

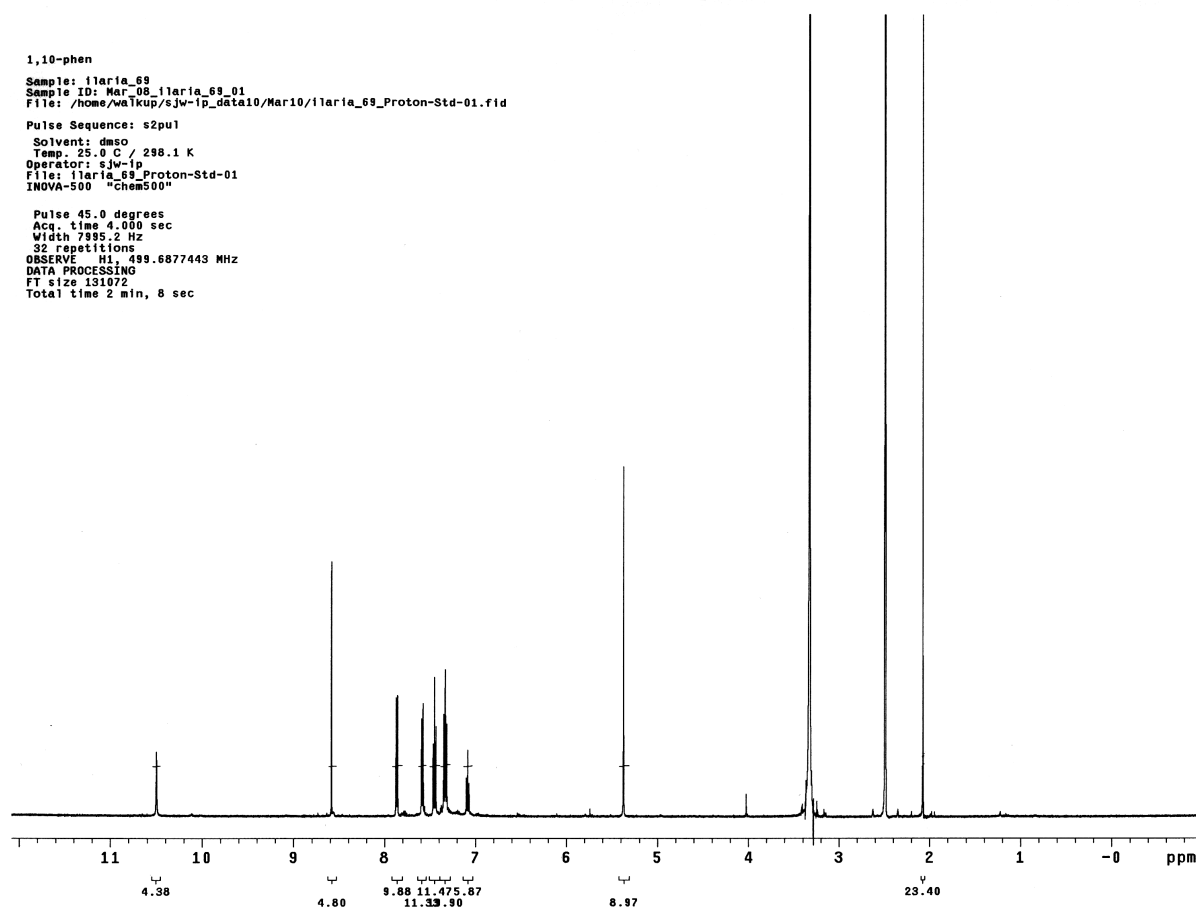
Copper(I)-catalyzed cycloaddition of silver acetylides and azides: Incorporation of volatile acetylenes into the triazole core

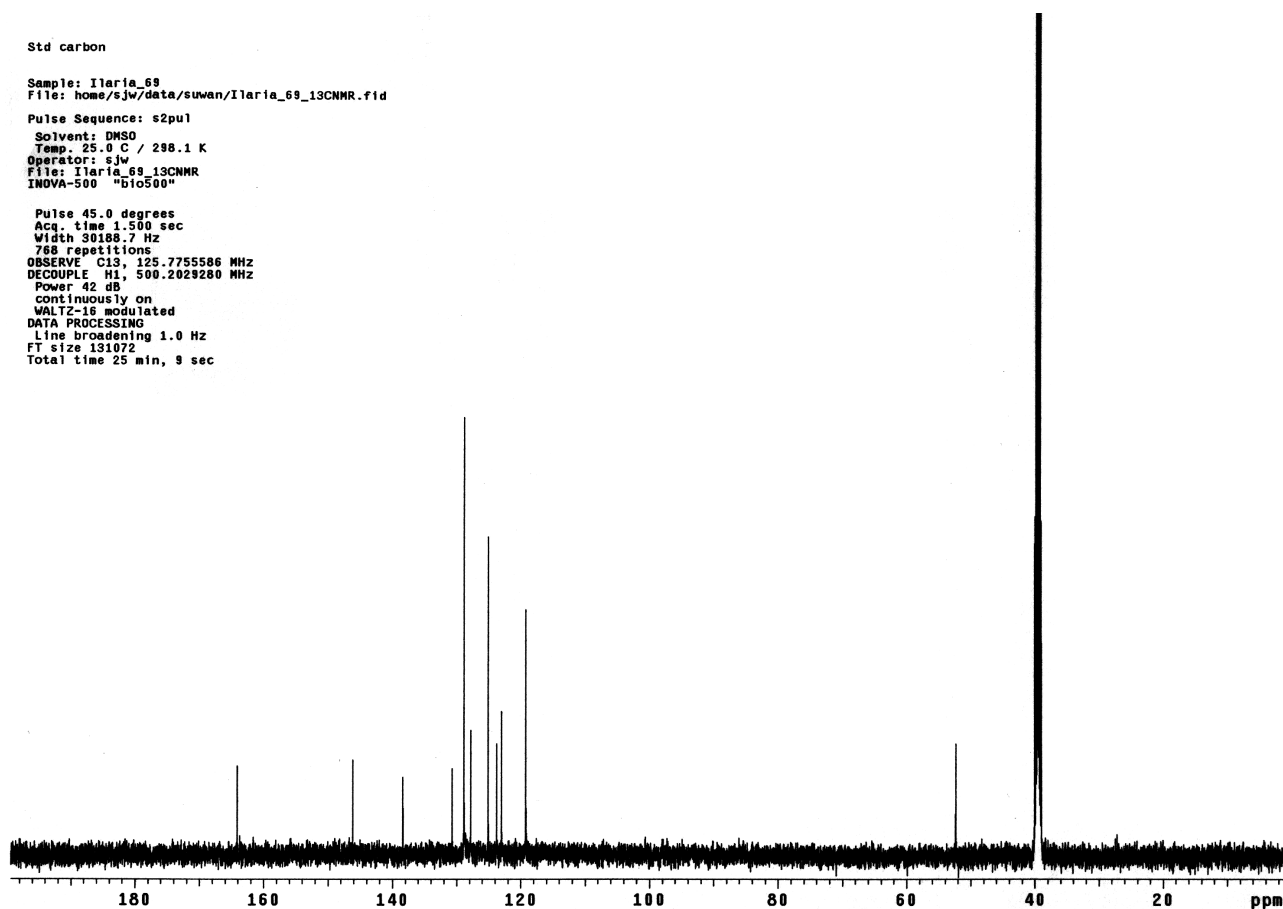
Ilaria Proietti Silvestri,^a Fikre Andemarian,^a George N. Kharailah,^a Su Wan Yap,^a Tim Quach,^a Sammi Tsegay,^a Craig M. Williams,^b Richard A. J. O'Hair,^a Paul S. Donnelly,^a and Spencer J. Williams^{a,}*

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^b *School of Chemistry and Molecular Biosciences, University of Queensland, Brisbane 4072, Queensland, Australia*

N-Phenyl-2-(4-phenyl-1*H*-1,2,3-triazol-1-yl) acetamide (3)

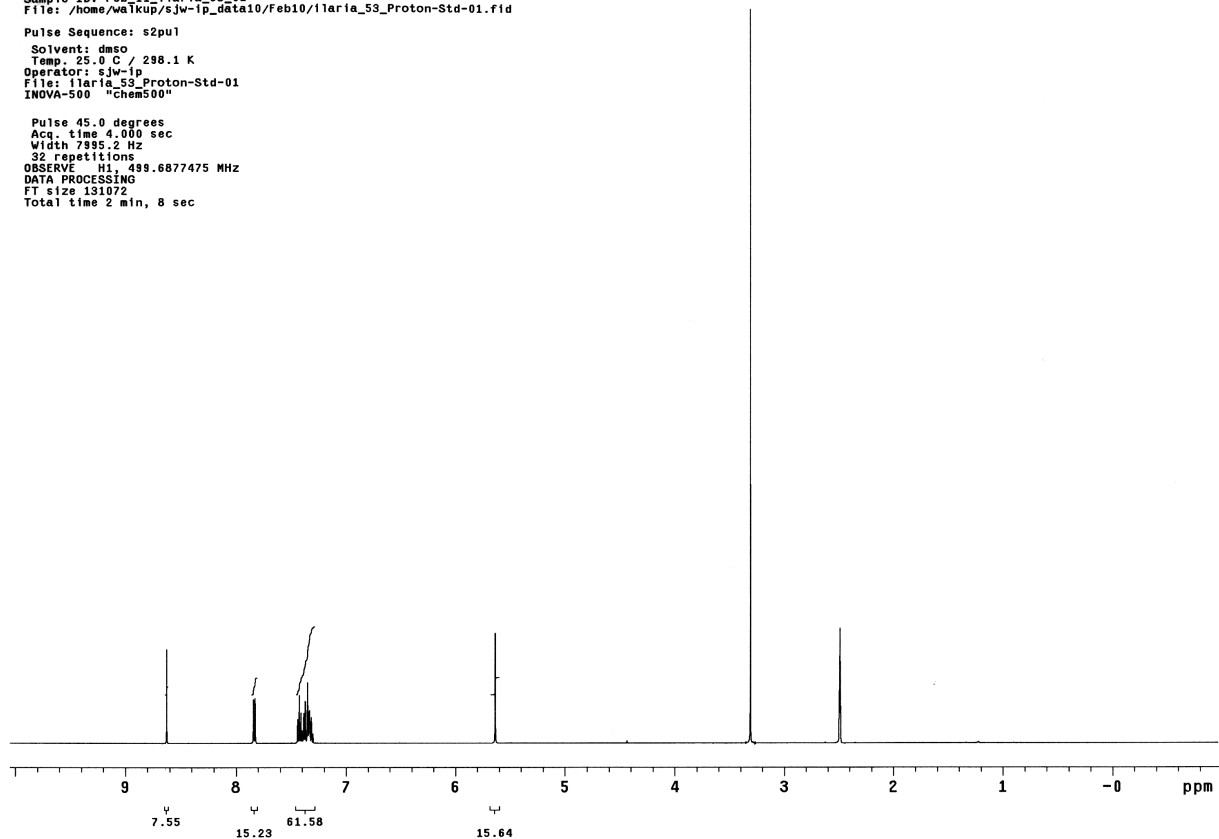




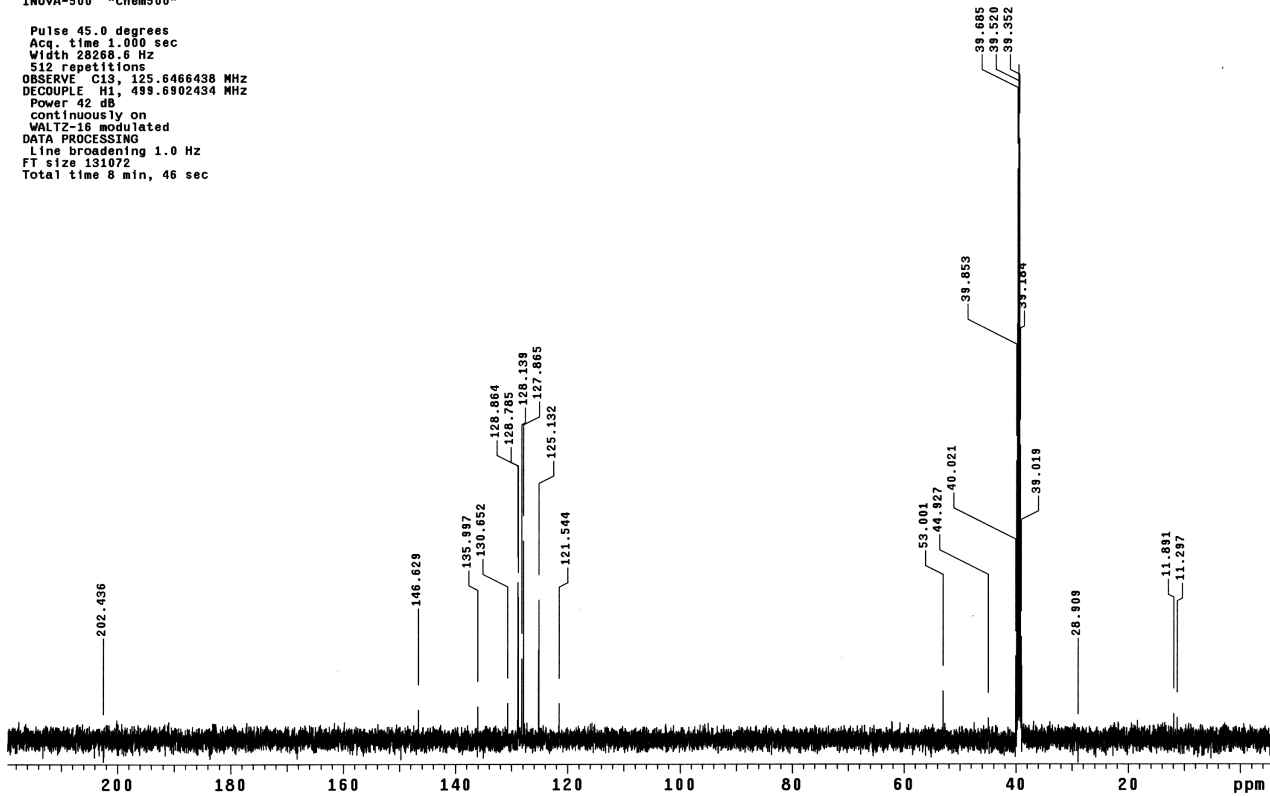
1-Benzyl-4-phenyl-1*H*-1,2,3-triazole (4)

Sample: ilaria_53
Sample ID: Feb_11_ilaria_53_01
File: /home/walkup/sjw-lp_data10/Feb10/ilaria_53_Proton-Std-01.fid
Pulse Sequence: s2pu1
Solvent: dmsc
Temp: 25.0 C / 298.1 K
Operator: sjw-lp
File: ilaria_53_Proton-Std-01
INOVA-500 "Chem500"

Pulse 45.0 degrees
Acq. time 4.000 sec
Width 7885.2 Hz
32 repetitions
OBSERVE H1, 499.6877475 MHz
DATA PROCESSING
FT size 131072
Total time 2 min, 8 sec



Sample: I1aria_52
Sample ID: I1aria_52_01
File: /home/walkup/sjw-sy_data10/Oct10/I1aria_52_Carbon-Std-01.fid
Pulse Sequence: s2pul
Solvent: dmsd
Temp: 25.0 C / 298.1 K
Operator: sjw-sy
File: I1aria_52_Carbon-Std-01
INOVA-500 "chem500"
Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28265.6 Hz
512 repetitions
OBSERVE C13, 125.6466438 MHz
DECOUPLE H1, 499.6902434 MHz
Power 42 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 46 sec



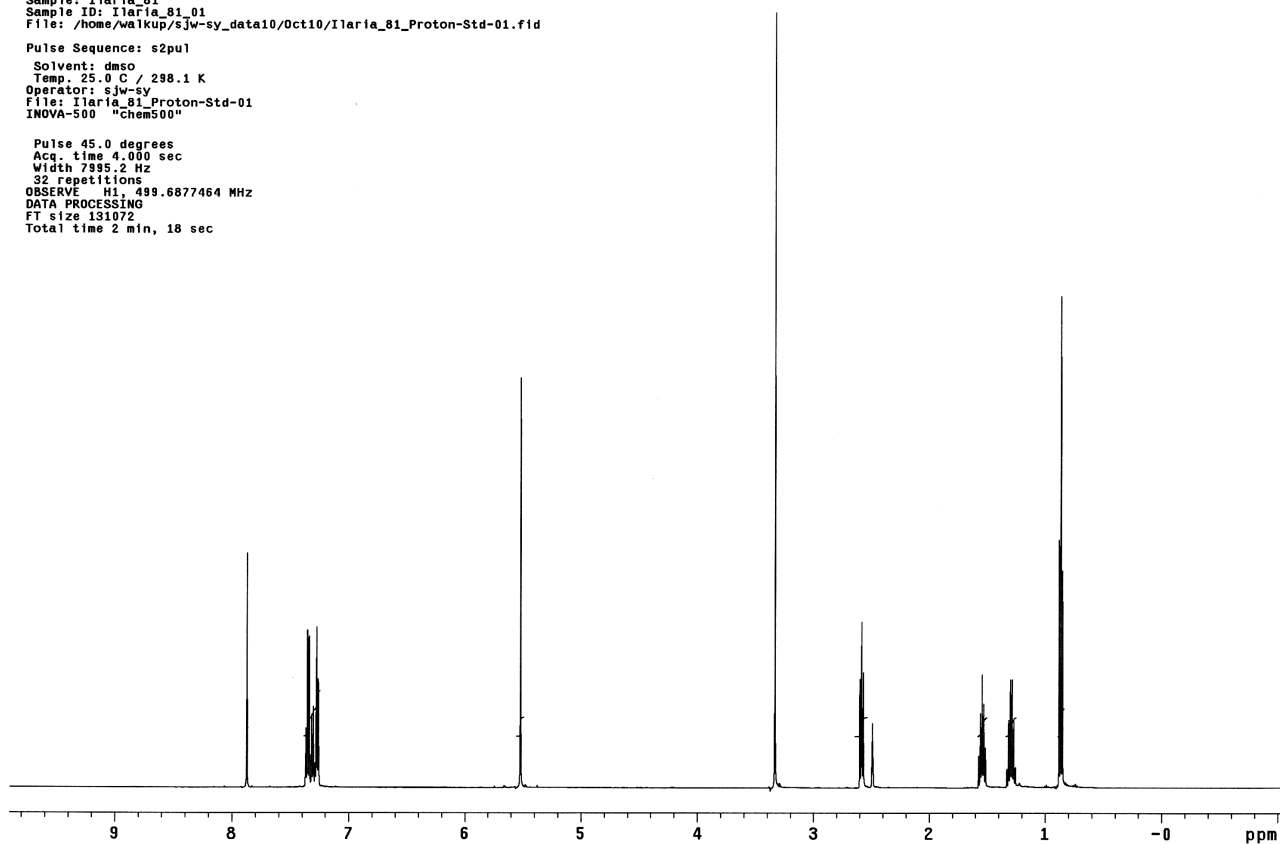
1-Benzyl-4-butyl-1*H*-1,2,3-triazole (5)

pad=10 run with findz0 before acquisition

Sample: I1aria_81
Sample ID: I1aria_81_01
File: /home/walkup/sjw-sy_data10/Oct10/I1aria_81_Proton-Std-01.fid

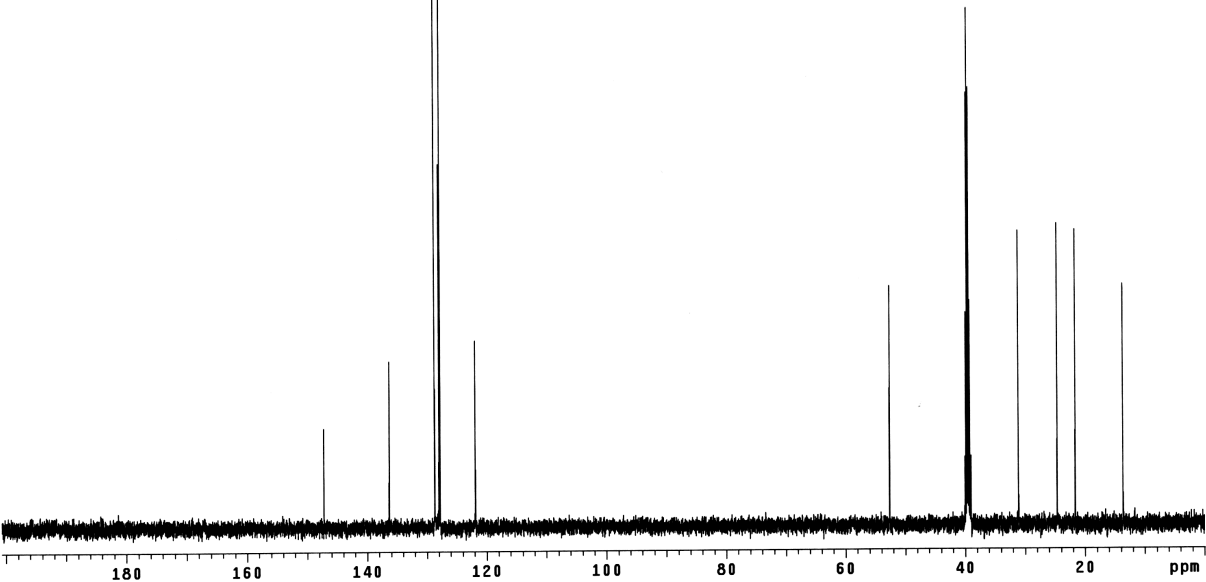
Pulse Sequence: s2pu1
Solvent: dmsd
Temp. 25.0 C / 298.1 K
Operator: sjw-sy
File: I1aria_81_Proton-Std-01
INOVA-500 "Chem500"

Pulse 45.0 degrees
Acq. time 4.000 sec
Width 7395.2 Hz
32 repetitions
OBSERVE H1, 499.6877464 MHz
DATA PROCESSING
FT size 131072
Total time 2 min, 18 sec

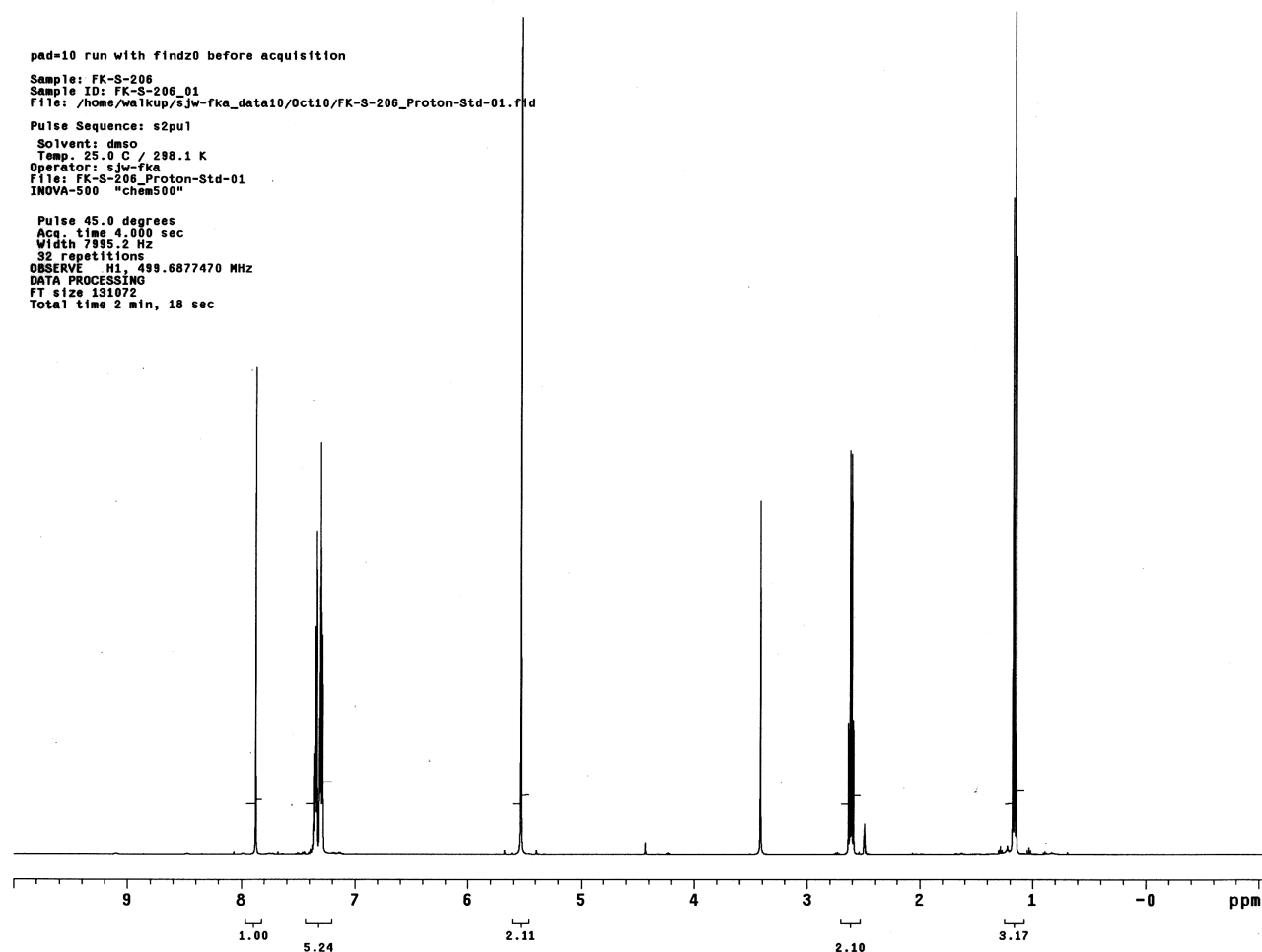


Sample: I1aria_81
Sample ID: I1aria_81_01
File: /home/walakup/sjw-sy_data10/Oct10/I1aria_81_Carbon-Std-01.fid
Pulse Sequence: s2pul
Solvent: dmsd
Temp: 25.0 C / 298.1 K
Operator: sjw-sy
File: I1aria_81_Carbon-Std-01
INOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28268.6 Hz
512 repetitions
OBSERVE C13, 125.6466429 MHz
DECOUPLE H1, 499.6902434 MHz
Power 42 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 46 sec



4-Ethyl-1-benzyl-1*H*-1,2,3-triazole (6)



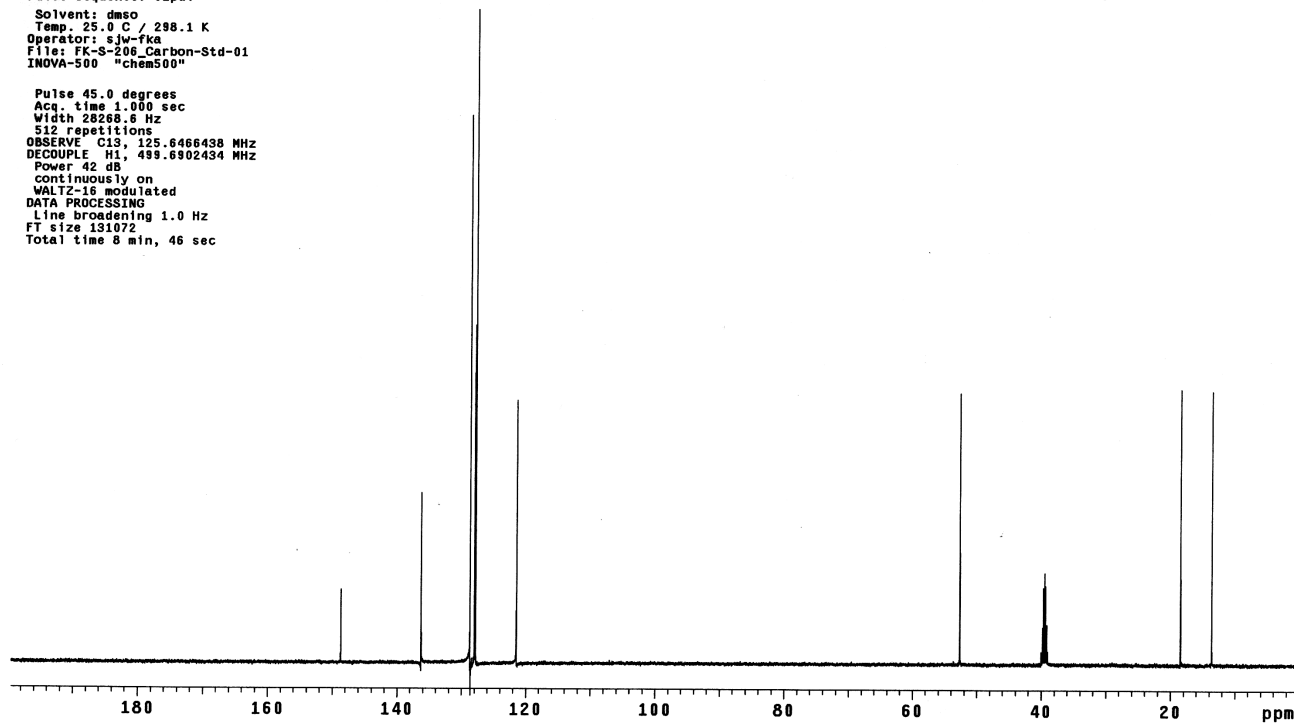
pad=10 run with findz0 before acquisition

Sample: FK-S-206
Sample ID: FK-S-206_02
File: /home/walkup/sjw-fka_data10/Oct10/FK-S-206_Carbon-Std-01.fid

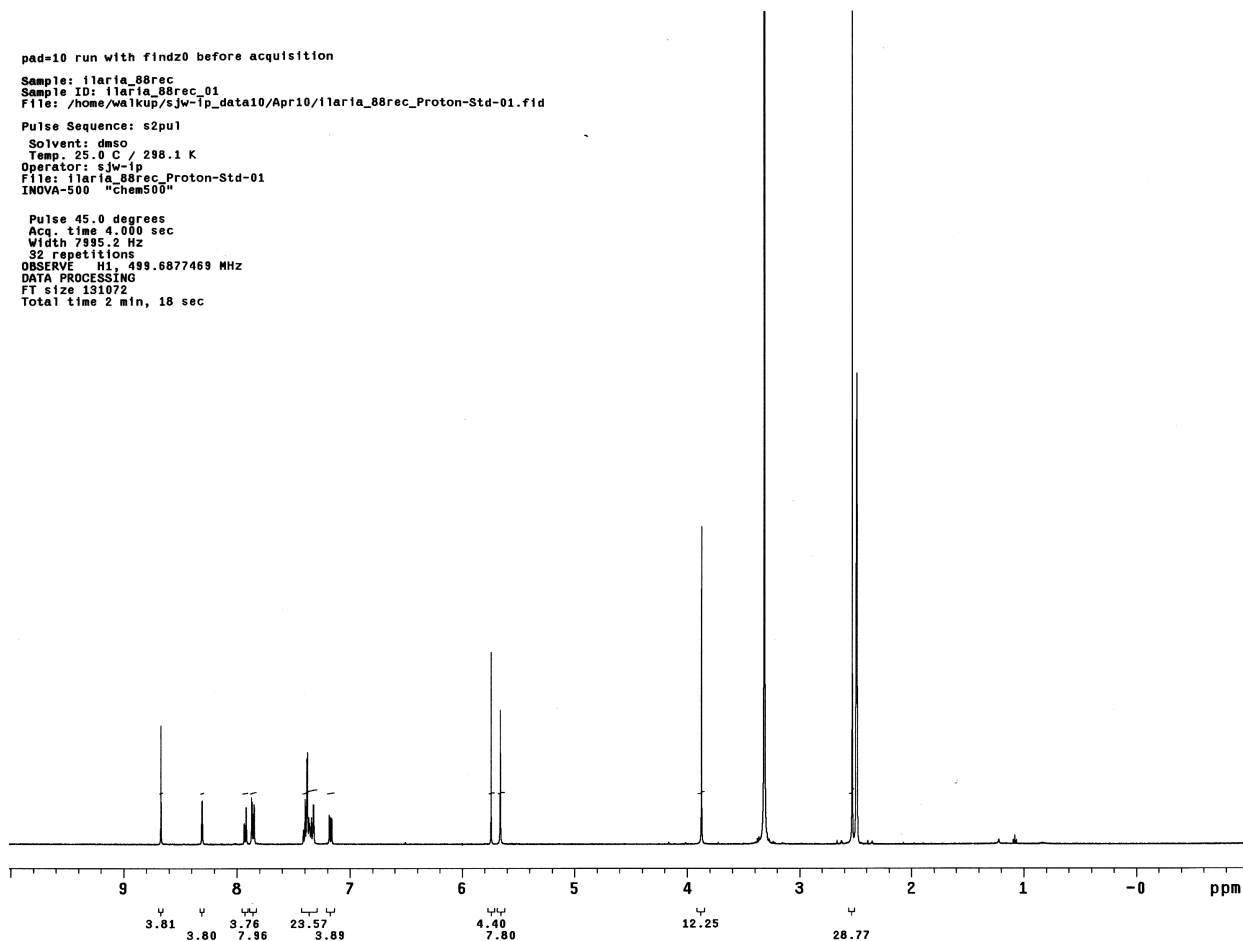
Pulse Sequence: s2pul

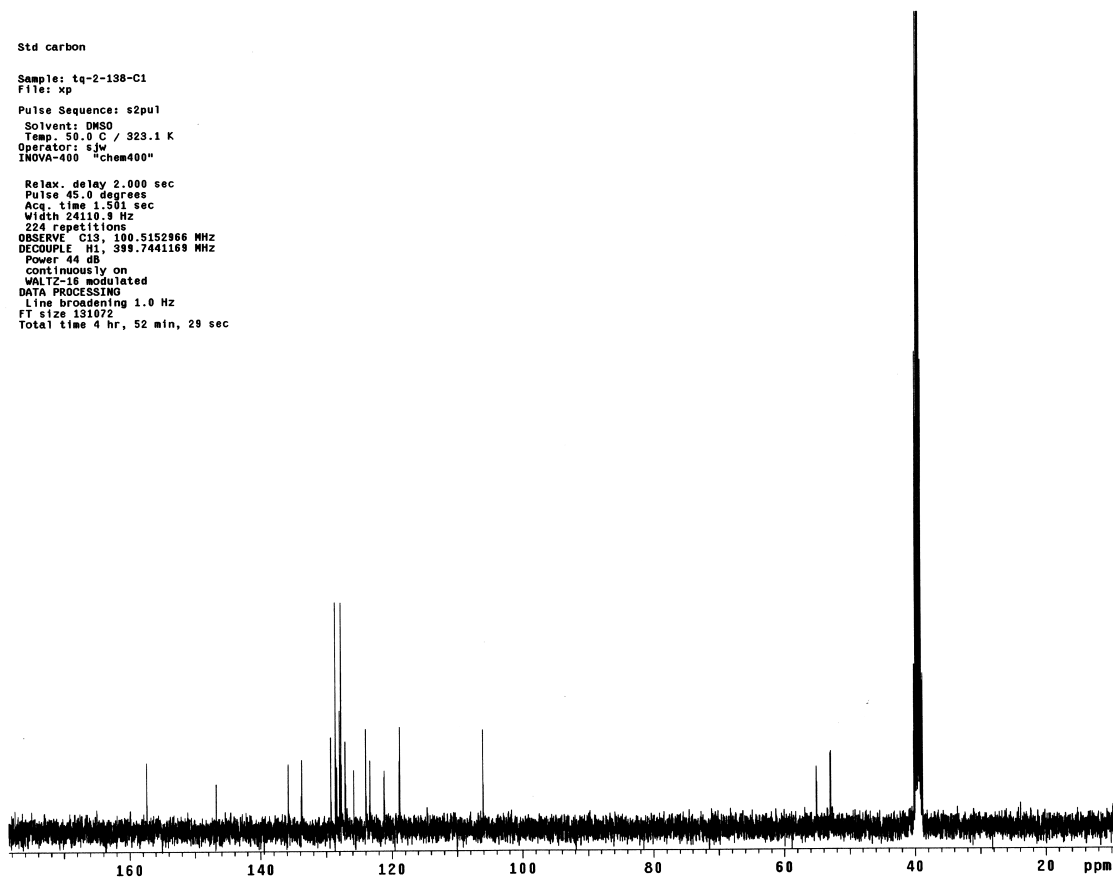
Solvent: dmsd
Temp: 25.0 C / 298.1 K
Operator: sjw-fka
File: FK-S-206_Carbon-Std-01
INOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28268.6 Hz
512 repetitions
OBSERVE C13, 125.6466438 MHz
DECOUPLE H1, 499.6902434 MHz
Power 42 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 46 sec

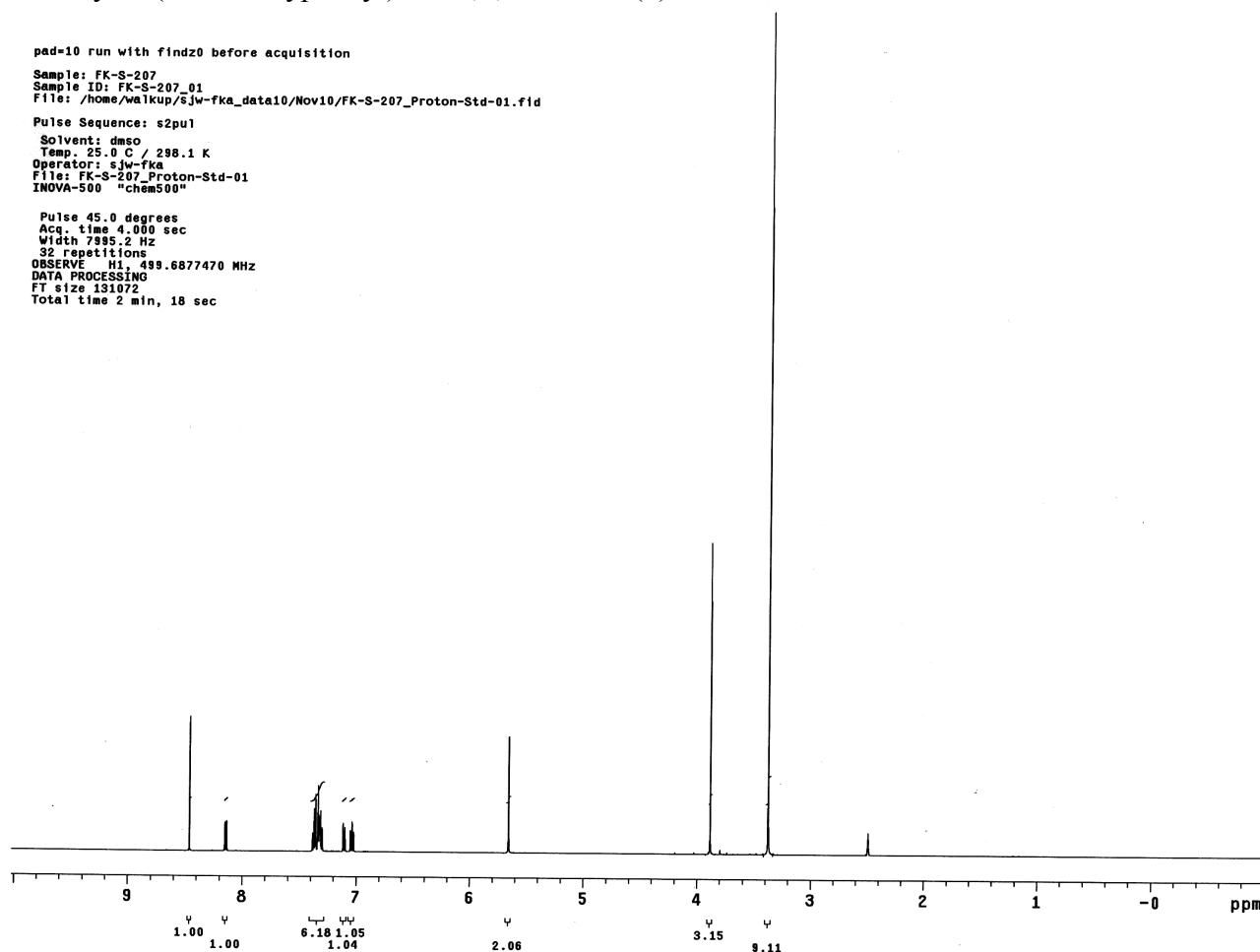


1-Benzyl-4-(2-methoxynaphthalen-7-yl)-1*H*-1,2,3-triazole (7)

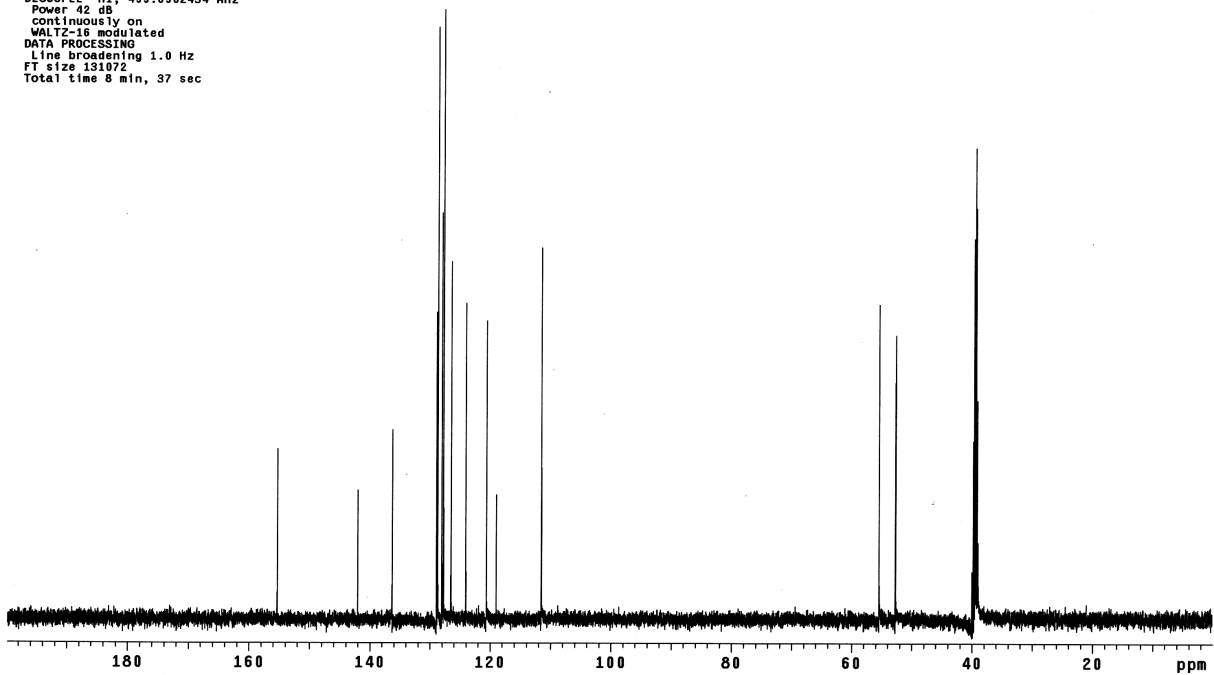




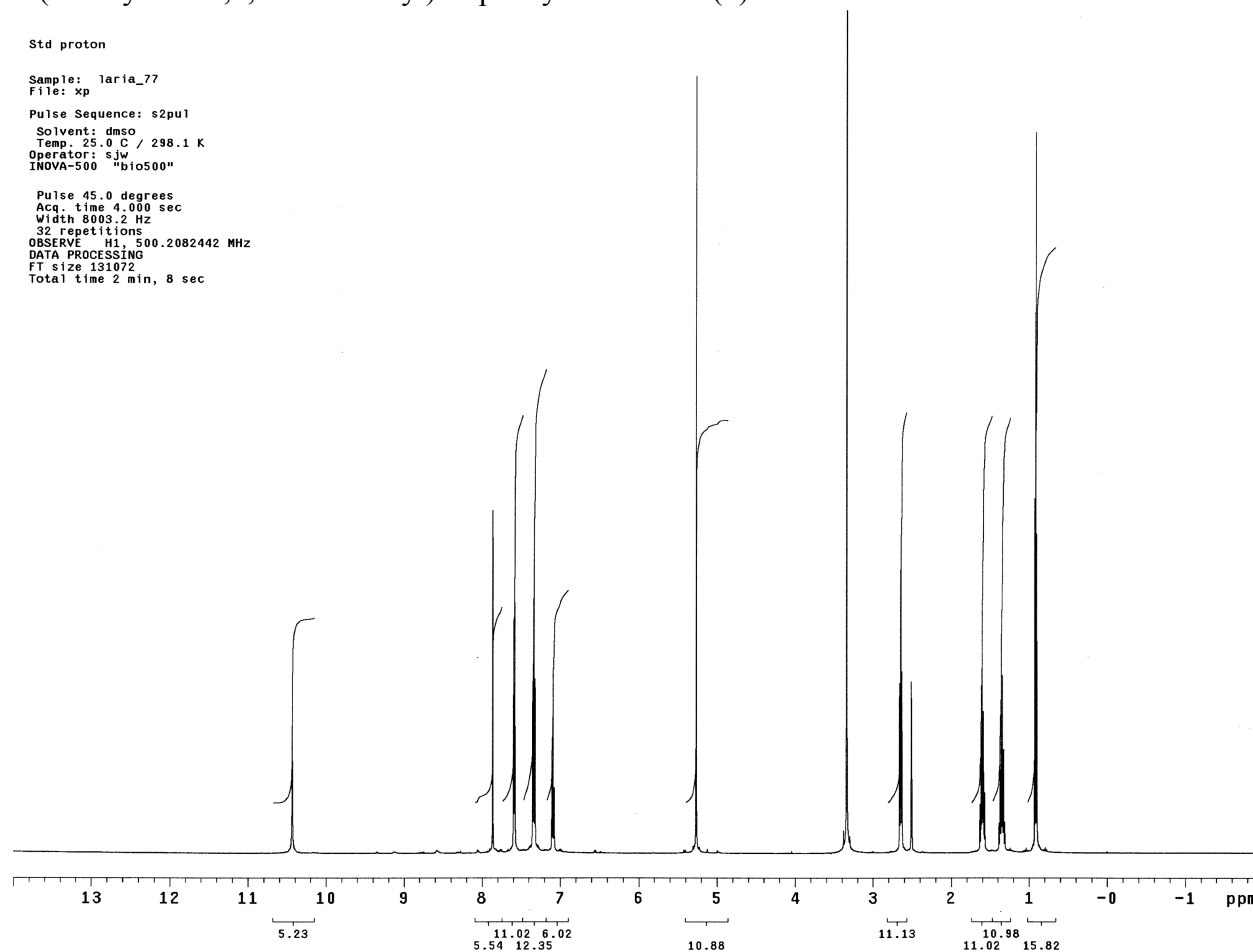
1-Benzyl-4-(2-methoxyphenyl)-1*H*-1,2,3-triazole (8)

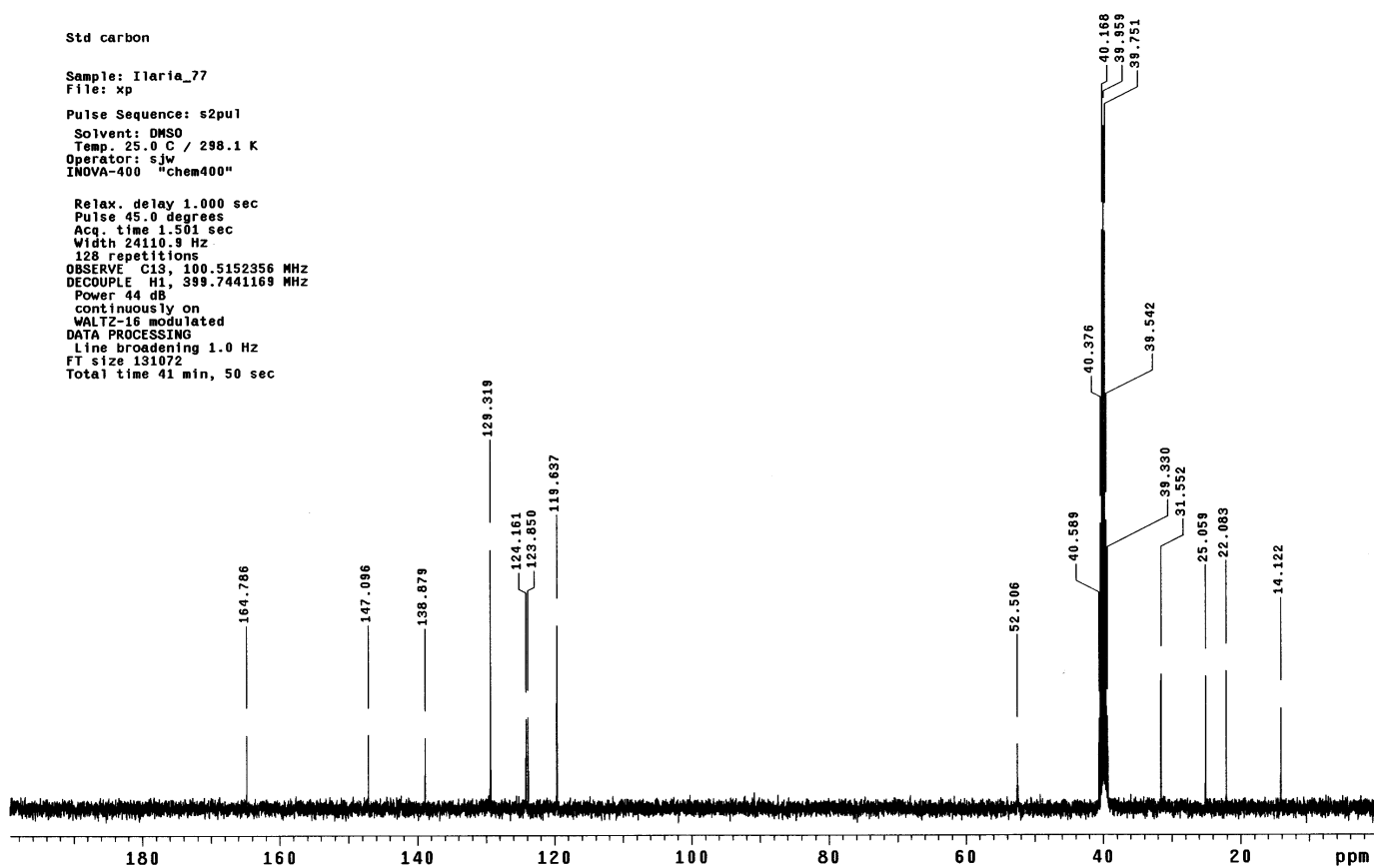


Sample: FK-S-207
Sample ID: FK-S-207_02
File: /home/waikup/sjw-fka_data10/Nov10/FK-S-207_Carbon-Std-01.fid
Pulse Sequence: s2pu1
Solvent: dmsc
Temp: 25.0 C / 298.1 K
Operator: sjw-fka
File: FK-S-207_Carbon-Std-01
INNOVA-500 "chem500"
Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28268.6 Hz
512 repetitions
OBSERVE C13, 125.6466394 MHz
DECOUPLE H1, 499.6302434 MHz
Power 42 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 37 sec

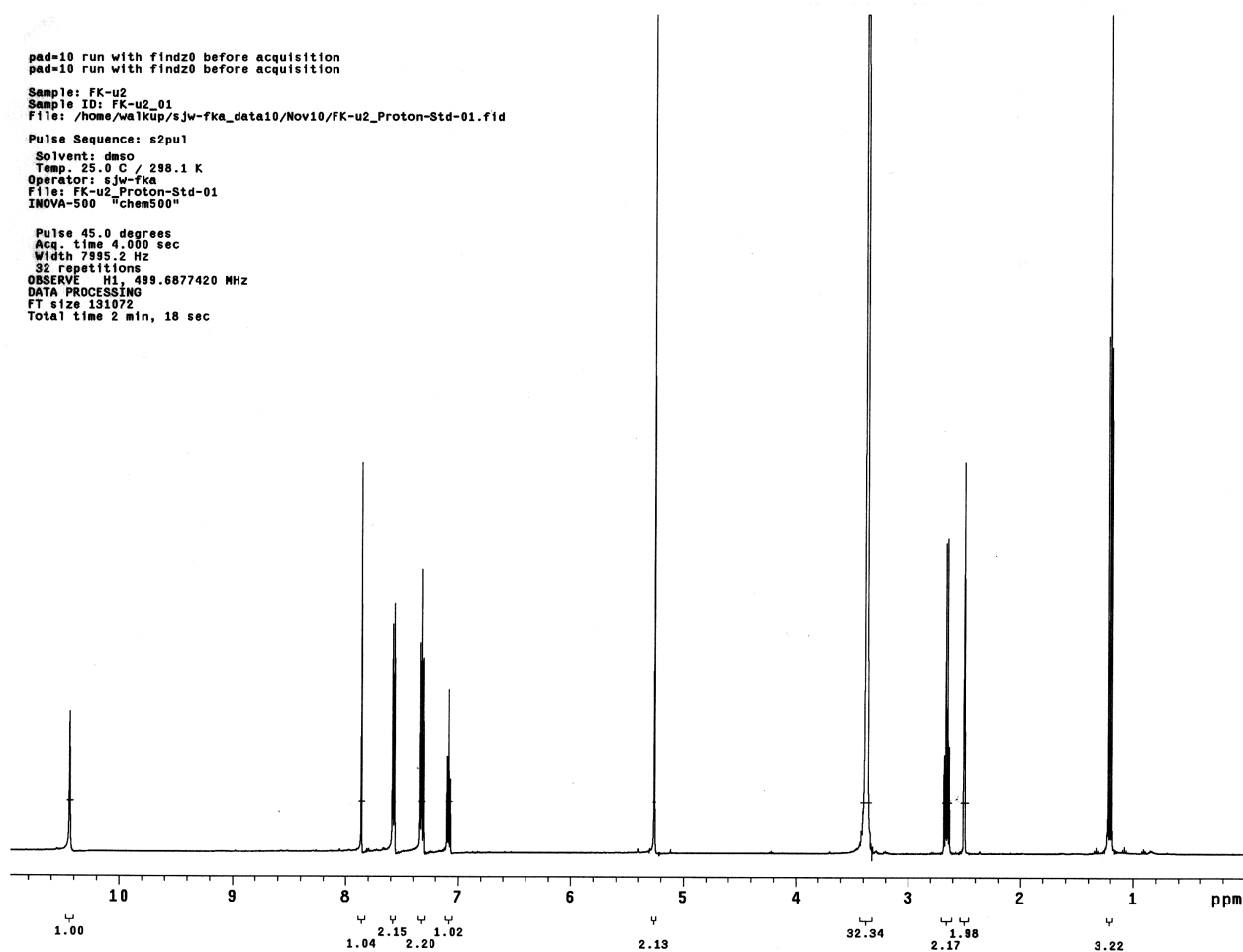


2-(4-Butyl-1*H*-1,2,3-triazol-1-yl)-*N*-phenyl acetamide (9)



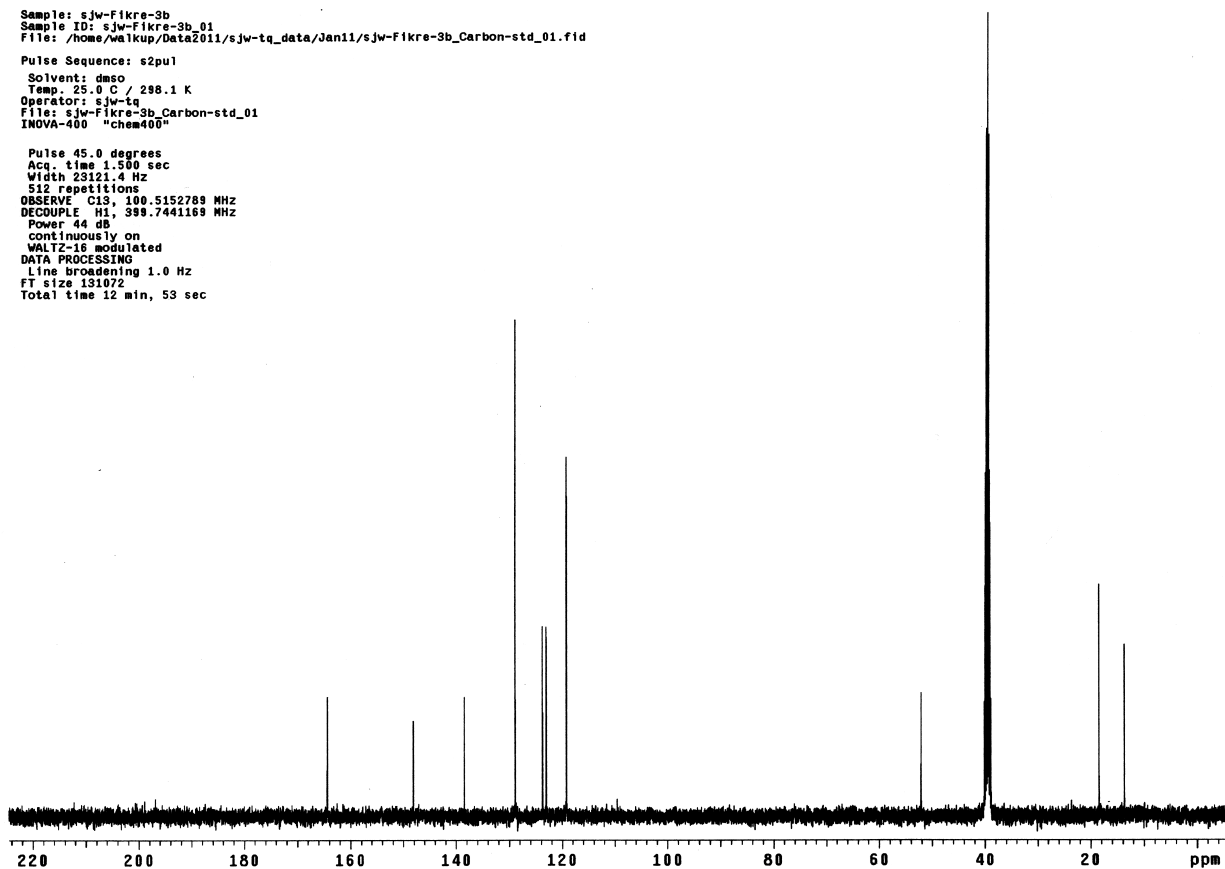


2-(4-Ethyl-1*H*-1,2,3-triazol-1-yl)-*N*-phenylacetamide (10)

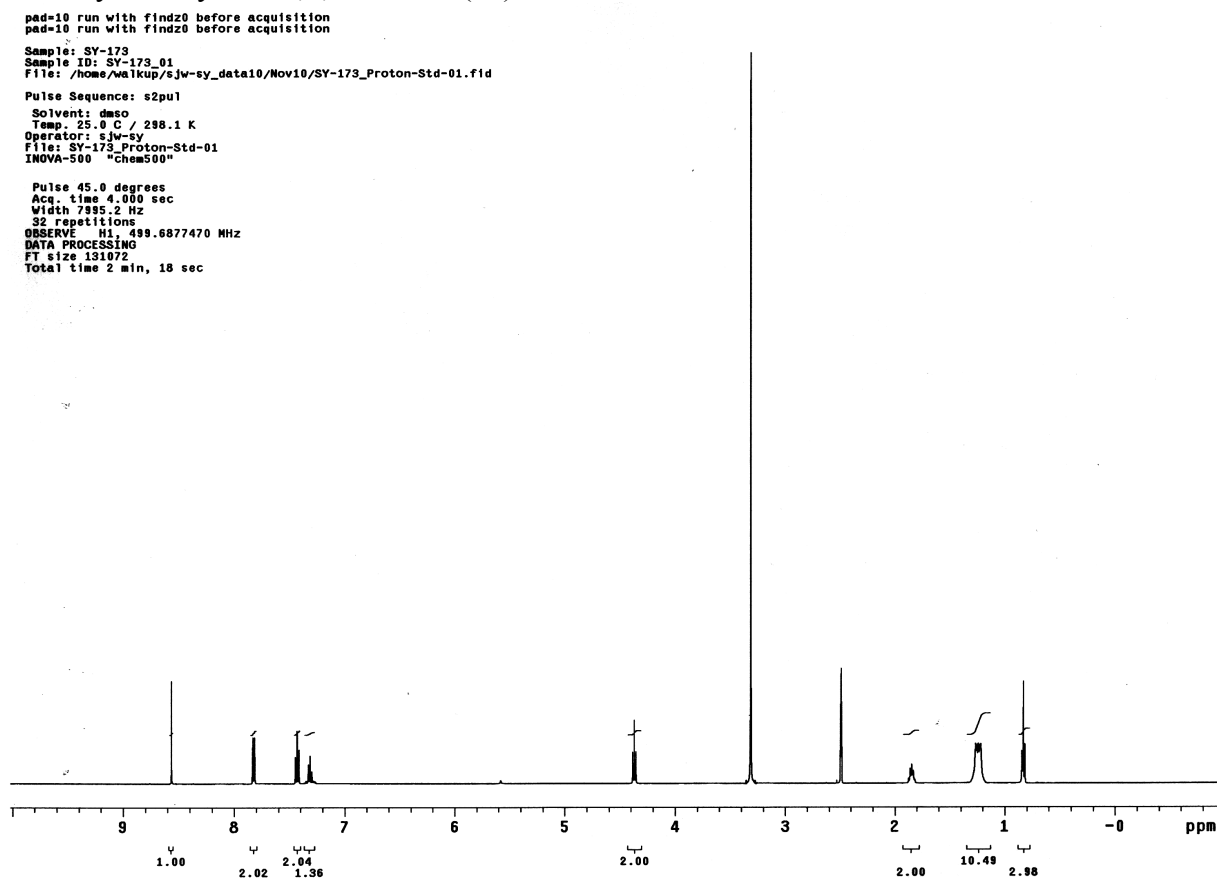


Sample: sjw-Fikre-3b
Sample ID: sjw-Fikre-3b_01
File: /home/walakup/Data2011/sjw-tq_data/Jan11/sjw-Fikre-3b_Carbon-std_01.fid
Pulse Sequence: s2pu1
Solvent: dmsc
Temp. 25.0 C / 298.1 K
Operator: sjw-tq
File: sjw-Fikre-3b_Carbon-std_01
INOVA-400 "chem400"

Pulse 45.0 degrees
Acq. time 1.500 sec
Width 23121.4 Hz
512 repetitions
OBSERVE C13, 100.5152789 MHz
DECOUPLE H1, 399.7441169 MHz
Power 44 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 12 min, 53 sec



4-Phenyl-1-octyl-1*H*-1,2,3-triazole (11)



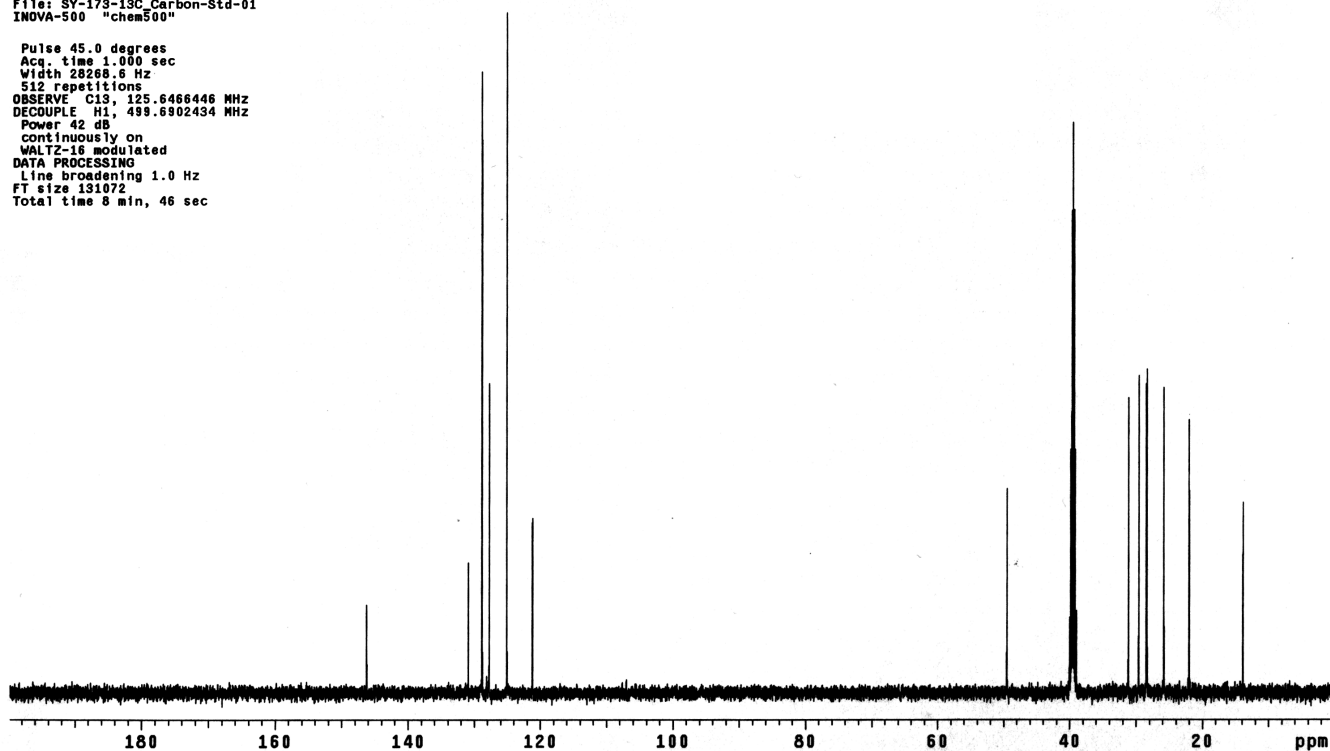
pad=10 run with findz0 before acquisition

Sample: SY-173-13C
Sample ID: SY-173-13C_01
File: /home/waikup/sjw-sy_data10/Nov10/SY-173-13C_Carbon-Std-01.fid

Pulse Sequence: s2pul

Solvent: dmso
Temp. 25.0 C / 298.1 K
Operator: sjw-sy
File: SY-173-13C_Carbon-Std-01
INNOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28268.6 Hz
512 repetitions
OBSERVE C13, 125.6466446 MHz
DECOUPLE H1, 499.6302434 MHz
Power 42 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 46 sec



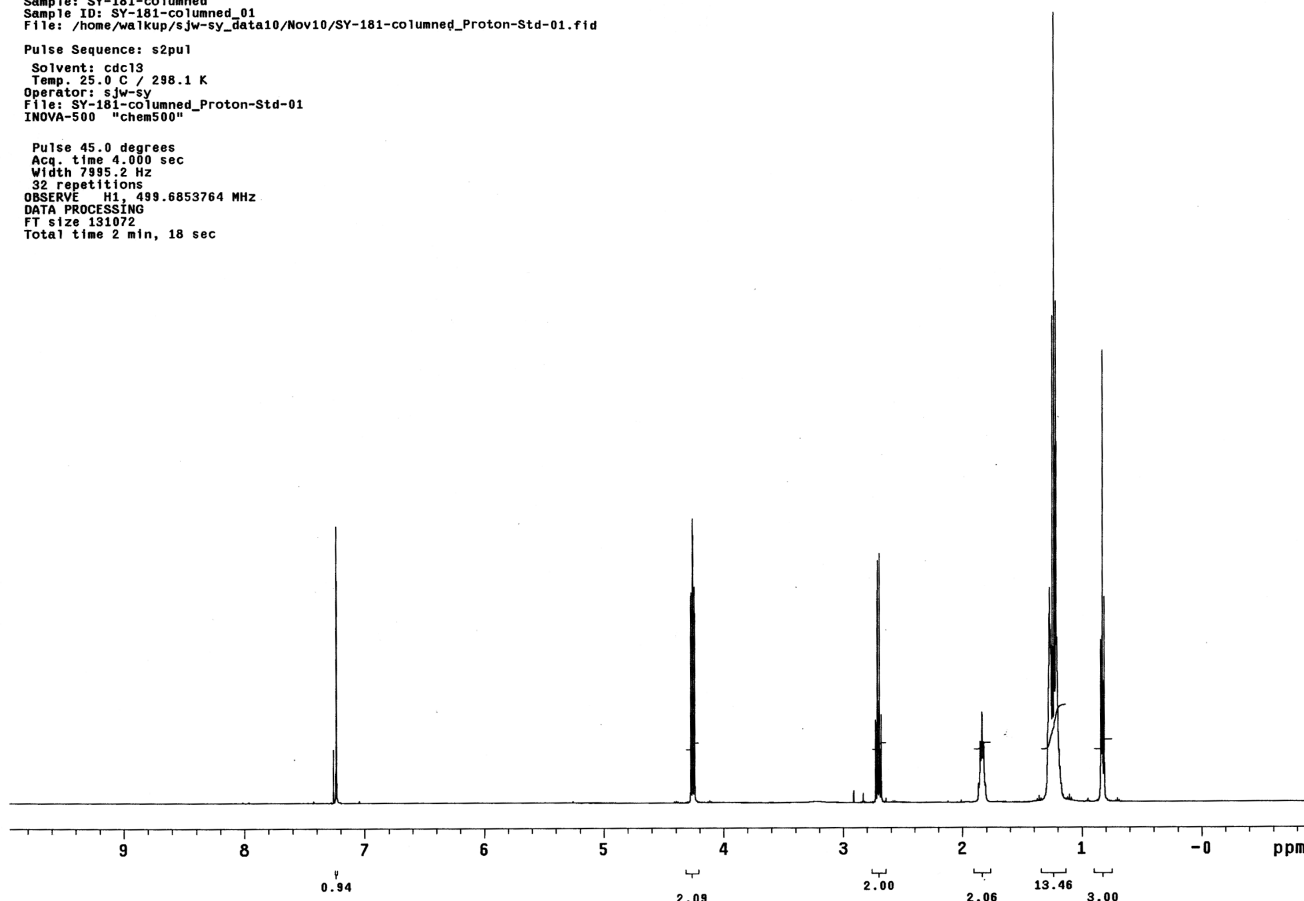
4-Ethyl-1-octyl-1*H*-1,2,3-triazole (12)

pad=10 run with findz0 before acquisition

Sample: SY-181-columned
Sample ID: SY-181-columned_01
File: /home/walkup/sjw-sy_data10/Nov10/SY-181-columned_Proton-Std-01.fid

Pulse Sequence: s2pul
Solvent: cdc13
Temp: 25.0 C / 298.1 K
Operator: sjw-sy
File: SY-181-columned_Proton-Std-01
INOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 4.000 sec
Width 7995.2 Hz
32 repetitions
OBSERVE H1, 499.6853764 MHz
DATA PROCESSING
FT size 131072
Total time 2 min, 18 sec

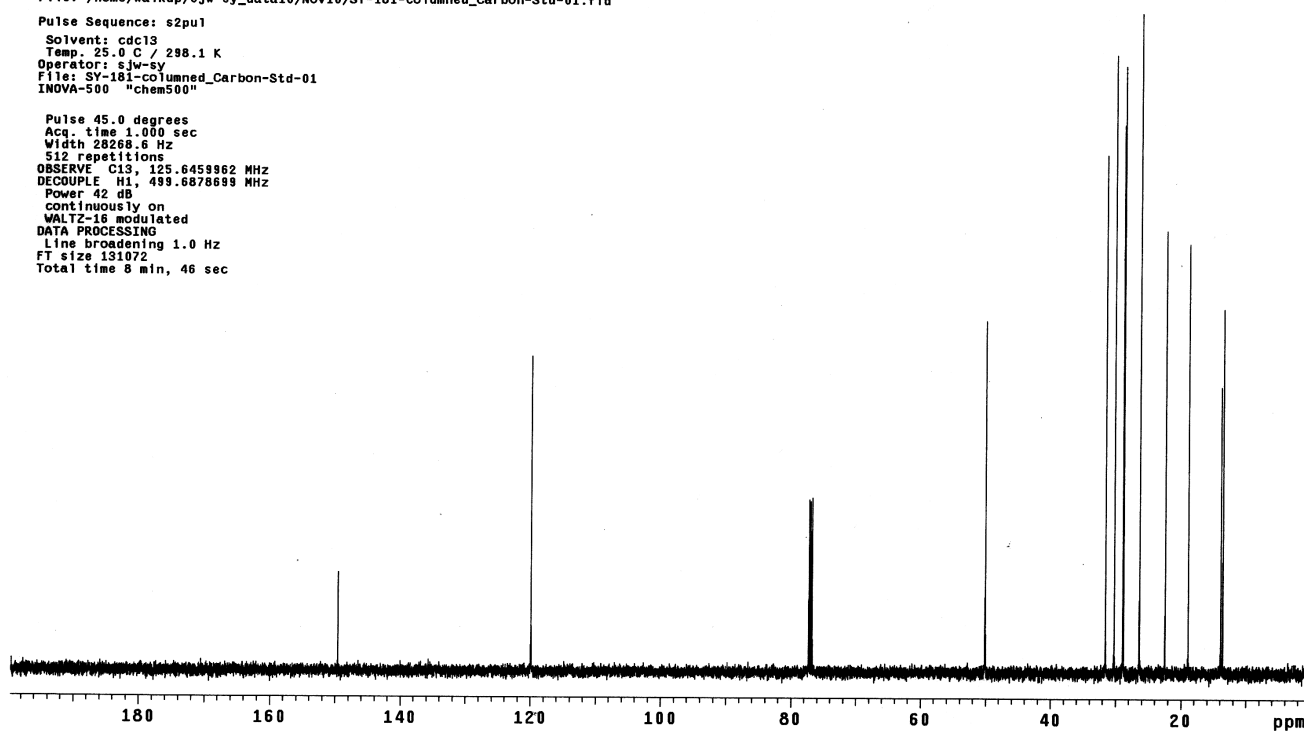


pad=10 run with findz0 before acquisition
pad=10 run with findz0 before acquisition

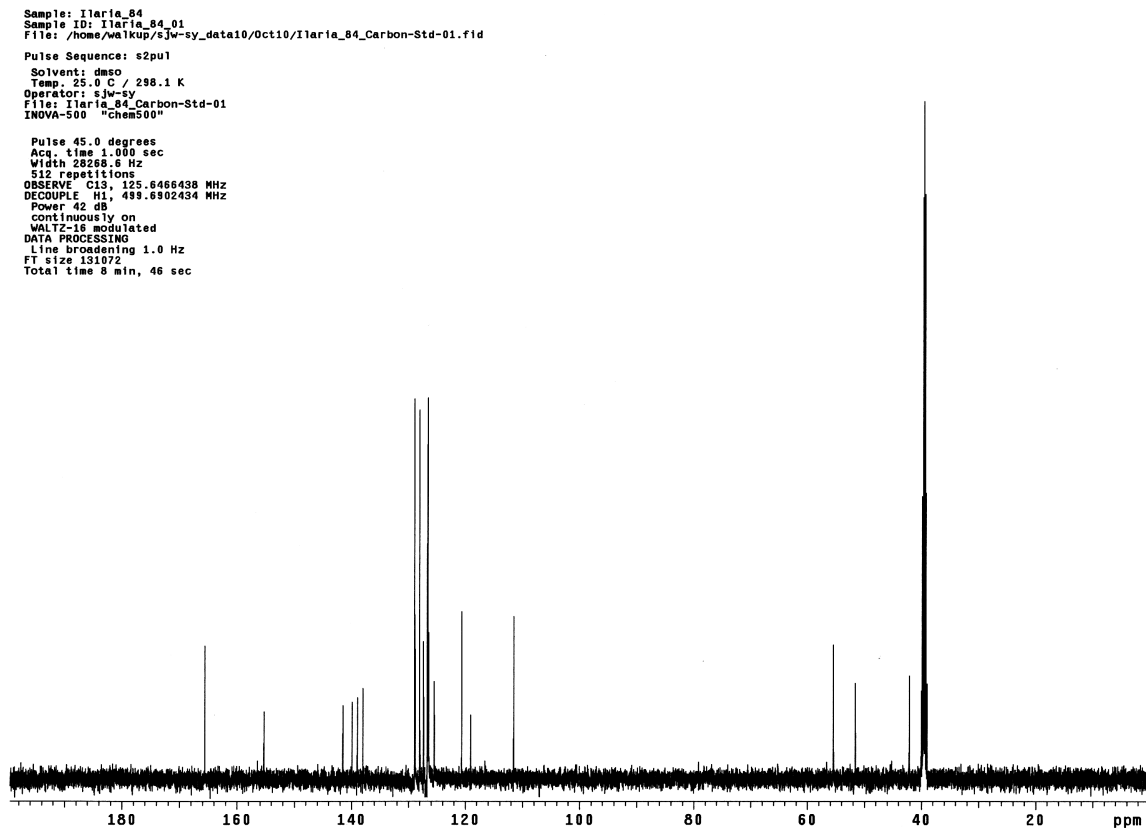
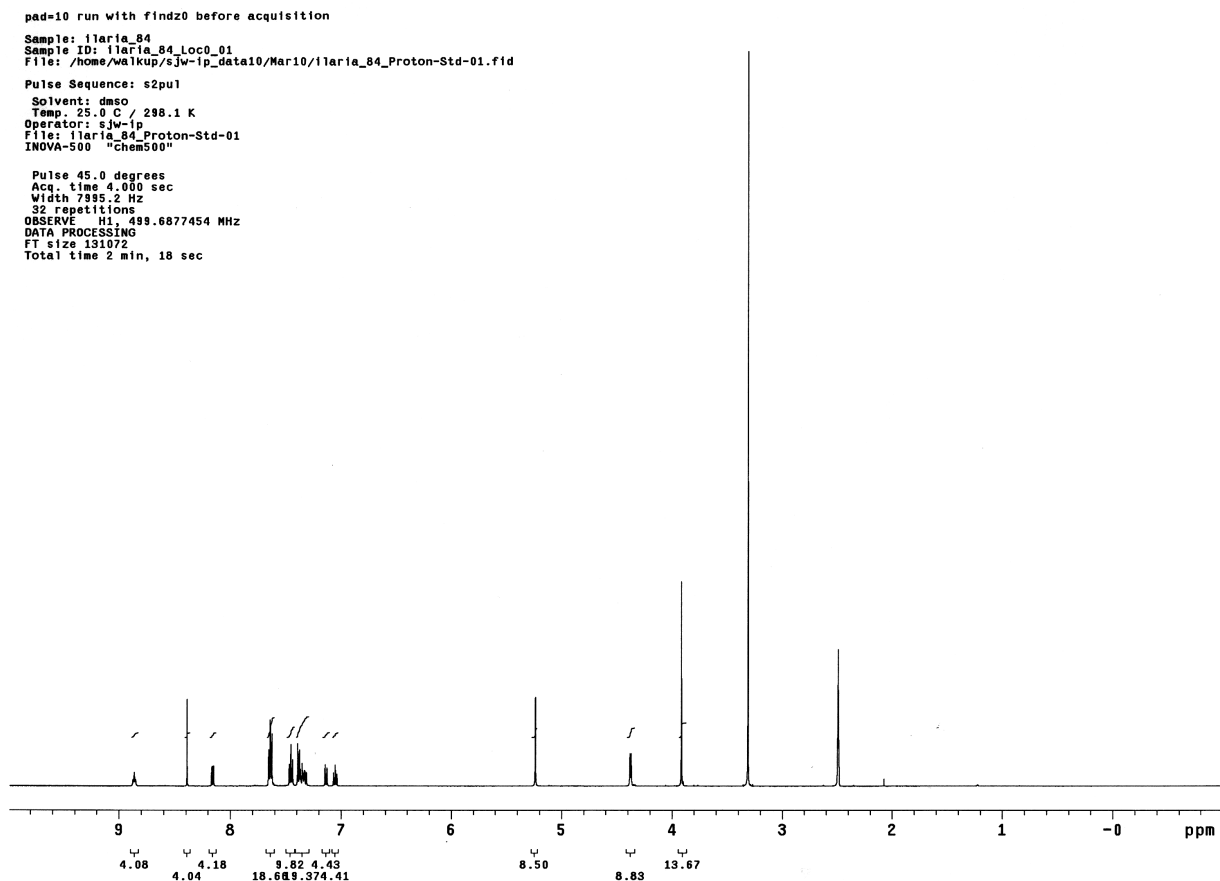
Sample: SY-181-columned
Sample ID: SY-181-columned_02
File: /home/walkup/sjw-sy_data10/Nov10/SY-181-columned_Carbon-Std-01.fid

Pulse Sequence: s2pul
Solvent: cdc13
Temp: 25.0 C / 298.1 K
Operator: sjw-sy
File: SY-181-columned_Carbon-Std-01
INOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28268.6 Hz
512 repetitions
OBSERVE C13, 125.6459862 MHz
DECOUPLE H1, 499.6878699 MHz
Power 42 dB
Continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 46 sec



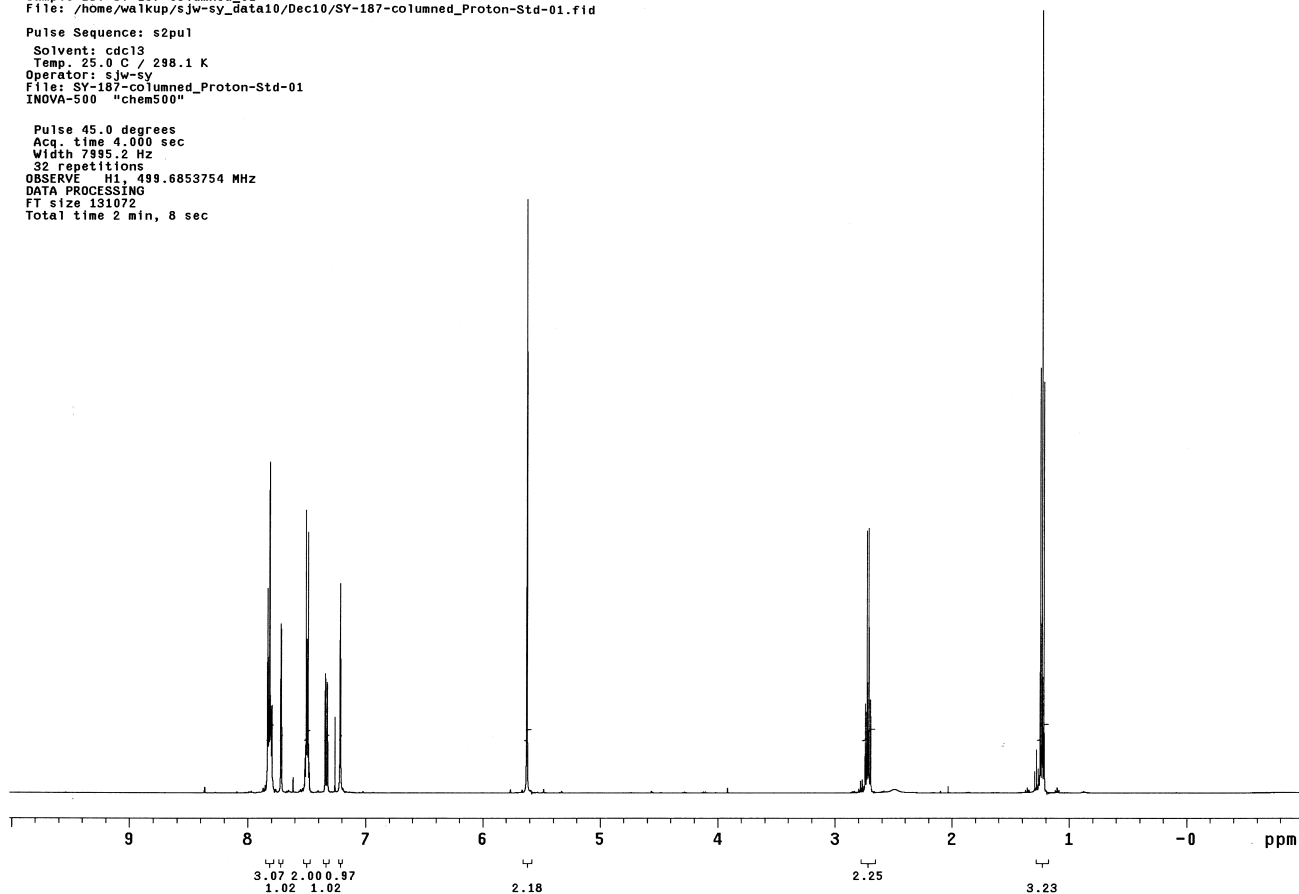
2-(4-(2-Methoxyphenyl)-1H-1,2,3-triazol-1-yl)-(N-(4-biphenyl))acetamide (13)



4-Ethyl-1-((naphthalen-6-yl)methyl)-1*H*-1,2,3-triazole (14)

Sample: SY-187-columned
Sample ID: SY-187-columned_01
File: /home/walkup/sjw-sy_data10/Dec10/SY-187-columned_Proton-Std-01.fid
Pulse Sequence: s2pu1
Solvent: cdc13
Temp: 25.0 C / 298.1 K
Operator: sjw-sy
File: SY-187-columned_Proton-Std-01
INOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 4.000 sec
Width 7995.2 Hz
32 repetitions
OBSERVE H1, 499.6853754 MHz
DATA PROCESSING
FT size 131072
Total time 2 min, 8 sec



Sample: SY-187-columned
Sample ID: SY-187-columned_02
File: /home/walkup/sjw-sy_data10/Dec10/SY-187-columned_Carbon-Std-01.fid

Pulse Sequence: s2pu1

Solvent: cdcl3

Temp. 25.0 C / 298.1 K

Operator: sjw-sy

File: SY-187-columned_Carbon-Std-01

INOVA-500 "chem500"

Pulse 45.0 degrees

Acq. time 1.000 sec

Width 28268.6 Hz

512 repetitions

OBSERVE C13, 125.6459988 MHz

DECOUPLE H1, 499.6878699 MHz

Power 42 dB

continuously on

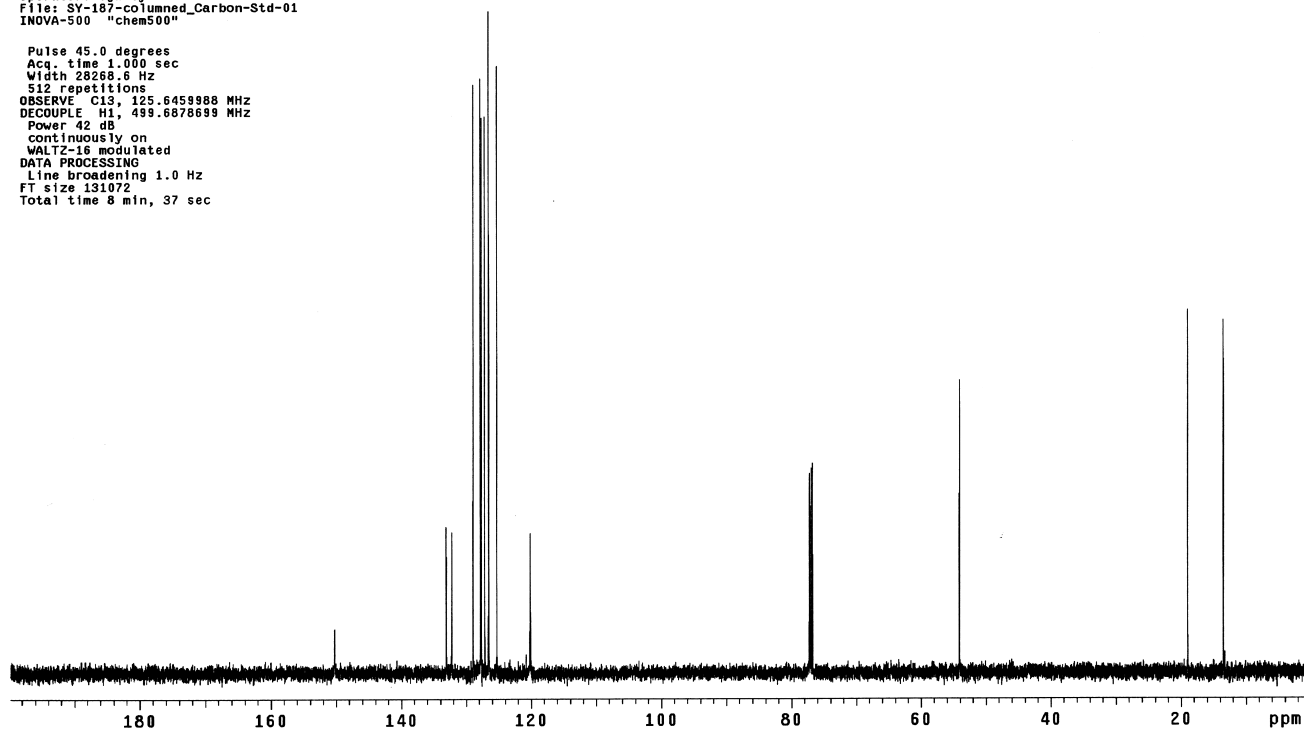
WALTZ-16 modulated

DATA PROCESSING

Line broadening 1.0 Hz

FT size 131072

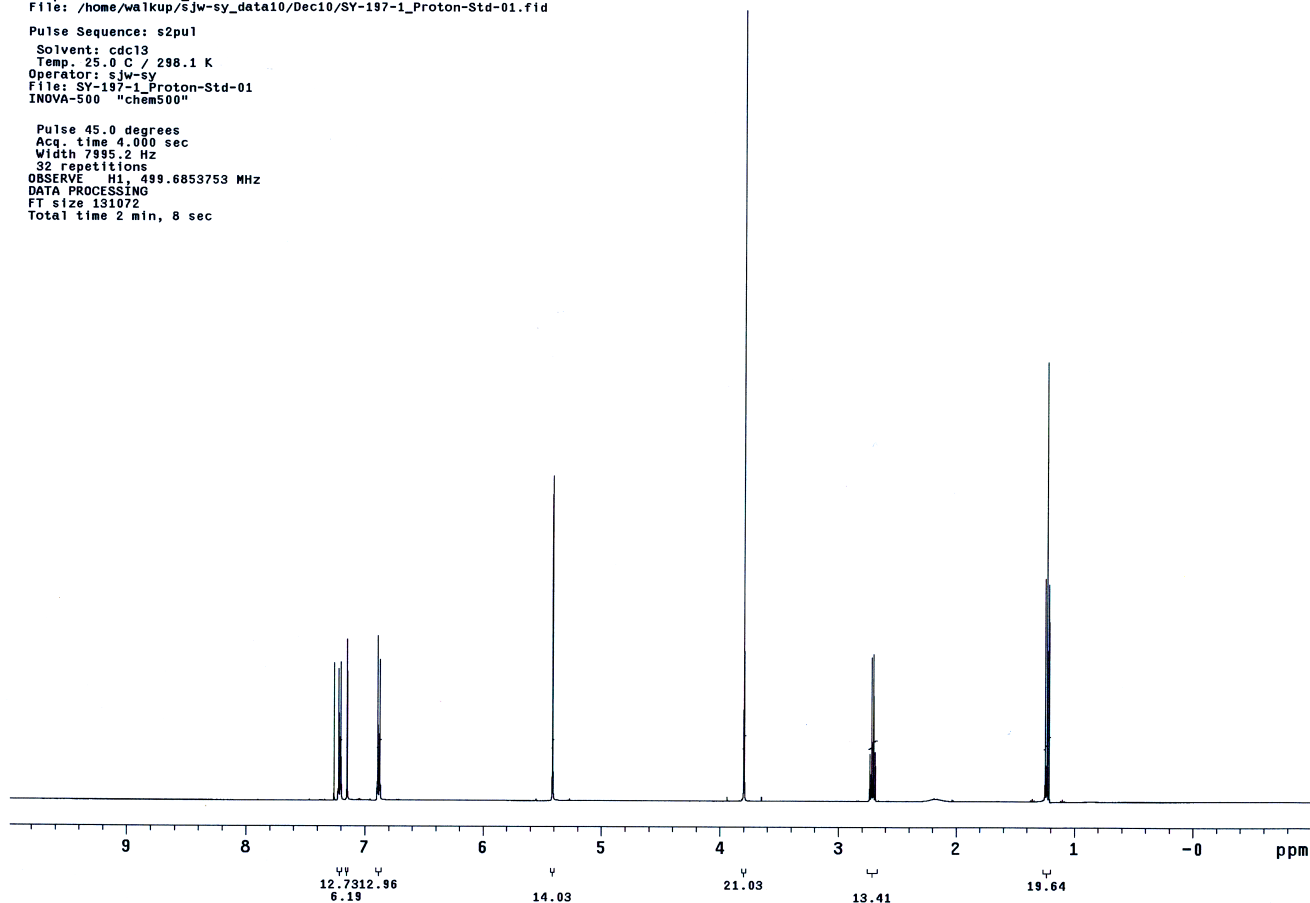
Total time 8 min, 37 sec



1-(4-Methoxybenzyl)-4-ethyl-1*H*-1,2,3-triazole (15)

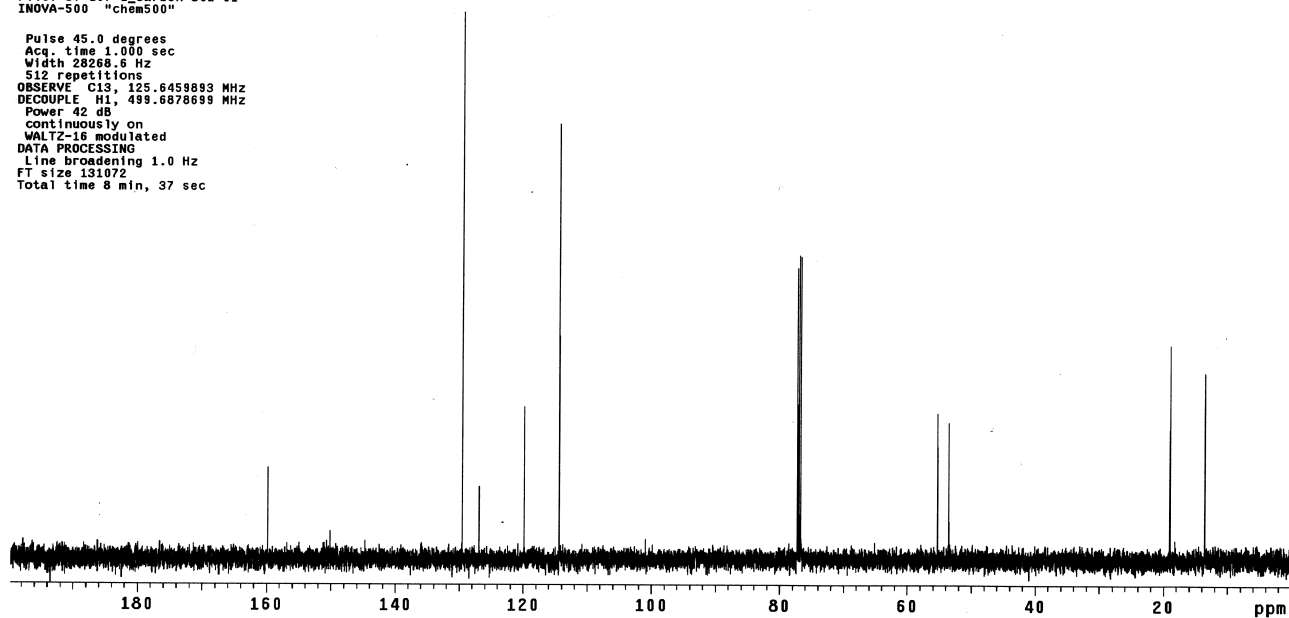
Sample: SY-197-1
Sample ID: SY-197-1_01
File: /home/walkup/sjw-sy_data10/Dec10/SY-197-1_Proton-Std-01.fid
Pulse Sequence: s2pu1
Solvent: cdc13
Temp. 25.0 C / 298.1 K
Operator: sjw-sy
File: SY-197-1_Proton-Std-01
INOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 4.000 sec
Width 7995.2 Hz
32 repetitions
OBSERVE H1, 499.6853753 MHz
DATA PROCESSING
FT size 131072
Total time 2 min, 8 sec

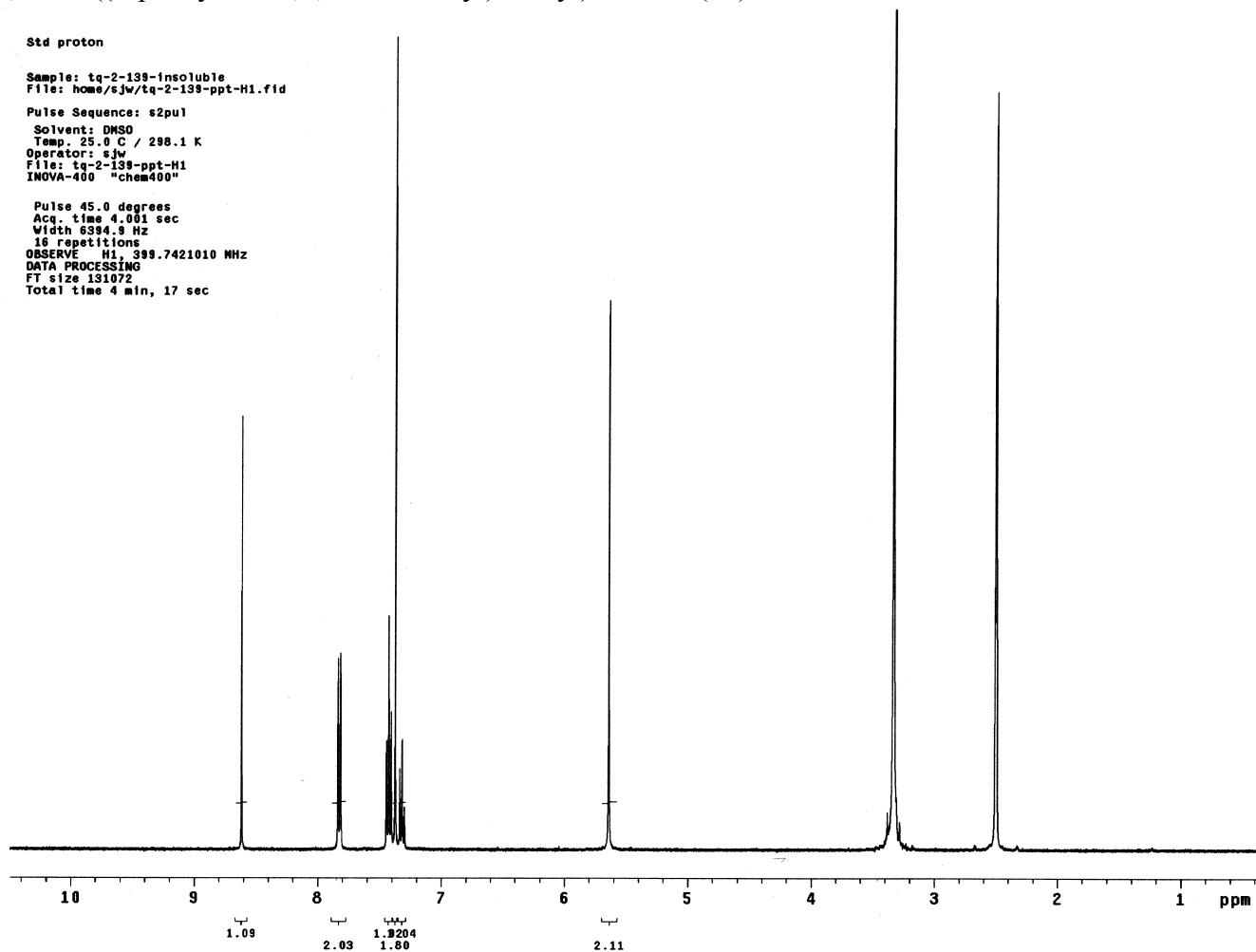


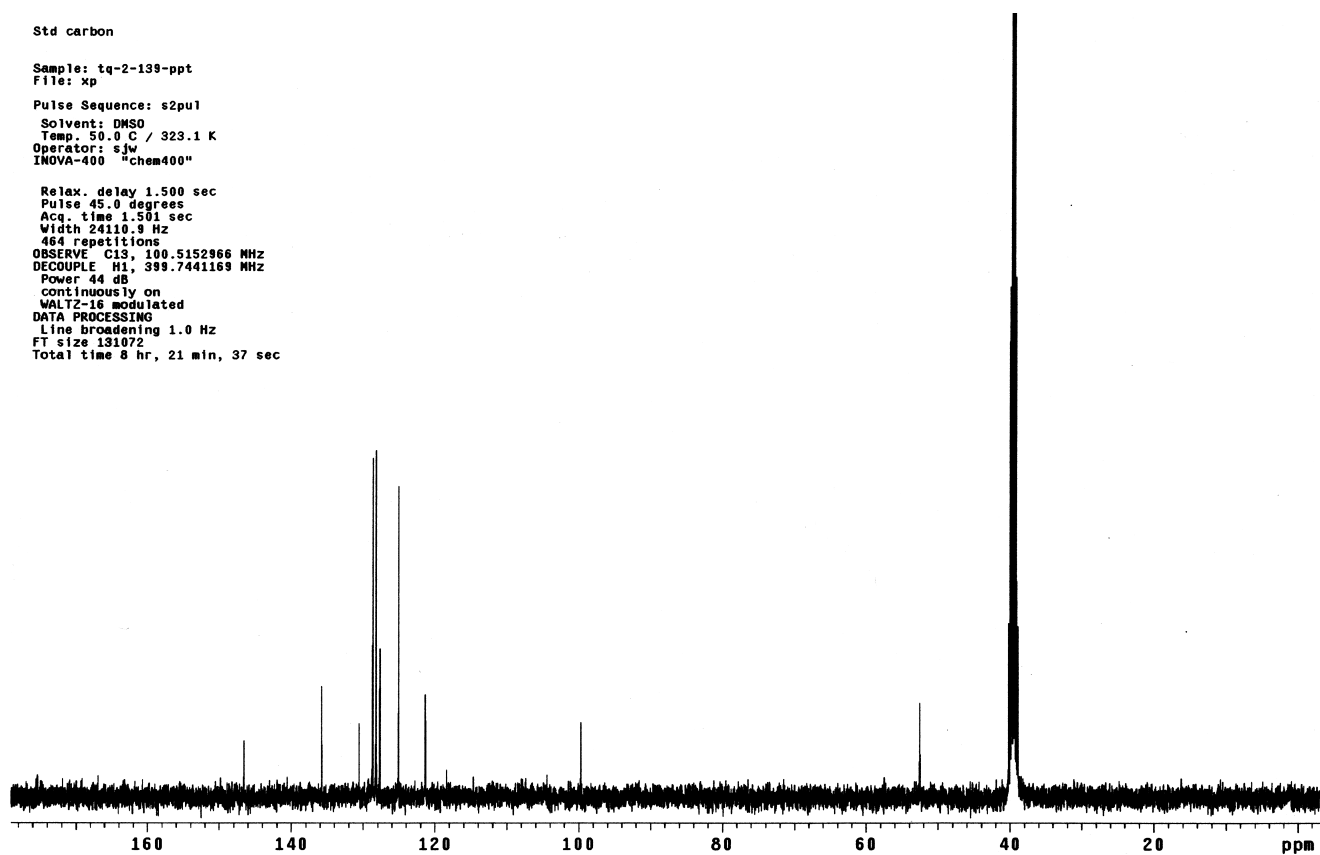
Sample: SY-197-1
Sample ID: SY-197-1_02
File: /home/walkup/sjw-sy_data10/Dec10/SY-197-1_Carbon-Std-01.fid
Pulse Sequence: s2pu1
Solvent: cdc13
Temp. 25.0 C / 298.1 K
Operator: sjw-sy
File: SY-197-1_Carbon-Std-01
INOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28268.6 Hz
512 repetitions
OBSERVE C13, 125.6459893 MHz
DECOUPLE H1, 499.6878699 MHz
Power 42 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 37 sec

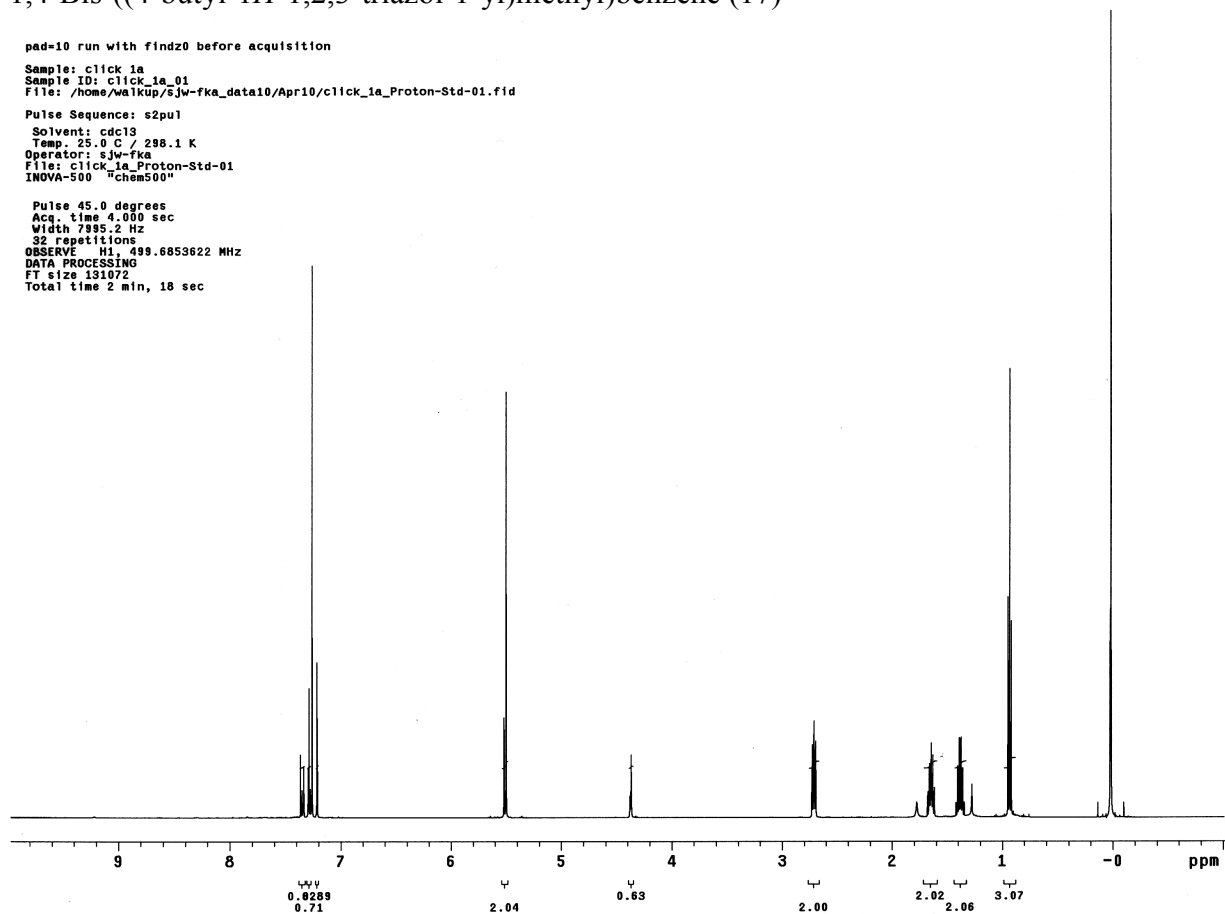


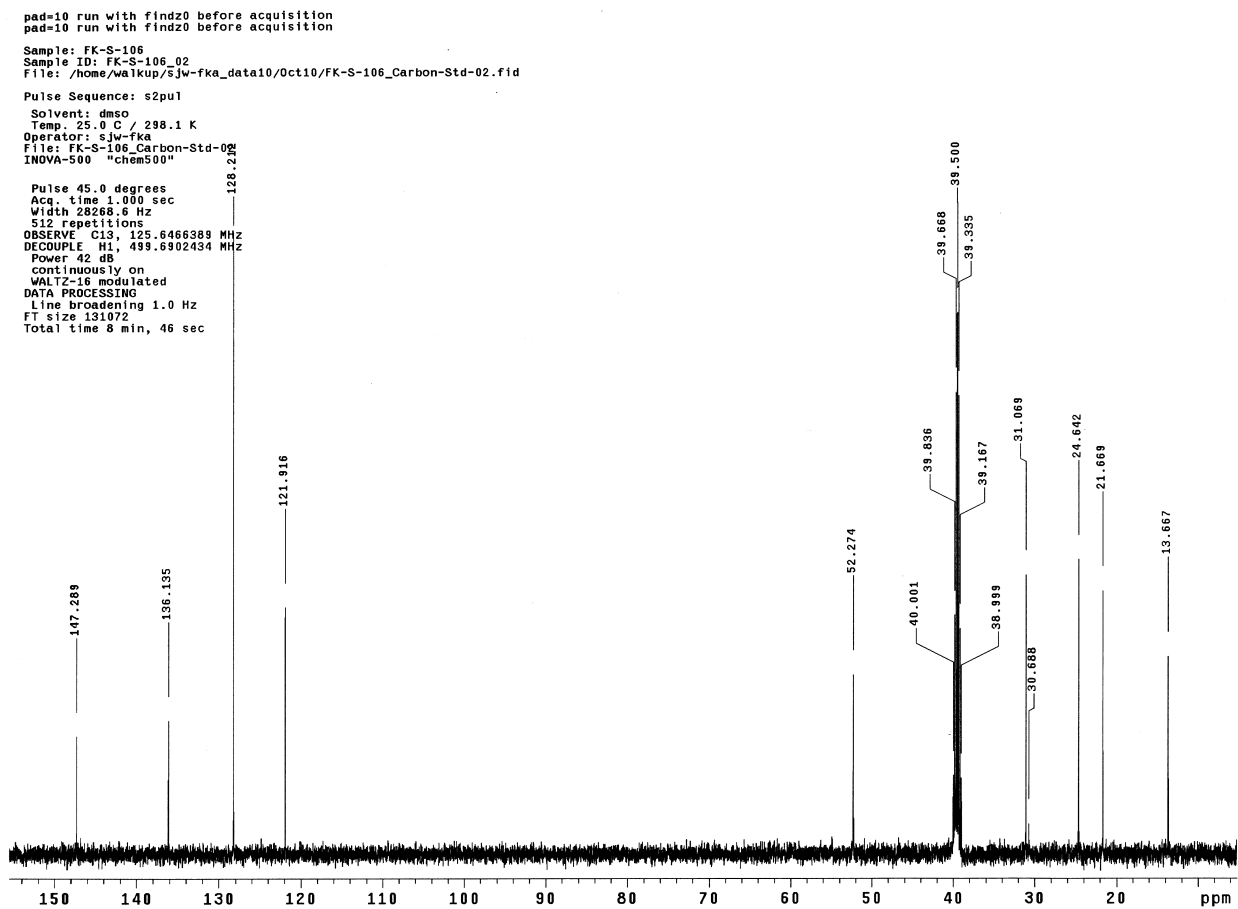
1,4-Bis-((4-phenyl-1*H*-1,2,3-triazol-1-yl)methyl)benzene (16)





1,4-Bis-((4-butyl-1*H*-1,2,3-triazol-1-yl)methyl)benzene (17)



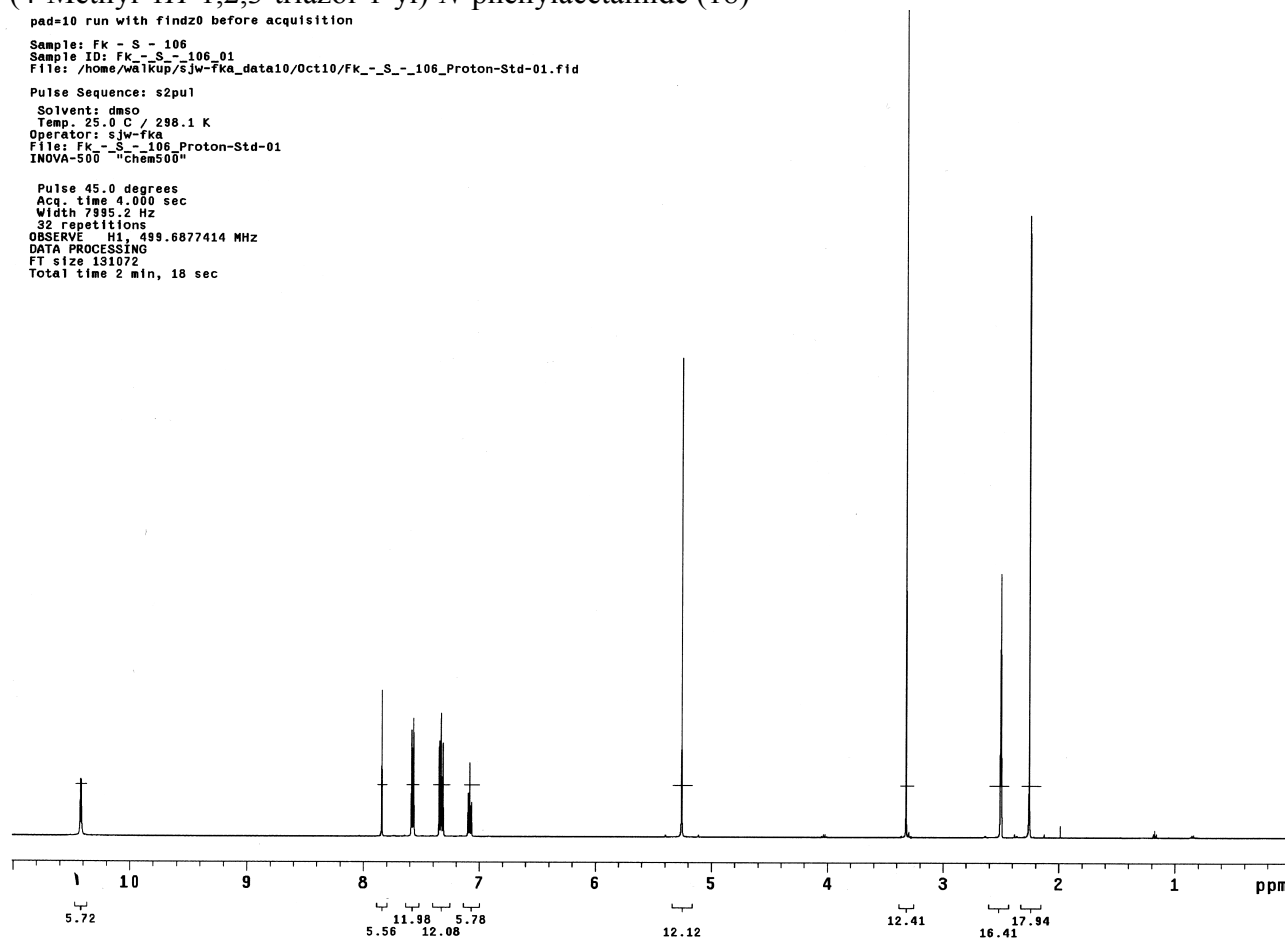


2-(4-Methyl-1*H*-1,2,3-triazol-1-yl)-*N*-phenylacetamide (18)

pad=10 run with findz0 before acquisition

Sample: Fk - S - 106
Sample ID: FK-S-106_01
File: /home/walkup/sjw-fka_data10/Oct10/FK-S-106_Proton-Std-01.fid
Pulse Sequence: s2pu1
Solvent: dmsd
Temp. 25.0 C / 298.1 K
Operator: sjw-fka
File: FK-S-106_Proton-Std-01
INOVA-500 "chem500"

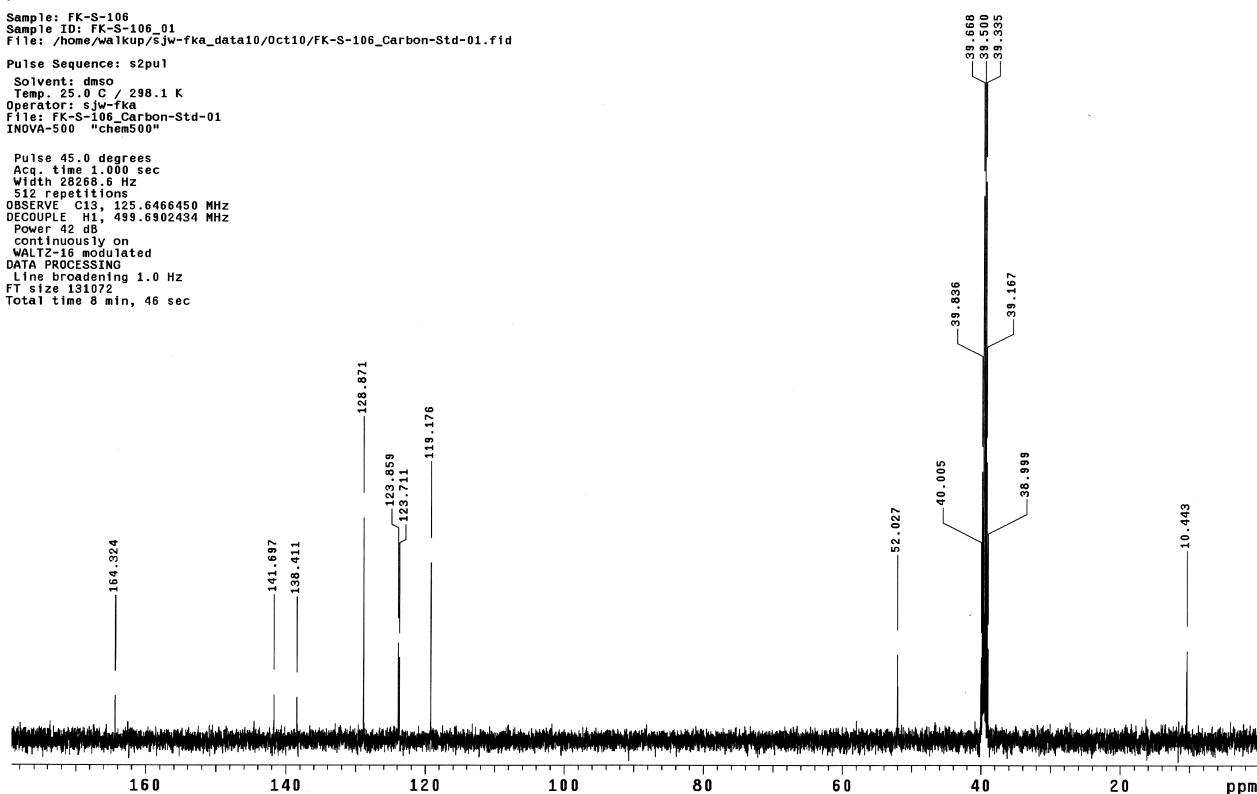
Pulse 45.0 degrees
Acq. time 4.000 sec
Width 7995.2 Hz
32 repetitions
OBSERVE H1, 499.6877414 MHz
DATA PROCESSING
FT size 131072
Total time 2 min, 18 sec



pad=10 run with findz0 before acquisition

Sample: FK-S-106
Sample ID: FK-S-106_01
File: /home/walkup/sjw-fka_data10/Oct10/FK-S-106_Carbon-Std-01.fid
Pulse Sequence: s2pu1
Solvent: dmsd
Temp. 25.0 C / 298.1 K
Operator: sjw-fka
File: FK-S-106_Carbon-Std-01
INOVA-500 "chem500"

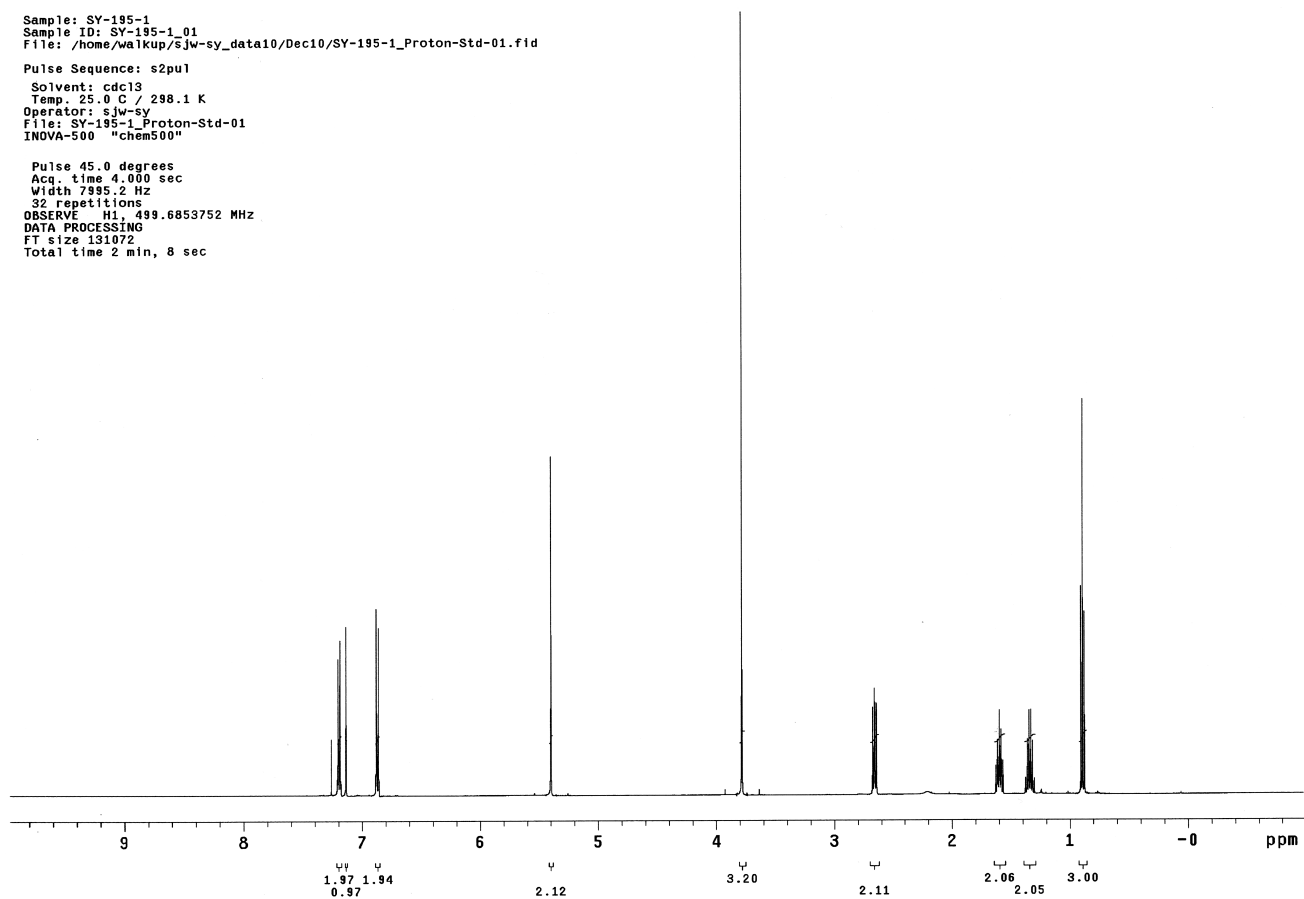
Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28268.6 Hz
512 repetitions
OBSERVE C13, 125.6466450 MHz
DECOUPLE H1, 499.6902434 MHz
Power 42 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 46 sec



1-(4-Methoxybenzyl)-4-butyl-1H-1,2,3-triazole (19)

Sample: SY-195-1
Sample ID: SY-195-1_01
File: /home/walkup/sjw-sy_data10/Dec10/SY-195-1_Proton-Std-01.fid
Pulse Sequence: s2pul1
Solvent: cdc13
Temp: 25.0 C / 298.1 K
Operator: sjw-sy
File: SY-195-1_Proton-Std-01
INNOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 4.000 sec
Width 7995.2 Hz
32 repetitions
OBSERVE H1, 499.6853752 MHz
DATA PROCESSING
FT size 131072
Total time 2 min, 8 sec



Sample: SY-195-1
Sample ID: SY-195-1_02
File: /home/walkup/sjw-sy_data10/Dec10/SY-195-1_Carbon-Std-01.fid

Pulse Sequence: s2pu1
Solvent: cdc13
Temp. 25.0 C / 298.1 K
Operator: sjw-sy
File: SY-195-1_Carbon-Std-01
INOVA-500 "chem500"

Pulse 45.0 degrees
Acq. time 1.000 sec
Width 28268.6 Hz
512 repetitions
OBSERVE C13, 125.6459932 MHz
DECOUPLE H1, 499.6878699 MHz
Power 42 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 8 min, 37 sec

