

Electronic Supplementary Information for

Concise Total Syntheses of (±)-Noruleine and (±)-Uleine

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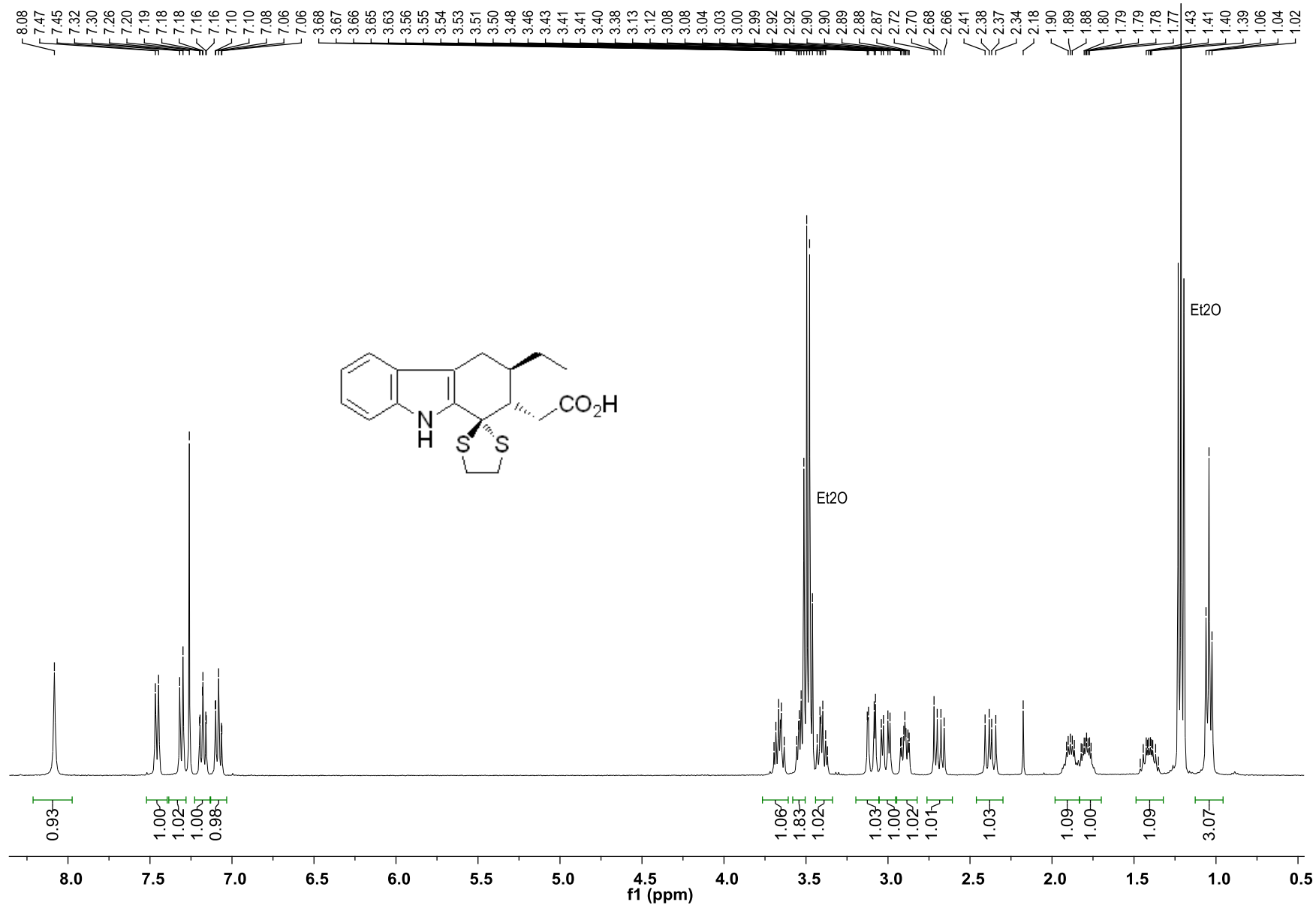
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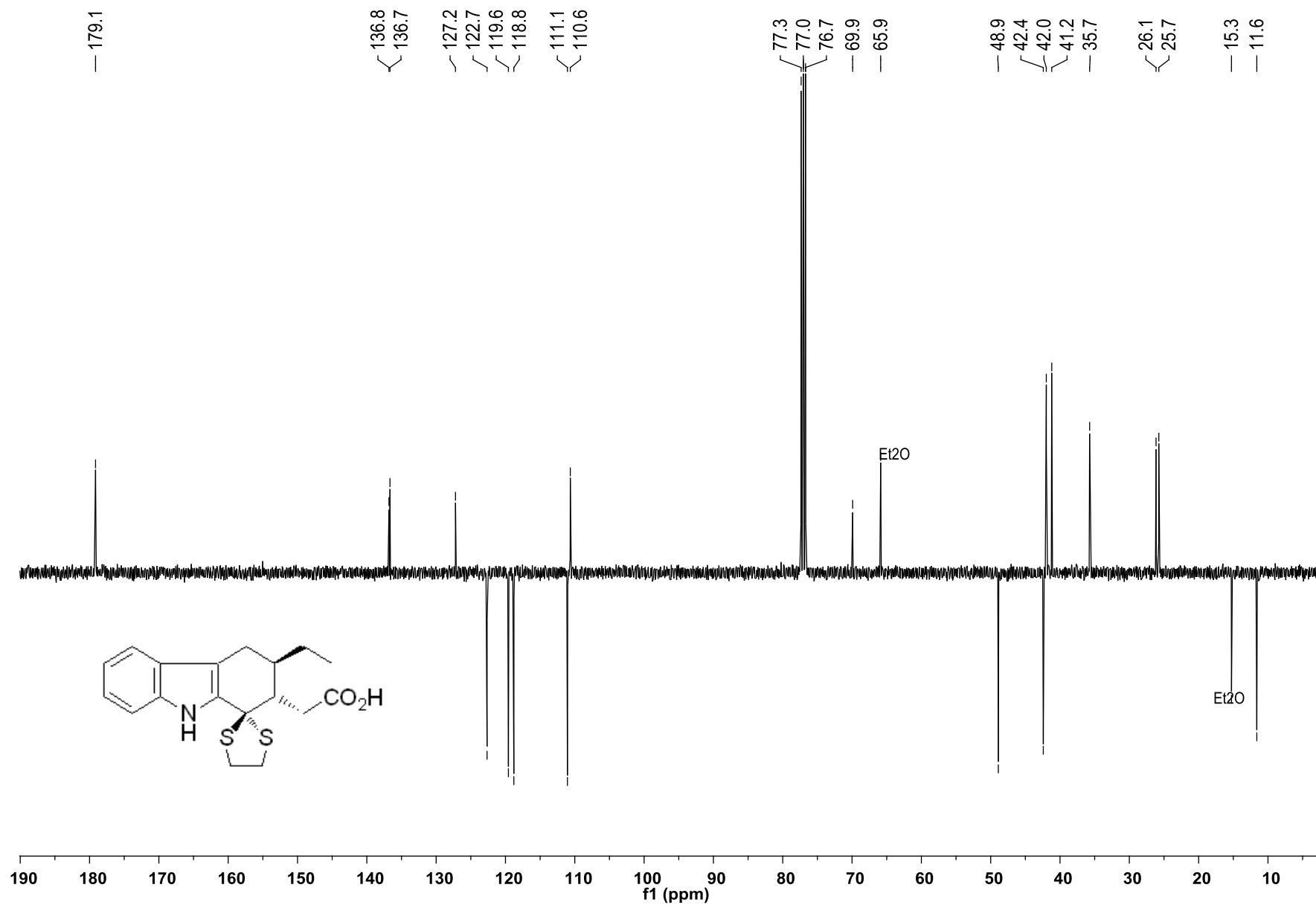
E-mail: patir@hacettepe.edu.tr (S. Patir); erkan.erturk@tubitak.gov.tr (E. Ertürk)

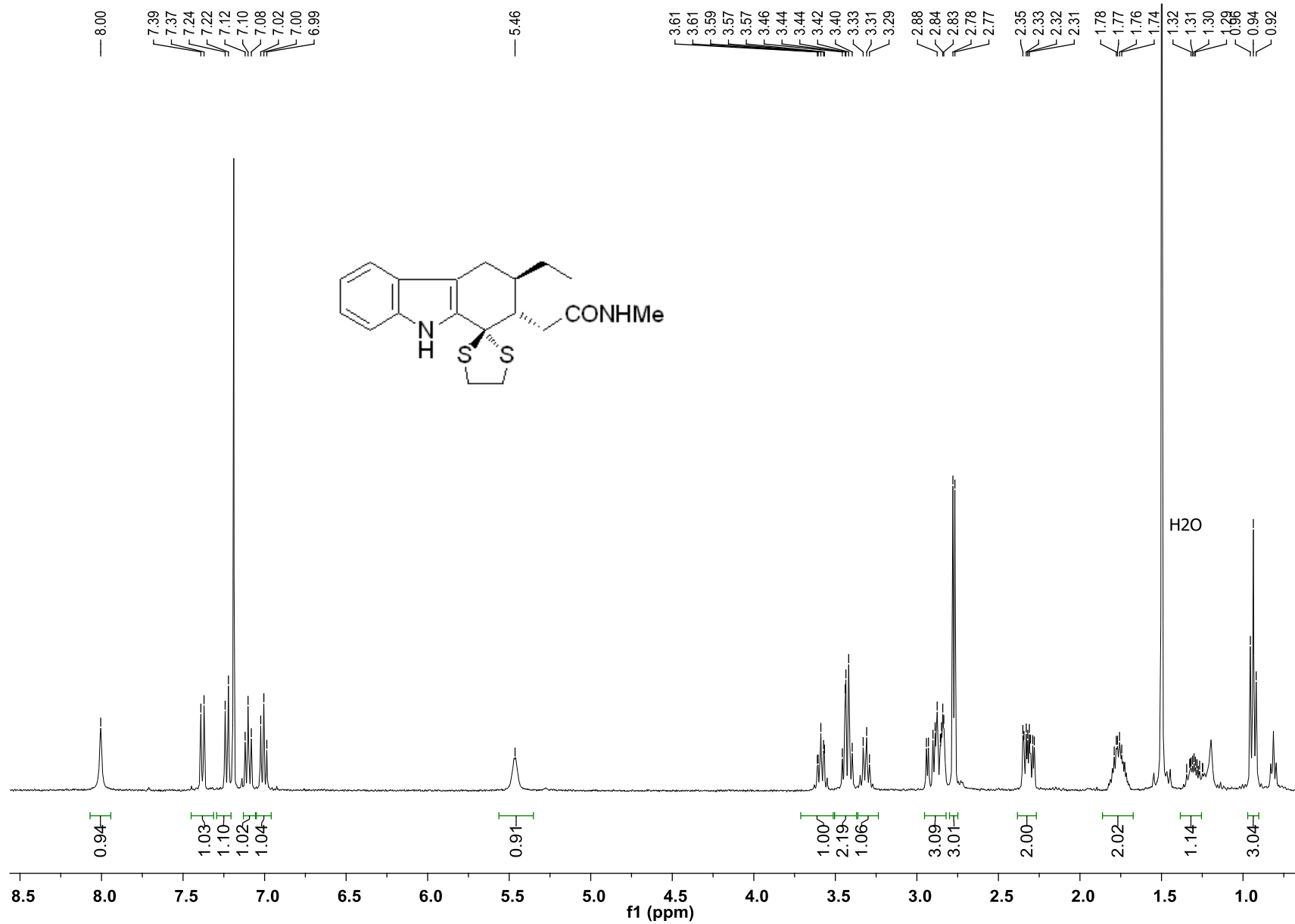
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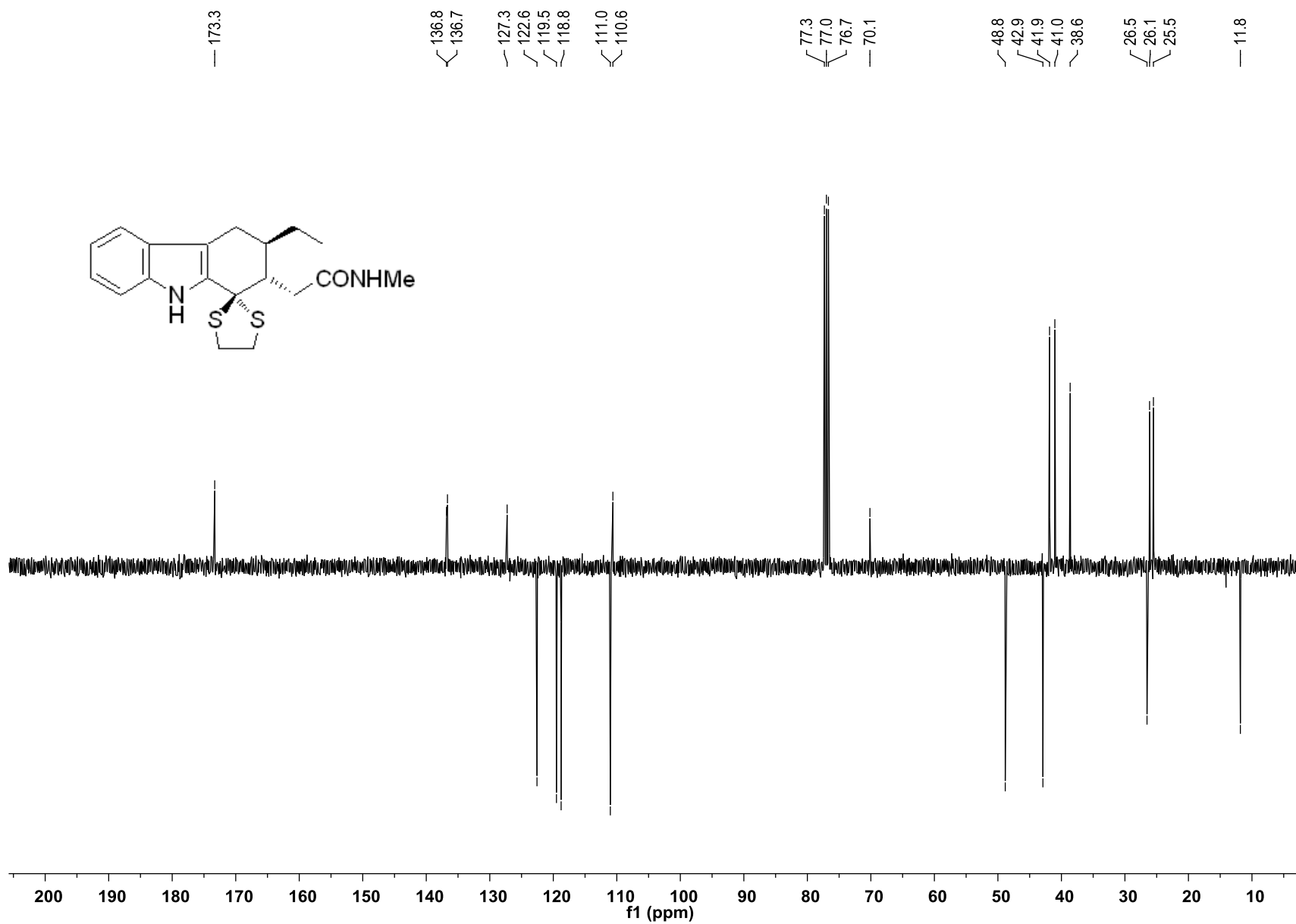
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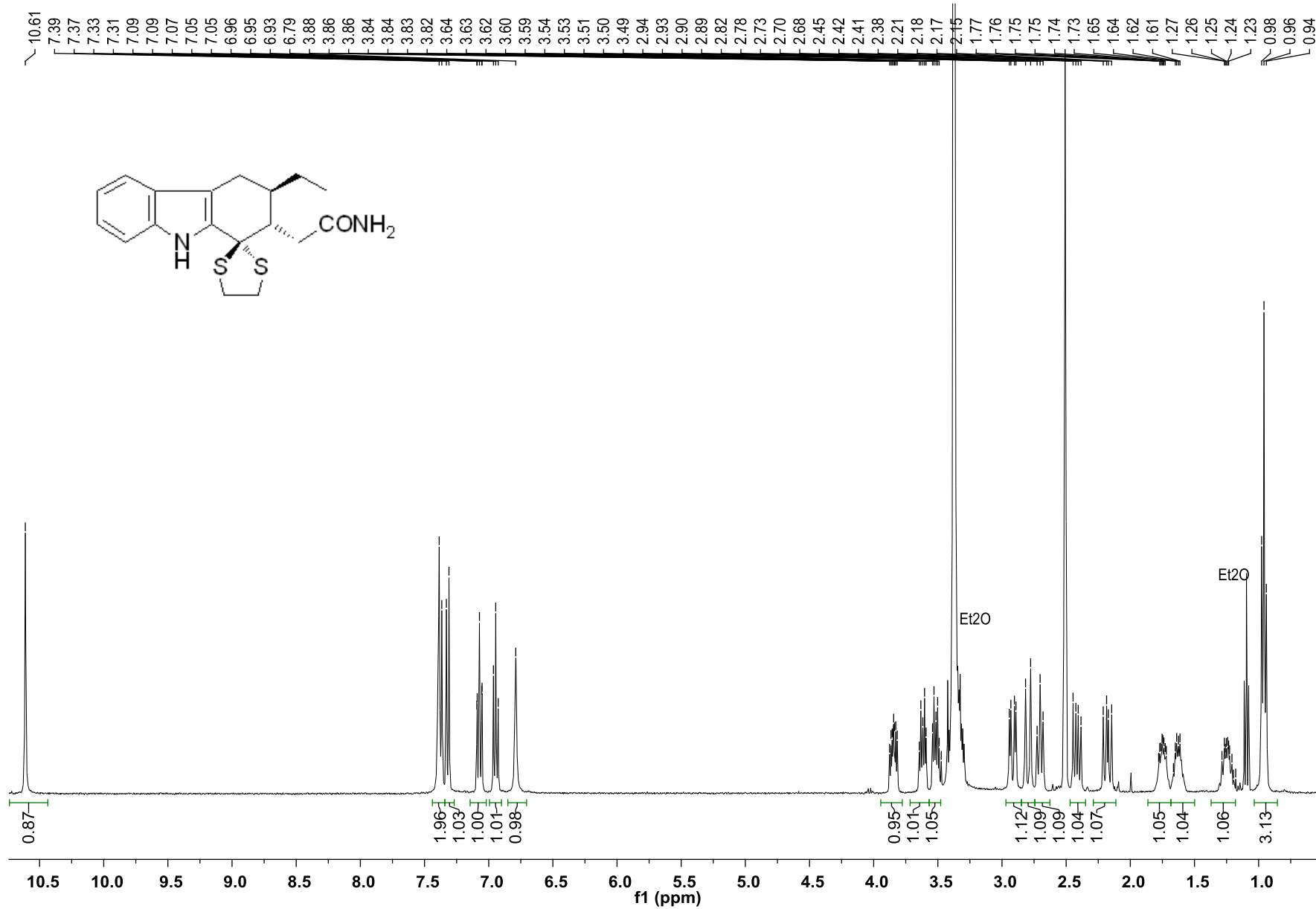
¹H NMR Spectrum of (±)-9 (500 MHz, CDCl₃)



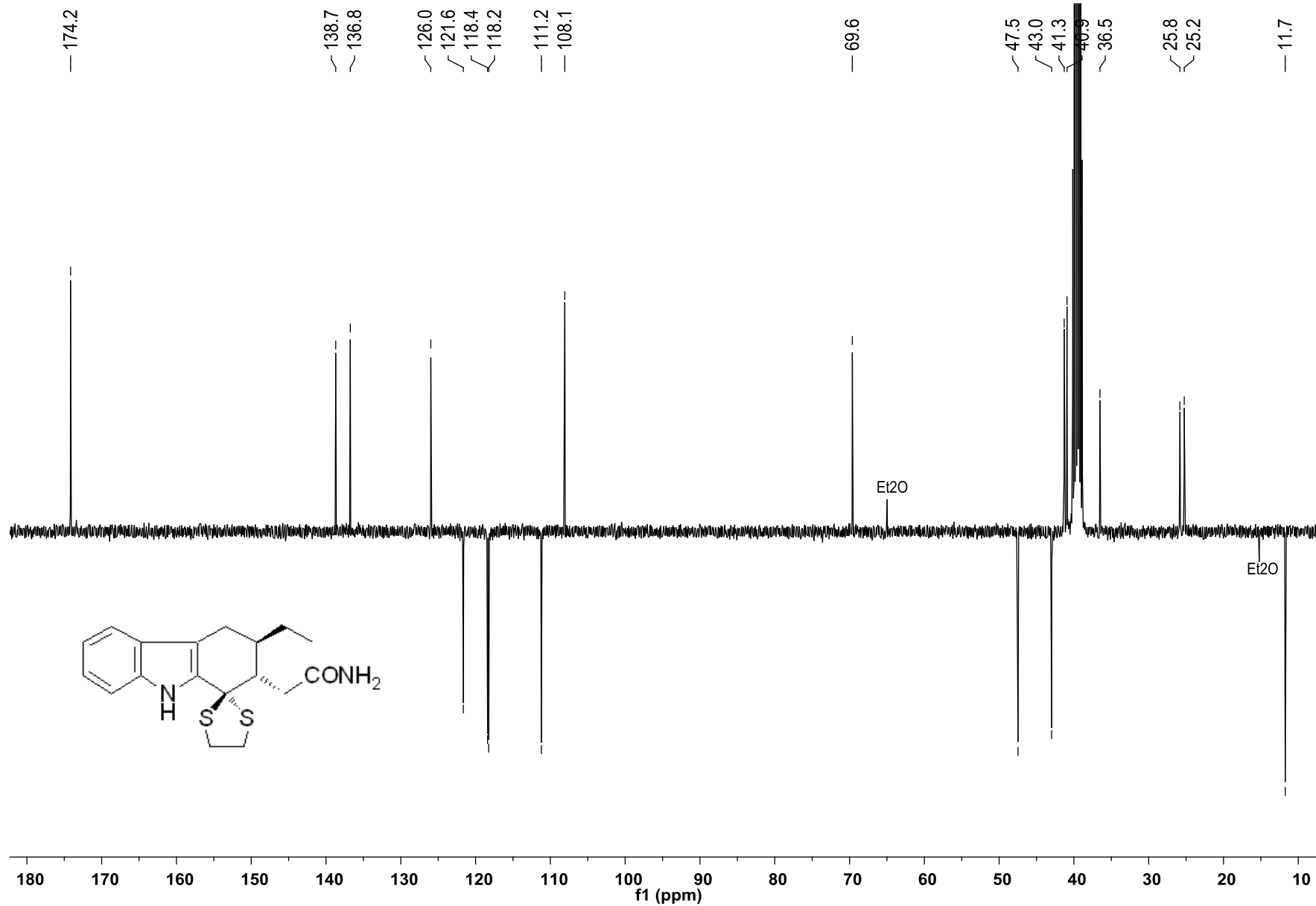




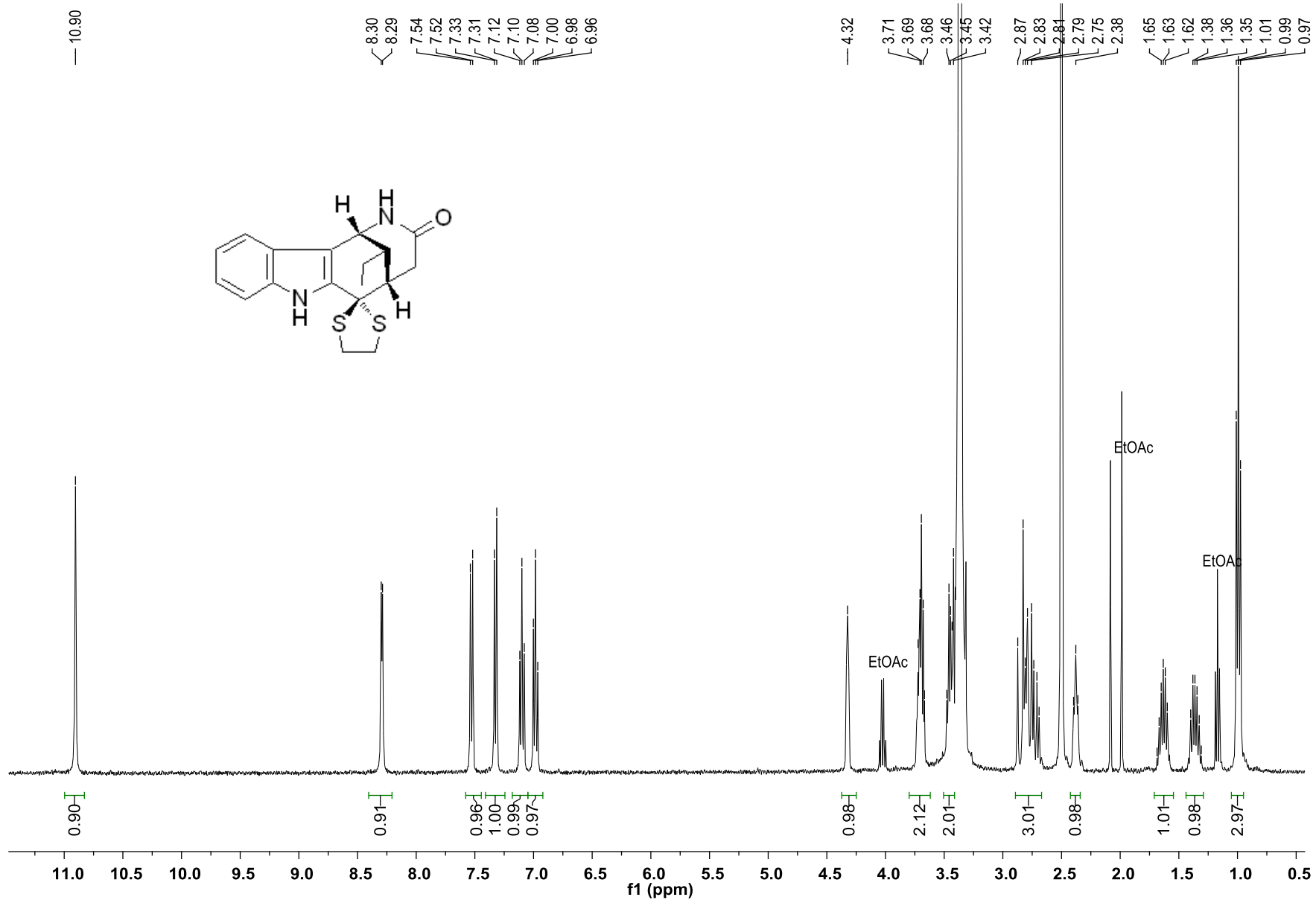
¹³C NMR Spectrum of (±)-10 (APT, 125 MHz, CDCl₃)

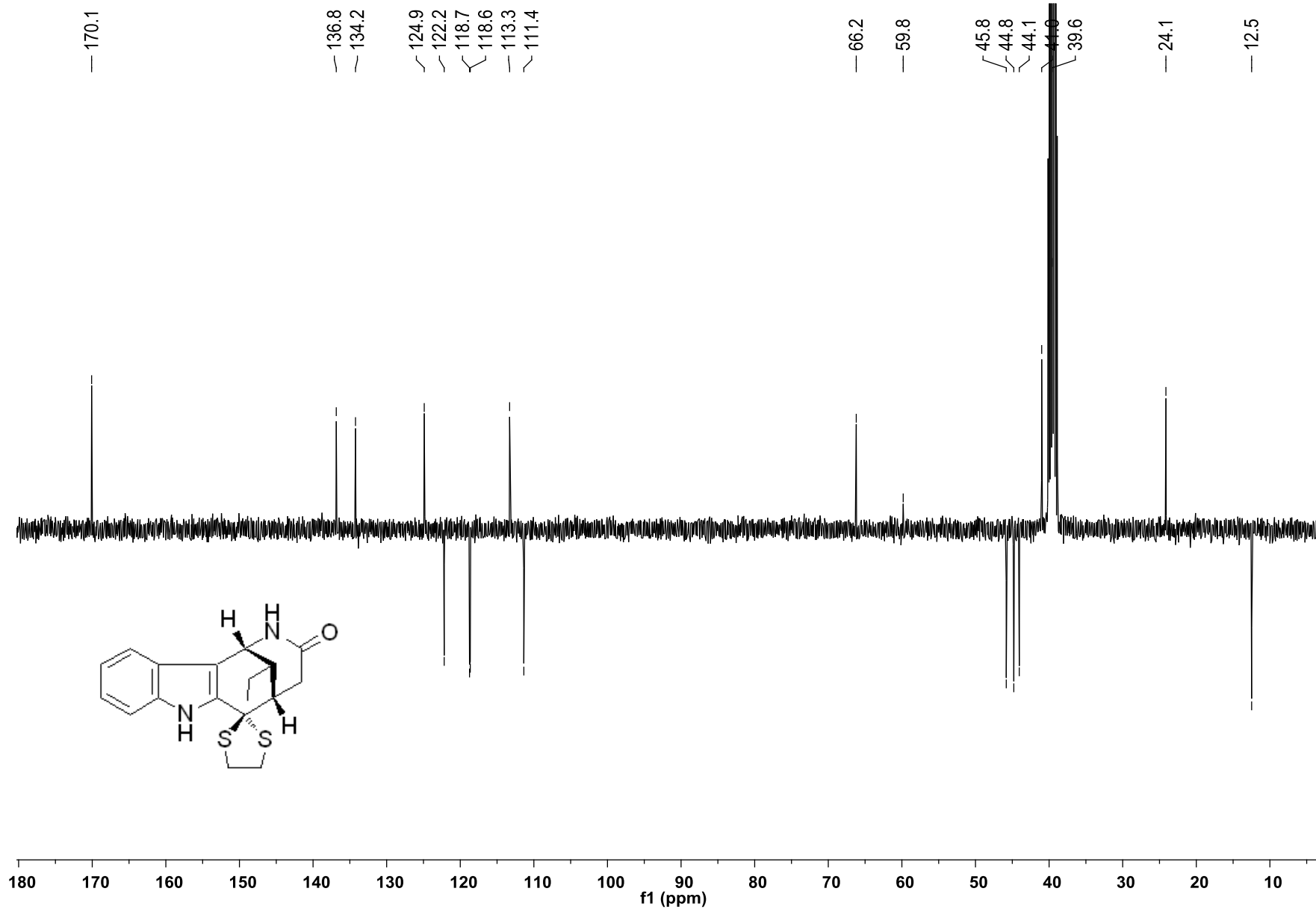


¹H NMR Spectrum of (±)-11 (500 MHz, DMSO-d₆)

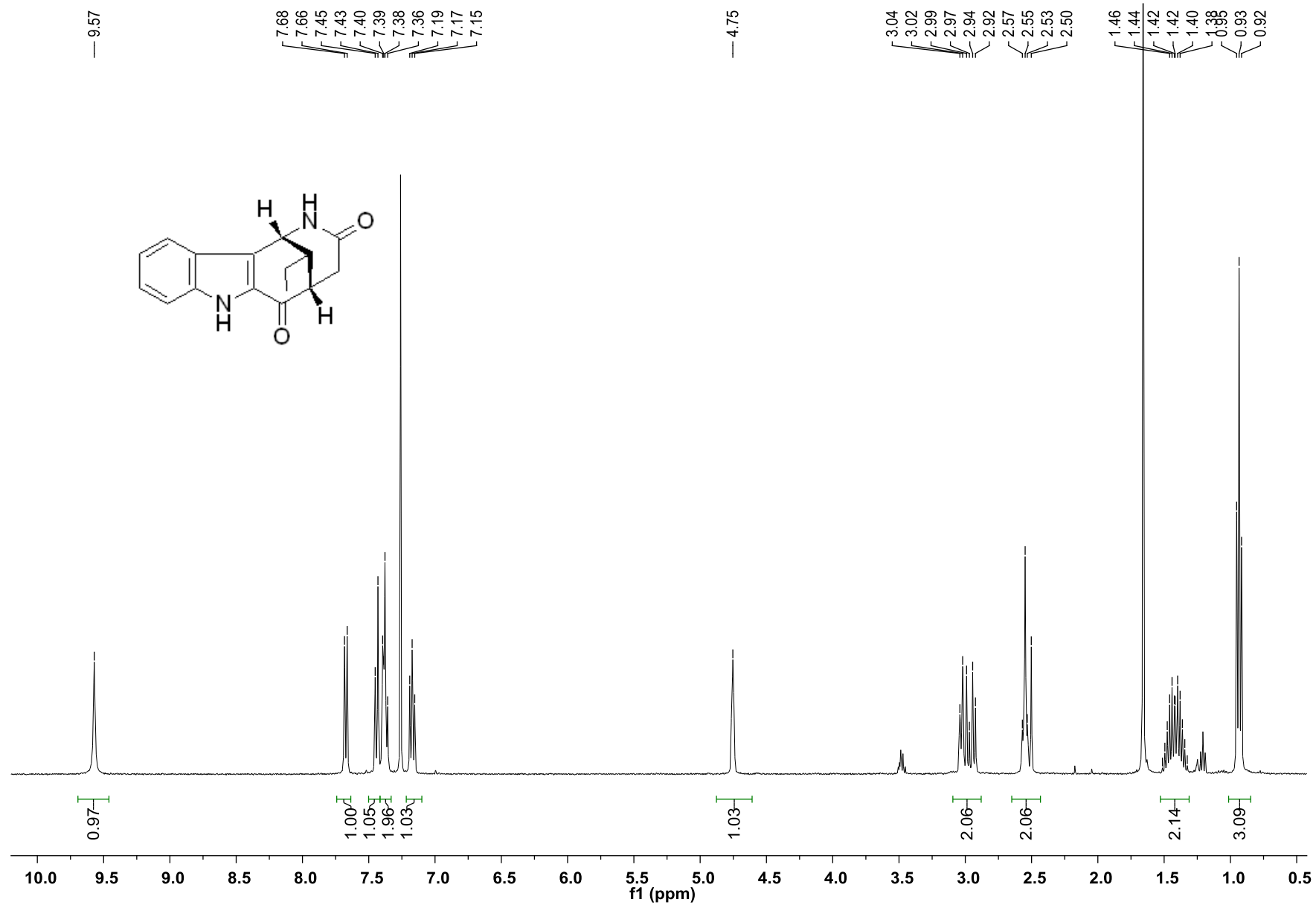


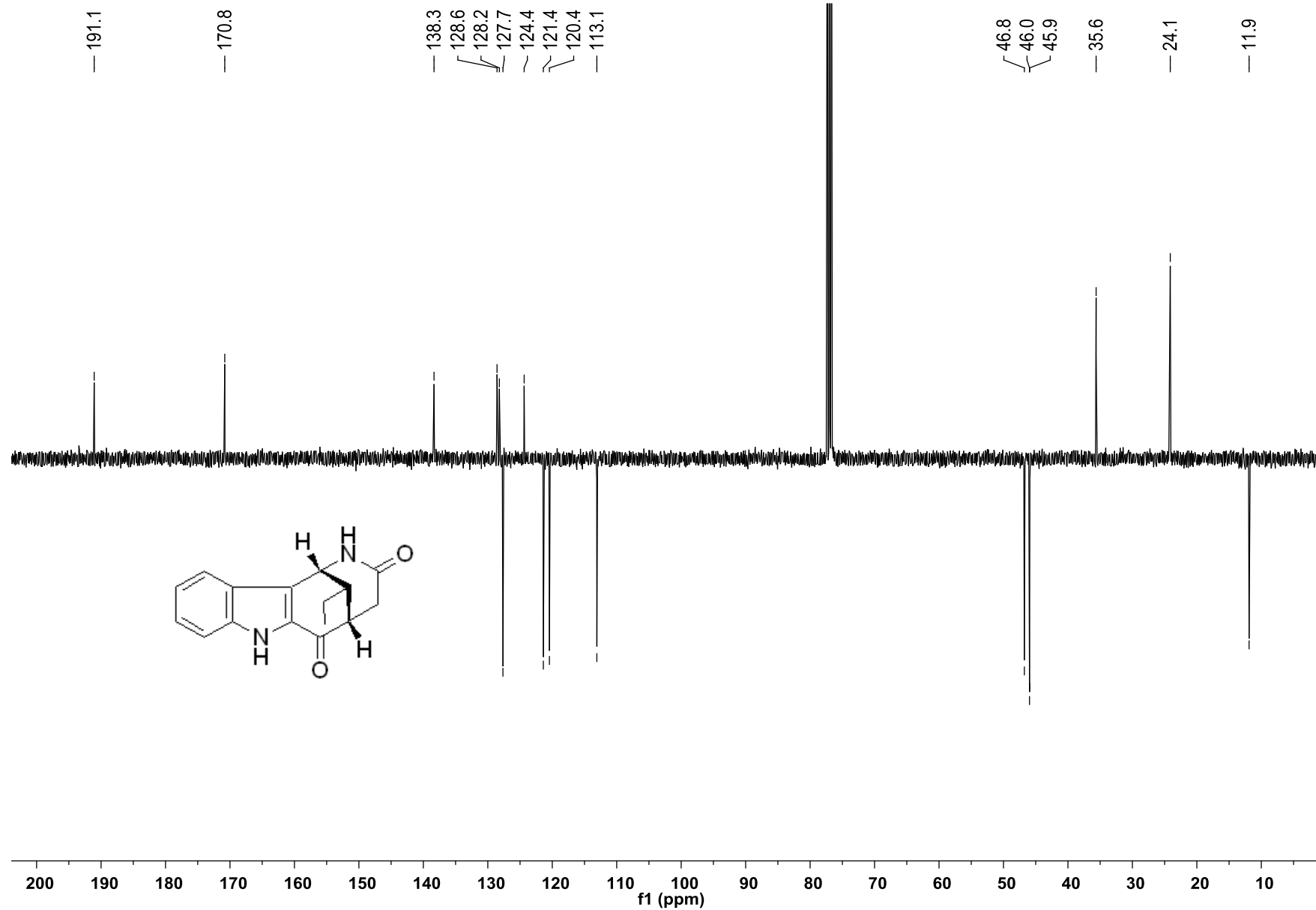
^{13}C NMR Spectrum of (\pm)-11 (APT, 125 MHz, DMSO- d_6)



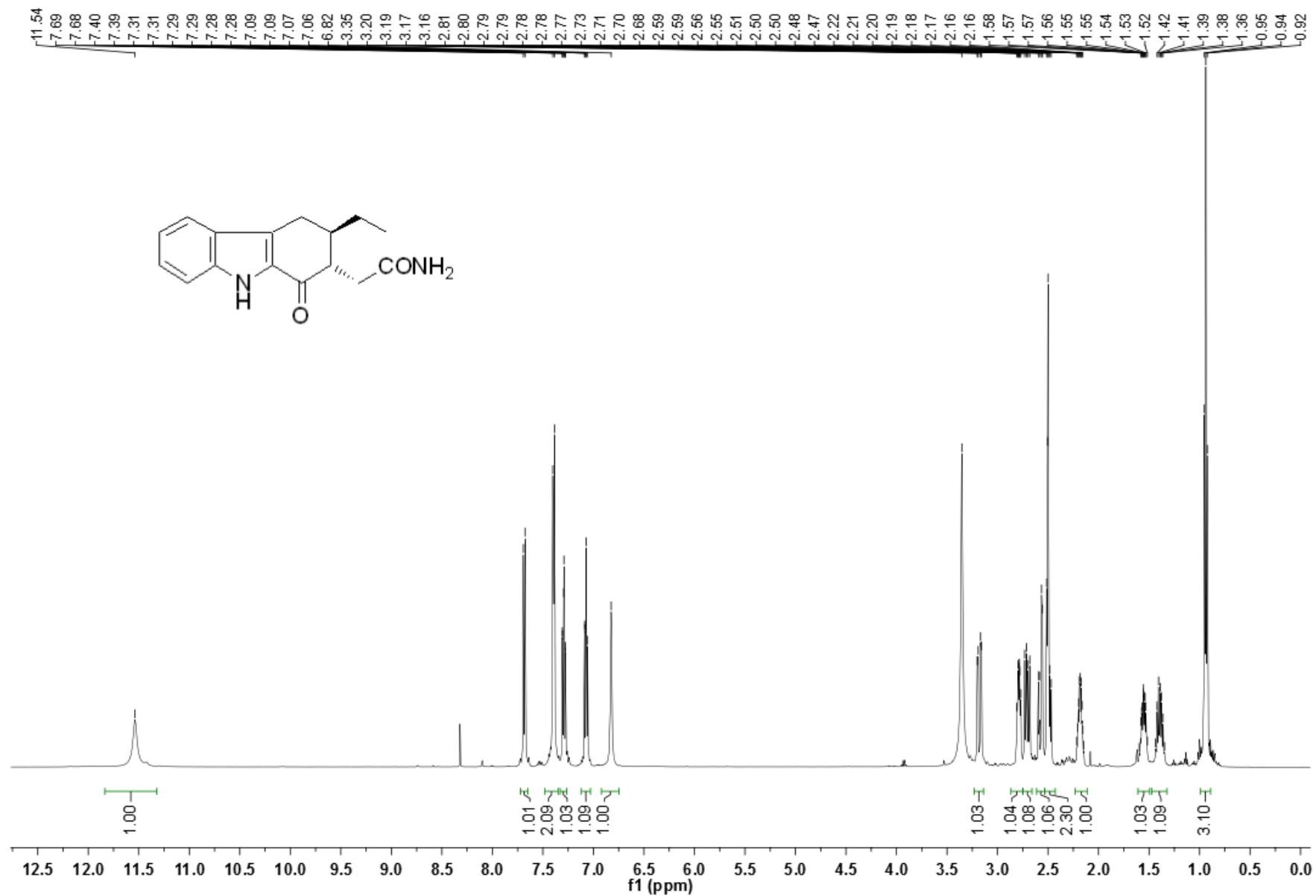


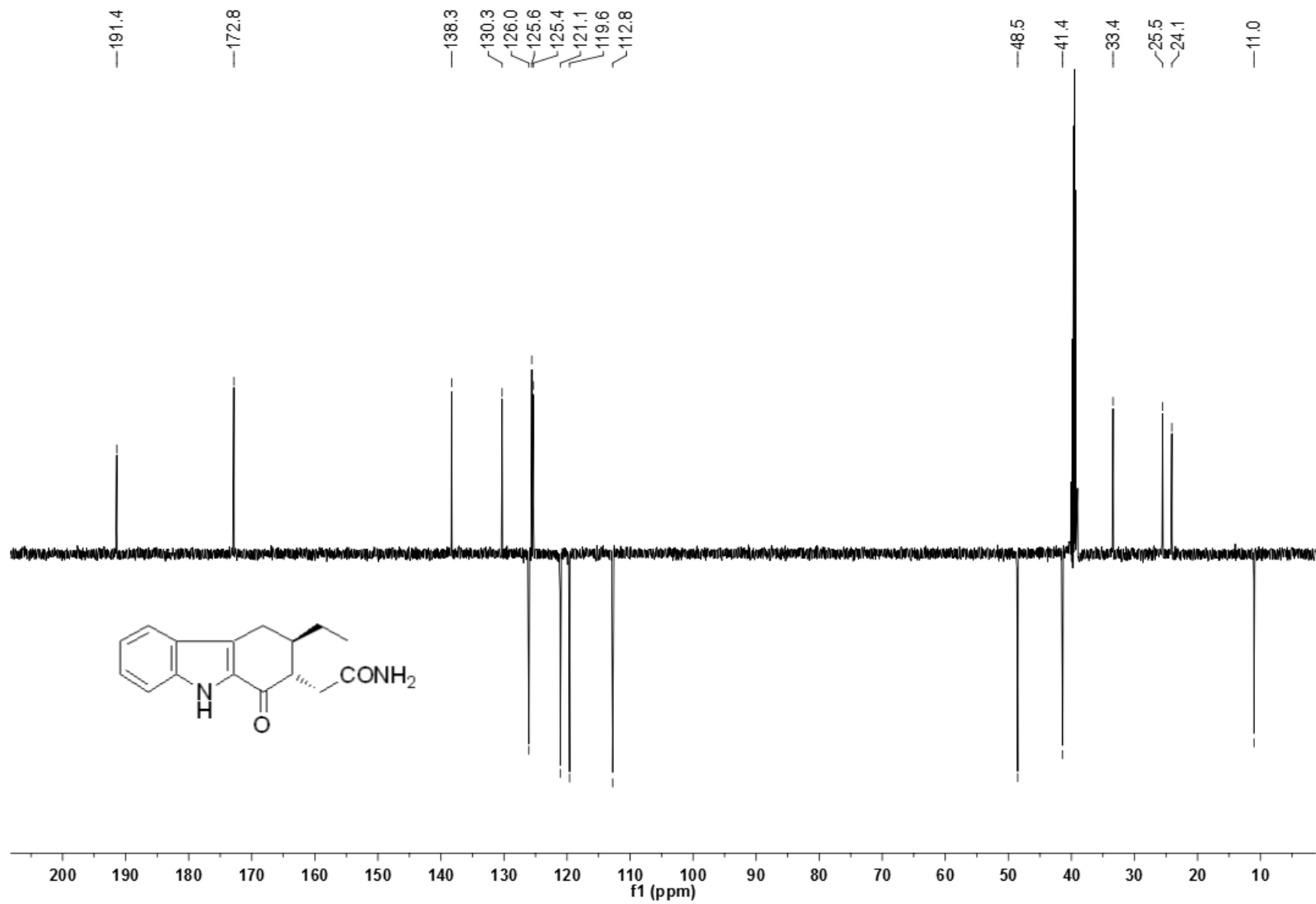
^{13}C NMR Spectrum of (\pm)-12 (APT, 125 MHz, DMSO- d_6)



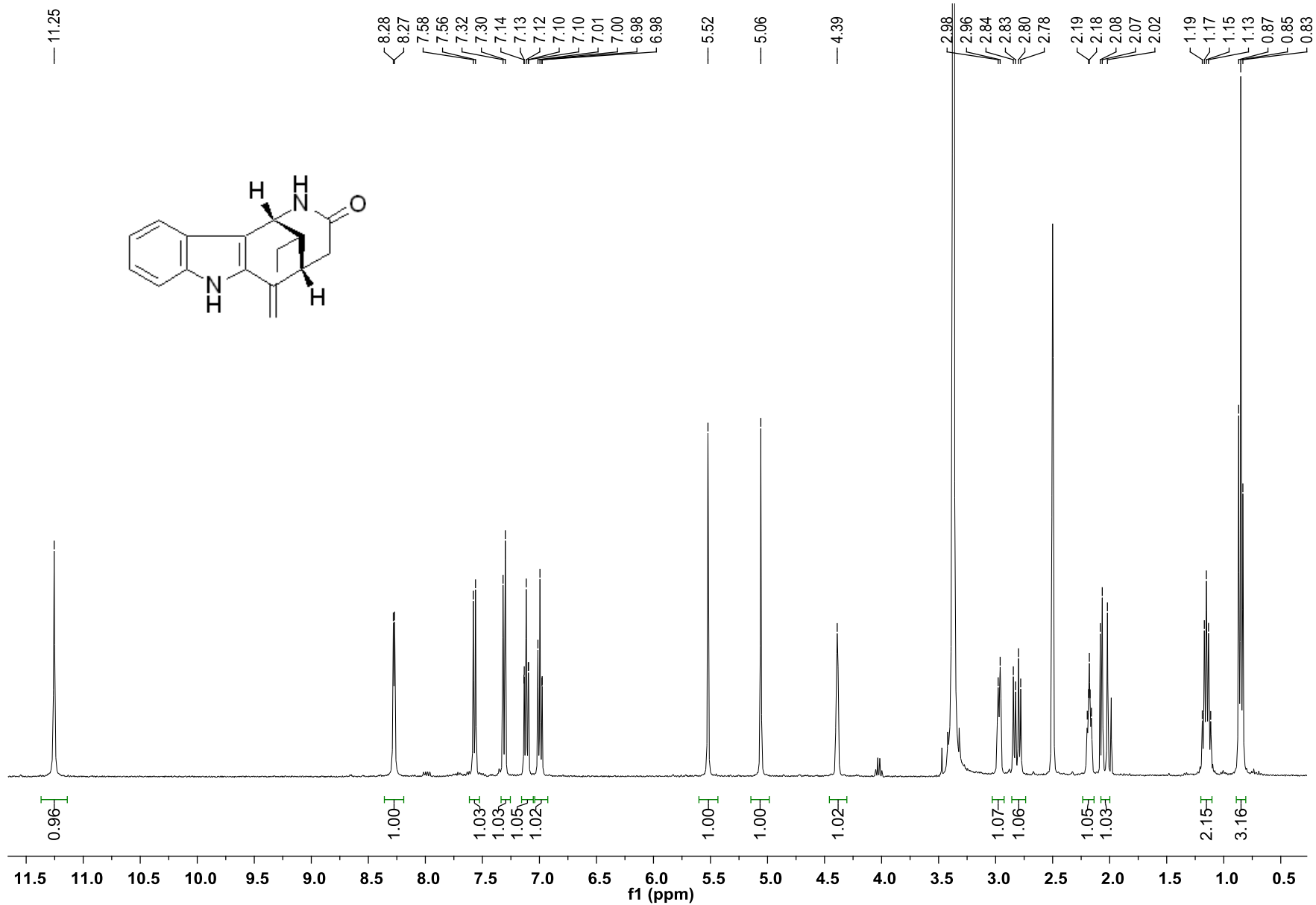


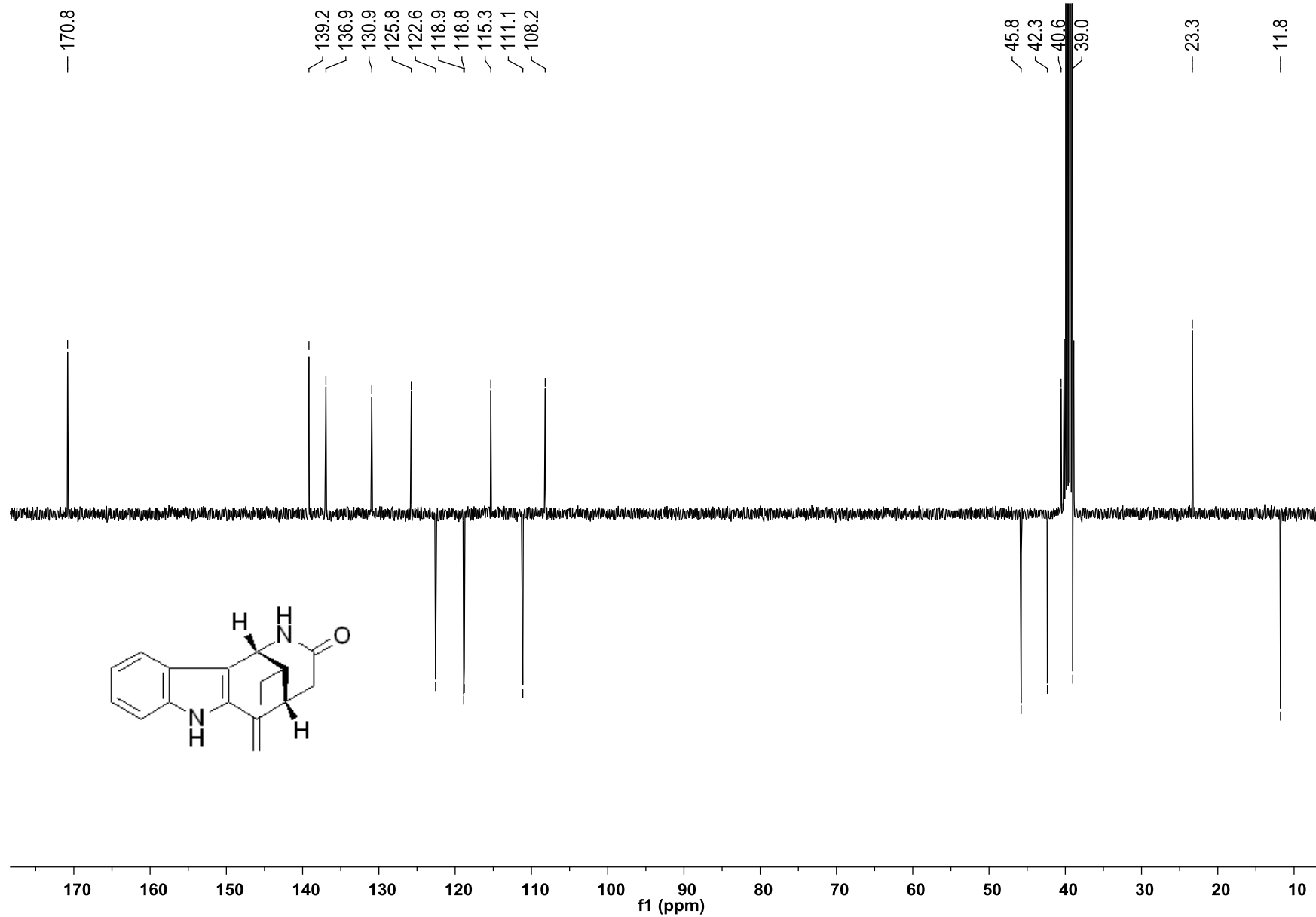
^{13}C NMR Spectrum of (\pm)-13 (APT, 125 MHz, CDCl_3)

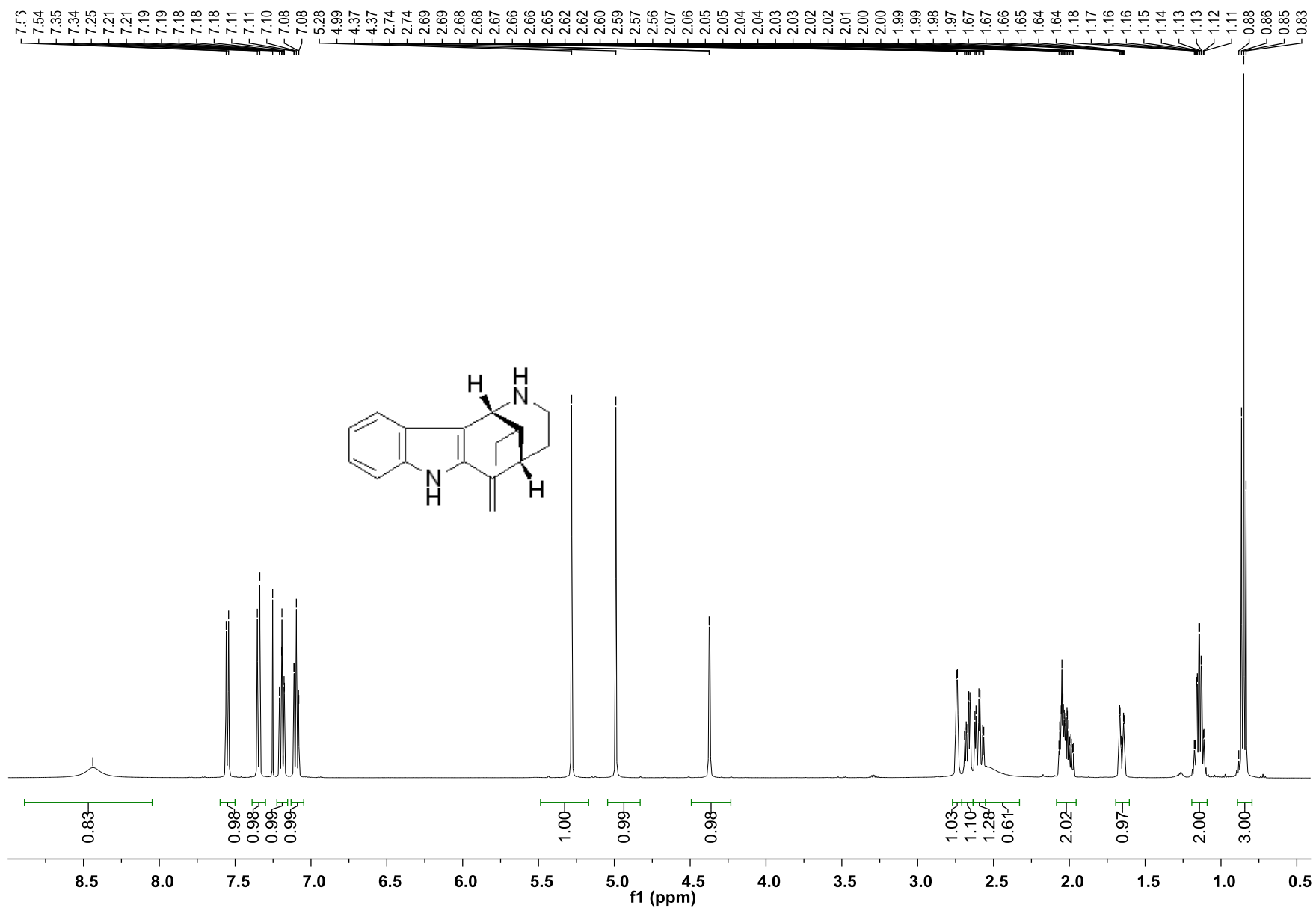




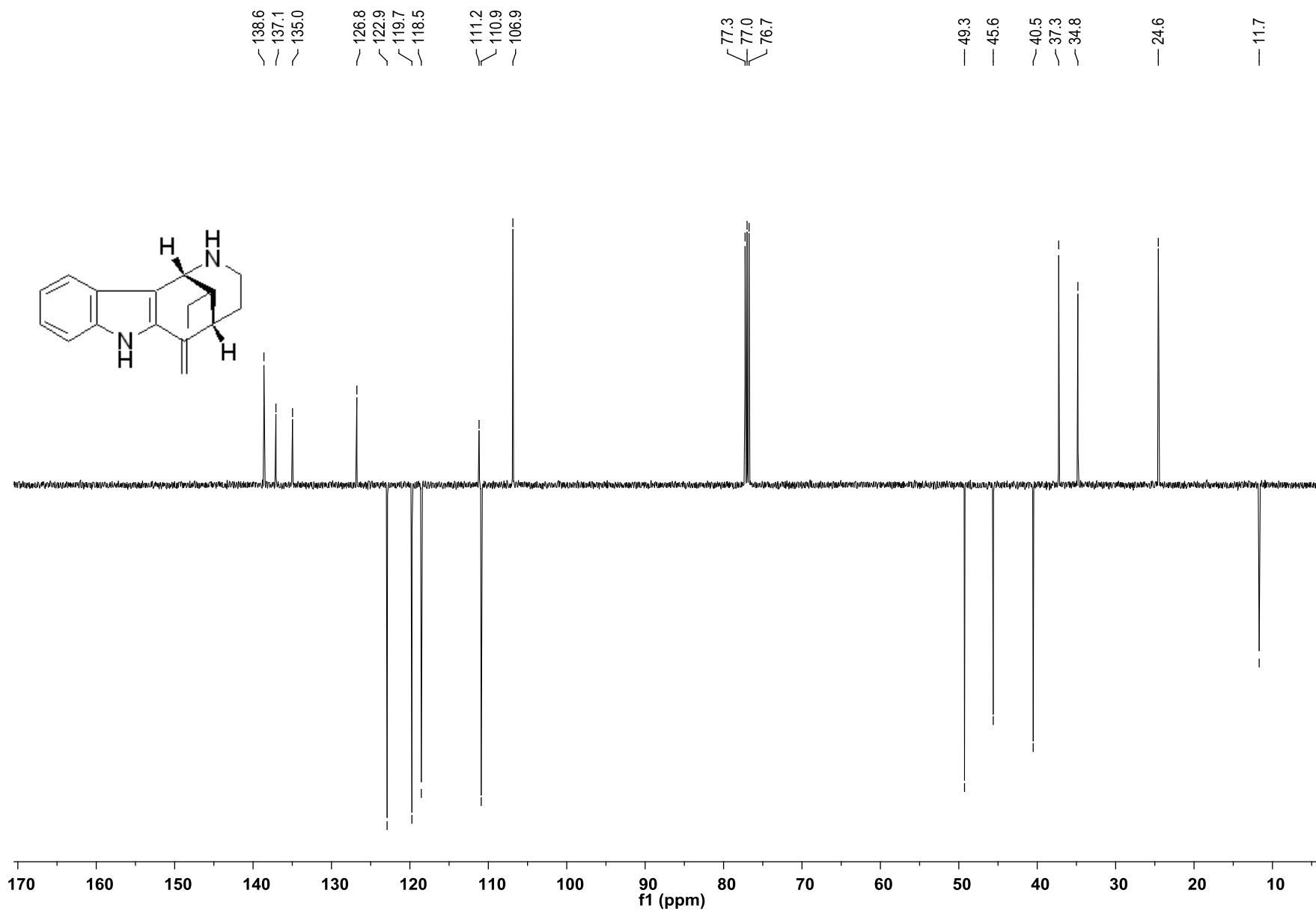
^{13}C NMR Spectrum of (\pm)-**14** (APT, 125 MHz, DMSO- d_6)







¹H NMR Spectrum of Noruleine (500 MHz, CDCl₃)



¹³C NMR Spectrum of Noruleine (APT, 125 MHz, CDCl₃)

Mass Spectrum SmartFormula Report

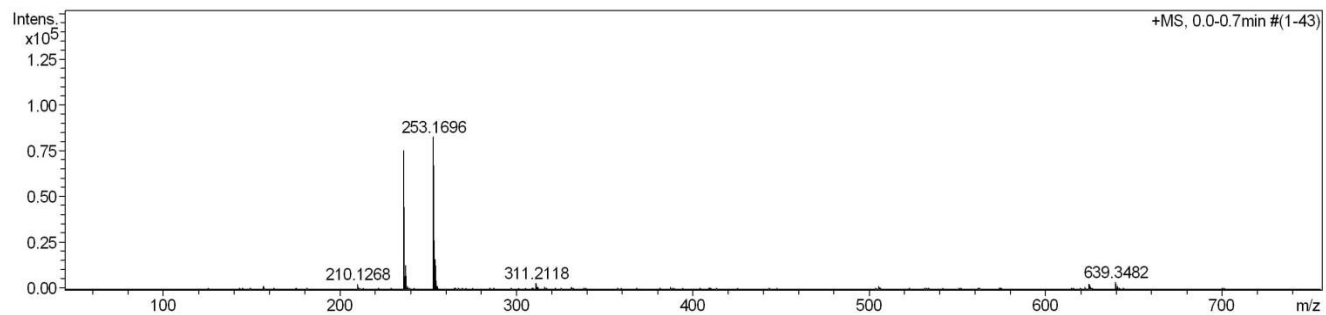
Analysis Info

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 Method tune_low.m
 Sample Name
 Comment

Acquisition Date 7/24/2012 2:40:34 PM
 Operator BDAL@DE
 Instrument / Ser# micrOTOF 10308

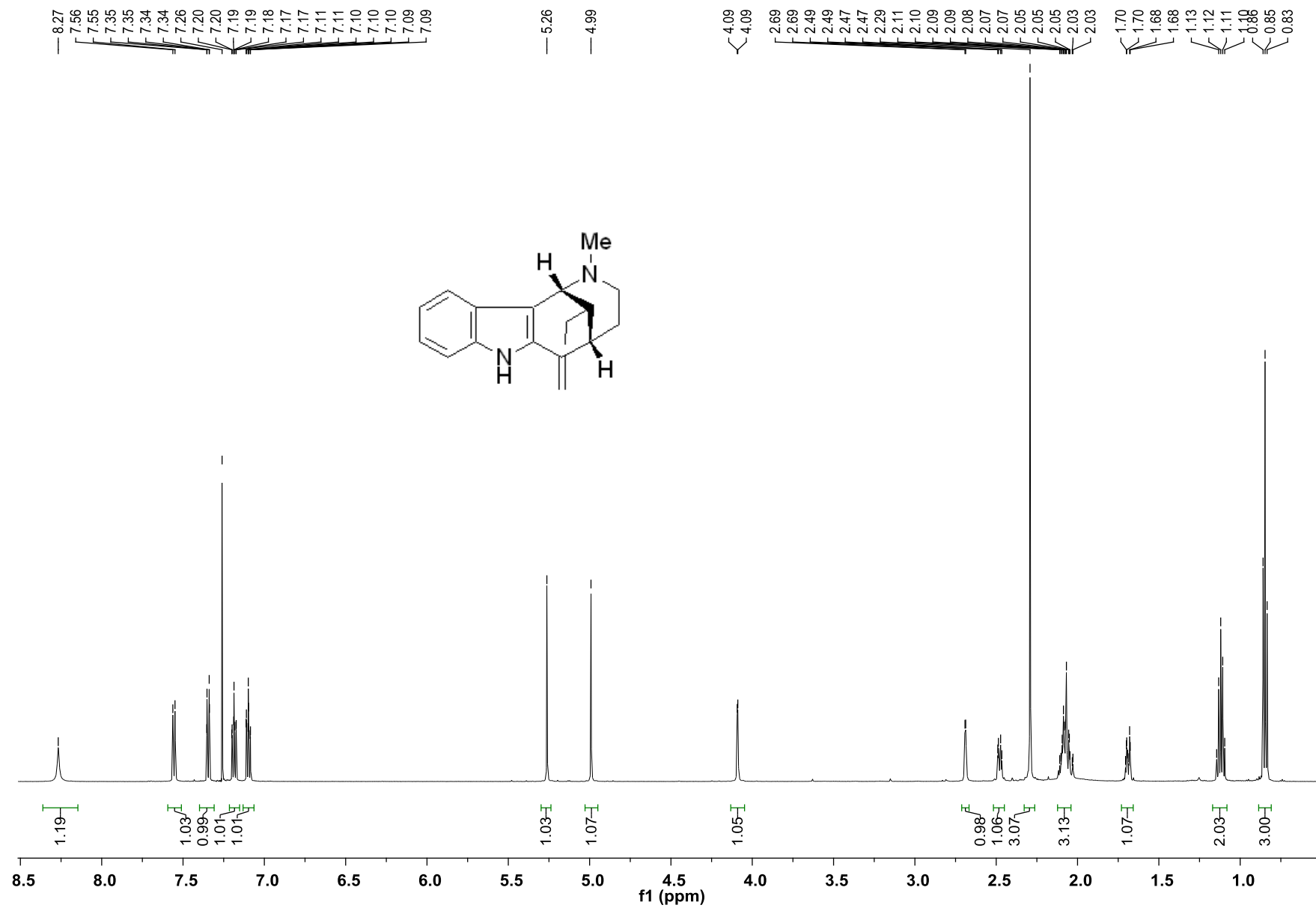
Acquisition Parameter

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Scan End	750 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste

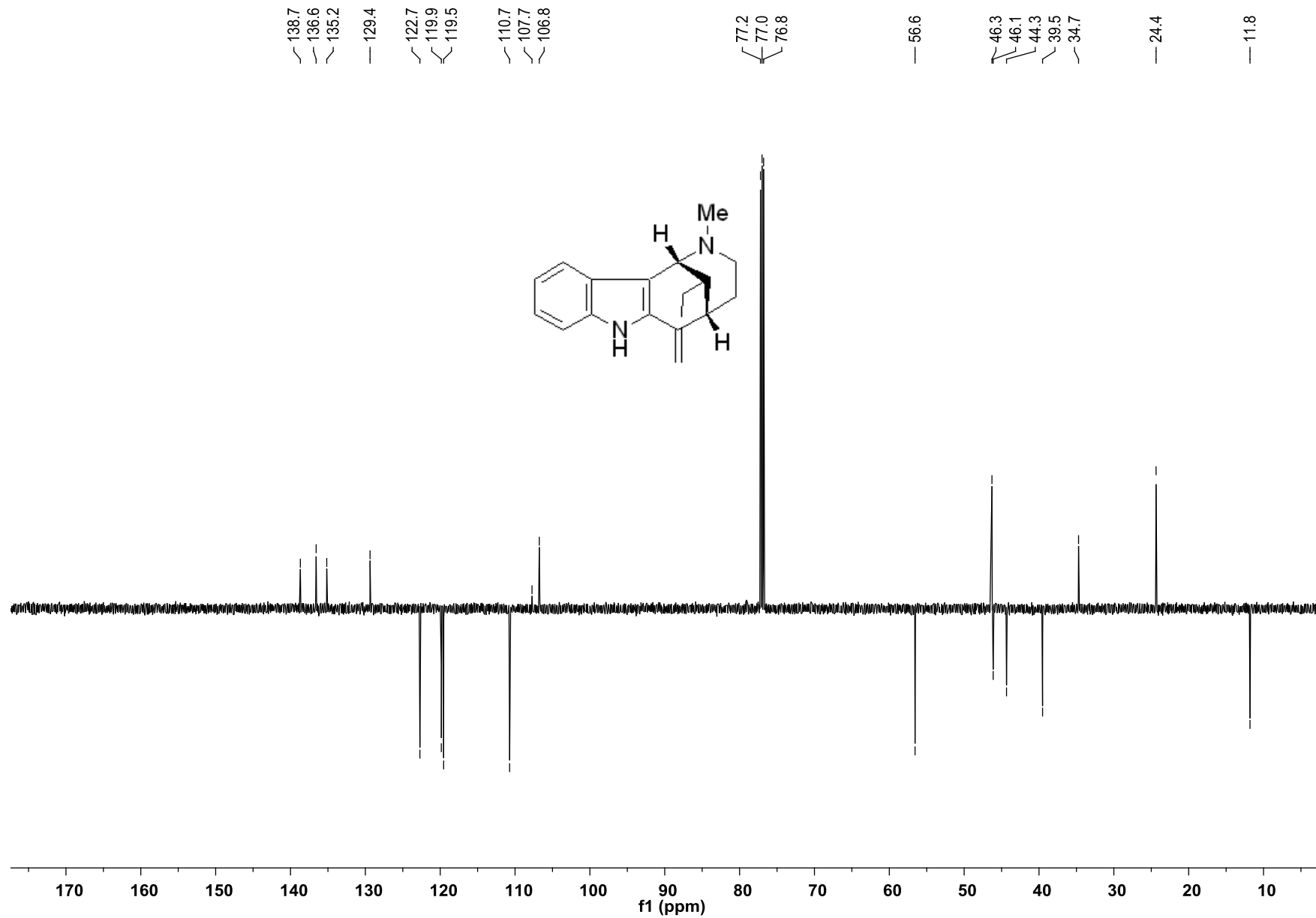


Meas. m/z	#	Formula	m/z	err [ppm]	Mean err [ppm]	rdb	N-Rule	e ⁻ Conf	mSigma	Std I	Std Mean m/z	Std I VarNorm	Std m/z Diff	Std Comb Dev
253.1696	1	C ₁₇ H ₂₁ N ₂	253.1699	1.5	1.8	8.5	ok	even	0.40	0.0006	0.0005	0.0003	0.0004	0.8427

HRMS Spectrum of Noruleine (ESI+)



¹H NMR Spectrum of Uleine (600 MHz, CDCl₃)



¹³C NMR Spectrum of Uleine (APT, 150 MHz, CDCl₃)

Mass Spectrum SmartFormula Report

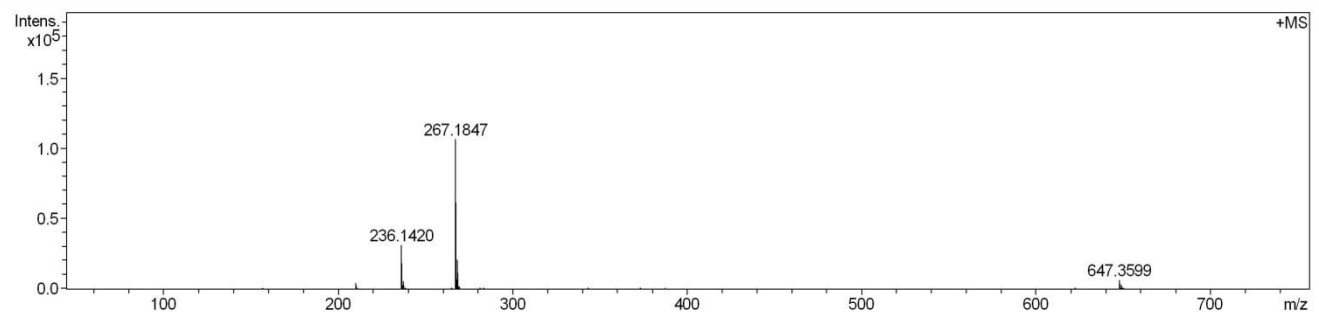
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 Sample Name
 Comment

Acquisition Date 7/24/2012 3:16:40 PM
 Operator BDAL@DE
 Instrument / Ser# micrOTOF 10308

Acquisition Parameter

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Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	4.0 l/min
Scan End	750 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste



Meas. m/z	#	Formula	m/z	err [ppm]	Mean err [ppm]	rdb	N-Rule	e ⁻ Conf	mSigma	Std I	Std Mean m/z	Std I VarNorm	Std m/z Diff	Std Comb Dev
267.1847	1	C 18 H 23 N 2	267.1856	3.3	3.7	8.5	ok	even	4.03	0.0072	0.0012	0.0028	0.0001	0.8427

HRMS Spectrum of Uleine (ESI+)