

Supporting information (ES-3)

L-tyrosine loaded nanoparticles: An efficient catalyst for synthesis of dicoumarols and Hantzsch 1,4-dihydropyridines.

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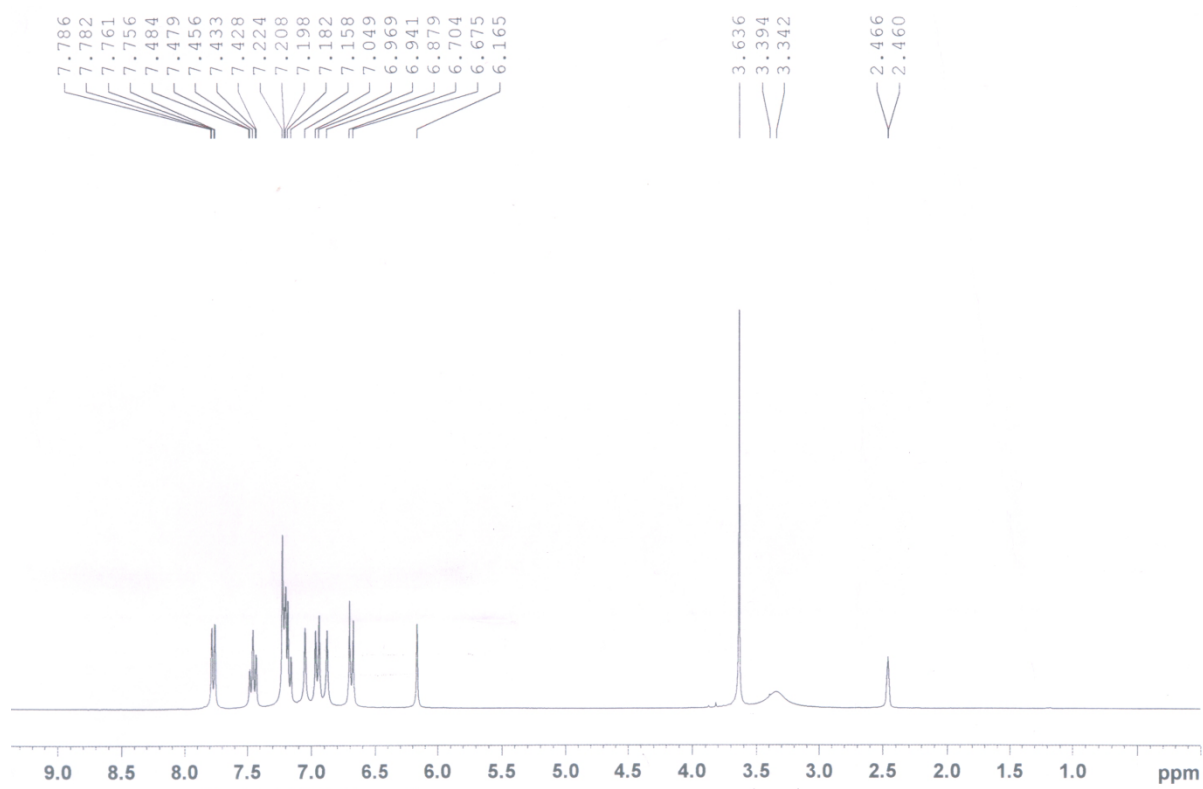
Table-1 Melting point of the dicoumarols (3a-3j)

Entry	Compound	M.P (°C)
1	3a	244
2	3b	230
3	3c	232
4	3d	250
5	3e	225
6	3f	127
7	3g	241
8	3h	278
9	3i	213
10	3j	270

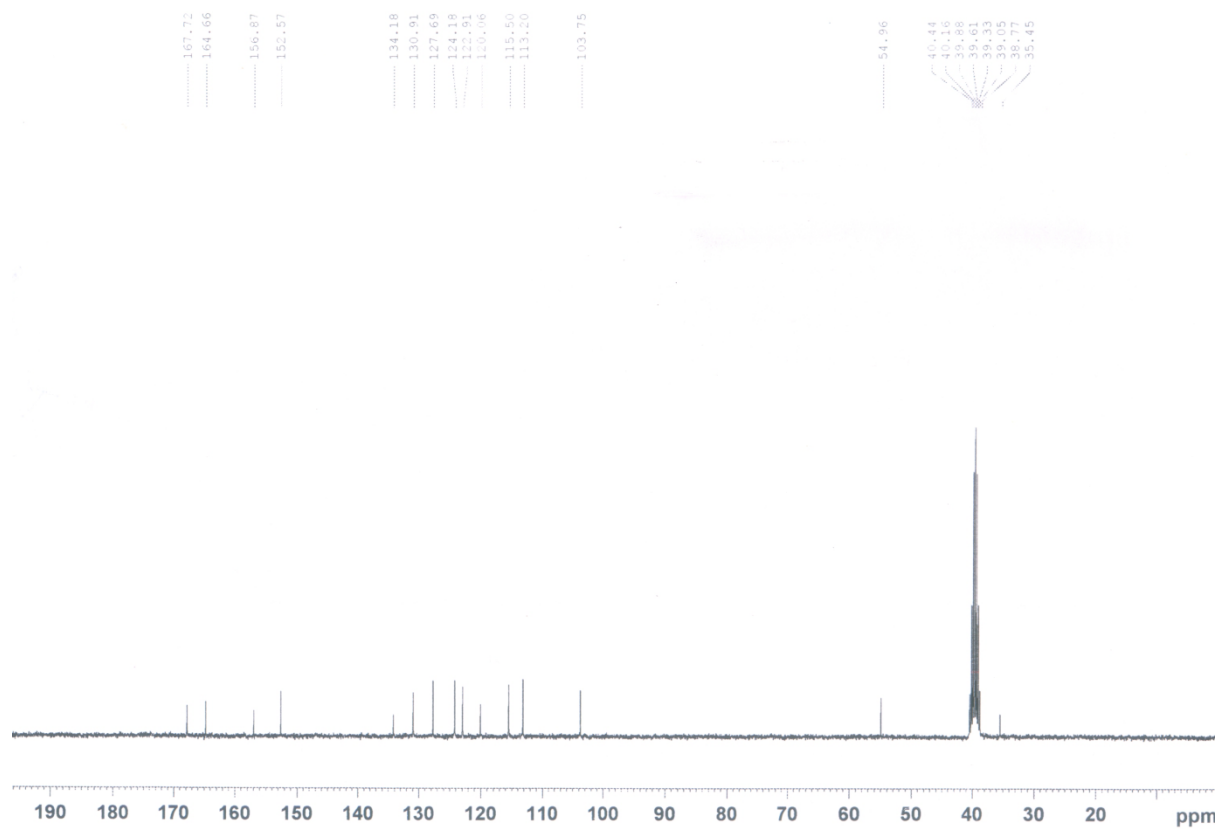
Table-2 Melting point of Hantzsch 1,4-DHPs (5a-5o)

Entry	Compound	M.P ((°C)
1	5a	163
2	5b	160
3	5c	227
4	5d	248
5	5e	233
6	5f	174
7	5g	144
8	5h	175
9	5i	102

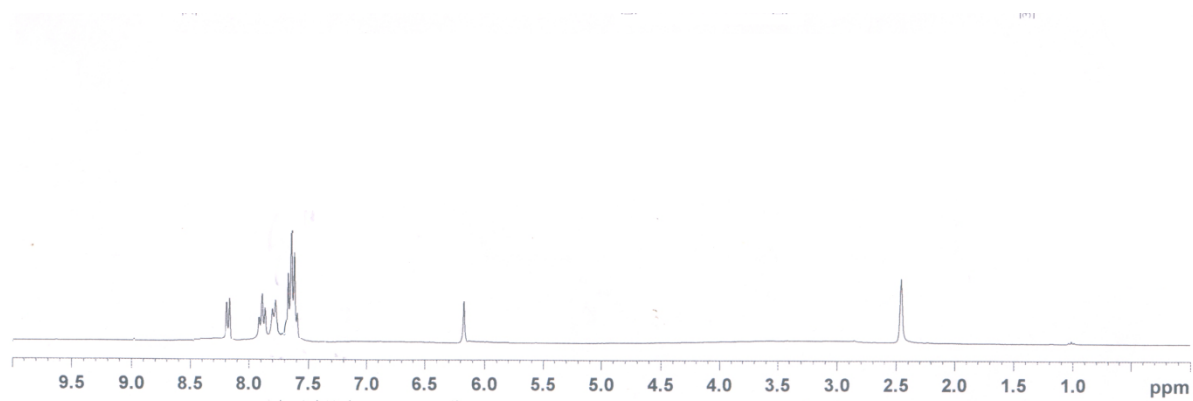
10	5j	198
11	5k	287
12	5l	158
13	5m	173
14	5n	198
15	5o	200



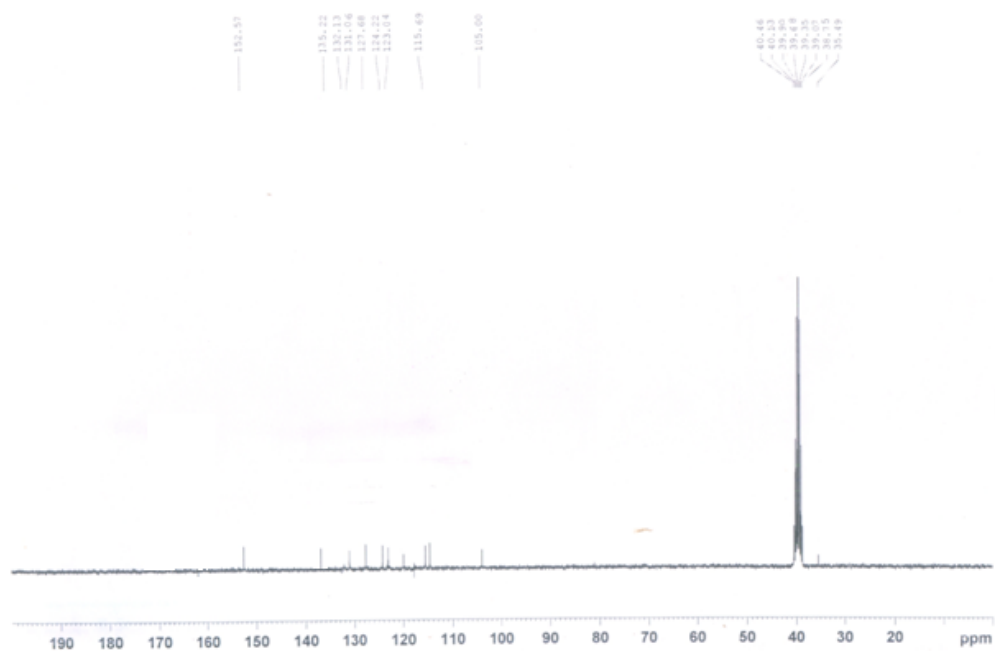
¹H NMR of compound 3a



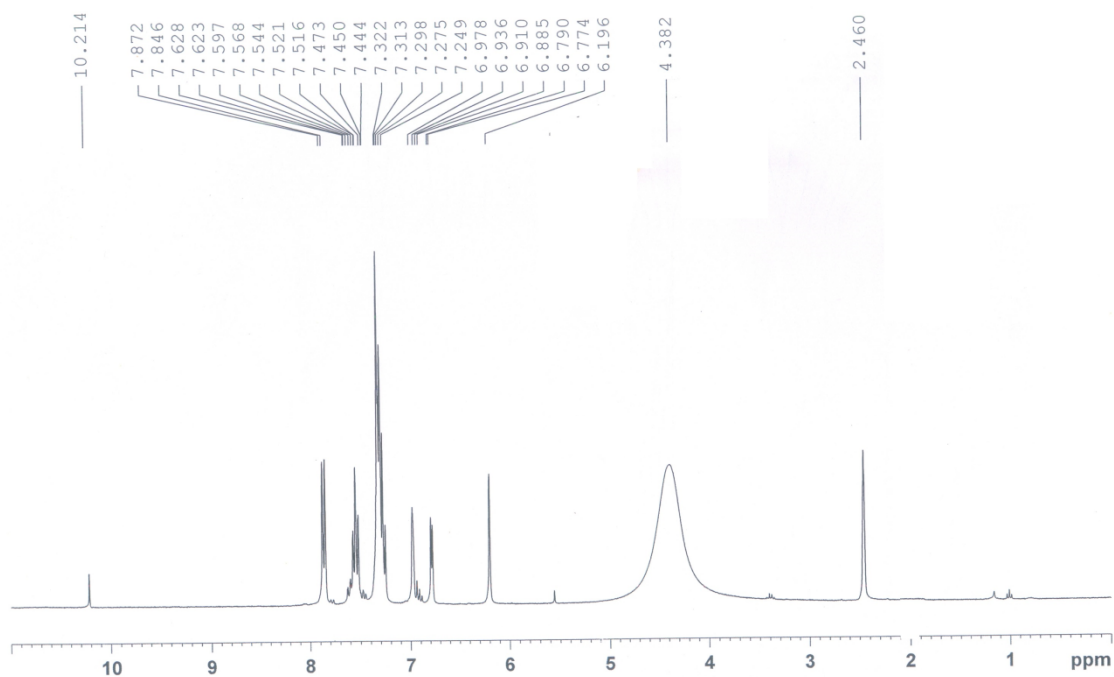
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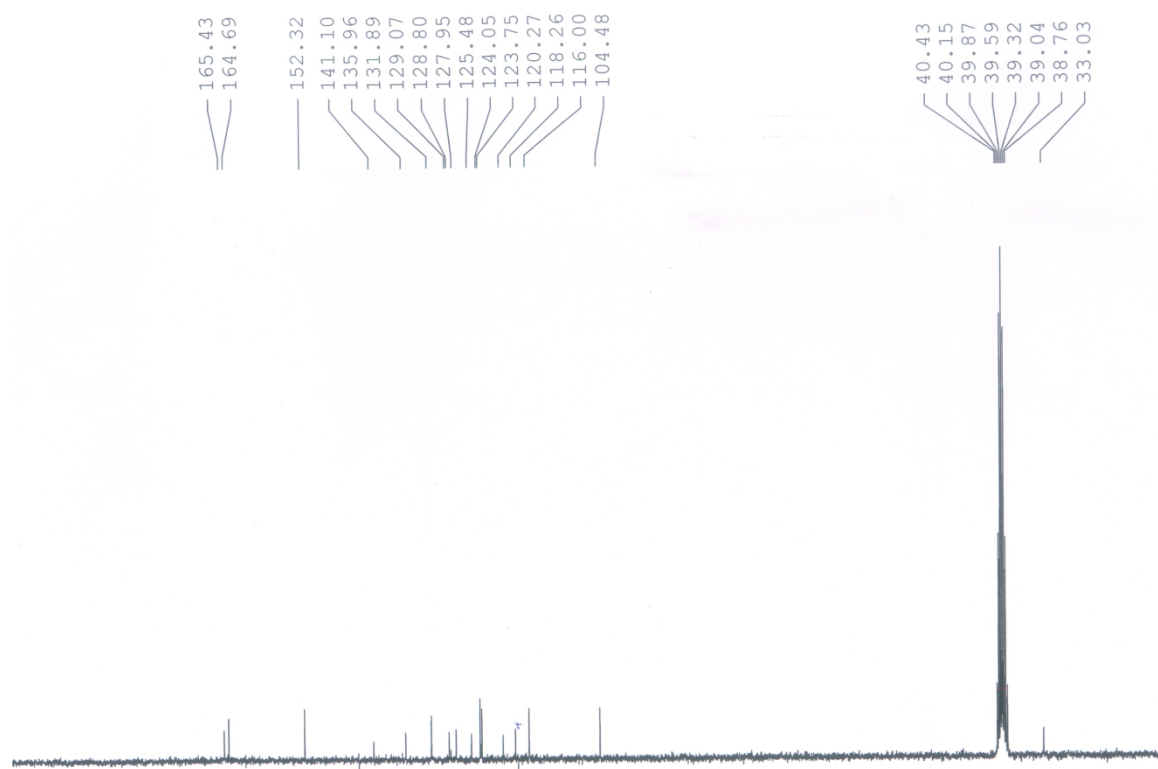
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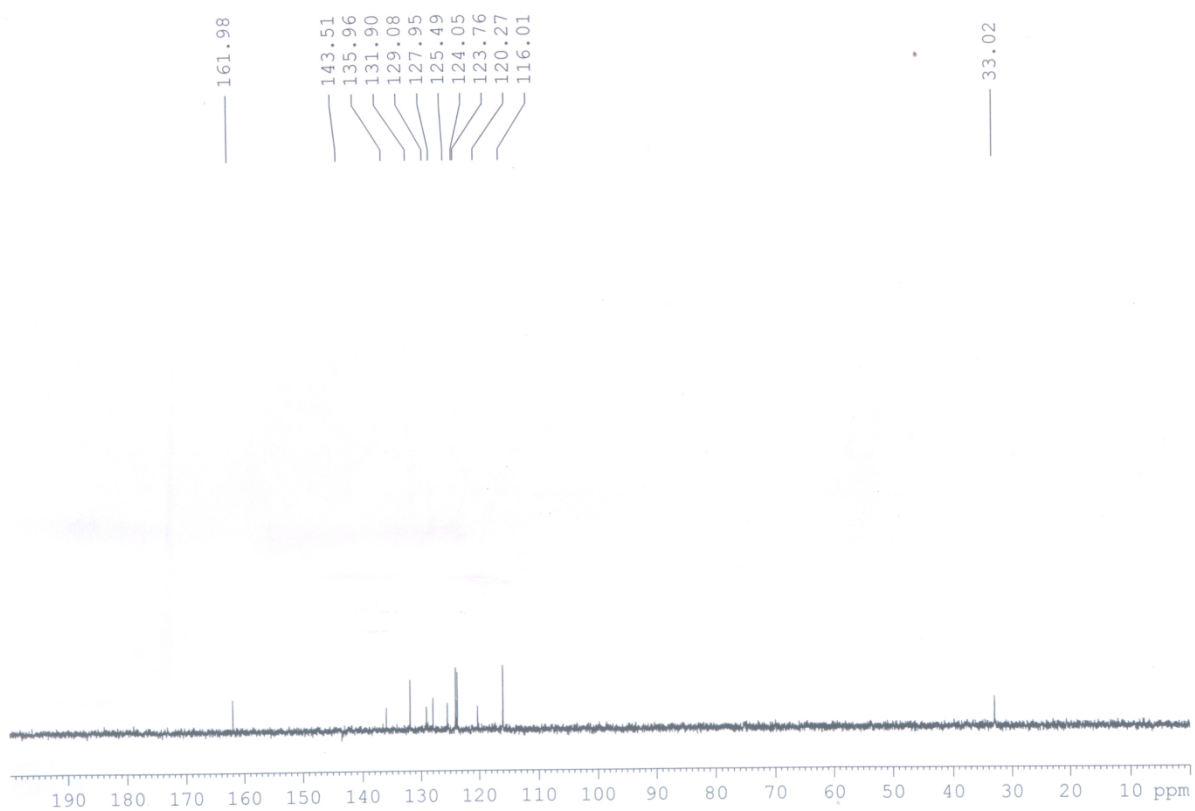
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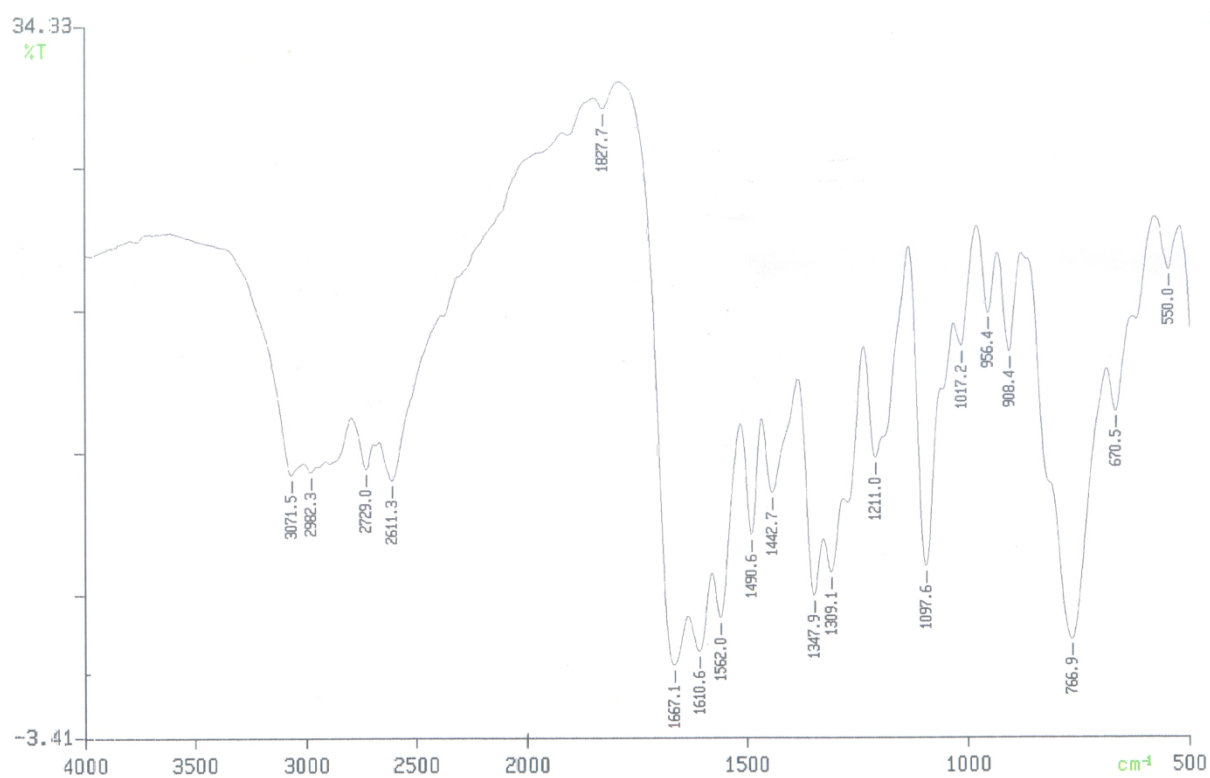
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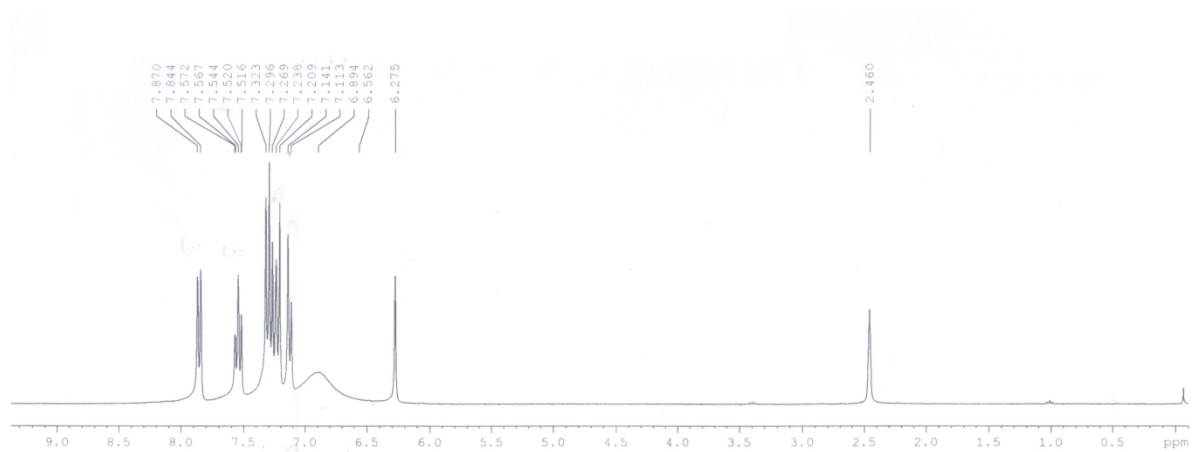
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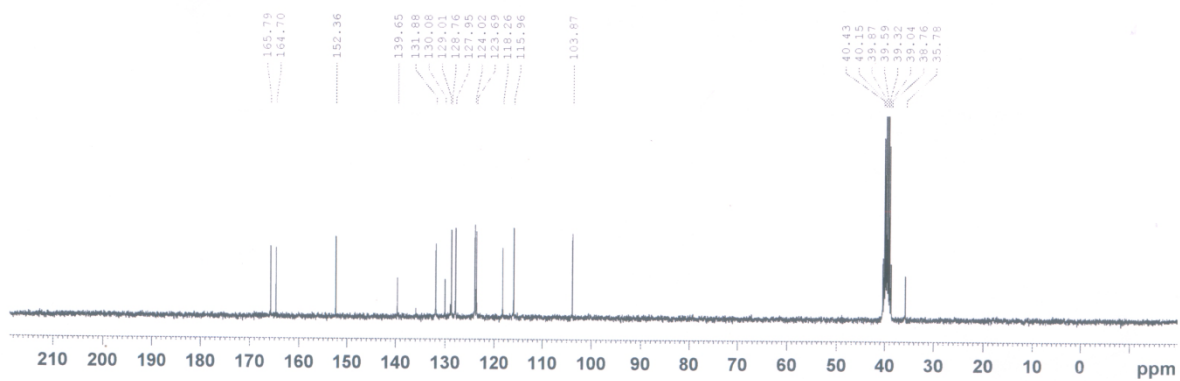


DEPT NMR of compound 3c

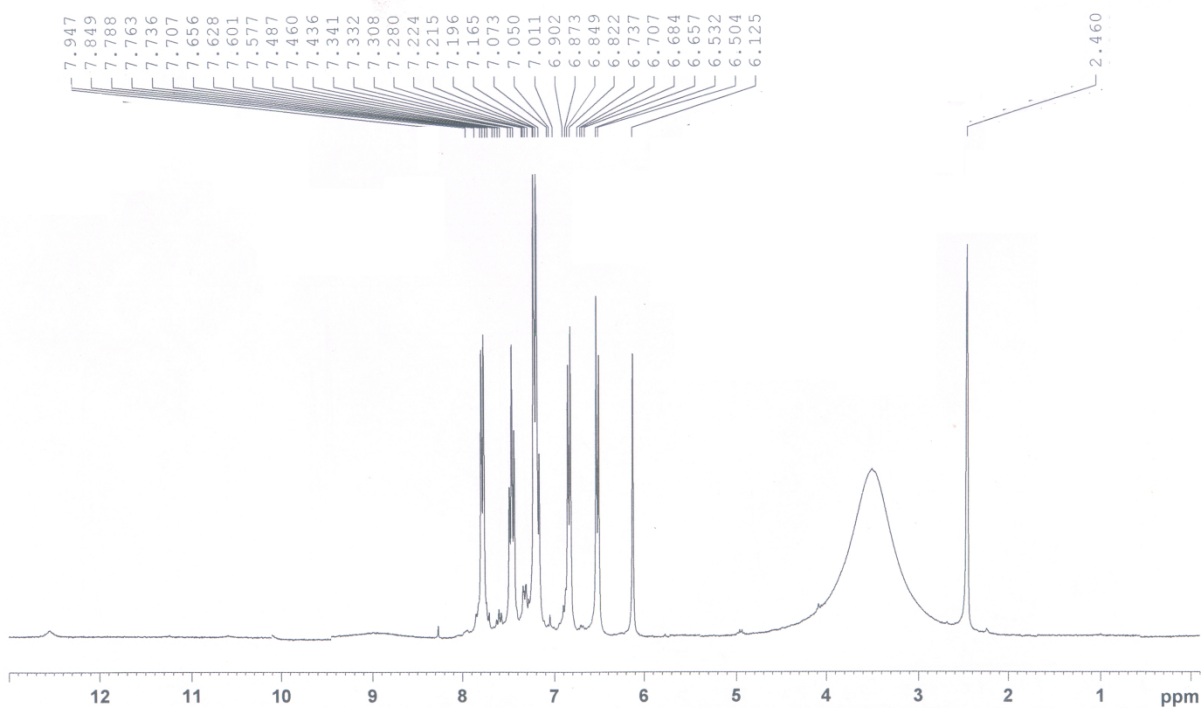


FT-IR of compound 3d

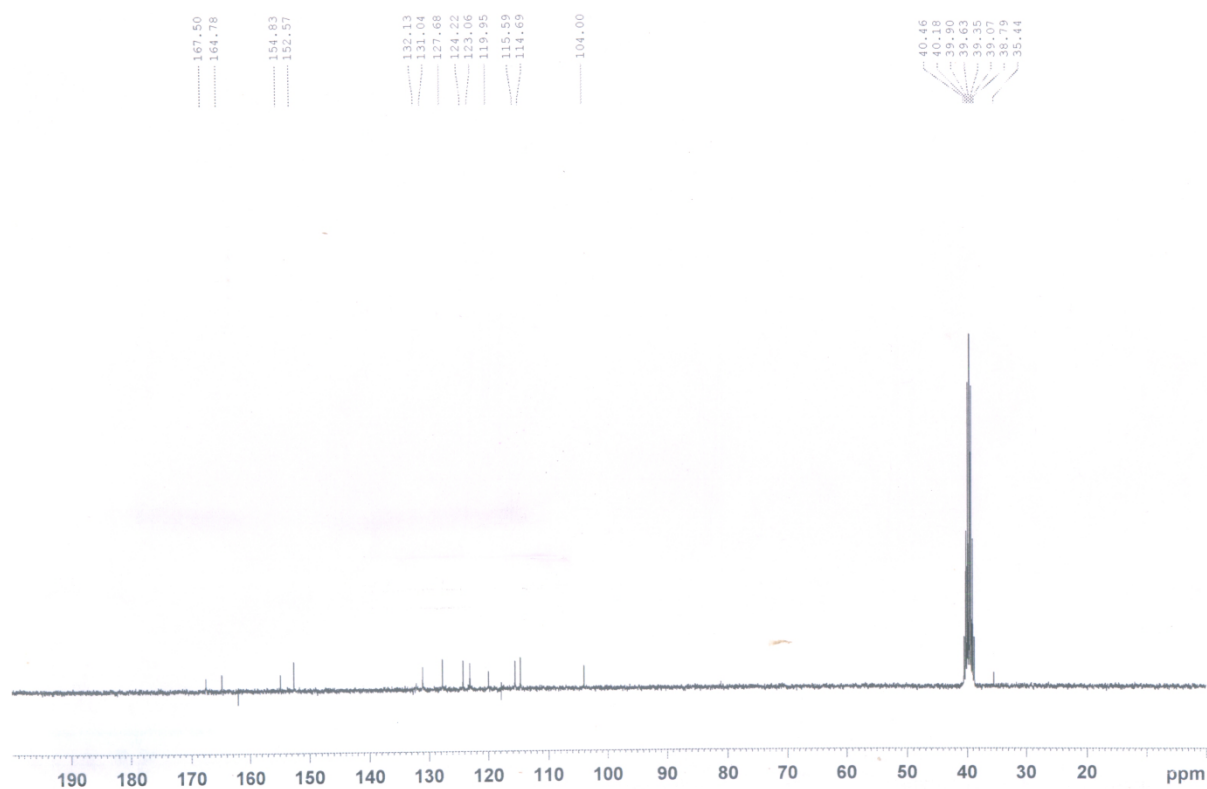
 ^1H NMR of compound 3d



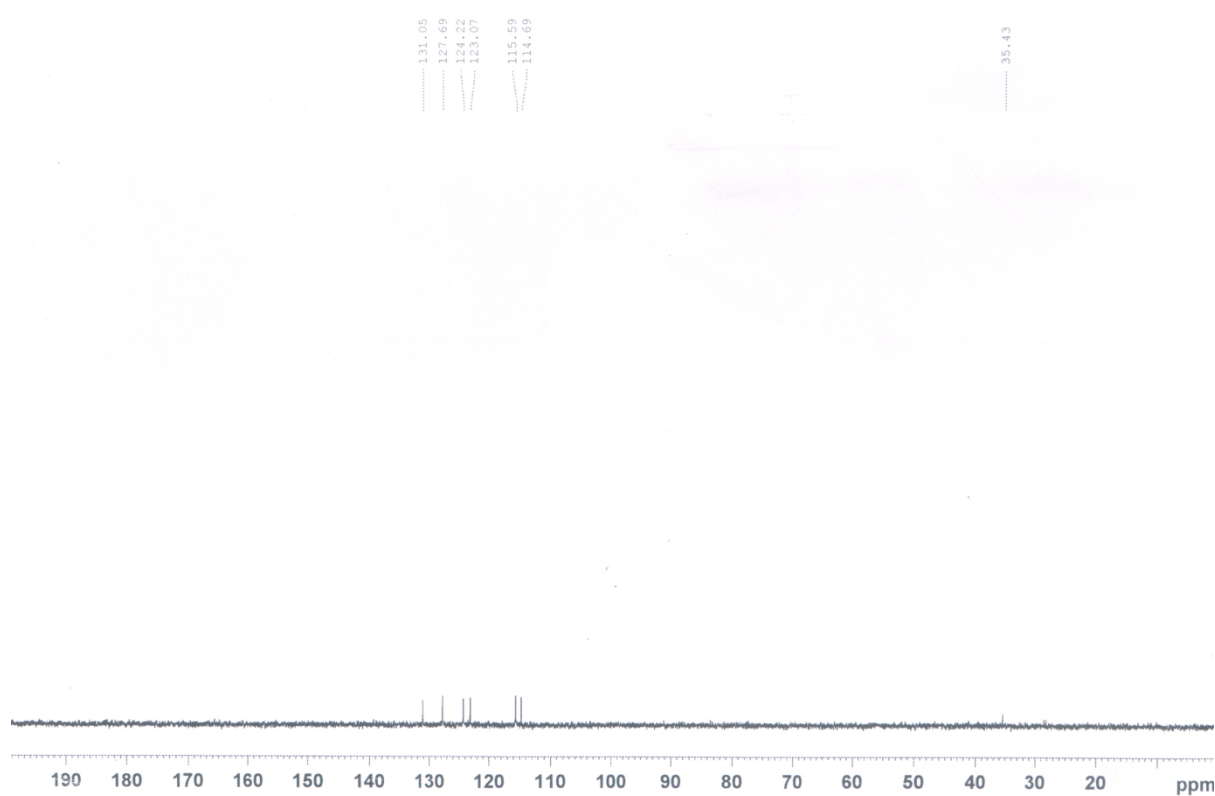
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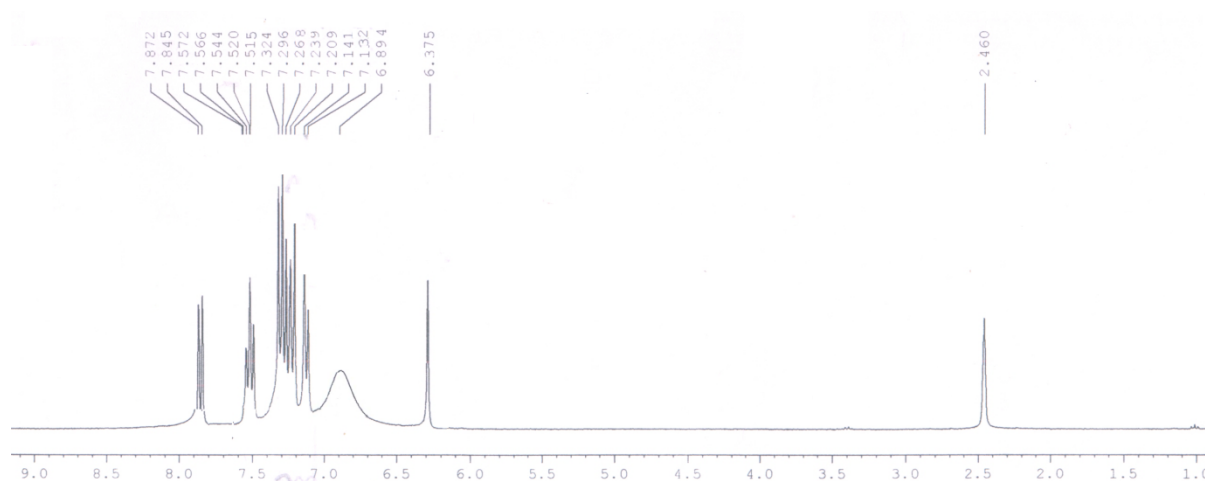
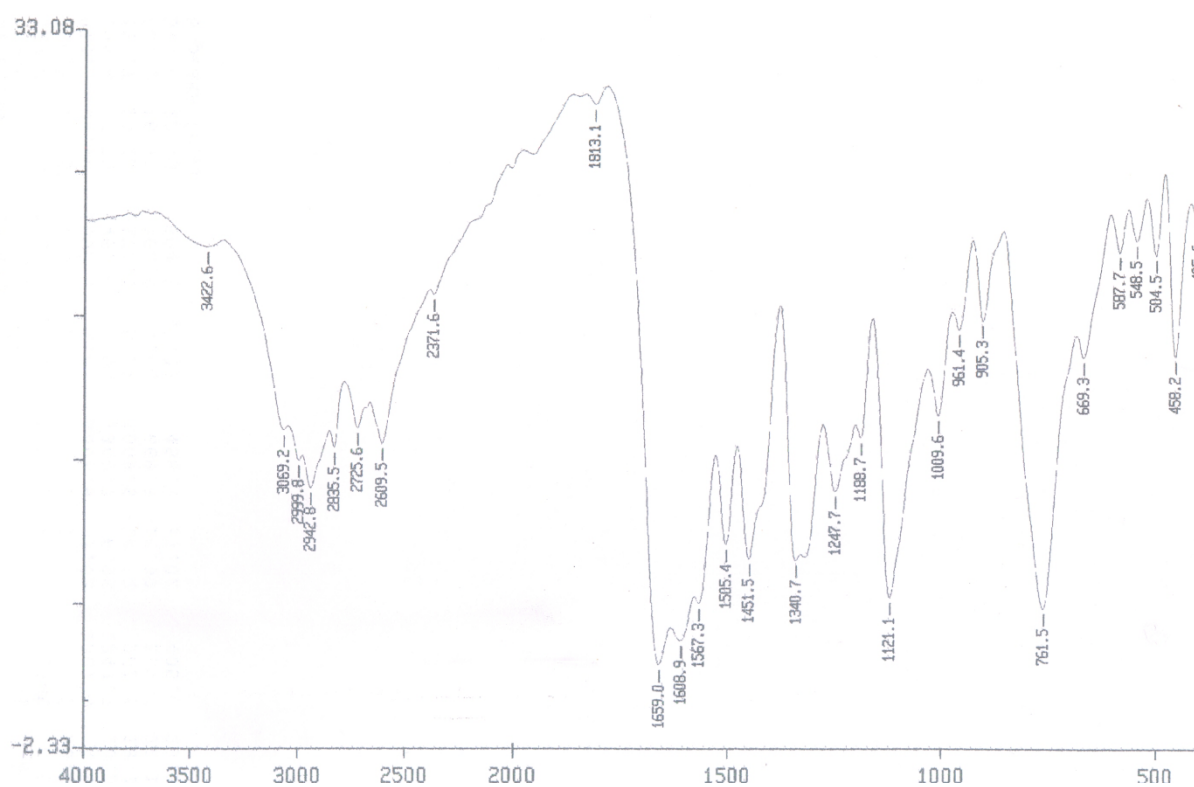
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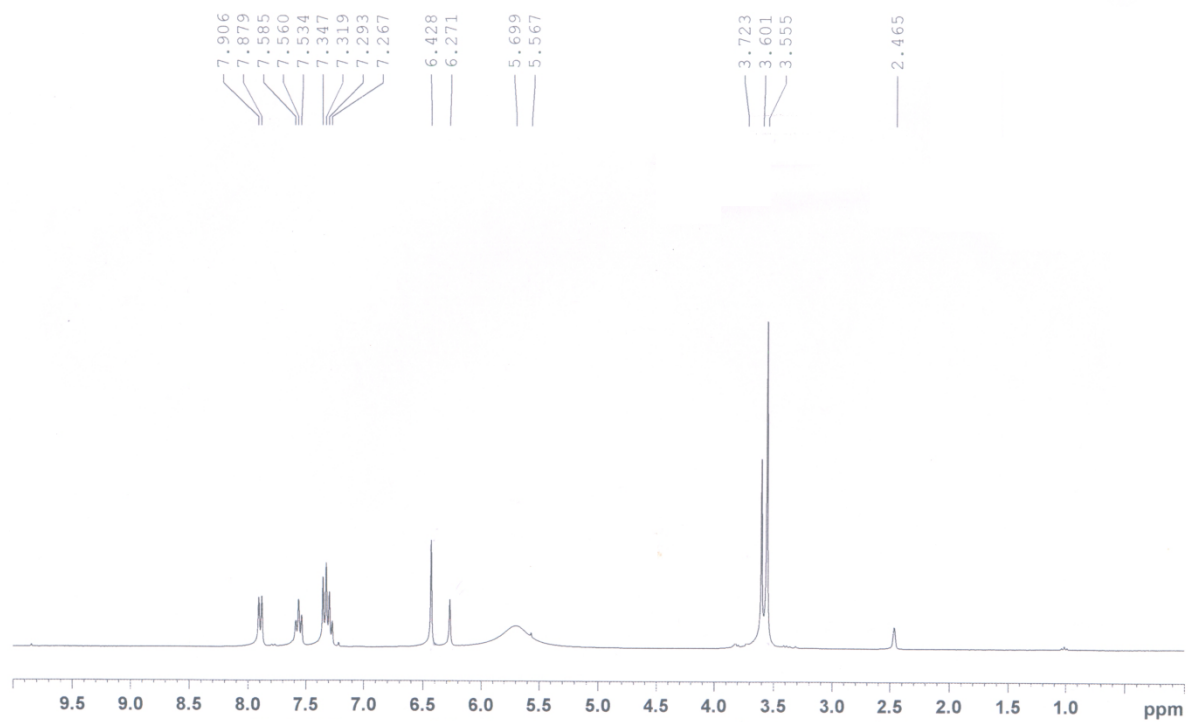
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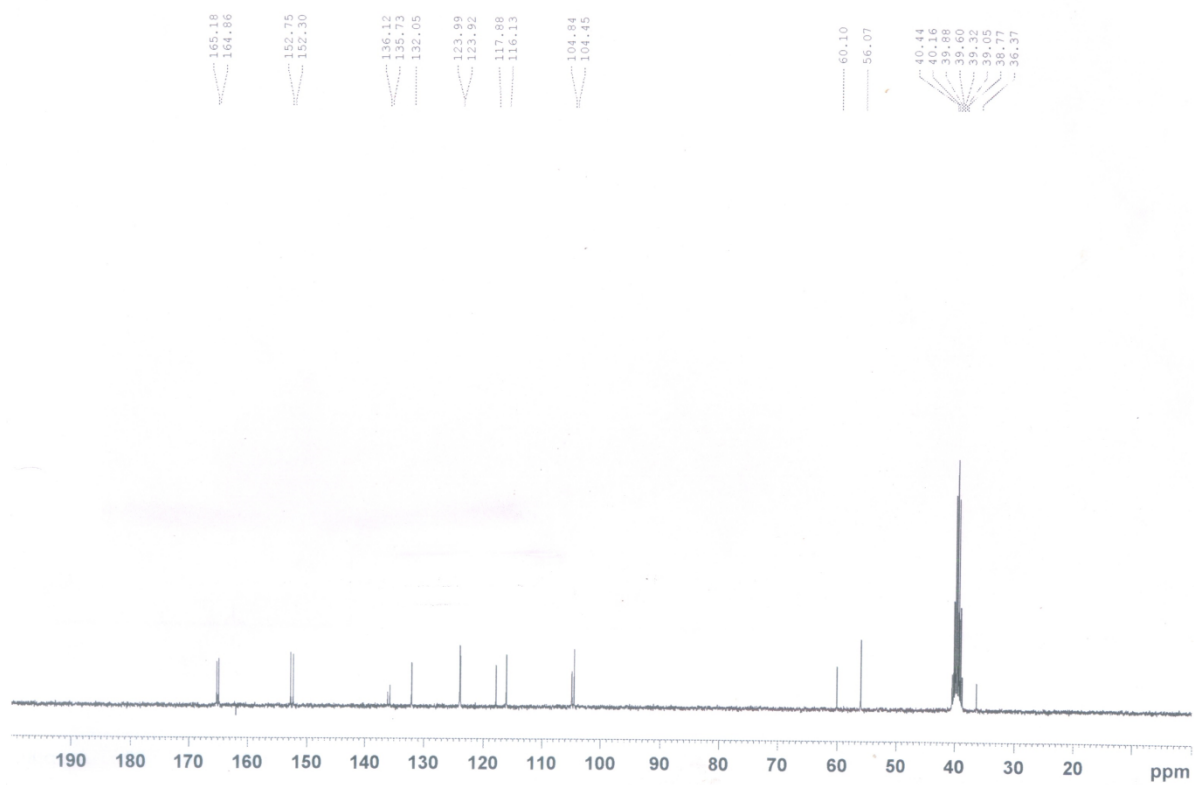
DEPT NMR of compound 3e

 ^1H NMR of compound 3f

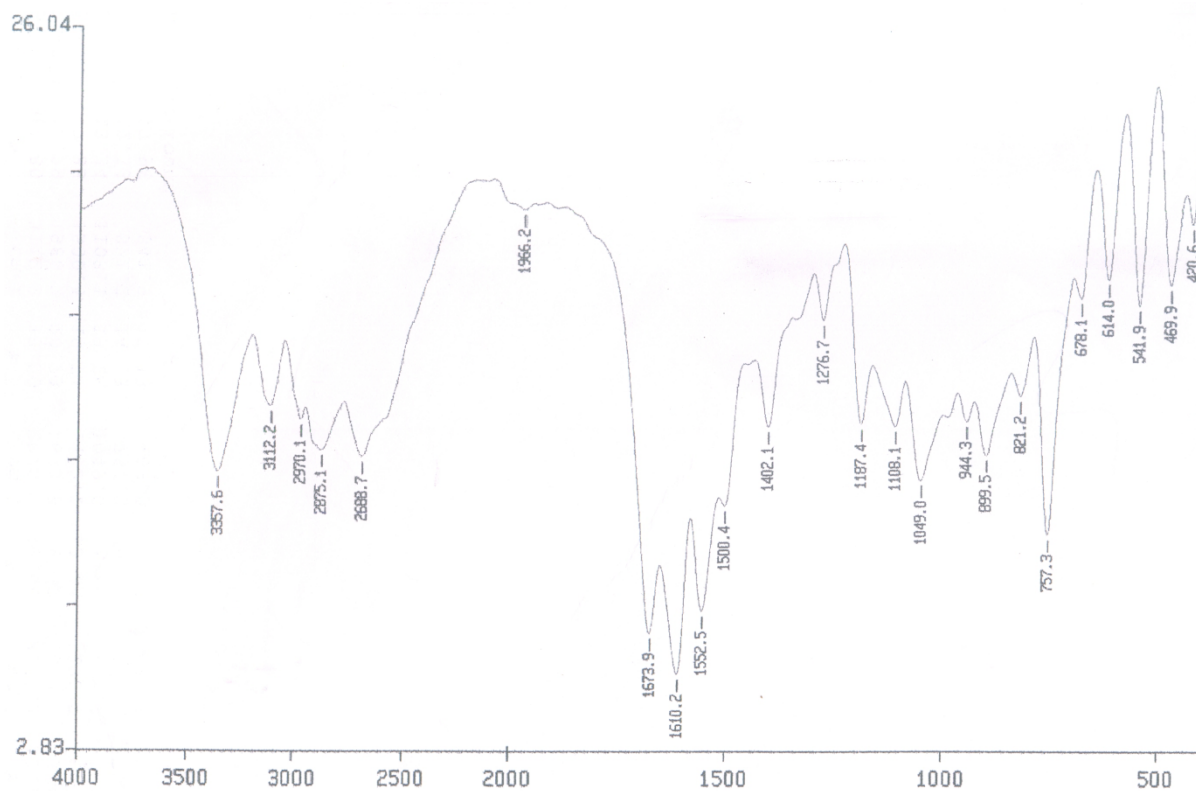
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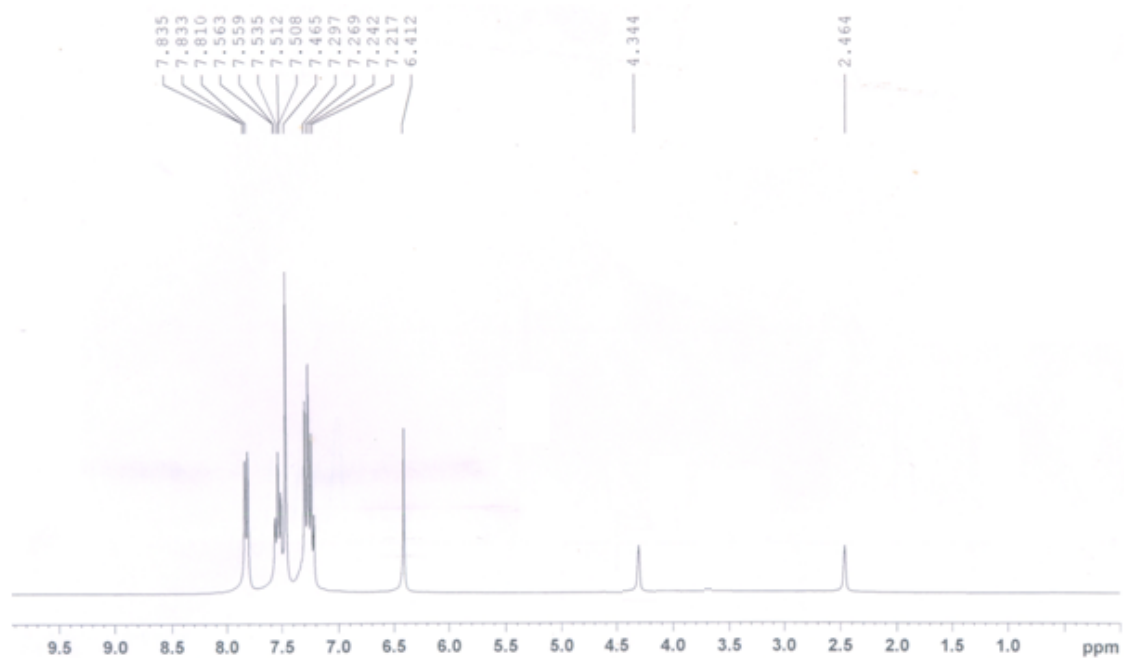
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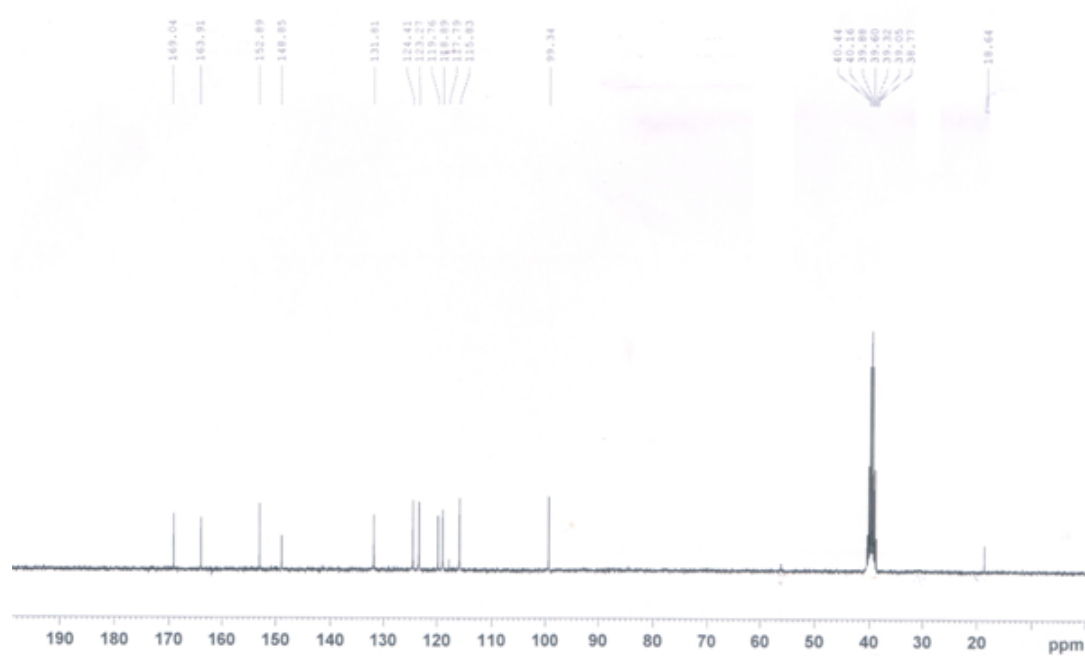
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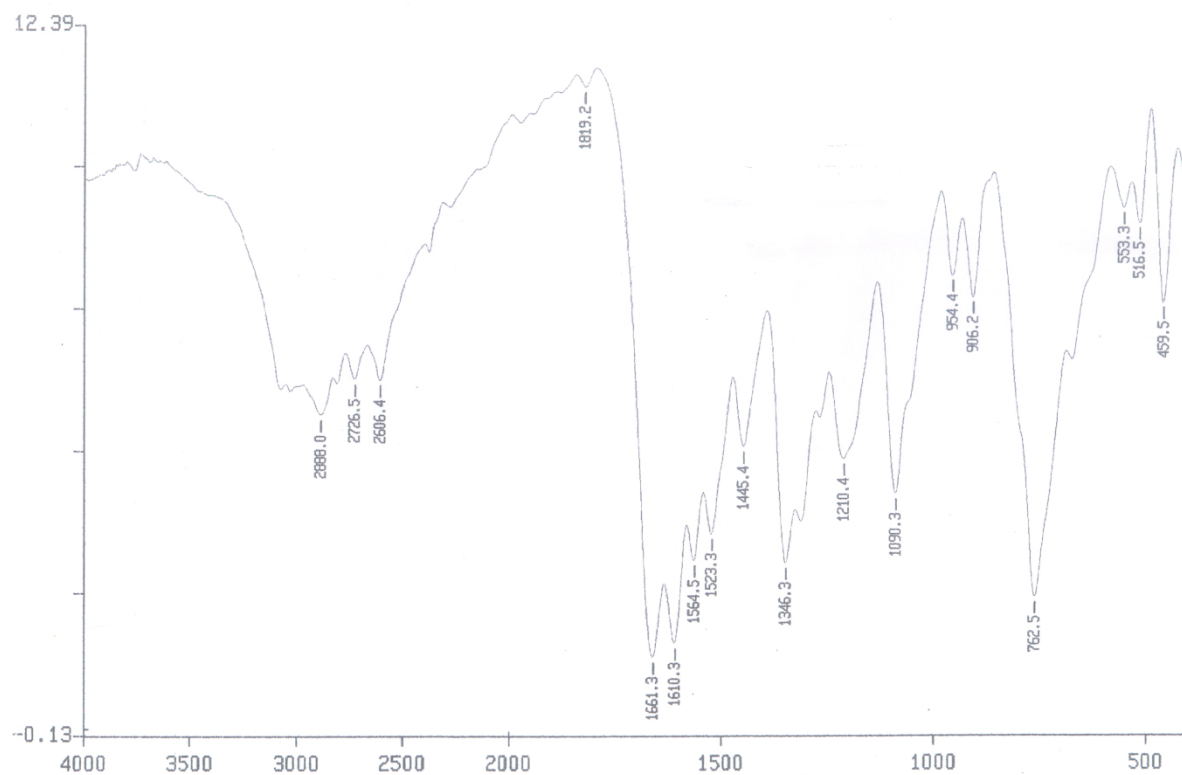
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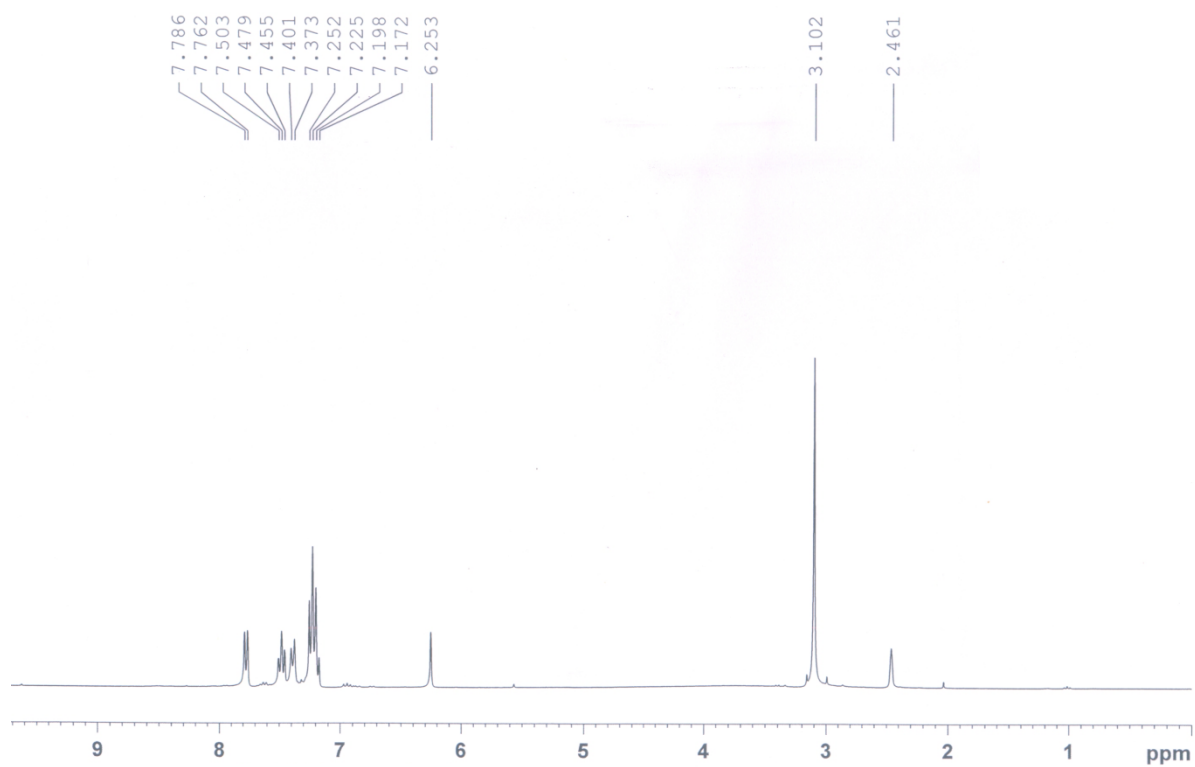
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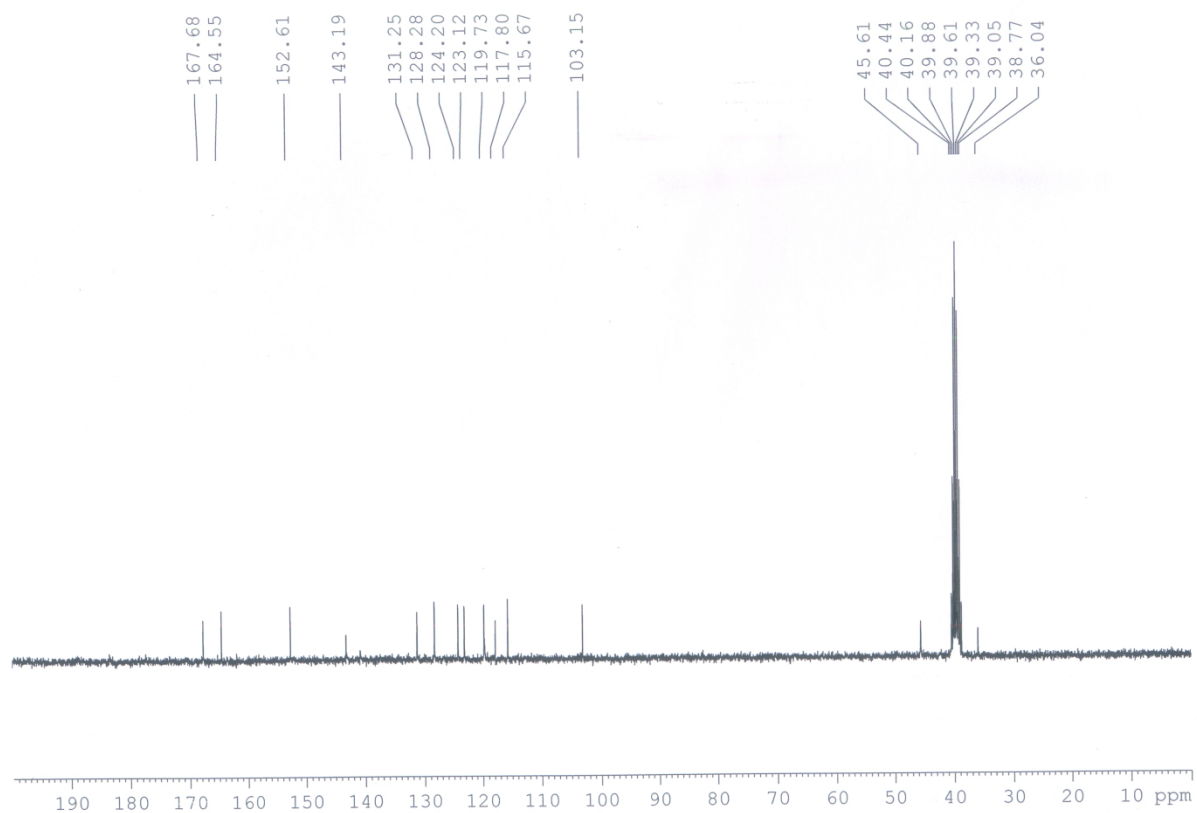


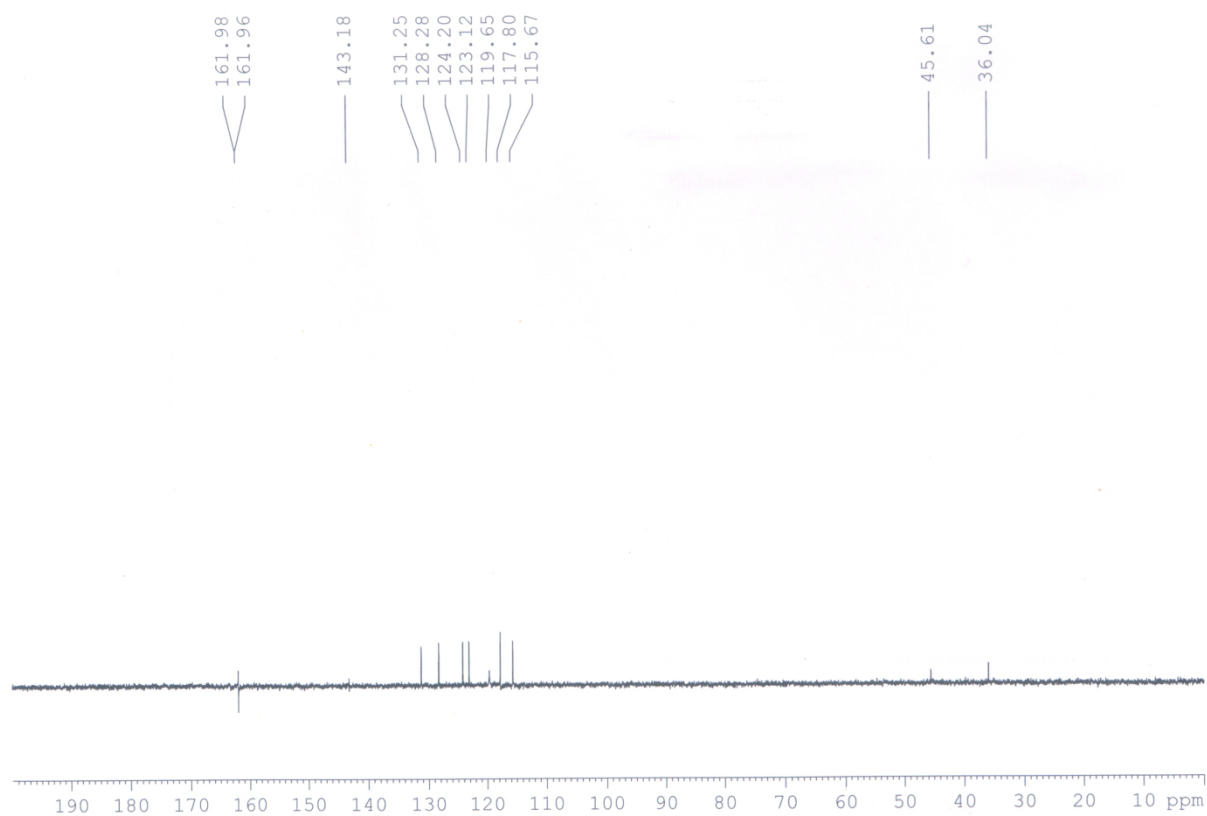
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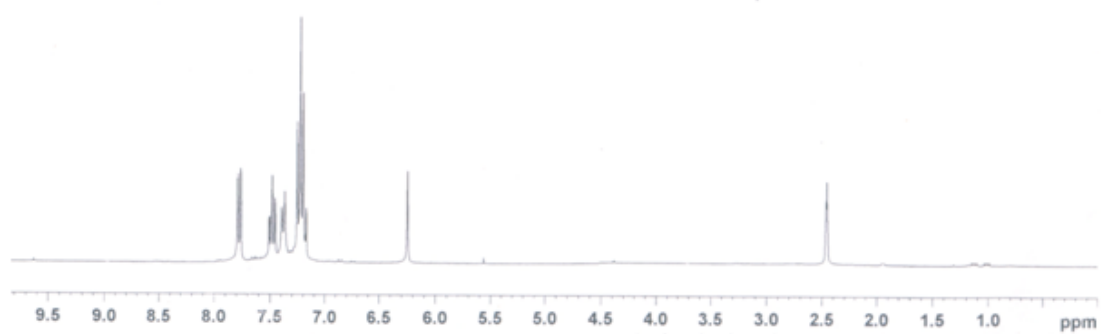
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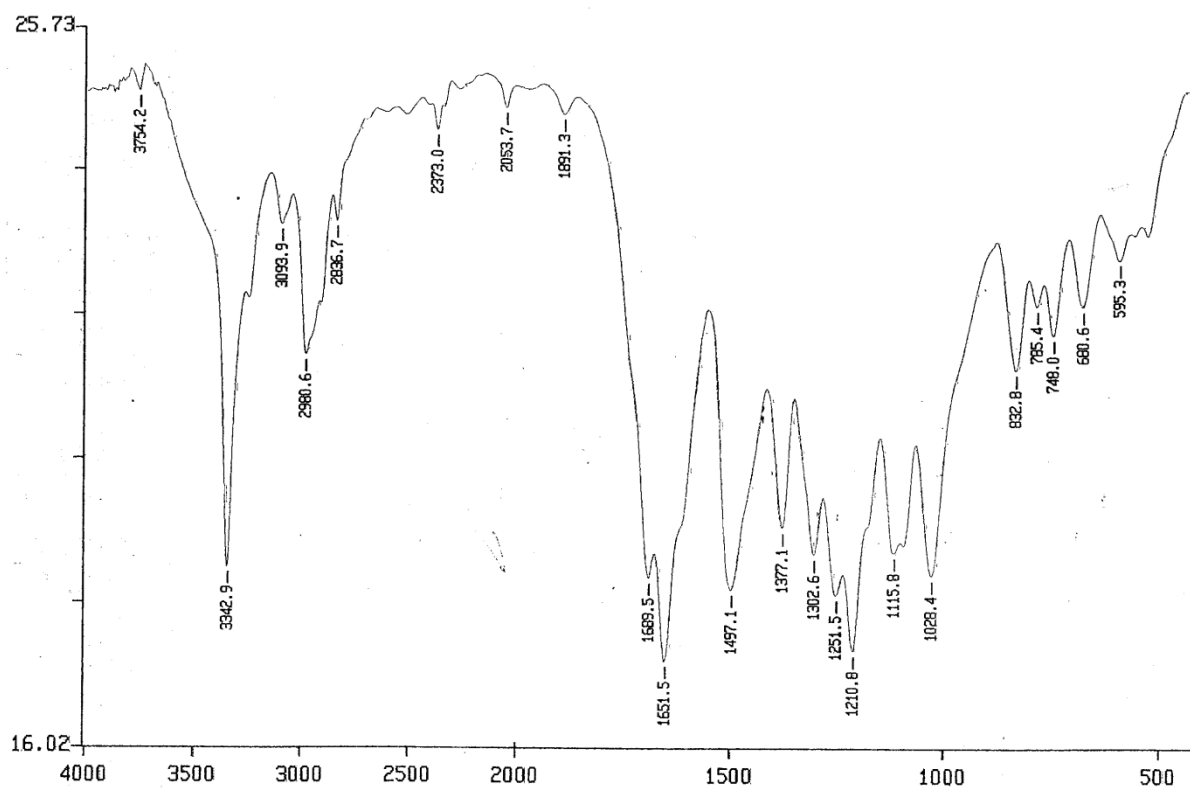


^1H NMR of compound 3i ^{13}C NMR of compound 3i

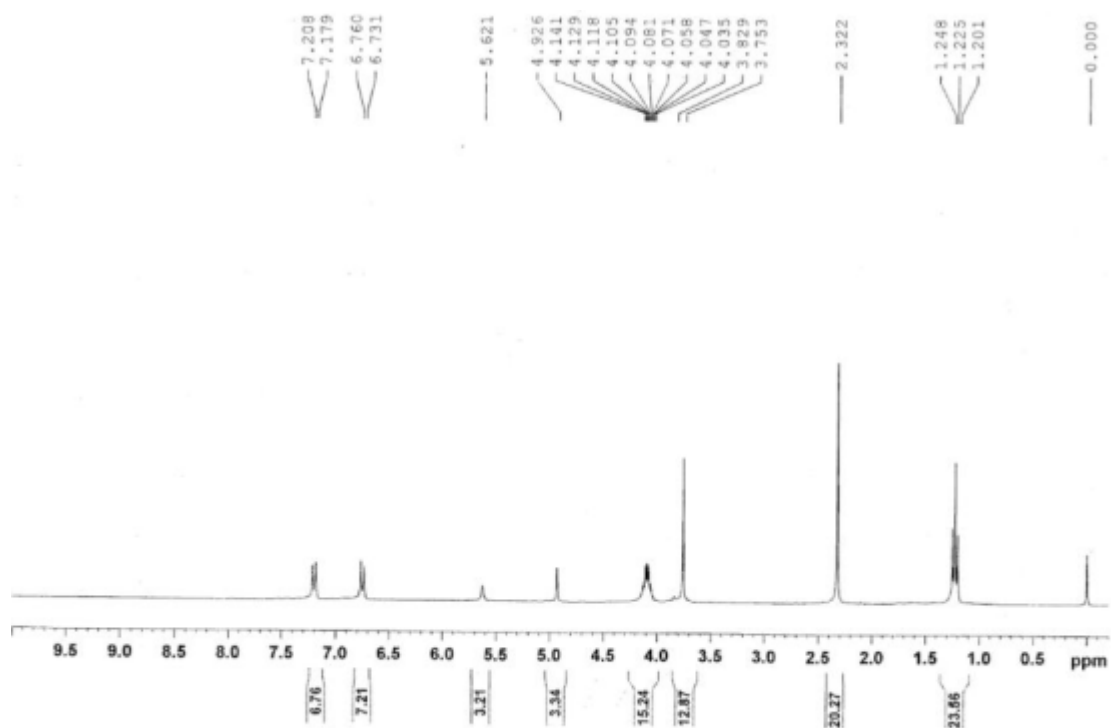


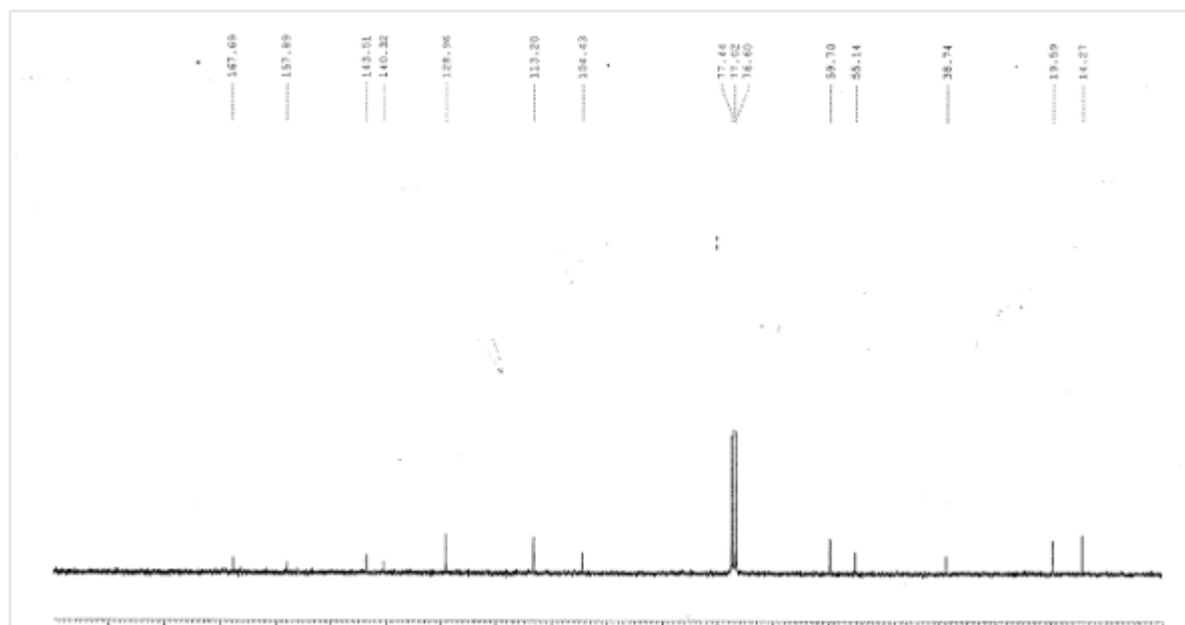
DEPT NMR of compound 3i

¹H NMR of compound 3j

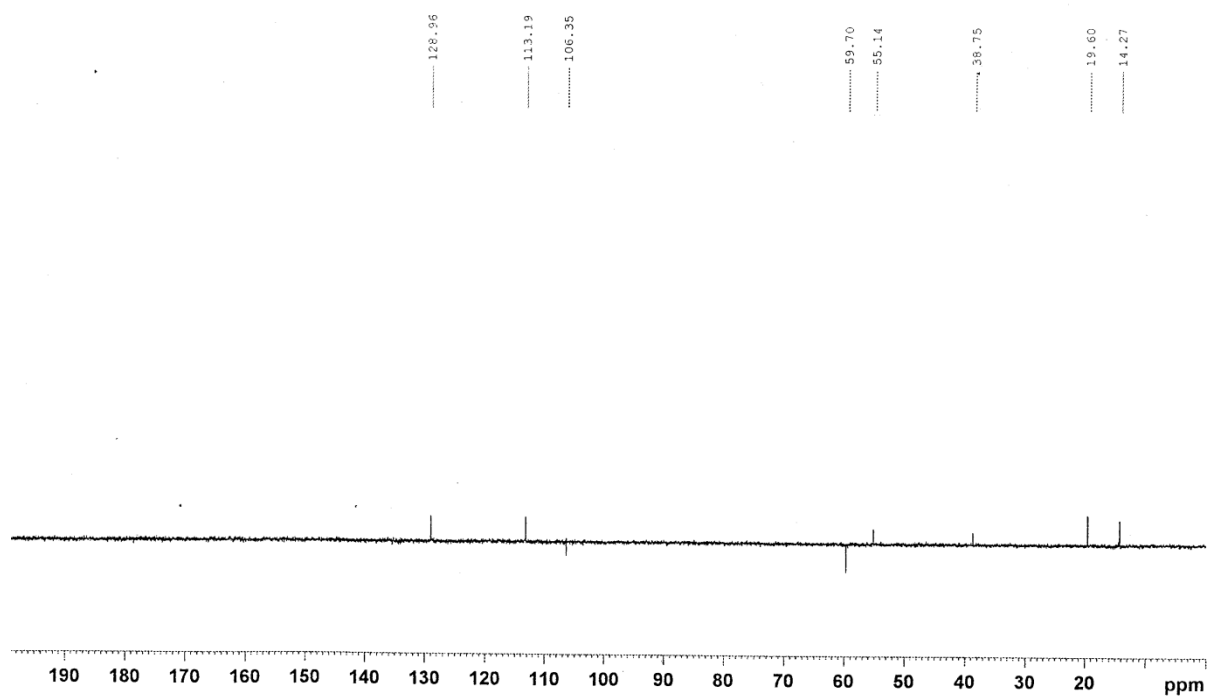


FT-IR of compound 5a

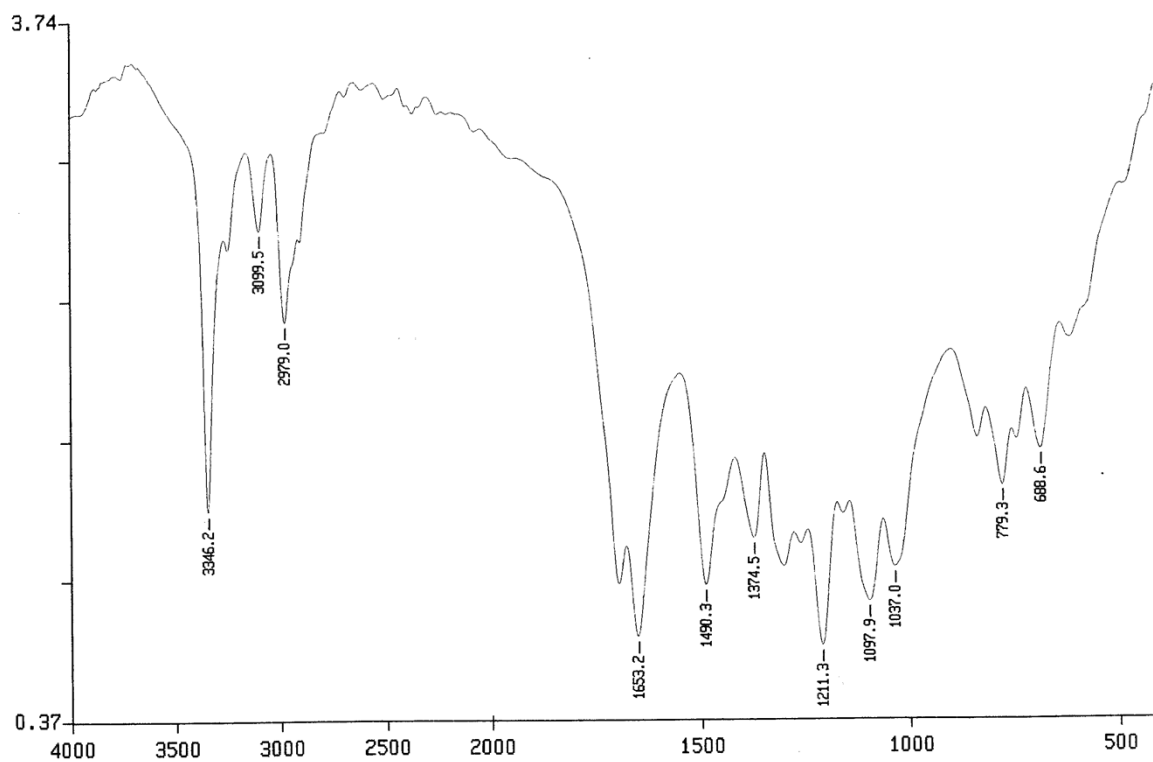
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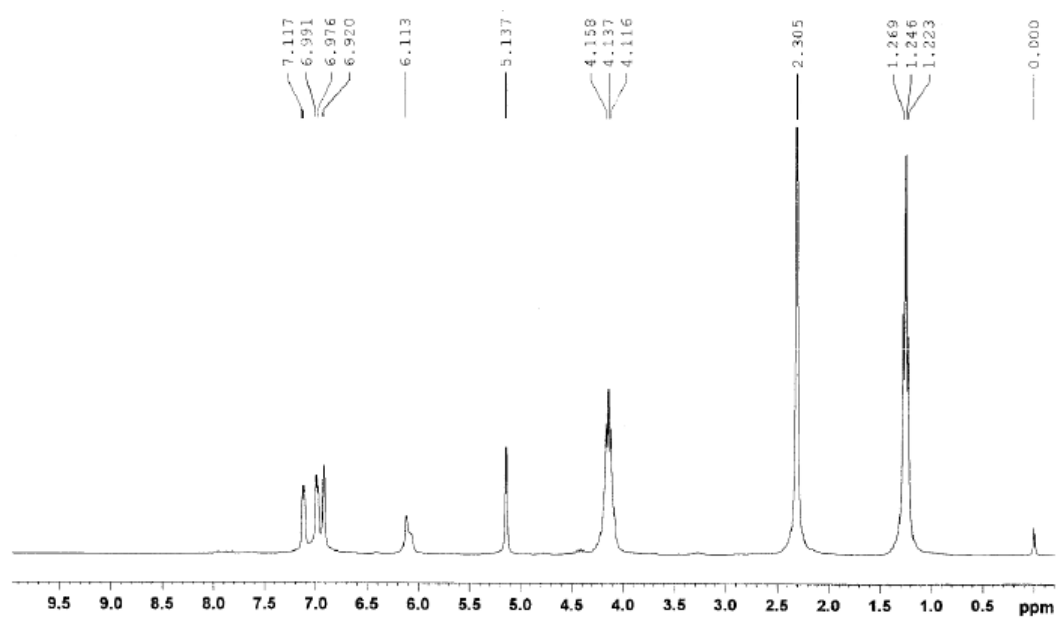
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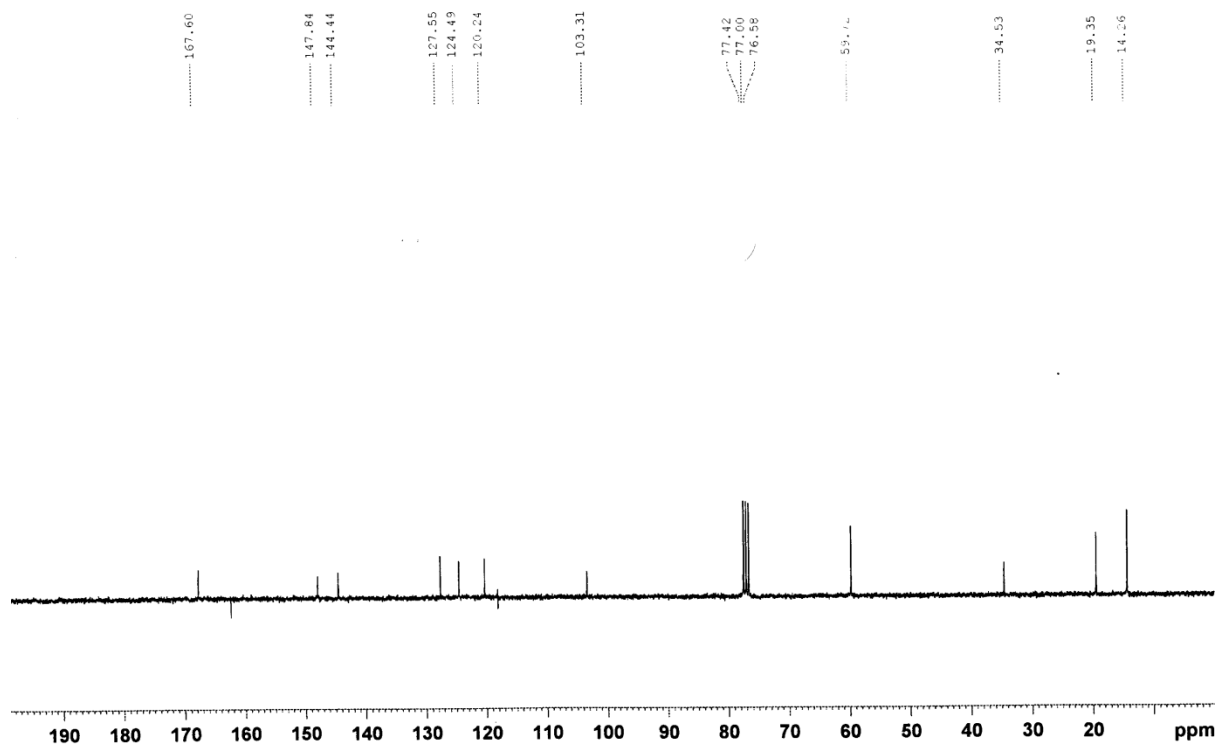


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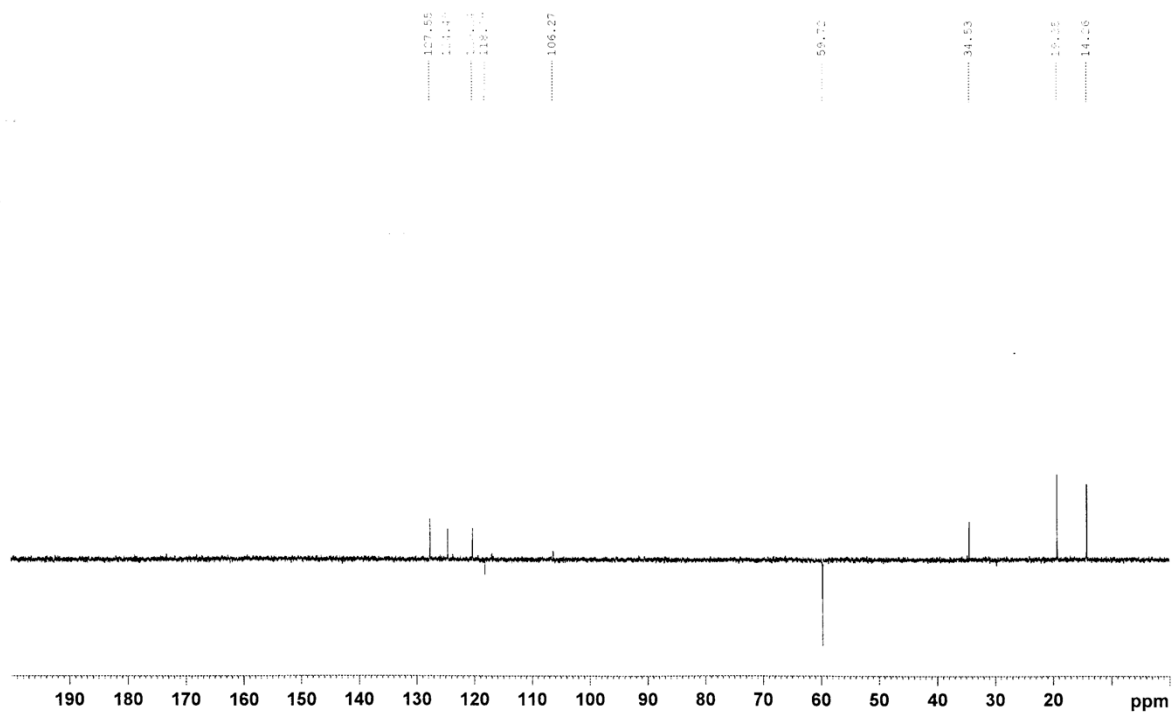


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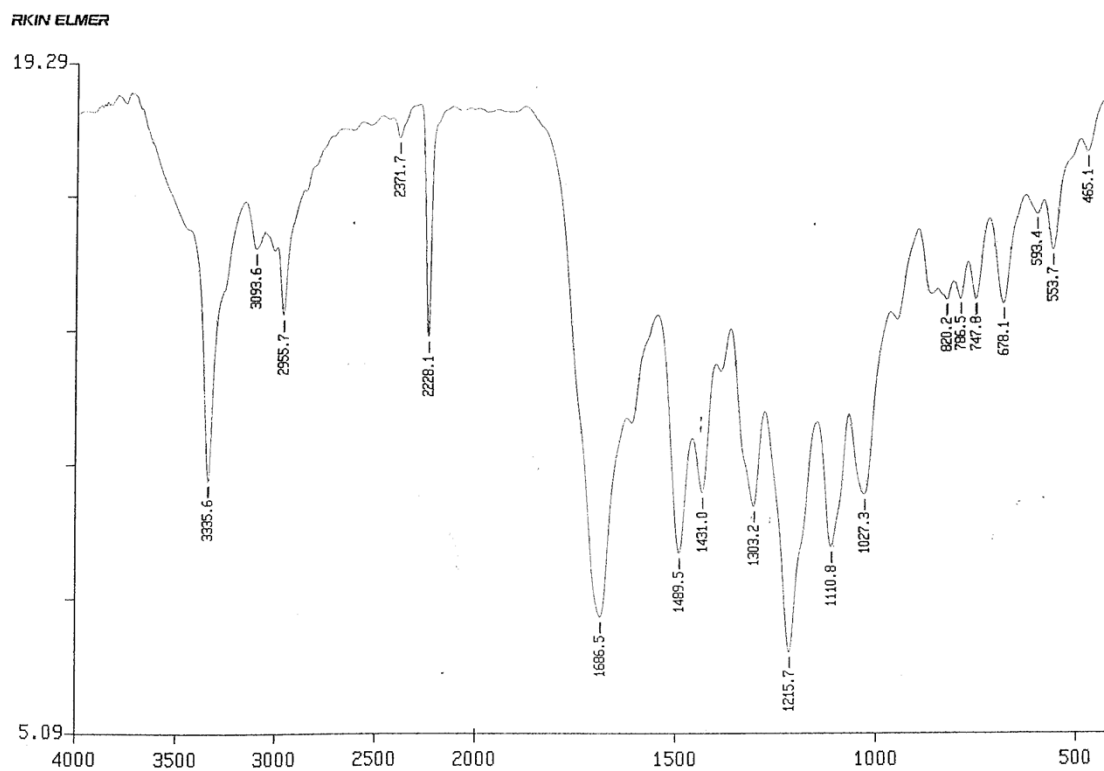
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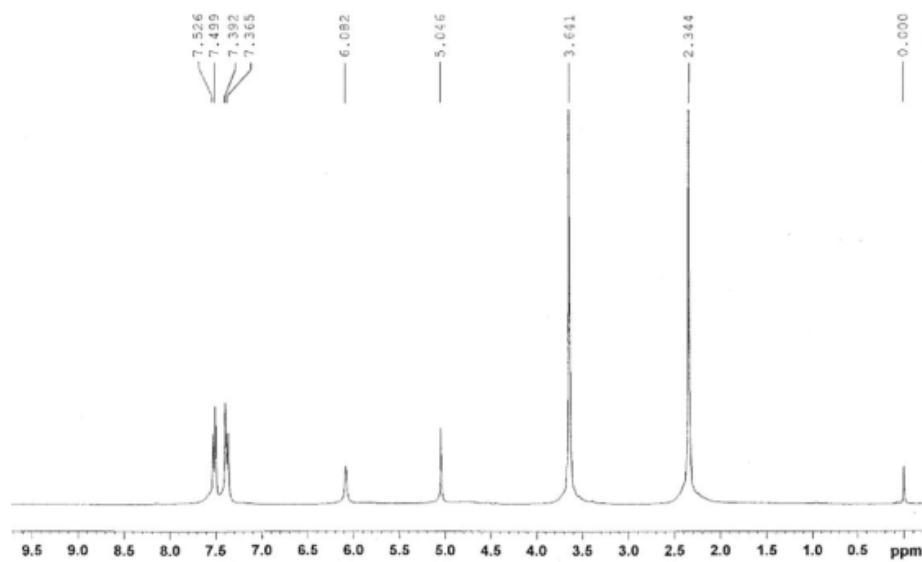
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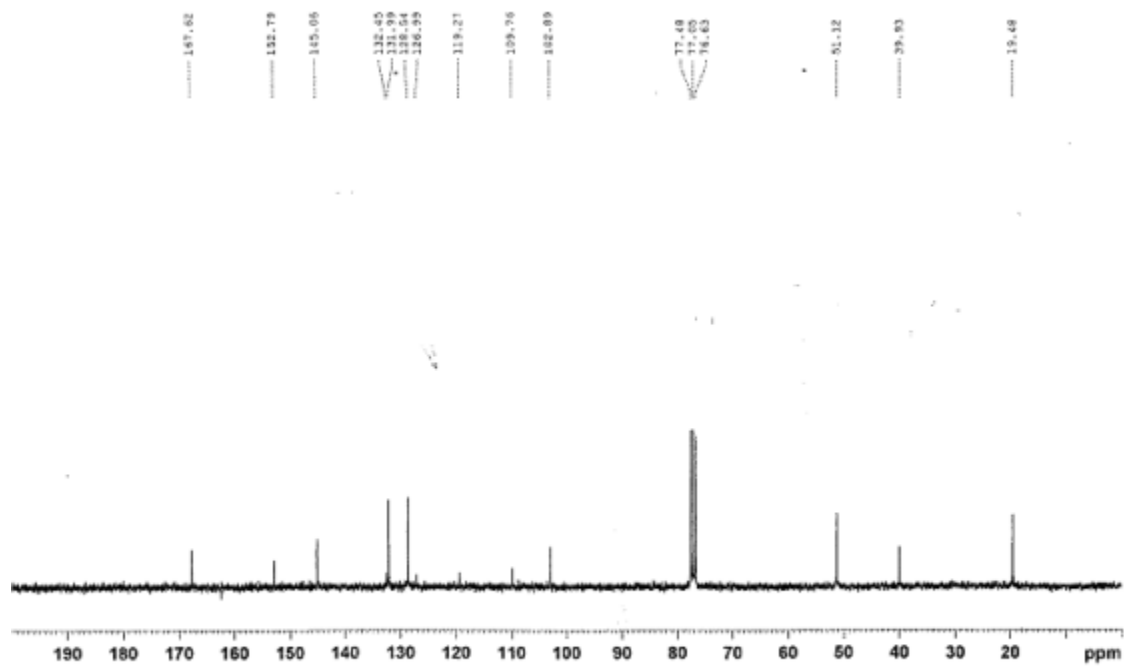


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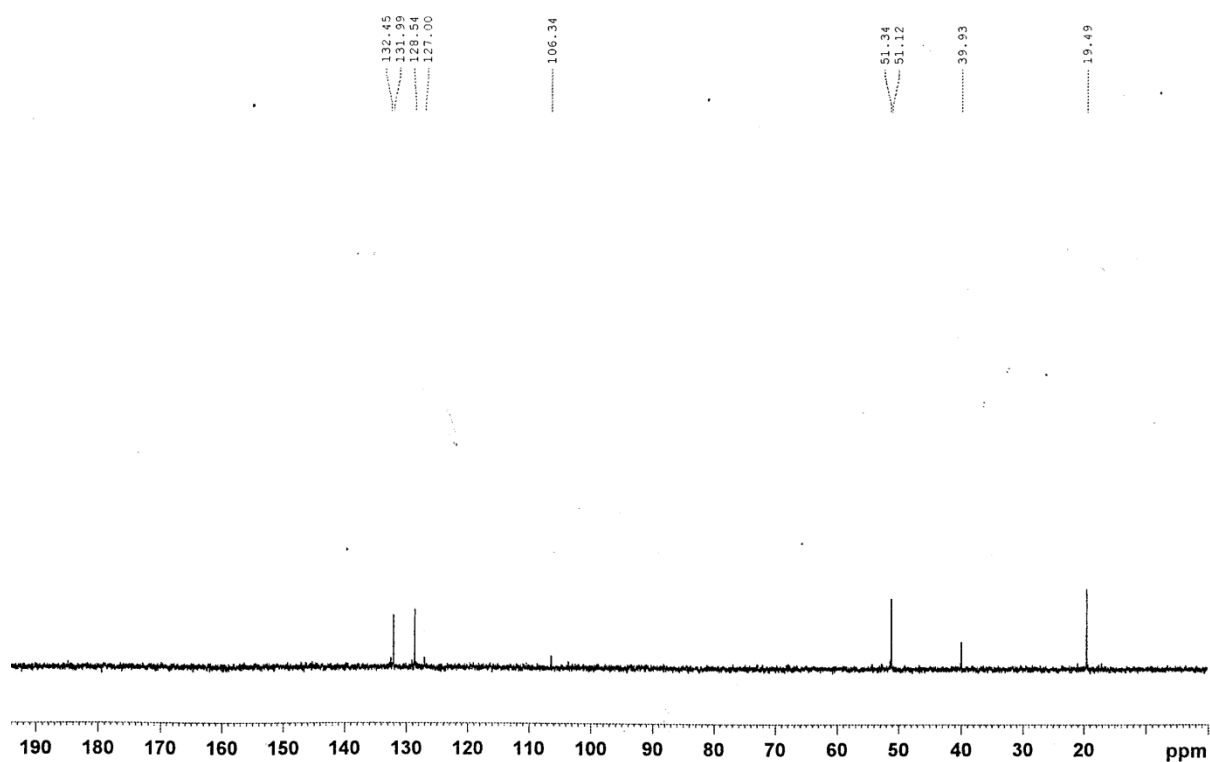


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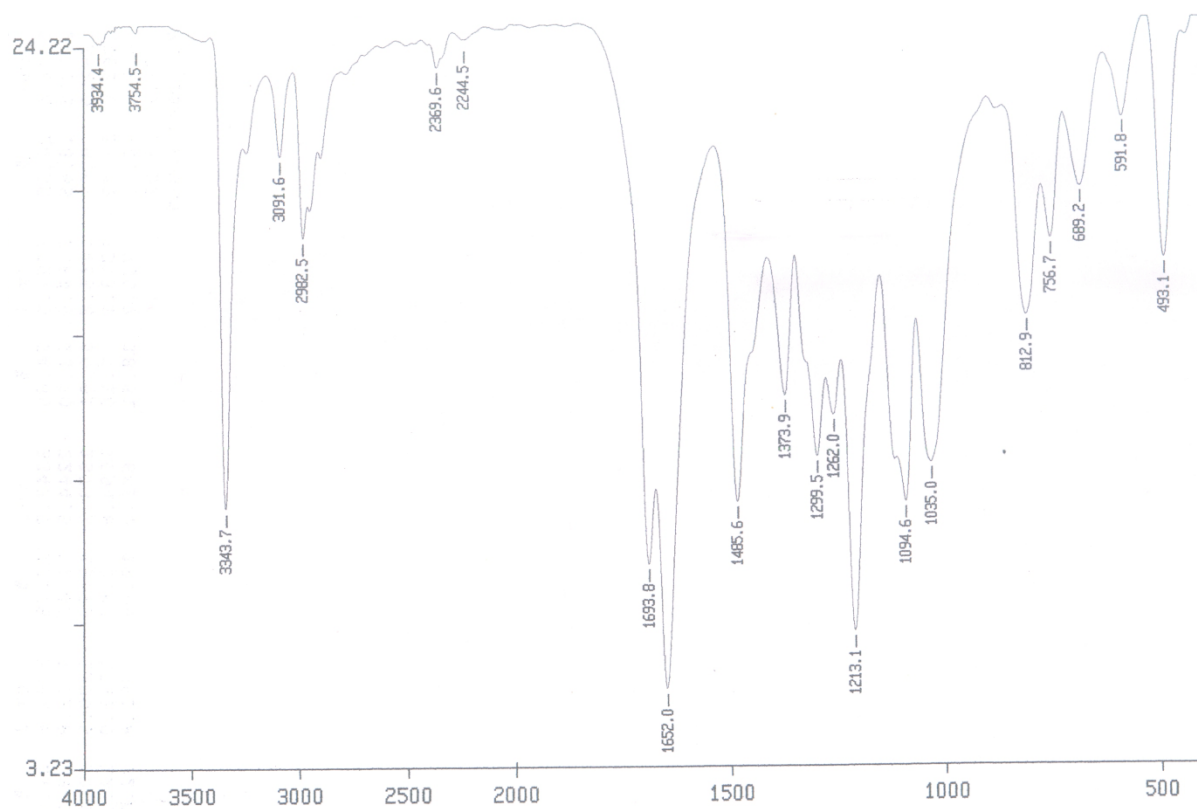
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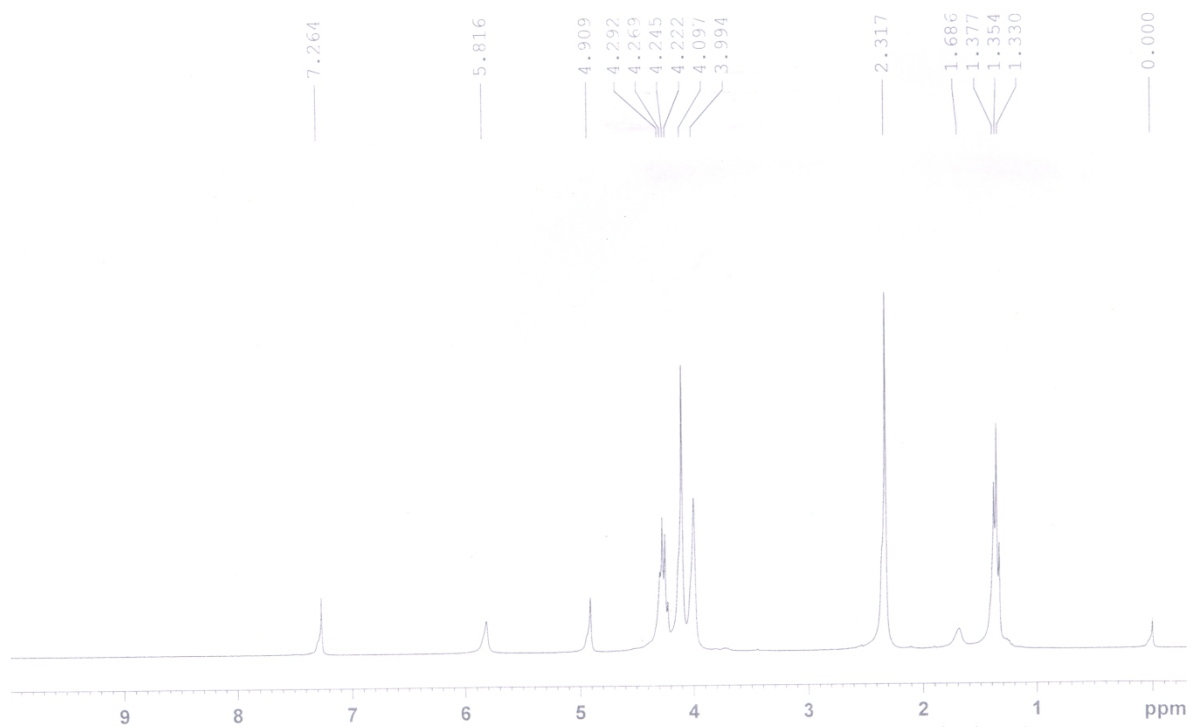
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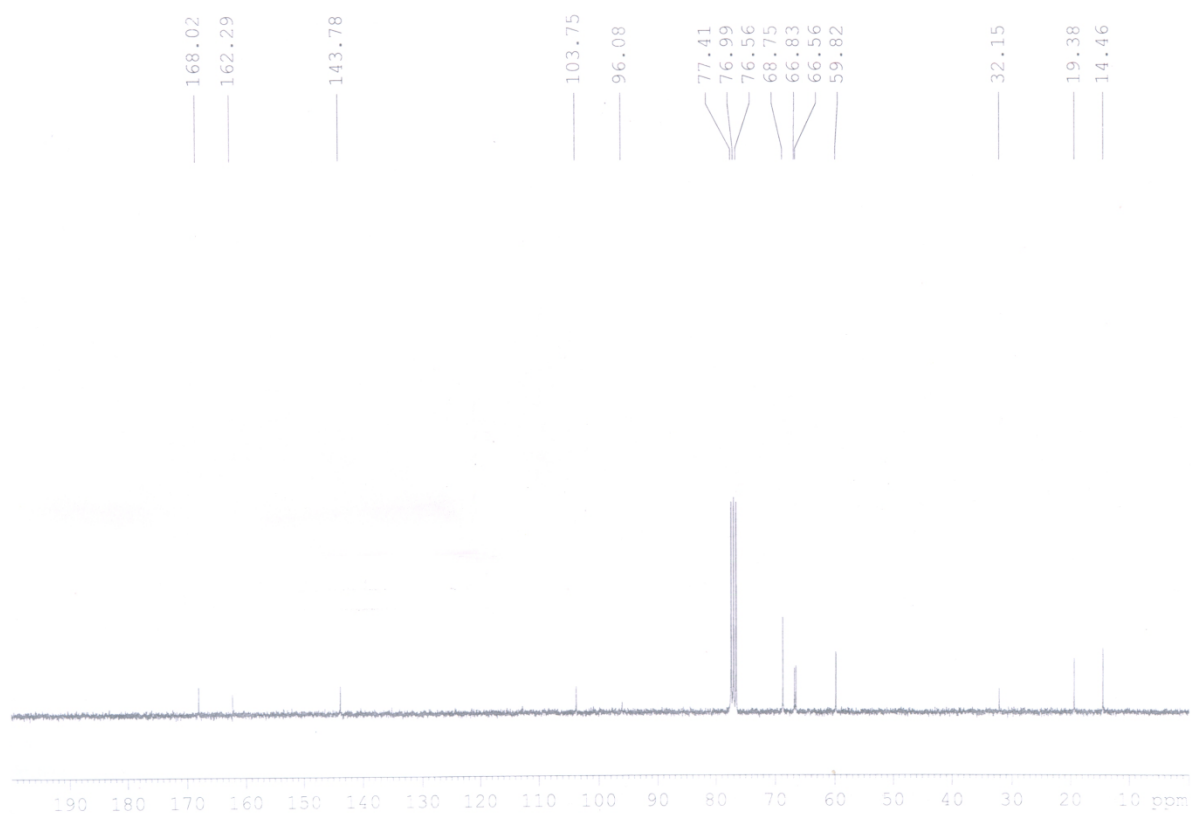


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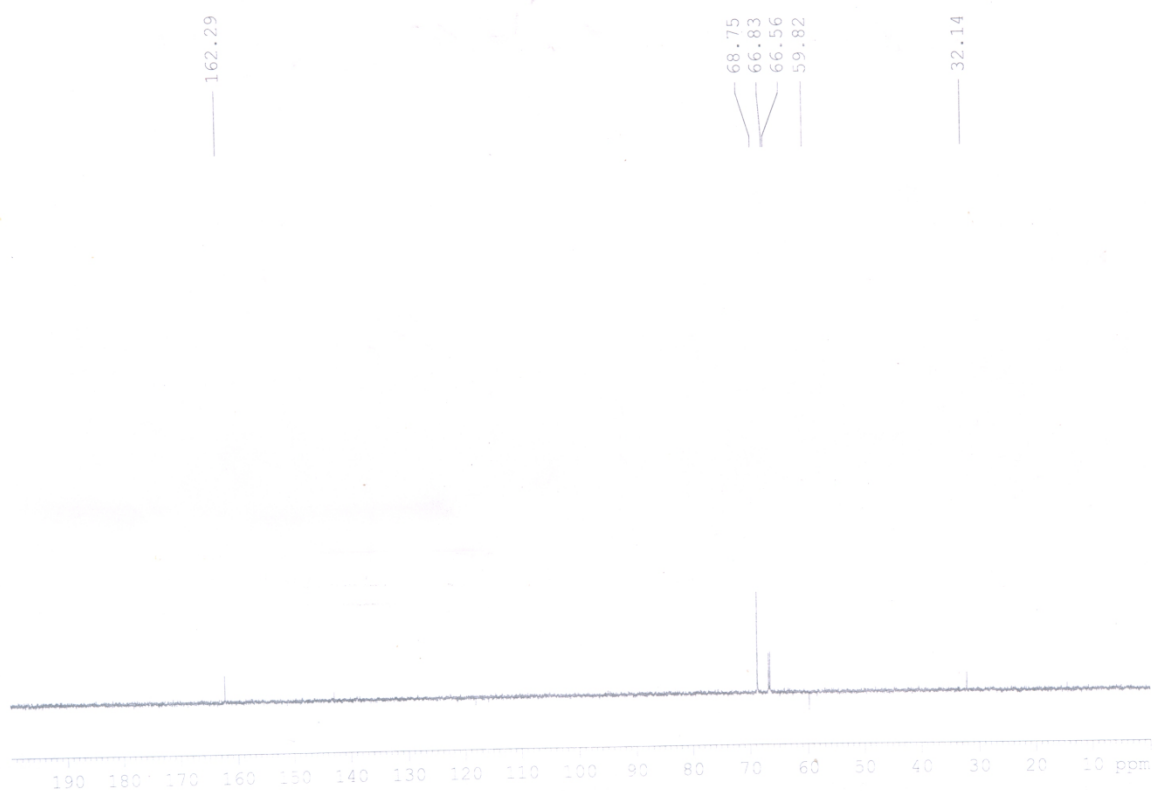


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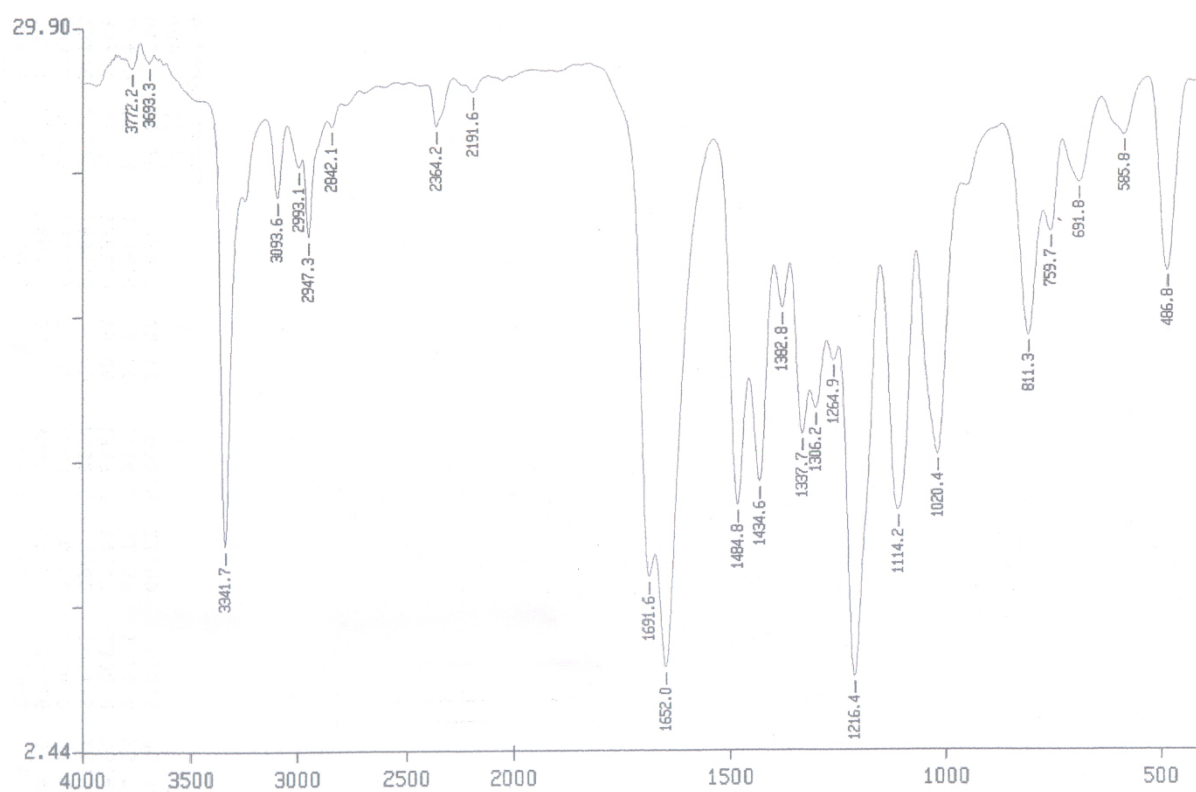
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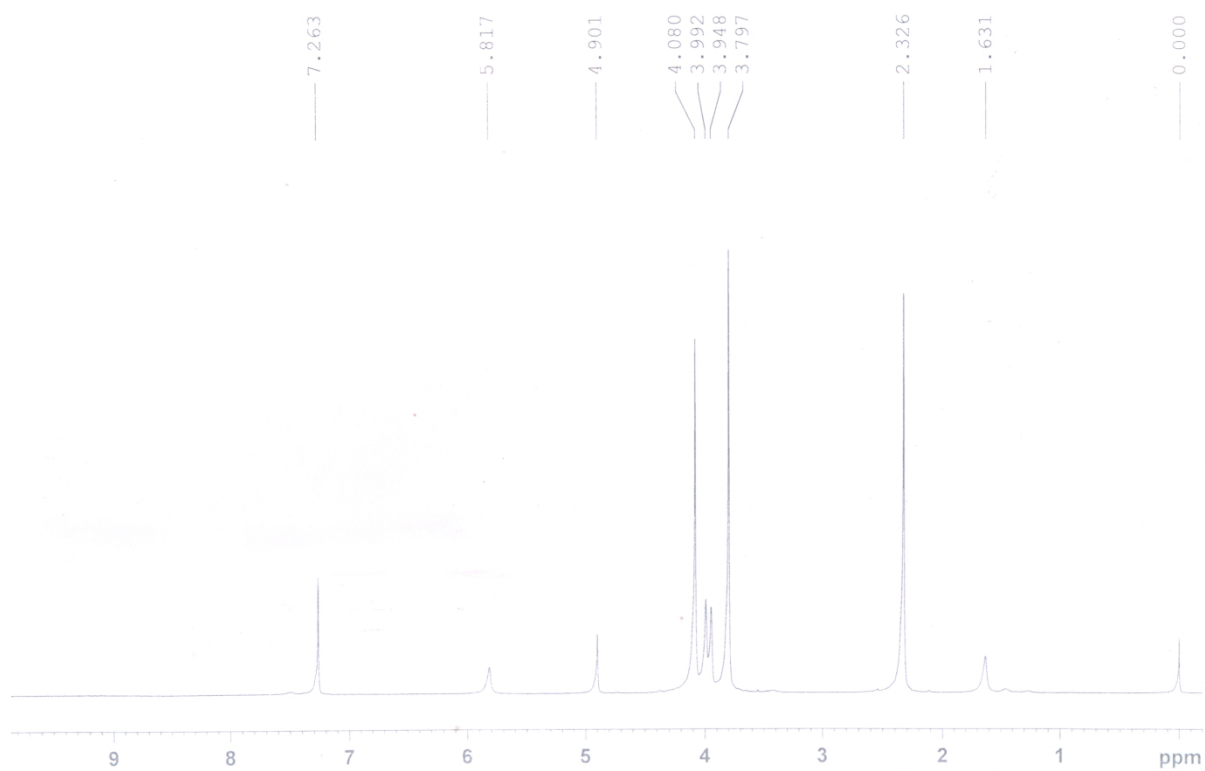
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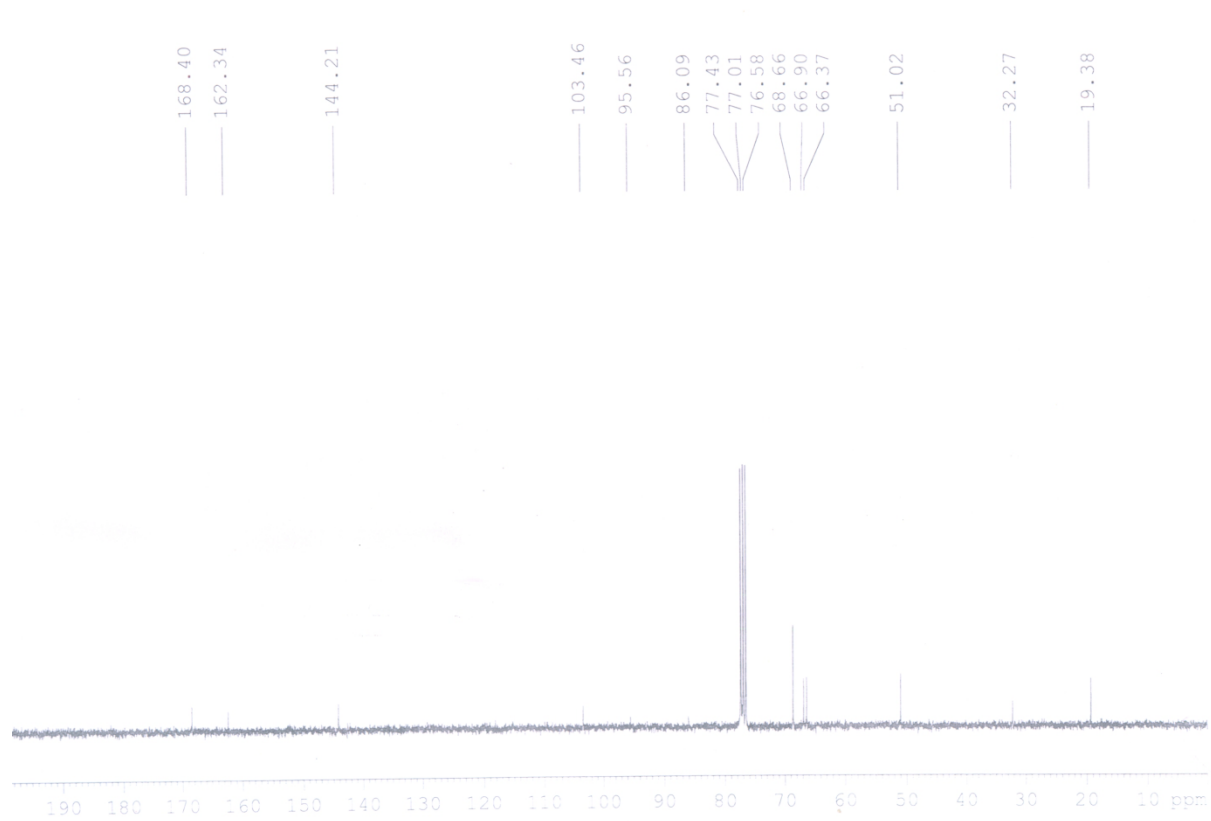


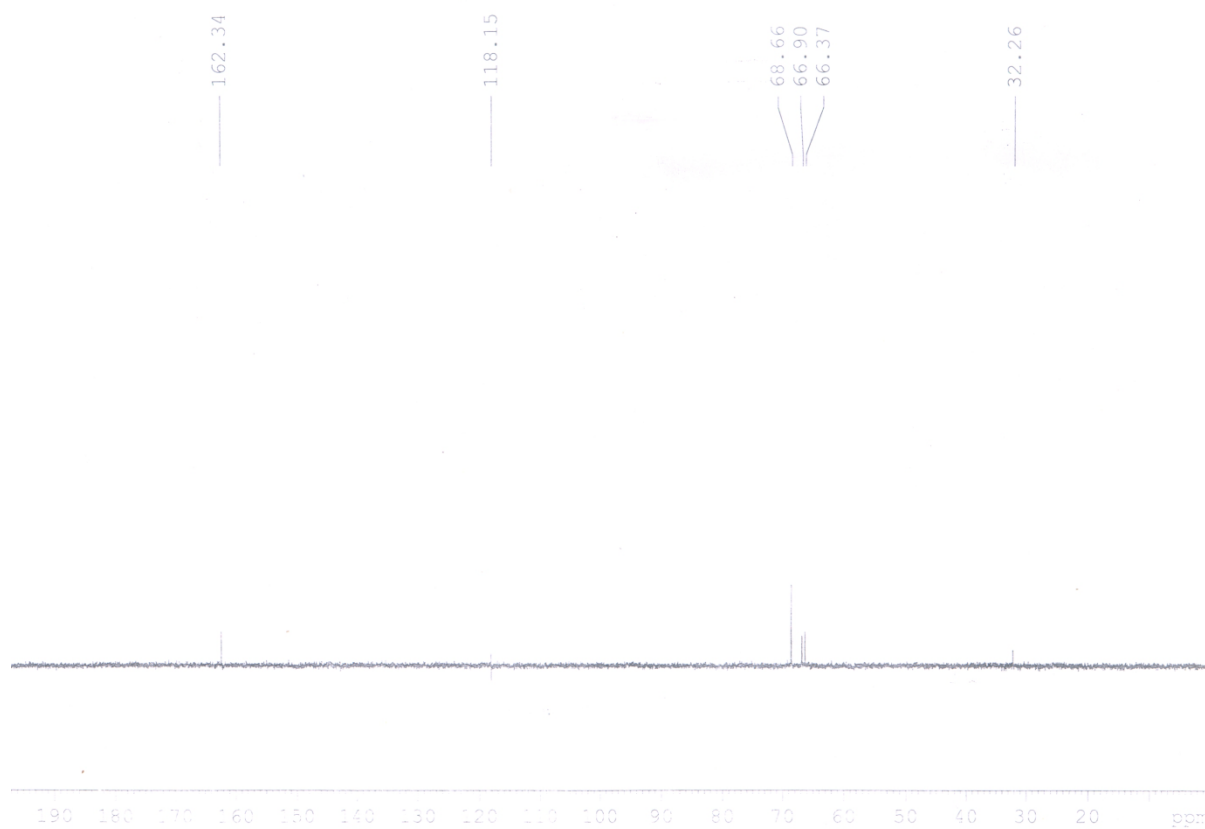
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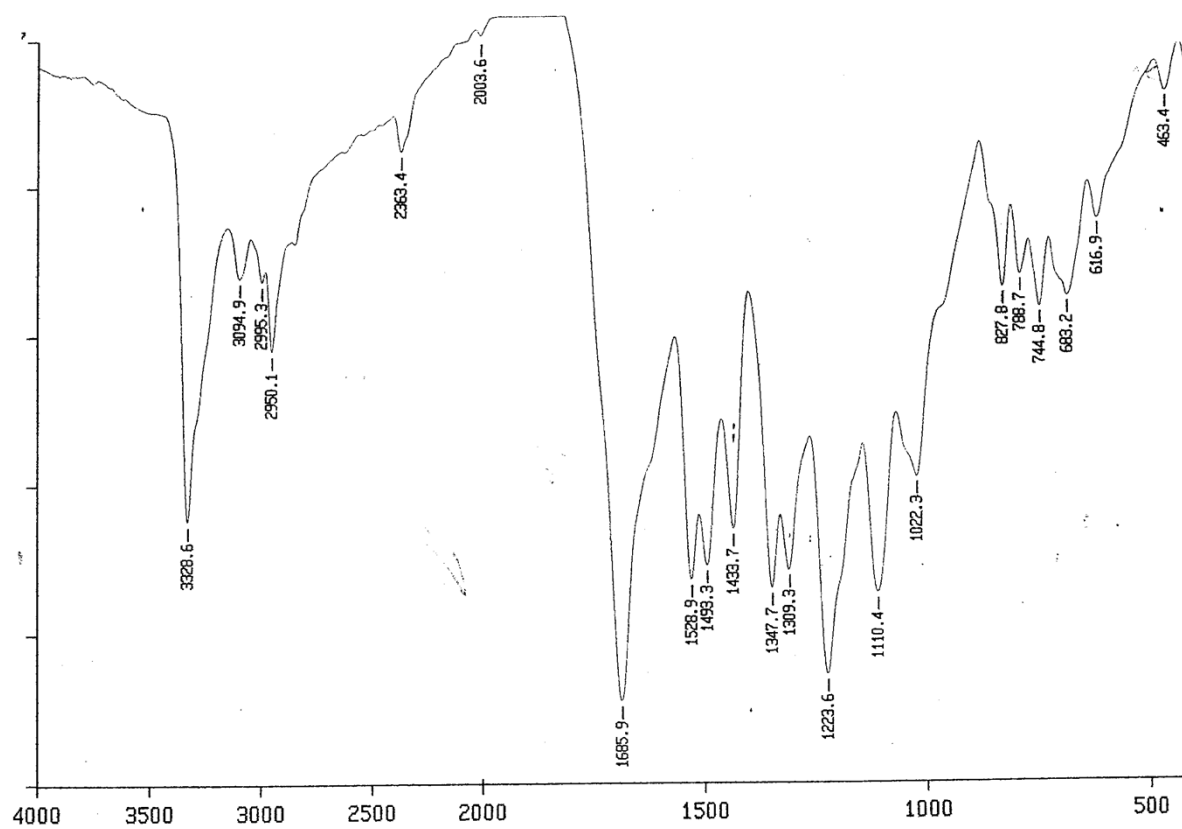
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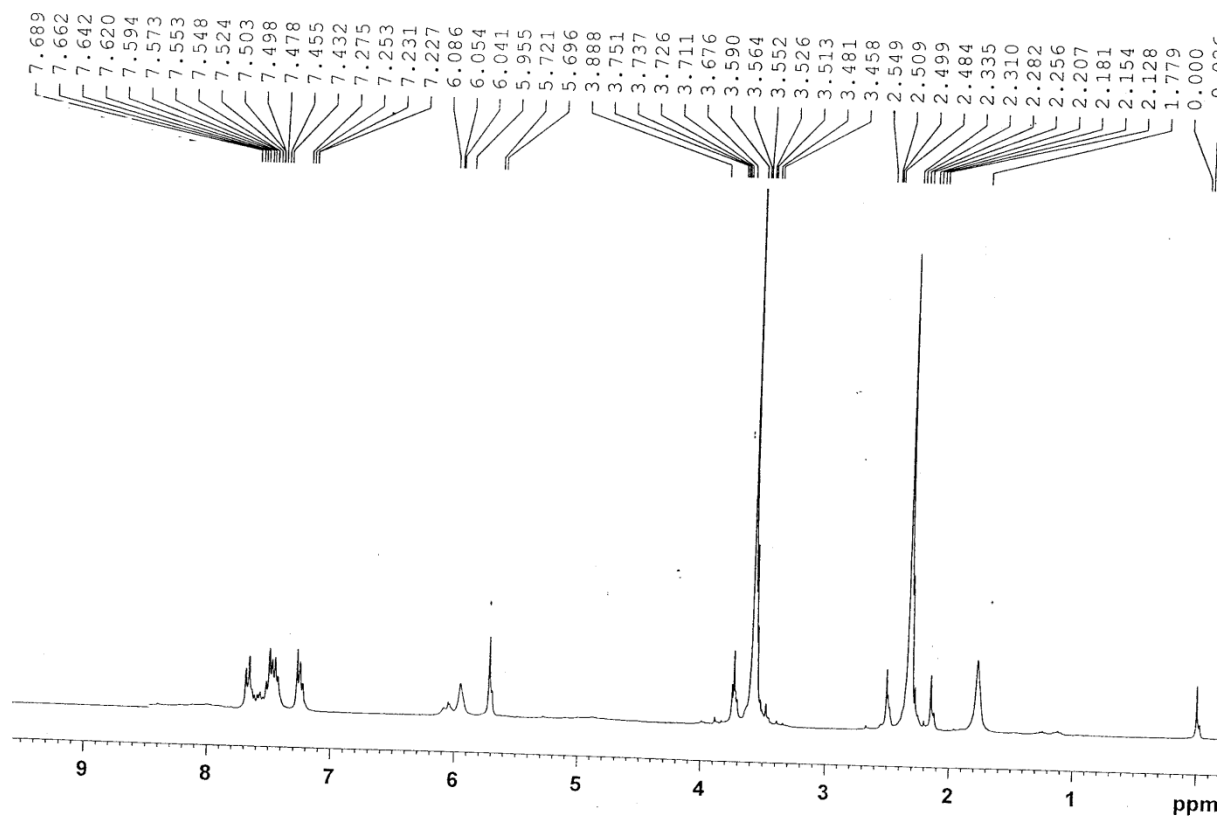
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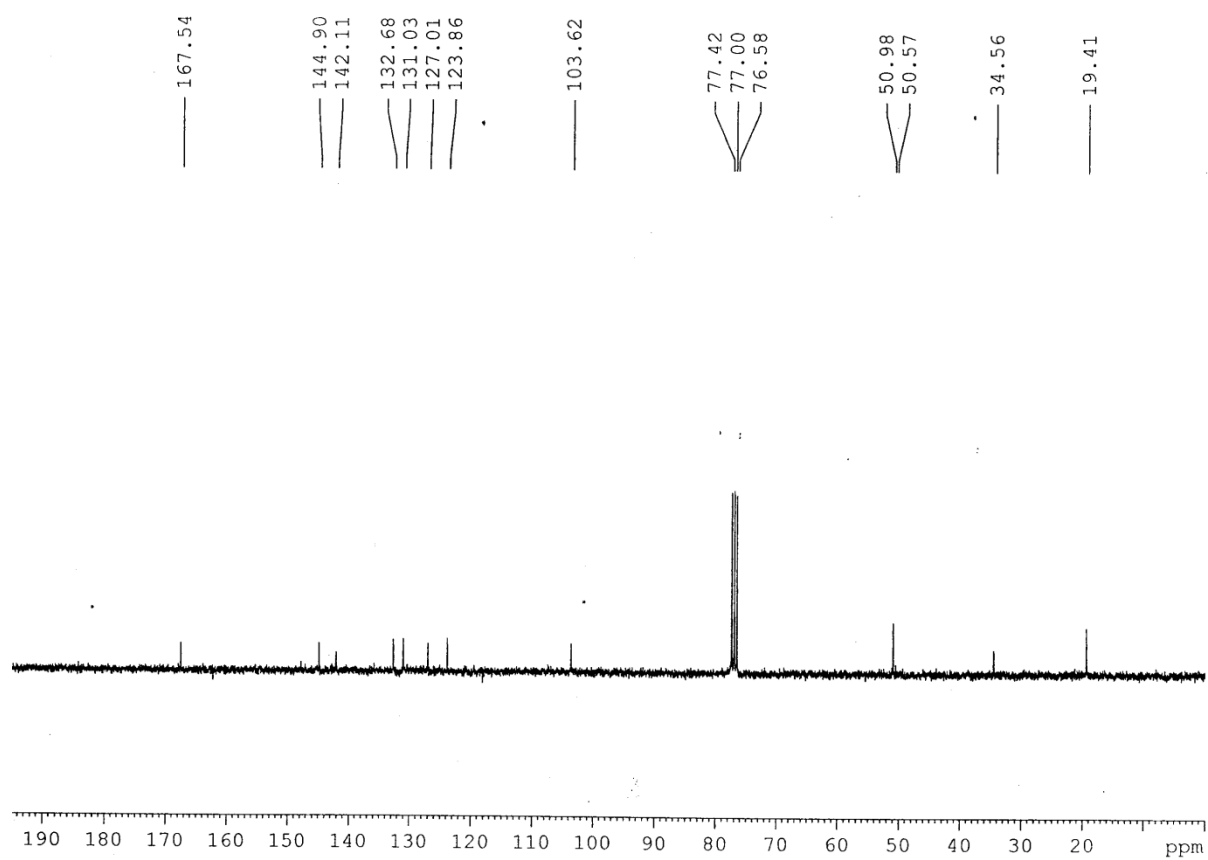
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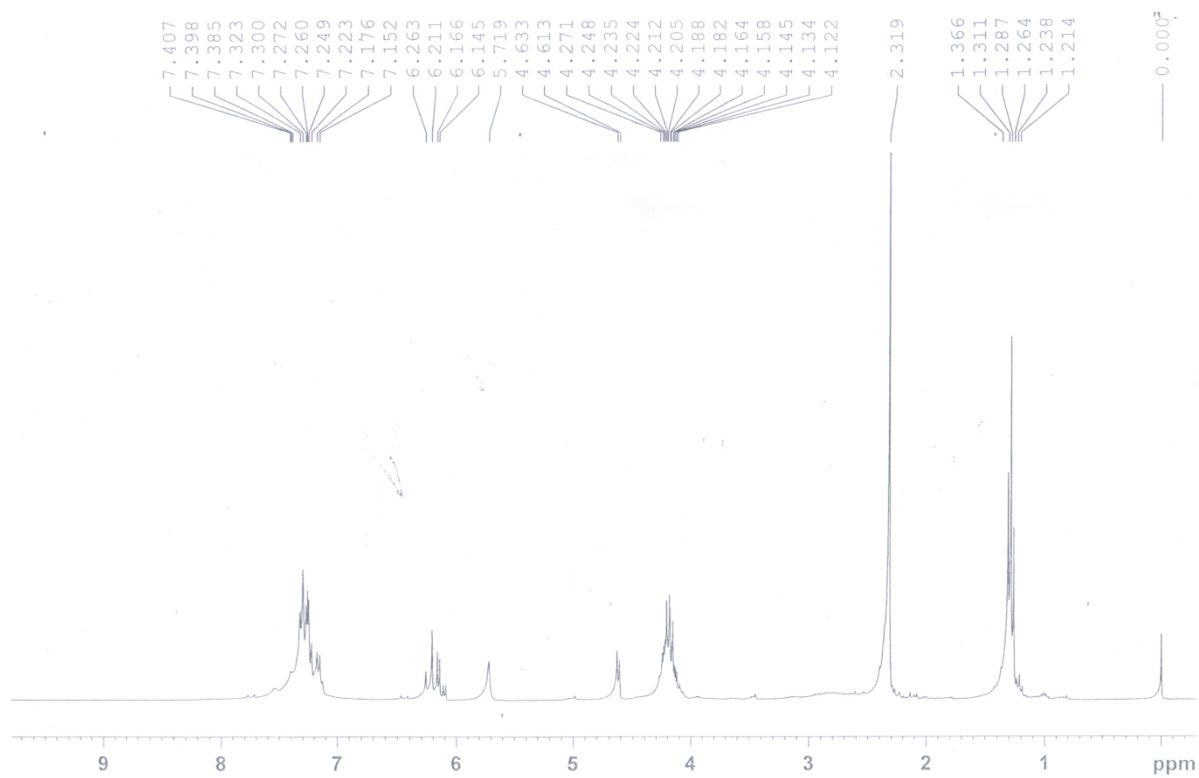
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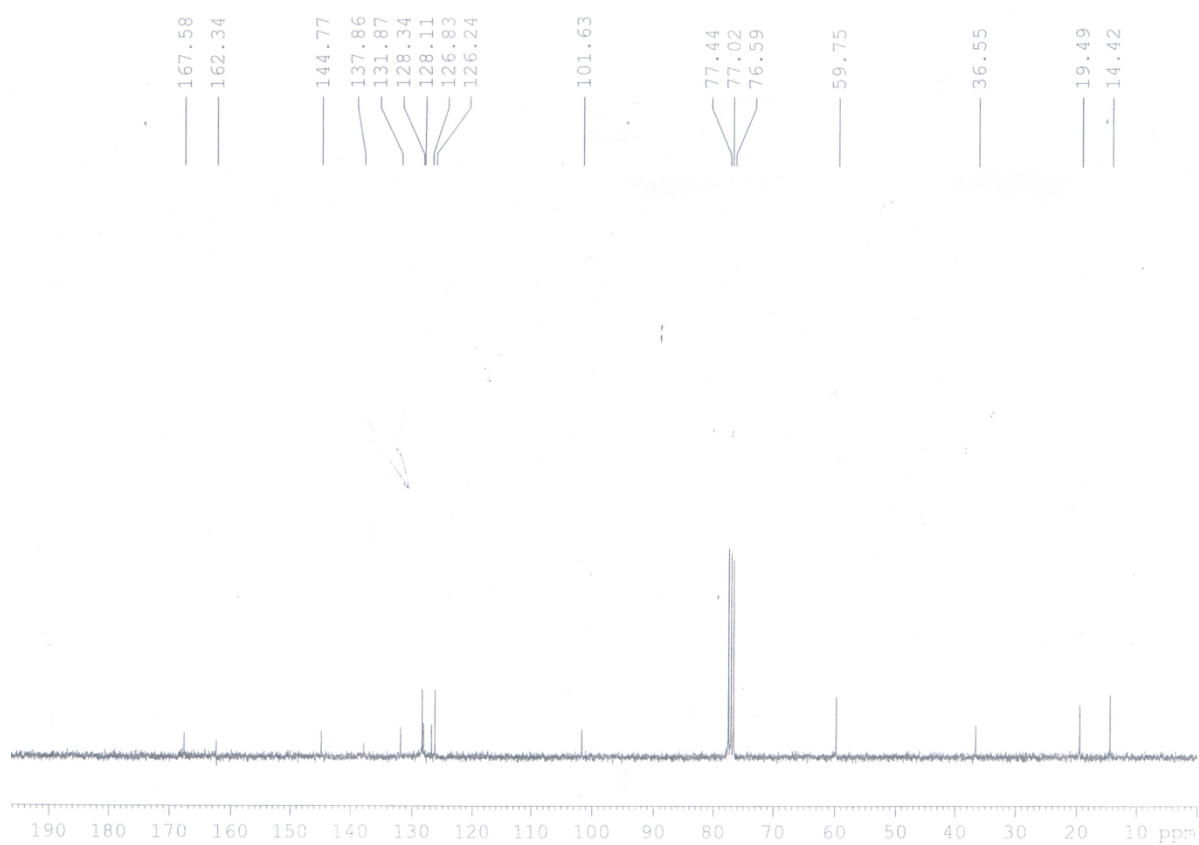
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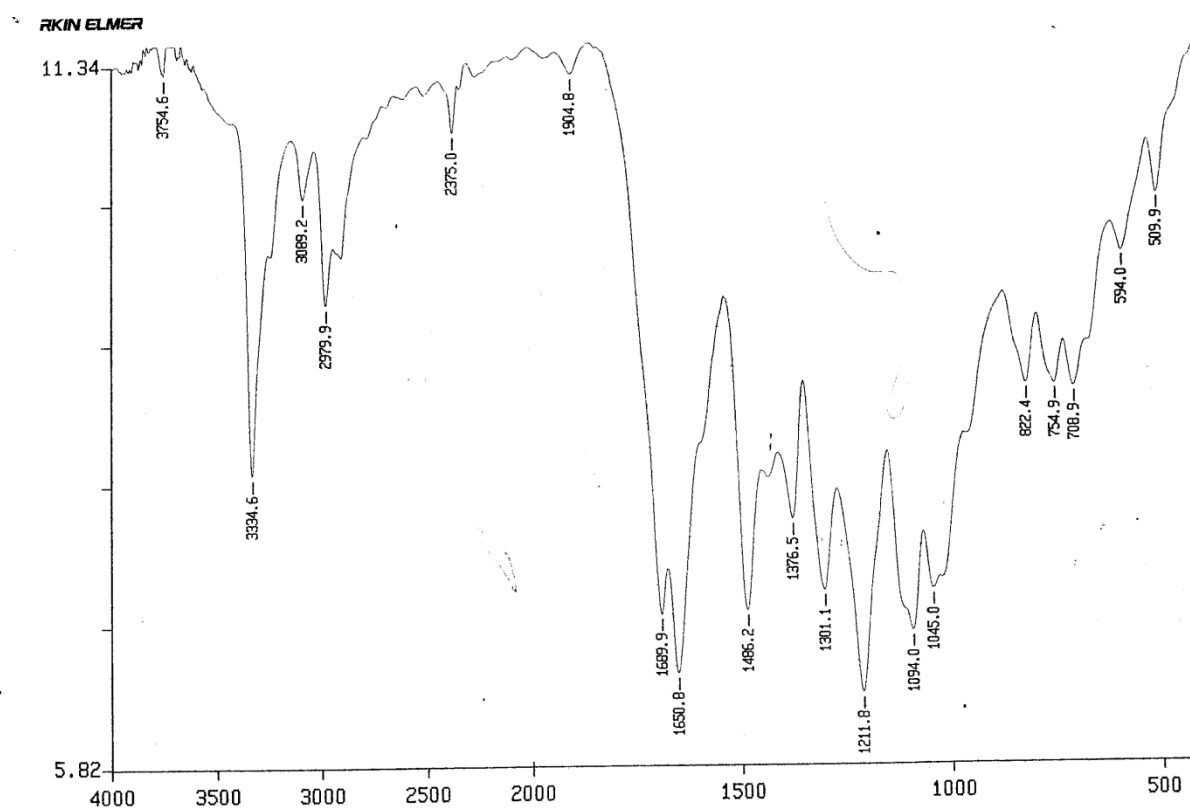


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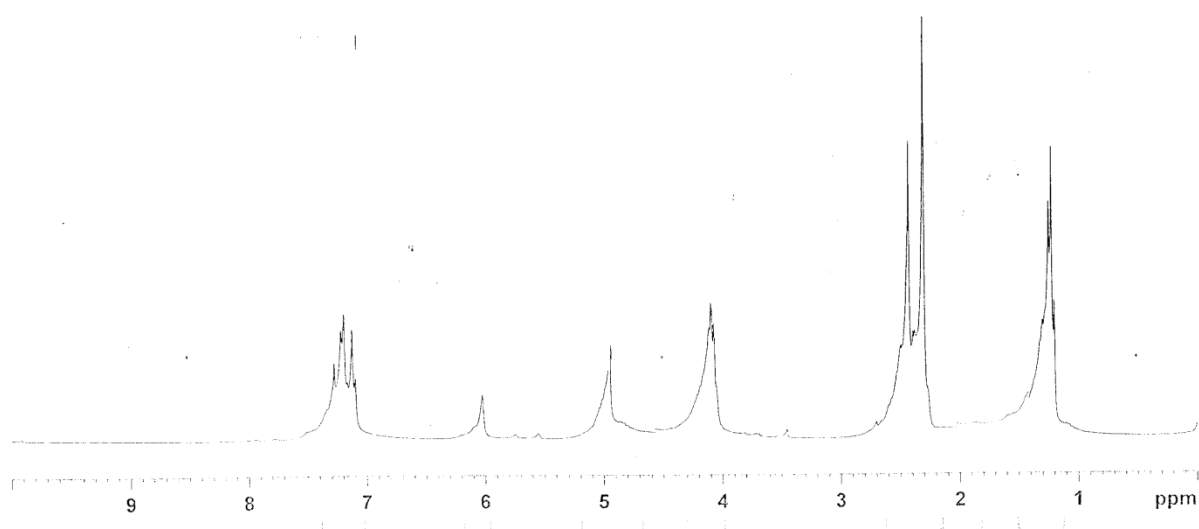


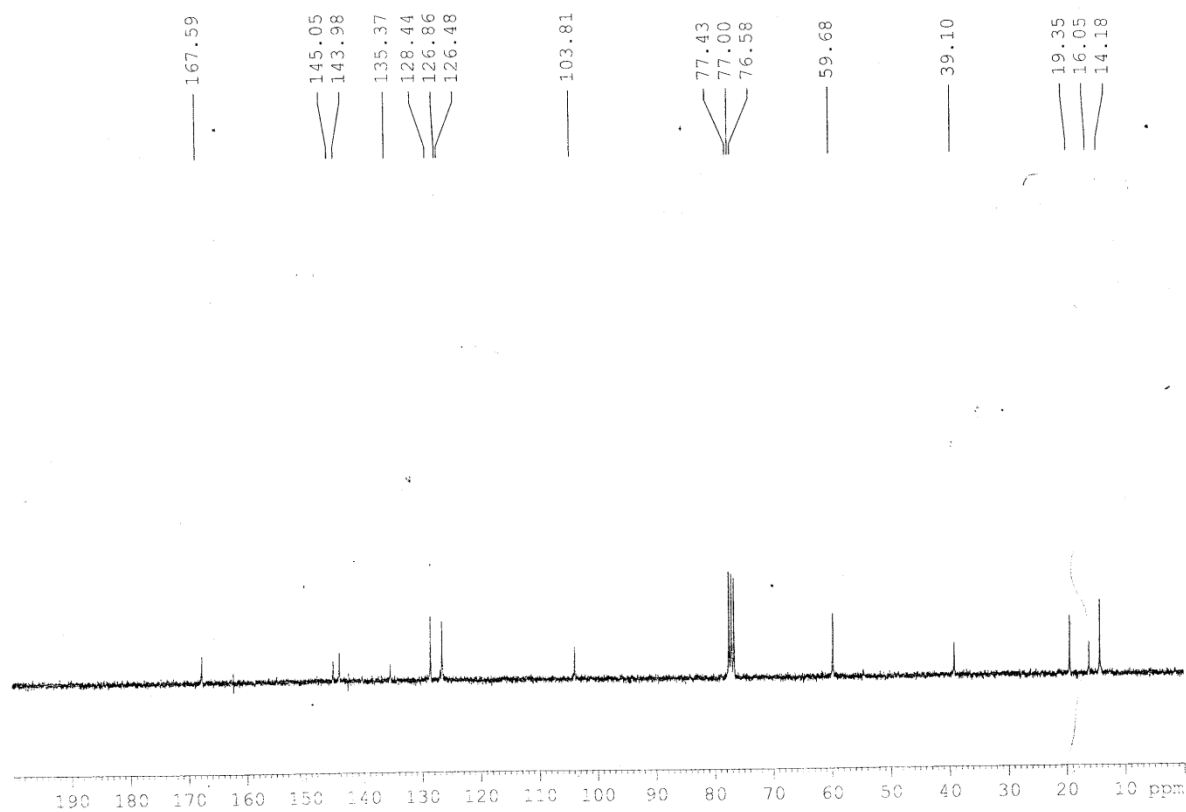
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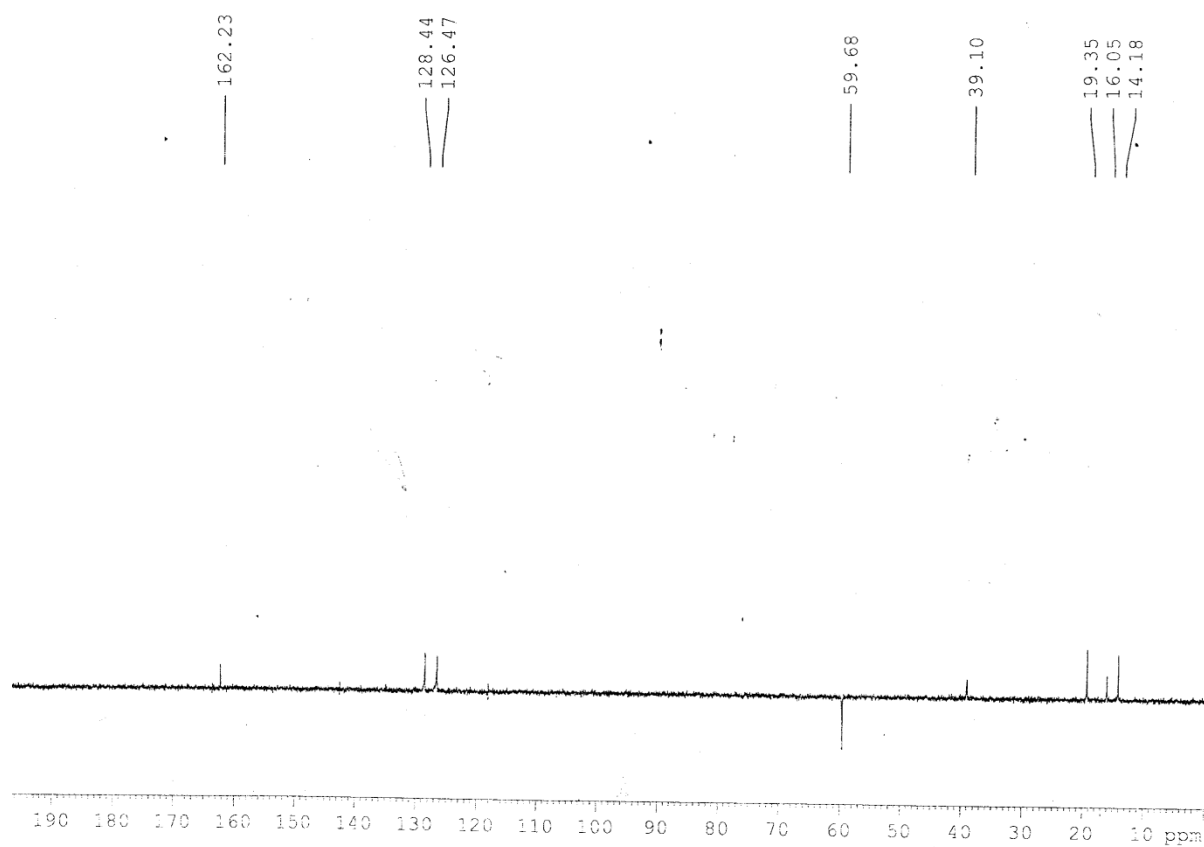


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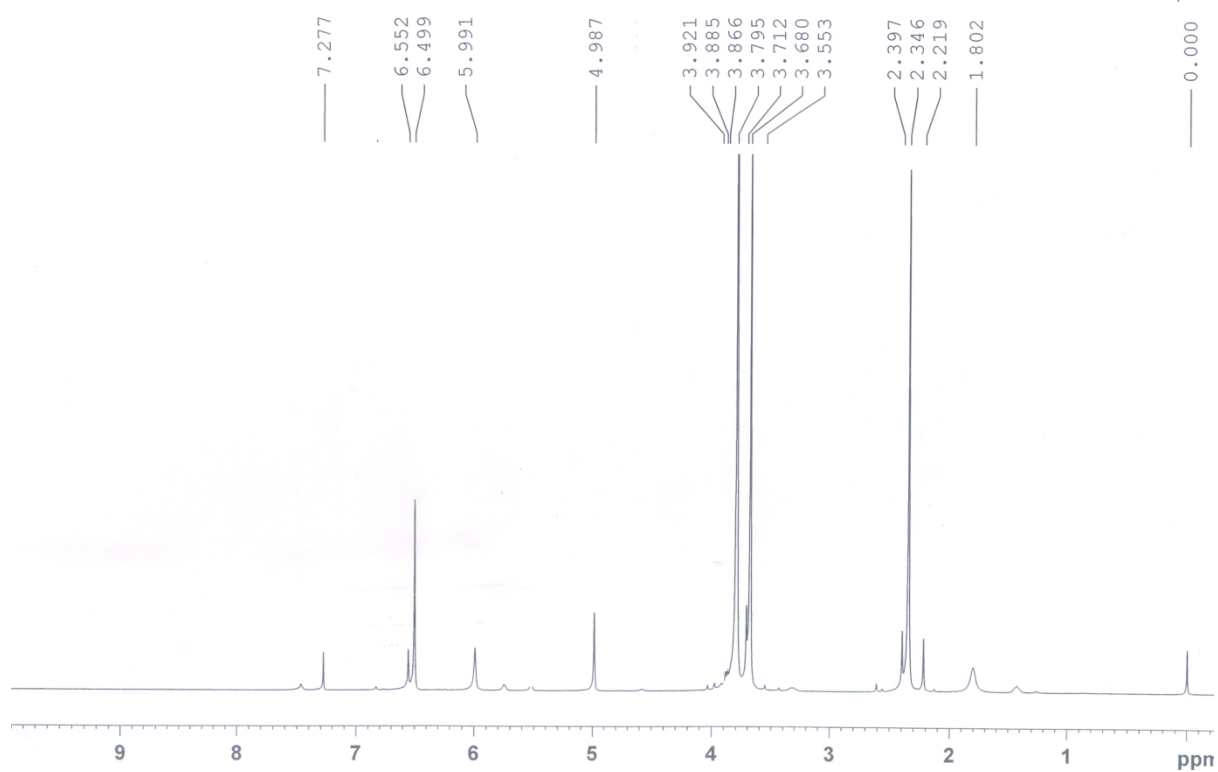
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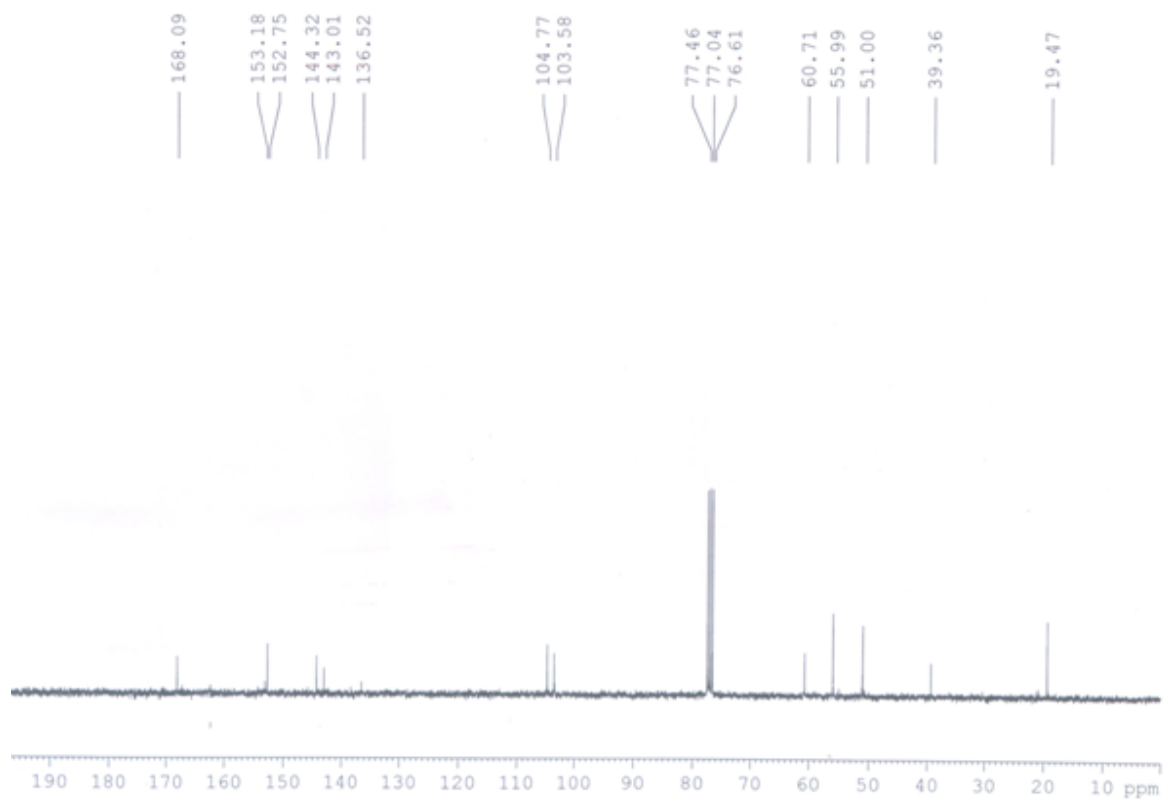
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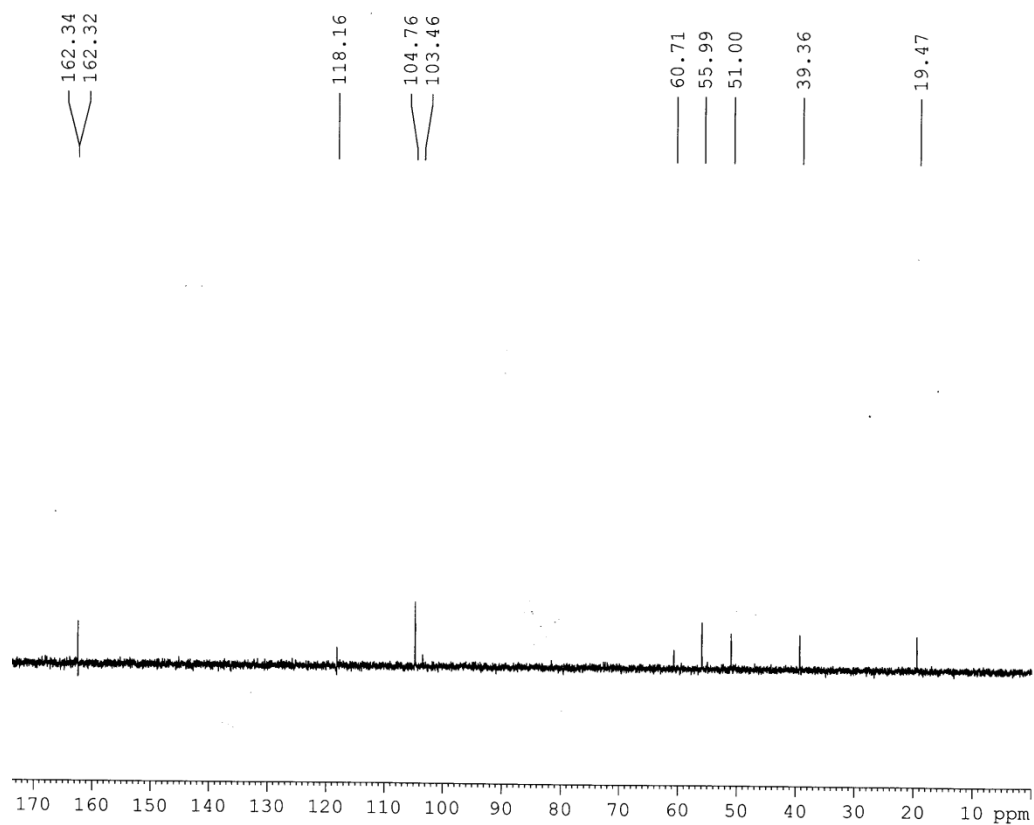
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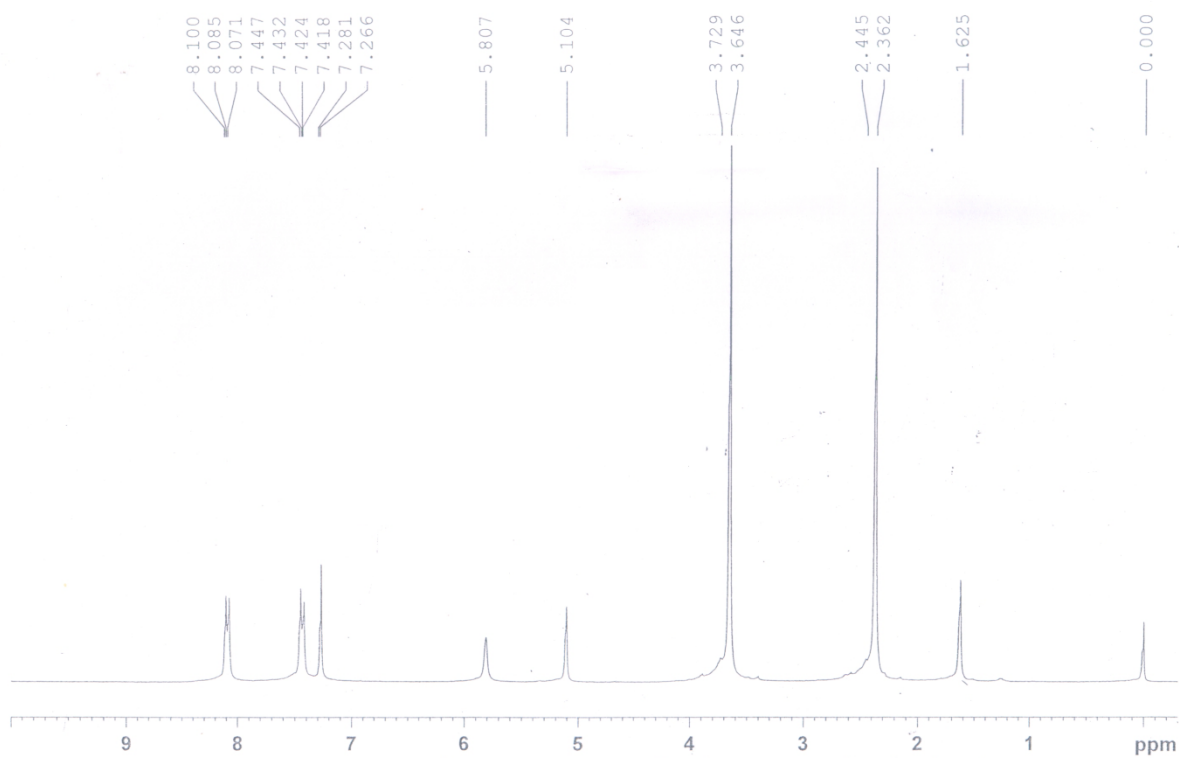
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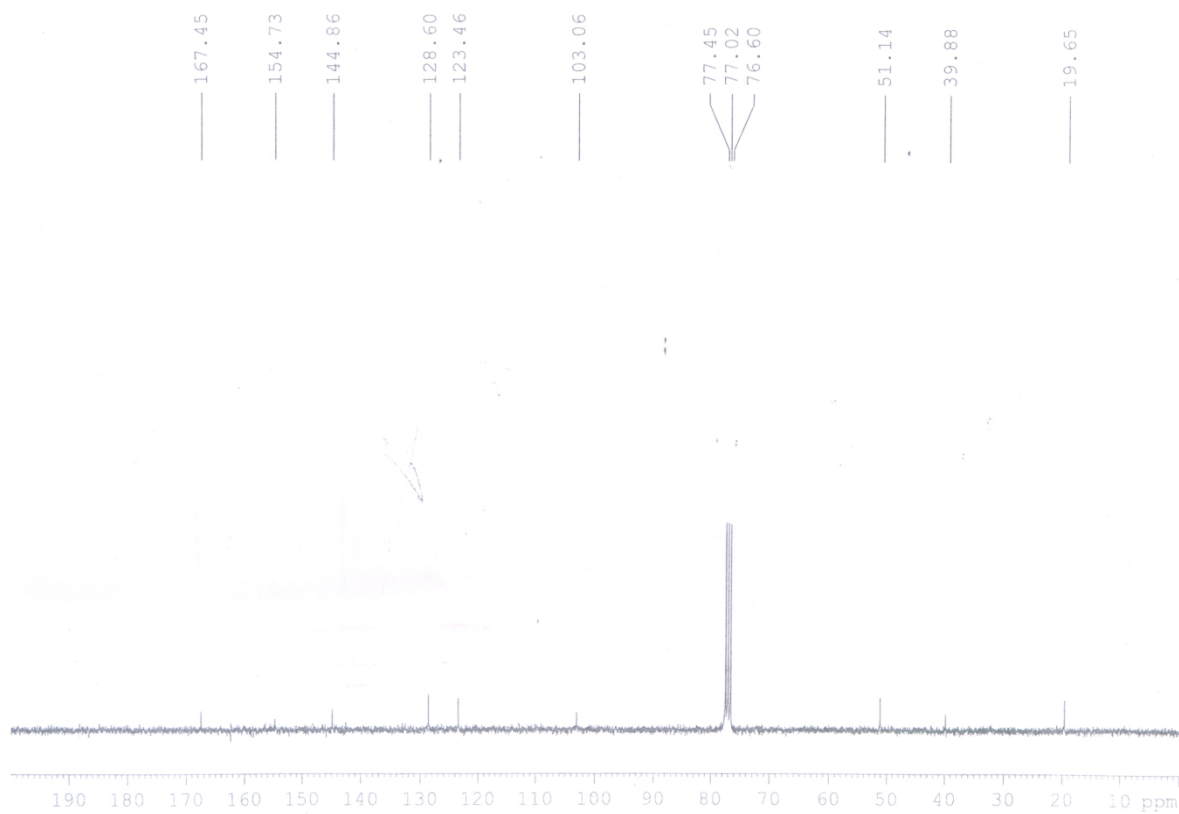
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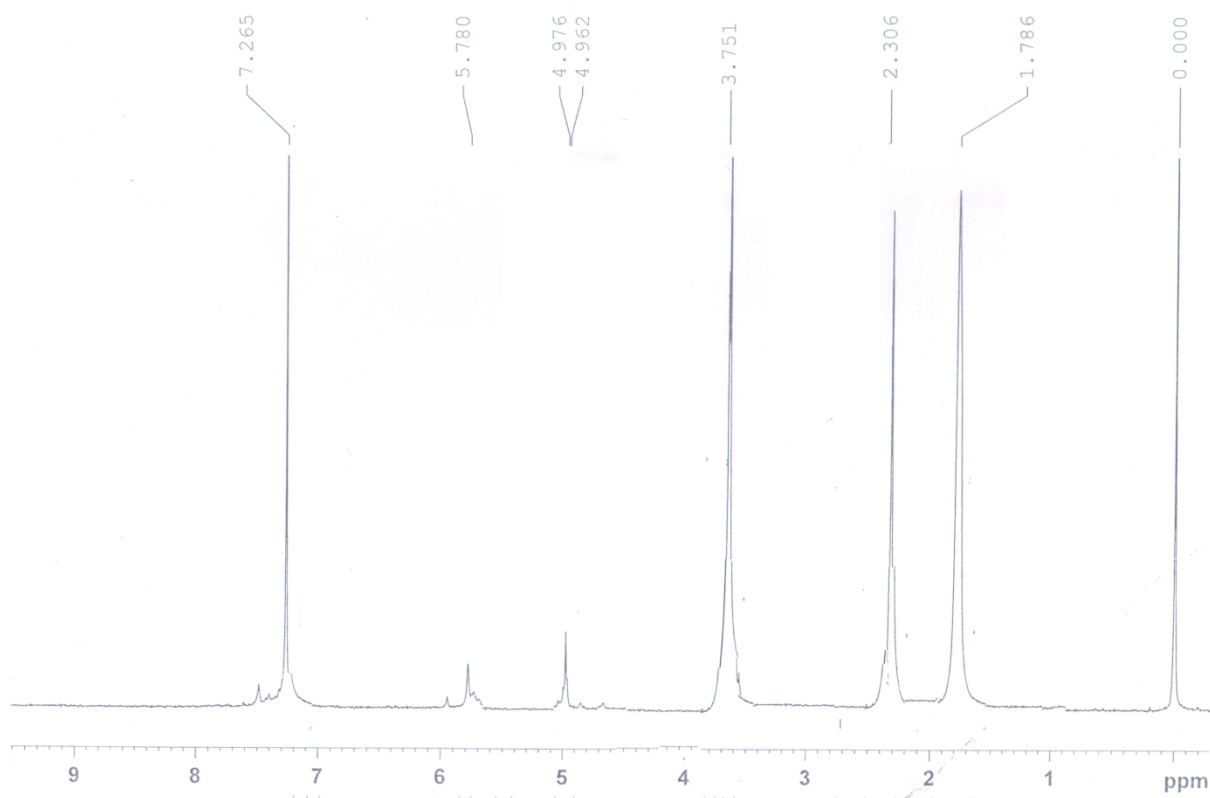
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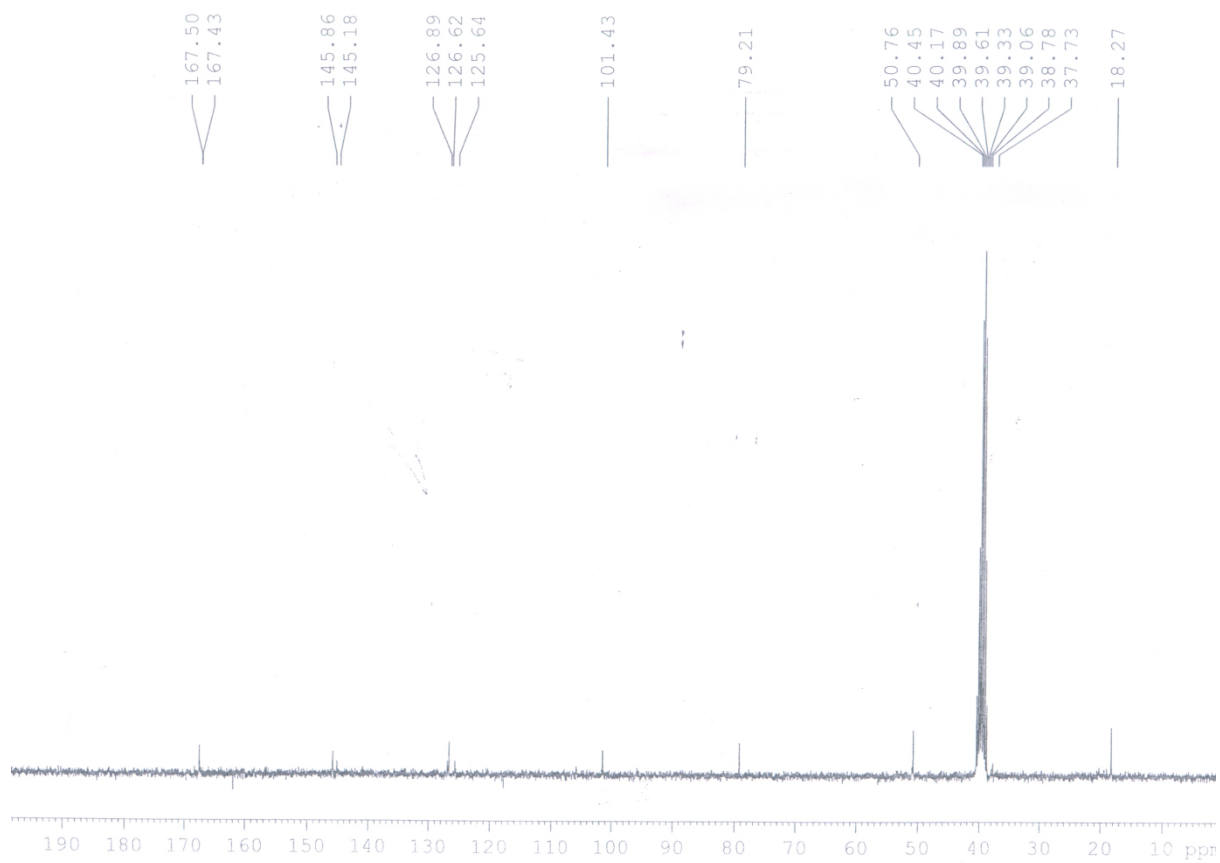
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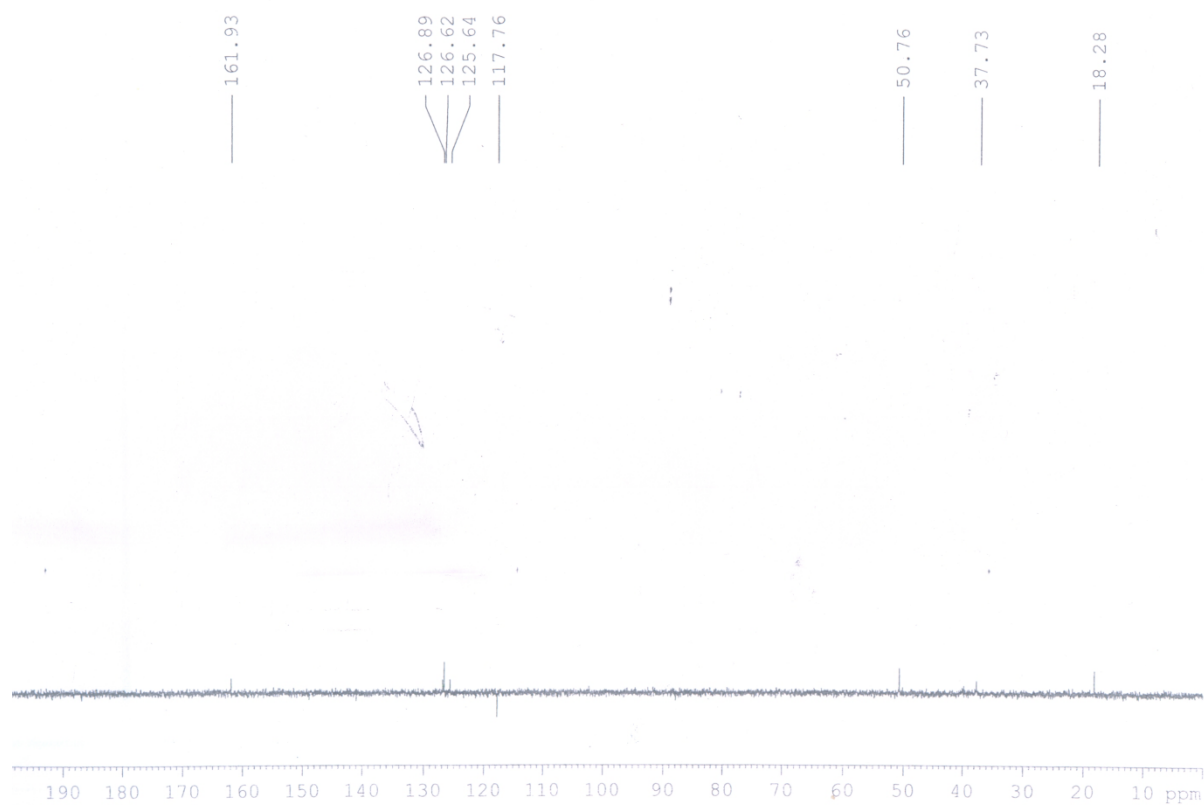


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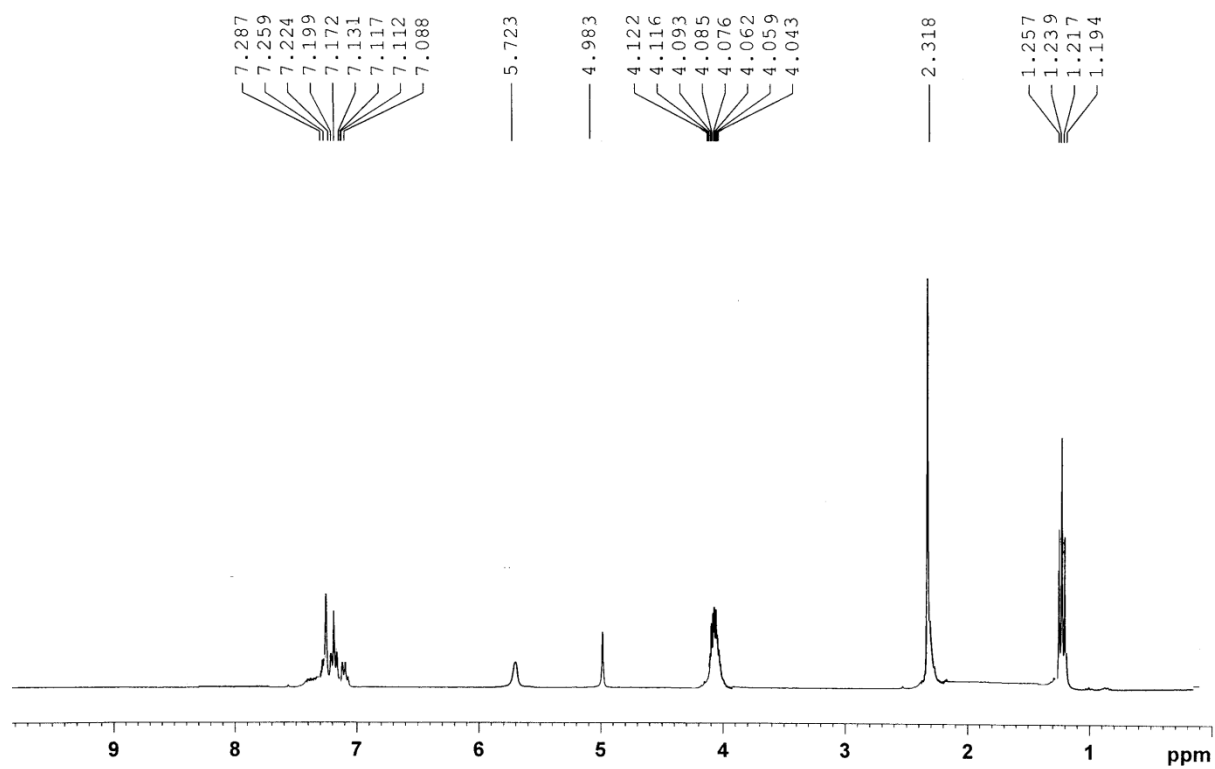


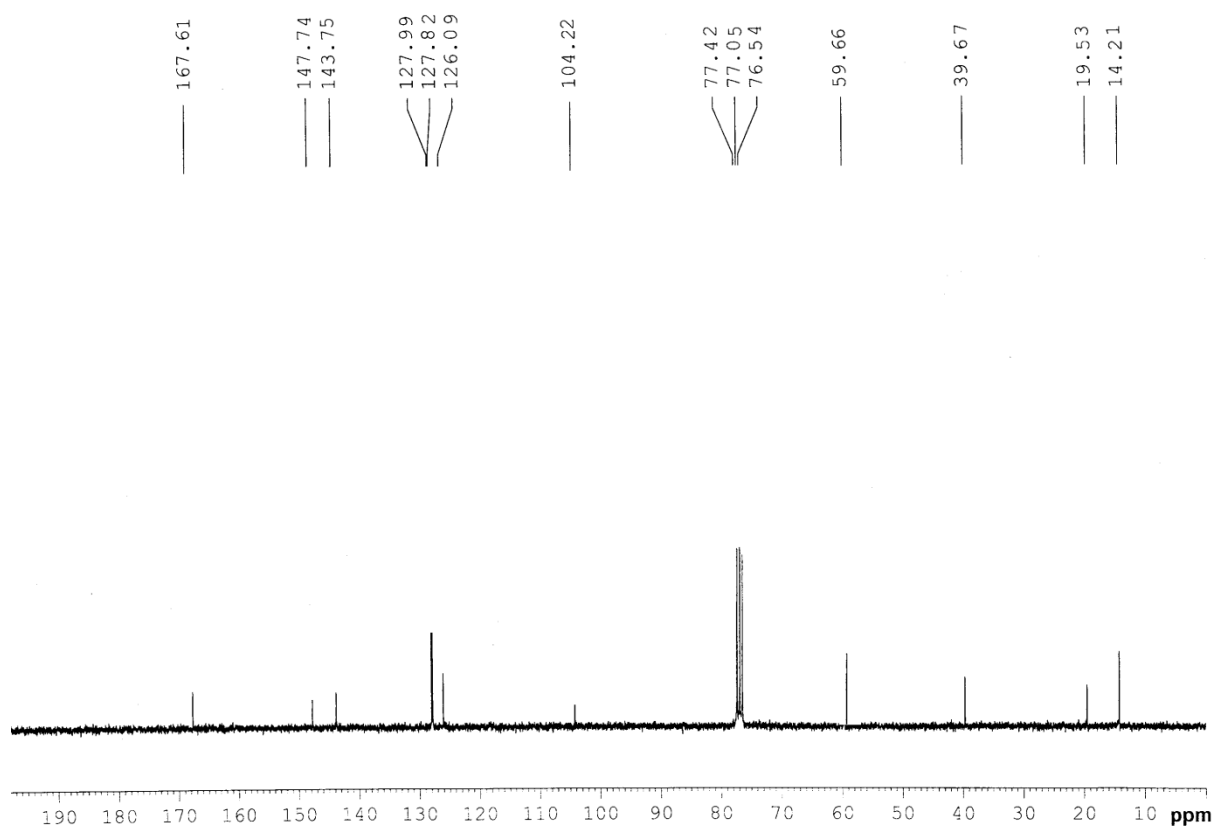
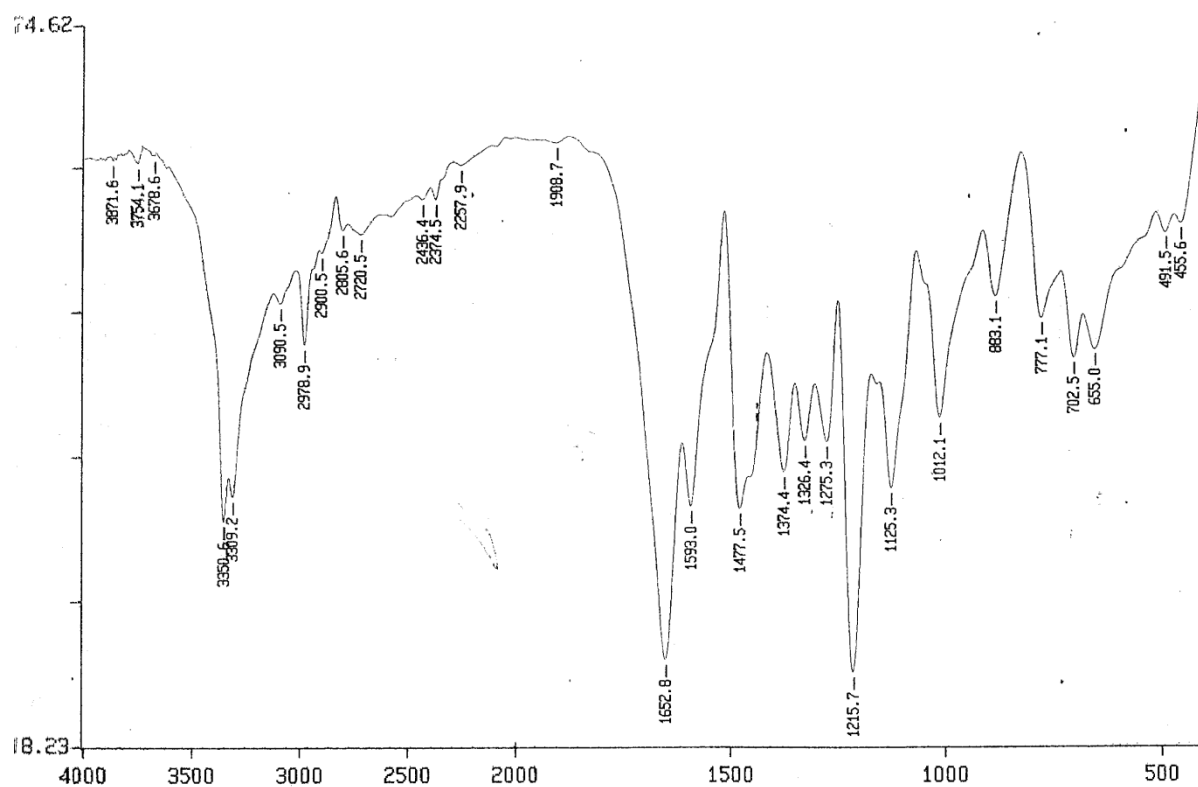
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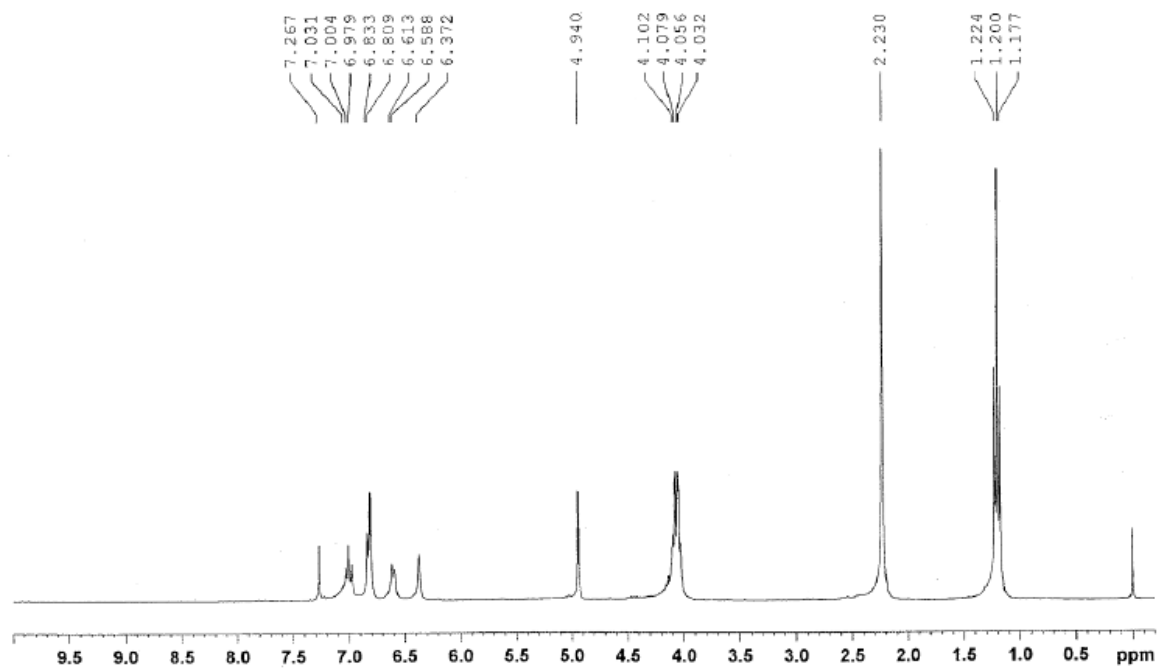
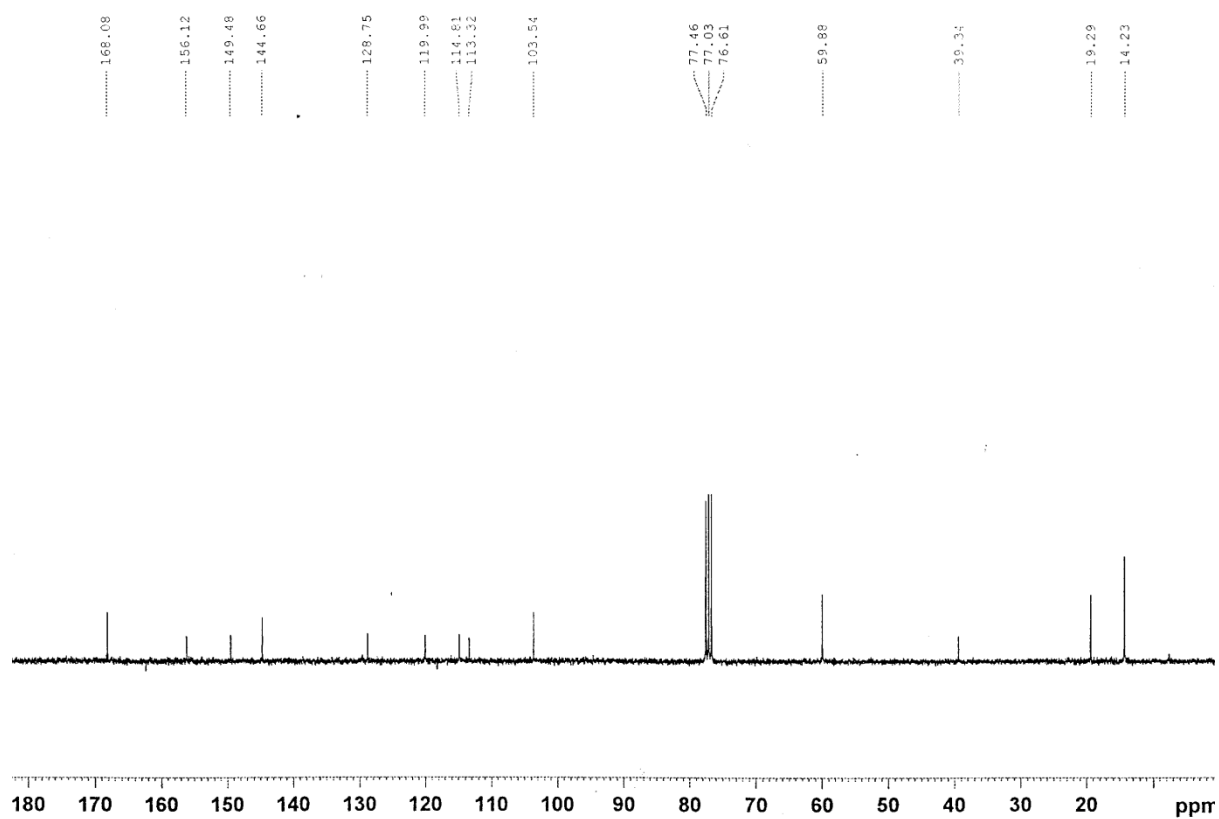
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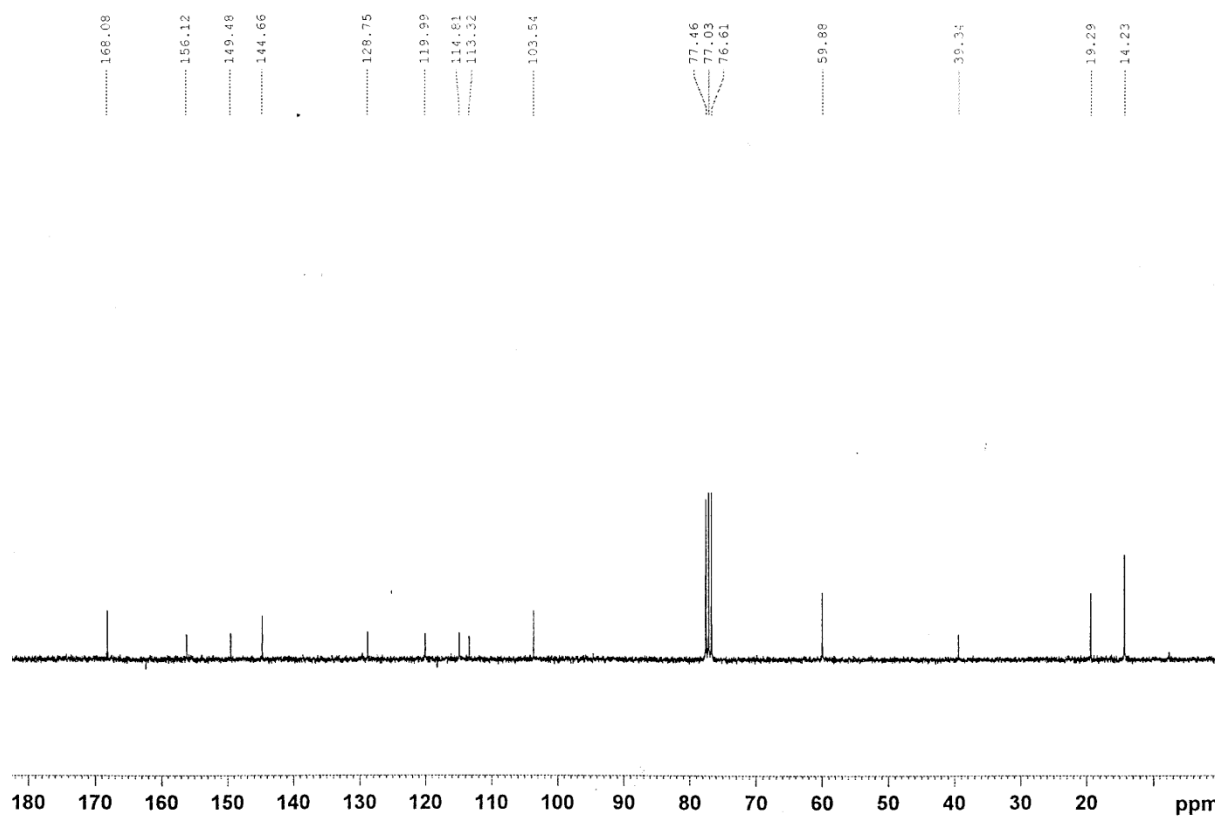
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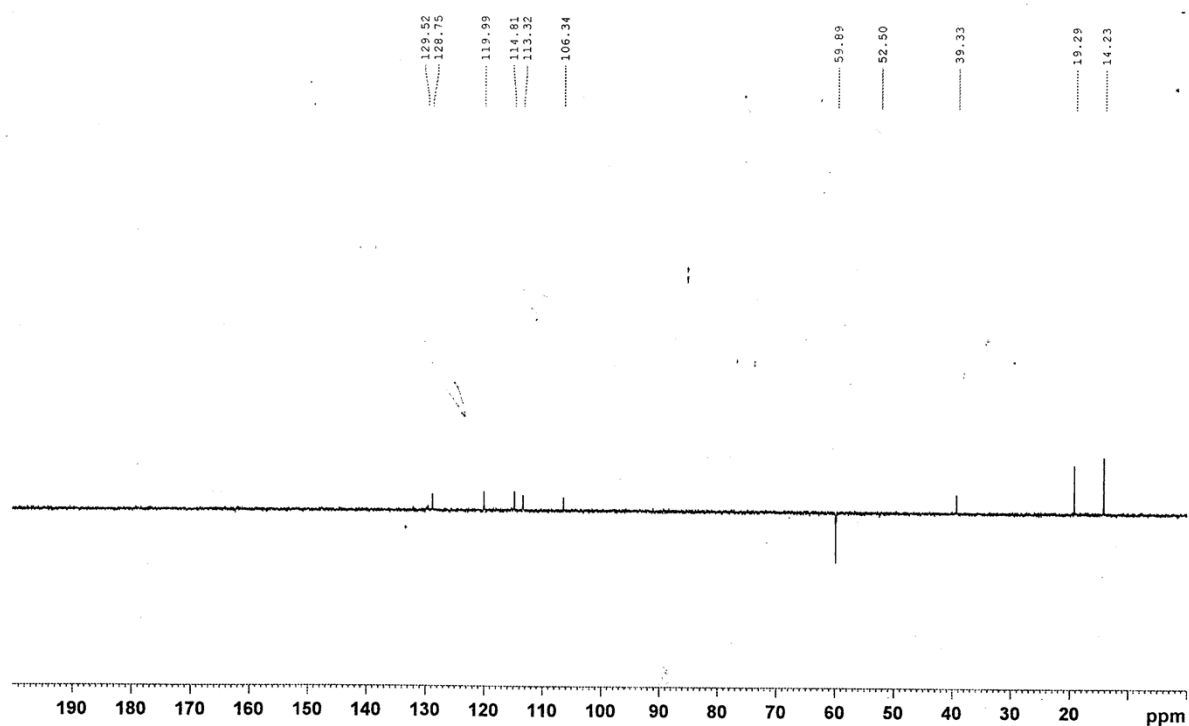
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FT-IR of compound 5m

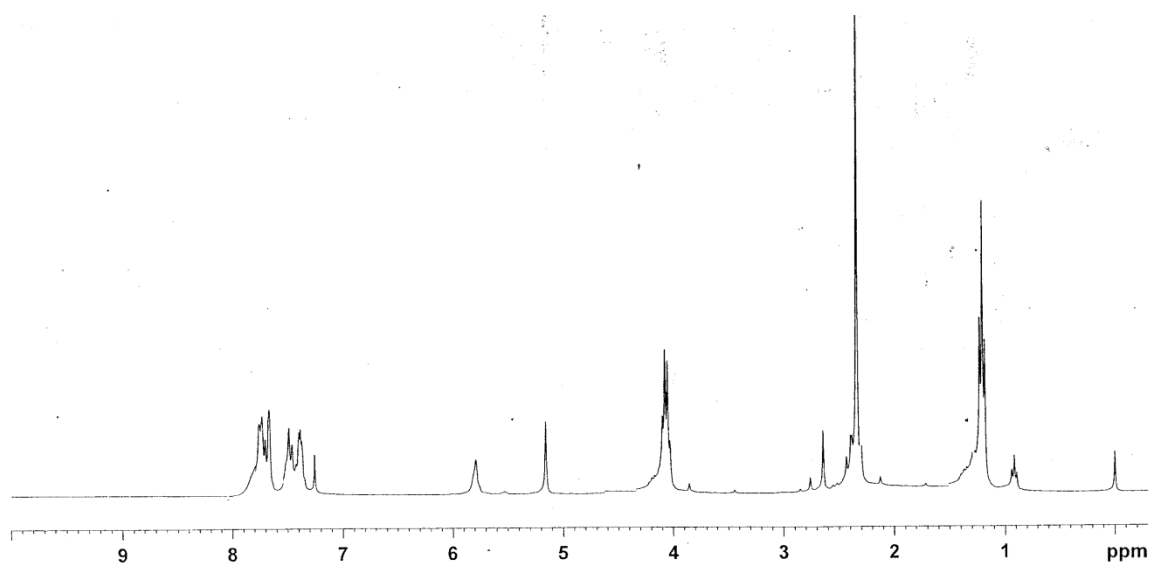
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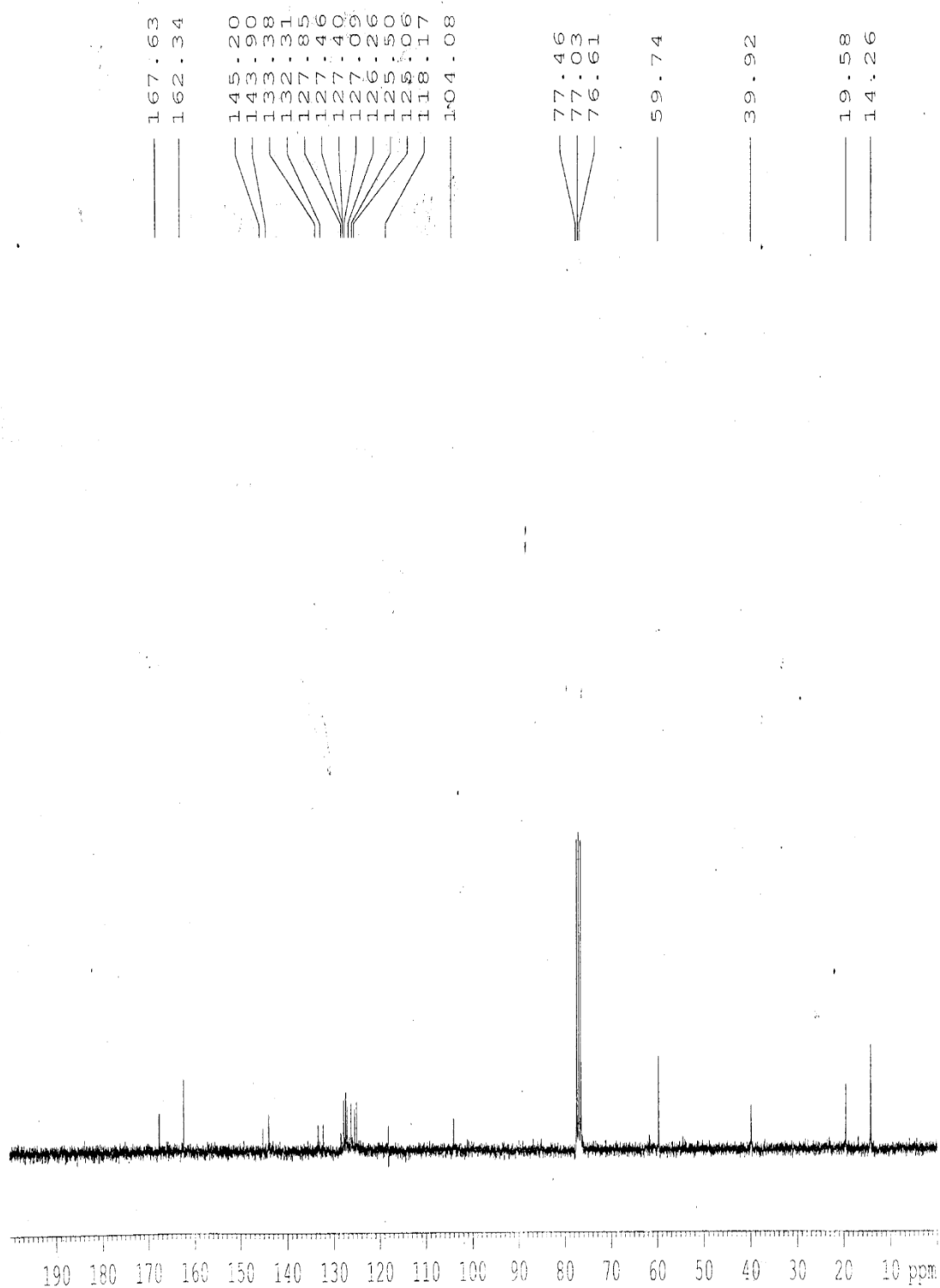
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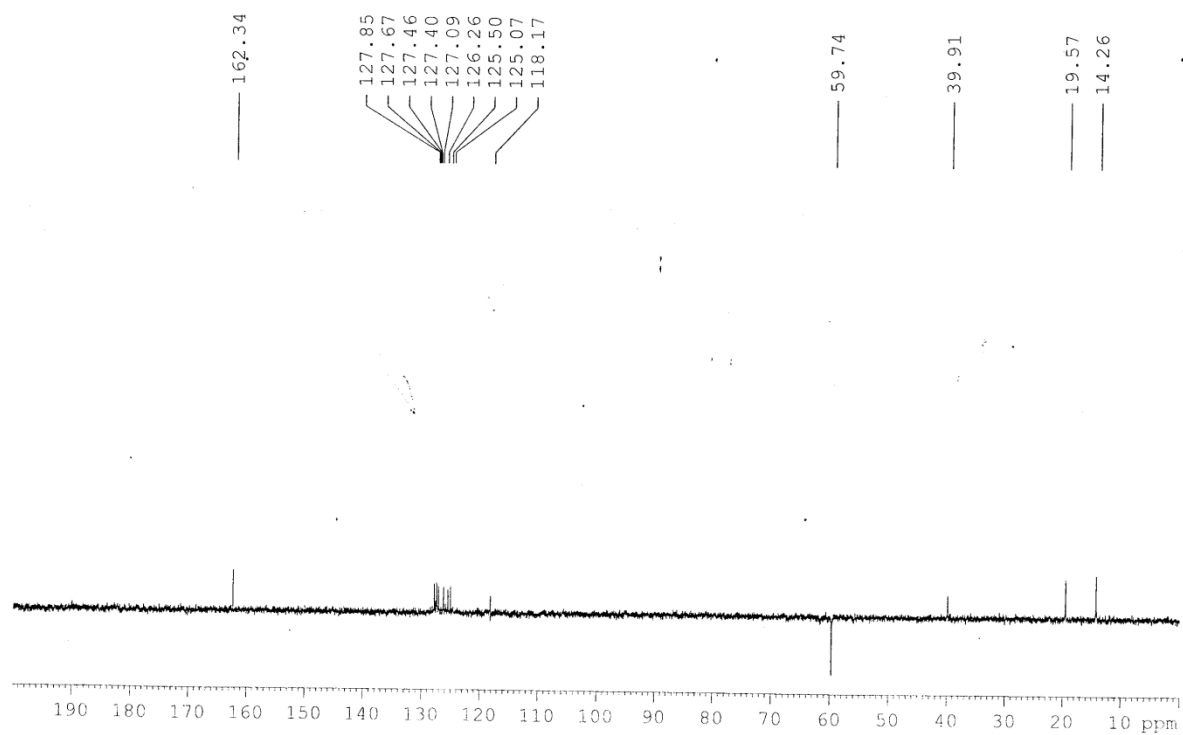
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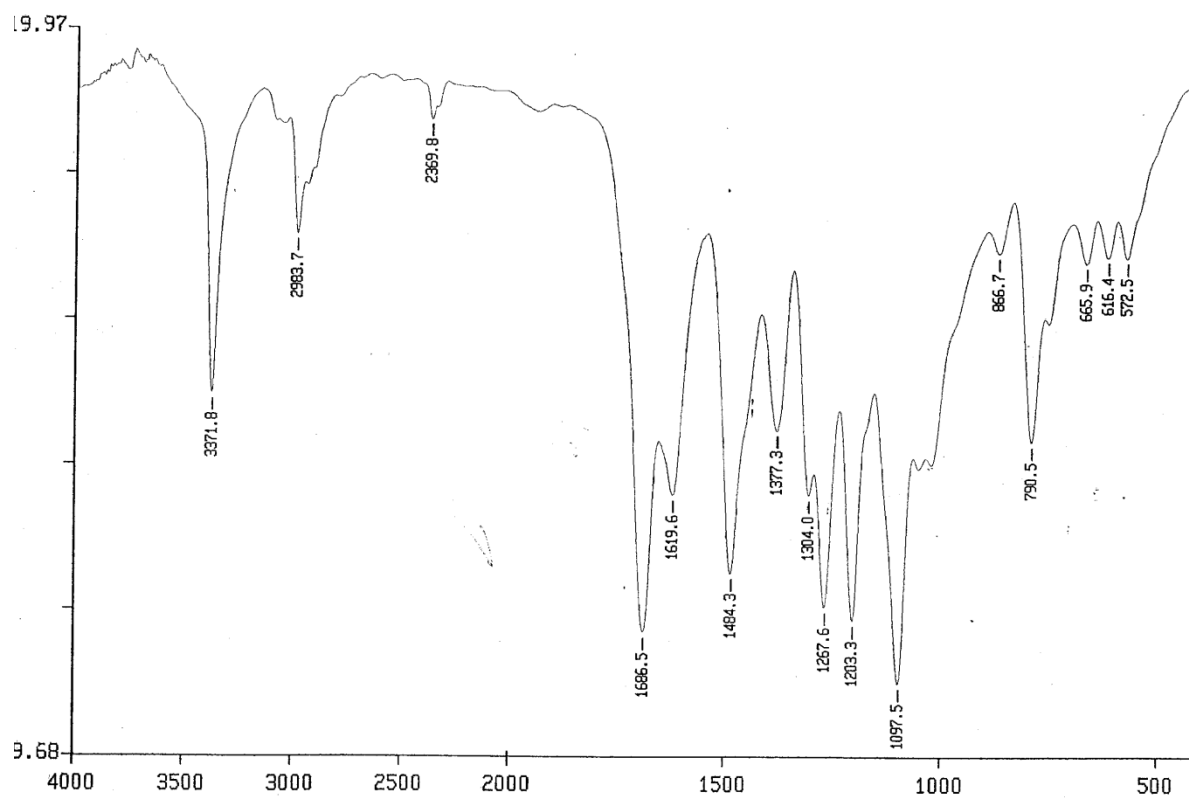
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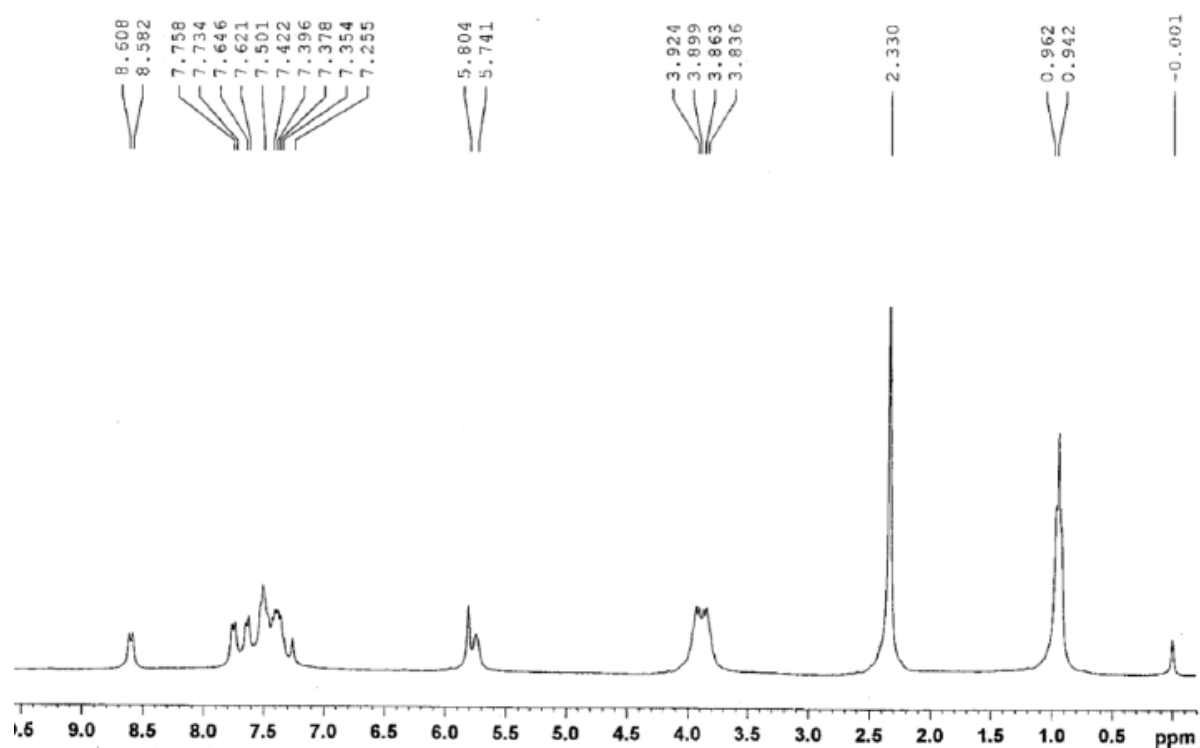
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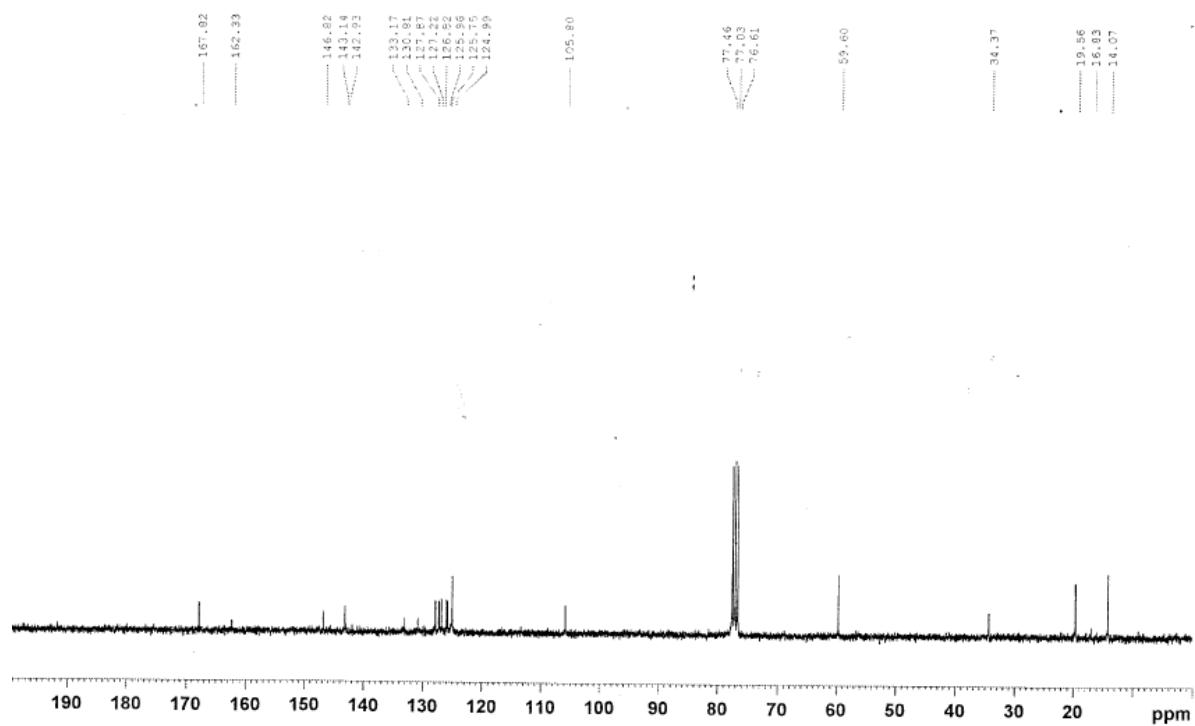


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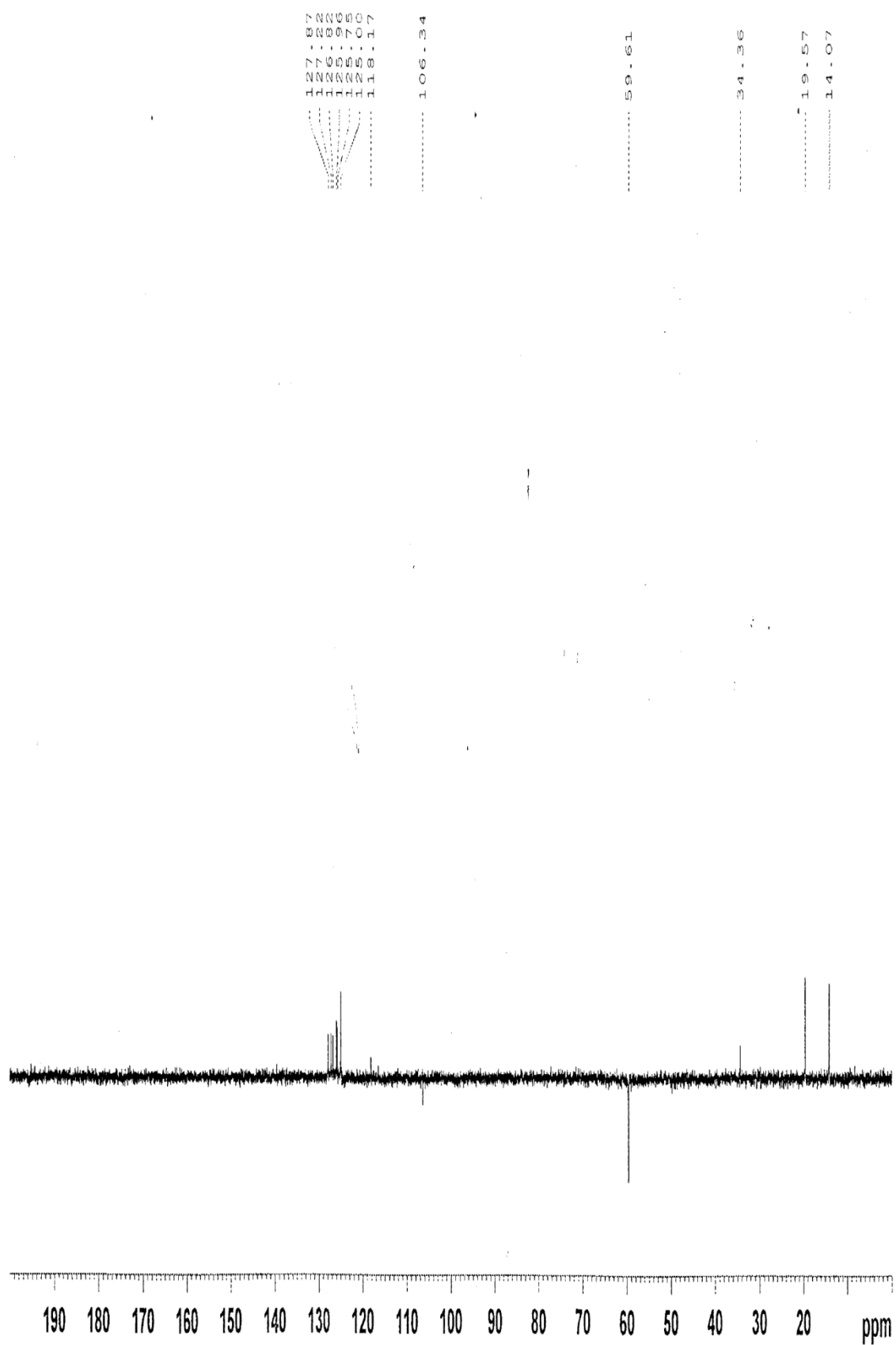


FT-IR of compound 5o

¹H NMR of compound 5o



¹³C NMR of compound 5o



DEPT NMR of compound 5o