Supplementary Data

A green and rapid approach for the stereoselective vinylation of phenol, thiol and amine derivatives in water

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Experimental Section:

General Considerations

Melting points were measured on an Electrothermal 9100 apparatus. Infrared spectra were recorded on a Shimadzu IR-8300 series FT-IR spectrophotometer. ^{1}H NMR and ^{13}C NMR spectra were recorded on a Bruker 400-MHz instrument in $CDCl_3$ solvent with TMS as a standard. Mass spectra were recorded by a Jeol DX303 HF mass spectrometer. Elemental analyses were carried out by Perkin-Elmer CHN 2400 instrument.

Typical procedure for synthesis of 1a

Phenol (0.188 g, 2 mmol) was dissolved in aqueous solution of K_2CO_3 (0.276 g, 2 mmol) and DMAD (0.284 g, 2 mmol) was added. The reaction mixture was stirred vigorously at room temperature. A turbid solution was formed which by consumption of phenol (monitored by TLC) in 5 min., the reaction mixture became clear and dimethyl (Z)-2-(phenoxy)-2-butenedioate **1a** existed as solid in water. The product was isolated by filtration without further purification.

Compounds **1a-f, j, k, s, v** , **w** and **5j** are known compounds and were characterized by comparison of their physical and spectroscopic data with those of reported ones.[24n, o, 27, 30, 31, 32j, 40] spectral data of new compounds are reported here.

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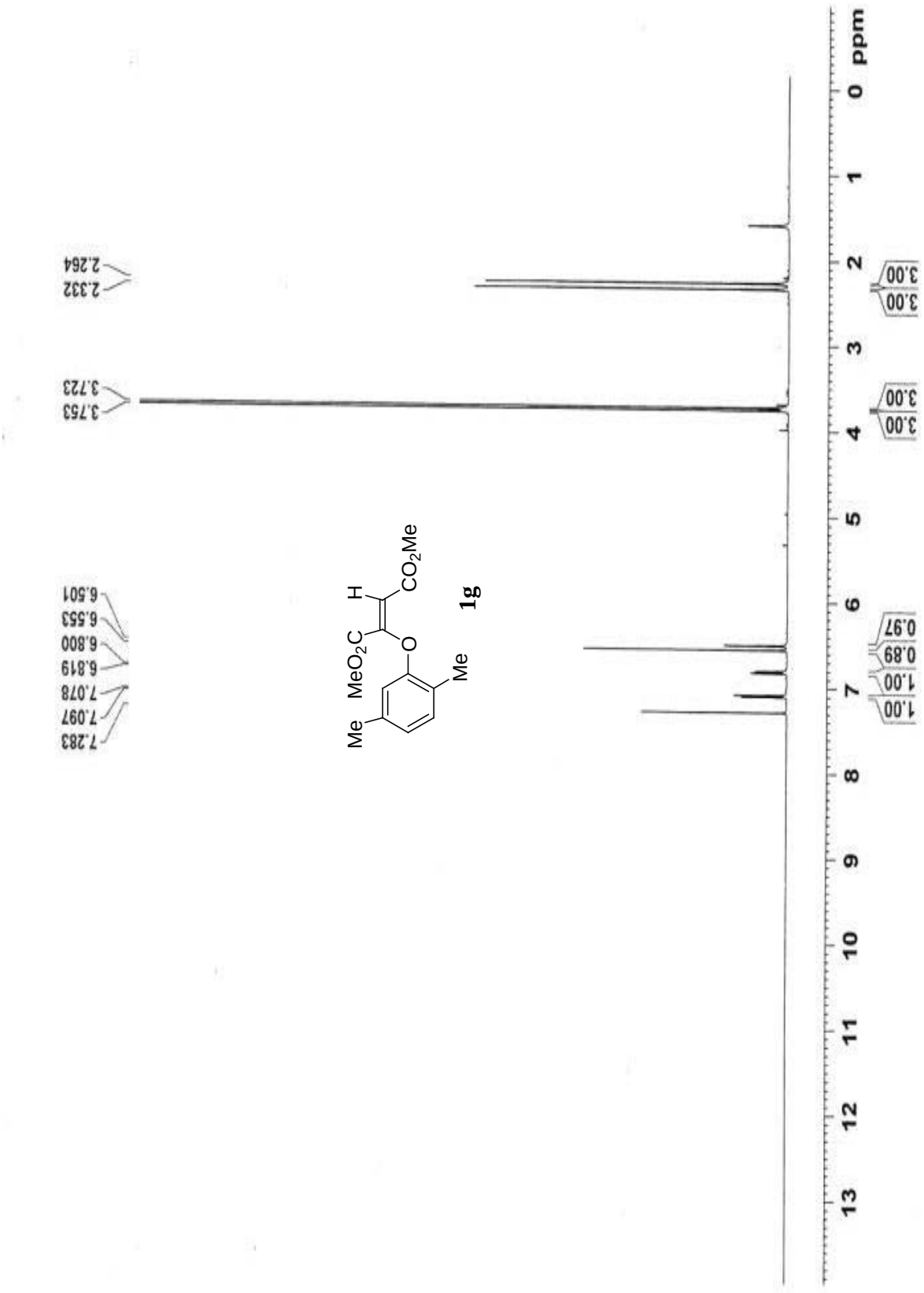

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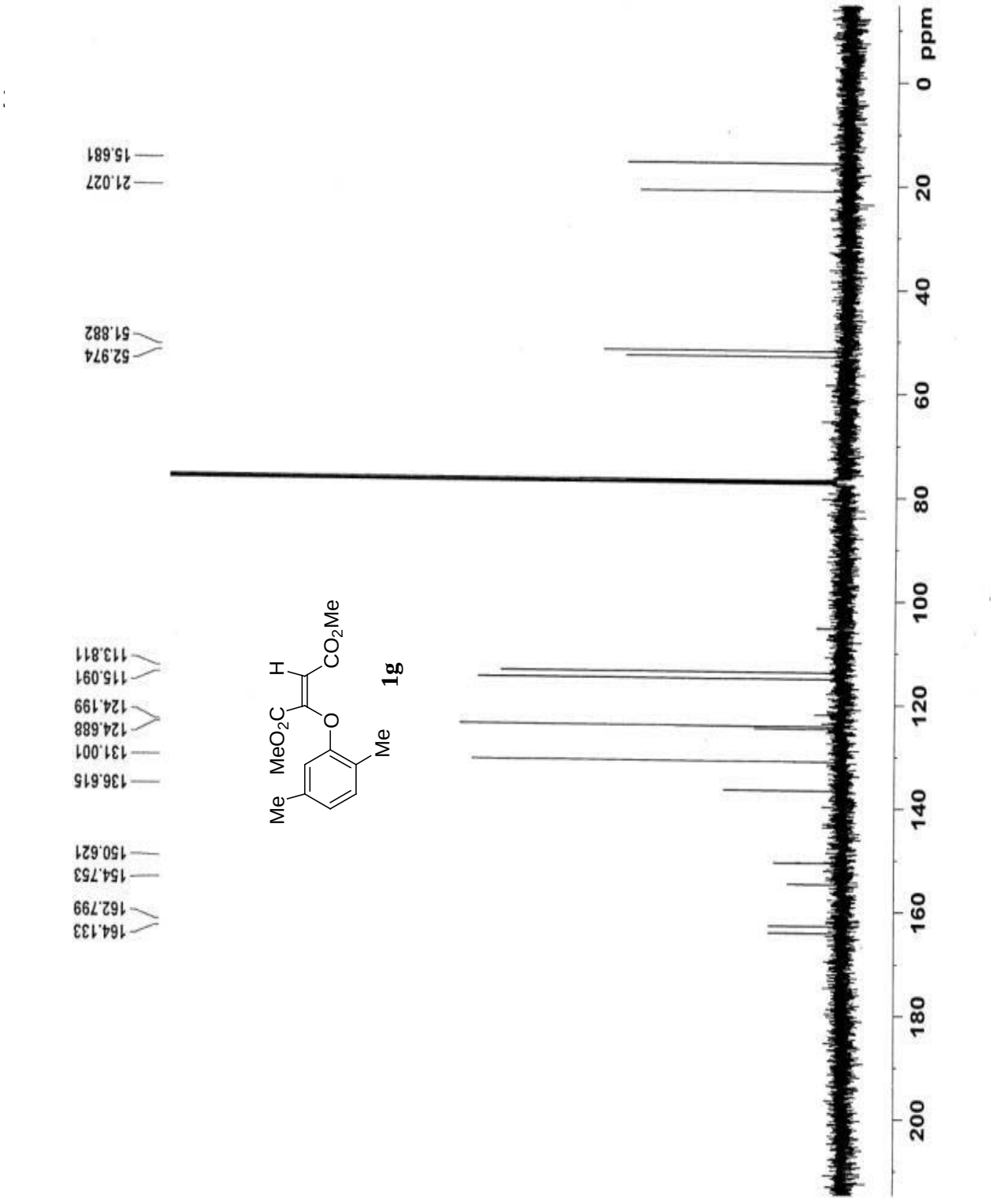

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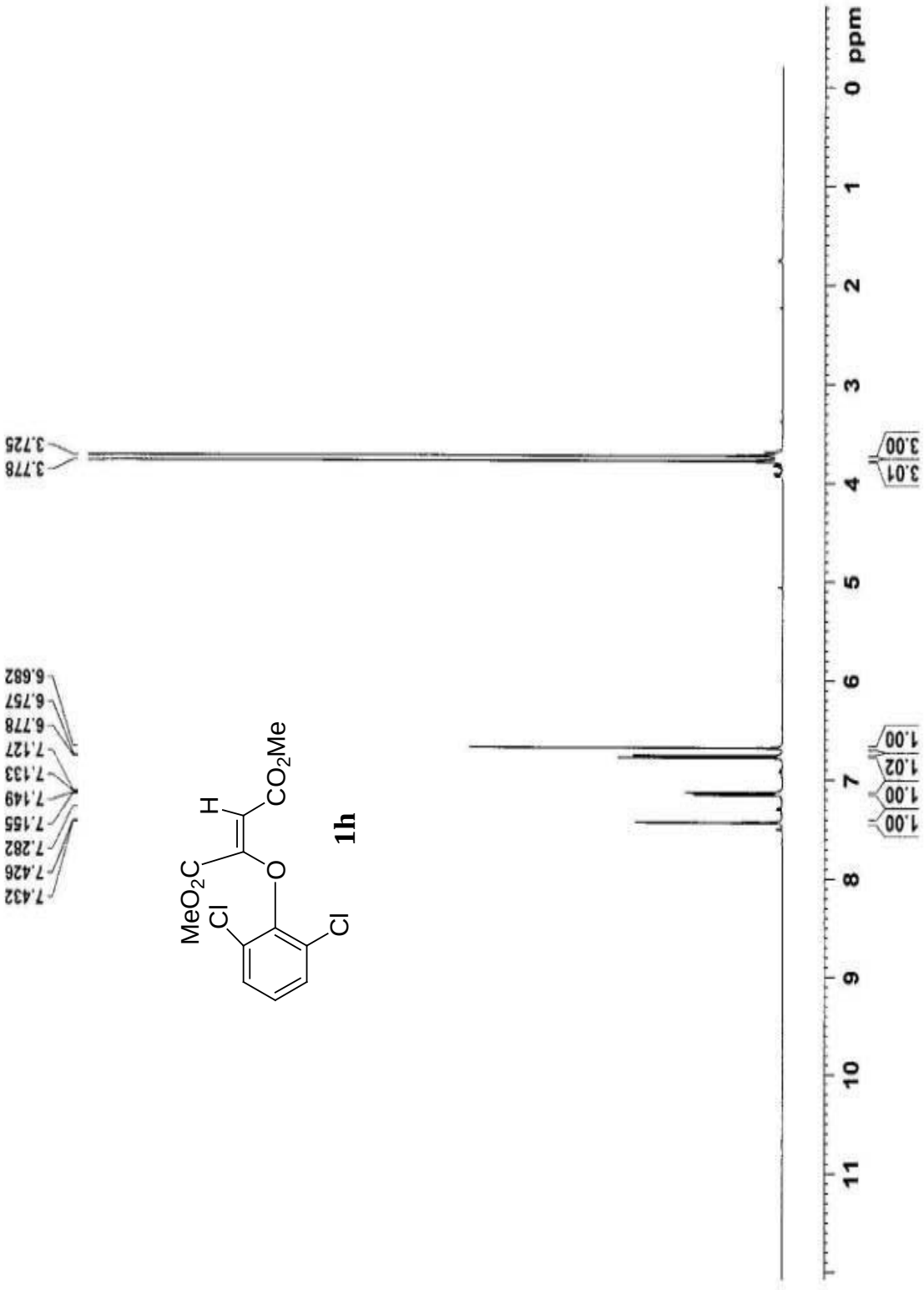

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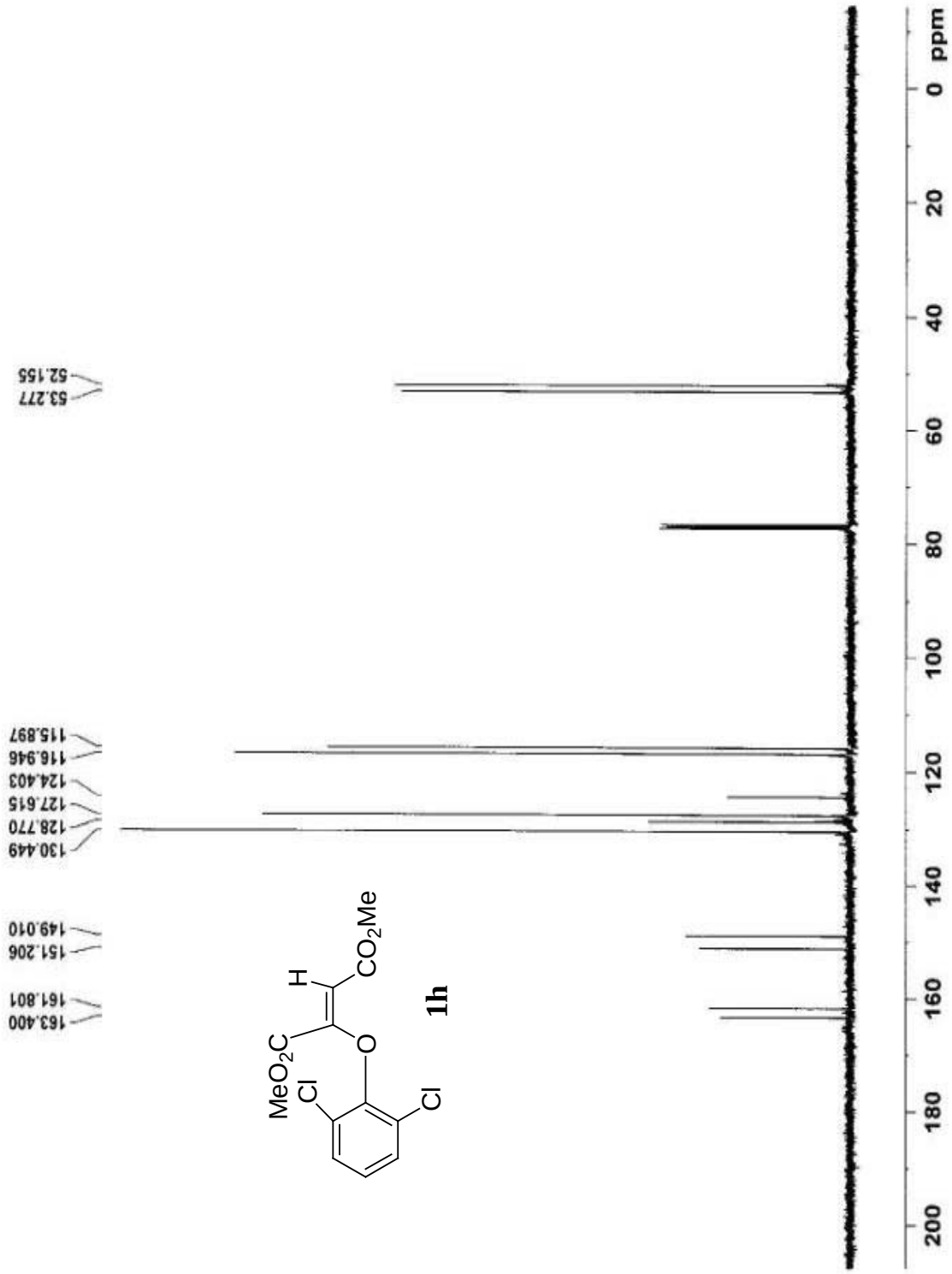

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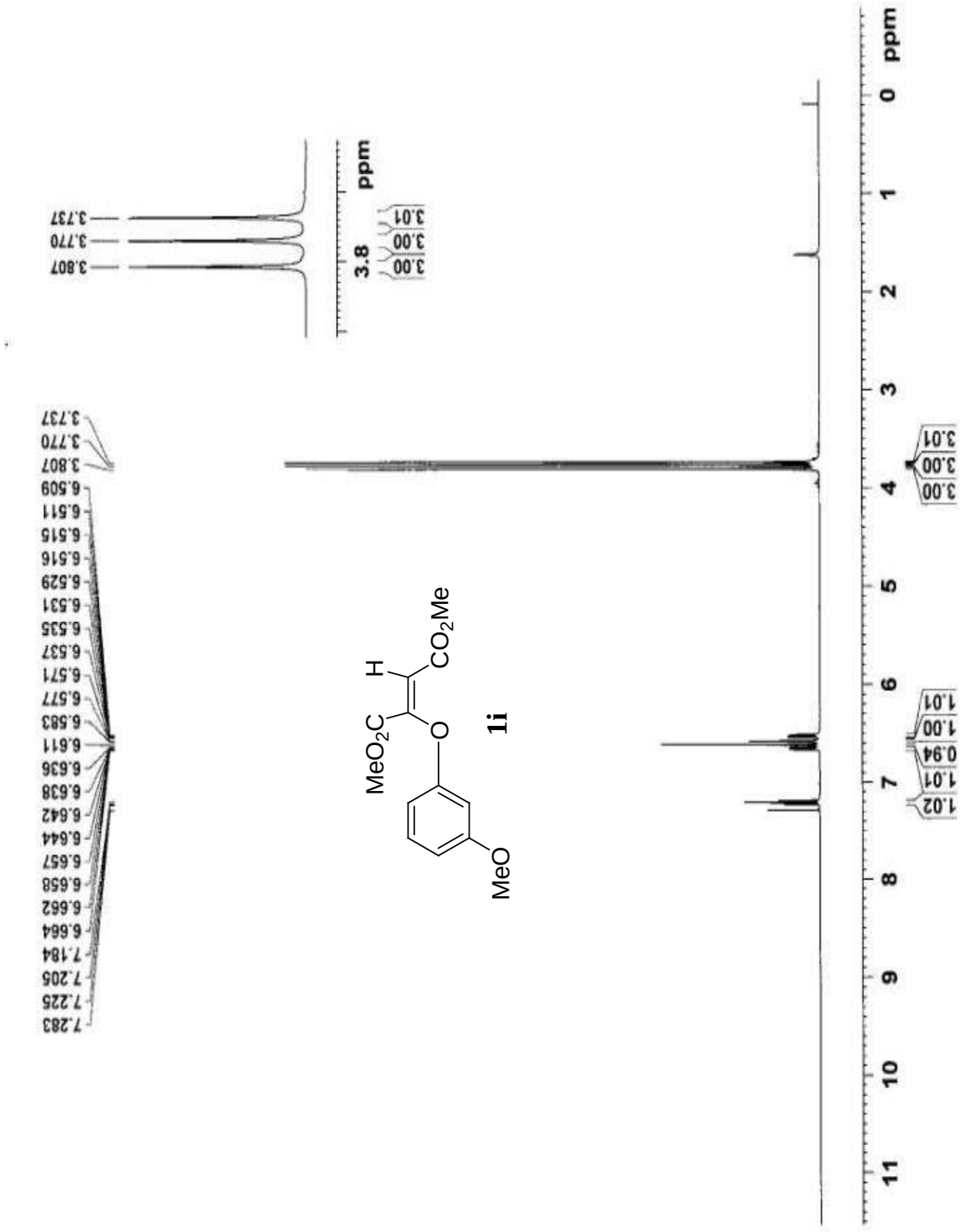

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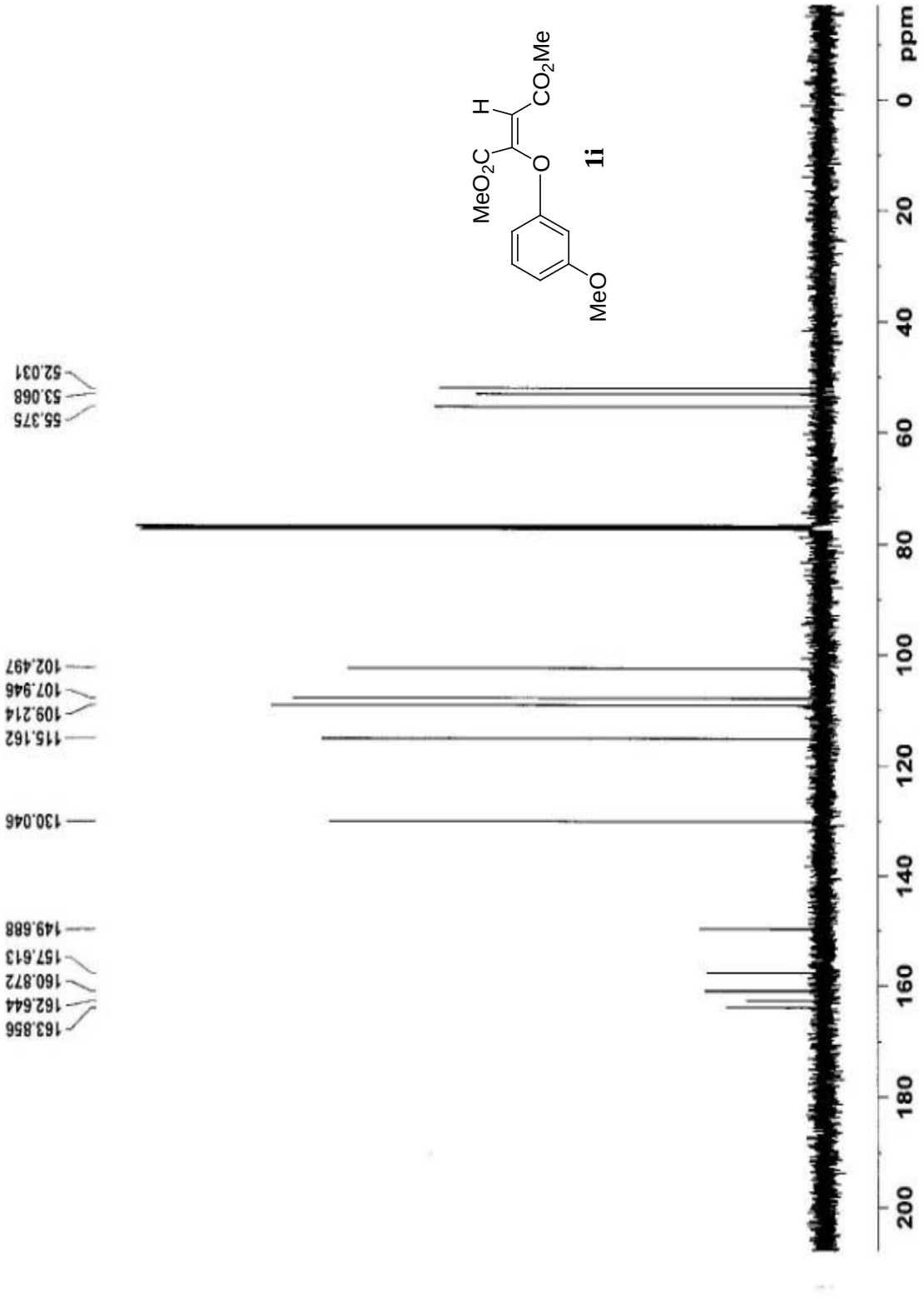

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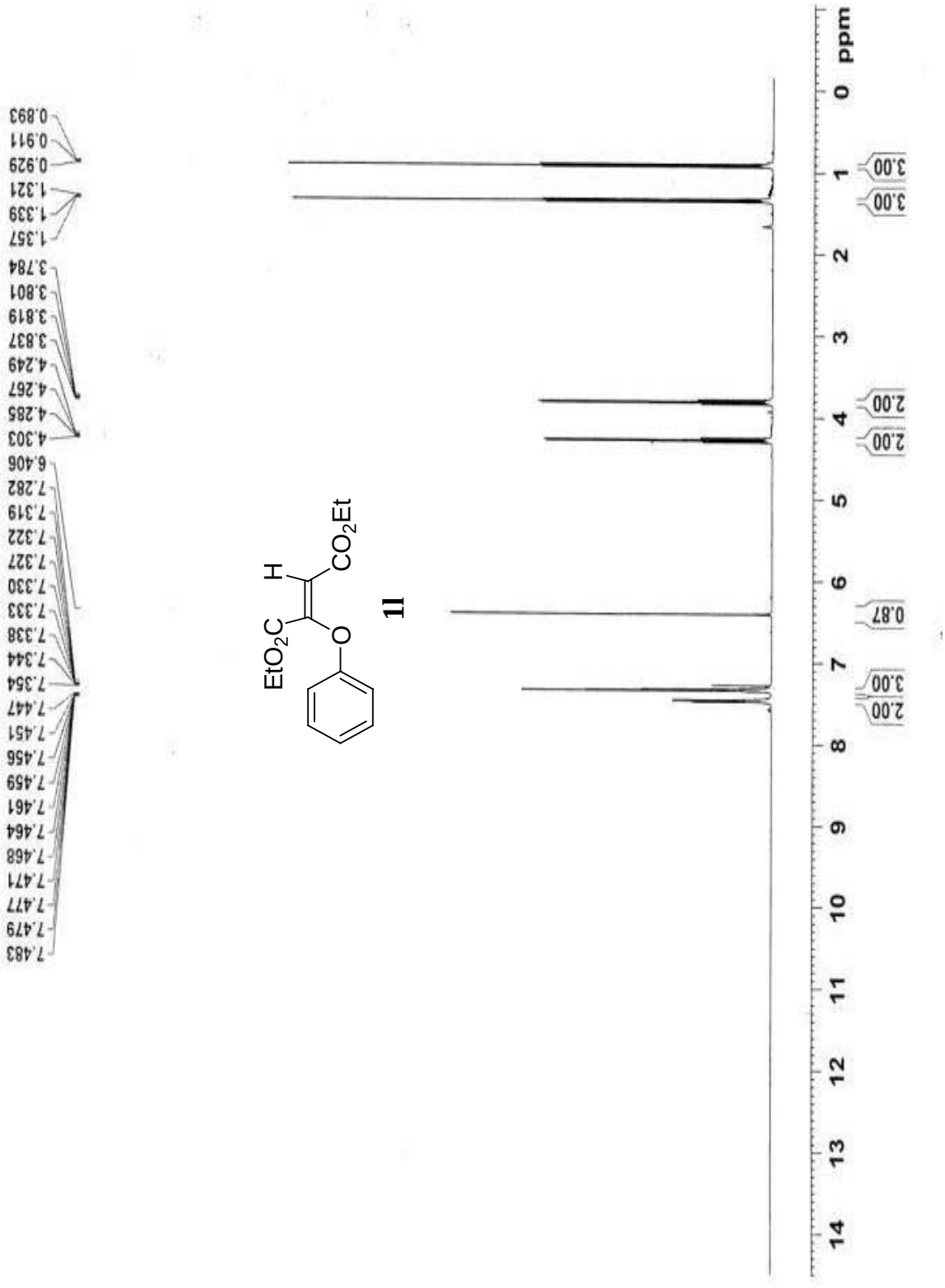

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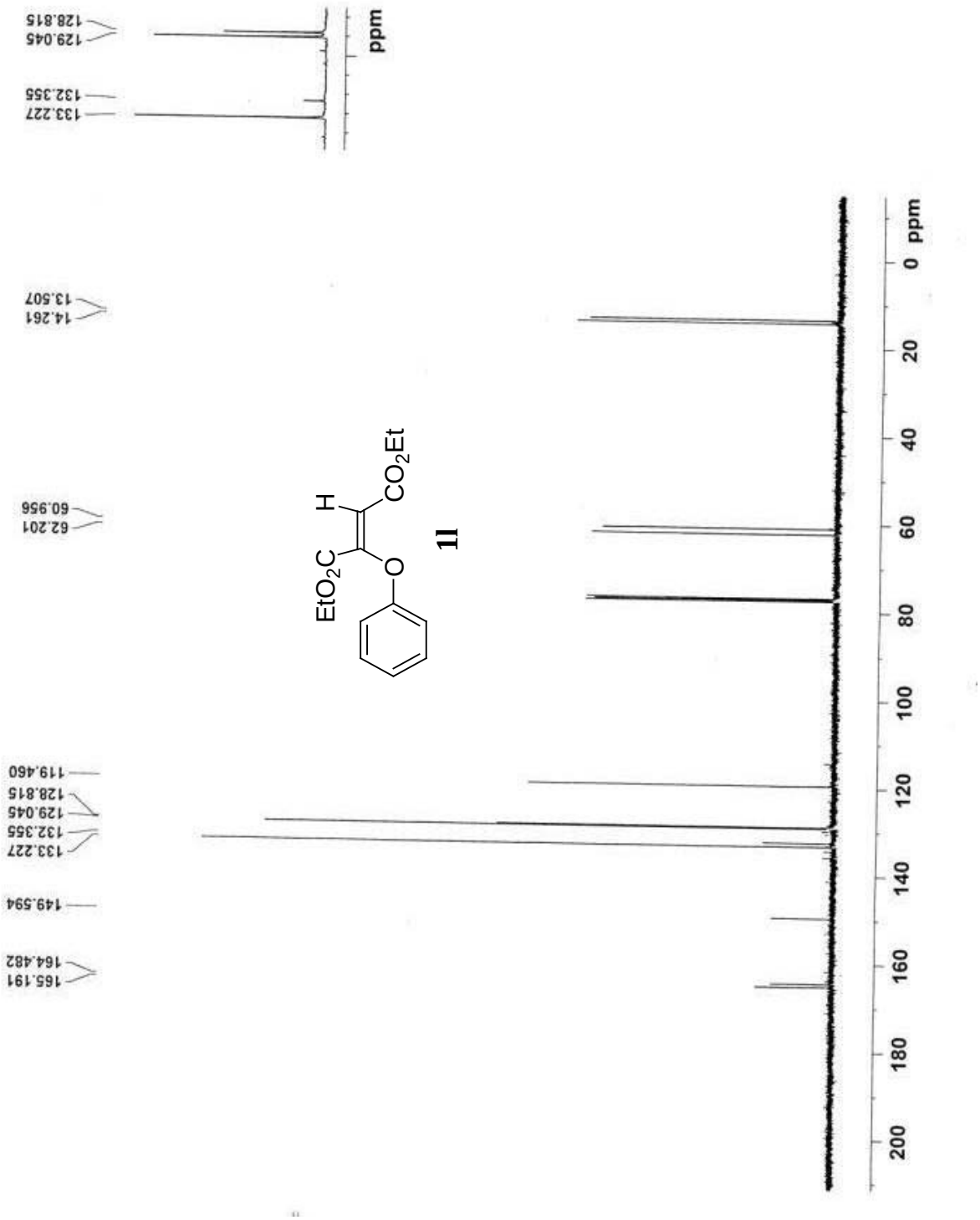

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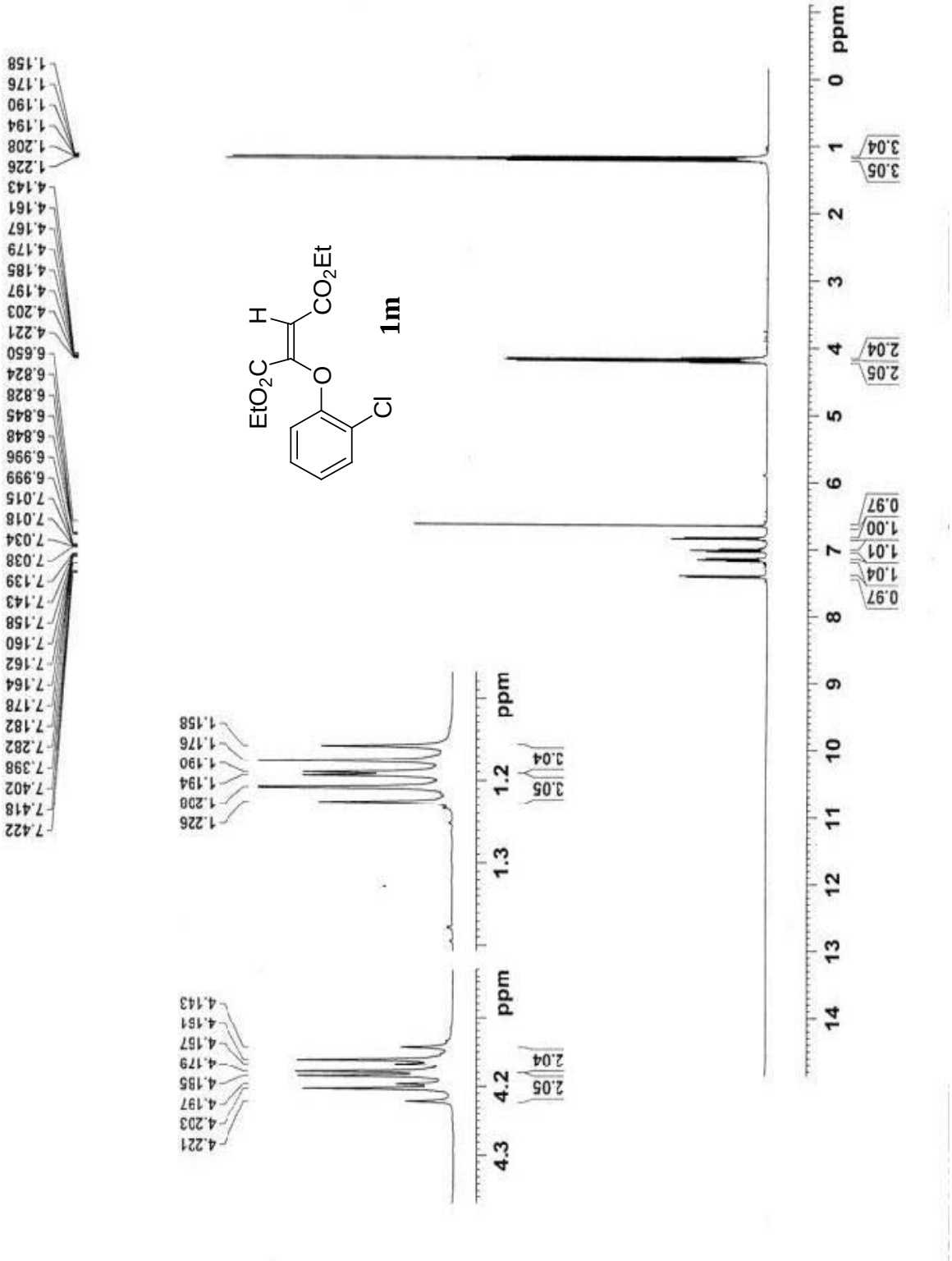

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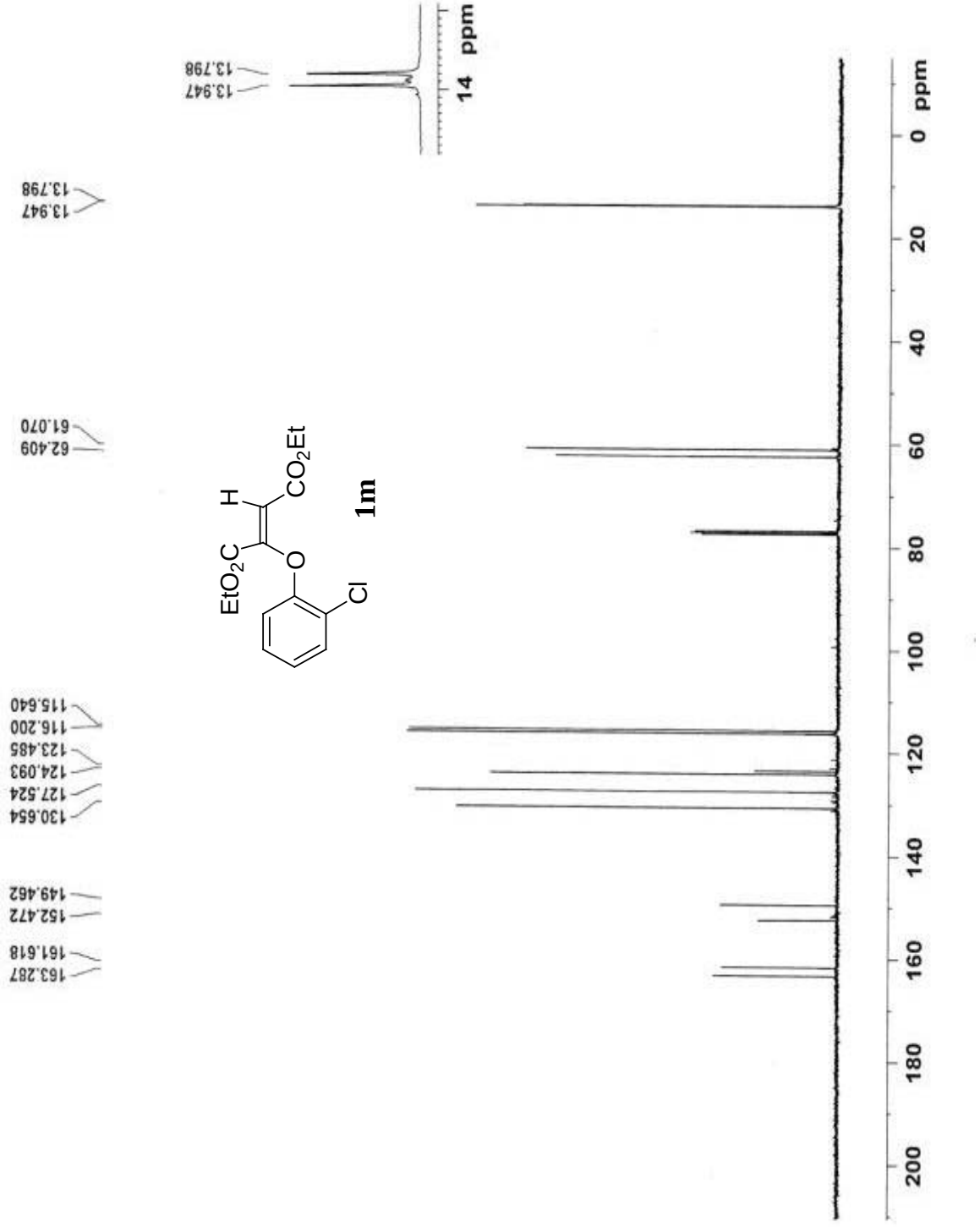

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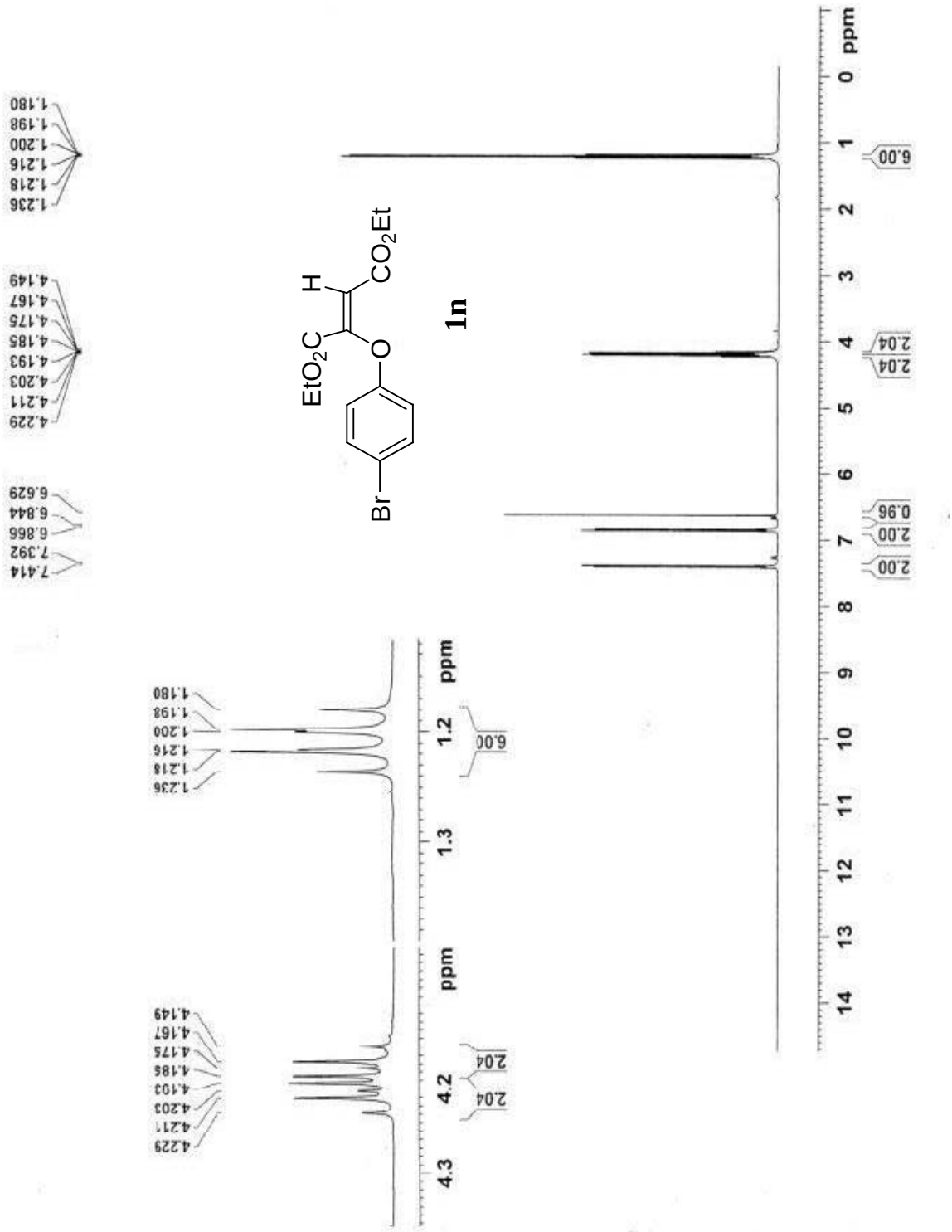

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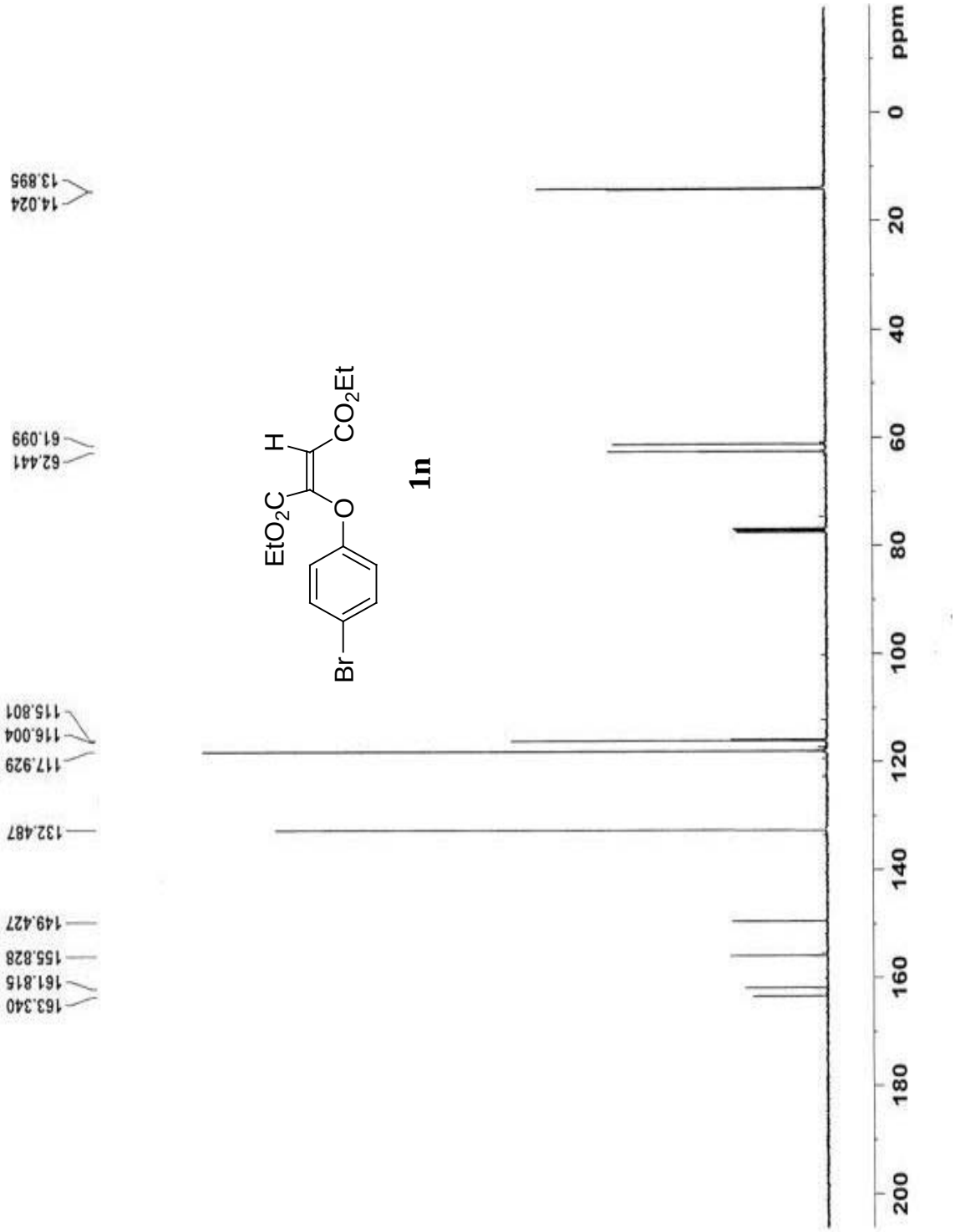

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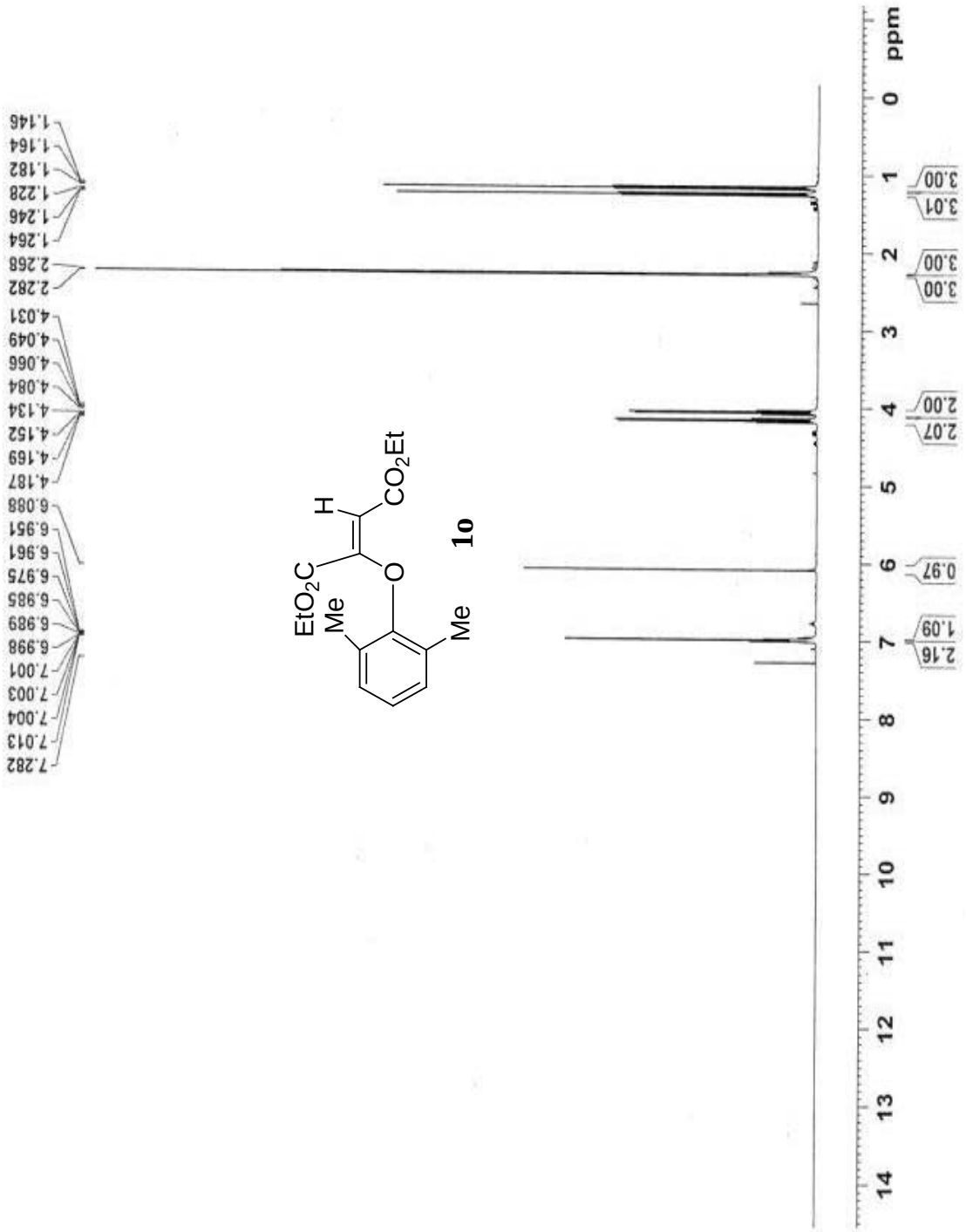

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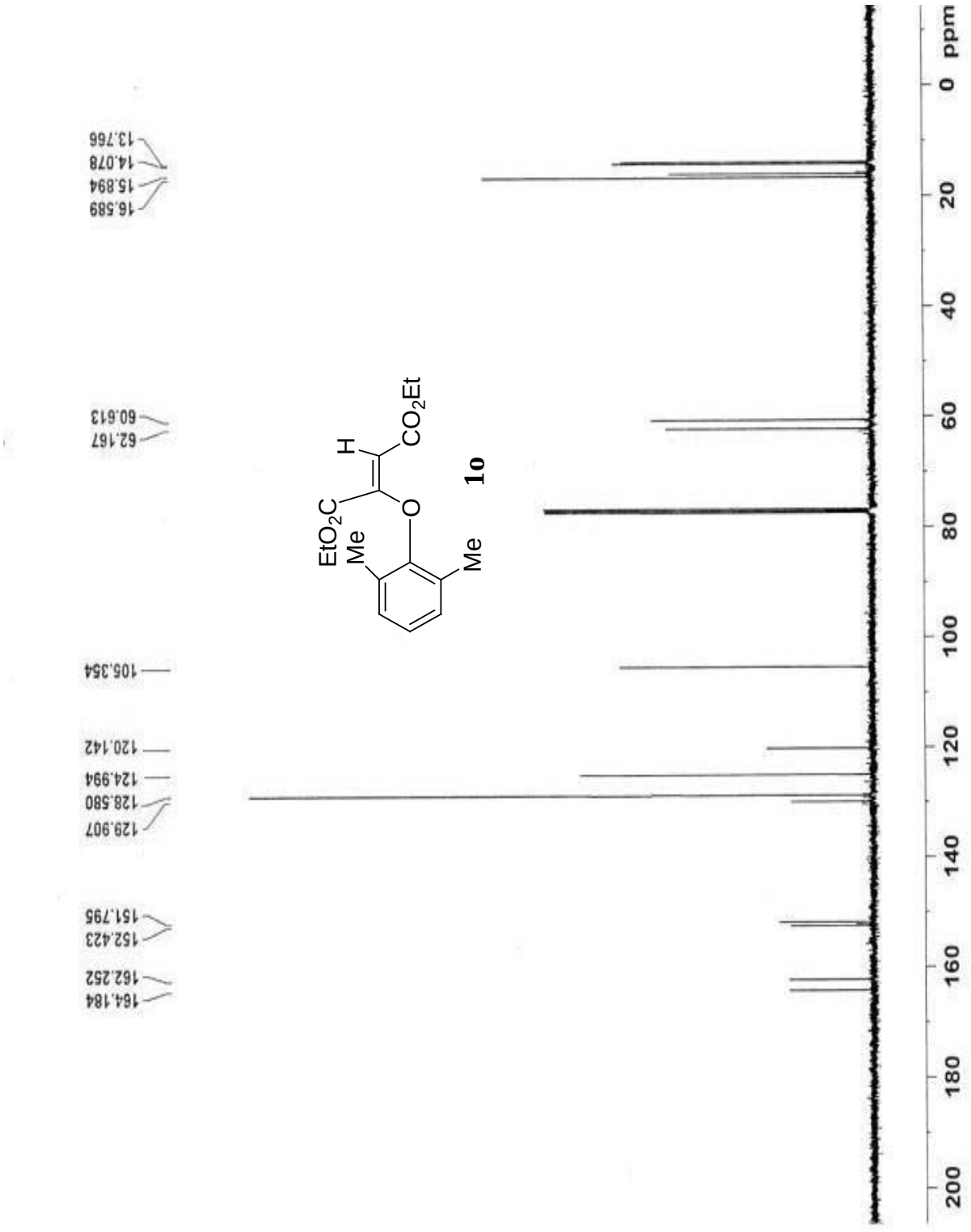

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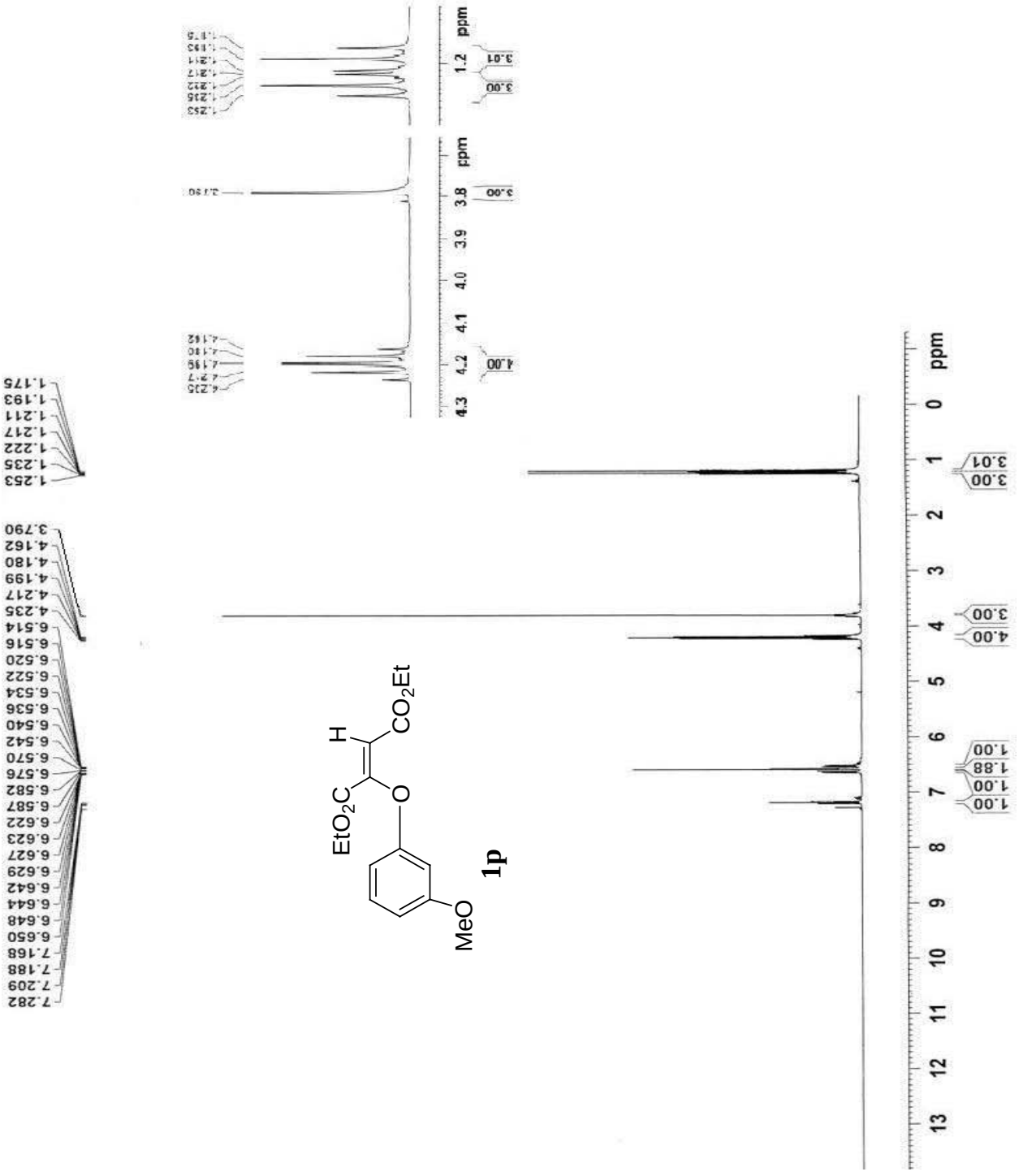

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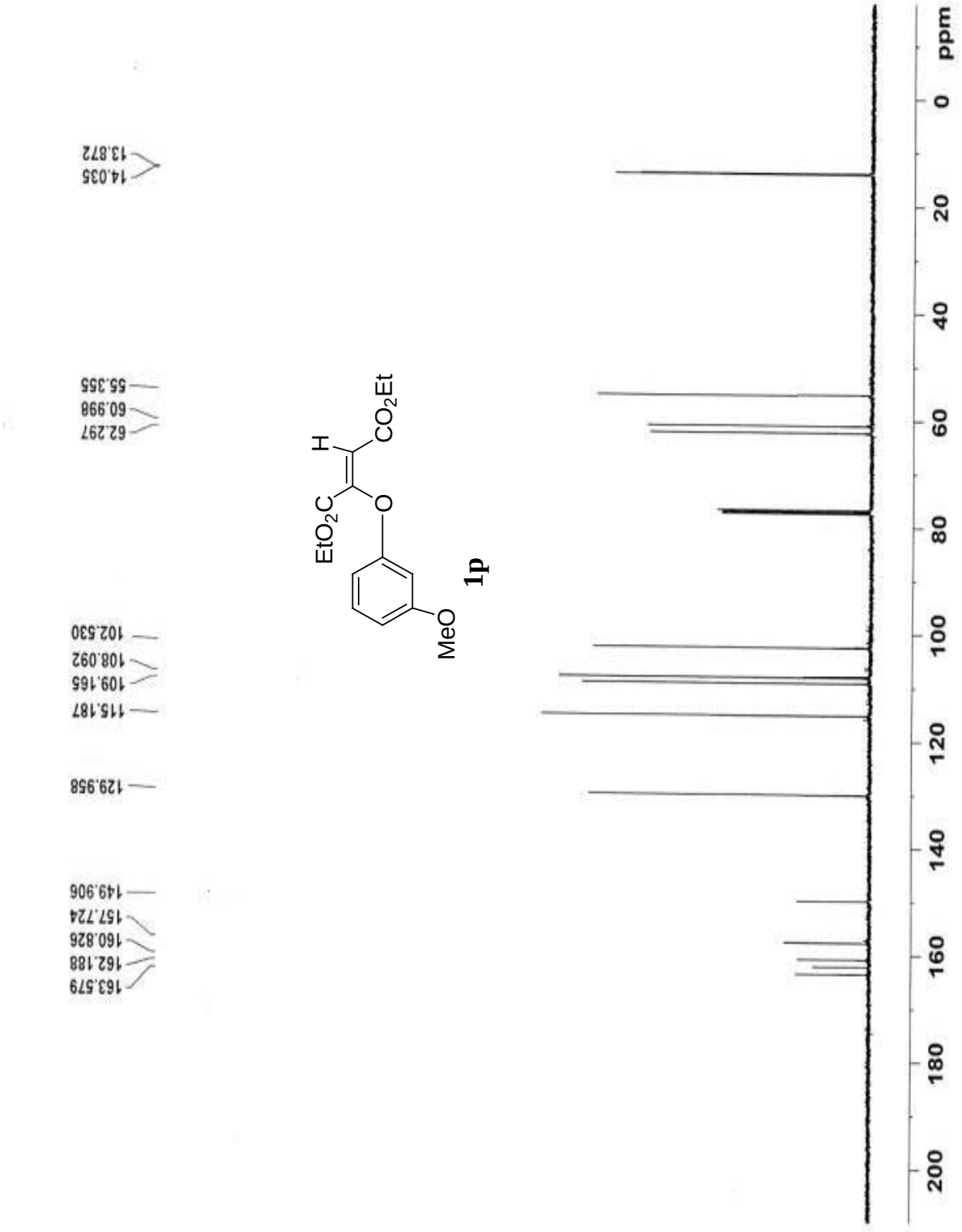

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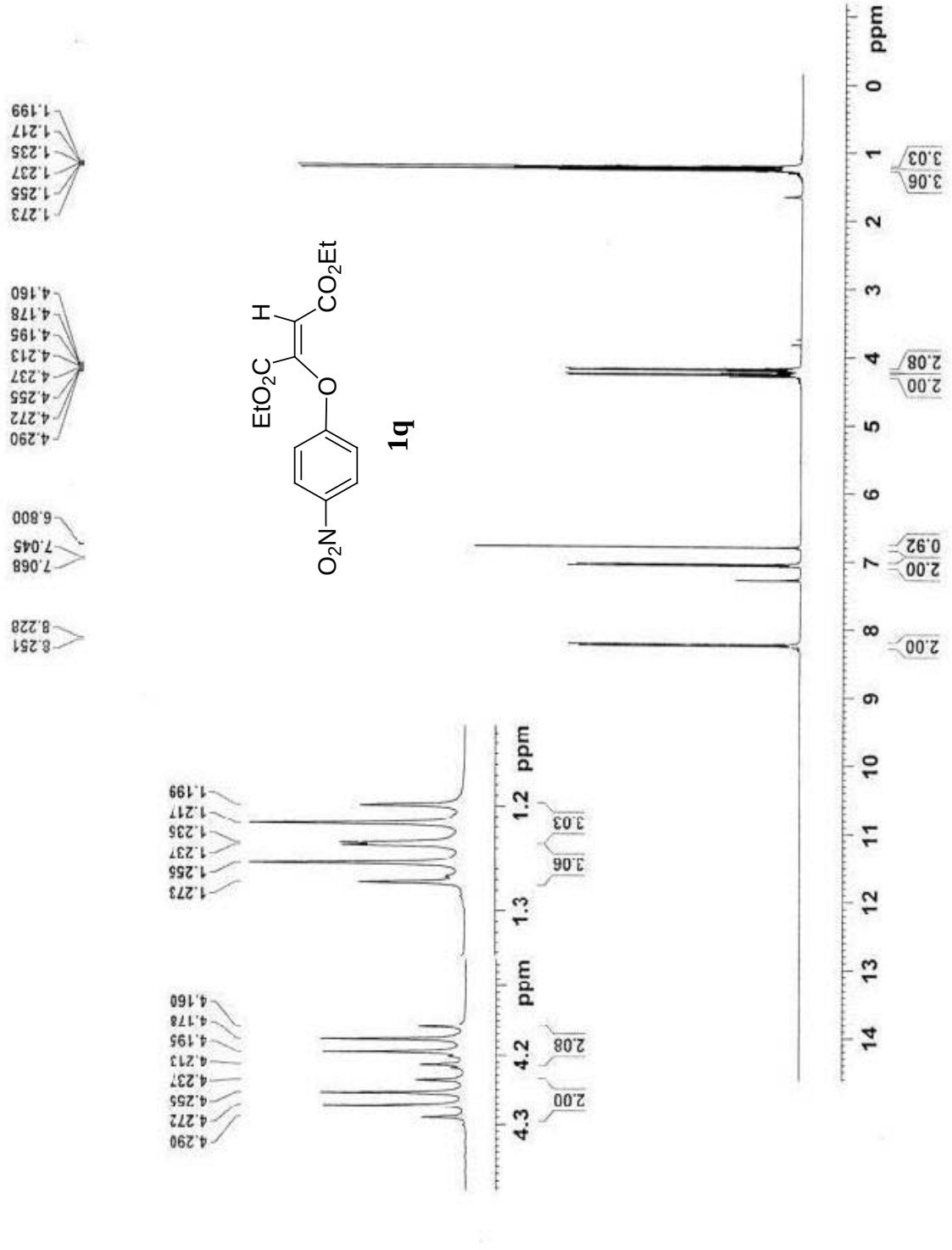

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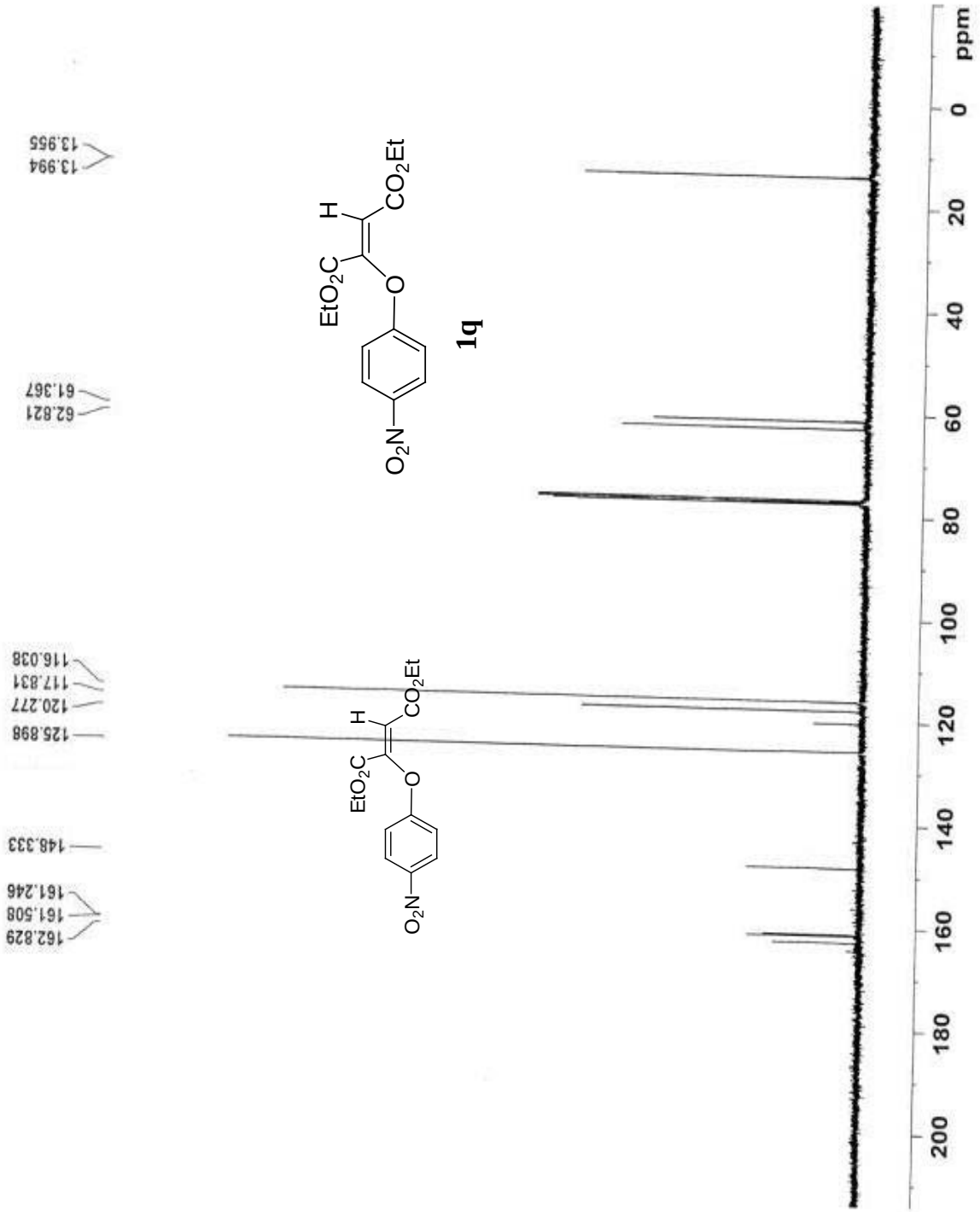

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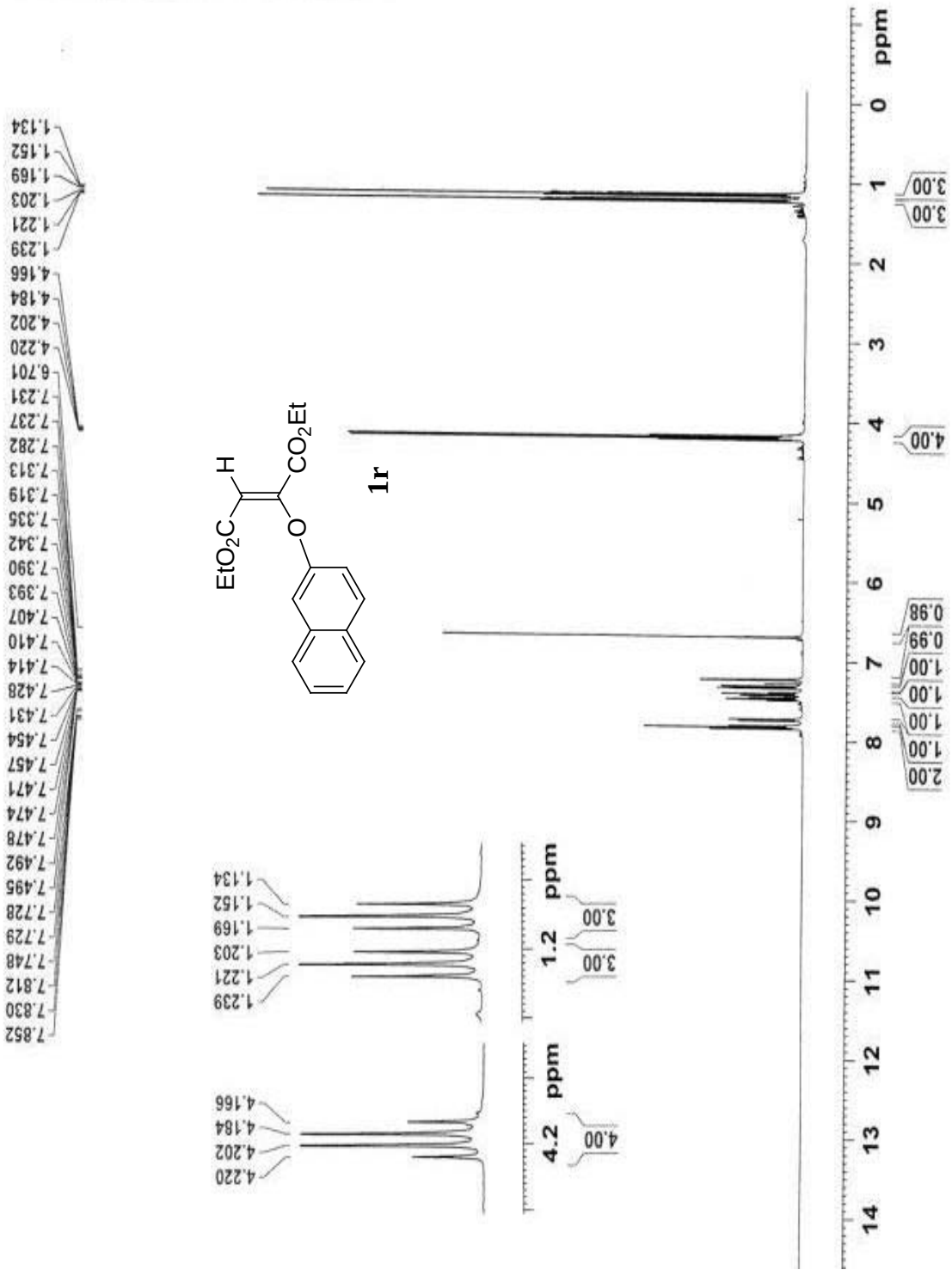

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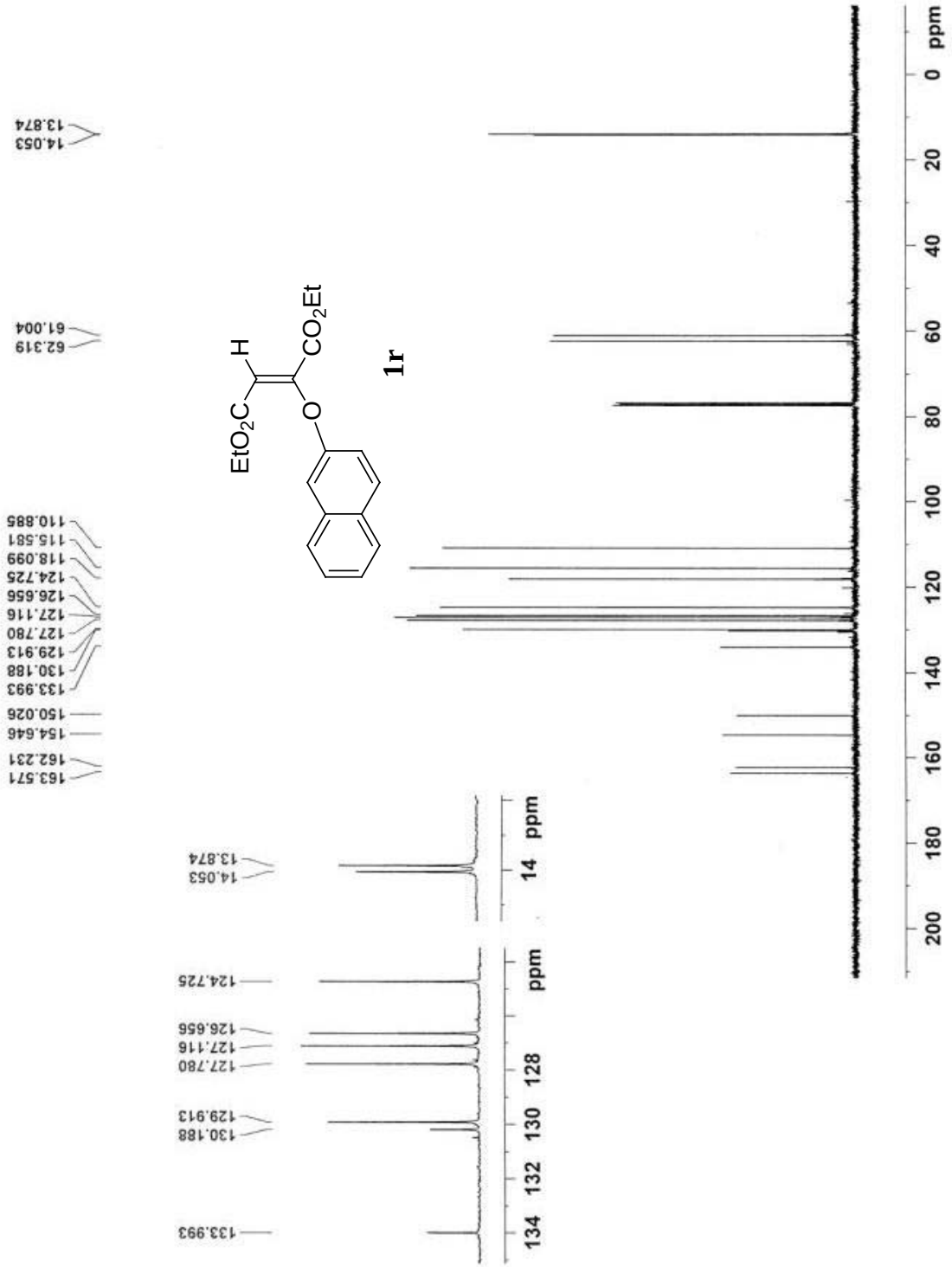

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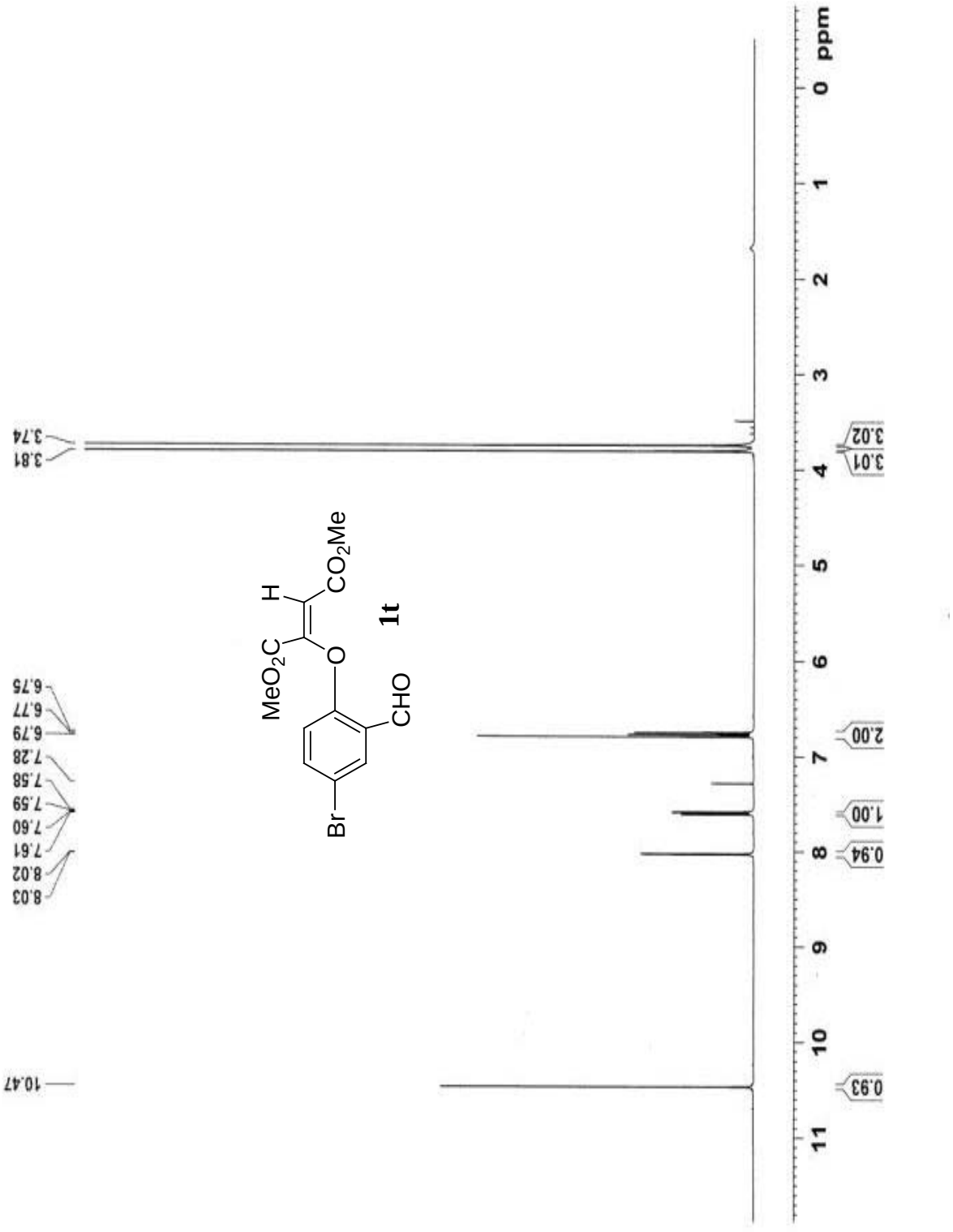

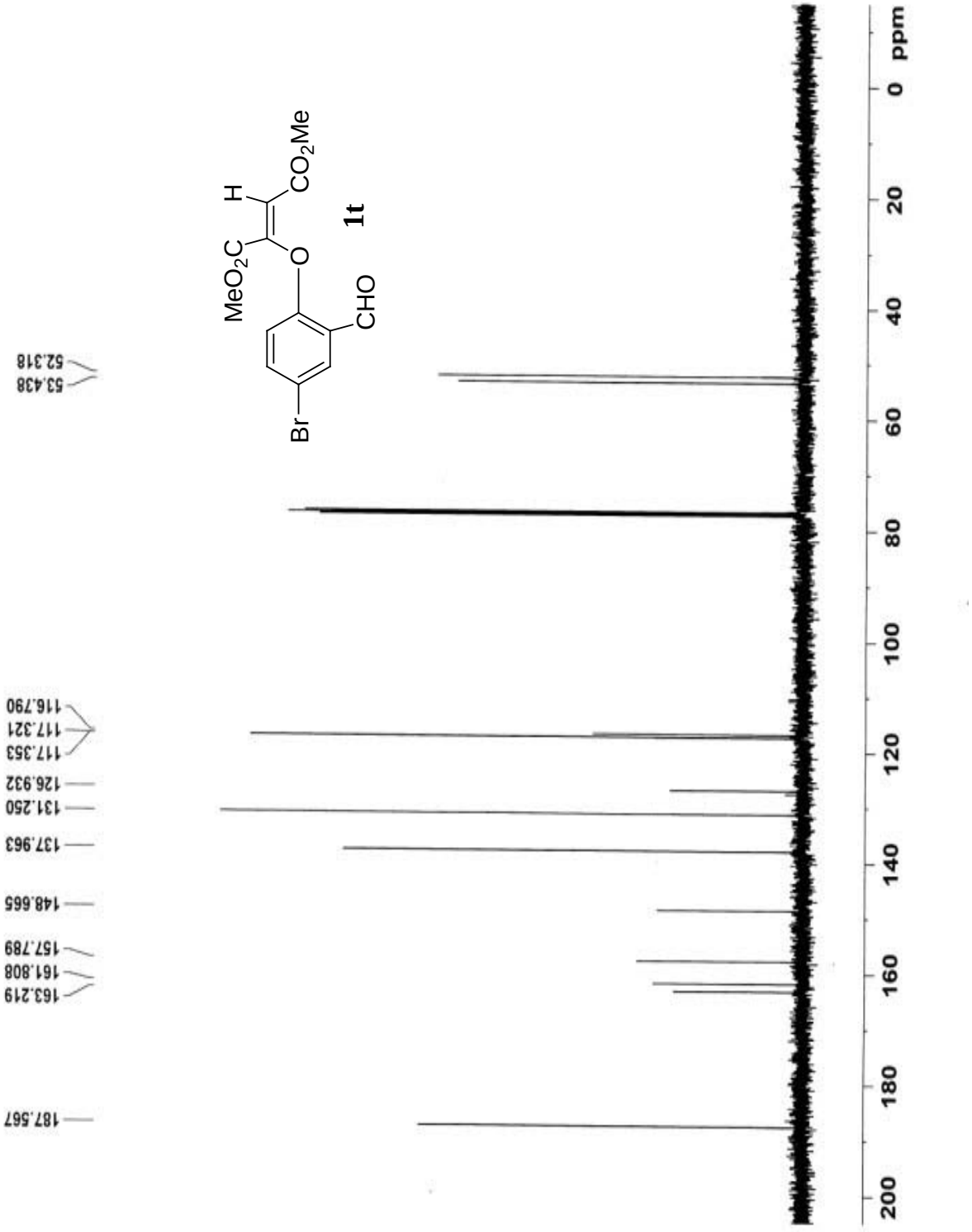

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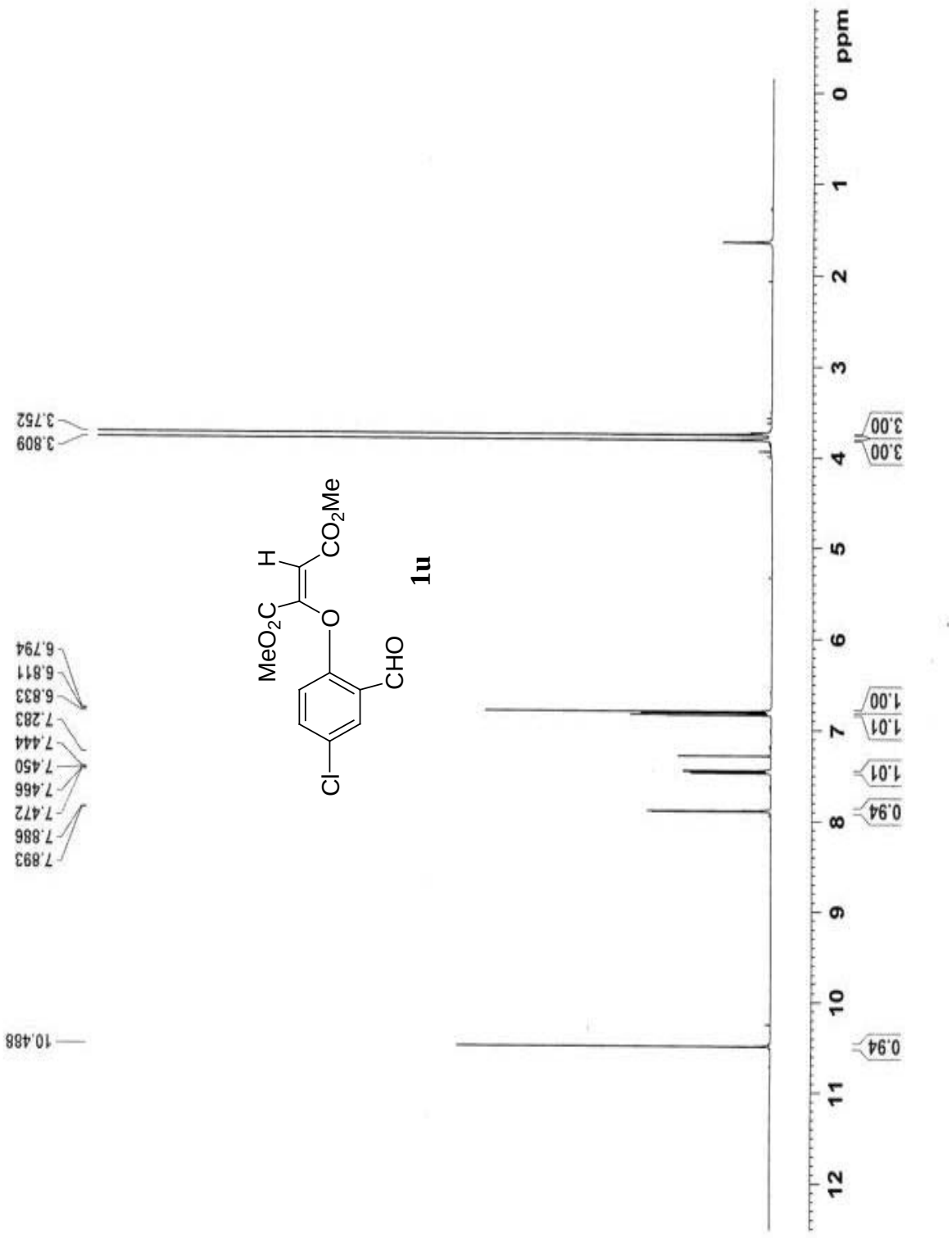

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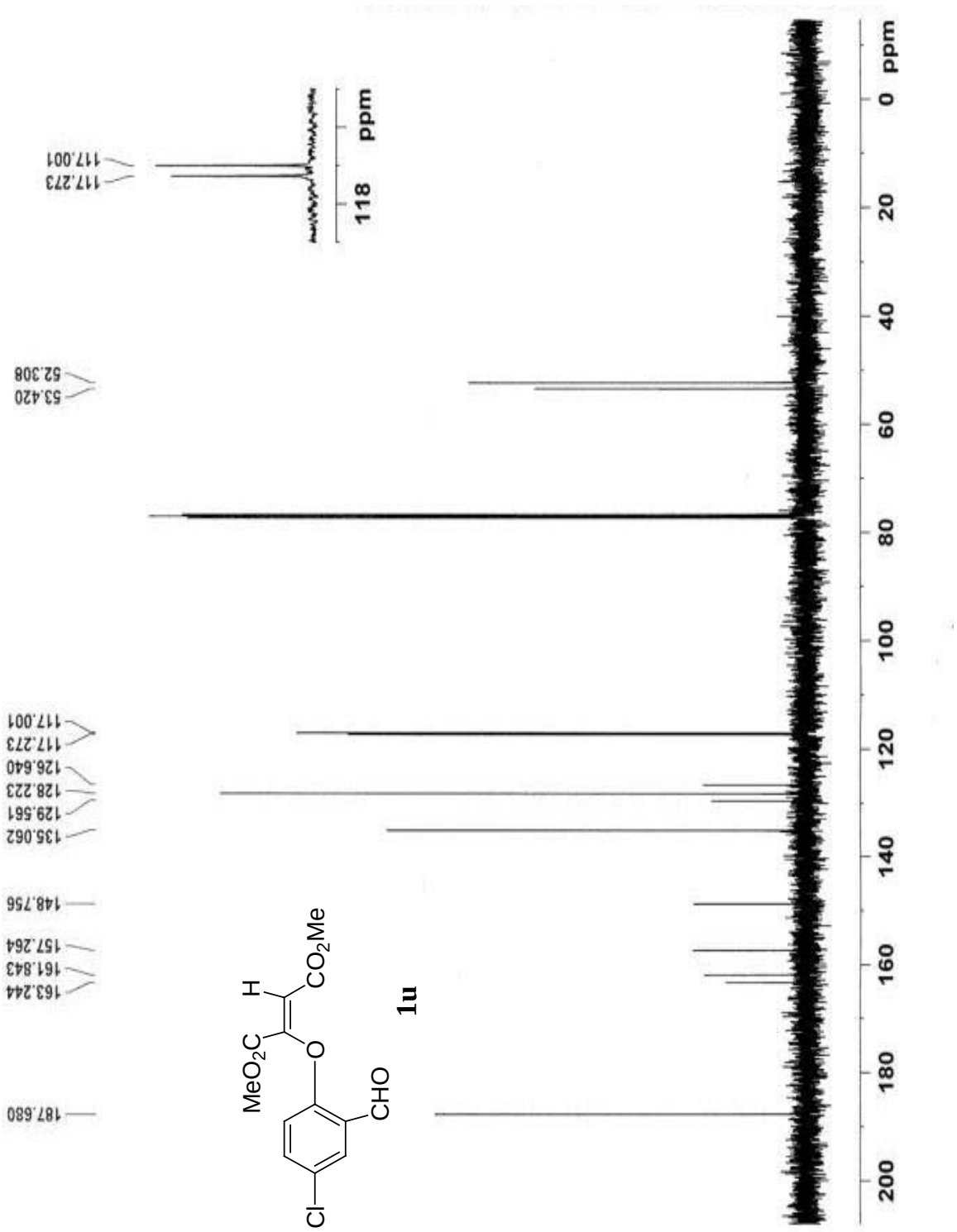

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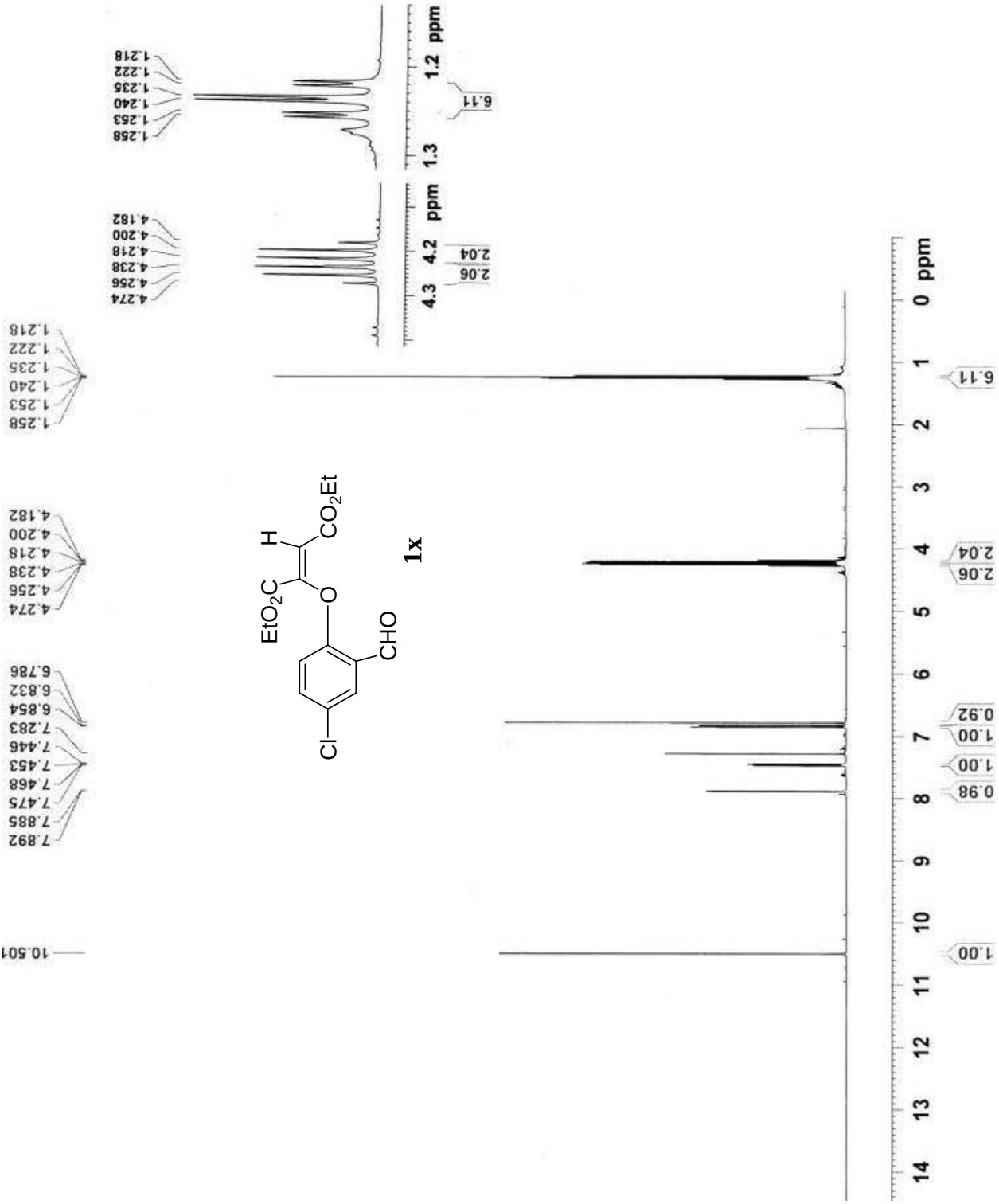

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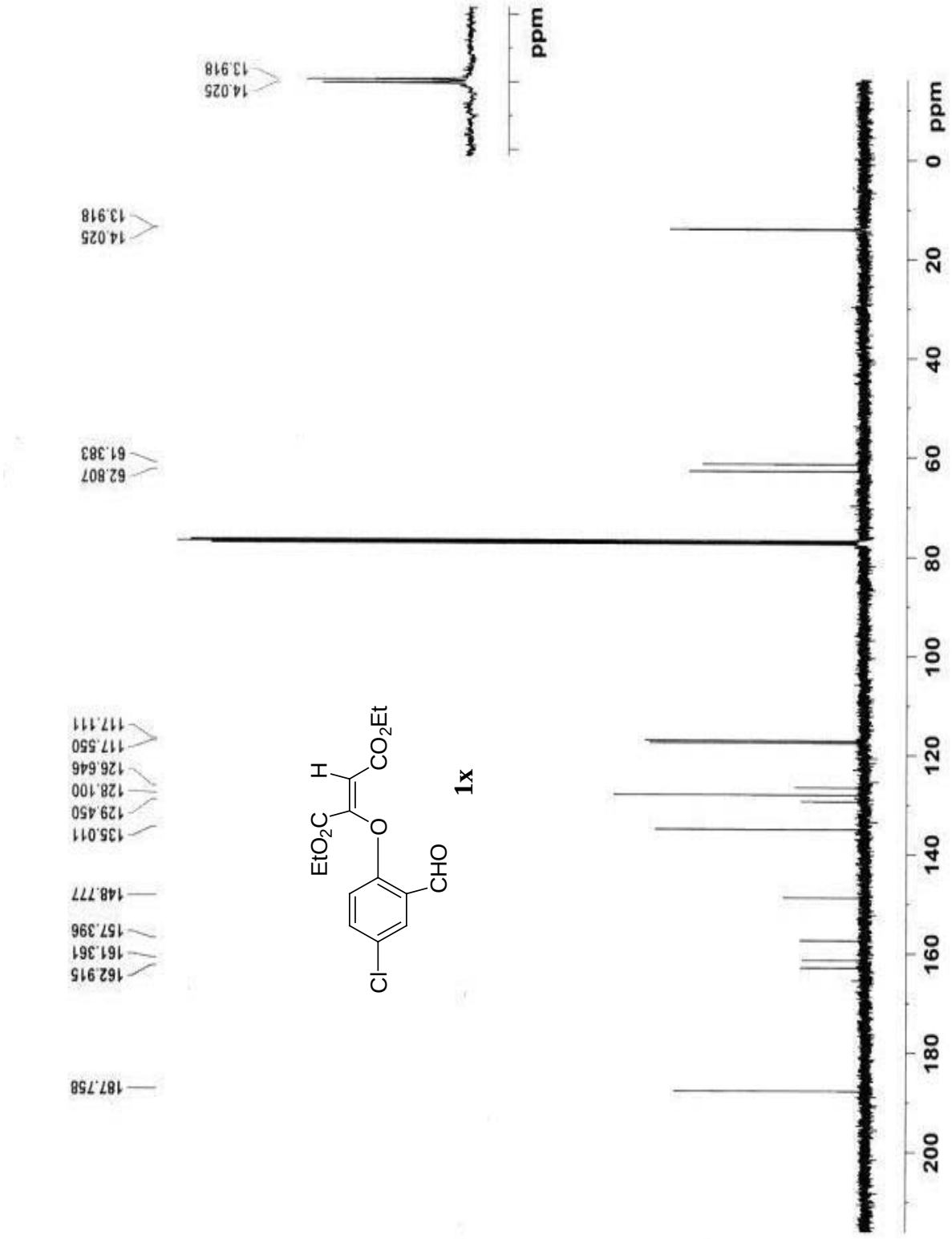

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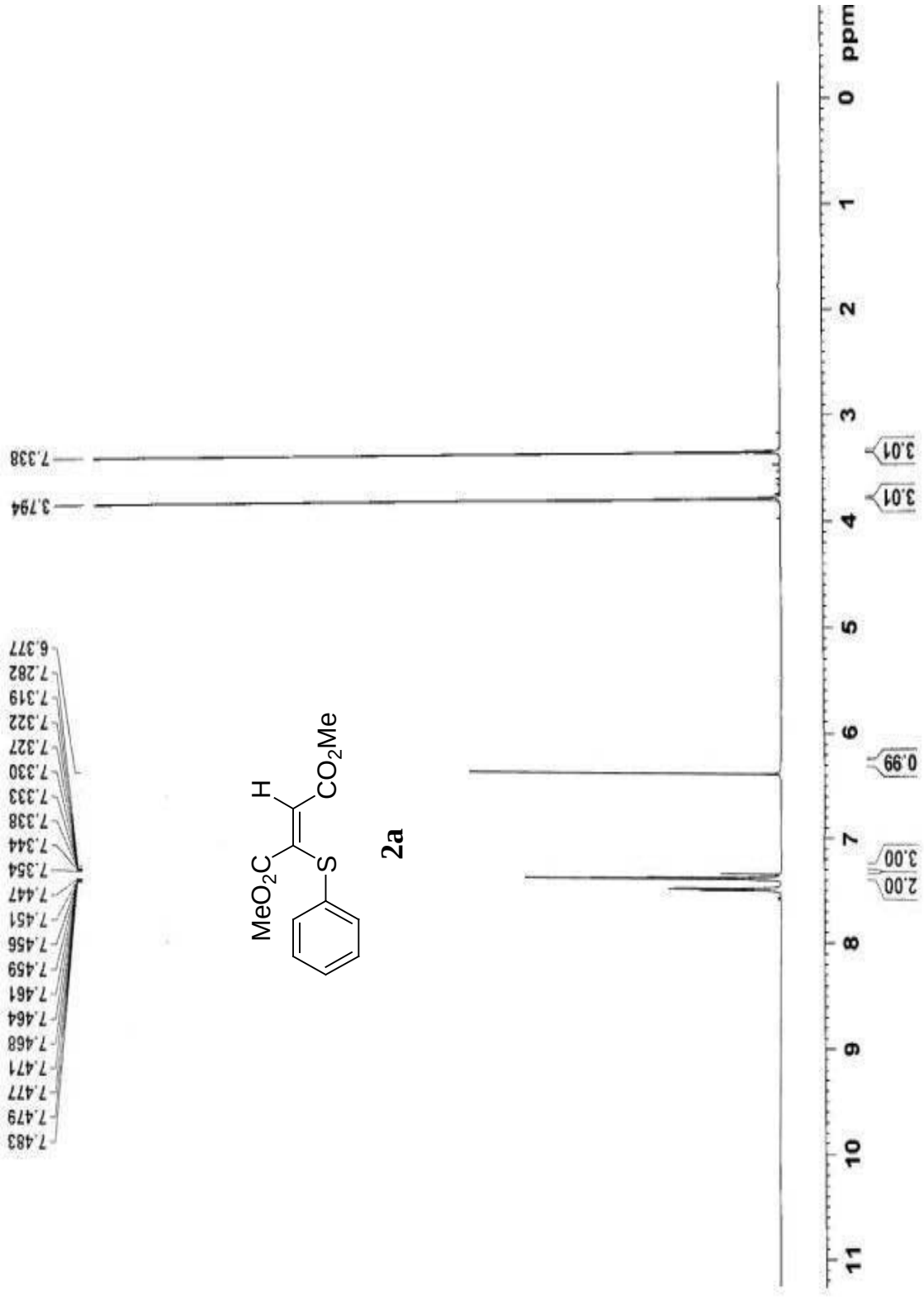

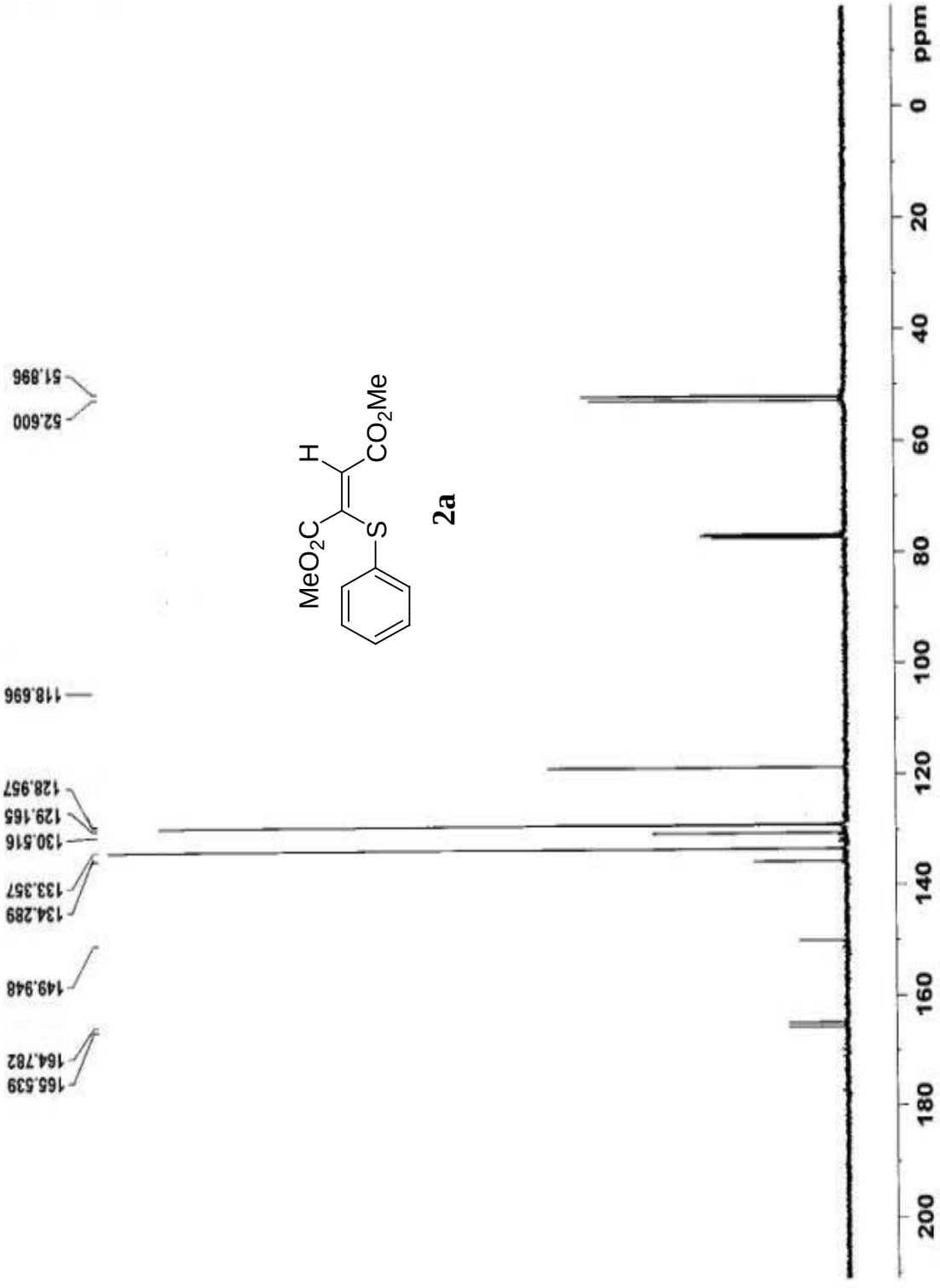

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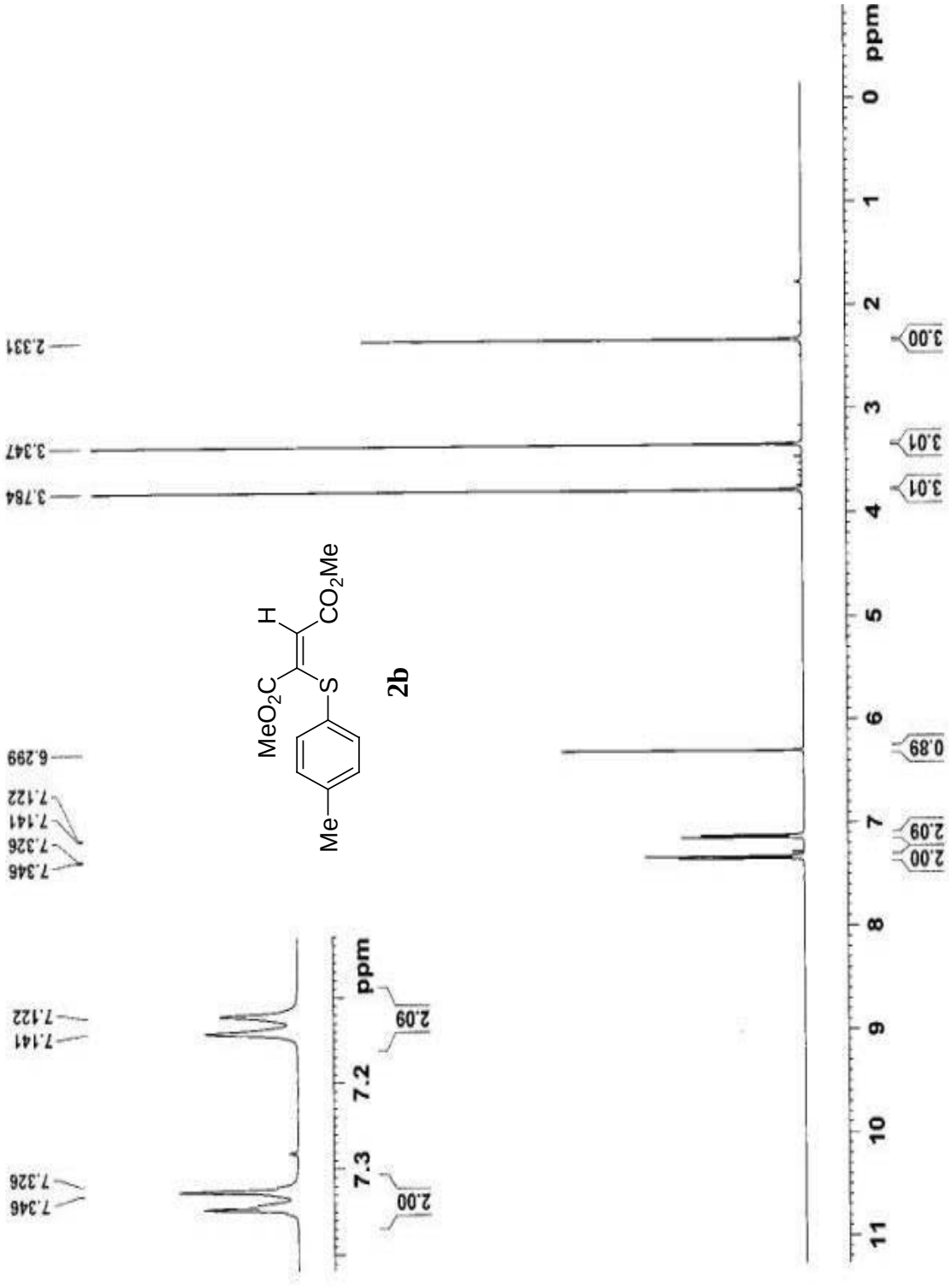

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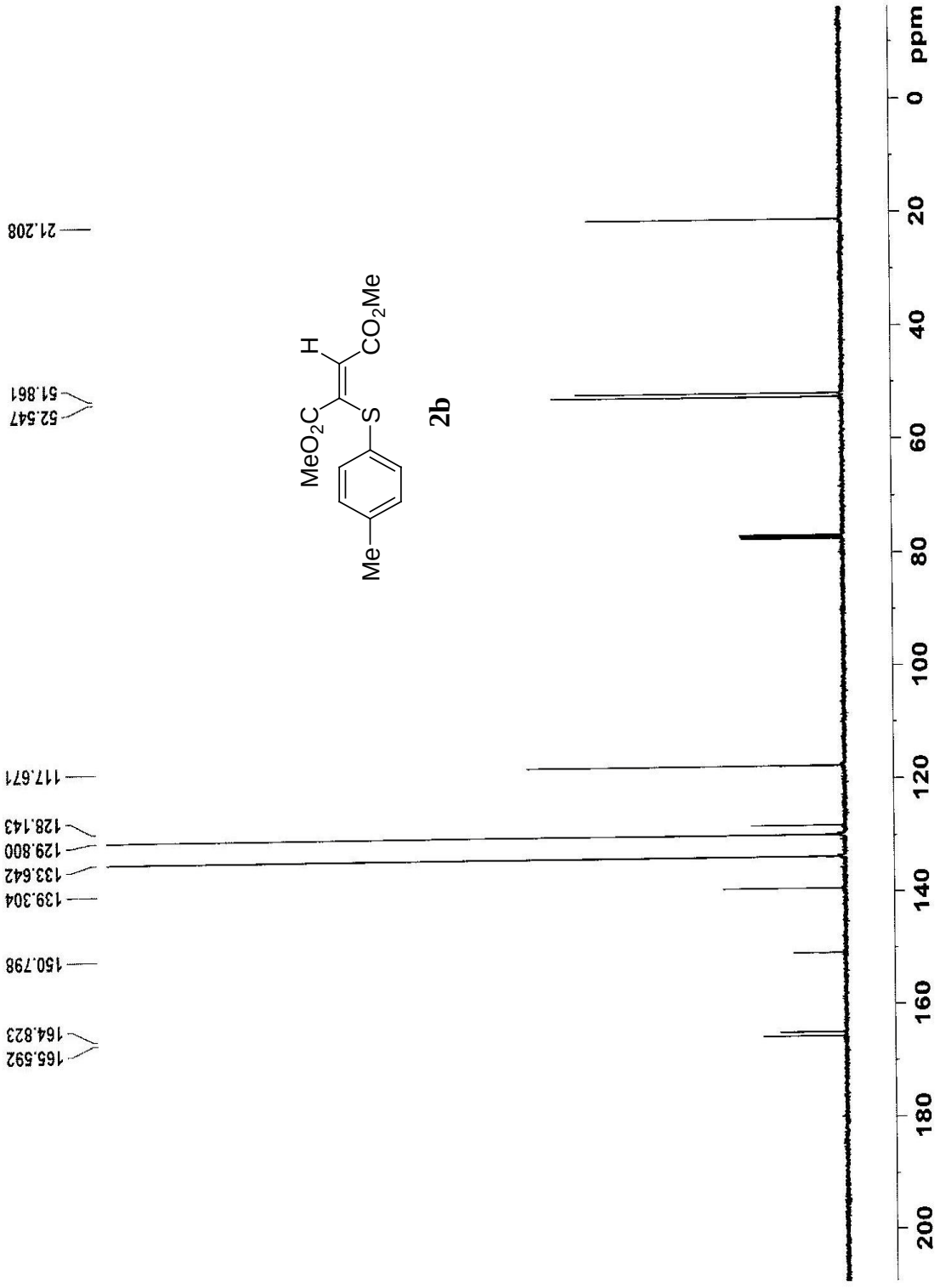

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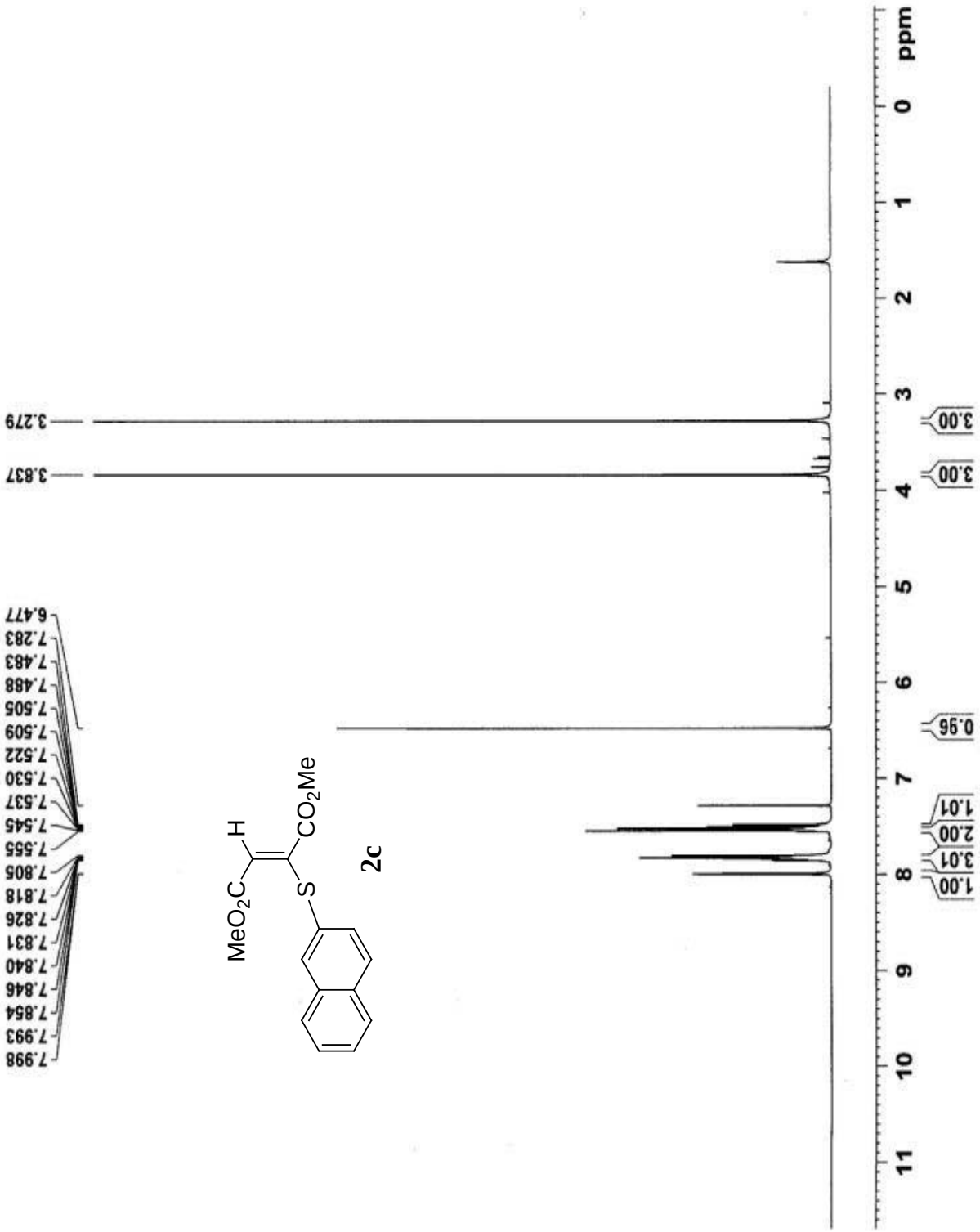

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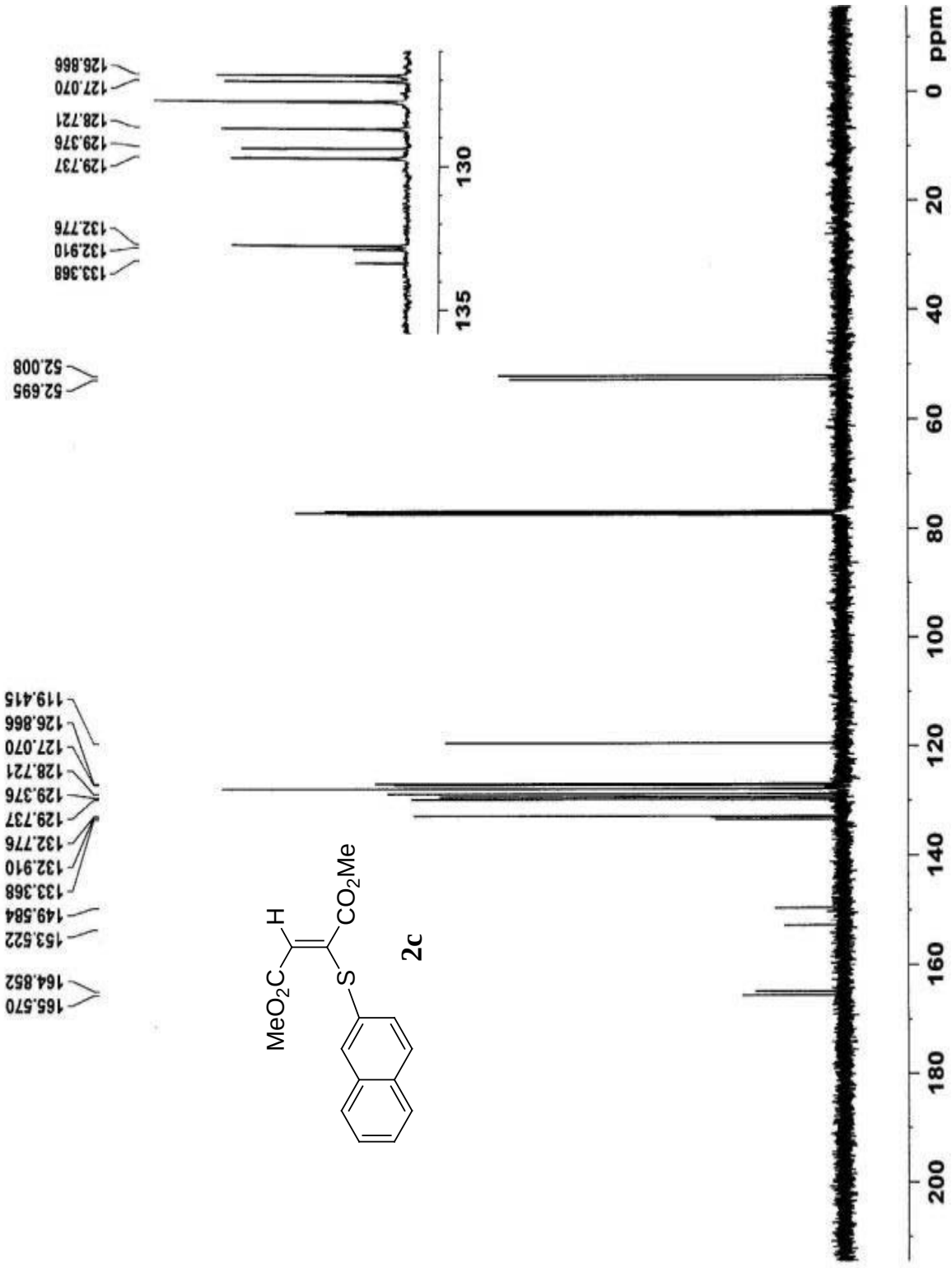

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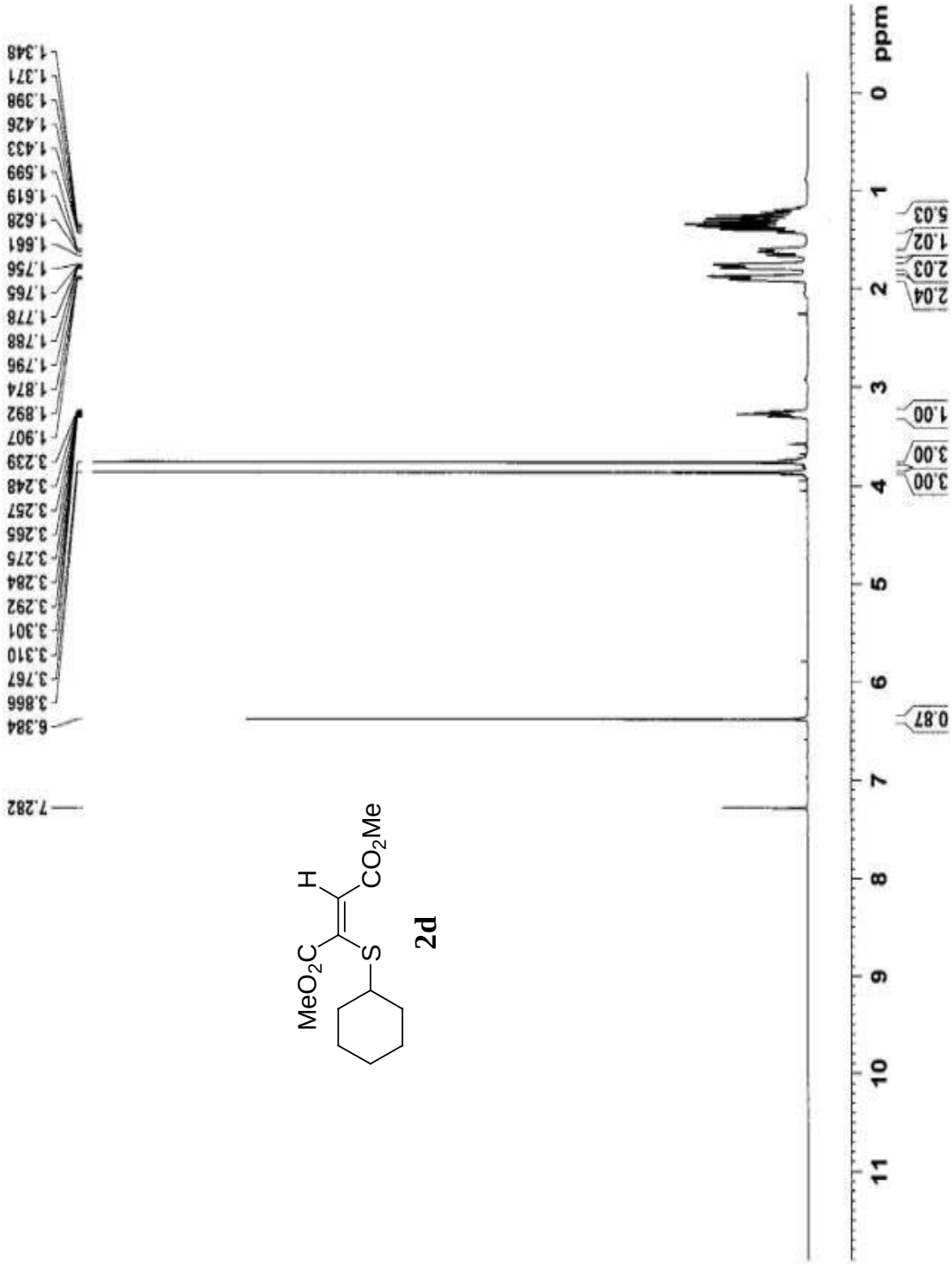

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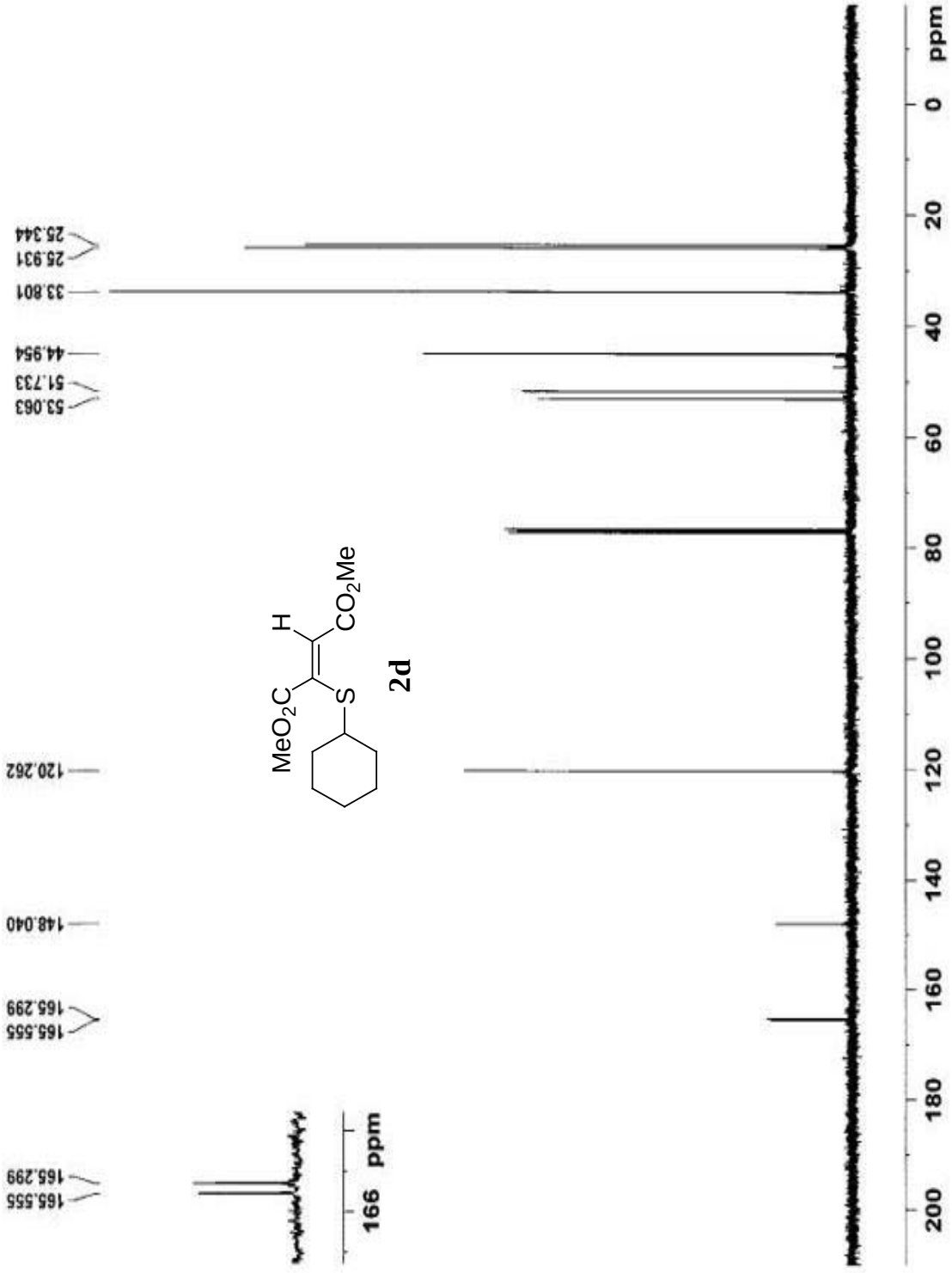

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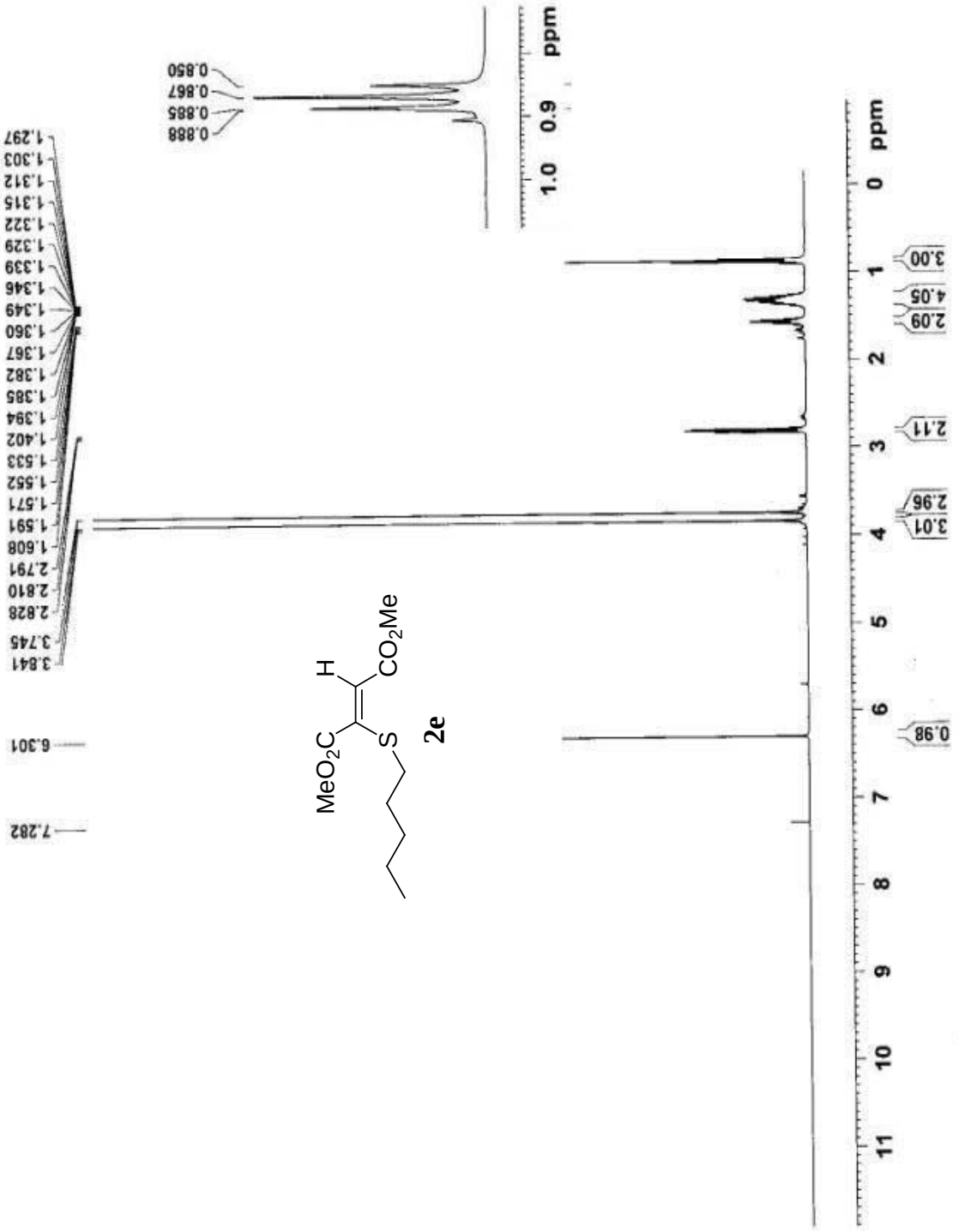

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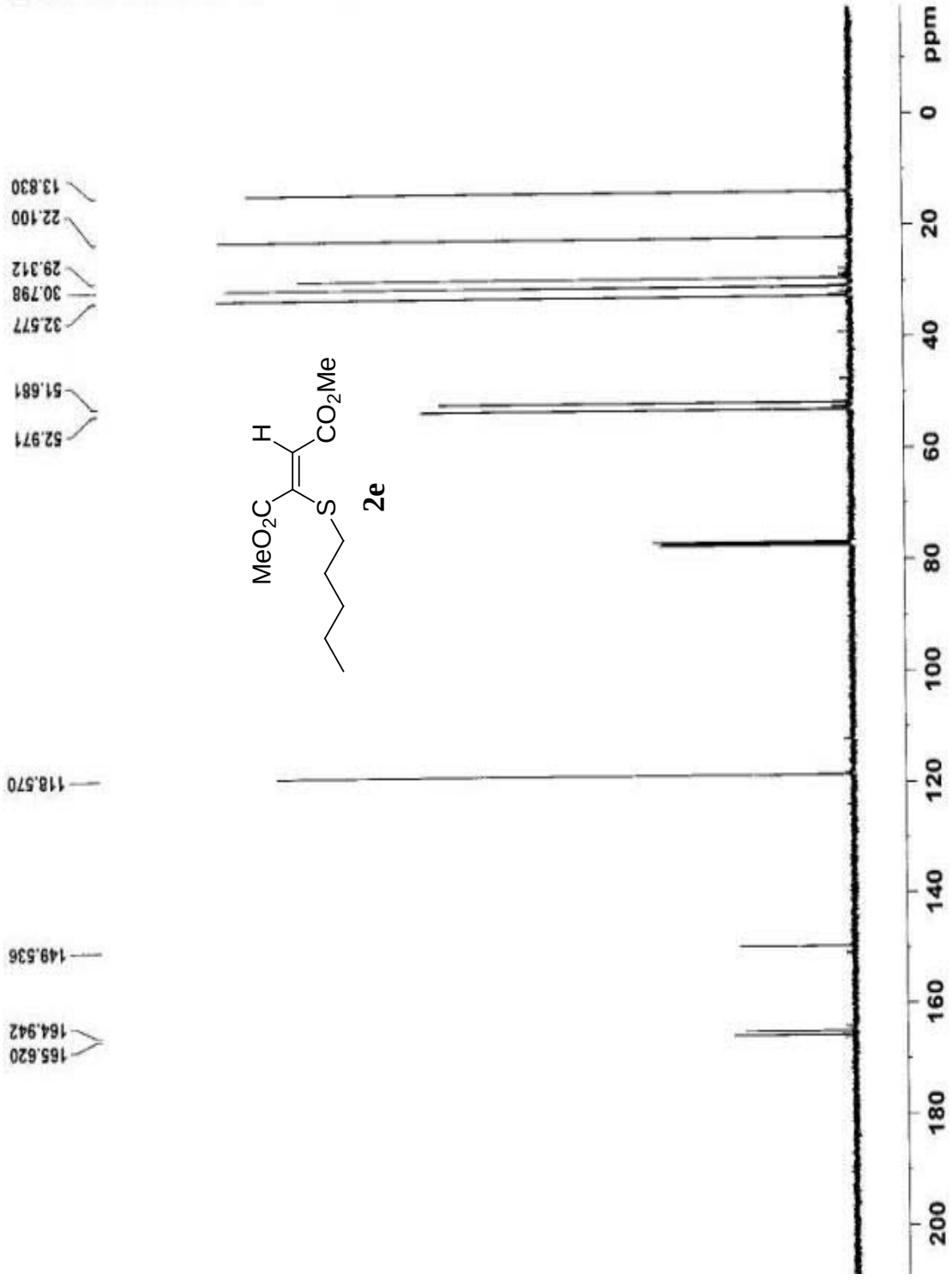

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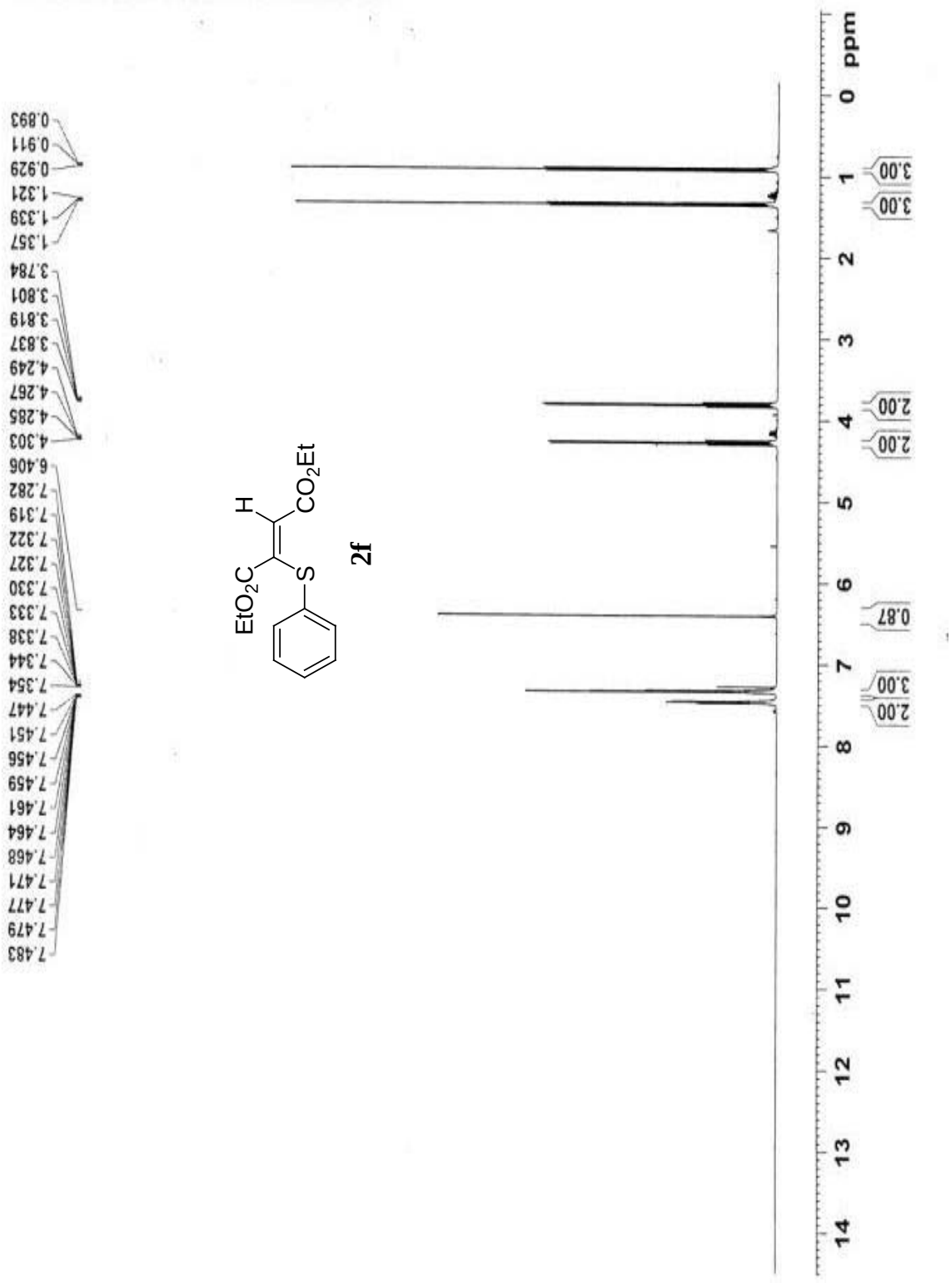

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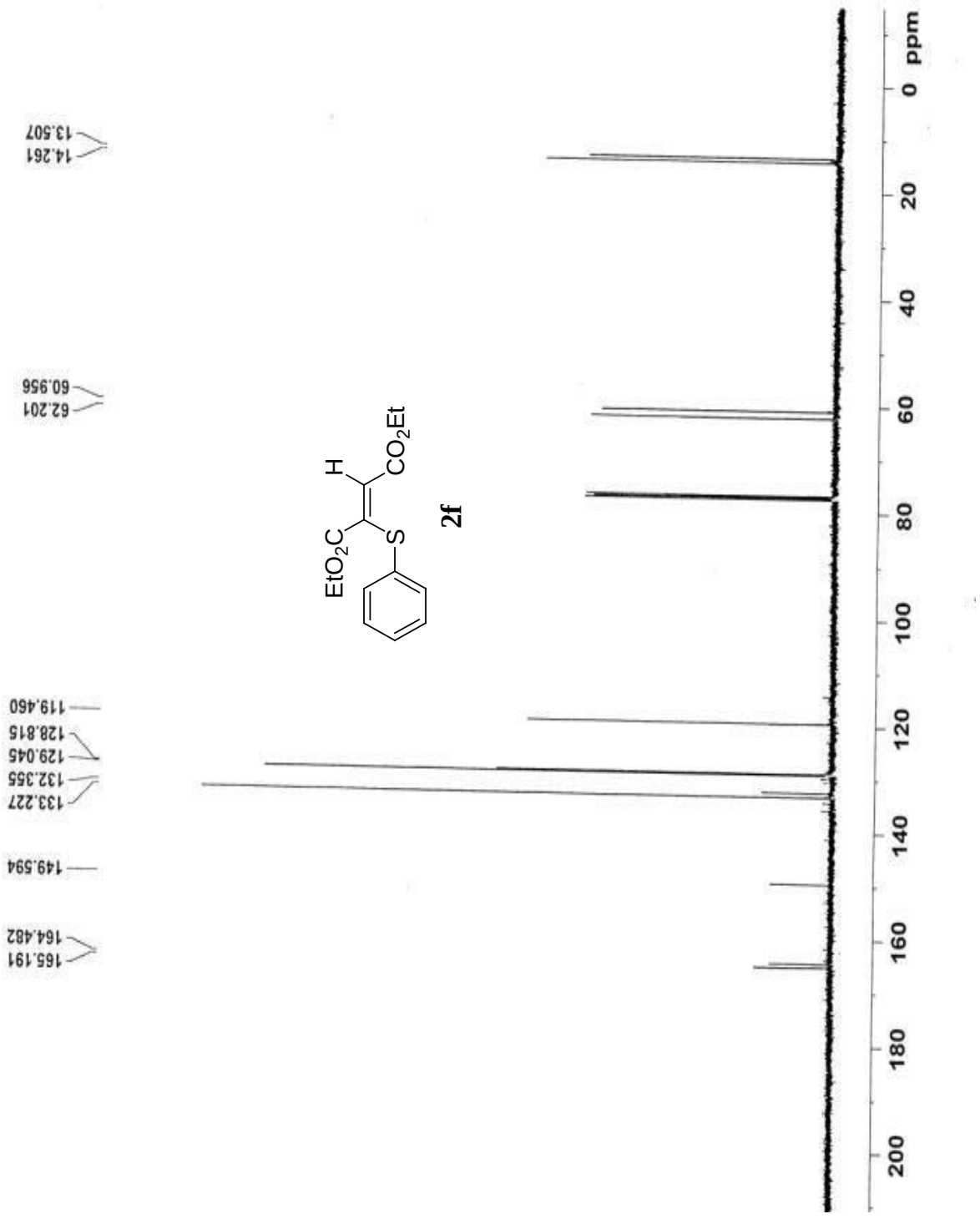

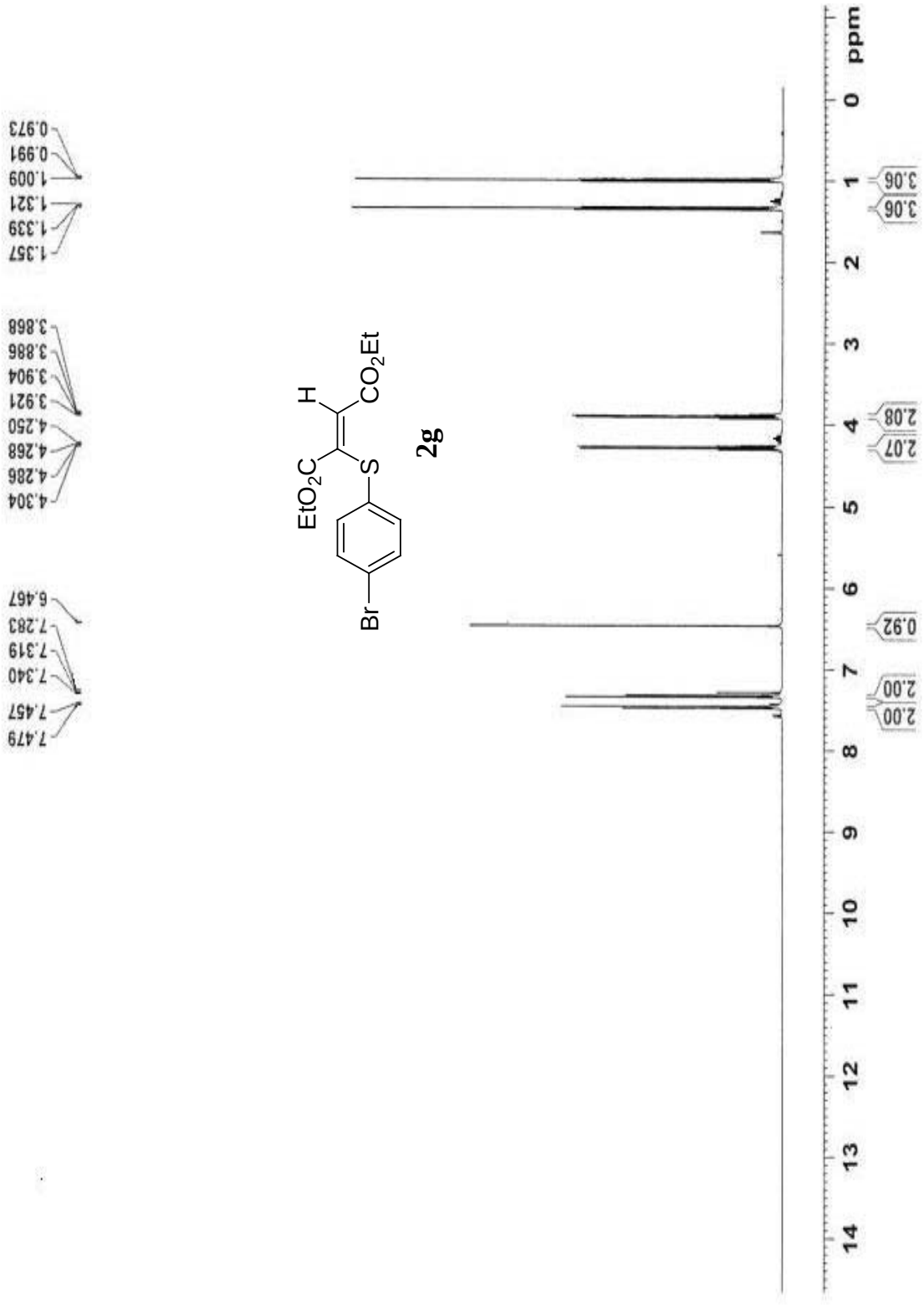

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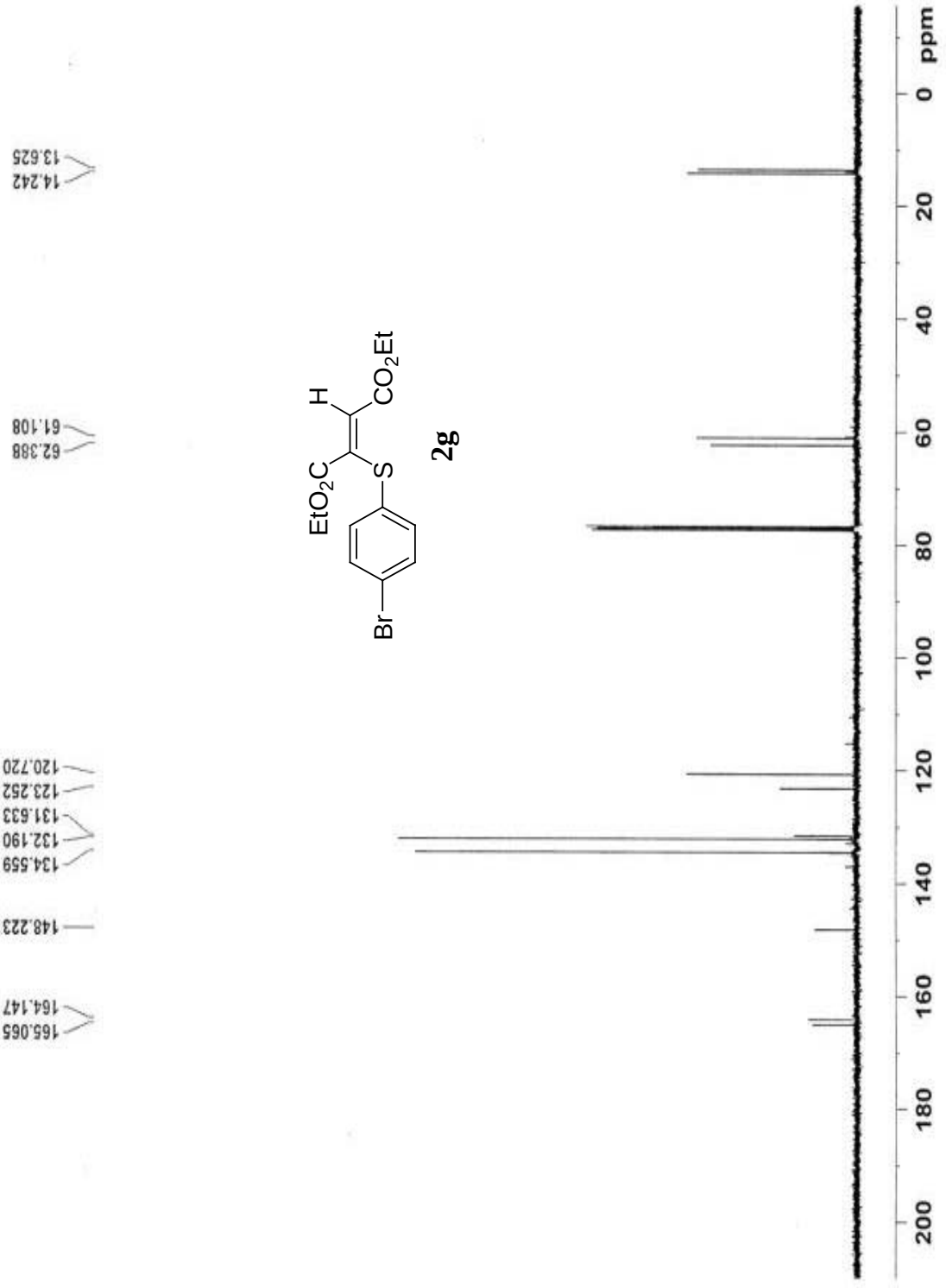

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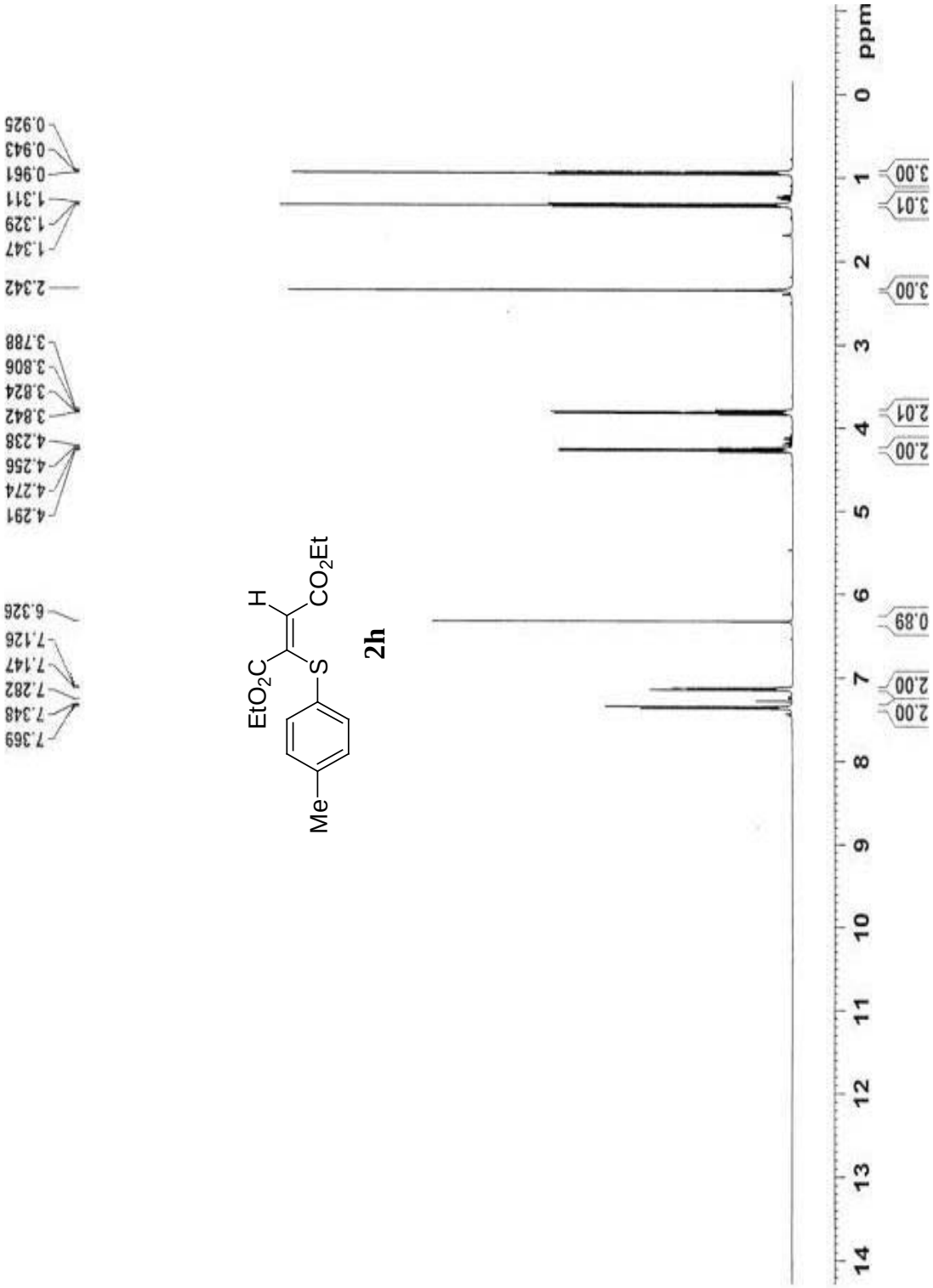

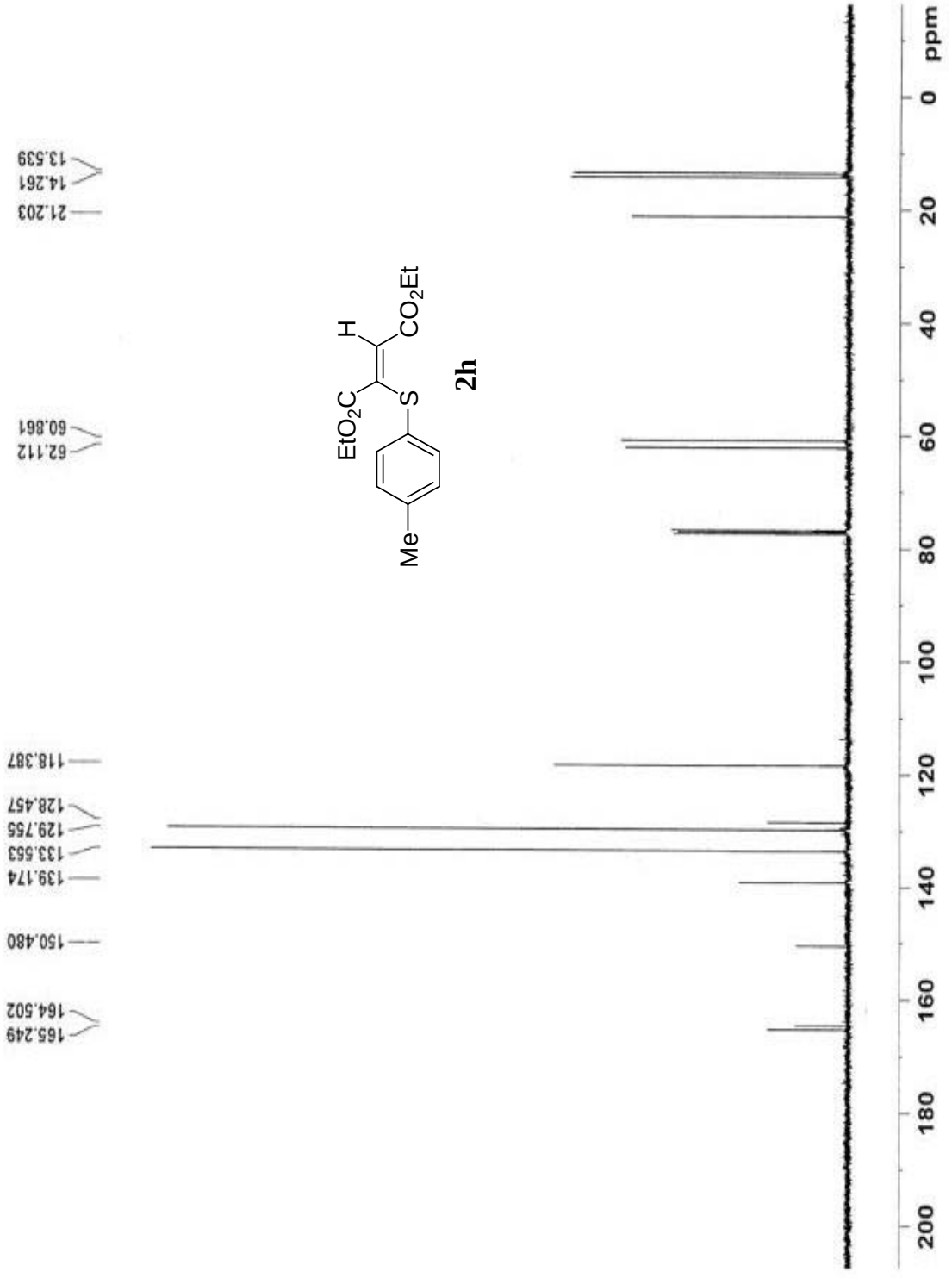

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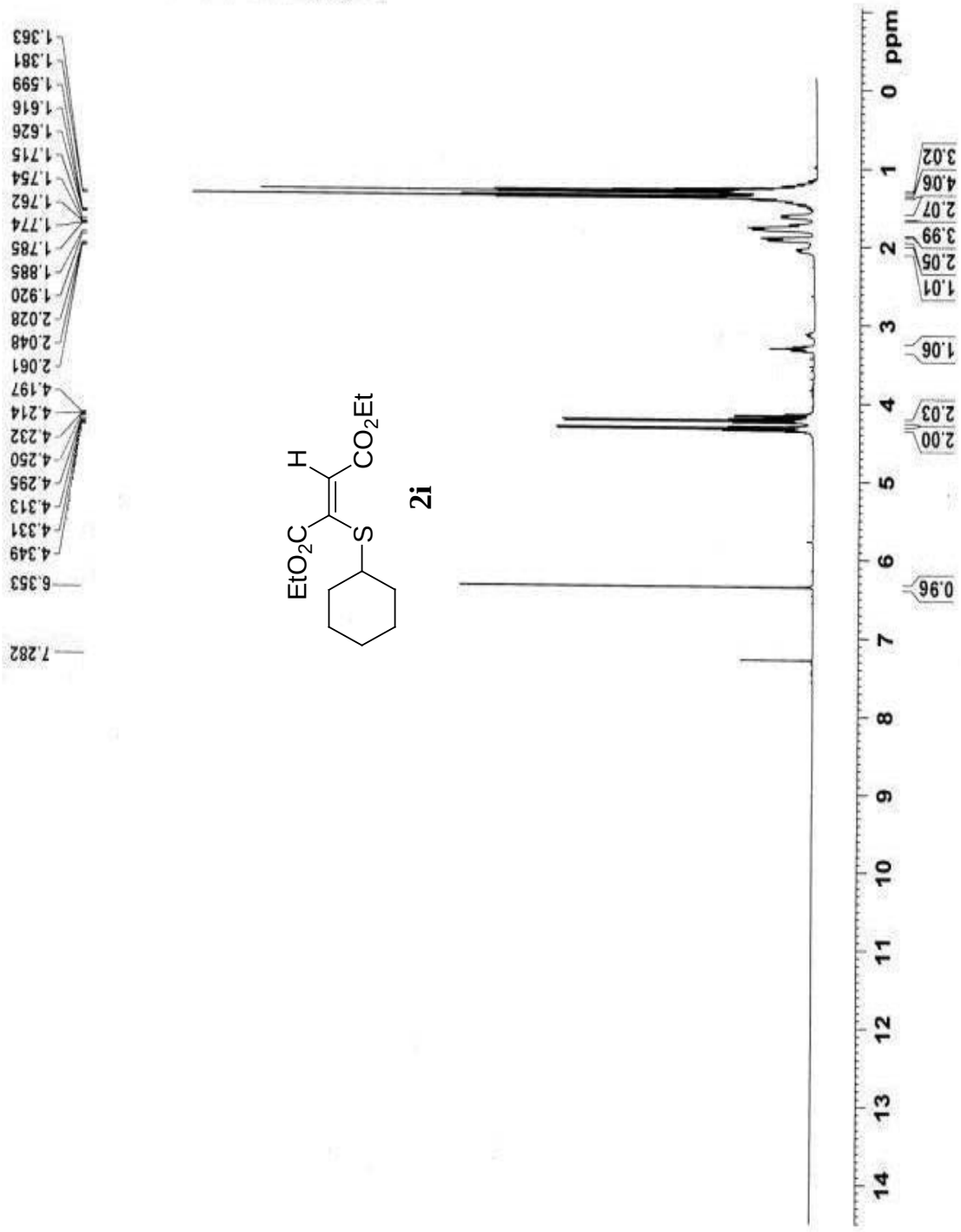

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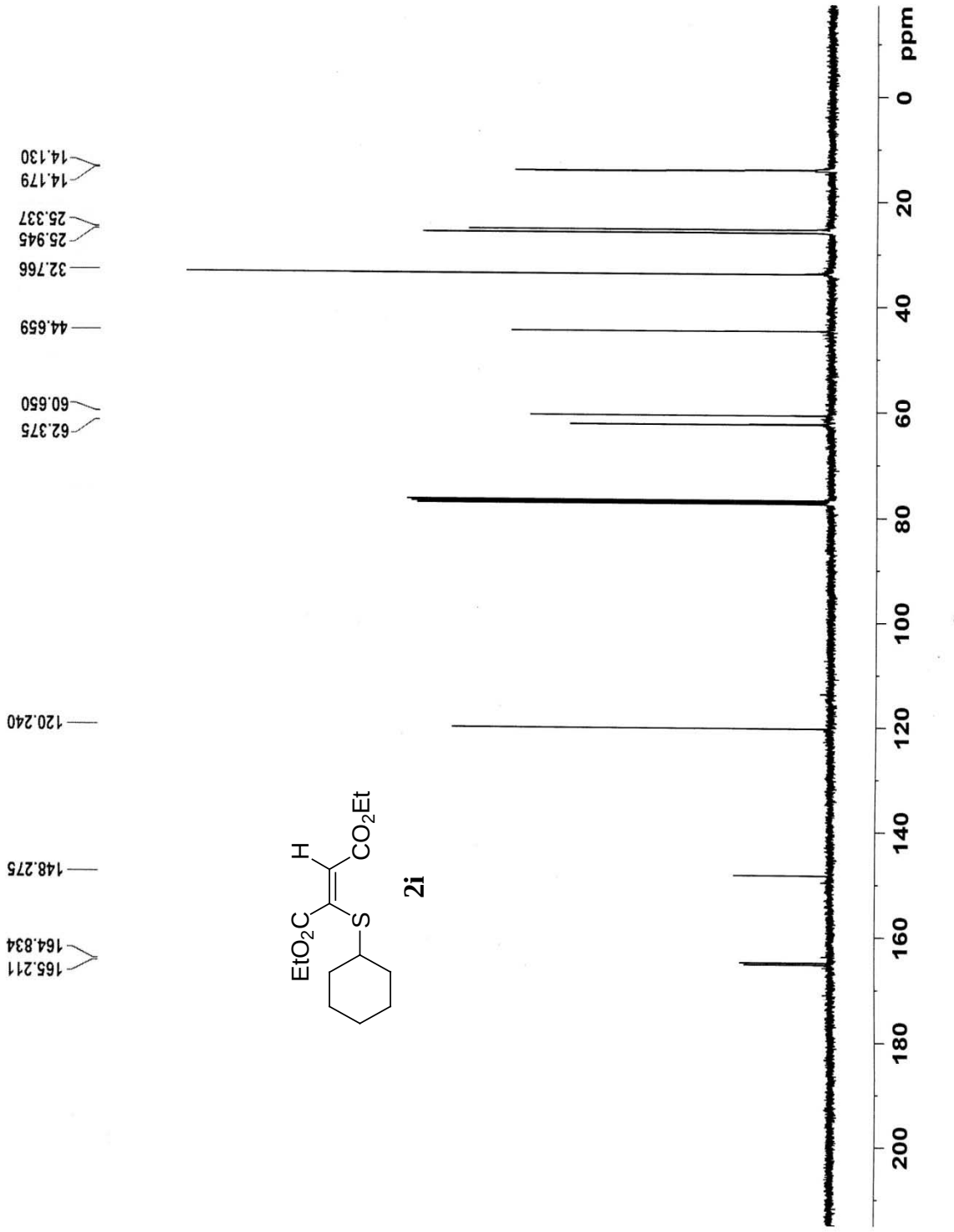

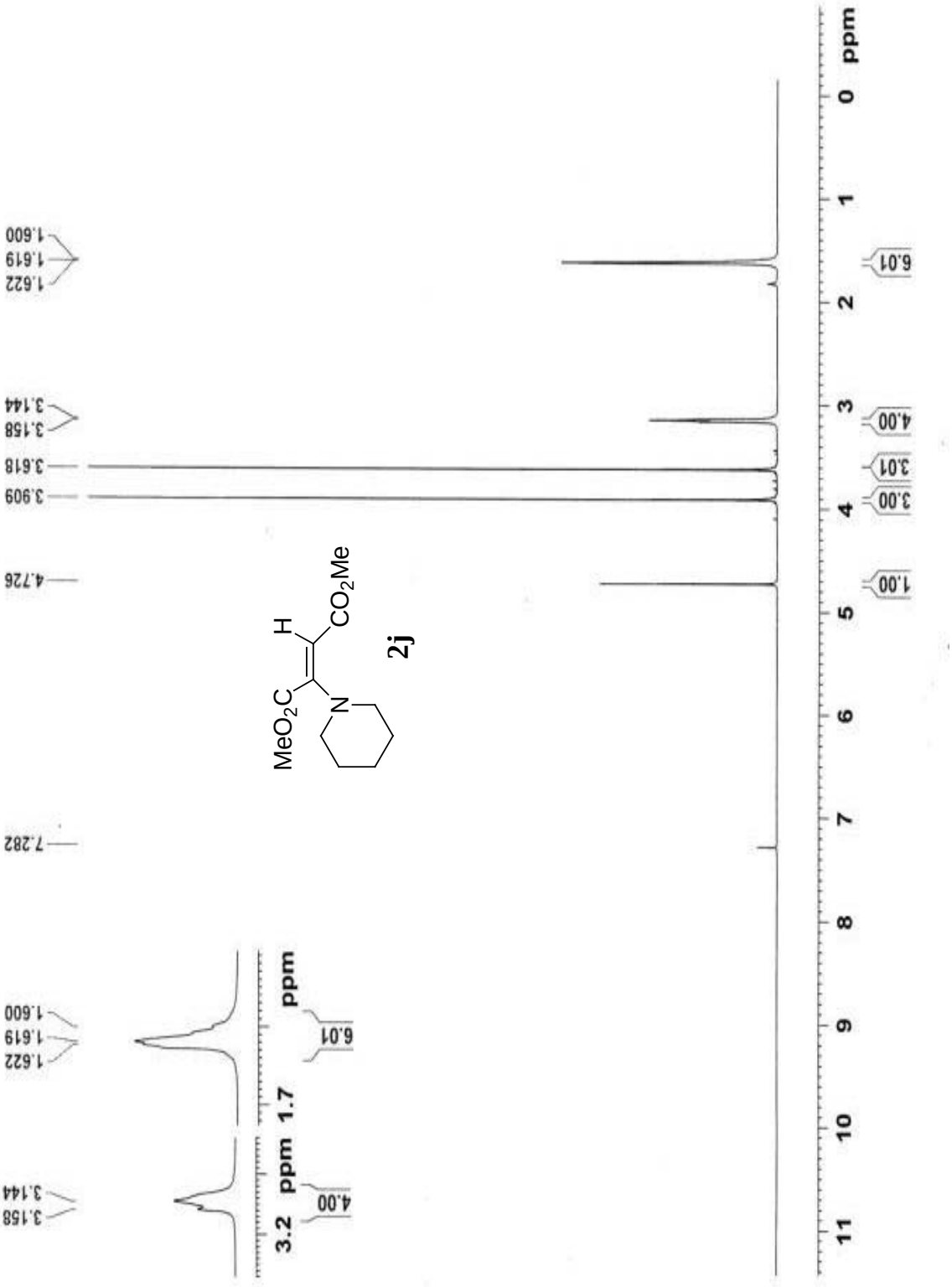

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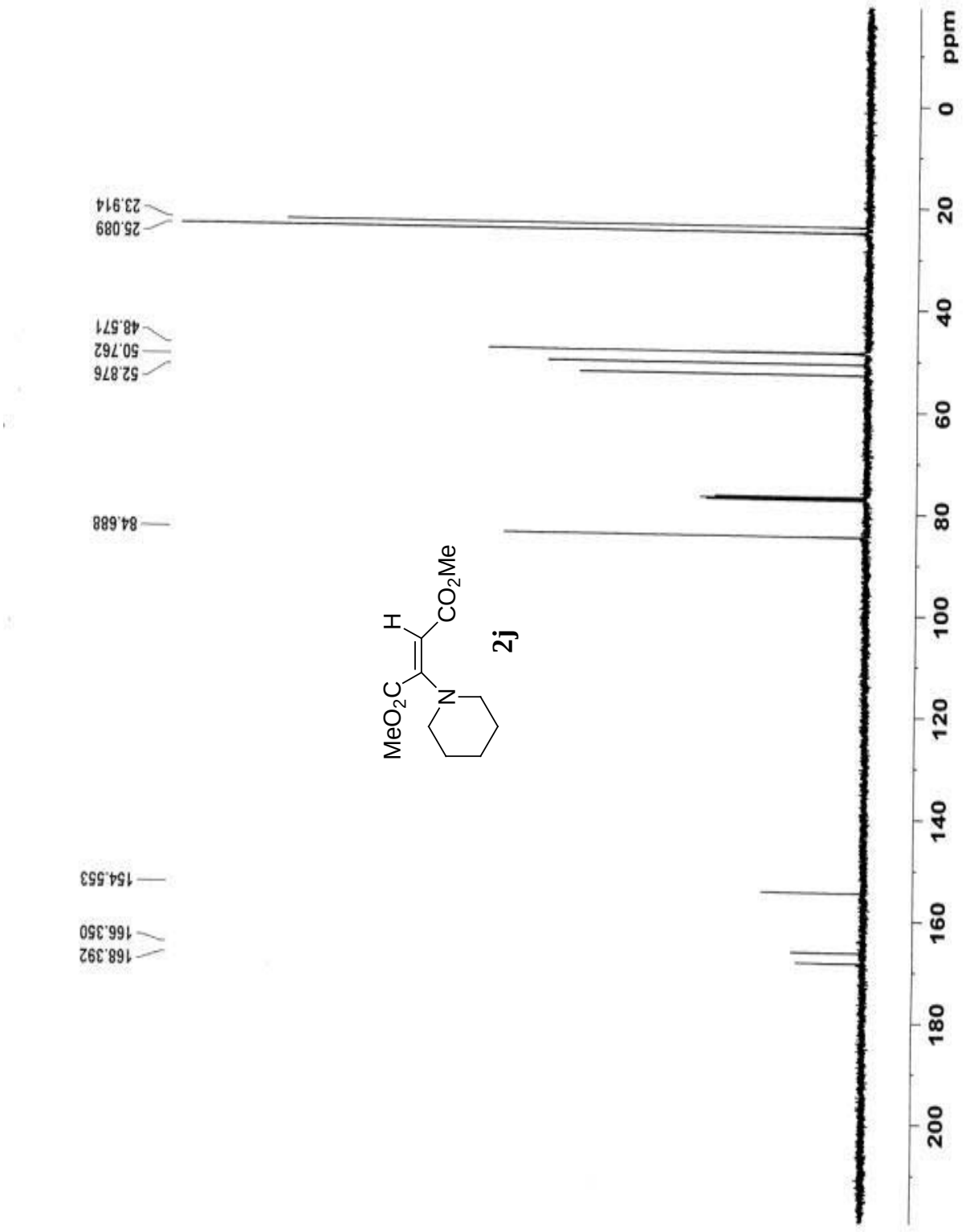

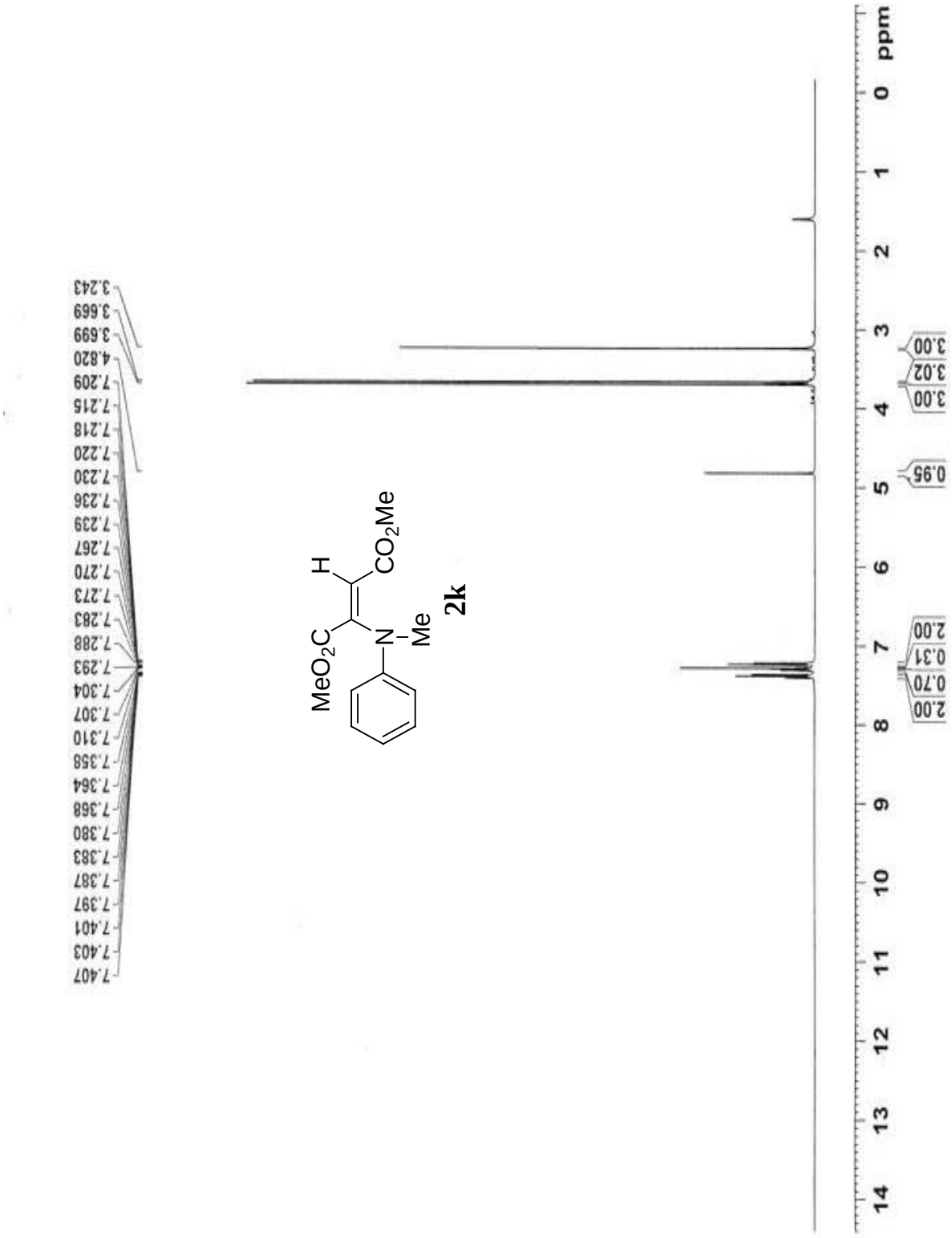

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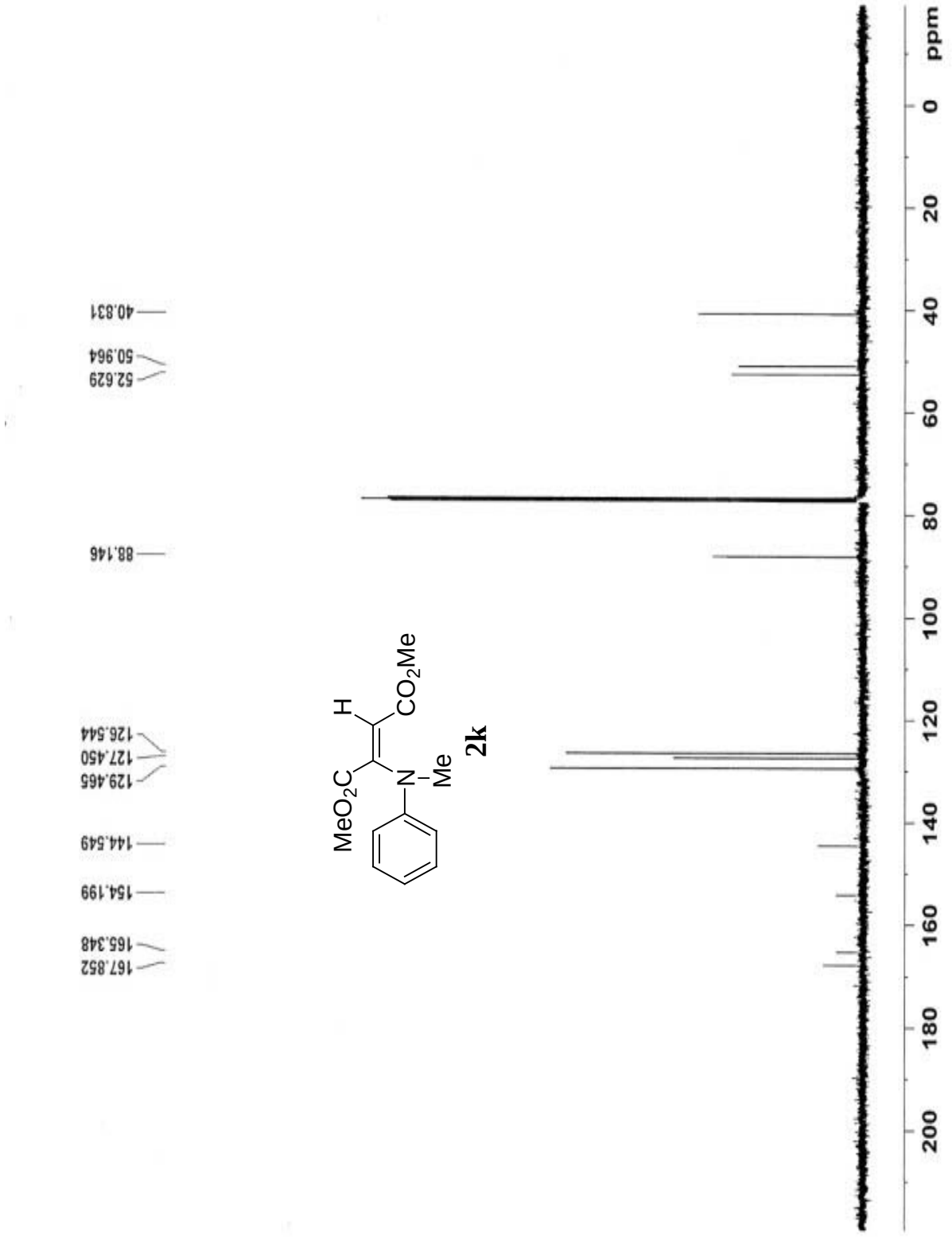

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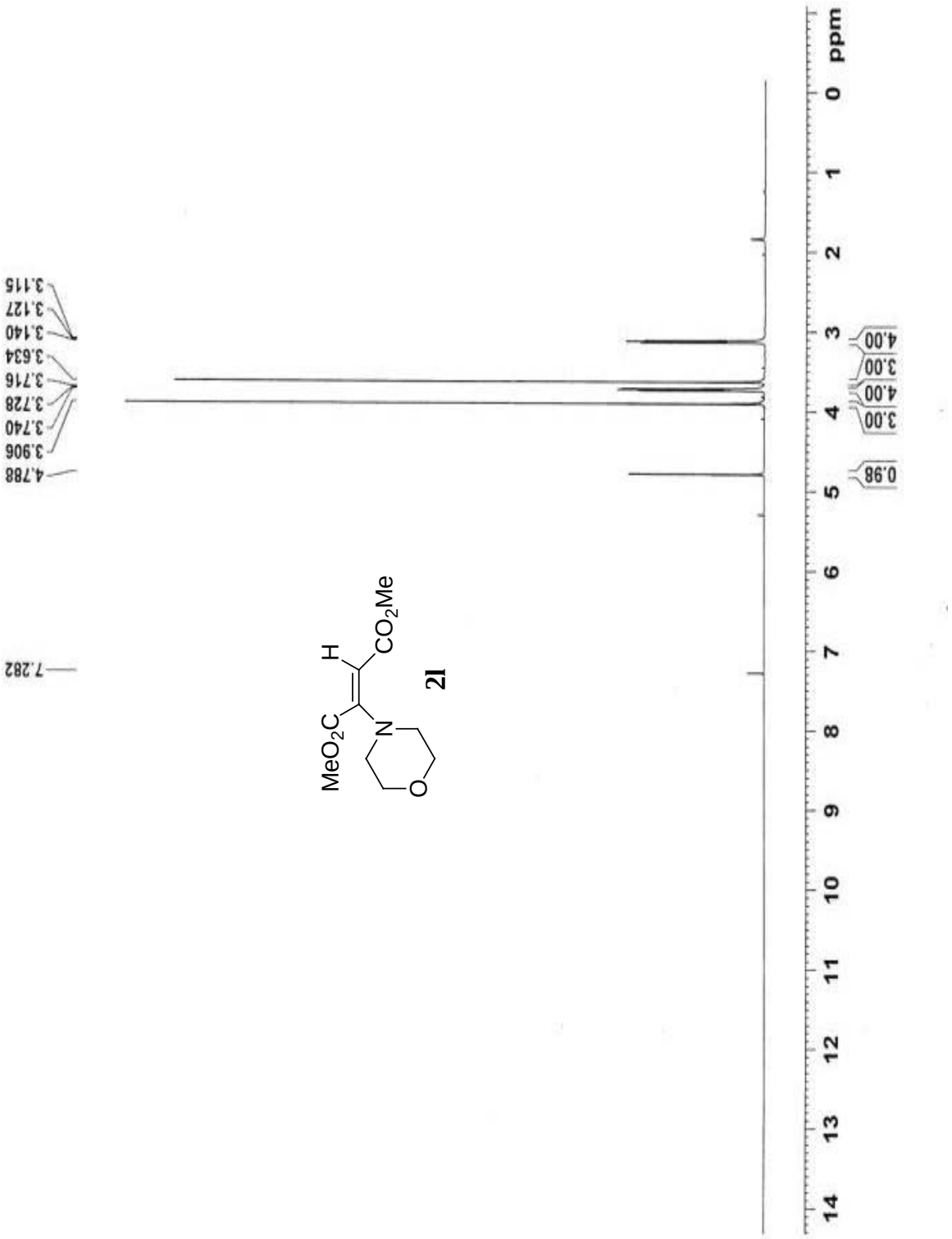

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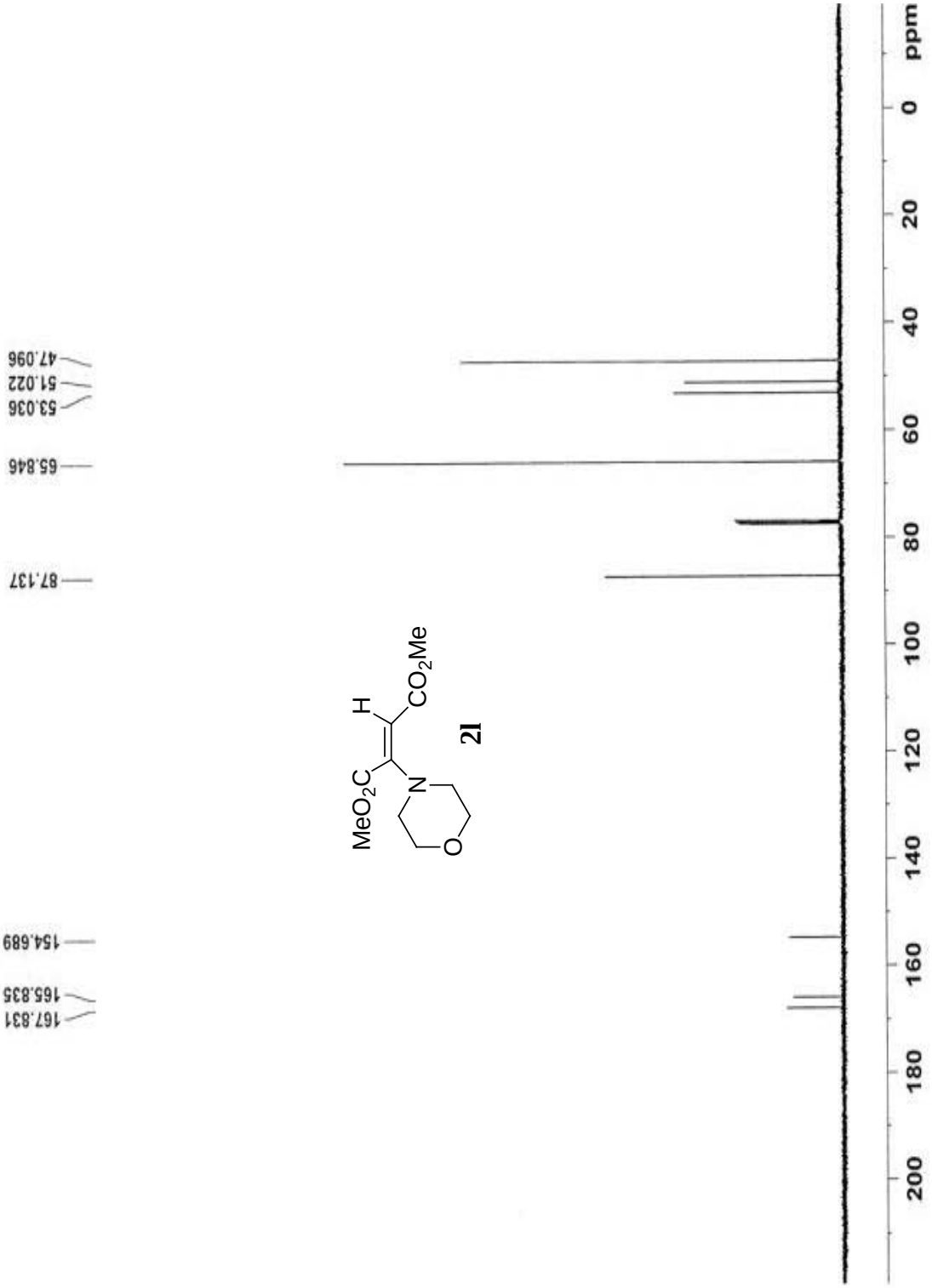

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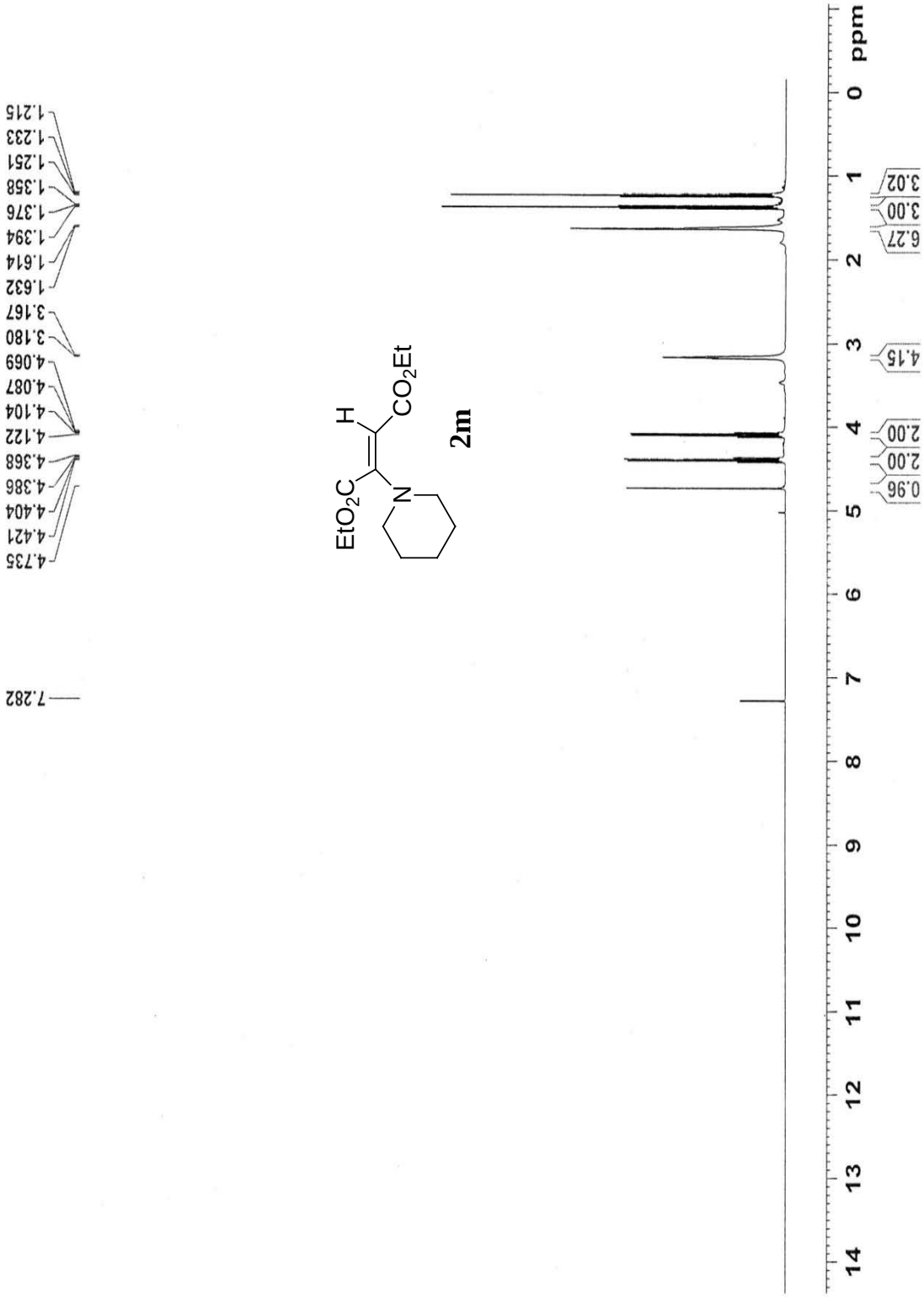

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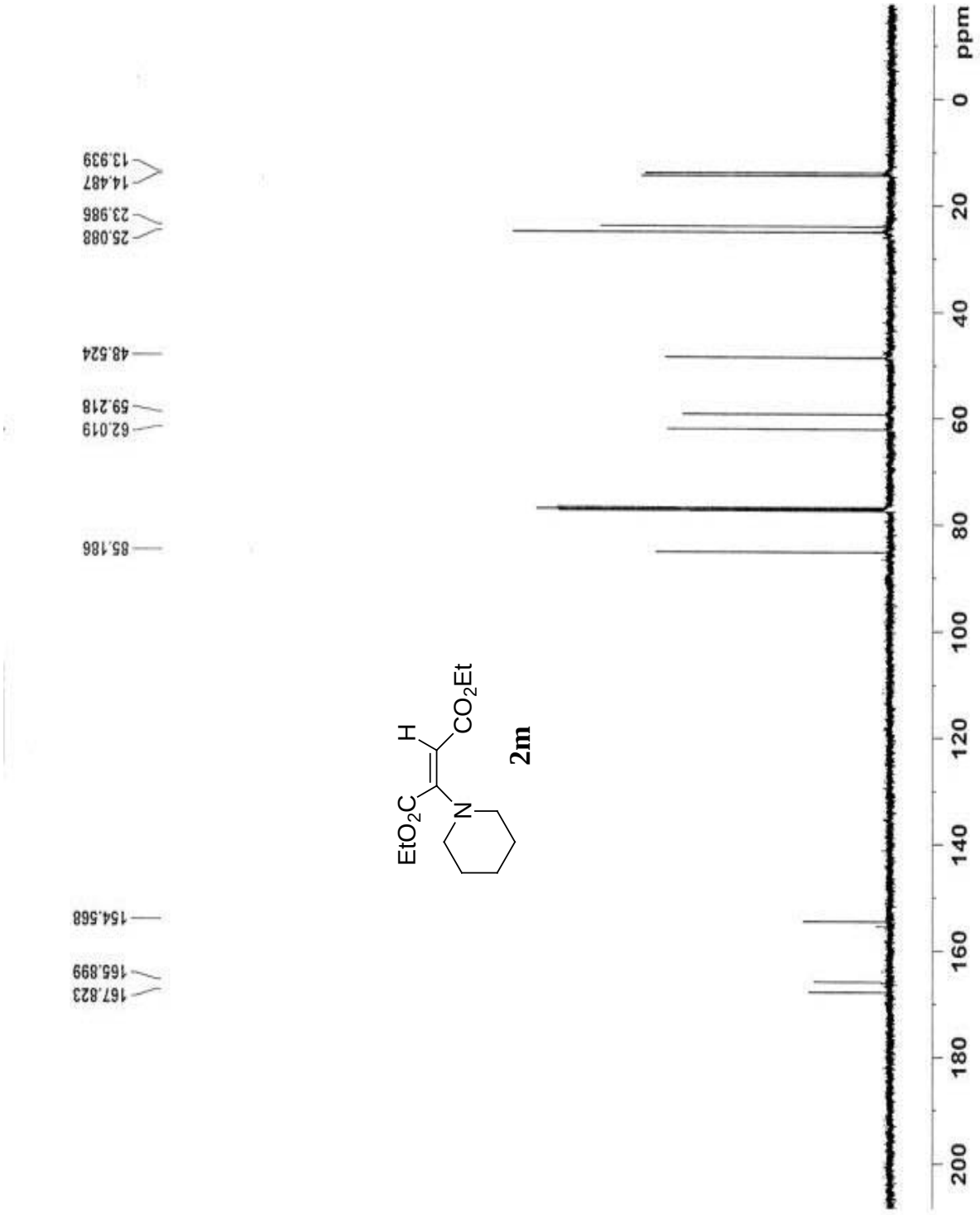

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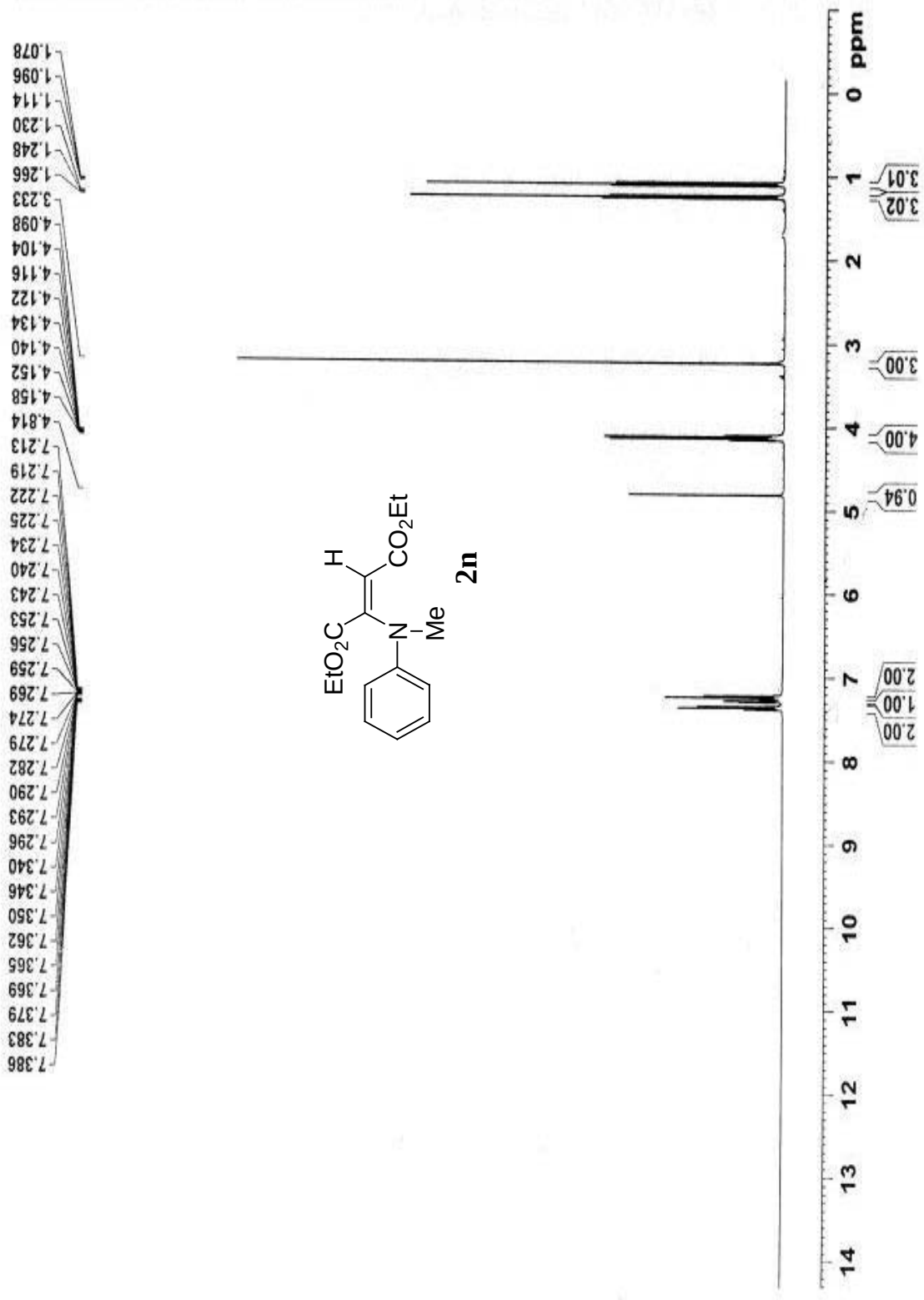

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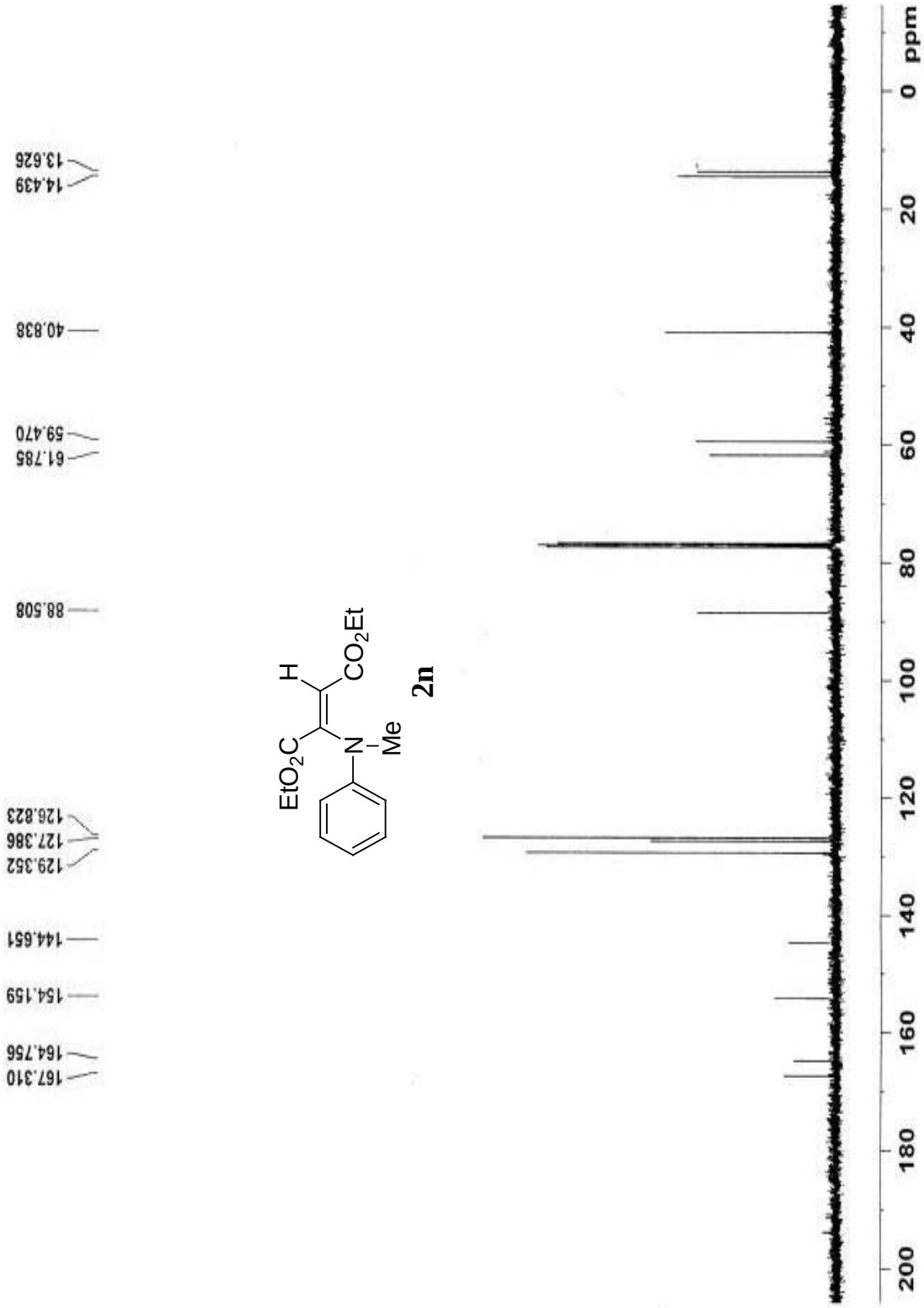

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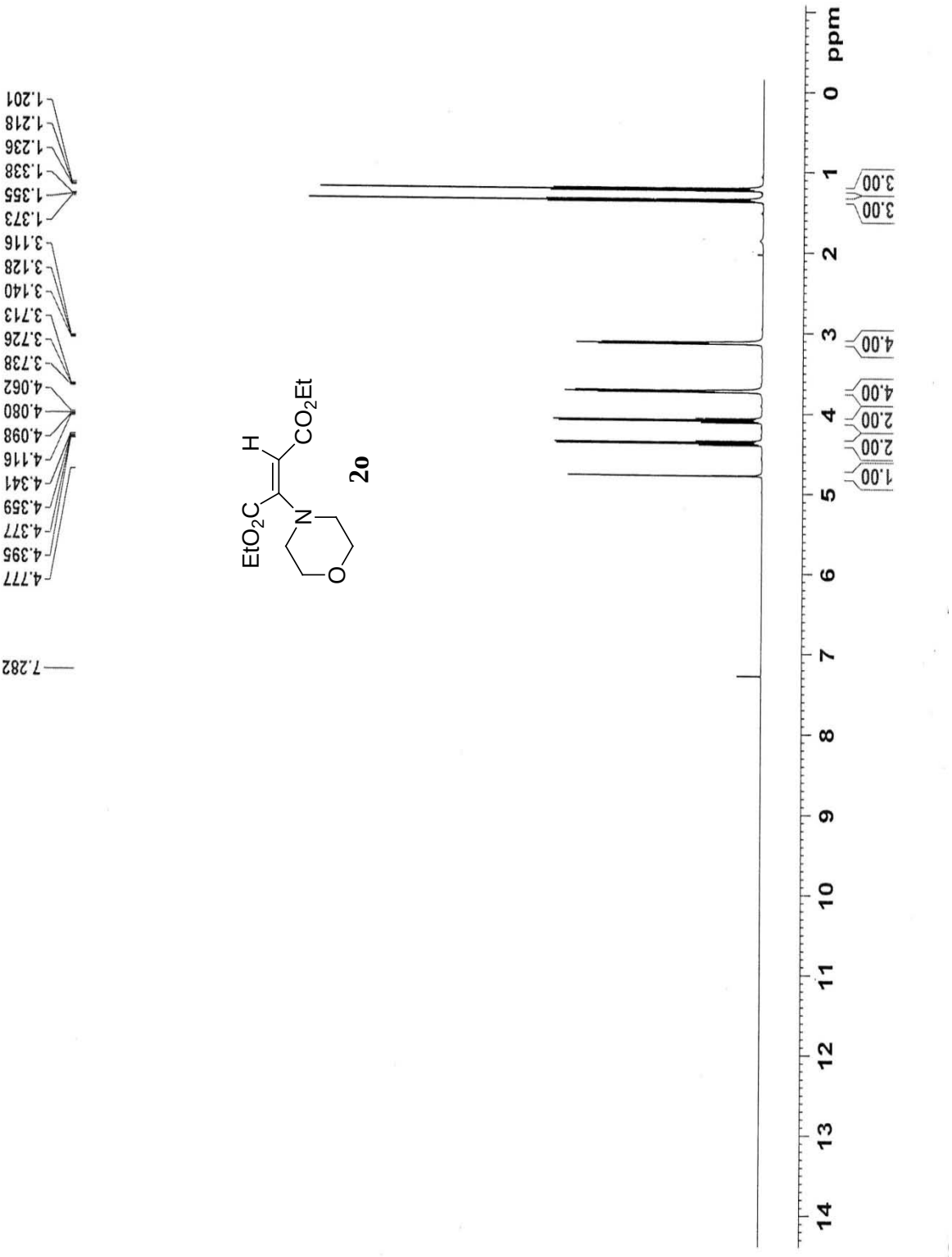

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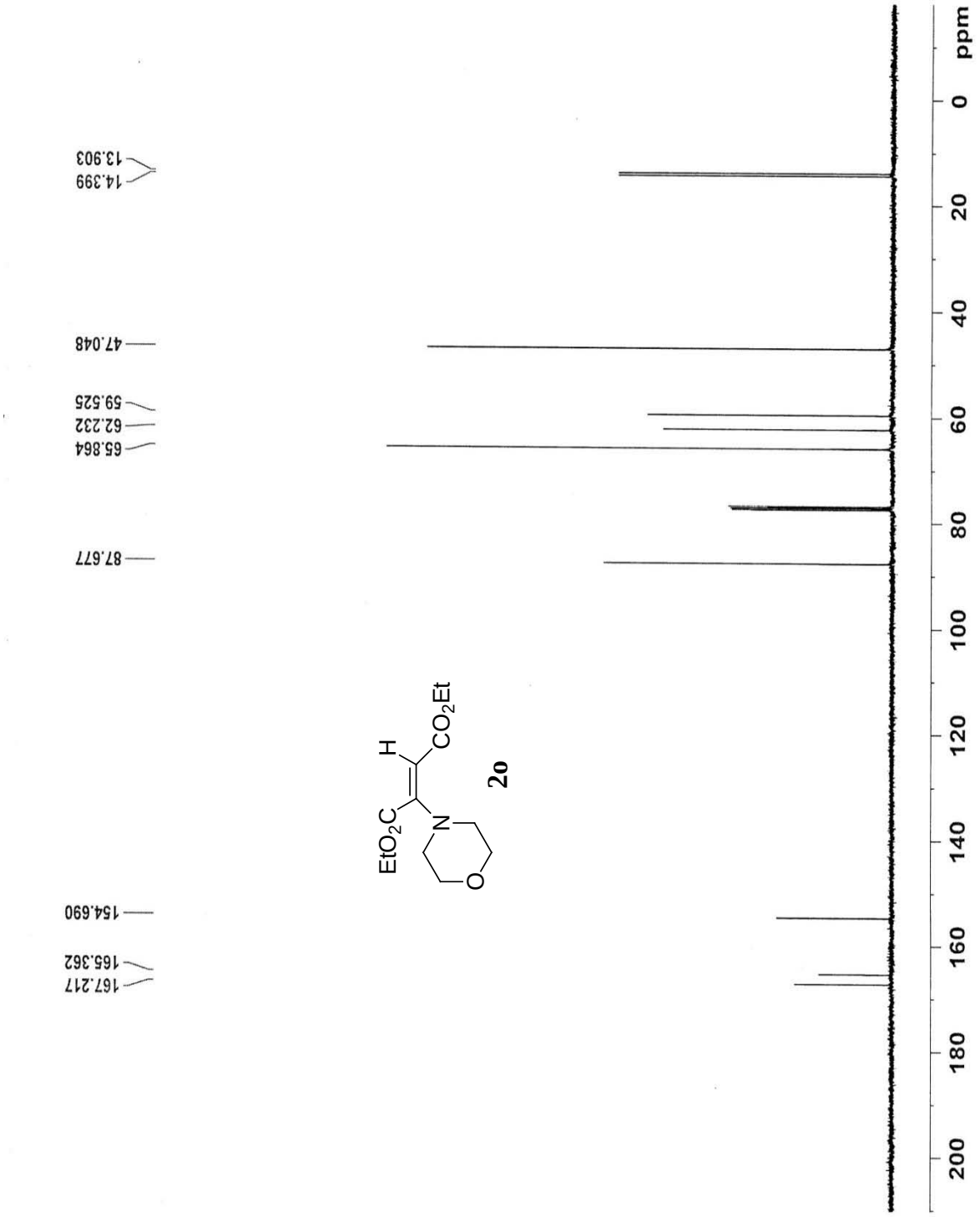

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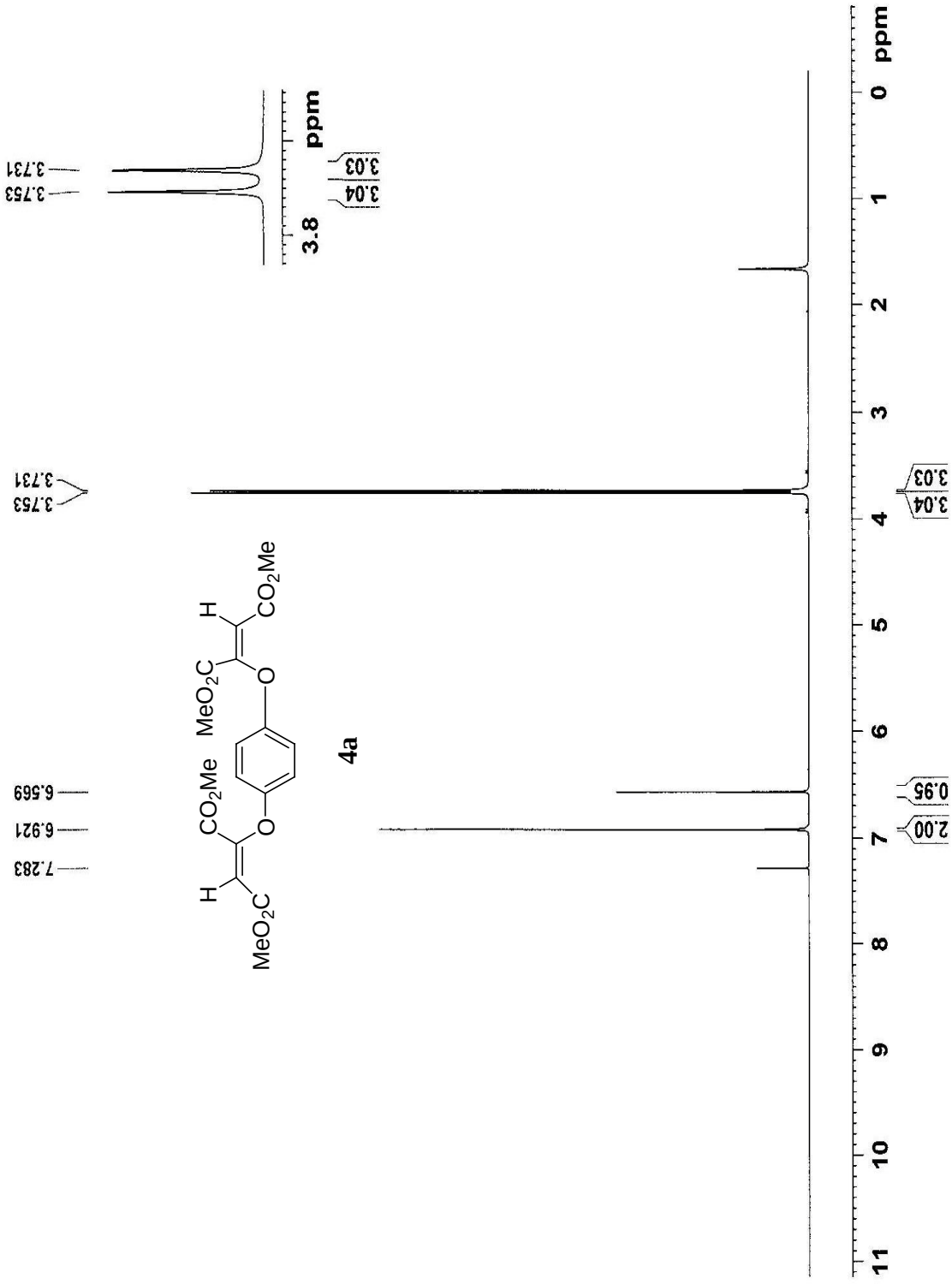

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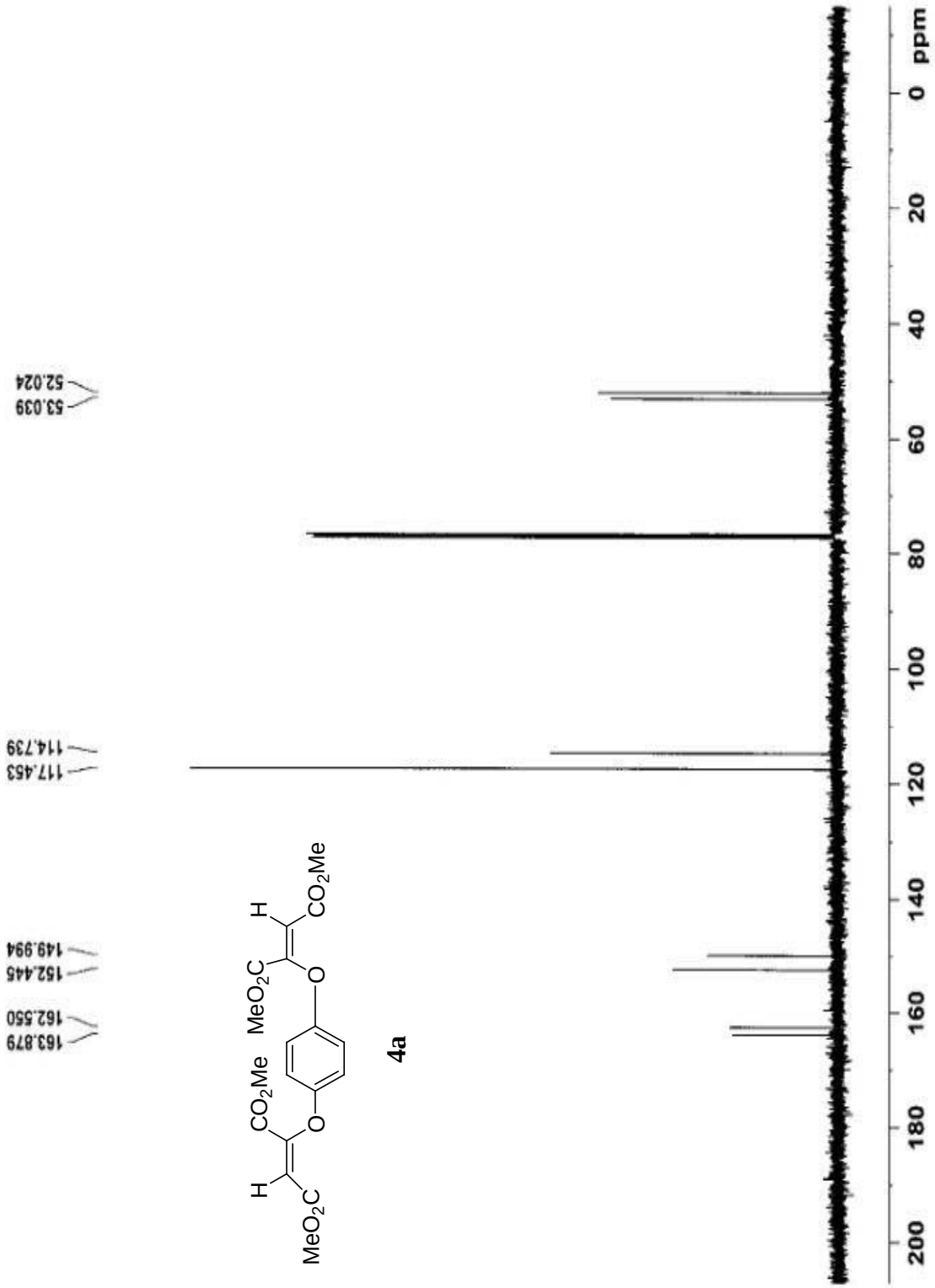

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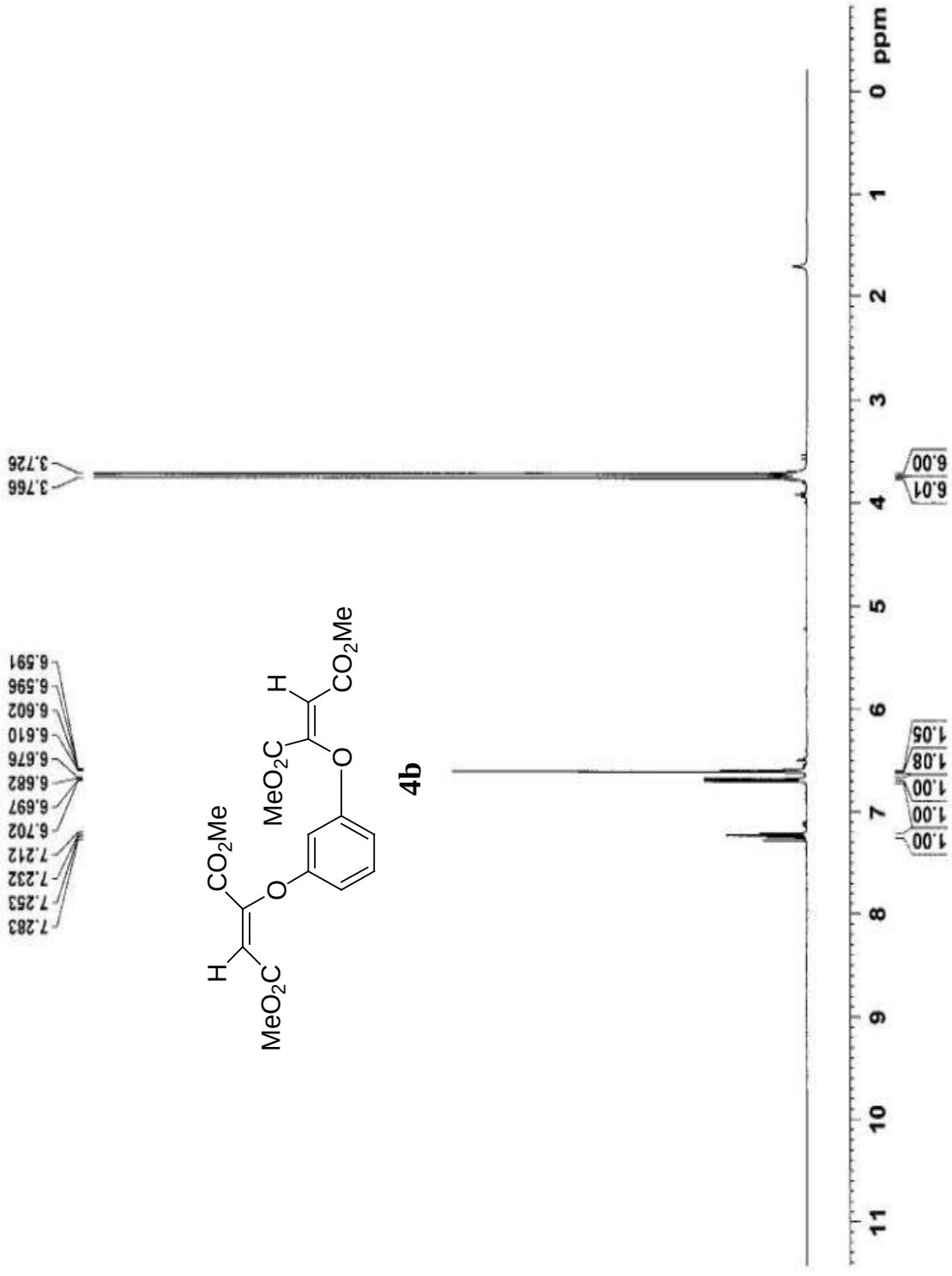

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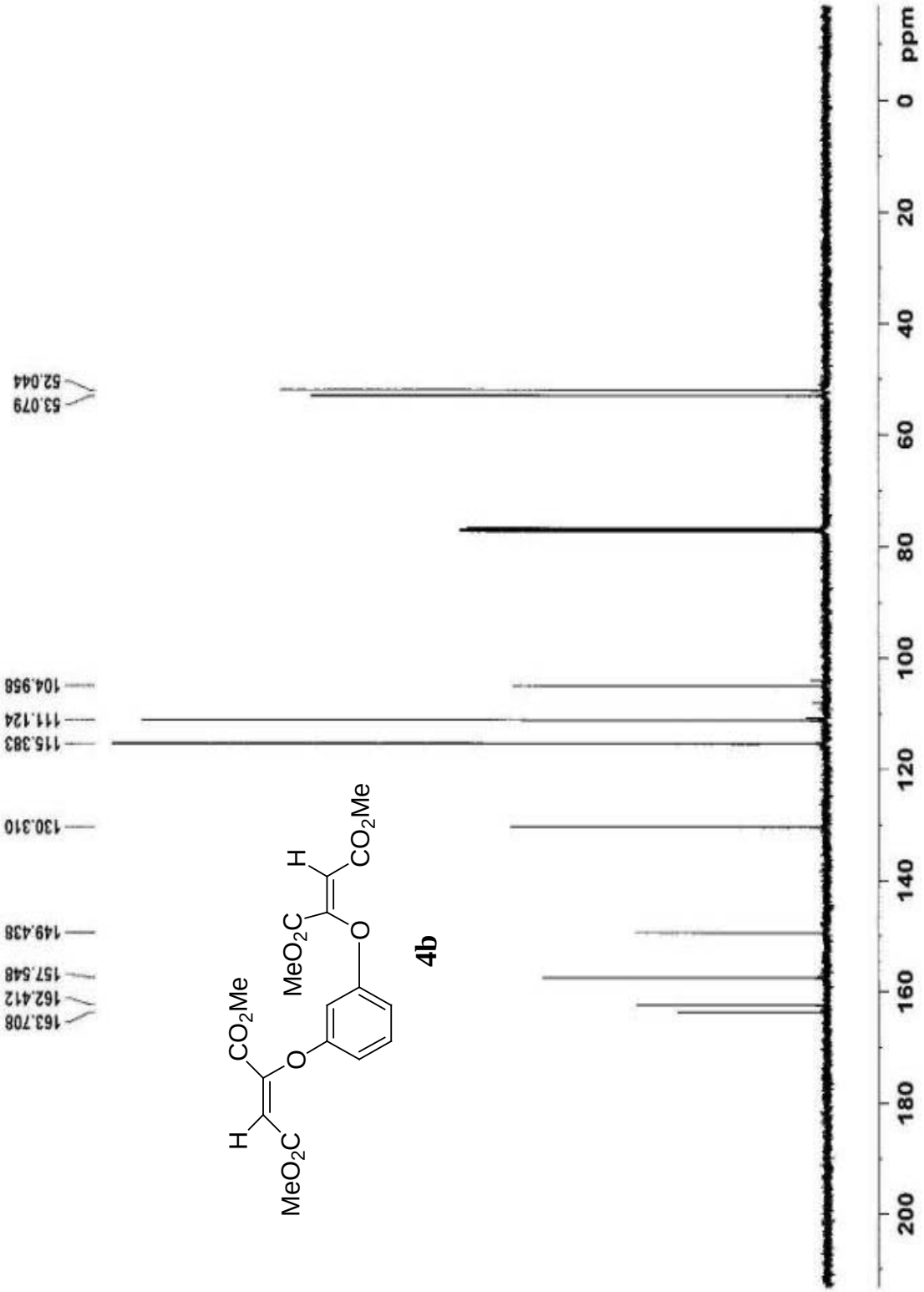

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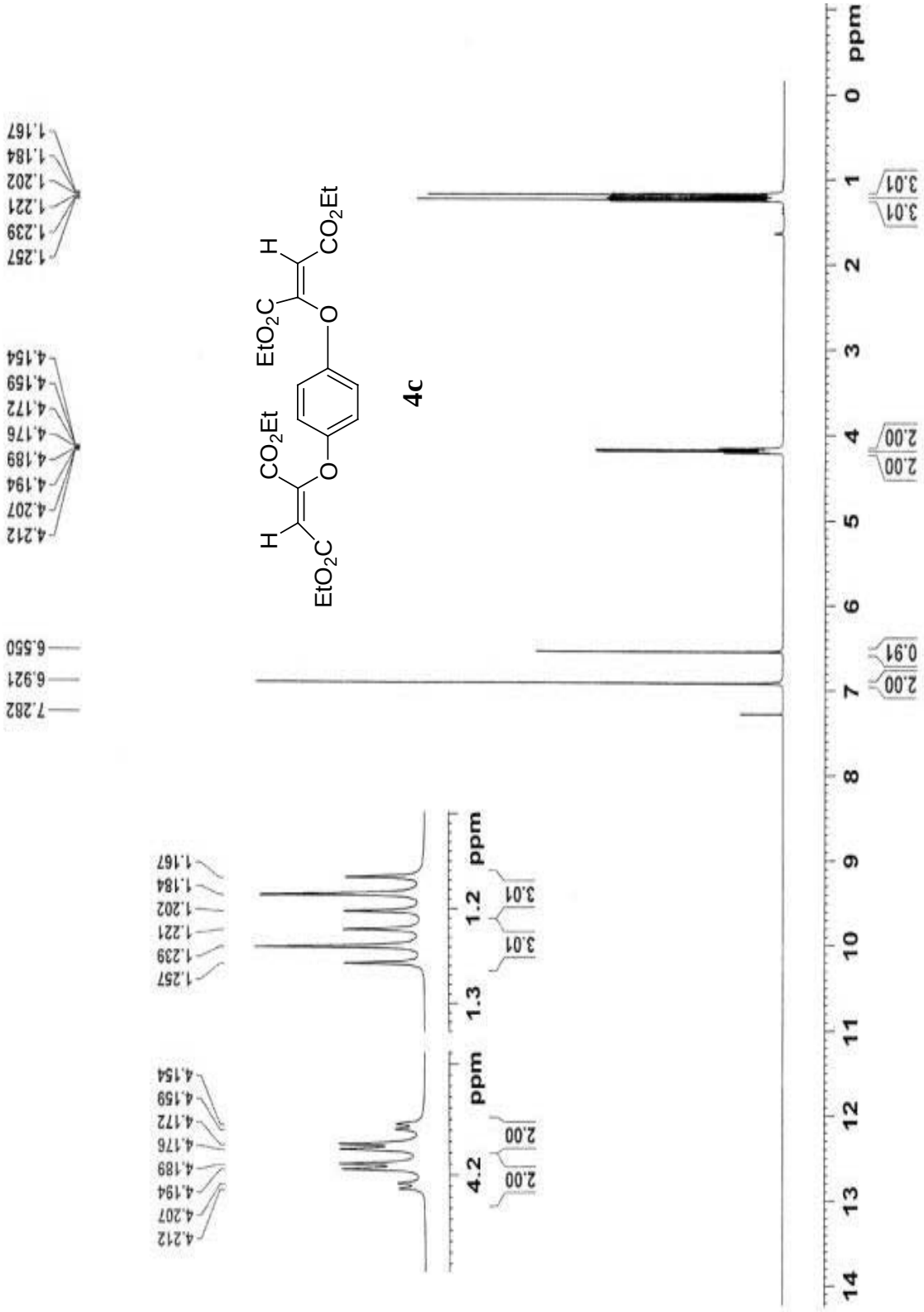

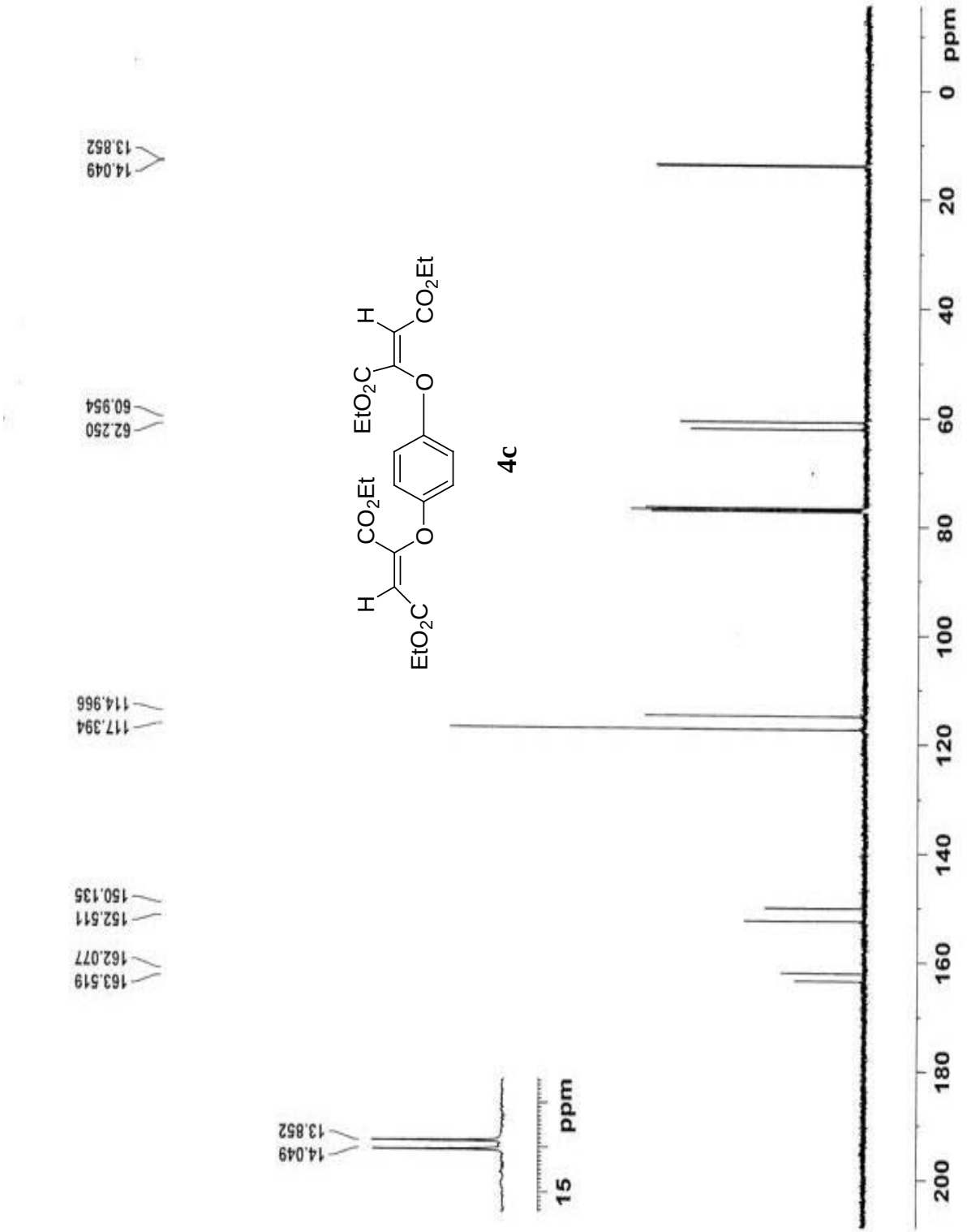

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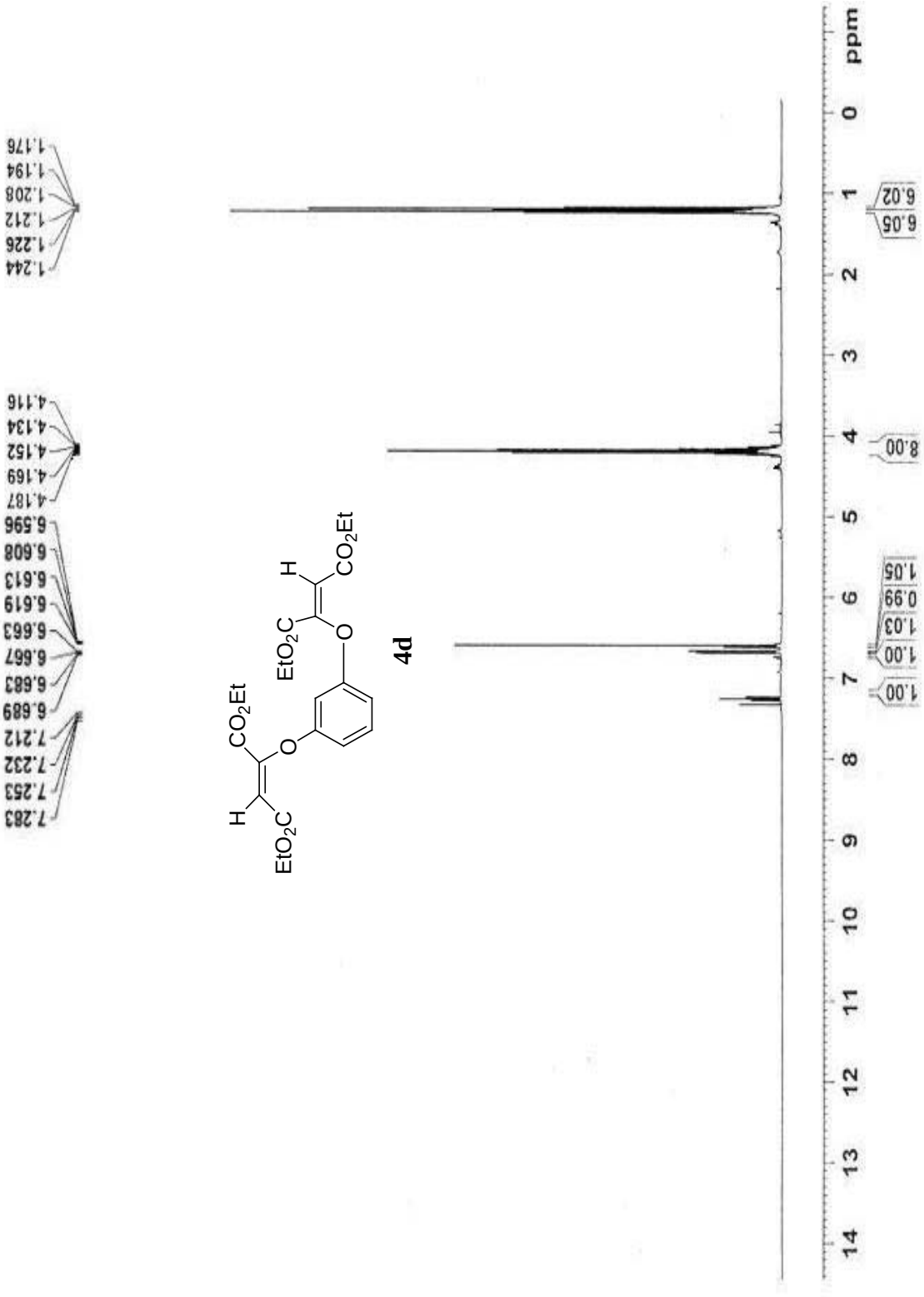

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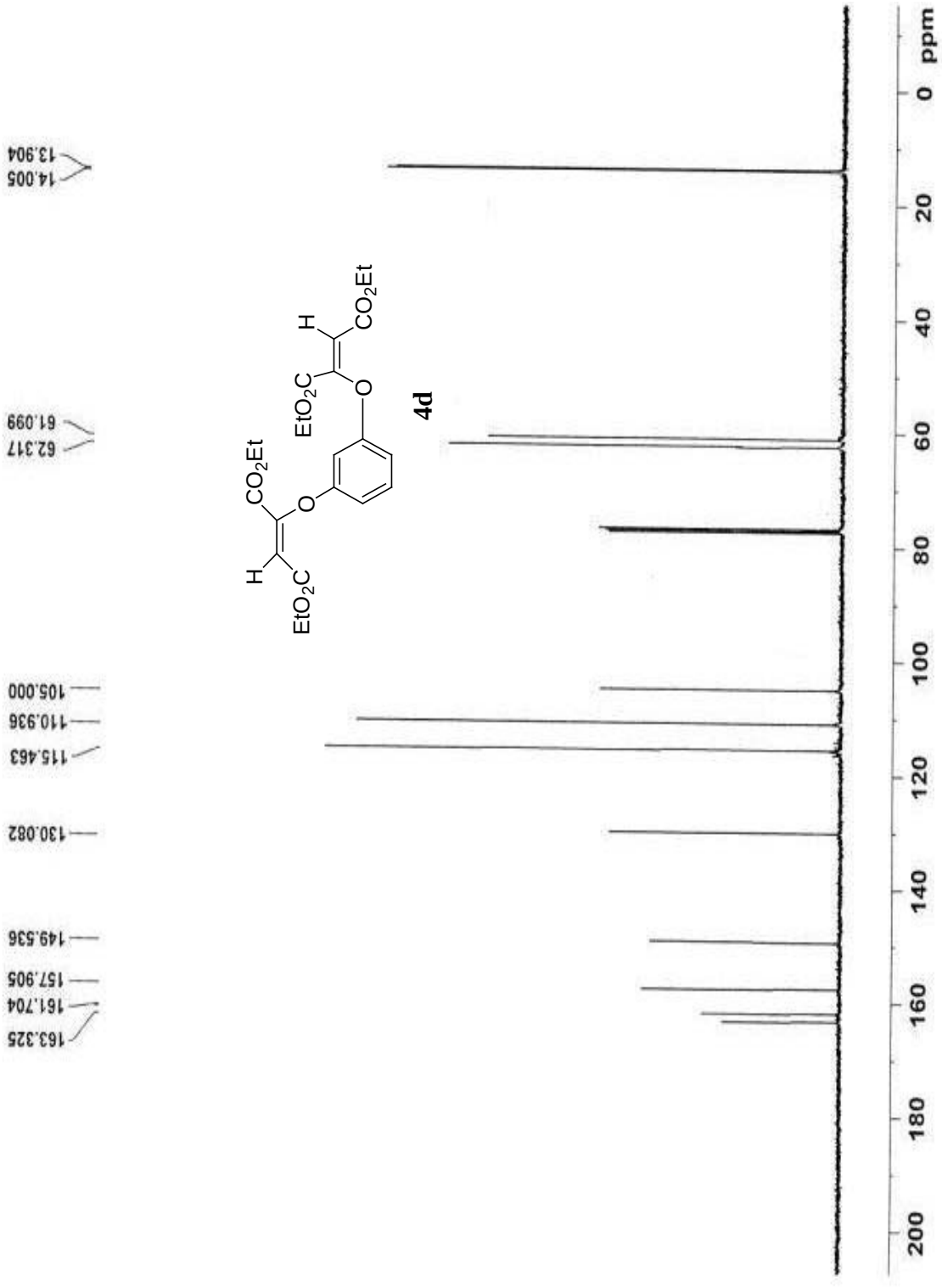

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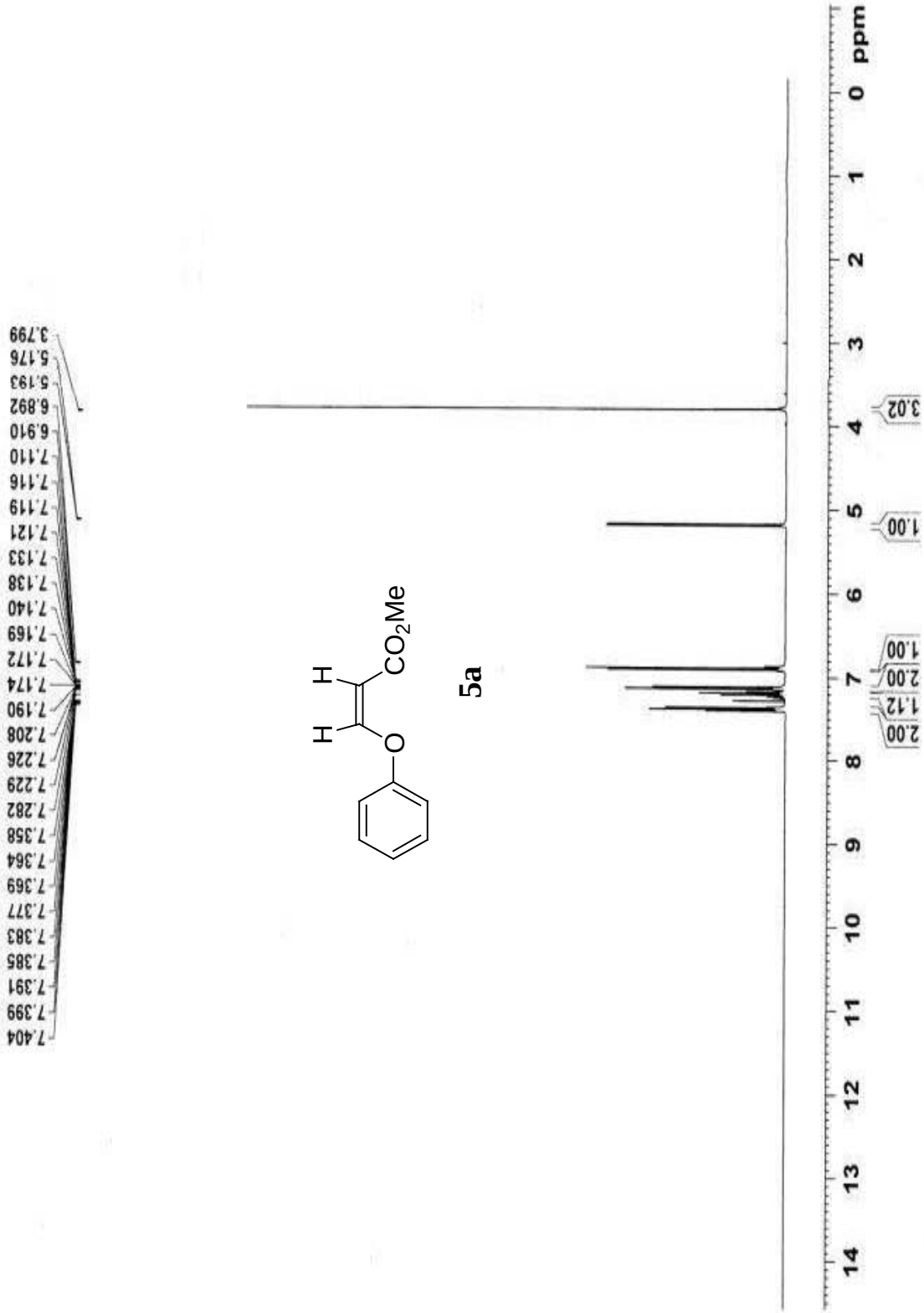

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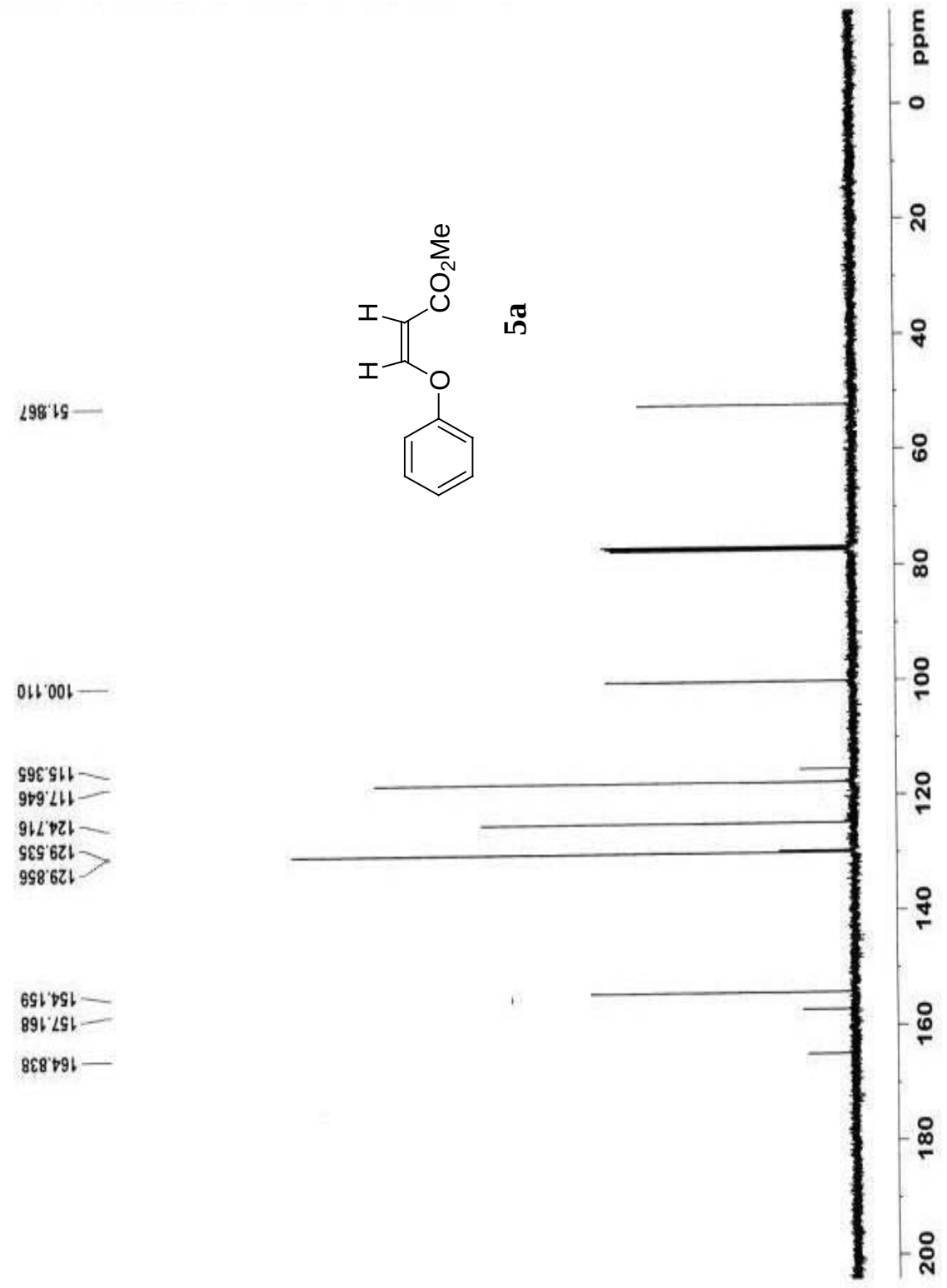

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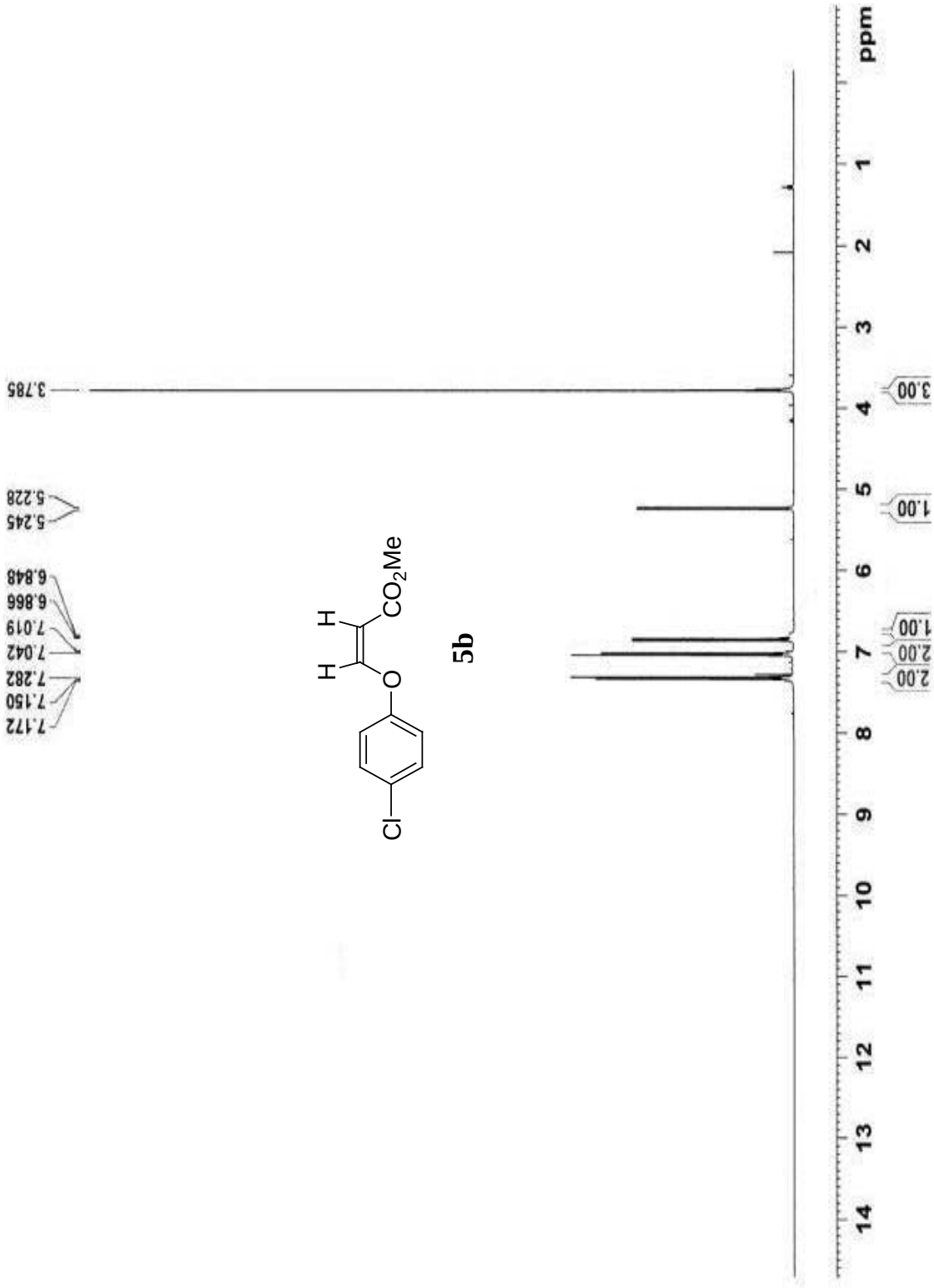

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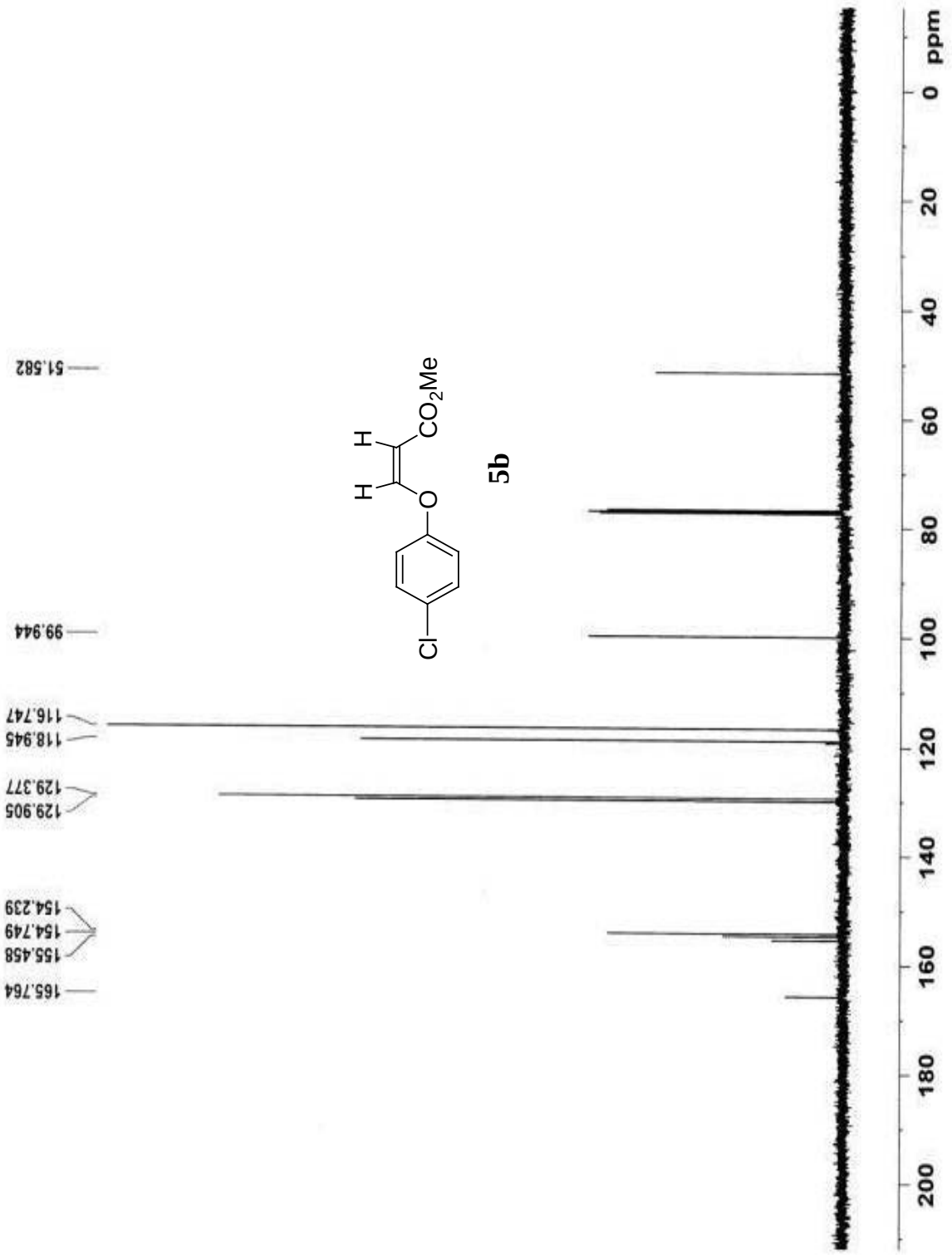

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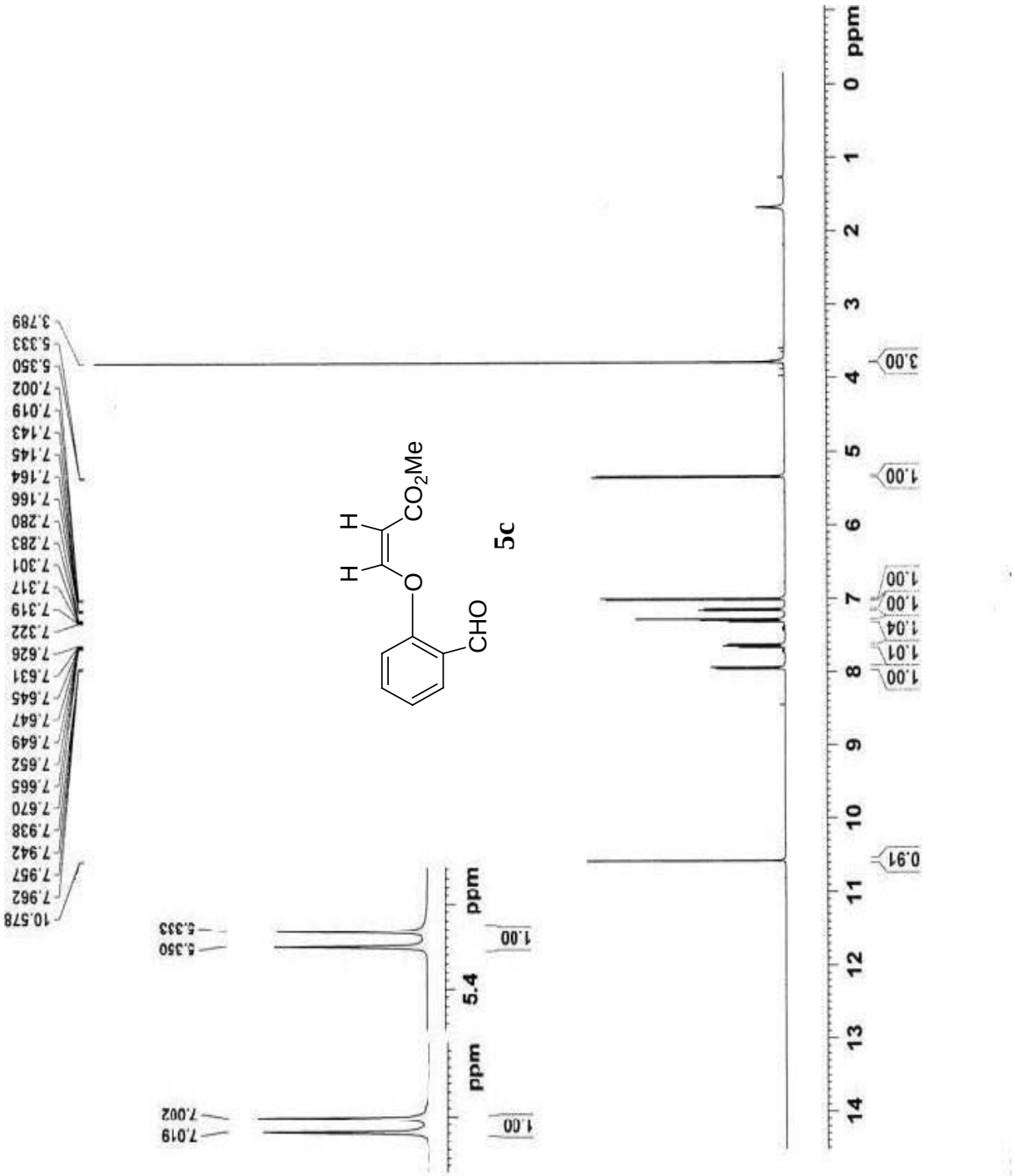

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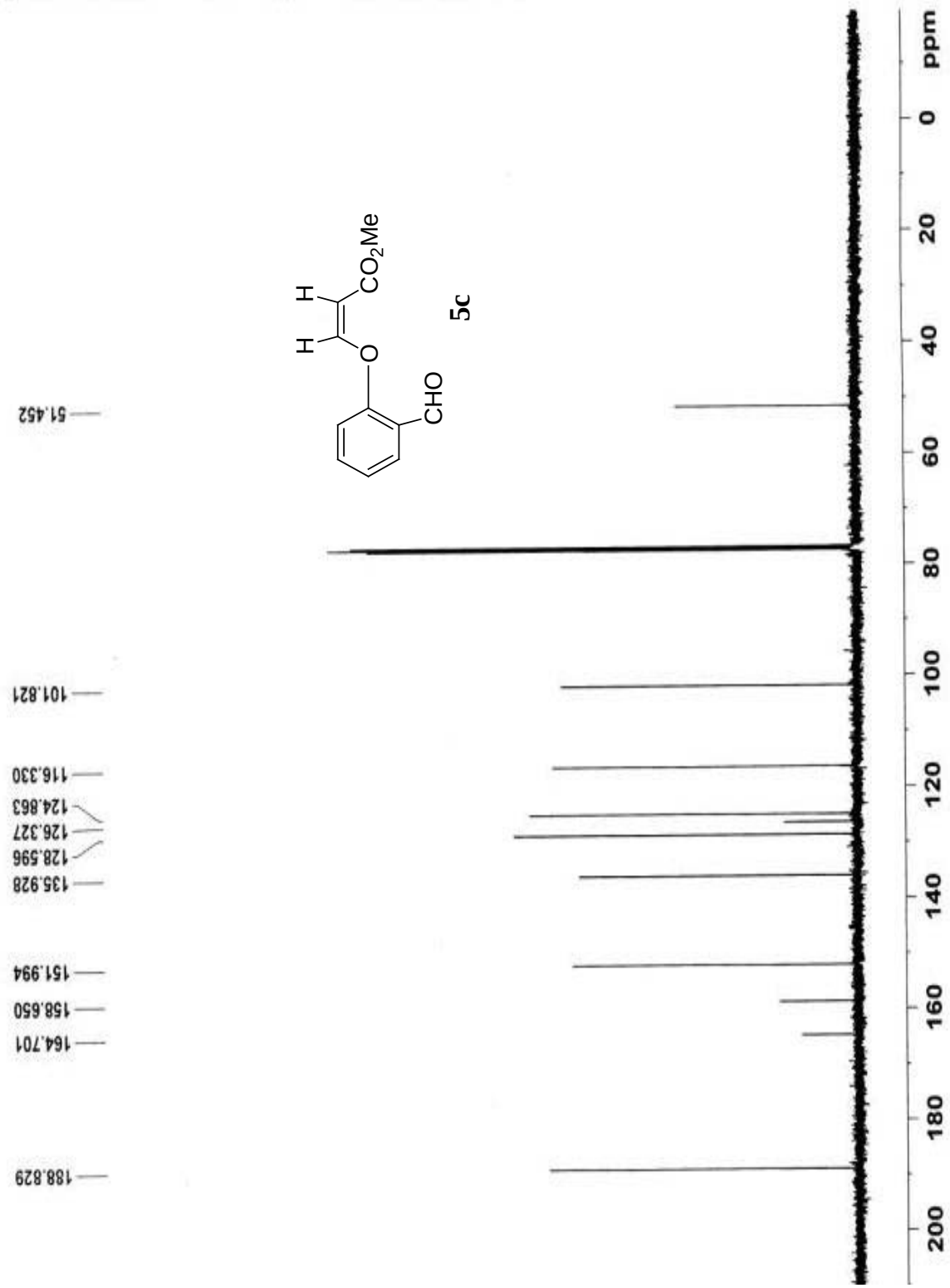

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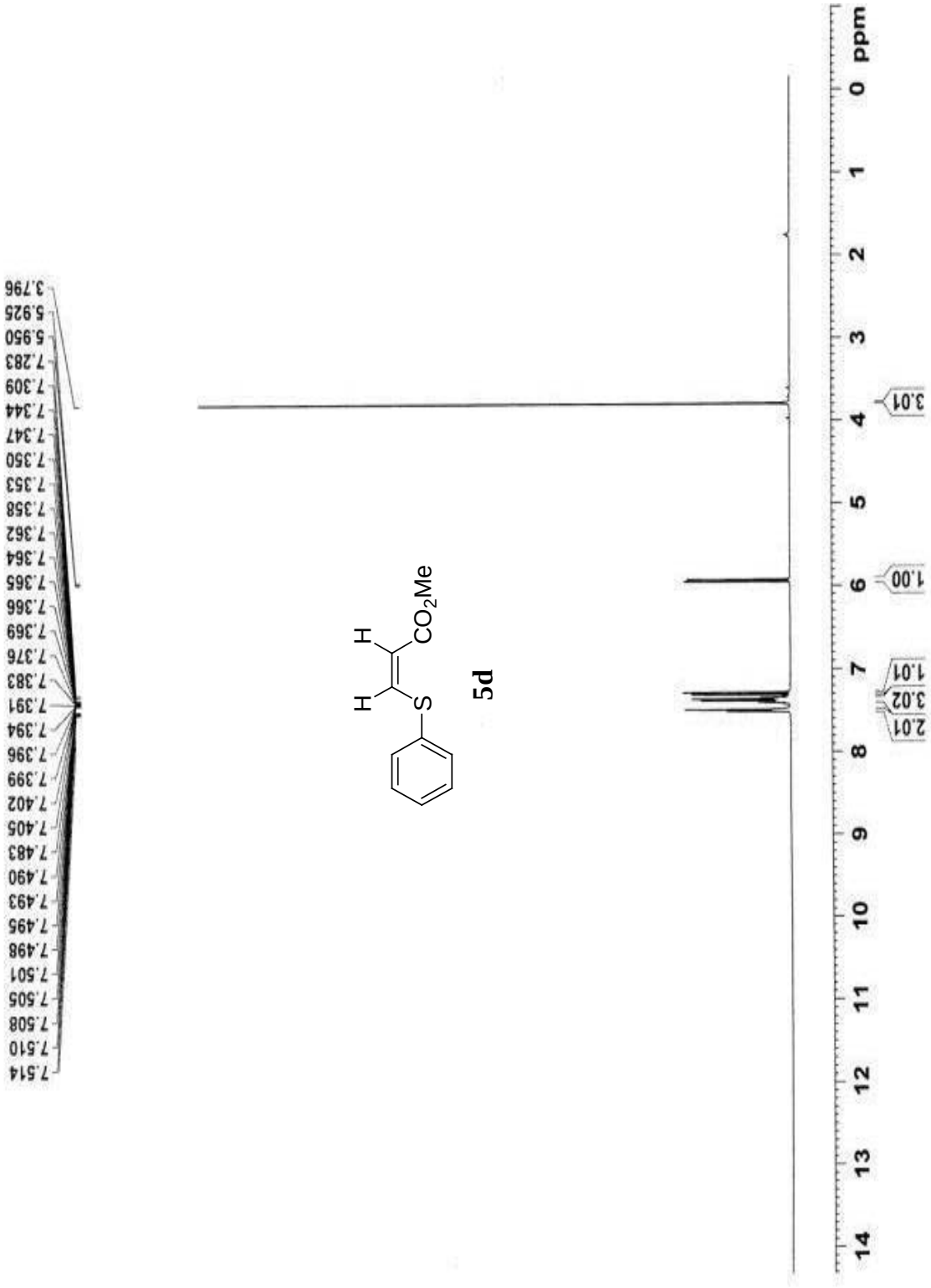

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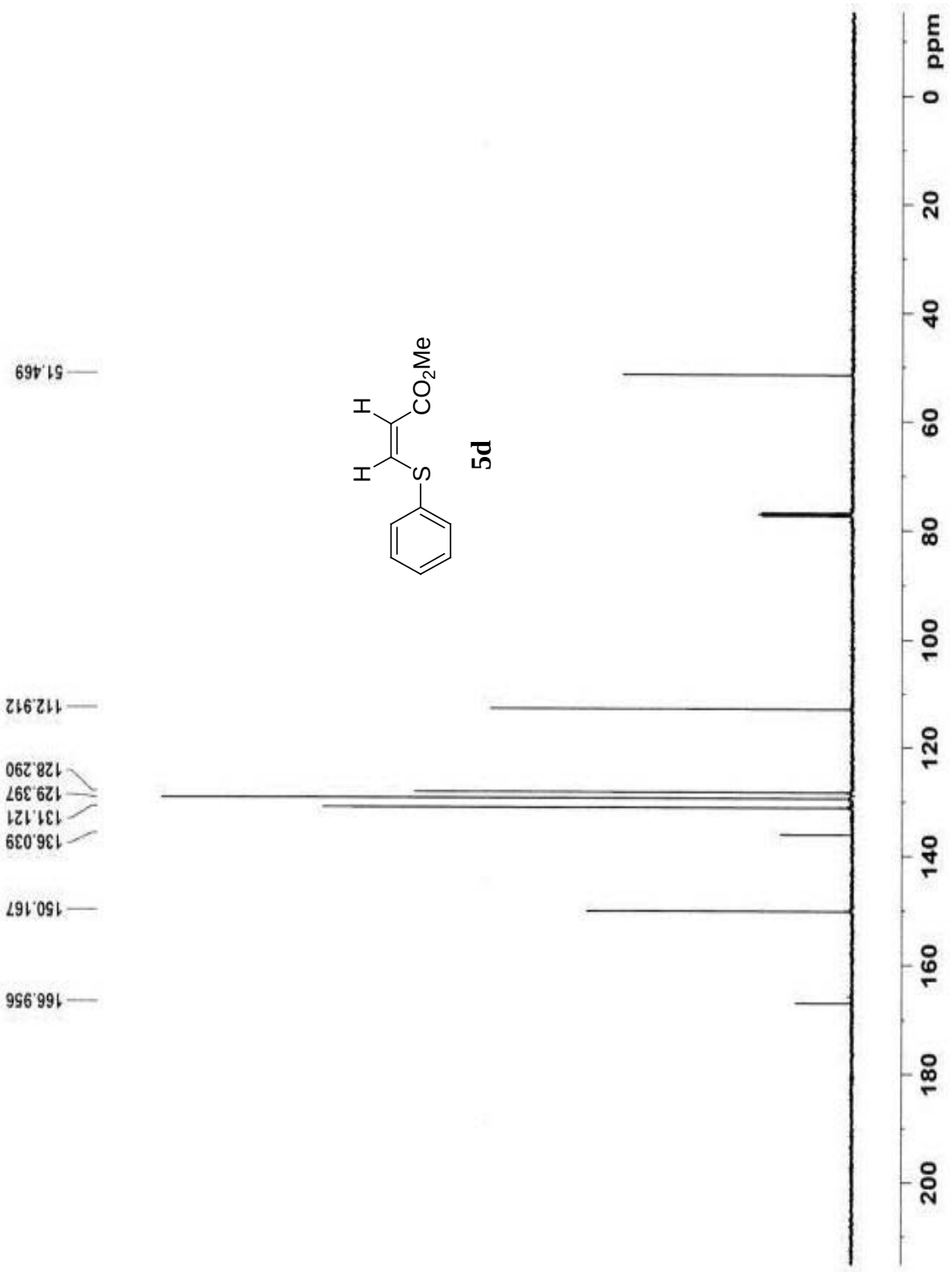

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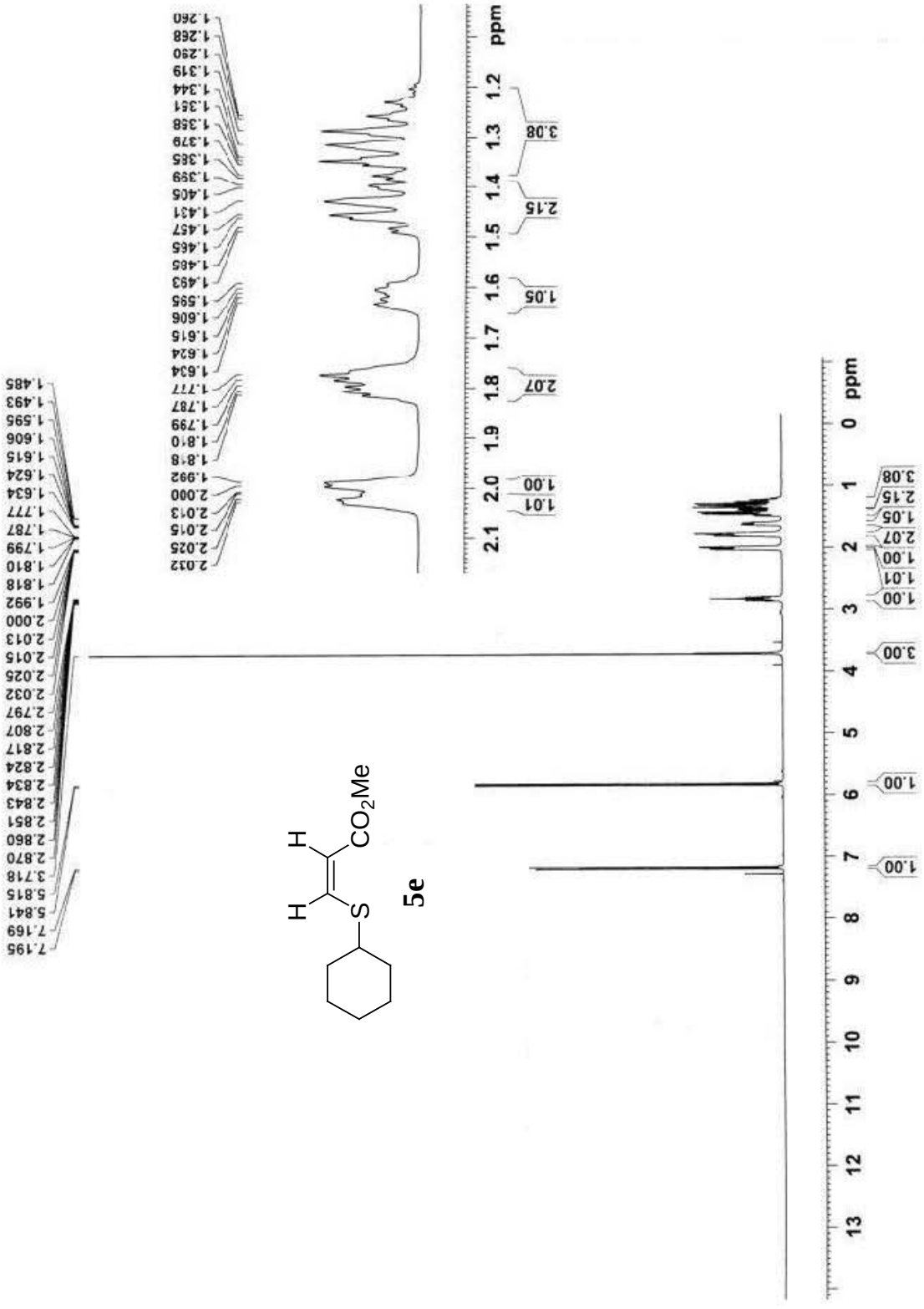

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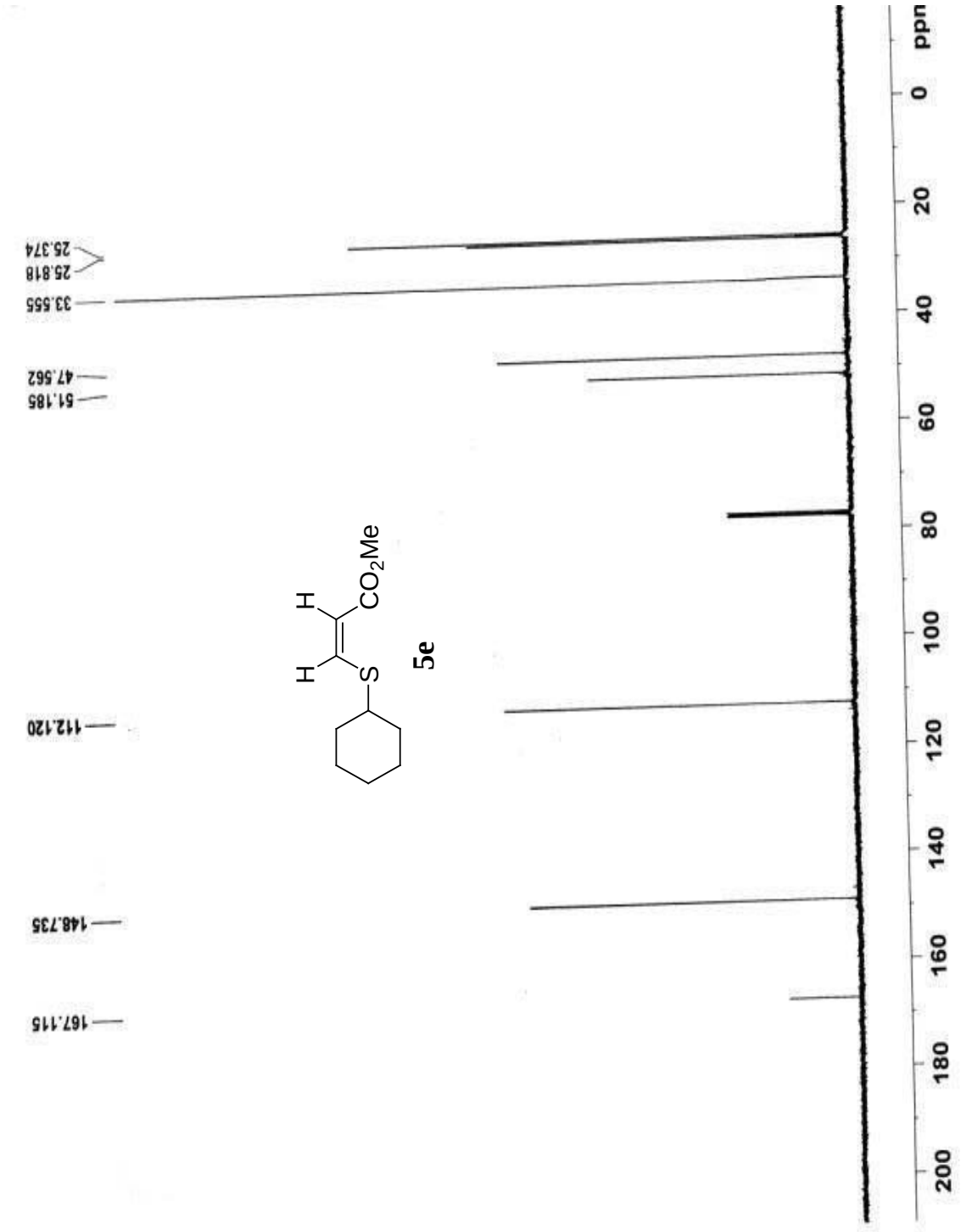

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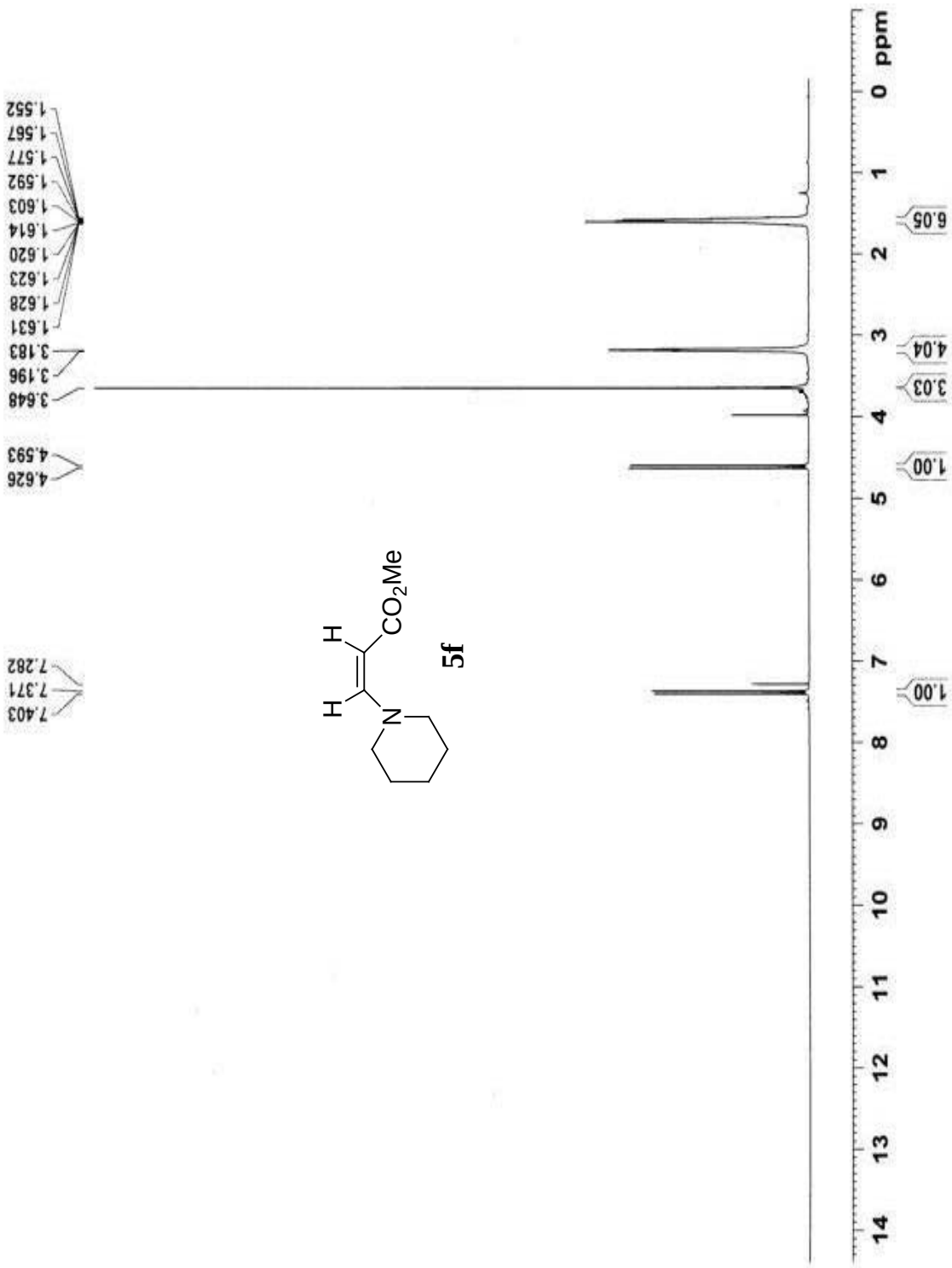

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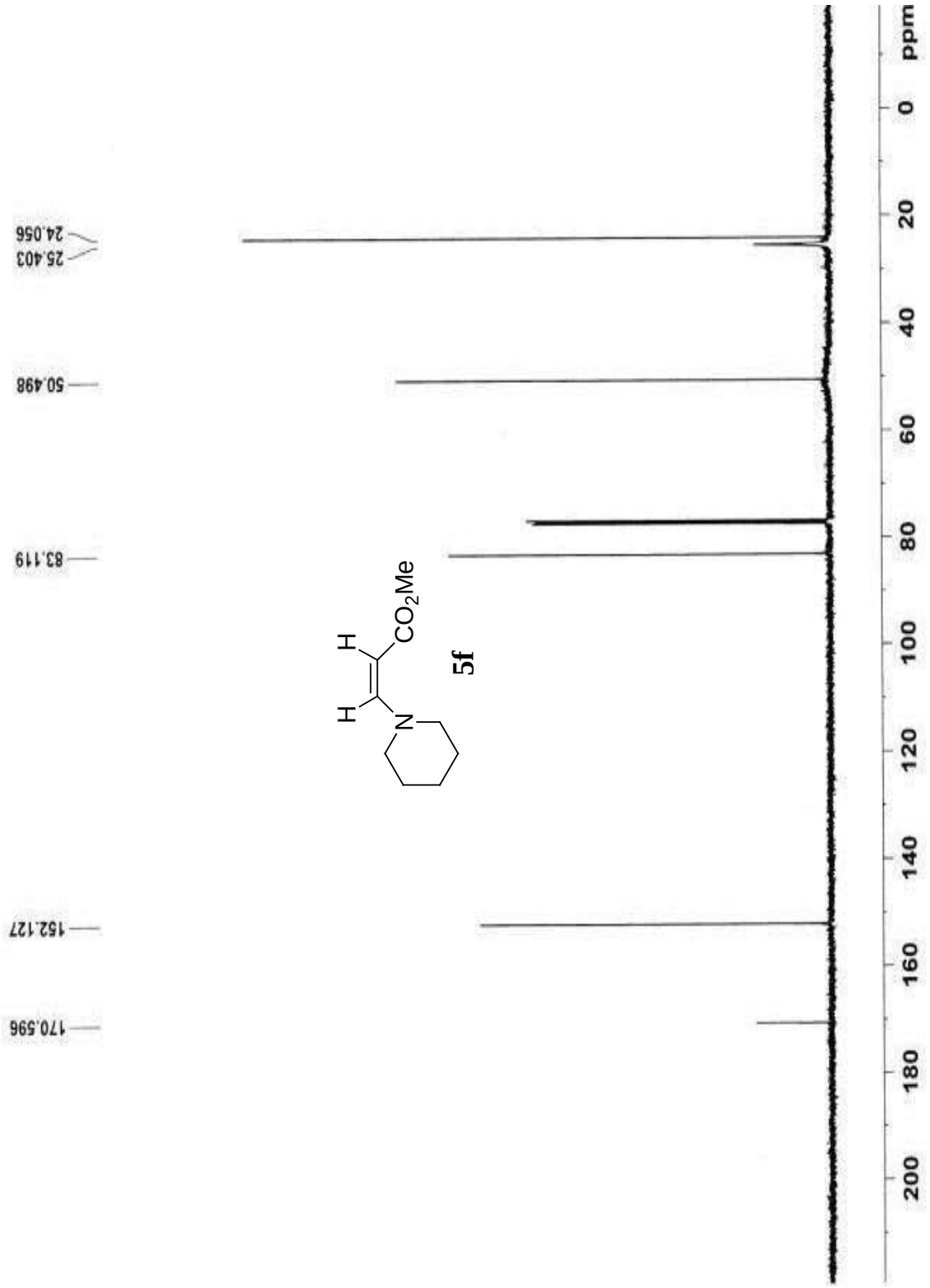

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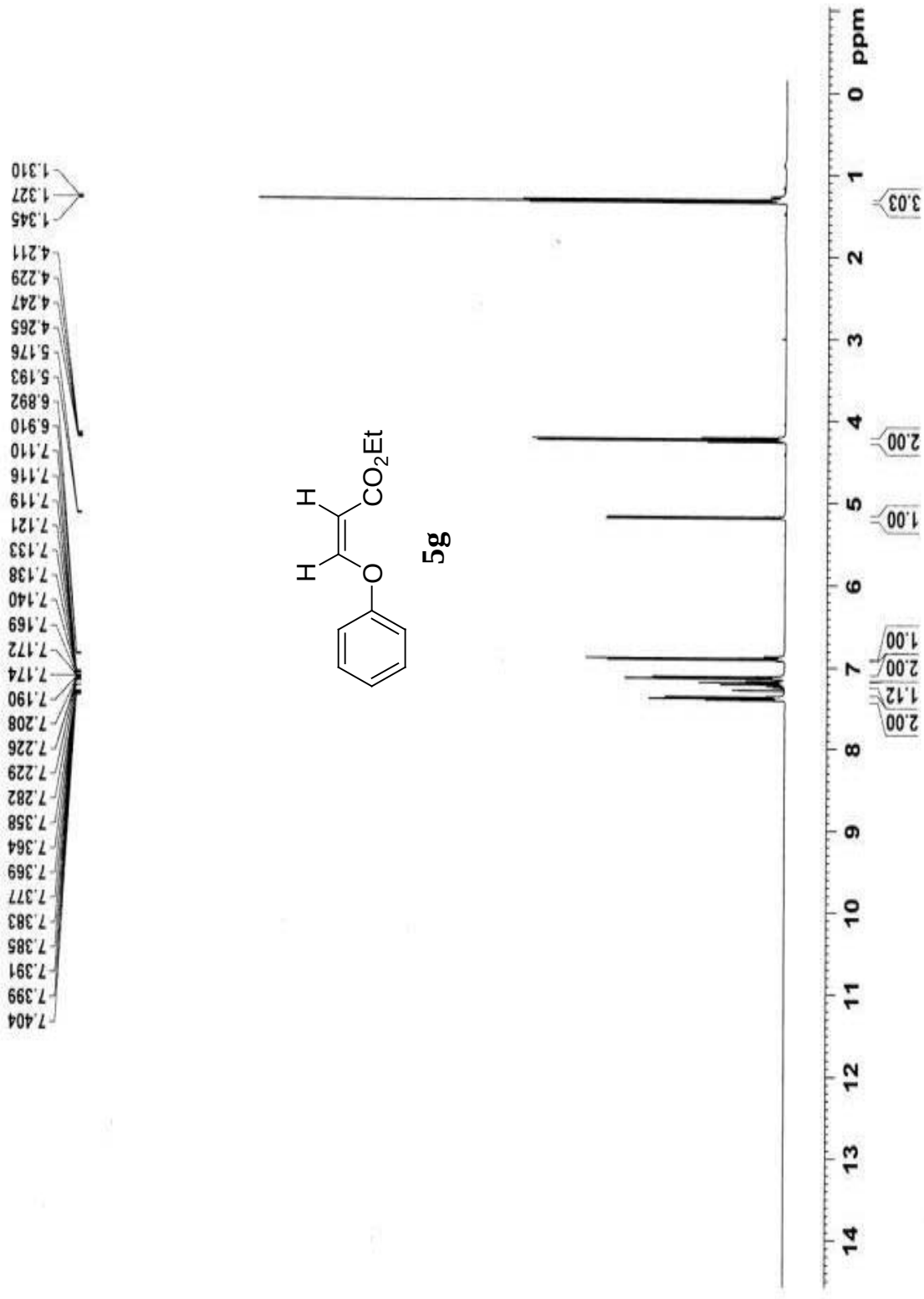

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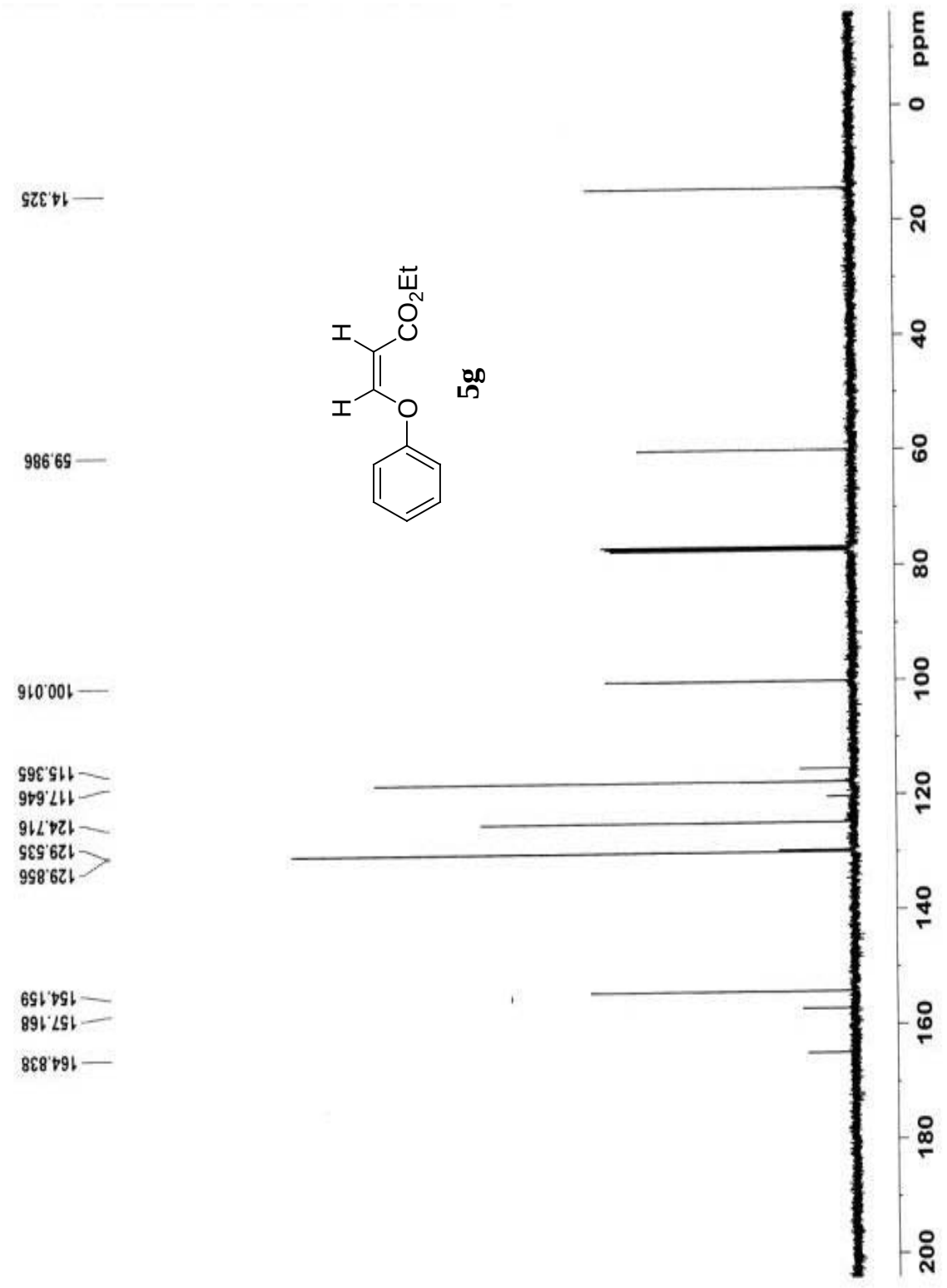

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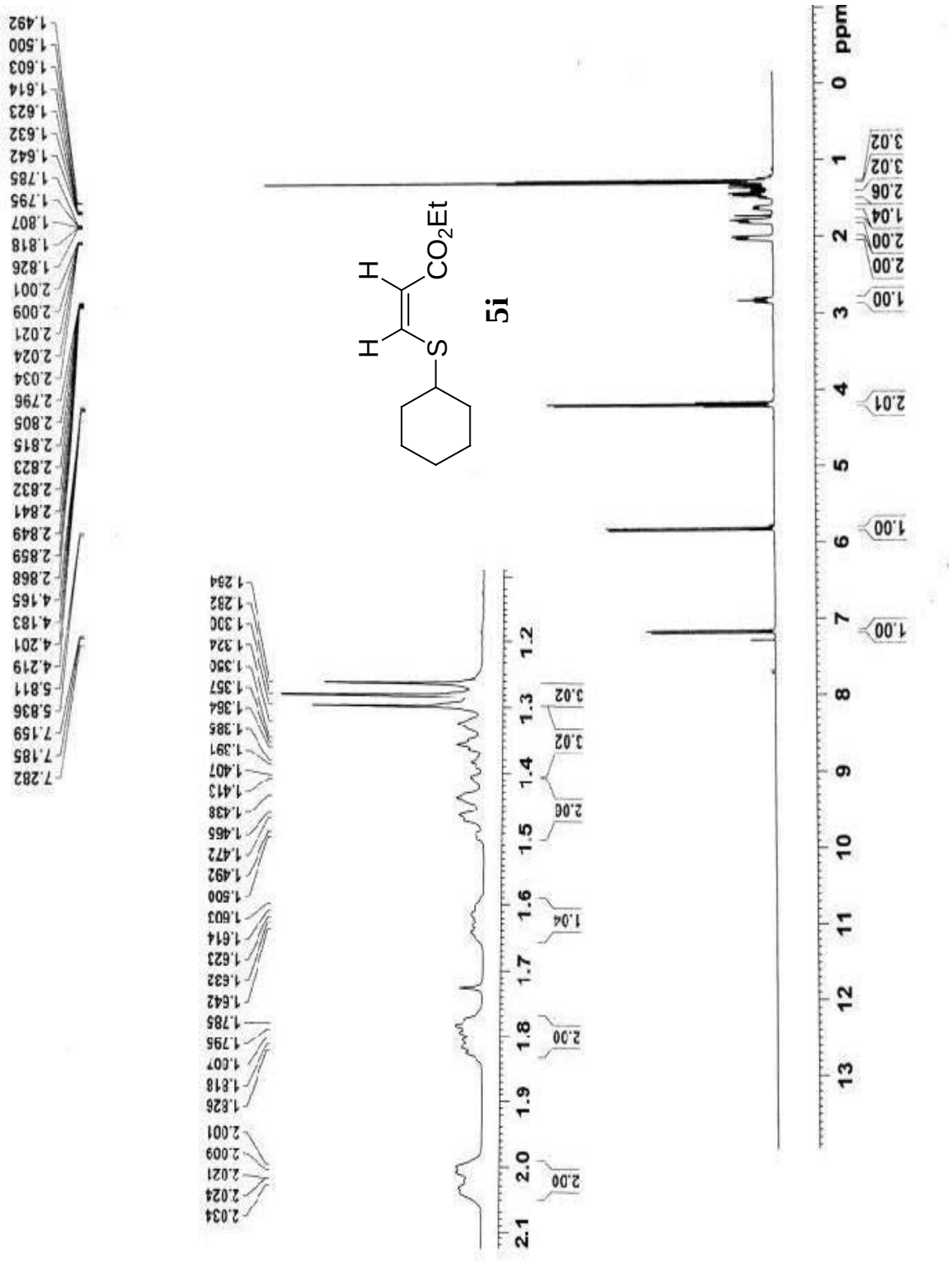

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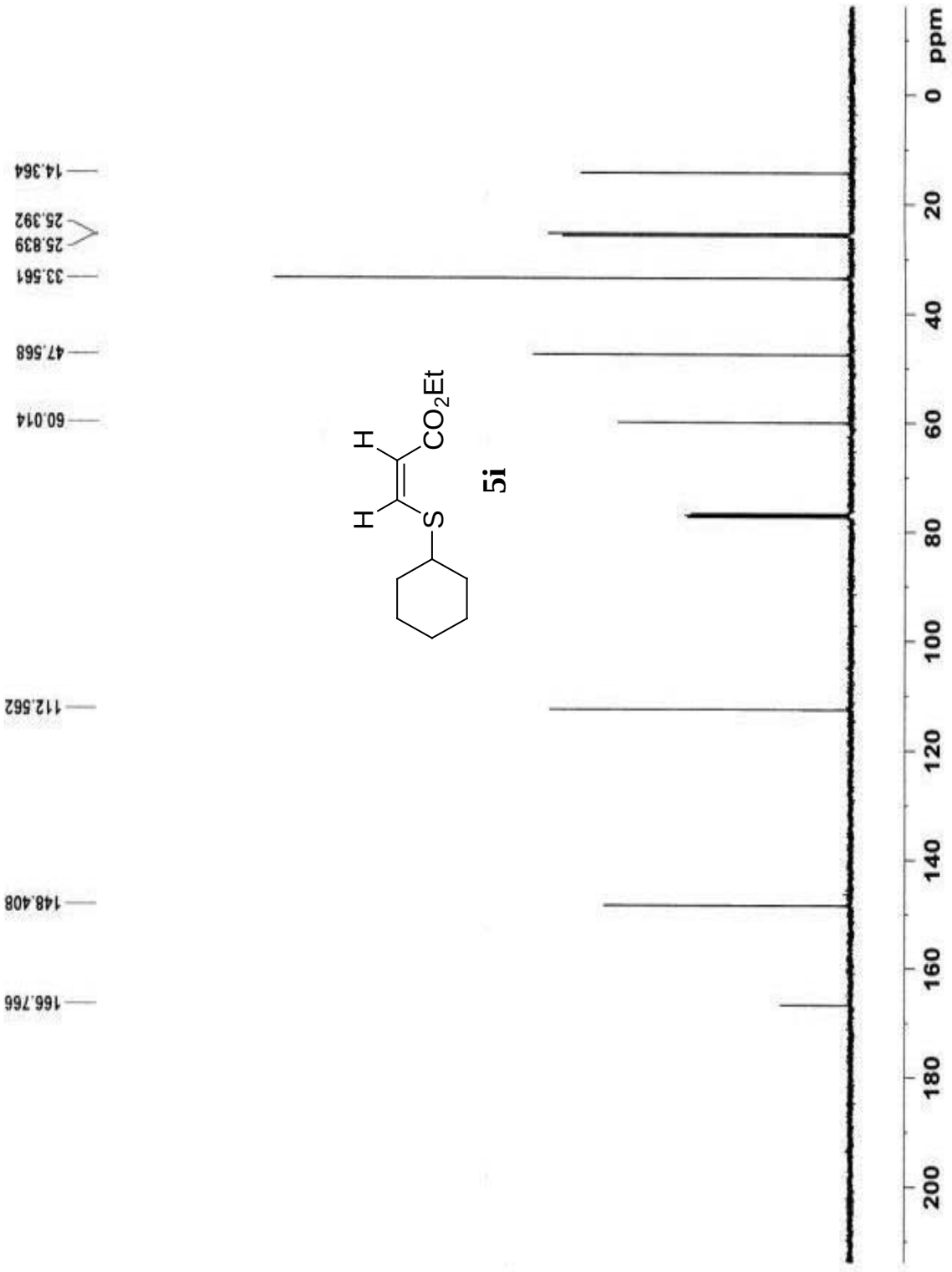

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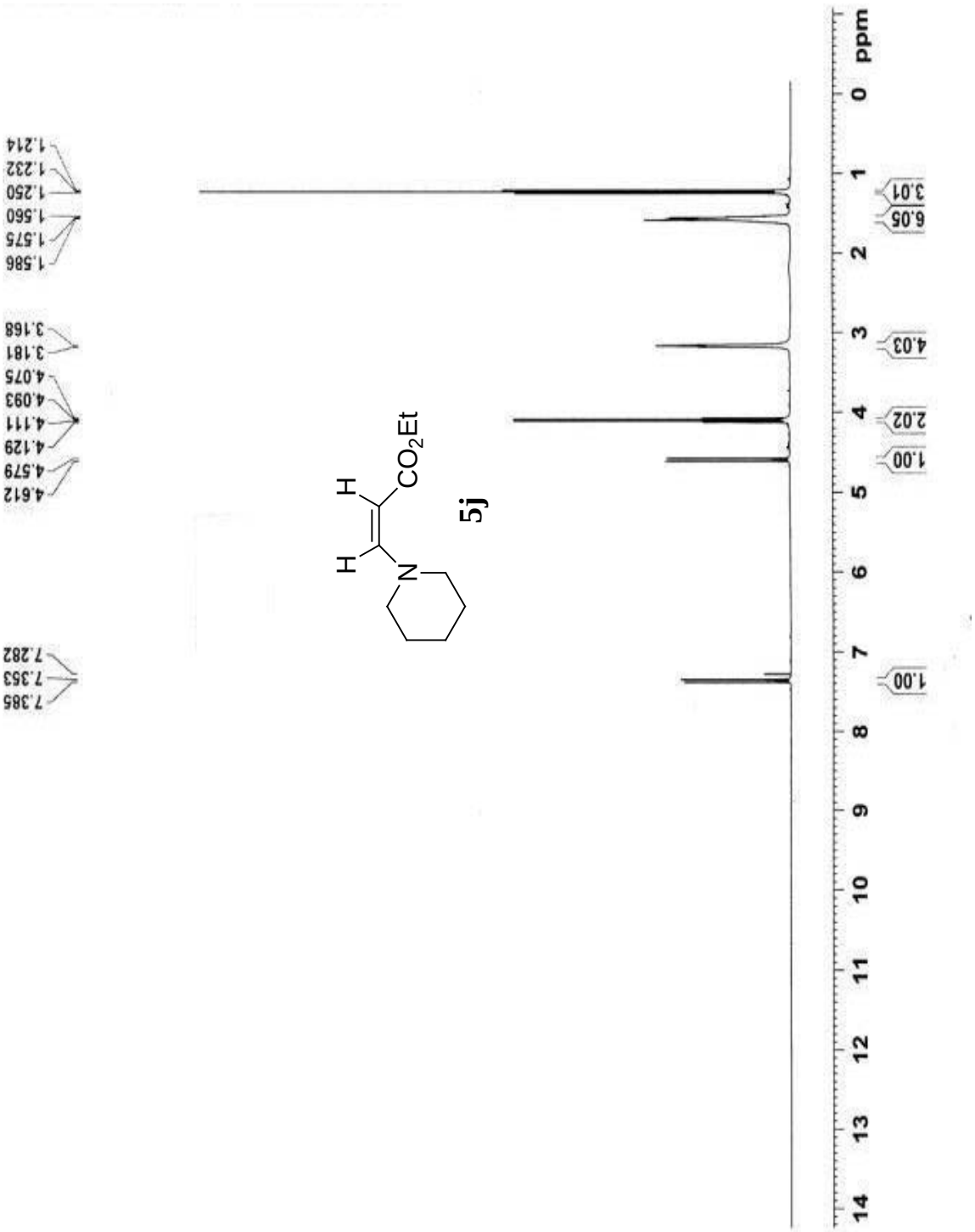

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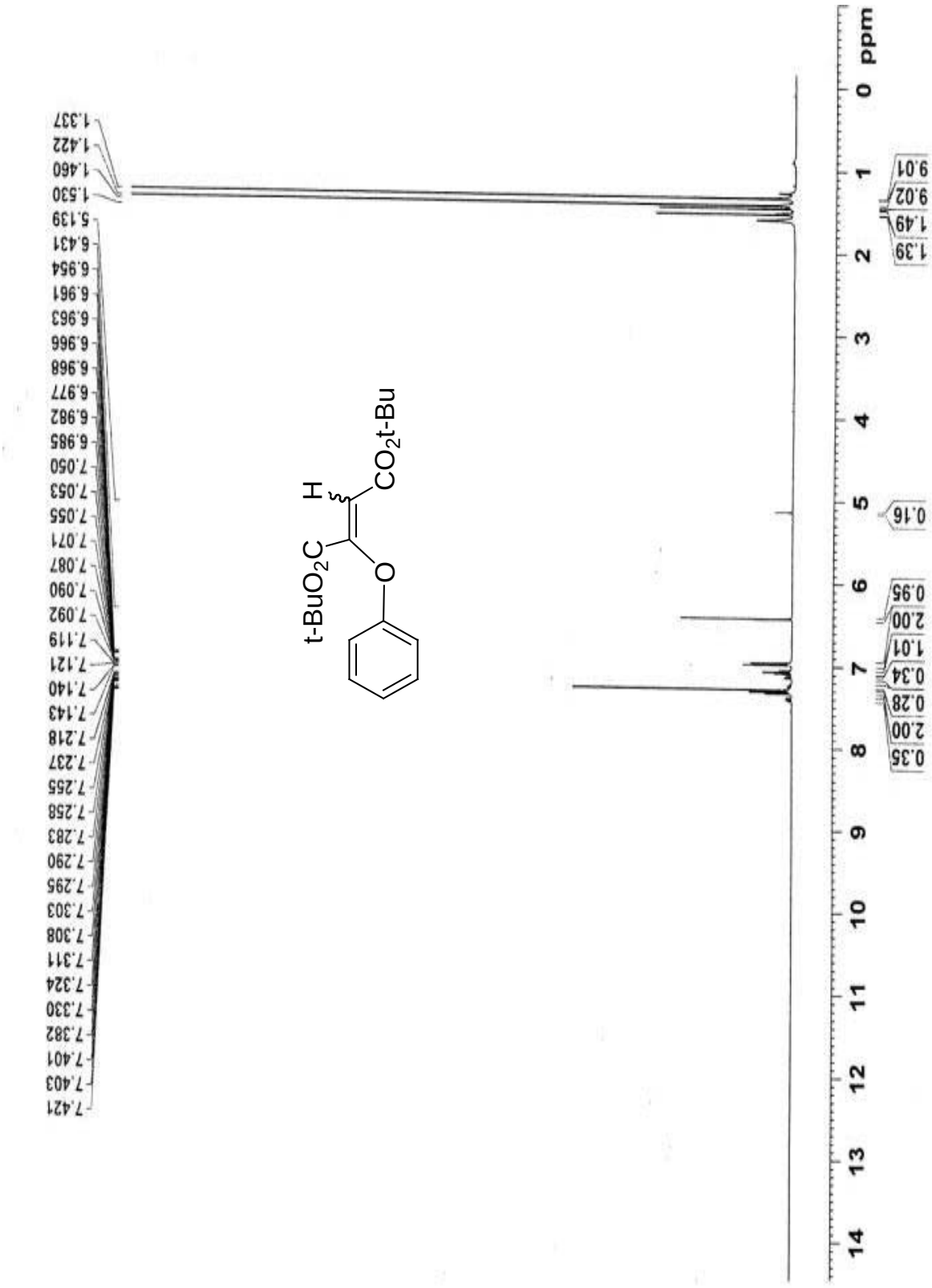

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