Supplementary Information

Catalyst- and metal-free C(sp^2)-H bond selenylation of (*N*-hetero)-arenes using diselenides and trichloroisocyanuric acid at room temperature.

José S. S. Neto[1], Isis J. A. Granja[2], Marcos R. Scheide[1], Marcelo S. Franco[1], Cassio A. O. Moraes[3], Adilson Beatriz [3], Dênis P. de Lima[3], Giancarlo V. Botteselle[4], Tiago E. A. Frizon[5], Sumbal Saba[2], Jamal Rafique[2,3*], and Antonio L. Braga[1,*]

[1] *Departamento de Química, Universidade Federal de Santa Catarina - UFSC, Florianópolis, 88040-970, SC-Brazil. http://labselen.ufsc.br; E-mail: braga.antonio@ufsc.br*

[2] *Instituto de Química, Universidade Federal de Goiás - UFG, Goiânia, 74690-900, GO-Brazil*

[3]*Instituto de Química, Universidade Federal do Mato Grosso do Sul - UFMS, Campo Grande, 79074-460, MS-Brazil. https://sintmol.ufms.br/; E-mail: jamal.rafique@ufms.br, jamal.chm@gmail.com*

[4] *Departamento de Química, Universidade Estadual do Centro-Oeste - UNICENTRO, 85819110, Guarapuava, PR - Brazil*

[5] *Universidade Federal de Santa Catarina – UFSC, Campus Araranguá, 88905120 Araranguá, SC-Brazil*

*****Corresponding author: jamal.chm@gmail.com (J.R.), braga.antonio@ufsc.br (A.L.B.)

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General Remarks

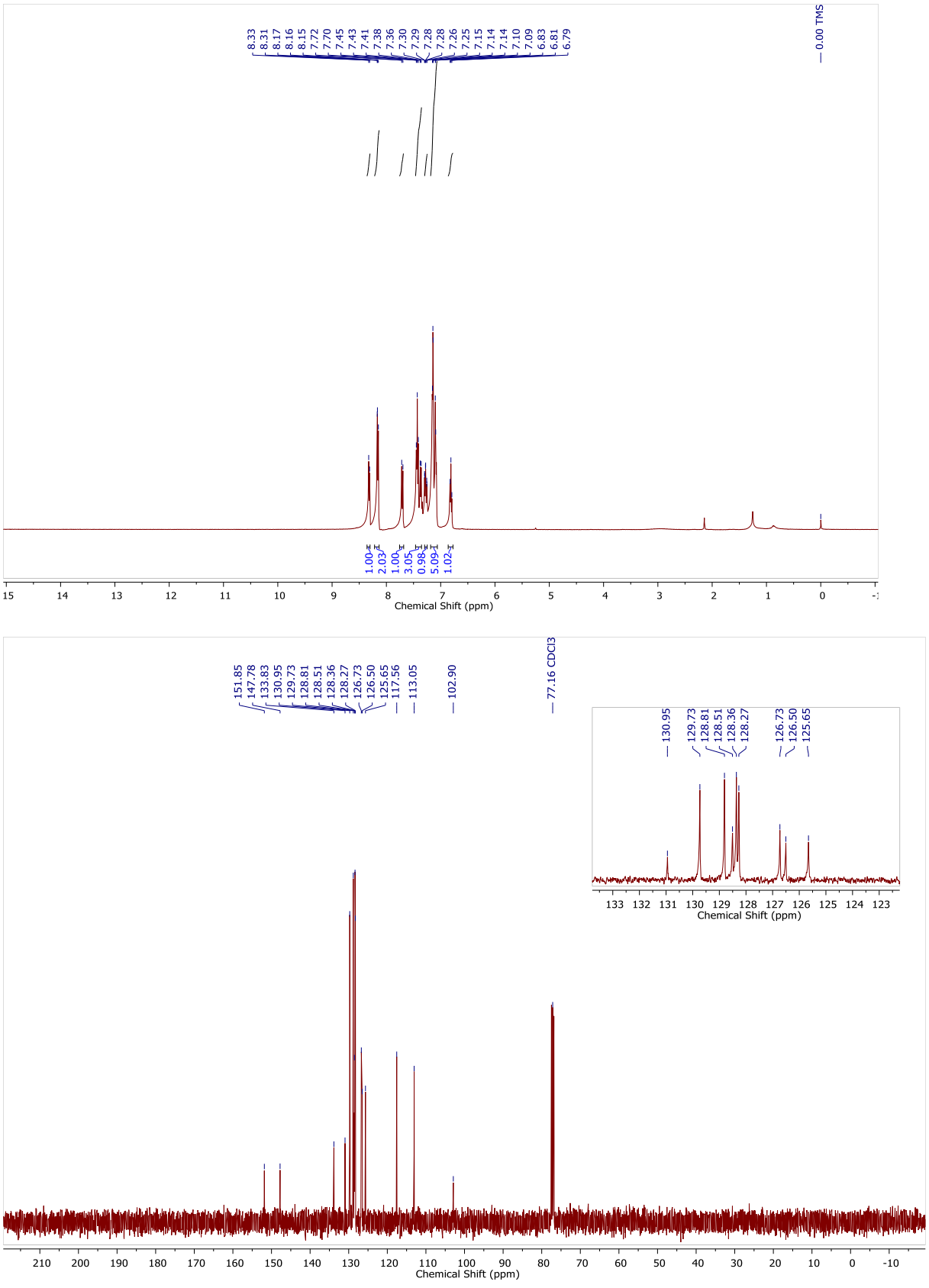
Starting materials obtained from commercial suppliers were used unless otherwise stated. Column chromatography was performed using silica gel 60 (diameter 0.05 - 0.10 mm) Macherey-Nagel. Thin layer chromatography (TLC) was performed using Macherey-Nagel pre-coated TLC sheets ALUGRAM® Xtra SIL with layer of 0.20 mm. Visualization was achieved by UV fluorescence, iodine chamber and acidic vanillin.

Synthesis of Starting Materials

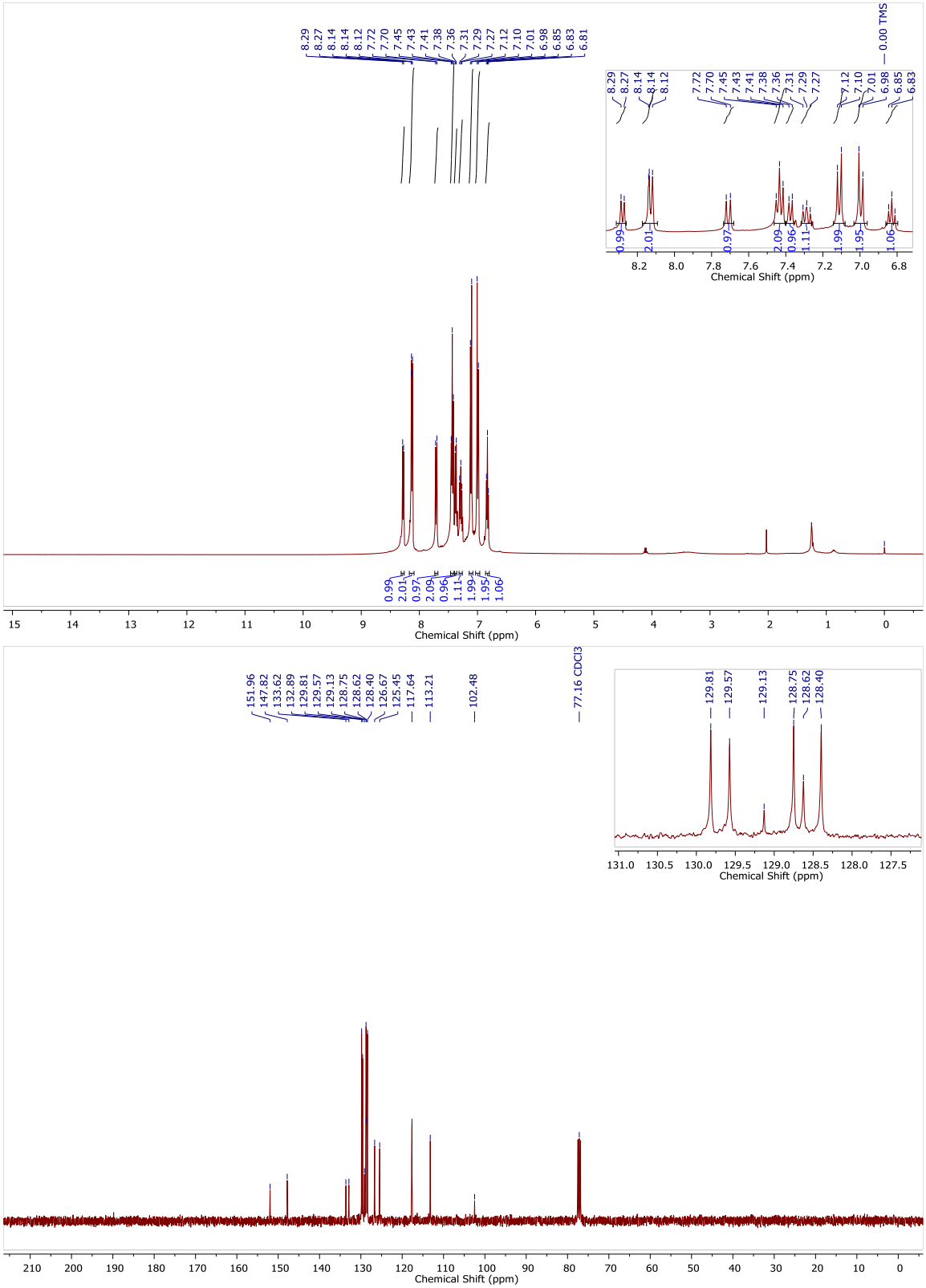
The substrates imidazo[1,2-*a*]pyridines, imidazo[1,2-a]pyrimidines and imidazo[2,1-*b*]thiazoles were prepared according to the literature reports.[1-12]

Characterization Data Products

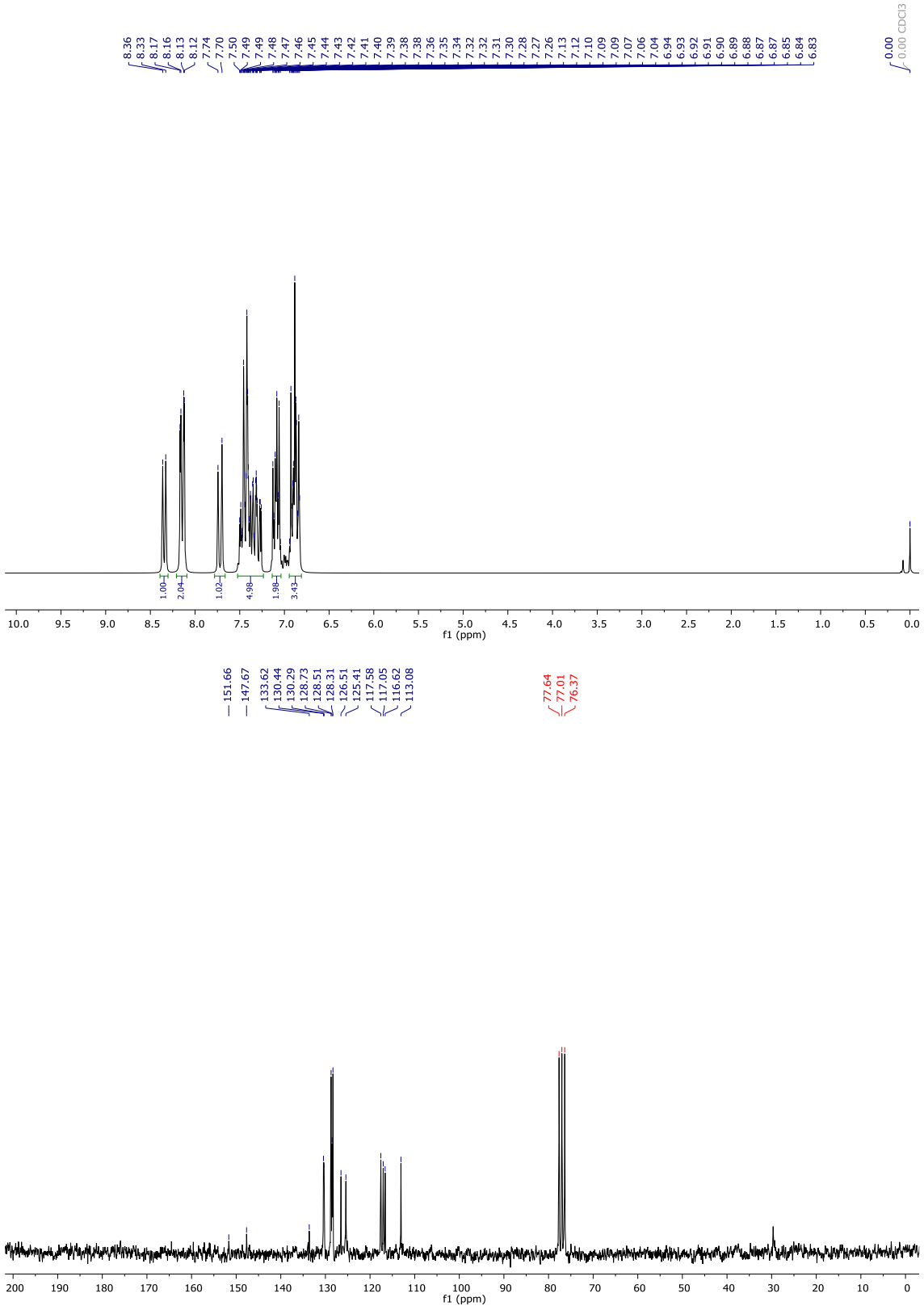
General considerations: The melting points were taken on a MQAPF-301 melting point apparatus, uncorrected. ^{1}H and ^{13}C NMR spectra were recorded on Varian NMR AS 400 spectrometer and Brucker NMR AC 200, with the samples dissolved in $CDCl_3$. Chemical shifts are informed in ppm downfield from the signal of TMS, used as internal standard, and the coupling constants (*J*) are expressed in Hertz (Hz). High-resolution mass spectral data were obtained on a Bruker microTOF-Q IIT instrument and Xevo G2-S QTOF (Waters) on ESI^+ mode. Infrared spectra were recorded on Bruker Alpha using KBr pellets.



^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **3a**



^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **3b**



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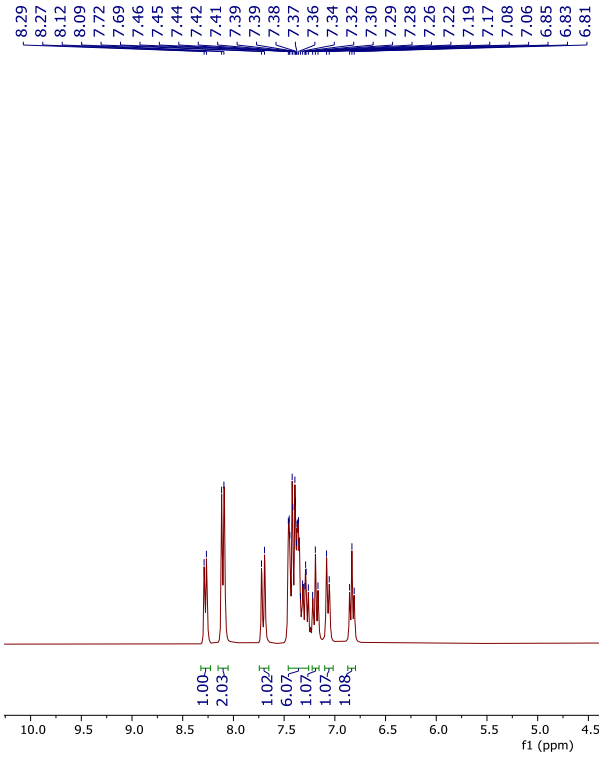
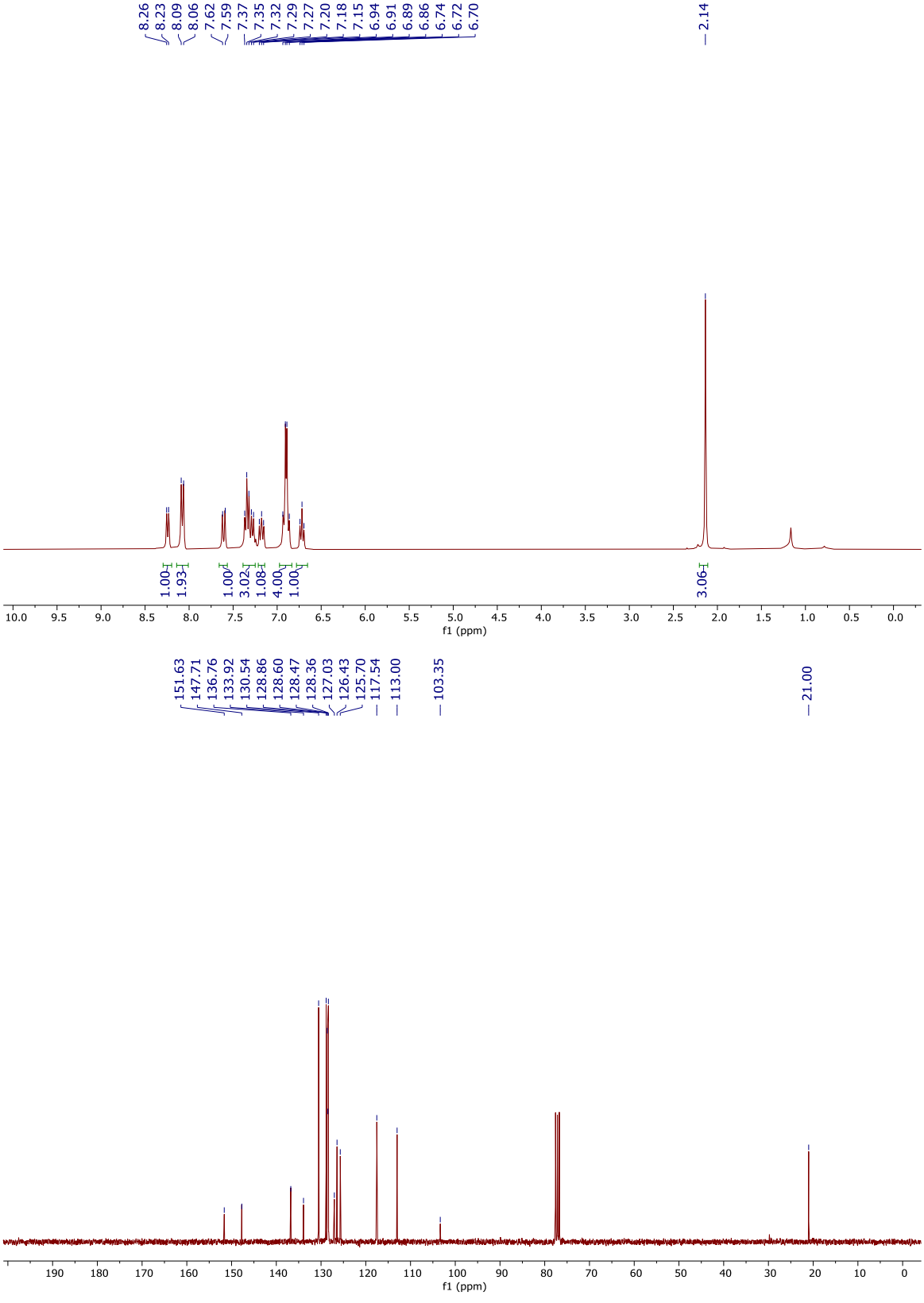


^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **3d**



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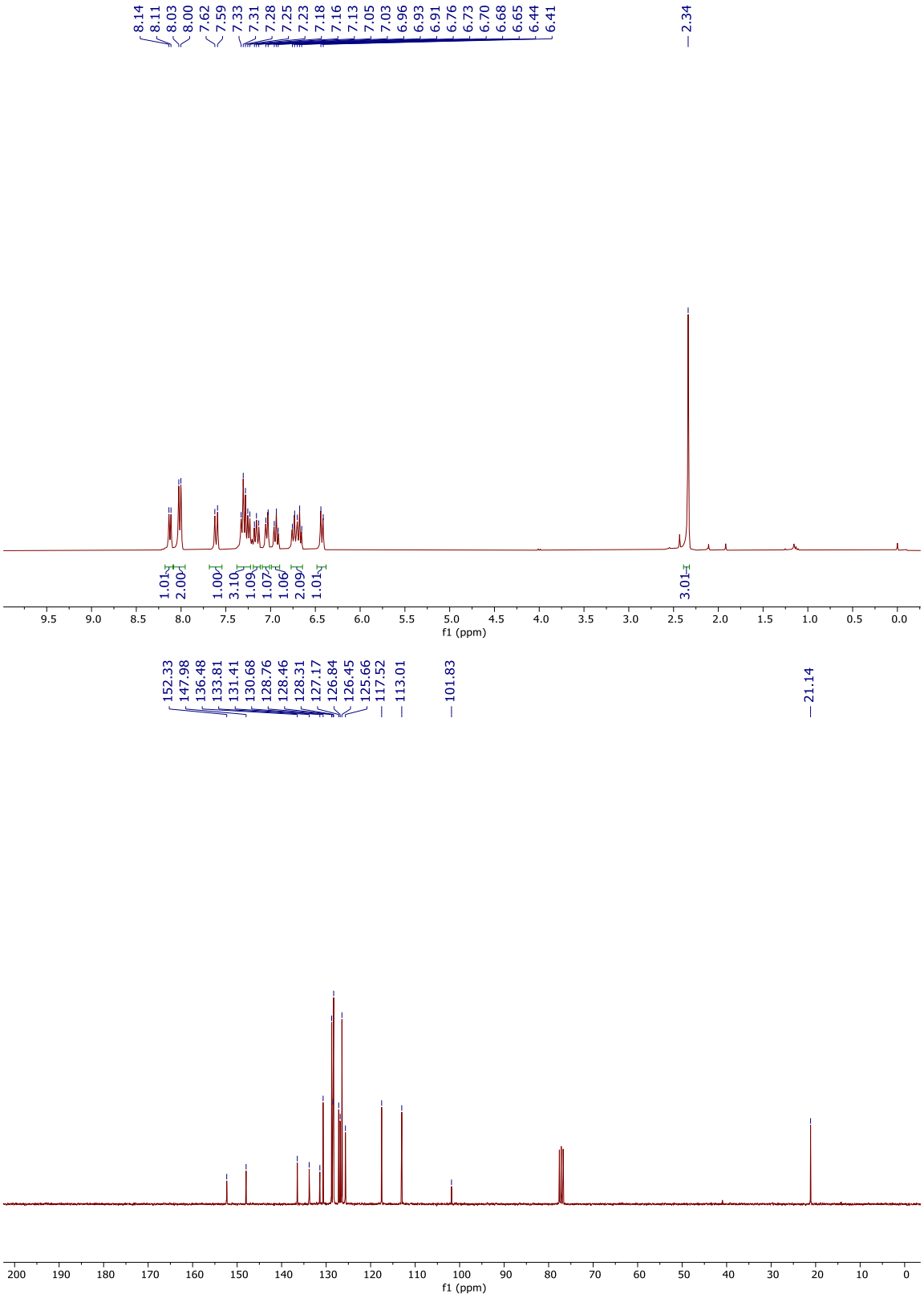

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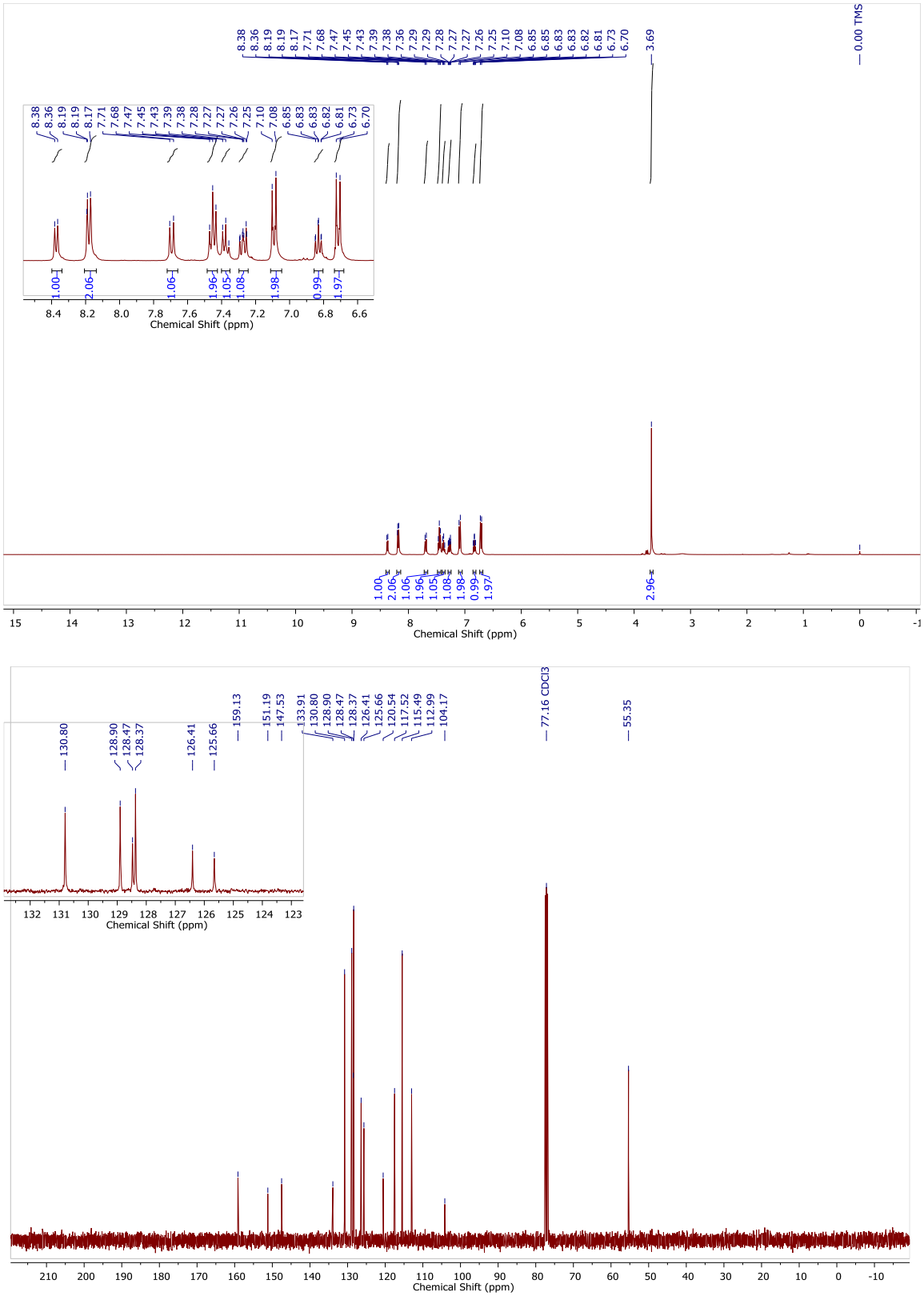

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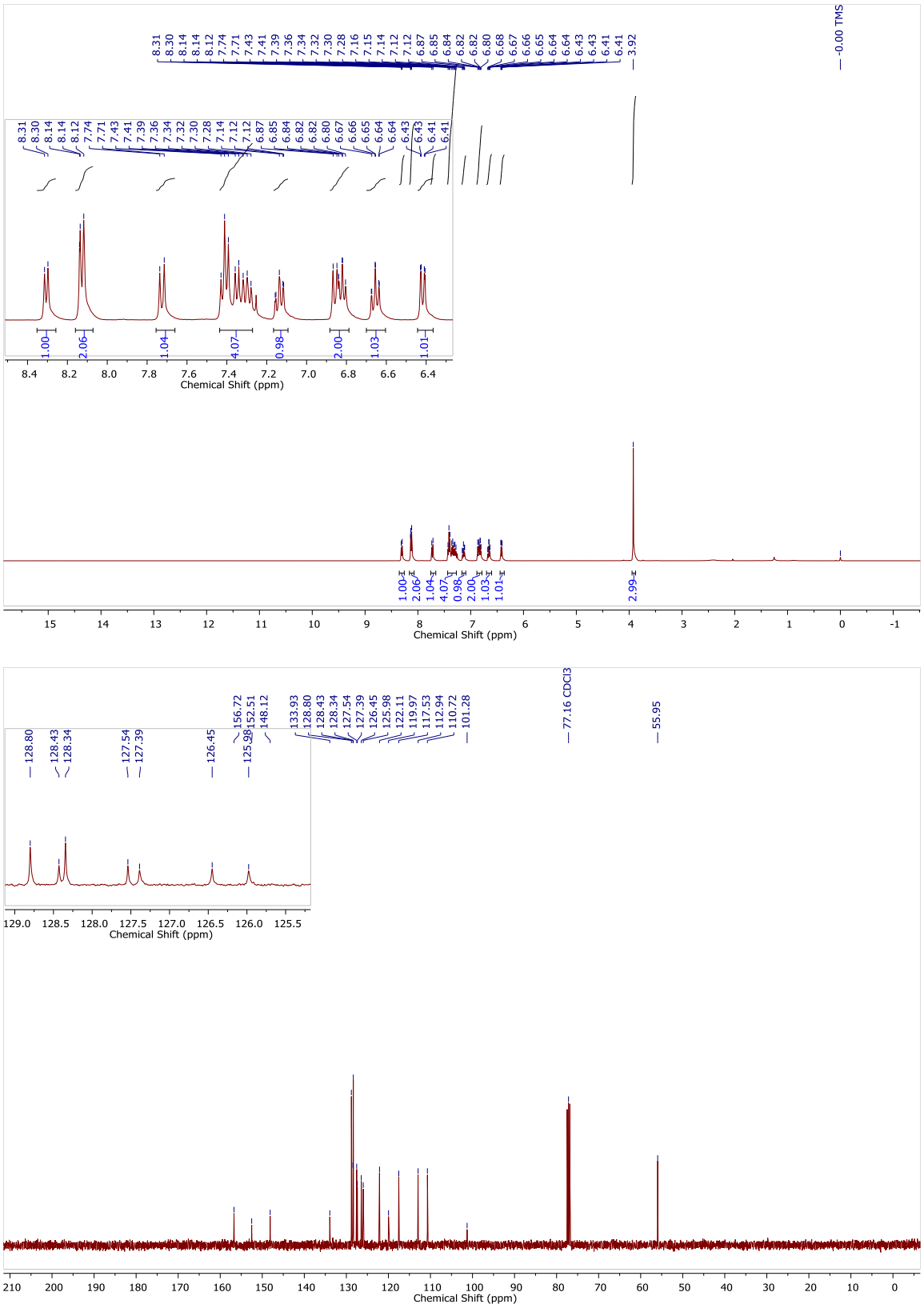

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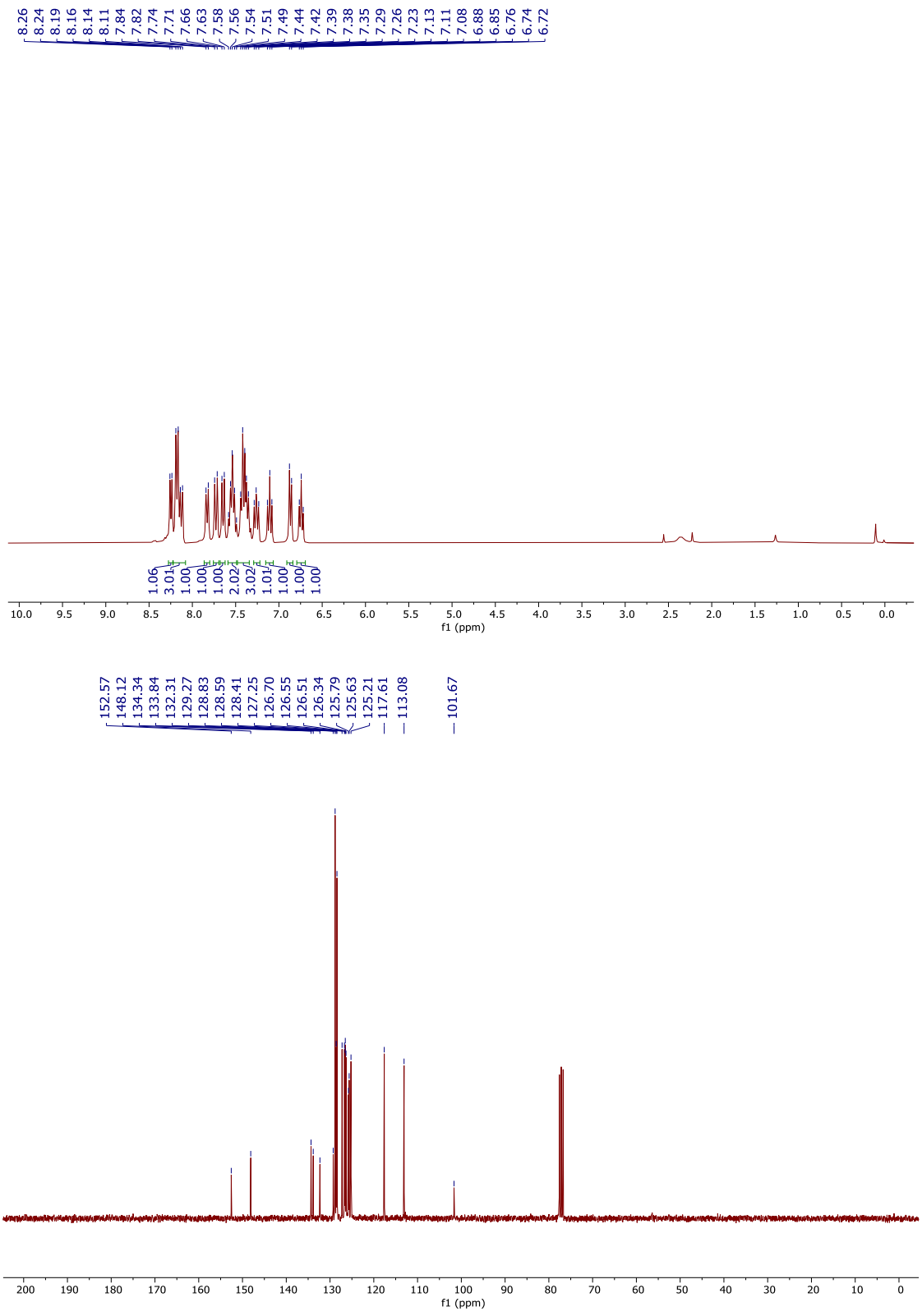
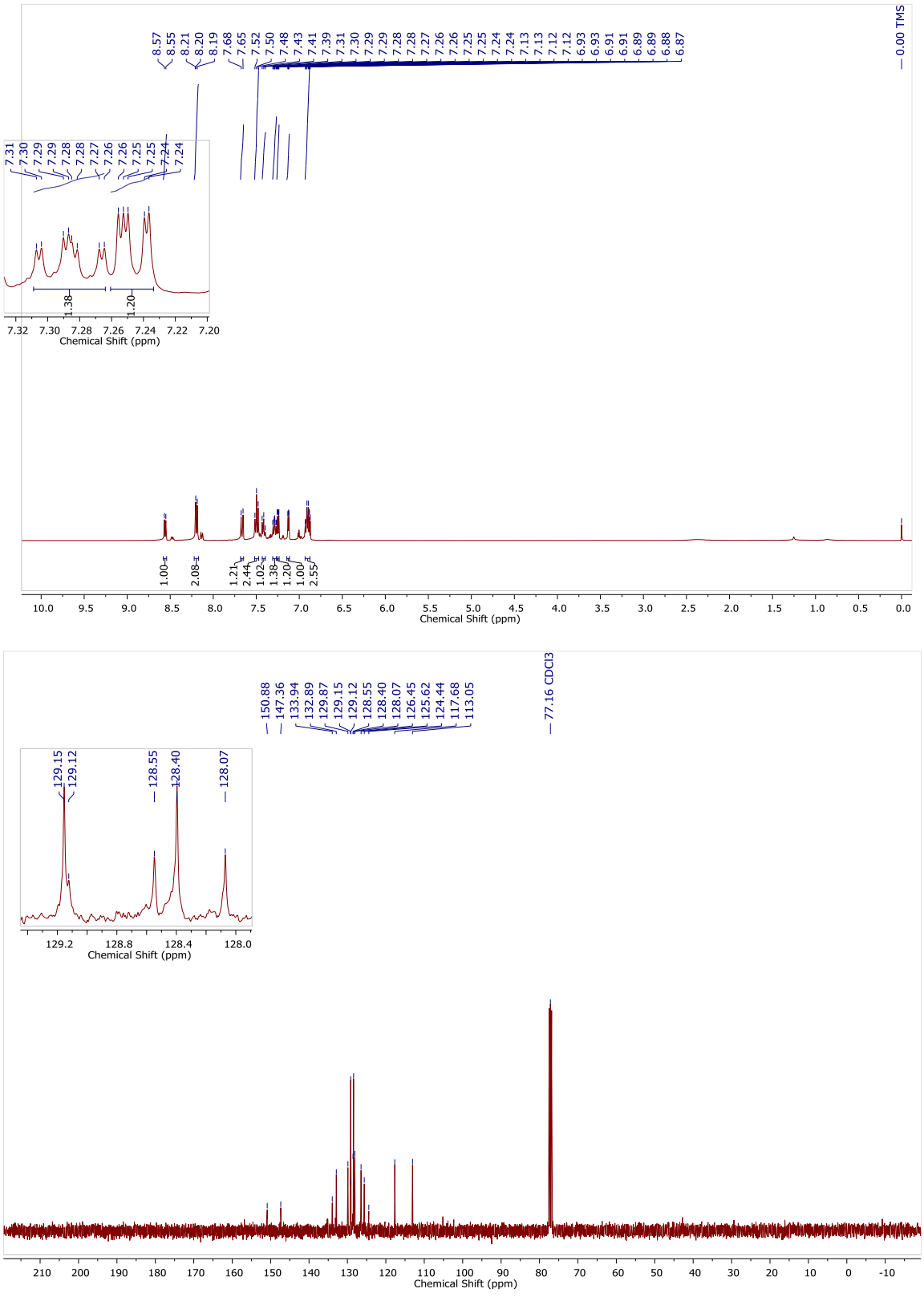
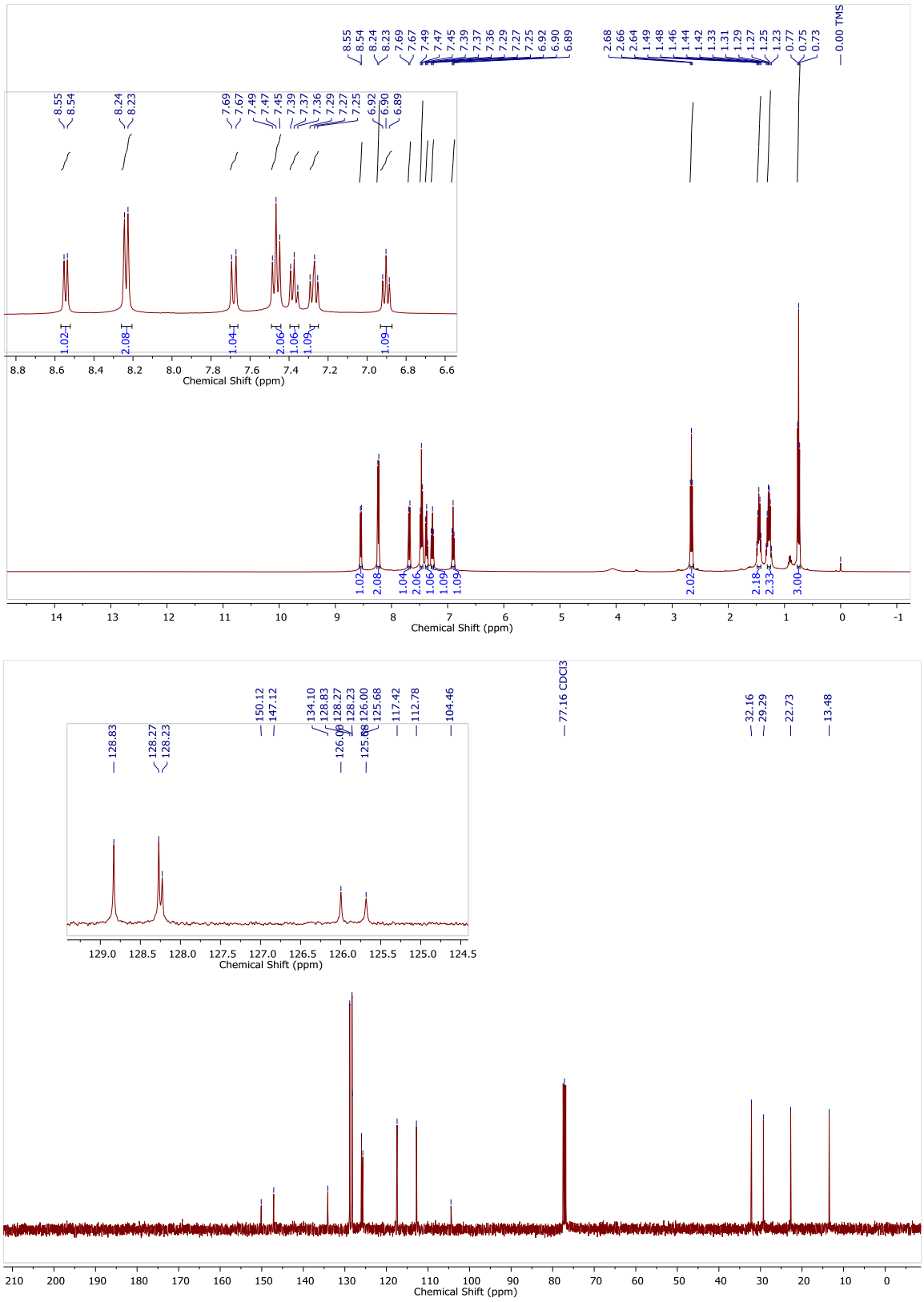


^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **3i**



^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **3j**



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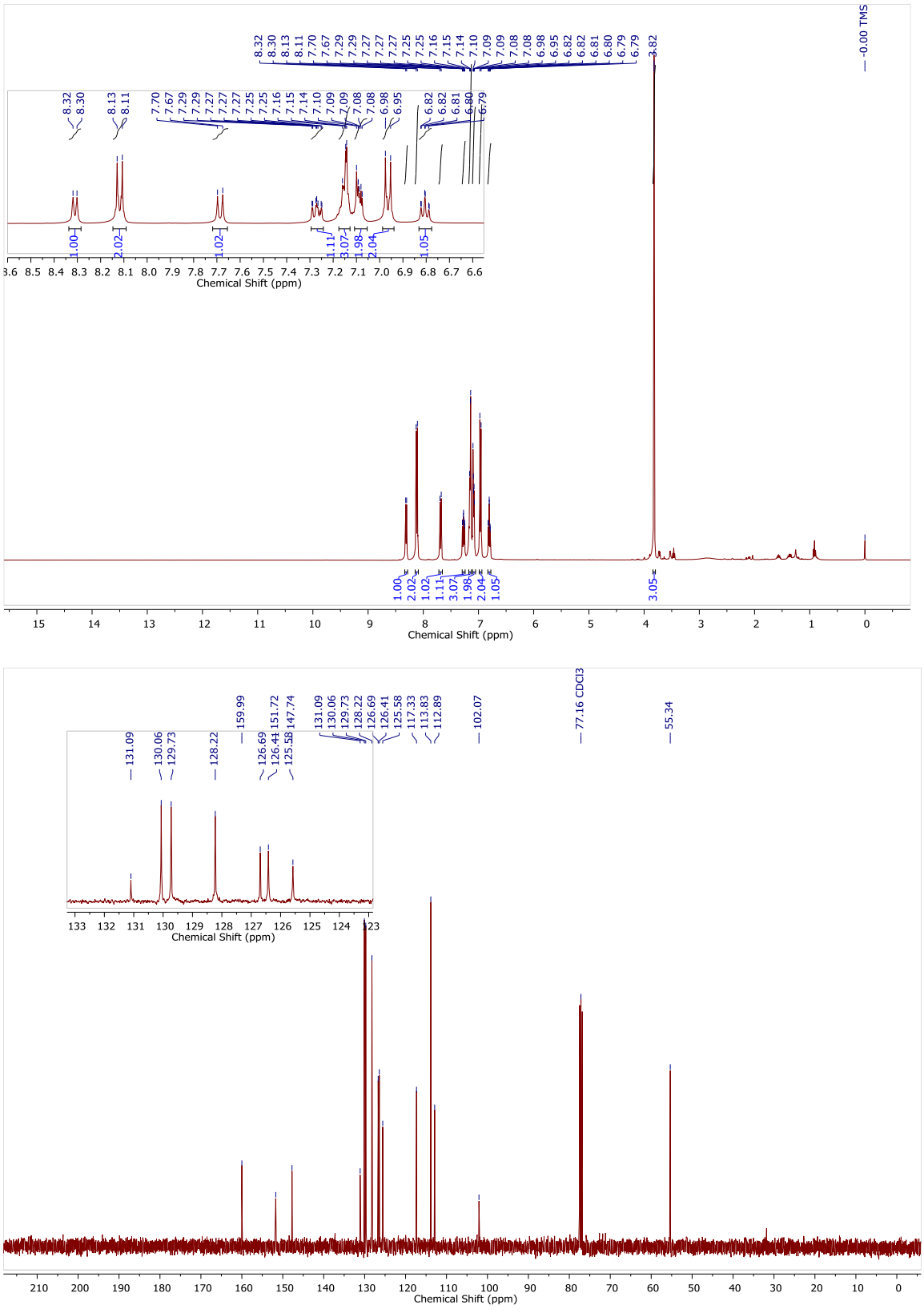
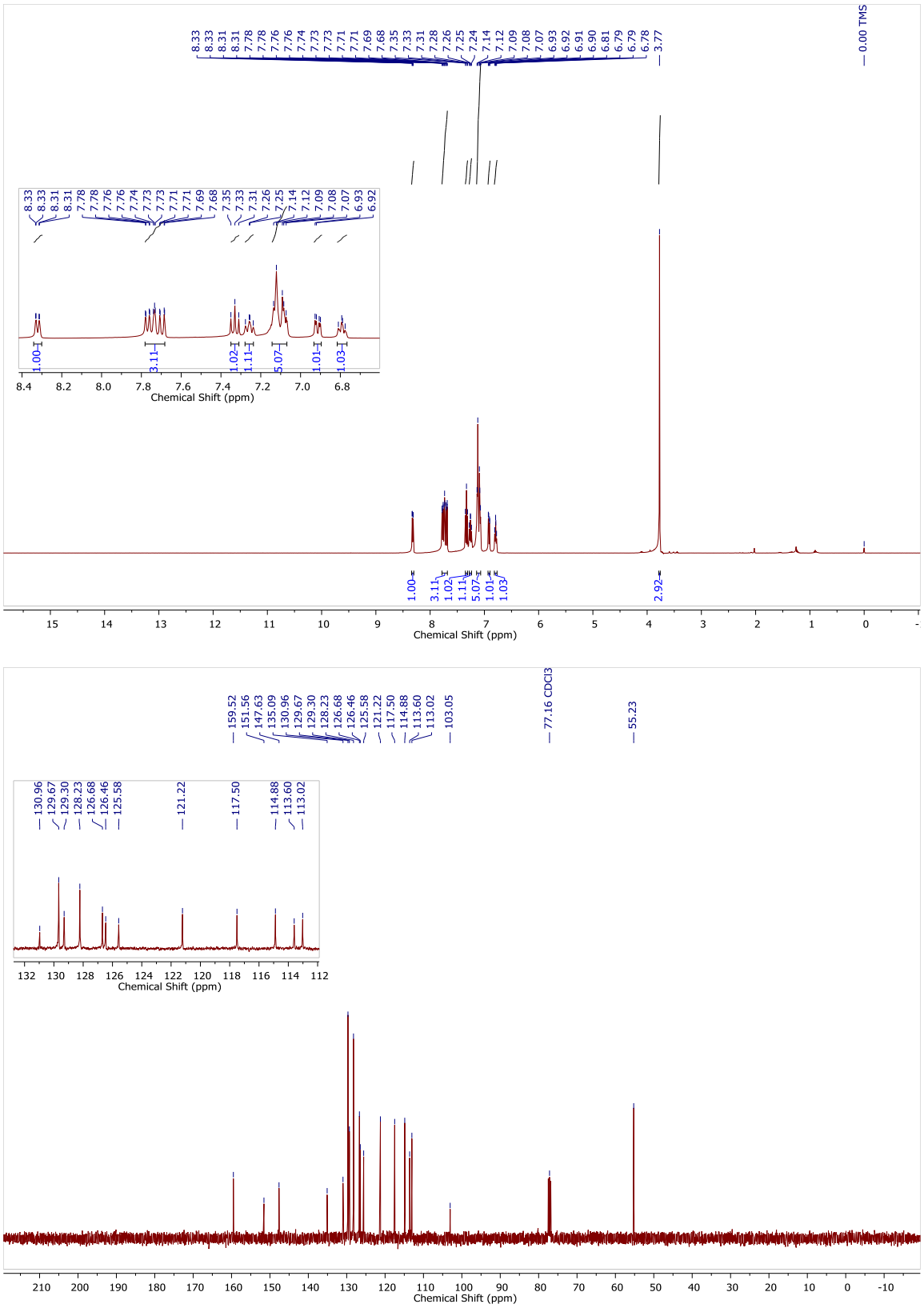


^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **4a**



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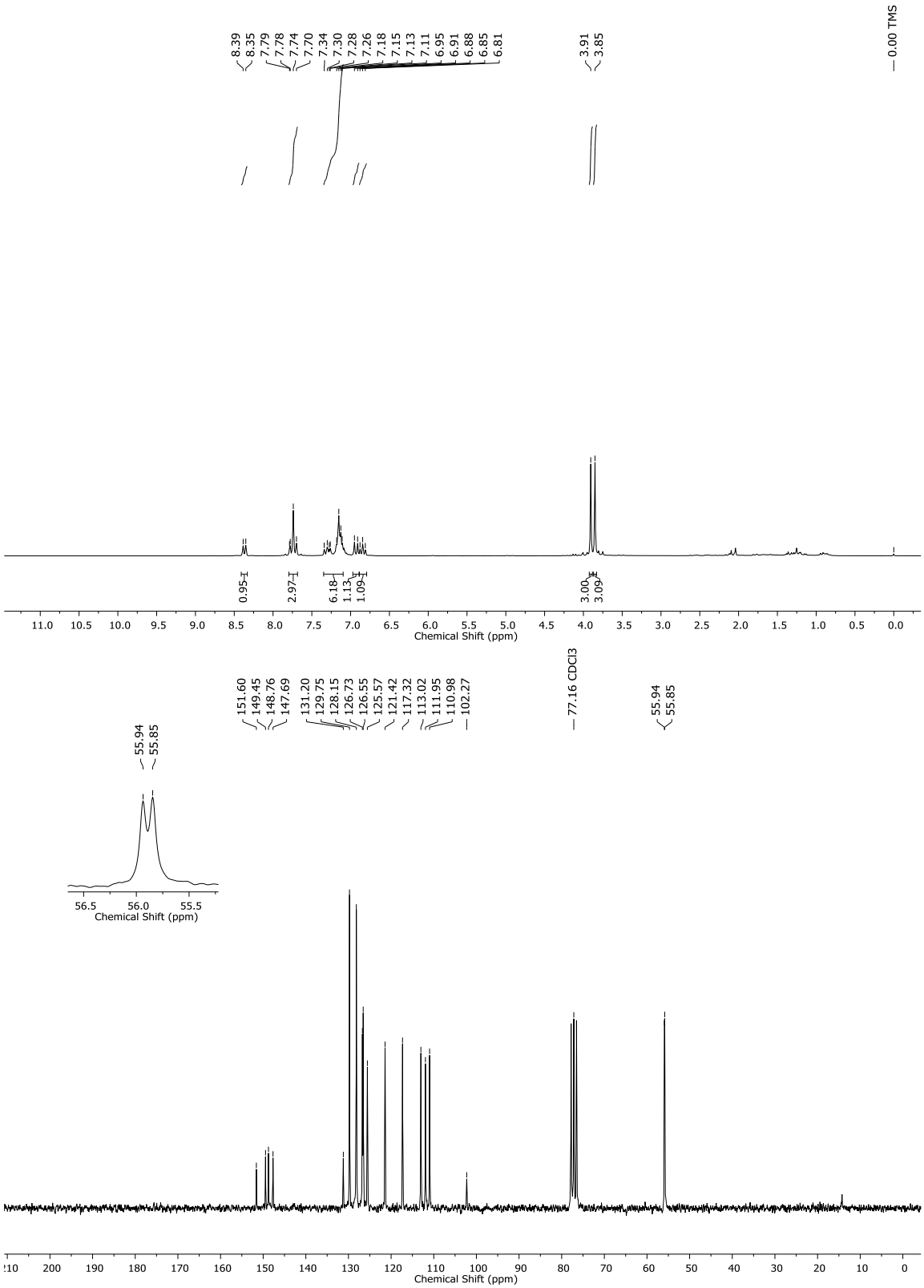
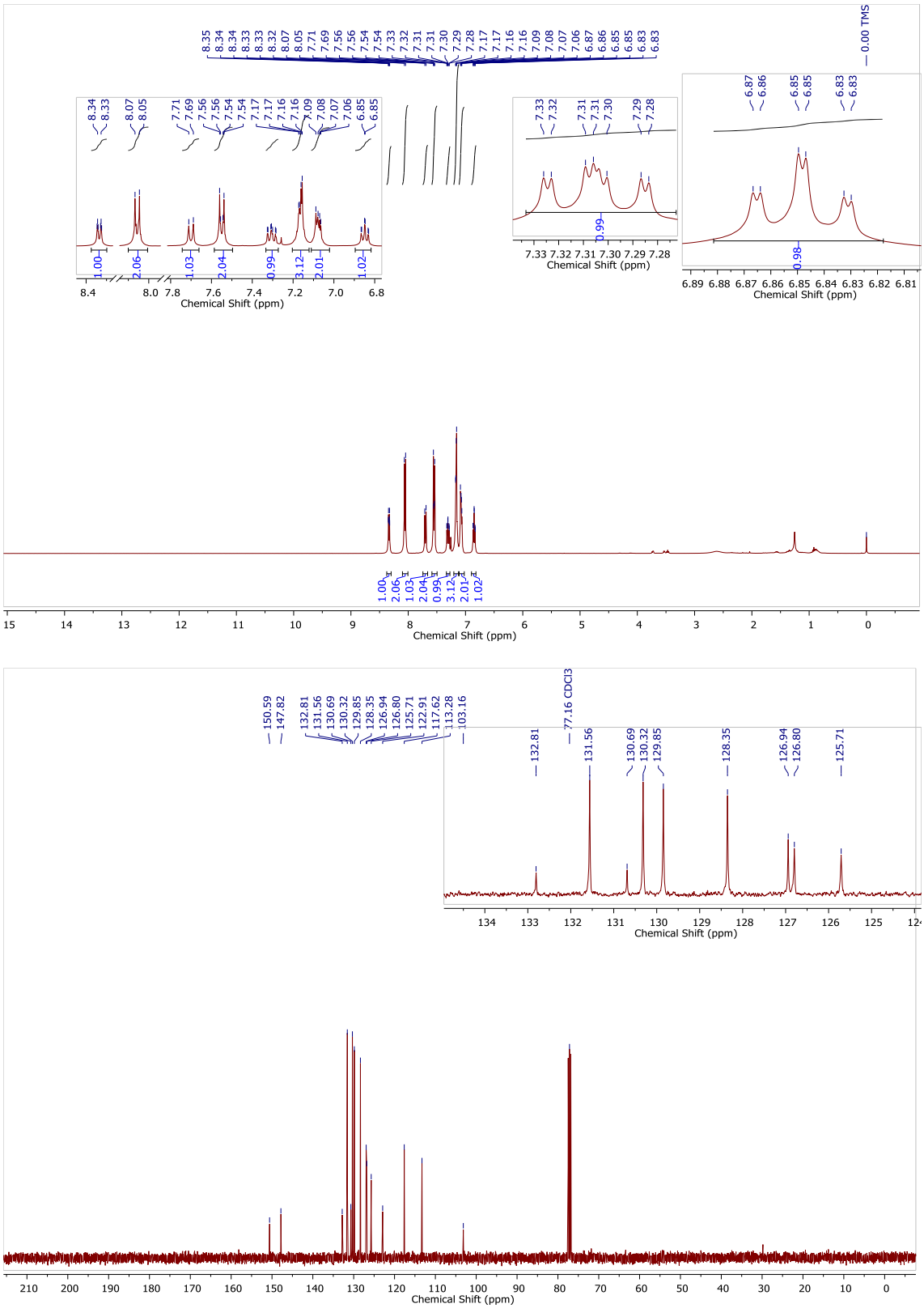


^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **4c**



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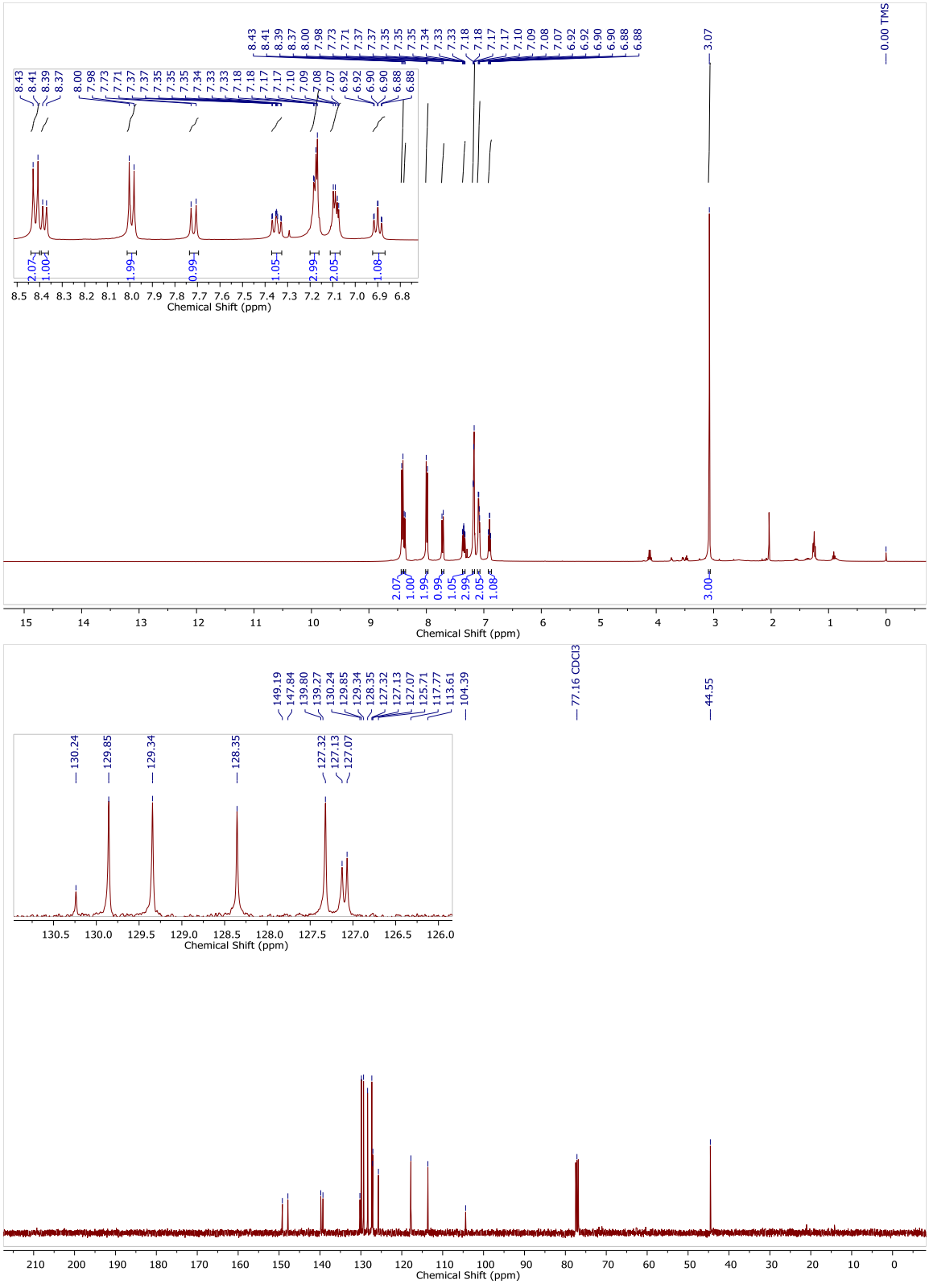

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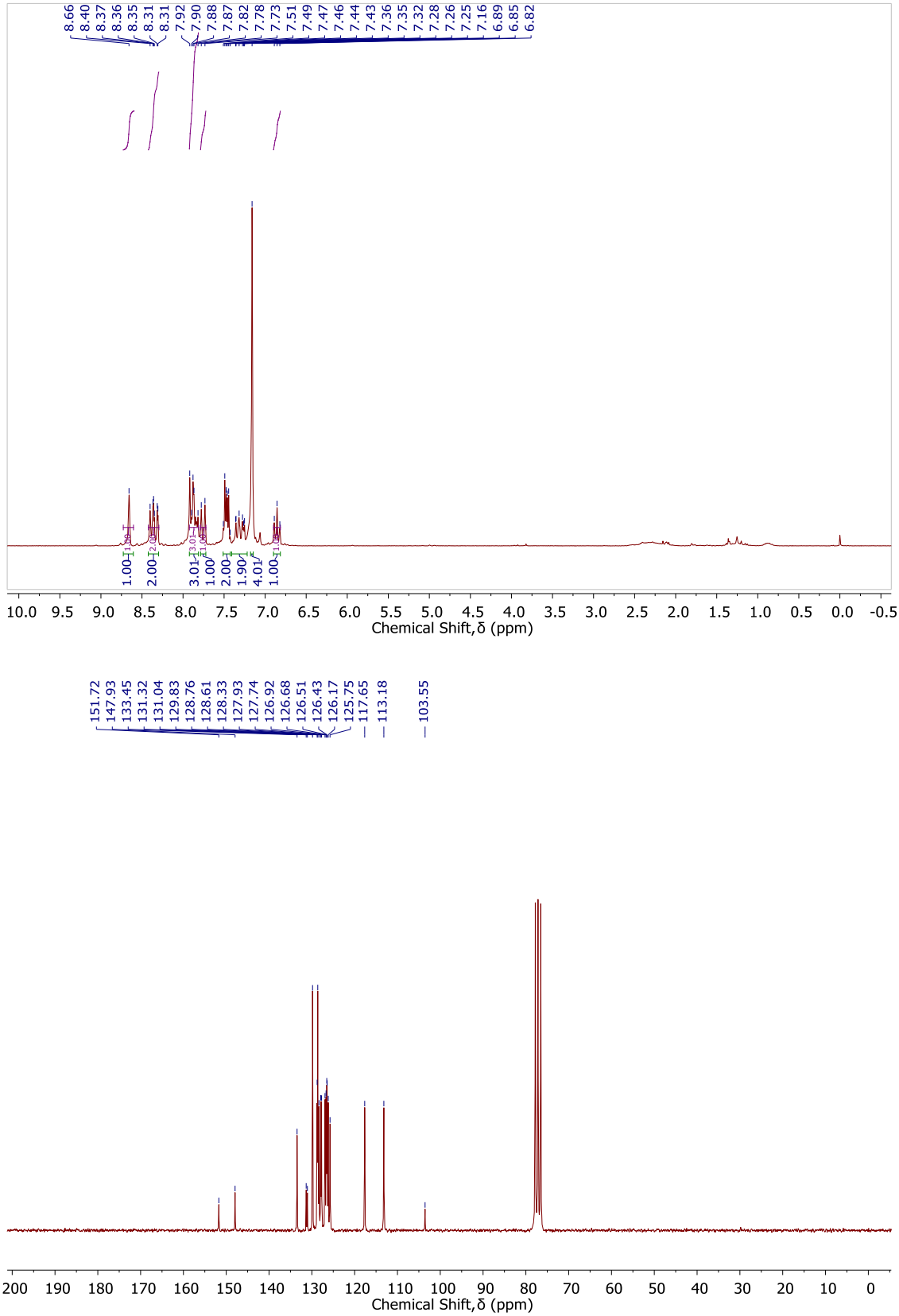
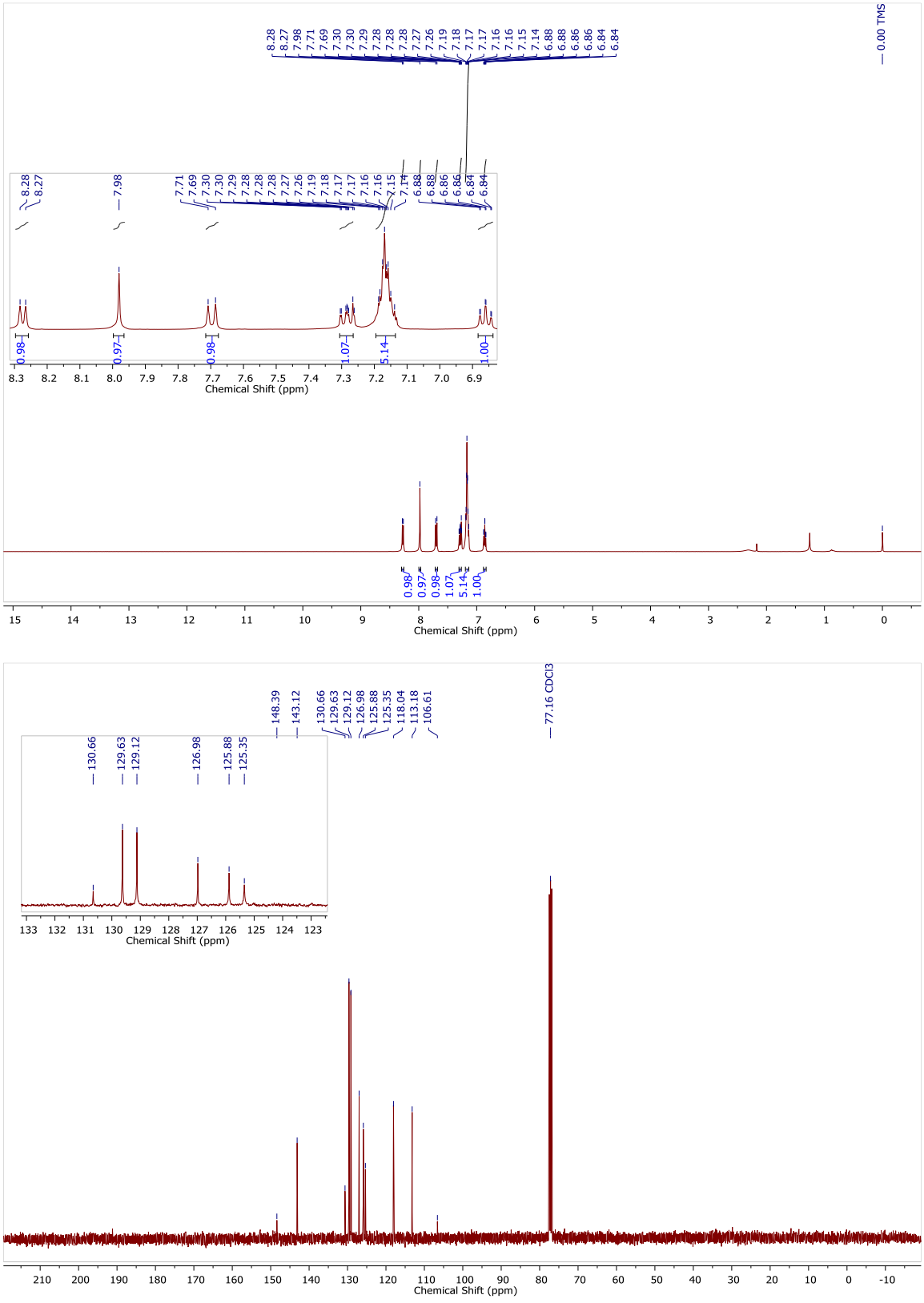


^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **4f**



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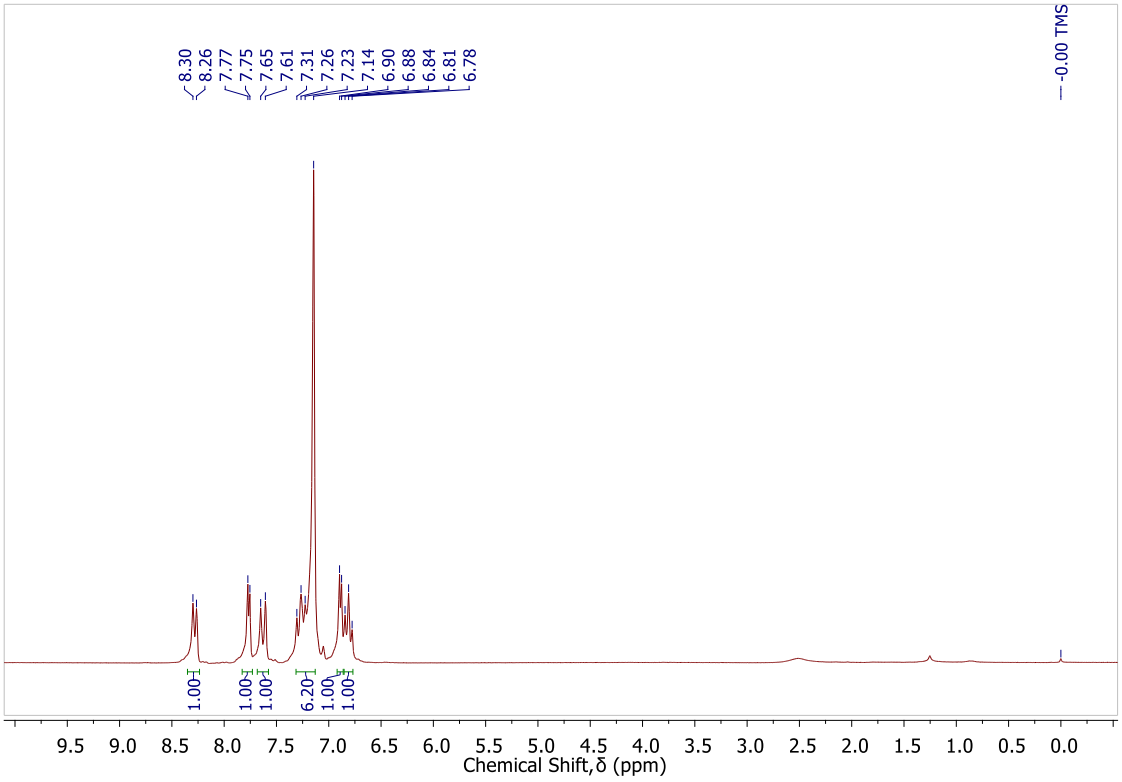

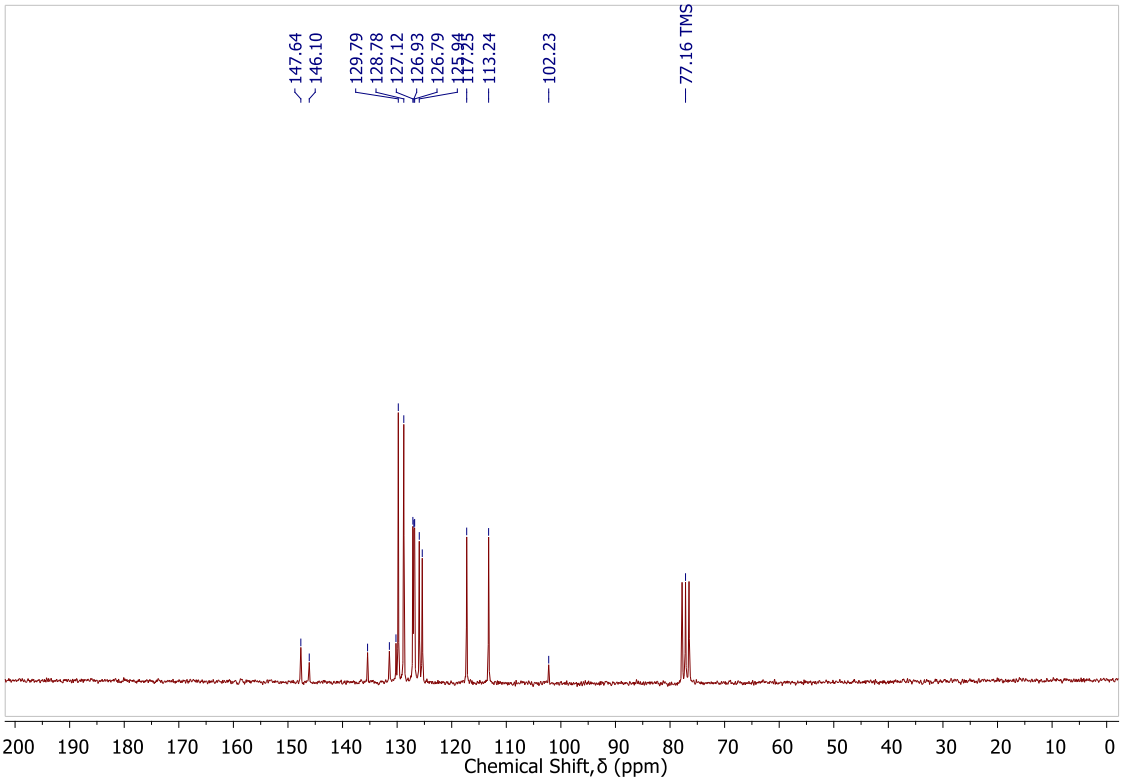

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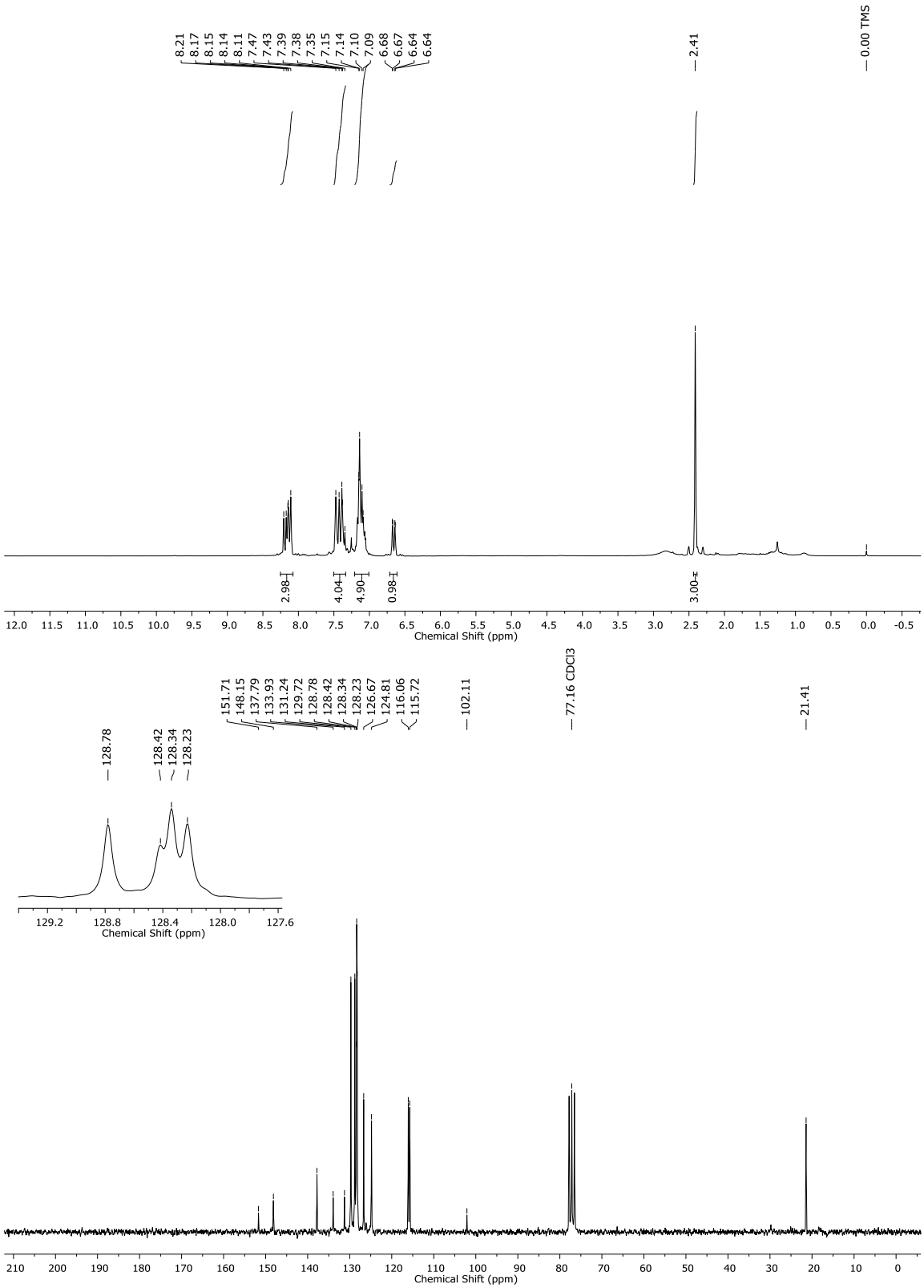

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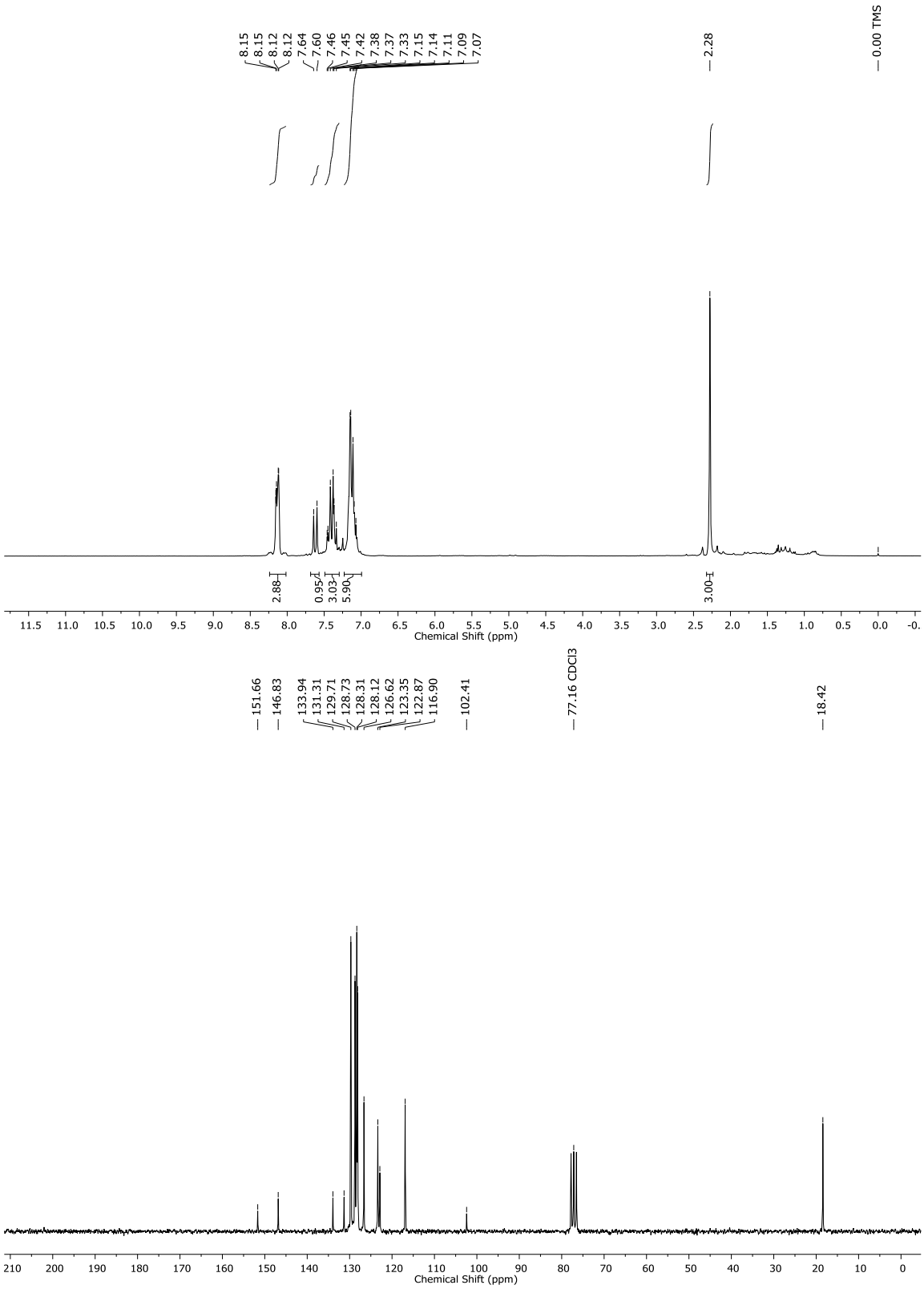

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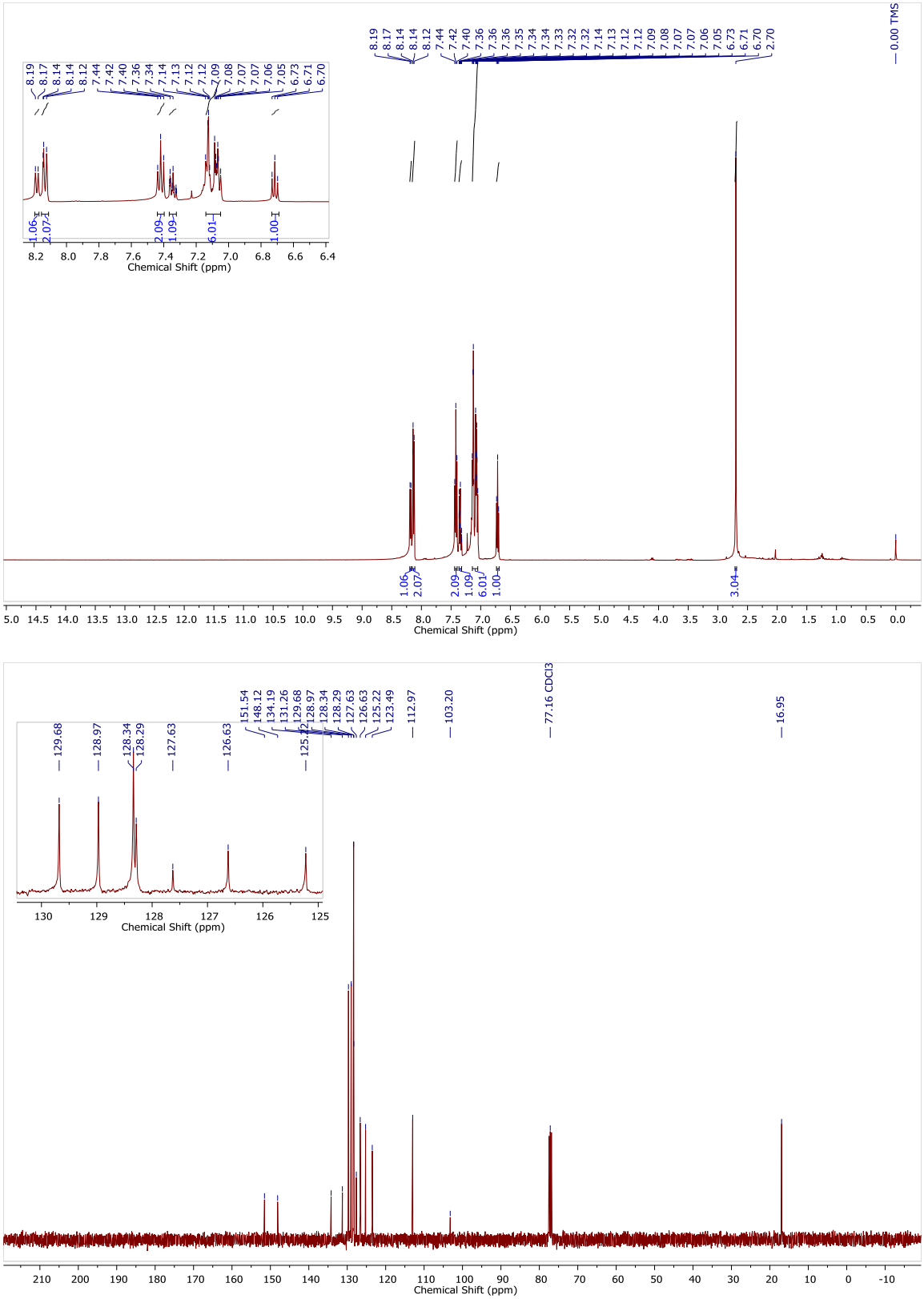

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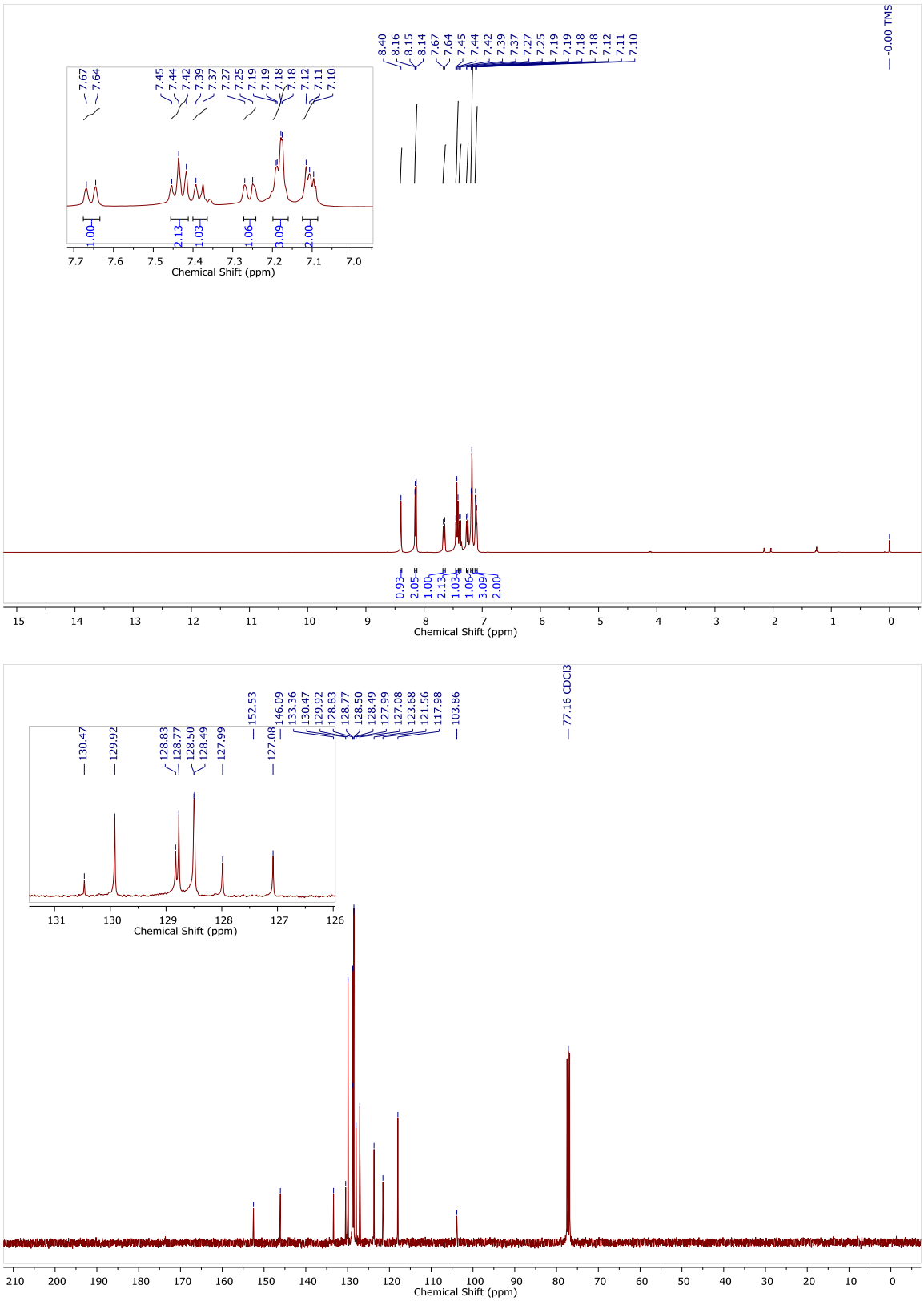
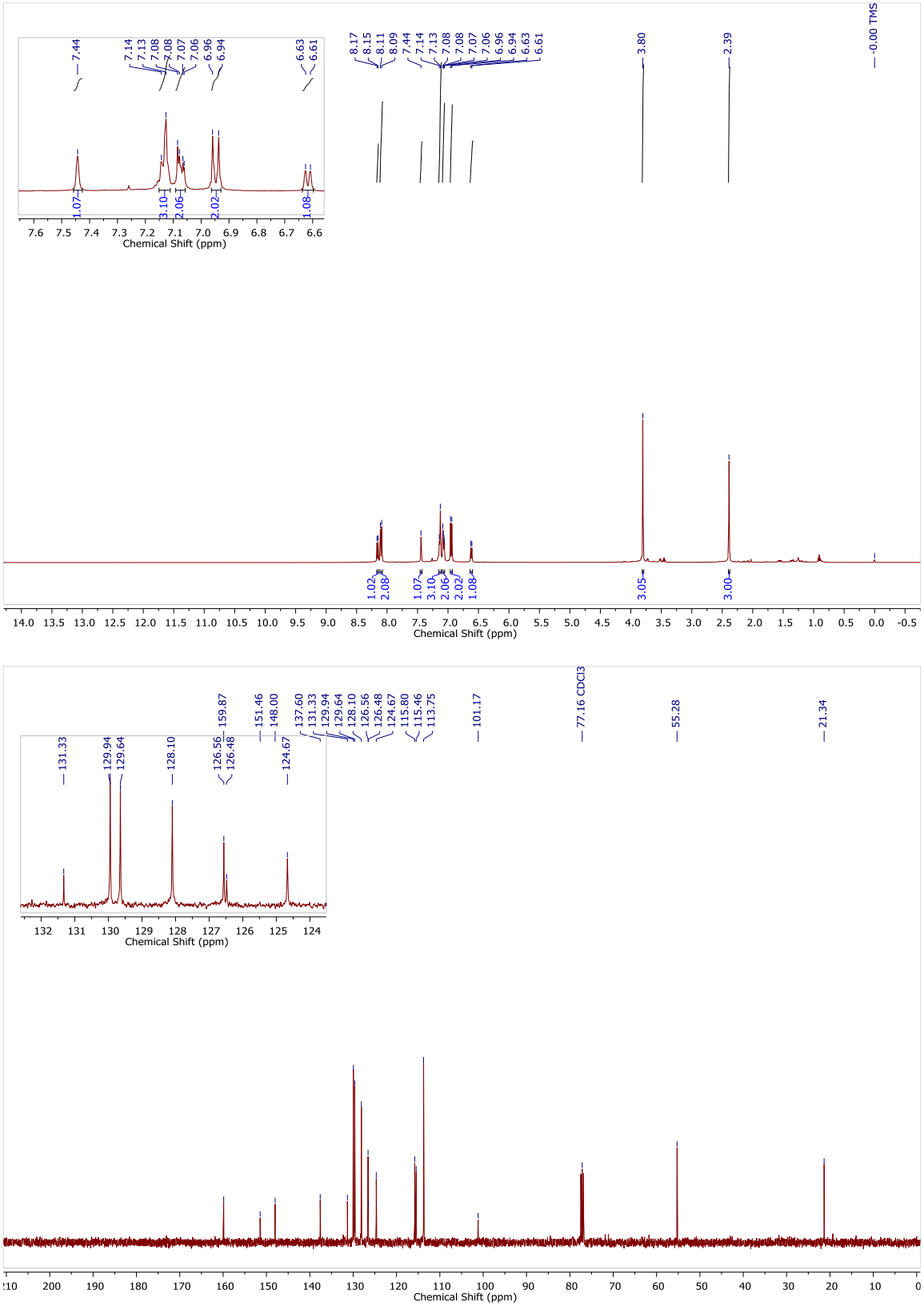
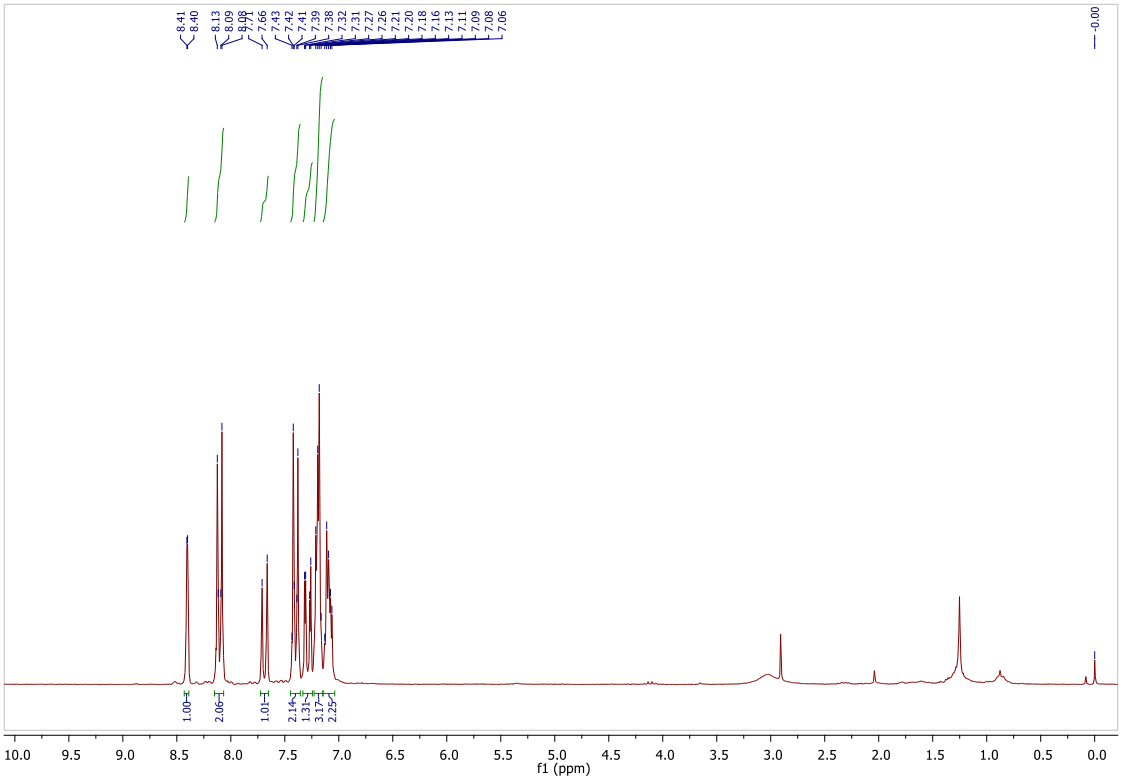
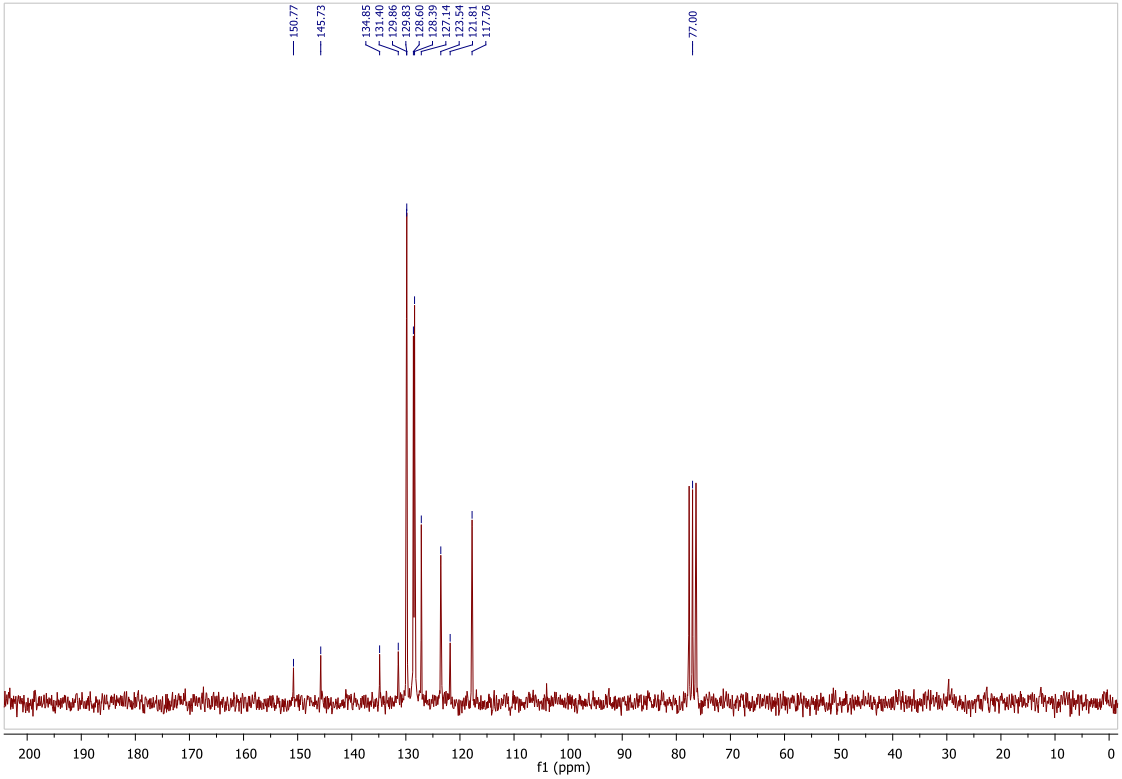


^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **4l**

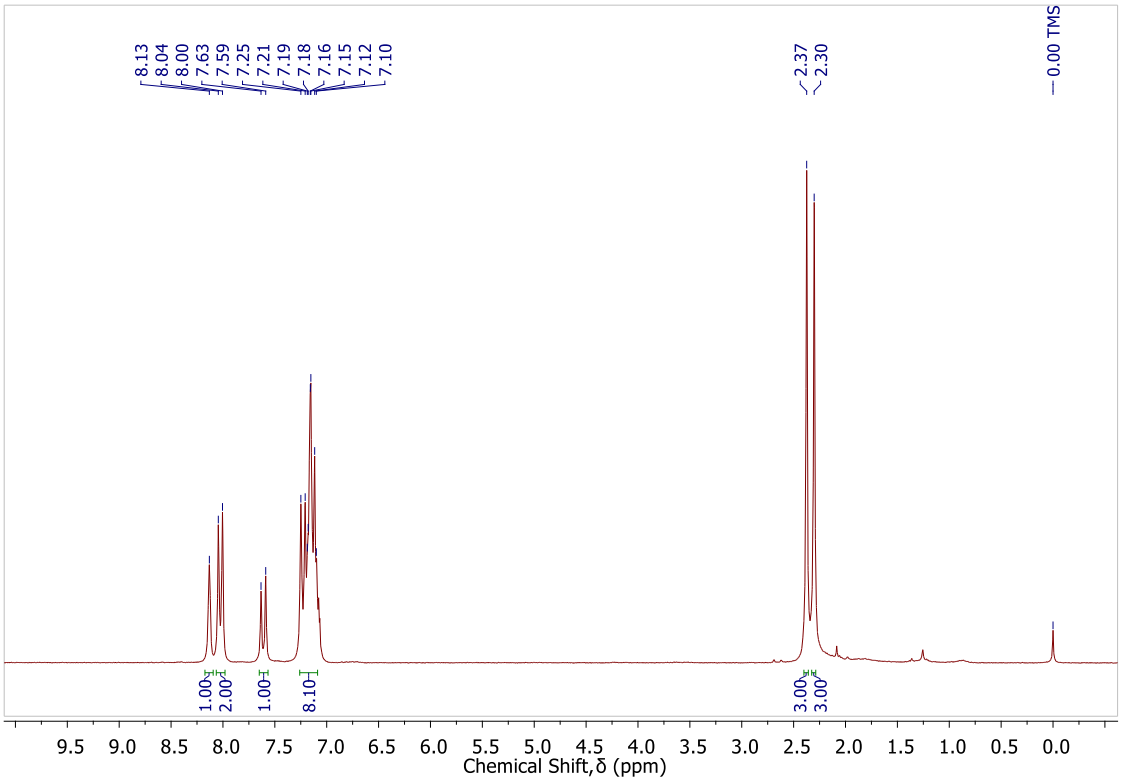


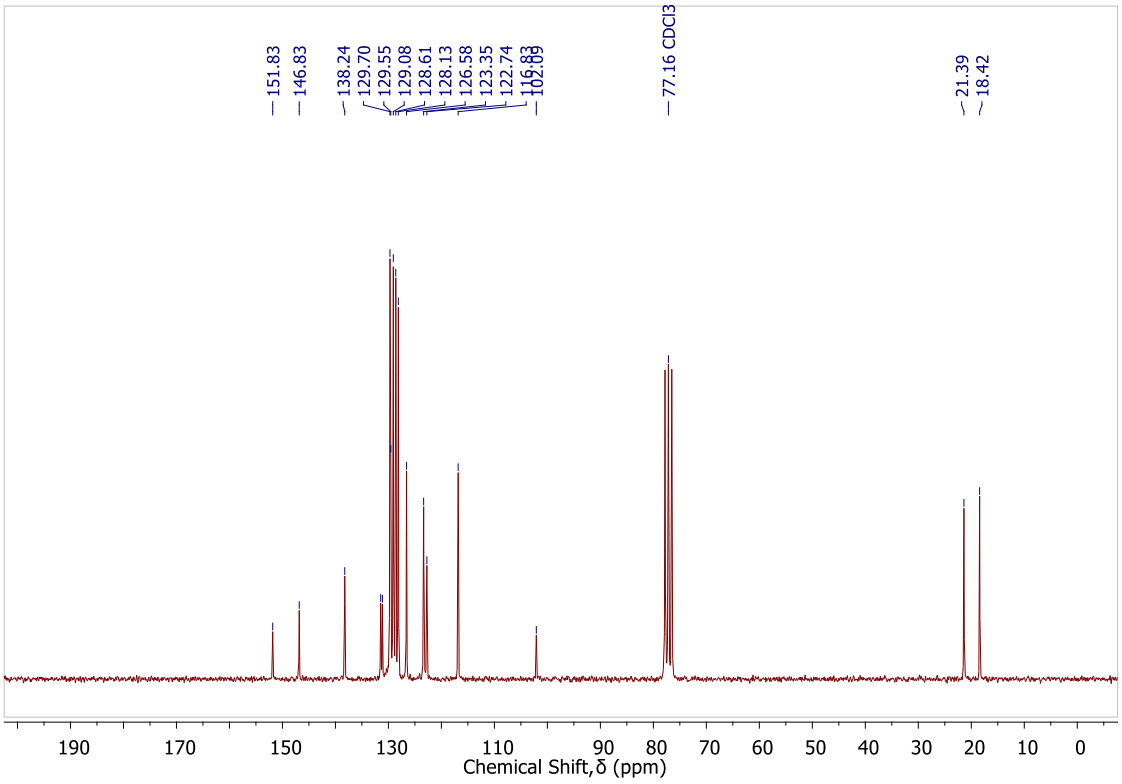
^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **4m**



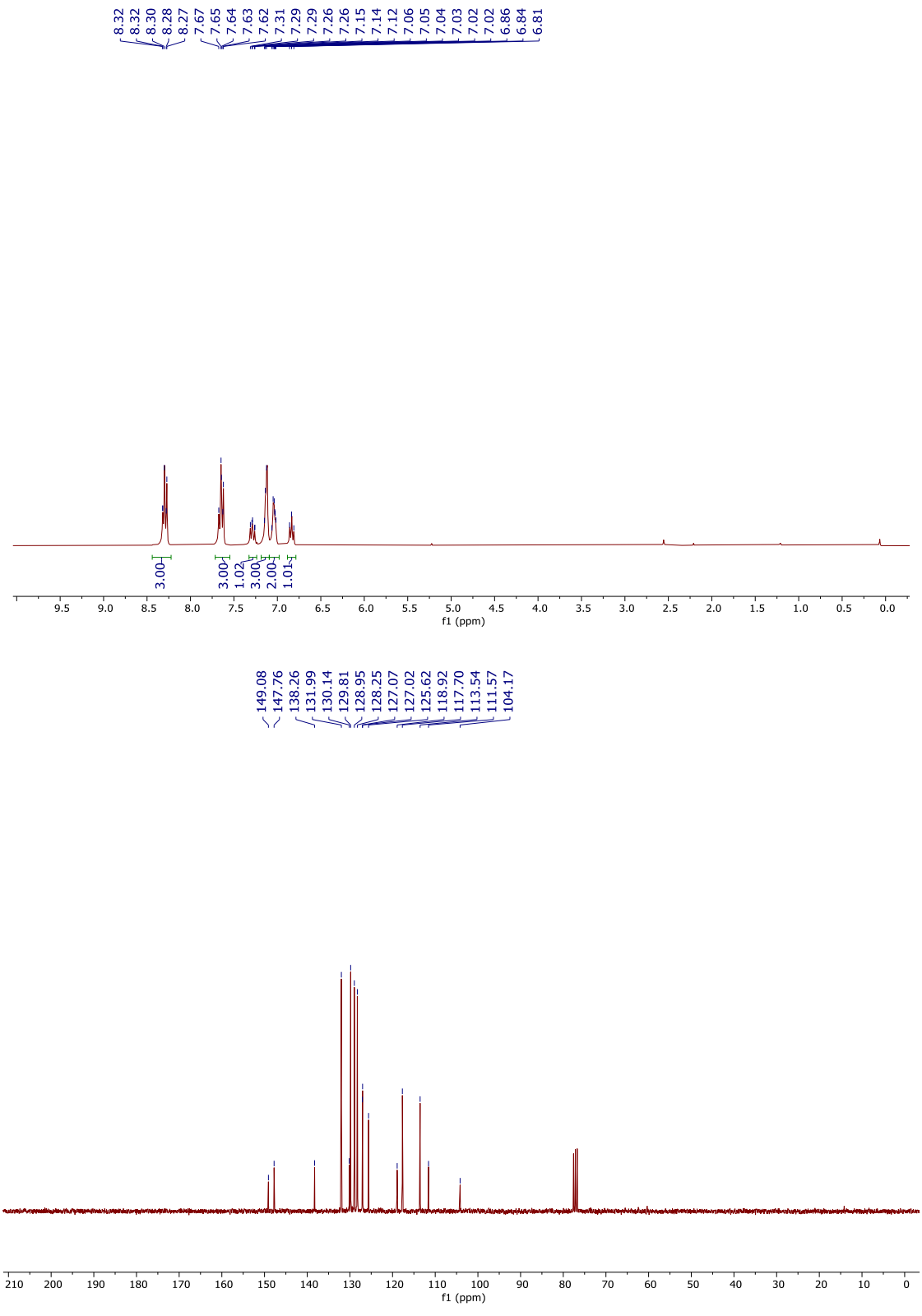


^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **4n**





^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **4o**



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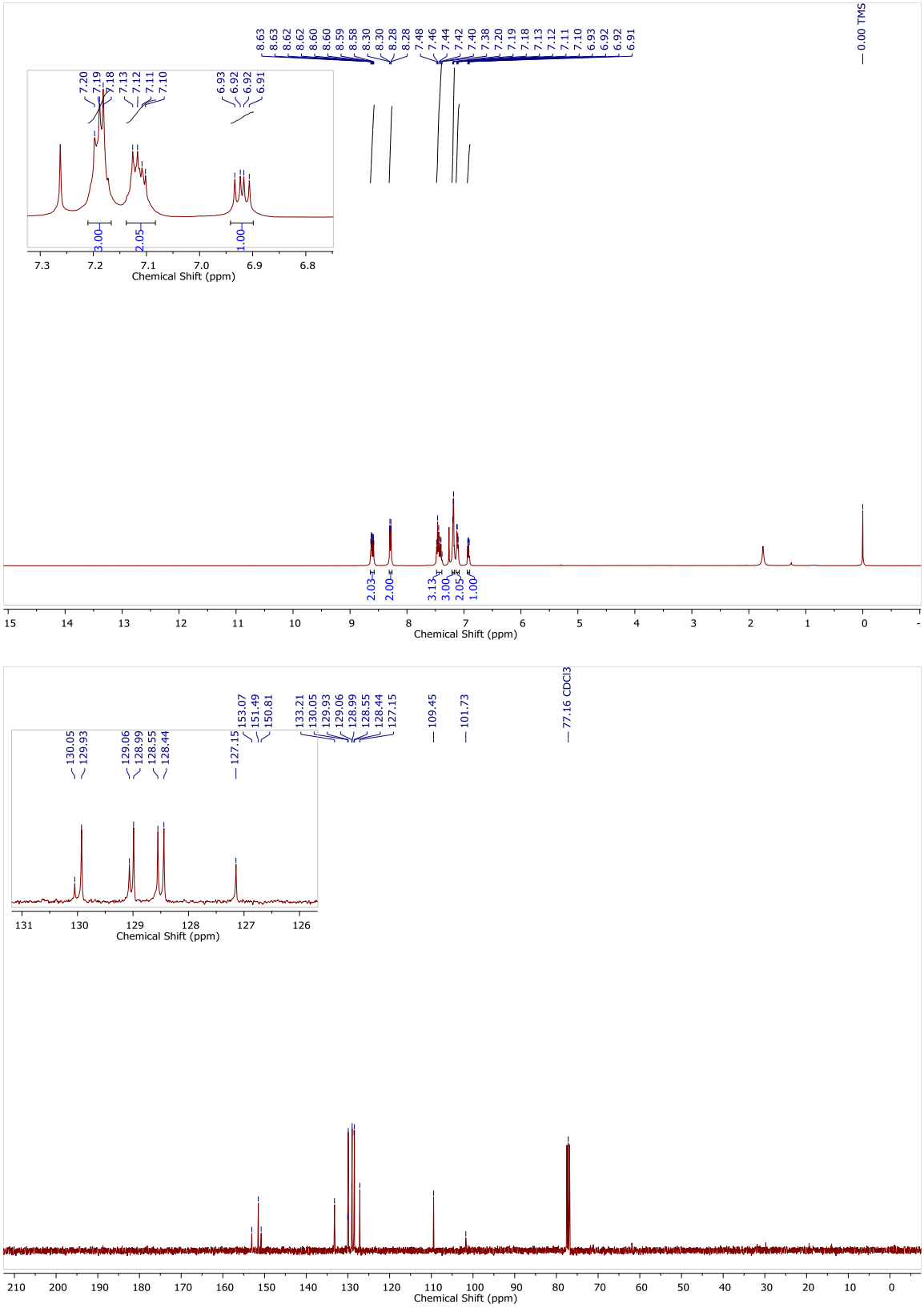
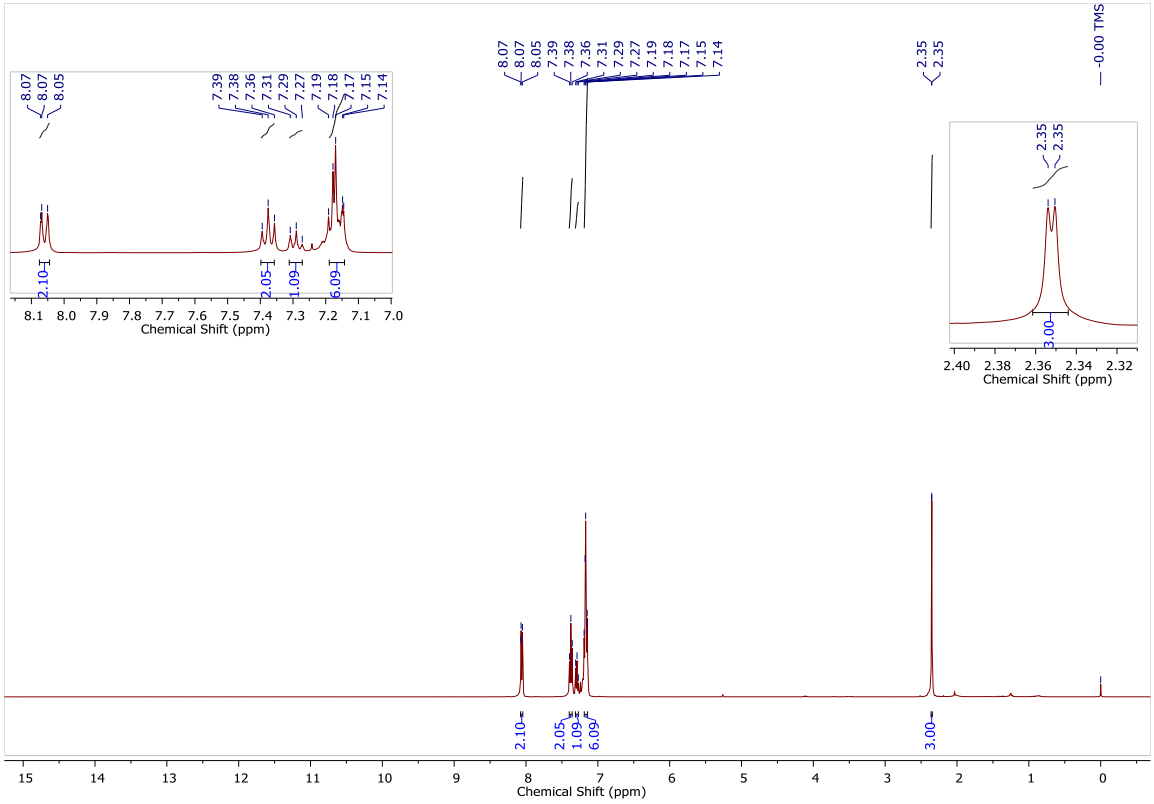
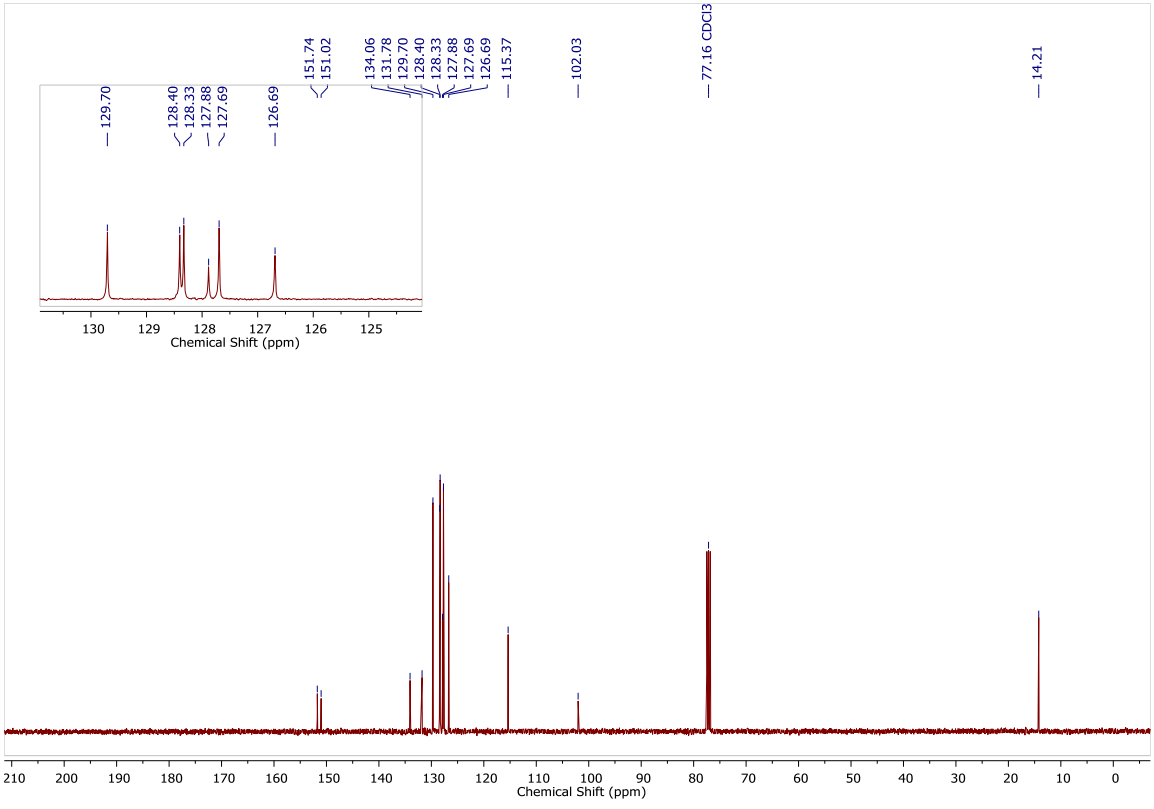


^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **6a**





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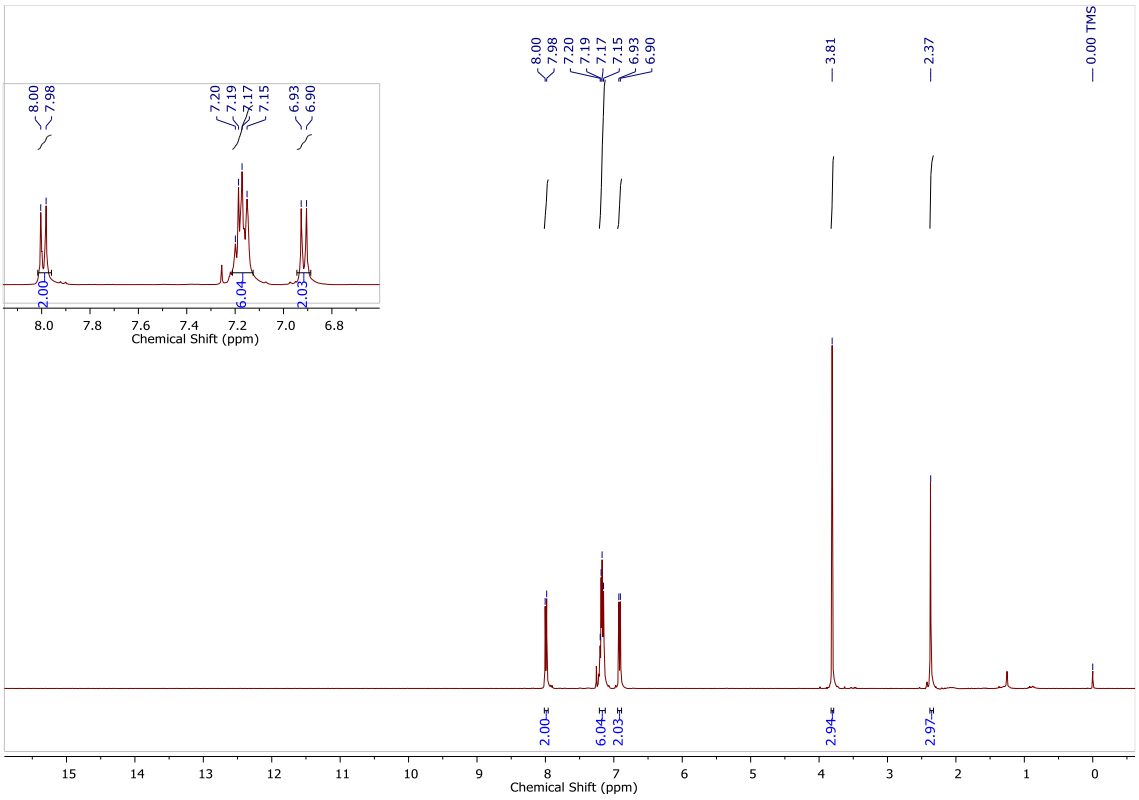

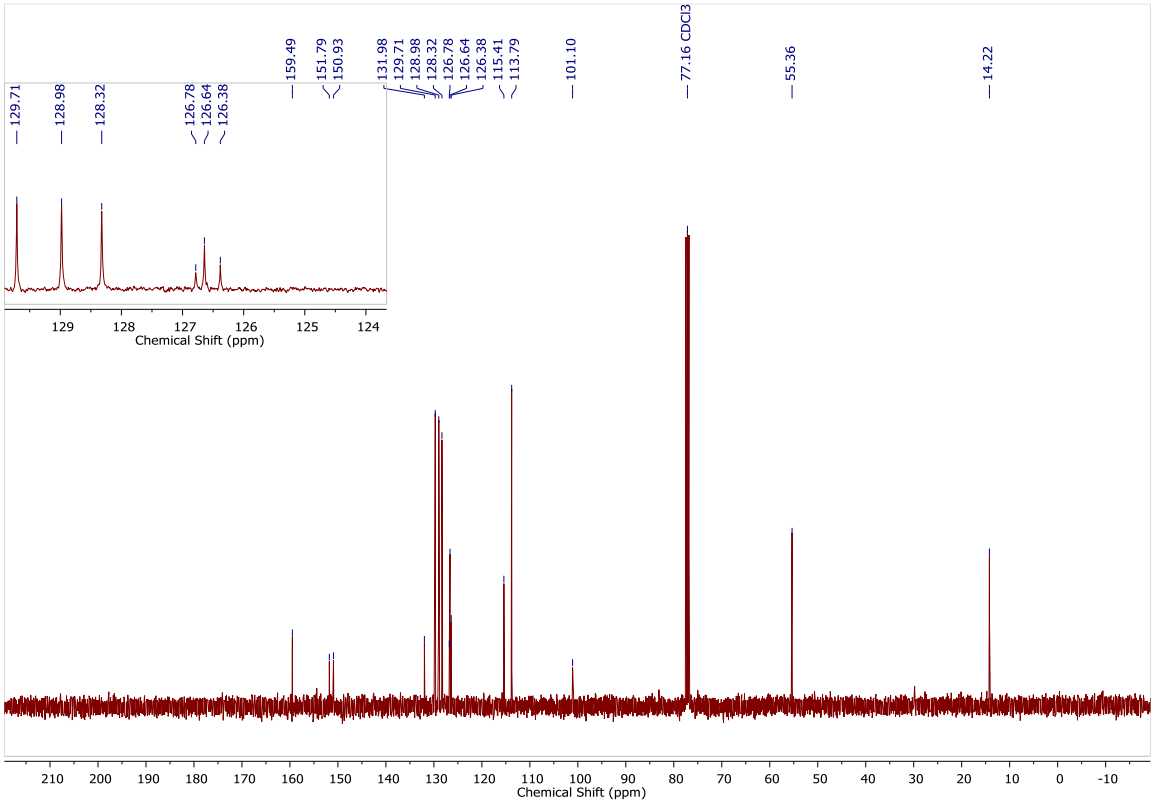

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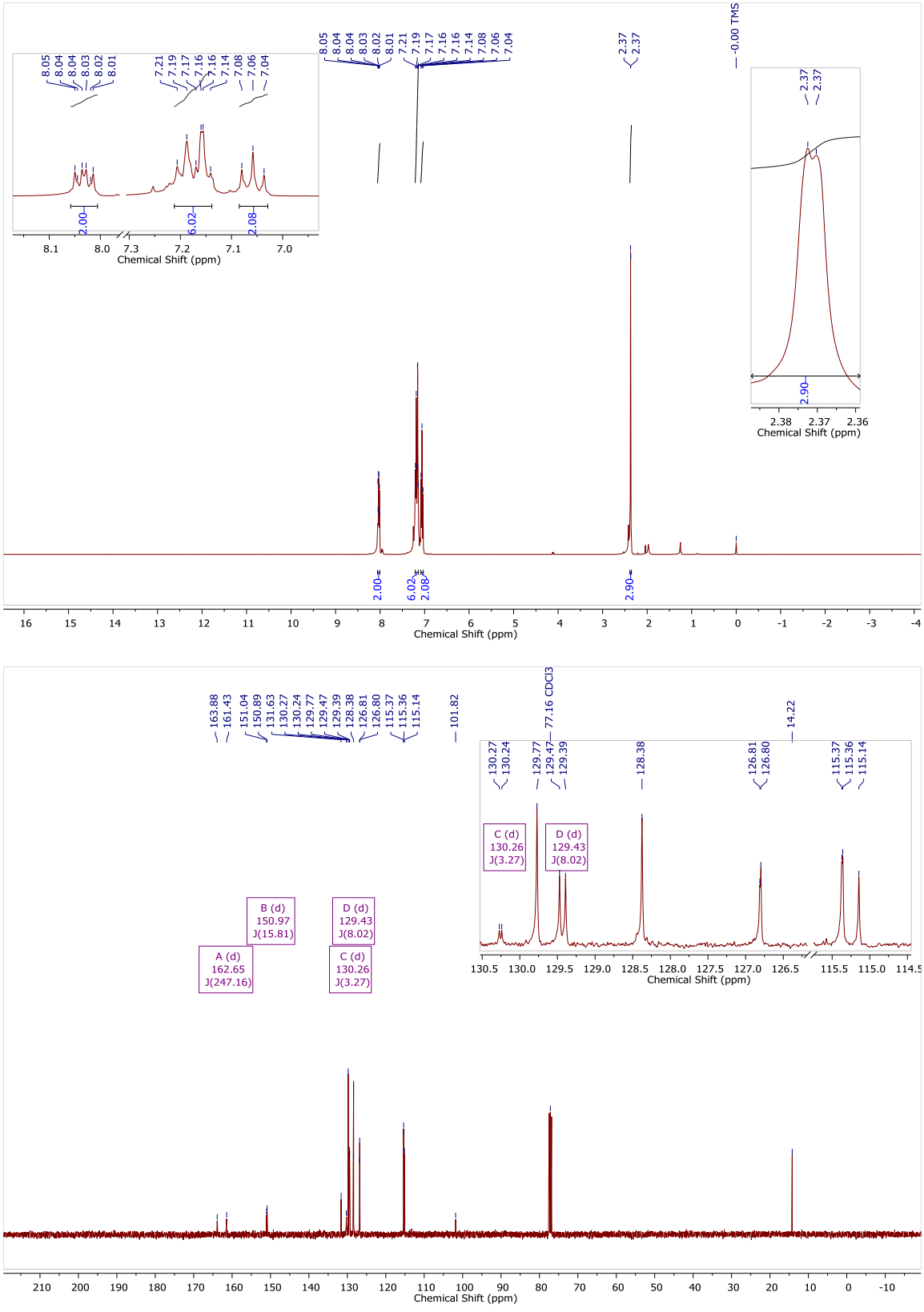

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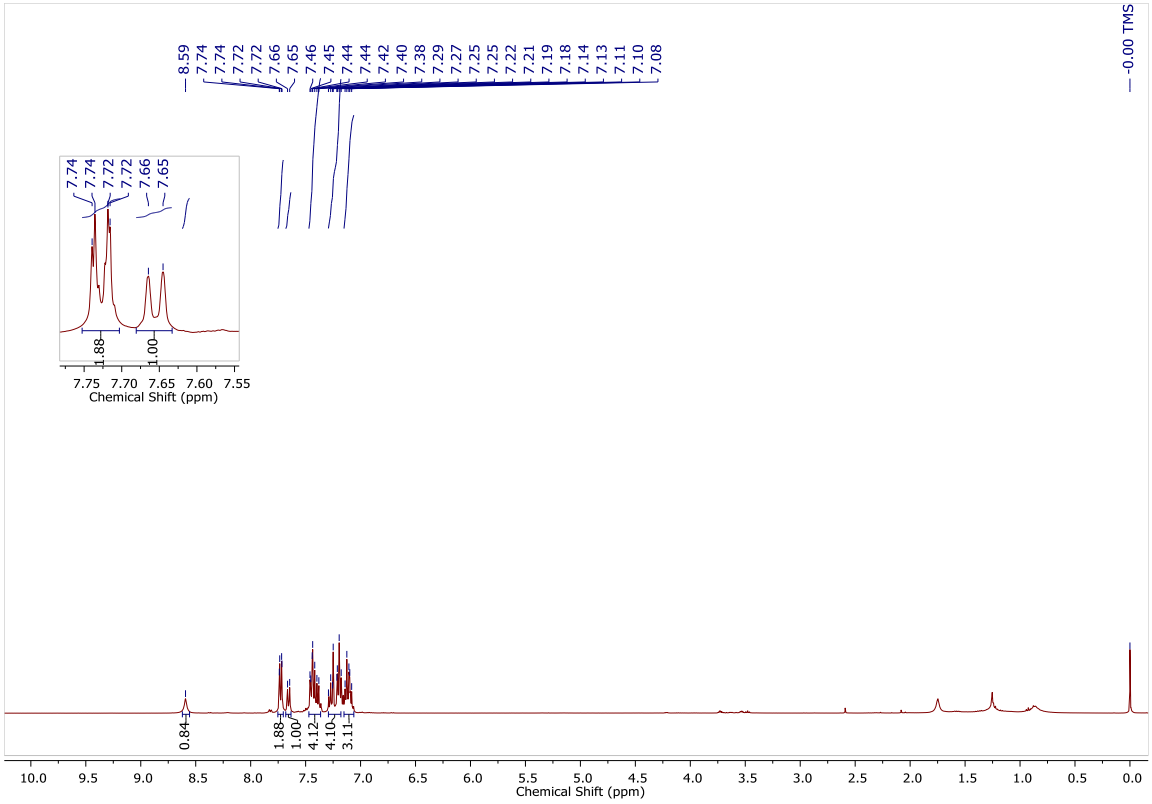

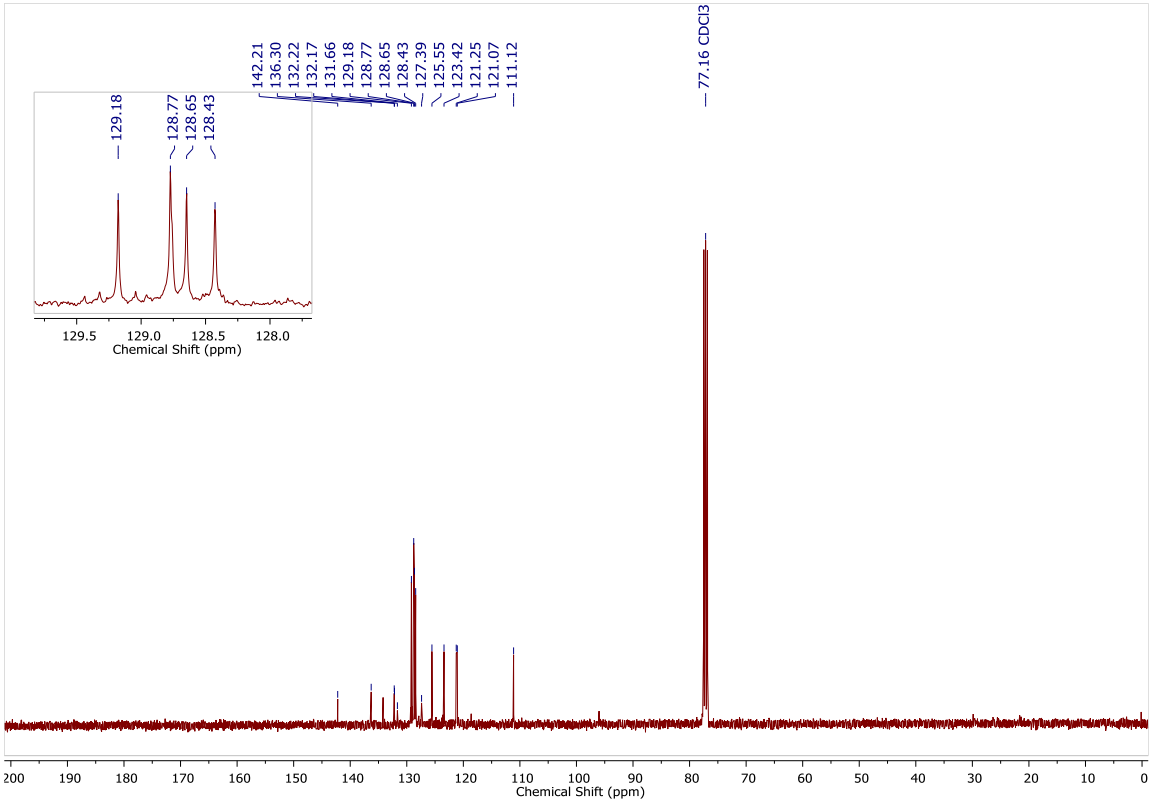

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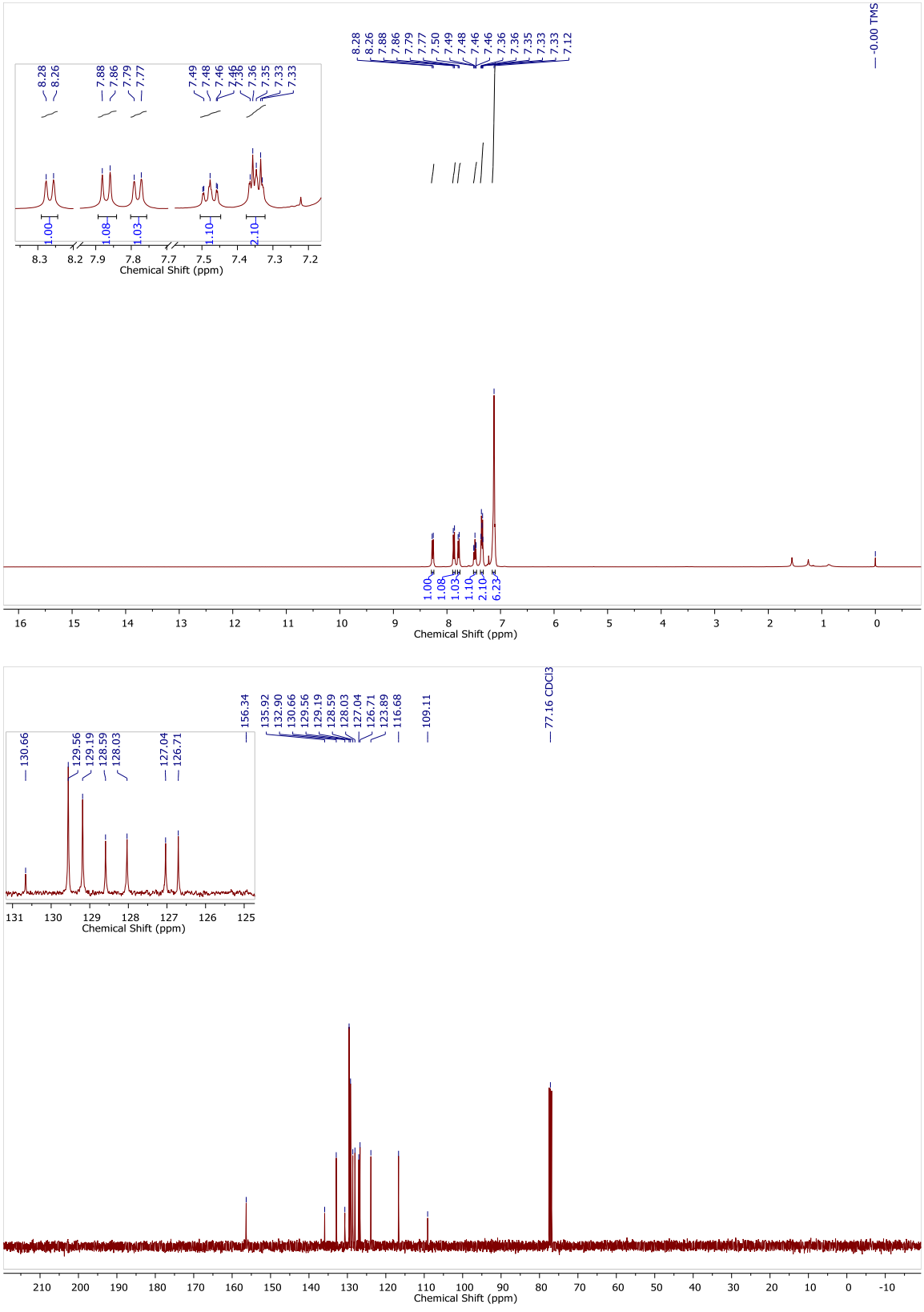

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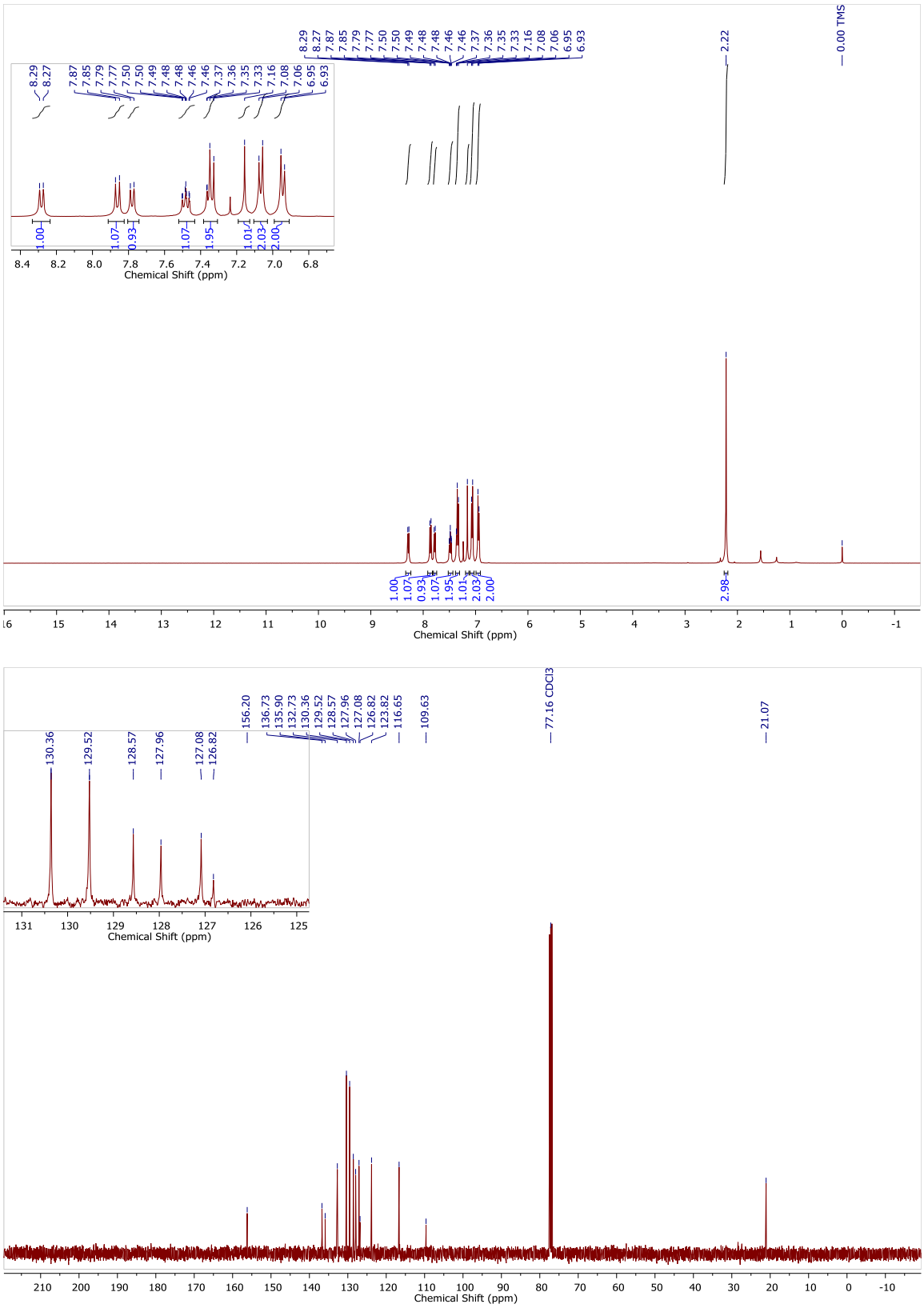

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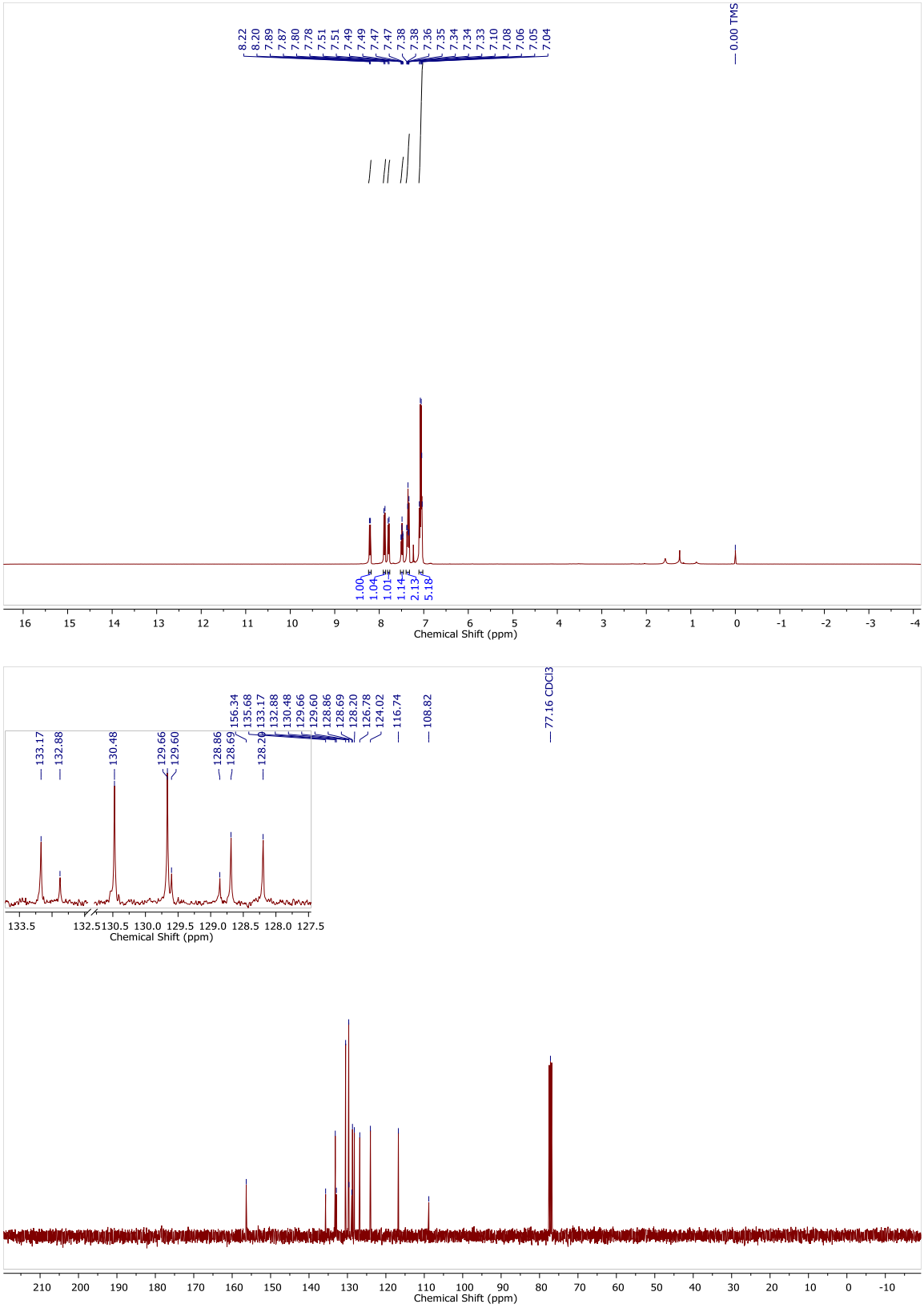

^{1}H NMR (top) ^{13}C NMR (bottom) $CDCl_3$ spectra of compound **6h**

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