SUPPORTING INFORMATION

Revised #JO030145Z

Synthesis of Diversely Functionalized Indolizidinones and Related Bicyclic Lactams Using Intramolecular Grubbs Olefin Metathesis and Dieckmann Condensation

Stephen Hanessian,* Helen Sailes, Alexander Munro, and Eric Therrien

Department of Chemistry, Université de Montréal, C. P. 6128, Succ. Centre-Ville, Montréal, P. Q., CANADA, H3C 3J7.

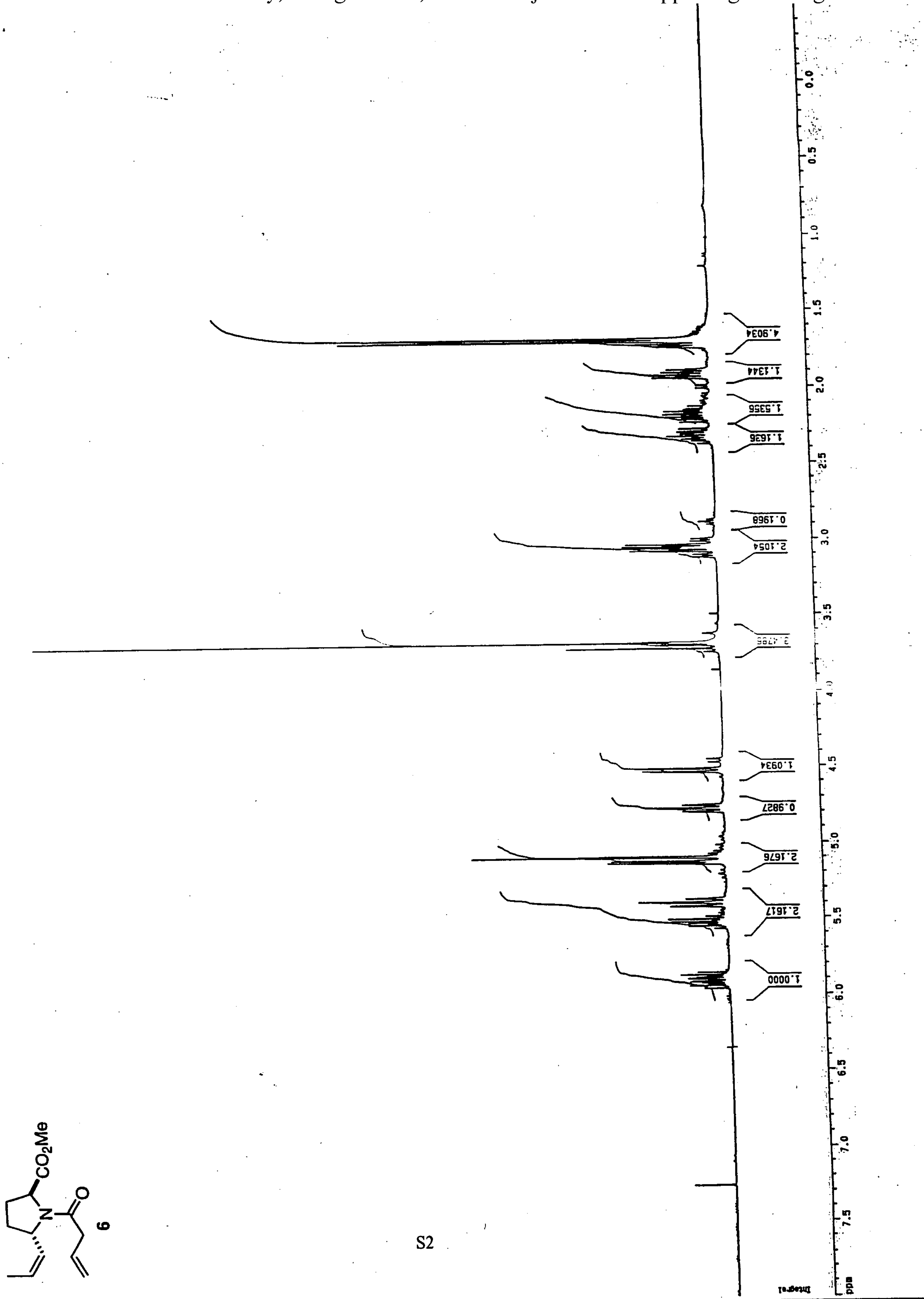
Supporting Information

General Experimental Section (S1) (1 page)

^{1}H NMR and ^{13}C NMR Spectra for Selected Compounds (S2-S31) (30 pages)

General. Flash chromatography was performed on 230-240 mesh silica gel.[1] Thin-layer chromatography (TLC) was performed on glass plates coated with 0.02 mm layer of silica gel 60 F_{254}. All solvents were distilled freshly before use. 400-MHz ^{1}H-NMR, 100.6-MHz ^{13}C-NMR spectra were determined in $CDCl_3$ unless otherwise noted. Wherever necessary, ^{1}H-NMR assignments were supported by appropriate homonuclear correlation experiments (COSY). Low- and high-resolution mass spectra were recorded using fast atom bombardment (FAB) technique. Optical rotations were measured at 25 °C at the sodium line.

[1] Still, W. C.; Kahn, M.; Mitra, A. *J. Org. Chem.* **1978**, *43*, 2923.



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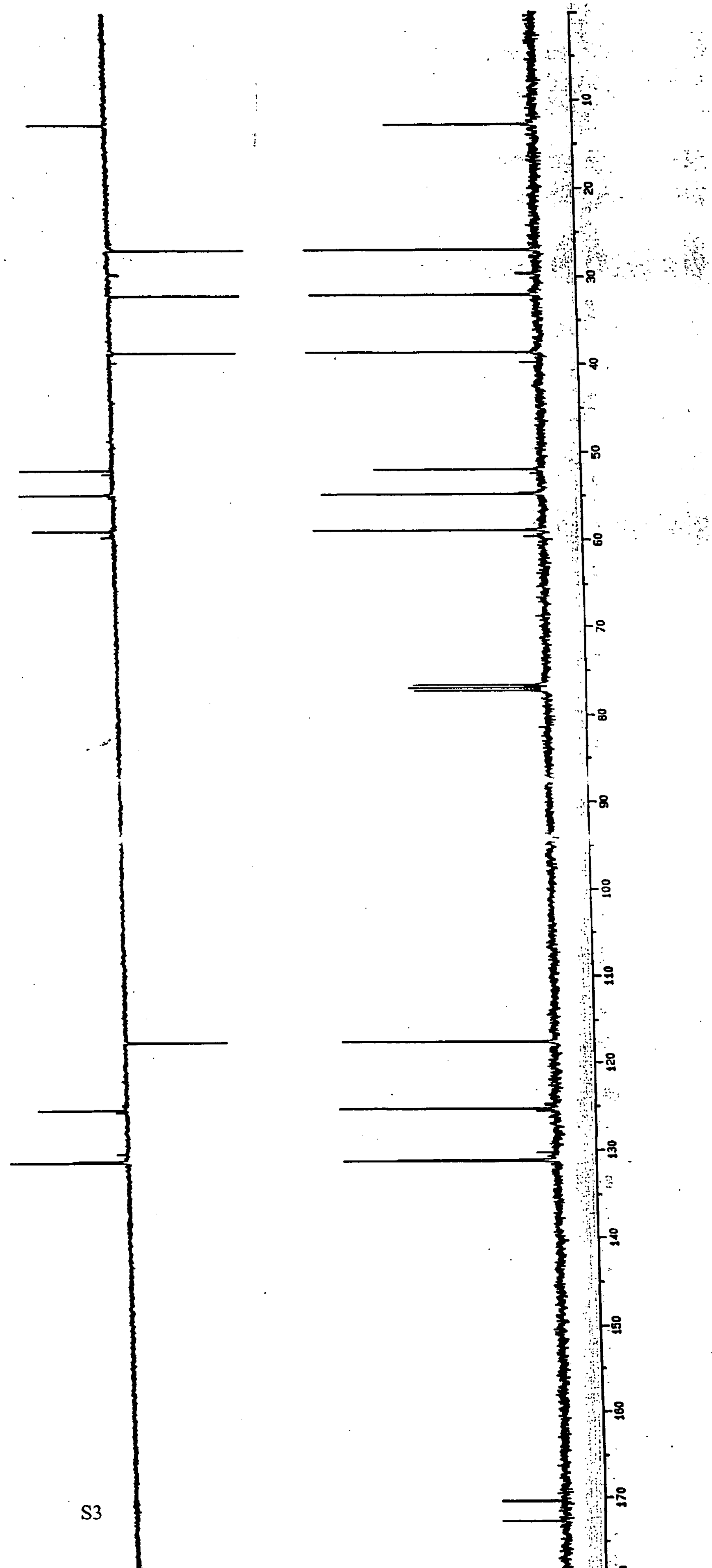

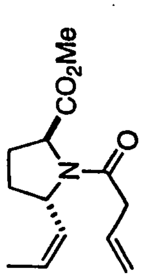
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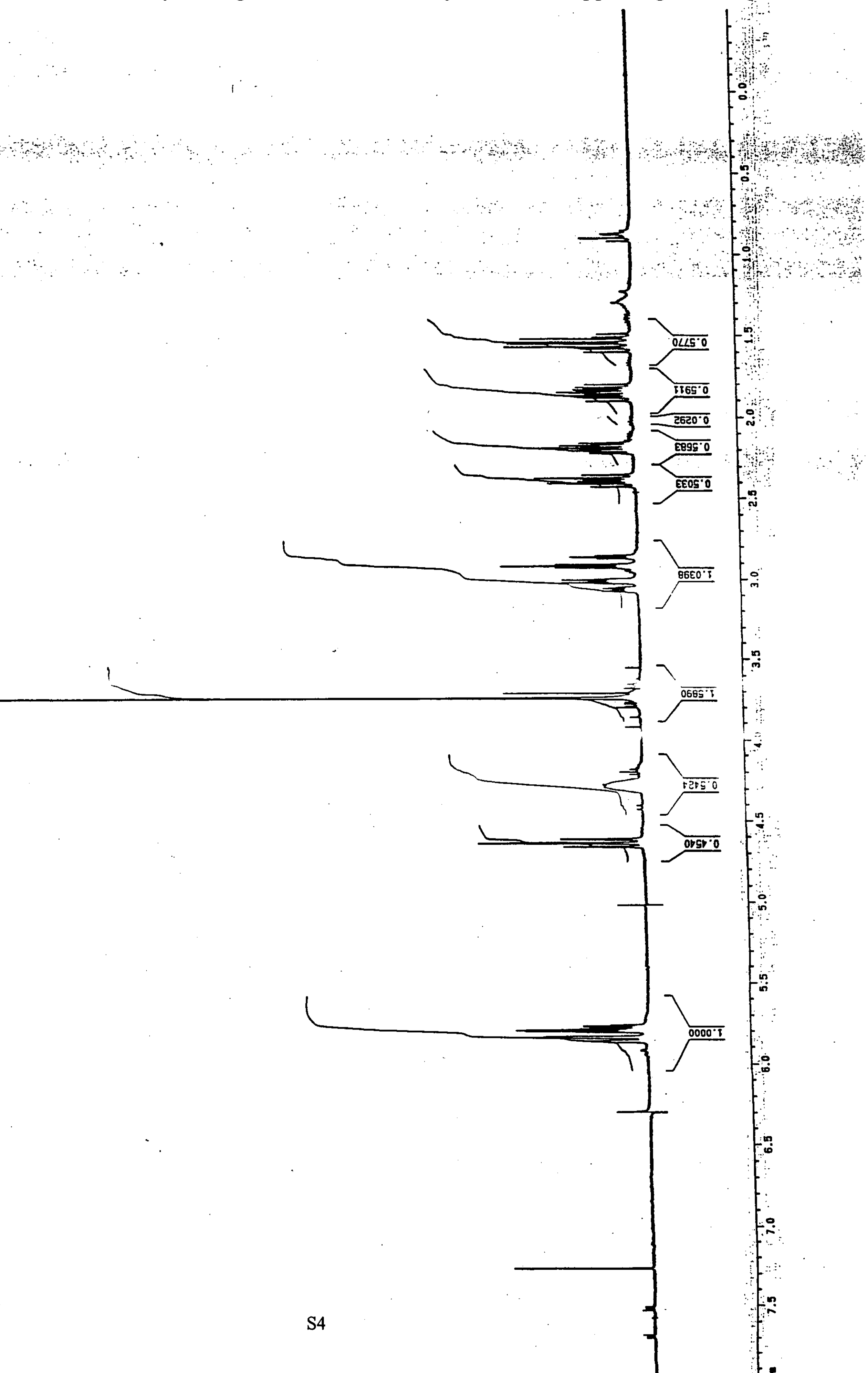
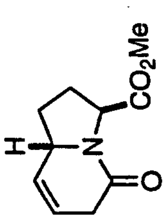
S3





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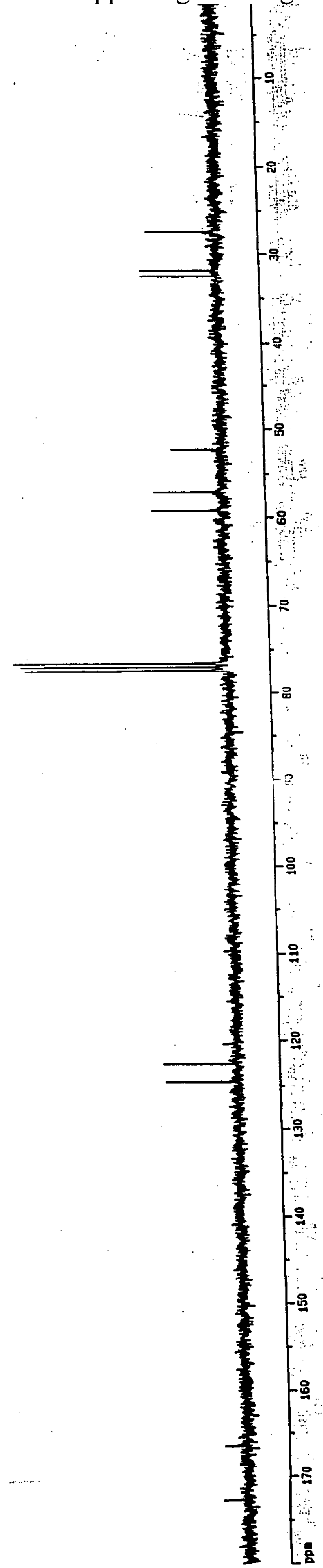
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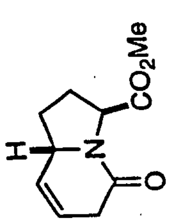
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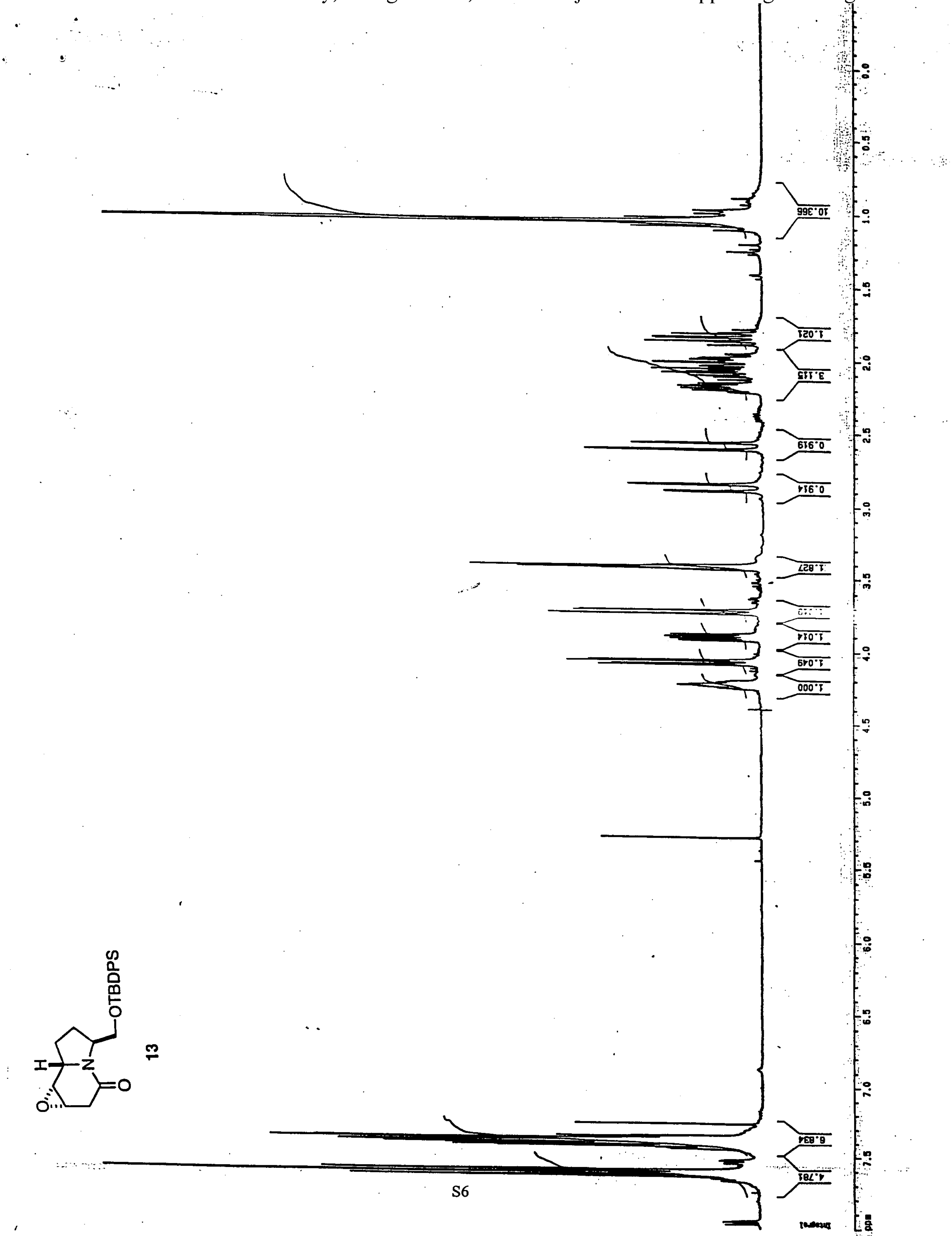
7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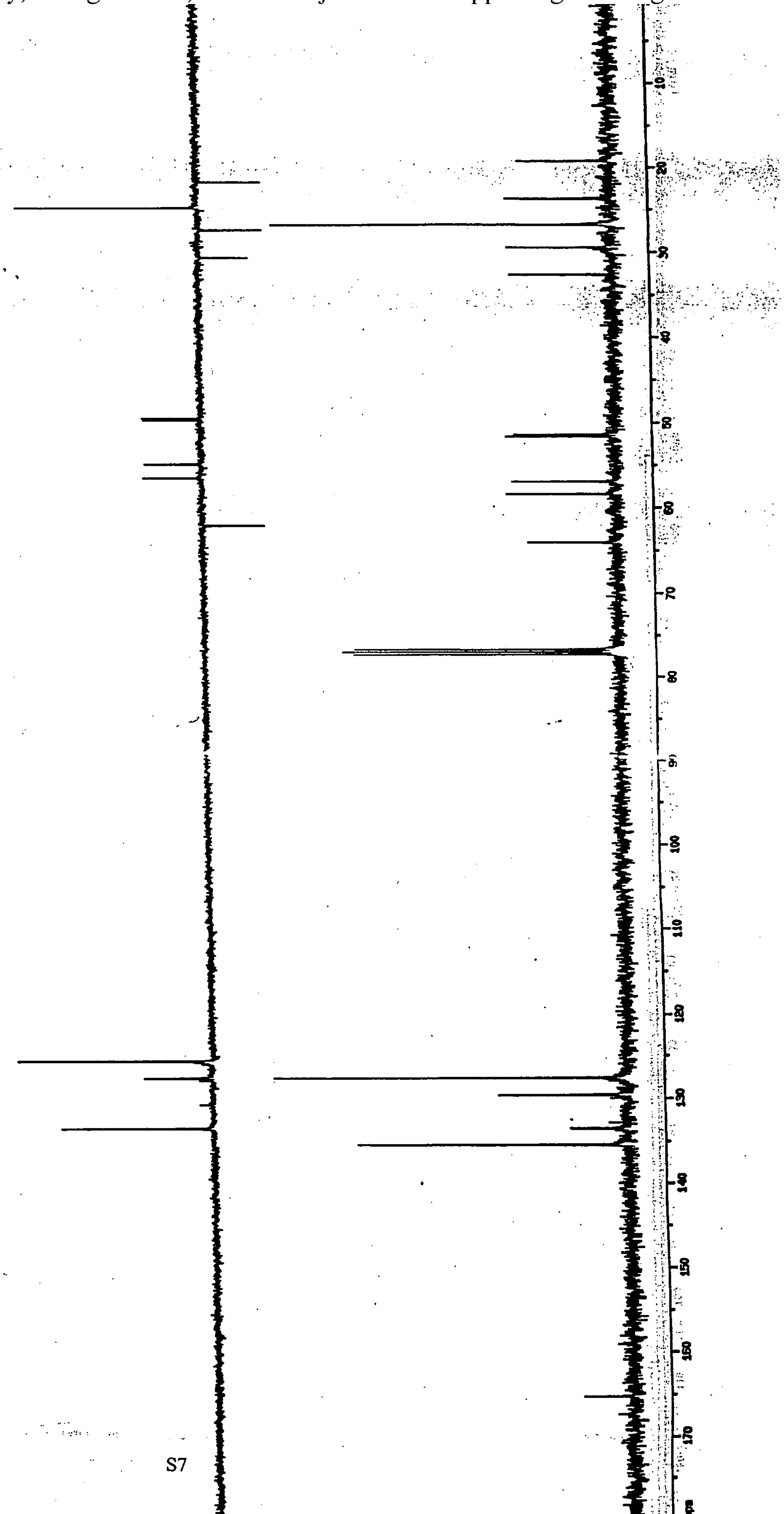
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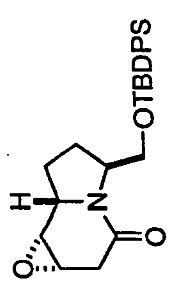
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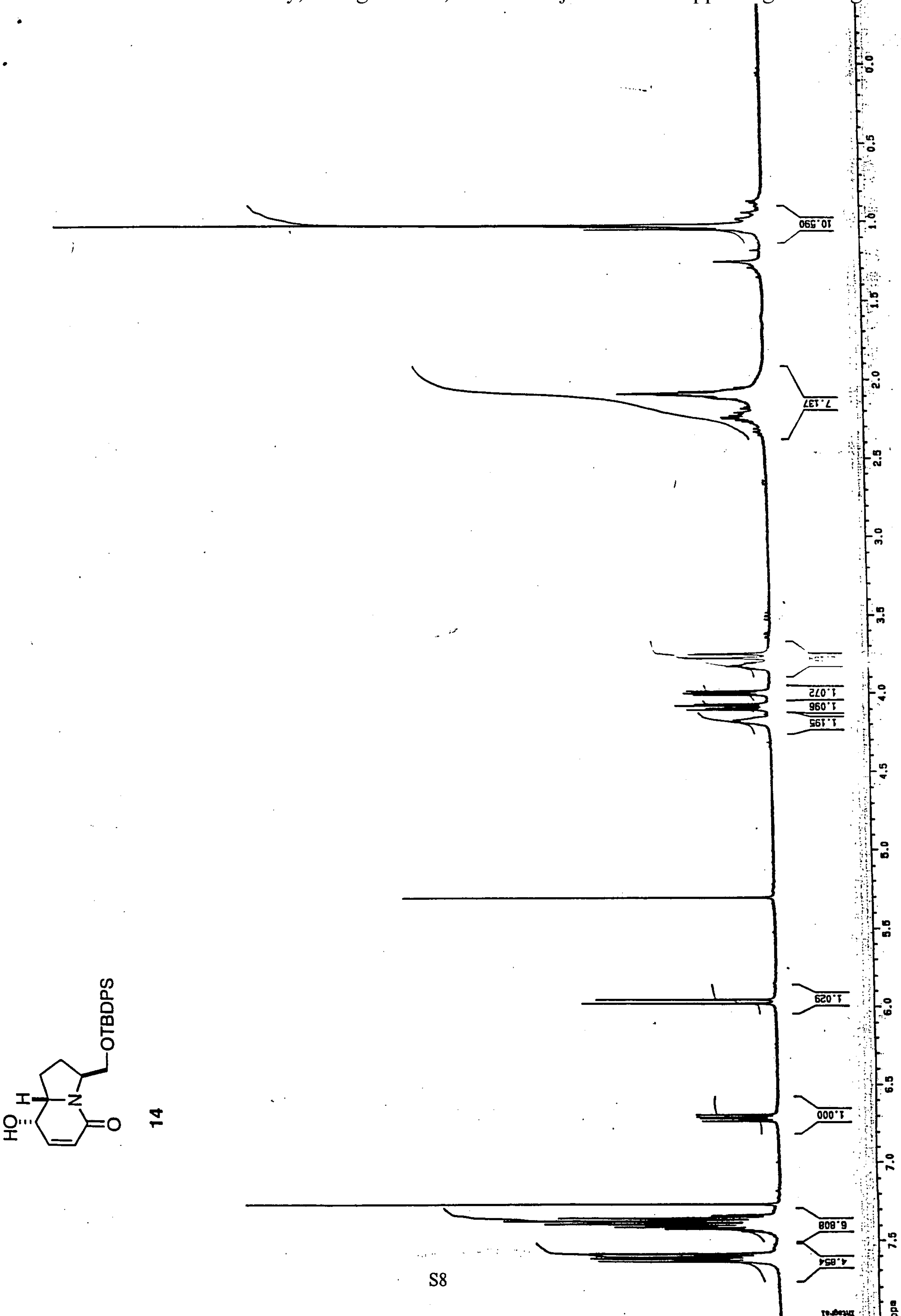
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HO
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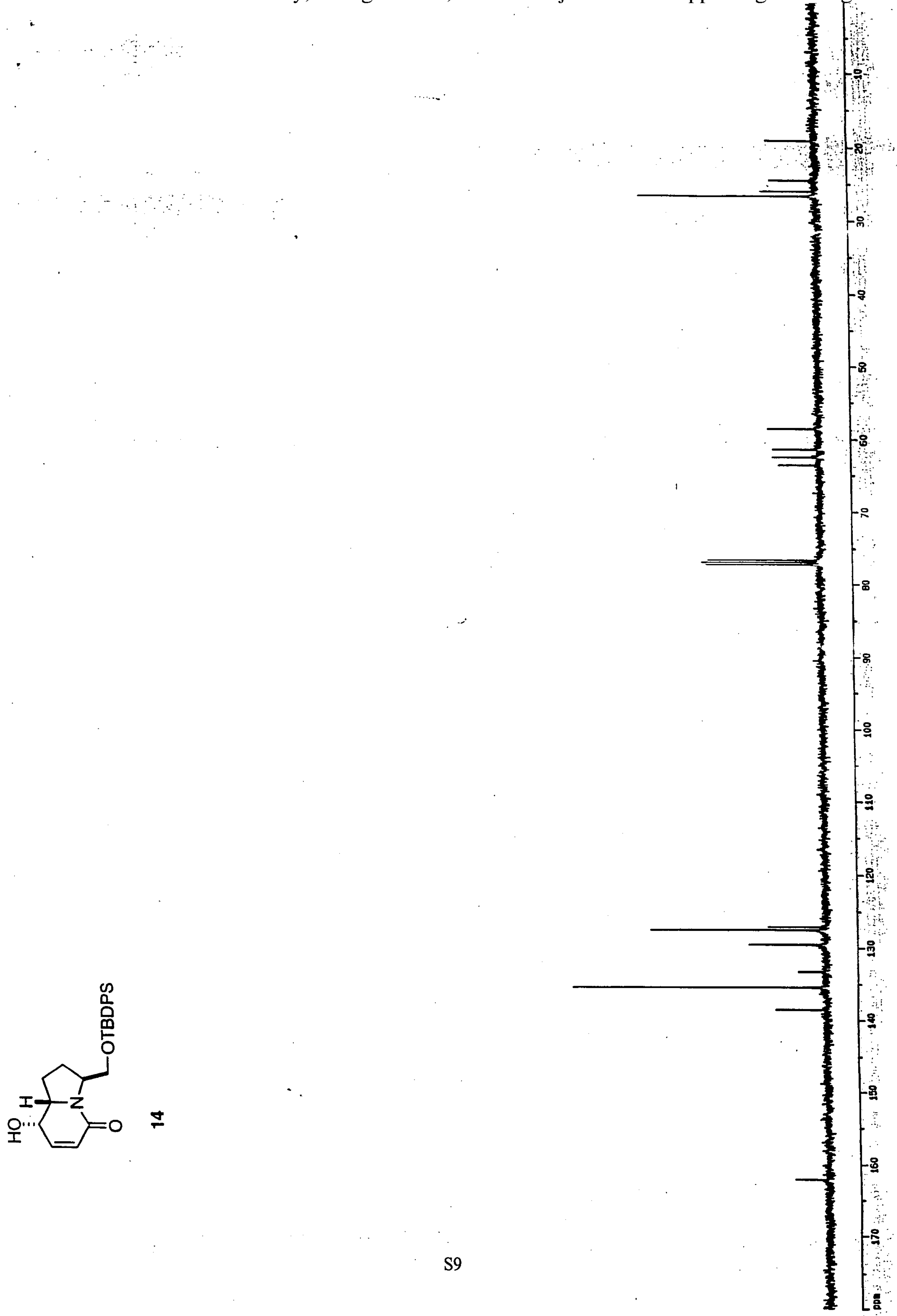
OTBDPS

14



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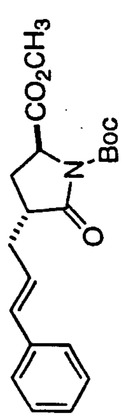
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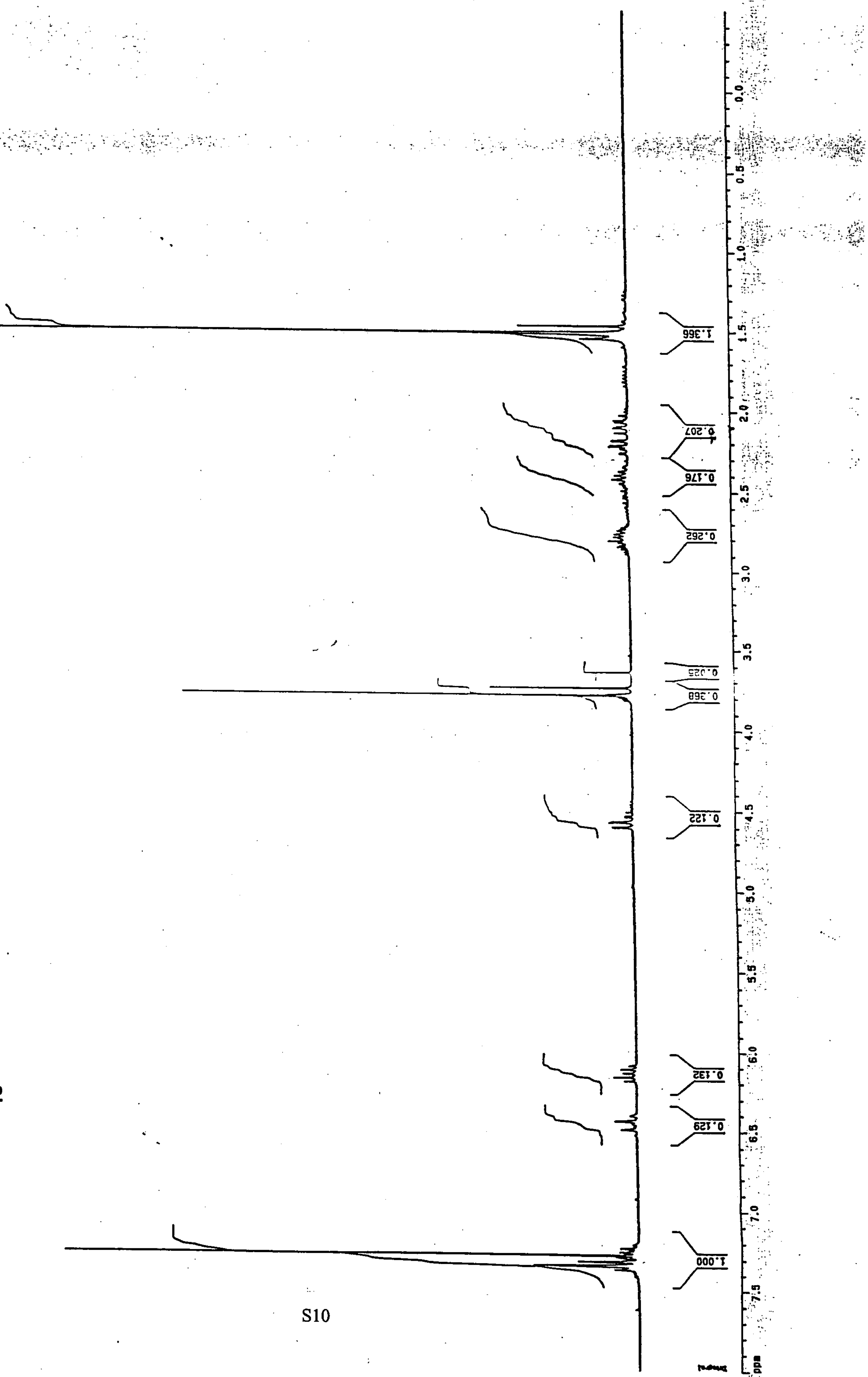
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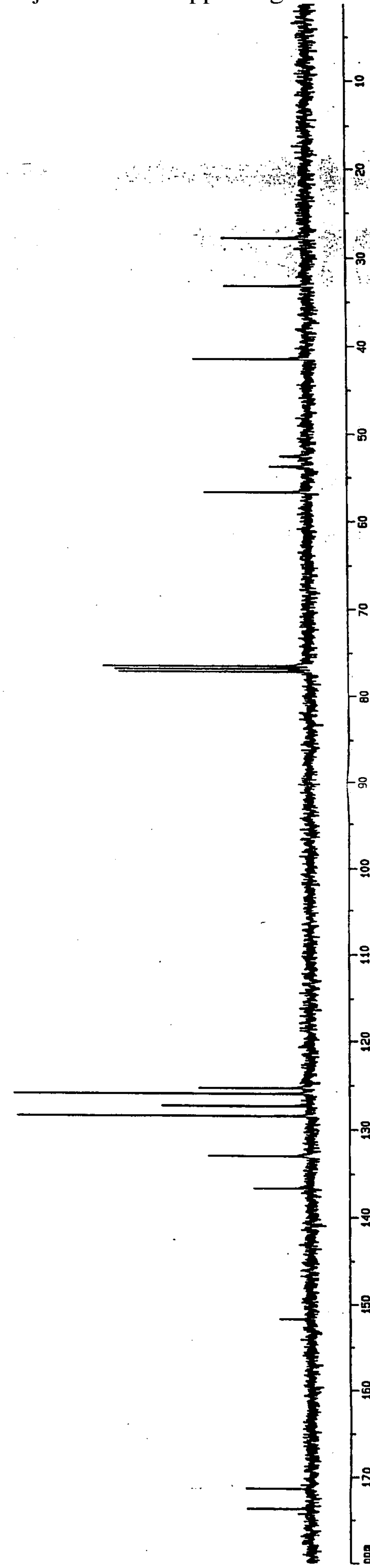
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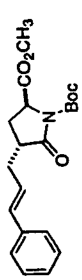
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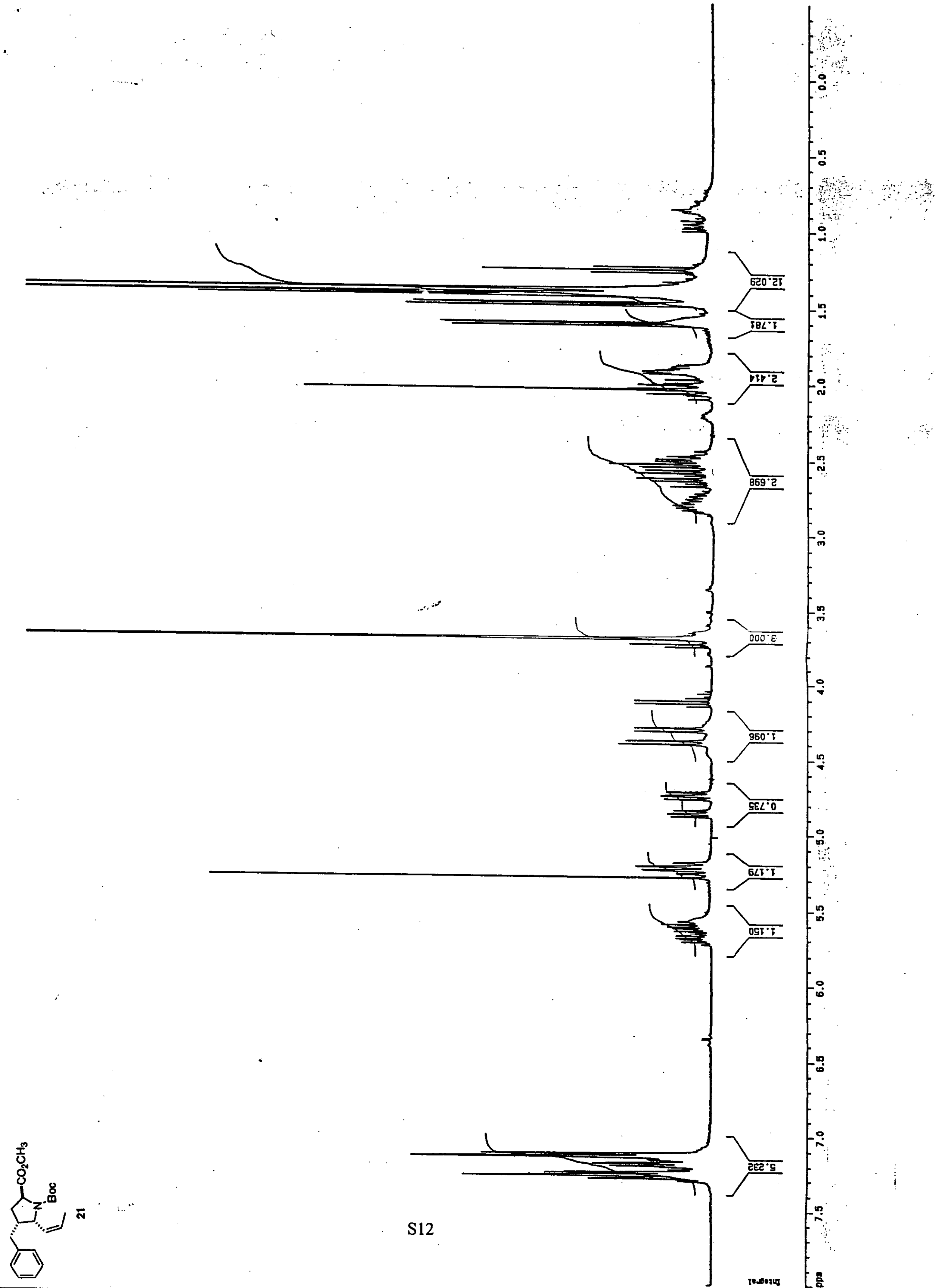

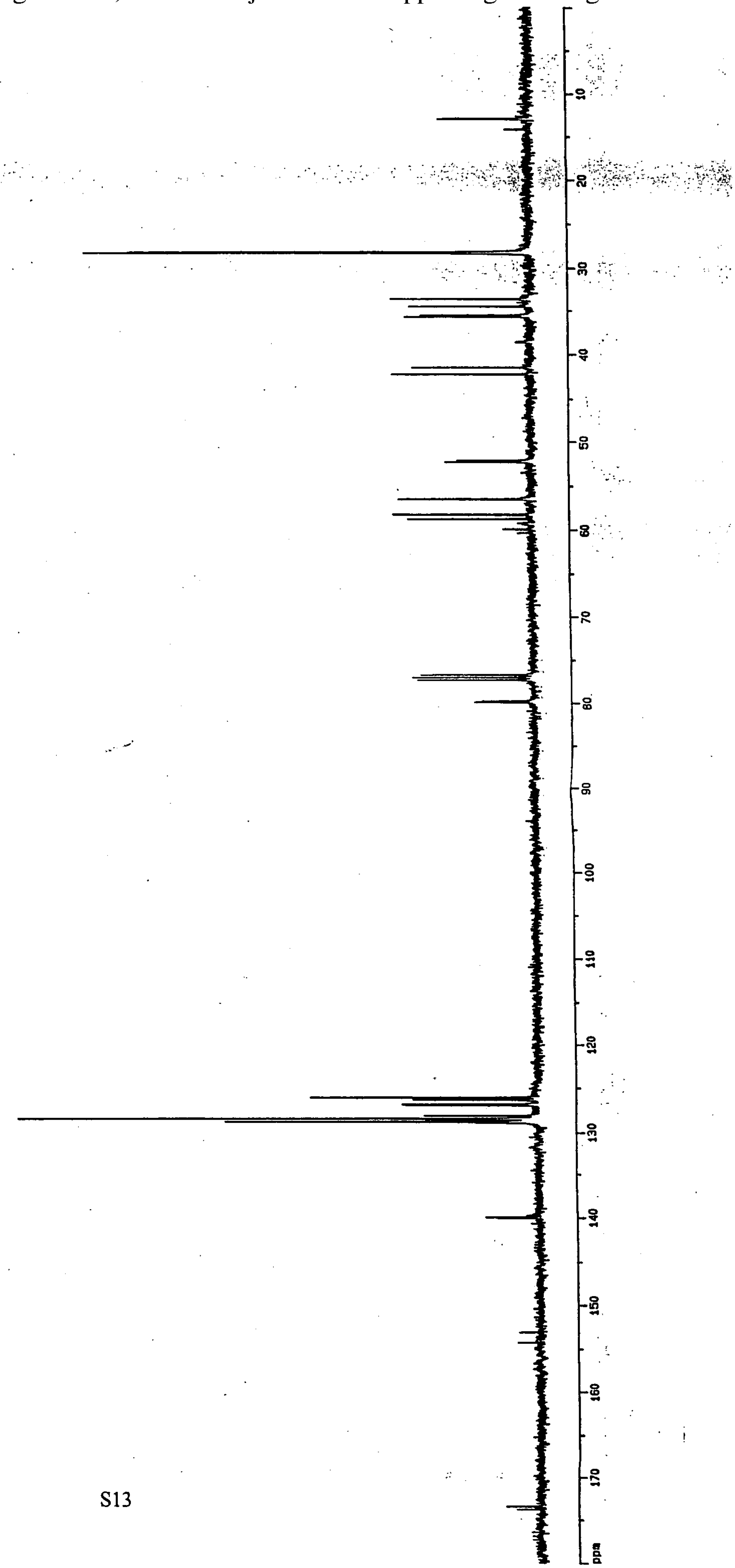
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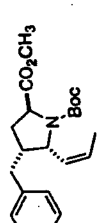
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Boc

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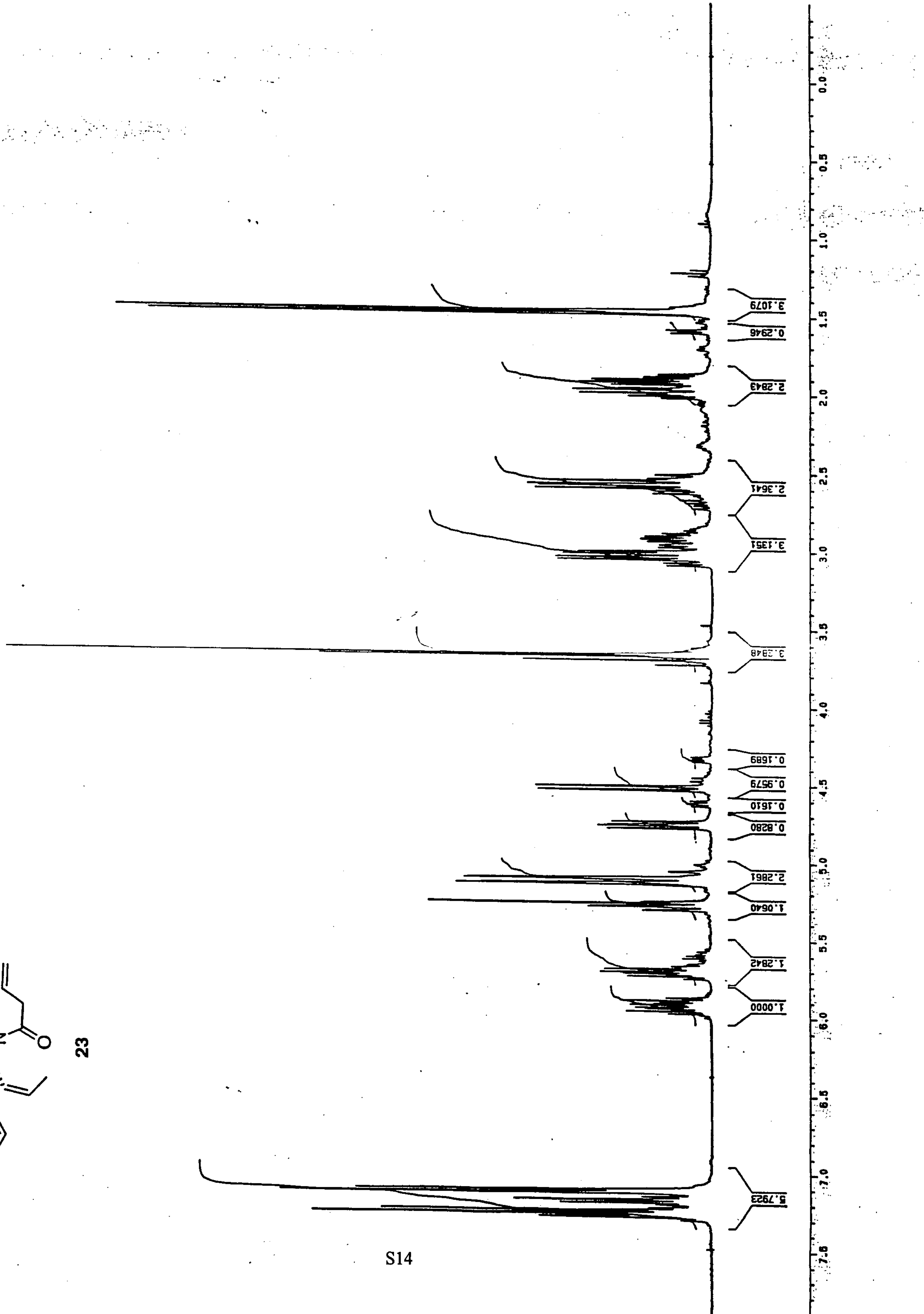

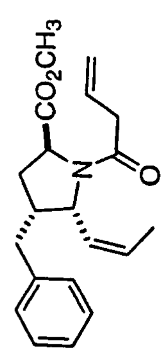

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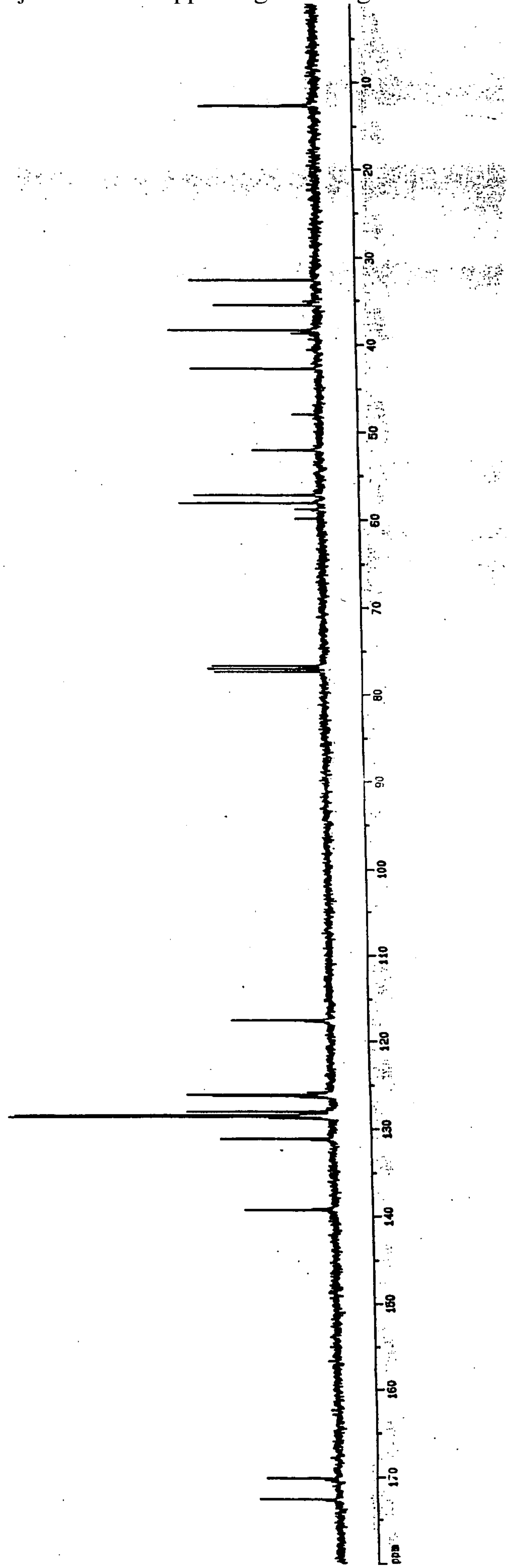

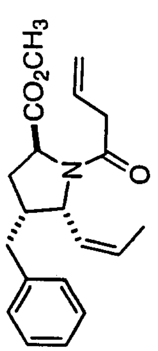

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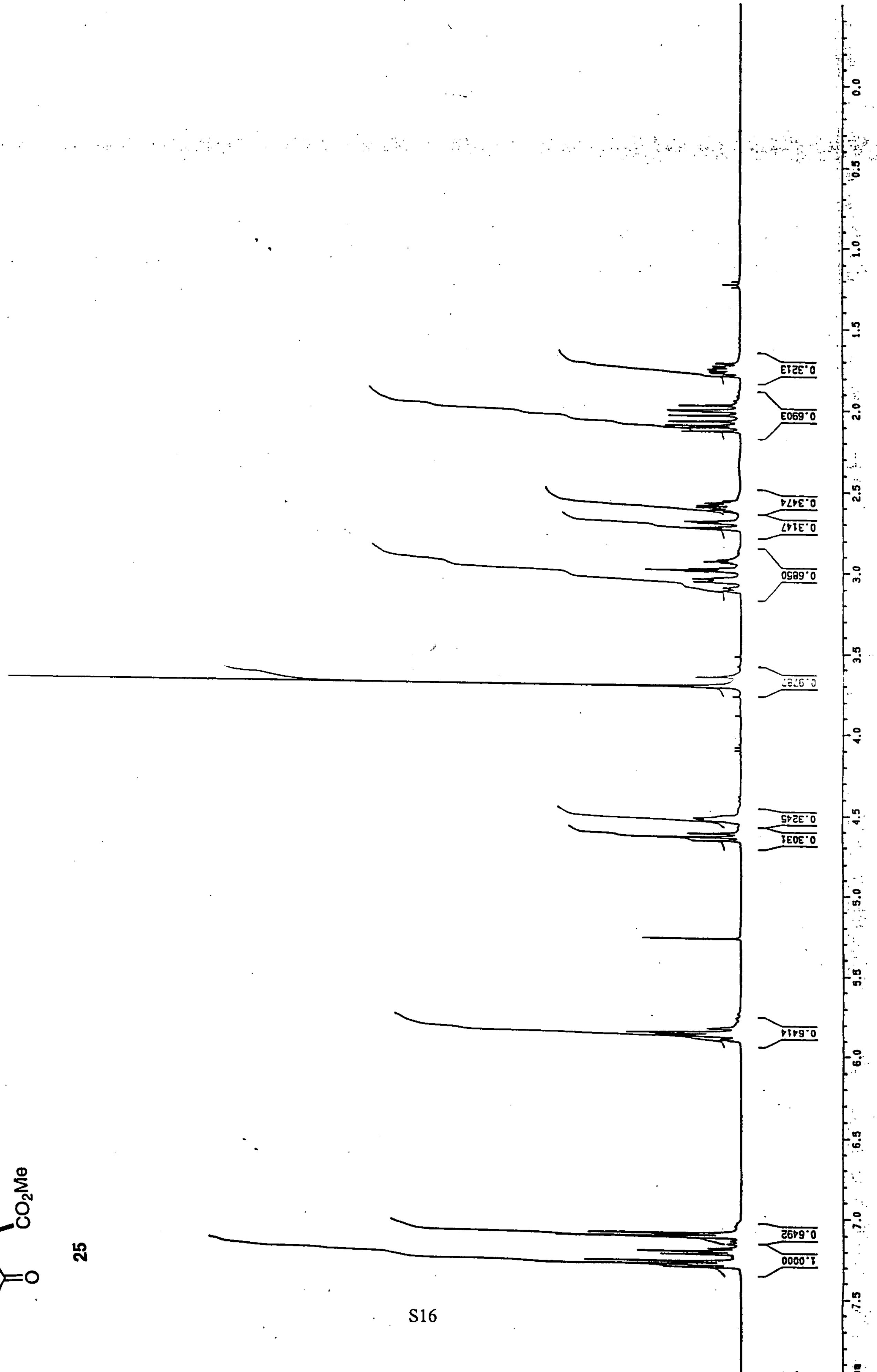
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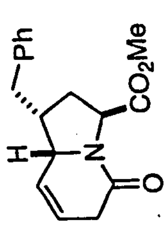
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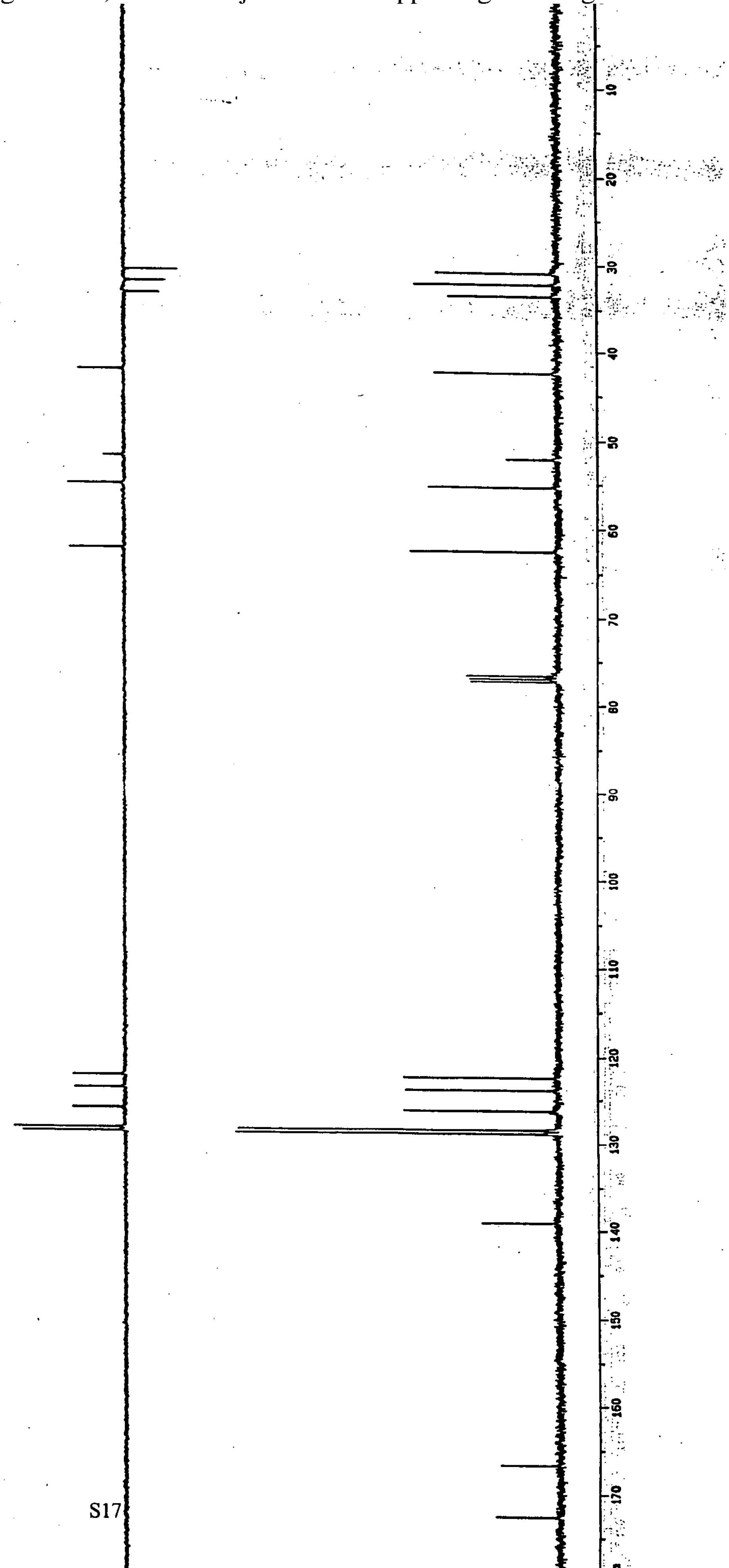

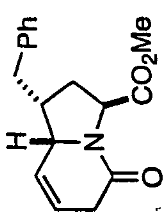

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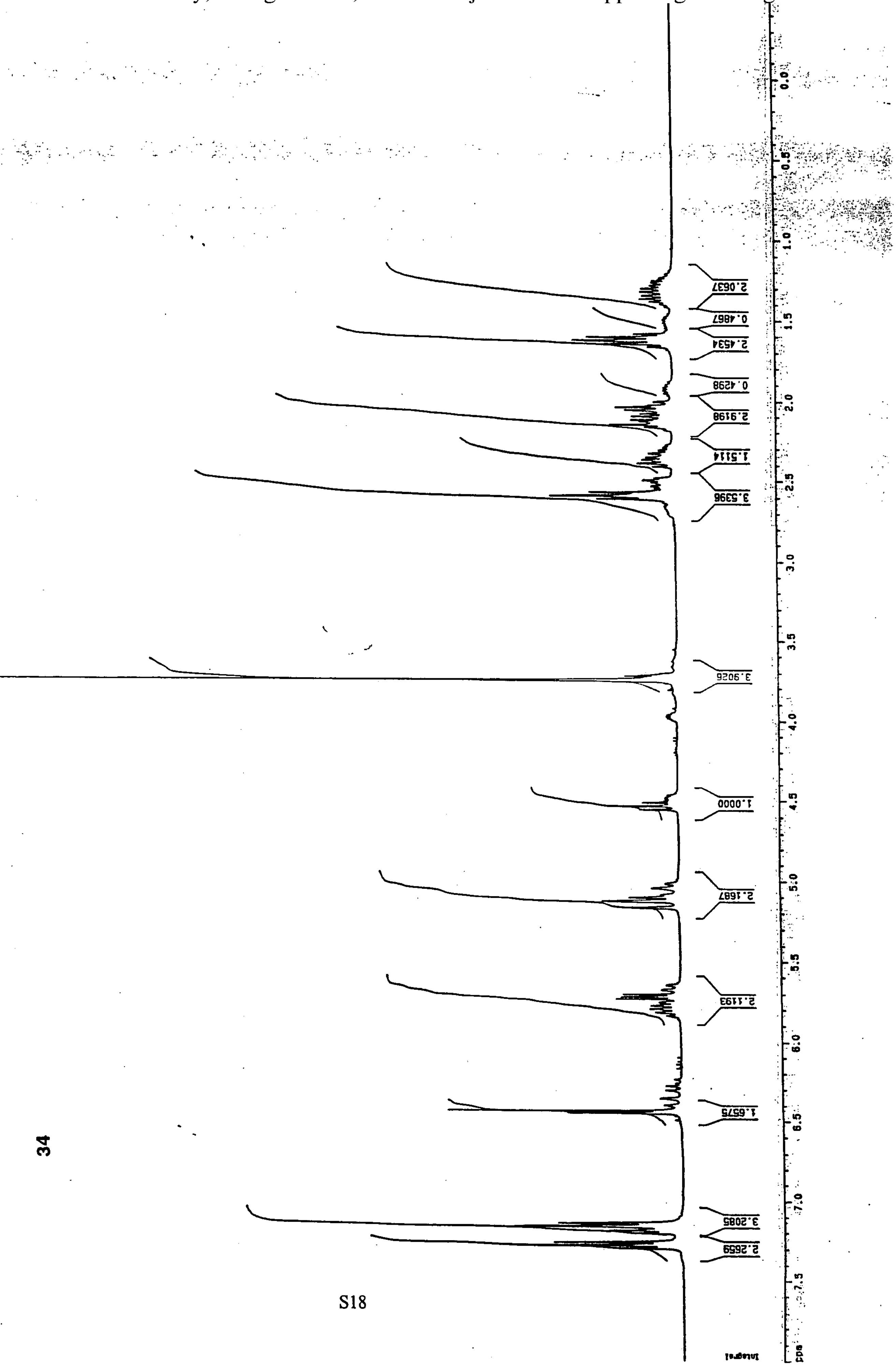

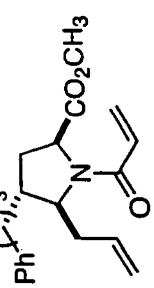

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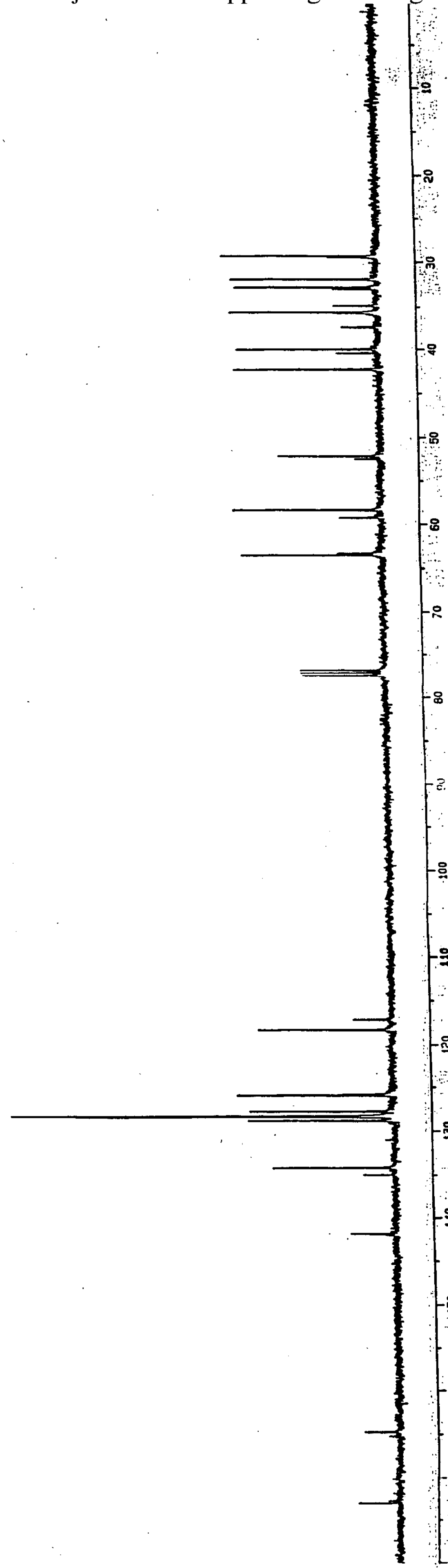
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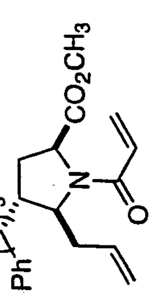
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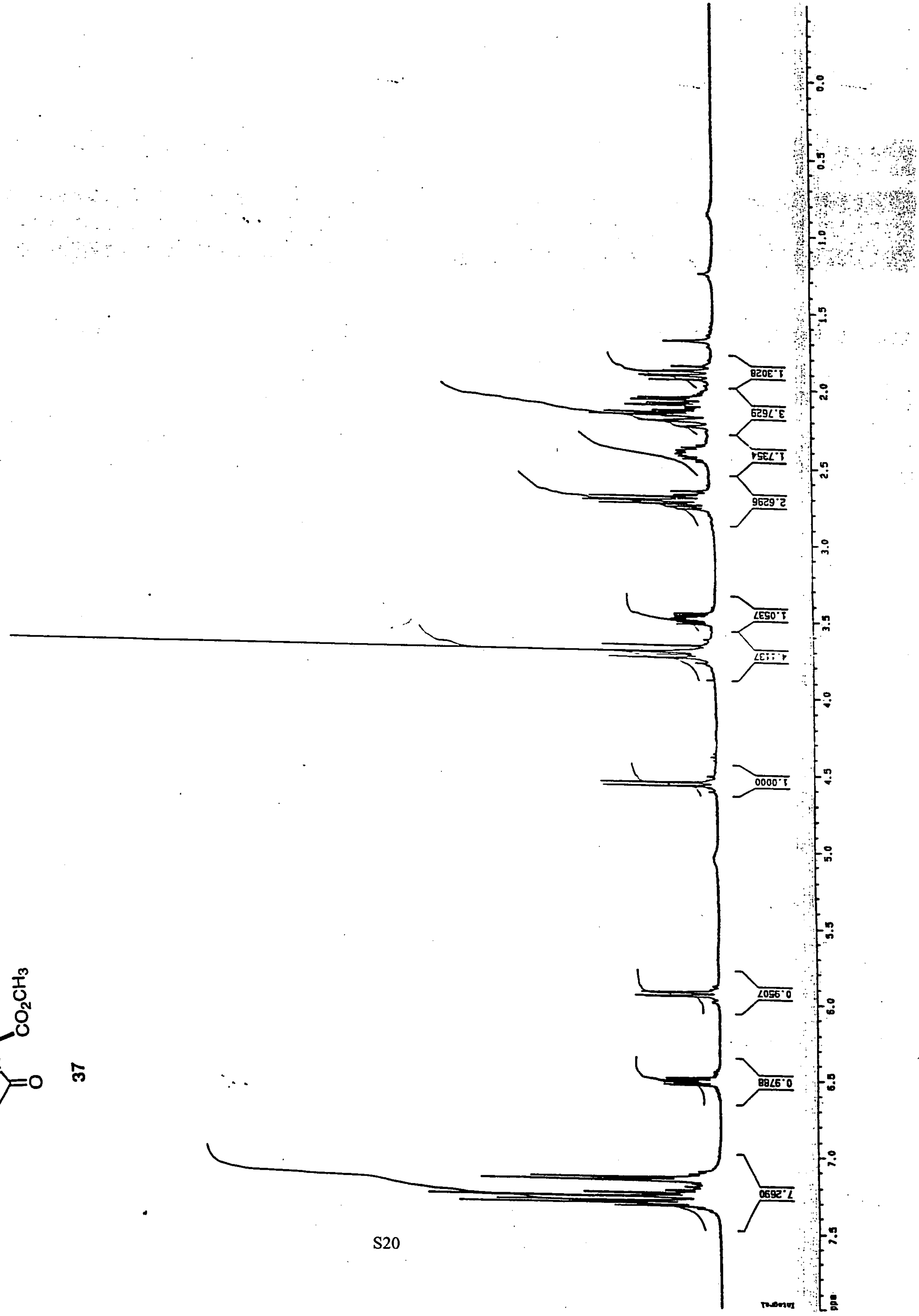
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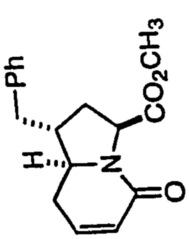
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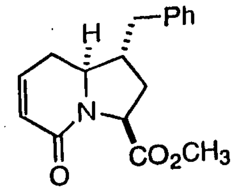

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4	11478.5	13966.794	138.8158	1.71
5	12955.4	12942.433	128.6347	6.80
6	12972.2	12930.817	128.5192	7.52
7	13264.9	12727.815	126.5016	3.36
8	13428.1	12614.522	125.3762	3.62
9	20413.4	7769.740	77.2233	15.80
10	20459.5	7737.758	76.9055	16.20
11	20505.6	7705.792	76.5878	16.20
12	22704.0	6180.996	61.4328	3.20
13	23449.3	5664.056	56.2950	3.40
14	24034.7	5258.083	52.2600	2.57
15	24910.1	4650.880	46.2250	3.64
16	26106.8	3820.920	37.9761	3.40
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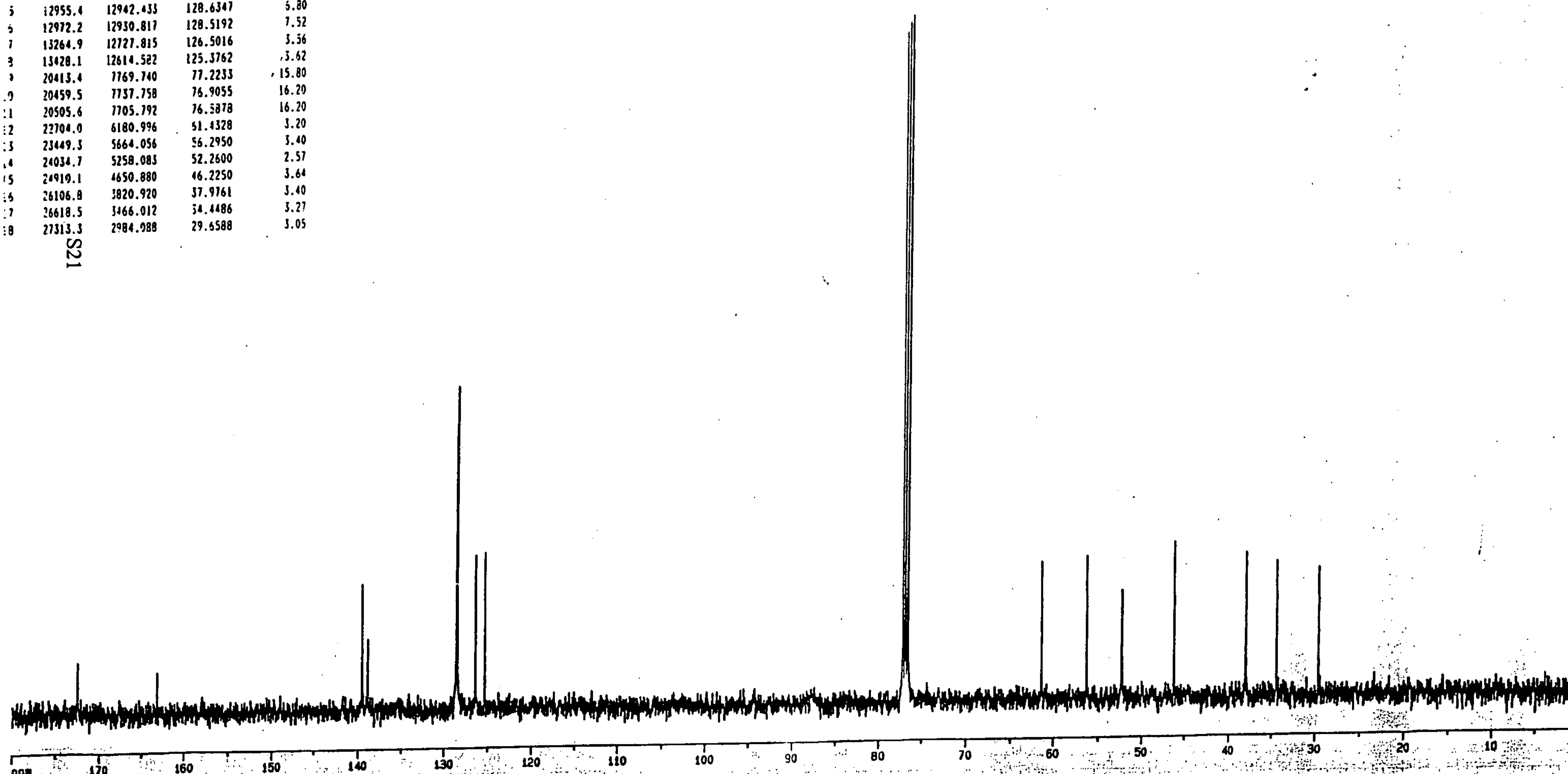

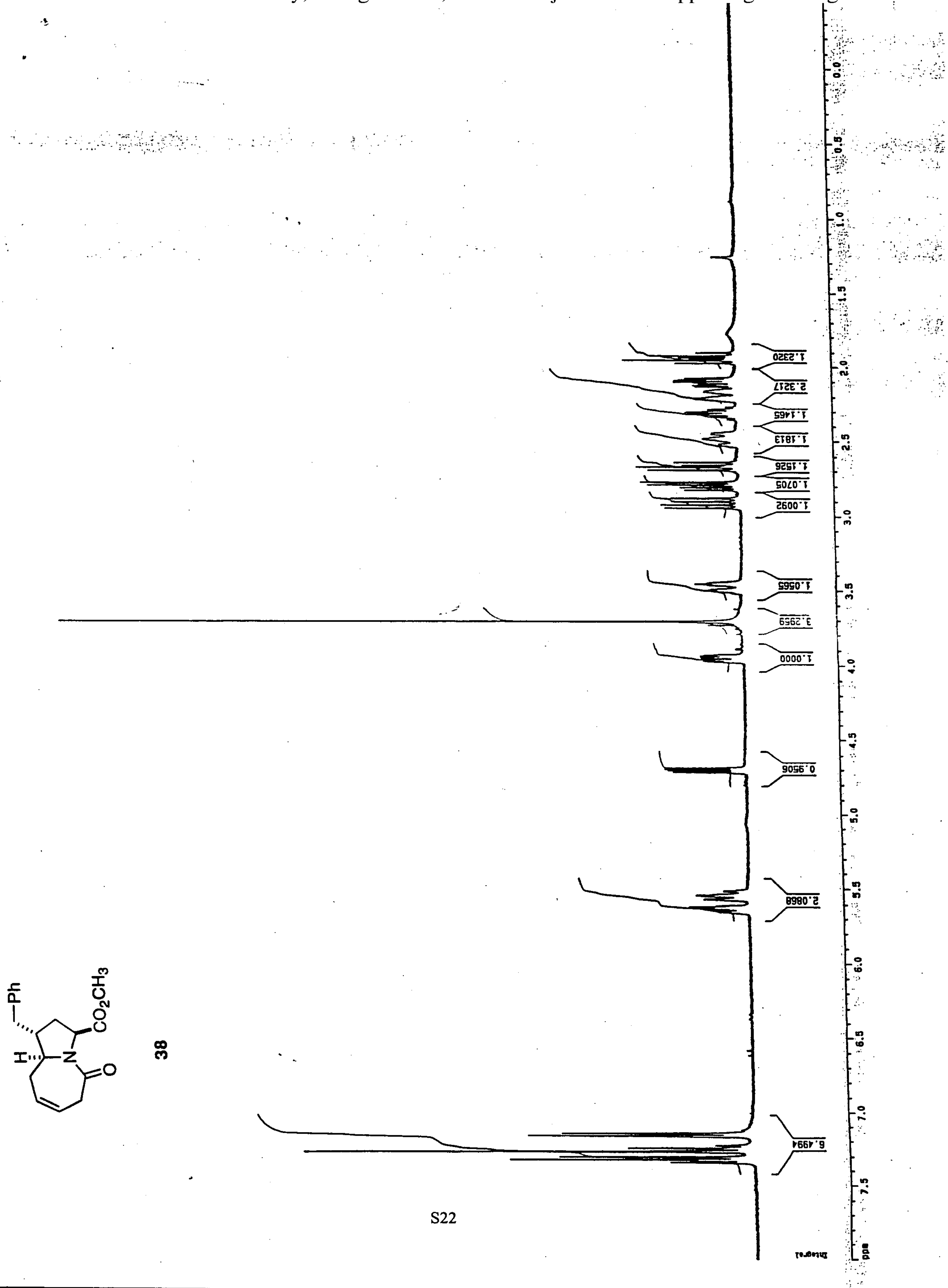
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O
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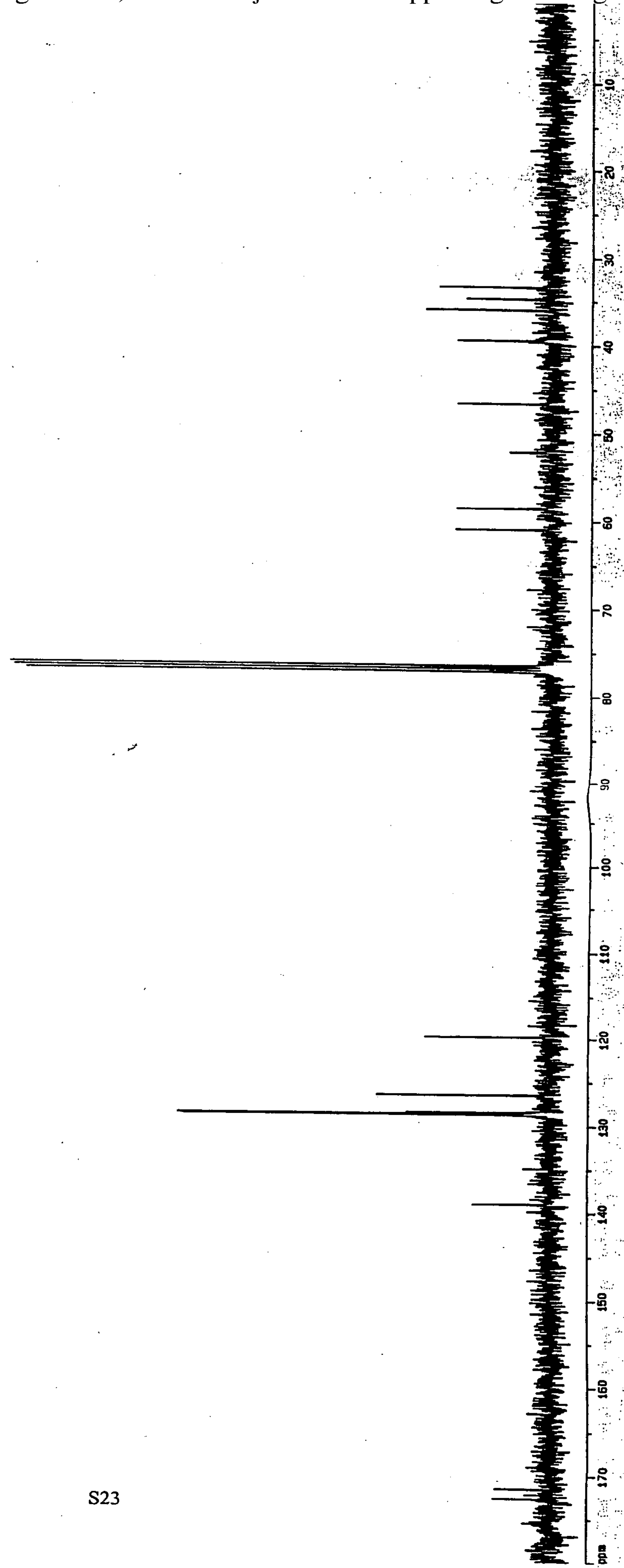
38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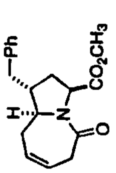
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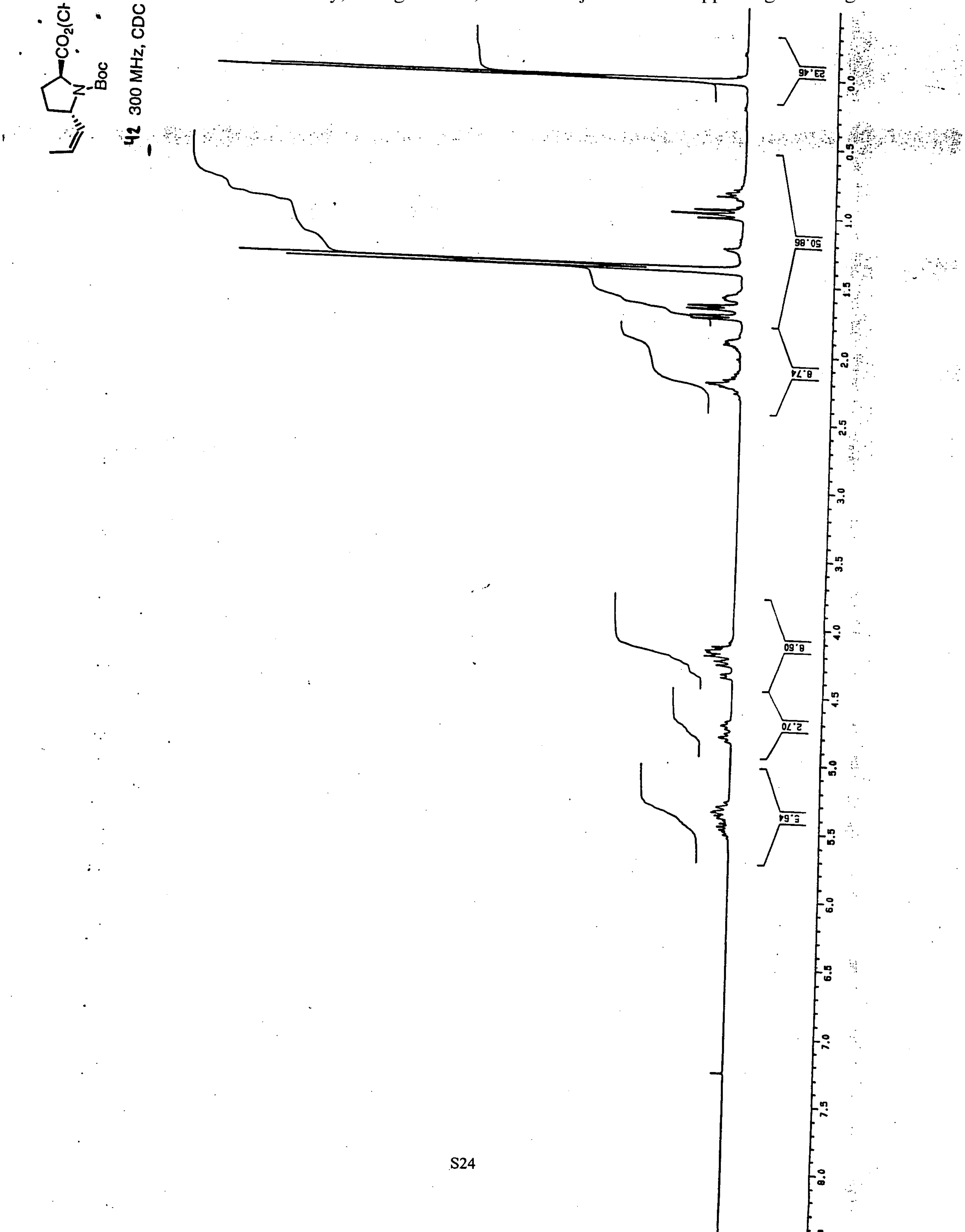
38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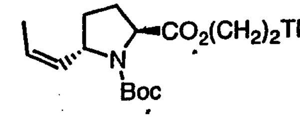
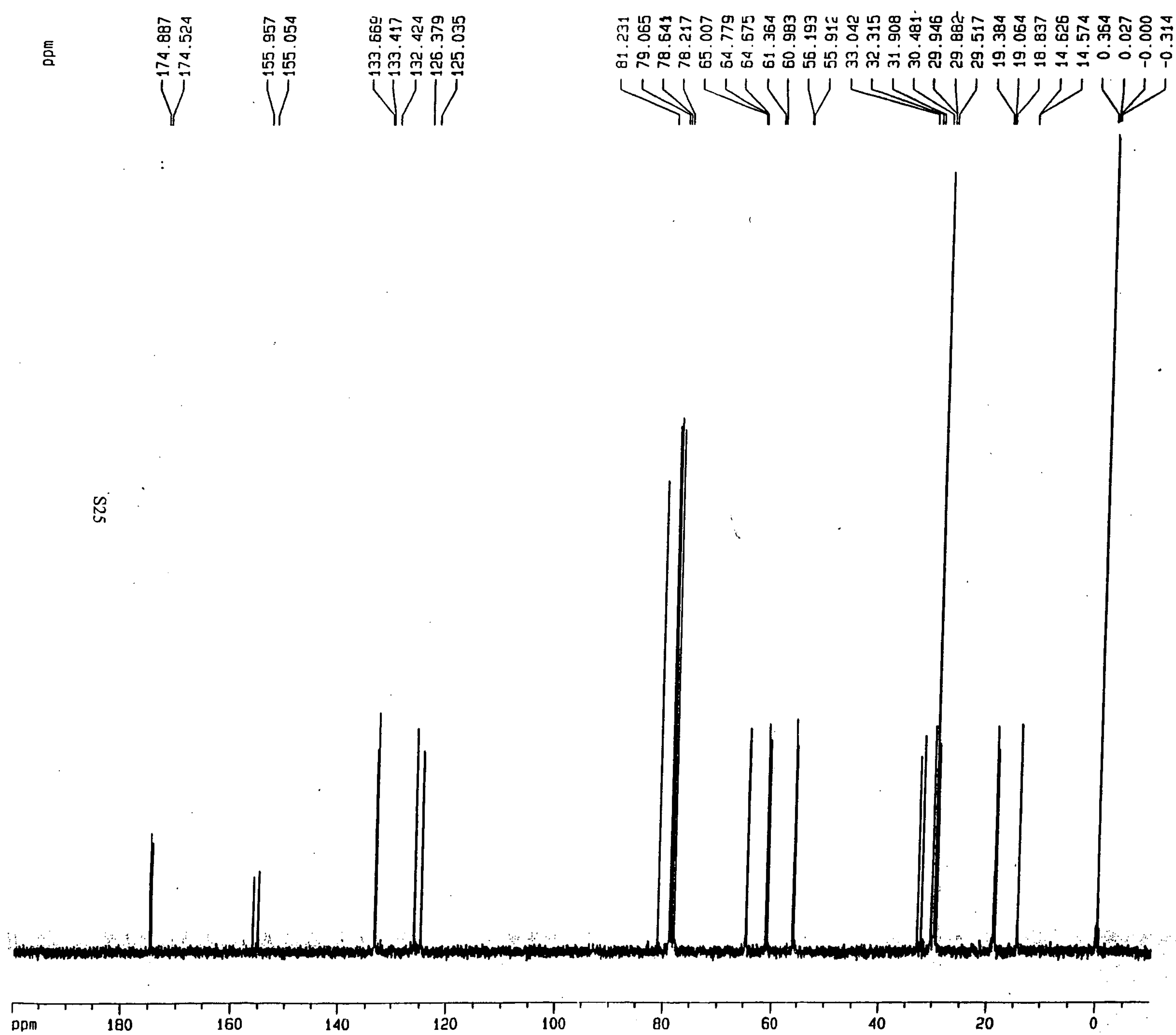


42 75.5 MHz, $CDCl_3$



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DE 37.93 usec
TE 300.0 K
D1 1.00000000 sec
d11 0.03000000 sec
d12 0.00002000 sec

============ CHANNEL f1 =====
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PL1 7.00 dB
SFO1 75.4760200 MHz

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PL13 26.00 dB
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F2 - Processing parameters
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1D NMR plot parameters
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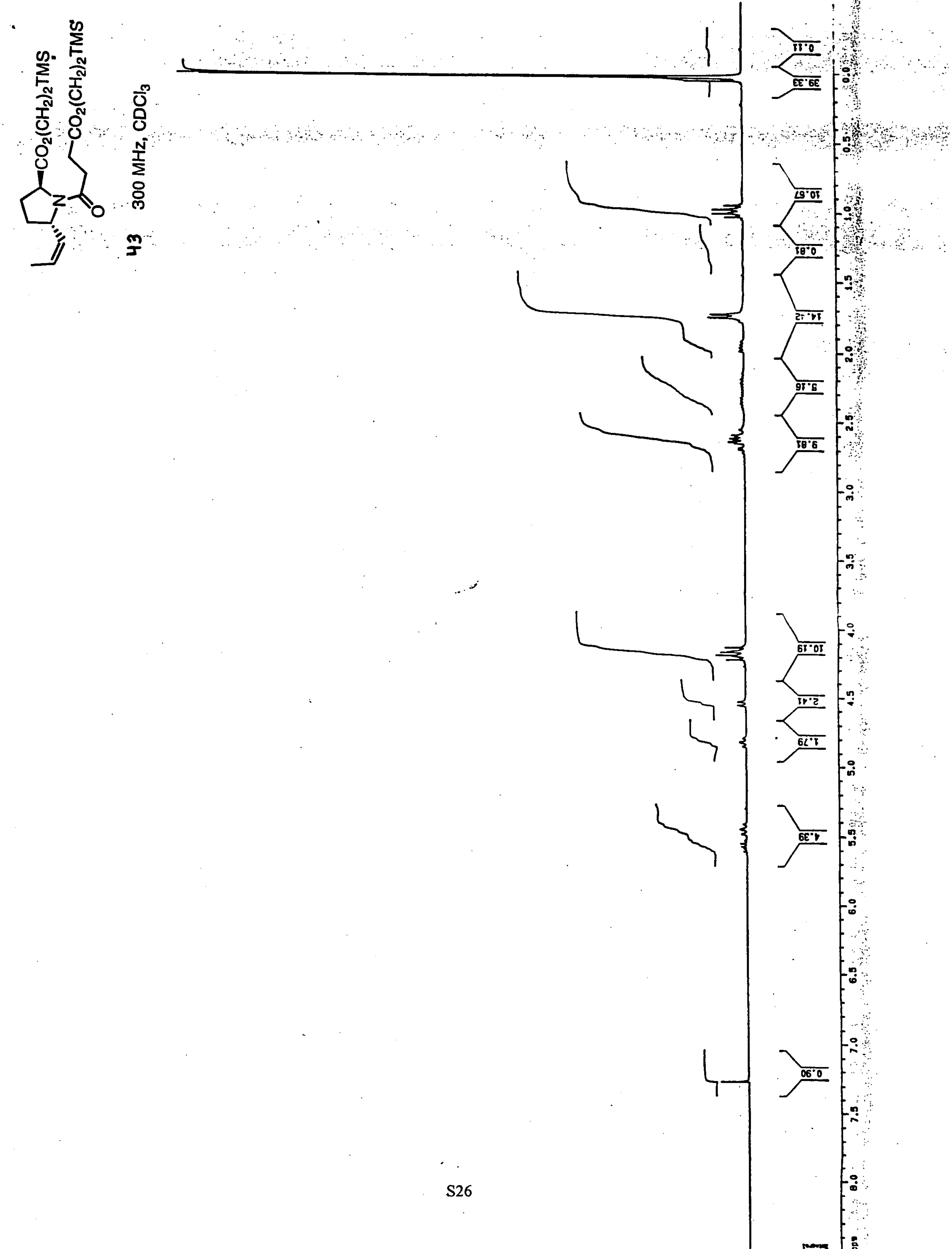
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CO2(CH2)2TMS
43
300 MHz, CDCl3
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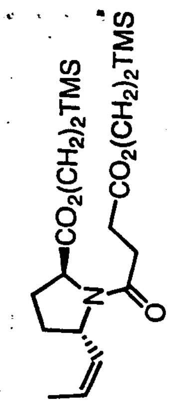

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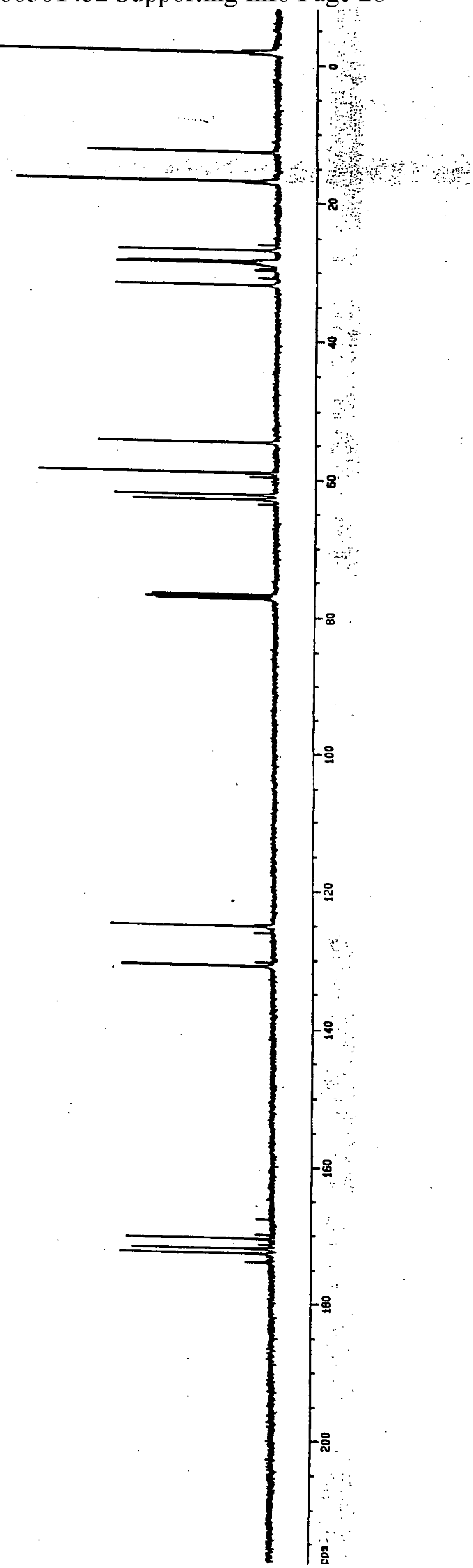

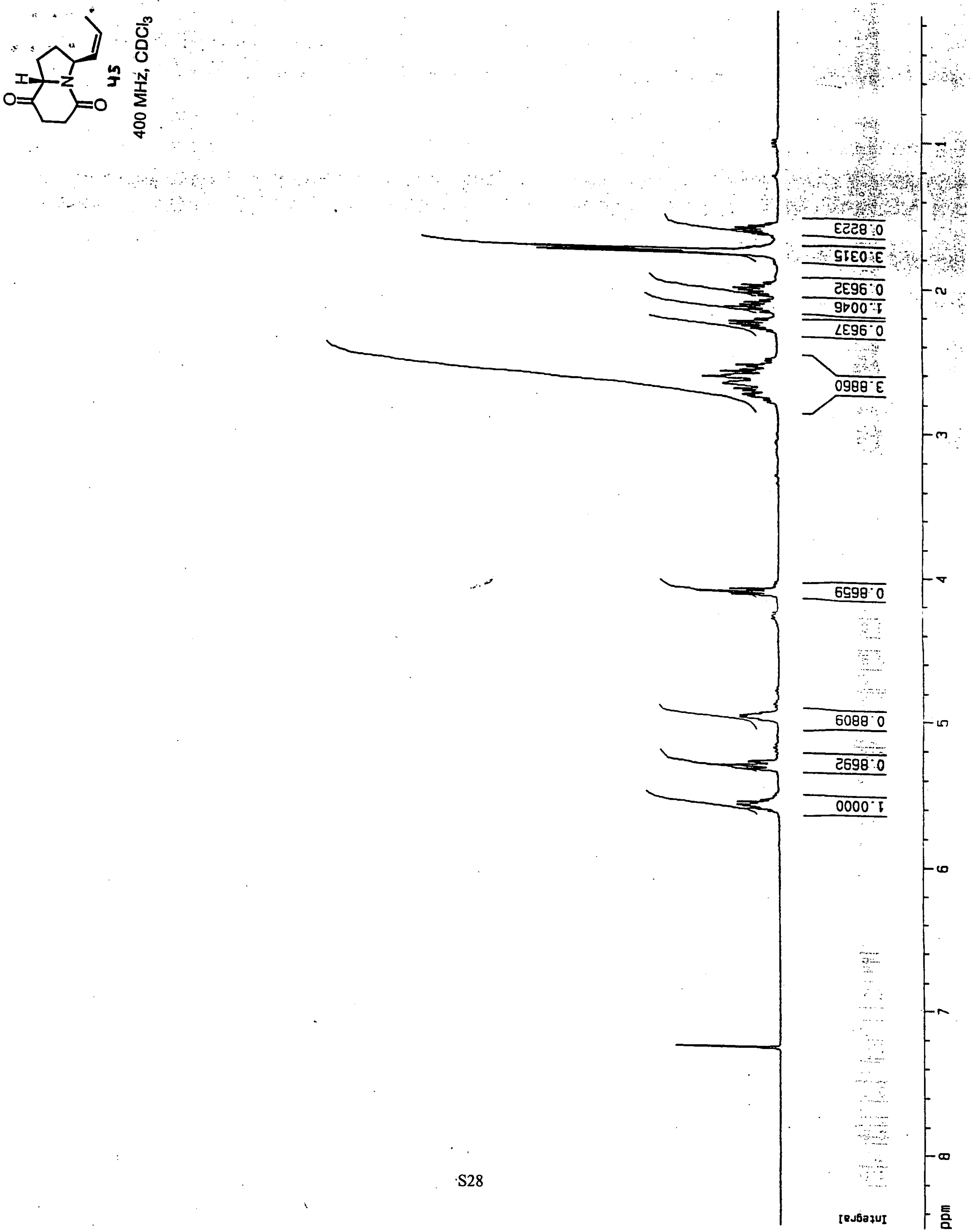
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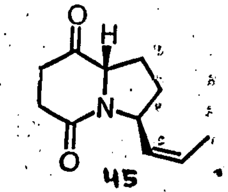

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75.5 MHz, $CDCl_3$

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PL1	7.00 dB
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PL2	6.00 dB
PL12	26.00 dB
PL13	26.00 dB
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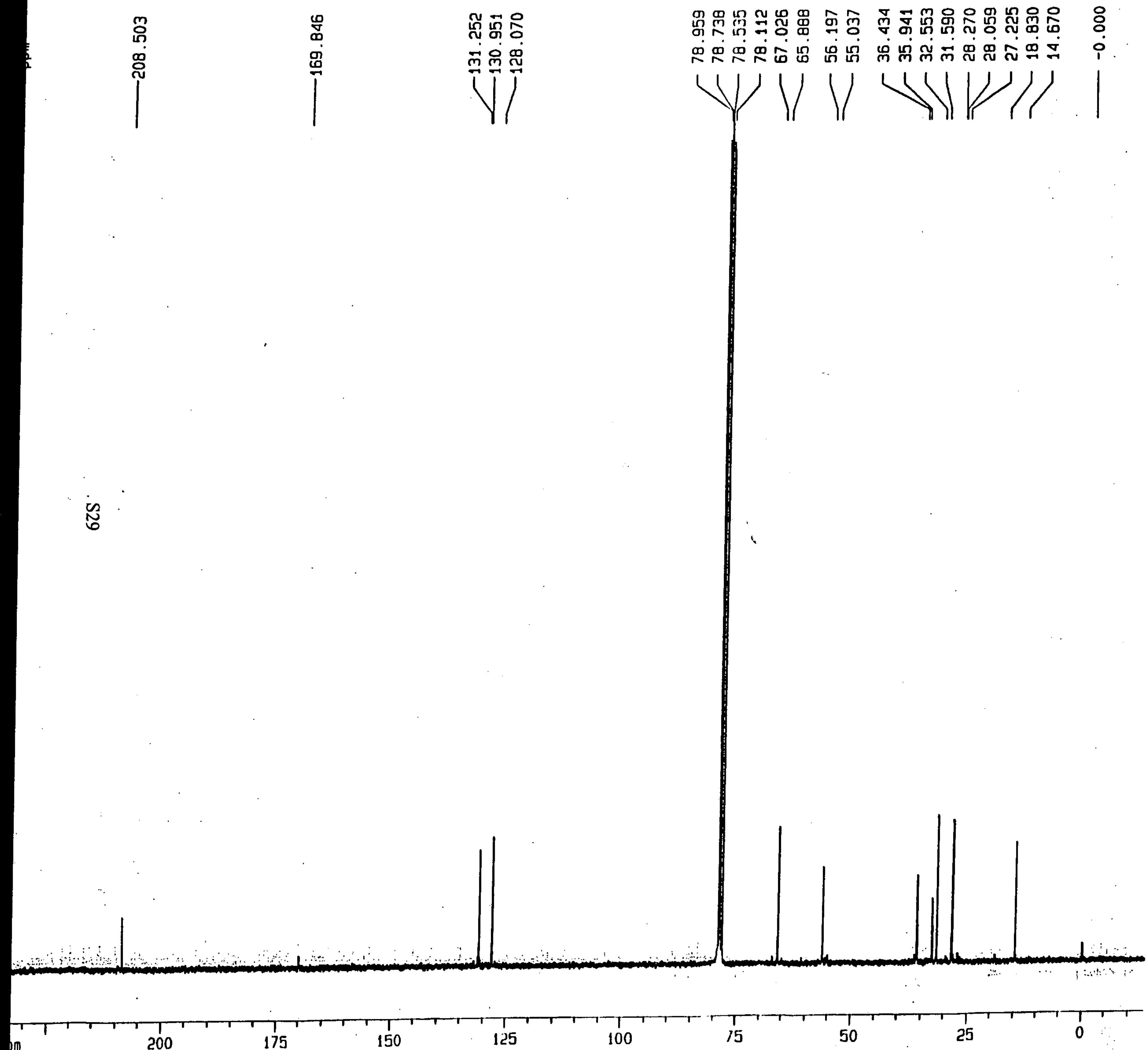
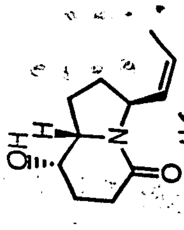
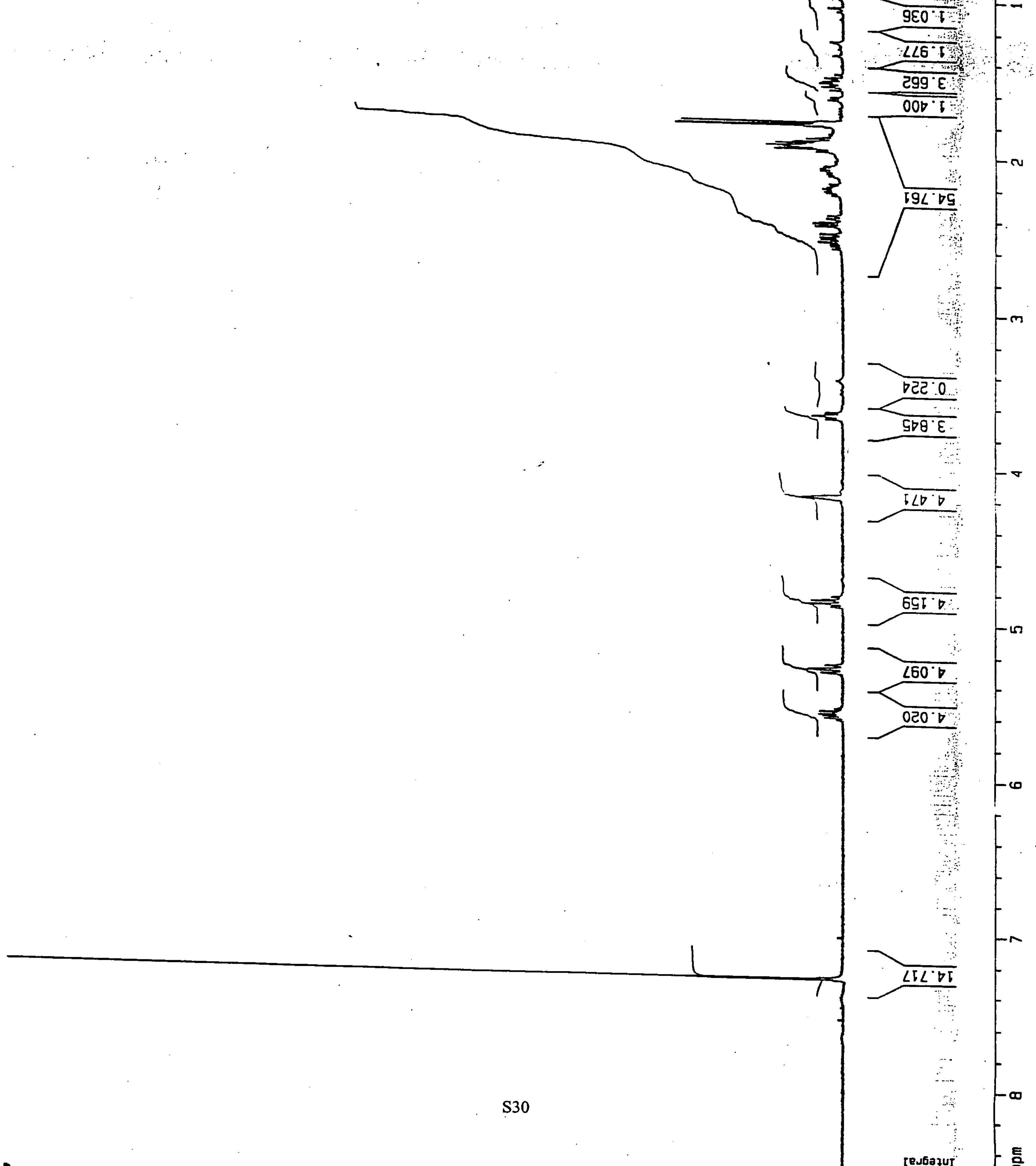
HZCM	856.01782 Hz/cm

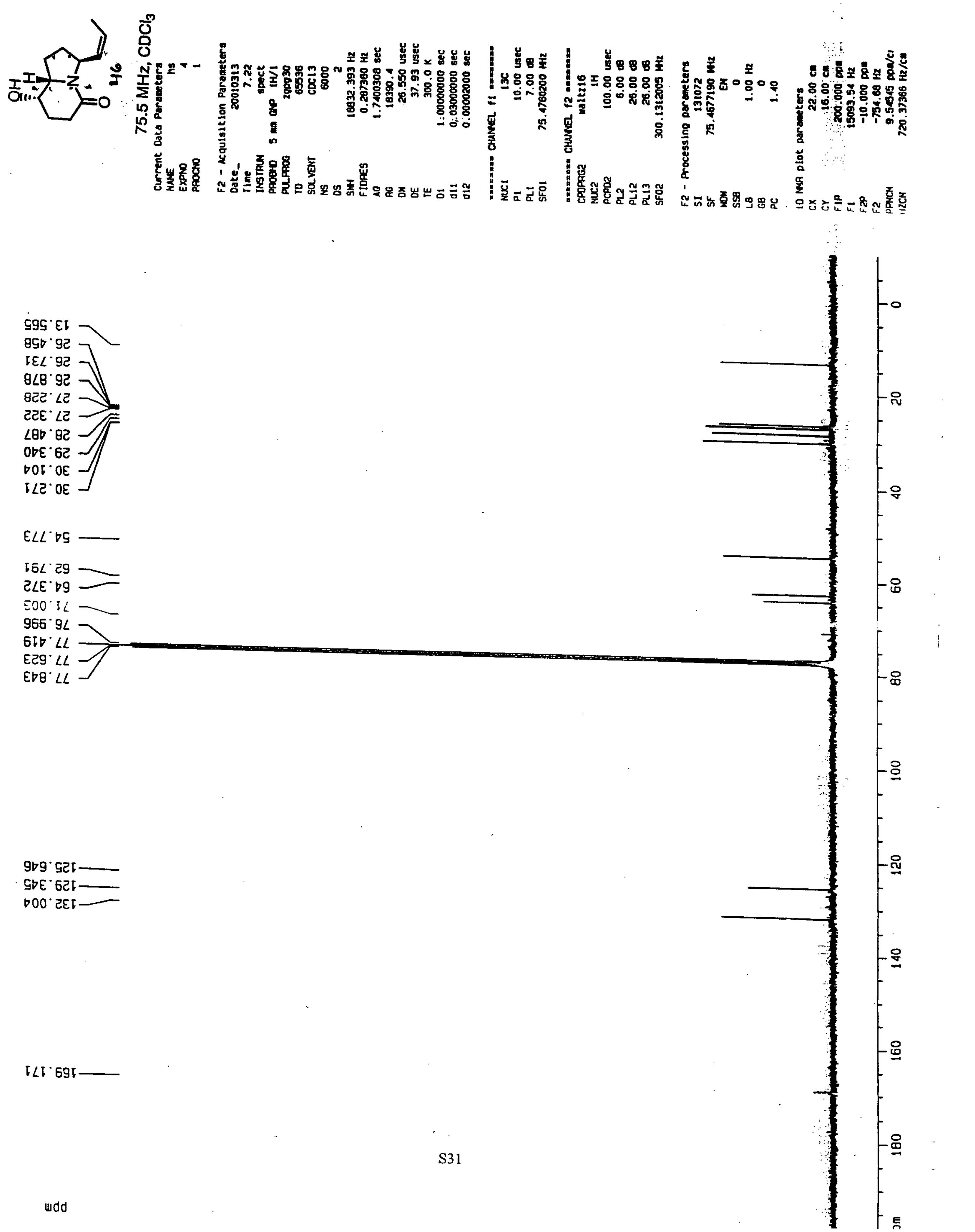




46

400 MHz, $CDCl_3$




46
75.5 MHz, CDCl3
Current Data Parameters
NAME hs
EXPNO 4
PROCNO 1
F2 - Acquisition Parameters
Date_ 20010313
Time 7.22
INSTRUM spect
PROBHD 5 mm QNP 1H/1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 6000
DS 2
SWH 18832.393 Hz
FIDRES 0.287360 Hz
AQ 1.7400308 sec
RG 18390.4
DW 26.550 usec
DE 37.93 usec
TE 300.0 K
D1 1.00000000 sec
d11 0.03000000 sec
d12 0.00002000 sec
======== CHANNEL f1 ========
NUC1 13C
P1 10.00 usec
PL1 7.00 dB
SFO1 75.4760200 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 6.00 dB
PL12 26.00 dB
PL13 26.00 dB
SFO2 300.1312005 MHz
F2 - Processing parameters
SI 131072
SF 75.4677190 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40
1D NMR plot parameters
CX 22.00 cm
CY 16.00 cm
F1P 200.000 ppm
F1 15093.54 Hz
F2P -10.000 ppm
F2 -754.68 Hz
PPMCM 9.54545 ppm/cm
HZCM 720.37366 Hz/cm
169.171
132.004
129.345
125.646
77.843
77.623
77.419
76.996
71.003
64.372
62.791
54.773
30.271
30.104
29.340
28.487
27.322
27.228
26.878
26.731
26.458
13.565
ppm
180
160
140
120
100
80
60
40
20
0