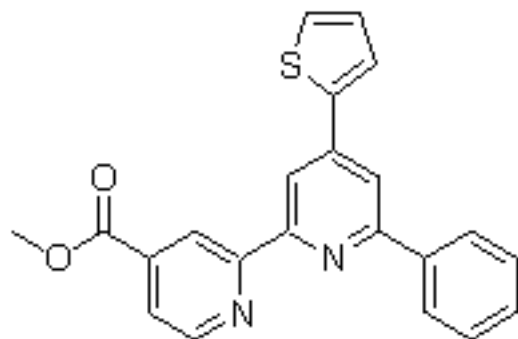


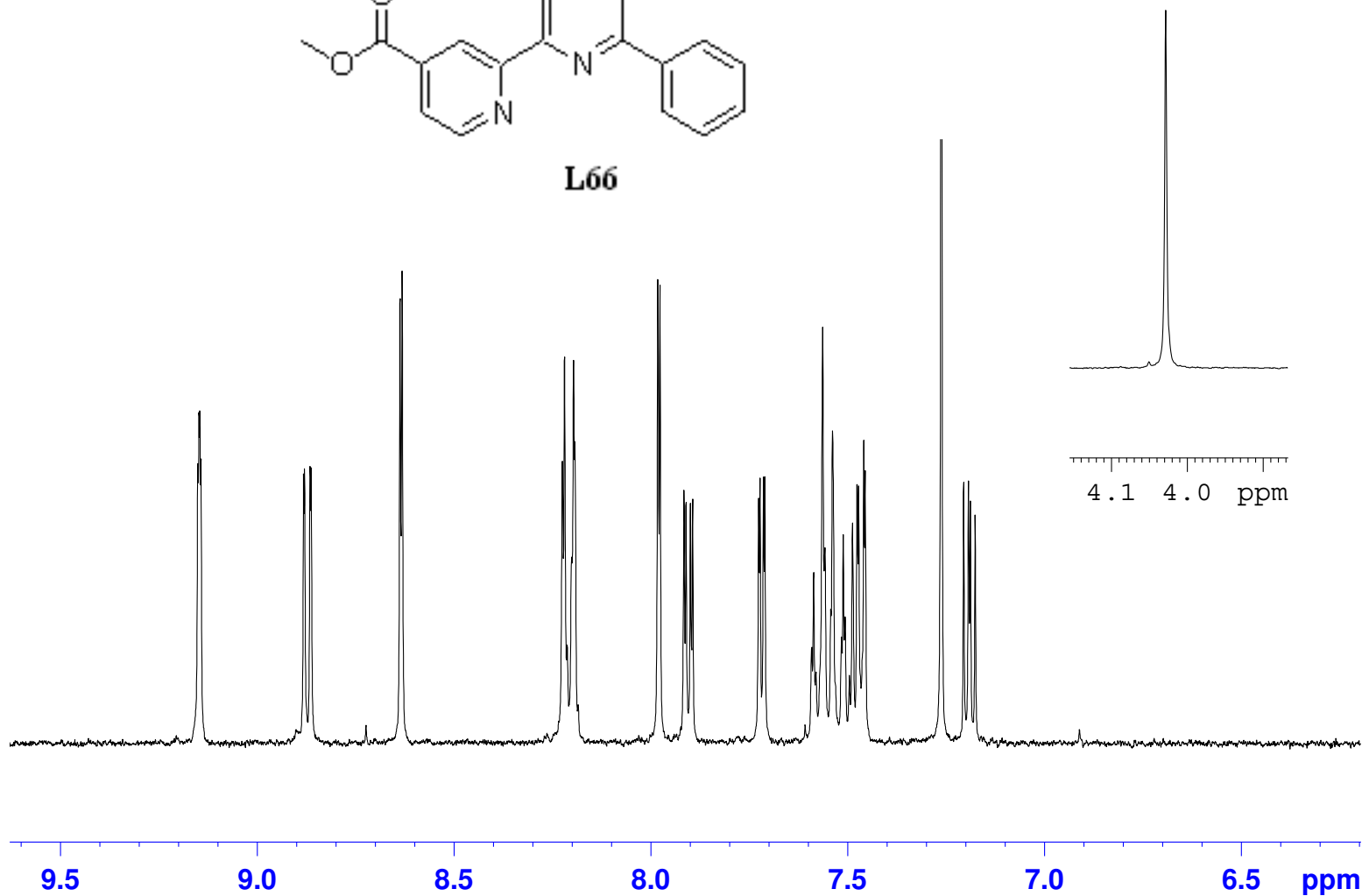
# Photophysical Properties of New Cyclometalated Ruthenium Complexes and Their Use in Dye Sensitized Solar Cells

**Hawraa Kisserwan, Amanda Kamar, Tharallah Shoker and Tarek H. Ghaddar\***  
Department of Chemistry, American University of Beirut, Beirut 11-0236, Lebanon

## Supporting Information



**L66**

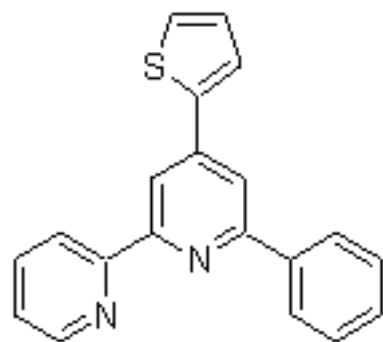


Current Data Parameters  
NAME Mar02-2010-ghad  
EXPNO 10  
PROCNO 1

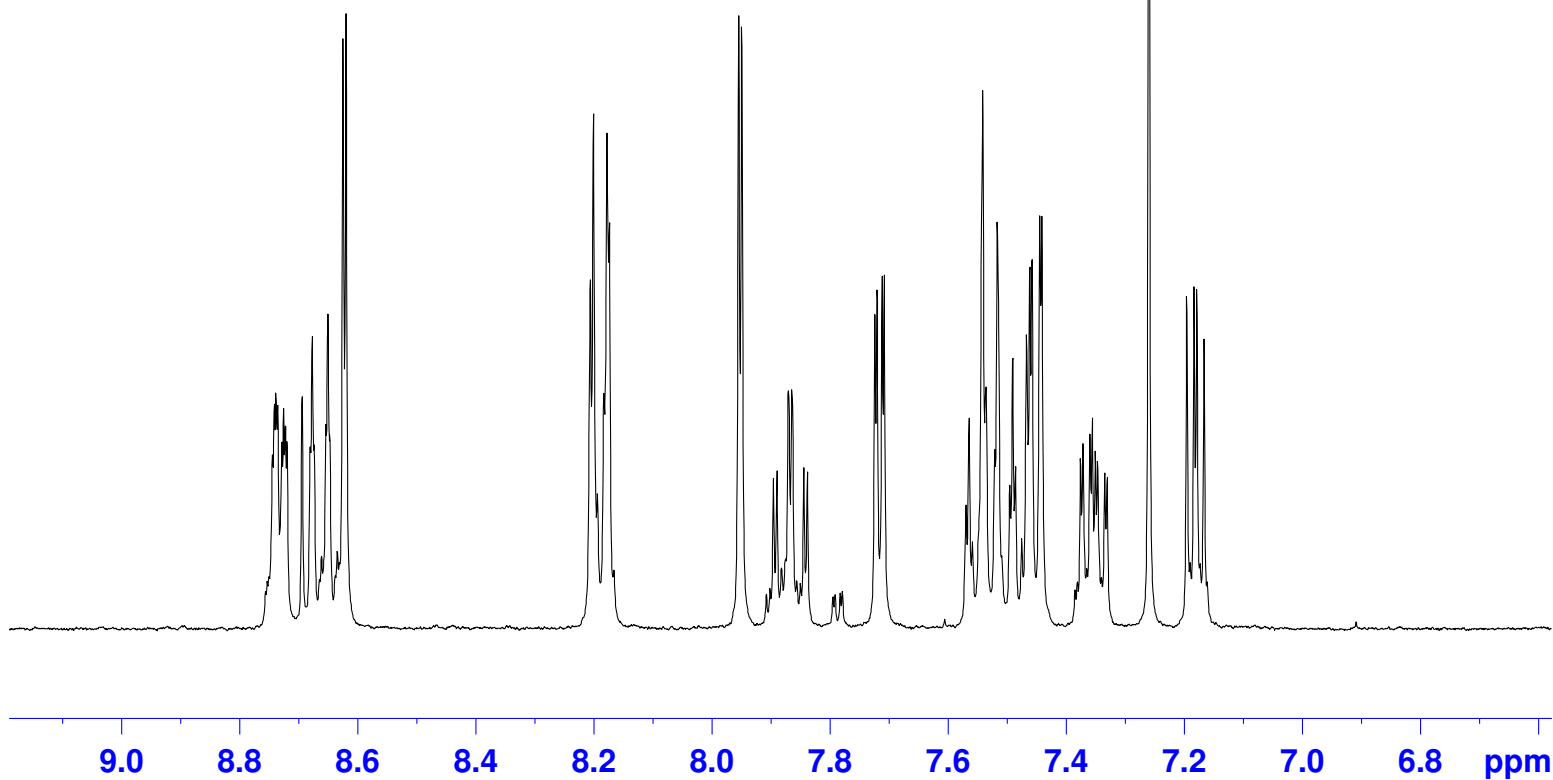
F2 - Acquisition Parameters  
Date\_ 20100302  
Time 9.23  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT CDC13  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 1448.2  
DW 80.800 usec  
DE 6.00 usec  
TE 290.8 K  
D1 1.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.130055 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



**L65**

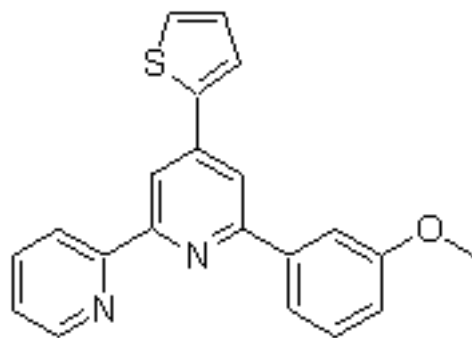


Current Data Parameters  
NAME Feb22-2010-ghad  
EXPNO 10  
PROCNO 1

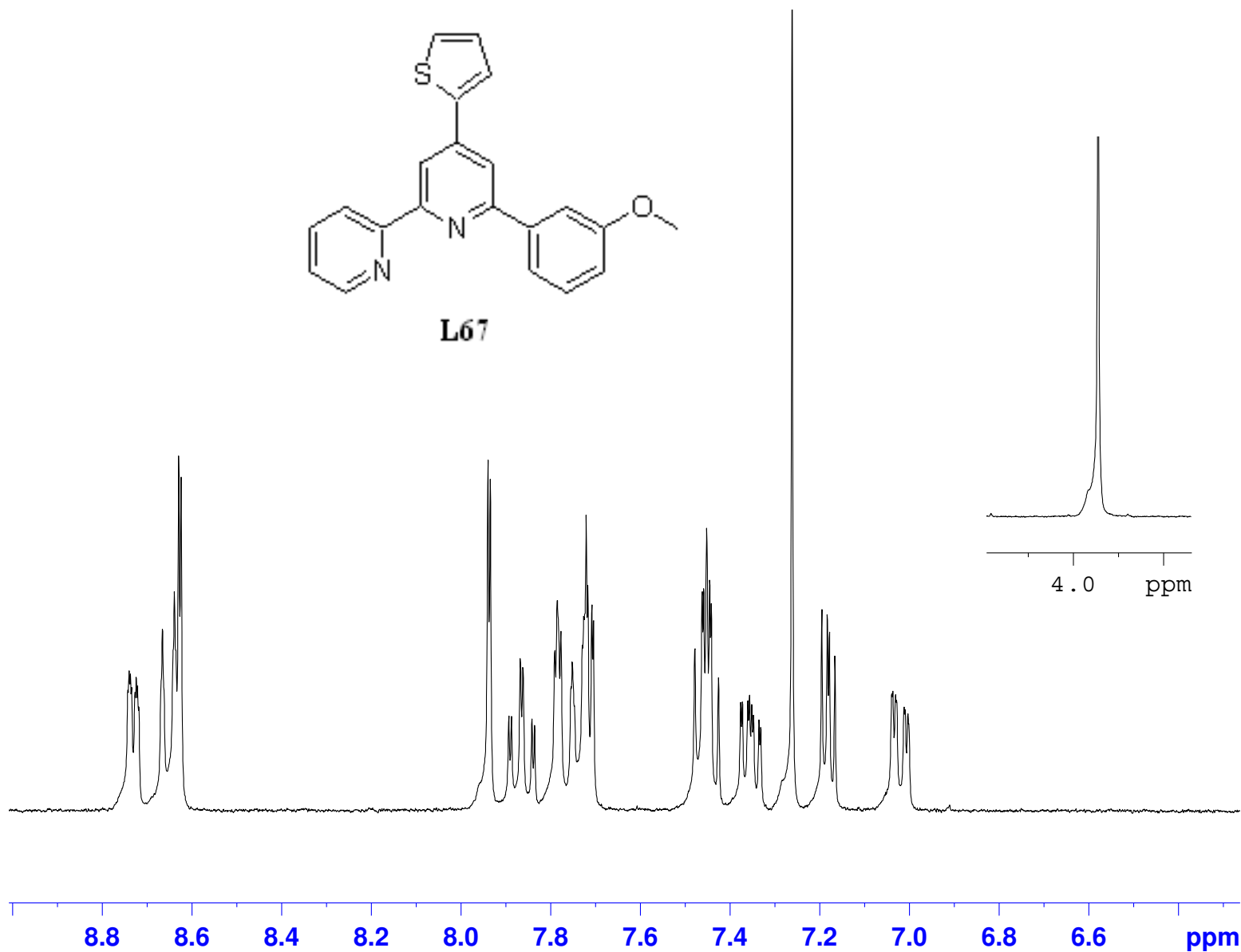
F2 - Acquisition Parameters  
Date\_ 20100222  
Time 16.41  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT CDC13  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 645.1  
DW 80.800 usec  
DE 6.00 usec  
TE 291.2 K  
D1 1.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300063 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



**L67**

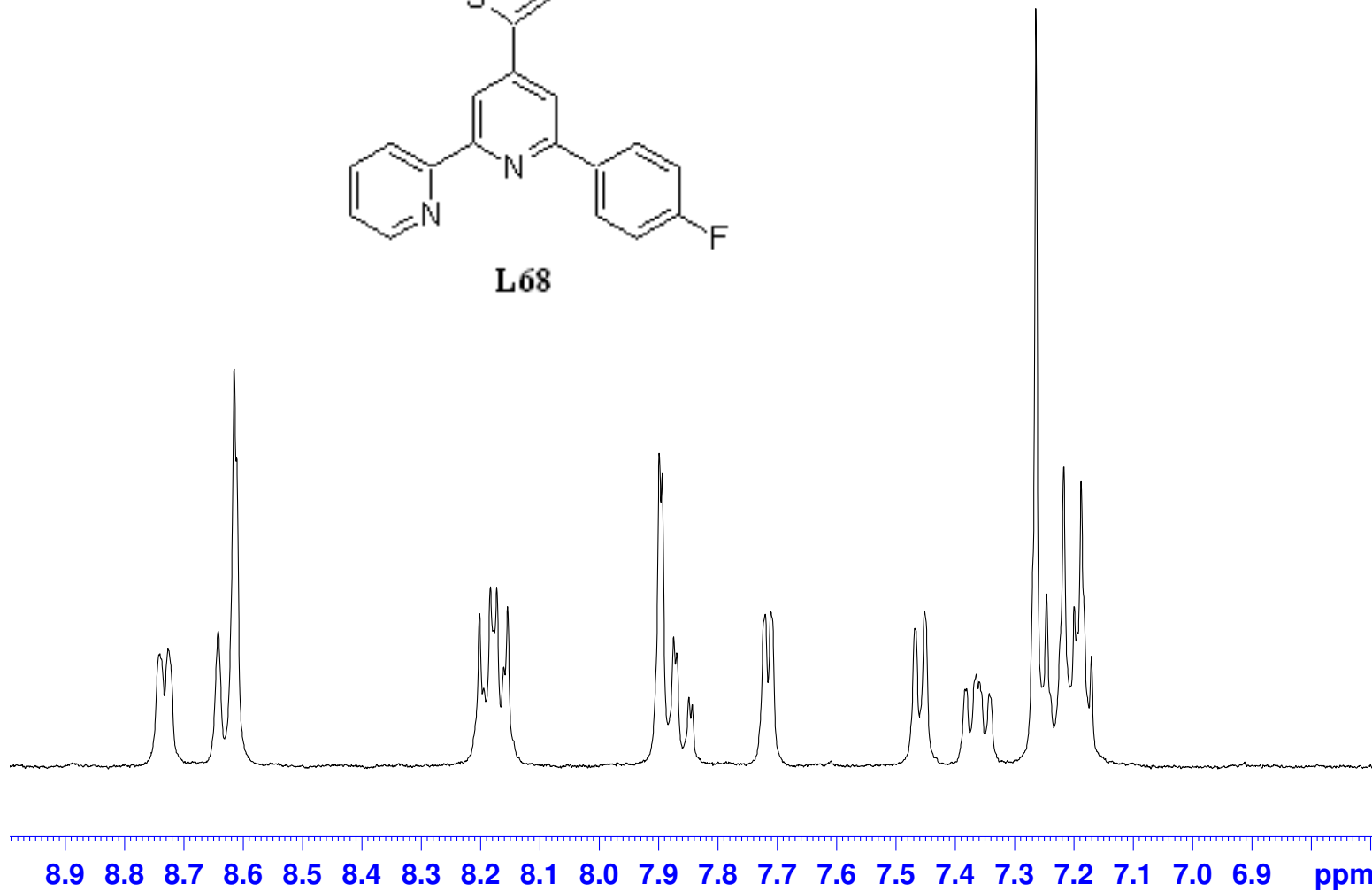
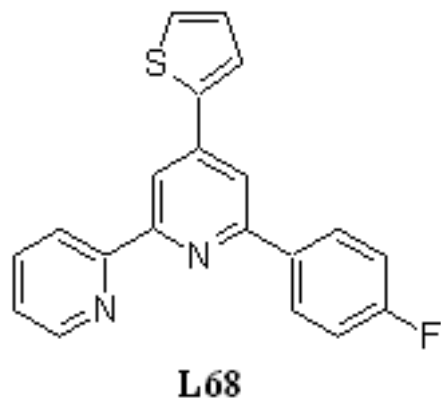


Current Data Parameters  
NAME Apr13-2010-ghad  
EXPNO 10  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20100413  
Time 17.33  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT CDC13  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 1149.4  
DW 80.800 usec  
DE 6.00 usec  
TE 291.7 K  
D1 1.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300058 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00

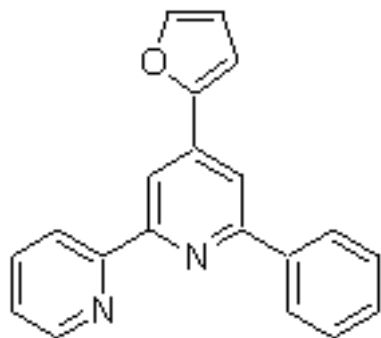


Current Data Parameters  
NAME Apr16-2010-kaaf  
EXPNO 20  
PROCNO 1

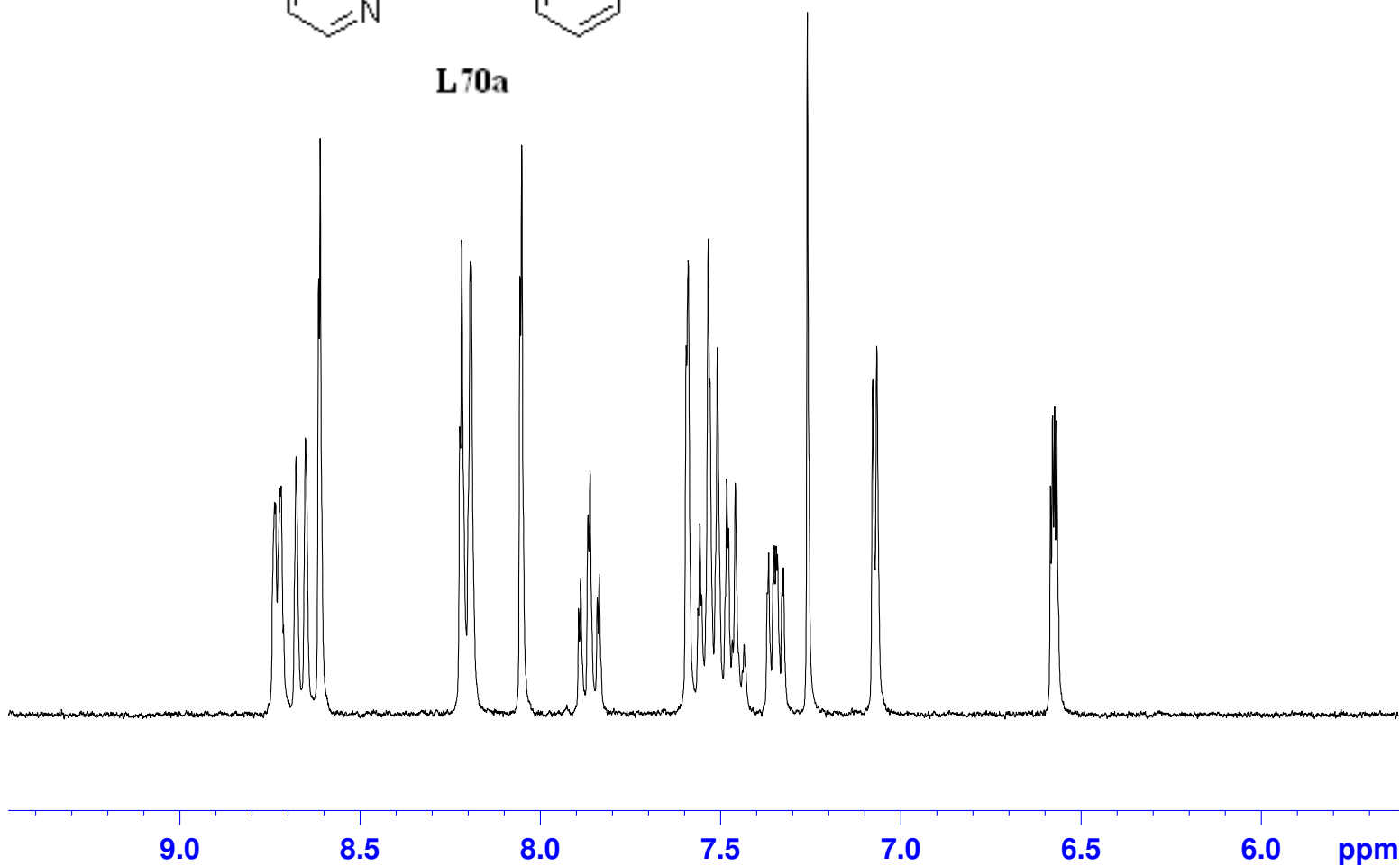
F2 - Acquisition Parameters  
Date\_ 20100416  
Time 18.06  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT CDC13  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 912.3  
DW 80.800 usec  
DE 6.00 usec  
TE 291.6 K  
D1 1.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300050 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



**L70a**

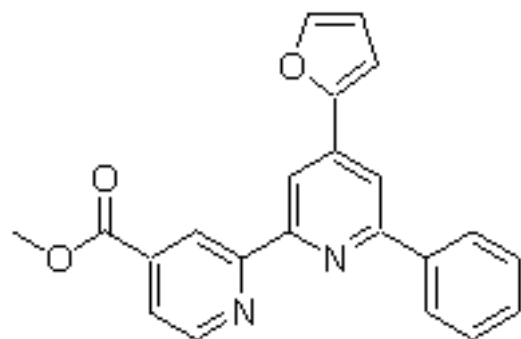


Current Data Parameters  
NAME Jul03-2010-ghad  
EXPNO 21  
PROCNO 1

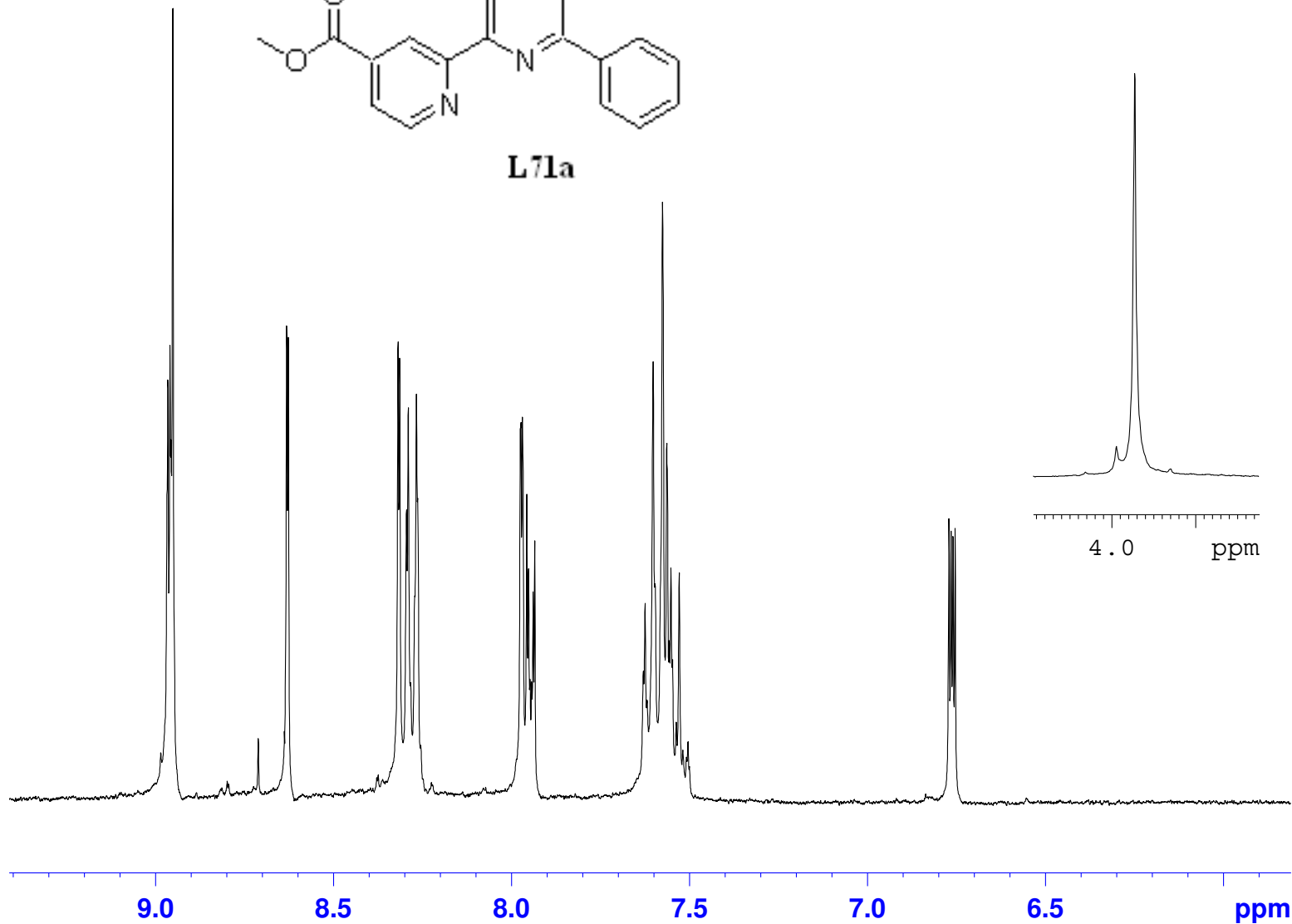
F2 - Acquisition Parameters  
Date\_ 20100703  
Time 11.36  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT CDC13  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 1290.2  
DW 80.800 usec  
DE 6.00 usec  
TE 292.3 K  
D1 1.0000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300071 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



**L71a**

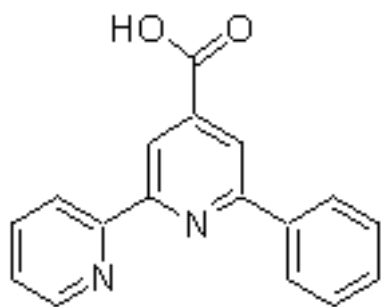


Current Data Parameters  
NAME Dec14-2011-ghad  
EXPNO 10  
PROCNO 1

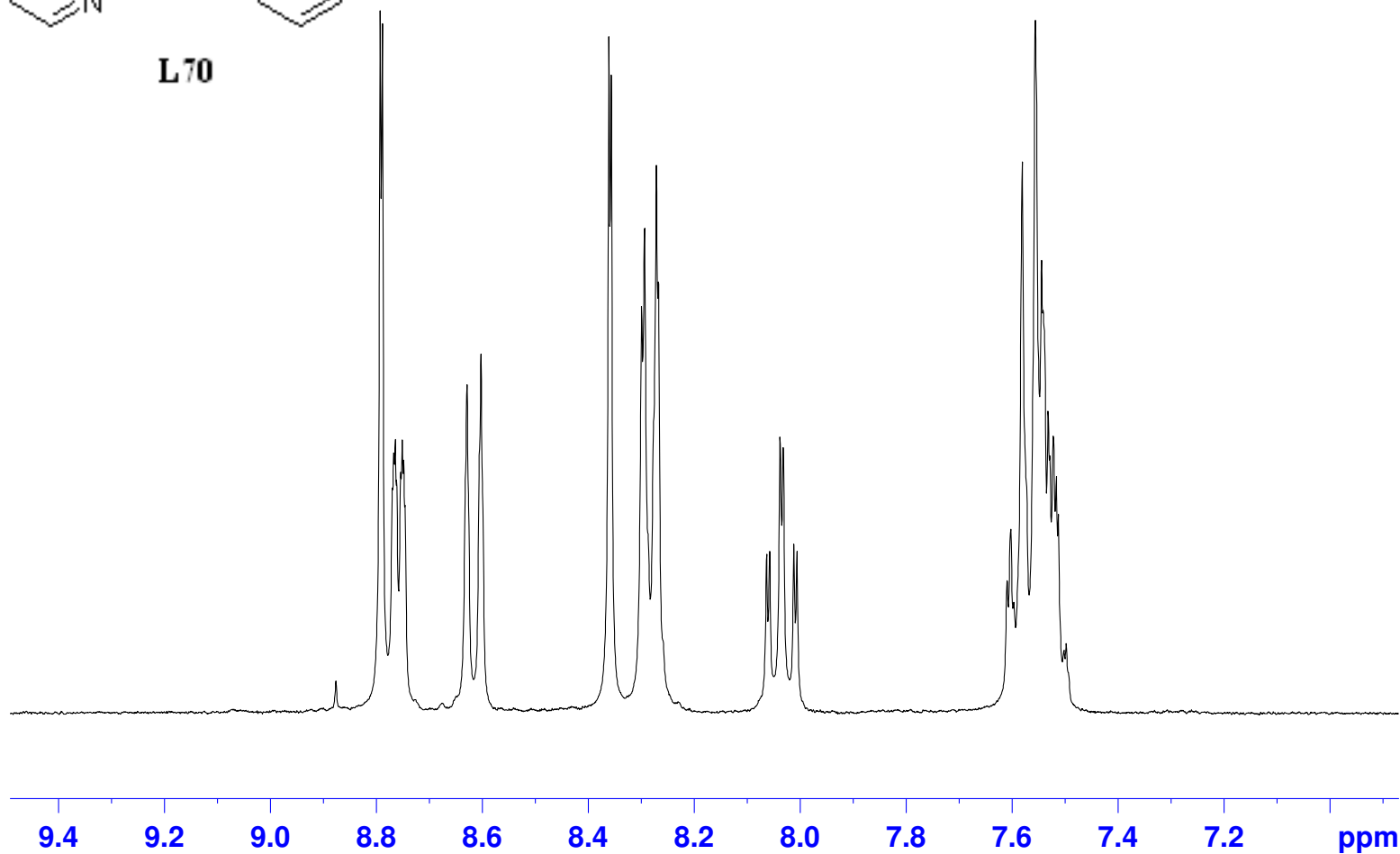
F2 - Acquisition Parameters  
Date\_ 20111214  
Time 13.01  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT DMSO  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 512  
DW 80.800 usec  
DE 6.00 usec  
TE 293.9 K  
D1 1.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300000 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



**L70**



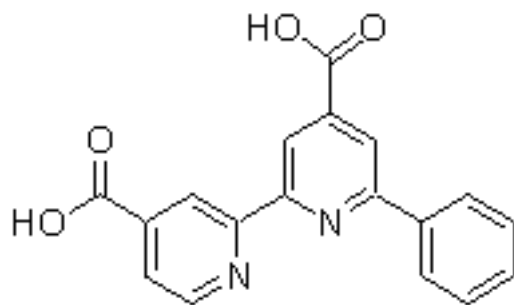
Current Data Parameters  
NAME Jul14-2010-ghad  
EXPNO 20  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20100714  
Time 18.50  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT DMSO  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 362  
DW 80.800 usec  
DE 6.00 usec  
TE 294.6 K  
D1 1.0000000 sec  
TD0 1

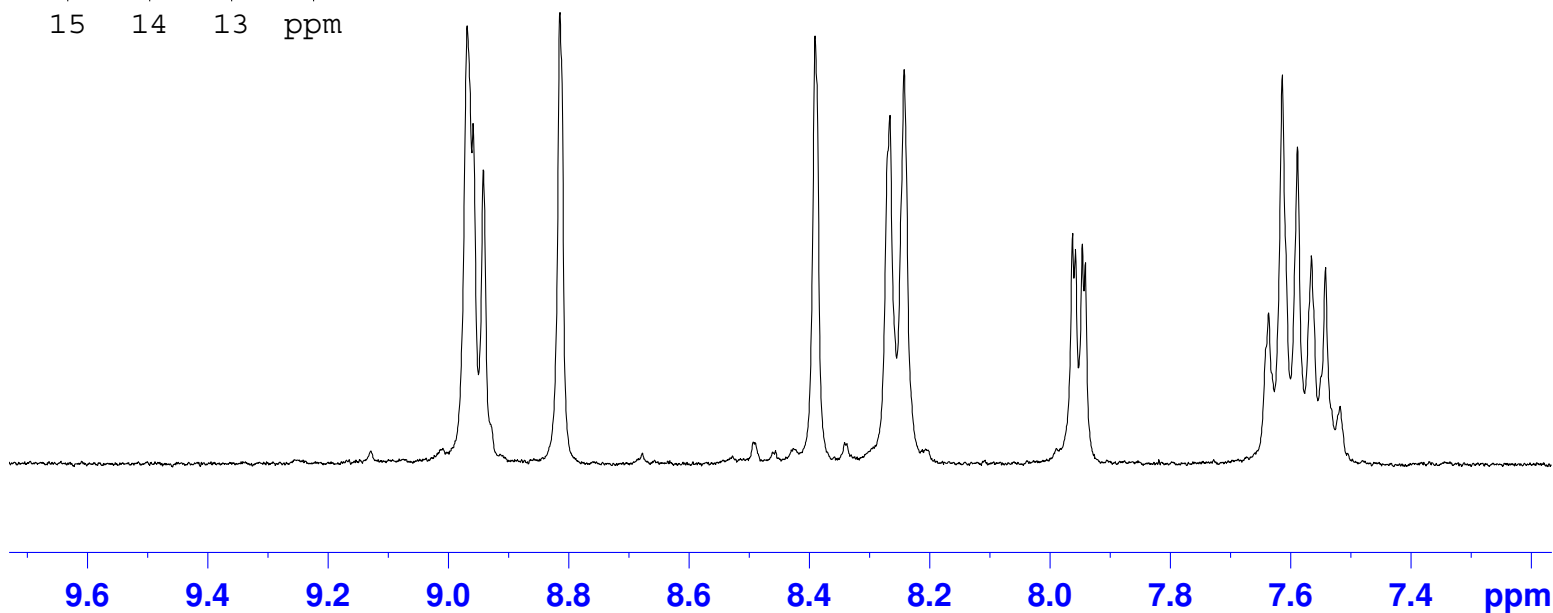
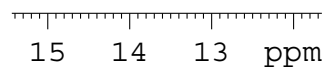
==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300000 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00





L71

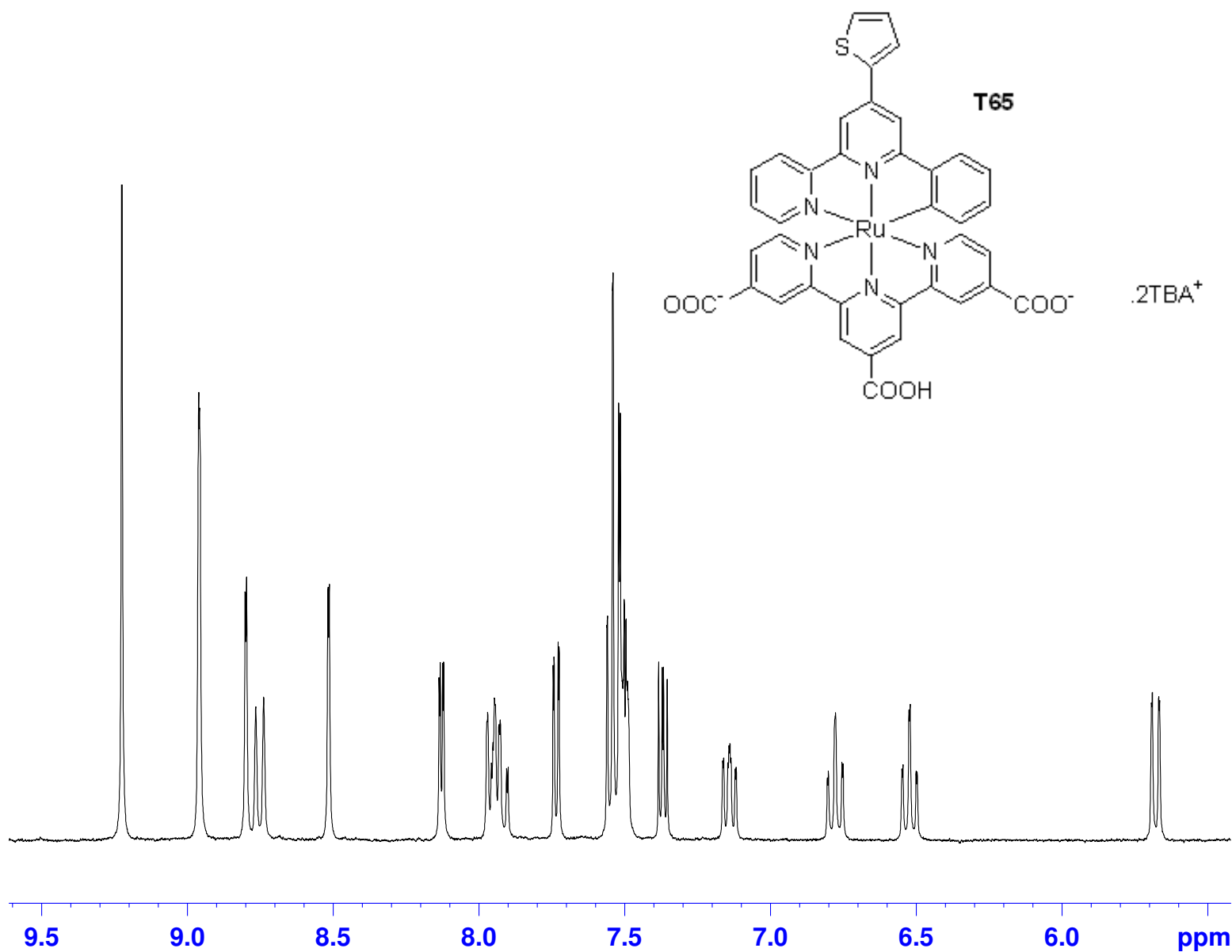


Current Data Parameters  
NAME Oct14-2010-ghad  
EXPNO 10  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20101014  
Time 12.36  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT DMSO  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 724.1  
DW 80.800 usec  
DE 6.00 usec  
TE 292.2 K  
D1 1.0000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300000 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00

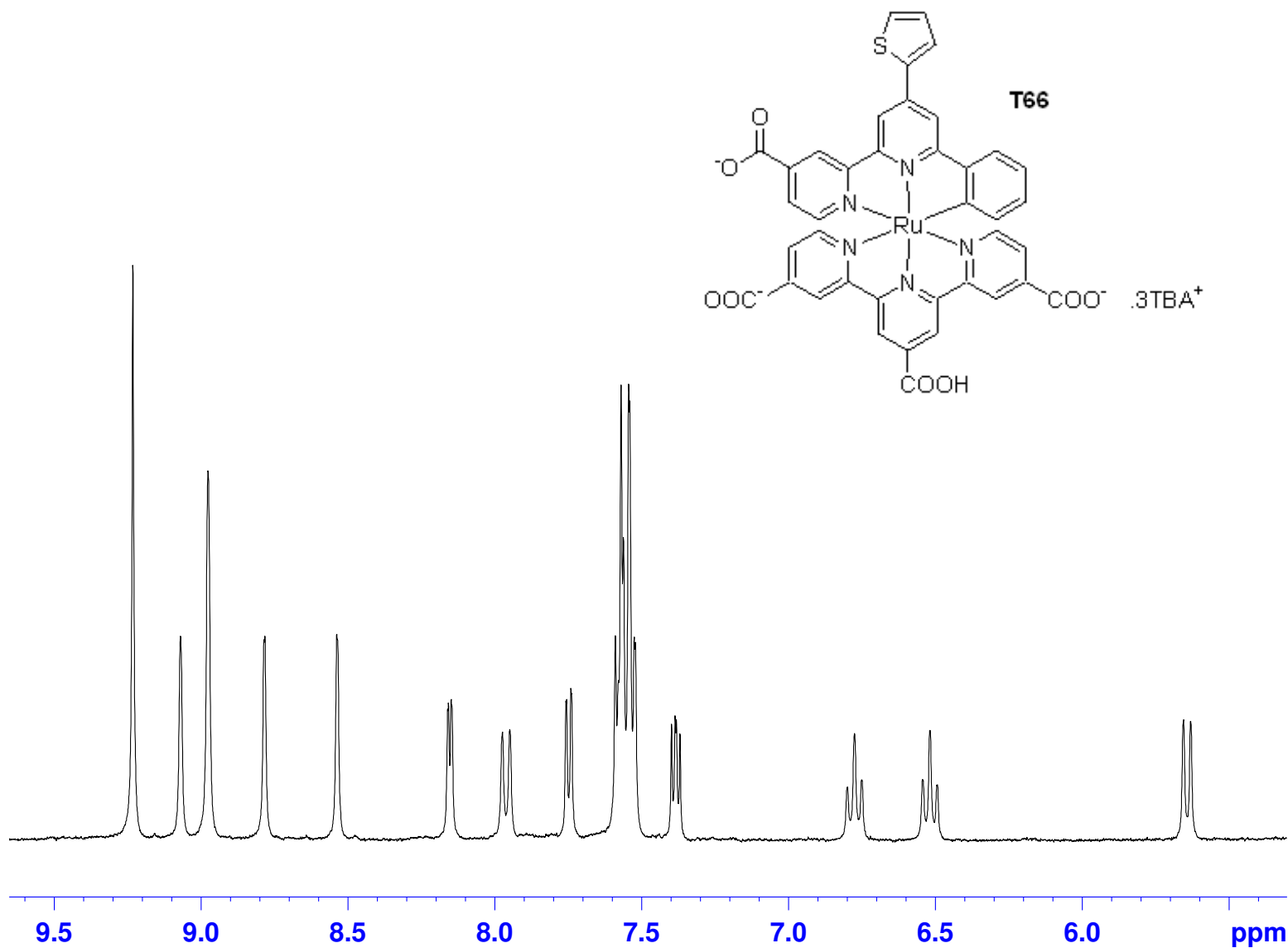


Current Data Parameters  
NAME Feb24-2010-ghad  
EXPNO 22  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20100224  
Time 12.06  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT MeOD  
NS 128  
DS 0  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 574.7  
DW 80.800 usec  
DE 6.00 usec  
TE 291.0 K  
D1 2.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300000 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00

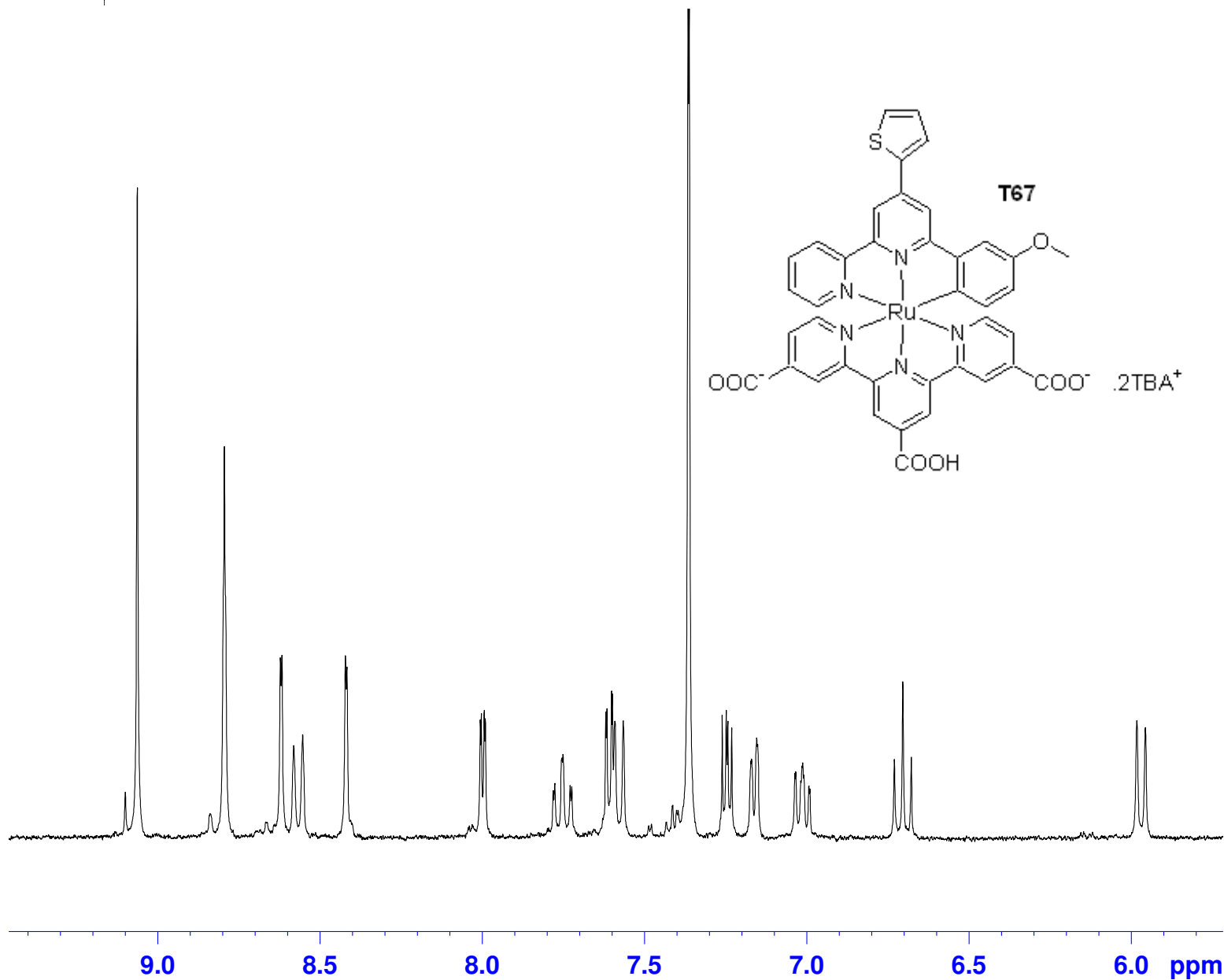


Current Data Parameters  
NAME Mar04-2010-ghad  
EXPNO 10  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20100304  
Time 11.48  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT MeOD  
NS 128  
DS 0  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 406.4  
DW 80.800 usec  
DE 6.00 usec  
TE 291.0 K  
D1 2.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300000 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00

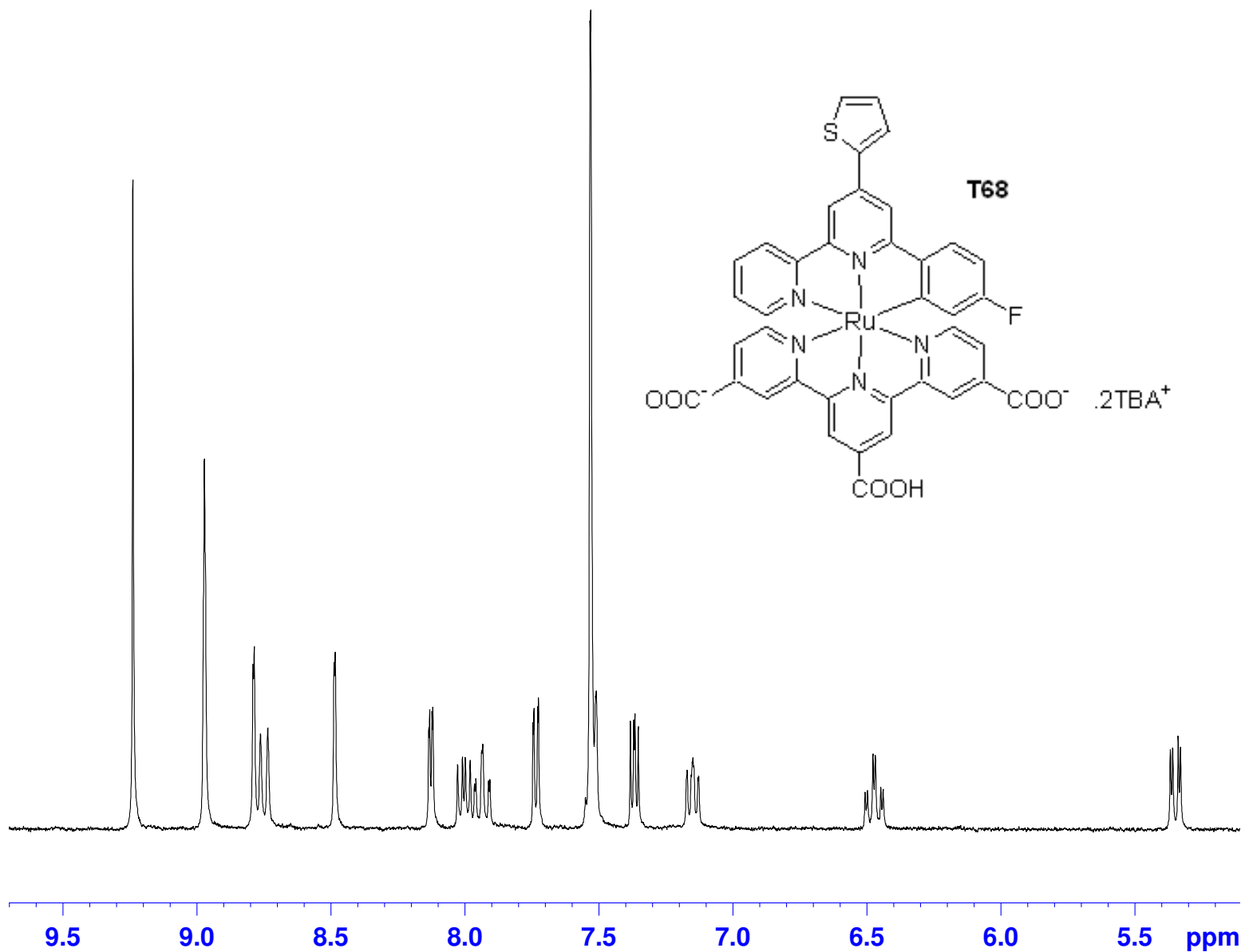


Current Data Parameters  
NAME Apr14-2010-ghad  
EXPNO 20  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20100414  
Time 17.40  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT MeOD  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 574.7  
DW 80.800 usec  
DE 6.00 usec  
TE 291.2 K  
D1 1.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300356 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00

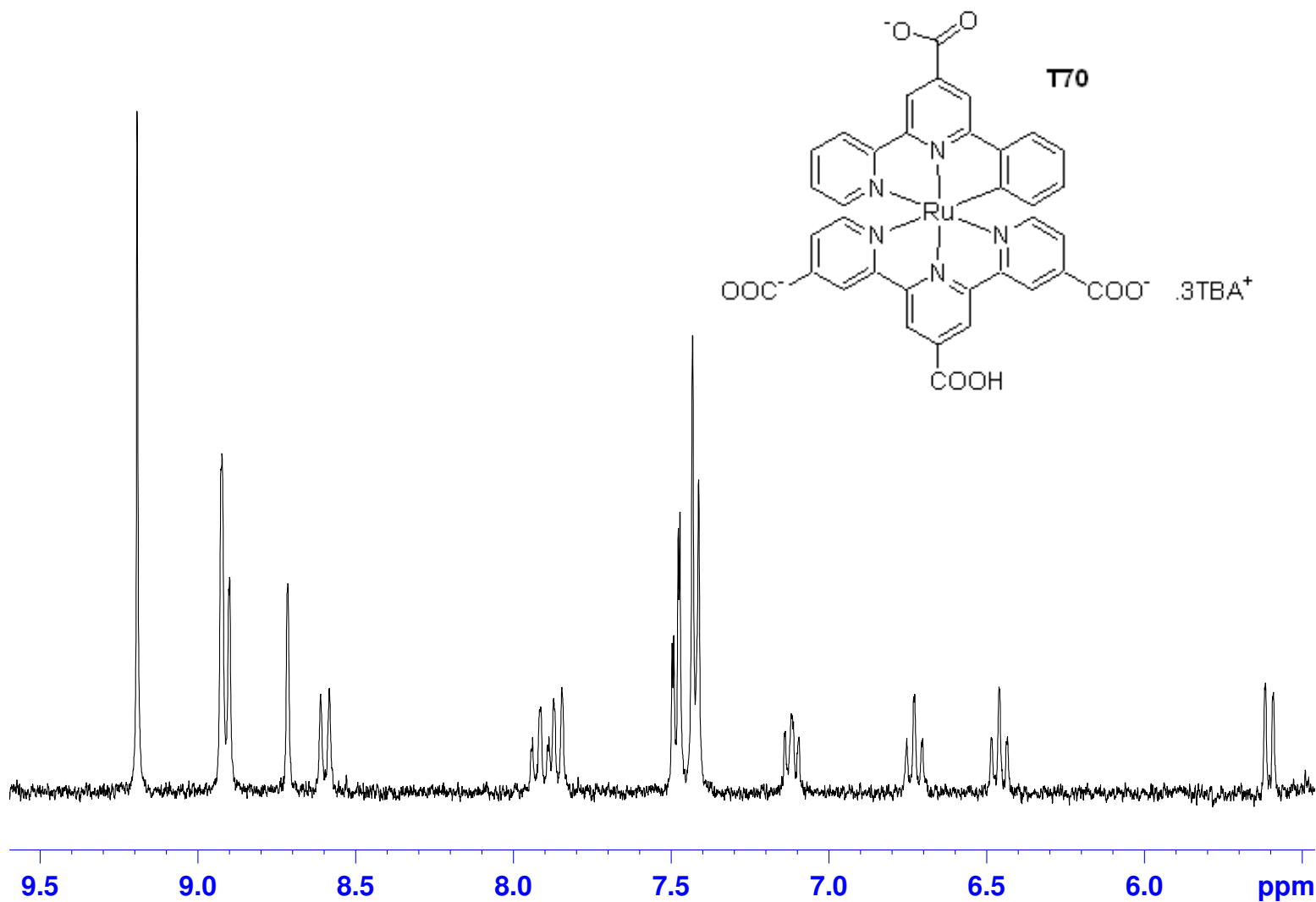


Current Data Parameters  
NAME Jul14-2010-ghad  
EXPNO 10  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20100714  
Time 18.30  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT MeOD  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 362  
DW 80.800 usec  
DE 6.00 usec  
TE 294.4 K  
D1 1.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300000 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00

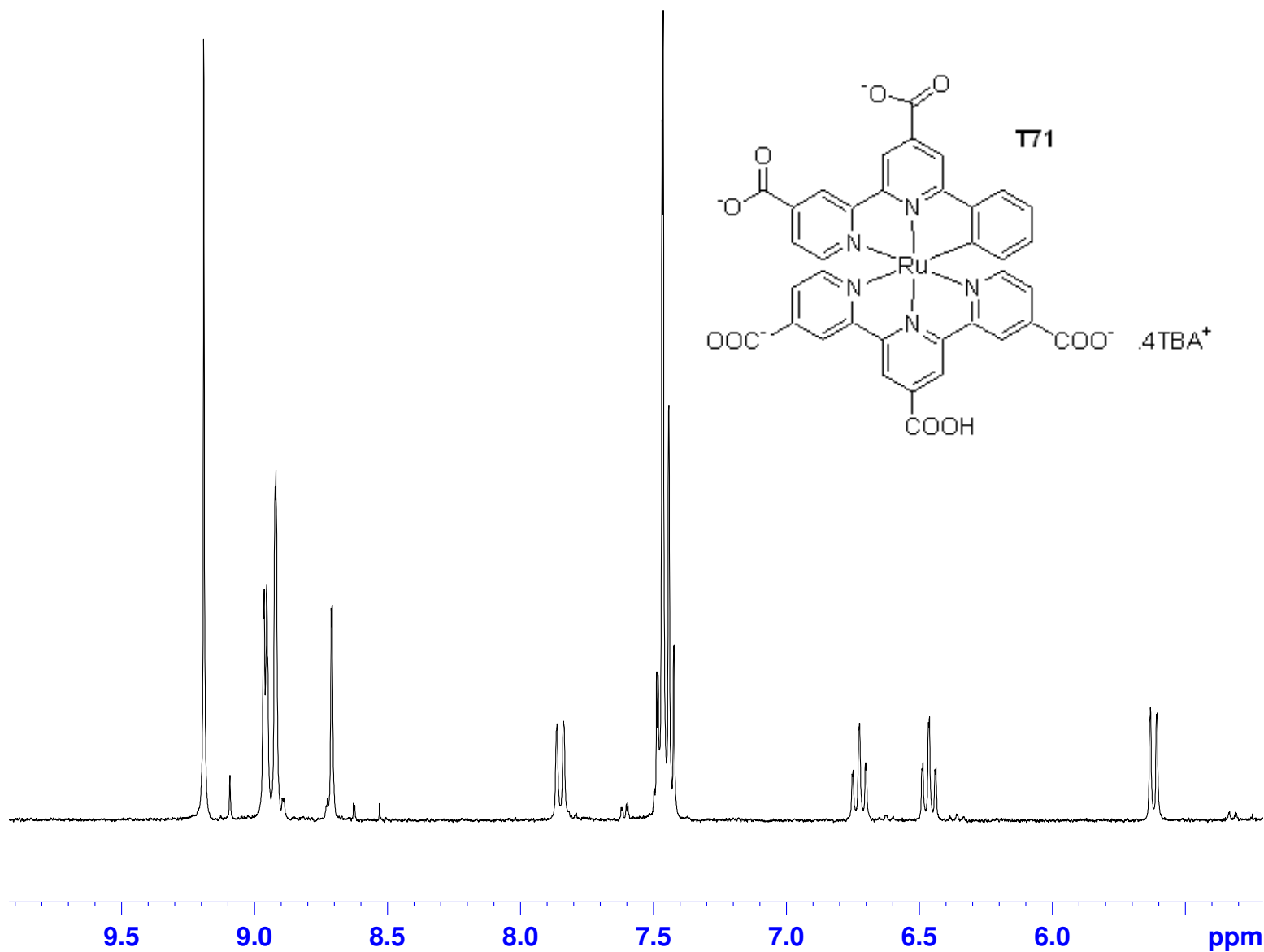


Current Data Parameters  
NAME Jul14-2010-ghad  
EXPNO 12  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20100714  
Time 18.40  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT MeOD  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 322.5  
DW 80.800 usec  
DE 6.00 usec  
TE 294.5 K  
D1 1.00000000 sec  
TD0 1

=====  
CHANNEL f1  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300076 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



Current Data Parameters  
NAME Oct15-2010-ghad  
EXPNO 21  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20101015  
Time 17.12  
INSTRUM spect  
PROBHD 5 mm QNP 1H/13  
PULPROG zg30  
TD 65536  
SOLVENT MeOD  
NS 16  
DS 2  
SWH 6188.119 Hz  
FIDRES 0.094423 Hz  
AQ 5.2954397 sec  
RG 203.2  
DW 80.800 usec  
DE 6.00 usec  
TE 292.9 K  
D1 1.00000000 sec  
TD0 1

==== CHANNEL f1 =====  
NUC1 1H  
P1 8.00 usec  
PL1 0.00 dB  
SFO1 300.1318534 MHz

F2 - Processing parameters  
SI 32768  
SF 300.1300096 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00