

Supplementary Material

Microwave-assisted synthesis of 2-acetyl-5-arylthiophenes and 4-(5-arylthiophen-2-yl)thiazoles via Suzuki coupling in water

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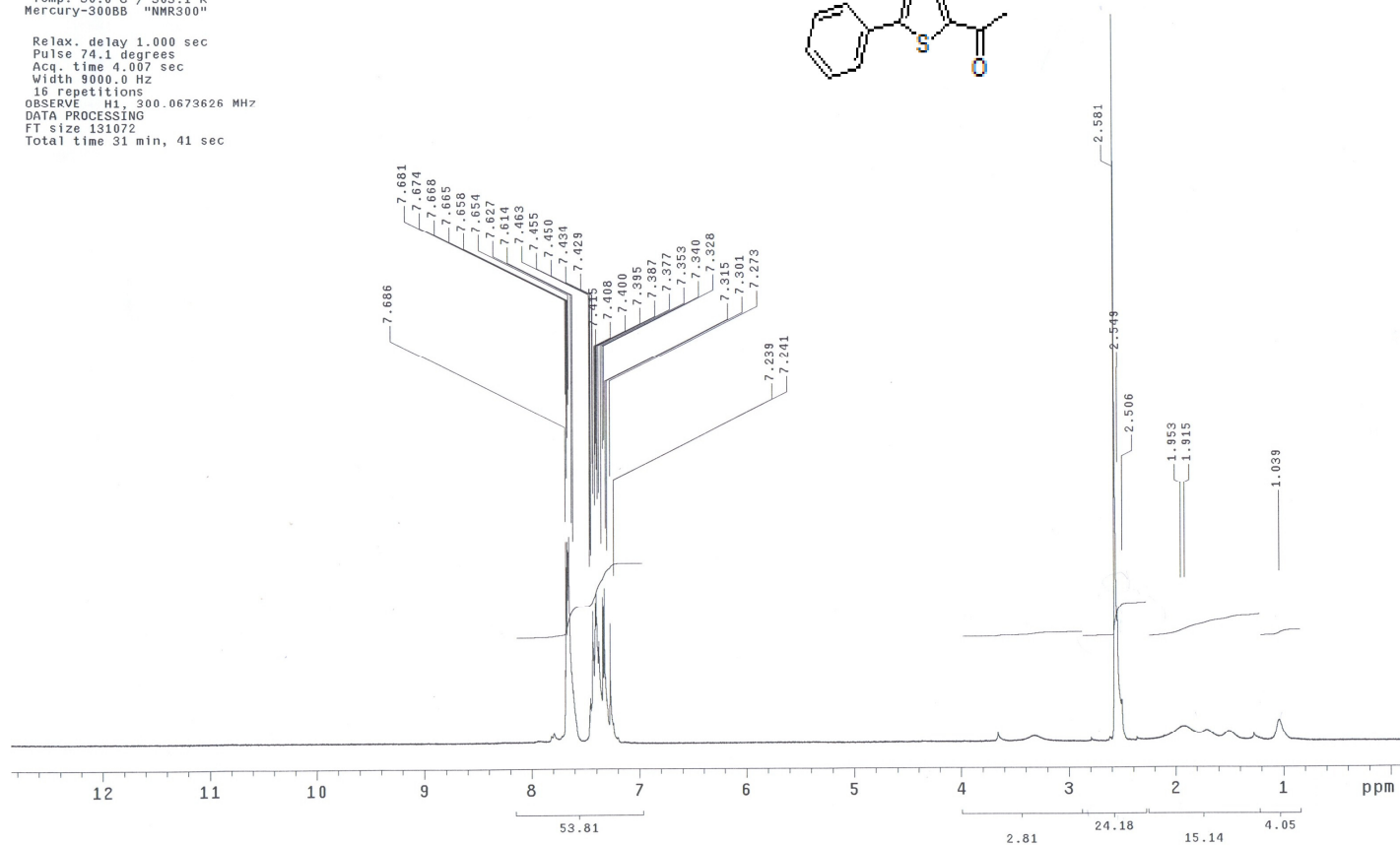
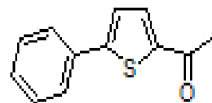
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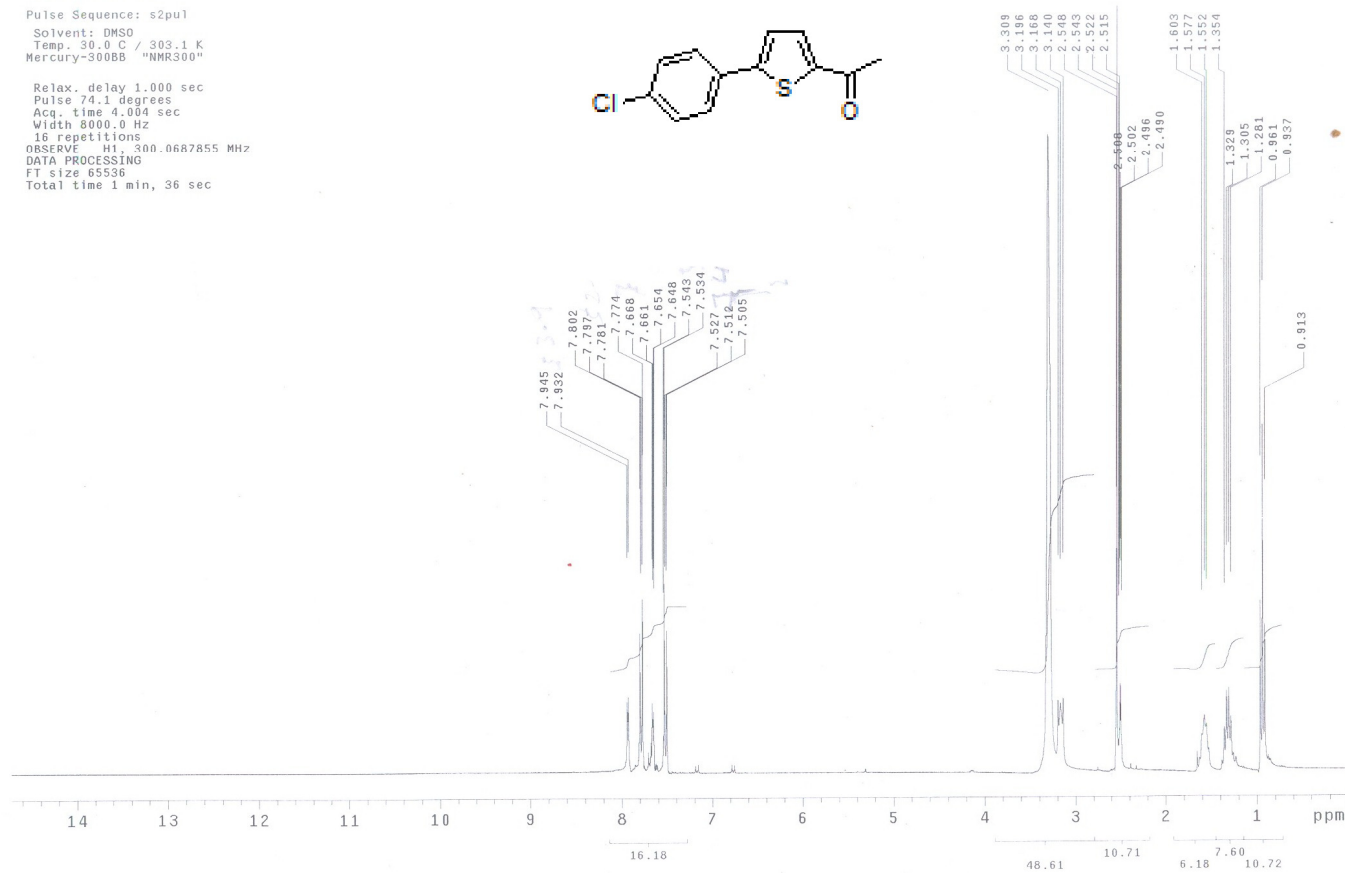
NMR spectra

S2

Manahel-N-72-CDCL3-H
 Pulse Sequence: s2pu1
 Solvent: CDC13
 Temp. 30.0 C / 303.1 K
 Mercury-300BB "NMR300"
 Relax. delay 1.000 sec
 Pulse 74.1 degrees
 Acq. time 4.007 sec
 Width 9000.0 Hz
 15 repetitions
 OBSERVE H1 300.0673626 MHz
 DATA PROCESSING
 FT size 131072
 Total time 31 min, 41 sec

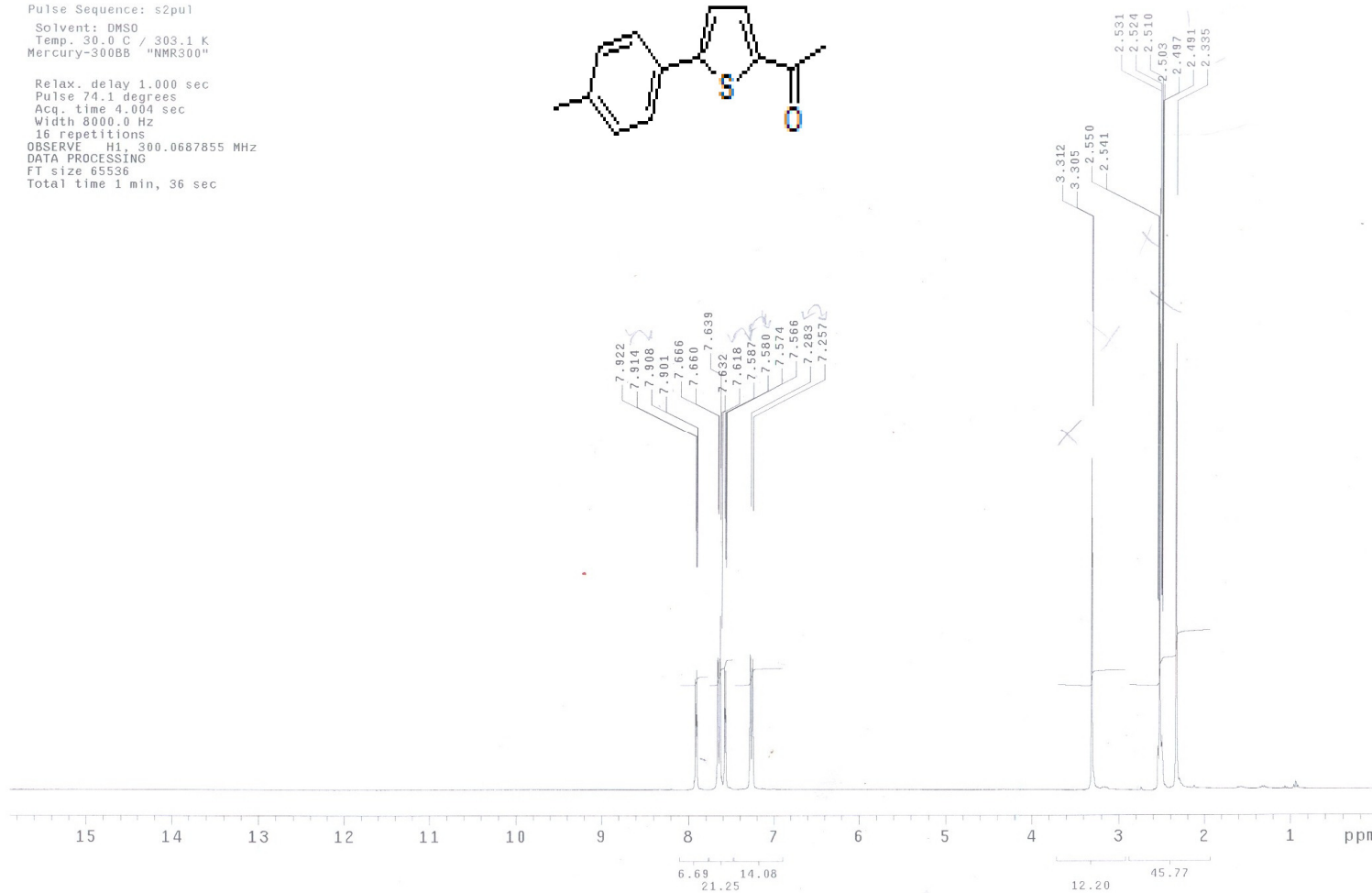


Manahel-1-DMSO-H
 Pulse Sequence: s2pu1
 Solvent: DMSO
 Temp. 30.0 C / 303.1 K
 Mercury-300BB "NMR300"
 Relax. delay 1.000 sec
 Pulse 74.1 degrees
 Acq. time 4.004 sec
 Width 8000.0 Hz
 16 repetitions
 OBSERVE H1, 300.06A7A55 MHz
 DATA PROCESSING
 FT size 65536
 Total time 1 min, 36 sec



Manahel-N33-DMSO-H
 Pulse Sequence: s2pu1
 Solvent: DMSO
 Temp. 30.0 C / 303.1 K
 Mercury-300BB "NMR300"

Relax. delay 1.000 sec
 Pulse 74.1 degrees
 Acq. time 4.004 sec
 Width 8000.0 Hz
 16 repetitions
 OBSERVE H1, 300.0687855 MHz
 DATA PROCESSING
 FT size 65536
 Total time 1 min, 36 sec

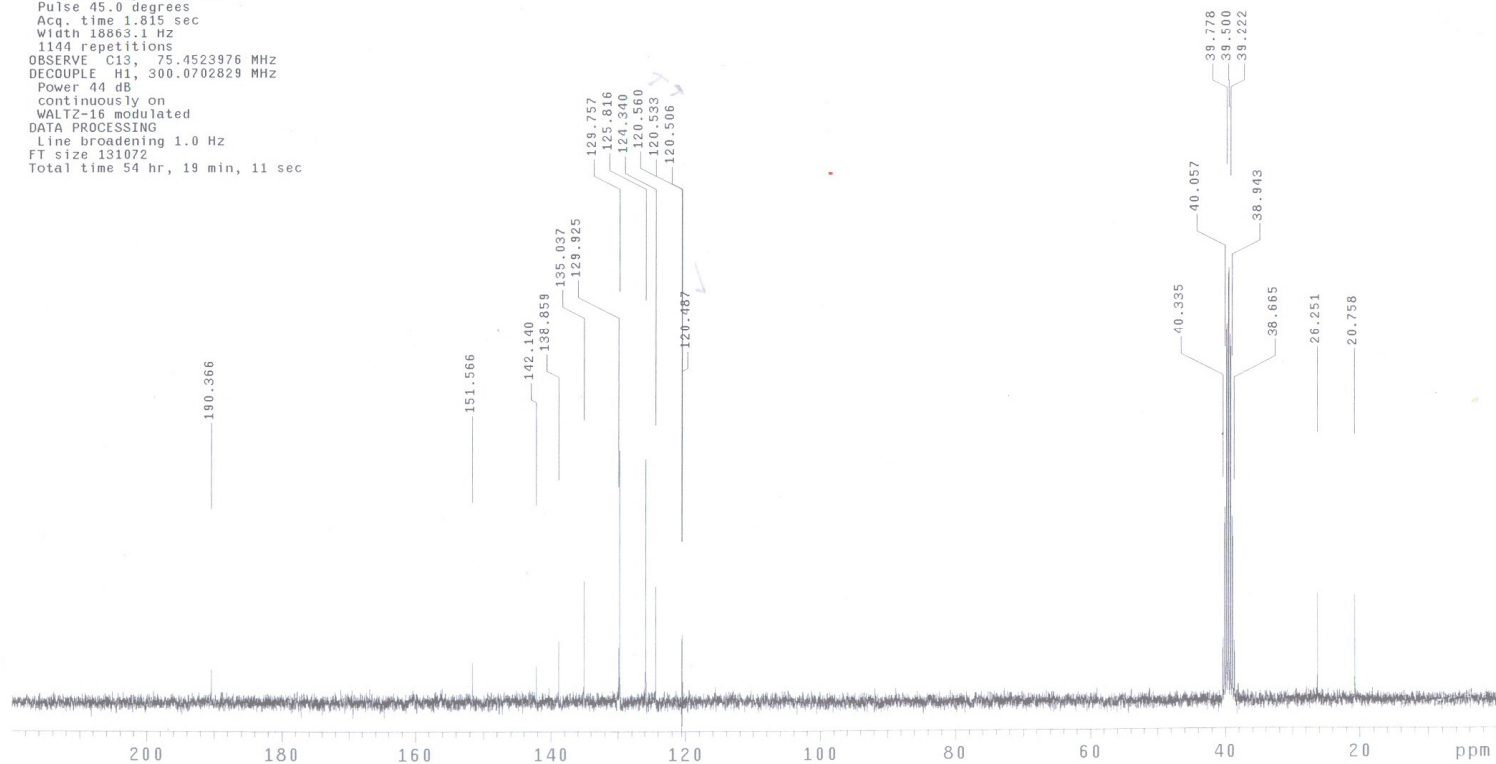
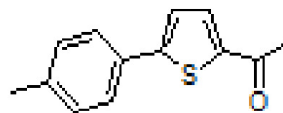


Manahel-N33-DMSO-C13

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Sample directory: MSobhy-4-13C-dmso_06Jun2004
File: CARBON

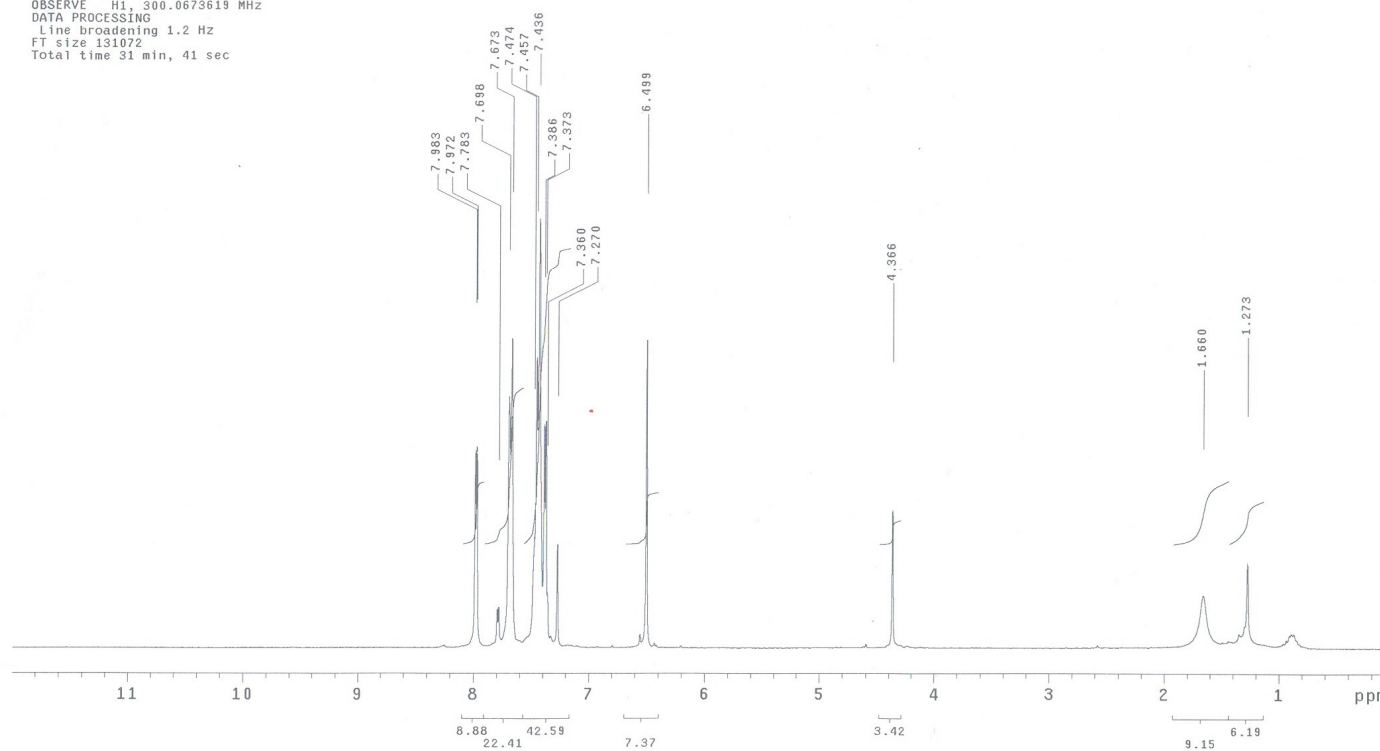
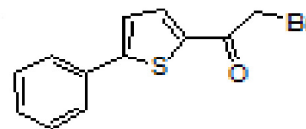
Pulse Sequence: s2pul
Solvent: DMSO
Temp. 30.0 C / 303.1 K
Mercury-300BB "NMR300"

Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 1.815 sec
Width 18863.1 Hz
1144 repetitions
OBSERVE C13, 75.4523976 MHz
DECOUPLE H1, 300.0702829 MHz
Power 44 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 54 hr, 19 min, 11 sec



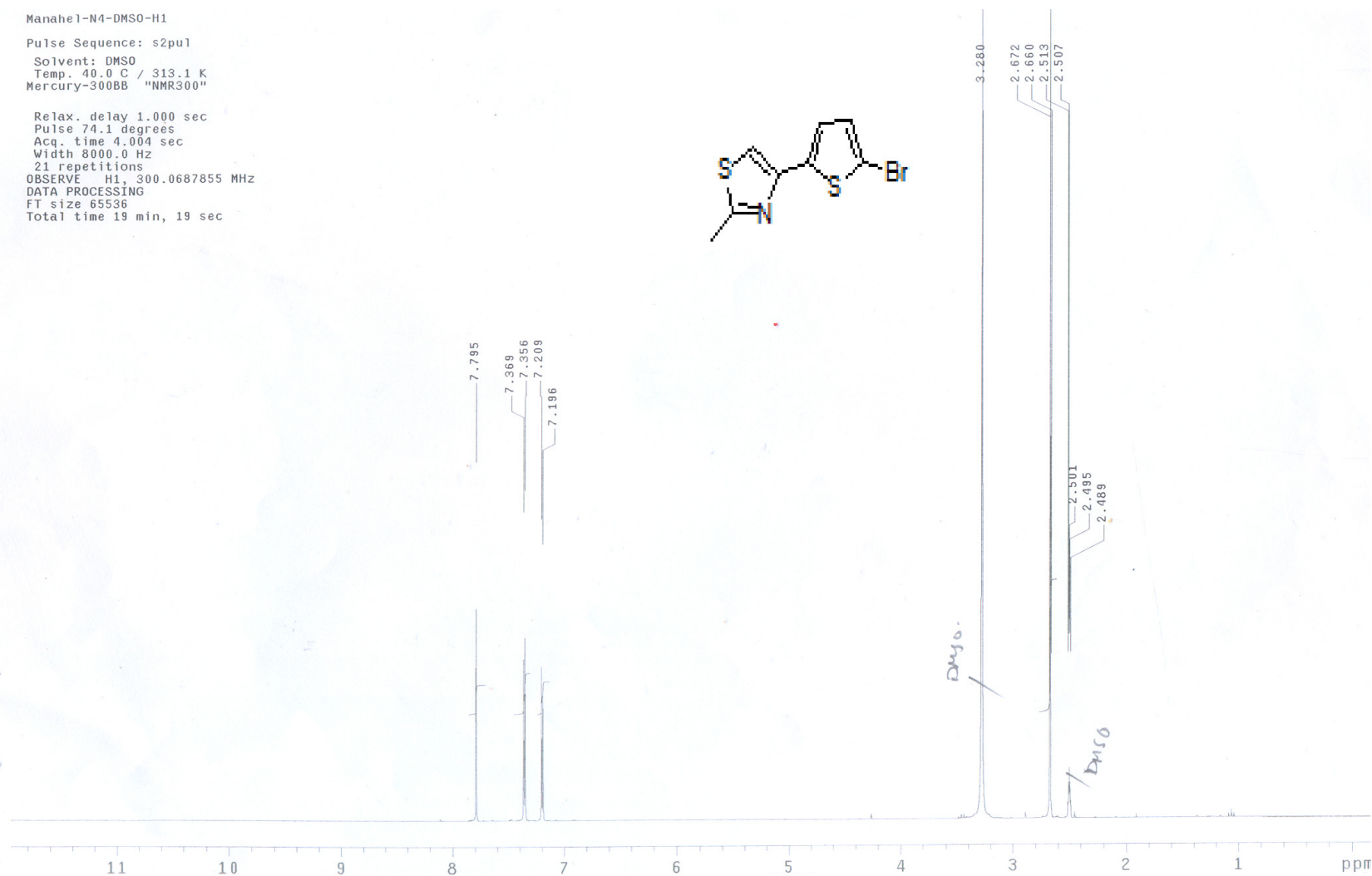
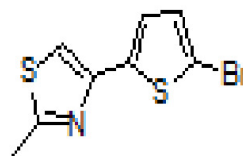
Manahel-N56-CDC13-H1
Pulse Sequence: s2pu1
Solvent: CDCl3
Temp. 30.0 C / 303.1 K
Mercury-300BB "NMR300"

Relax. delay 1.000 sec
Pulse 74.1 degrees
Acq. time 4.007 sec
Width 9000.0 Hz
19 repetitions
OBSERVE H1, 300.0673619 MHz
DATA PROCESSING
Line broadening 1.2 Hz
FT size 131072
Total time 31 min, 41 sec



Manahel-N4-DMSO-H1
 Pulse Sequence: s2pu1
 Solvent: DMSO
 Temp: 40.0 C / 313.1 K
 Mercury-300BB "NMR300"

Relax. delay 1.000 sec
 Pulse 74.1 degrees
 Acq. time 4.004 sec
 Width 8000.0 Hz
 21 repetitions
 OBSERVE H1, 300.0687855 MHz
 DATA PROCESSING
 FT size 65536
 Total time 19 min, 19 sec

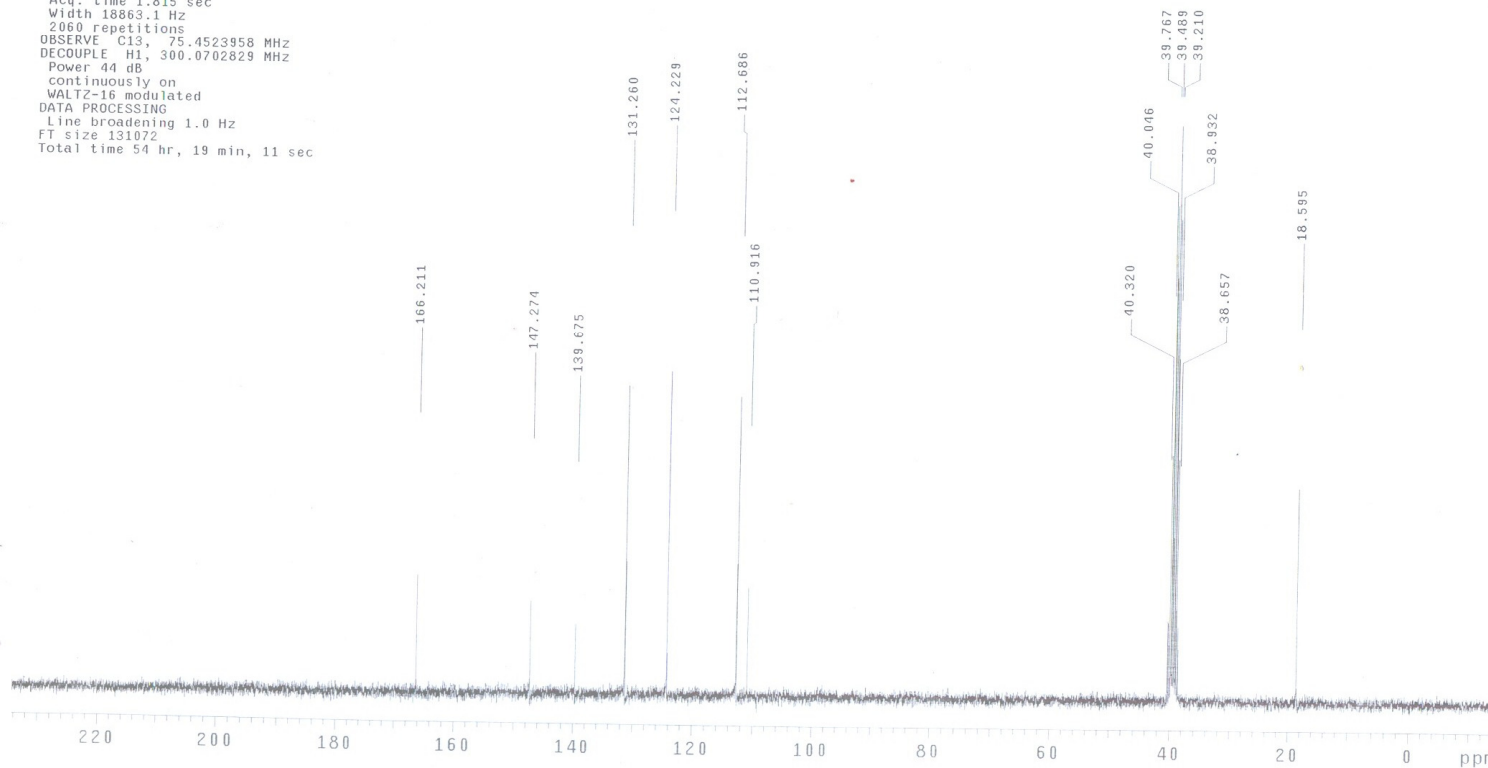
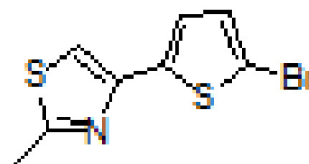


Manahel-N4-DMSO-C13

Archive directory: /export/home/vnmr1/vnmrsys/data
 Sample directory: MSobhy-4-13C-dms0_06Jun2004
 File: CARBON

Pulse Sequence: s2pu1
 Solvent: DMSO
 Temp: 30.0 C / 303.1 K
 Mercury-300BB "NMR300"

Relax. delay 1.000 sec
 Pulse 45.0 degrees
 Acq. time 1.815 sec
 Width 18863.1 Hz
 2060 repetitions
 OBSERVE C13, 75.4523958 MHz
 DECOUPLE H1, 300.0702829 MHz
 Power 44 dB
 continuously on
 WALTZ-16 modulated
 DATA PROCESSING
 Line broadening 1.0 Hz
 FT size 131072
 Total time 54 hr, 19 min, 11 sec



Manahel-N55-CDC13-H1forC13

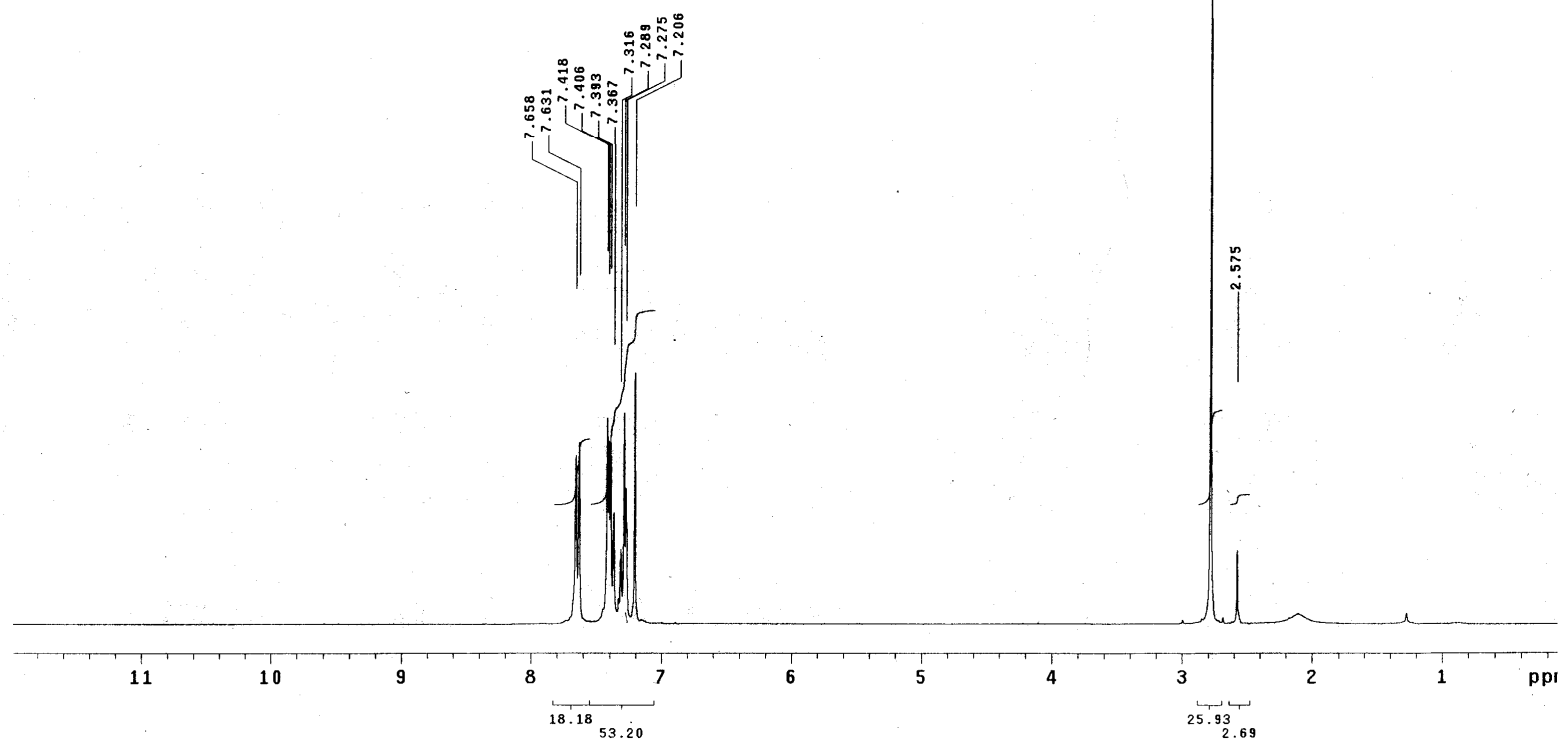
Pulse Sequence: s2pu1

Solvent: CDC13

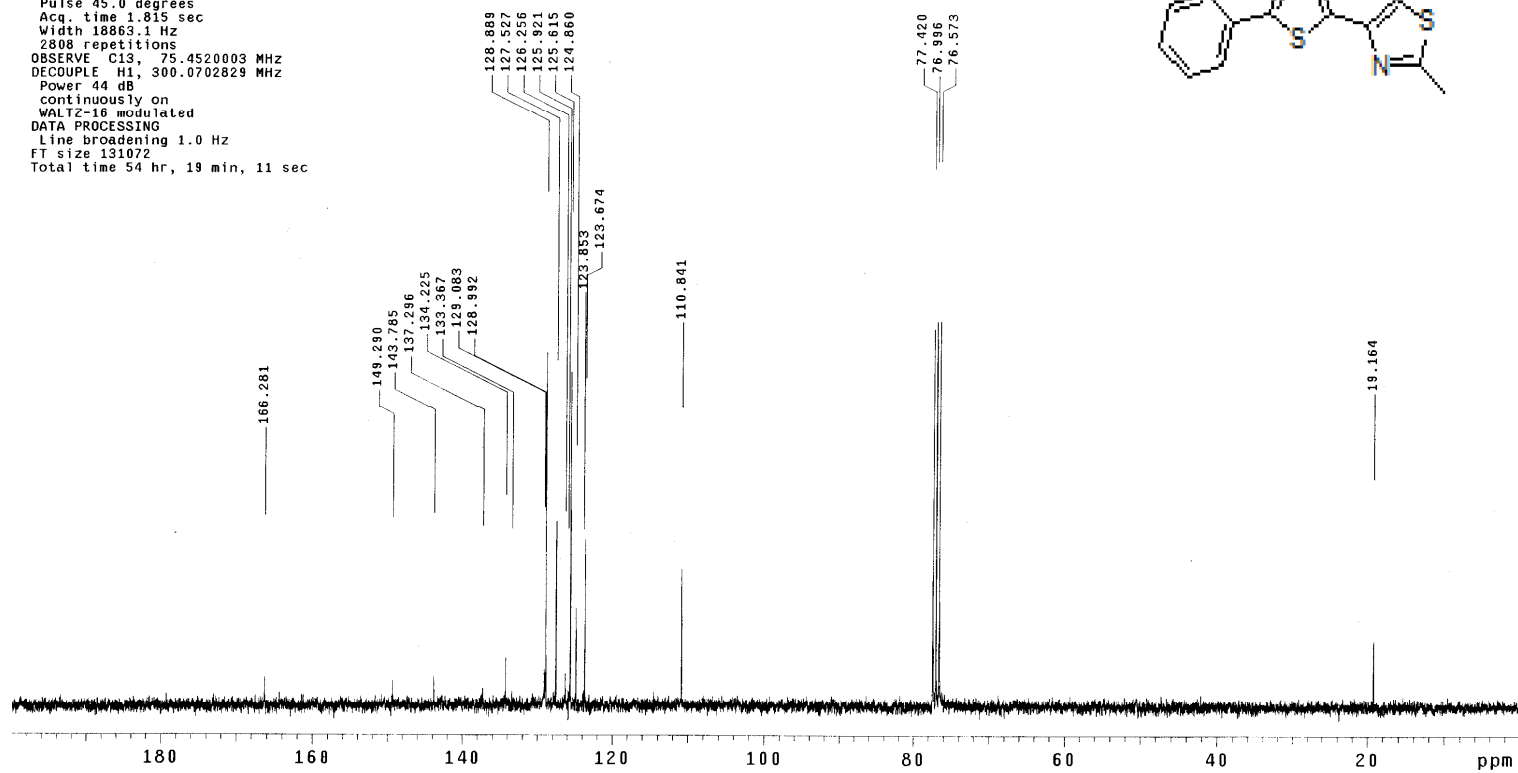
Temp. 30.0 C / 303.1 K

Mercury-300BB "NMR300"

Relax. delay 1.000 sec
Pulse 74.1 degrees
Acq. time 4.007 sec
Width 9000.0 Hz
37 repetitions
OBSERVE H1, 300.0673626 MHz
DATA PROCESSING
Line broadening 0.7 Hz
FT size 131072
Total time 31 min, 41 sec



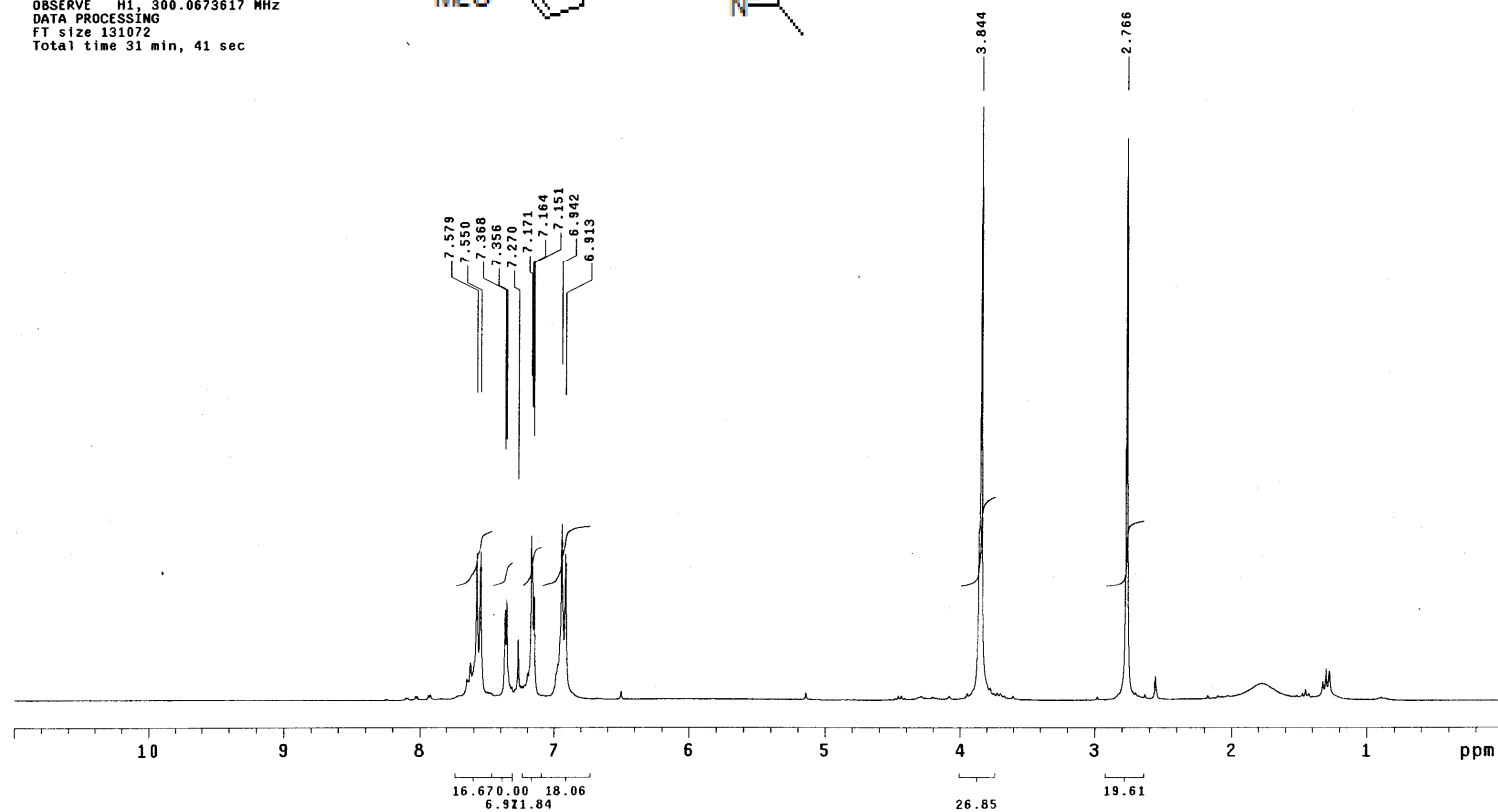
Manahel-N55-CDC13-C13

Archive directory: /export/home/vnmr1/vnmrsys/data
Sample directory: MSobhy-4-13C-dmso_06Jun2004
File: CARBONPulse Sequence: s2pu1
Solvent: DMSO
Temp. 30.0 C / 303.1 K
Mercury-300BB "NMR300"Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 1.815 sec
Width 18863.1 Hz
2808 repetitions
OBSERVE C13, 75.4520003 MHz
DECOUPLE H1, 300.0702829 MHz
Power 44 dB
Continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 54 hr, 19 min, 11 sec

Manahel-N38b-CDC13-H1forC13

Pulse Sequence: s2pu1
 Solvent: CDC13
 Temp. 30.0 C / 303.1 K
 Mercury-300BB "NMR300"

Relax. delay 1.000 sec
 Pulse 74.1 degrees
 Acq. time 4.007 sec
 Width 9000.0 Hz
 39 repetitions
 OBSERVE H1, 300.0673617 MHz
 DATA PROCESSING
 FT size 131072
 Total time 31 min, 41 sec

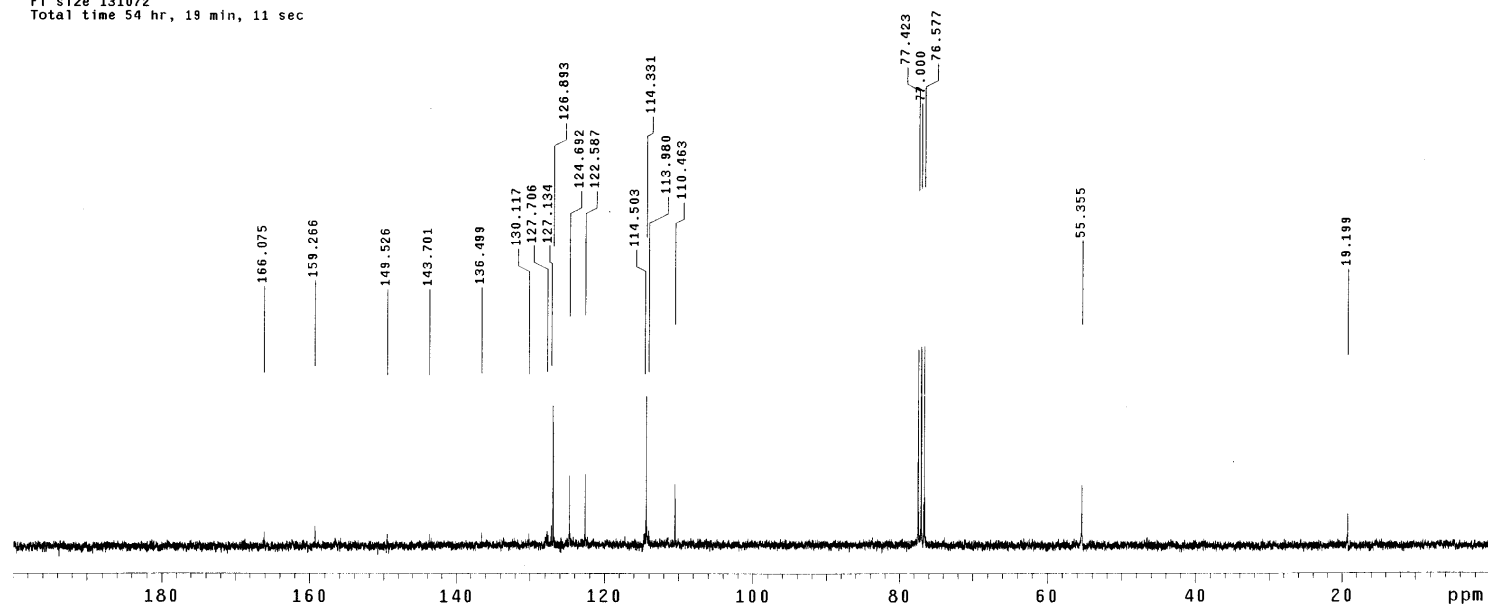
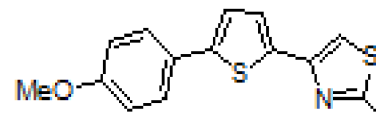


Manahel-N38b-CDC13-C13

Archive directory: /export/home/vnmr1/vnmrSYS/data
Sample directory: MSobhy-4-13C-dms0_06Jun2004
File: CARBON

Pulse Sequence: s2pul
Solvent: DMSO
Temp. 30.0 C / 303.1 K
Mercury-300BB "NMRS00"

Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 1.815 sec
Width 18883.1 Hz
3604 repetitions
OBSERVE C13, 75.4520000 MHz
DECOUPLE H1, 300.0702829 MHz
Power 44 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 54 hr, 19 min, 11 sec

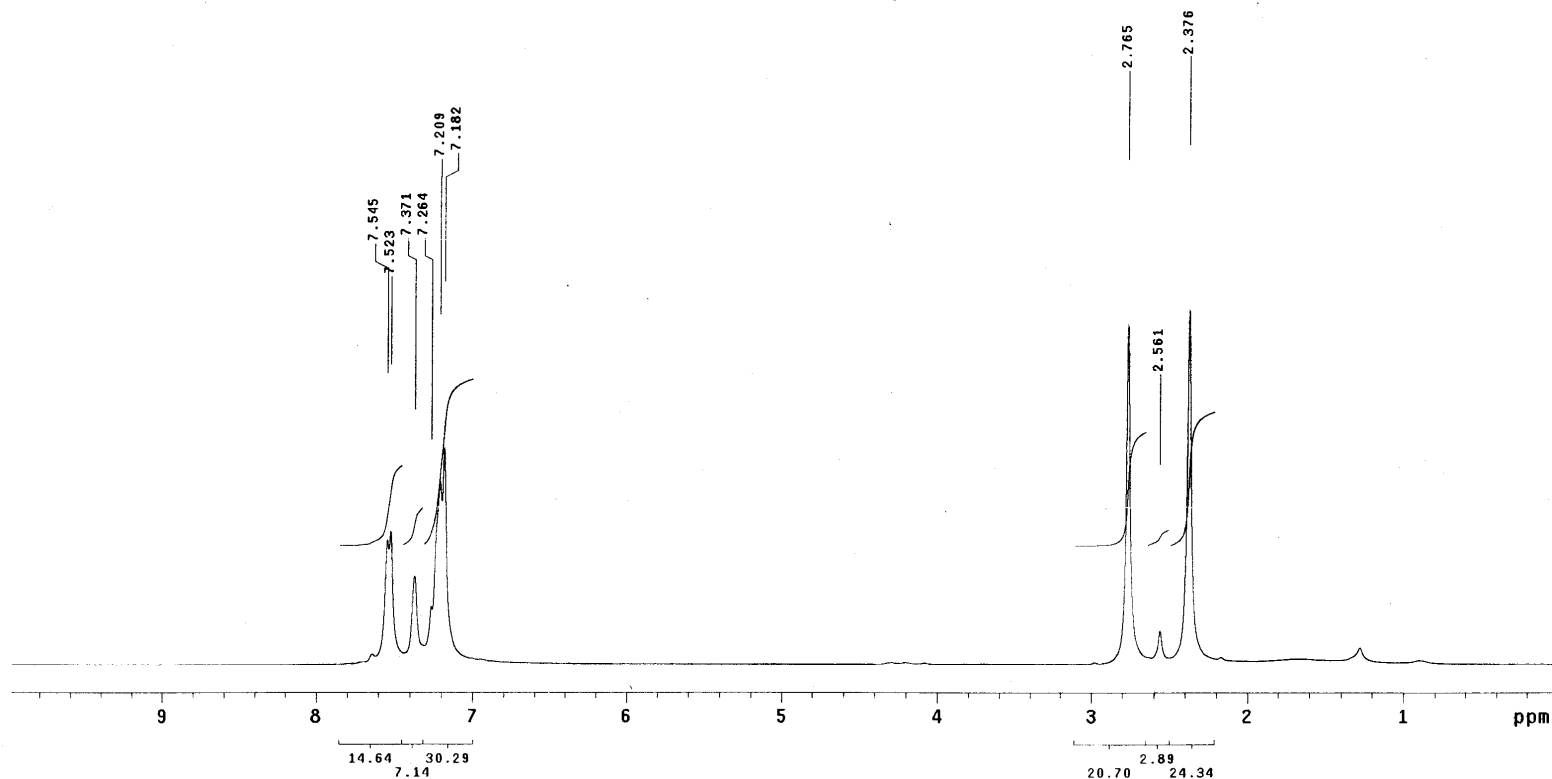


Manahel-N51-CDC13-H1forC13

Pulse Sequence: s2pu1

Solvent: CDC13
 Temp. 30.0 C / 303.1 K
 Mercury-300BB "NMR300"

Relax. delay 1.000 sec
 Pulse 74.1 degrees
 Acq. time 4.007 sec
 Width 9000.0 Hz
 23 repetitions
 OBSERVE H1, 300.0673626 MHz
 DATA PROCESSING
 FT size 131072
 Total time 31 min, 41 sec



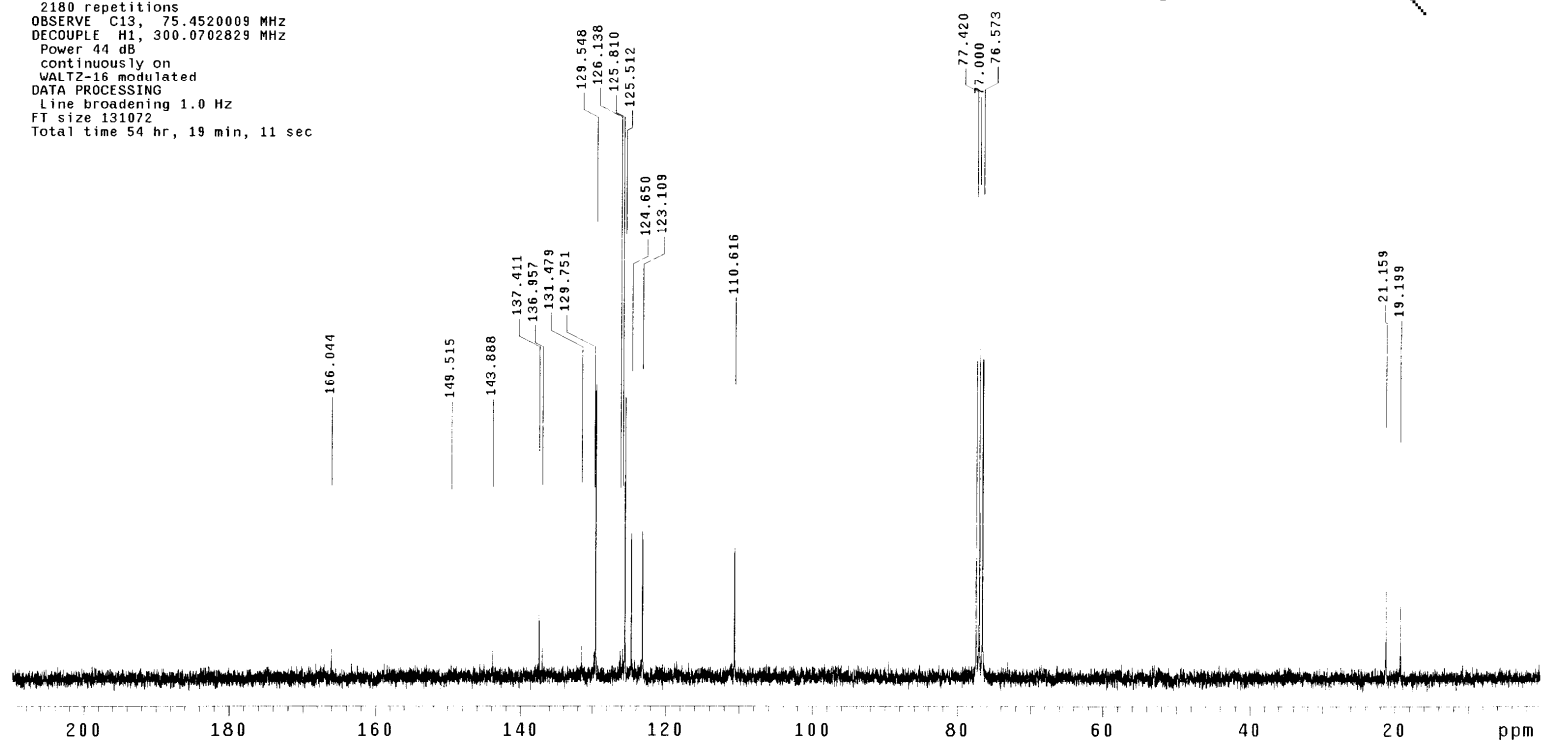
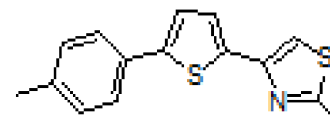
Manahel-N51-CDC13-C13

Archive directory: /export/home/vnmr1/vnmrsys/data
Sample directory: MSobhy-4-13C-dmso_06Jun2004
File: CARBON

Pulse Sequence: s2pu1

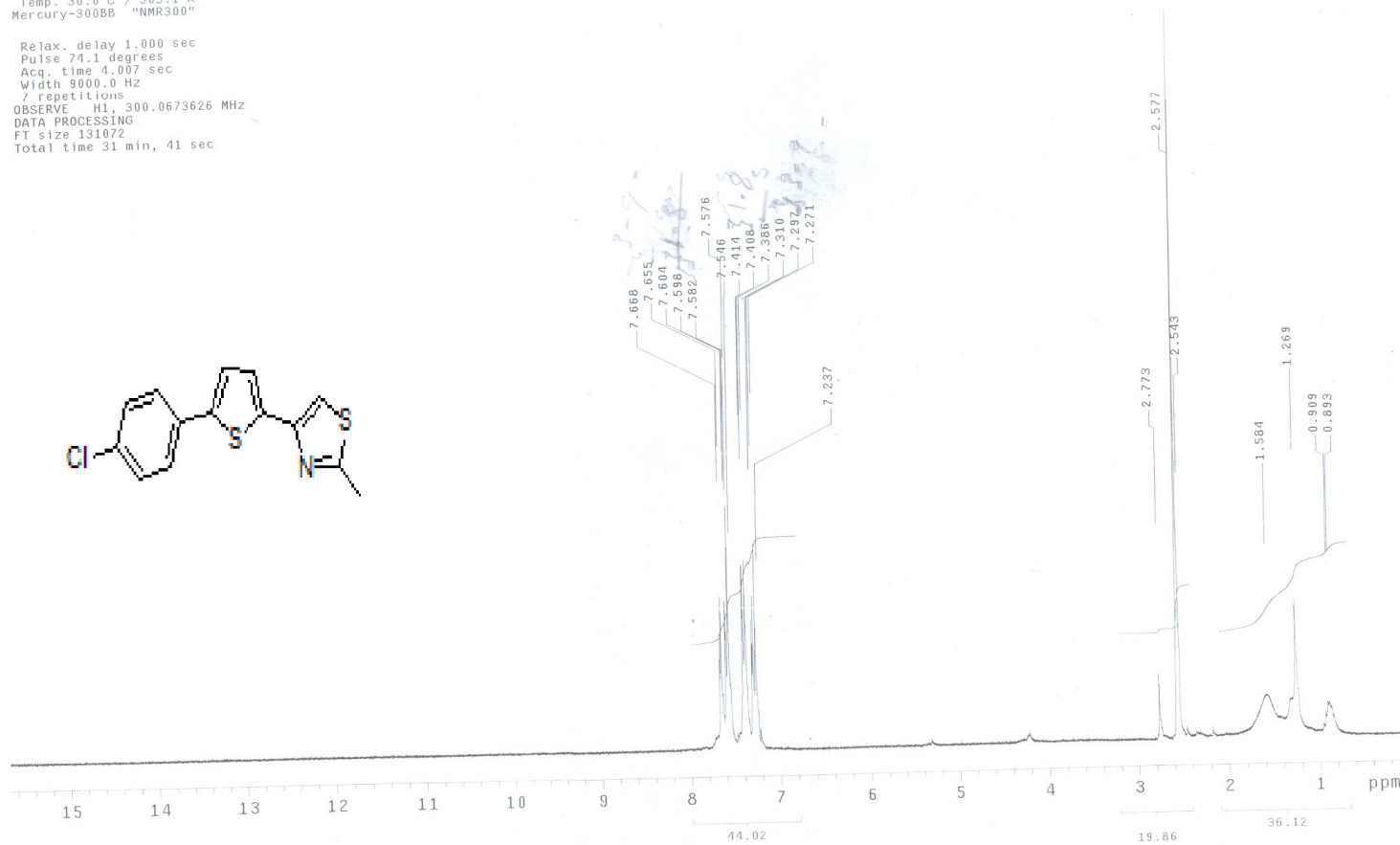
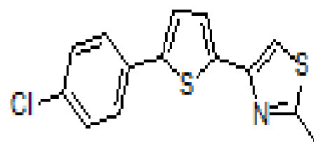
Solvent: DMSO
Temp. 30.0 C / 303.1 K
Mercury-300BB "NMR300"

Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 1.815 sec
Width 18863.1 Hz
2180 repetitions
OBSERVE C13, 75.4520009 MHz
DECOUPLE H1, 300.0702829 MHz
Power 44 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 54 hr, 19 min, 11 sec



Manahel-N39b-CDCL3-H
 Pulse Sequence: s2pu1
 Solvent: CDCl3
 Temp. 30.0 C / 303.1 K
 Mercury-300BB "NMR300"

Relax. delay 1.000 sec
 Pulse 74.1 degrees
 Acq. time 4.007 sec
 Width 9000.0 Hz
 / repetitions
 OBSERVE H1, 300.0673626 MHz
 DATA PROCESSING
 FT size 131072
 Total time 31 min, 41 sec



Manahel-N39b-CDC13-C13

Archive directory: /export/home/vnmr1/vnmr/sys/data
Sample directory: MSobhy-4-13C-dmso_06Jun2004
File: CARBON

Pulse Sequence: s2pu1
Solvent: DMSO
Temp. 30.0 C / 303.1 K
Mercury-300BB "NMR300"

Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 1.815 sec
Width 18863.1 Hz
1608 repetitions
OBSERVE C13, 75.4520015 MHz
DECOUPLE H1, 300.0702829 MHz
Power 44 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 54 hr, 19 min, 11 sec

