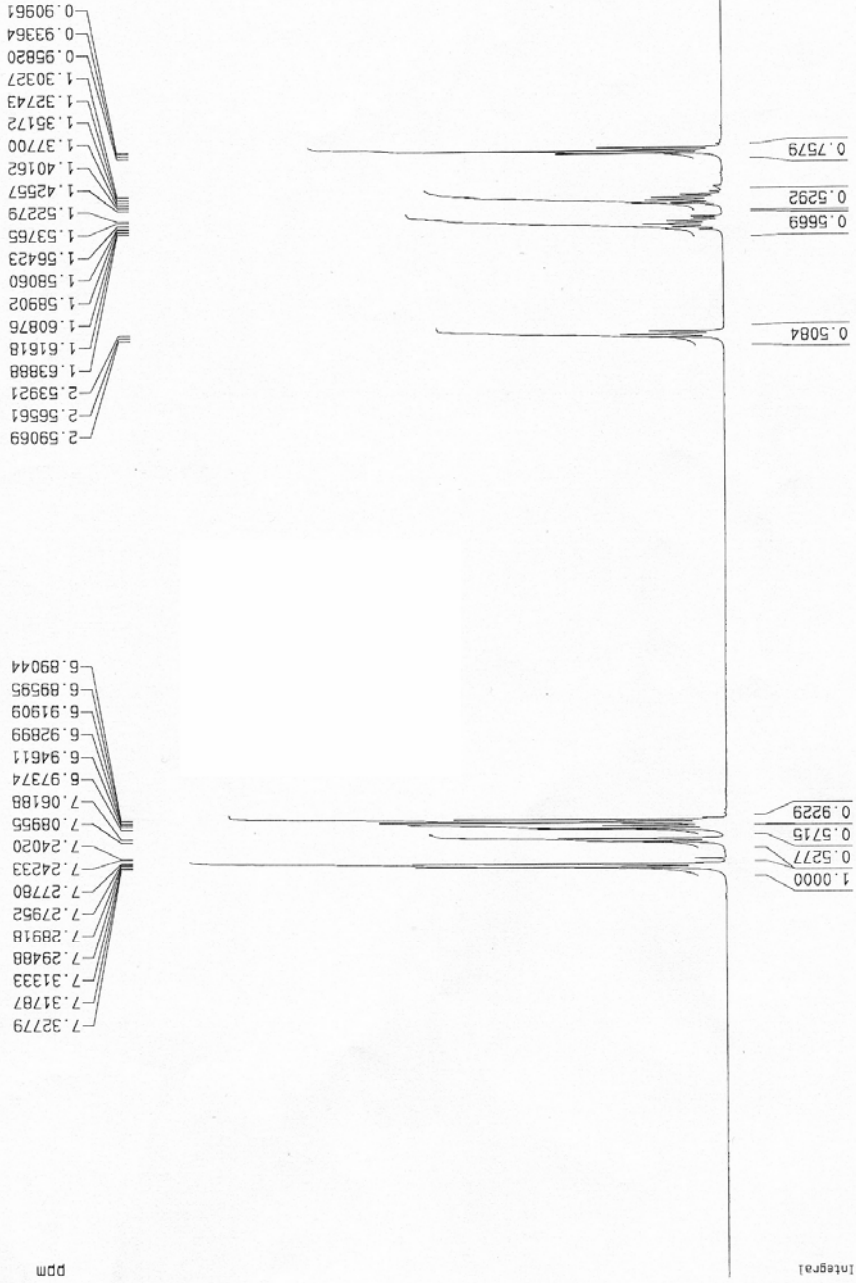


BU-TPA-Bc

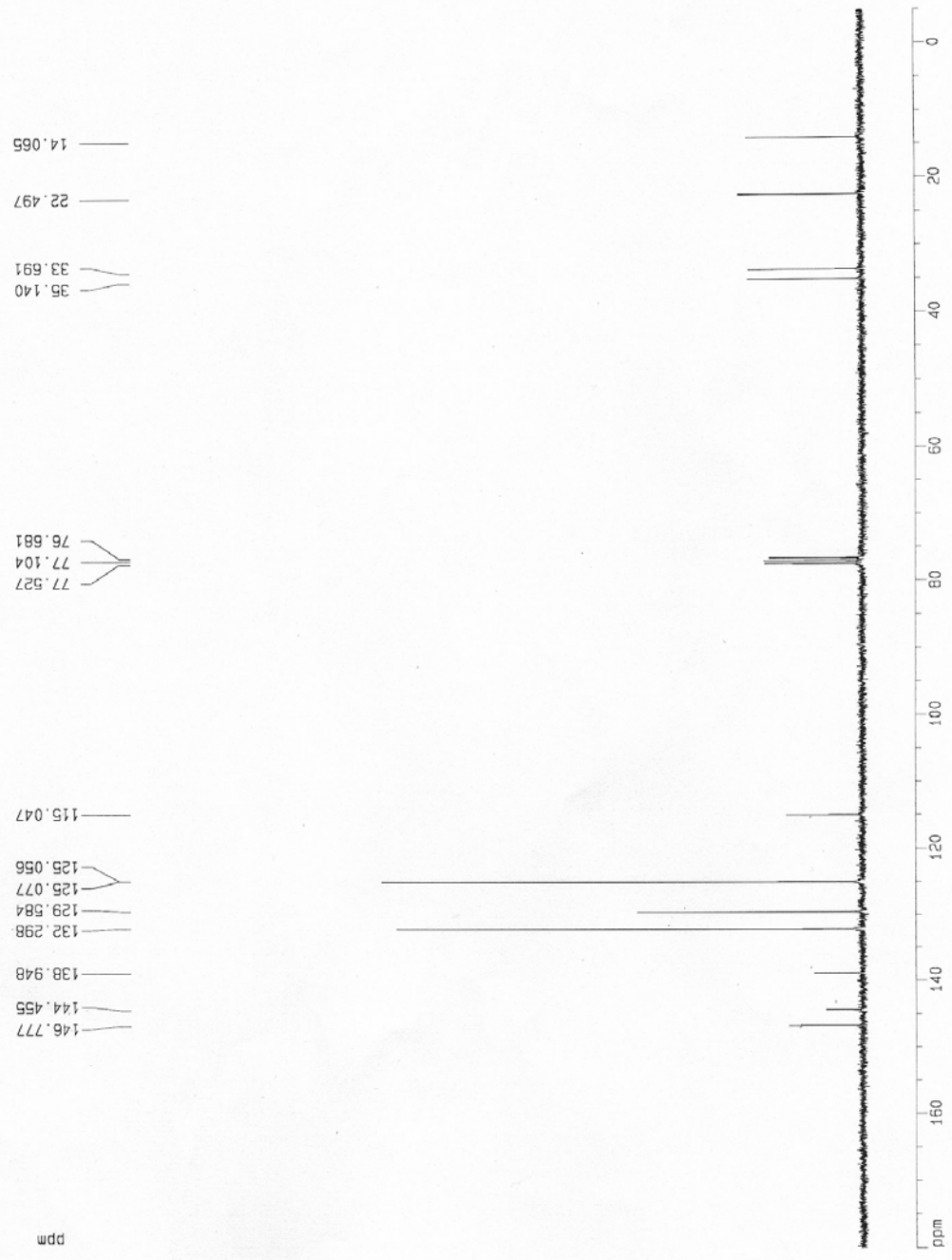


Current Data Parameters
NAME: BU-TPA-Bc
PROCNO: 1
F2 - Acquisition Parameters
Date_ : 20060903
Time : 15.25
PROBHD: 5 mm BBO
PULPROG: zgpg30
PC: 300
SOLVENT: DMSO
NS: 320
DS: 4
AQ: 5.09100000
RG: 320
FIDRES: 0.171420 Hz
AQRES: 0.1671300 Hz
INSTRUM: spect
PROBHD: 5 mm BBO
P1: 11.200 usec
P2: 300.0 usec
P3: 300.0 usec
P4: 1.5000000 sec
P5: 300.000000 sec
P6: 300.000000 sec
P7: 300.000000 sec
PC: 4.00 sec
PCL1: 4.00 sec
F2 - Processing parameters
SI: 500.1364 MHz
WDW: EM
SSB: 0
LB: 0.3 Hz
GB: 0
PC: 1.00
IS MRD P14 parameters
CX MRD P14 parameters
SI: 25.00 cm
P1: 11.000 usec
P2: 300.0 usec
P3: 300.0 usec
P4: -2.500 usec
P5: -500.07 Hz
P6: 300.000000 sec
P7: 300.000000 sec
PC: 0.0000000 sec

附圖 16 化合物 6-1 之 $^1\text{H-NMR}$ 光譜

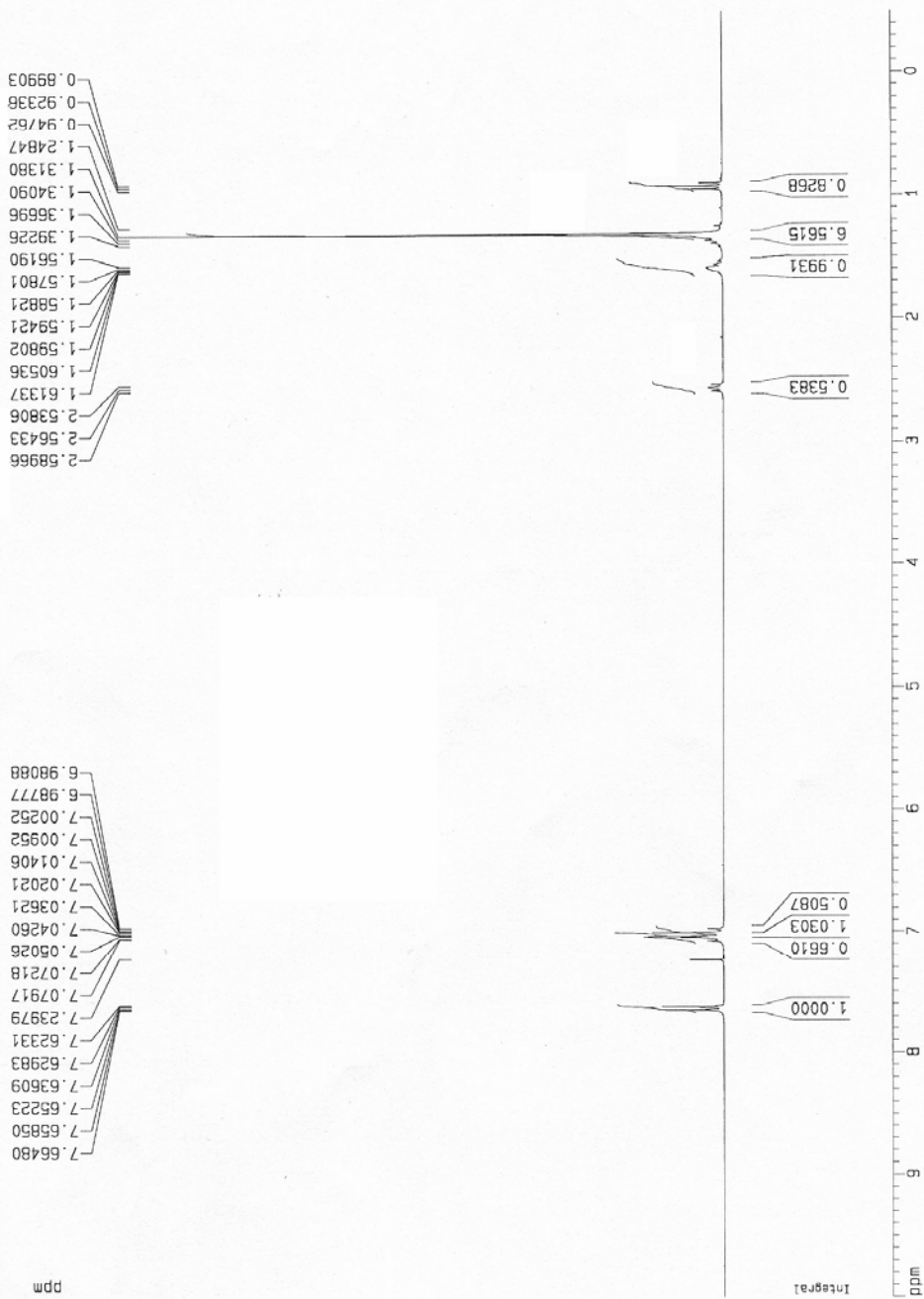
Current Data Parameters
 EXPNO 2
 PROCNO 1
 F2 - Acquisition Parameters
 Date_ 20050523
 Time 15:30
 PROBHD 5 mm MBO
 PULPROG zgpg30
 INSTRUM spect
 SOLVENT Acetone
 NS 197
 DS 4
 SWH 20025.522 Hz
 FIDRES 0.316188 Hz
 AQ 1.4152256 sec
 RG 244.650 usec
 DE 6.50 usec
 TE 300.2 K
 D12 0.50000000 sec
 R13 21.00 sec
 D1 1.50000000 sec
 PCPD2 54.70 usec
 SFO2 300.1315514 MHz
 P1 18.00 sec
 P12 18.00 sec
 P13 13.00 usec
 P14 75.47350000 MHz
 NS21 180
 P11 0.00 sec
 D11 6.00000000 sec
 F2 - Processing parameters
 SI 32768
 SF 75.4630000 MHz
 MD 32
 EQ 1
 LB 1.00 Hz
 GB 0
 SC 0
 MC 1.00
 PC 1.00
 USMR plot parameters
 CP 23.00 sec
 FIP 180.000 ppa
 FI 2300.000 Hz
 FS 8.000 Hz
 FE -377.34 Hz
 PRON 8.61488 ppb/cm
 RSDN 607.01212 Hz/cm

B1-TPA-E1



附圖 17 化合物 6-1 之 ¹³C-NMR 光譜

Butyl-TPA Baro monomer



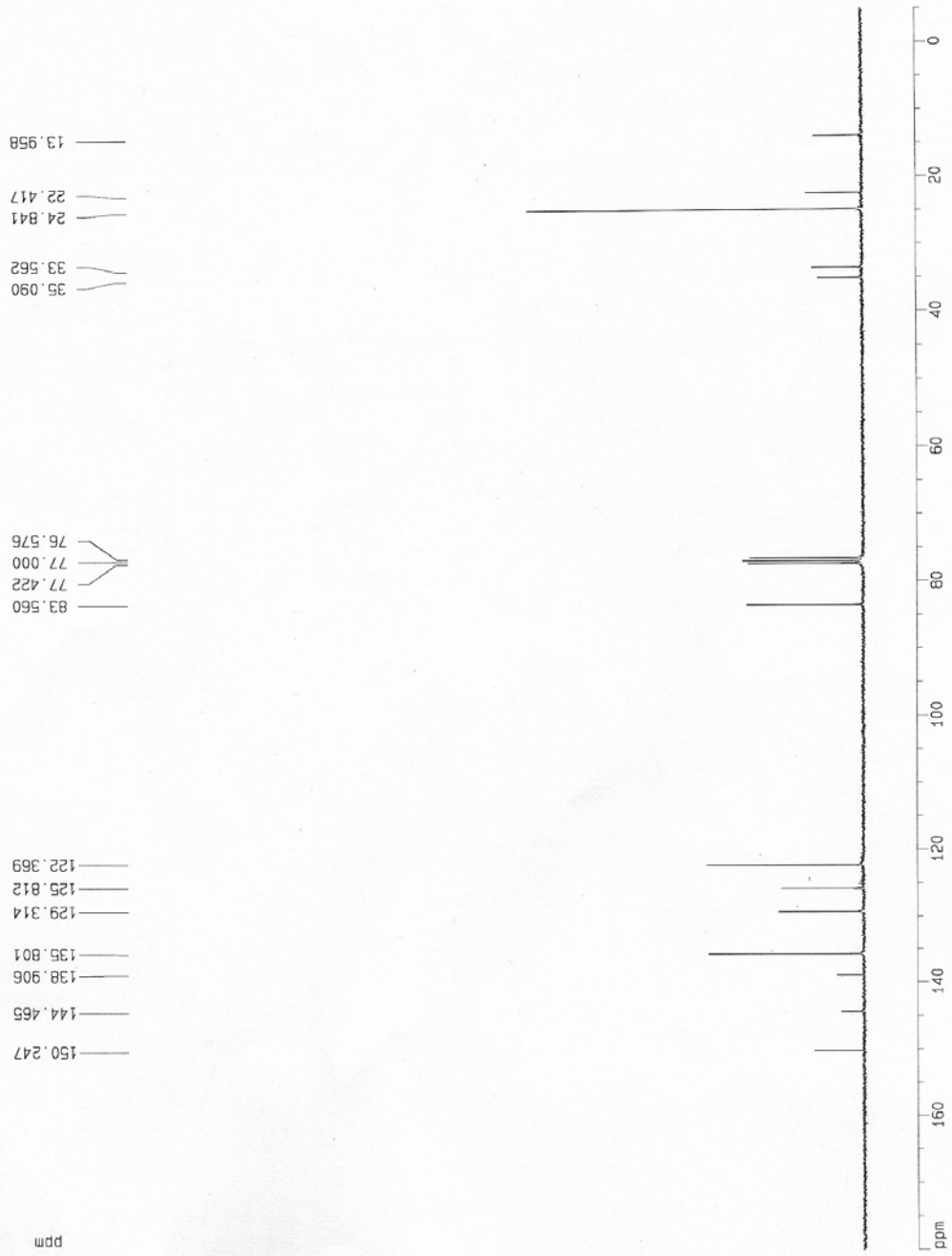
Current Data Parameters
 NAME w080102
 EXPNO 1
 PROCNO 1
 F2 - Acquisition Parameters
 Date_ 20080805
 Time 17:11
 INSTRUM spect
 PROBR2 5 mm QNP
 PULPROG zgpg30
 SOLVENT CDCl3
 NS 20
 DS 4
 SWH 4485.432 Hz
 FIDRES 0.274428 Hz
 AQ 1.861193 Hz
 RG 655
 DQ 111.200 uHz
 DE 6.50 uHz
 TE 300.2 K
 P1 5.40 uHz
 PL 0
 D1 1.50000000 Hz
 NMRZ 300.131313131 MHz
 NUC1 13C
 P1.L -4.00 dB
 R1.L
 F2 - Processing parameters
 SI 320
 SF 300.13509125 MHz
 IN 320
 SN 0
 AS 0
 LB 0.10 Hz
 GB 0
 WB 1.00
 F3 - NMR unit parameters
 NUC2 1H
 P2 10.00000000 MHz
 F4 500.136091 MHz
 F1 500.136091 MHz
 F2 500.136091 MHz
 F3 500.136091 MHz
 PRACH 0.458580000000
 NUC3 157.0187157157 MHz

附圖 18 化合物 6-2 之 ¹H-NMR 光譜

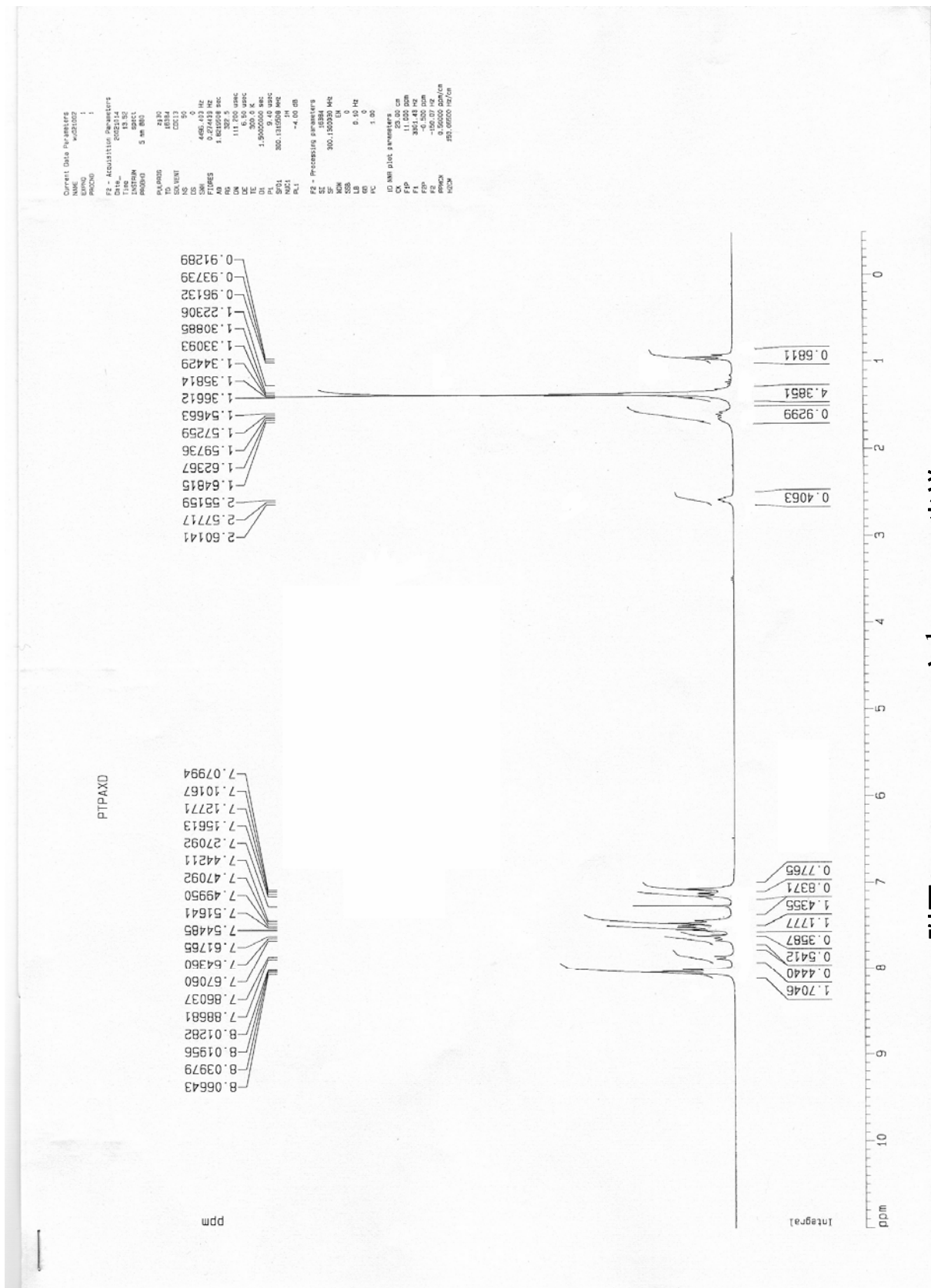
Butyl-TPA Boro monomer

```

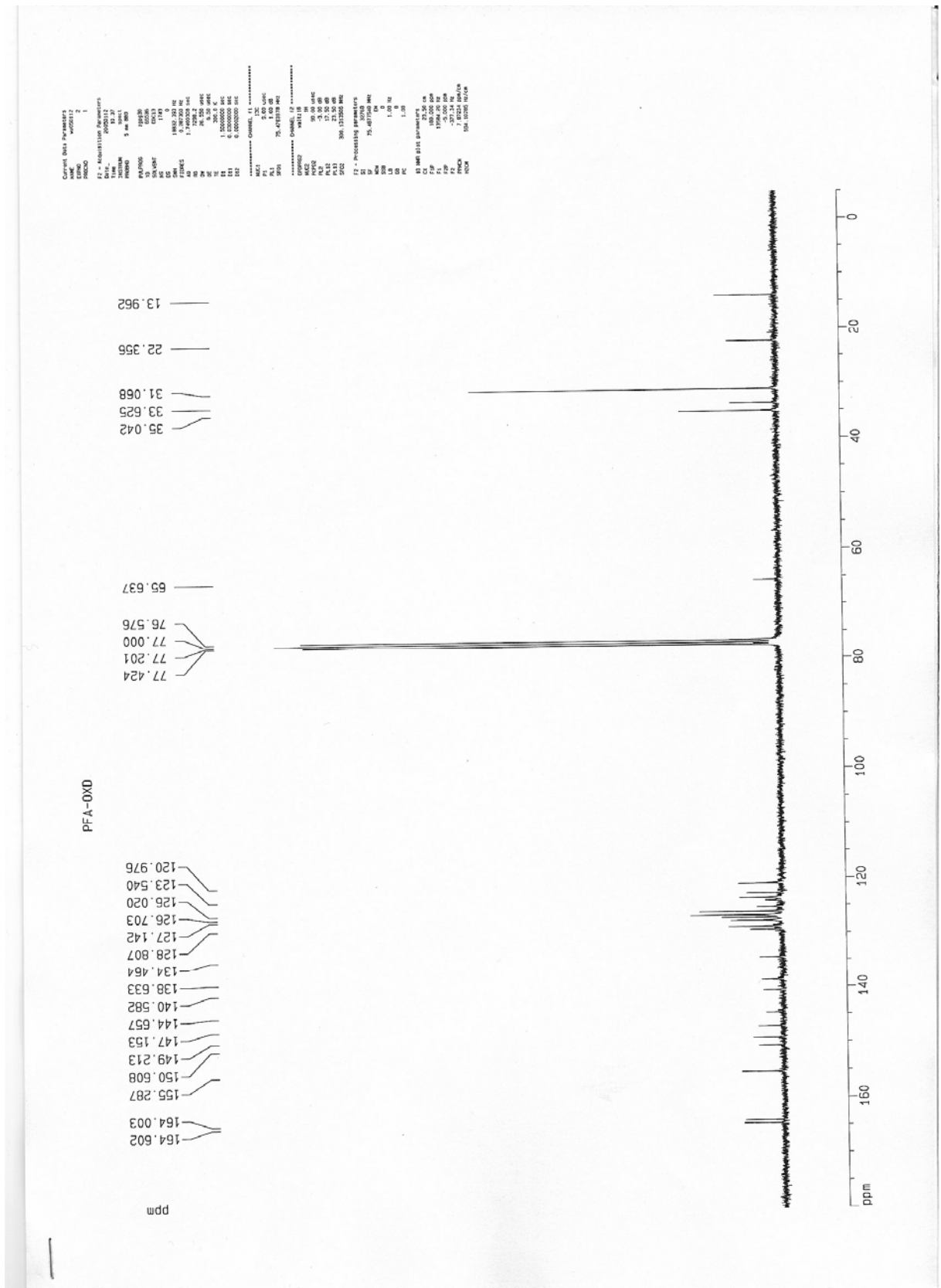
Current Data Parameters
NAME      w555112
PRNO     1
=====
F2 - Acquisition Parameters
Date_     20080302
Time      17.13
INSTRUM  spect
PROBHD   5 mm BBO
PULPROG  zgpg30
SOLVENT  Acetone
NS       1654
DS       4
SWH      20260.203 Hz
FIDRES   0.360186 Hz
AQ       1.618285 sec
RG       327.68
DE       24.600 uV/sec
TE       6.20 uV/sec
=====
F1 - Processing parameters
SI       32798
SF       75.477500 MHz
WDW      EM
SSB      0
LB       1.00 Hz
GB       0
PC       1.00
=====
D2 Name list parameters
CO      23.00 sec
F1P     180.000 deg
F2      128.00 Hz
F2P     -277.34 Hz
PRNCHN  8.0000000000000000
NCHN    67.0000000000000000
    
```



附圖 19 化合物 6-2 之 ¹³C-NMR 光譜



附圖 20 PFA-OXD 之 ¹H-NMR 光譜



附圖 21 PFA-OXD 之 ¹³C-NMR 光譜