Supplementary Material

Advantages of Green Methodologies-Microwave and Solvent-free

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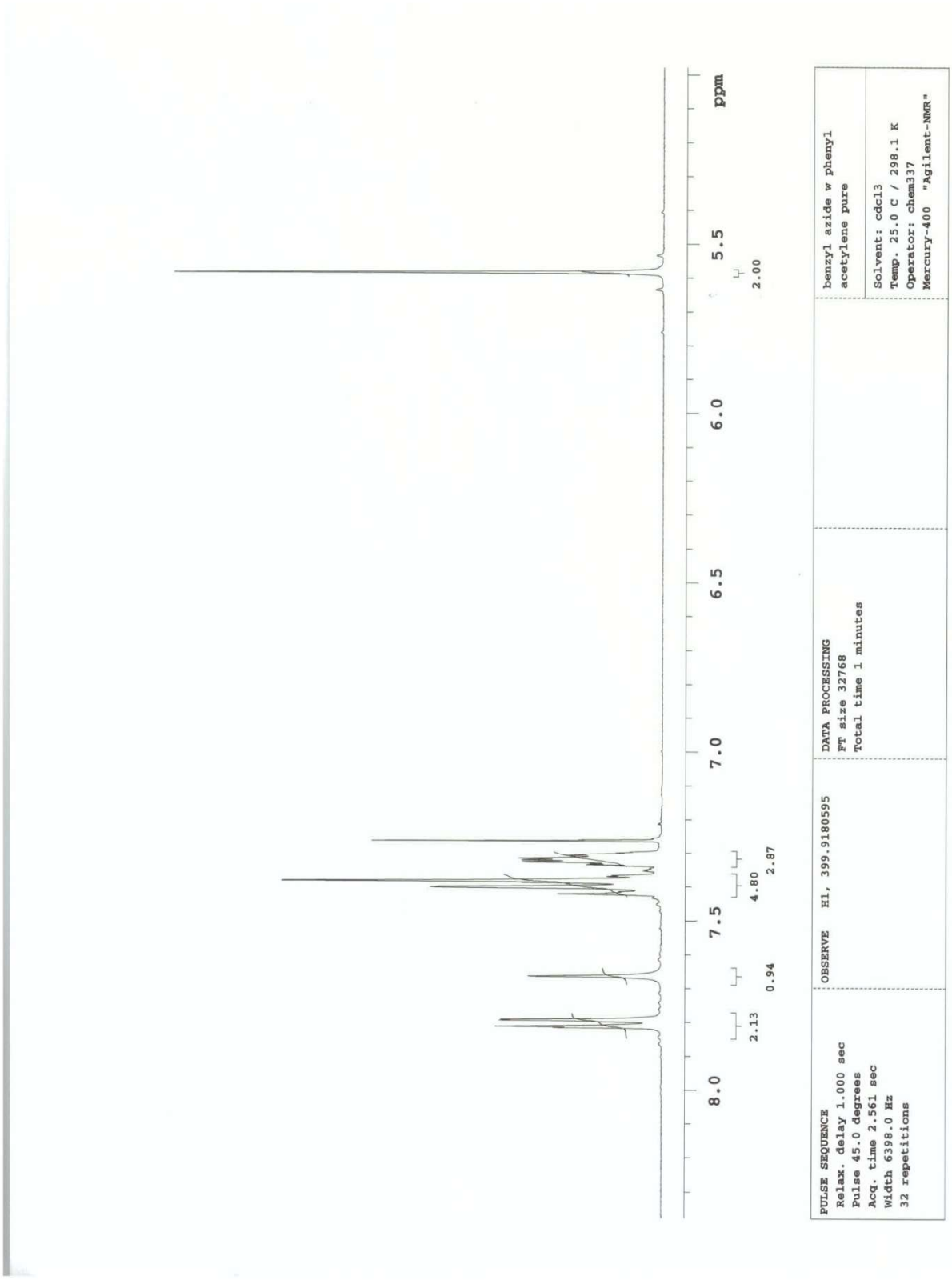
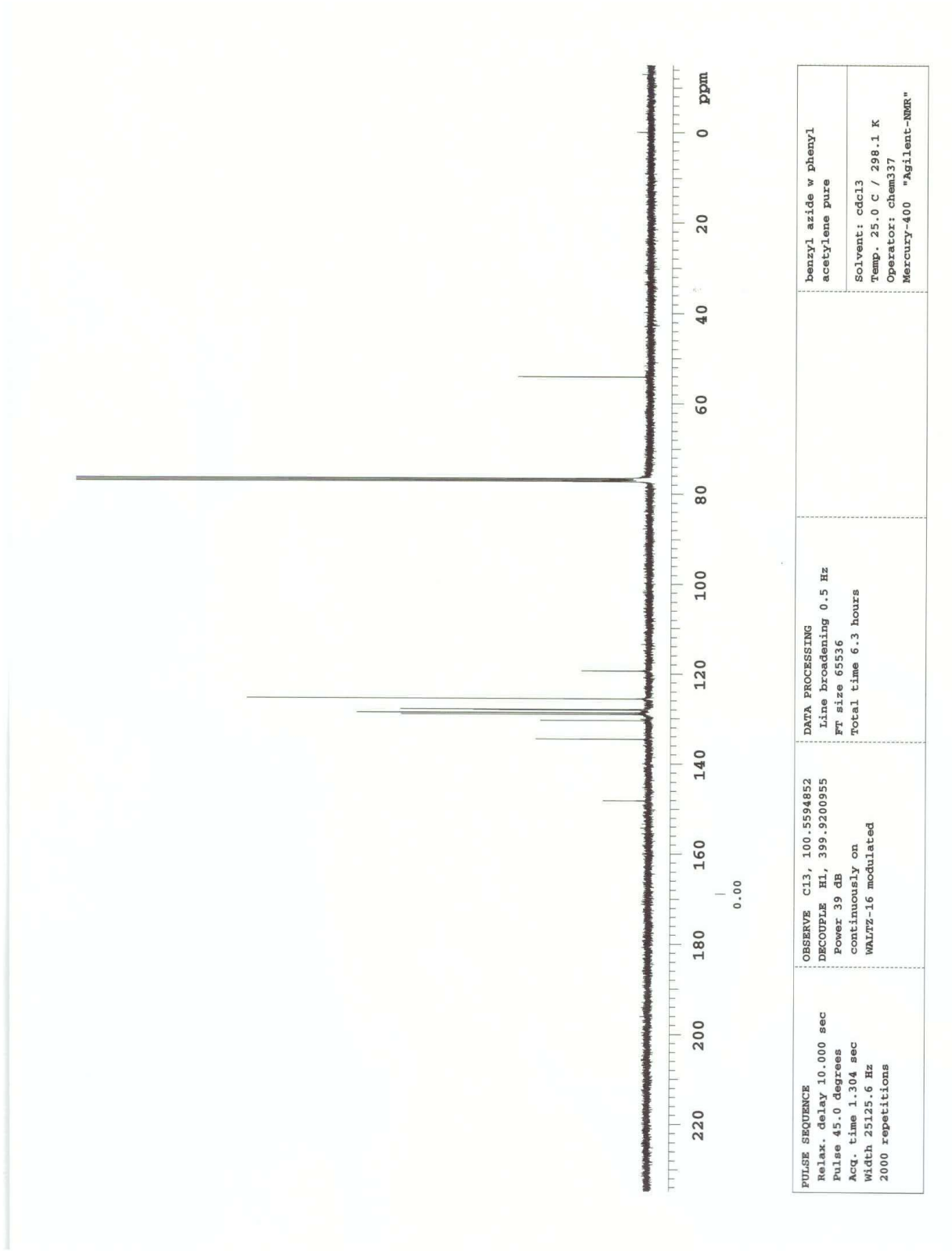
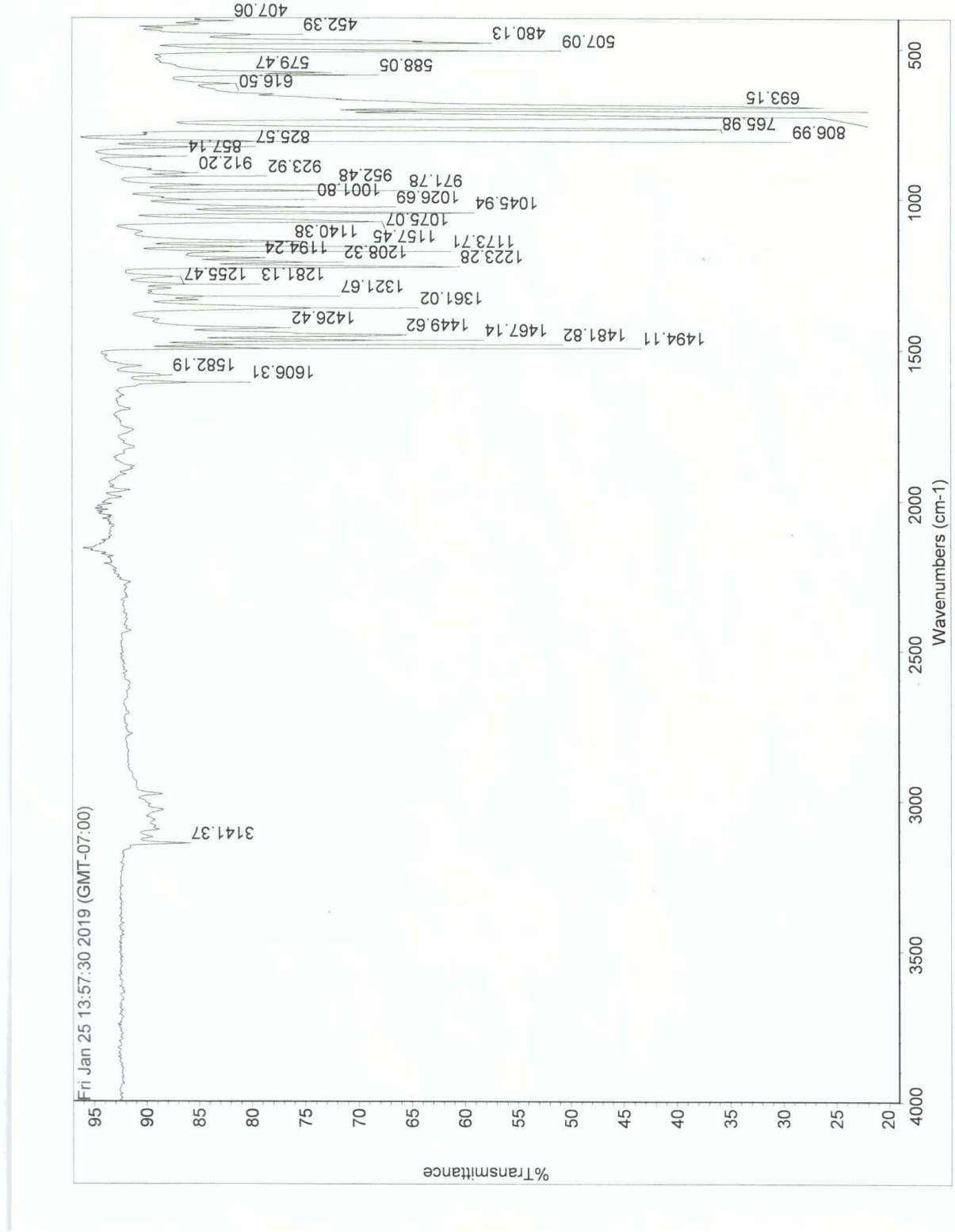


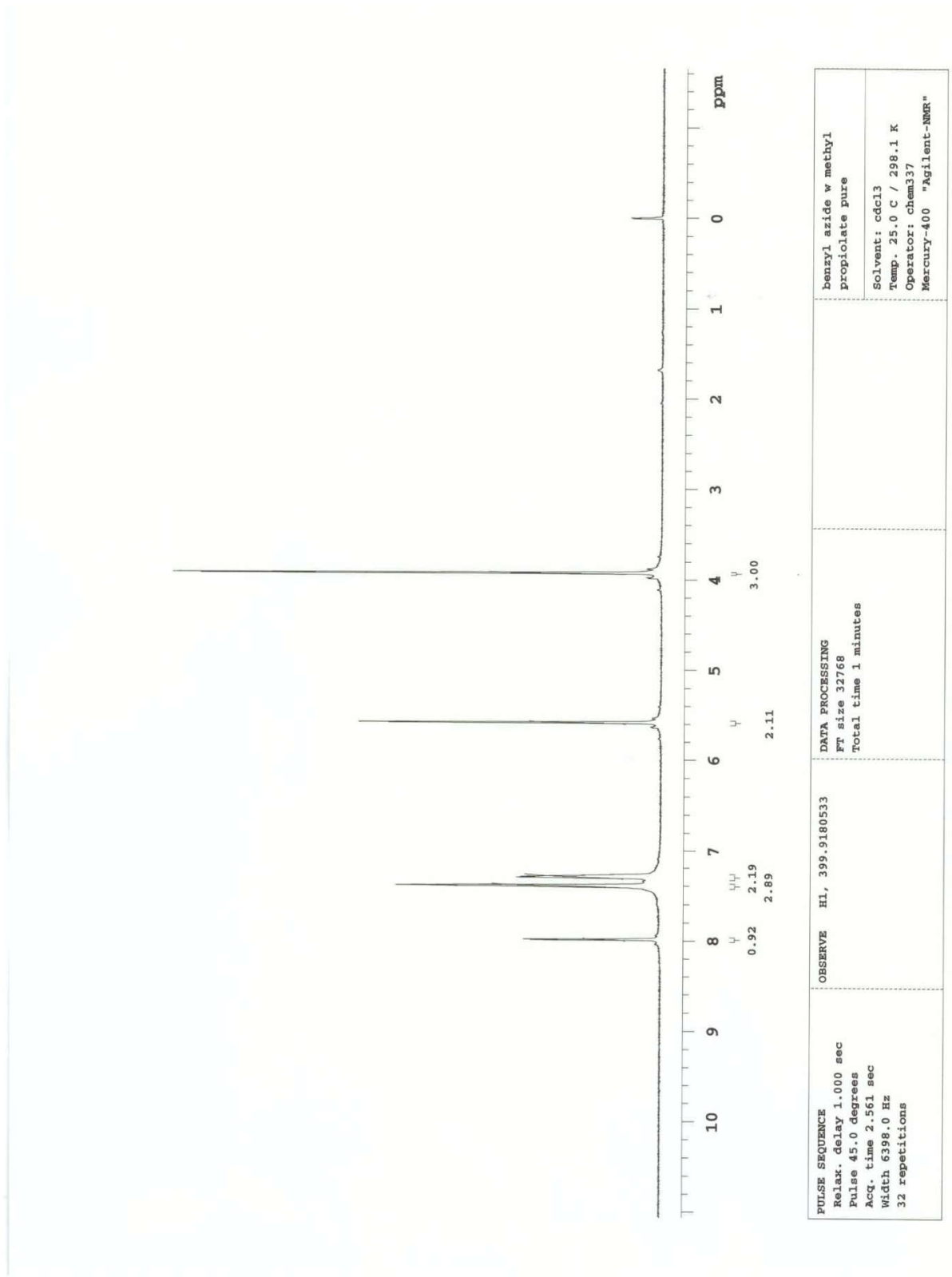
^{1}H NMR spectrum of **1**



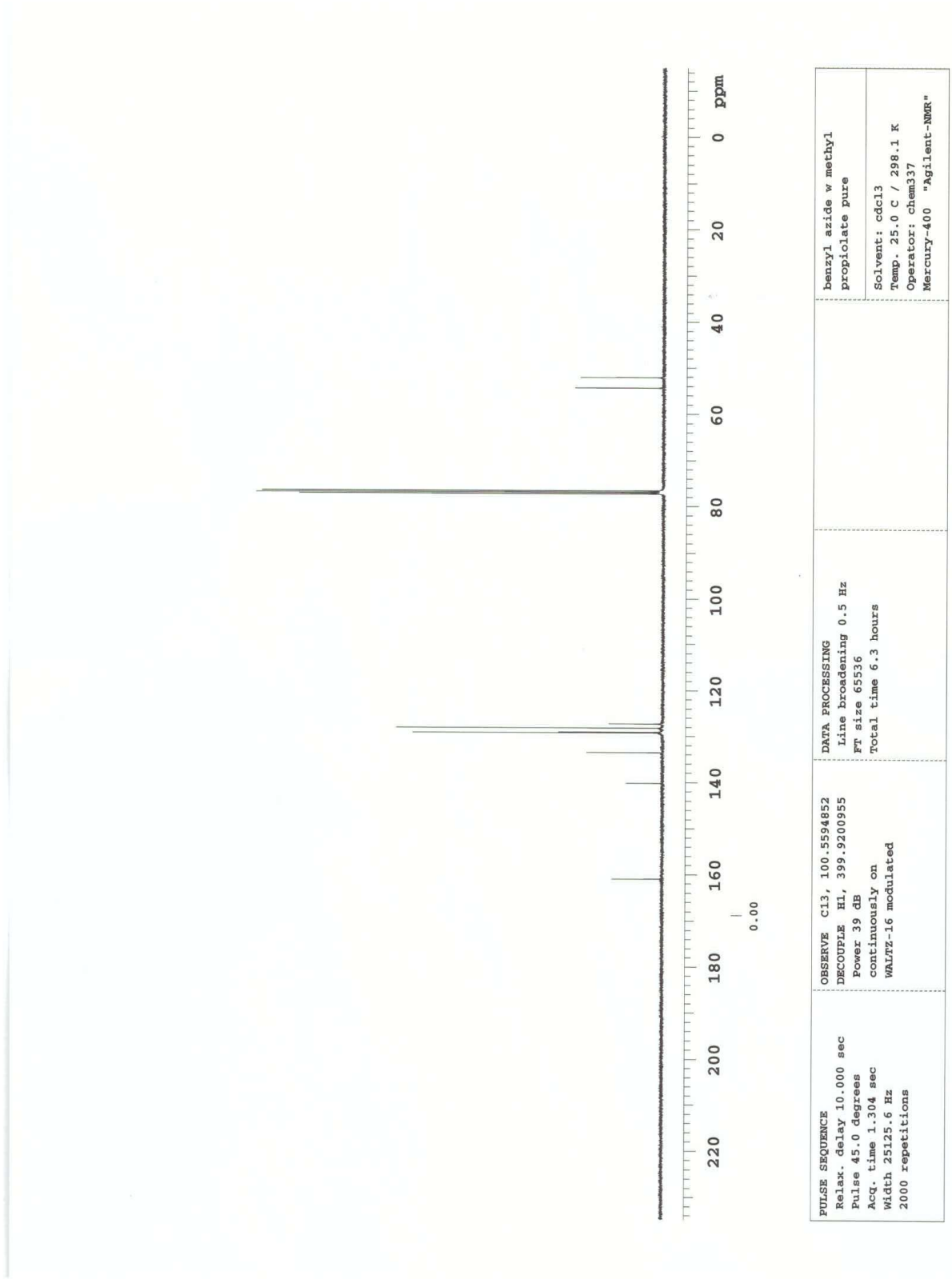
^{13}C NMR spectrum of **1**



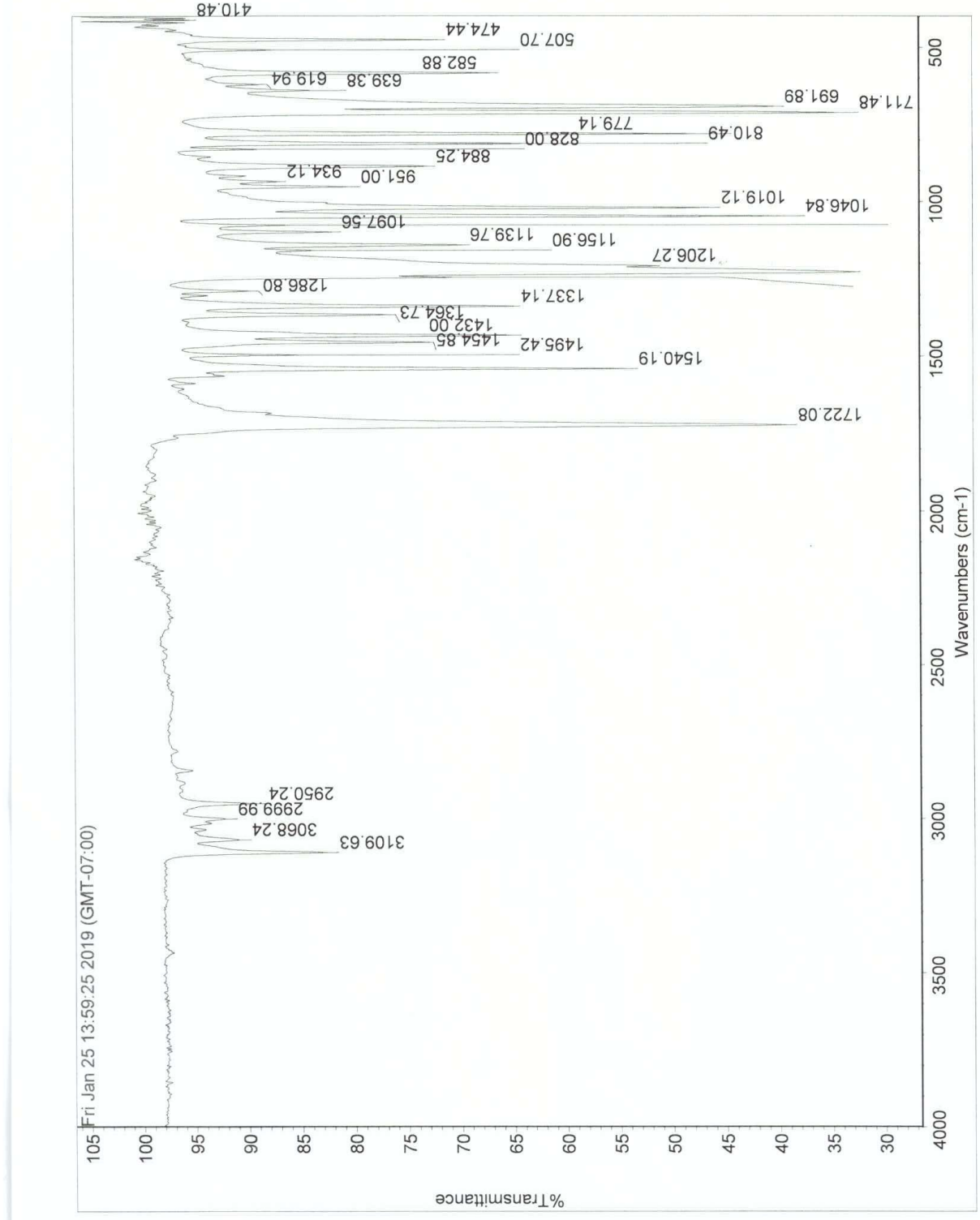
FTIR spectrum of **1**



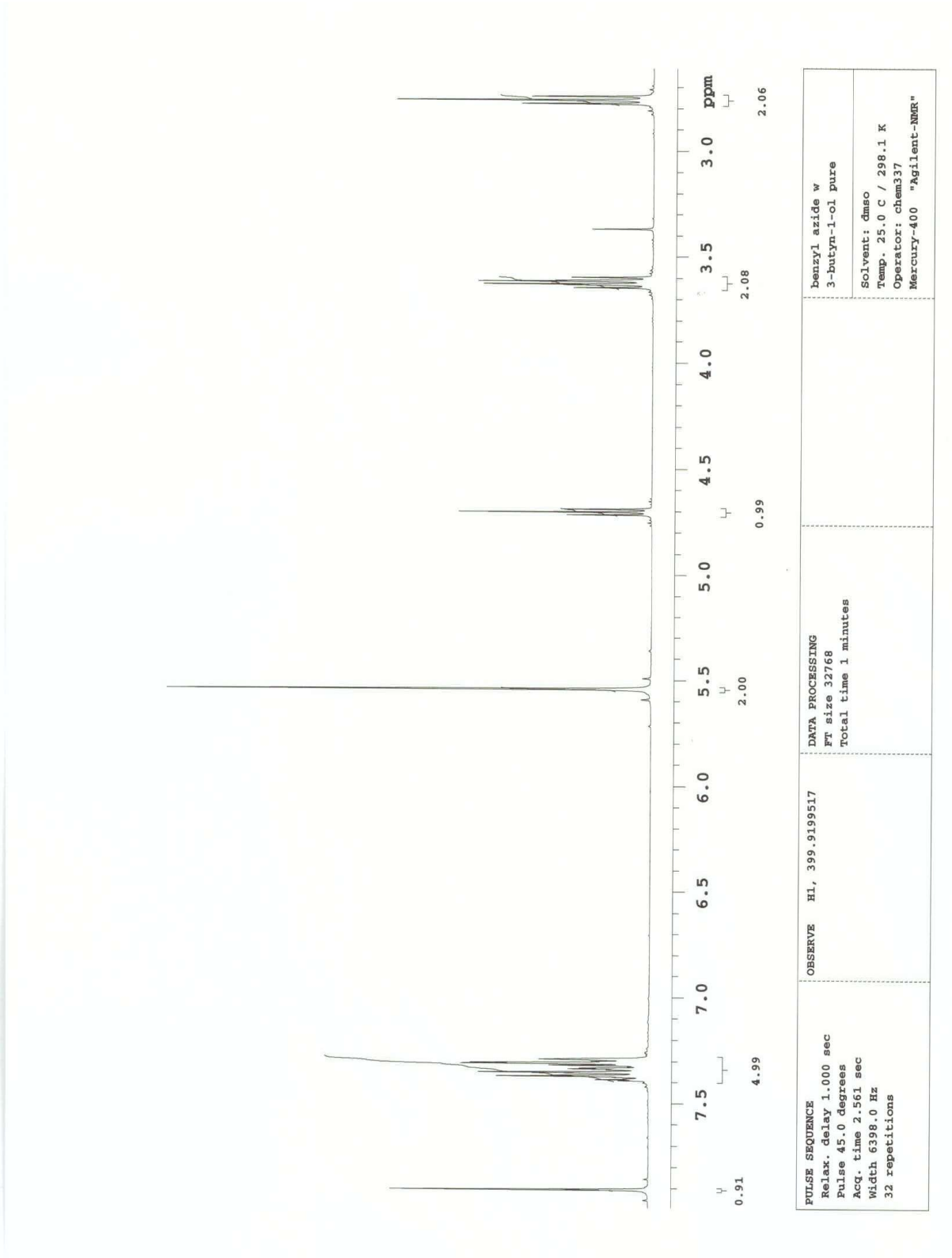
^{1}H NMR spectrum of **2**



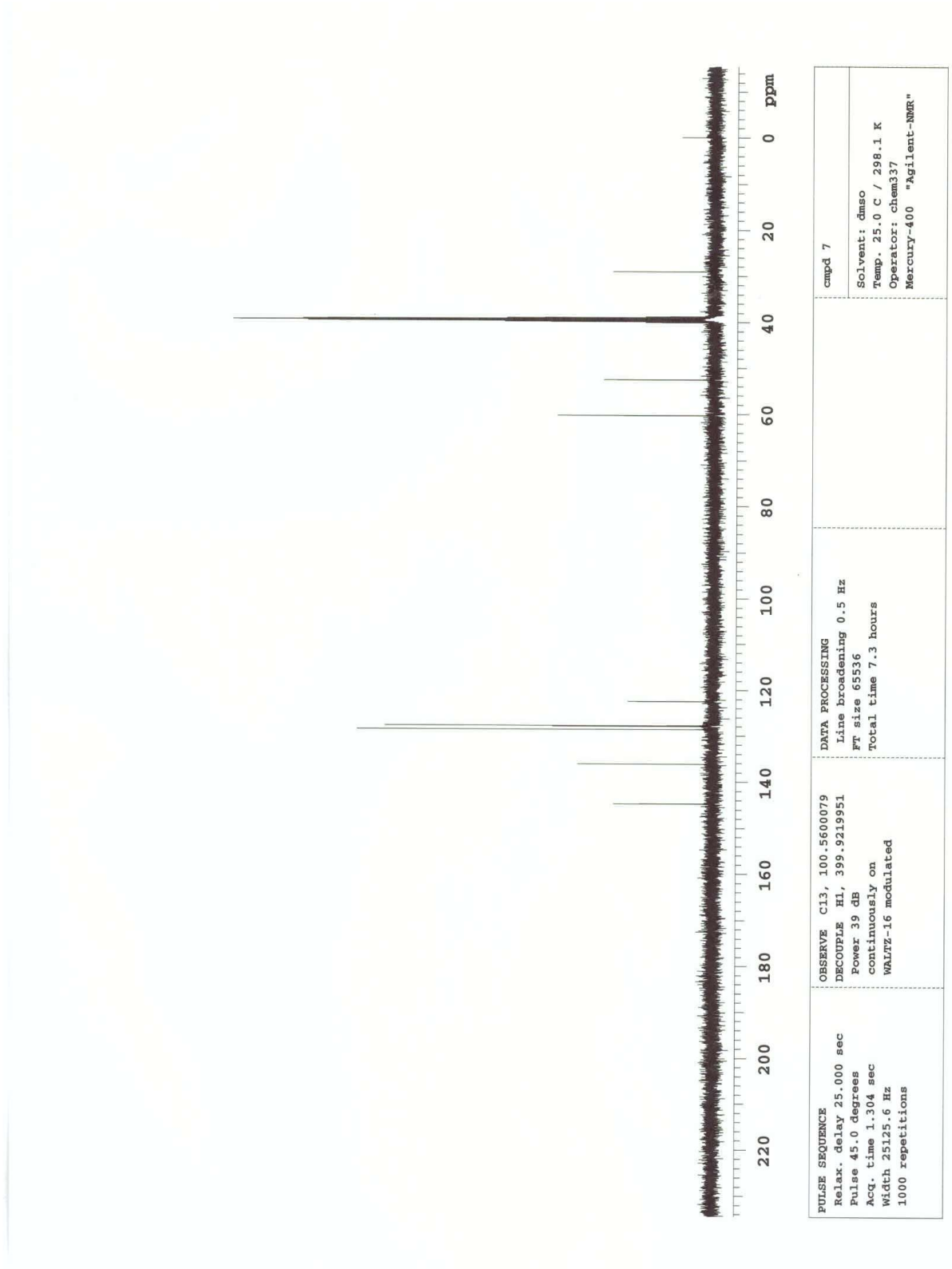
^{13}C NMR spectrum of **2**



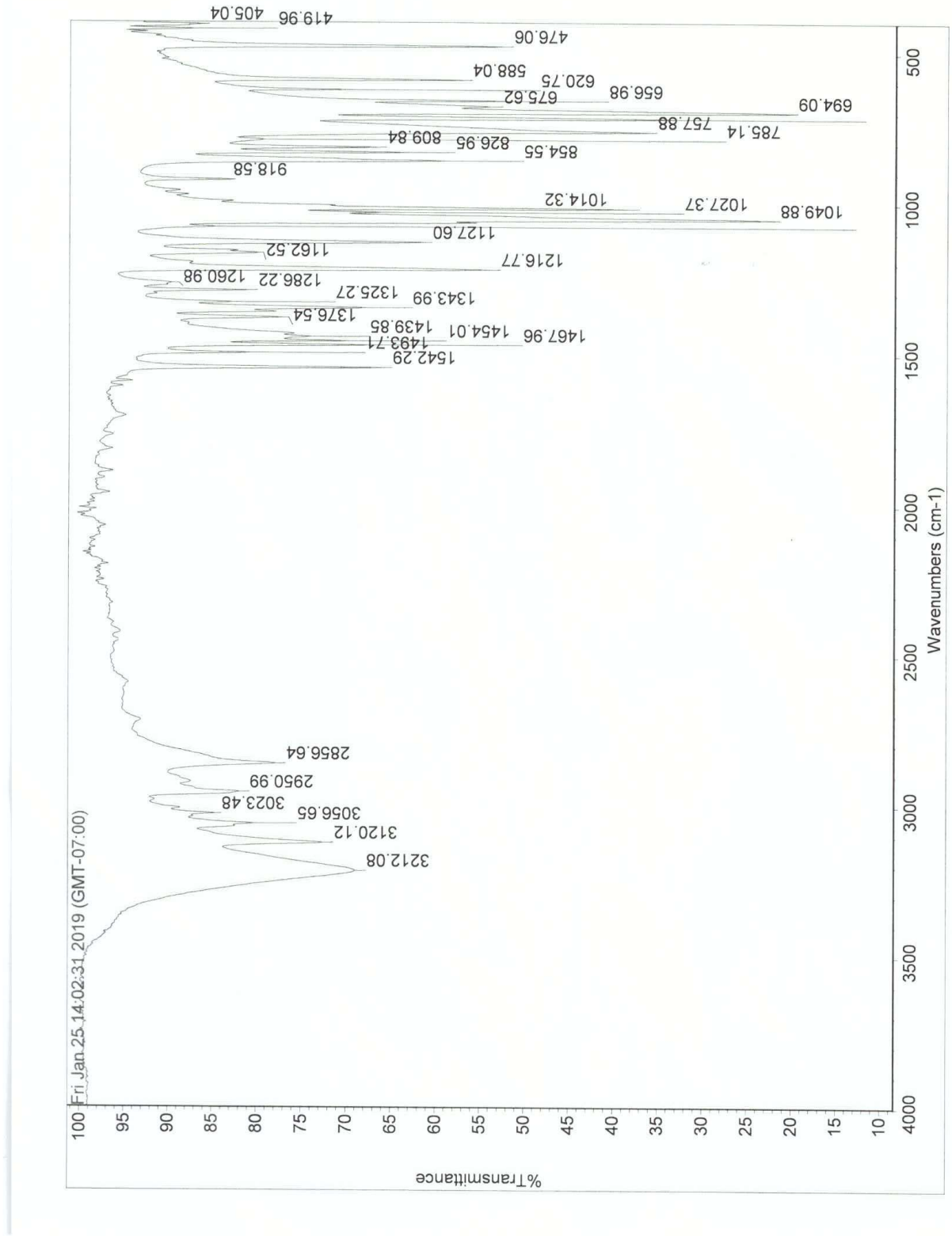
FTIR spectrum of **2**



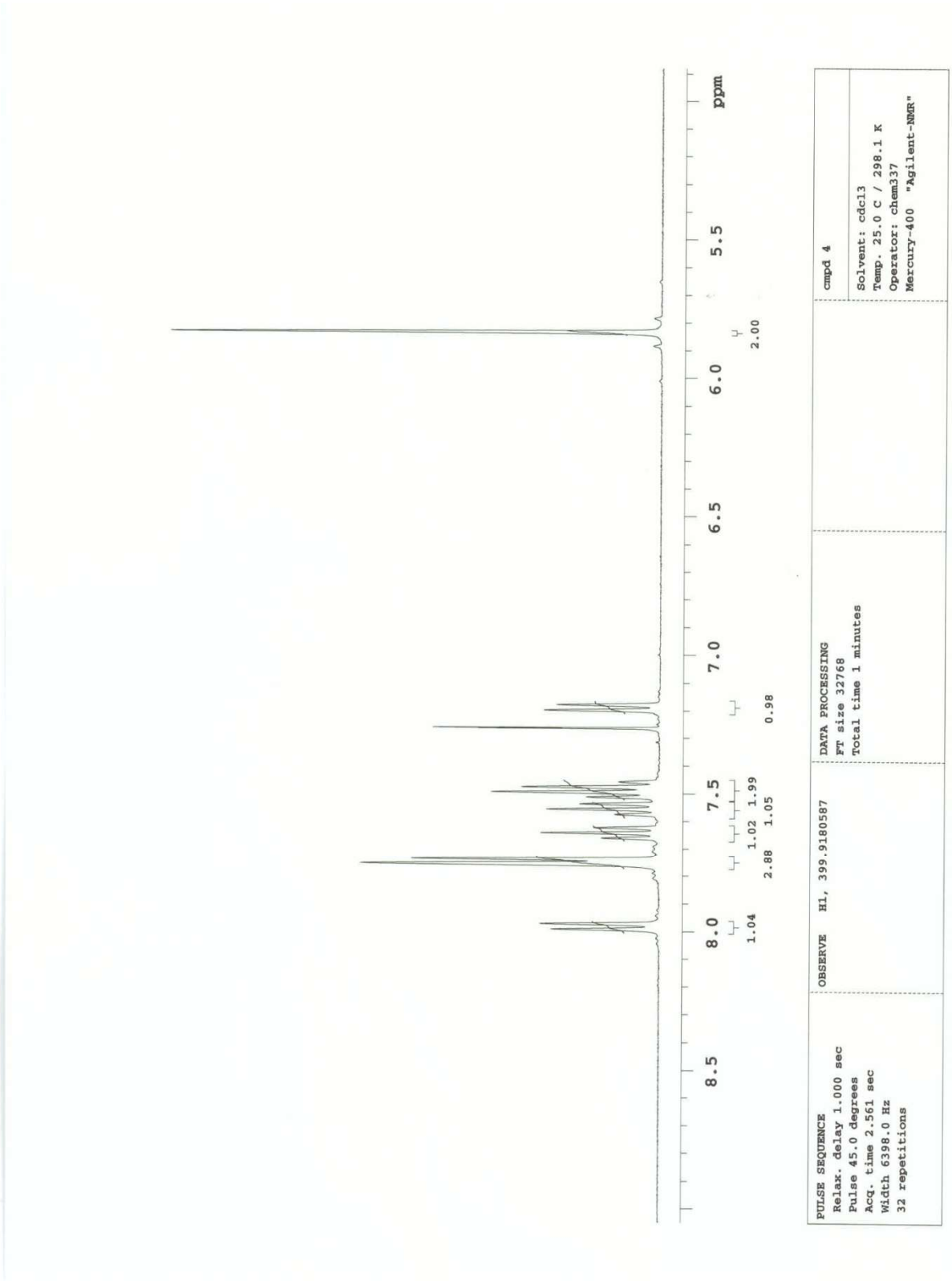
^{1}H NMR spectrum of **3**



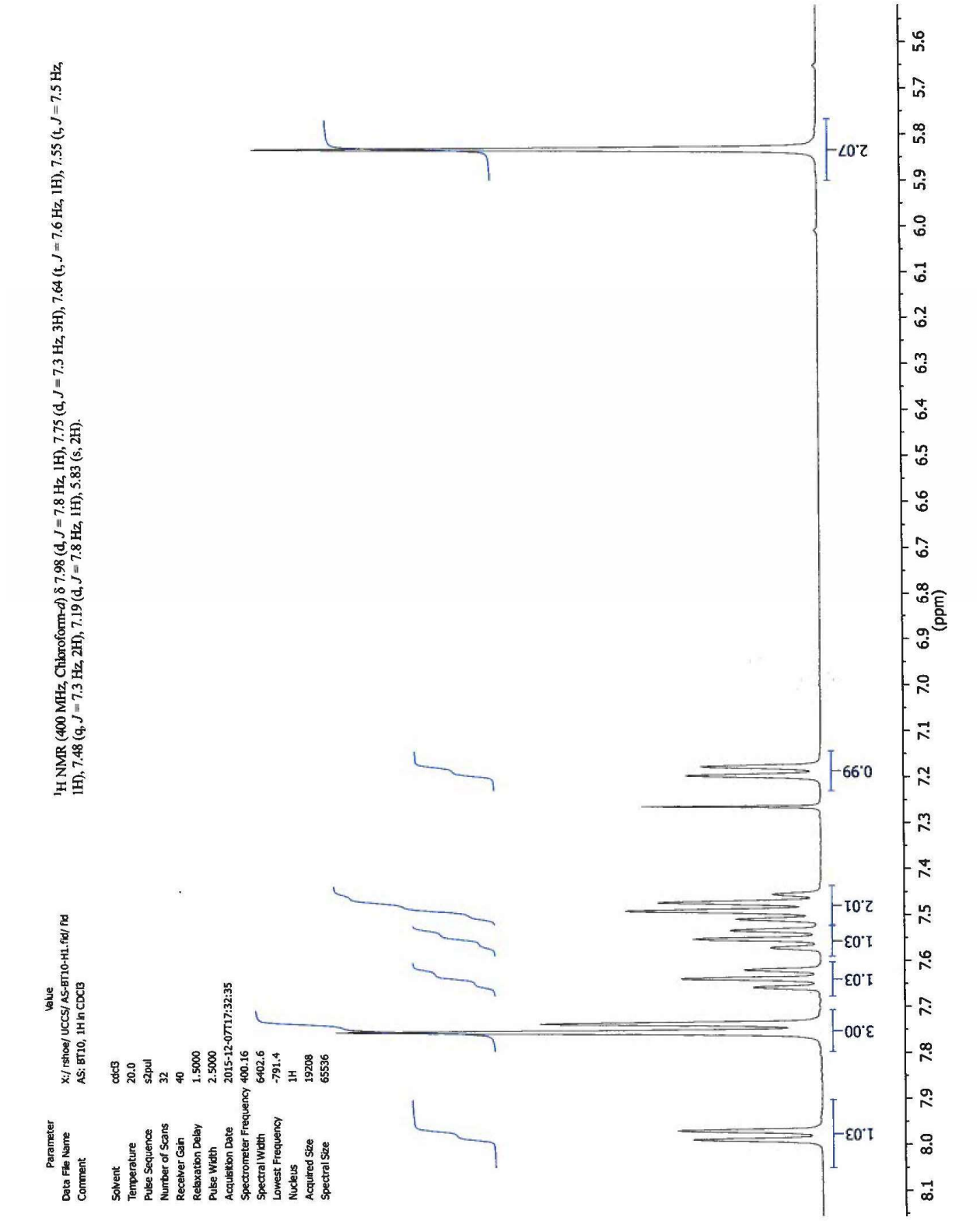
^{13}C NMR spectrum of **3**



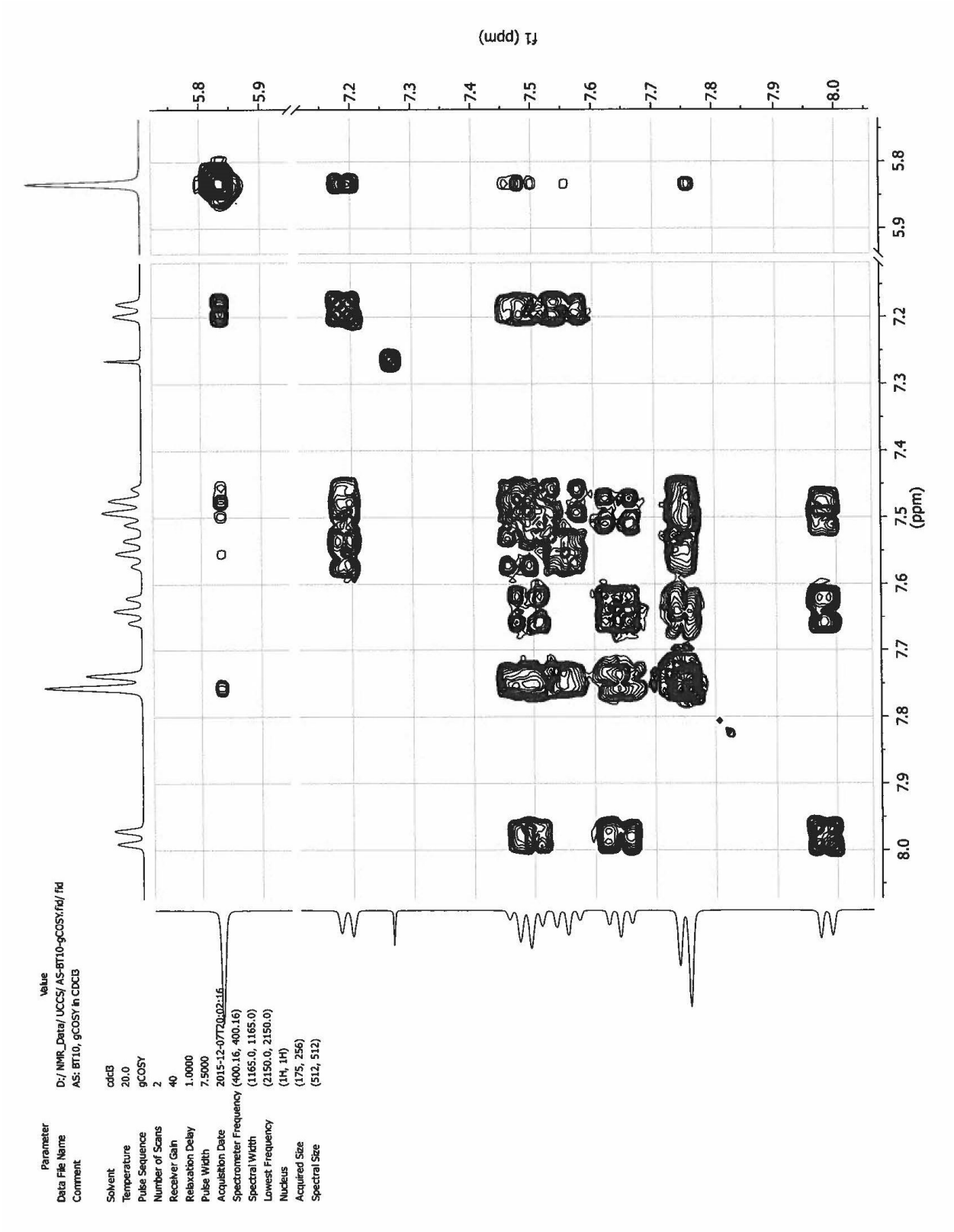
FTIR spectrum of **3**



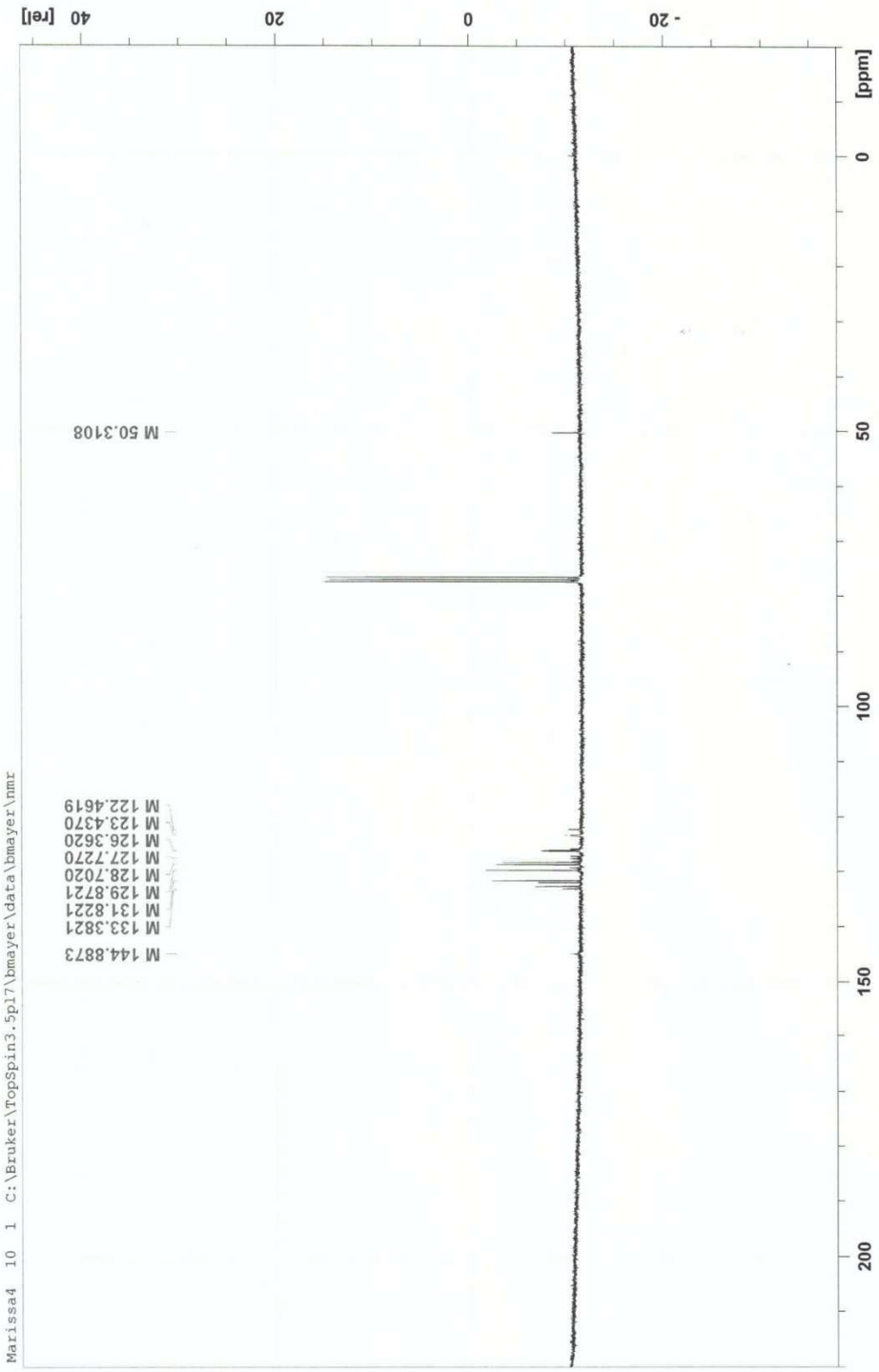
^{1}H NMR spectrum of **4**



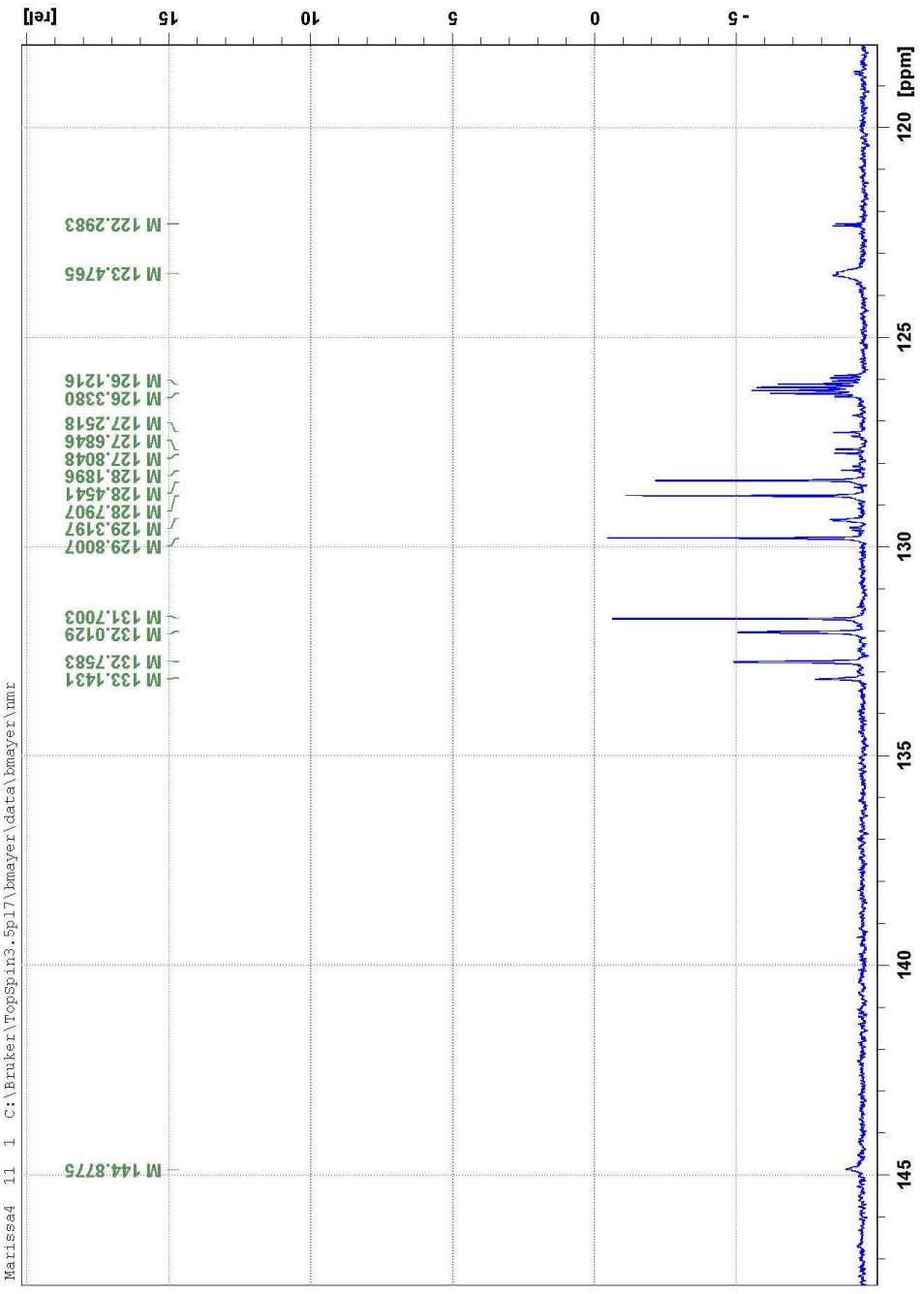
^{1}H NMR spectrum (expanded) of **4**



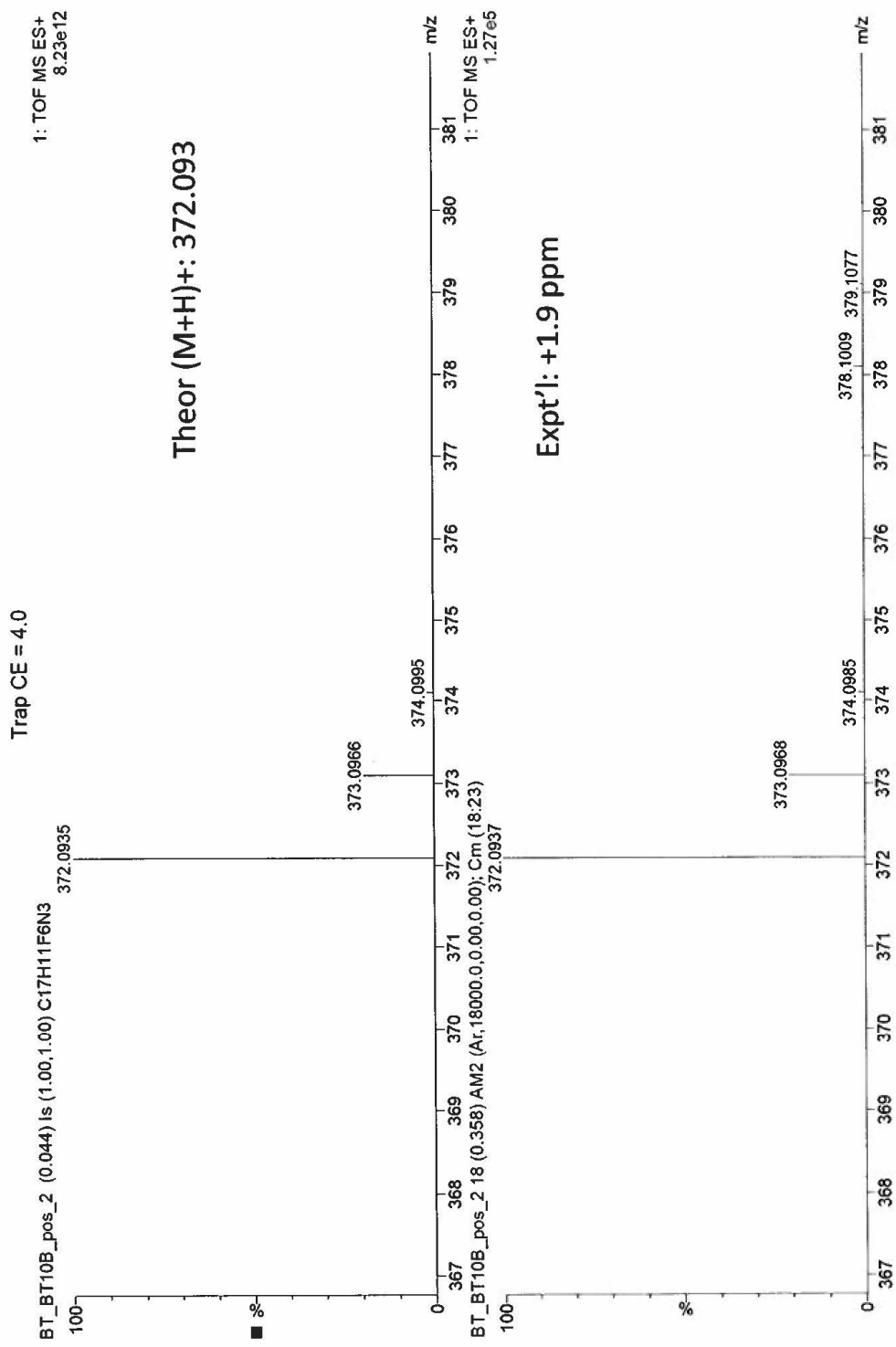
COSY spectrum of **4**



^{13}C NMR spectrum of **4**



^{13}C NMR spectrum (expanded) of **4**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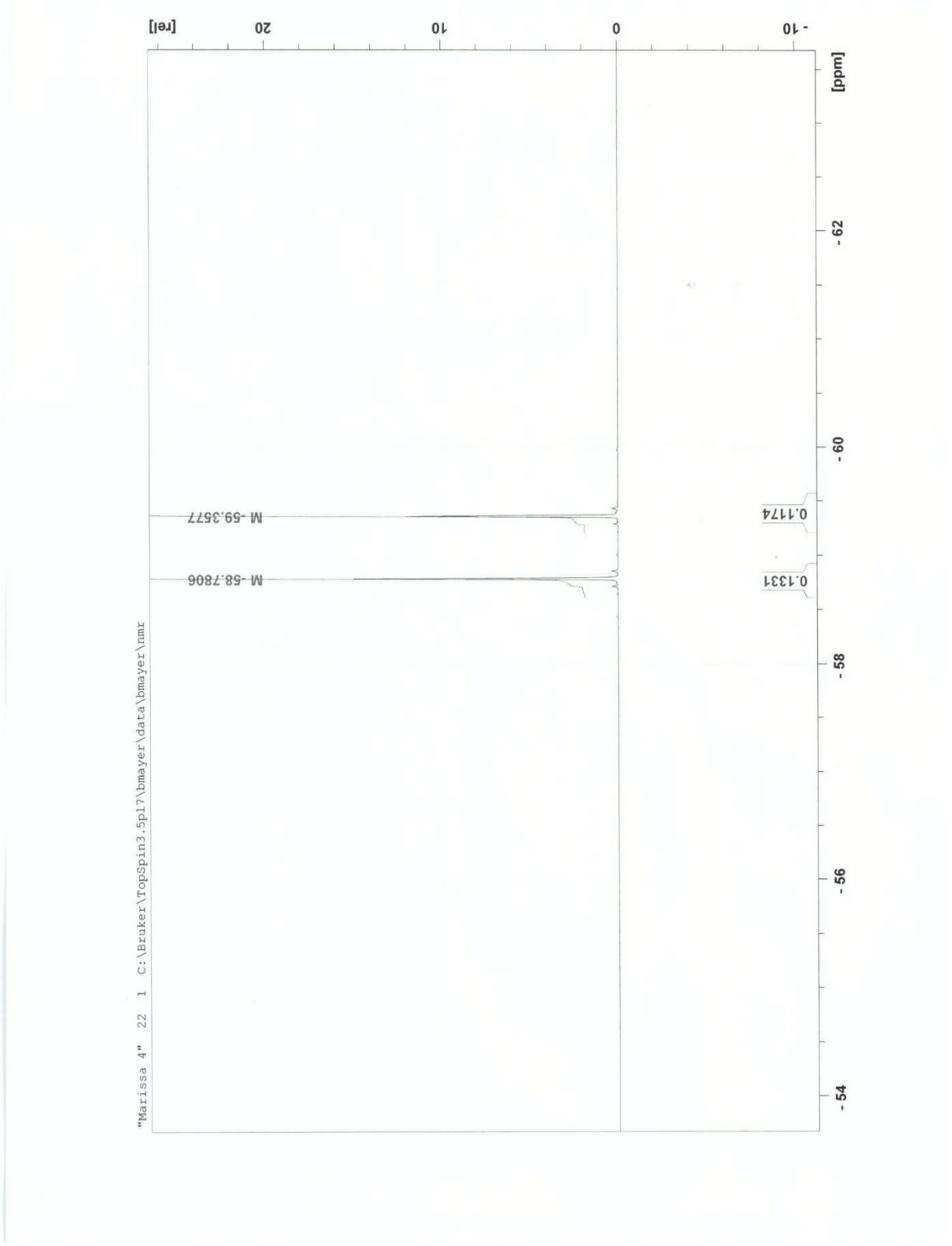
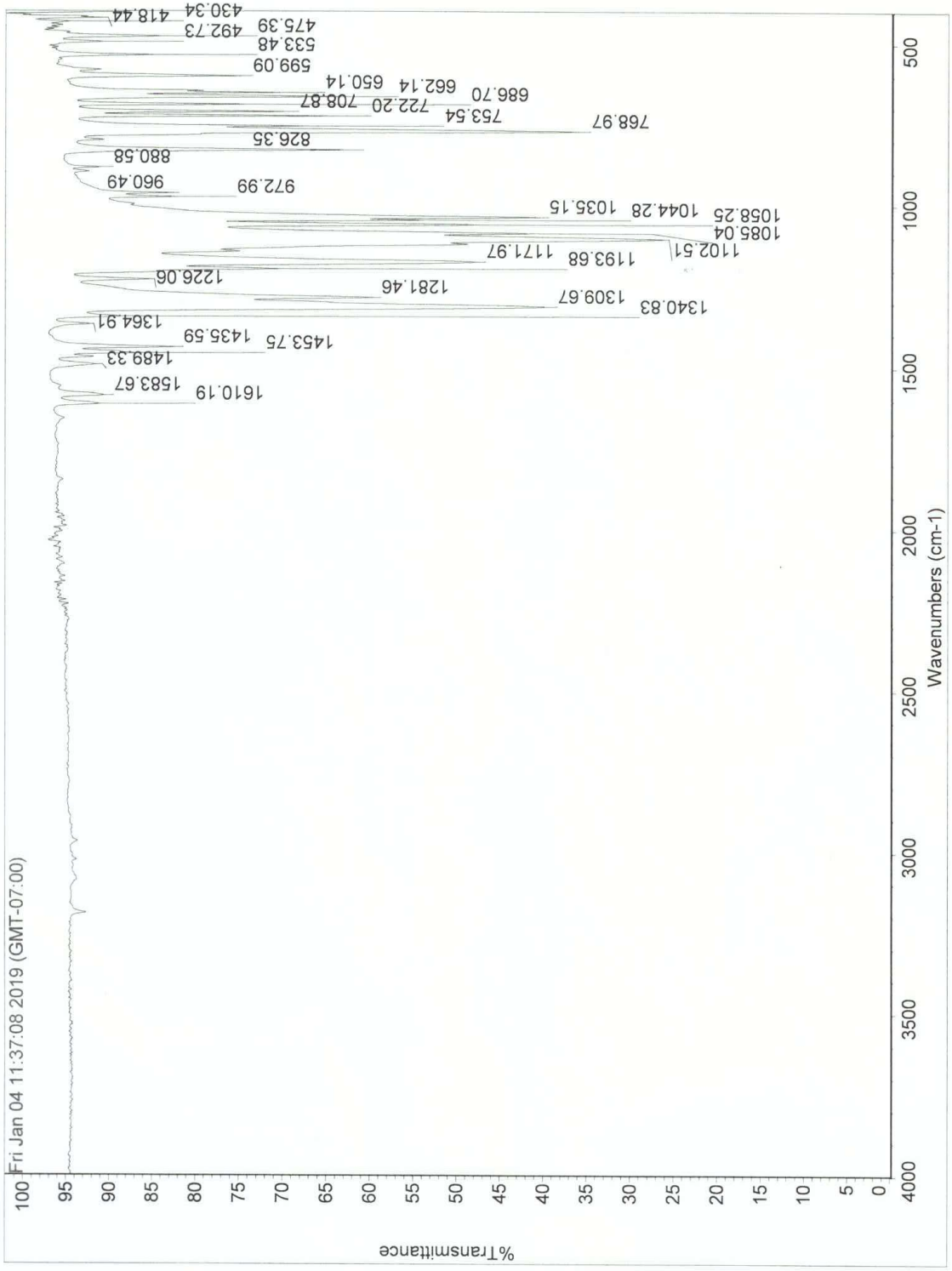
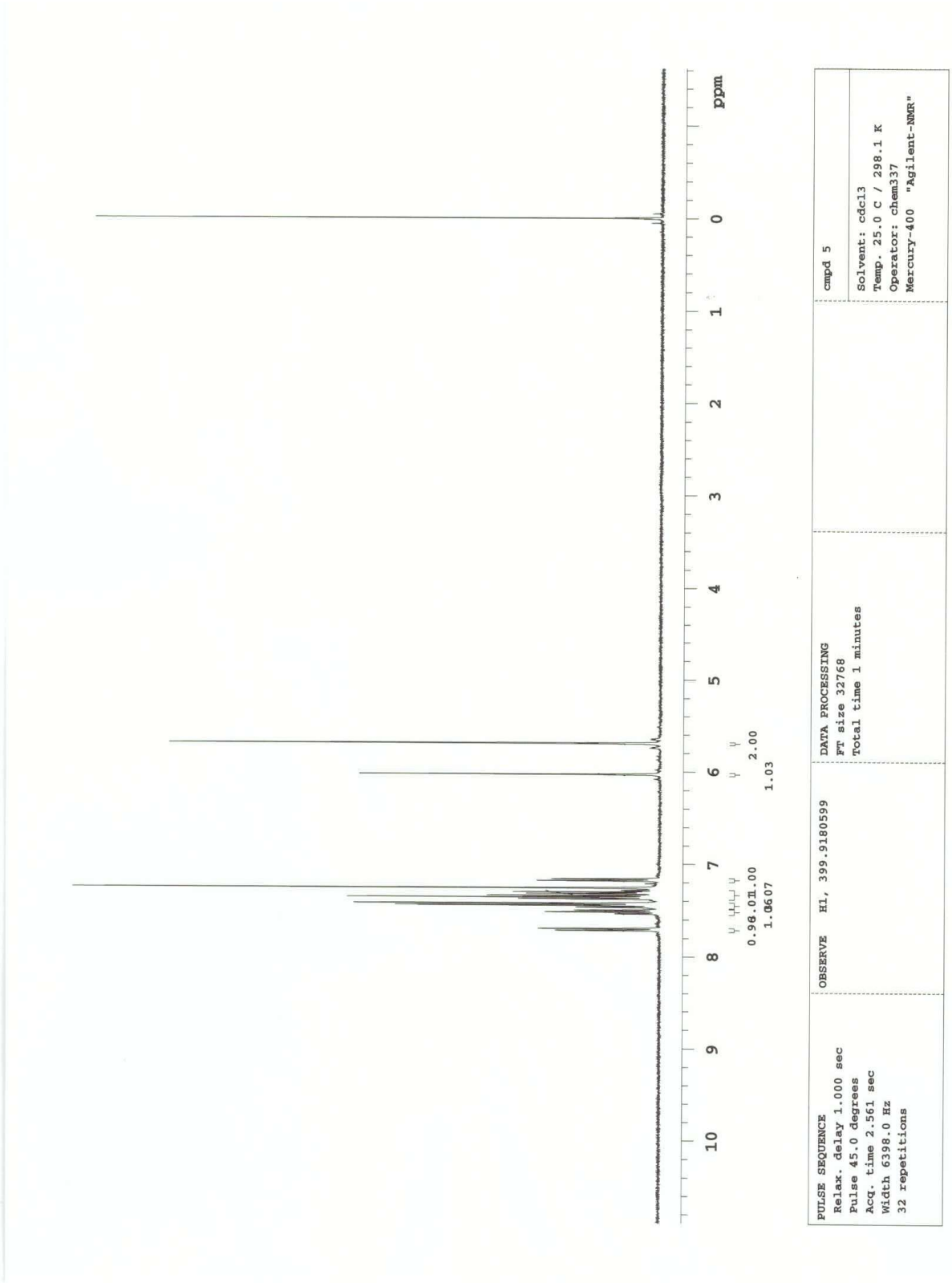
Theor (M+H)+: 372.093
Expt'l: +1.9 ppm
BT_BT10B_pos_2 (0.044) Is (1.00,1.00) C17H11F6N3
BT_BT10B_pos_2 18 (0.358) AM2 (Ar,18000.0,0.00,0.00); Cm (18:23)
1: TOF MS ES+
8.23e12
1: TOF MS ES+
1.27e5
372.0935
373.0966
374.0995
372.0937
373.0968
374.0985
378.1009
379.1077
m/z
%



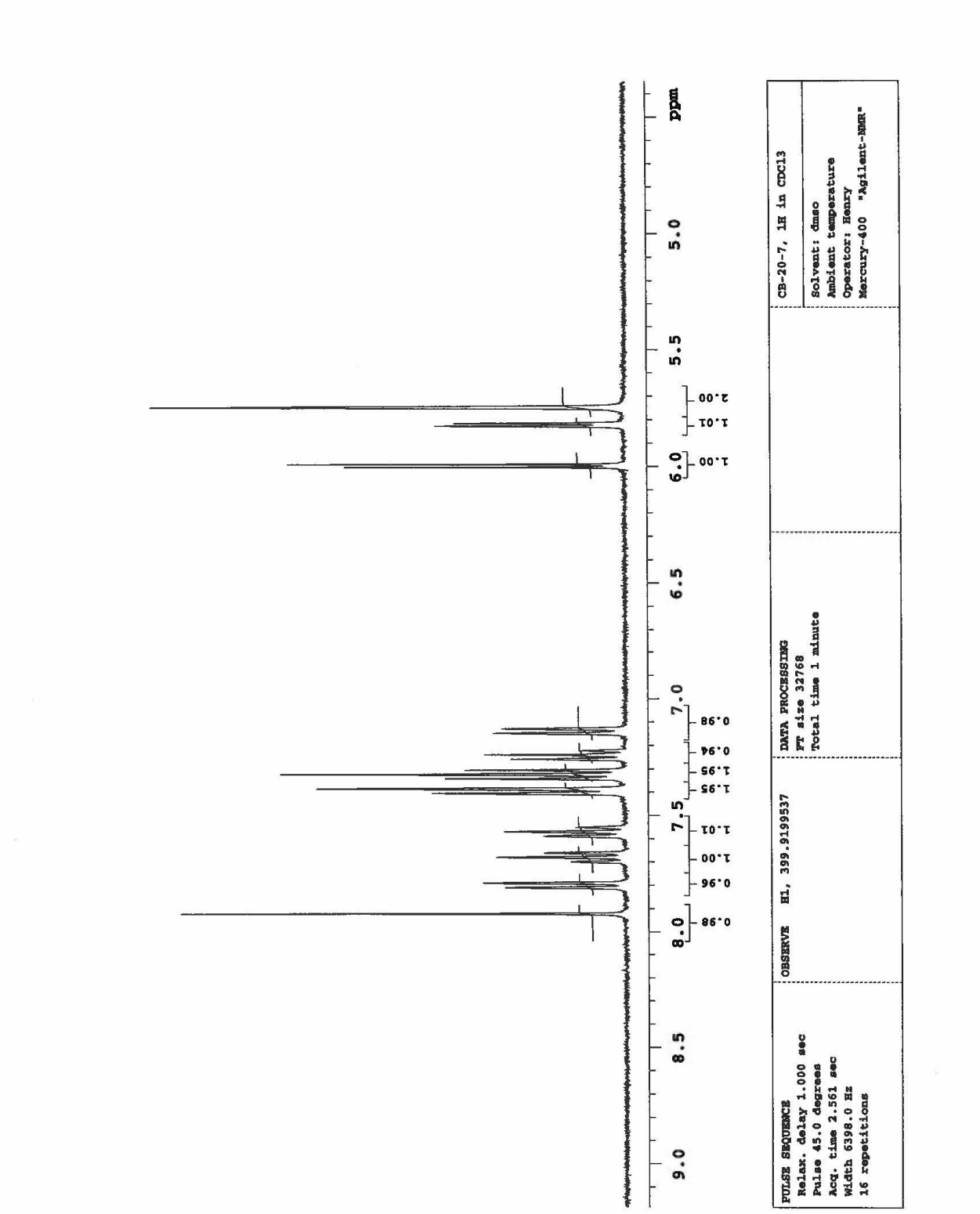
^{19}F NMR spectrum of **4**



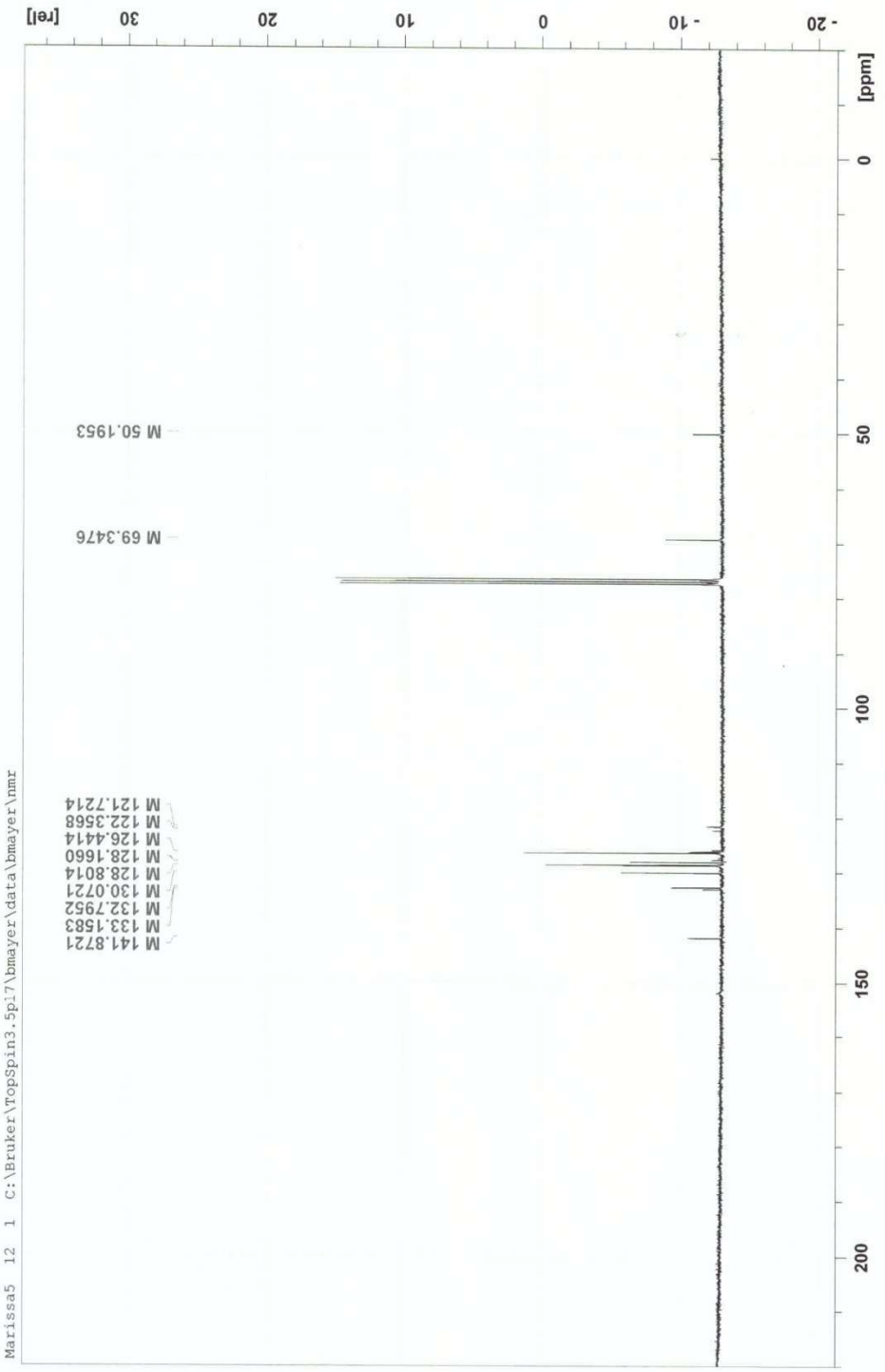
FTIR spectrum of **4**



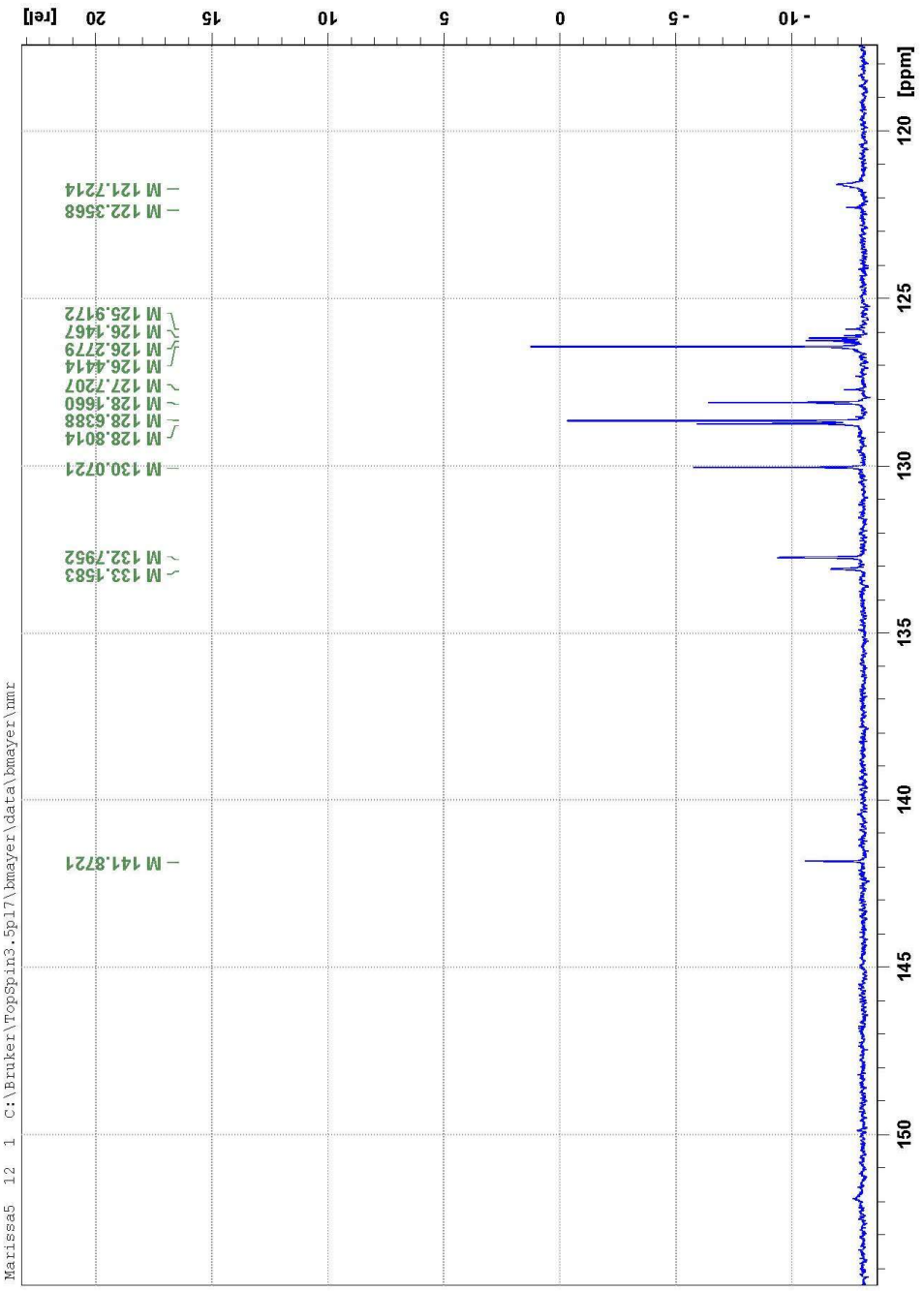
^{1}H NMR spectrum of **5**



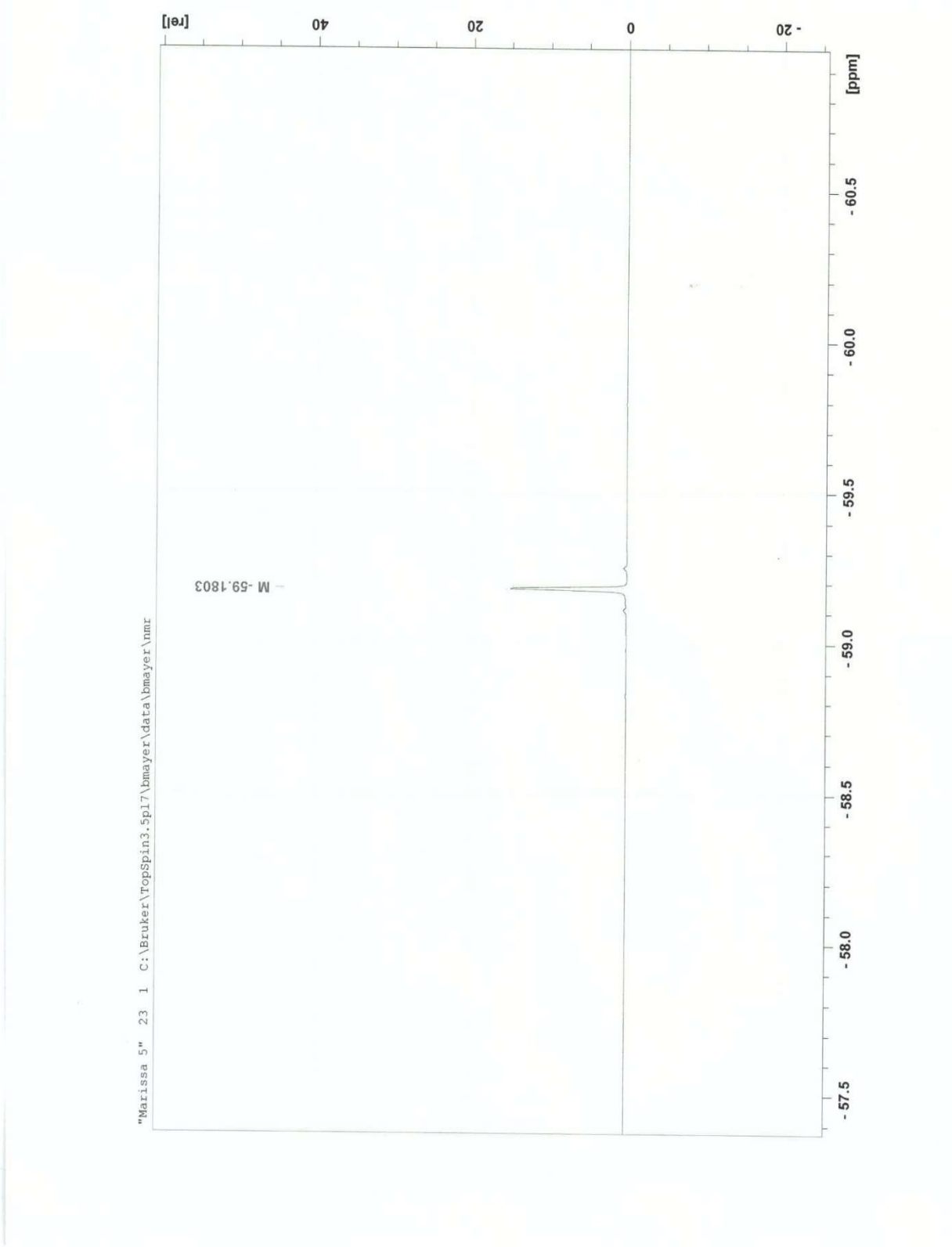
^{1}H NMR spectrum (expanded) of **5**



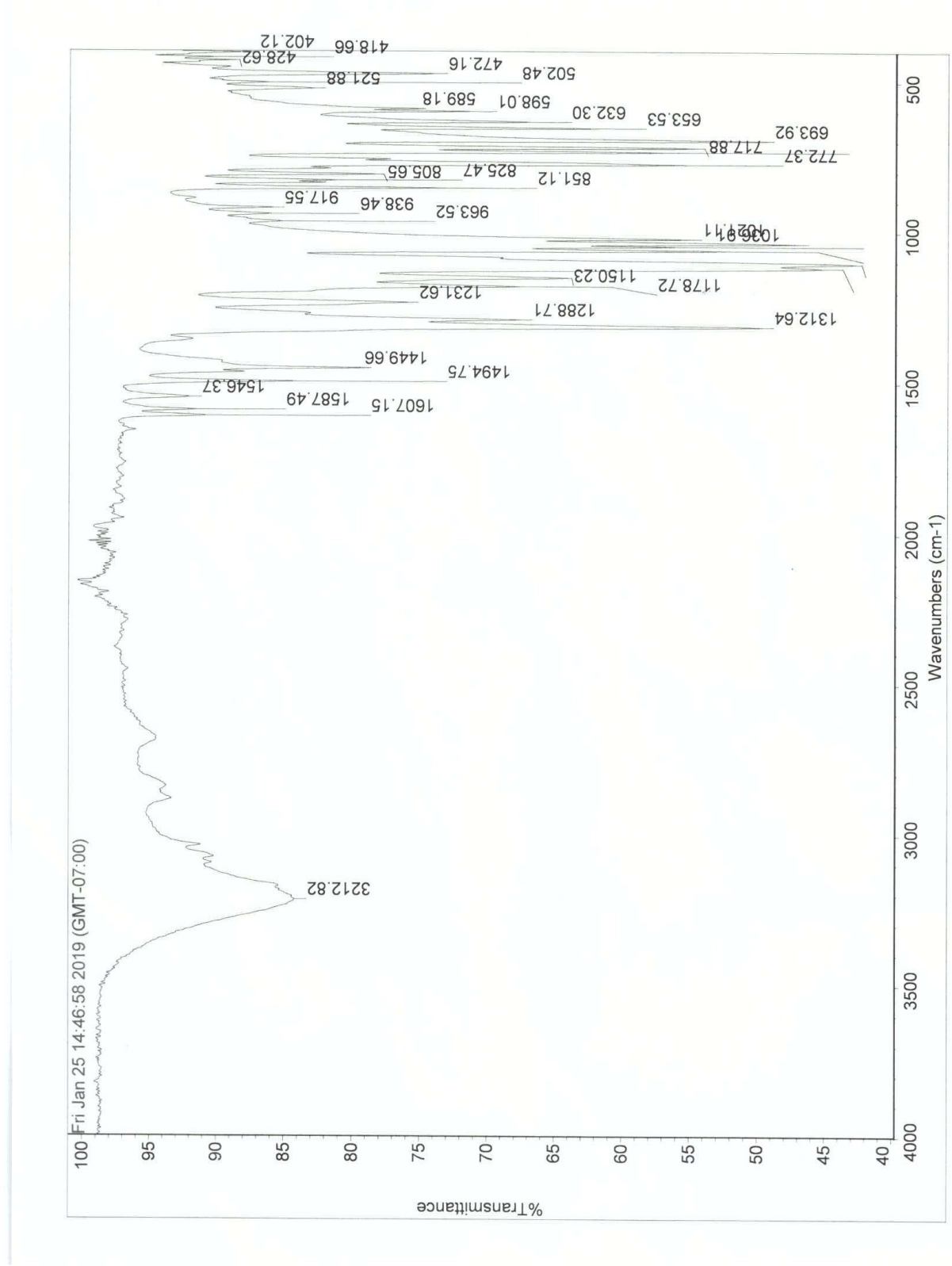
^{13}C NMR spectrum of **5**



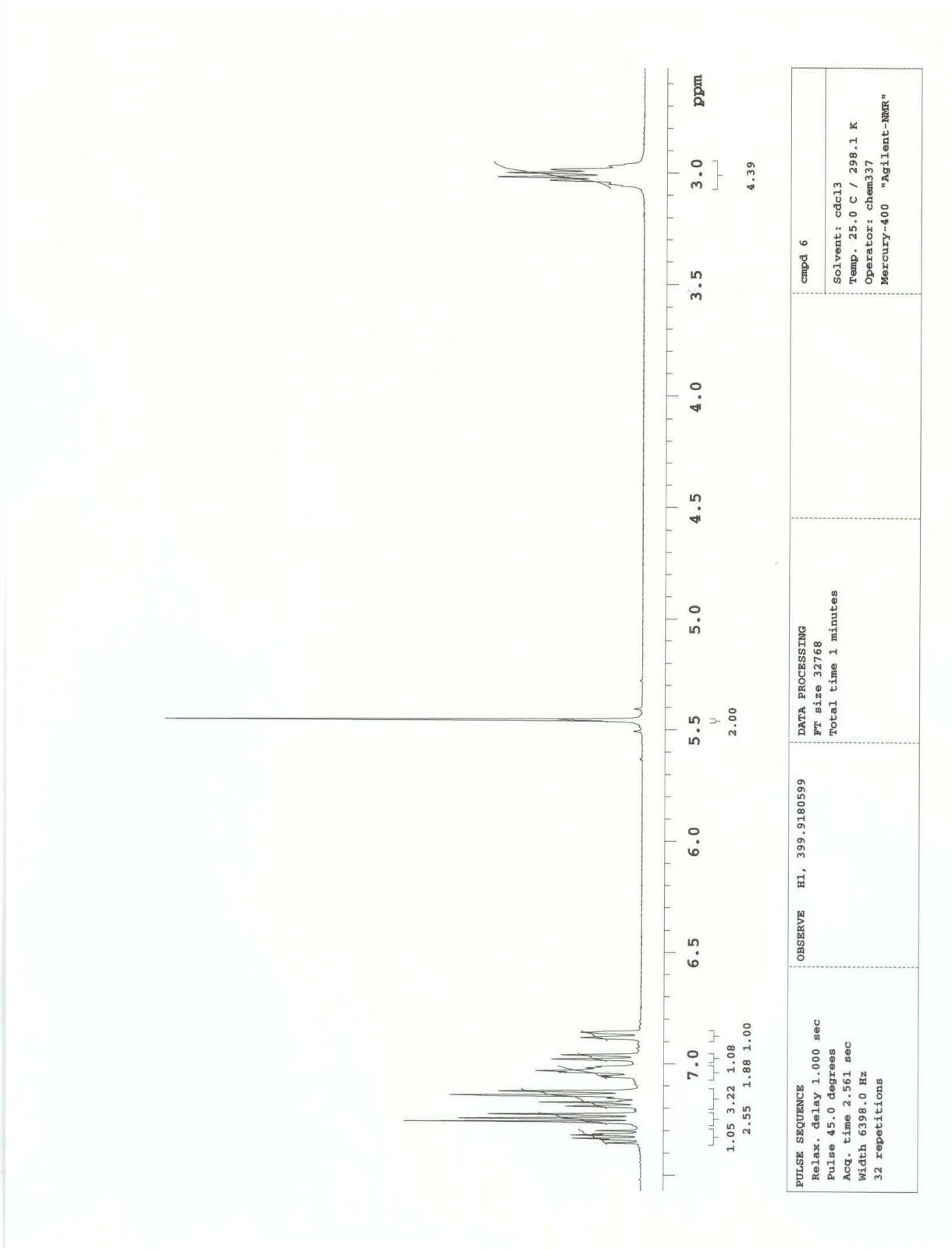
^{13}C NMR spectrum (expanded) of **5**



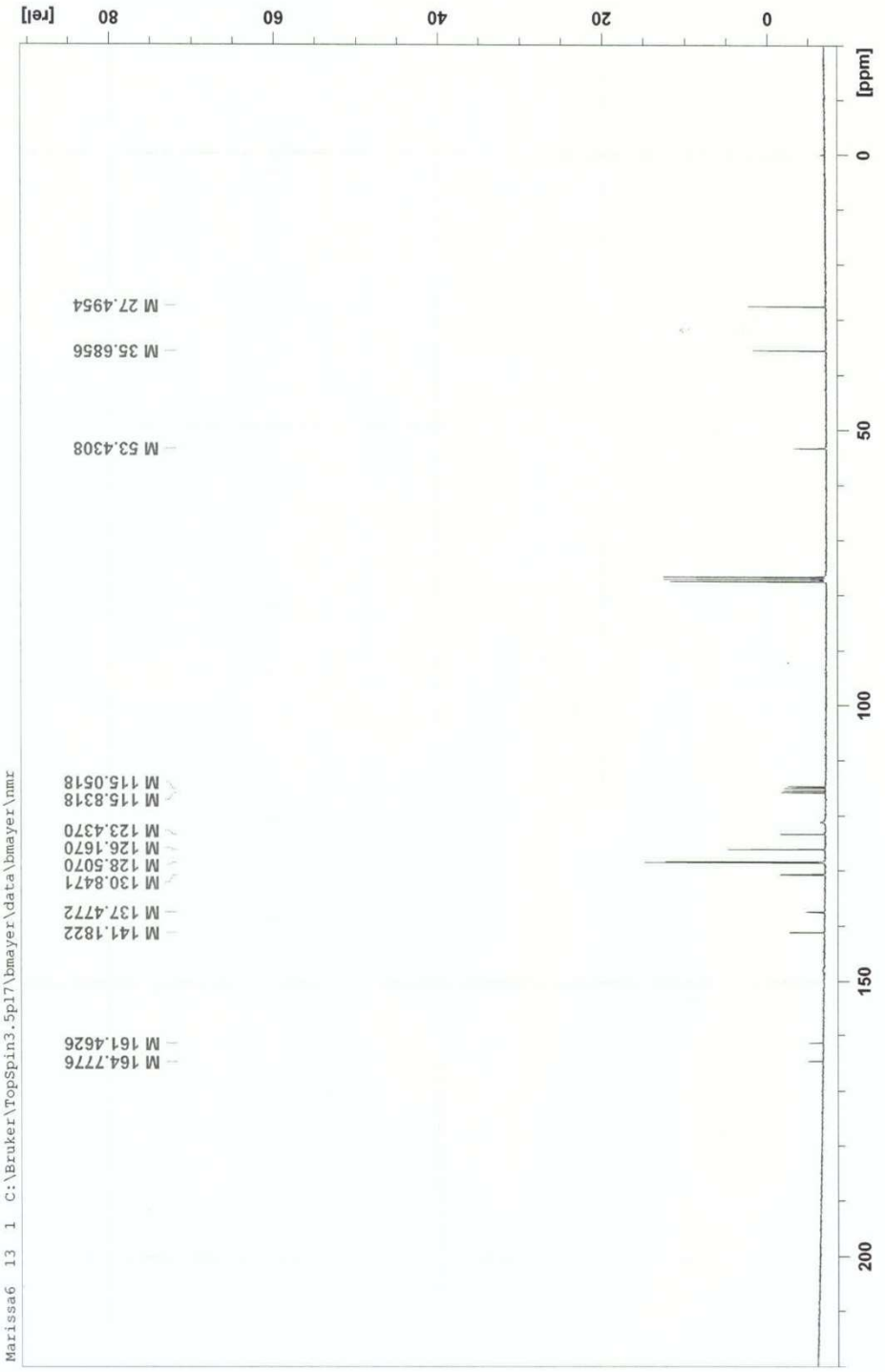
^{19}F NMR spectrum of **5**



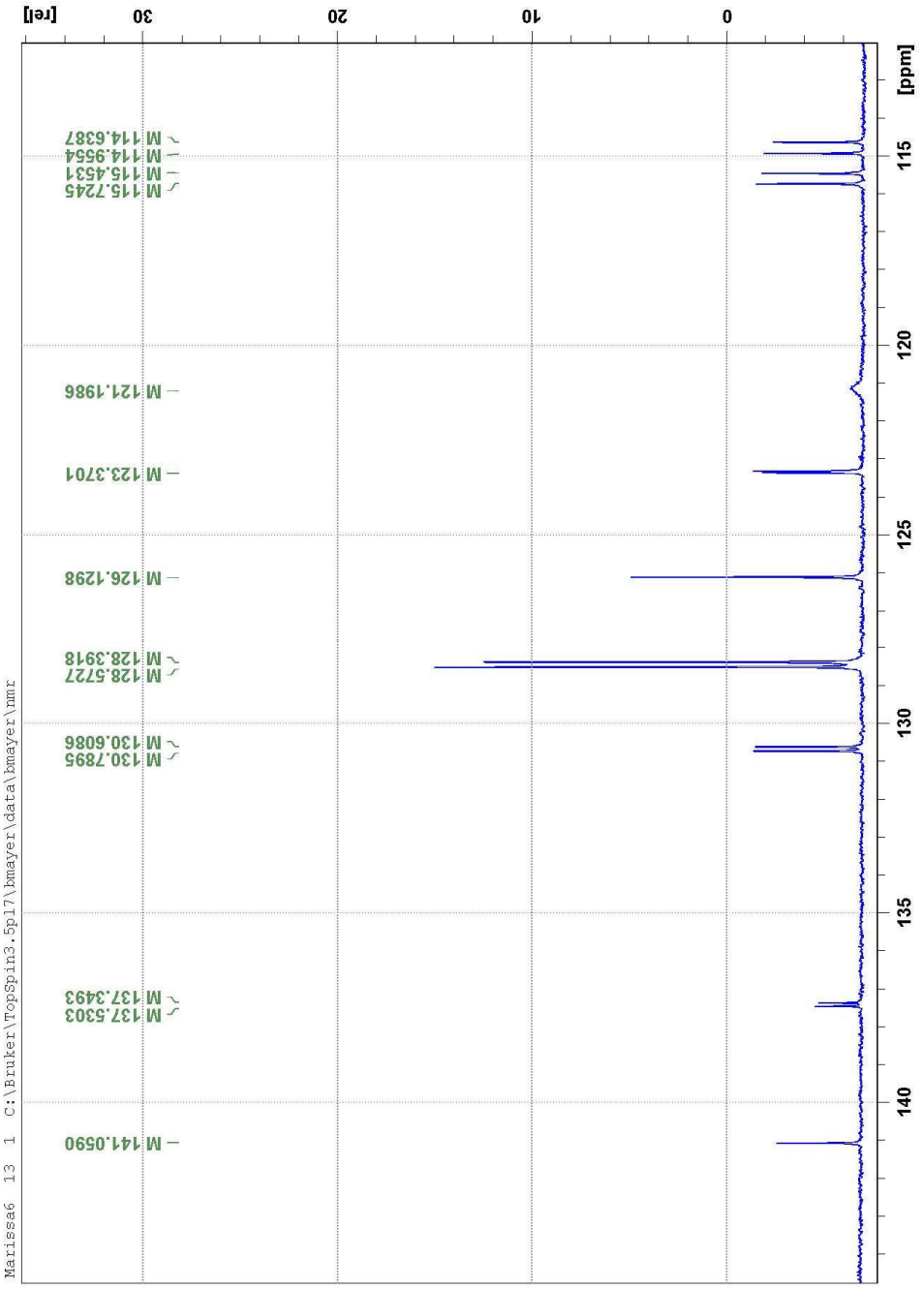
FTIR spectrum of **5**



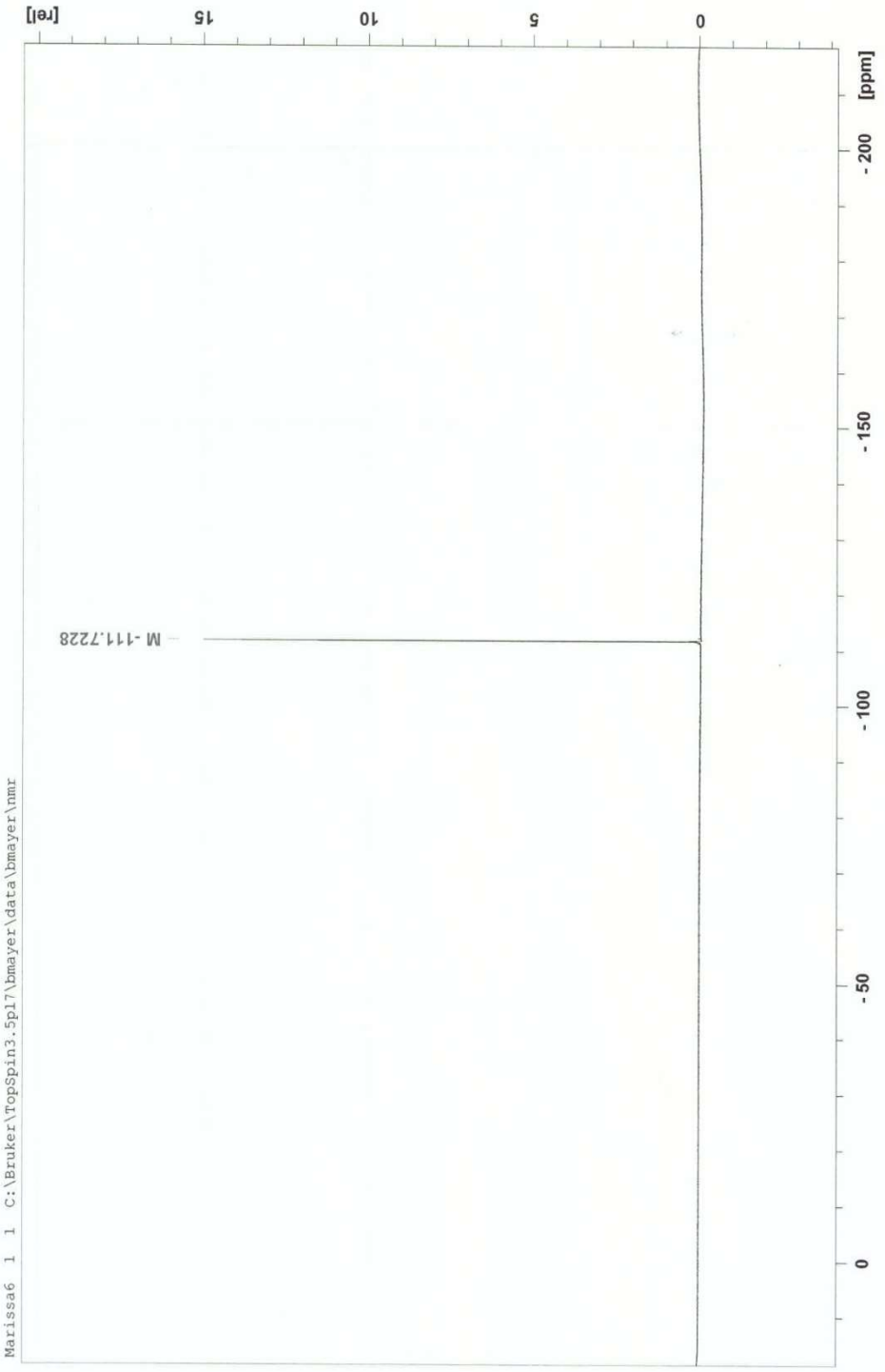
^{1}H NMR spectrum of **6**



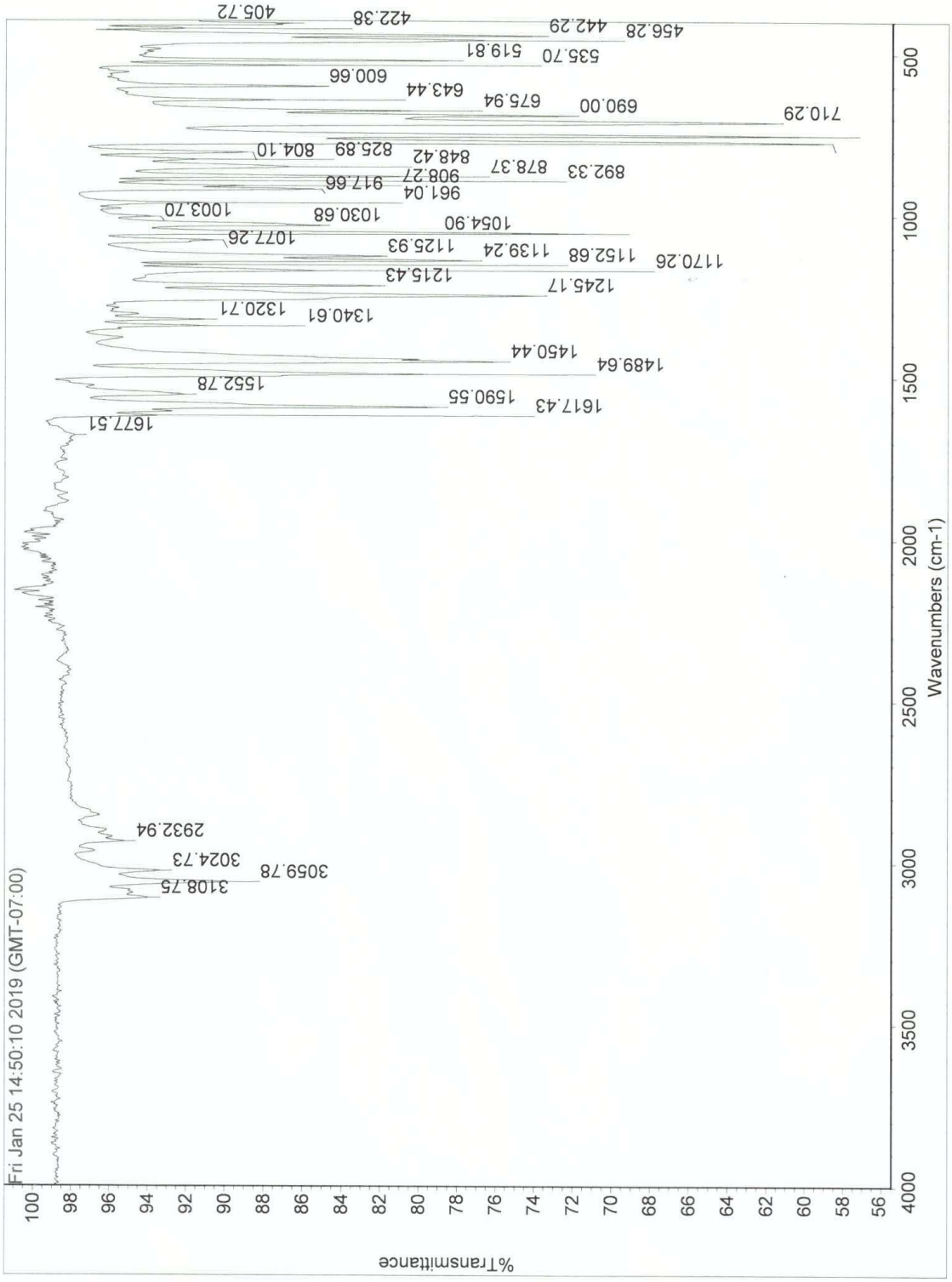
^{13}C NMR spectrum of **6**



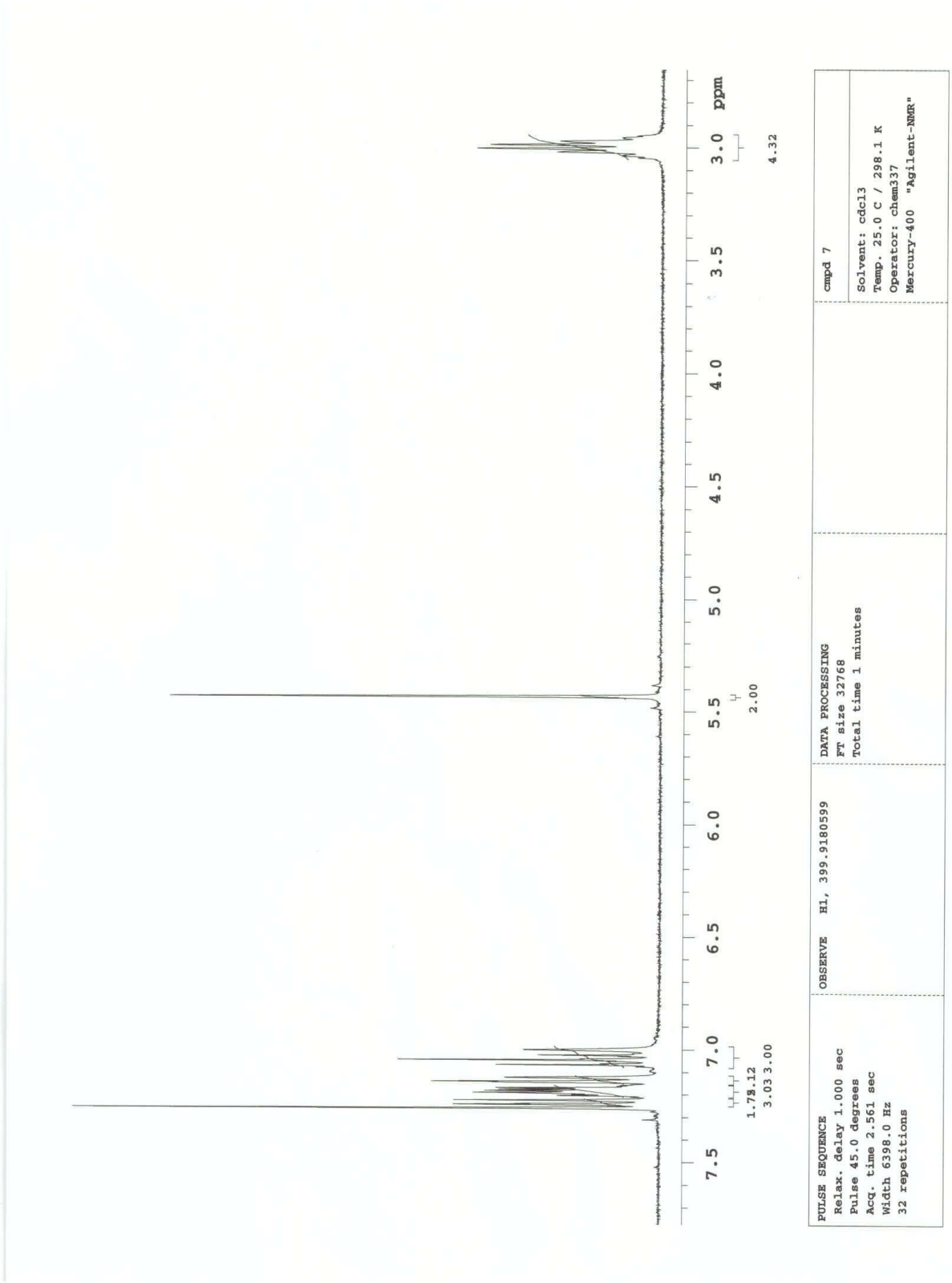
^{13}c NMR spectrum (expanded) of **6**



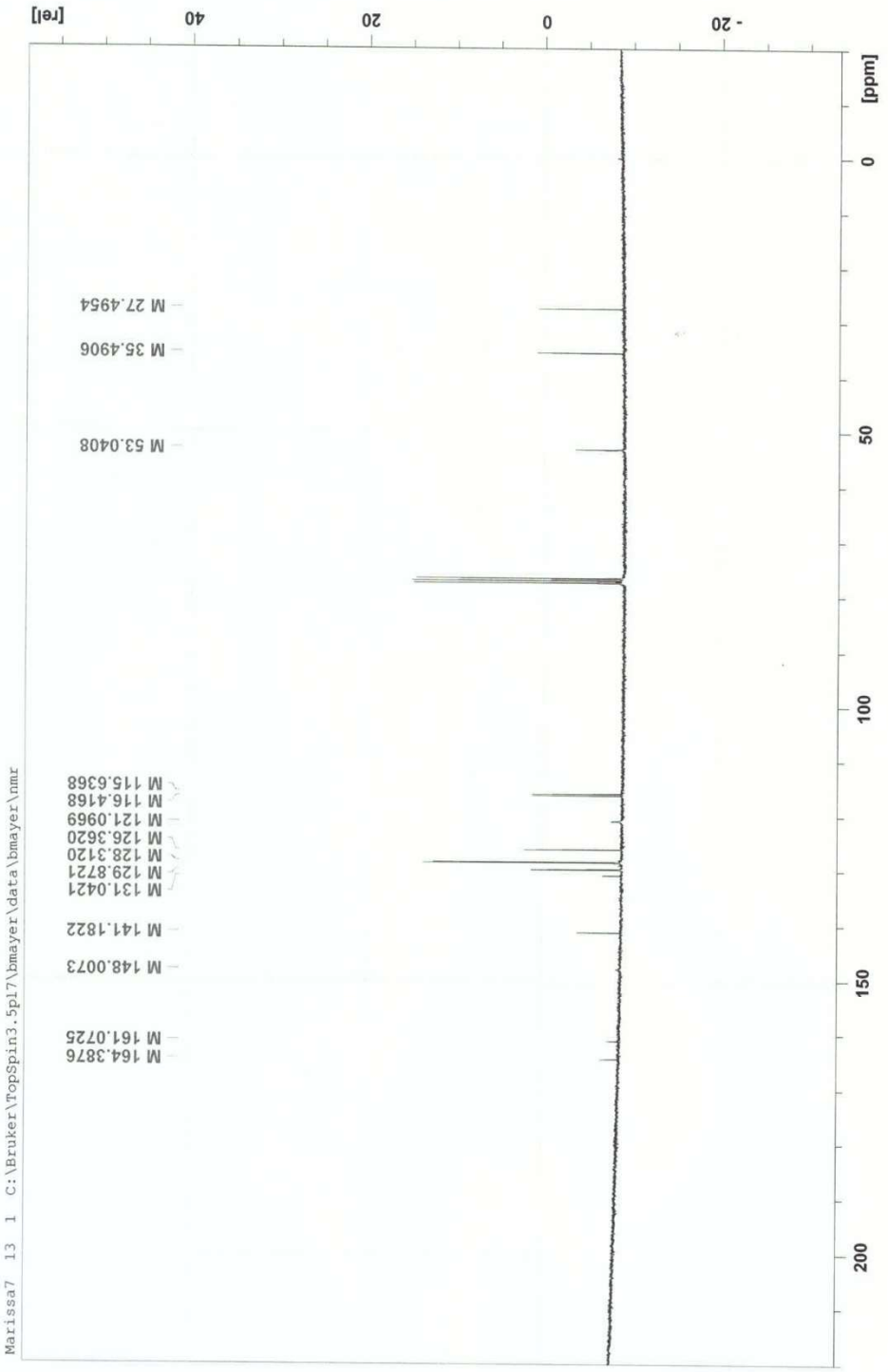
^{19}F NMR spectrum of **6**



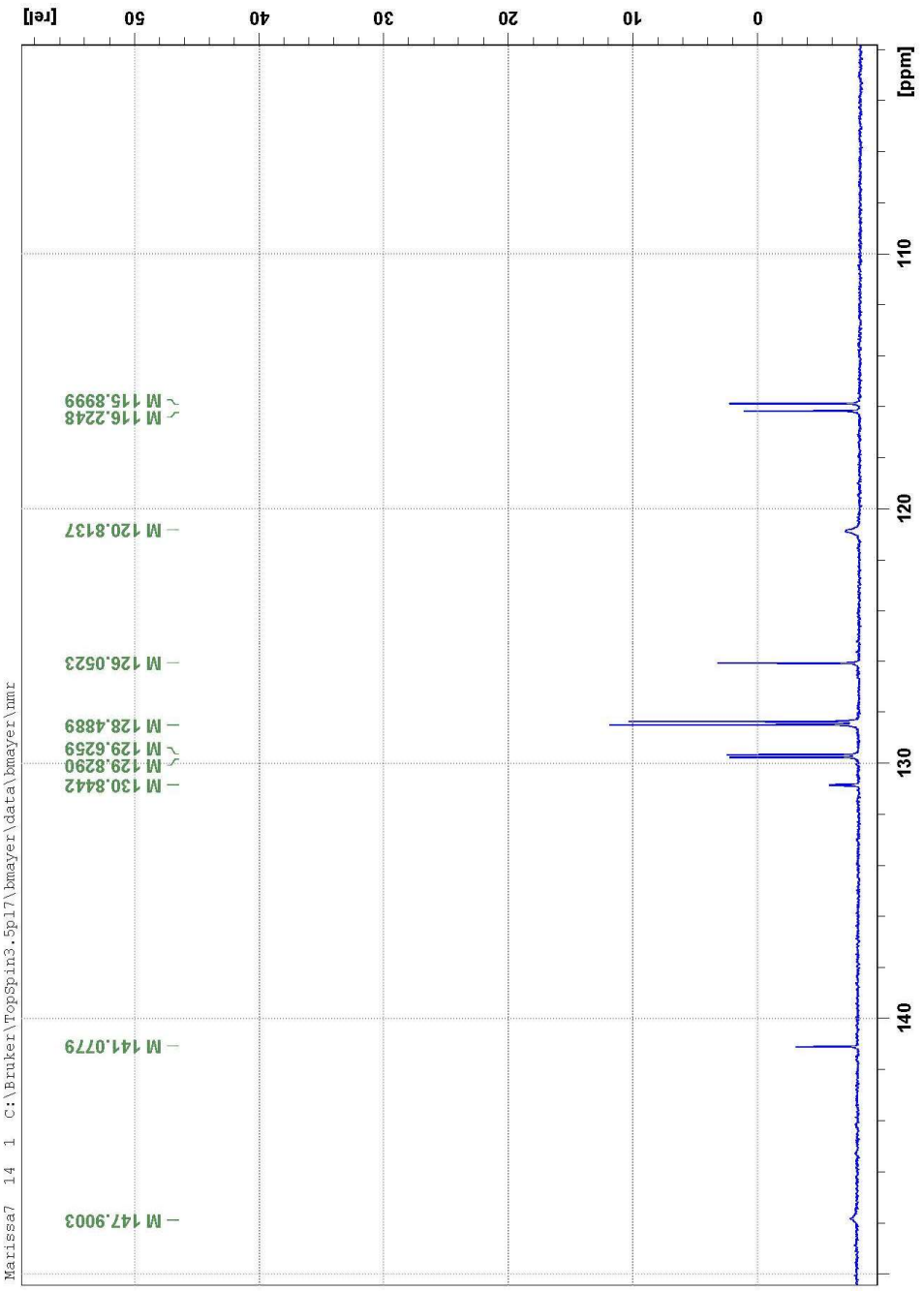
FTIR spectrum of **6**



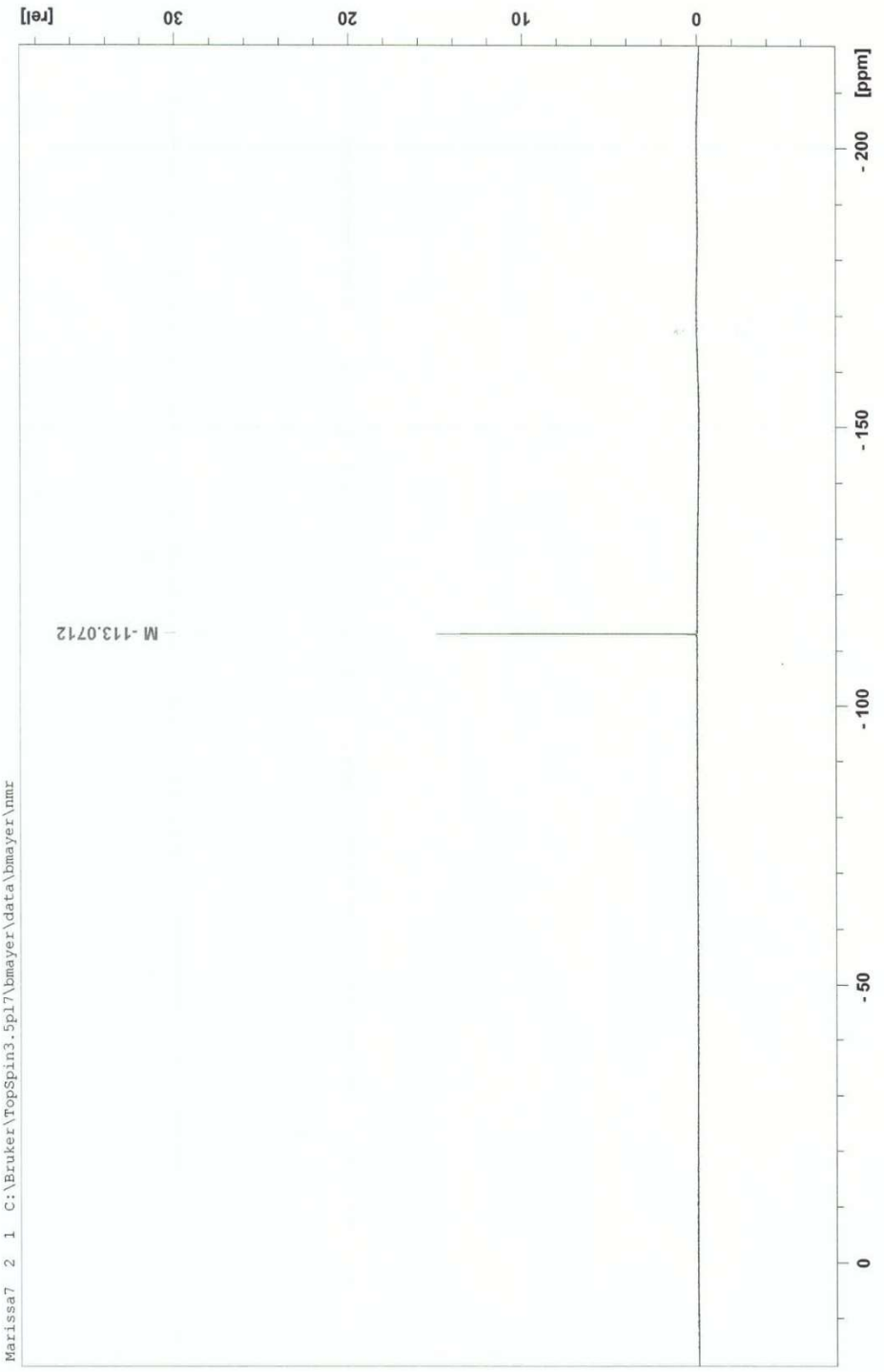
^{1}H NMR spectrum of **7**



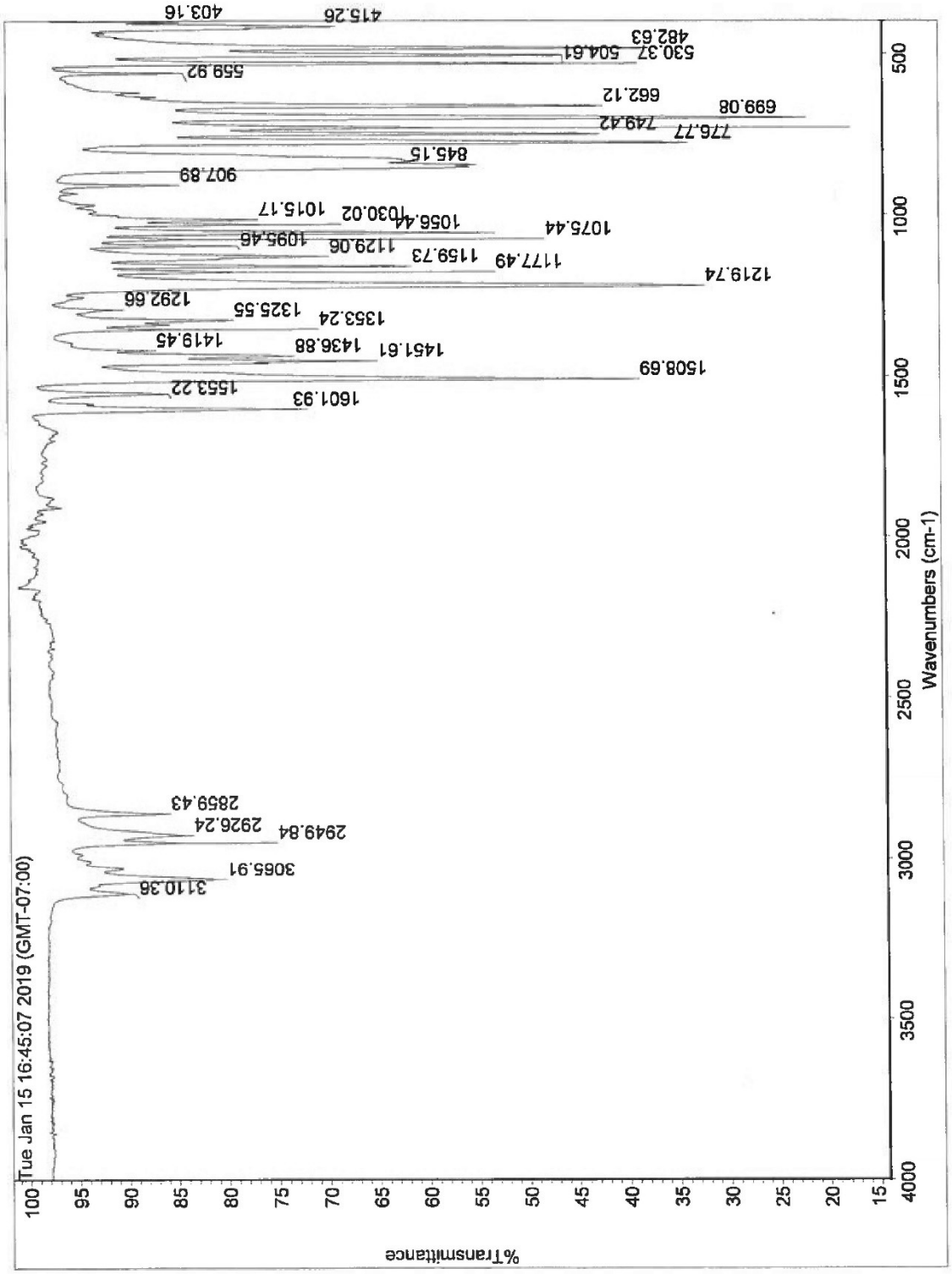
^{13}C NMR spectrum of **7**



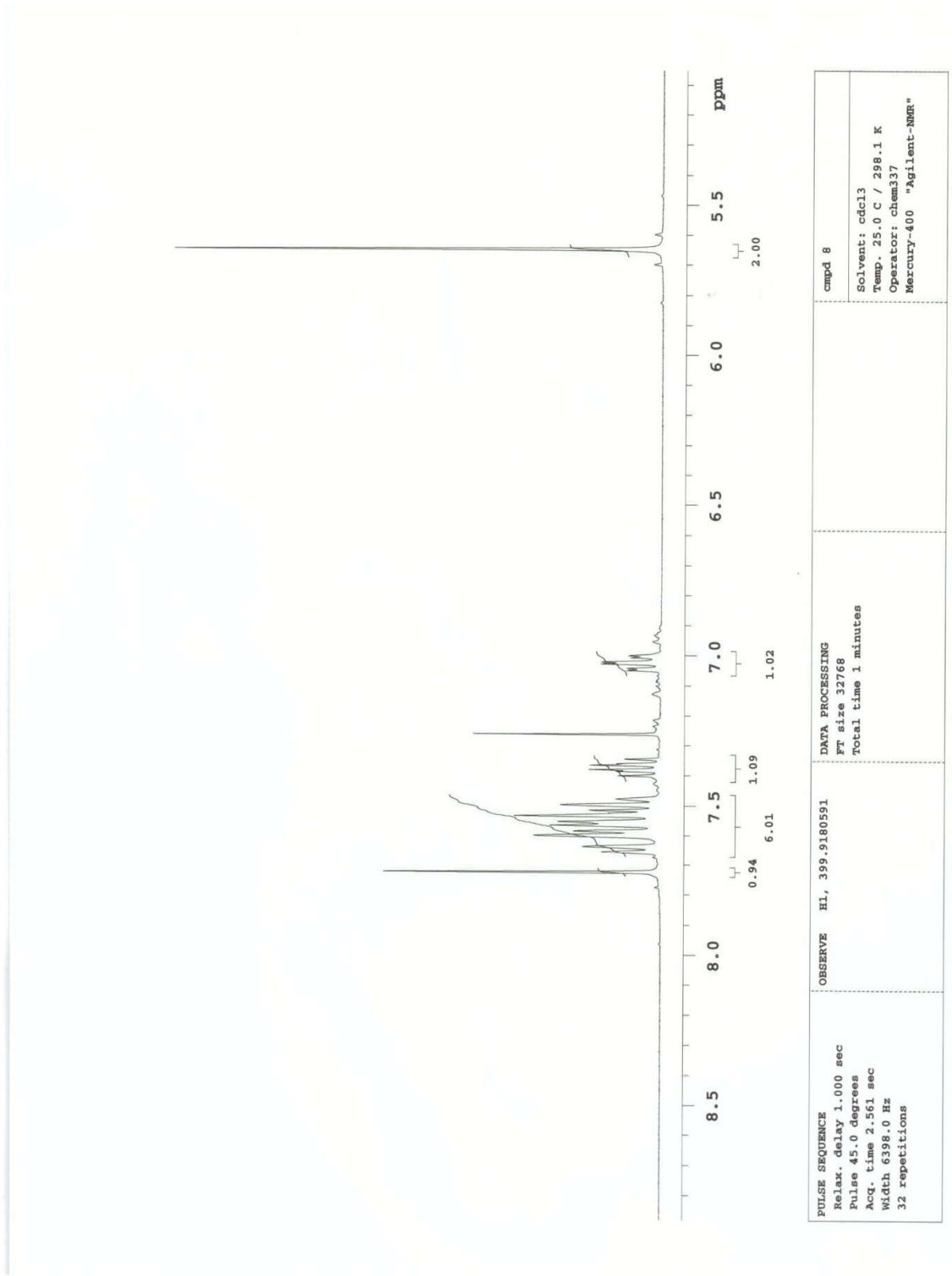
^{13}C NMR spectrum (expanded) of **7**



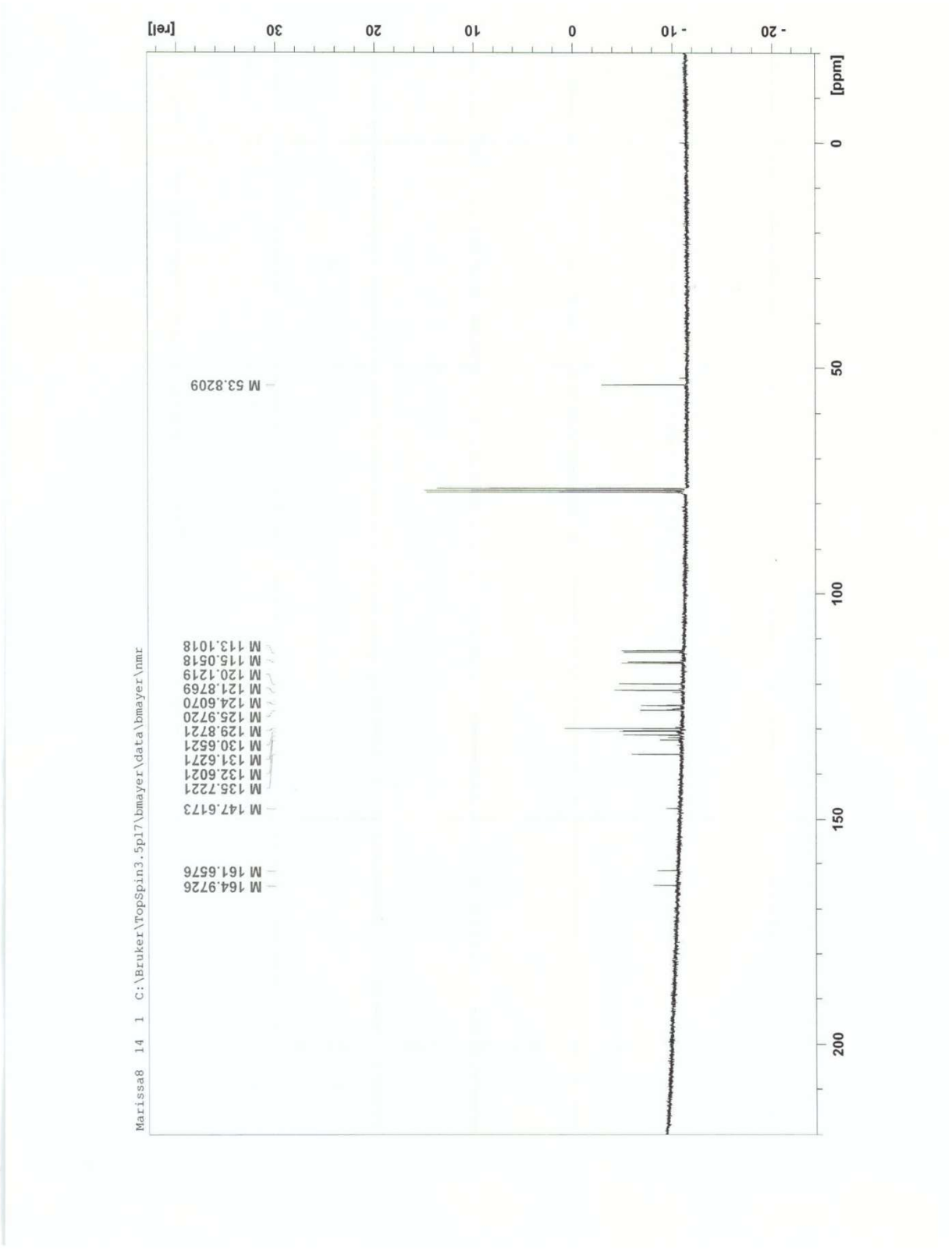
^{19}F NMR spectrum of **7**



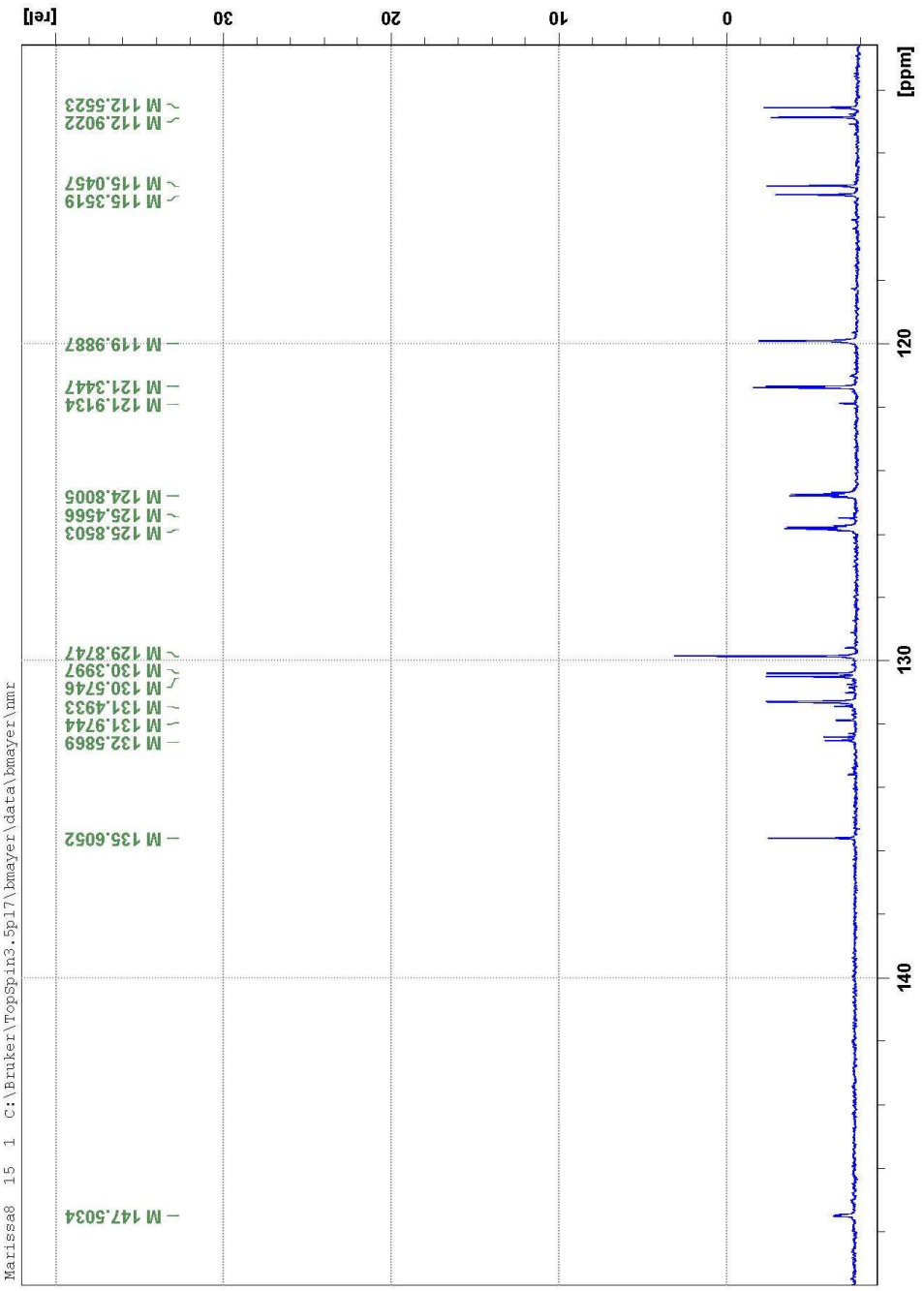
FTIR spectrum of **7**



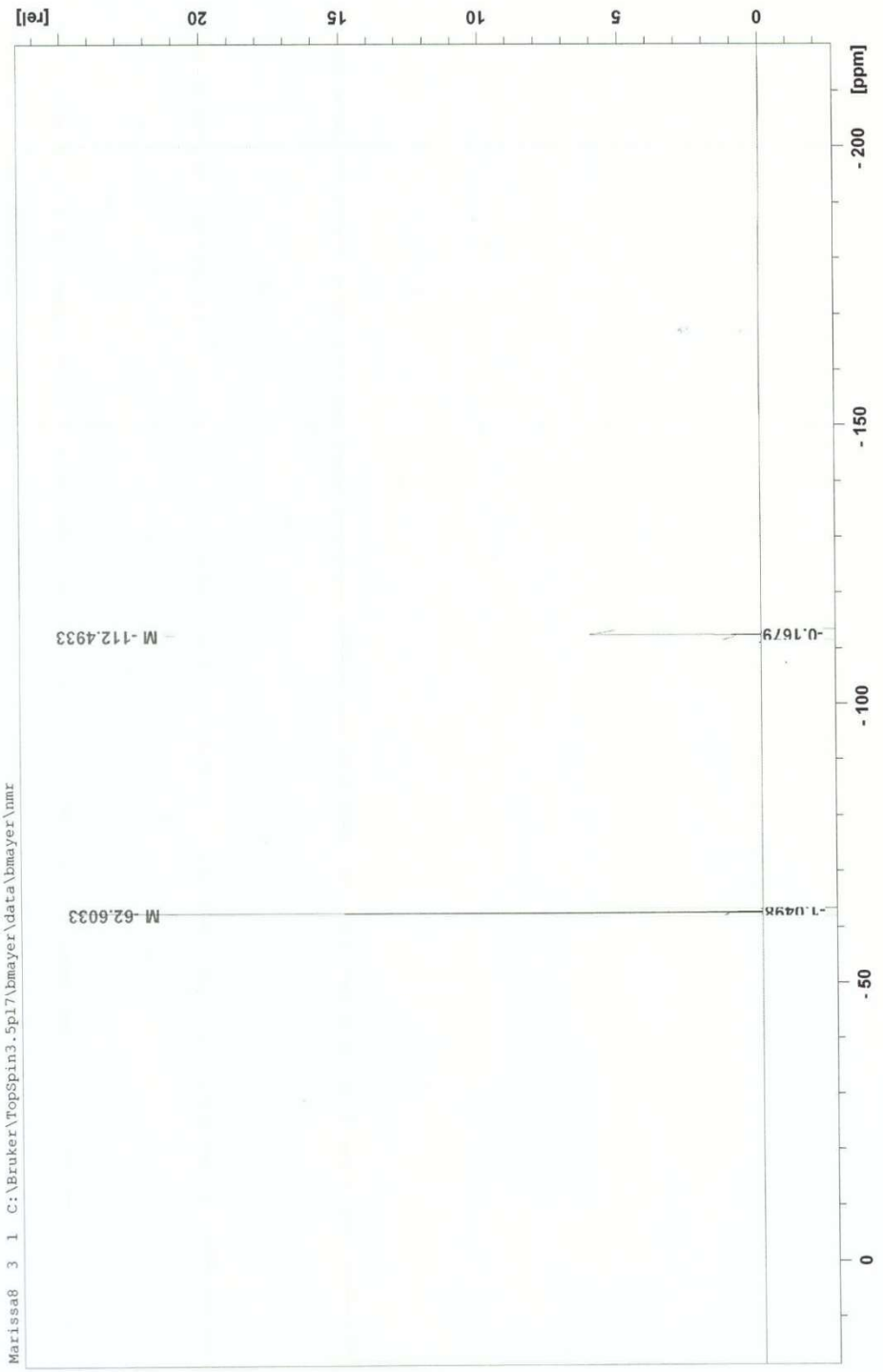
^{1}H NMR spectrum of **8**



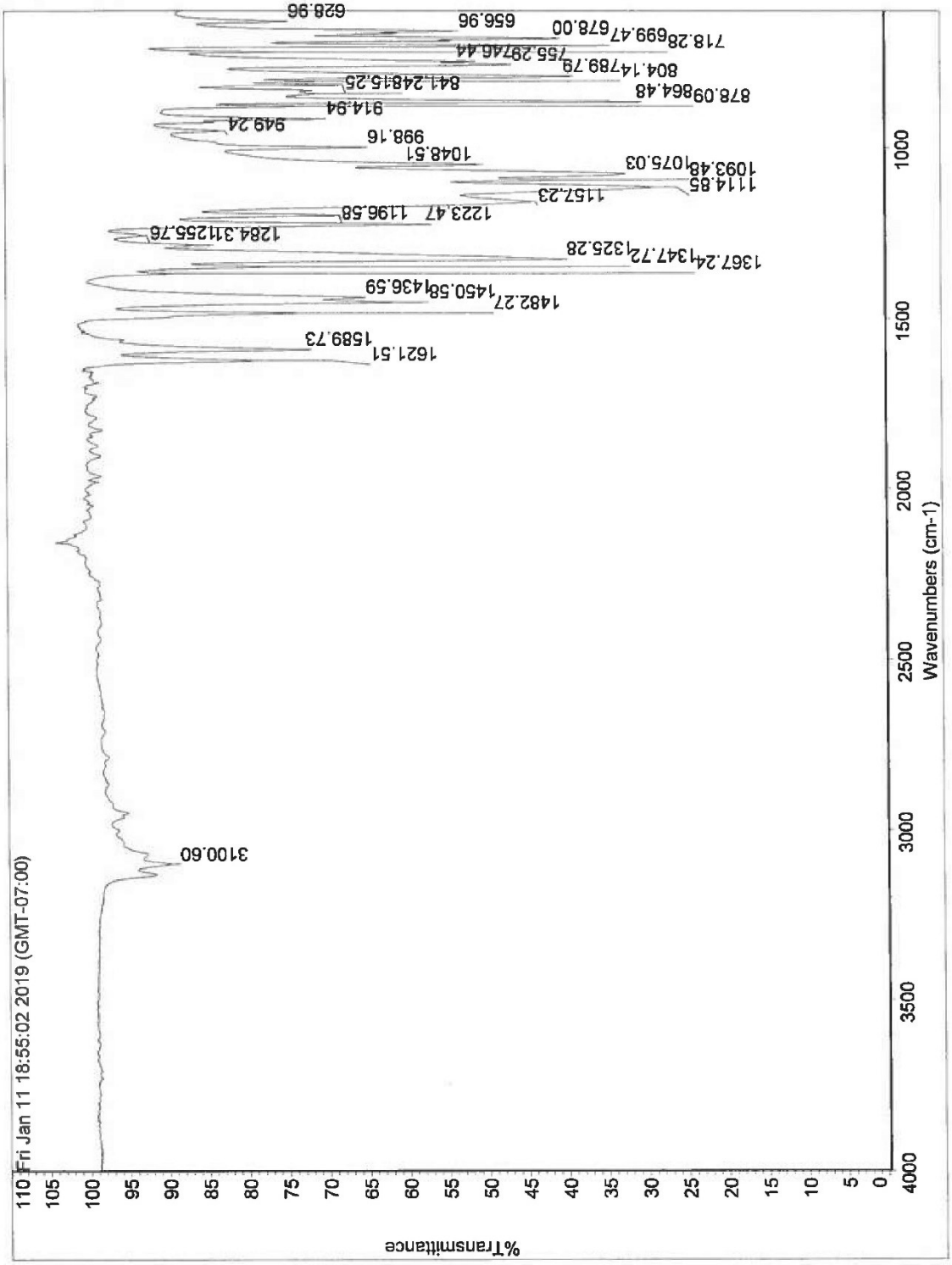
^{13}C NMR spectrum of **8**



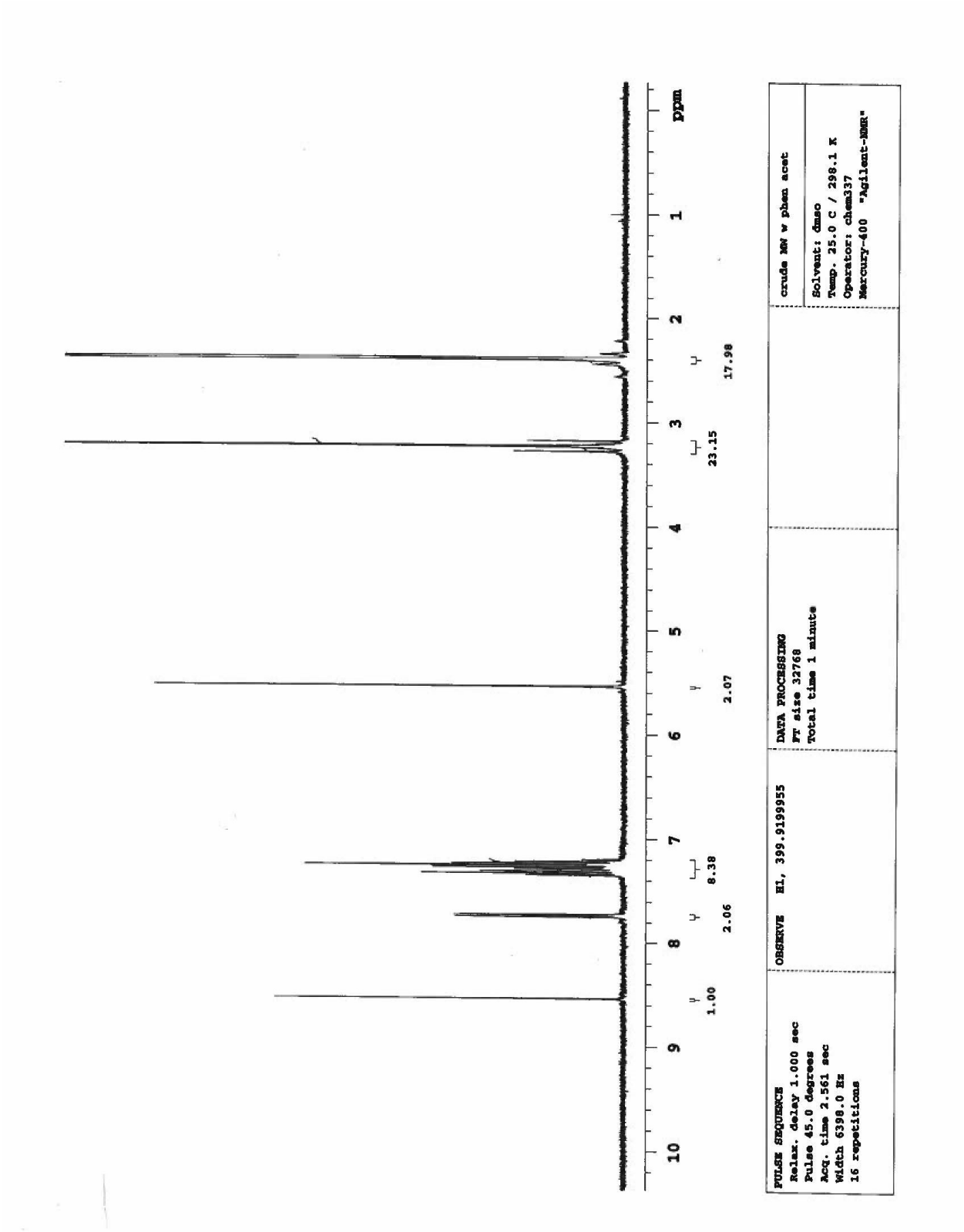
^{13}C NMR spectrum (expanded) of **8**



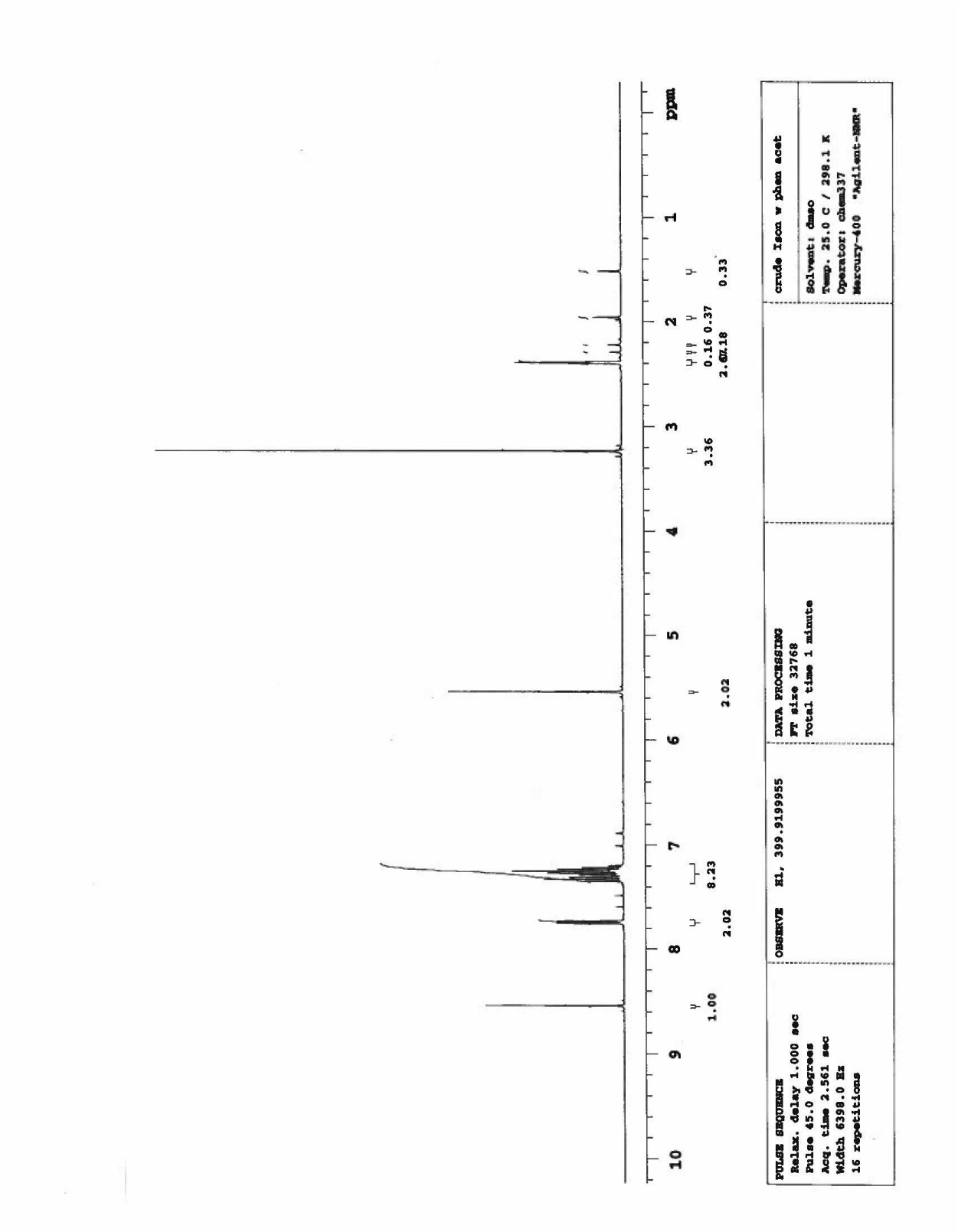
^{19}F NMR spectrum of **8**



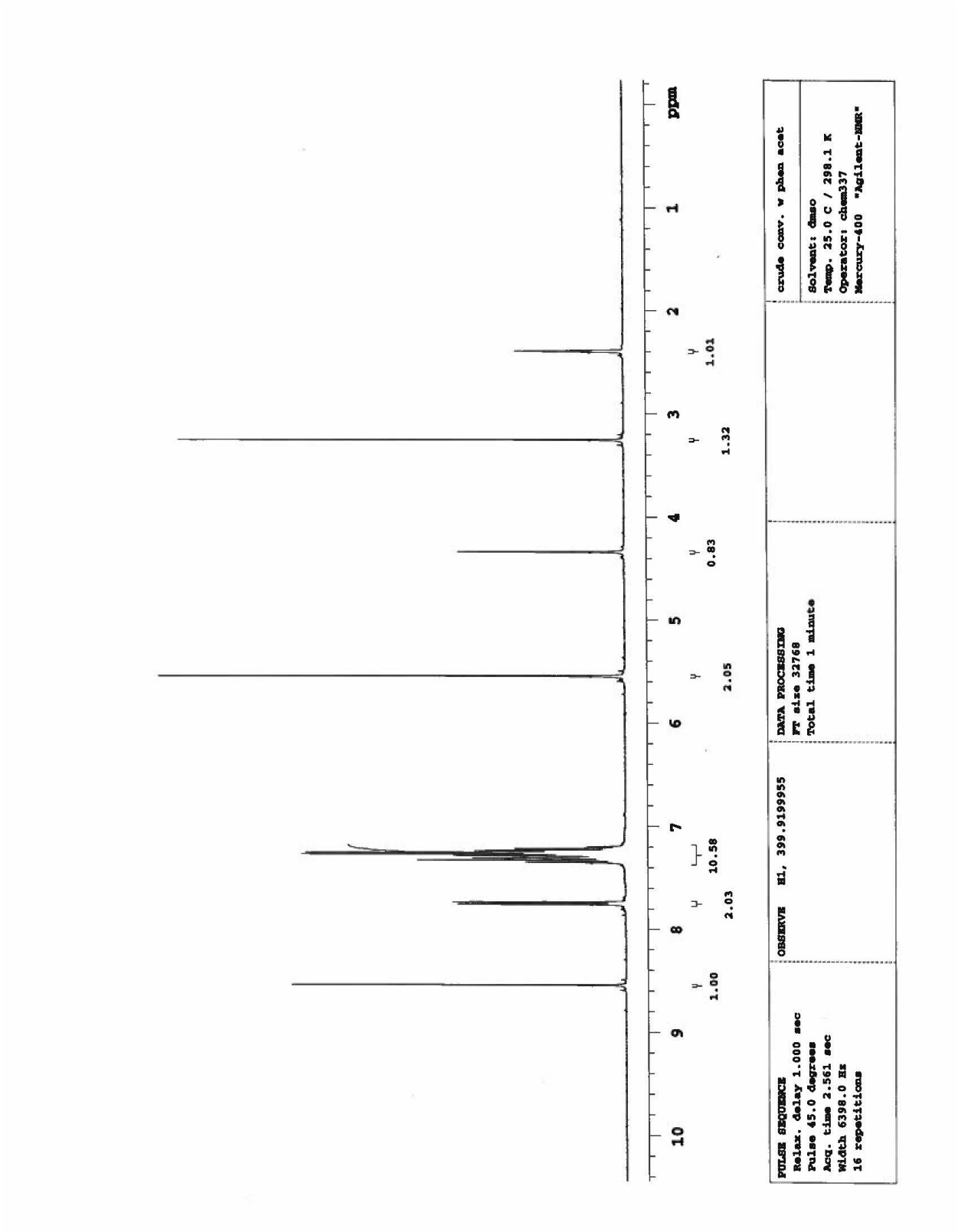
FTIR spectrum of **8**



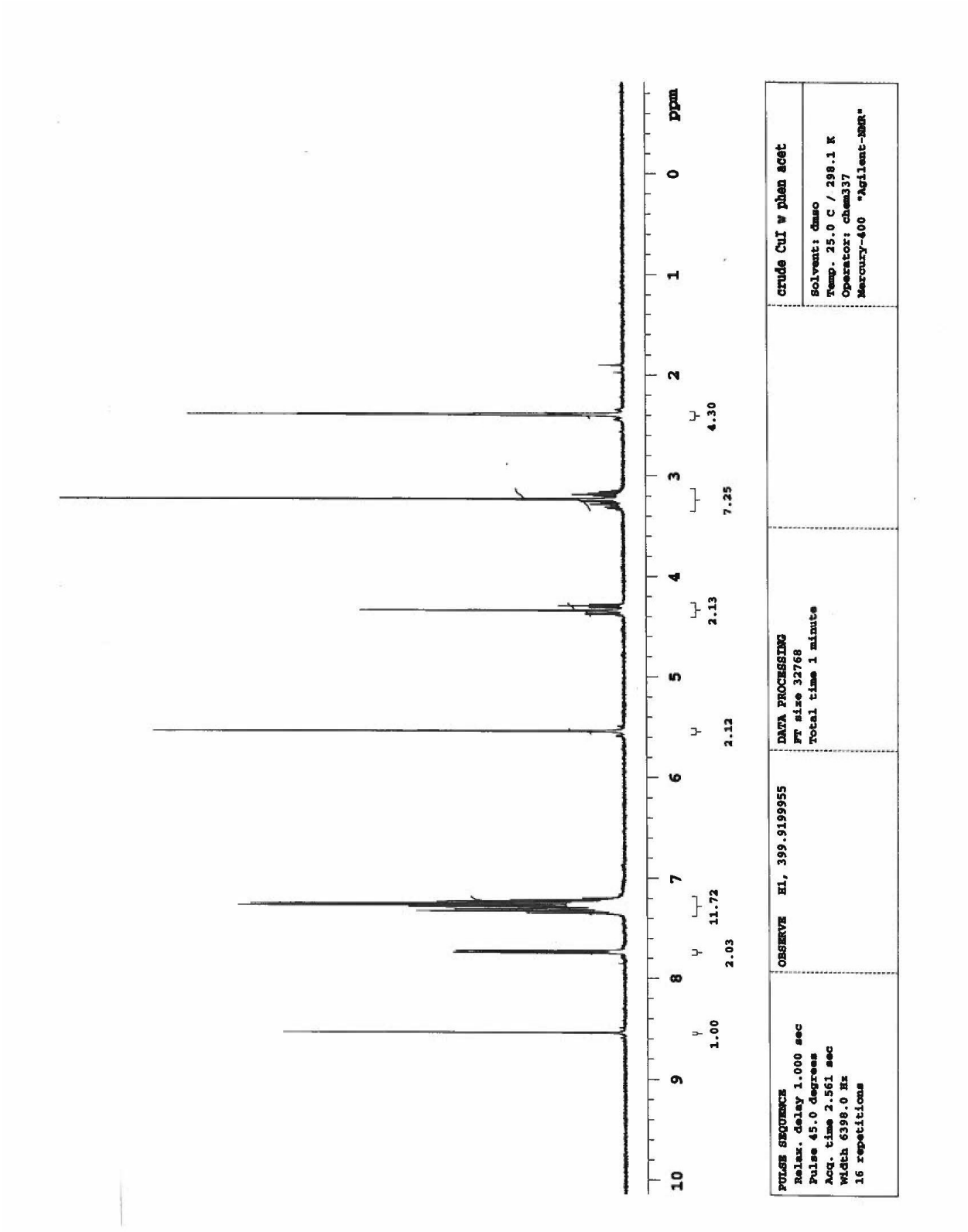
Microwave scale up of **1**.



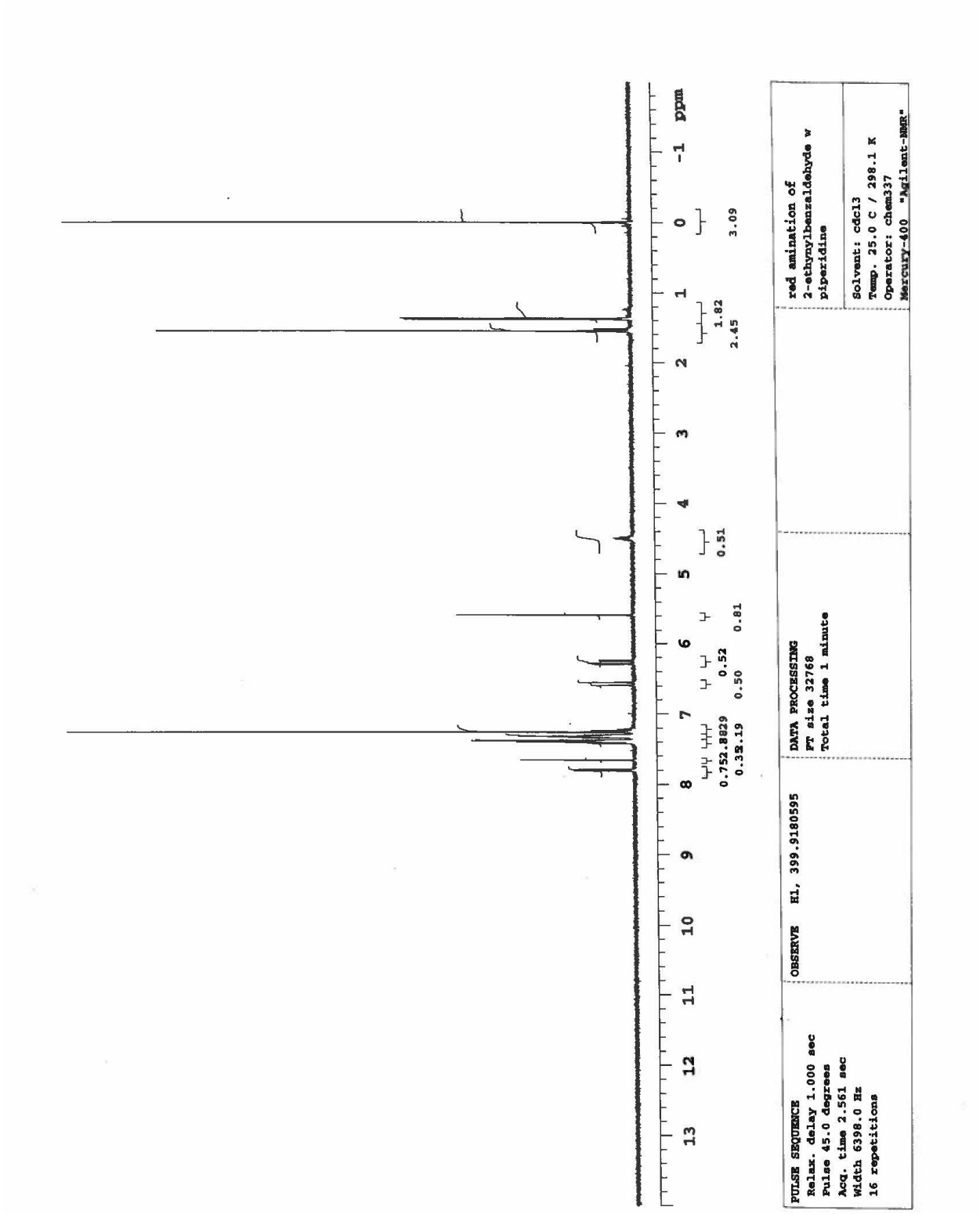
Solvent -free scale up of **1**.



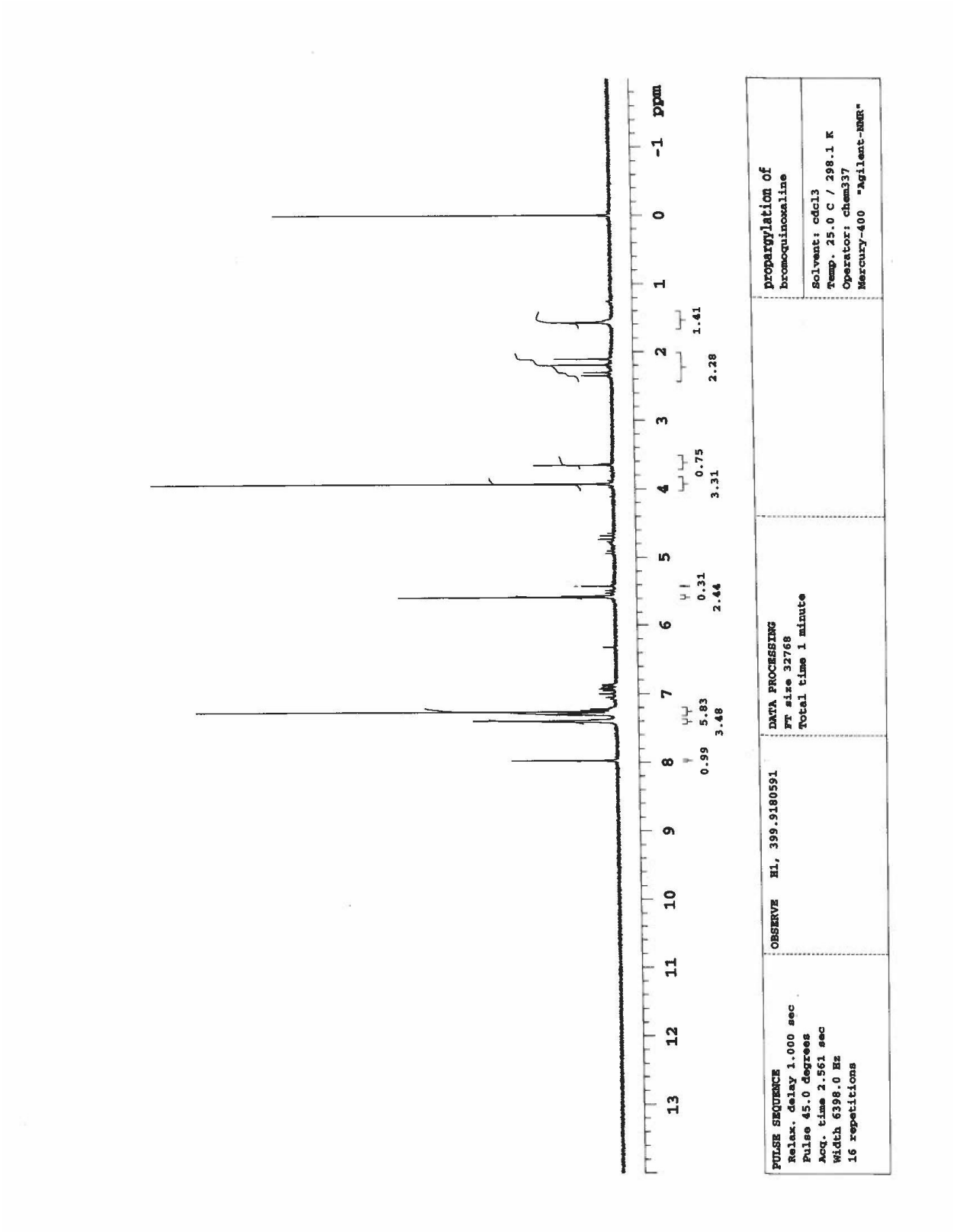
Conventional scale up of **1**.



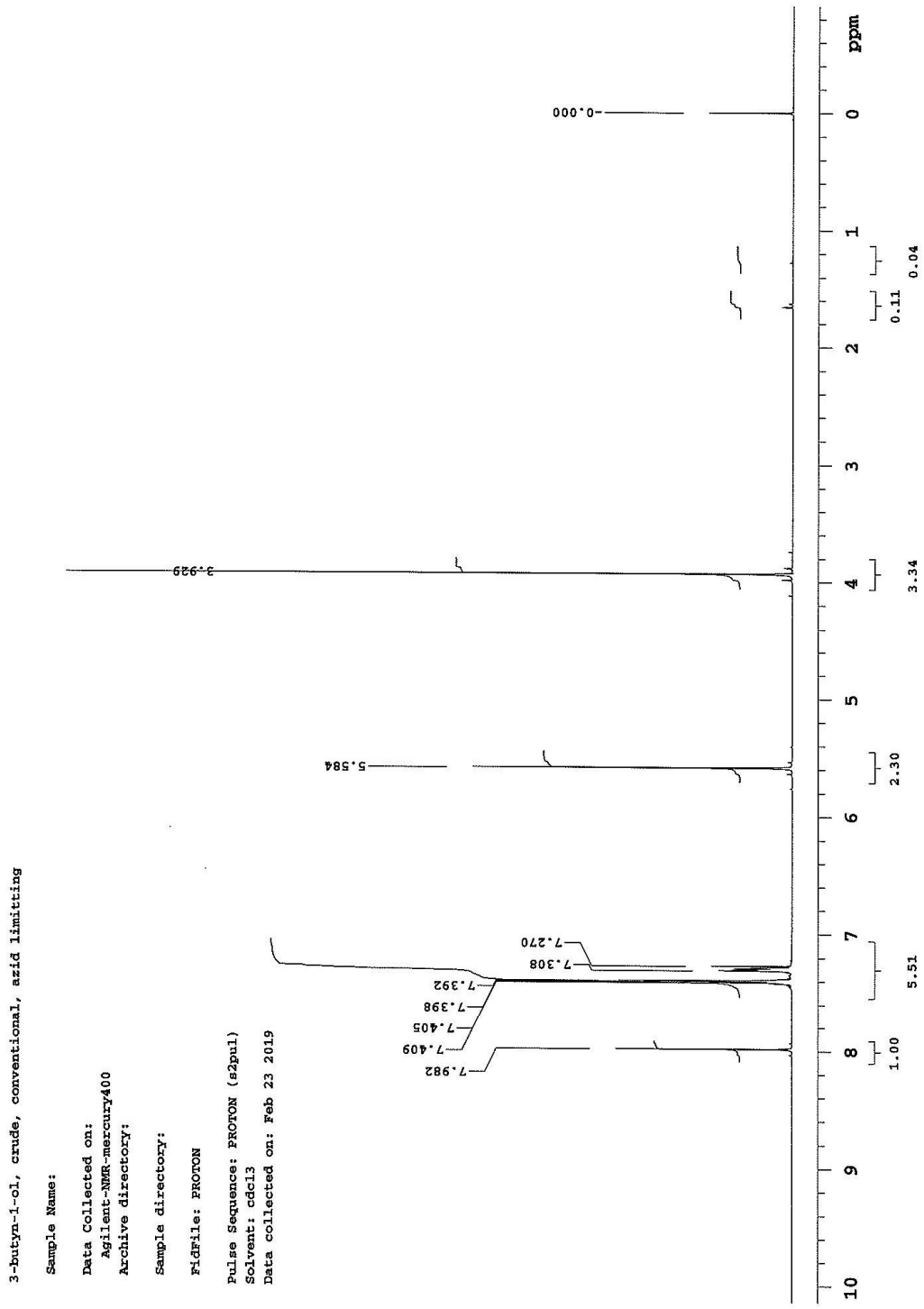
CuI in glycerol scale up of **1**.



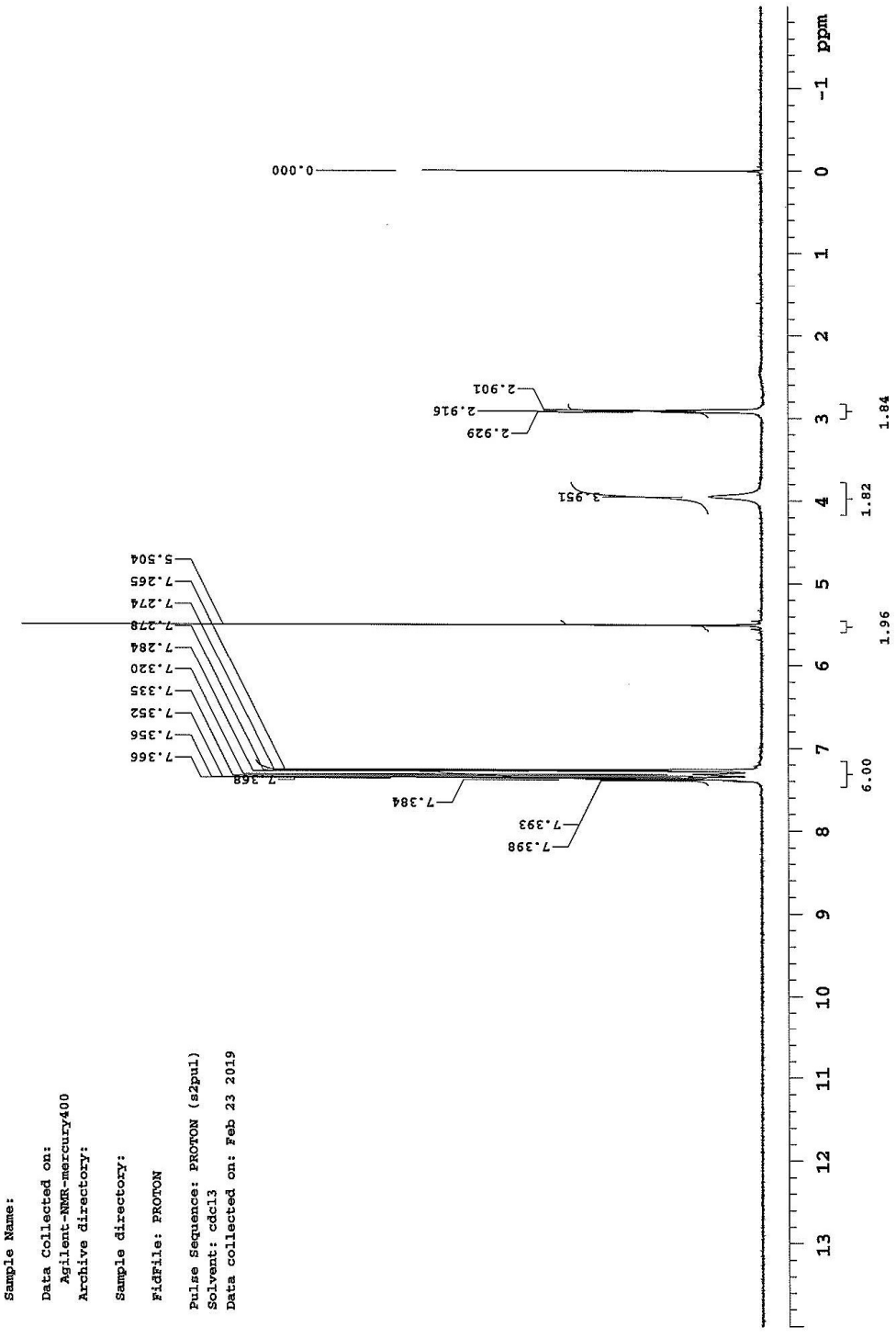
Solvent-free product **1** from equimolar reactants.



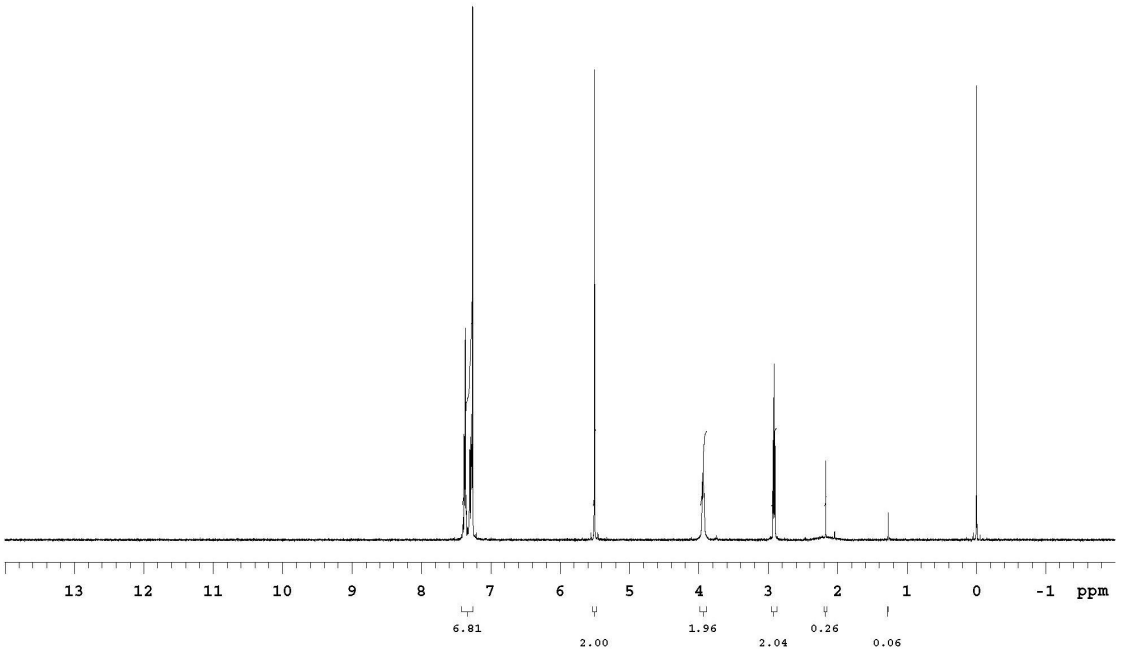
Solvent-free product **2** from equimolar reactants.



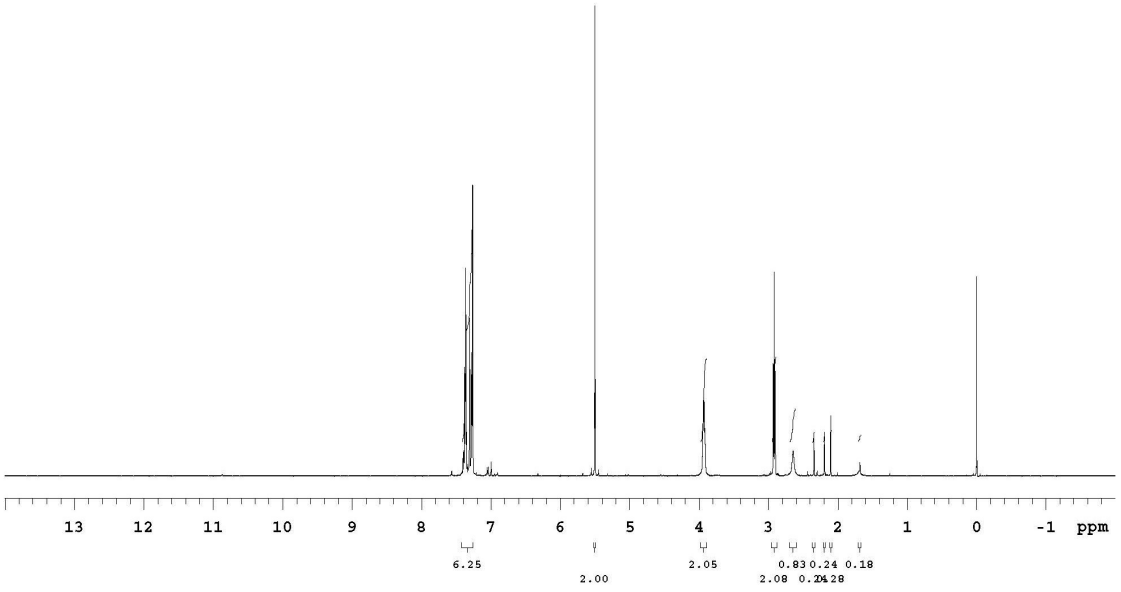
Conventional product **2** from 50% excess of methyl propiolate.



Conventional product **3** from 50% excess of 3-butyn-1-ol.



PULSE SEQUENCE Relax. delay 1.000 sec Pulse 45.0 degrees Acq. time 2.561 sec Width 6398.0 Hz 16 repetitions	OBSERVE H1, 399.9180595	DATA PROCESSING FT size 32768 Total time 1 minute		Excess Alkyne, MW 3-Butyn-1-ol Solvent: cdcl3 Temp. 25.0 C / 298.1 K Operator: chem337 Mercury-400 "Agilent-NMR"



PULSE SEQUENCE Relax. delay 1.000 sec Pulse 45.0 degrees Acq. time 2.561 sec Width 6398.0 Hz 16 repetitions	OBSERVE H1, 399.9180588	DATA PROCESSING FT size 32768 Total time 1 minute		Excess Alkyne, Ison 3-Butyn-1-ol Solvent: cdcl3 Temp. 25.0 C / 298.1 K Operator: chem337 Mercury-400 "Agilent-NMR"

Solvent-free product **3** from 50% excess of 3-butyn-1-ol. S-49