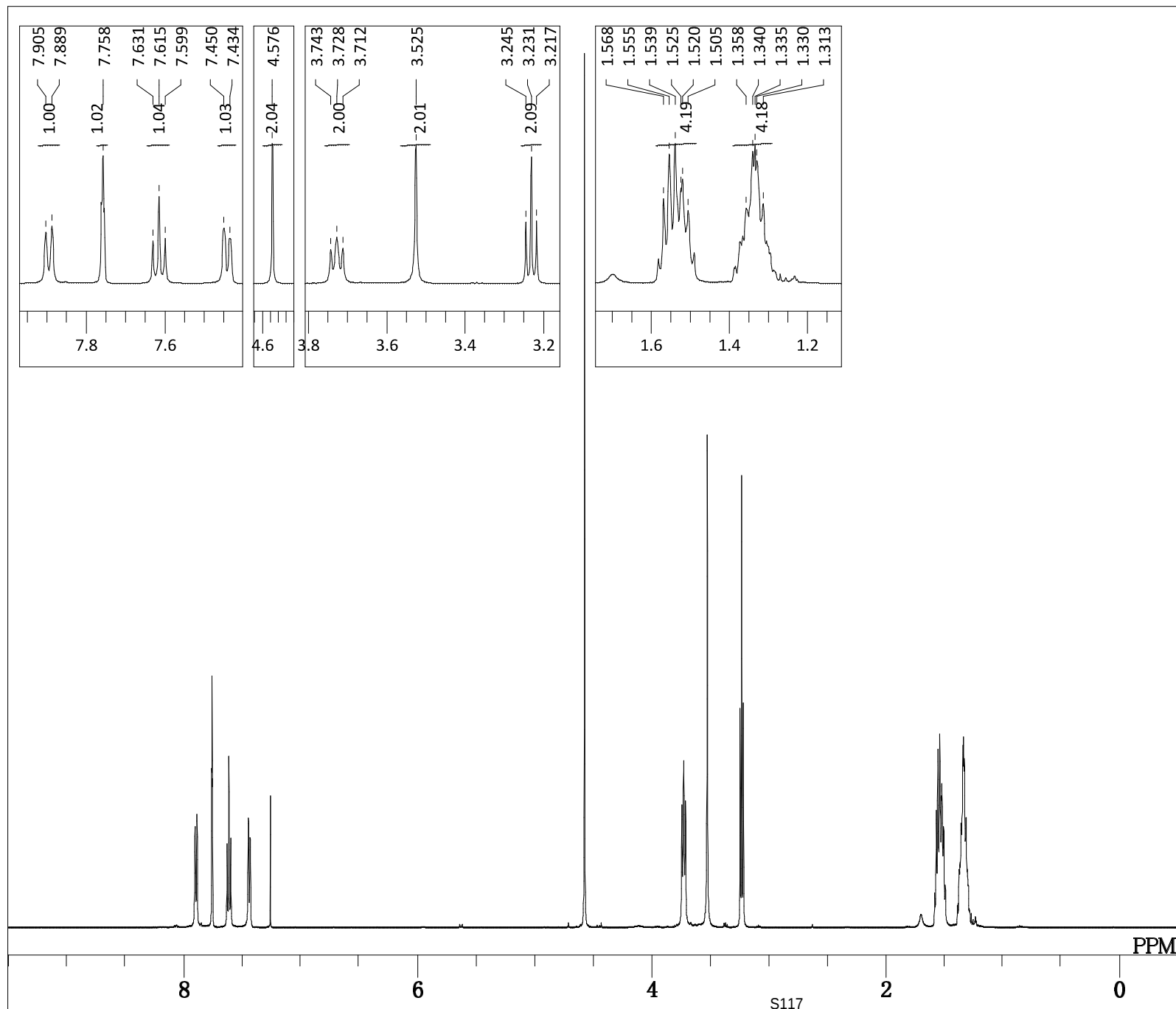




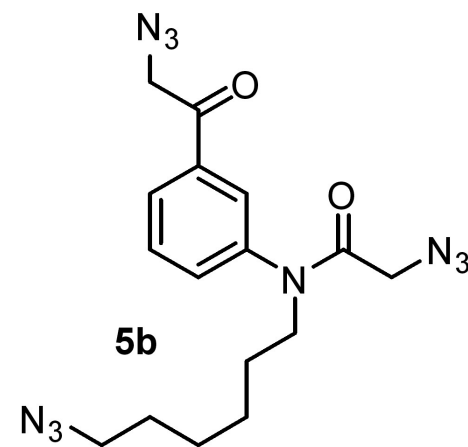
DFILE
 COMNT
 DATIM
 OBNUC
 EXMOD
 OBFRQ
 OBSET
 OBFIN
 POINT
 FREQU
 SCANS
 ACQTM
 PD
 PW1
 IRNUC
 CTEMP
 SLVNT
 EXREF
 BF
 RGAIN

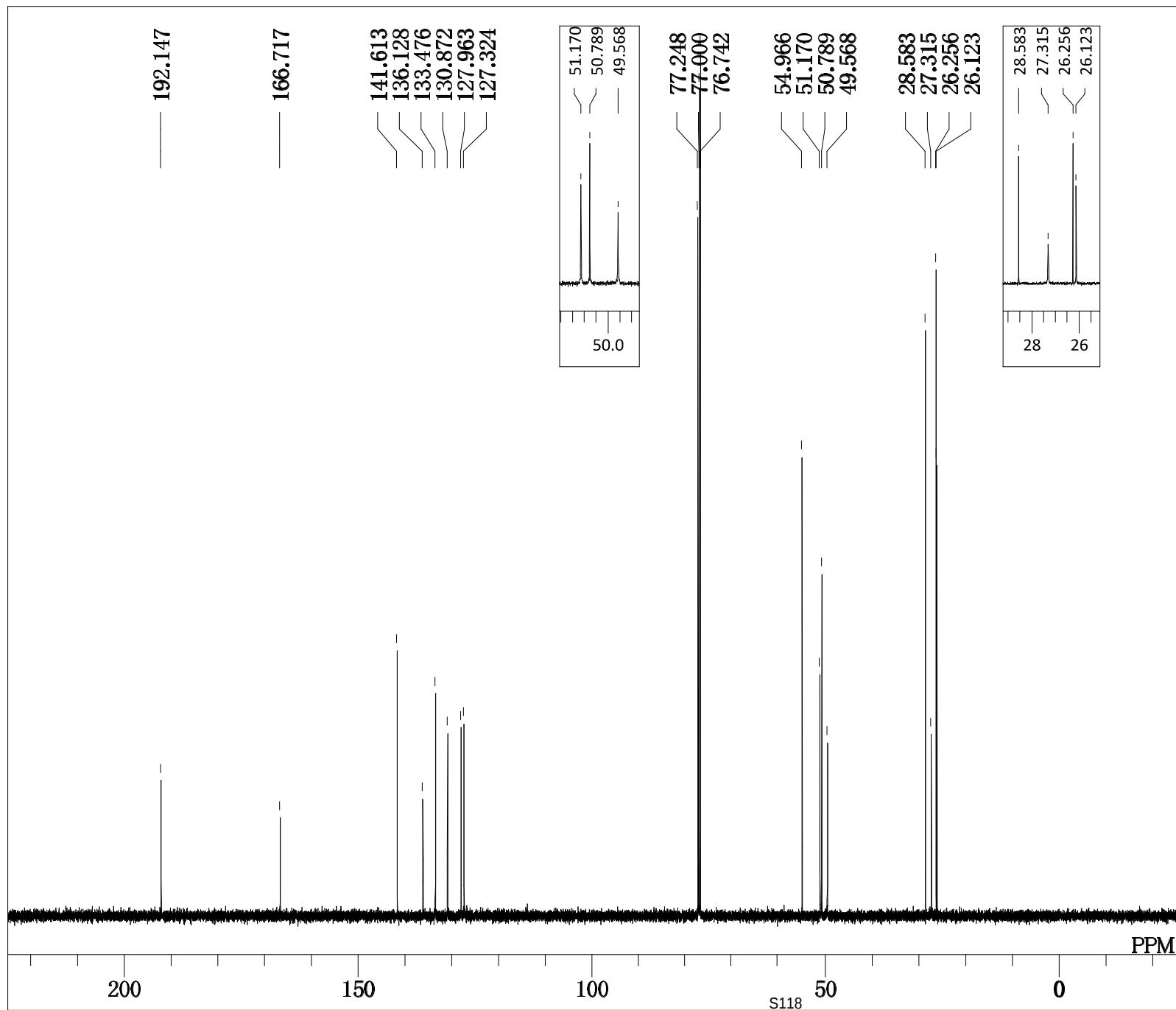
TU-02-080-2 180215_carbon-1-
 single pulse decoupled gated NO
 2018-02-15 14:45:57
 13C
 carbon.jxp
 125.77 MHz
 7.87 KHz
 4.21 Hz
 26214
 31446.54 Hz
 350
 0.8336 sec
 2.0000 sec
 3.12 usec
 1H
 15.9 c
 CDCL3
 77.00 ppm
 0.10 Hz
 58





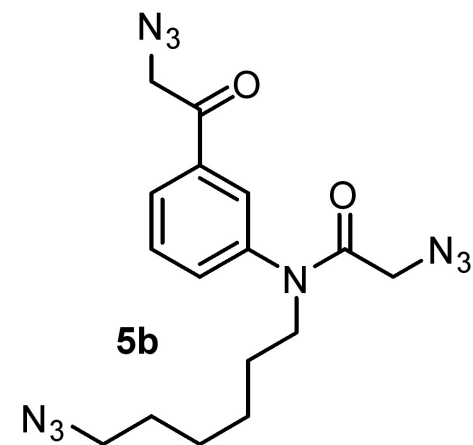
DFILE TU-02-087-2 171013_proton-1-
 COMNT single_pulse
 DATIM 2017-10-13 14:28:29
 OBNUC 1H
 EXMOD proton.jxp
 OBFRQ 500.16 MHz
 OBSET 2.41 KHz
 OBFIN 6.01 Hz
 POINT 13107
 FREQU 7507.51 Hz
 SCANS 8
 ACQTM 1.7459 sec
 PD 5.0000 sec
 PW1 6.85 usec
 IRNUC 1H
 CTEMP 15.3 c
 SLVNT CDCL3
 EXREF 7.26 ppm
 BF 0.10 Hz
 RGAIN 32

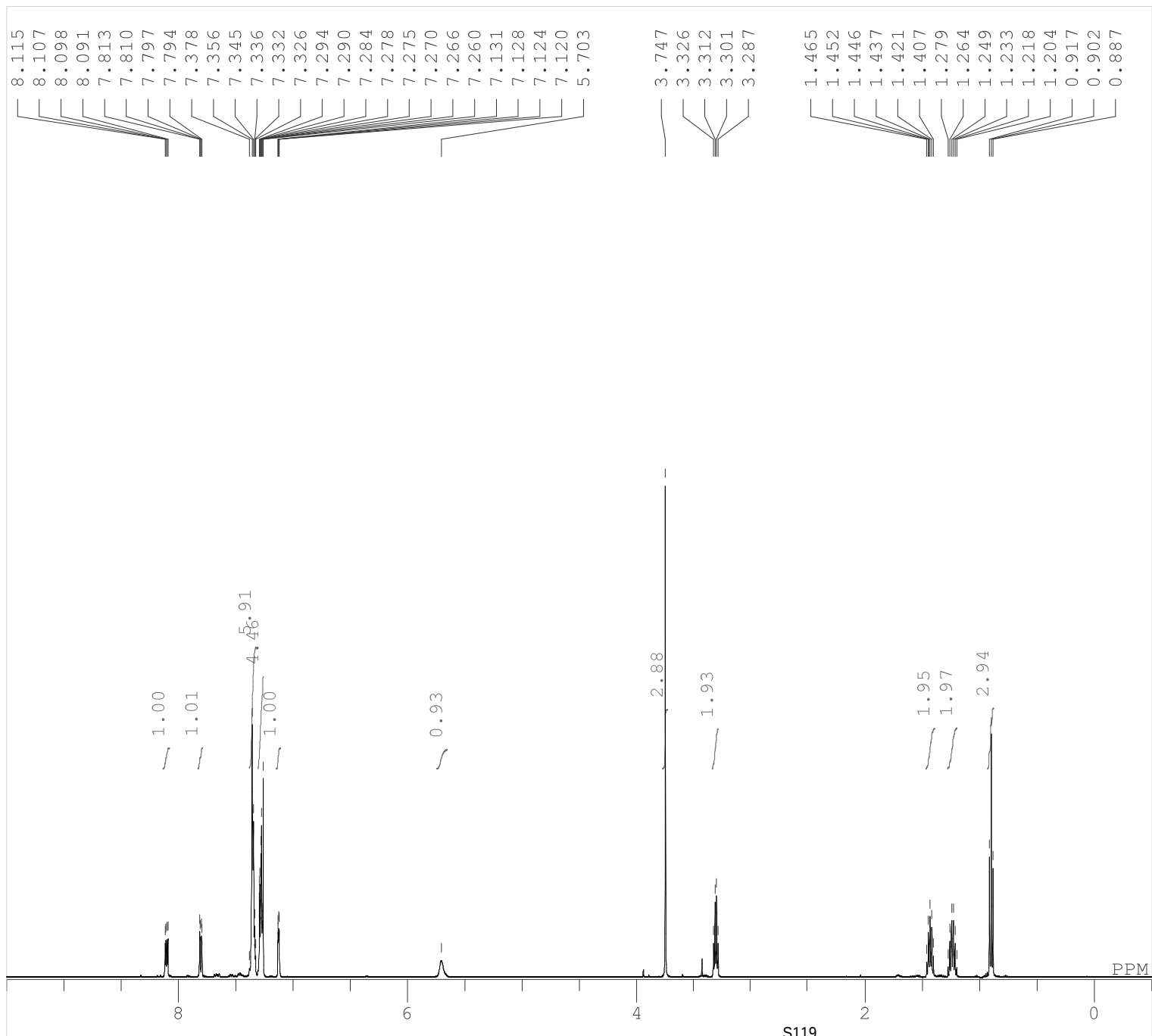




DFILE
 COMNT
 DATIM
 OBNUC
 EXMOD
 OBFRQ
 OBSET
 OBFIN
 POINT
 FREQU
 SCANS
 ACQTM
 PD
 PW1
 IRNUC
 CTEMP
 SLVNT
 EXREF
 BF
 RGAIN

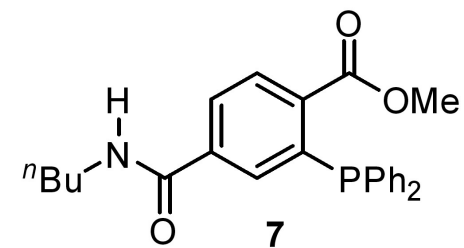
TU-02-087-2 171013_carbon-1-
 single pulse decoupled gated NO
 2017-10-13 14:30:16
 13C
 carbon.jxp
 125.77 MHz
 7.87 KHz
 4.21 Hz
 32767
 39308.18 Hz
 512
 0.8336 sec
 2.0000 sec
 3.12 usec
 1H
 15.5 c
 CDCL3
 77.00 ppm
 0.10 Hz
 60

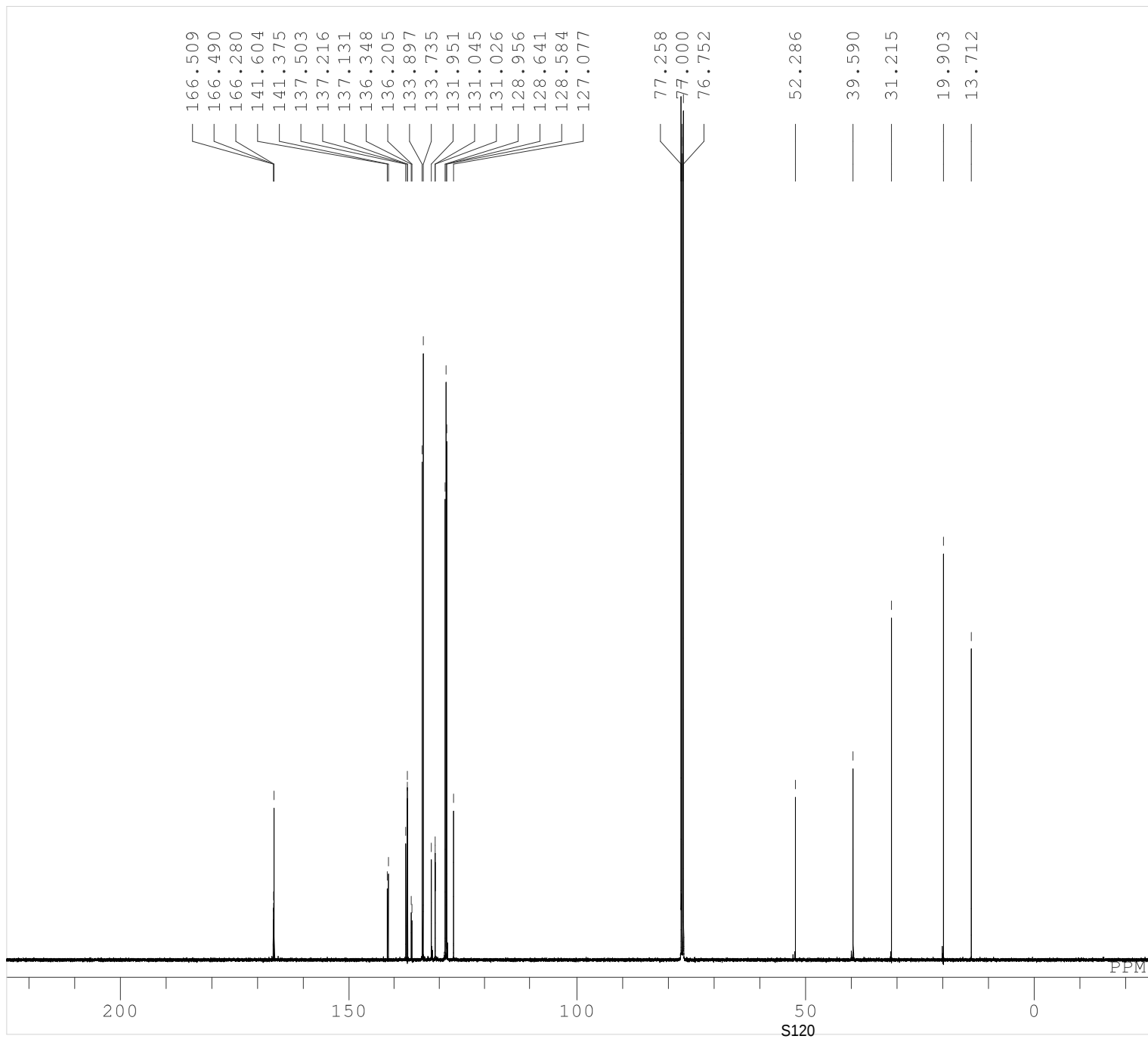




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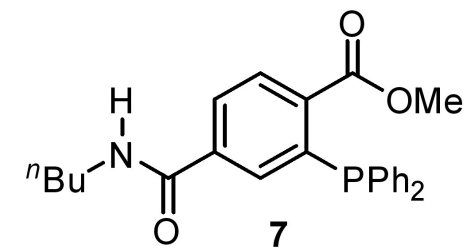
DFILE TY_09_080_02_proton-1-1.als
COMNT single_pulse
DATIM 2018-02-20 23:12:14
OBNUC 1H
EXMOD proton.jxp
OBFRQ 500.16 MHz
OBSET 2.41 KHz
OBFIN 6.01 Hz
POINT 13107
FREQU 7507.51 Hz
SCANS 8
ACQTM 1.7459 sec
PD 5.0000 sec
PW1 6.85 usec
IRNUC 1H
CTEMP 13.4 c
SLVNT CDCL3
EXREF 7.26 ppm
BF 0.10 Hz
RGAIN 34
  
```

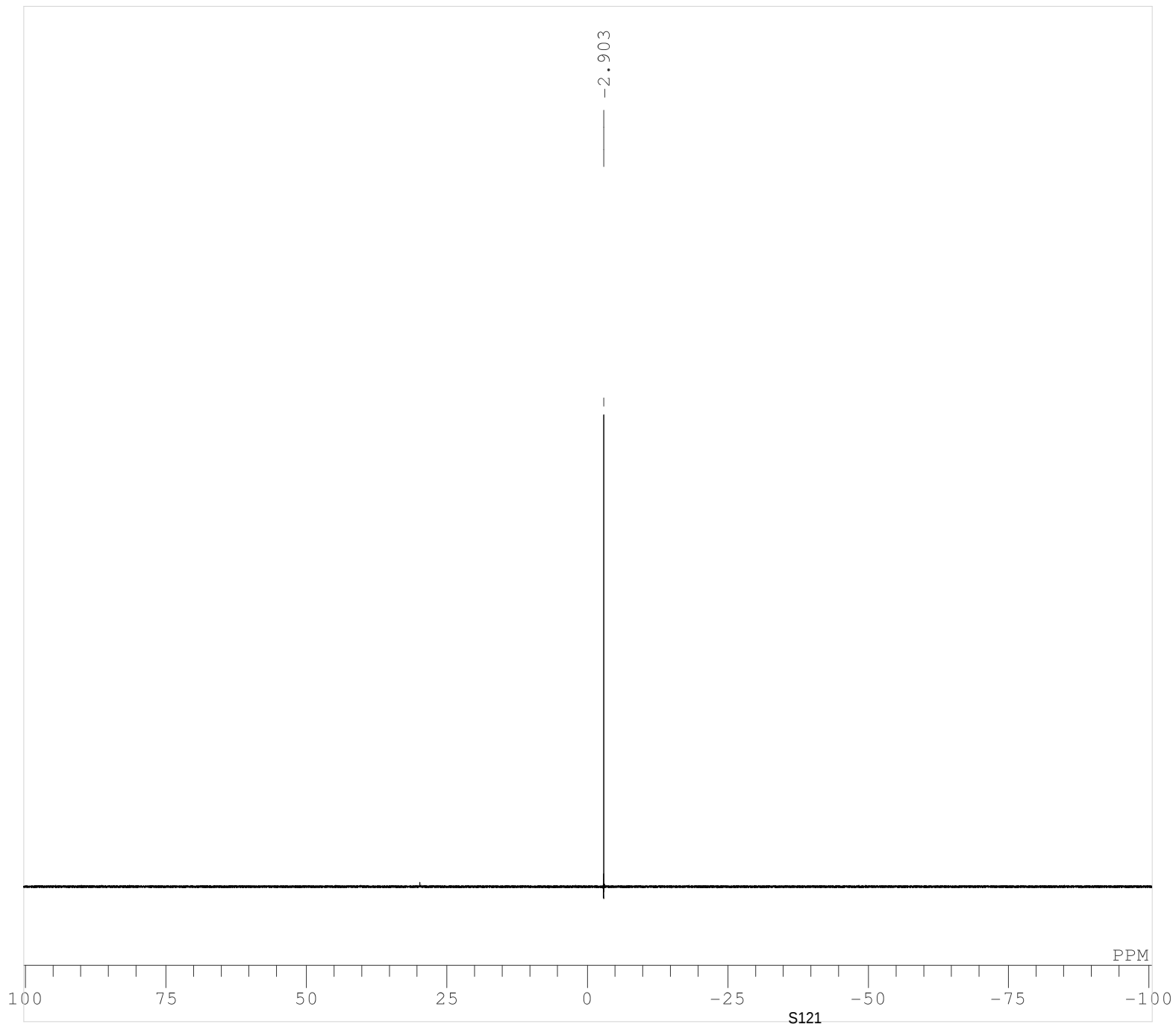




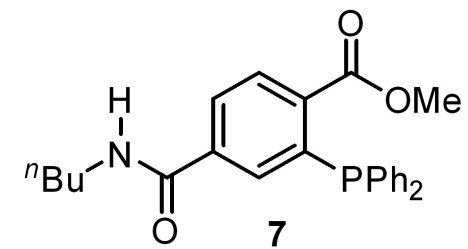
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DFILE  TY_09_080_02_carbon-1-1.als
COMNT  single pulse decoupled gated
DATIM  2018-02-20 23:13:45
OBNUC  13C
EXMOD  carbon.jxp
OBFRQ   125.77 MHz
OBSET    7.87 KHz
OBFIN    4.21 Hz
POINT    26214
FREQU    31446.54 Hz
SCANS     9200
ACQTM    0.8336 sec
PD        2.0000 sec
PW1       3.12 usec
IRNUC    1H
CTEMP     15.2 c
SLVNT    CDCL3
EXREF     77.00 ppm
BF        0.10 Hz
RGAIN     60
  
```



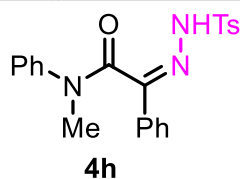
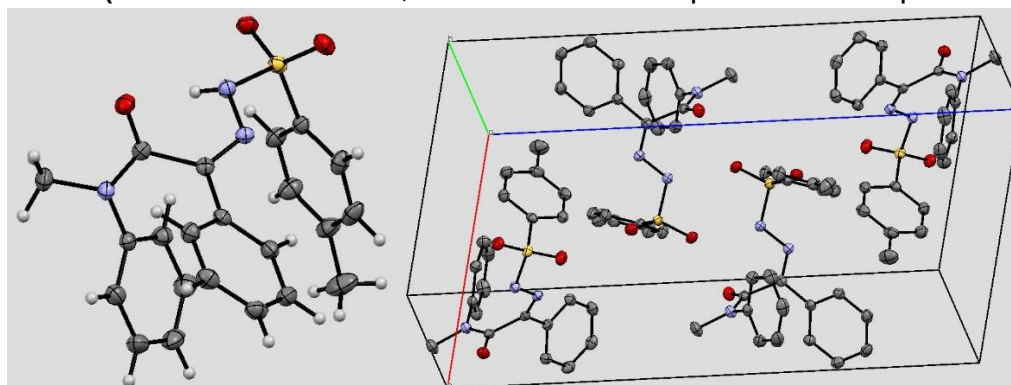


DFILE TY_09_080_02_phosphorus-1-1.a
COMNT single pulse decoupled gated
DATIM 2018-02-22 15:50:30
OBNUC 31P
EXMOD carbon.jxp
OBFRQ 202.46 MHz
OBSET 8.31 KHz
OBFIN 0.75 Hz
POINT 26214
FREQU 40650.41 Hz
SCANS 35
ACQTM 0.6449 sec
PD 2.0000 sec
PW1 3.88 usec
IRNUC 1H
CTEMP 15.2 c
SLVNT C6D6
EXREF 0.00 ppm
BF 0.10 Hz
RGAIN 56



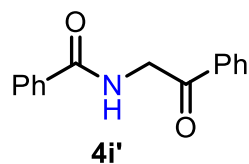
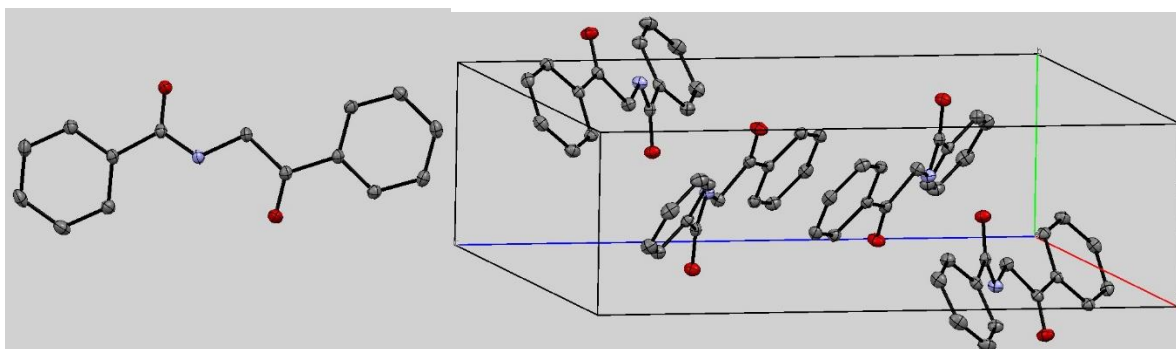
X-ray Crystallographic Analysis Information

(1) Hydrazone 4h (CCDC No. 1839202, ORTEP thermal ellipsoids at 50% probability)



Empirical formula	C ₂₂ H ₂₁ N ₃ O ₃ S
Formula weight	407.49
Temperature	-150 ± 1 °C
Wavelength	MoKα (λ = 0.71075 Å)
Crystal system	monoclinic
Space group	P2 ₁ /c (#14)
Unit cell dimensions	a = 10.37797(19) Å b = 9.68067(18) Å β = 98.126(7) ° c = 20.4861(4) Å
Volume	V = 2037.48(7) Å ³
Z	4
Density (calculated)	1.328 g/cm ³
2θ _{max}	55.0 °
Absorption coefficient μ for Mo-Kα	1.873 cm ⁻¹
F(000)	856.00
Crystal size	0.120 x 0.090 x 0.020 mm
No. of reflection collected	Total: 33730 Unique: 4683 (R _{int} = 0.0325)
Transmission factor	min: 0.834, max: 0.996
Refinement method	Full-matrix least-squares on F ²
Goodness-of-fit on F ²	1.041
Final R indices [I > 2σ (I)]	R ₁ = 0.0380
R indices (all data)	R ₁ = 0.0463 wR ₂ = 0.0948
Largest diff. peak and hole	-0.35 and 0.45 e ⁻ ·Å ⁻³

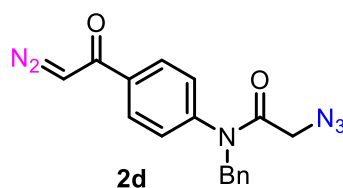
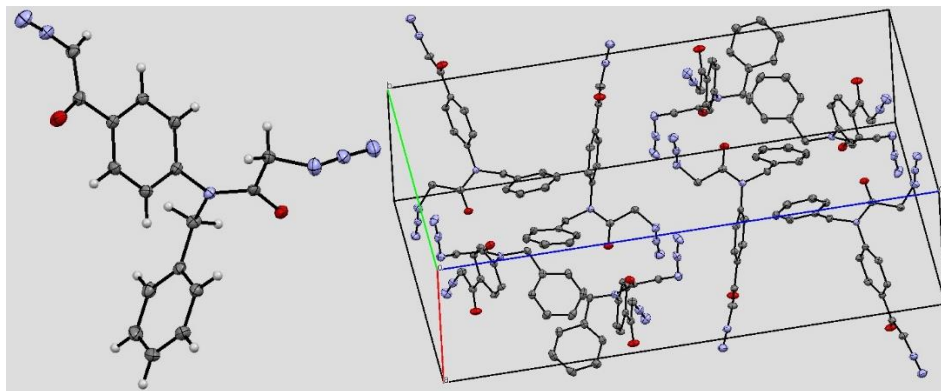
(2) Dimeric Amide 4i' (CCDC No. 1839204, ORTEP thermal ellipsoids at 50% probability)



Empirical formula	C ₁₅ H ₁₃ NO ₂
Formula weight	239.27
Temperature	-170 ± 1 °C
Wavelength	MoKα (λ = 0.71075 Å)
Crystal system	monoclinic
Space group	P2 ₁ /c (#14)
Unit cell dimensions	a = 12.9092(4) Å b = 5.32654(15) Å β = 98.180(7) ° c = 17.0164(5) Å
Volume	V = 1158.17(6) Å ³
Z	4
Density (calculated)	1.372 g/cm ³
2θ _{max}	55.0 °
Absorption coefficient μ for Mo-Kα	0.915 cm ⁻¹
F(000)	504.00
Crystal size	0.200 x 0.130 x 0.060 mm
No. of reflection collected	Total: 10780 Unique: 2643 (R _{int} = 0.0160)
Transmission factor	min: 0.902, max: 0.995
Refinement method	Full-matrix least-squares on F ²
Goodness-of-fit on F ²	1.049
Final R indices [I > 2σ (I)]	R ₁ = 0.0361
R indices (all data)	R ₁ = 0.0397 wR ₂ = 0.0973
Largest diff. peak and hole	0.41 and -0.16 e ⁻ ·Å ⁻³

(3) α -Diazo Ketone Possessing α -Azido amido moiety **2d**

(CCDC No.1839203, ORTEP thermal ellipsoids at 50% probability)



Empirical formula	C ₁₇ H ₁₄ N ₆ O ₂
Formula weight	334.34
Temperature	-170 ± 1 °C
Wavelength	MoK α (λ = 0.71075 Å)
Crystal system	orthorhombic
Space group	Pbca (#61)
Unit cell dimensions	a = 8.17797(15) Å b = 14.6247(3) Å c = 27.2033(5) Å
Volume	V = 3253.52(10) Å ³
Z	8
Density (calculated)	1.365 g/cm ³
2 $\theta_{\max}$	55.0 °
Absorption coefficient μ for Mo-K α	0.951 cm ⁻¹
$F(000)$	1392.00
Crystal size	0.190 x 0.060 x 0.030 mm
No. of reflection collected	Total: 52120 Unique: 3740 (R_{int} = 0.0341)
Transmission factor	min: 0.890, max: 0.997
Refinement method	Full-matrix least-squares on F^2
Goodness-of-fit on F^2	1.034
Final R indices [$I > 2\sigma(I)$]	R_1 = 0.0367
R indices (all data)	R_1 = 0.0432 wR_2 = 0.0897
Largest diff. peak and hole	-0.22 and 0.35 e ⁻ ·Å ⁻³