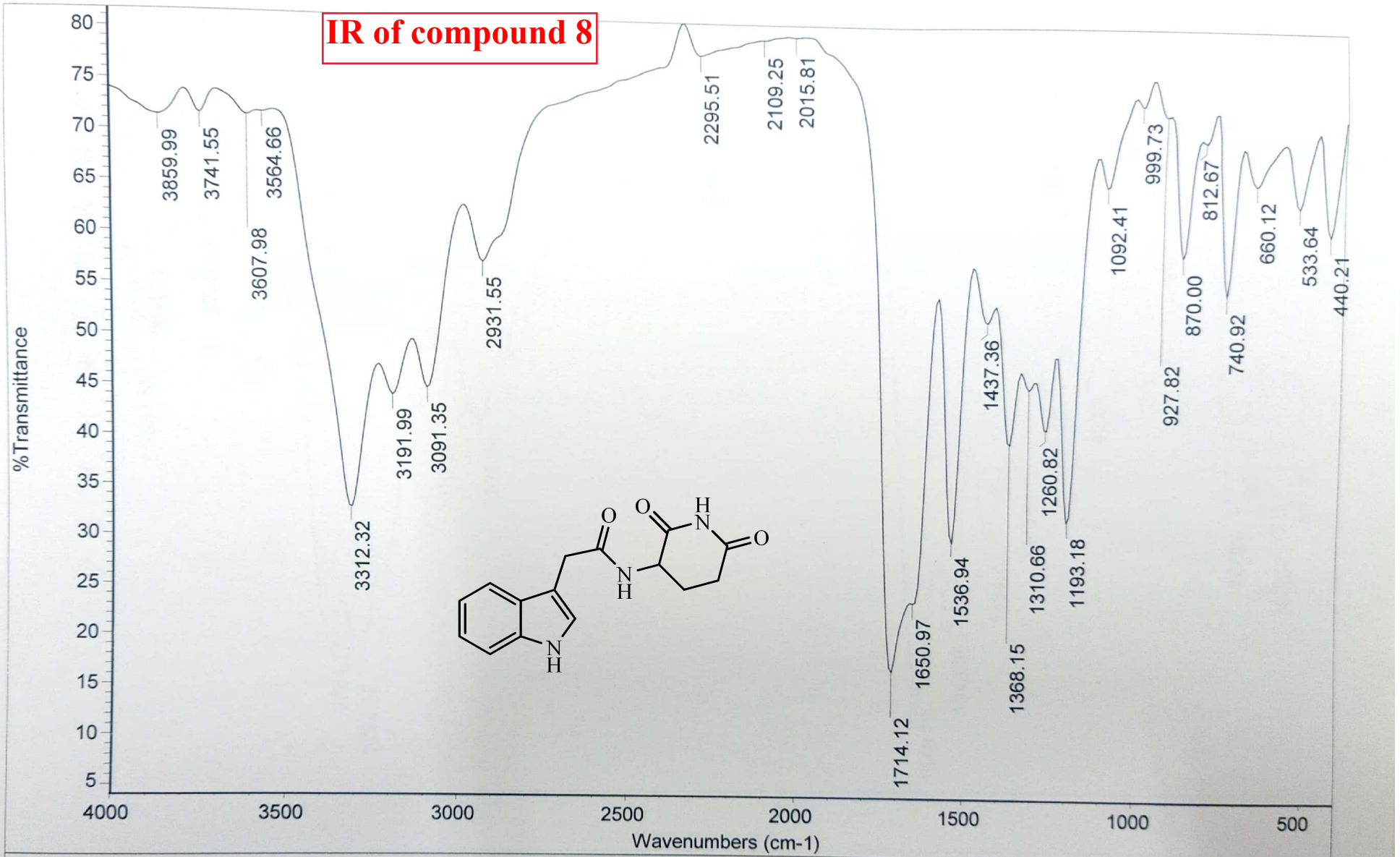
IR of compound 8

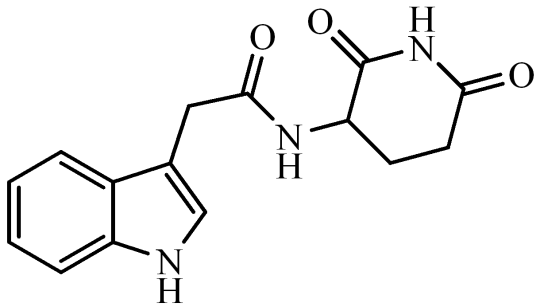


Dr_HazemElkady-IAPD

Dr_HazemElkady-IAPD

Sample Name Dr_HazemElkady-IAPD | Pulse sequence PROTON | Temperature 25 | Study owner vnmr1
Date collected 2017-11-19 | Solvent dmso | Spectrometer nmr400-mercury400 | Operator vnmr1

^{1}HNMR of compound 8



Plotname: Dr_HazemElkady-IAPD_PROTON_01_plot02

Data file /home/data/NMRlab2017/Nov/Dr_HazemElkady-IAPD_20171119_01/Dr_HazemElkady-IAPD_PROTON_01

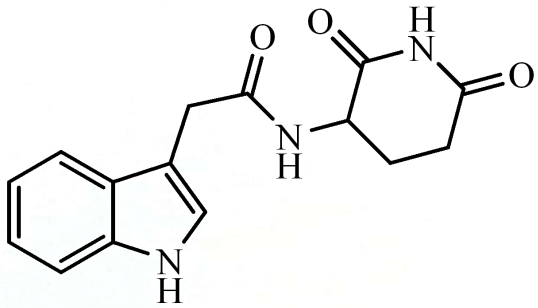
Plot date 2017-11-19

Dr_HazemElkady-IAPD-D2O

Dr_HazemElkady-IAPD-D2O

Sample Name Dr_HazemElkady-IAPD-D2O Pulse sequence PROTON Temperature 25 Study owner vnmr1
Date collected 2017-11-20 Spectrometer nmr400-mercury400 Operator vnmr1

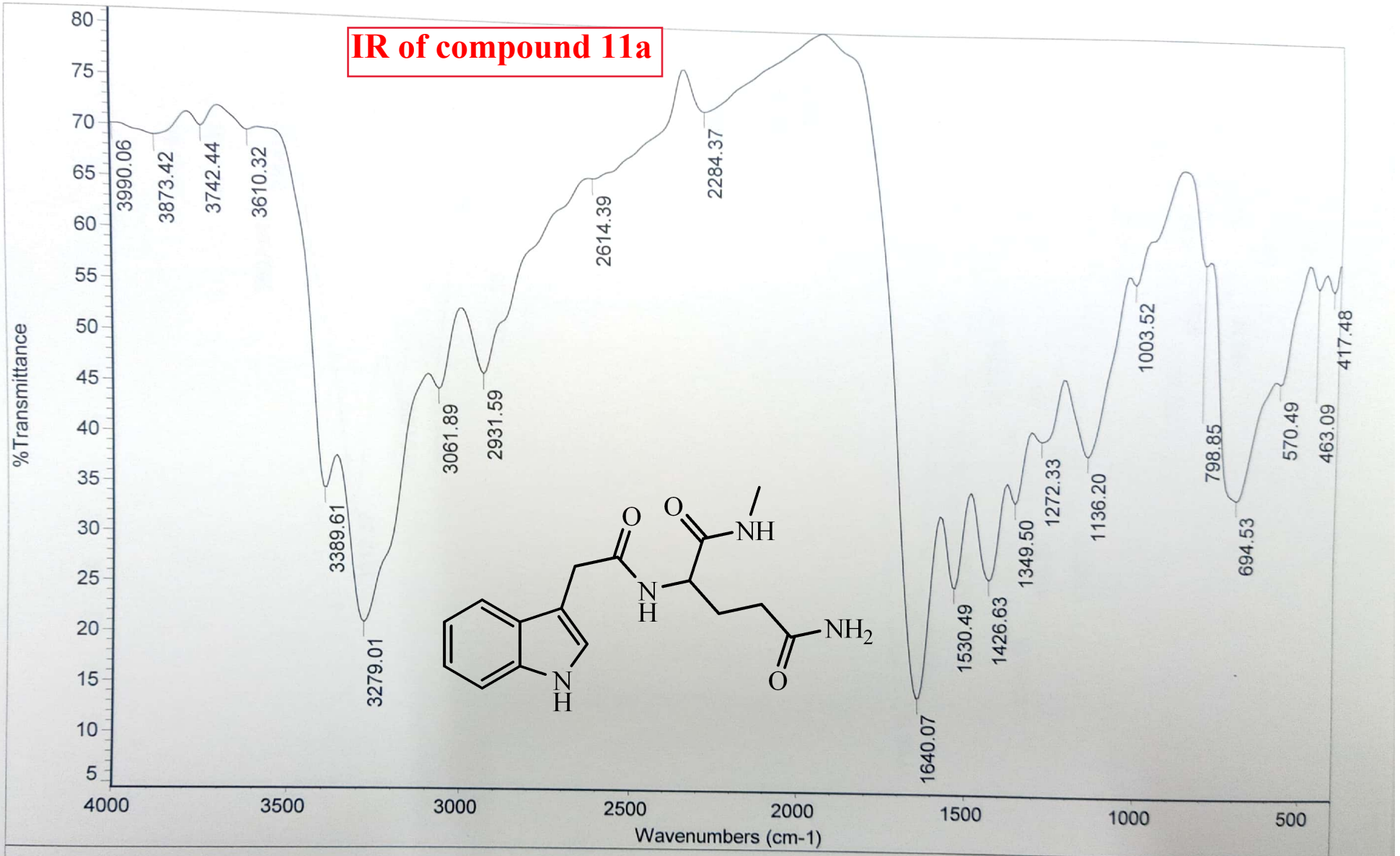
^{1}HNMR of compound 8 (D_2O)



Plotname: Dr_HazemElkady-IAPD-D2O_PROTON_01_plot02

Plot date 2017-11-22

IR of compound 11a



^{1}HNMR of compound 11a

Microanalytical Unit - FOPCU - NMR laboratory
www.pharma.cu.edu.eg dir-mau.fopcu@pharma.cu.edu.eg

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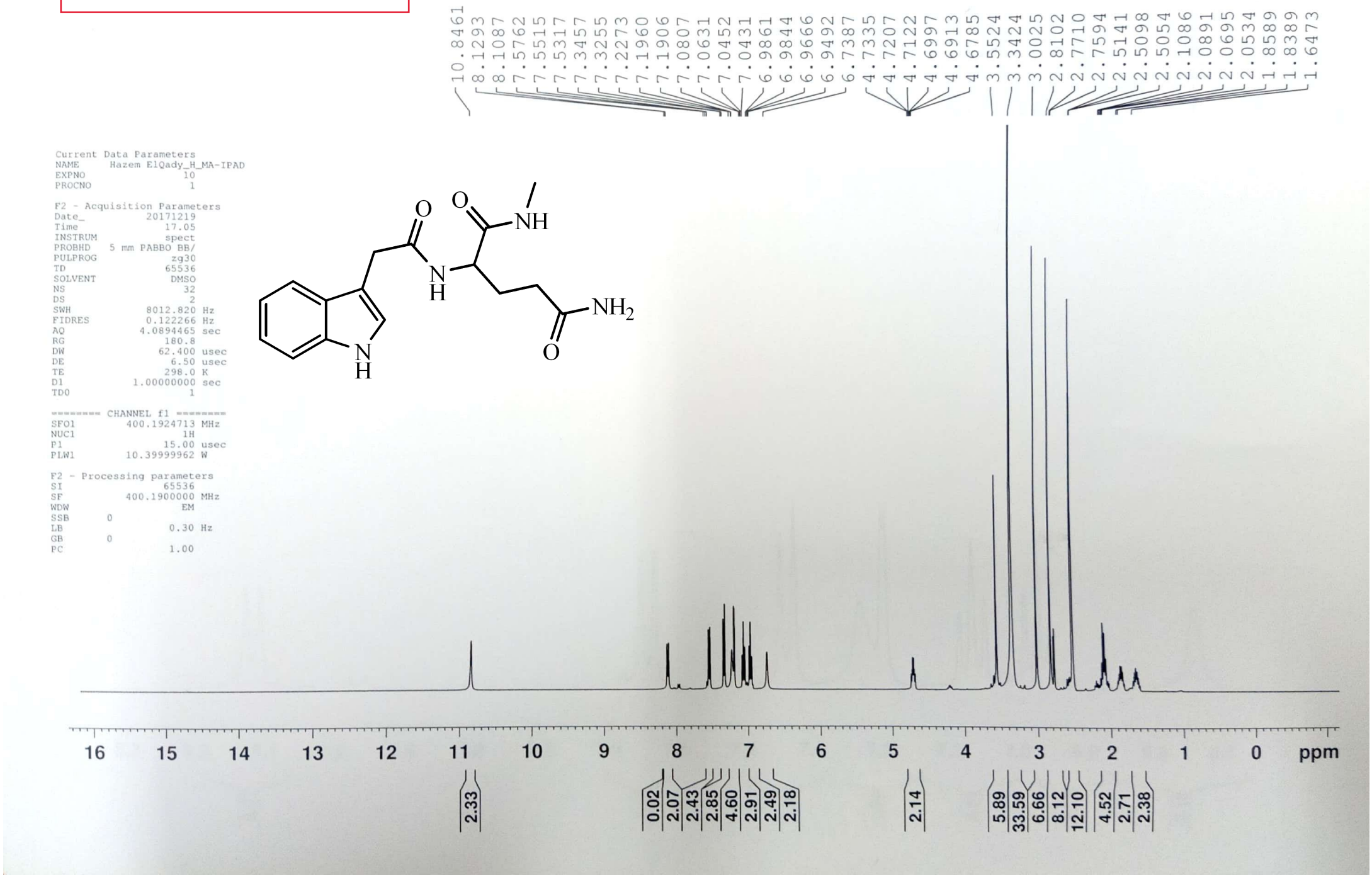

^{1}HNMR of compound 11a (D_2O)

Microanalytical Unit - FOPCU - NMR laboratory
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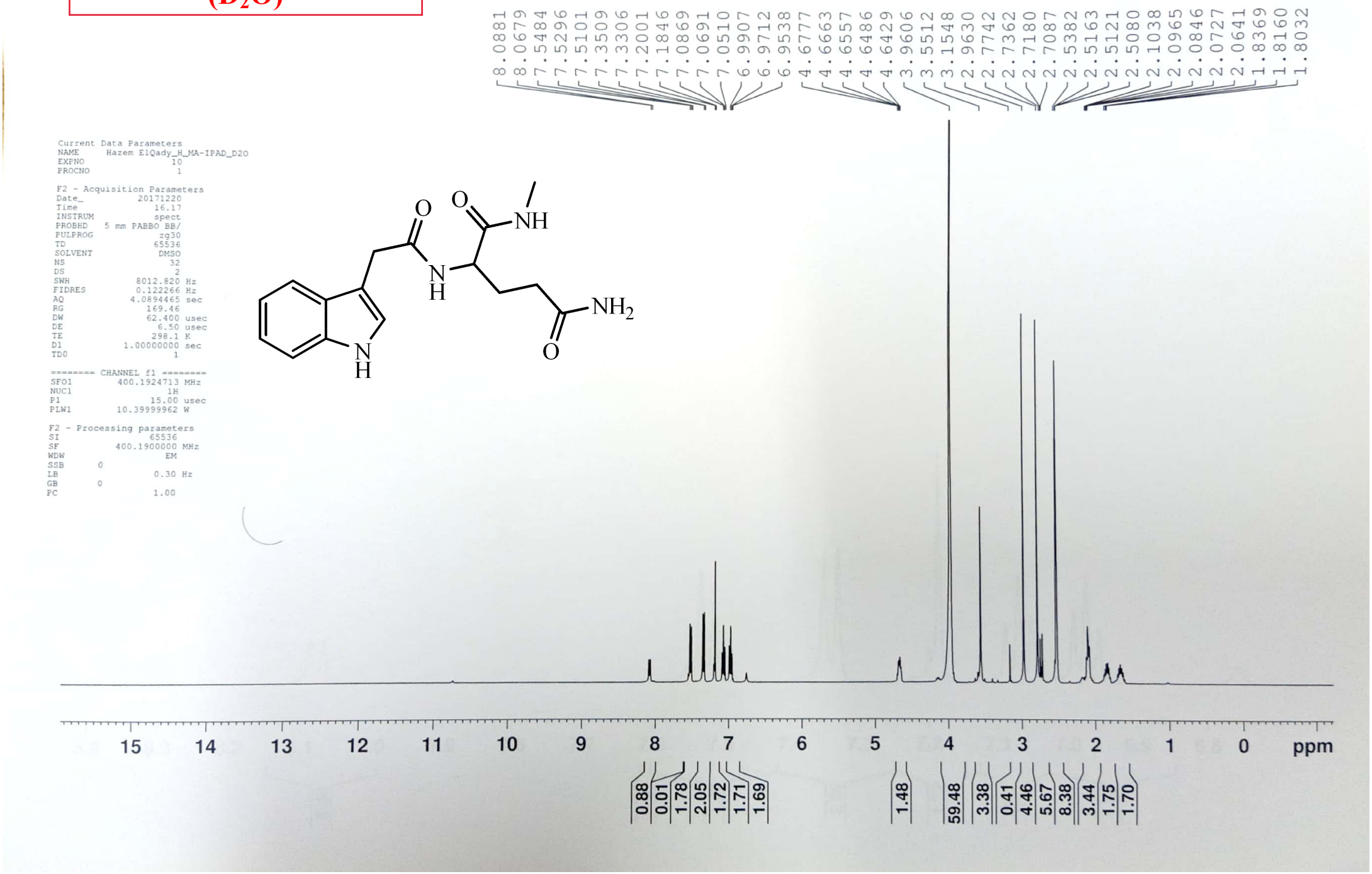
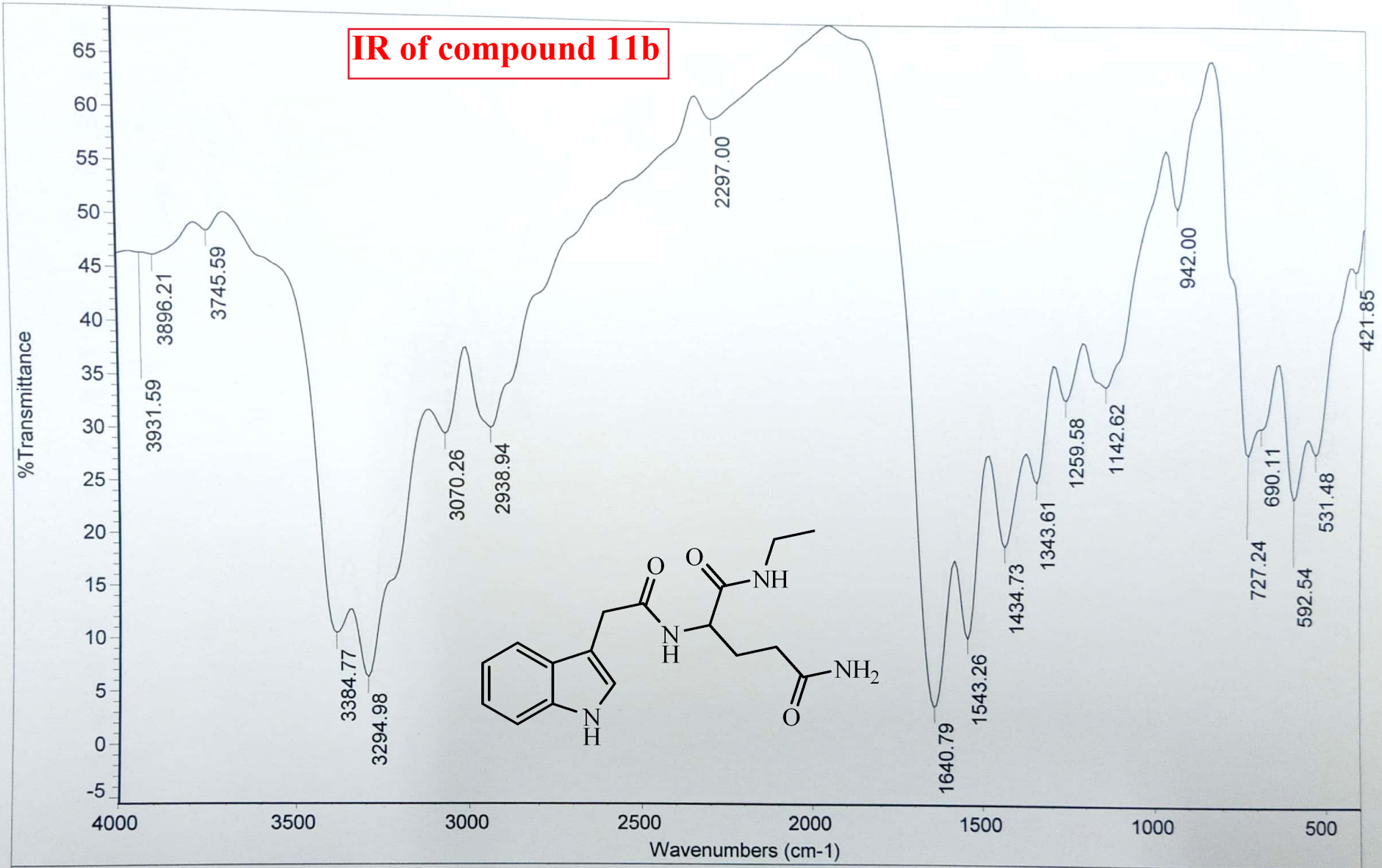


IR of compound 11b



Date: Tue Jul 03 12:42:14 2018 (GMT-07:00) EA IAPD

Scans: 100

Resolution: 16.000

^{1}HNMR of compound 11b

Microanalytical Unit - FOPCU - NMR laboratory
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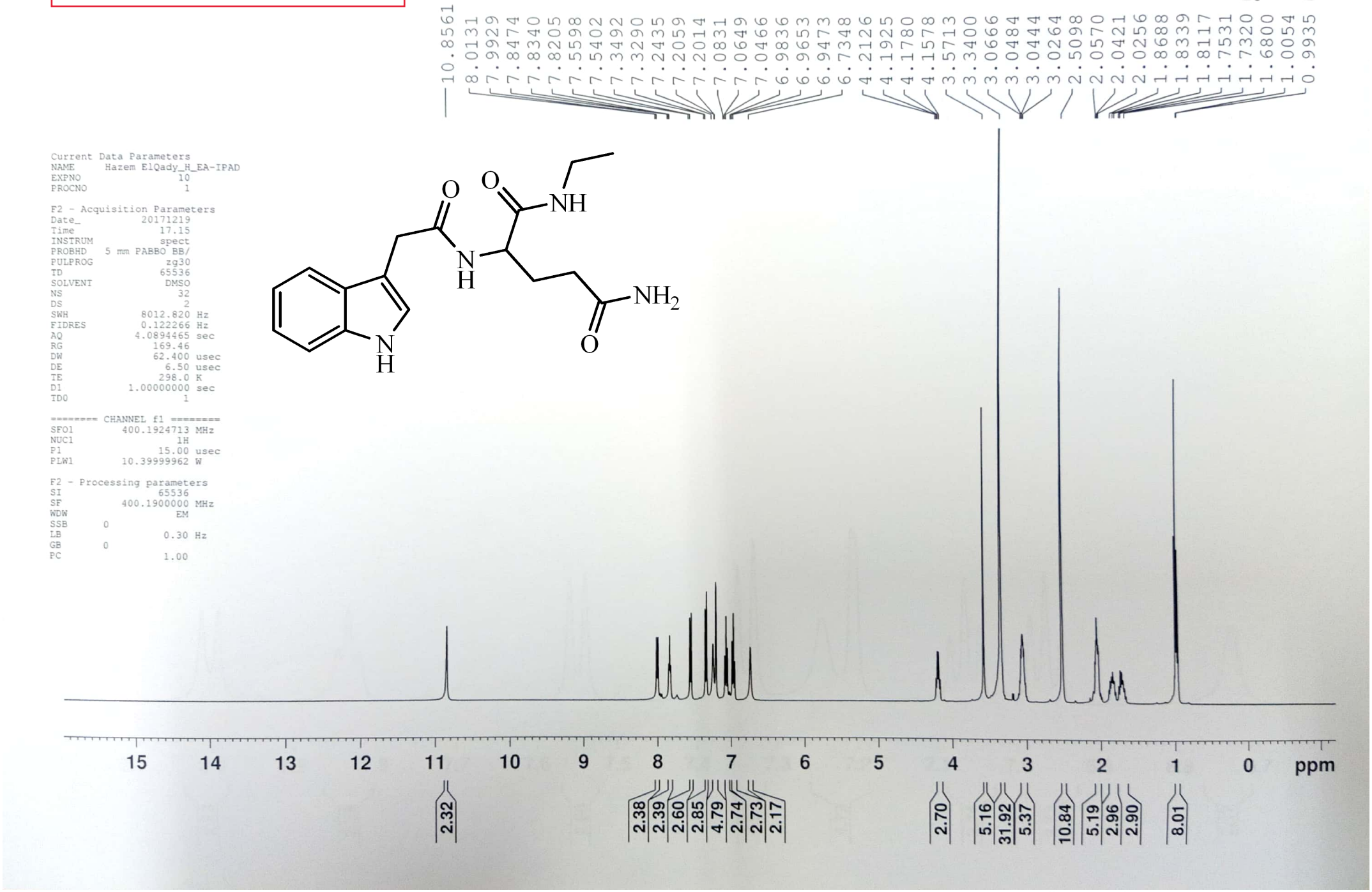
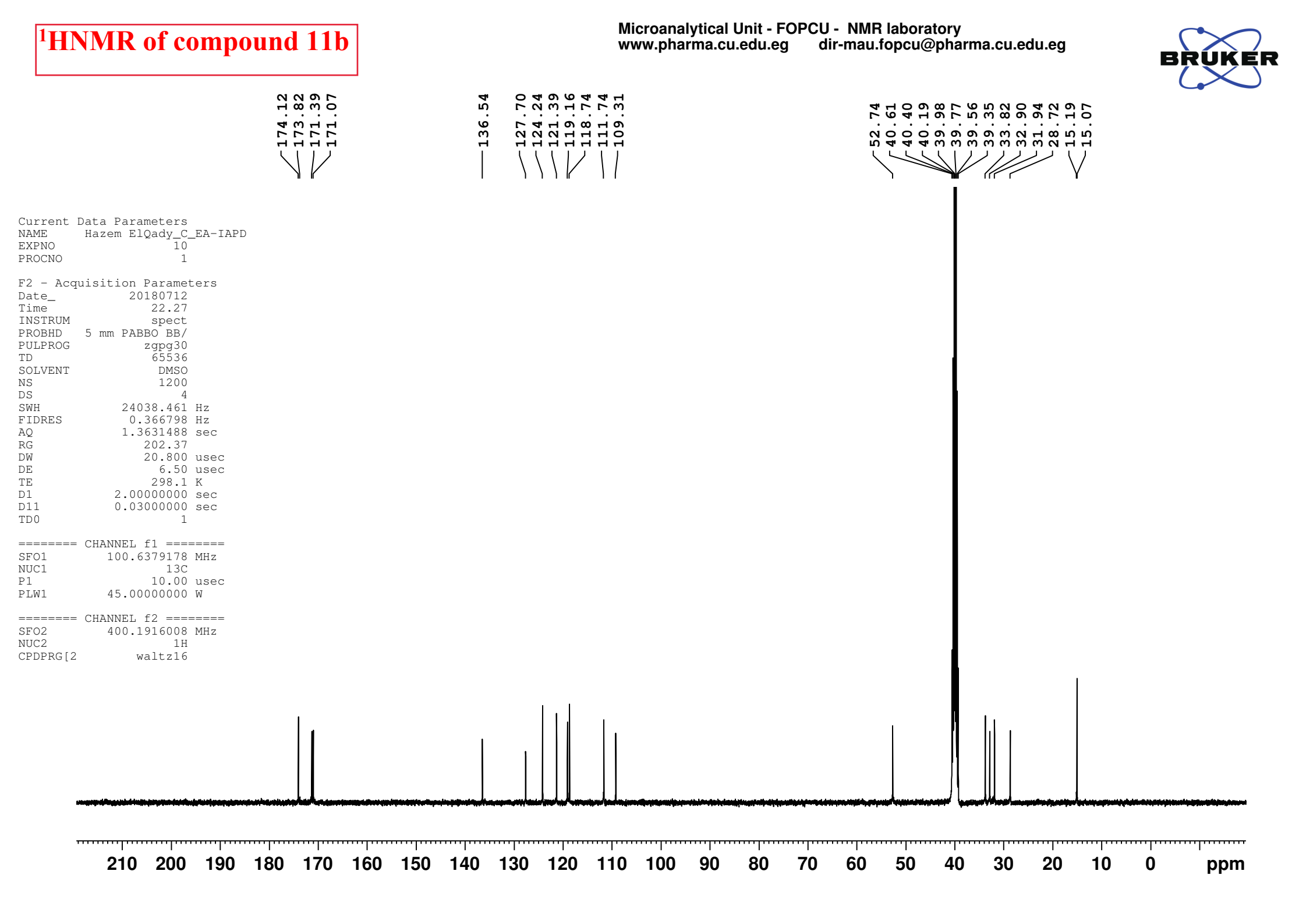
BRUKER

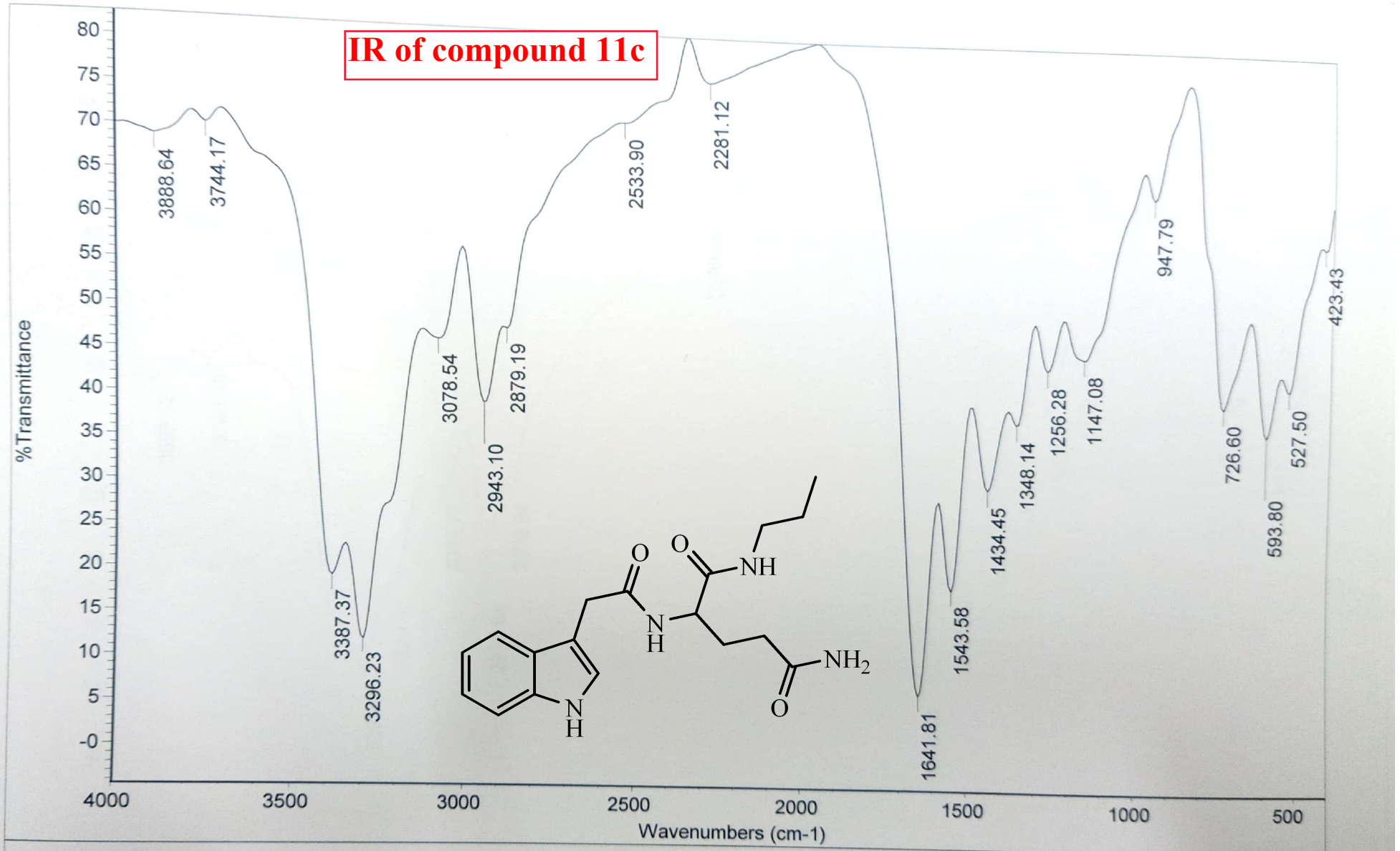


^{1}HNMR of compound 11b

Microanalytical Unit - FOPCU - NMR laboratory
www.pharma.cu.edu.eg dir-mau.fopcu@pharma.cu.edu.eg



IR of compound 11c



Date: Tue Jul 03 11:39:37 2018 (GMT-07:00)PA IAPD

Scans: 100

Resolution: 16.000

[1]HNMR of compound 11c

Microanalytical Unit - FOPCU - NMR laboratory
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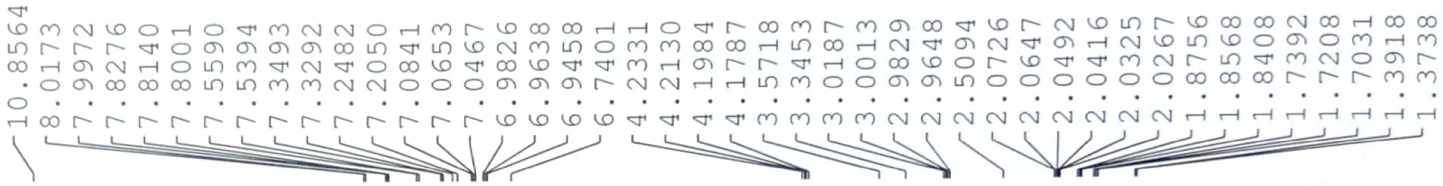
BRUKER

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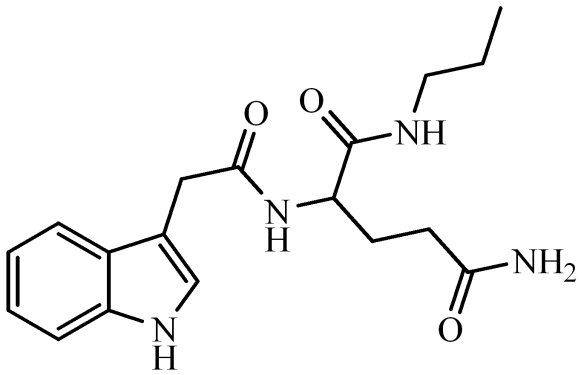
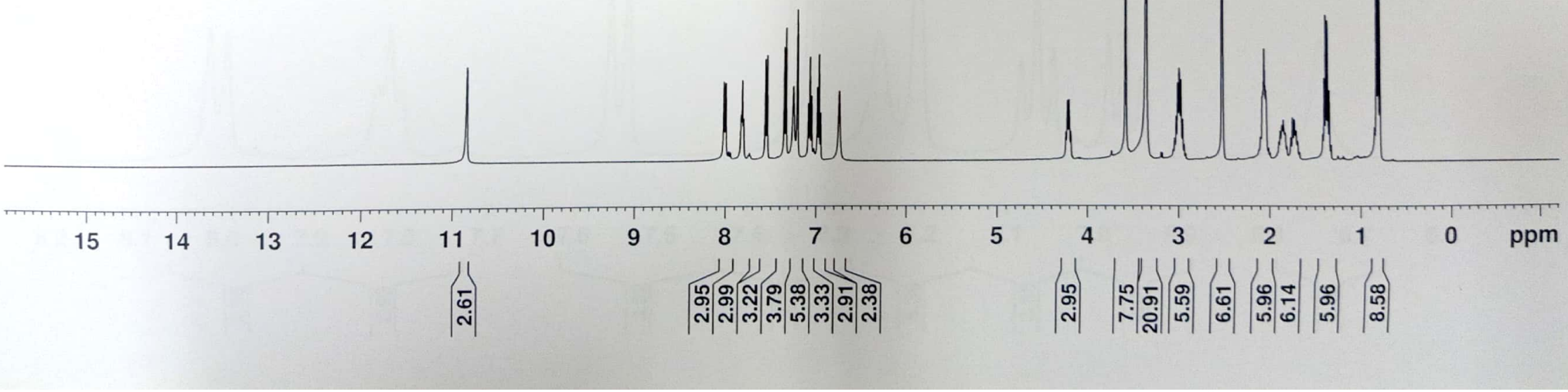
Current Data Parameters
NAME      Hazem ElQady_H_PA-IPAD
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20171219
Time              17.20
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG            zg30
TD                65536
SOLVENT            DMSO
NS                    32
DS                     2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG                129.43
DW                62.400 usec
DE                 6.50 usec
TE                298.1 K
D1           1.00000000 sec
TD0                    1

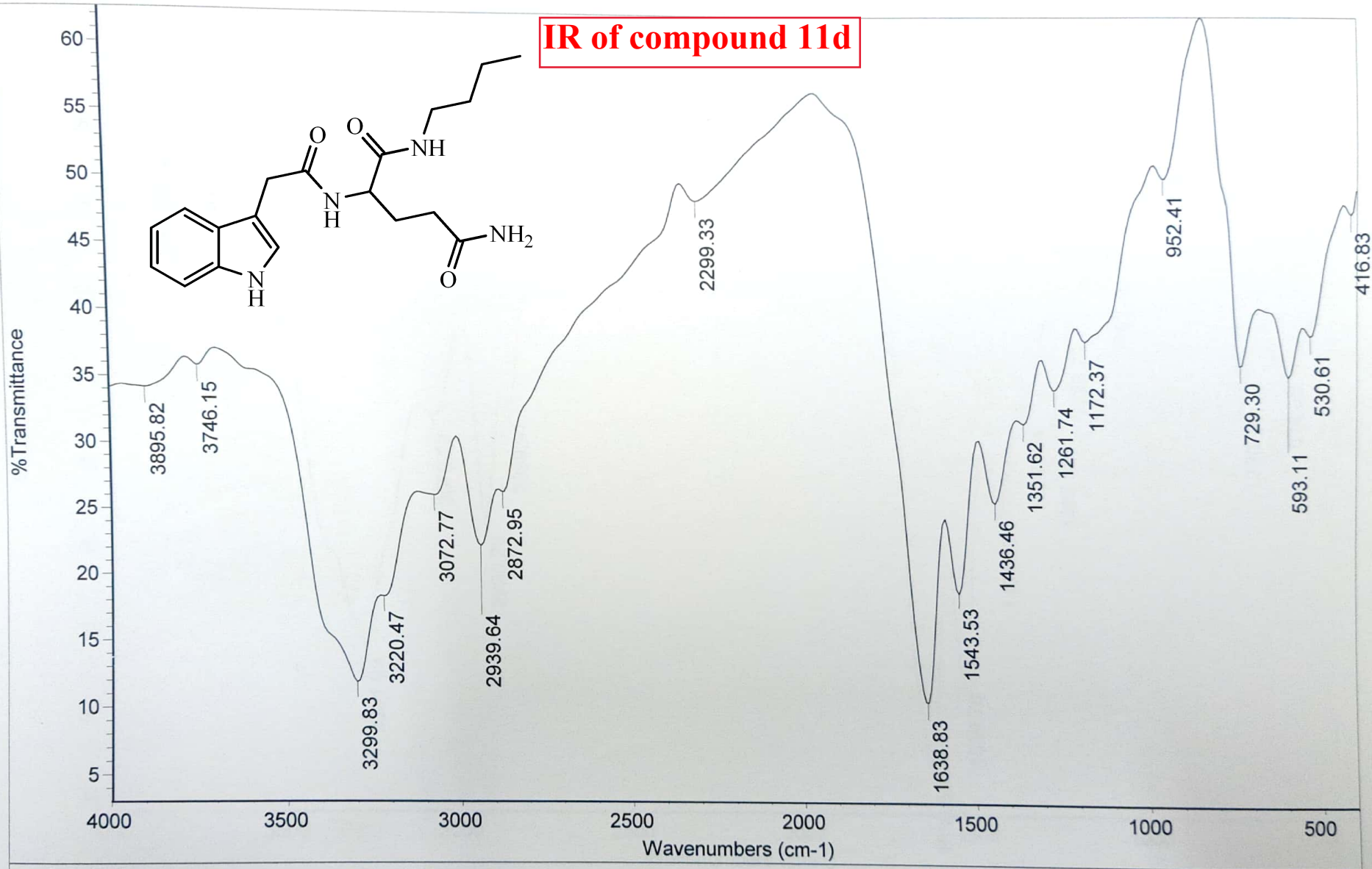
======== CHANNEL f1 ========
SFO1         400.1924713 MHz
NUC1                   1H
P1                15.00 usec
PLW1         10.39999962 W

F2 - Processing parameters
SI                 65536
SF           400.1900000 MHz
WDW                   EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```





IR of compound 11d



^{1}HNMR of compound 11d

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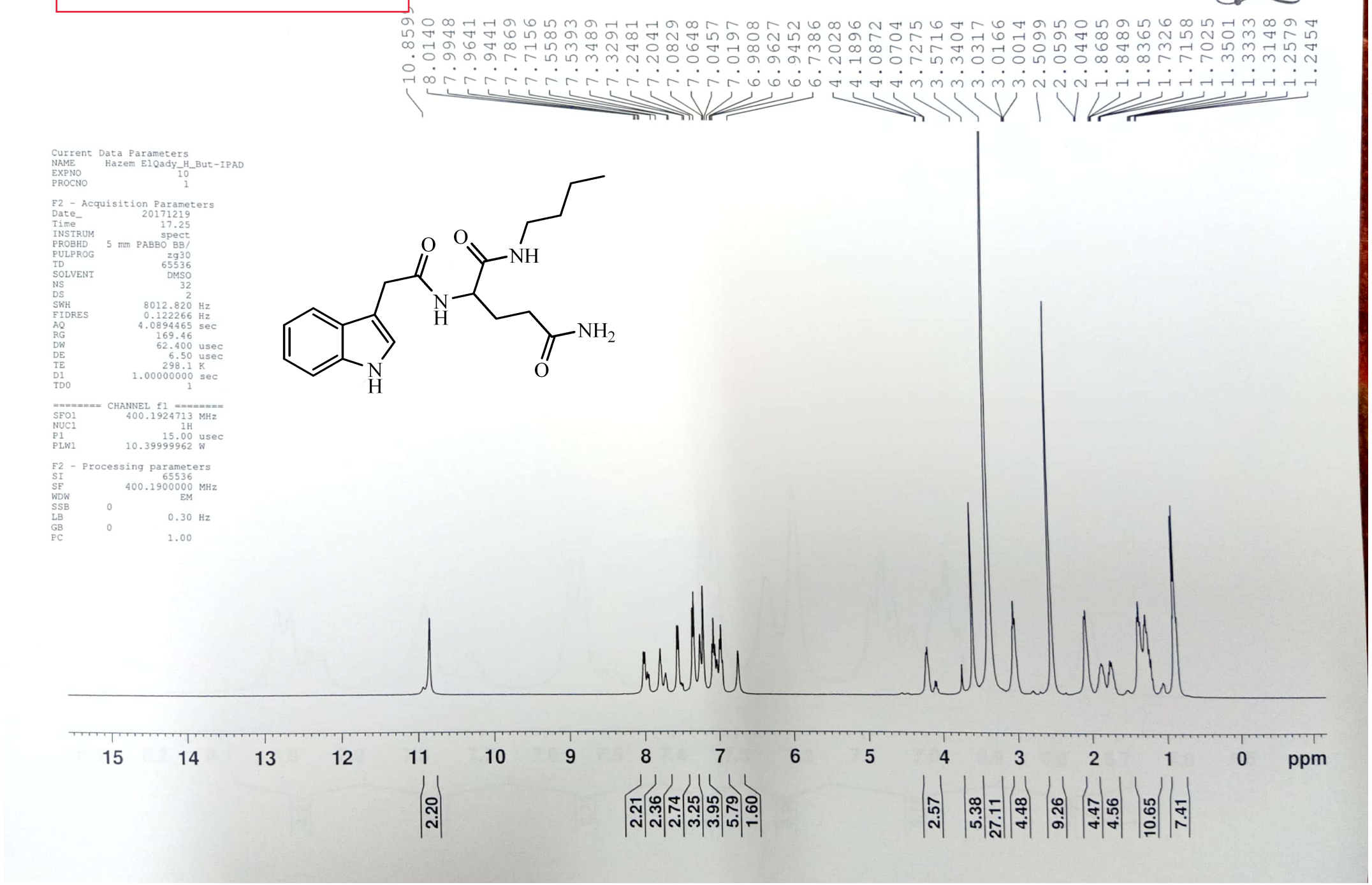
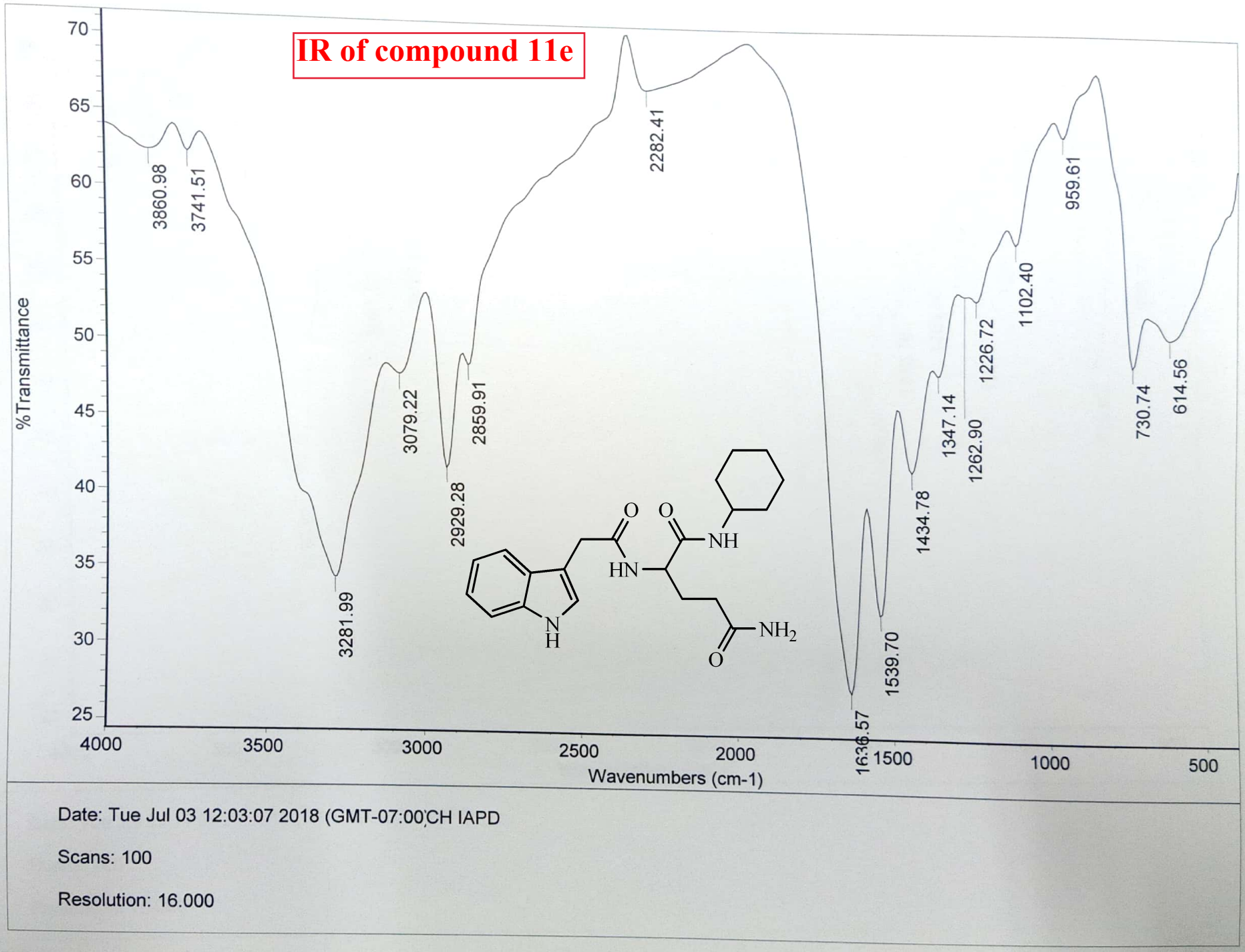


IR of compound 11e



[1]HNMR of compound 11e

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10.8867
8.0226 8.0037 7.6496 7.6330 7.5694 7.5506 7.3529 7.3356 7.2757 7.2099 7.0842 7.0676 7.0495 7.0245 6.9825 6.9649 6.9492 6.7489
4.2187 4.2033 3.5767 3.5318 3.4873 2.5105 2.0558 1.8428 1.8258 1.6765 1.6443 1.5397 1.2135 1.1880 1.1095 1.0845 1.0619

```
Current Data Parameters
NAME      Hazem ElQady_H_CH-IAPD
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20180114
Time              19.53
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG             zg30
TD                 65536
SOLVENT             DMSO
NS                    32
DS                     2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG                 84.65
DW                62.400 usec
DE                 6.50 usec
TE                298.1 K
D1             1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1924713 MHz
NUC1                   1H
P1                 15.00 usec
PLW1         10.39999962 W

F2 - Processing parameters
SI                 65536
SF           400.1900000 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
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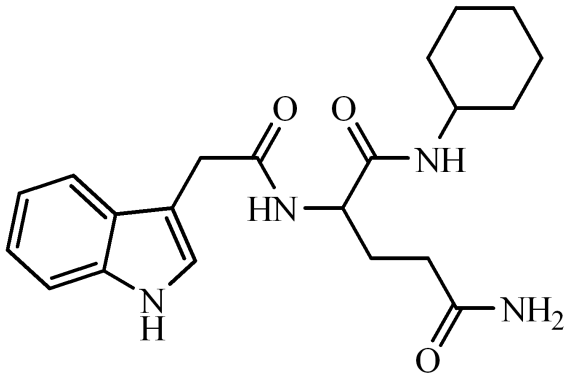
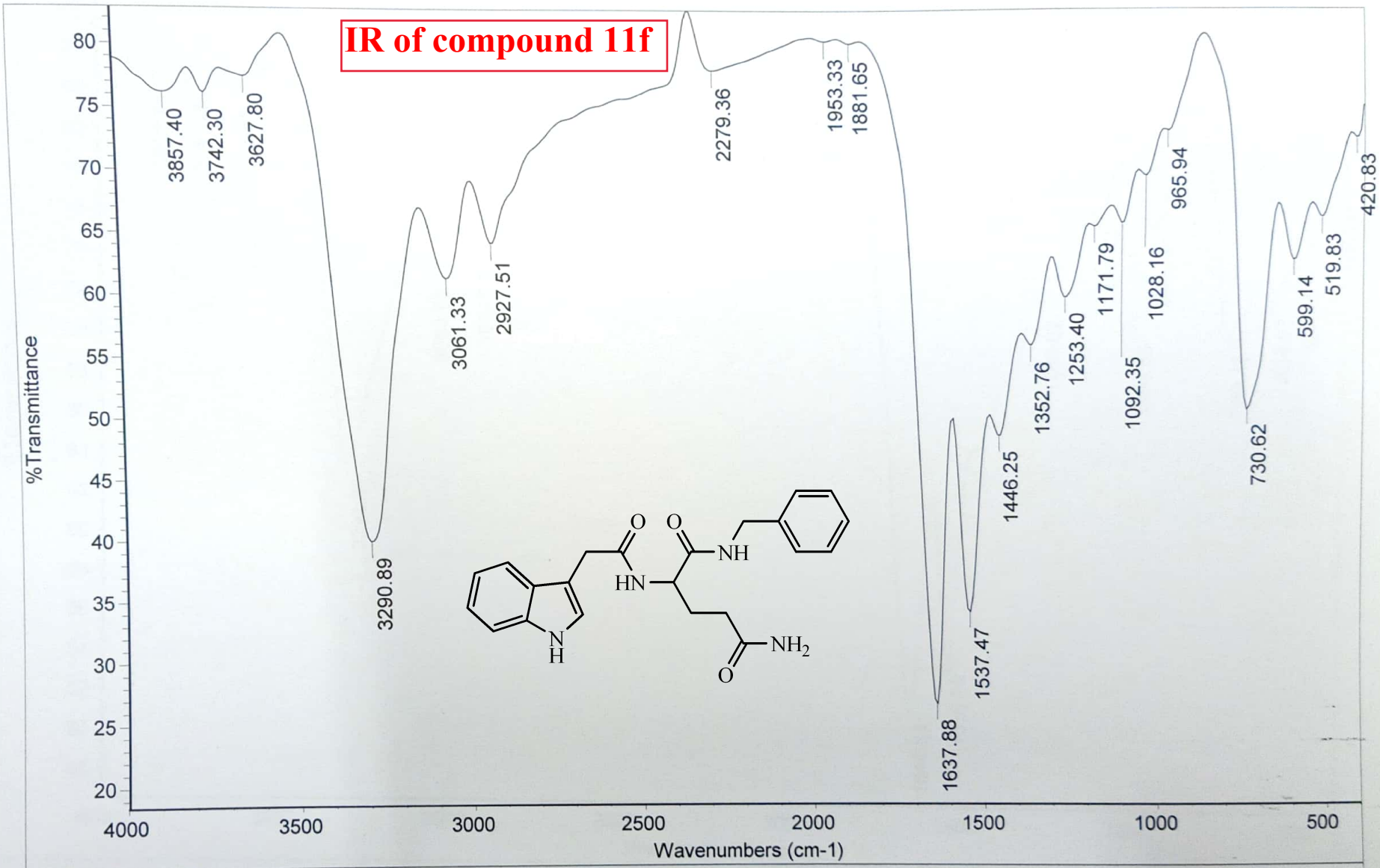


15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 ppm

2.86 2.49 5.92 10.15 7.56 2.47 3.33 14.47 2.05 6.52 24.56 17.62

IR of compound 11f



Date: Tue Jul 03 11:55:04 2018 (GMT-07:00) BA IAPD

Scans: 100

Resolution: 16.000

^{1}HNMR of compound 11f

Microanalytical Unit - FOPCU - NMR laboratory
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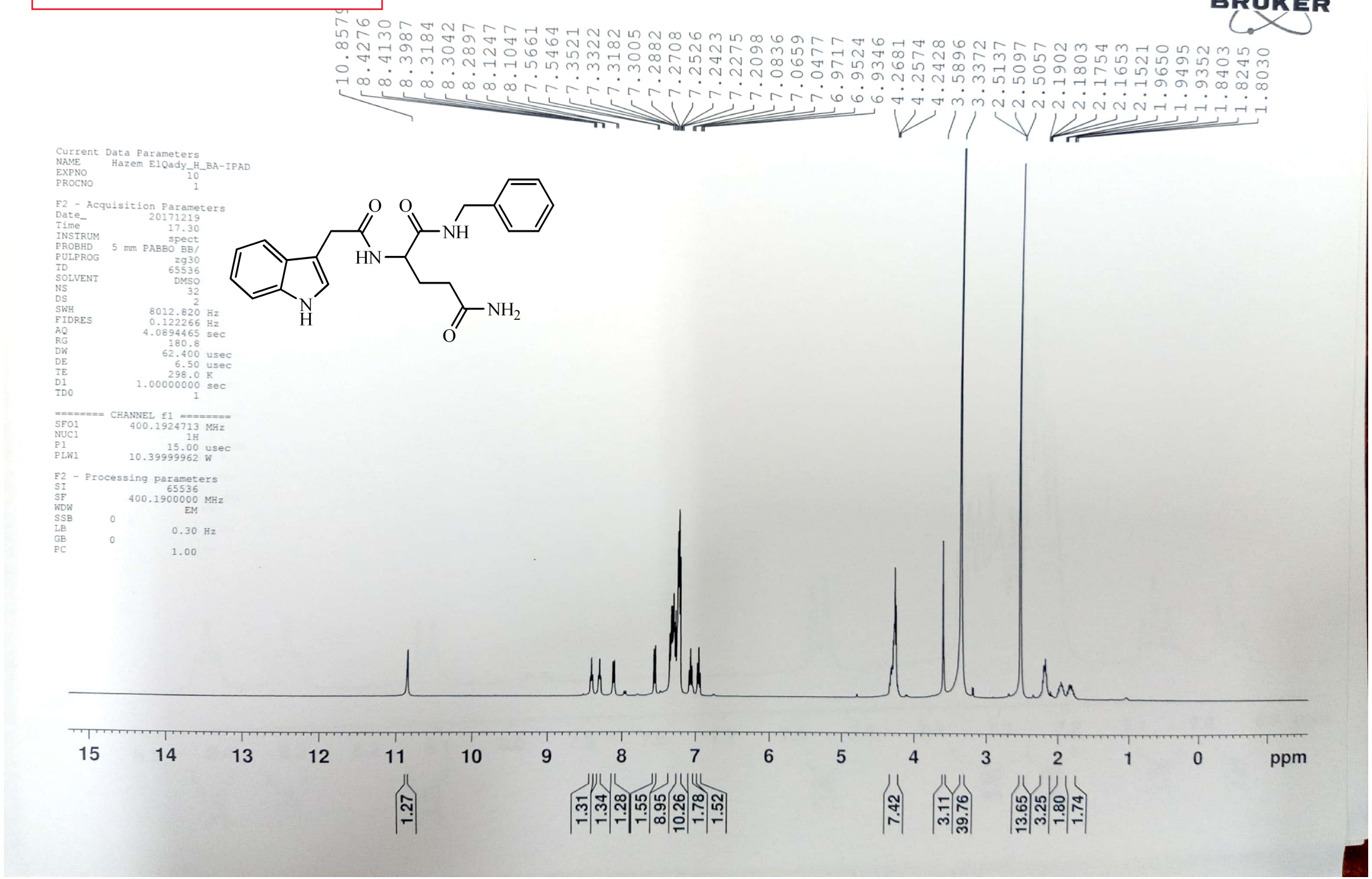
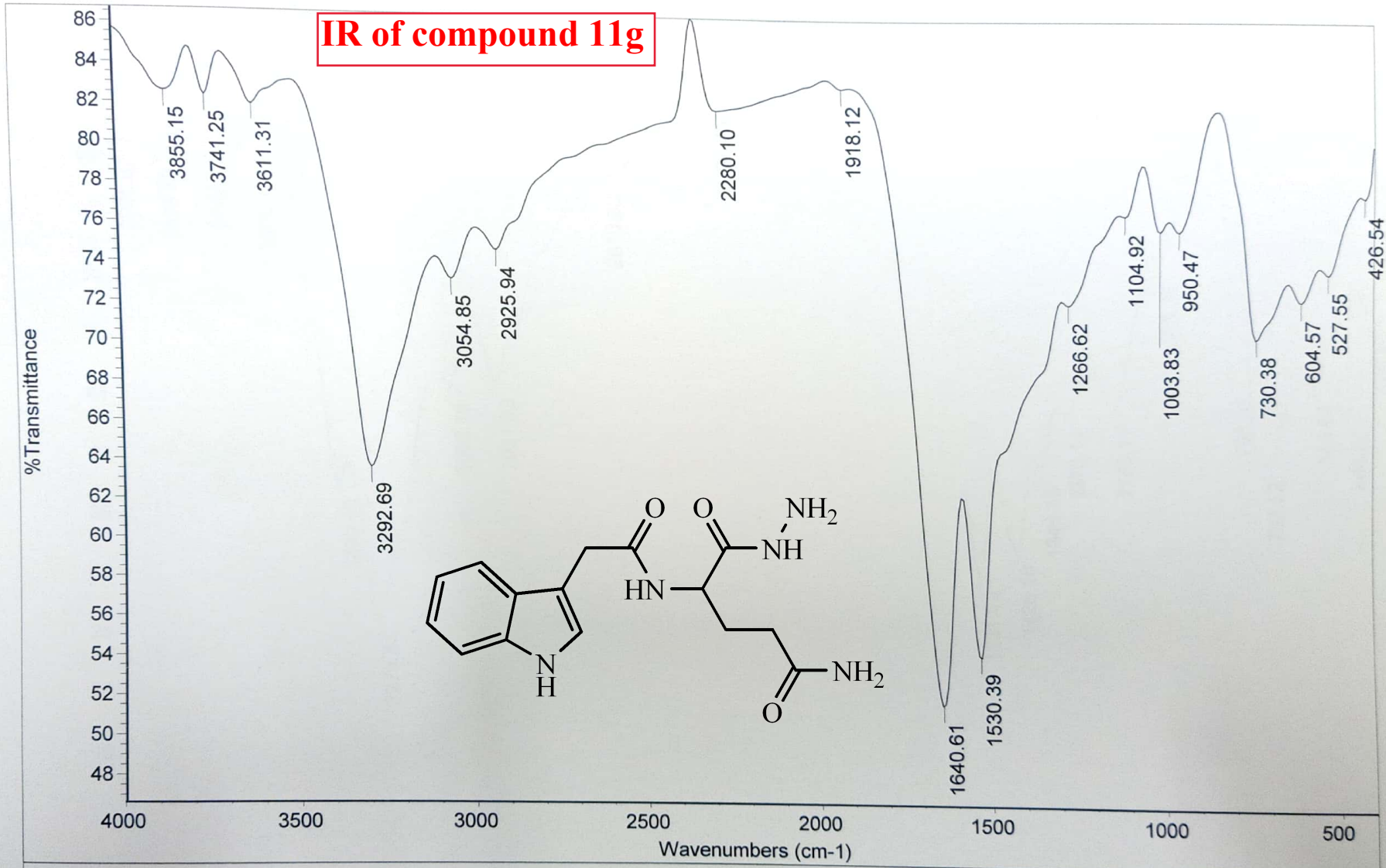


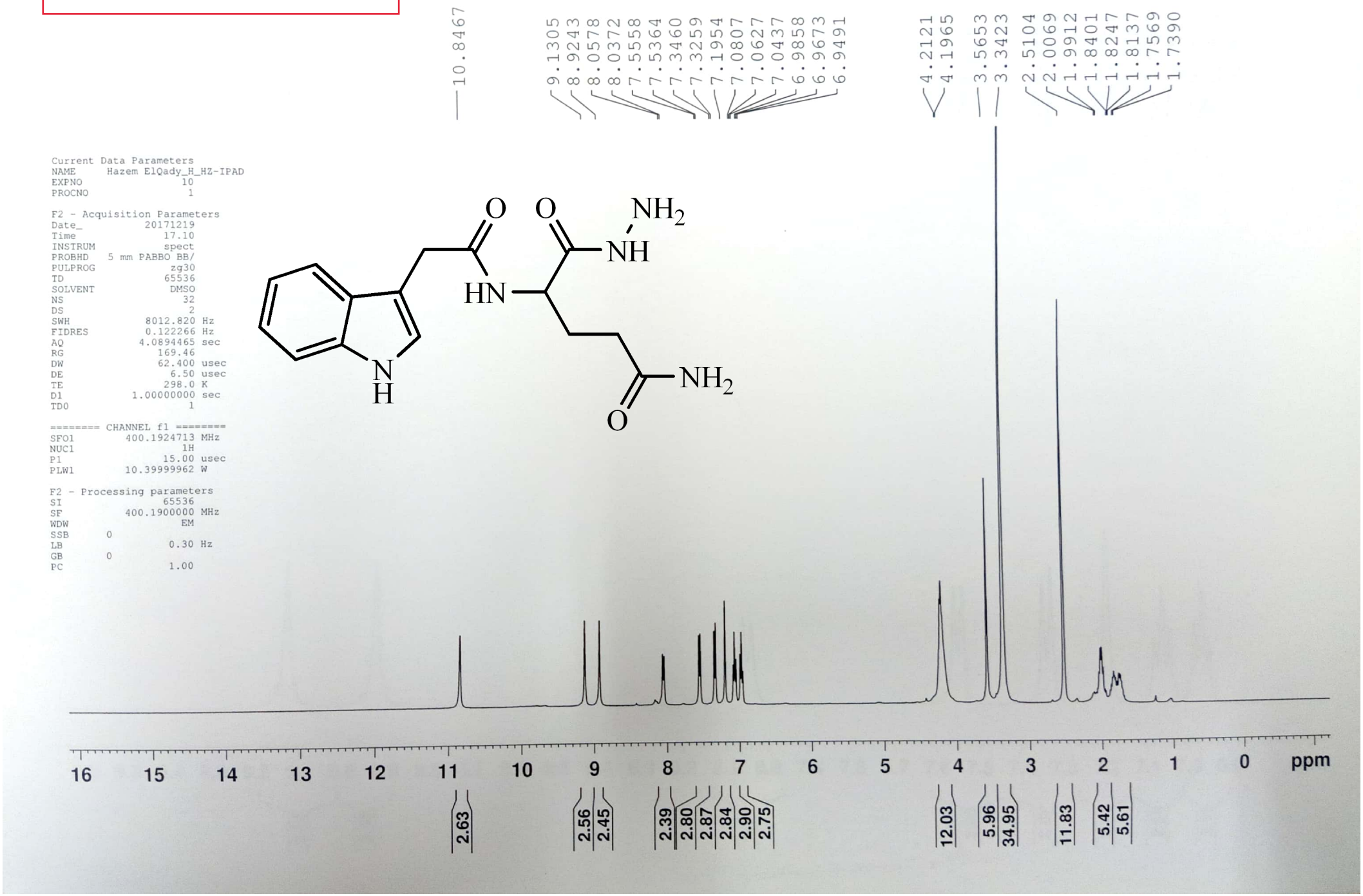
IR of compound 11g



^{1}HNMR of compound 11g

Microanalytical Unit - FOPCU - NMR laboratory
www.pharma.cu.edu.eg dir-mau.fopcu@pharma.cu.edu.eg

BRUKER



^{1}HNMR of compound 11g (D_2O)

Microanalytical Unit - FOPCU - NMR laboratory
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7.5337
7.5142
7.3505
7.3304
7.1841
7.0868
7.0689
7.0495
6.9909
6.9724
6.9542

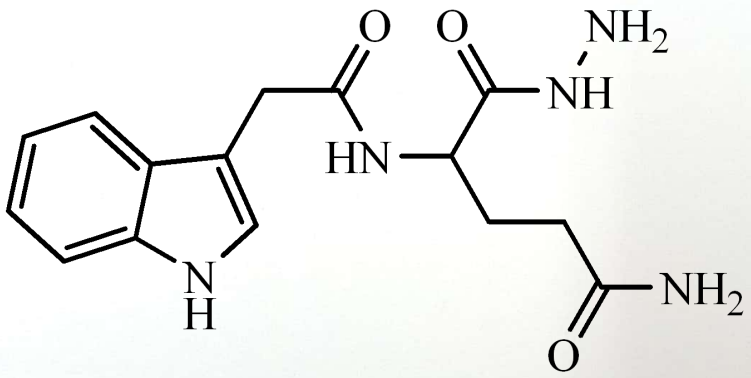
3.9697
3.5575
3.1557
2.5127
2.0173
2.0104
2.0060
1.9980
1.8342
1.7372

```
Current Data Parameters
NAME      Hazem ElQady_H_HZ-IPAD_D2O
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20171220
Time              16.22
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG            zg30
TD                65536
SOLVENT            DMSO
NS                    32
DS                     2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG                146.06
DW                62.400 usec
DE                 6.50 usec
TE                298.0 K
D1           1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1924713 MHz
NUC1                 1H
P1                15.00 usec
PLW1         10.39999962 W

F2 - Processing parameters
SI                 65536
SF           400.1900000 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```



15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 ppm

2.02 2.04 2.01 2.09 1.87

3.29 67.41 3.80

7.31 4.23 3.92

^{13}CNMR of compound 11g

Microanalytical Unit - FOPCU - NMR laboratory
www.pharma.cu.edu.eg dir-mau.fopcu@pharma.cu.edu.eg


```
Current Data Parameters
NAME      Hazem ElQady_C_H2-IAPD
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20180712
Time              23.55
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD                65536
SOLVENT             DMSO
NS                  1500
DS                     4
SWH           24038.461 Hz
FIDRES         0.366798 Hz
AQ            1.3631488 sec
RG               202.37
DW               20.800 usec
DE                6.50 usec
TE               298.1 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1        100.6379178 MHz
NUC1                13C
P1                10.00 usec
PLW1        45.00000000 W

======== CHANNEL f2 ========
SFO2        400.1916008 MHz
NUC2                1H
CPDPRG[2        waltz16
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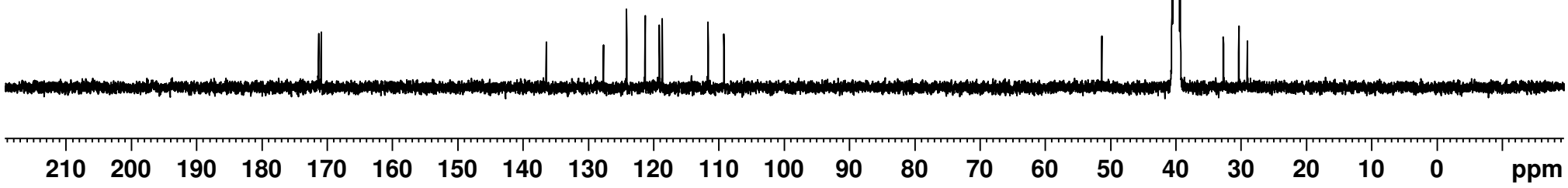
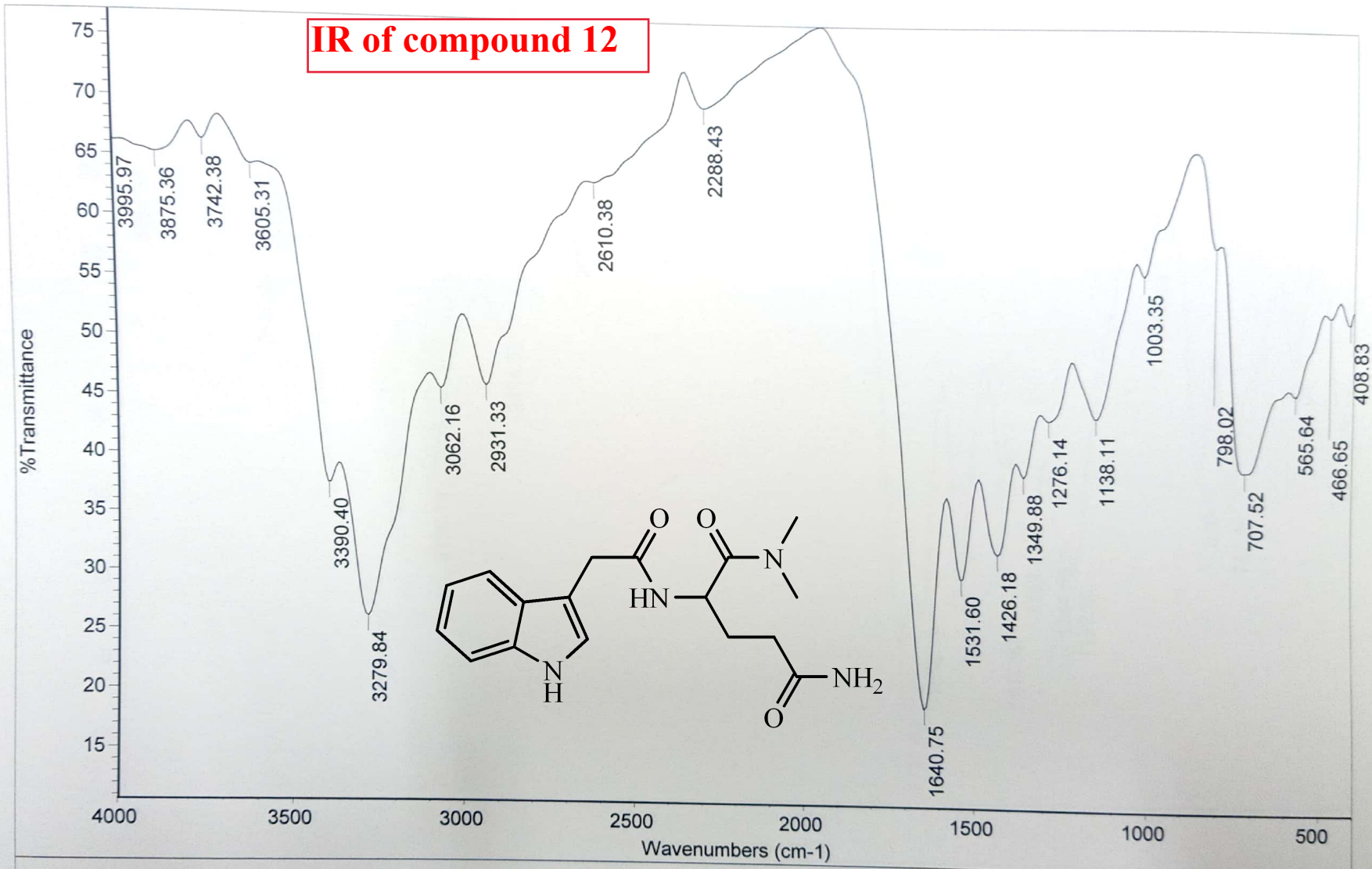


IR of compound 12



^{1}HNMR of compound 12

Microanalytical Unit - FOPCU - NMR laboratory
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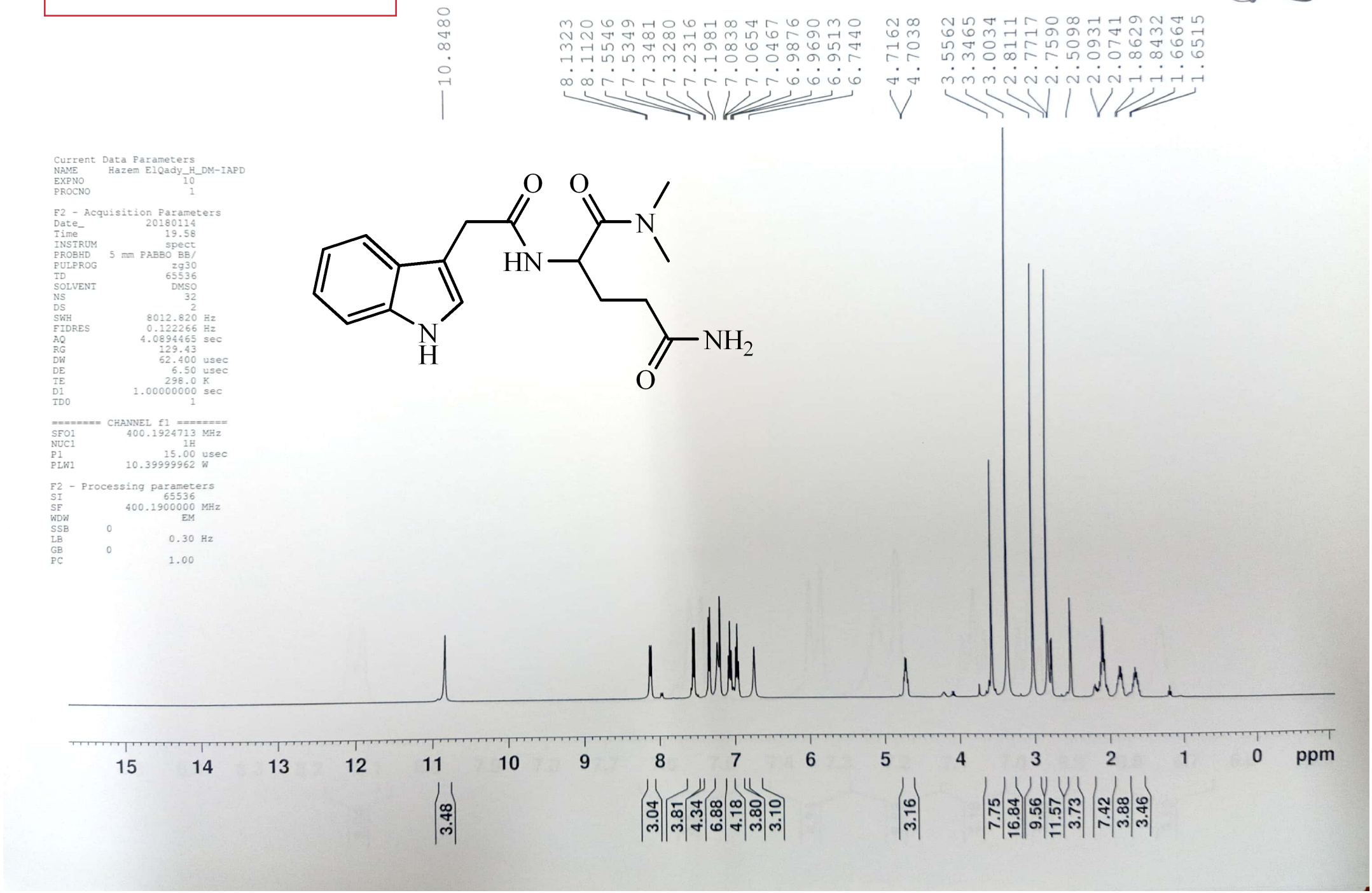
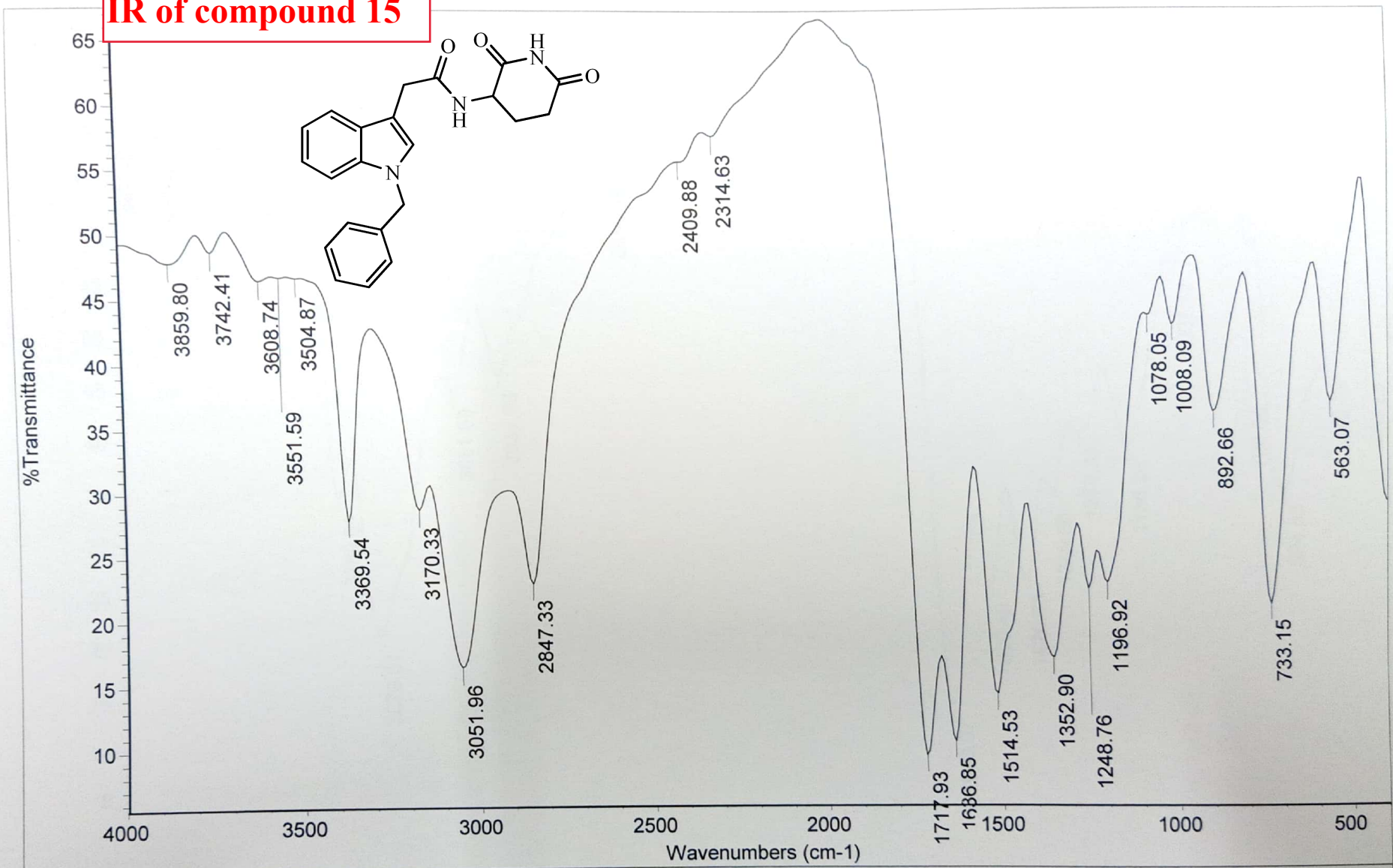
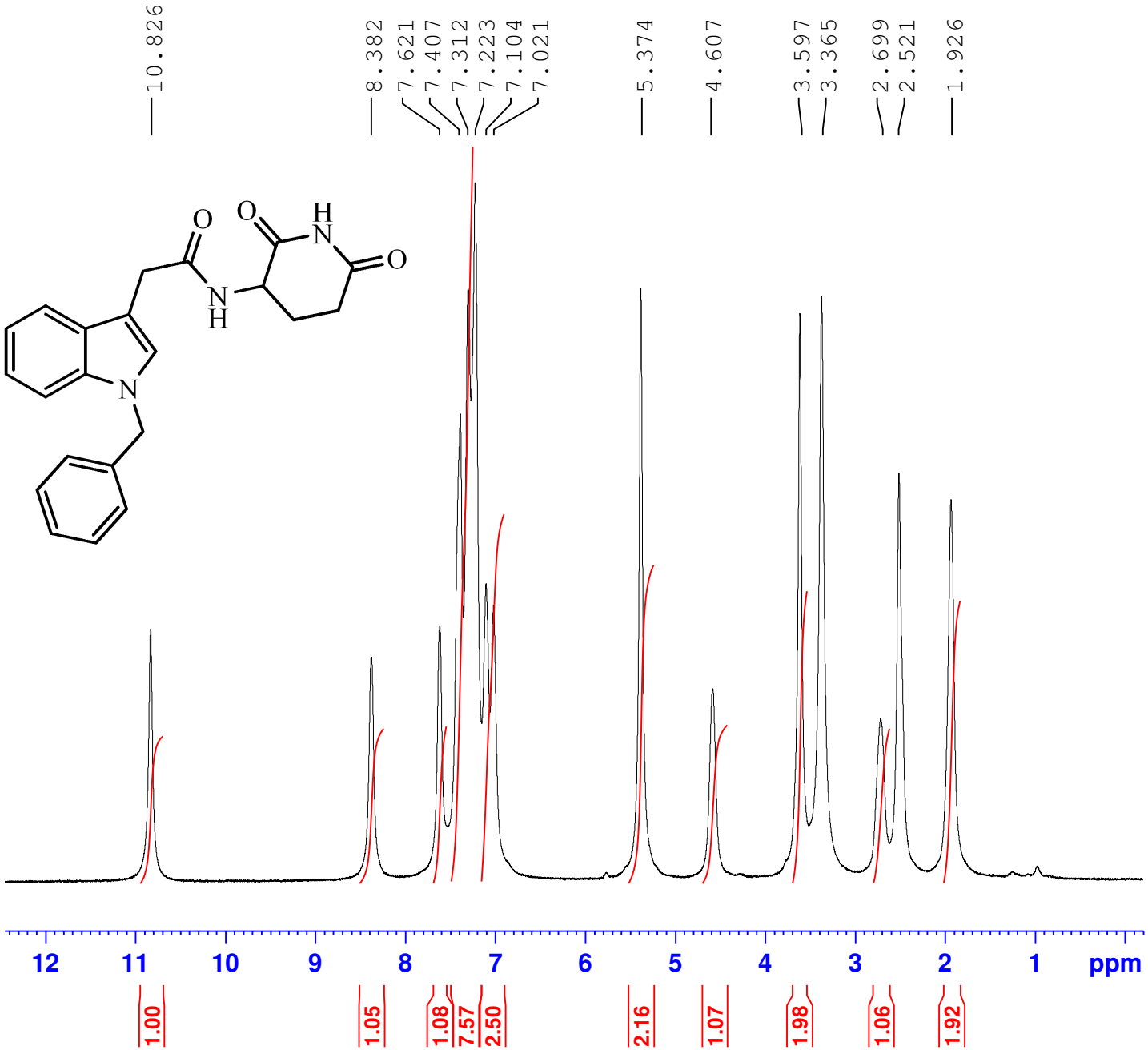


IR of compound 15



^{1}HNMR of compound 15

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EXPNO                   1
PROCNO                  1

F2 - Acquisition Parameters
Date_            20180307
Time                 8.53
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG              zg30
TD                  65536
SOLVENT              DMSO
NS                     58
DS                      2
SWH              8012.820 Hz
FIDRES           0.122266 Hz
AQ               4.0894465 sec
RG                  205.37
DW                  62.400 usec
DE                   6.50 usec
TE                  298.0 K
D1             1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         400.1524711 MHz
NUC1                    1H
P1                  12.00 usec
PLW1         18.00000000 W

F2 - Processing parameters
SI                  65536
SF           400.1500000 MHz
WDW                    EM
SSB       0
LB                   0.30 Hz
GB        0
PC                   1.00
```
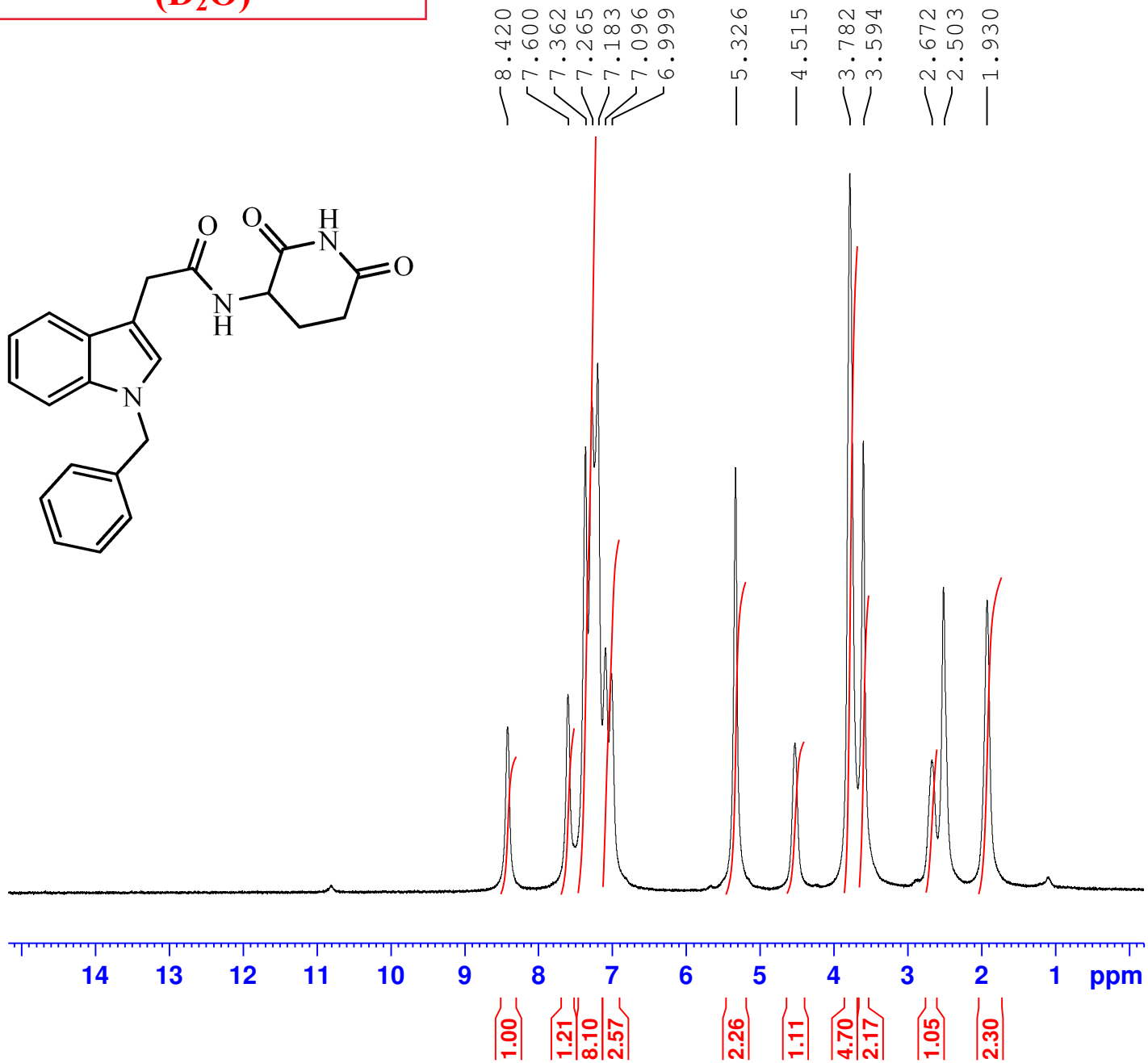

^{1}HNMR of compound 15 (D_2O)



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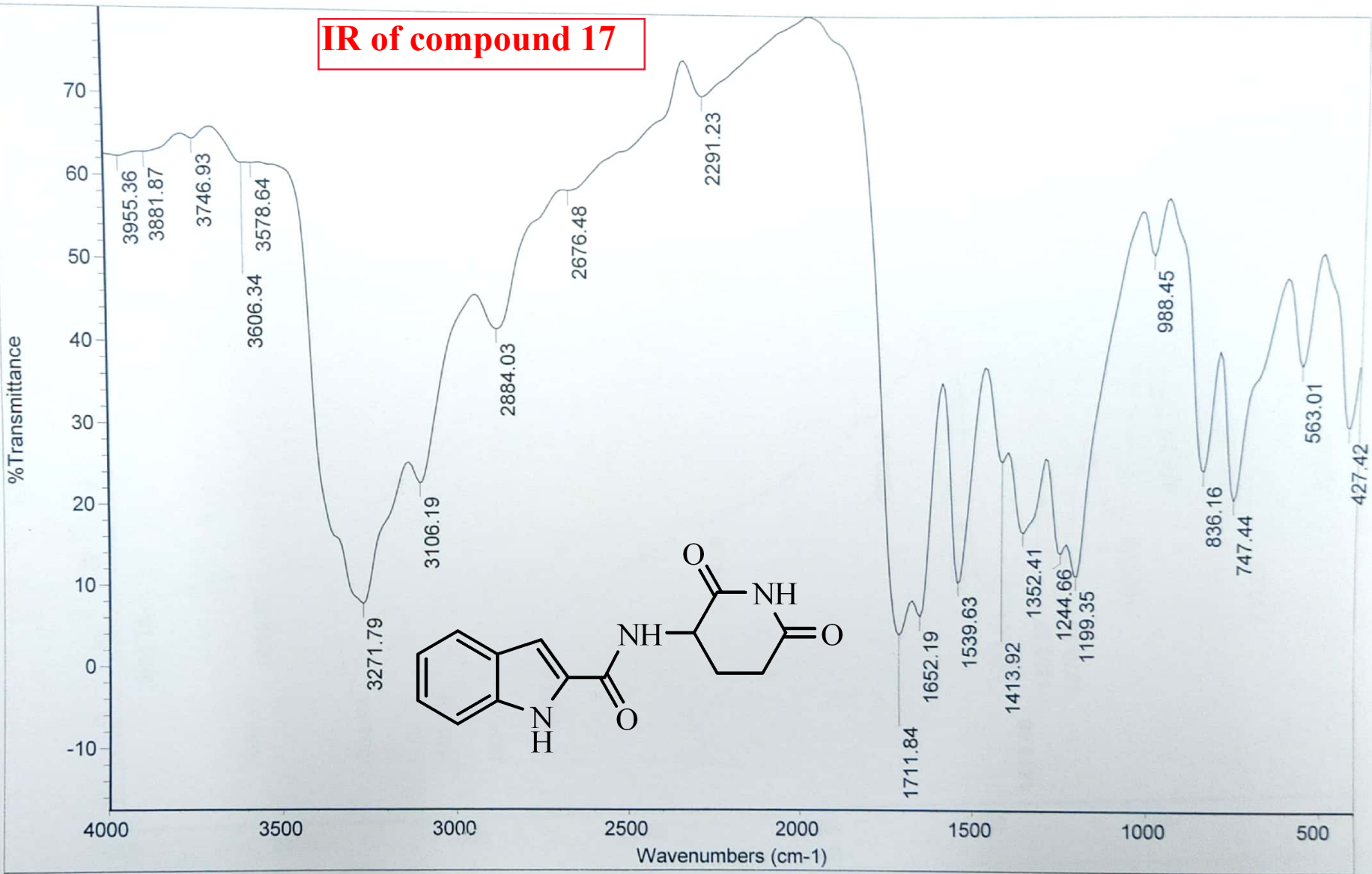
```
Current Data Parameters
NAME      hazem-INA-BZ-PD-d2o
EXPNO                       1
PROCNO                      1

F2 - Acquisition Parameters
Date_              20180307
Time                   9.08
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    65536
SOLVENT                DMSO
NS                       30
DS                        2
SWH               8012.820 Hz
FIDRES            0.122266 Hz
AQ                4.0894465 sec
RG                   205.37
DW                   62.400 usec
DE                    6.50 usec
TE                   298.0 K
D1              1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                     1H
P1                   12.00 usec
PLW1           18.00000000 W

F2 - Processing parameters
SI                    65536
SF             400.1500000 MHz
WDW                      EM
SSB       0
LB                    0.30 Hz
GB        0
PC                    1.00
```

IR of compound 17



Date: Tue Jul 03 10:53:32 2018 (GMT-07:00)IN2PD

Scans: 100

Resolution: 16.000

^{1}HNMR of compound 17

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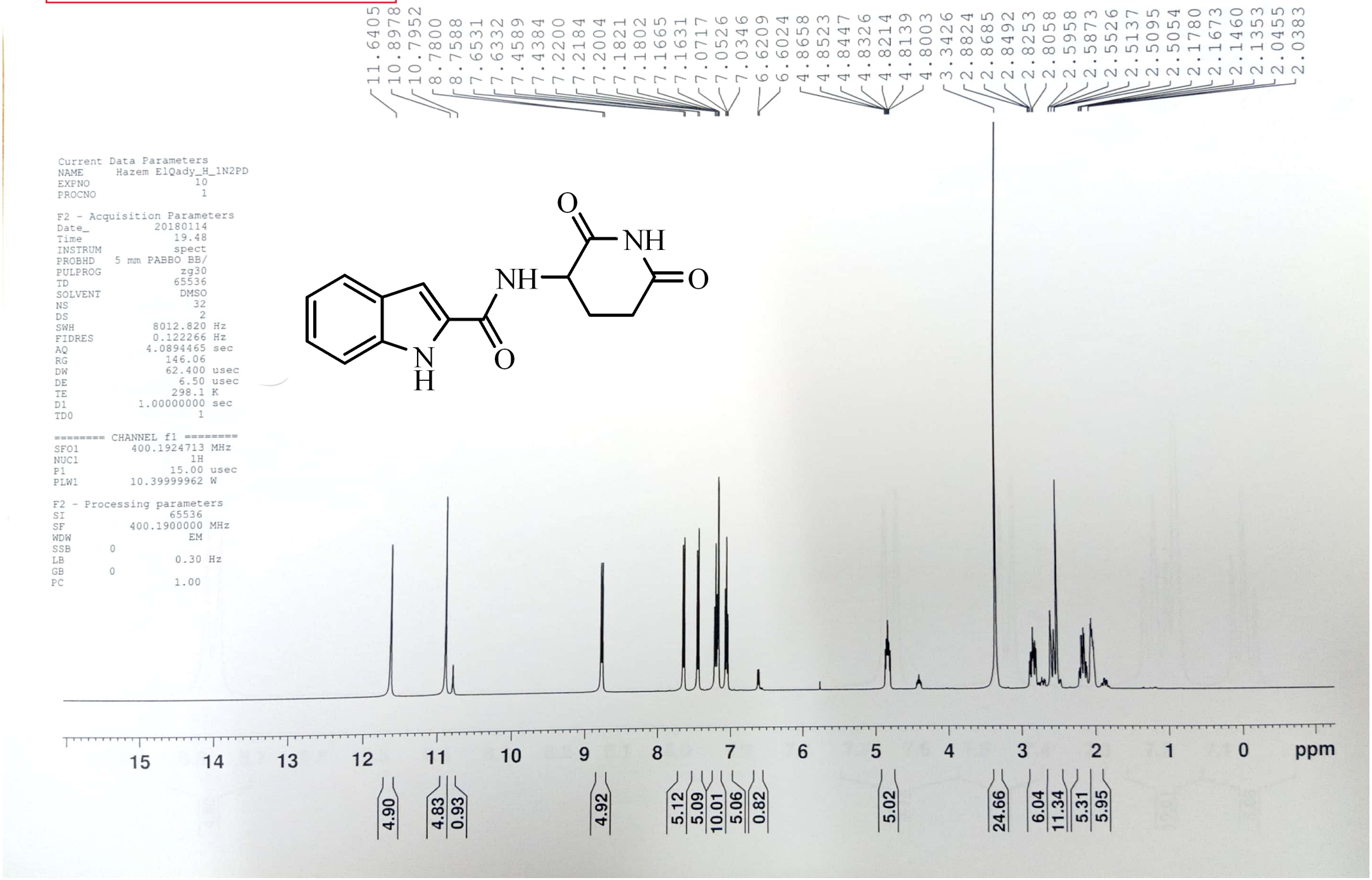
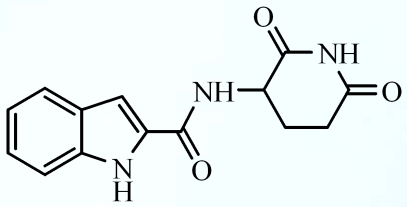


C:\Xcalibur\data\S\HAZEM-ELKADY-IN2PD

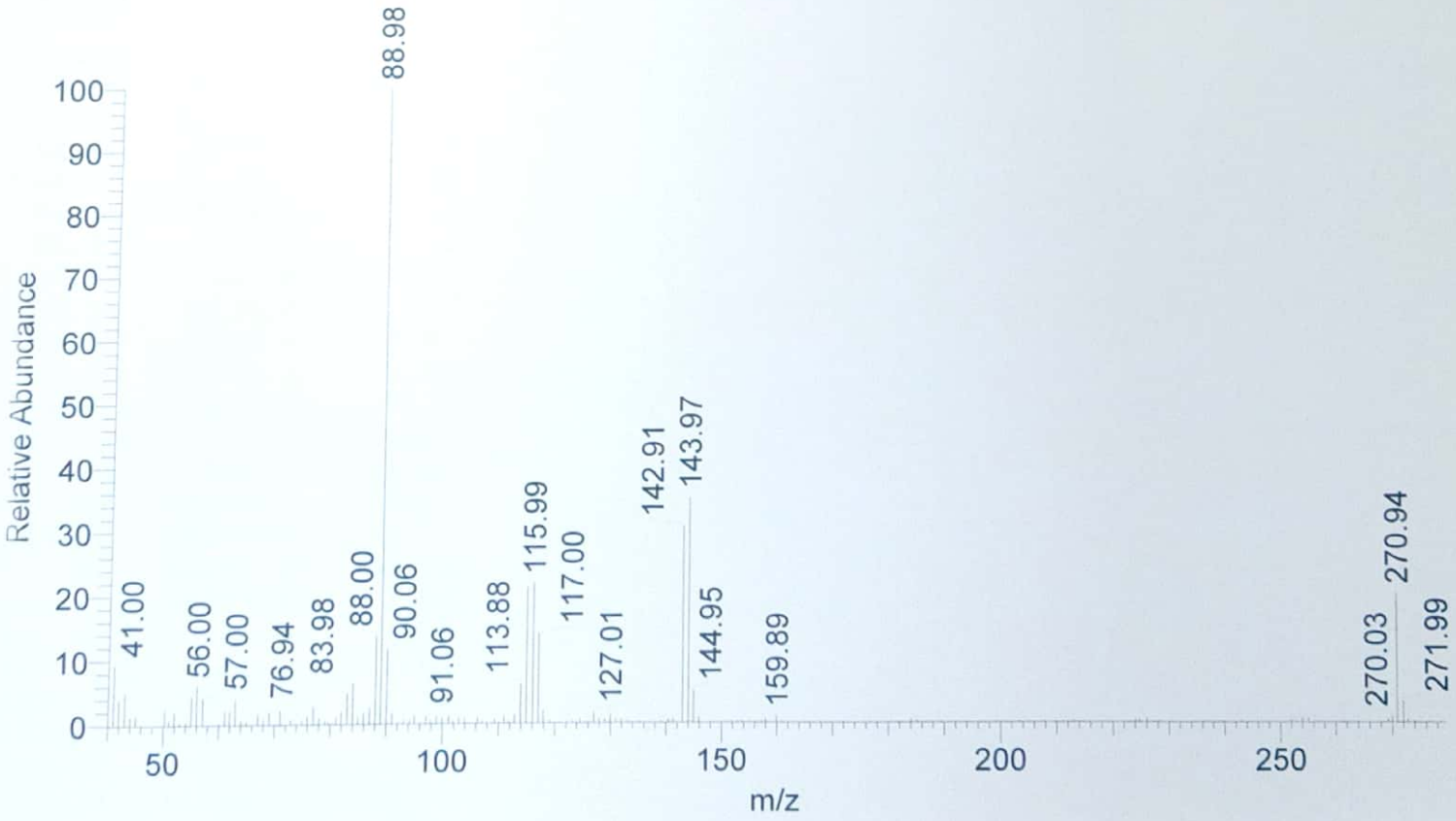
8/8/2018 1:14:29 PM
THE REGIONAL CENTER FOR MYCOLOGY AND BIOTECHNOLOGY
AZHAR UNIVERSITY

RT: 0.00 - 5.10 SM: 15G

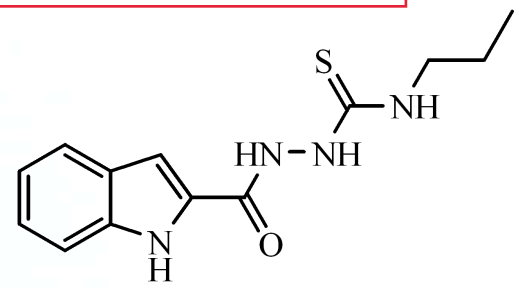
Mass spec. of compound 17



HAZEM-ELKADY-IN2PD #143 RT: 2.41 AV: 1 SB: 5 2.73 , 2.71-2.76 NL: 2.77E5
T: {0,0} + c EI Full ms [40.00-1000.00]



IR of compound 21a

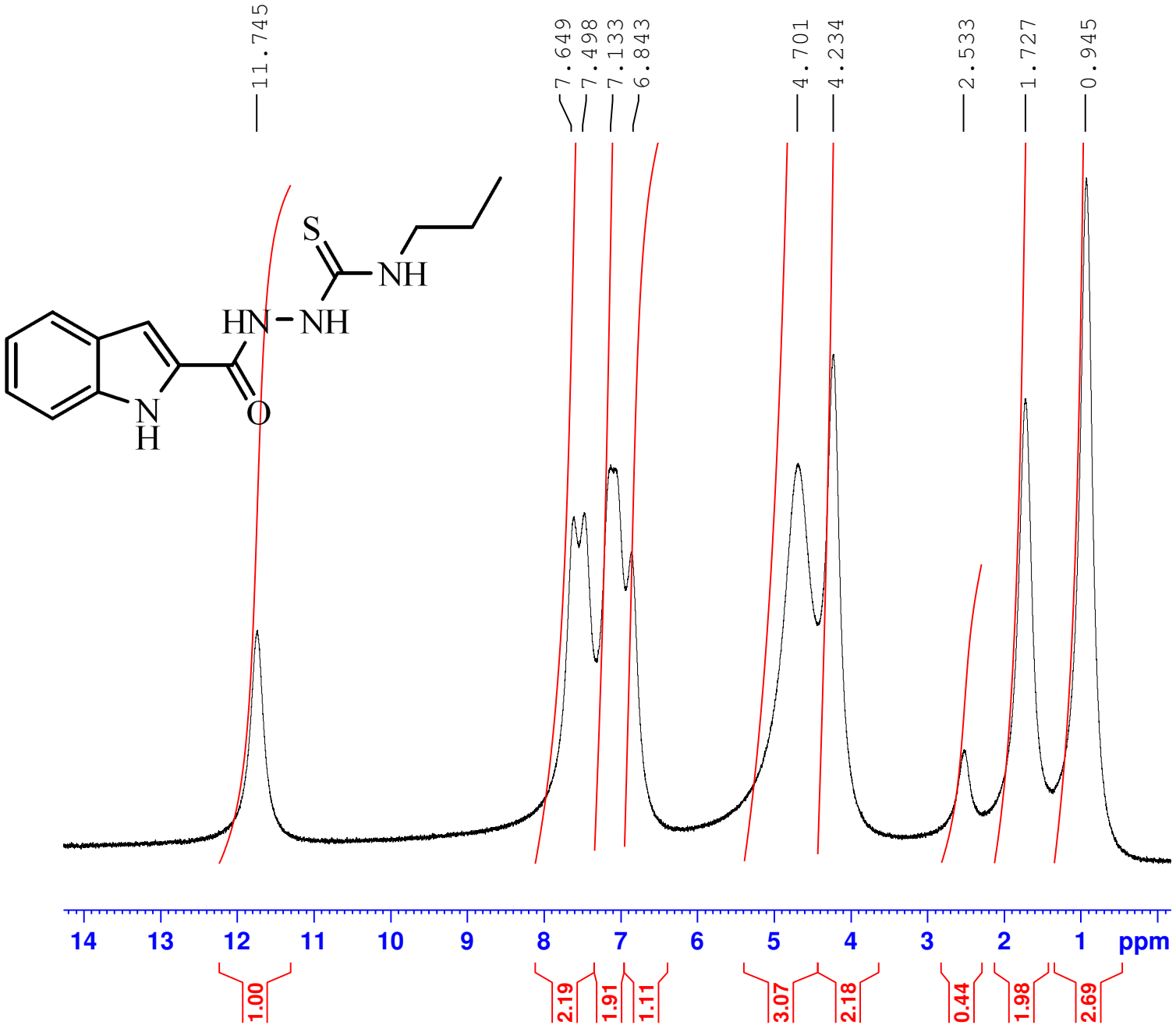


Date: Mon Jul 02 13:58:53 2018 (GMT-07:00IN2-PROP

Scans: 100

Resolution: 16.000

^{1}HNMR of compound 21a



BRUKER

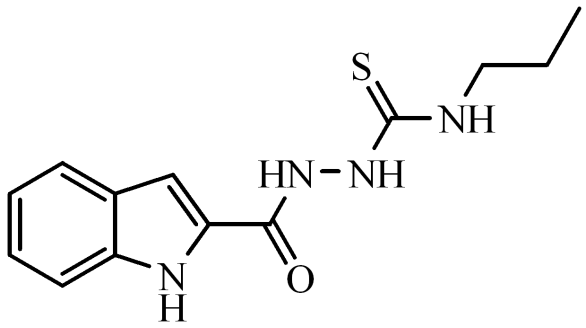
```
Current Data Parameters
NAME      hazem-IN2-propyl
EXPNO                    1
PROCNO                   1

F2 - Acquisition Parameters
Date_            20180606
Time                 8.28
INSTRUM             spect
PROBHD    5 mm PABBO BB/
PULPROG              zg30
TD                  65536
SOLVENT              DMSO
NS                     32
DS                      2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                 205.37
DW                 62.400 usec
DE                  6.50 usec
TE                 298.0 K
D1            1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         400.1524711 MHz
NUC1                   1H
P1                 12.00 usec
PLW1         18.00000000 W

F2 - Processing parameters
SI                  65536
SF           400.1500000 MHz
WDW                    EM
SSB       0
LB                  0.30 Hz
GB        0
PC                  1.00
```

^{1}HNMR of compound 21a (D_2O)




```
Current Data Parameters
NAME      hazem-IN2-propyl-d2o
EXPNO                       1
PROCNO                      1

F2 - Acquisition Parameters
Date_              20180606
Time                   8.48
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    65536
SOLVENT                DMSO
NS                       42
DS                        2
SWH                8012.820 Hz
FIDRES            0.122266 Hz
AQ               4.0894465 sec
RG                  205.37
DW                  62.400 usec
DE                   6.50 usec
TE                  298.0 K
D1              1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                      1H
P1                    12.00 usec
PLW1            18.00000000 W

F2 - Processing parameters
SI                    65536
SF              400.1500000 MHz
WDW                      EM
SSB          0
LB                    0.30 Hz
GB           0
PC                    1.00
```

^{13}CNMR of compound 21a

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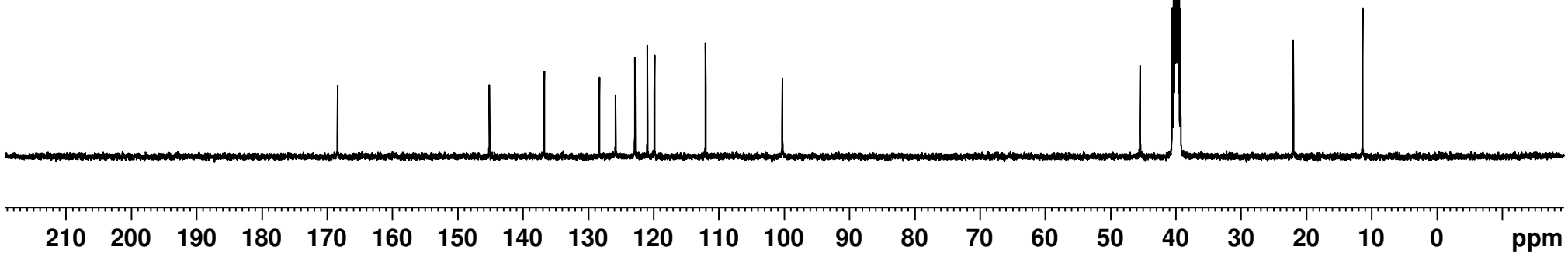
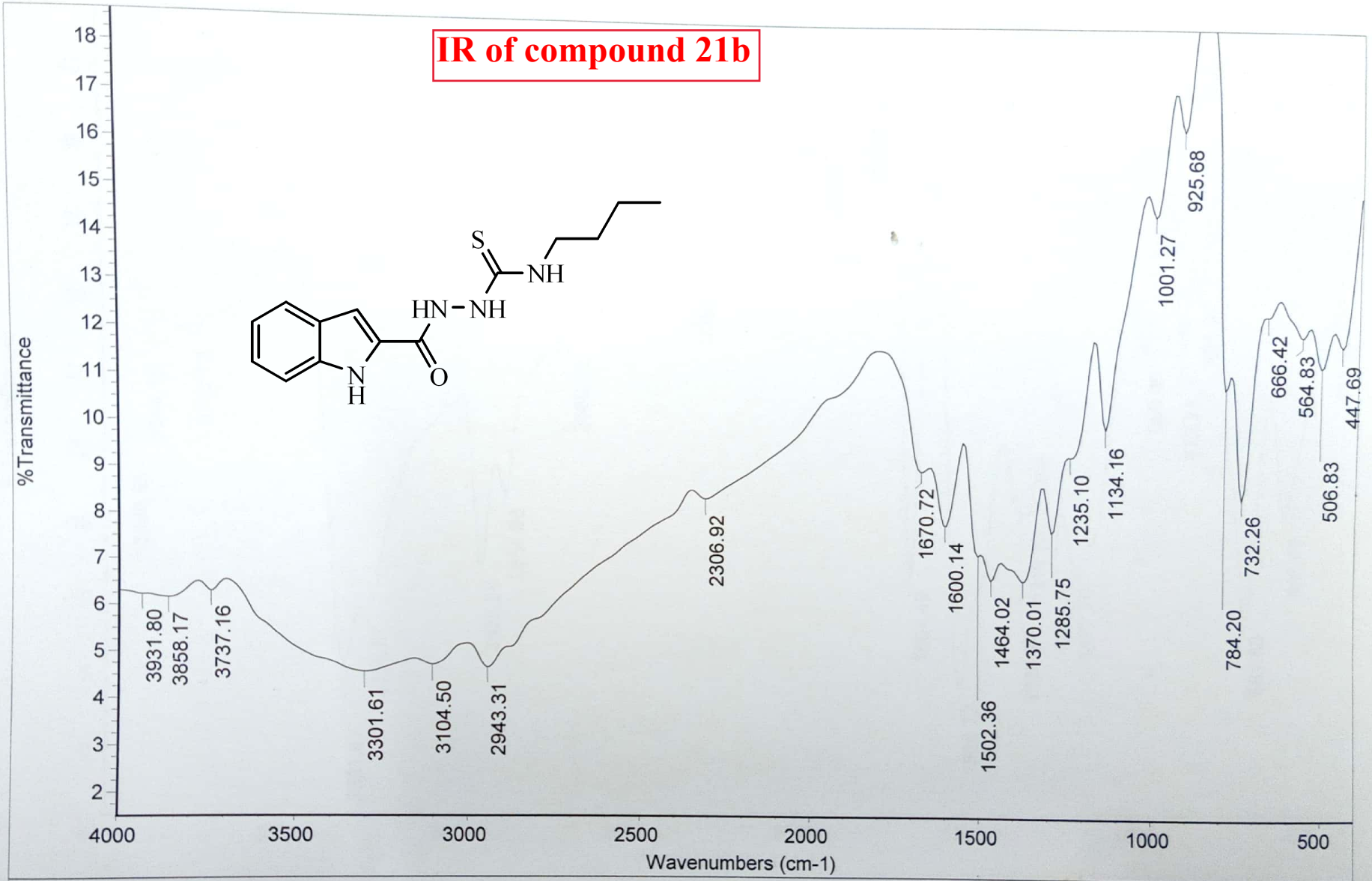
www.pharma.cu.edu.eg dir-mau.fopcu@pharma.cu.edu.eg


```
Current Data Parameters
NAME      Hazem ElQady_C_IN2-prop
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20180712
Time              20.04
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD                65536
SOLVENT             DMSO
NS                 1200
DS                    4
SWH           24038.461 Hz
FIDRES         0.366798 Hz
AQ            1.3631488 sec
RG               202.37
DW               20.800 usec
DE                6.50 usec
TE               298.1 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1        100.6379178 MHz
NUC1                13C
P1                10.00 usec
PLW1        45.00000000 W

======== CHANNEL f2 ========
SFO2        400.1916008 MHz
NUC2                1H
CPDPRG[2        waltz16
```



IR of compound 21b

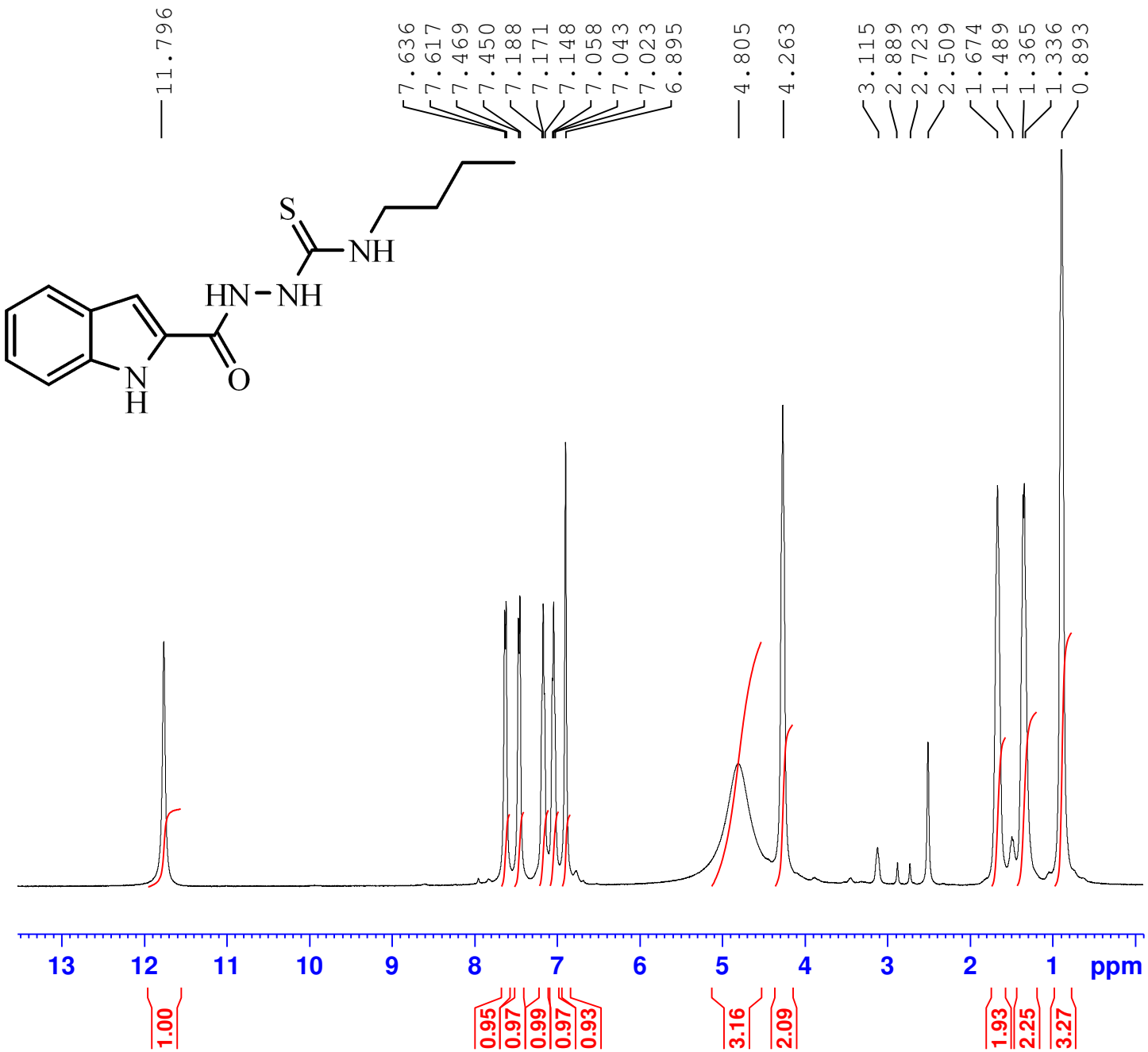


Date: Tue Jul 03 15:32:33 2018 (GMT-07:00) IN2 BUTYL

Scans: 100

Resolution: 16.000

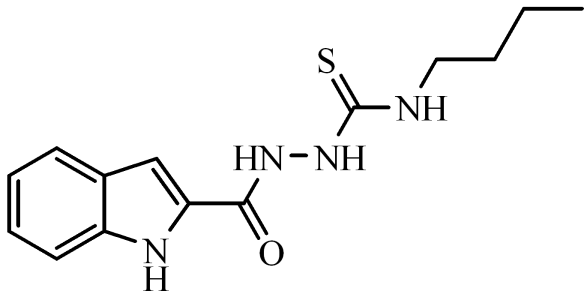
^{1}HNMR of compound 21b



BRUKER

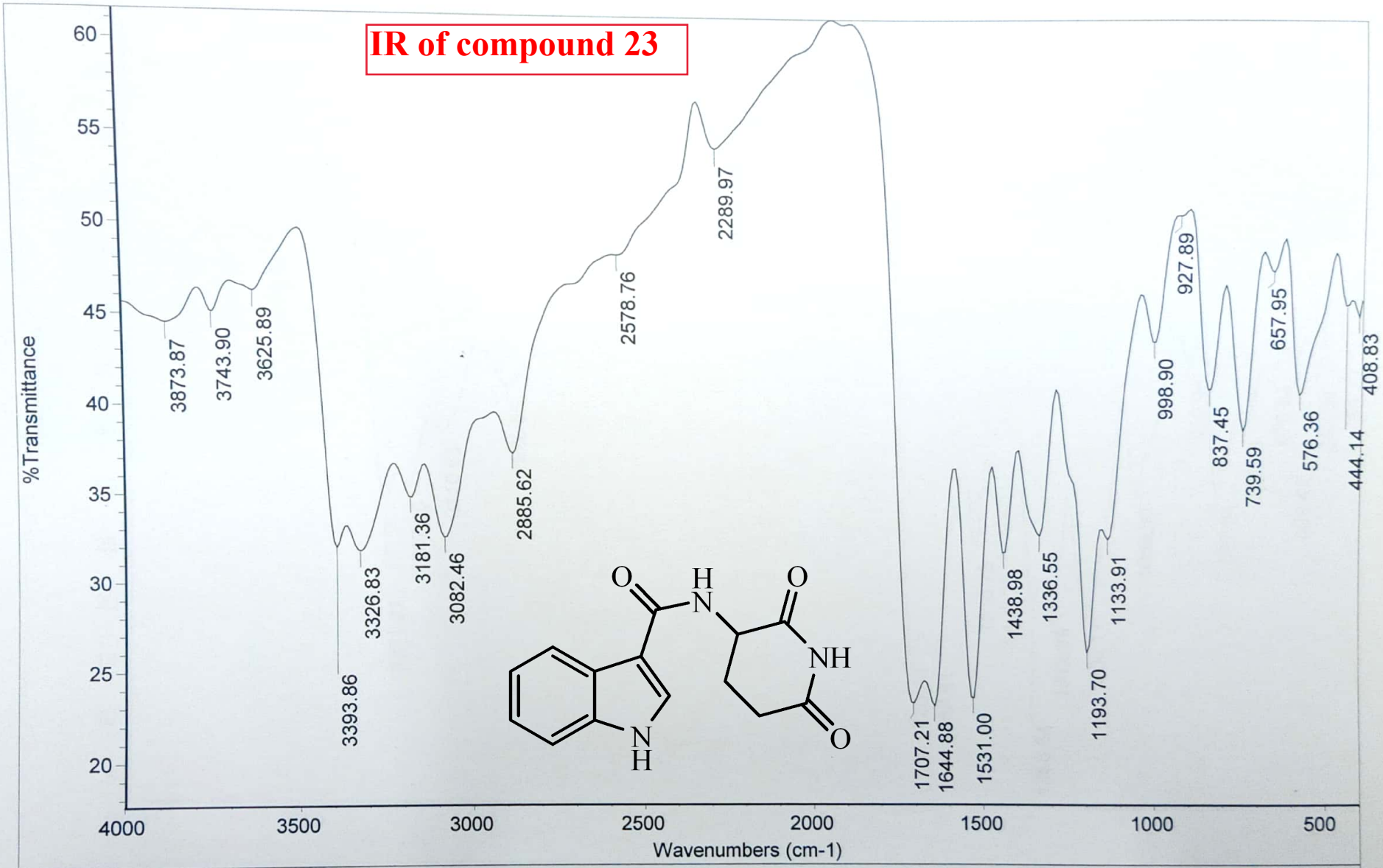
```
Current Data Parameters
NAME      hazem-IN2-butyl
EXPNO                   1
PROCNO                  1

F2 - Acquisition Parameters
Date_           20180606
Time                8.42
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG             zg30
TD                 65536
SOLVENT             DMSO
NS                    62
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ             4.0894465 sec
RG                205.37
DW                62.400 usec
DE                 6.50 usec
TE                298.0 K
D1           1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1524711 MHz
NUC1                   1H
P1                12.00 usec
PLW1         18.00000000 W

F2 - Processing parameters
SI                 65536
SF           400.1500000 MHz
WDW                   EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

^{1}HNMR of compound 21b (D_2O)




```
Current Data Parameters
NAME      hazem-IN2-butyl-d2o
EXPNO                       1
PROCNO                      1

F2 - Acquisition Parameters
Date_              20180606
Time                   8.57
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    65536
SOLVENT                DMSO
NS                       64
DS                        2
SWH               8012.820 Hz
FIDRES            0.122266 Hz
AQ                4.0894465 sec
RG                   205.37
DW                   62.400 usec
DE                    6.50 usec
TE                   298.0 K
D1              1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                     1H
P1                   12.00 usec
PLW1           18.00000000 W

F2 - Processing parameters
SI                    65536
SF             400.1500000 MHz
WDW                      EM
SSB       0
LB                    0.30 Hz
GB        0
PC                    1.00
```

IR of compound 23



Date: Mon Jul 02 17:46:59 2018 (GMT-07:00IN3PD

Scans: 100

Resolution: 16.000

^{1}HNMR of compound 23

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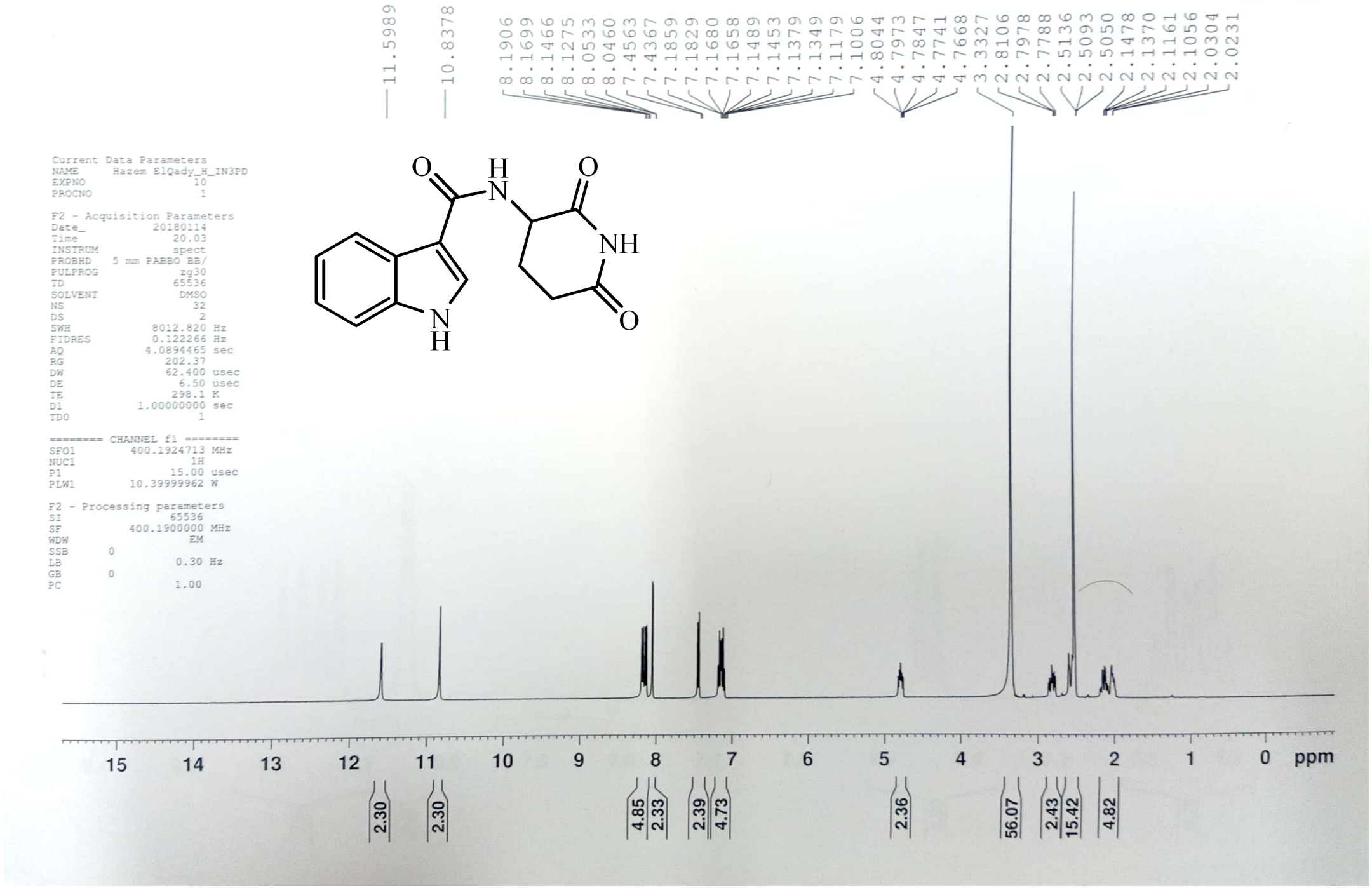
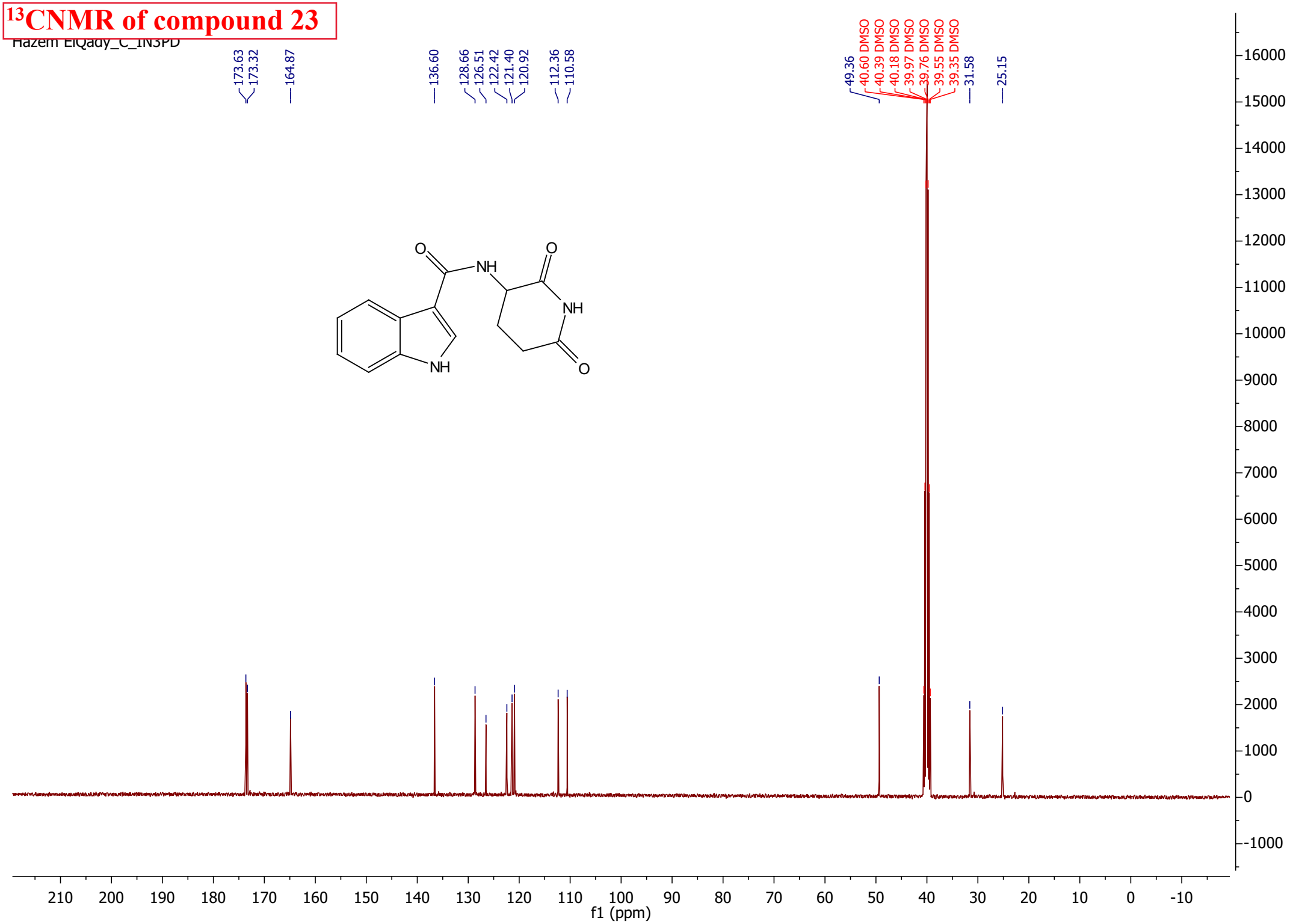
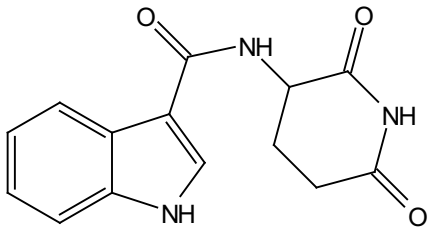


^{13}CNMR of compound 23

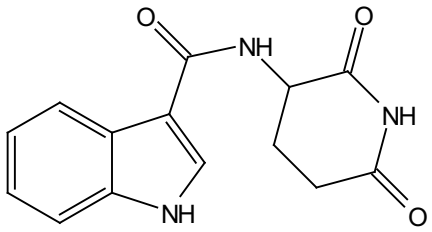


^{13}CNMR of compound 23

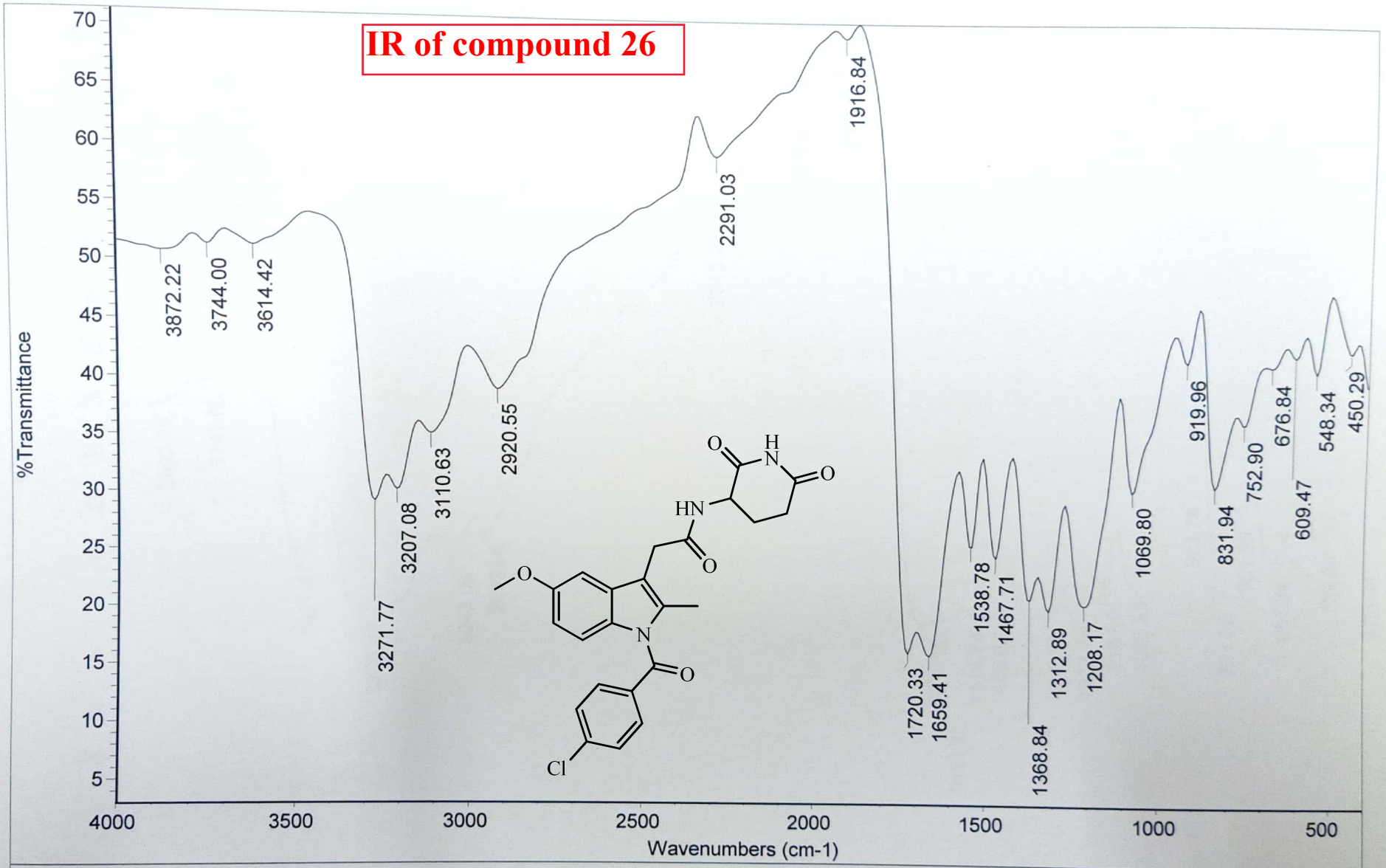


Hazem ElQady_C_IN3PD.10.fid
Hazem ElQady_C_IN3PD

^{13}CNMR of compound 23



IR of compound 26

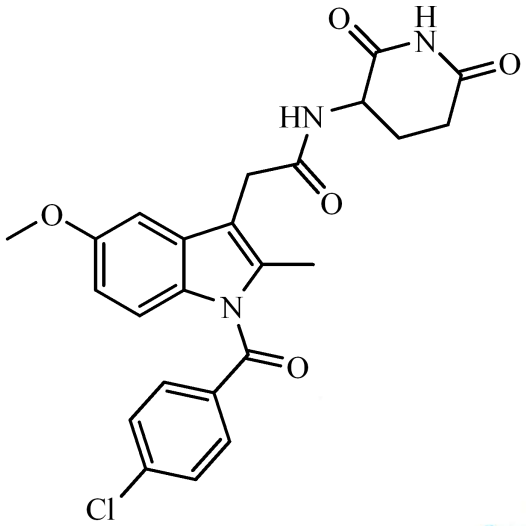


[1]HNMR of compound 26

Dr_HazemElkady-indome1

Sample Name Dr_HazemElkady-indome1 | Pulse sequence PROTON | Temperature 25 | Study owner vnmr1
Date collected 2017-11-19 | Solvent dmso | Spectrometer nmr400-mercury400 | Operator vnmr1

Dr_HazemElkady-indome1



Plotname: Dr_HazemElkady-indome1_PROTON_01_plot05

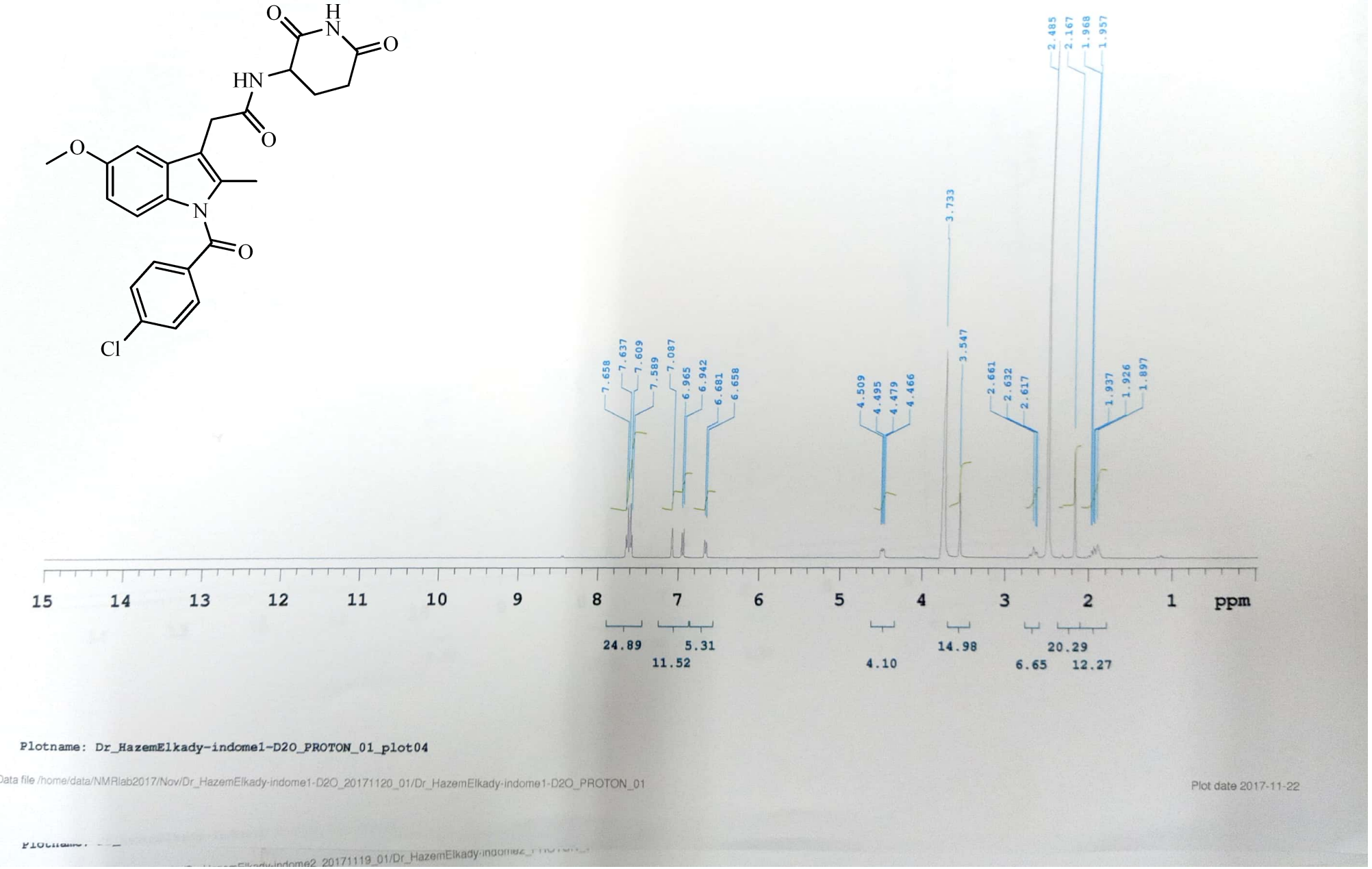
Data file /home/data/NMRlab2017/Nov/Dr_HazemElkady-indome1_20171119_01/Dr_HazemElkady-indome1_PROTON_01

Plot date 2017-11-22

^{1}HNMR of compound 26

Dr_HazemElkady-indome1-D2O

Sample Name Dr_HazemElkady-indome1-D2O Pulse sequence PROTON Temperature 25 Study owner vnmr1
Date collected 2017-11-20 Solvent dmso Spectrometer nmr400-mercury400 Operator vnmr1

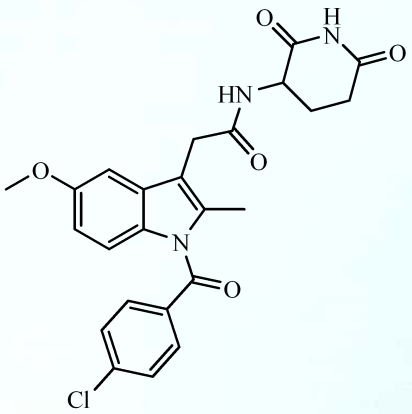


Plotname: Dr_HazemElkady-indome1-D2O_PROTON_01_plot04

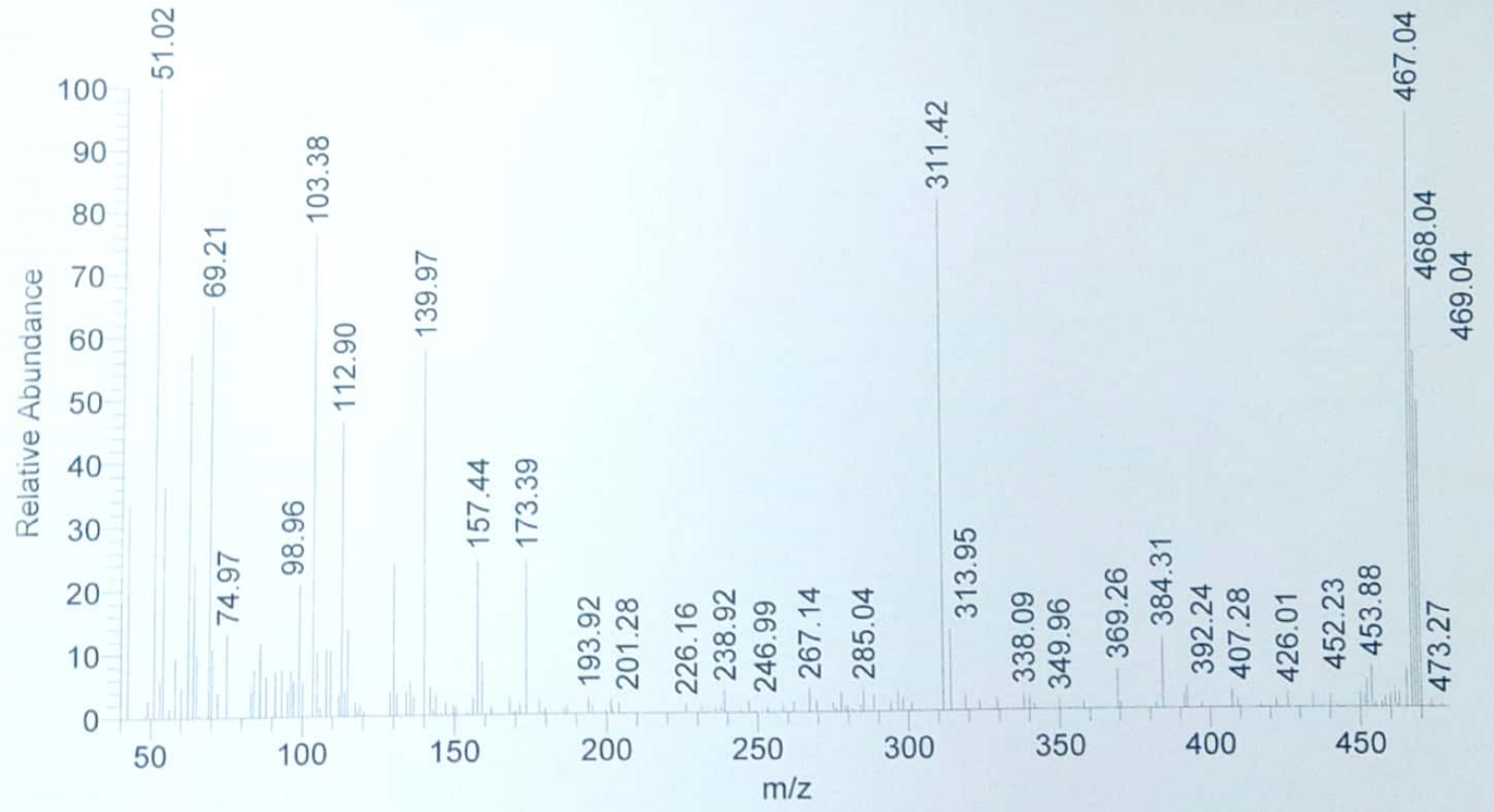
Data file /home/data/NMRlab2017/Nov/Dr_HazemElkady-indome1-D2O_20171120_01/Dr_HazemElkady-indome1-D2O_PROTON_01

Plot date 2017-11-22

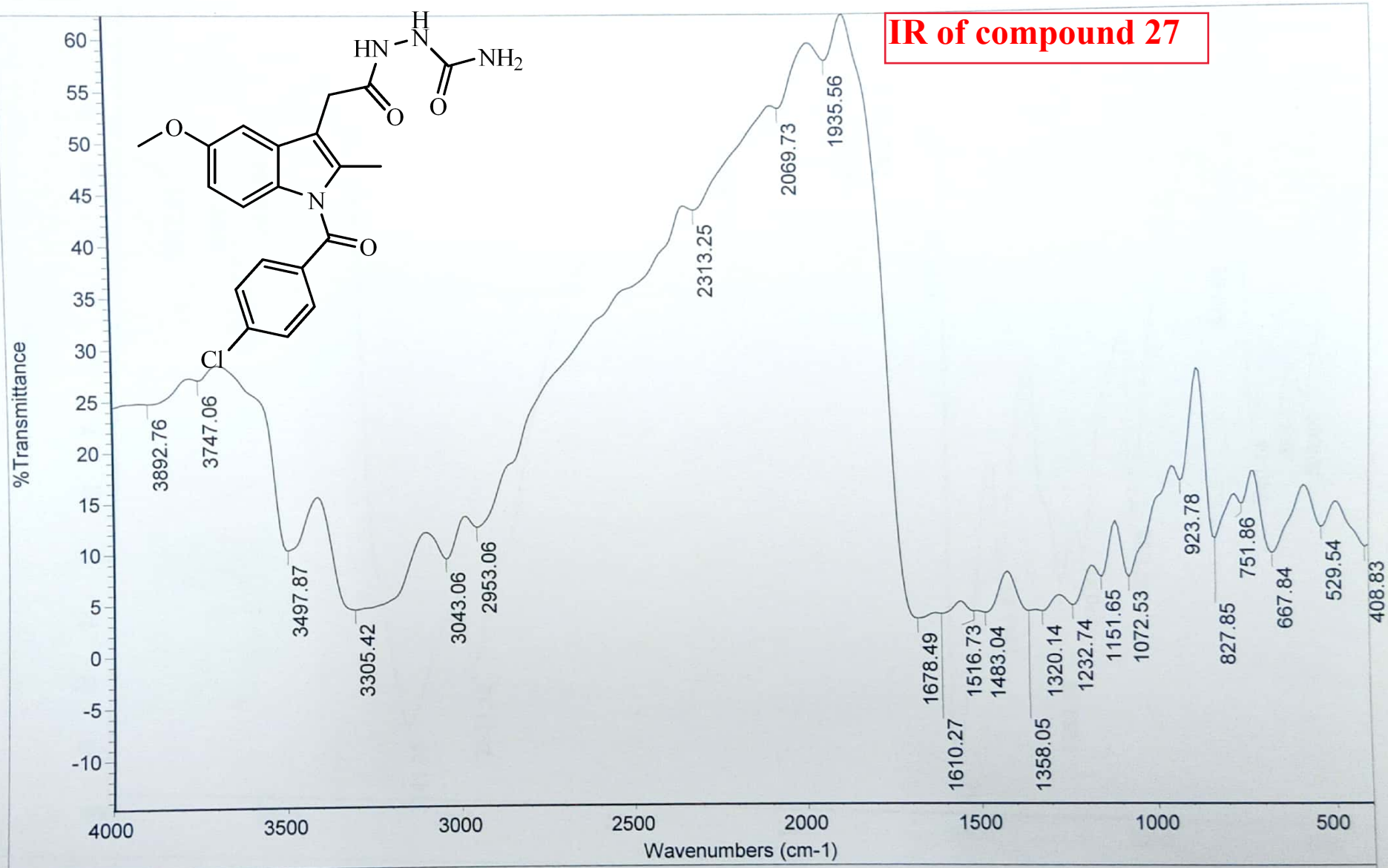
Mass spec. of compound 26



HAZEM-ELKADY-INDOME1 #163 RT: 2.74 AV: 1 SB: 5 2.73 , 2.71-2.76 NL: 1.61E4
T: {0,0} + c EI Full ms [40.00-1000.00]



IR of compound 27

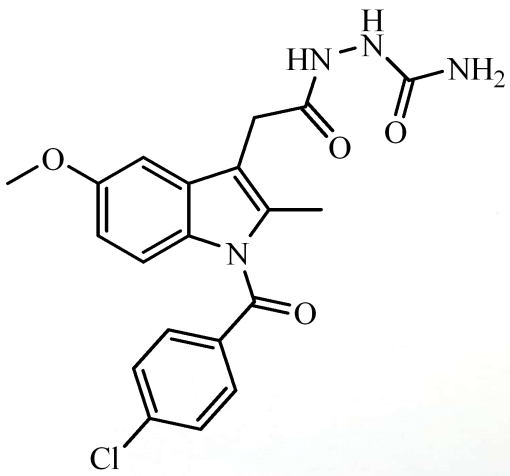


^{1}HNMR of compound 27

zemElkady-indome2

Name Dr_HazemElkady-indome2 | Pulse sequence PROTON | Temperature 25 | Study owner vnmr1
Collected 2017-11-19 | Solvent dmso | Spectrometer nmr400-mercury400 | Operator vnmr1

Dr_HazemElkady-indome2

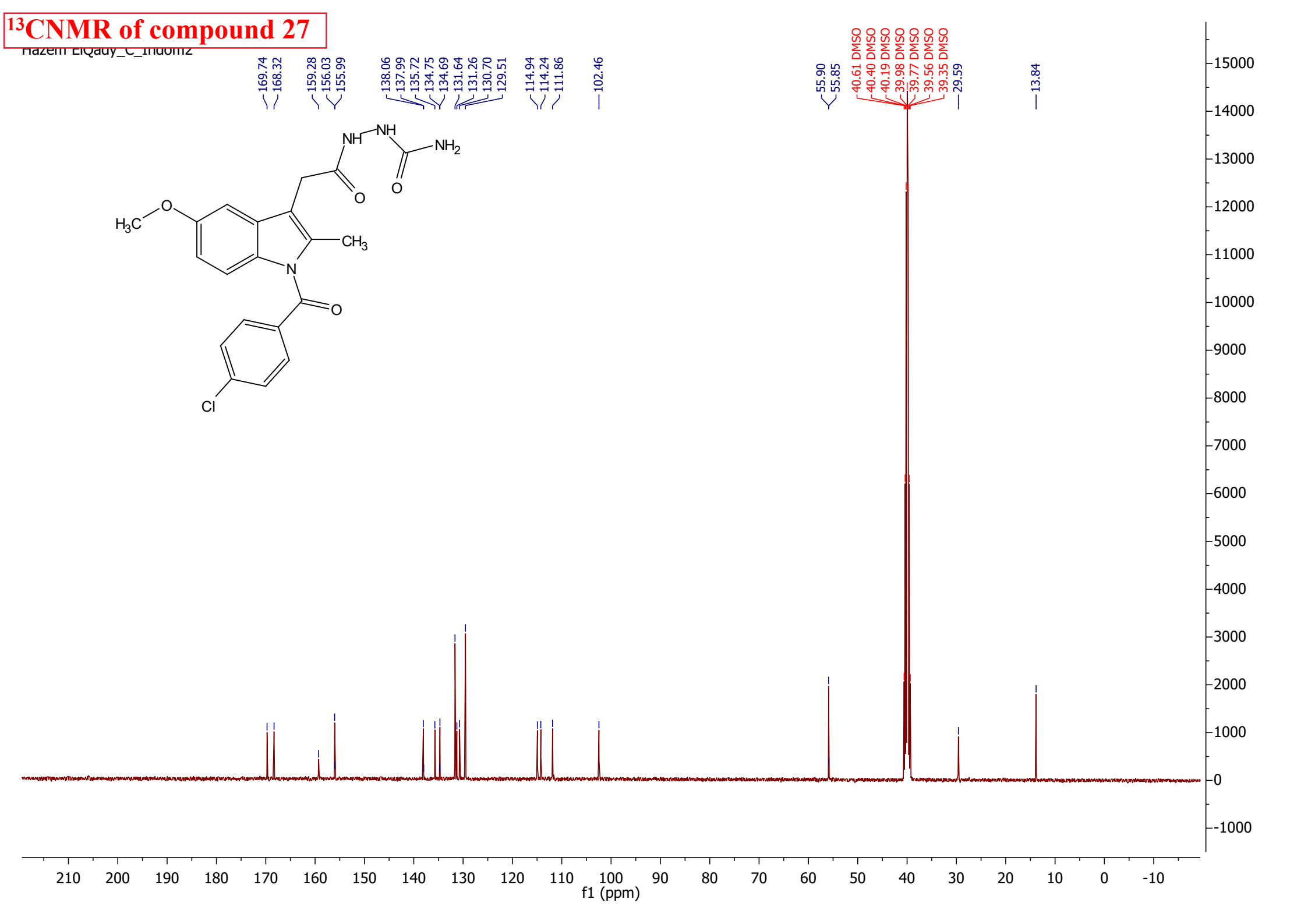


Plotname: Dr_HazemElkady-indome2_PROTON_01_plot04

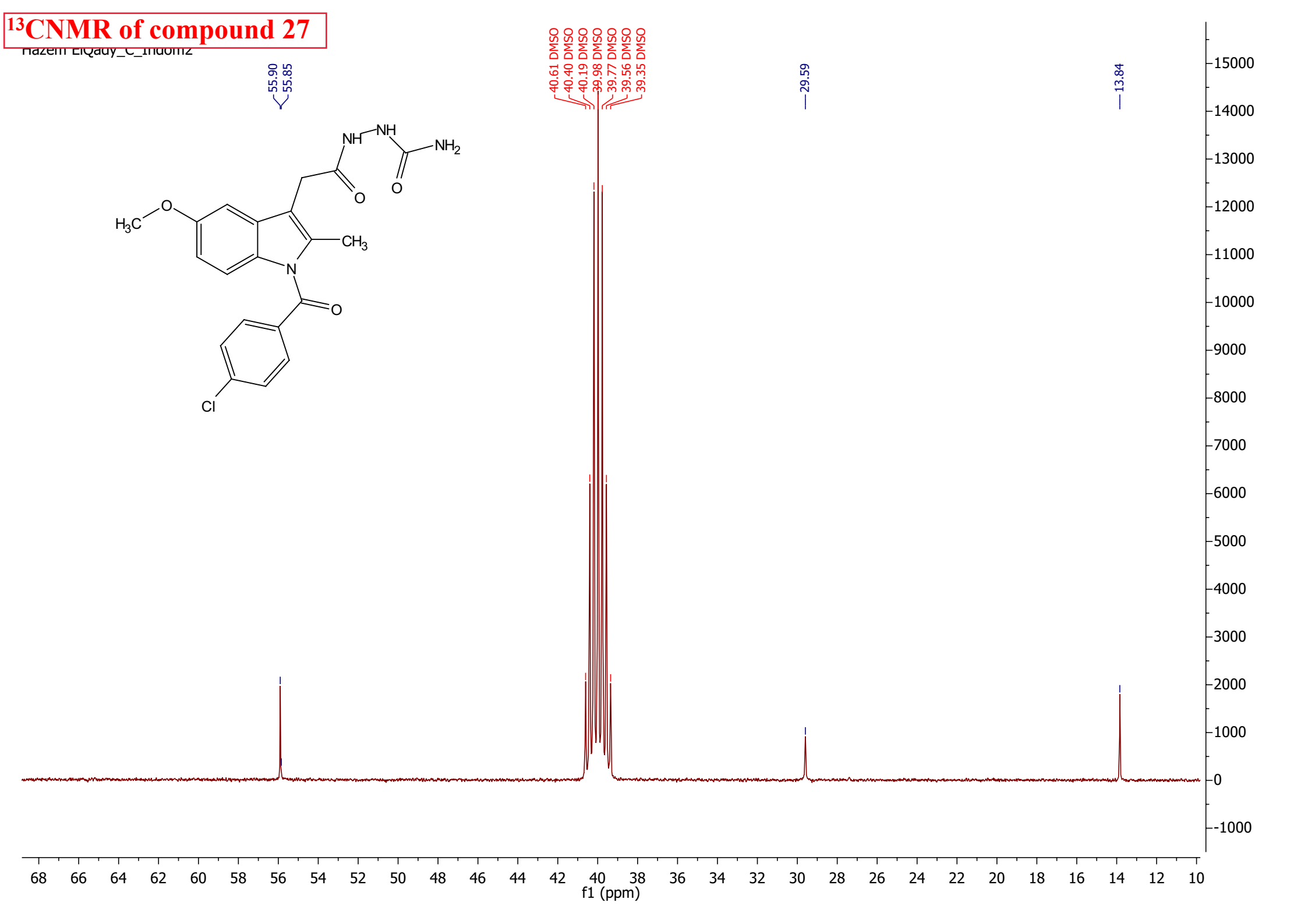
Plot date 2017-11-22

Data file /home/data/NMRlab2017/Nov/Dr_HazemElkady-indome2_20171119_01/Dr_HazemElkady-indome2_PROTON_01

^{13}CNMR of compound 27

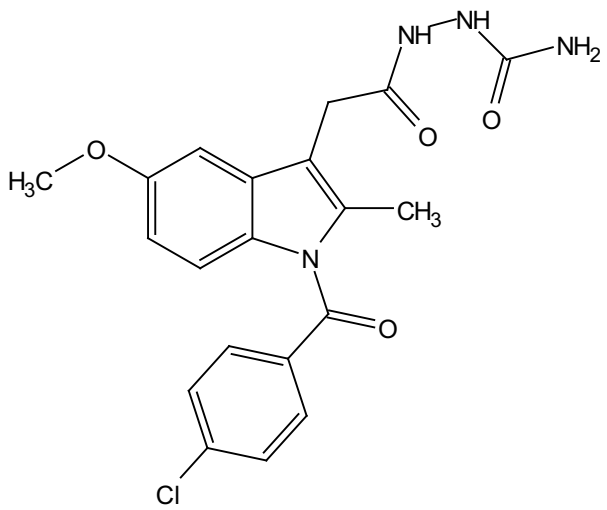


^{13}CNMR of compound 27



Hazem ElQady_C_Indom2.10.fid
Hazem ElQady_C_Indom2

^{13}CNMR of compound 27



^{13}CNMR of compound 27