

## **SUPPORTING INFORMATION**

### **Synthesis and ring-chain-ring tautomerism of bisoxazolidines, thiazolidinyloxazolidines and spirothiazolidines**

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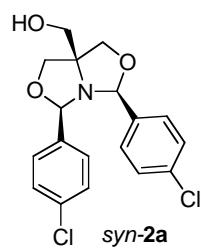
## Contents

General Methods .....	S3
Copies of $^1\text{H}$ and $^{13}\text{C}$ NMR Spectra:	
Bisoxazolidines ( <b>2a-e</b> ) .....	S4-S15
Thiazolidinyloxazolidines ( <b>3a-d</b> ).....	S16-S31
Thiazolidin-spirocycles ( <b>4a, 4d-e</b> ) .....	S32-S38
4,4-Bis(hydroxymethyl)thiazolidin-2-thione ( <b>7</b> ) .....	S39-S40
Mercaptomethyl bisoxazolidines ( <b>8a-e</b> ) .....	S41-S50
4-hydroxymethyl-4-thiomethyl-thiazolidin-2-thione ( <b>9</b> ).....	S51-S52
4,4-Bis(hydroxymethyl)oxazolidin-2-thione ( <b>10</b> ).....	S53-S54
Thiazolidin-thione-spirocycle ( <b>11a</b> ).....	S55-S56
Thiazolidin-thione-spirocycle ( <b>12a</b> ) .....	S57-S58
Bisoxazolidine acetalic dimers ( <b>14c-e</b> ) .....	S59-S64
Bisoxazolidine thioesters ( <b>15a-e</b> ) .....	S65-S74
Bisoxazolidine disulfur dimers ( <b>16d-e</b> ).....	S75-S78

## **General methods**

Reactions were monitored by analytical thin layer chromatography (TLC) on 0.25 mm silica gel coated plastic sheets (SIL G/UV 254). Flash chromatography on Silica gel 60 (40 µm average particle diameter) was used to purify the crude reaction mixtures. NMR spectra were recorded at 400 MHz/100 MHz ( $^1\text{H-NMR}$ ,  $^{13}\text{C-NMR}$ ) at 21  $^{\circ}\text{C}$ . Chemical shifts ( $\delta$ ) are reported as follows: chemical shift, multiplicity (s=singlet, d= doublet, t=triplet, q=quartet, m=multiplet, b=broad), coupling constant and integration. IR spectra were obtained on a FTIR spectrometer. Melting points were determined using a Laboratory Devices without correction. All reactions were carried out in dry, freshly distilled solvents under anhydrous conditions unless otherwise stated. Yields are reported for chromatographic and spectroscopic ( $^1\text{H}$  and  $^{13}\text{C-NMR}$ ) pure compounds unless otherwise stated. High resolution mass spectra were obtained on ESI Q-Tof spectrometer, at Polo Tecnológico de Pando, Facultad de Química, Universidad de la República and on a double focusing mass spectrometer (EI) or at the University of Pittsburgh Mass Spectrometry facility. Microwave-assisted reactions were carried out on a CEM Discover microwave reactor equipped with 10 mL vials. Assignments of  $^1\text{H}$  and  $^{13}\text{C}$  NMR peaks were made based on a combination of COSY, HSQC, and HMBC spectra. Relative stereochemistry was determined by NOESY experiments, using the pulse sequence selnogp, D8 at 300 and 800 ms.

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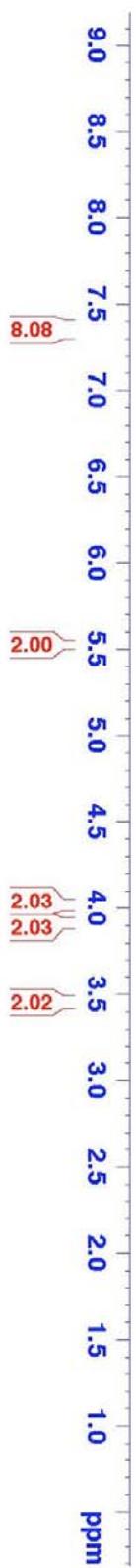


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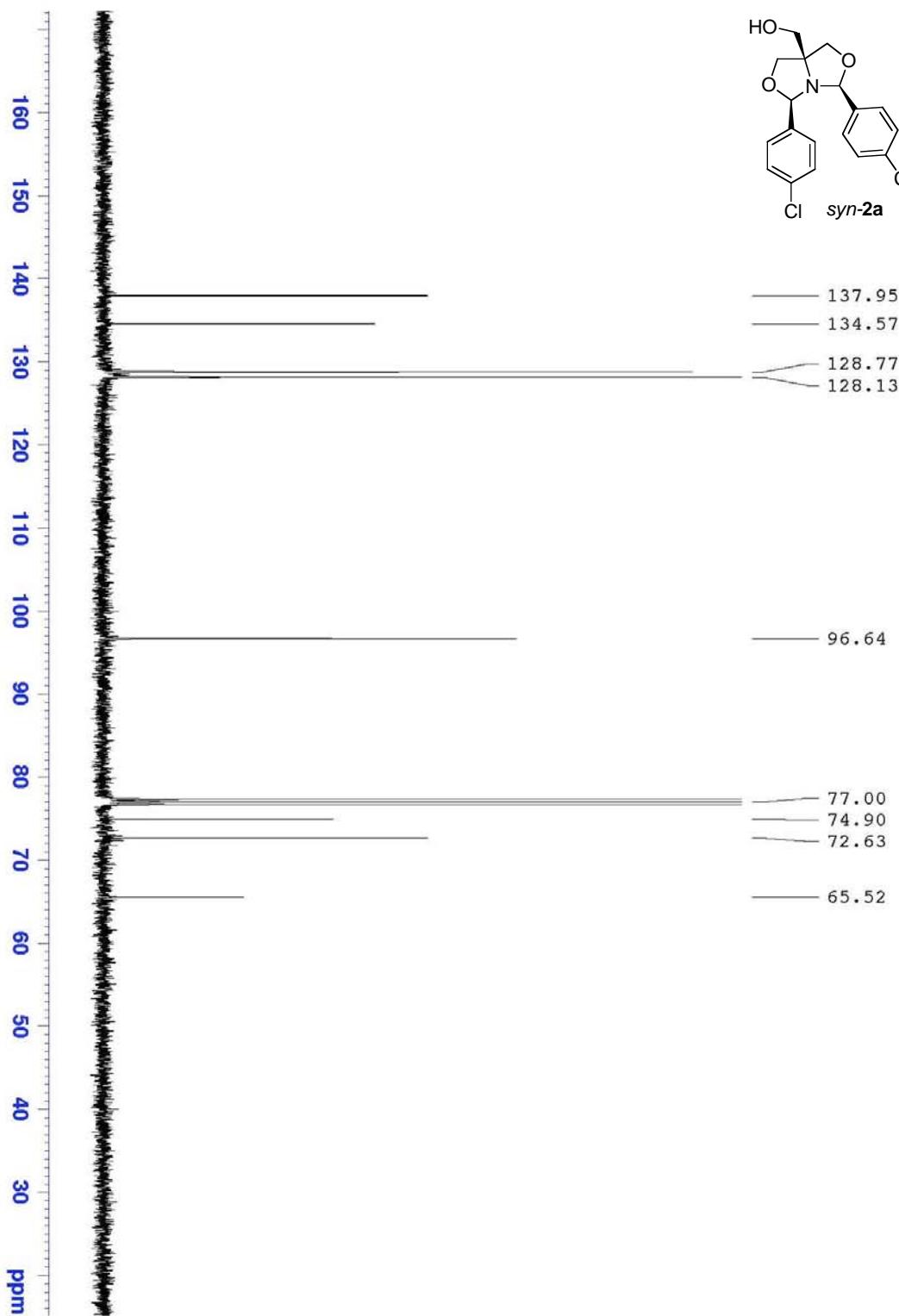
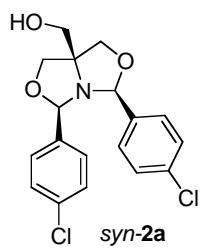
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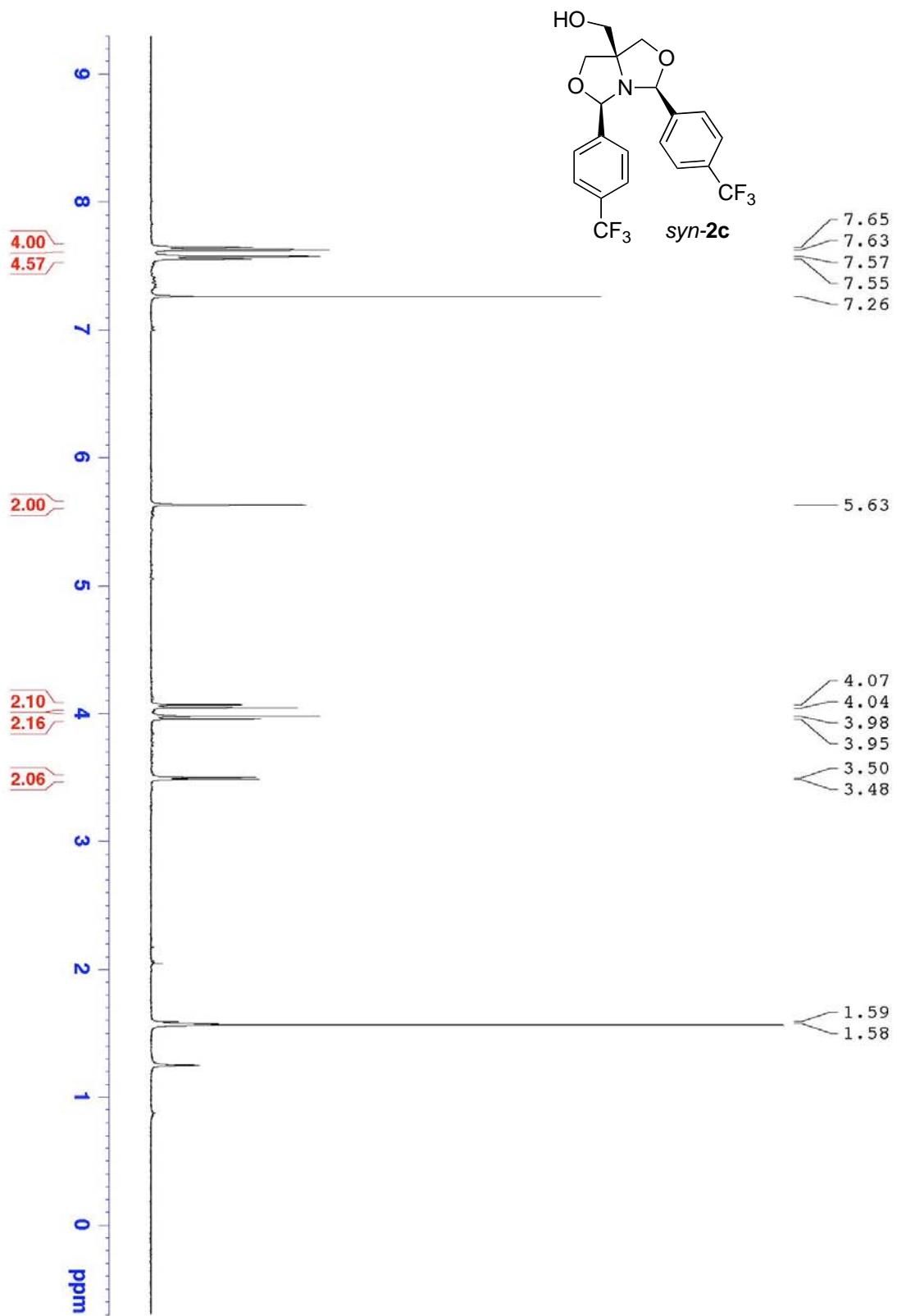
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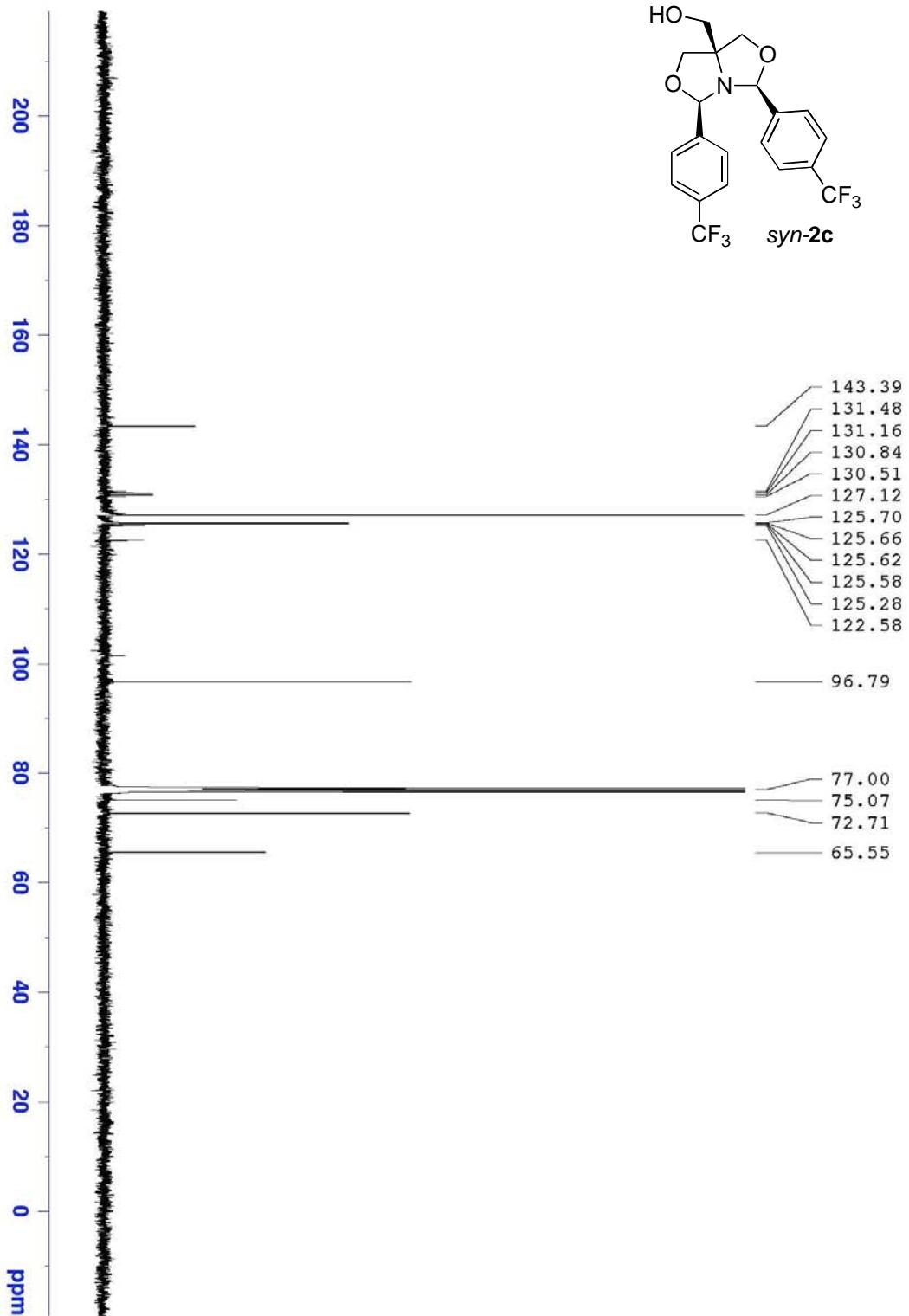
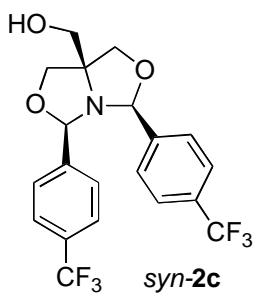


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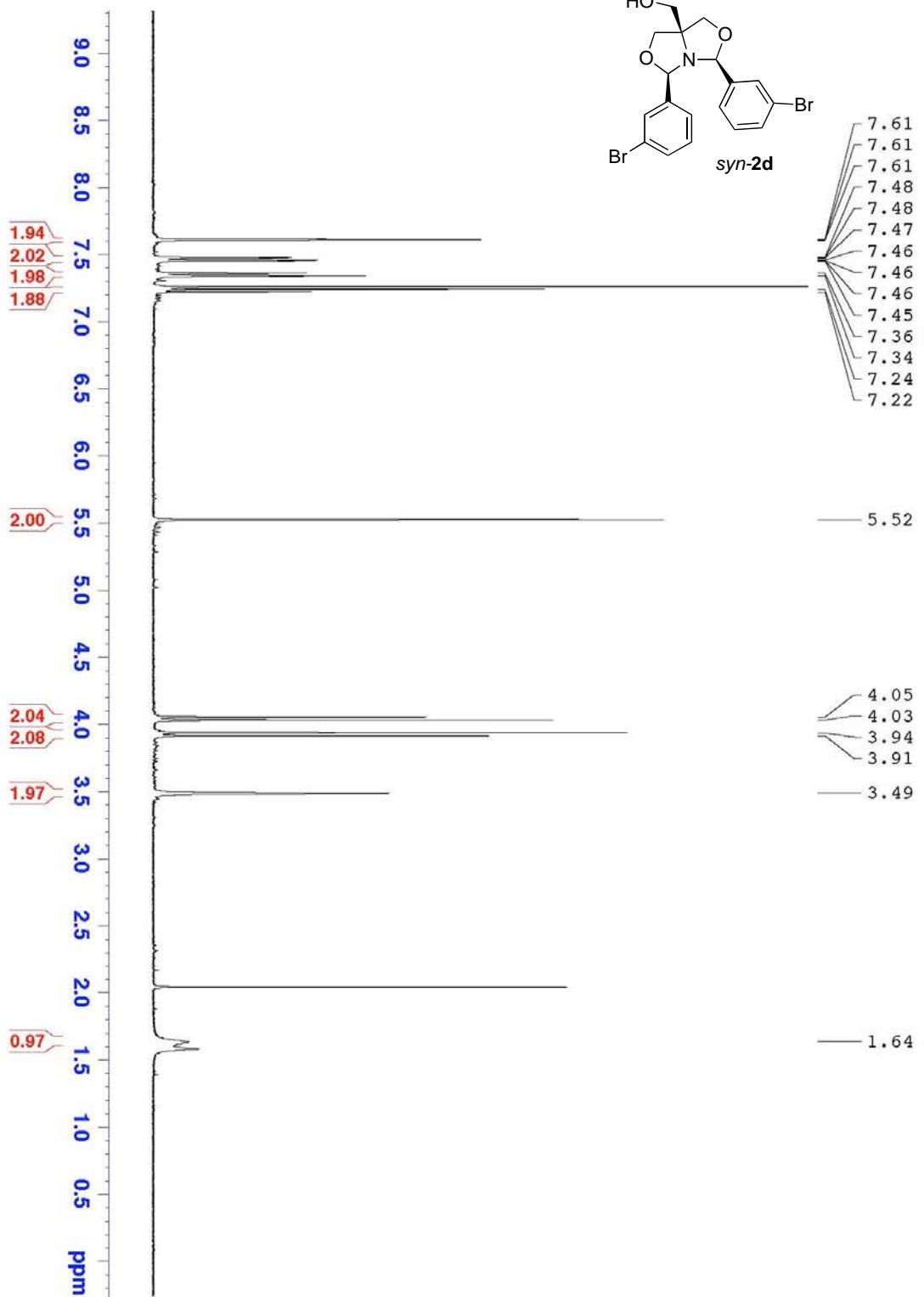
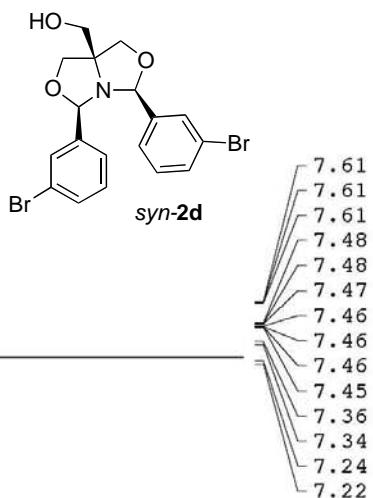




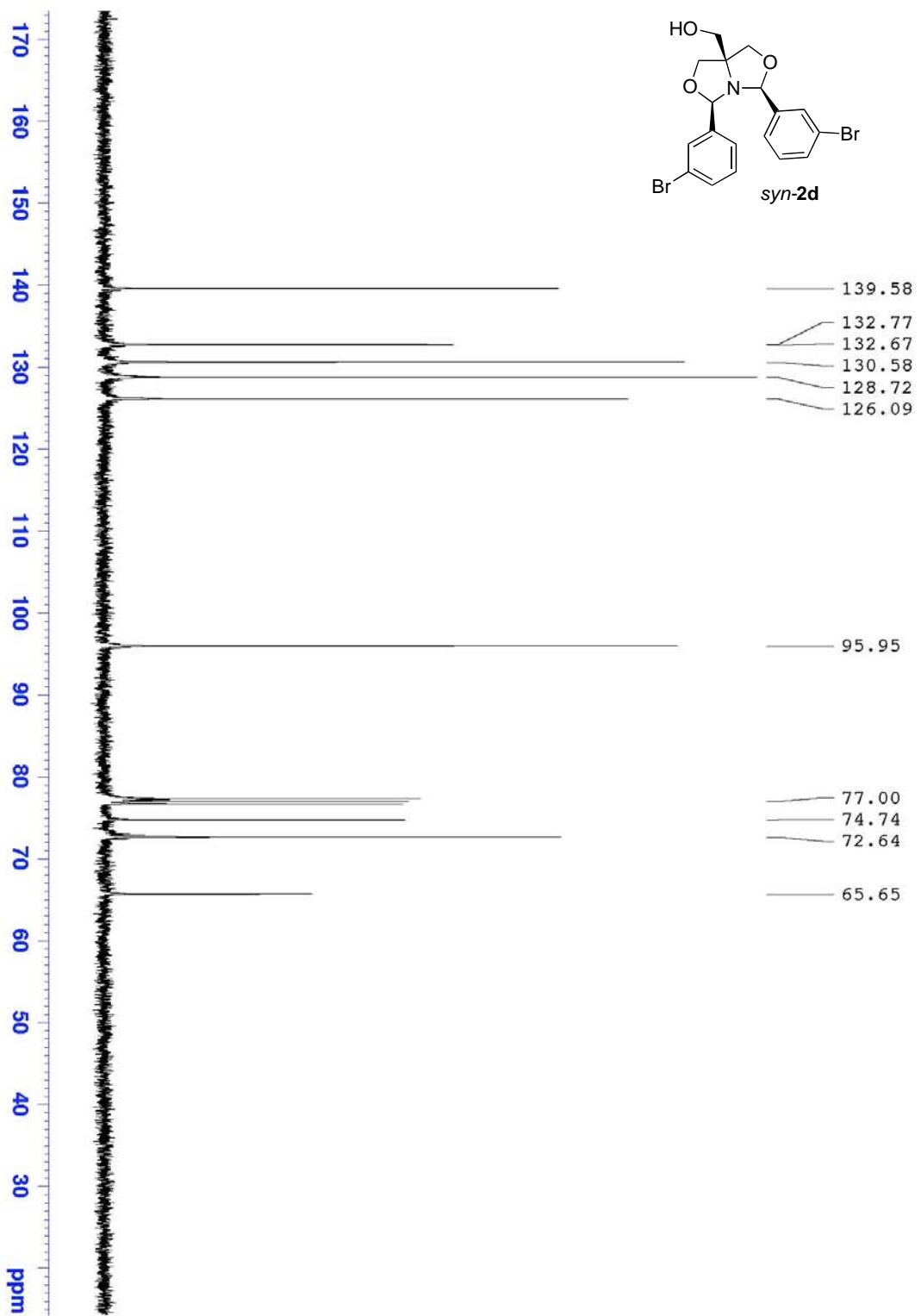
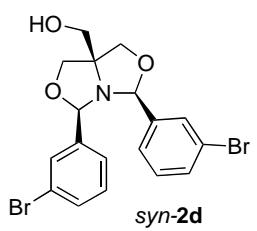
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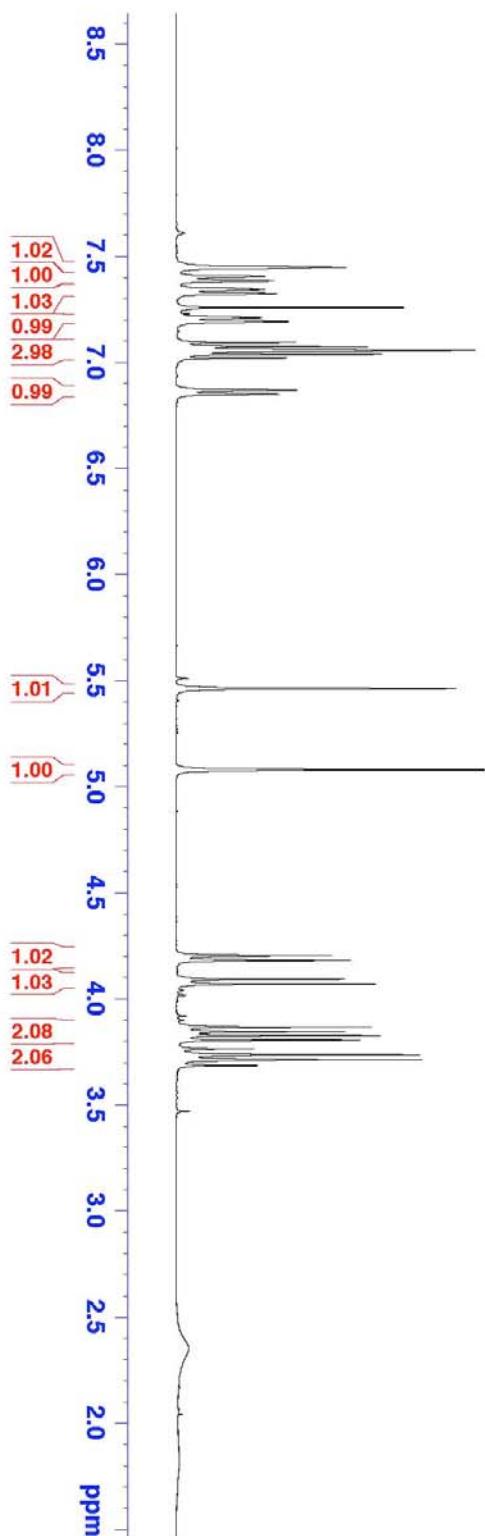
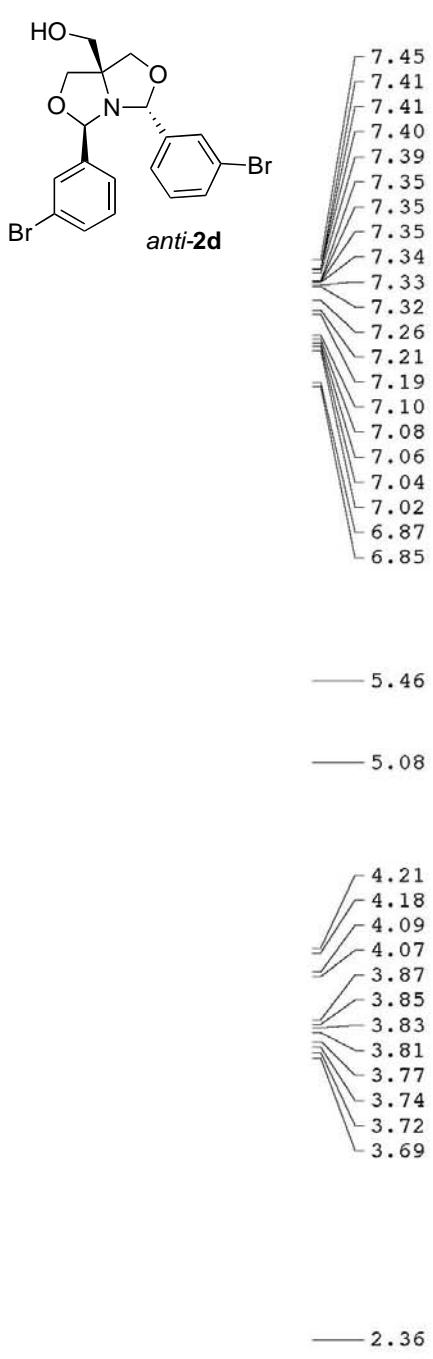
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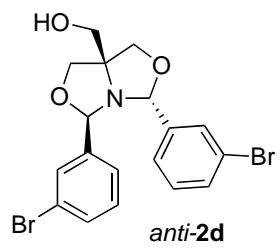
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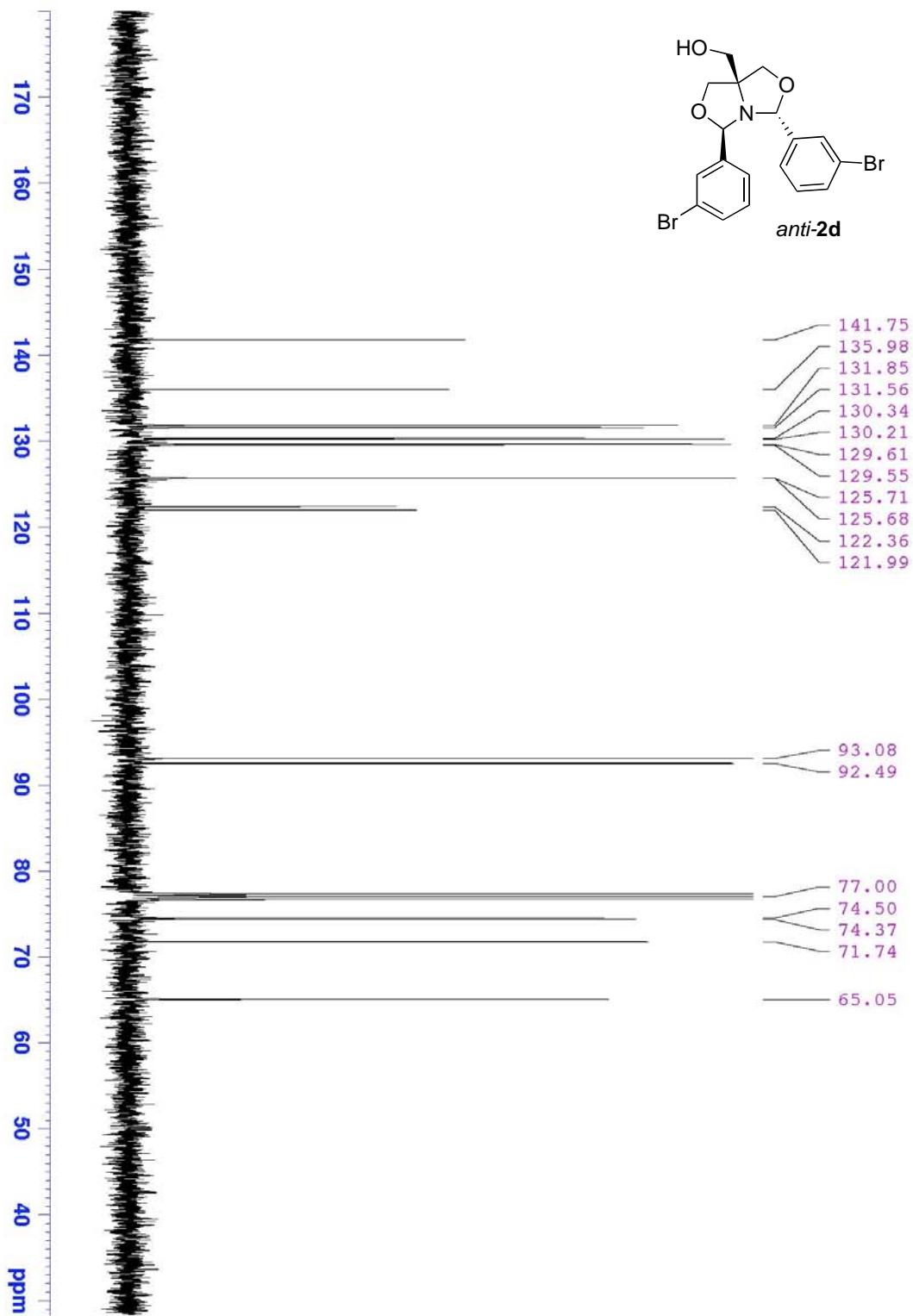
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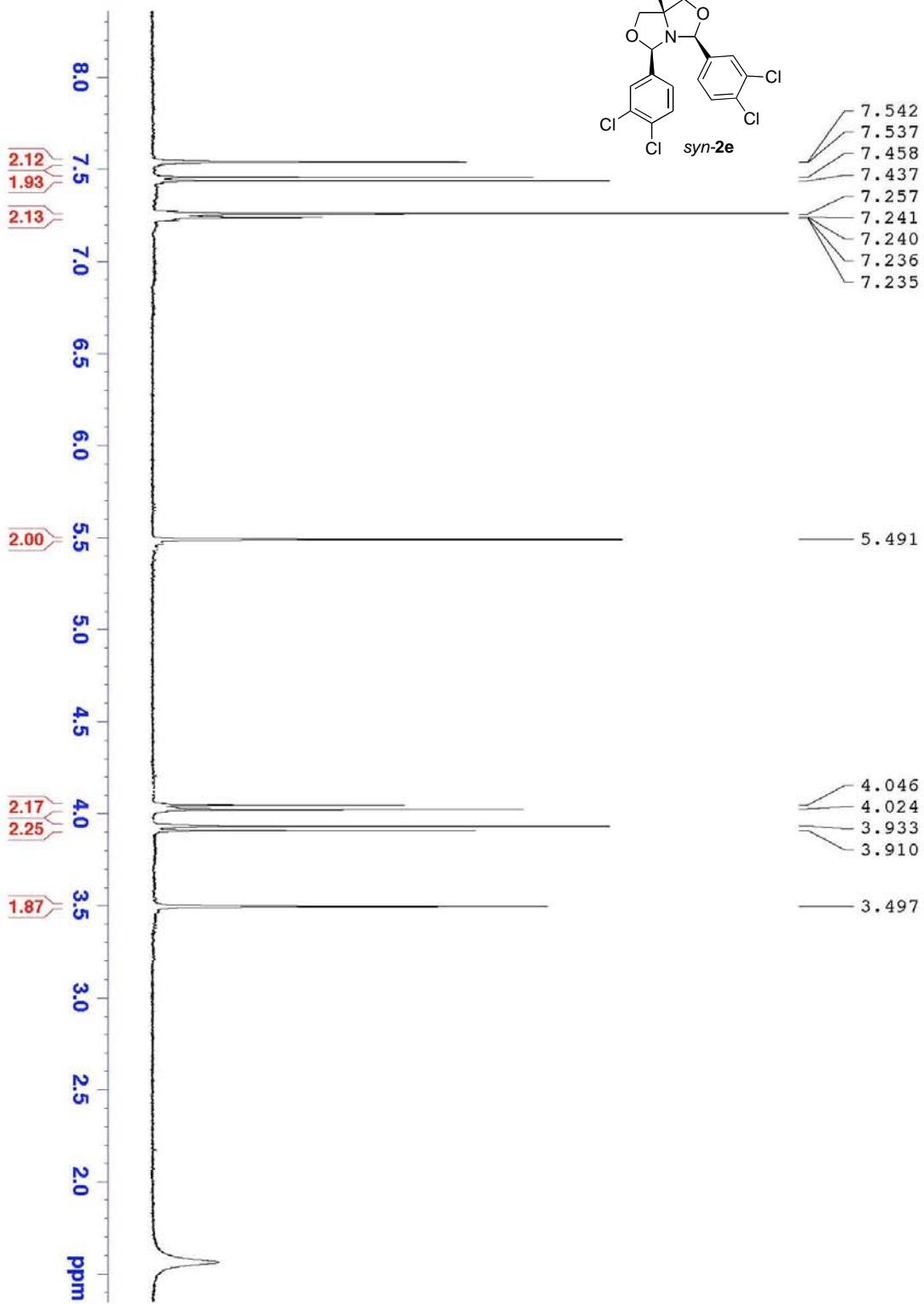
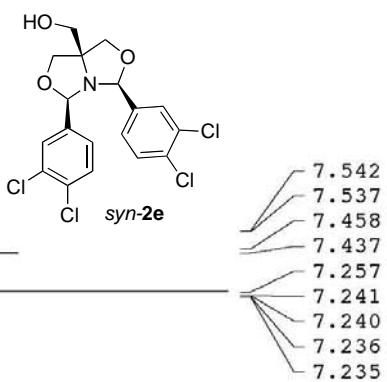
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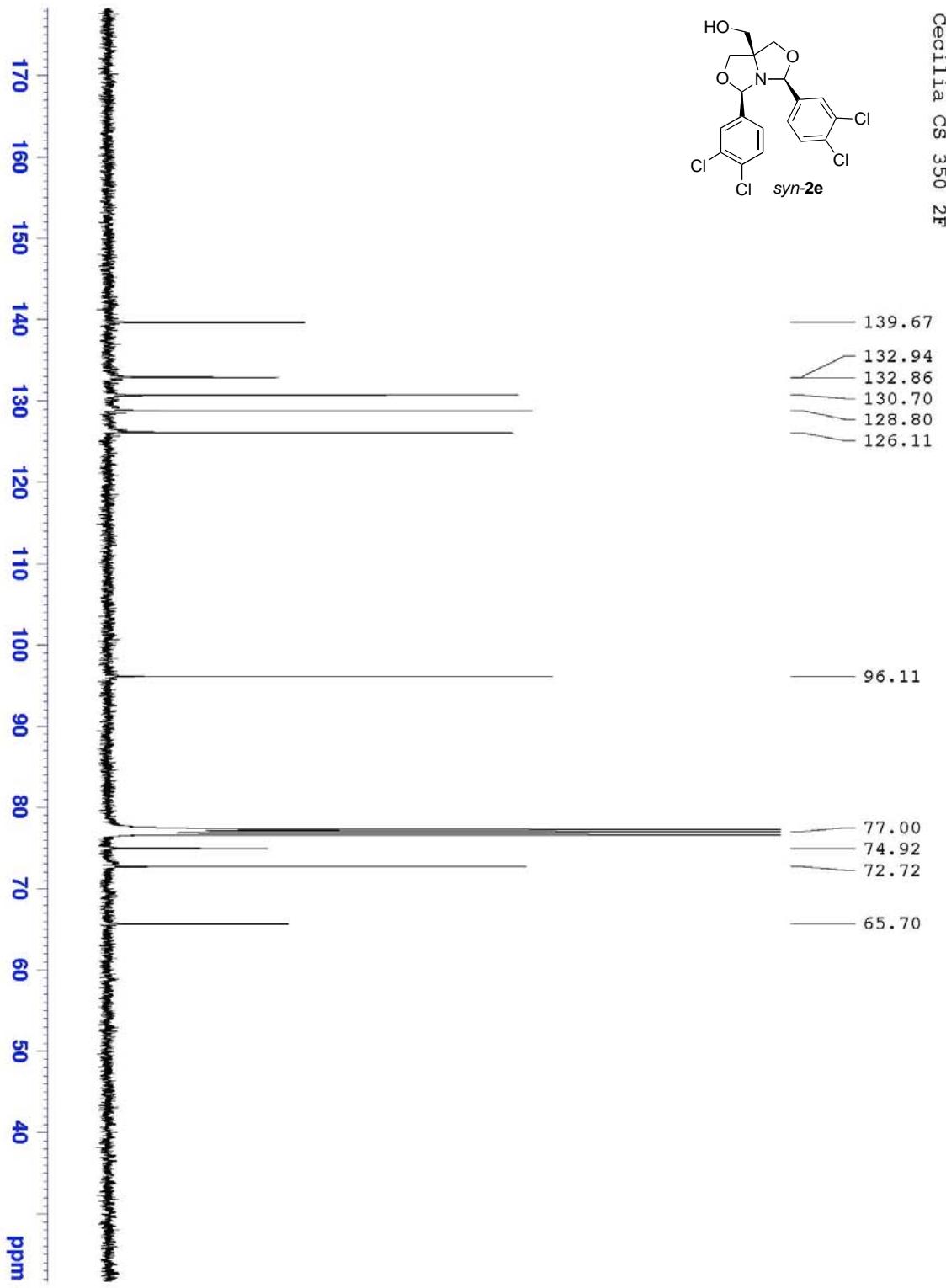


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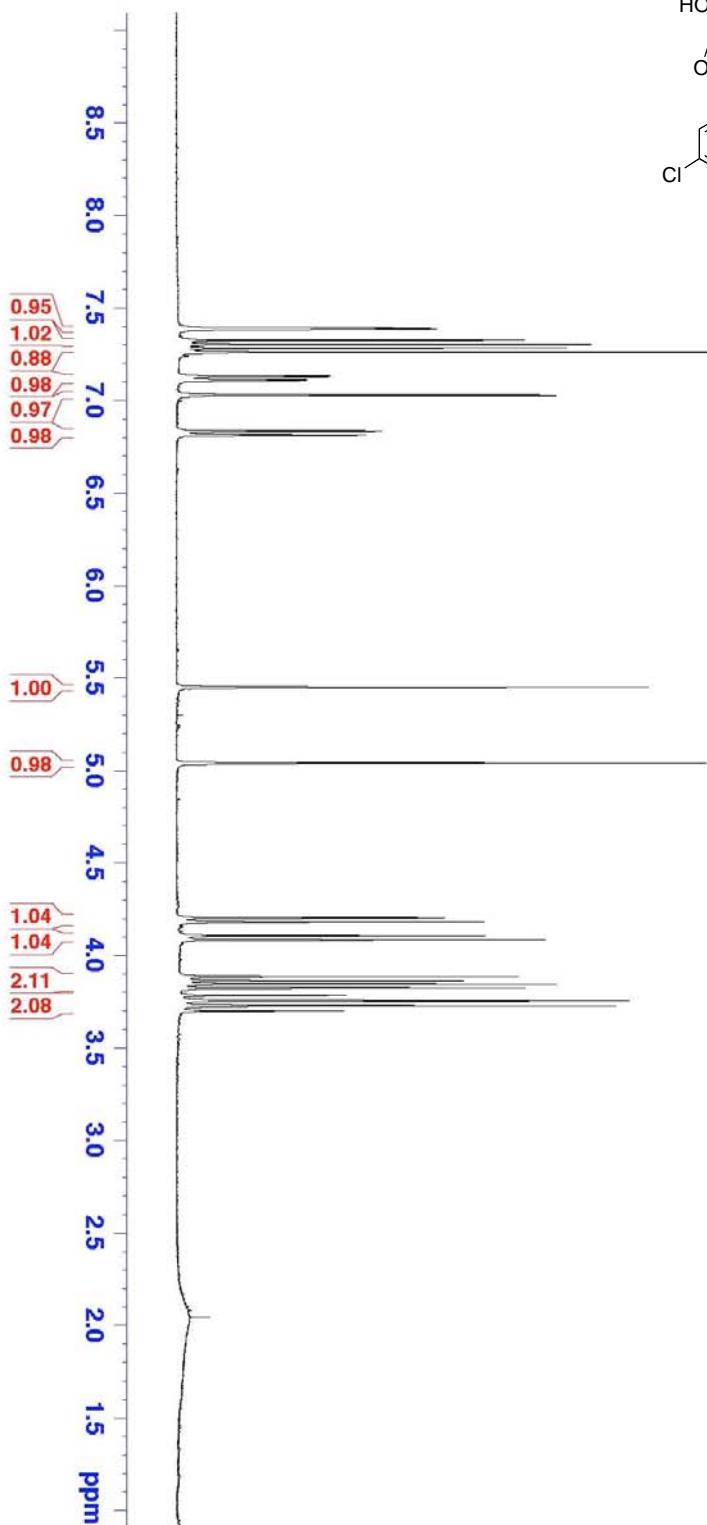
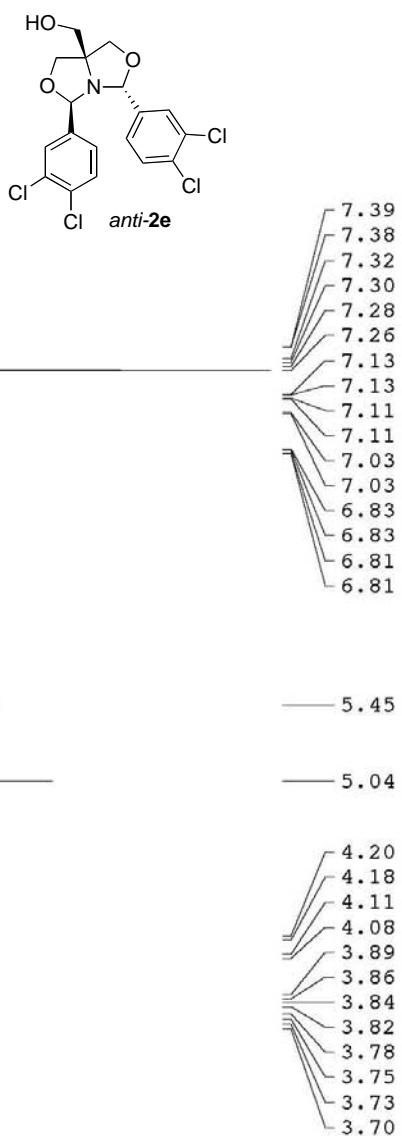


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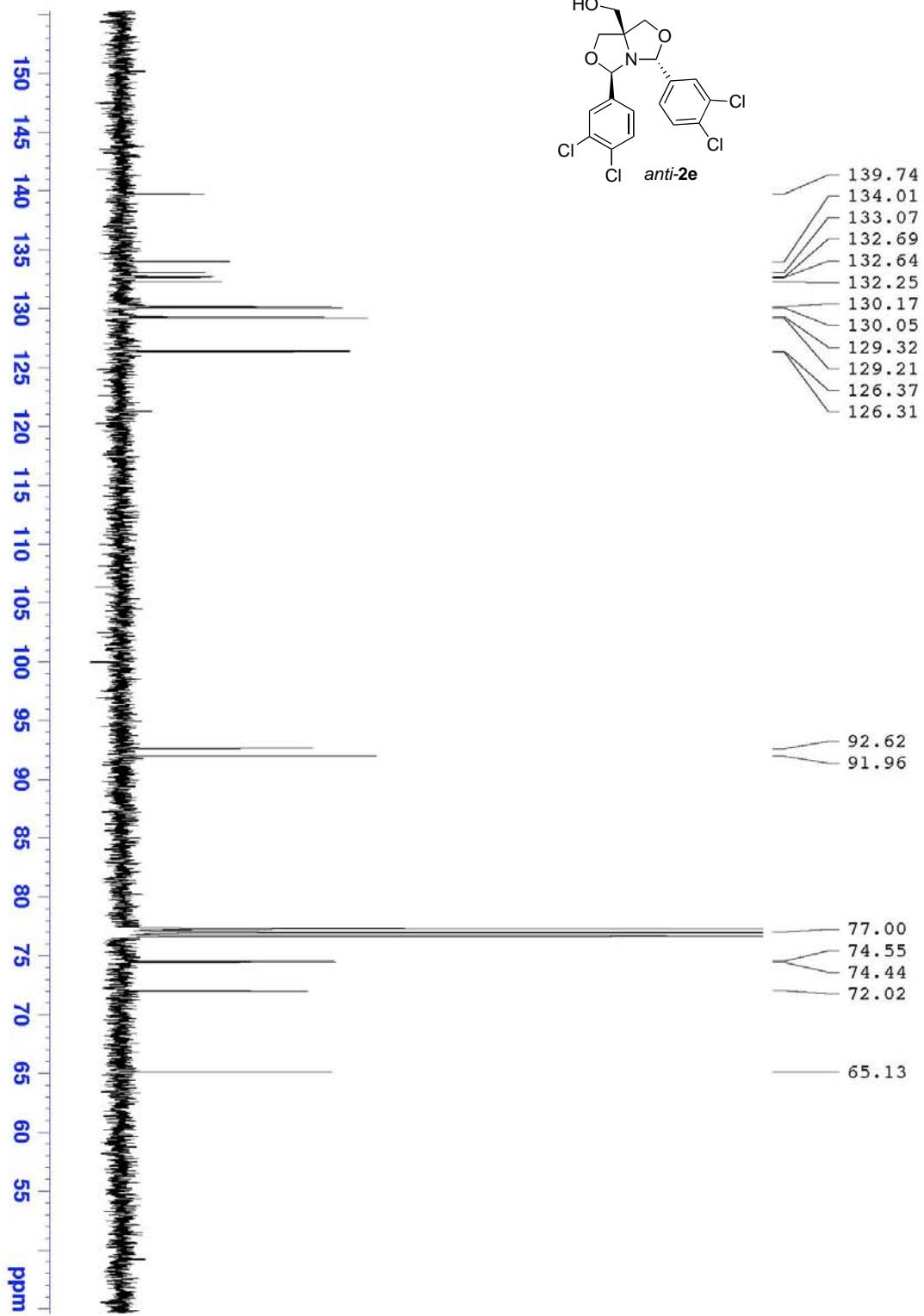




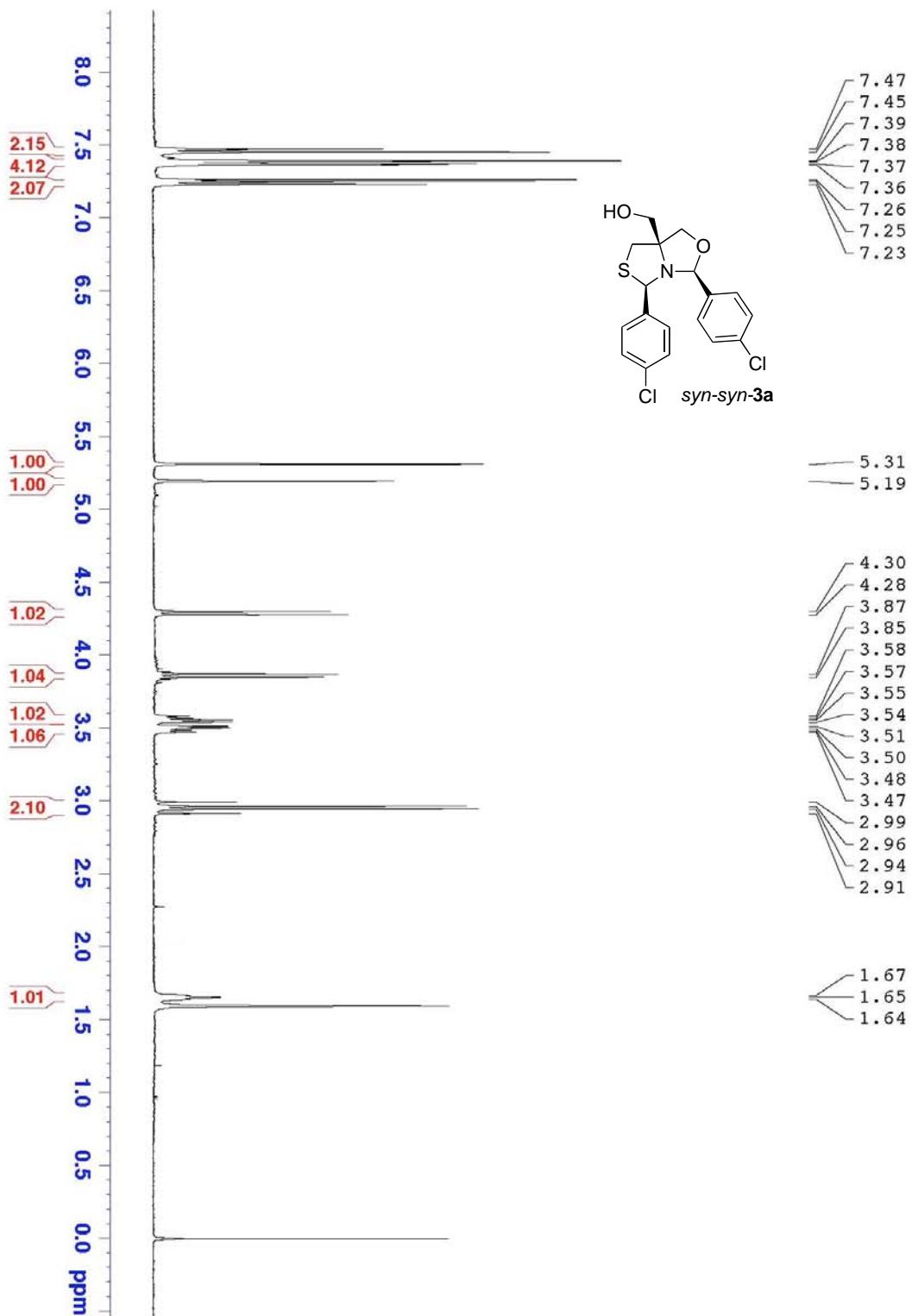
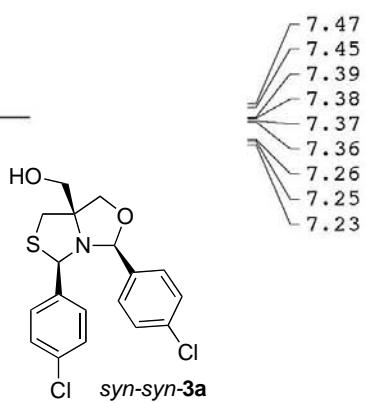
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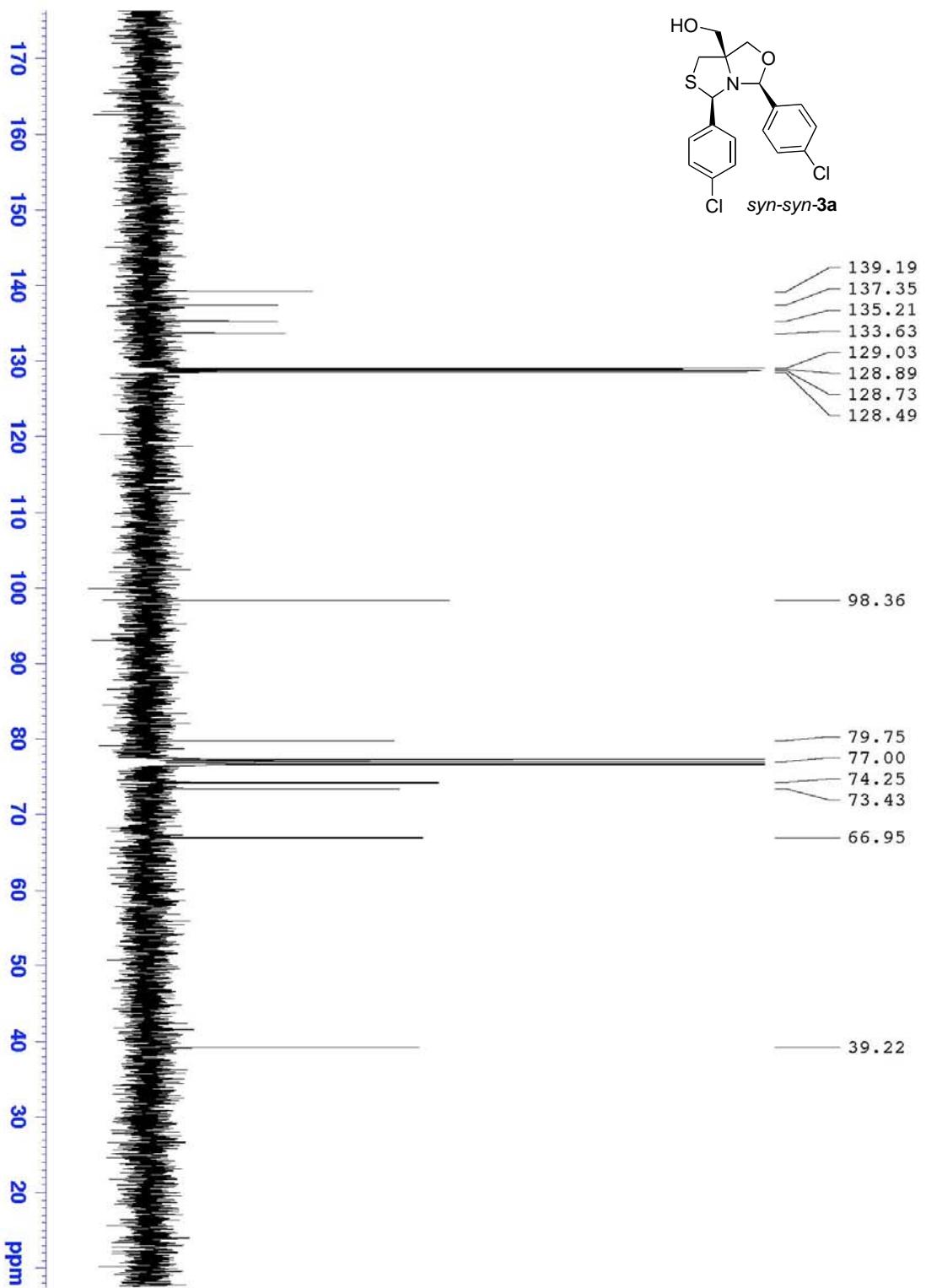


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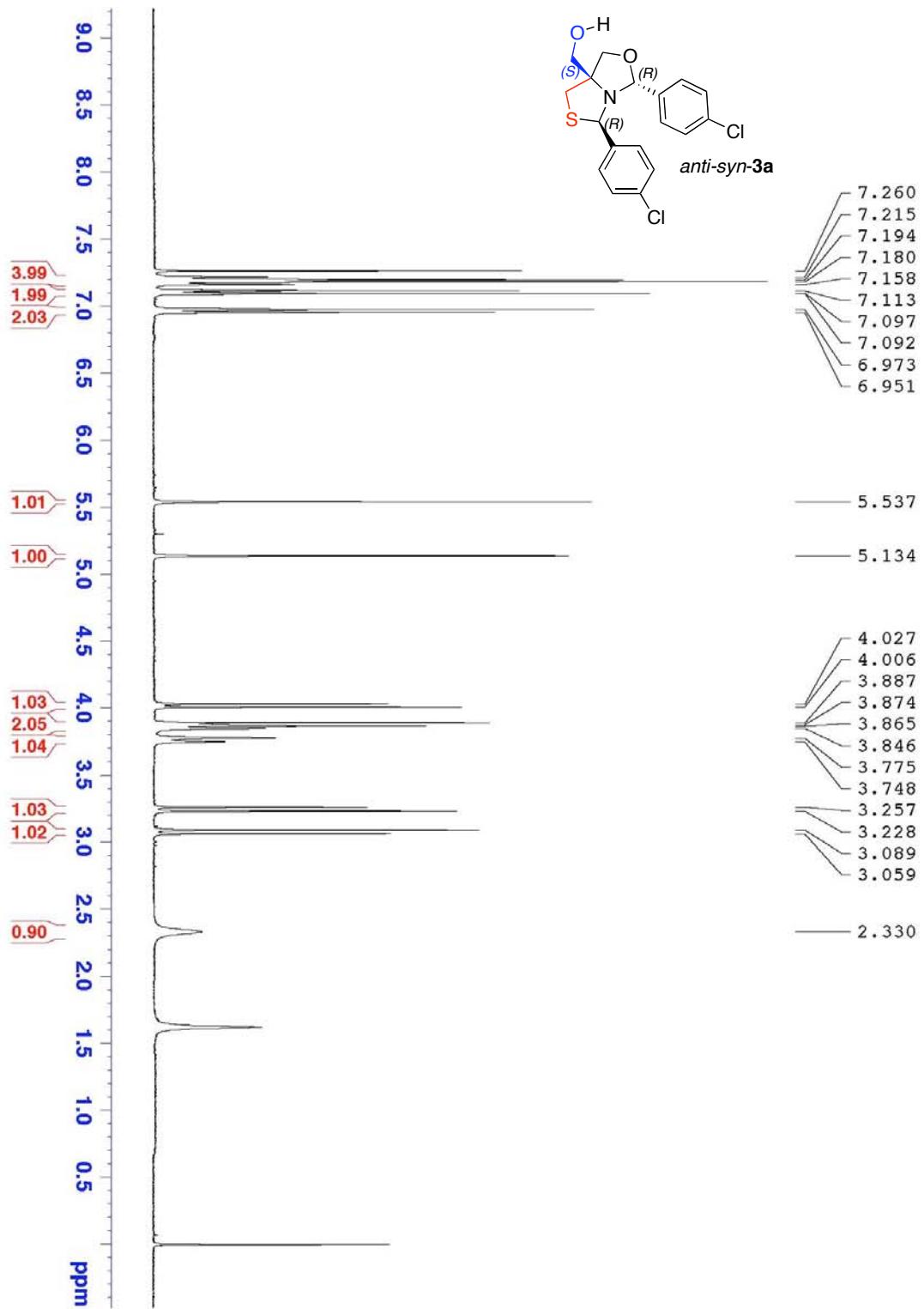


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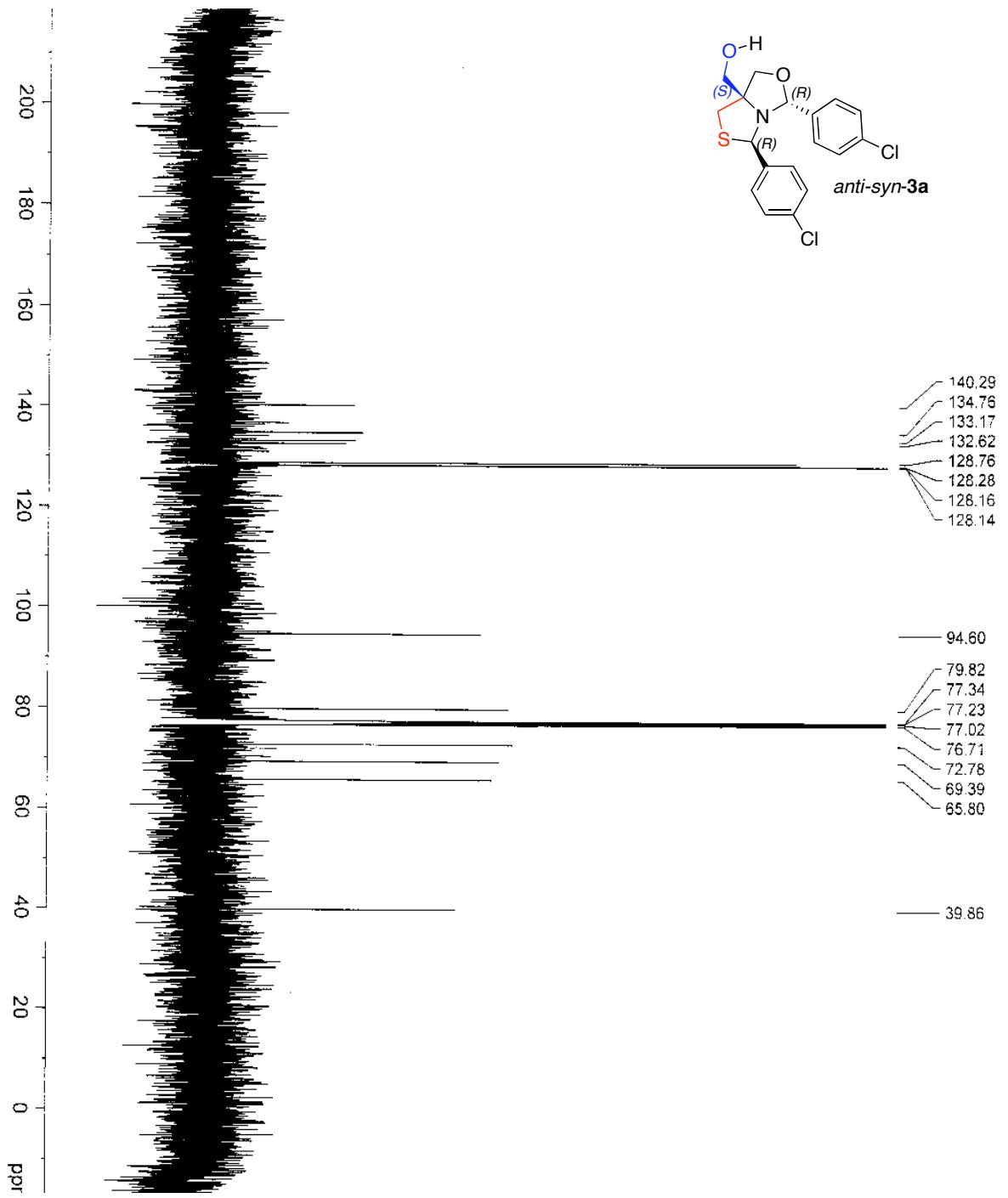


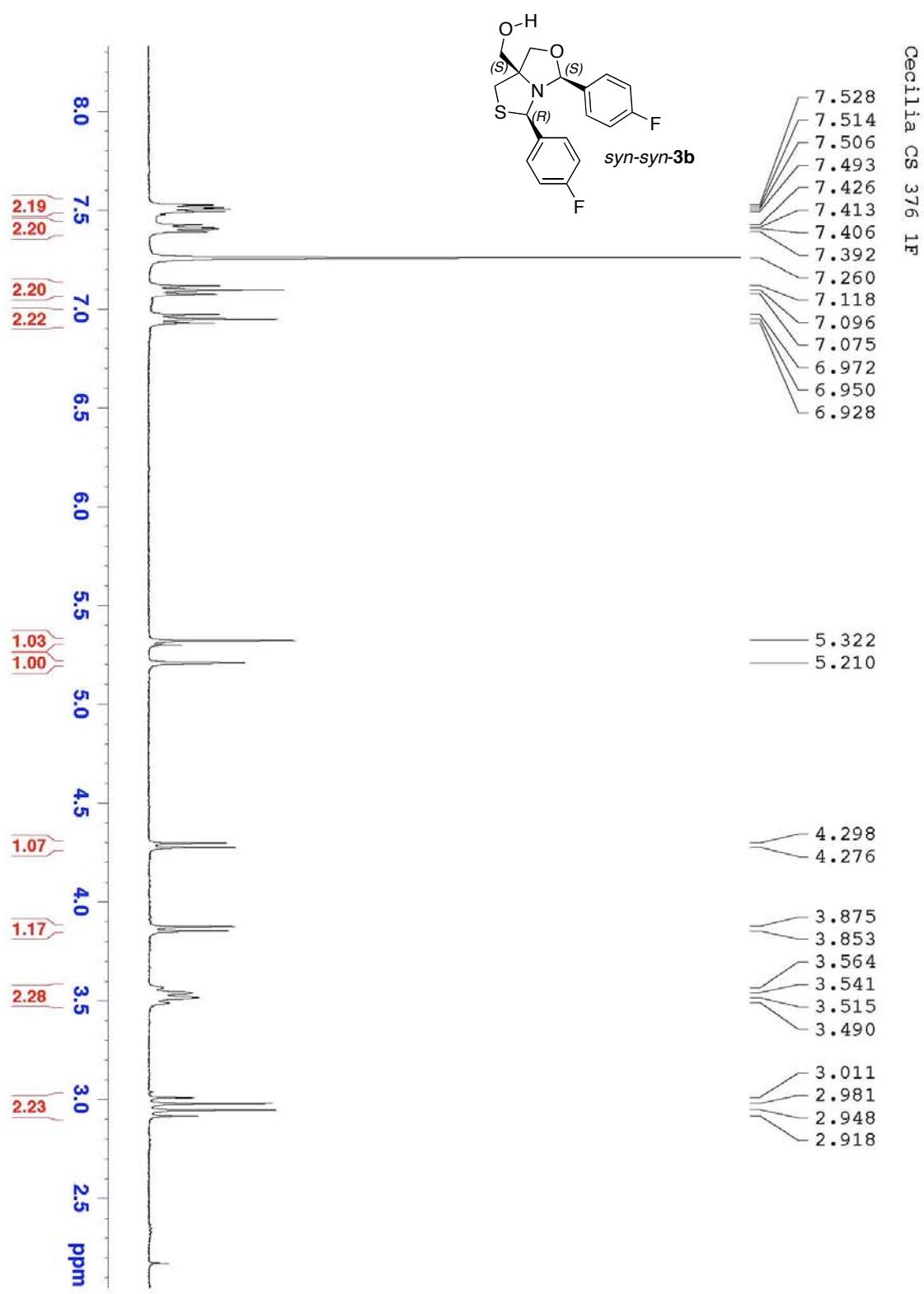


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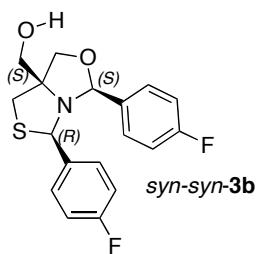
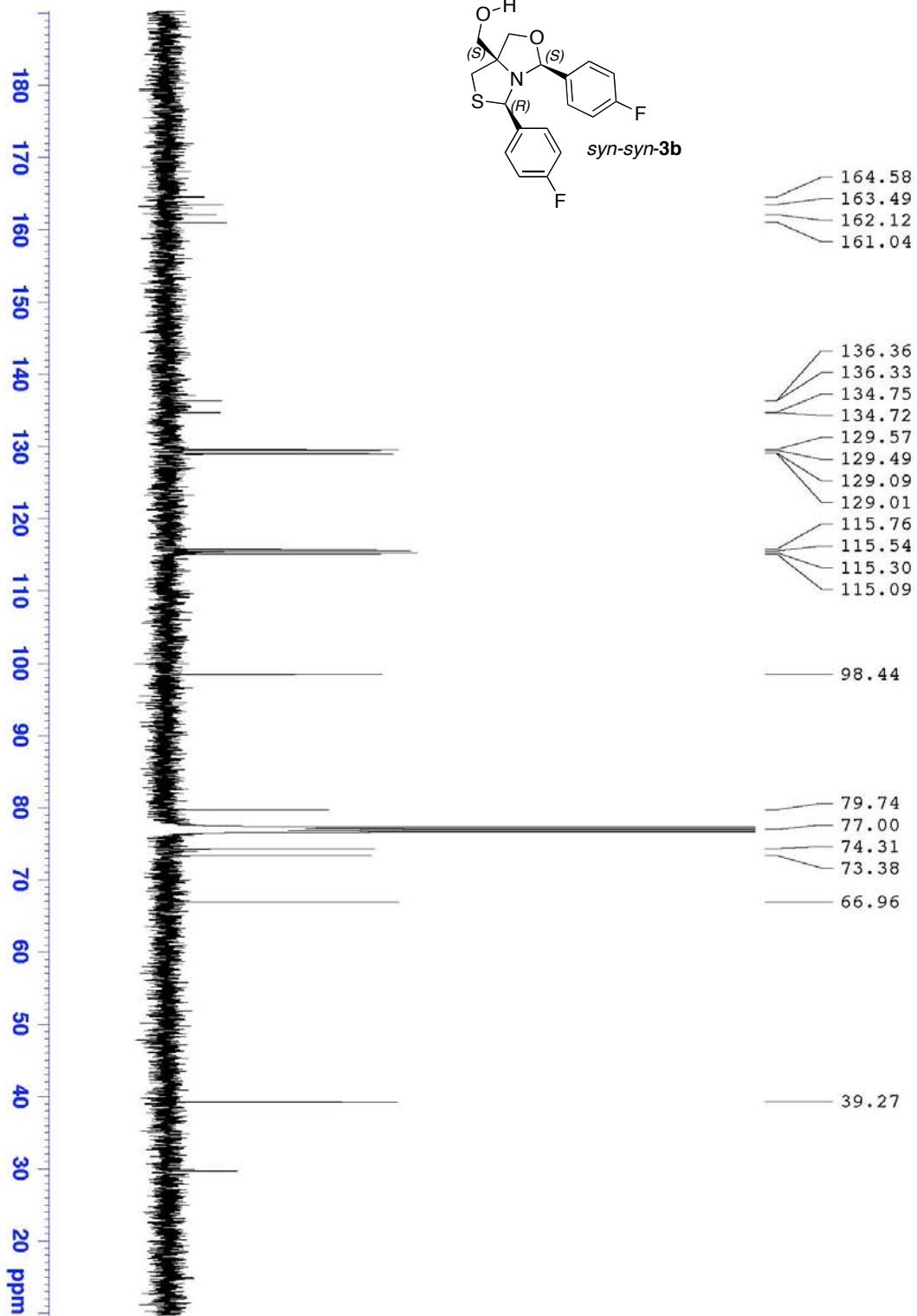


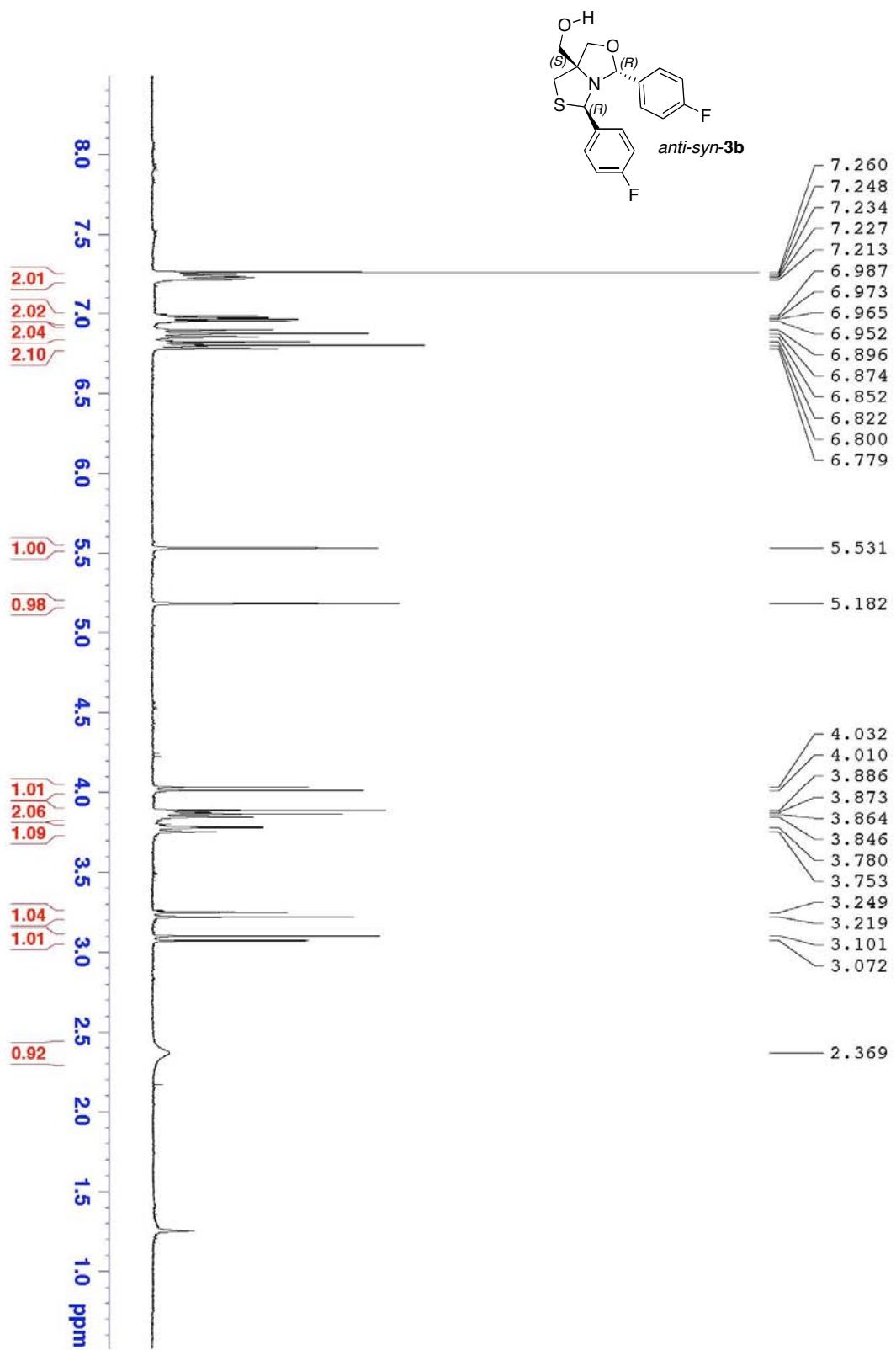
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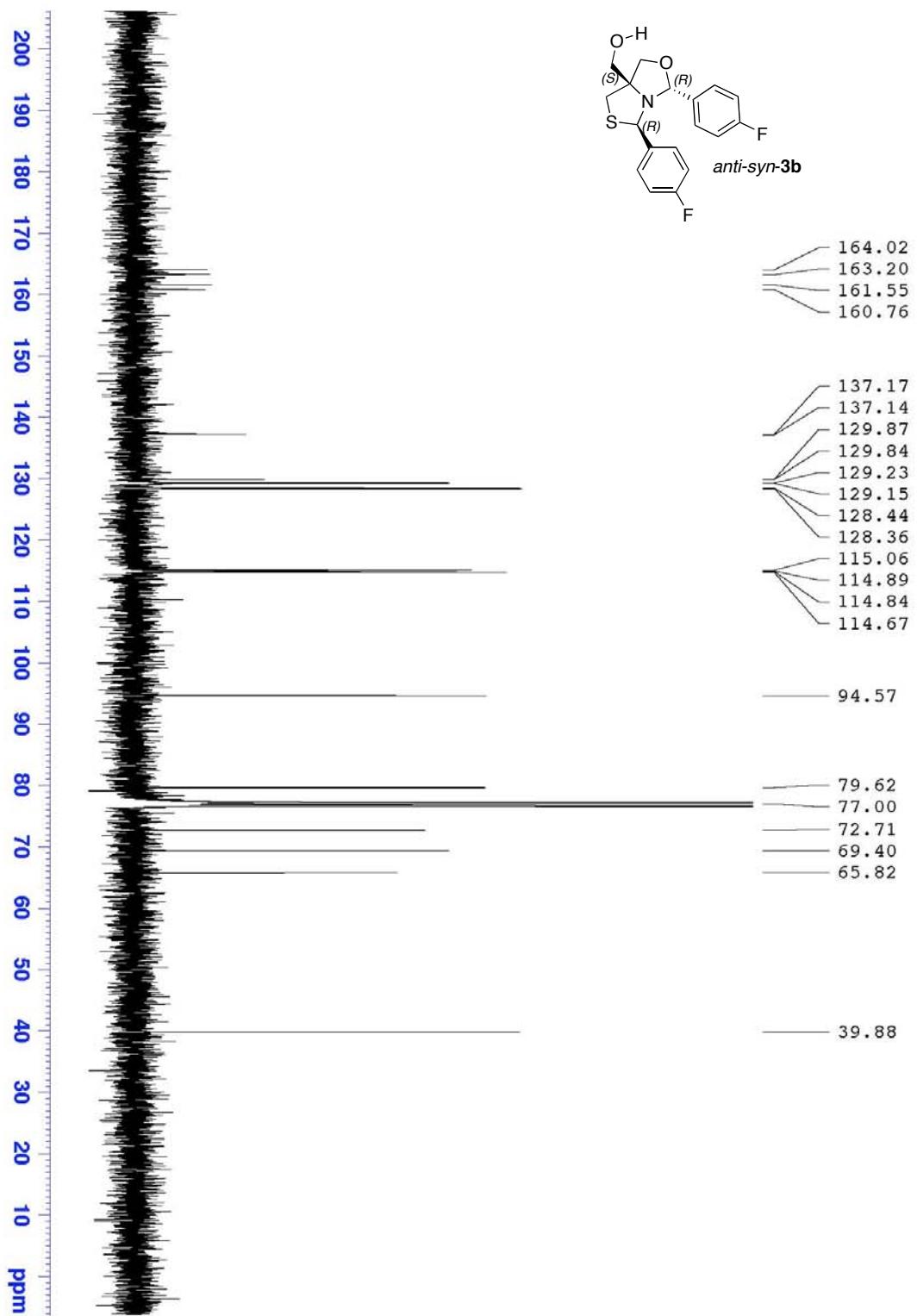


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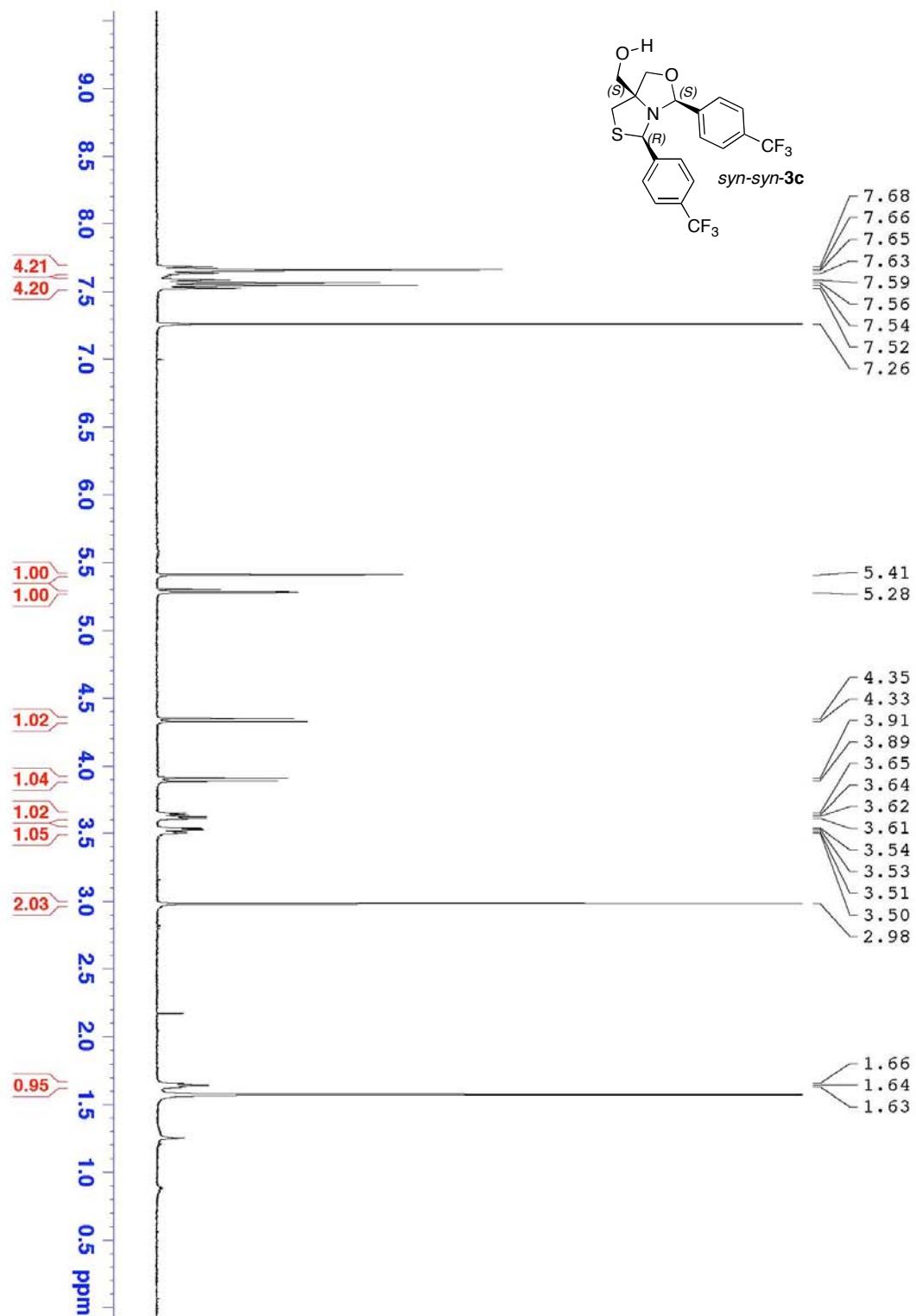


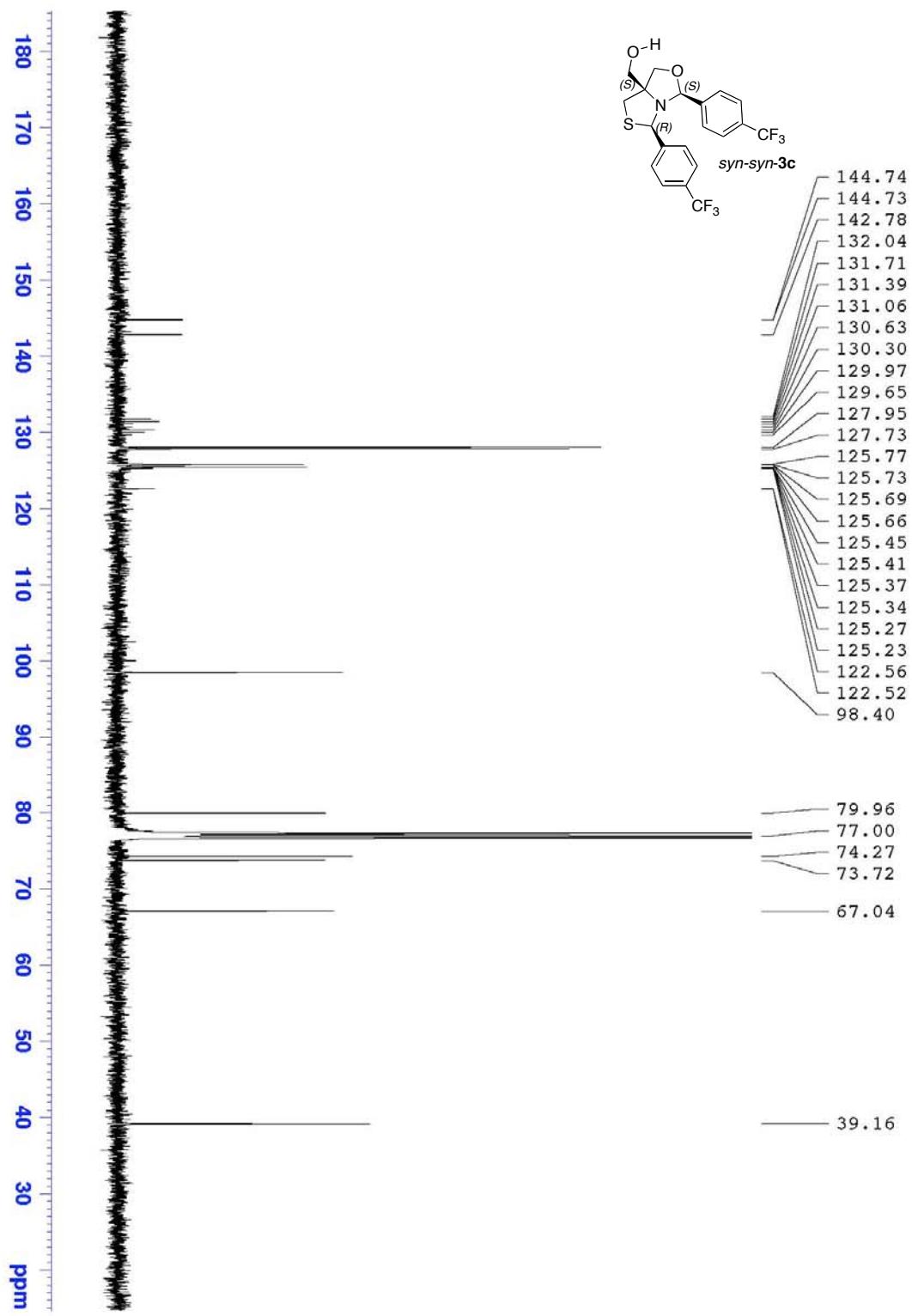


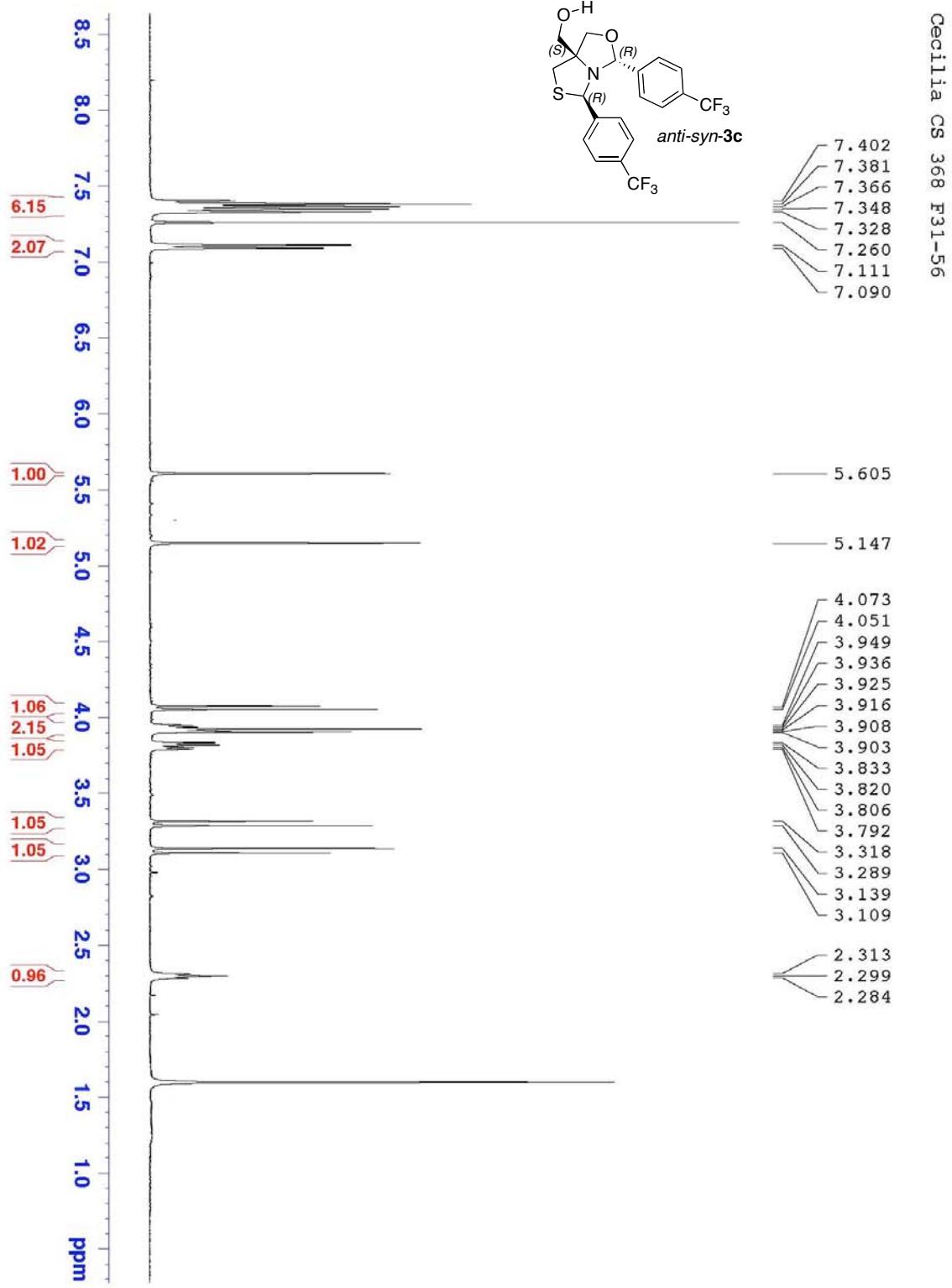
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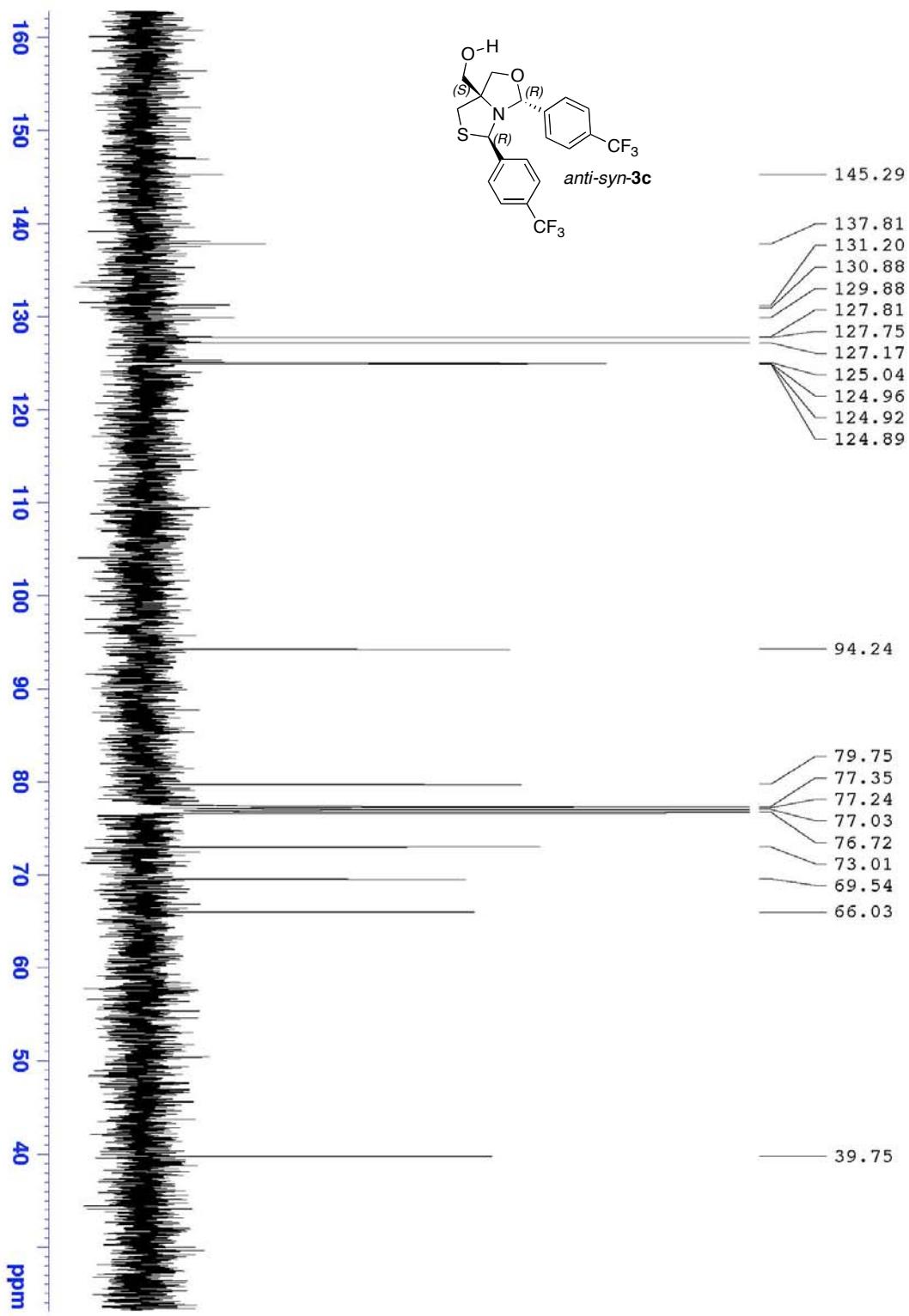
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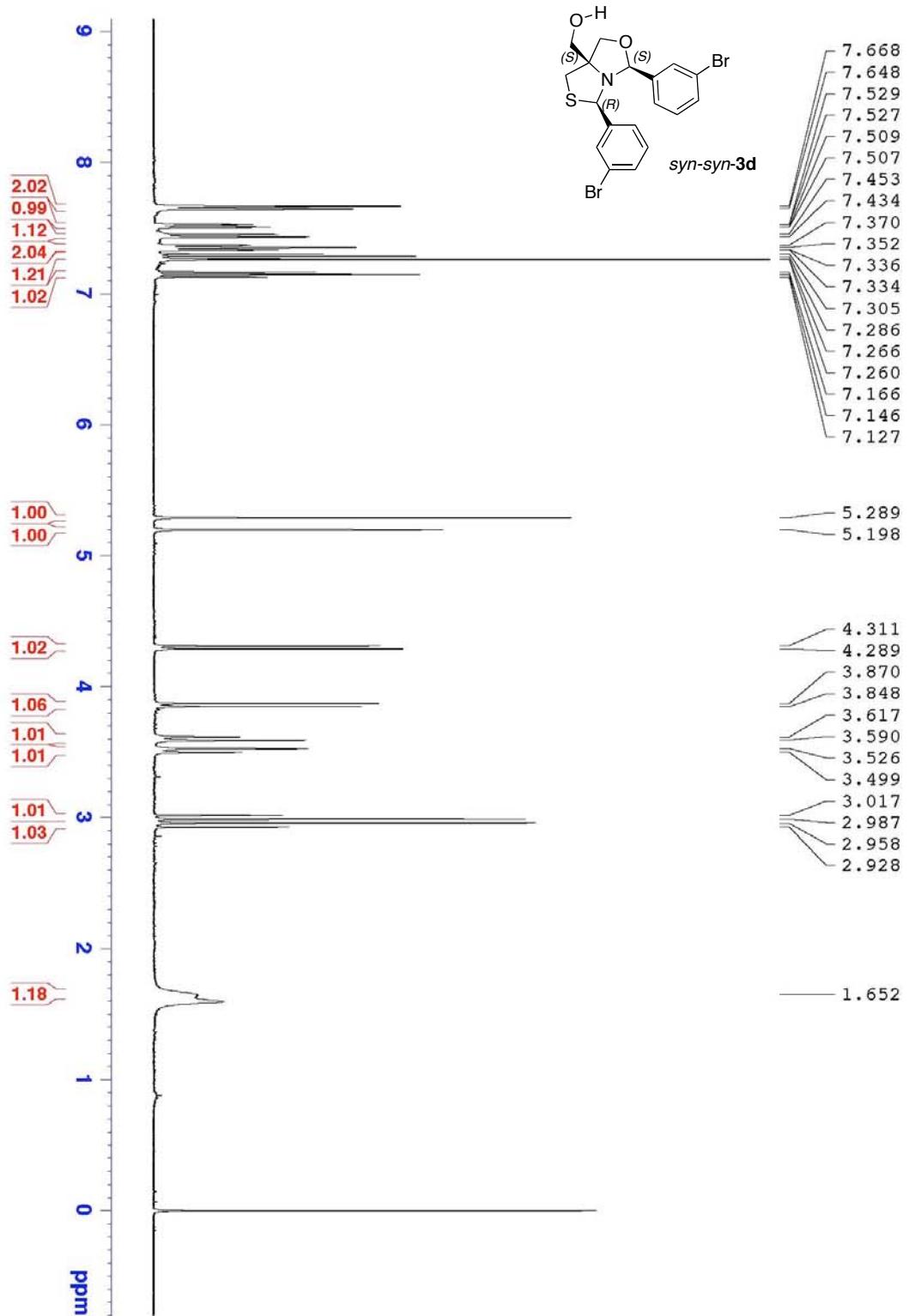




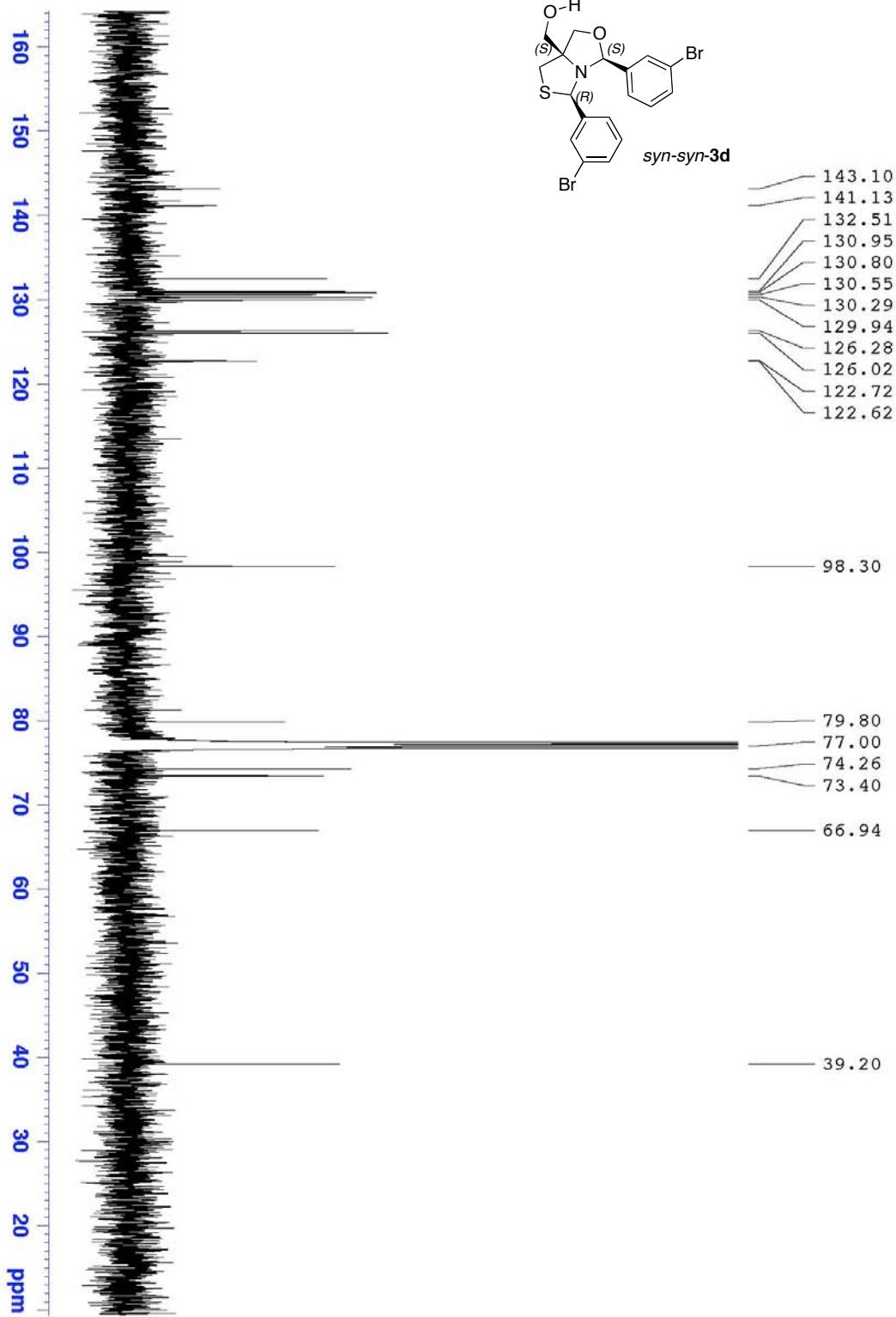
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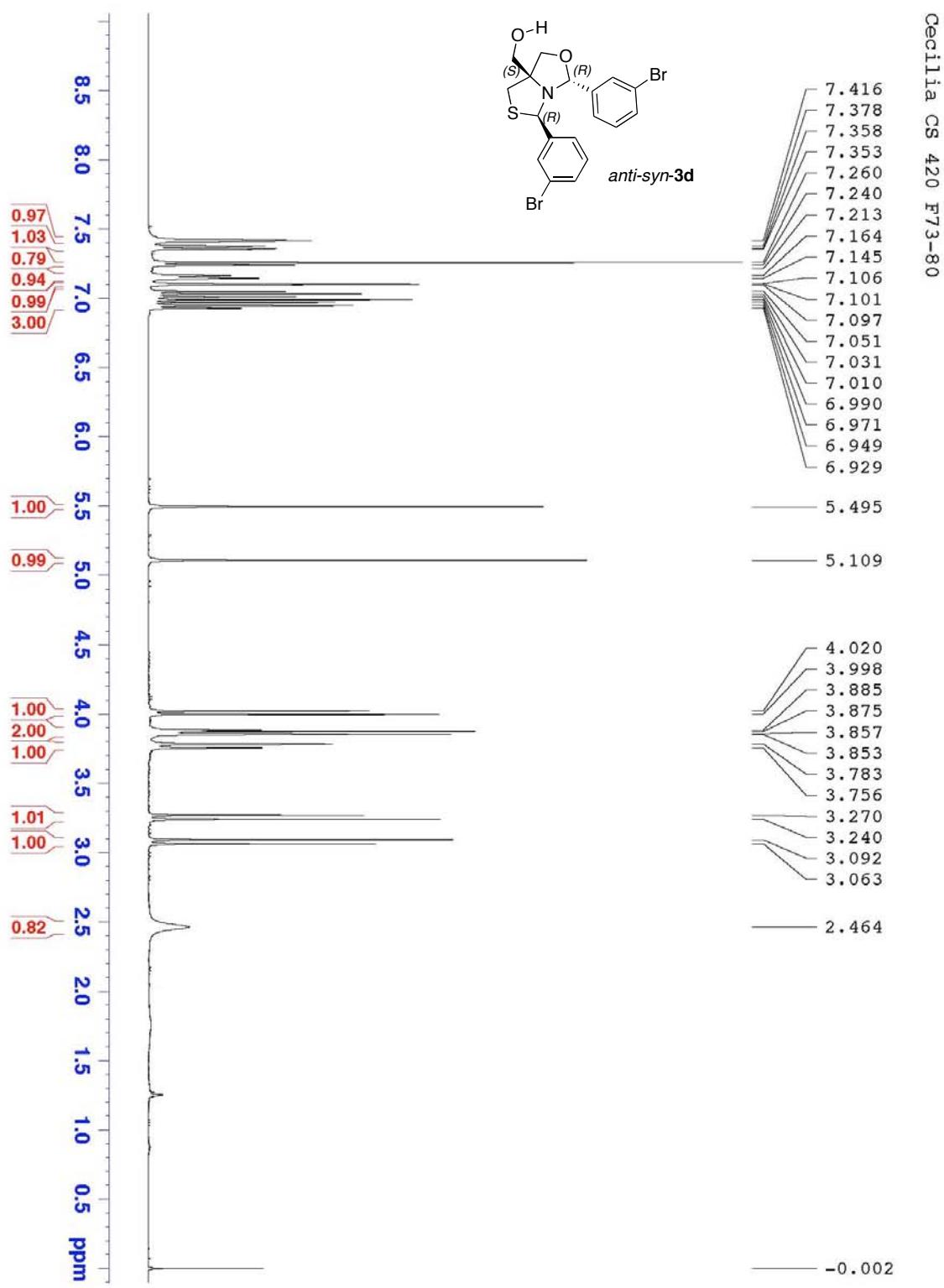


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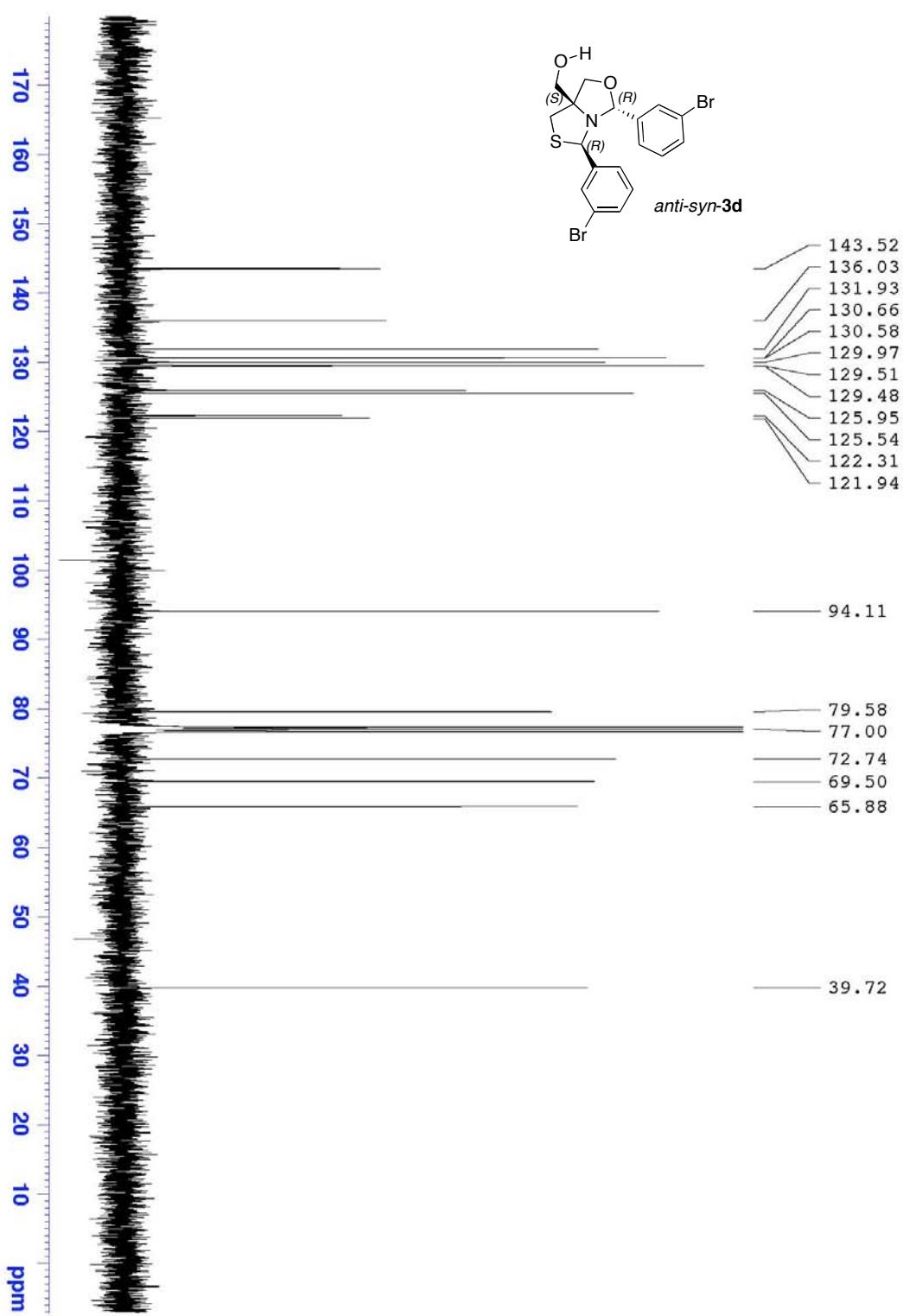


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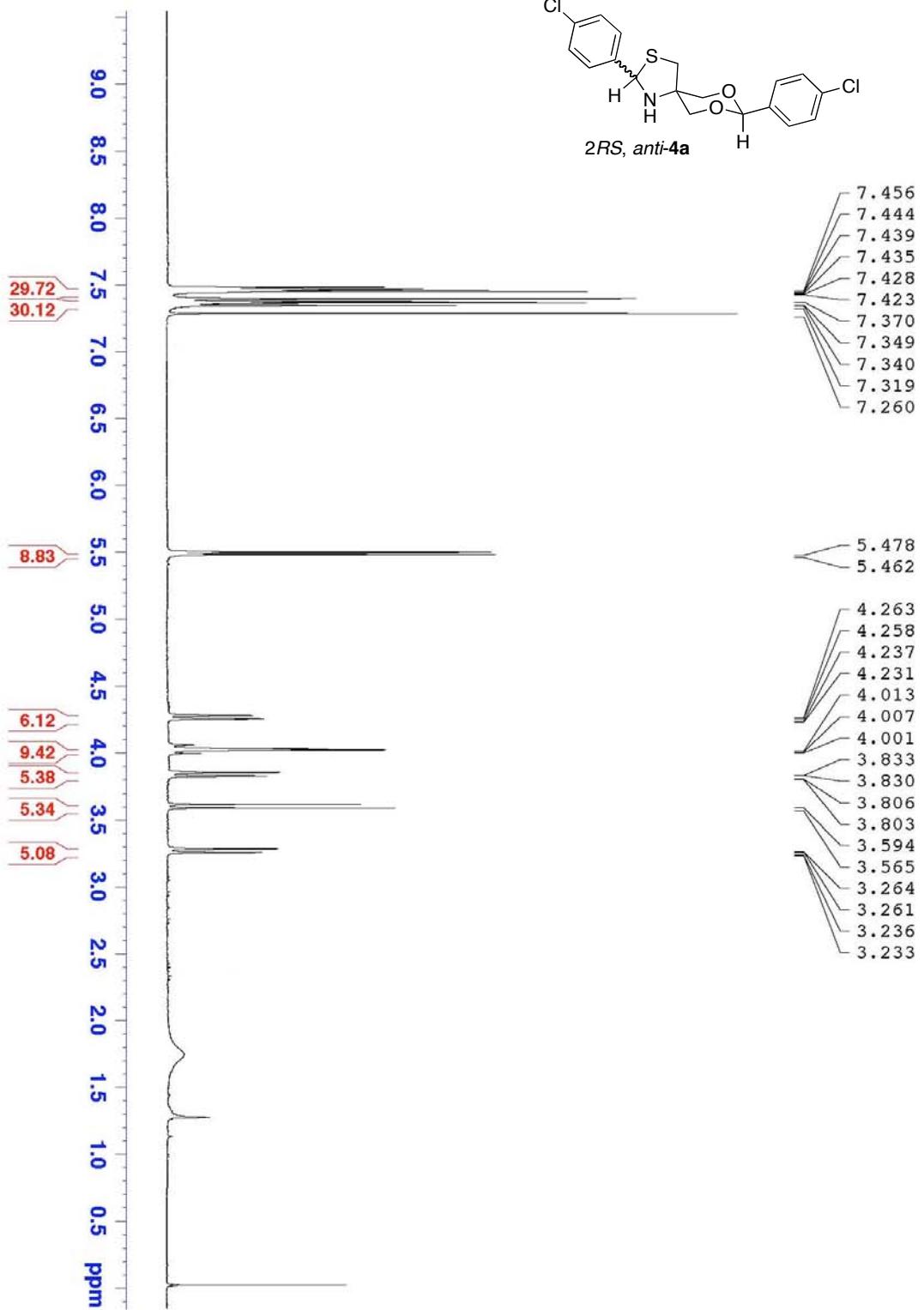
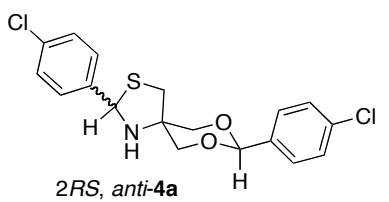




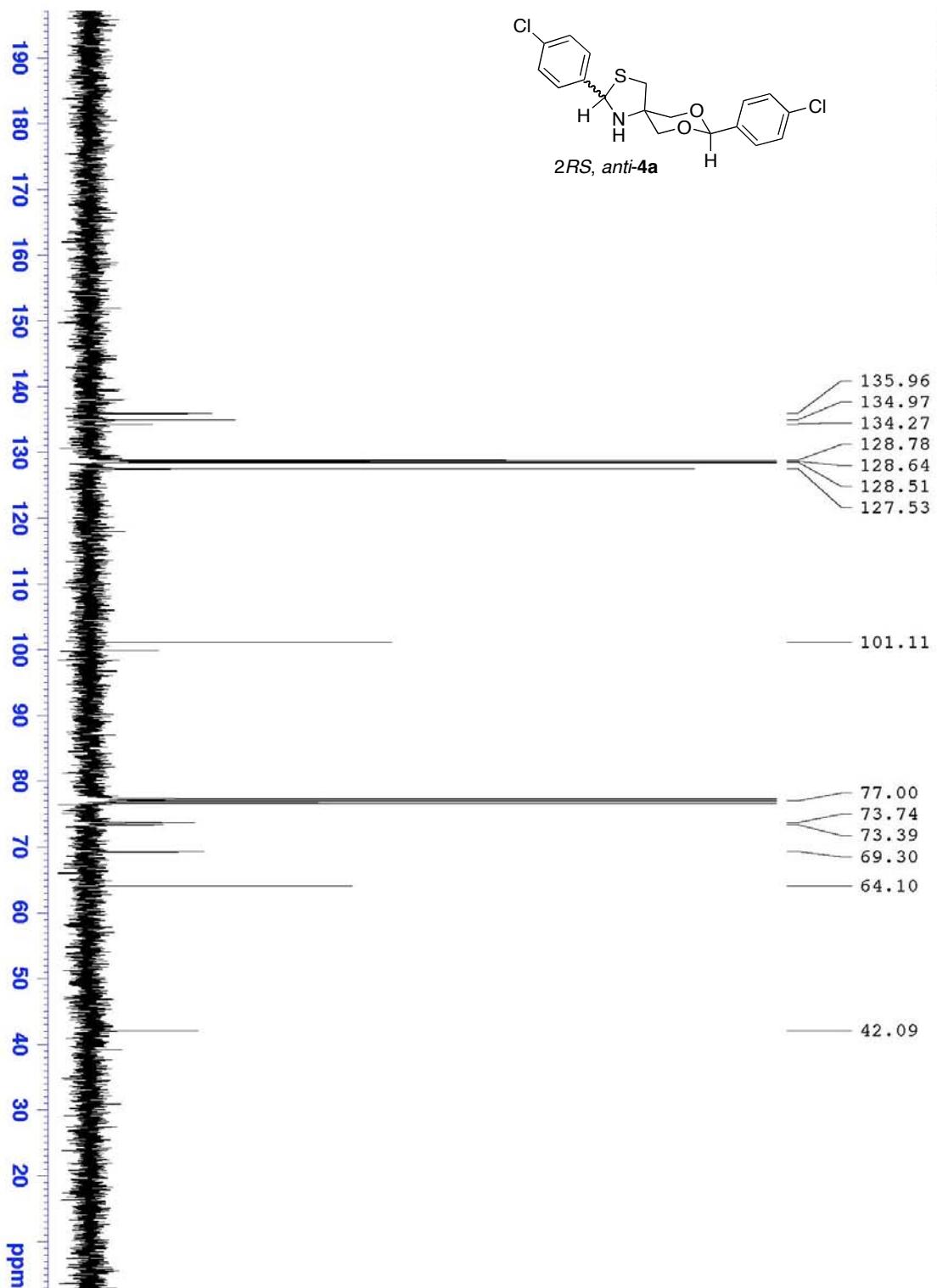
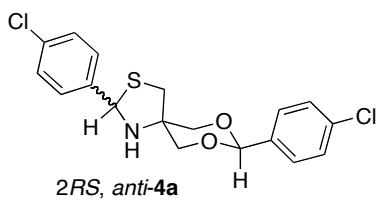
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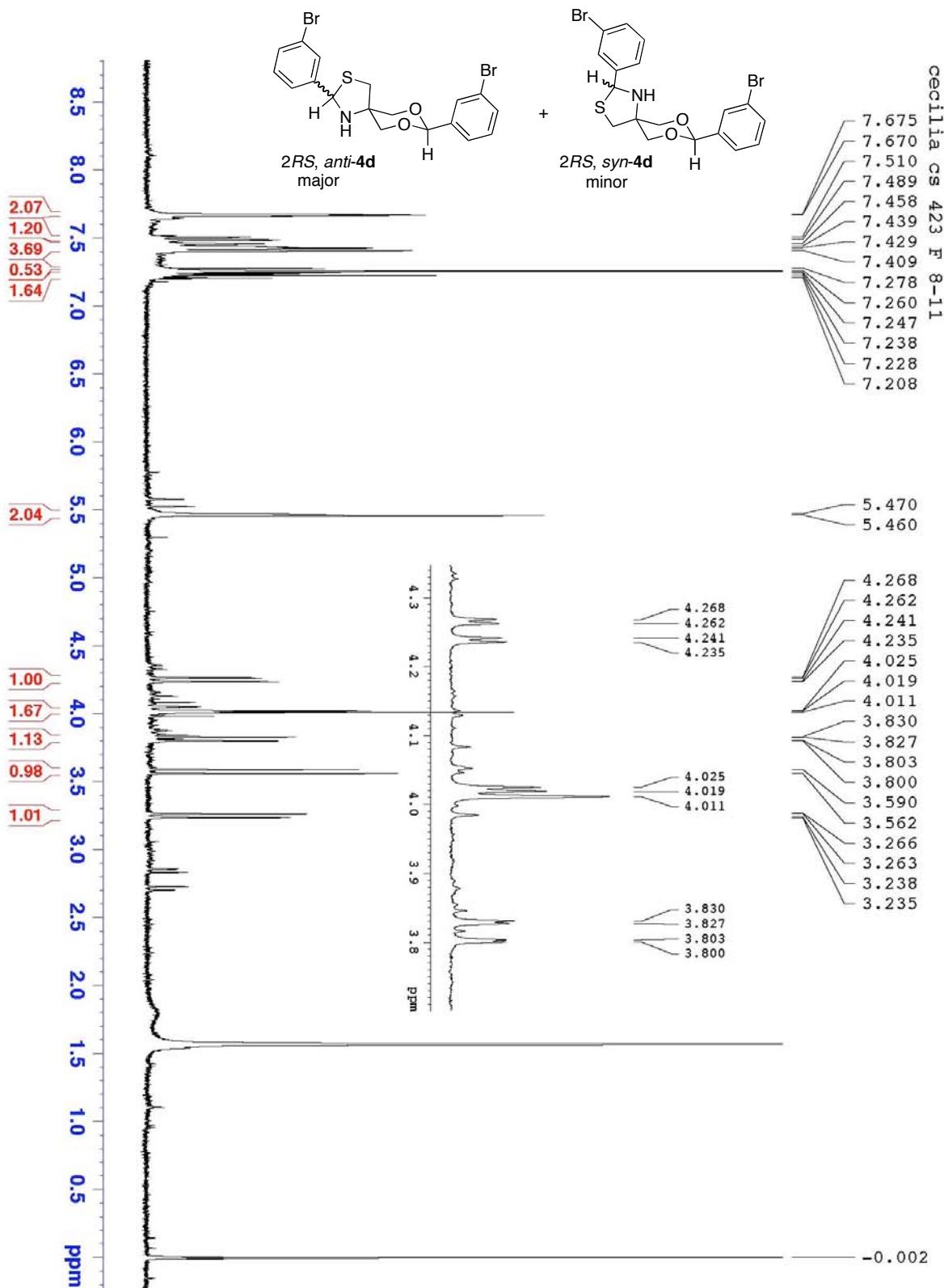


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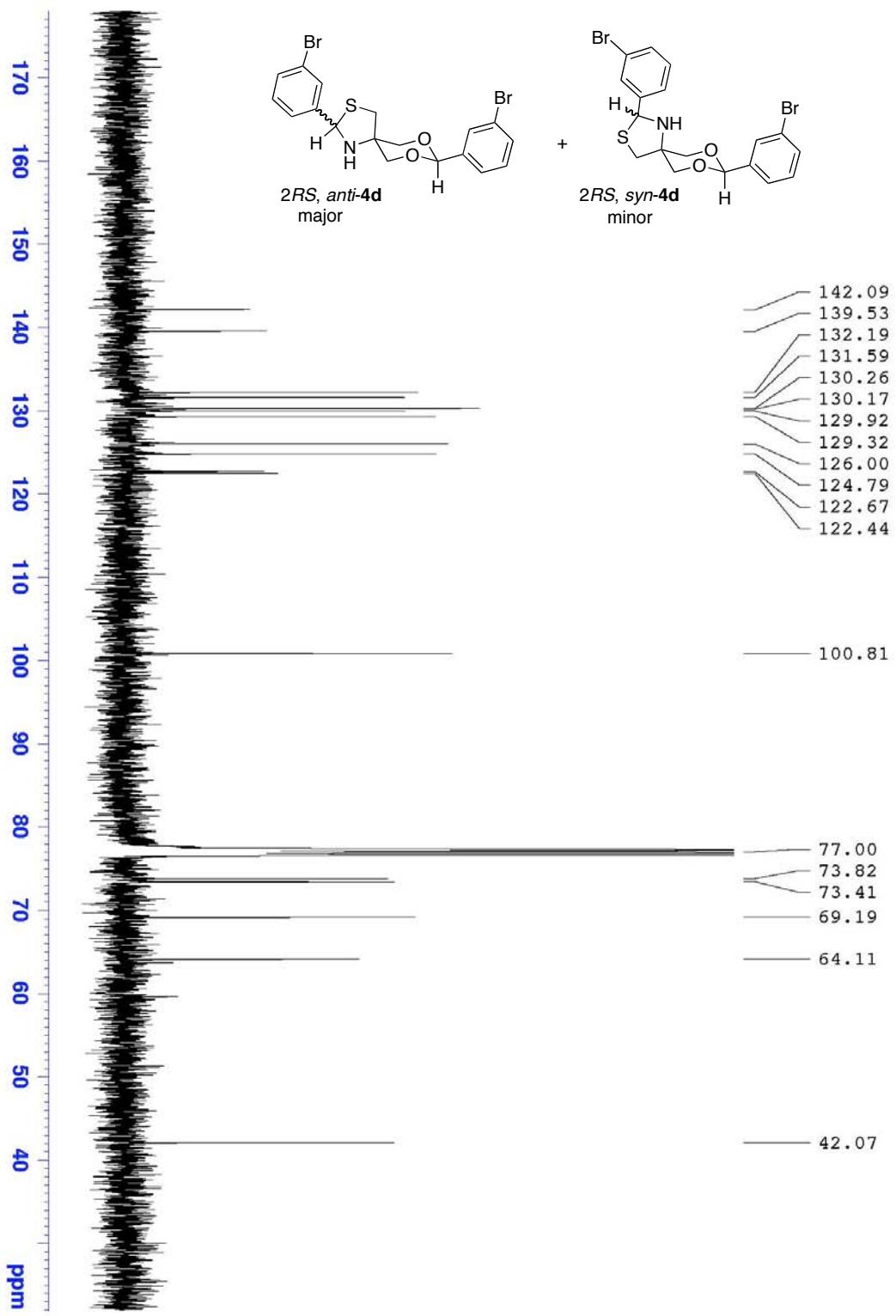


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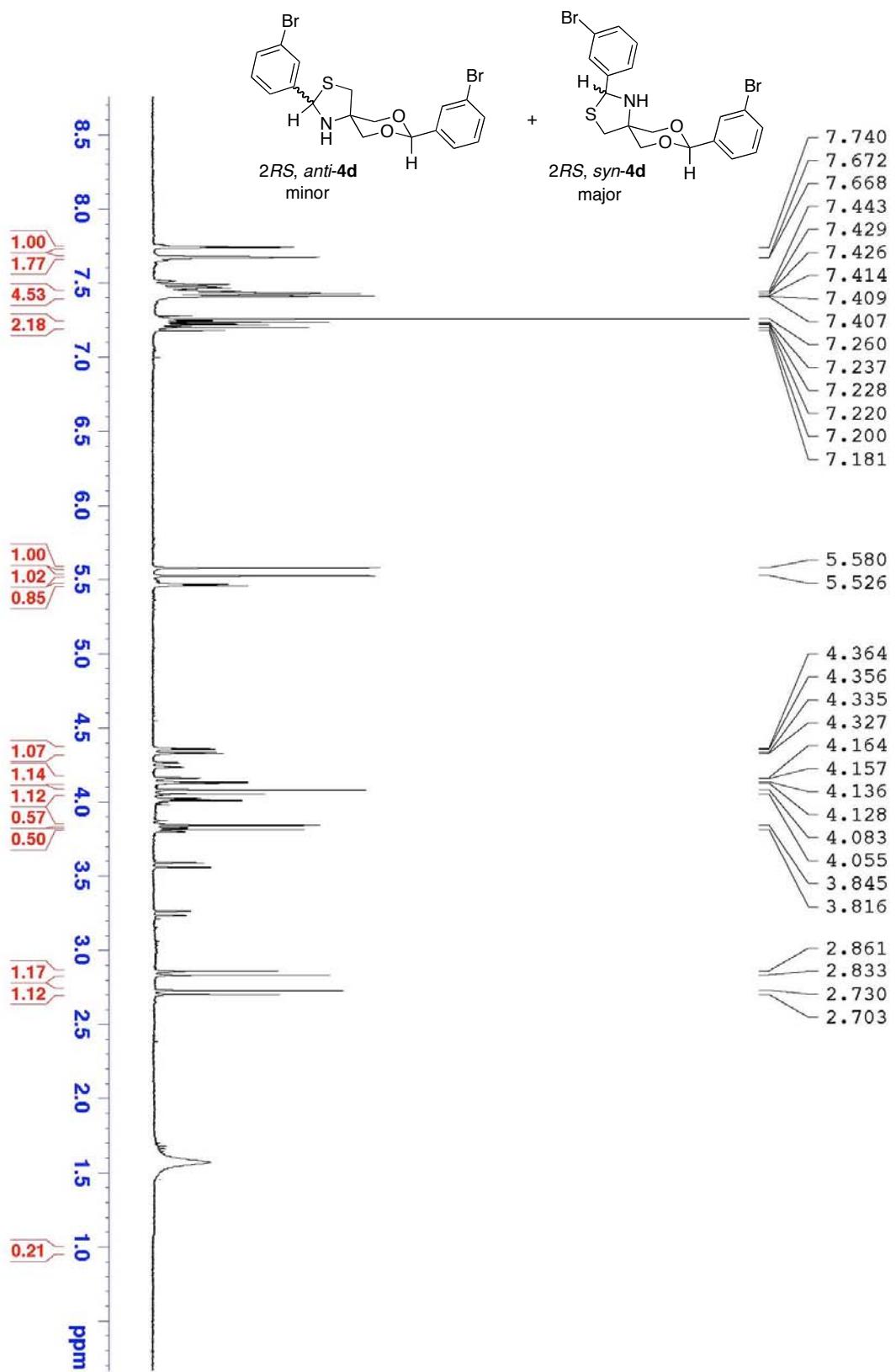




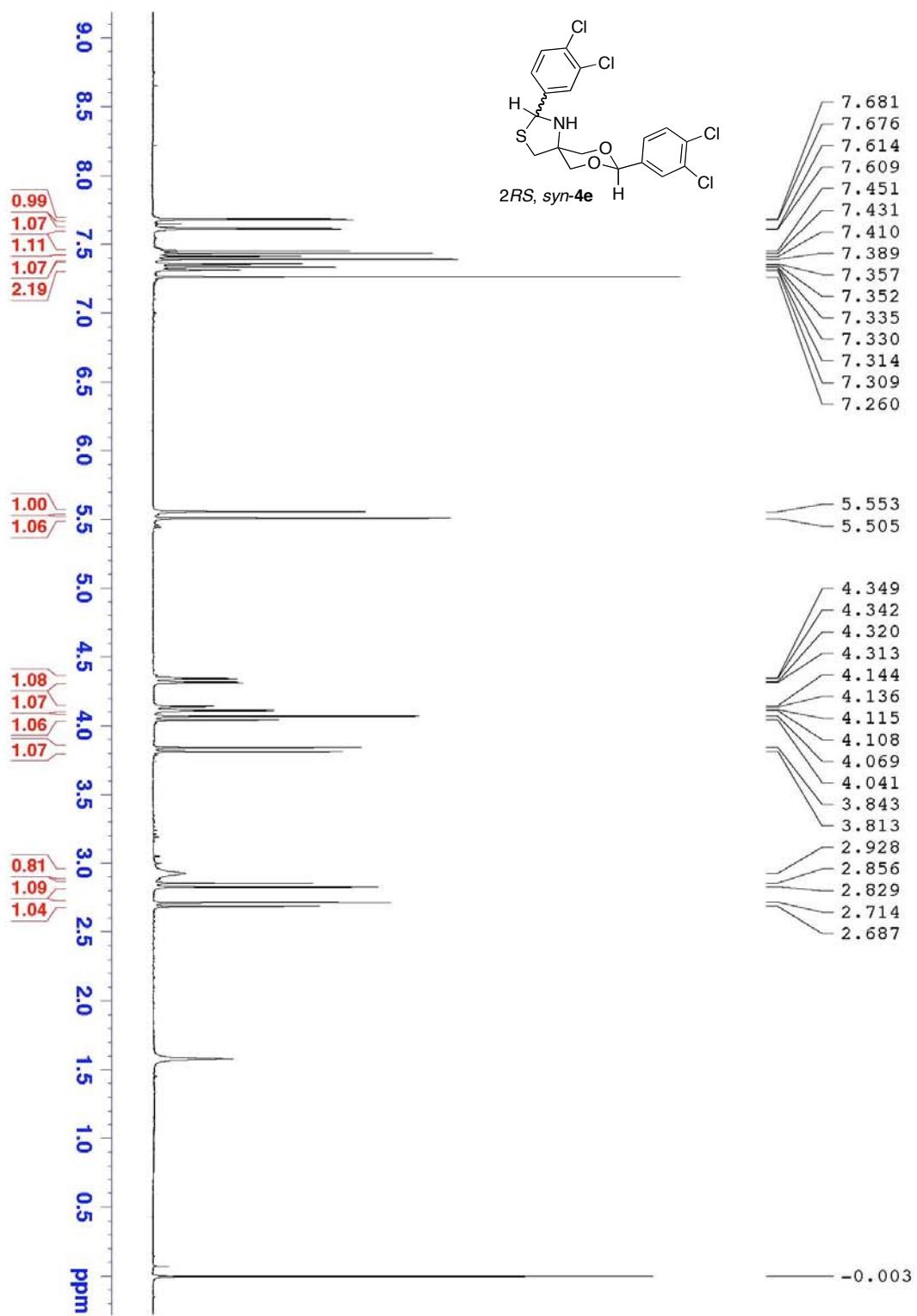
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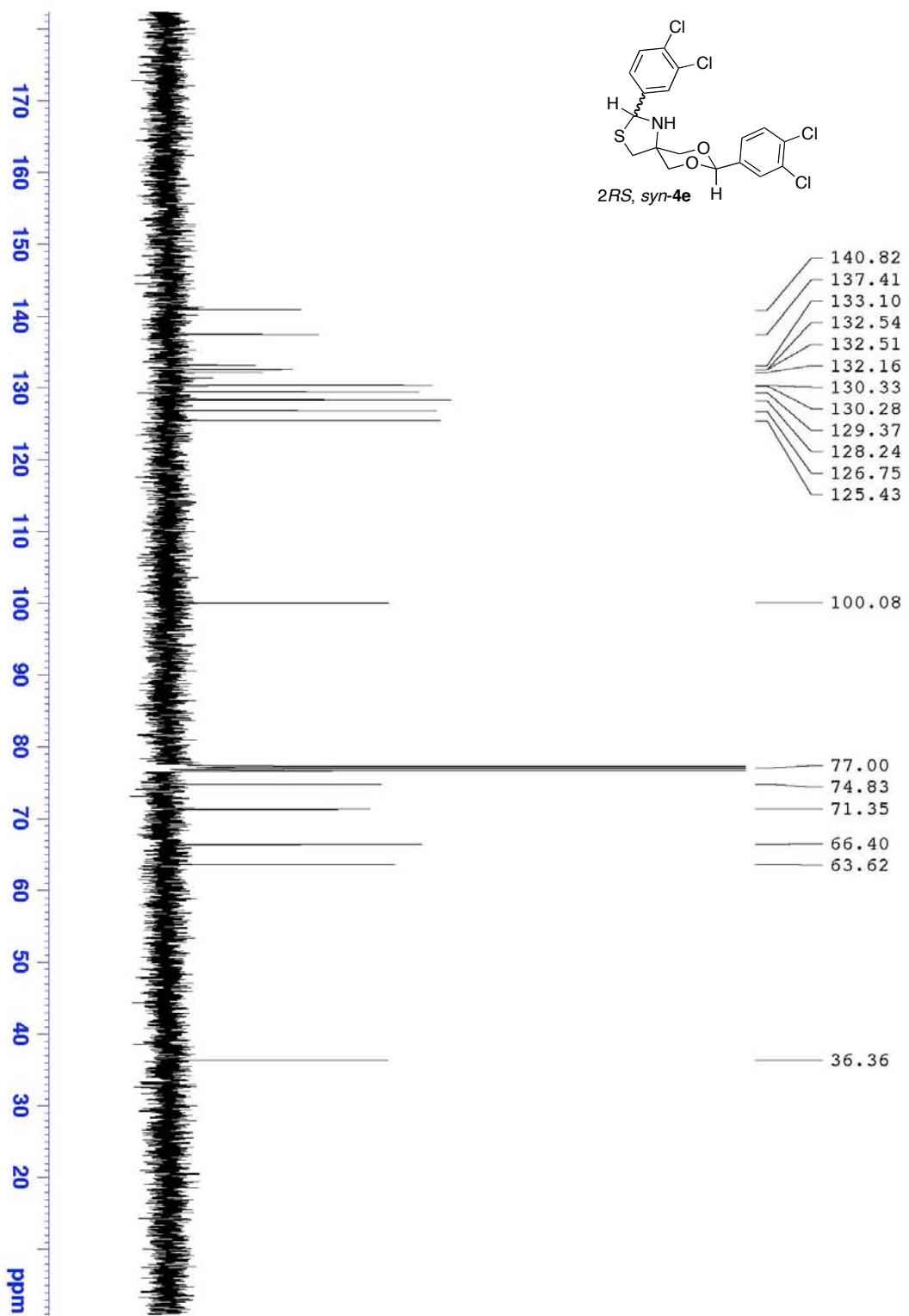
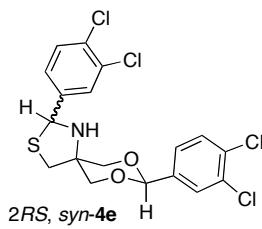
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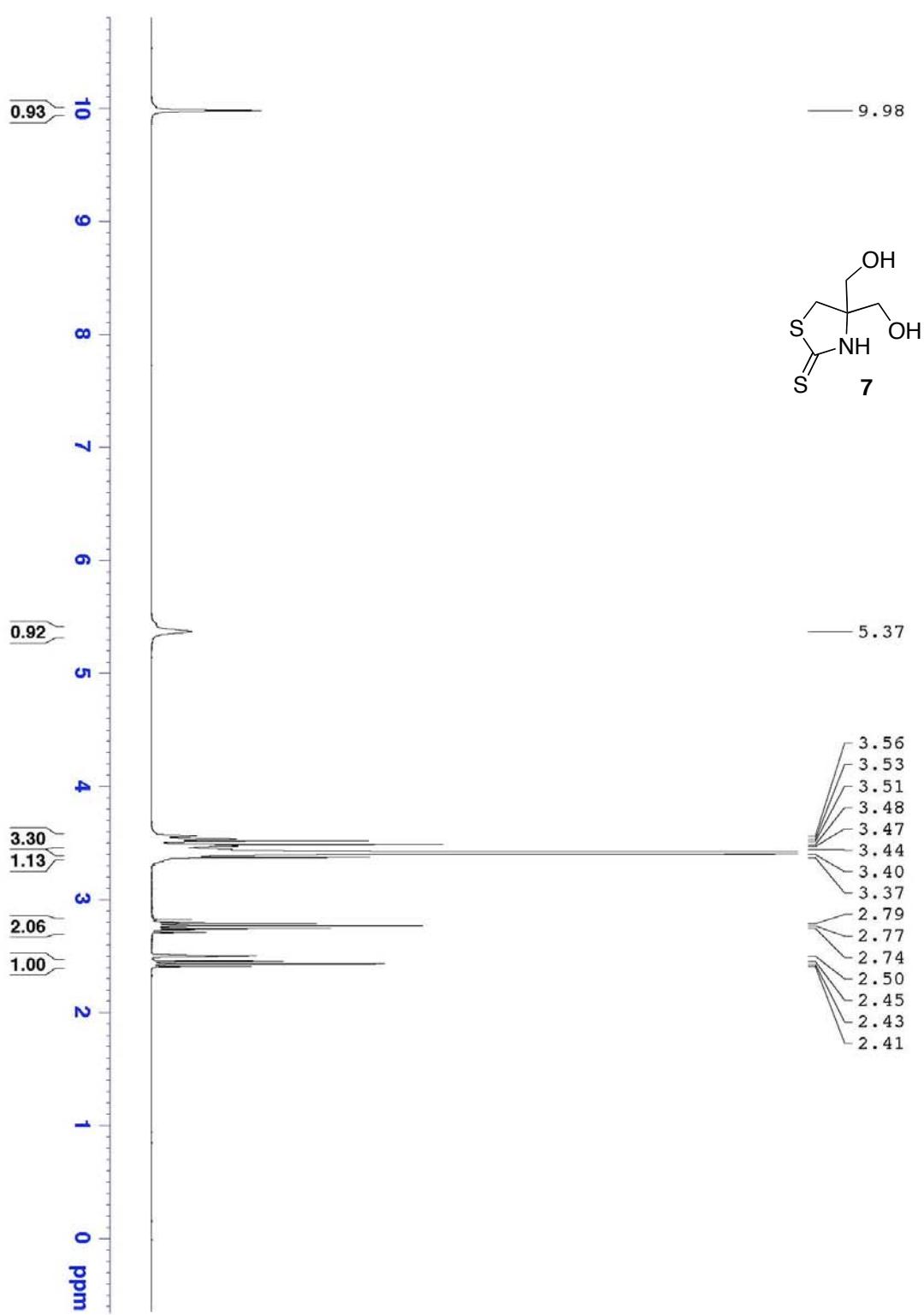
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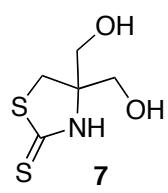
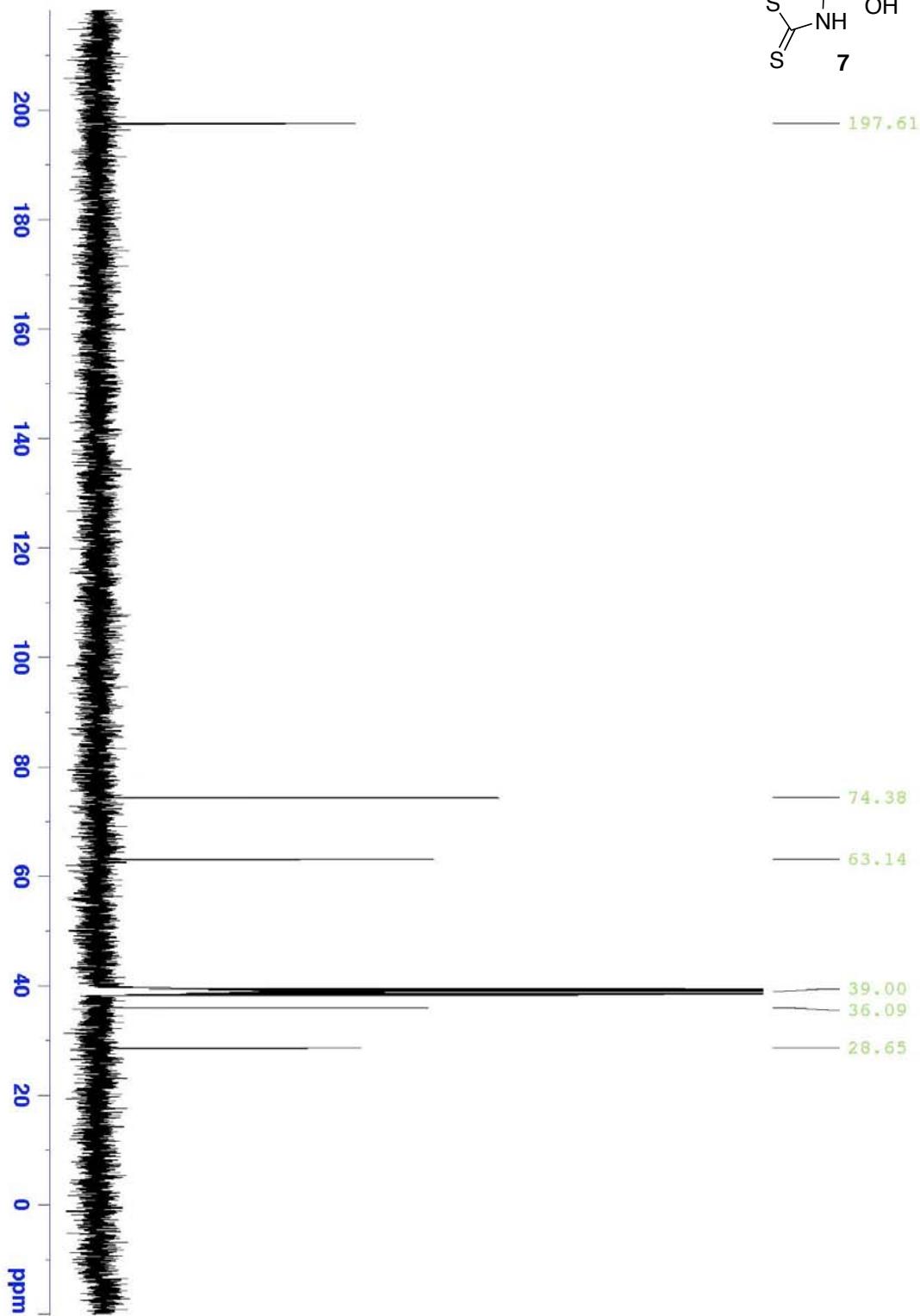


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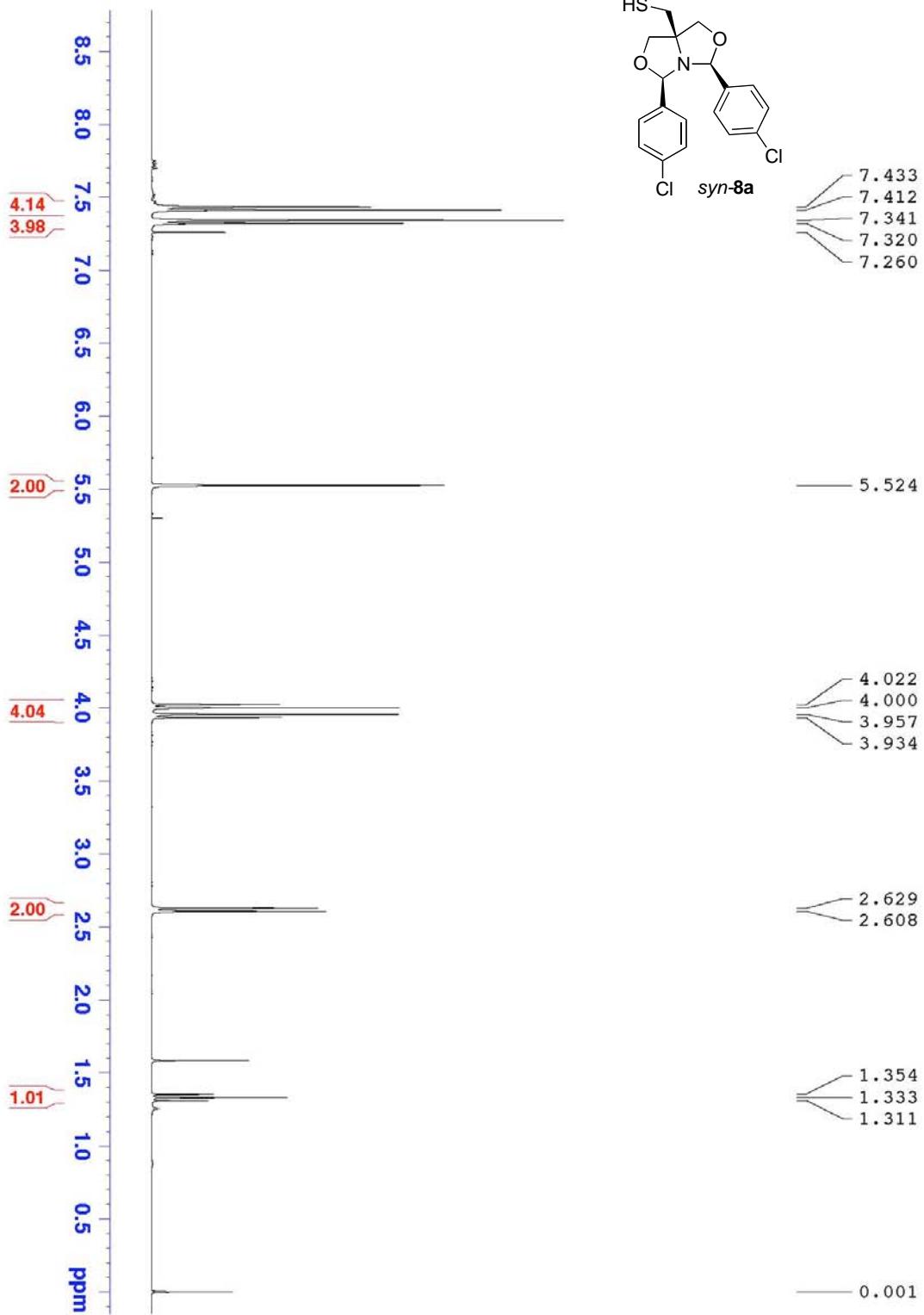
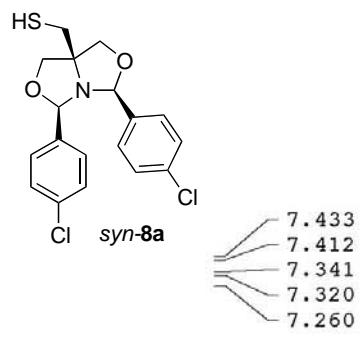


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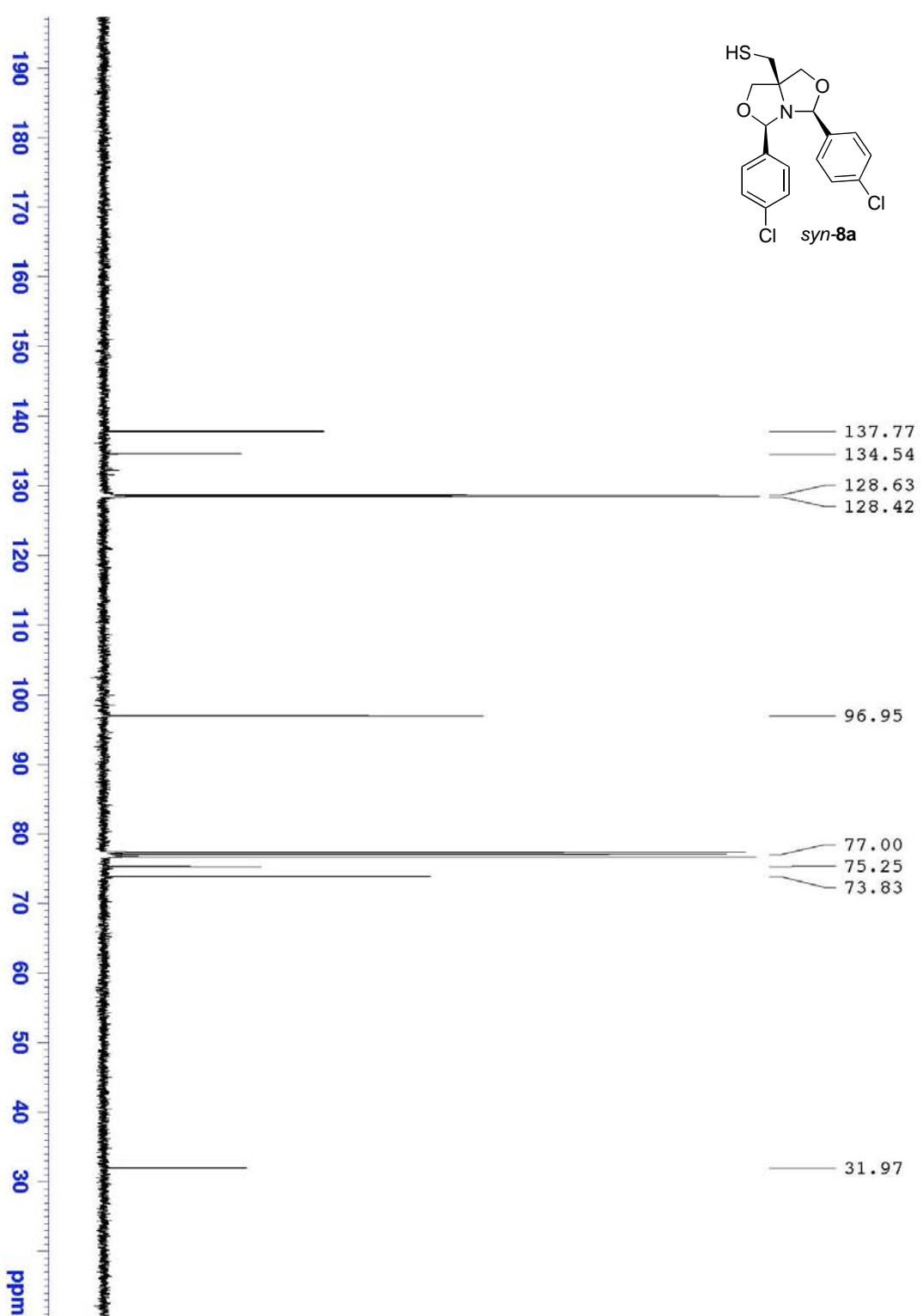
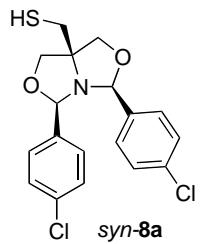




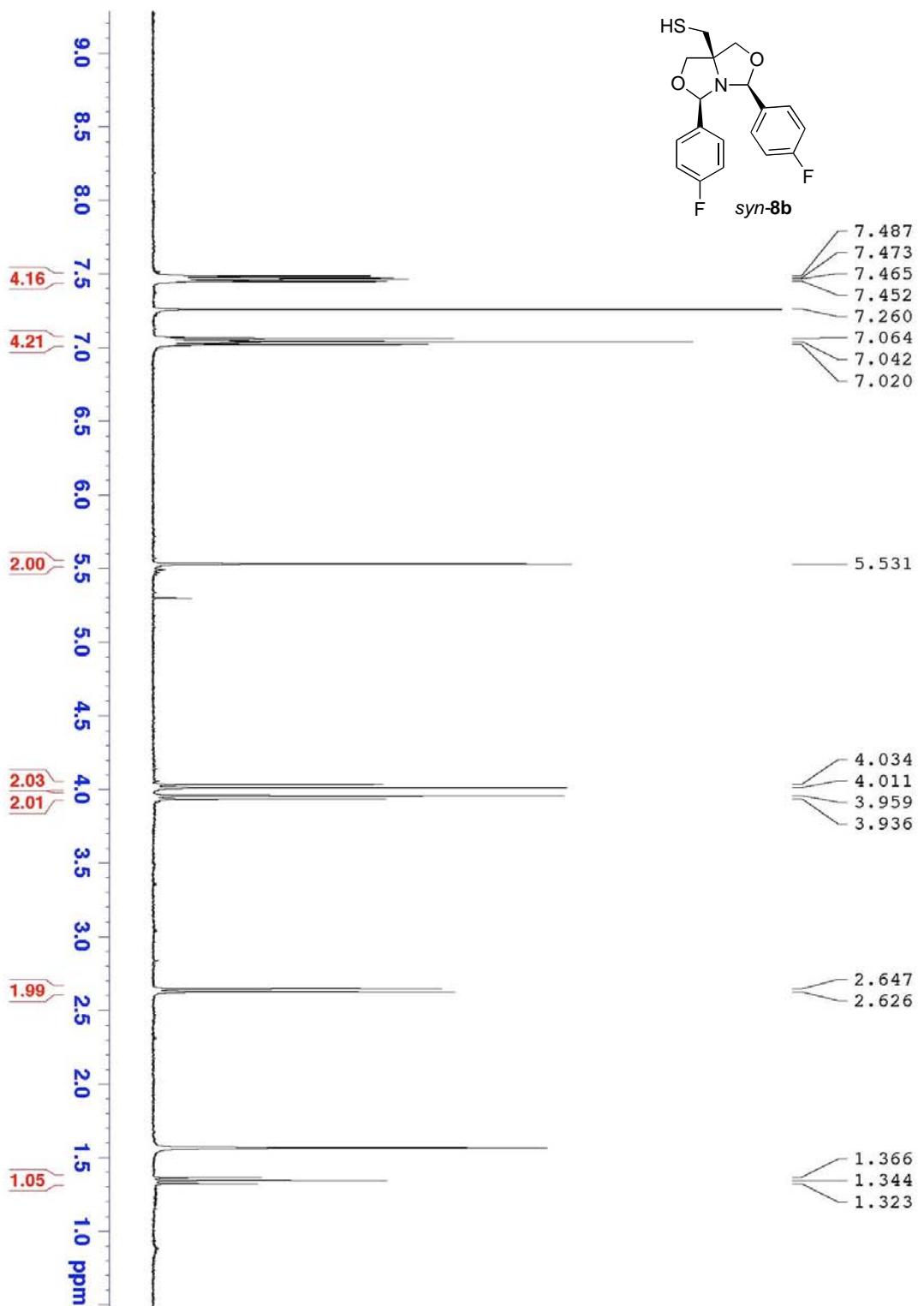
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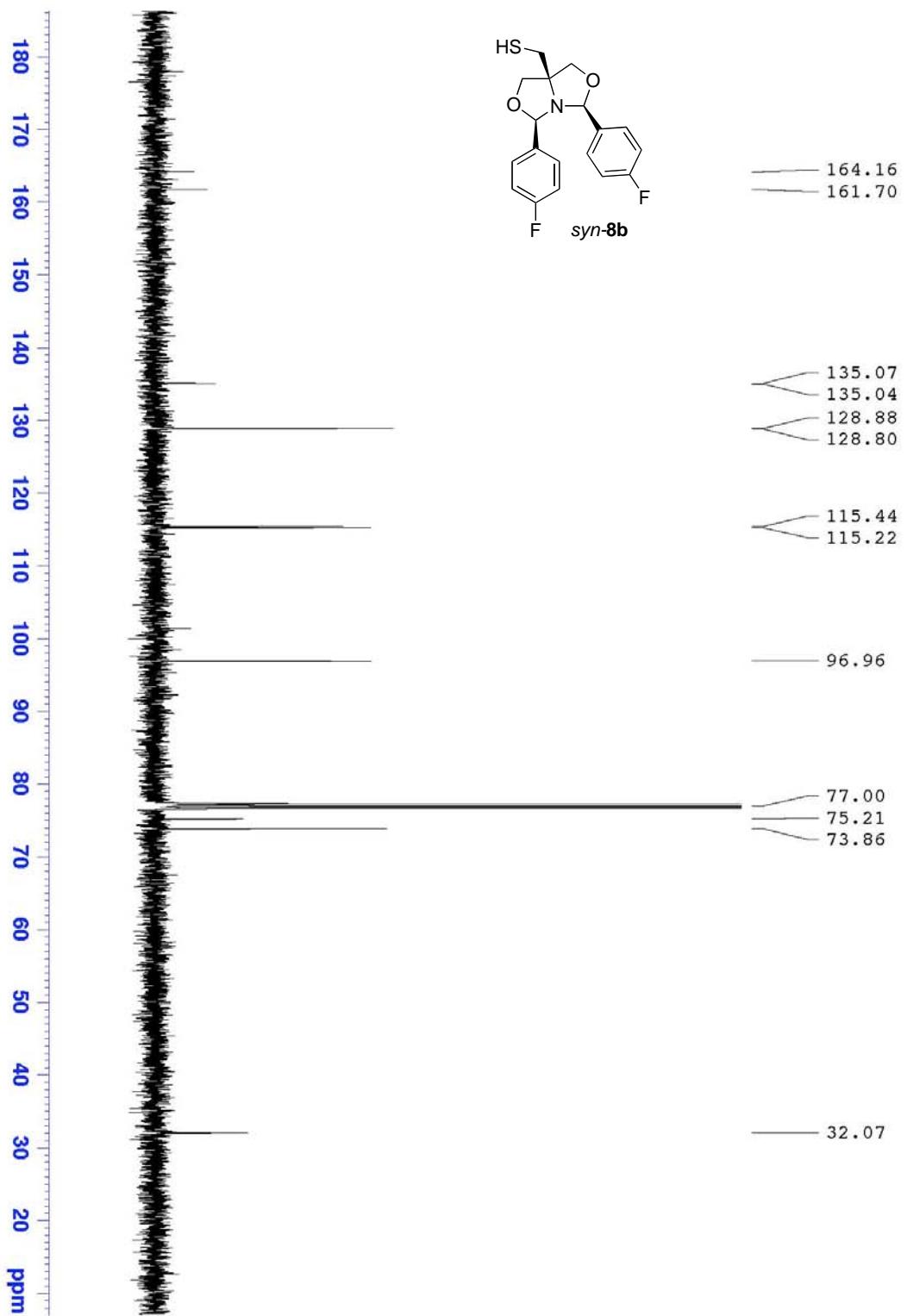
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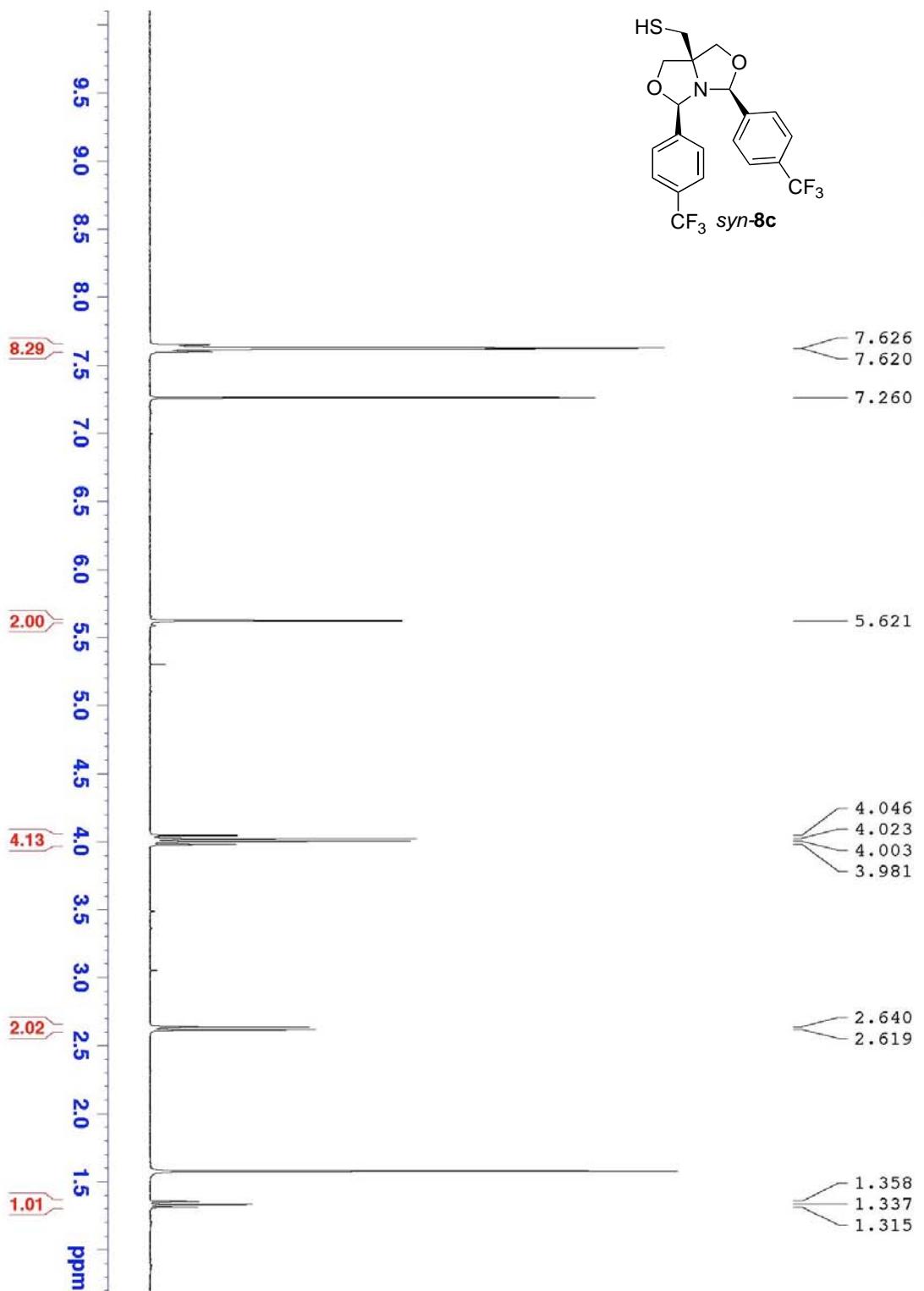
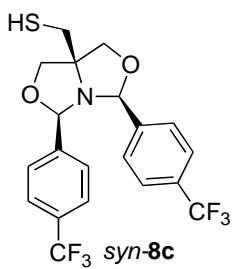
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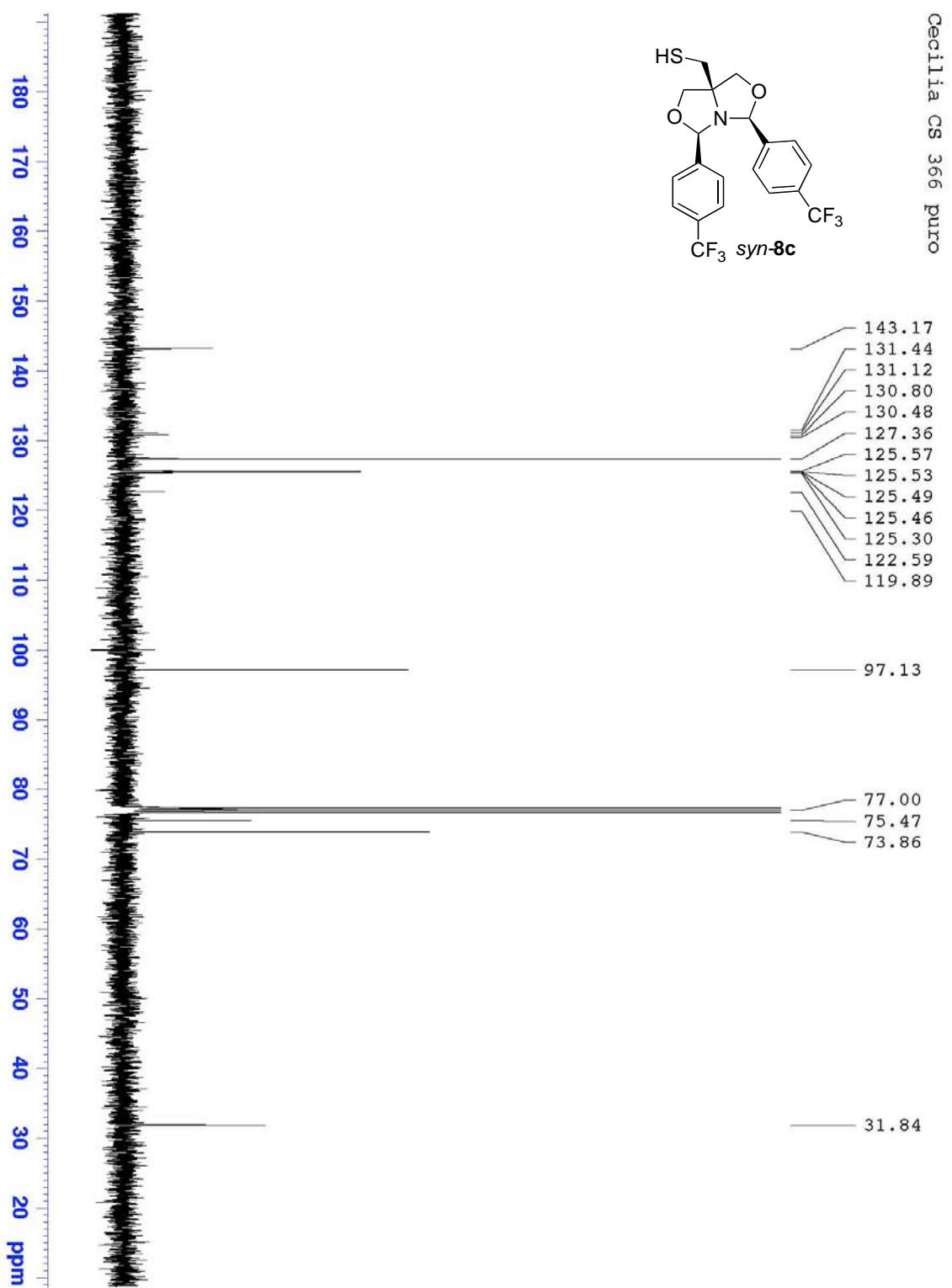


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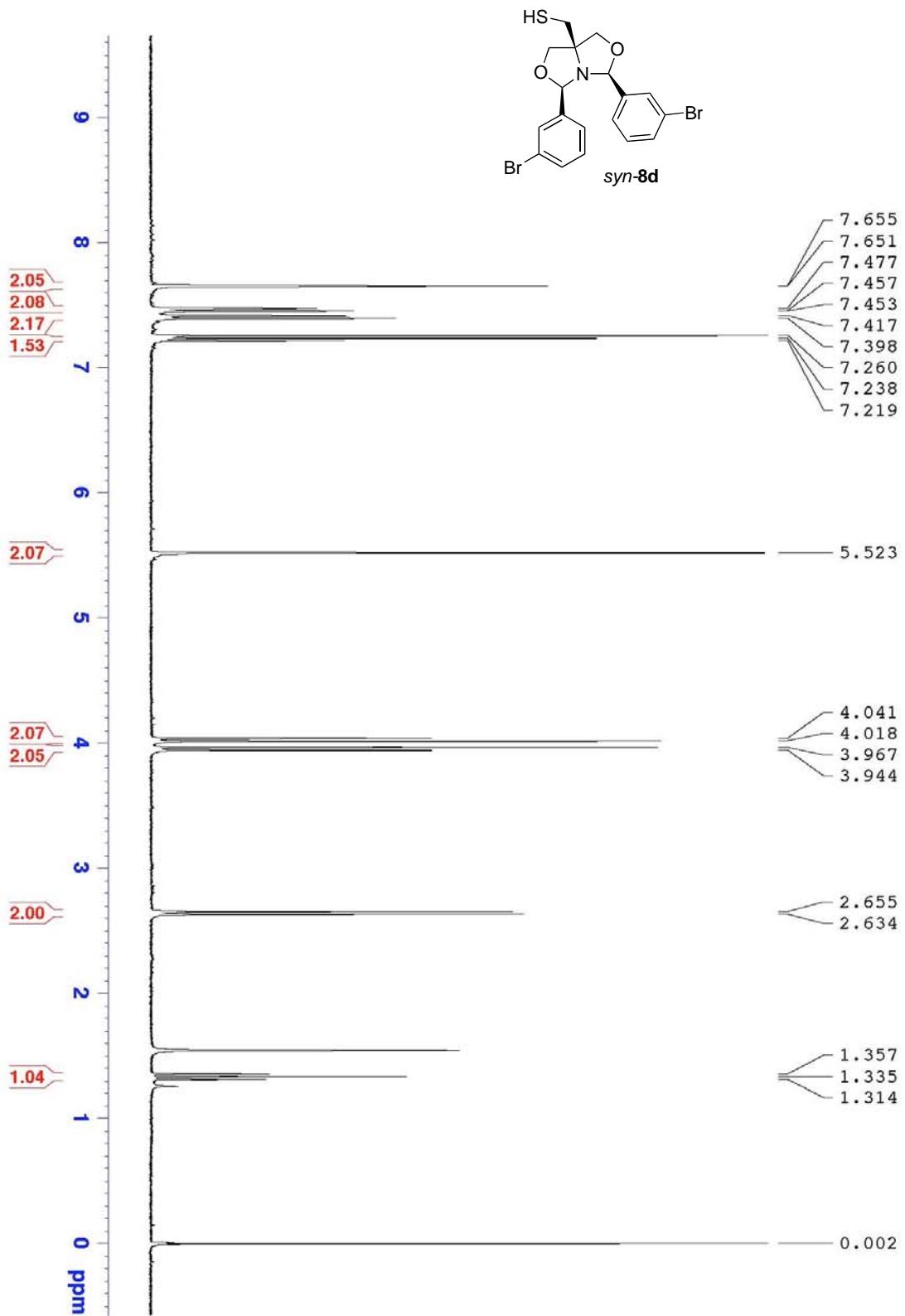


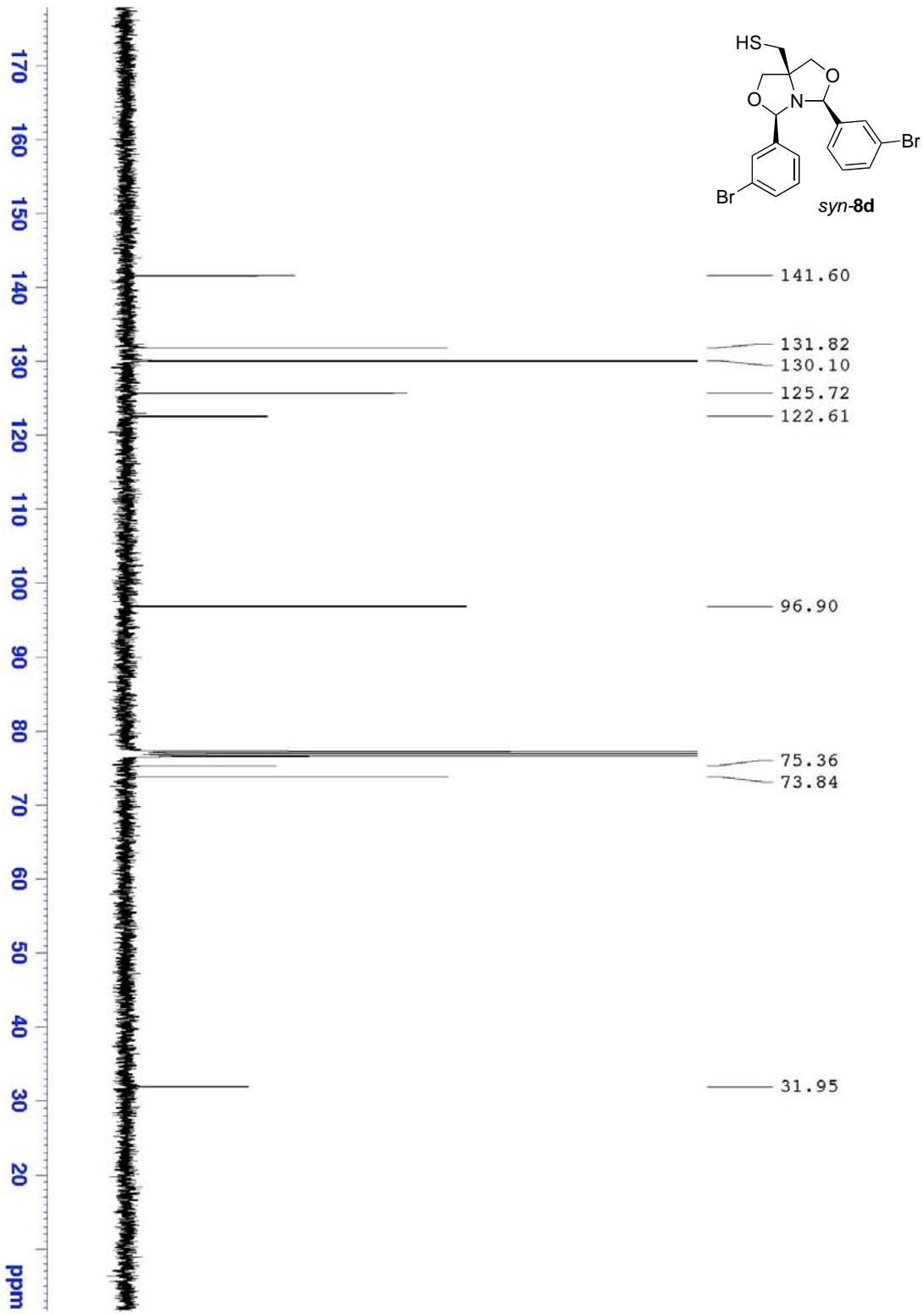
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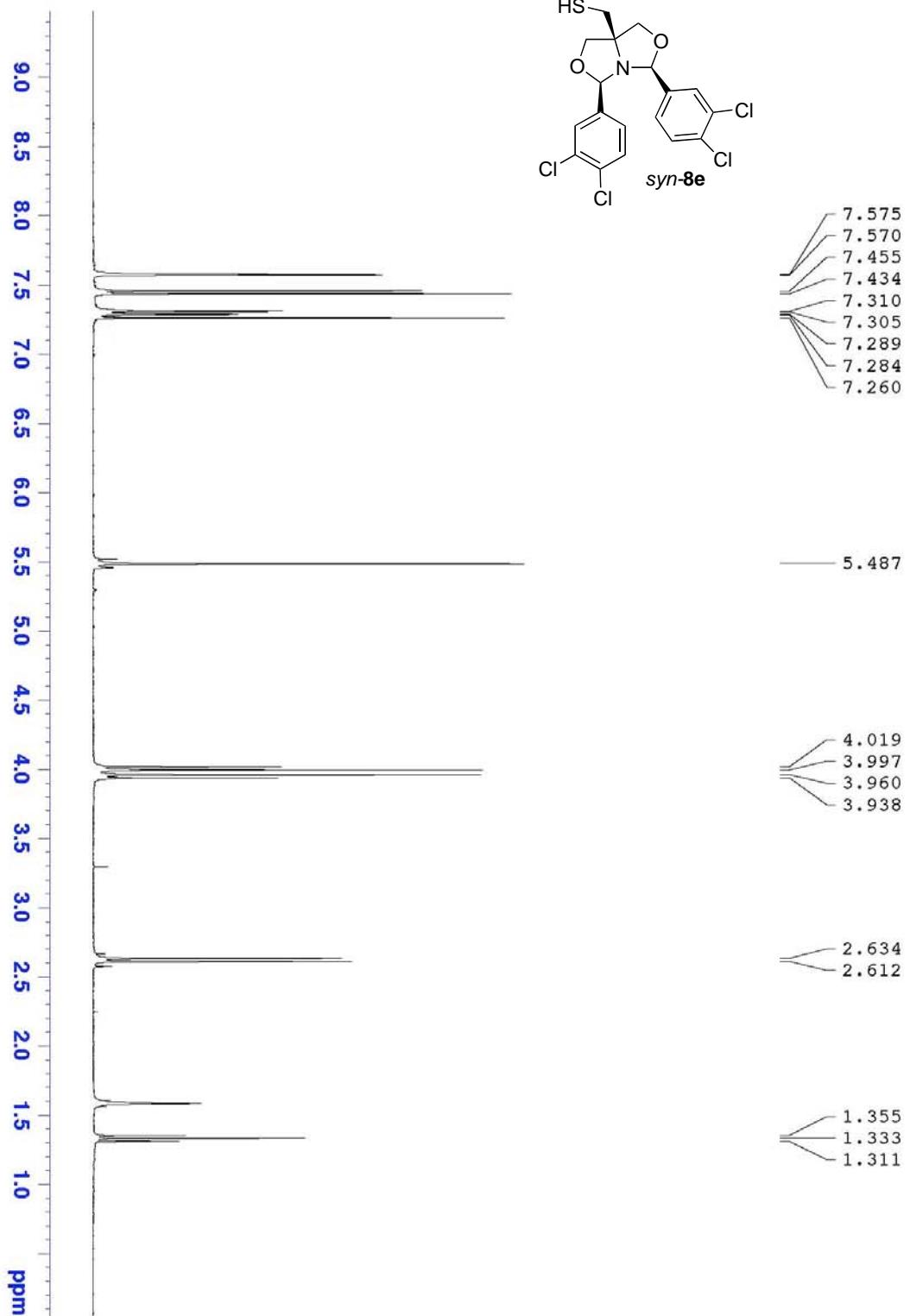
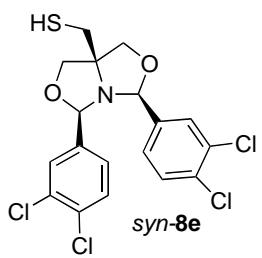


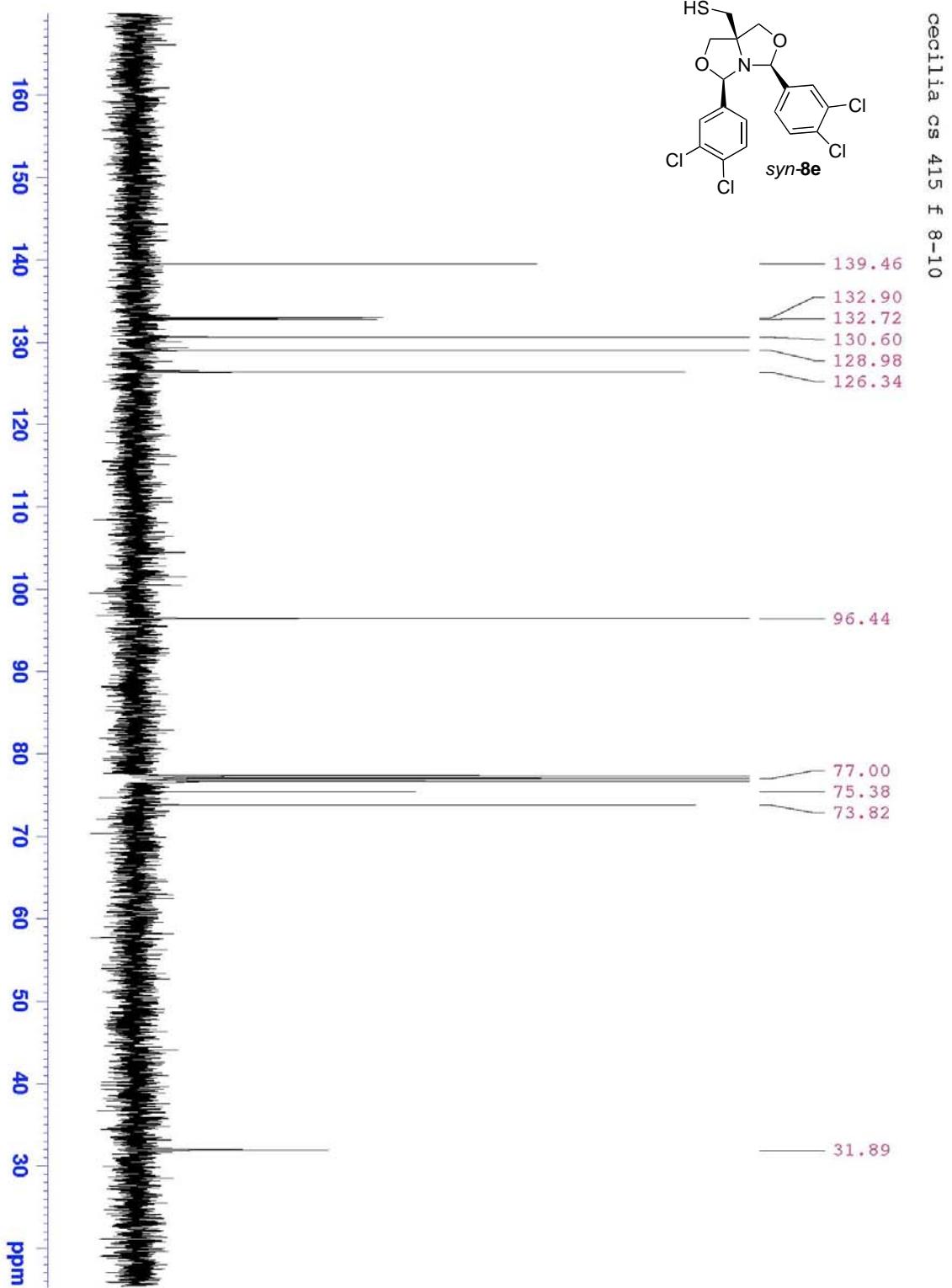
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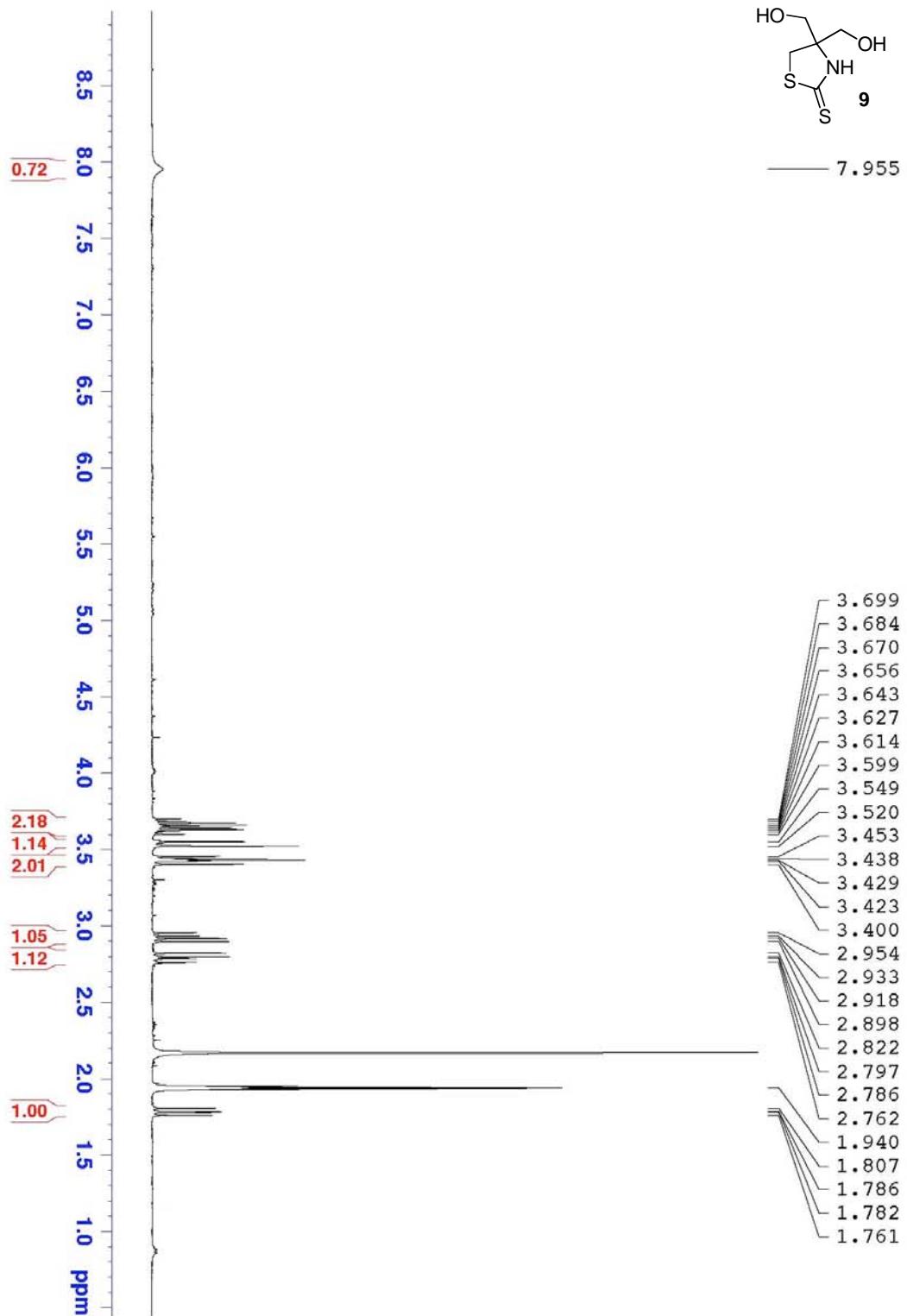


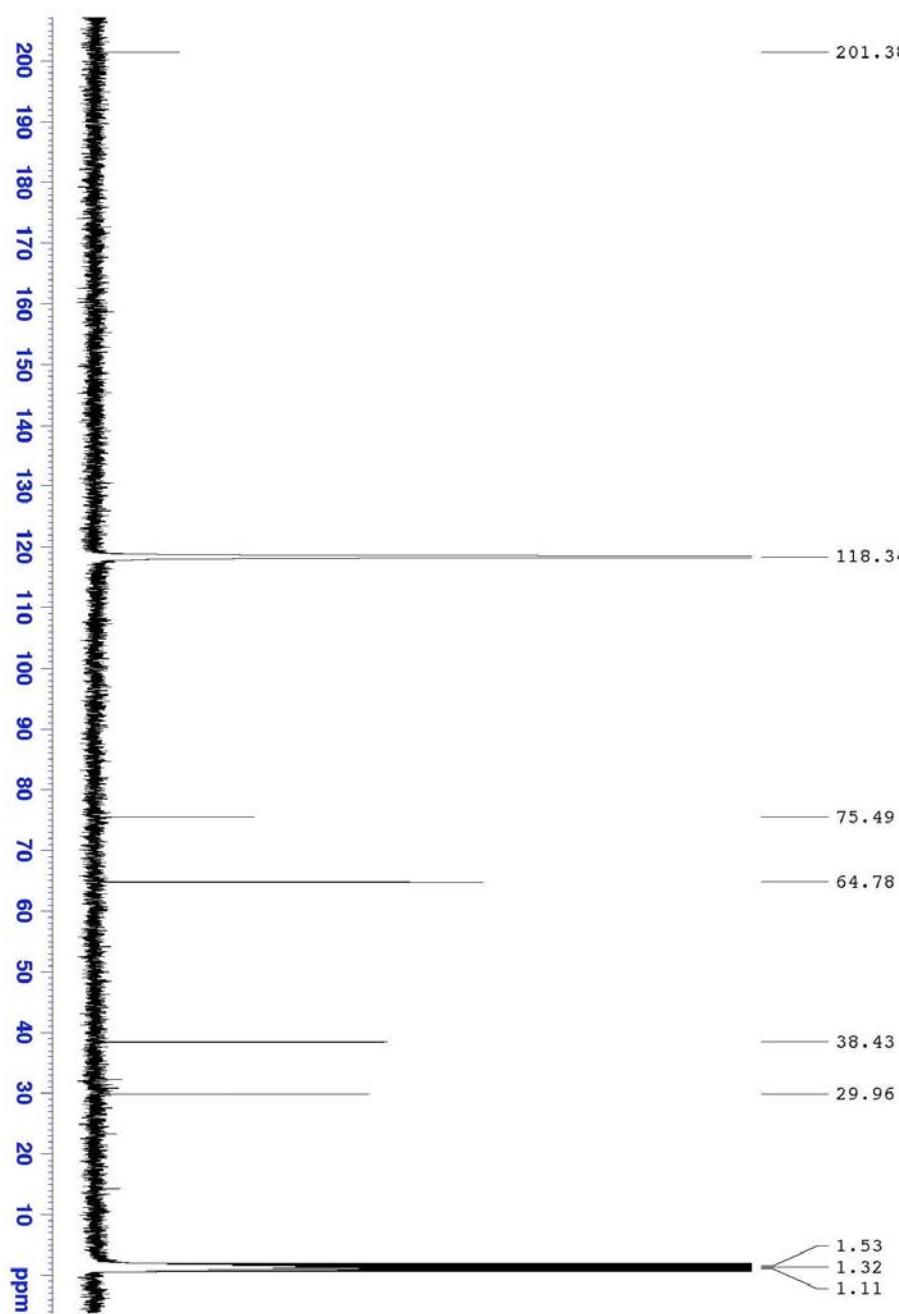


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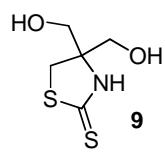






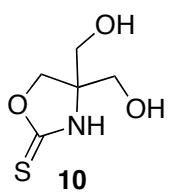


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Cecilia cs 268 ultimas F

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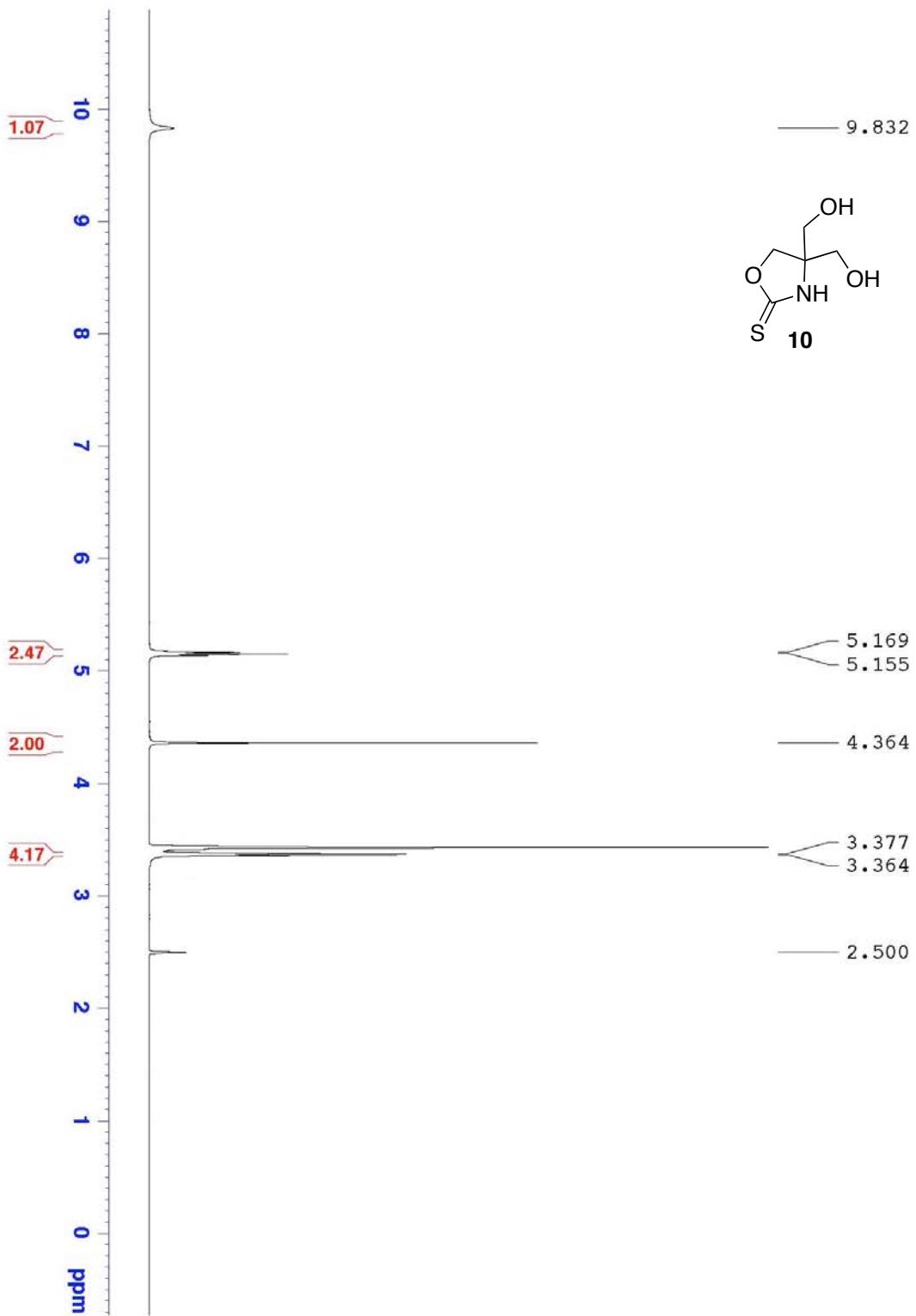


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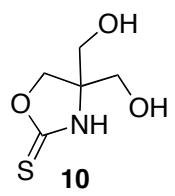
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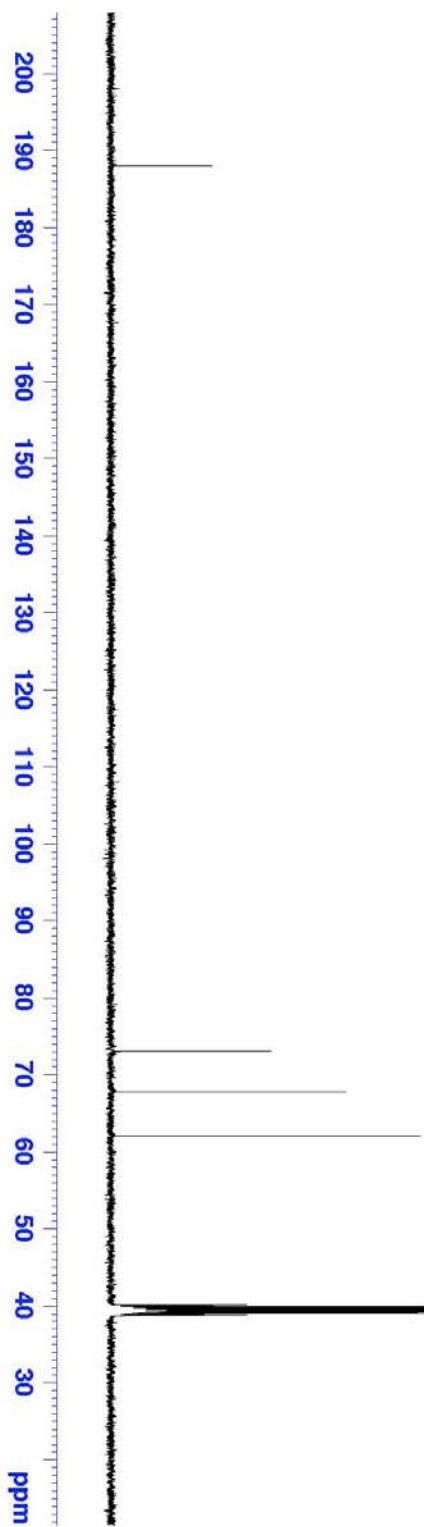
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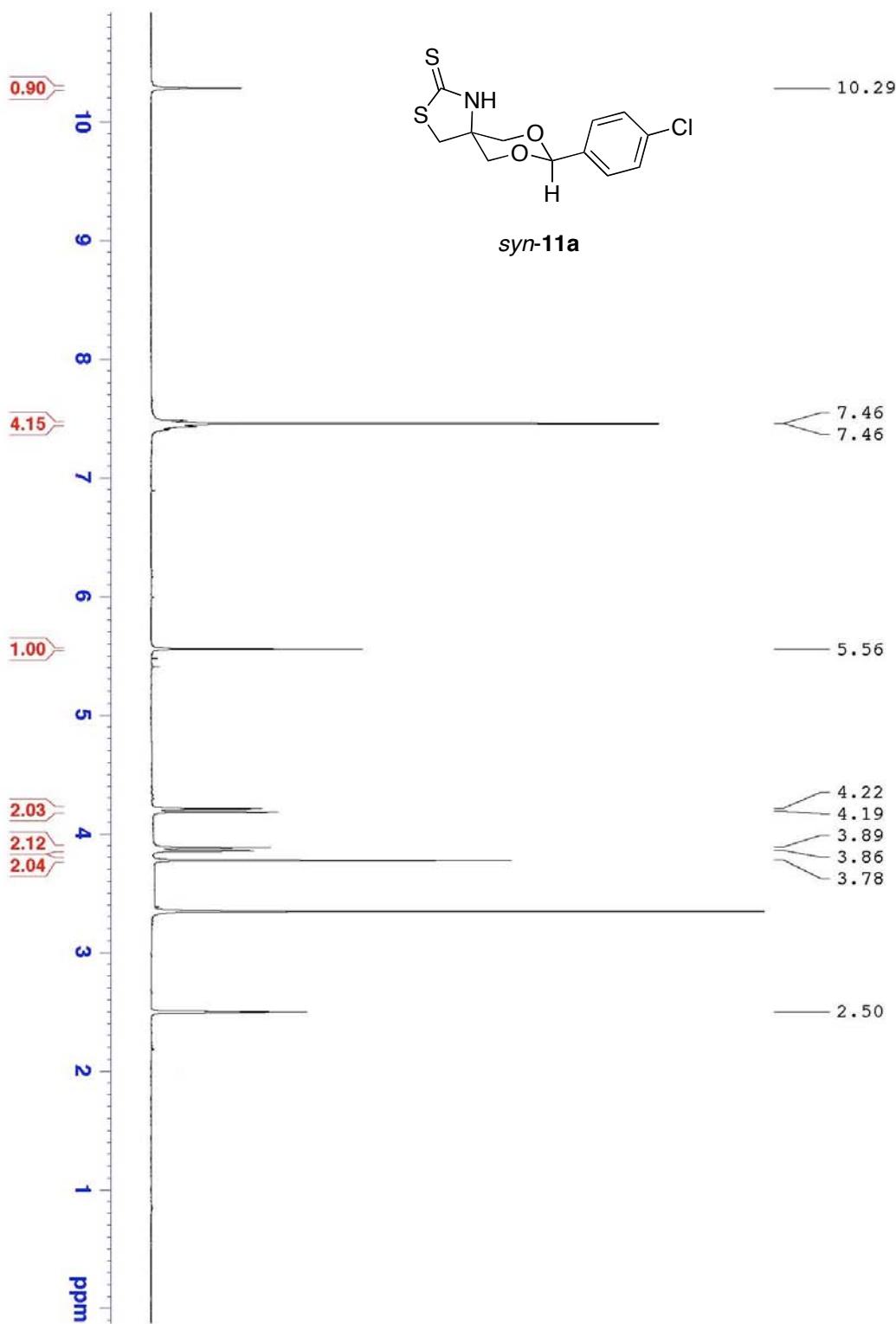
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62.08

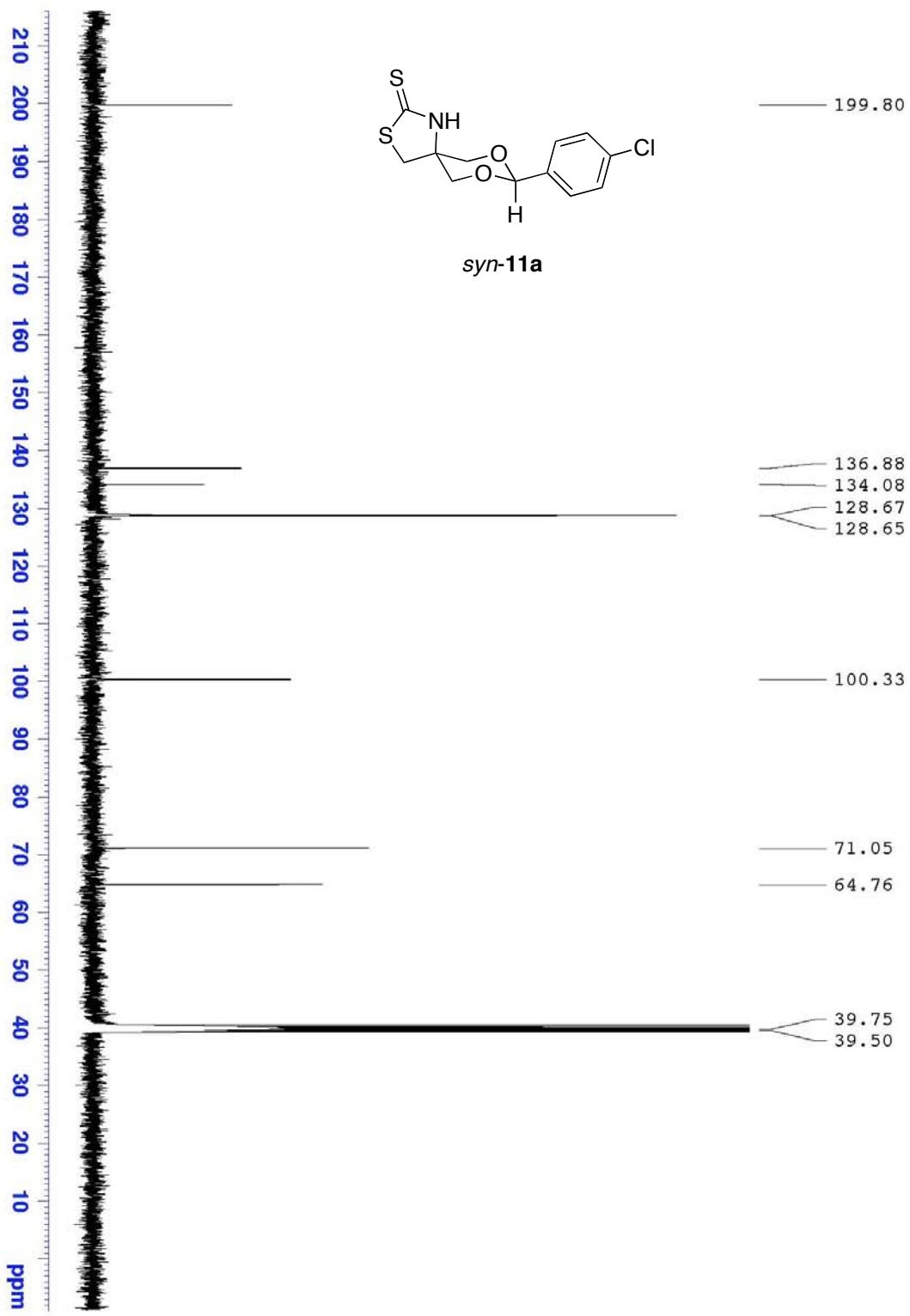
39.50



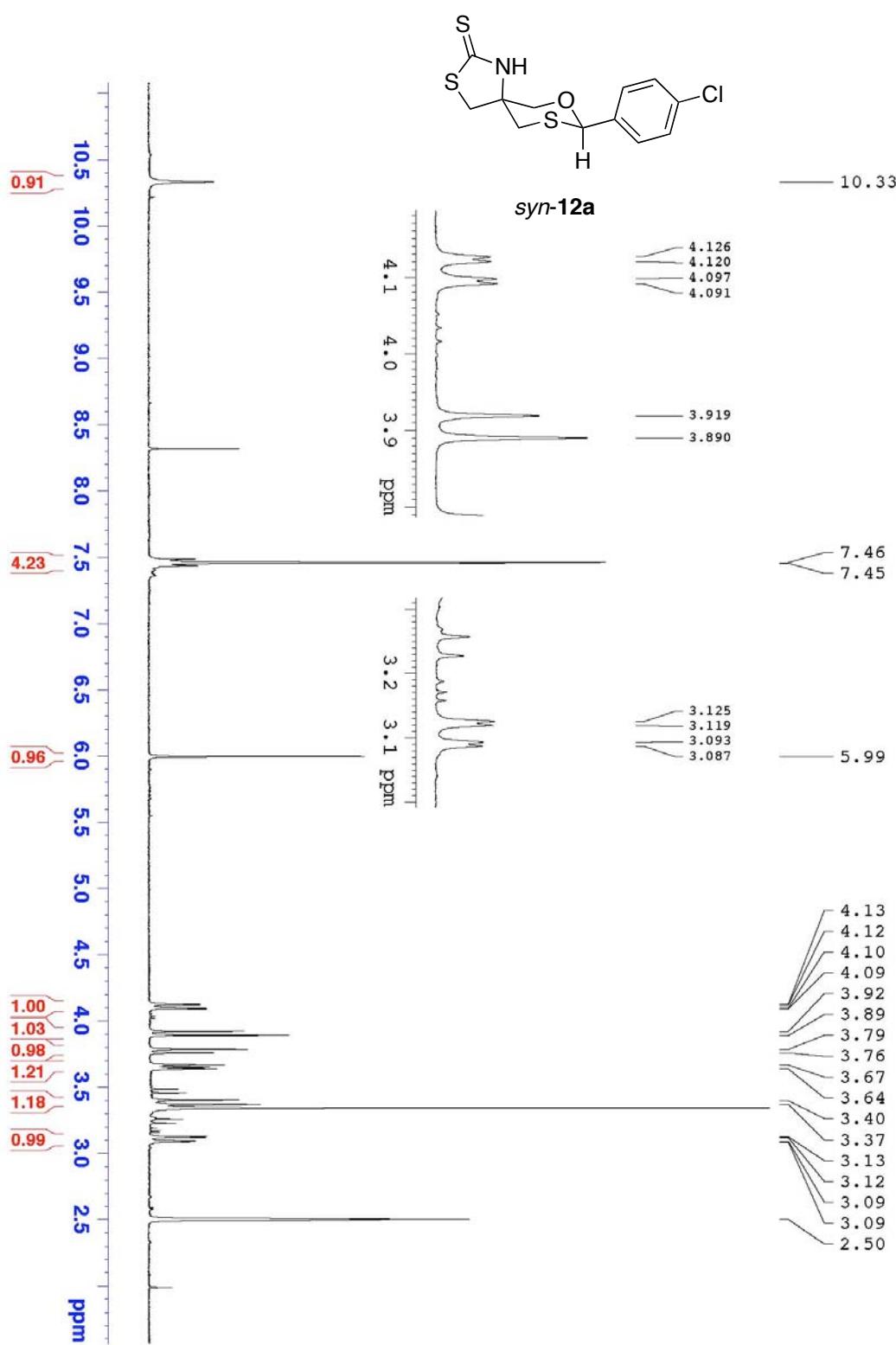
cecilia CS 285 F18-21

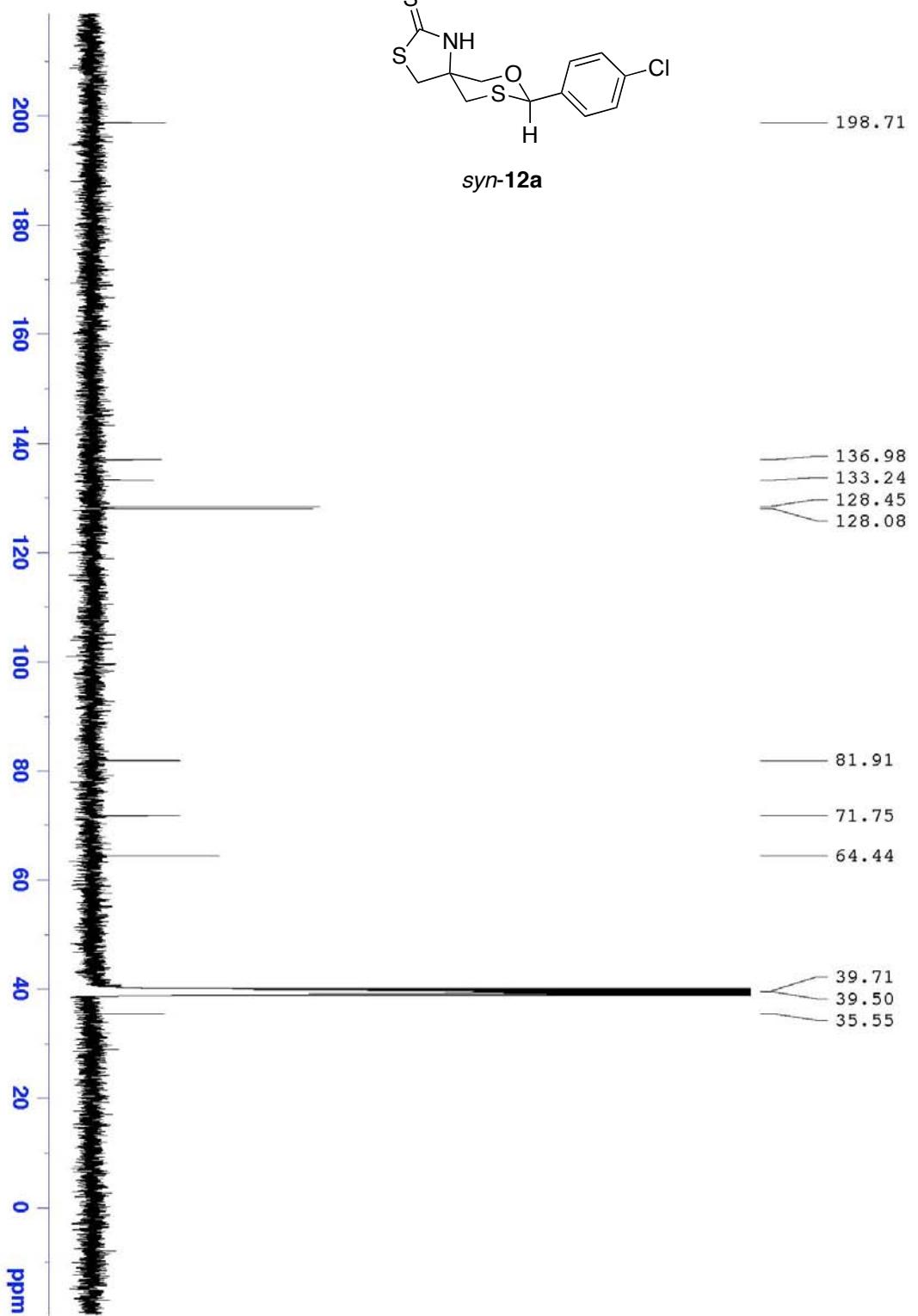


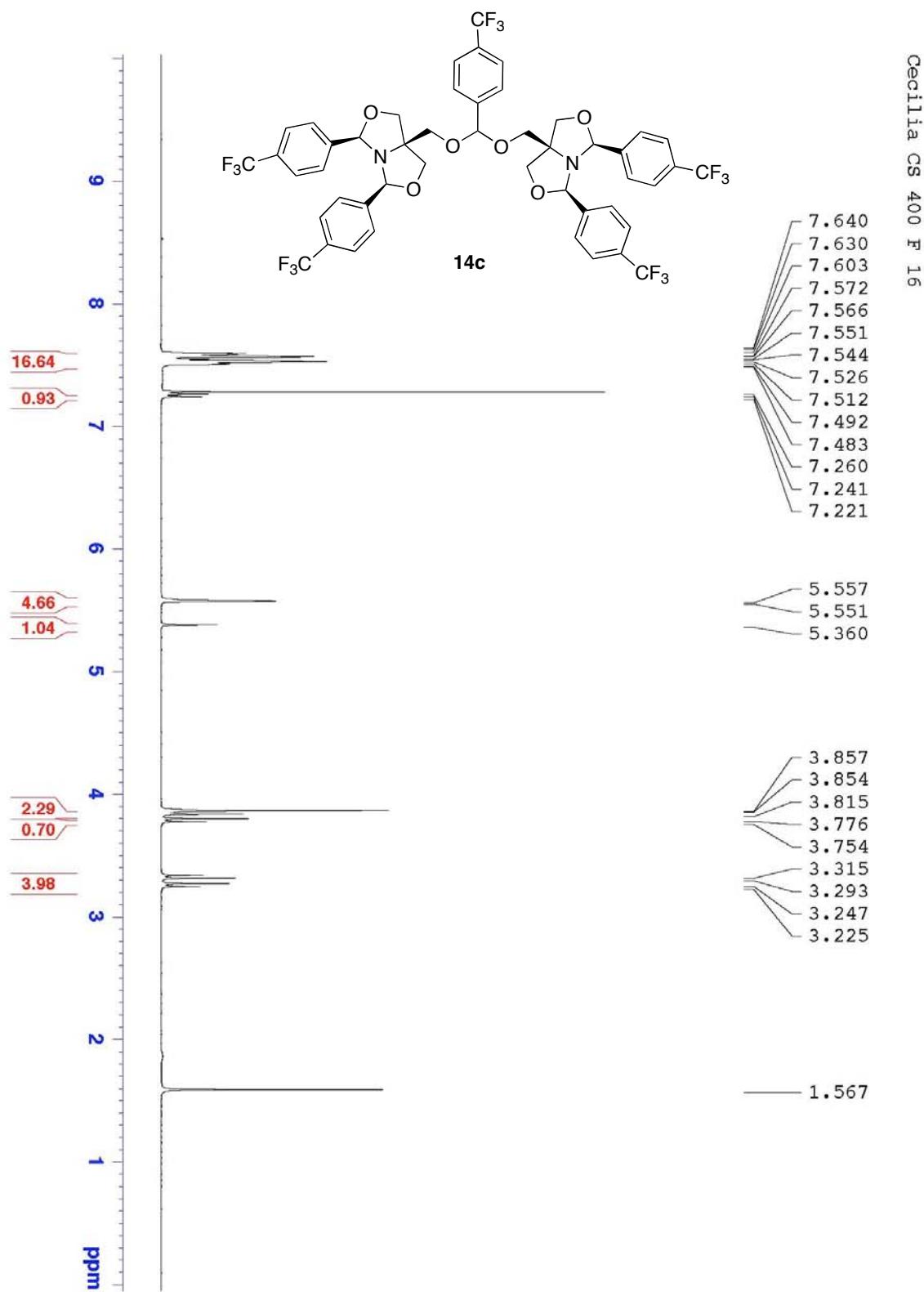
Cecilia CS 285 F18-21



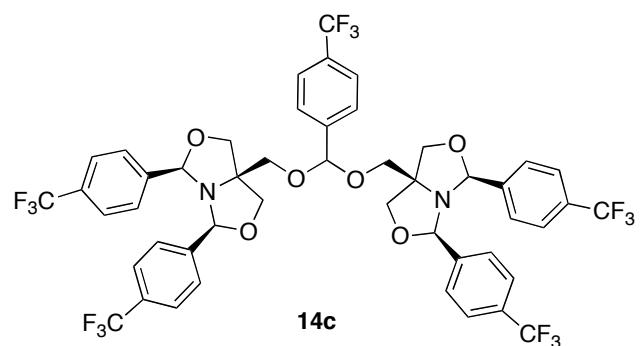
Cecilia CS 284 F10-18







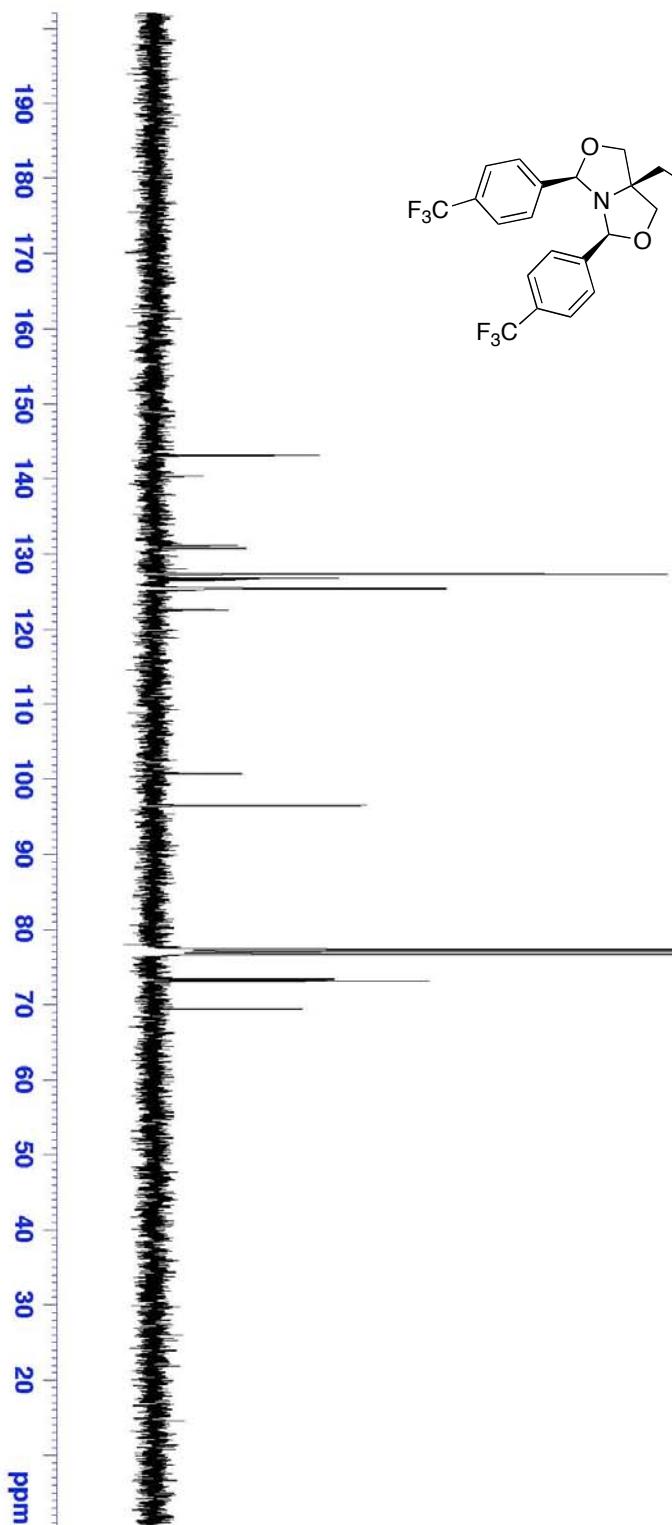
Cecilia CS 400 F 16



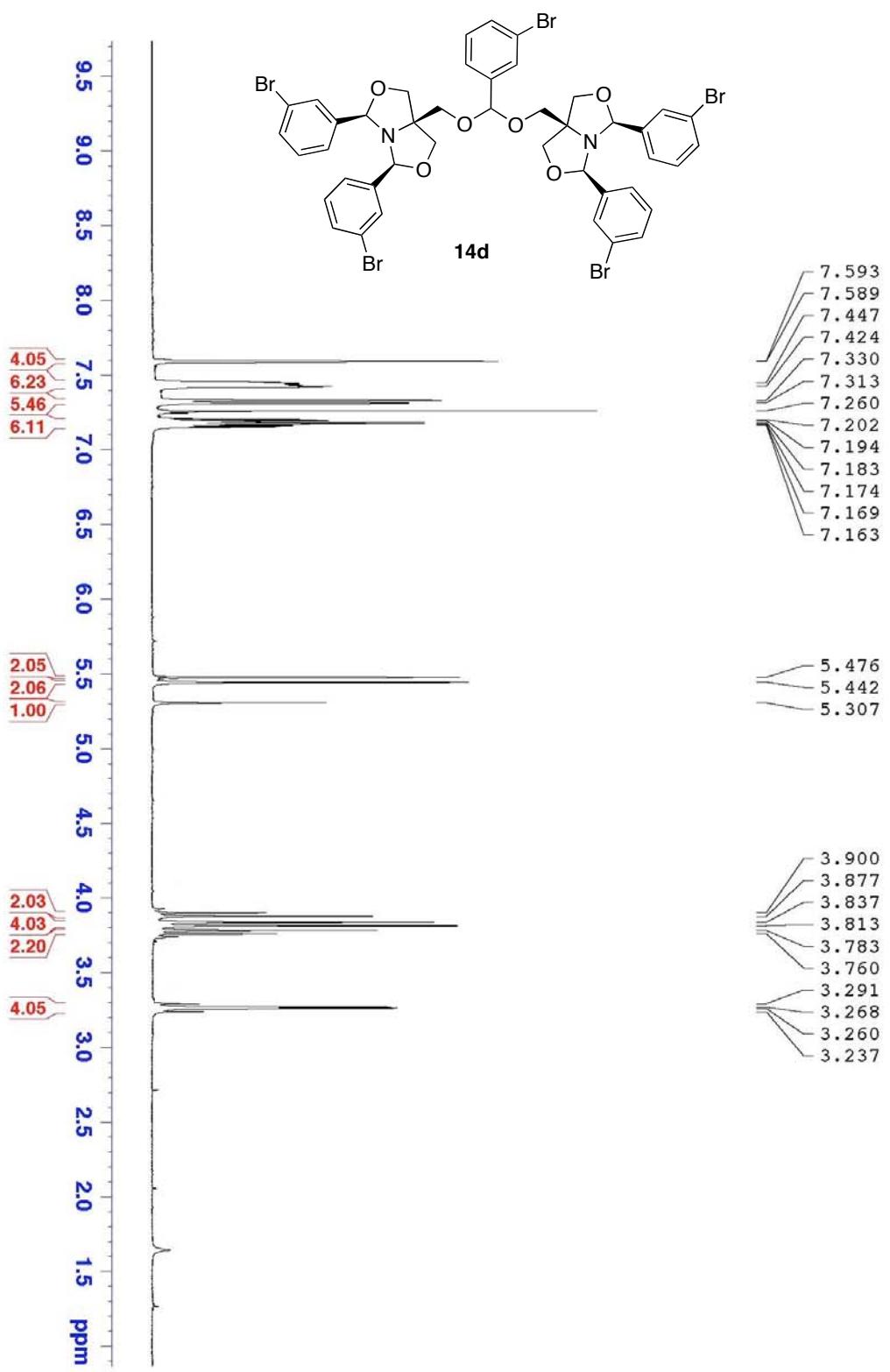
143.08
140.32
131.09
130.77
127.31
127.26
126.72
126.53
126.42
125.53
125.42
125.38
125.35
125.31
125.26
122.55
100.70
96.46
96.39

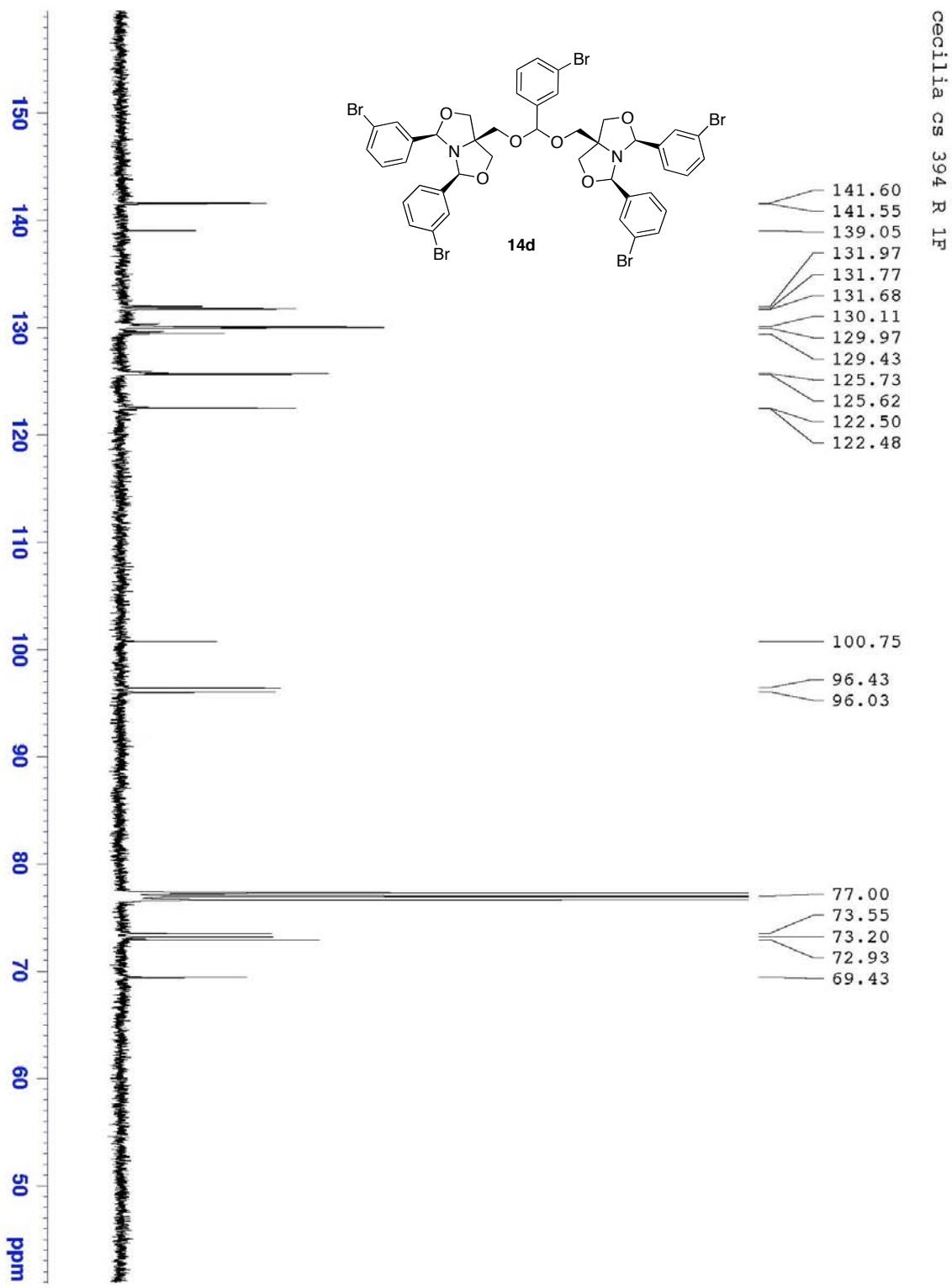
  

77.32
77.00
76.69
73.33
73.20
73.04
69.39

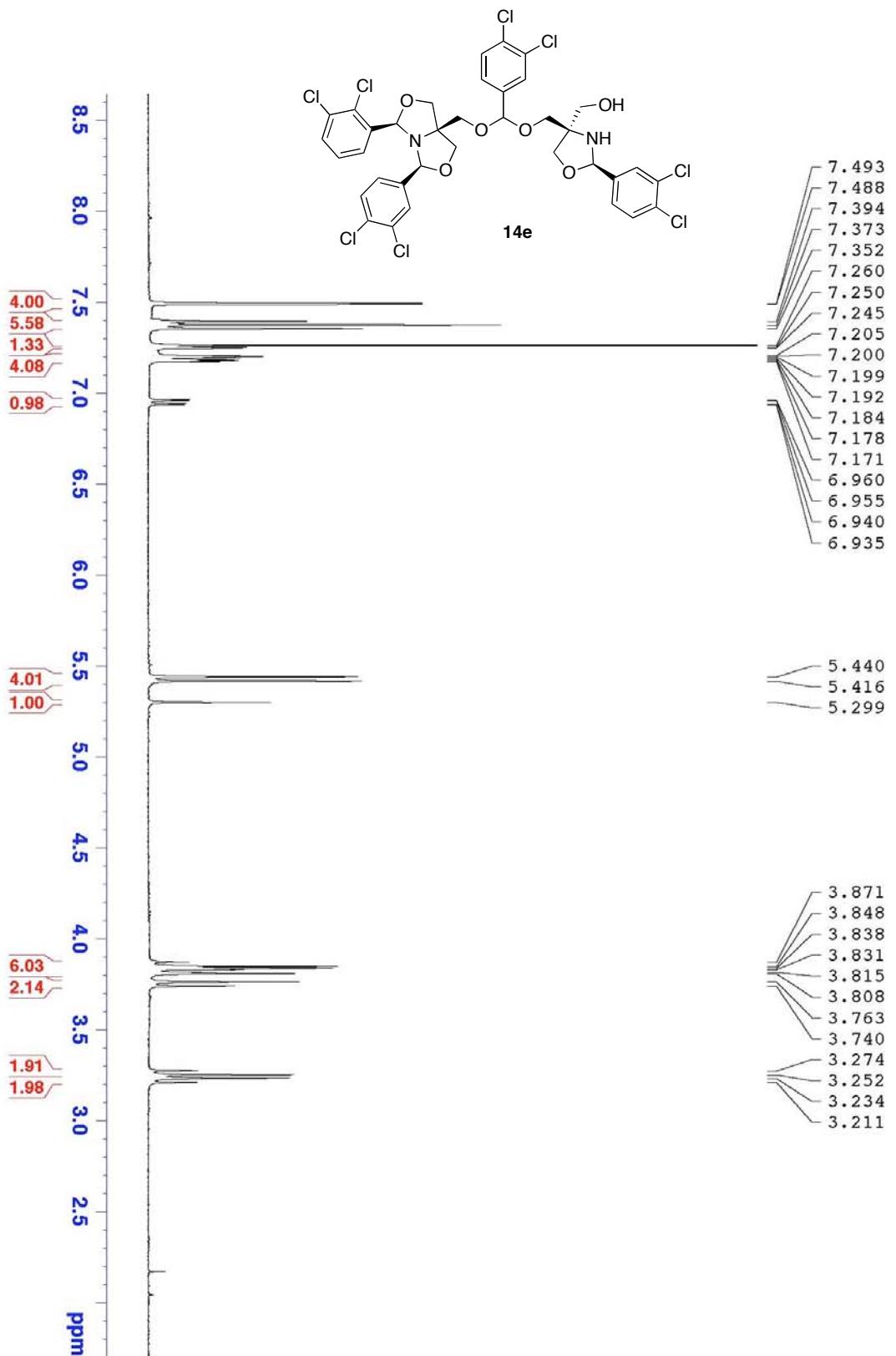


Cecilia cs 412 F8-rep

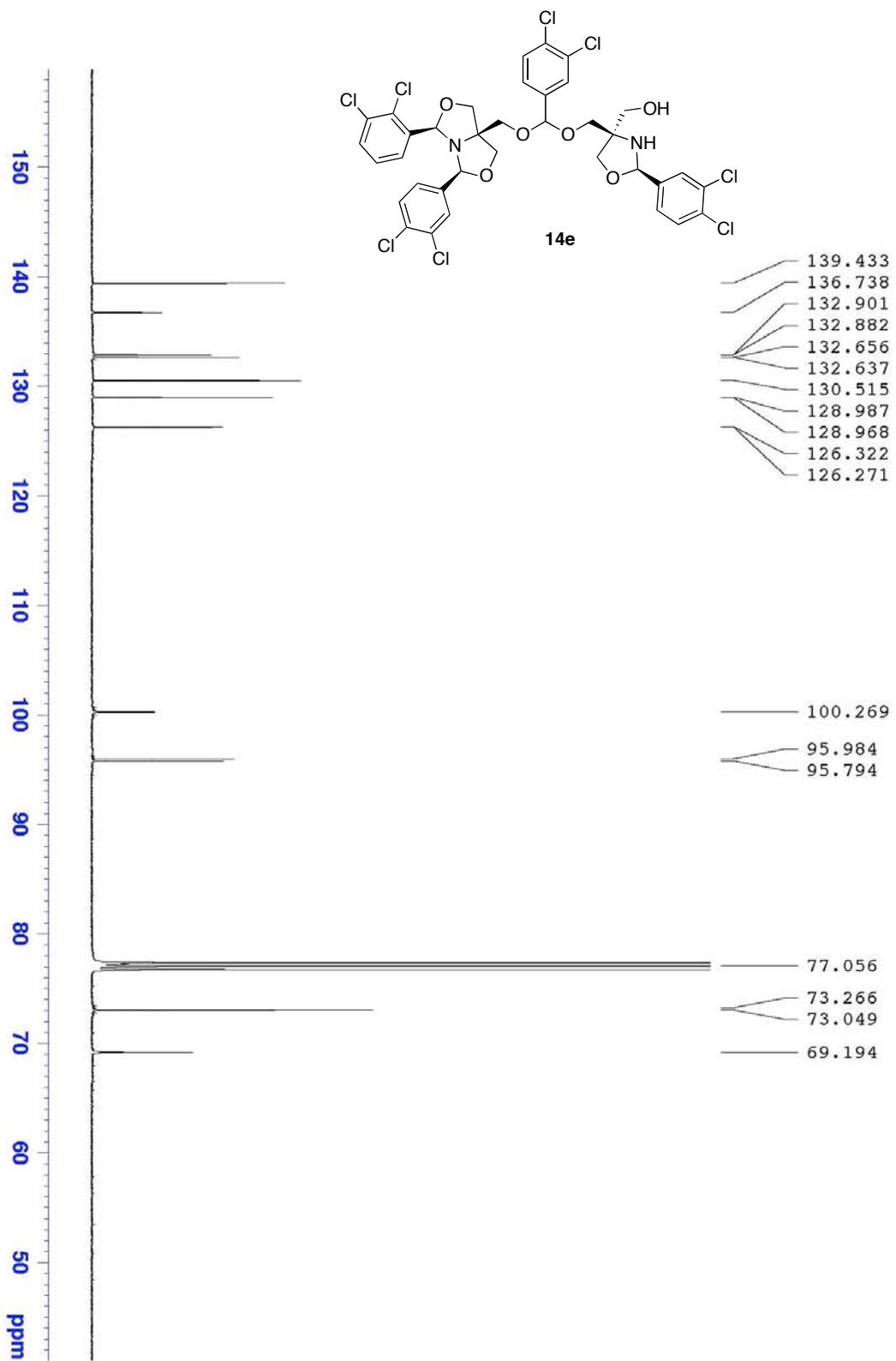




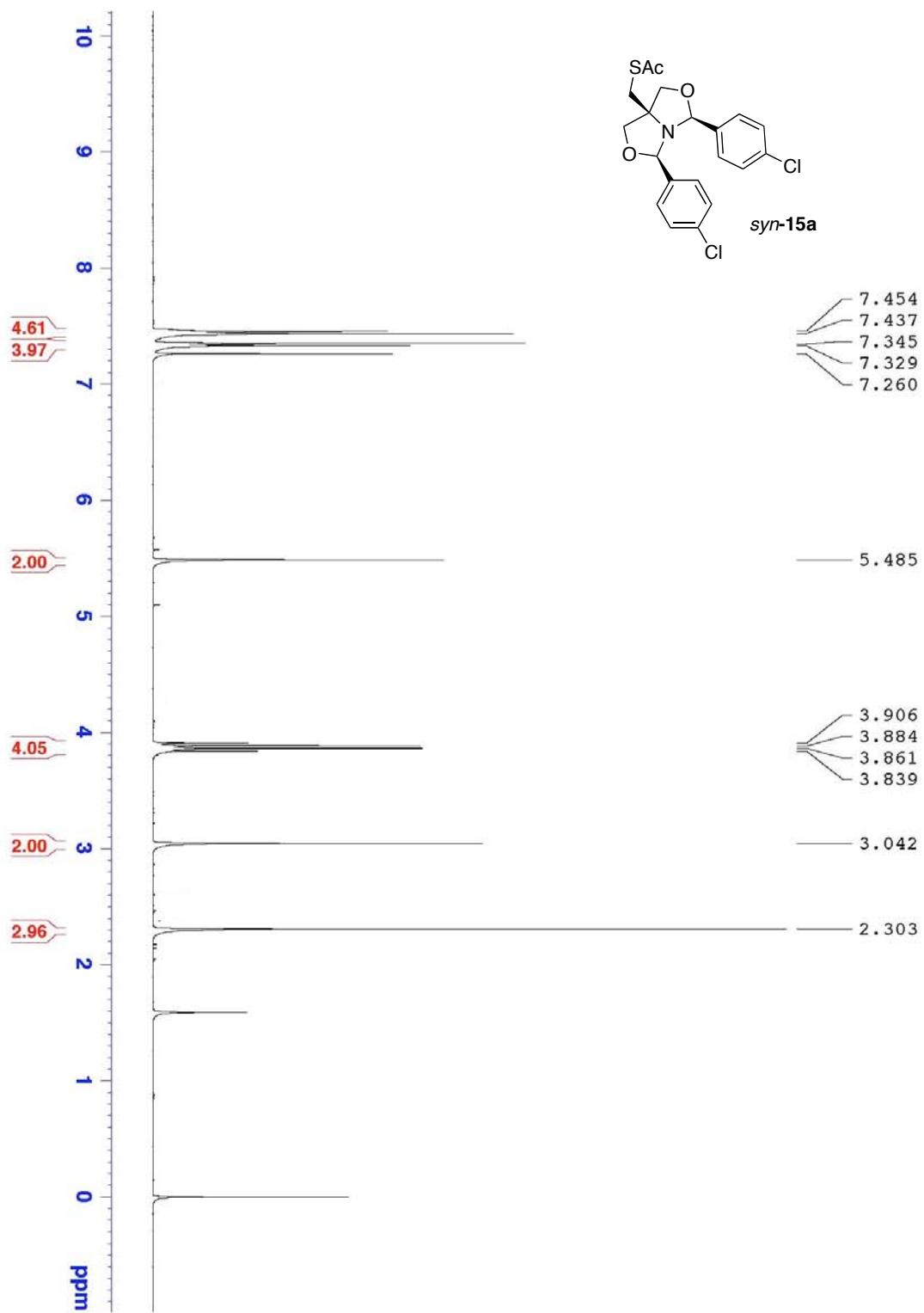
Cecilia CS 350 F1 prep 1



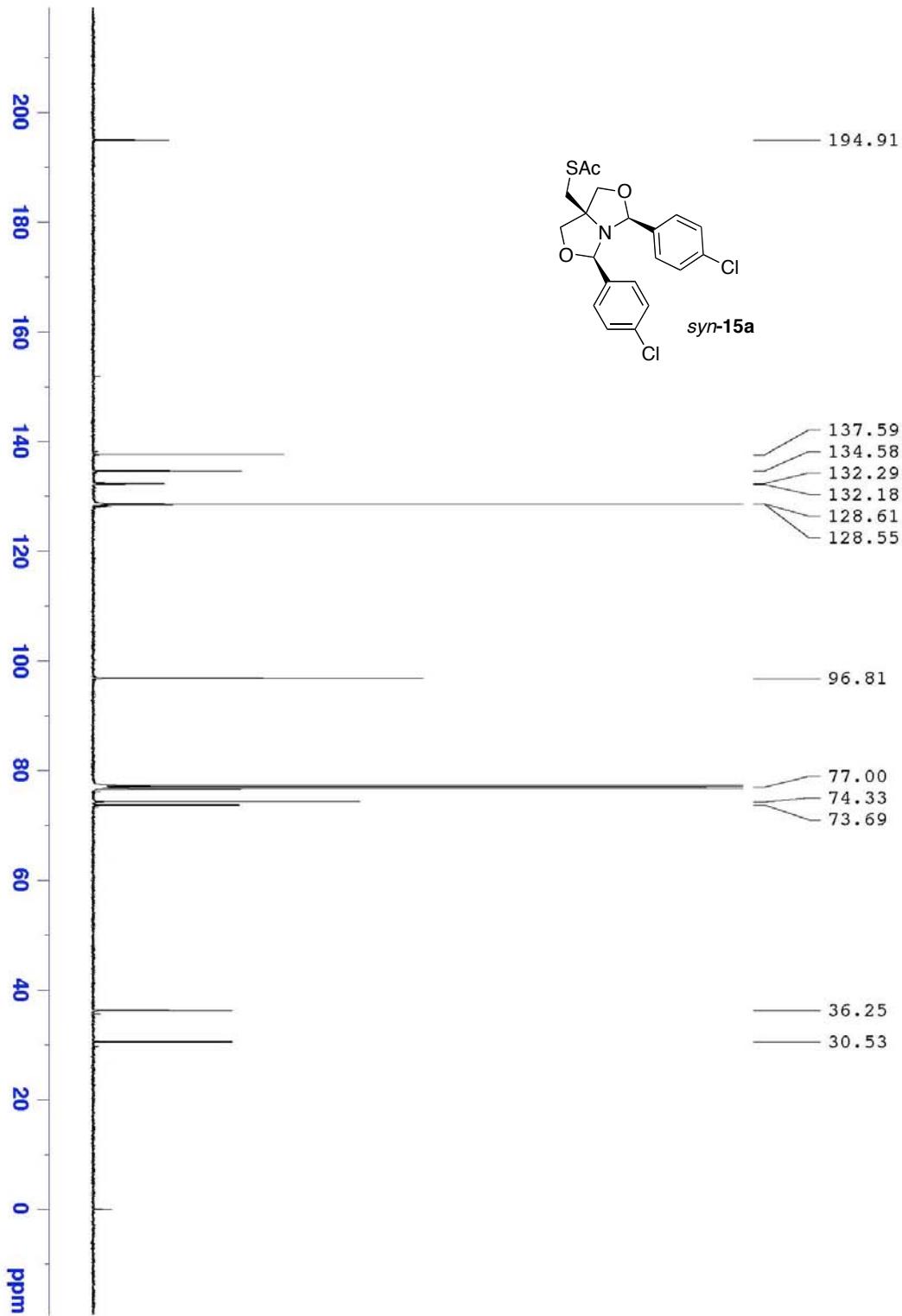
Cecilia CS 350 1F



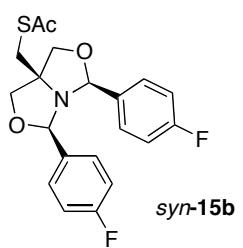
Cecilia CS339 F14-20



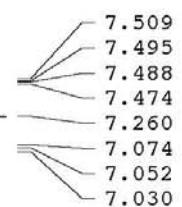
Cecilia CS339 F14-20



Cecilia CS 374 F1

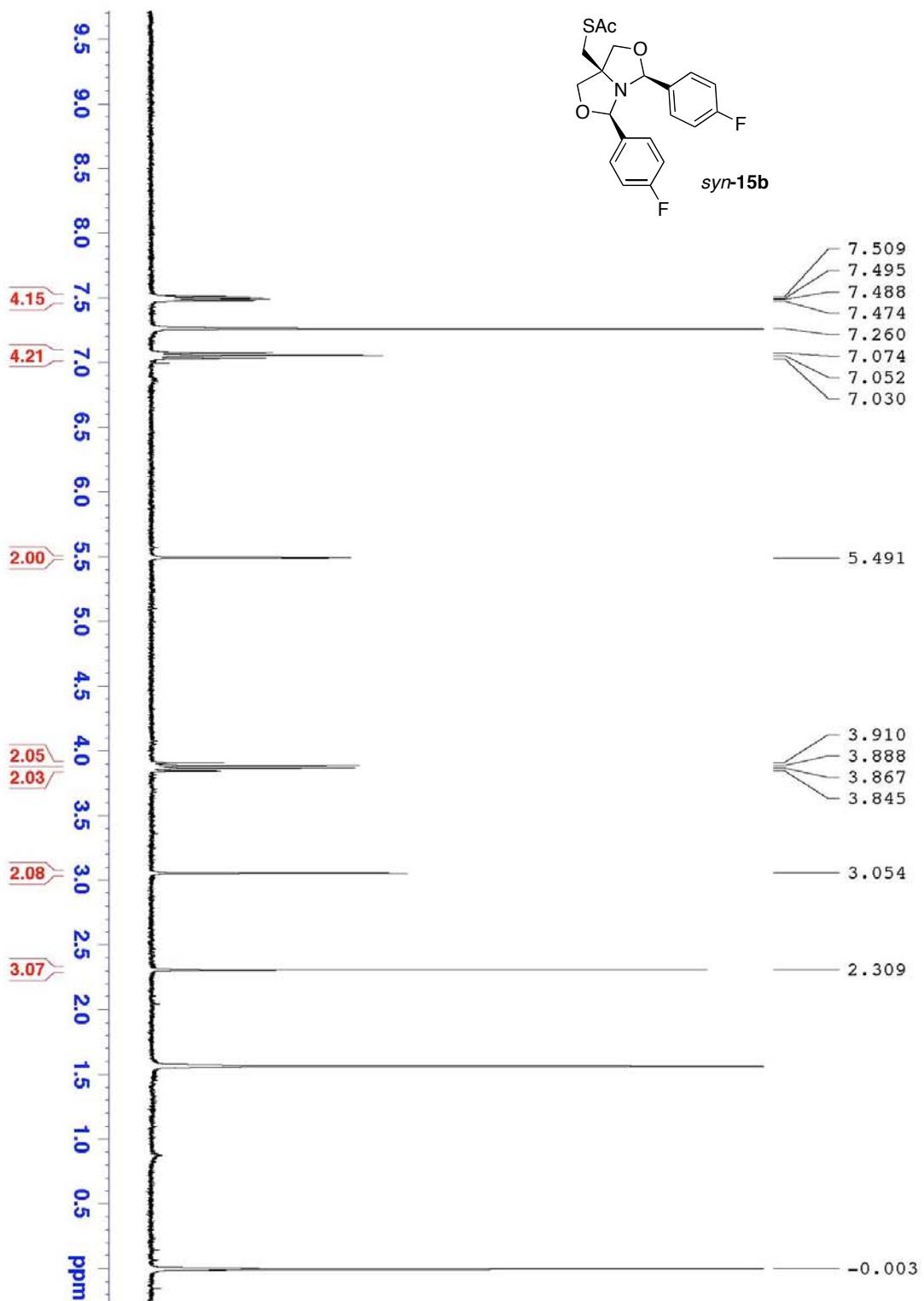


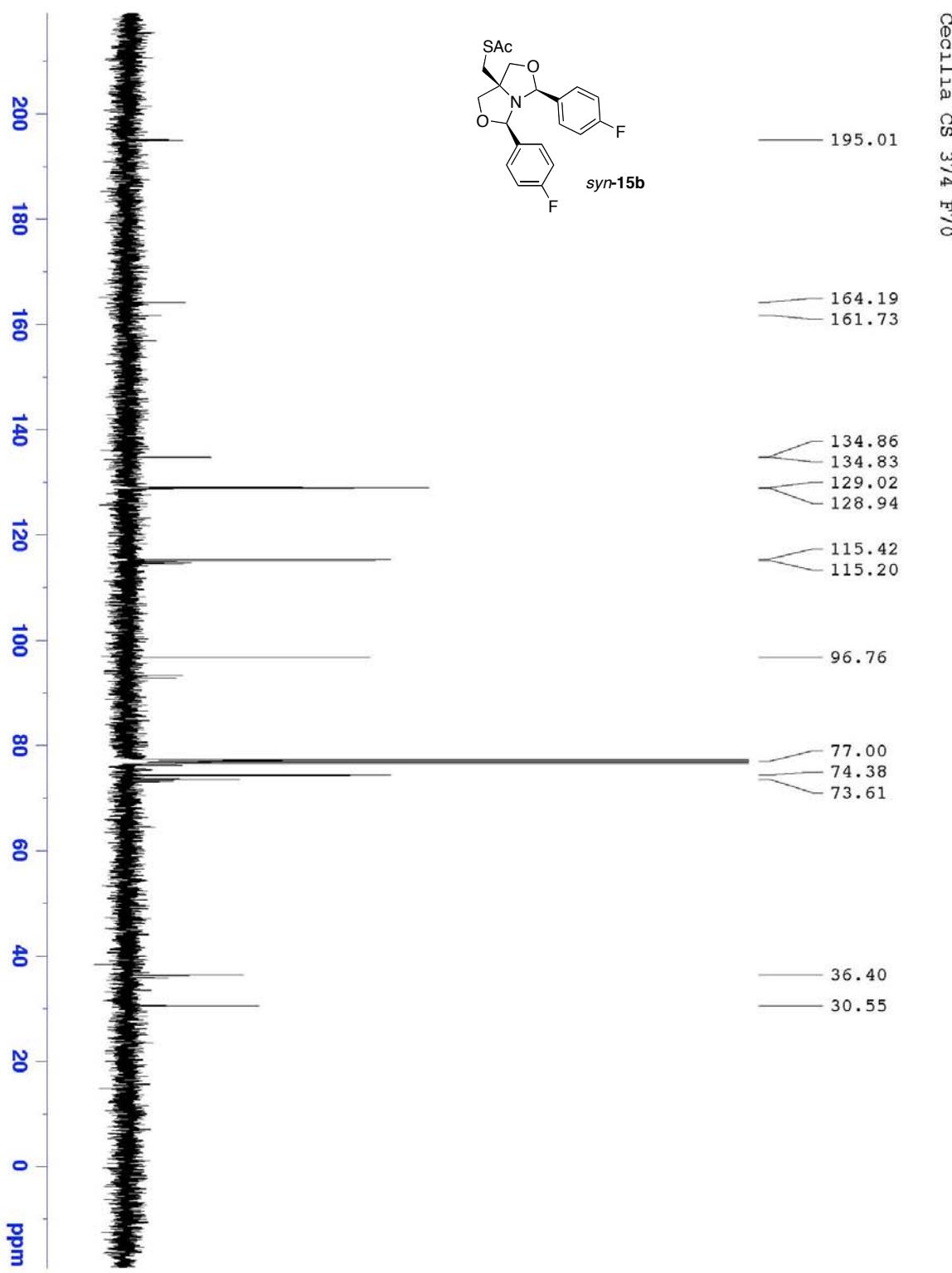
*syn*-15b



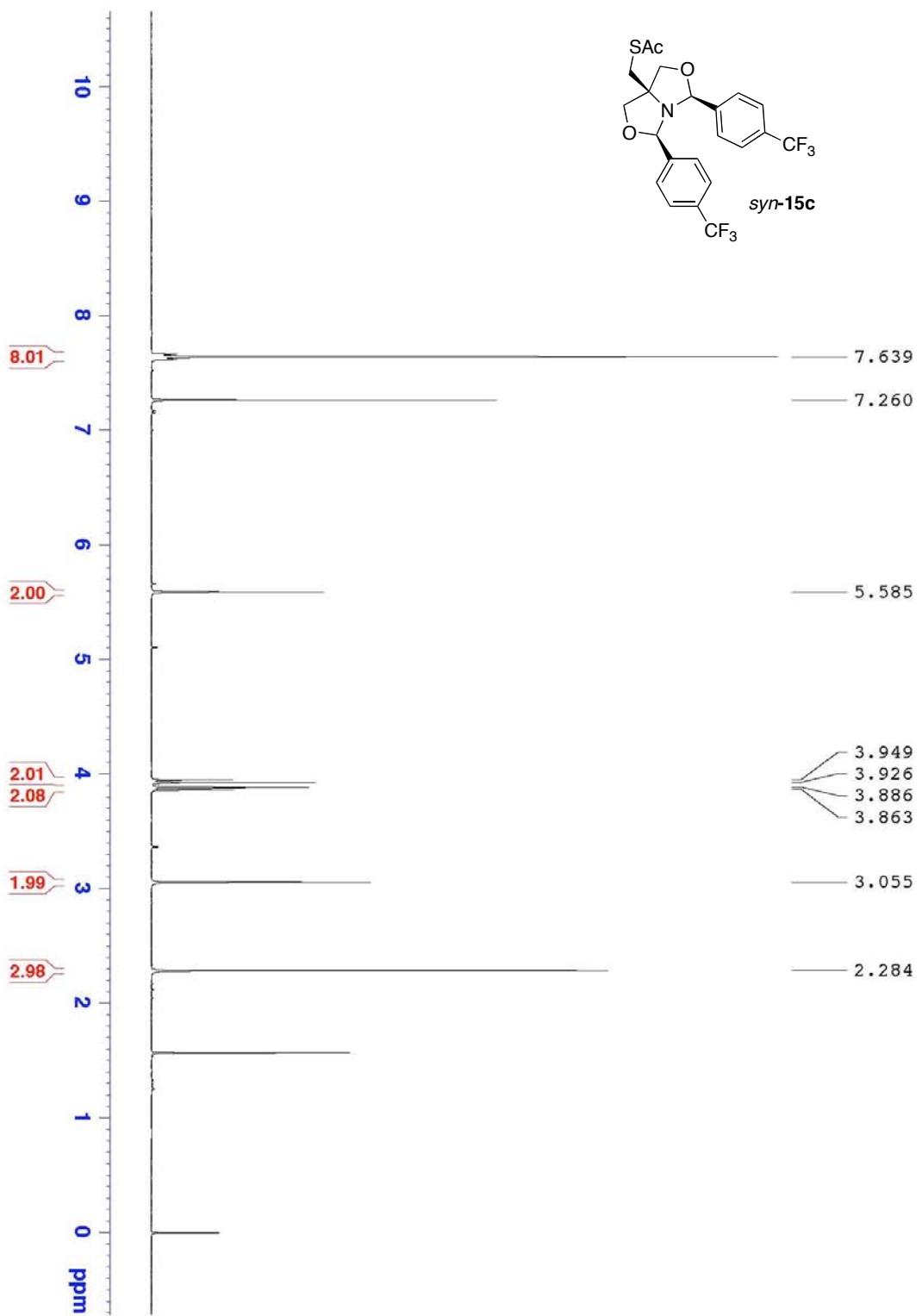
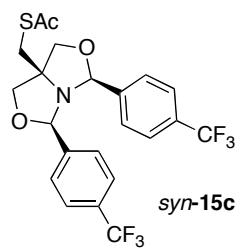
Peak assignments for the aromatic protons of *syn*-15b:

- 7.509
- 7.495
- 7.488
- 7.474
- 7.260
- 7.074
- 7.052
- 7.030

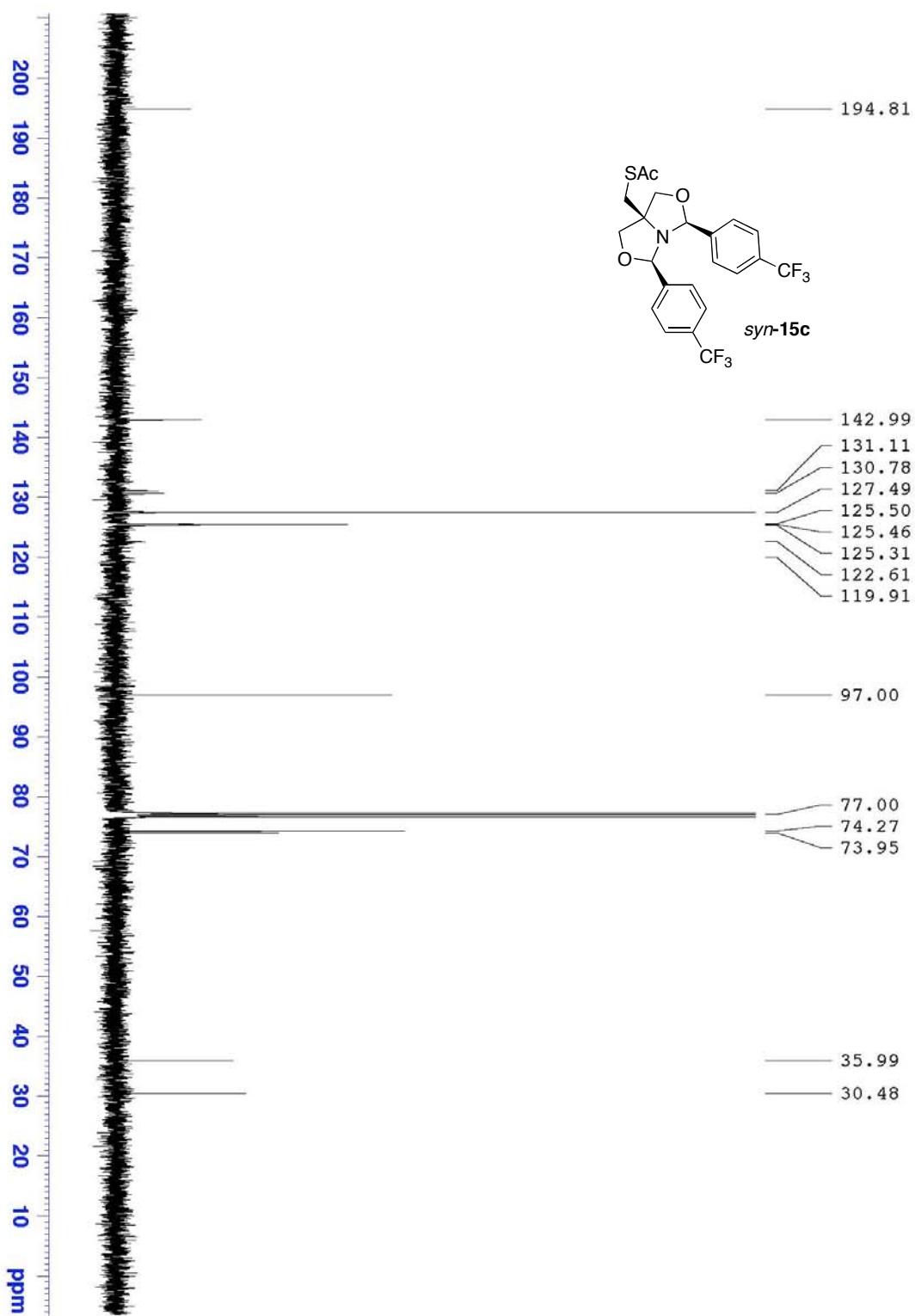




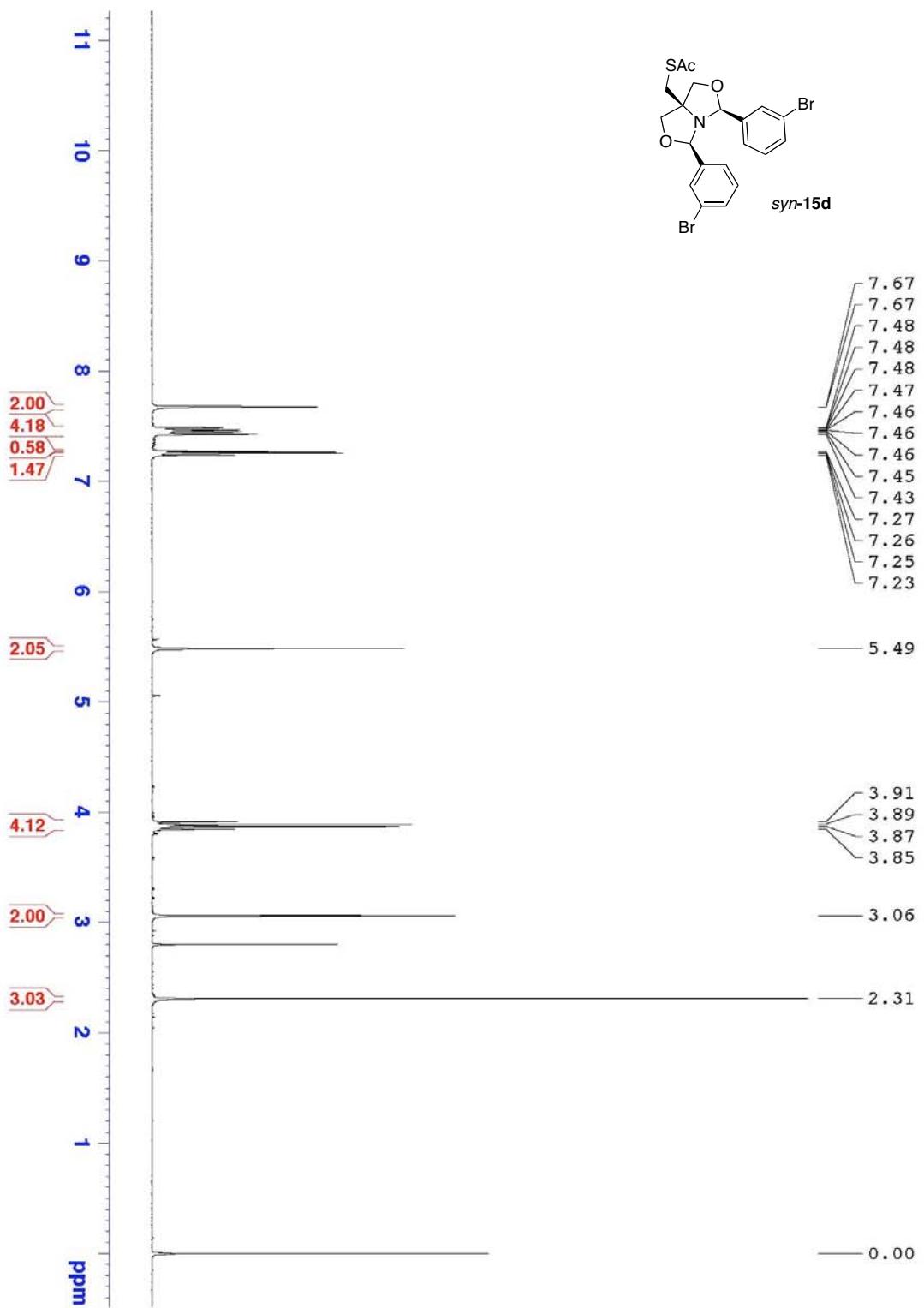
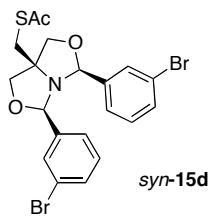
Cecilia CS363 F39-70



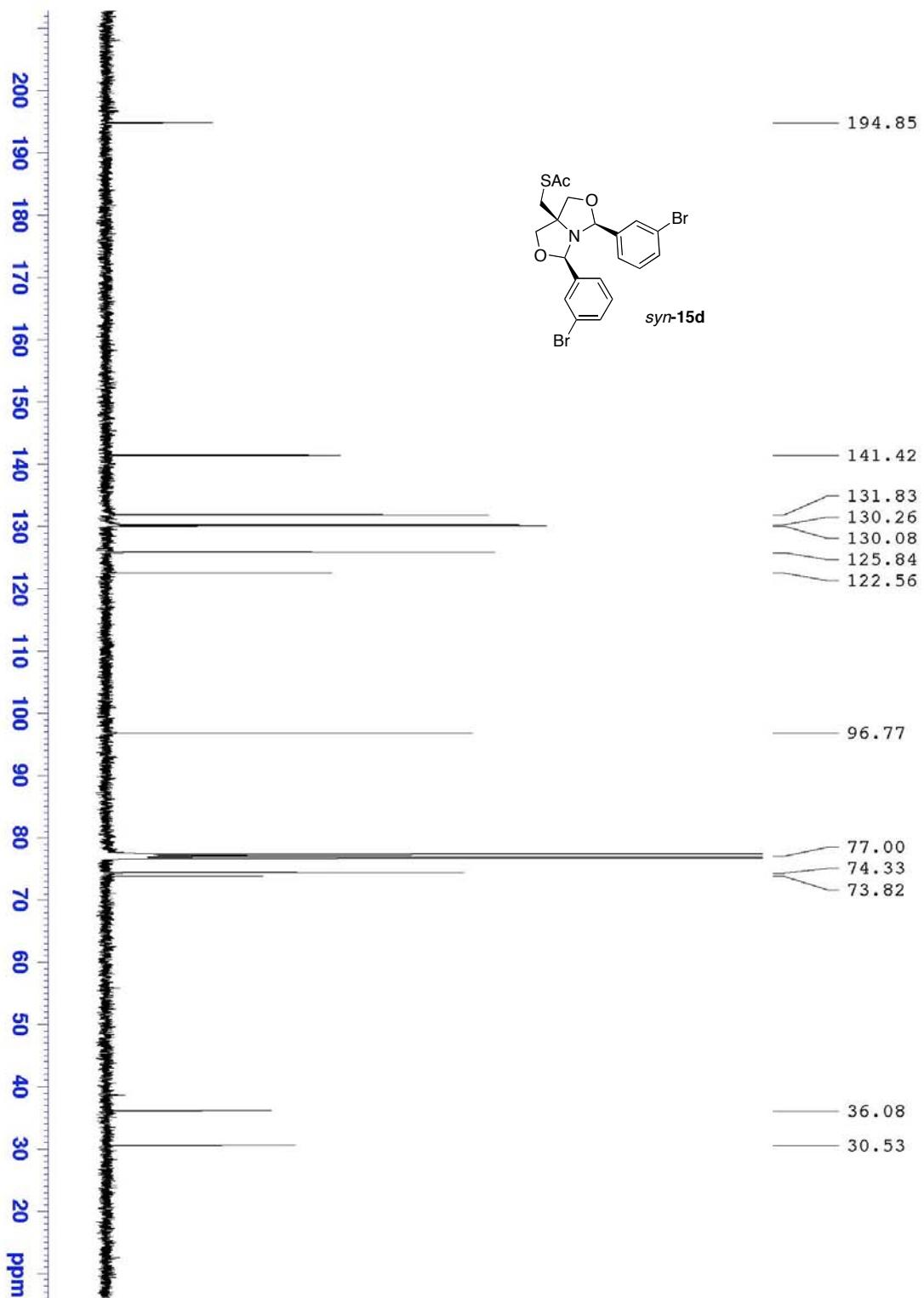
Cecilia CS363 F39-70



Cecilia CS 357 puro



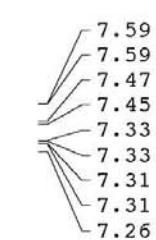
Cecilia CS 357 puro



Cecilia CS 351 F50

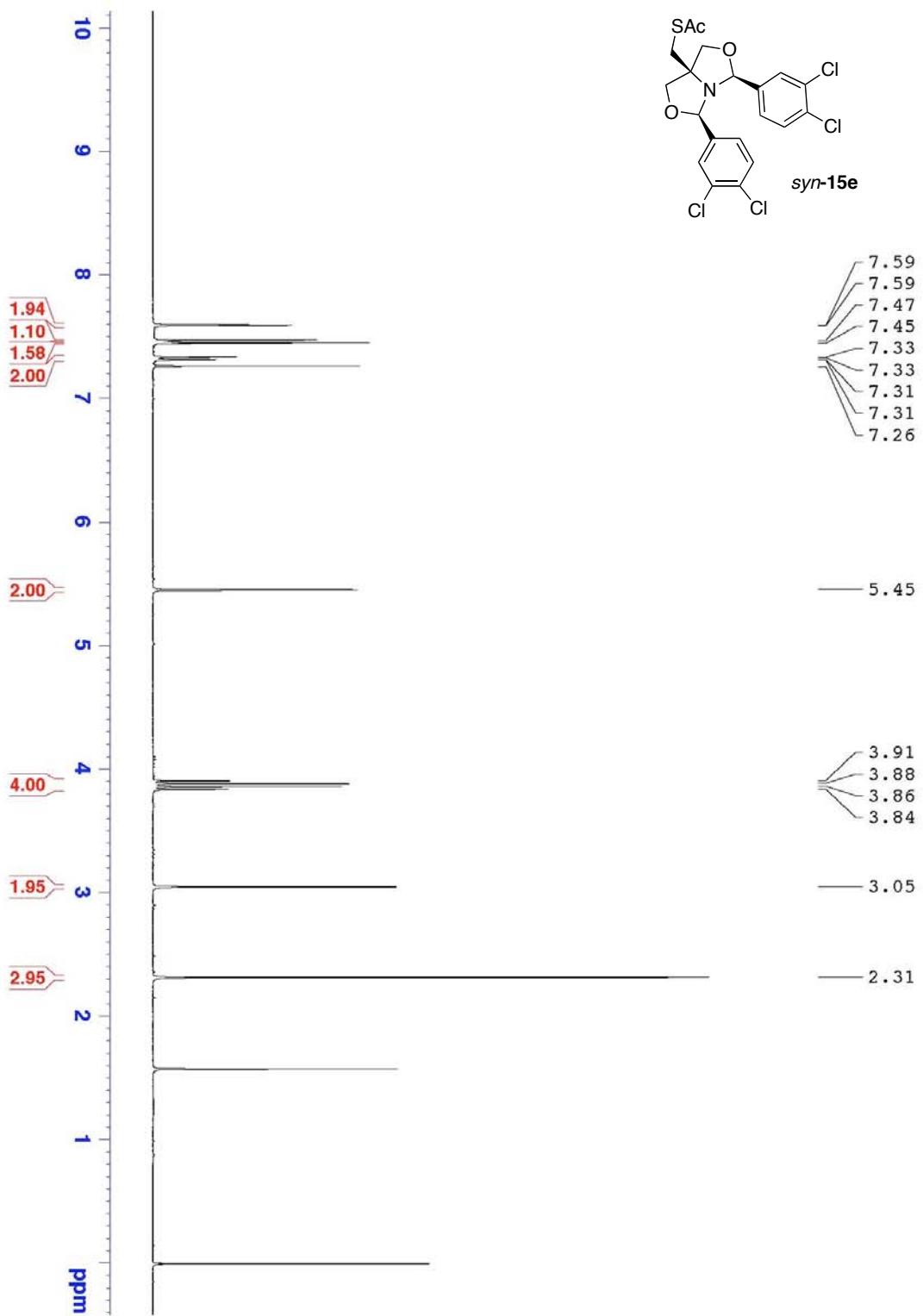


*syn*-15e

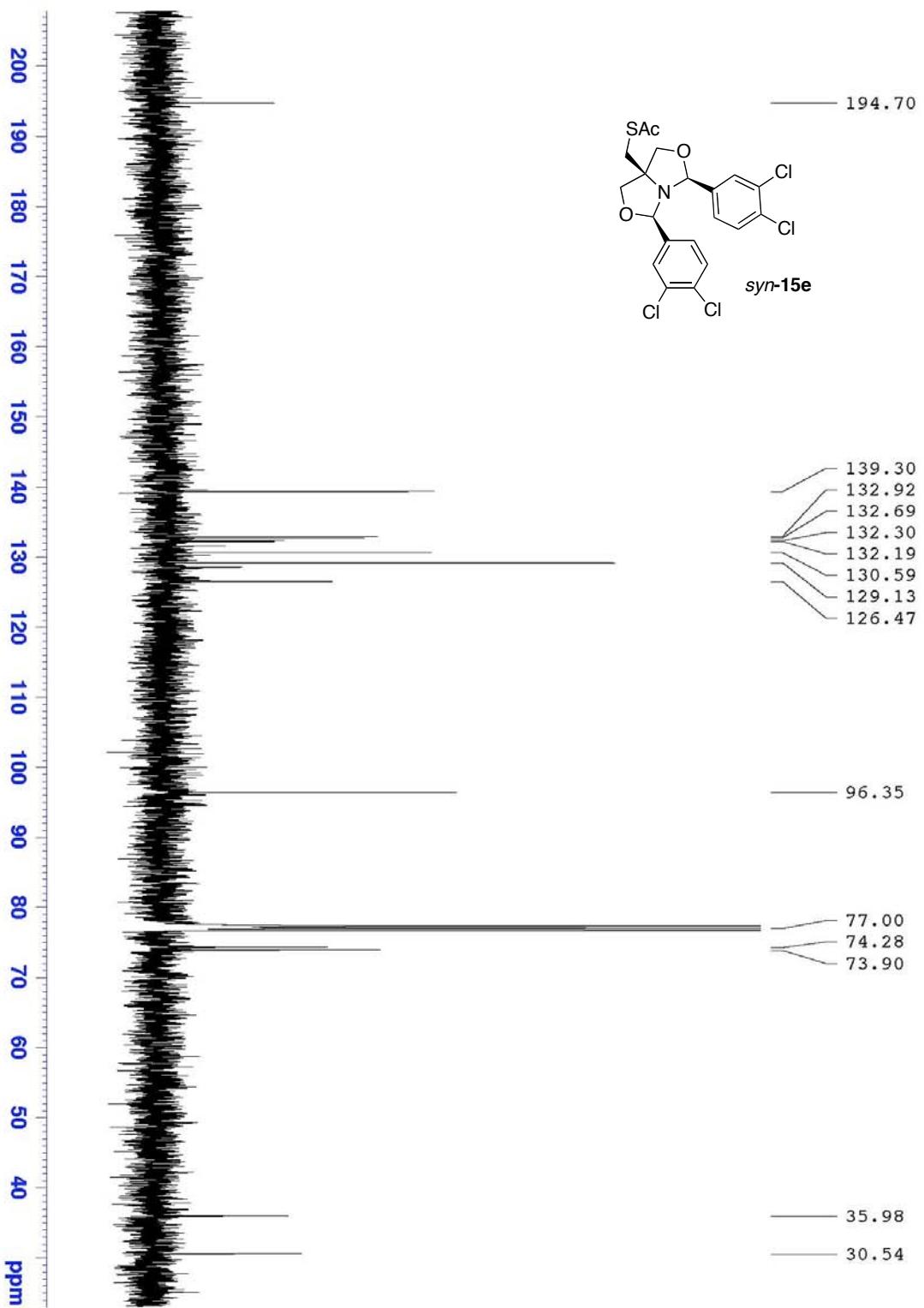


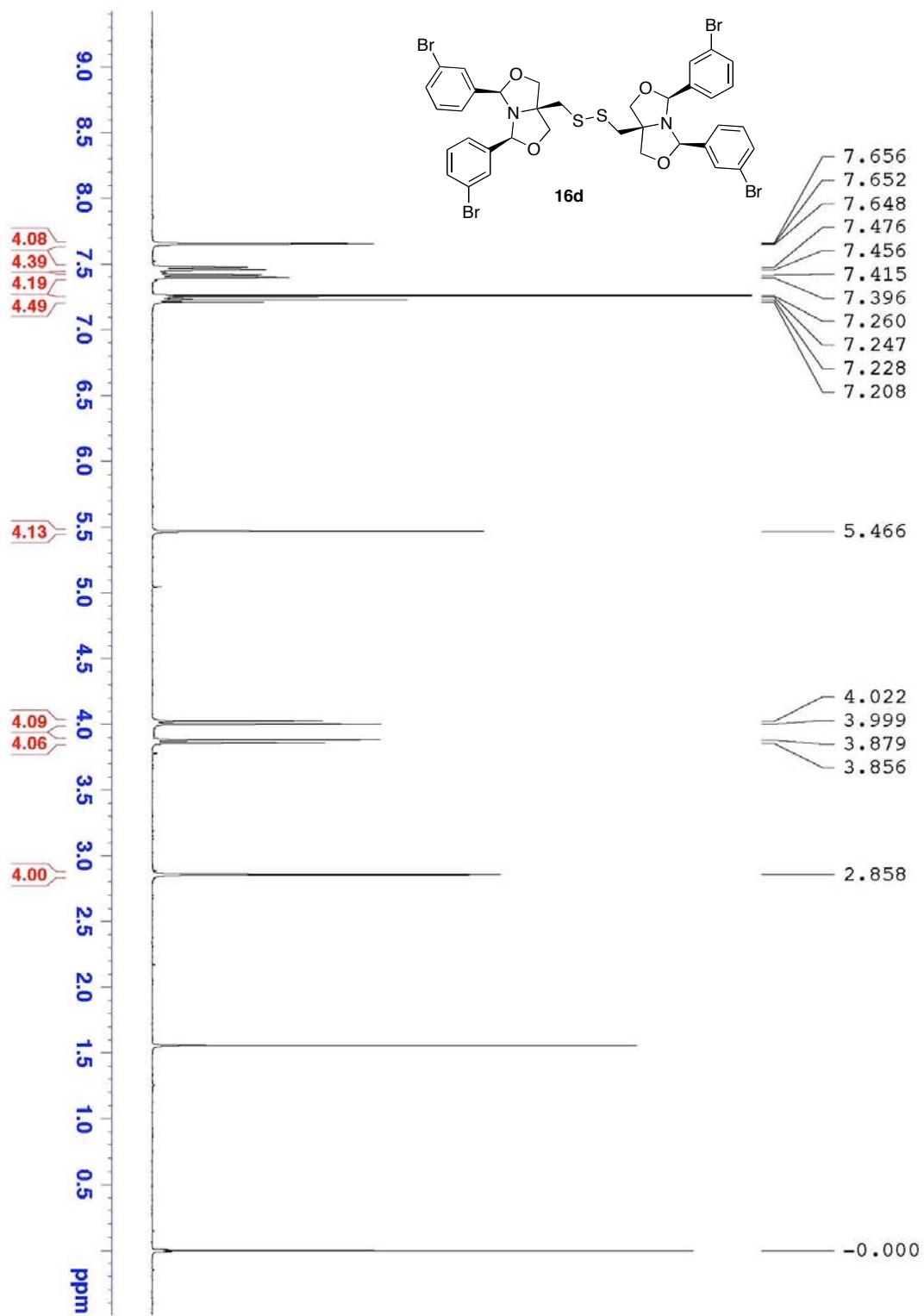
A list of chemical shifts (ppm) for the *syn*-15e molecule, corresponding to the peaks labeled in the NMR spectrum:

- 7.59
- 7.59
- 7.47
- 7.45
- 7.33
- 7.33
- 7.31
- 7.31
- 7.26

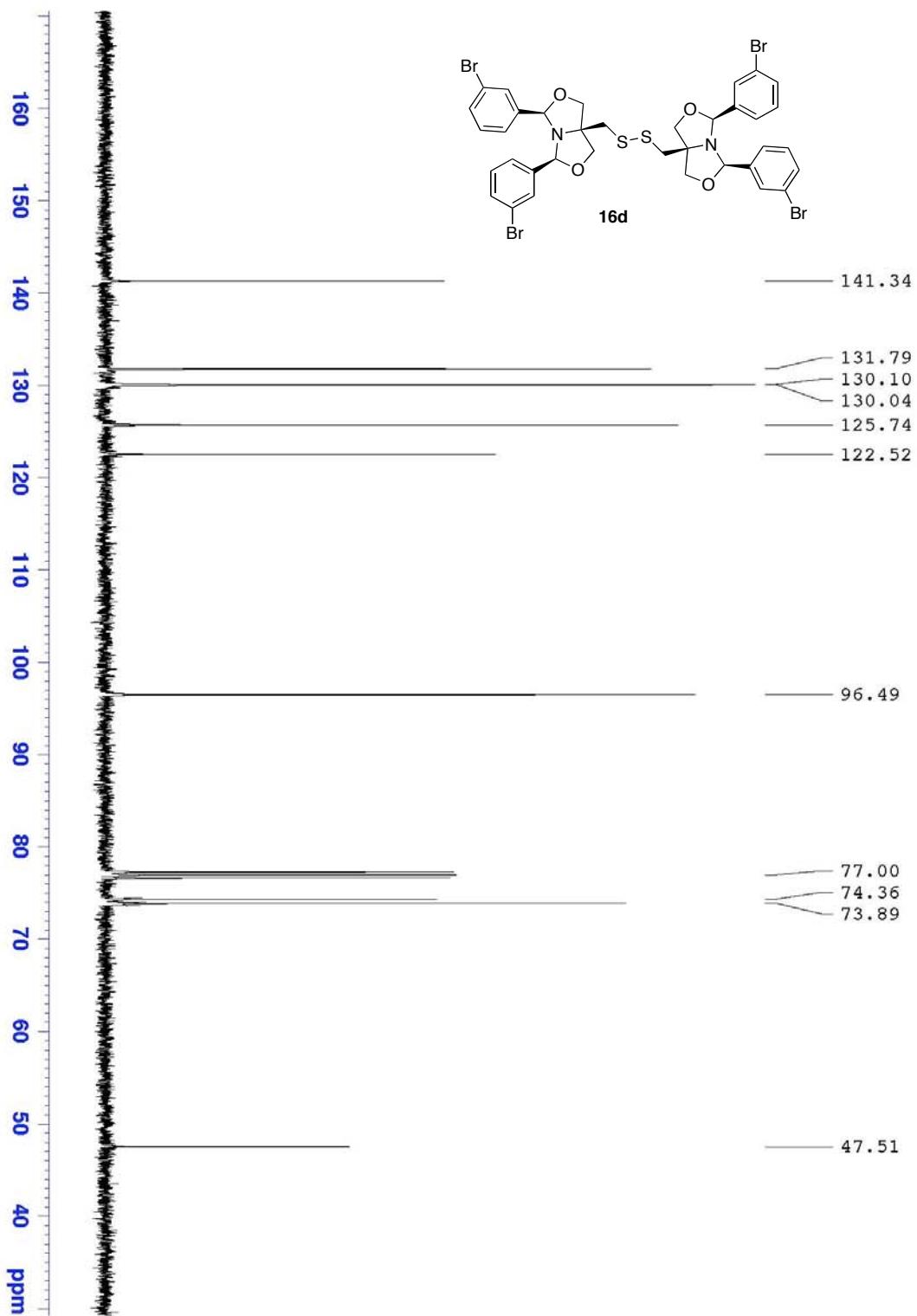


Cecilia CS 351 F50

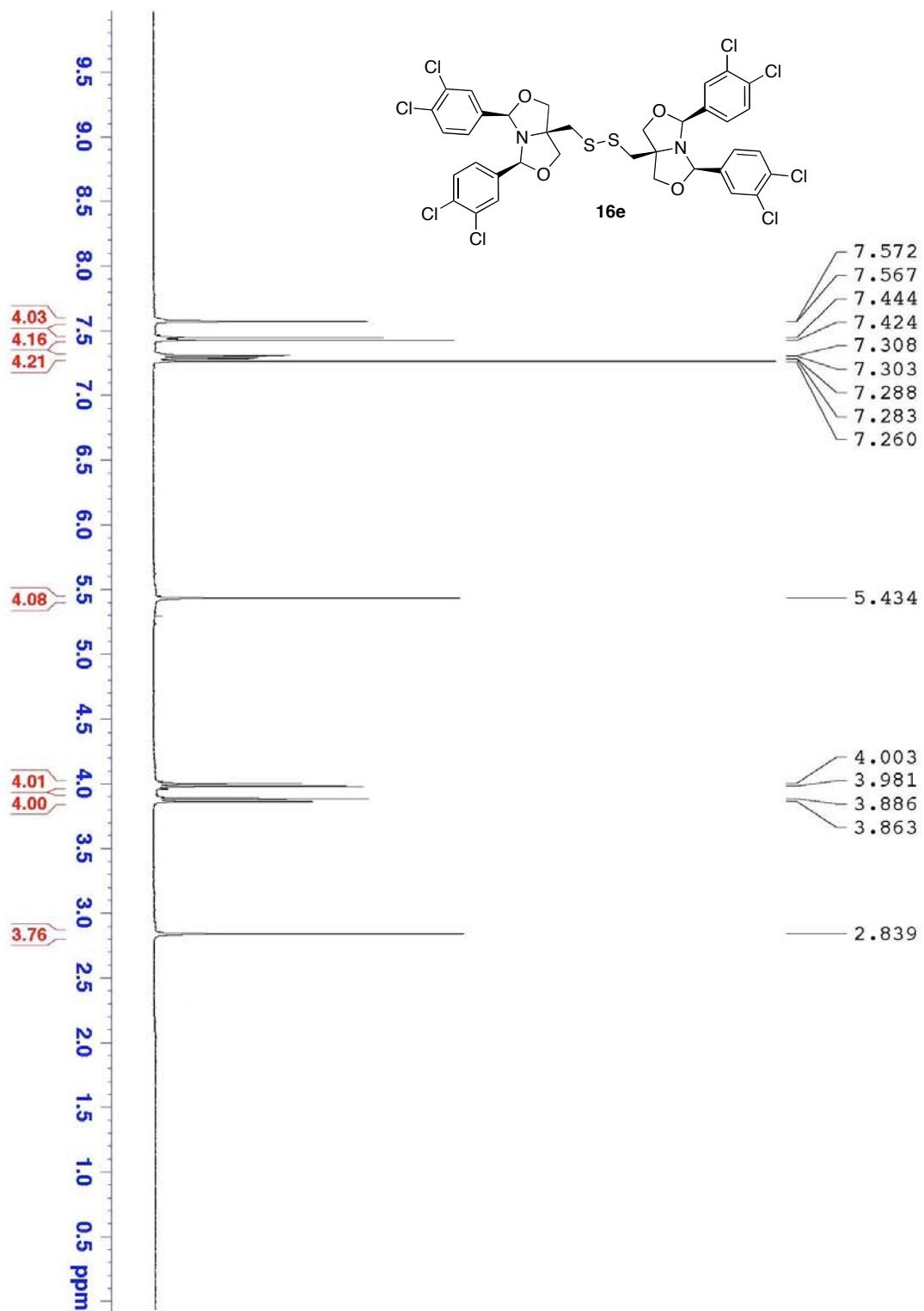




Cecilia CS 418 F2



Cecilia cs388 24 hrs



Cecilia CS 388 dímero

