

Supplementary data

Novel Pyridinium Based Cobalt Carbonyl Ionic Liquids: Synthesis, Full Characterization, Crystal Structure and Application in Catalysis

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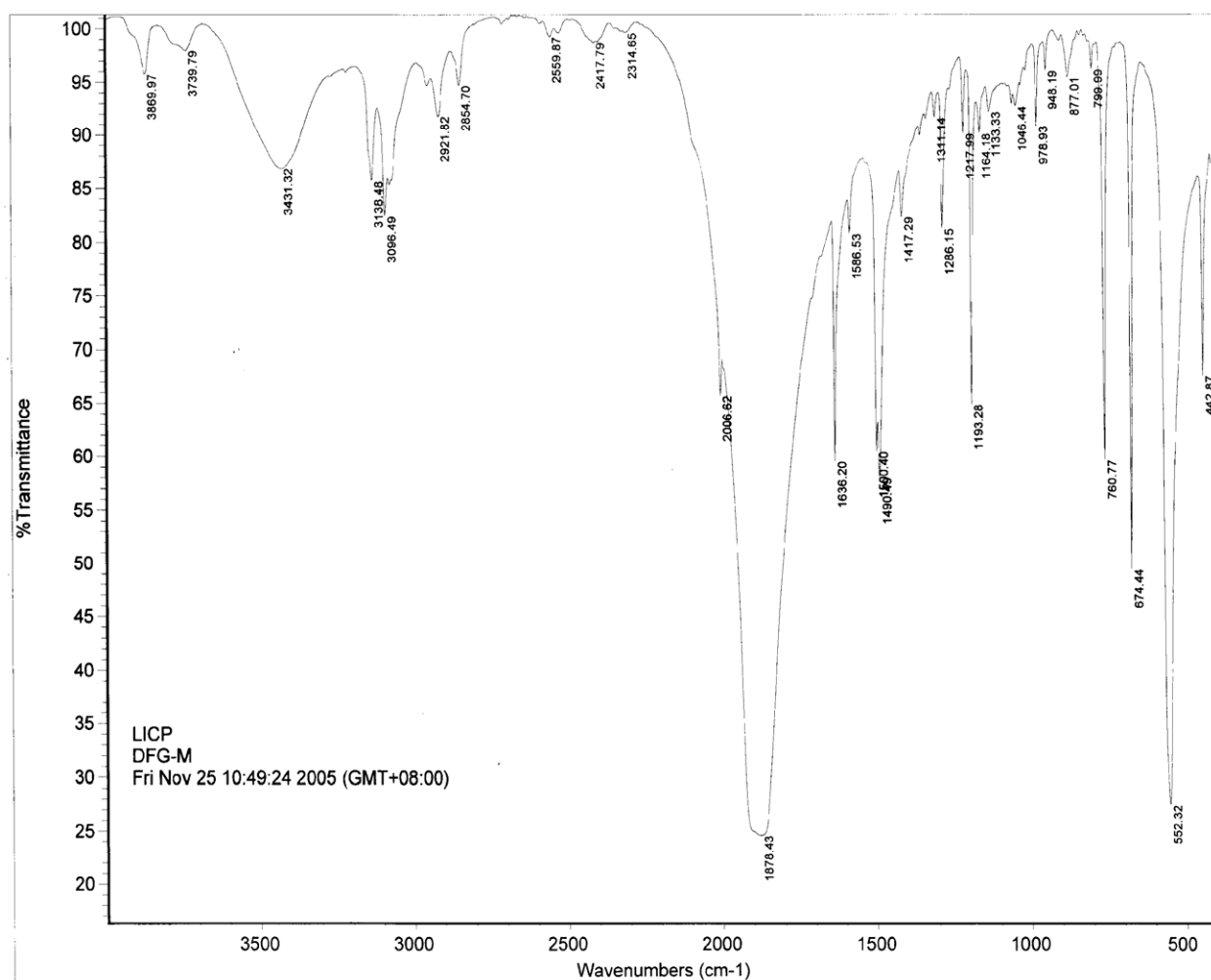


Figure 1. IR spectrum of 2a (KBr)

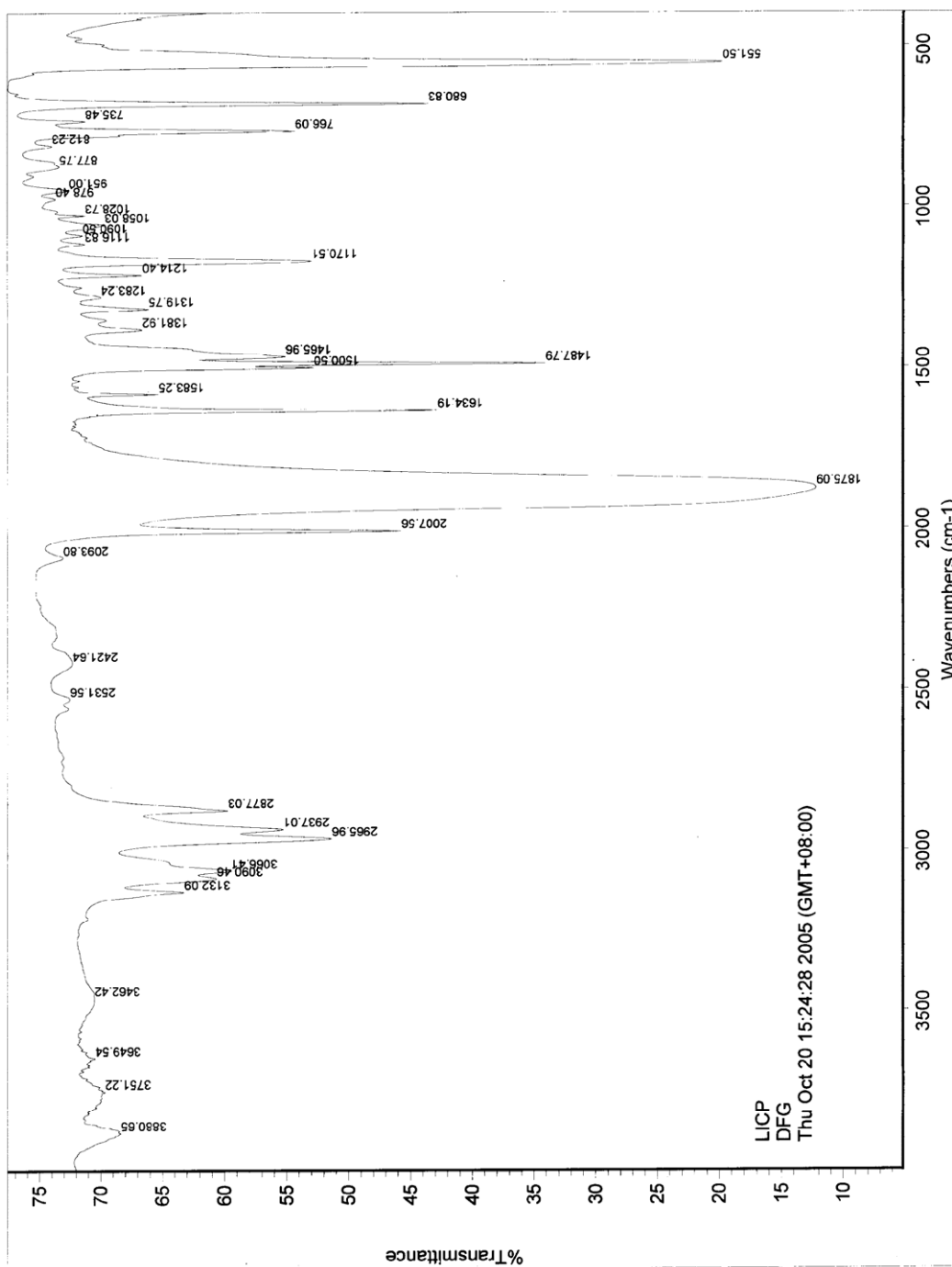


Figure 2. IR spectrum of **2b** (liquid film)

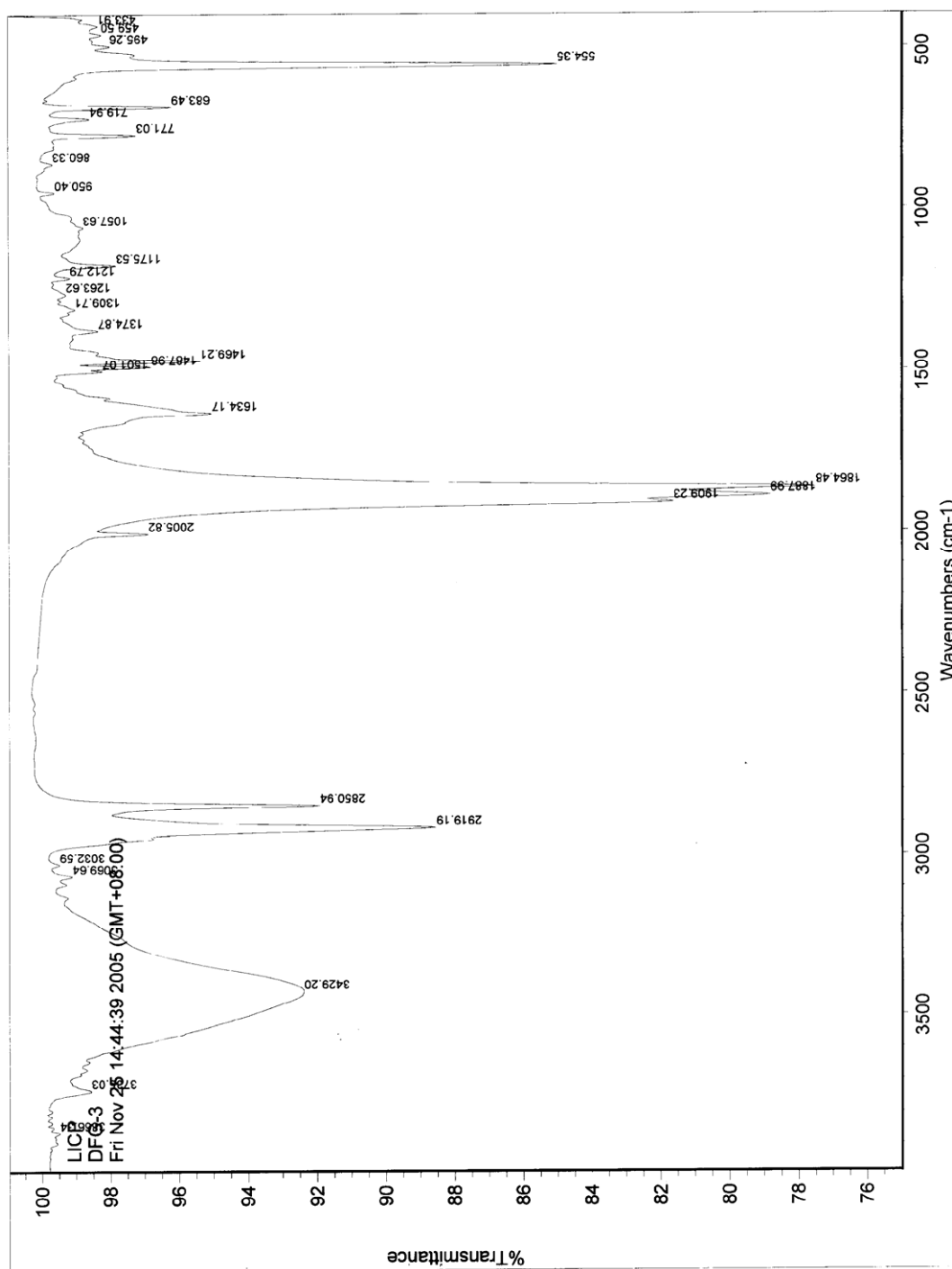


Figure 3. IR spectrum of 2c (KBr)

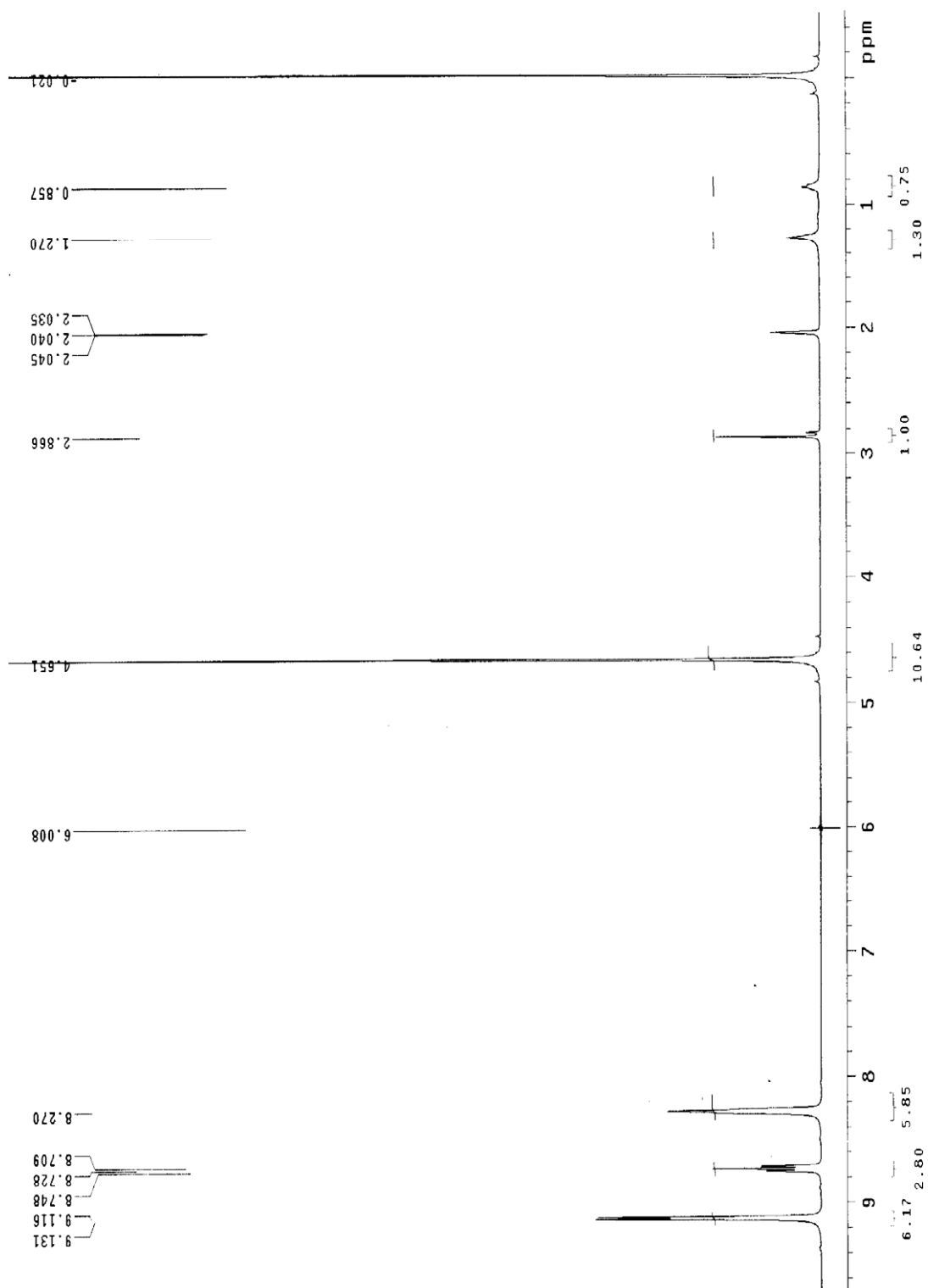


Figure 4. ^1H NMR spectrum of **2a** (in acetone- d_6)

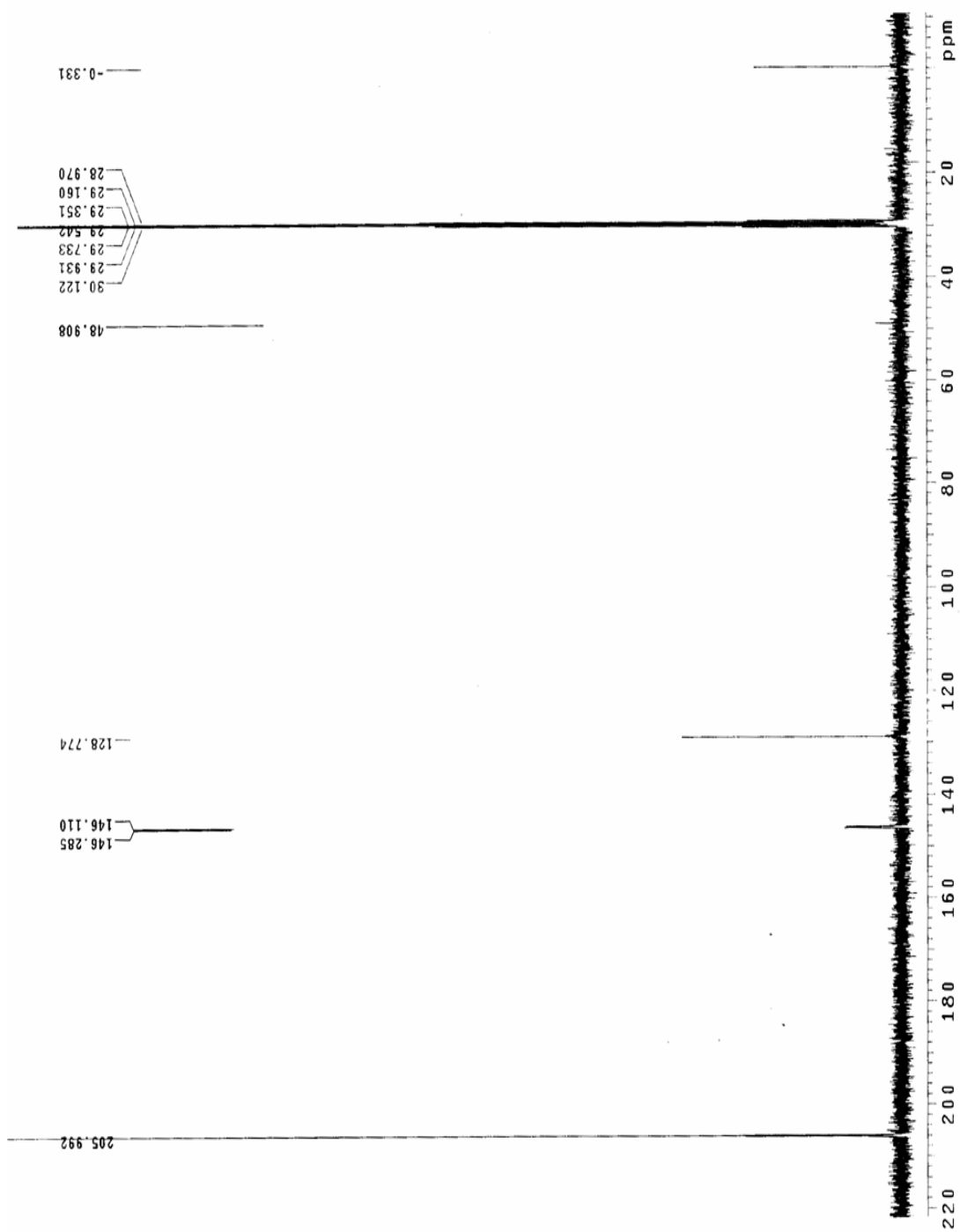


Figure 5. ^{13}C NMR spectrum of 2a (in acetone- d_6)

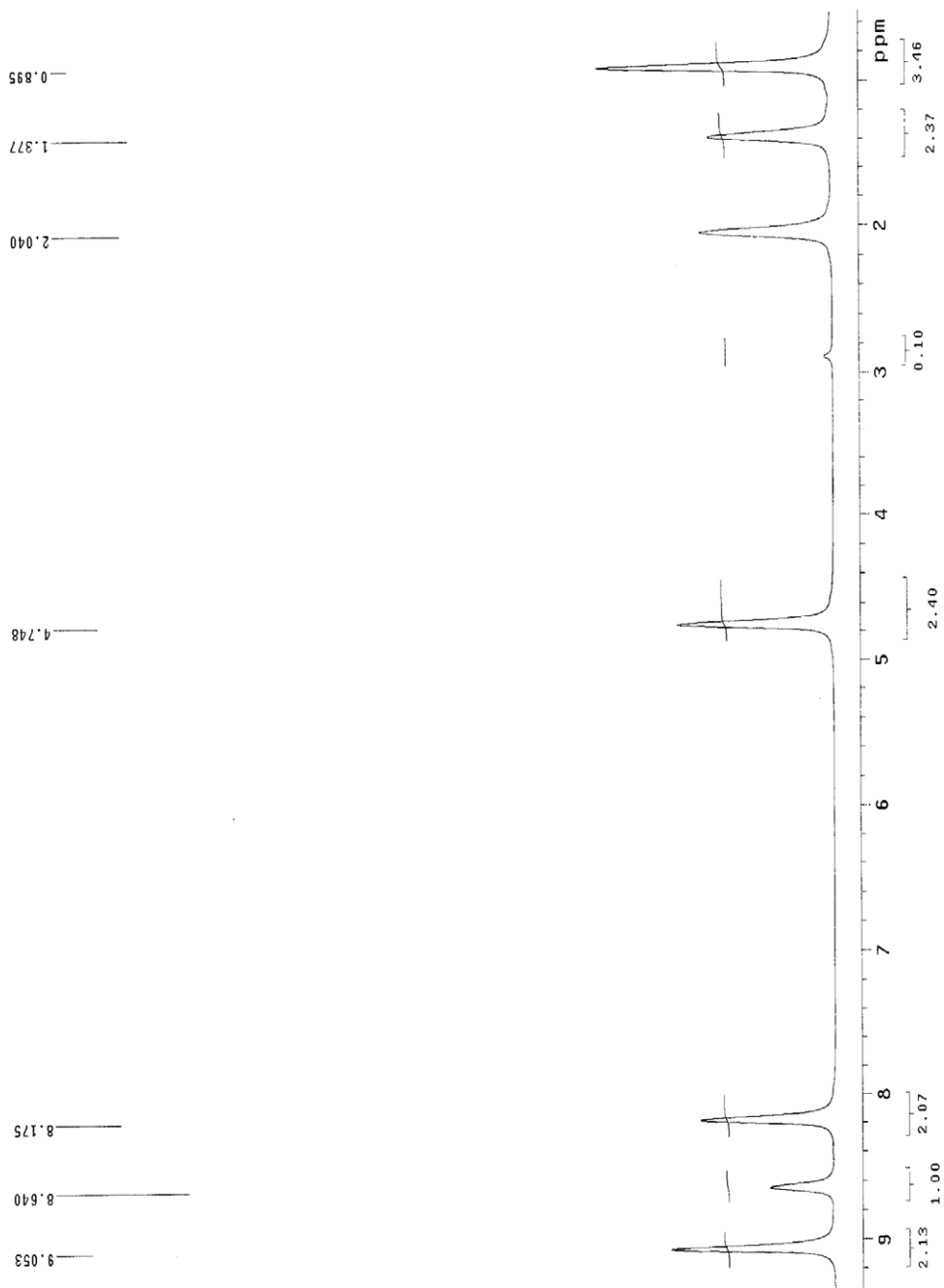


Figure 6. ^1H NMR spectrum of **2b** (in acetone- d_6)

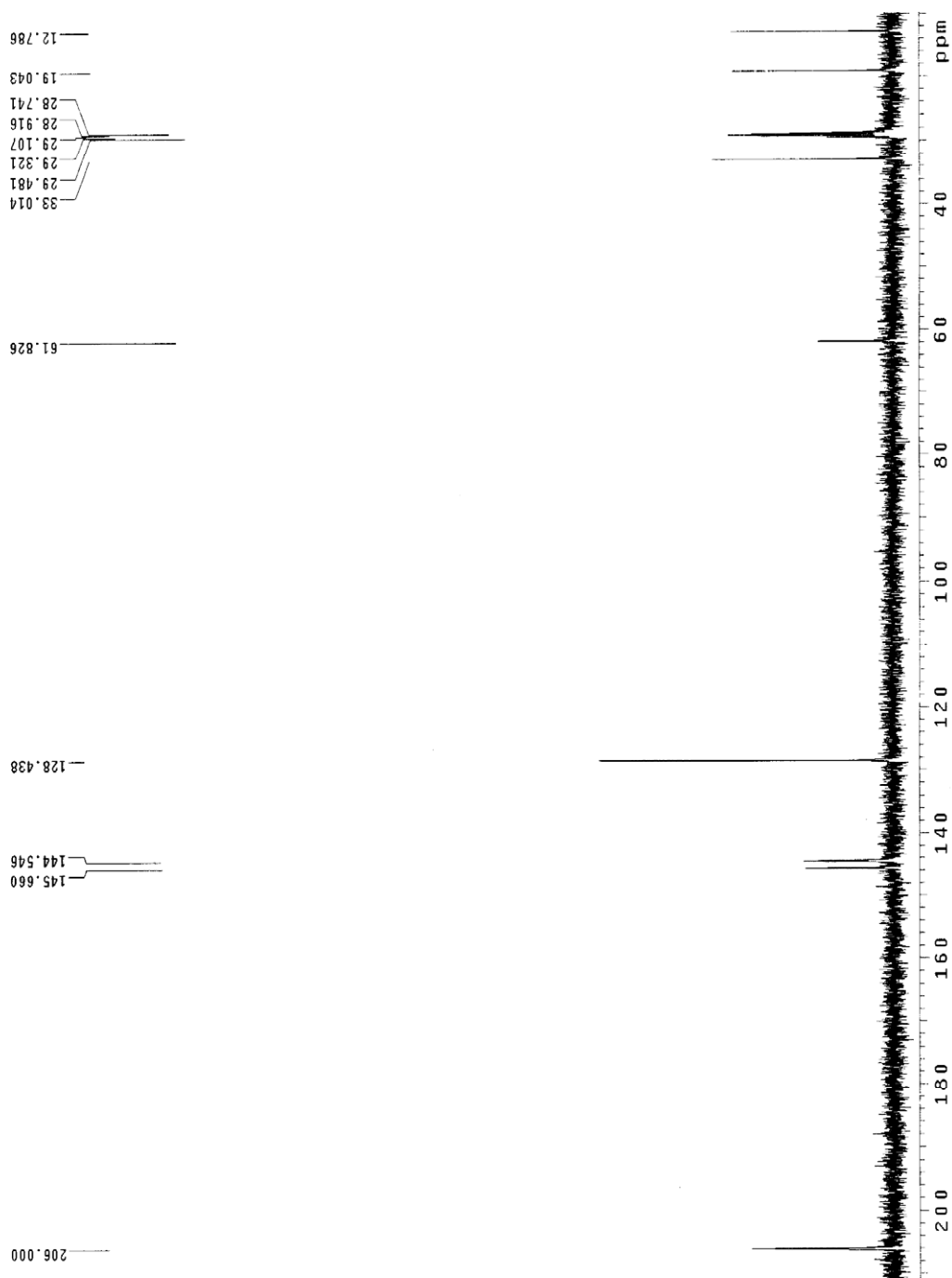


Figure 7. ^{13}C NMR spectrum of **2b** (in acetone- d_6)

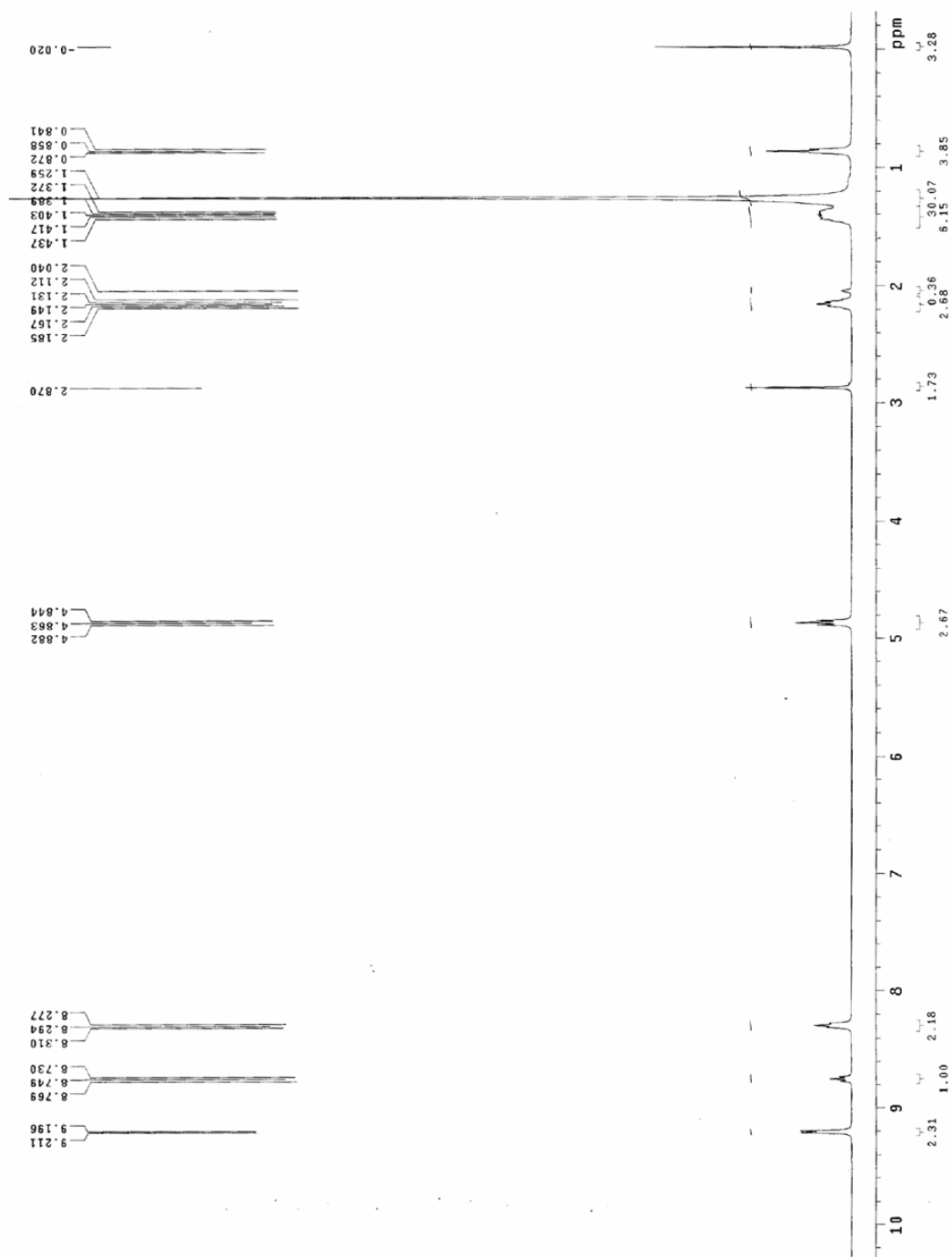


Figure 8. ^1H NMR spectrum of **2c** (in acetone- d_6)

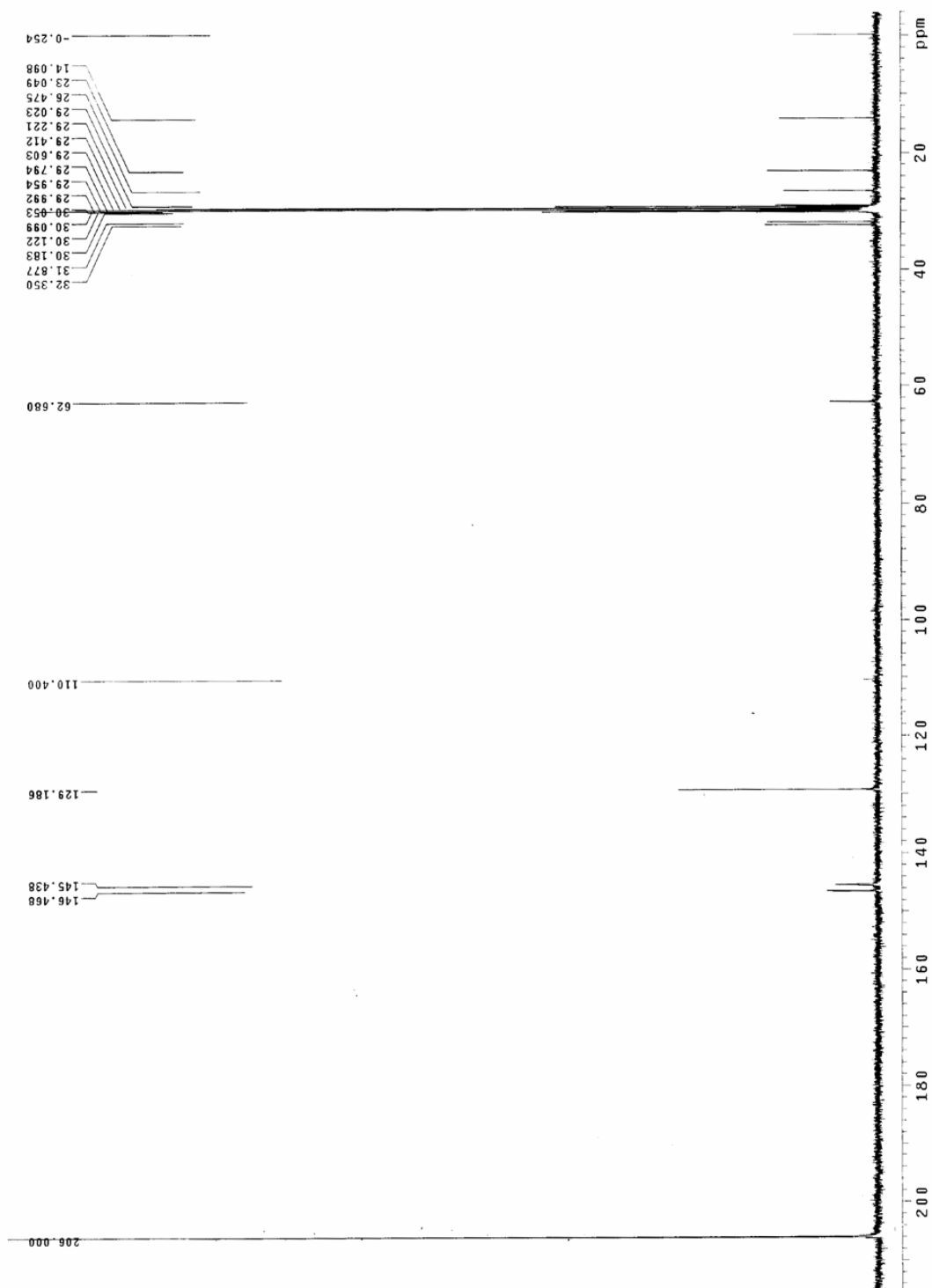


Figure 9. ^{13}C NMR spectrum of **2c** (in acetone- d_6)

General Procedure for the carbonylation of propylene oxide

Under no protection of an inert atmosphere, 0.1228g (0.4mmol) of **2b** was washed three times into a clean, dry 25mL stainless steel autoclave with 4mL of methanol, followed by the addition of 0.58g propylene oxide and a magnetic bar. The autoclave was sealed, purged three times with carbon monoxide, pressurized with the desired pressure of CO and then placed in a preheated oil bath and stirred for 24h. At the end of the reaction, the reactor was cooled in a -18°C freezer for 30min, and ventilated before qualitative and quantitative analyses were carried out.