

Supporting Information

The preparation of [1,2,4]Triazolo[1,5-*a*]pyrimidines catalyzed by Schiff base zinc (II) complex supported on magnetite nanoparticles under mild condition

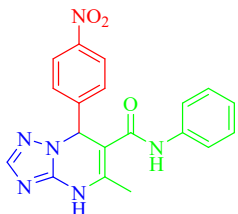
Ahmad Reza Moosavi-Zare,* Raha Najafi, Hamid Goudarziafshar

^aDepartment of Chemical Engineering, Hamedan University of Technology, Hamedan,65155,

Iran .

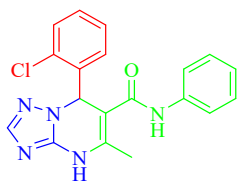
*E-mail: moosavizare@yahoo.com

Spectral data of compounds:



5-methyl-7-(4-nitrophenyl)-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

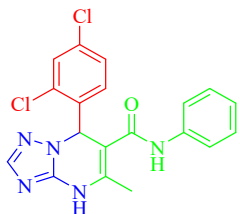
White Solid; M.p: 259-261 °C; IR (KBr, cm^{-1}): 3255, 3101, 2915, 1667, 1621, 1596, 1247, 825, 749, 545; ^1H NMR (250 MHz, $\text{DMSO}-d_6$): δ 2.17 (s, 3H, CH_3), 6.66 (s, 1H, H-benzylic), 6.99 (s, 1H), 7.22 (s, 2H, ArH), 7.47 (d, $J = 6.25$ Hz, 4H, ArH), 7.67 (s, 1H, ArH), 8.16 (d, $J = 6.75$ Hz, 2H, ArH), 9.78 (s, 1H, NH), 10.39 (s, 1H, NH); ^{13}C -NMR ($\text{DMSO}-d_6$, 62.5 MHz): δ 25.4, 60.0, 103.0, 120.1, 123.8, 124.2, 129.0, 130.0, 137.8, 138.4, 139.2, 147.6, 148.0, 148.3, 149.2, 150.7, 165.0.



7-(2-chlorophenyl)-5-methyl-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

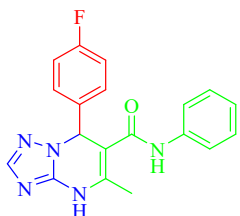
White Solid; M.p: 252-254 °C; IR (KBr, cm^{-1}): 3414, 3299, 3098, 3037, 2866, 1670, 1636, 1595, 1499, 1328, 1262, 975, 872, 750, 546; ^1H NMR (250 MHz, $\text{DMSO}-d_6$): δ 2.14 (s, 3H, CH_3), 6.92 (s, 1H), 6.97 (s, 1H), 7.27 (s, 5H, ArH), 7.44 (s, 3H, ArH), 7.60 (s, 1H, ArH), 9.81 (s, 1H, NH),

10.28 (s, 1H, NH); ^{13}C -NMR (DMSO- d_6 , 62.5 MHz): δ 17.5, 58.2, 103.2, 119.9, 123.7, 128.0, 129.0, 130.3, 130.5, 132.5, 137.2, 138.1, 139.3, 148.3, 150.4, 165.0.



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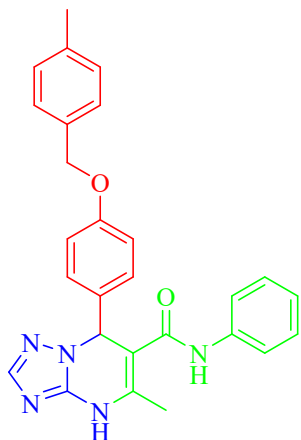
White Solid; M.p: 248-250 °C; IR (KBr, cm^{-1}): 3414, 3304, 3095, 3027, 1739, 1670, 1533, 1491, 1332, 1260, 857, 759, 547; ^1H NMR (250 MHz, DMSO- d_6): 2.13 (s, 3H, CH₃), 6.88 (s, 1H, H-benzylic), 6.98 (s, 1H, ArH), 7.21 (s, 2H, ArH), 7.30 (d, $J=7.30$ Hz, 1H, ArH), 7.36 (s, 1H, ArH), 7.45 (s, 3H, ArH), 7.52 (s, 1H, ArH), 7.61 (s, 1H, ArH), 9.82 (s, 1H, NH), 10.33 (s, 1H, NH); ^{13}C NMR (DMSO- d_6 , 62.5 MHz): δ 17.6, 57.8, 59.1, 102.7, 119.9, 123.8, 128.3, 129.0, 129.5, 131.9, 133.6, 134.0, 137.5, 139.3, 148.3, 150.6, 164.9.



7-(4-fluorophenyl)-5-methyl-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

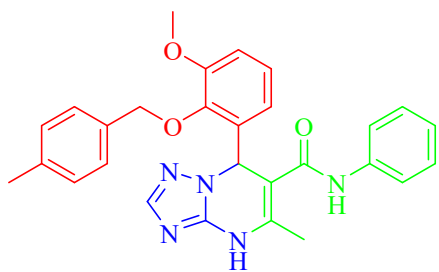
White Solid; M.p: 276-278 °C; IR (KBr, cm^{-1}): 3270, 3102, 2977, 1663, 1627, 1595, 1509, 1325, 1231, 977, 839, 747, 516; ^1H NMR (250 MHz, DMSO- d_6): δ 2.16 (s, 3H, CH₃), 6.53 (s, 1H), 6.95-7.01 (m, 1H), 7.10 (d, $J=8.00$ Hz, 2H, ArH), 7.15 (s, 1H), 7.24 (d, $J=6.75$ Hz, 3H, ArH), 7.48 (d, $J=7.5$ Hz, 2H, ArH), 7.63 (s, 1H, ArH), 9.73 (s, 1H, NH), 10.24 (s, 1H, NH); ^{13}C -NMR

(DMSO-*d*₆, 62.5 MHz): δ 17.7, 60.0, 103.8, 115.5, 115.9, 120.0, 123.7, 129.0, 129.7, 137.1, 137.4, 139.3, 148.2, 150.4, 165.2.



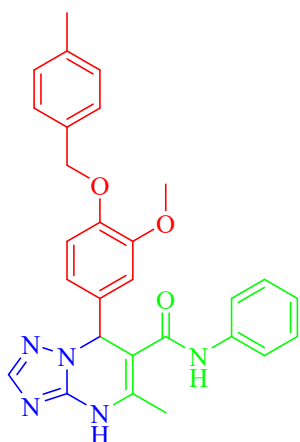
5-methyl-7-(4-((4-methylbenzyl)oxy)phenyl)-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

White Solid; M.p: 232-234°C; IR (KBr, cm⁻¹): 3445, 3271, 3101, 3027, 2920, 2869, 1667, 1626, 1596, 1510, 1441, 1330, 1243, 1010, 750, 728, 691 ; ¹H NMR (250 MHz, DMSO-*d*₆): δ 2.16 (s, 3H, CH₃), 2.26 (s, 3H, CH₃), 4.95 (s, 2H), 6.47 (s, 1H), 6.89 (d, *J* = 7.00 Hz, 2H, ArH), 7.00 (d, *J* = 6.50 Hz, 2H, ArH), 7.14 (d, *J* = 5.75 Hz, 2H, ArH), 7.19 (s, 1H, ArH), 7.24 (s, 3H, ArH), 7.49 (d, *J* = 6.75 Hz, 3H, ArH), 7.60 (s, 1H, ArH), 9.70 (s, 1H, NH), 10.15 (s, 1H, NH); ¹³C-NMR (DMSO-*d*₆, 62.5 MHz): δ 17.7, 21.1, 60.1, 69.5, 104.1, 115.0, 120.0, 123.7, 128.2, 128.8, 129.0, 129.3, 133.4, 134.3, 136.8, 137.5, 139.4, 150.2, 158.6, 165.4; MS: *m/z* = 451.



7-(3-methoxy-2-((4-methylbenzyl)oxy)phenyl)-5-methyl-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

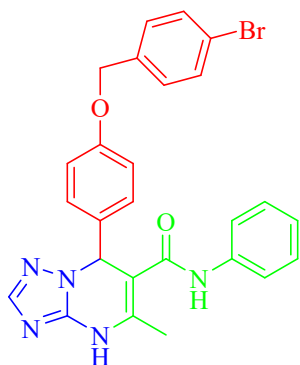
White Solid; M.p: 241-243°C; IR (KBr, cm^{-1}): 3407, 3274, 3134, 3055, 2890, 1595, 1670, 1589, 1529, 1481, 1314, 1224, 1070, 766 ; ^1H NMR (250 MHz, $\text{DMSO-}d_6$): δ 2.12 (s, 3H, CH_3), 2.30 (s, 3H, CH_3), 3.76 (s, 3H, CH_3), 4.73 (d, $J = 10.25$ Hz, 1H, ArH), 5.01 (d, $J = 10.25$ Hz, 1H), 6.78-6.84 (m, 2H, ArH), 6.95 (s, 2H, ArH), 7.00 (s, 1H, ArH), 7.18 (s, 3H, ArH), 7.38 (d, $J = 7.00$ Hz, 2H, ArH), 7.46 (d, $J = 7.50$ Hz, 2H, ArH), 7.56 (s, 1H, ArH), 9.72 (s, 1H, NH), 10.09 (s, 1H, NH); ^{13}C -NMR ($\text{DMSO-}d_6$, 62.5 MHz): δ 17.6, 21.2, 56.1, 74.4, 104.2, 112.9, 119.8, 120.6, 123.6, 124.7, 128.5, 128.9, 129.1, 134.7, 135.3, 136.5, 137.3, 139.4, 150.1, 152.7. MS: $m/z = 481.5$.



7-(3-methoxy-4-((4-methylbenzyl)oxy)phenyl)-5-methyl-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

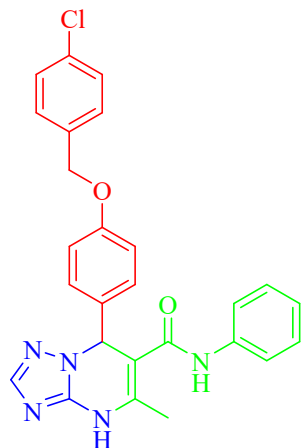
White Solid; M. p: 246-248°C; IR (KBr, cm^{-1}): 3277, 3098, 3027, 2918, 1673, 1628, 1596, 1515, 1441, 1262, 1003, 754 ; ^1H NMR (250 MHz, $\text{DMSO-}d_6$): δ 2.15 (s, 3H, CH_3), 2.26 (s, 3H, CH_3), 3.62 (s, 3H, CH_3), 4.93 (s, 2H), 6.45 (s, 1H), 6.68 (d, $J = 8.00$ Hz, 1H, ArH), 6.81 (s, 1H, ArH), 6.90-7.02 (m, 2H, ArH), 7.13 (d, $J = 7.50$ Hz, 2H, ArH), 7.20 (s, 1H, ArH), 7.25 (d, $J = 7.50$ Hz,

2H, ArH), 7.34 (s, 1H, ArH), 7.50 (d, $J = 7.75$ Hz, 2H, ArH), 7.62 (s, 1H, ArH), 9.70 (s, 1H, NH), 10.15 (s, 1H, NH); ^{13}C -NMR (DMSO- d_6 , 62.5 MHz): δ 17.7, 21.2, 56.0, 60.3, 70.2, 104.0, 111.6, 113.7, 120.0, 123.7, 128.3, 129.0, 129.3, 133.8, 134.4, 136.8, 137.5, 139.4, 148.1, 149.2, 150.2, 165.4; MS: $m/z = 481.6$.



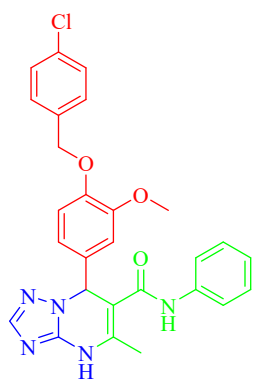
7-(4-((4-bromobenzyl)oxy)phenyl)-5-methyl-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

White Solid; M.p: 237-239°C; IR (KBr, cm^{-1}): 3406, 3262, 3103, 2925, 1754, 1665, 1626, 1595, 1509, 1440, 1321, 1242, 1011, 752 ; ^1H NMR (250 MHz, DMSO- d_6): δ 2.15 (s, 3H, CH_3), 4.99 (s, 2H), 6.47 (s, 1H), 6.91 (s, 2H, ArH), 6.98 (s, 2H, ArH), 7.14 (d, $J = 7.00$ Hz, 2H, ArH), 7.22 (s, 2H, ArH), 7.35 (s, 3H, ArH), 7.51-7.59 (m, 4H, ArH), 9.69 (s, 1H, NH), 10.15 (s, 1H, NH); ^{13}C -NMR (DMSO- d_6 , 62.5 MHz): δ 17.7, 60.1, 68.8, 104.1, 115.0, 120.0, 121.3, 123.7, 129.0, 130.2, 131.7, 133.6, 136.8, 139.4, 158.3, 165.4.



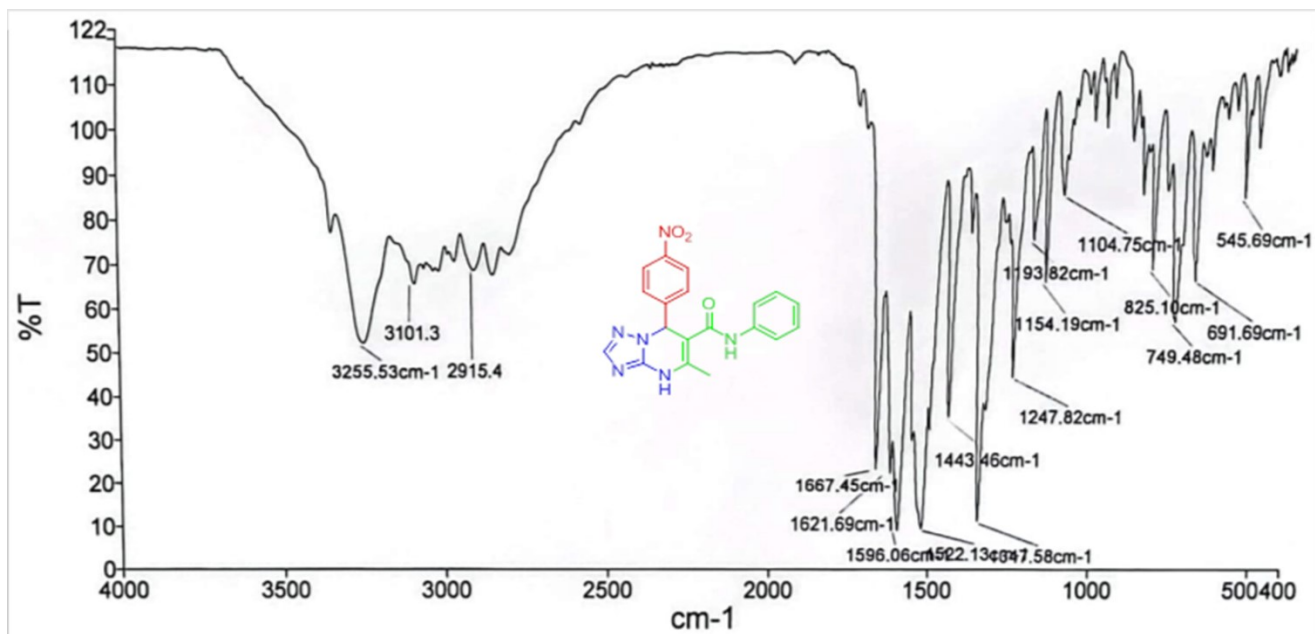
7-(4-((4-chlorobenzyl)oxy)phenyl)-5-methyl-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

White Solid; M.p: 237-239 °C; IR (KBr, cm^{-1}): 3263, 3101, 3032, 2925, 1665, 1626, 1595, 1510, 1440, 1329, 1249, 1014, 752; ^1H NMR (250 MHz, $\text{DMSO}-d_6$): δ 2.15 (s, 3H, CH_3), 5.01 (s, 2H), 6.47 (s, 1H), 6.91 (d, $J = 7.50$ Hz, 2H, ArH), 6.98 (s, 1H, ArH), 7.15 (d, $J = 7.75$ Hz, 2H, ArH), 7.21 (d, $J = 7.25$ Hz, 2H, ArH), 7.40 (s, 4H, ArH), 7.49 (d, $J = 7.25$ Hz, 2H, ArH), 7.60 (s, 1H, ArH), 9.69 (s, 1H, NH), 10.15 (s, 1H, NH); ^{13}C -NMR ($\text{DMSO}-d_6$, 62.5 MHz): δ 17.7, 60.0, 68.7, 115.0, 119.9, 123.7, 128.8, 129.9, 133.6, 139.4, 150.2, 158.4, 165.4; MS: $m/z = 477.4$.



7-(4-((4-chlorobenzyl)oxy)-3-methoxyphenyl)-5-methyl-N-phenyl-4,7-dihydro-[1,2,4]triazolo[1,5-a]pyrimidine-6-carboxamide

White Solid; M.p: 256-258 °C; IR (KBr, cm^{-1}): 3263, 3103, 2917, 2865, 1667, 1626, 1509, 1596, 1515, 1440, 1330, 1228, 1031, 874, 753, 541; ^1H NMR (250 MHz, $\text{DMSO-}d_6$): δ 2.15 (s, 3H, CH_3), 3.63 (s, 3H, CH_3), 4.98 (s, 2H), 6.46 (s, 1H), 6.69 (d, $J = 7.00$ Hz, 1H, ArH), 6.82 (s, 1H, ArH), 6.90-6.98 (m, 2H, ArH), 7.23 (s, 2H, ArH), 7.39 (s, 4H, ArH), 7.50 (d, $J = 6.75$ Hz, 2H, ArH), 7.62 (s, 1H, ArH), 9.70 (s, 1H, NH), 10.15 (s, 1H, NH); ^{13}C -NMR ($\text{DMSO-}d_6$, 62.5 MHz): δ 17.7, 56.0, 60.3, 69.5, 104.0, 111.7, 113.9, 119.9, 123.7, 128.8, 129.0, 129.9, 132.8, 134.1, 136.5, 136.8, 139.4, 147.9, 149.2, 150.2, 165.4; MS: $m/z = 507.5$.





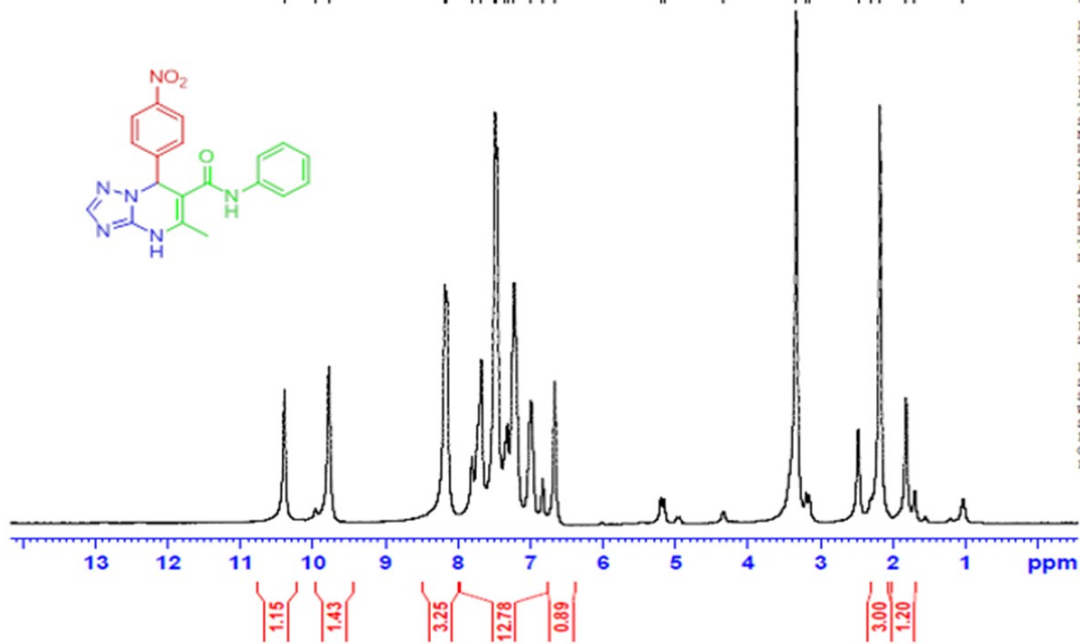
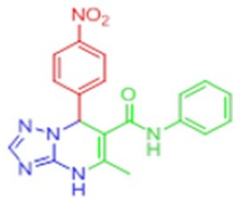
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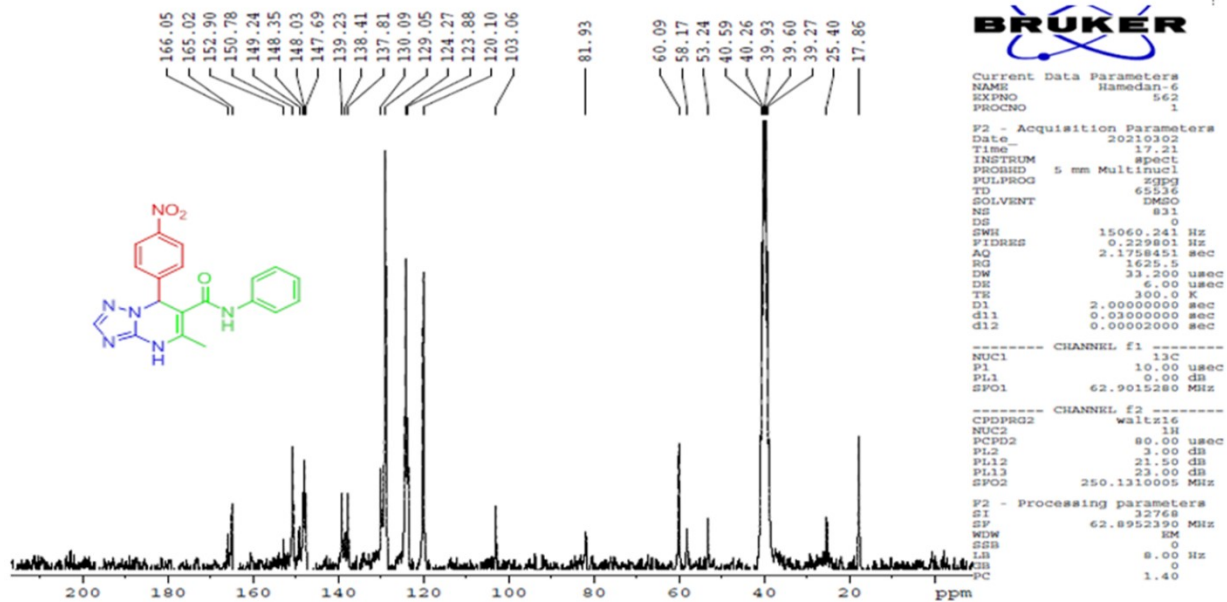
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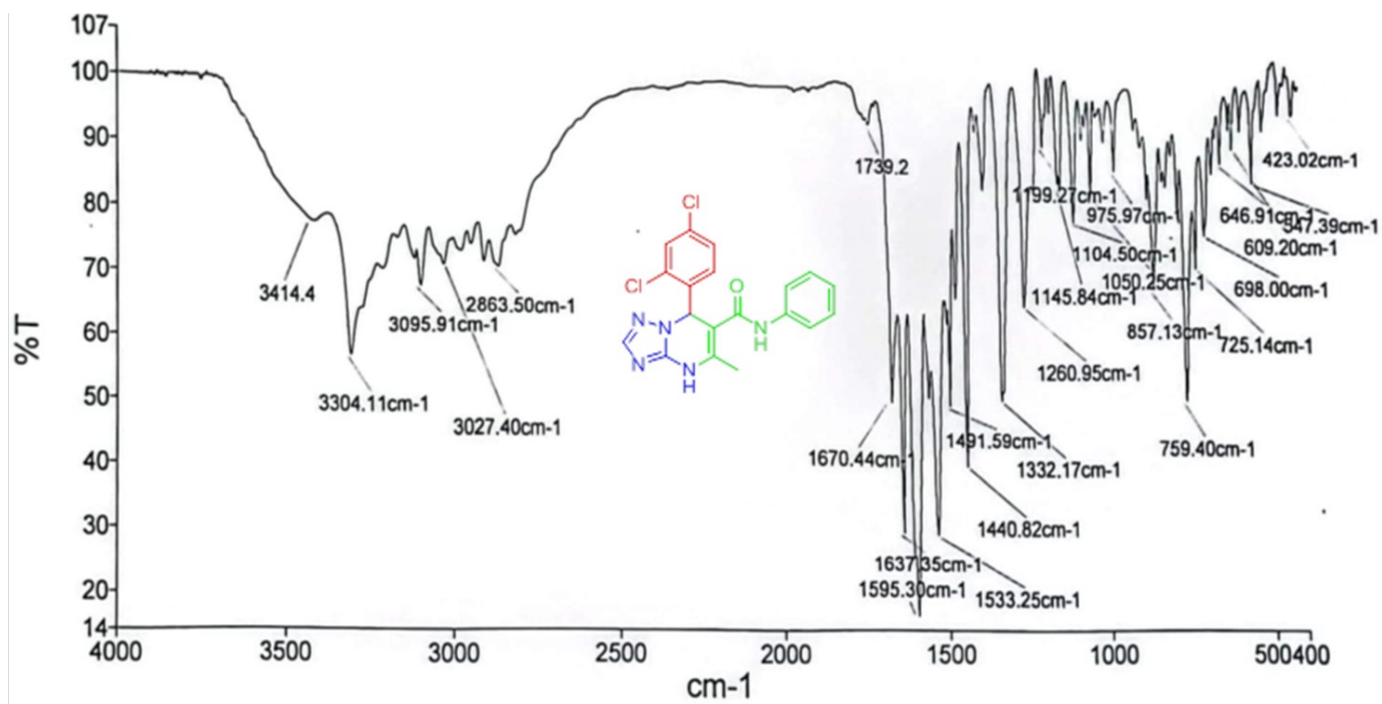
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GB 0
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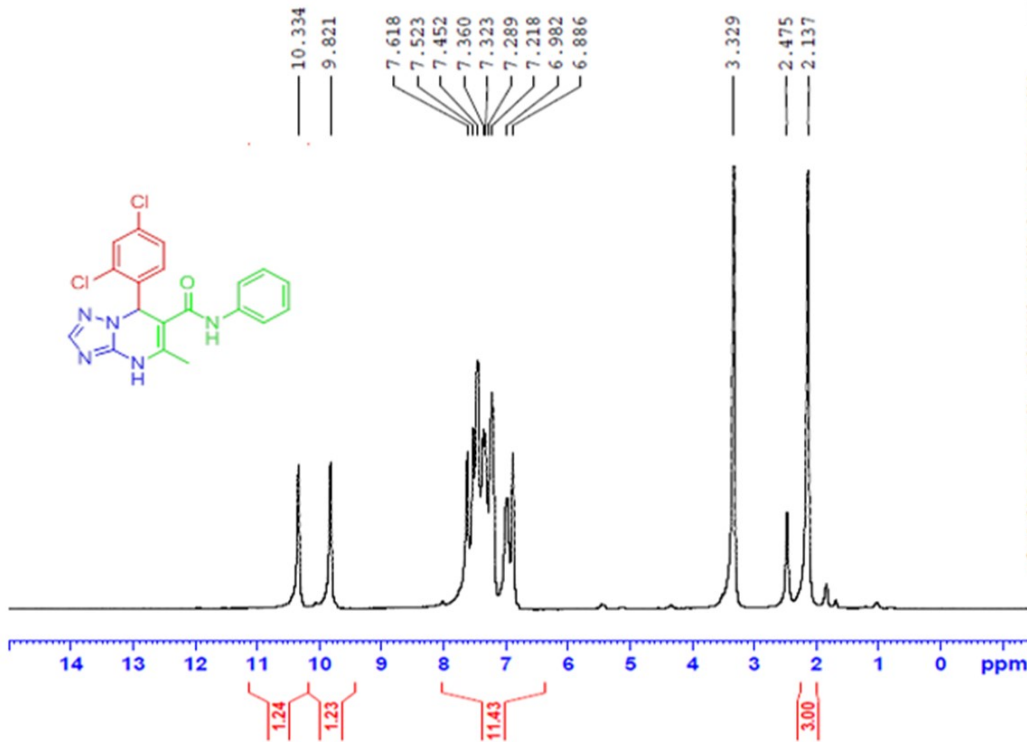
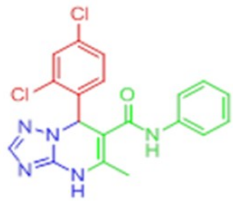
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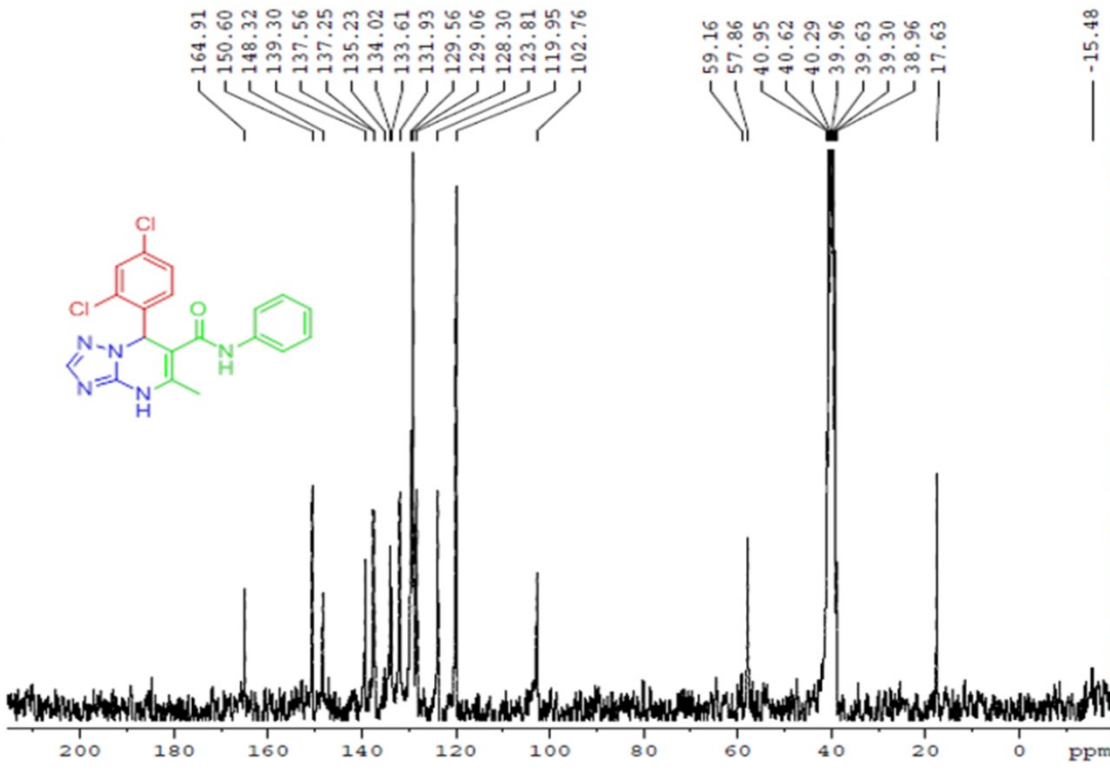
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-15.48

BRUKER

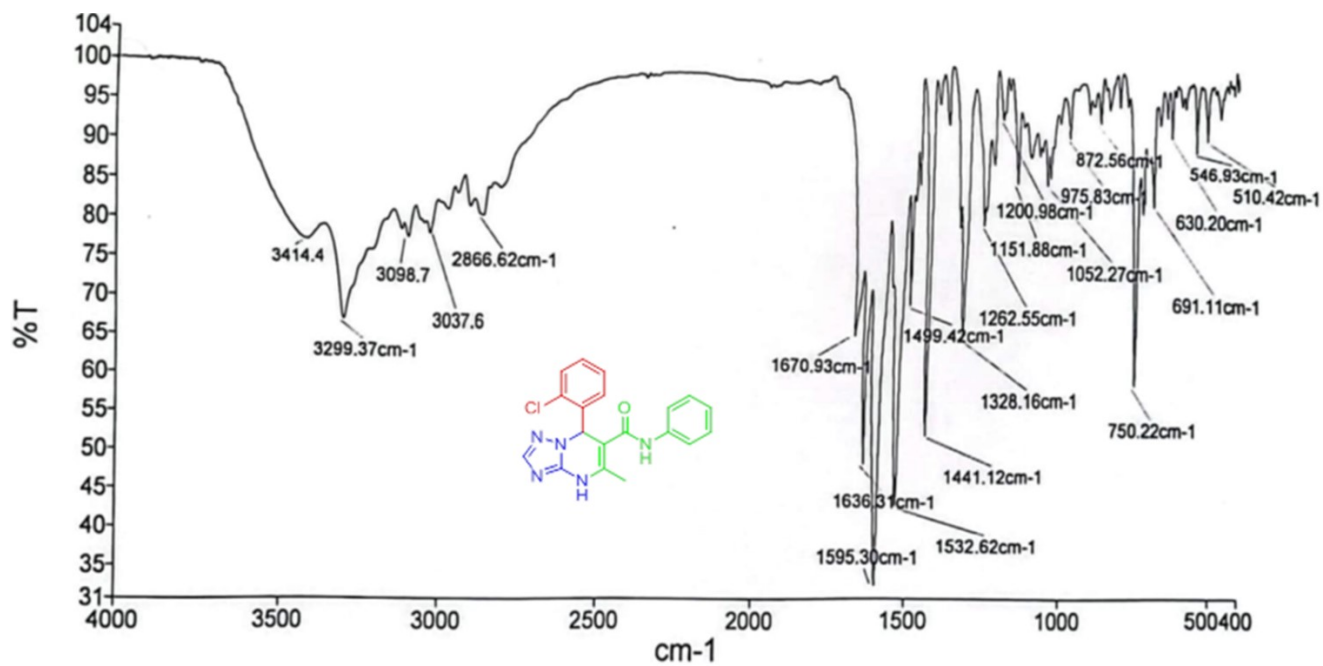
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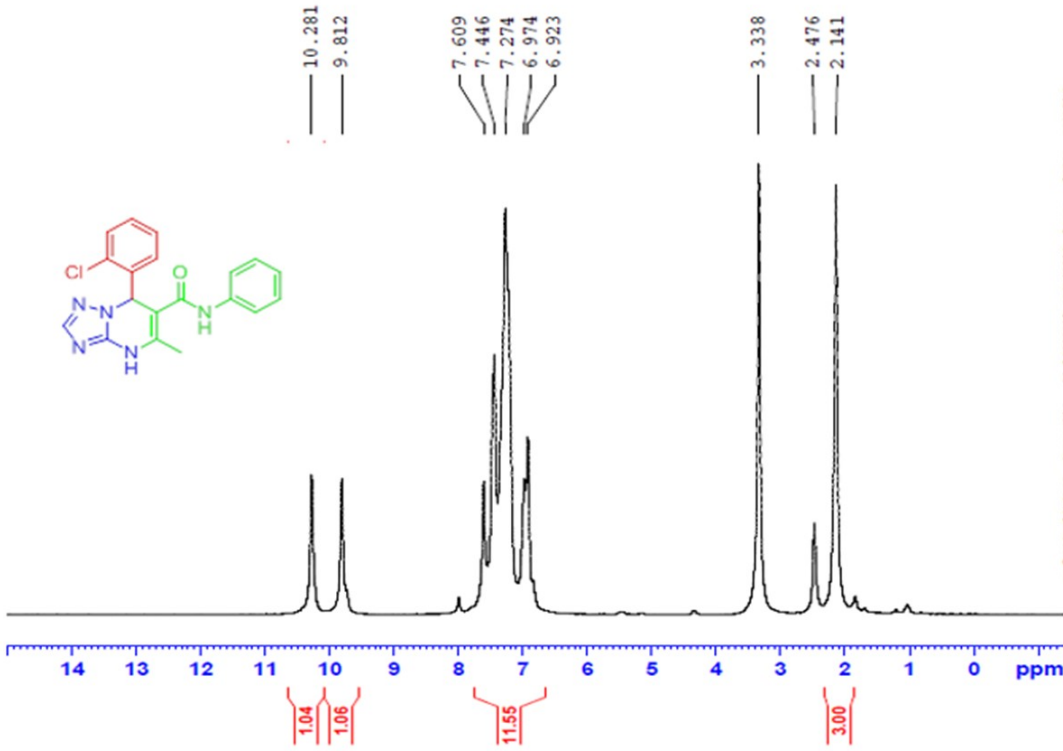
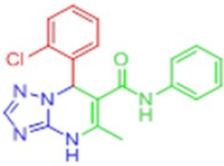


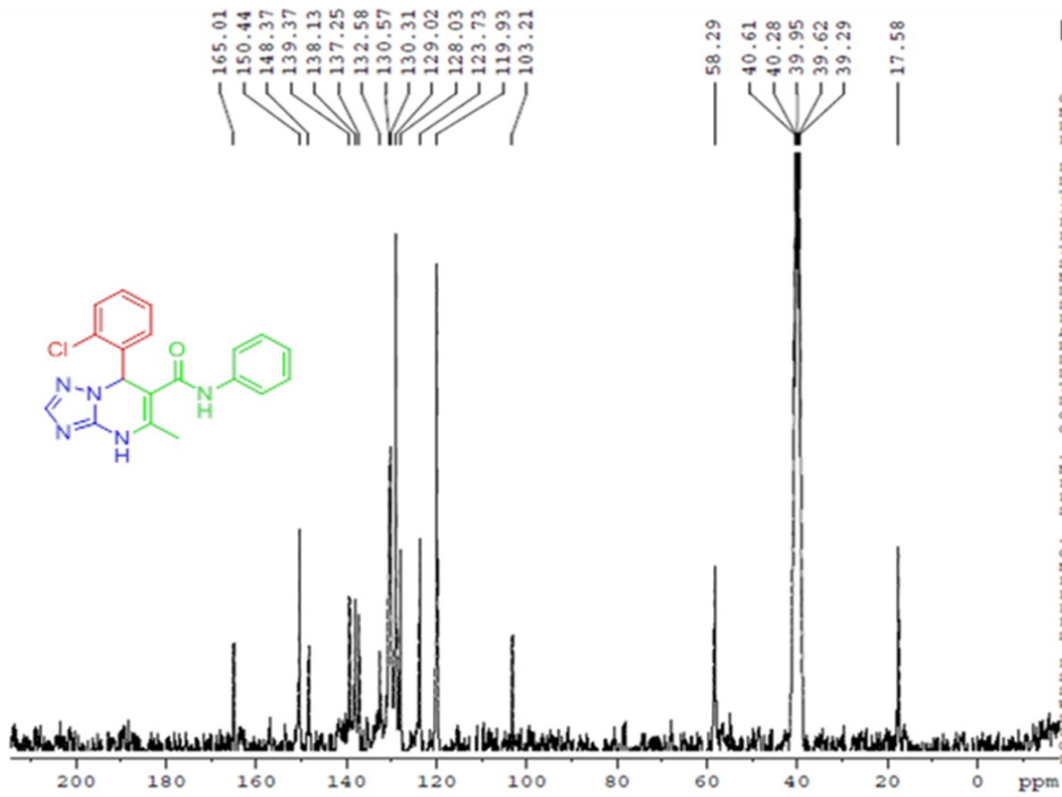
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FIDRES 0.382426 Hz
AQ 1.3074932 sec
RG 32
DW 79.800 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec

----- CHANNEL f1 -----
NUC1 1H
P1 9.00 usec
PL1 3.00 dB
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PC 1.00





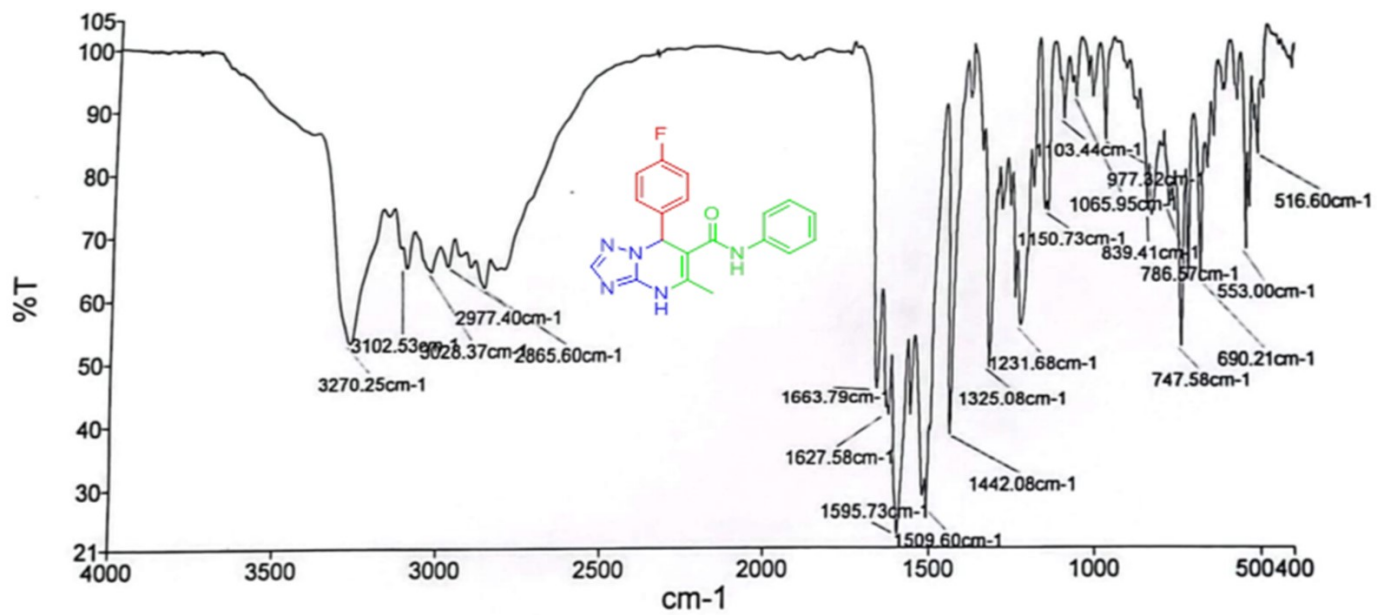
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 RG 1625.5
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 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.00002000 sec

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 P1 10.00 usec
 PL1 0.00 dB
 SFO1 62.9015280 MHz

----- CHANNEL f2 -----
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 PL2 3.00 dB
 PL12 21.50 dB
 PL13 23.00 dB
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F2 - Processing parameters
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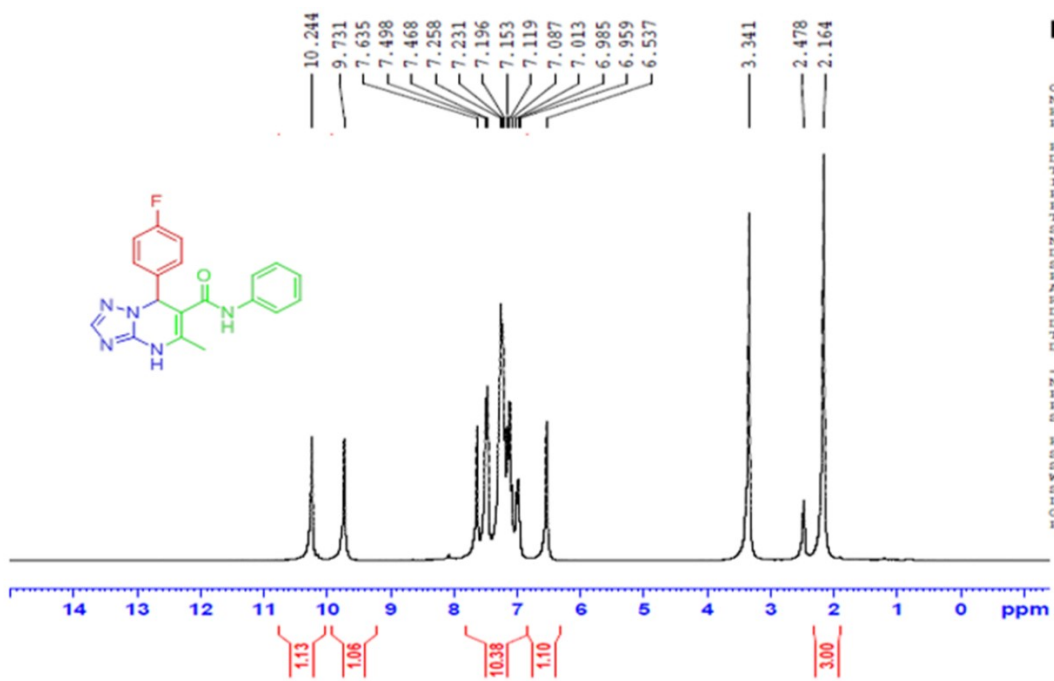


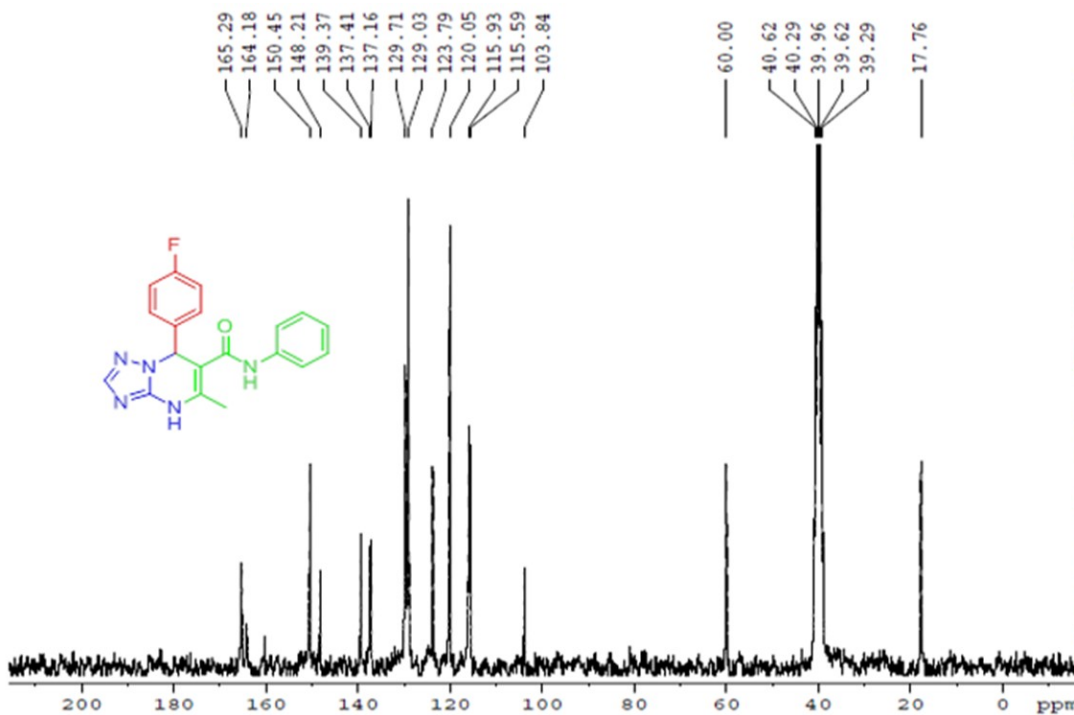


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FIDRES 0.382426 Hz
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RG 32
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DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec

----- CHANNEL f1 -----
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P1 9.00 usec
PL1 3.00 dB
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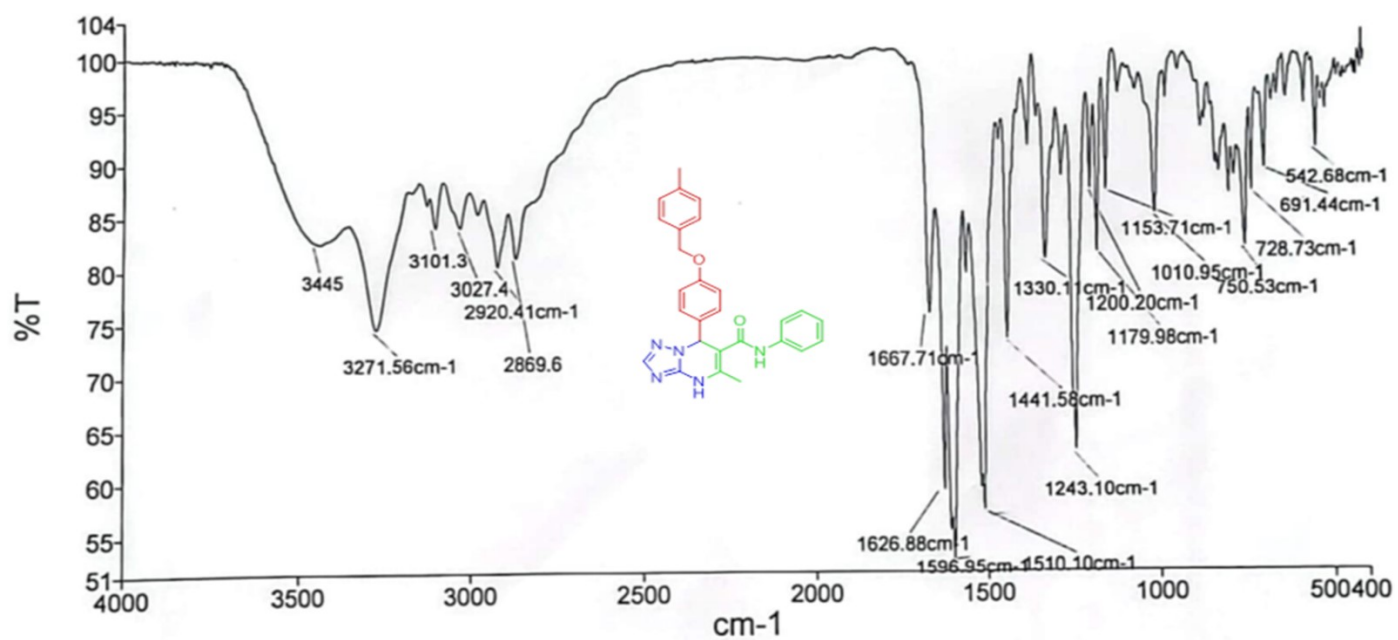
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PROBHD 5 mm Multinucl
PULPROG zgpg3
TD 65536
SOLVENT DMSO
NS 443
DS 0
SWH 15060.241 Hz
FIDRES 0.229801 Hz
AQ 2.1758451 sec
RG 1625.5
DW 33.200 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
d12 0.00002000 sec

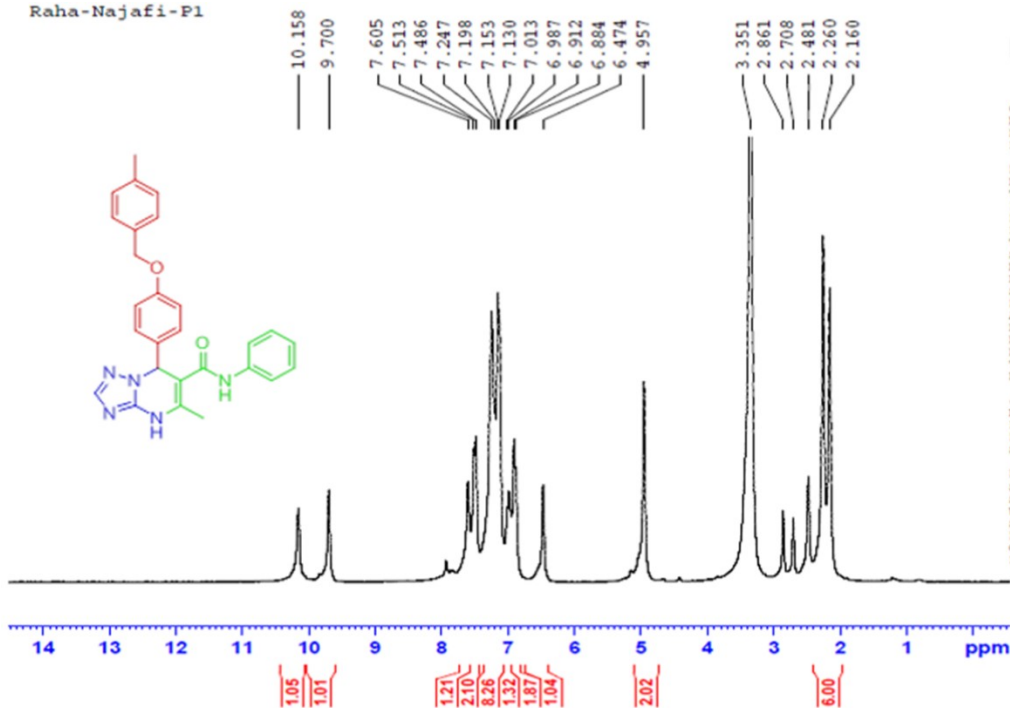
----- CHANNEL f1 -----
NUC1 13C
P1 10.00 usec
PL1 0.00 dB
SFO1 62.9015280 MHz

----- CHANNEL f2 -----
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 3.00 dB
PL12 21.50 dB
PL13 23.00 dB
SFO2 250.1310005 MHz

F2 - Processing parameters
SI 32768
SF 62.8952390 MHz
WDW RM
SSB 0
LB 8.00 Hz
GB 0
PC 1.40



Raha-Najafi-P1

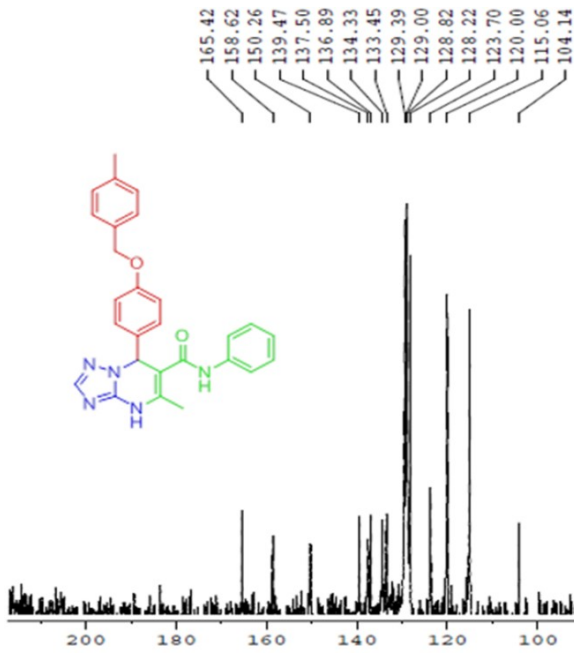


Current Data Parameters
NAME Hamedan-6
EXPNO 841
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210612
Time 12.49
INSTRUM spect
PROBHD 5 mm Multinucl
PULPROG zg
TD 16384
SOLVENT DMSO
NS 16
DS 0
SWH 6265.664 Hz
FIDRES 0.382426 Hz
AQ 1.3074932 sec
RG 32
DW 79.800 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec

----- CHANNEL f1 -----
NUC1 1H
P1 9.00 usec
PL1 3.00 dB
SFO1 250.1320010 MHz

F2 - Processing parameters
SI 32768
SF 250.1300000 MHz
WDW EM
SSB 0
LB 0.70 Hz
GB 0
PC 1.00



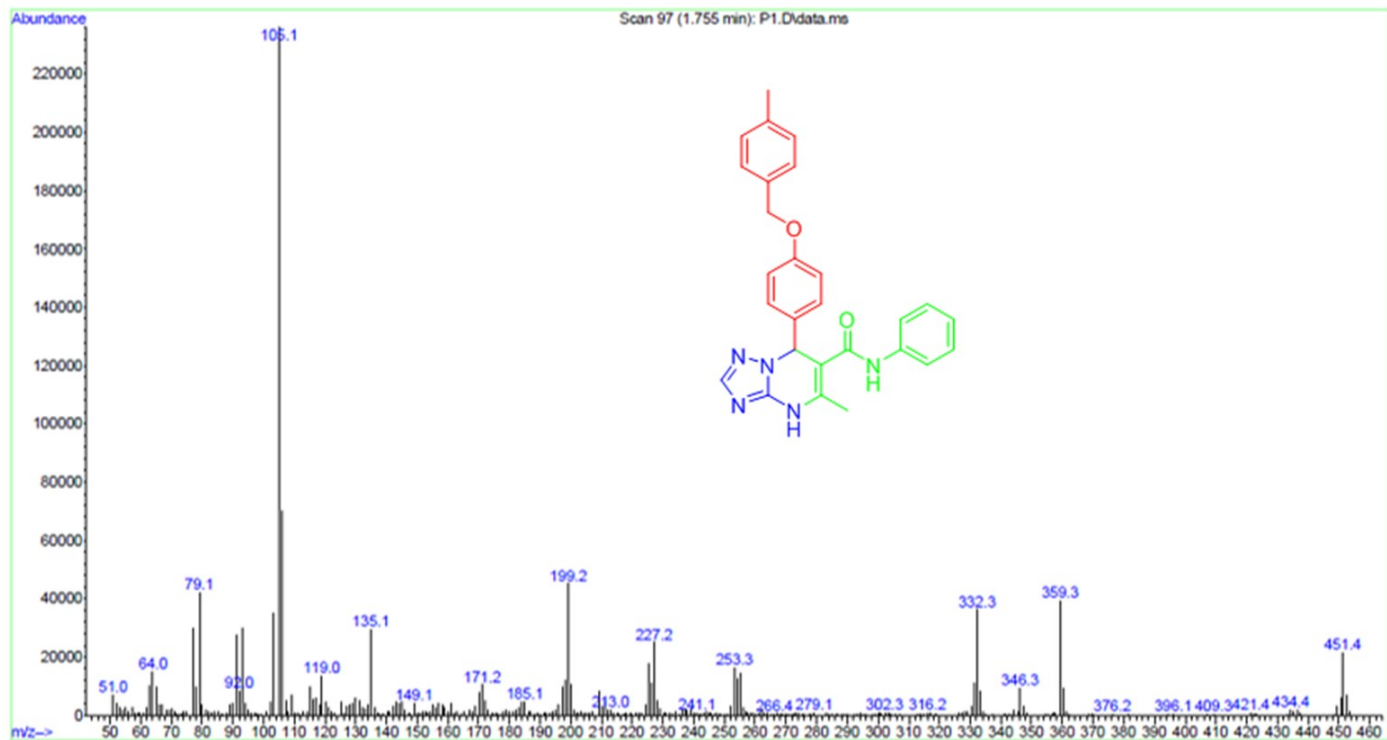
Current Data Parameters
 NAME Hamedan-6
 EXPNO 892
 PROCNO 1

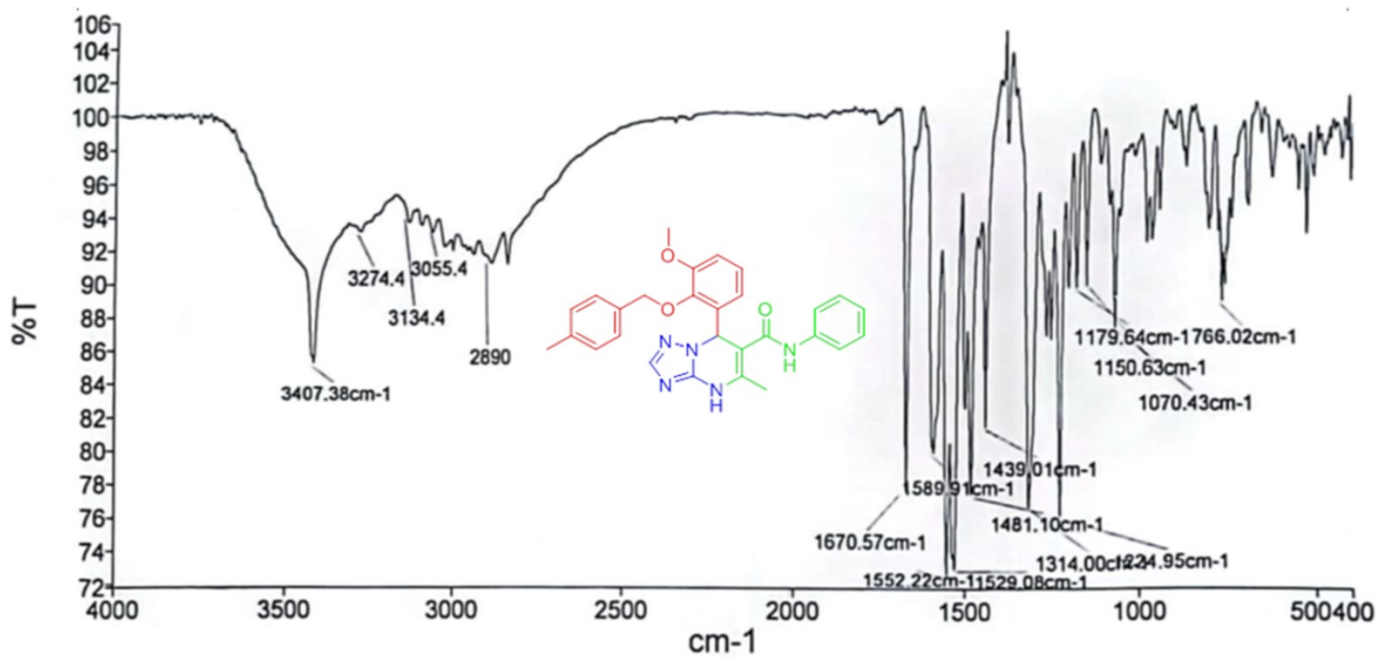
F2 - Acquisition Parameters
 Date_ 20210615
 Time 18.54
 INSTRUM spect
 PROBHD 5 mm Multinucl
 PULPROG zgpg3
 TD 6536
 FIDRES 0.229801 Hz
 AQ 2.1758451 sec
 RG 1625.5
 DW 33.200 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.00002000 sec

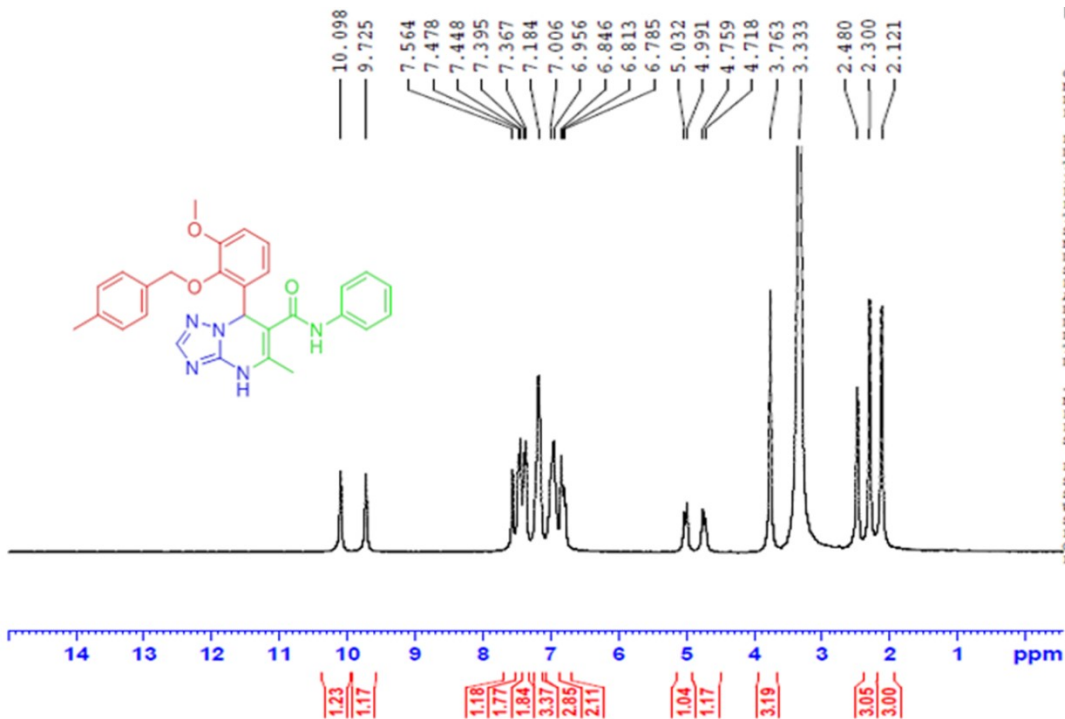
----- CHANNEL f1 -----
 NUC1 13C
 P1 10.00 usec
 PL1 0.00 dB
 SFO1 62.9015280 MHz

----- CHANNEL f2 -----
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 3.00 dB
 PL12 21.50 dB
 PL13 23.00 dB
 SFO2 250.1310005 MHz

F2 - Processing parameters
 SI 32768
 SF 62.8952390 MHz
 WDW EM
 SSB 0
 LB 5.00 Hz
 GB 0
 PC 1.40





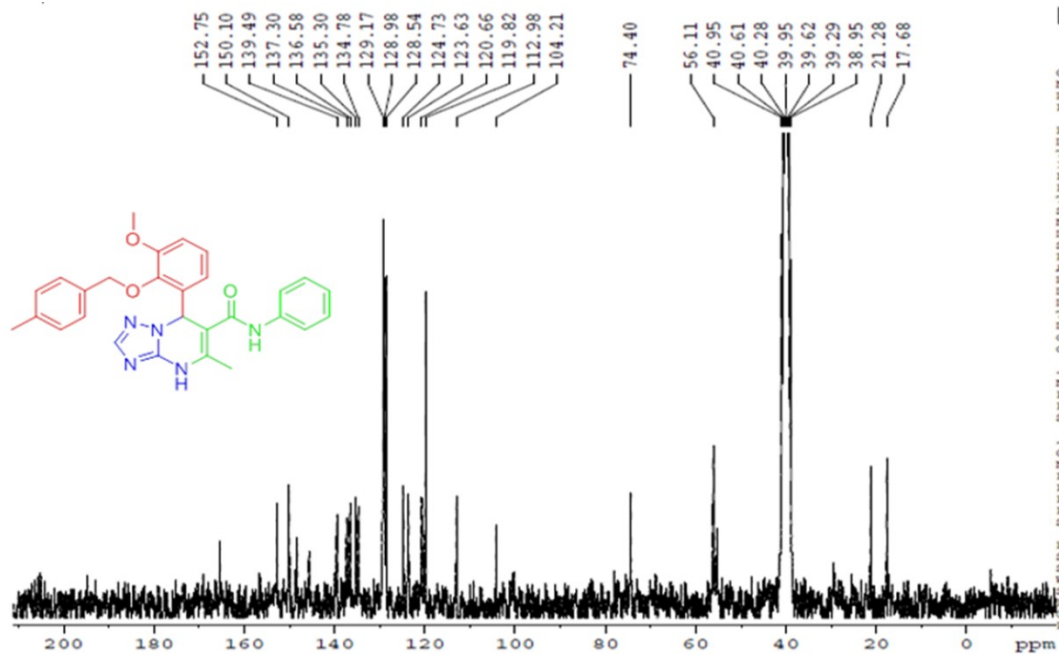


Current Data Parameters
 NAME Hamedan-6
 EXPNO 819
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20210612
 Time 12.40
 INSTRUM spect
 PROBHD 5 mm Multinucl
 PULPROG zg
 TD 16384
 SOLVENT DMSO
 NS 16
 DS 0
 SWH 6265.664 Hz
 FIDRES 0.382426 Hz
 AQ 1.3074932 sec
 RG 32
 DW 79.800 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec

----- CHANNEL f1 -----
 NUC1 1H
 P1 9.00 usec
 PL1 3.00 dB
 SFO1 250.1320010 MHz

F2 - Processing parameters
 SI 32768
 SF 250.1300000 MHz
 WDW RM
 SSB 0
 LB 0.70 Hz
 GB 0
 PC 1.00



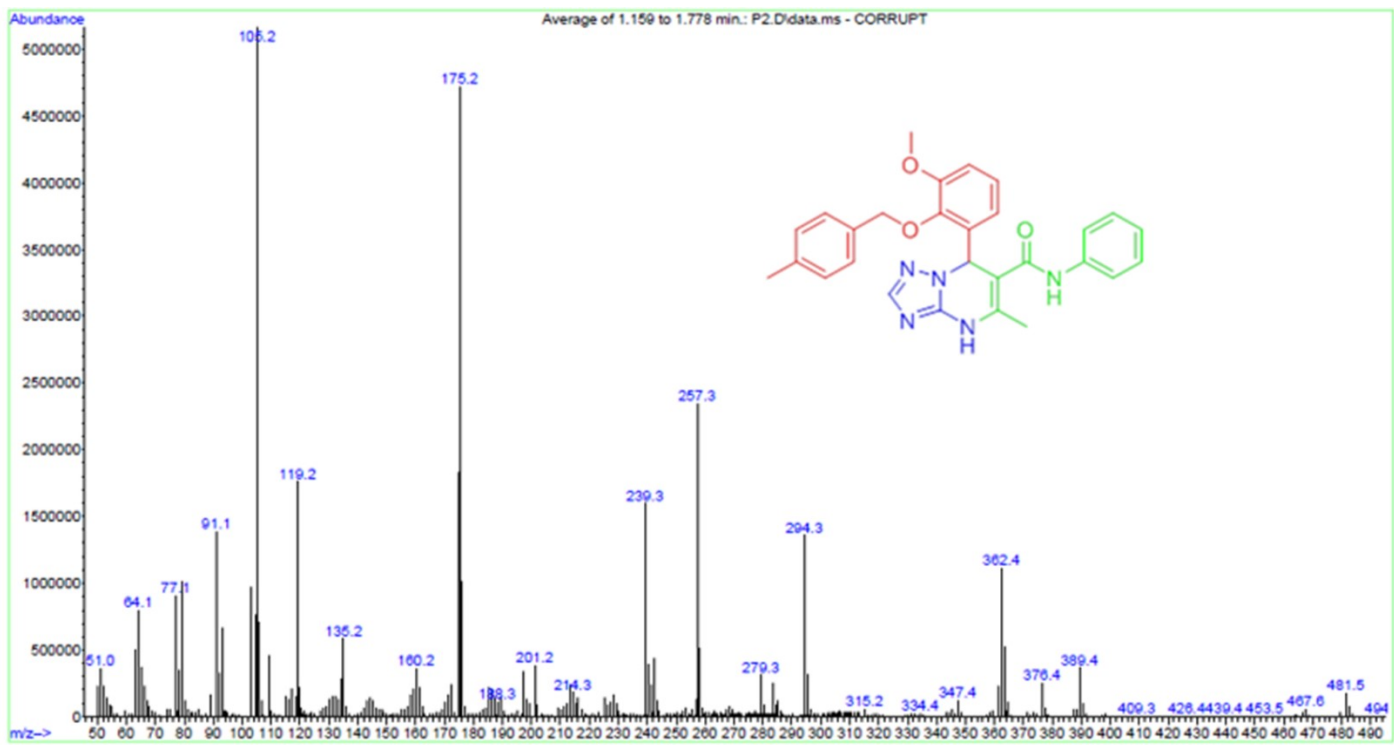
Current Data Parameters
 NAME Hamedan-6
 EXPNO 891
 PROCNO 1

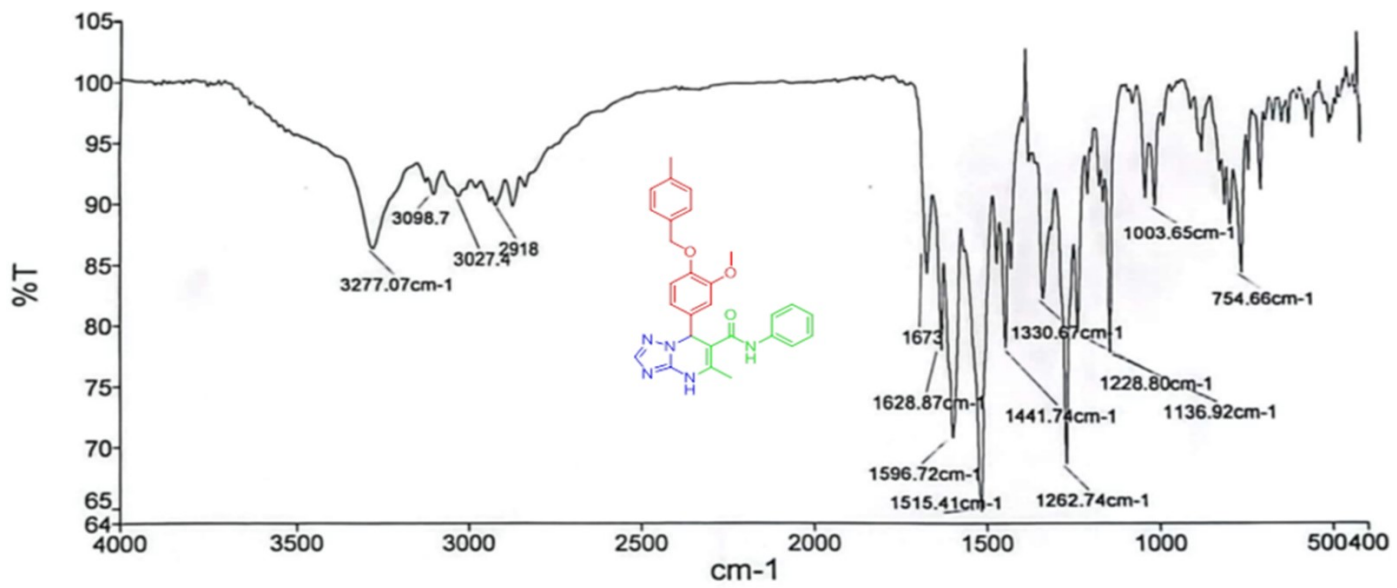
F2 - Acquisition Parameters
 Date 20210615
 Time 14.20
 INSTRUM spect
 PROBHD 5 mm Multinucl
 PULPROG zgpg
 TD 65536
 SOLVENT DMSO
 NS 881
 DS 0
 SWH 15060.241 Hz
 FIDRES 0.229801 Hz
 AQ 2.1758451 sec
 RG 1625.5
 DW 33.200 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.00002000 sec

----- CHANNEL f1 -----
 NUC1 13c
 P1 10.00 usec
 PL1 0.00 dB
 SFO1 62.9015280 MHz

----- CHANNEL f2 -----
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 3.00 dB
 PL12 21.50 dB
 PL13 23.00 dB
 SFO2 250.1310005 MHz

F2 - Processing parameters
 SI 32768
 SF 62.8952390 MHz
 NCV 8K
 HB 0
 LB 5.00 Hz
 GB 0
 PC 1.40





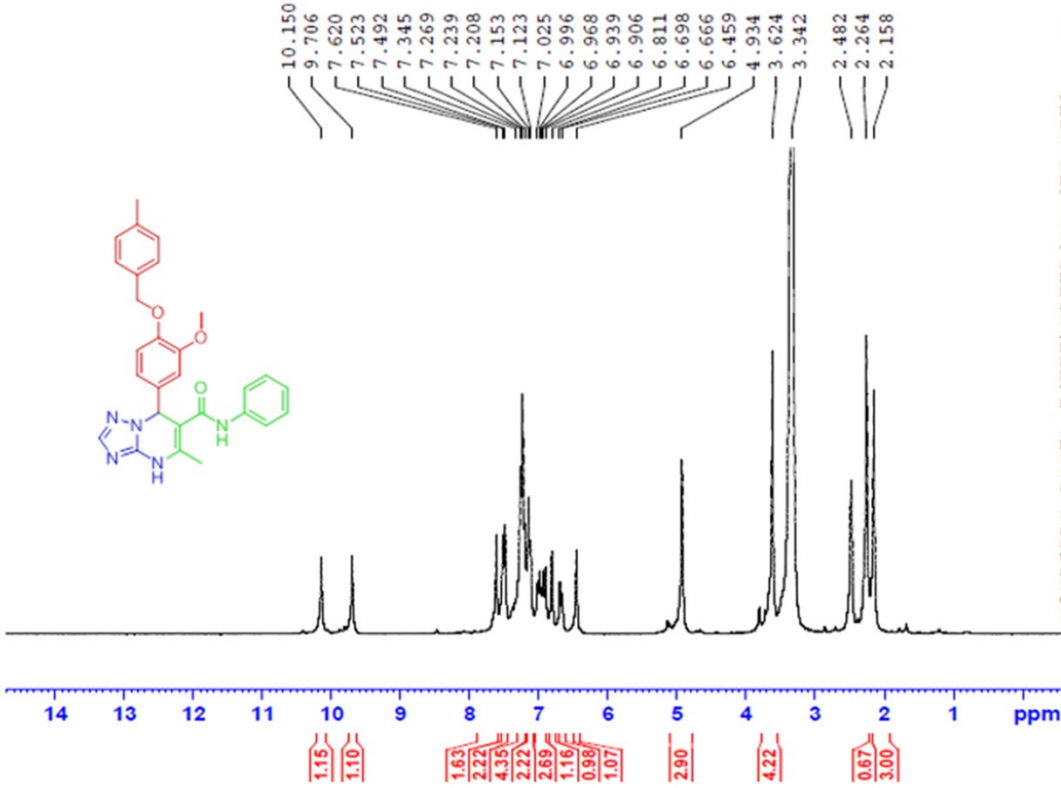


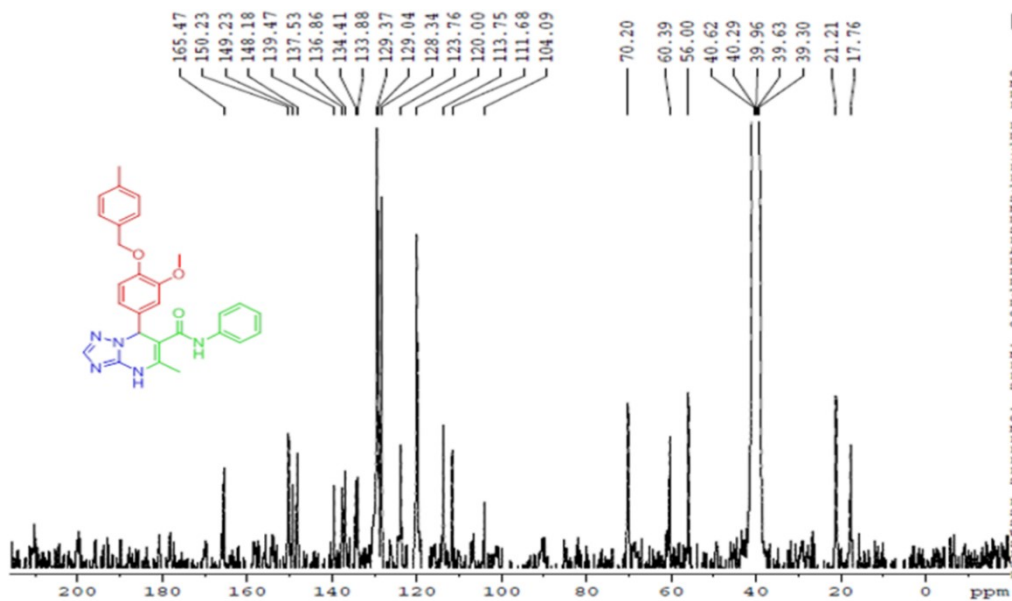
Current Data Parameters
NAME Hamedan-6
EXPNO 816
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210612
Time 11.28
INSTRUM spect
PROBHD 5 mm Multinucl
PULPROG zg
TD 16384
SOLVENT DMSO
NS 16
DS 0
SWH 6265.664 Hz
FIDRES 0.382426 Hz
AQ 1.1074932 sec
RG 32
DW 79.800 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec

----- CHANNEL f1 -----
NUC1 1H
P1 9.00 usec
PL1 3.00 dB
SFO1 250.1320010 MHz

F2 - Processing parameters
SI 32768
SF 250.1300000 MHz
WDW EM
SSB 0
LB 0.70 Hz
GB 0
PC 1.00





BRUKER

```

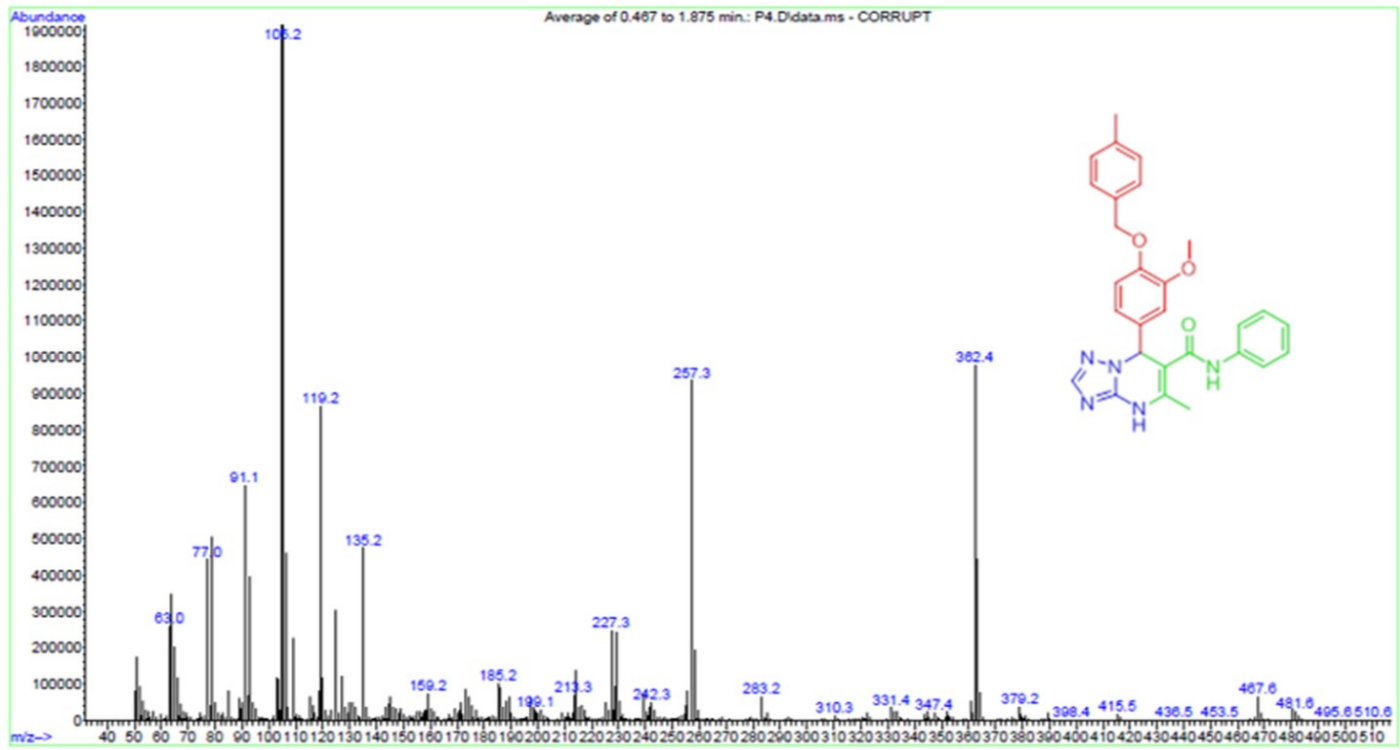
Current Data Parameters
NAME      Hamdan-6
EXPNO    837
PROCNO   1

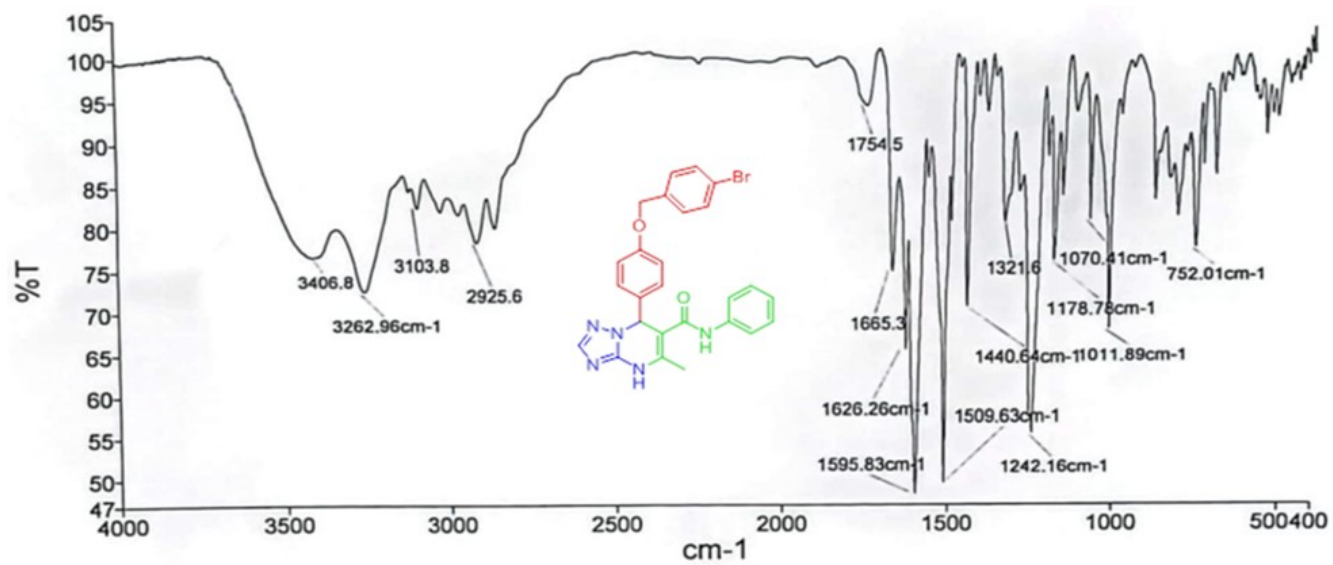
F2 - Acquisition Parameters
Date_    20210612
Time     11.34
INSTRUM  spect
PROBHD   5 mm MultiNuc1
PULPROG  zgpg
TD        65536
SOLVENT  DMSO
NS        726
DS        0
SWH       15060.241 Hz
FIDRES    0.229801 Hz
AQ        2.1758451 sec
RG        3625.5
DW        33.200 usec
DE        6.00 usec
TE        300.0 K
D1        2.00000000 sec
d11       0.03000000 sec
d12       0.00002000 sec

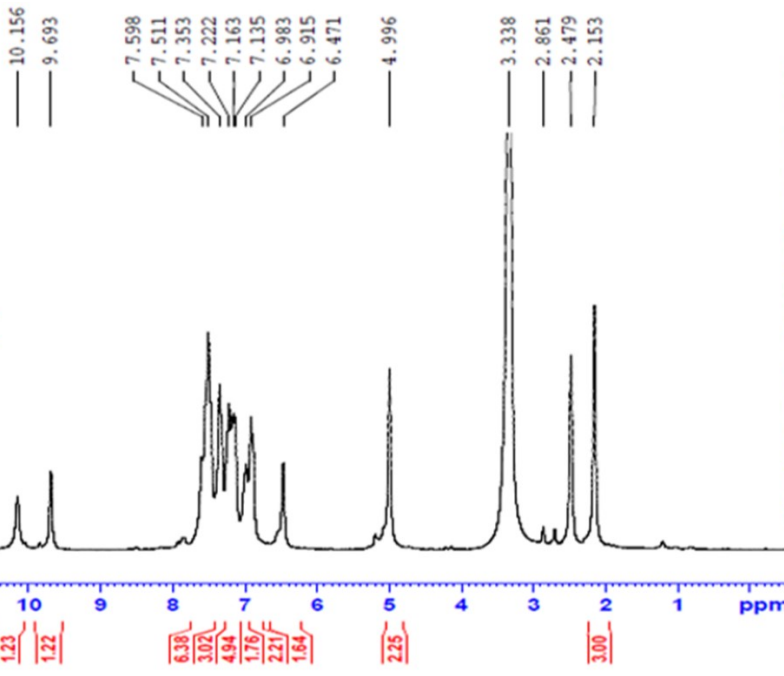
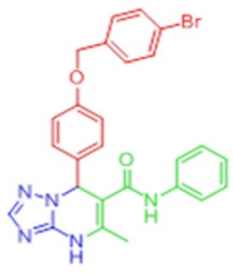
----- CHANNEL f1 -----
NUC1      13C
P1        10.00 usec
PL1       0.00 dB
SFO1      62.9015280 MHz

----- CHANNEL f2 -----
CPDPRG2  waltz16
NUC2      1H
PCPD2     80.00 usec
PL2       3.00 dB
PL12      21.50 dB
PL13      23.00 dB
SFO2      250.1310005 MHz

F2 - Processing parameters
SI        32768
SF        62.8952390 MHz
WDW       RM
SSB       0
GB        0
PC        1.40
  
```







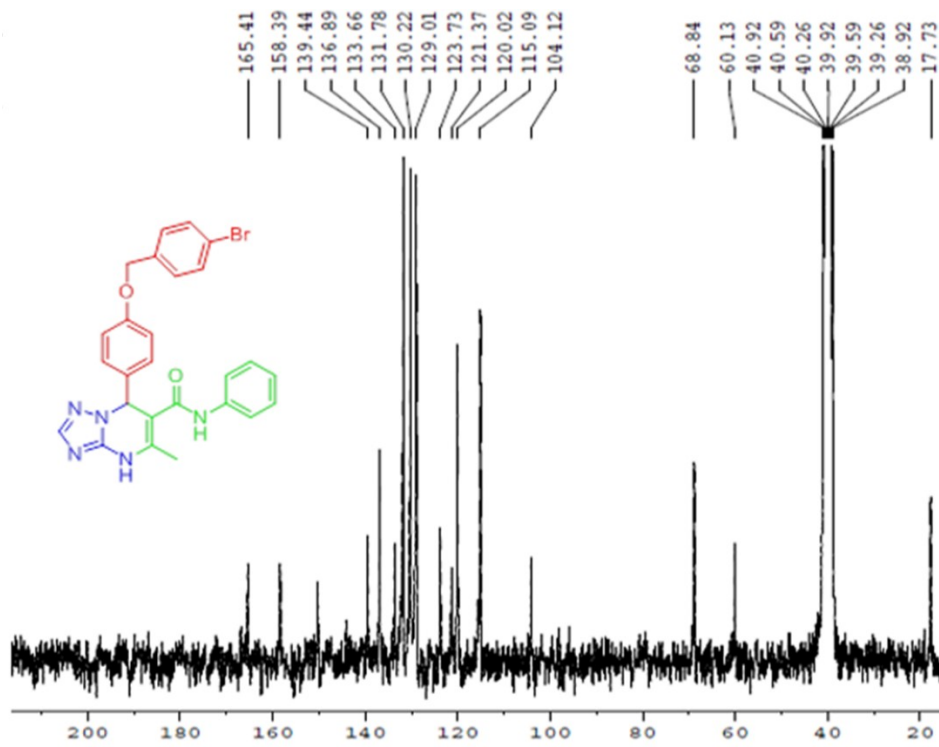
```

Current Data Parameters
NAME      Hamedan-6
EXPNO    838
PROCNO   1

F2 - Acquisition Parameters
Date_    20210612
Time     12.35
INSTRUM  spect
PROBHD   5 mm Multinucl
PULPROG  zg
TD        16384
SOLVENT  DMSO
NS        16
DS        0
SWH       6265.664 Hz
FIDRES    0.382426 Hz
AQ        1.3074932 sec
RG        32
DW        79.800 usec
DE        6.00 usec
TE        300.0 K
D1        2.00000000 sec

----- CHANNEL f1 -----
NUC1      1H
P1        9.00 usec
PL1       3.00 dB
SFO1      250.1320010 MHz

F2 - Processing parameters
SI        32768
SF        250.1300000 MHz
WDW       RM
SSB       0
LB        0.70 Hz
GB        0
PC        1.00
  
```



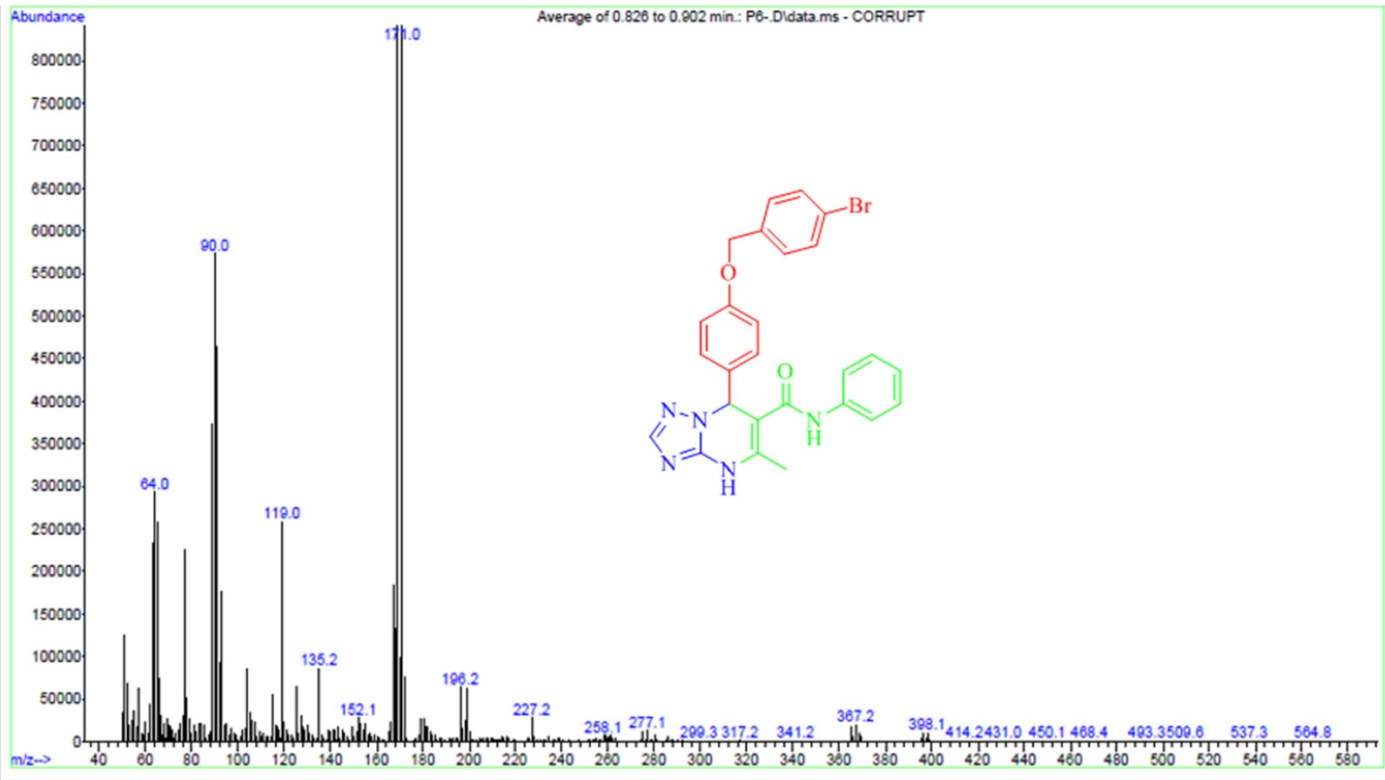
Current Data Parameters
 NAME Hamedan-6
 EXPTNO 889
 PROCNO 1

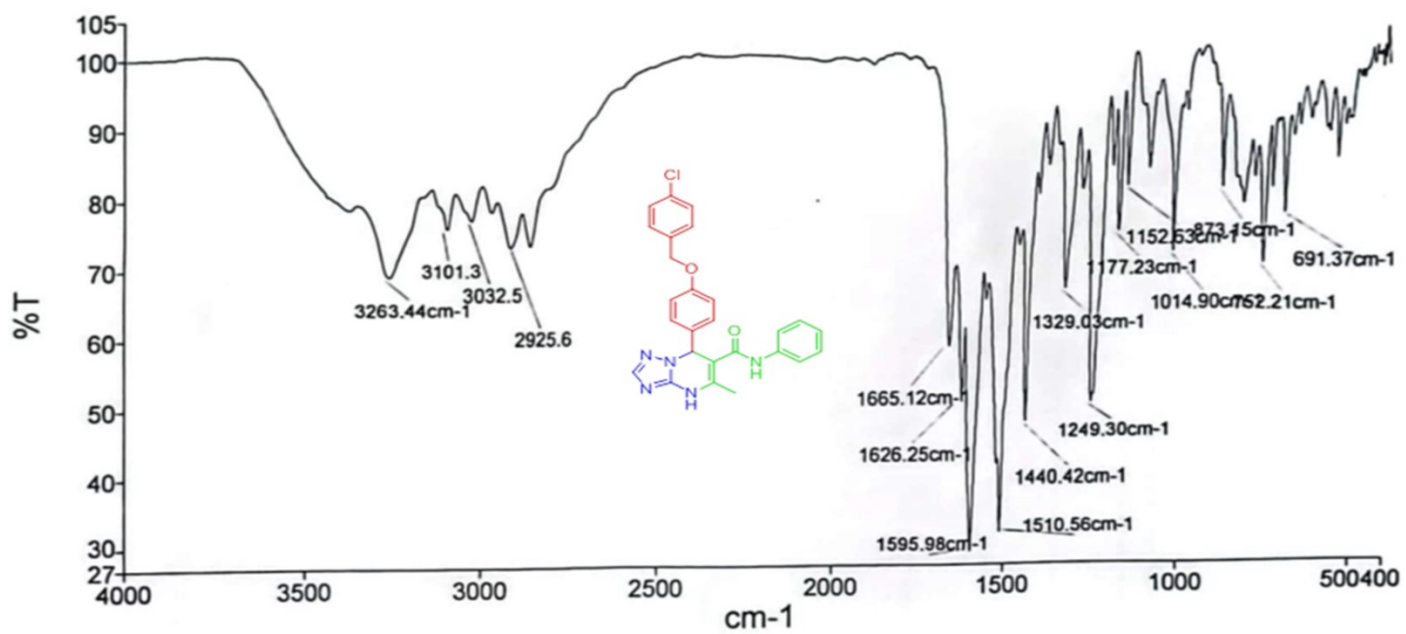
F2 - Acquisition Parameters
 Date_ 20210625
 Time_ 19.01
 INSTRUM spect
 PROBHD 5 mm Multinucl
 PULPROG zgpg
 TD 65536
 SOLVENT DMSO
 NS 1657
 DS 0
 SWH 15060.241 Hz
 FIDRES 0.229801 Hz
 AQ 2.1758451 sec
 RG 1625.5
 DW 33.200 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.0000000 sec
 d11 0.0300000 sec
 d12 0.00002000 sec

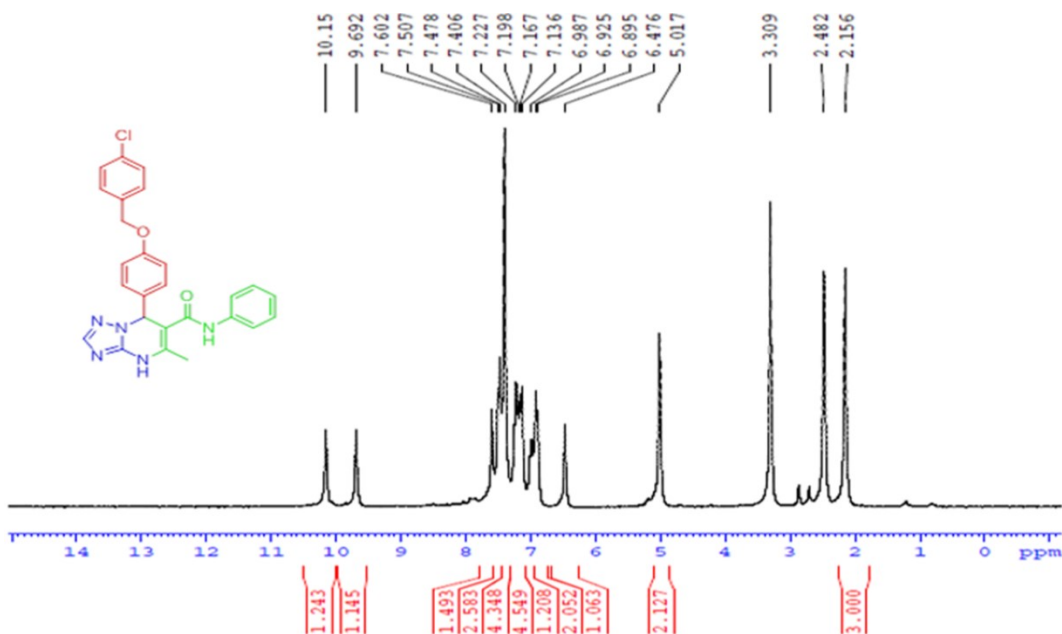
----- CHANNEL f1 -----
 NUC1 13C
 P1 10.00 usec
 PL1 0.00 dB
 SFO1 62.9015280 MHz

----- CHANNEL f2 -----
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 3.00 dB
 PL12 21.50 dB
 PL13 23.00 dB
 SFO2 250.1310005 MHz

F2 - Processing parameters
 SI 32768
 SF 62.8952390 MHz
 WDW EM
 SSB 0
 LB 5.00 Hz
 GB 0
 PC 1.40







```

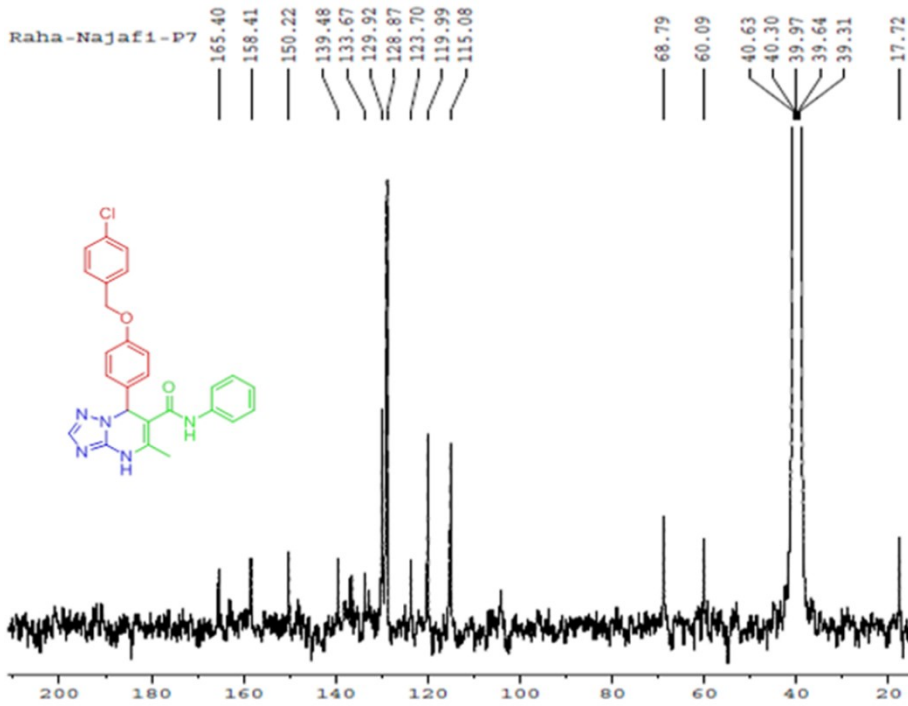
Current Data Parameters
NAME: Hamedan-6
EXPRO: 834
PROCNO: 1

F2 - Acquisition Parameters
Date: 20210612
Time: 9.54
INSTRUM: spect
PROBHD: 5 mm Multinucl
PULPROG: zg
TD: 16384
SOLVENT: DMSO
NS: 16
DS: 0
SWH: 6265.664 Hz
FIDRES: 0.382426 Hz
AQ: 1.3074932 sec
RG: 32
DW: 79.800 usec
DE: 6.00 usec
TE: 300.0 K
D1: 2.00000000 sec

----- CHANNEL f1 -----
NUC1: 1H
P1: 9.00 usec
PL1: 1.00 dB
SFO1: 250.1320010 MHz

F2 - Processing parameters
SI: 32768
SP: 250.1300000 MHz
WDW: RM
SSB: 0
LB: 0.70 Hz
GB: 0
PC: 1.00
  
```

Raha-Najafi-P7



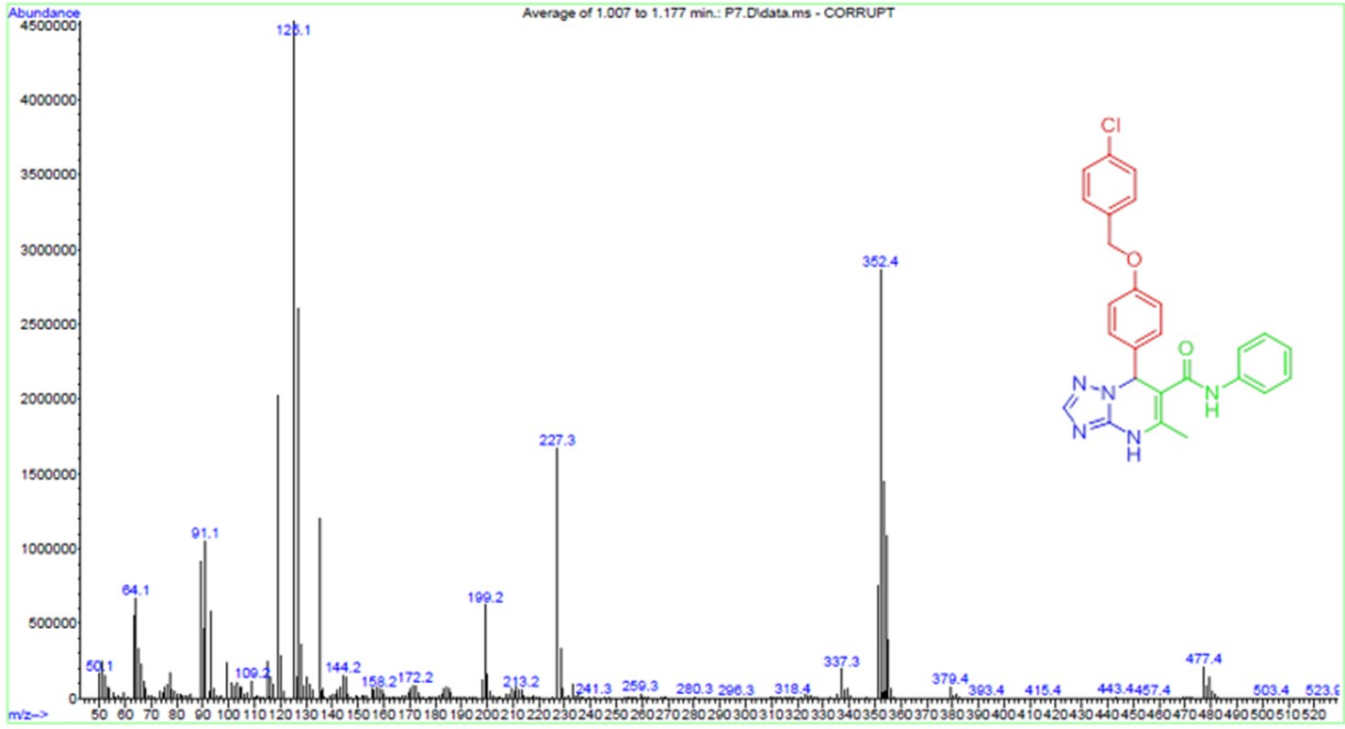
Current Data Parameters
NAME Hamedan-6
EXPNO 835
PROCNO 1

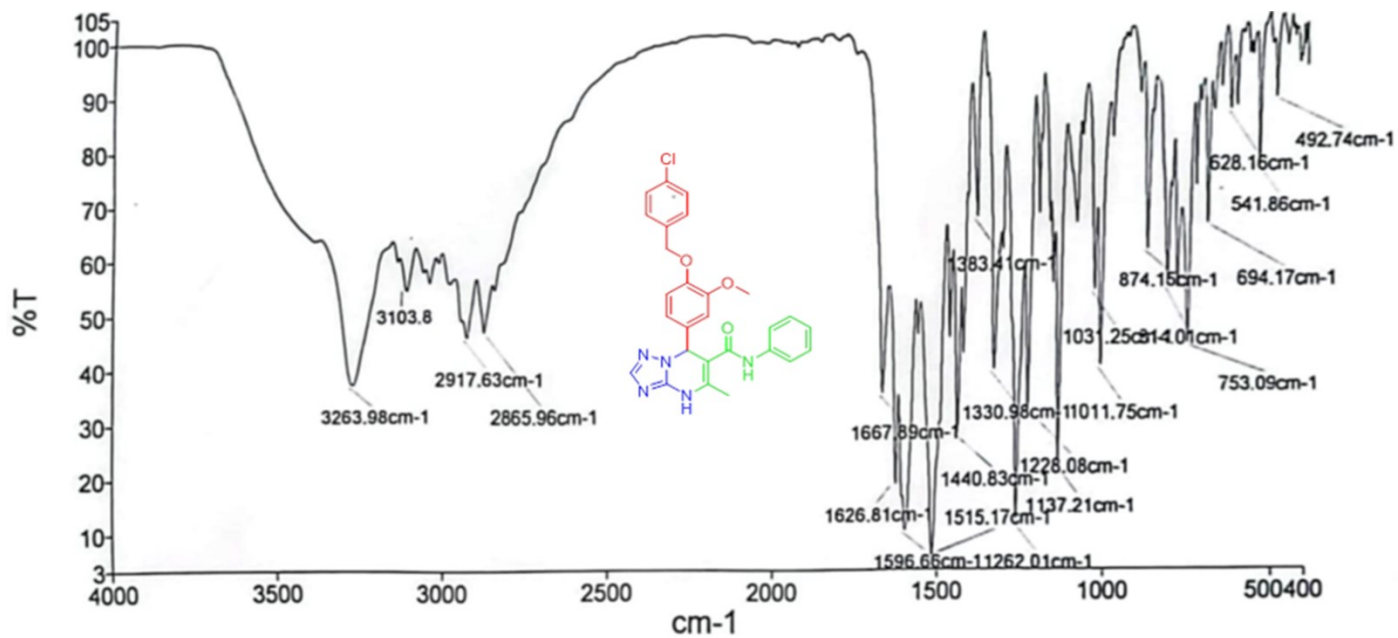
F2 - Acquisition Parameters
Date_ 20210625
Time 9.50
INSTRUM spect
PROBHD 5 mm Multinucl
PULPROG zgpg3
TD 65536
SOLVENT DMSO
NS 2860
DS 0
SWH 15060.241 Hz
FIDRES 0.229801 Hz
AQ 2.1758451 sec
RG 3625.8
DW 33.200 usec
DE 6.00 usec
TK 300.0 K
D1 2.0000000 sec
d11 0.0300000 sec
d12 0.0000200 sec

----- CHANNEL F1 -----
NUC1 13C
P1 10.00 usec
PL1 0.00 dB
SFO1 62.9015280 MHz

----- CHANNEL F2 -----
CDDPRG2 waltz16
NUC2 1H
PCDD2 80.00 usec
PL2 3.00 dB
PL12 21.50 dB
PL13 23.00 dB
SFO2 250.1310005 MHz

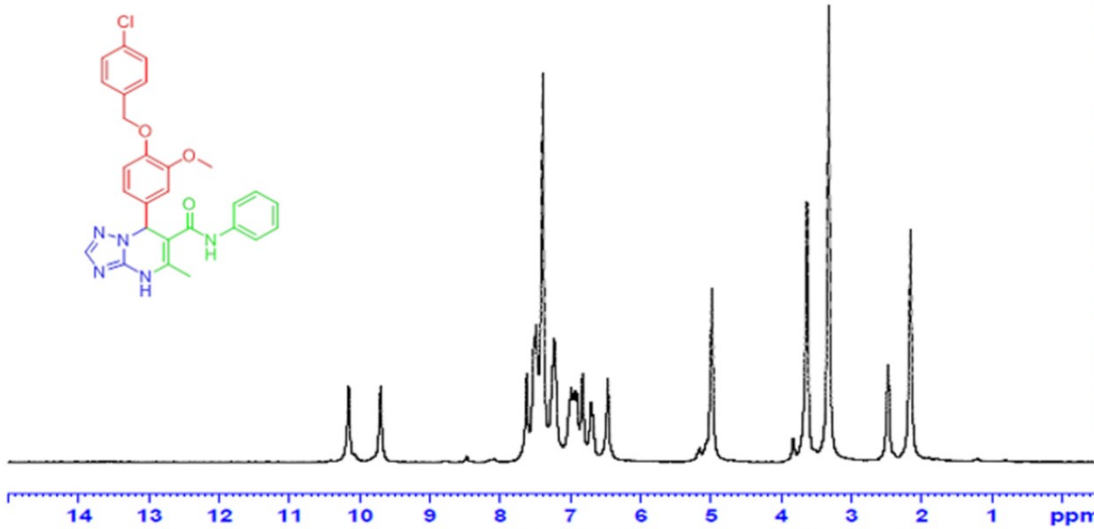
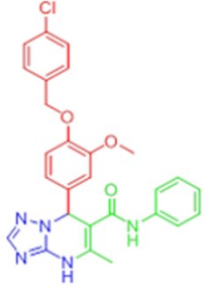
F2 - Processing parameters
SI 32768
SF 62.8952390 MHz
WDW EM
SSB 0
LB 10.00 Hz
GB 0
PC 1.40





aha-Najafi-P8-1402-3-21

10.157
9.703
7.622
7.518
7.491
7.394
7.233
6.988
6.963
6.934
6.903
6.826
6.708
6.680
6.468
4.987
3.633
3.323
2.478
2.158

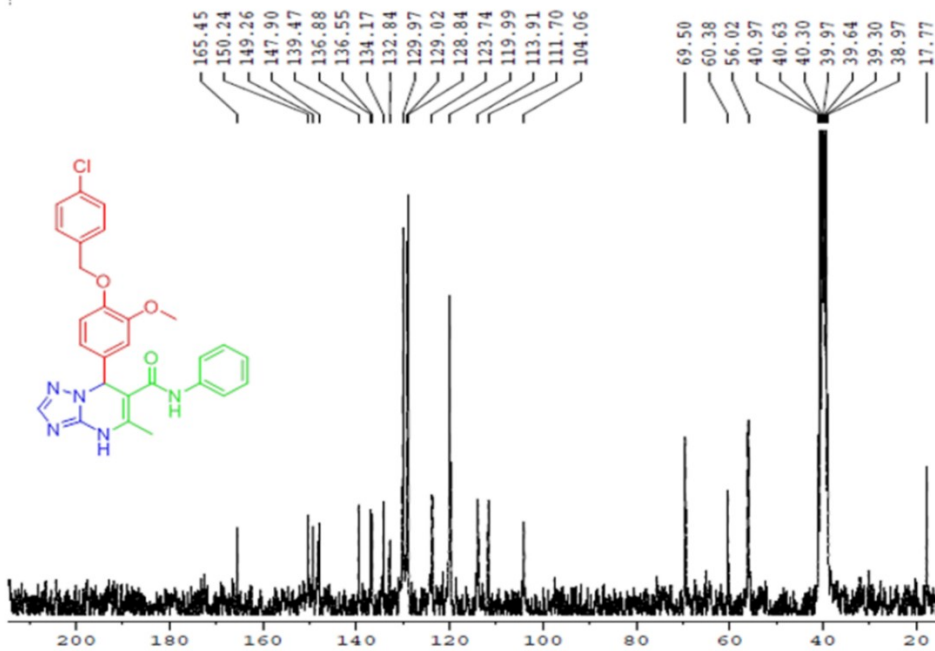


Current Data Parameters
NAME Hamedan-6
EXPNO 840
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210612
Time 12.45
INSTRUM spect
PROBHD 5 mm Multinucl
PULPROG zg
TD 16384
SOLVENT DMSO
NS 16
DS 0
SWH 6265.664 Hz
FIDRES 0.382426 Hz
AQ 1.3074932 sec
RG 32
RW 79.800 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec

----- CHANNEL f1 -----
NUC1 1H
P1 9.00 usec
PL1 3.00 dB
SFO1 250.1320010 MHz

F2 - Processing parameters
SI 32768
SF 250.1300000 MHz
WDW RM
SGB 0
LB 0.70 Hz
GB 0
PC 1.00



Current Data Parameters
 NAME Hamedan_6
 EXPNO 890
 PROCNO 1

F2 - Acquisition Parameters
 Date 20210615
 Time 13:54
 INSTRUM spect
 PROBRD 5 mm Multinucl
 PULPROG zgpg
 TD 65536
 SOLVENT DMSO
 NS 327
 DS 0
 SWH 15060.241 Hz
 FIDRES 0.229801 Hz
 AQ 2.1758451 sec
 RG 1625.5
 DW 33.200 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.00002000 sec

----- CHANNEL f1 -----
 NUC1 13C
 P1 10.00 usec
 PL1 0.00 dB
 SFO1 62.9015280 MHz

----- CHANNEL f2 -----
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 3.00 dB
 PL12 21.50 dB
 PL13 23.00 dB
 SFO2 250.1310005 MHz

F2 - Processing parameters
 SI 32768
 SF 62.8952390 MHz
 WDW EM
 SSB 0
 LB 5.00 Hz
 GB 0
 PC 1.40

