

Supporting Information

Tandem Blaise/retro-Blaise Reaction for the Nitrile-Mediated Regioselective Intermolecular Addition of Unstabilized Zinc Ester Enolates (Reformatsky Reagents) to 1-Alkynes and 1,3-Enynes

Ju Hyun Kim, Yu Sung Chun, Sang-gi Lee*

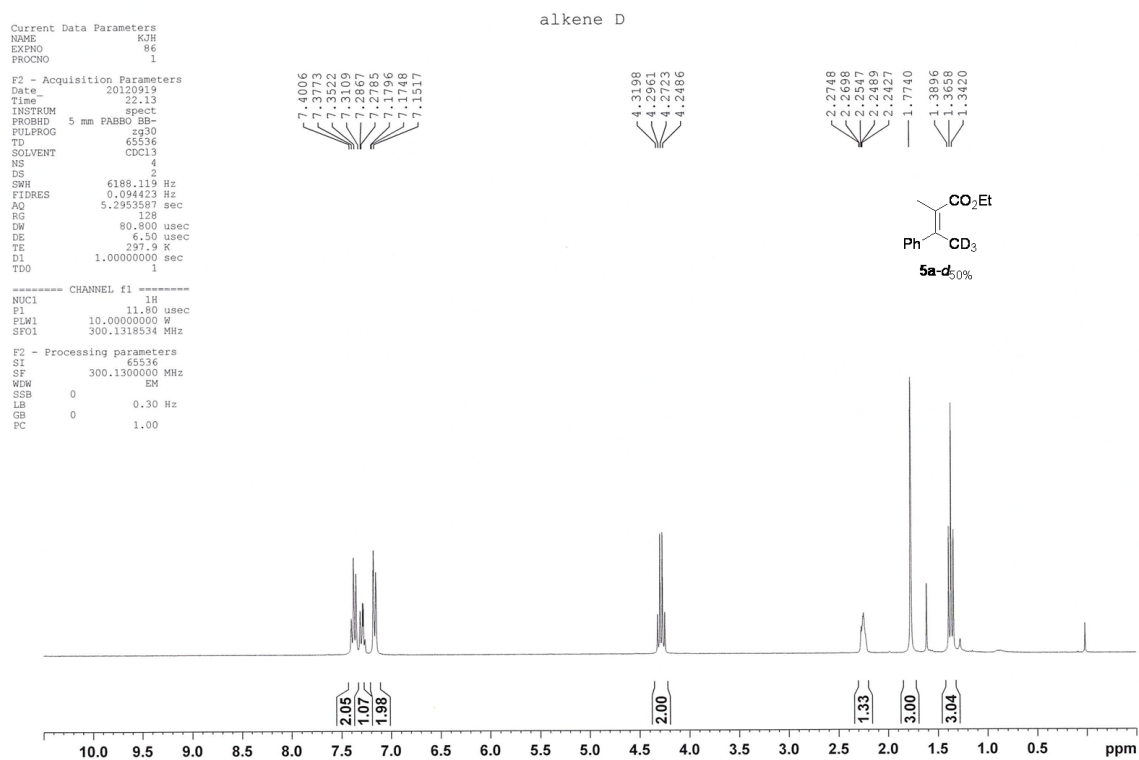
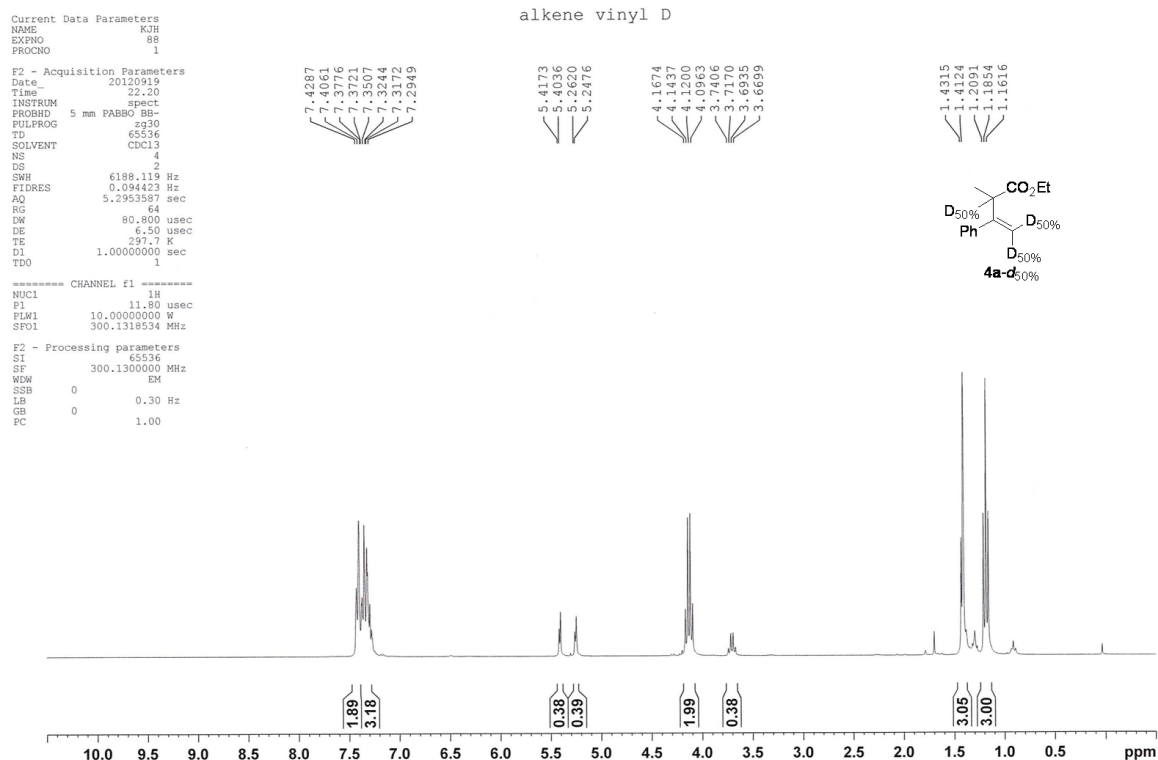
Department of Chemistry and Nano Science, Ewha Womans University, Seoul 120-750, Korea

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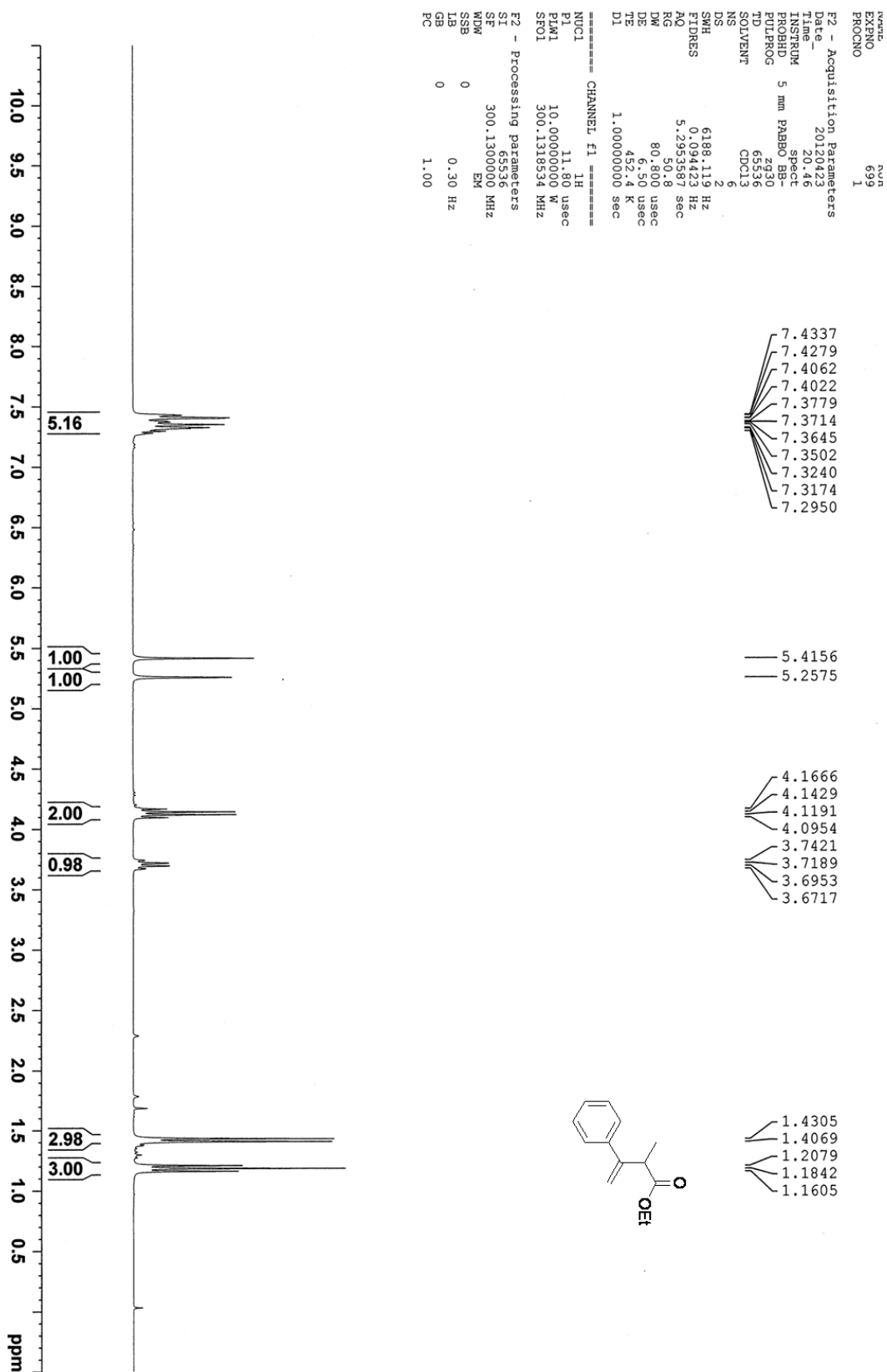
List

Copies of ^1H spectra of compound 4a-d and 5a-d -----	S2
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Copy of ^1H and ^{13}C spectra of compounds 8 -----	S83-S84
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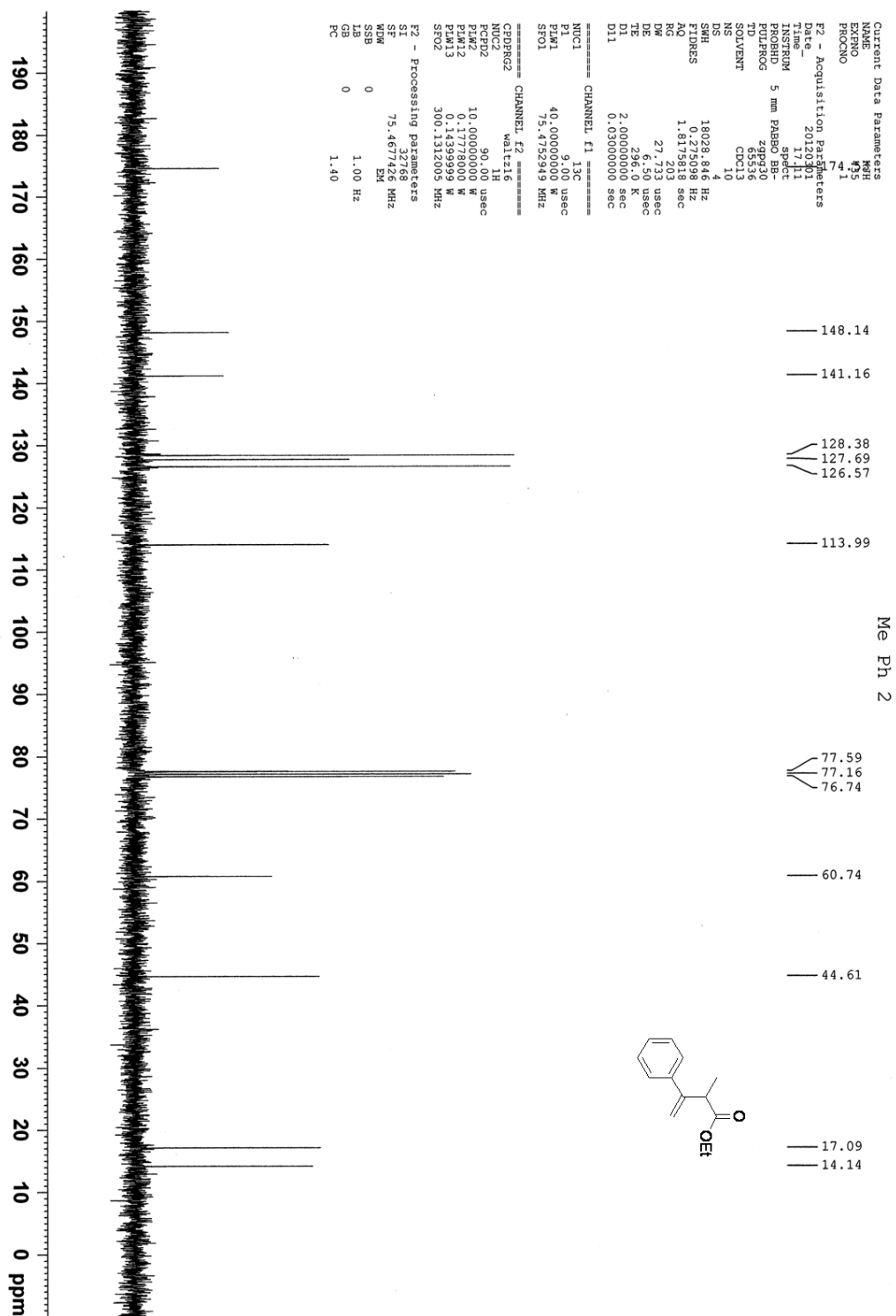
Copies of ¹H spectra of compound **4a-d** and **5a-d**



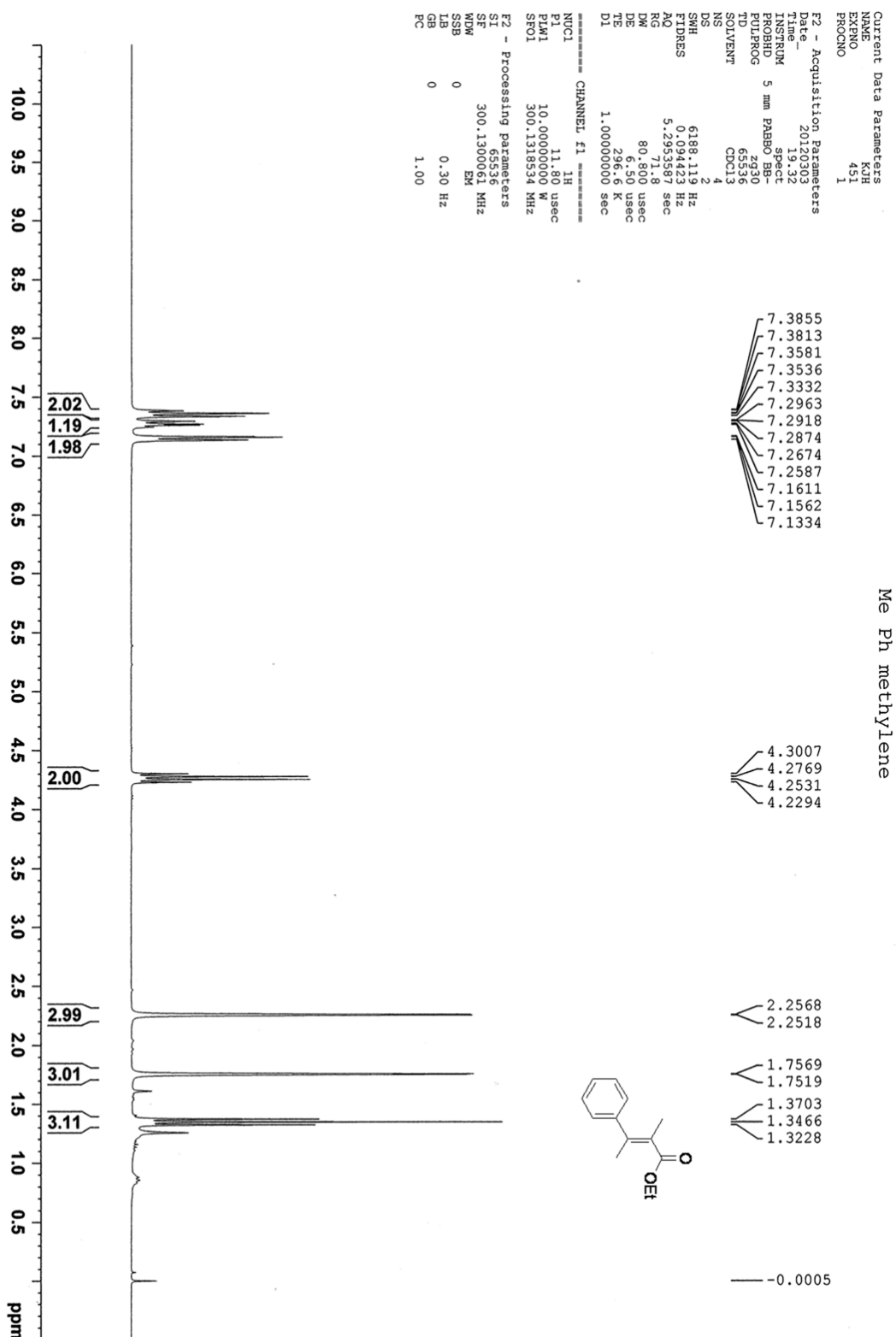
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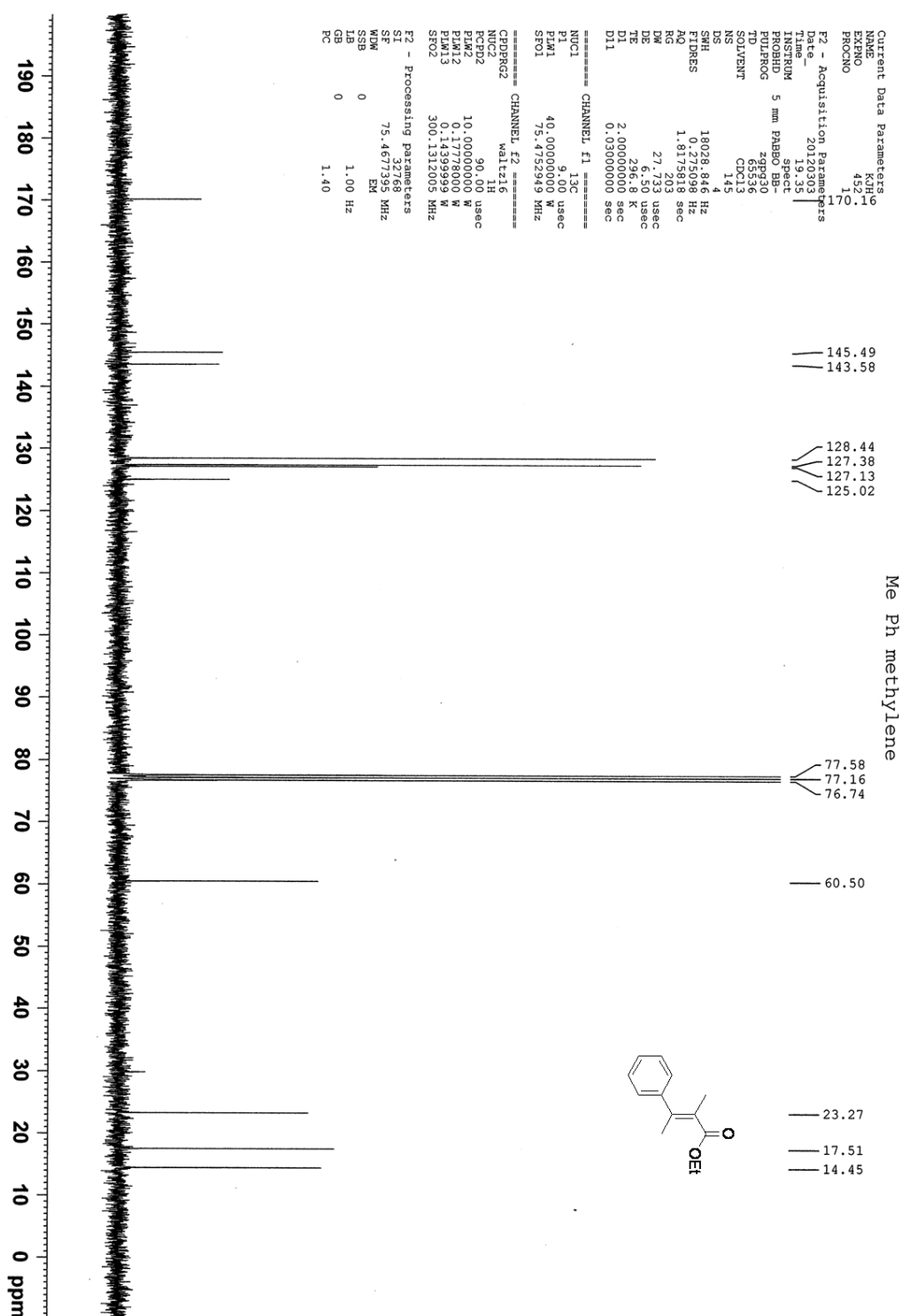
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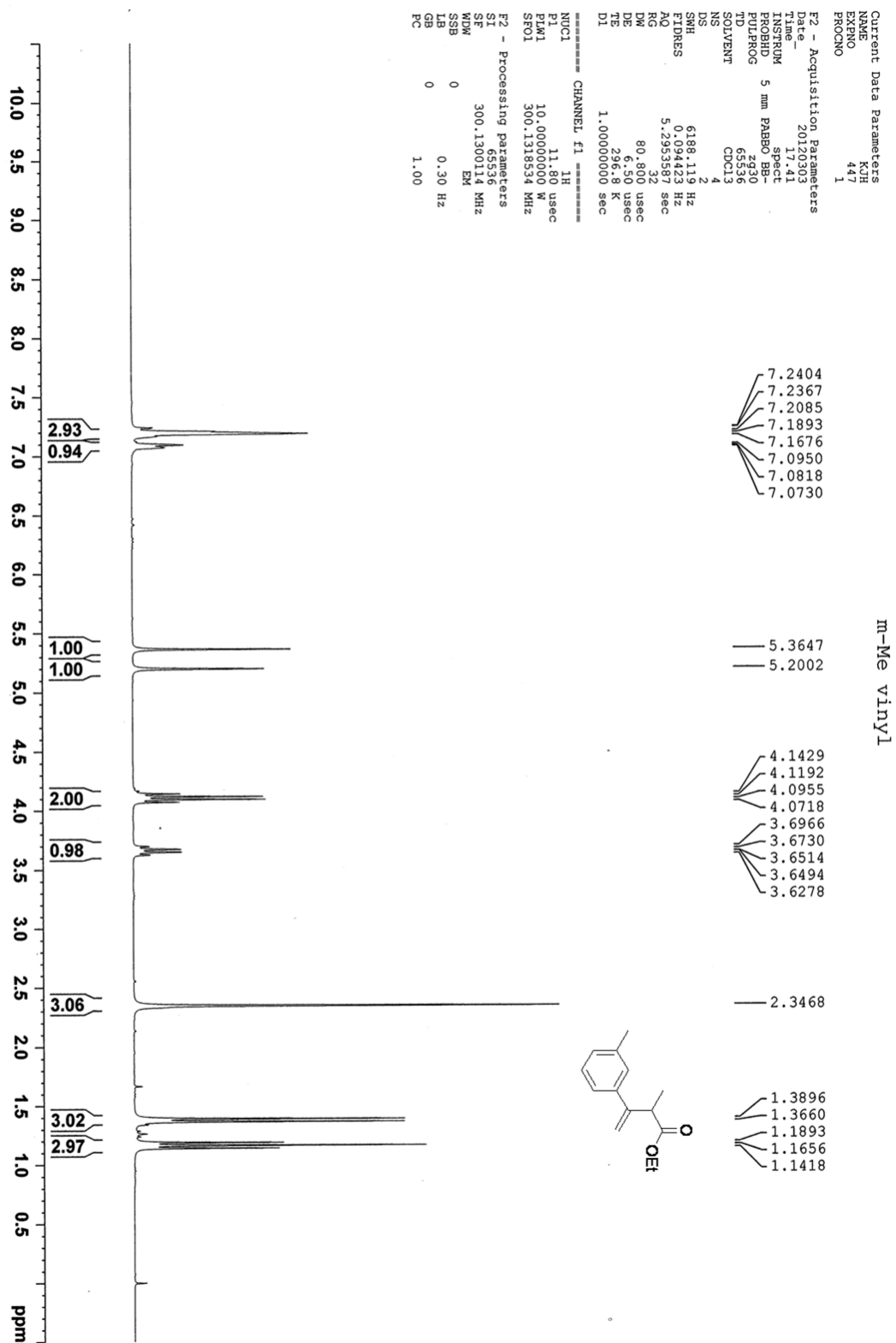
Copies of ^1H spectra of compound **5a**



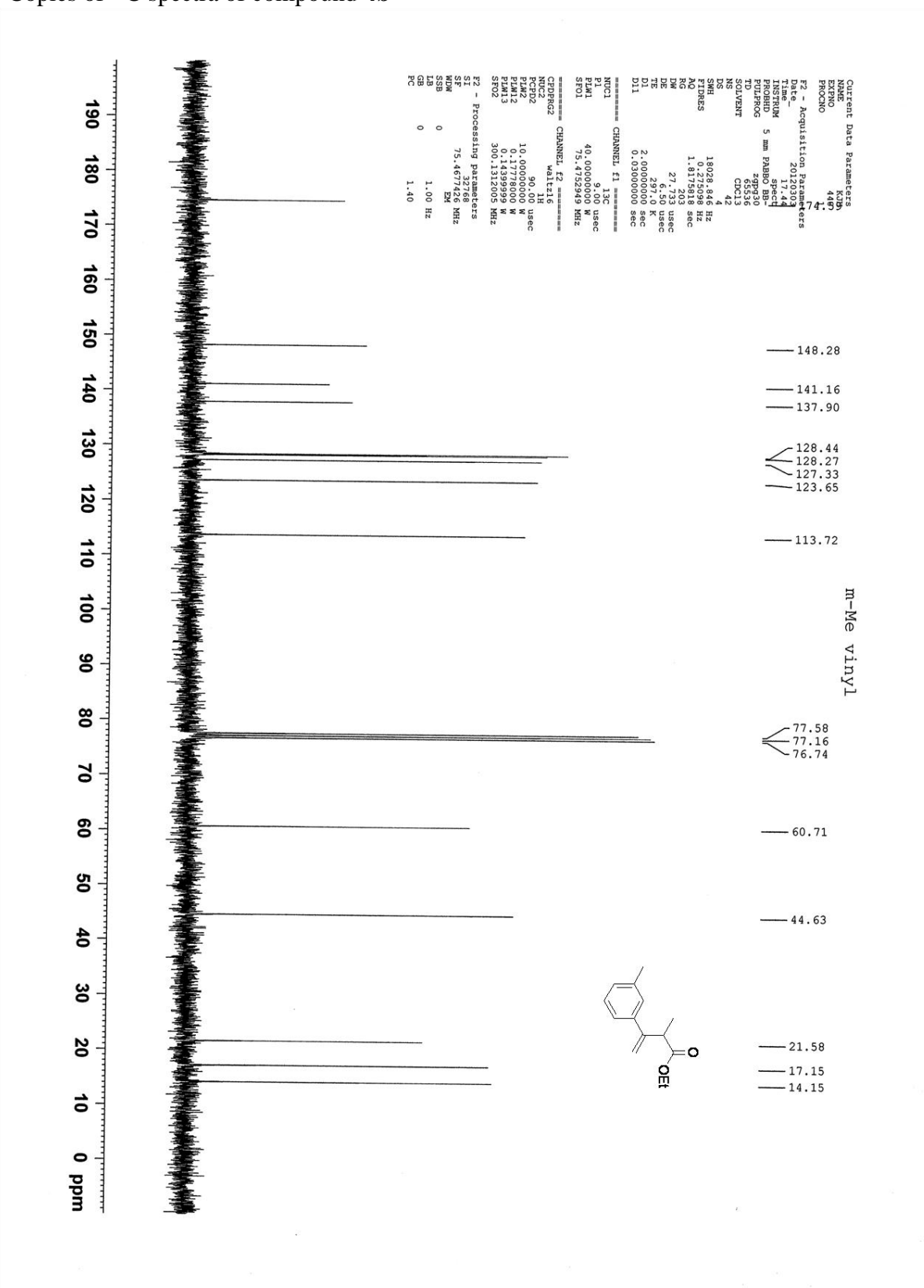
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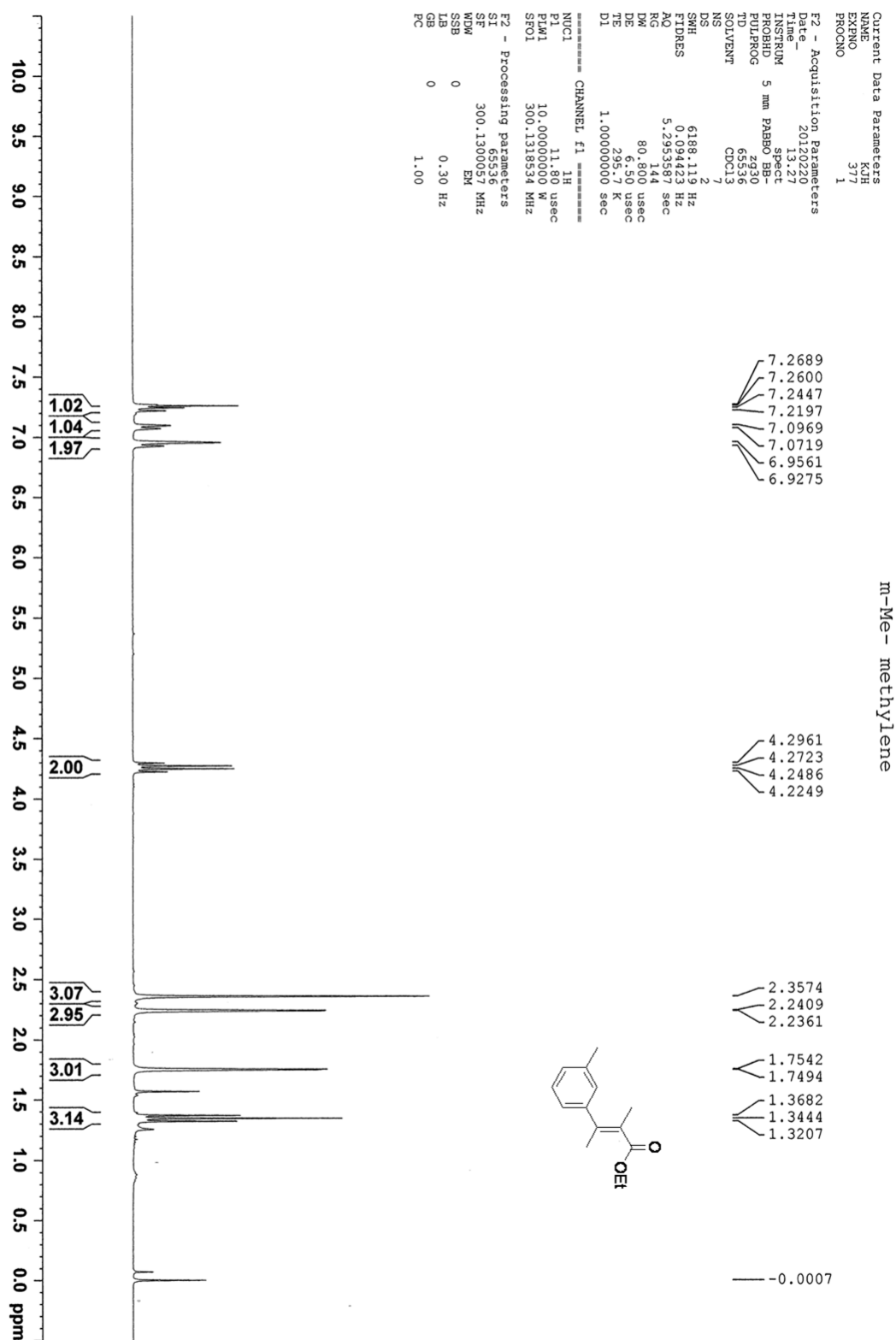
Copies of ^1H spectra of compound **4b**



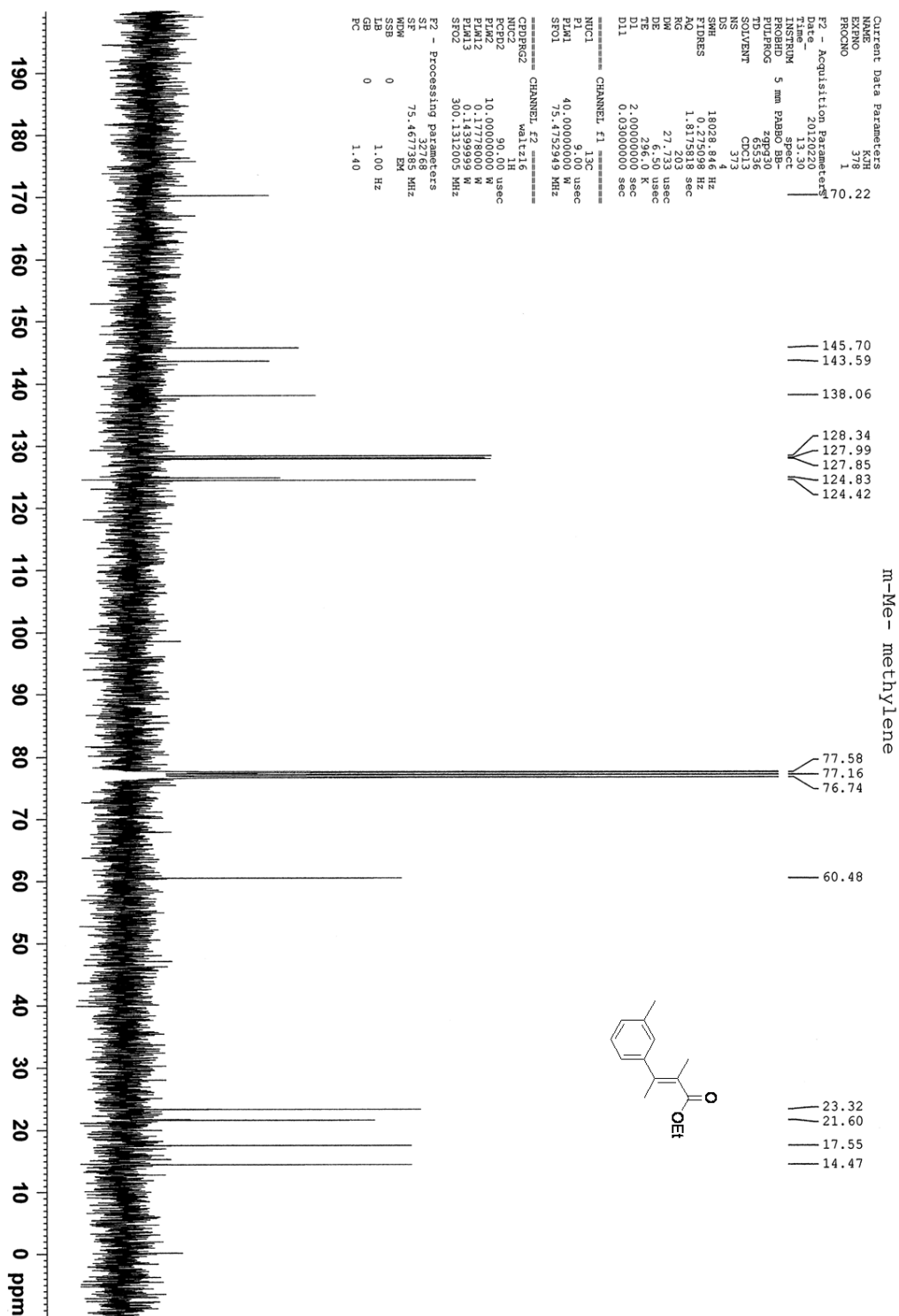
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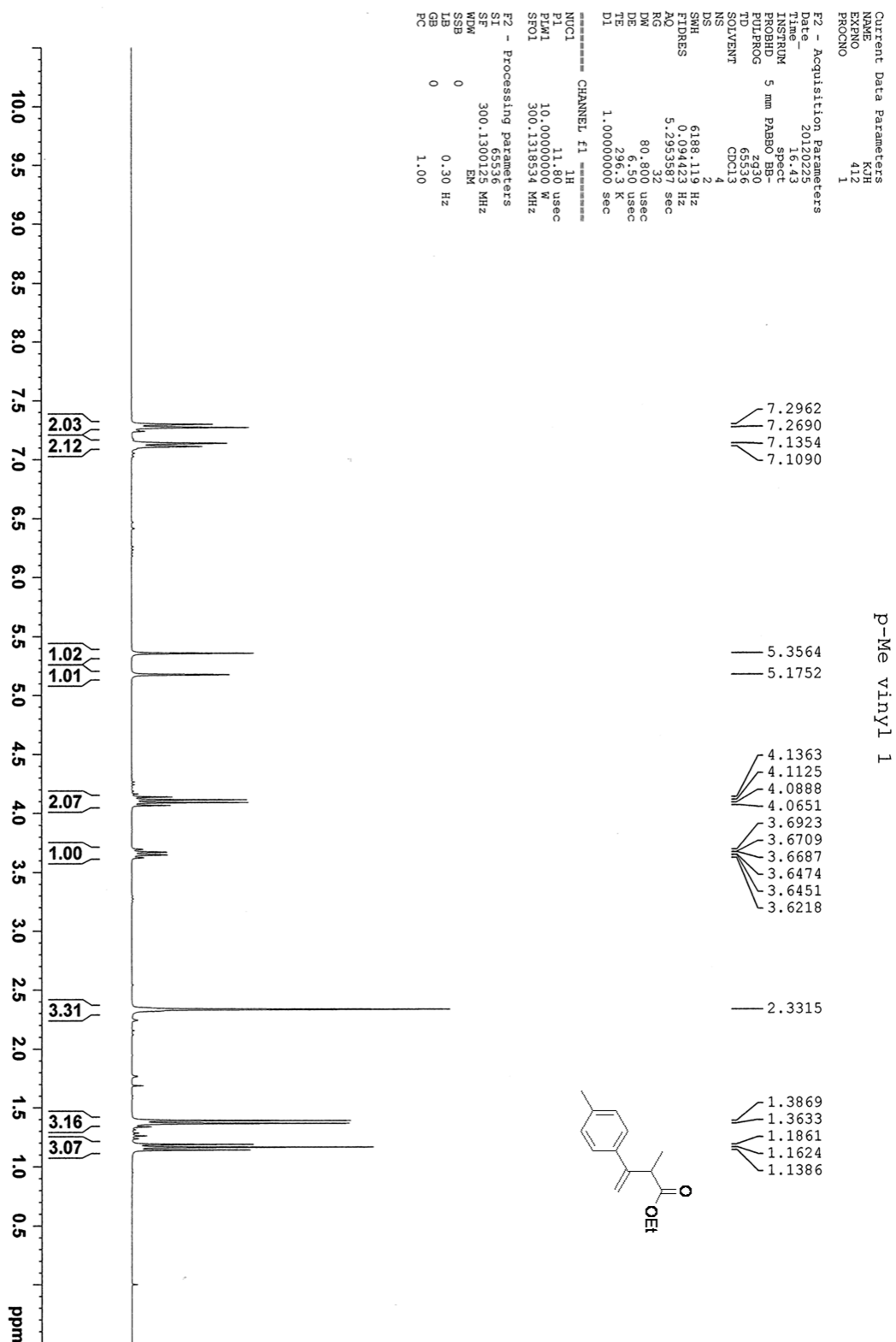
Copies of ^1H spectra of compound **5b**



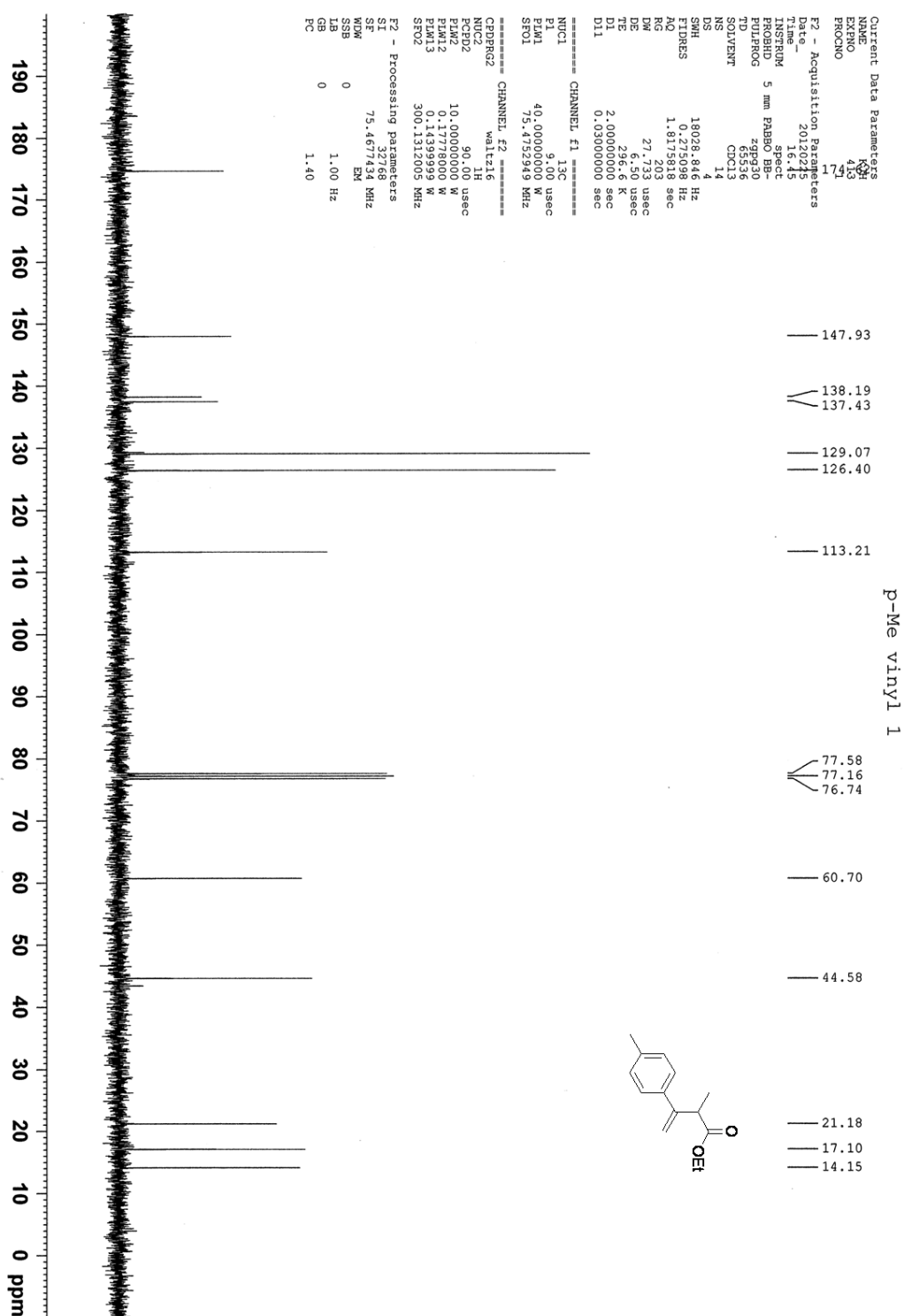
Copies of ^{13}C spectra of compound **5b**



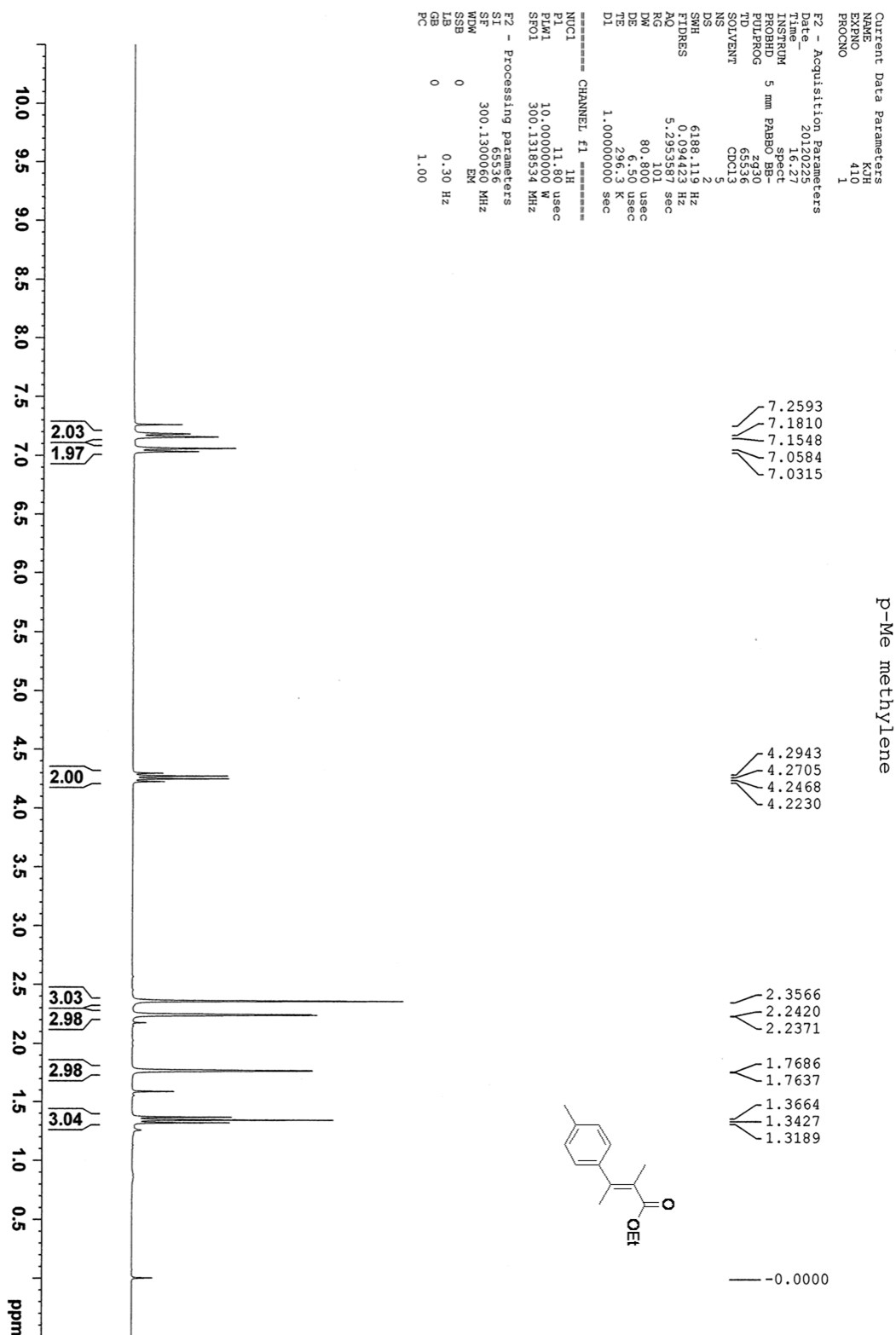
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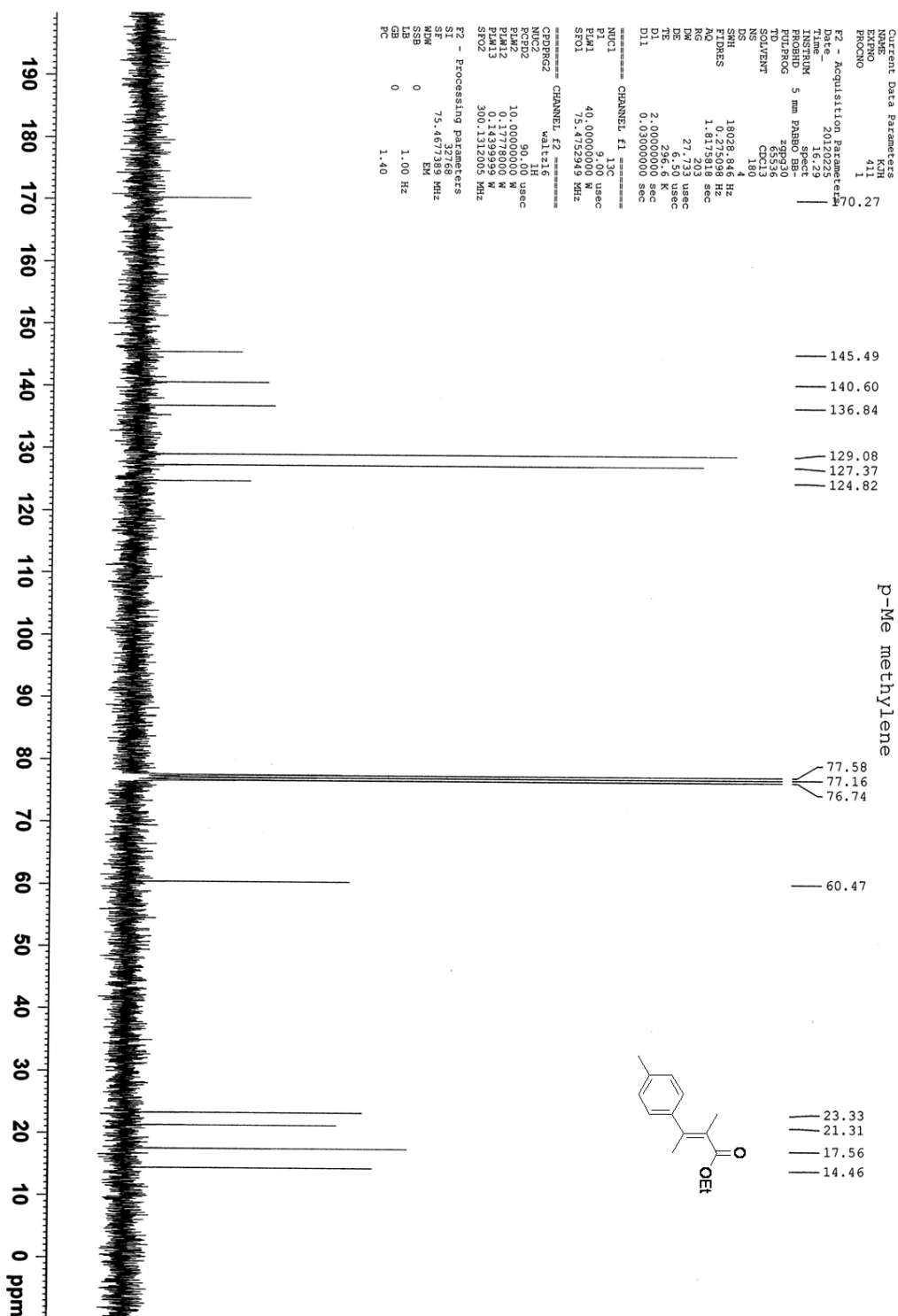
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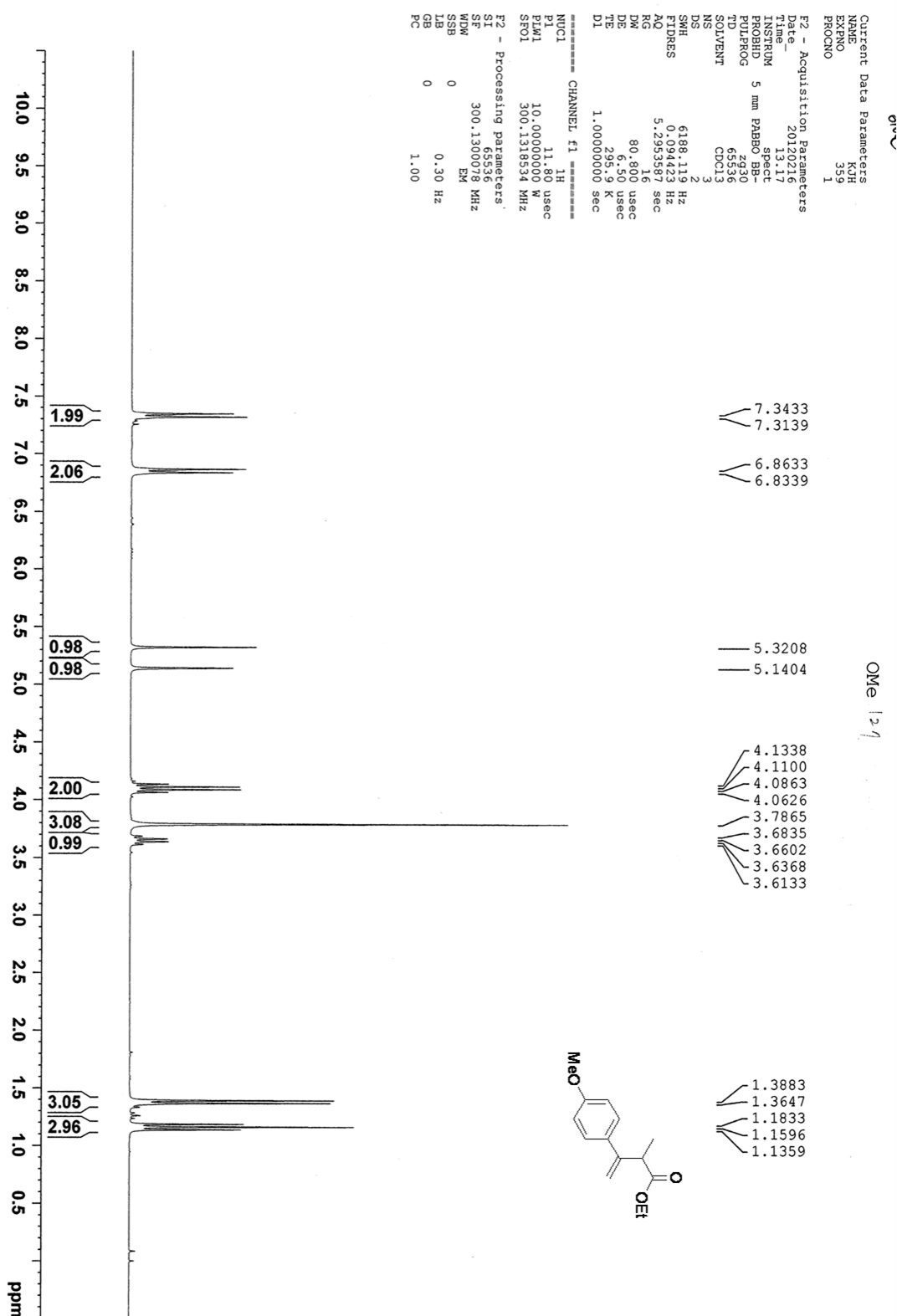
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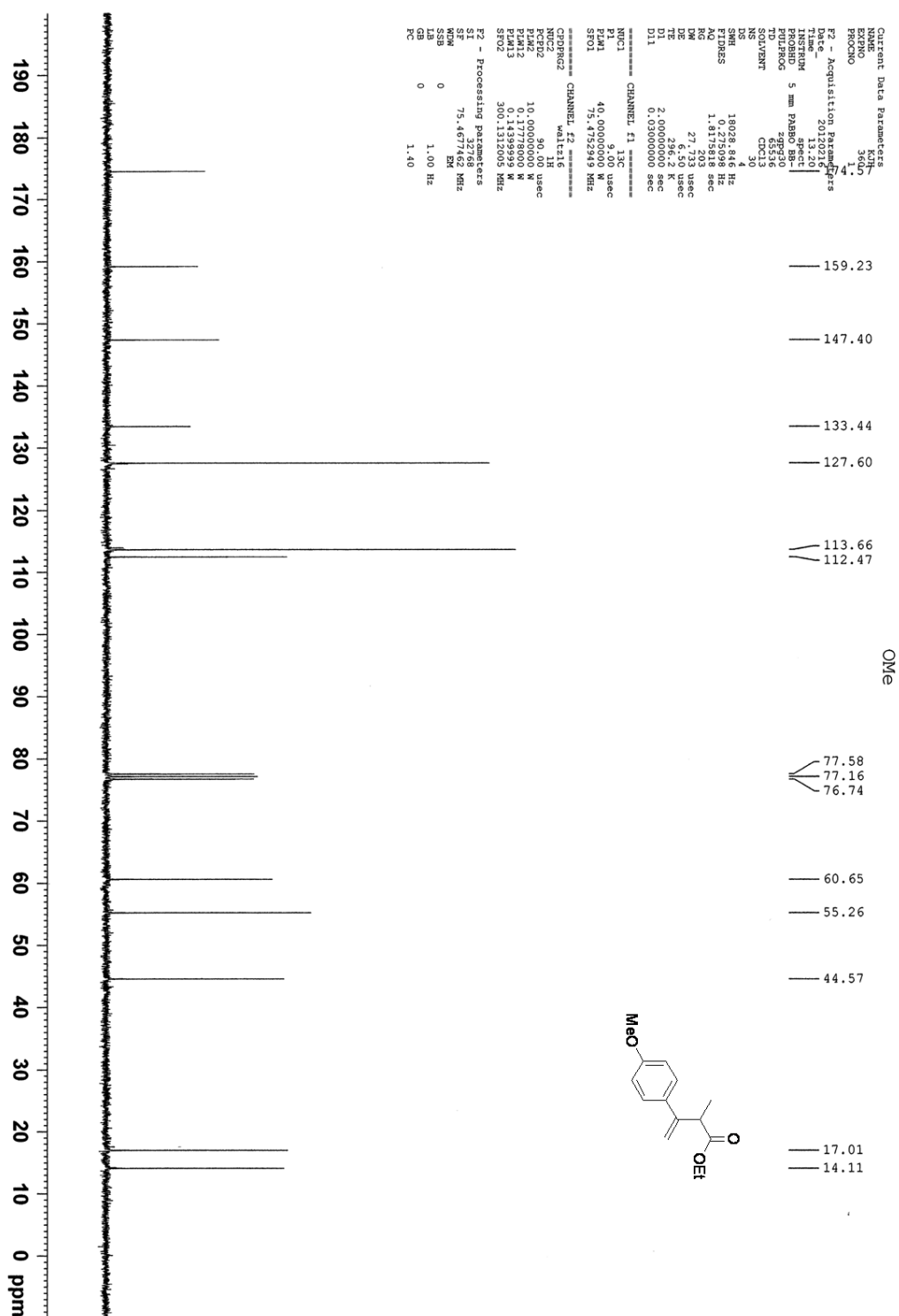
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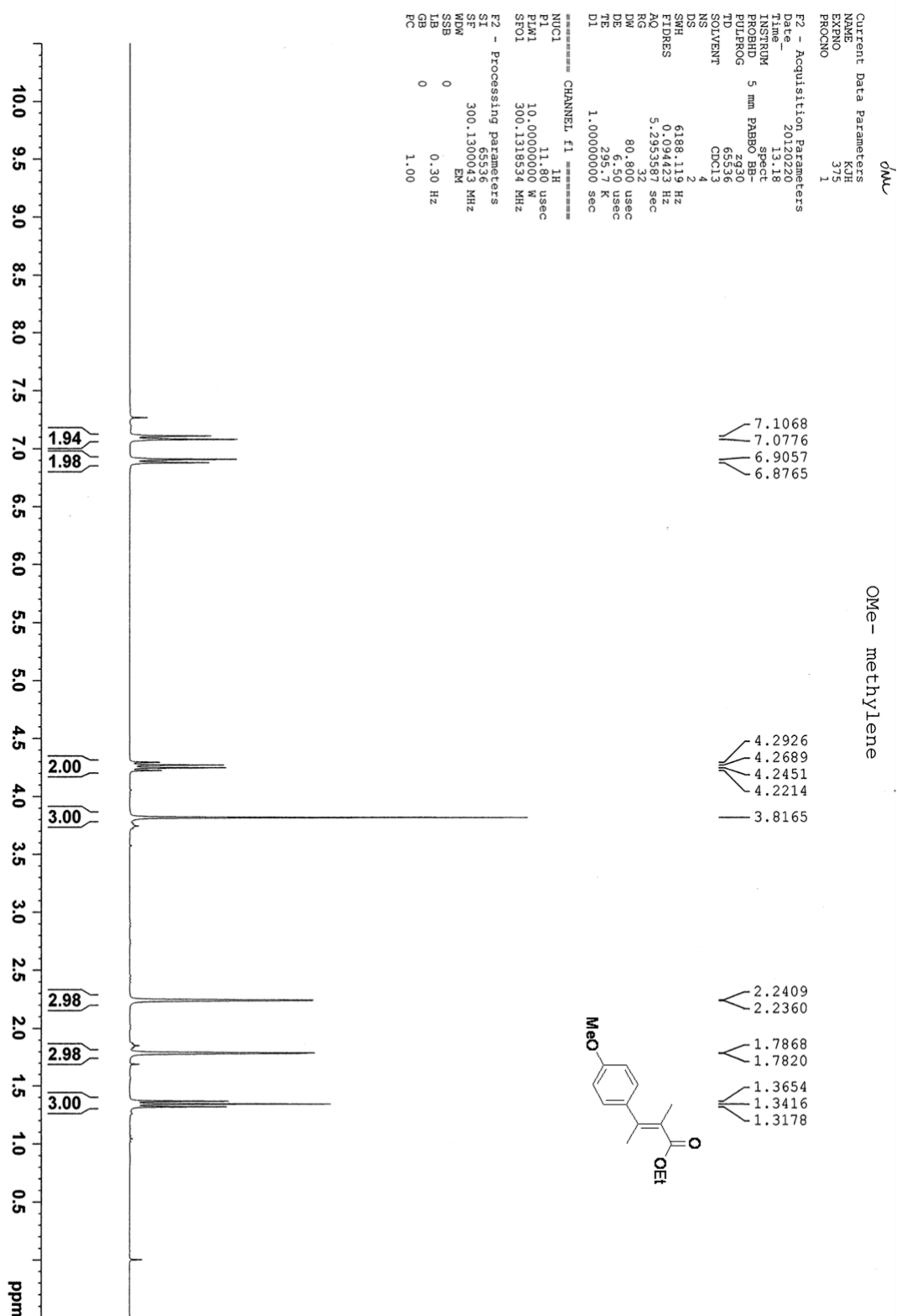
Copies of ^1H spectra of compound **4d**



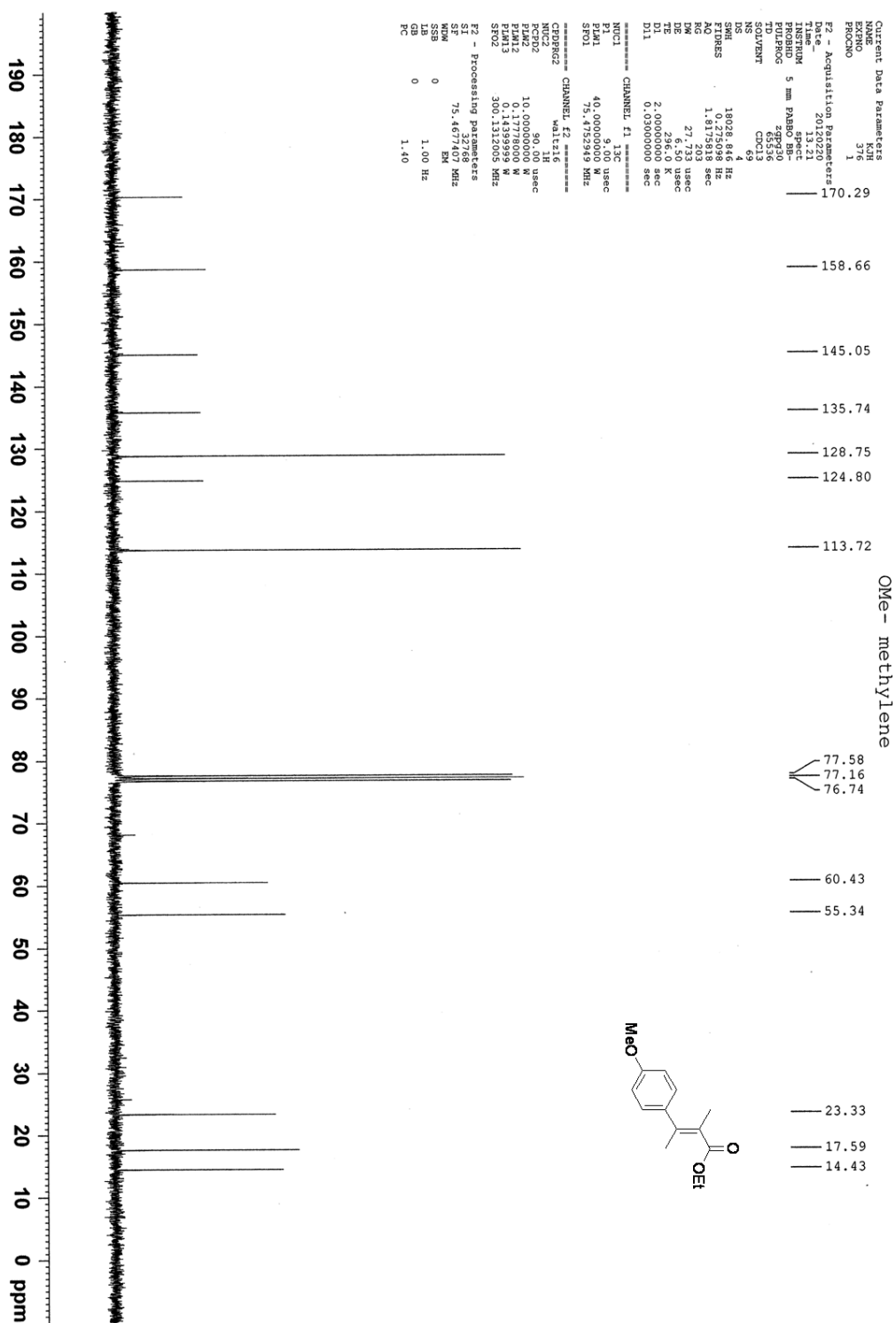
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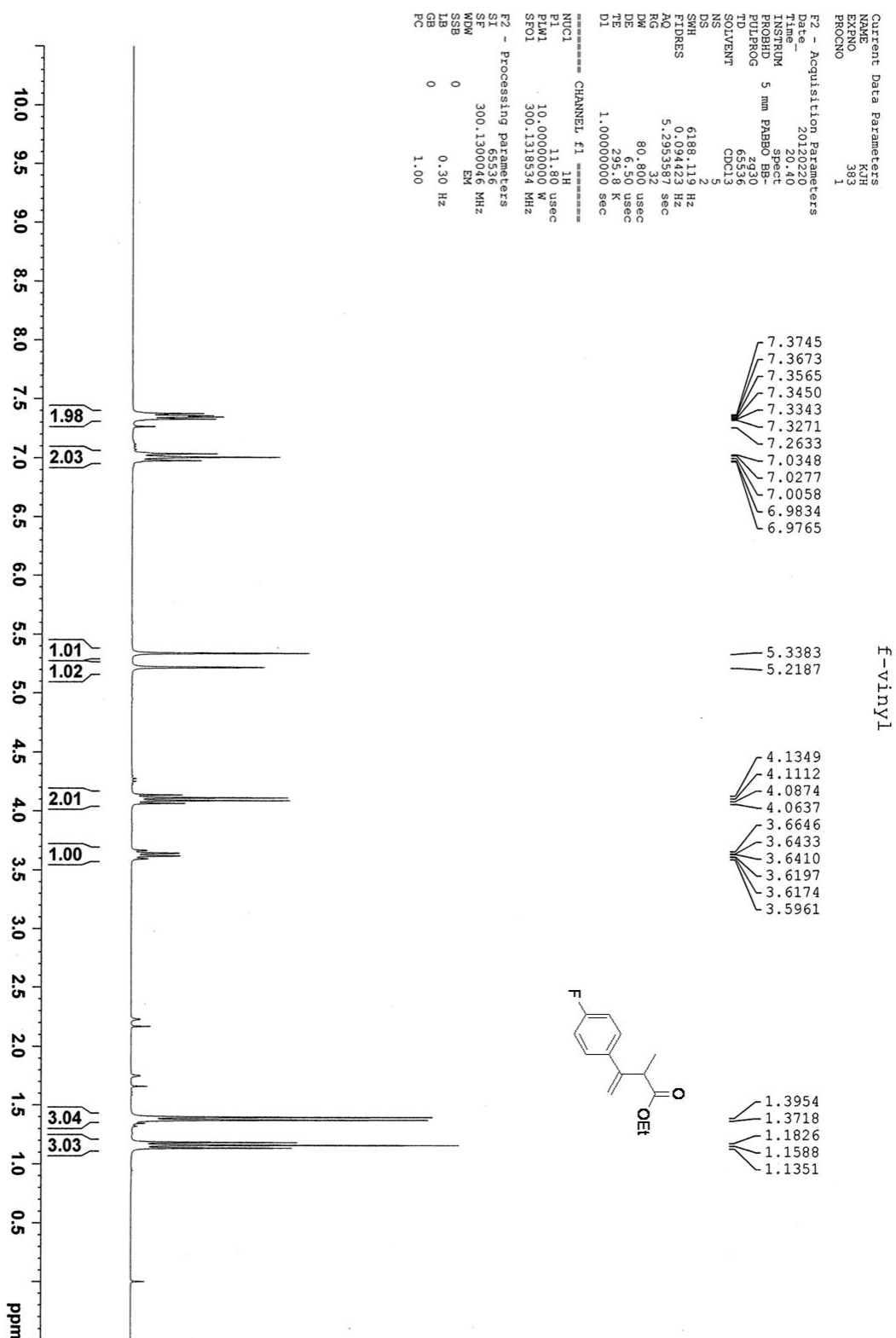
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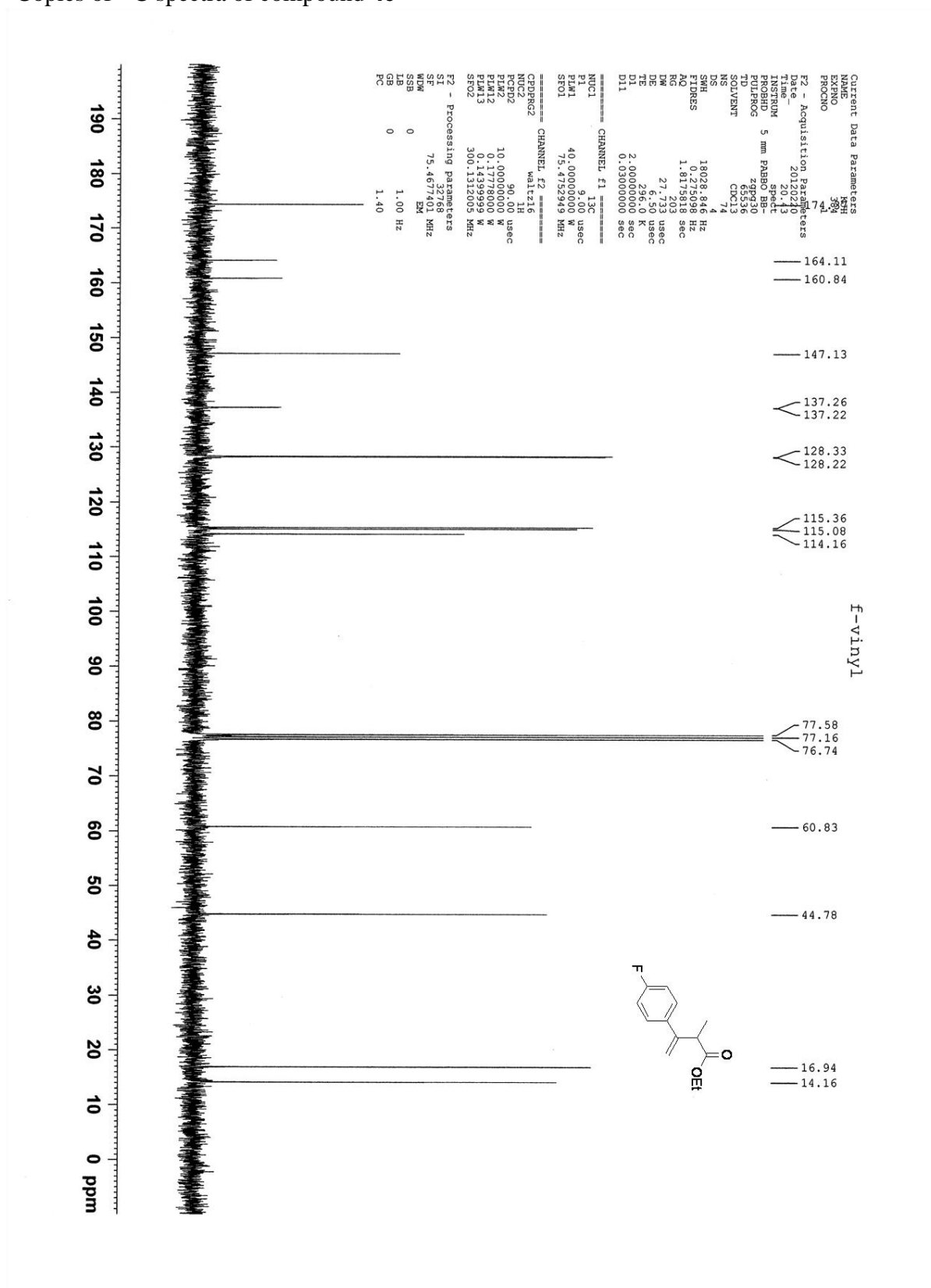
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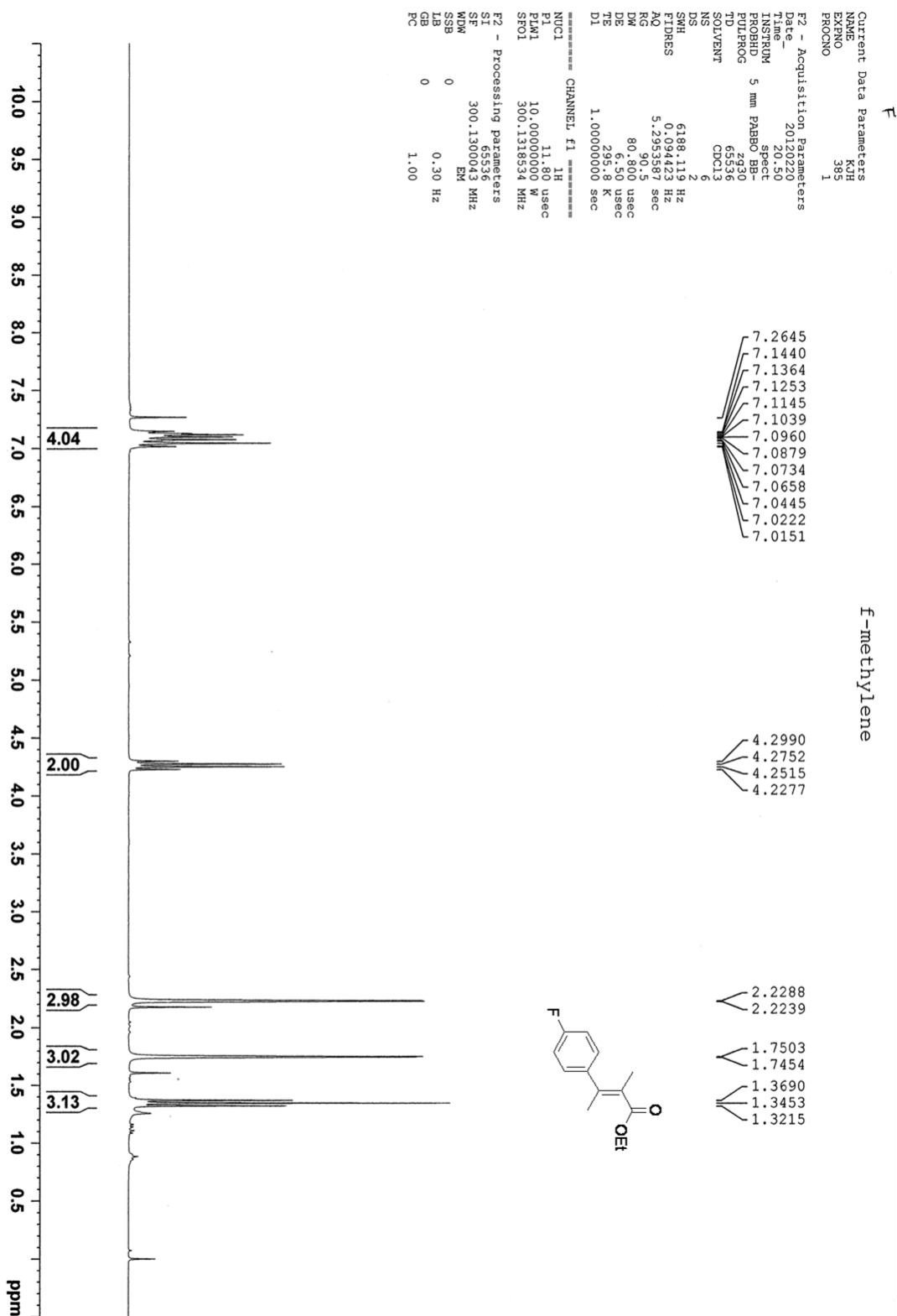
Copies of ^1H spectra of compound **4e**



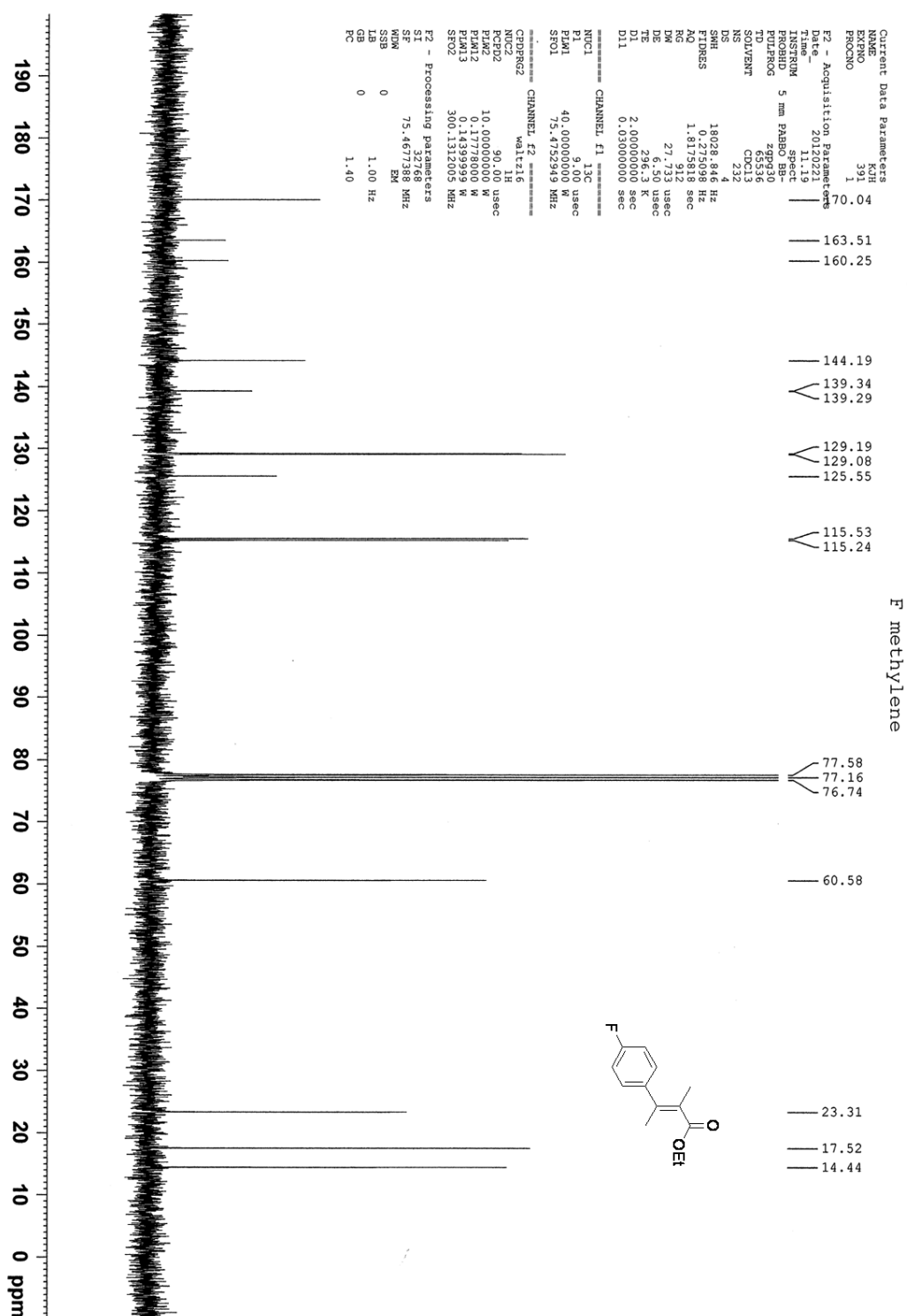
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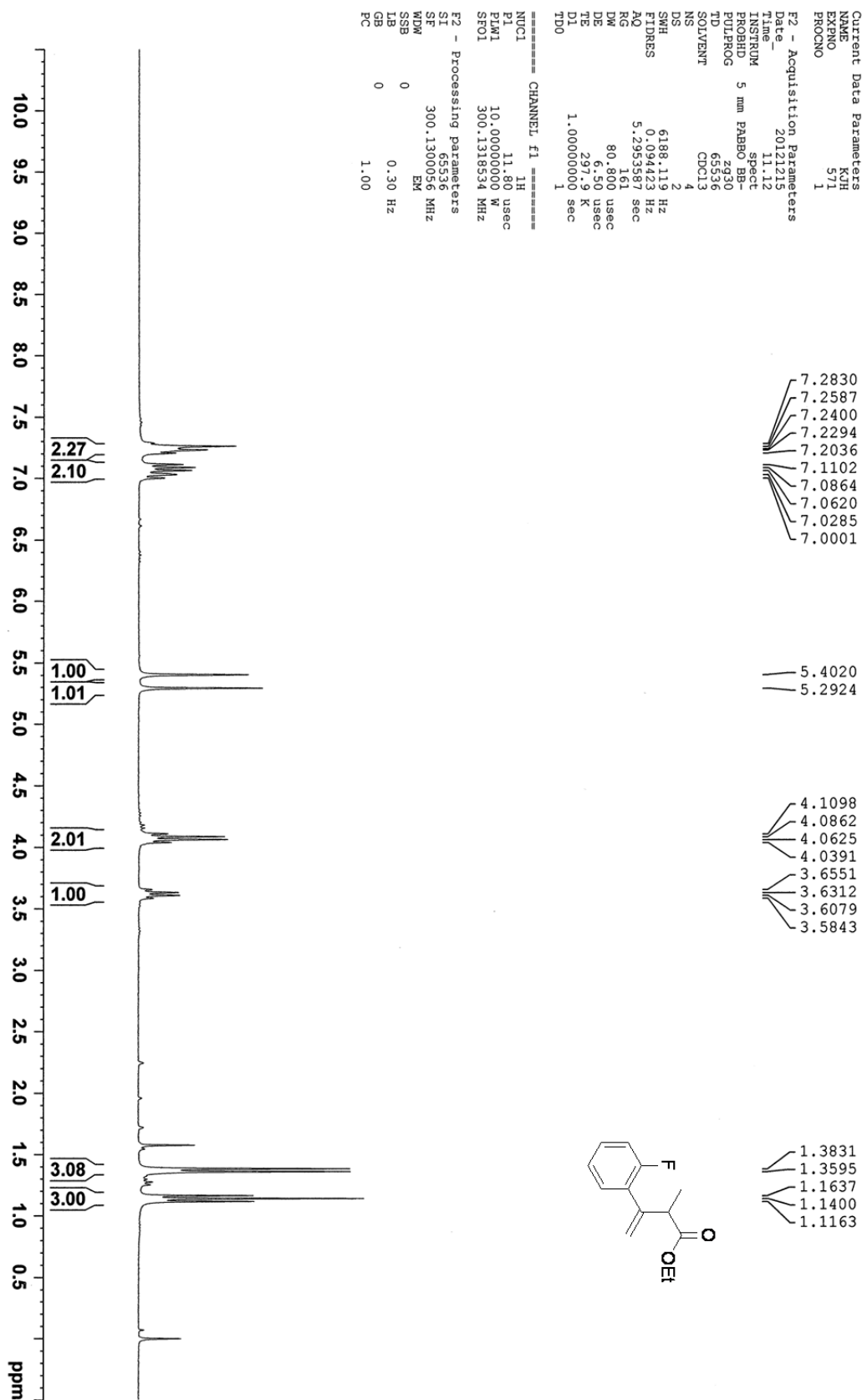
Copies of ^1H spectra of compound **5e**



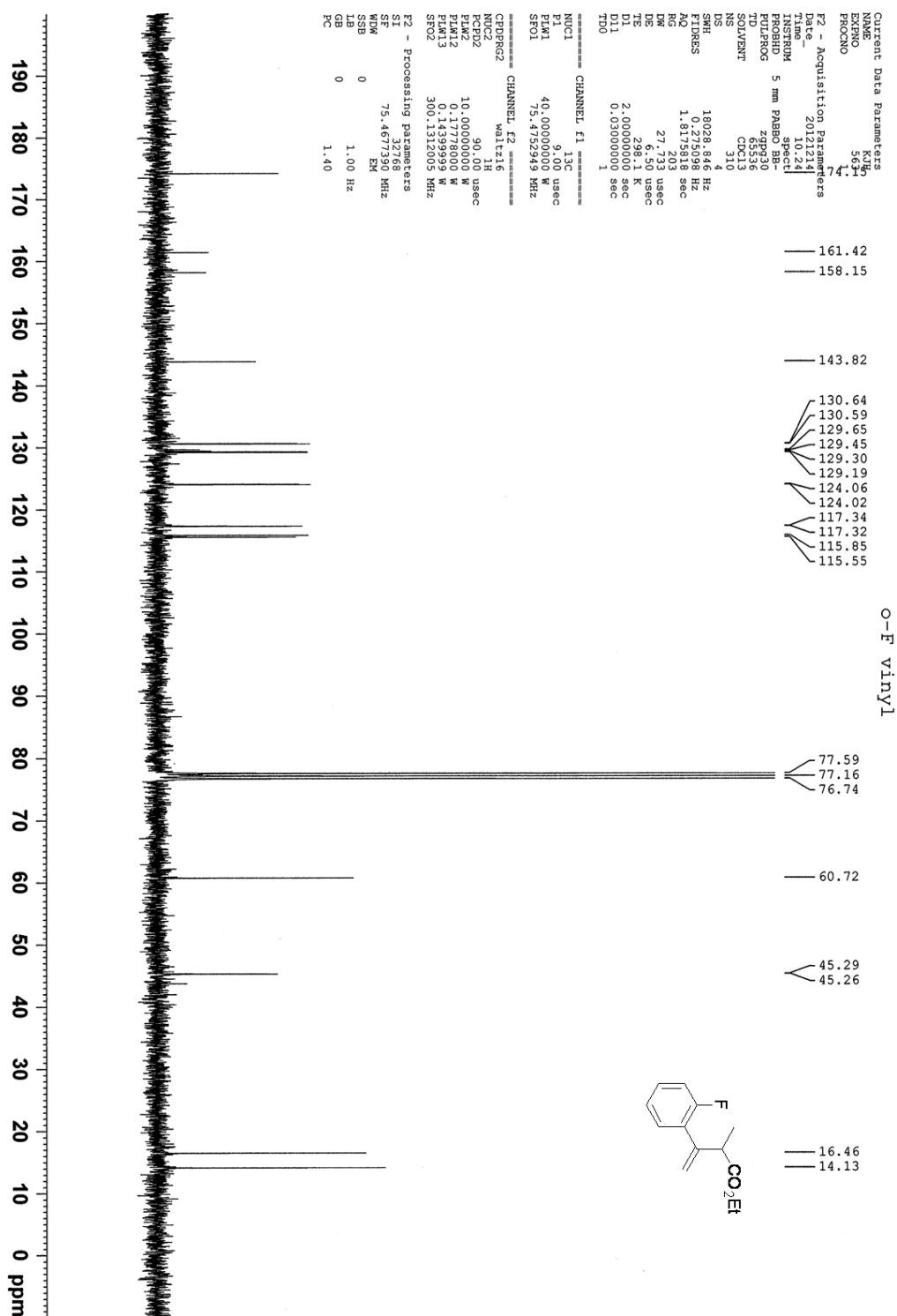
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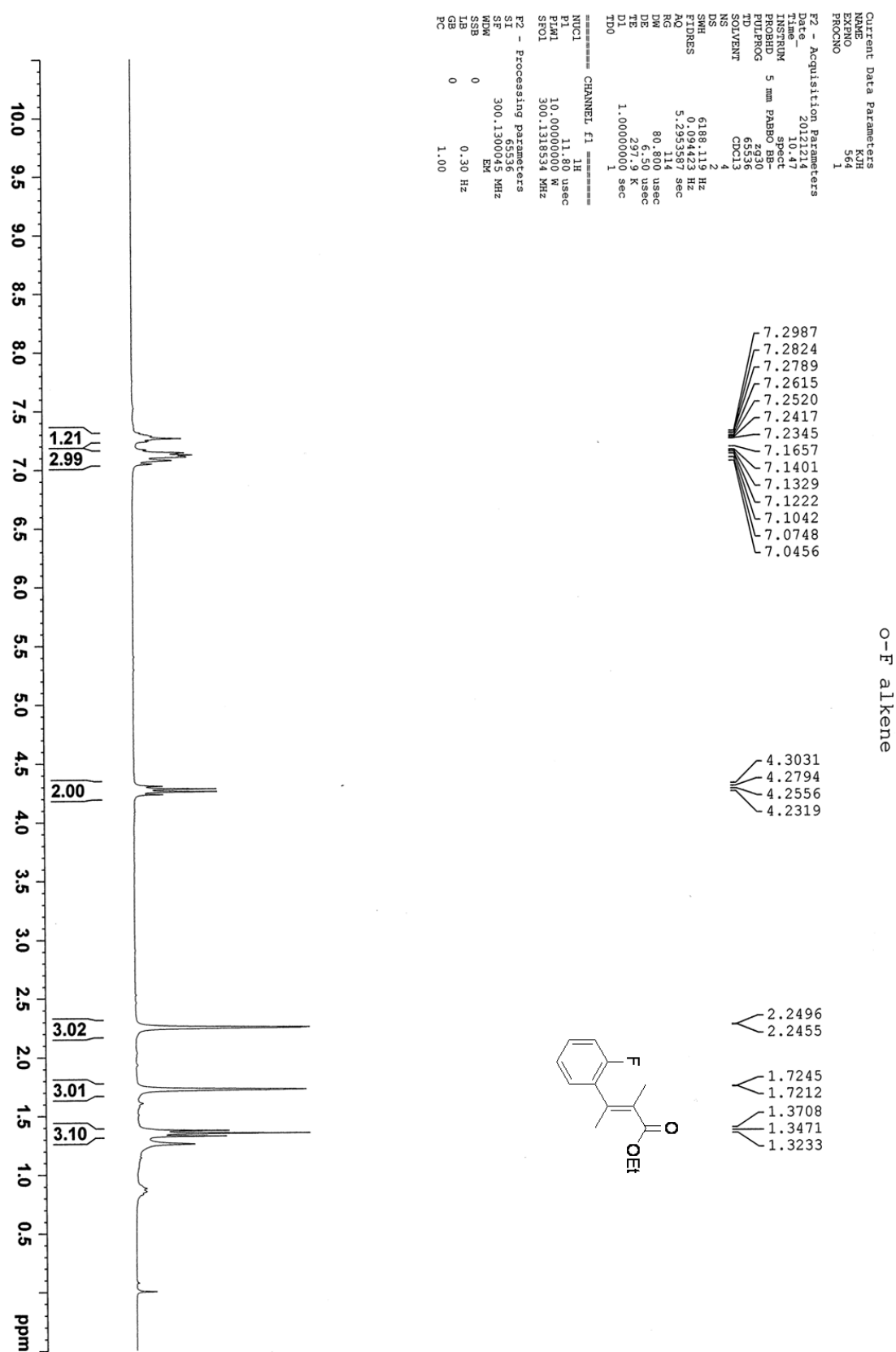
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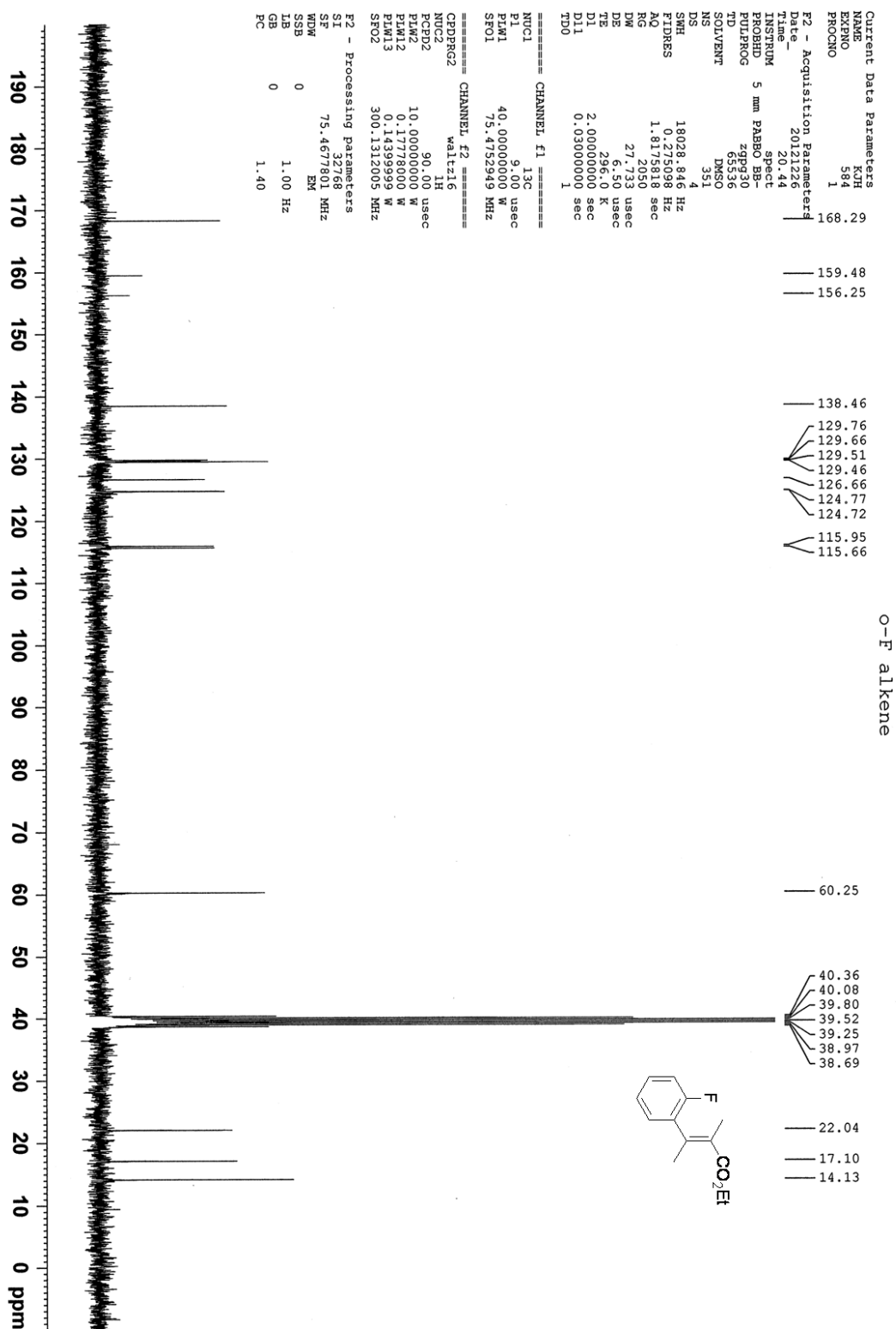
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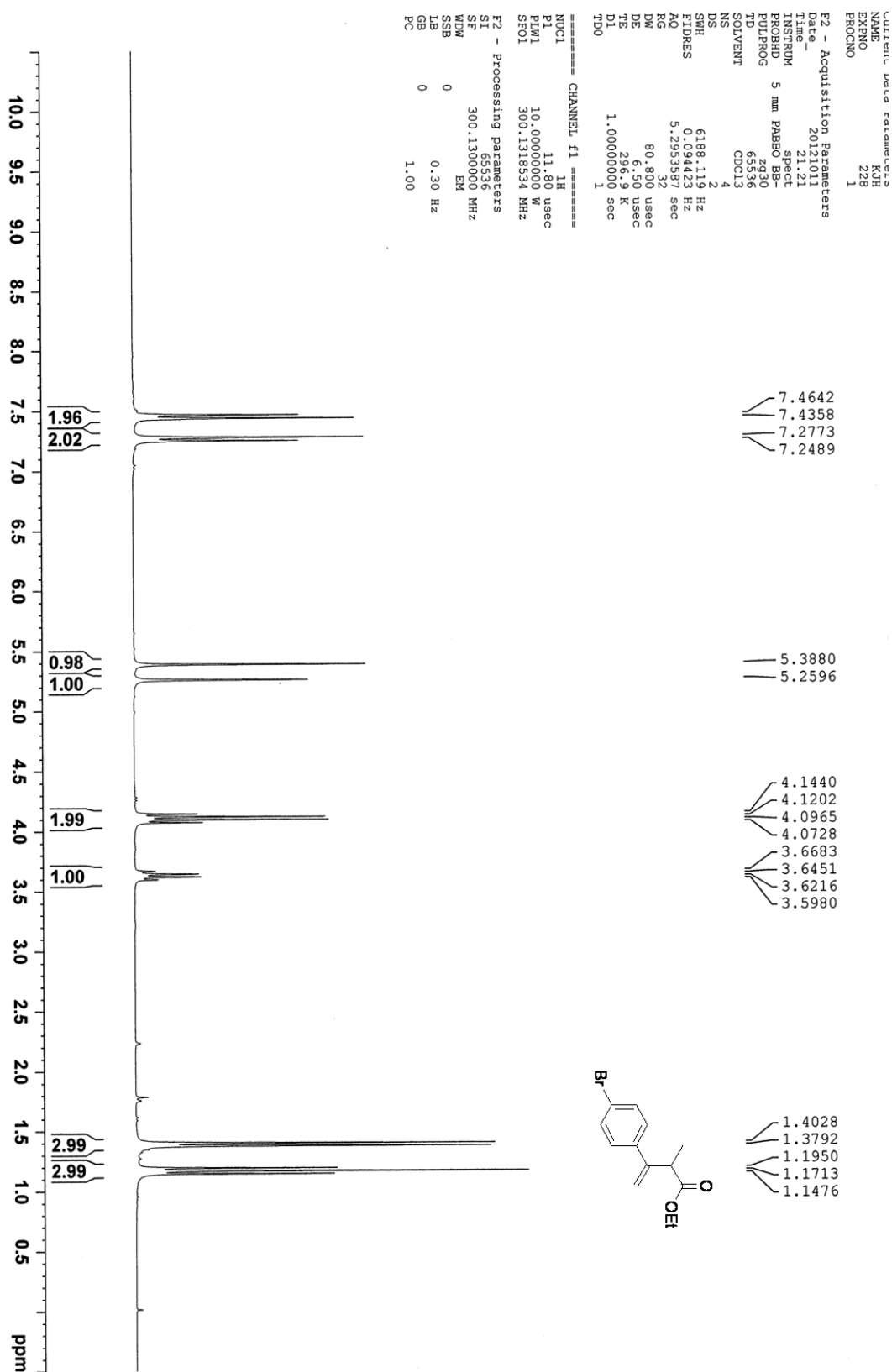
Copies of ^1H spectra of compound **5f**



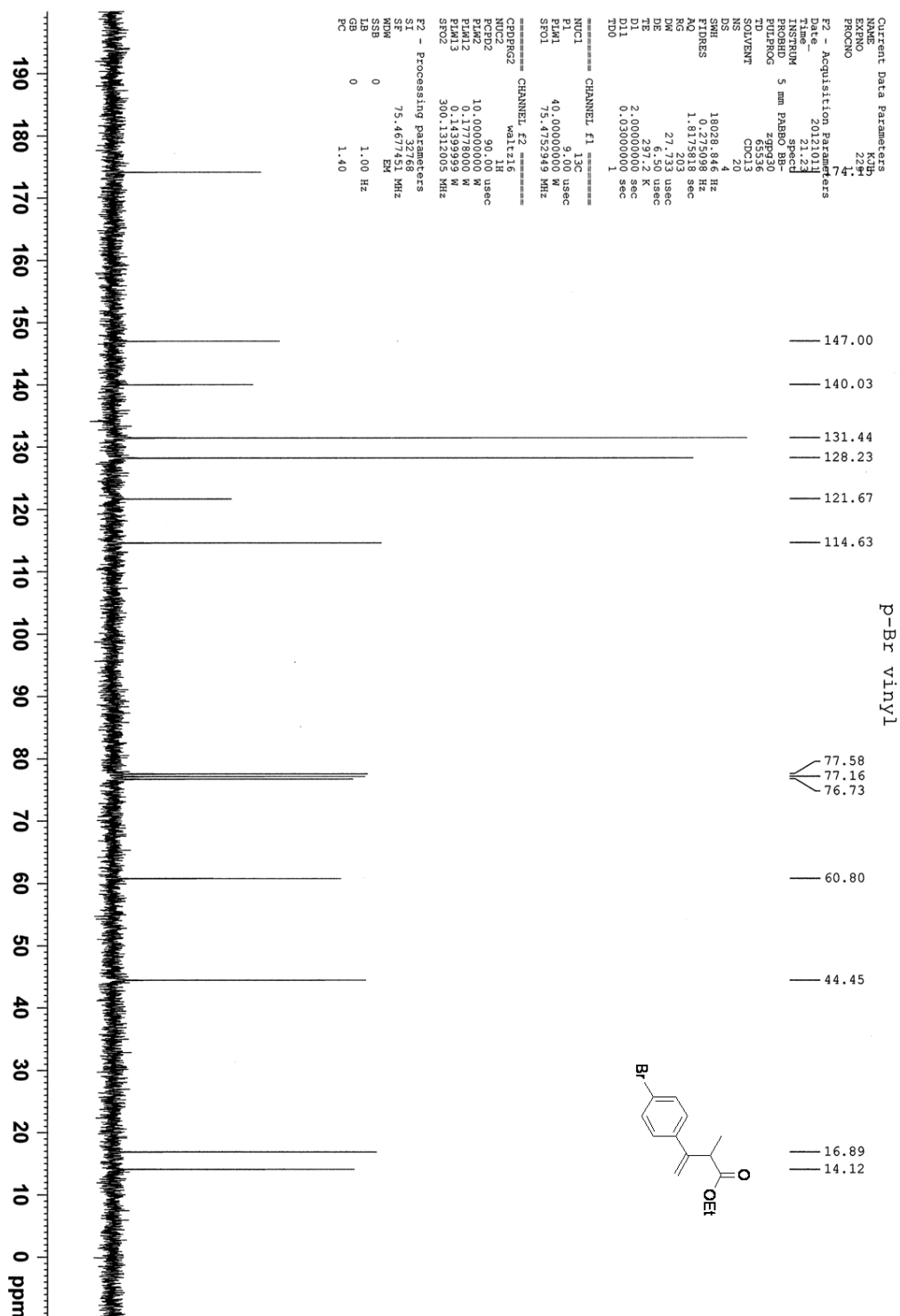
Copies of ^{13}C spectra of compound **5f**



Copies of ^1H spectra of compound **4g**



Copies of ^{13}C spectra of compound **4g**



Copies of ^1H spectra of compound **5g**

W

p-Br alkene

Current Data Parameters
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EXPNO 232
PROCNO 1

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Time 18.40

INSTRUM spect
PROBHD 5 mm PABBO
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 4
DS 2
SWH 6188.119 Hz
FIDRES 0.094423 Hz
AQ 5.2953587 sec
RG 101
RG 80.800 usec
DE 26.30 usec
TE 300.2 K
D1 1.0000000 sec
TD0 1

CHANNEL f1
NUC1 ^1H
P1 11.80 usec
PL1 10.00000000 W
SFO1 300.1318534 MHz

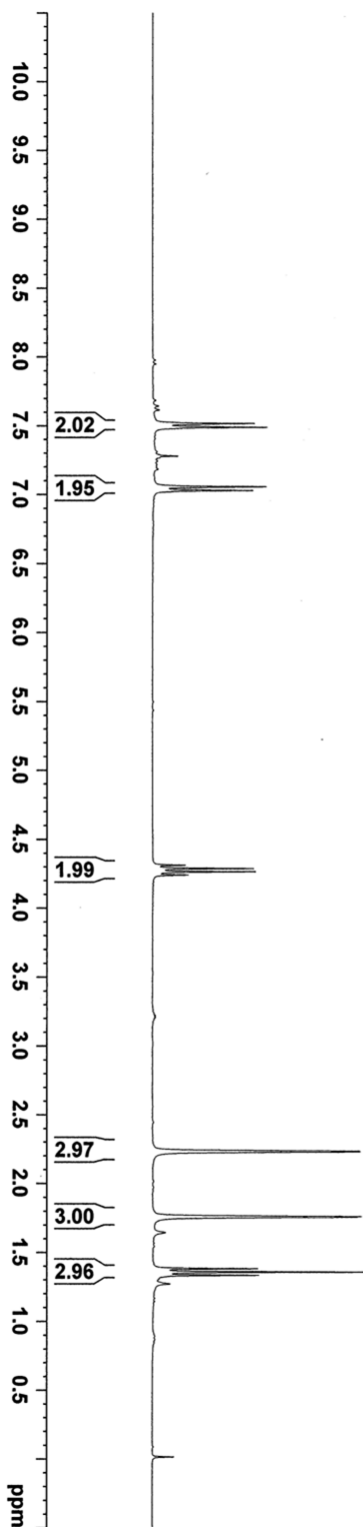
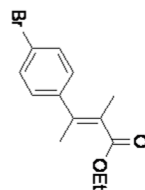
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LB 0
GB 0
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7.0280

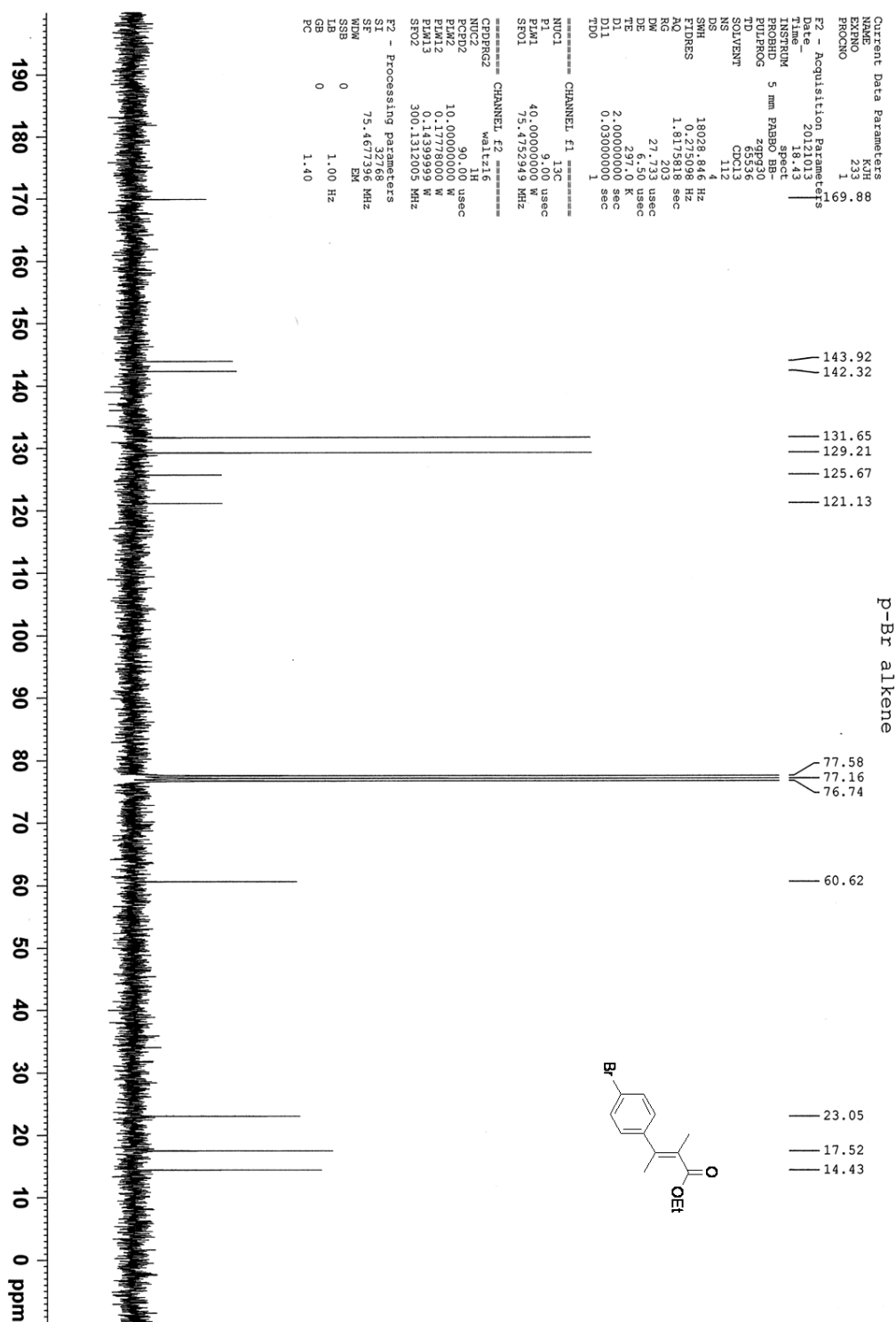
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4.2639
4.2401

2.2338
2.2293

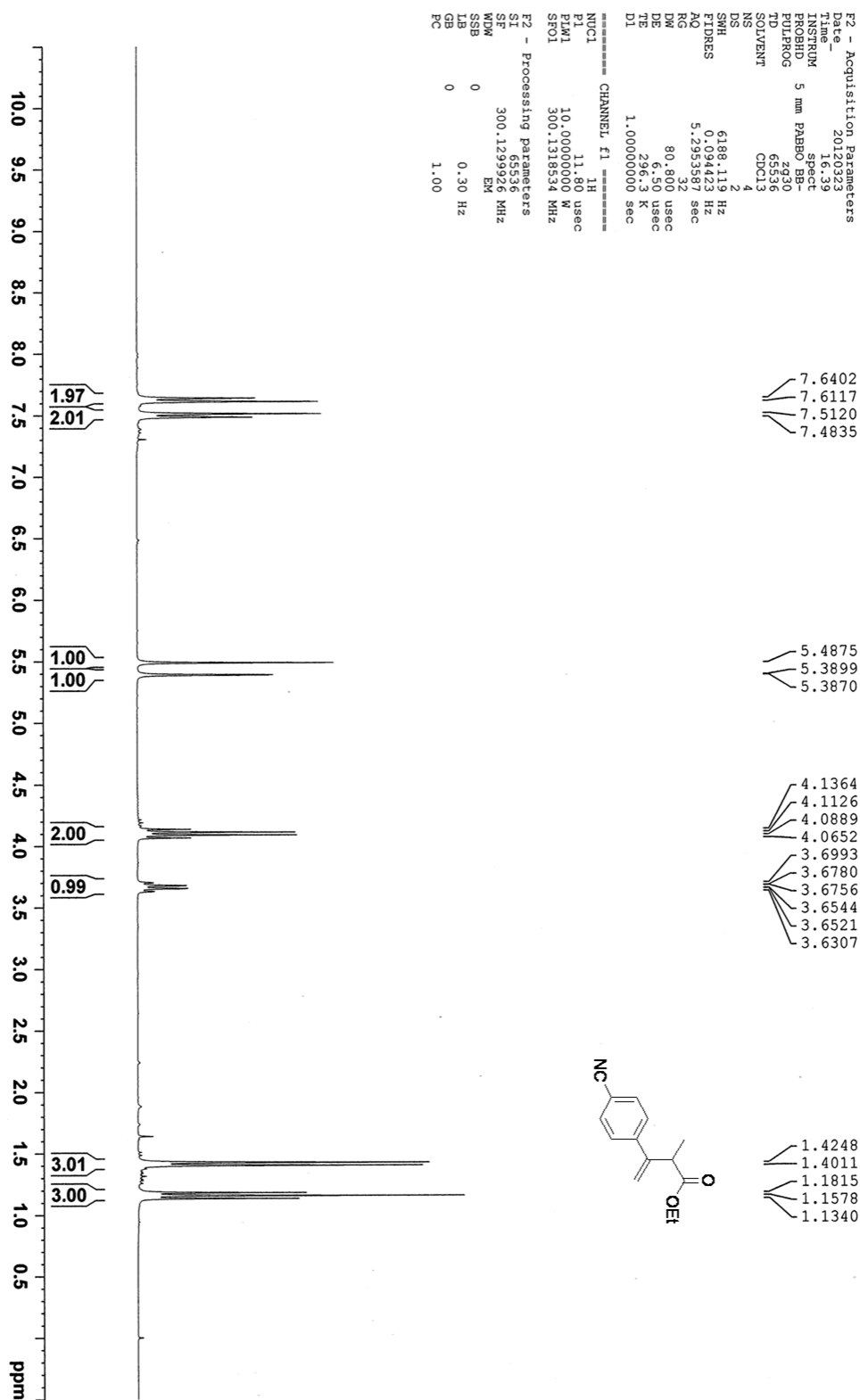
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1.3802
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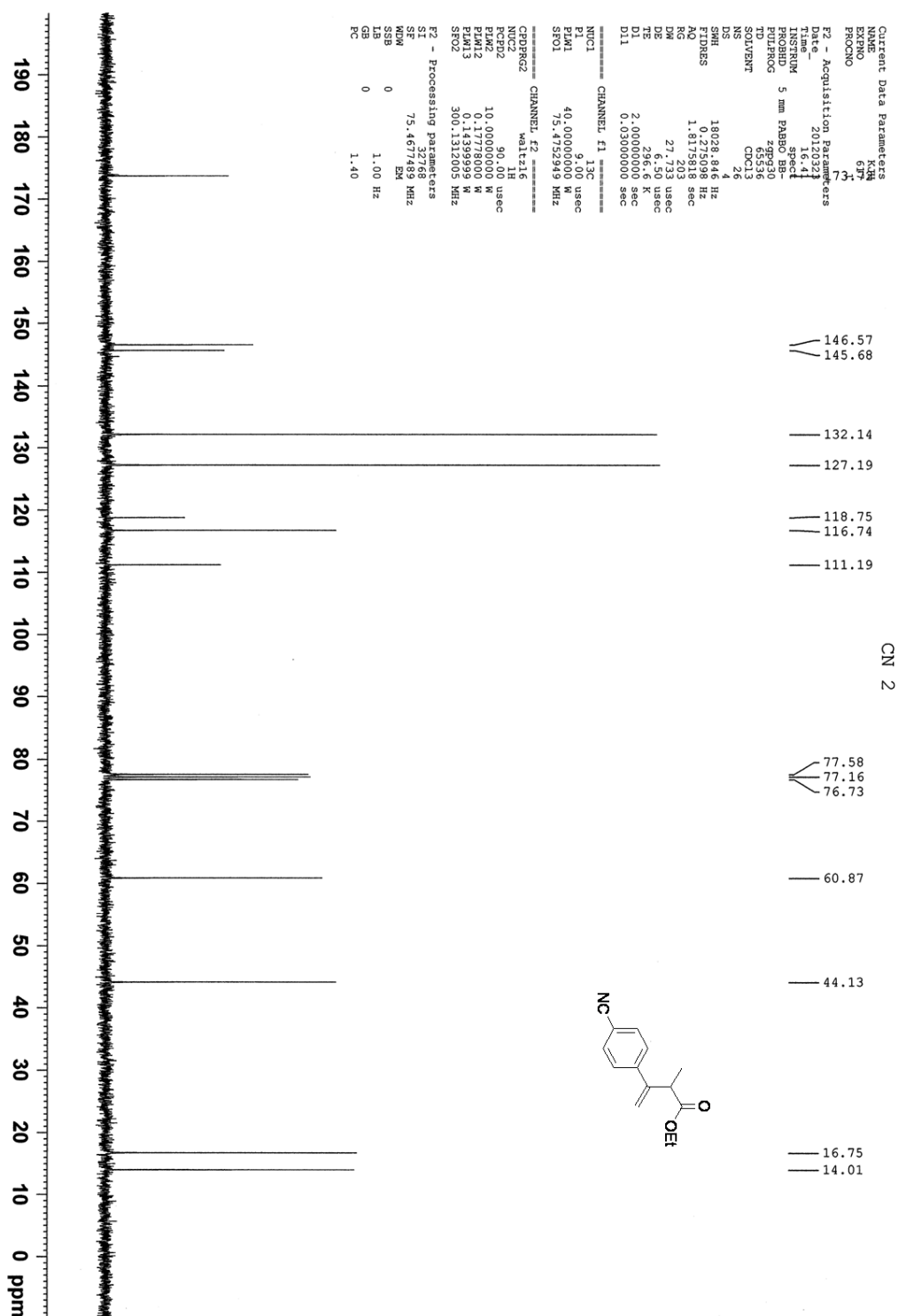
S30



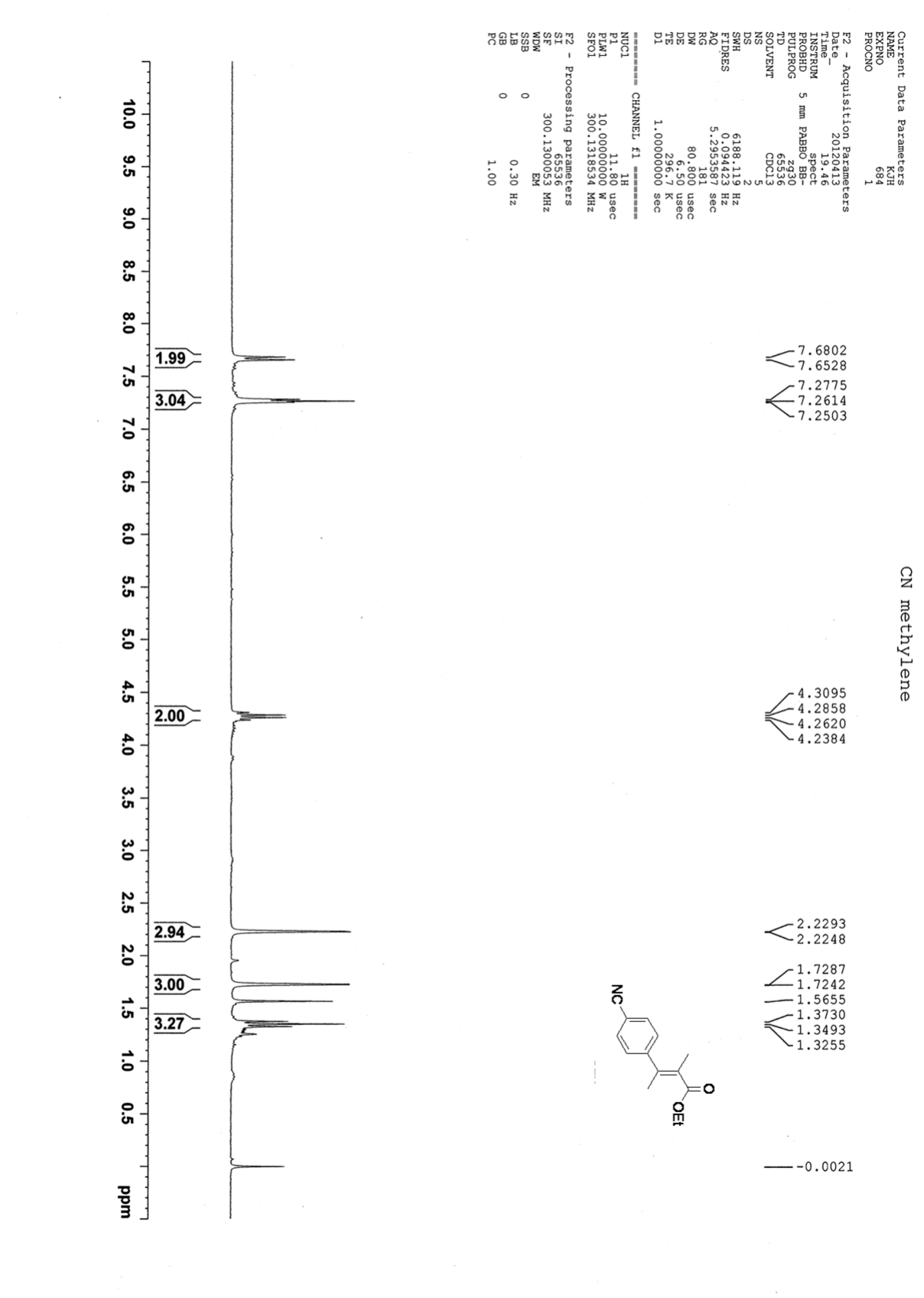
Copies of ^1H spectra of compound **4h**



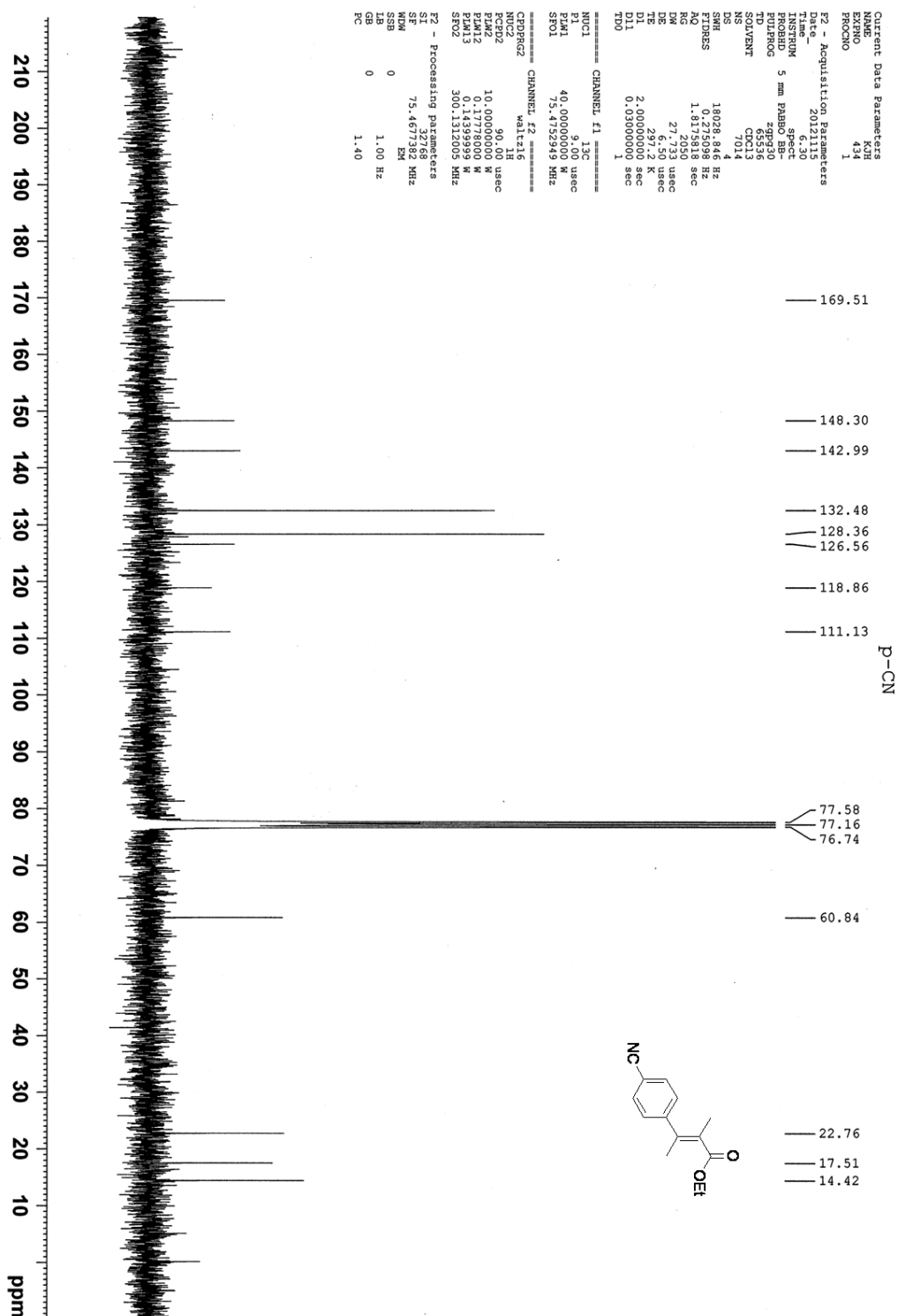
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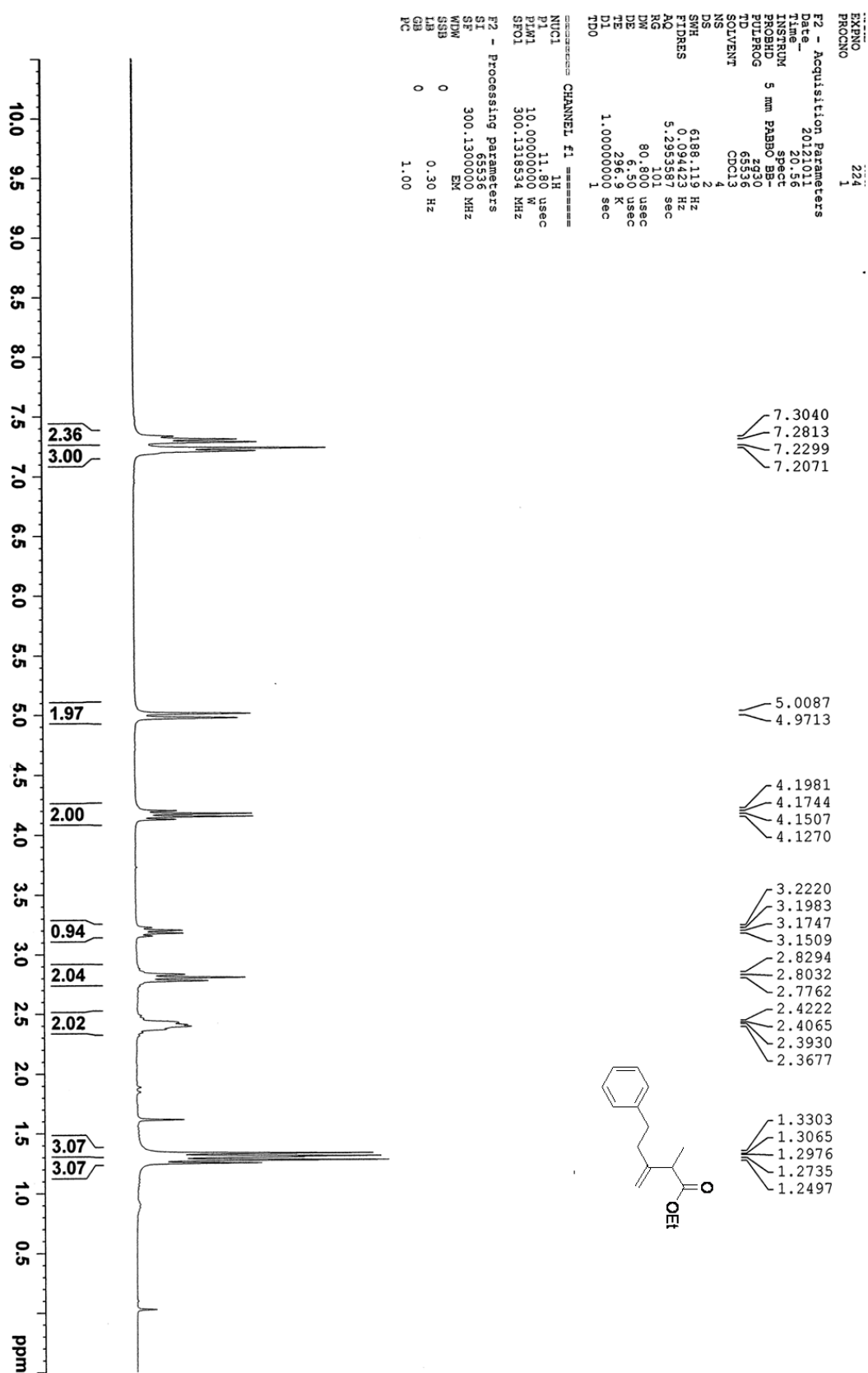
Copies of ^1H spectra of compound **5h**



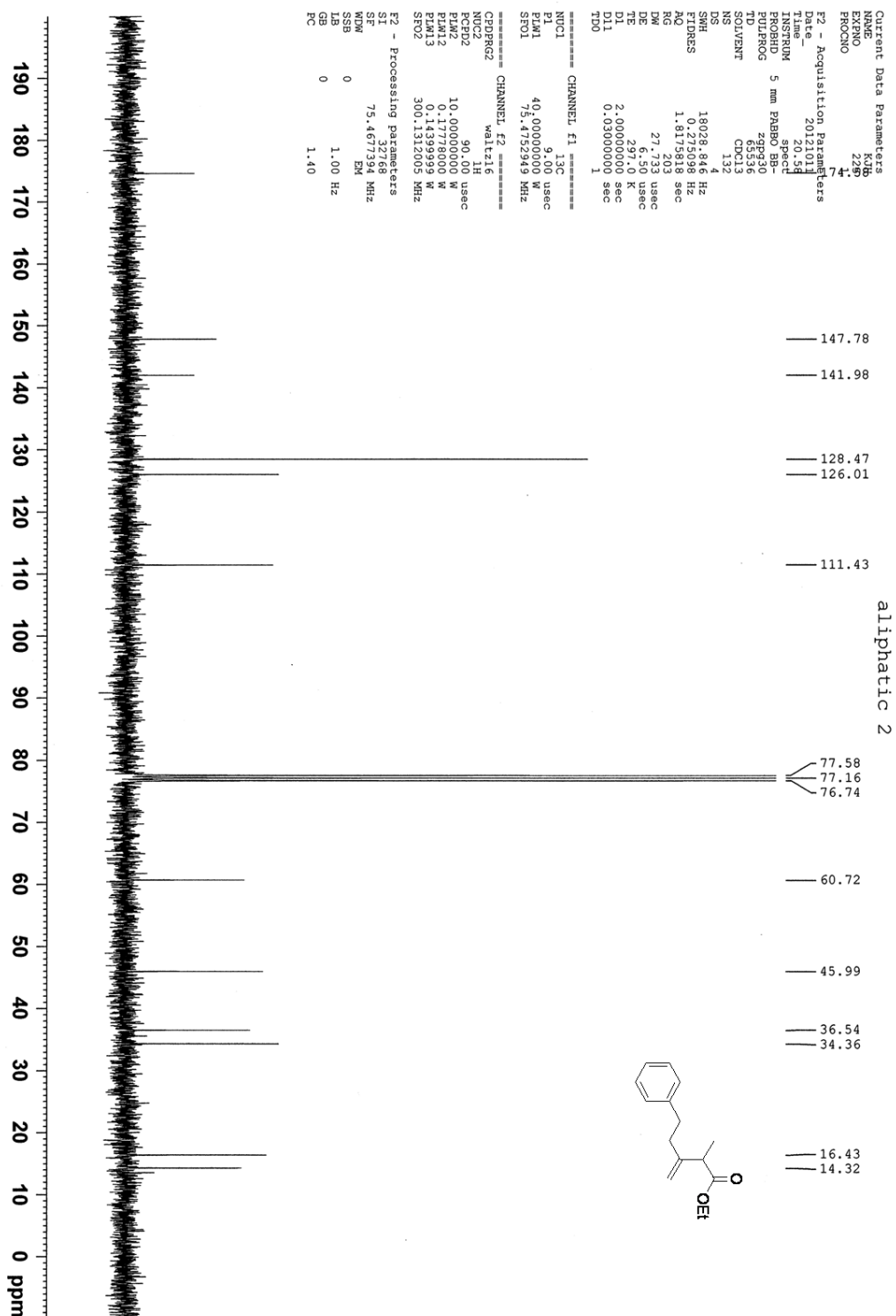
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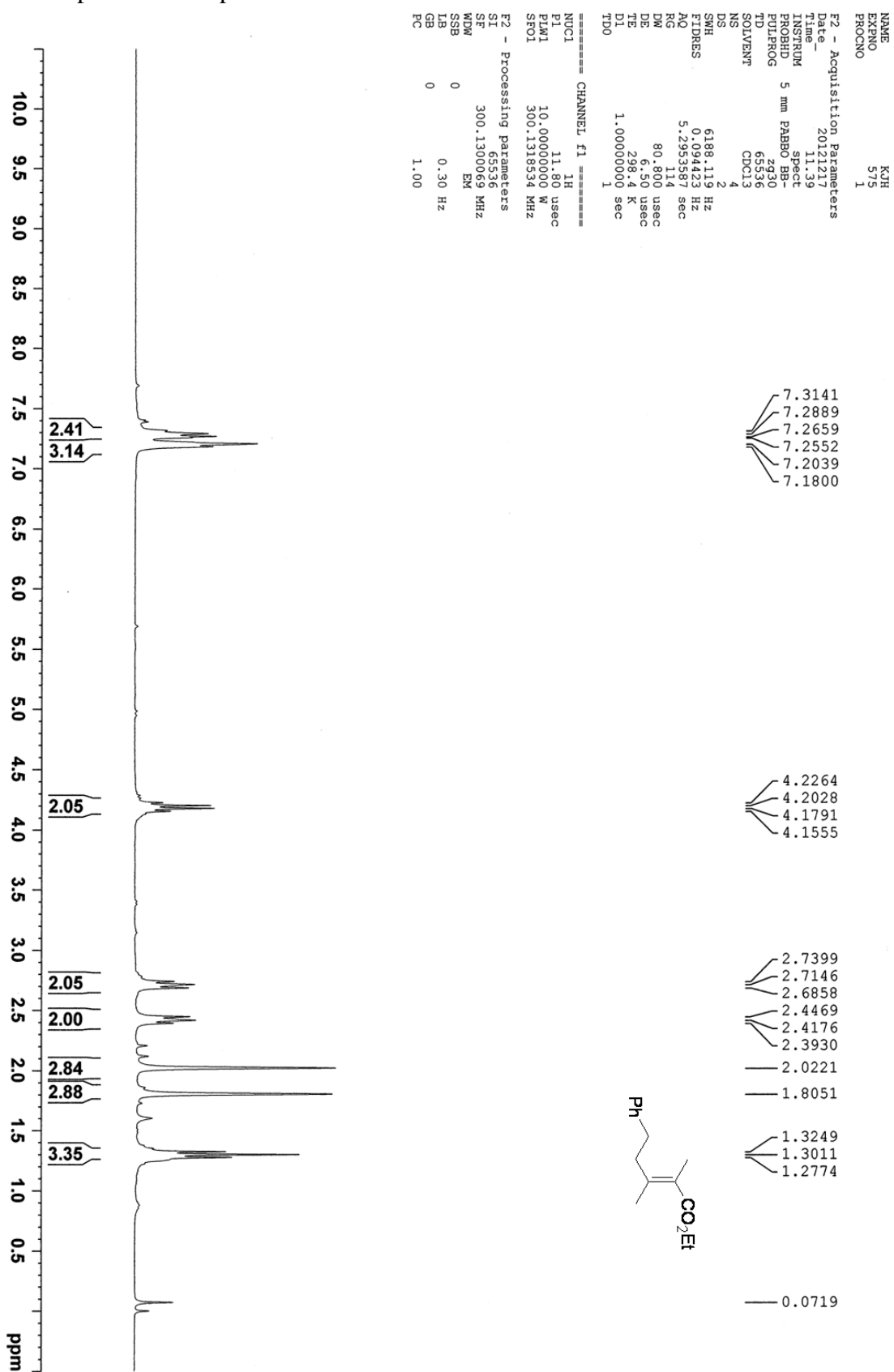
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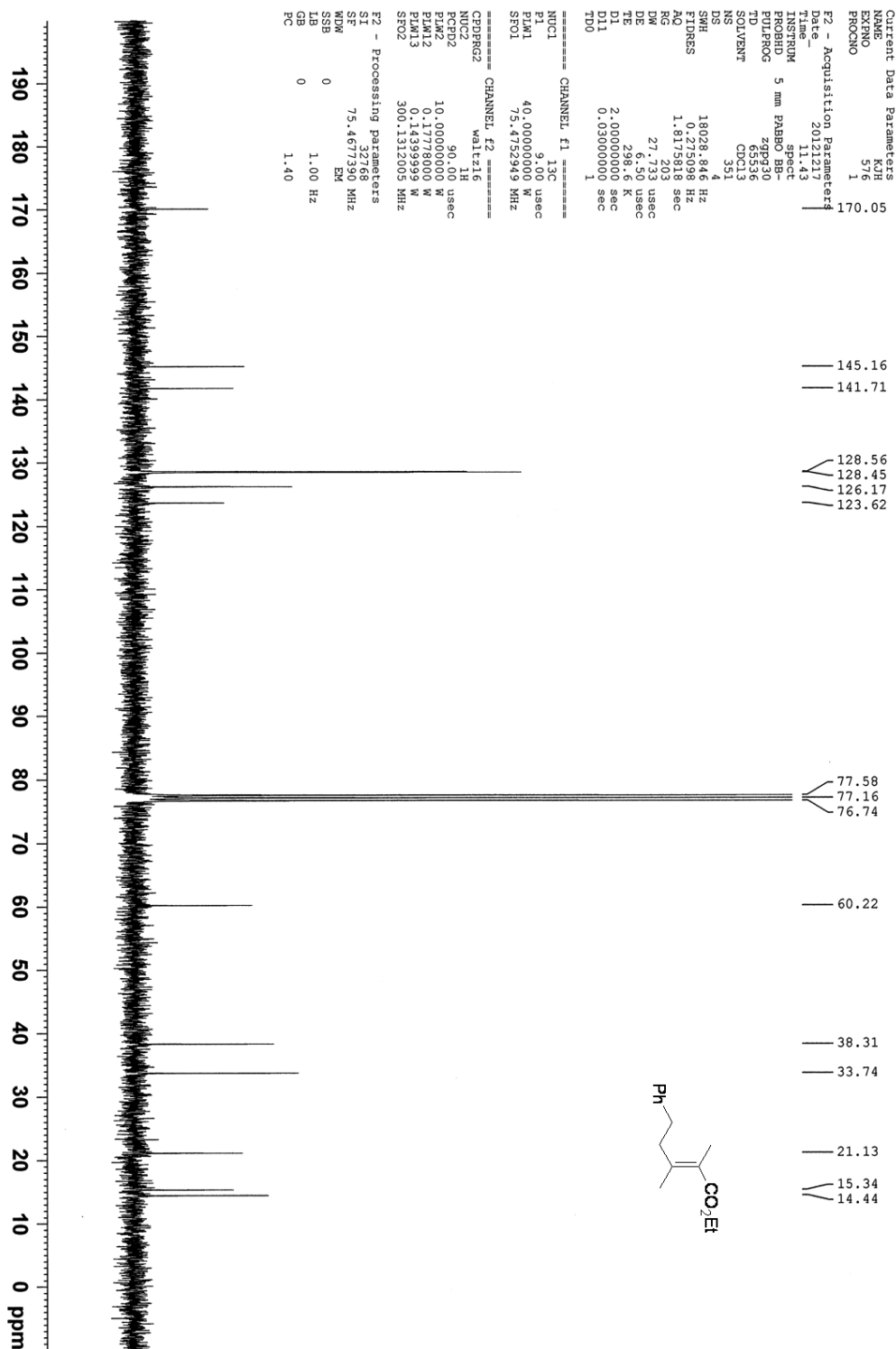
Copies of ^{13}C spectra of compound **4i**



Copies of ^1H spectra of compound **5i**

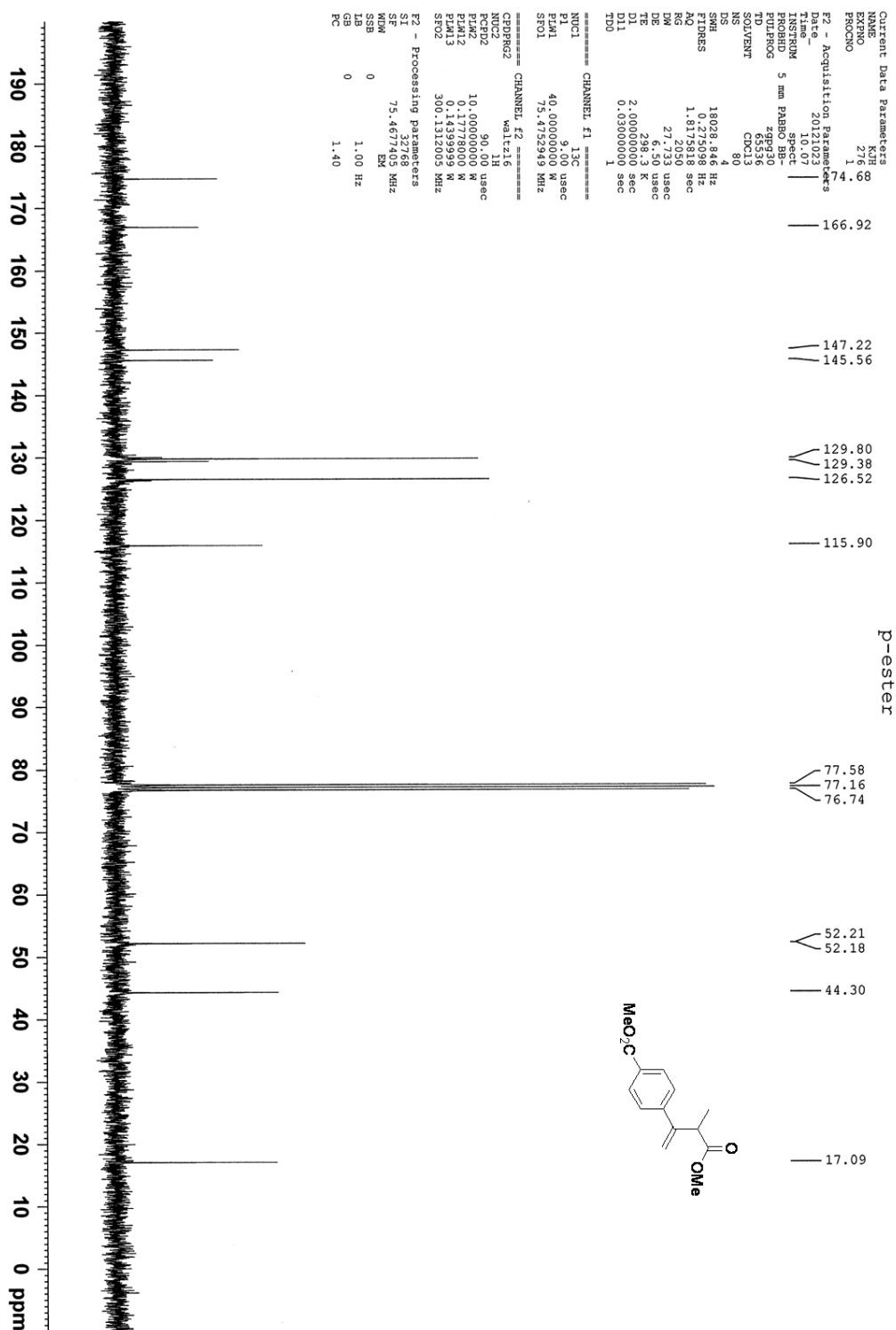


Copies of ^{13}C spectra of compound **5i**

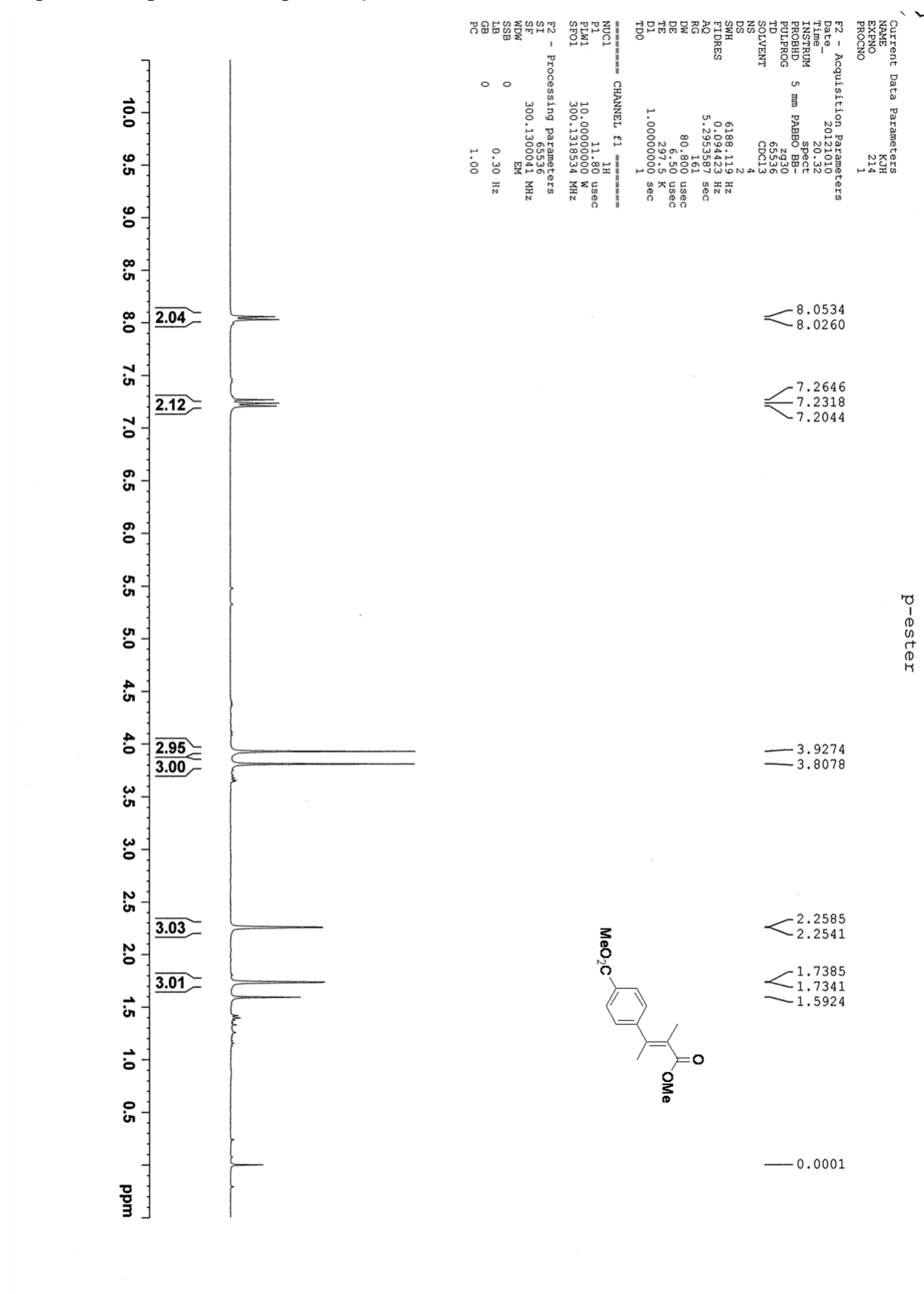




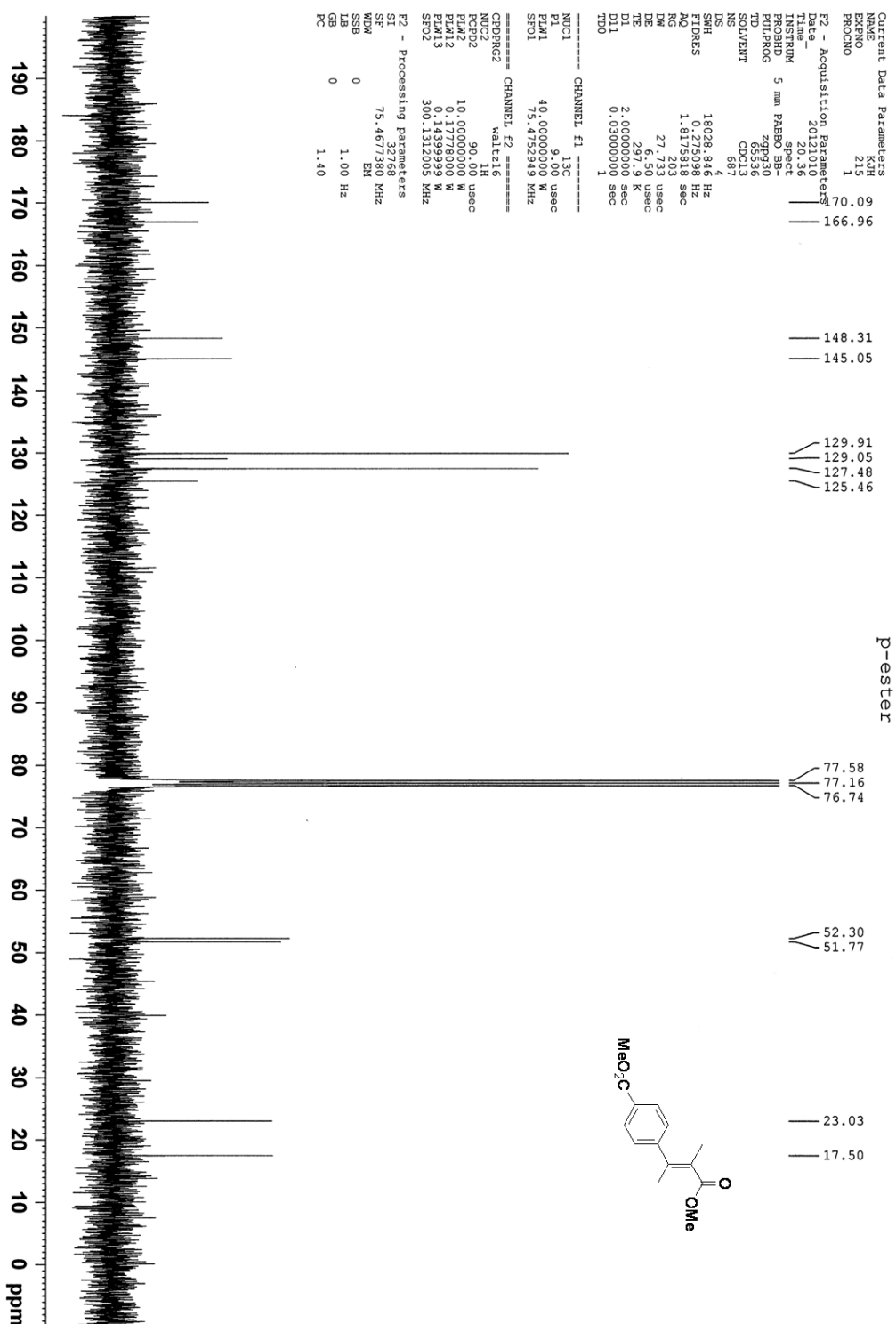
S40



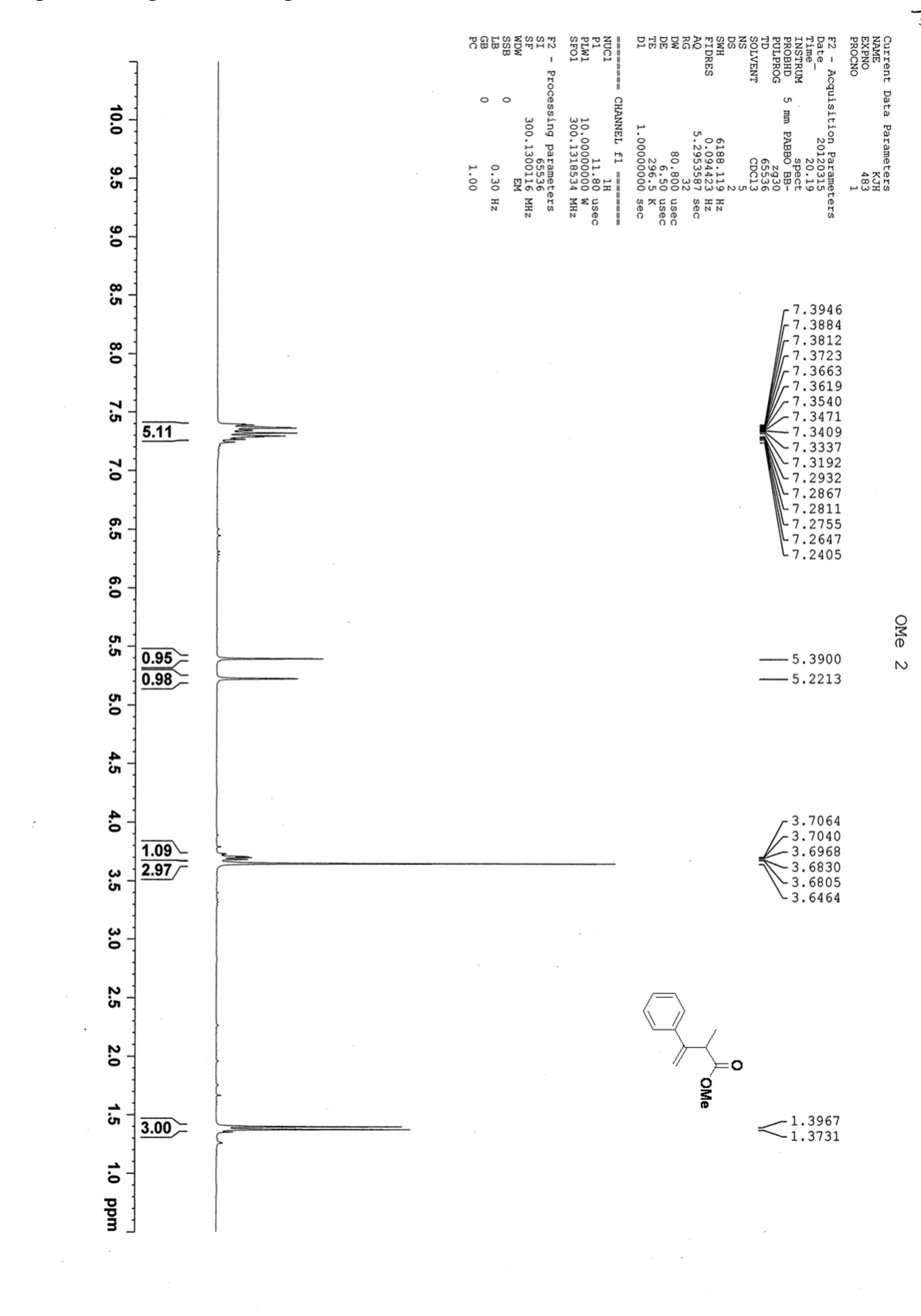
Copies of ^1H spectra of compound **5j**



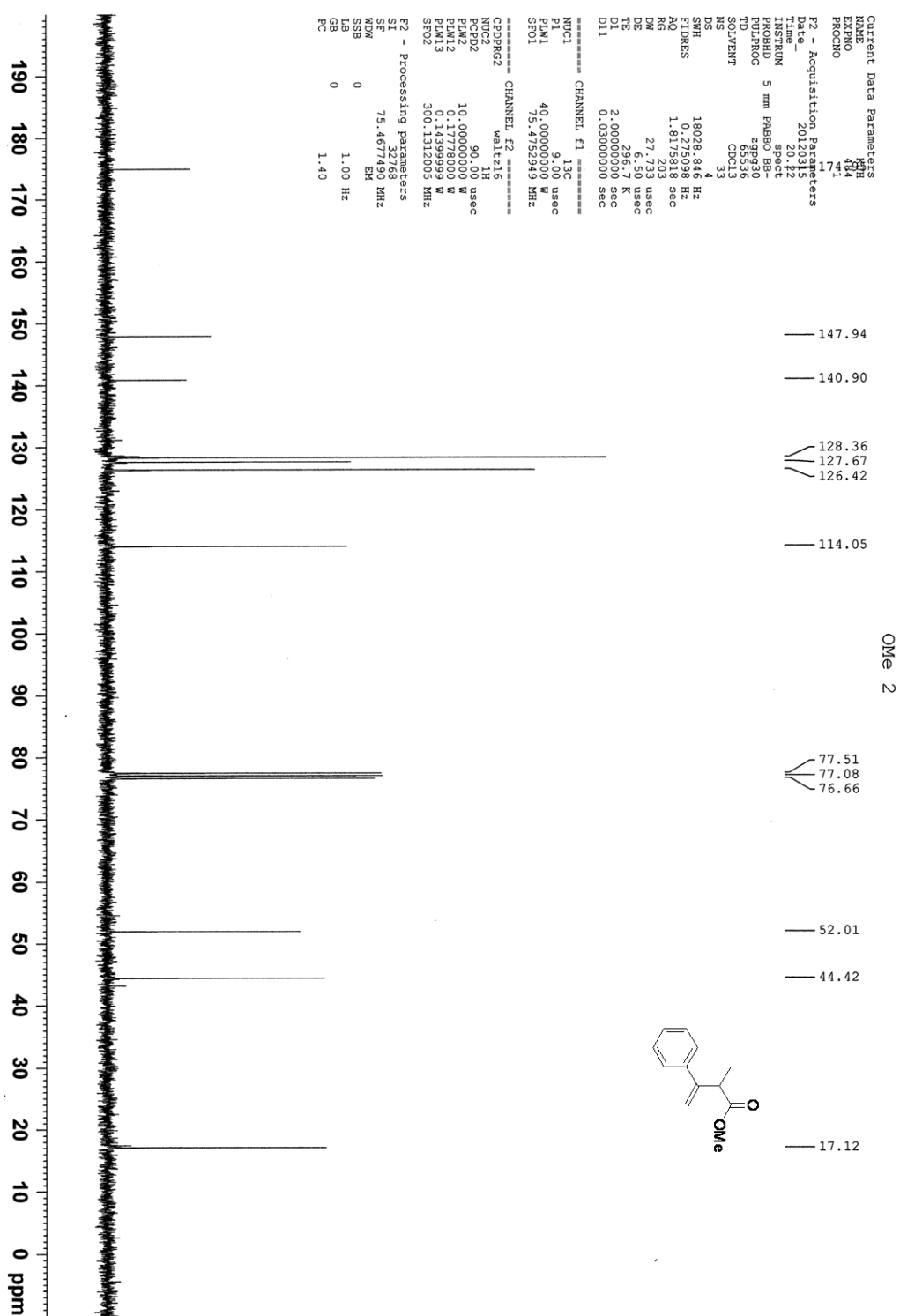
Copies of ^{13}C spectra of compound **5j**



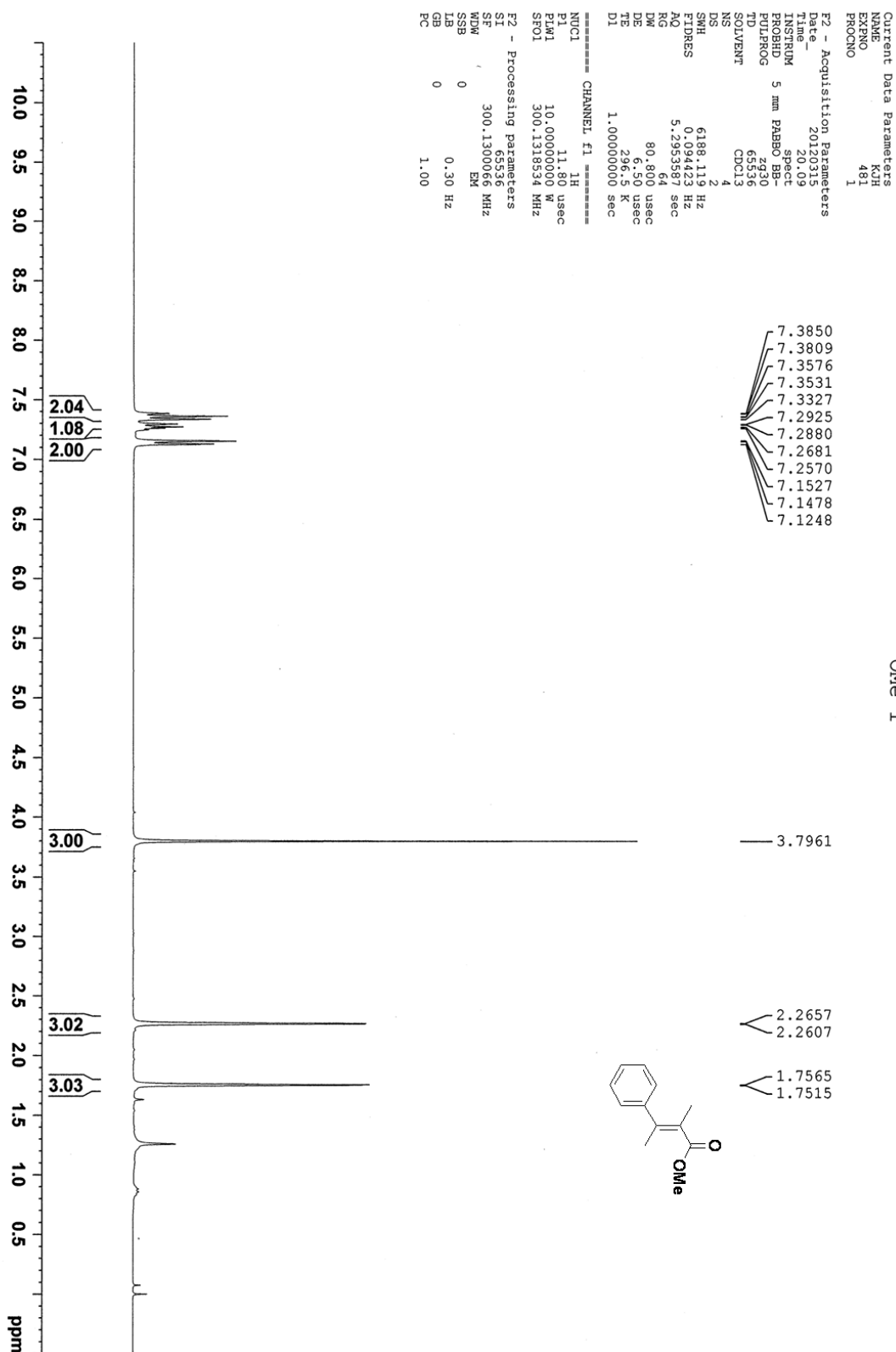
Copies of ^1H spectra of compound **4k**



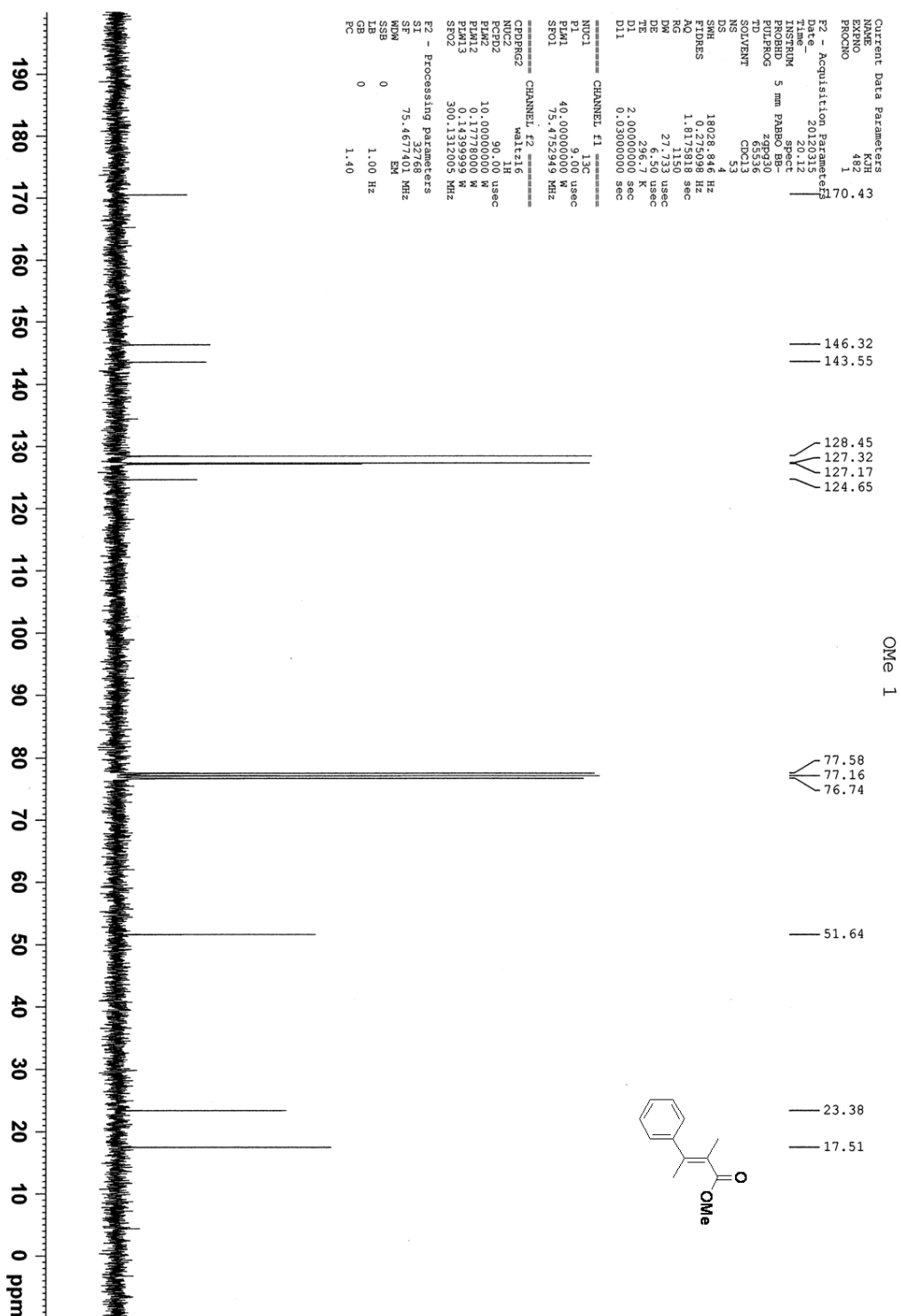
Copies of ^{13}C spectra of compound **4k**



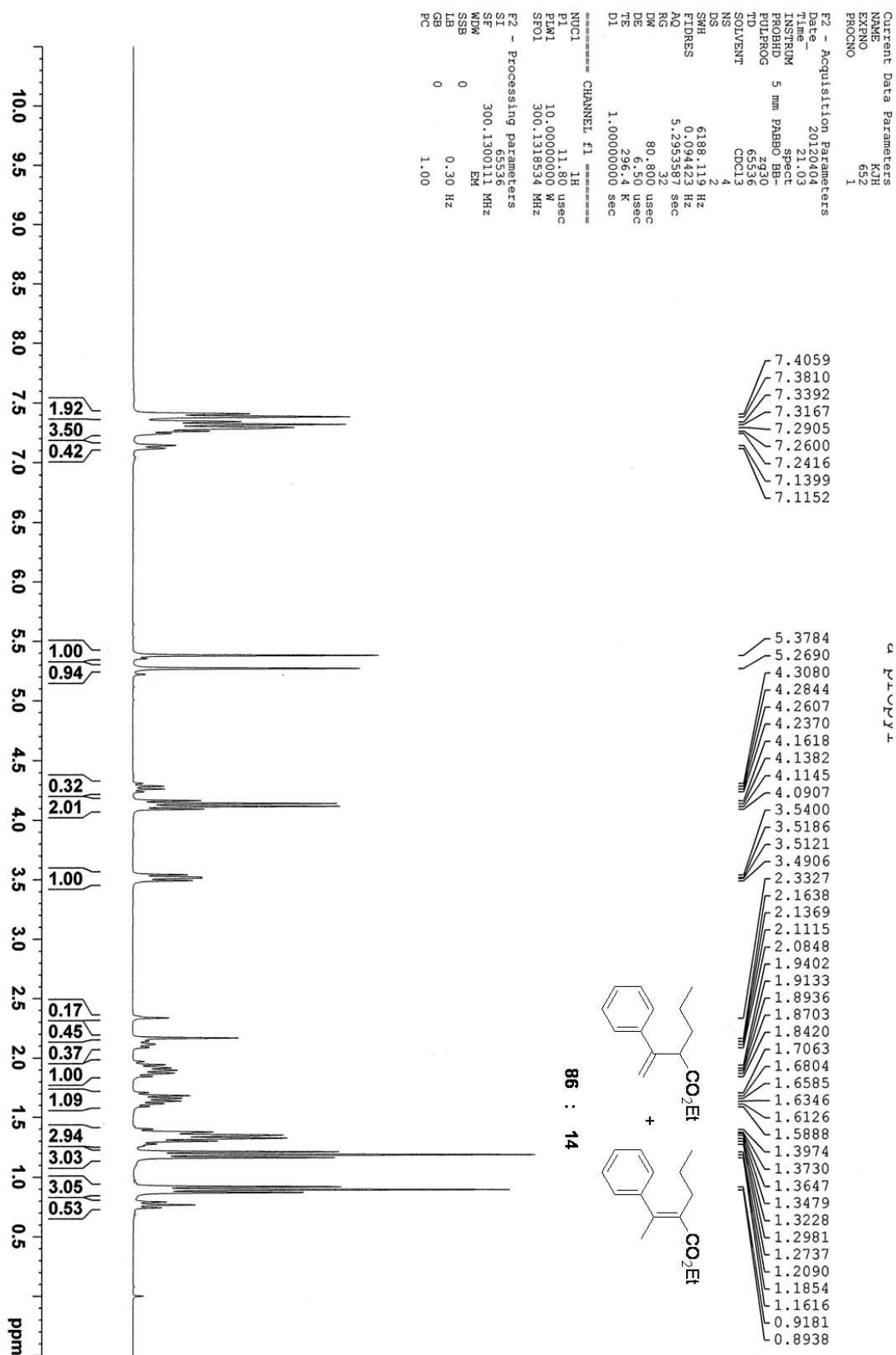
Copies of ^1H spectra of compound **5k**



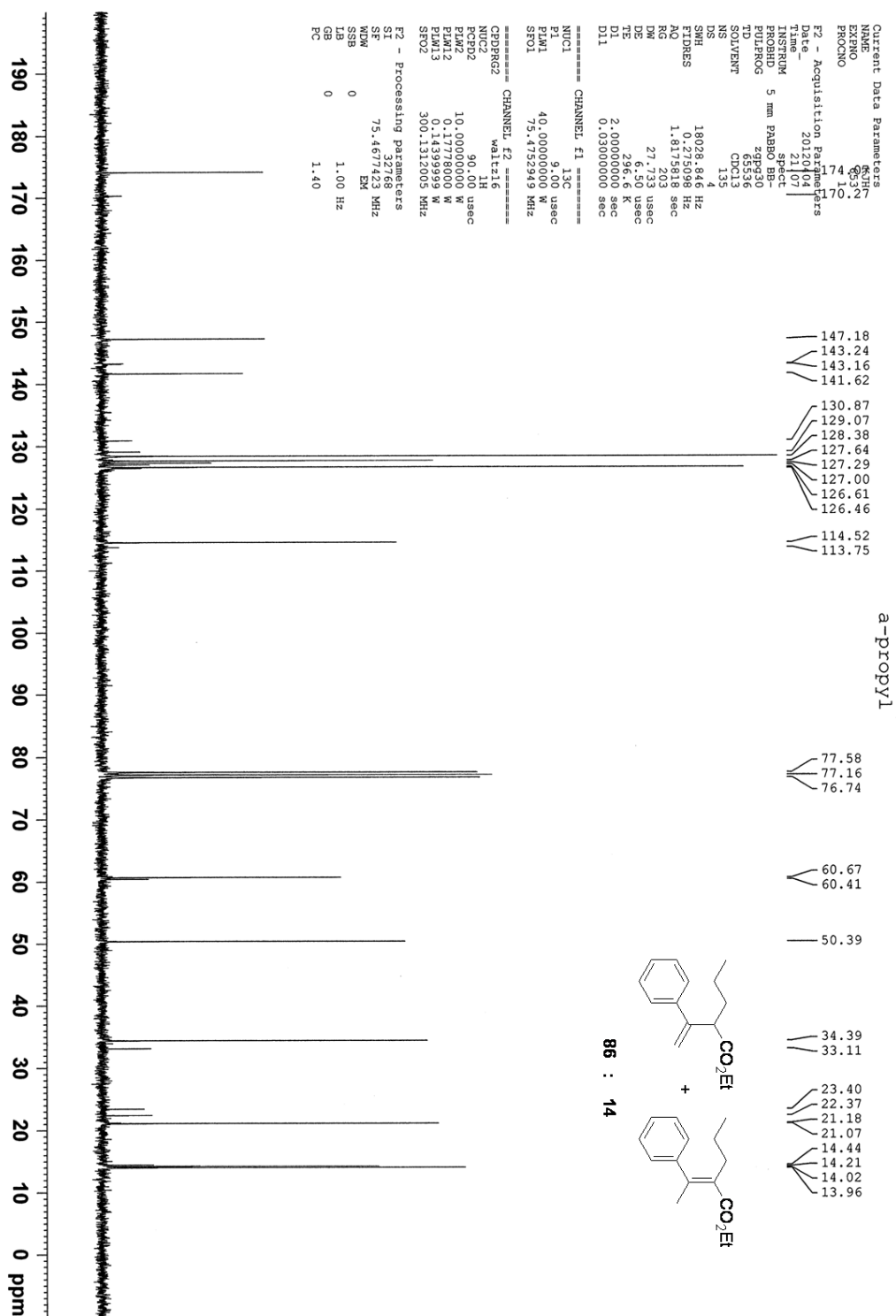
Copies of ^{13}C spectra of compound **5k**



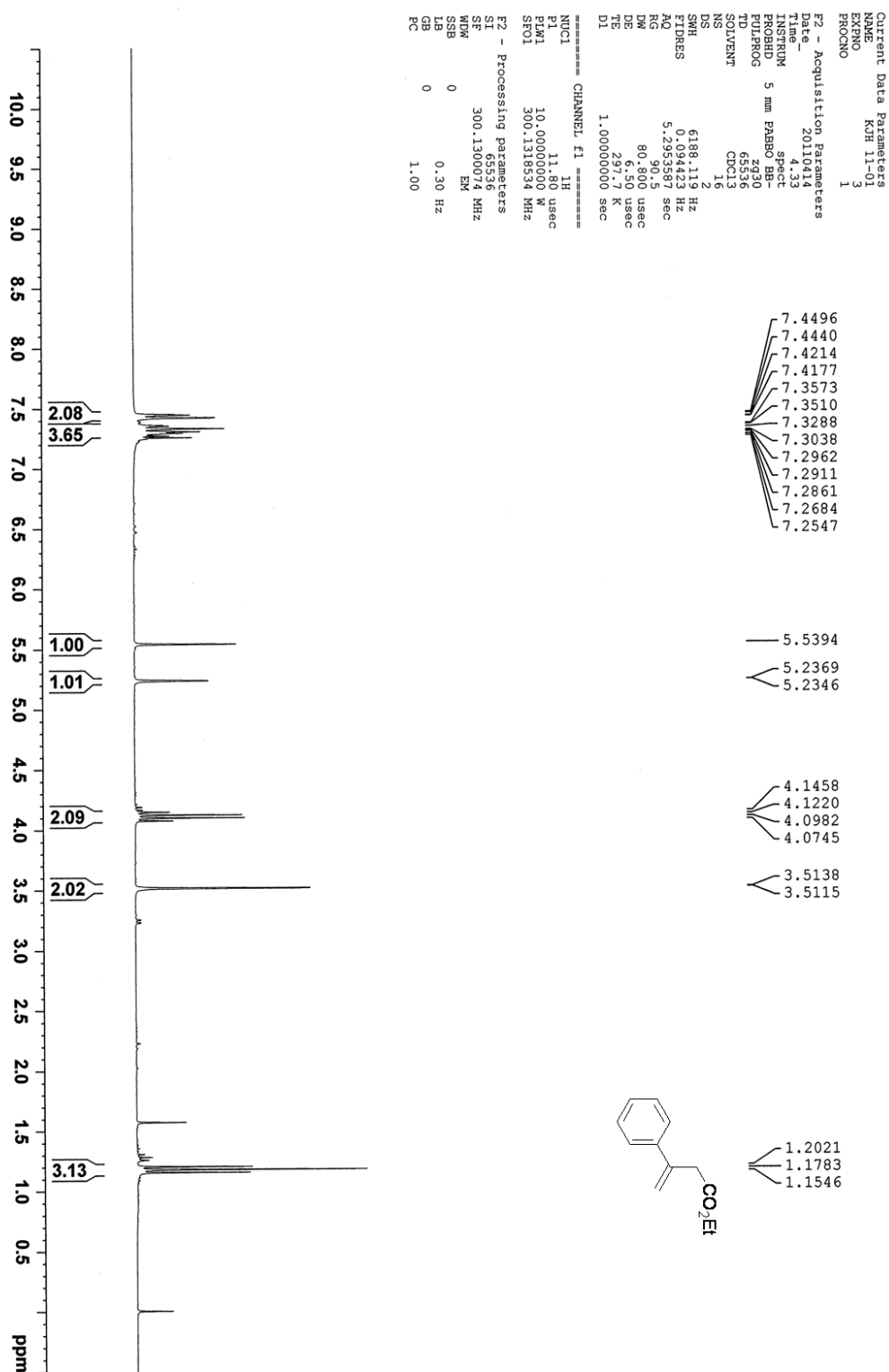
Copies of ^1H spectra of mixture of compounds **4l** and **5l**



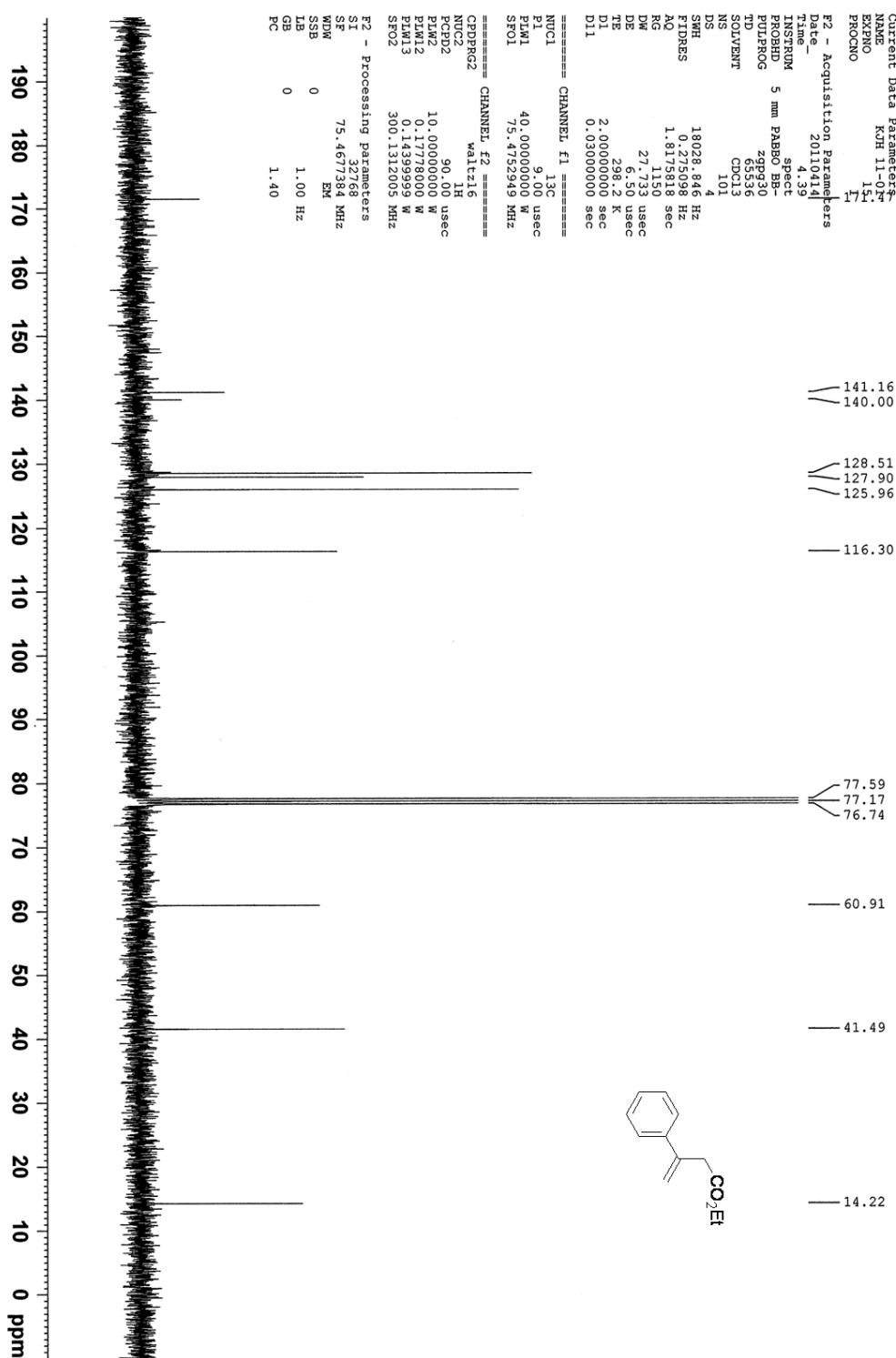
Copies of ^{13}C spectra of mixture of compounds **41** and **51**



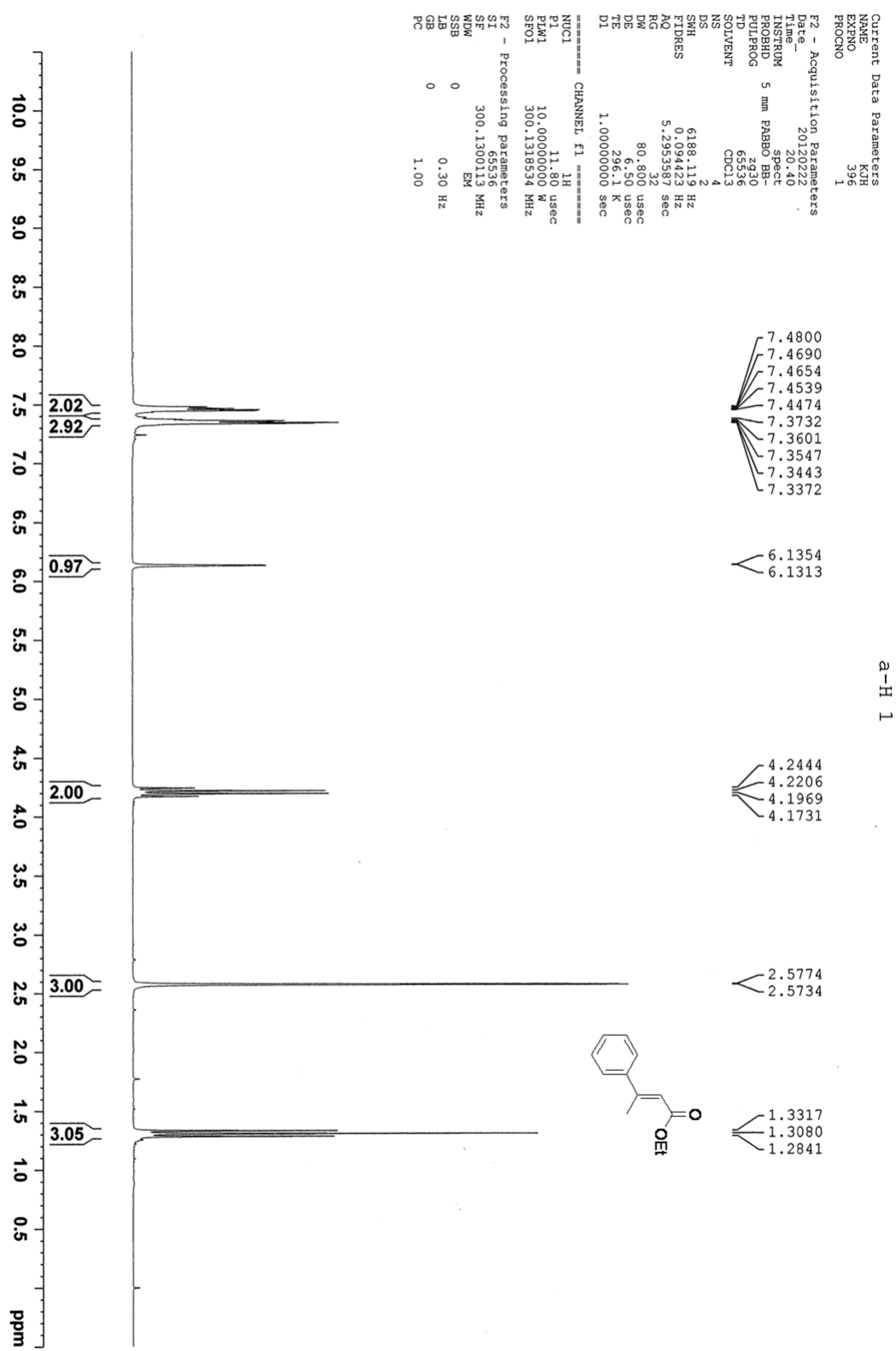
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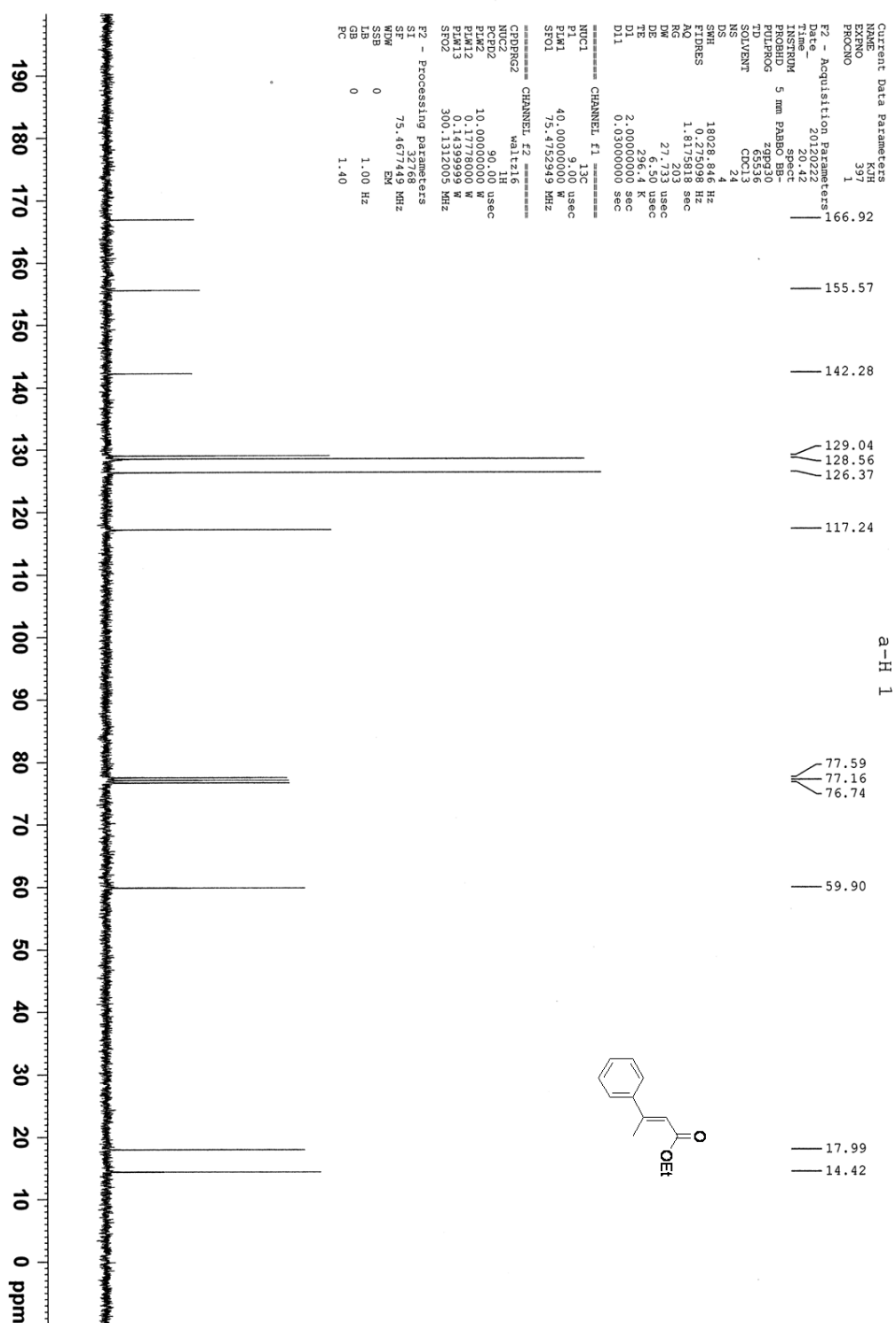
Copies of ^{13}C spectra of compound **4m**



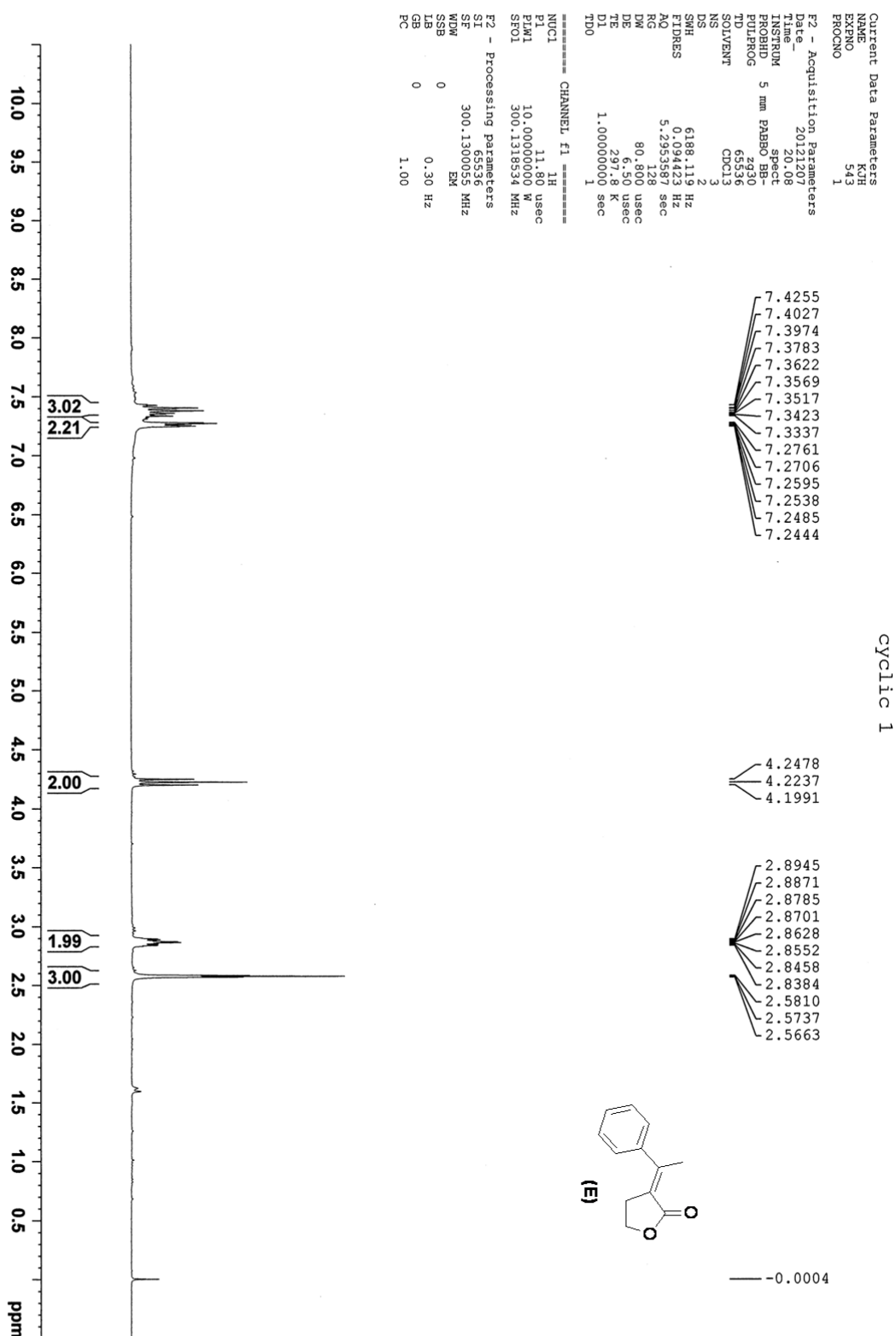
Copies of ^1H spectra of compound **5m**



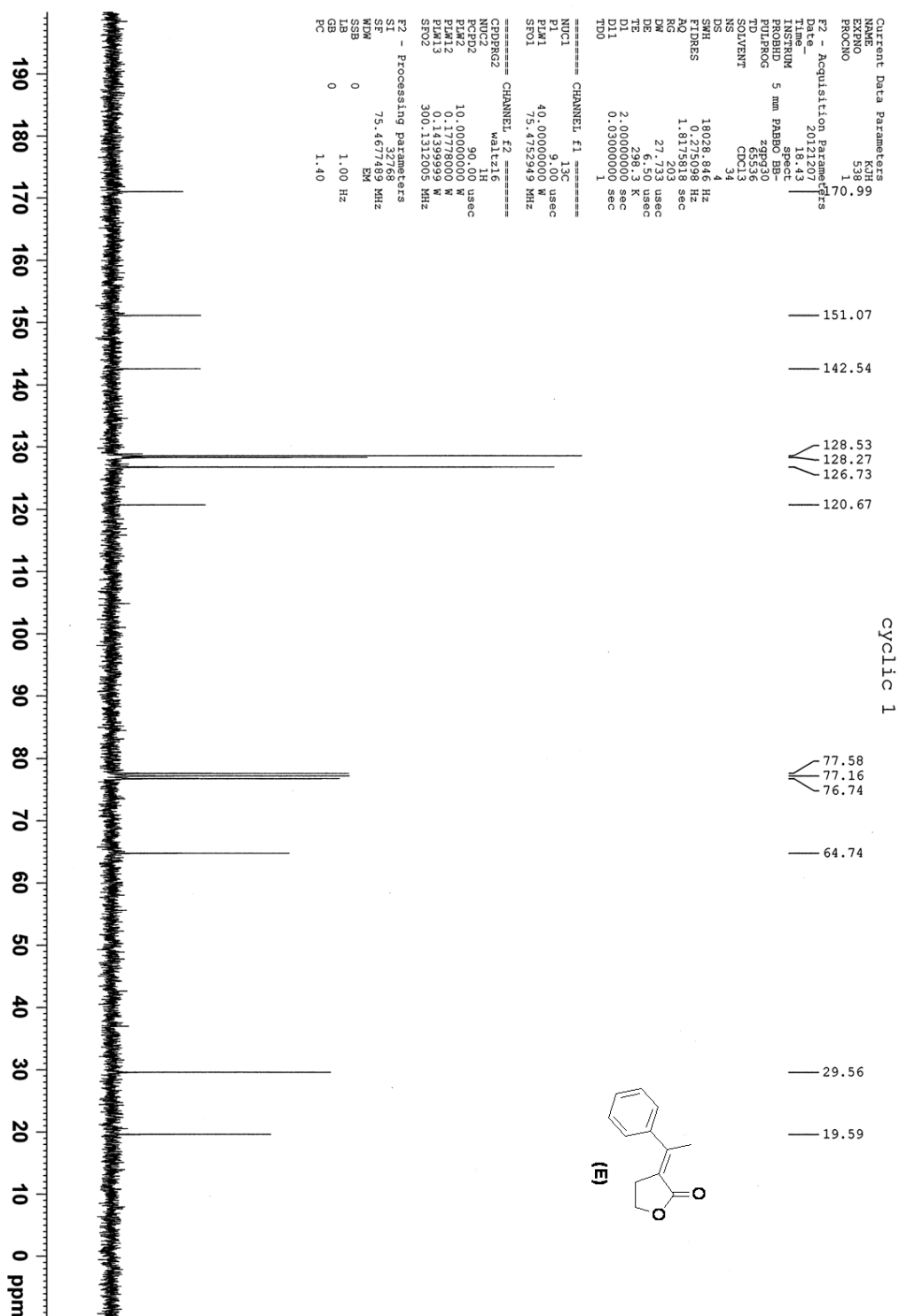
Copies of ^{13}C spectra of compound **5m**



Copies of ^1H spectra of compound (*E*)-**5n**



Copies of ^{13}C spectra of compound (E)-5n



Copies of ^1H spectra of compound (Z)-5n

cyclic ester 2

Current Data Parameters
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EXPNO 526
PROCNO 1

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Time_ 22.09

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PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 4
DS 2
SWH 6188.112 Hz
FWDRES 0.094423 Hz
AQ 5.295387 sec
RG 32
DW 80.800 usec
DE 6.50 usec
TE 296.6 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 ^1H
P1 11.40 usec
PL1 0.0000000 W
SFO1 300.1318534 MHz

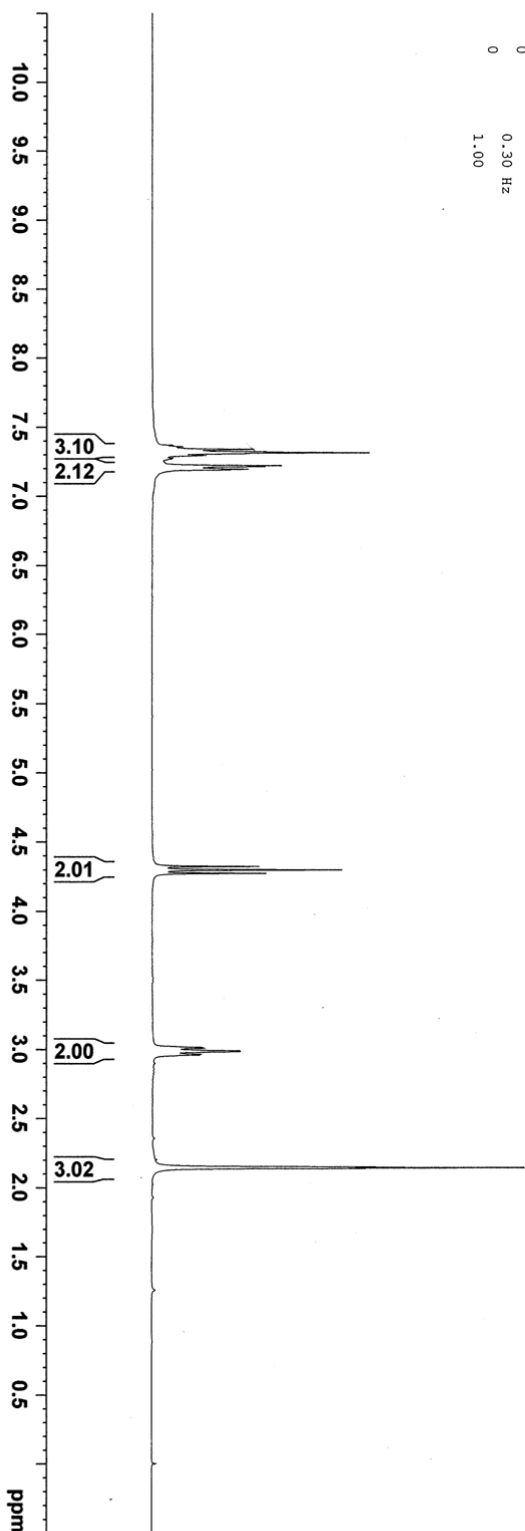
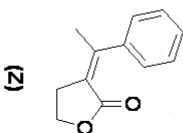
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WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

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7.3519
7.3385
7.3265
7.3201
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7.2203
7.2135
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7.1891

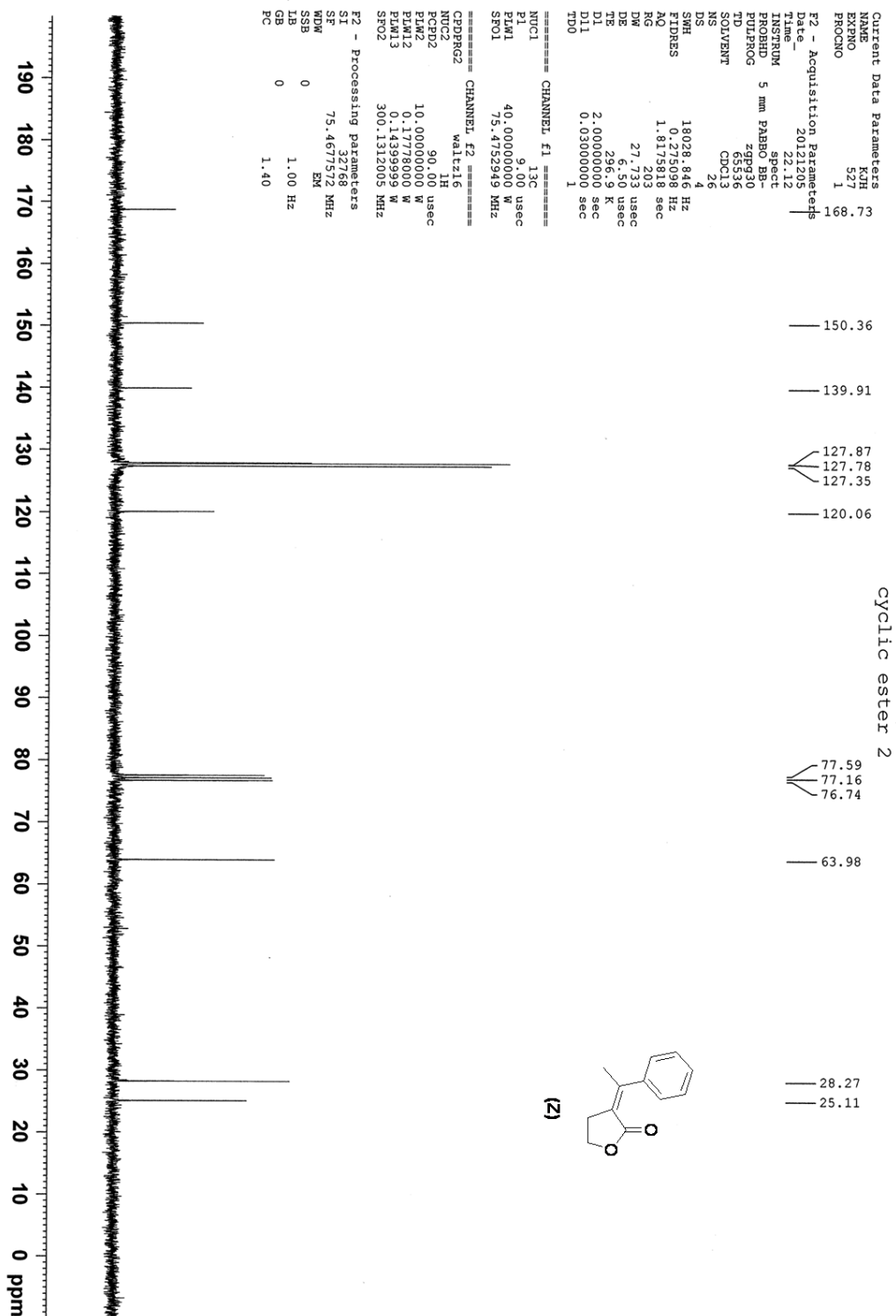
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3.0089
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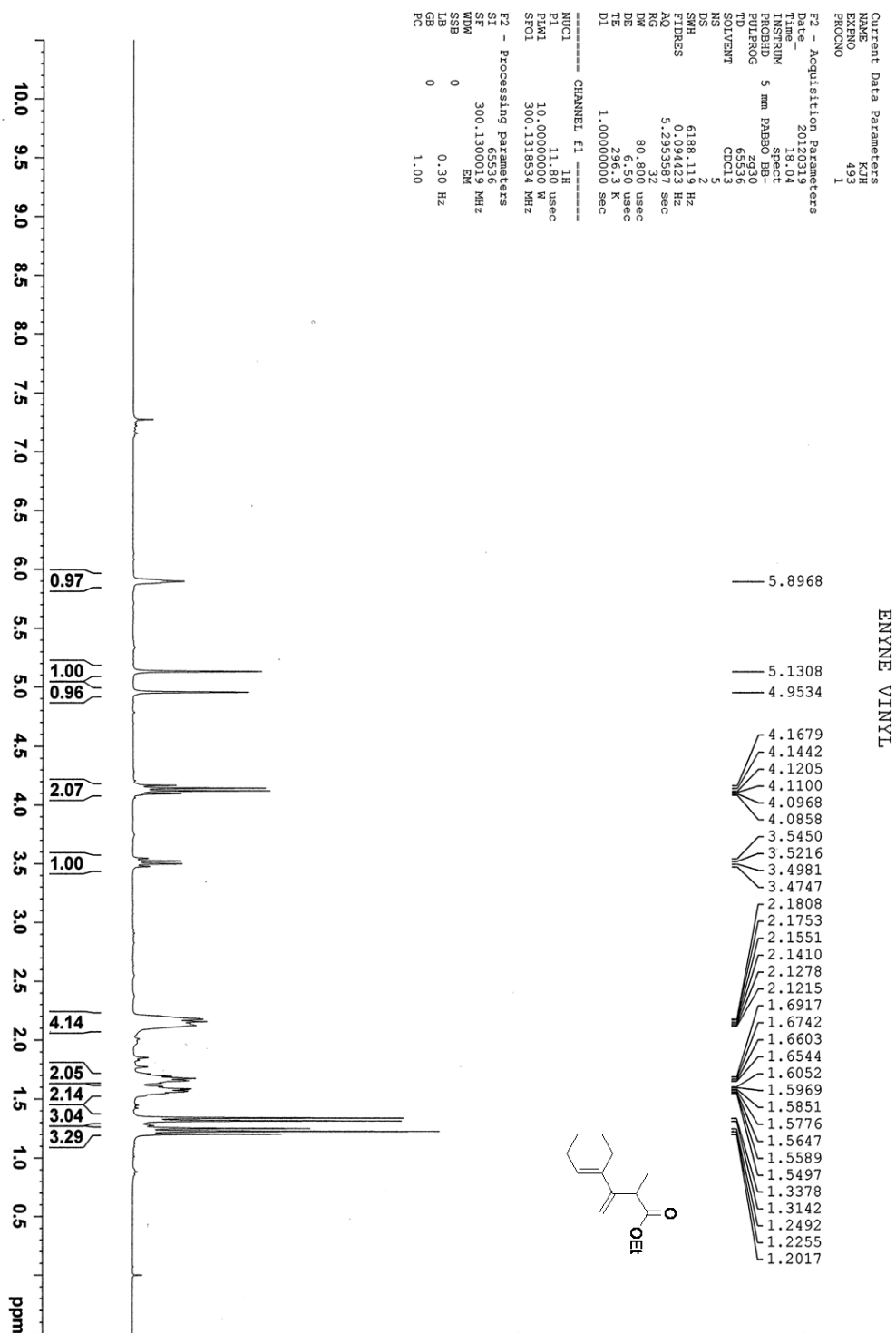
2.1488
2.1433
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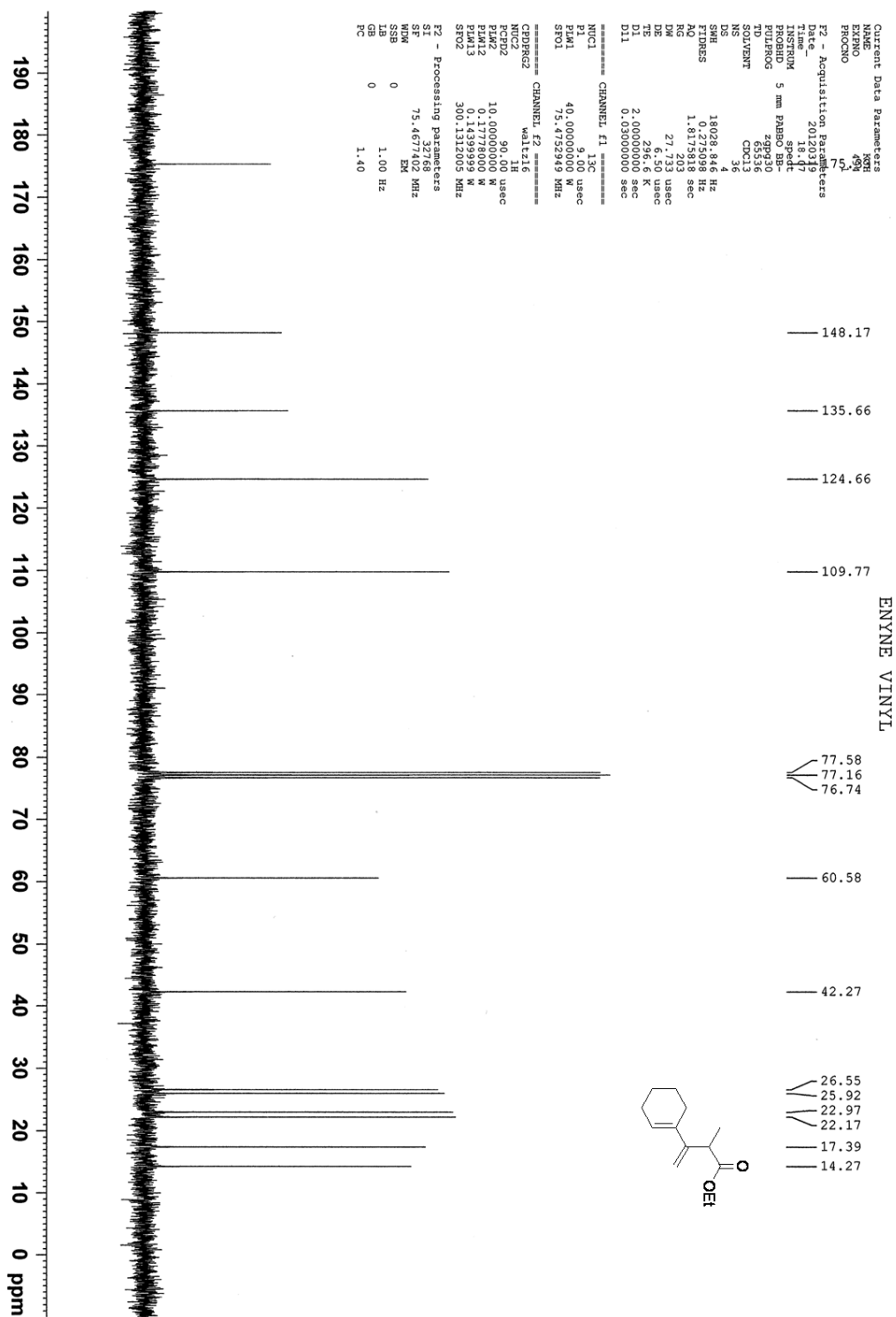
Copies of ^{13}C spectra of compound (Z)-5n



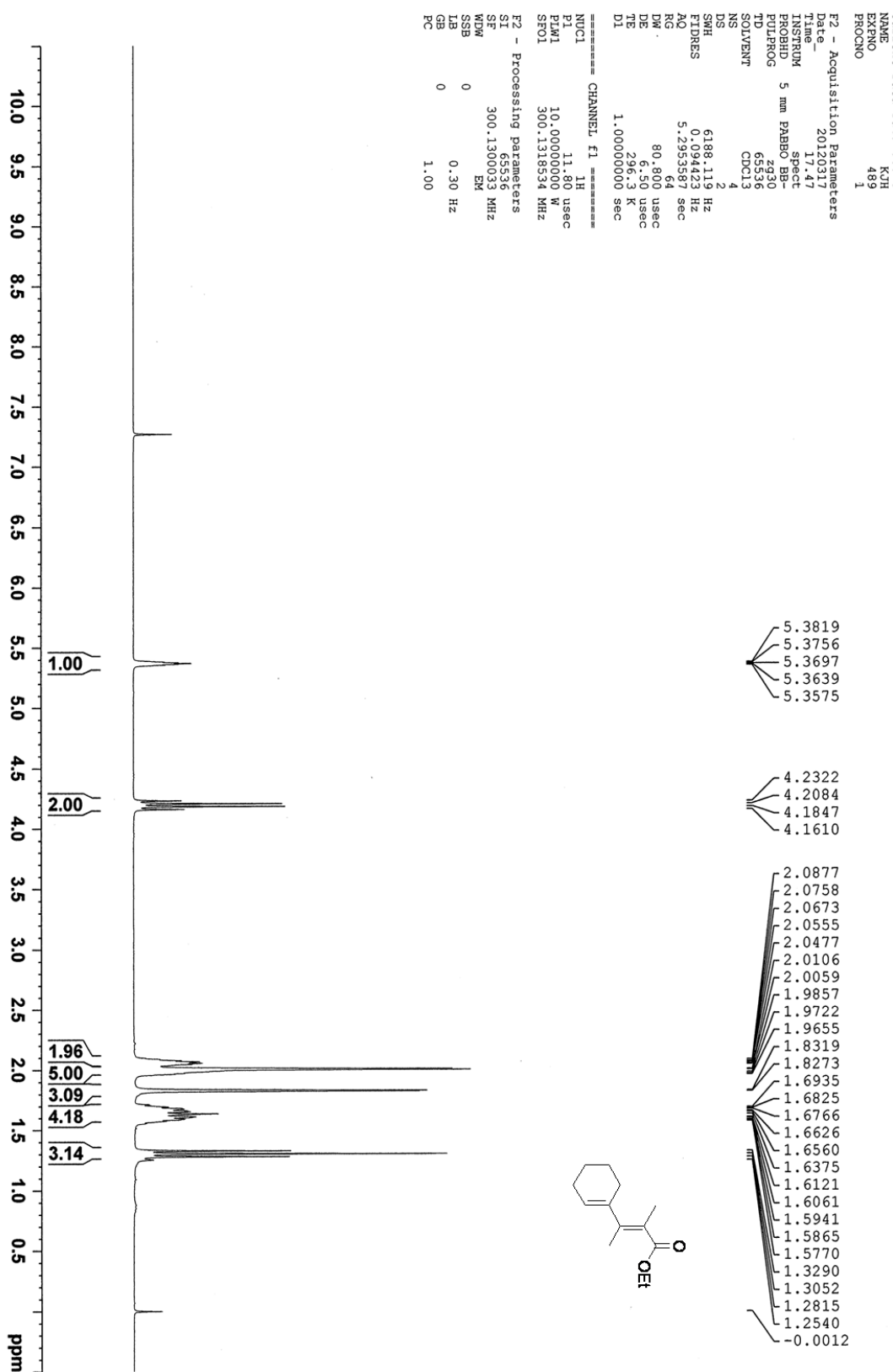
Copies of ^1H spectra of compound **40**



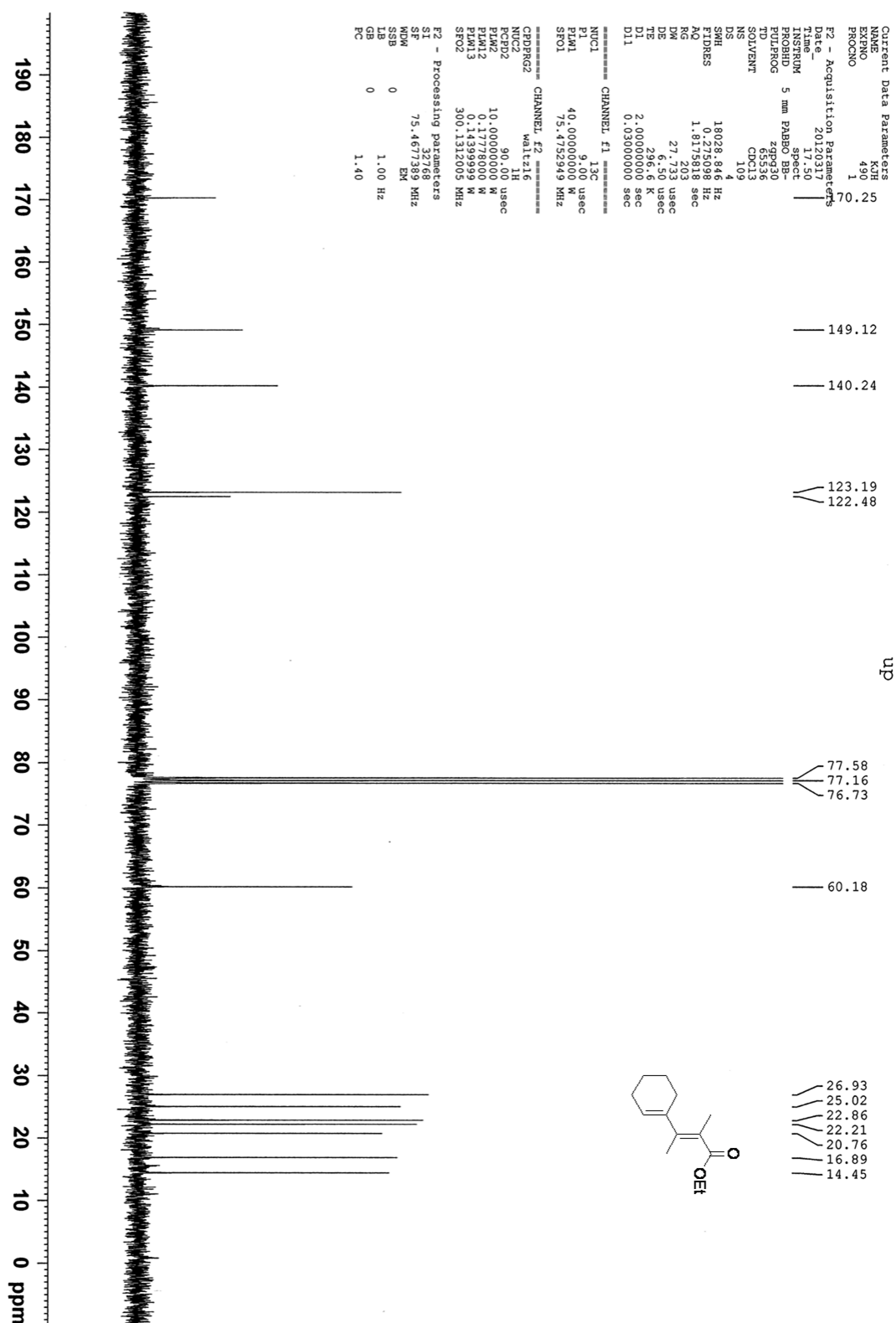
S58



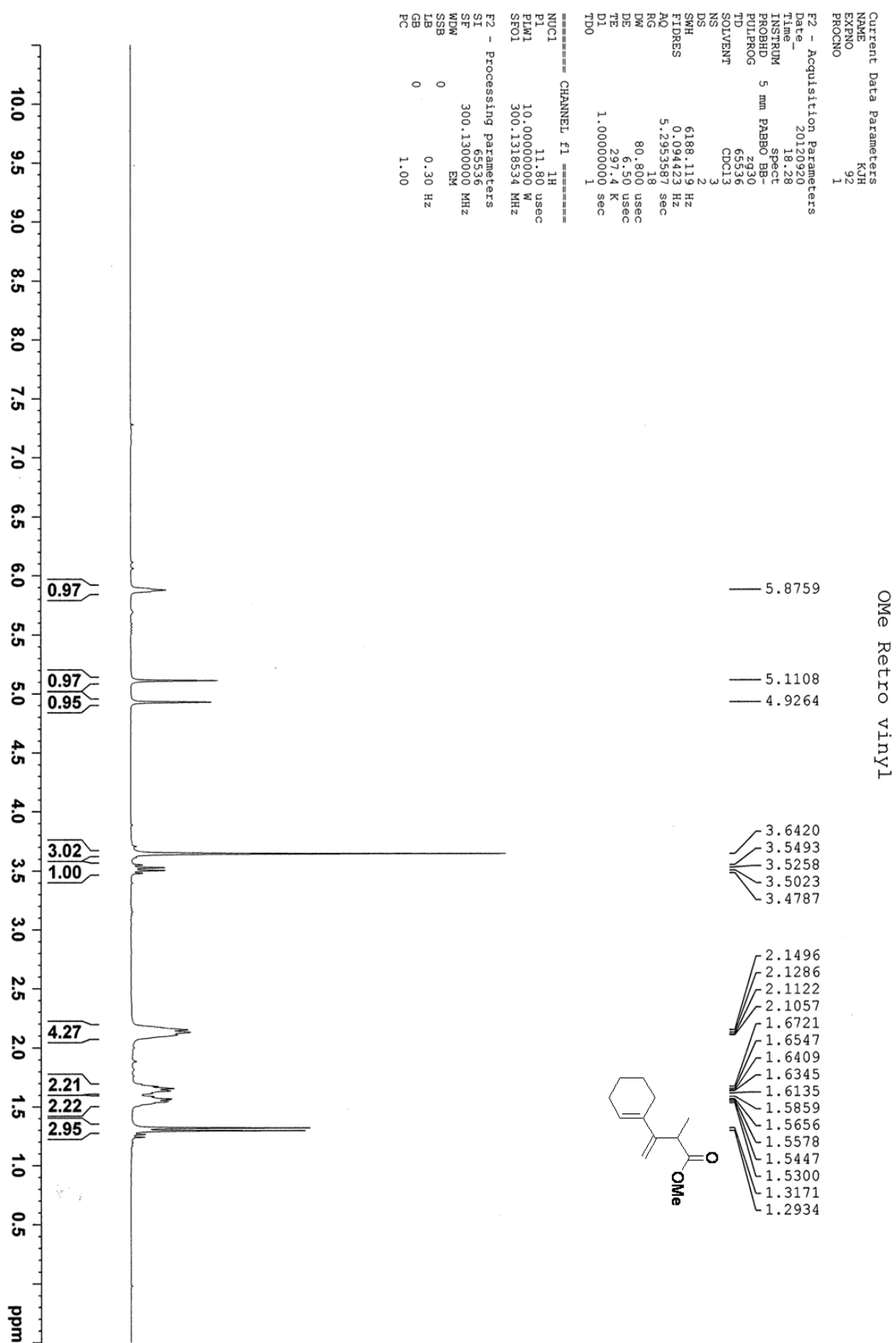
Copies of ^1H spectra of compound **50**



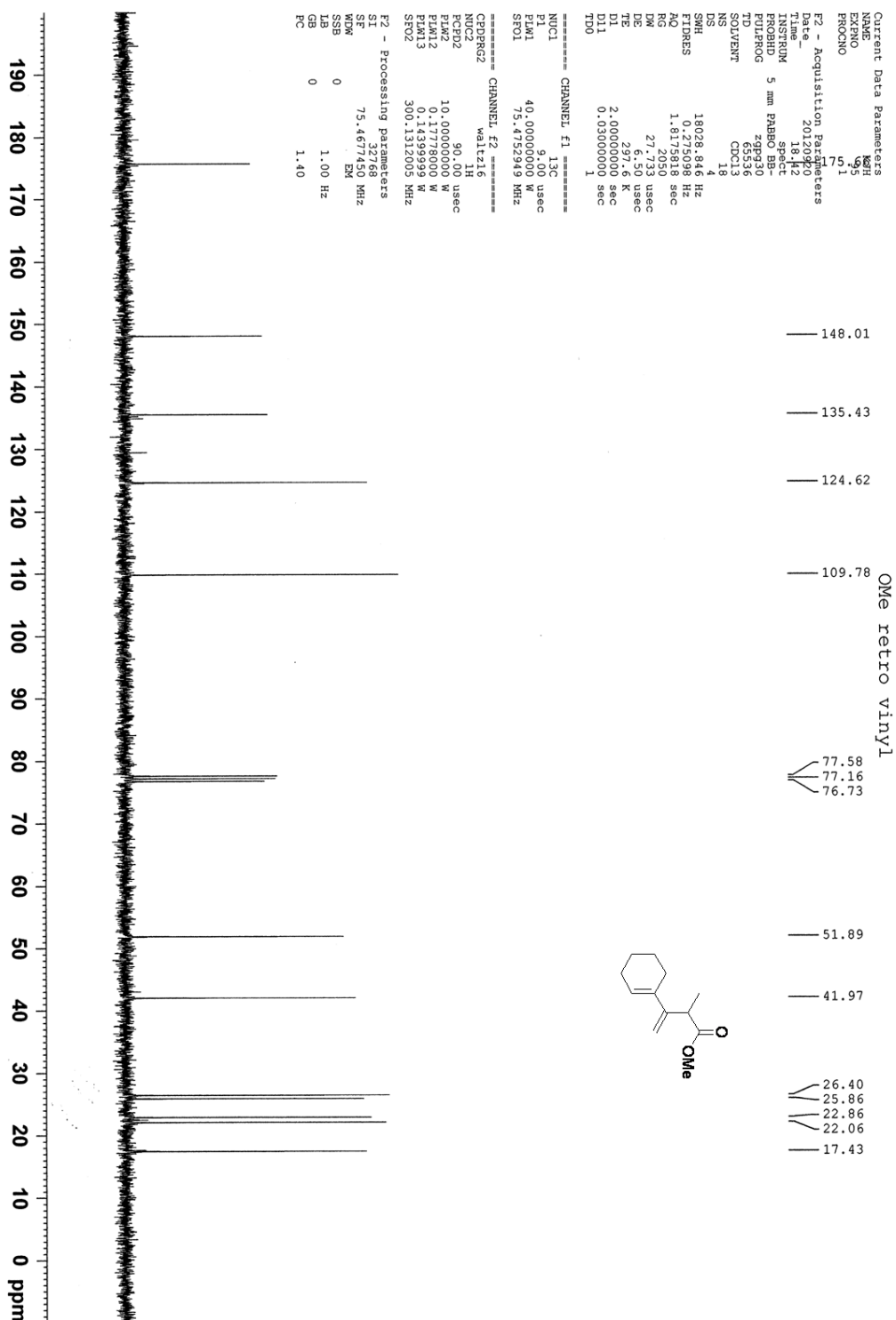
Copies of ^{13}C spectra of compound **5o**



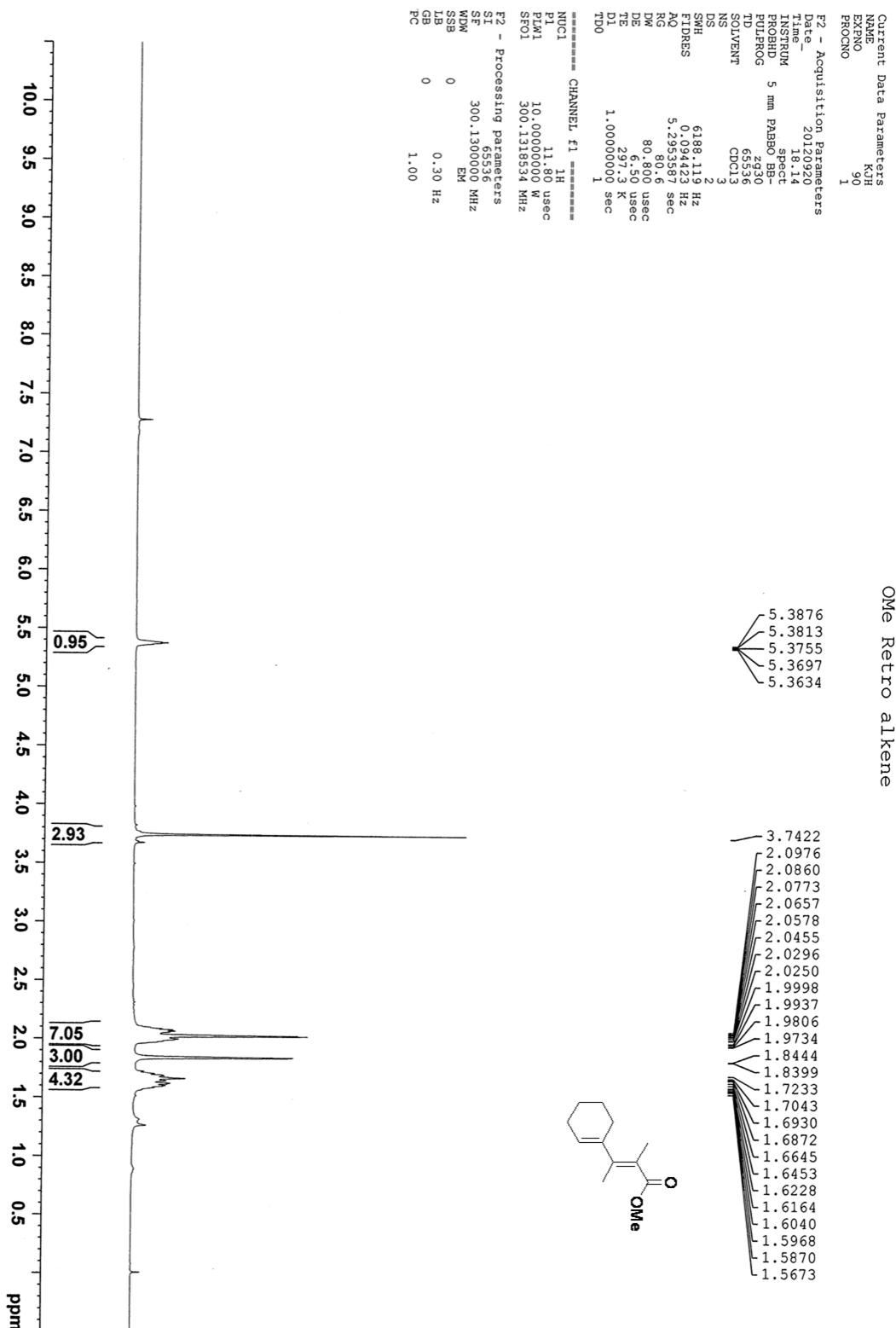
Copies of ^1H spectra of compound **4p**



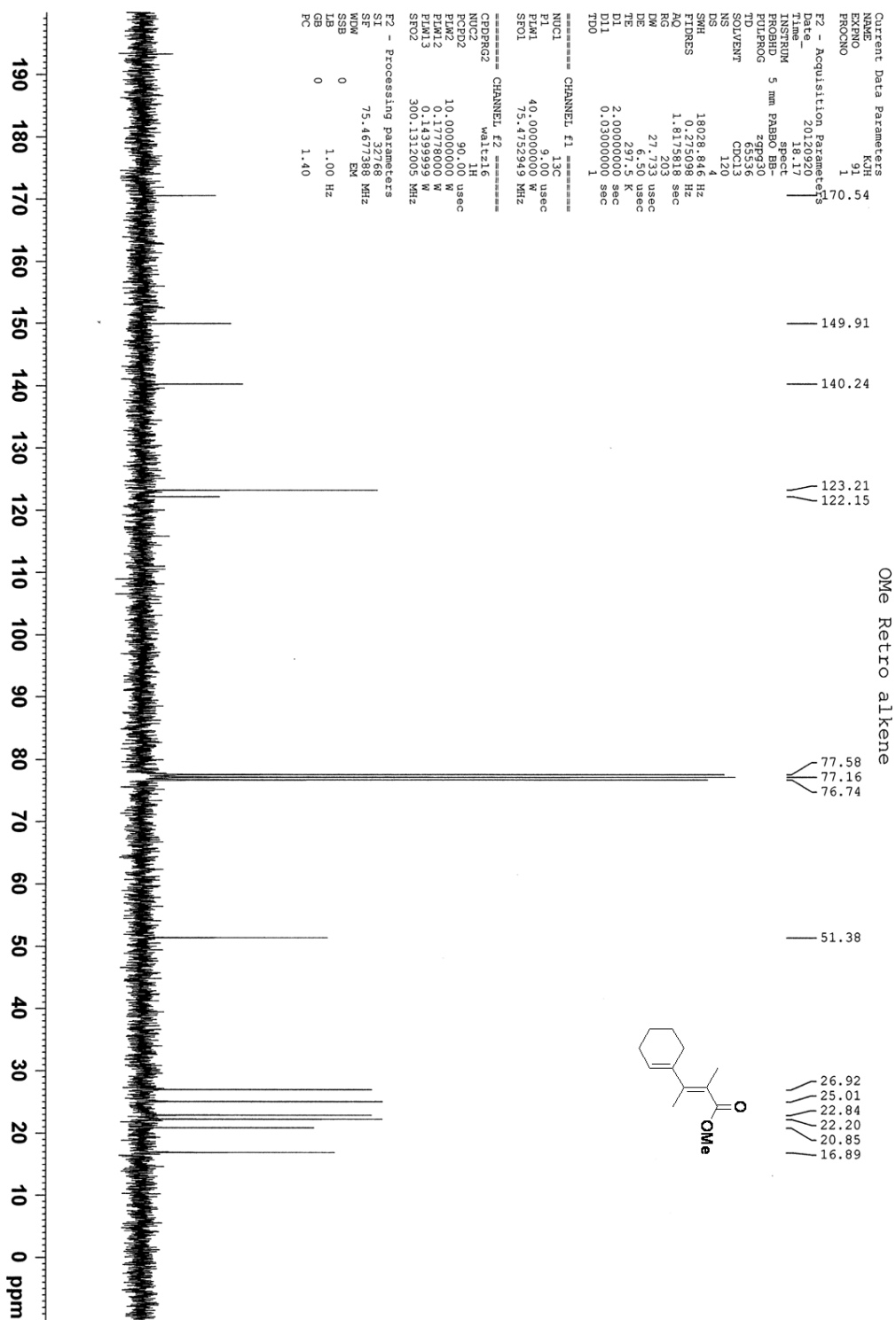
Copies of ^{13}C spectra of compound **4p**



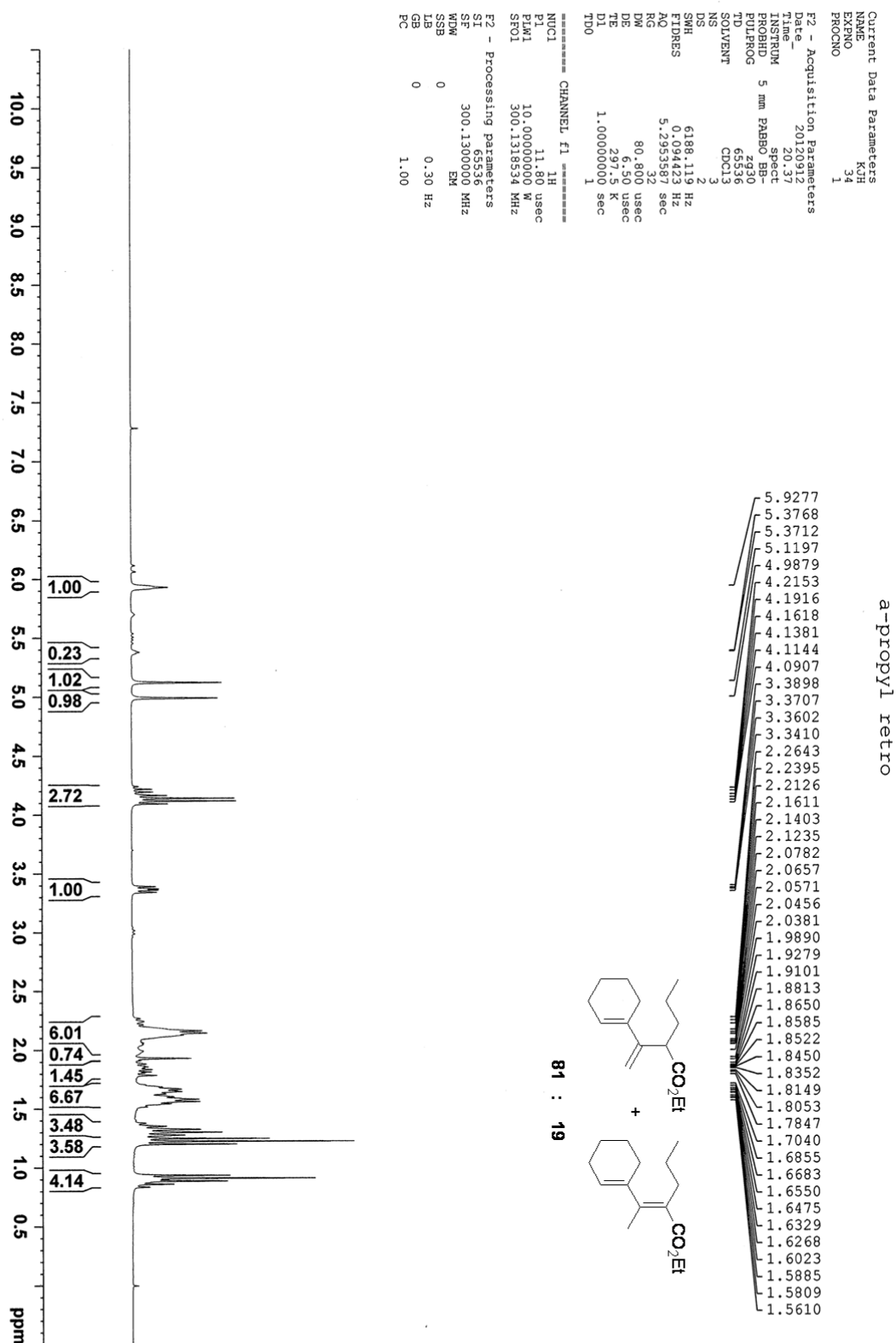
Copies of ^1H spectra of compound **5p**



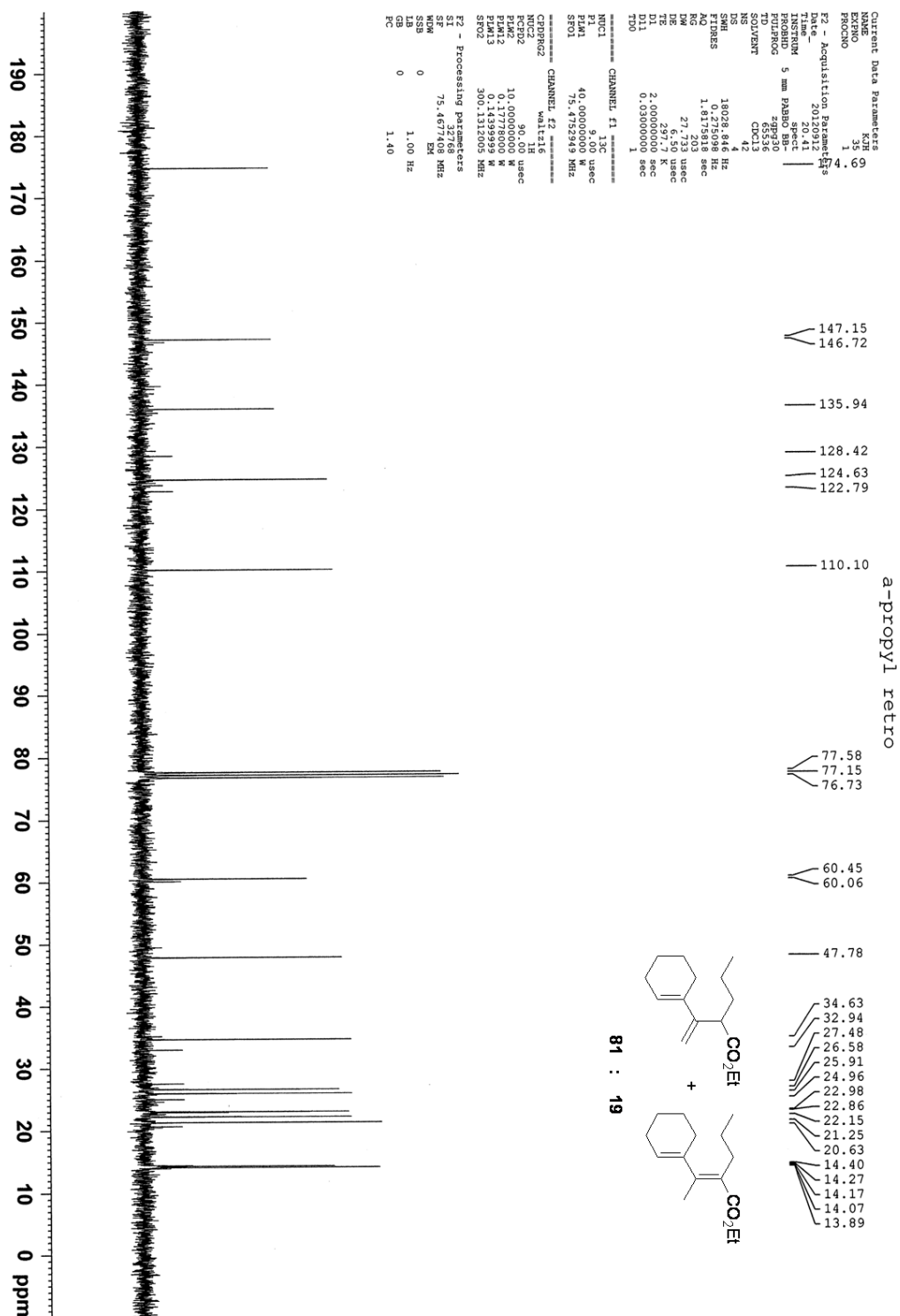
Copies of ^{13}C spectra of compound **5p**



Copies of ^1H spectra of mixture of compounds **4q** and **5q**



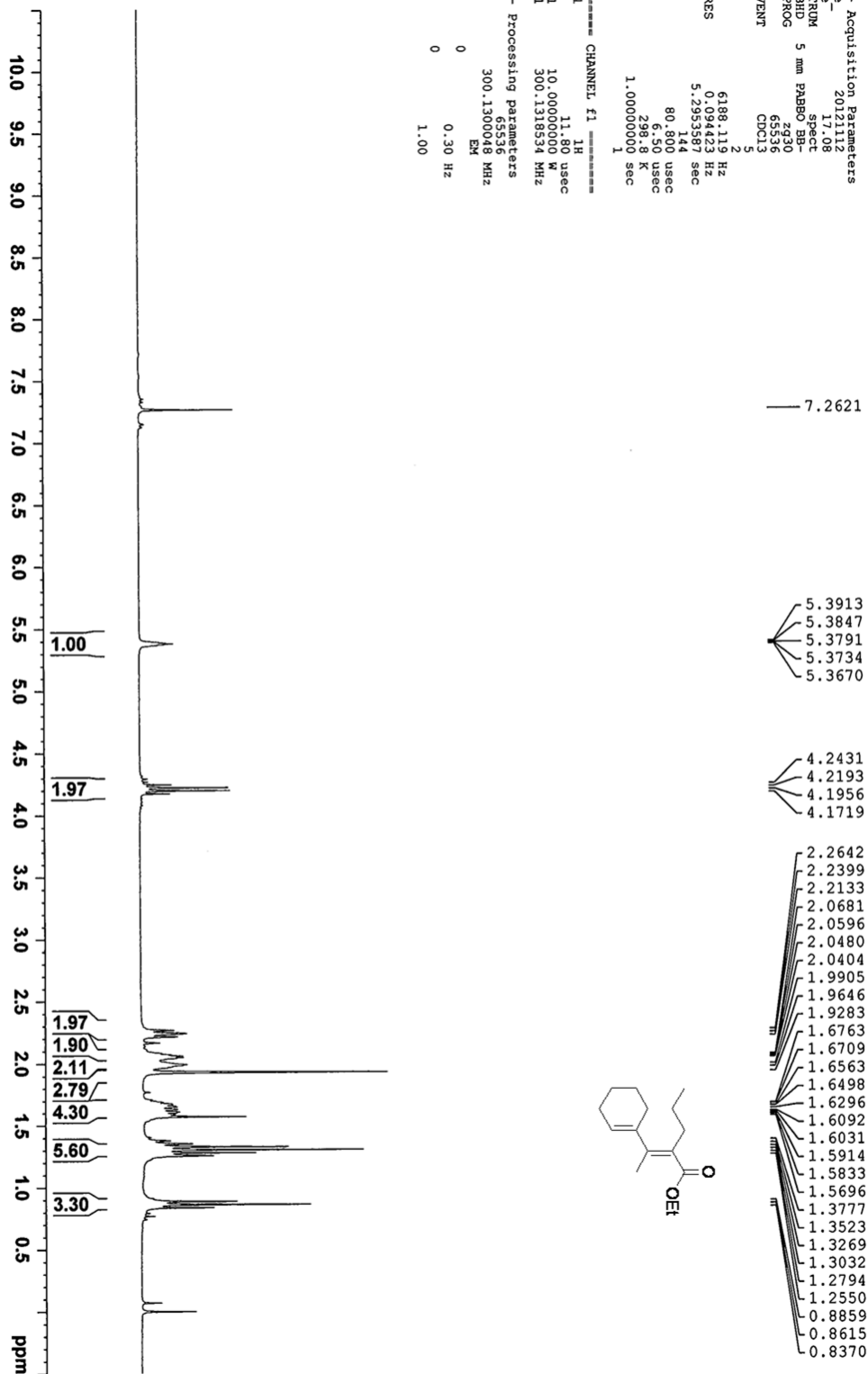
Copies of ^{13}C spectra of mixture of compounds **4q** and **5q**



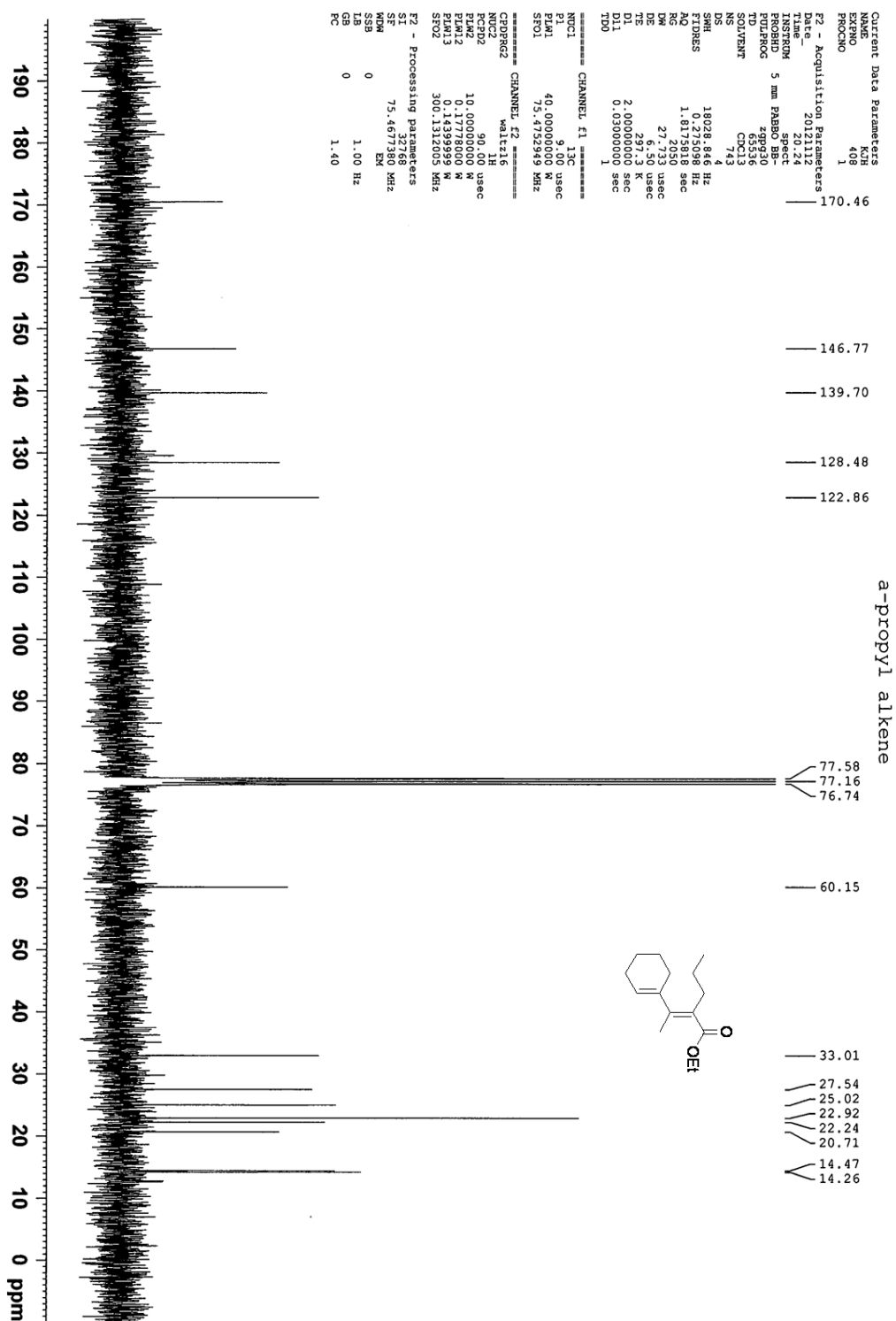
Copies of ^1H spectra of compound **5q**

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 PROCNO 1
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 Time_ 17.08
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 TD 65536
 SOLVENT CDCl₃
 NS 2
 DS 2
 SWH 6188.119 Hz
 FIDRES 0.094423 Hz
 AQ 5.295387 sec
 RG 144
 DW 80.800 usec
 DE 6.50 usec
 TE 298.8 K
 DI 1.0000000 sec
 TDO 1
 CHANNEL f1
 NUC1 ¹H
 P1 11.80 usec
 PL1 10.0000000 W
 SFO1 300.1318534 MHz
 F2 - Processing Parameters
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 WDM EM
 WOB 0
 SSB 0
 GB 0
 PC 1.00

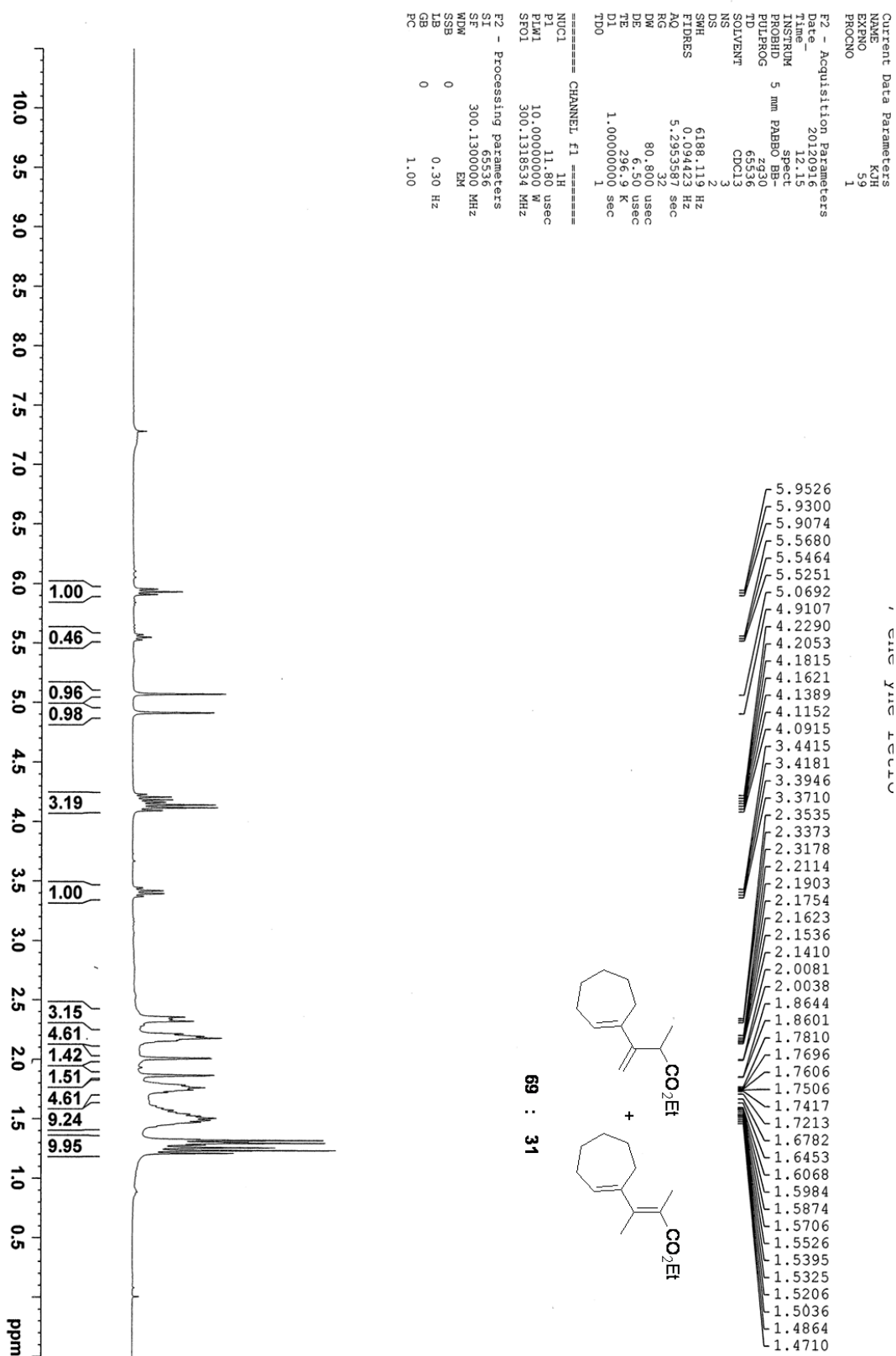
a-propyl



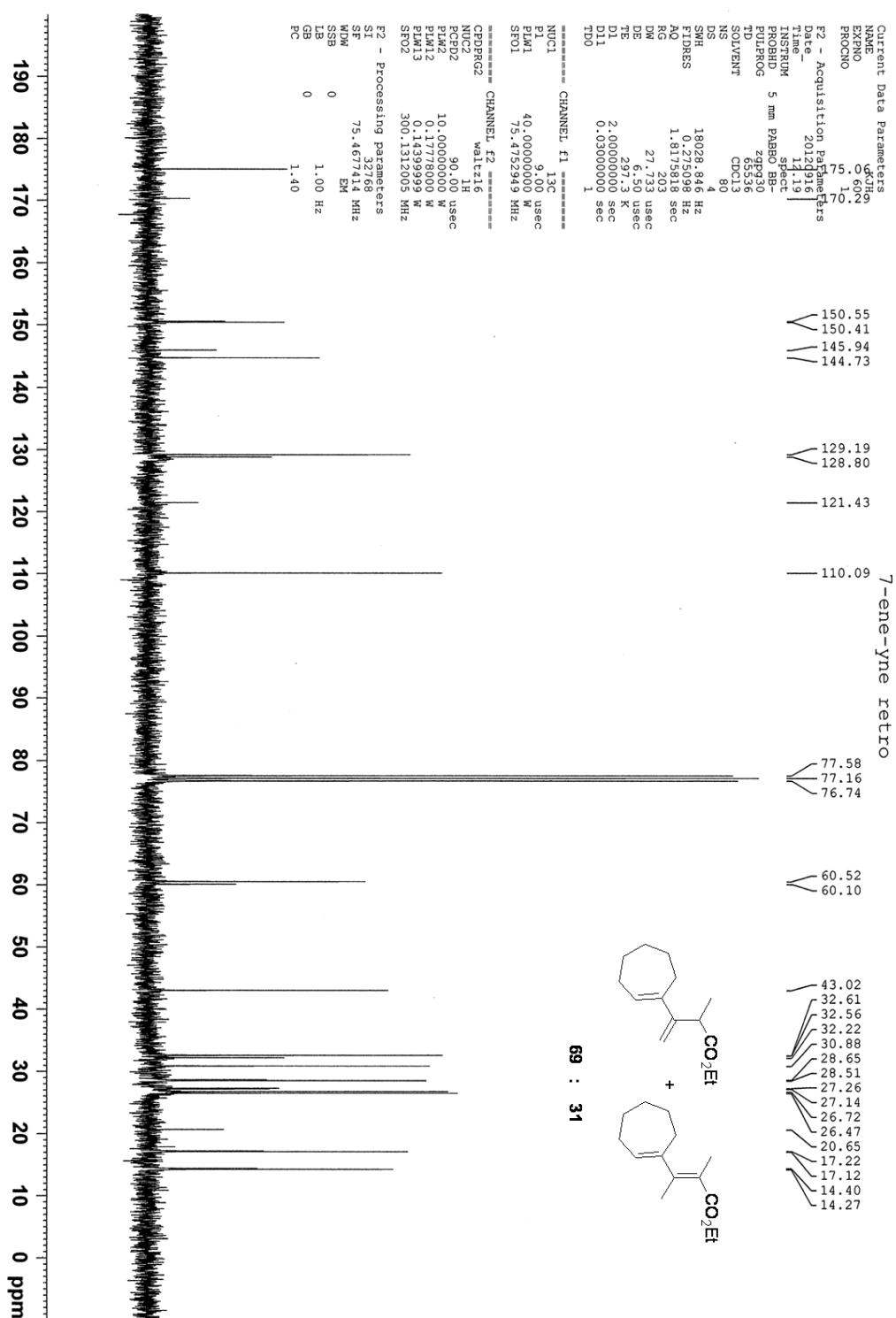
Copies of ^{13}C spectra of compound **5q**



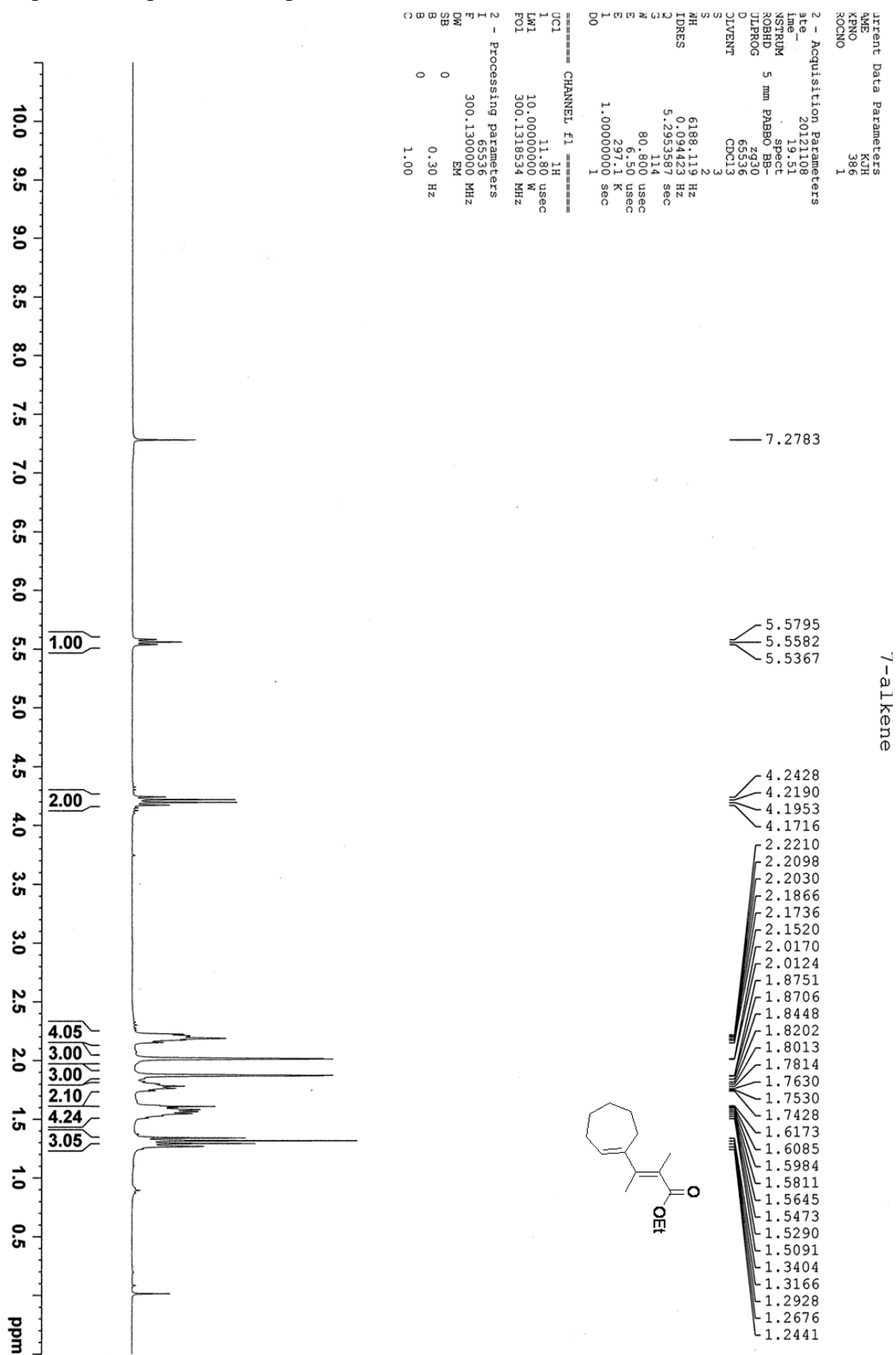
Copies of ^1H spectra of mixture of compounds **4r** and **5r**



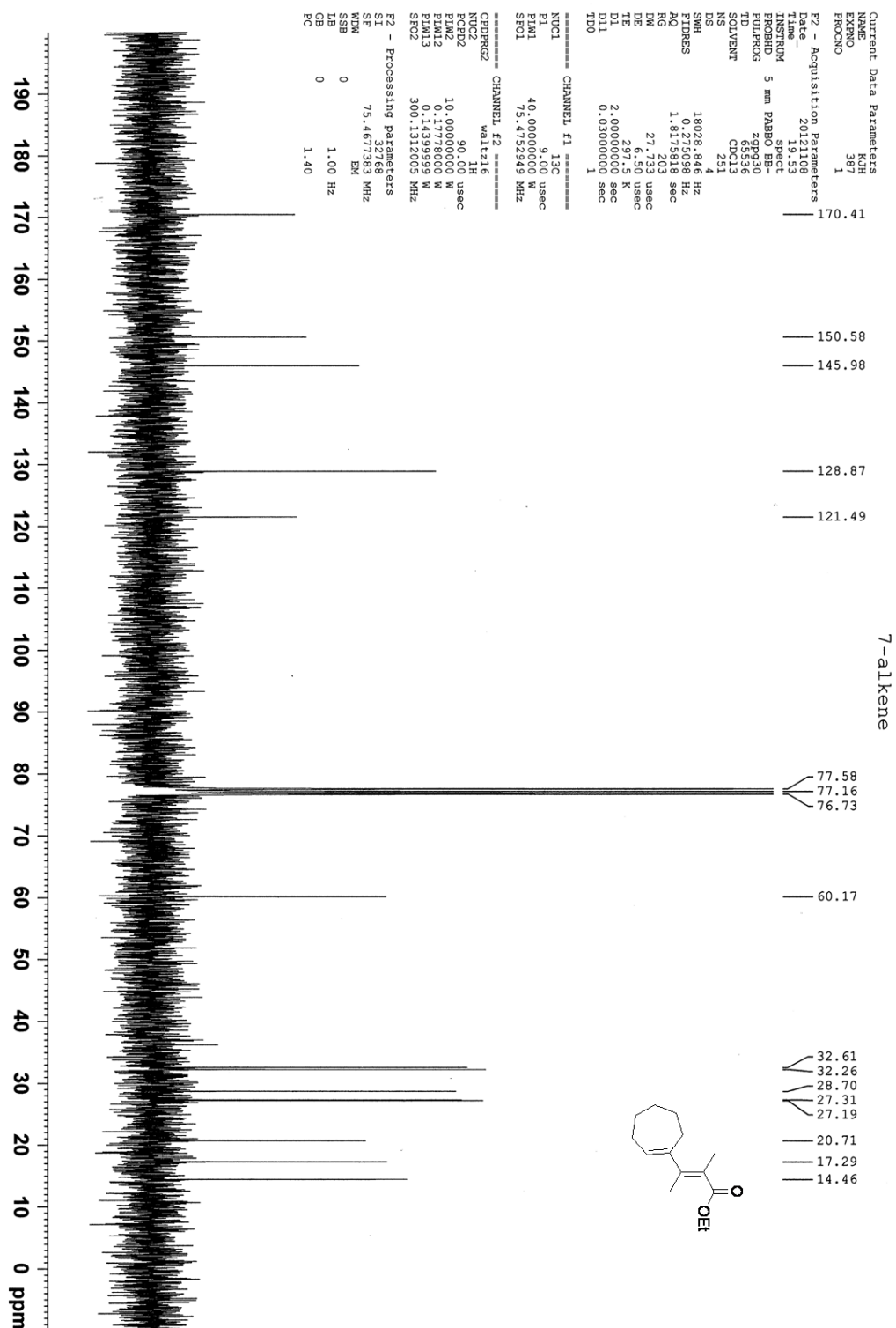
Copies of ^{13}C spectra of mixture of compounds **4r** and **5r**



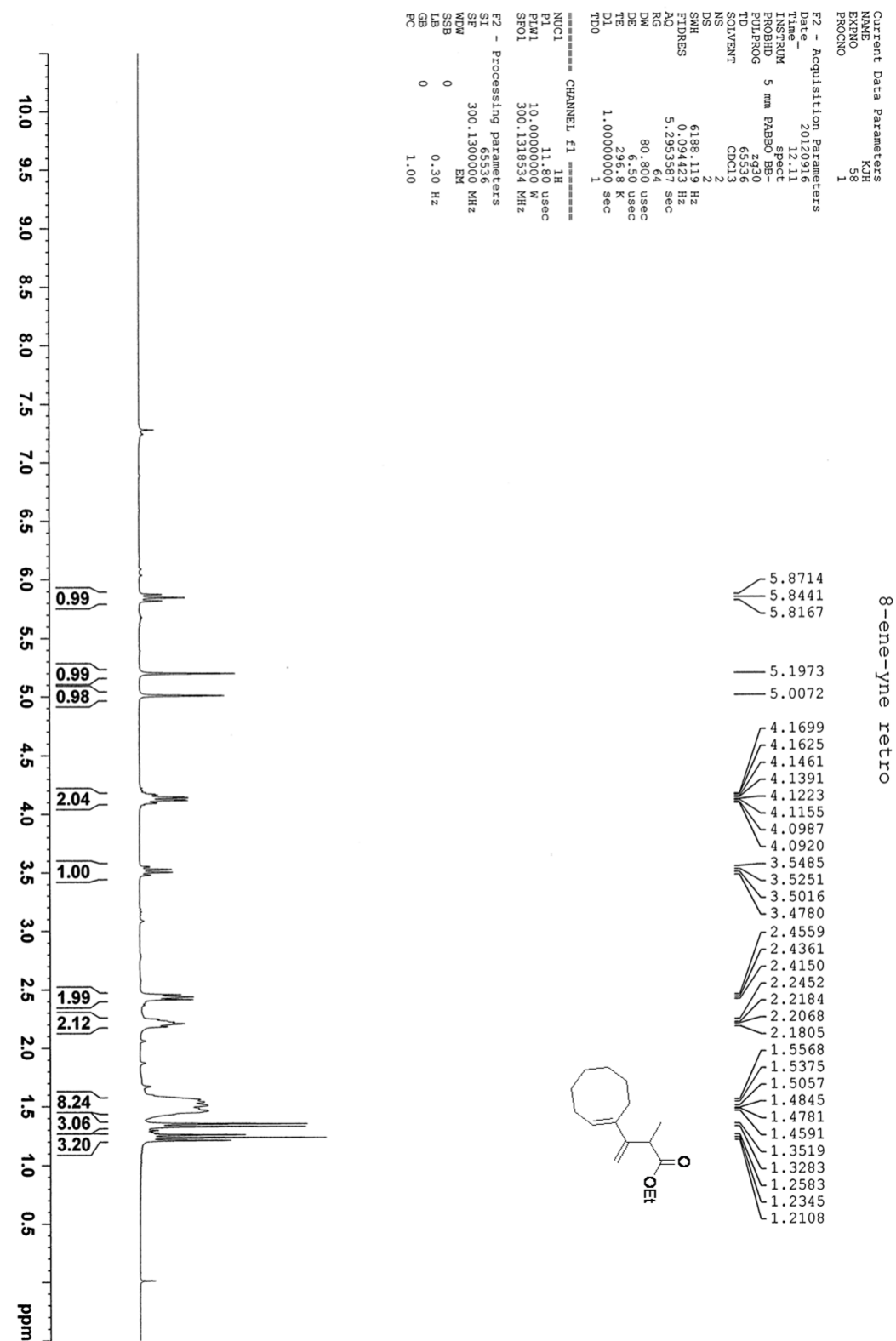
Copies of ^1H spectra of compound **5r**



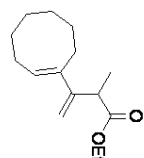
Copies of ^{13}C spectra of compound **5r**



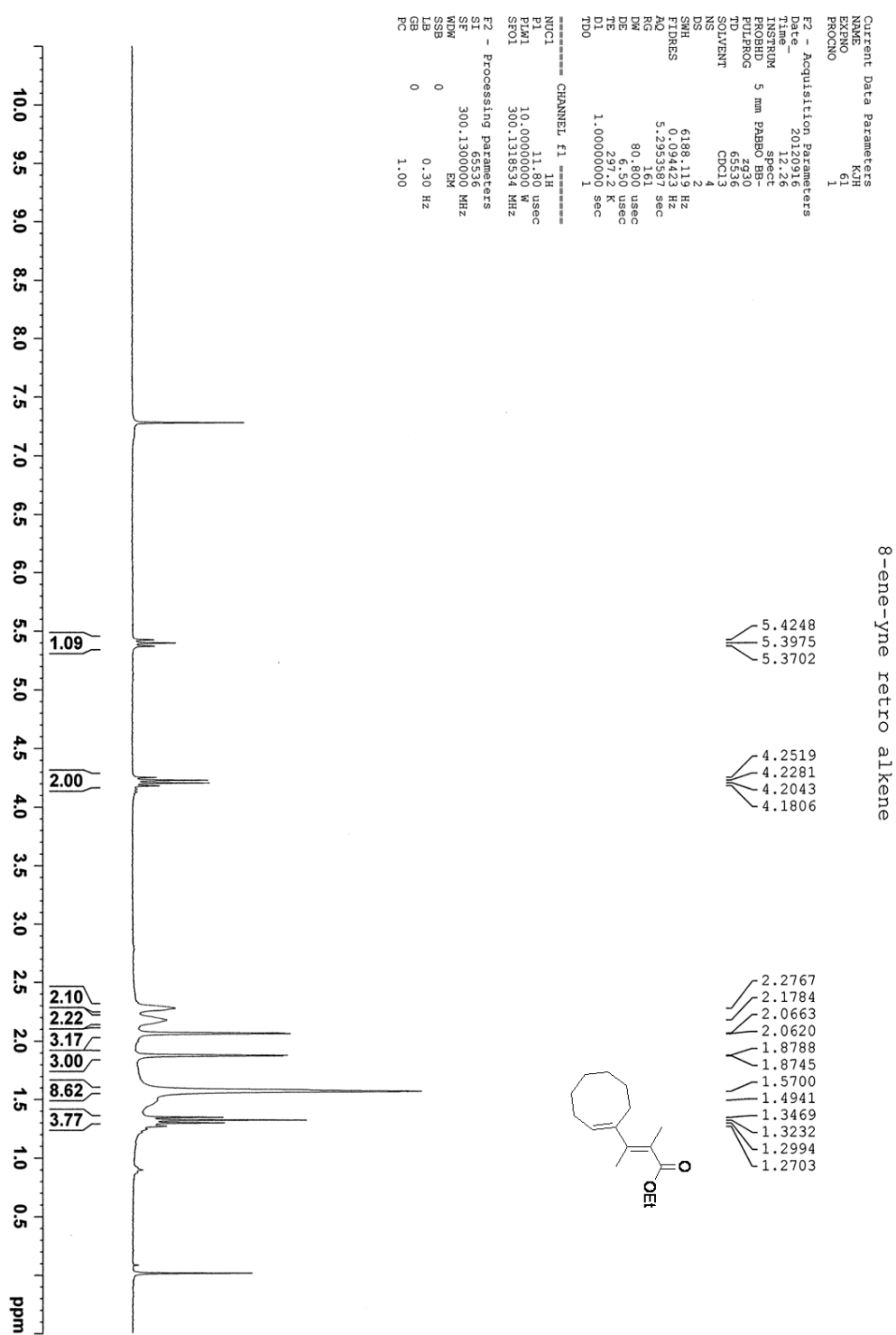
Copies of ^1H spectra of compound **4s**



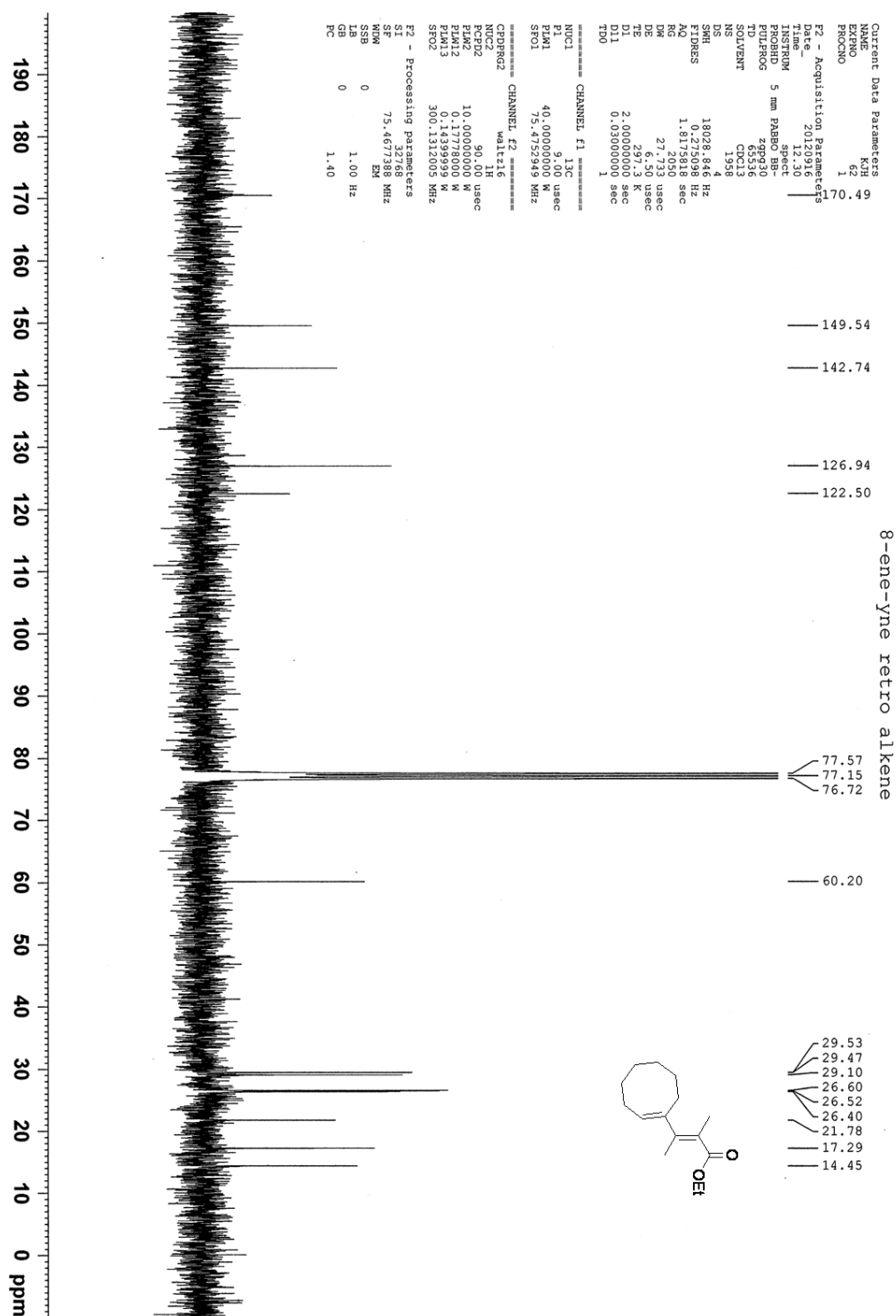
S74



Copies of ^1H spectra of compound **5s**



Copies of ^{13}C spectra of compound **5s**



Copies of ^1H spectra of compound **4t**

Current Data Parameters
 NAME KUH
 EXPNO 271
 PROCNO 1

F2 - Acquisition Parameters
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 Time_ 13:02:22
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 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 6
 DS 2
 SWH 6188.119 Hz
 FIDRES 0.094423 Hz
 AQ 5.295387 sec
 RM 1.80
 DM 80.800 usec
 DE 6.50 usec
 TE 297.2 K
 D1 1.00000000 sec
 TDO 1

CHANNEL f1
 NUC1 ^1H
 P1 11.80 usec
 PL1 10.000000 W
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F2 - Processing Parameters
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 LB 0.30 Hz
 GB 0
 PC 1.00

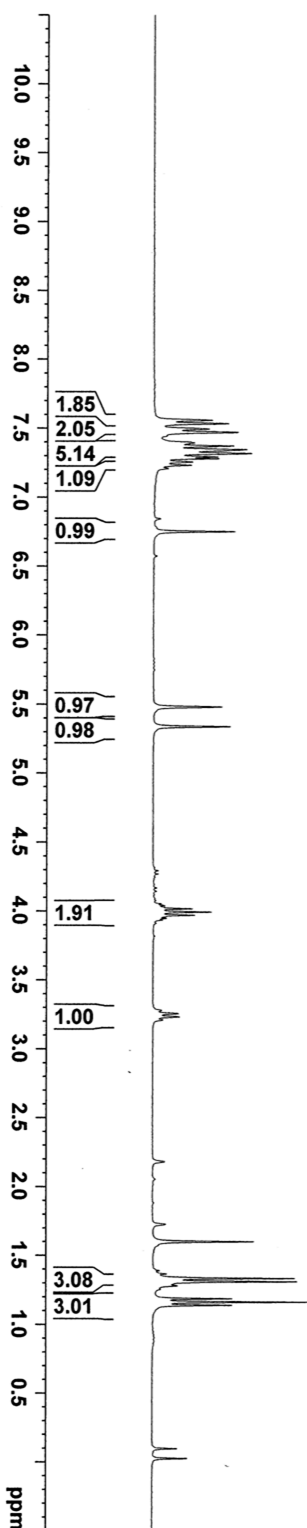
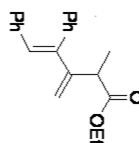
ene-yne vinyl

7.5570
 7.5323
 7.4931
 7.4698
 7.3922
 7.3852
 7.3701
 7.3437
 7.3161
 7.2910
 7.2783
 7.2541
 7.2304
 6.7506

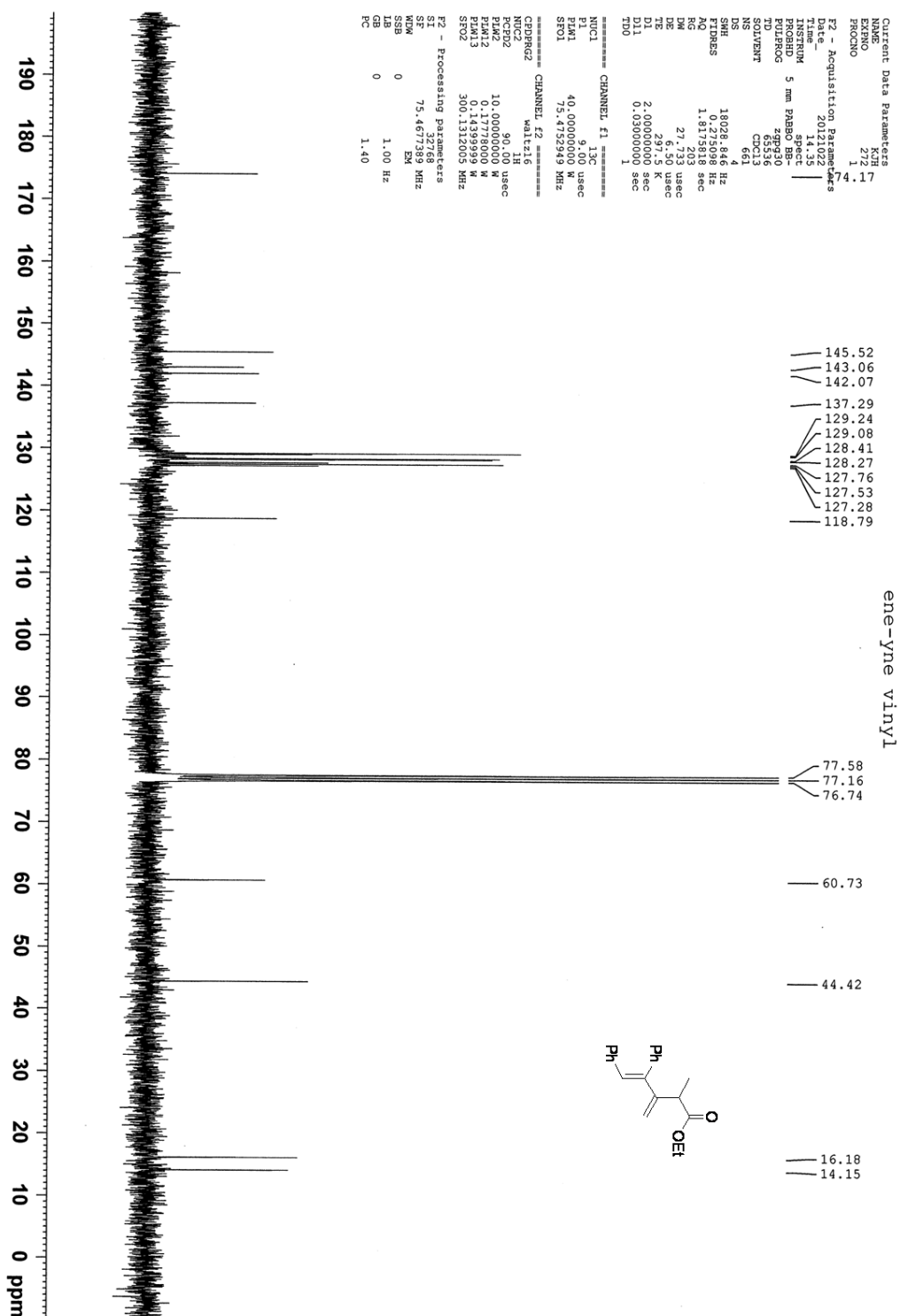
5.4786
 5.3366

4.0504
 4.0385
 4.0263
 4.0150
 3.9916
 3.9686
 3.9452
 3.9333
 3.2776
 3.2543
 3.2308
 3.2078

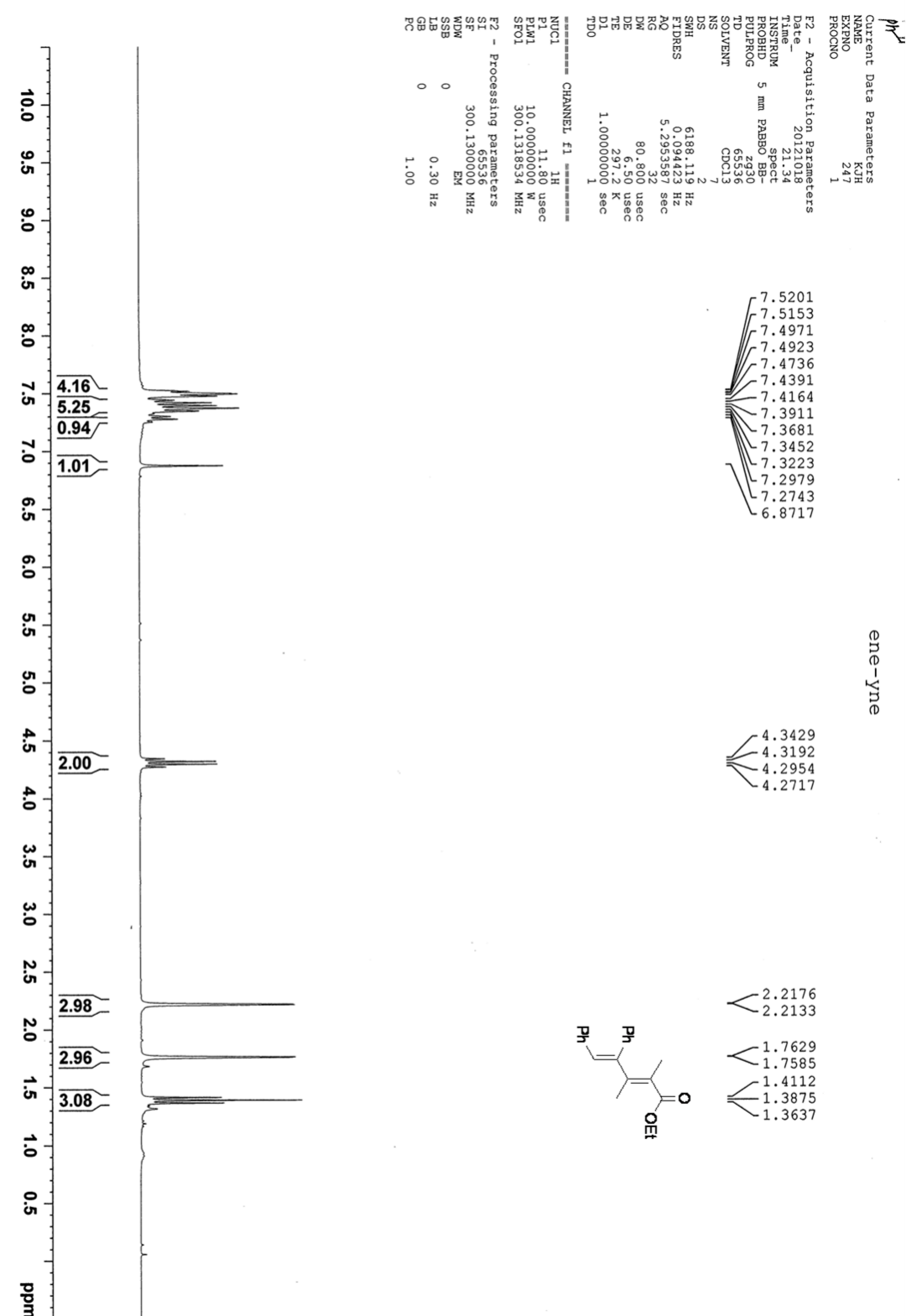
1.5981
 1.3318
 1.3082
 1.1856
 1.1618
 1.1380



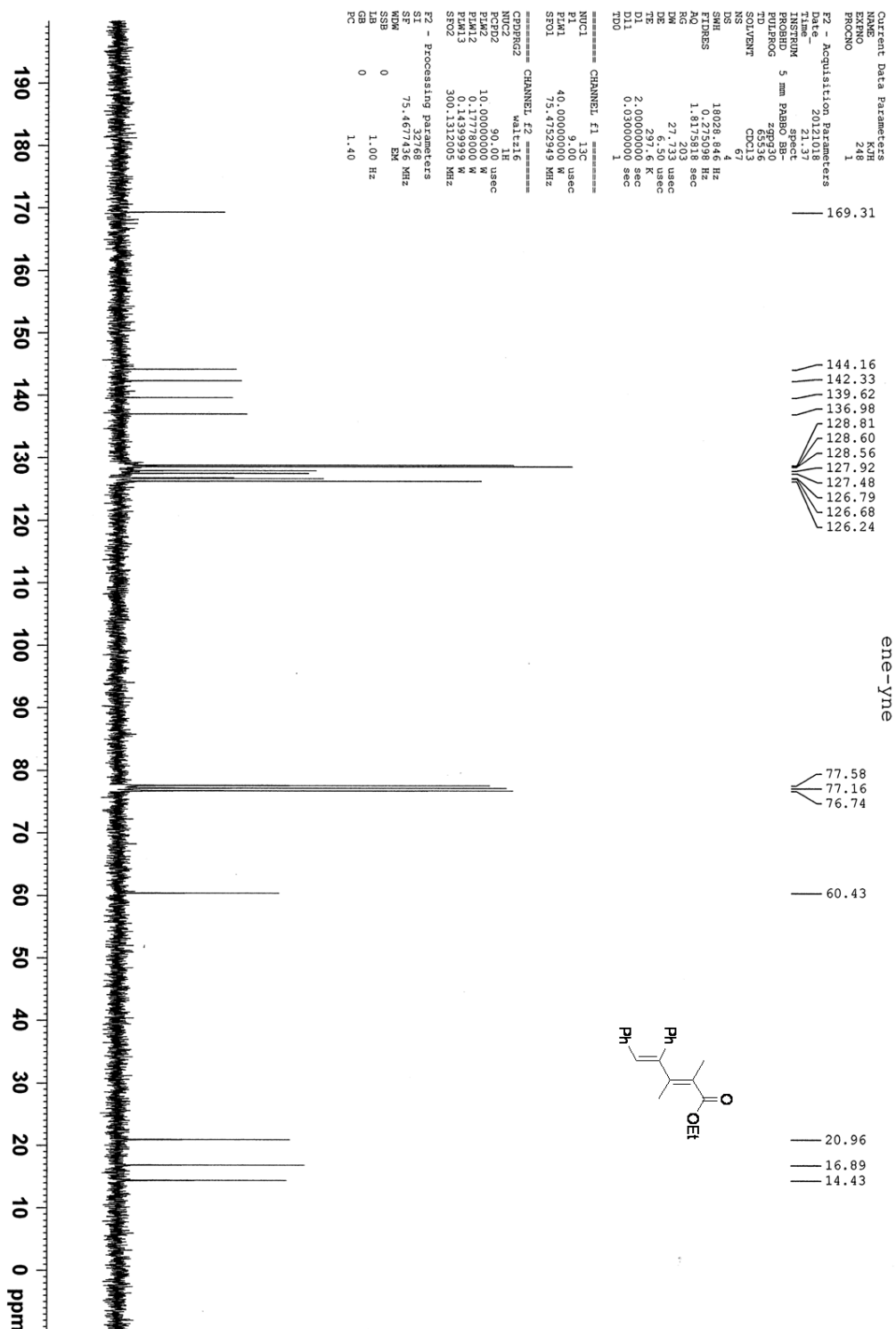
Copies of ^{13}C spectra of compound **4t**



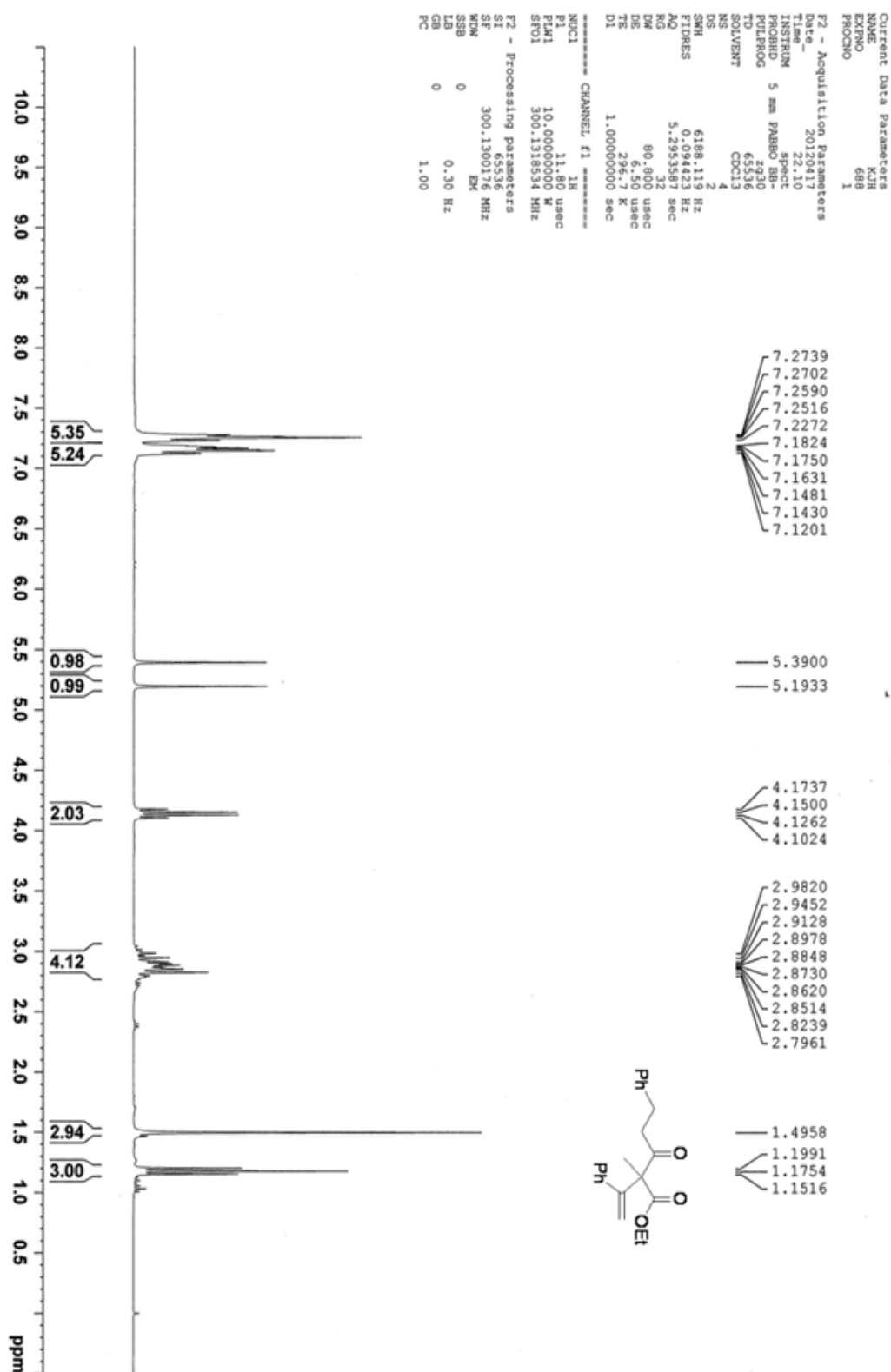
S79



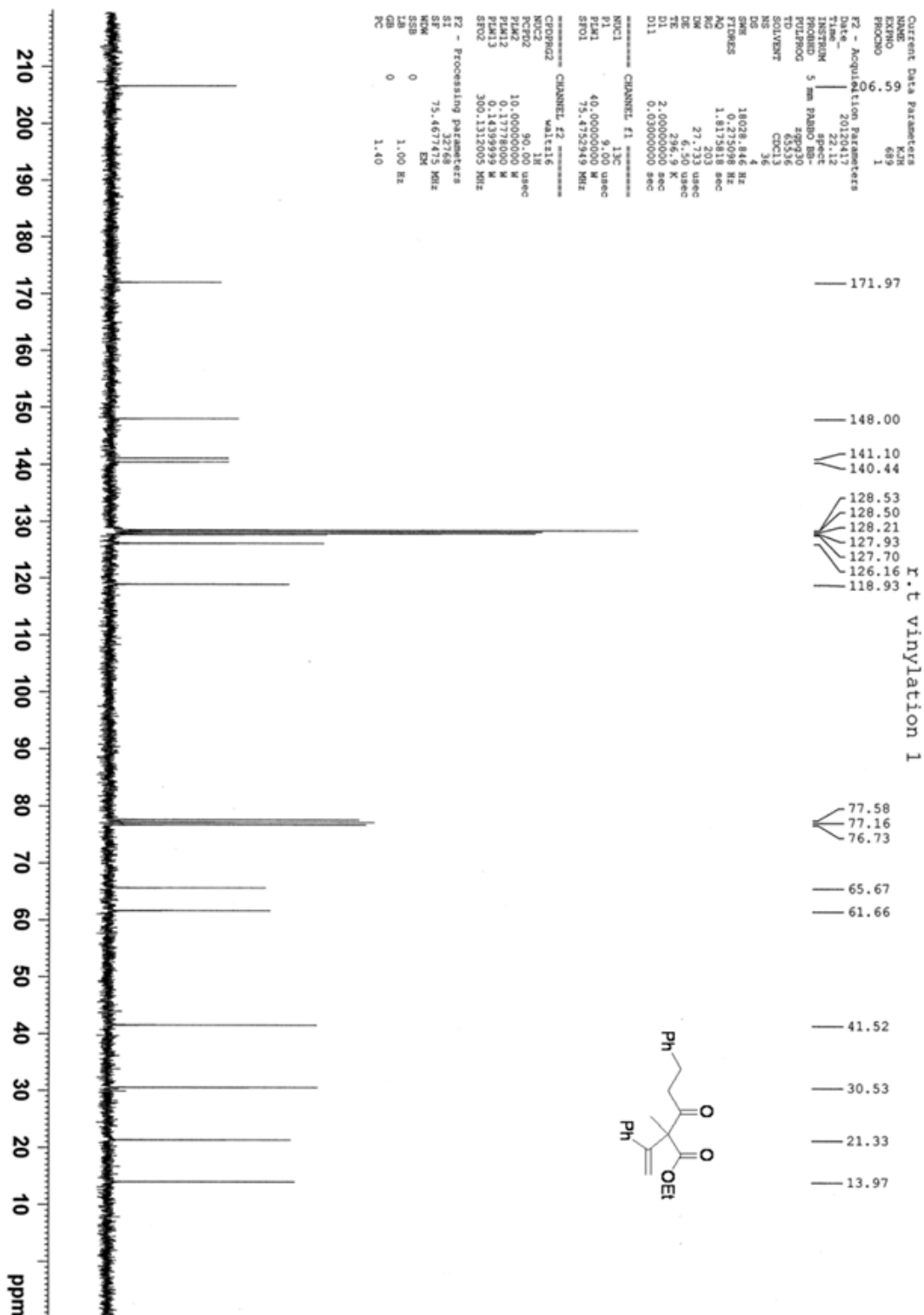
Copies of ^{13}C spectra of compound **5t**



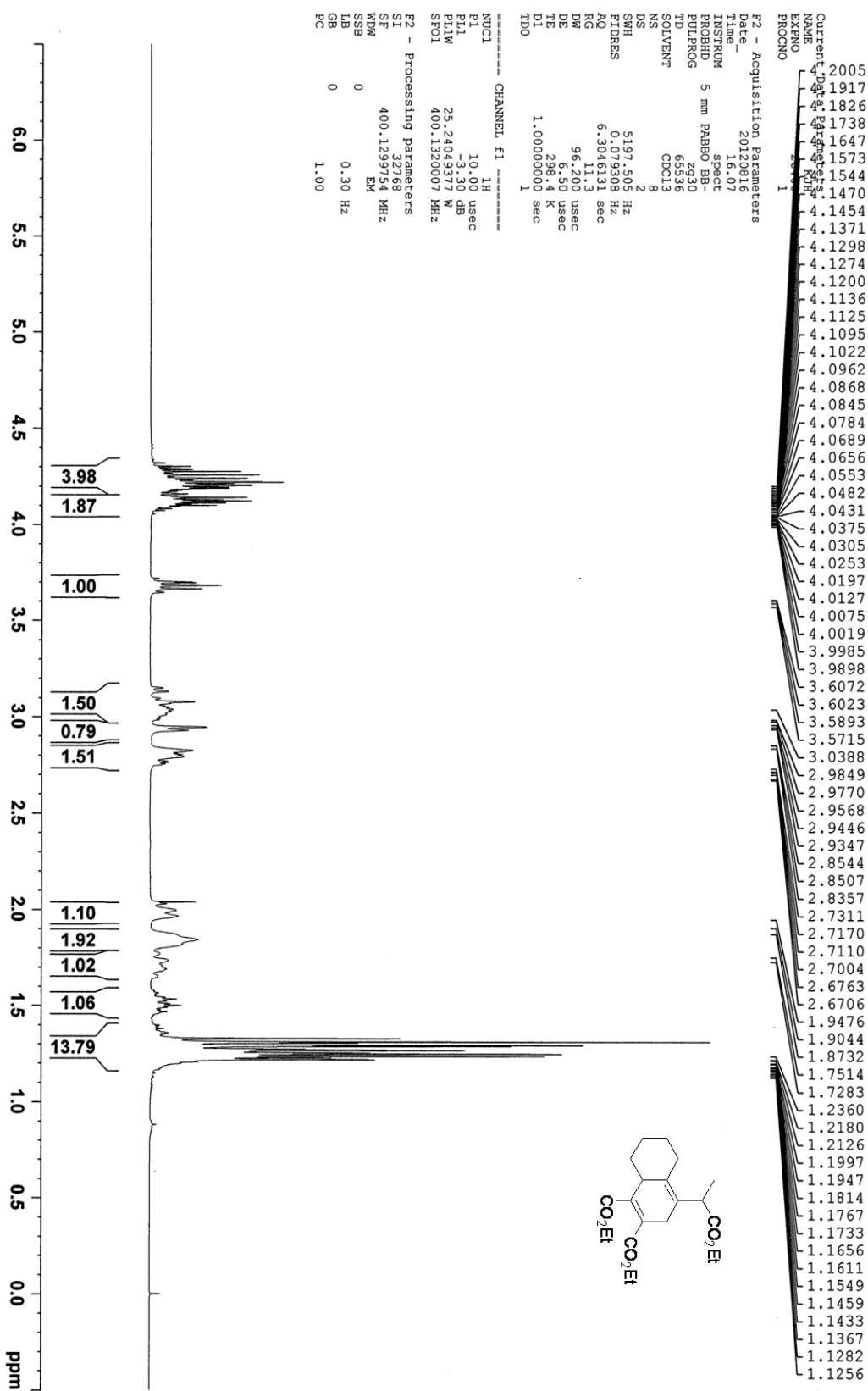
Copies of ^1H spectra of compound **6**



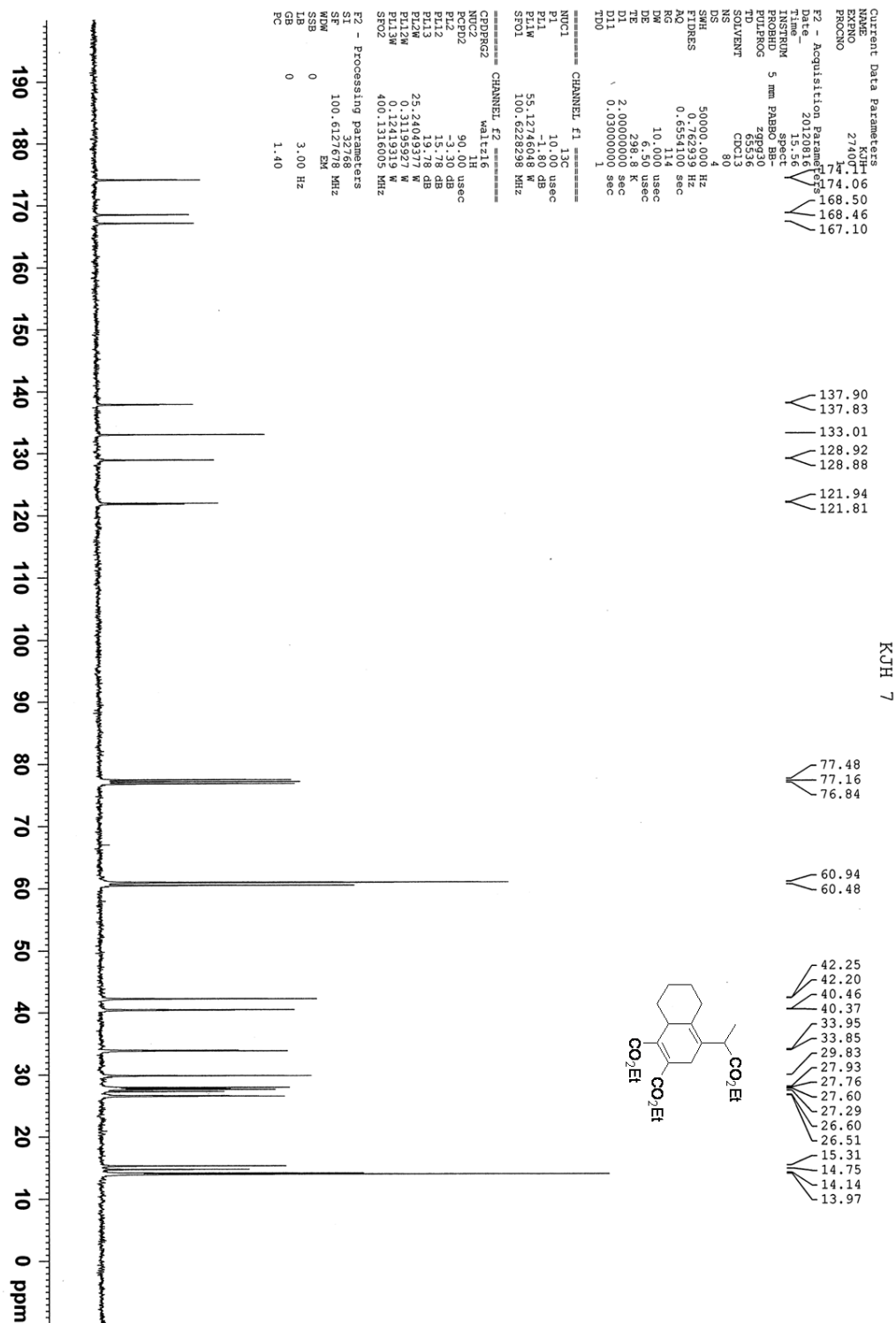
Copies of ^{13}C spectra of compound 6



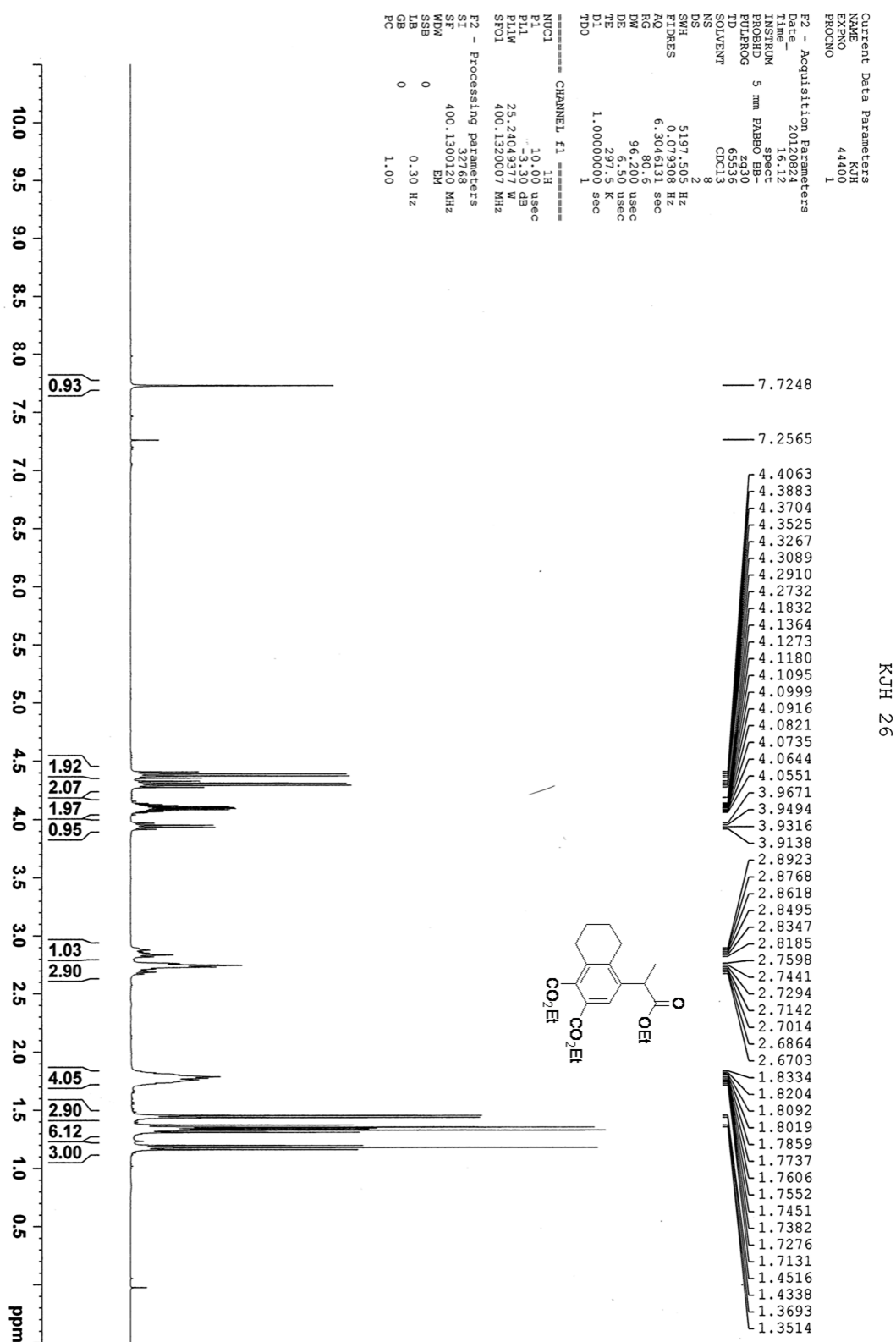
Copies of ^1H spectra of compound **8**



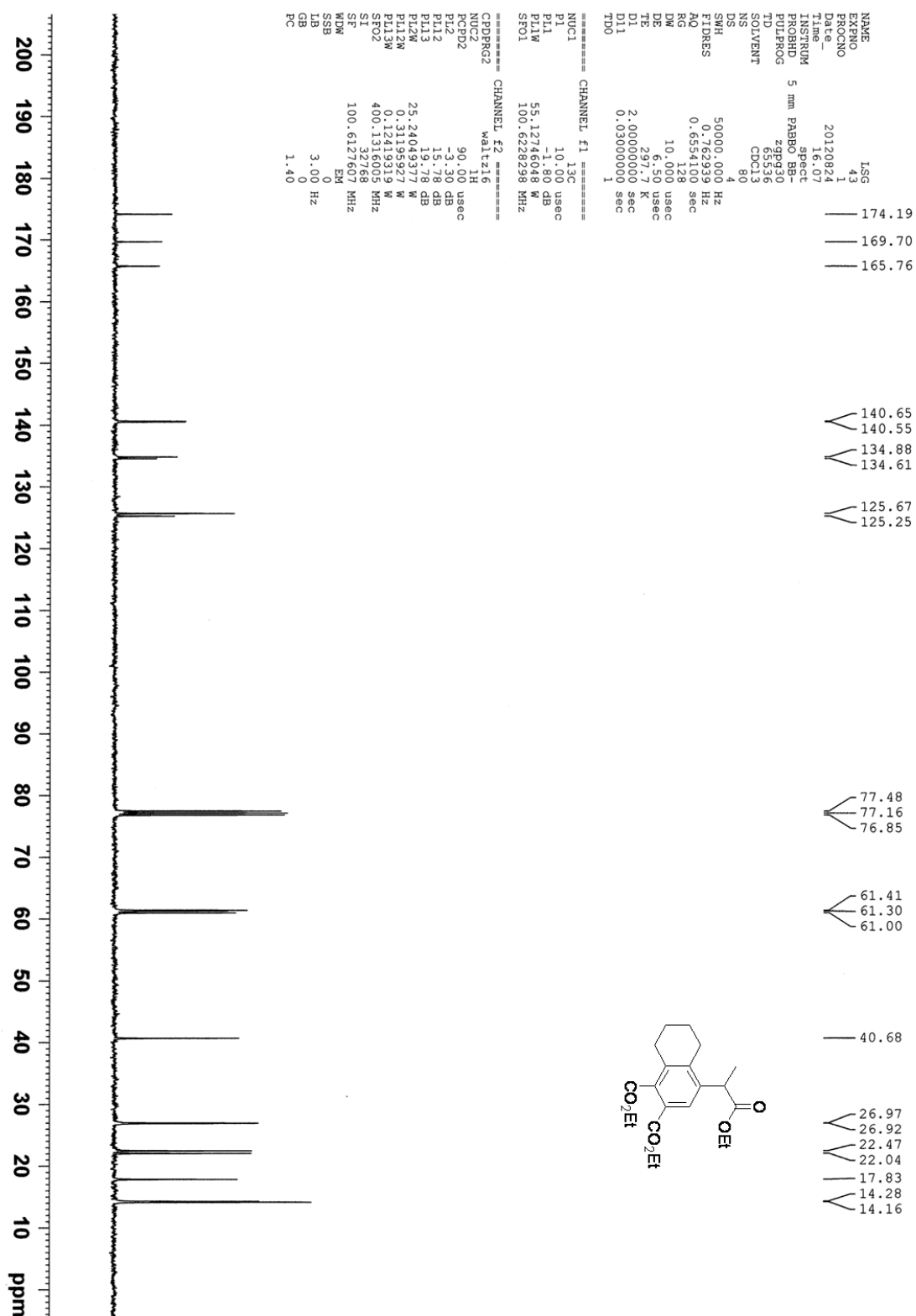
Copies of ^{13}C spectra of compound 8



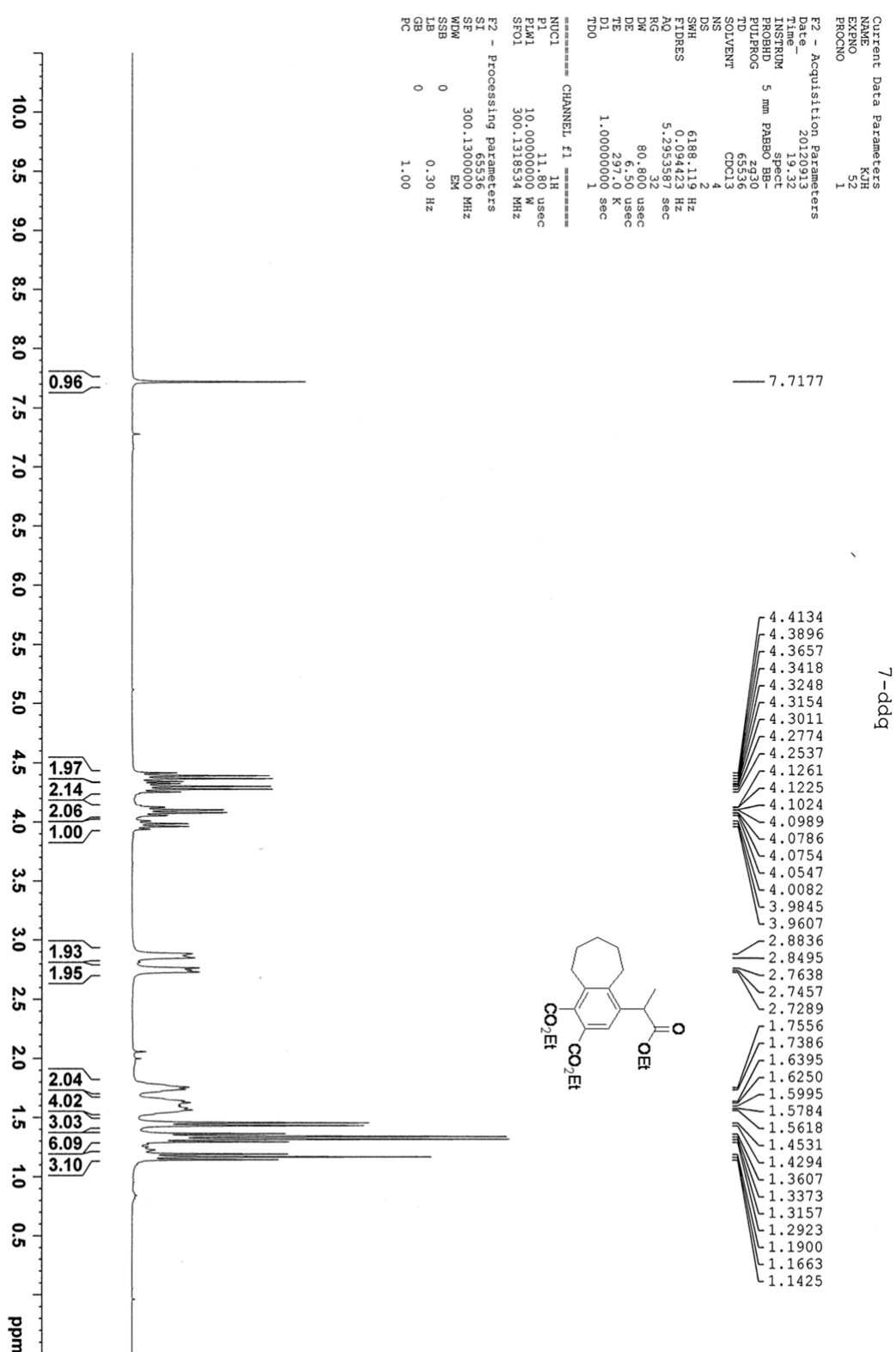
Copies of ^1H spectra of compound **9a**



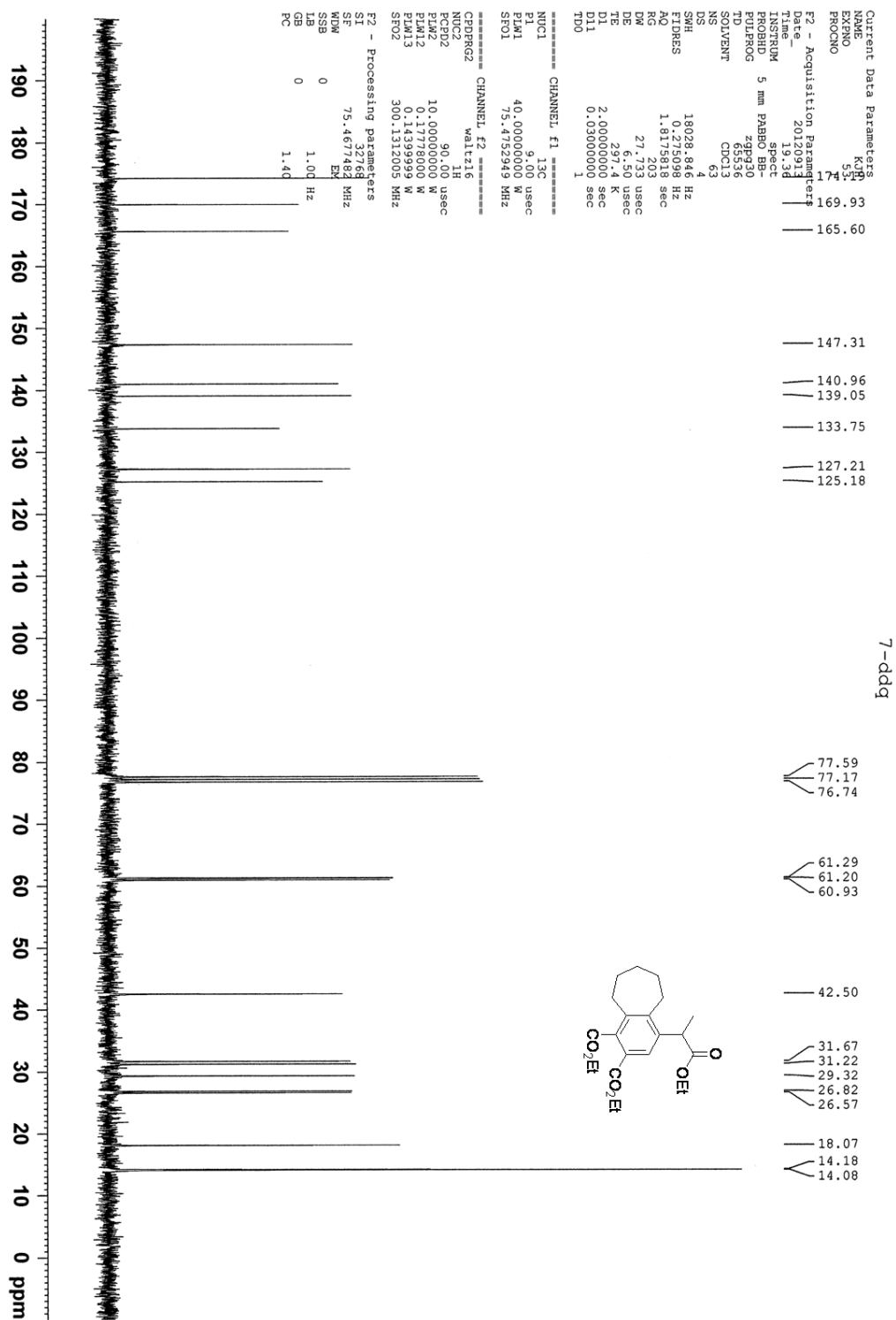
Copies of ^{13}C spectra of compound **9a**



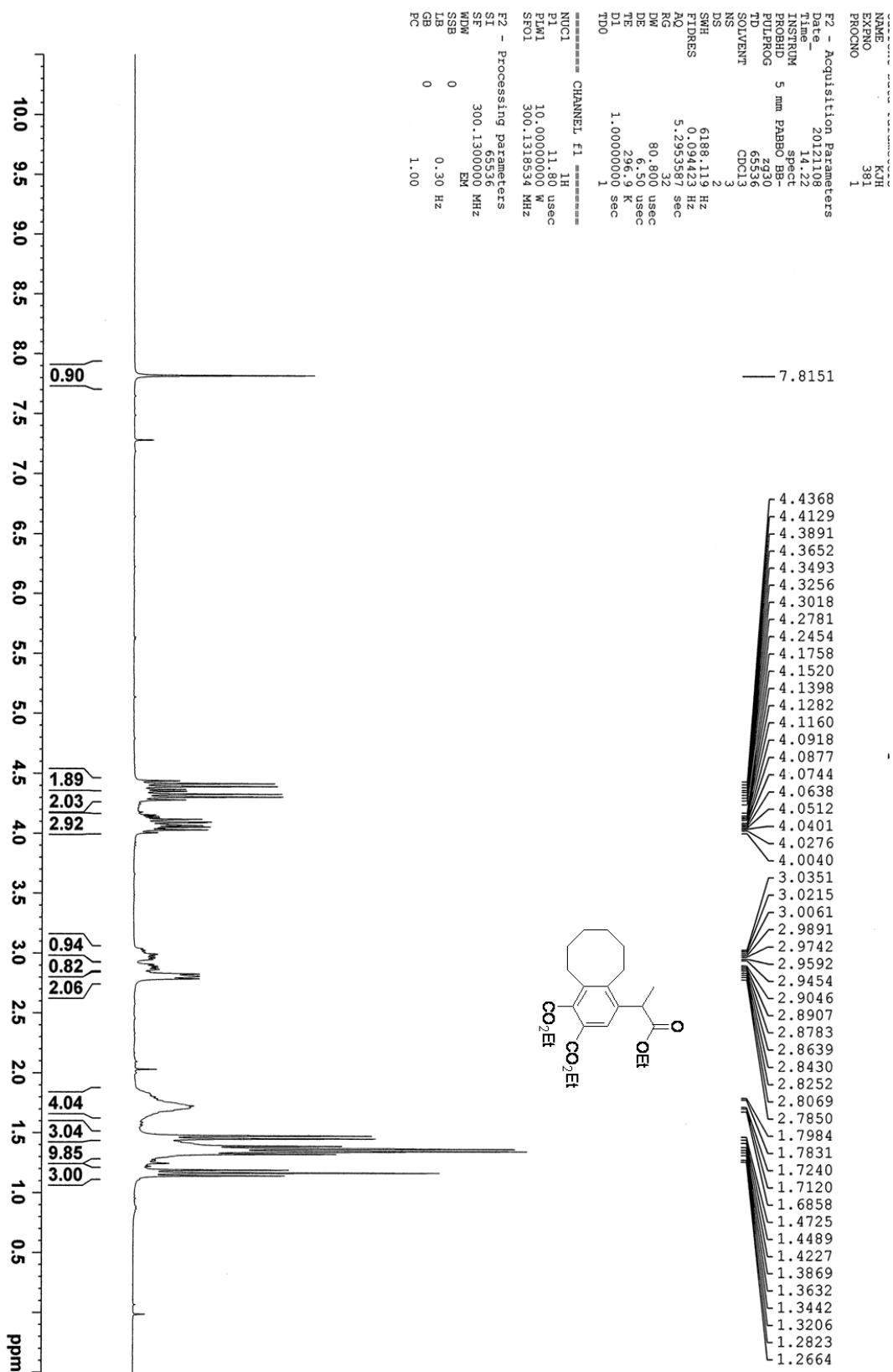
Copies of ^1H spectra of compound **9b**



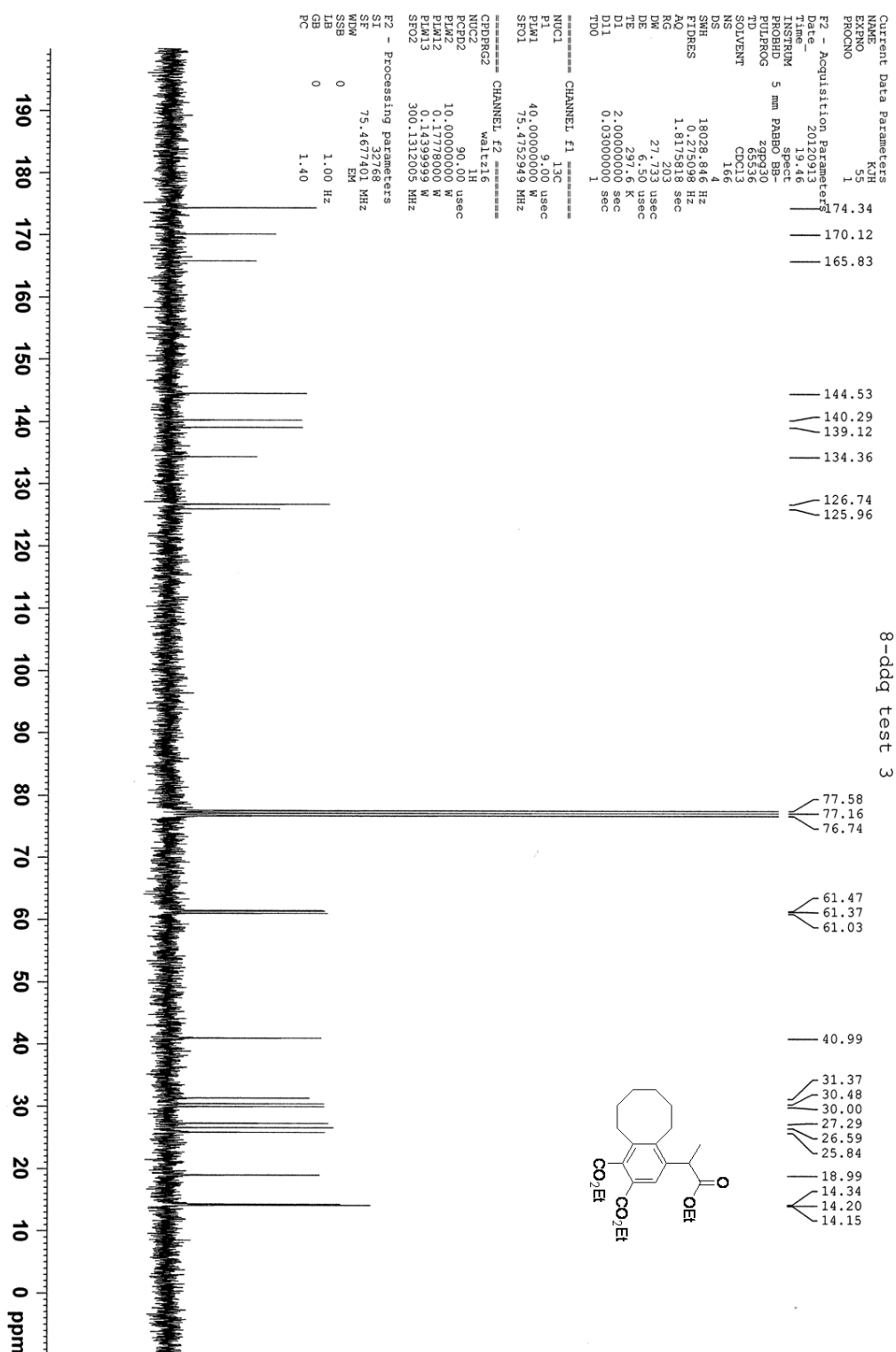
Copies of ^{13}C spectra of compound **9b**



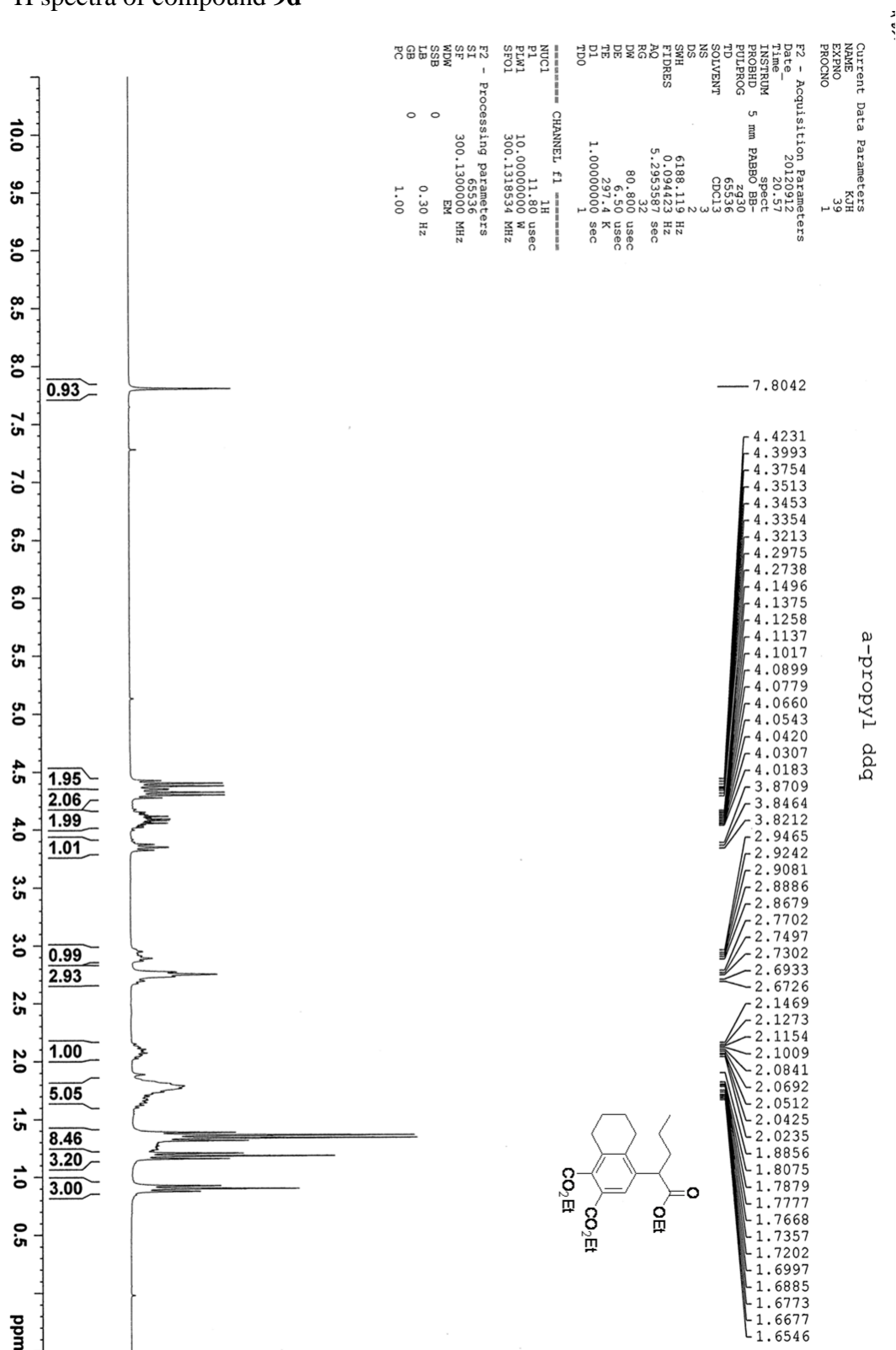
Copies of ^1H spectra of compound **9c**



Copies of ^{13}C spectra of compound **9c**



Copies of ^1H spectra of compound **9d**



Copies of ^{13}C spectra of compound **9d**

