

Catalytic Enantioselective Total Synthesis of (+)-Eucomic Acid

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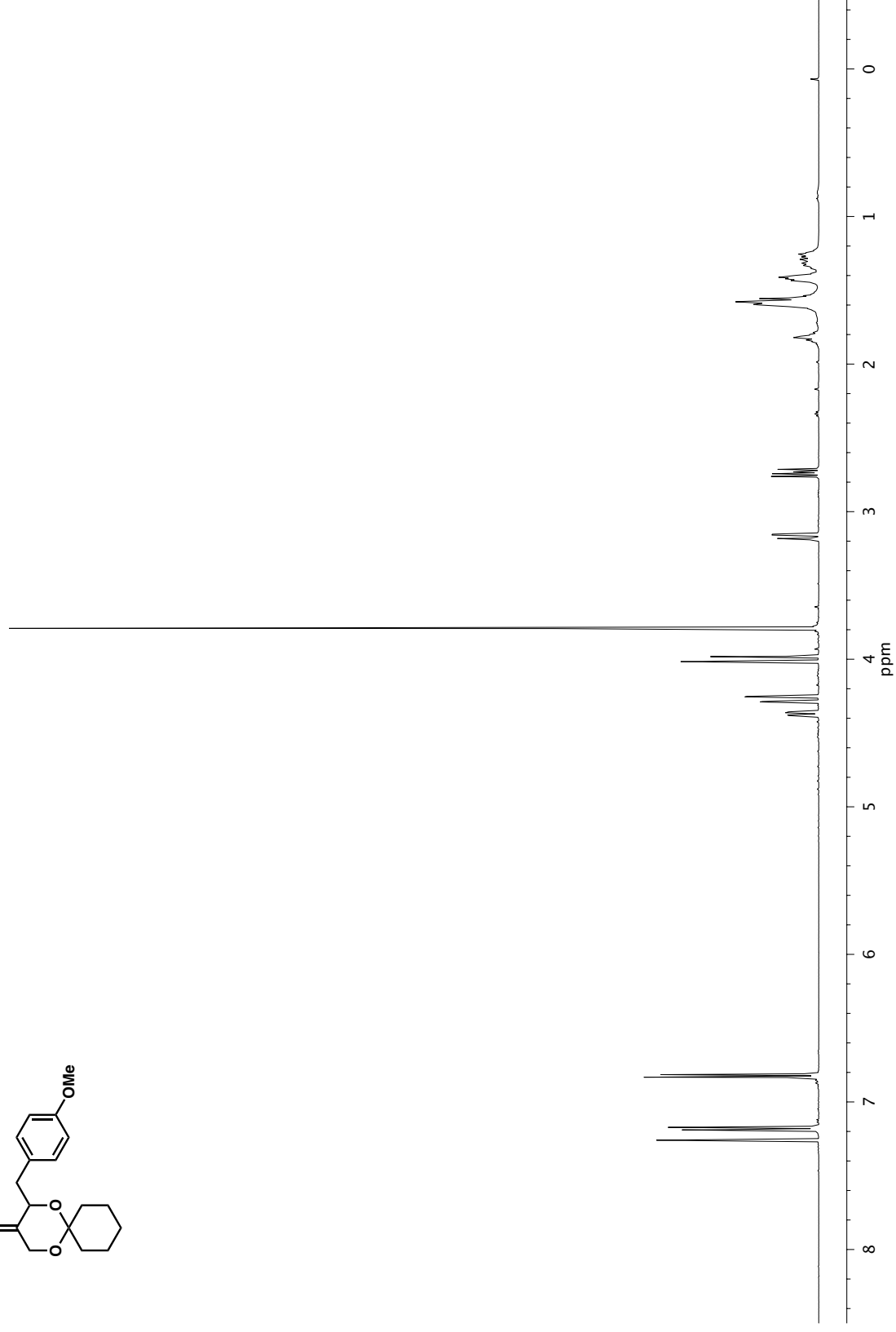
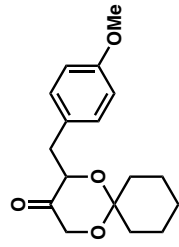
Comparison of Synthetic Material to Published Data

^1H NMR, ^{13}C NMR, and optical rotation data are in excellent agreement to those reported from the alkaline hydrolysis (i.e. degradation product) of naturally-occurring glycosylated eucomic acid derivatives (Table S1).¹

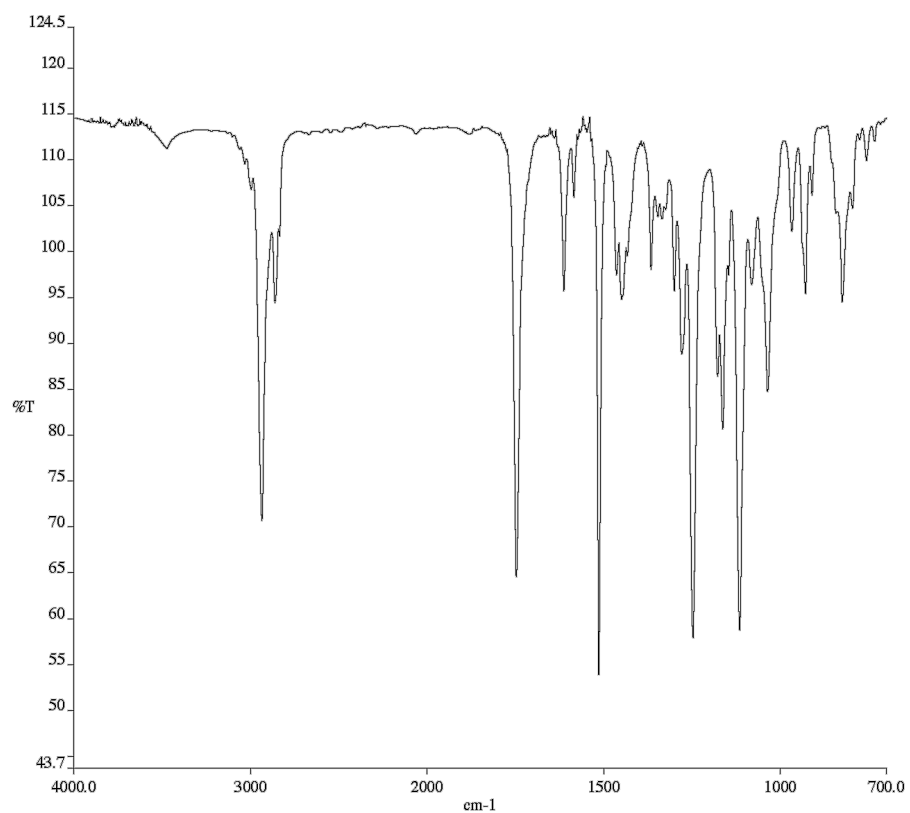
Comparison of Synthetic and Natural Eucomic Acid (Table S1)

Synthetic (+)-eucomic acid	Natural (–)-eucomic acid
^1H NMR (400 MHz, CD_3OD) – δ	^1H NMR (300 MHz, CD_3OD) – δ
7.06 (d, J = 8.5 Hz, 2H)	7.06 (d, J = 8.5 Hz, 2H)
6.68 (d, J = 8.5 Hz, 2H)	6.68 (d, J = 8.5 Hz, 2H)
2.95 (d, J = 16.6 Hz, 1H)	2.95 (d, J = 13.9 Hz, 1H)
2.94 (d, J = 13.4 Hz, 1H)	2.94 (d, J = 16.0 Hz, 1H)
2.86 (d, J = 13.7 Hz, 1H)	2.85 (d, J = 13.9 Hz, 1H)
2.56 (d, J = 16.2 Hz, 1H)	2.56 (d, J = 16.0 Hz, 1H)
^{13}C NMR (101 MHz, CD_3OD)	^{13}C NMR (75 MHz, CD_3OD)
177.7	177.7
174.2	174.2
157.4	157.4
132.6	132.6
127.6	127.6
115.8	115.8
76.8	76.8
45.5	45.4
43.6	43.6
$[\alpha]_{\text{D}}^{25}$ = +17.0 (c 1.15, MeOH)	$[\alpha]_{\text{D}}^{26}$ (natural) = –15.1 (c 0.45, MeOH)

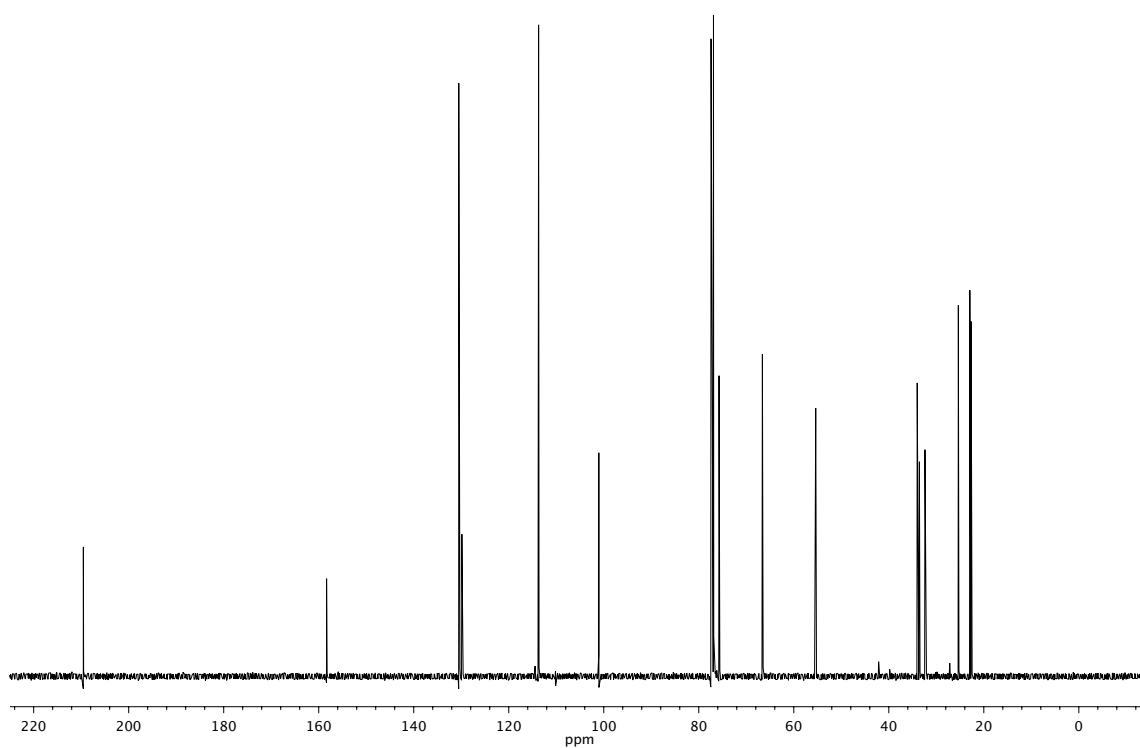
¹ Sahakitpichan, P.; Mahidol, C.; Disadee, W.; Chimnoi, N.; Ruchirawat, S.; Kanchanapoom, T. *Tetrahedron*, **2013**, 69, 1031–1037.



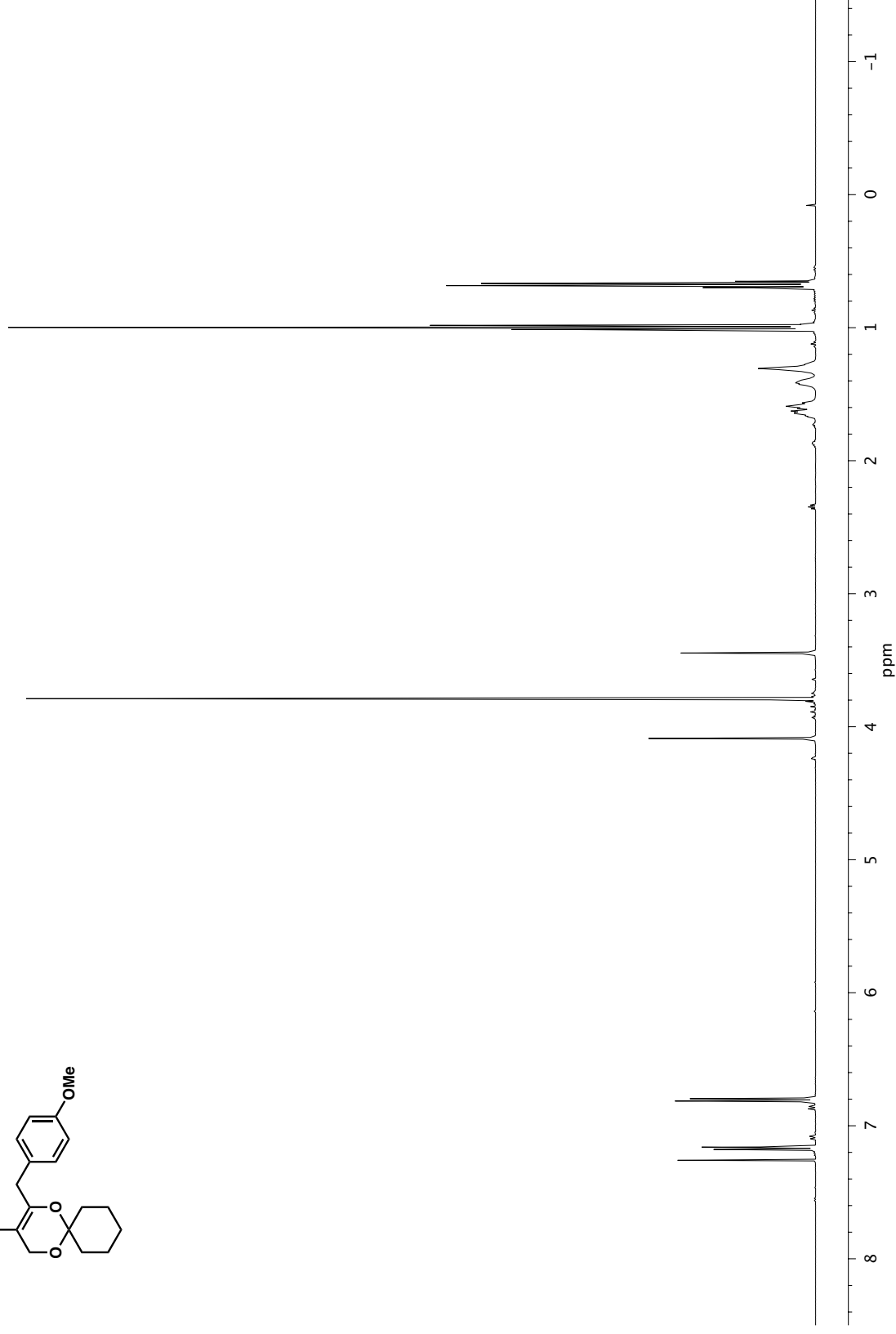
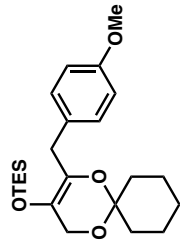
^1H NMR (500 MHz, CDCl_3) of compound **9**.



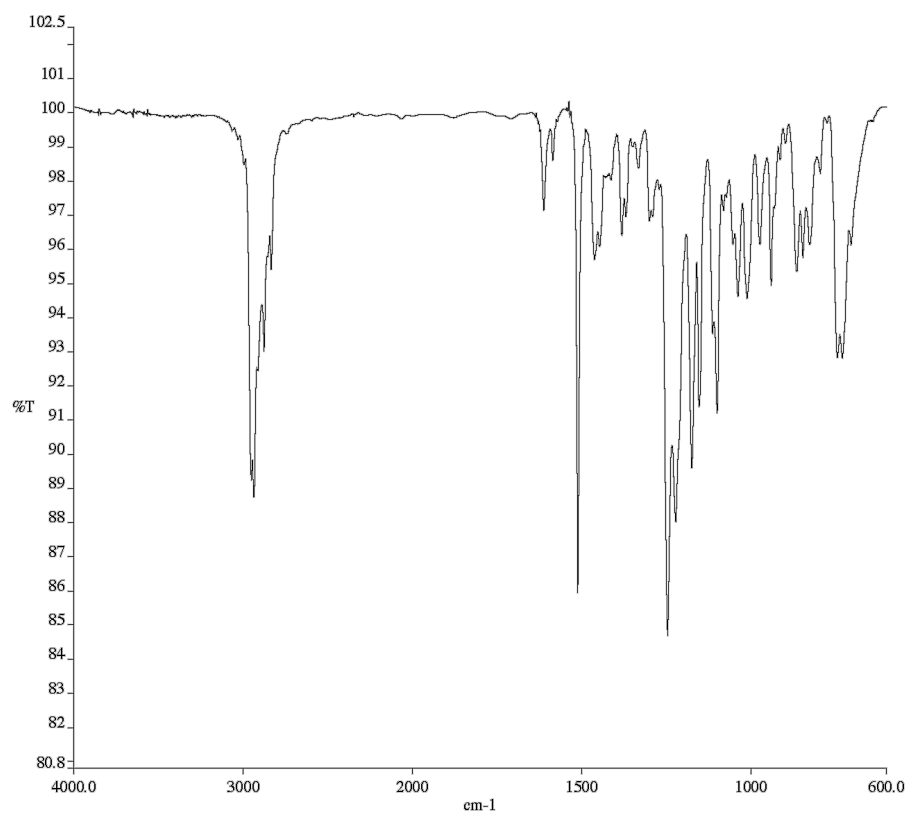
Infrared spectrum (Thin Film, NaCl) of compound



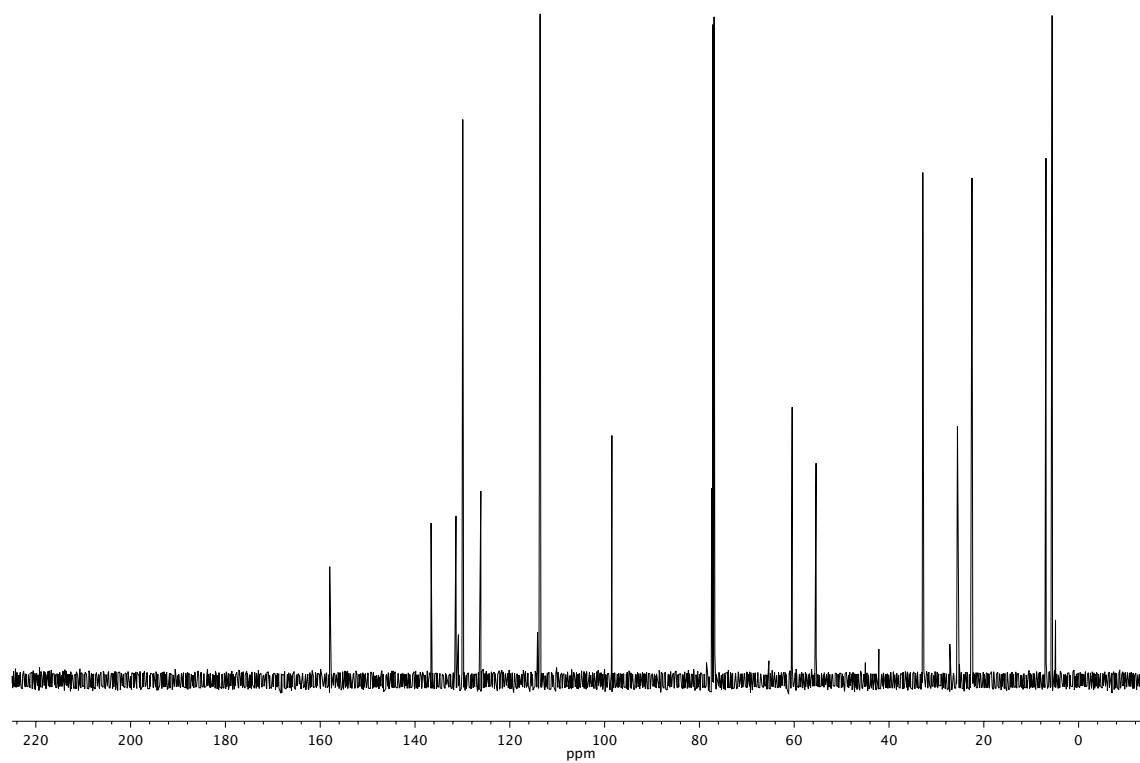
^{13}C NMR (126 MHz, CDCl_3) of compound 9.



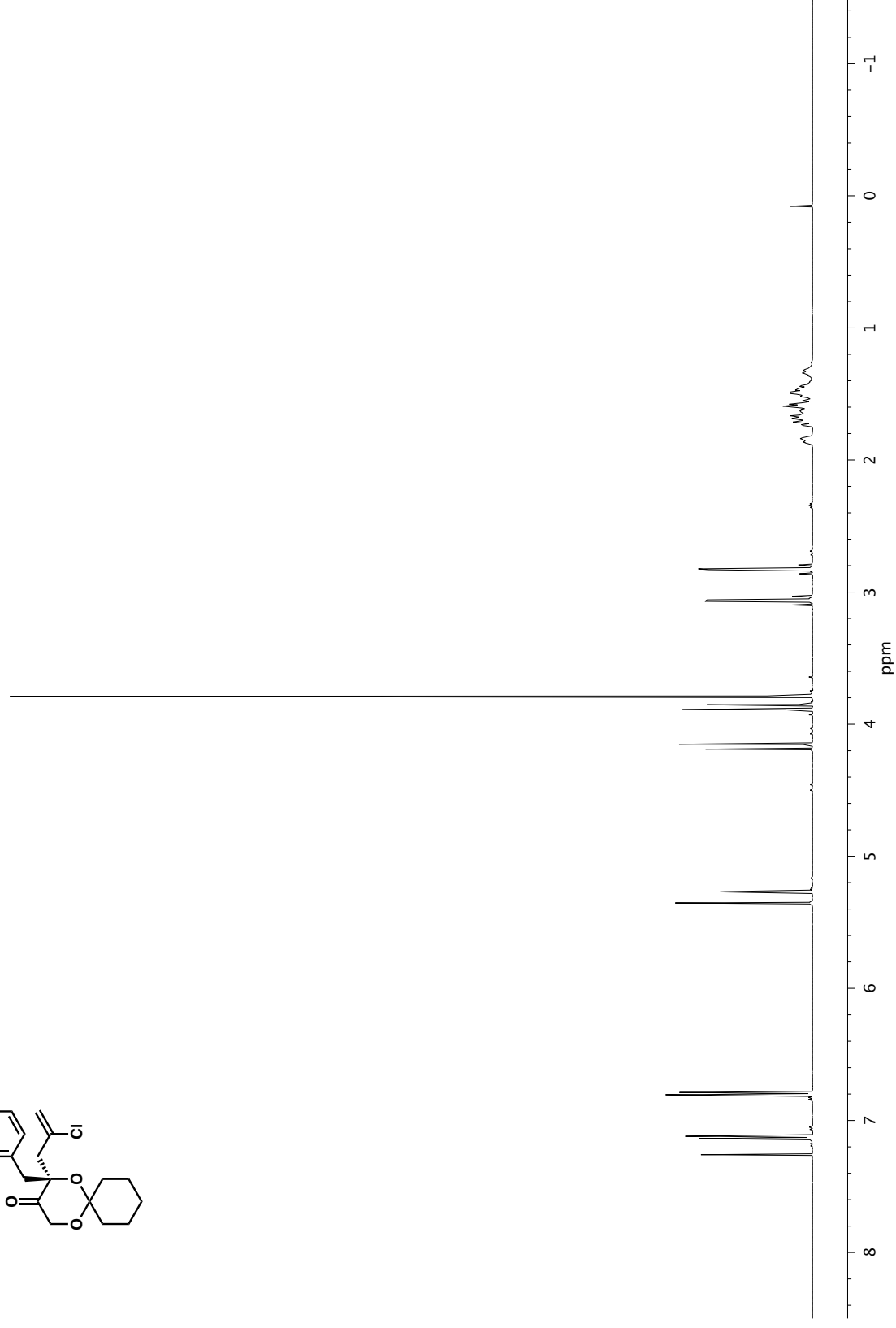
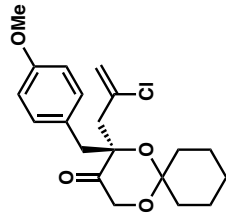
¹H NMR (500 MHz, CDCl₃) of compound 7.



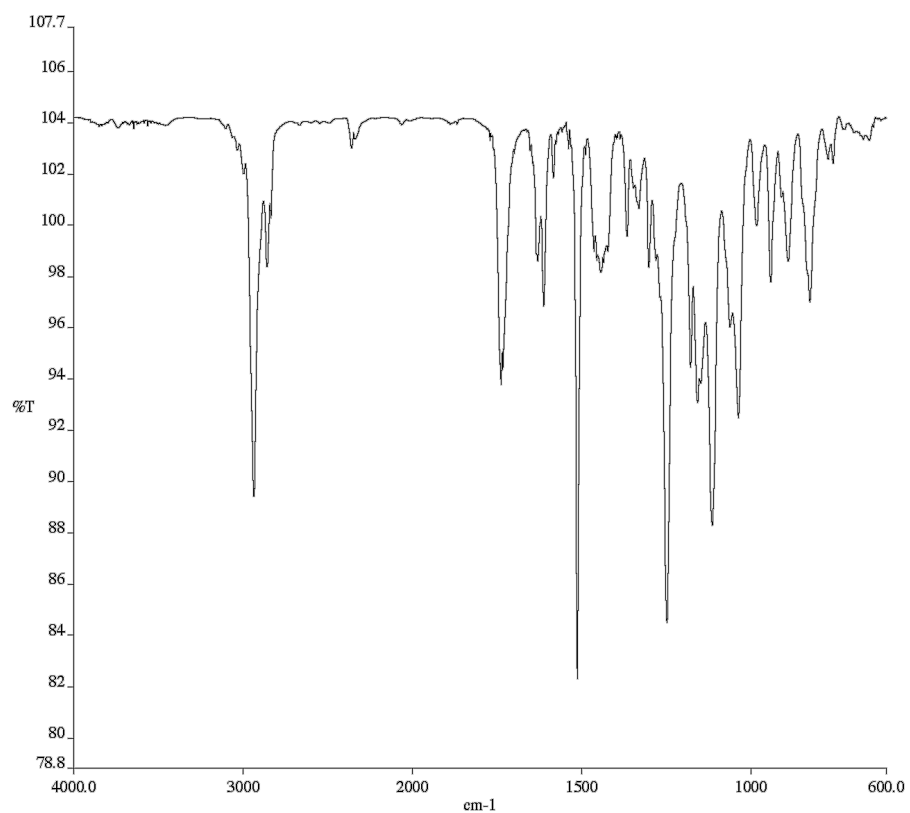
Infrared spectrum (Thin Film, NaCl) of compound



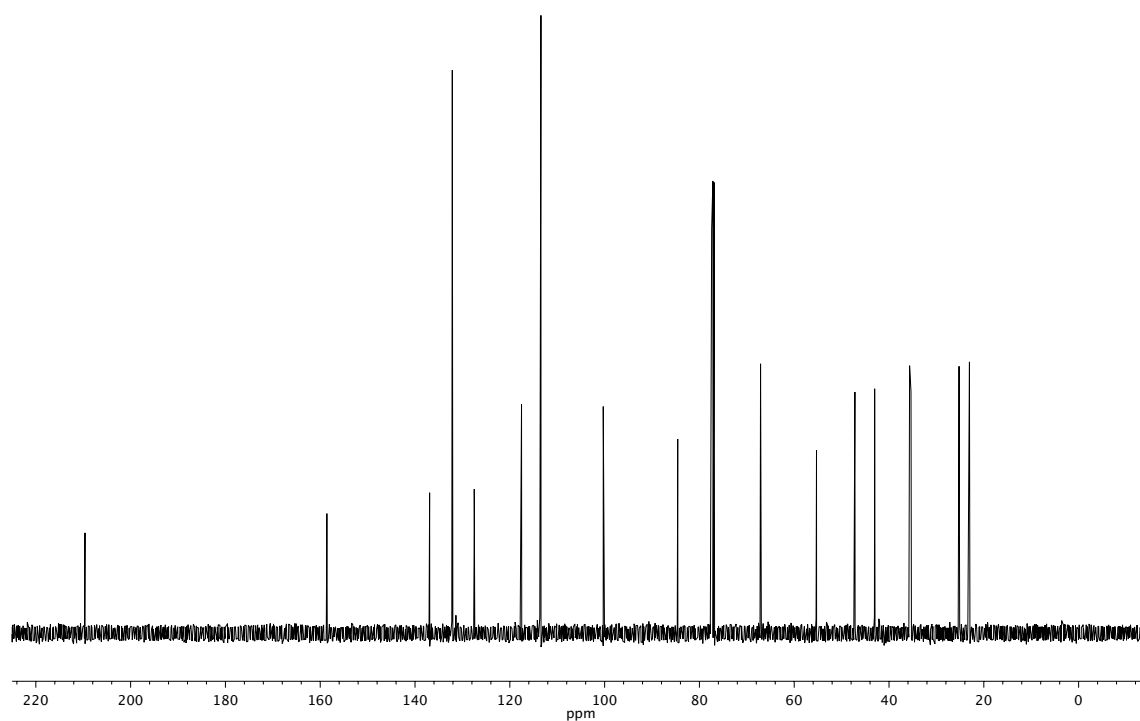
¹³C NMR (126 MHz, CDCl₃) of compound 7.



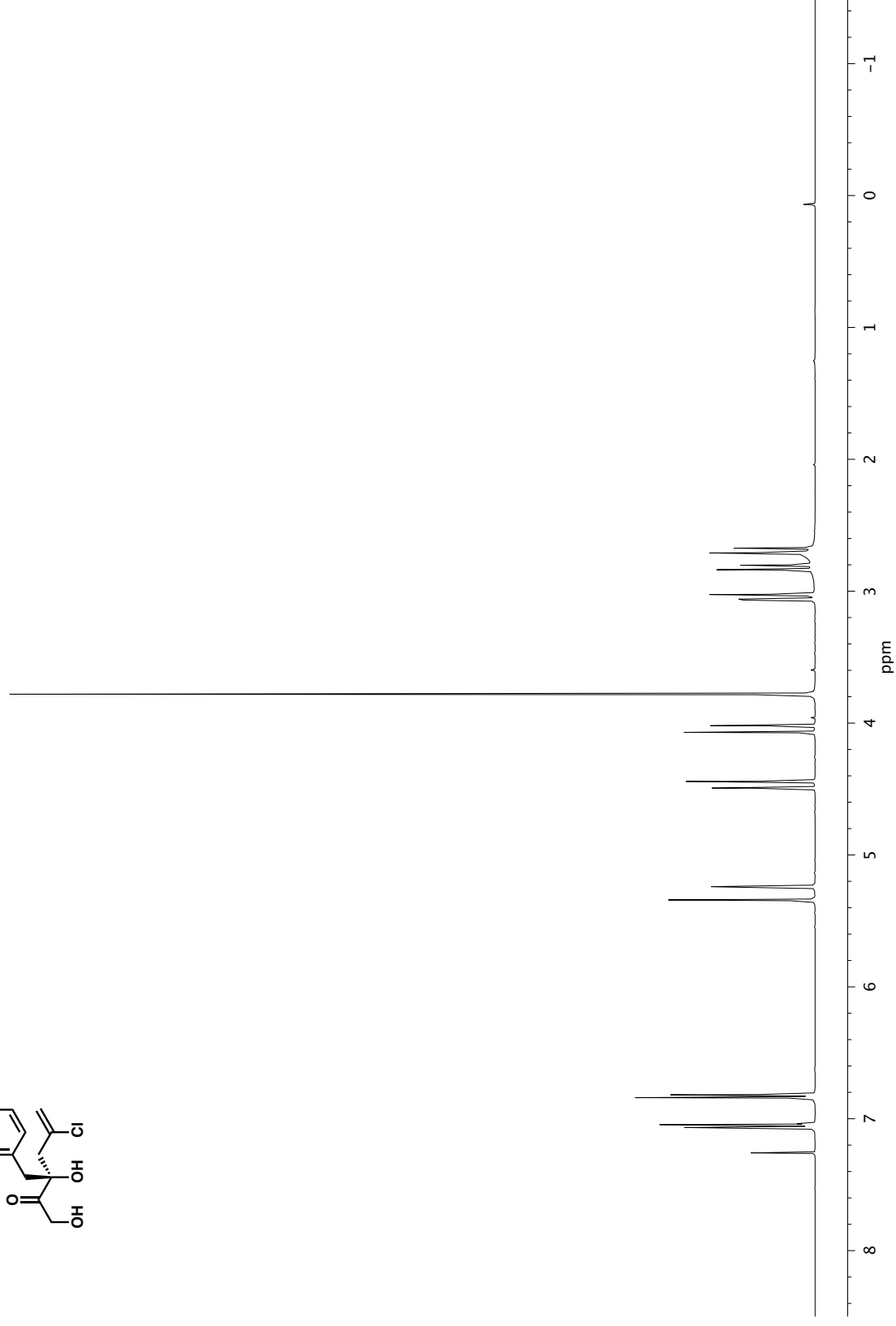
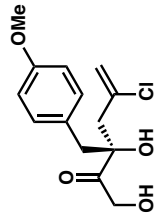
¹H NMR (500 MHz, CDCl₃) of compound 6.



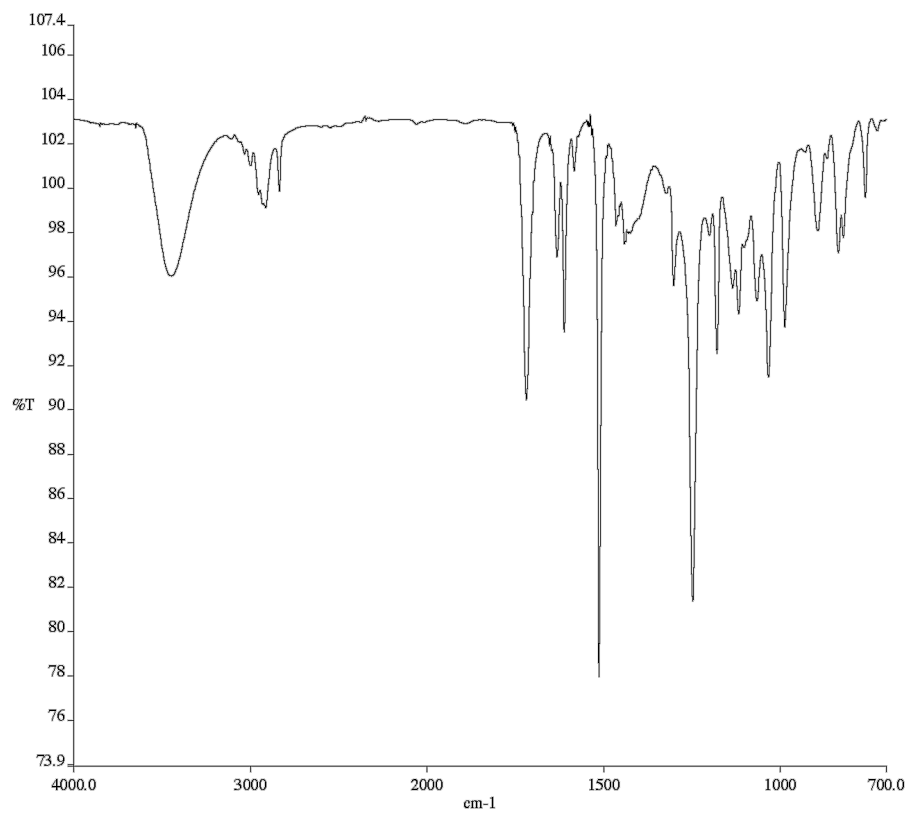
Infrared spectrum (Thin Film, NaCl) of compound



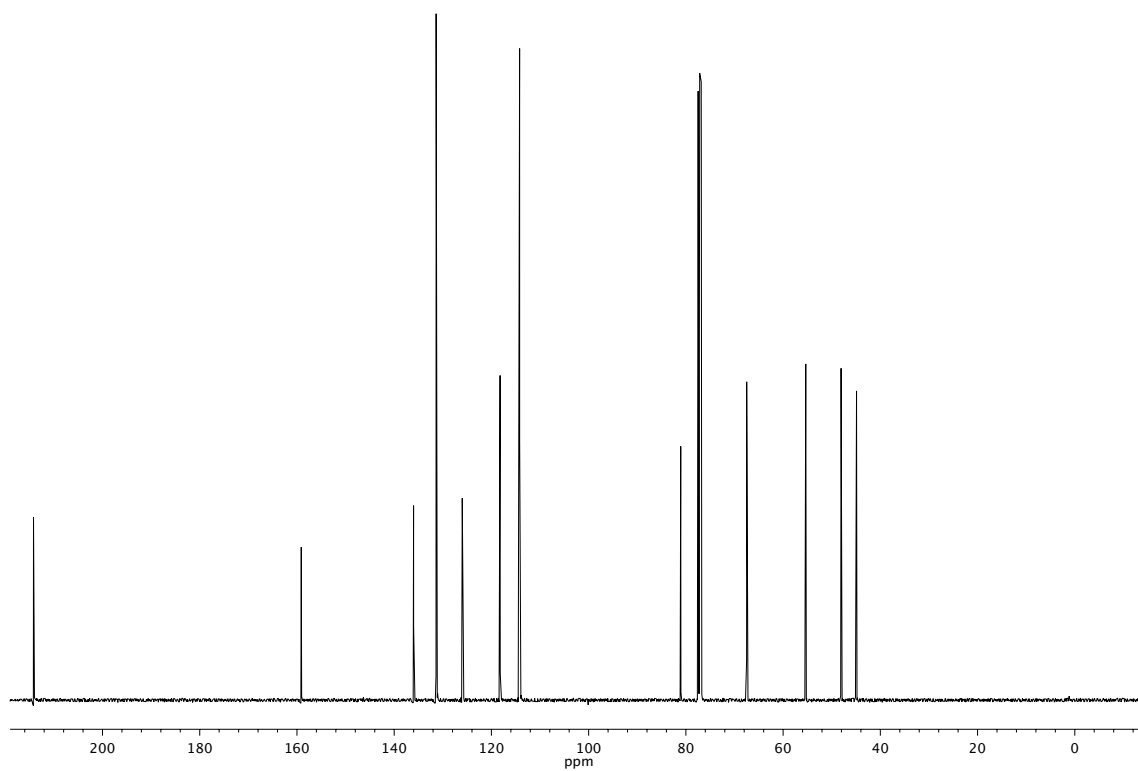
^{13}C NMR (126 MHz, CDCl_3) of compound 6.



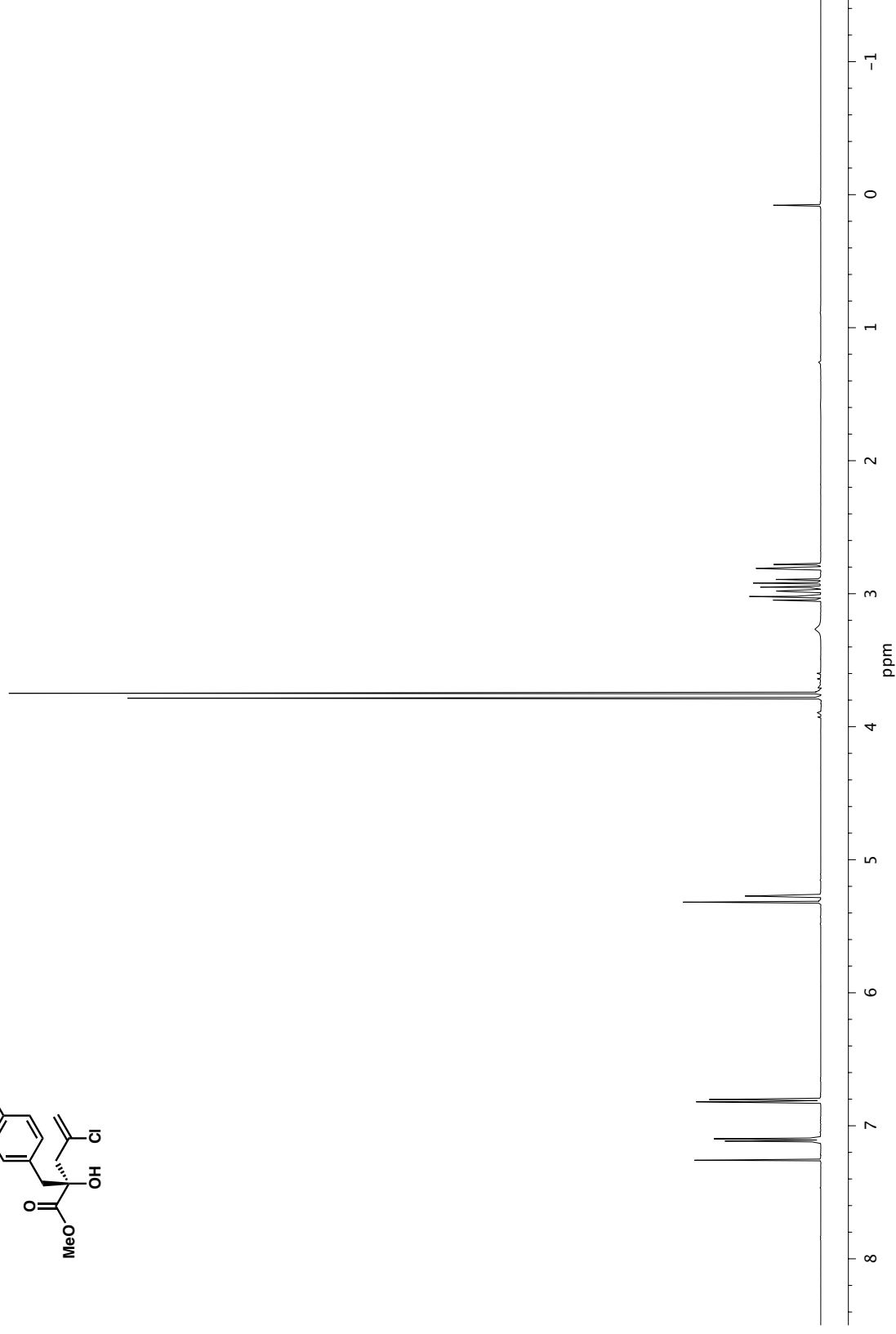
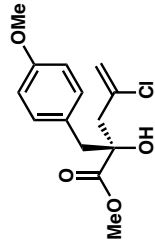
¹H NMR (400 MHz, CDCl₃) of compound **10**.



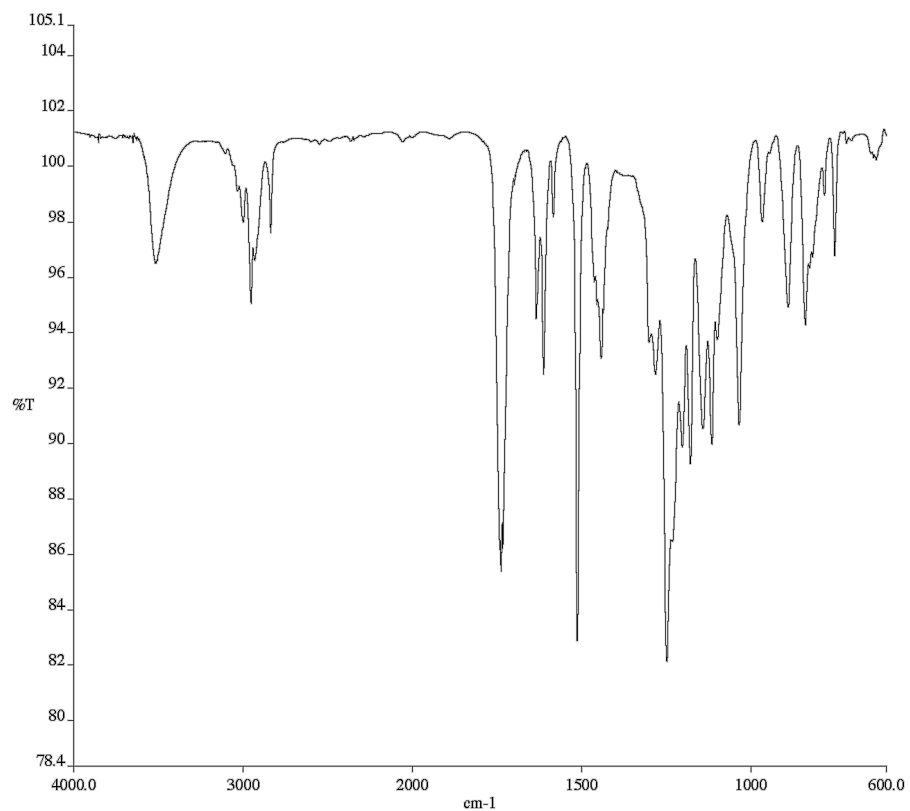
Infrared spectrum (Thin Film, NaCl) of compound



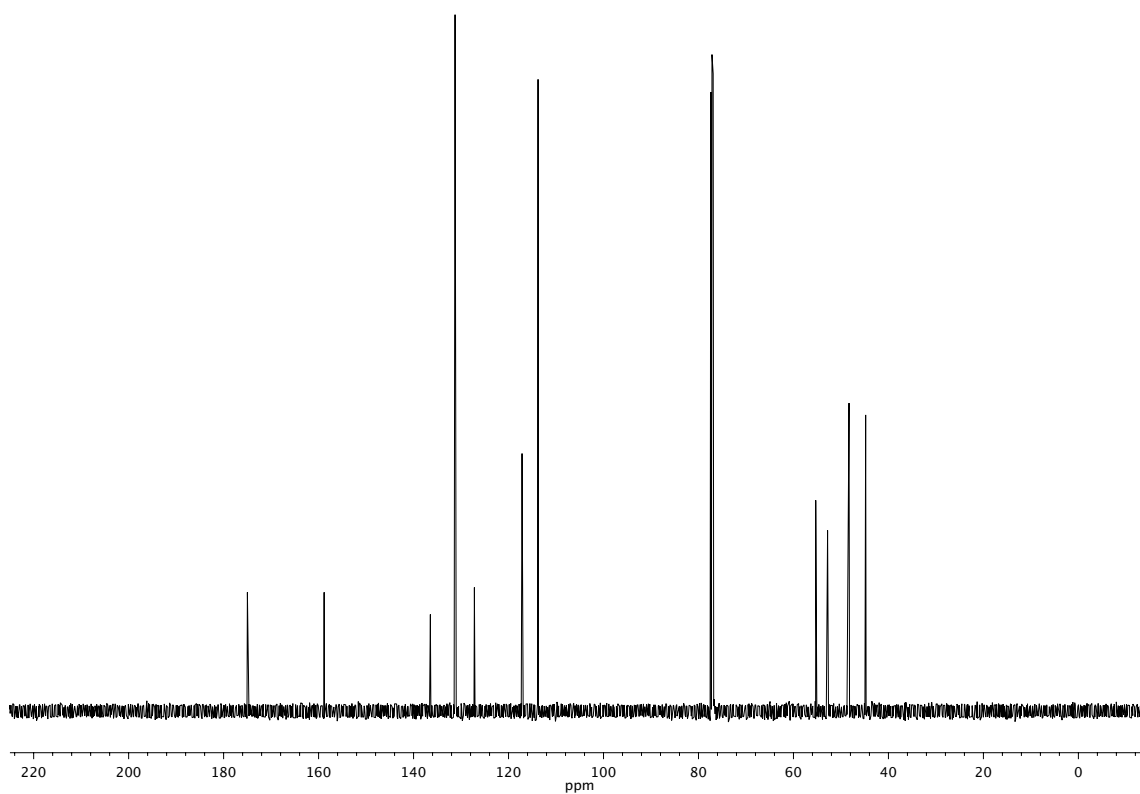
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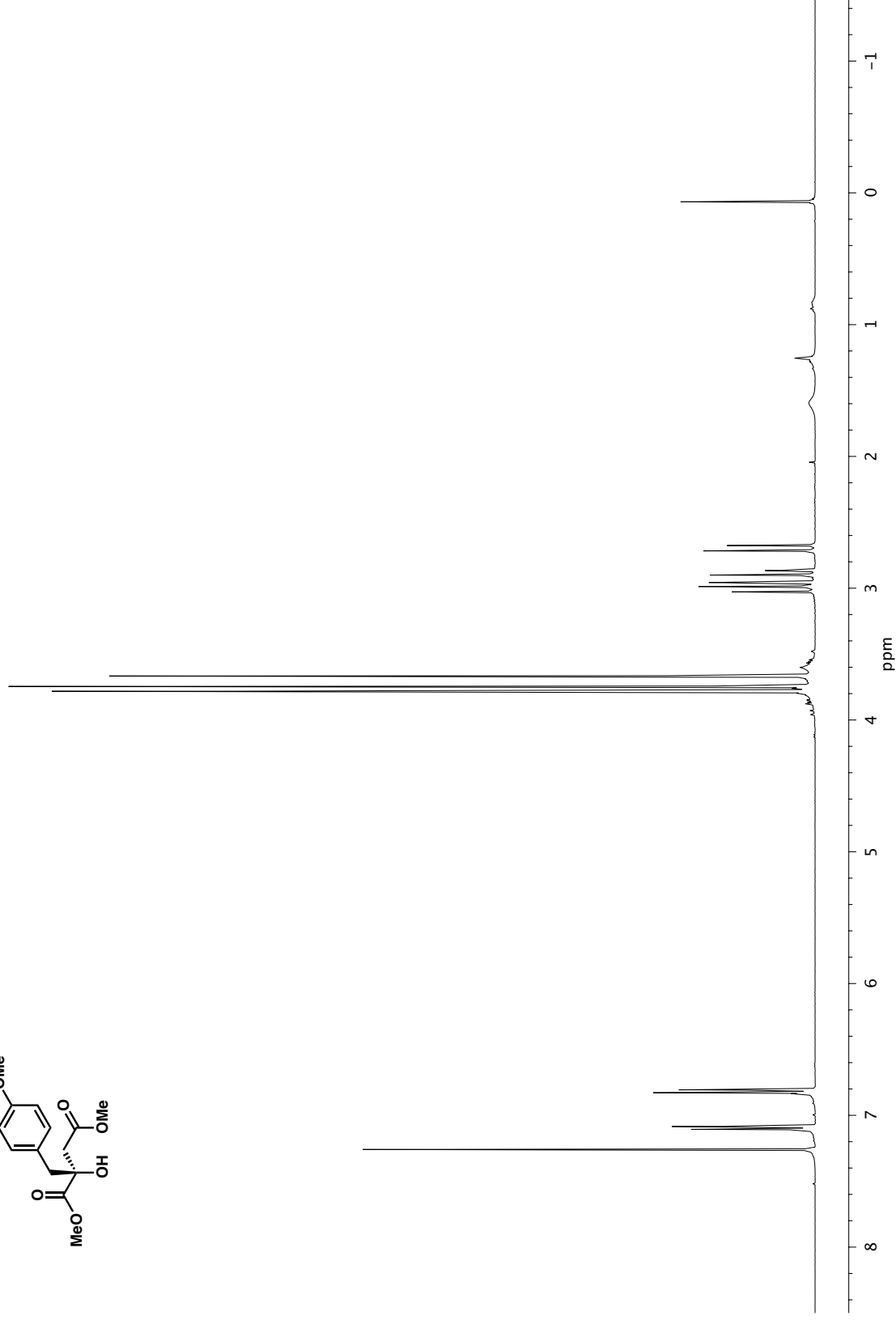
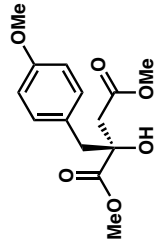
¹H NMR (500 MHz, CDCl₃) of compound **11**.



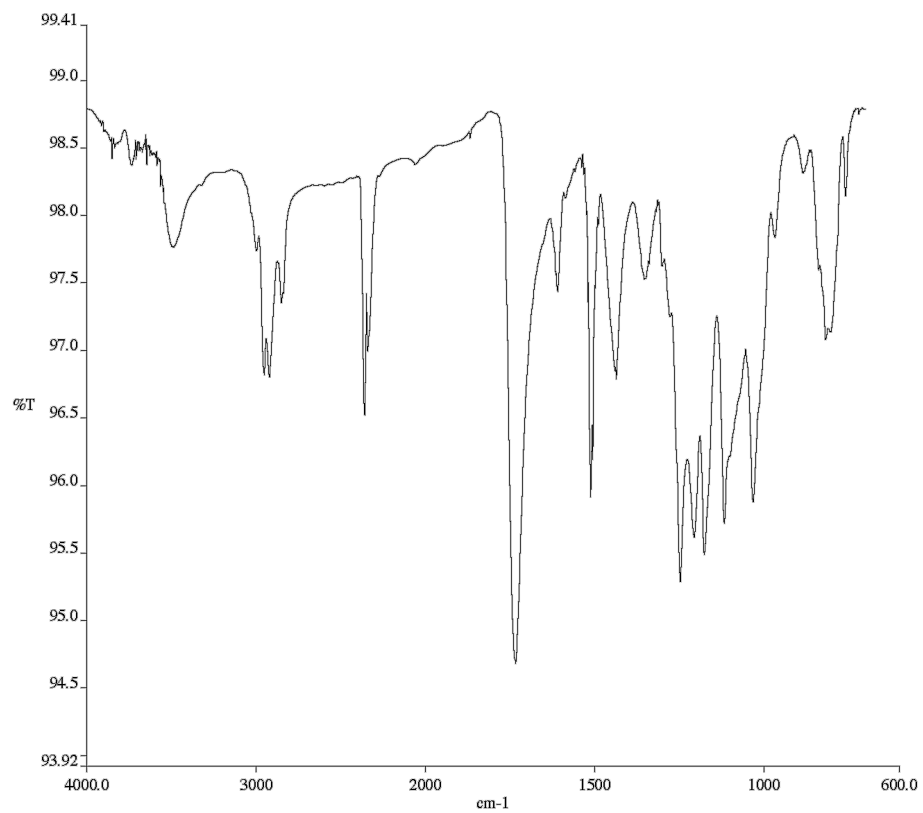
Infrared spectrum (Thin Film, NaCl) of compound



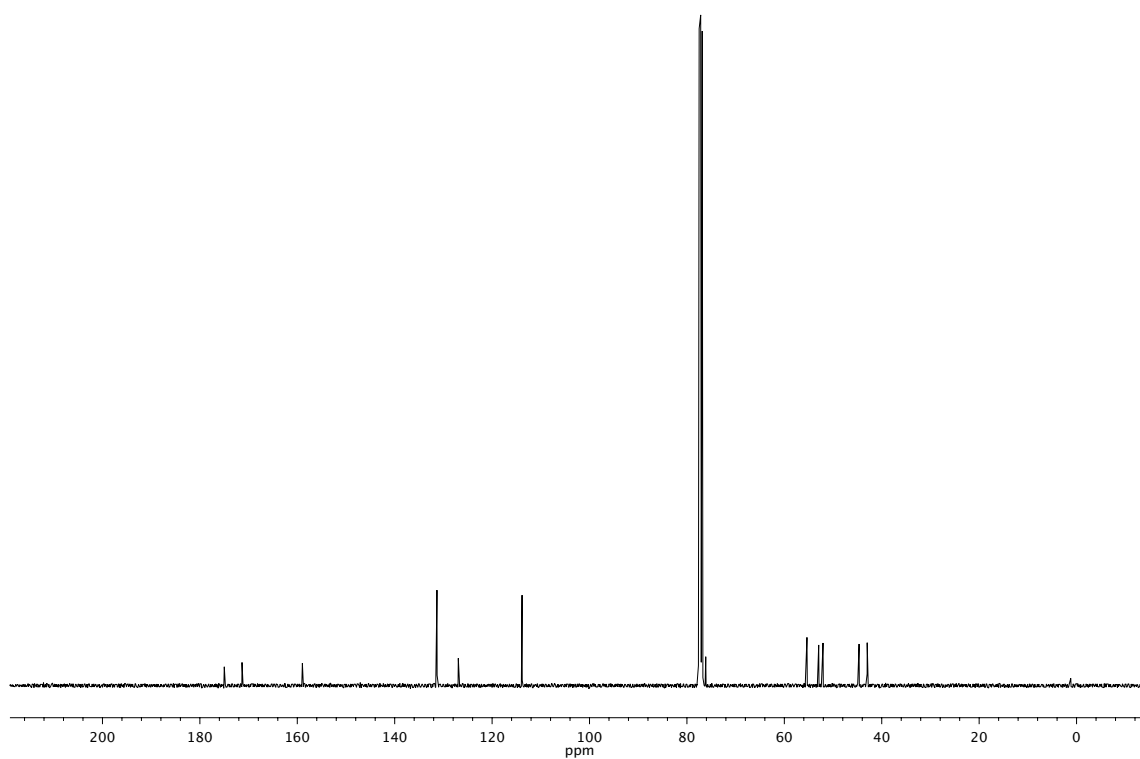
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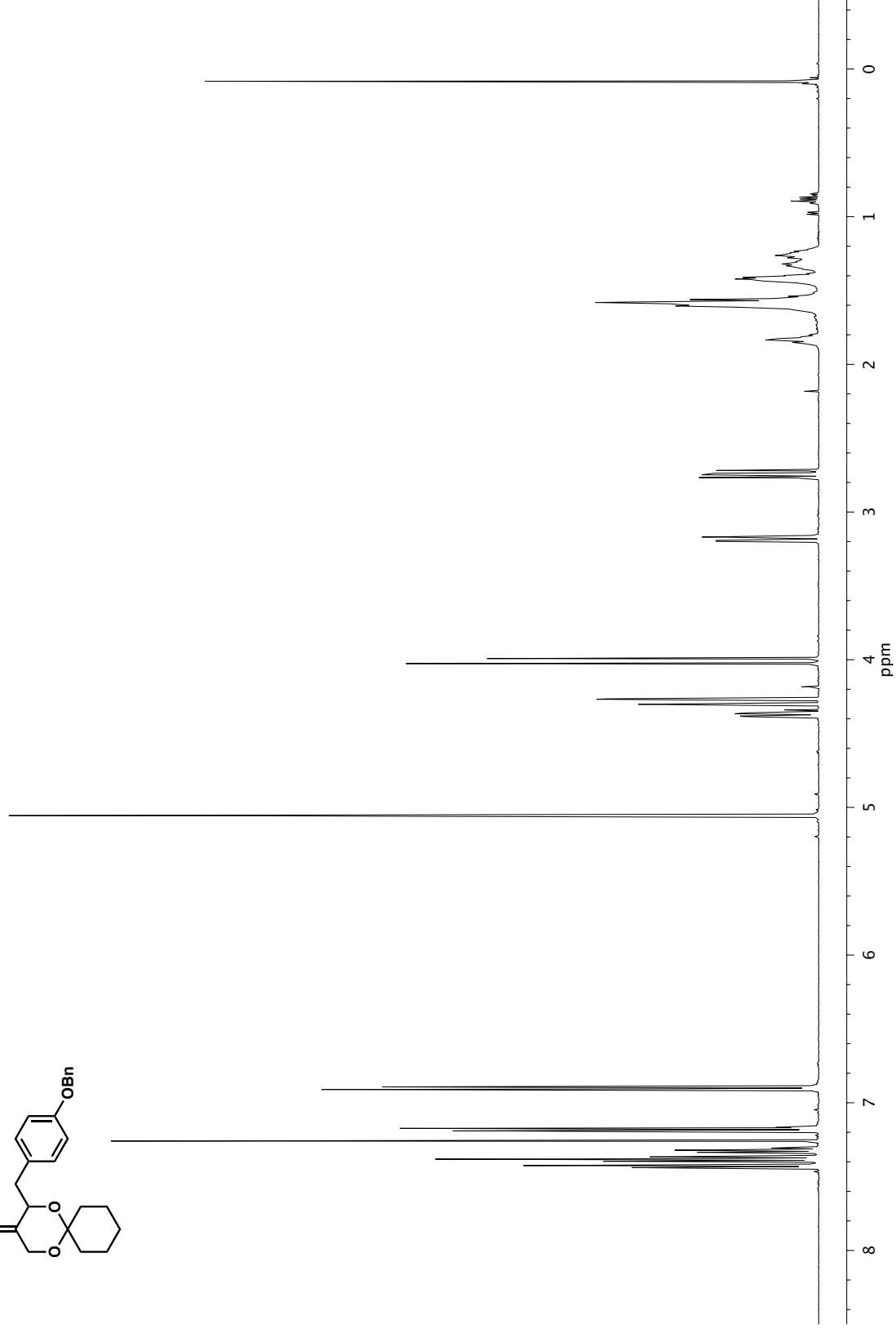
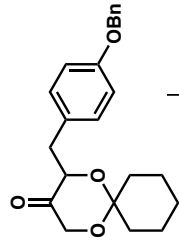
¹H NMR (400 MHz, CDCl₃) of compound 5.



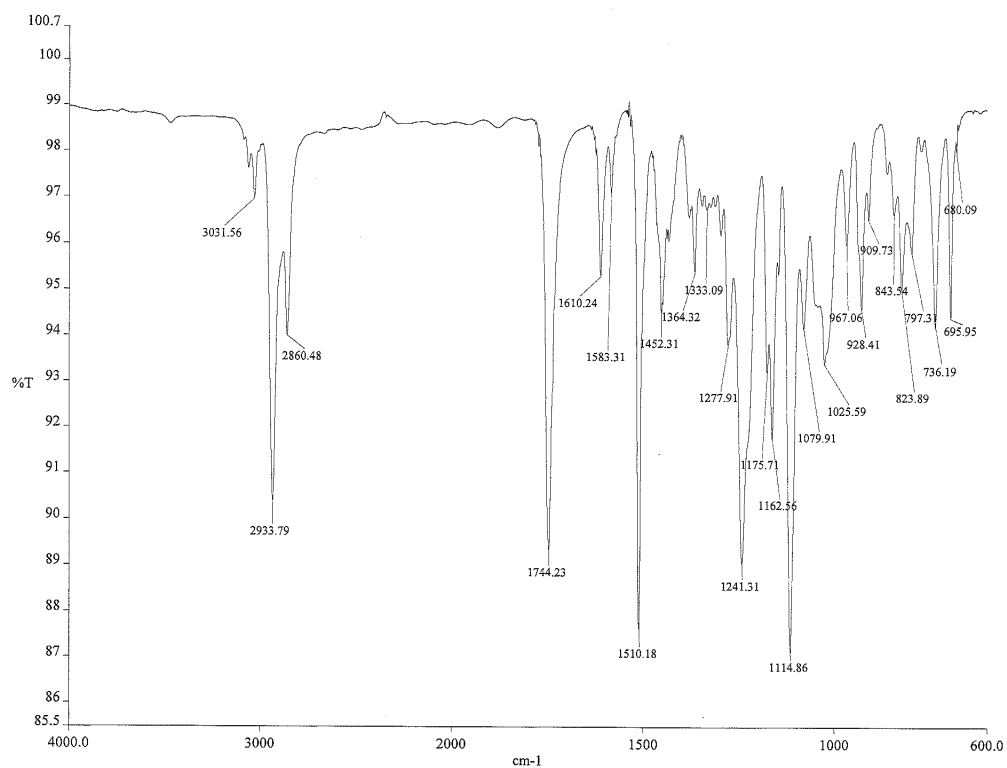
Infrared spectrum (Thin Film, NaCl) of compound



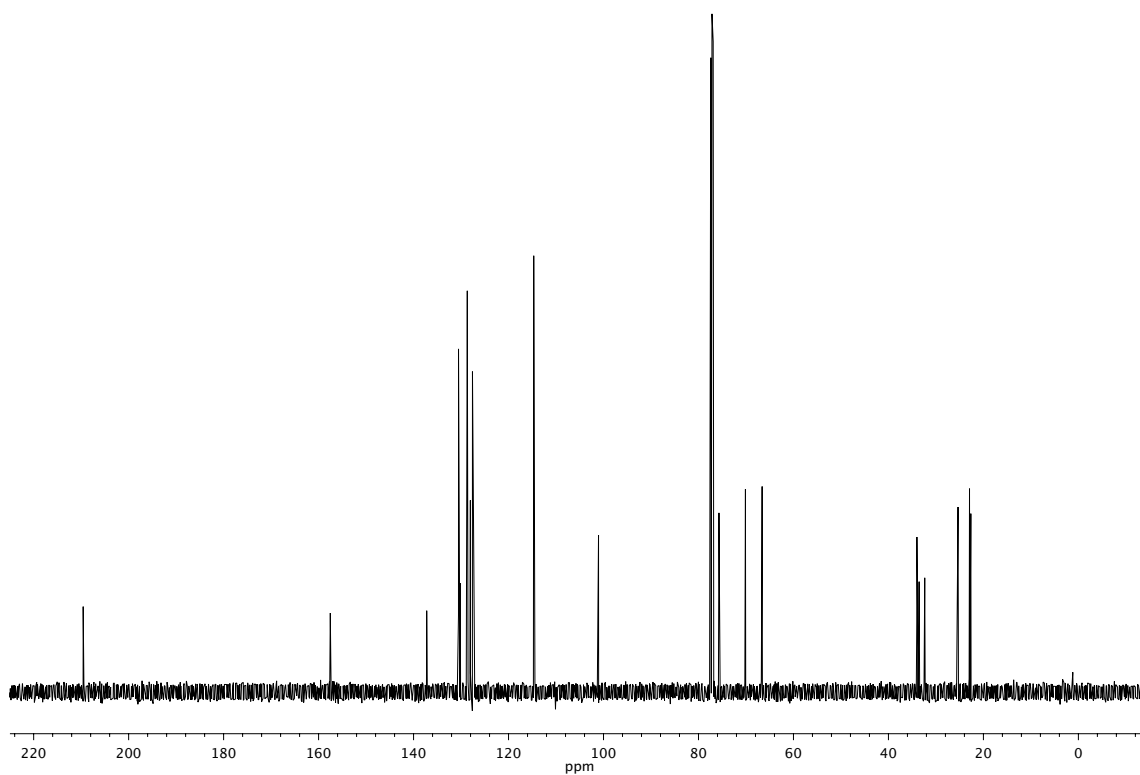
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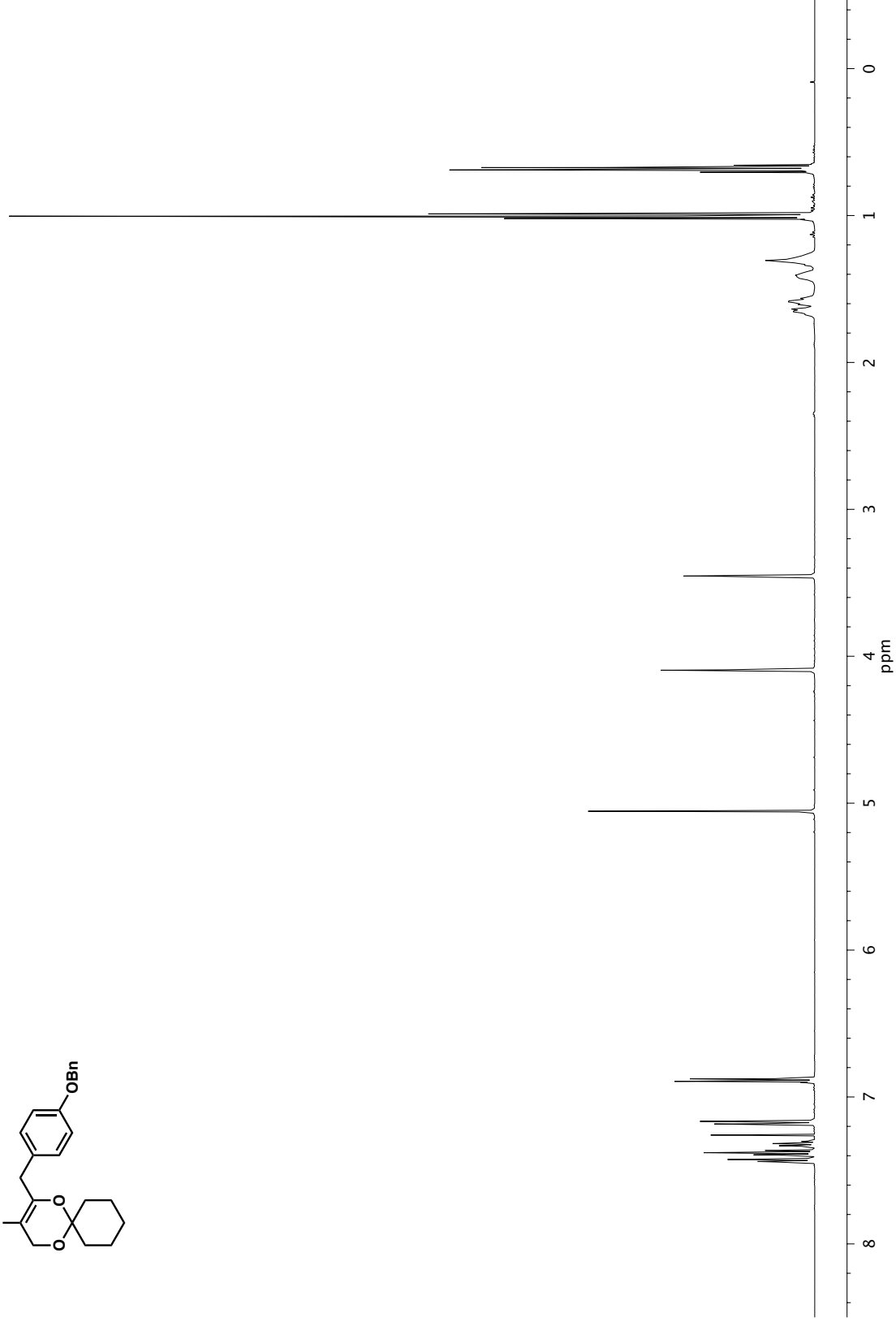
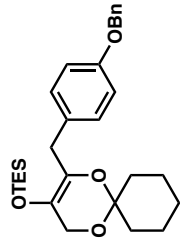
¹H NMR (500 MHz, CDCl₃) of compound **13**.



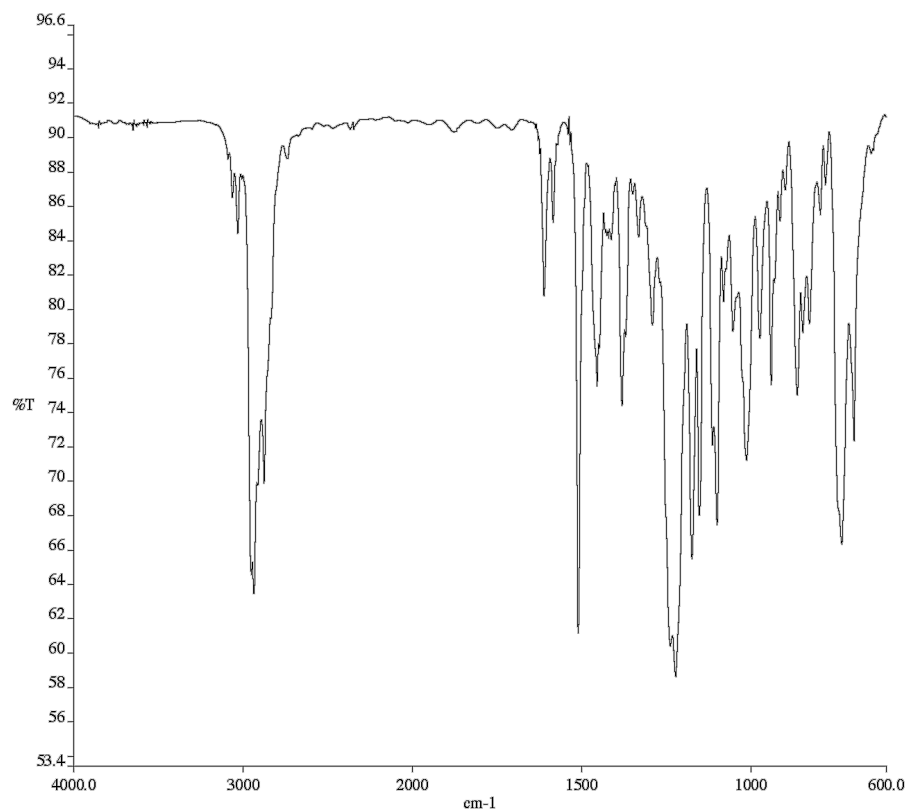
Infrared spectrum (Thin Film, NaCl) of compound



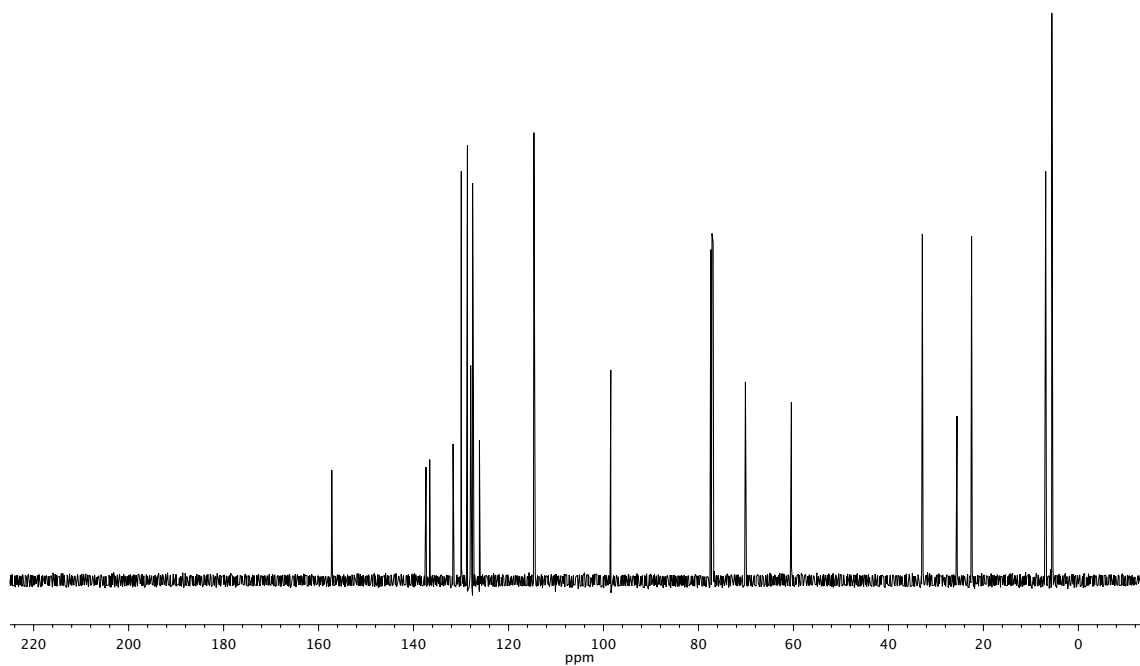
¹³C NMR (126 MHz, CDCl₃) of compound 13.



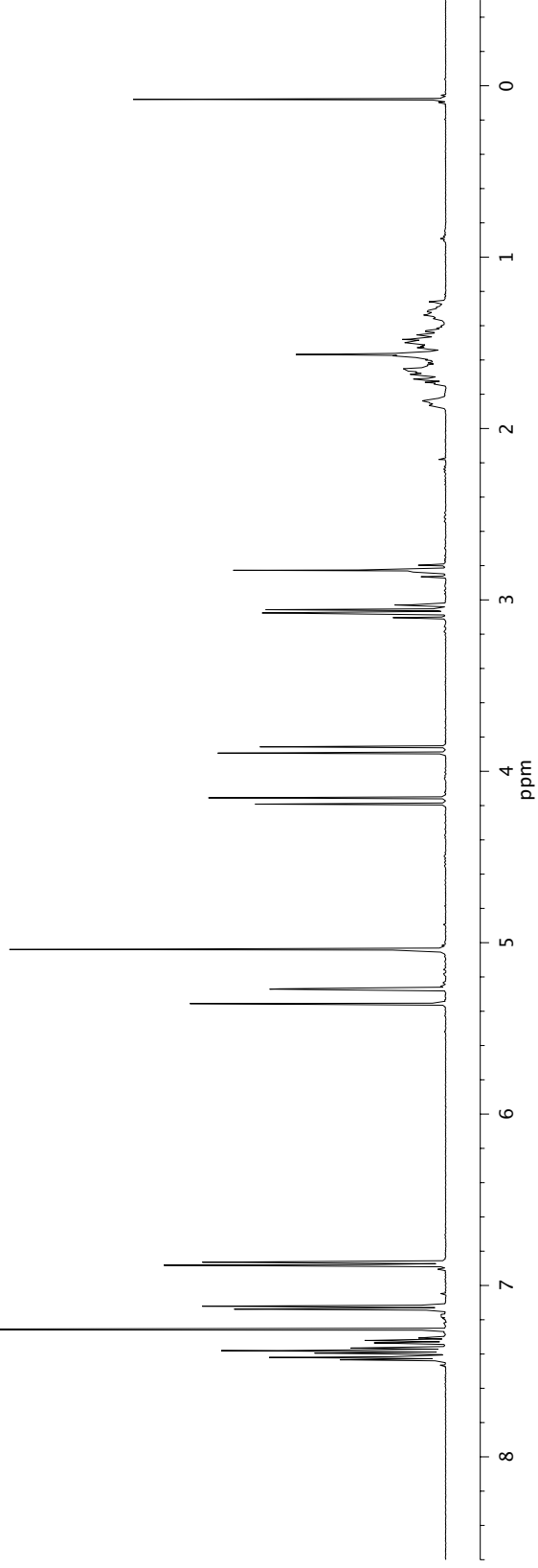
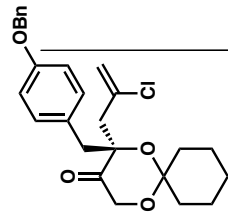
¹H NMR (500 MHz, CDCl₃) of compound **14**.



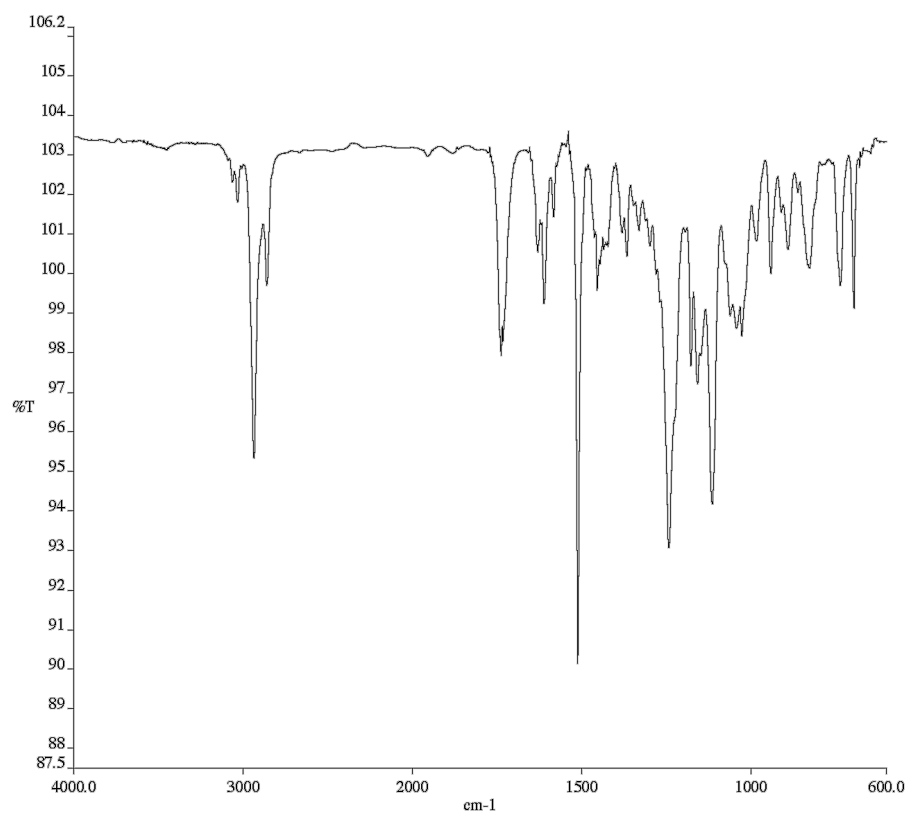
Infrared spectrum (Thin Film, NaCl) of compound



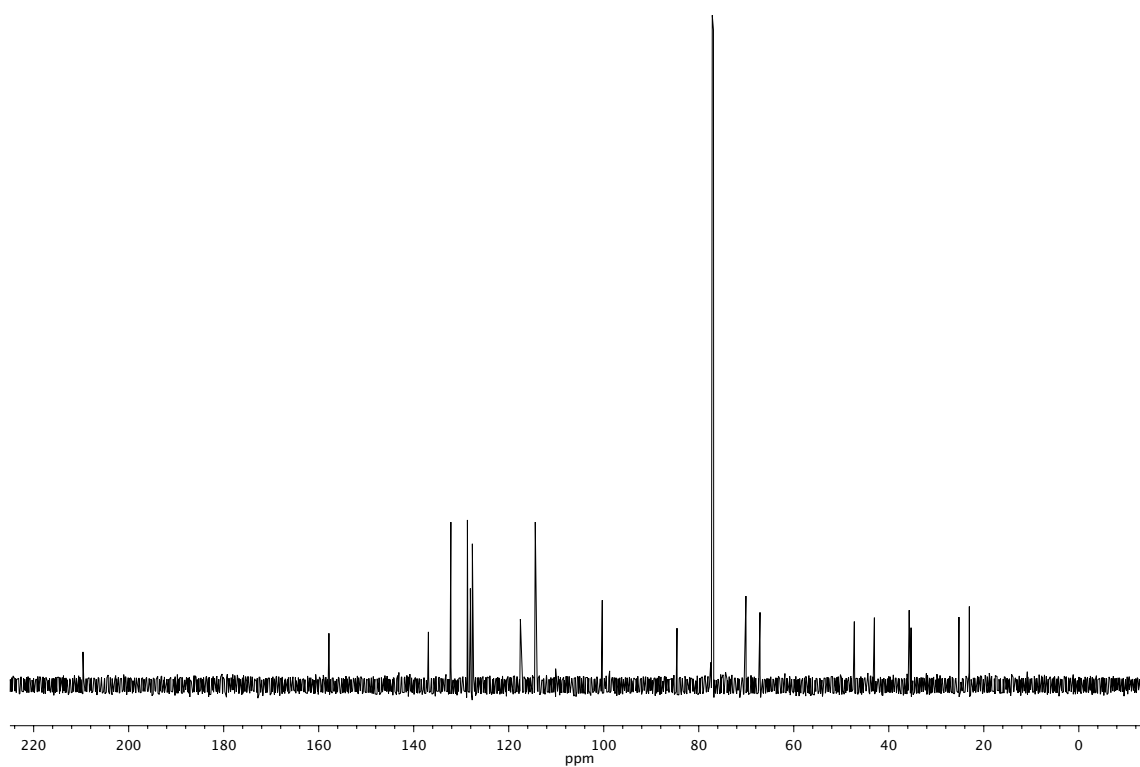
¹³C NMR (126 MHz, CDCl₃) of compound **14**.



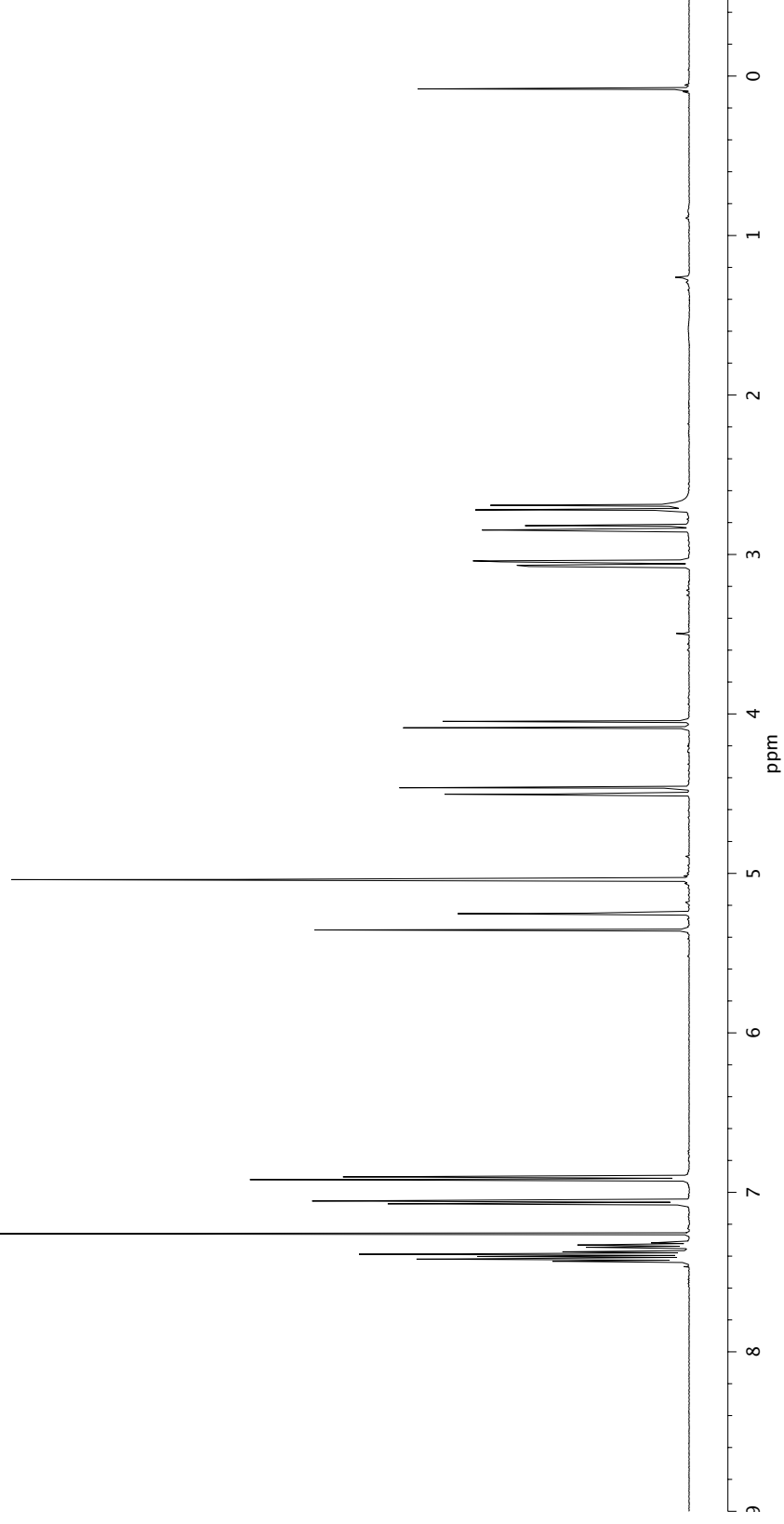
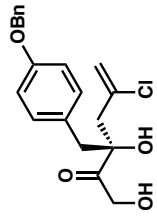
^1H NMR (500 MHz, CDCl_3) of compound **15**.



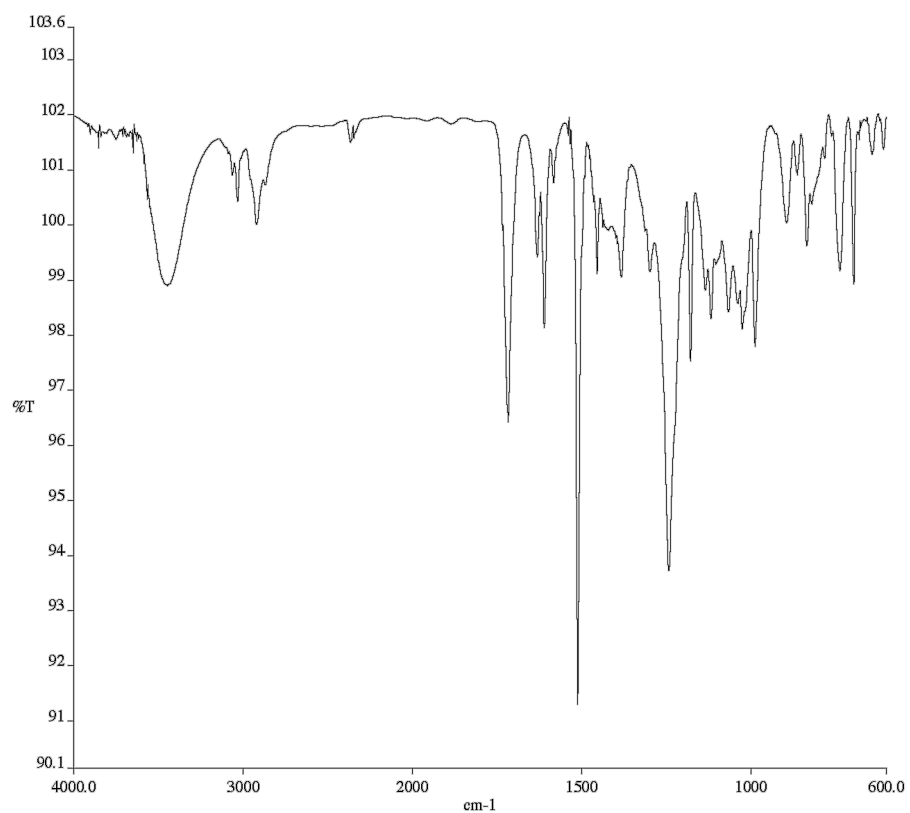
Infrared spectrum (Thin Film, NaCl) of compound



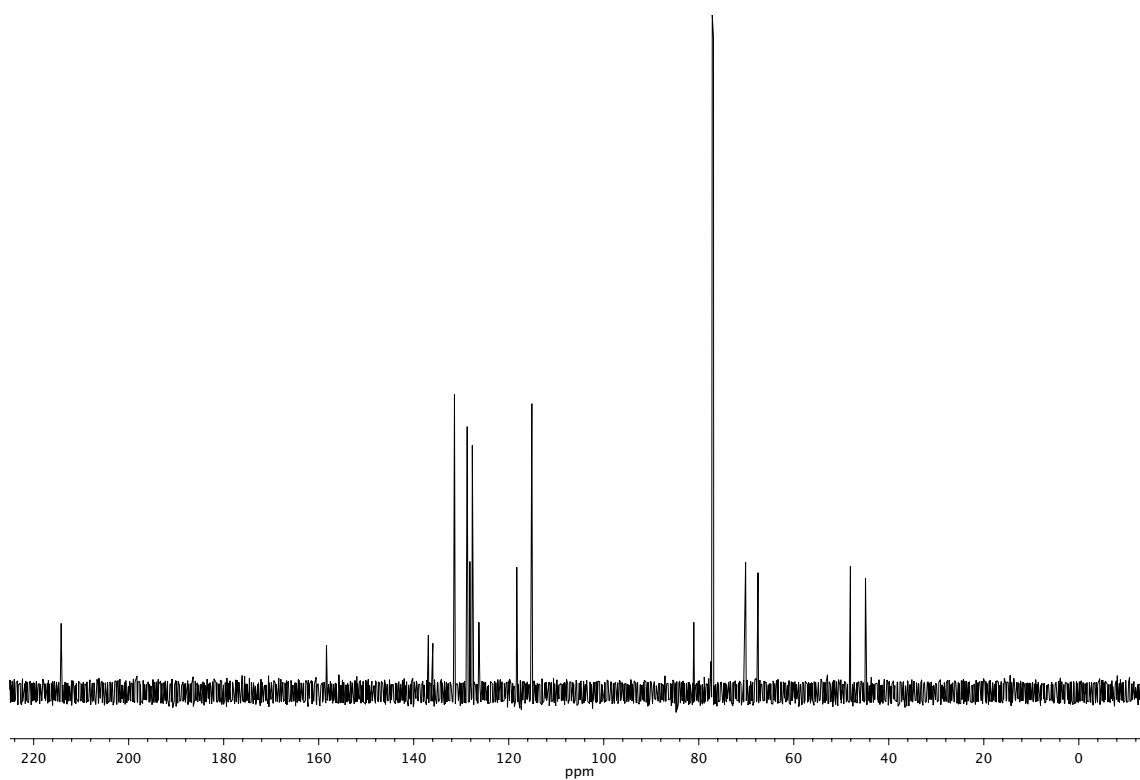
¹³C NMR (126 MHz, CDCl₃) of compound **15**.



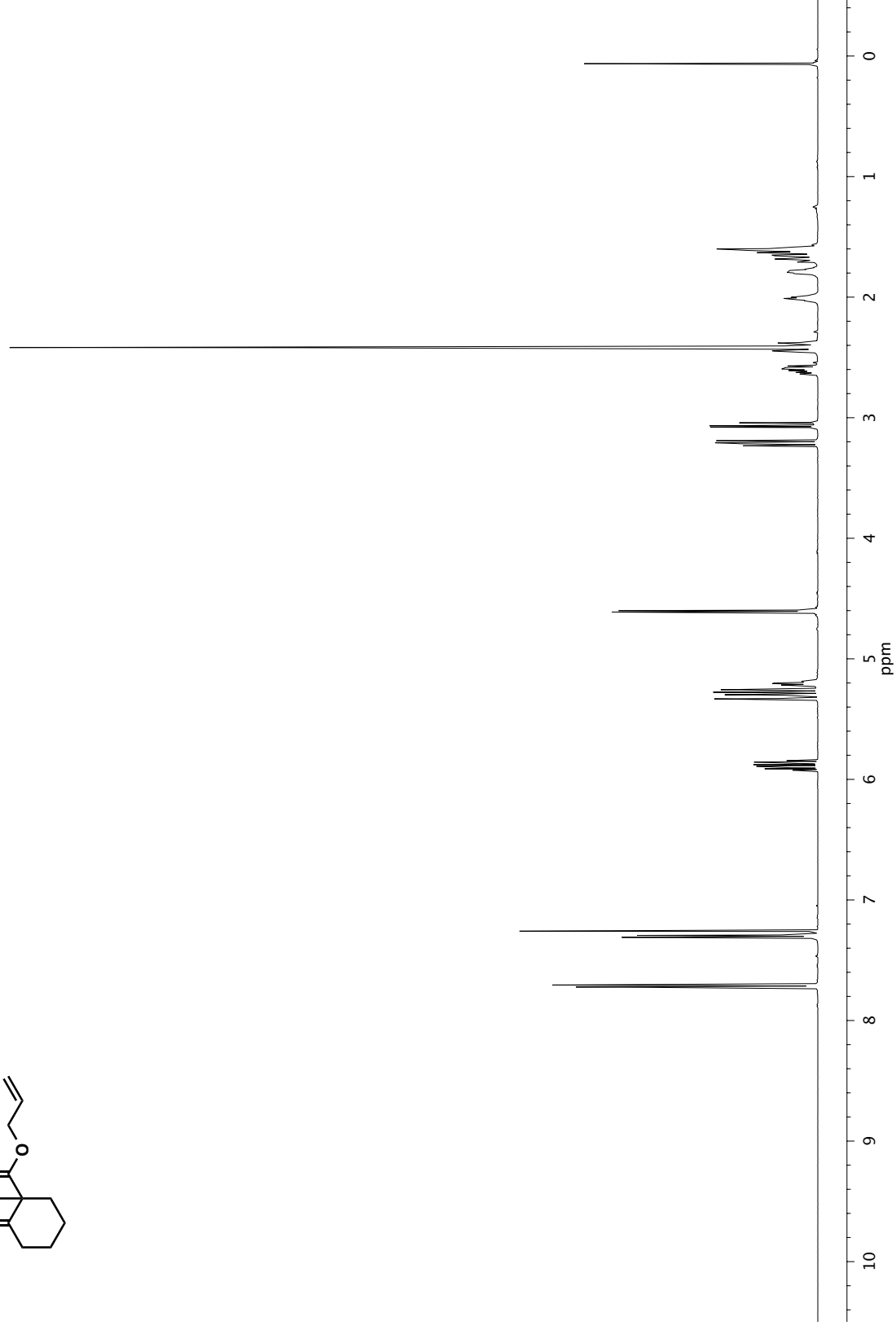
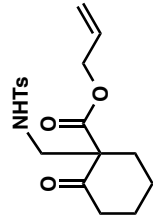
¹H NMR (500 MHz, CDCl₃) of compound **S1**.



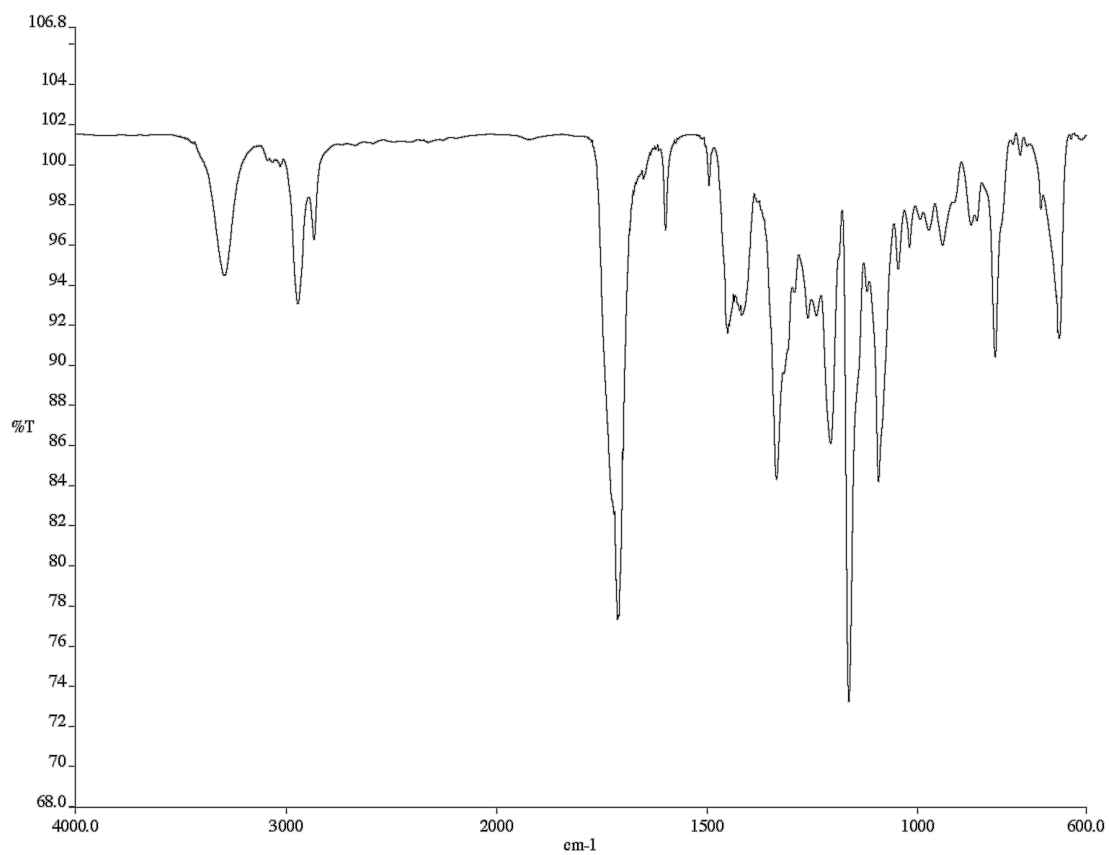
Infrared spectrum (Thin Film, NaCl) of compound



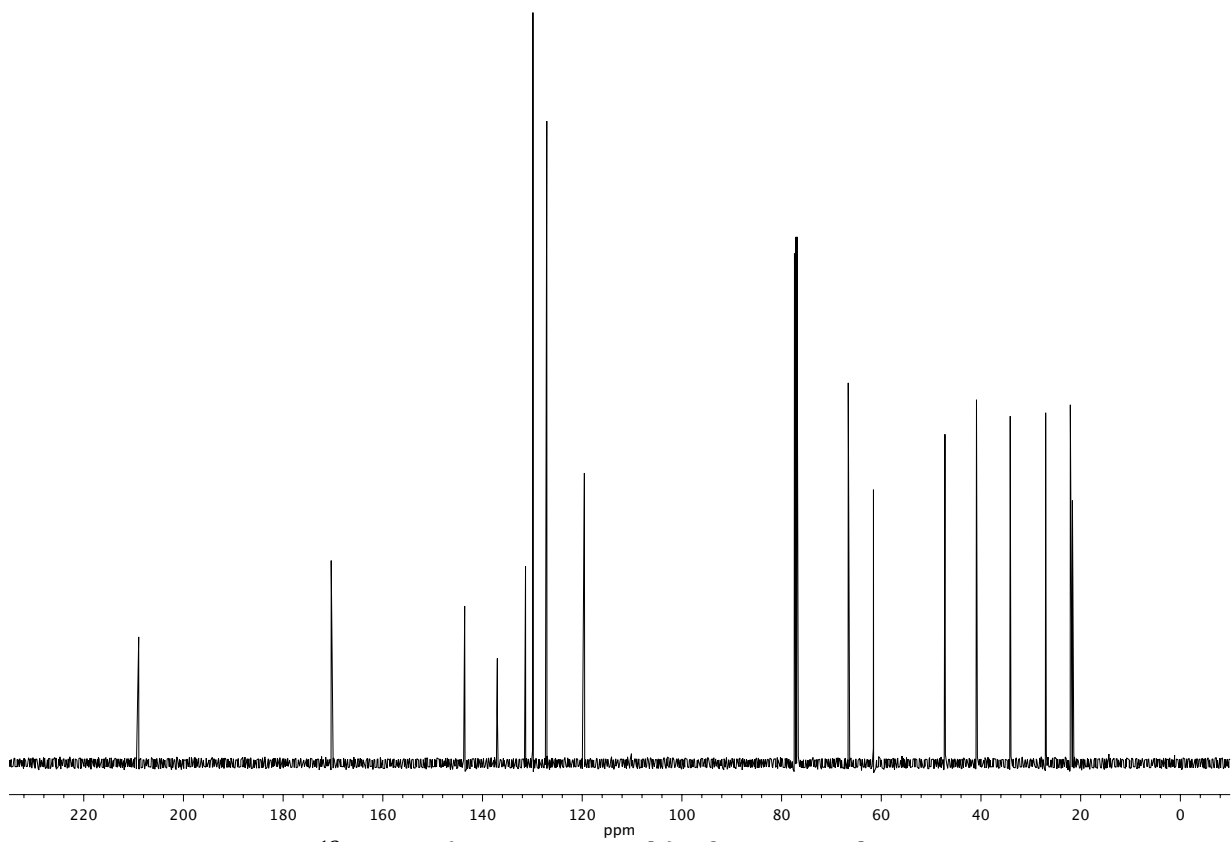
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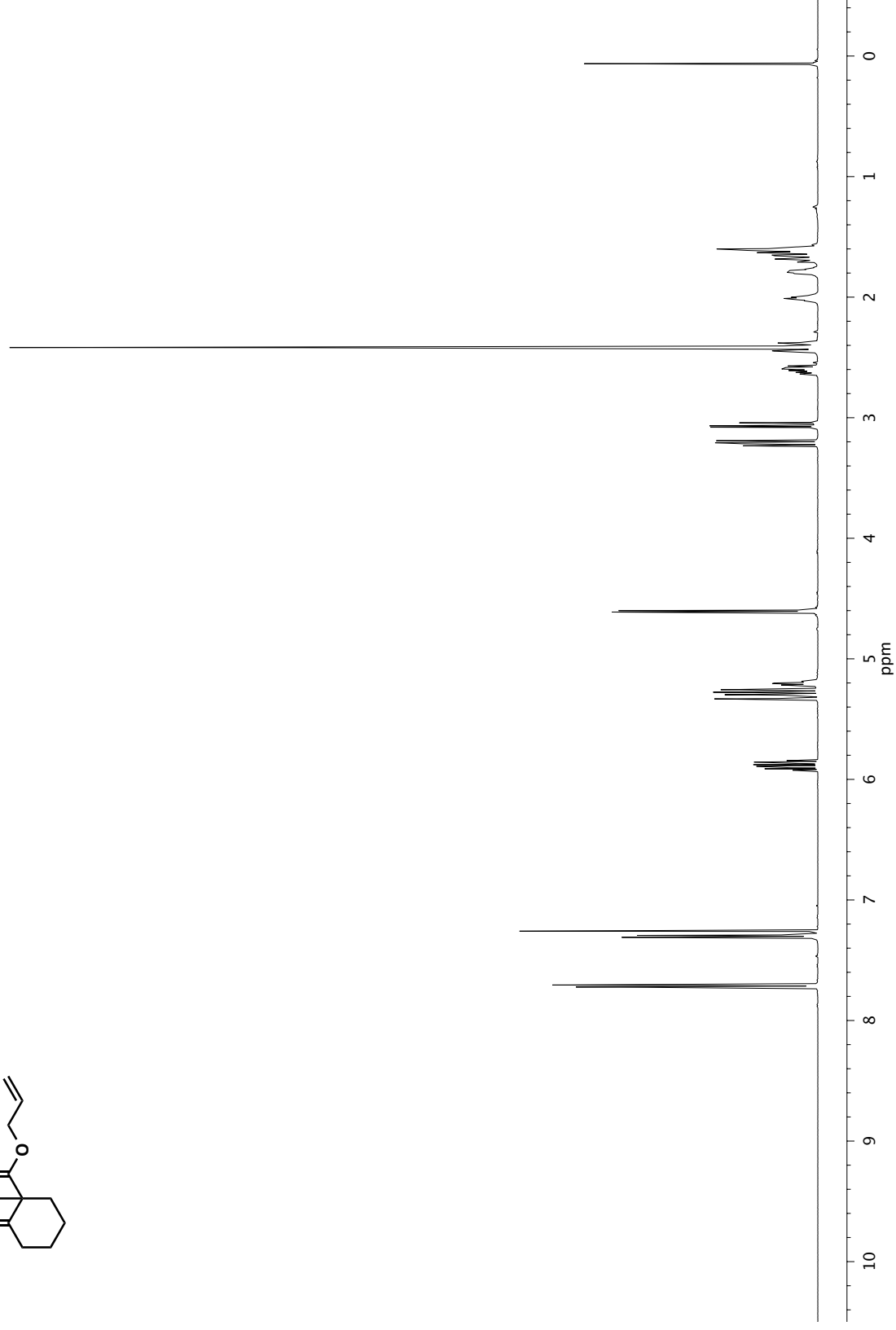
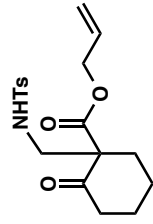
¹H NMR (500 MHz, CDCl₃) of compound 3g.



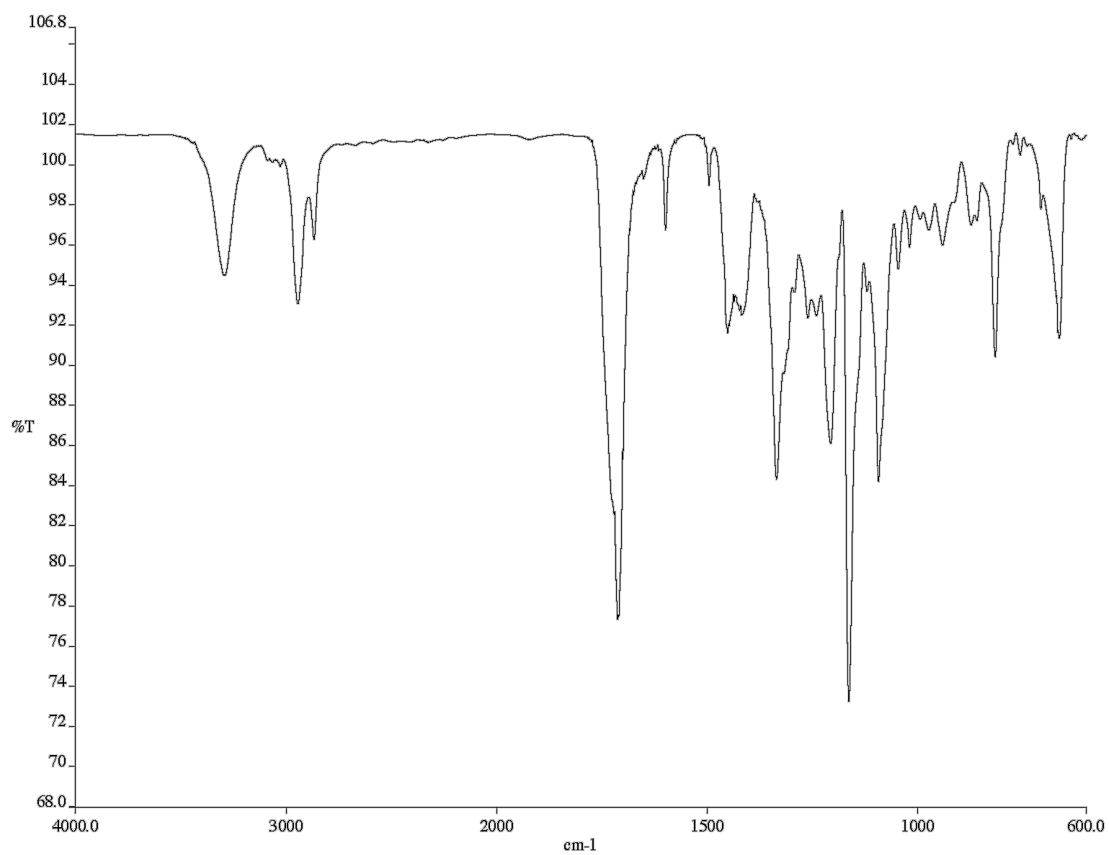
Infrared spectrum (Thin Film, NaCl) of compound



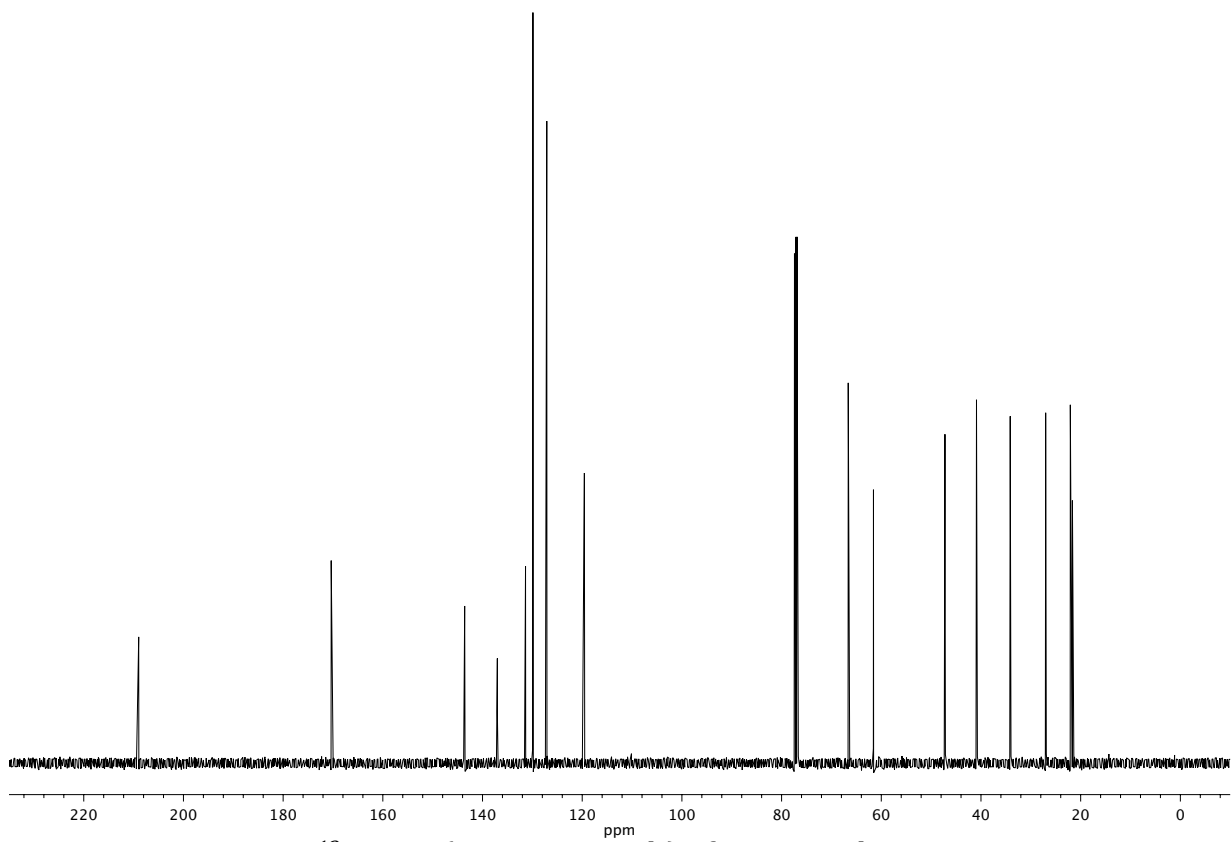
¹³C NMR (126 MHz, CDCl₃) of compound **3g**.



^1H NMR (500 MHz, CDCl_3) of compound 3g.



Infrared spectrum (Thin Film, NaCl) of compound



¹³C NMR (126 MHz, CDCl₃) of compound **3g**.

