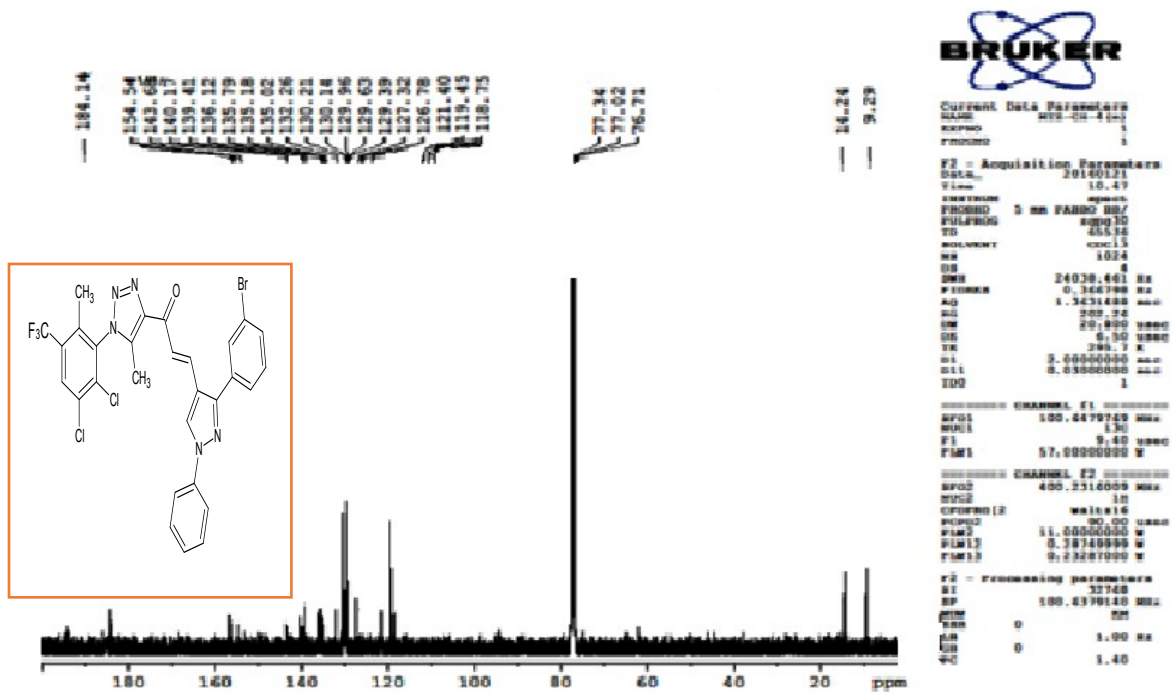
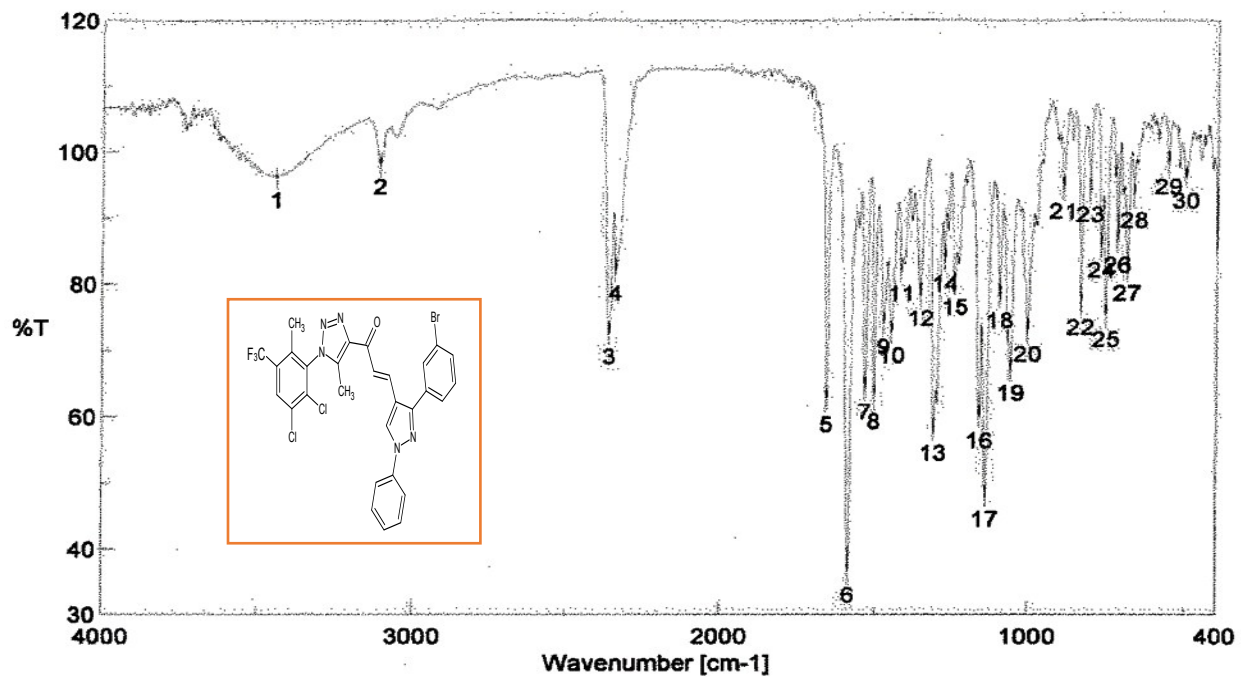




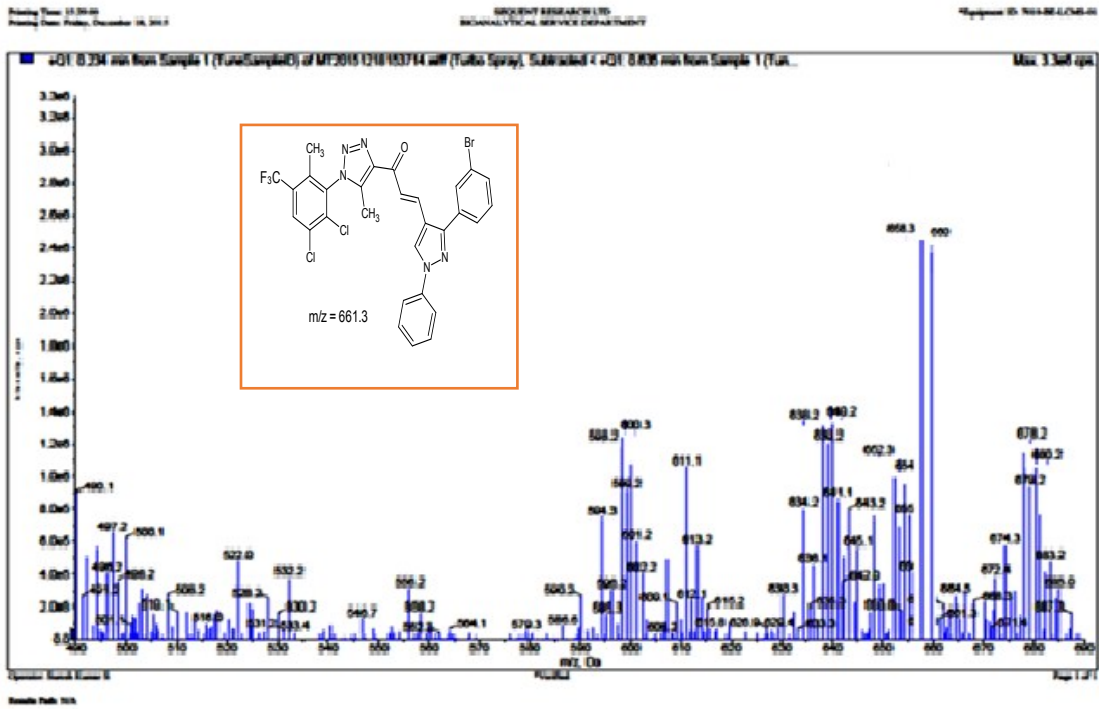
### <sup>13</sup>C-NMR Spectrum of (6e)



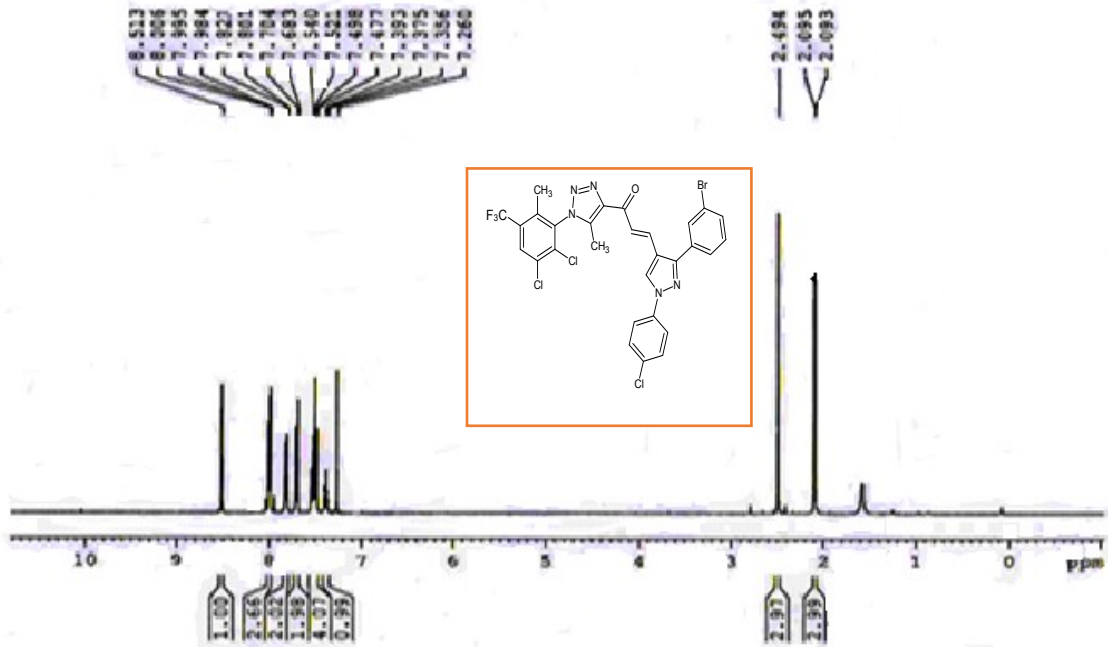
### IR-Spectrum of (6e)



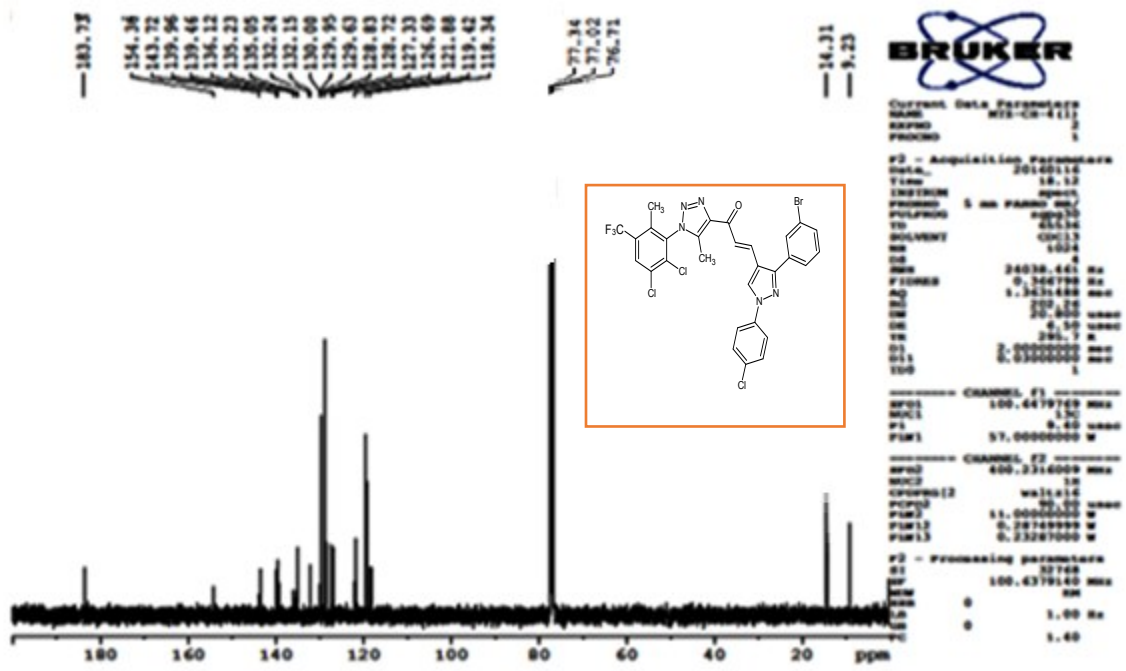
## Mass-Spectrum of (6e)



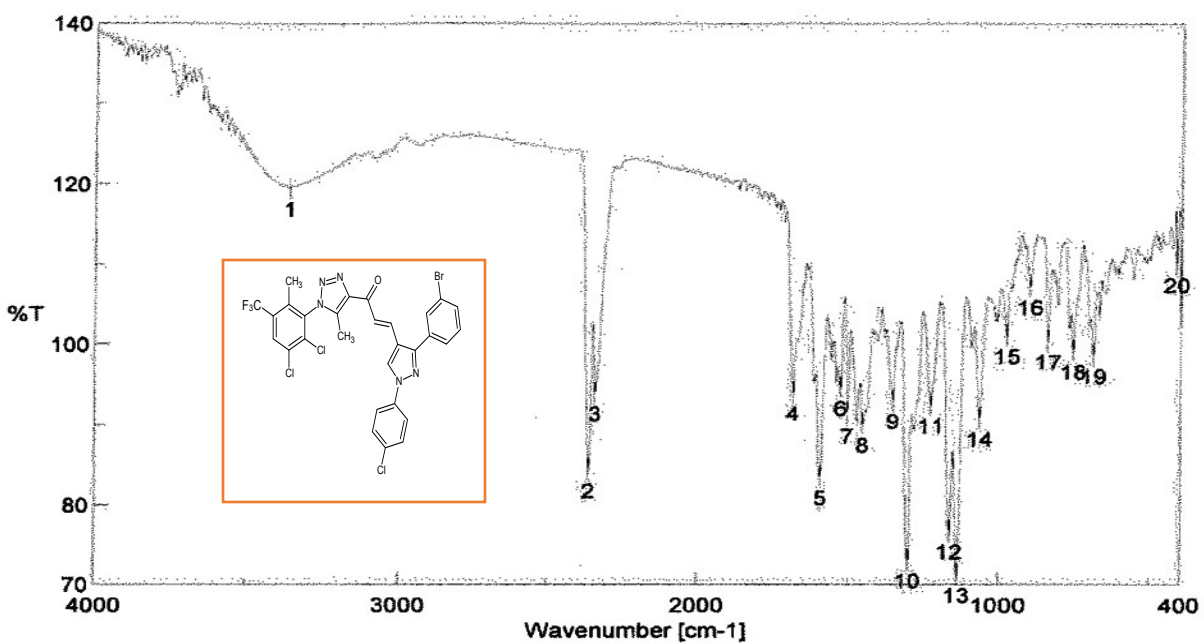
## <sup>1</sup>H-NMR Spectrum of (6d)



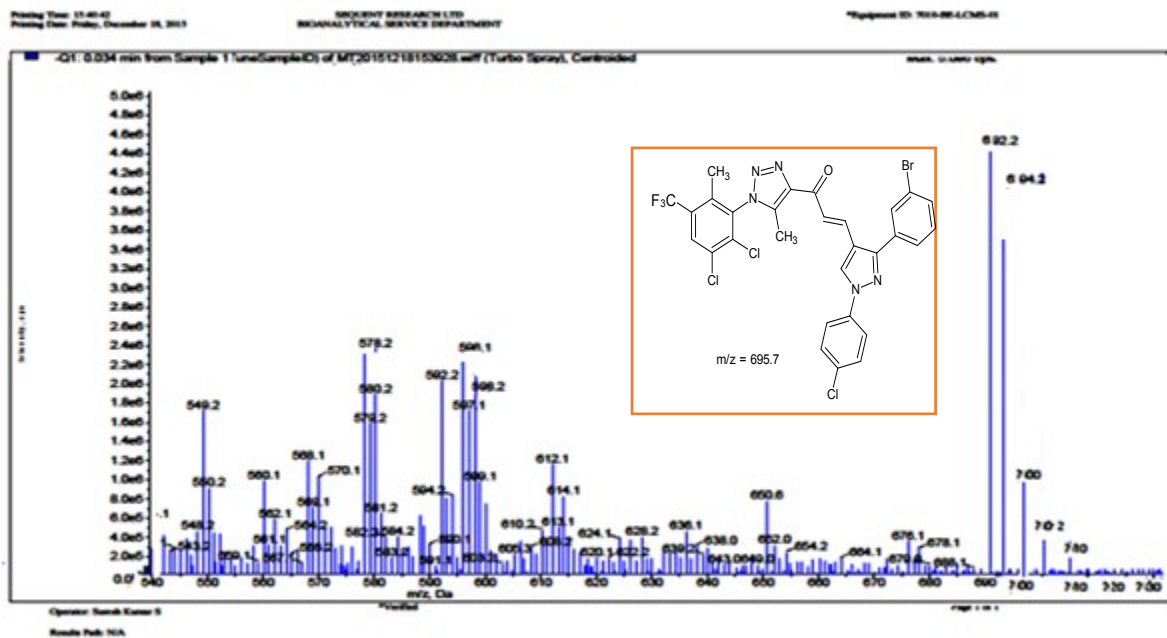
### <sup>13</sup>C-NMR Spectrum of (6d)



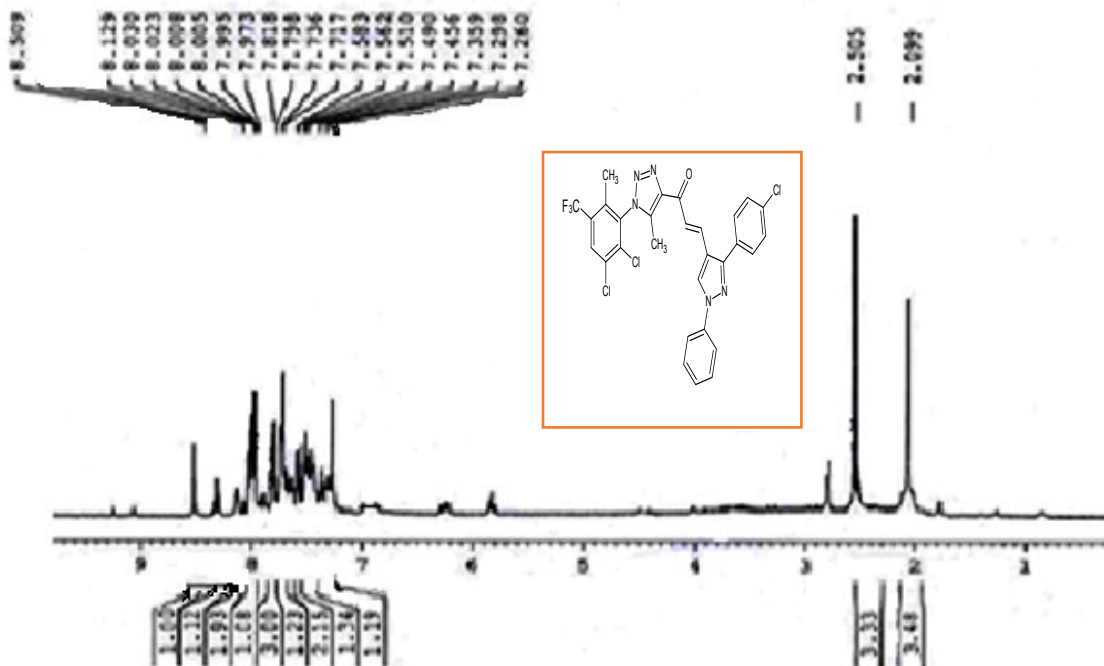
### IR-Spectrum of (6d)



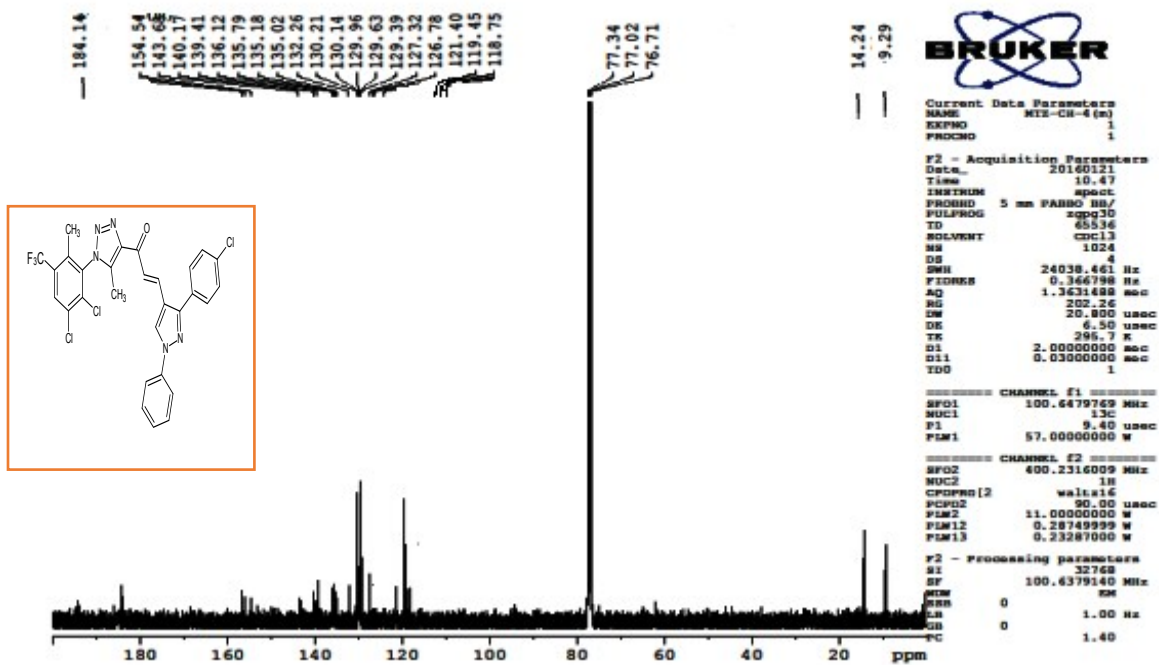
## Mass-Spectrum of (6d)



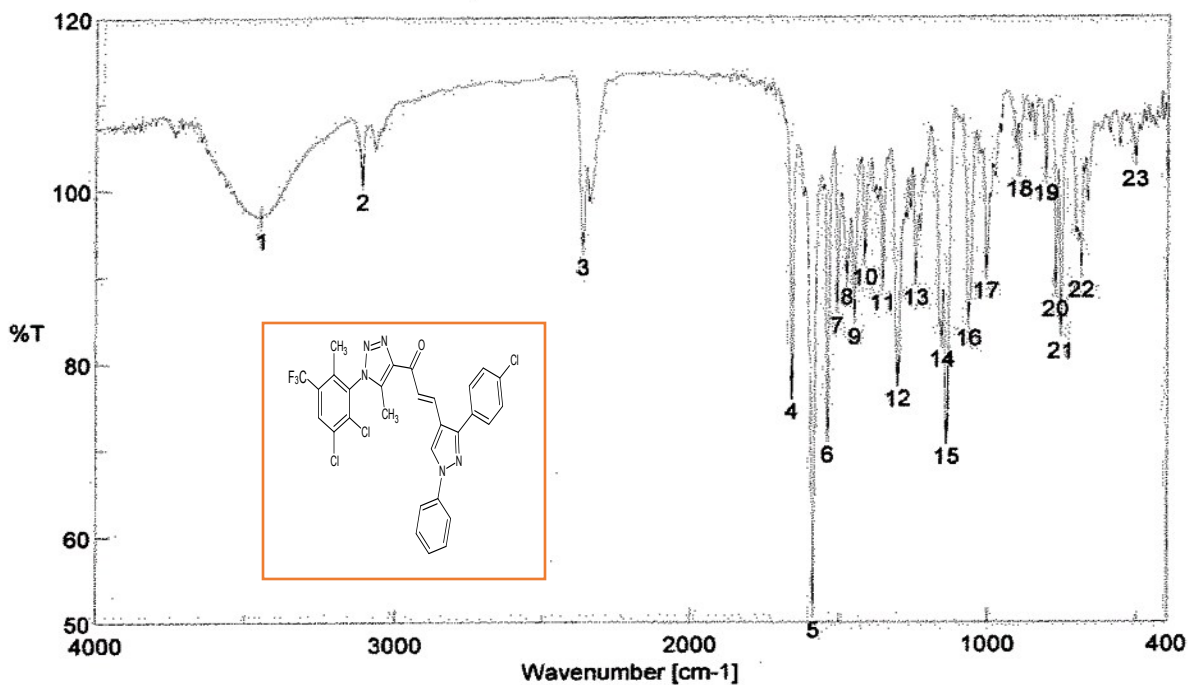
## <sup>1</sup>H-NMR Spectrum of (6b)



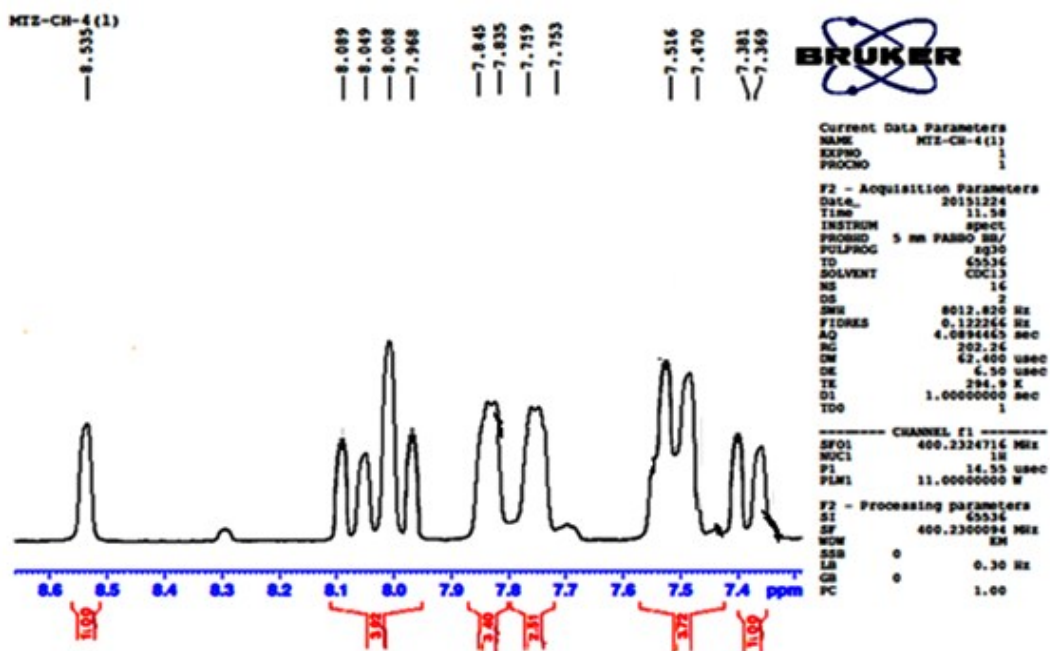
### <sup>13</sup>C-NMR Spectrum of (6b)



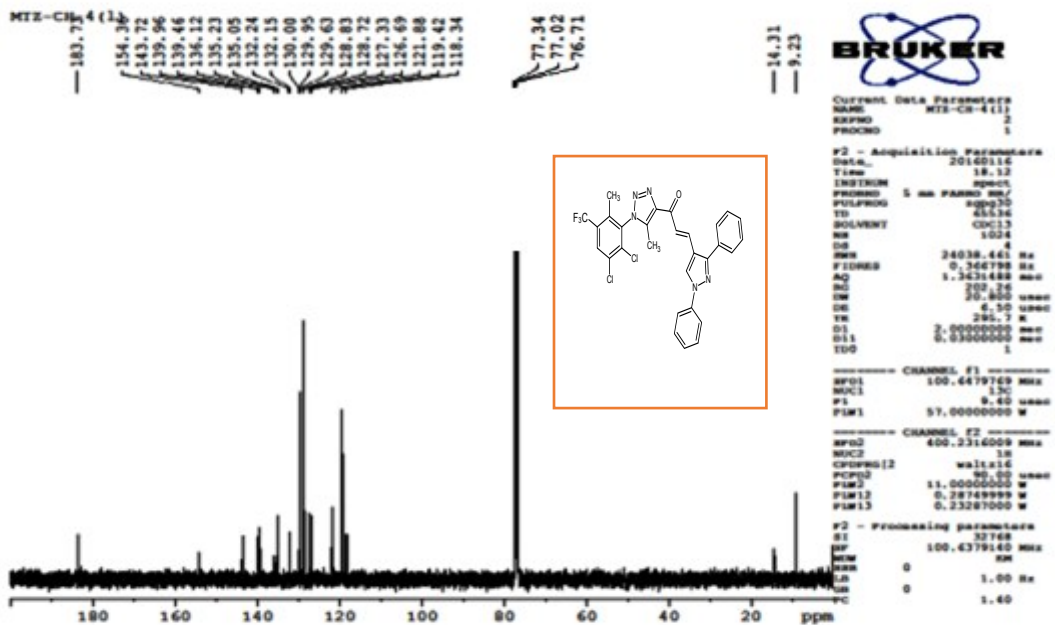
### IR-Spectrum of (6b)



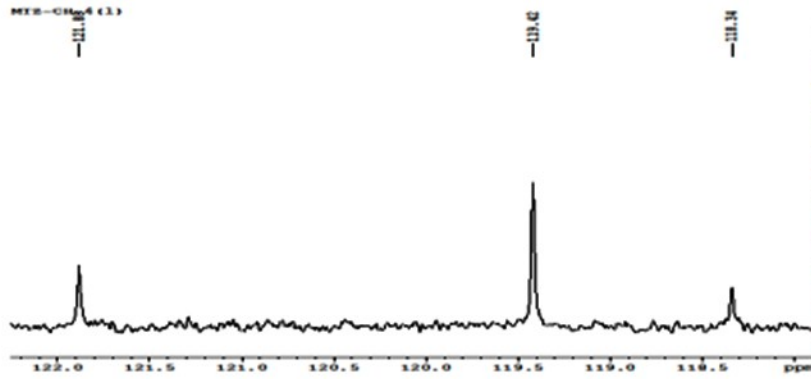




<sup>13</sup>C-NMR Spectrum of (6a)







**BRUKER**

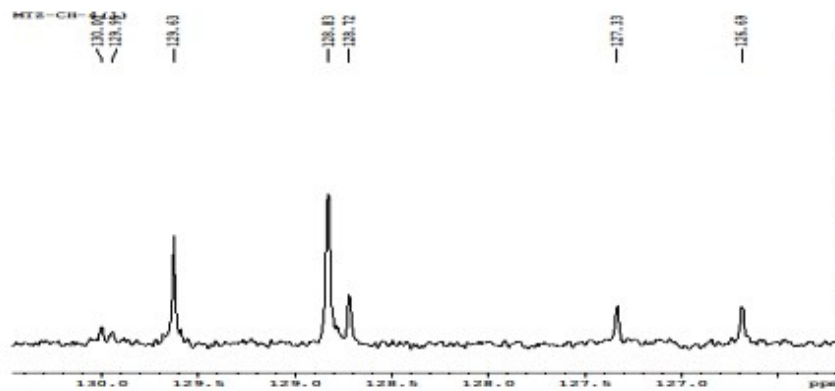
CURRENT DATA PARAMETERS  
NAME: MTZ-CH-4 (1)  
EXPNO: 1  
PROCNO: 1

F2 - Acquisition Parameters  
Date\_ : 20160116  
Time : 18.12  
INSTRUM : spect  
PROBHD : 5 mm F400  
PULPROG : zgpg30  
TD : 65536  
SOLVENT : CDCl3  
NS : 1024  
DS : 4  
SWH : 24038.421 Hz  
FIDRES : 0.366788 Hz  
AQ : 1.3631488 sec  
RG : 350.36  
DW : 20.900 usec  
DE : 6.30 usec  
TE : 300.2 K  
D1 : 2.0000000 sec  
D11 : 0.0300000 sec  
TD0 : 1

===== CHANNEL F1 =====  
NUC1 : 13C  
P1 : 9.40 usec  
PL1 : 57.0000000 W

===== CHANNEL F2 =====  
NUC2 : 1H  
P2 : 18.00 usec  
PL2 : 11.0000000 W  
PL12 : 0.2814000 W  
PL13 : 0.23287000 W

F2 - Processing parameters  
SI : 32768  
SF : 100.6279125 MHz  
WDW : EM  
SSB : 0  
GB : 0  
PC : 1.00 Hz  
MC : 1.40



**BRUKER**

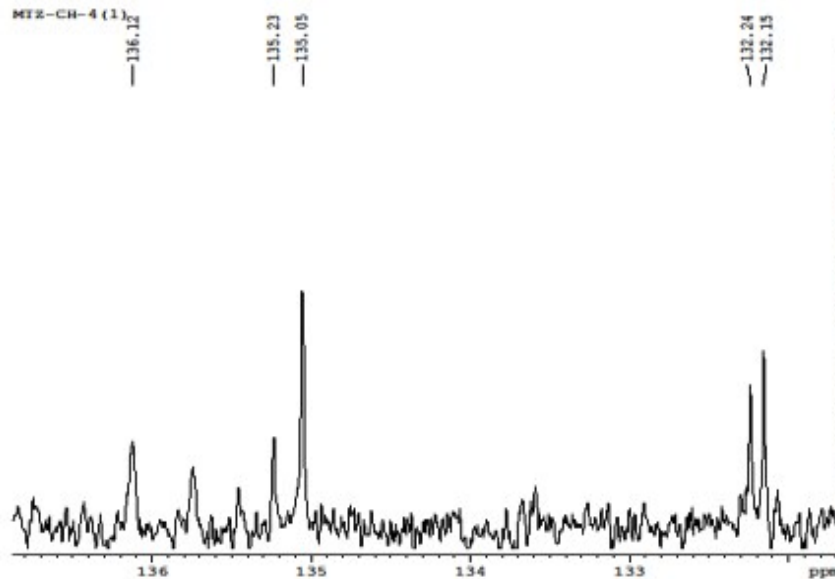
CURRENT DATA PARAMETERS  
NAME: MTZ-CH-4 (1)  
EXPNO: 1  
PROCNO: 1

F2 - Acquisition Parameters  
Date\_ : 20160116  
Time : 18.12  
INSTRUM : spect  
PROBHD : 5 mm F400  
PULPROG : zgpg30  
TD : 65536  
SOLVENT : CDCl3  
NS : 1024  
DS : 4  
SWH : 24038.421 Hz  
FIDRES : 0.366788 Hz  
AQ : 1.3631488 sec  
RG : 350.36  
DW : 20.900 usec  
DE : 6.30 usec  
TE : 300.2 K  
D1 : 2.0000000 sec  
D11 : 0.0300000 sec  
TD0 : 1

===== CHANNEL F1 =====  
NUC1 : 13C  
P1 : 9.40 usec  
PL1 : 57.0000000 W

===== CHANNEL F2 =====  
NUC2 : 1H  
P2 : 18.00 usec  
PL2 : 11.0000000 W  
PL12 : 0.2814000 W  
PL13 : 0.23287000 W

F2 - Processing parameters  
SI : 32768  
SF : 100.6279125 MHz  
WDW : EM  
SSB : 0  
GB : 0  
PC : 1.00 Hz  
MC : 1.40



**BRUKER**

CURRENT DATA PARAMETERS  
NAME: MTZ-CH-4 (1)  
EXPNO: 2  
PROCNO: 1

F2 - Acquisition Parameters  
Date\_ : 20160116  
Time : 18.12  
INSTRUM : spect  
PROBHD : 5 mm F400  
PULPROG : zgpg30  
TD : 65536  
SOLVENT : CDCl3  
NS : 1024  
DS : 4  
SWH : 24038.421 Hz  
FIDRES : 0.366788 Hz  
AQ : 1.3631488 sec  
RG : 350.36  
DW : 20.900 usec  
DE : 6.30 usec  
TE : 300.2 K  
D1 : 2.0000000 sec  
D11 : 0.0300000 sec  
TD0 : 1

===== CHANNEL F1 =====  
NUC1 : 13C  
P1 : 9.40 usec  
PL1 : 57.0000000 W

===== CHANNEL F2 =====  
NUC2 : 1H  
P2 : 18.00 usec  
PL2 : 11.0000000 W  
PL12 : 0.2814000 W  
PL13 : 0.23287000 W

F2 - Processing parameters  
SI : 32768  
SF : 100.6279125 MHz  
WDW : EM  
SSB : 0  
GB : 0  
PC : 1.00 Hz  
MC : 1.40

MTZ-CH-4 (1)

143.72

139.96

139.46



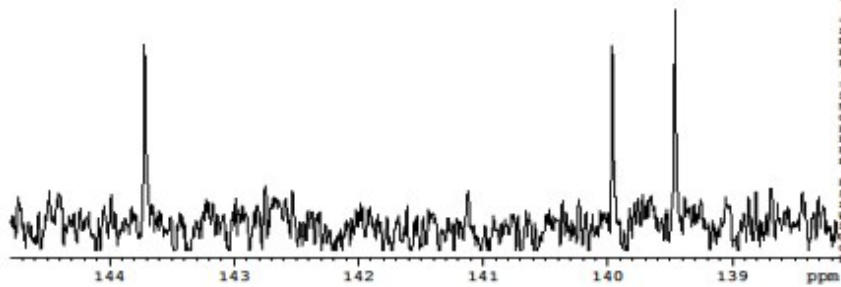
```
Current Data Parameters
NAME      MTZ-CH-4 (1)
EXPNO     2
PROCNO    1

F2 - Acquisition Parameters
Date_     20160116
Time      18.12
INSTRUM   spect
PROBHD    5 mm PABBO BB/
PULPROG   zgpg30
TD         65536
SOLVENT   cdcl3
NS         1024
DS         4
SWH        24038.461 Hz
FIDRES     0.366798 Hz
AQ         1.3631488 sec
RG         252.26
DW         20.800 usec
DE         6.50 usec
TE         295.7 K
D1         2.0000000 sec
D11        0.0300000 sec
TD0        1
```

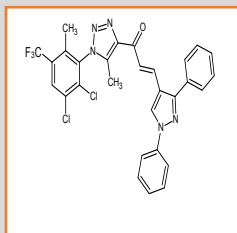
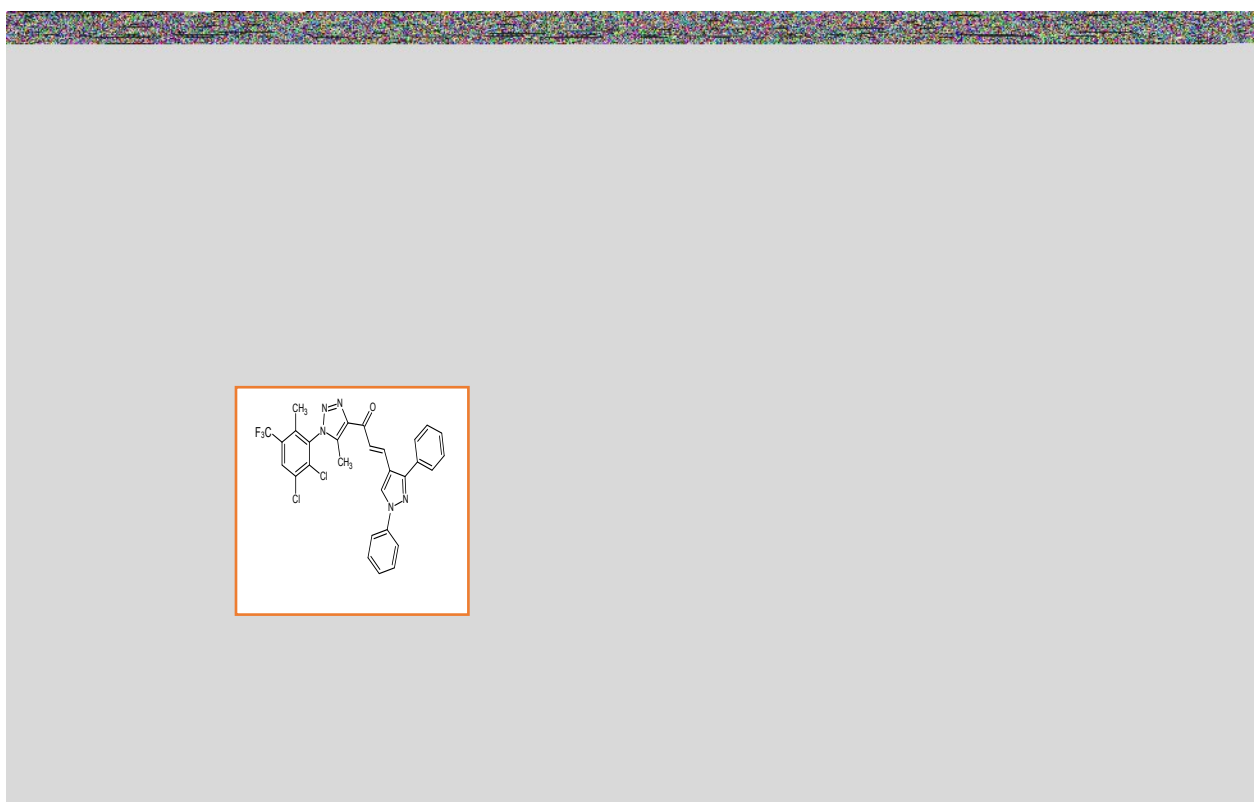
```
===== CHANNEL F1 =====
RF01      100.6279769 MHz
NUC1       13C
P1         9.40 usec
PLM1      57.0000000 W

===== CHANNEL F2 =====
RF02      400.2316009 MHz
NUC2       1H
CPDPRG2   waltz16
PCPD2     90.00 usec
PLM2      11.0000000 W
PLM12     0.2874999 W
PLM13     0.23287000 W
```

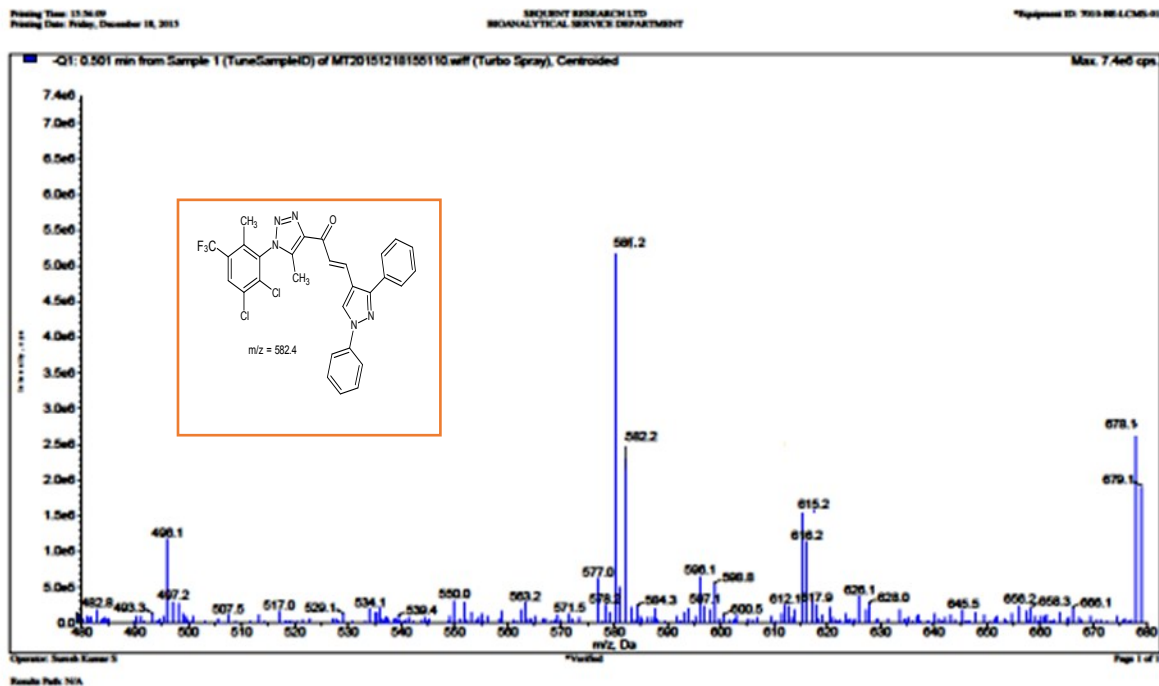
```
F2 - Processing parameters
SI         32768
SF         100.6279740 MHz
WDW        EM
SSB         0
GB         0
PC         1.40
```



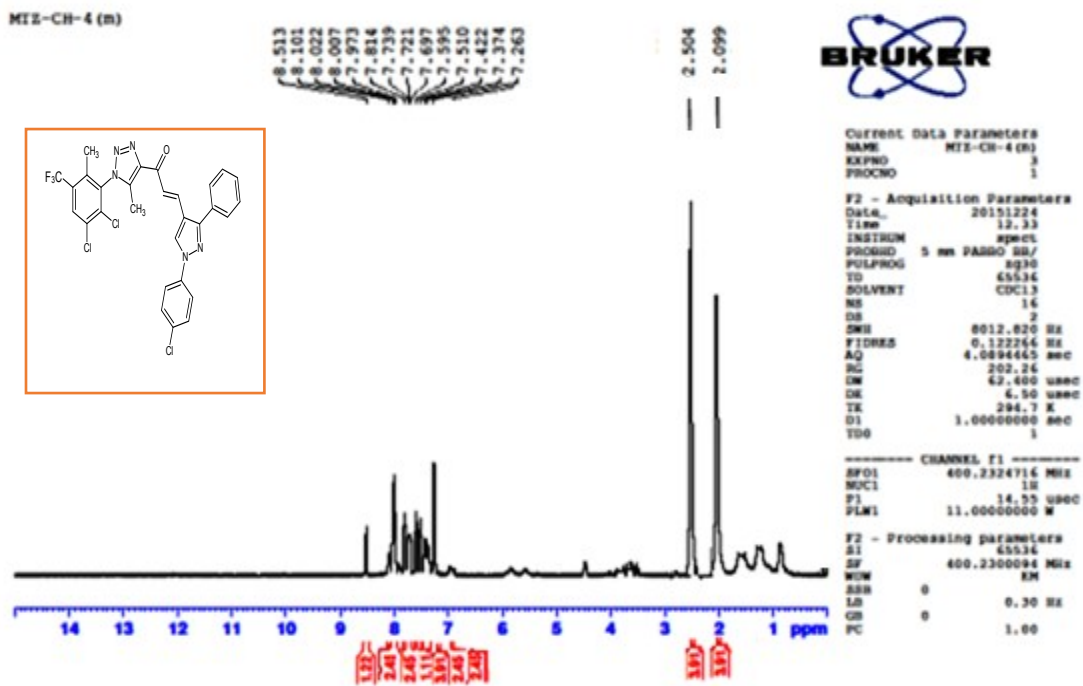
### IR-Spectrum of (6a)



## Mass-Spectrum of (6a)



## <sup>1</sup>H-NMR Spectrum of (6c)



MTZ-CH-4 (m)

8.022  
8.007  
7.973

7.814

7.739  
7.721  
7.697

7.595  
7.535

7.510  
7.470

7.422

7.374

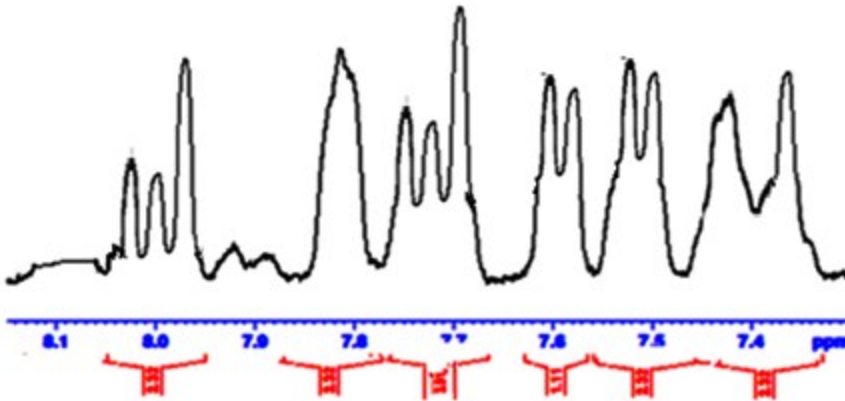


Current Data Parameters  
NAME MTZ-CH-4 (m)  
EXPNO 3  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20151224  
Time 12.33  
INSTRUM spect  
PROBHD 5 mm PABBO BB/  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 16  
DS 2  
SWH 8012.820 Hz  
FIDRES 0.122264 Hz  
AQ 4.0894465 sec  
RG 202.26  
OW 62.400 usec  
DE 6.50 usec  
TE 294.7 K  
D1 1.0000000 sec  
TD0 1

CHANNEL F1  
SFO1 400.2324716 MHz  
NUC1 1H  
P1 14.55 usec  
PLM1 11.0000000 W

F2 - Processing parameters  
SI 65536  
SF 400.2300094 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



MTZ-CH-4 (m)

2.504

2.099

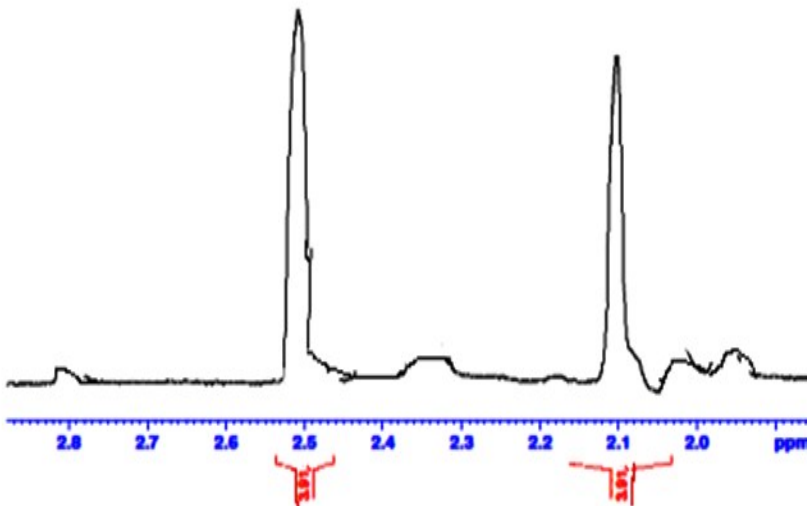


Current Data Parameters  
NAME MTZ-CH-4 (m)  
EXPNO 3  
PROCNO 1

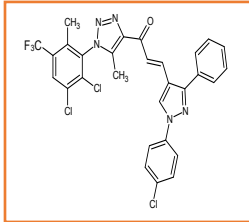
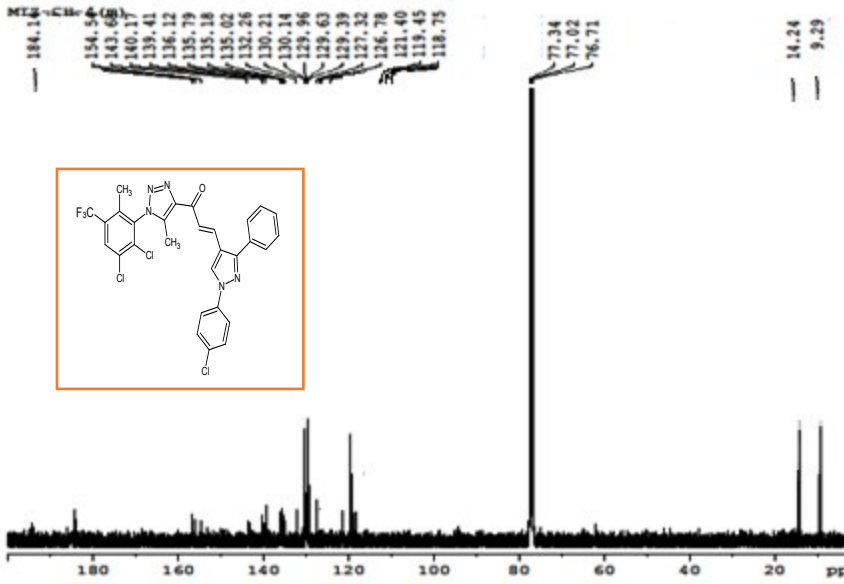
F2 - Acquisition Parameters  
Date\_ 20151224  
Time 12.33  
INSTRUM spect  
PROBHD 5 mm PABBO BB/  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 16  
DS 2  
SWH 8012.820 Hz  
FIDRES 0.122264 Hz  
AQ 4.0894465 sec  
RG 202.26  
OW 62.400 usec  
DE 6.50 usec  
TE 294.7 K  
D1 1.0000000 sec  
TD0 1

CHANNEL F1  
SFO1 400.2324716 MHz  
NUC1 1H  
P1 14.55 usec  
PLM1 11.0000000 W

F2 - Processing parameters  
SI 65536  
SF 400.2300094 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



<sup>13</sup>C-NMR Spectrum of (6c)



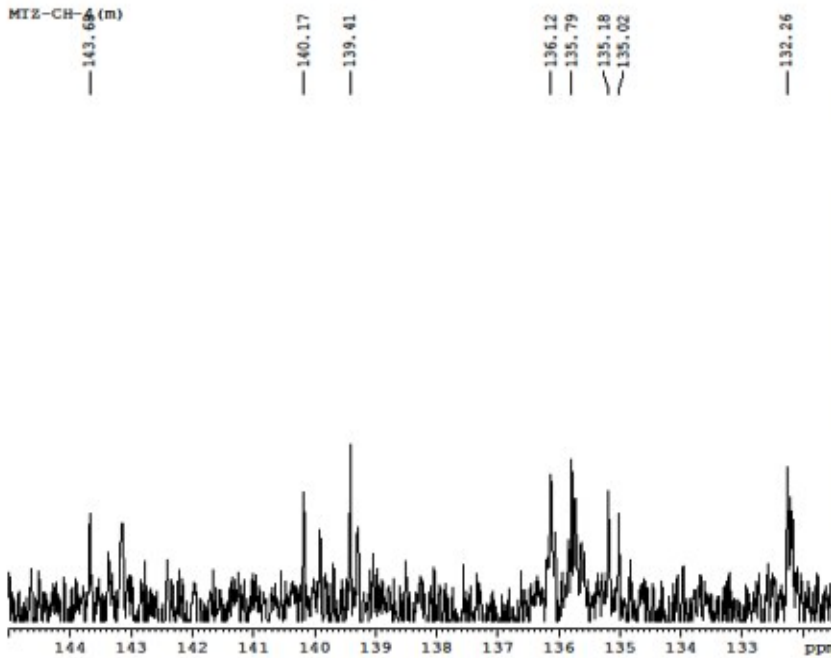
Current Data Parameters  
 NAME MTZ-CH-4 (m)  
 EXPNO 1  
 PROCNO 1

F2 - Acquisition Parameters  
 Date\_ 20160121  
 Time 10.47  
 INSTRUM spect  
 PULPROG 5 ms PABBO BB/  
 FULPROG zgpg30  
 TD 65536  
 SOLVENT CDCl3  
 NS 1024  
 DS 4  
 SWH 24038.461 Hz  
 FIDRES 0.366798 Hz  
 AQ 1.3631488 sec  
 RG 202.26  
 DM 20.800 umsec  
 DE 6.50 umsec  
 TE 295.7 K  
 D1 2.0000000 sec  
 D11 0.0300000 sec  
 TDD 1

===== CHANNEL f1 =====  
 SFO1 100.6279769 MHz  
 NUC1 13C  
 P1 9.40 umsec  
 FWH1 57.0000000 W

===== CHANNEL f2 =====  
 SFO2 400.2316009 MHz  
 NUC2 1H  
 CPDPRG12 waltz16  
 SFO2 90.00 umsec  
 FWH2 11.0000000 W  
 FWH12 0.28749999 W  
 FWH13 0.23287000 W

F2 - Processing parameters  
 SI 32768  
 SF 100.6379140 MHz  
 GCW 0 RM  
 LA 0 1.00 Hz  
 GB 0 1.40



Current Data Parameters  
 NAME MTZ-CH-4 (m)  
 EXPNO 1  
 PROCNO 1

F2 - Acquisition Parameters  
 Date\_ 20160121  
 Time 10.47  
 INSTRUM spect  
 PULPROG 5 ms PABBO BB/  
 FULPROG zgpg30  
 TD 65536  
 SOLVENT CDCl3  
 NS 1024  
 DS 4  
 SWH 24038.461 Hz  
 FIDRES 0.366798 Hz  
 AQ 1.3631488 sec  
 RG 202.26  
 DM 20.800 umsec  
 DE 6.50 umsec  
 TE 295.7 K  
 D1 2.0000000 sec  
 D11 0.0300000 sec  
 TDD 1

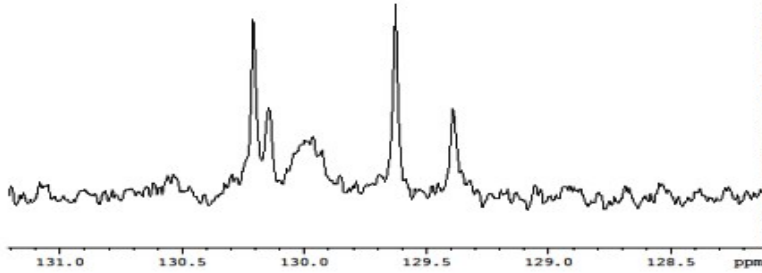
===== CHANNEL f1 =====  
 SFO1 100.6279769 MHz  
 NUC1 13C  
 P1 9.40 umsec  
 FWH1 57.0000000 W

===== CHANNEL f2 =====  
 SFO2 400.2316009 MHz  
 NUC2 1H  
 CPDPRG12 waltz16  
 SFO2 90.00 umsec  
 FWH2 11.0000000 W  
 FWH12 0.28749999 W  
 FWH13 0.23287000 W

F2 - Processing parameters  
 SI 32768  
 SF 100.6379140 MHz  
 GCW 0 RM  
 LA 0 1.00 Hz  
 GB 0 1.40

MTZ-CH-4 (m)

130.21  
130.14  
129.96  
129.63  
129.39



Current Data Parameters  
 NAME MTZ-CH-4 (m)  
 EXPNO 1  
 PROCNO 1

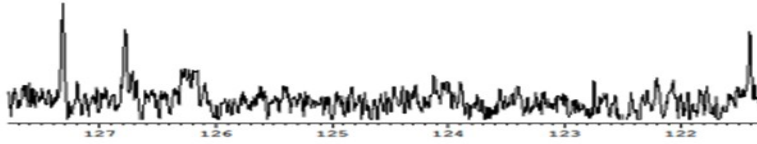
F2 - Acquisition Parameters  
 Date\_ 20160121  
 Time 10.47  
 INSTRUM spect  
 PROBRD 5 mm PABBO BH/CP  
 PULPROG zgpg30  
 TD 65536  
 TO 25.536  
 SOLVENT CDCl3  
 NS 1024  
 DS 4  
 SWH 24038.461 Hz  
 FIDRES 0.346798 Hz  
 AQ 1.3631488 sec  
 RG 322.26  
 DW 20.800 usec  
 DE 6.50 usec  
 TE 298.7 K  
 D1 2.0000000 sec  
 D11 0.0300000 sec  
 TDD 1

===== CHANNEL F1 =====  
 SFO1 100.6279769 MHz  
 NUC1 13C  
 P1 9.40 usec  
 PLW1 57.0000000 W

===== CHANNEL F2 =====  
 SFO2 400.2316009 MHz  
 NUC2 1H  
 CPDPRG2 waltz16  
 PCPD2 30.00 usec  
 PLW2 11.0000000 W  
 PLW12 0.28749999 W  
 PLW13 0.23287000 W

F2 - Processing parameters  
 SI 32768  
 SF 100.6379140 MHz  
 MM 32  
 LB 0 1.00 Hz  
 GB 0  
 PC 1.40

MTZ-CH-4 (m)  
127.16  
126.19



Current Data Parameters  
 NAME MTZ-CH-4 (m)  
 EXPNO 1  
 PROCNO 1

F2 - Acquisition Parameters  
 Date\_ 20160121  
 Time 10.47  
 INSTRUM spect  
 PROBRD 5 mm PABBO BH/CP  
 PULPROG zgpg30  
 TD 65536  
 TO 25.536  
 SOLVENT CDCl3  
 NS 1024  
 DS 4  
 SWH 24038.461 Hz  
 FIDRES 0.346798 Hz  
 AQ 1.3631488 sec  
 RG 322.26  
 DW 20.800 usec  
 DE 6.50 usec  
 TE 298.7 K  
 D1 2.0000000 sec  
 D11 0.0300000 sec  
 TDD 1

===== CHANNEL F1 =====  
 SFO1 100.6279769 MHz  
 NUC1 13C  
 P1 9.40 usec  
 PLW1 57.0000000 W

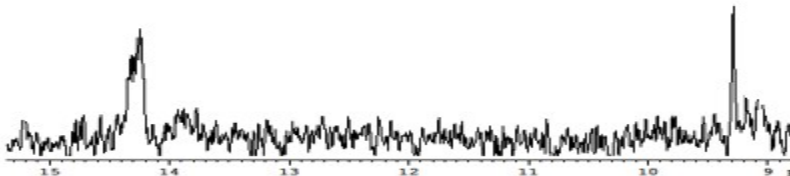
===== CHANNEL F2 =====  
 SFO2 400.2316009 MHz  
 NUC2 1H  
 CPDPRG2 waltz16  
 PCPD2 30.00 usec  
 PLW2 11.0000000 W  
 PLW12 0.28749999 W  
 PLW13 0.23287000 W

F2 - Processing parameters  
 SI 32768  
 SF 100.6379140 MHz  
 MM 32  
 LB 0 1.00 Hz  
 GB 0  
 PC 1.40

MTZ-CH-4 (m)

14.24

9.29



Current Data Parameters  
 NAME MTZ-CH-4 (m)  
 EXPNO 1  
 PROCNO 1

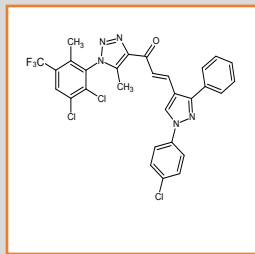
F2 - Acquisition Parameters  
 Date\_ 20160121  
 Time 10.47  
 INSTRUM spect  
 PROBRD 5 mm PABBO BH/CP  
 PULPROG zgpg30  
 TD 65536  
 TO 25.536  
 SOLVENT CDCl3  
 NS 1024  
 DS 4  
 SWH 24038.461 Hz  
 FIDRES 0.346798 Hz  
 AQ 1.3631488 sec  
 RG 322.26  
 DW 20.800 usec  
 DE 6.50 usec  
 TE 298.7 K  
 D1 2.0000000 sec  
 D11 0.0300000 sec  
 TDD 1

===== CHANNEL F1 =====  
 SFO1 100.6279769 MHz  
 NUC1 13C  
 P1 9.40 usec  
 PLW1 57.0000000 W

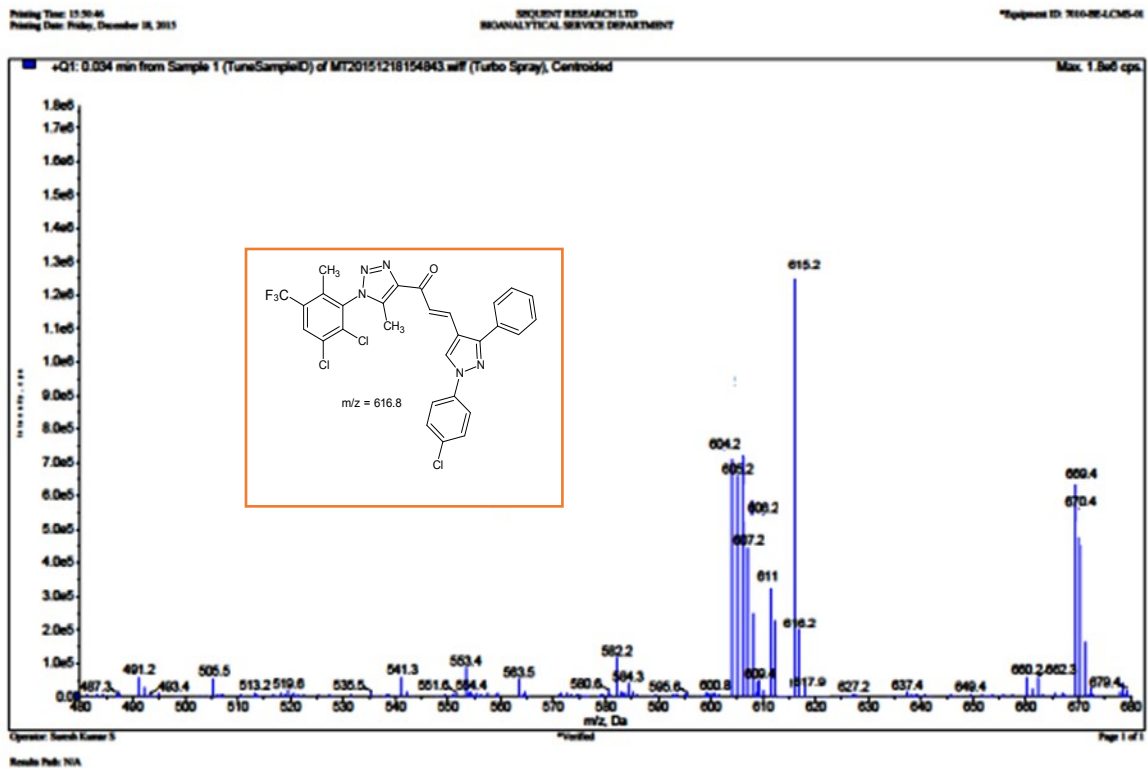
===== CHANNEL F2 =====  
 SFO2 400.2316009 MHz  
 NUC2 1H  
 CPDPRG2 waltz16  
 PCPD2 30.00 usec  
 PLW2 11.0000000 W  
 PLW12 0.28749999 W  
 PLW13 0.23287000 W

F2 - Processing parameters  
 SI 32768  
 SF 100.6379140 MHz  
 MM 32  
 LB 0 1.00 Hz  
 GB 0  
 PC 1.40

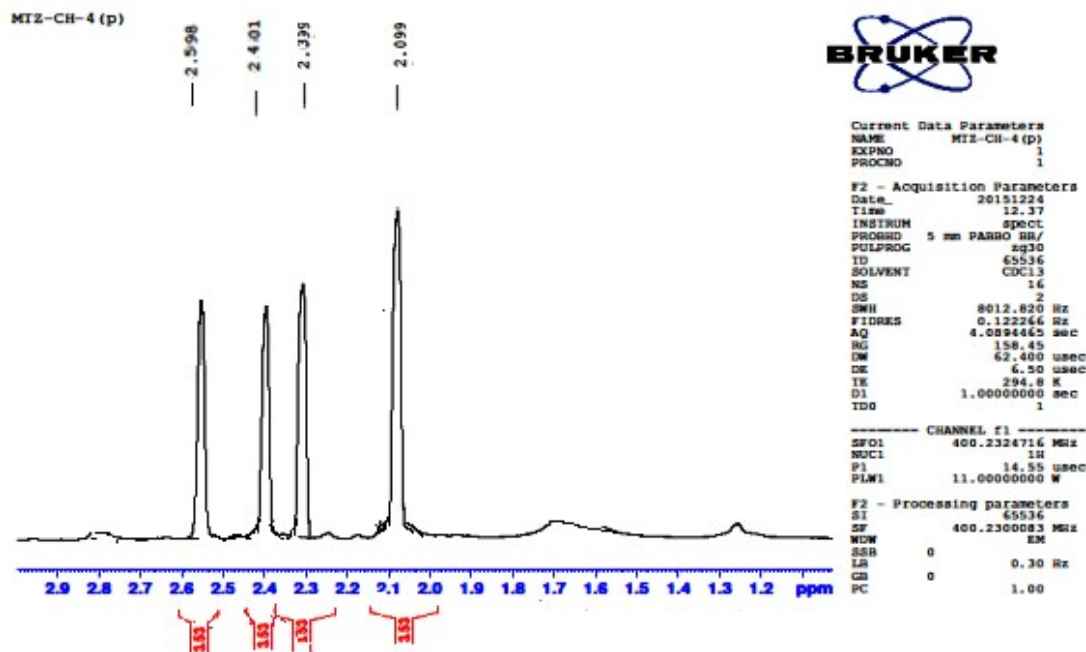
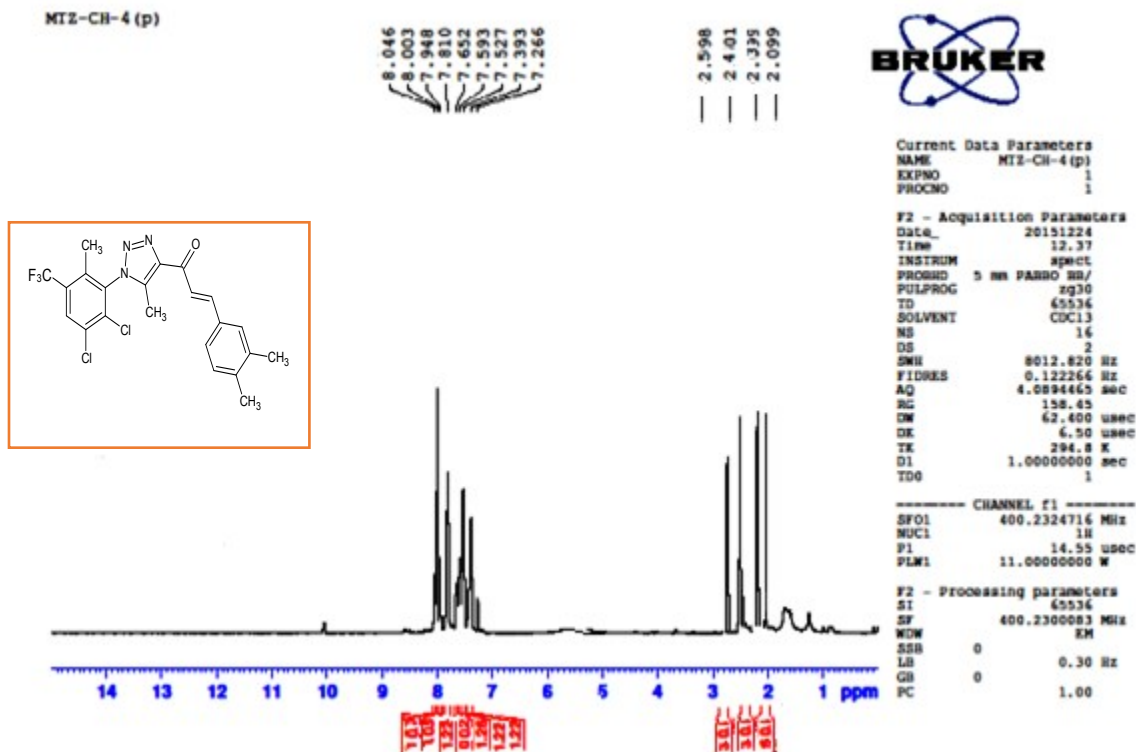
## IR-Spectrum of (6c)



## Mass-Spectrum of (6c)



# <sup>1</sup>H-NMR Spectrum of (5d)





MTZ-CH-4 (p)

8.046  
8.003  
7.948  
7.810  
7.652  
7.593  
7.527  
7.393  
7.266



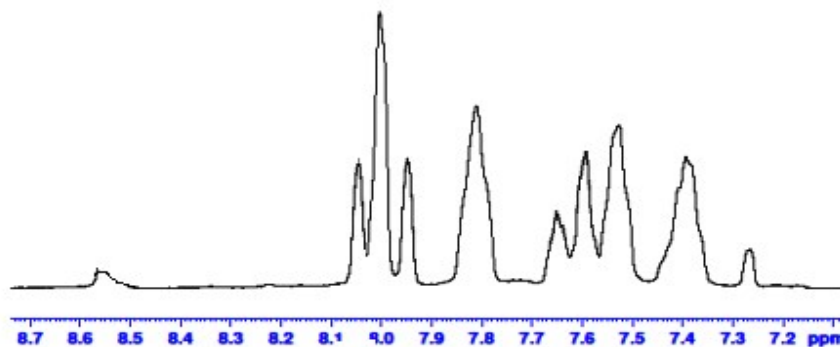
Current Data Parameters  
NAME MTZ-CH-4 (p)  
EXPNO 1  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20151224  
Time 12.37  
INSTRUM spect  
PROBHD 5 mm PABBO BB/  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 16  
DS 2  
SWH 8012.820 Hz  
FIDRES 0.122266 Hz  
AQ 4.0894465 sec  
RG 158.43  
DW 62.400 usec  
DE 6.50 usec  
TE 294.8 K  
D1 1.00000000 sec  
TD0 1

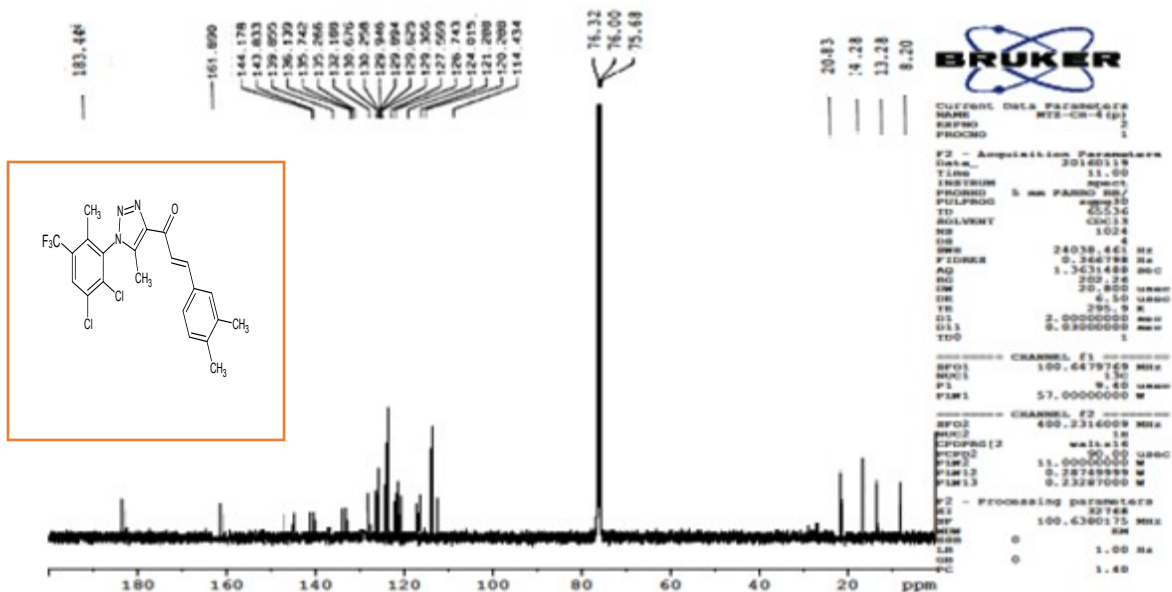
CHANNEL f1

SFO1 400.2324716 MHz  
NUC1 1H  
P1 14.55 usec  
PLW1 11.00000000 W

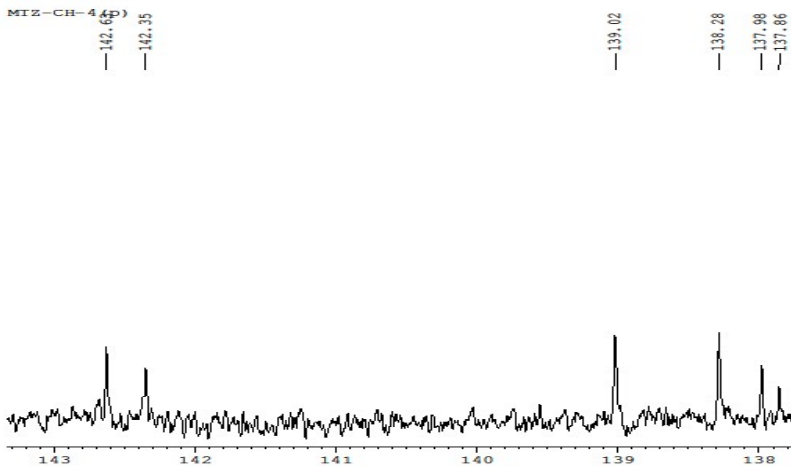
F2 - Processing parameters  
SI 65536  
SF 400.2300083 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



### <sup>13</sup>C-NMR Spectrum of (5d)



MIZ-CH-4 (p)  
142.66  
142.35



```
Current Data Parameters
NAME MIZ-CH-4 (p)
EXPNO 2
PROCNO 1

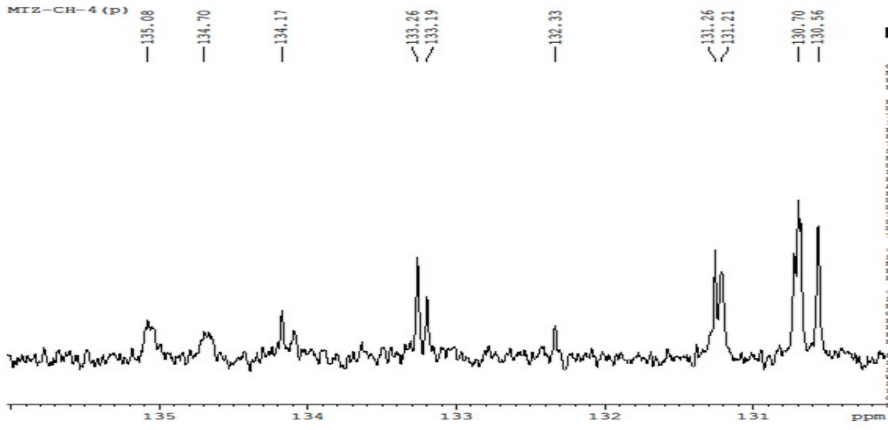
F2 - Acquisition Parameters
Date_ 20160119
Time 11.00
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 1024
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 202.26
DW 20.800 usec
DE 6.50 usec
TE 295.9 K
D1 0.0000000 sec
d11 0.0000000 sec
TDO 1

===== CHANNEL f1 =====
SFO1 100.6479769 MHz
NUC1 13C
P1 9.40 usec
P1M1 57.0000000 W

===== CHANNEL f2 =====
SFO2 400.2316009 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
P1M2 11.0000000 W
P1M3 0.28749999 W
P1M13 0.23287000 W

F2 - Processing parameters
SI 32768
SF 100.6380175 MHz
WDW EM
SSB 0 1.00 Hz
GB 0 1.40
```

MIZ-CH-4 (p)  
135.08  
134.70  
134.17  
133.26  
133.19  
132.33  
131.26  
131.21  
130.70  
130.56



```
Current Data Parameters
NAME MIZ-CH-4 (p)
EXPNO 2
PROCNO 1

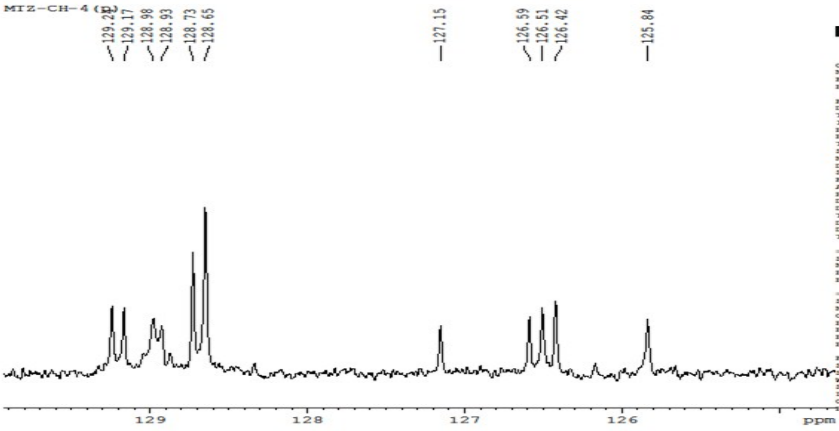
F2 - Acquisition Parameters
Date_ 20160119
Time 11.00
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 1024
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 202.26
DW 20.800 usec
DE 6.50 usec
TE 295.9 K
D1 0.0000000 sec
d11 0.0000000 sec
TDO 1

===== CHANNEL f1 =====
SFO1 100.6479769 MHz
NUC1 13C
P1 9.40 usec
P1M1 57.0000000 W

===== CHANNEL f2 =====
SFO2 400.2316009 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
P1M2 11.0000000 W
P1M3 0.28749999 W
P1M13 0.23287000 W

F2 - Processing parameters
SI 32768
SF 100.6380175 MHz
WDW EM
SSB 0 1.00 Hz
GB 0 1.40
```

MIZ-CH-4 (p)  
129.22  
129.17  
128.98  
128.93  
128.73  
128.65  
127.15  
126.59  
126.51  
126.42  
125.84



```
Current Data Parameters
NAME MIZ-CH-4 (p)
EXPNO 2
PROCNO 1

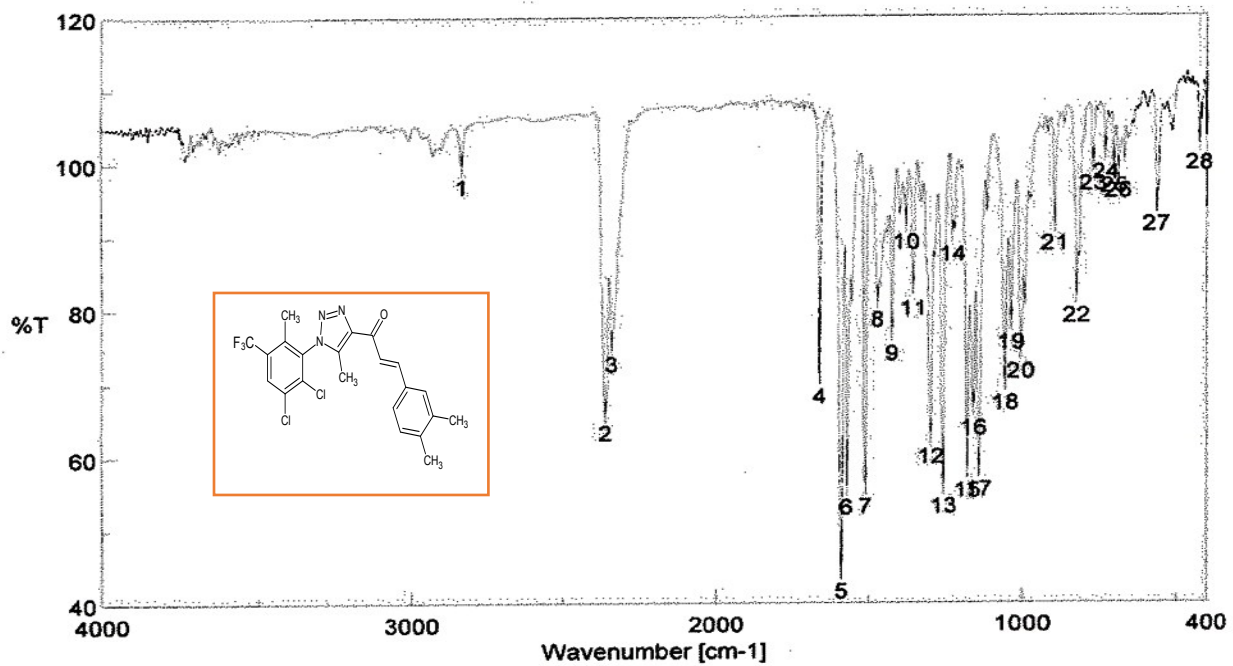
F2 - Acquisition Parameters
Date_ 20160119
Time 11.00
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 1024
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 202.26
DW 20.800 usec
DE 6.50 usec
TE 295.9 K
D1 0.0000000 sec
d11 0.0000000 sec
TDO 1

===== CHANNEL f1 =====
SFO1 100.6479769 MHz
NUC1 13C
P1 9.40 usec
P1M1 57.0000000 W

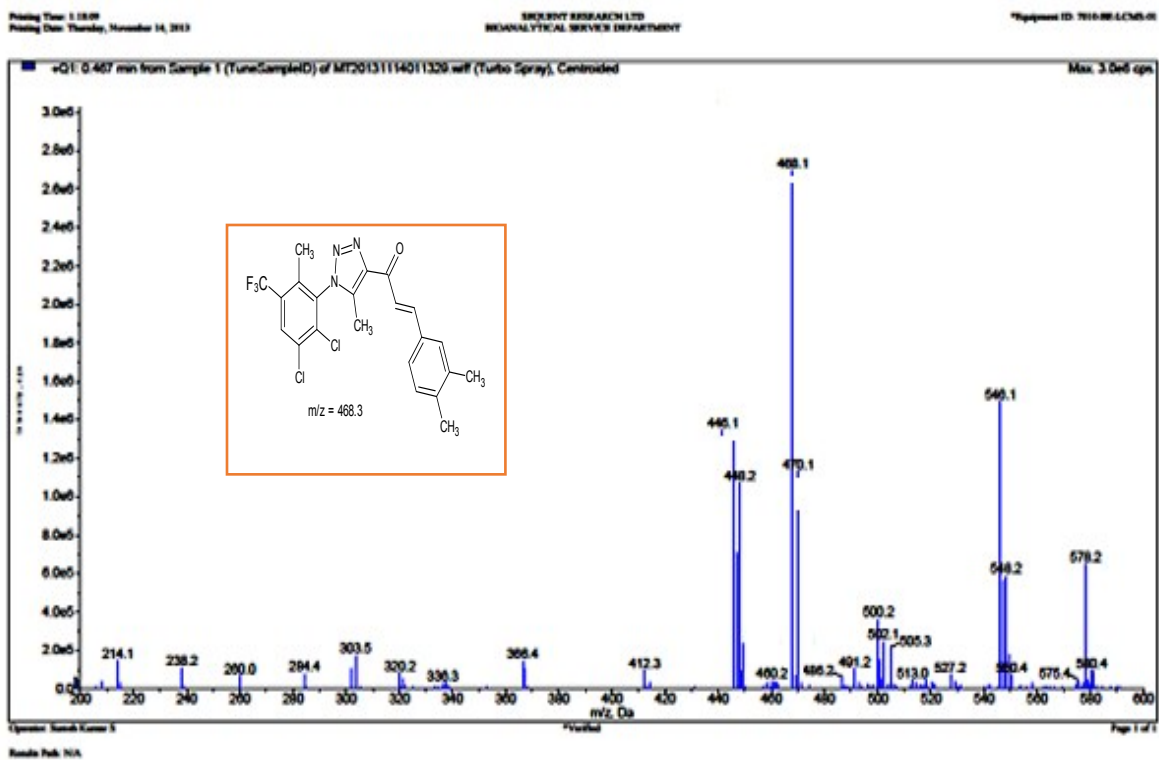
===== CHANNEL f2 =====
SFO2 400.2316009 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
P1M2 11.0000000 W
P1M3 0.28749999 W
P1M13 0.23287000 W

F2 - Processing parameters
SI 32768
SF 100.6380175 MHz
WDW EM
SSB 0 1.00 Hz
GB 0 1.40
```

## IR-Spectrum of (5d)



## Mass-Spectrum of (5d)



# <sup>1</sup>H-NMR Spectrum of (5k)

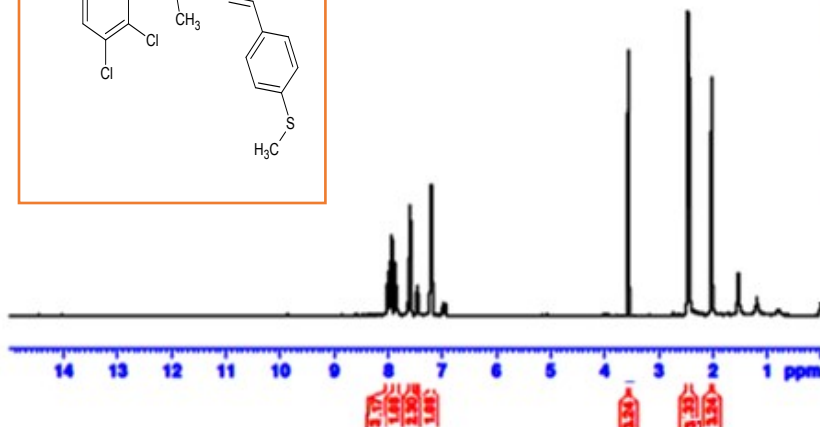
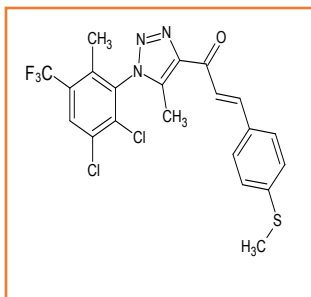
MTZ-CH-4 (k)

8.014  
7.980  
7.974  
7.936  
7.877  
7.840  
7.589  
7.467  
7.208  
7.201

3.434

2.434

2.024



Current Data Parameters

NAME MTZ-CH-4 (k)  
EXPNO 1  
PROCNO 1

F2 - Acquisition Parameters

Date\_ 20151224  
Time 11.54  
INSTRUM spect  
PROBHD 5 mm PABBO BBO/  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 14  
DS 2  
SWH 8012.820 Hz  
FIDRES 0.122264 Hz  
AQ 4.0894465 sec  
RG 257.24  
CW 62.400 usec  
DE 6.50 usec  
TE 294.8 K  
D1 1.00000000 sec  
TD0 1

CHANNEL f1

SFO1 400.2324714 MHz  
NUC1 1H  
P1 14.55 usec  
PLM1 11.00000000 W

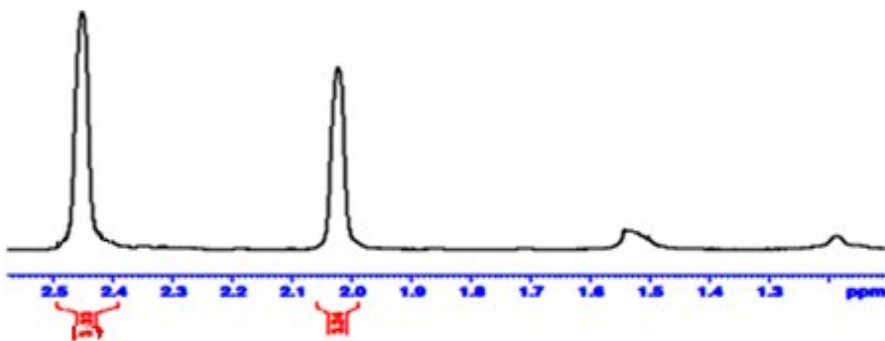
F2 - Processing parameters

SF 400.2324714 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00

MTZ-CH-4 (k)

2.024

2.024



Current Data Parameters

NAME MTZ-CH-4 (k)  
EXPNO 1  
PROCNO 1

F2 - Acquisition Parameters

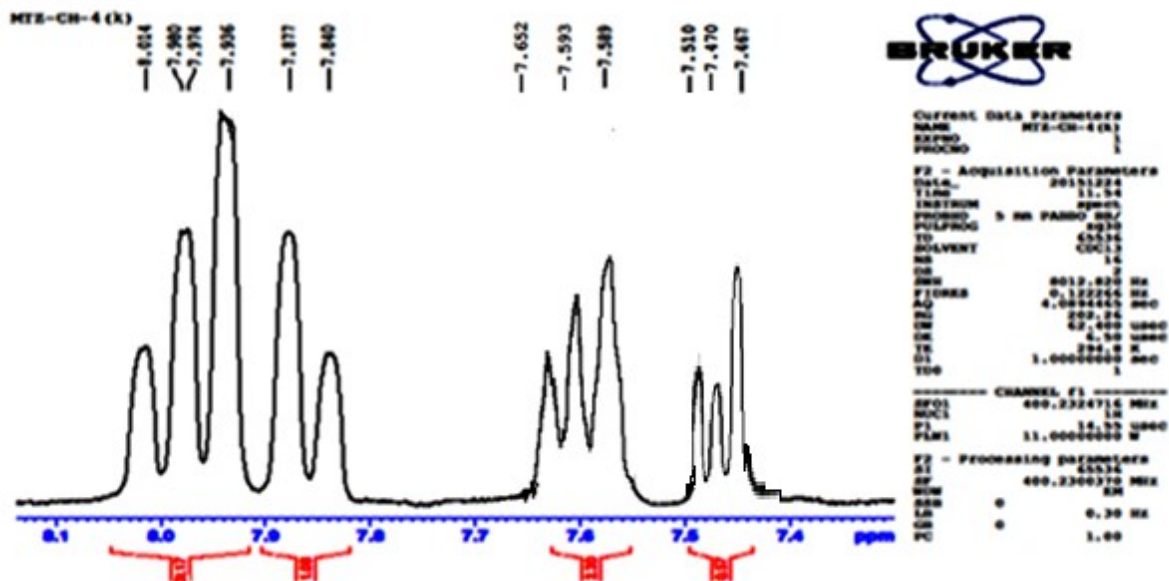
Date\_ 20151224  
Time 11.54  
INSTRUM spect  
PROBHD 5 mm PABBO BBO/  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 14  
DS 2  
SWH 8012.820 Hz  
FIDRES 0.122264 Hz  
AQ 4.0894465 sec  
RG 257.24  
CW 62.400 usec  
DE 6.50 usec  
TE 294.8 K  
D1 1.00000000 sec  
TD0 1

CHANNEL f1

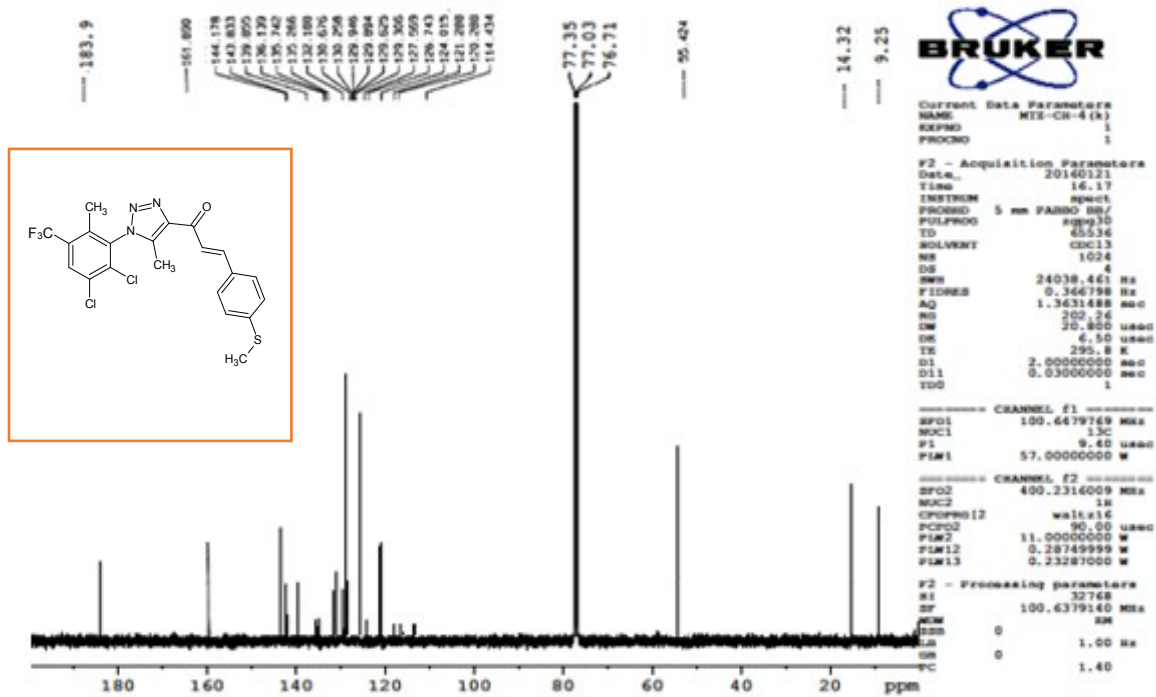
SFO1 400.2324714 MHz  
NUC1 1H  
P1 14.55 usec  
PLM1 11.00000000 W

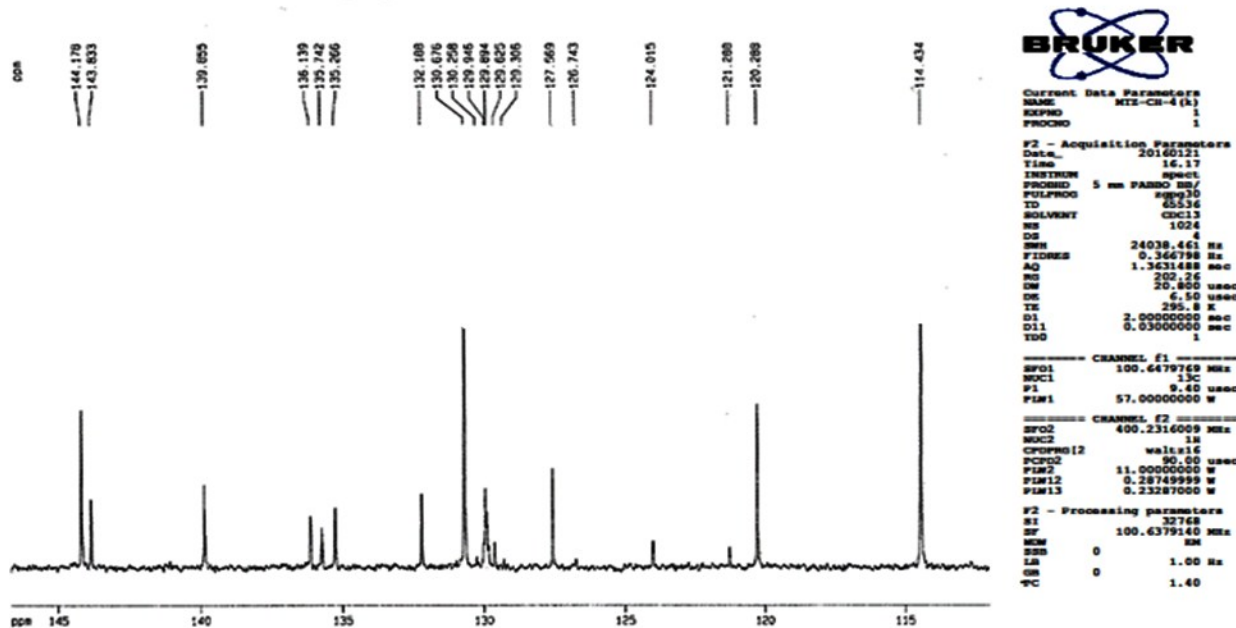
F2 - Processing parameters

SF 400.2324714 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00

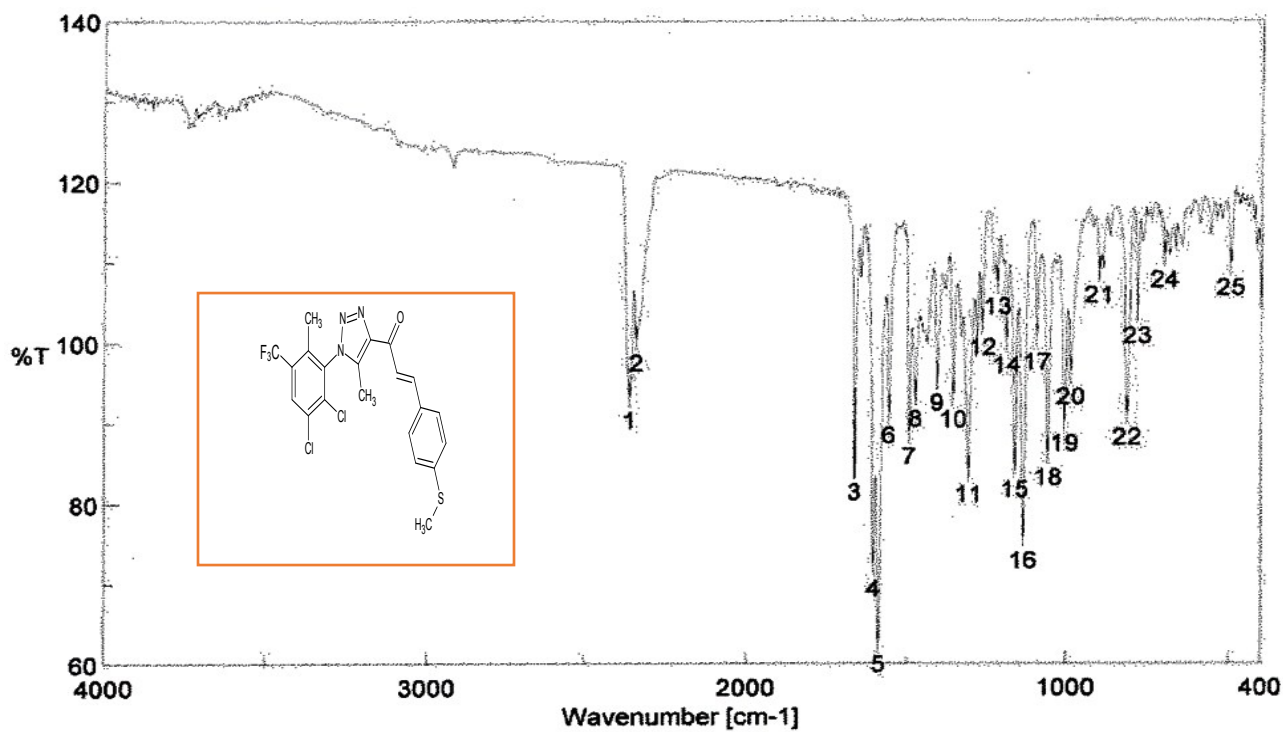


<sup>13</sup>C-NMR Spectrum of (5k)

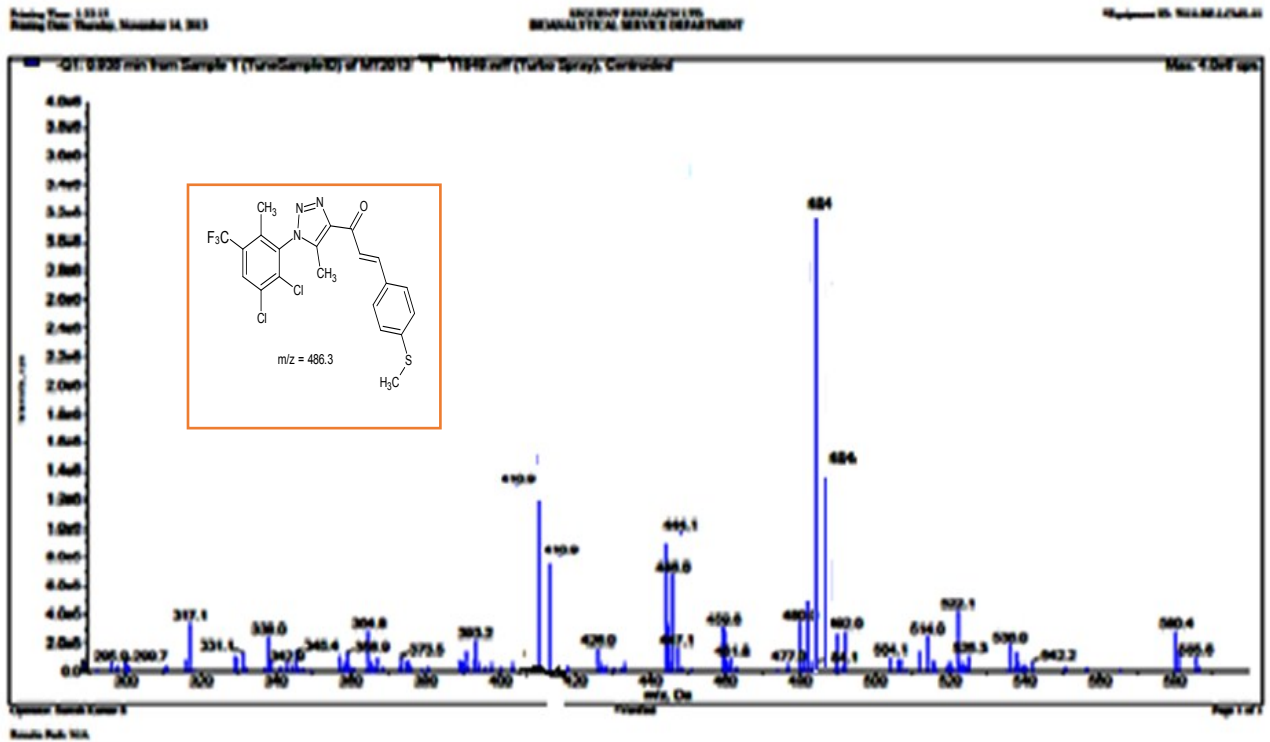




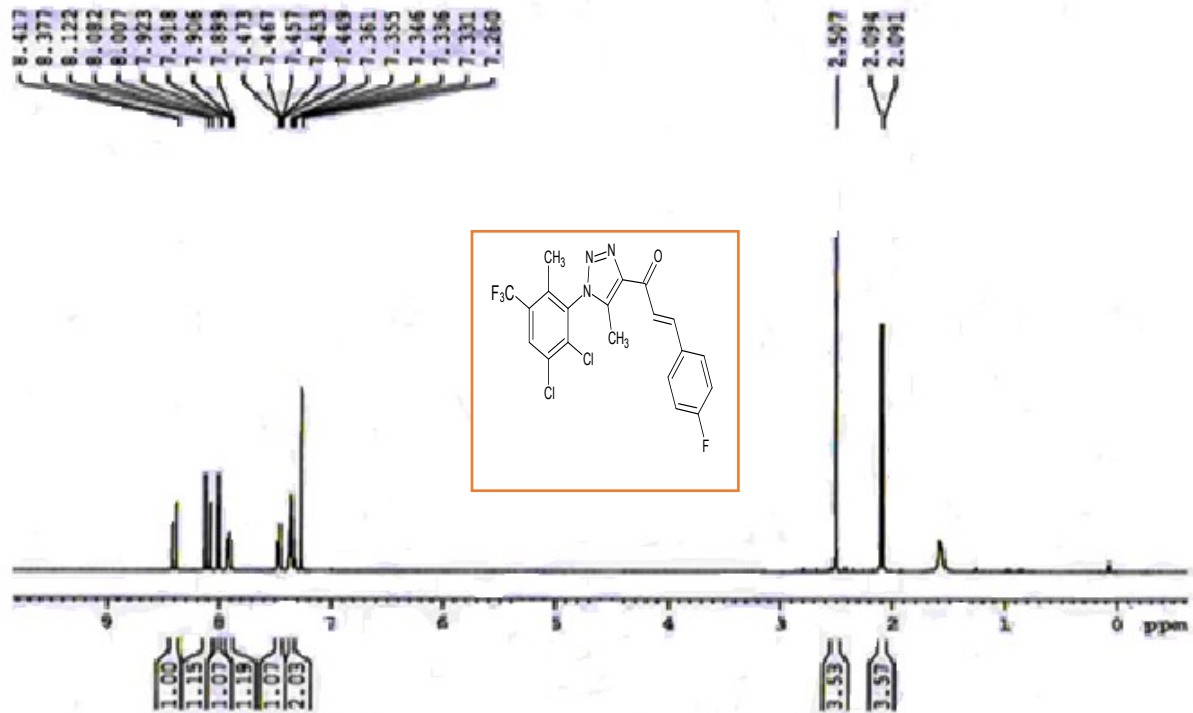
IR-Spectrum of (5k)



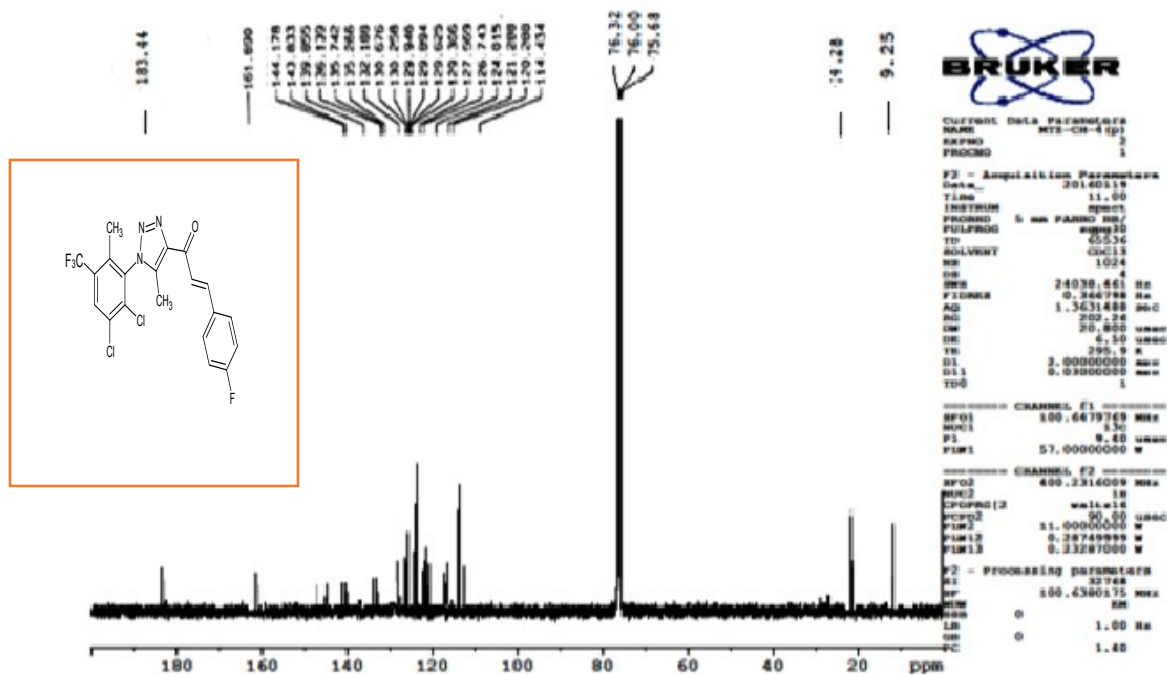
## Mass-Spectrum of (5k)



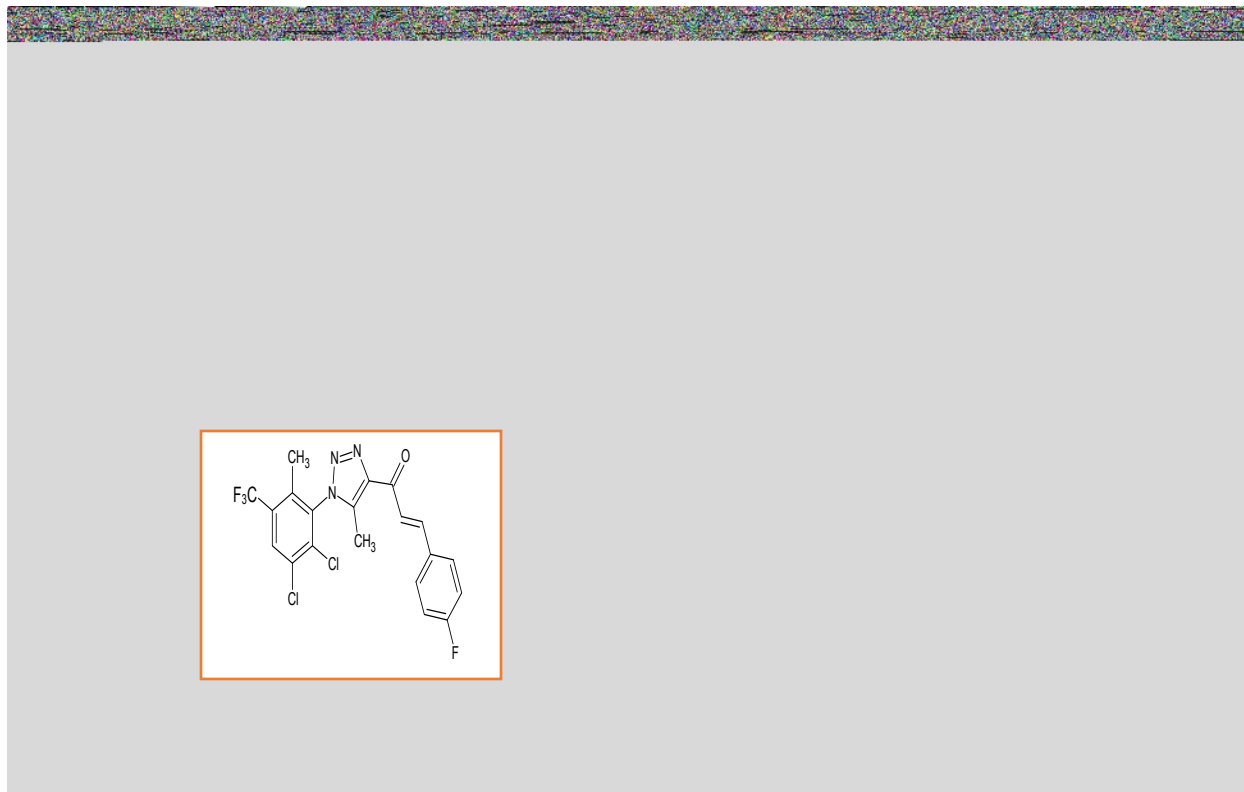
## <sup>1</sup>H-NMR Spectrum of (5e)



### <sup>13</sup>C-NMR Spectrum of (5e)

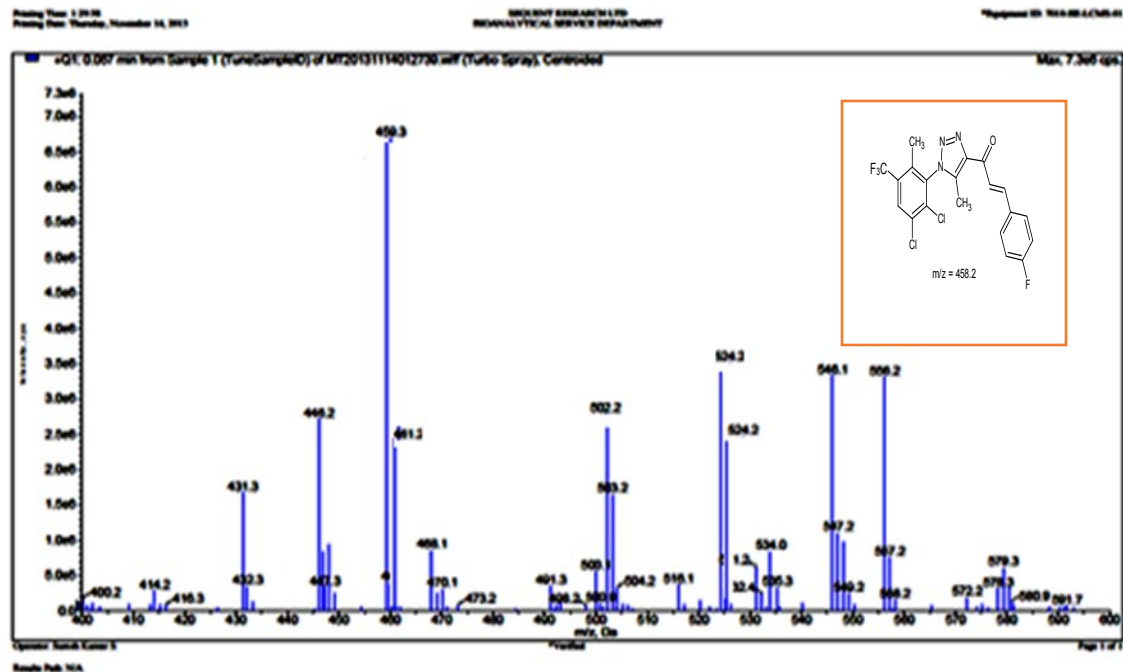


### IR-Spectrum of (5e)



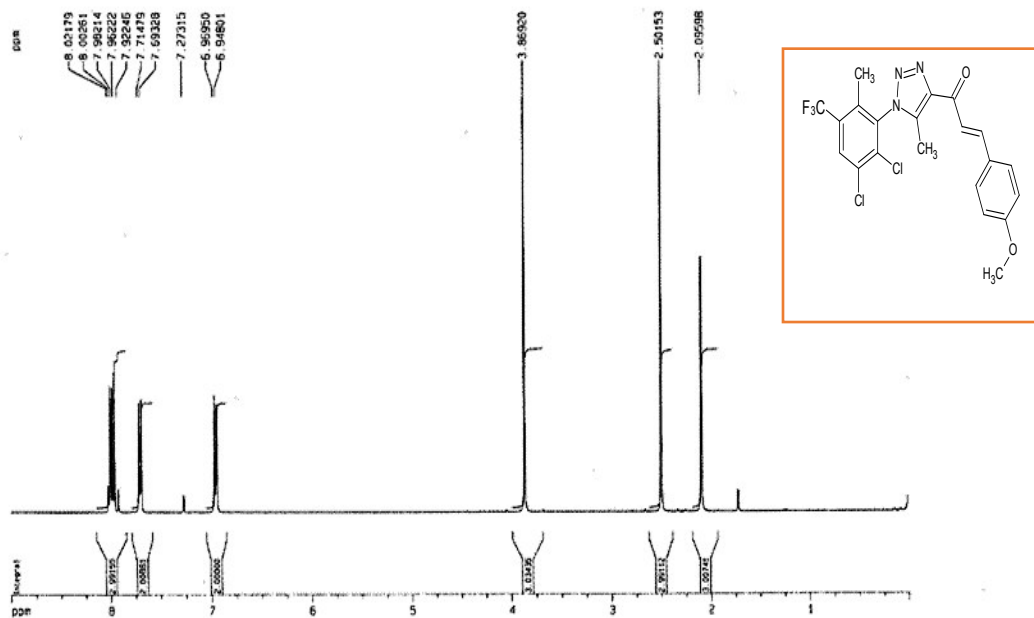


## Mass-Spectrum of (5e)

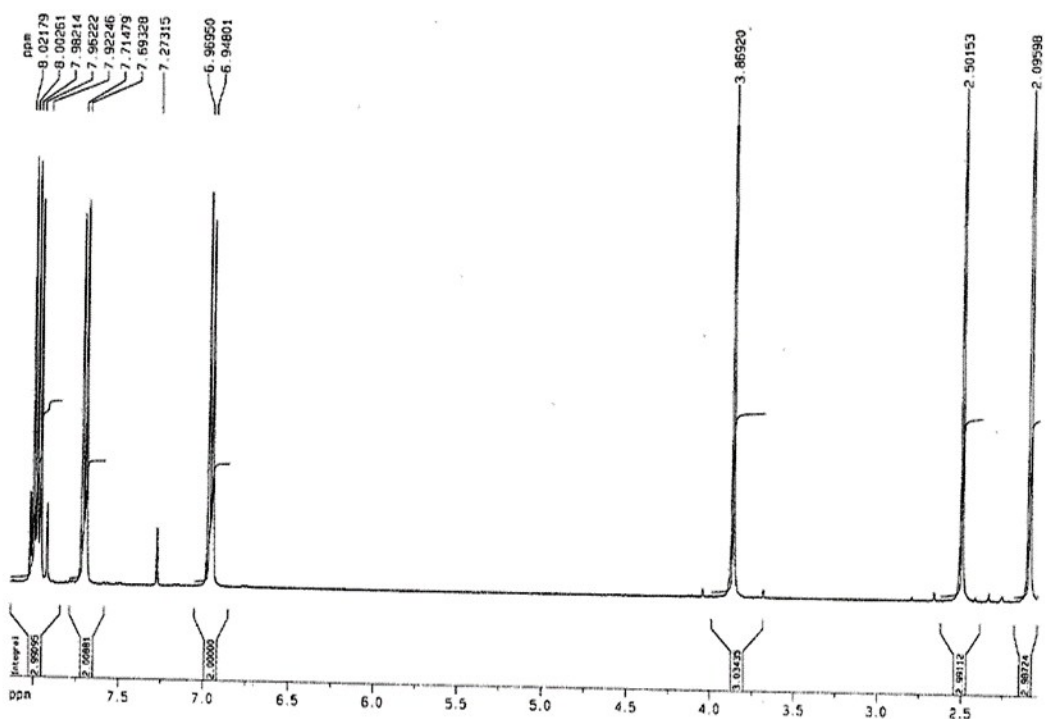


## <sup>1</sup>H-NMR Spectrum of (5g)

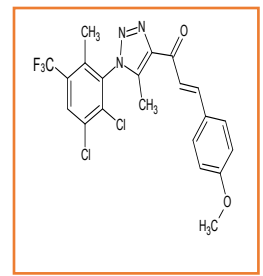
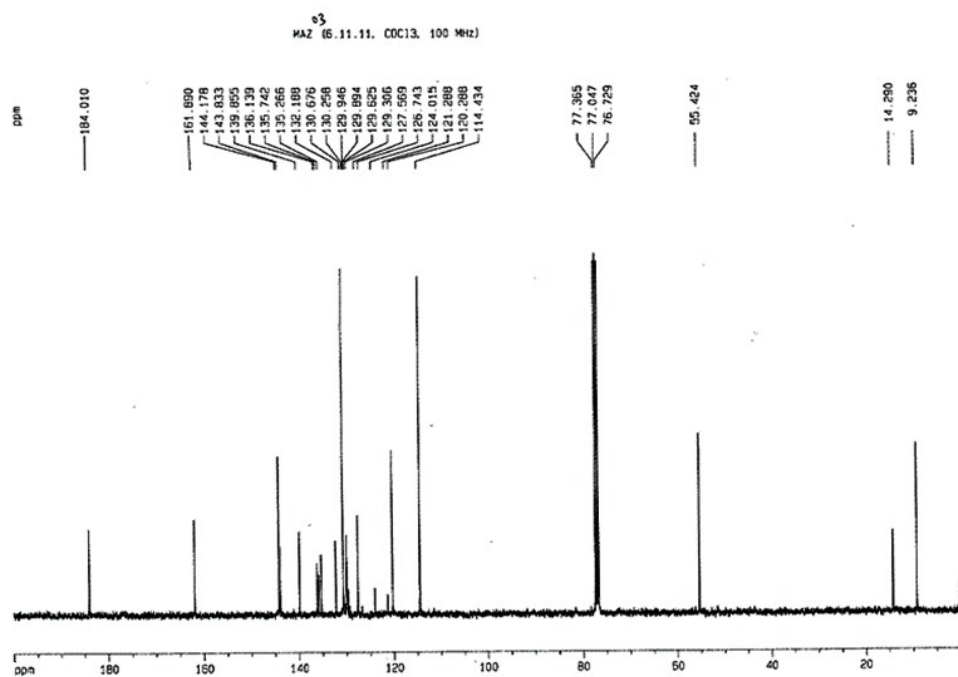
<sup>35</sup>  
 MAZ (6.11.11, CDC13, 400 MHz)

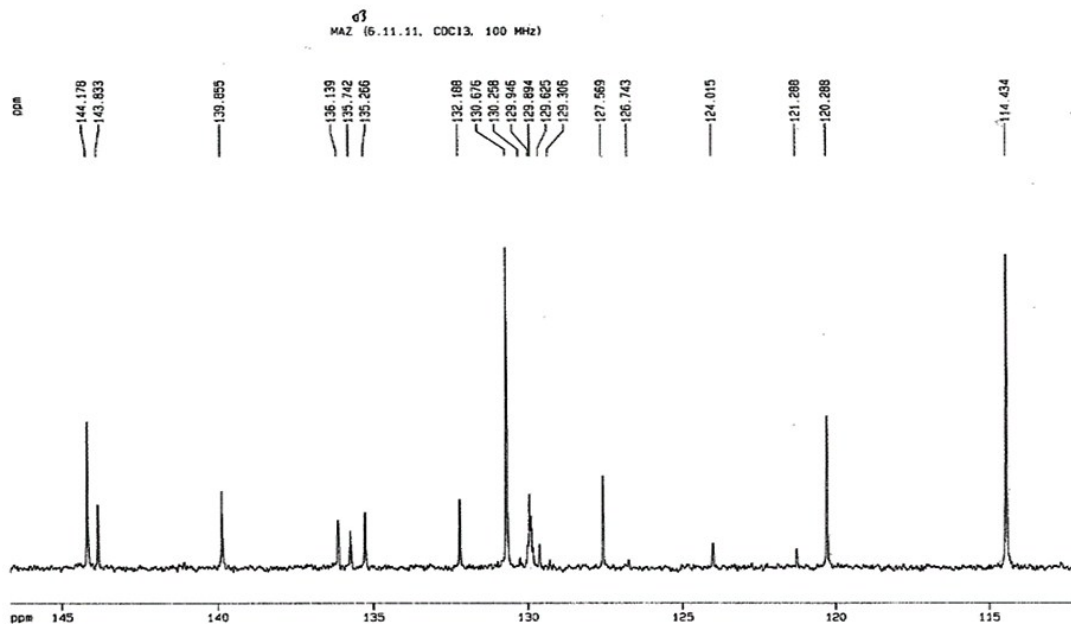


MAZ (6.11.11, CDC13, 400 MHz)

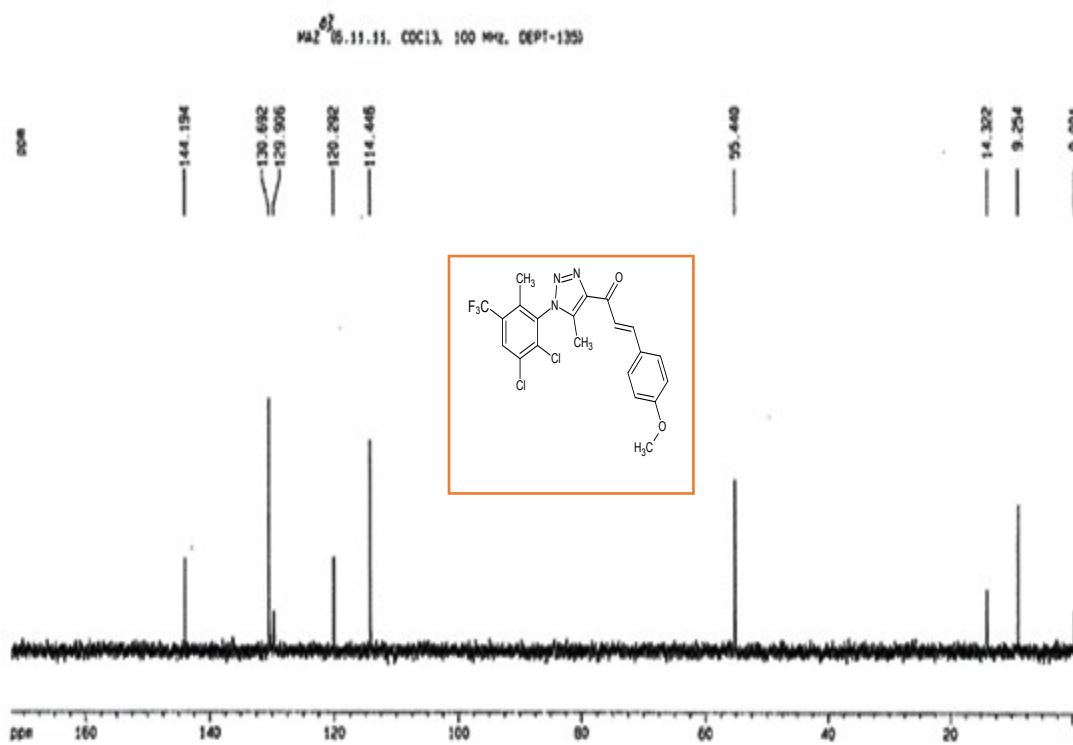


### <sup>13</sup>C-NMR Spectrum of (5g)

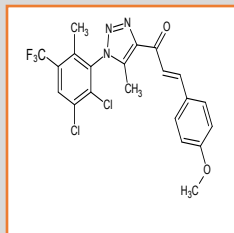




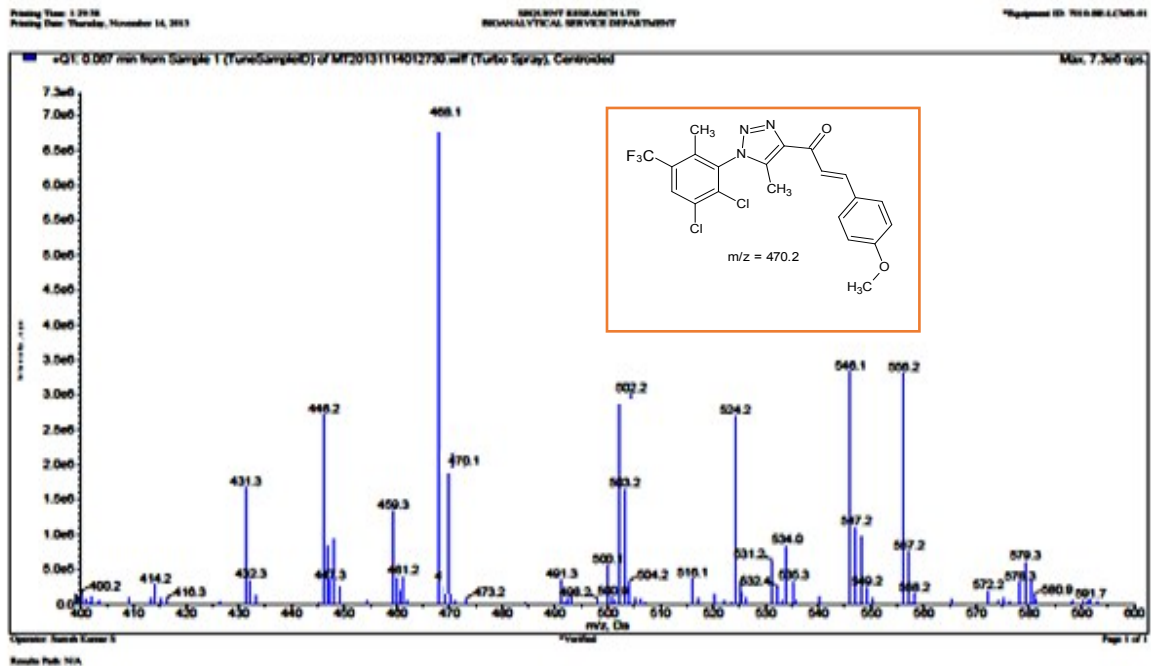
**<sup>13</sup>C-DEPT-135 -NMR Spectrum of (5g)**



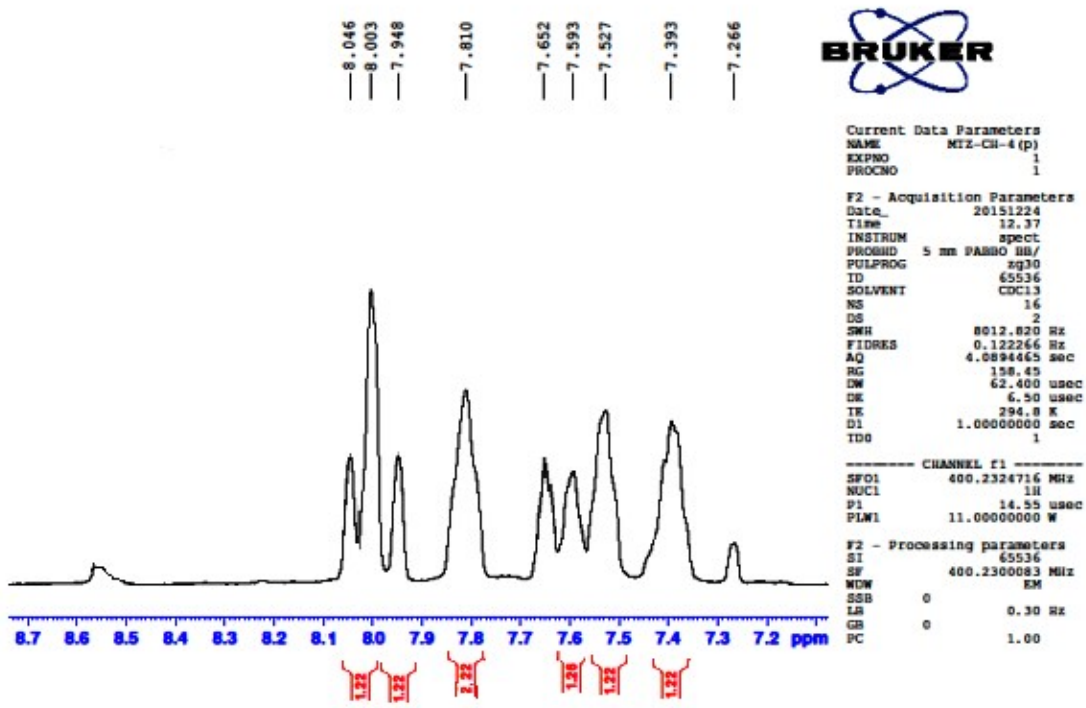
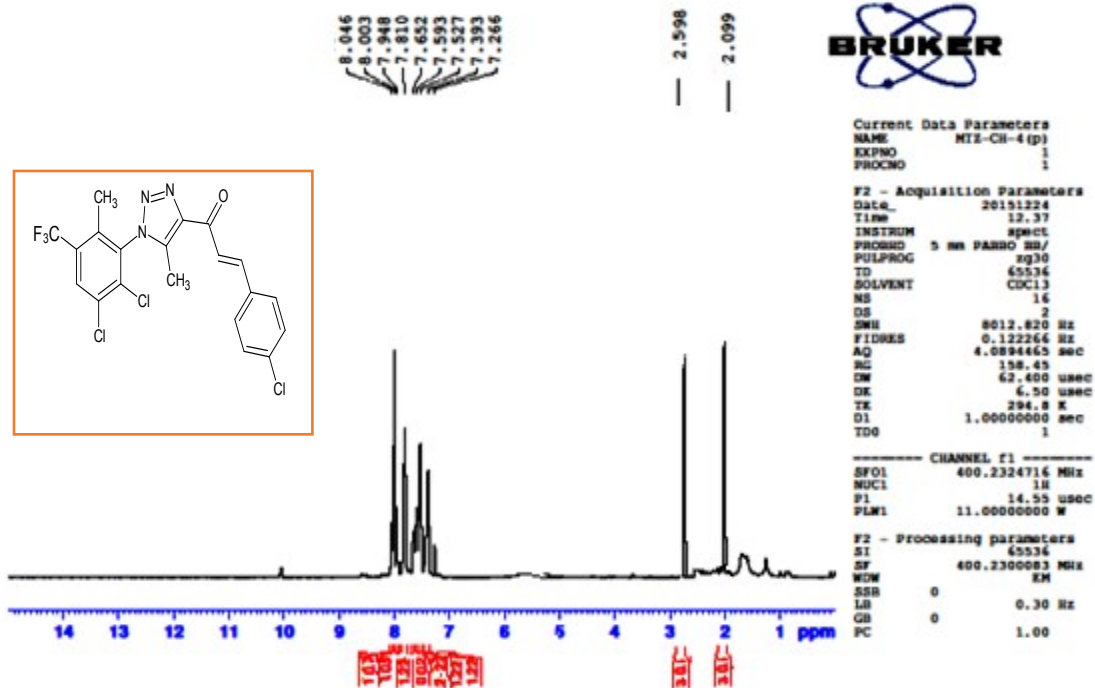
## IR-Spectrum of (5g)



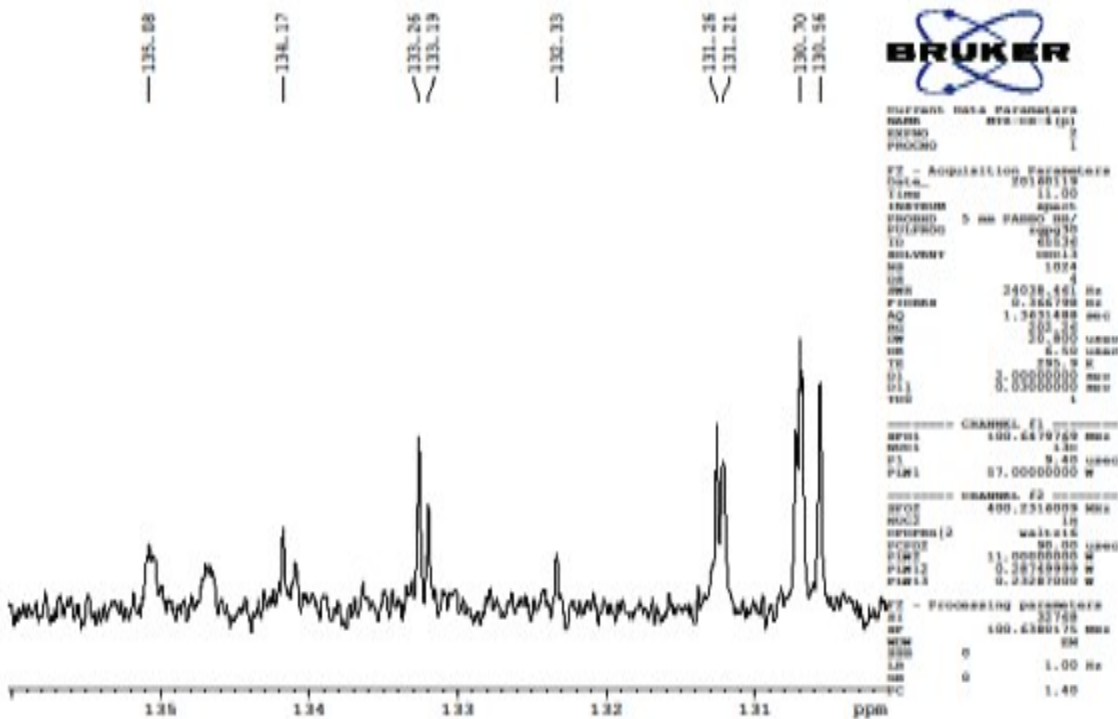
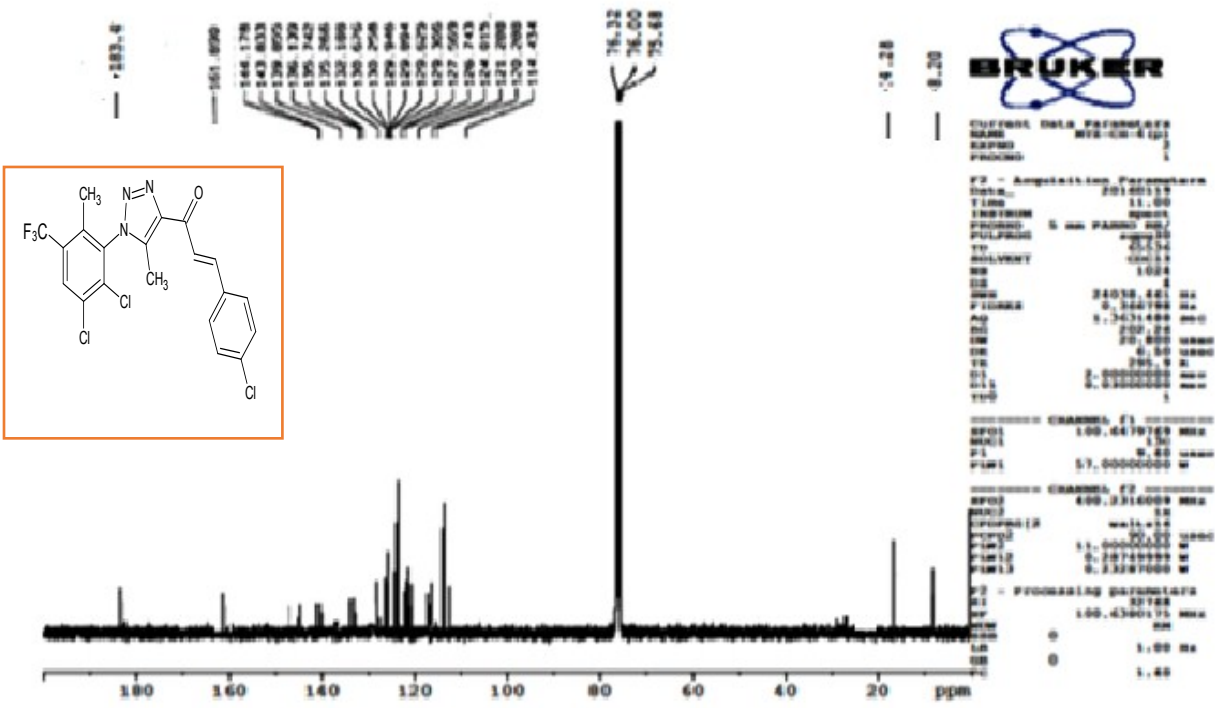
## Mass-Spectrum of (5g)



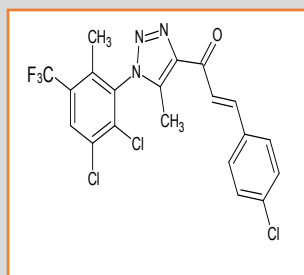
# <sup>1</sup>H-NMR Spectrum of (5f)



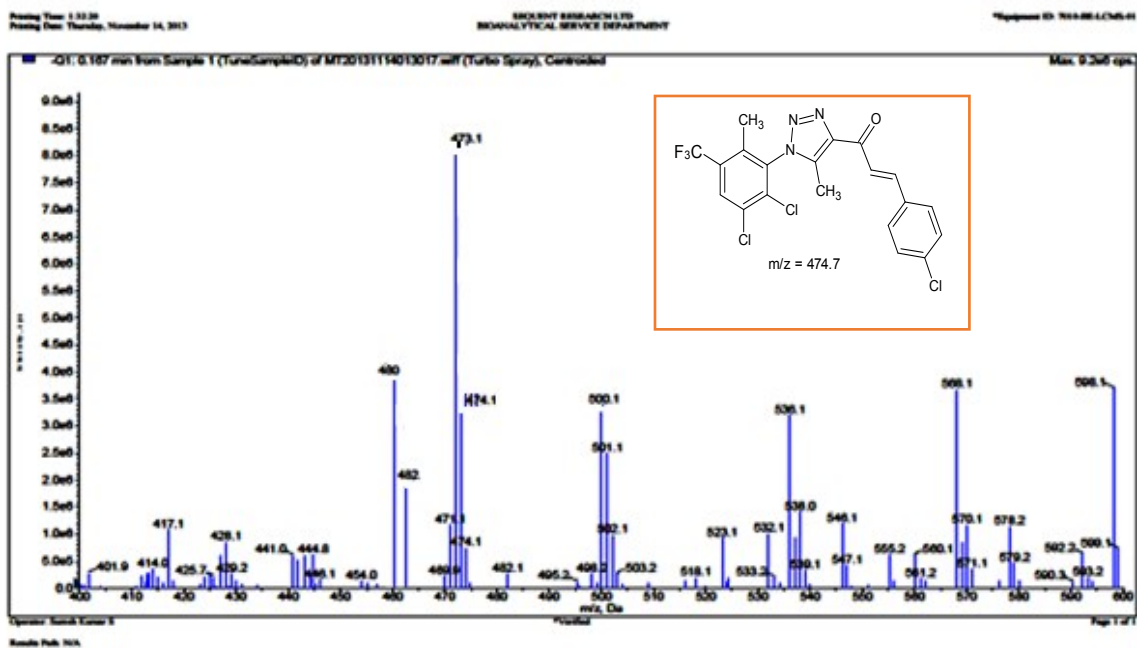
# <sup>13</sup>C-NMR Spectrum of (5f)



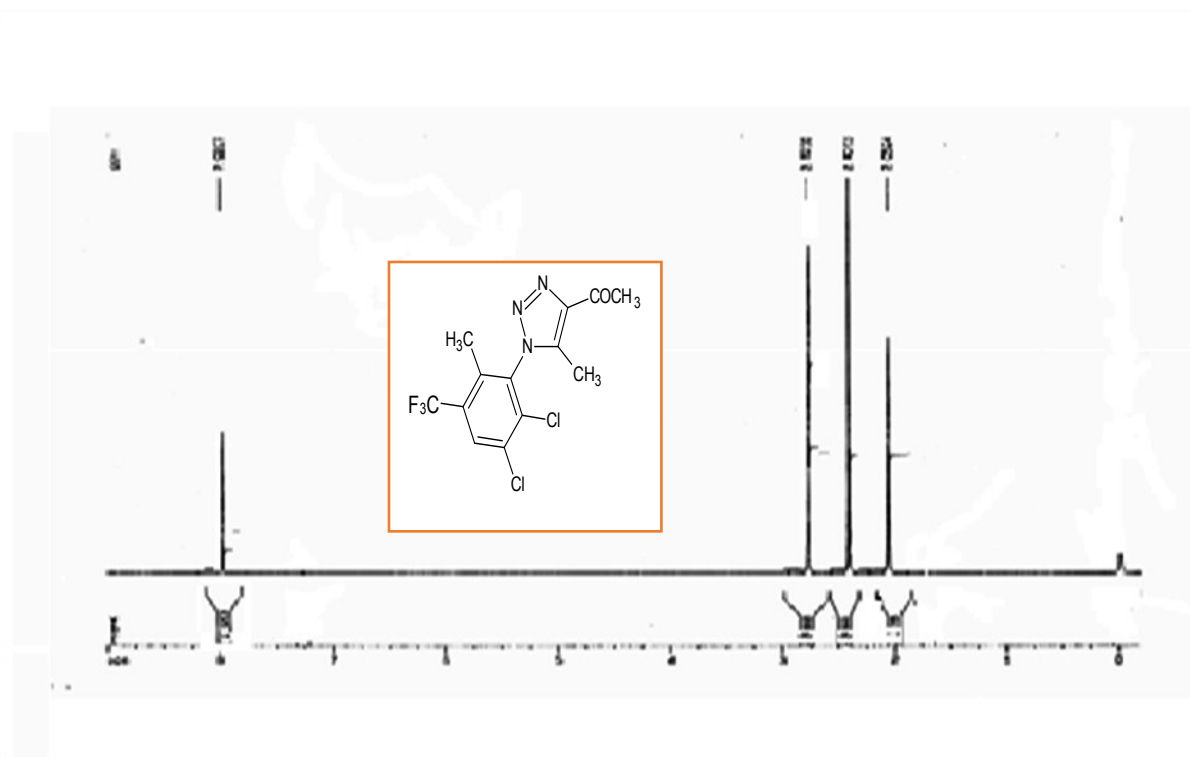
## IR-Spectrum of (5f)



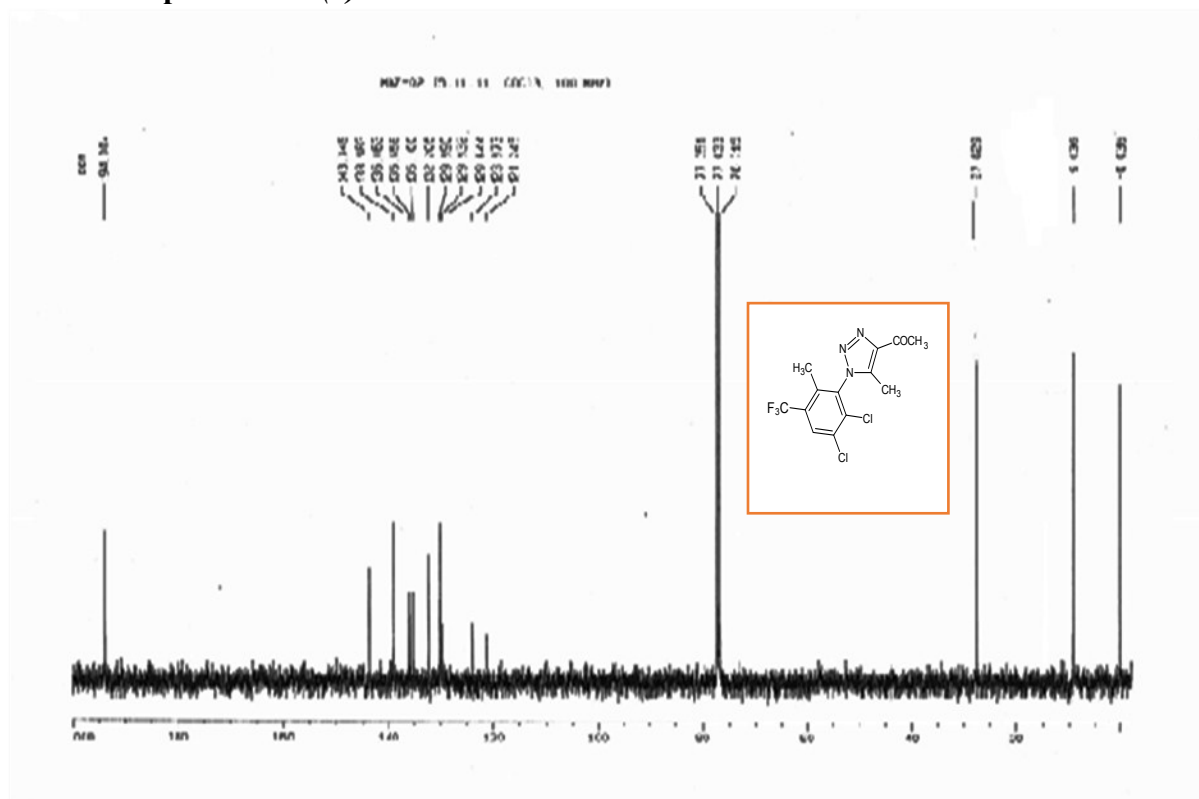
## Mass-Spectrum of (5f)



### <sup>1</sup>H-NMR Spectrum of (4)

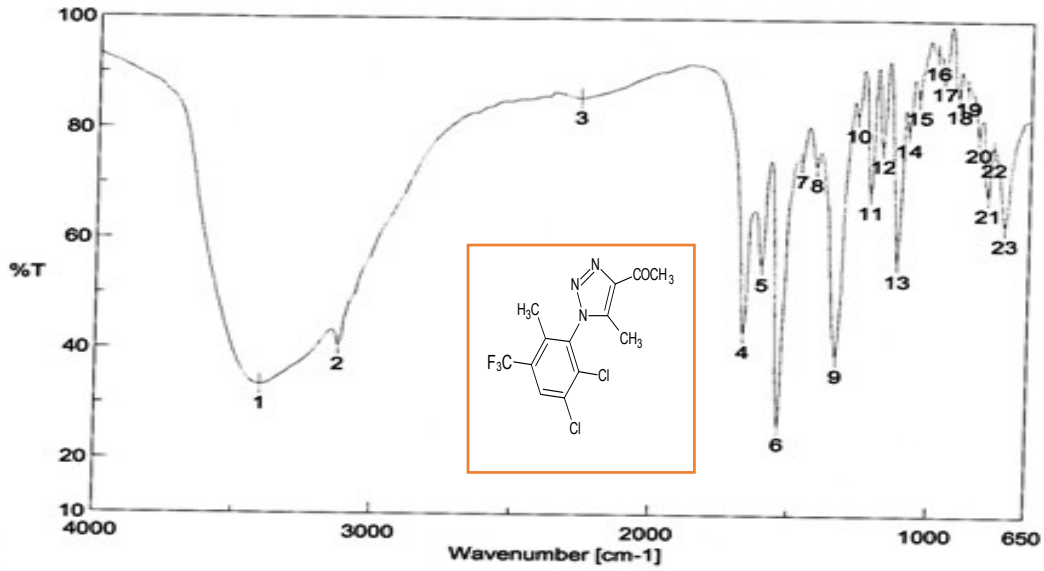


### <sup>13</sup>C-NMR Spectrum of (4)

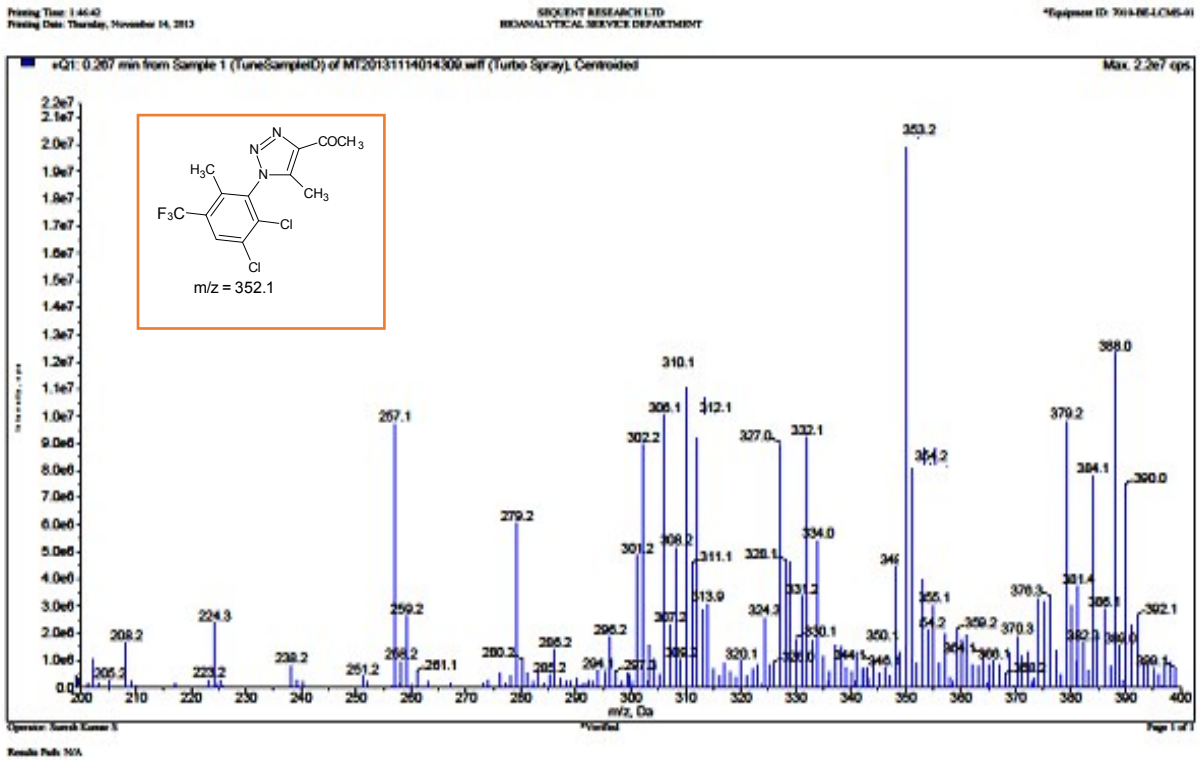




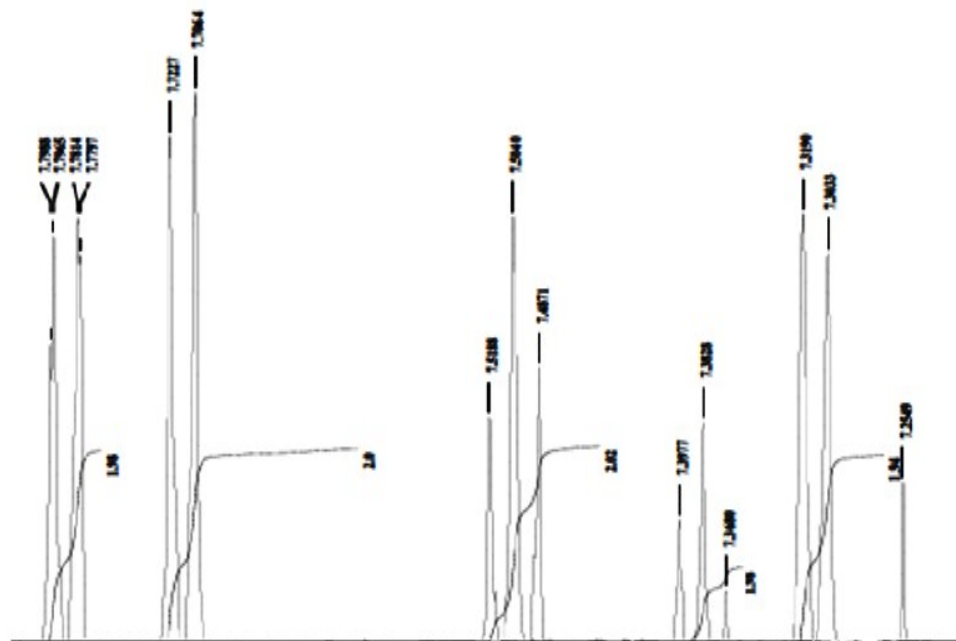
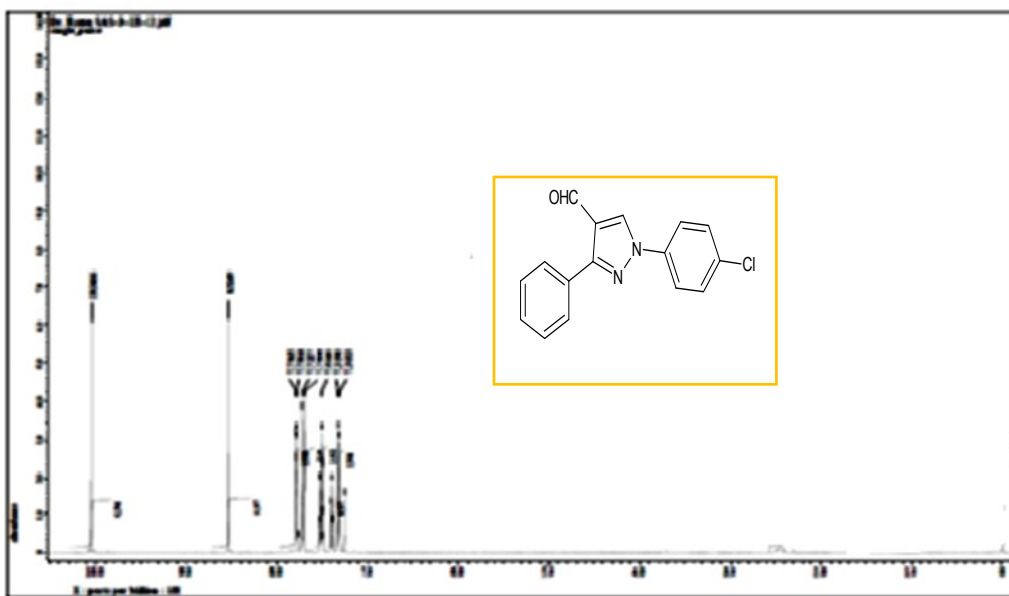
## IR-Spectrum of (4)



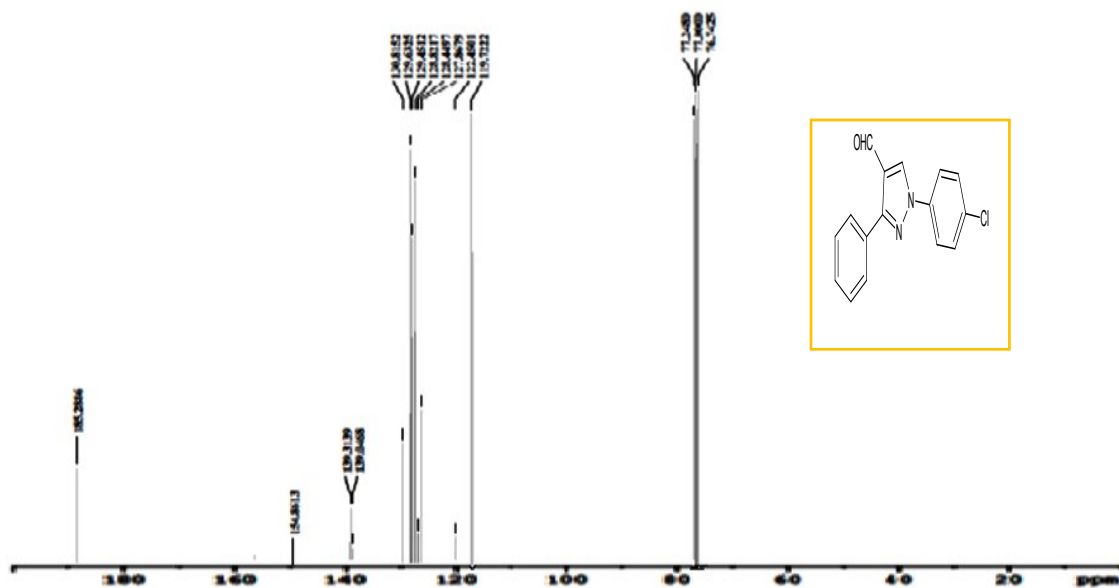
## Mass-Spectrum of (4)



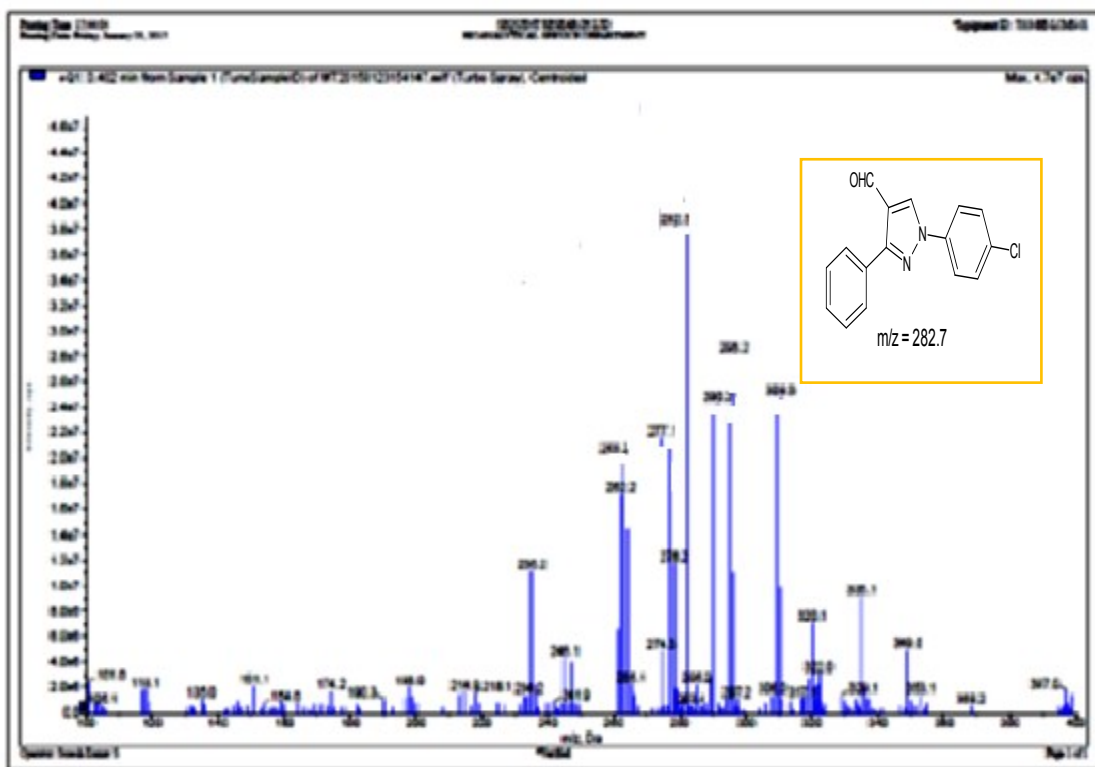
# <sup>1</sup>H-NMR Spectrum of *iii(b)*



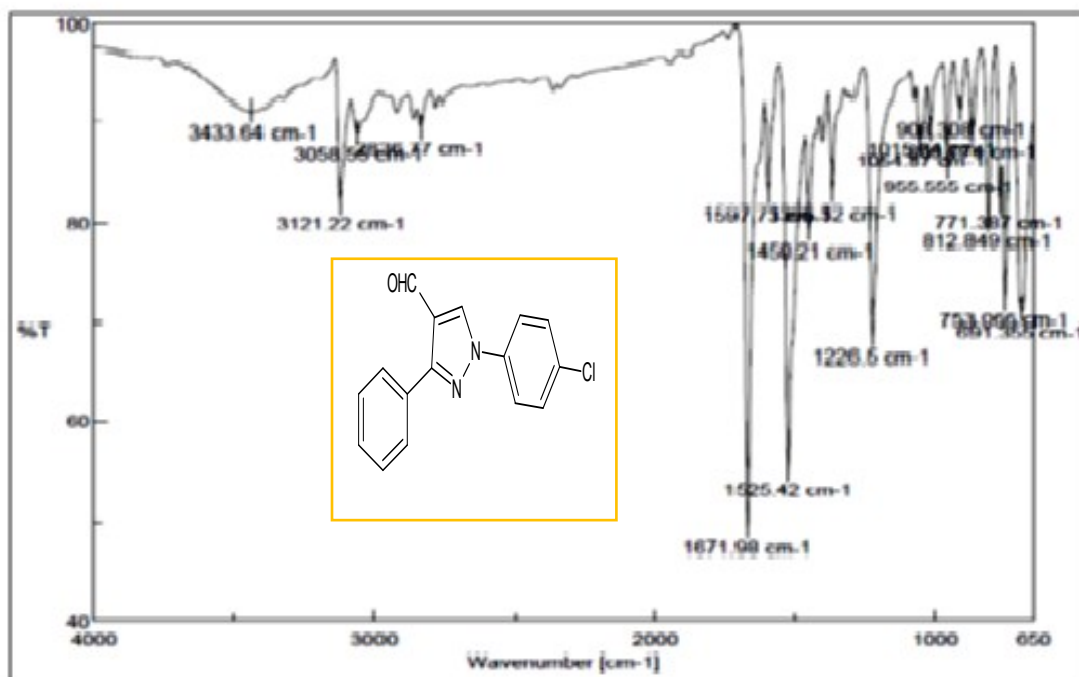
### <sup>13</sup>C-NMR Spectrum of *iii(b)*



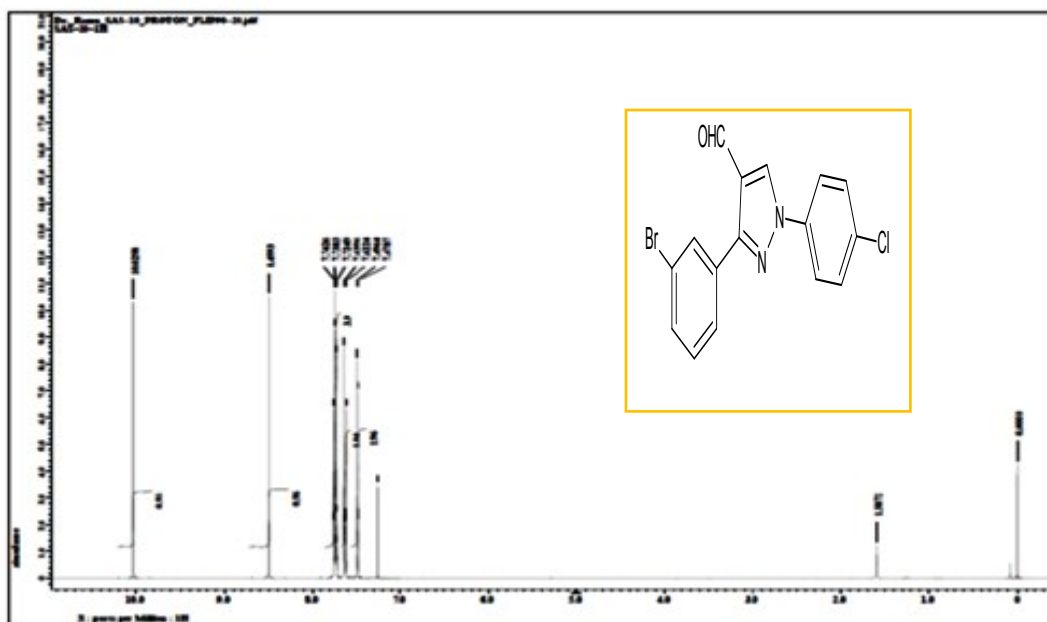
### Mass-Spectrum of *iii(b)*



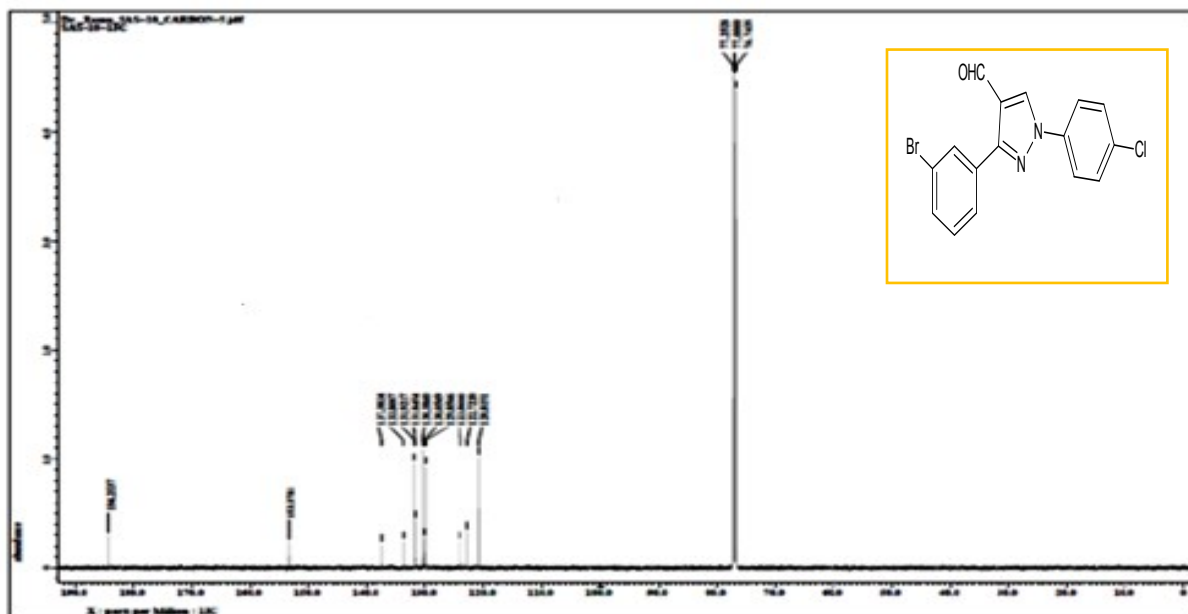
### IR-Spectrum of *iii(b)*



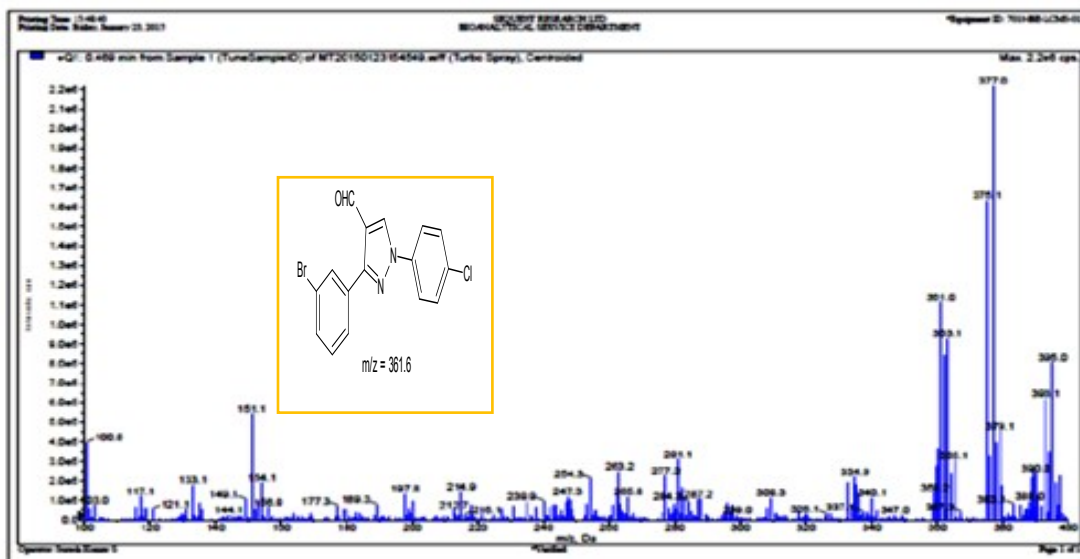
### <sup>1</sup>H-NMR Spectrum of *iii(d)*



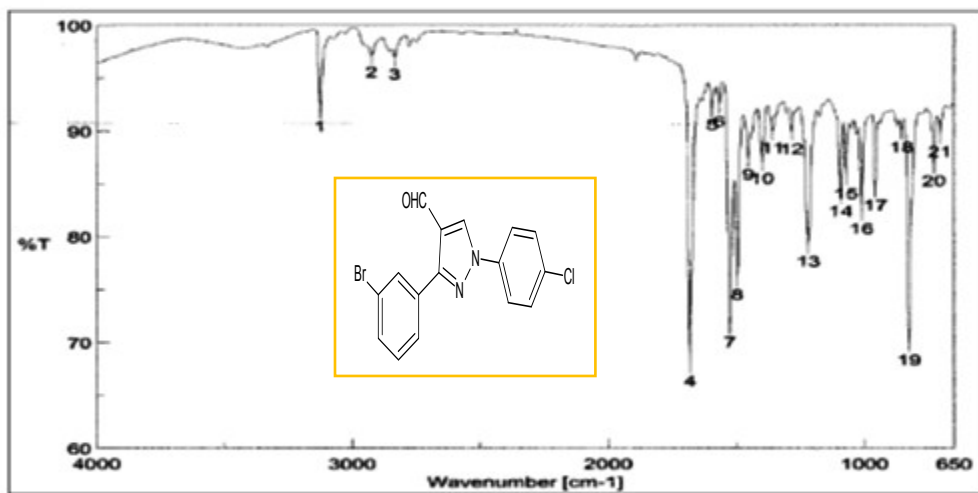
### $^{13}\text{C}$ -NMR Spectrum of *iii(d)*



### Mass-Spectrum of *iii(d)*



IR-Spectrum of *iii(d)*



## CHNS analysis of all the synthesized compounds (5a-k) and (6a-e)

Mangalore University

Department of Chemistry - CHNS analyser

Elementar Vario EL III – SL. No. 11054048

18.06.16 15:15

| No. | Name | Wght.<br>[mg] | Date Time      | Info | O2      | C/N<br>Ratio | Content<br>[%]                               | Blank<br>Value   |
|-----|------|---------------|----------------|------|---------|--------------|--|------------------|
| 1   | 5a   | 4.4750        | 18.06.16 08:30 | v/v  | Index 1 | 5.697        | N: 09.58<br>C: 54.58<br>S: 0.002<br>H: 3.240 | 0<br>0<br>0<br>0 |
| 2   | 5b   | 4.9550        | 18.06.16 08:42 | v/v  | Index 1 | 5.705        | N: 08.55<br>C: 48.78<br>S: 0.000<br>H: 2.441 | 0<br>0<br>0<br>0 |
| 3   | 5c   | 4.6700        | 18.06.16 08:55 | v/v  | Index 1 | 5.688        | N: 09.25<br>C: 52.62<br>S: 0.001<br>H: 3.082 | 0<br>0<br>0<br>0 |
| 4   | 5d   | 4.7250        | 18.06.16 09:10 | v/v  | Index 1 | 6.323        | N: 08.92<br>C: 56.40<br>S: 0.002<br>H: 3.850 | 0<br>0<br>0<br>0 |
| 5   | 5e   | 4.5800        | 18.06.16 09:23 | v/v  | Index 1 | 5.704        | N: 09.19<br>C: 52.42<br>S: 0.001<br>H: 2.881 | 0<br>0<br>0<br>0 |
| 6   | 5f   | 4.8502        | 18.06.16 09:35 | v/v  | Index 1 | 5.739        | N: 08.82<br>C: 50.62<br>S: 0.001<br>H: 2.780 | 0<br>0<br>0<br>0 |
| 7   | 5g   | 4.7501        | 18.06.16 09:55 | v/v  | Index 1 | 5.964        | N: 08.98<br>C: 53.56<br>S: 0.000<br>H: 3.471 | 0<br>0<br>0<br>0 |
| 8   | 5h   | 4.5900        | 18.06.16 10:10 | v/v  | Index 1 | 5.705        | N: 09.19<br>C: 52.43<br>S: 0.001<br>H: 2.890 | 0<br>0<br>0<br>0 |

Document: Untitled. Name: eassuperuser. Access: varioEL superuser

Elementar Analysensysteme GmbH

VarioEL V5.18.6.16 CHNS mode. S.No. 11054048

| No. | Name | Wght.<br>[mg] | Date Time      | Info | O2      | C/N<br>Ratio | Content<br>[%]                               | Blank<br>Value   |
|-----|------|---------------|----------------|------|---------|--------------|--|------------------|
| 9   | 5i   | 4.8505        | 18.06.16 10:28 | v/v  | Index 1 | 5.735        | N: 08.83<br>C: 50.64<br>S: 0.002<br>H: 2.791 | 0<br>0<br>0<br>0 |
| 10  | 5j   | 4.5502        | 18.06.16 10:46 | v/v  | Index 1 | 4.049        | N: 12.76<br>C: 51.67<br>S: 0.002<br>H: 2.990 | 0<br>0<br>0<br>0 |
| 11  | 5k   | 4.8710        | 18.06.16 11:05 | v/v  | Index 1 | 5.965        | N: 08.70<br>C: 51.90<br>S: 6.610<br>H: 3.352 | 0<br>0<br>0<br>0 |
| 12  | 6a   | 5.8550        | 18.06.16 11:23 | v/v  | Index 1 | 4.954        | N: 12.06<br>C: 59.75<br>S: 0.002<br>H: 3.431 | 0<br>0<br>0<br>0 |
| 13  | 6b   | 6.2305        | 18.06.16 11:45 | v/v  | Index 1 | 4.991        | N: 11.32<br>C: 56.50<br>S: 0.002<br>H: 3.130 | 0<br>0<br>0<br>0 |
| 14  | 6c   | 6.2250        | 18.06.16 12:08 | v/v  | Index 1 | 4.970        | N: 11.37<br>C: 56.51<br>S: 0.002<br>H: 3.121 | 0<br>0<br>0<br>0 |
| 15  | 6d   | 6.9750        | 18.06.16 12:32 | v/v  | Index 1 | 4.955        | N: 10.11<br>C: 50.10<br>S: 0.002<br>H: 2.571 | 0<br>0<br>0<br>0 |
| 16  | 6e   | 6.7110        | 18.06.16 12:58 | v/v  | Index 1 | 4.957        | N: 10.62<br>C: 52.65<br>S: 0.002<br>H: 2.930 | 0<br>0<br>0<br>0 |