

Electronic Supplementary Information belonging to the paper:

Polycationic phosphorus dendrimers: synthesis, characterization, study of cytotoxicity, complexation of DNA, and transfection experiments

Clément Padié,^a Maria Maszewska,^b Kinga Majchrzak,^b Barbara Nawrot,^{*b} Anne-Marie Caminade,^{*a} and Jean-Pierre Majoral^{*a}

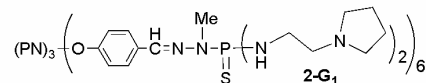
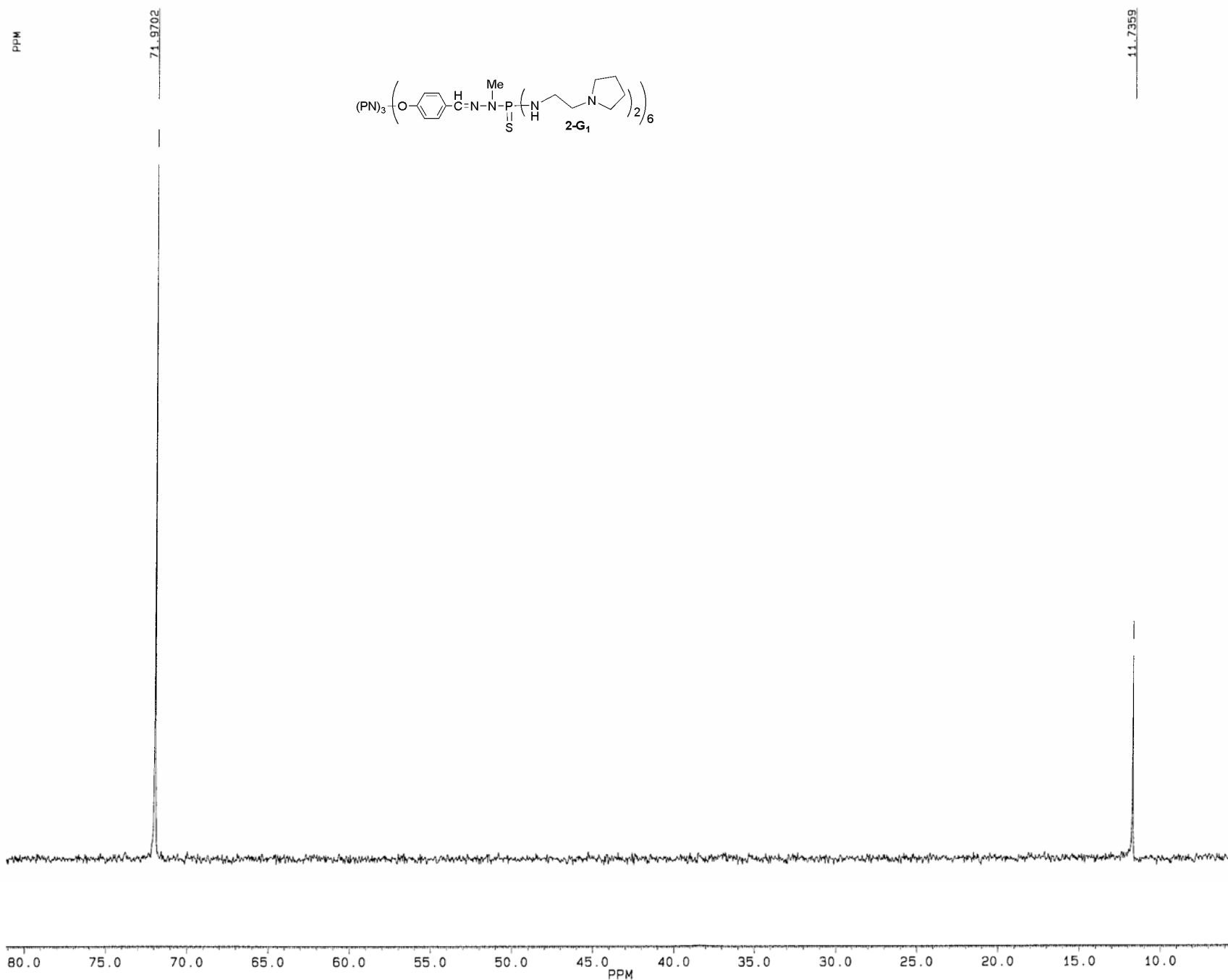
^a *Laboratoire de Chimie de Coordination du CNRS, 205 route de Narbonne, 31077 Toulouse Cedex 4, France. Fax: + 33 561 55 30 03; E-mail: caminade@lcc-toulouse.fr; majoral@lcc-toulouse.fr*

^b *Department of Bioorganic Chemistry, Centre of Molecular and Macromolecular Studies, Polish Academy of Sciences, Sienkiewicza 112, 90-363 Lodz, Poland, Fax:48-42-6815483; E-mail: bnawrot@bio.cbmm.lodz.pl*

I. ³¹P NMR spectra of dendrimers on AC200 Bruker NMR instrument. Chemical shift of 85% H₃PO₄ in water was taken as a reference.

S - 2 -

CDCL₃



~~BRUKER~~

P3105.001
DATE 15-3-4
TIME 15:21

SF 81.015
SY 81.0100000
O1 5000.000
SI 16384
TD 16384
SW 23809.524
HZ/PT 2.906

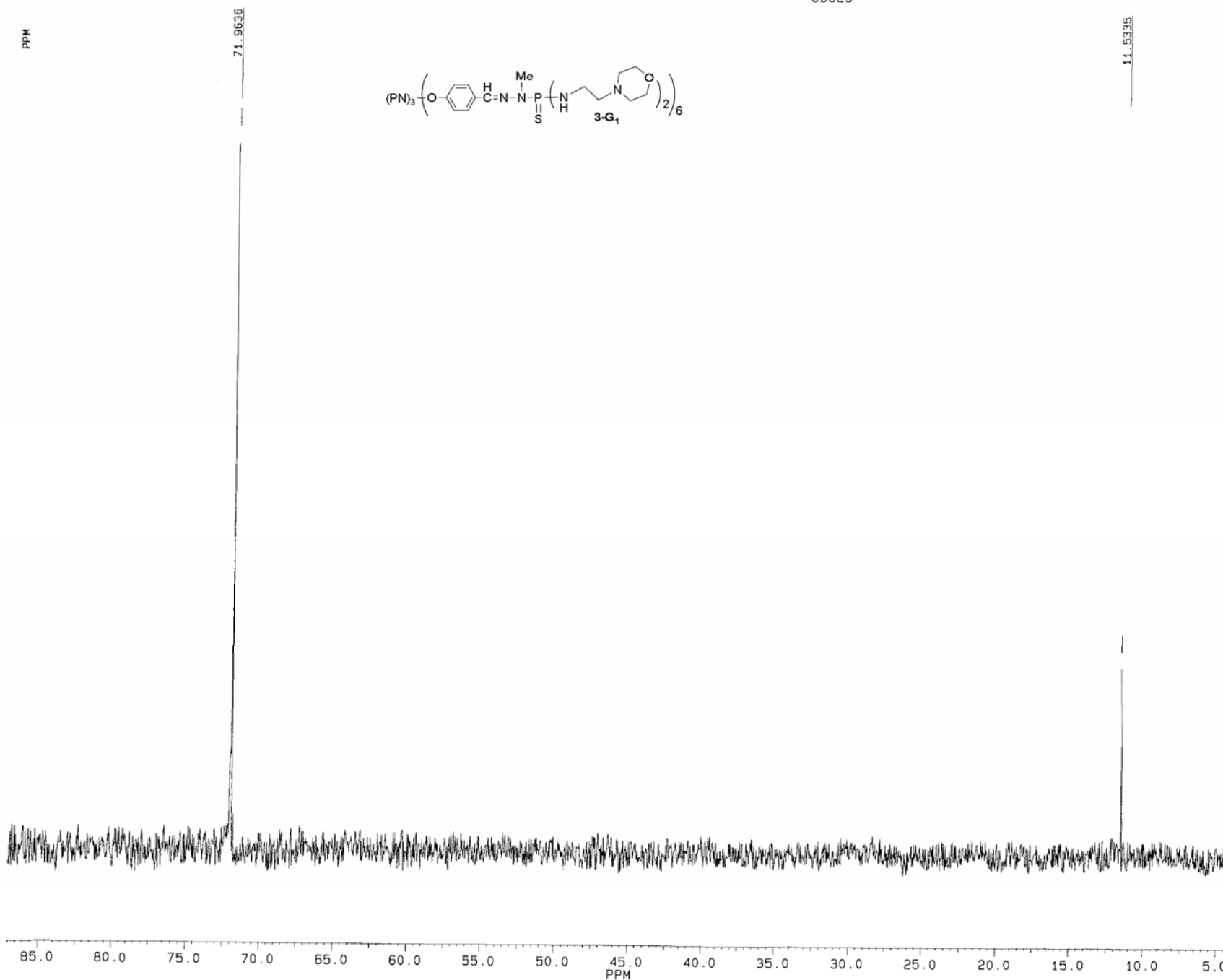
PW 4.0
RD .100
AQ .344
RG 800
NS 174
TE 298

FW 29800
Q2 3300.000
DP 24H BB

LB 1.000
GB 0.0
CX 35.00
CY 0.0
F1 81.118P
F2 5.421P
HZ/CM 175.217
PPM/CM 2.163
SR 4773.00

S - 3 -

CDCL₃



~~BLANK~~

P31T5.001
DATE 15-3-4
TIME 18:54

SF 101.255
SY 74.0
Q1 6000.000
SI 16384
TD 16384
SW 31250.000
HZ/PT 3.815

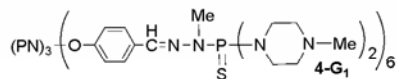
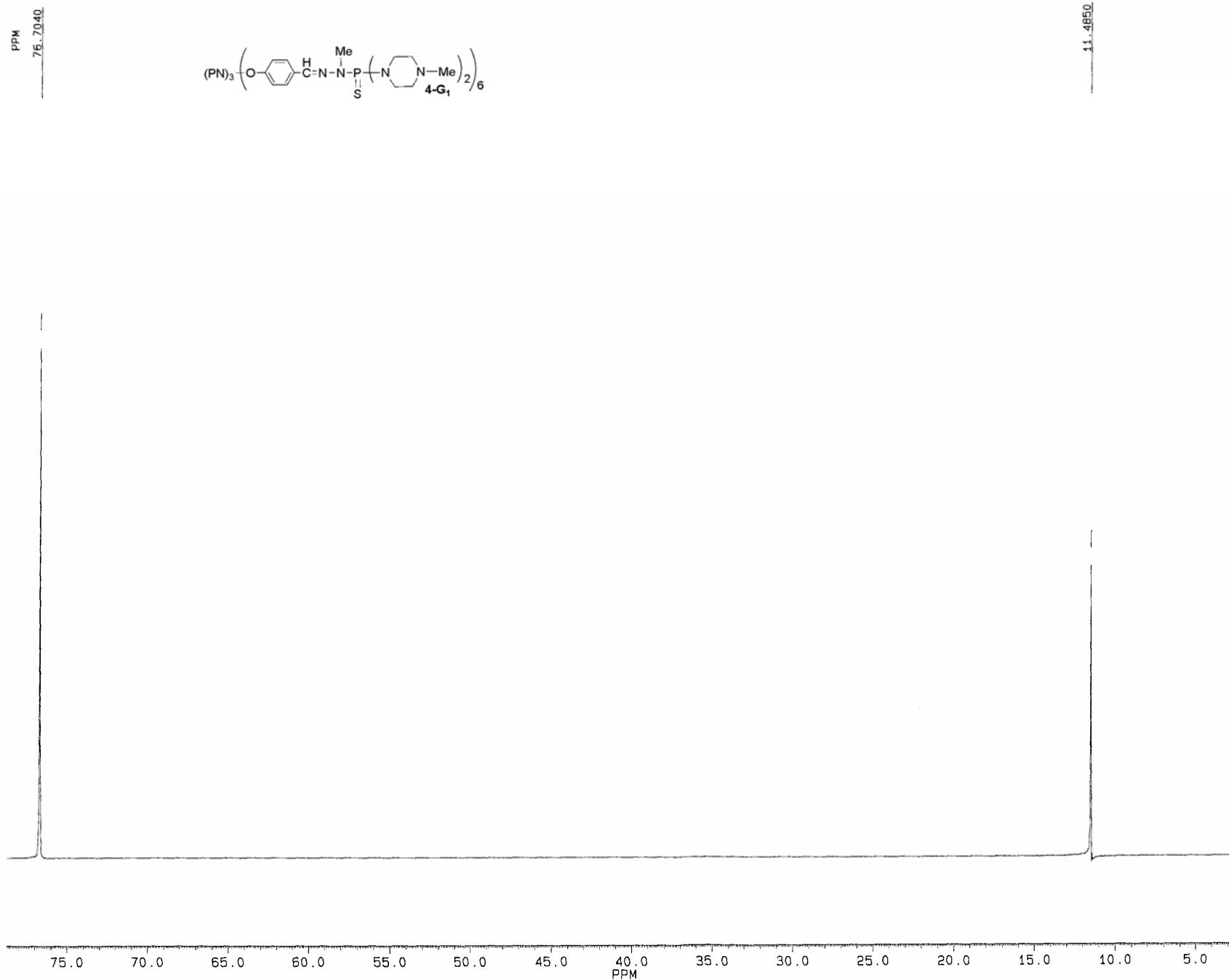
PW 10.0
RD .100
AQ .262
RG 320
NS 1691
TE 298

FW 39100
Q2 3800.000
DP 14H CPD

LB 1.000
GB 0.0
CX 35.00
CY 0.0
F1 87.071P
F2 3.924P
HZ/CM 240.544
PPM/CM 2.376
SR 285.00

S - 4 -

CDCL₃



~~BOOKER~~

CP170304.001
DATE 17-3-4
TIME 13:03

SF 81.015
SY 81.0100000
O1 5000.000
SI 16384
TD 16384
SW 23809.524
HZ/PT 2.906

PW 4.0
RD .100
AQ .344
RG 100
NS 331
TE 298

FW 29800
O2 3300.000
DP 24H BB

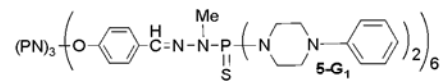
LB .100
GB 0.0
CX 35.00
CY 0.0
F1 78.714P
F2 2.156P
HZ/CM 177.210
PPM/CM 2.187
SR 4773.00

S - 5 -

CDCL₃

PPM

76.4902



11.4845

~~BEIJER~~

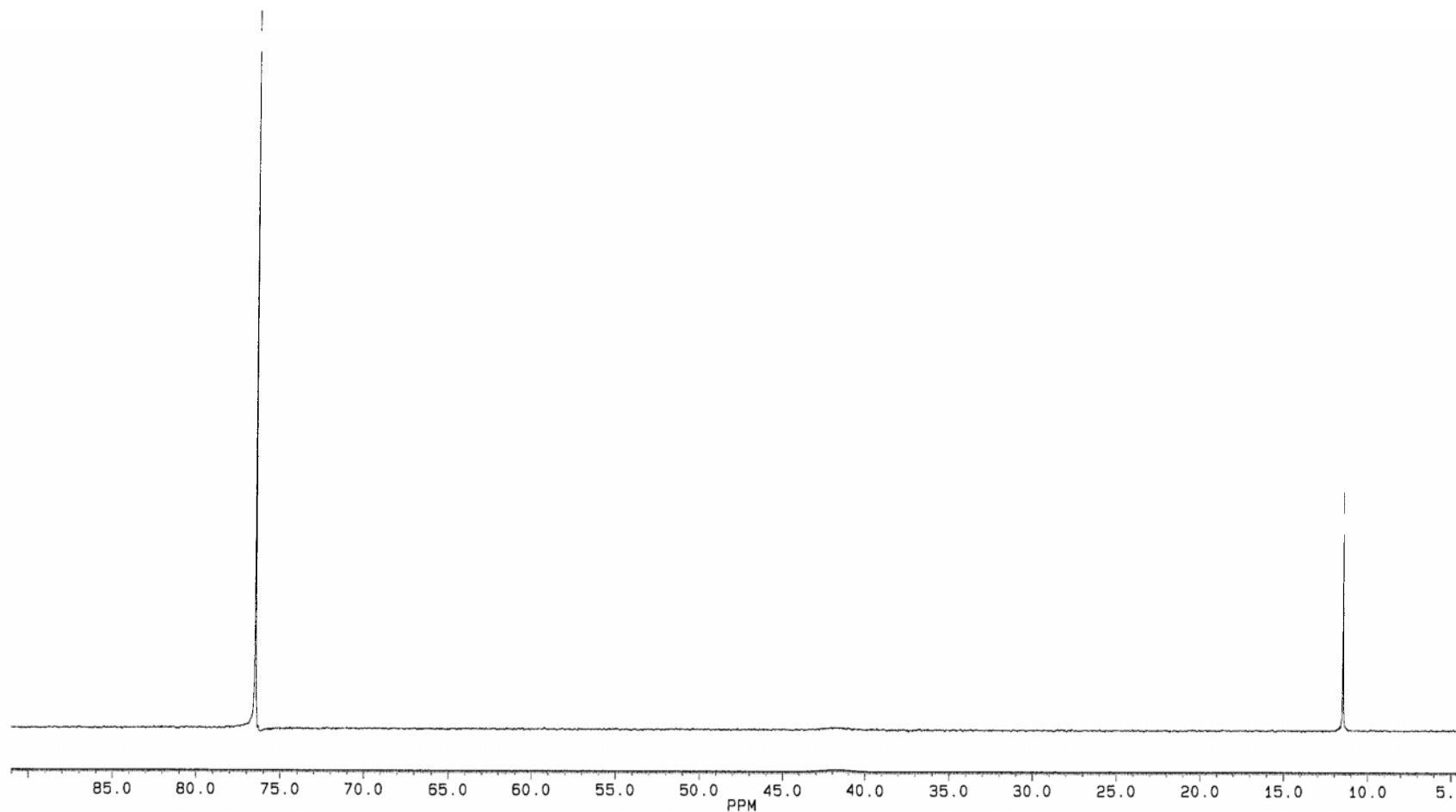
CP050304.006
DATE 5-3-4
TIME 19:30

SF 81.015
SY 81.010000
O1 5000.000
SI 16384
TD 16384
SW 23809.524
HZ/PT 2.906

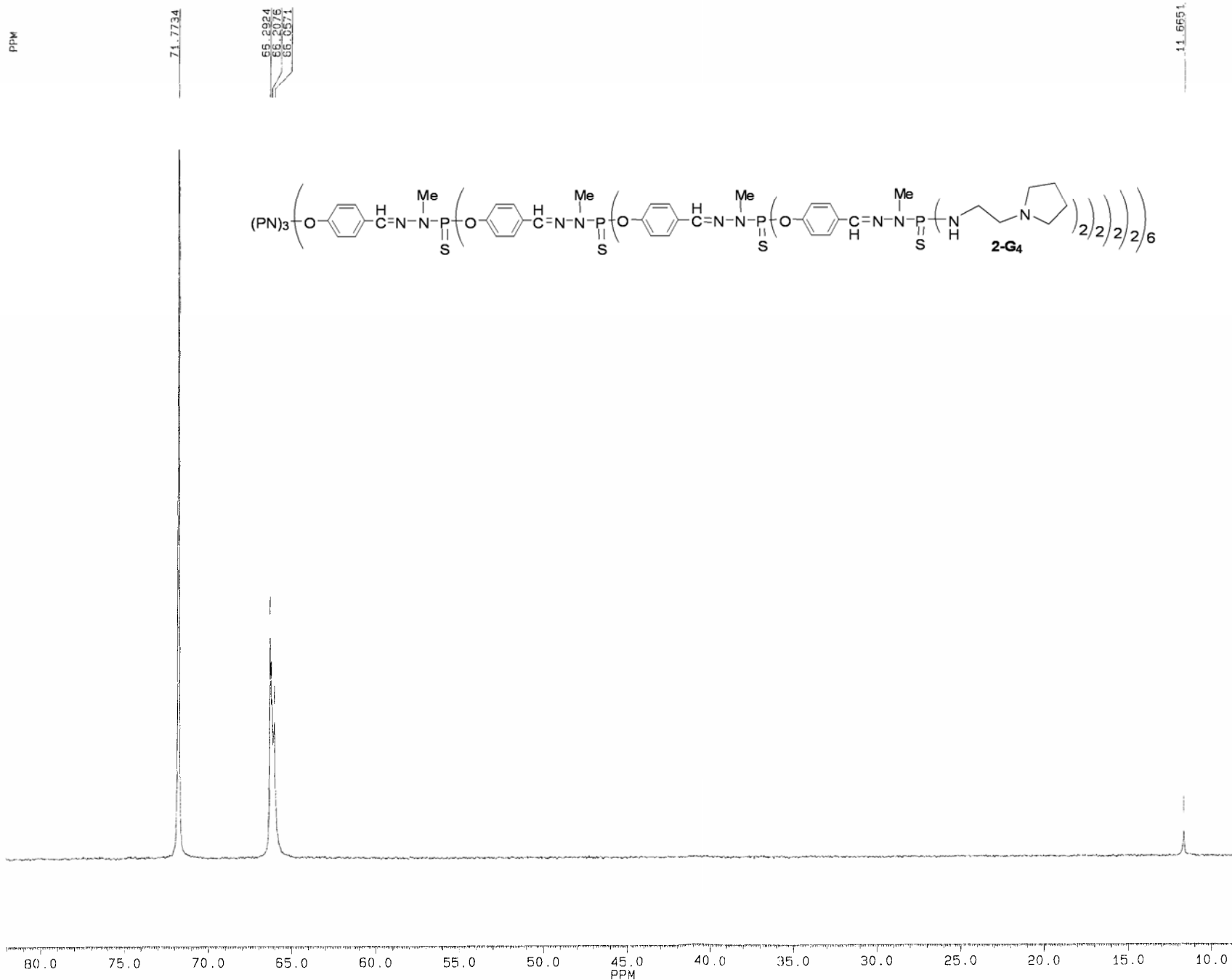
PW 4.0
RD .100
AQ .344
RG 800
NS 1511
TE 298

FW 29800
O2 3300.000
DP 24H BB

LB 1.000
GB 0.0
CX 35.00
CY 0.0
F1 7373.93H
F2 308.38H
HZ/CM 201.873
PPM/CM 2.492
SR 4773.00



S - 6 -



~~SECRET~~

CP2603.002
DATE 26-3-4
TIME 18:37

SF 81.015
SY 81.0100000
O1 5000.000
SI 16384
TD 16384
SW 23809.524
HZ/PT 2.906

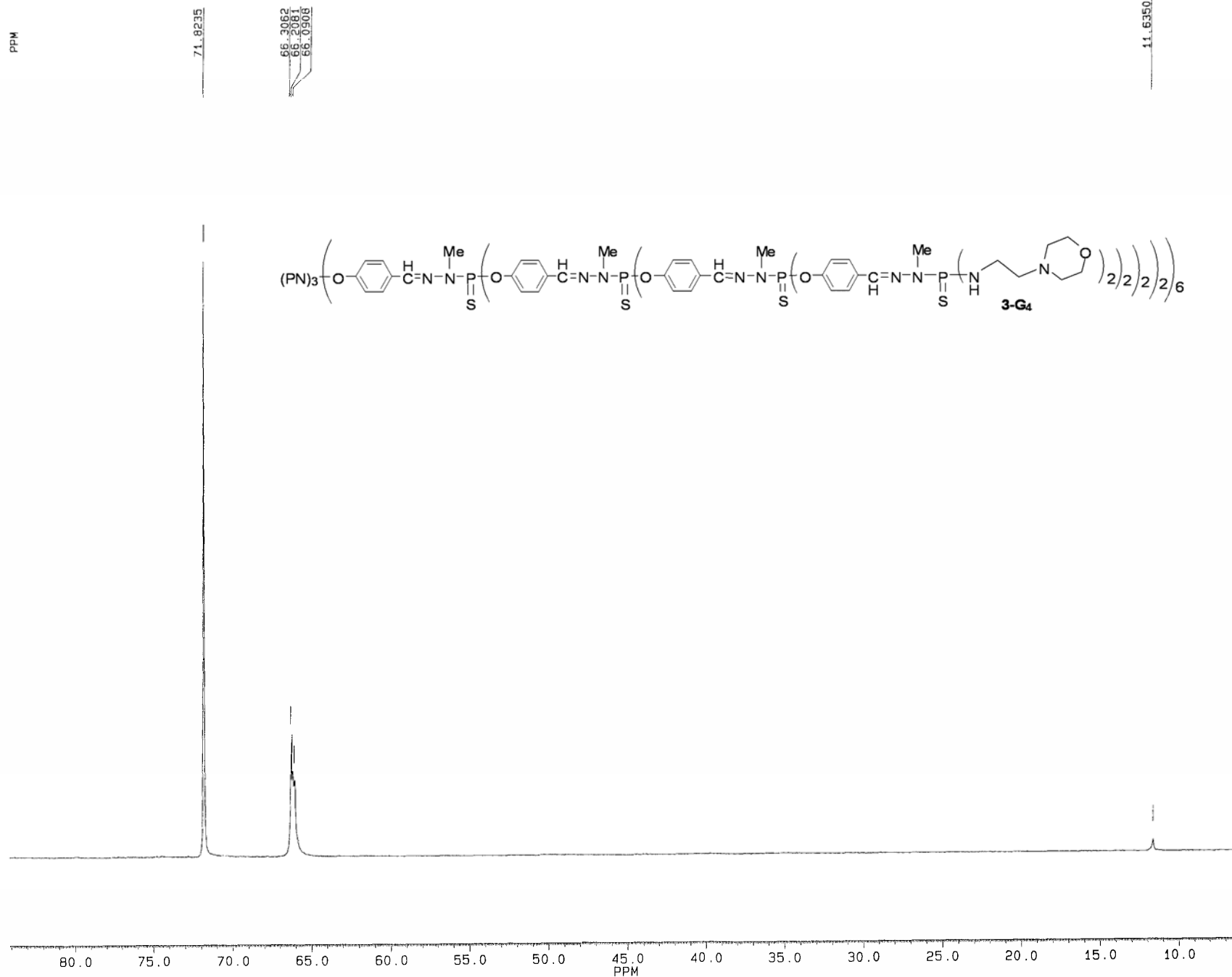
PW 4.0
RD .100
AQ .344
RG 400
NS 710
TE 298

FW 29800
O2 3300.000
DP 24H BB

LB 1.000
GB 0.0
CX 35.00
CY 0.0
F1 82.051P
F2 8.399P
HZ/CM 170.483
PPM/CM 2.104
SR 4773.00

S - 7 -

CDCL₃



~~BB-UK-PR~~

GC4A2.002
DATE 3-4-4
TIME 10:16

SF 81.015
SY 81.0100000
O1 5000.000
SI 16384
TD 16384
SW 23809.524
HZ/PT 2.906

PW 4.0
RD .100
AQ .344
RG 320
NS 1016
TE 298

FW 29800
O2 3300.000
DP 24H BB

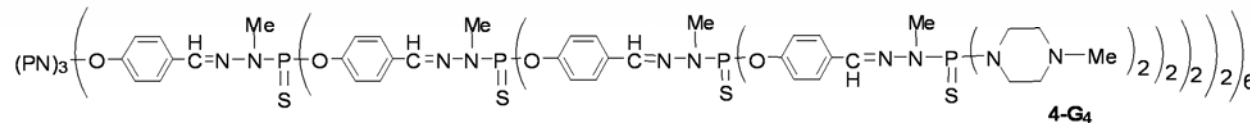
LB 1.000
GB 0.0
CX 35.00
CY 0.0
F1 84.131P
F2 6.102P
HZ/CM 180.614
PPM/CM 2.229
SR 4773.00

11.6300

ppm

76.3272

66. 1970
65. 9267



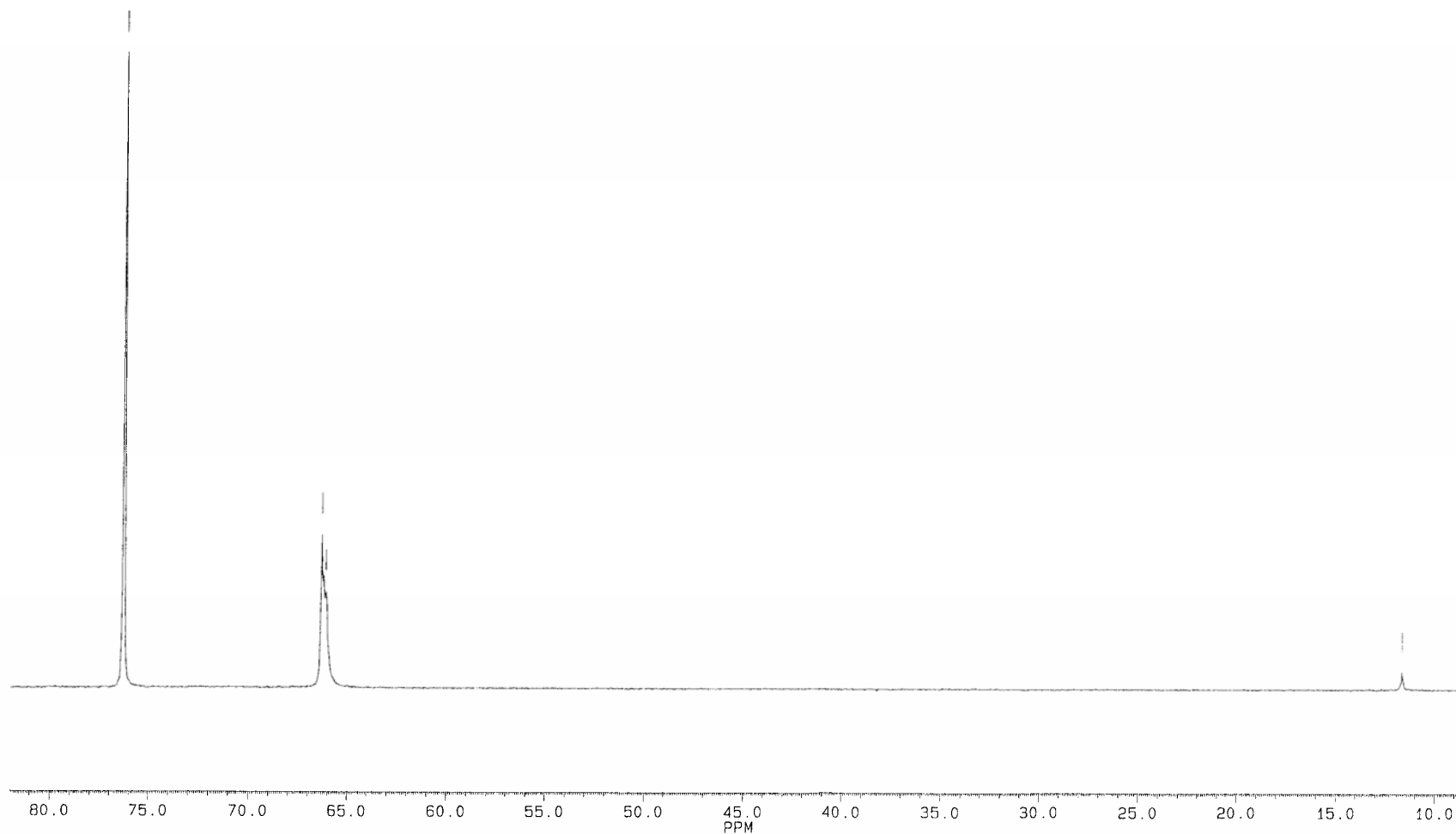
CP010404.001
DATE 1-4-4
TIME 13:02

```
SF      81.015
SY      81.0100000
O1      5000.000
SI      16384
TD      16384
SW      23809.524
HZ/PT   2.906
```

PW	4.0
RD	.400
AQ	.344
RG	320
NS	298
TE	298

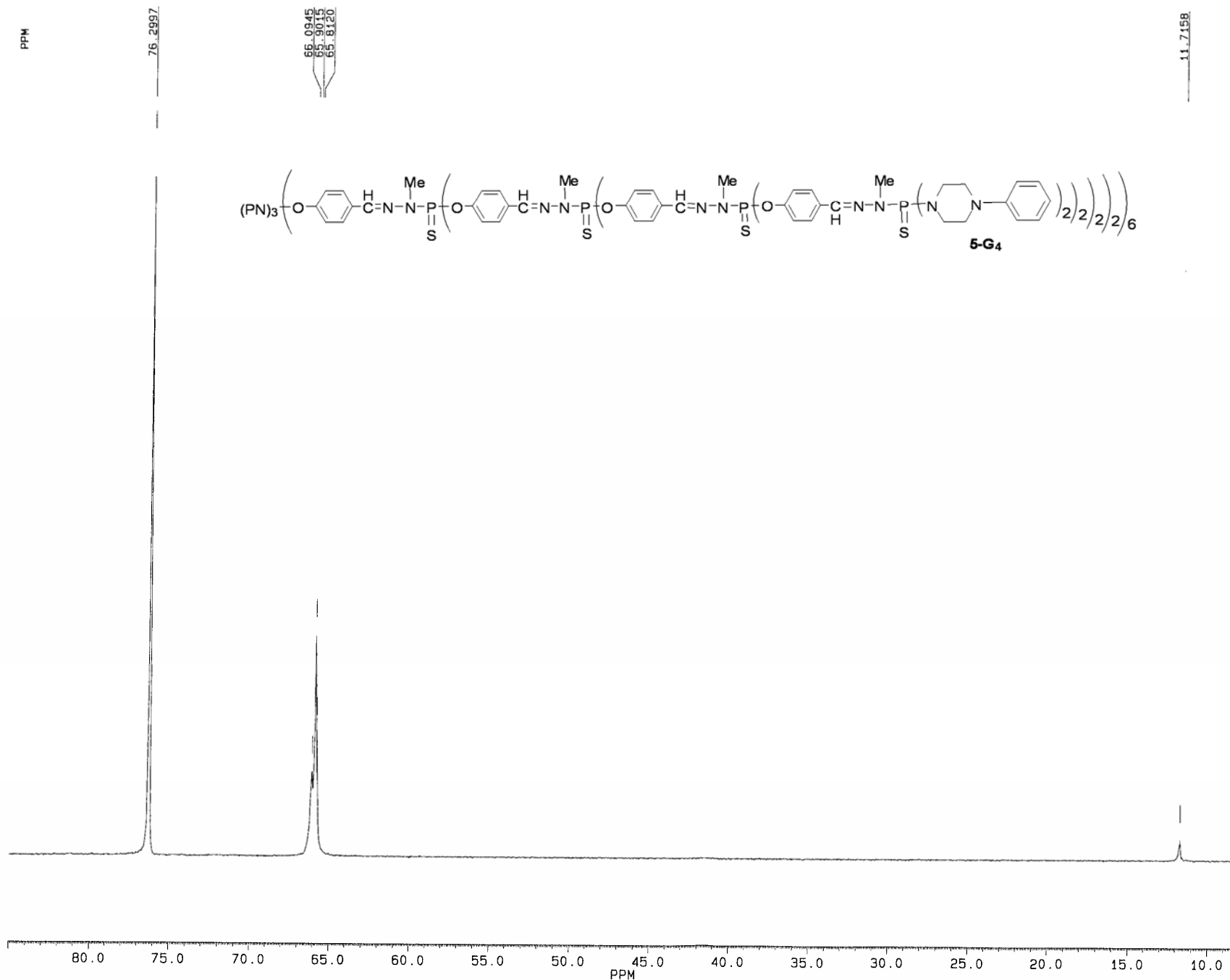
```
FW 29800
02 3300.000
DP 24H BB
```

LB	1.000
GB	0.0
CX	35.00
CY	0.0
F1	81.979F
F2	8.363F
HZ/CM	170.400
PPM/CM	2.400
SR	4773.00



S - 9 -

CDCL₃



~~SECRET~~

GC4A5.002
DATE 4-4-4
TIME 18:39

SF 81.015
SY 81.010000
O1 5000.000
SI 16384
TD 16384
SW 23809.524
HZ/PT 2.906

PW 4.0
RD .100
AQ .344
RG 320
NS 800
TE 298

FW 29800
O2 3300.000
DP 24H BB

LB .100
GB 0.0
CX 35.00
CY 0.0
F1 84.992P
F2 8.112P
HZ/CM 177.957
PPM/CM 2.197
SR 4773.00

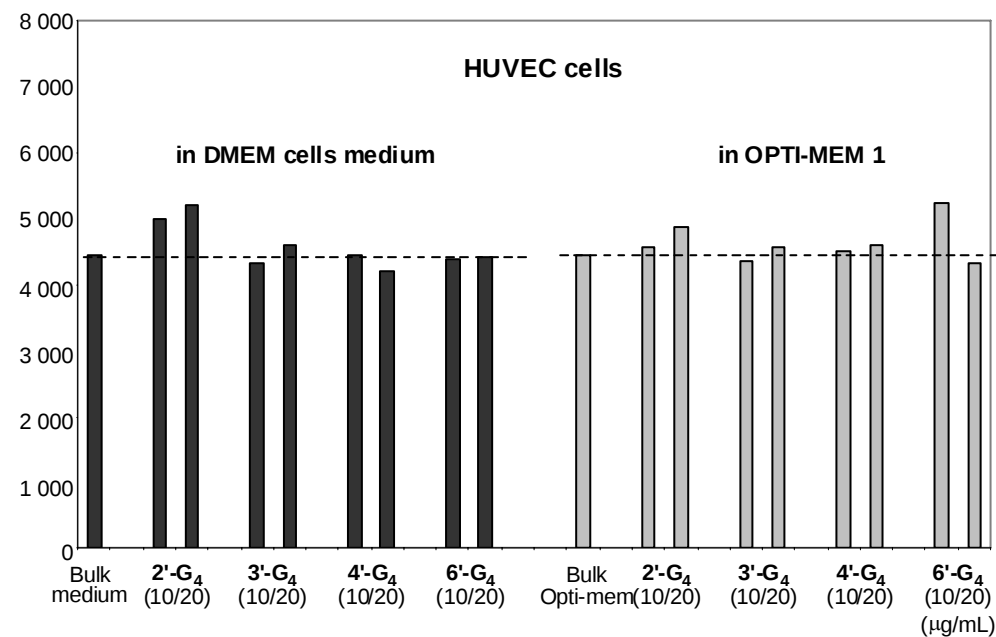
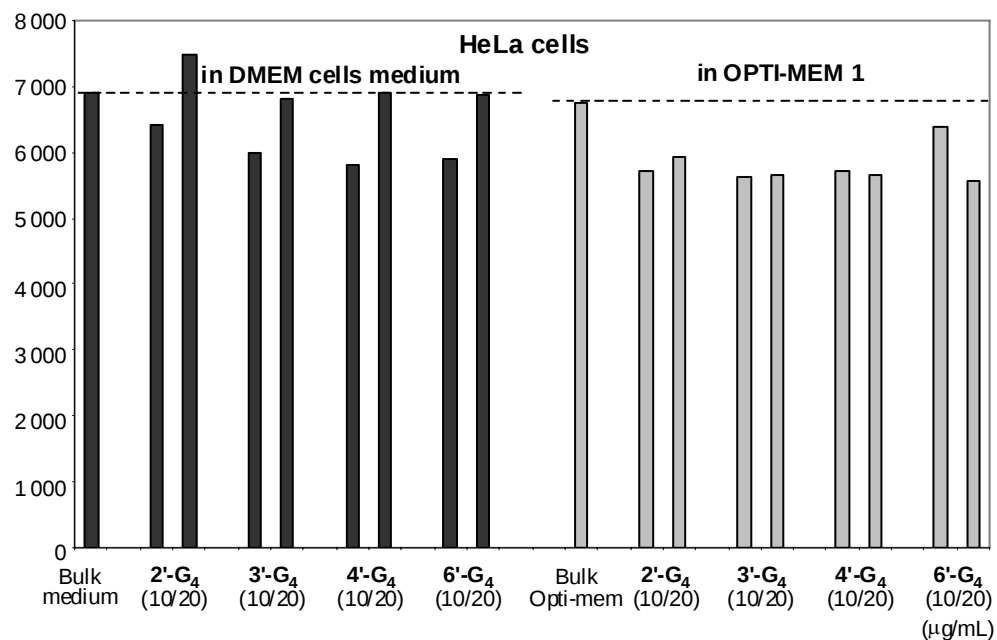
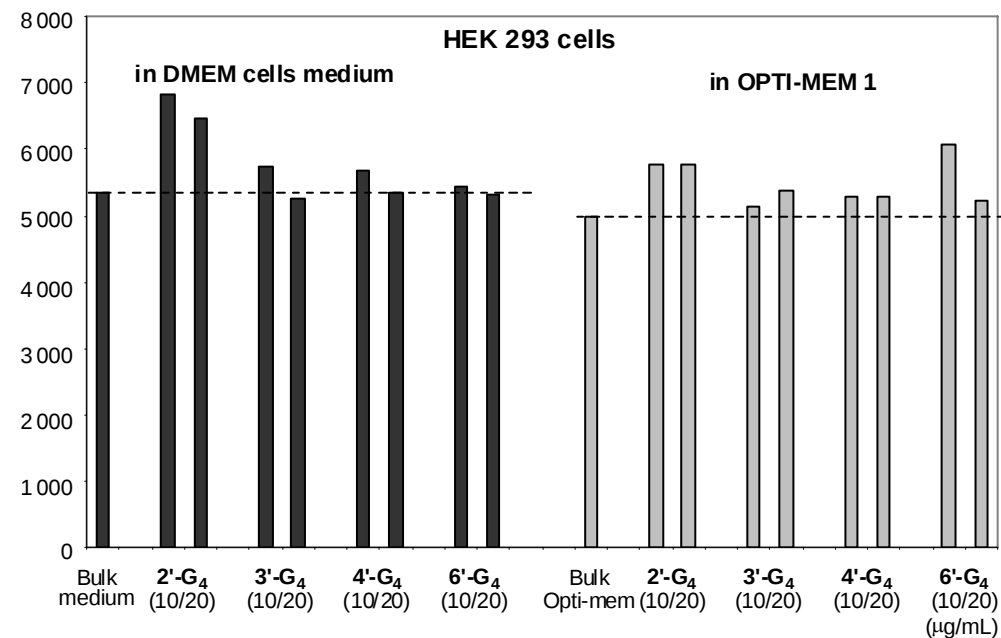


LB	1.000
GB	0.0
CX	35.00
CY	0.0
F1	79.611P
F2	3.878P
HZ/CM	175.300
PPM/CM	2.164
SR	4979.00

II. Transfection experiments

Transfection experiments

of GFP-coding plasmid in HEK 293, HeLa, and Huvec cells, using various dendrimers with a concentration of 10 and 20 $\mu\text{g/mL}$, detected by fluorescence. The dotted lines indicate the threshold for DMEM cells medium (left black bar) or OPTI-MEM medium (left grey bar) alone.



S - 12 -

Chemical reaction used in MTT assay experiments.

