

SUPPORTING INFORMATION

FOR

General Strategy for the Syntheses of Corynanthe, Tacaman, and Oxindole Alkaloids

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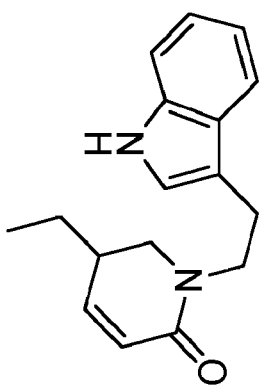
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Experimental Section

General Methods. Unless otherwise noted, solvents and reagents were reagent grade and used without purification. CH₂Cl₂, *i*-Pr₂NH and Et₃N were freshly distilled from CaH₂. THF and Et₂O were passed through two columns of neutral alumina. MeOH, CH₃CN and DMF were passed through two columns of molecular sieves. Toluene was passed through a column of neutral alumina and a column of Q5 reactant. Reactions involving air- or moisture-sensitive reagents or intermediates were performed under an inert atmosphere of argon in glassware that had been flame dried. Melting points are uncorrected. Infrared (IR) spectra were recorded either neat on sodium chloride plates or as solutions in CH₂Cl₂ as indicated and are reported in wavenumbers (cm⁻¹). ¹H and ¹³C NMR spectra were obtained as solutions in CDCl₃ or C₆D₆ and chemical shifts are reported in parts per million (ppm) downfield

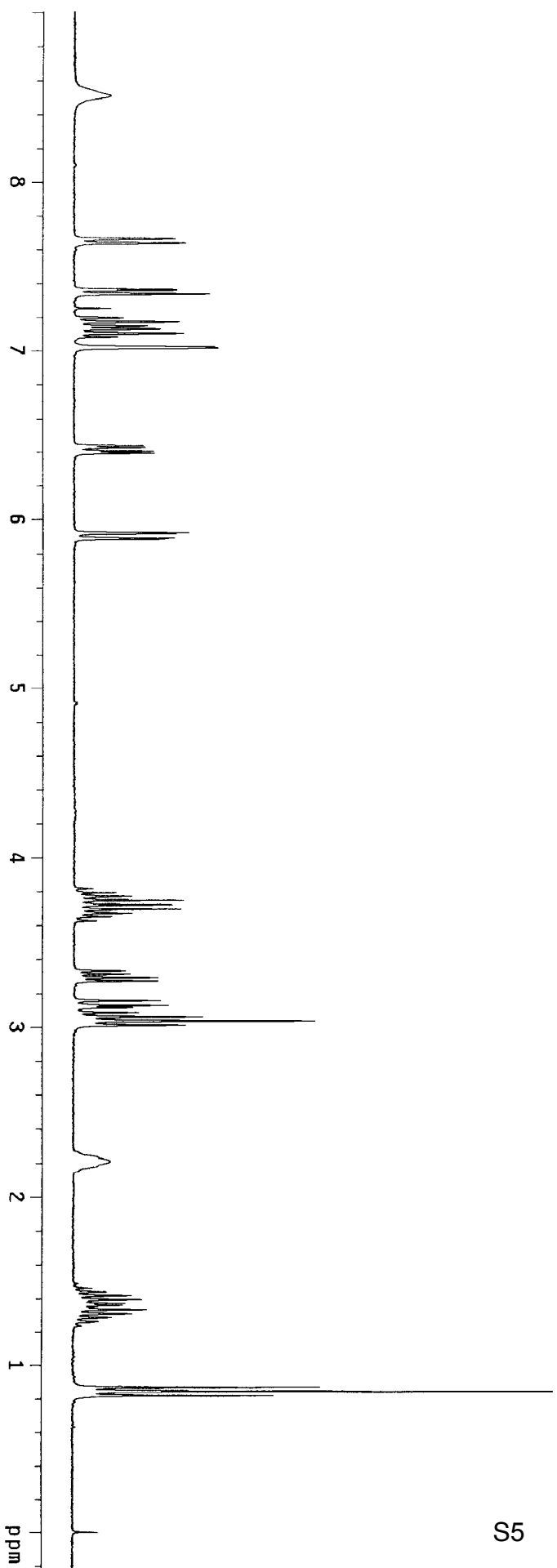
from (CH₃)₄Si (TMS). Coupling constants are reported in hertz (Hz). Spectral splitting patterns are designated as follows: s, singlet; br, broad; d, doublet; t, triplet; q, quartet; quin, quintet; m, multiplet and comp, complex multiplet. Flash column-chromatography was performed using Merck silica gel 60 (230-400 mesh ASTM) according to Still.¹ When specified in the experimental procedures, solvents were degassed immediately prior to use for reactions that were particularly oxygen sensitive. CH₂Cl₂ used in metathesis reactions was degassed by passing argon through the solvent for 20 min. THF, toluene and MeOH were degassed using the “freeze-pump-thaw” method: A flame-dried two-neck flask equipped with argon and vacuum inlet was charged with the appropriate solvent. The flask was cooled with liquid nitrogen and evacuated. After the solvent had solidified, the liquid nitrogen bath was removed, and while still under vacuum, the flask was gently warmed with a heat gun to melt the solvent. When all the solvent had melted, the flask was again immersed in liquid nitrogen and the process was repeated two more times. After the solvent had melted the third time the vacuum inlet was closed off and the flask was backfilled with argon. Under a stream of argon the vacuum adapter was replaced with a septum and the solvent was immediately used in the reaction.

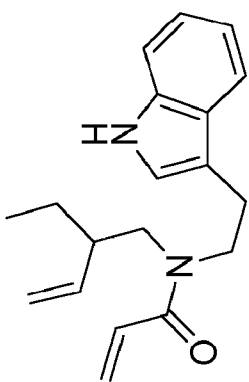
1. Still, W. C.; Kahn, M.; Mitra, A. *J. Org. Chem.* **1978**, *43*, 2923.



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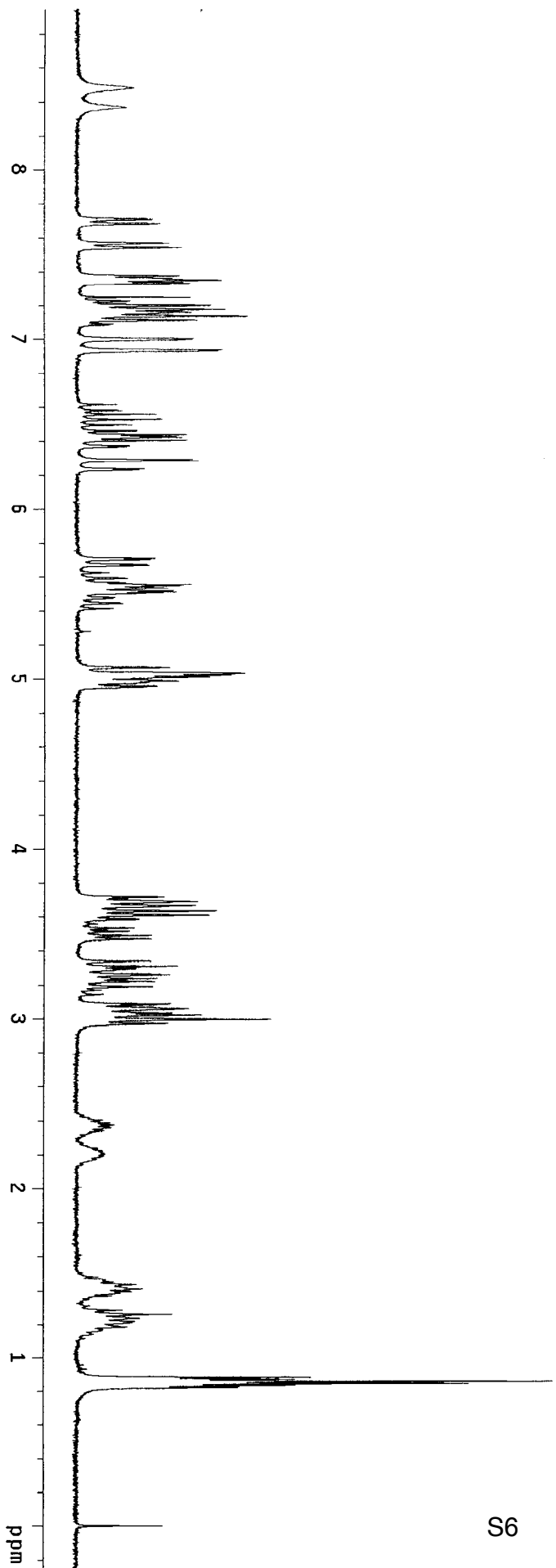
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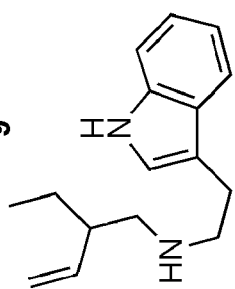




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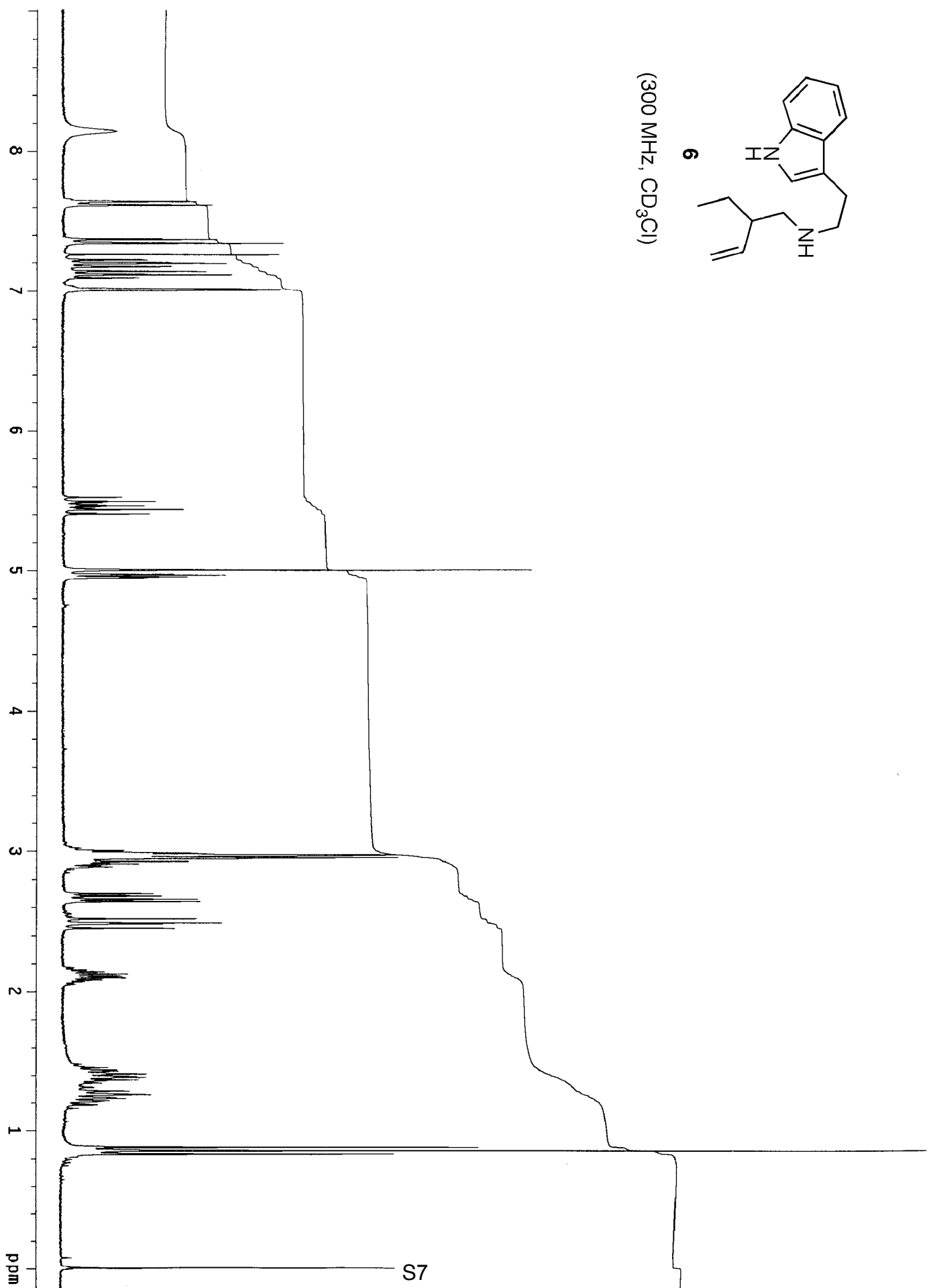
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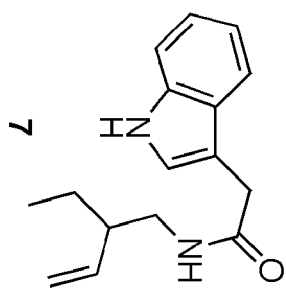




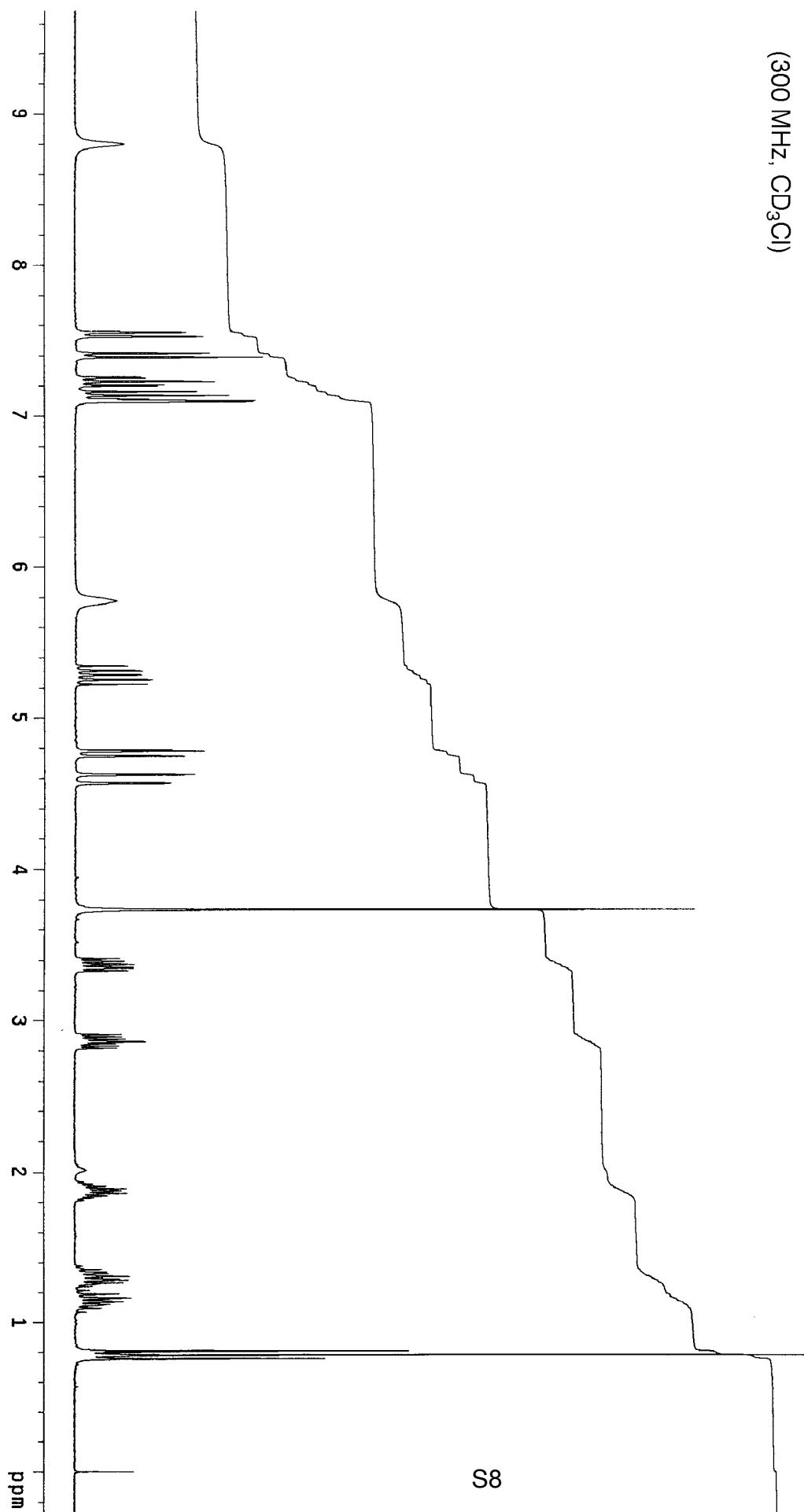
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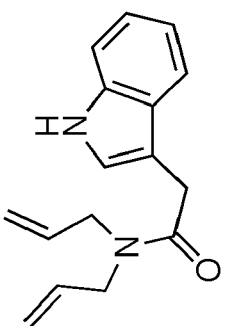
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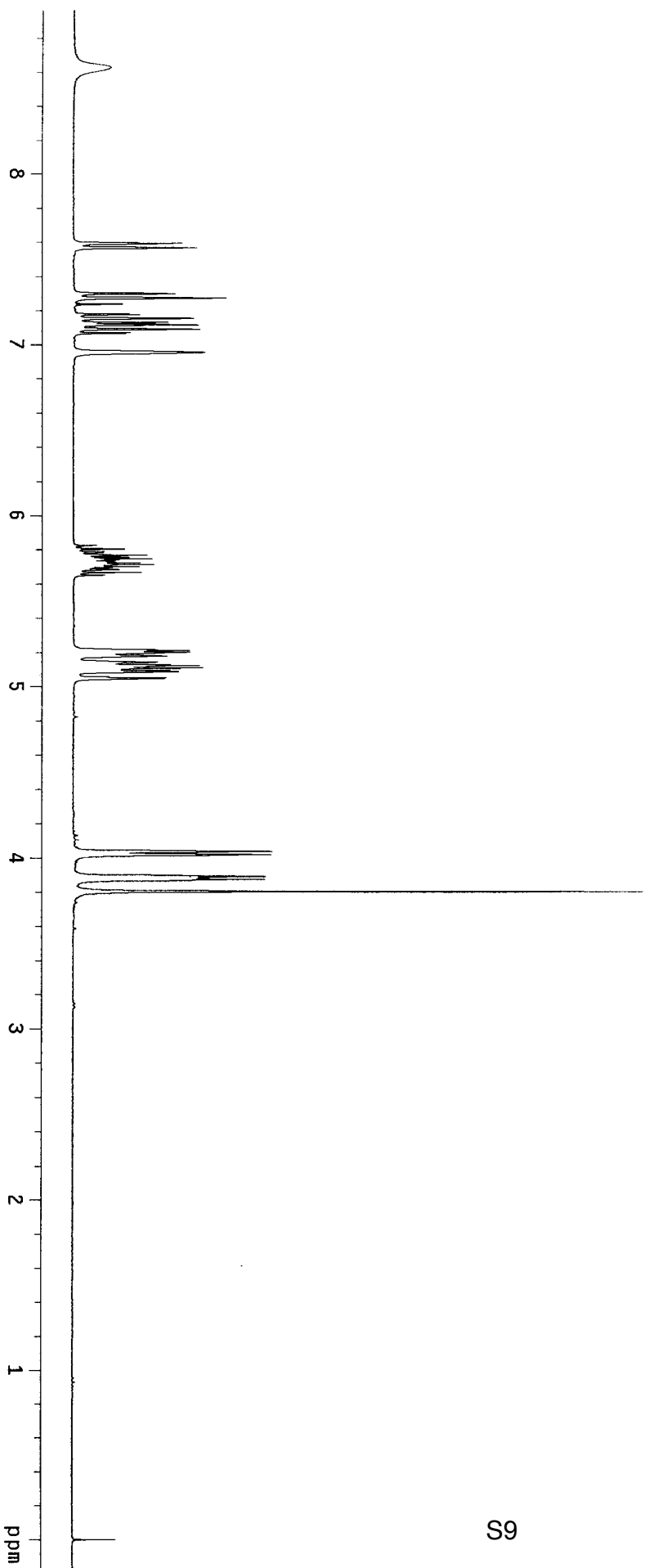
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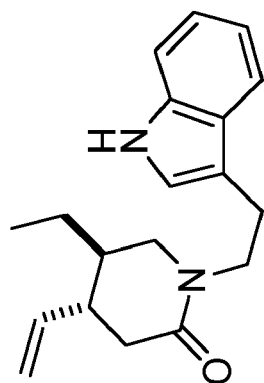




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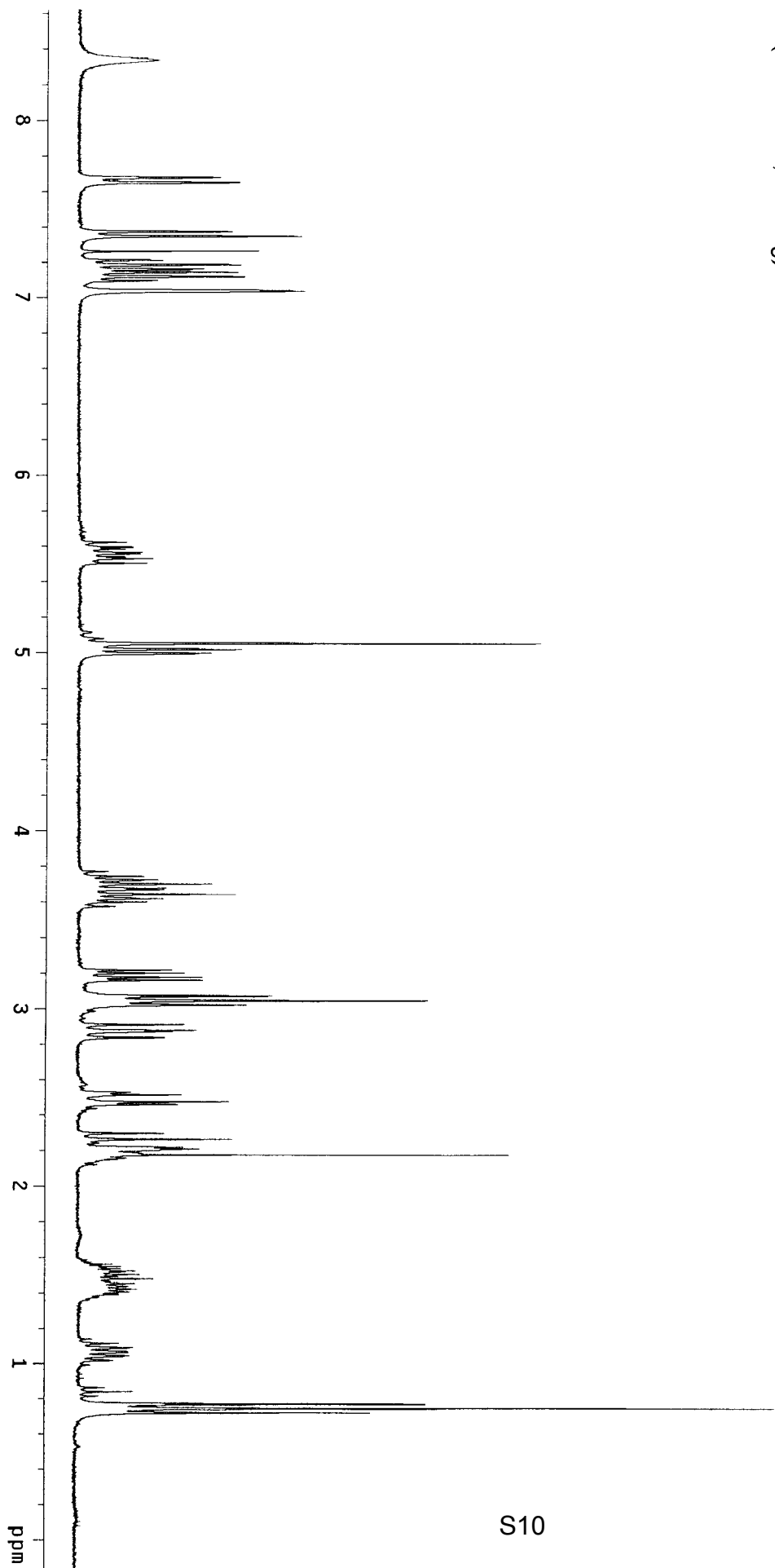
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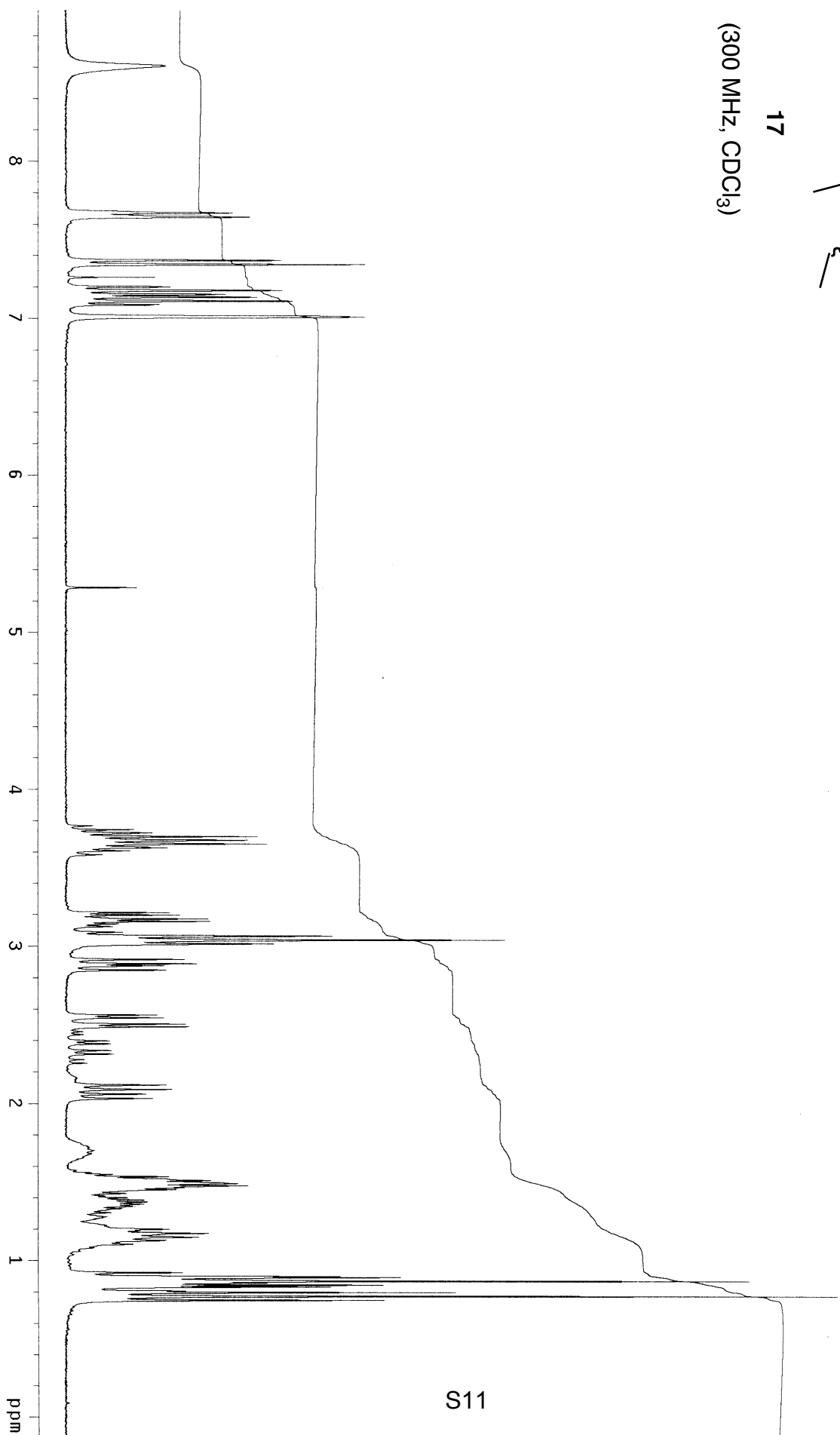


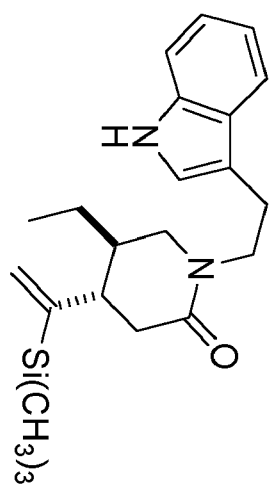


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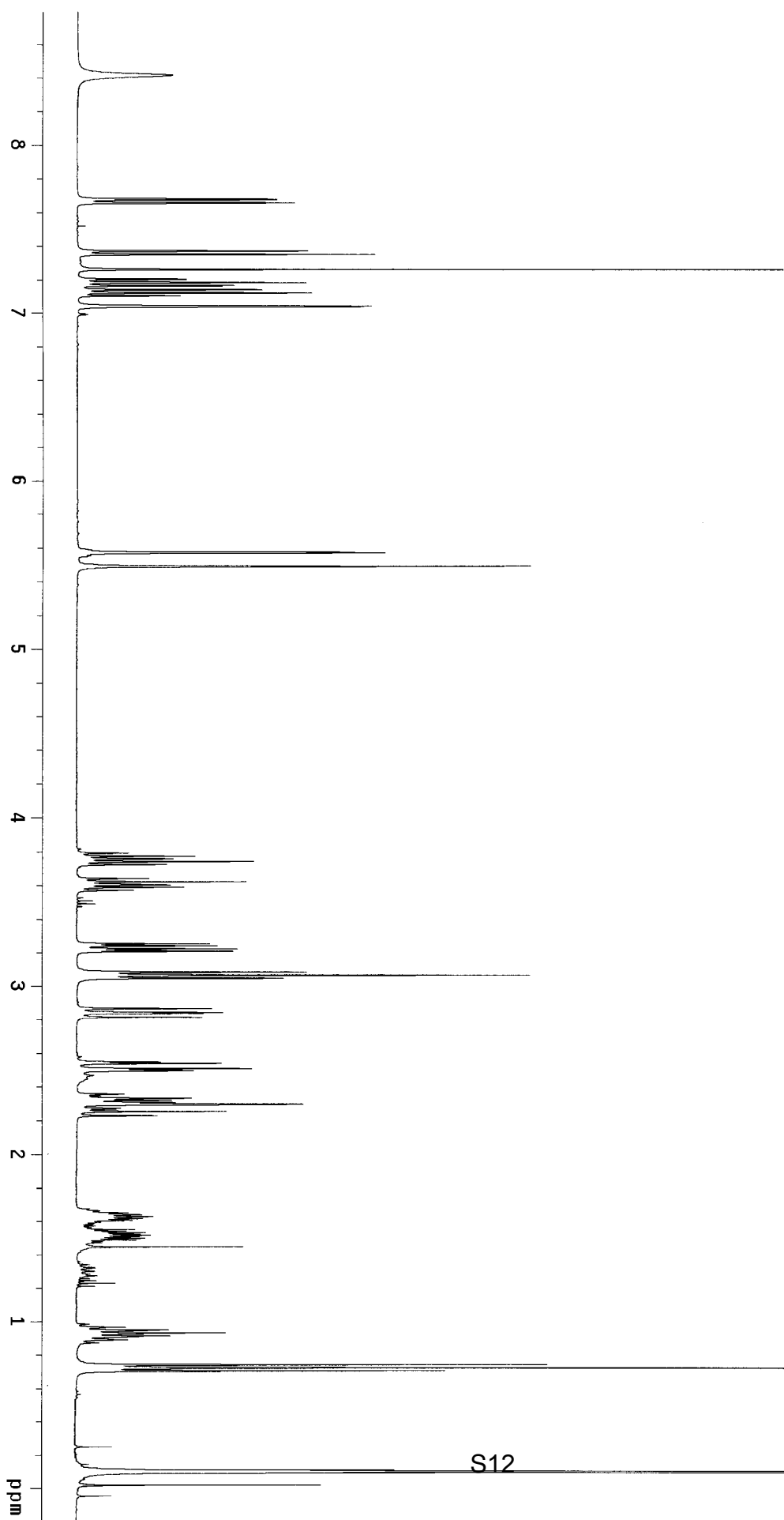


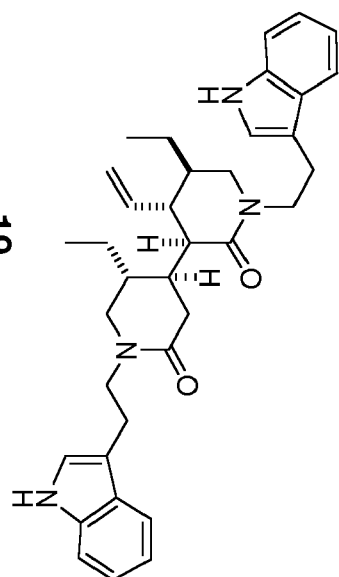
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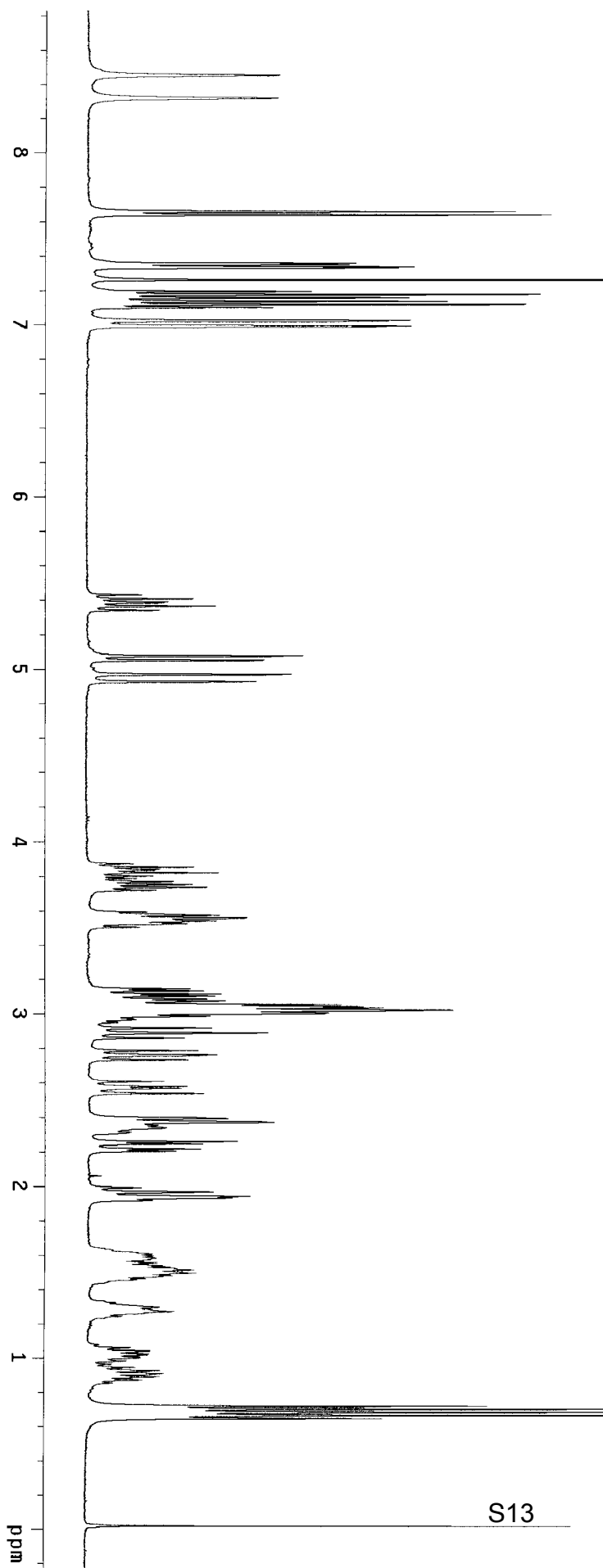
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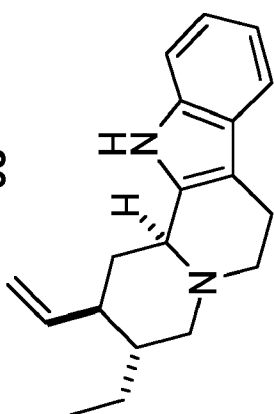




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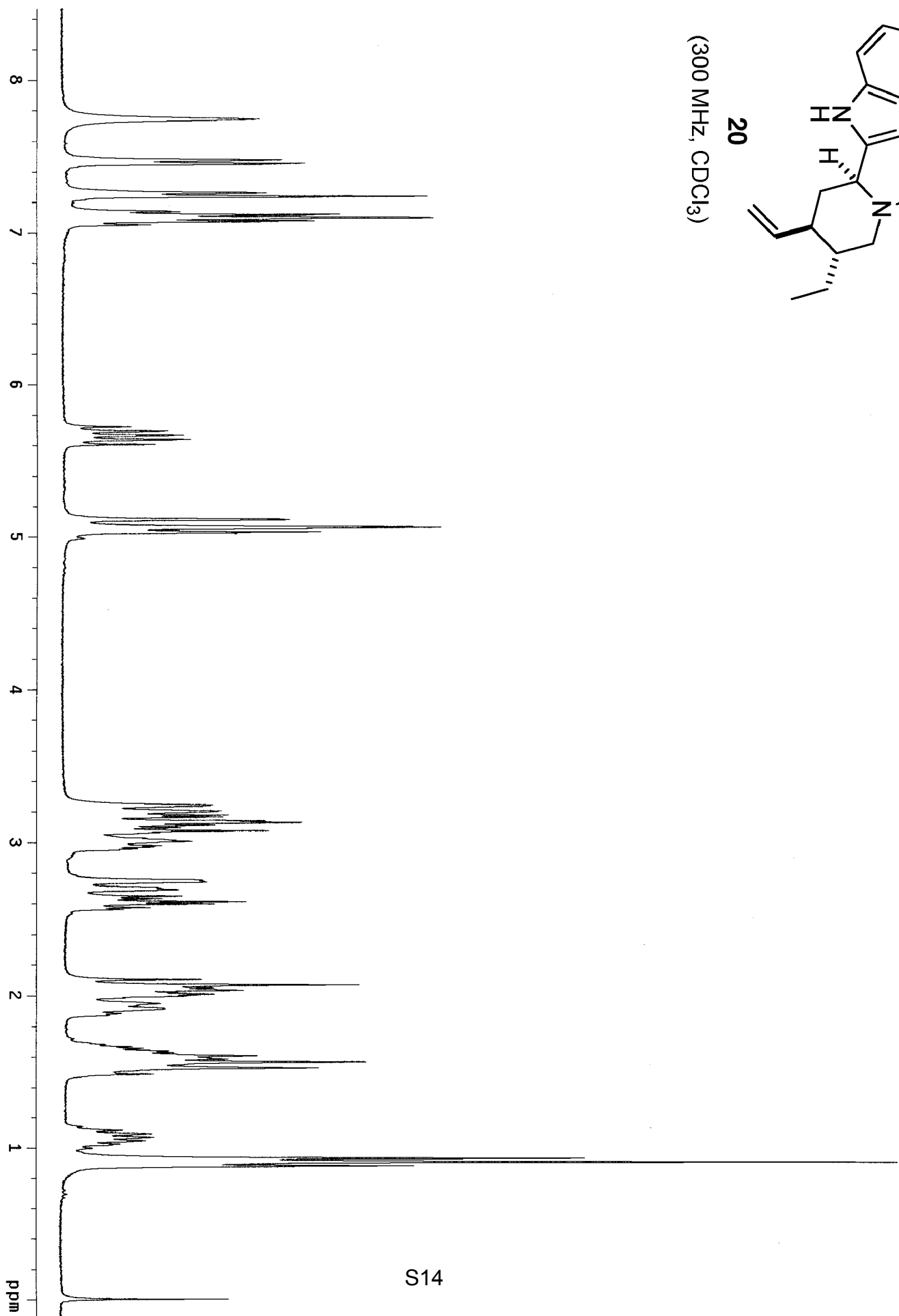
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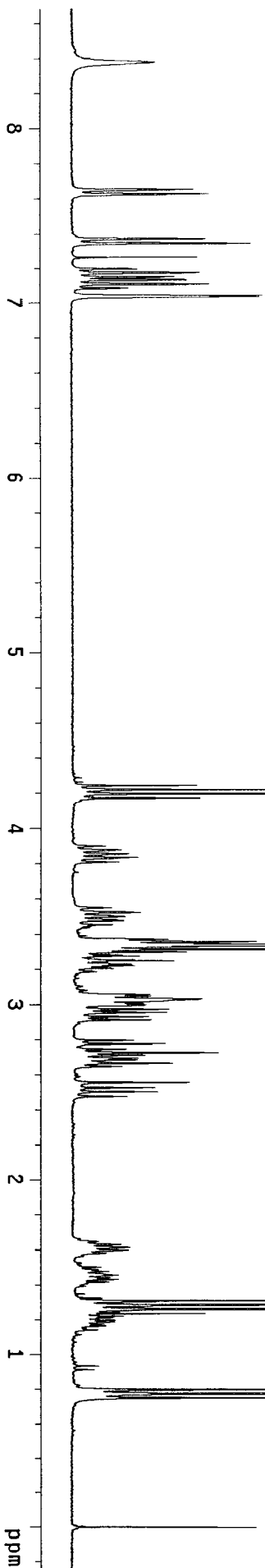
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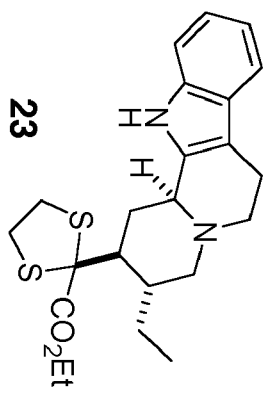
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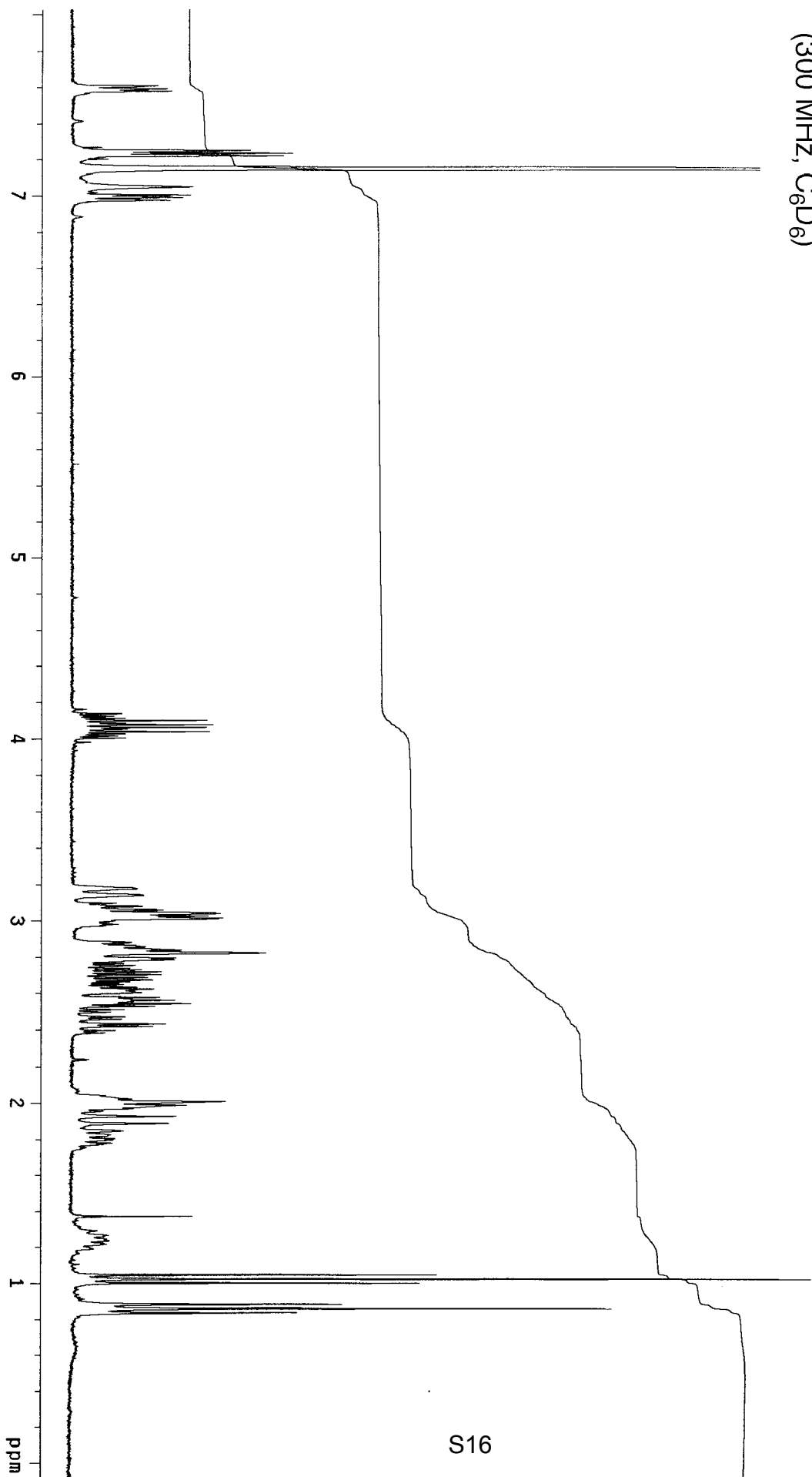


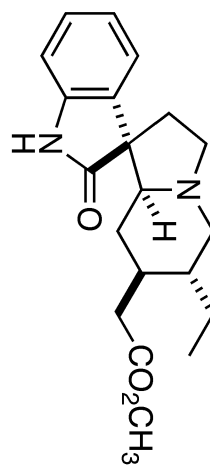
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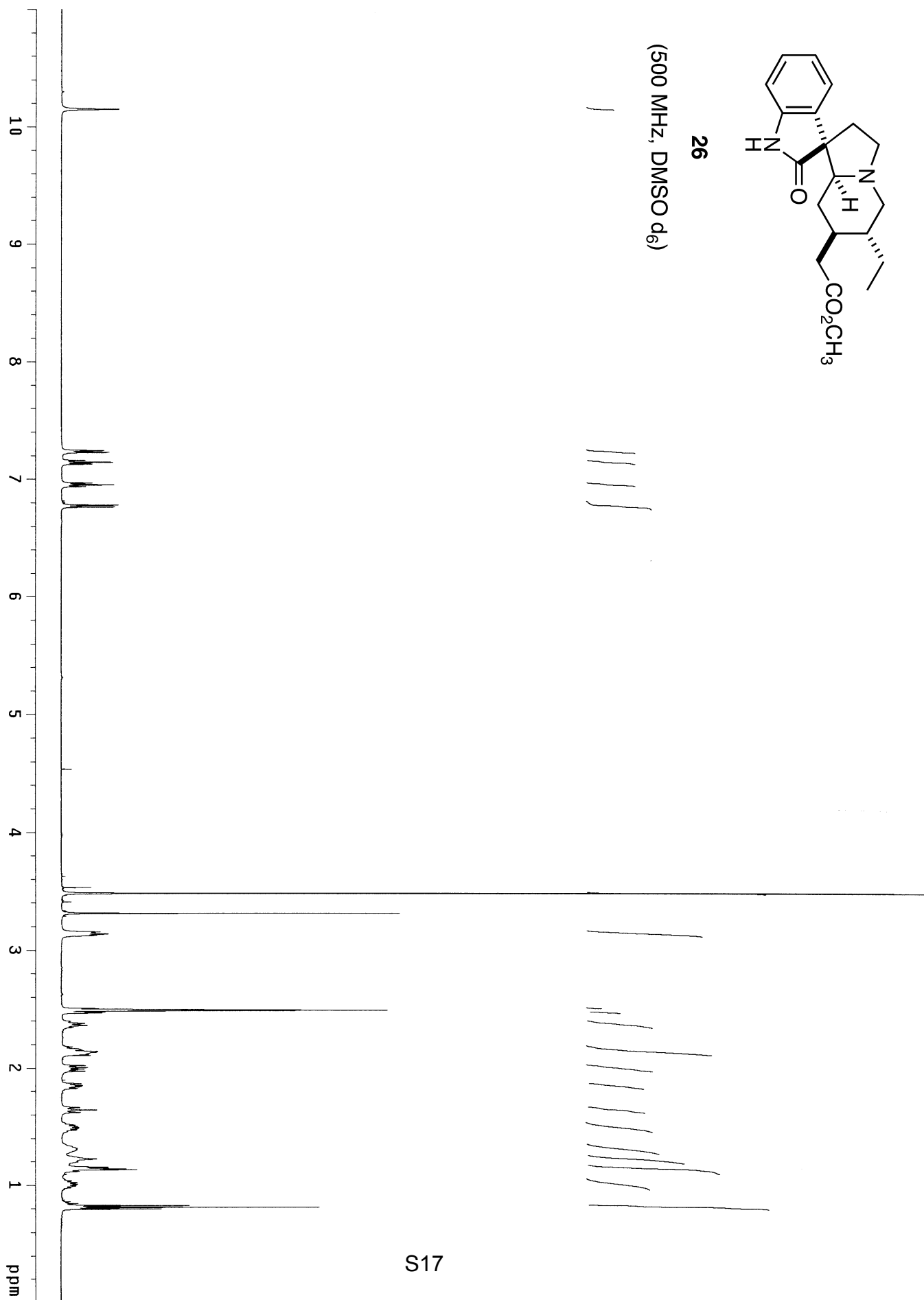
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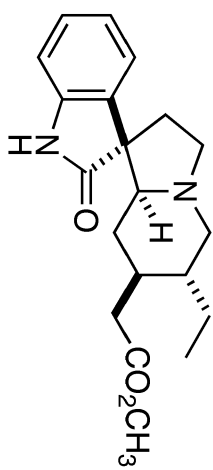




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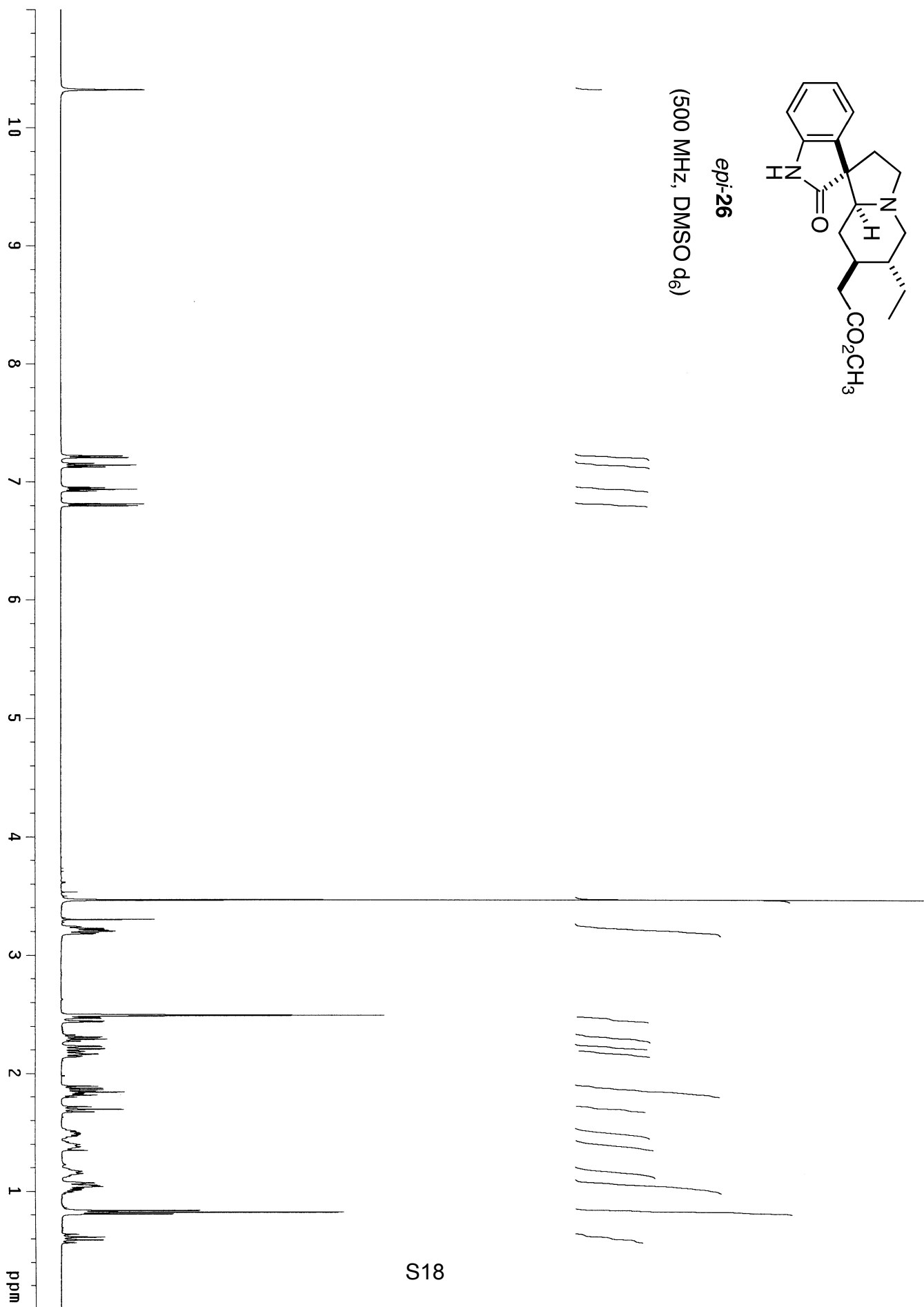
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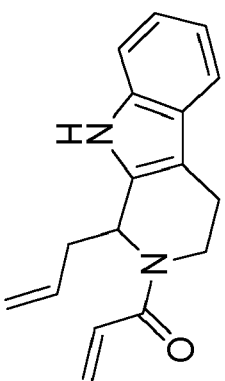




epi-26

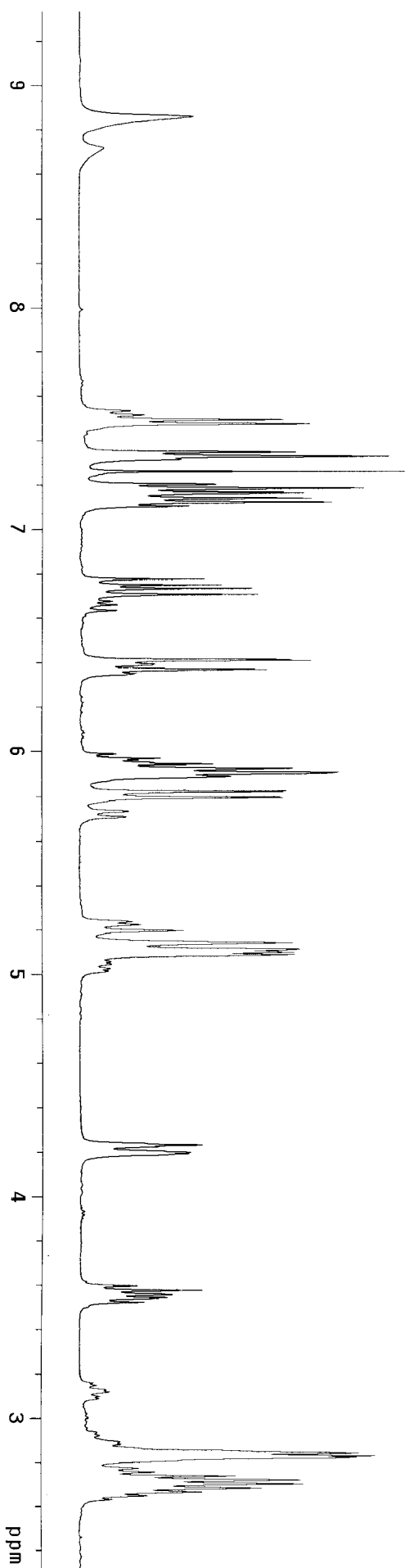
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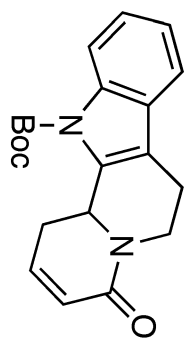




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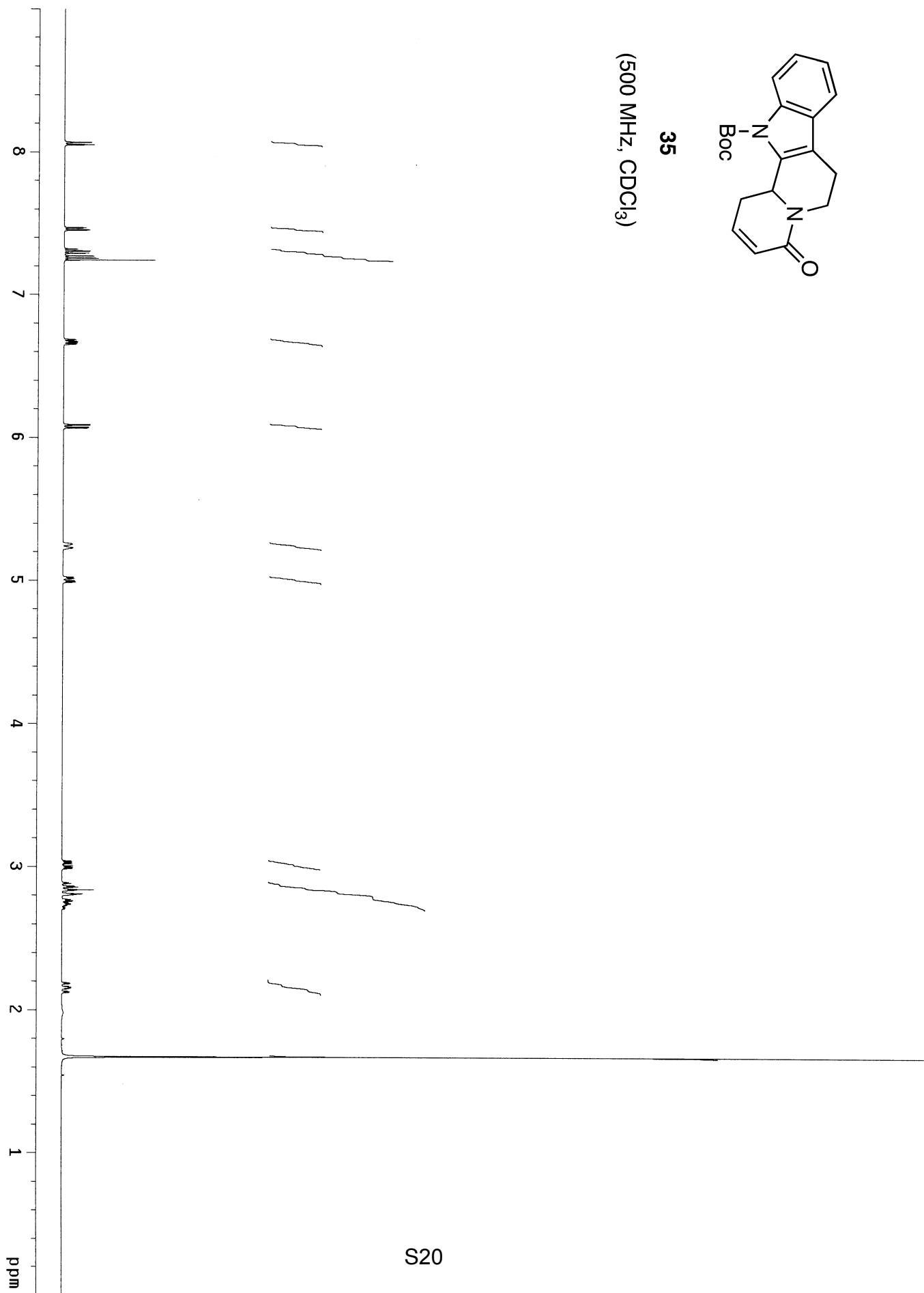
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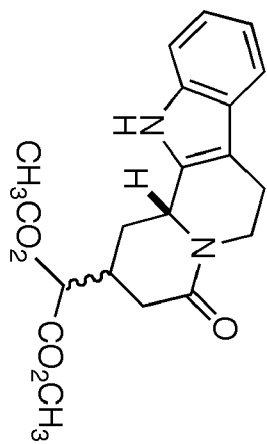




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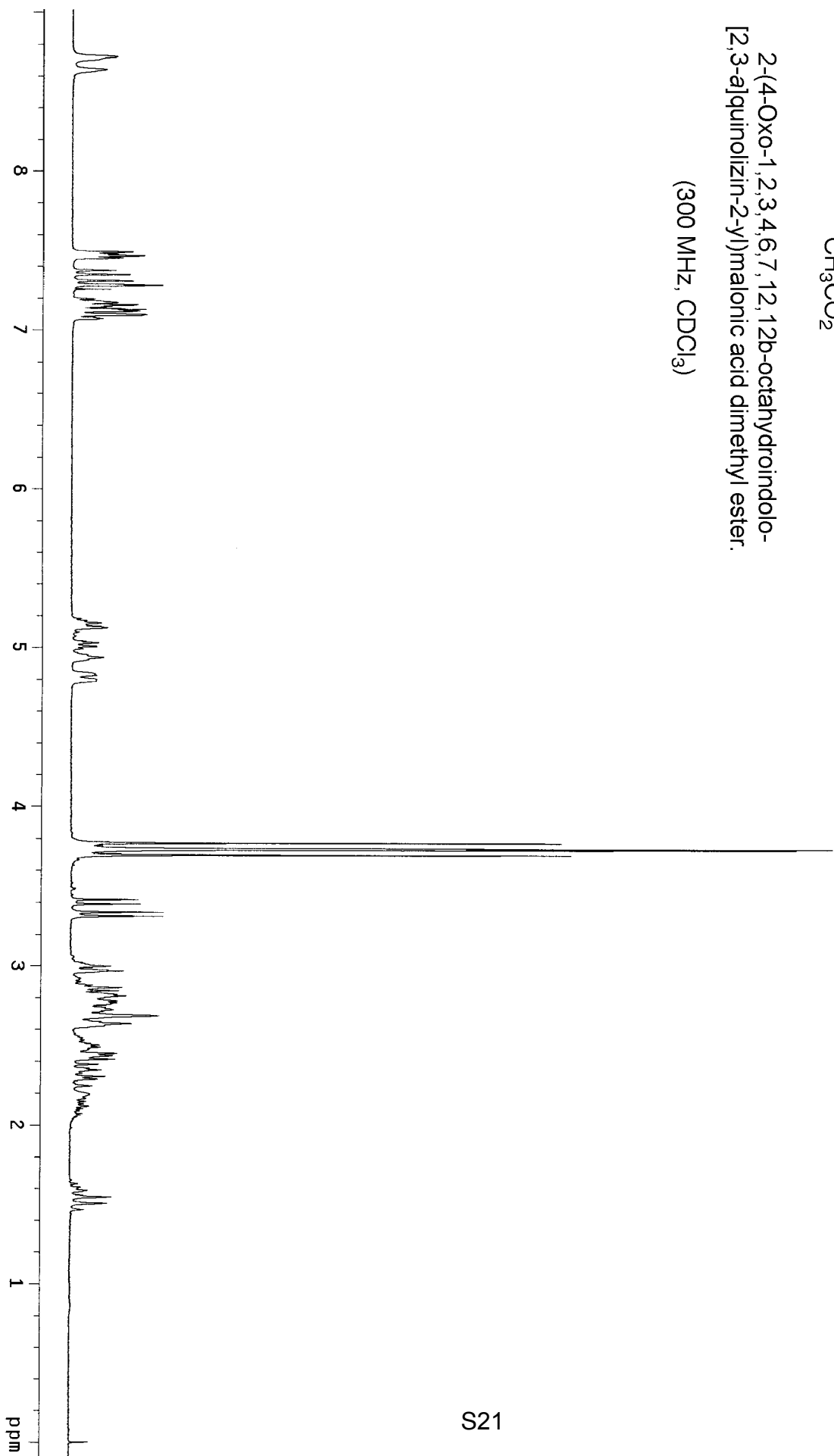
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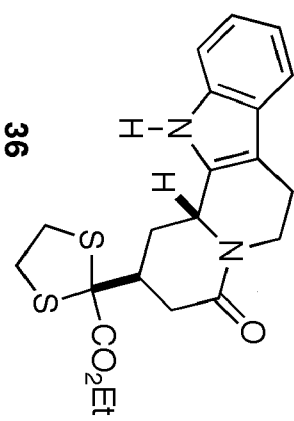




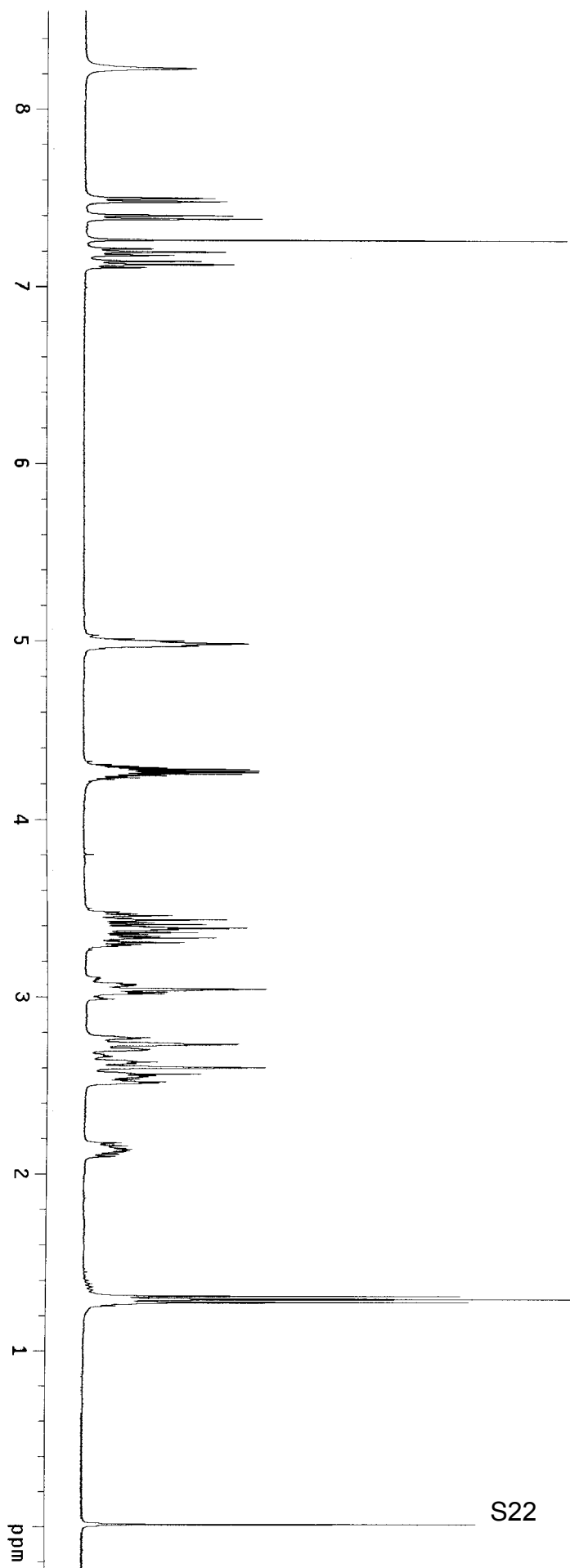
2-(4-Oxo-1,2,3,4,6,7,12,12b-octahydroindolo-
[2,3-a]quinolizin-2-yl)malonic acid dimethyl ester.

(300 MHz, CDCl_3)

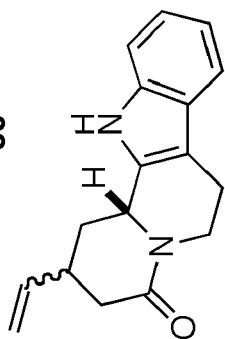




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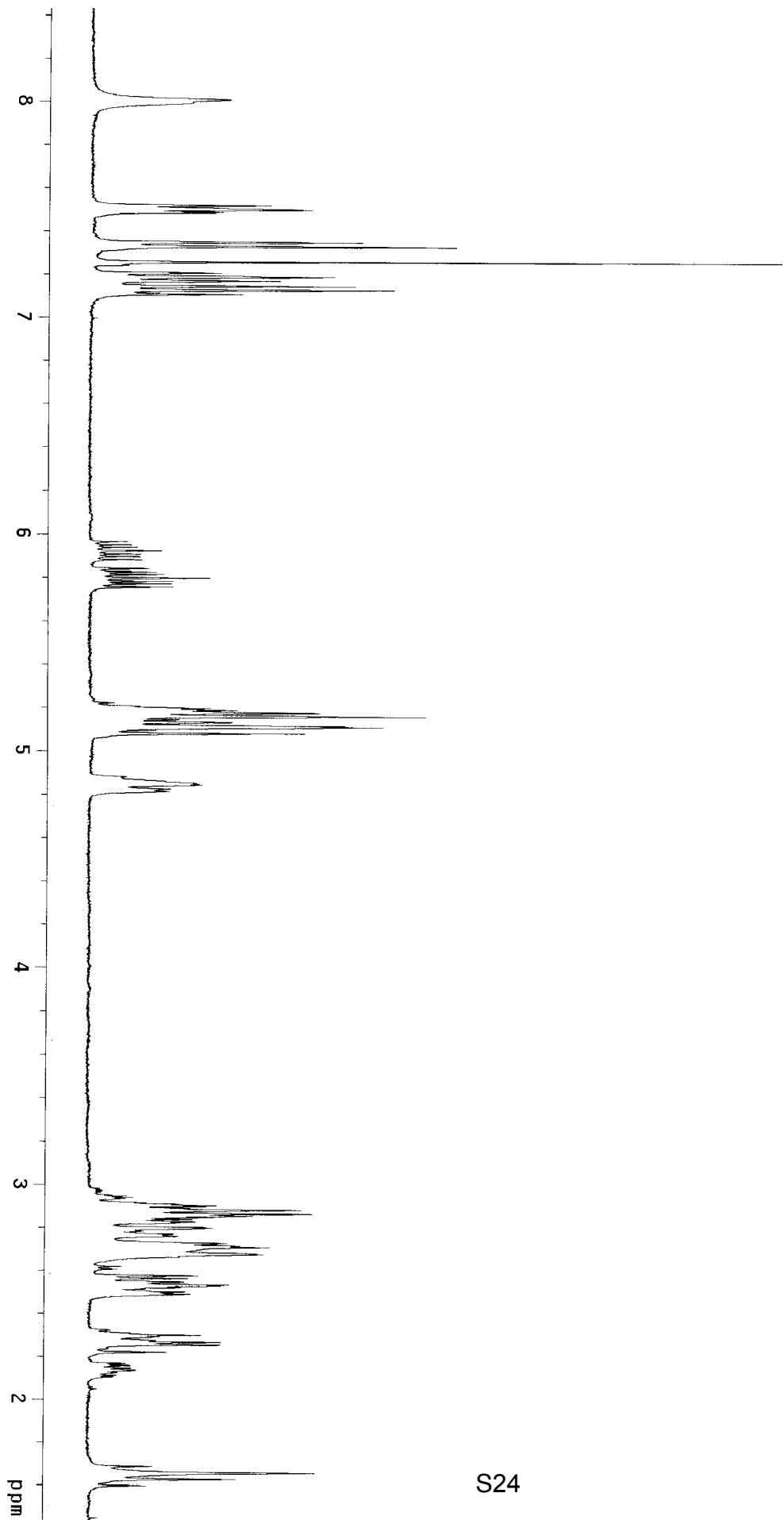


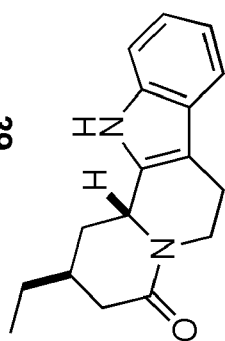




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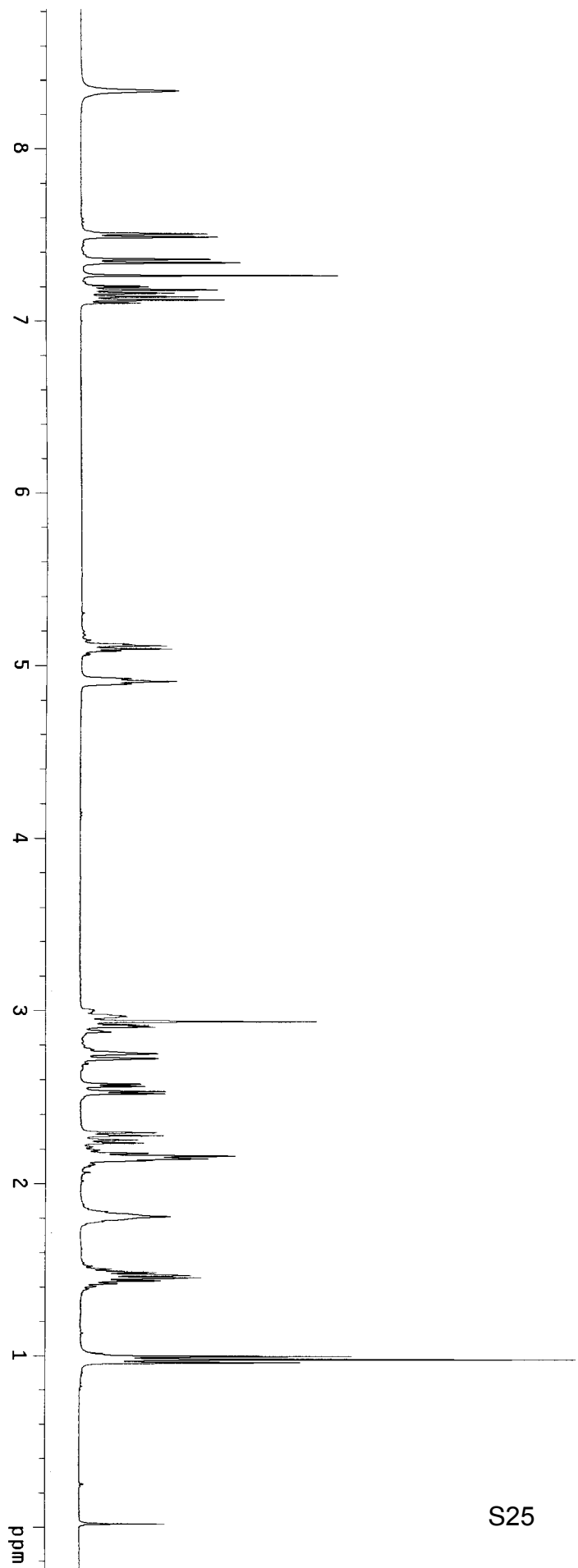
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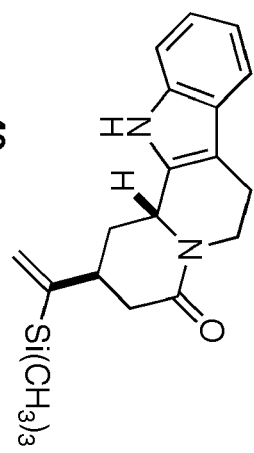




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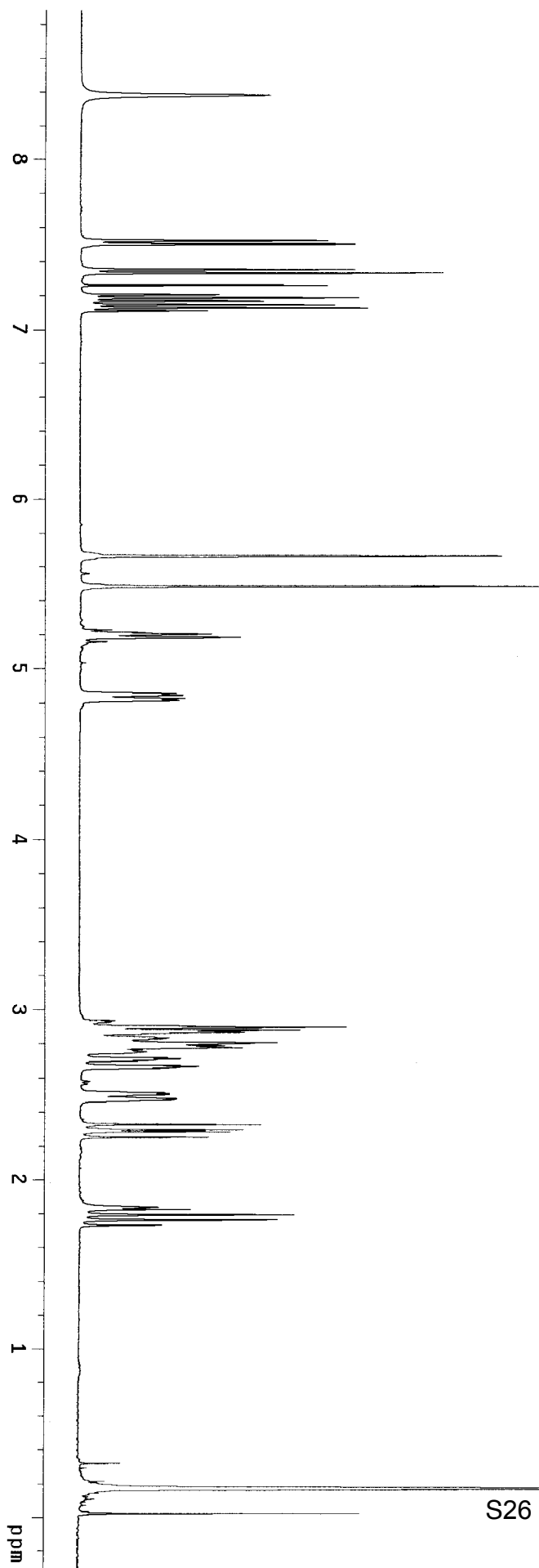
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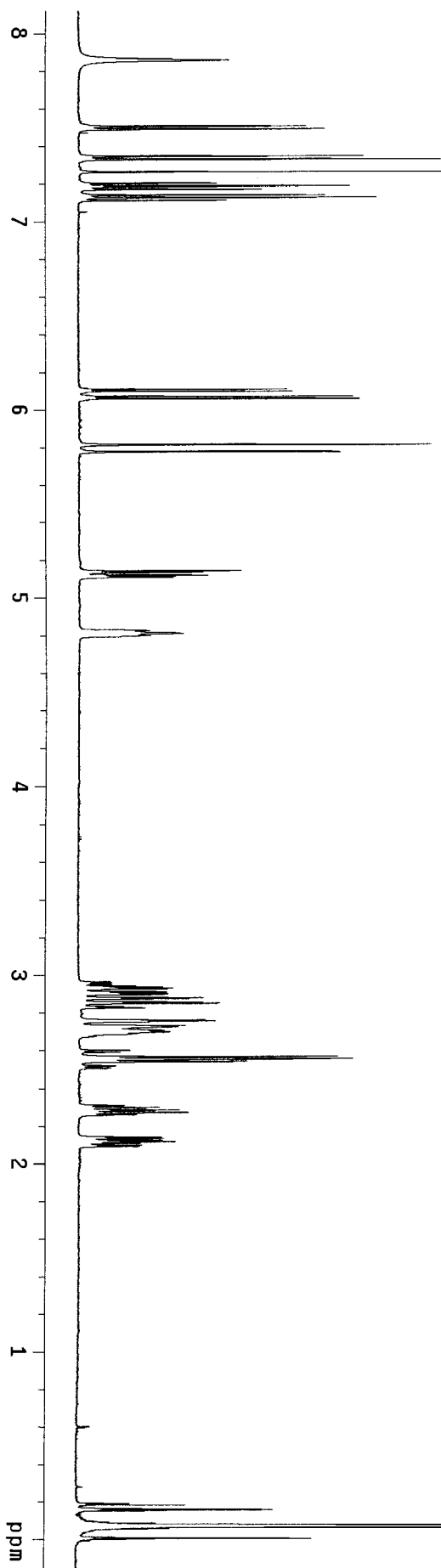
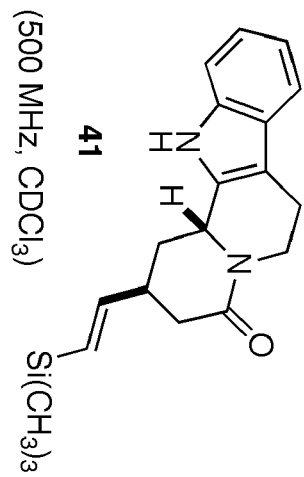


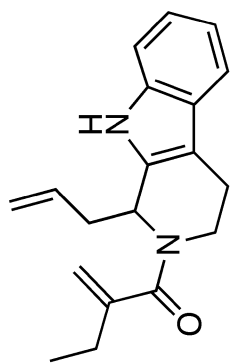


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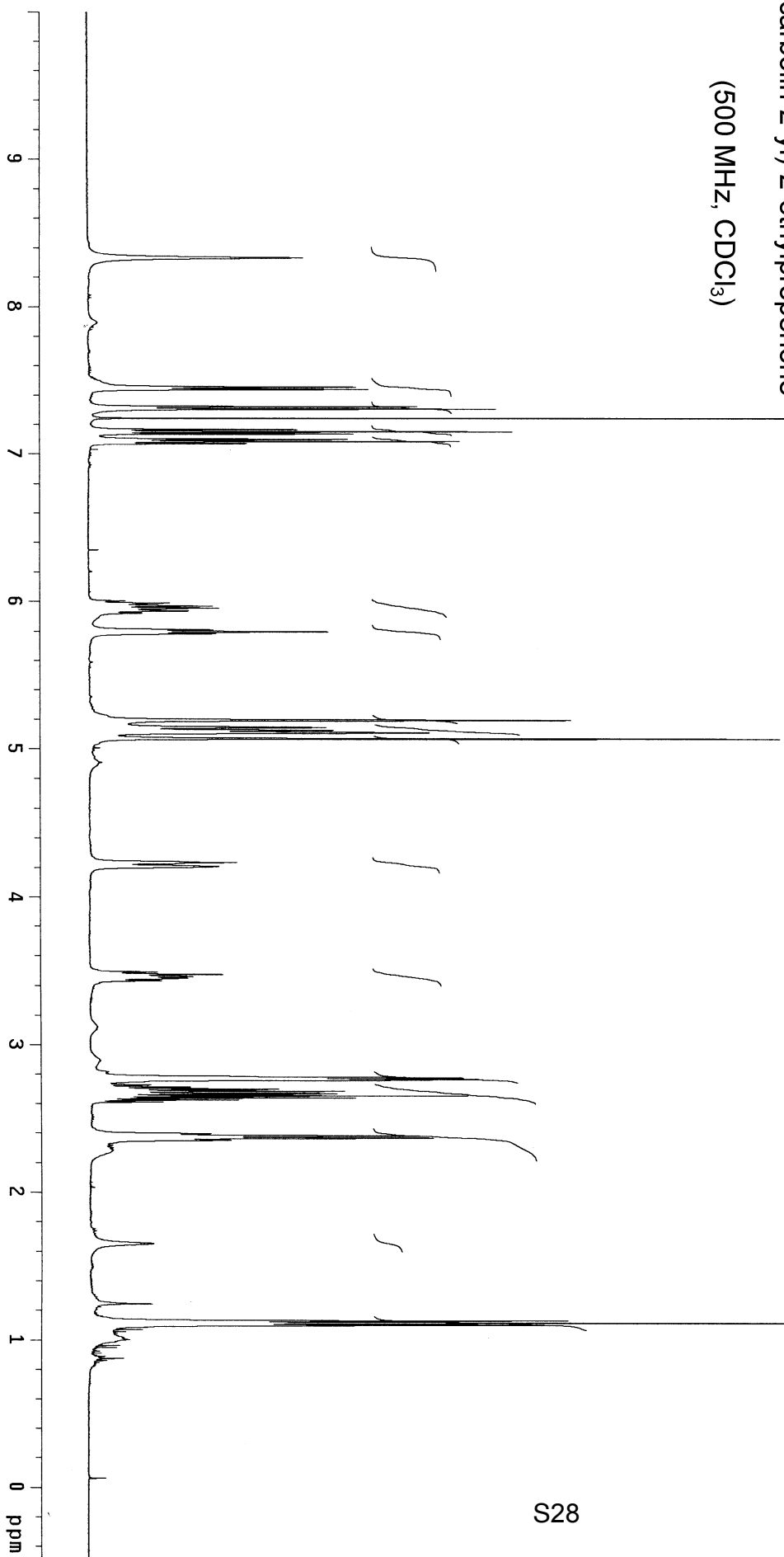


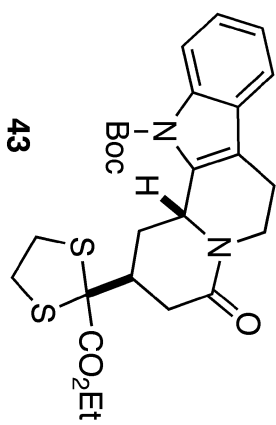




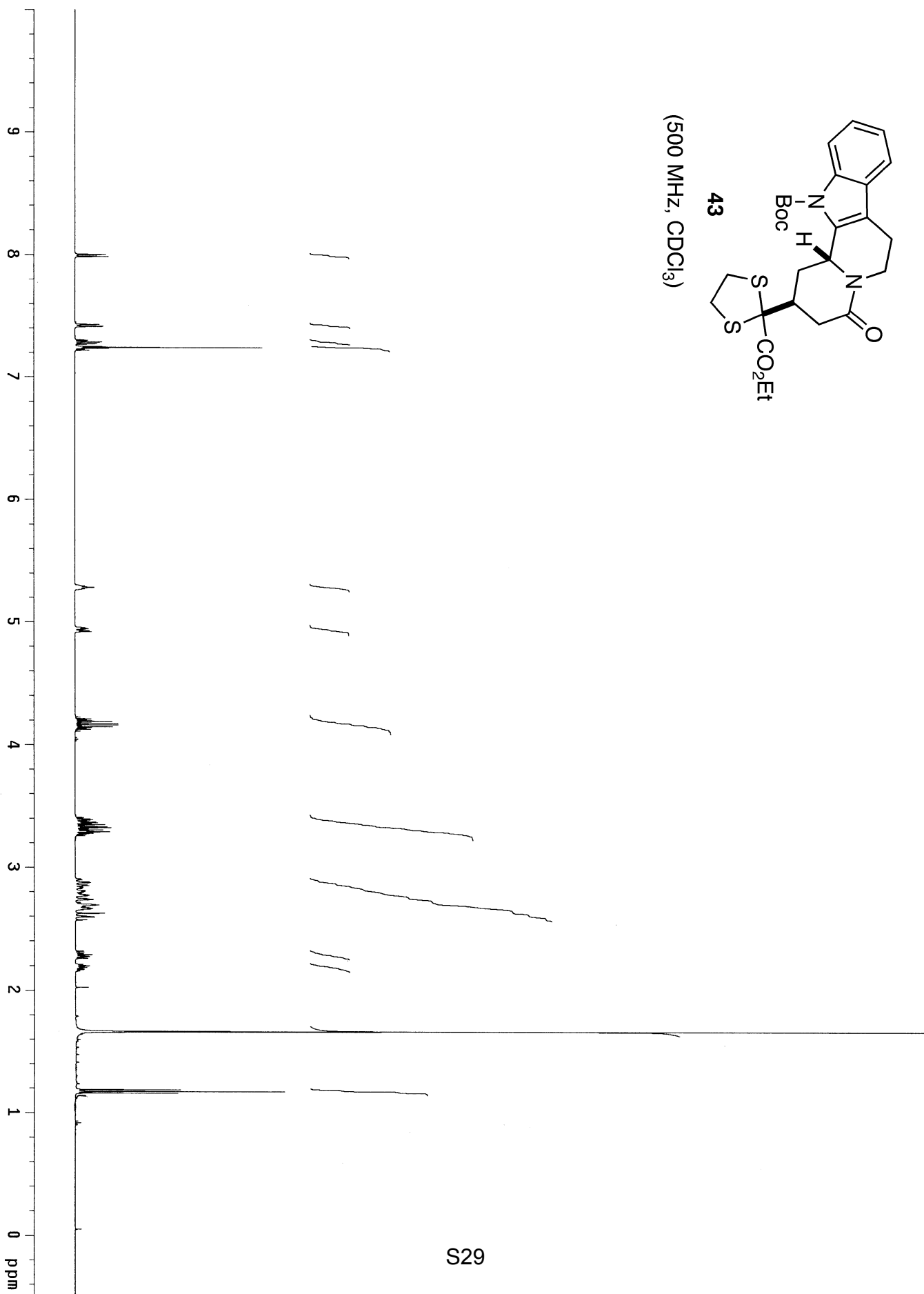
1-(1-Allyl-1,3,4,9-tetrahydro-β-carbolin-2-yl)-2-ethylpropenone

(500 MHz, CDCl₃)




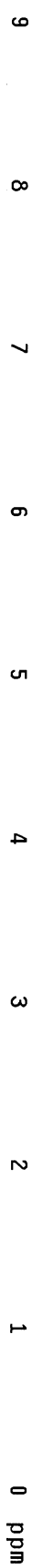


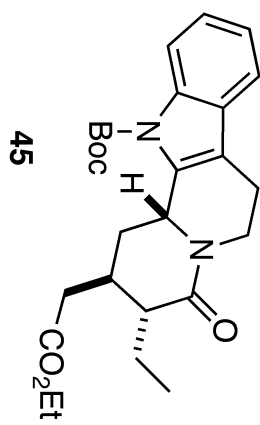
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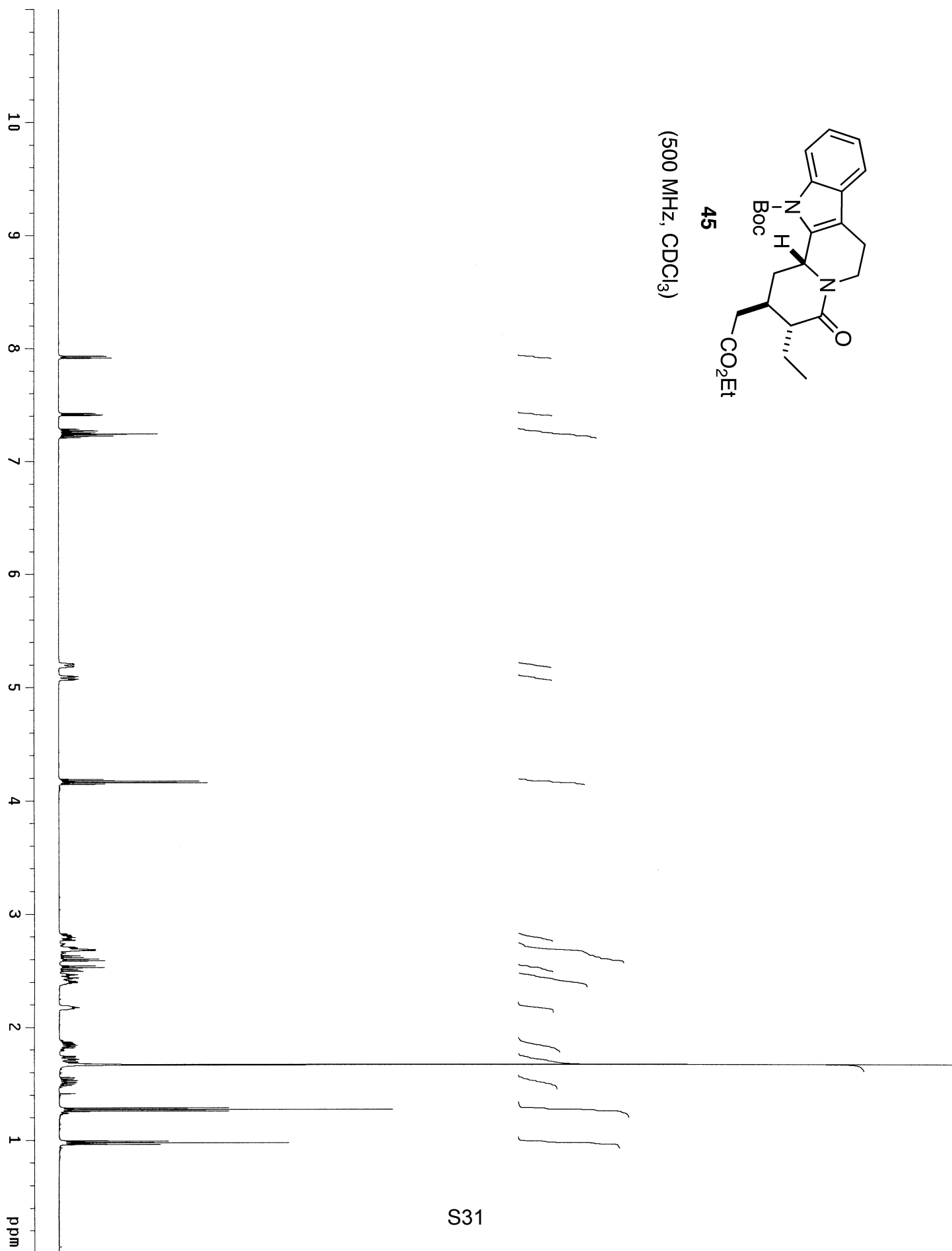



CCOC(=O)[C@H](C)C(=O)C



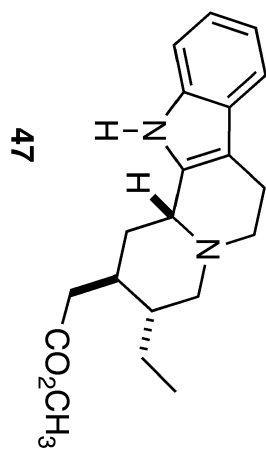


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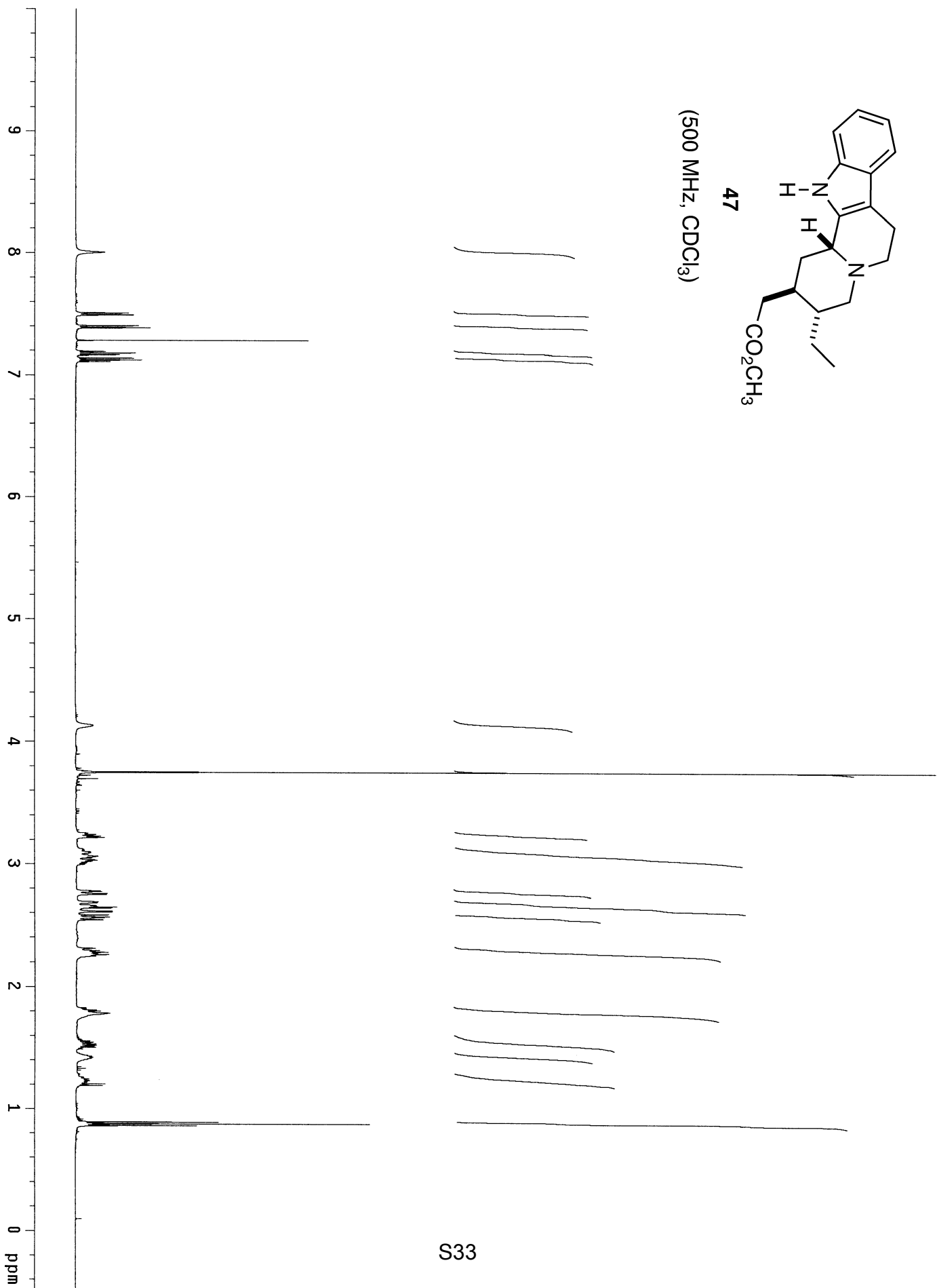


 CO_2CH_3 

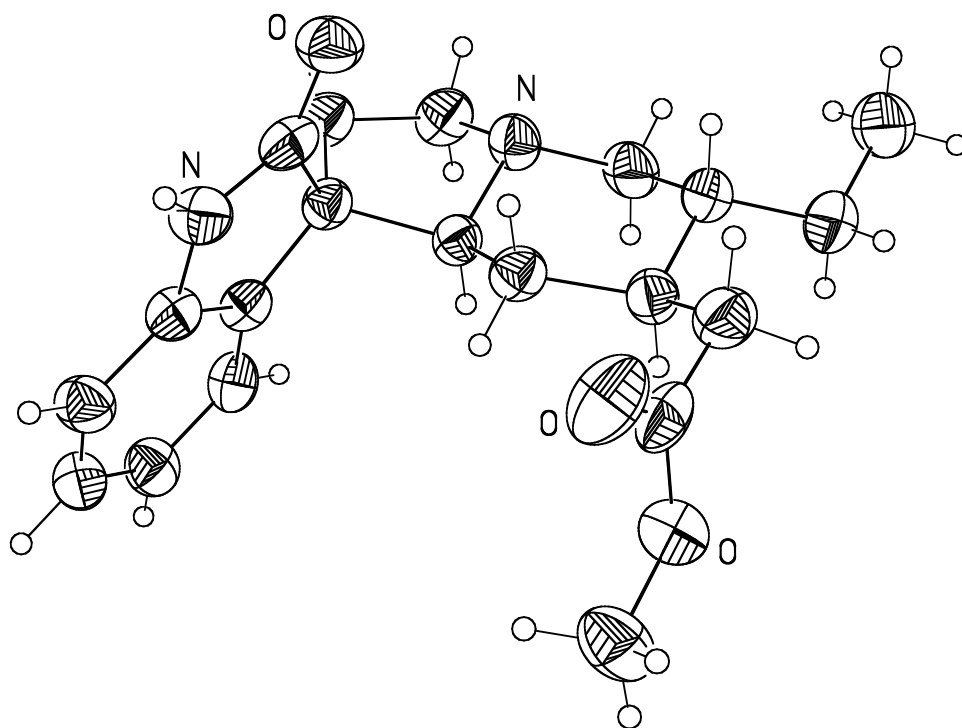
0 ppm



(500 MHz, CDCl₃)



ORTEP of **26**



ORTEP of **44**

