

Electronic Supplementary Information

Regio- and Stereo-Selective Synthesis of Aryl 2-Deoxy-C-Glycopyranosides by Palladium-Catalyzed Heck Coupling Reactions of Glycals and Aryl Iodides

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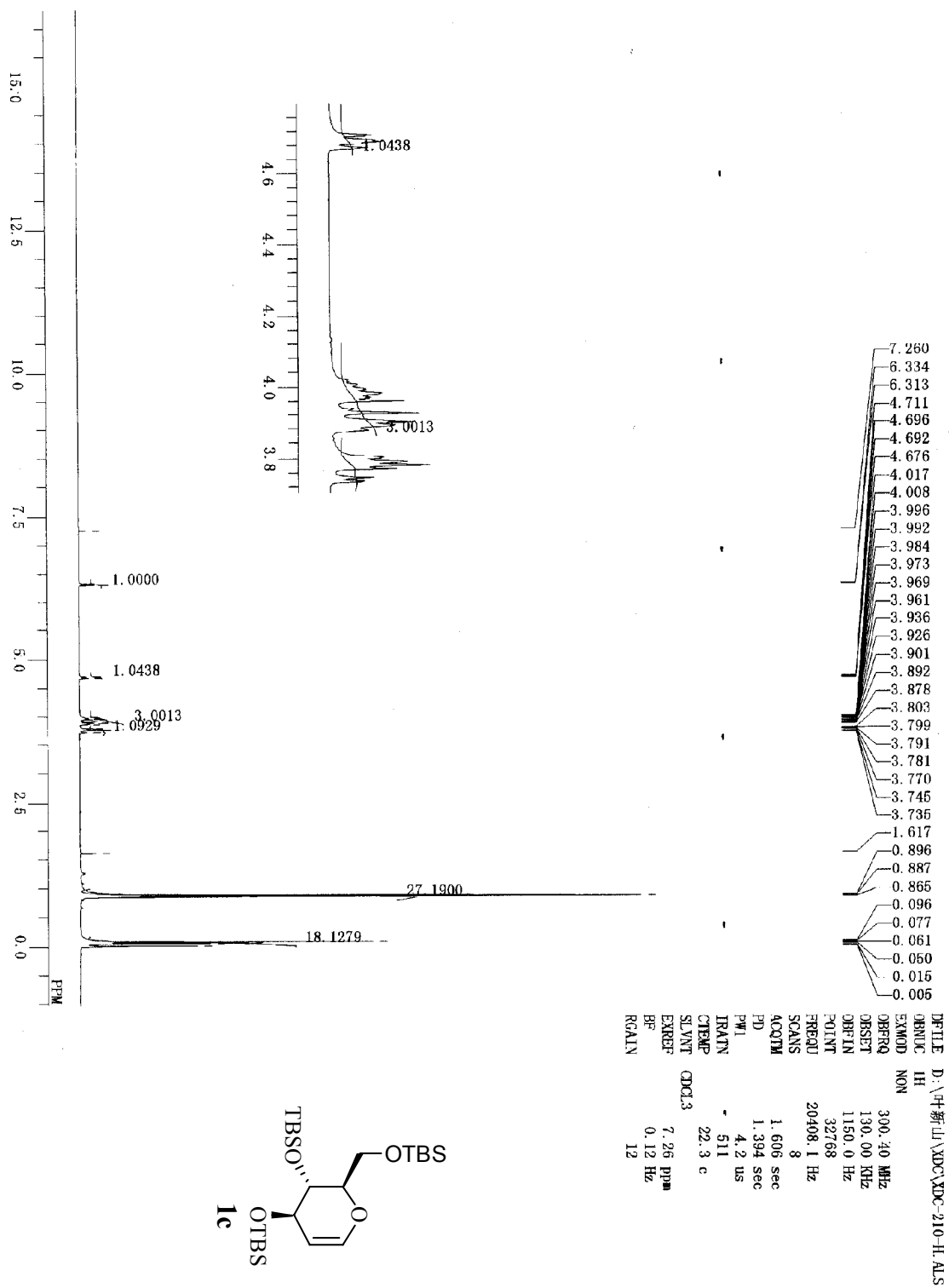
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School of Pharmaceutical Sciences, Peking University, Xue Yuan Rd #38, Beijing,
100191, China

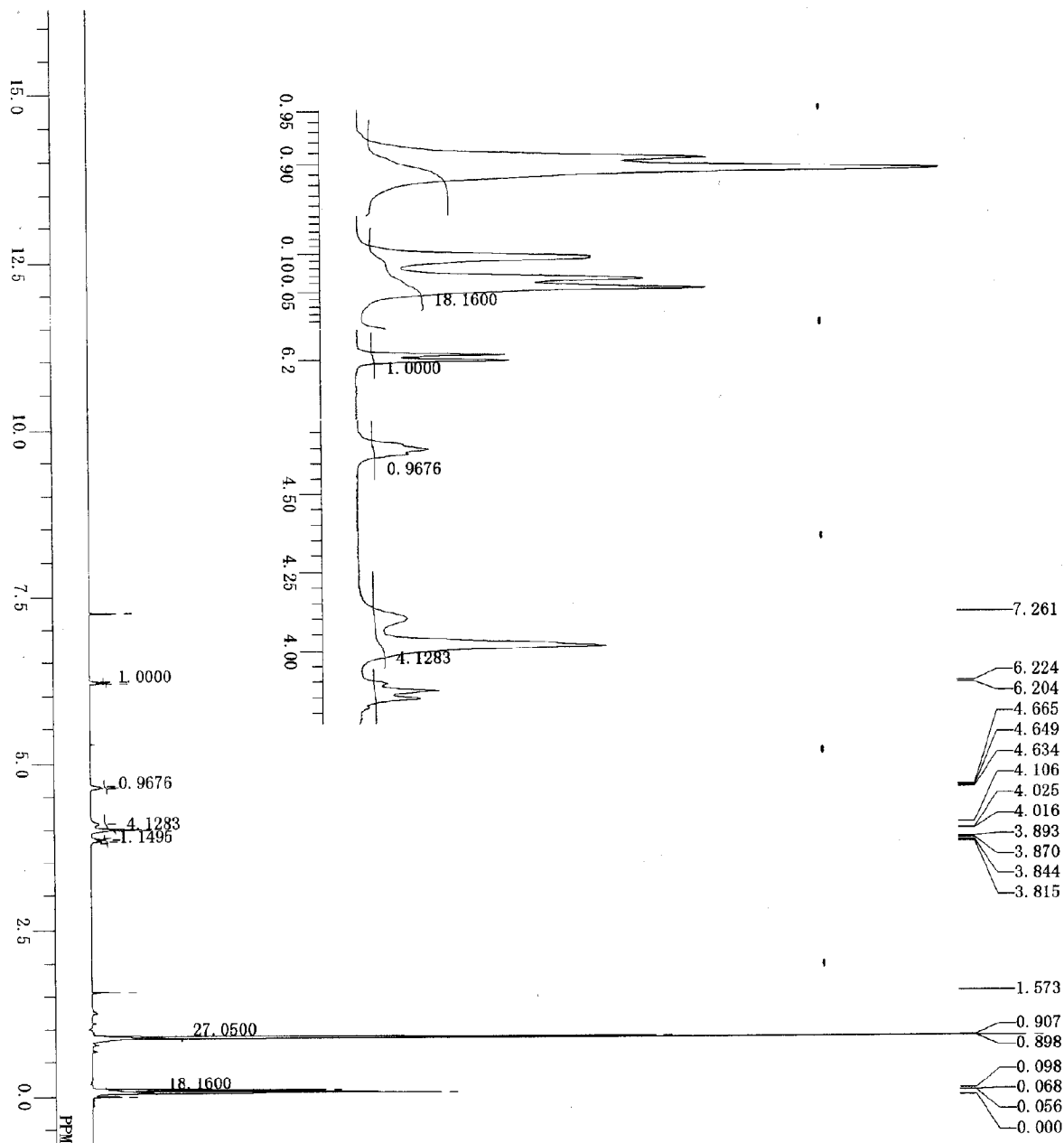
Fax: (+86)-10-82802724; e-mail: xinshan@bjmu.edu.cn

Selected spectra

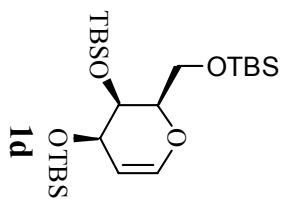
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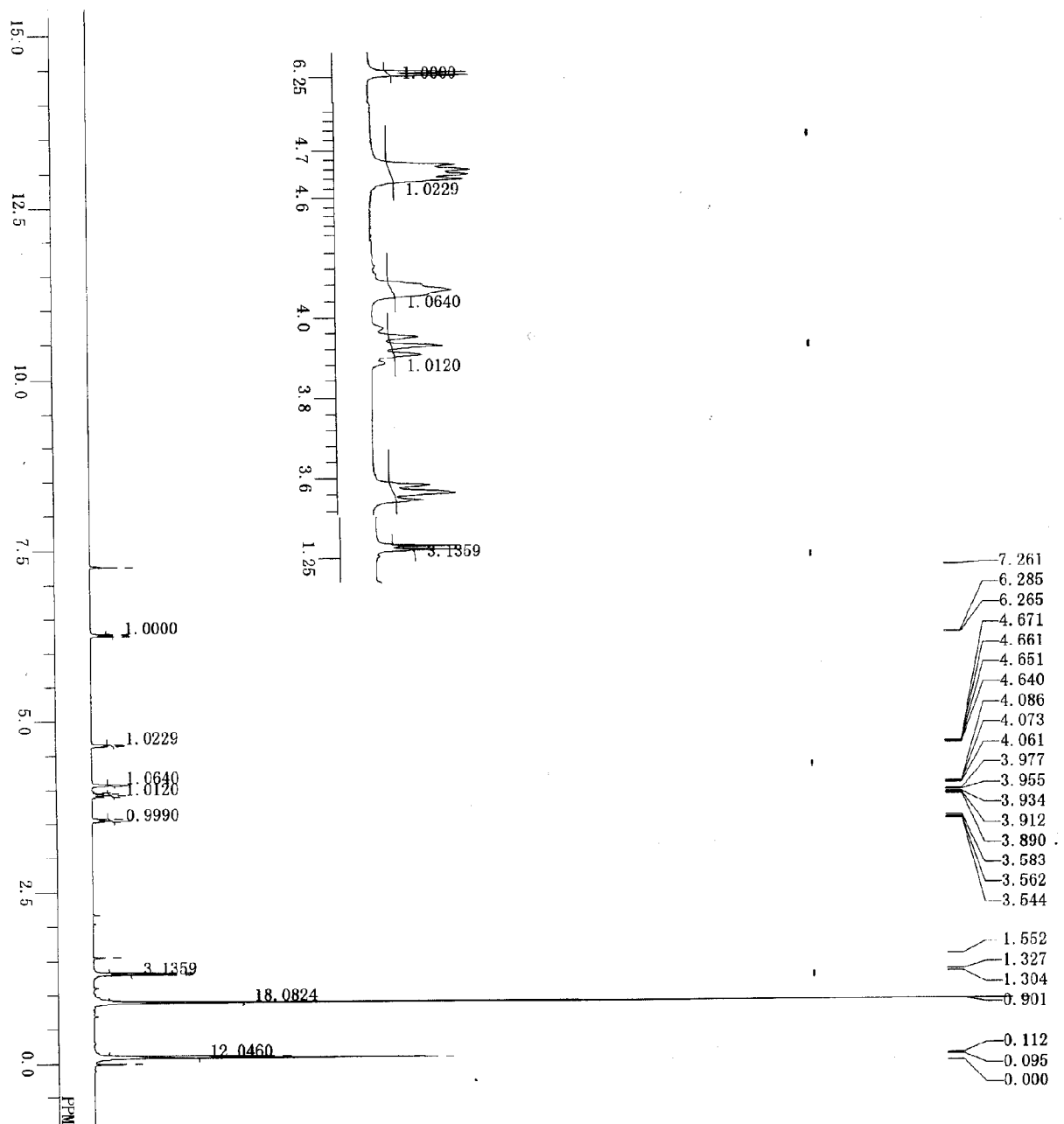
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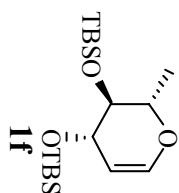


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 FREQU 8000.0 Hz
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 PD 1.551 sec
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 TRACTN 511
 CTEMP 22.7 c
 SLYVT CDCl3
 EXREF 0.00 ppm
 BR 0.12 Hz
 RGAIN 13



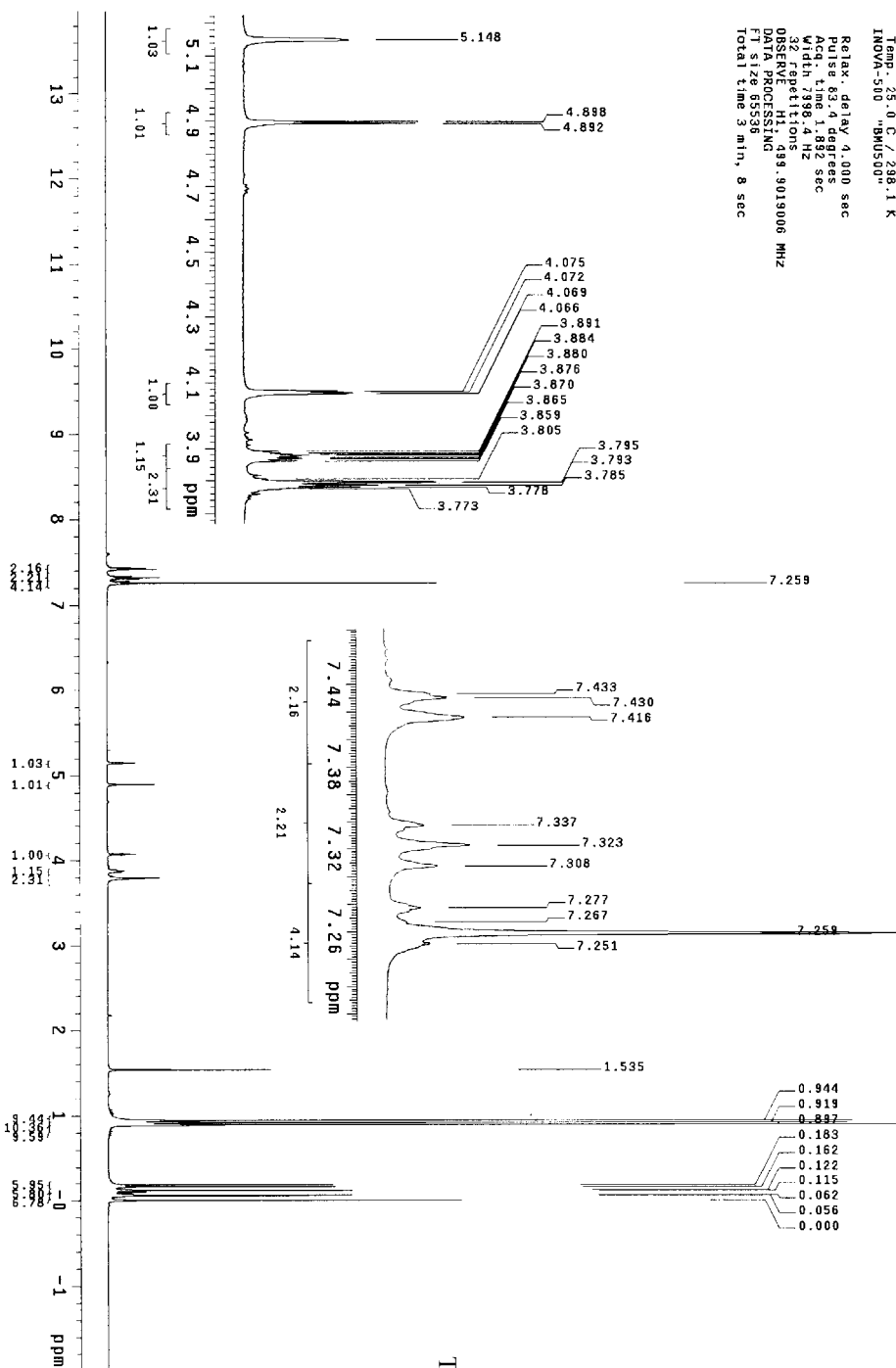


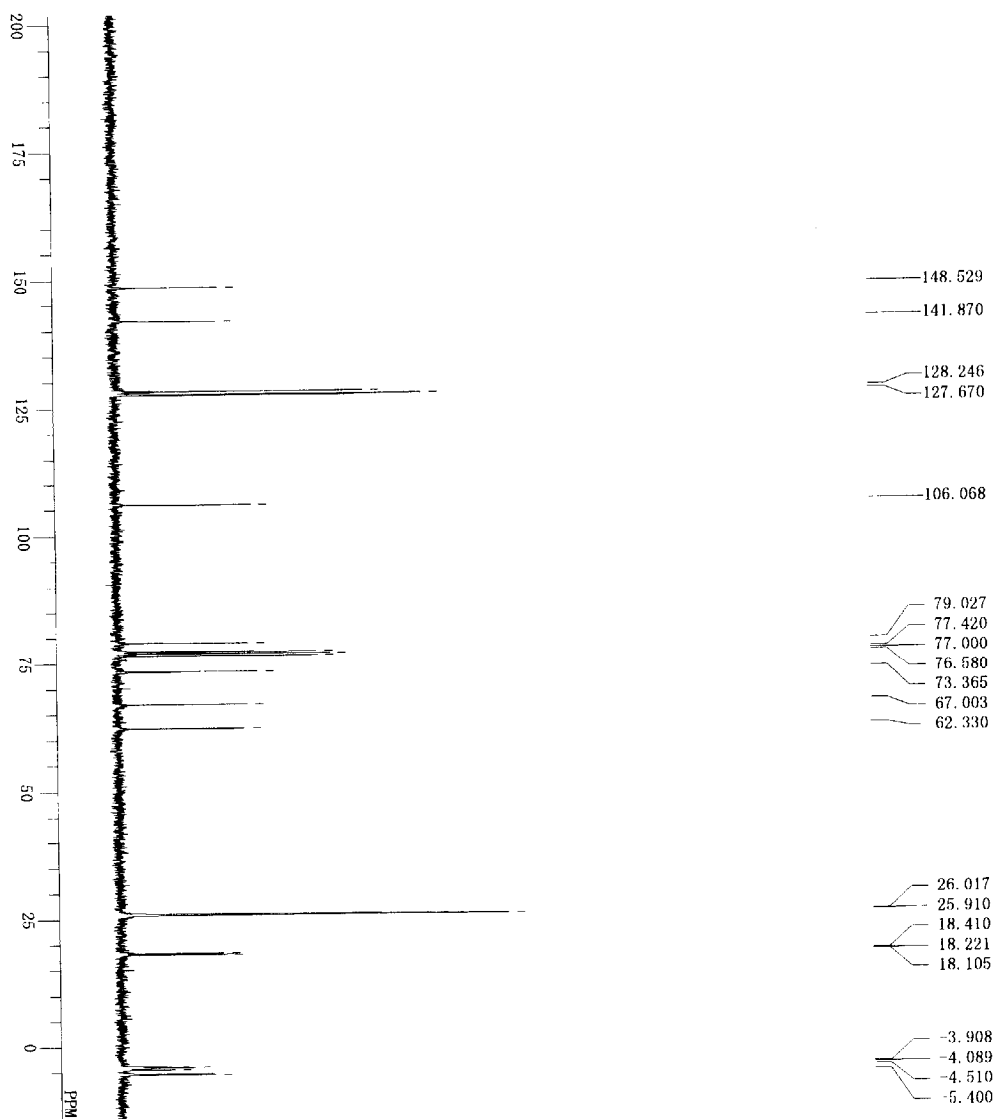
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 PREQU 8000.0 Hz
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 EXREF 0.00 ppm
 BF 0.12 Hz
 RGAIN 15



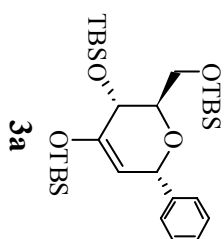
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 Pulse 63.4 degrees
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 Width 7398.4 Hz
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 0.5 REPEATITIONS
 0.5 DATA PROCESSING
 FT size 65536
 Total time 3 min, 8 sec



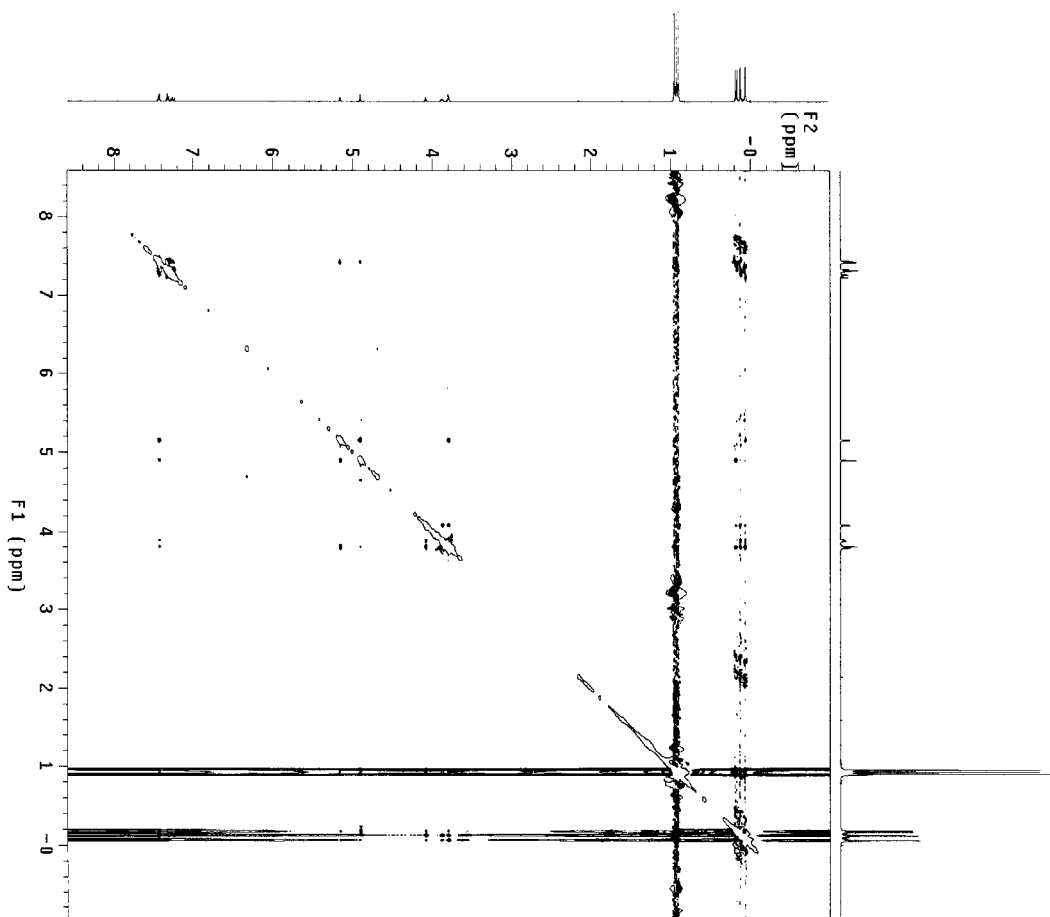
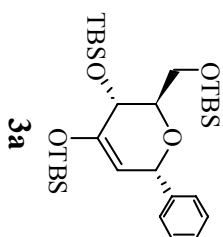


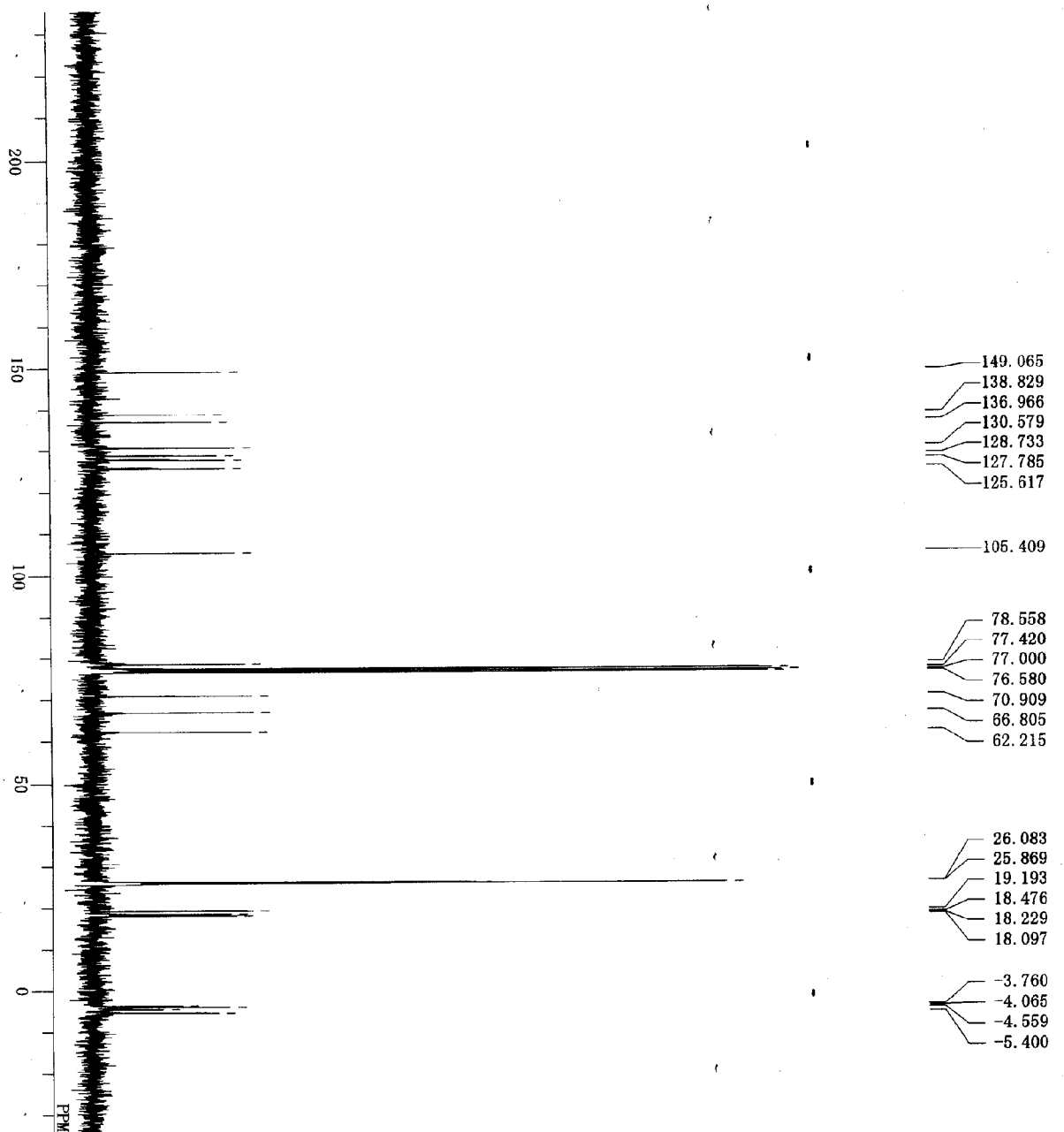
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 PREQU 29408.1 Hz
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 PD 1.394 sec
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 CTEMP 22.4 c
 SLVNT CDCL3
 SLYNT 77.00 ppm
 EXREF 2.00 Hz
 BF 24
 RGAIN 24



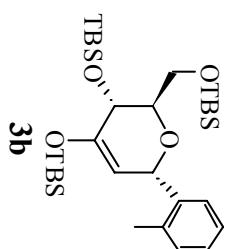
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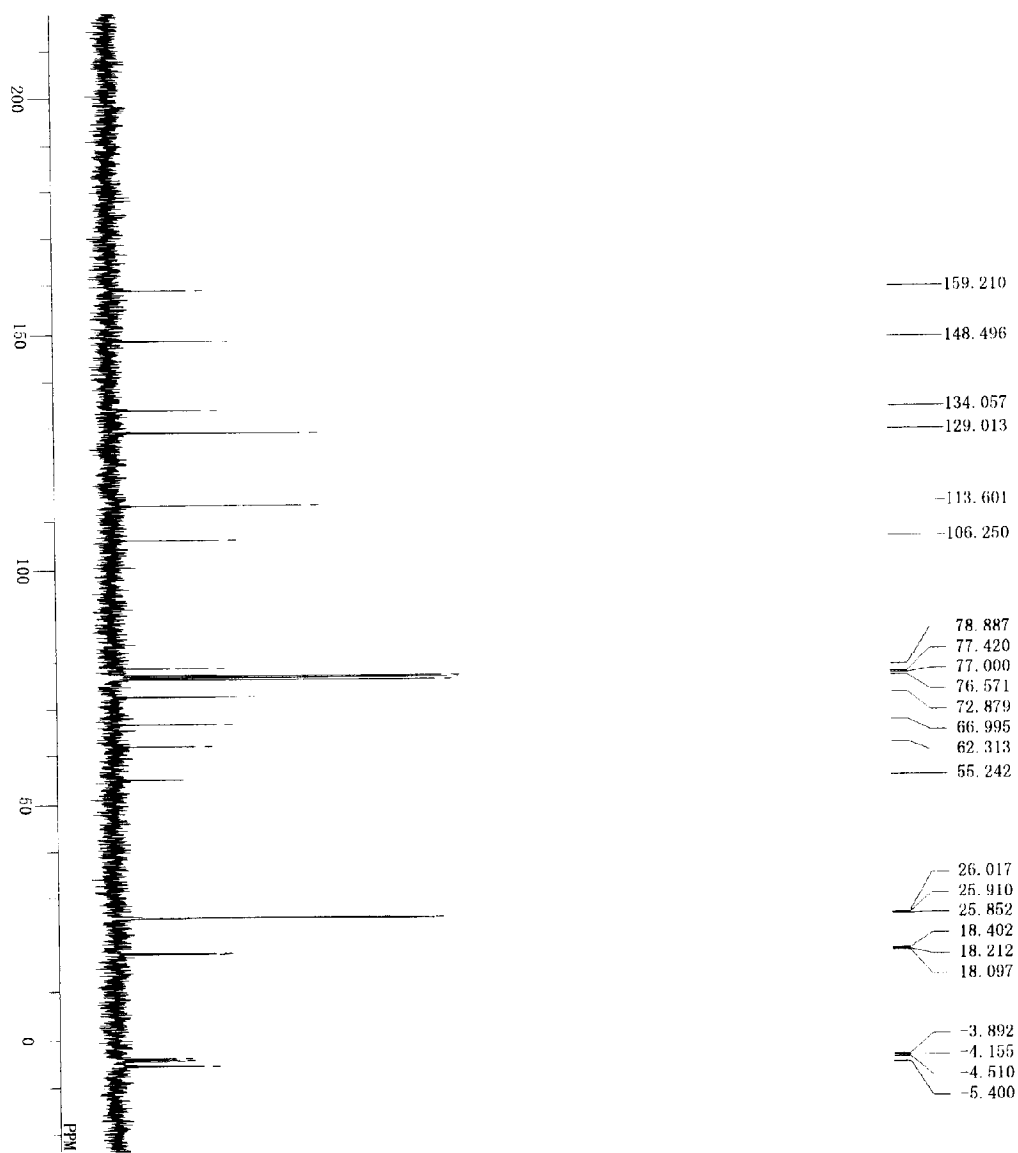
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Relax: delay 1.000 sec
Mixing: 0.200 sec
Acq: time 0.214 sec
NUC1: 1H 4784.4 MHz
2D: 4784.4 MHz
32 repetitions
2 x 300 increments
OBSERVE: H1, 499.9019159 MHz
DATA PROCESSING
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F1: 4784.4 MHz
Gauss apodization 0.034 sec
FT size 4096 x 4096
Total time 7 hr, 47 min, 28 sec



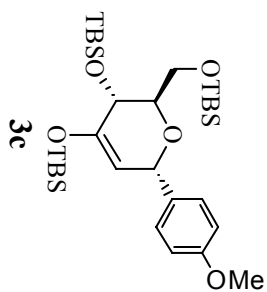


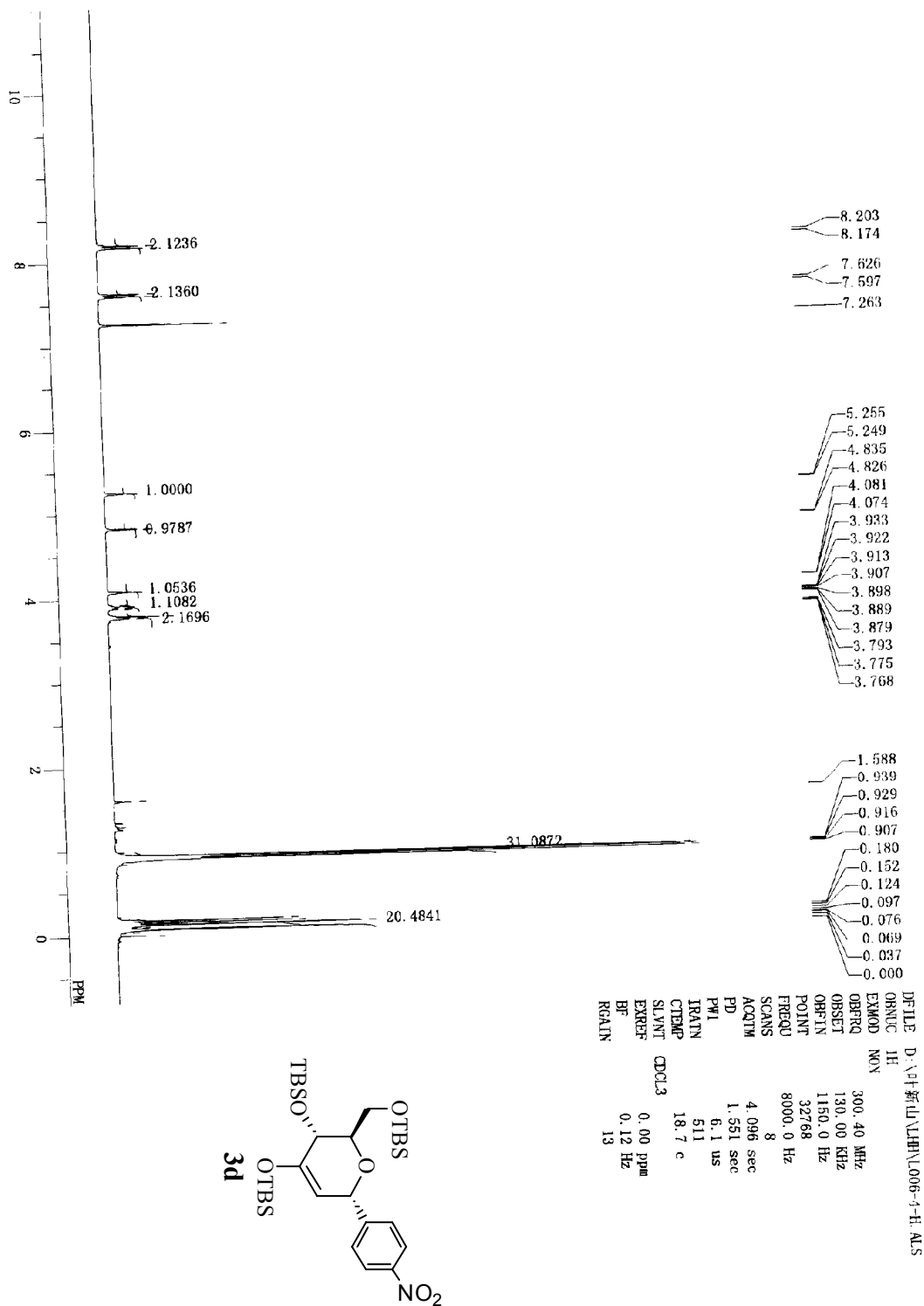
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 ORBSET 124.00 KHz
 ORFTIN 1840.0 Hz
 POINT 32768
 FREQOU 20408.1 Hz
 SCANS 211
 ACQTM 1.606 sec
 PD 1.394 sec
 PW1 4.2 us
 TRATN 511
 CTEMP 19.1 c
 SLYNT CDCL3
 EXREF 77.00 ppm
 BF 2.00 Hz
 RGAIN 24

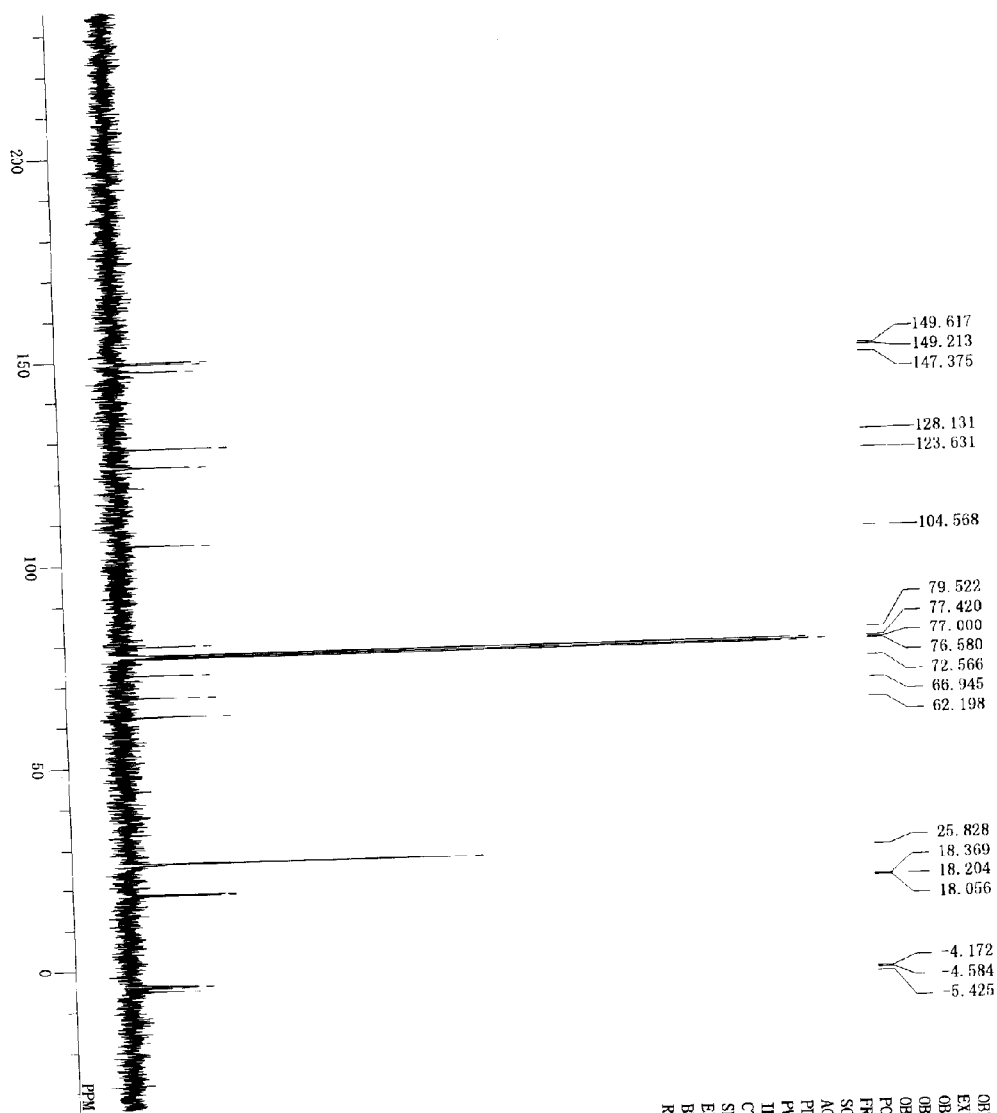




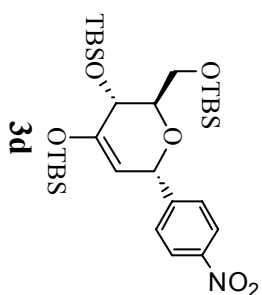
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 ORSET 124.00 kHz
 ORPTN 1840.0 Hz
 POINT 32768
 FREQU 20408.1 Hz
 SCANS 157
 ACQTM 1.606 sec
 PD 1.394 sec
 PVI 4.2 us
 IRATN 511
 CTEMP 22.3 c
 SOLVT CDCL3
 EXREF 77.00 ppm
 BR 2.00 Hz
 RGAIN 12

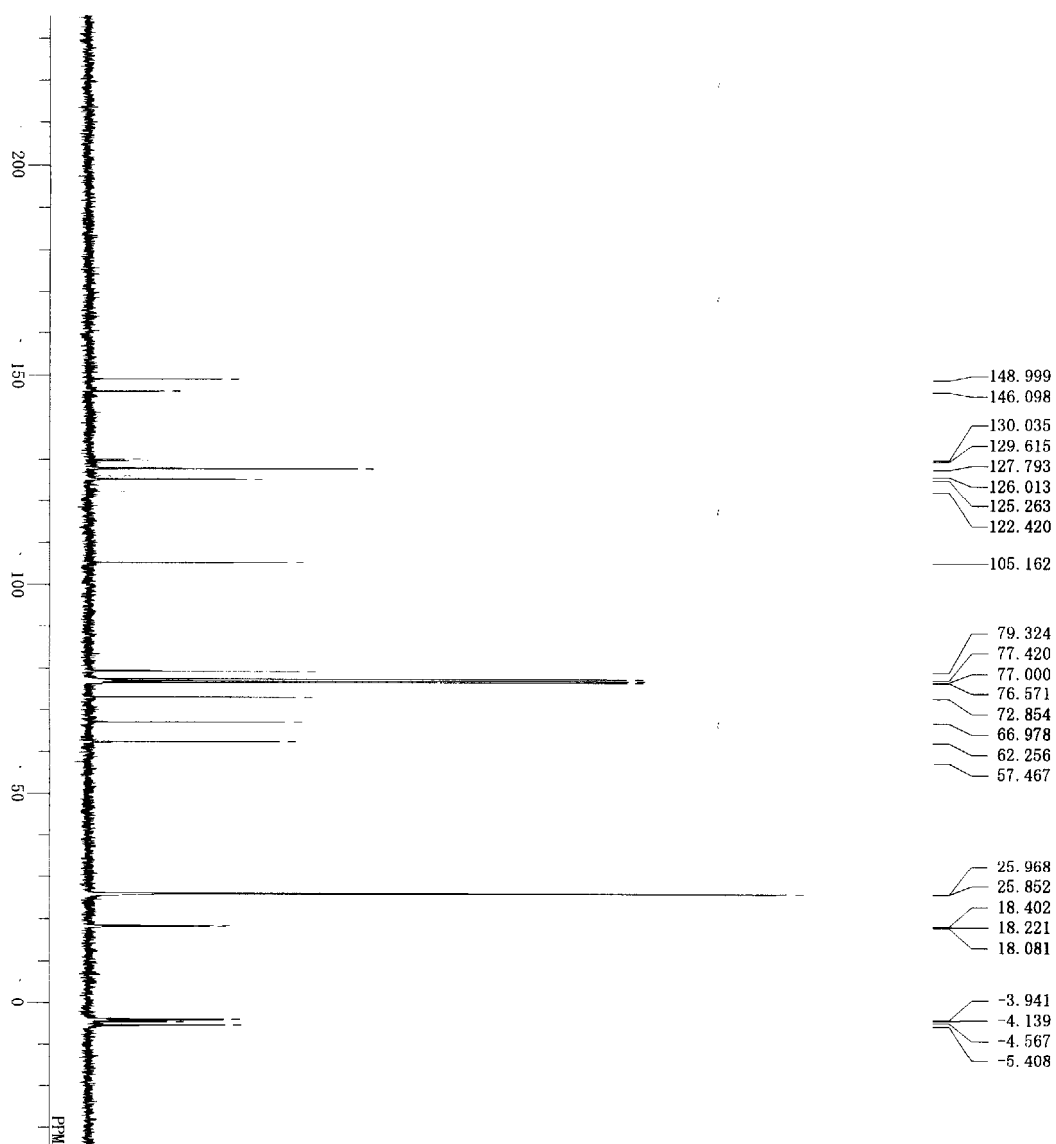




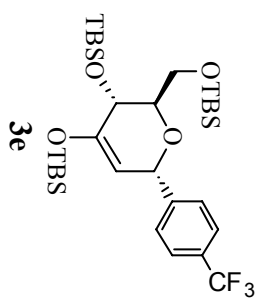


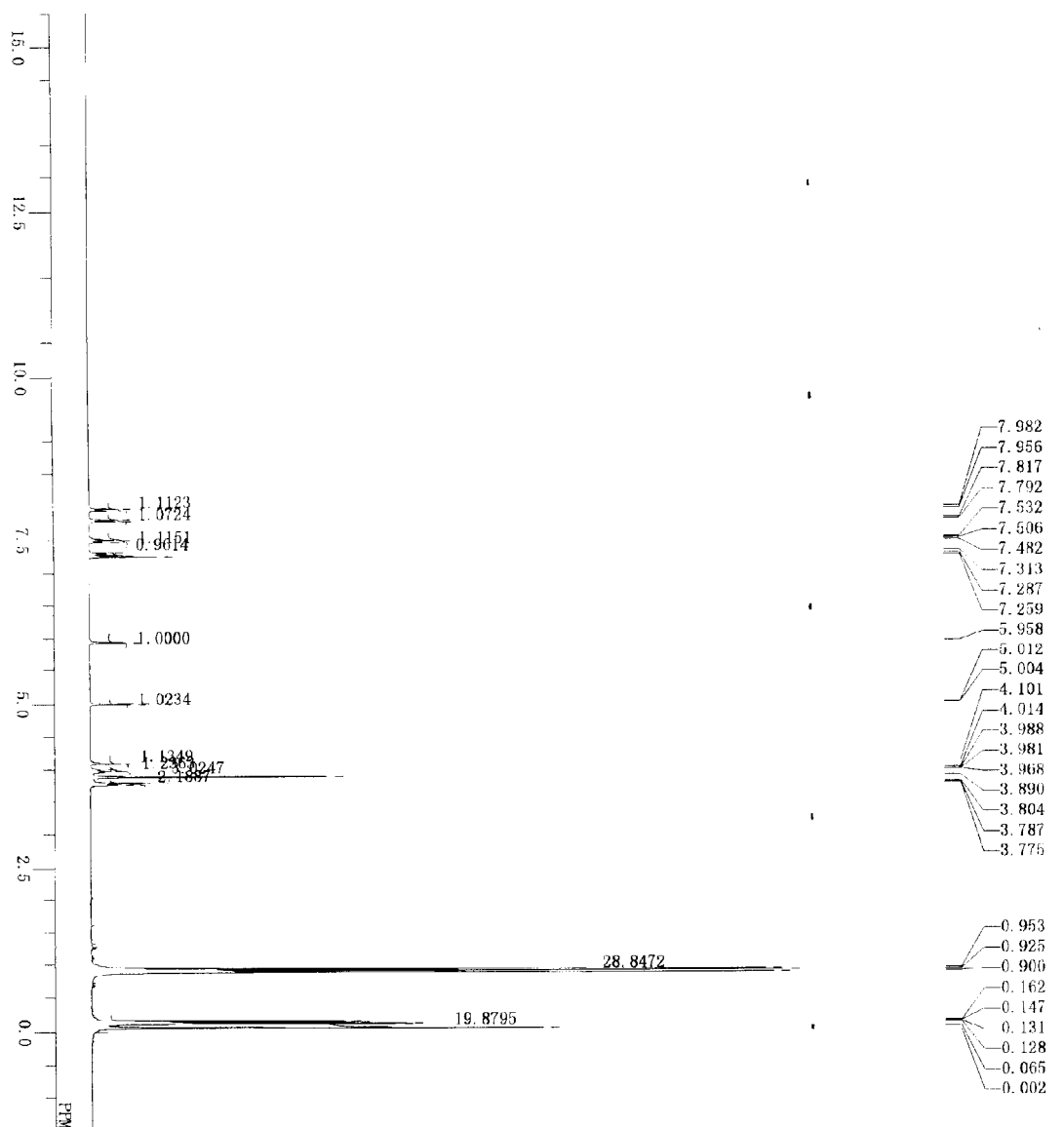
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 ORSET 124.00 KHz
 OFPIN 1840.0 Hz
 POINT 32768
 FREQU 20408.1 Hz
 SCANS 201
 ACQTM 1.805 sec
 PD 1.394 sec
 PWT 4.2 us
 511
 TRATN 19.4 c
 CTBMP
 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 2.00 Hz
 RGAIN 14



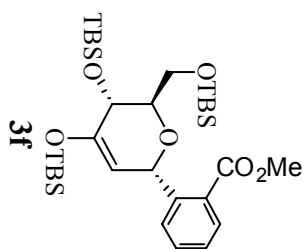


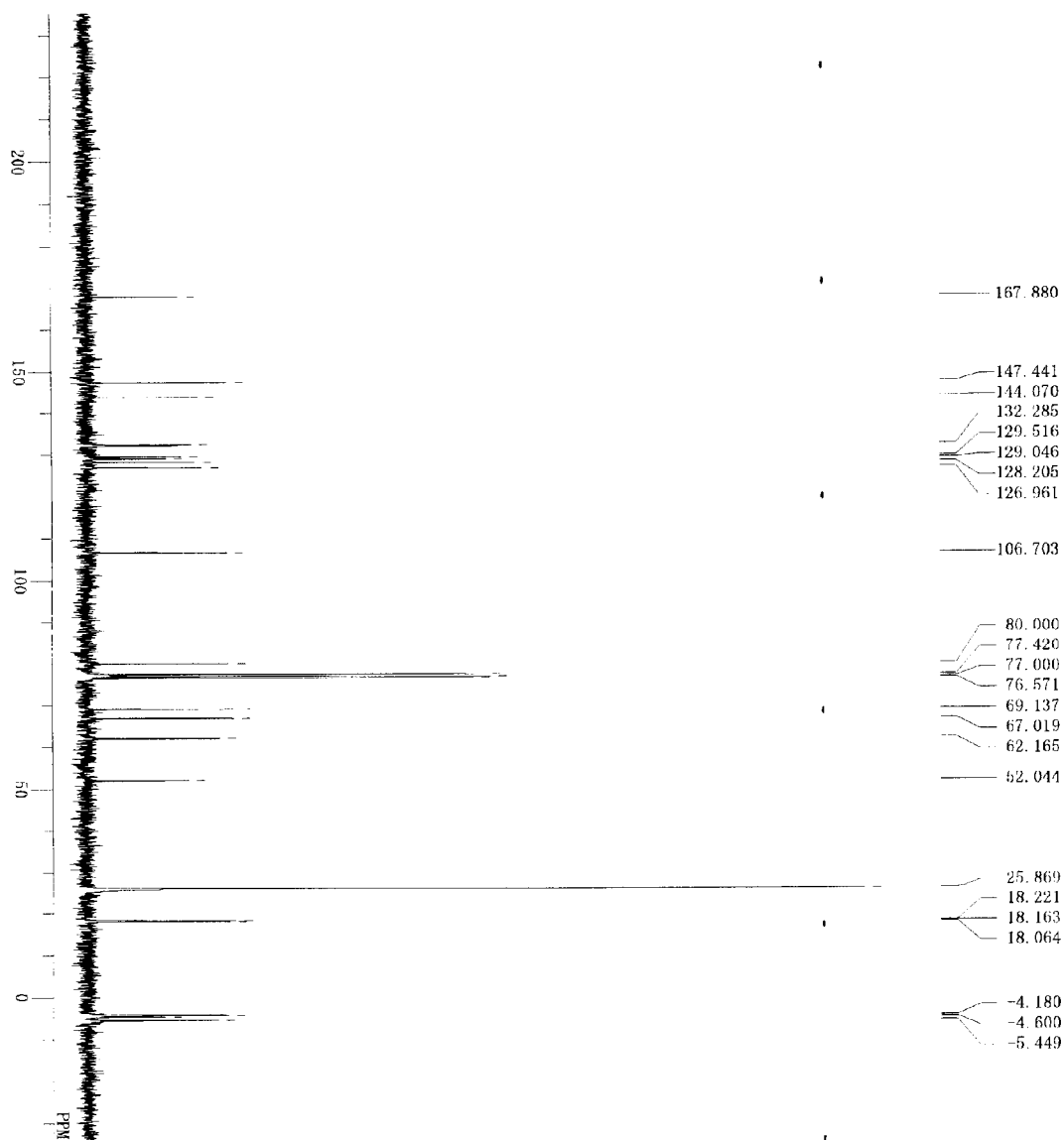
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 OHSET 124.00 KHz
 OBFIN 1840.0 Hz
 POINT 32768
 FREQD 20408.1 Hz
 SCANS 584
 ACQTM 1.606 sec
 PD 1.394 sec
 PW1 4.2 us
 IRATN 511
 CTMR 22.5 c
 SLVNT CDCL3
 EXREF 77.00 ppm
 BR 2.00 Hz
 RGAIN 25



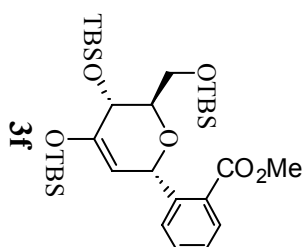


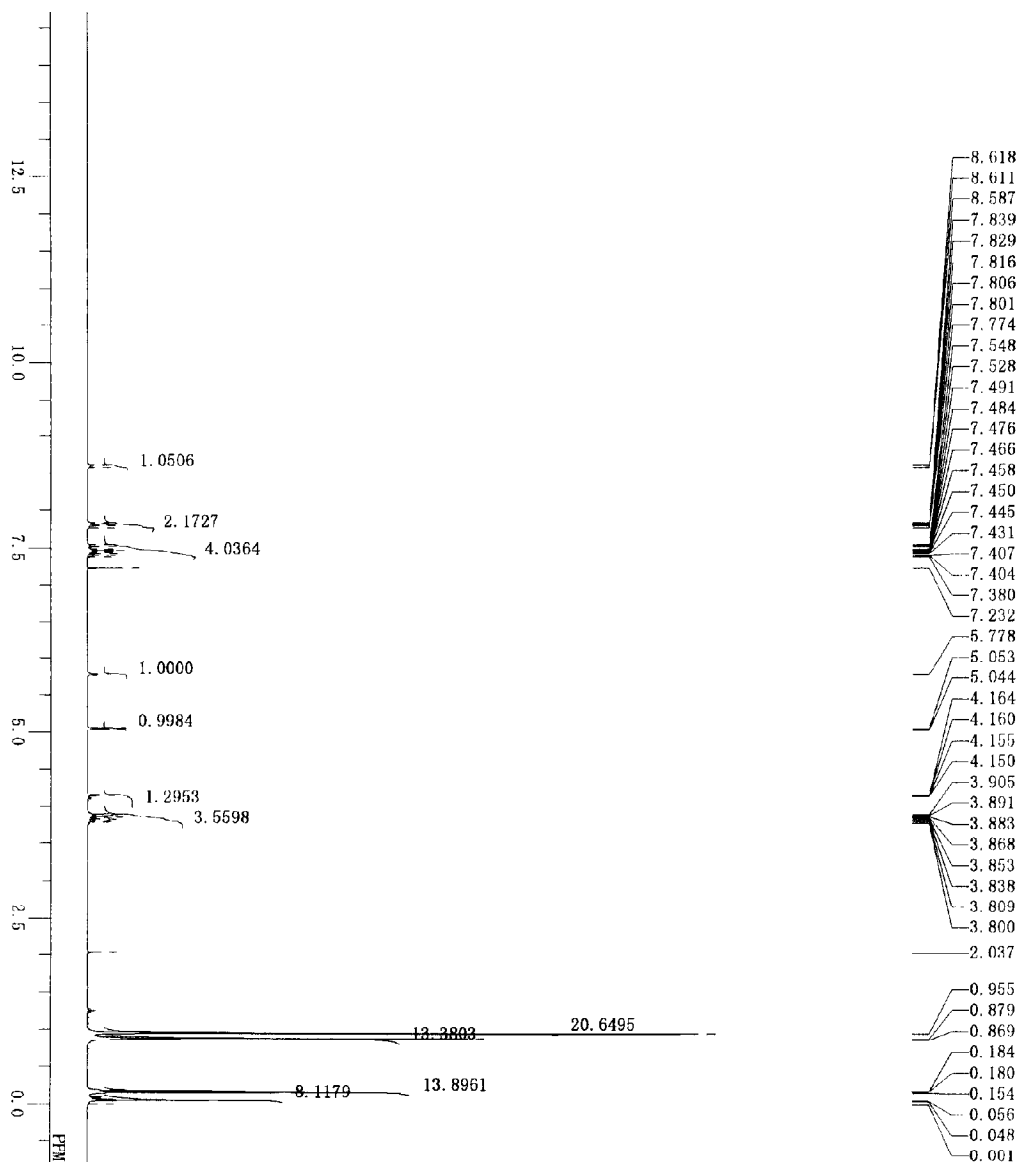
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 ORPIN 1150.0 Hz
 POINT 32768
 PREQU 8000.0 Hz
 SCANS 8
 ACQTM 4.096 sec
 PD 1.551 sec
 PM1 6.1 us
 TRATN 511
 CTMP 20.0 c
 SILNT CXL3
 EXREF 0.00 ppm
 BR 0.12 Hz
 RGAIN 11



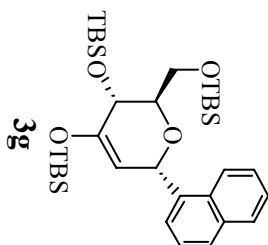


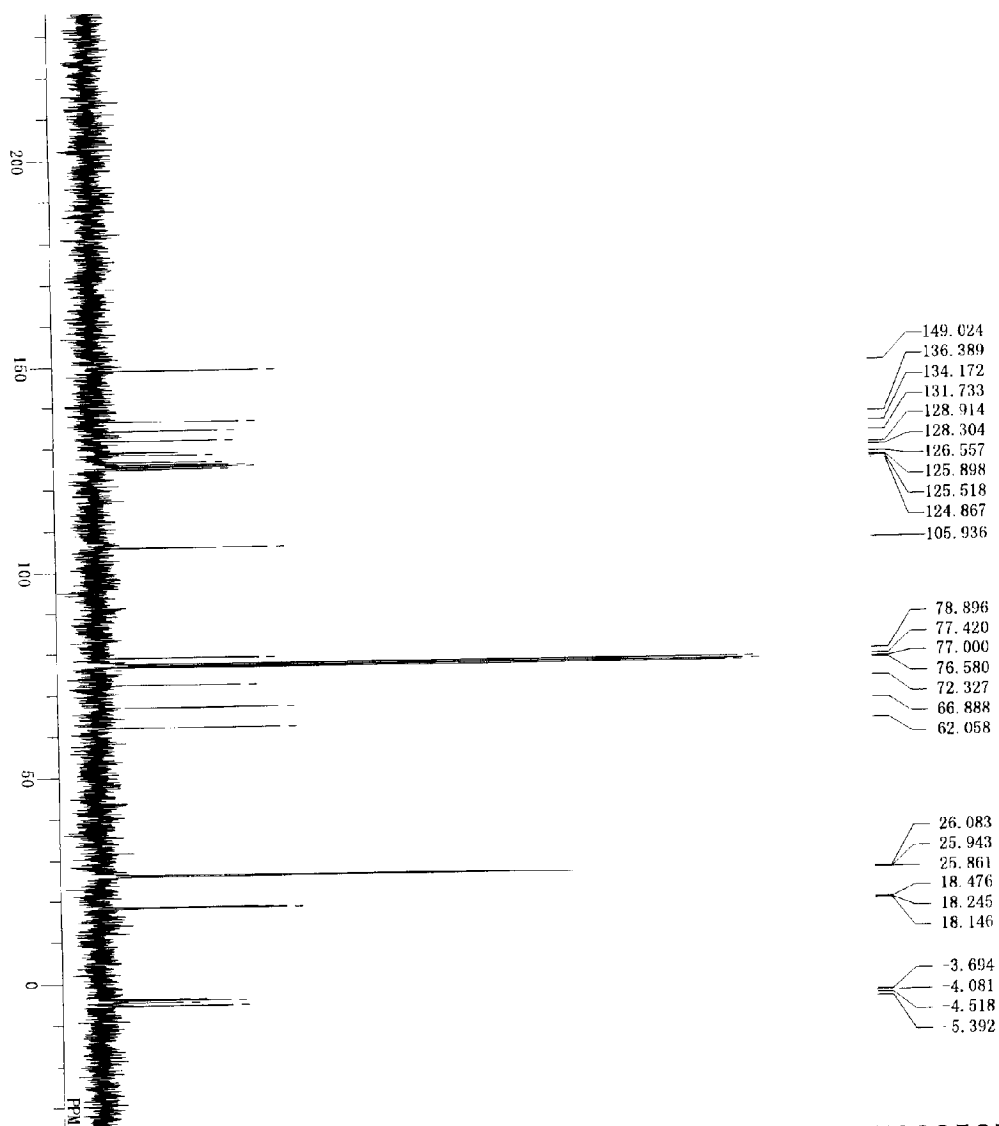
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 DEPT 13C
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 GBSRT 124.00 kHz
 GBSIN 1840.0 Hz
 POINT 32768
 FREQ 20408.1 Hz
 SCANS 137
 ACQTM 1.606 sec
 PD 1.394 sec
 PUL 4.2 us
 IRATN 511
 CTBAP 19.5 c
 SLYNT CDCL3
 EXREF 77.00 ppm
 BR 2.00 Hz
 RGAIN 18





DEFILE D:\H新山\HH\006-7A-H.ALS
 ORNDIC 1H
 EXM000 NON
 ORPRQ 300.40 MHz
 ORSET 130.00 kHz
 ORFIN 1150.0 Hz
 POINT 32768
 PREQU 8000.0 Hz
 SCANS 8
 ACQTM 4.096 sec
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 PW1 6.1 us
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 CDCL3
 EXREF 0.00 ppm
 BR 0.12 Hz
 RGAIN 10





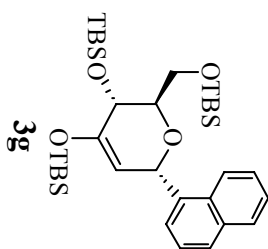
- 149.024
- 136.389
- 134.172
- 131.733
- 128.914
- 128.304
- 126.557
- 125.898
- 125.518
- 124.867
- 105.936

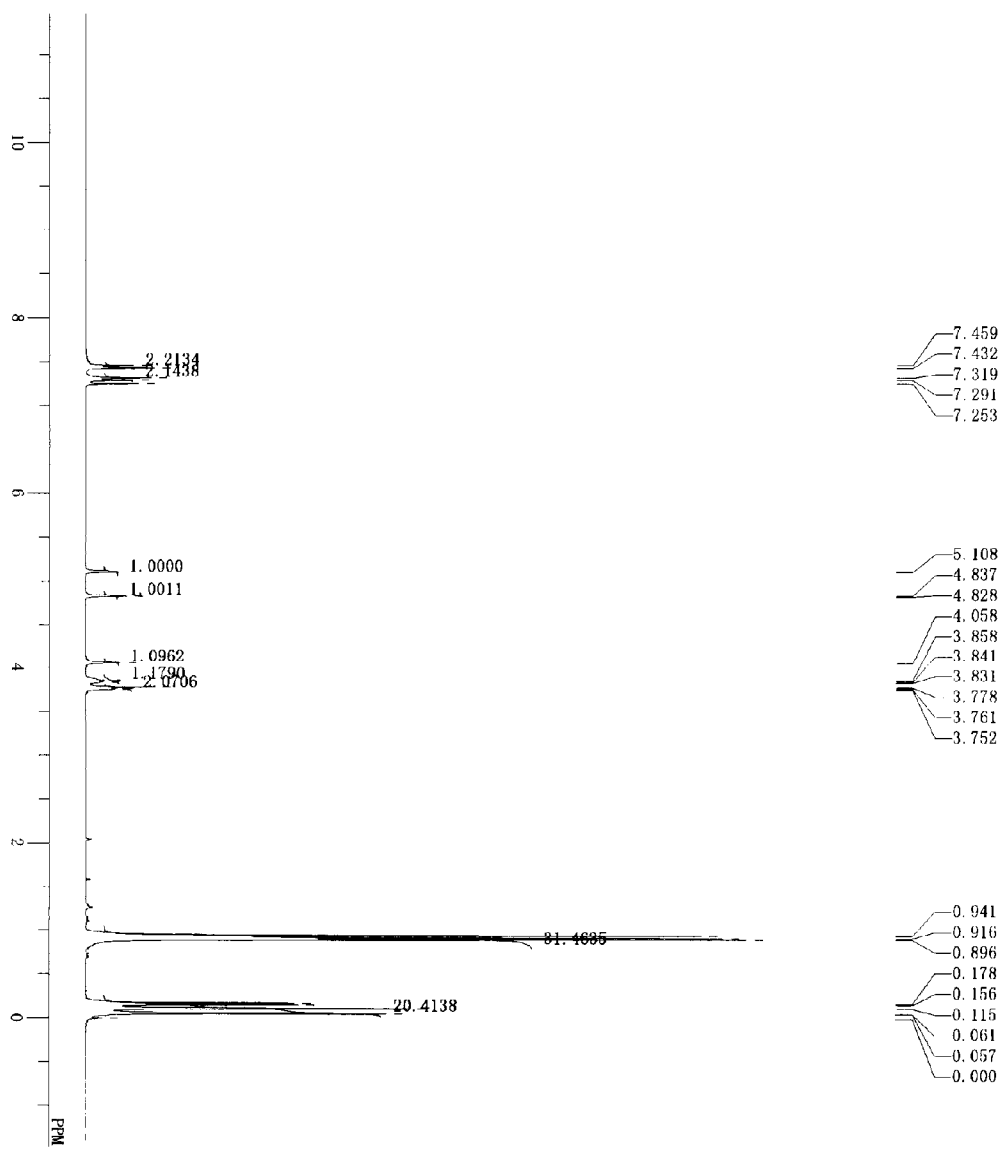
- 78.896
- 77.420
- 77.000
- 76.580
- 72.327
- 66.888
- 62.058

- 26.083
- 25.943
- 25.861
- 18.476
- 18.245
- 18.146

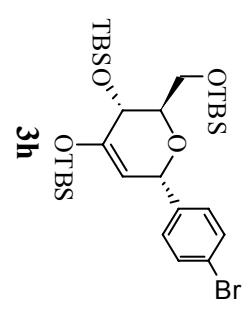
- 3.694
- 4.081
- 4.518
- 5.392

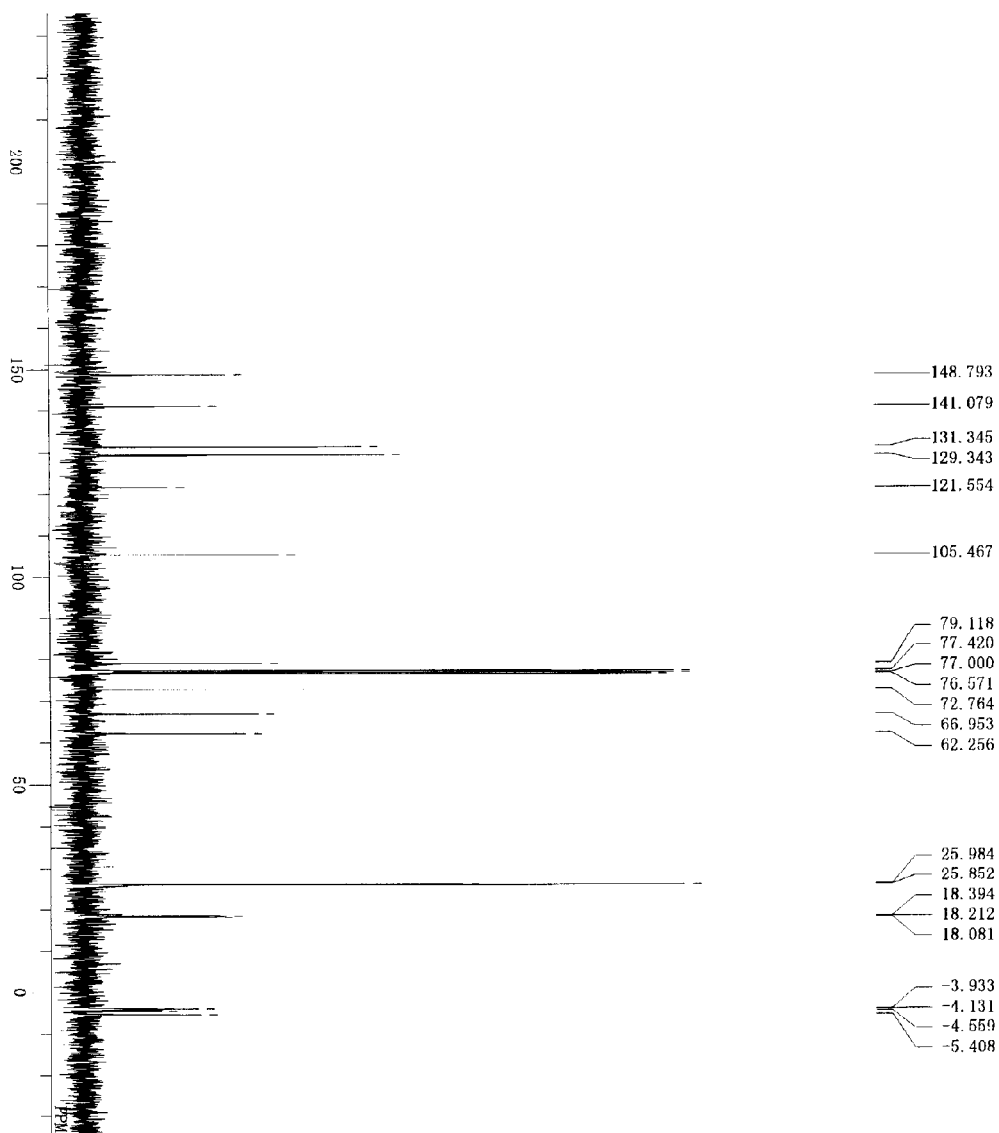
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 OBSF1N 1840.0 Hz
 POINTN 32768
 FREQ0U 20408.1 Hz
 SCANS 89
 ACQTM 1.606 sec
 PD 1.394 sec
 PWT 4.2 us
 511
 TRATN
 CTEMP 20.3 c
 SLYNT CDCL3
 EXREF 77.00 ppm
 BF 2.00 Hz
 RGAIN 13



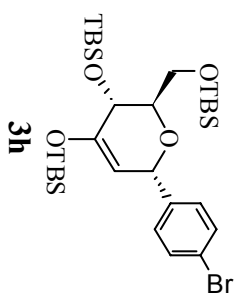


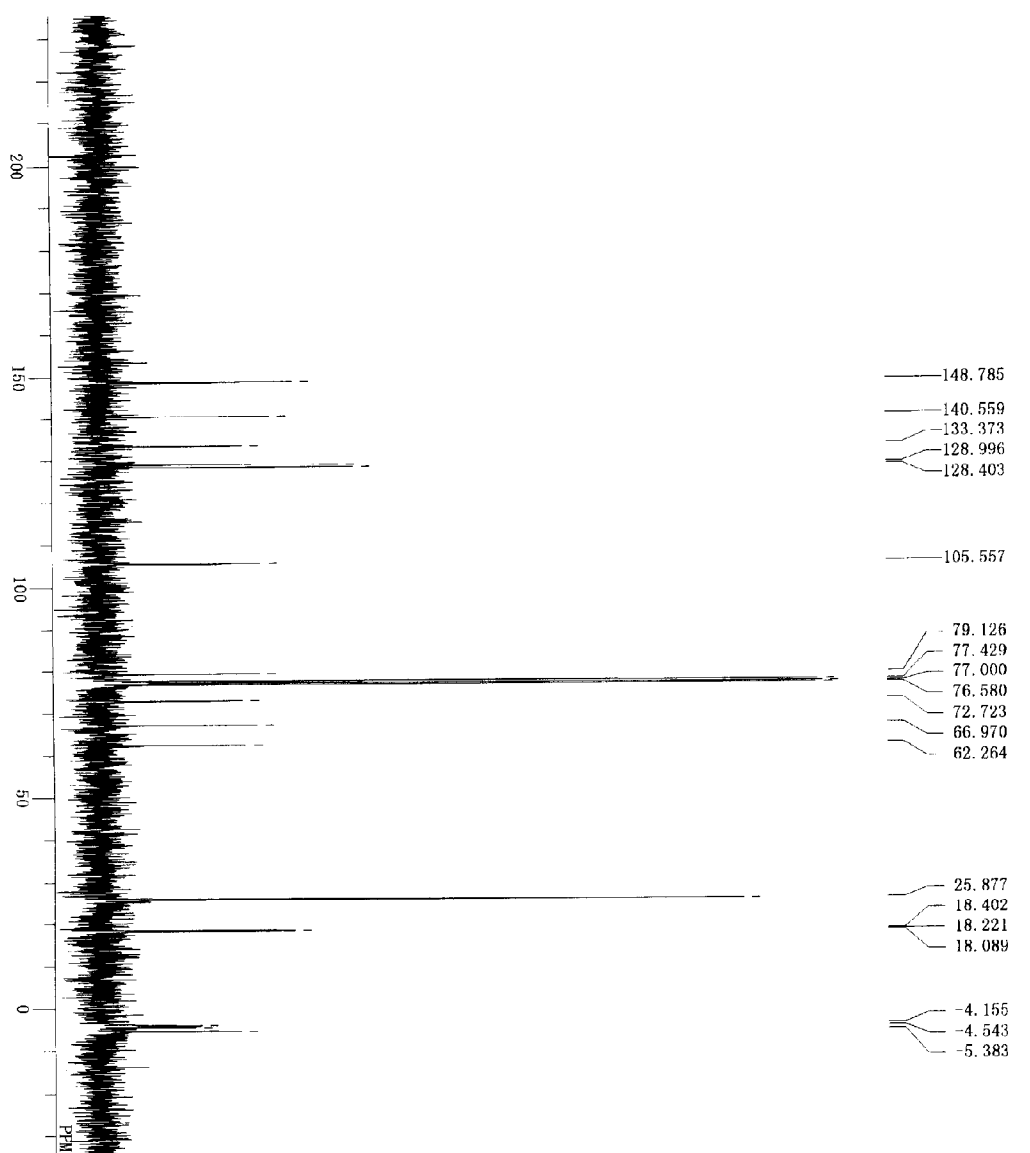
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 ORSET 130.00 KHz
 ORFIN 1150.0 Hz
 POINT 32768
 FREQU 8000.0 Hz
 SCANS 8
 ACQTM
 PD 4.096 sec
 PW1 1.551 sec
 IRATN 6.1 us
 511
 20.8 c
 CDCL3
 SLANT 0.00 ppm
 EXREF 0.12 Hz
 BF 11
 RGAIN



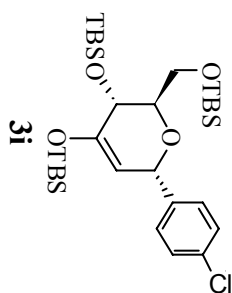


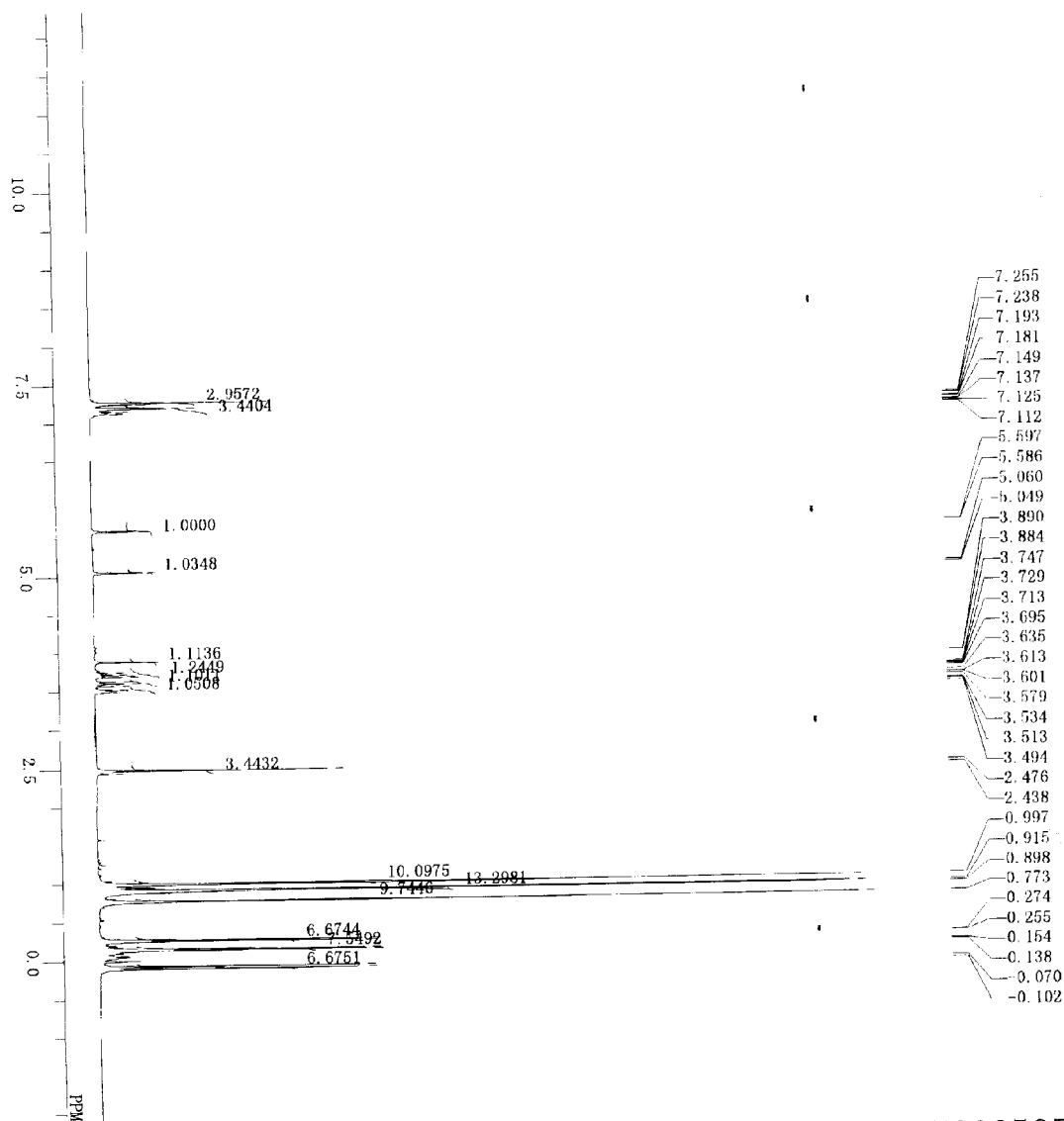
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 OPRN 1840.0 Hz
 POINT 32768
 PREQU 20408.1 Hz
 SCANS 64
 ACQIM 1.606 sec
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 TRATN 511
 CTEMP 20.3 c
 SLVNT CDCl3
 EXREF 77.00 ppm
 BF 2.00 Hz
 RGAIN 24



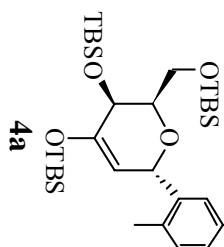


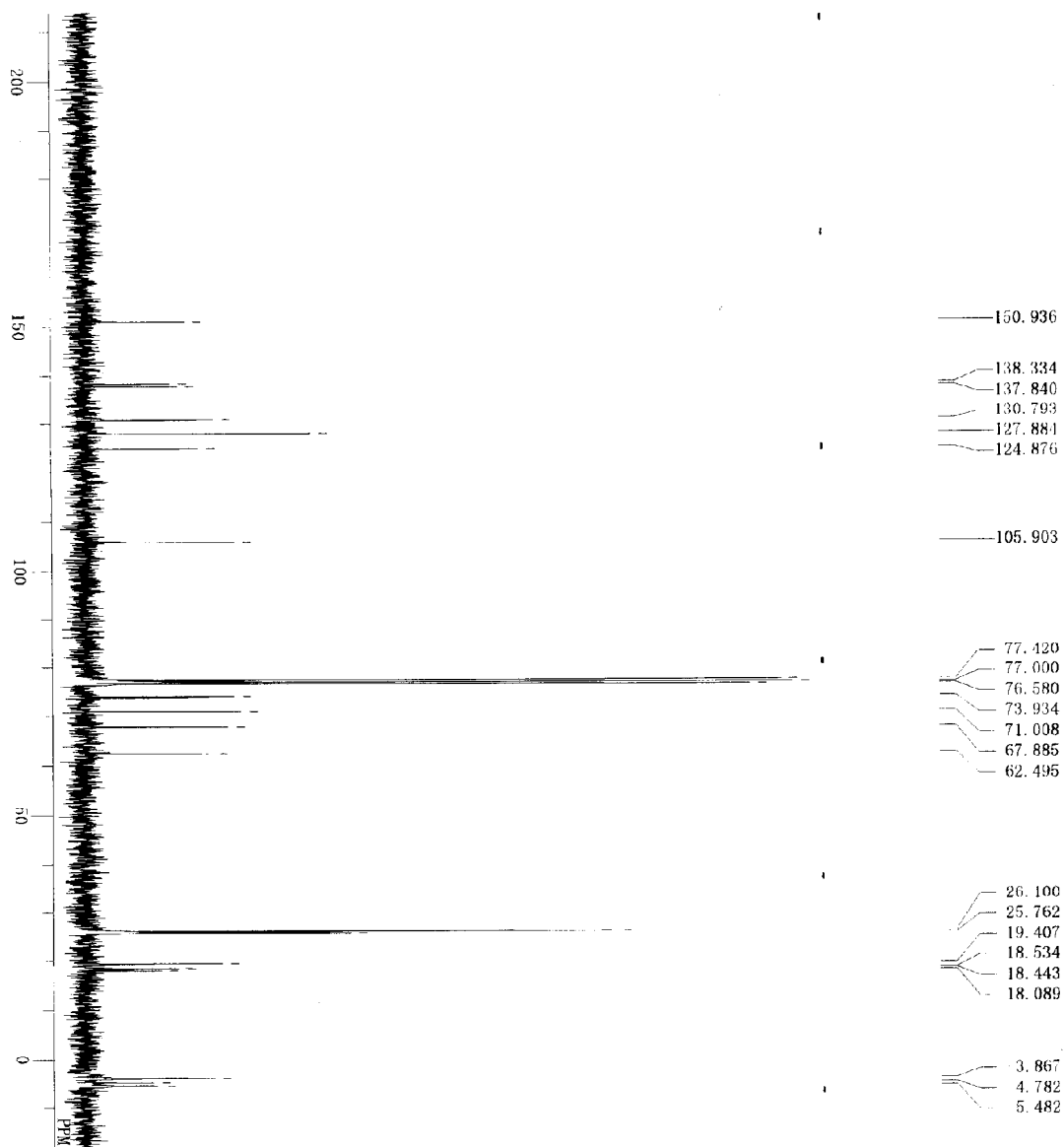
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 ORFREQ 75.45 MHz
 ORSET 124.00 KHz
 ORFLN 1840.0 Hz
 POINT 32768
 FREQ0 20408.1 Hz
 SCANS 65
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 CTIMP 20.7 e
 SLVNT CDCL3 77.00 ppm
 EXREF BF 2.00 Hz
 RGAIN 19



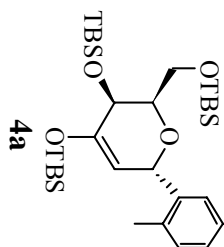


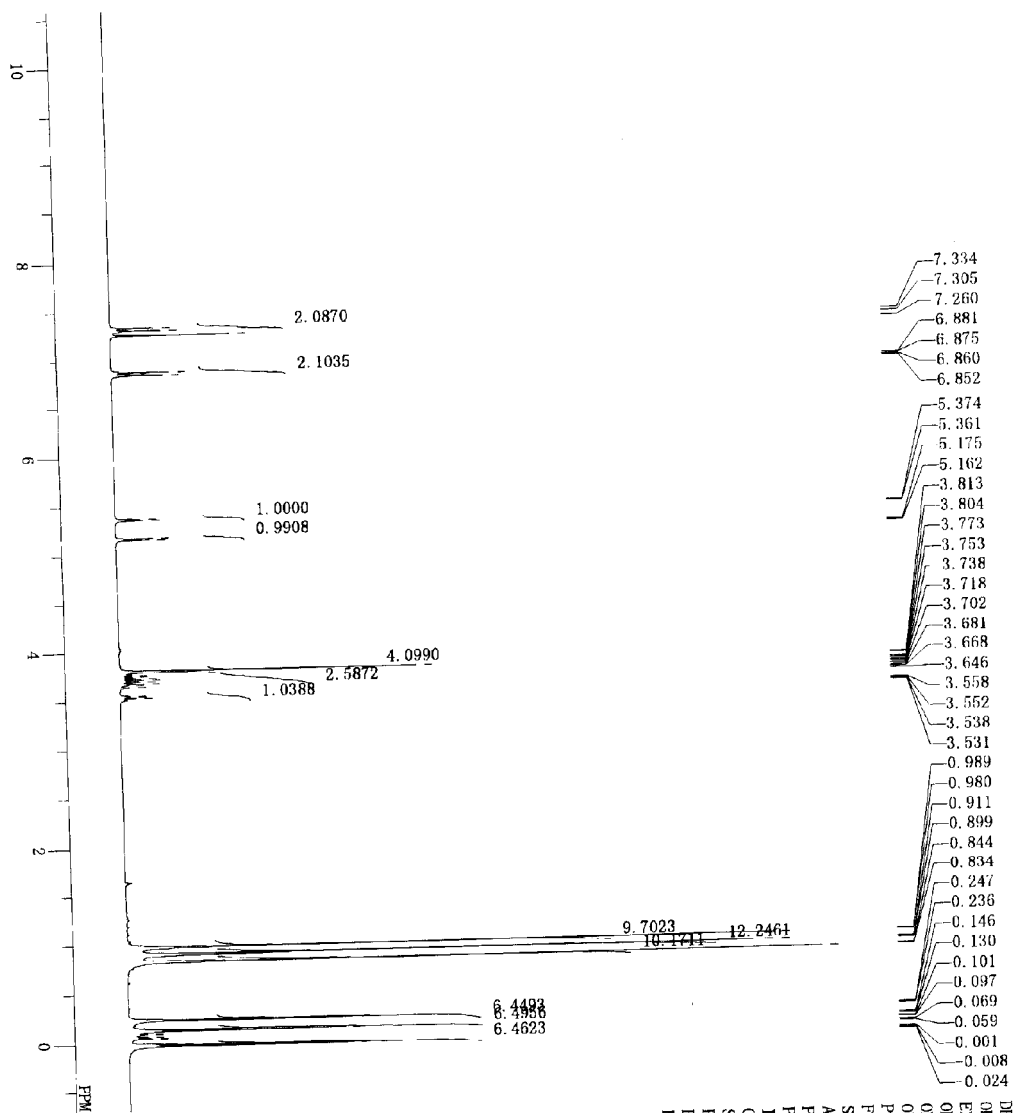
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 09SET 130.00 MHz
 09FLN 1150.0 Hz
 POINT 32768
 FREQU 8000.0 Hz
 SCANS 8
 ACQTM 4.096 sec
 PD 1.551 sec
 PUL 6.1 us
 511
 TRATN 19.0 c
 CTMP
 SOLVT CDCL3
 EXREF 0.100 ppm
 BR 0.12 Hz
 RGAIN 13



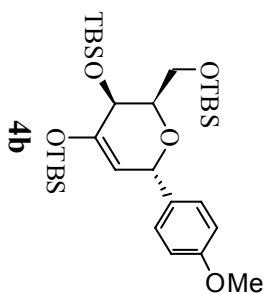


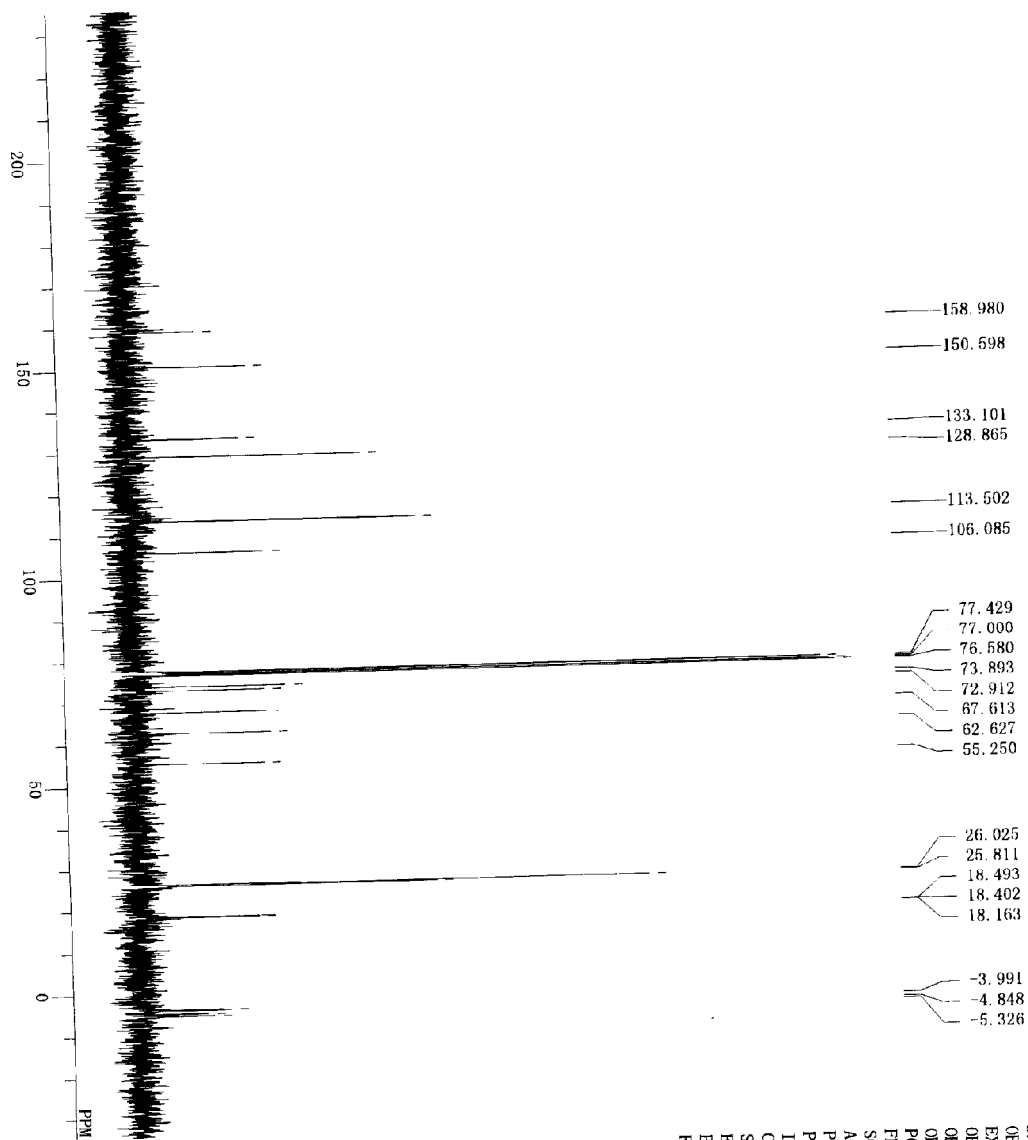
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 FREQU 20408.1 Hz
 SCANS 100
 ACQTM 1.606 sec
 PD 1.394 sec
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 SLVNT CDCL3
 EXREF 77.00 ppm
 BF 2.00 Hz
 RGAIN 25



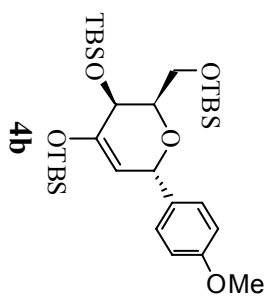


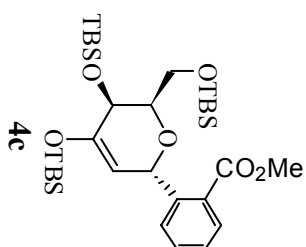
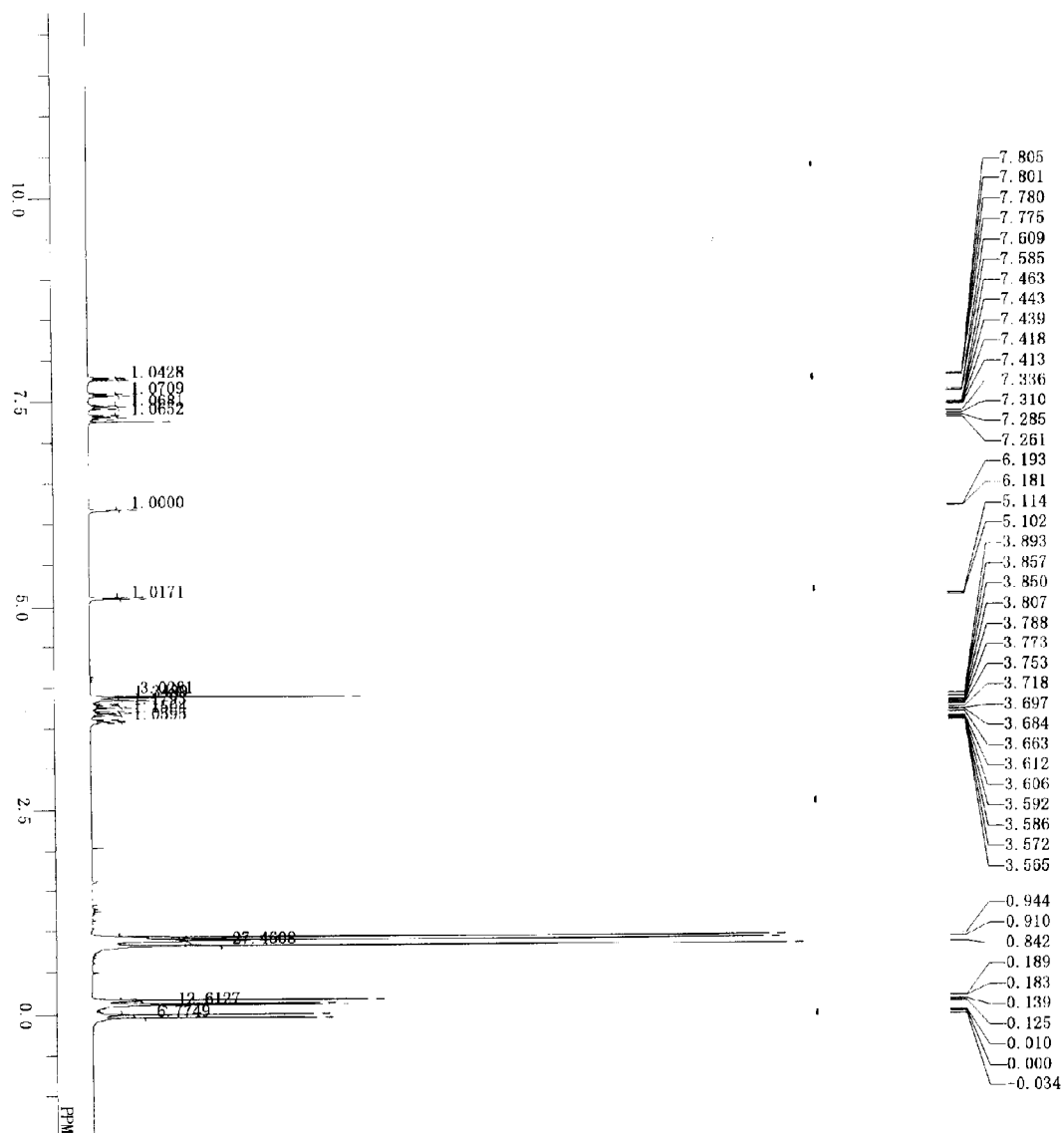
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 EXMOD NON
 ORPRQ 300.40 MHz
 ORSEF 130.00 MHz
 ORPIN 1150.0 Hz
 POINT 32768
 FREQJ 8000.0 Hz
 SCANS 8
 ACQTM 4.096 sec
 PD 1.561 sec
 Pw1 6.1 us
 TRATN 511
 CTMP 18.4 c
 CDCL3 7.26 ppm
 EXREF 0.12 Hz
 RF 12
 RGAIN



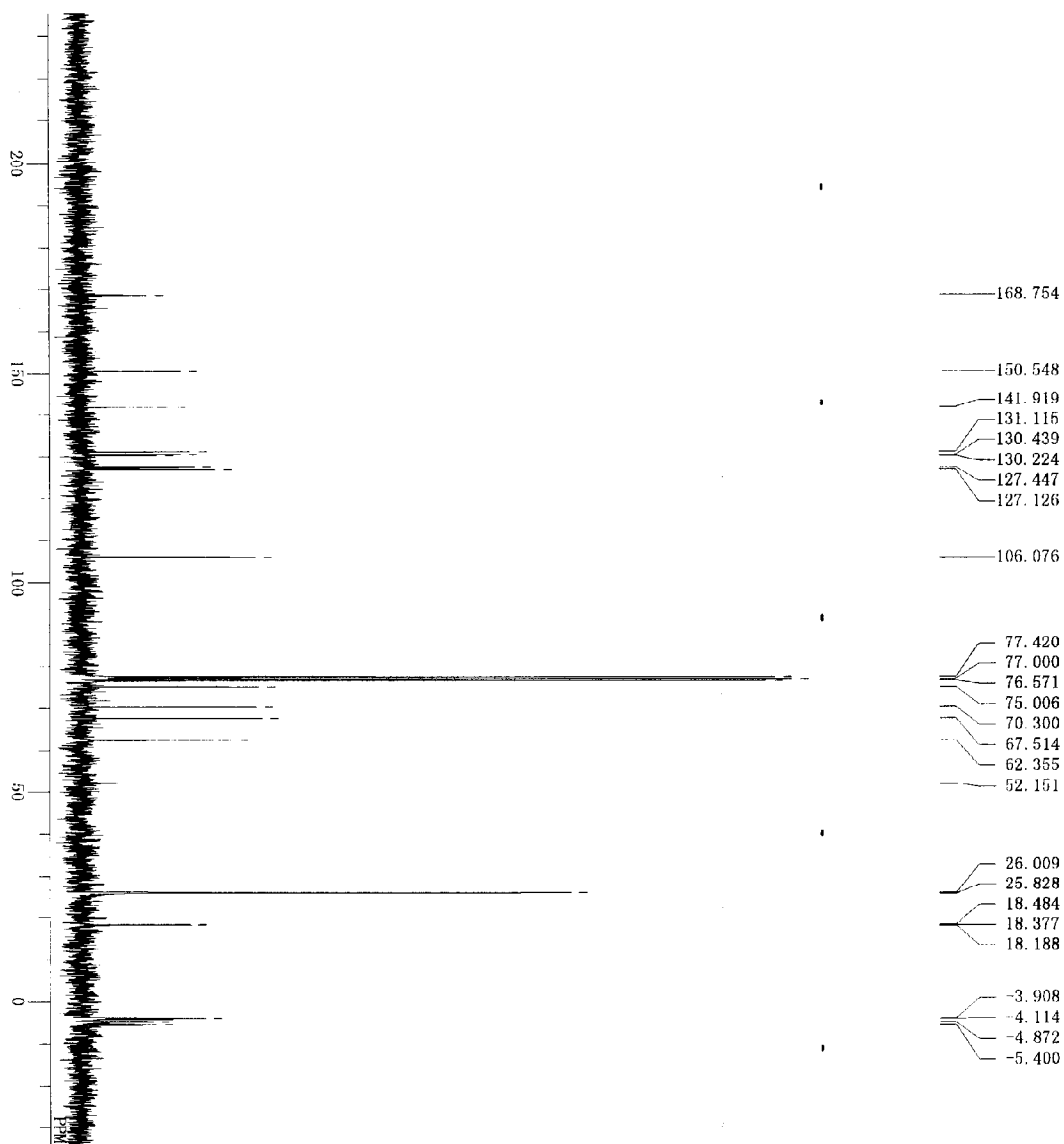


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 OBNUC 13C
 EXM0D BCM
 OBRRO 75.45 MHz
 OBSET 124.00 kHz
 OBFIN 1840.0 Hz
 POINT 32768
 FREQU 20408.1 Hz
 SCANS 80
 ACQTM 1.608 sec
 PD 1.394 sec
 PM1 4.2 us
 IRATN 511
 CTEMP 19.0 c
 SLVNT CMC13
 EXREF 77.00 ppm
 BR 2.00 Hz
 RGAIN 18

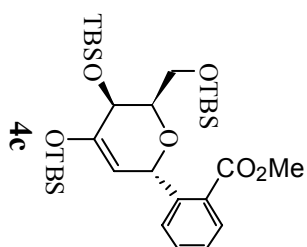




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 EXMOD NON
 OBSREQ 300.40 MHz
 OBSRET 130.00 MHz
 OBSPTN 1150.0 Hz
 POINT 32768
 FREQD0 8000.0 Hz
 SCANS 8
 ACQTM 4.096 sec
 PD 1.651 sec
 PM1 6.1 us
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 CTEMP 22.6 c
 SLVNT CDCL3
 EXRBF 7.26 ppm
 RF 0.12 Hz
 RGAIN 14

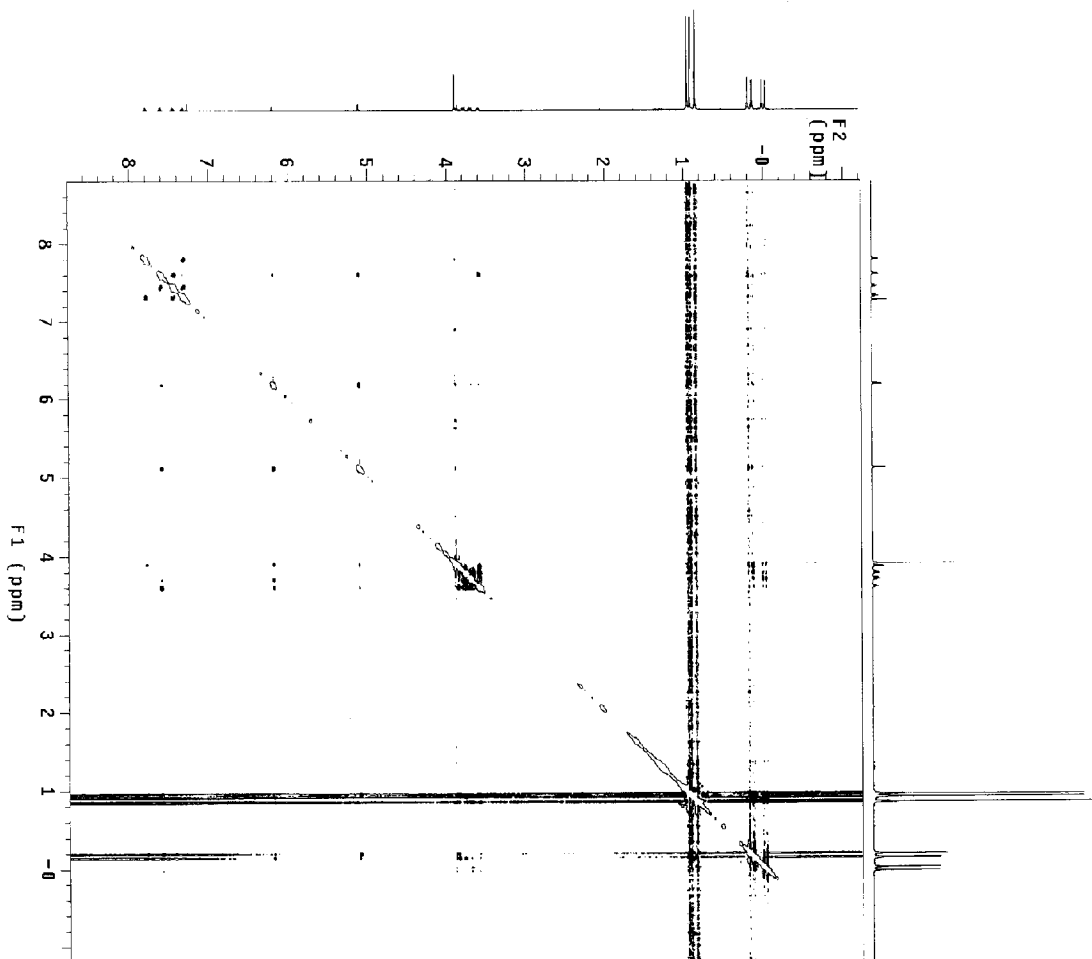
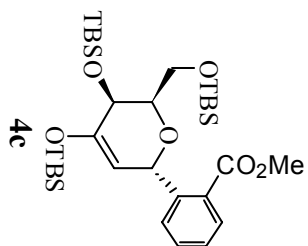


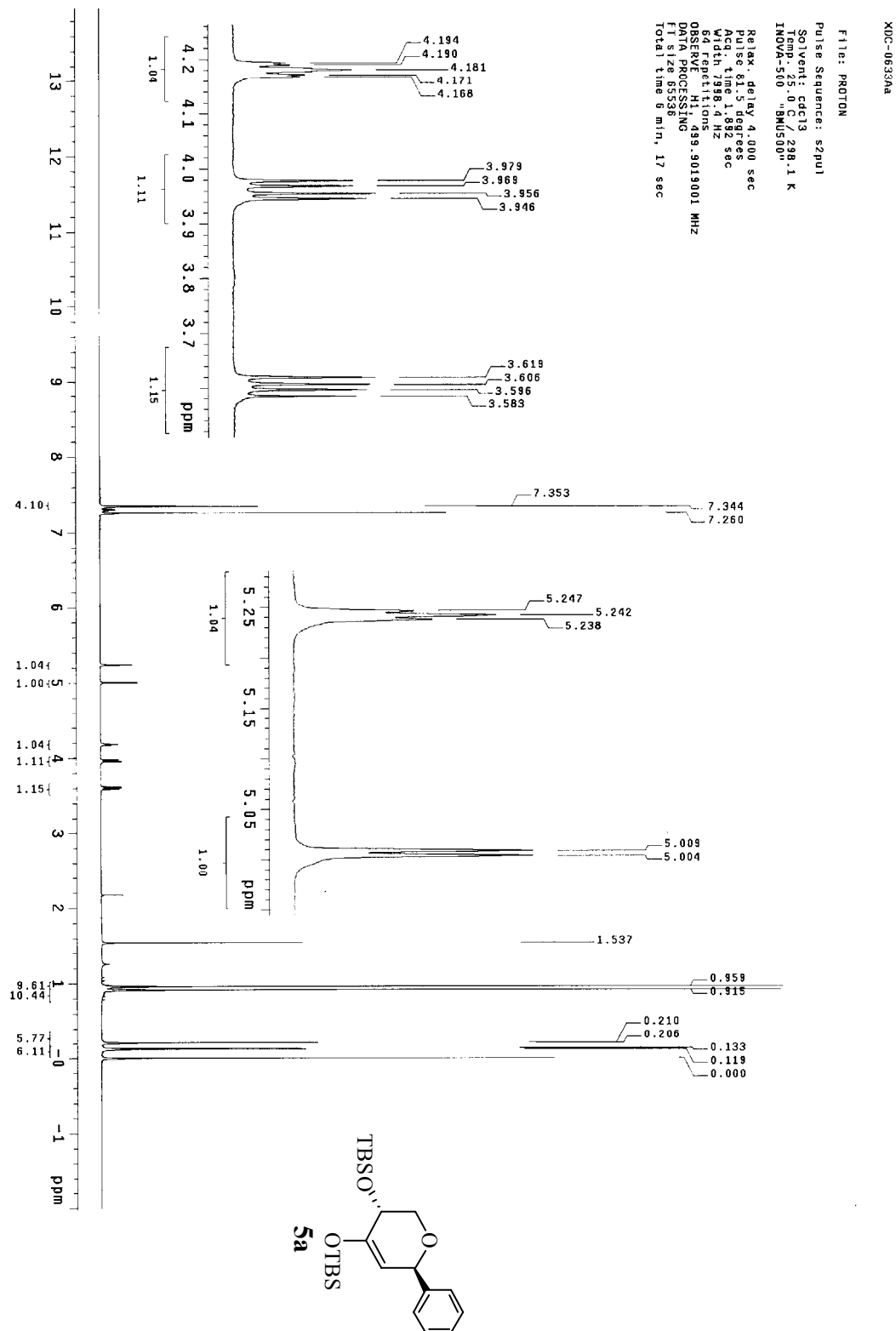
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 EXMOD ECM
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 OBSSET 124.00 KHz
 ORFIN 1840.0 Hz
 POINT 32768
 PREQU 20408.1 Hz
 SCANS 177
 ACQTM 1.606 sec
 PD 1.394 sec
 PW1 4.2 us
 IRAIN 511
 CTAMP 23.2 c
 CDCL3 77.00 ppm
 SLVNT EXREF
 BF 2.00 Hz
 RGAIN 25

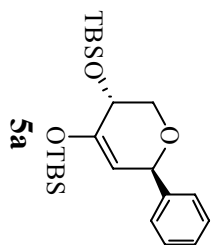
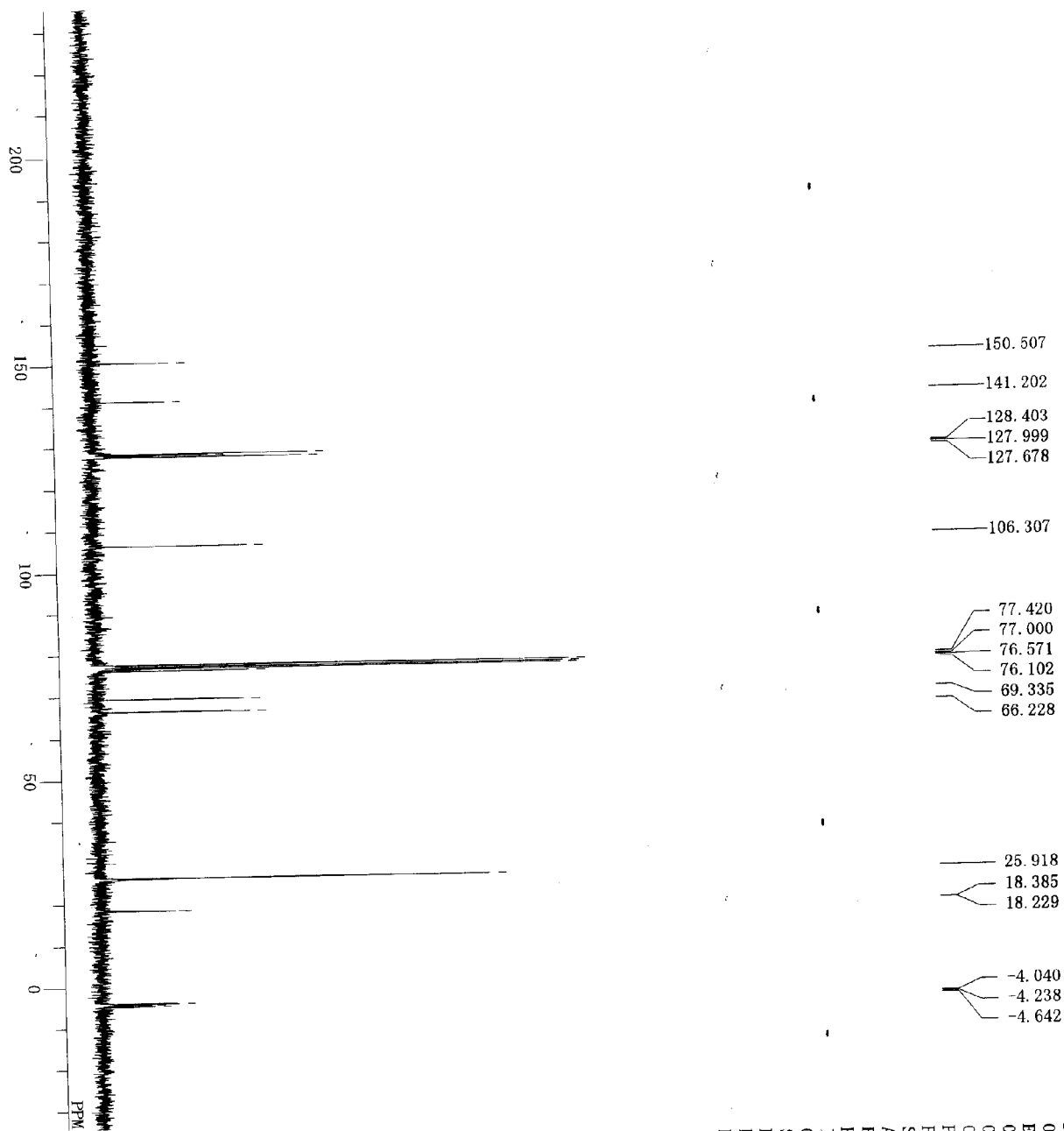


L007-6a

File: PR07ON
Pulse Sequence: NOESY
Solvent: cdcl3
Temp: 29.0 C/298.1 K
INSTR: spect
NUC1: 13C
Relax: delay 1.000 sec
Mrg: 0.500 sec
Acq: time 0.204 sec
Width: 5007.8 Hz
2D Width: 5007.8 Hz
32 repetitions
2 x 320 increments
OBSERVED: 13C, 99.5, 5013000 MHz
DURATION: 1.000 sec
F1 DATA PROCESSING
Gauss apodization: 0.037 sec
FT size: 4096 x 4096
Total time: 9 hr, 52 min, 20 sec



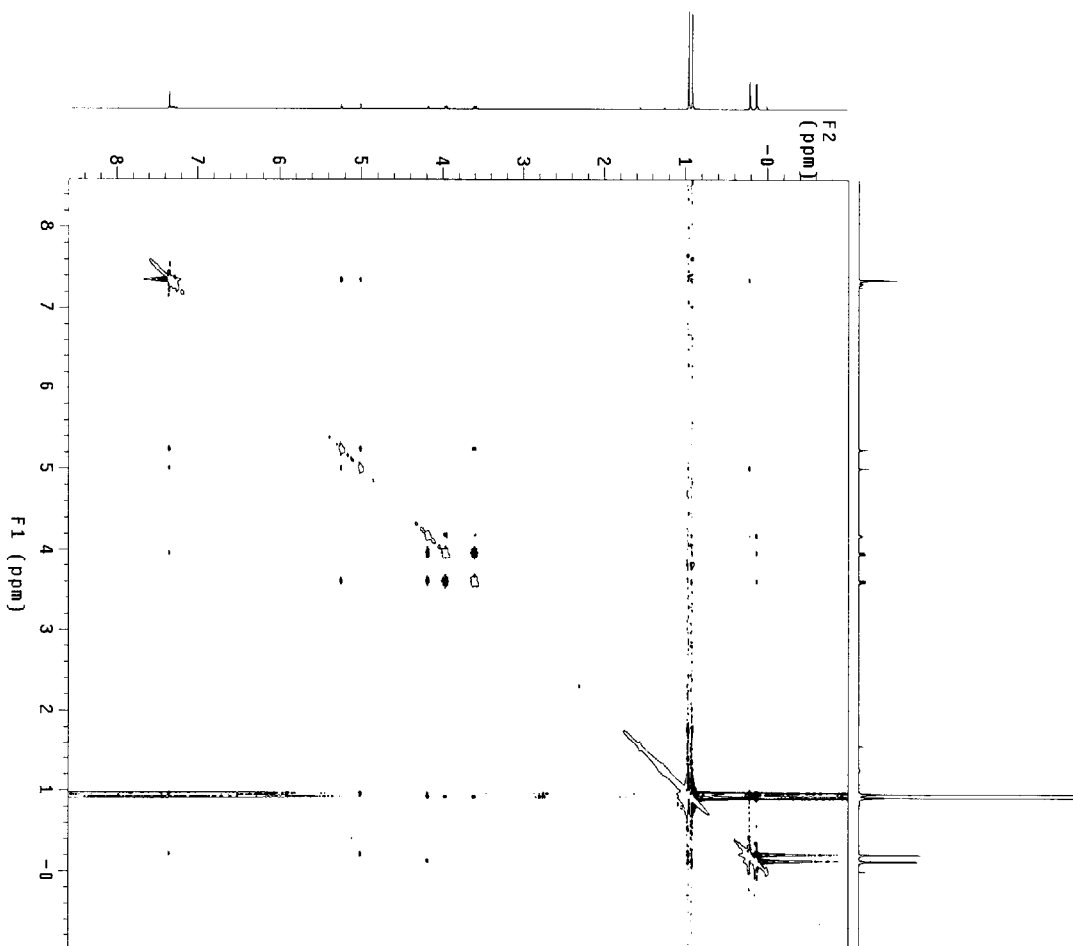
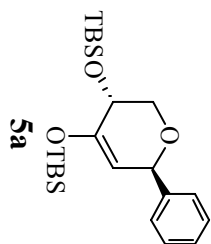


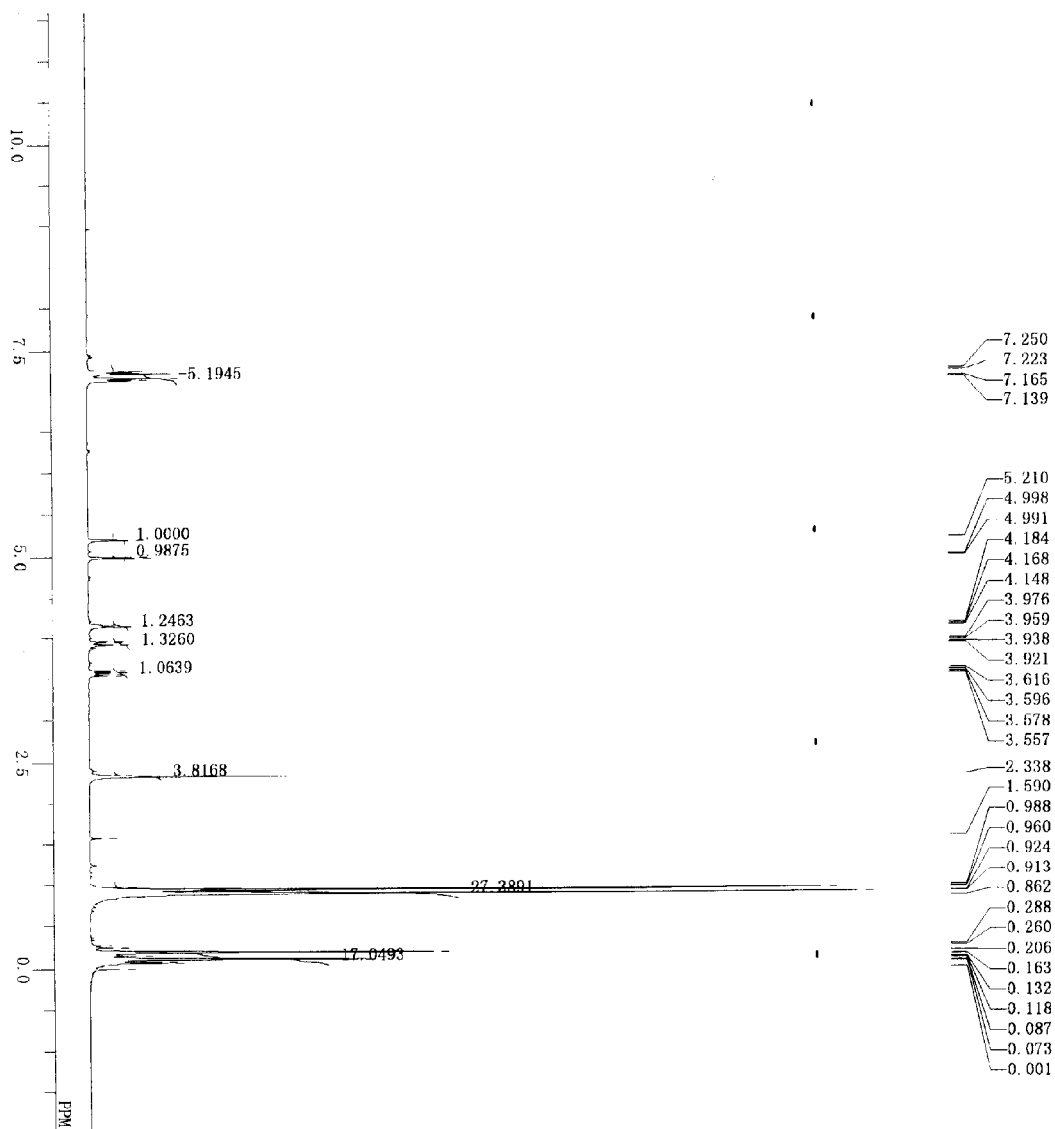


DEFILE D:\#新山\XDC\XDC-06334A-C.ALS
 QENUC 13C
 EXMOD BCM
 OBSFREQ 75.45 MHz
 OBSSET 124.00 kHz
 OBFIN 1840.0 Hz
 POINT 32768
 FREQQU 20408.1 Hz
 SCANS 209
 ACQTM 1.606 sec
 PD 1.394 sec
 PM1 4.2 us
 TRATN 511
 CTMP 23.7 c
 SILVNT
 EXREF CDCL3 77.00 ppm
 BF 2.00 Hz
 RGAIN 25

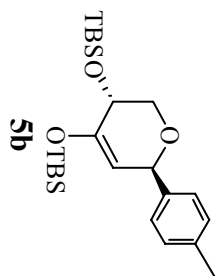
XDC-06330A

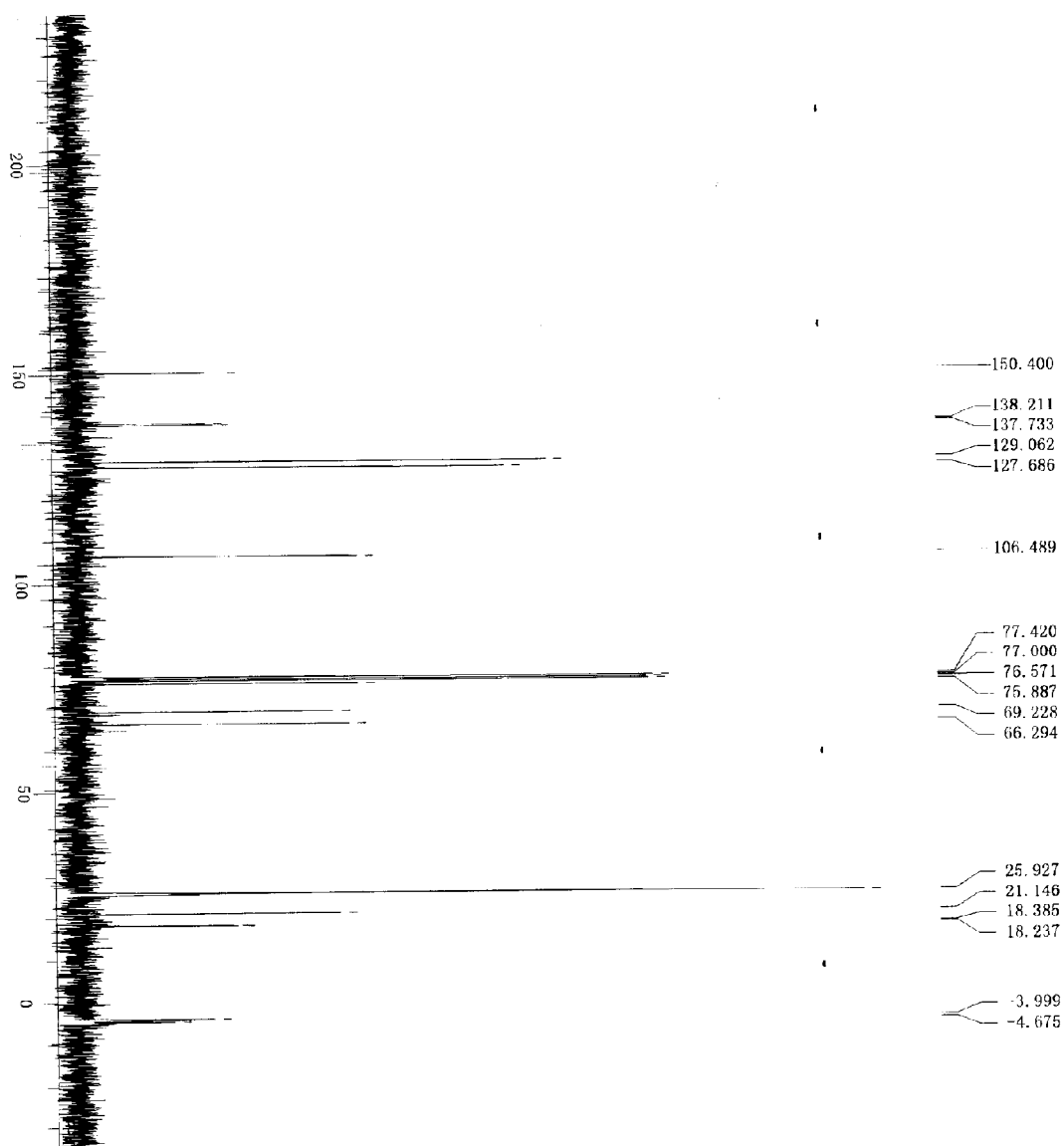
File: PROTON
Pulse Sequence: NOESY
Solvent: cdcl3
INSTRUM: spect
PROBHD: 5mm 1H/13
Relax. delay: 1.000 sec
Mixing: 0.550 sec
Acq. time: 0.213 sec
Width: 4796.7 Hz
2D Width: 4796.7 Hz
2D Repetitions: 20
Observed: 1100 points
DATA PROCESSING
Gauss apodization: 0.099 sec
F1 DATA PROCESSING
Gauss apodization: 0.028 sec
F2 size: 1099
Total time: 12 hr, 18 min, 46 sec



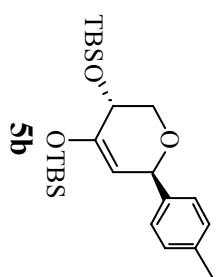


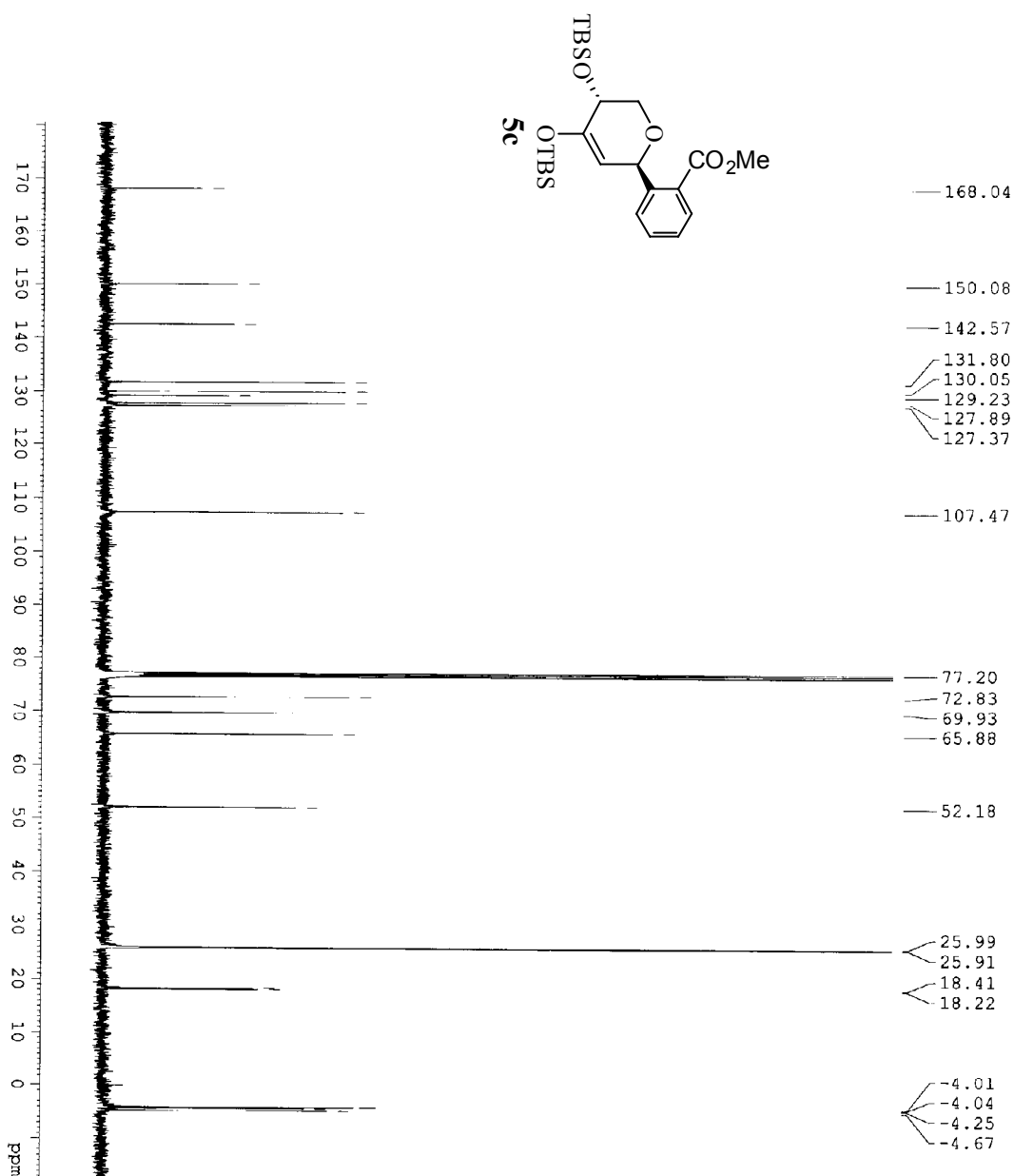
DEFILE D:\叶新山\NMR\009-13A-H.ALS
 ORNLIC 1H
 EXMDC NON
 ORPRQ 300.40 MHz
 ORSET 130.00 KHz
 ORFTN 1150.0 Hz
 POINT 32768
 PRFRQ 8000.0 Hz
 SCANS 8
 ACQTM 4.096 sec
 PD 1.551 sec
 PUL 6.1 us
 IRFTN 511
 CTENP 23.2 c
 SLVNT CDCL3
 EXREF 0.00 ppm
 BF 0.12 Hz
 RGAIN 13





DP1LE D:\H1 新山\NMR\008-13A.C.ALS
 ORNDC 13C
 EXMUD BCM
 OBRQA 75.45 MHz
 OBRSEI 124.60 KHz
 OBRFIN 1840.0 Hz
 PULPRO 32768
 FREQQU 20408.1 Hz
 SCANS 112
 ACQTM 1.606 sec
 PD 1.394 sec
 PVI 4.2 us
 IRATN 511
 CTEMP 23.4 c
 SLVNT CDCL3 77.00 ppm
 EXRBR BF 2.00 Hz
 RGAIN 25





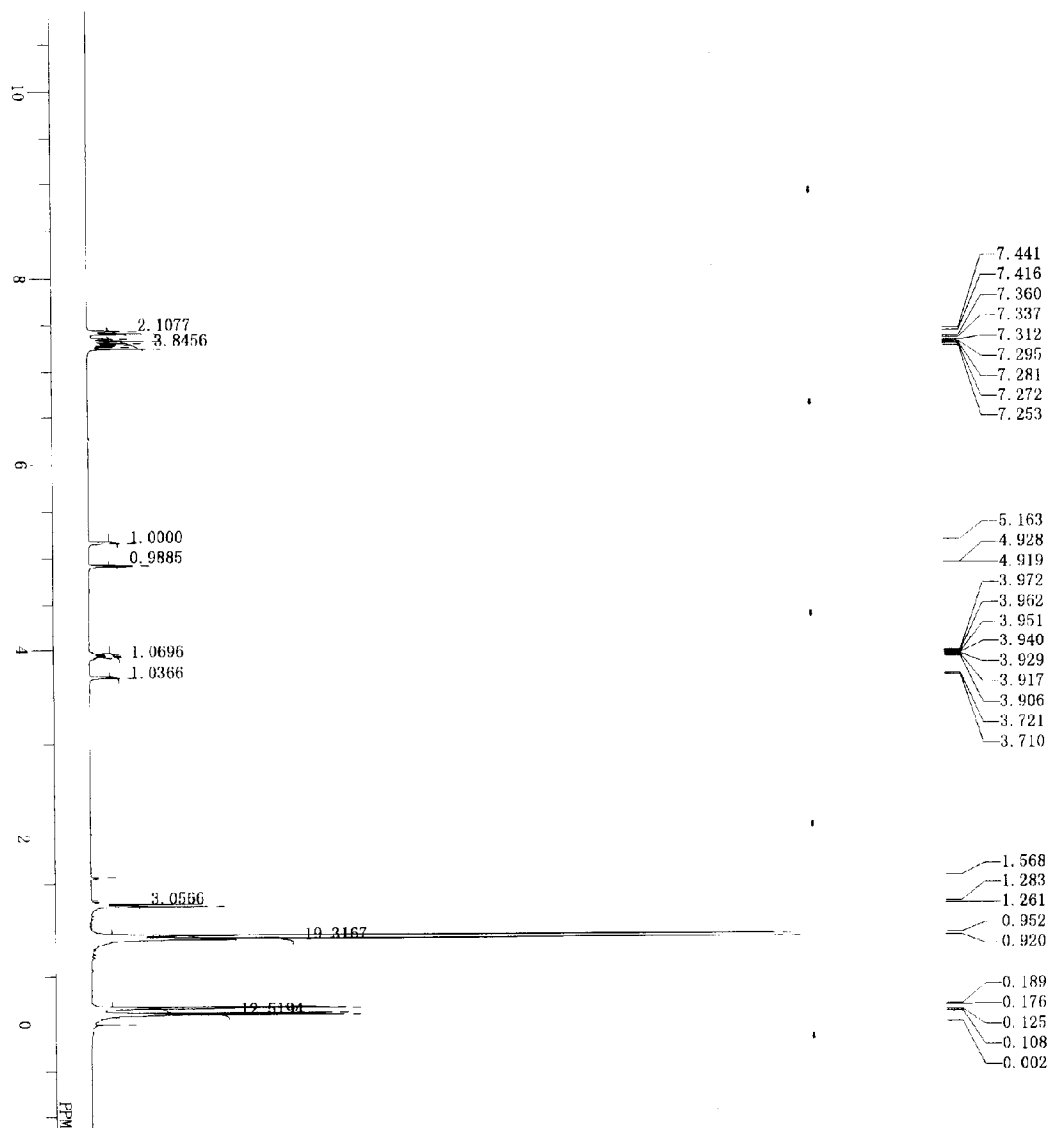
```

=====
NAME          L009-6a
EXPNO         2
PROCNO        1
Date_         20081212
Time_         9.45
INSTRUM       spect
PROBHD        5 mm PABUL 13C
PULPROG       zgpg30
TD            65536
SOLVENT       CDCl3
NS            1360
DS            2
SMH           28409.092 Hz
FTDRES        0.433488 Hz
AQ            1.1534896 sec
RG            2030
DM            17.600 usec
DE            6.50 usec
TE            295.3 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0           1

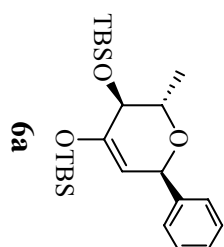
=====
CHANNEL F1
NUC1          13C
P1            8.80 usec
PL1          -1.00 dB
PL1W         44.90434265 W
SFO1         100.6278593 MHz

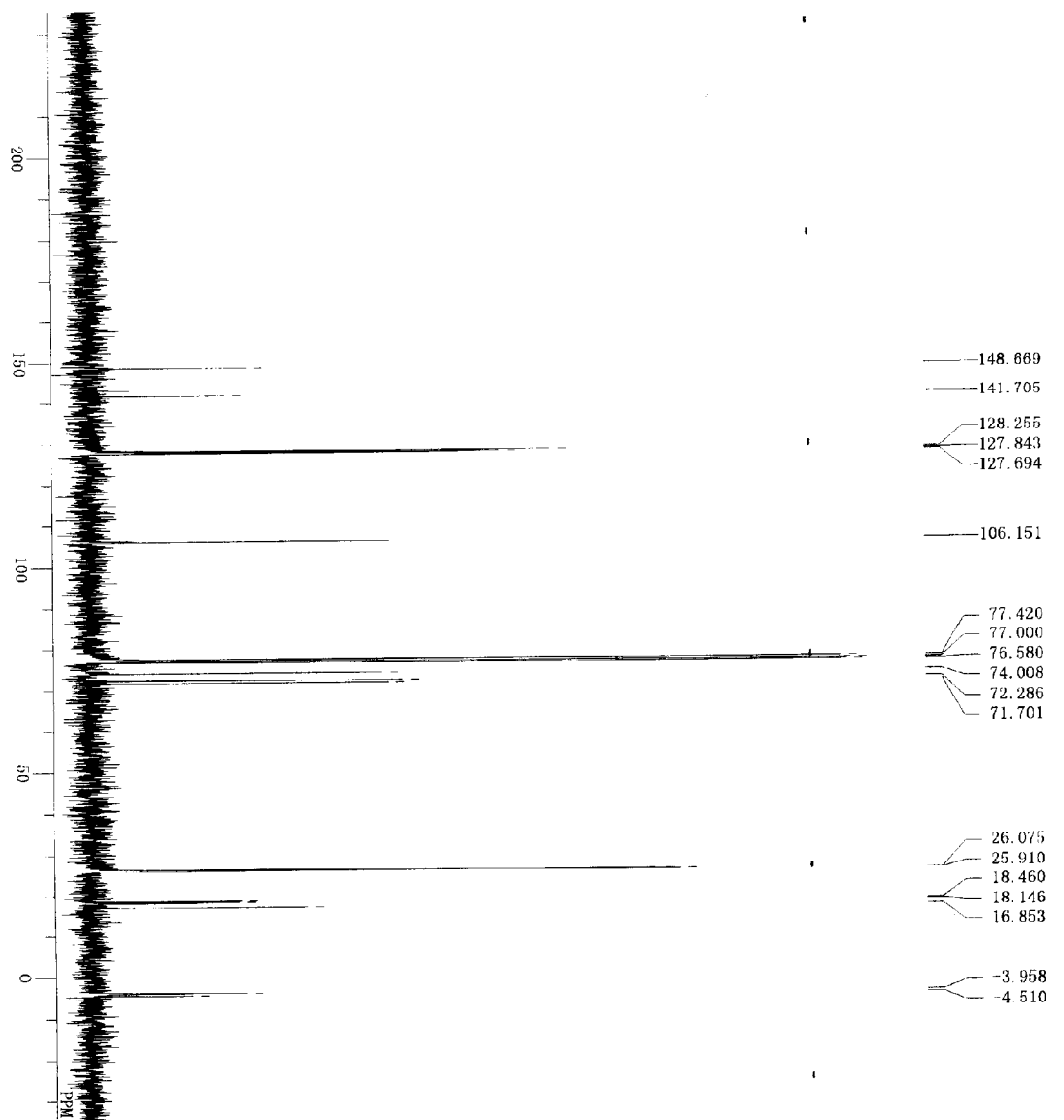
=====
CHANNEL F2
CPDPRG2      waltz16
NUC2          1H
PCPD2        80.00 usec
PL2           0.00 dB
PL12         16.05 dB
PL13         20.00 dB
PL1W         9.46981144 W
PL1ZW       0.23514807 W
PL13W       0.09469812 W
SFO2         400.1516006 MHz
SI           32768
SE           100.6177989 MHz
MWDW         EM
SSB          0
GB           2.00 Hz
PC           1.40
    
```



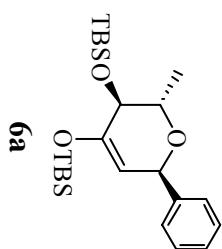


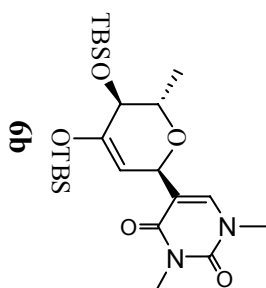
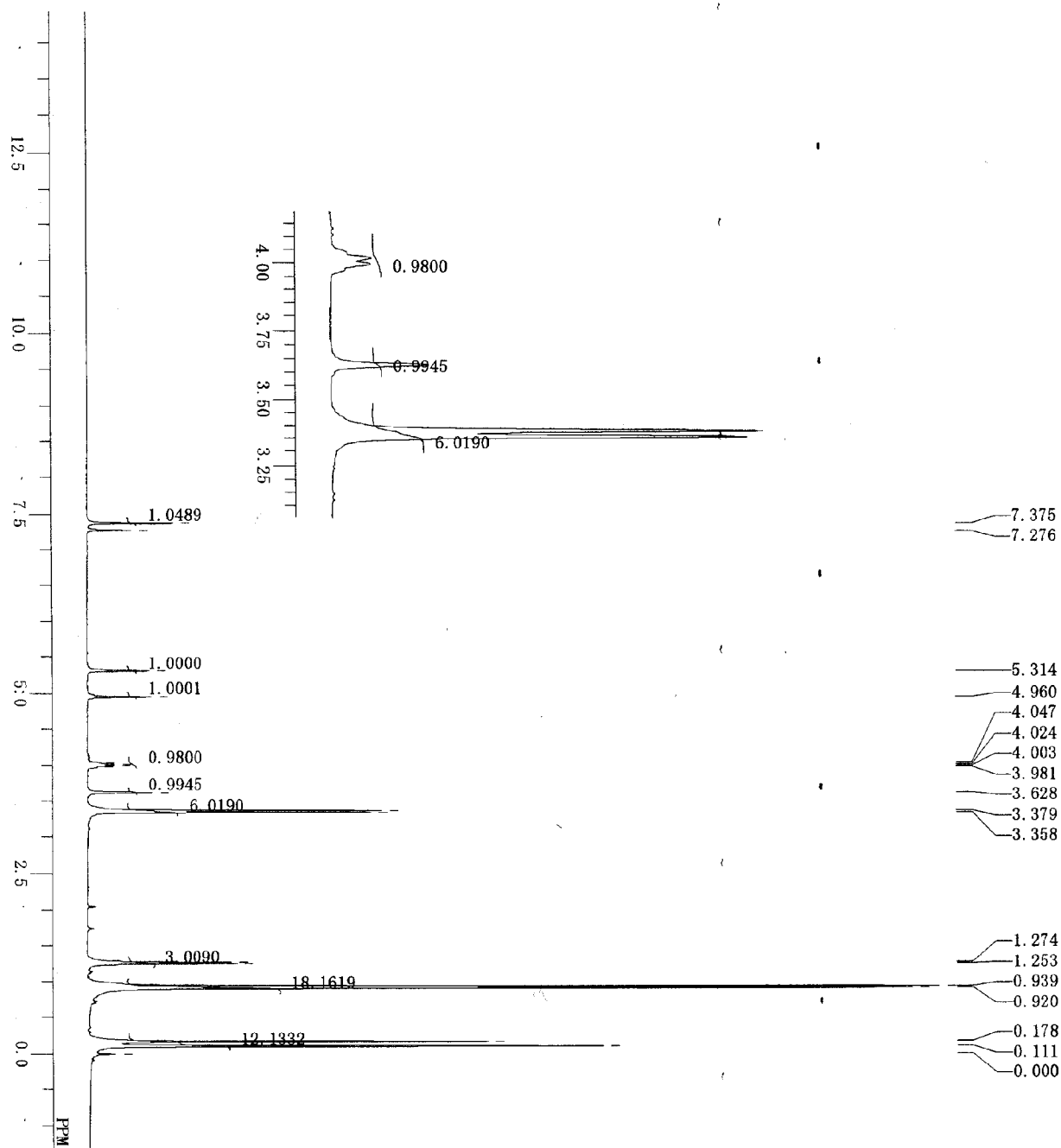
DE-FILE D:\4-新山\1HN\1008-1A-H-ALS
 ORBNUC 1H
 EXMPOD NON
 ORBTR0 300.40 MHz
 ORBSET 130.00 kHz
 ORBITN 1150.0 Hz
 POINTN 32768
 PREPDU 8000.0 Hz
 SCANS 8
 ACQTM 4.096 sec
 PD 1.561 sec
 PM 6.1 us
 IRATN 511
 CTMPP 22.5 c
 SLVNT CDCl3
 EXREF 0.00 ppm
 BF 0.12 Hz
 RGAIN 13



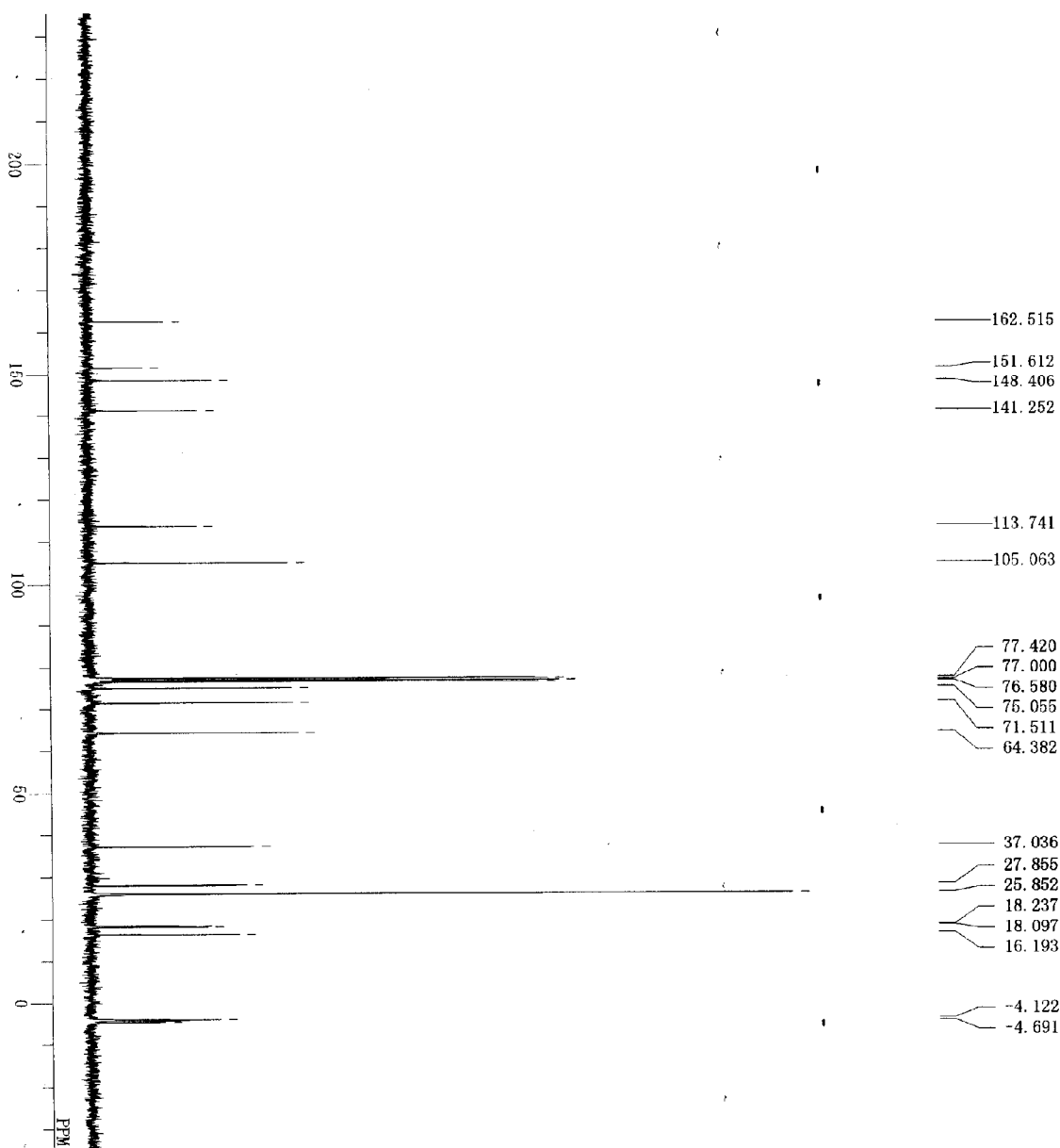


D:\FH\新山\11HH\1008-1A-C.ALS
 DBFILE D:\FH\新山\11HH\1008-1A-C.ALS
 ORBNUC 13C
 EXMOD FOM
 ORBRQ 75.45 MHz
 ORBSET 124.00 KHz
 ORFIN 1840.0 Hz
 POINT 32768
 PREQU 20408.1 Hz
 SCANS 160
 ACQTM 1.606 sec
 PD 1.394 sec
 PM1 4.2 us
 IRATN 517
 CTEMP 22.9 c
 SLVNT CDCl3
 EXREF 77.00 ppm
 BF 2.00 Hz
 RGAIN 17





DFILE D:\叶新山\1HN\008-14A-H.ALS
 ORNUC 1H
 EXMOD NON
 ORFREQ 300.40 MHz
 ORSET 130.00 KHz
 ORPIN 1150.0 Hz
 POINT 32768
 FREQ 8000.0 Hz
 SCANS 8
 ACQTM 4.096 sec
 PD 1.551 sec
 PUL 6.1 us
 IRPIN 511
 CTDMP 21.6 c
 CPCL3
 SLVNT 0.00 ppm
 EXREF 0.12 Hz
 BF 12
 RGAIN



D:\PI新山\13H\1008-14A-C.MS
 DEPT13
 ORNUC 13C
 EXMOD RCM
 ORBRQ 75.45 MHz
 ORSET 124.00 KHz
 ORFIN 1840.0 Hz
 POINT 32768
 FREQU 20408.1 Hz
 SCANS 320
 ACQTM 1.606 sec
 PD 1.394 sec
 PM1 4.2 us
 IRATN 511
 CTEMP 21.7 c
 SLYNT
 EXREF
 BF 77.00 ppm
 RGAIN 25

