

Supplementary Data

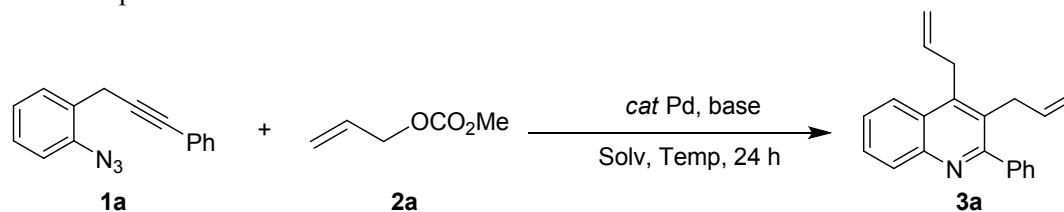
Synthesis of Allylated Quinolines/Isoquinolines via Palladium-catalyzed Cyclization-Allylation of Azides and Allyl Methyl Carbonate

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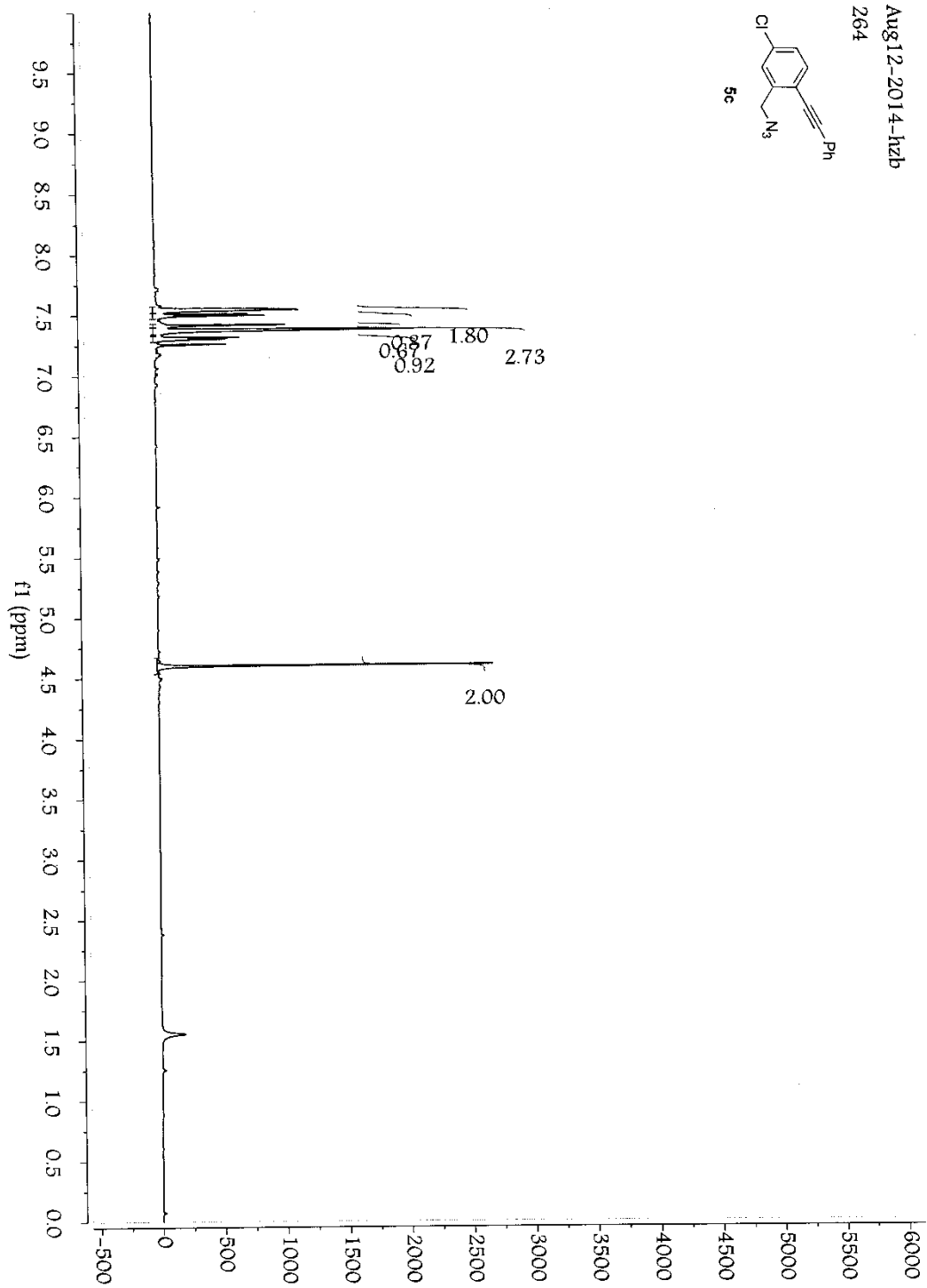
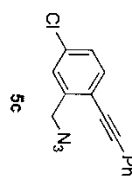
Table S1. Optimization of the reaction conditions. ^a

Entry	cat Pd	Bases	Solvent	Yield (%) ^b	SM recov. (%) ^b
1	-	K ₃ CO ₃	DMF	0	0
2	Pd ₂ (dba) ₃ ·CHCl ₃ (5 mol%)	K ₃ CO ₃	DMF	4	0
3	Pd ₂ (dba) ₃ ·CHCl ₃ ^c (5 mol%)	K ₃ CO ₃	DMF	8	0
4	Pd ₂ (dba) ₃ ·CHCl ₃ ^d (5 mol%)	K ₃ CO ₃	DMF	35	0
5	Pd(PPh ₃) ₄	-	DMF	26	0
6	Pd(PPh ₃) ₄	K ₂ CO ₃	DMF	(47) ^e	0
7	Pd(PPh ₃) ₄	Na ₂ CO ₃	DMF	42	0
8	Pd(PPh ₃) ₄	NaHCO ₃	DMF	46	0
9	Pd(PPh ₃) ₄	NaOH	DMF	56	0
10	Pd(PPh ₃) ₄	NaOAc	DMF	66	0
11	Pd(PPh ₃) ₄	K ₃ PO ₄	DMF	75 (69) ^e	0
12	Pd(PPh ₃) ₄	KH ₂ PO ₄	DMF	37	0
13	Pd(PPh ₃) ₄	Et ₃ N	DMF	48	0
14	Pd(PPh ₃) ₄	K ₃ PO ₄	1,4-dioxane	27	5
15	Pd(PPh ₃) ₄	K ₃ PO ₄	AcOEt	29	8
16	Pd(PPh ₃) ₄	K ₃ PO ₄	Benzene	26	11
17	Pd(PPh ₃) ₄	K ₃ PO ₄	CH ₃ CN	66	0
18	Pd(PPh ₃) ₄	K ₃ PO ₄	CH ₃ CN+H ₂ O	15	0
19	Pd(PPh ₃) ₄	K ₃ PO ₄	THF	30	8
20	Pd(PPh ₃) ₄ ^f	K ₃ PO ₄	DMF	69 (60) ^e	0
21	Pd(PPh ₃) ₄ (5 mol%)	K ₃ PO ₄	DMF	63	0
22	Pd(PPh ₃) ₄	K ₃ PO ₄ (3 eq)	DMF	65 (59) ^e	0

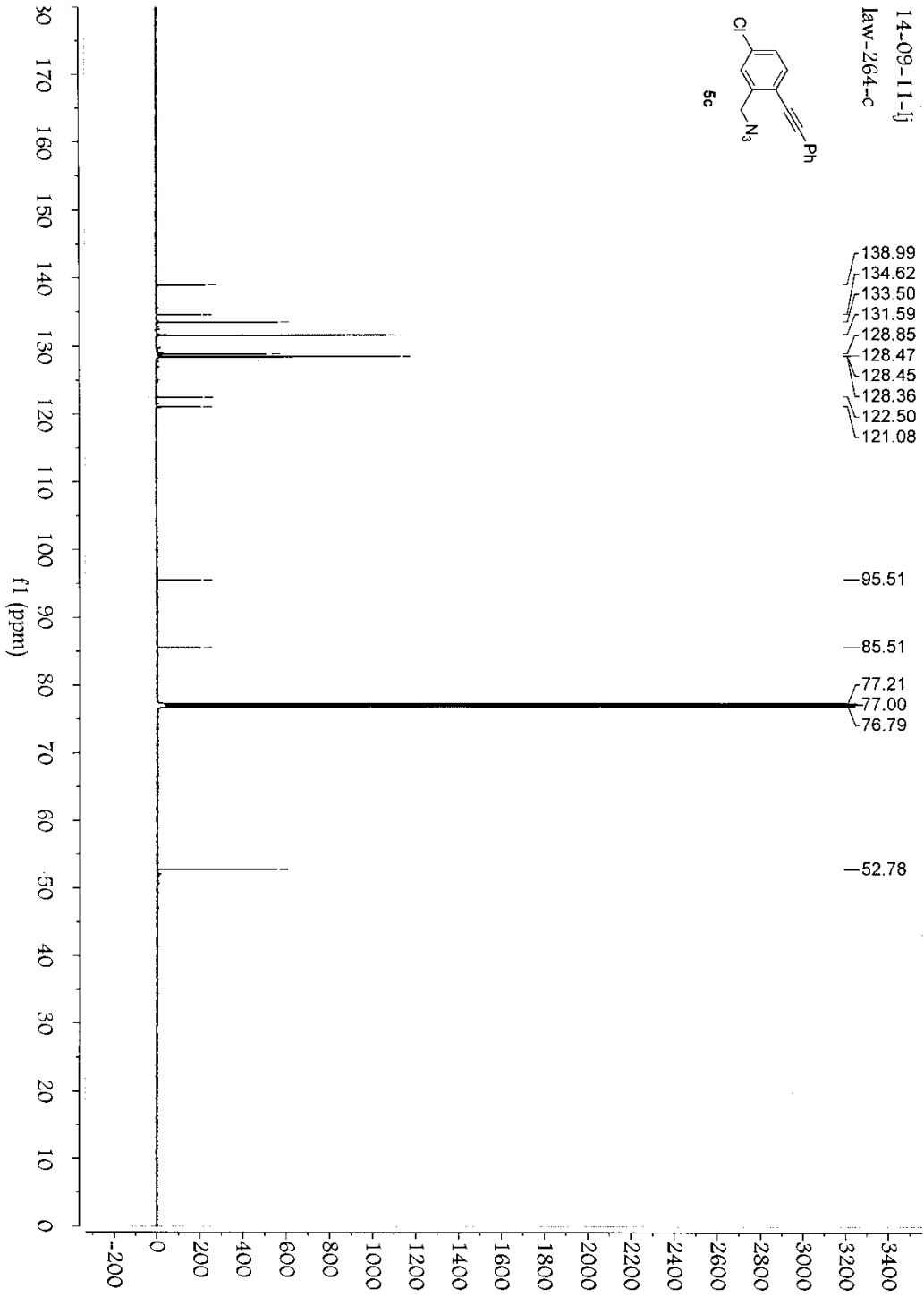
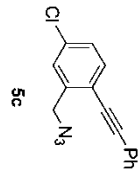
^a The reactions were performed with **1a** (0.05 mmol) and **2a** (5 eq) in the presence of Pd catalyst (10 mol%) and base (5 eq) in 1 mL DMF at 100 °C for 24 h under a argon atmosphere. ^b ¹H NMR yield was determined by using *p*-xylene as an internal standard. ^c 5 mol% XantPhos was used. ^d 10 mol% S-Phos was used. ^e Isolated yield is shown in parentheses. ^f The reaction temperature was 80 °C.

^1H NMR and ^{13}C NMR spectra of compounds

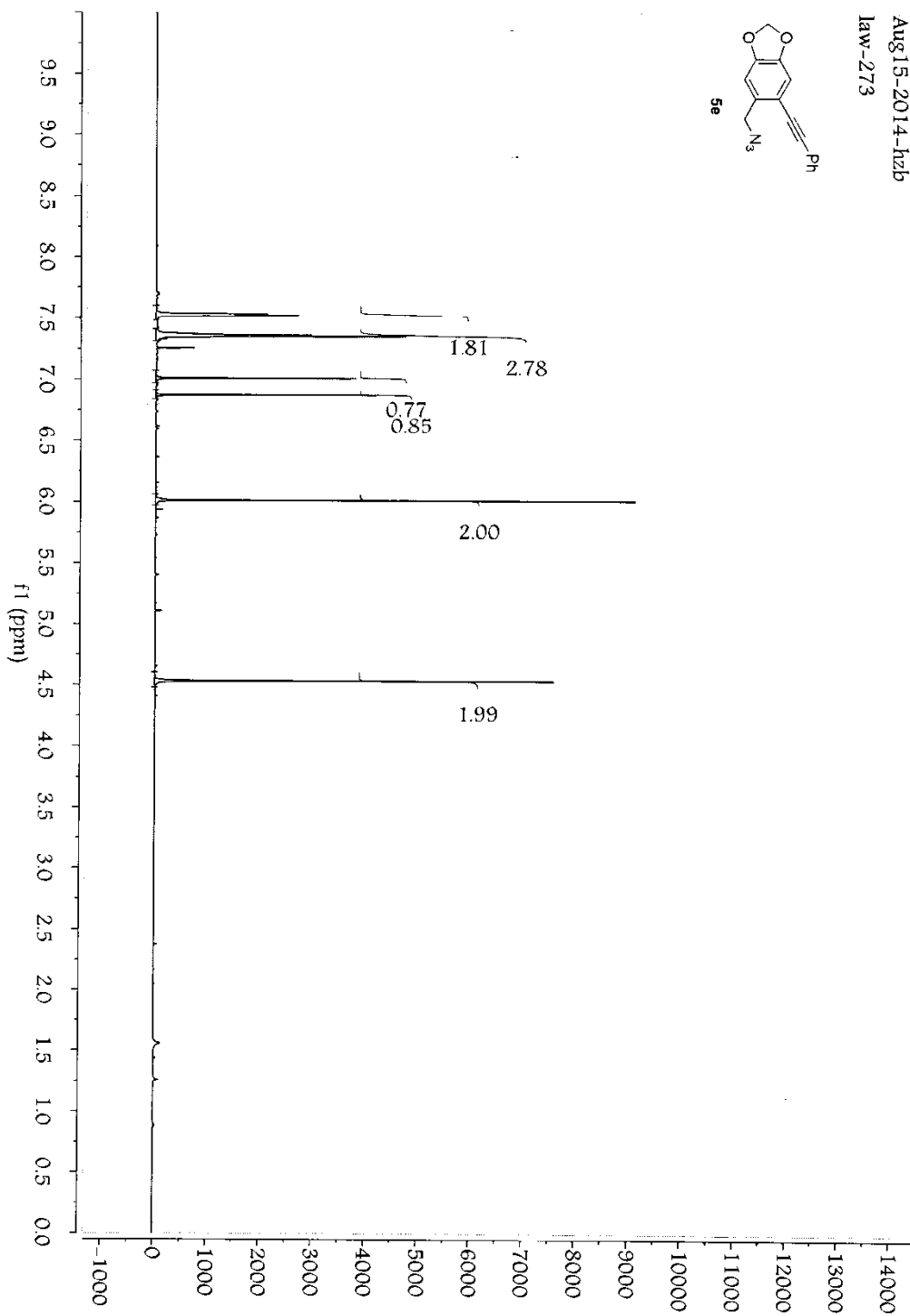
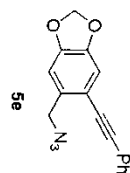
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264



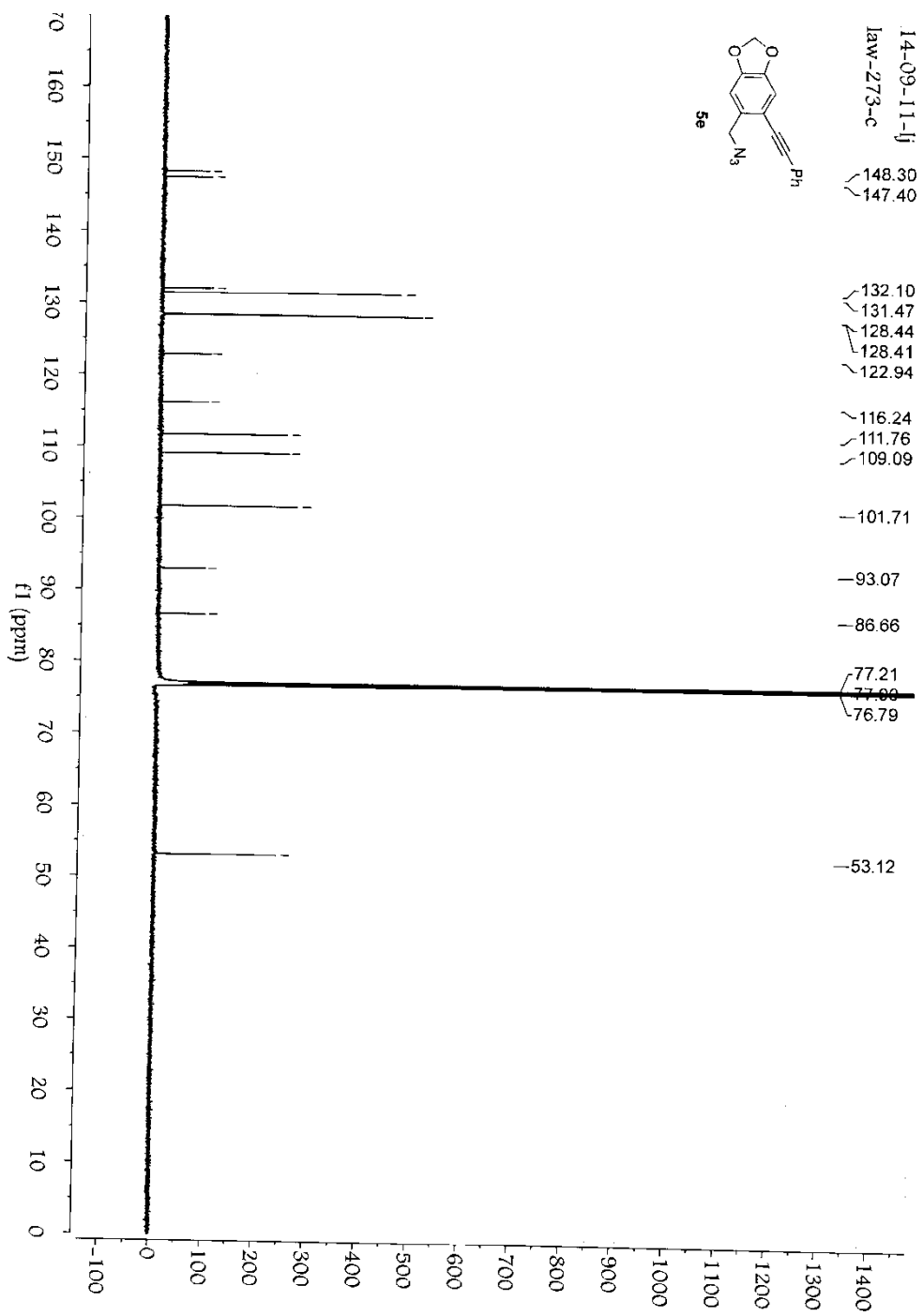
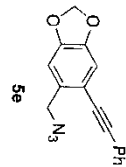
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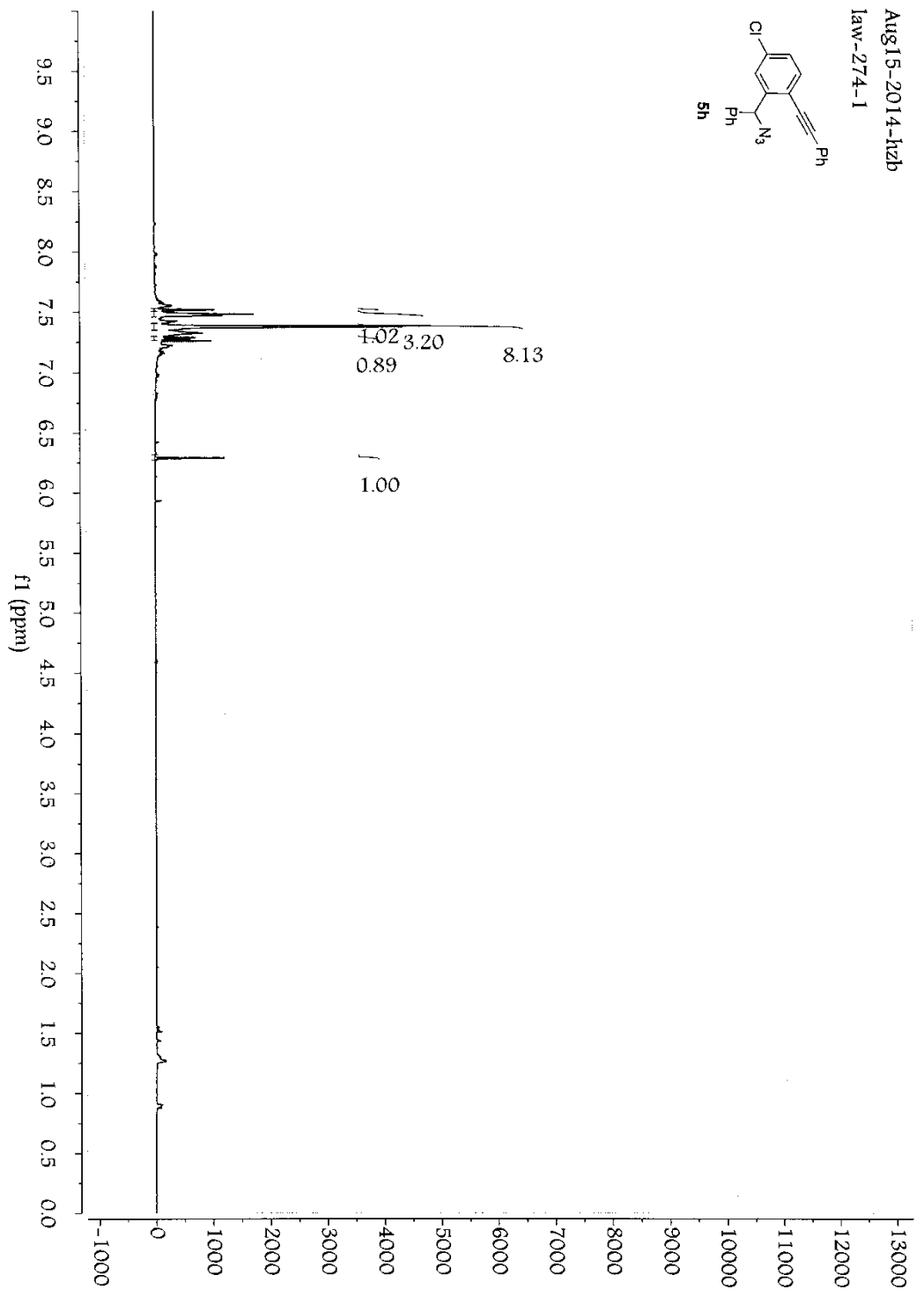
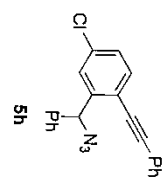
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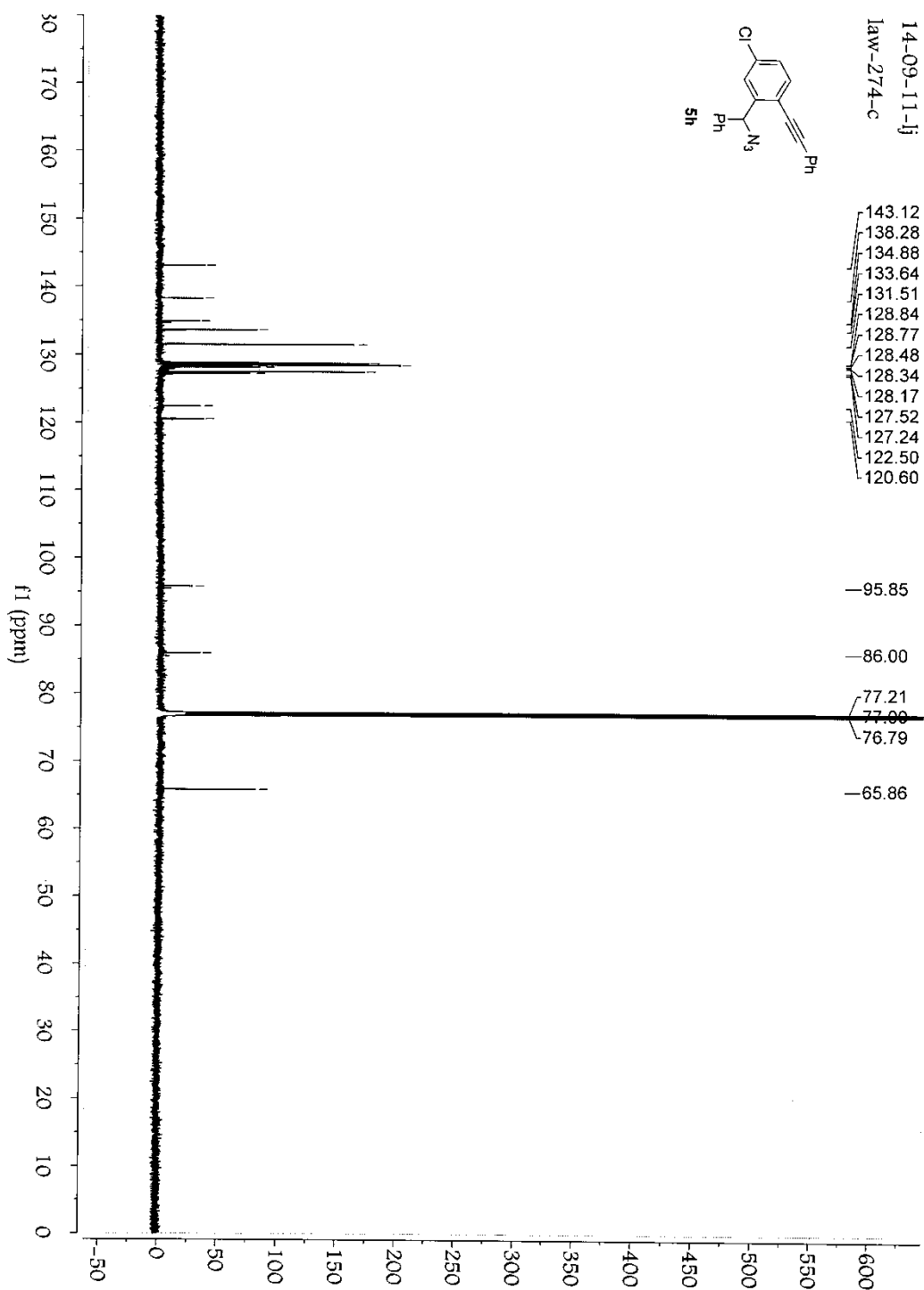
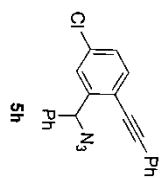
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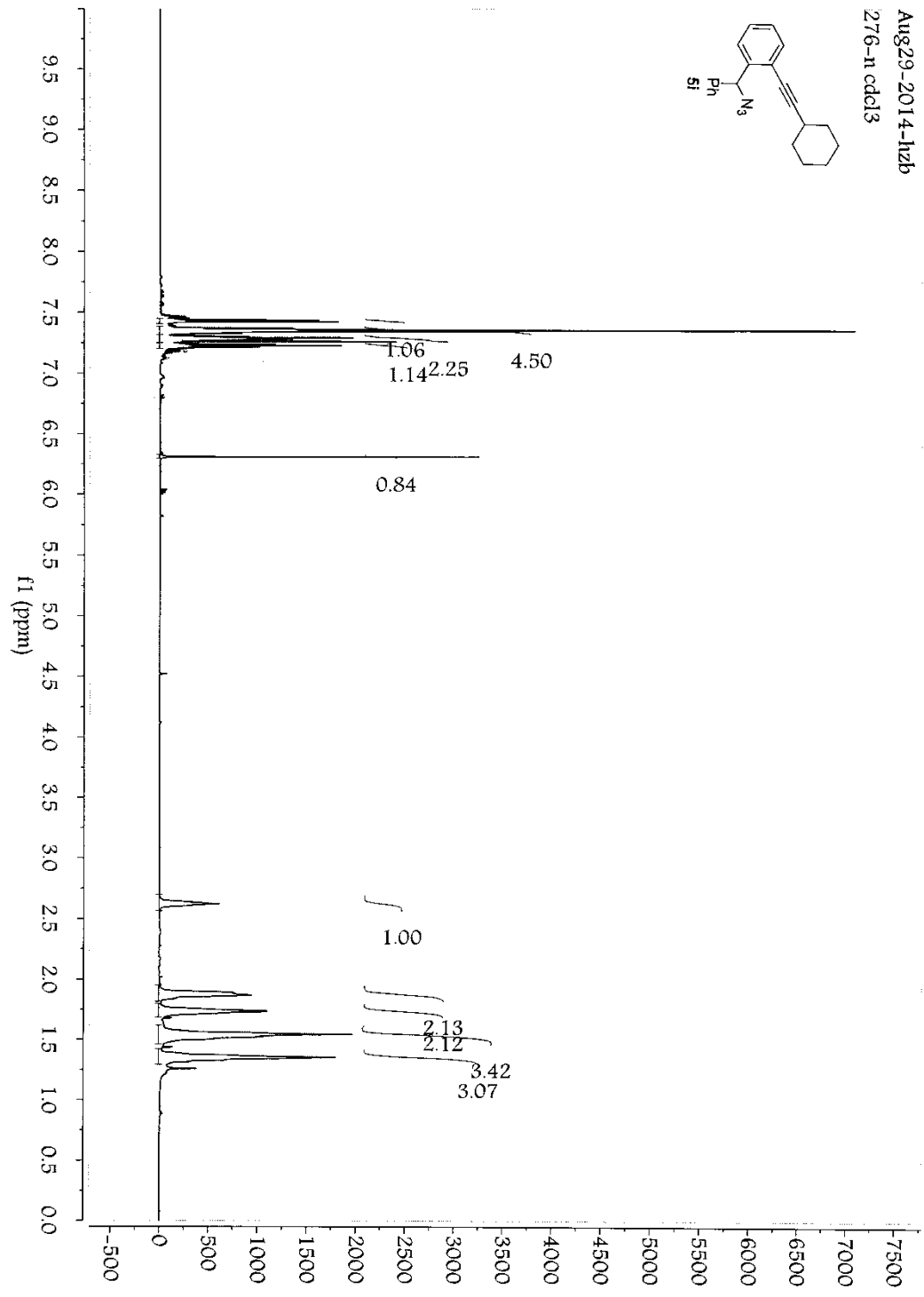
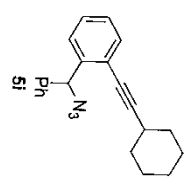
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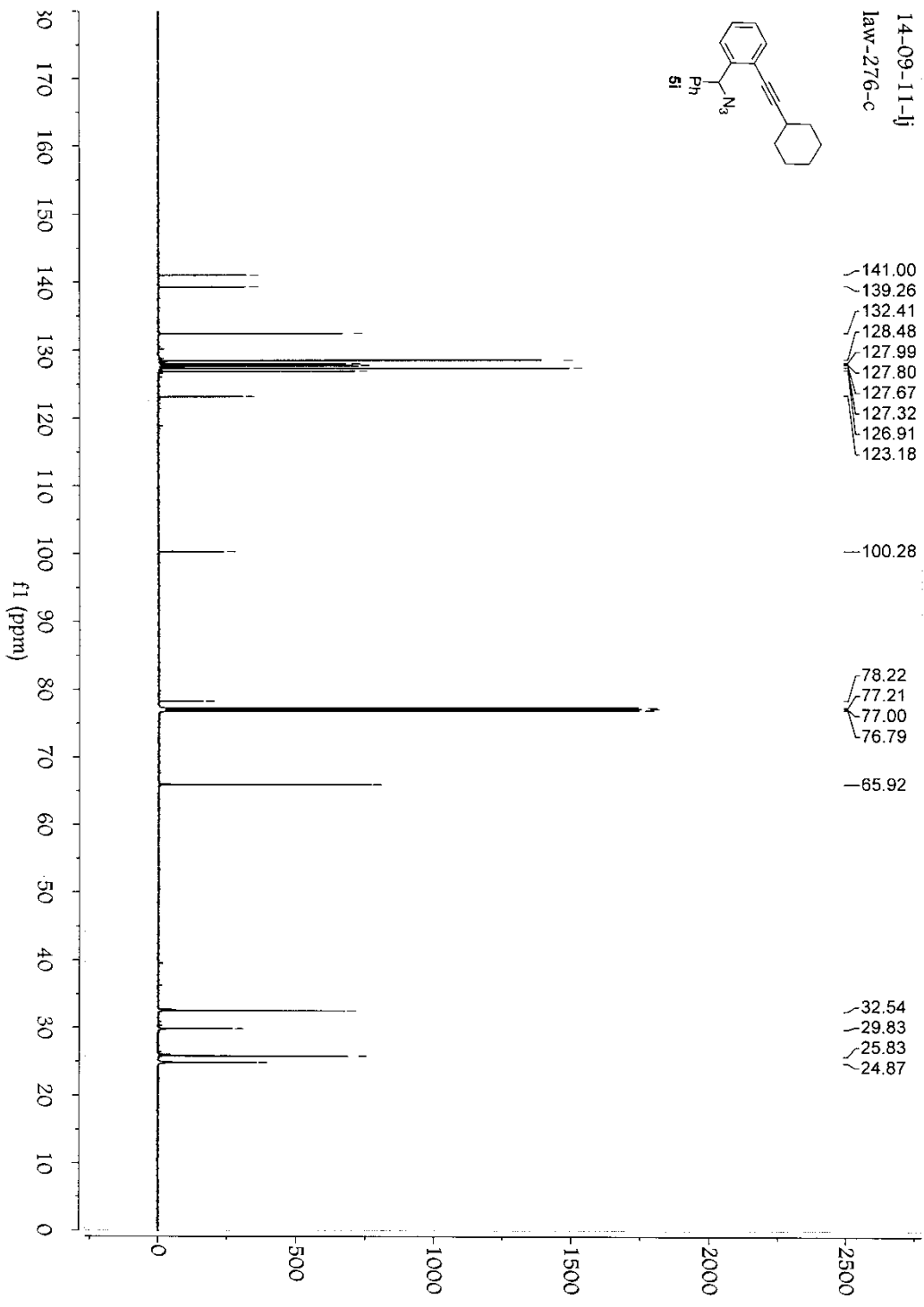
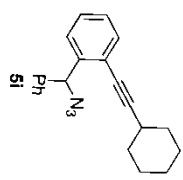
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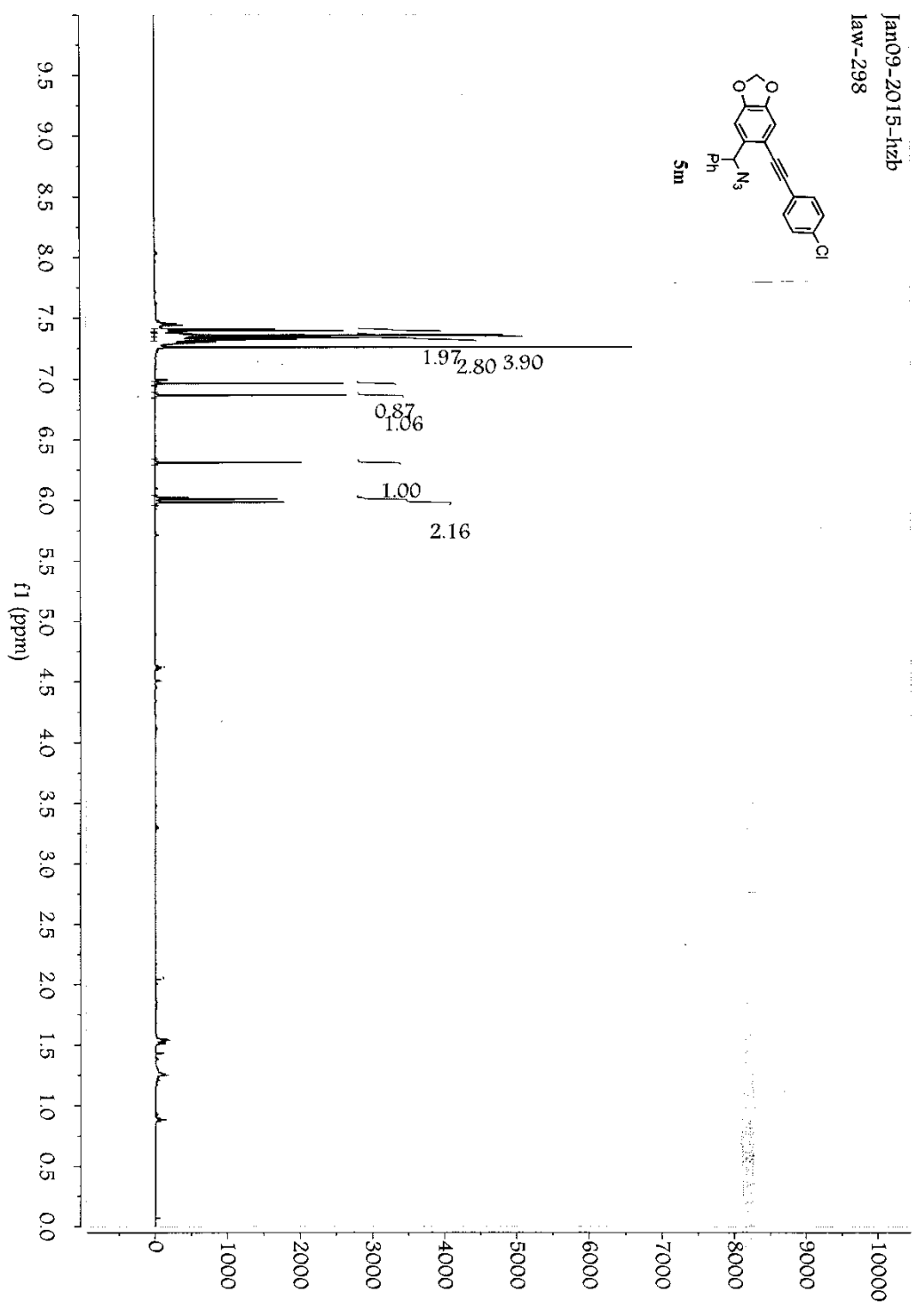
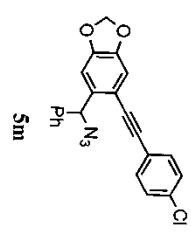
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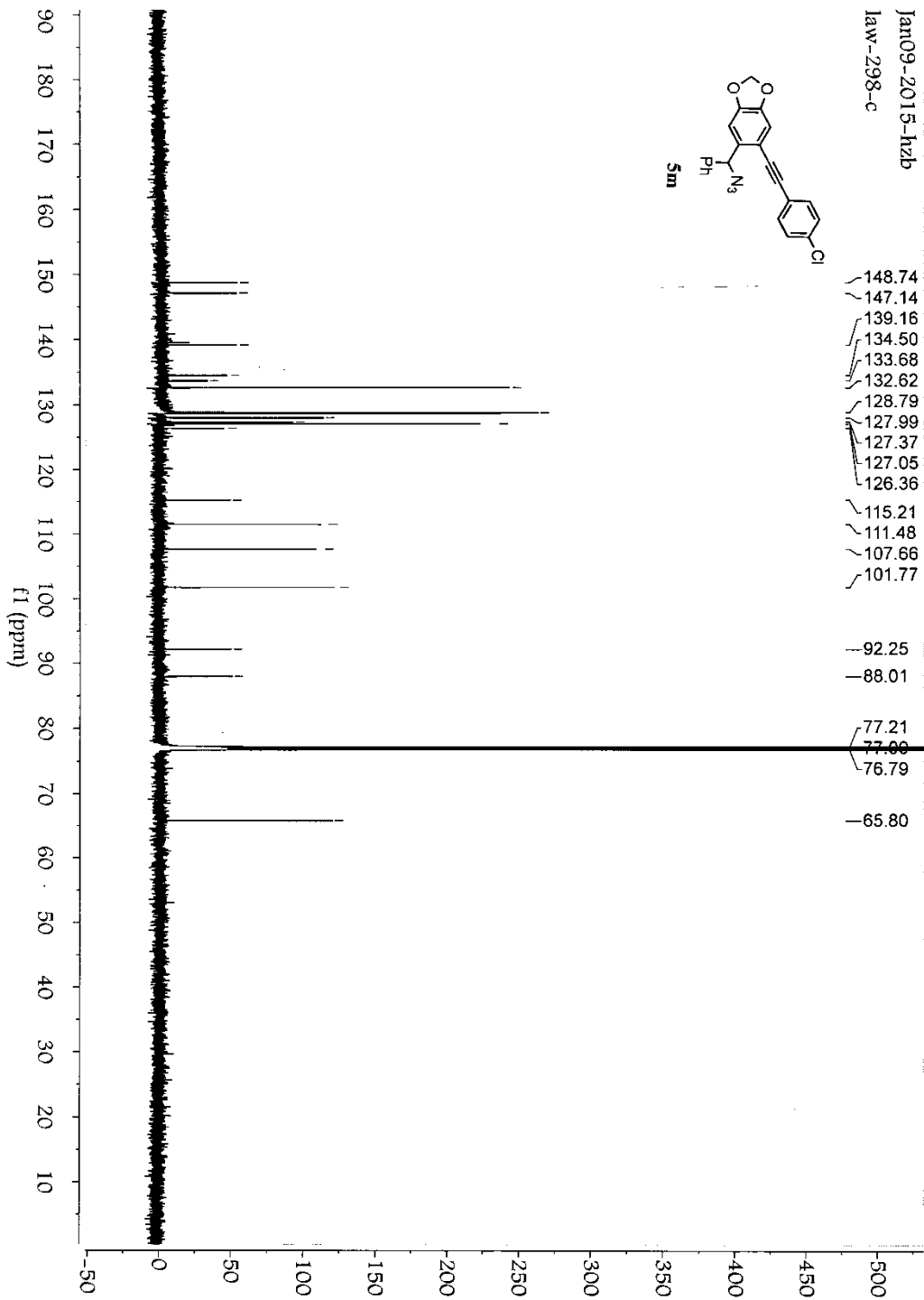
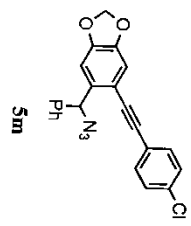
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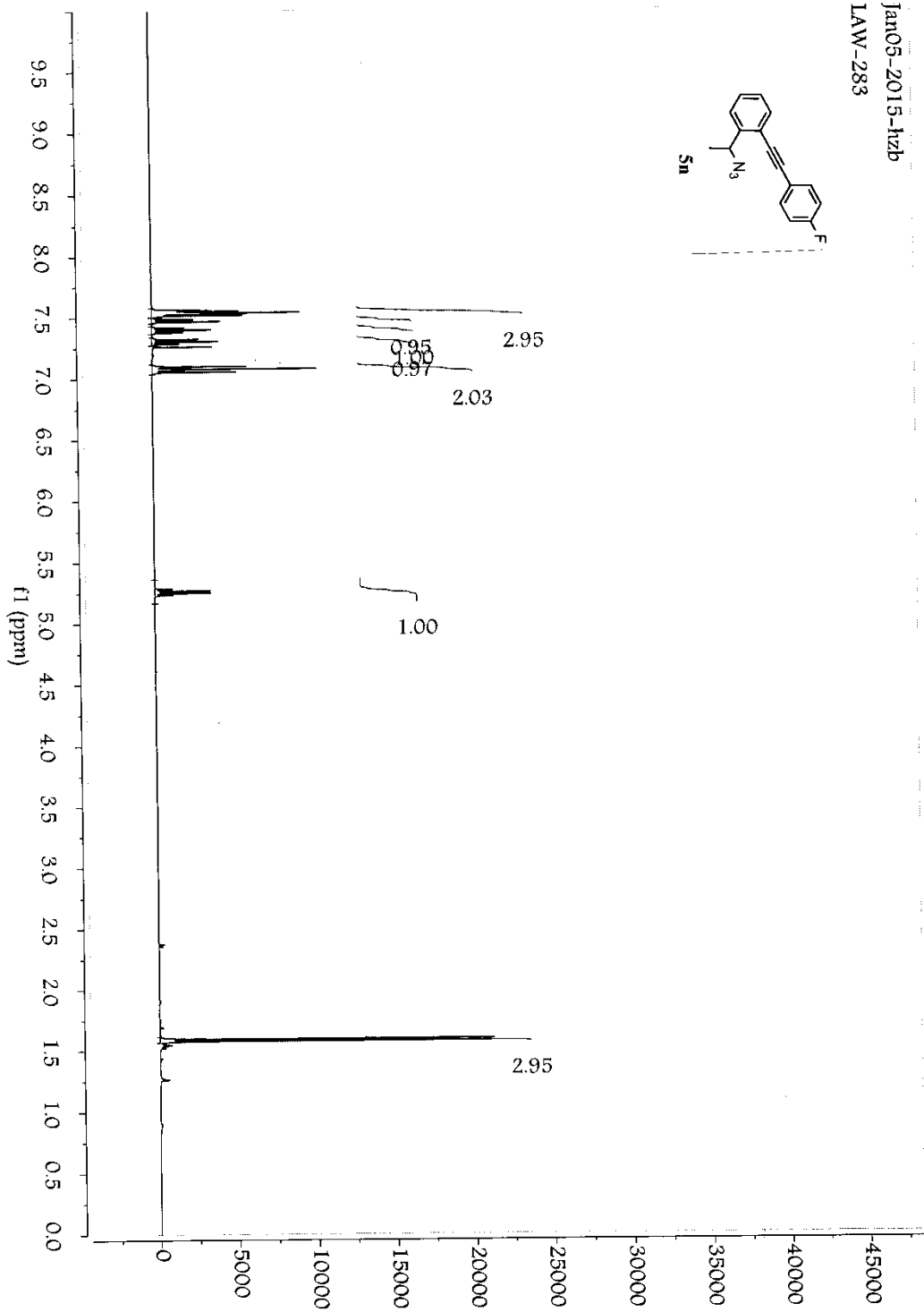
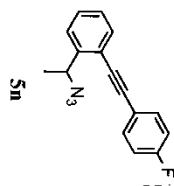
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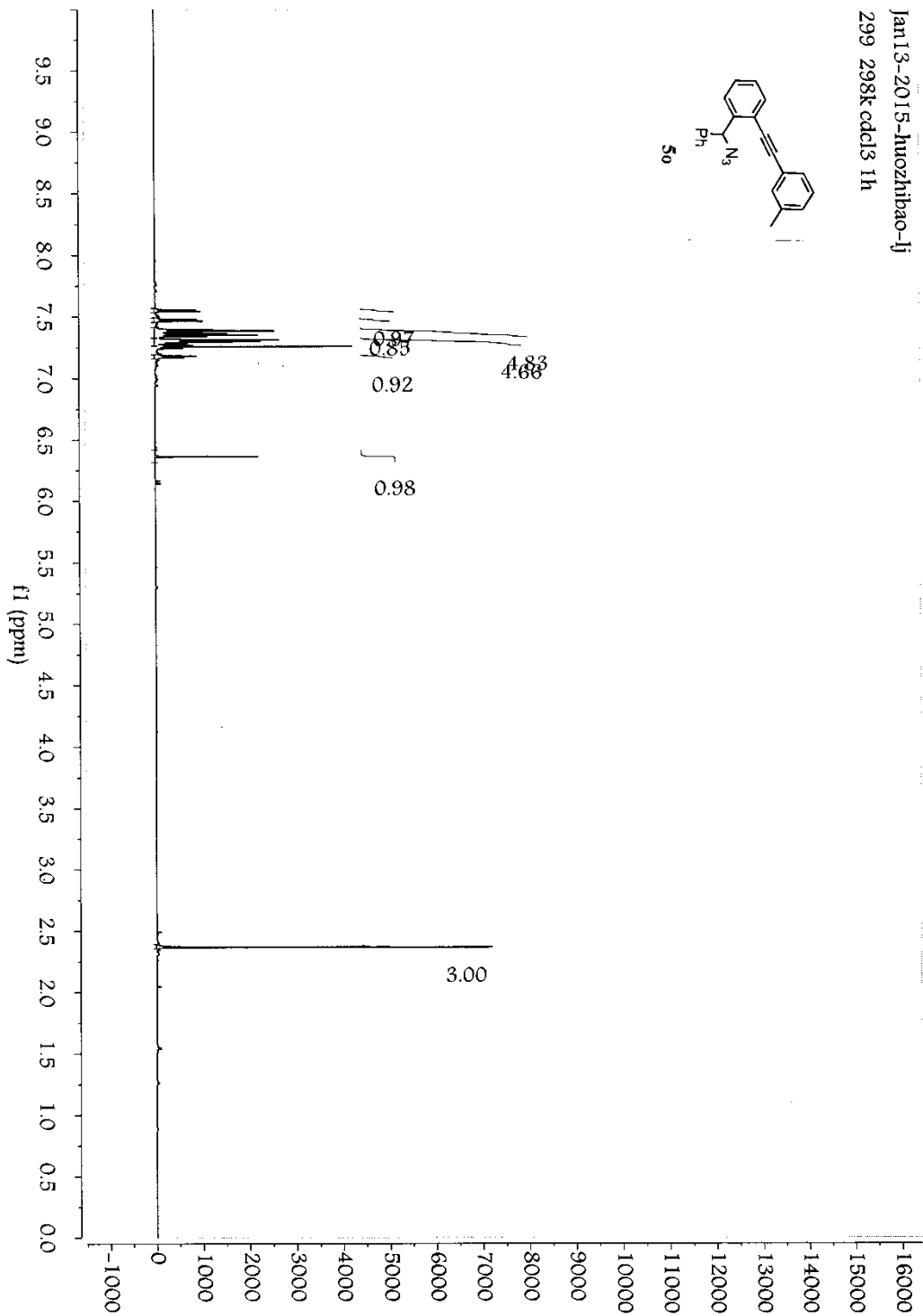
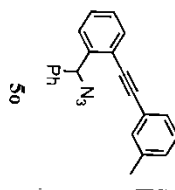
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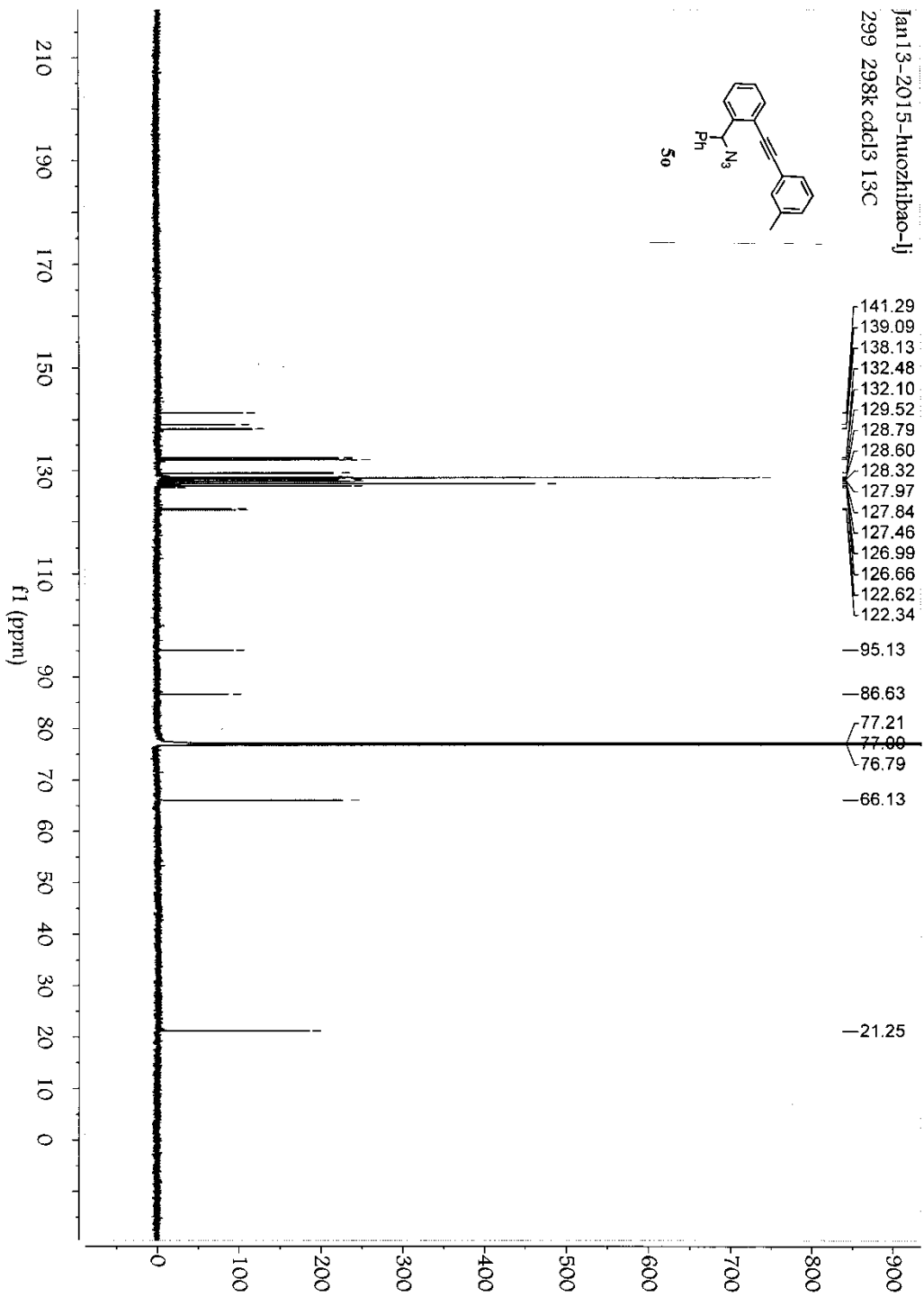
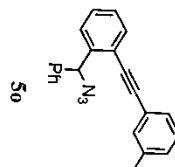
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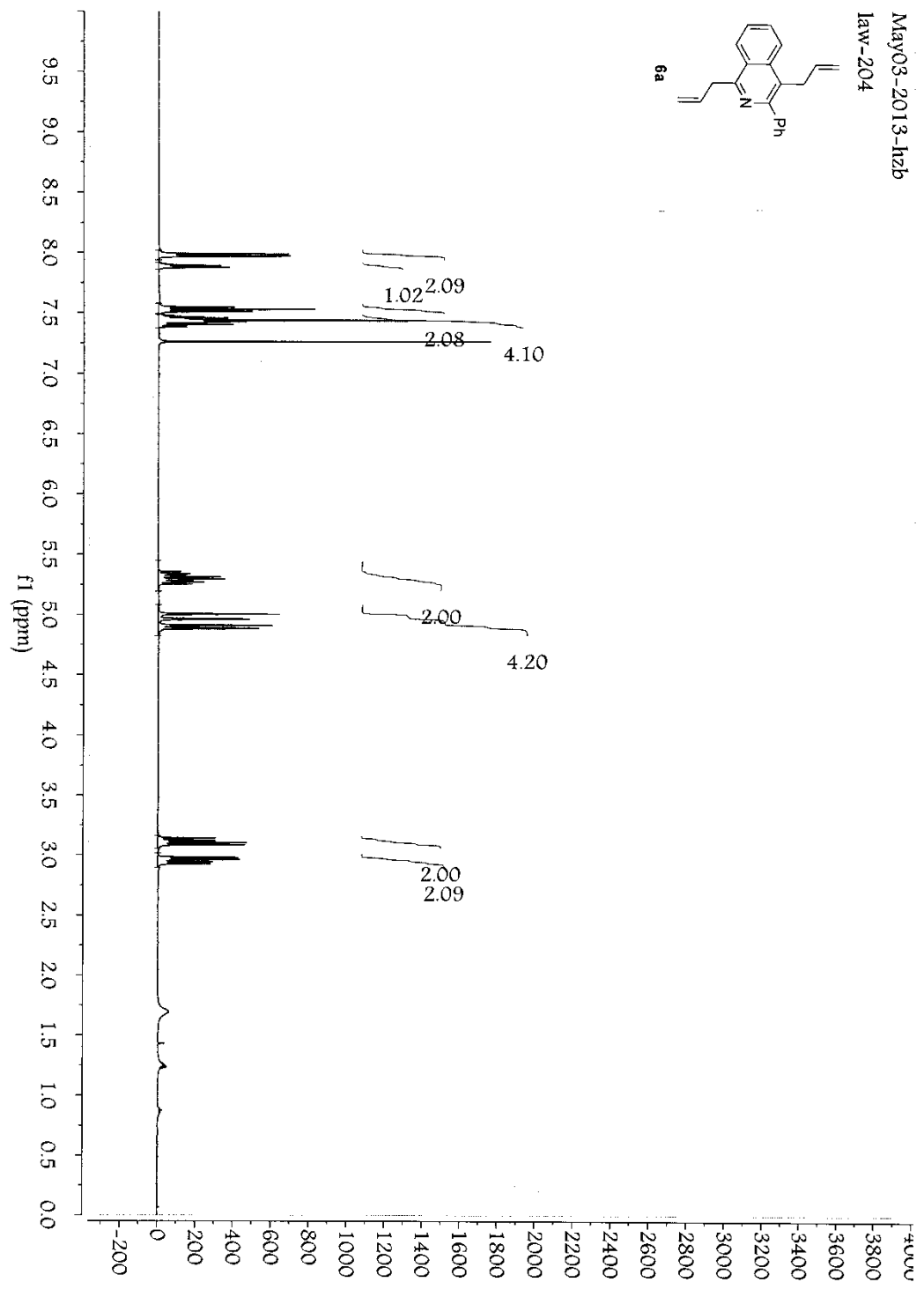
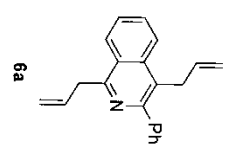
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299 293k cdcl3 1h



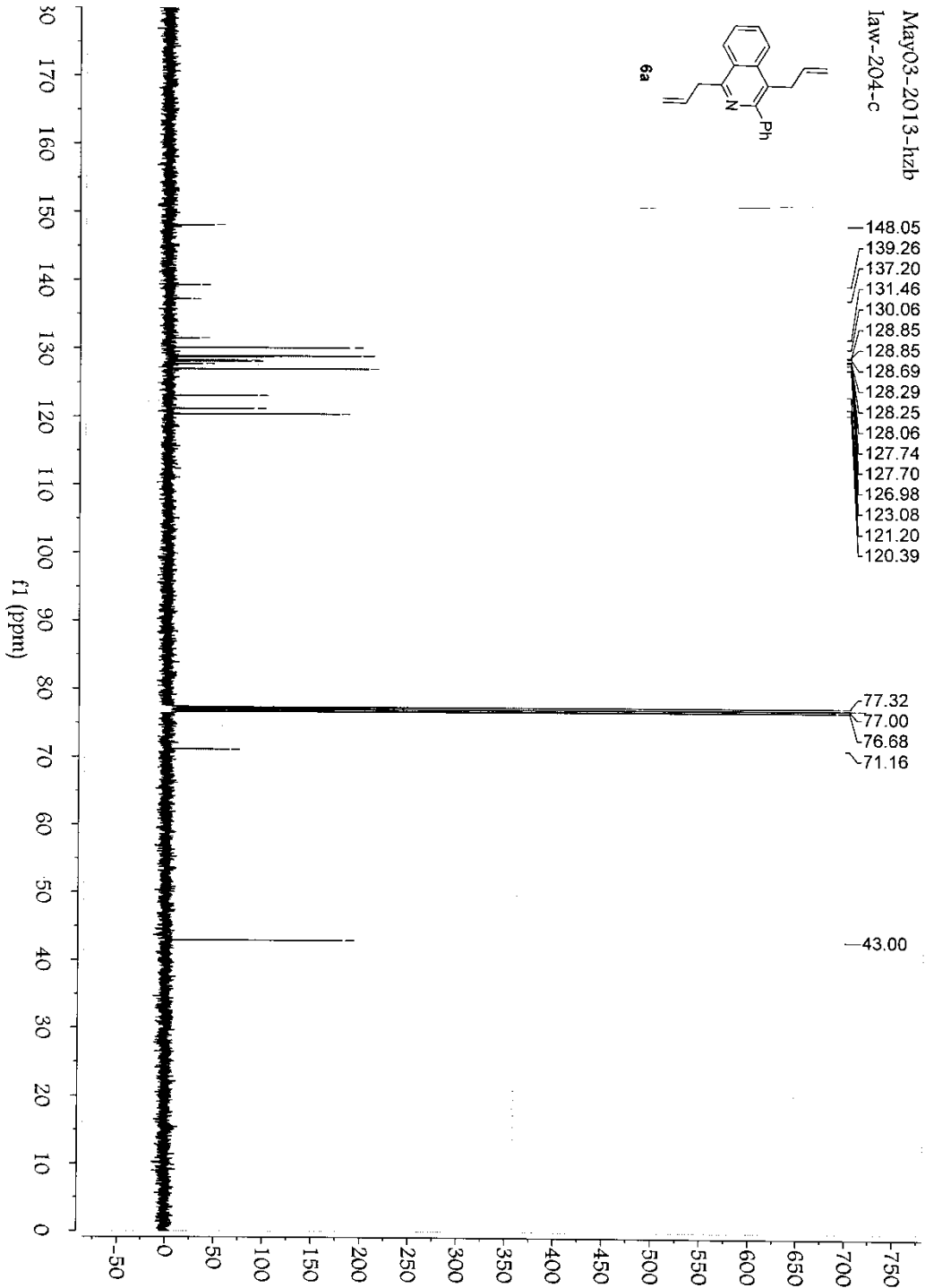
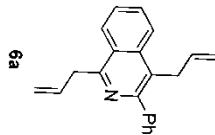
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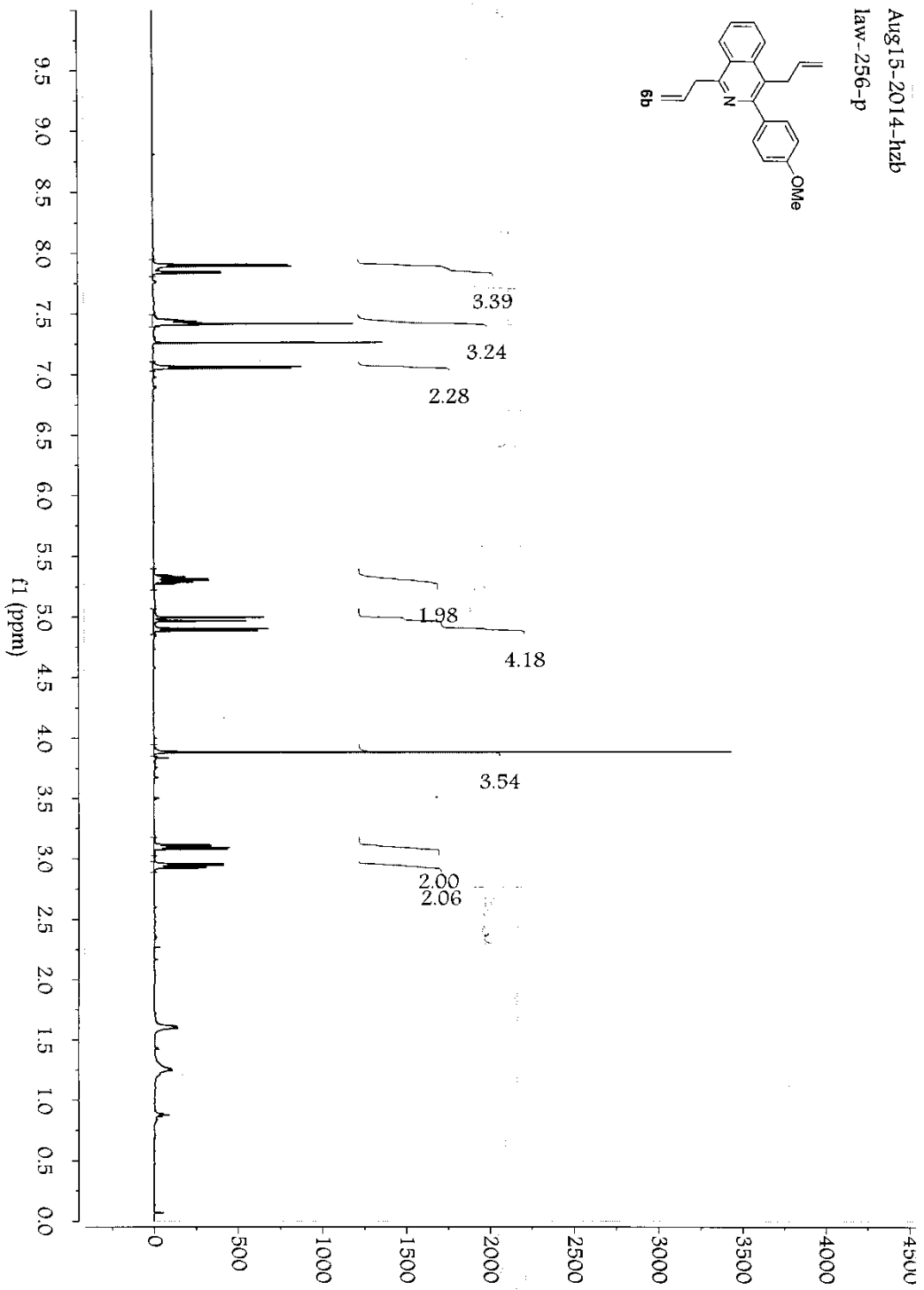
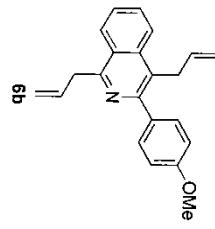
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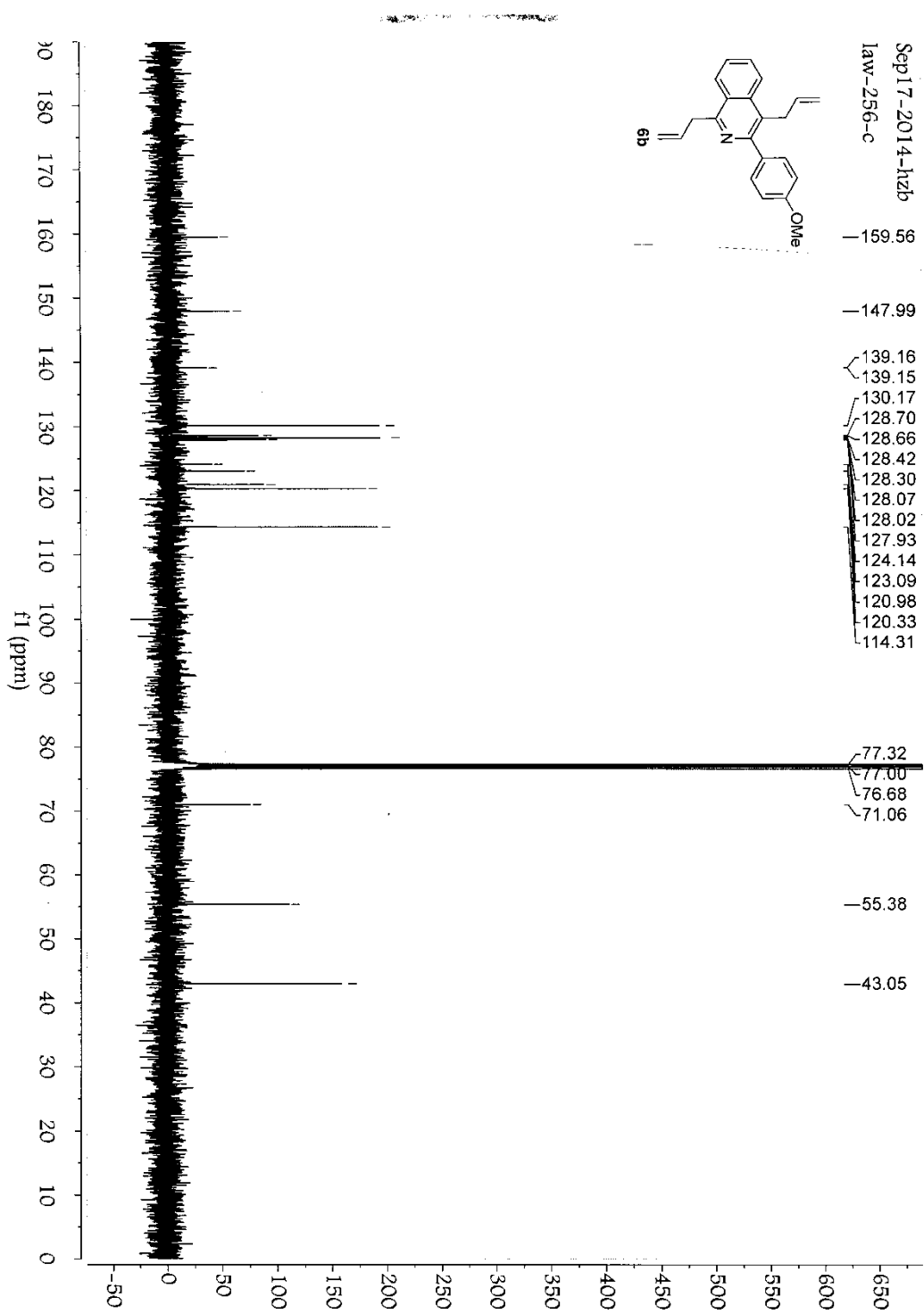


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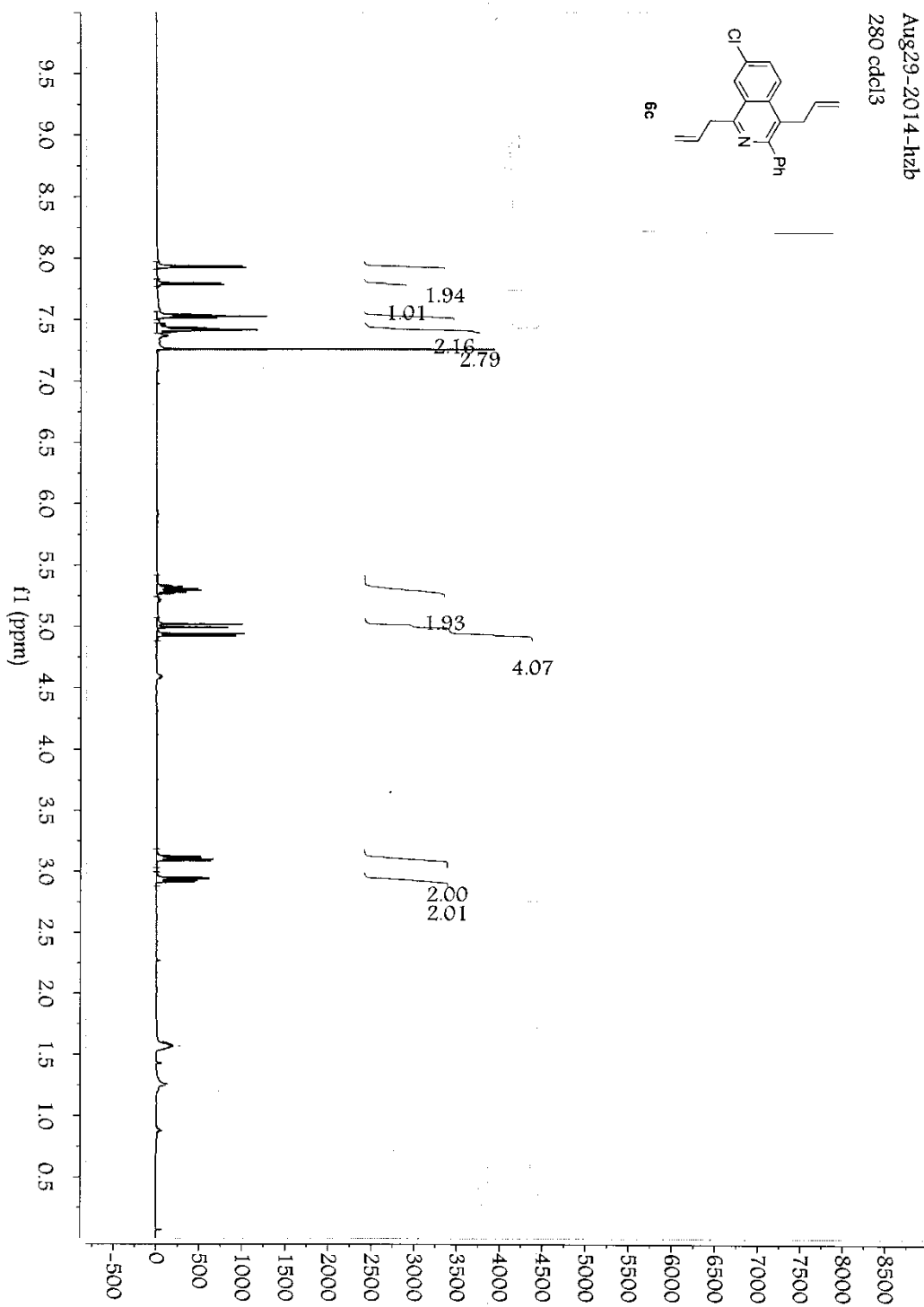
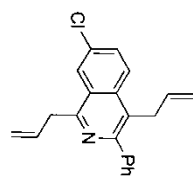


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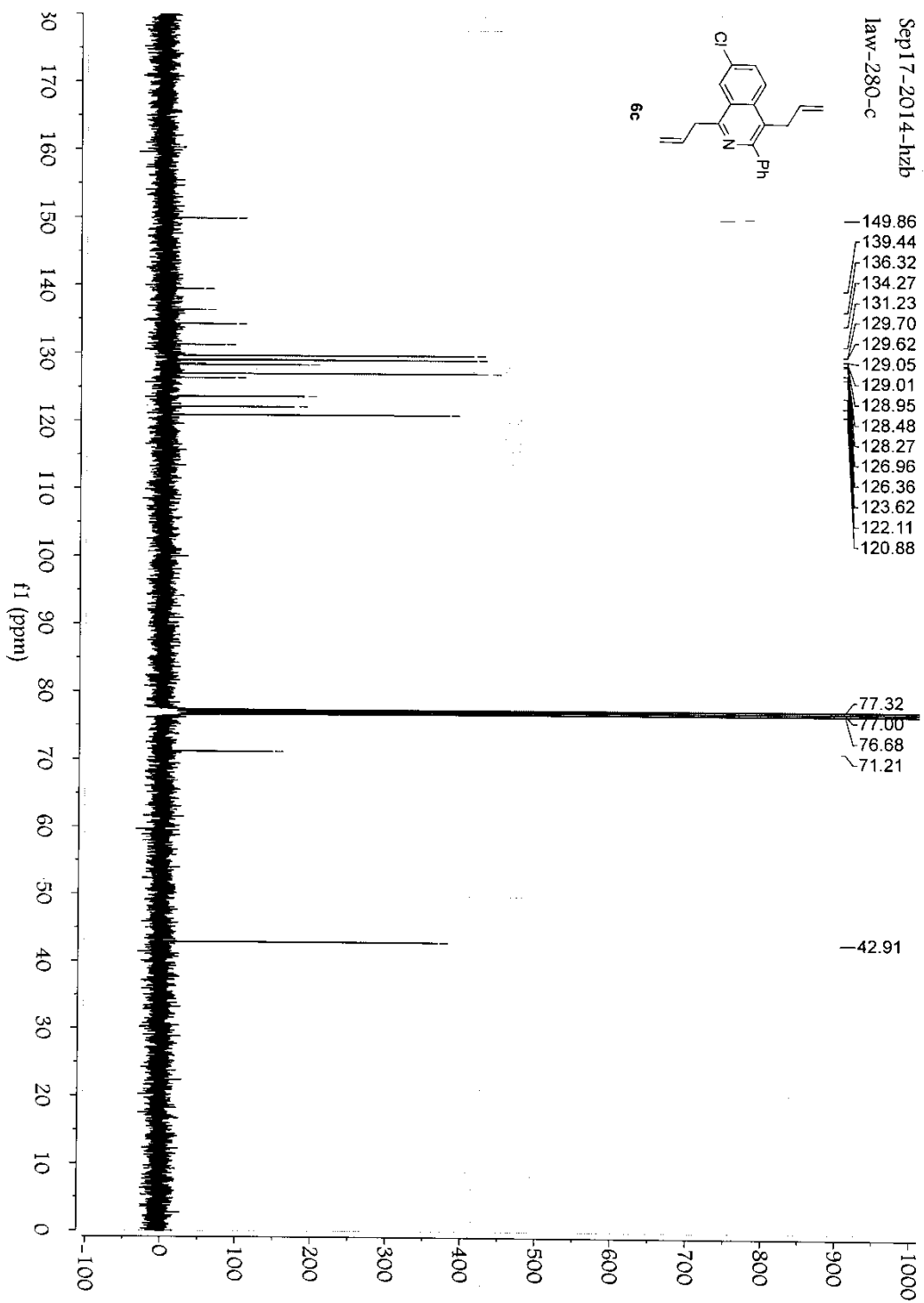
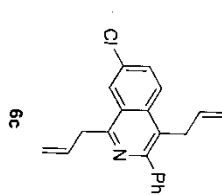




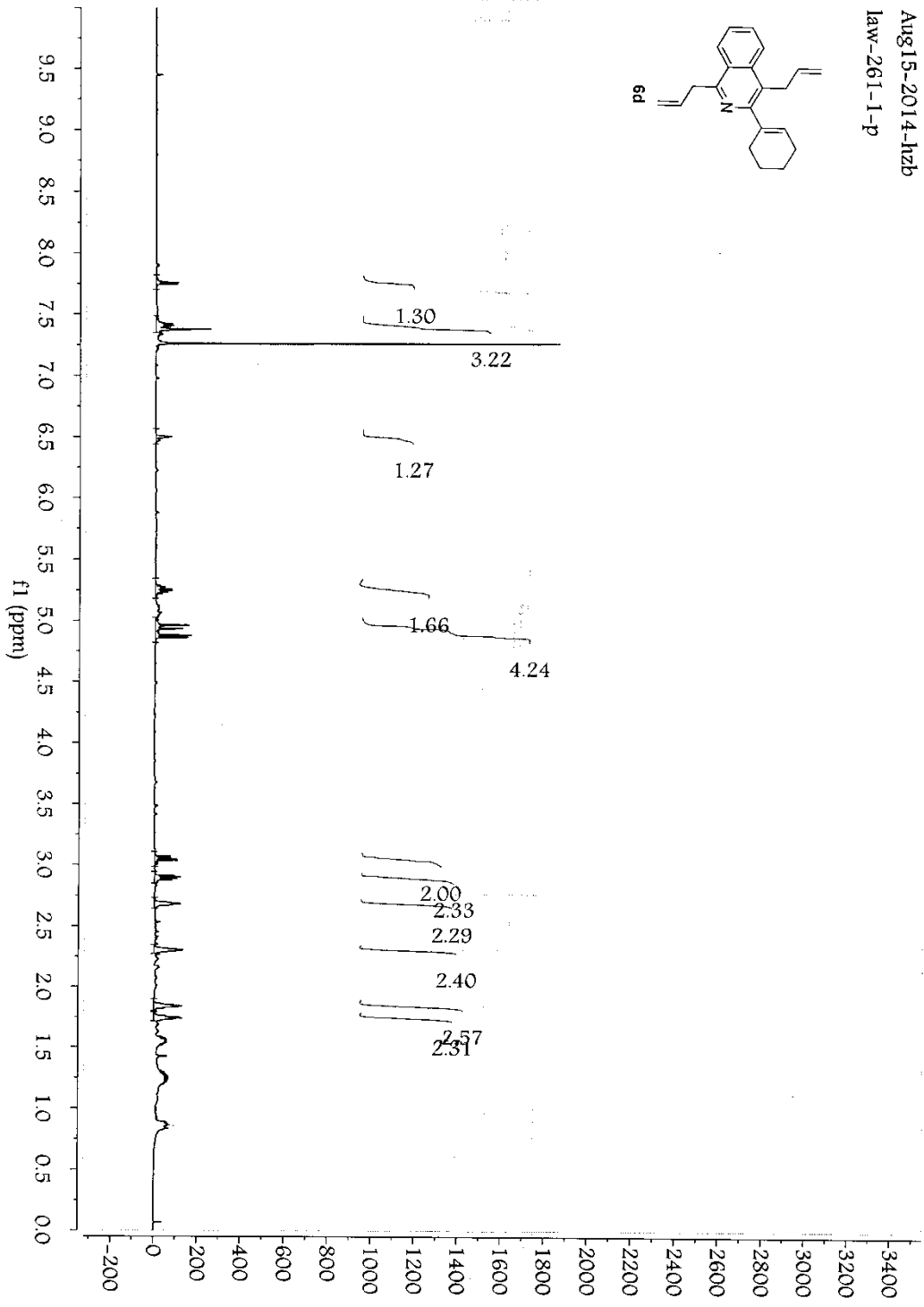
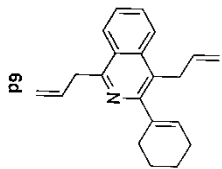
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280 cdcl3



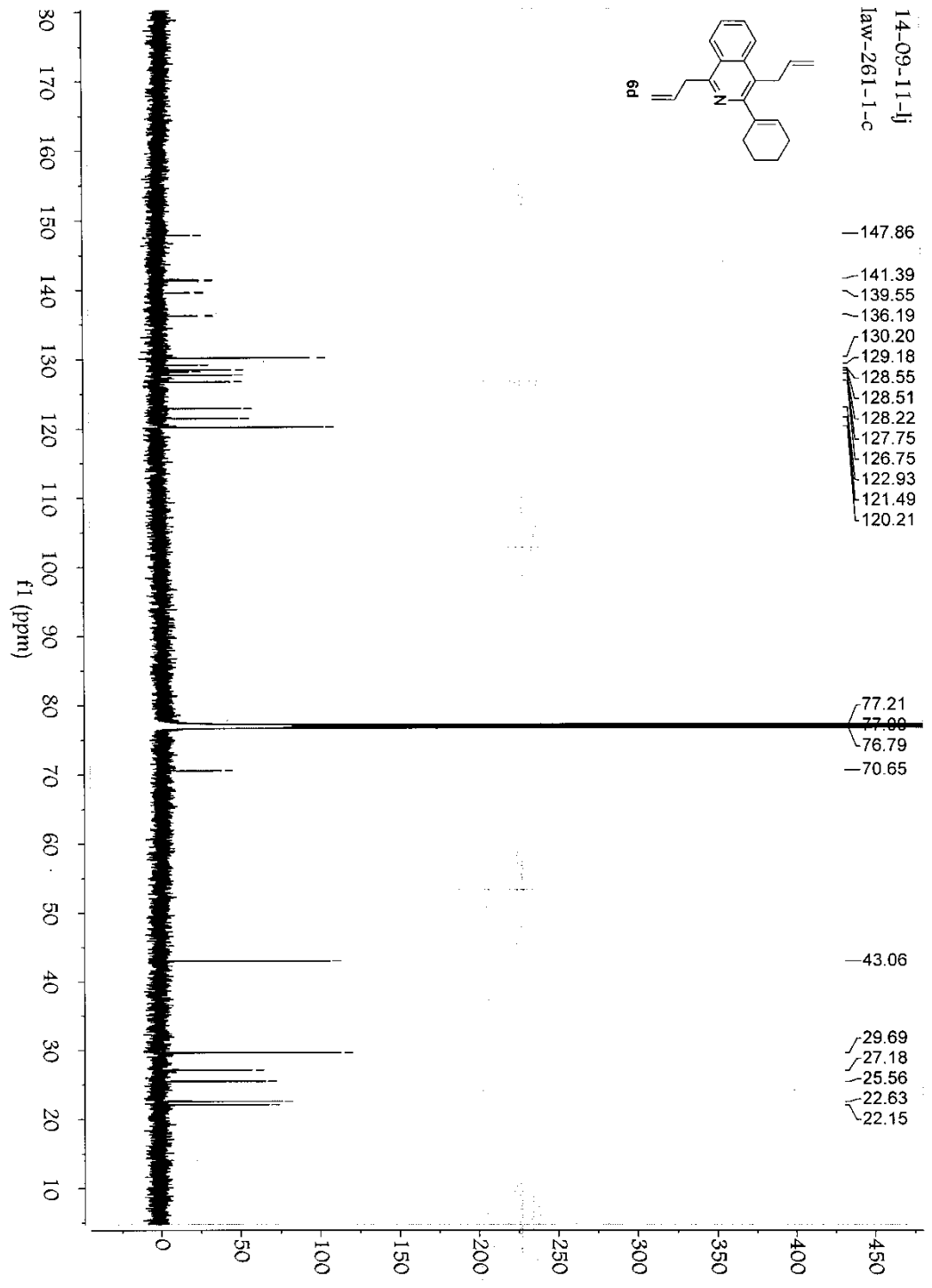
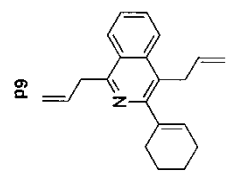
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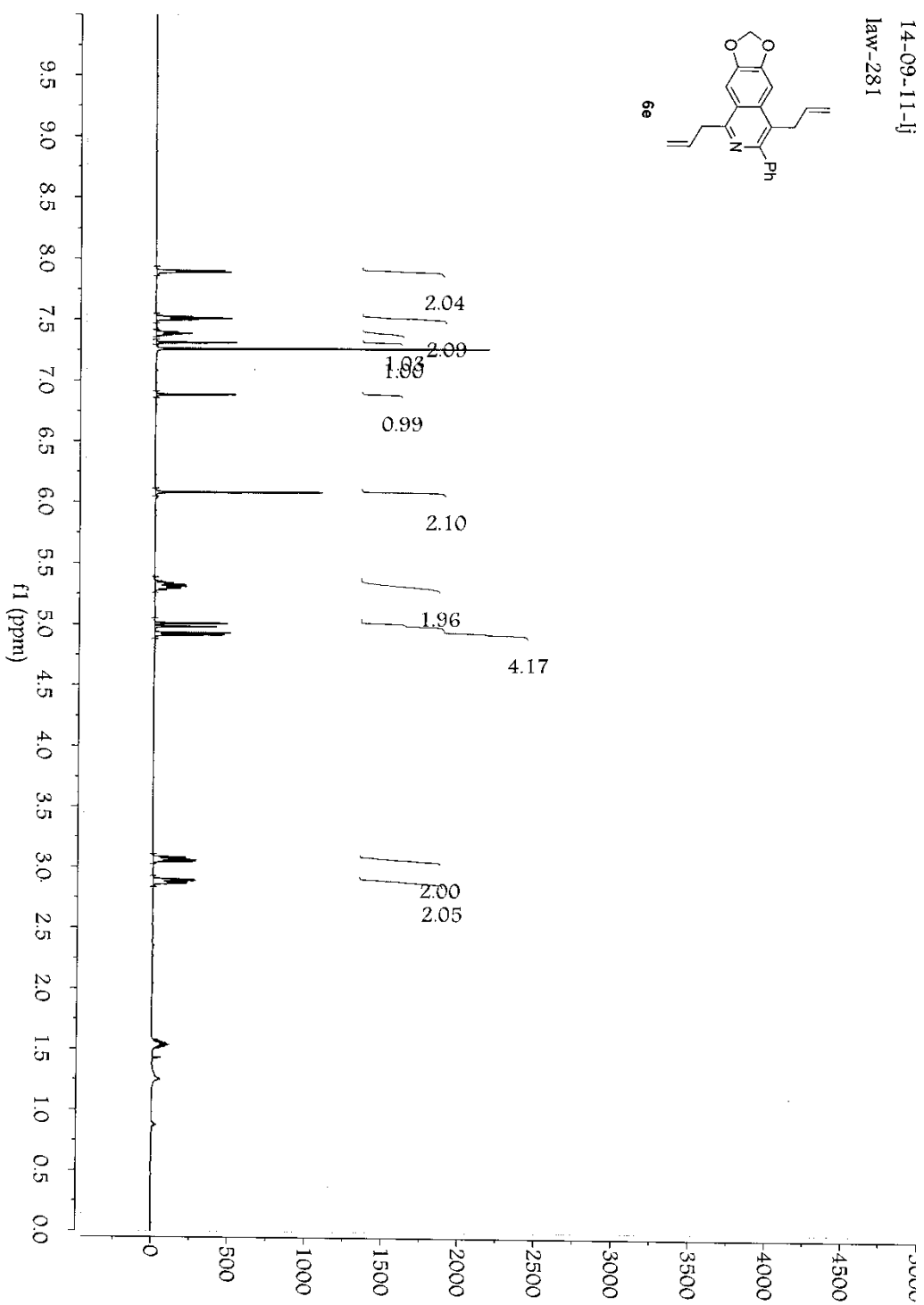
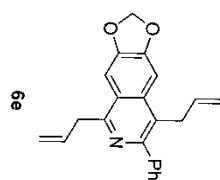
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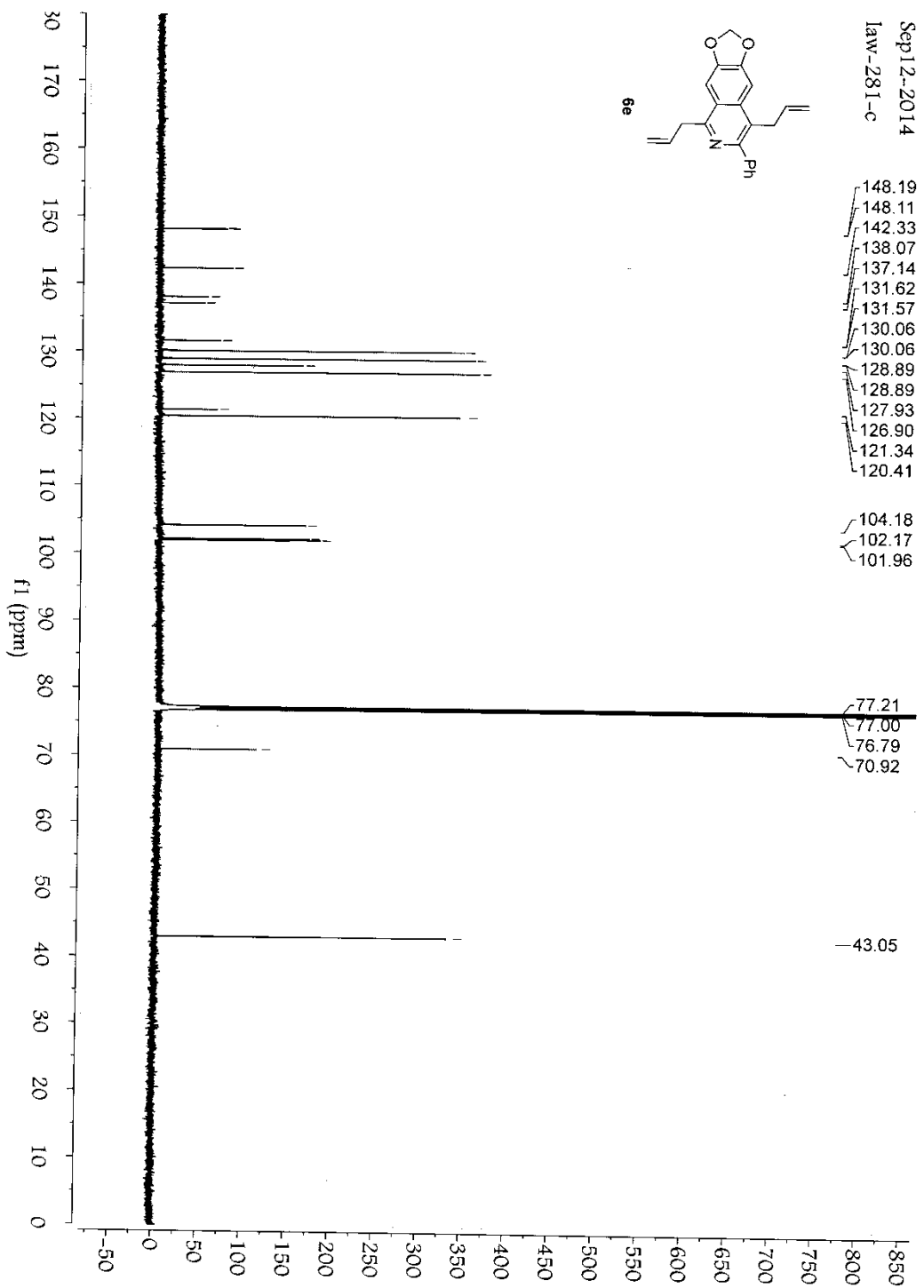
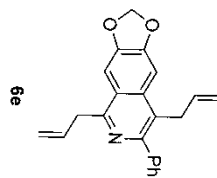
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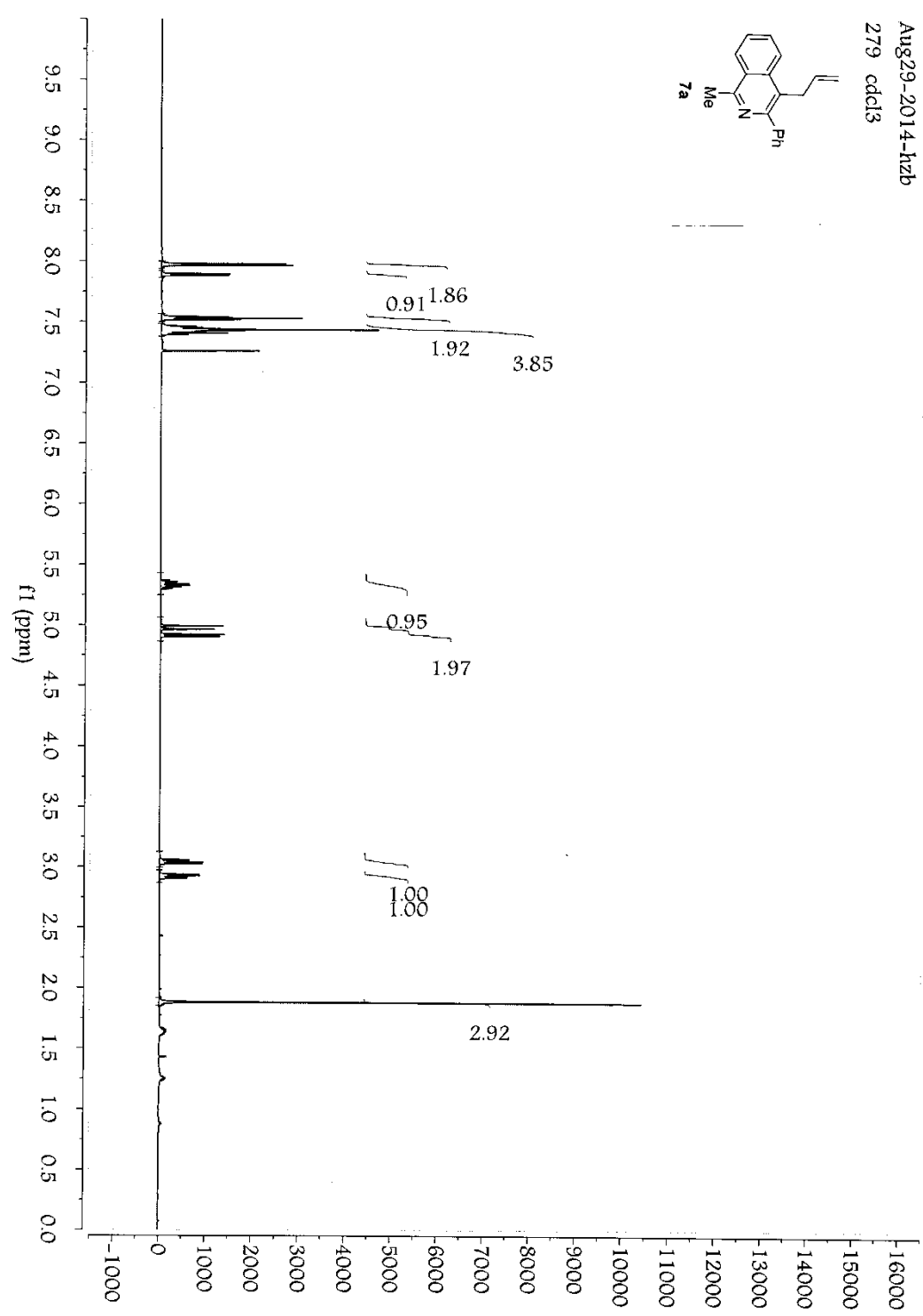
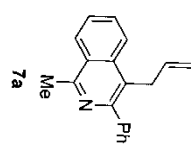
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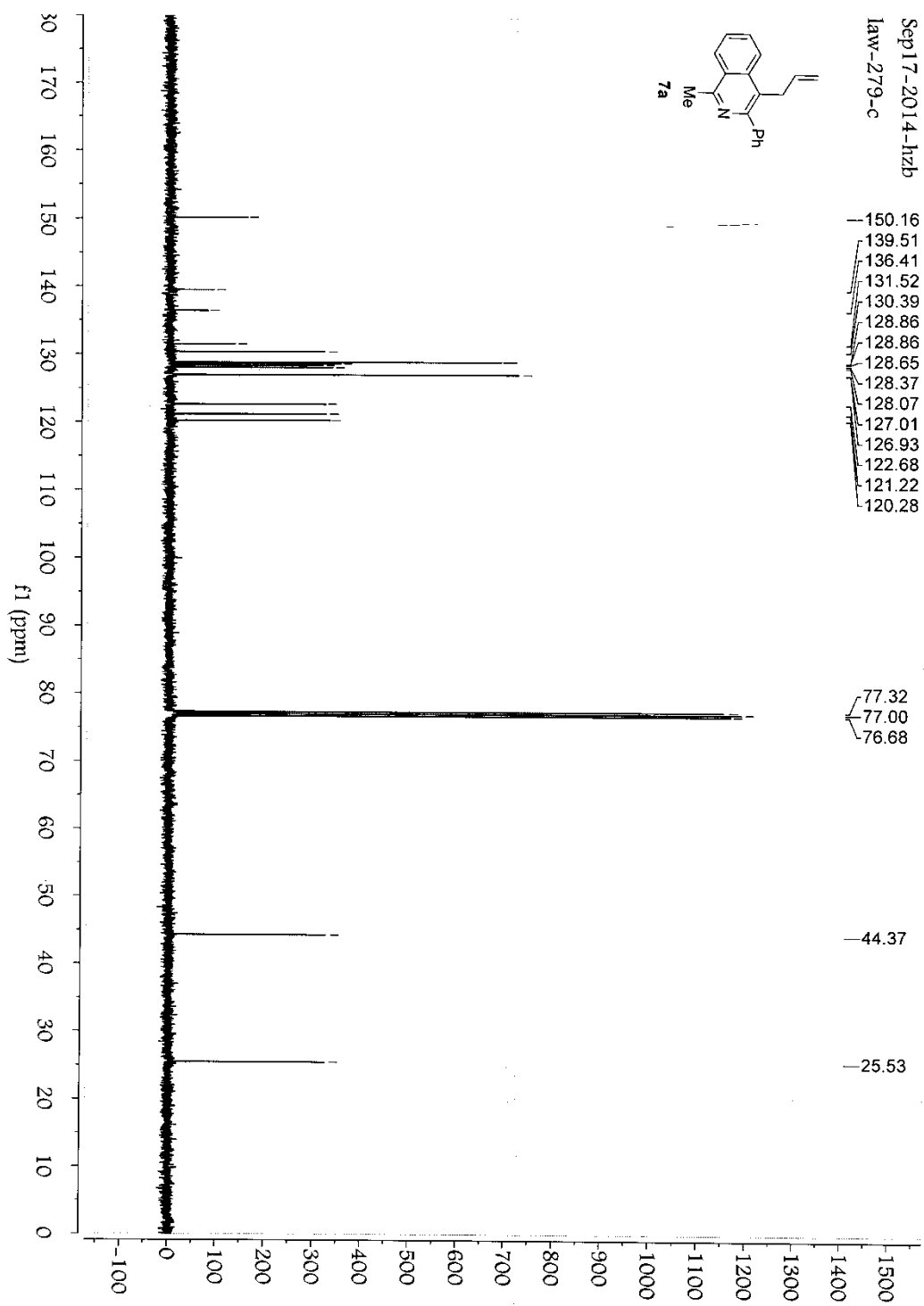
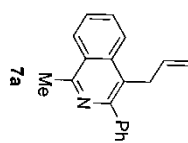
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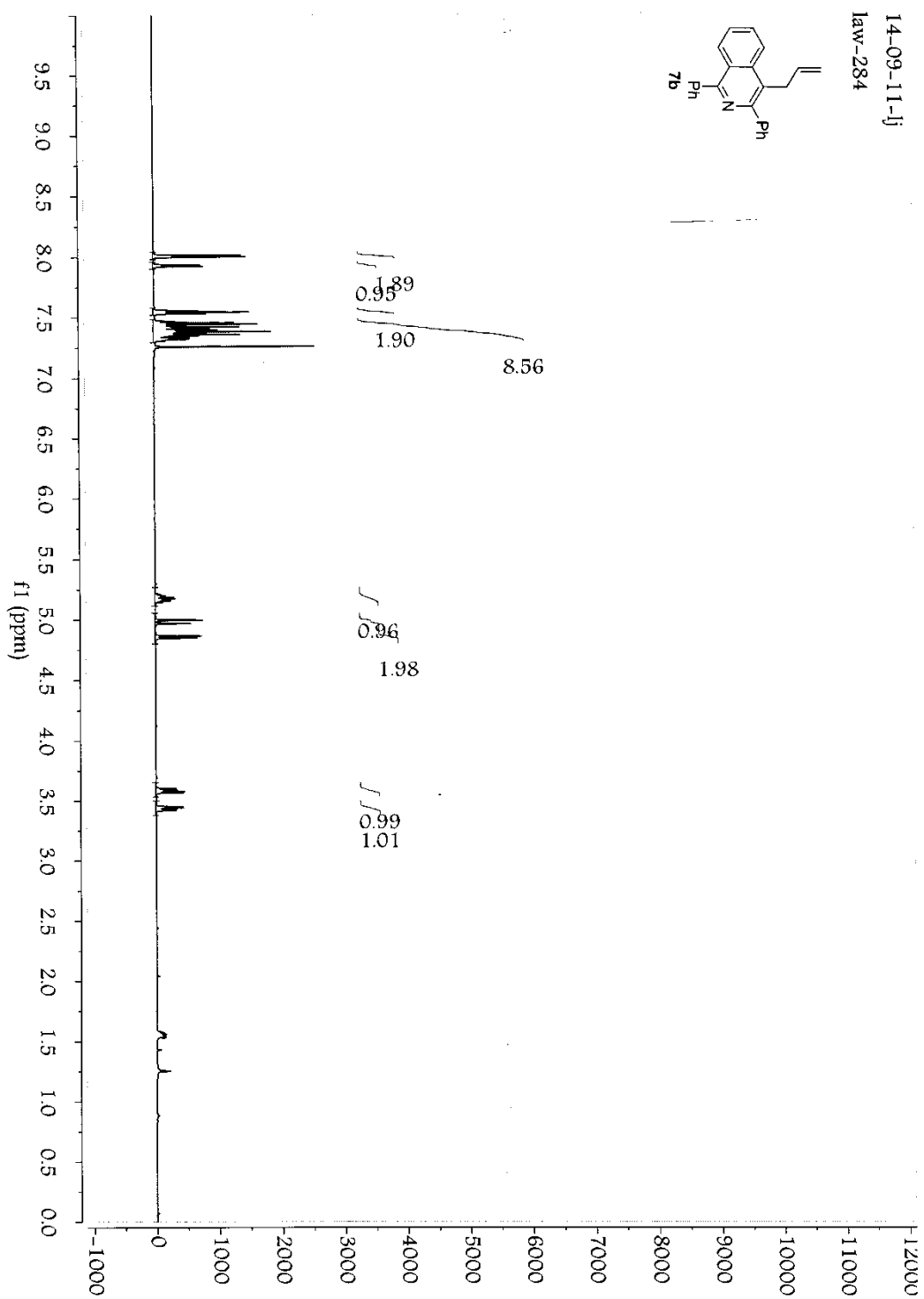
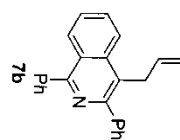
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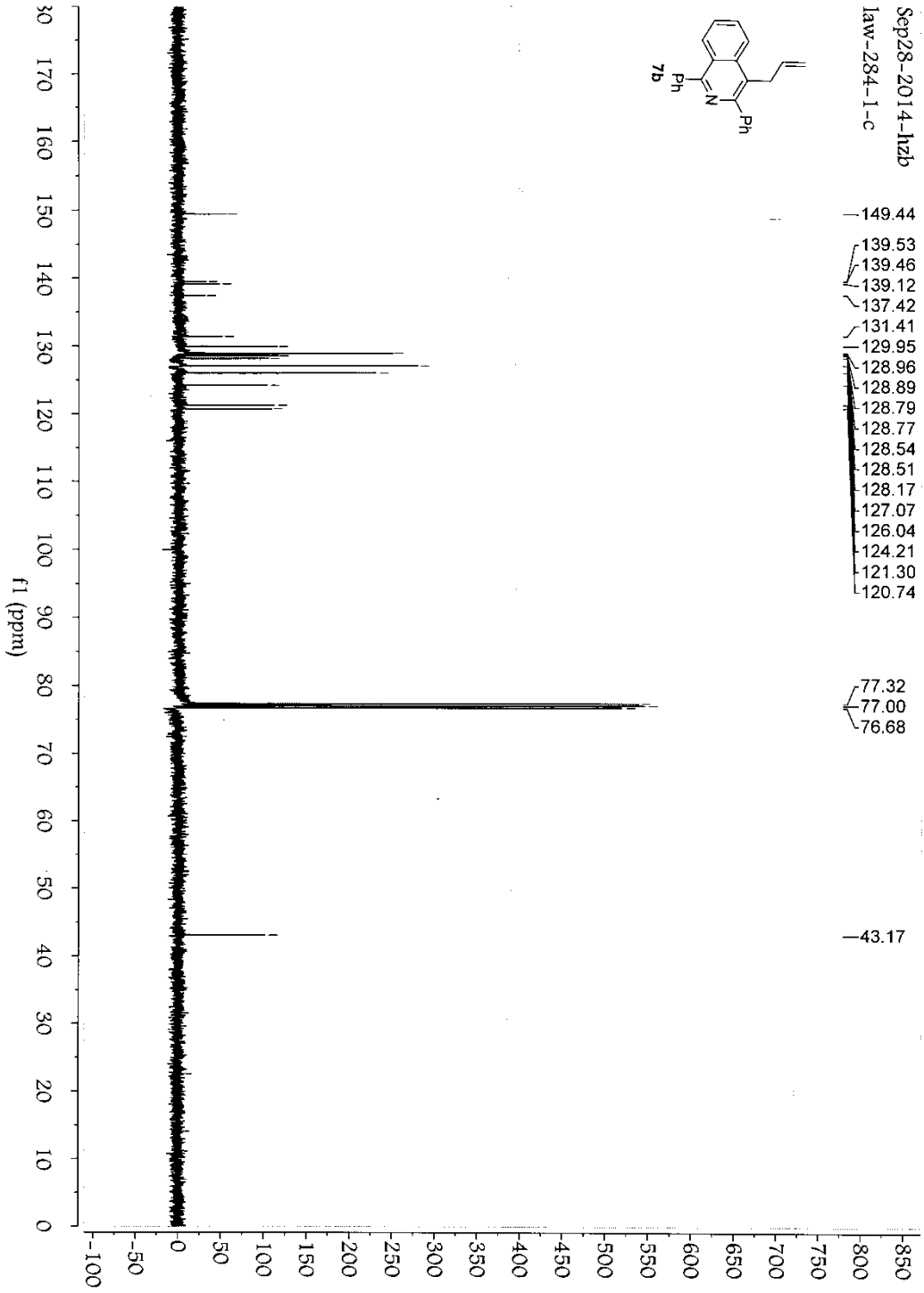
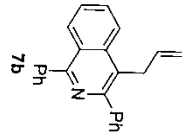
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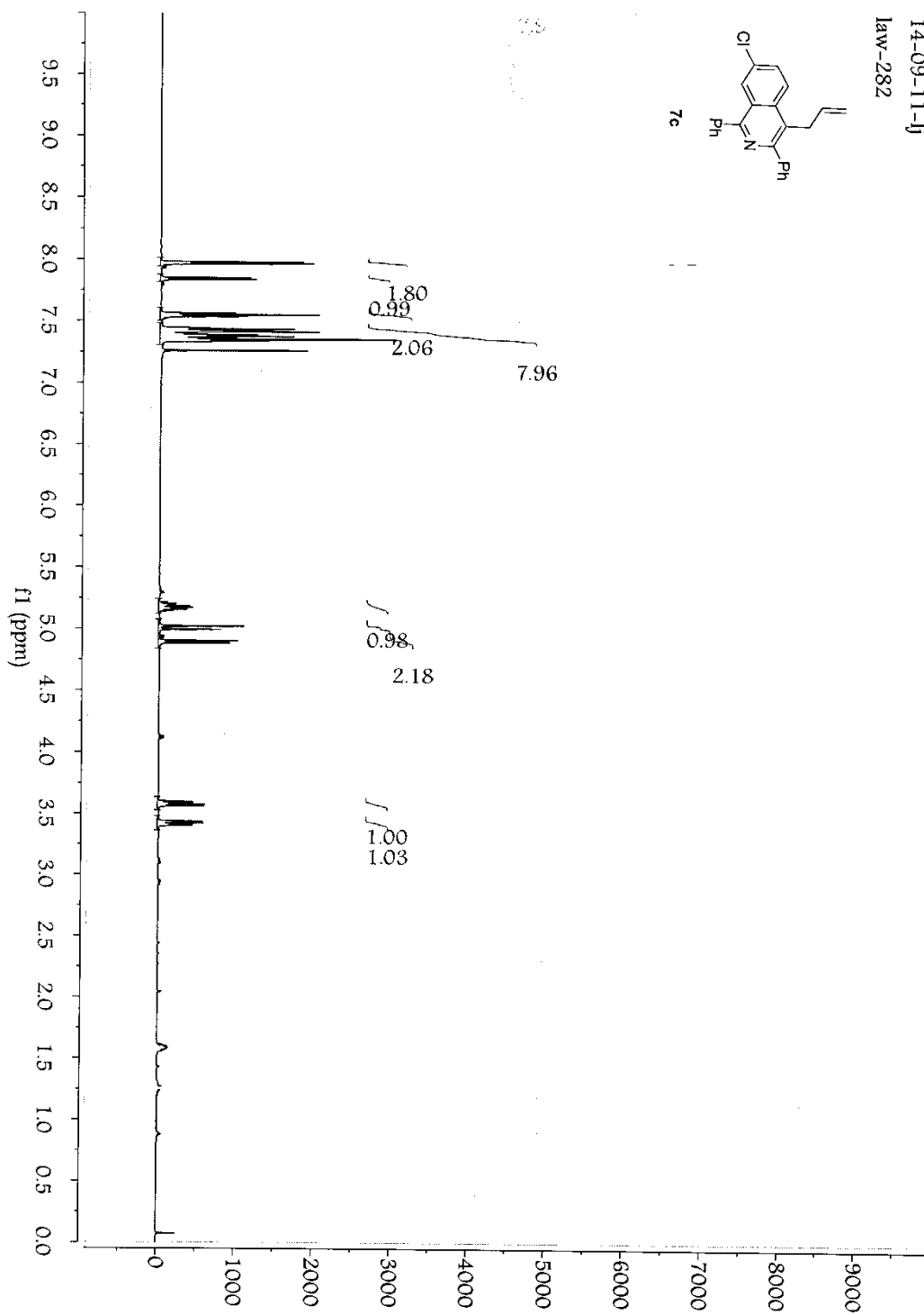
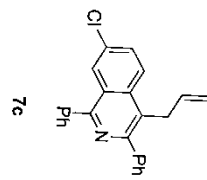
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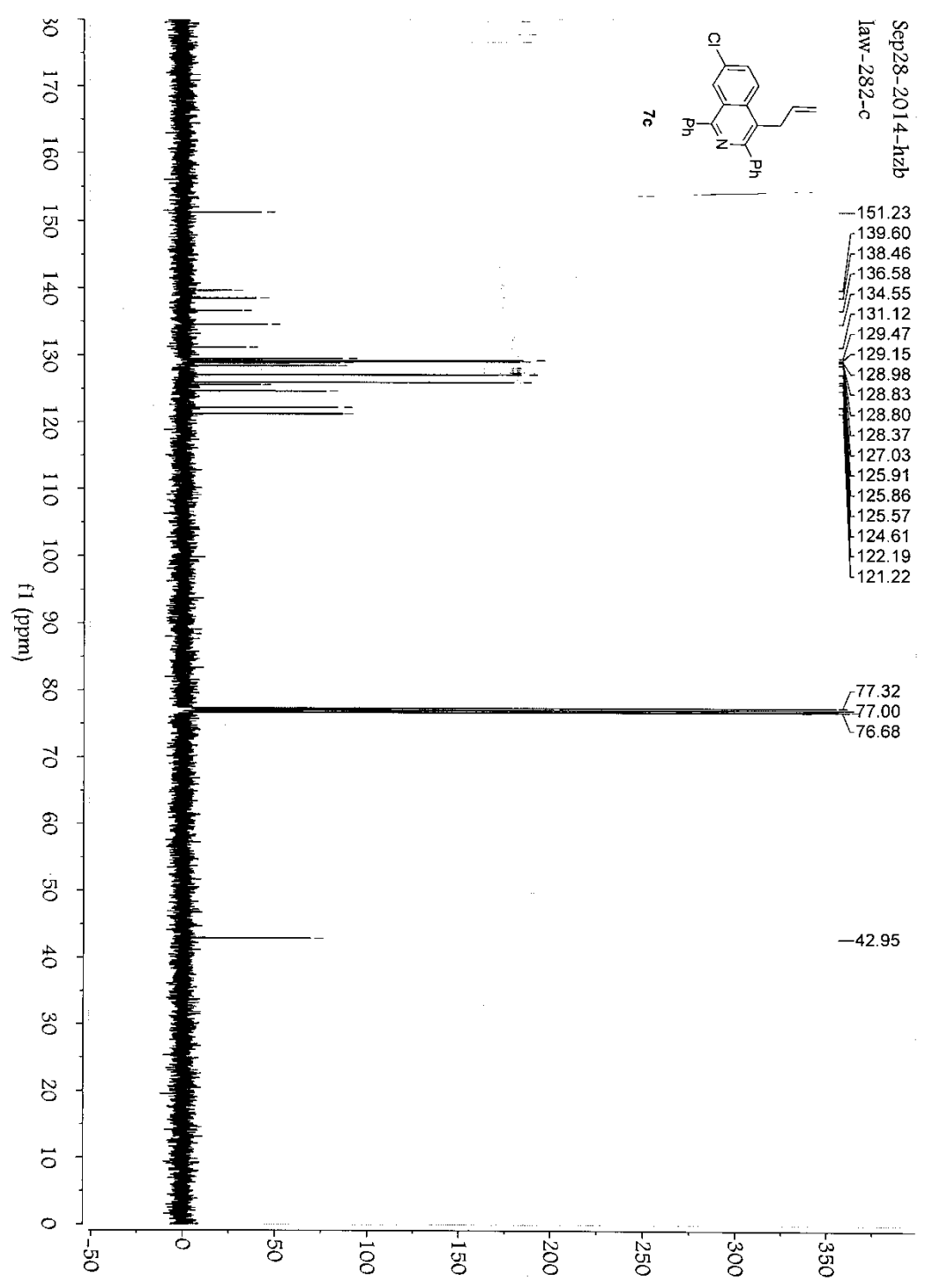
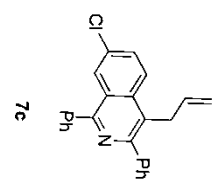
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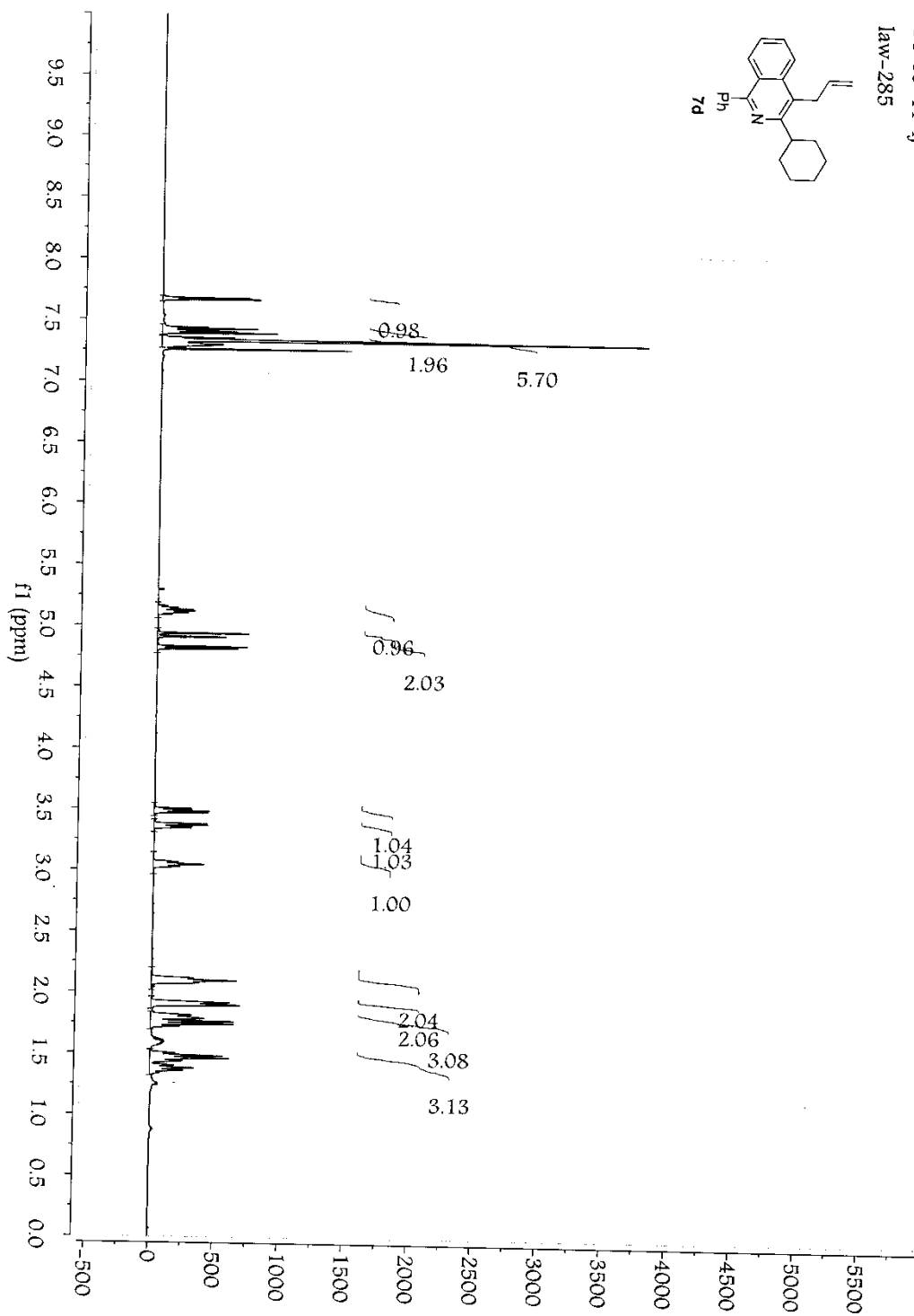
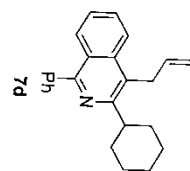
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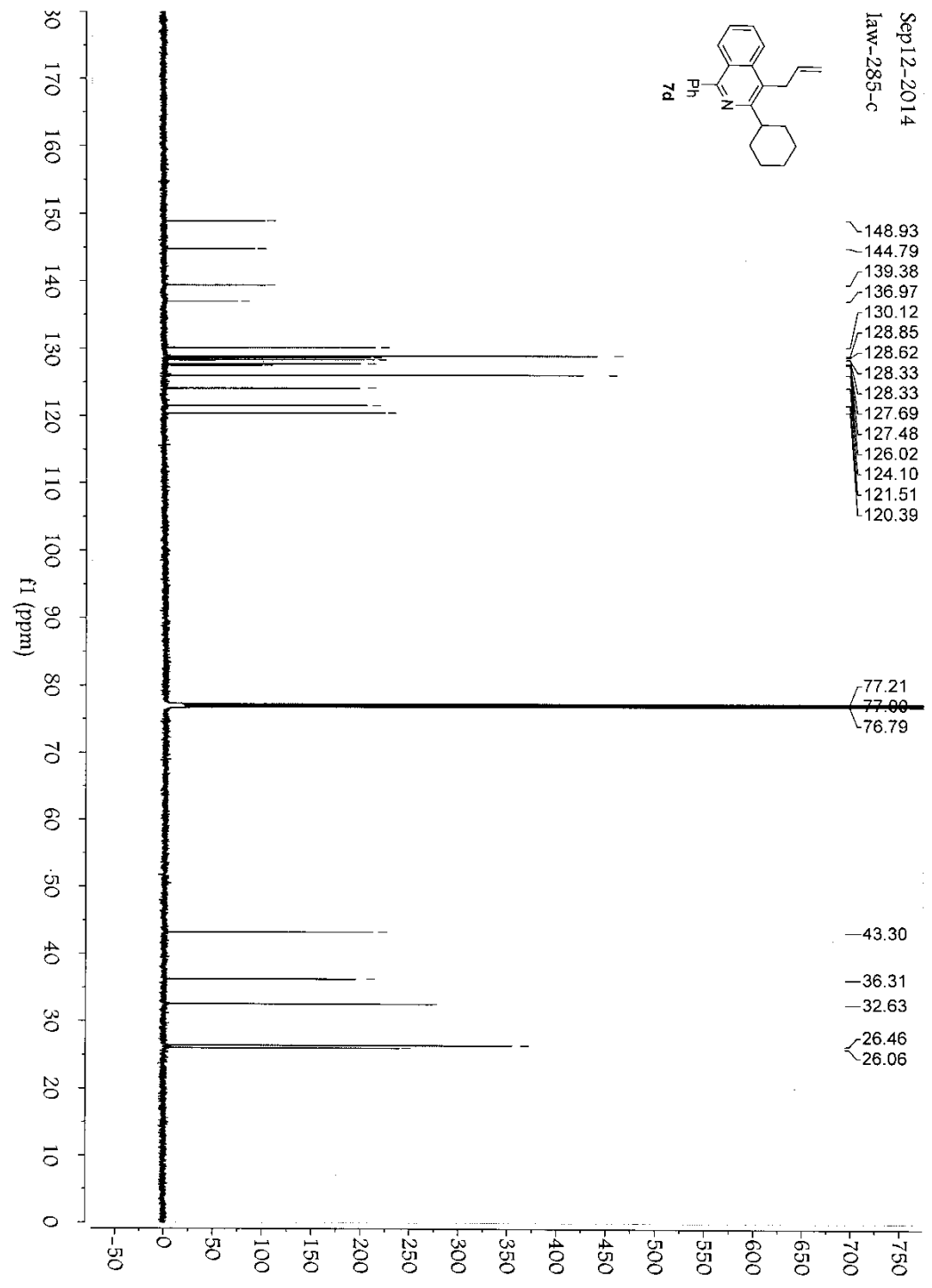
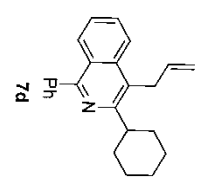
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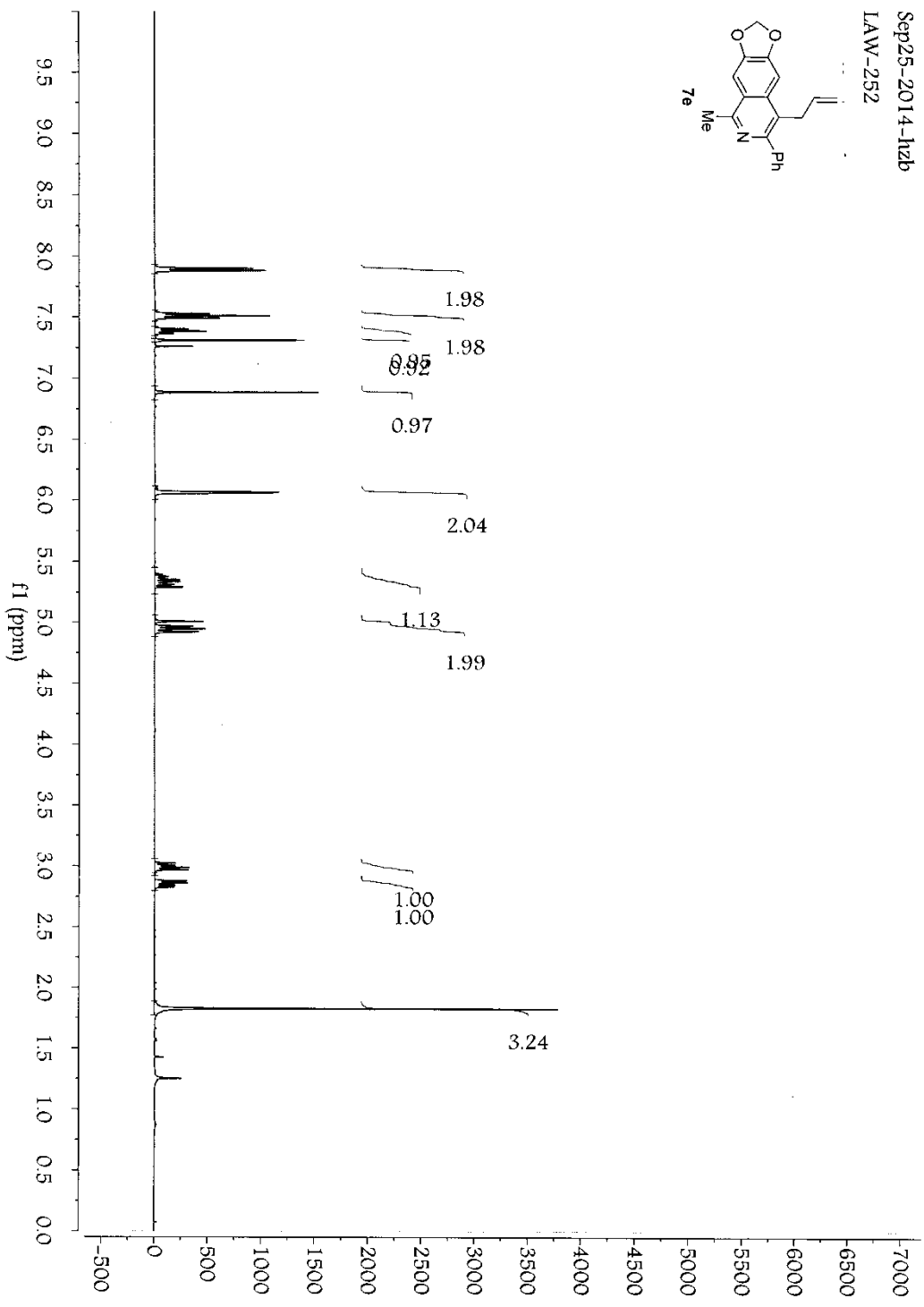
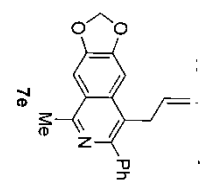
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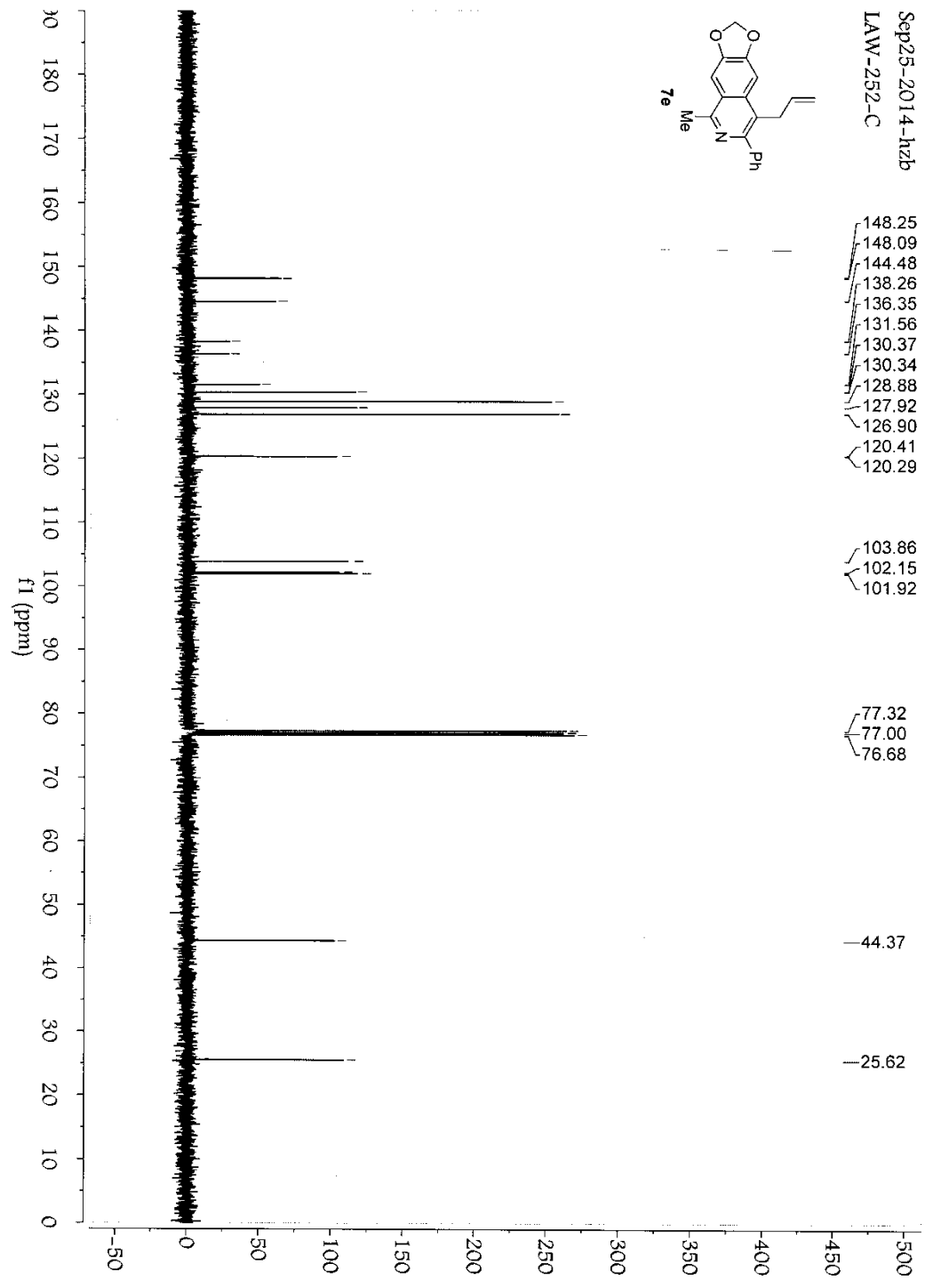
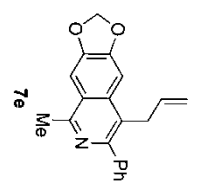
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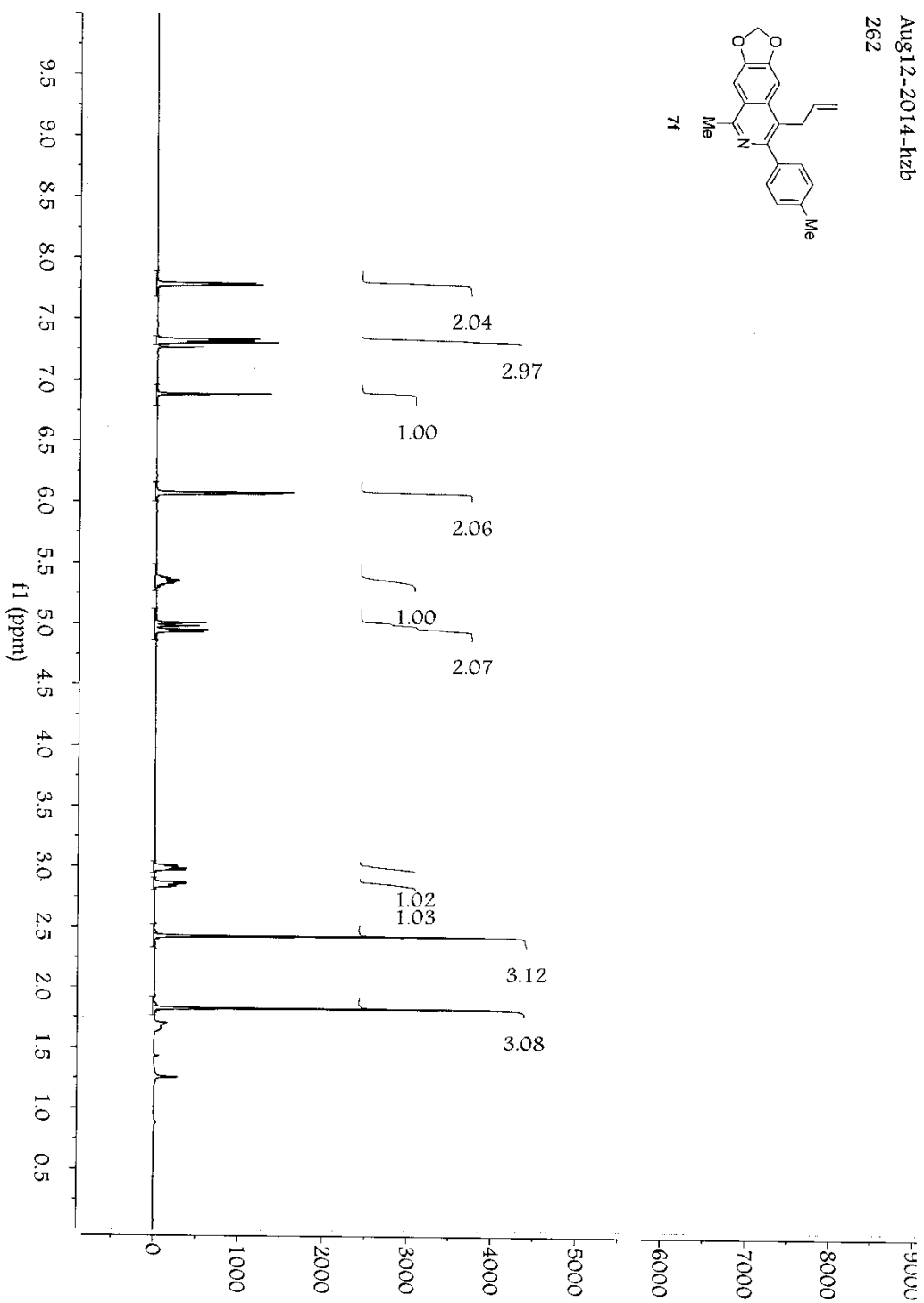
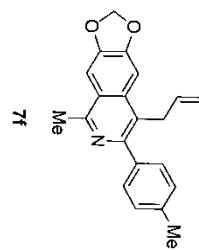
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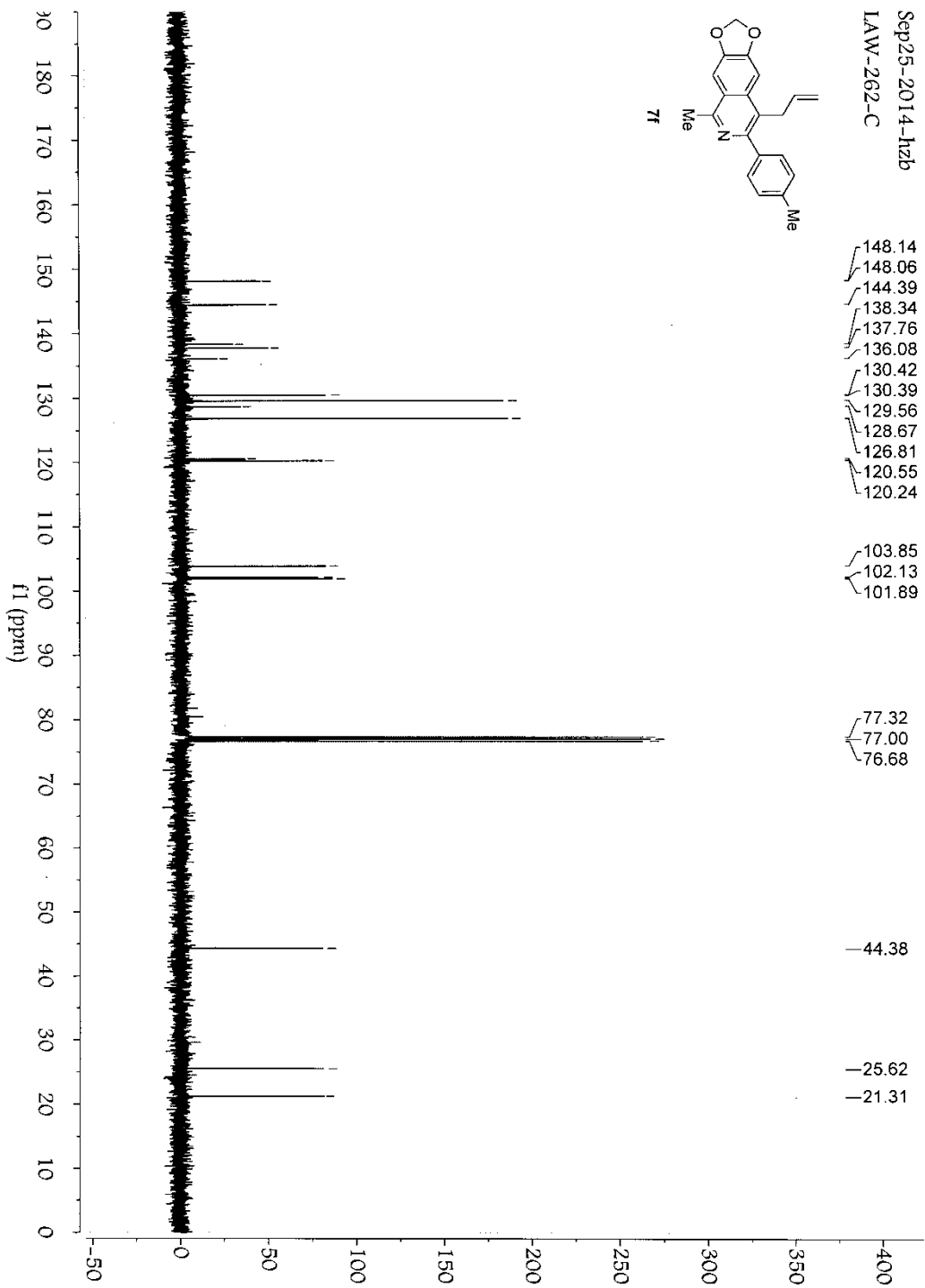
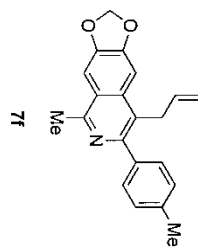
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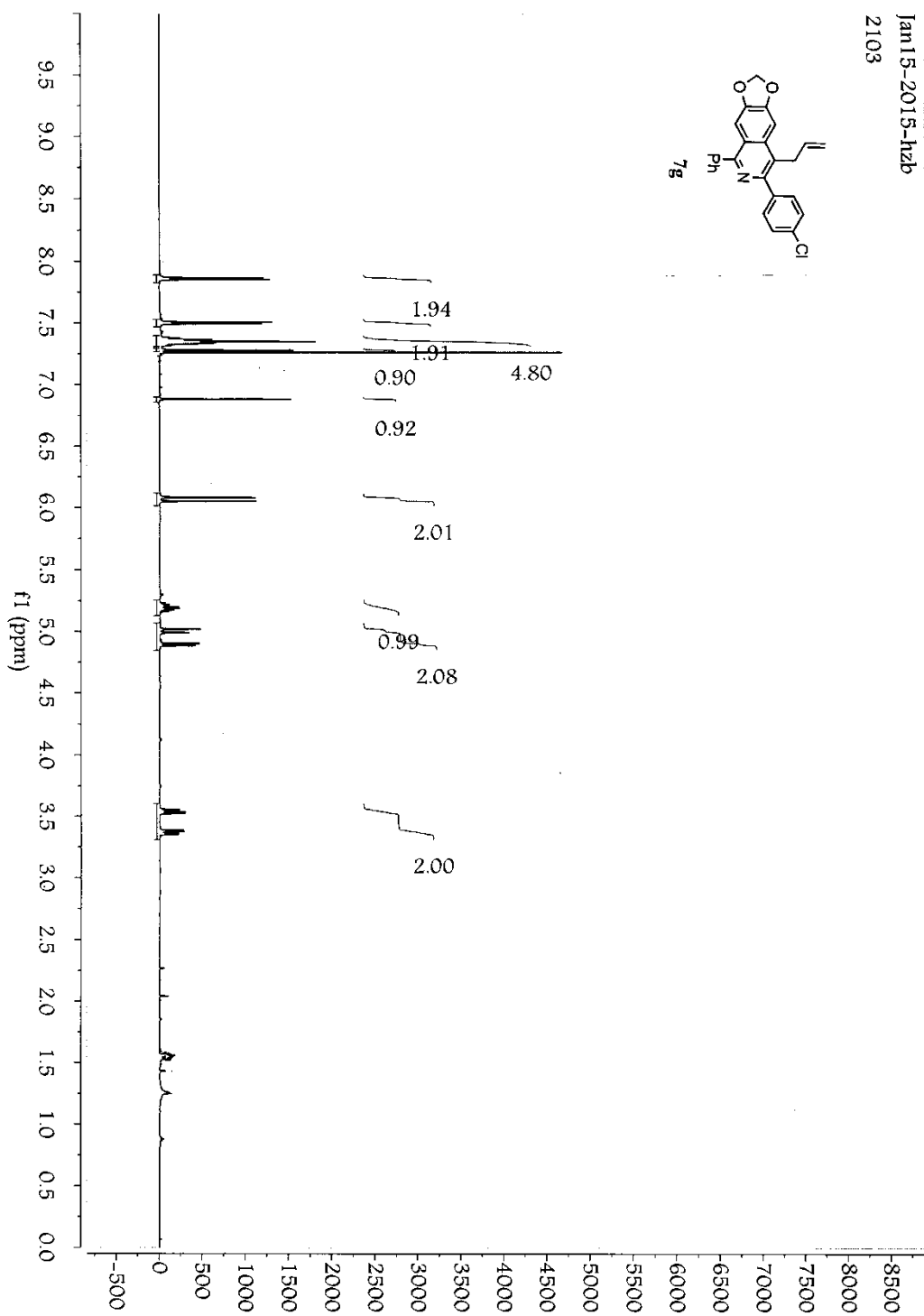
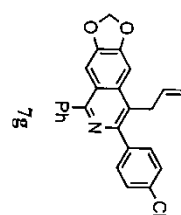
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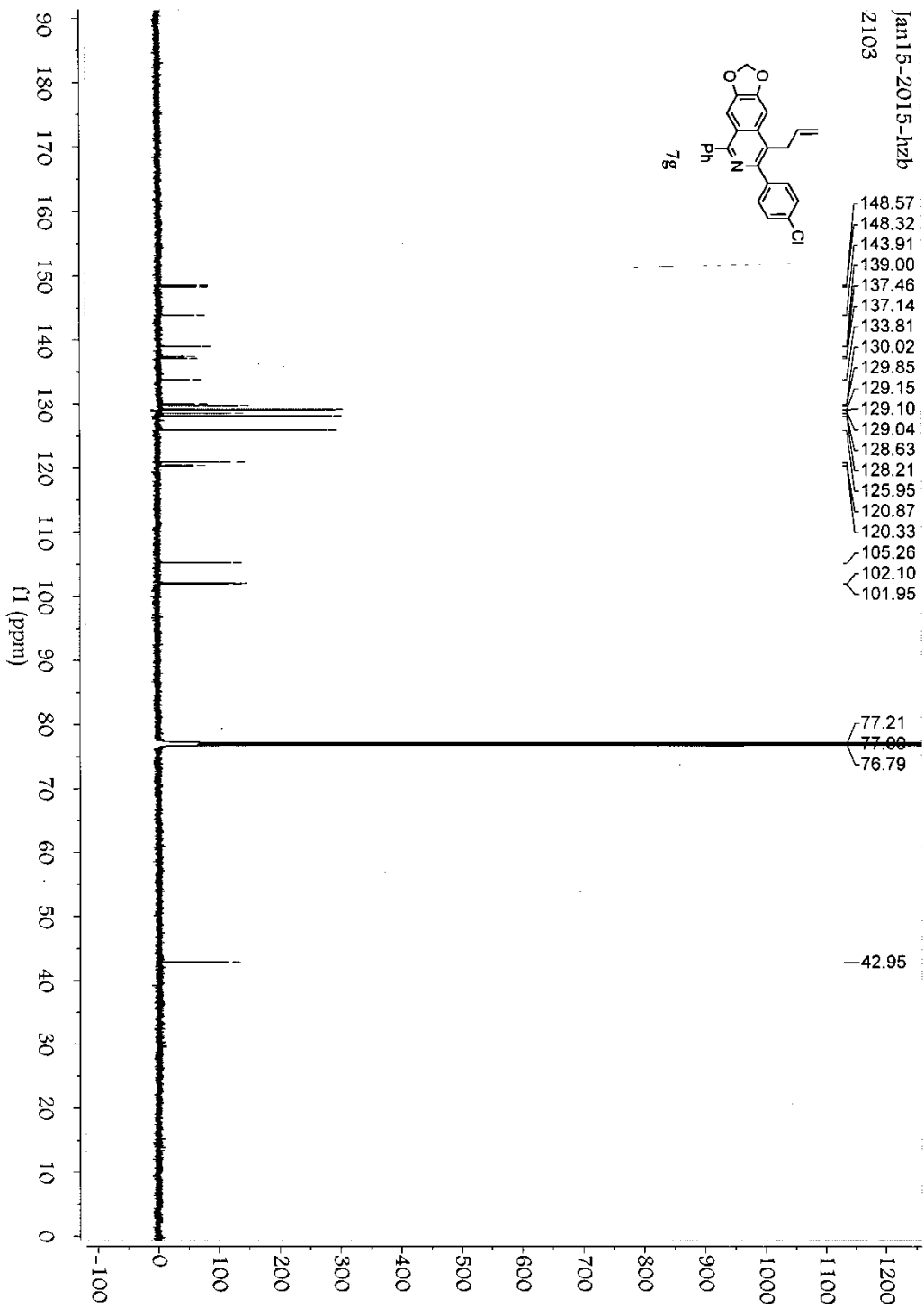
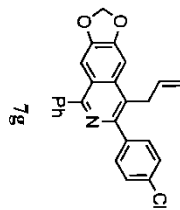
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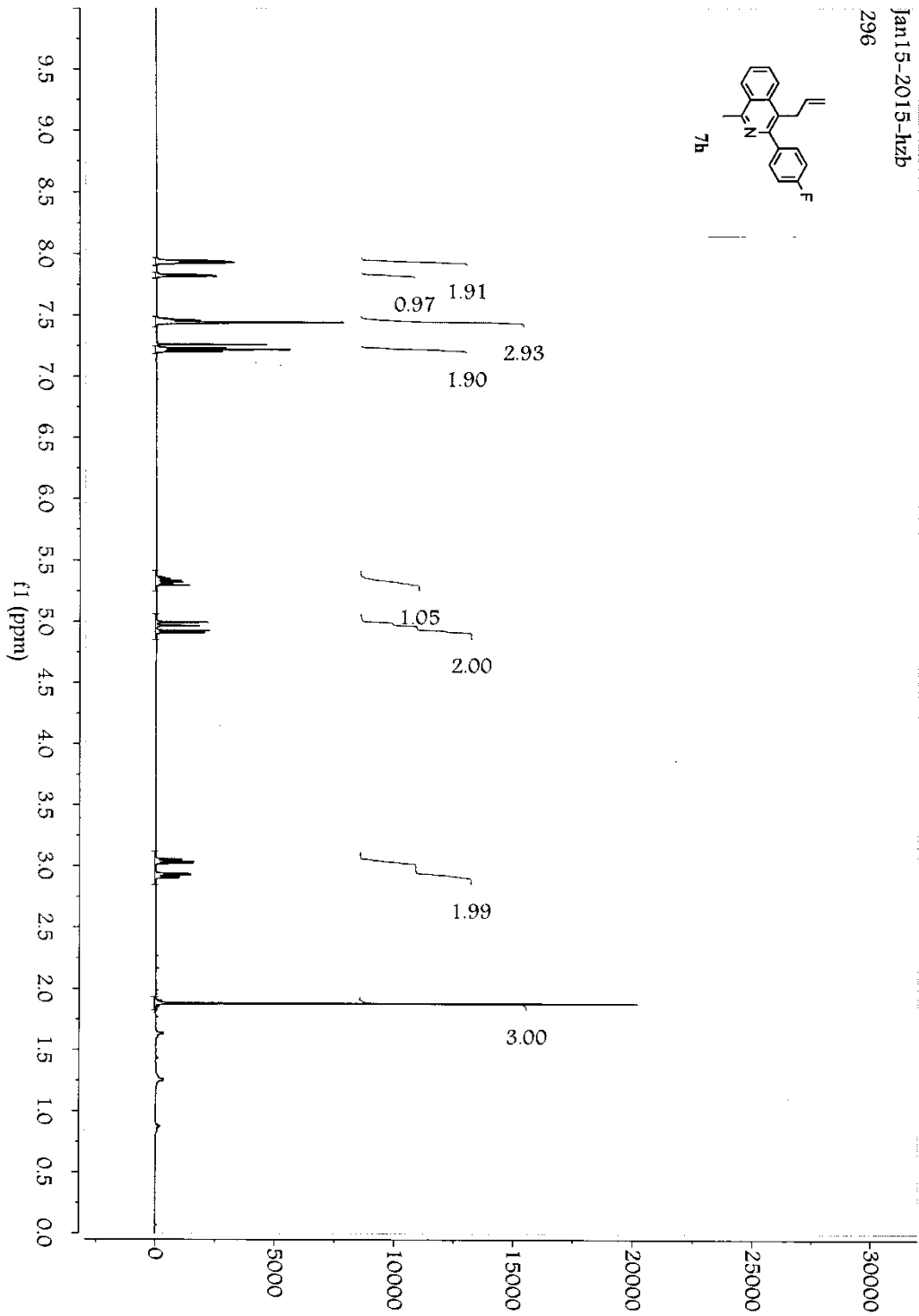
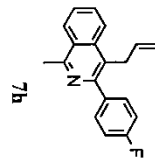
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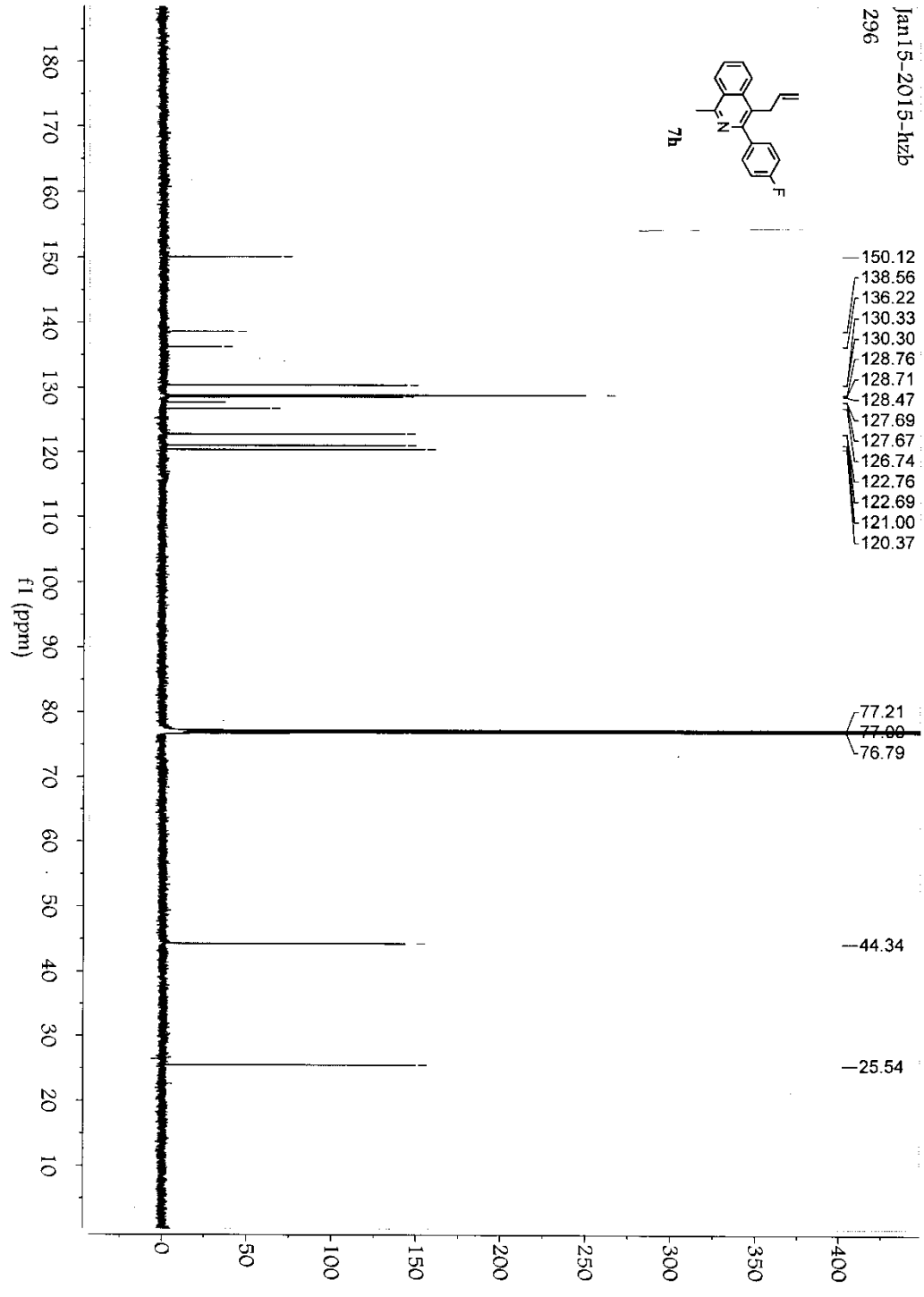
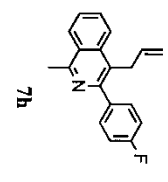
Jan15-2015-hzb
2103



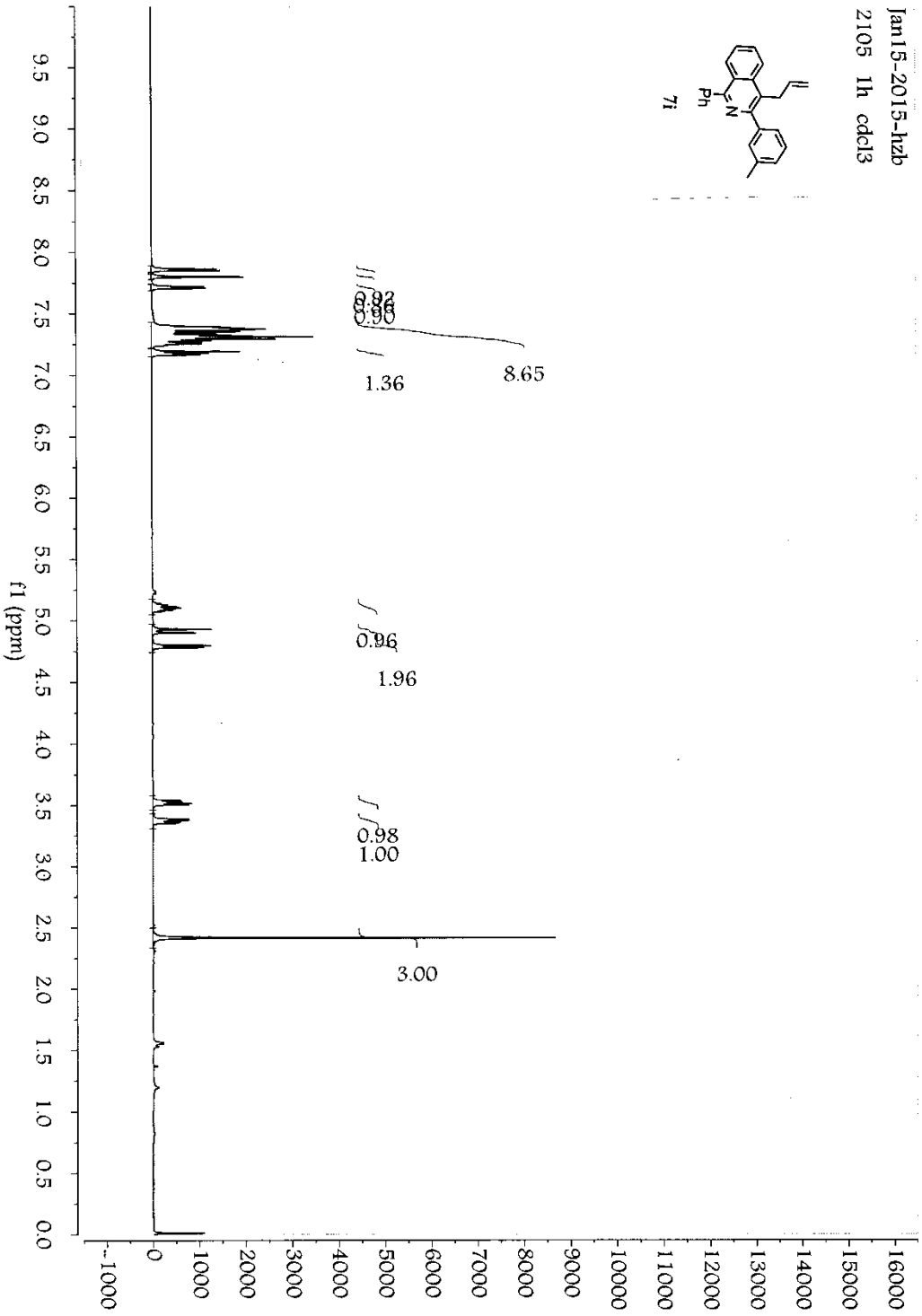
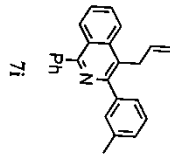
Jan15-2015-hzb
296



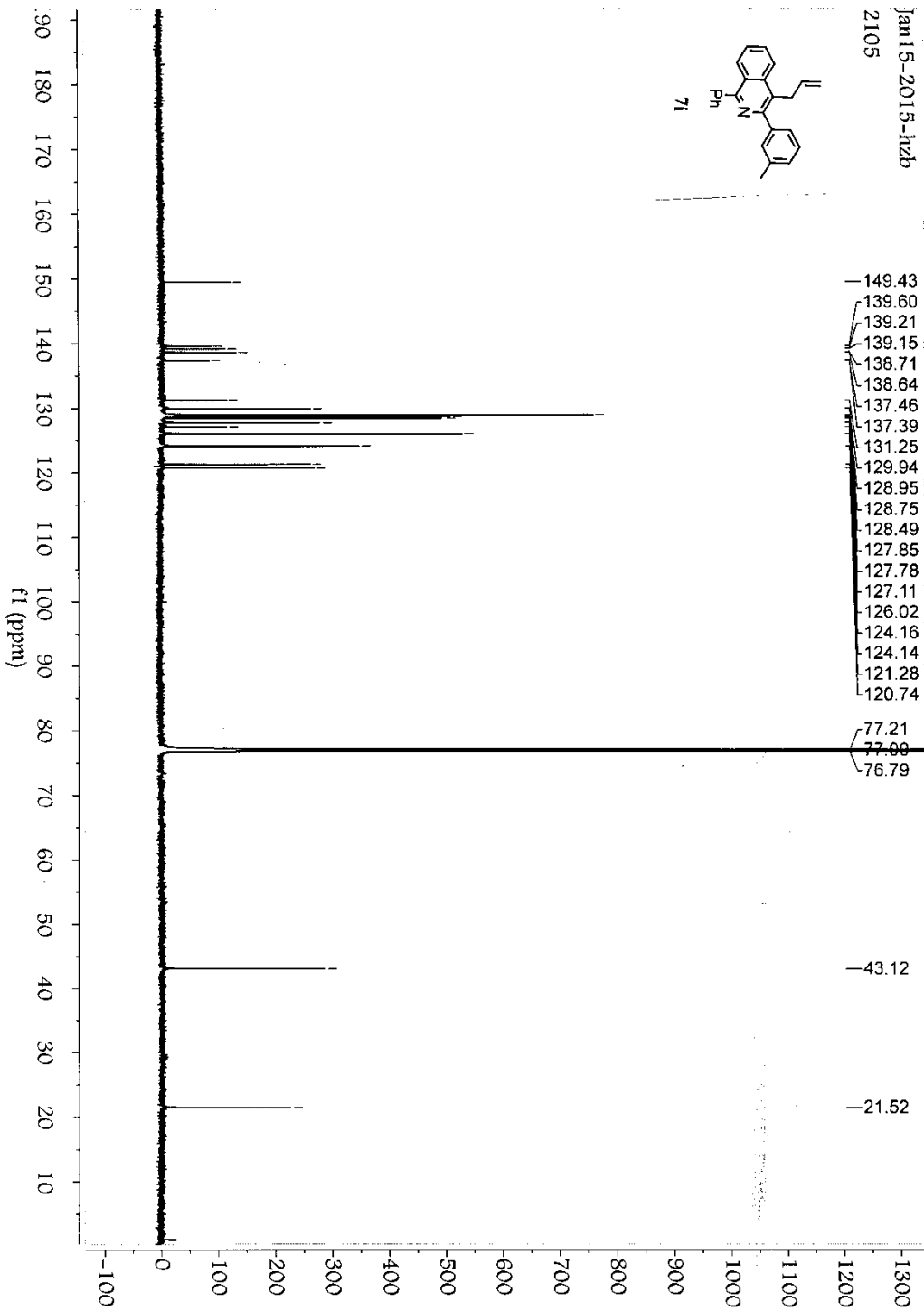
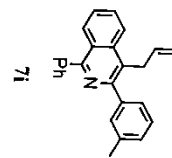
Jan 15-2015-hzlb
296



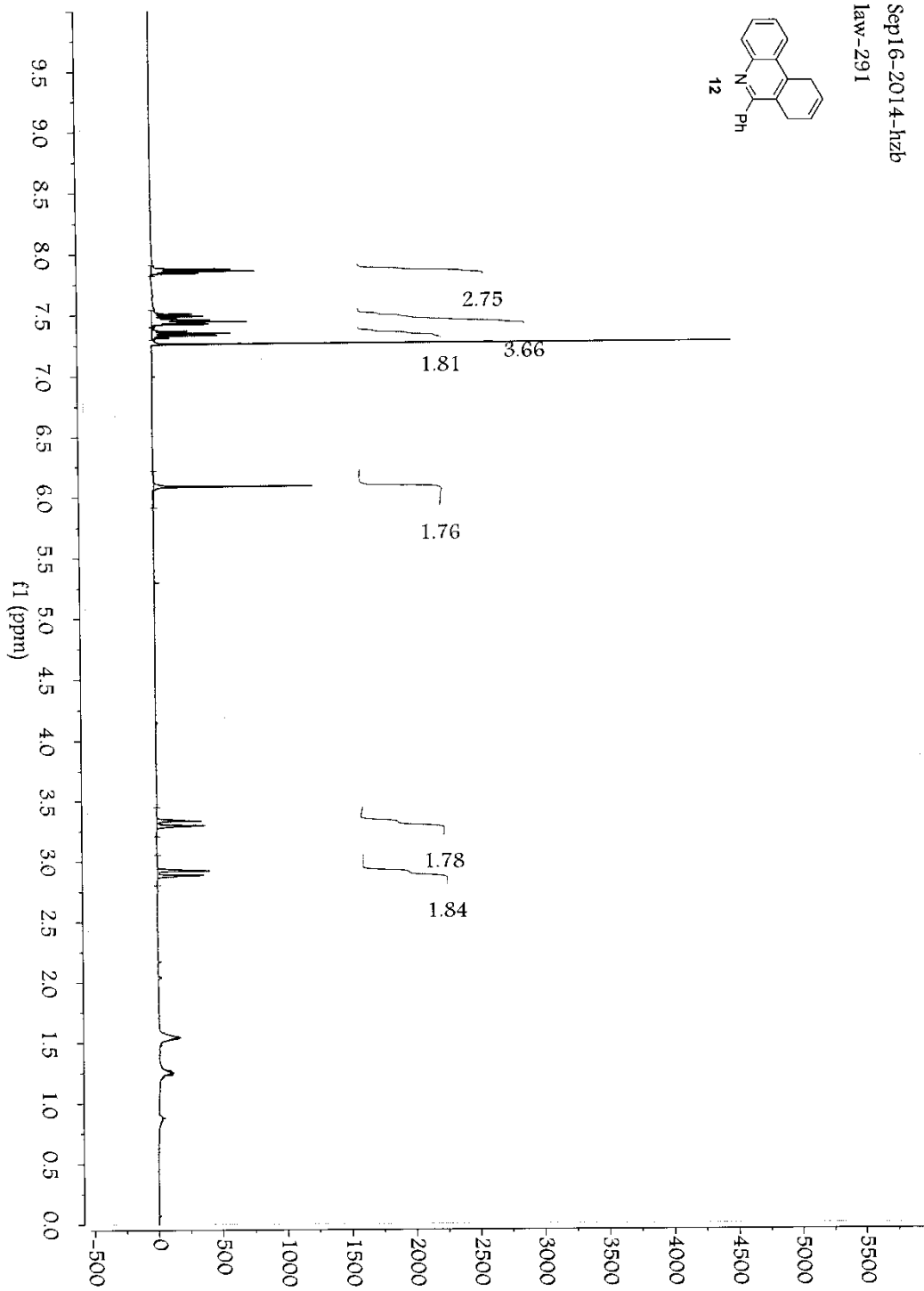
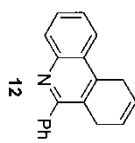
Jan15-2015-hzb
2105 1h cdcl3



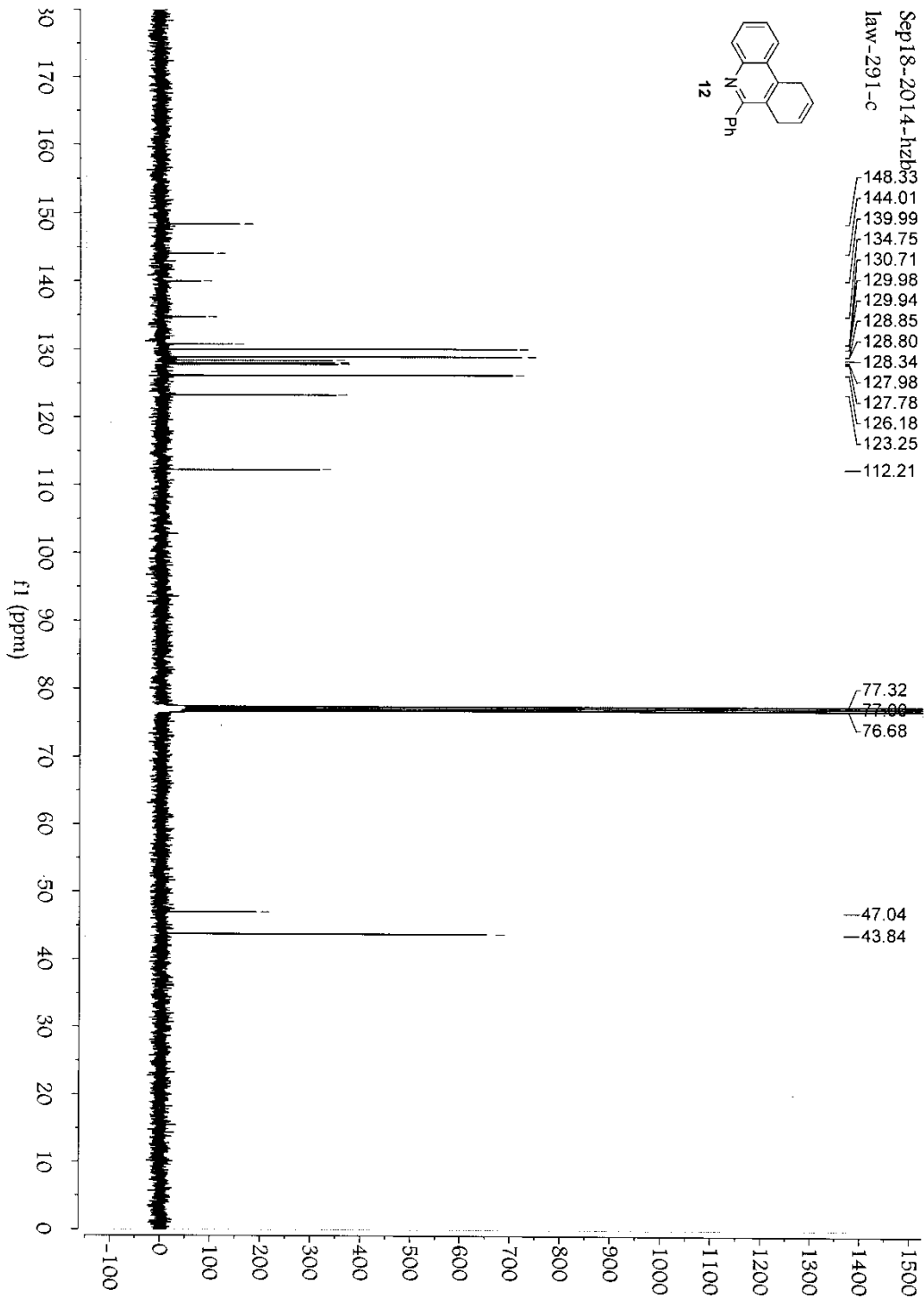
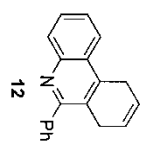
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2105



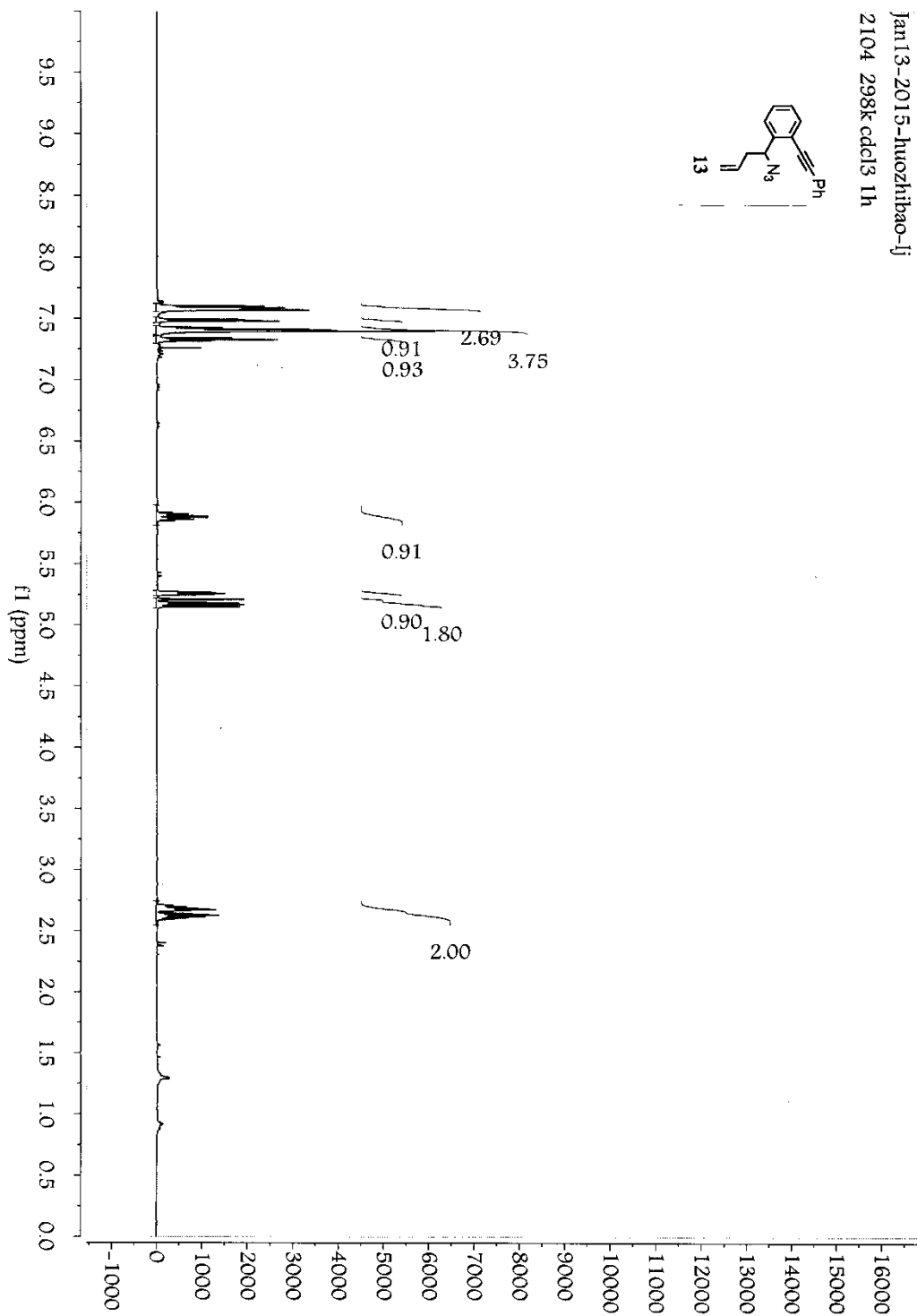
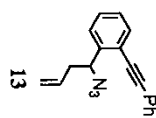
Sep16-2014-hzb
law-291



Sep18-2014-hzlh
law-291-c



Jan13-2015-huozhibao-lj
2104 298k cdcl3 1h



Jan 13-2015-Jhuozhibao-Ij
2104 298K cdcl3 13C

