ORGANOMETALLICS
Organometallics, 1996, 15(12), 2707-2712, DOI:10.1021/om960031w

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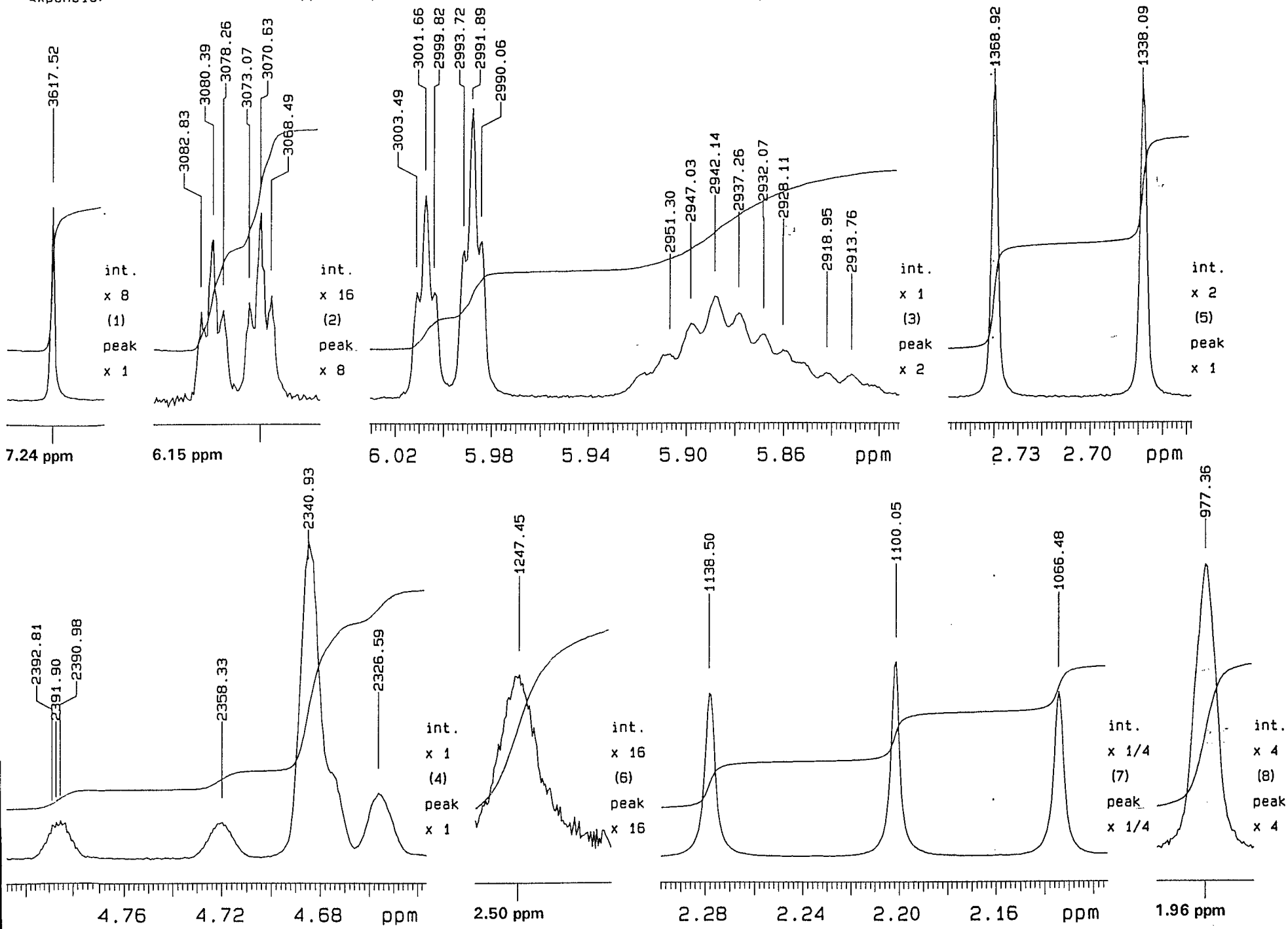
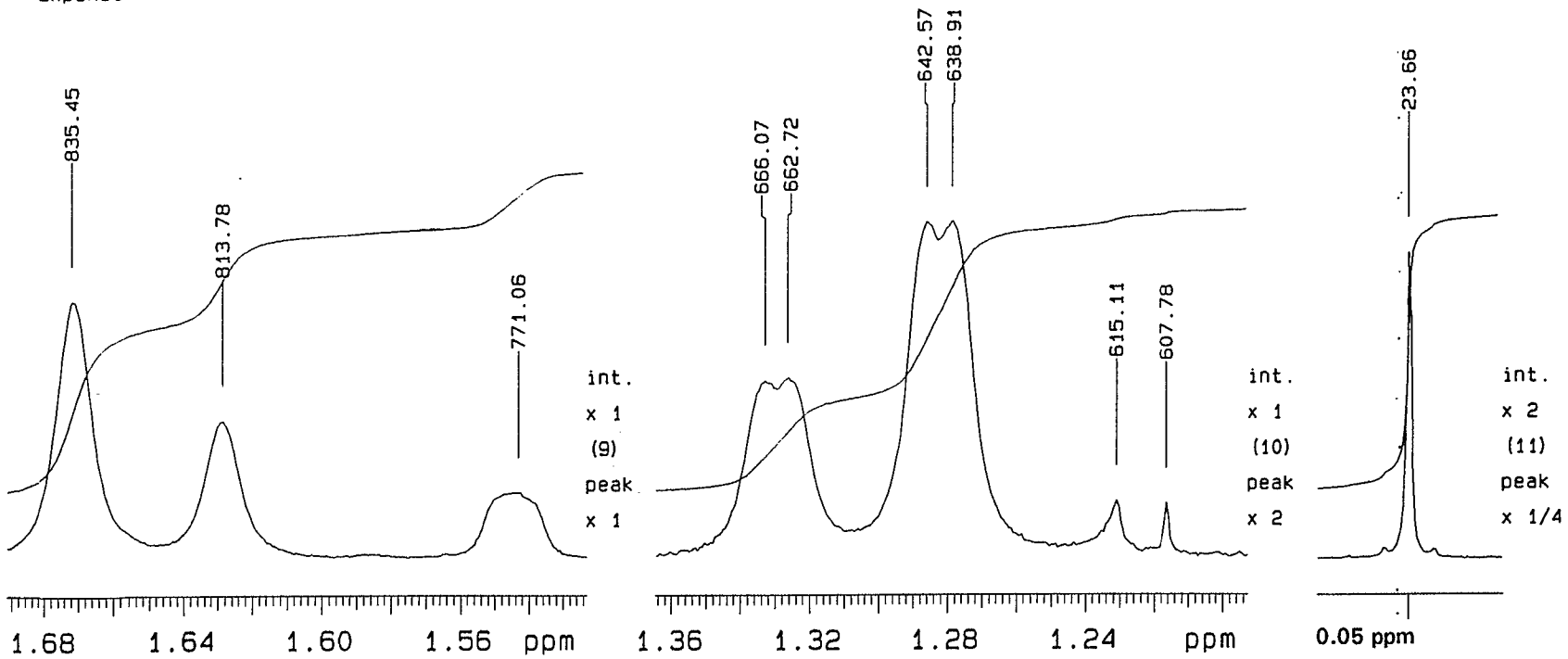
Expansions at 10 Hz/cm 0.020 ppm/cm (p.1) *STANDT (AC) RS C5.4 rsc54.ah/h unity500/hrd Feb 16 94 (CDCl3)*



LR718-41

Expansions at 10 Hz/cm 0.020 ppm/cm (p.2) *STANDT (AC) RS C5.4 rsc54.ah/h unity500/hrd Feb 16 94 (CDCl3)*



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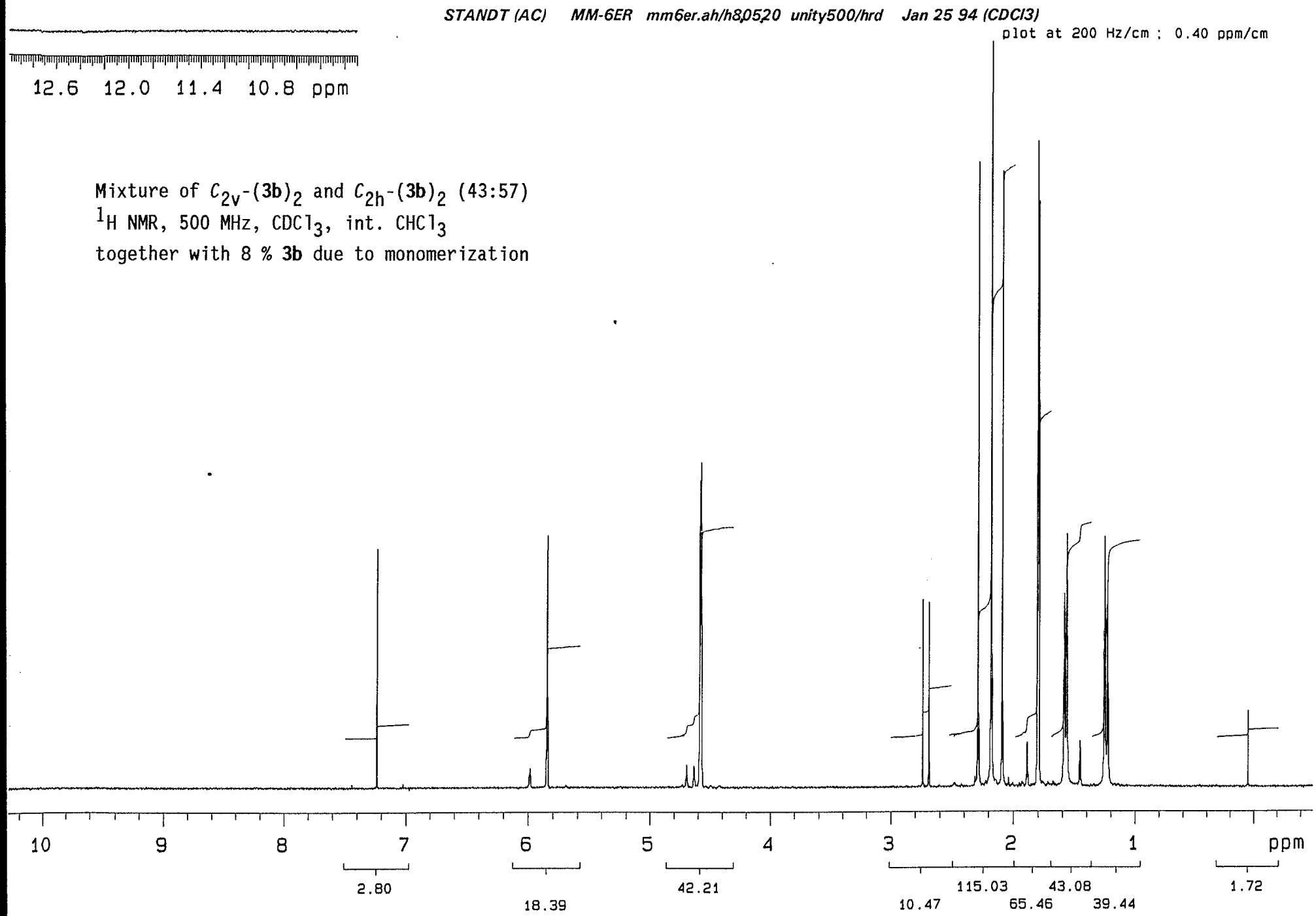
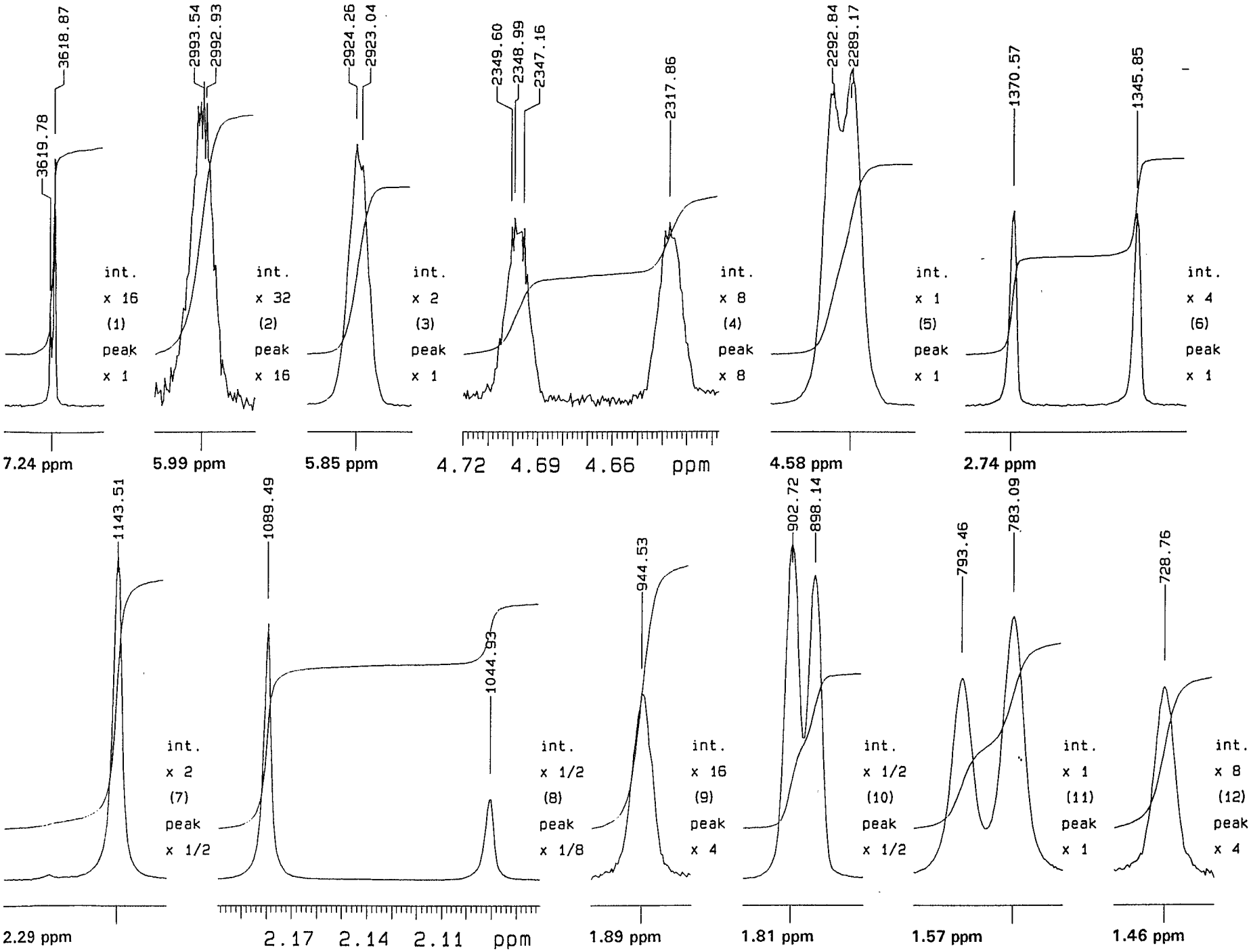
L2718-48


STANDT (AC) MM-6ER mm6er.ah/h8,05,20 unity500/hrd Jan 25 94 (CDCl3)
plot at 200 Hz/cm ; 0.40 ppm/cm
12.6 12.0 11.4 10.8 ppm
Mixture of C_{2v}-(**3b**)$_2$ and C_{2h}-(**3b**)$_2$ (43:57)
^{1}H NMR, 500 MHz, $CDCl_3$, int. $CHCl_3$
together with 8 % **3b** due to monomerization
10 9 8 7 6 5 4 3 2 1 ppm
2.80
18.39
42.21
10.47
115.03
65.46
43.08
39.44
1.72

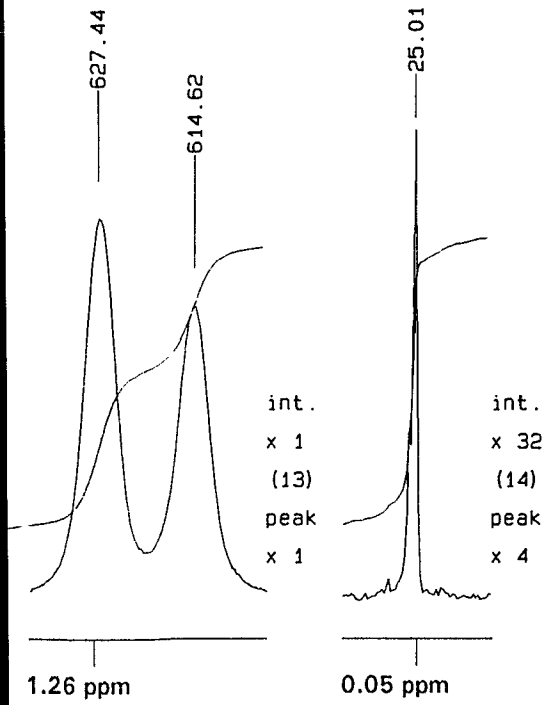
S4-1h-1

Expansions at 10 Hz/cm 0.020 ppm/cm (p.1) *STANDT (AC) MM-6ER mm6er.ah/h80520 unity500/hrd Jan 25 94 (CDCl3)*



23713-44

Expansions at 10 Hz/cm 0.020 ppm/cm (p.2) *STANDT (AC) MM-6ER mm6er.ah/h80520 unity500/hrd Jan 25 94 (CDCl3)*



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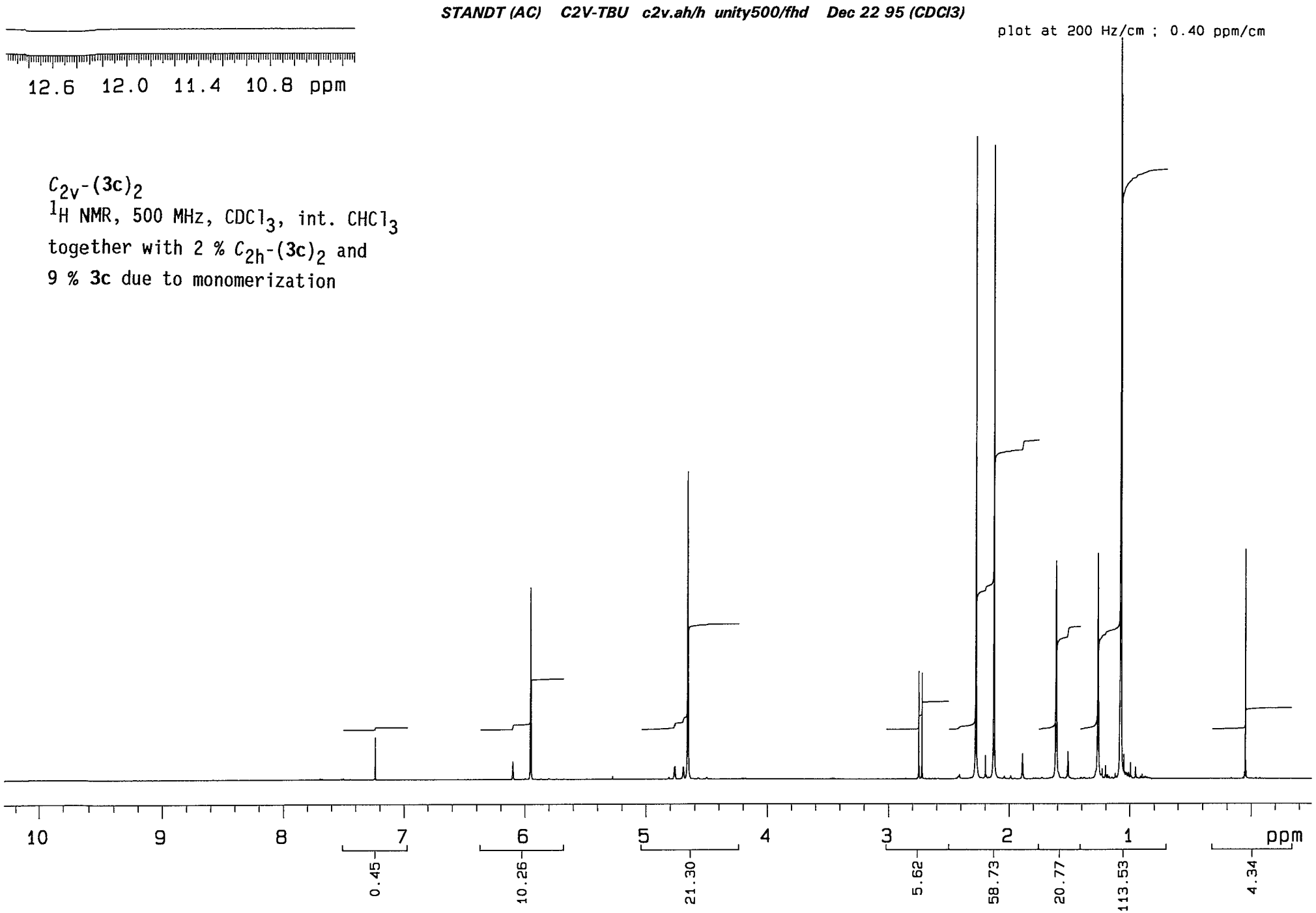
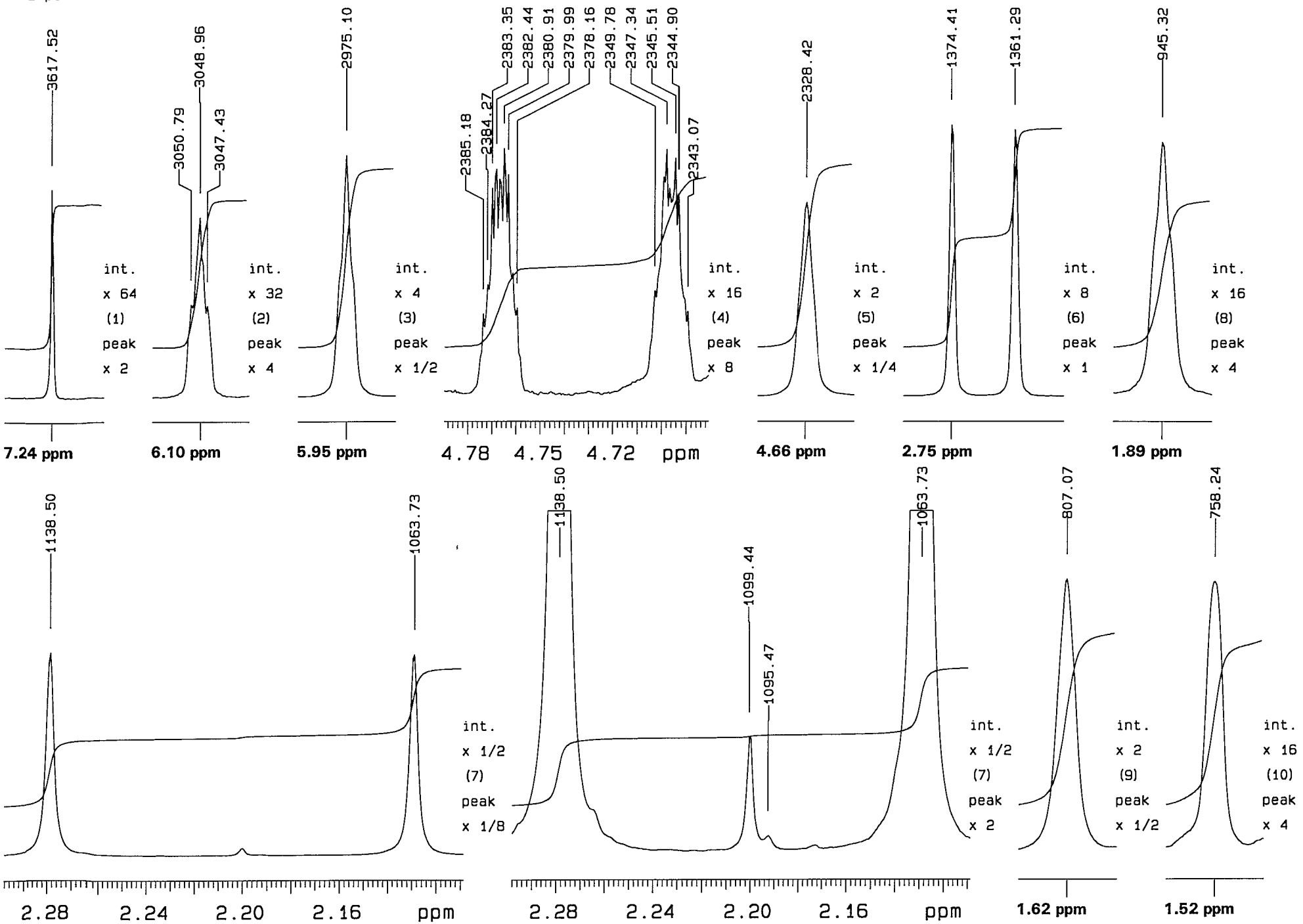
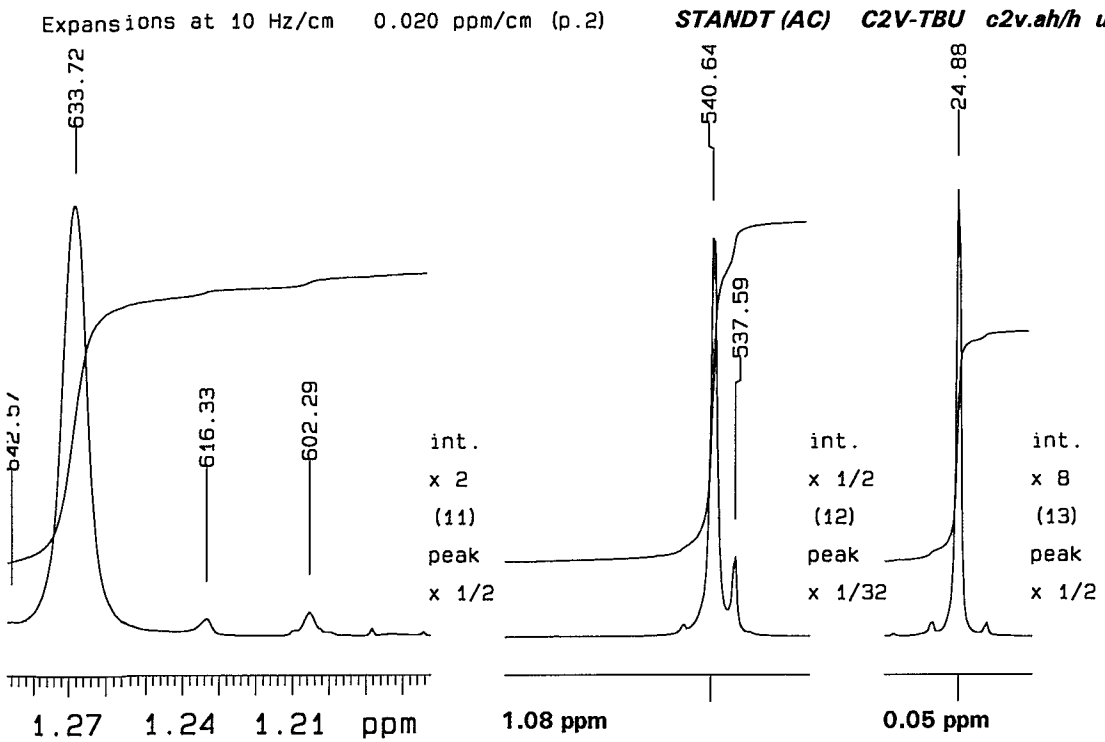


L-Q'11-46

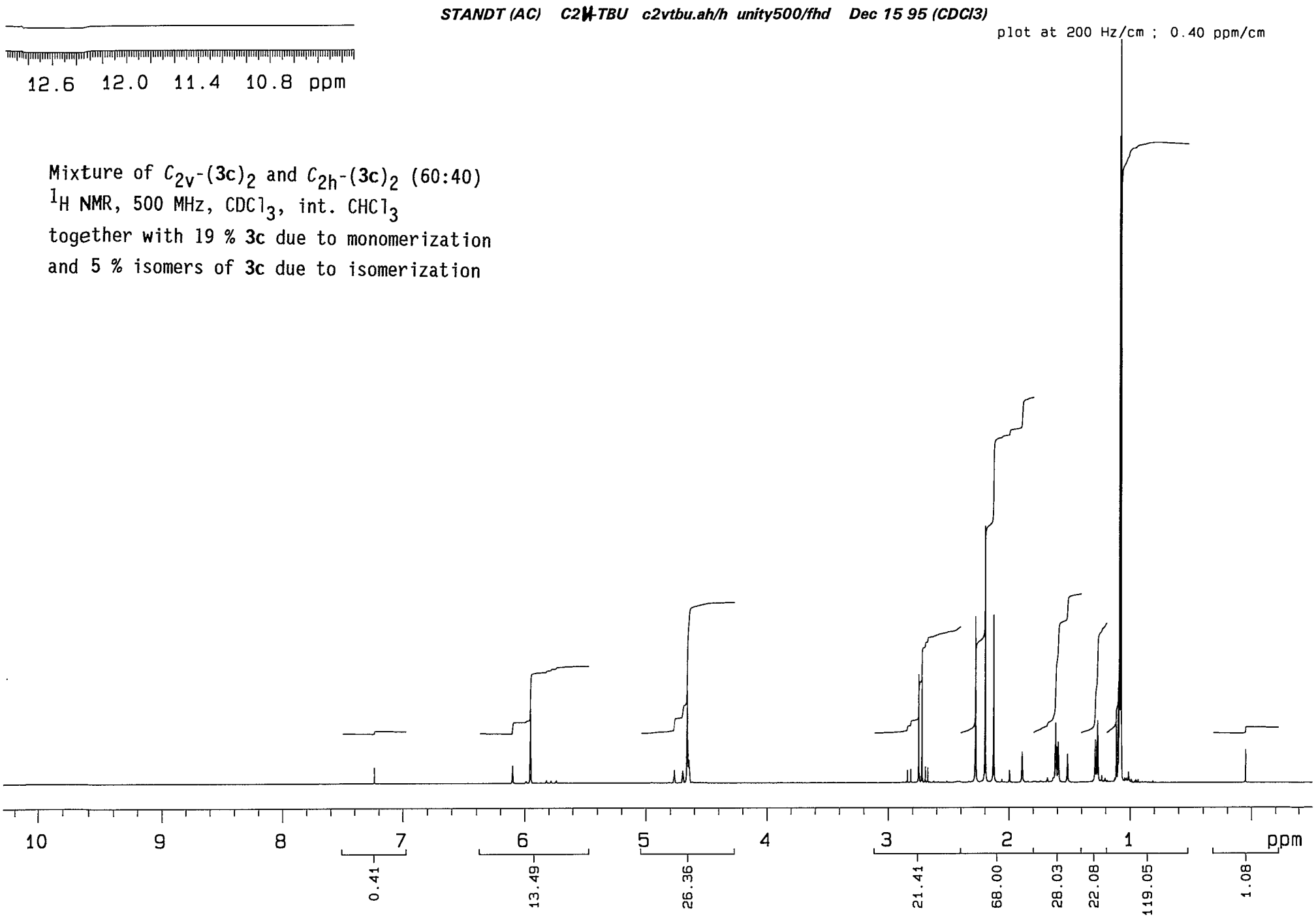
Expansions at 10 Hz/cm 0.020 ppm/cm (p.1) **STANDT (AC) C2V-TBU c2v.ah/h unity500/fhd Dec 22 95 (CDCl3)**



Lo.116-41

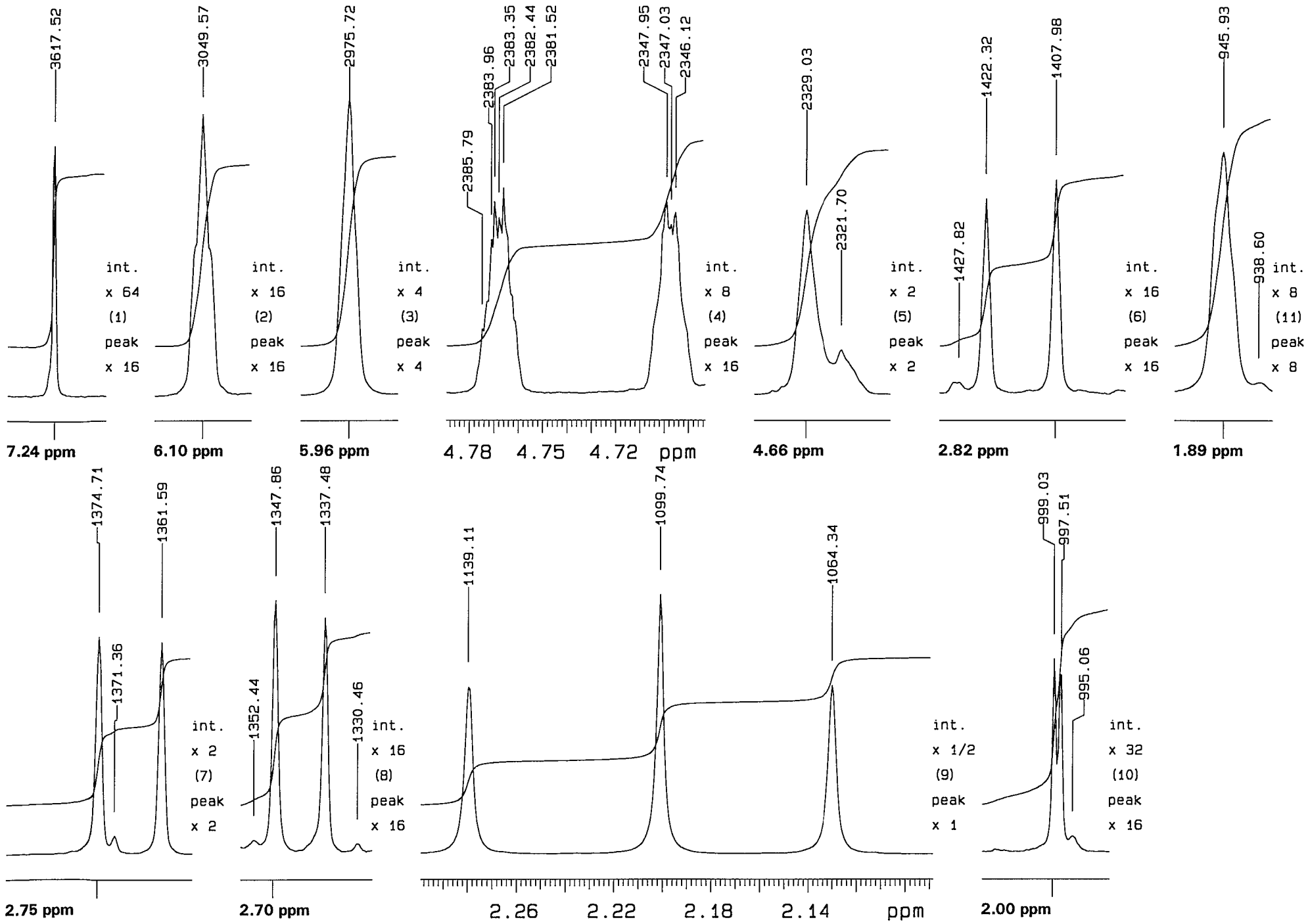

Expansions at 10 Hz/cm 0.020 ppm/cm (p.2)
STANDT (AC) C2V-TBU c2v.ah/h unity500/fhd Dec 22 95 (CDCl3)
633.72
642.57
616.33
602.29
int.
x 2
(11)
peak
x 1/2
540.64
537.59
int.
x 1/2
(12)
peak
x 1/32
24.88
int.
x 8
(13)
peak
x 1/2
1.27 1.24 1.21 ppm
1.08 ppm
0.05 ppm

L2'112-48


STANDT (AC) C2H-TBU c2vtbu.ah/h unity500/fhd Dec 15 95 (CDCl3)
plot at 200 Hz/cm ; 0.40 ppm/cm
12.6 12.0 11.4 10.8 ppm
Mixture of C_{2v}-(3c)$_2$ and C_{2h}-(3c)$_2$ (60:40)
^{1}H NMR, 500 MHz, $CDCl_3$, int. $CHCl_3$
together with 19 % 3c due to monomerization
and 5 % isomers of 3c due to isomerization
10 9 8 7 6 5 4 3 2 1 ppm
0.41
13.49
26.36
21.41
68.00
28.03
22.08
119.05
1.08

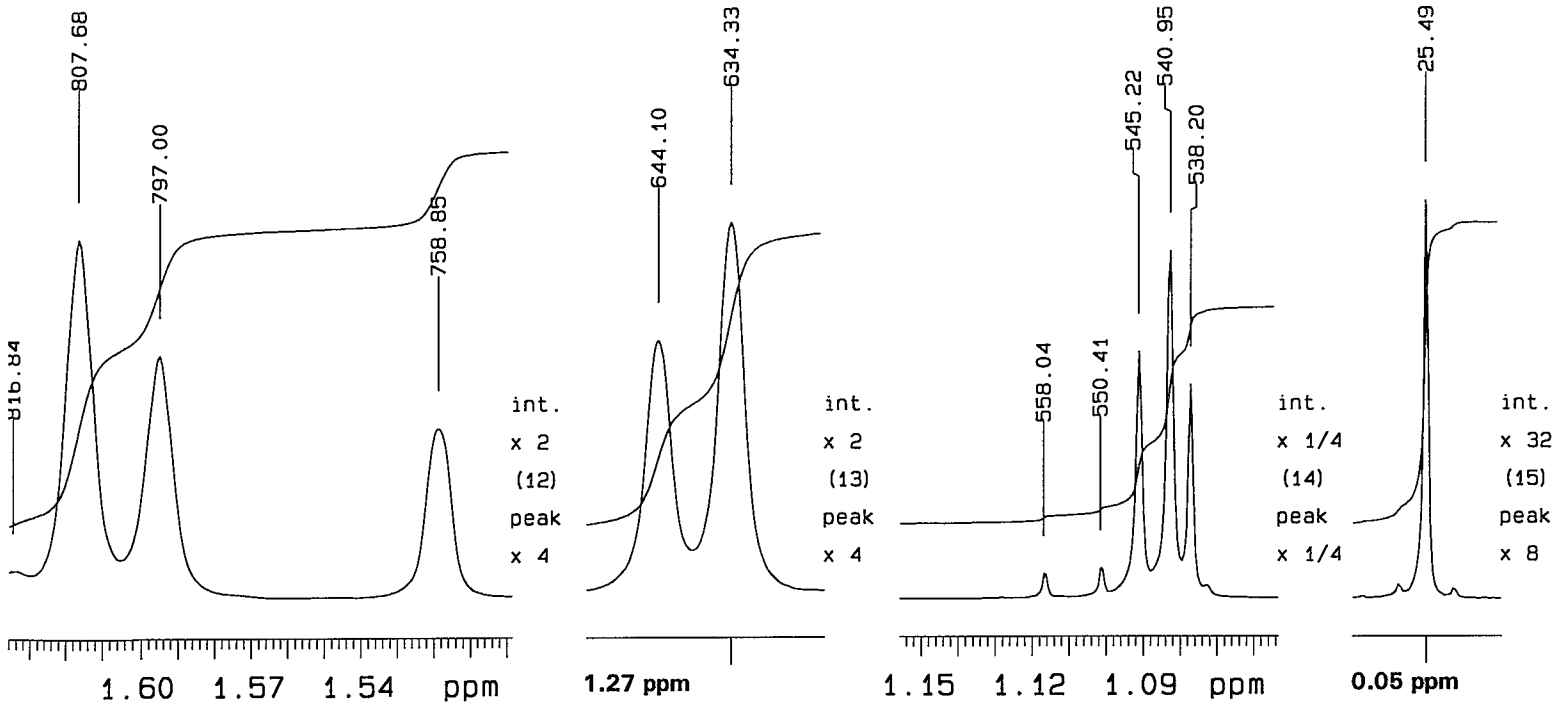
LA116-47

Expansions at 10 Hz/cm 0.020 ppm/cm (p.1) *STANDT (AC) C2W-TBU c2vtbu.ah/h unity500/fhd Dec 15 95 (CDCl3)*



LBH-50

Expansions at 10 Hz/cm 0.020 ppm/cm (p.2) *STANDT (AC) C2V-TBU c2vtbu.ah/h unity500/fhd Dec 15 95 (CDCl3)*



L2712-51

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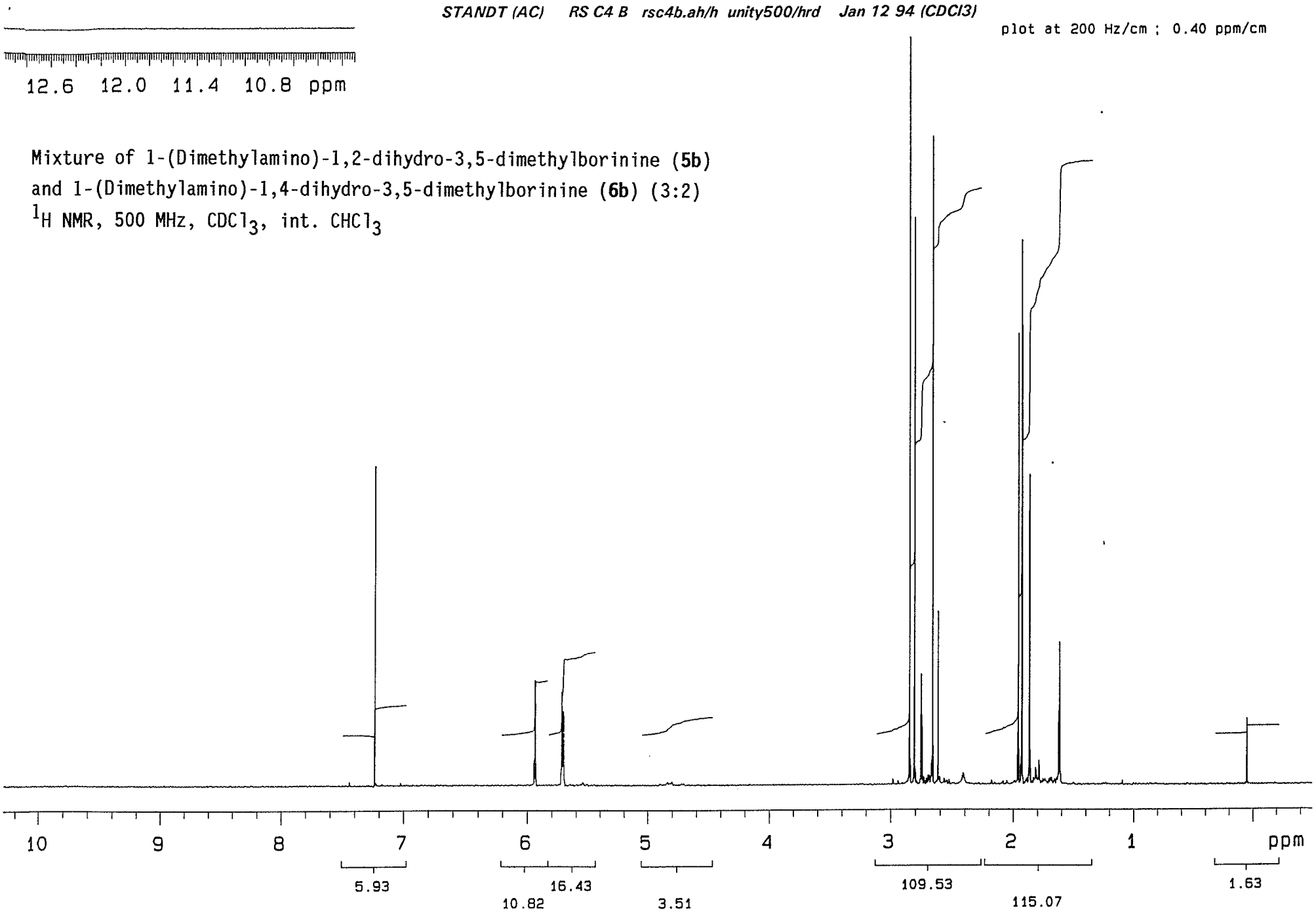
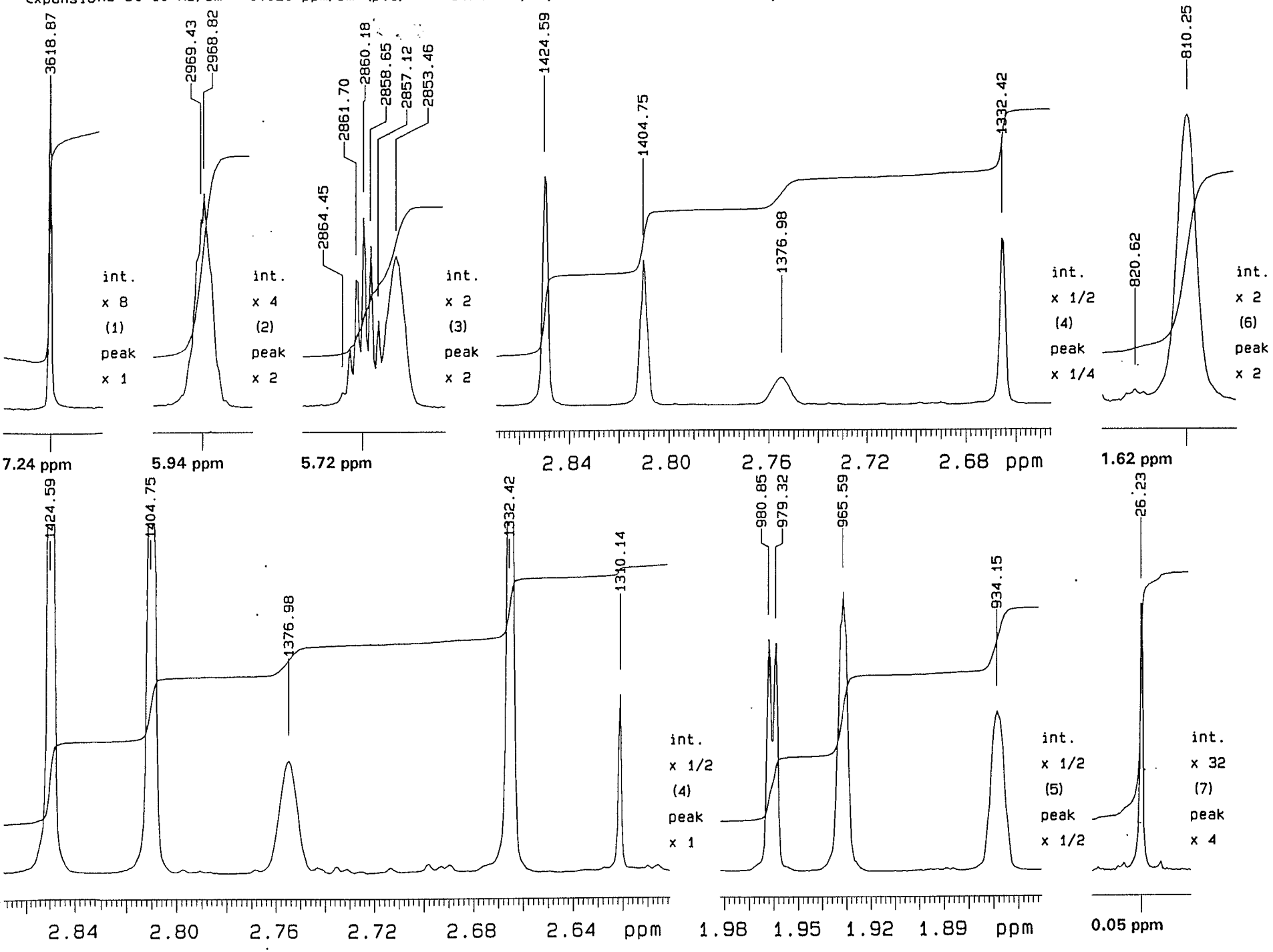


Mixture of 1-(Dimethylamino)-1,2-dihydro-3,5-dimethylborinine (**5b**) and 1-(Dimethylamino)-1,4-dihydro-3,5-dimethylborinine (**6b**) (3:2)
^{1}H NMR, 500 MHz, $CDCl_3$, int. $CHCl_3$

Expansions at 10 Hz/cm 0.020 ppm/cm (p.1) *STANDT (AC) RS C4 B rsc4b.ah/h unity500/hrd Jan 12 94 (CDCl3)*



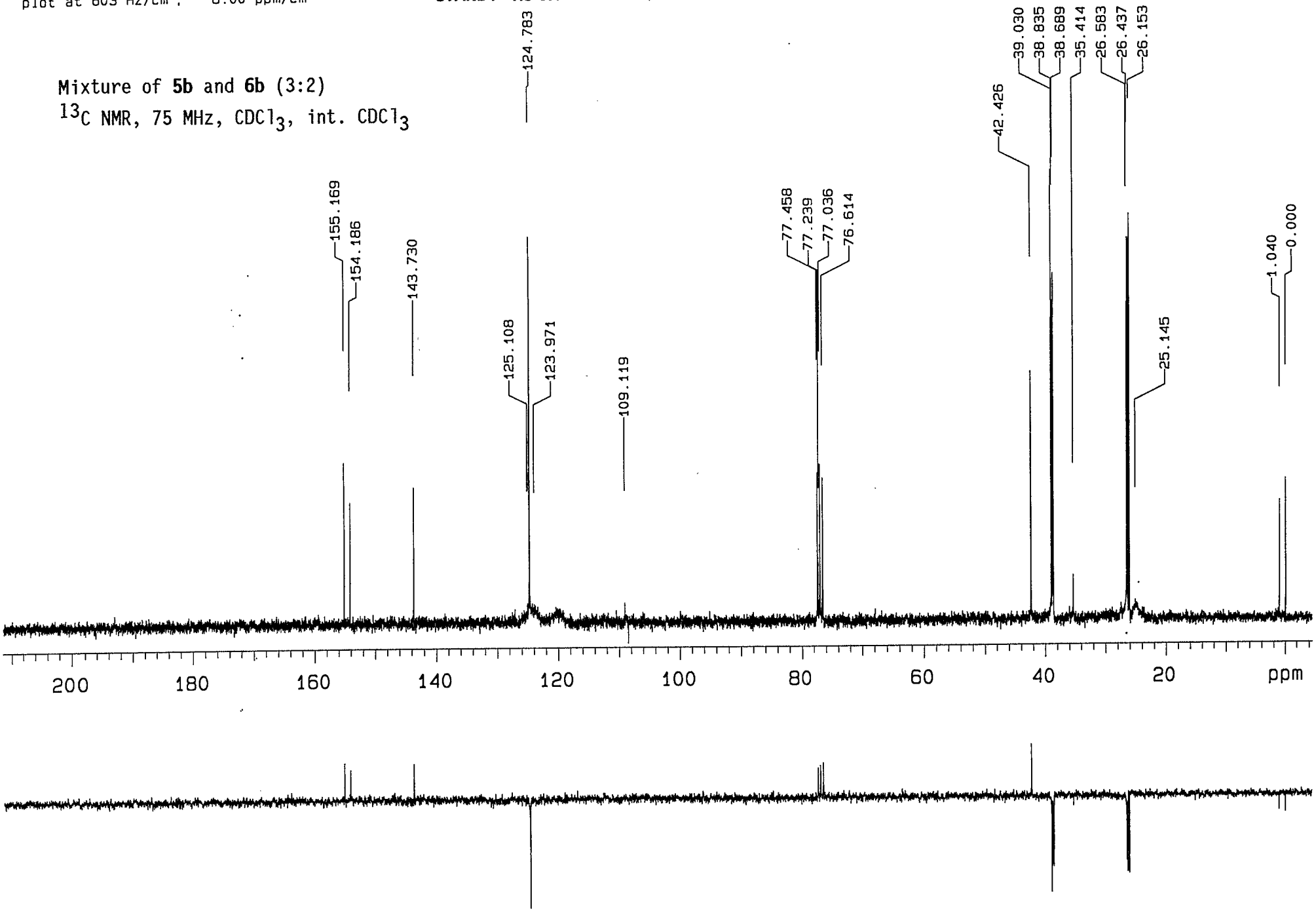
P.G.-1B

plot at 603 Hz/cm : 8.00 ppm/cm

STANDT RS 6.1 autoh1.ah/c vxr300/sw5 Jul 27 93 (CDCl3)

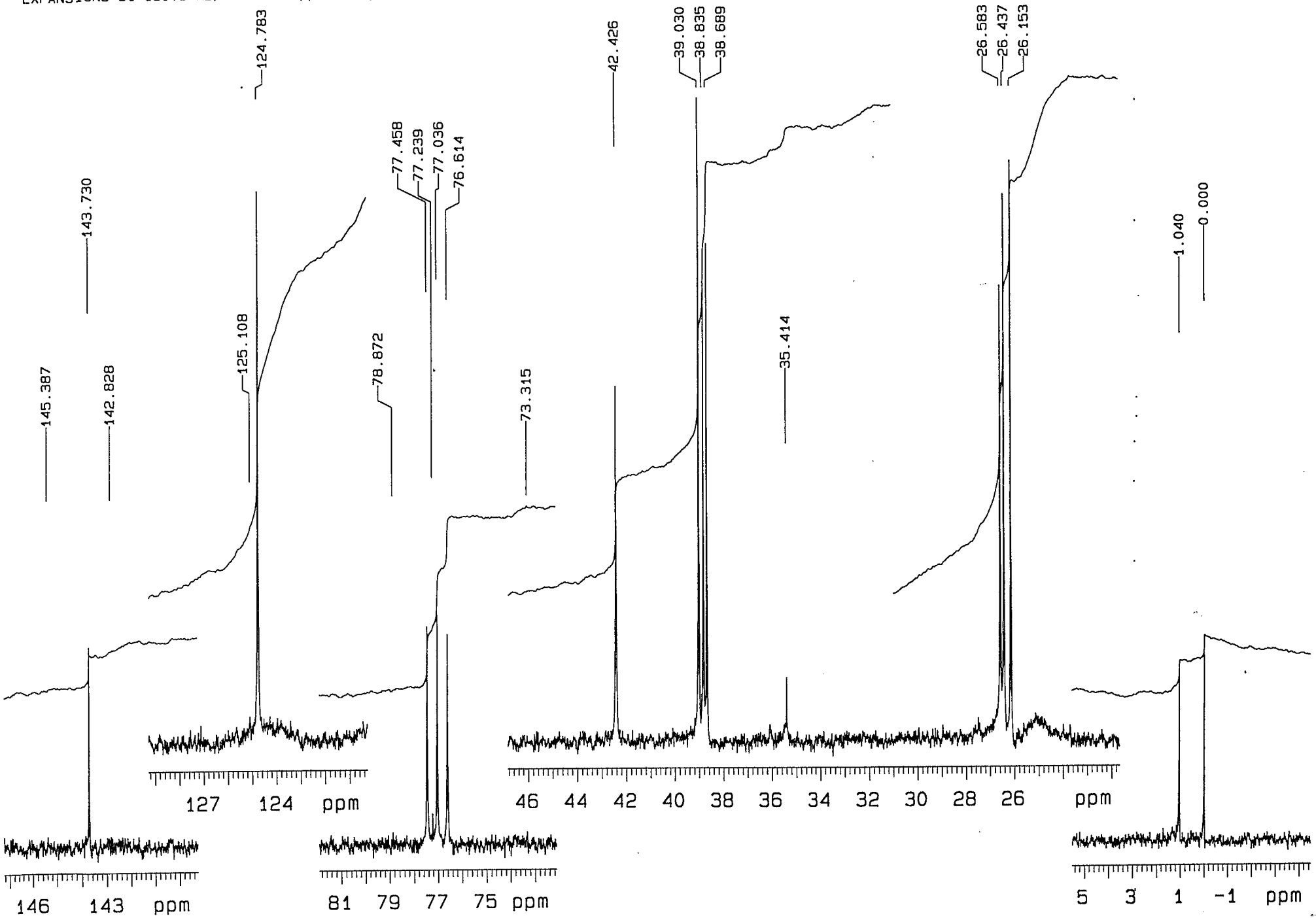
Mixture of **5b** and **6b** (3:2)

^{13}C NMR, 75 MHz, $CDCl_3$, int. $CDCl_3$



L-PH-34

EXPANSIONS at 150.9 Hz/cm 2.00 ppm/cm (p.1) **STANDT RS 6.1 autoh1.ah/c vxr300/sw5 Jul 27 93 (CDCl3)**



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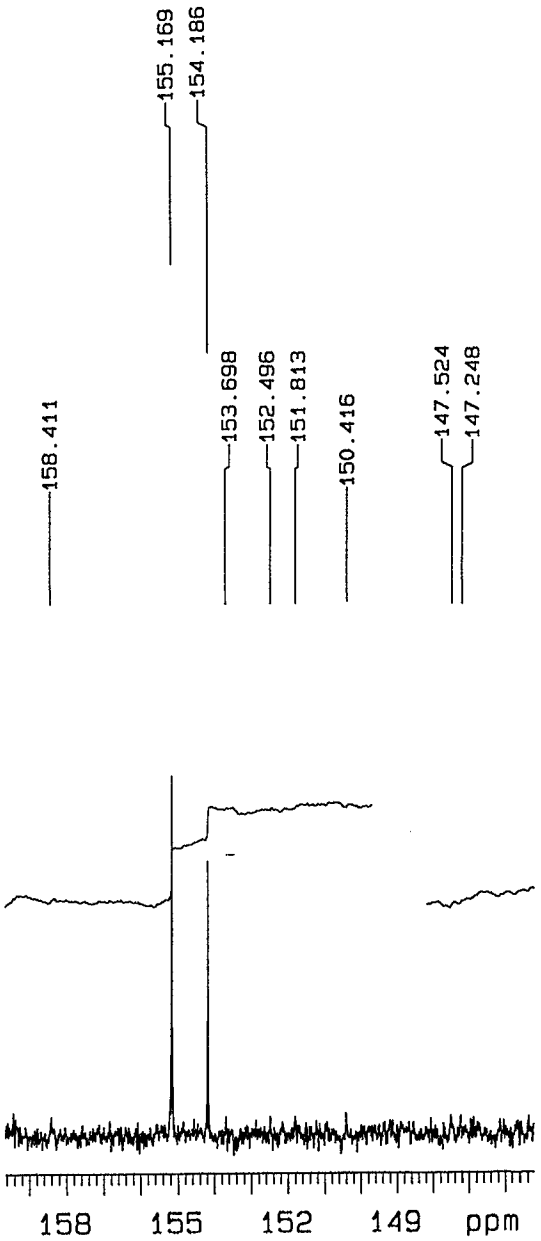
7-116-00

EXPANSIONS at 150.9 Hz/cm 2.00 ppm/cm (p.2) ***STANDT RS 6.1 autoh1.ah/c vxr300/sw5 Jul 27 93 (CDCl3)***



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THRESHOLD : 3.3

STANDT RS 6.1 autoh1.ah/c vxr300/sw5 Jul 27 93 (CDCl3)

Pulse sequence s2pulrd
OBSERVE C13
 Frequency 75.429 MHz
 Spectral width 20080.3 Hz
 Acquisition time 1.632 sec
 Relaxation delay 0.100 sec
 Pulse width 46.2 degrees
 Ambient temperature
 No. repetitions 768
DECOUPLE H1
 Low power 2
 Decoupler continuously on
 WALTZ-16 modulated
Double precision acquisition
DATA PROCESSING
 Line broadening 1.0 Hz
 FT size 65536
Total acquisition time 22 minutes

INDEX	FREQ. (Hz)	PPM	HEIGHT
1	11704.3	155.169	47.2
2	11630.1	154.186	35.7
3	10841.4	143.730	40.0
4	9588.8	127.123	4.0
5	9478.5	125.661	3.8
6	9436.8	125.108	5.7
7	9412.3	124.783	111.9
8	9351.0	123.971	5.4
9	9086.3	120.461	4.6
10	9036.7	119.803	4.2
11	8335.6	110.509	3.5
12	8230.8	109.119	5.7
13	5842.6	77.458	43.6
14	5826.1	77.239	6.3
15	5810.8	77.036	46.0
16	5778.9	76.614	42.0
17	5126.3	67.961	3.5
18	3200.2	42.426	72.5
19	2944.0	39.030	130.2
20	2929.3	38.835	92.9
21	2918.3	38.689	100.8
22	2722.2	36.089	3.6
23	2671.3	35.414	12.9
24	2074.4	27.501	4.6
25	2005.2	26.583	92.3
26	1994.1	26.437	110.6
27	1972.7	26.153	117.4
28	1896.7	25.145	5.5
29	78.4	1.040	34.5
30	0.0	0.000	40.8

L9TB-51

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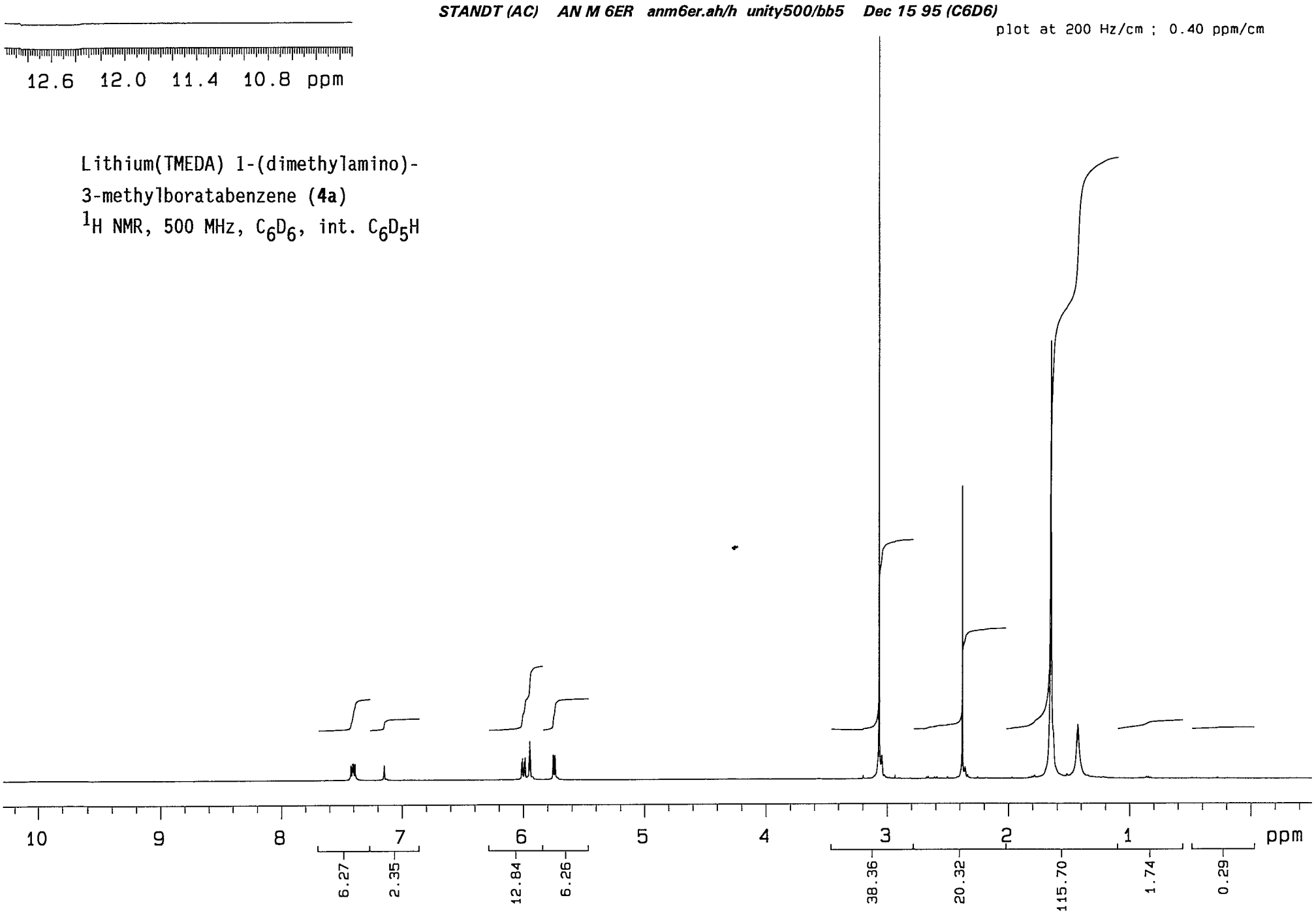
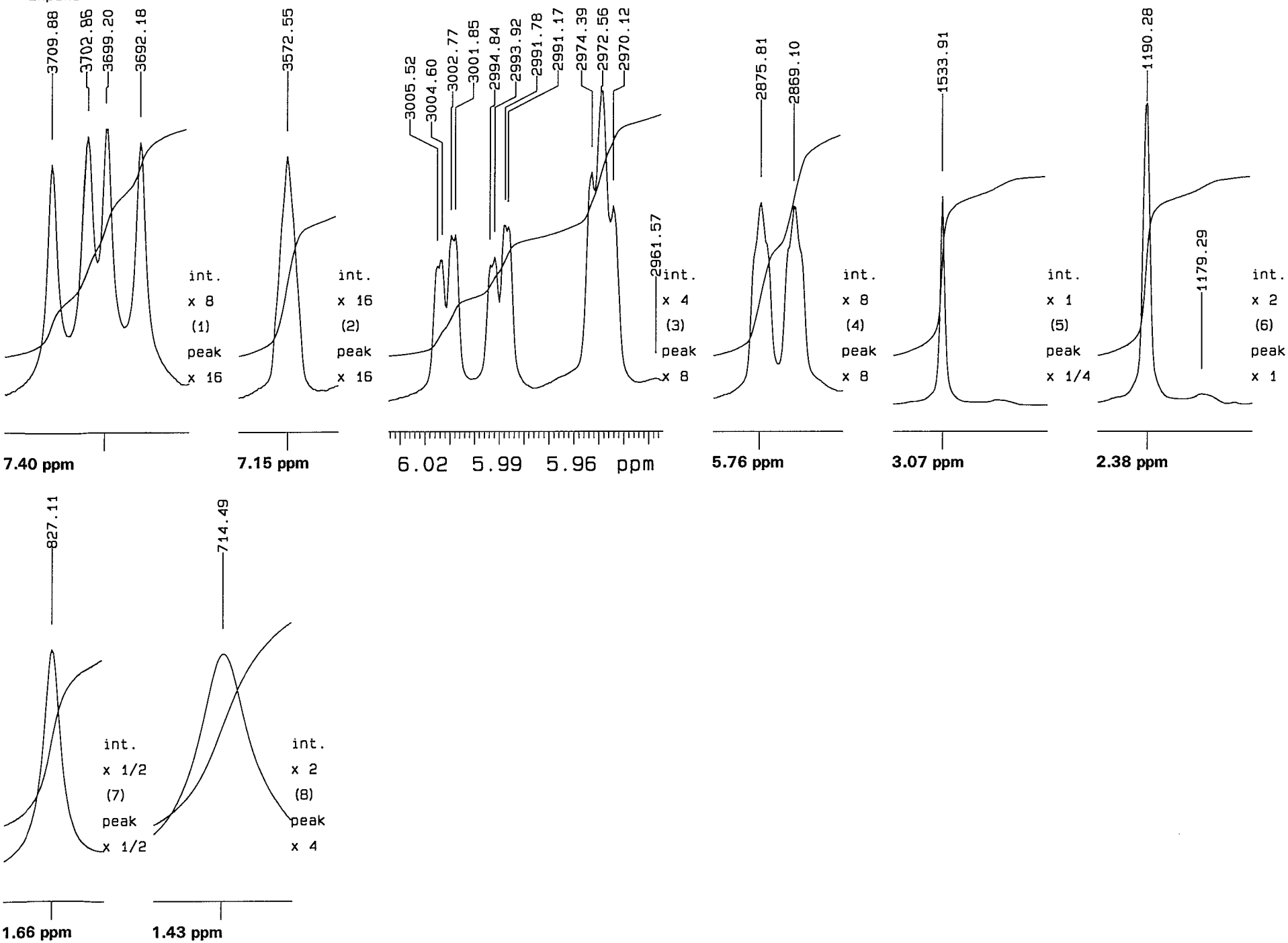


Expansions at 10 Hz/cm 0.020 ppm/cm (p.1) ***STANDT (AC) AN M 6ER anm6er.ah/h unity500/bb5 Dec 15 95 (C6D6)***



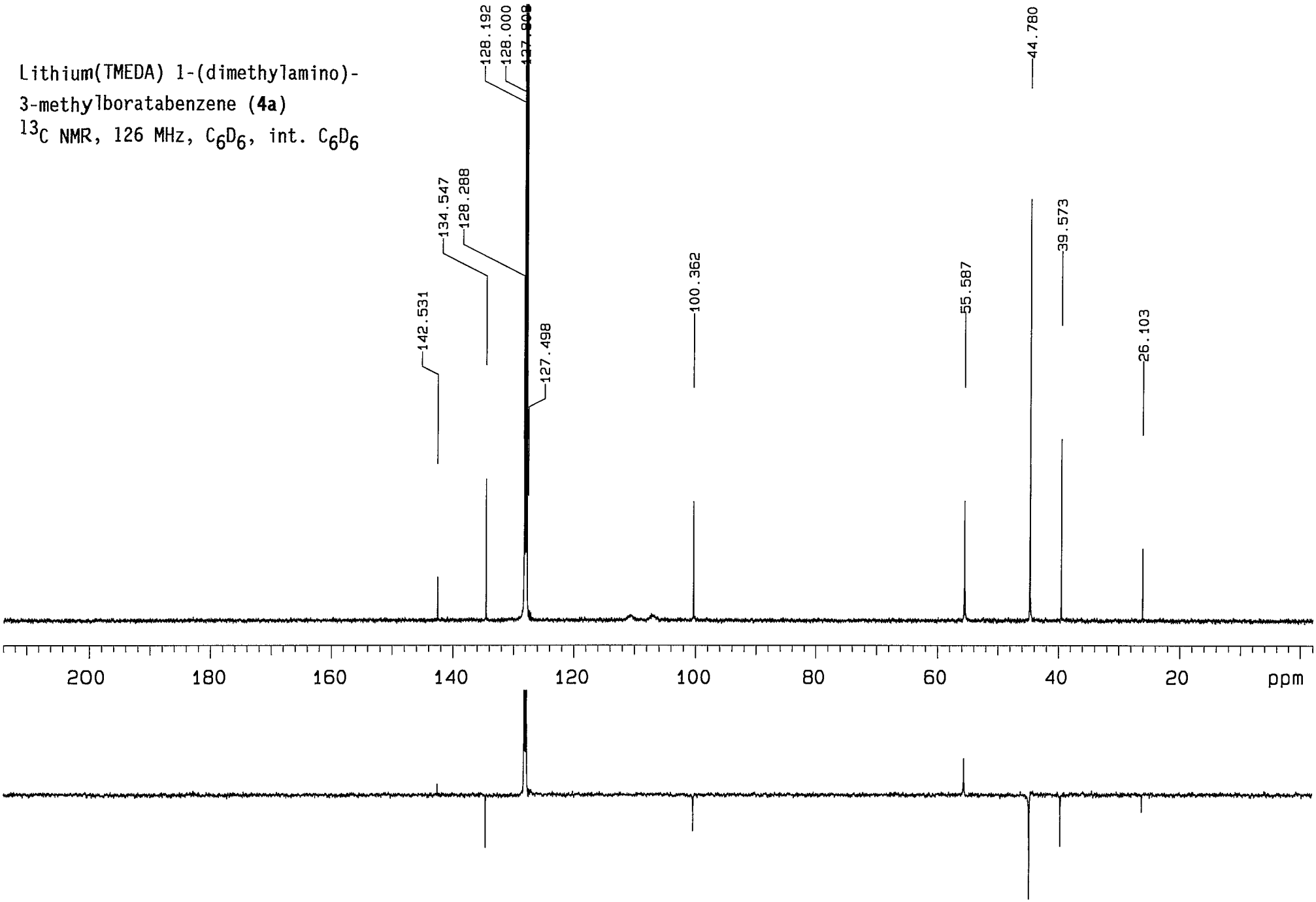
L8718-59

plot at 1005 Hz/cm ; 8.00 ppm/cm

STANDT (AC) AN M 6ER anm6er.ah/c unity500/bb5 Dec 15 95 (C6D6)

Lithium(TMEDA) 1-(dimethylamino)-3-methylboratabenzene (**4a**)

^{13}C NMR, 126 MHz, C_6D_6, int. C_6D_6



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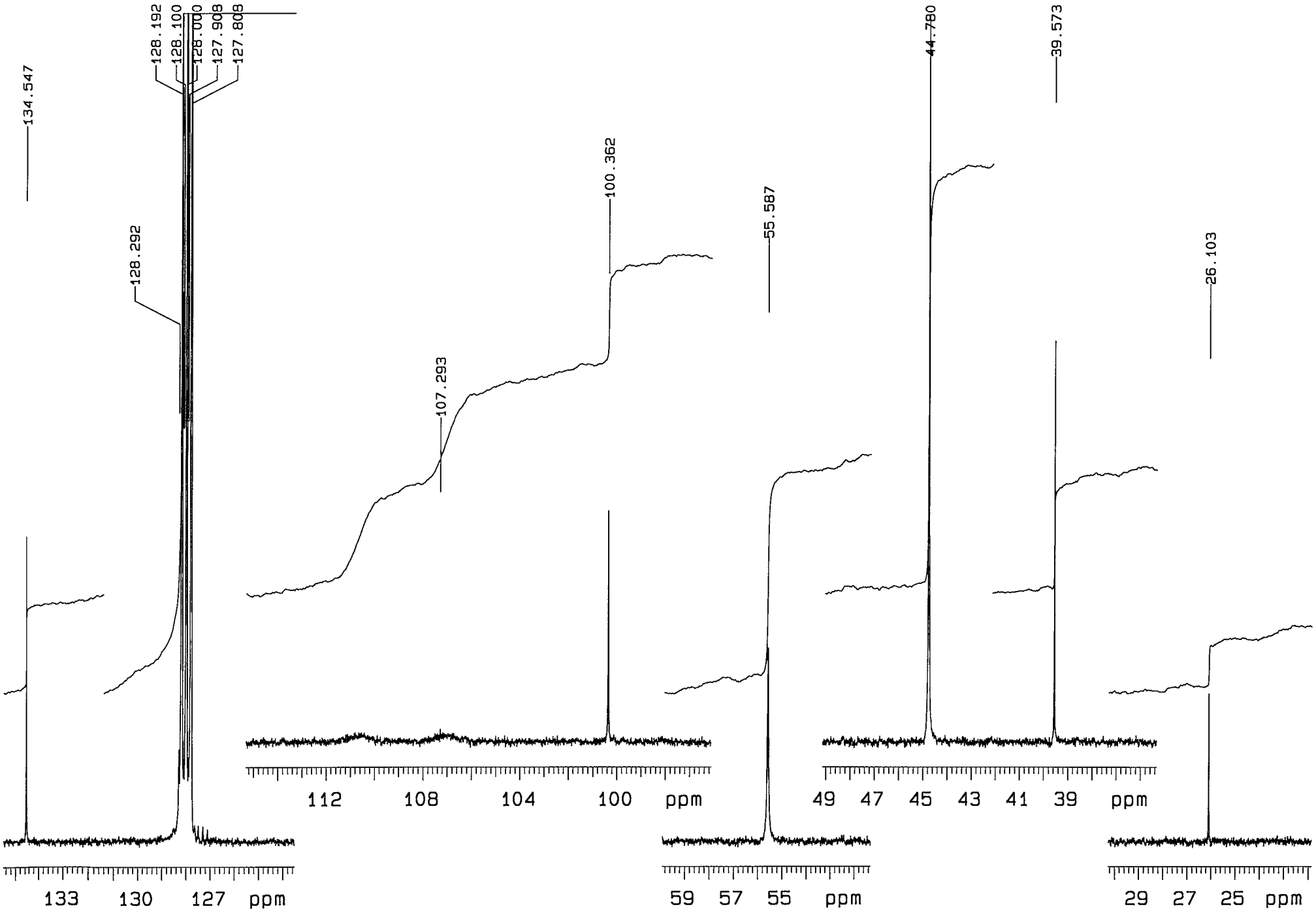
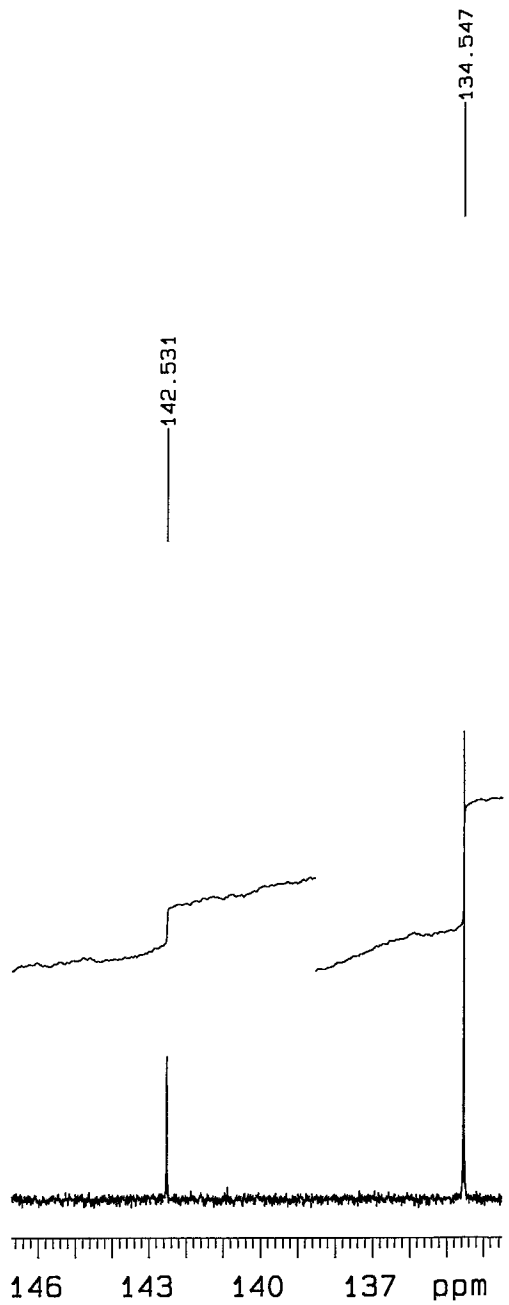
EXPANSIONS at 251.3 Hz/cm 2.00 ppm/cm (p.1) ***STANDT (AC) AN M 6ER anm6er.ah/c unity500/bb5 Dec 15 95 (C6D6)***



L-118-101

EXPANSIONS at 251.3 Hz/cm 2.00 ppm/cm (p.2) ***STANDT (AC) AN M 6ER anm6er.ah/c unity500/bb5 Dec 15 95 (C6D6)***



LA-11-64

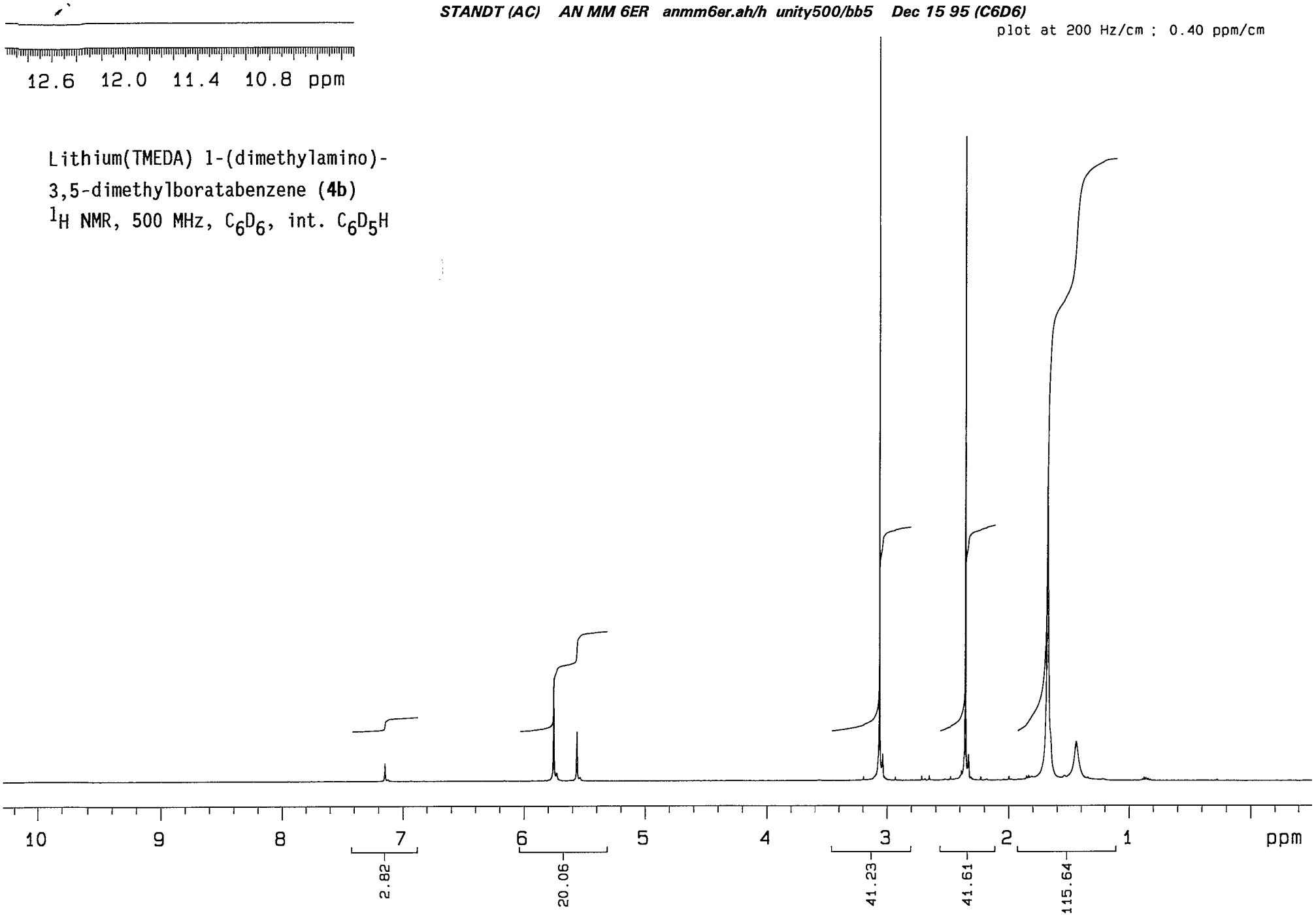
THRESHOLD : 2.1

STANDT (AC) AN M 6ER anm6er.ah/c unity500/bb5 Dec 15 95 (C6D6)

Pulse sequence s2pulrd
OBSERVE C13
 Frequency 125.639 MHz
 Spectral width 35938.9 Hz
 Acquisition time 1.824 sec
 Relaxation delay 0.100 sec
 Pulse width 45.0 degrees
 Ambient temperature
 No. repetitions 640
DECOUPLE H1
 High power 45
 Decoupler continuously on
 WALTZ-16 modulated
Double precision acquisition
DATA PROCESSING
 Line broadening 1.0 Hz
 FT size 131072
Total acquisition time 21 minutes
End acquisition time 09: 10

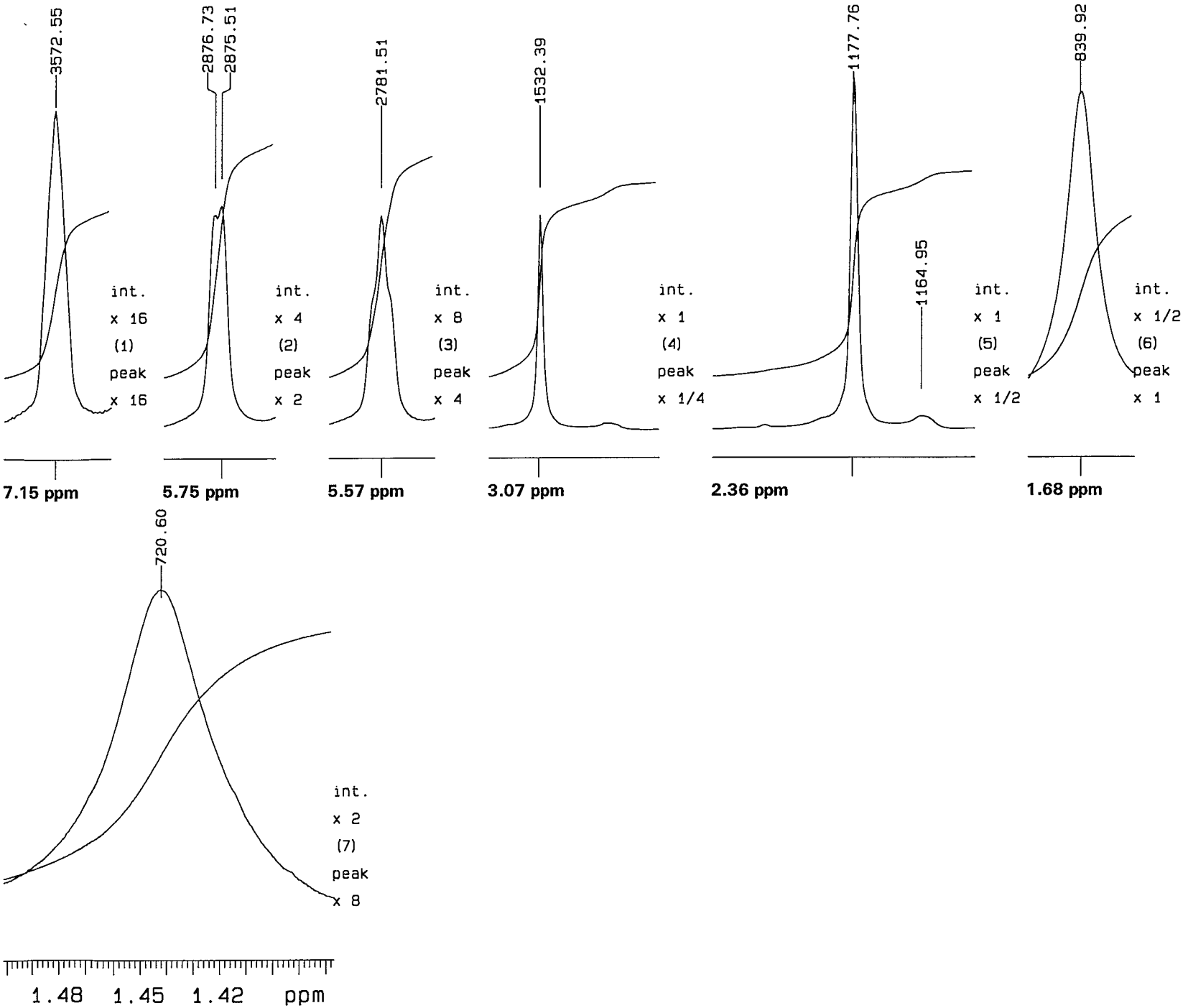
INDEX	FREQ. (Hz)	PPM	HEIGHT
1	17907.4	142.531	18.8
2	16904.4	134.547	61.7
3	16118.5	128.292	18.6
4	16105.9	128.192	434.0
5	16094.4	128.100	15.5
6	16081.8	128.000	456.3
7	16070.3	127.908	17.0
8	16057.6	127.808	461.9
9	16018.2	127.494	3.3
10	15995.1	127.310	3.2
11	15971.0	127.118	2.6
12	13480.2	107.293	2.6
13	12609.4	100.362	46.7
14	6983.9	55.587	38.9
15	5626.1	44.780	152.3
16	4971.9	39.573	81.2
17	3279.6	26.103	29.8

L2712-63


STANDT (AC) AN MM 6ER anmm6er.ah/h unity500/bb5 Dec 15 95 (C6D6)
plot at 200 Hz/cm ; 0.40 ppm/cm
12.6 12.0 11.4 10.8 ppm
Lithium(TMEDA) 1-(dimethylamino)-
3,5-dimethylboratabenzene (4b)
1H NMR, 500 MHz, C6D6, int. C6D5H
10 9 8 7 6 5 4 3 2 1 ppm
2.82
20.06
41.23
41.61
115.64

L.A.113-64

Expansions at 10 Hz/cm 0.020 ppm/cm (p.1) ***STANDT (AC) AN MM 6ER anmm6er.ah/h unity500/bb5 Dec 15 95 (C6D6)***



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L37137-65

THRESHOLD : 2.0

STANDT (AC) AN MM 6ER anmm6er.ah/h unity500/bb5 Dec 15 95 (C6D6)

Pulse sequence s2pulrd
OBSERVE H1
 Frequency 499.657 MHz
 Spectral width 10000.0 Hz
 Acquisition time 3.277 sec
 Relaxation delay 0.100 sec
 Pulse width 30.0 degrees
 Ambient temperature
 No. repetitions 16
Double precision acquisition
DATA PROCESSING
 FT size 65536
Total acquisition time 1 minutes
End acquisition time 09:22

INDEX	FREQ. (Hz)	PPM	HEIGHT
1	3572.6	7.150	3.7
2	2876.7	5.757	19.8
3	2875.5	5.755	20.7
4	2781.5	5.567	9.9
5	1532.4	3.067	158.3
6	1519.9	3.042	5.4
7	1194.5	2.391	2.0
8	1177.8	2.357	130.1
9	1164.9	2.331	5.2
10	839.9	1.681	61.9
11	720.6	1.442	7.9

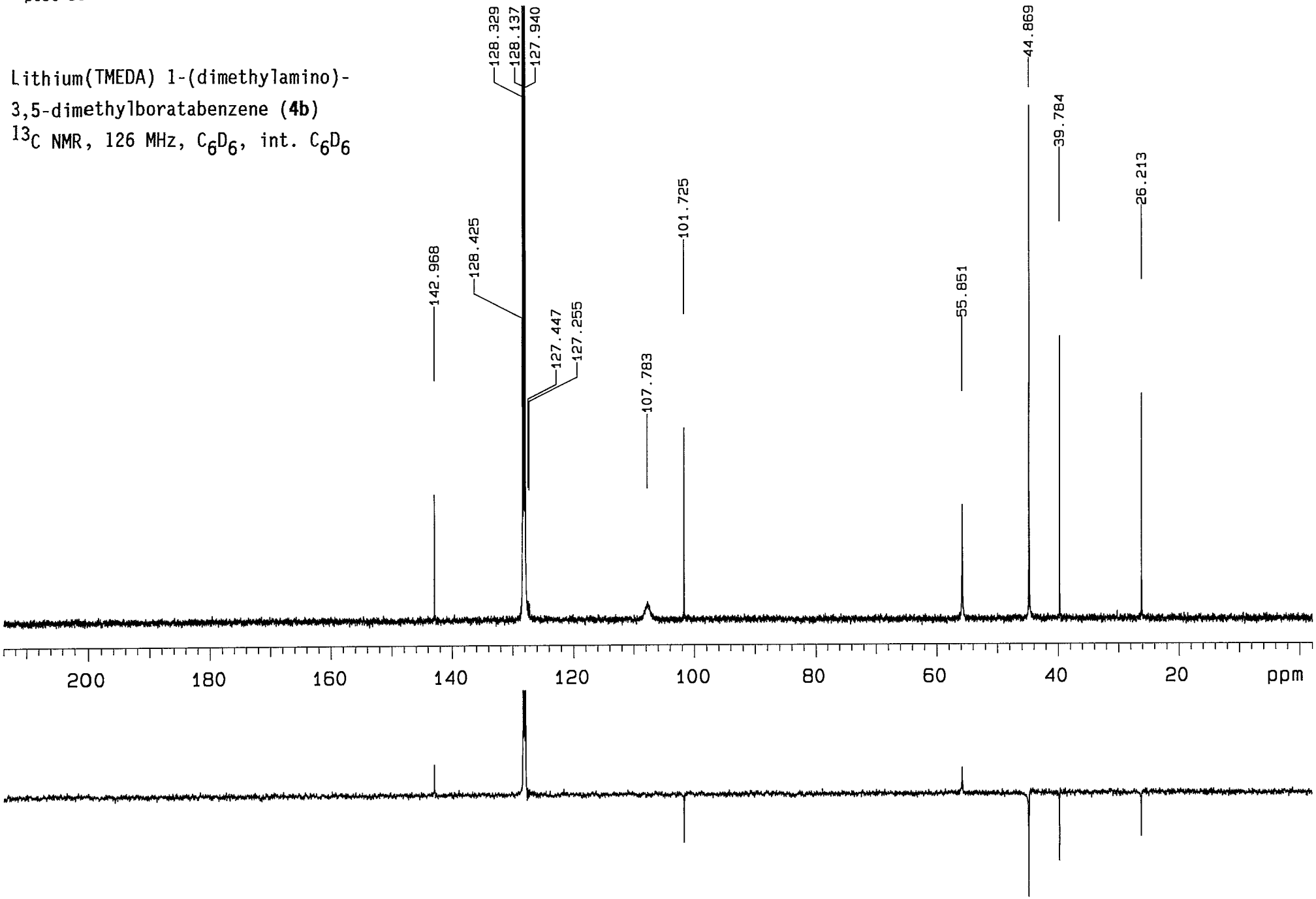
L 2718-66

plot at 1005 Hz/cm : 8.00 ppm/cm

STANDT (AC) AN MM 6ER anmm6er.ah/c unity500/bb5 Dec 15 95 (C6D6)

Lithium(TMEDA) 1-(dimethylamino)-3,5-dimethylboratabenzene (**4b**)

^{13}C NMR, 126 MHz, C_6D_6, int. C_6D_6



L9-4b-67

EXPANSIONS at 251.3 Hz/cm 2.00 ppm/cm (p.1) ***STANDT (AC) AN MM 6ER anmm6er.ah/c unity500/bb5 Dec 15 95 (C6D6)***

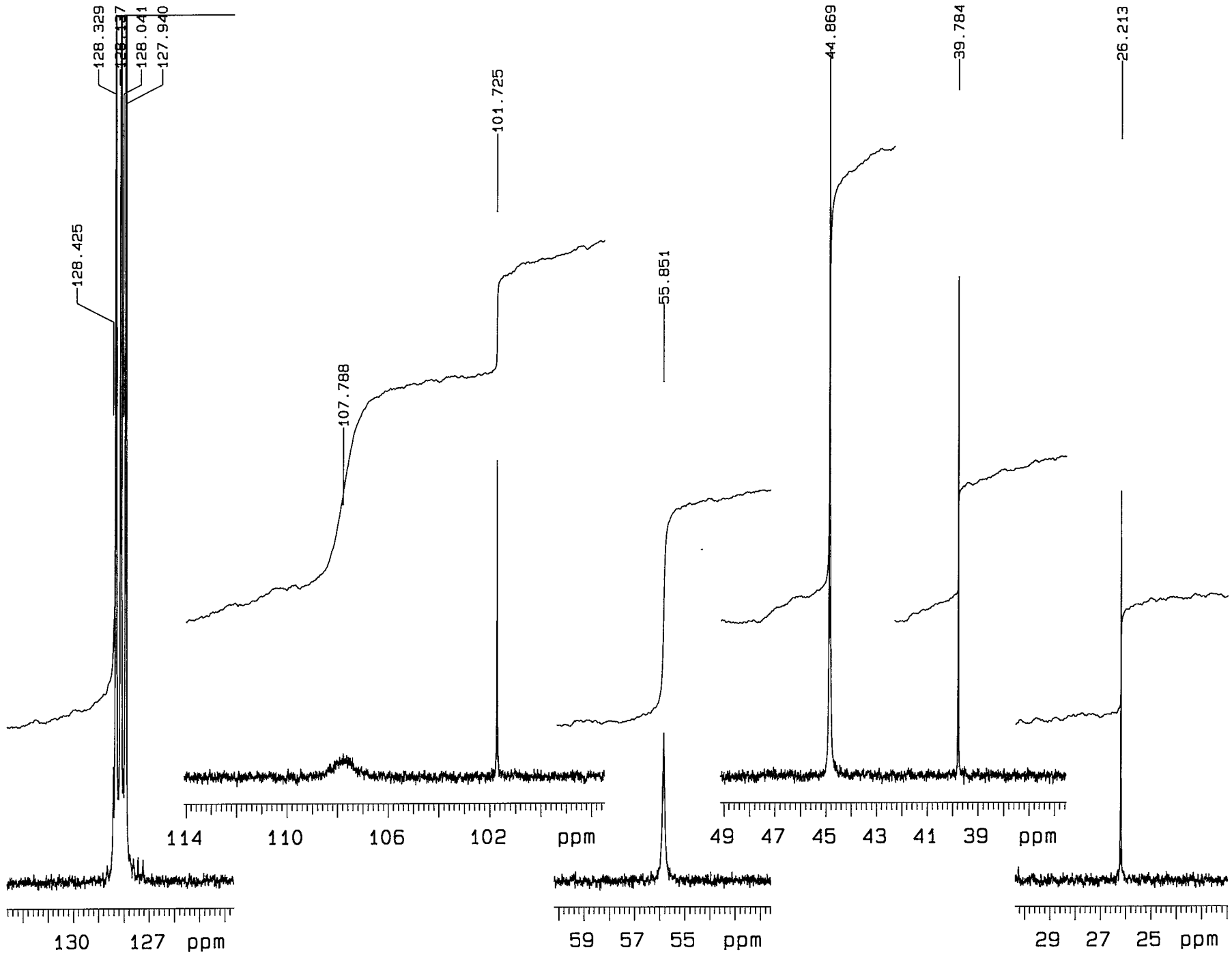
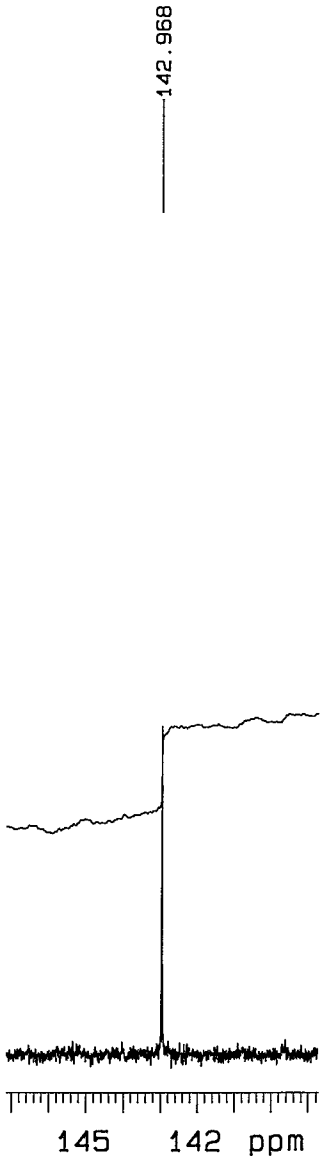


Fig. 11a-68

EXPANSIONS at 251.3 Hz/cm 2.00 ppm/cm (p.2) ***STANDT (AC) AN MM 6ER anmm6er.ah/c unity500/bb5 Dec 15 95 (C6D6)***



LA-118-69

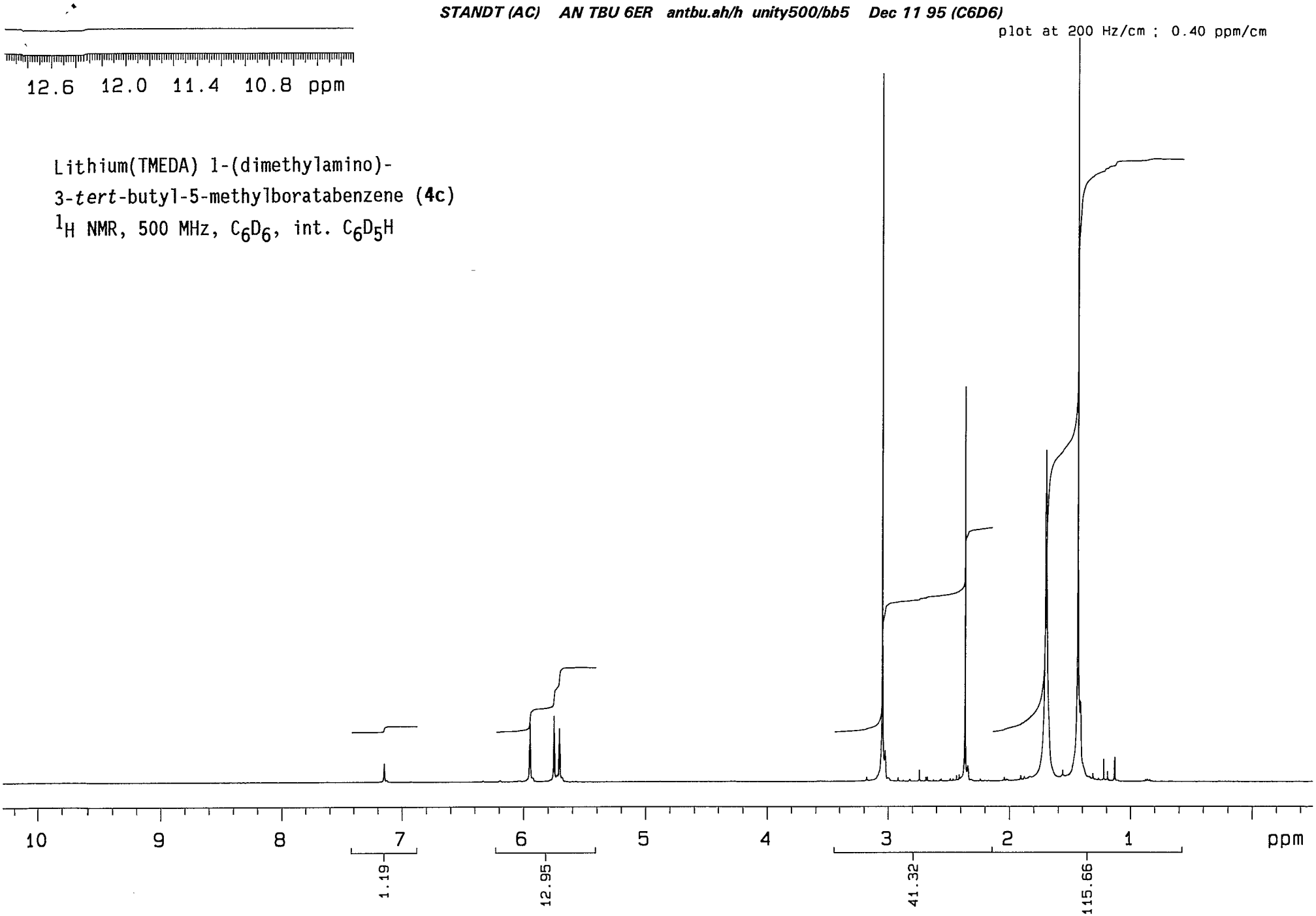
THRESHOLD : 3.0

STANDT (AC) AN MM 6ER anmm6er.ah/c unity500/bb5 Dec 15 95 (C6D6)

Pulse sequence s2pulrd
OBSERVE C13
Frequency 125.639 MHz
Spectral width 35938.9 Hz
Acquisition time 1.824 sec
Relaxation delay 0.100 sec
Pulse width 45.0 degrees
Ambient temperature
No. repetitions 512
DECOUPLE H1
High power 45
Decoupler continuously on
WALTZ-16 modulated
Double precision acquisition
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total acquisition time 17 minutes
End acquisition time 09:39

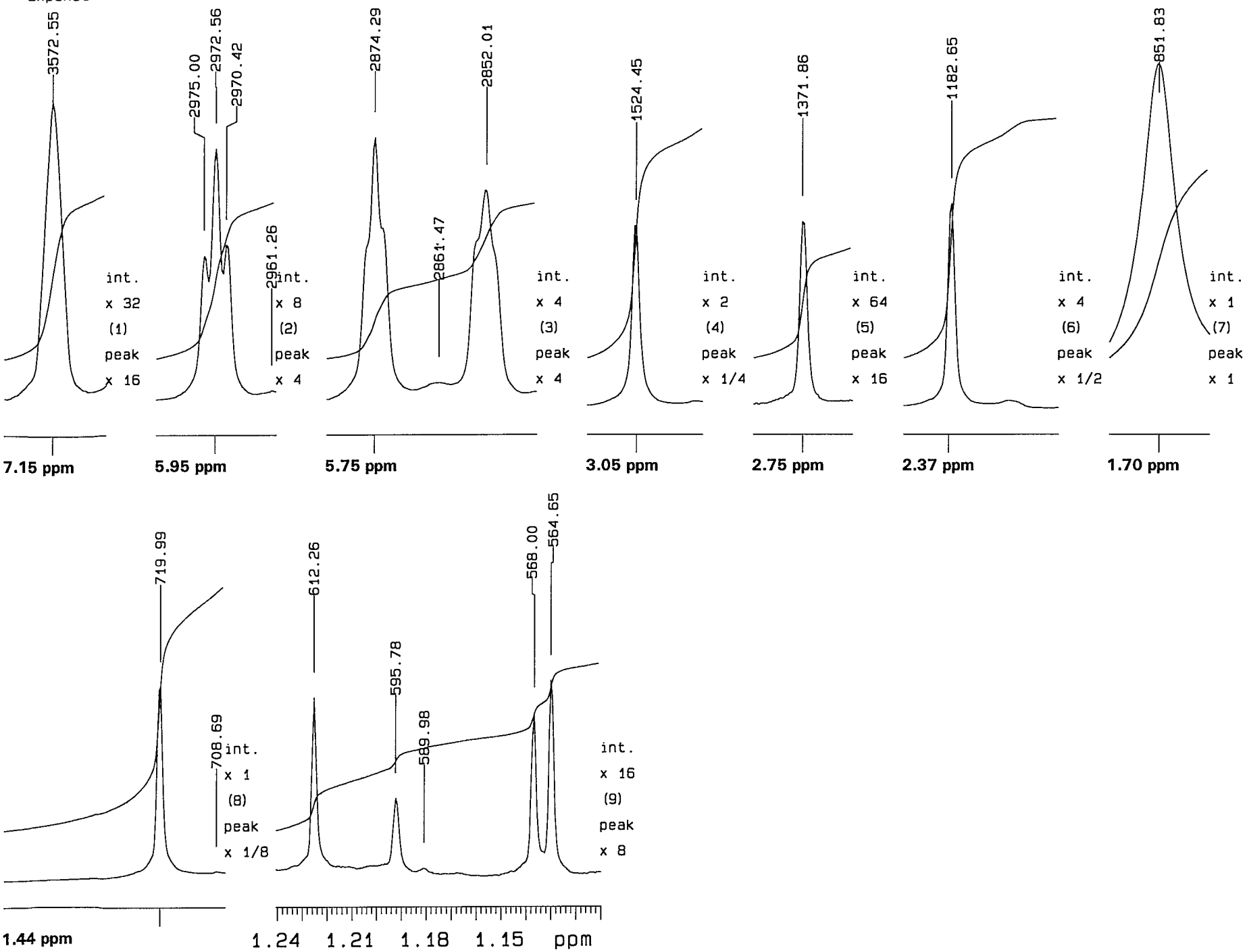
INDEX	FREQ. (Hz)	PPM	HEIGHT
1	17962.4	142.968	43.2
2	16135.1	128.425	22.2
3	16123.1	128.329	551.7
4	16098.9	128.137	576.4
5	16086.9	128.041	21.8
6	16074.3	127.940	587.9
7	16035.9	127.635	4.6
8	16012.8	127.451	4.9
9	15988.2	127.255	4.4
10	13542.3	107.788	4.6
11	12780.6	101.725	61.1
12	7017.0	55.851	28.4
13	5637.3	44.869	141.0
14	4998.4	39.784	96.7
15	3293.4	26.213	75.1

L-2718-70


STANDT (AC) AN TBU 6ER antbu.ah/h unity500/bb5 Dec 11 95 (C6D6)
plot at 200 Hz/cm ; 0.40 ppm/cm
12.6 12.0 11.4 10.8 ppm
Lithium(TMEDA) 1-(dimethylamino)-
3-*tert*-butyl-5-methylboratabenzene (**4c**)
^{1}H NMR, 500 MHz, C_6D_6, int. C_6D_5H
10 9 8 7 6 5 4 3 2 1 ppm
1.19
12.95
41.32
115.66

L-8116-11

Expansions at 10 Hz/cm 0.020 ppm/cm (p.1) ***STANDT (AC) AN TBU 6ER antbu.ah/h unity500/bb5 Dec 11 95 (C6D6)***



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L8714-73

THRESHOLD : 2.0

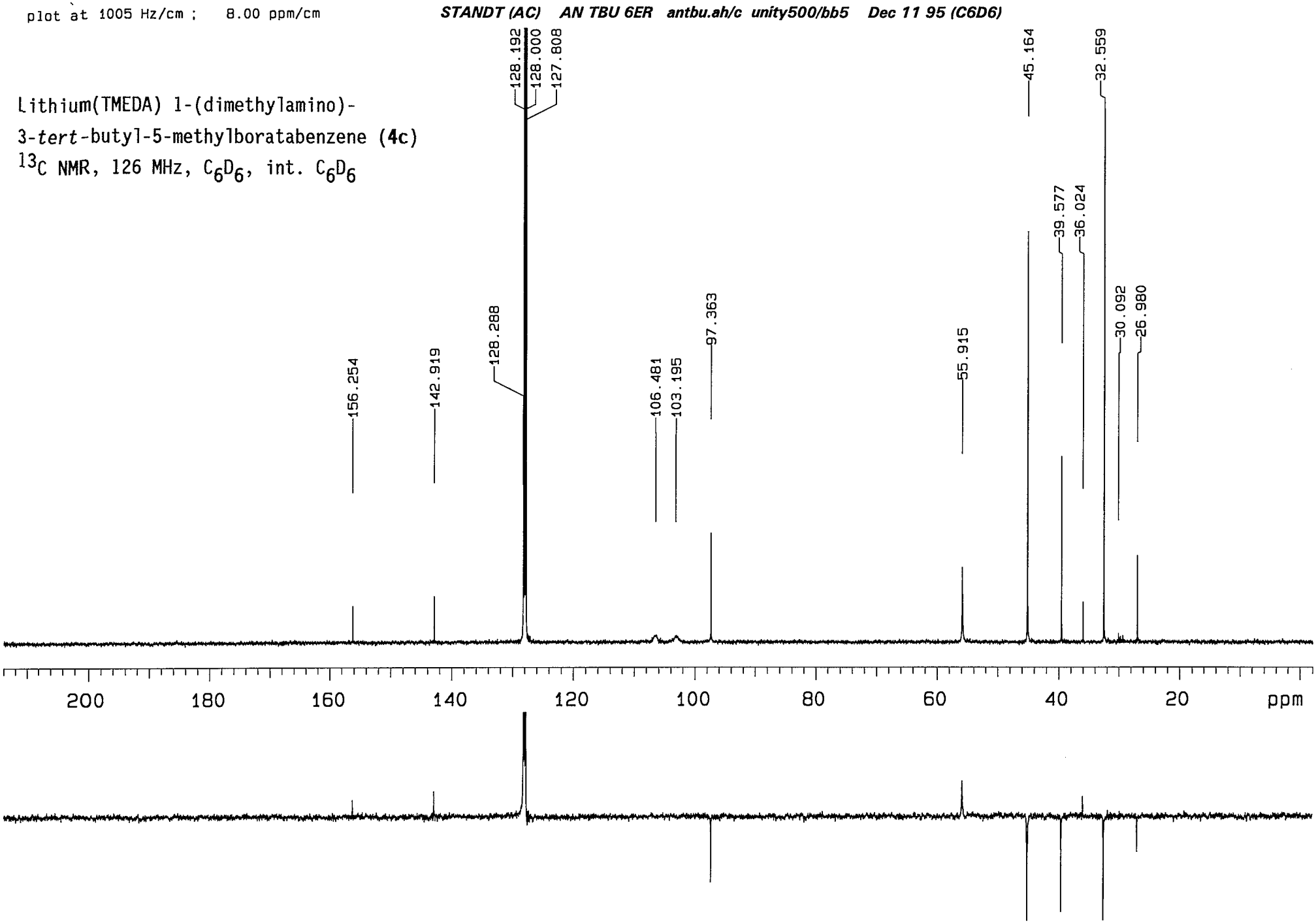
STANDT (AC) AN TBU 6ER antbu.ah/h unity500/bb5 Dec 11 95 (C6D6)

Pulse sequence s2pulrd
OBSERVE H1
Frequency 499.657 MHz
Spectral width 10000.0 Hz
Acquisition time 3.277 sec
Relaxation delay 0.100 sec
Pulse width 30.0 degrees
Ambient temperature
No. repetitions 16
Double precision acquisition
DATA PROCESSING
FT size 65536
Total acquisition time 1 minutes
End acquisition time 11:16

INDEX	FREQ. (Hz)	PPM	HEIGHT
1	3572.6	7.150	3.8
2	2975.0	5.954	7.5
3	2972.6	5.949	12.7
4	2970.4	5.945	8.0
5	2874.3	5.753	13.2
6	2852.0	5.708	10.6
7	1524.5	3.051	142.8
8	1512.9	3.028	6.3
9	1371.9	2.746	2.3
10	1182.6	2.367	79.8
11	1170.7	2.343	3.2
12	851.8	1.705	67.0
13	781.6	1.564	2.3
14	741.3	1.484	3.3
15	720.0	1.441	302.1
16	708.7	1.418	16.1
17	698.6	1.398	3.8
18	612.3	1.225	4.5
19	595.8	1.192	2.0
20	568.0	1.137	4.1
21	564.6	1.130	4.9

L3713-75

Lithium(TMEDA) 1-(dimethylamino)-3-*tert*-butyl-5-methylboratabenzene (**4c**)
^{13}C NMR, 126 MHz, C_6D_6, int. C_6D_6



14

EXPANSIONS at 251.3 Hz/cm 2.00 ppm/cm (p.1) ***STANDT (AC) AN TBU 6ER antbu.ah/c unity500/bb5 Dec 11 95 (C6D6)***

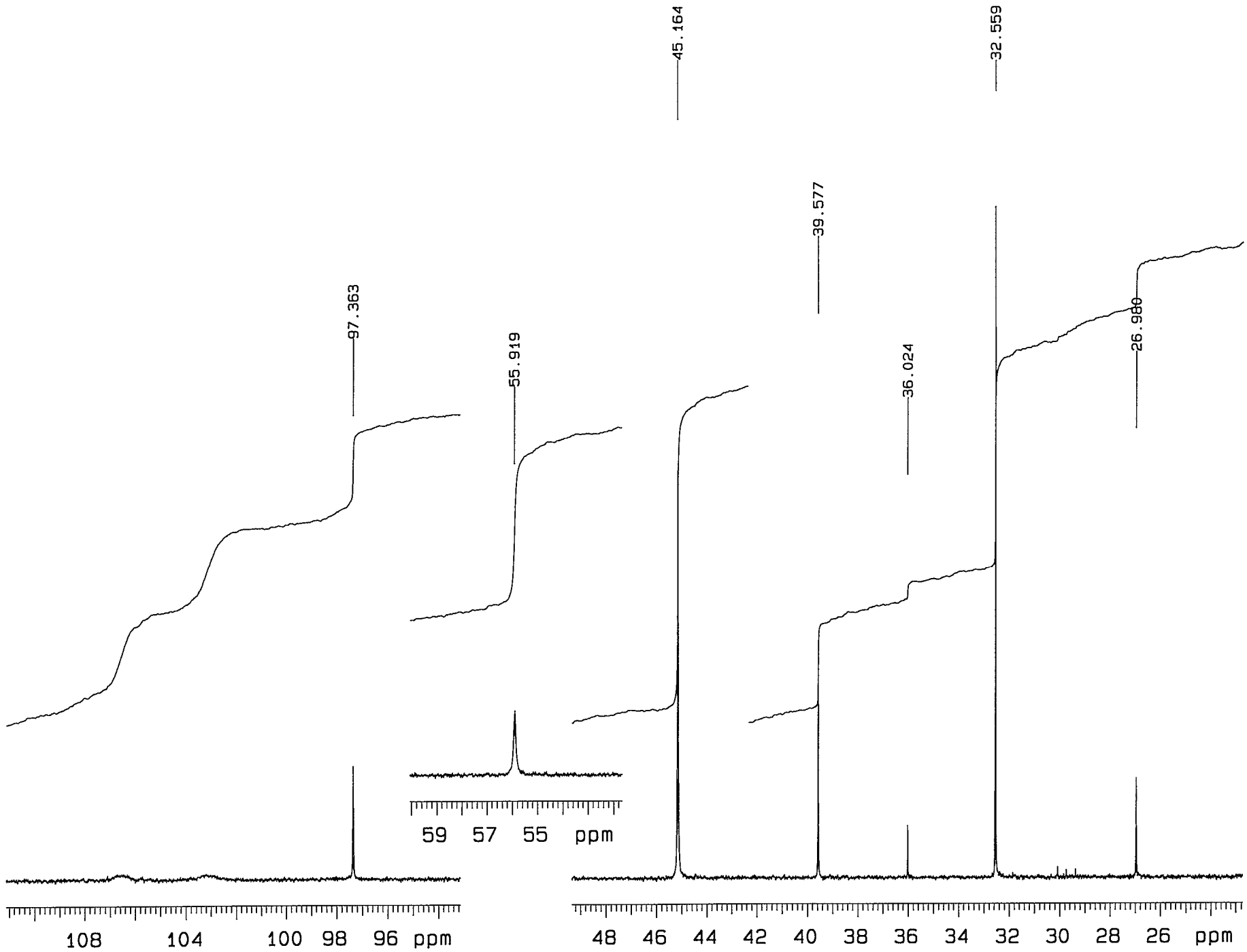
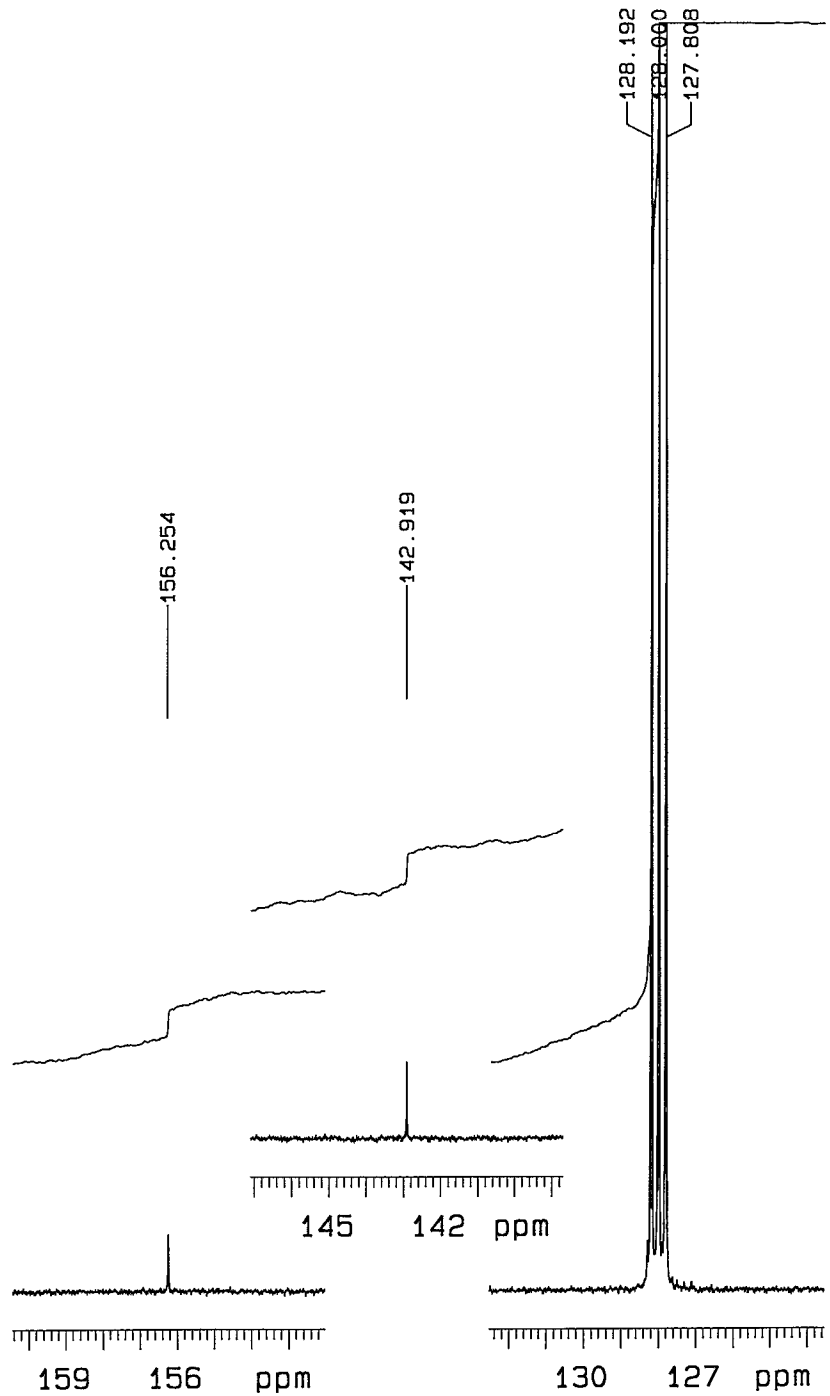


Fig. 18-19

EXPANSIONS at 251.3 Hz/cm 2.00 ppm/cm (p.2) ***STANDT (AC) AN TBU 6ER antbu.ah/c unity500/bb5 Dec 11 95 (C6D6)***



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THRESHOLD : 2.0

STANDT (AC) AN TBU 6ER antbu.ah/c unity500/bb5 Dec 11 95 (C6D6)

Pulse sequence s2pulrd
OBSERVE C13
 Frequency 125.639 MHz
 Spectral width 35938.9 Hz
 Acquisition time 1.824 sec
 Relaxation delay 0.100 sec
 Pulse width 45.0 degrees
 Ambient temperature
 No. repetitions 320
DECOUPLE H1
 High power 45
 Decoupler continuously on
 WALTZ-16 modulated
Double precision acquisition
DATA PROCESSING
 Line broadening 1.0 Hz
 FT size 131072
Total acquisition time 10 minutes
End acquisition time 11:27

INDEX	FREQ. (Hz)	PPM	HEIGHT
1	19631.5	156.254	7.5
2	17956.2	142.919	10.1
3	16118.5	128.292	6.6
4	16105.9	128.192	160.9
5	16081.8	128.000	169.6
6	16070.3	127.908	6.3
7	16057.6	127.808	172.0
8	12232.6	97.363	21.8
9	7025.6	55.919	12.4
10	5674.4	45.164	79.0
11	4972.4	39.577	41.5
12	4526.1	36.024	10.2
13	4090.6	32.559	130.2
14	3780.8	30.092	2.1
15	3389.8	26.980	19.2

L2718-71