

Spectrum for

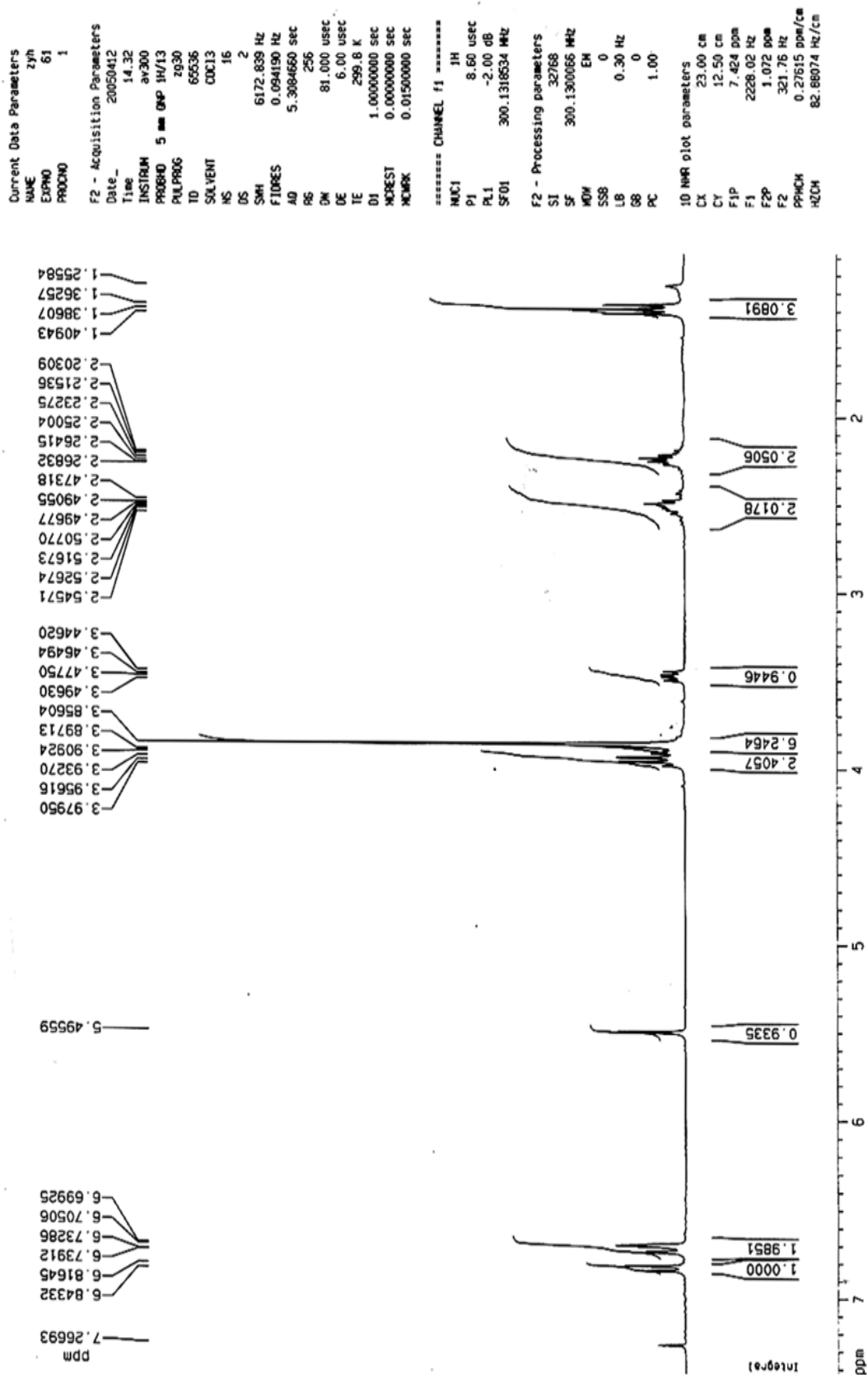
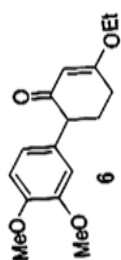
Palladium Catalyzed Sequential Arylation and Allylic Alkylation of Highly Functionalized Ketones: A Concise Synthesis of Mesembrine

Yuanhong Zhao, Yongyun Zhou, Leilei Liang, Xiaodong Yang, Fengxiang Du, Liang Li, and
Hongbin Zhang *

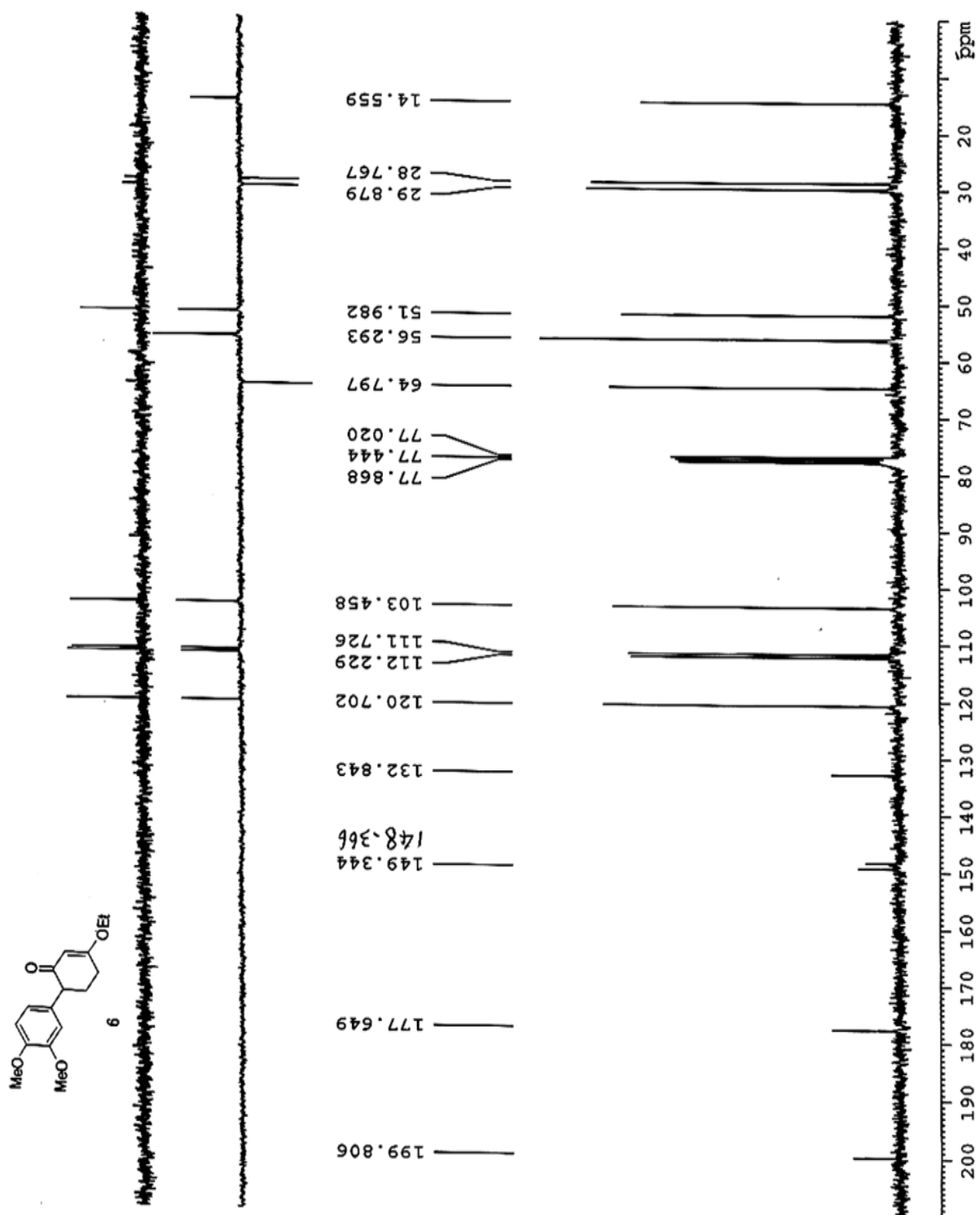
Key Laboratory of Medicinal Chemistry for Natural Resource, Ministry of Education, School of
Chemical Science and Technology, Yunnan University, Kunming, Yunnan 650091, P. R. China

Fax: 86-871-5035538. E-mail: zhanghb@ynu.edu.cn

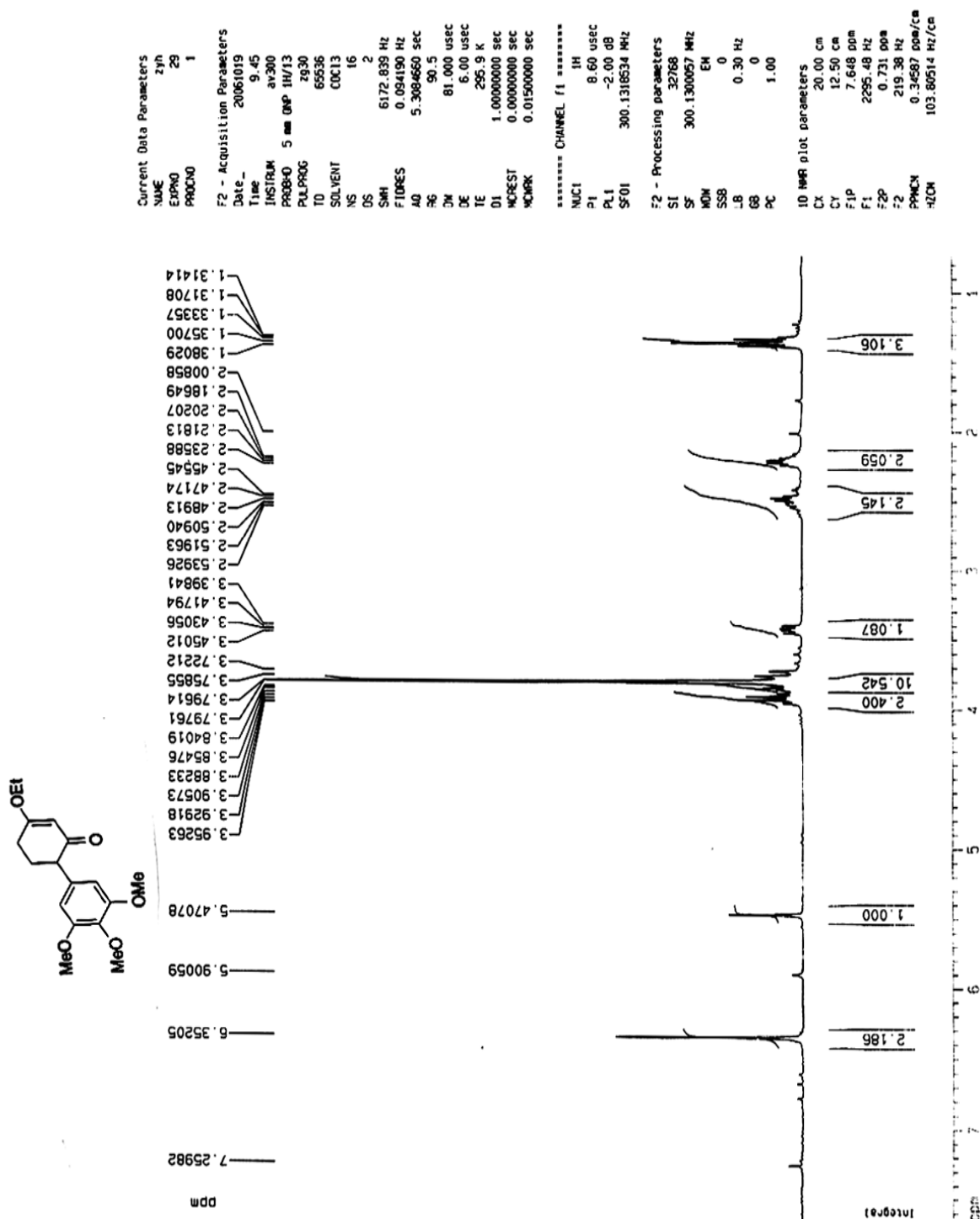
Compound 6



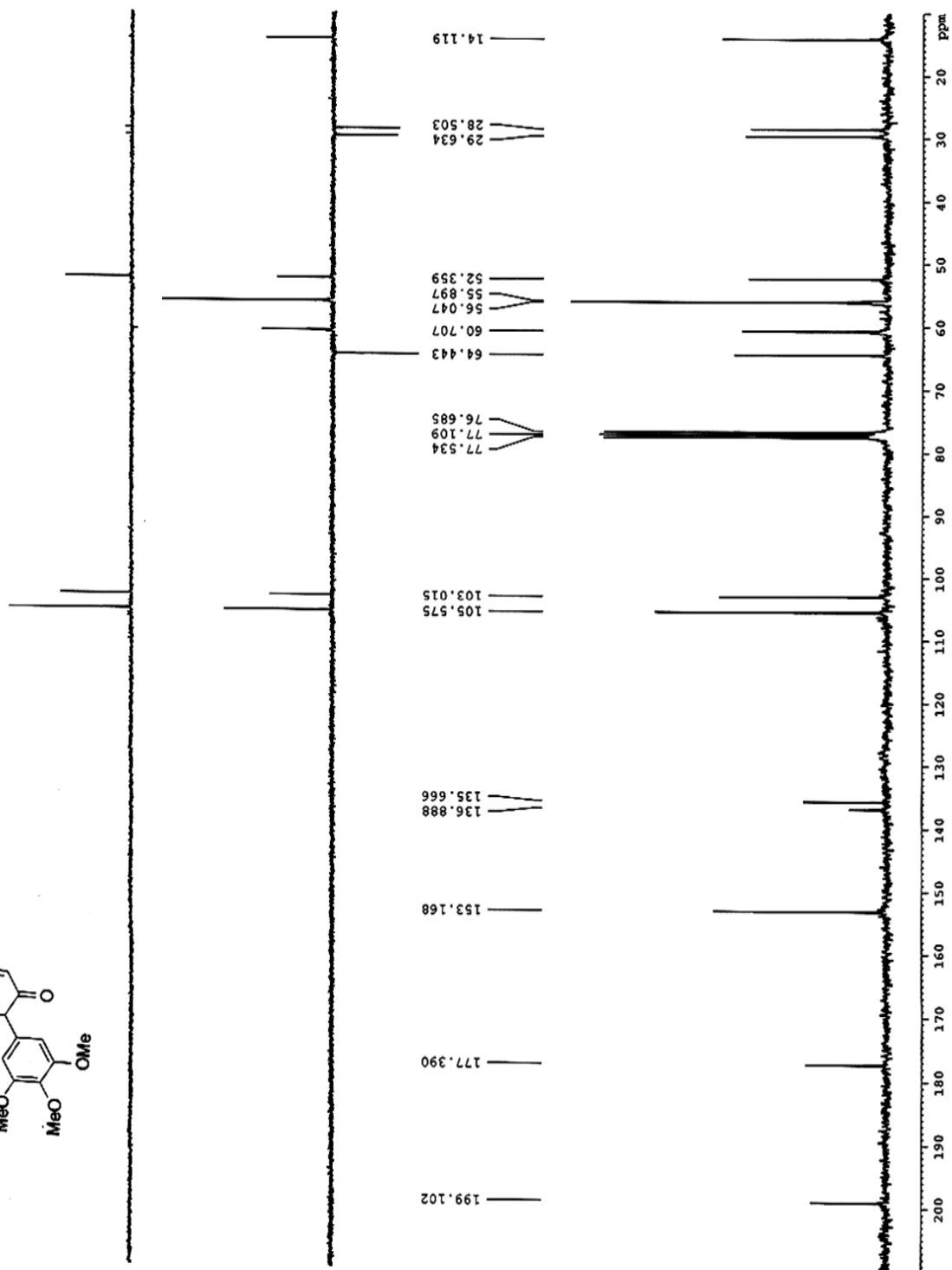
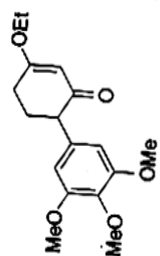
Compound 6



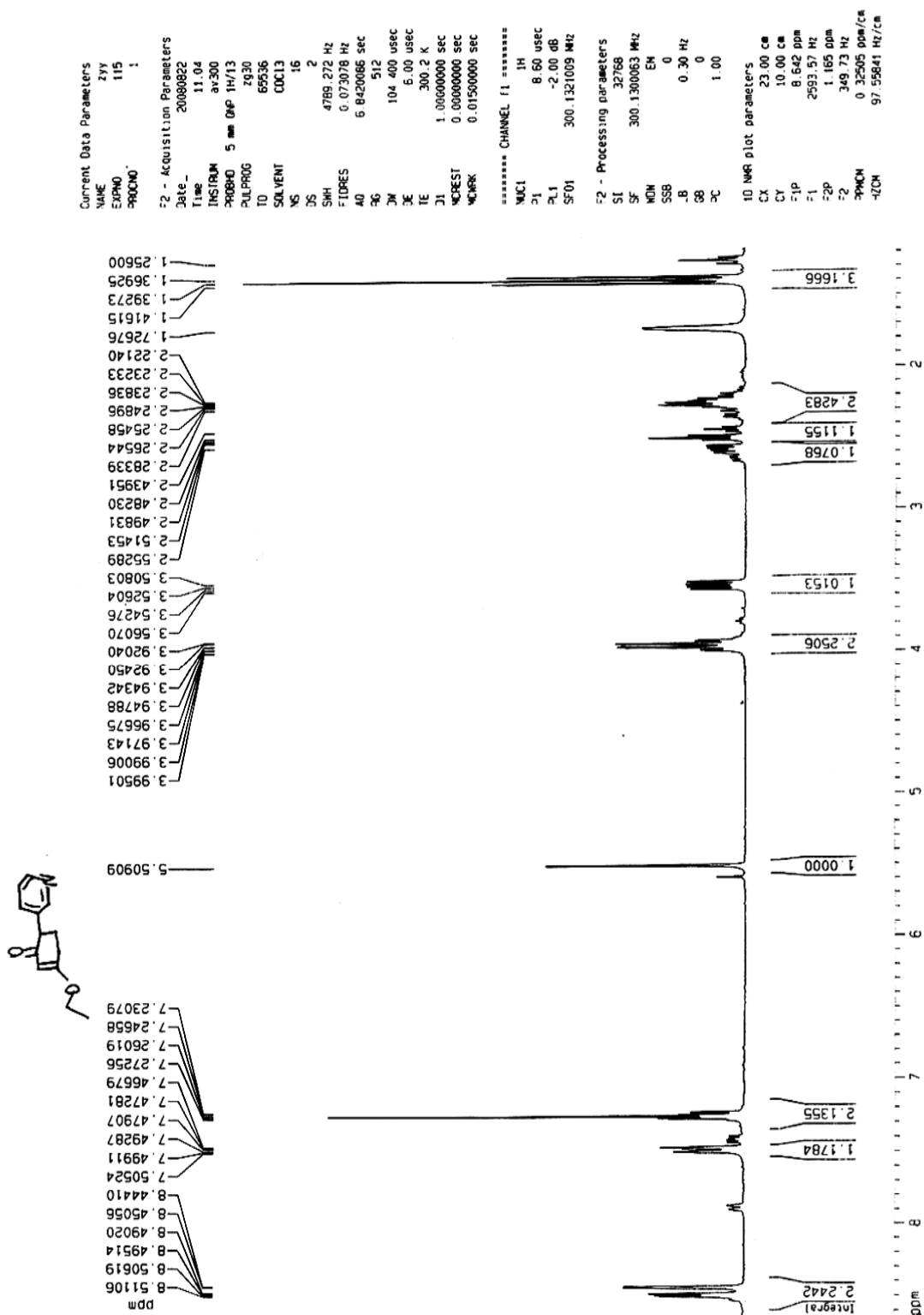
Compound 12



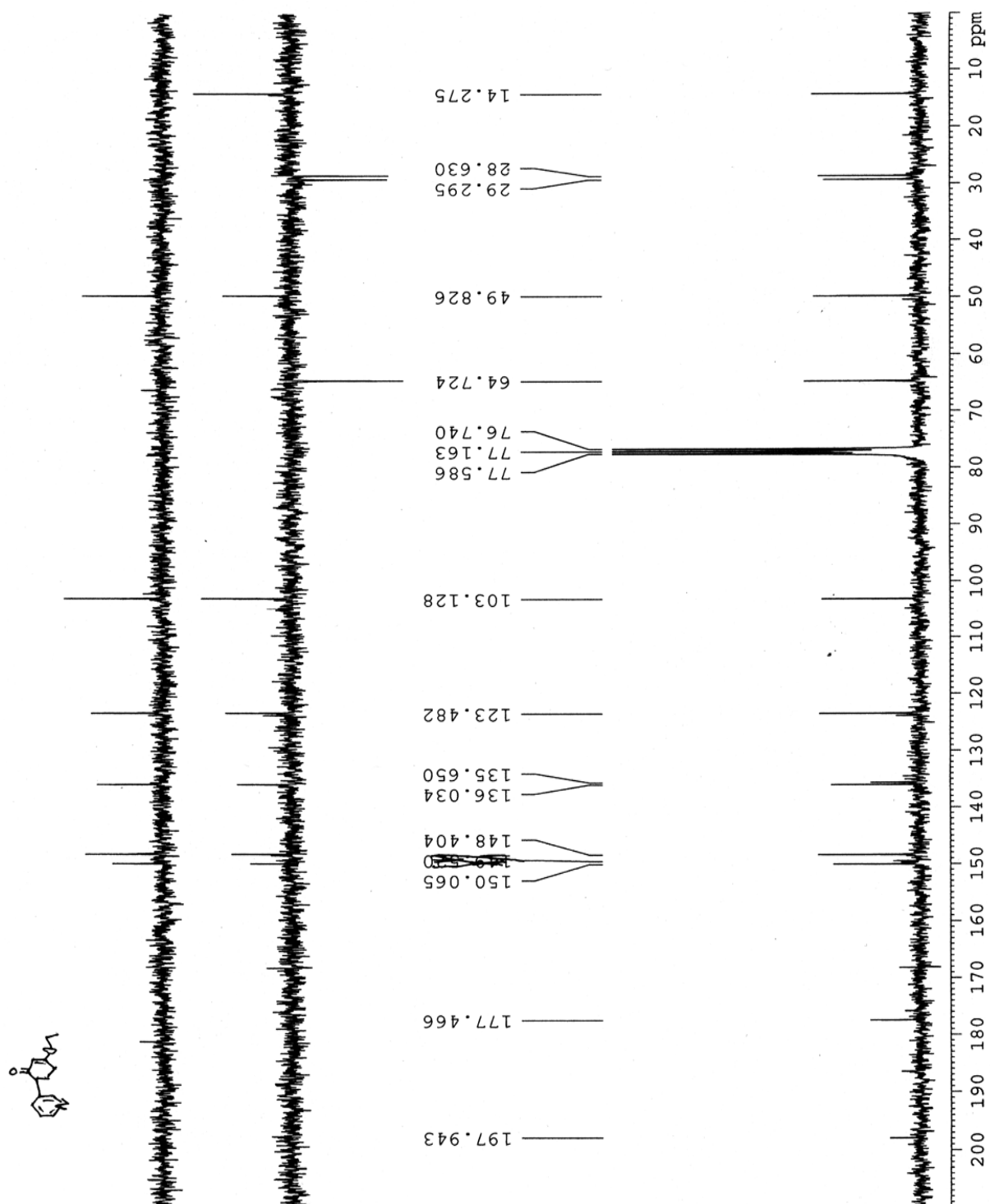
Compound 12



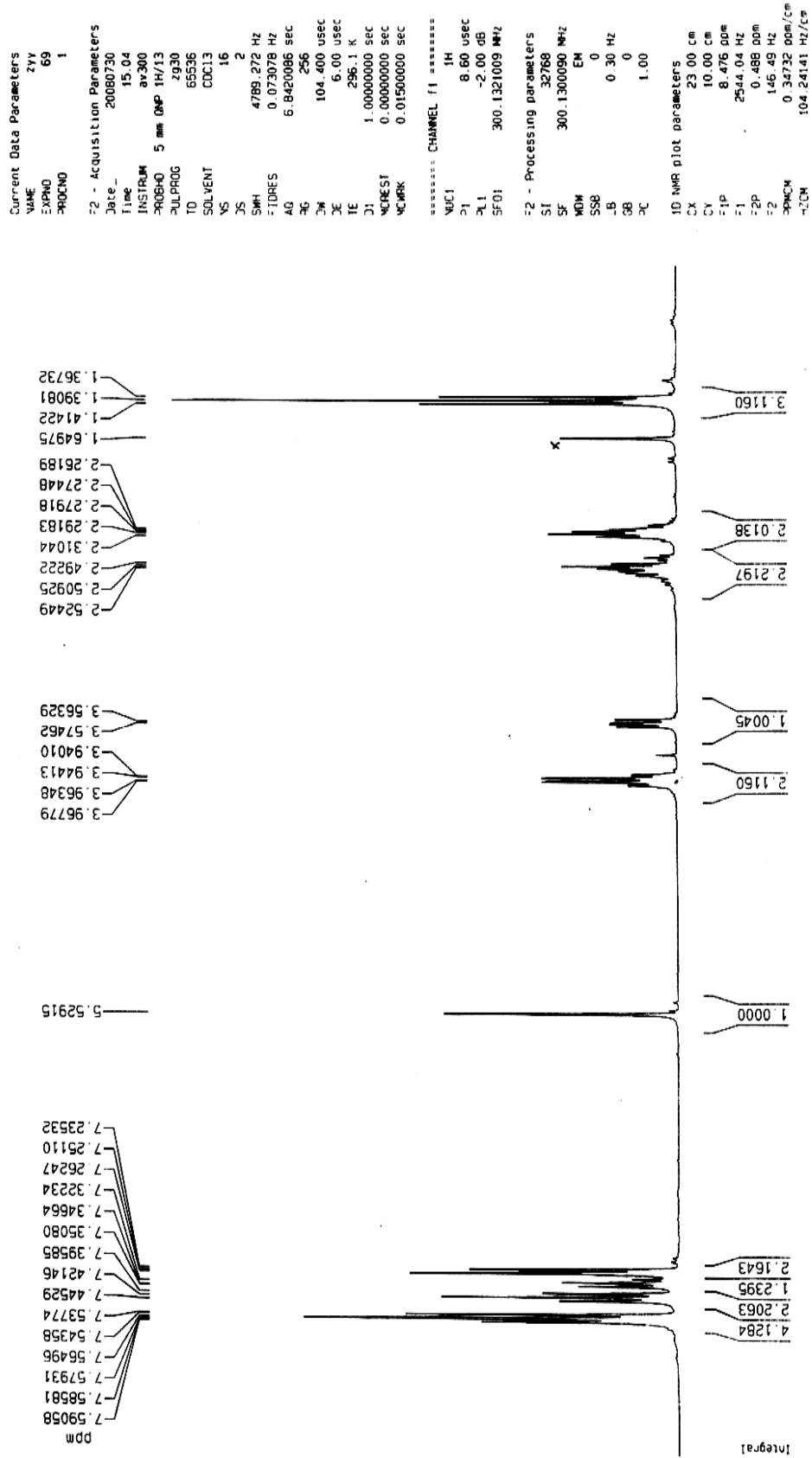
Compound 8



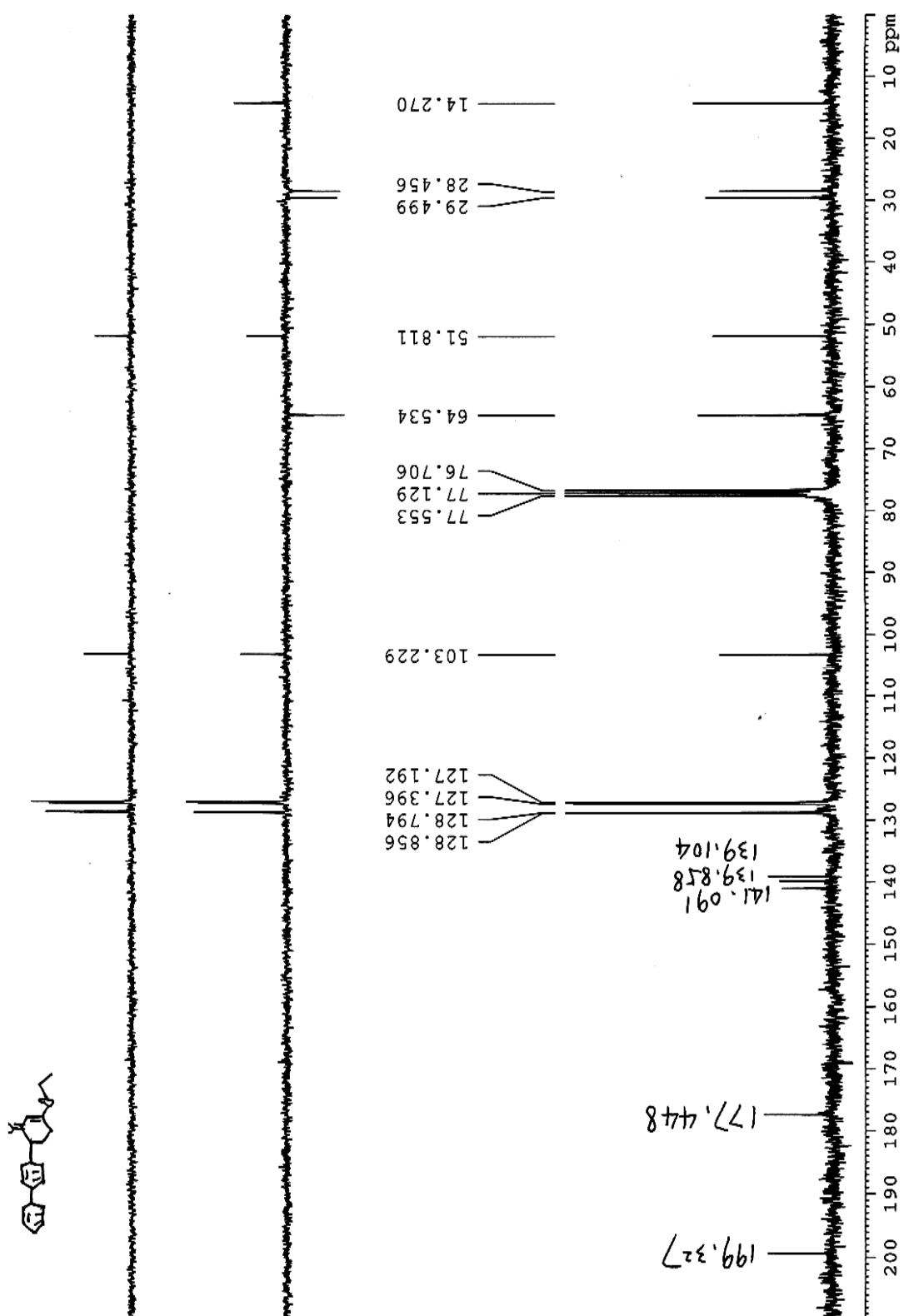
Compound 8



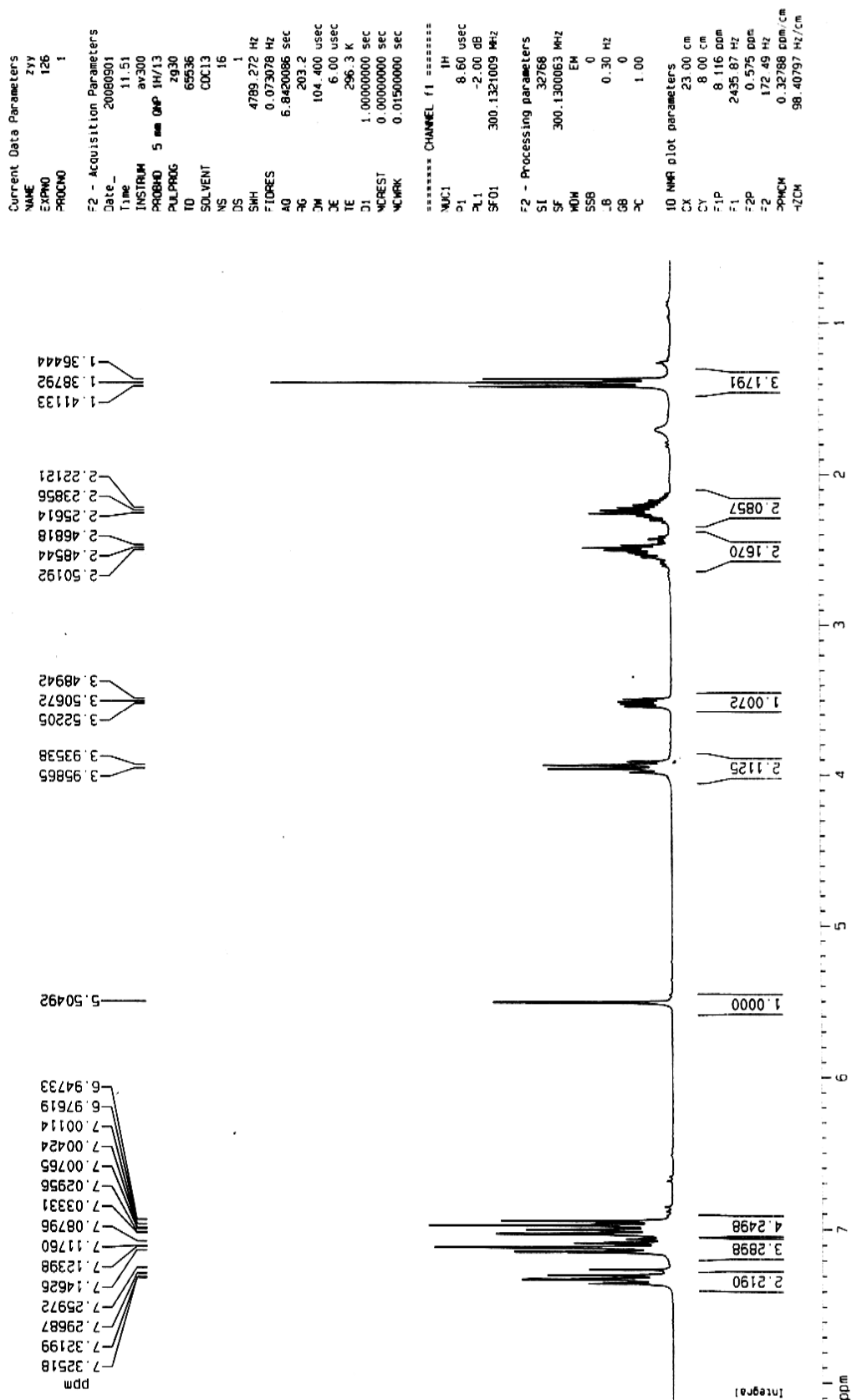
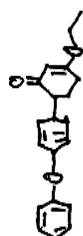
Compound 7



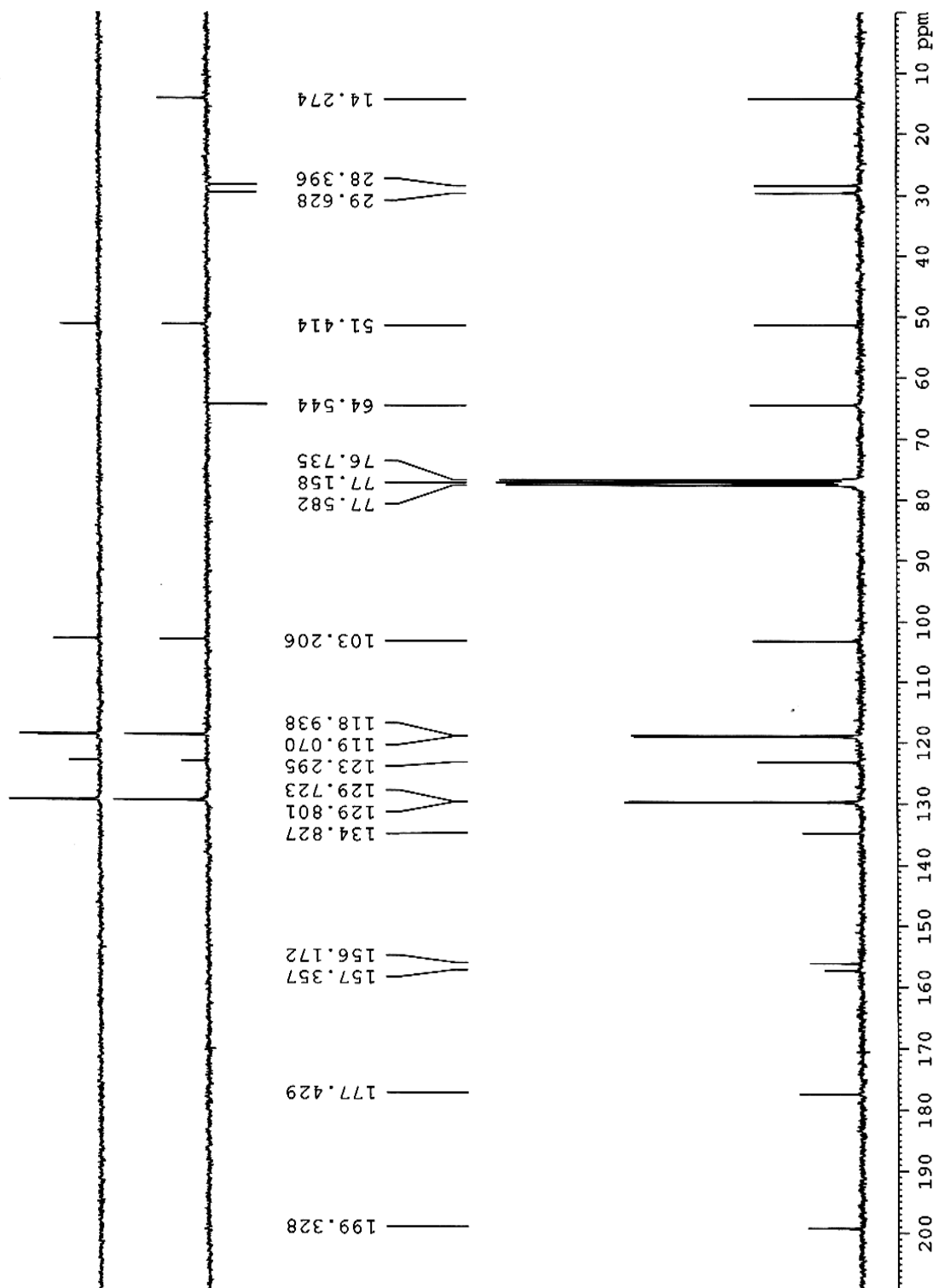
Compound 7



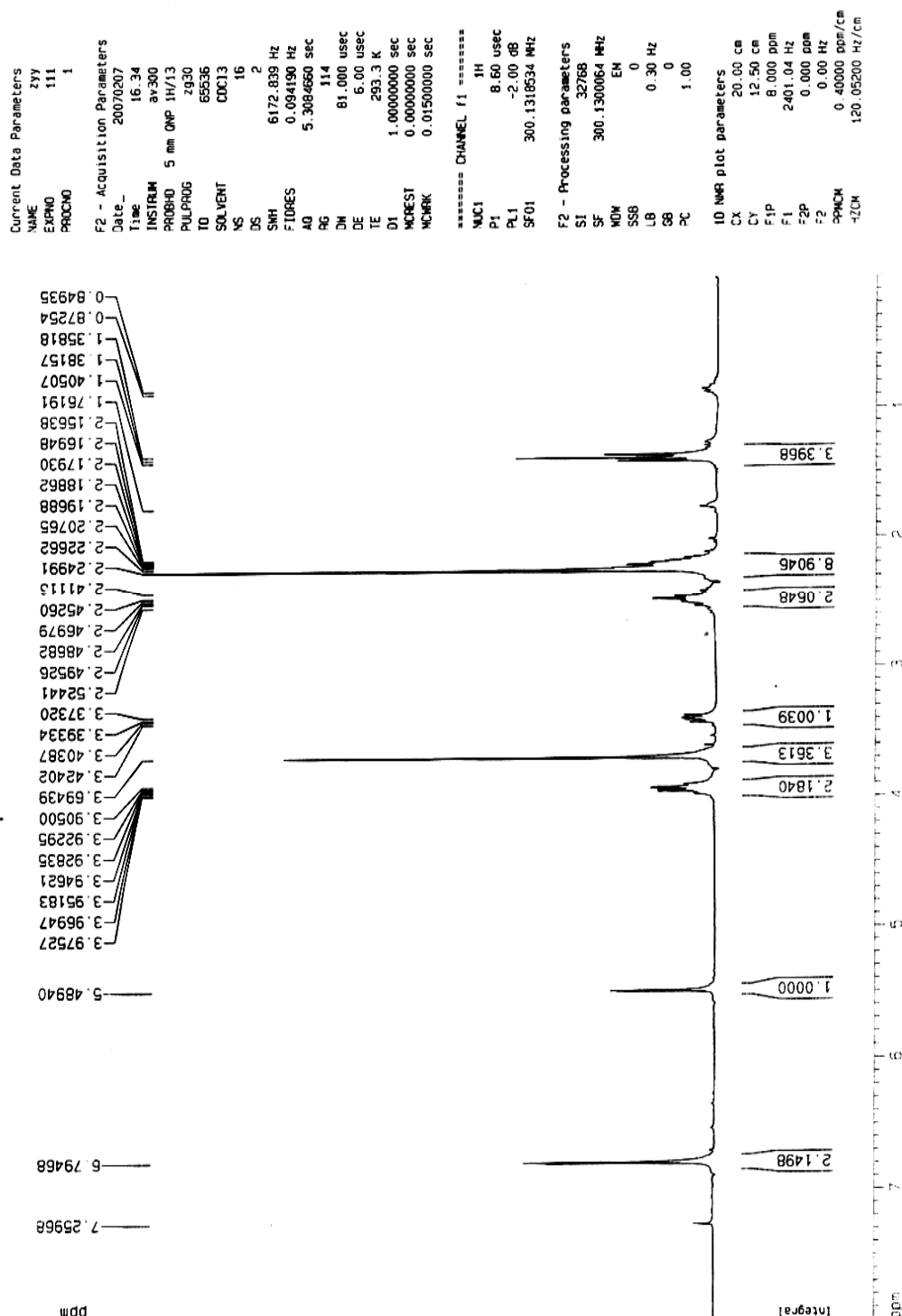
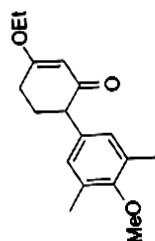
Compound 11



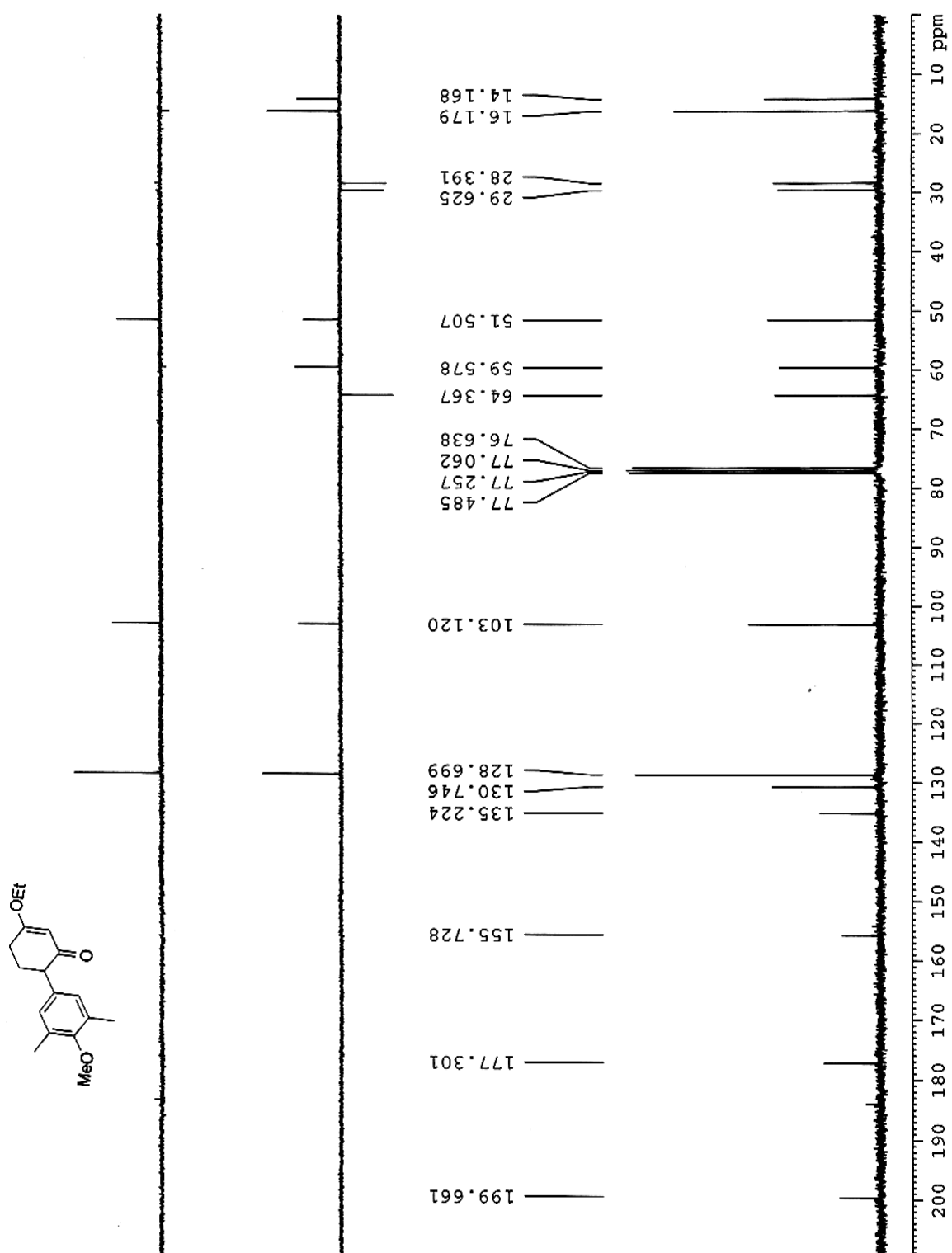
Compound 11



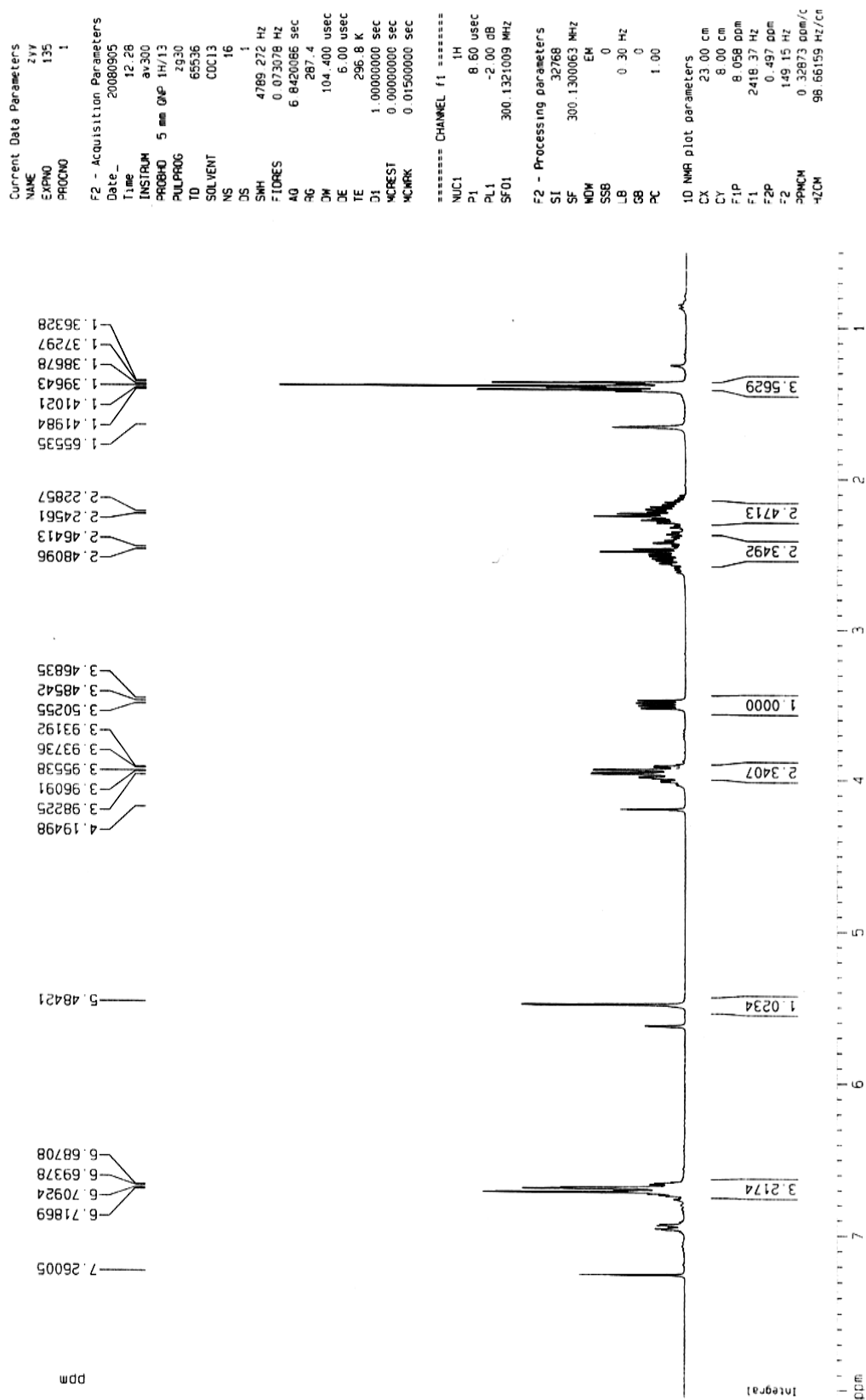
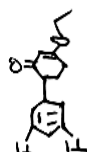
Compound 10



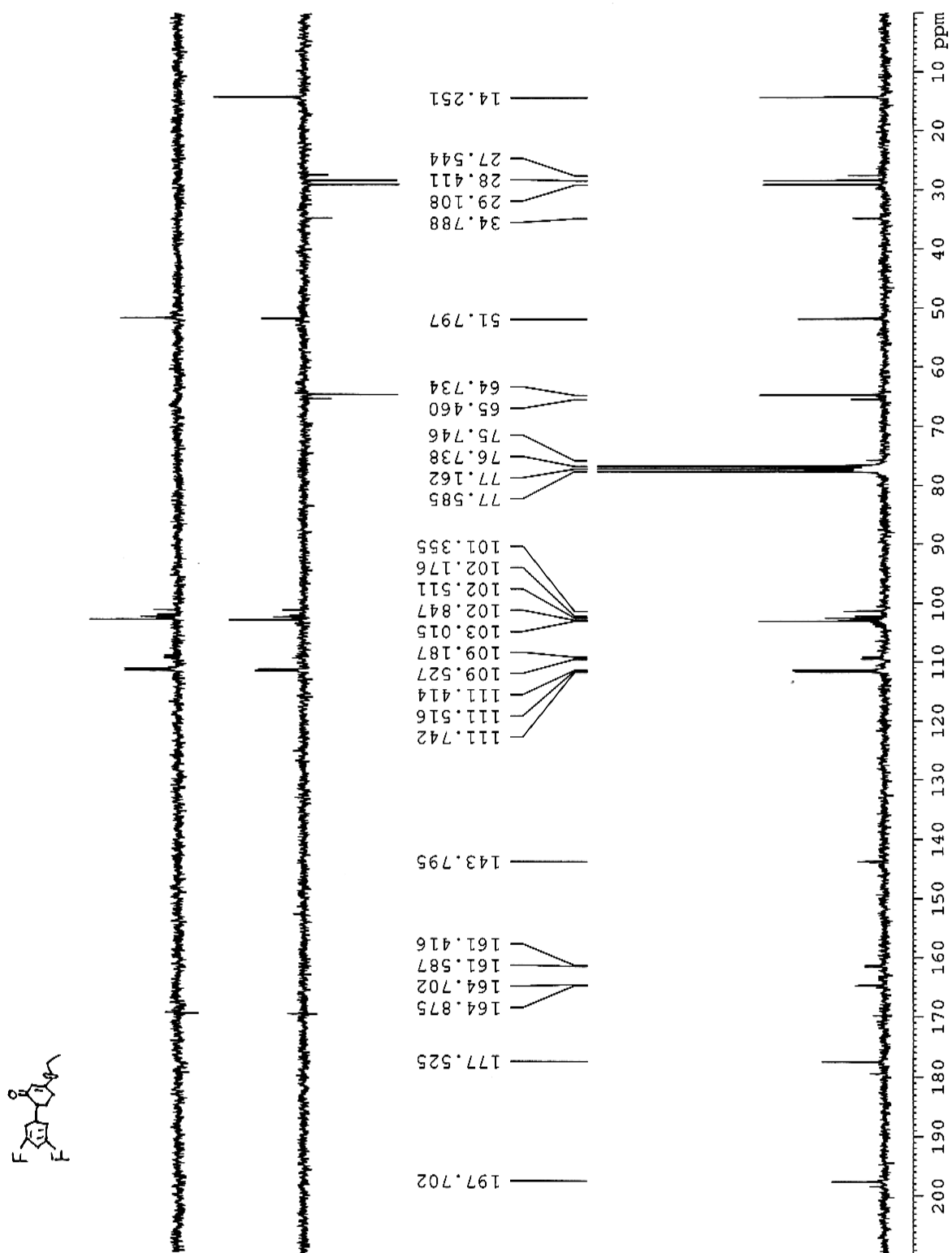
Compound 10



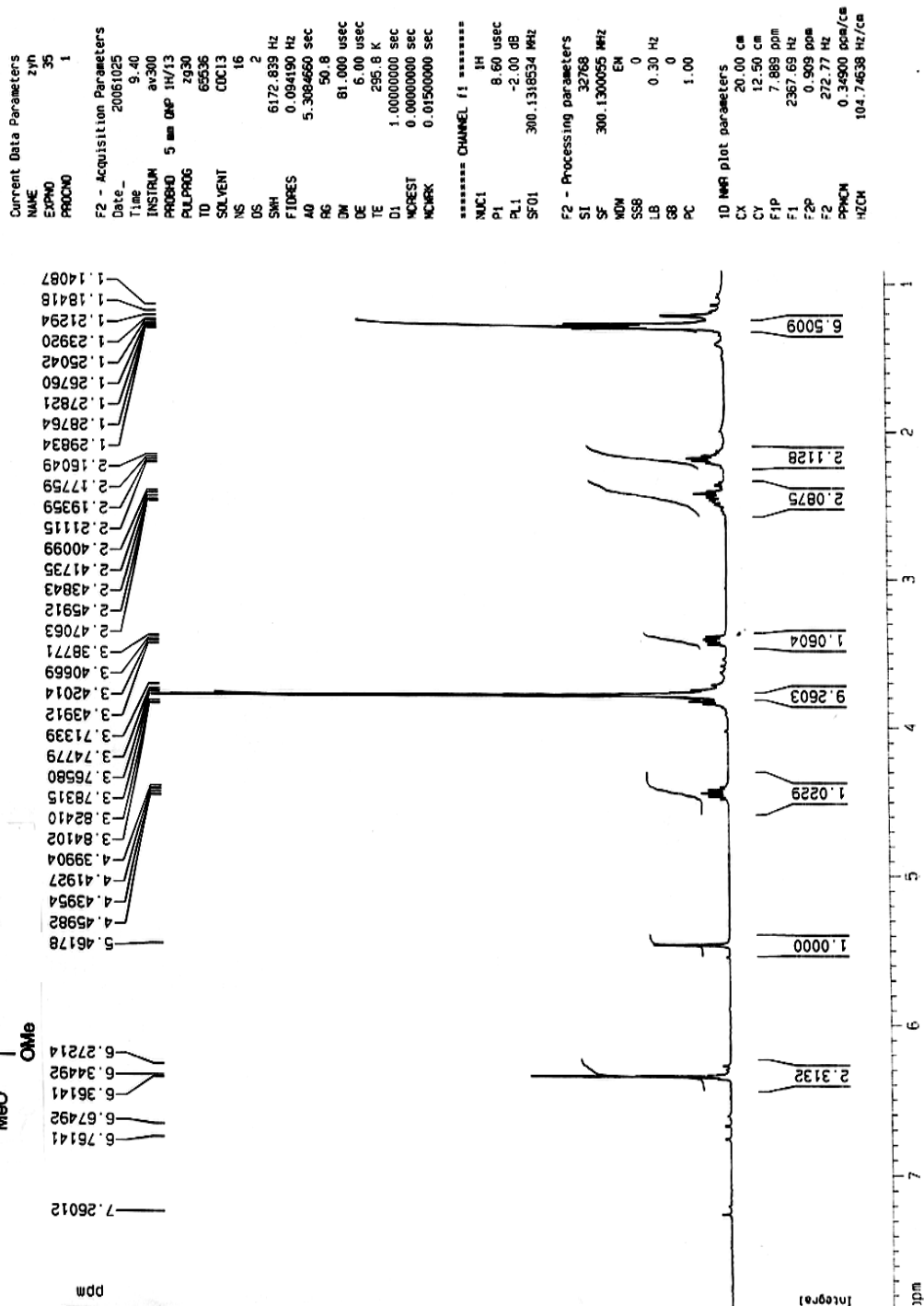
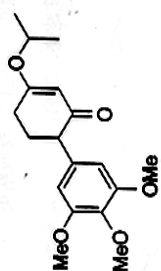
Compound 9



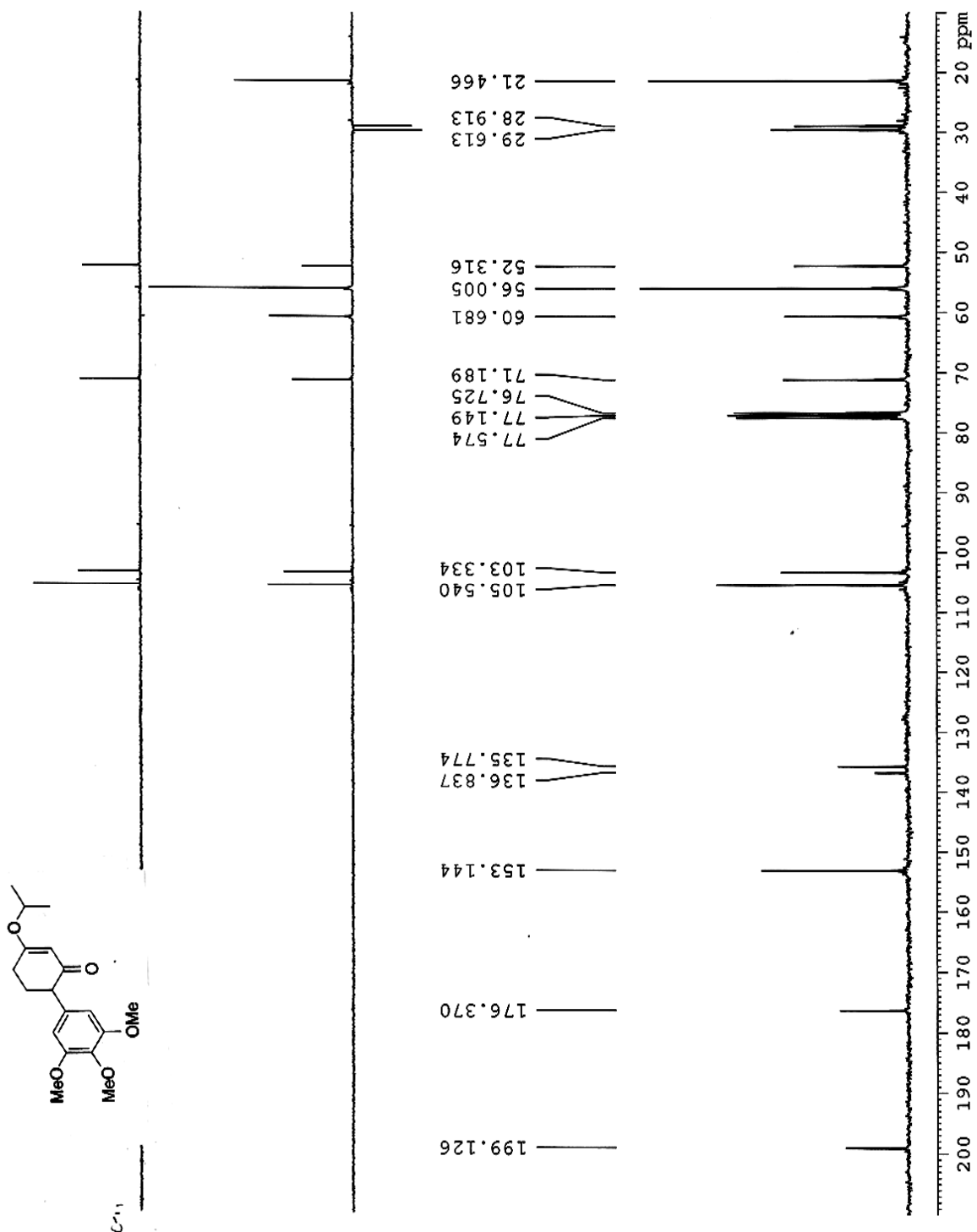
Compound 6



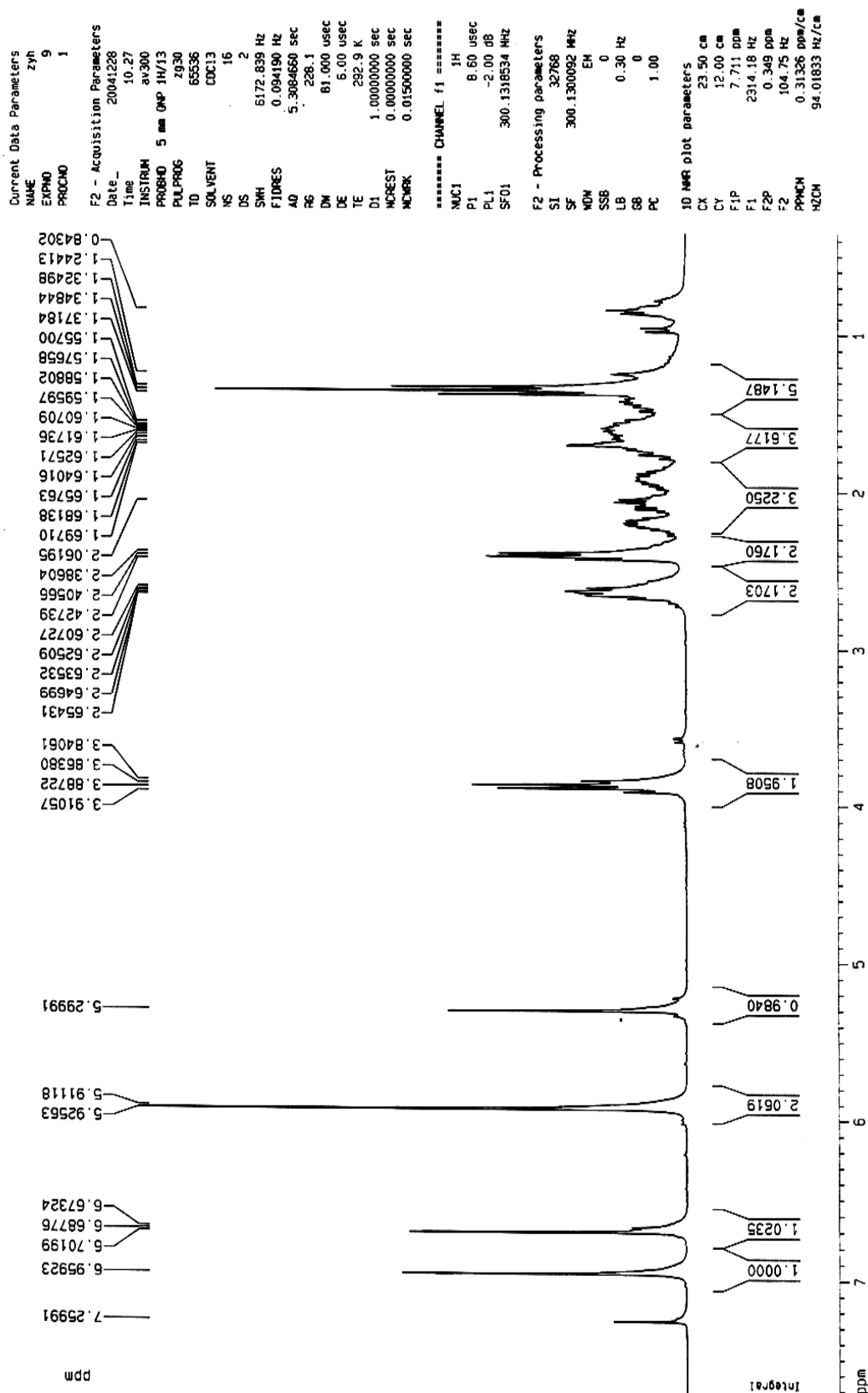
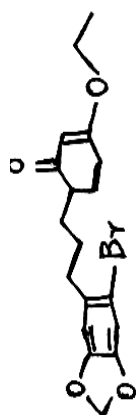
Compound 13



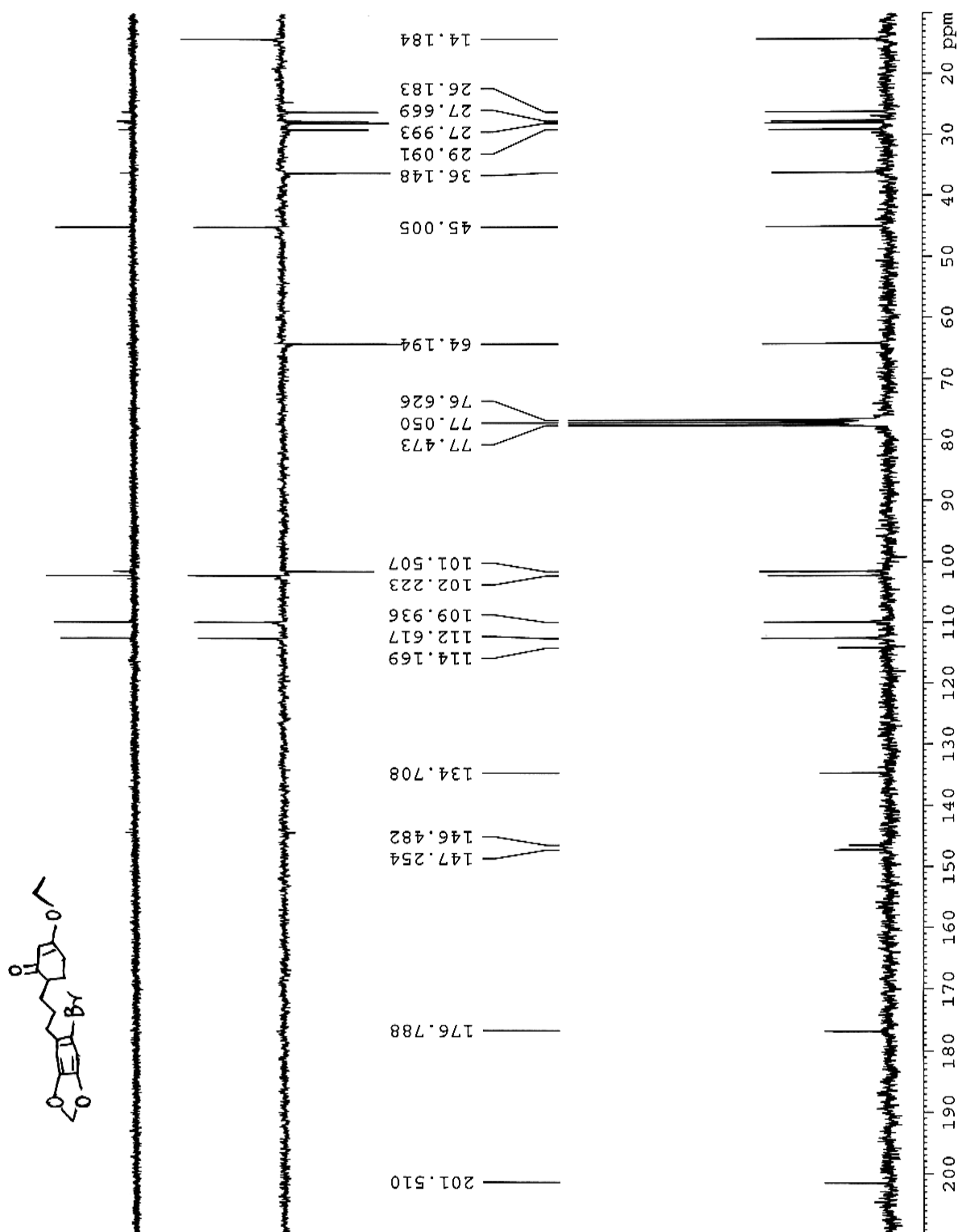
Compound 13



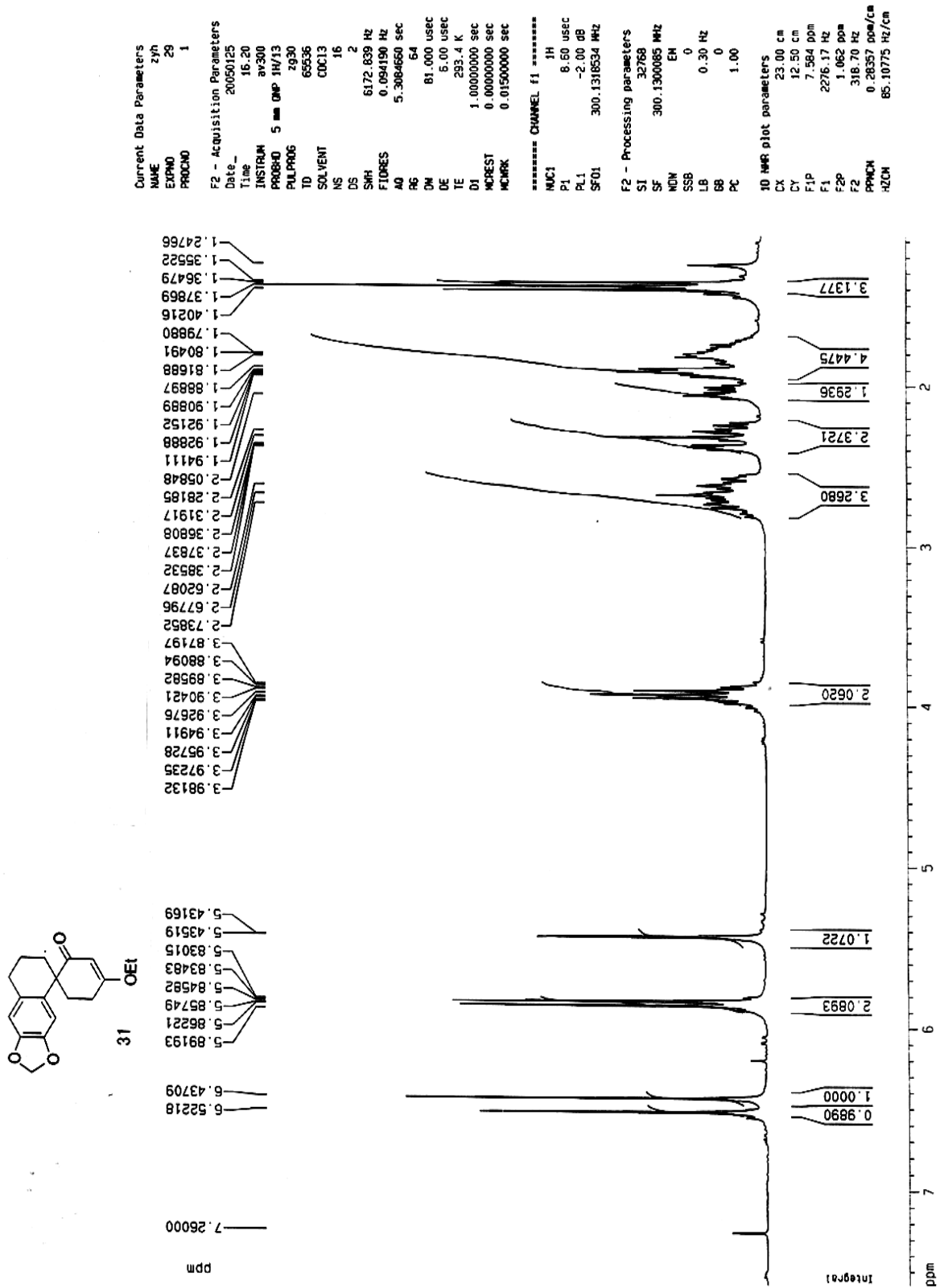
Compound 15



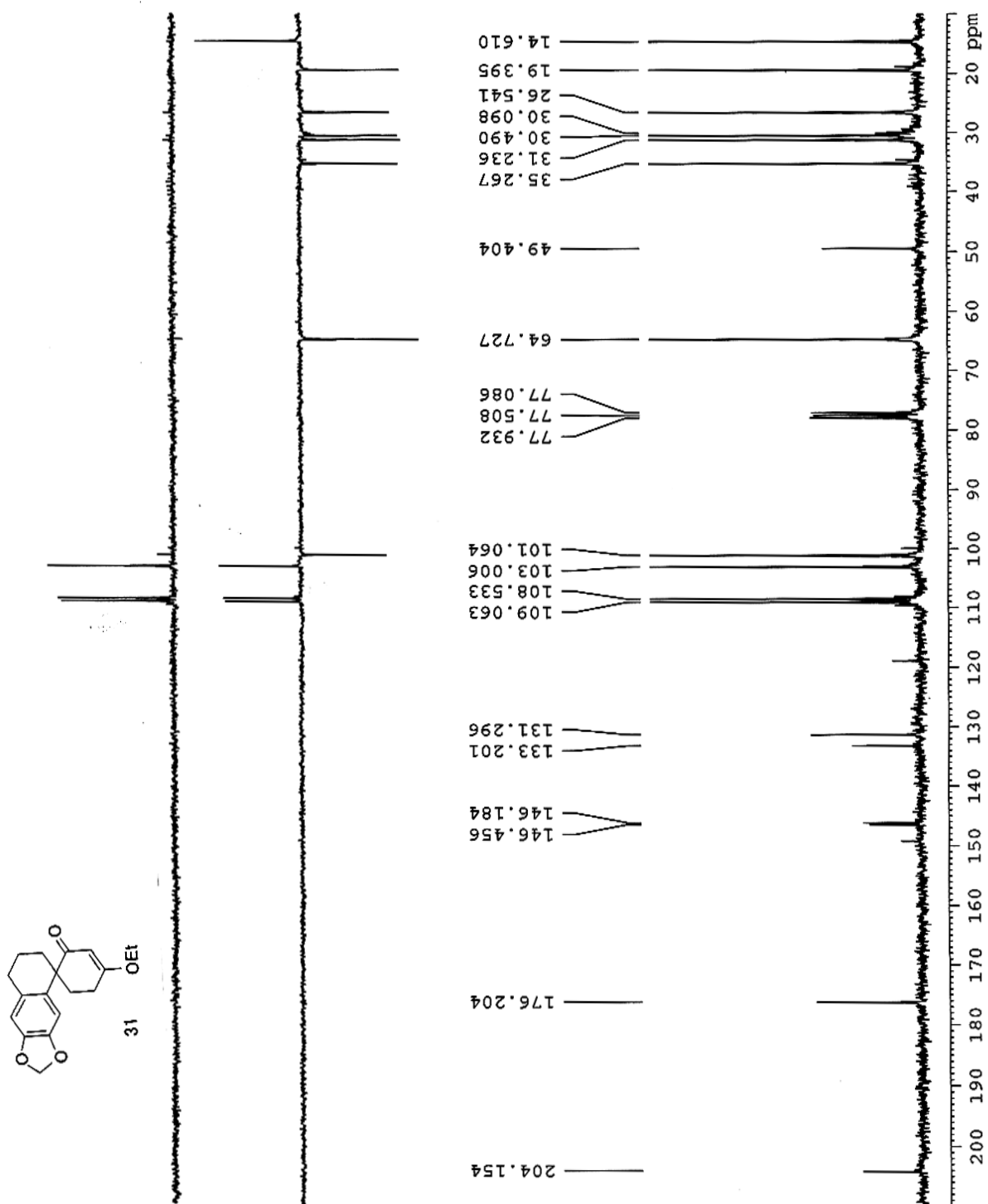
Compound 15



Compound 16



Compound 16



Compound 17

Current Data Parameters
 NAME zvy
 EXPNO 84
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20080807
 Time 17.09
 INSTRUM av300
 PROBHD 5 mm QNP 1H/13
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 4789.272 Hz
 FIDRES 0.073078 Hz
 AQ 5.8420086 sec
 RG 456.1
 DM 104.400 usec
 DE 6.00 usec
 TE 297.9 K
 D1 1.00000000 sec
 ACQRES 0.00000000 sec
 MCWRR 0.01500000 sec

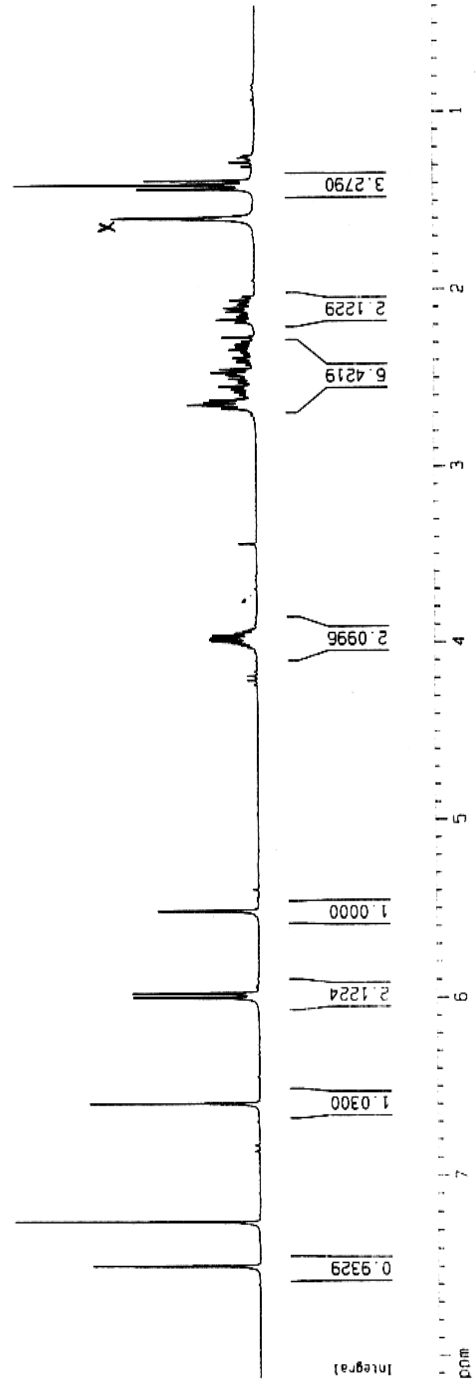
===== CHANNEL f1 =====
 NUC1 1H
 P1 8.60 usec
 PL1 -2.00 dB
 SF01 300.1321009 MHz

F2 - Processing parameters
 SI 32768
 SF 300.1300073 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 23.00 cm
 CY 4.00 cm
 F1P 8.132 ppm
 F2P 2440.59 Hz
 F2 0.392 ppm
 F2 117.65 Hz
 PPMCM 0.33651 ppm/cm
 HZCM 100.95741 Hz/cm

1.38305
 1.40652
 1.42994
 1.59519
 2.10372
 2.12374
 2.16900
 2.26708
 2.45045
 2.46761
 2.48158
 2.54788
 2.62216
 2.63327
 2.63802
 2.65103
 2.65630
 2.66907
 2.67394
 3.95820
 3.97171
 3.98158
 3.99524

5.51545
 5.97347
 5.97767
 5.99790
 6.00213
 6.59716
 7.25649
 7.50004

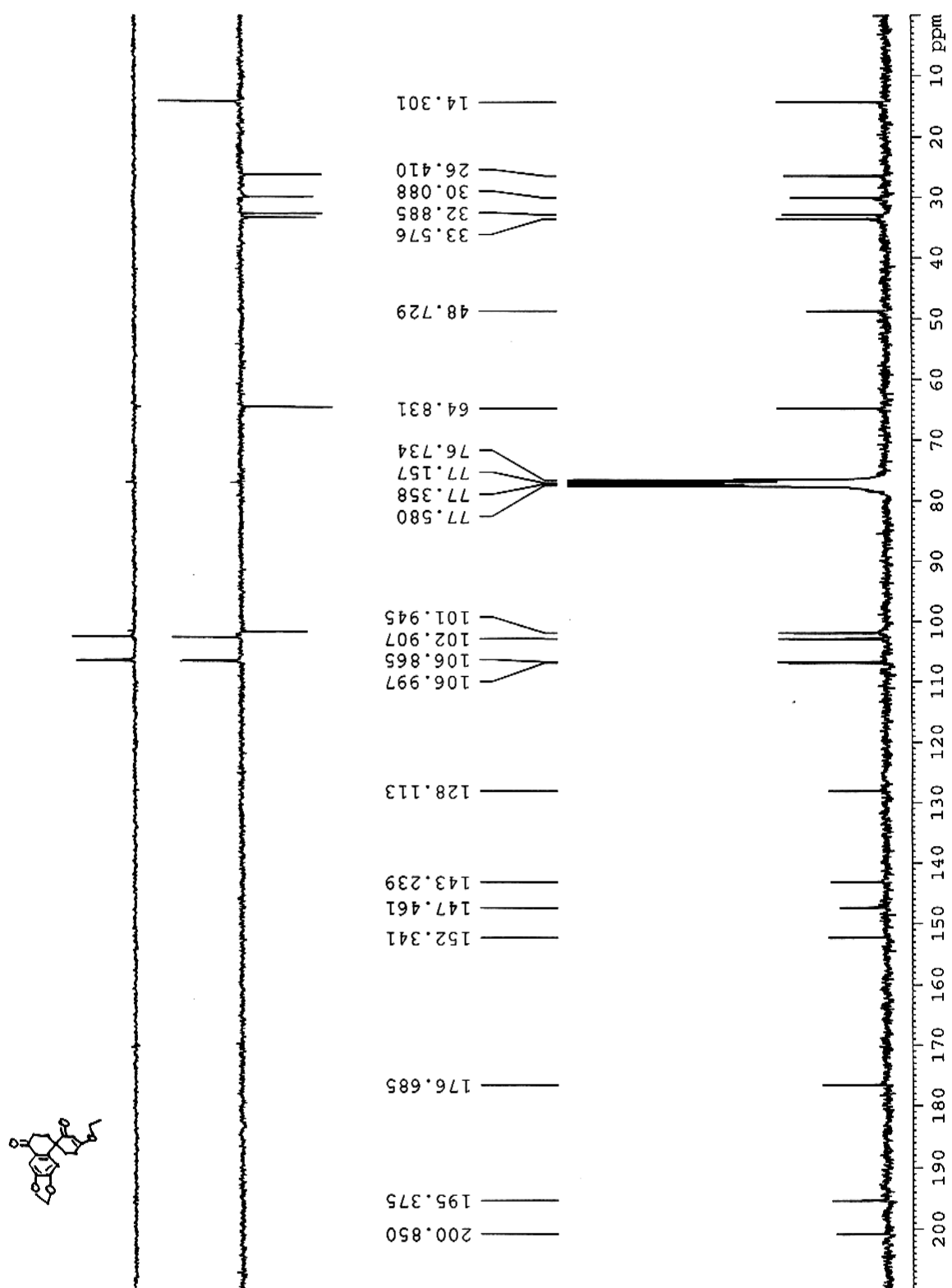


ppm

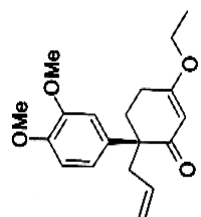
Integral

ppm

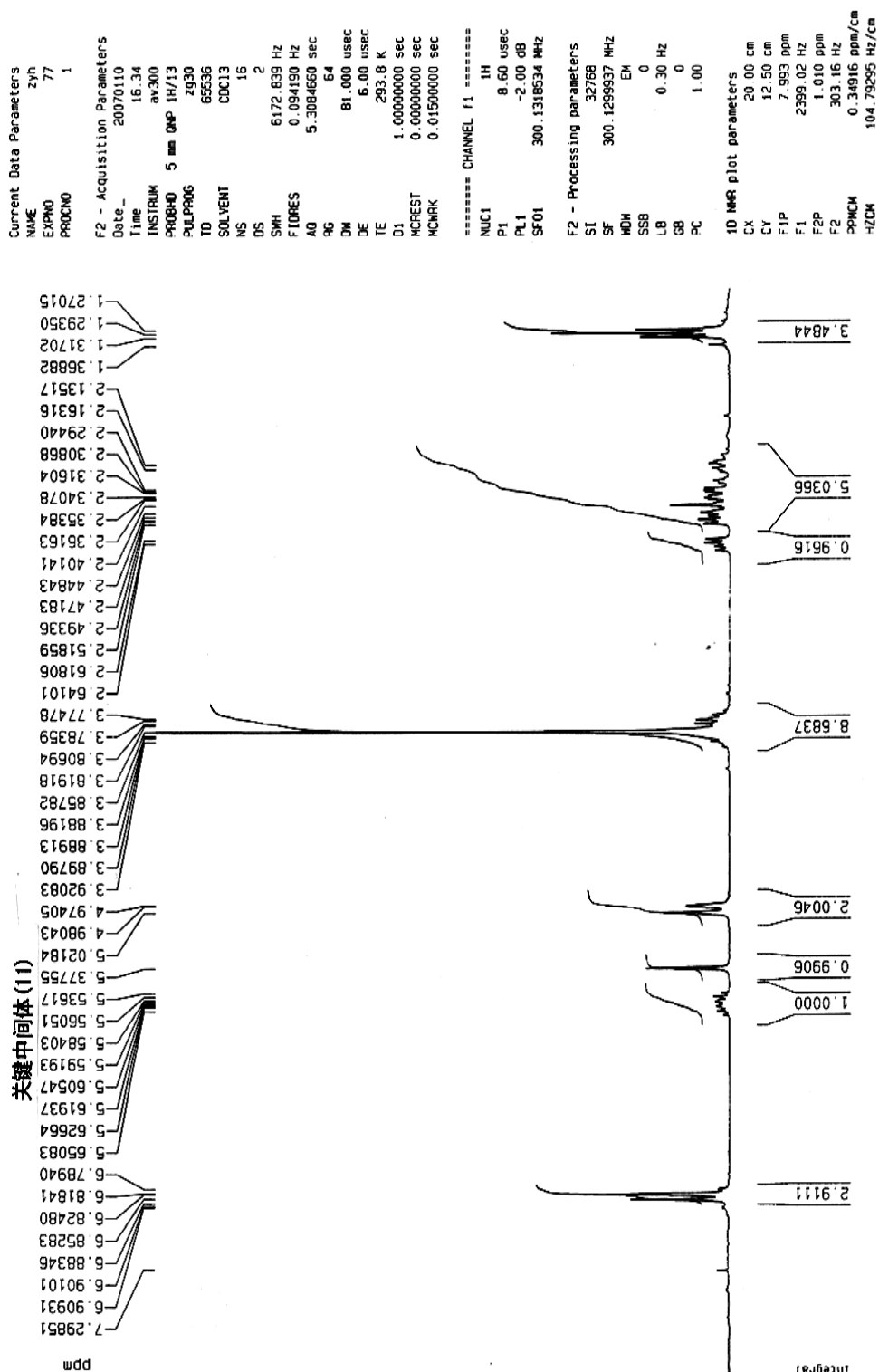
Compound 17



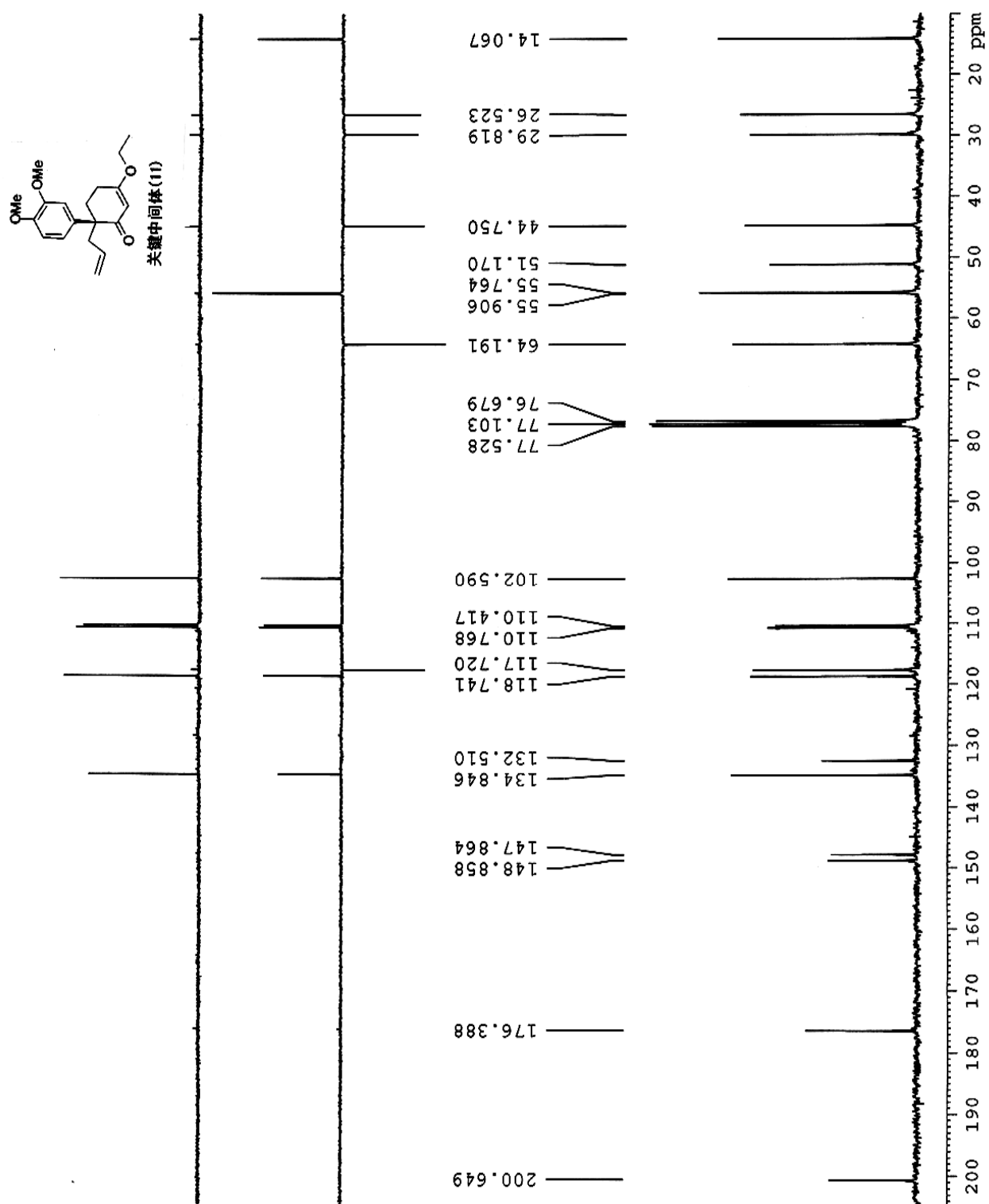
Compound 18



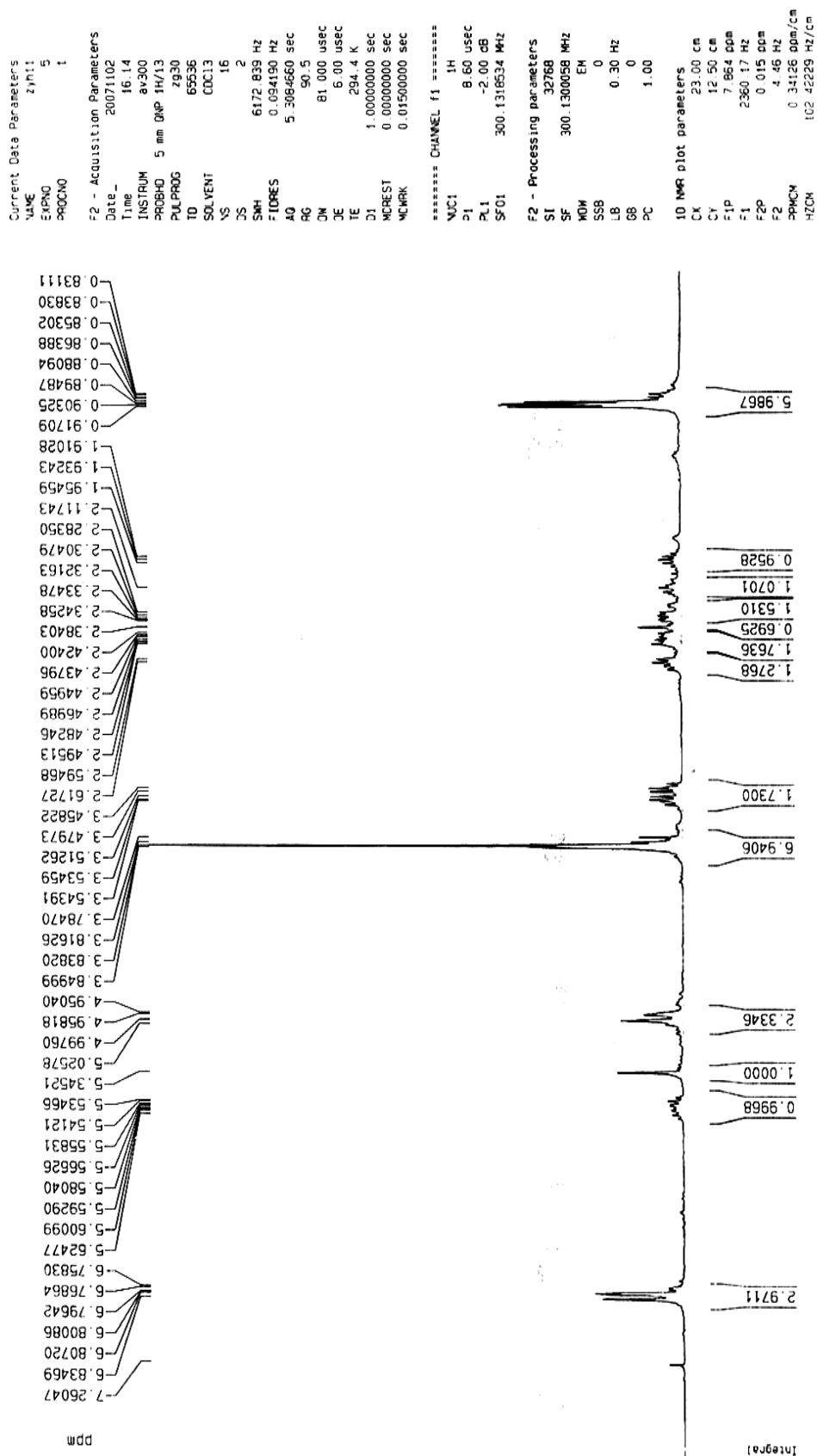
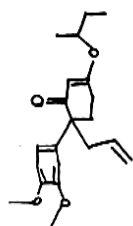
关键中间体 (11)



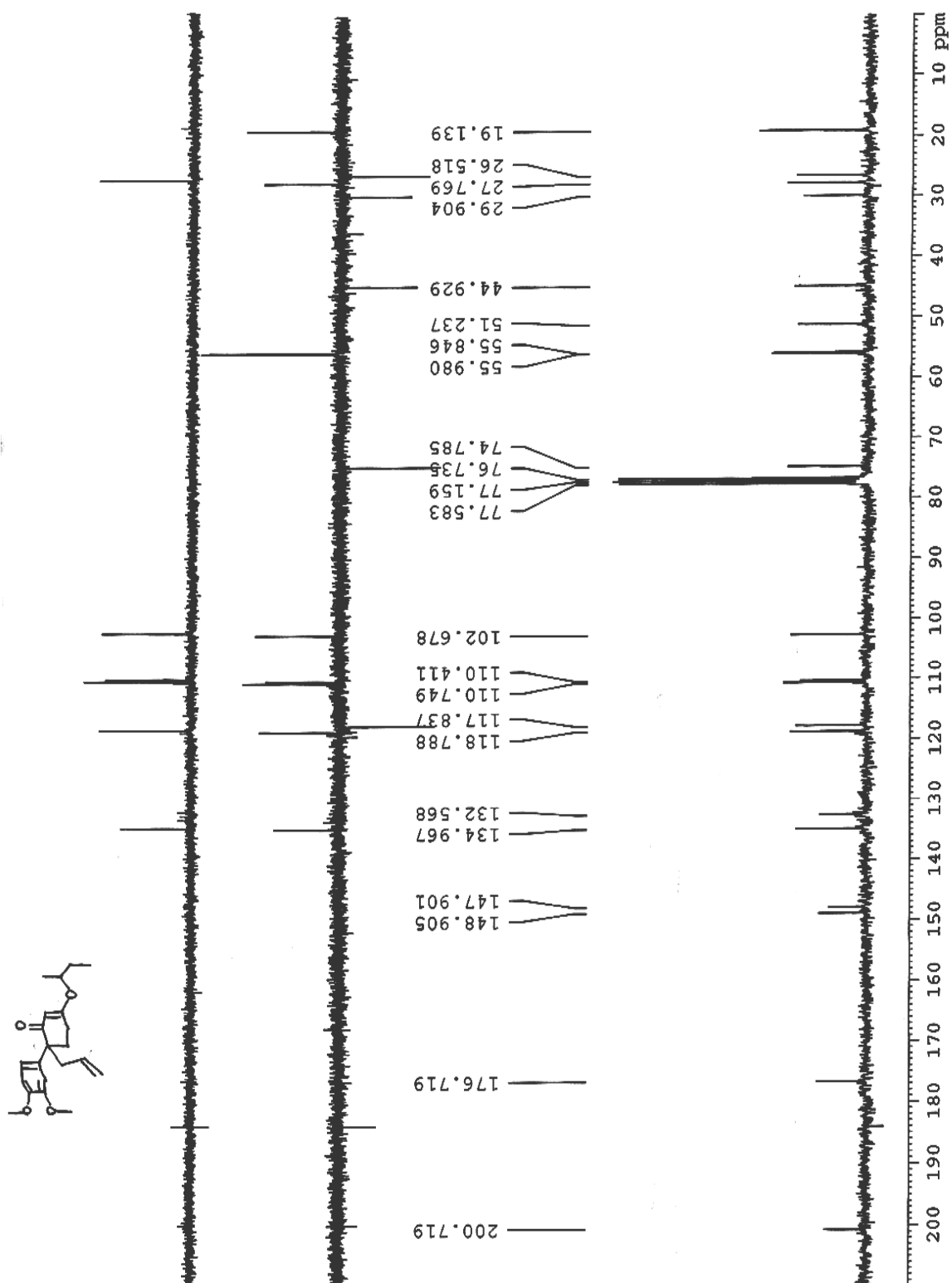
Compound 18



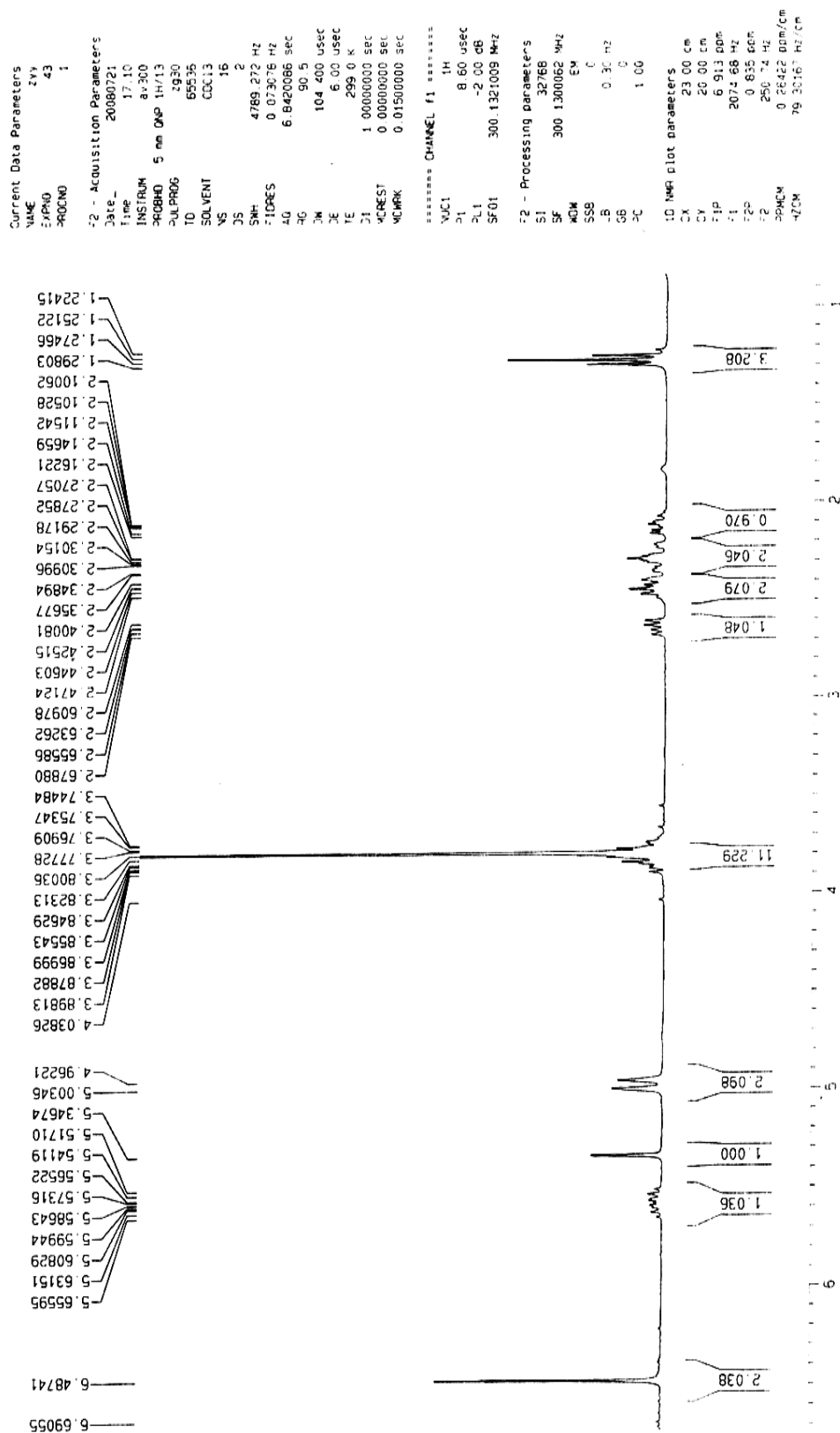
Compound 23



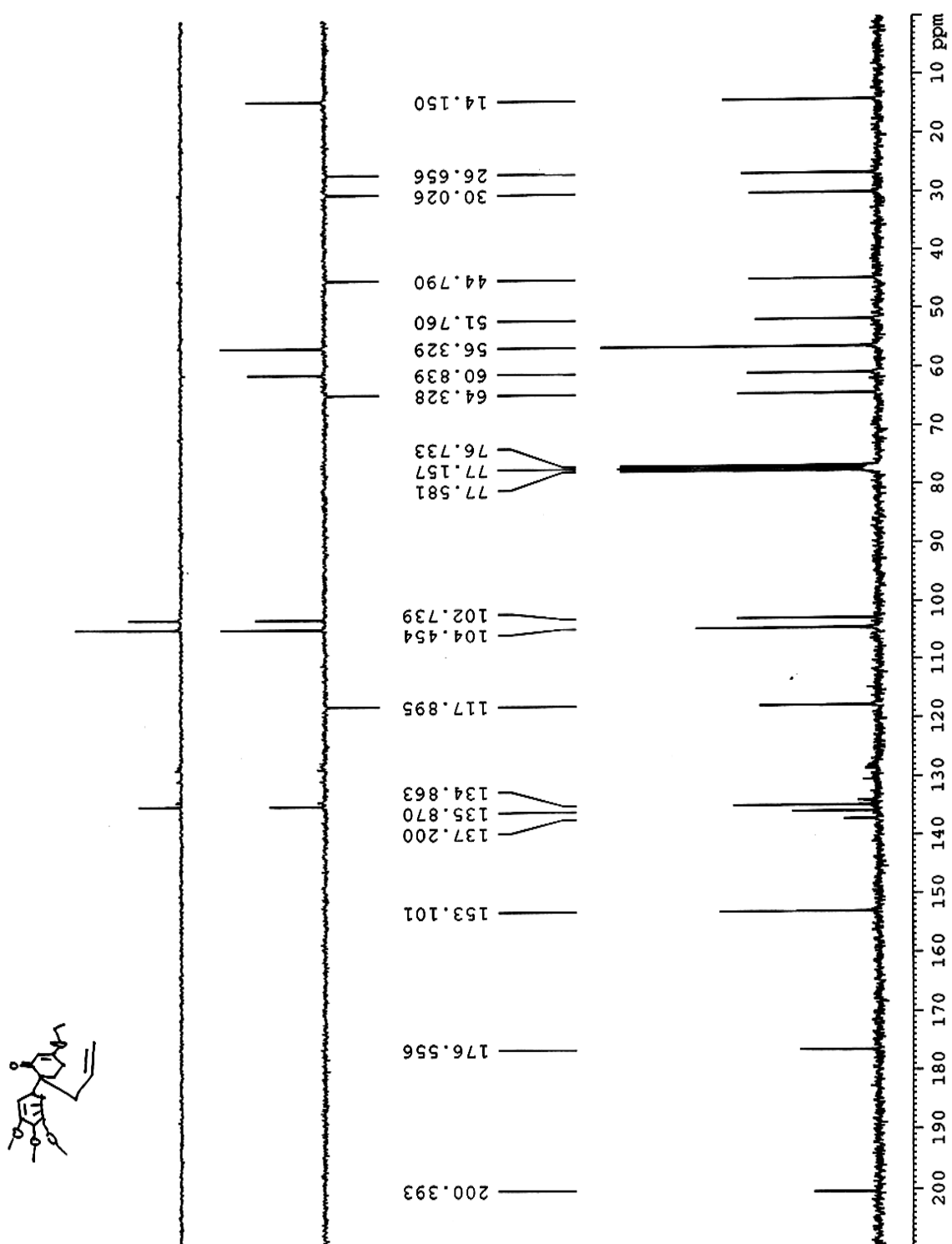
Compound 23



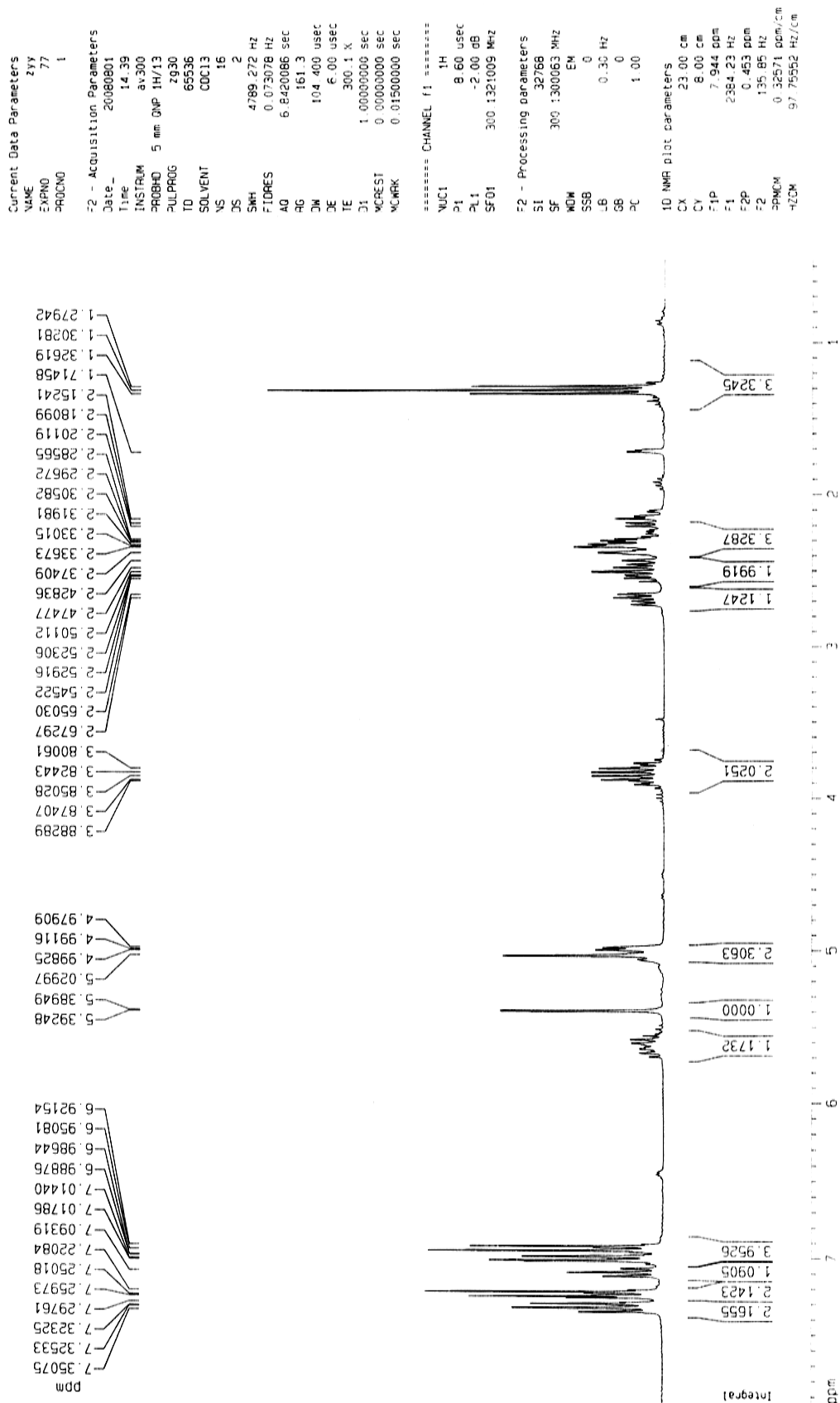
Compound 21



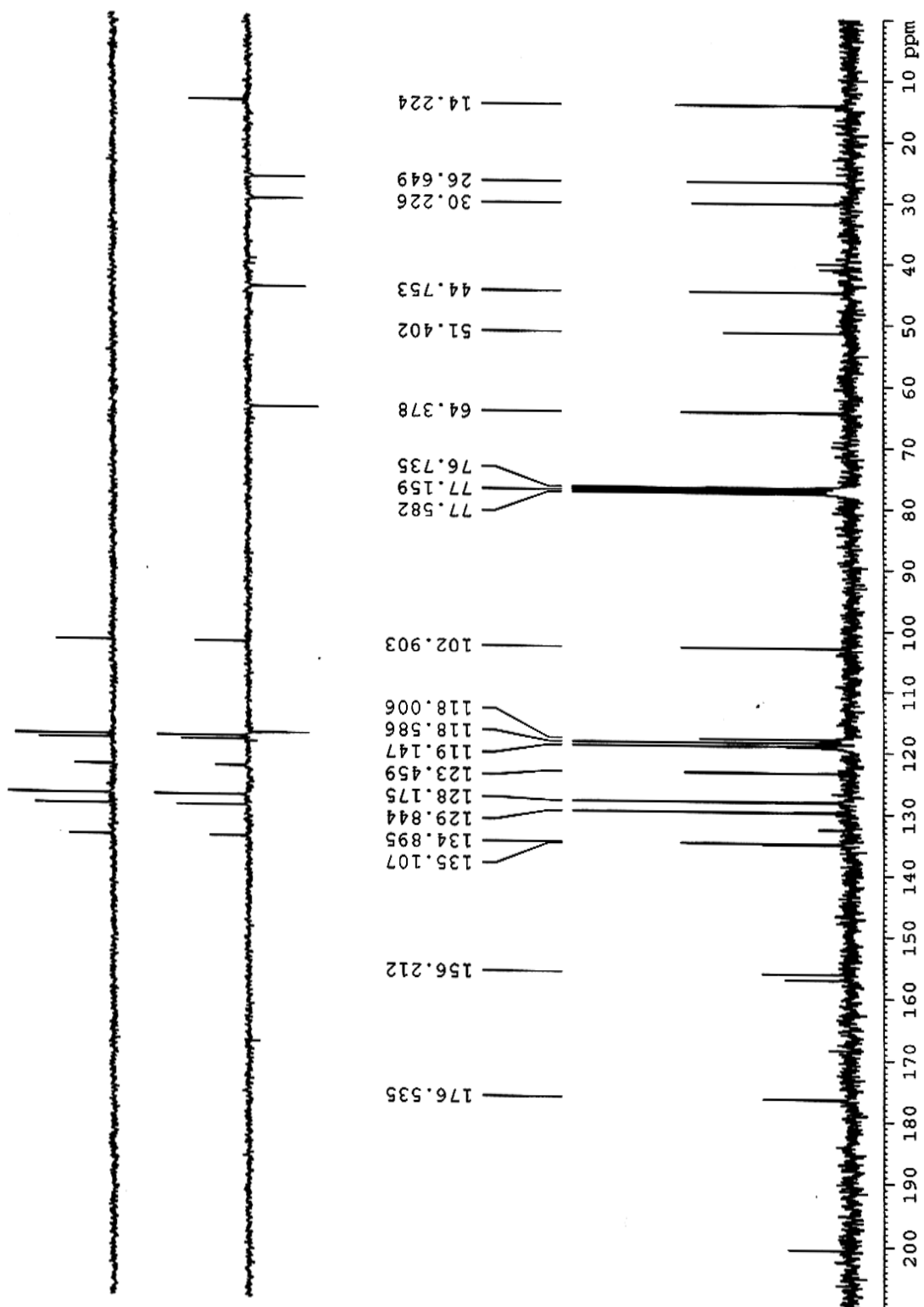
Compound 21

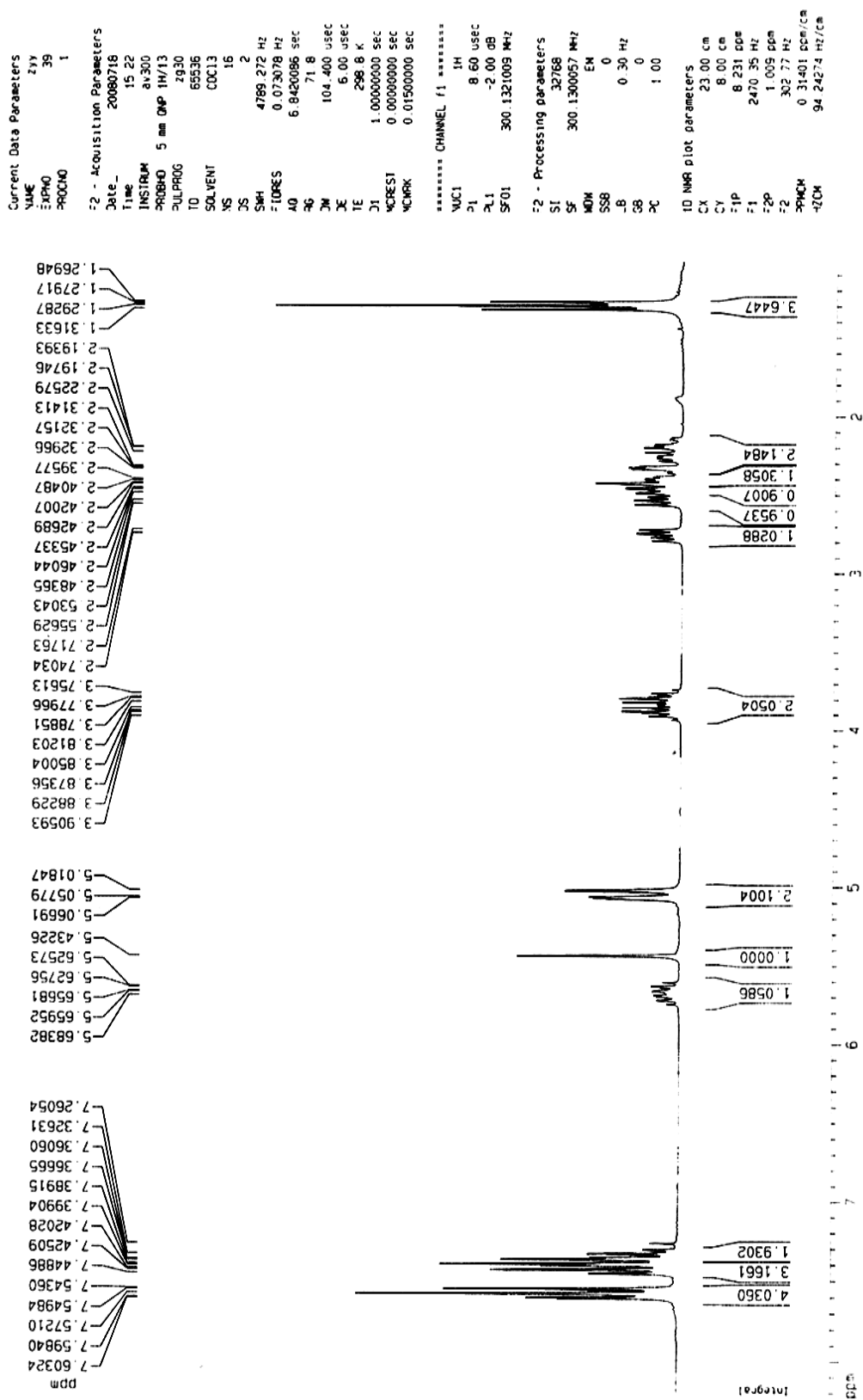


Compound 22

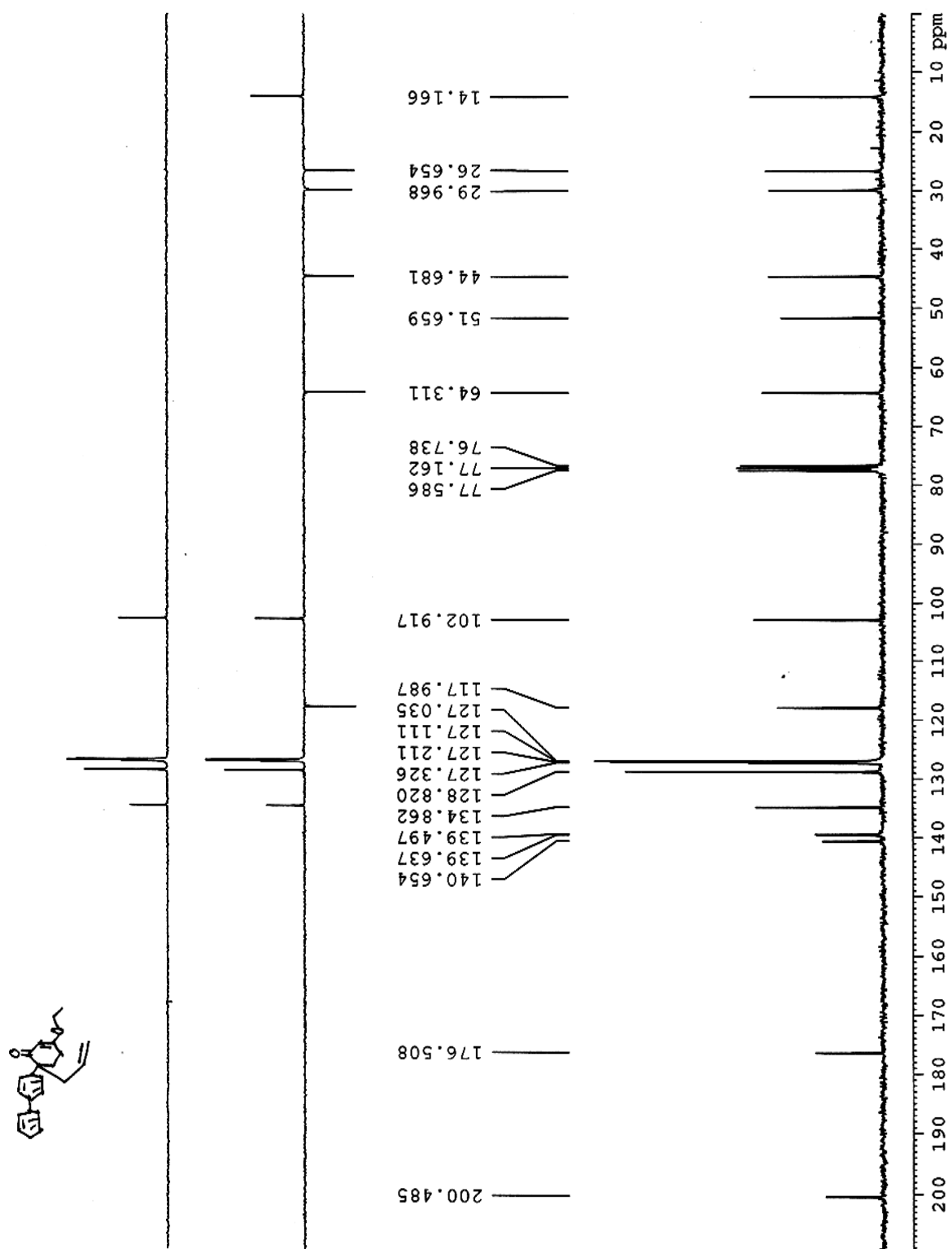


Compound 22

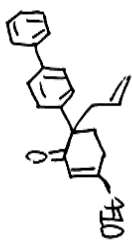
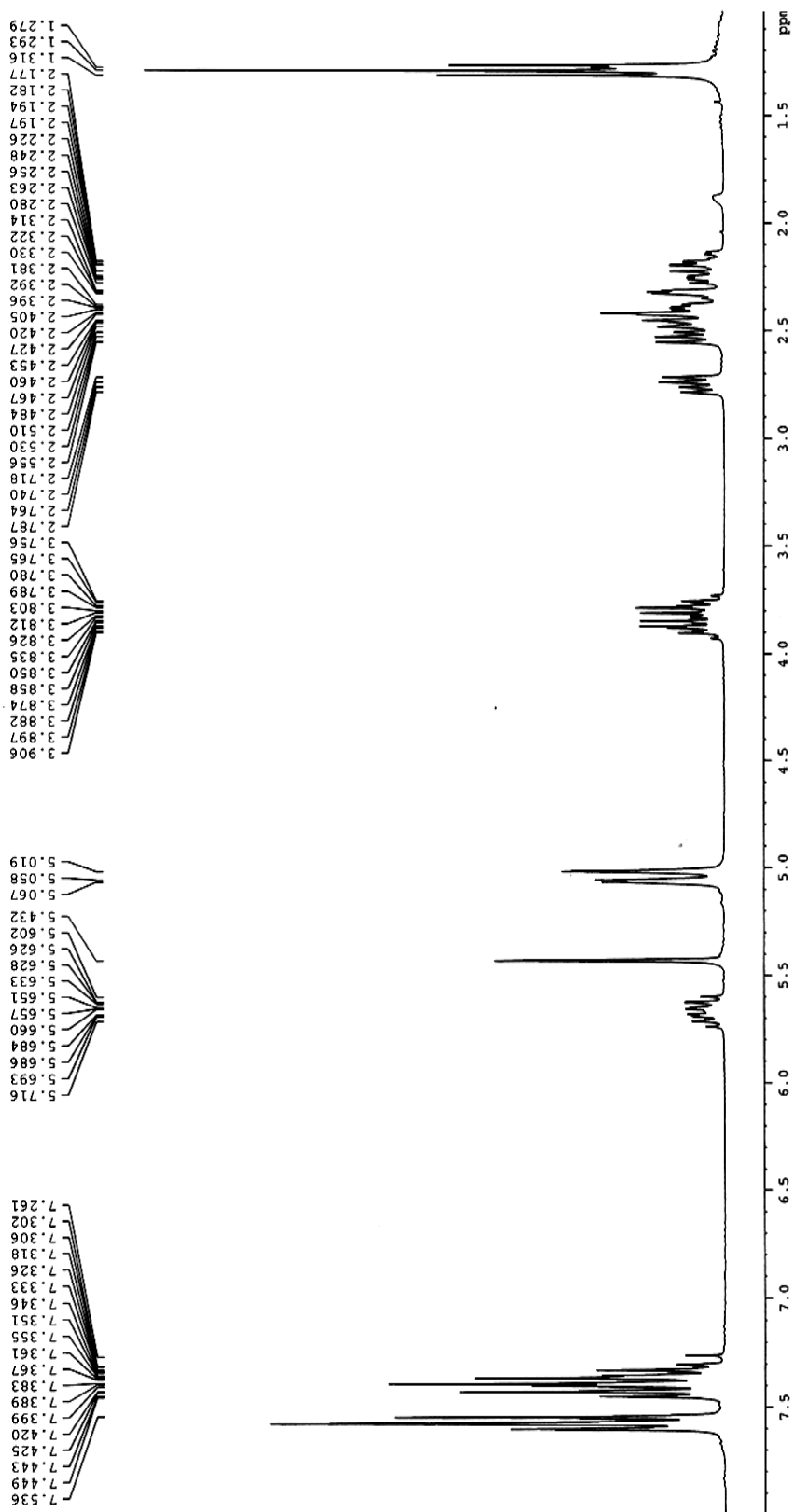




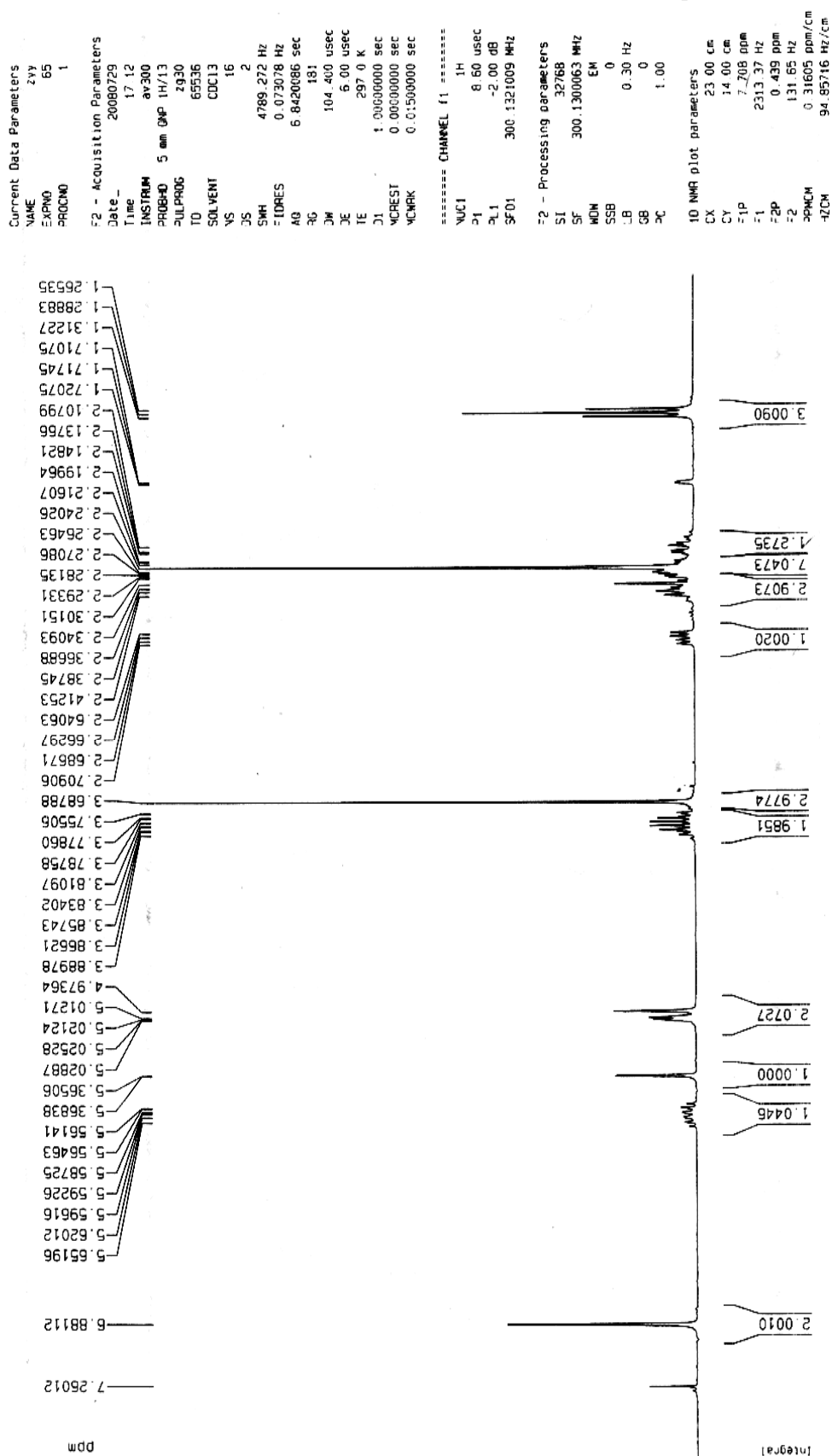
Compound 19

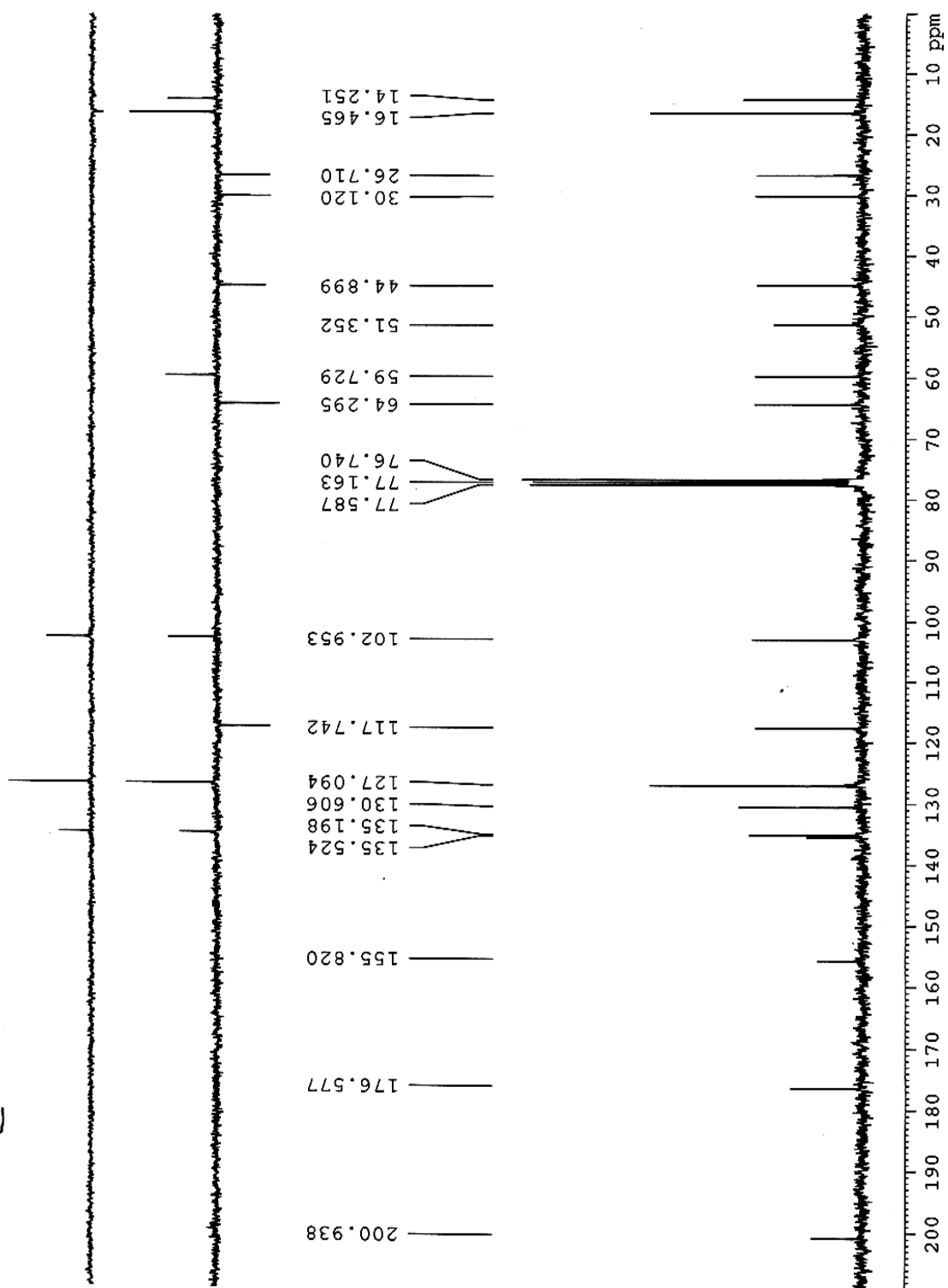


Compound 19

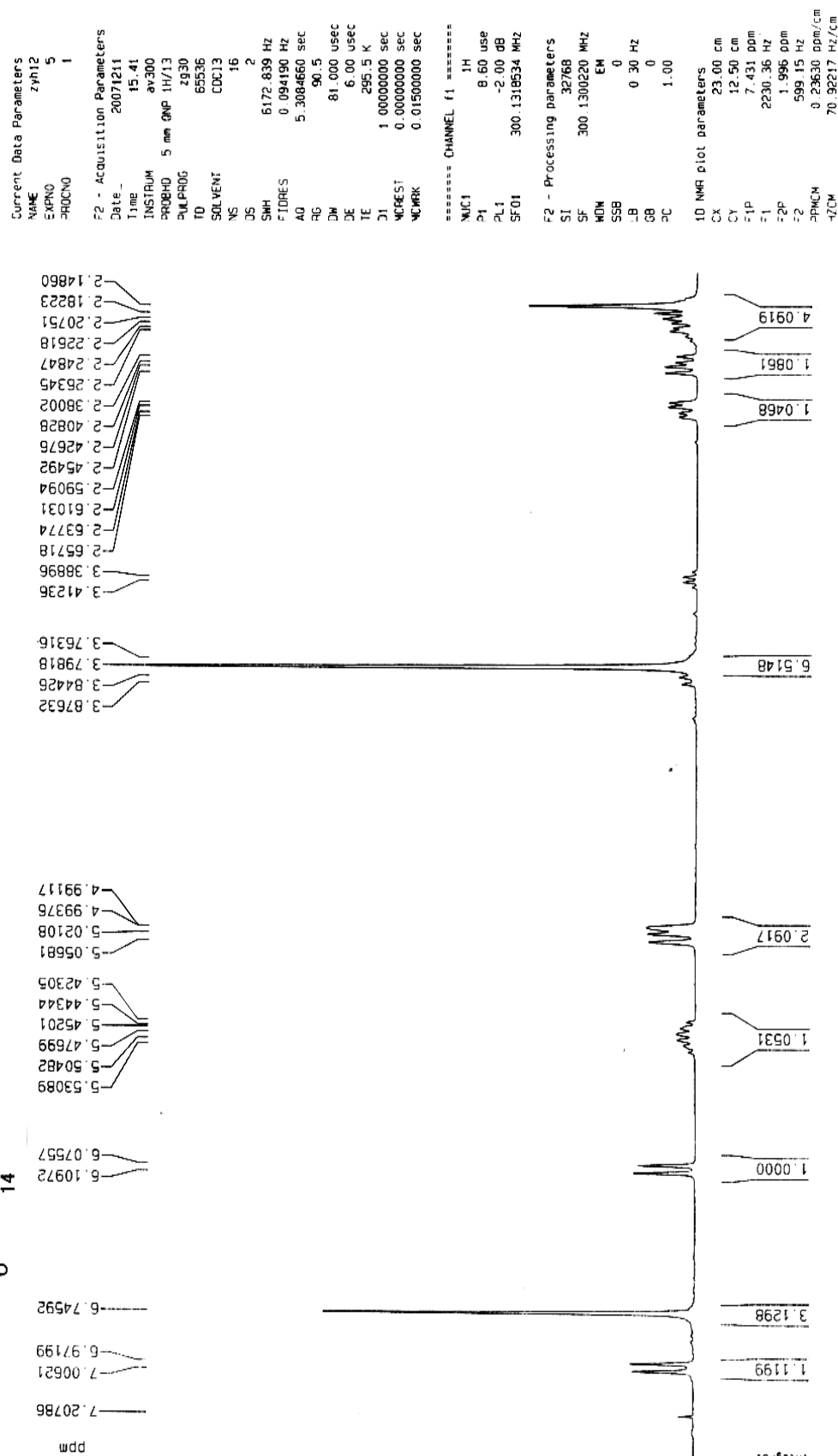
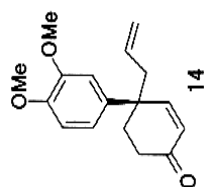


Compound 20

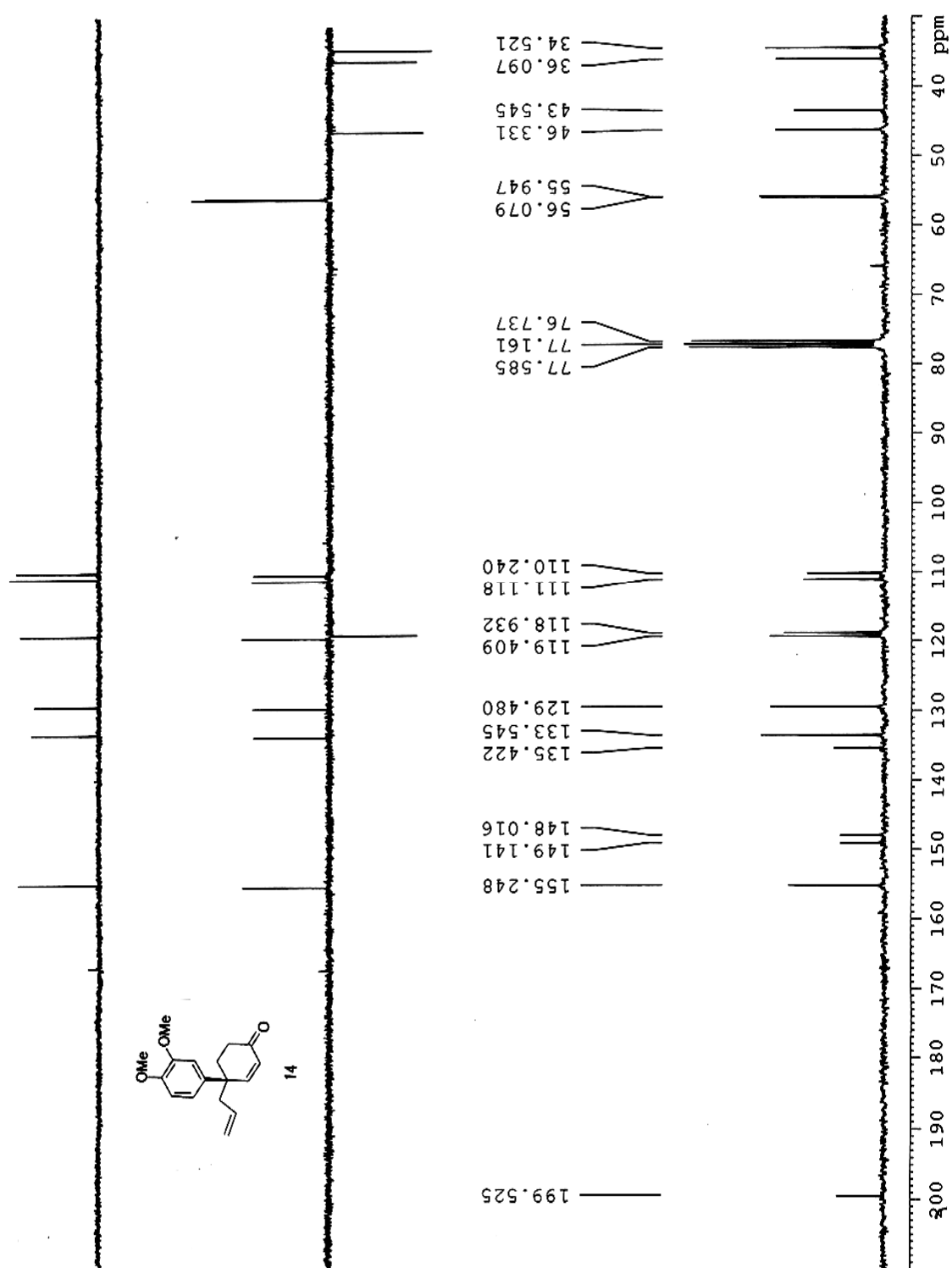




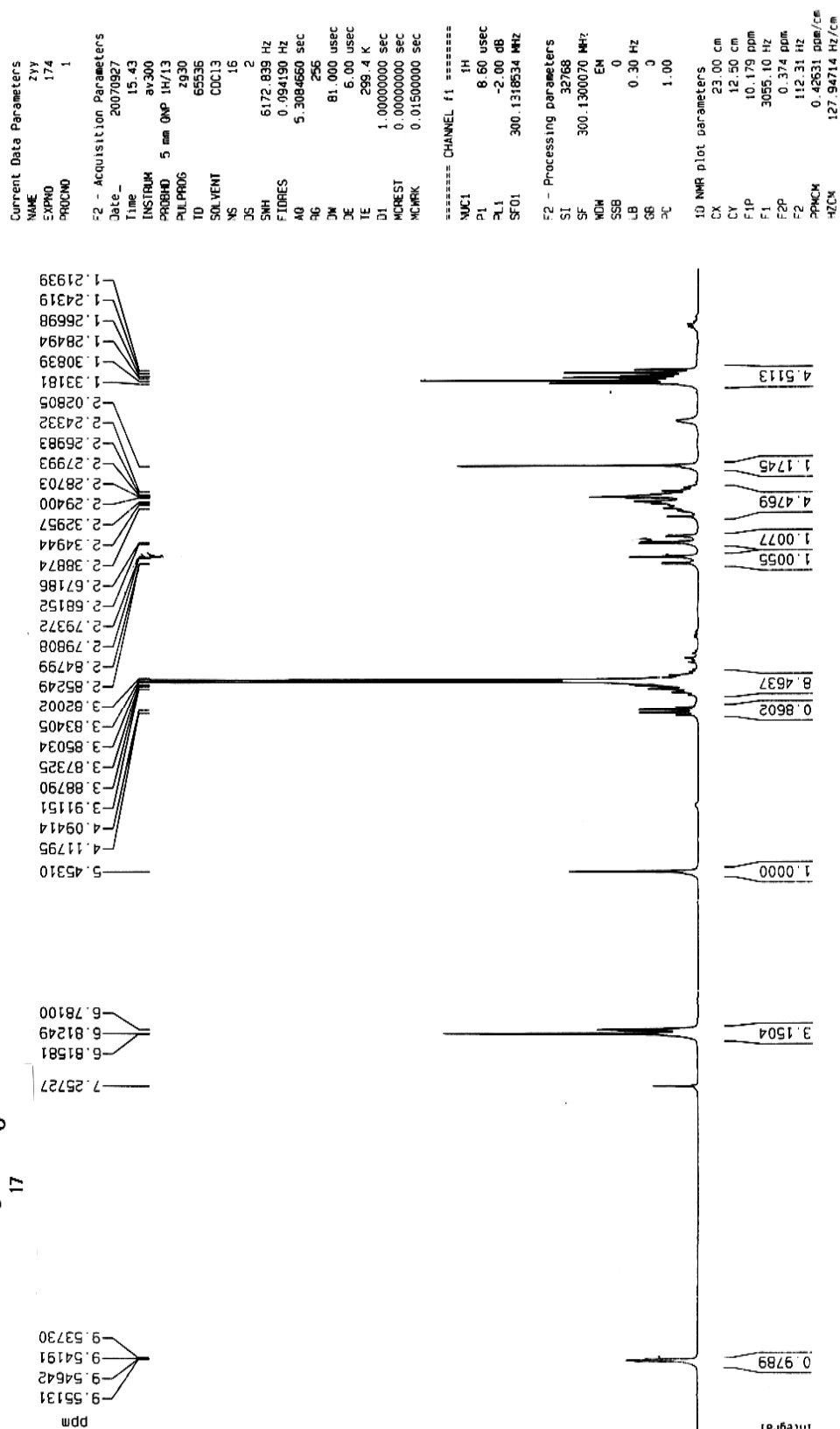
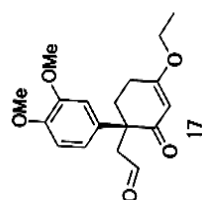
Compound 24



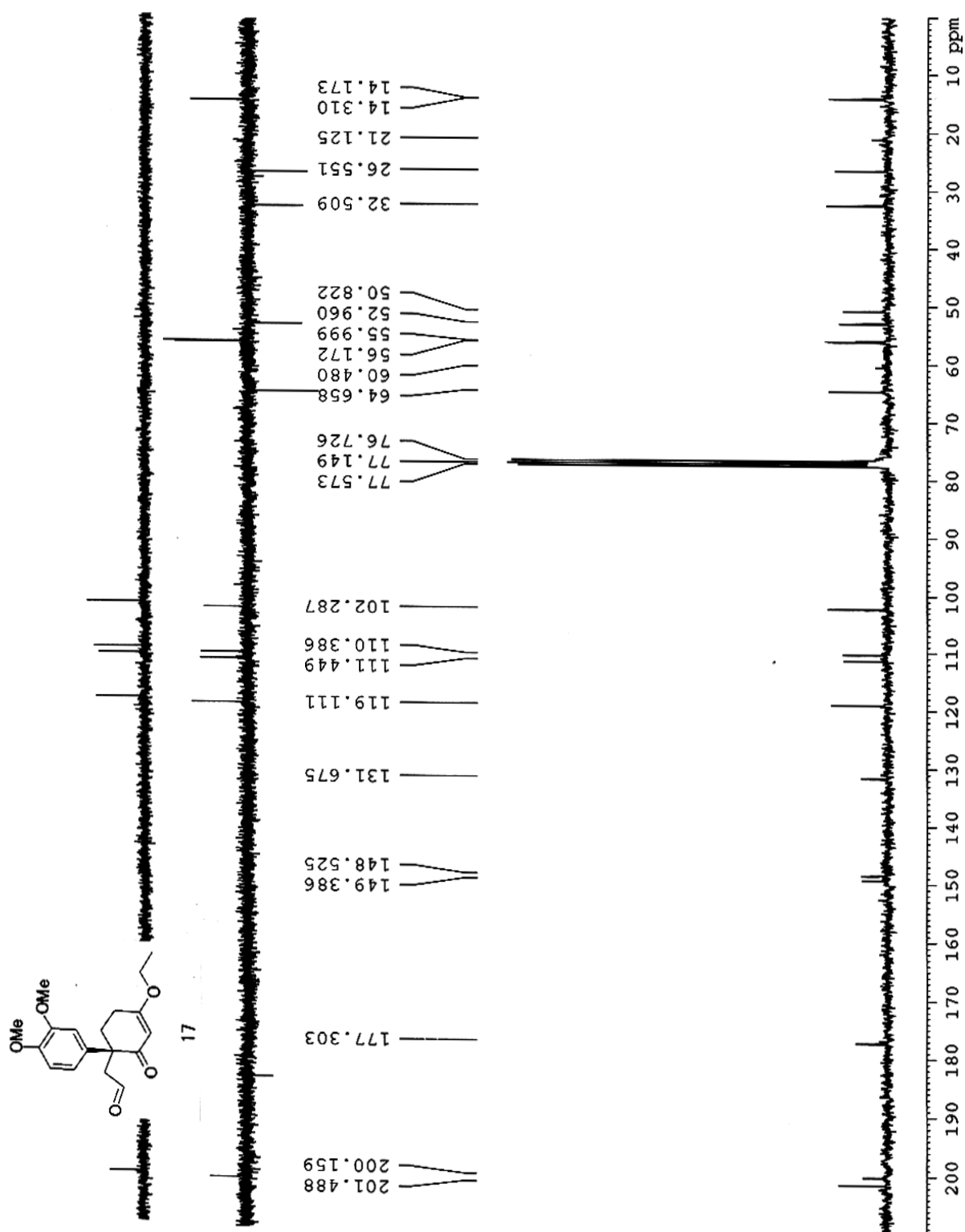
Compound 24



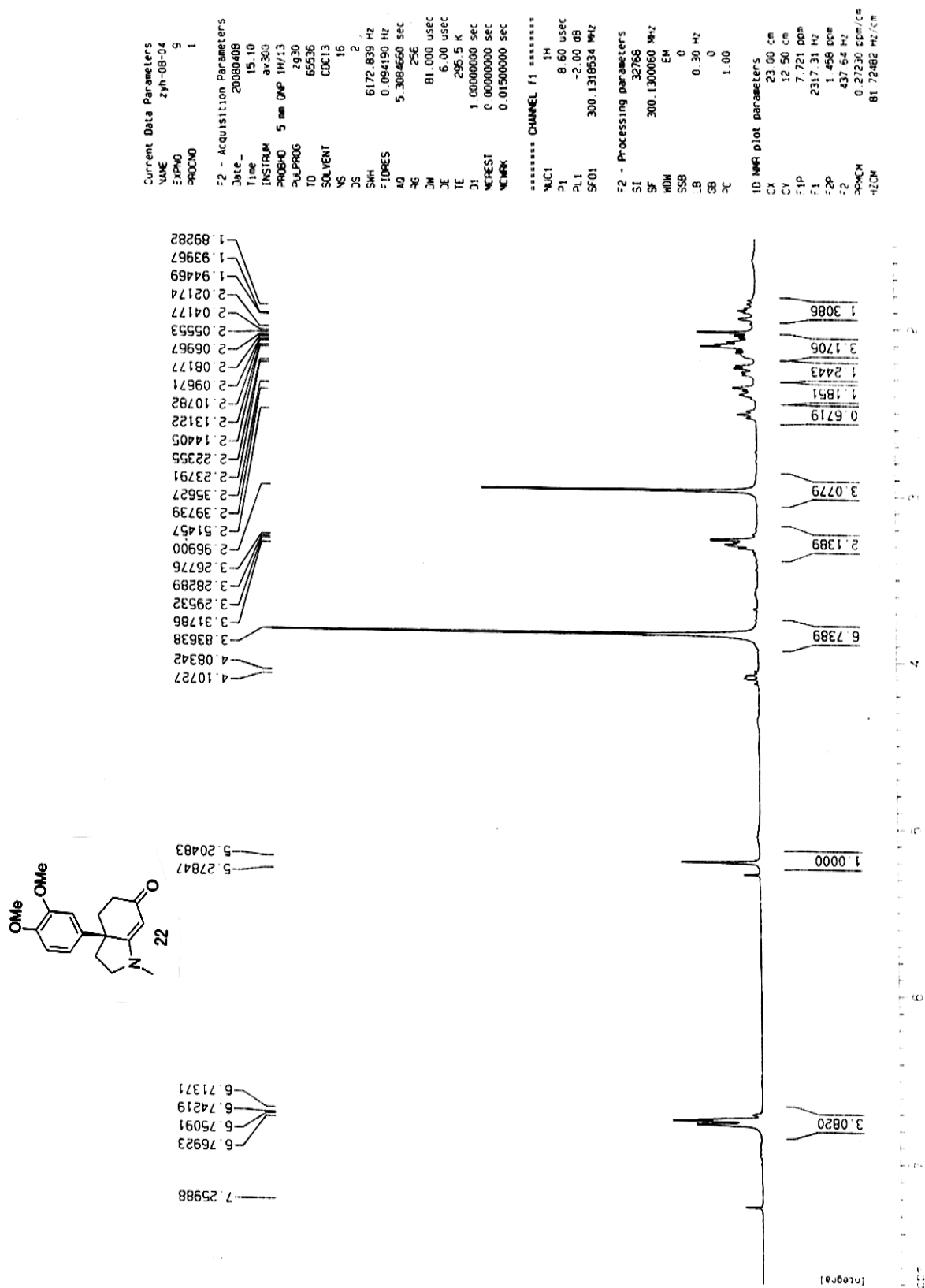
Compound 25



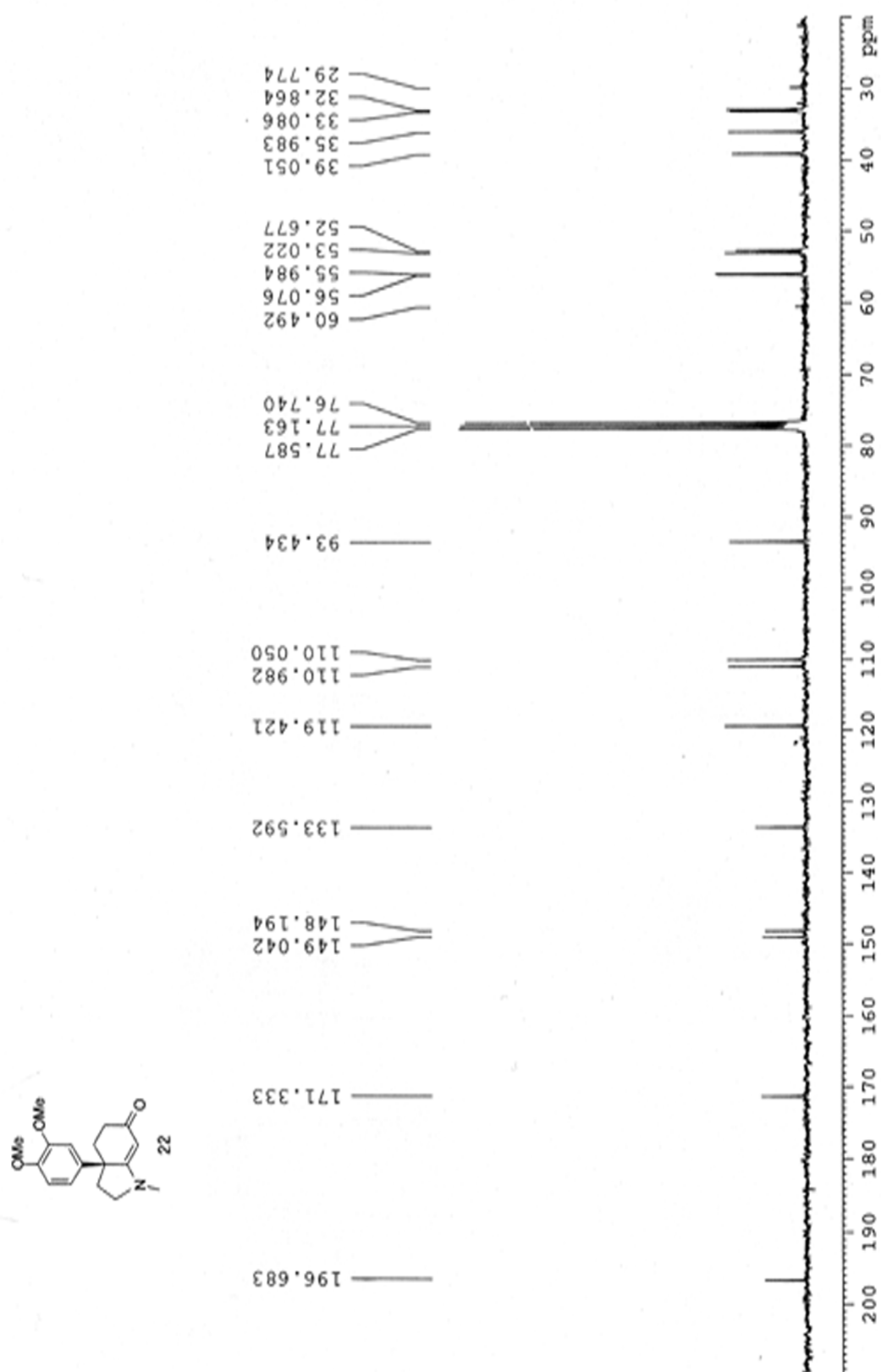
Compound 25



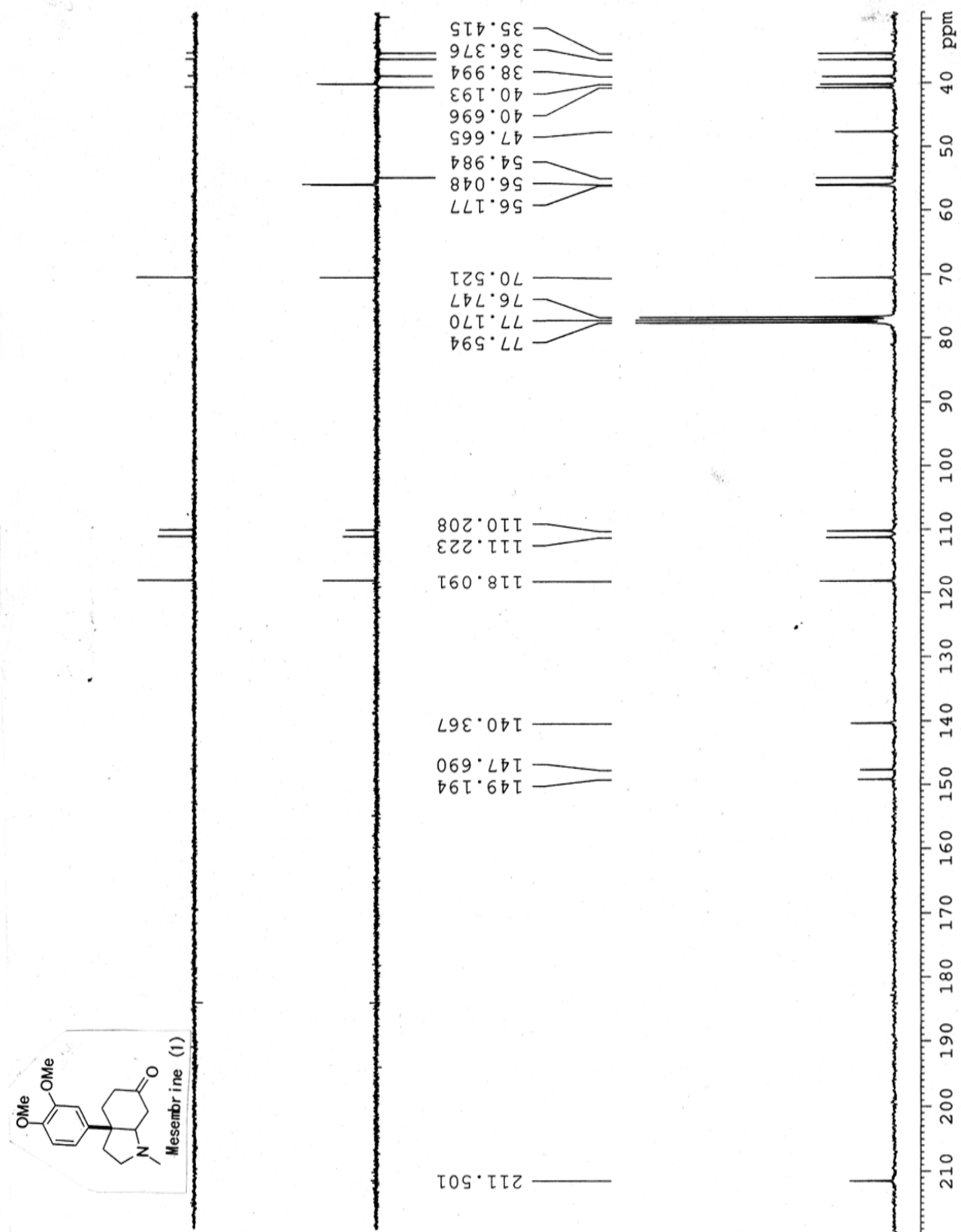
Compound 26



Compound 26



Mesembrine 1



Mesembrine 1

