Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry.

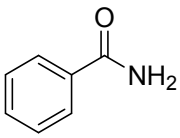
General comments:
All reactions were carried out under air. Reactions were monitored by TLC analysis (pre-coated silica gel plates with fluorescent indicator UV254, 0.2 mm) and visualized with 254 nm UV light or iodine. Chemicals were purchased from Aldrich and were used without further purification otherwise noted. All compounds were characterized by ^{1}H NMR, ^{13}C NMR. ^{1}H spectra were recorded on Bruker AV 300 and AV 400 spectrometers. ^{13}C NMR spectra were recorded at 282 MHz. GC was performed on Agilent 6890 chromatograph with a 30 m HP5 column. All yields reported refer to isolated yields. All the products are commercially available.

General procedure for the oxidative synthesis of primary amides from acetophenones:
Ammonia (25 % in water; 1 mL), and acetophenones (1 mmol) were added to pressure equipped with a stirring bar. Then, TBHP (70 % in H_2O; 1.0 mL; 8 equiv.), TBAI (20 mol %) were added and the final solution was kept at 100°C temperature for 16h. The mixture was cooled to room temperature and solvent was removed under vacuum. The pure product can be isolated by column.

General procedure for the oxidative synthesis of primary amides from carbinols:
Ammonia (25 % in water; 1 mL), and carbinols (1 mmol) were added to pressure equipped with a stirring bar. Then, TBHP (70 % in H_2O; 1.0 mL; 8 equiv.), TBAI (20 mol %) were added and the final solution was kept at 100°C temperature for 16h. The mixture was cooled to room temperature and solvent was removed under vacuum. The pure product can be isolated by column.

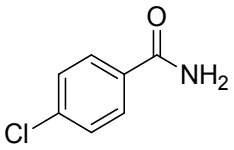
Analytic data.

Benzamide



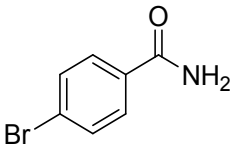
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.39-7.56 (m, 4H), 7.89-7.94 (m, 2H), 8.03 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 128.4 ($2CH_2$), 129.1 ($2CH_2$), 132.1 (CH), 135.2 (C), 168.8 (CO). GC-MS (EI, 70 eV): m/z (%) [M+]121 (81), 105 (100), 77 (95), 51 (40), 50 (23), 44 (10).

4-Chlorobenzamide



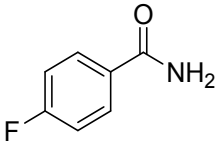
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.48-7.57 (m, 3H), 7.91-7.95 (m, 2H), 8.09 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 129.2 (2CH), 130.3 (2CH), 133.9 (C), 136.9 (C), 167.7 (CO); **GC-MS** (EI, 70 eV): *m/z* (%) [M^+]155 (55), 141 (33), 139 (100), 111 (52), 75 (35), 50 (17); **HRMS** (EI): Calc for $C_7H_6N_1O_1Cl$: 155.01324; found: 155.15501291.

4-Bromobenzamide



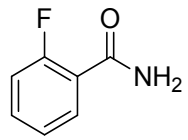
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.51´0 (s, 1H, NH_2), 7.67-7.72 (m, 2H), 7.83-7.88 (m, 2H), 8.09 (s, 1H, NH_2); **^{13}CNMR** (DMSO-d_6): δ = 125.9 (C), 130.5 (2CH), 132.1 (2CH), 134.3 (C), 167.8 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 199 (57), 185 (99), 183 (100), 157 (44), 155 (44), 76 (34); **HRMS** (EI): Calc for $C_7H_6N_1O_1Br$: 198.96273; found: 198.96294.

4-Fluorobenzamide



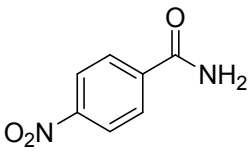
^{1}H NMR (300 MHz, DMSO-d_6): δ = 6.09 (s, 1H), 6.90-7.7.07 (m, 3H), 7.70-7.77 (m, 2H), 8.09 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 116.2 (d, *J* = 25.6 Hz, 2CH), 129.9 (d, *J* = 9.60 Hz, 2CH), 131.6 (C), 135.9 (C), 164.6 (d, *J* = 248.6 Hz, CF), 167.7 (CO); **GC-MS** (EI, 70 eV): *m/z* (%) [M^+]139 (55), 123 (100), 95 (76), 75 (34), 74 (10), 50 (10); **HRMS** (EI): Calc for $C_7H_6N_1O_1F$: 139.04279; found: 139.04315.

2-Fluorobenzamide



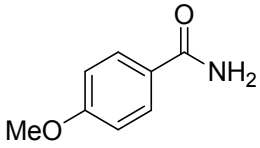
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.27-7.34 (m, 2H), 7.52 -7.57(m, 1H), 7.59-7.79 (m, 3H); **^{13}CNMR** (DMSO-d_6): δ = 116.9 (d, *J* = 22.5 Hz, CH), 124.7 (d, *J* = 14.5 Hz, CH), 125.3 (CH), 131.1 (CH), 133.3 (CH), 160.2 (d, *J* = 248.8 Hz, CF), 166.2 (CO). GC-MS (EI, 70 eV): m/z (%) [M+]139 (63), 123 (100), 95 (46), 75 (30), 74 (12), 50 (10)

4-Nitrobenzamide



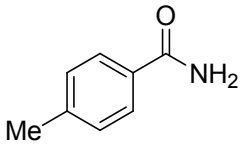
^{1}H NMR (300 MHz, DMSO-d_6): δ = 8.12-8.16 (m, 3H), 8.24-8.28 (m, 3H) **^{13}CNMR** (DMSO-d_6): δ = 124.0, 131.1 (CH), 143.2, 149.6 (C), 168.0 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 166 (71), 150 (100), 120 (24), 104 (28), 92 (24), 50 (19); **HRMS** (EI): Calc for $C_7H_6N_2O_3$: 166.03729; found: 166.03782.

4-Methoybenzamide



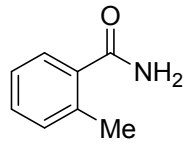
^{1}H NMR (300 MHz, DMSO-d_6): δ = 3.84 (s, 3H), 6.99-7.03 (m, 2H), 7.23 (s, 1H), 7.85-7.92 (m, 3H); **^{13}CNMR** (DMSO-d_6): δ = 56.4 (OCH_3), 114.5 (2CH), 127.6 (C), 130.5 (2CH), 162.7 (C), 168.6 (CO).

4-Methylbenzamide



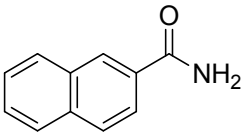
^{1}H NMR (300 MHz, DMSO-d_6): δ = 2.37 (s, 3H), 7.27 (d, *J* = 8.15 Hz, 2H), 7.34 (s, 1H, NH_2), 7.81 (d, *J* = 8.15 Hz, 2H), 7.94 (s, 1H, NH_2); **^{13}CNMR** (DMSO-d_6): δ = 21.8 (CH_3), 128.4 (2CH), 129.6 (2CH), 132.3 (C), 141.9 (C), 168.7 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 135 (62), 119 (100), 91 (66), 89 (11), 65 (23), 63 (11); **HRMS** (EI): Calc for $C_8H_9N_1O_1$: 135.06787; found: 135.06777.

2-Methylbenzamide



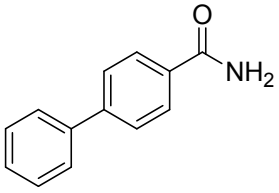
^{1}H NMR (300 MHz, DMSO-d_6): δ = 2.40 (s, 3H), 7.21-7.28 (m, 2H), 7.31-7.42 (m, 3H), 7.73 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 20.5 (CH_3), 126.3, 127.9, 130.0, 131.3 (CH), 135.9, 137.9 (C), 171.9 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 135 (85), 119 (92), 91 (100), 90 (27), 89 (23).

2-Naphthamide



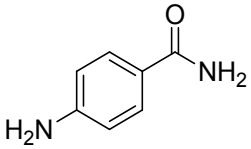
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.55 (s, 1H), 7.59-7.66 (m, 2H), 7.99-8.06 (m, 4H), 8.21 (s, 1H), 8.55 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 125.3, 127.5, 128.5, 128.7, 129.8, 132.5, 133.1 135.1, 168.9 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 171 (80), 156 (12), 155 (99), 127 (100), 75 (10).

[1,1'-Niphenyl]-4-carboxamide



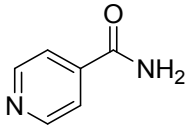
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.24-7.55 (m, 4H), 7.74-7.81 (m, 4H), 8.00-8.0 (m, 2H), 8.09 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 127.3 (2CH), 127.7 (2CH), 128.9 (CH), 129.1 (2CH), 129.9 (2CH), 134.0 (C), 140.1 (C), 143.6 (C), 168.5 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 197 (71), 181 (100), 153 (34), 152 (66), 151 (20), 76 (14).

4-Aminobenzamide



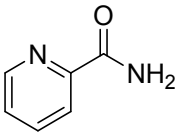
^{1}H NMR (300 MHz, DMSO-d_6): δ = 5.63 (s, 2H, NH_2), 6.52-6.58 (m, 2H), 6.87 (s, 1H), 7.54-7.64 (m, 3H); **^{13}CNMR** (DMSO-d_6): δ = 113.3 (2CH), 121.8 (C), 130.0 (2CH), 152.5 (C), 168.9 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 136 (69), 120 (100), 92 (38), 65 (33); **HRMS** (EI) $[M]^+$: Calc for $C_7H_8N_2O$: 136.06311; found: 136.06345.

Isonicotinamide



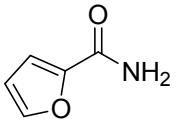
^{1}H NMR (δ = 7.74-7.82 (m, 3H), 8.28 (s, 1H), 8.73-8.77 (m, 2H); **^{13}CNMR** (DMSO-d_6): δ =122.4 (2CH), 142.2 (C), 151.2 (2CH), 167.3 (CO).

Picolinamide



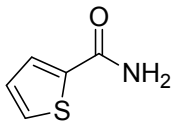
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.11-7.14 (m, 1H), 7.34 (s, 1H, NH_2), 7.72-7.75 (m, 3H), 7.96 (s, 1H, NH_2); **^{13}CNMR** (DMSO-d_6): δ =125.4 (CH), 128.8 (CH), 129.5 (CH), 131.8 (CH), 141.2 (C), 163.7 (CO).

Furan-2-carboxamide



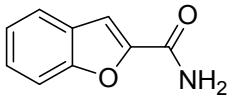
^{1}H NMR (300 MHz, DMSO-d_6): δ = 6.62–6.64 (m, 1H), 7.12 (d, *J* = 4.80 Hz, 1H), 7.40 (1, 1H), 7.79 (s, 1H), 7.83-7.84 (m, 1H); **^{13}CNMR** (DMSO-d6): δ = 112.6 (CH), 114.5 (CH), 145.9 (CH), 148.9 (C), 160.3 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 111 (100), 95 (96), 44 (18), 39 (40).

Thiophene-2-carboxamide.



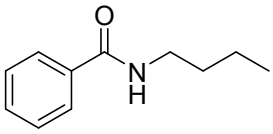
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.12–7.19 (m, 1H), 7.41 (s, 1H), 7.75–7.79 (m, 2H), 7.99 (s, 1H); **^{13}CNMR** (DMSO-d6): δ = 128.8 (CH), 129.6 (CH), 131.9 (CH), 141.2 (C), 163.8 (CO). **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 127 (67), 111 (100), 39 (20).

Benzofuran-2-carboxamide



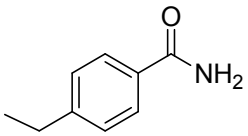
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.33–7.39 (m, 1H), 7.46-7.49 (m, 1H), 7.52 (s, 1H), 7.57-7.59 (s, 1H), 7.65 (s, 1H), 7.69–7.82 (m, 1H), 8.16 (s, 1H); **^{13}C NMR** (DMSO-d6): δ = 110.4 (CH), 112.7 (CH), 123.6 (CH), 124.5 (CH), 127.6 (CH), 128.1 (C), 150.2 (C), 155.1 (C), 160.7 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 161 (98), 145 (100), 90 (11), 89 (58), 63 (23).

***N*-Butylbenzamide**



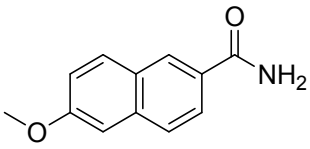
^{1}H NMR (300 MHz, $CDCl_3$): δ = 0.93 (t, *J* = 7.28 Hz, 3H), 1.35 (sext., 2H), 1.53 (pent., 2H), 3.30 (q, *J* = 7.13 Hz, 2H), 7.45-7.54 (m, 3H), 7.84-7.87 (m, 2H), 8.45 (s, 1H, NH_2); **^{13}CNMR** ($CDCl_3$): δ = 14.7 (CH_3), 20.6 (CH_2), 32.2 (CH_2), 39.7 (CH_2), 128.1 (2CH), 129.2 (2CH), 131.9 (CH), 135.7 (C), 167.0 (CO); **GC-MS** (EI, 70 eV): *m/z* (%) [M^+] 177 (9), 135 (19), 134 (19), 105 (100), 77 (40), 51 (11); **HRMS** (EI) $[M]^+$: Calc for $C_{11}H_{15}N_1O_1$: 177.11482; found: 177.11443.

4-Ethylbenzamide



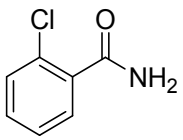
^{1}H NMR (300 MHz, DMSO-d_6): δ = 1.22 (t, *J* = 7.50 Hz, 3H), 2.67 (q, *J* = 15.3 Hz, 2H), 7.28-7.34 (m, 3H), 7.81-7.86 (m, 2H), 7.94 (s, 1H, NH_2); **^{13}CNMR** (DMSO-d_6): δ = 16.5 (CH_3), 28.9 (CH_2), 128.4 (2CH), 128.5 (2CH), 132.6 (C), 148.1 (C), 168.7 (CO); **GC-MS** (EI, 70 eV): *m/z* (%)[M^+] 149 (50), 134 (11), 133 (100), 106 (14), 79 (21), 77 (26)

6-Methoxy-2-naphthamide



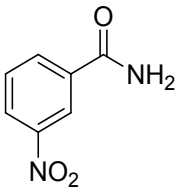
^{1}H NMR (300 MHz, DMSO-d_6): δ = 3.93 (s, OCH_3), 7.23-7.29 (m, 1H), 7.38-7.44 (m, 2H), 7.76-7.99 (m, 3H), 8.09 (s, 1H), 8.45 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 56.2 (OCH_3), 106.7 (CH), 120.2 (CH), 125.8 (CH), 127.4 (CH), 128.4 (CH), 130.2 (CH), 131.3 (C), 136.7 (C), 159.4 (C), 168.9 (CO).

2-Chlorobenzamide



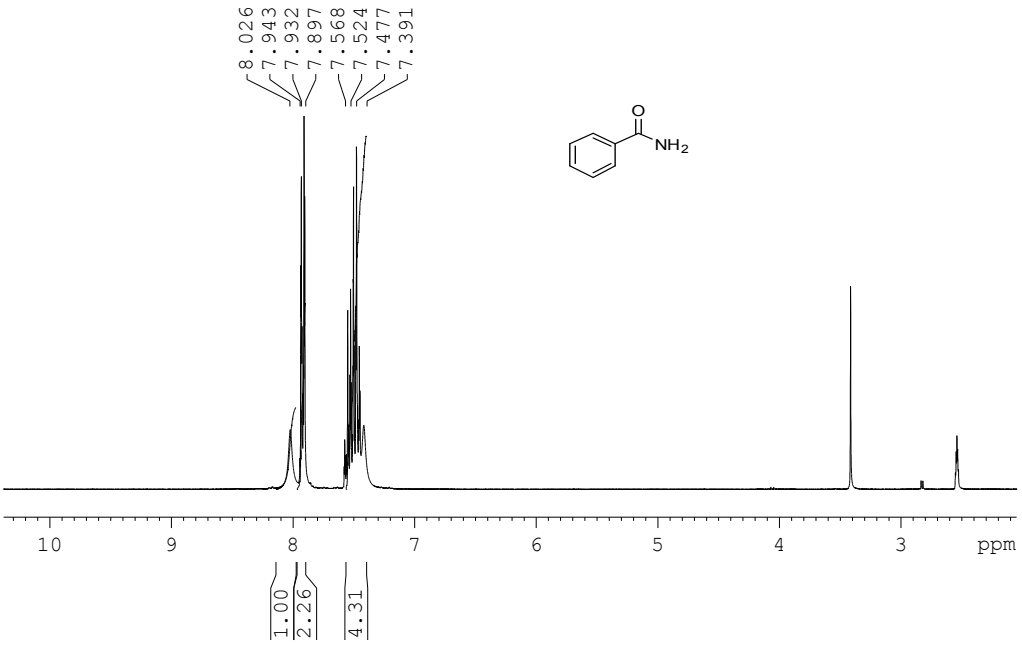
^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.39-7.54 (m, 4H), 7.62 (s, 1H), 7.90 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 127.9 (CH), 129.5 (CH), 130.5 (CH), 131.4 (CH), 138.0 (C), 169.0 (CO).

3-Nitrobenzamide.



^{1}H NMR (300 MHz, DMSO-d_6): δ = 7.73-7.82 (m, 2H), 8.33-8.41 (m, 3H), 8.73 (s, 1H); **^{13}CNMR** (DMSO-d_6): δ = 123.2 (CH), 126.7 (CH),130.9 (CH), 134.7 (CH), 136.7 (CH), 148.7 (C), 166.6 (CO).

^{1}HNMR

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PROCNO                 1

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DS                     2
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FIDRES             0.093132 Hz
AQ              5.3687091 sec
RG                19.0807
DW                 81.920 usec
DE                  6.50 usec
TE                298.0 K
D1             1.00000000 sec
TD0                    1

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NUC1                  1H
P1                 11.00 usec
PLW1          16.00000000 W

F2 - Processing parameters
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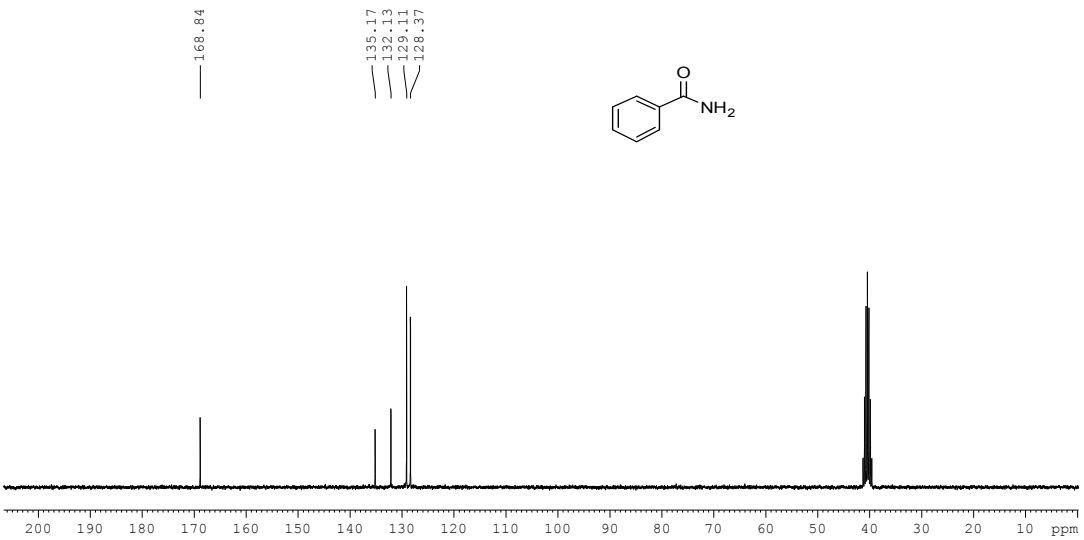
^{13}CNMR

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PROCNO                 1

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RG                501.187
DW                 20.480 usec
DE                  6.50 usec
TE                298.1 K
D1             2.00000000 sec
D11            0.03000000 sec
D31            0.00001140 sec
D40            0.02898005 sec
L4                    40
L5                    57
P32                90.00 usec
TD0                    1

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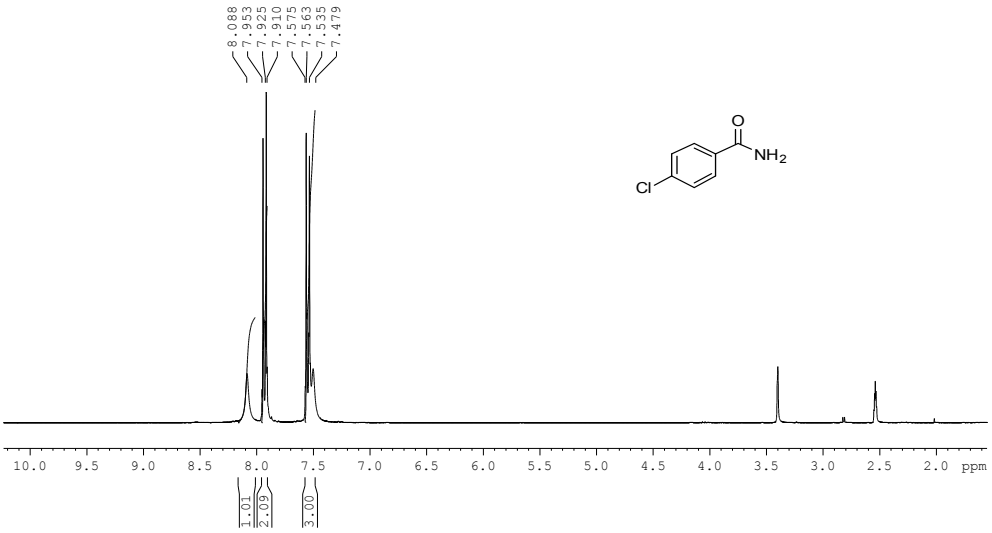
NUC1                  13C
P1                 11.40 usec
PLW1          30.00000000 W

======== CHANNEL f2 ========
SFO2          300.2012008 MHz
NUC2                  1H
CPDPRG[2           waltz16
PCPD2              90.00 usec
PLW2          16.00000000 W
PLW12          0.23901001 W
PLW13          0.19360000 W

F2 - Processing parameters
SI                 32768
SF            75.4853156 MHz
WDW                   EM
SSB       0
LB                  1.00 Hz
GB        0
PC                  1.40
```

^{1}HNMR



BRUKER

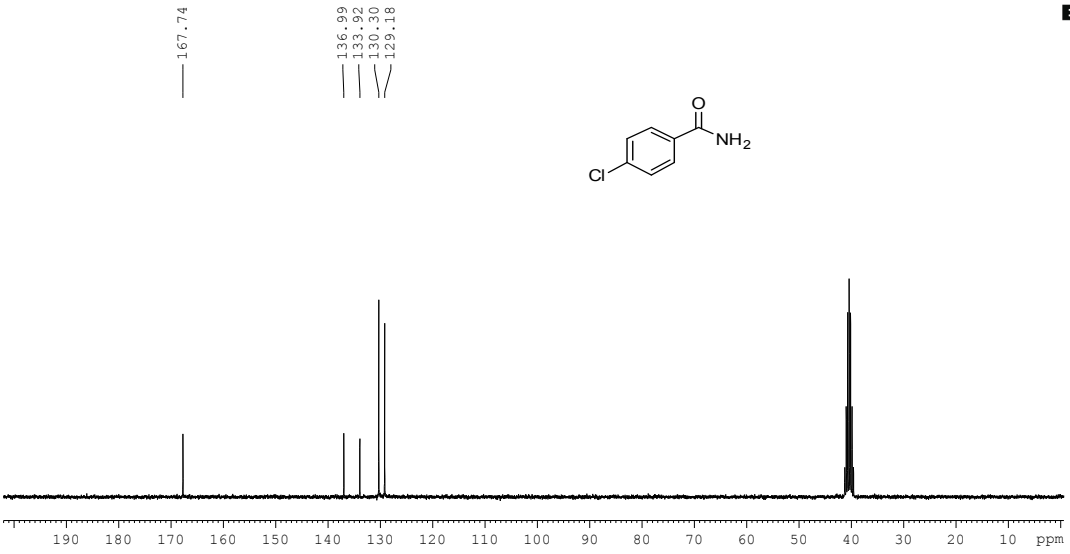
```
Current Data Parameters
NAME                  SF 643 I
EXPNO                       10
PROCNO                       1

F2 - Acquisition Parameters
Date_               20140429
Time                   11.03
INSTRUM          FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG                 zg30
TD                     65536
SOLVENT                 DMSO
NS                        16
DS                         2
SWH                 6103.516 Hz
FIDRES              0.093132 Hz
AQ                  5.3687091 sec
RG                     23.1849
DW                     81.920 usec
DE                      6.50 usec
TE                     299.1 K
D1                1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
SFO1             300.2018539 MHz
NUC1                       1H
P1                      11.00 usec
PLW1            16.00000000 W

F2 - Processing parameters
SI                         65536
SF               300.1999877 MHz
WDW                           EM
SSB          0
LB                      0.30 Hz
GB           0
PC                      1.00
```

^{13}CNMR



BRUKER

```
Current Data Parameters
NAME                  SF 643 I
EXPNO                       11
PROCNO                       1

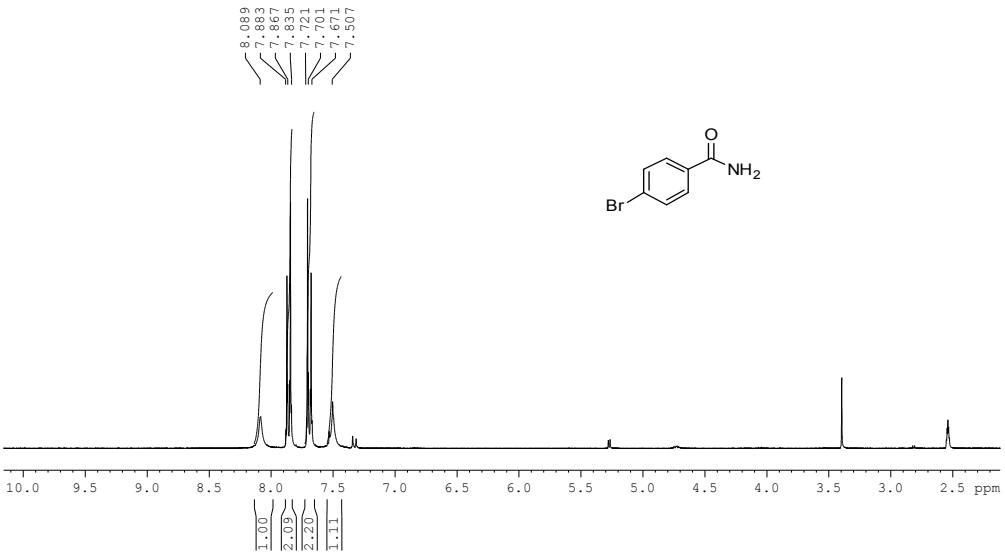
F2 - Acquisition Parameters
Date_               20140429
Time                   11.06
INSTRUM          FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG              zgpg30
TD                     65536
SOLVENT                 DMSO
NS                        256
DS                          4
SWH                24414.063 Hz
FIDRES              0.372529 Hz
AQ                  1.3421773 sec
RG                     501.187
DW                     20.480 usec
DE                      6.50 usec
TE                     299.2 K
D1                  2.00000000 sec
D11                 0.03000000 sec
D31                 0.00001140 sec
D40                 0.02898005 sec
L4                         40
L5                         57
P32                     90.00 usec
TD0                          1

======== CHANNEL f1 ========
SFO1             75.4928982 MHz
NUC1                       13C
P1                      11.40 usec
PLW1            30.00000000 W

======== CHANNEL f2 ========
SFO2            300.2012008 MHz
NUC2                       1H
CPDPRG[2                waltz16
PCPD2                   90.00 usec
PLW2            16.00000000 W
PLW12            0.23901001 W
PLW13            0.19360000 W

F2 - Processing parameters
SI                         32768
SF               75.4853168 MHz
WDW                           EM
SSB          0
LB                      1.00 Hz
GB           0
PC                      1.40
```

^{1}HNMR



BRUKER

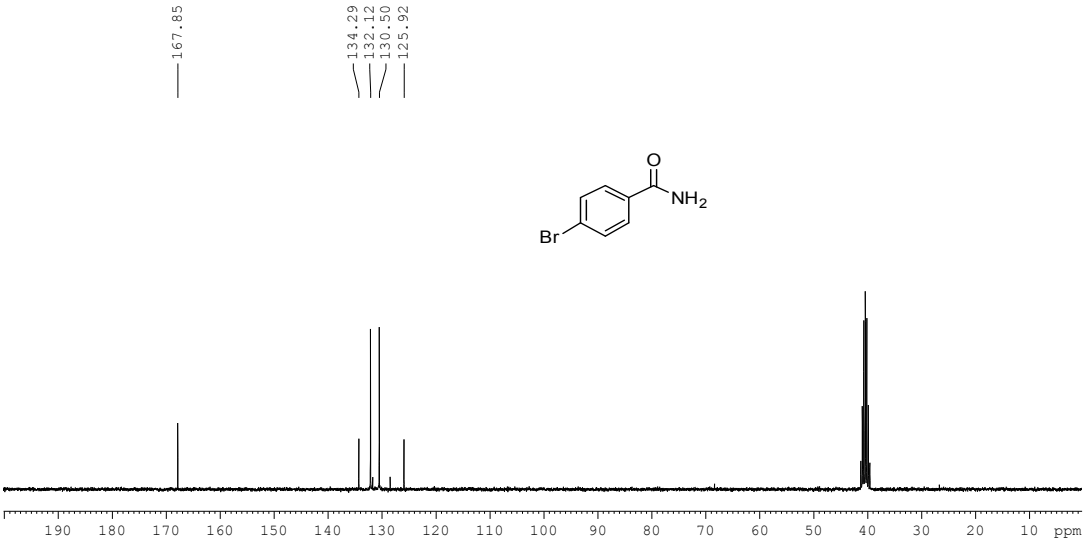
```
Current Data Parameters
NAME          SF 643 G 1
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140428
Time_              14.46
INSTRUM       FOURIER300
PROBHD   5 mm DUL 13C-1
PULPROG            zg30
TD                65536
SOLVENT            DMSO
NS                    16
DS                     2
SWH            6103.516 Hz
FIDRES            0.093132 Hz
AQ             5.3687091 sec
RG                23.1849
DW                81.920 usec
DE                 6.50 usec
TE                299.1 K
D1             1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          300.2018539 MHz
NUC1                  1H
P1                 11.00 usec
PLW1          16.00000000 W

F2 - Processing parameters
SI                 65536
SF            300.1999876 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

^{13}CNMR



BRUKER

```
Current Data Parameters
NAME          SF 643 G 1
EXPNO                 11
PROCNO                 1

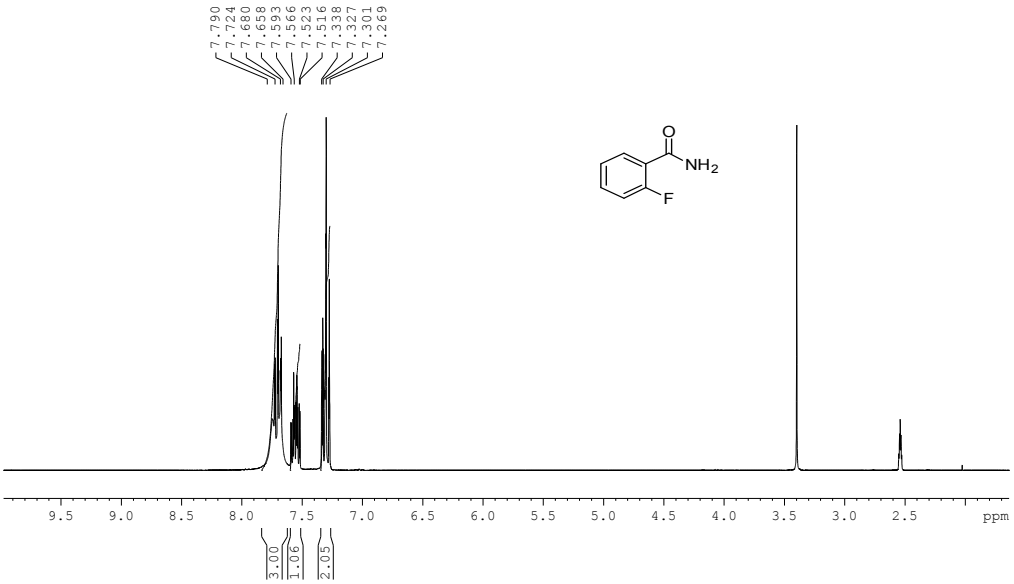
F2 - Acquisition Parameters
Date_           20140428
Time_              14.49
INSTRUM       FOURIER300
PROBHD   5 mm DUL 13C-1
PULPROG          zgpg30
TD                65536
SOLVENT            DMSO
NS                   256
DS                     4
SWH           24414.063 Hz
FIDRES            0.372529 Hz
AQ             1.3421773 sec
RG                501.187
DW                20.480 usec
DE                 6.50 usec
TE                299.2 K
D1             2.00000000 sec
D11            0.03000000 sec
D31            0.00001140 sec
D40            0.02898005 sec
L4                    40
L5                    57
P32                90.00 usec
TD0                    1

======== CHANNEL f1 ========
SFO1          75.4928982 MHz
NUC1                  13C
P1                 11.40 usec
PLW1          30.00000000 W

======== CHANNEL f2 ========
SFO2          300.2012008 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2          16.00000000 W
PLW12          0.23901001 W
PLW13          0.19360000 W

F2 - Processing parameters
SI                 32768
SF            75.4853175 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```

^{1}HNMR



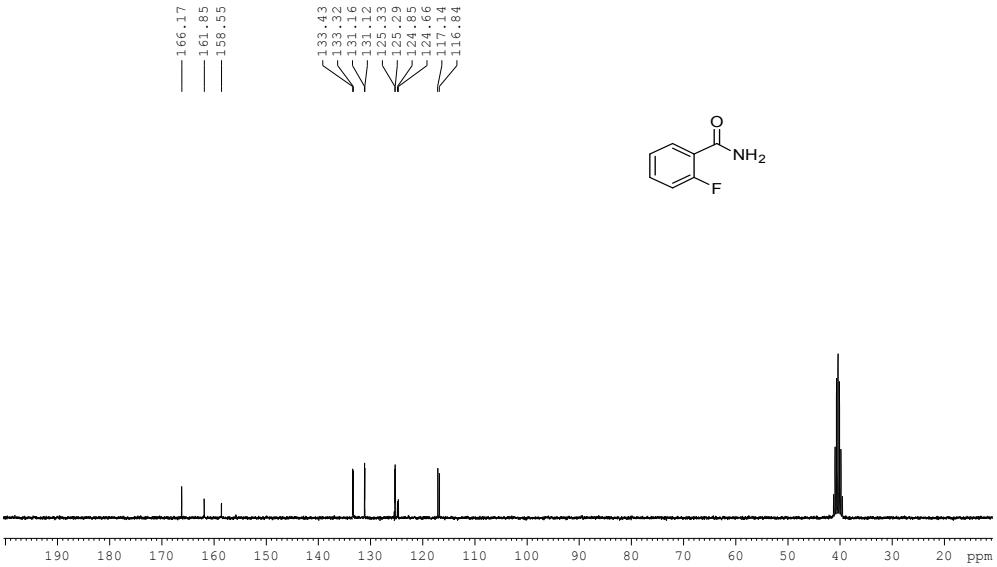
```
Current Data Parameters
NAME          SF 642 Y 3
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140424
Time_              12.54
INSTRUM            AV300
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 32768
SOLVENT             DMSO
NS                    32
DS                     4
SWH             6172.839 Hz
FIDRES          0.188380 Hz
AQ              2.6542079 sec
RG                   181
DW                81.000 usec
DE                 6.00 usec
TE                296.2 K
D1              1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                11.00 usec
PL1        0 dB
PL1W        12.28312492 W
SFO1         300.1318534 MHz

F2 - Processing parameters
SI                 32768
SF           300.1299892 MHz
WDW                   EM
SSB        0
LB                 0.10 Hz
GB         0
PC                 1.00
```

^{13}CNMR

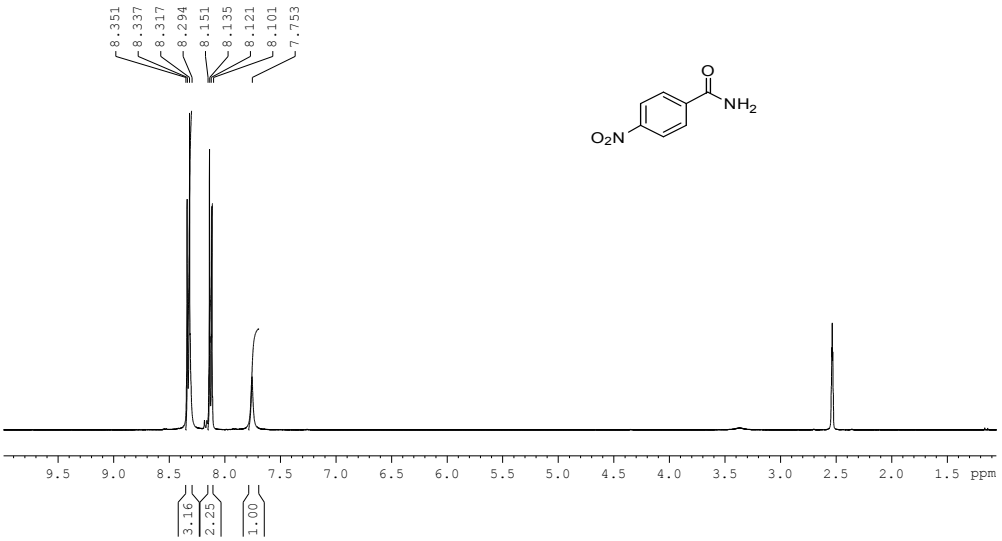


```
Current Data Parameters
NAME          SF 642 Y 3
EXPNO                 11
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140424
Time_              13.08
INSTRUM            AV300
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD                 32768
SOLVENT             DMSO
NS                   256
DS                     4
SWH            21097.047 Hz
FIDRES          0.643831 Hz
AQ              0.7766016 sec
RG                 32768
DW                23.700 usec
DE                 6.00 usec
TE                296.8 K
D1              2.00000000 sec
d11             0.03000000 sec
DELTA           1.89999998 sec
TD0                    1
SFO1          75.4771825 MHz
NUC1                  13C
P1                 9.60 usec
PLW1          -1.00000000 W
SFO2         300.1312005 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              100.00 usec
PLW2          -1.00000000 W
PLW12         -1.00000000 W
PLW13         -1.00000000 W

F2 - Processing parameters
SI                 32768
SF            75.4677149 MHz
WDW                   EM
SSB        0
LB                 1.00 Hz
GB         0
PC                 1.40
```

^{1}HNMR



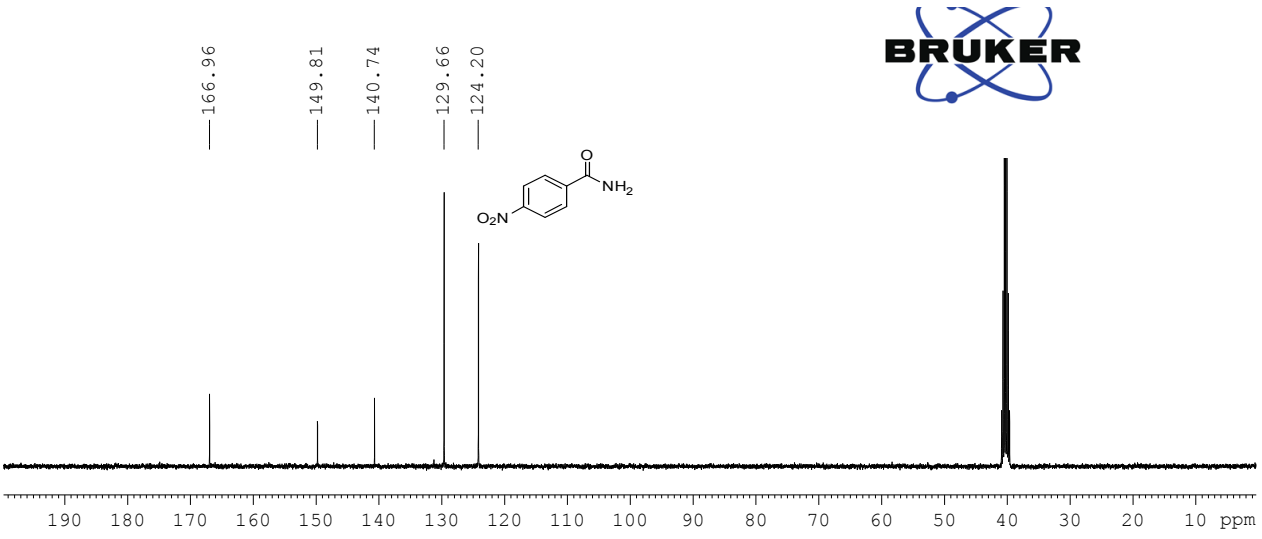

```
Current Data Parameters
NAME                  SF 642 F 1
EXPNO                        10
PROCNO                        1

F2 - Acquisition Parameters
Date_                  20140313
Time                       6.05
INSTRUM                  AV300
PROBHD    5 mm PABBO BB-
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                          32
DS                           4
SWH                 6172.839 Hz
FIDRES              0.188380 Hz
AQ                  2.6542079 sec
RG                      645.1
DW                     81.000 usec
DE                      6.00 usec
TE                      295.3 K
D1                  1.00000000 sec
TD0                          1

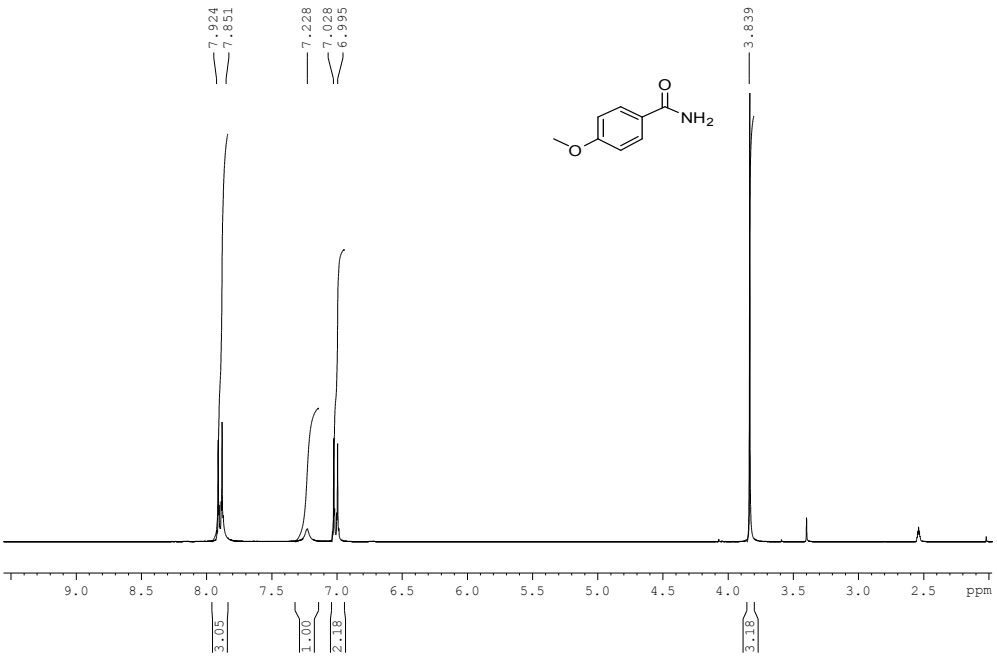
======== CHANNEL f1 ========
NUC1                        1H
P1                      11.00 usec
PL1        0 dB
PL1W          12.28312492 W
SFO1          300.1318534 MHz

F2 - Processing parameters
SI                       32768
SF                300.1300354 MHz
WDW                         EM
SSB          0
LB                      0.10 Hz
GB           0
PC                      1.00
```

^{13}CNMR



^{1}HNMR



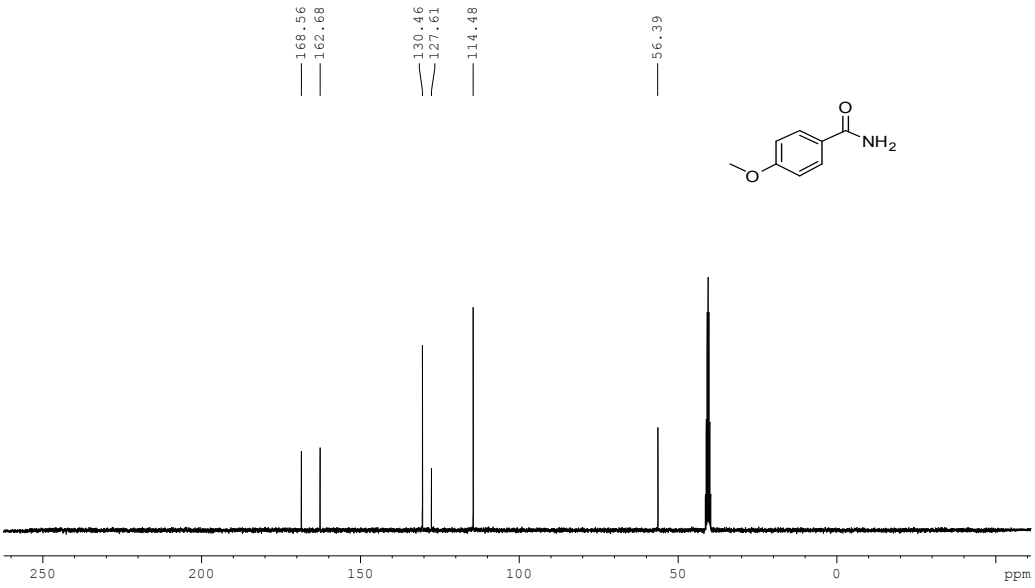

```
Current Data Parameters
NAME                  SF 642 A 2
EXPNO                         10
PROCNO                         1

F2 - Acquisition Parameters
Date_               20140428
Time                      13.04
INSTRUM            FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG                    zg30
TD                        65536
SOLVENT                    DMSO
NS                           16
DS                            2
SWH                  6103.516 Hz
FIDRES               0.093132 Hz
AQ                   5.3687091 sec
RG                      17.7572
DW                     81.920 usec
DE                      6.50 usec
TE                     299.1 K
D1                  1.00000000 sec
TD0                           1

======== CHANNEL f1 ========
SFO1               300.2018539 MHz
NUC1                         1H
P1                       11.00 usec
PLW1               16.00000000 W

F2 - Processing parameters
SI                        65536
SF                 300.1999874 MHz
WDW                          EM
SSB          0
LB                        0.30 Hz
GB           0
PC                        1.00
```

^{13}CNMR




```
Current Data Parameters
NAME                  SF 642 A 2
EXPNO                         11
PROCNO                         1

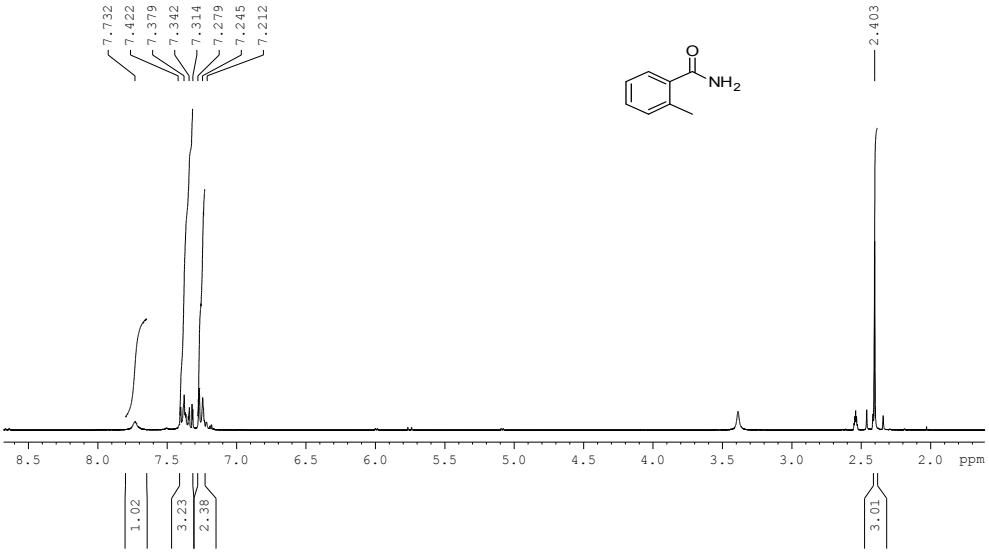
F2 - Acquisition Parameters
Date_               20140428
Time                      13.07
INSTRUM            FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG                 zgpg30
TD                        65536
SOLVENT                    DMSO
NS                          256
DS                            4
SWH                 24414.063 Hz
FIDRES               0.372529 Hz
AQ                   1.3421773 sec
RG                      501.187
DW                     20.480 usec
DE                      6.50 usec
TE                     299.1 K
D1                  2.00000000 sec
D11                 0.03000000 sec
D31                 0.00001140 sec
D40                 0.02898005 sec
L4                           40
L5                           57
P32                    90.00 usec
TD0                           1

======== CHANNEL f1 ========
SFO1                75.492898 MHz
NUC1                         13C
P1                       11.40 usec
PLW1               30.00000000 W

======== CHANNEL f2 ========
SFO2               300.2012008 MHz
NUC2                         1H
CPDPRG[2                waltz16
PCPD2                    90.00 usec
PLW2               16.00000000 W
PLW12               0.23901001 W
PLW13               0.19360000 W

F2 - Processing parameters
SI                        32768
SF                 75.4853010 MHz
WDW                          EM
SSB          0
LB                        1.00 Hz
GB           0
PC                        1.40
```

^{1}HNMR



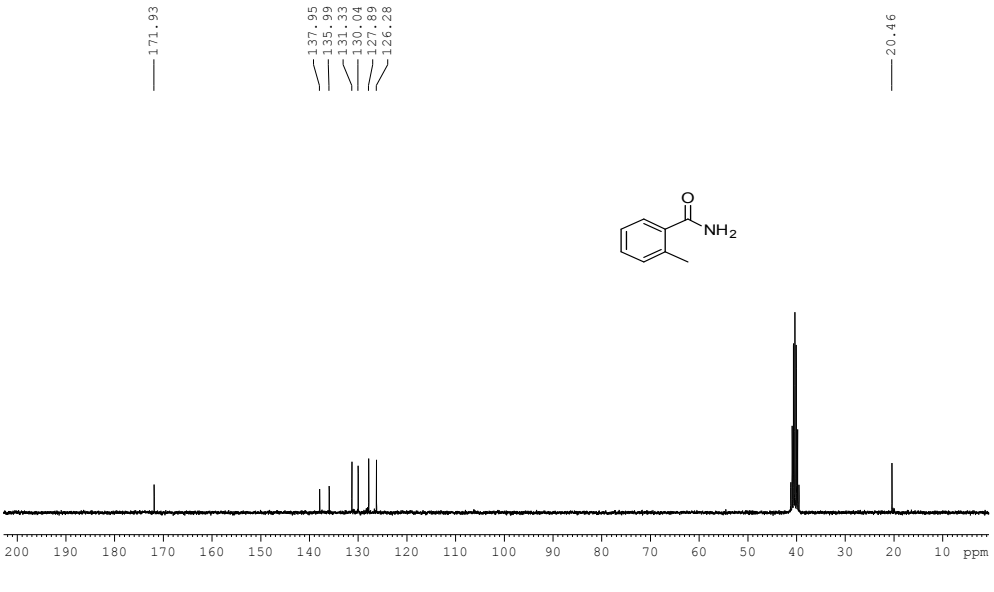

```
Current Data Parameters
NAME          SF 642 Z 2
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140424
Time              13.34
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               32768
SOLVENT           DMSO
NS                   32
DS                    4
SWH           6172.839 Hz
FIDRES        0.188380 Hz
AQ            2.6542079 sec
RG                  181
DW             81.000 usec
DE              6.00 usec
TE              296.2 K
D1          1.00000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                 1H
P1               11.00 usec
PL1       0 dB
PL1W       12.28312492 W
SFO1        300.1318534 MHz

F2 - Processing parameters
SI               32768
SF          300.1299893 MHz
WDW                 EM
SSB       0
LB                0.10 Hz
GB        0
PC                1.00
```

^{13}CNMR

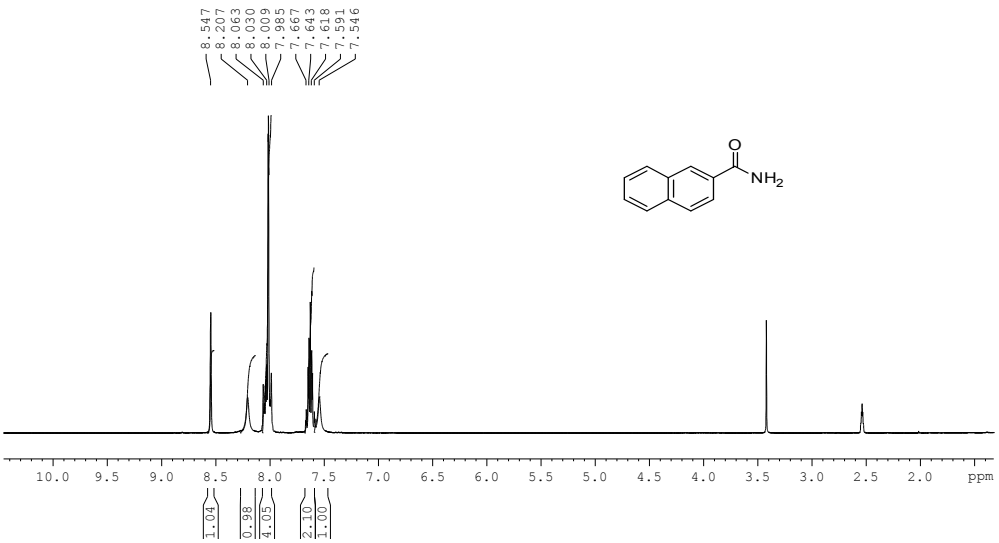



```
Current Data Parameters
NAME          SF 642 Z 2
EXPNO                 11
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140424
Time              13.49
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD               32768
SOLVENT           DMSO
NS                  256
DS                    4
SWH           21097.047 Hz
FIDRES        0.643831 Hz
AQ            0.7766016 sec
RG                32768
DW             23.700 usec
DE              6.00 usec
TE              296.8 K
D1          2.00000000 sec
d11         0.03000000 sec
DELTA       1.89999998 sec
TD0                   1
SFO1         75.4771825 MHz
NUC1                 13C
P1               9.60 usec
PLW1       -1.00000000 W
SFO2        300.1312005 MHz
NUC2                 1H
CPDPRG[2         waltz16
PCPD2          100.00 usec
PLW2       -1.00000000 W
PLW12      -1.00000000 W
PLW13      -1.00000000 W

F2 - Processing parameters
SI               32768
SF          75.4677169 MHz
WDW                 EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

^{1}HNMR



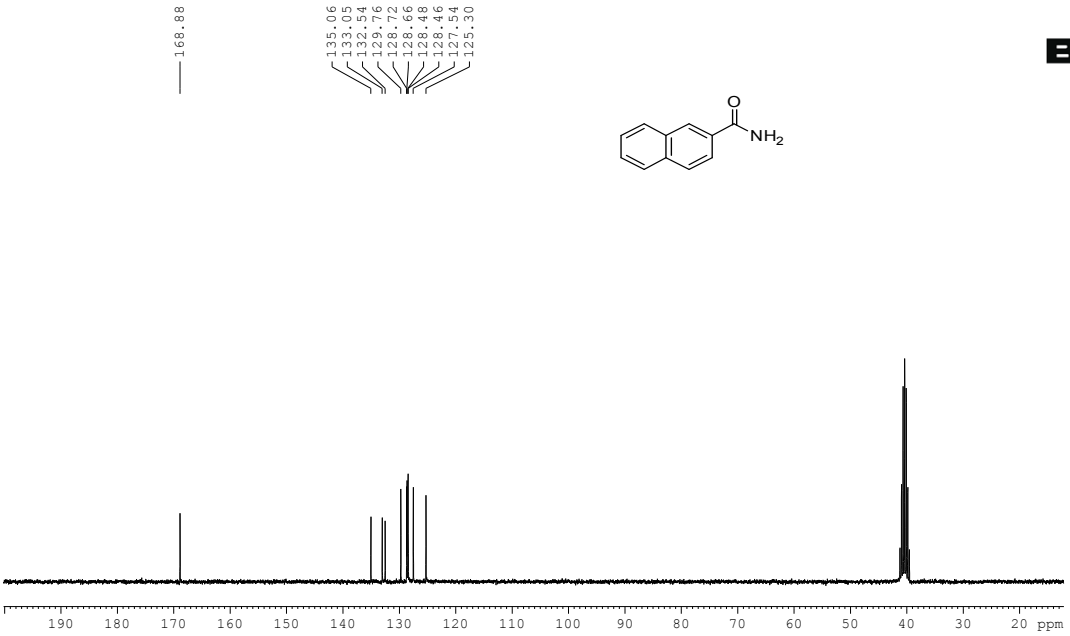
```
Current Data Parameters
NAME          SF 642 V 2
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140417
Time              12.42
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               32768
SOLVENT           DMSO
NS                   32
DS                    4
SWH            6172.839 Hz
FIDRES         0.188380 Hz
AQ             2.6542079 sec
RG                161.3
DW               81.000 usec
DE                6.00 usec
TE                295.6 K
D1           1.00000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                 1H
P1                11.00 usec
PL1       0 dB
PL1W       12.28312492 W
SFO1        300.1318534 MHz

F2 - Processing parameters
SI               32768
SF          300.1299891 MHz
WDW                 EM
SSB       0
LB                0.10 Hz
GB        0
PC                1.00
```

^{13}CNMR

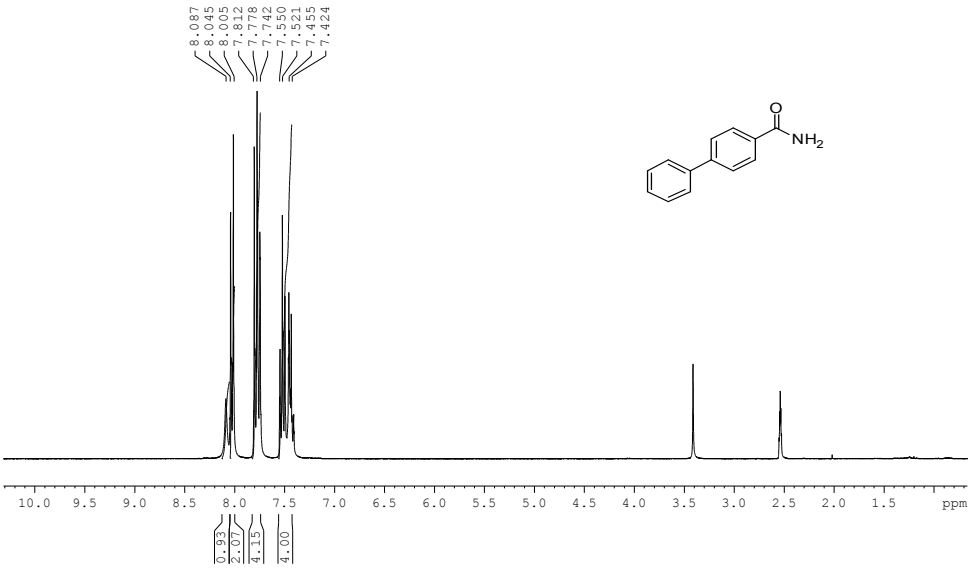


```
Current Data Parameters
NAME          SF 642 V 2
EXPNO                 12
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140417
Time              13.03
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD               32768
SOLVENT           DMSO
NS                  256
DS                    4
SWH           21097.047 Hz
FIDRES         0.643831 Hz
AQ             0.7766016 sec
RG                32768
DW               23.700 usec
DE                6.00 usec
TE                296.1 K
D1             2.00000000 sec
d11            0.03000000 sec
DELTA          1.89999998 sec
TD0                   1
SFO1         75.4771825 MHz
NUC1                 13C
P1                9.60 usec
PLW1         -1.00000000 W
SFO2        300.1312005 MHz
NUC2                 1H
CPDPRG[2          waltz16
PCPD2           100.00 usec
PLW2         -1.00000000 W
PLW12        -1.00000000 W
PLW13        -1.00000000 W

F2 - Processing parameters
SI               32768
SF          75.4677163 MHz
WDW                 EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

^{1}HNMR



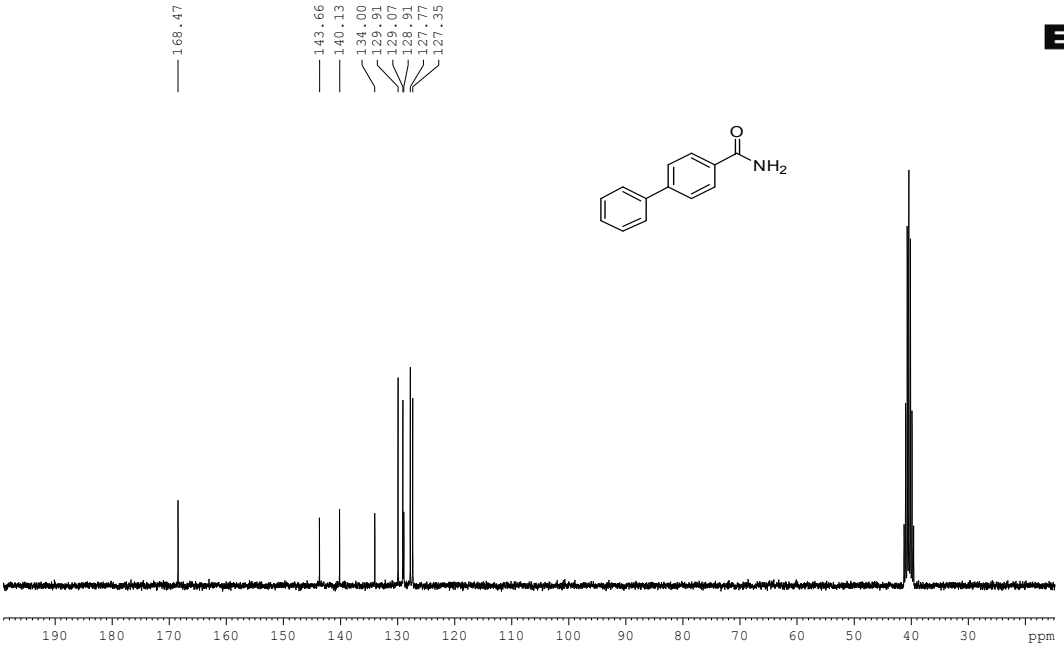

```
Current Data Parameters
NAME                  SF 642 Q
EXPNO                      10
PROCNO                      1

F2 - Acquisition Parameters
Date_               20140416
Time                   16.55
INSTRUM            FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG                 zg30
TD                     65536
SOLVENT                 DMSO
NS                         16
DS                          2
SWH                6103.516 Hz
FIDRES                0.093132 Hz
AQ                 5.3687091 sec
RG                    21.9821
DW                    81.920 usec
DE                     6.50 usec
TE                    298.5 K
D1                 1.00000000 sec
TD0                         1

======== CHANNEL f1 ========
SFO1               300.2018539 MHz
NUC1                       1H
P1                     11.00 usec
PLW1               16.00000000 W

F2 - Processing parameters
SI                     65536
SF                 300.1999873 MHz
WDW                        EM
SSB          0
LB                      0.30 Hz
GB           0
PC                      1.00
```

^{13}CNMR




```
Current Data Parameters
NAME                  SF 642 Q
EXPNO                      11
PROCNO                      1

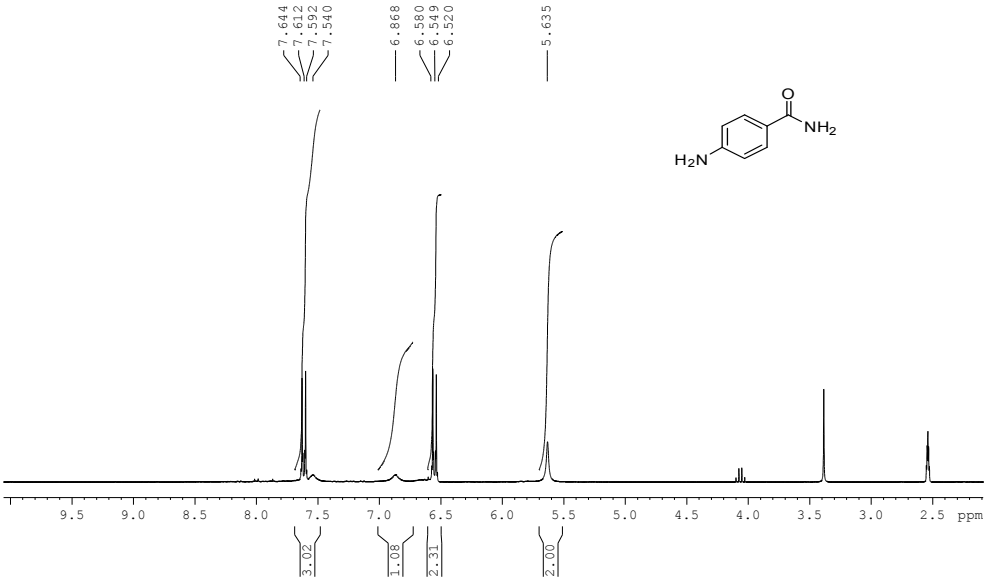
F2 - Acquisition Parameters
Date_               20140416
Time                   16.57
INSTRUM            FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG              zgpg30
TD                     65536
SOLVENT                 DMSO
NS                        256
DS                          4
SWH               24414.063 Hz
FIDRES                0.372529 Hz
AQ                 1.3421773 sec
RG                    501.187
DW                    20.480 usec
DE                     6.50 usec
TE                    298.5 K
D1                 2.00000000 sec
D11                0.03000000 sec
D31                0.00001140 sec
D40                0.02898005 sec
L4                         40
L5                         57
P32                   90.00 usec
TD0                         1

======== CHANNEL f1 ========
SFO1               75.4928982 MHz
NUC1                       13C
P1                     11.40 usec
PLW1               30.00000000 W

======== CHANNEL f2 ========
SFO2              300.2012008 MHz
NUC2                       1H
CPDPRG[2              waltz16
PCPD2                  90.00 usec
PLW2               16.00000000 W
PLW12               0.23901001 W
PLW13               0.19360000 W

F2 - Processing parameters
SI                     32768
SF                 75.4853170 MHz
WDW                        EM
SSB          0
LB                      1.00 Hz
GB           0
PC                      1.40
```

^{1}HNMR



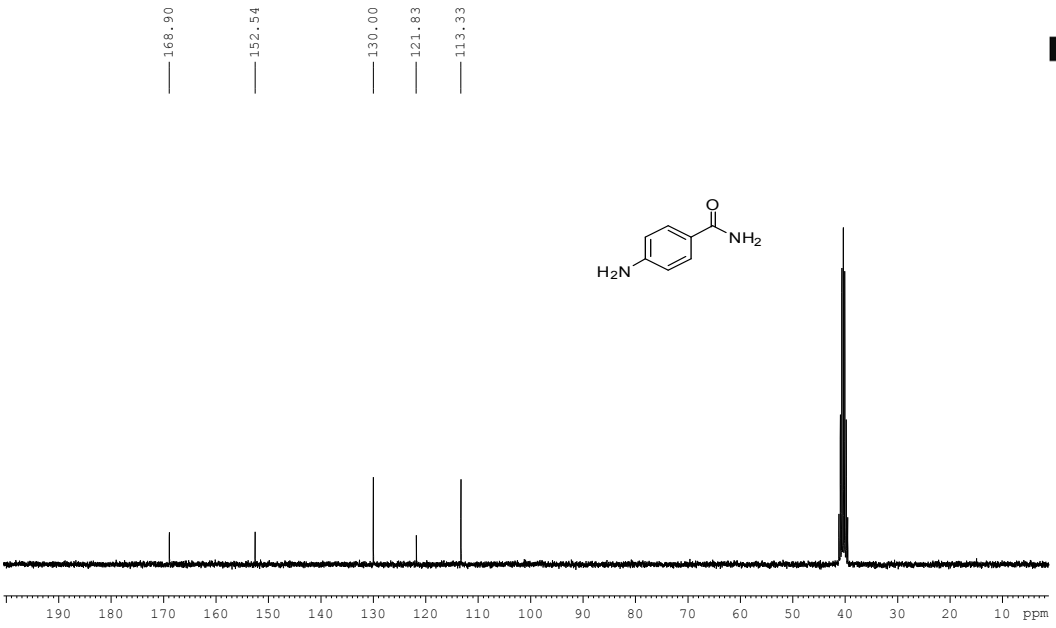

```
Current Data Parameters
NAME          SF 642 G 2
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140313
Time               7.42
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG          zg30
TD              32768
SOLVENT           DMSO
NS                  32
DS                   4
SWH           6172.839 Hz
FIDRES        0.188380 Hz
AQ            2.6542079 sec
RG                322.5
DW               81.000 usec
DE                6.00 usec
TE               295.3 K
D1           1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                11.00 usec
PL1       0 dB
PL1W        12.28312492 W
SFO1       300.1318534 MHz

F2 - Processing parameters
SI                32768
SF           300.1299892 MHz
WDW                  EM
SSB       0
LB                0.10 Hz
GB        0
PC                1.00
```

^{13}CNMR

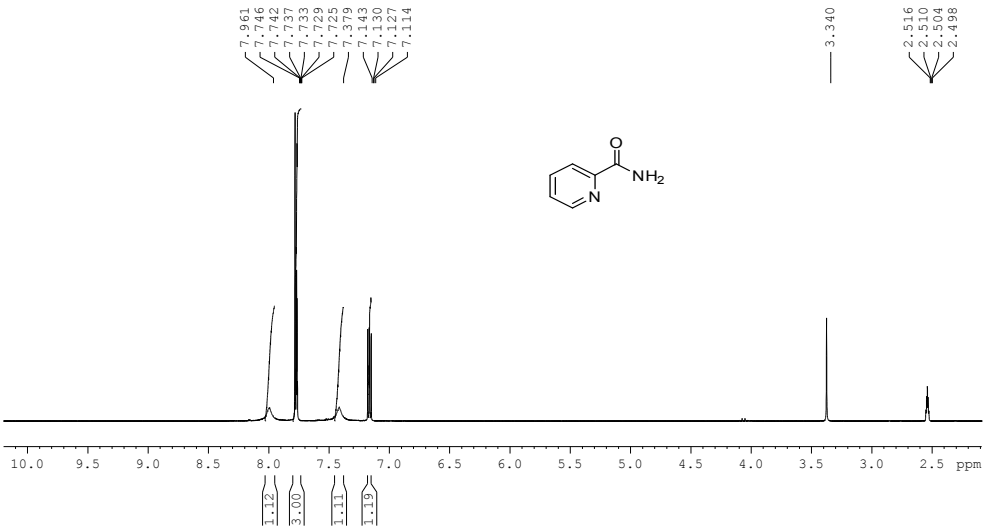



```
Current Data Parameters
NAME          SF 642 G 2
EXPNO                 11
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140313
Time               7.56
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD              32768
SOLVENT           DMSO
NS                 256
DS                   4
SWH          21097.047 Hz
FIDRES        0.643831 Hz
AQ            0.7766016 sec
RG                32768
DW               23.700 usec
DE                6.00 usec
TE               295.8 K
D1           2.00000000 sec
d11          0.03000000 sec
DELTA        1.89999998 sec
TD0                    1
SFO1         75.4771825 MHz
NUC1                  13C
P1                9.60 usec
PLW1        -1.00000000 W
SFO2        300.1312005 MHz
NUC2                  1H
CPDPRG[2         waltz16
PCPD2           100.00 usec
PLW2        -1.00000000 W
PLW12       -1.00000000 W
PLW13       -1.00000000 W

F2 - Processing parameters
SI                32768
SF           75.4677158 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

^{1}H NMR



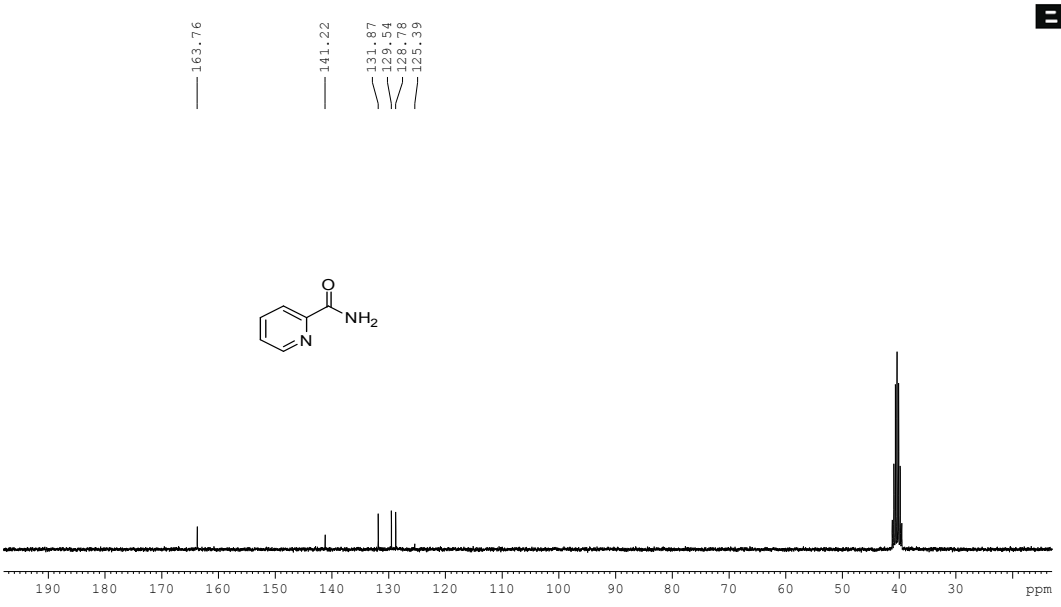

```
Current Data Parameters
NAME          SF 642 W 2
EXPNO                 12
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140417
Time              13.36
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG            zg30
TD                32768
SOLVENT            DMSO
NS                    32
DS                     4
SWH            6172.839 Hz
FIDRES         0.188380 Hz
AQ             2.6542079 sec
RG                574.7
DW               81.000 usec
DE                6.00 usec
TE                295.7 K
D1            1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                11.00 usec
PL1       0 dB
PL1W        12.28312492 W
SFO1       300.1318534 MHz

F2 - Processing parameters
SI                 32768
SF            300.1299892 MHz
WDW                   EM
SSB       0
LB                 0.10 Hz
GB        0
PC                 1.00
```

^{13}C NMR

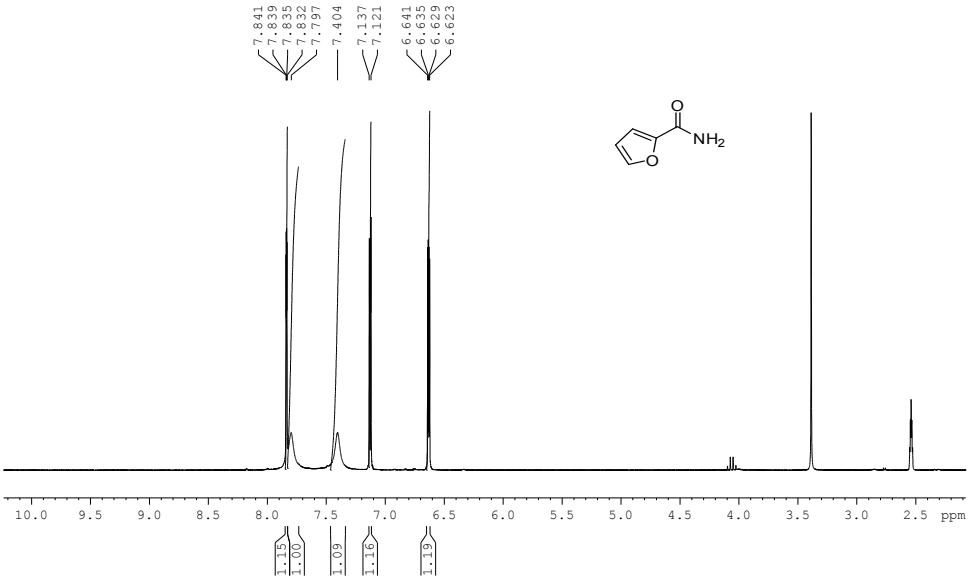



```
Current Data Parameters
NAME          SF 642 W 2
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140417
Time              13.25
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD                32768
SOLVENT            DMSO
NS                   256
DS                     4
SWH           21097.047 Hz
FIDRES         0.643831 Hz
AQ             0.7766016 sec
RG                32768
DW               23.700 usec
DE                6.00 usec
TE                296.2 K
D1            2.00000000 sec
d11           0.03000000 sec
DELTA         1.89999998 sec
TD0                    1
SFO1         75.4771825 MHz
NUC1                  13C
P1                 9.60 usec
PLW1         -1.00000000 W
SFO2        300.1312005 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              100.00 usec
PLW2         -1.00000000 W
PLW12        -1.00000000 W
PLW13        -1.00000000 W

F2 - Processing parameters
SI                 32768
SF            75.4677159 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```

^{1}HNMR



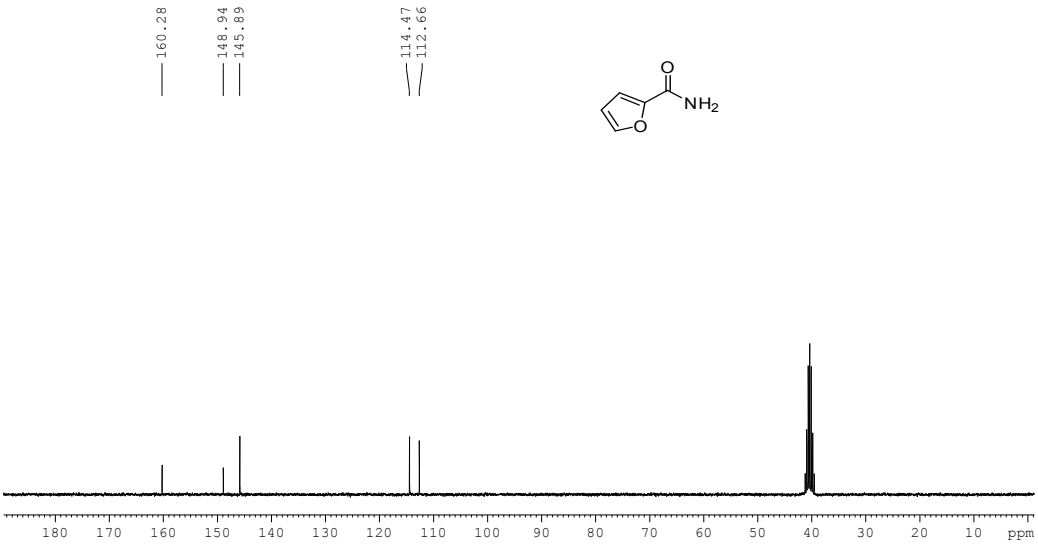
```
Current Data Parameters
NAME                  SF 642 S 1
EXPNO                         10
PROCNO                         1

F2 - Acquisition Parameters
Date_                  20140424
Time                       9.23
INSTRUM                  AV300
PROBHD    5 mm PABBO BB-
PULPROG                   zg30
TD                       32768
SOLVENT                    DMSO
NS                           32
DS                            4
SWH                   6172.839 Hz
FIDRES                0.188380 Hz
AQ                    2.6542079 sec
RG                        322.5
DW                     81.000 usec
DE                      6.00 usec
TE                       296.0 K
D1                    1.00000000 sec
TD0                            1

======== CHANNEL f1 ========
NUC1                          1H
P1                         11.00 usec
PL1         0 dB
PL1W                 12.28312492 W
SFO1                 300.1318534 MHz

F2 - Processing parameters
SI                         32768
SF                   300.1299891 MHz
WDW                           EM
SSB         0
LB                          0.10 Hz
GB          0
PC                          1.00
```

^{13}CNMR

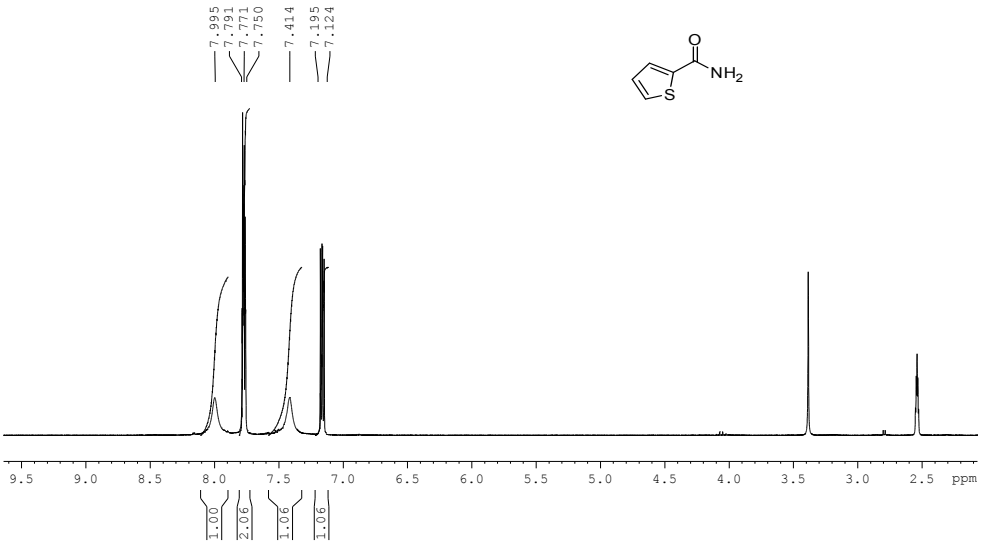


```
Current Data Parameters
NAME                  SF 642 S 1
EXPNO                         11
PROCNO                         1

F2 - Acquisition Parameters
Date_                  20140424
Time                       9.37
INSTRUM                  AV300
PROBHD    5 mm PABBO BB-
PULPROG                 zgpg30
TD                       32768
SOLVENT                    DMSO
NS                          256
DS                            4
SWH                  21097.047 Hz
FIDRES                0.643831 Hz
AQ                    0.7766016 sec
RG                        32768
DW                     23.700 usec
DE                      6.00 usec
TE                       296.6 K
D1                    2.00000000 sec
d11                   0.03000000 sec
DELTA                 1.89999998 sec
TD0                            1
SFO1                 75.4771825 MHz
NUC1                         13C
P1                          9.60 usec
PLW1                 -1.00000000 W
SFO2                 300.1312005 MHz
NUC2                          1H
CPDPRG[2                waltz16
PCPD2                     100.00 usec
PLW2                 -1.00000000 W
PLW12                -1.00000000 W
PLW13                -1.00000000 W

F2 - Processing parameters
SI                         32768
SF                   75.4677159 MHz
WDW                           EM
SSB         0
LB                          1.00 Hz
GB          0
PC                          1.40
```

^{1}HNMR



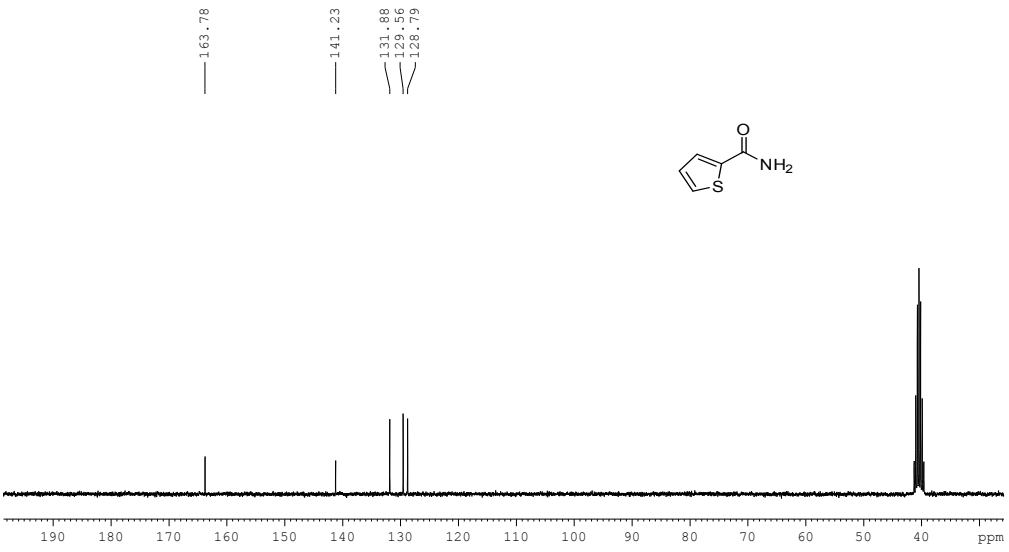

```
Current Data Parameters
NAME                  SF 642 U
EXPNO                       10
PROCNO                       1

F2 - Acquisition Parameters
Date_               20140424
Time                   10.29
INSTRUM                AV300
PROBHD   5 mm PABBO BB-
PULPROG                zg30
TD                    32768
SOLVENT                DMSO
NS                        32
DS                         4
SWH                6172.839 Hz
FIDRES             0.188380 Hz
AQ                 2.6542079 sec
RG                     322.5
DW                    81.000 usec
DE                     6.00 usec
TE                    296.2 K
D1                 1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     11.00 usec
PL1          0 dB
PL1W           12.28312492 W
SFO1          300.1318534 MHz

F2 - Processing parameters
SI                    32768
SF                300.1299891 MHz
WDW                      EM
SSB          0
LB                     0.10 Hz
GB           0
PC                     1.00
```

^{13}CNMR

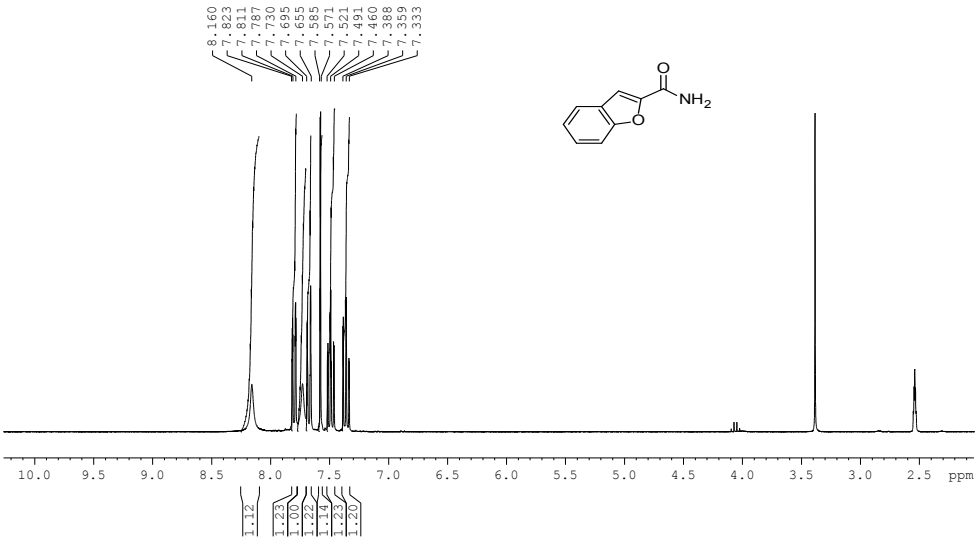



```
Current Data Parameters
NAME                  SF 642 U
EXPNO                       11
PROCNO                       1

F2 - Acquisition Parameters
Date_               20140424
Time                   10.42
INSTRUM                AV300
PROBHD   5 mm PABBO BB-
PULPROG             zgpg30
TD                    32768
SOLVENT                DMSO
NS                       256
DS                         4
SWH               21097.047 Hz
FIDRES             0.643831 Hz
AQ                 0.7766016 sec
RG                      3276
DW                    23.700 usec
DE                     6.00 usec
TE                    296.7 K
D1                 2.00000000 sec
d11                0.03000000 sec
DELTA              1.89999998 sec
TD0                        1
SFO1              75.4771825 MHz
NUC1                      13C
P1                     9.60 usec
PLW1              -1.00000000 W
SFO2             300.1312005 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                100.00 usec
PLW2              -1.00000000 W
PLW12             -1.00000000 W
PLW13             -1.00000000 W

F2 - Processing parameters
SI                    32768
SF                75.4677151 MHz
WDW                      EM
SSB          0
LB                     1.00 Hz
GB           0
PC                     1.40
```

^{1}HNMR



BRUKER

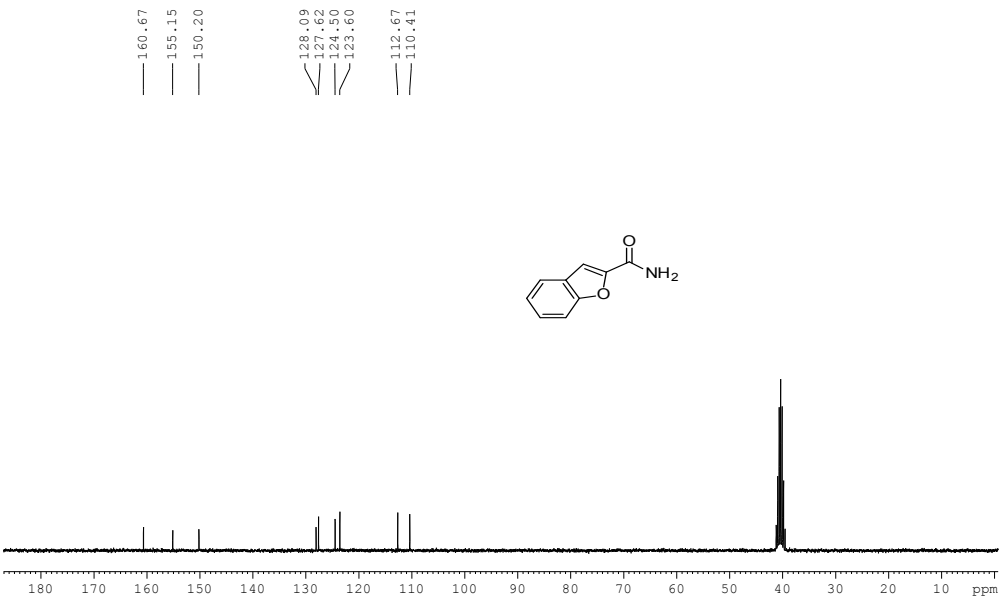
```
Current Data Parameters
NAME                  SF 642 X
EXPNO                       10
PROCNO                       1

F2 - Acquisition Parameters
Date_               20140417
Time                   13.51
INSTRUM                AV300
PROBHD    5 mm PABBO BB-
PULPROG                zg30
TD                    32768
SOLVENT                DMSO
NS                       32
DS                        4
SWH                6172.839 Hz
FIDRES            0.188380 Hz
AQ                2.6542079 sec
RG                     322.5
DW                  81.000 usec
DE                   6.00 usec
TE                   295.7 K
D1              1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                     11.00 usec
PL1       0 dB
PL1W          12.28312492 W
SFO1          300.1318534 MHz

F2 - Processing parameters
SI                       32768
SF            300.1299892 MHz
WDW                         EM
SSB       0
LB                      0.10 Hz
GB        0
PC                      1.00
```

^{13}CNMR



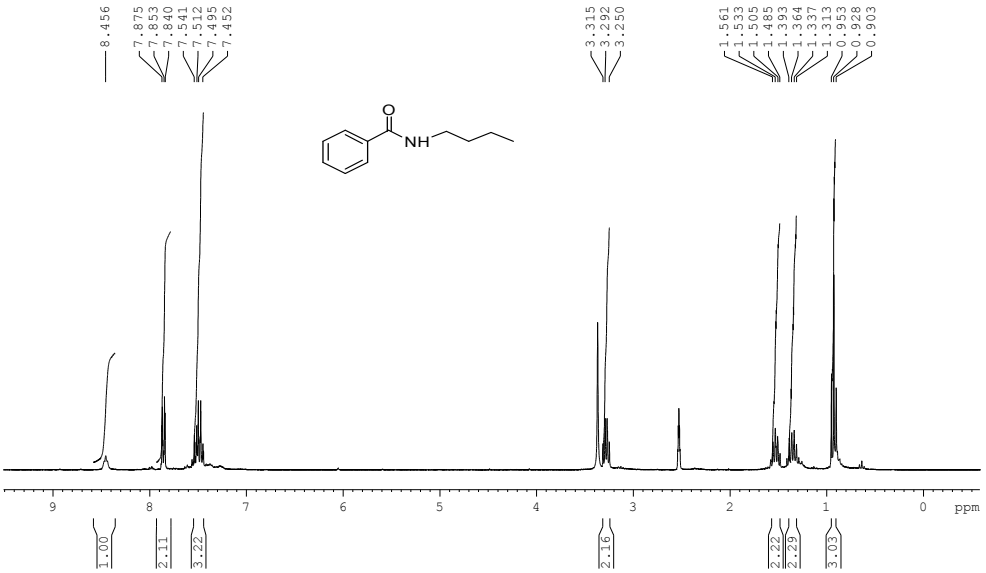
BRUKER

```
Current Data Parameters
NAME                  SF 642 X
EXPNO                       12
PROCNO                       1

F2 - Acquisition Parameters
Date_               20140417
Time                   14.12
INSTRUM                AV300
PROBHD    5 mm PABBO BB-
PULPROG             zgpg30
TD                    32768
SOLVENT                DMSO
NS                      256
DS                        4
SWH               21097.047 Hz
FIDRES            0.643831 Hz
AQ                0.7766016 sec
RG                     32768
DW                  23.700 usec
DE                   6.00 usec
TE                   296.2 K
D1              2.00000000 sec
d11             0.03000000 sec
DELTA           1.89999998 sec
TD0                          1
SFO1           75.4771825 MHz
NUC1                       13C
P1                     9.60 usec
PLW1          -1.00000000 W
SFO2          300.1312005 MHz
NUC2                        1H
CPDPRG[2            waltz16
PCPD2                100.00 usec
PLW2          -1.00000000 W
PLW12         -1.00000000 W
PLW13         -1.00000000 W

F2 - Processing parameters
SI                       32768
SF            75.4677170 MHz
WDW                         EM
SSB       0
LB                      1.00 Hz
GB        0
PC                      1.40
```

^{1}HNMR



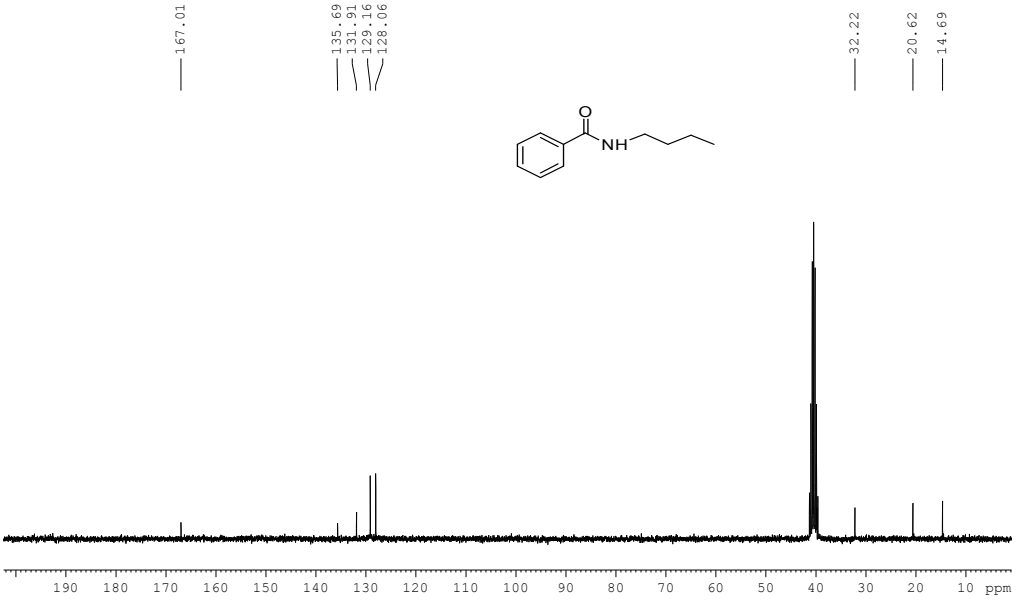

```
Current Data Parameters
NAME          SF 642 N 2
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140411
Time_               0.48
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               32768
SOLVENT           DMSO
NS                   32
DS                    4
SWH            6172.839 Hz
FIDRES         0.188380 Hz
AQ             2.6542079 sec
RG                322.5
DW               81.000 usec
DE                6.00 usec
TE               295.6 K
D1             1.00000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                 1H
P1                11.00 usec
PL1       0 dB
PL1W       12.28312492 W
SFO1       300.1318534 MHz

F2 - Processing parameters
SI               32768
SF         300.1299922 MHz
WDW                  EM
SSB       0
LB                0.10 Hz
GB        0
PC                1.00
```

^{13}CNMR

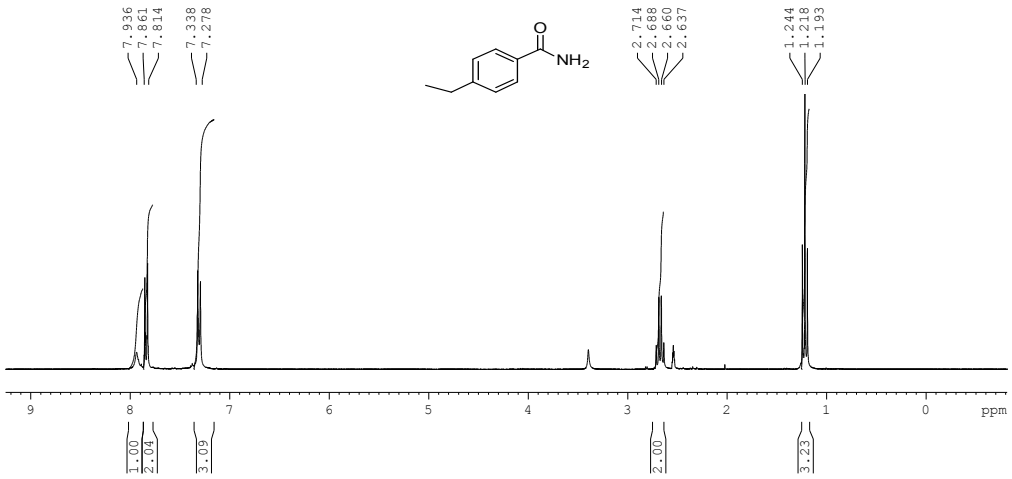



```
Current Data Parameters
NAME          SF 642 N 2
EXPNO                 11
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140411
Time_               1.02
INSTRUM           AV300
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD               32768
SOLVENT           DMSO
NS                  256
DS                    4
SWH           21097.047 Hz
FIDRES         0.643831 Hz
AQ             0.7766016 sec
RG                32768
DW               23.700 usec
DE                6.00 usec
TE               296.1 K
D1             2.00000000 sec
d11            0.03000000 sec
DELTA          1.89999998 sec
TD0                   1
SFO1           75.4771825 MHz
NUC1                 13c
P1                9.60 usec
PLW1          -1.00000000 W
SFO2          300.1312005 MHz
NUC2                 1H
CPDPRG[2          waltz16
PCPD2           100.00 usec
PLW2          -1.00000000 W
PLW12         -1.00000000 W
PLW13         -1.00000000 W

F2 - Processing parameters
SI               32768
SF            75.4677113 MHz
WDW                  EM
SSB       0
LB             1.00 Hz
GB        0
PC                1.40
```

^{1}HNMR



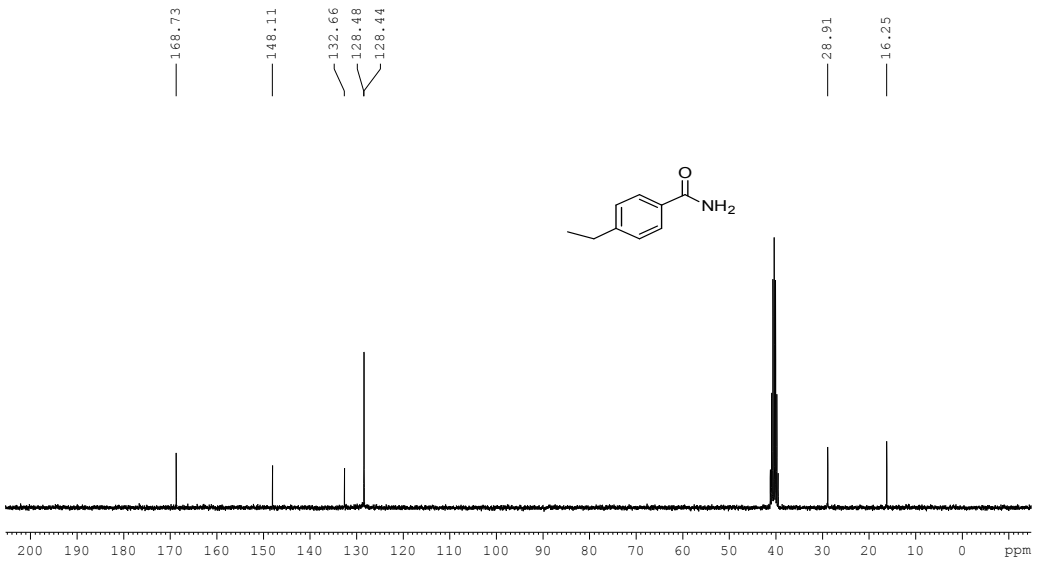

```
Current Data Parameters
NAME                  SF 643 A
EXPNO                       10
PROCNO                       1

F2 - Acquisition Parameters
Date_               20140424
Time                    7.39
INSTRUM           FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG                 zg30
TD                     65536
SOLVENT                 DMSO
NS                        16
DS                         2
SWH                6103.516 Hz
FIDRES                0.093132 Hz
AQ                 5.3687091 sec
RG                      22.8402
DW                     81.920 usec
DE                      6.50 usec
TE                     298.3 K
D1                 1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
SFO1             300.2018539 MHz
NUC1                       1H
P1                      11.00 usec
PLW1            16.00000000 W

F2 - Processing parameters
SI                         65536
SF               300.1999873 MHz
WDW                          EM
SSB          0
LB                       0.30 Hz
GB           0
PC                       1.00
```

^{13}CNMR




```
Current Data Parameters
NAME                  SF 643 A
EXPNO                       11
PROCNO                       1

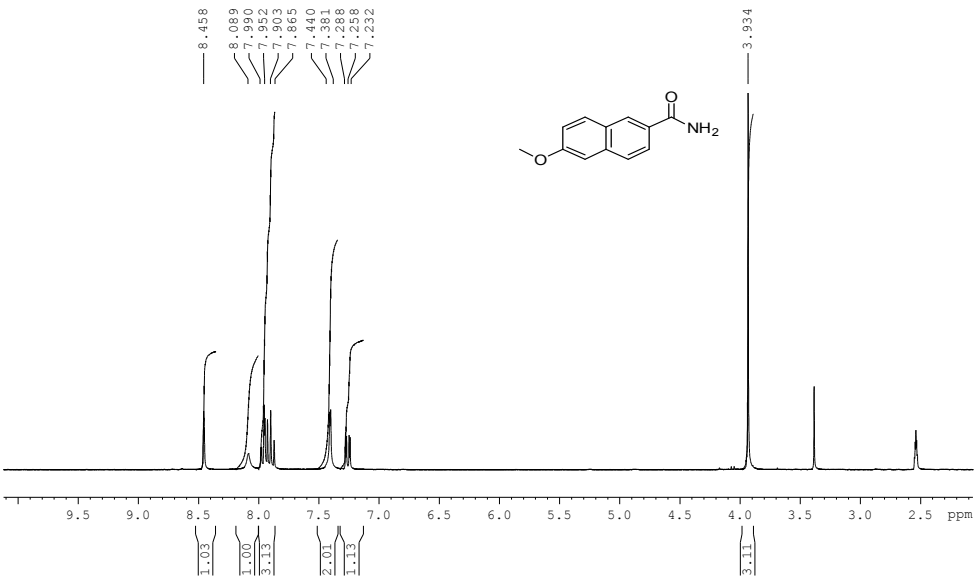
F2 - Acquisition Parameters
Date_               20140424
Time                    7.42
INSTRUM           FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG             zgpg30
TD                     65536
SOLVENT                 DMSO
NS                       256
DS                         4
SWH               24414.063 Hz
FIDRES                0.372529 Hz
AQ                 1.3421773 sec
RG                      501.187
DW                     20.480 usec
DE                      6.50 usec
TE                     298.3 K
D1                 2.00000000 sec
D11                0.03000000 sec
D31                0.00001140 sec
D40                0.02898005 sec
L4                          40
L5                          57
P32                    90.00 usec
TD0                          1

======== CHANNEL f1 ========
SFO1              75.4928982 MHz
NUC1                       13C
P1                      11.40 usec
PLW1            30.00000000 W

======== CHANNEL f2 ========
SFO2             300.2012008 MHz
NUC2                       1H
CPDPRG[2              waltz16
PCPD2                   90.00 usec
PLW2            16.00000000 W
PLW12            0.23901001 W
PLW13            0.19360000 W

F2 - Processing parameters
SI                         32768
SF               75.4853167 MHz
WDW                          EM
SSB          0
LB                       1.00 Hz
GB           0
PC                       1.40
```

^{1}HNMR



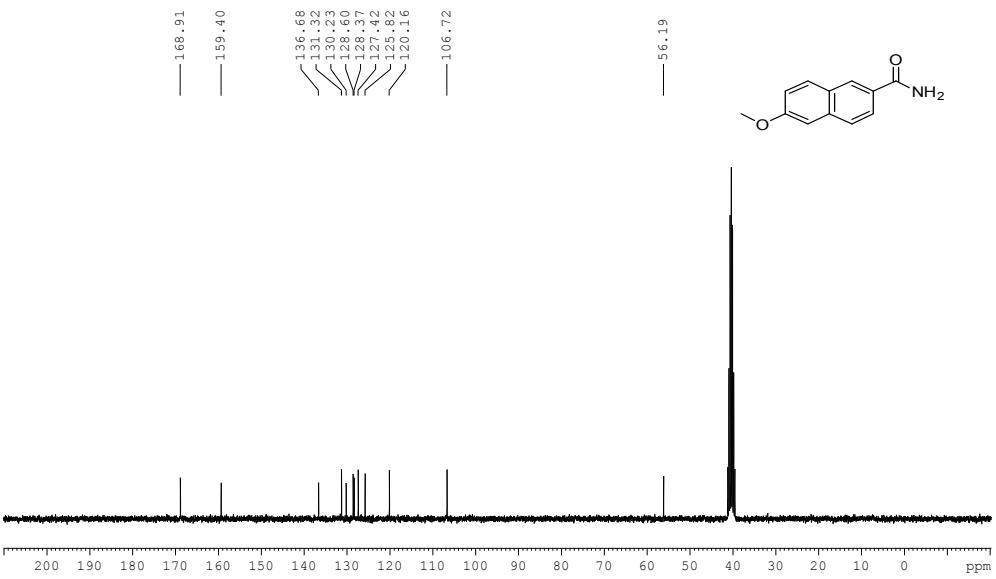
```
Current Data Parameters
NAME                  SF 643 D 2
EXPNO                         10
PROCNO                         1

F2 - Acquisition Parameters
Date_                  20140428
Time                      13.38
INSTRUM              FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG                   zg30
TD                       65536
SOLVENT                    DMSO
NS                           16
DS                            2
SWH                   6103.516 Hz
FIDRES                0.093132 Hz
AQ                    5.3687091 sec
RG                       34.8102
DW                       81.920 usec
DE                         6.50 usec
TE                        299.2 K
D1                    1.00000000 sec
TD0                            1

======== CHANNEL f1 ========
SFO1                300.2018539 MHz
NUC1                         1H
P1                        11.00 usec
PLW1                16.00000000 W

F2 - Processing parameters
SI                           65536
SF                  300.1999877 MHz
WDW                             EM
SSB                0
LB                            0.30 Hz
GB                 0
PC                            1.00
```

^{13}CNMR



```
Current Data Parameters
NAME                  SF 643 D 2
EXPNO                         11
PROCNO                         1

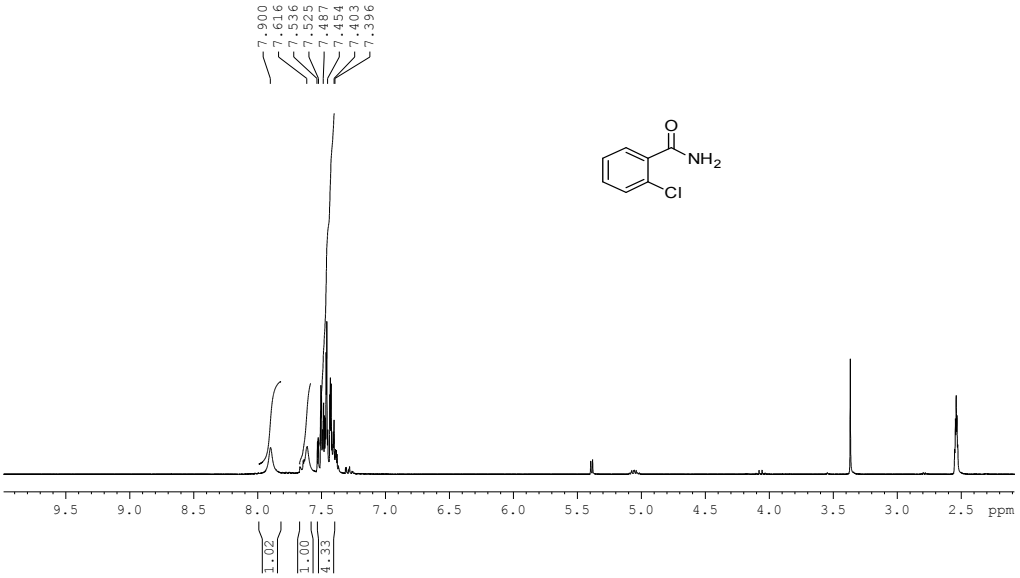
F2 - Acquisition Parameters
Date_                  20140428
Time                      13.41
INSTRUM              FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG                 zgpg30
TD                       65536
SOLVENT                    DMSO
NS                           256
DS                             4
SWH                  24414.063 Hz
FIDRES                0.372529 Hz
AQ                    1.3421773 sec
RG                       501.187
DW                       20.480 usec
DE                         6.50 usec
TE                        299.2 K
D1                    2.00000000 sec
D11                   0.03000000 sec
D31                   0.00001140 sec
D40                   0.02898005 sec
L4                            40
L5                            57
P32                      90.00 usec
TD0                            1

======== CHANNEL f1 ========
SFO1                 75.4928982 MHz
NUC1                         13C
P1                        11.40 usec
PLW1                30.00000000 W

======== CHANNEL f2 ========
SFO2                300.2012008 MHz
NUC2                         1H
CPDPRG[2                waltz16
PCPD2                     90.00 usec
PLW2                16.00000000 W
PLW12                0.23901001 W
PLW13                0.19360000 W

F2 - Processing parameters
SI                           32768
SF                   75.4853178 MHz
WDW                             EM
SSB                0
LB                            1.00 Hz
GB                 0
PC                            1.40
```

^{1}HNMR



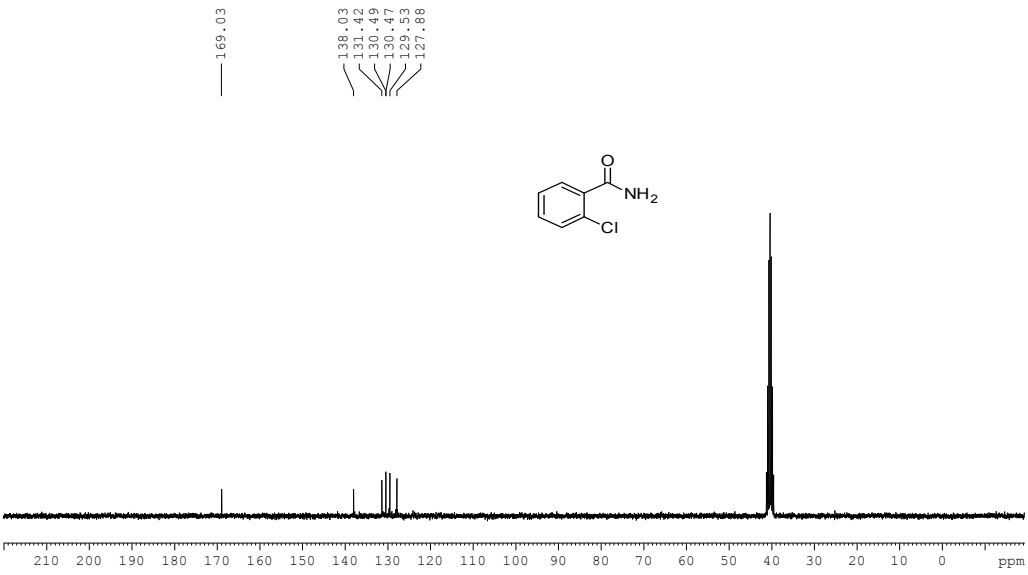

```
Current Data Parameters
NAME                  SF 643 F 1
EXPNO                        10
PROCNO                        1

F2 - Acquisition Parameters
Date_                 20140428
Time                     14.12
INSTRUM              FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG                   zg30
TD                       65536
SOLVENT                   DMSO
NS                           16
DS                            2
SWH                   6103.516 Hz
FIDRES                0.093132 Hz
AQ                    5.3687091 sec
RG                       56.367
DW                       81.920 usec
DE                        6.50 usec
TE                       299.0 K
D1                    1.00000000 sec
TD0                           1

======== CHANNEL f1 ========
SFO1                300.2018539 MHz
NUC1                        1H
P1                       11.00 usec
PLW1                16.00000000 W

F2 - Processing parameters
SI                        65536
SF                  300.1999877 MHz
WDW                          EM
SSB                 0
LB                        0.30 Hz
GB                  0
PC                        1.00
```

^{13}CNMR




```
Current Data Parameters
NAME                  SF 643 F 1
EXPNO                        11
PROCNO                        1

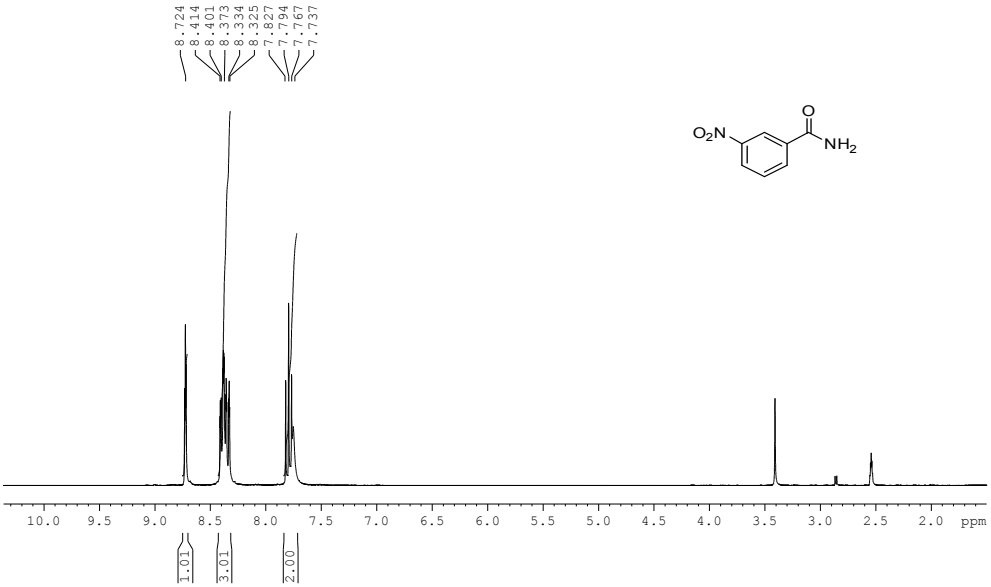
F2 - Acquisition Parameters
Date_                 20140428
Time                     14.15
INSTRUM              FOURIER300
PROBHD    5 mm DUL 13C-1
PULPROG              zgpg30
TD                       65536
SOLVENT                   DMSO
NS                          256
DS                            4
SWH                  24414.063 Hz
FIDRES                0.372529 Hz
AQ                    1.3421773 sec
RG                       501.187
DW                        20.480 usec
DE                        6.50 usec
TE                       299.0 K
D1                    2.00000000 sec
D11                   0.03000000 sec
D31                   0.00001140 sec
D40                   0.02898005 sec
L4                           40
L5                           57
P32                      90.00 usec
TD0                           1

======== CHANNEL f1 ========
SFO1                75.4928982 MHz
NUC1                        13C
P1                       11.40 usec
PLW1                30.00000000 W

======== CHANNEL f2 ========
SFO2                300.2012008 MHz
NUC2                        1H
CPDPRG[2                waltz16
PCPD2                    90.00 usec
PLW2                16.00000000 W
PLW12                0.23901001 W
PLW13                0.19360000 W

F2 - Processing parameters
SI                        32768
SF                  75.4853185 MHz
WDW                          EM
SSB                 0
LB                        1.00 Hz
GB                  0
PC                        1.40
```

^{1}HNMR



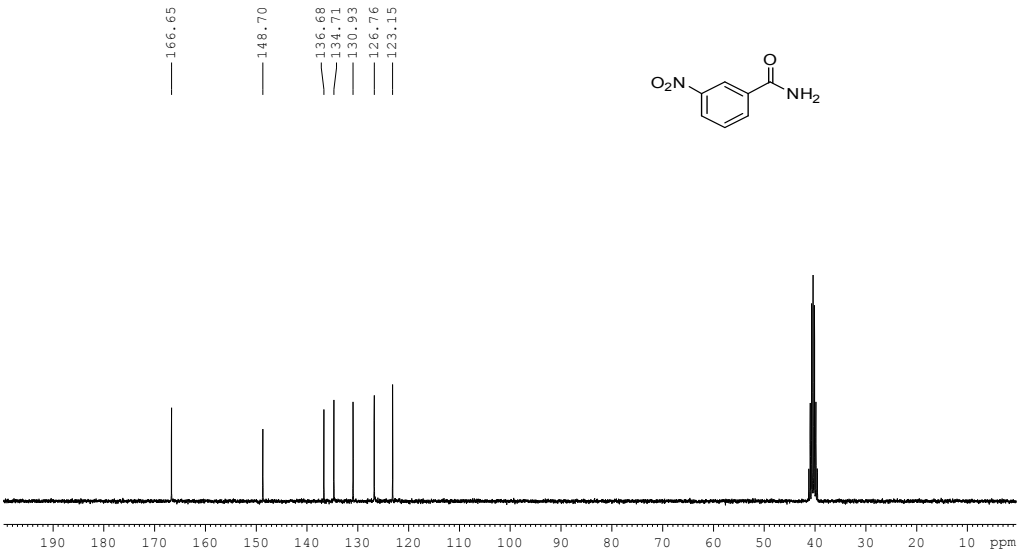

```
Current Data Parameters
NAME          SF 643 H 2
EXPNO                 10
PROCNO                 1

F2 - Acquisition Parameters
Date_          20140429
Time              10.29
INSTRUM       FOURIER300
PROBHD   5 mm DUL 13C-1
PULPROG             zg30
TD                65536
SOLVENT            DMSO
NS                    16
DS                     2
SWH            6103.516 Hz
FIDRES            0.093132 Hz
AQ             5.3687091 sec
RG                21.445
DW                81.920 usec
DE                 6.50 usec
TE                299.0 K
D1             1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          300.2018539 MHz
NUC1                   1H
P1                 11.00 usec
PLW1          16.00000000 W

F2 - Processing parameters
SI                 65536
SF            300.1999876 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

^{13}CNMR




```
Current Data Parameters
NAME          SF 643 H 2
EXPNO                 11
PROCNO                 1

F2 - Acquisition Parameters
Date_          20140429
Time              10.32
INSTRUM       FOURIER300
PROBHD   5 mm DUL 13C-1
PULPROG          zgpg30
TD                65536
SOLVENT            DMSO
NS                   256
DS                     4
SWH           24414.063 Hz
FIDRES            0.372529 Hz
AQ             1.3421773 sec
RG                501.187
DW                20.480 usec
DE                 6.50 usec
TE                299.0 K
D1             2.00000000 sec
D11            0.03000000 sec
D31            0.00001140 sec
D40            0.02898005 sec
L4                    40
L5                    57
P32                90.00 usec
TD0                    1

======== CHANNEL f1 ========
SFO1          75.4928982 MHz
NUC1                  13C
P1                 11.40 usec
PLW1          30.00000000 W

======== CHANNEL f2 ========
SFO2          300.2012008 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2          16.00000000 W
PLW12          0.23901001 W
PLW13          0.19360000 W

F2 - Processing parameters
SI                 32768
SF            75.4853147 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```