

## Supplementary Material

### Synthesis, Structures and Conformations of Linked Bis-glyoxylamides Derived from Bis-acylisatins

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**Table S1.** Numerical values of the intramolecular interactions.

Crystal Structure <b>9</b>				
Donor (D)-H...Acceptor (A)	D-H (Å)	H...A (Å)	D...A (Å)*	D-H...A (°)
<b>Ordered structure</b>				
N1A-H1A...O1B=[C8B]	0.86	2.25	2.677	111
N1A-H1A...O2A=[C9A]	0.86	1.99	2.679	137
C6A-H6A...O1A=[C8A]	0.93	2.30	2.906	122
C3A-H21...O3A=[C10A]	0.93	2.45	2.966	115
C11A-H11A...O3A=[C10A]	0.97	2.44	2.836	104
N1B-H1B...O1A=[C8A]	0.86	2.21	2.653	112
N1B-H1B...O2B=[C9B]	0.86	1.96	2.664	138
C6B-H6B...O1B=[C8B]	0.93	2.32	2.936	124
C11B-H11C...O3B=[C10B]	0.97	2.55	2.819	96
<b>Disordered structure</b>				
N1C-H1C...O2C=[C9C]	0.86	1.99	2.681	137
N2C-H2C...O2C=[C9C]	0.86	2.46	2.745	100
N1C-H1C...O1C=[C8C]	0.86	2.23	2.664	111
C6C-H6C...O1C=[C8C]	0.93	2.31	2.926	123
C3C-H3C...O3C=[C10C]	0.93	2.40	2.964	119
C11C-H11F...O3C=[C10C]	0.97	2.39	2.788	104
*The ESD of D...A range from 0.005-007 (Å)				

Crystal Structure <b>24</b>				
Donor (D)-H...Acceptor (A)	D-H (Å)	H...A (Å)	D...A (Å)*	D-H...A (°)
N2-H2...O2=C10	0.86	2.39	2.726	104
N2A-H2A...O2A=C10A	0.86	2.38	2.717	104
C3-H3...O2=C10	0.98	2.60	2.870	97
C3A-H3A...O2A=C10A	0.93	2.59	2.856	97
C9A-H9A2...O1A=C7A	0.97	2.62	2.837	93
C12A-H12F...O3A=C11A	0.96	2.53	2.811	97
*The ESD of D...A range from 0.003-005 (Å)				

C=O...C=O	O...C (Å)	C=O...C (°)	O...C=O (°)
C7=O1...C10=O2	2.53	107	105
C7=O1...C11=O3	2.80	92	110
C7A=O1A...C10A=O2A	2.49	109	105
C7A=O1A...C11A=O3A	2.77	96	110

Crystal Structure <b>25</b>				
Donor (D)-H...Acceptor (A)	D-H (Å)	H...A (Å)	D...A (Å)	D-H...A (°)
N1-H1N...O2=C10	0.88	1.97	2.682(4)	138
C6-H6...O1=C7	0.95	2.26	2.875(4)	122
C9-H9B...O1=C7	0.99	2.68	2.835(4)	88
C3-H3...O3=C10	0.95	2.67	3.266(4)	121
C14-H14A...O3=C10	0.98	2.49	3.111(4)	121
C15-H15C...O3=C10	0.98	2.49	3.106(4)	120

Crystal Structure <b>26</b>				
Donor (D)-H...Acceptor (A)	D-H (Å)	H...A (Å)	D...A (Å)	D-H...A (°)
N2-H2...O2=C10	0.88	2.37	2.704(17)	103
C3-H3...O2=C10	0.95	2.53	2.814(17)	97
C12-H12B...O3=C11	0.99	2.48	2.811(17)	99
C9-H9B...O1=C7	0.99	2.86	2.857(17)	89
C=O...C=O	O...C (Å)	C=O...C (°)	O...C=O (°)	
C7=O1...C10=O2	2.68	104	110	
C7=O1...C11=O3	2.84	92	110	

**Table S2.** Numerical values of the intermolecular interactions.

Crystal Structure 9				
Donor (D)-H...Acceptor (A)	D-H (Å)	H...A (Å)	D...A (Å)*	D-H...A (°)
C5A-H5A...O1B <sup>a</sup> =[C8B]	0.93	2.55	3.468	168
C7A-H7A2...O2A <sup>a</sup> =[C9A]	0.96	2.49	3.196	130
C5B-H5B...O1A <sup>a</sup> =[C8A]	0.93	2.62	3.543	175
C7B-H7B2...O2B <sup>a</sup> =[C9B]	0.96	2.66	3.253	120
N1C-H1C...O1C <sup>b</sup> =[C8C]	0.86	2.23	2.664	111
C7C-H7C1...O2C <sup>a</sup> =[C9C]	0.96	2.40	3.234	145
C5C-H5C...O1C <sup>b</sup> =[C8C]	0.93	2.63	3.560	175
N2A-H2A...O3C <sup>c</sup> =[C10C]	0.86	1.99	2.801	156
N2C-H2C...O3B <sup>d</sup> =[C10B]	0.86	2.12	2.832	139
N2B-H2B...O3A <sup>e</sup> =[C10A]	0.86	2.04	2.784	145
C12C-H12F...O3B <sup>d</sup> =[C10B]	0.97	2.46	3.229	136
C15'-H15...O3B <sup>f</sup> =[C10B]	0.97	2.60	3.502	155

\*The ESD of D...A range from 0.005-007 (Å)

<sup>a</sup>Equivalent position indicators: <sup>a</sup>1+x,y,z <sup>b</sup>1-x,-y,-z <sup>c</sup>-1/2+x,1/2-y,1/2+z <sup>d</sup>1/2-x,-1/2+y,1/2-z <sup>e</sup>-1/2+x,1/2-y,-1/2+z <sup>f</sup>1/2+x,1/2-y,1/2+z

C=O...C=O	O...C (Å)	C=O...C (°)	O...C=O (°)
C10A=O3A...C9B=O2B	3.036	153	99
C8C=O1C...C8B=O1B	3.10	97	84
C8B=O1B...C8C=O1C	3.12	96	84

Crystal Structure 24				
Donor (D)-H...Acceptor (A)	D-H (Å)	H...A (Å)	D...A (Å)*	D-H...A (°)
N1-H1...O3A <sup>a</sup> =C11A	0.86	2.03	2.851	159
N1A-H1A...O3 <sup>b</sup> =C11	0.86	2.04	2.845	155
N2-H2...O1A <sup>c</sup> =C7A	0.86	2.16	2.867	138
N2A-H2A...O1 <sup>d</sup> =C7	0.86	2.14	2.841	138
C6-H6...O3A <sup>a</sup> =C11A	0.93	2.58	3.286	133
C6A-H6A...O3 <sup>b</sup> =C11	0.93	2.50	3.227	135
C12A-H12E...O1 <sup>c</sup> =C7	0.96	2.67	3.181	112
C12-H12B...O1A <sup>d</sup> =C7A	0.96	2.60	3.175	118
C9-H9A...O2A <sup>d</sup> =C10A	0.97	2.69	3.307	121

\*The ESD of D...A range from 0.003-005 (Å)

<sup>a</sup>Equivalent position indicators: <sup>a</sup>x,y,1+z <sup>b</sup>x,y,-1+z <sup>c</sup>-1+x,y,z <sup>d</sup>1+x,y,z -1+x,y,z

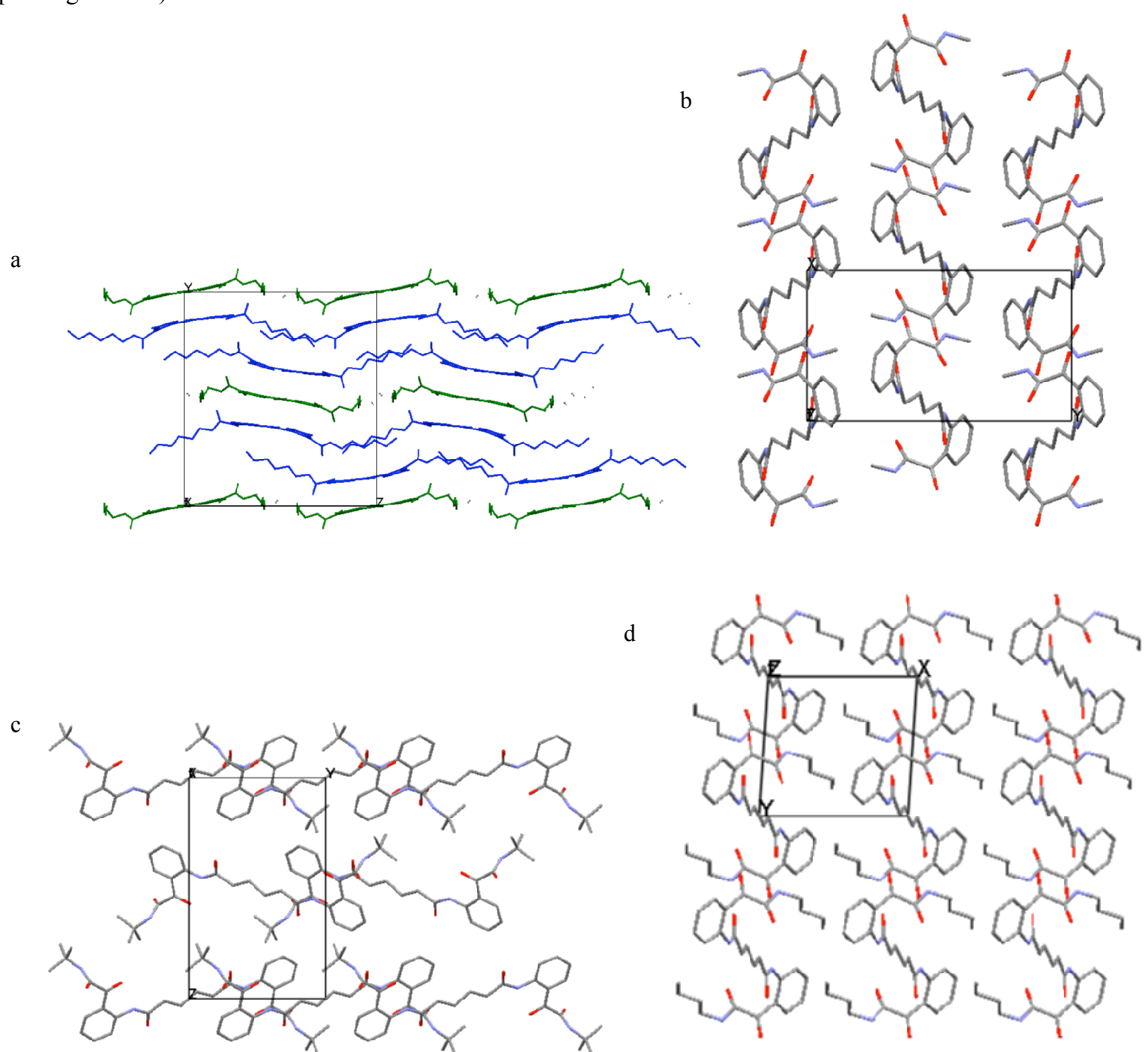
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Donor (D)-H...Acceptor (A)	D-H (Å)	H...A (Å)	D...A (Å)	D-H...A (°)
N2-H2...O1 <sup>a</sup> =C7	0.88	2.13	2.965(3)	158
N1-H1...O3=C11	0.88	2.62	3.073(3)	113
C8-H8B...O3=C11	0.99	2.61	3.422(3)	139

<sup>a</sup>Equivalent position indicators: <sup>a</sup>1-x,1-y,-z

Crystal Structure 26				
Donor (D)-H...Acceptor (A)	D-H (Å)	H...A (Å)	D...A (Å)	D-H...A (°)
N1-H1...O3 <sup>a</sup> =C11	0.88	2.01	2.855(16)	162
N2-H2...O1 <sup>b</sup> =C7	0.88	2.39	3.089(14)	137
C9-H9B...O2 <sup>b</sup> =C10	0.99	2.59	3.442(18)	144
C13-H13B...O2 <sup>b</sup> =C10	0.99	2.46	3.339(18)	148

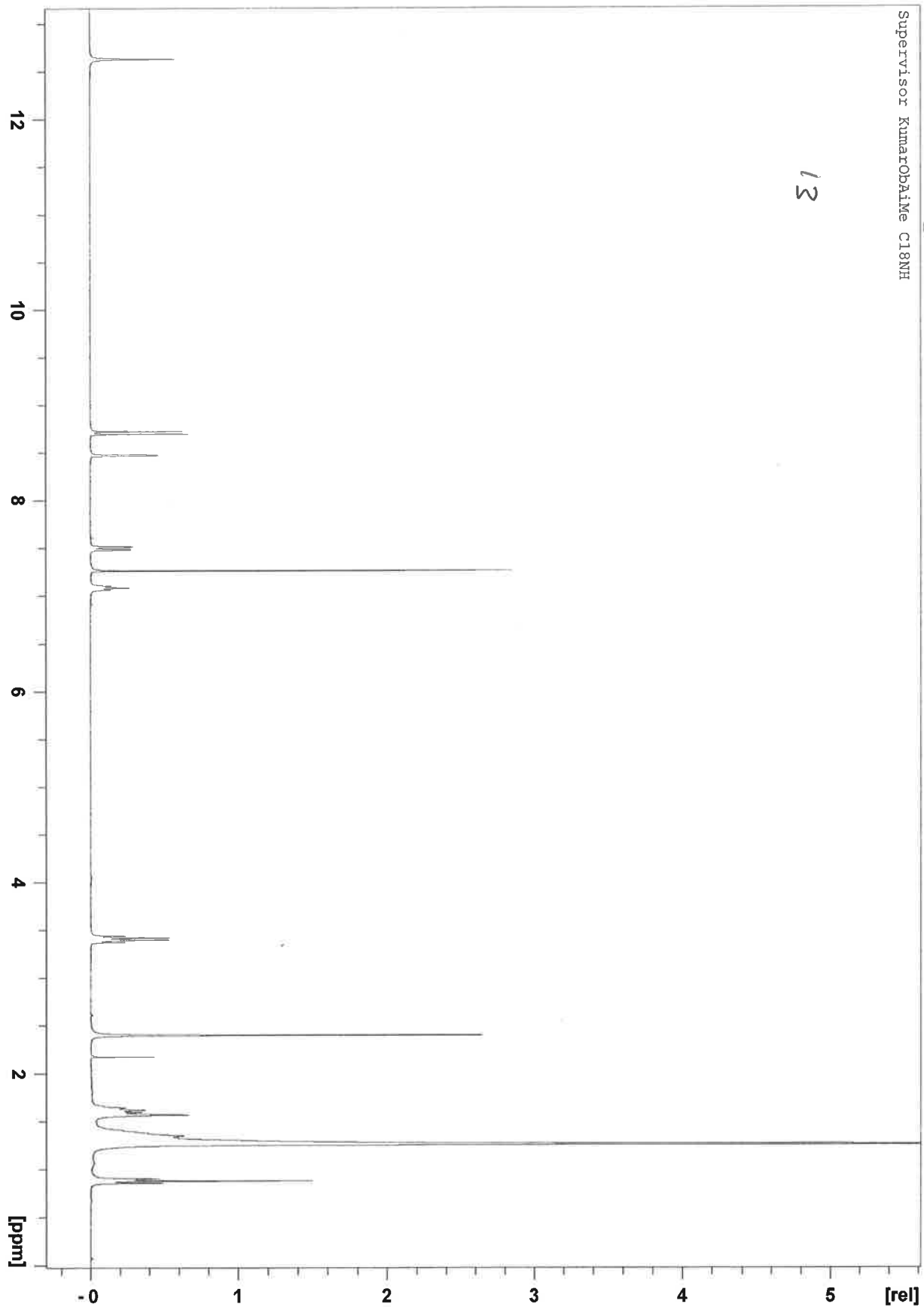
<sup>a</sup>Equivalent position indicators: <sup>a</sup>2-x,-y,1-z <sup>b</sup>2-x,1-y,-z

**Figure S1.** Crystal packing of (a) **9** (packing down *a*), (b) **24** (packing down *c*), (c) **25** (packing down *a*) and (d) **26** (packing down *c*).

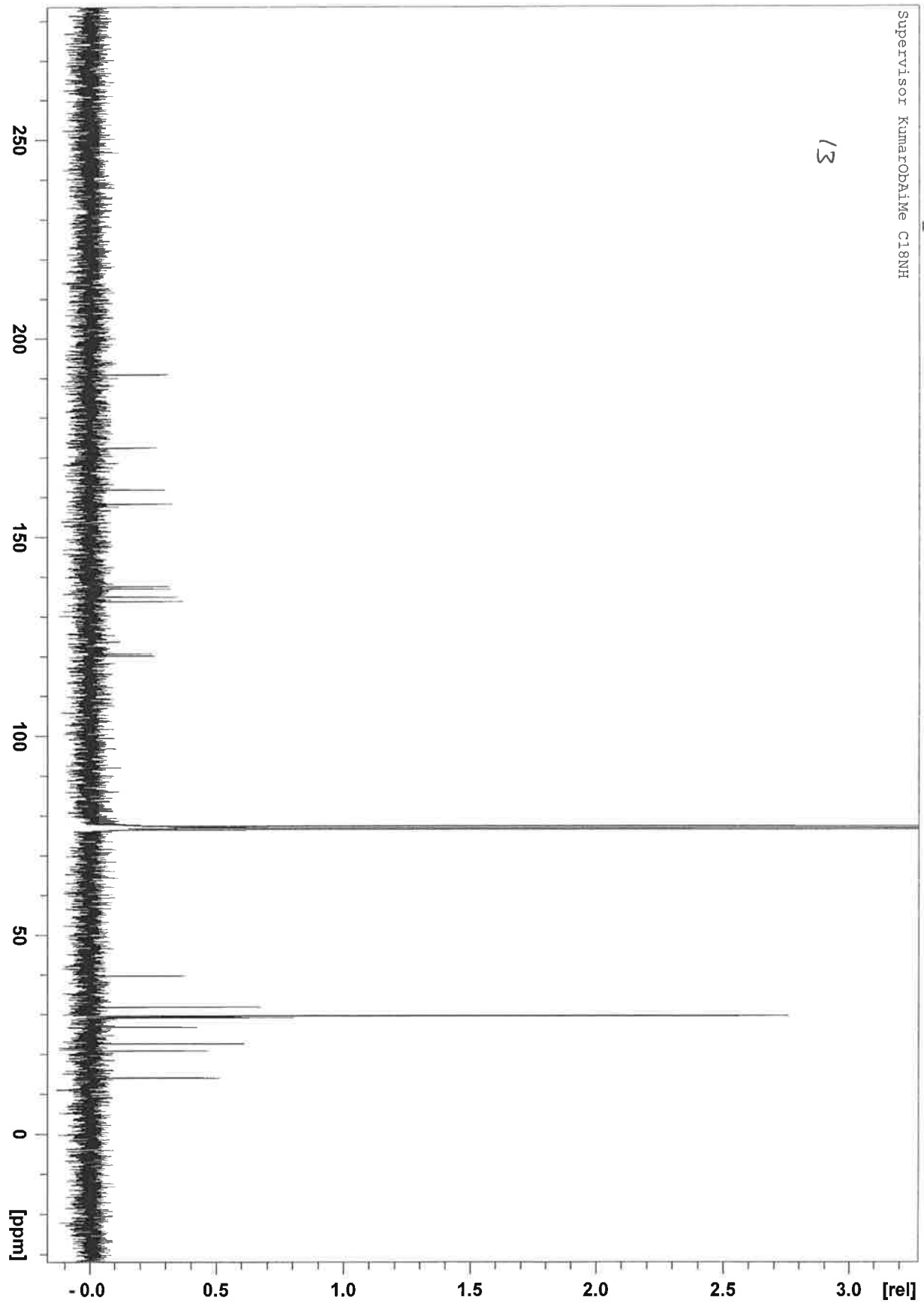


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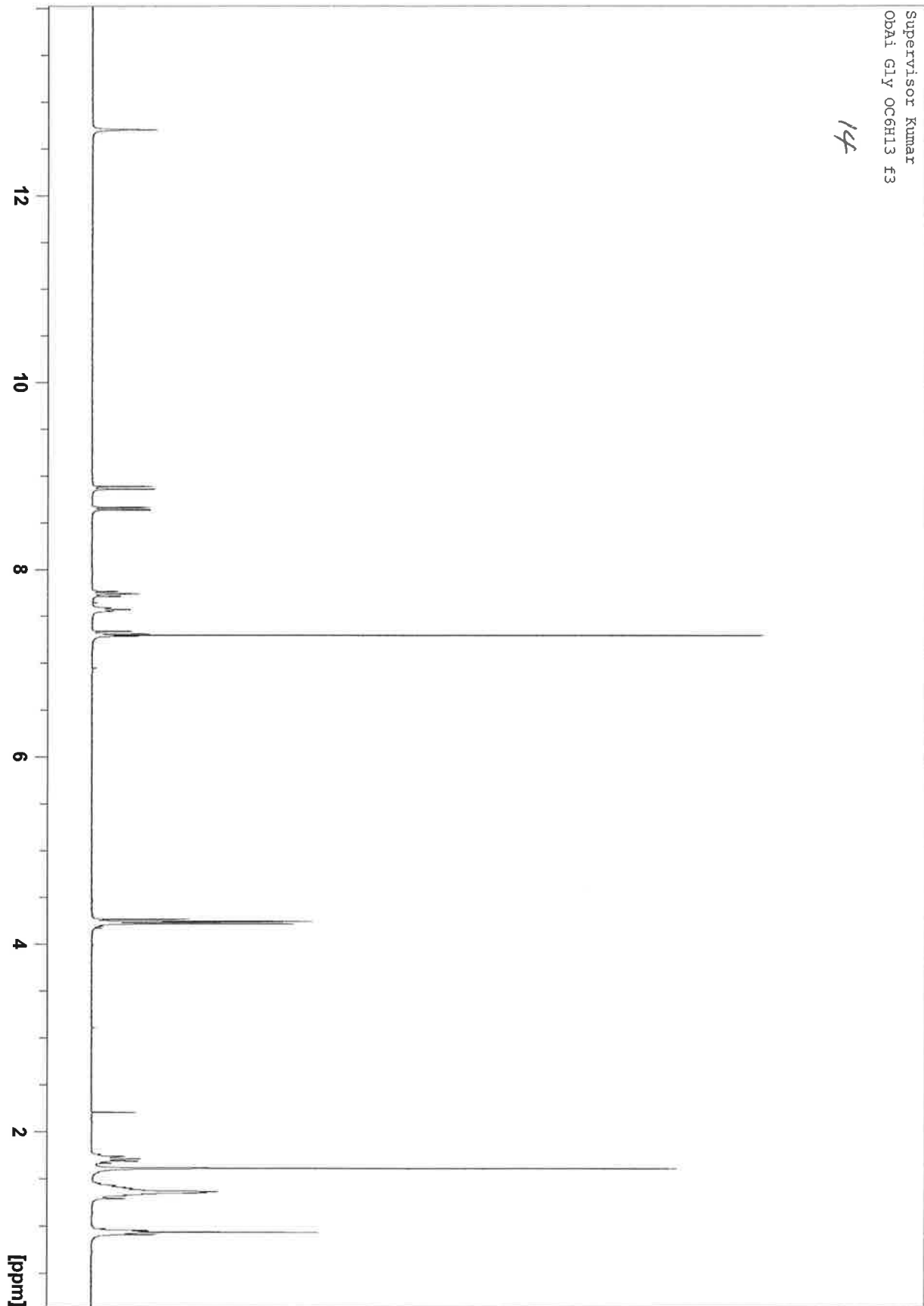


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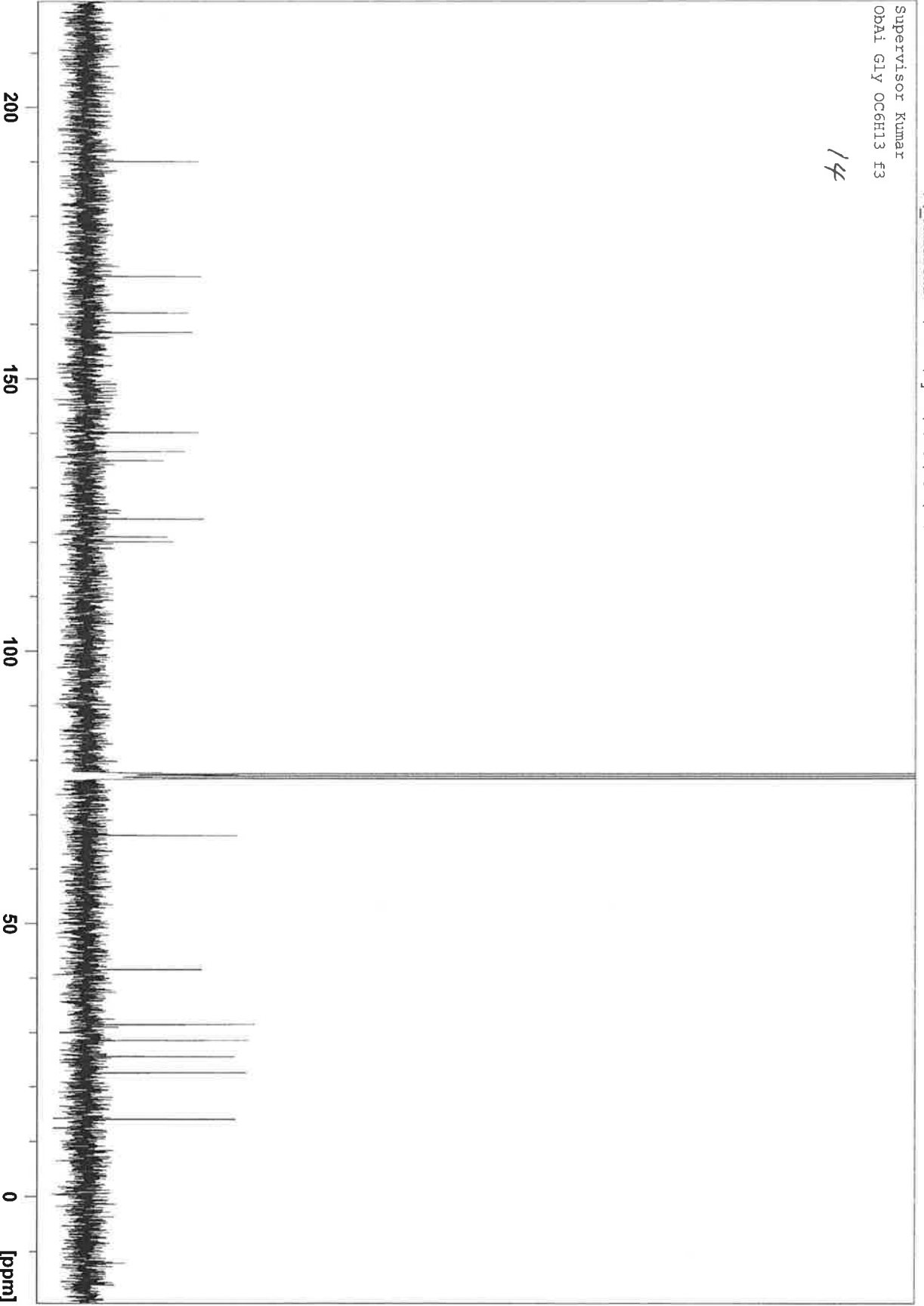
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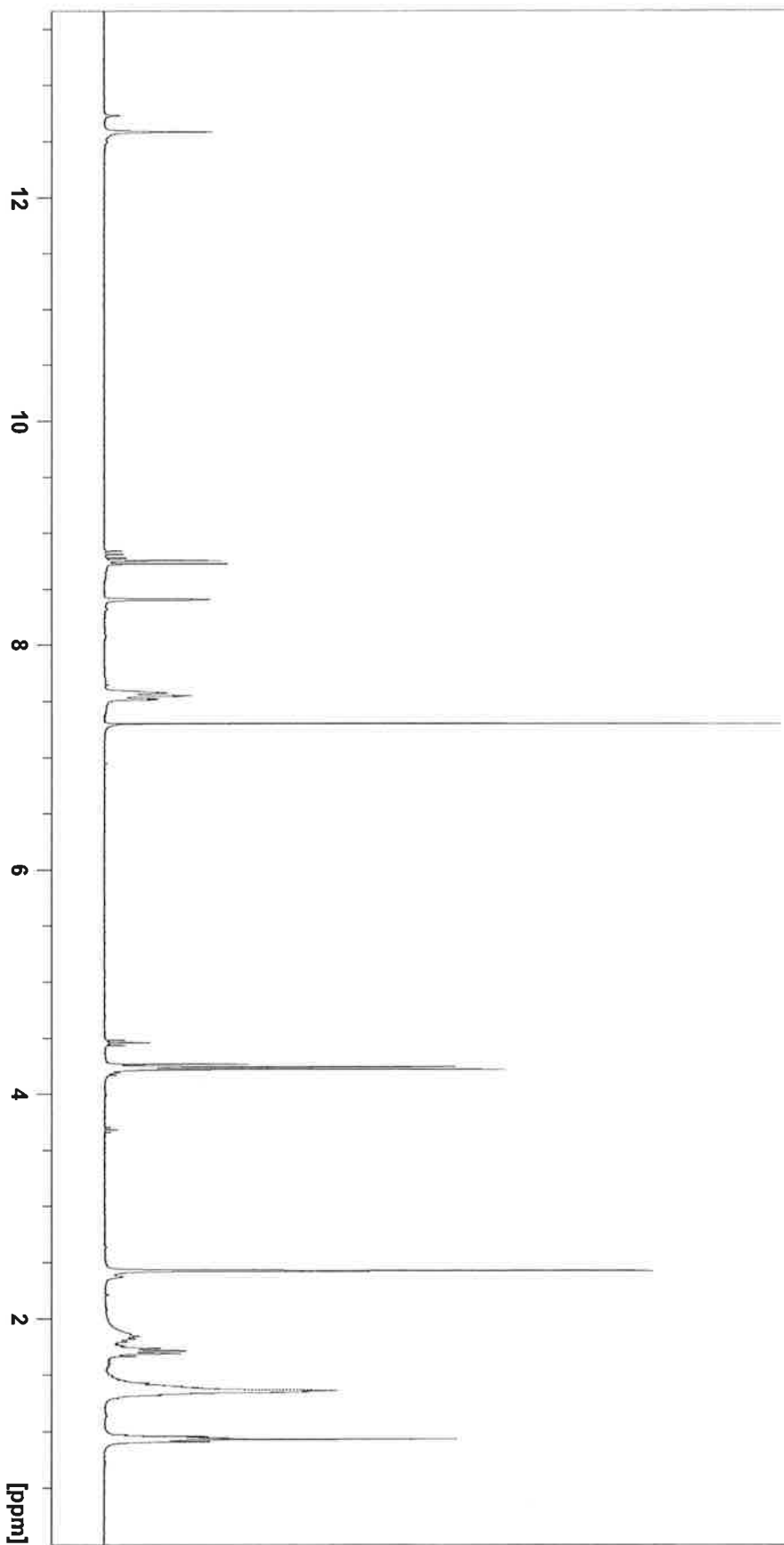
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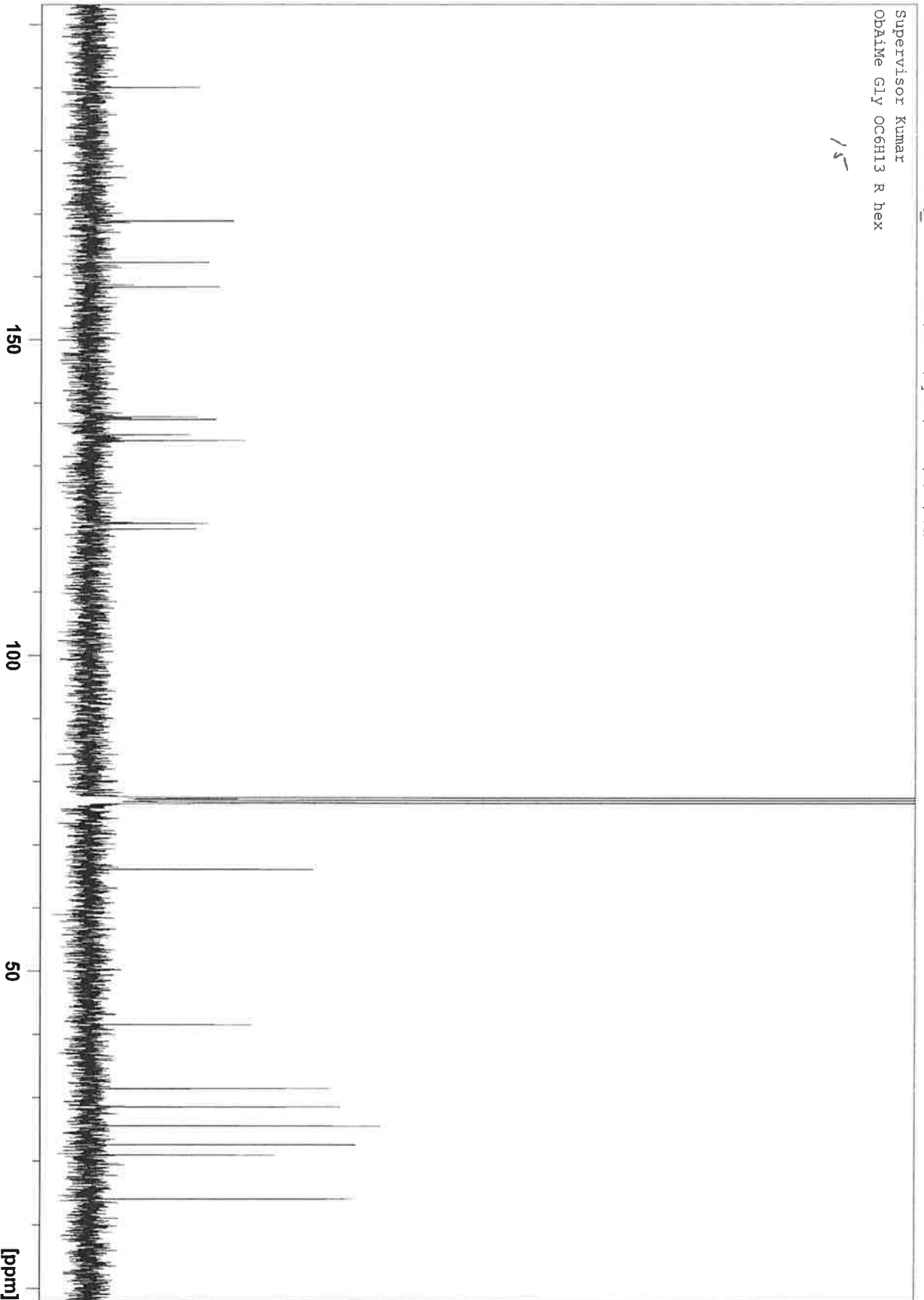
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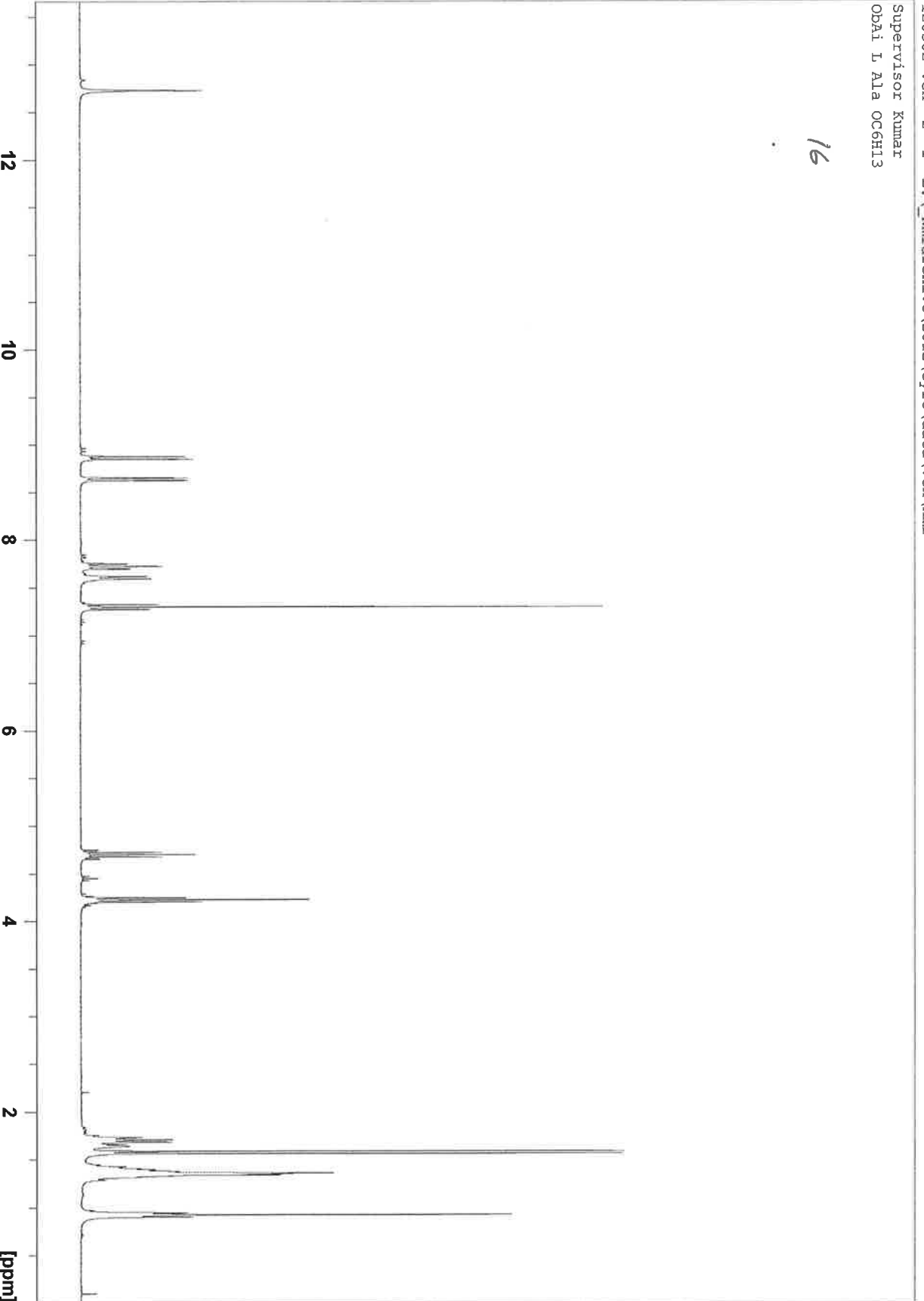
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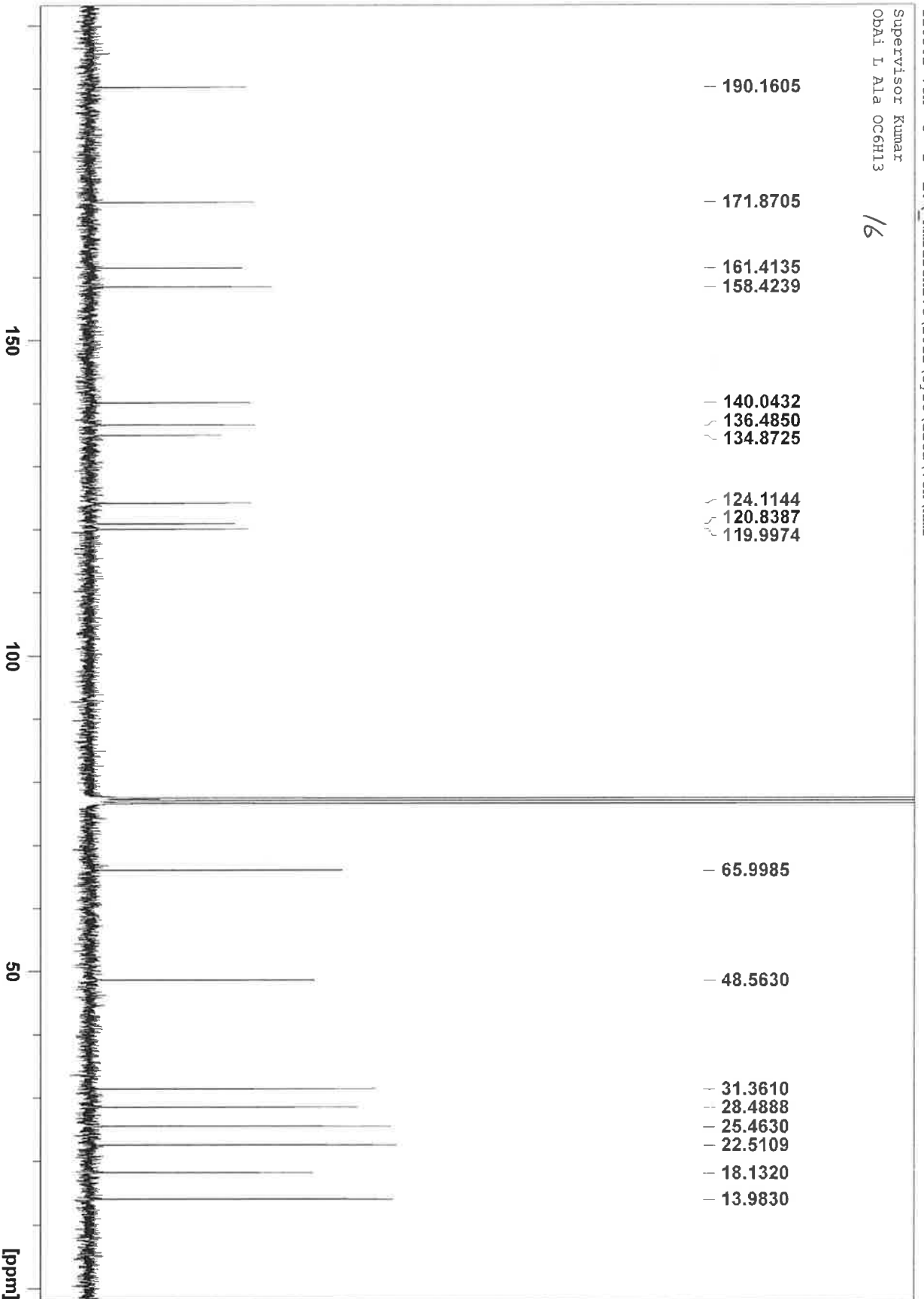


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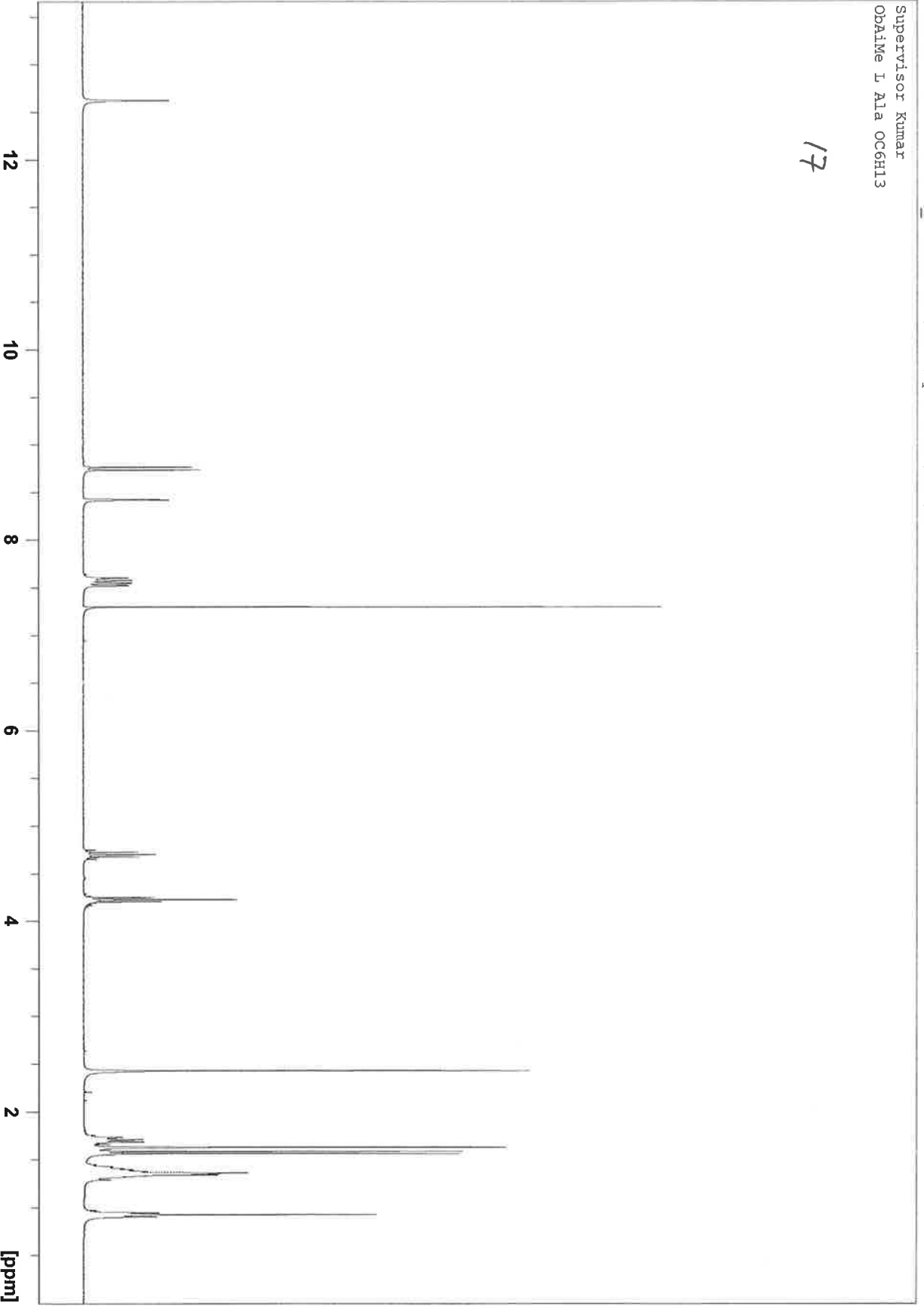




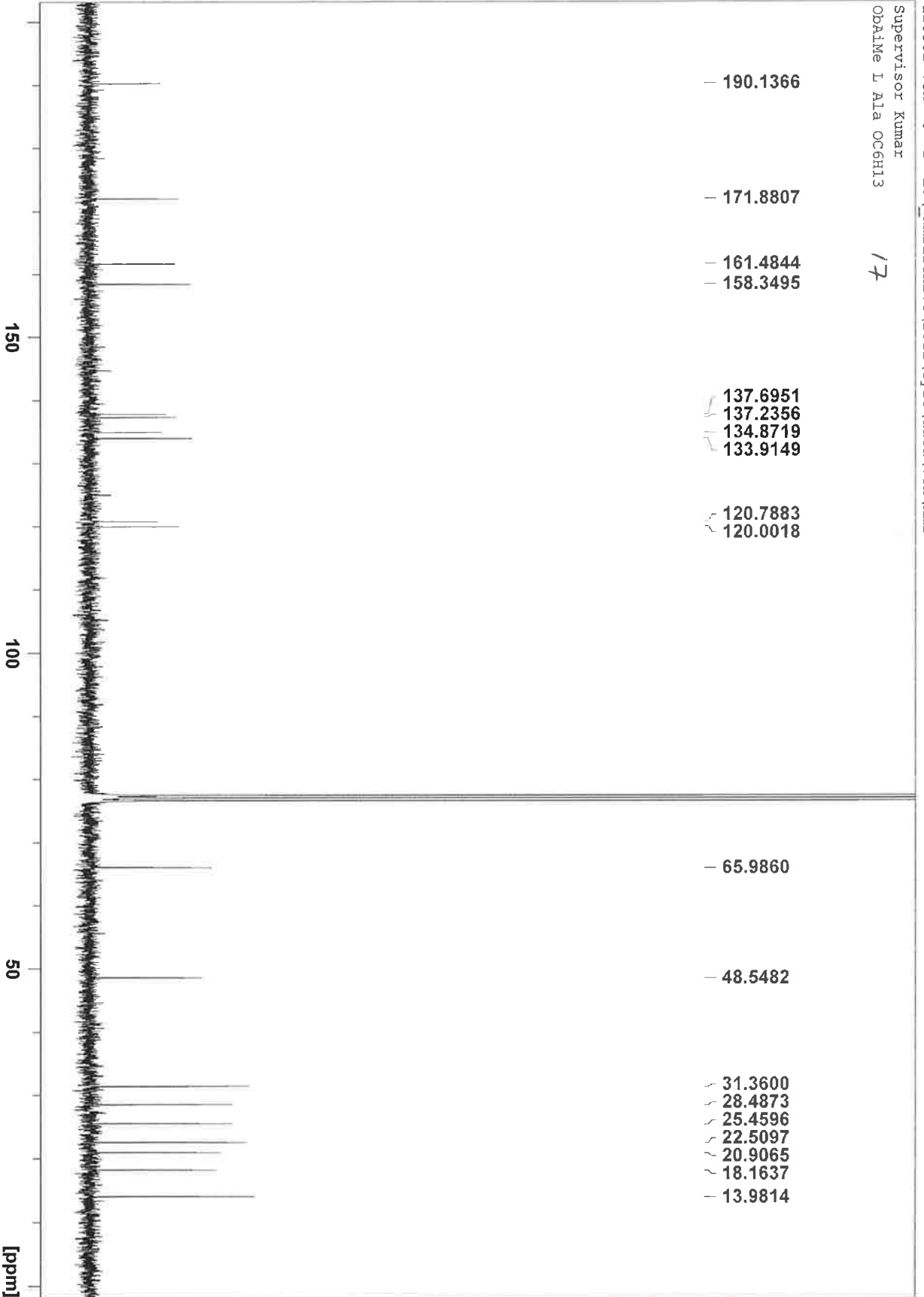
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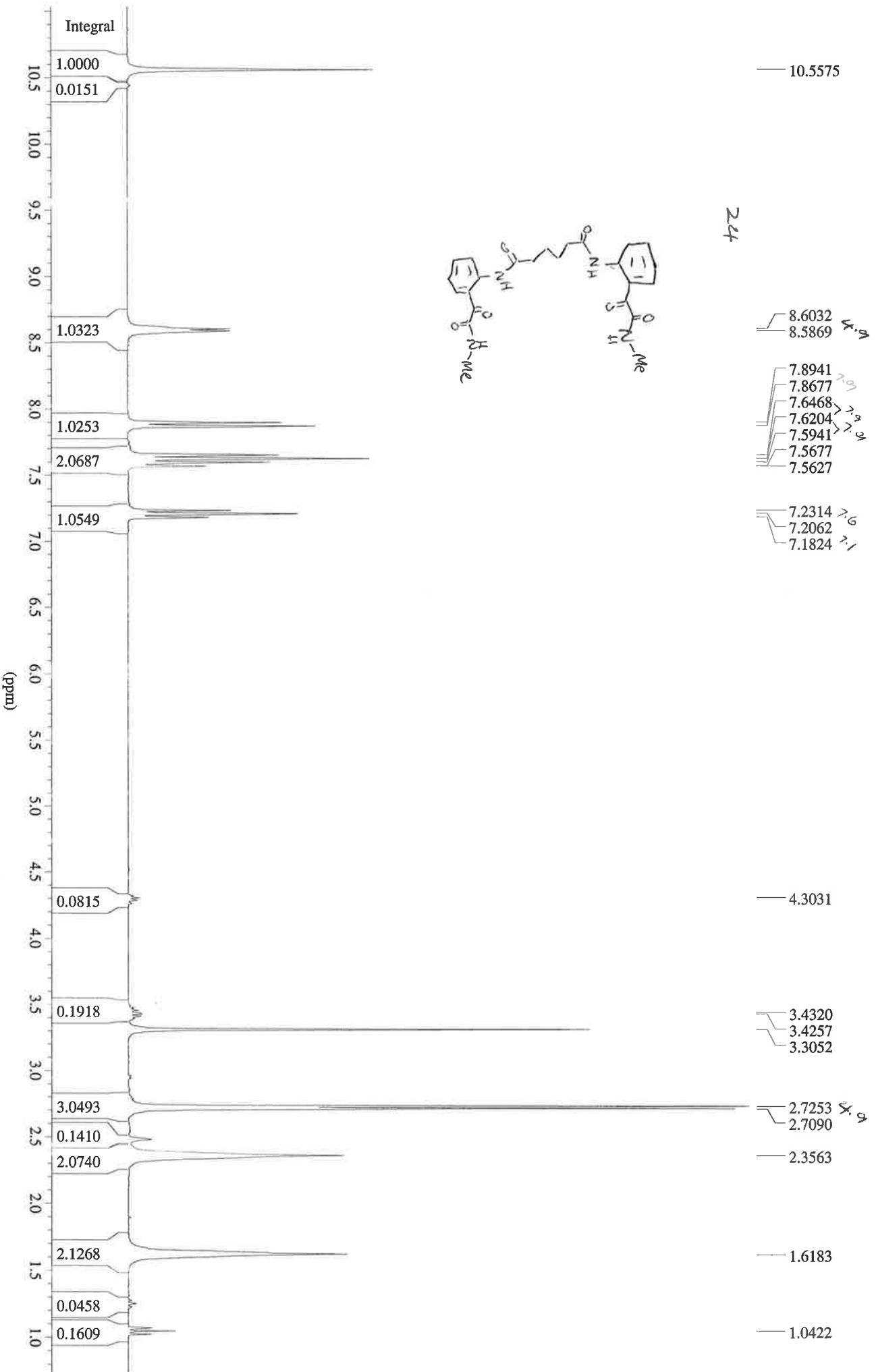
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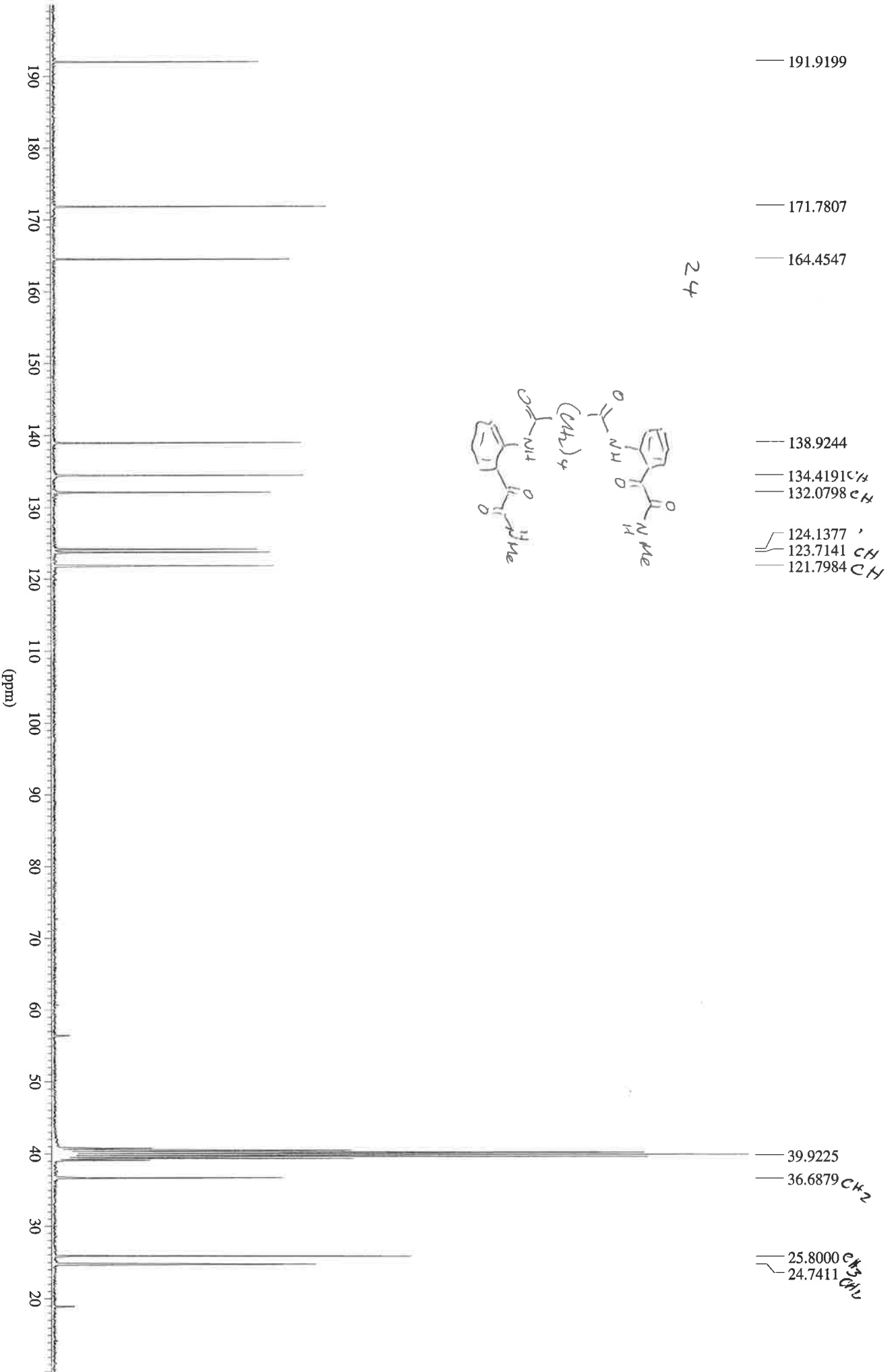
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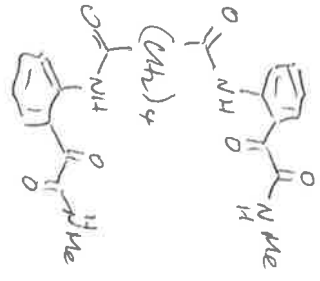
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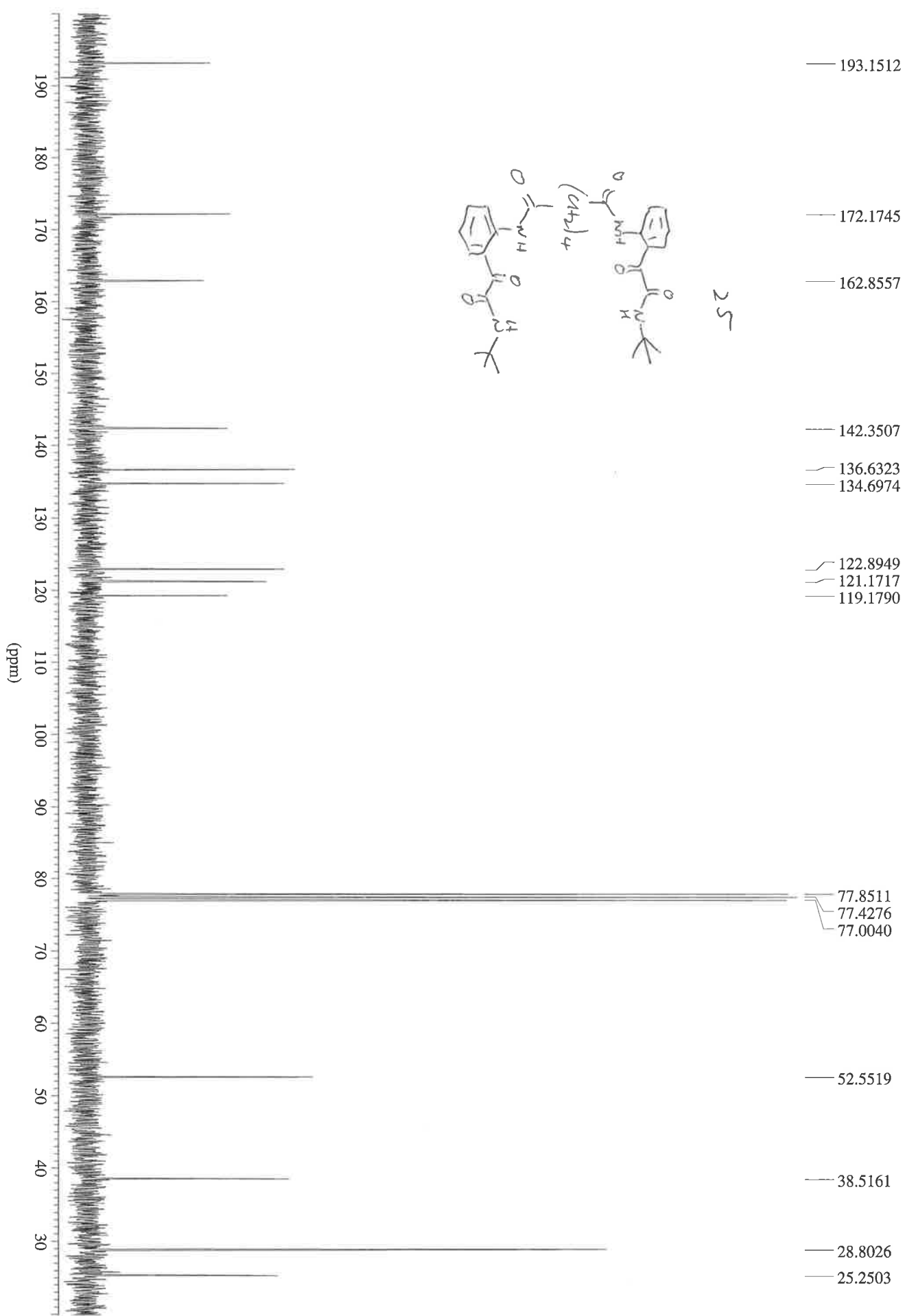


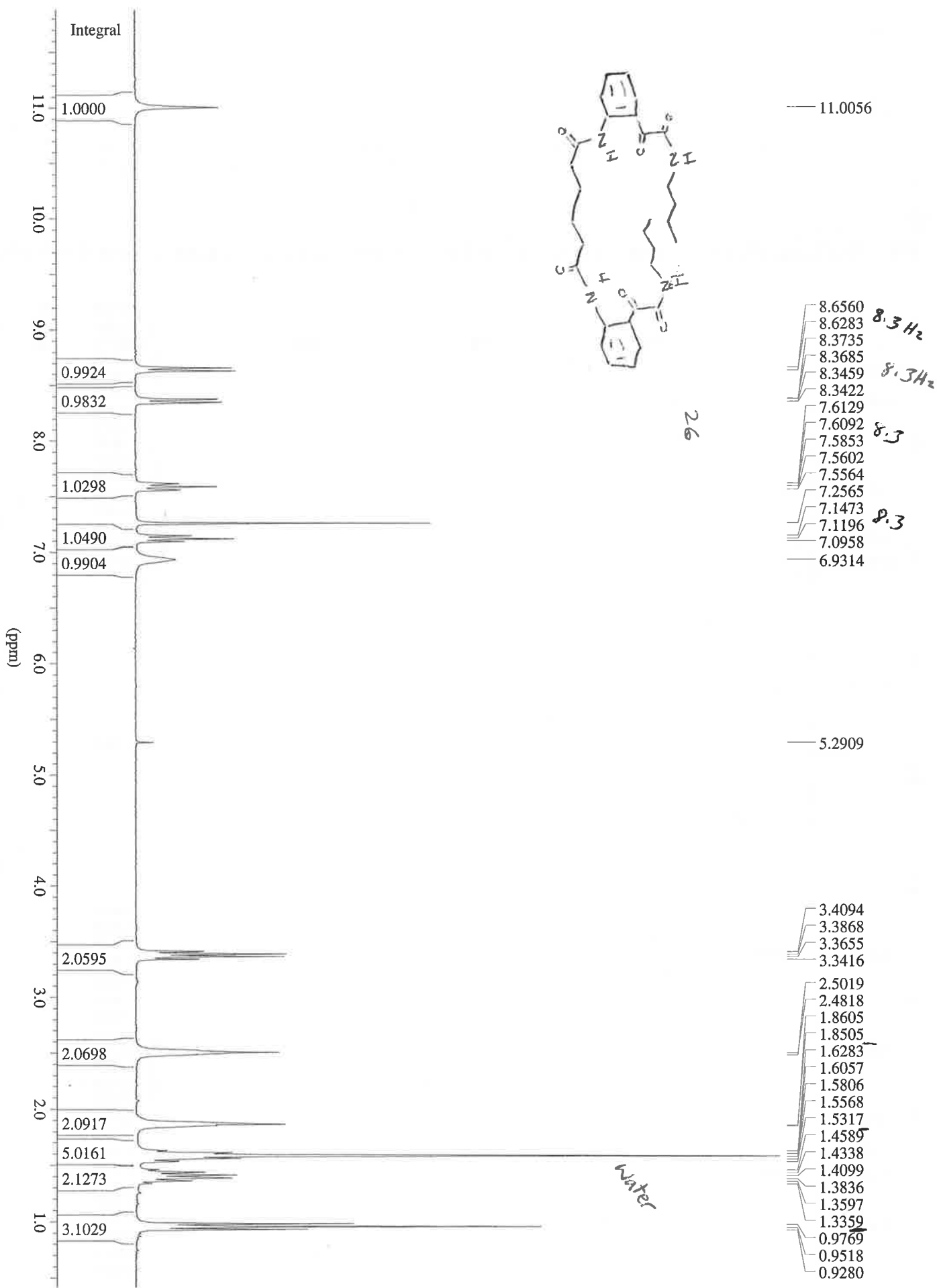
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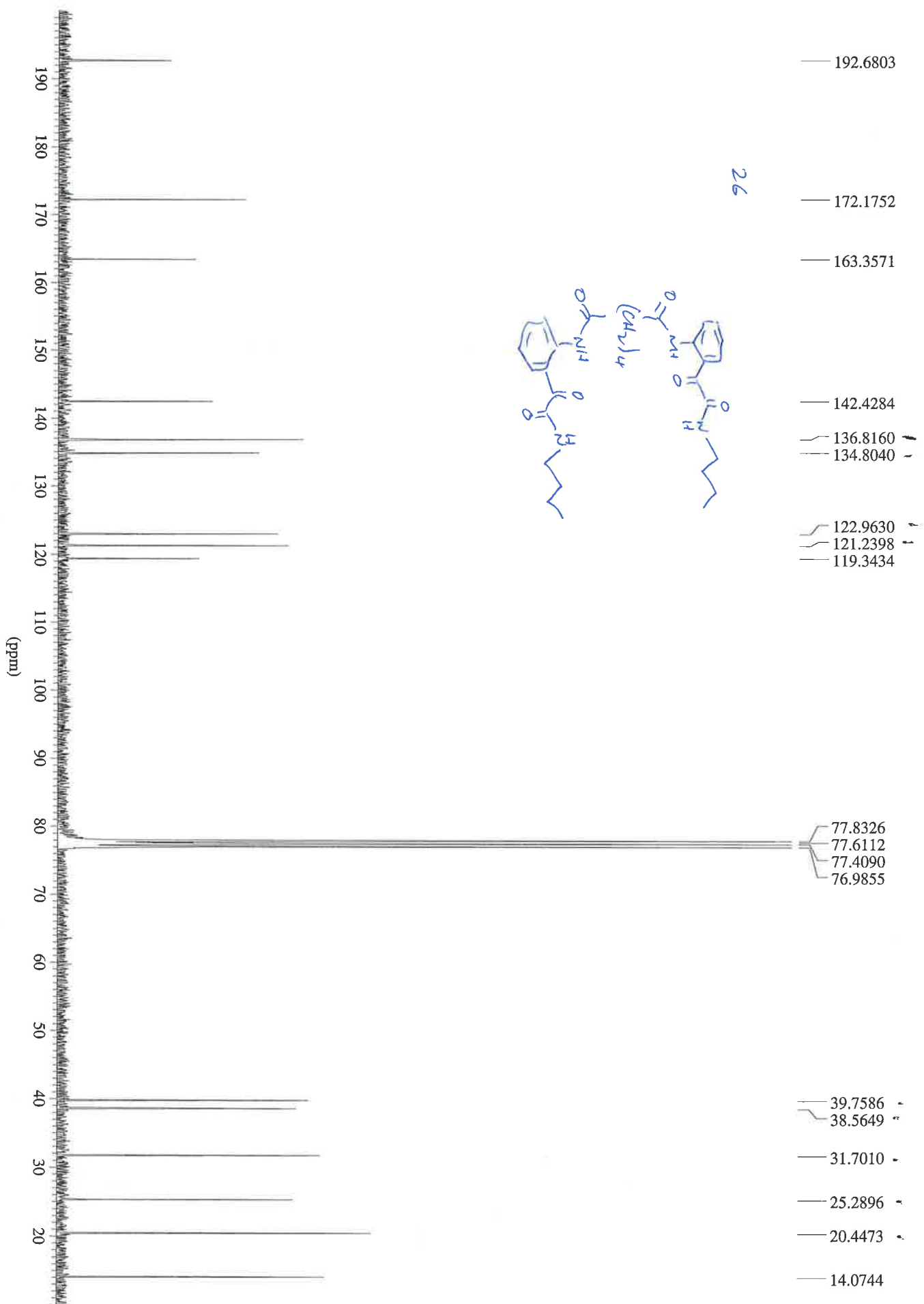




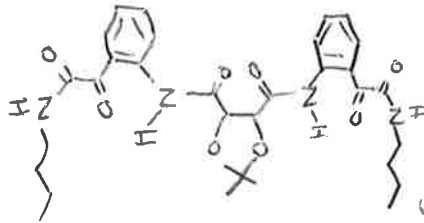












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