

Supplementary Information

Synthesis of 2,3-Dihydro-4-pyranones from Epoxides via Intermolecular [4+2] Cycloaddition Reaction

Kiran Indukuri, Somasekhar Bondalapati, Sabera Sultana and Anil K. Saikia*

Experimental Section

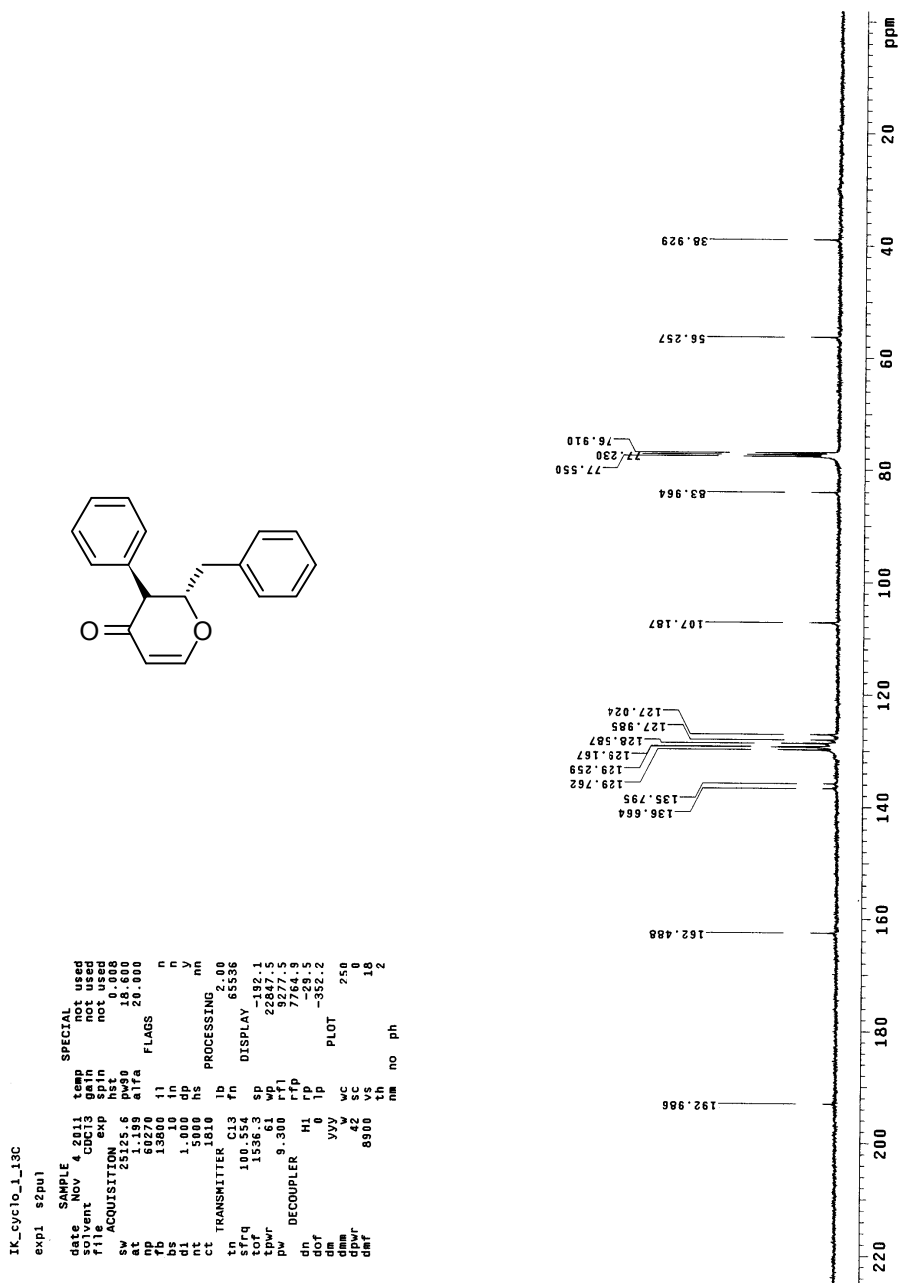
General

All the reagents are commercially obtained. $\text{BF}_3 \cdot \text{Et}_2\text{O}$ was distilled over CaH_2 prior to use. ^1H NMR spectra were recorded in CDCl_3 on Varian AS 400 (400 MHz) spectrometer using TMS as internal standard. The ^{13}C spectra were obtained on Varian AS 400 operating at 100 MHz. IR spectra were recorded on Nicolet Impact 410 FT-IR spectrometer. HRMS spectra were recorded using ESI mode. Melting points were measured in open capillary tubes and are uncorrected. All 3-ethoxy cyclobutanones are prepared by the following literature methods.

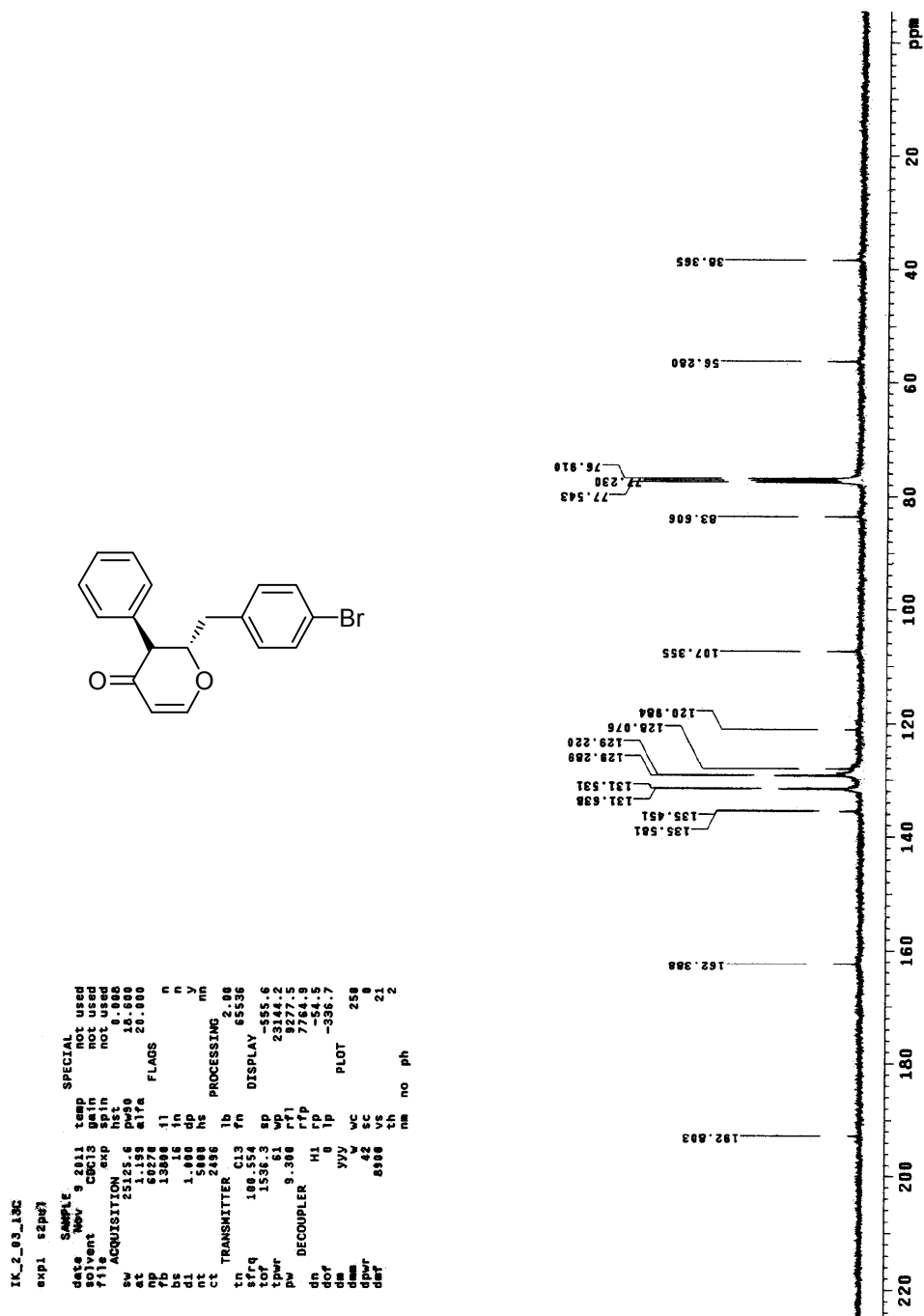
Ref:

- 1) J.-i. Matsuo, R. Okuno, K. Takeuchi, M. Kawano and H. Ishibashi, *Tetrahedron Lett.* 2010, **51**, 3736.
- 2) J.-i. Matsuo, S. Sasaki, H. Tanaka and H. Ishibashi, *J. Am. Chem. Soc.* 2008, **130**, 11600.

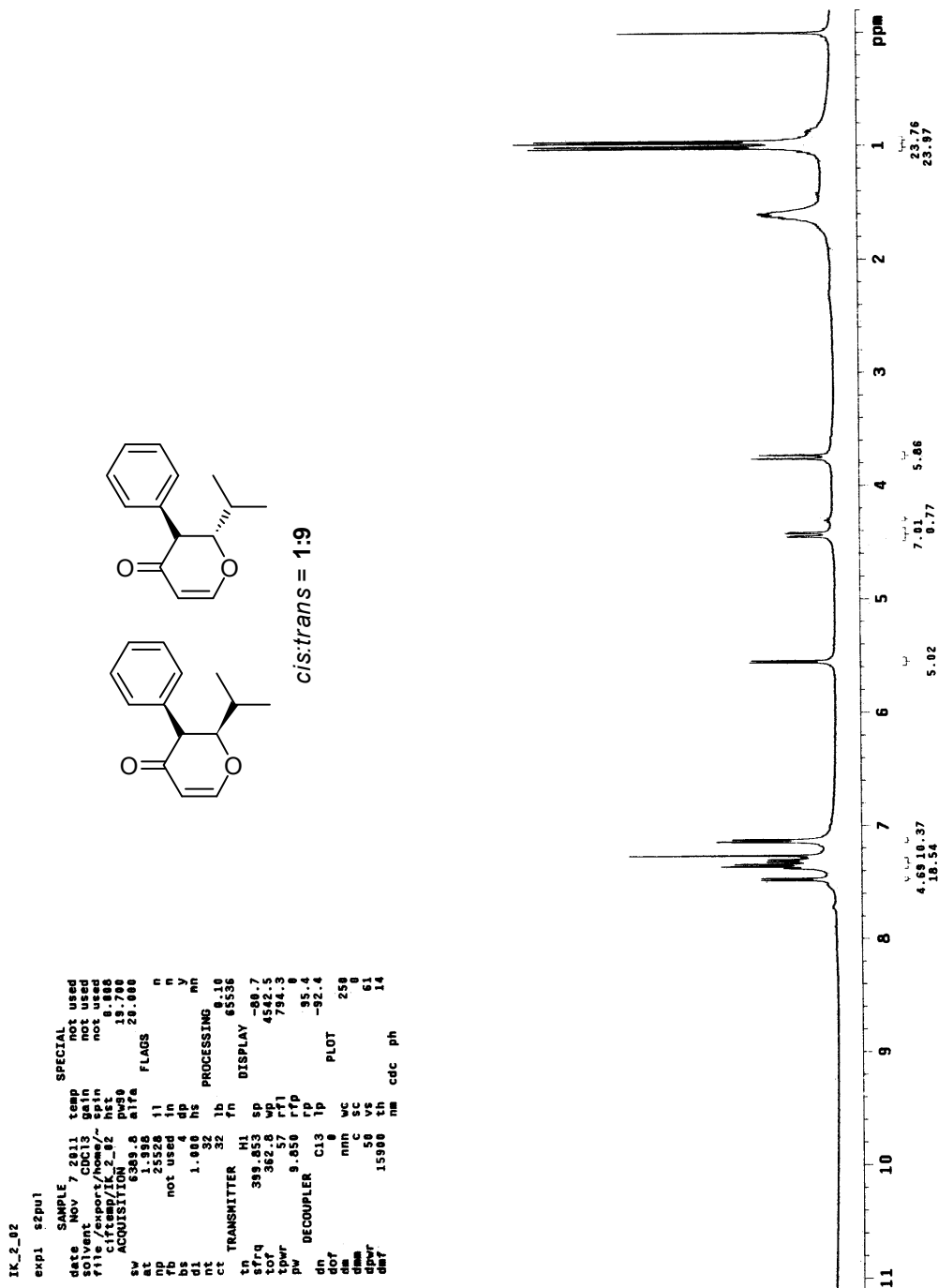
¹³C NMR spectrum of 1



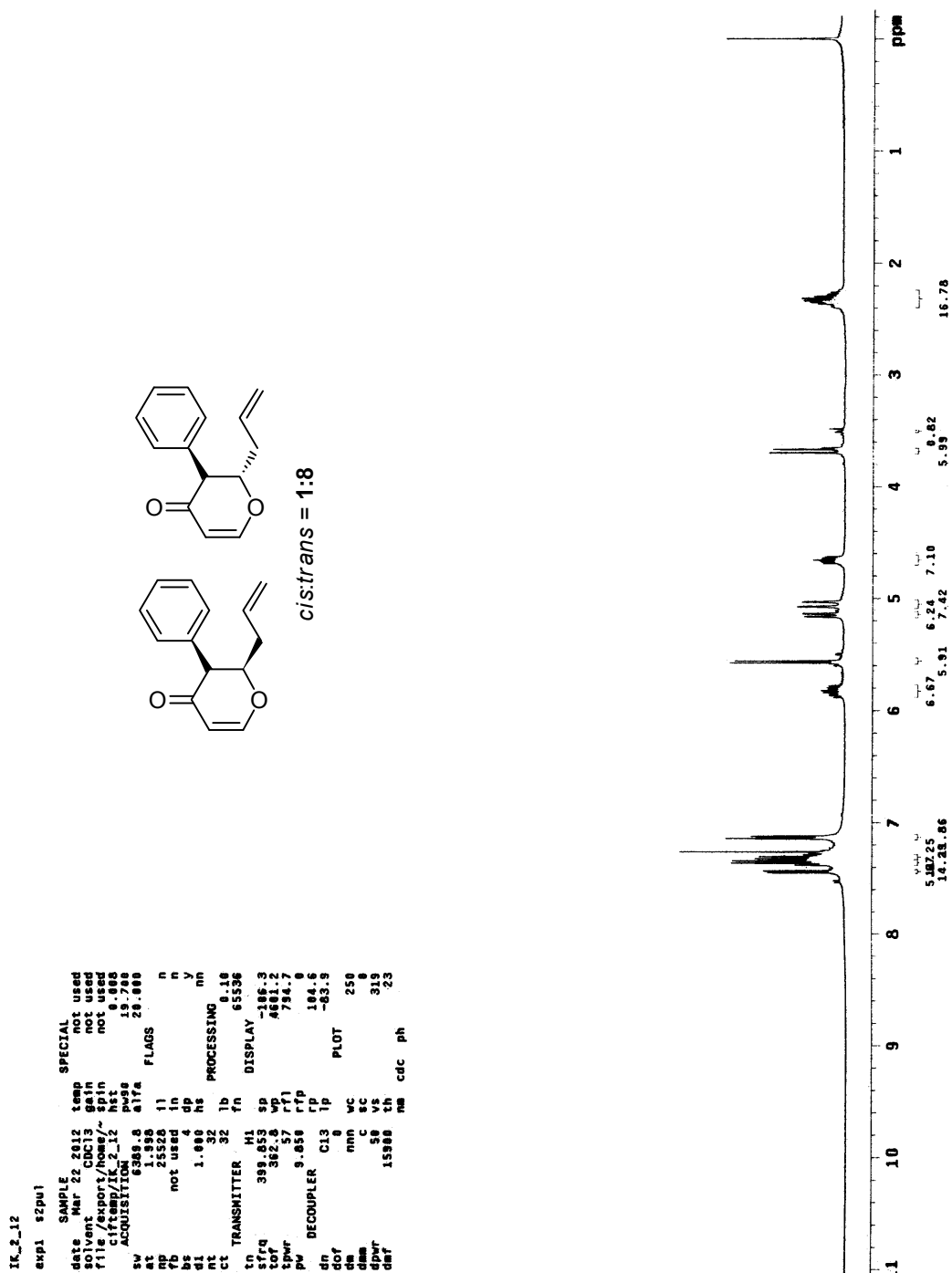
¹³C NMR spectrum of 2



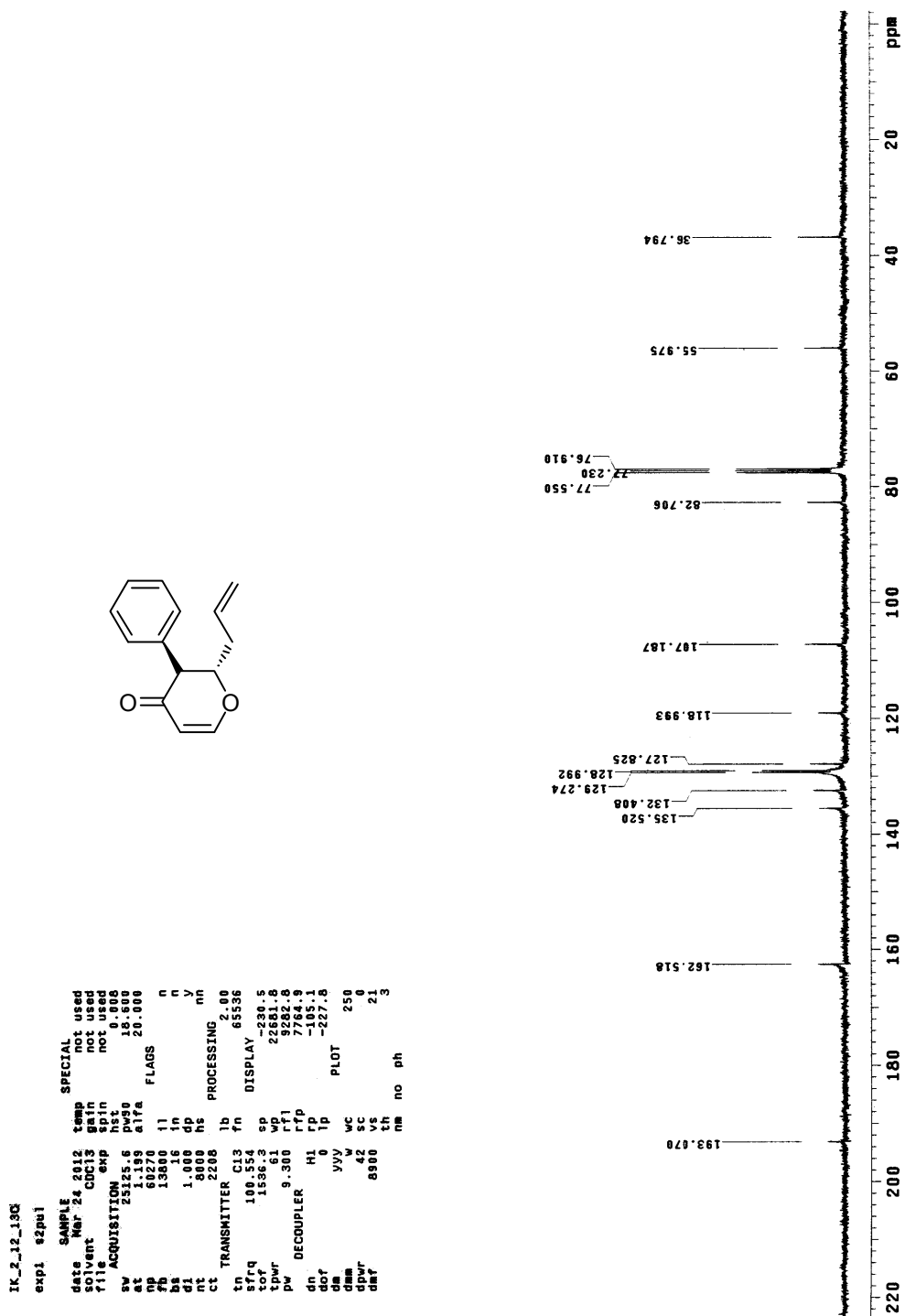
¹H NMR spectrum of 3



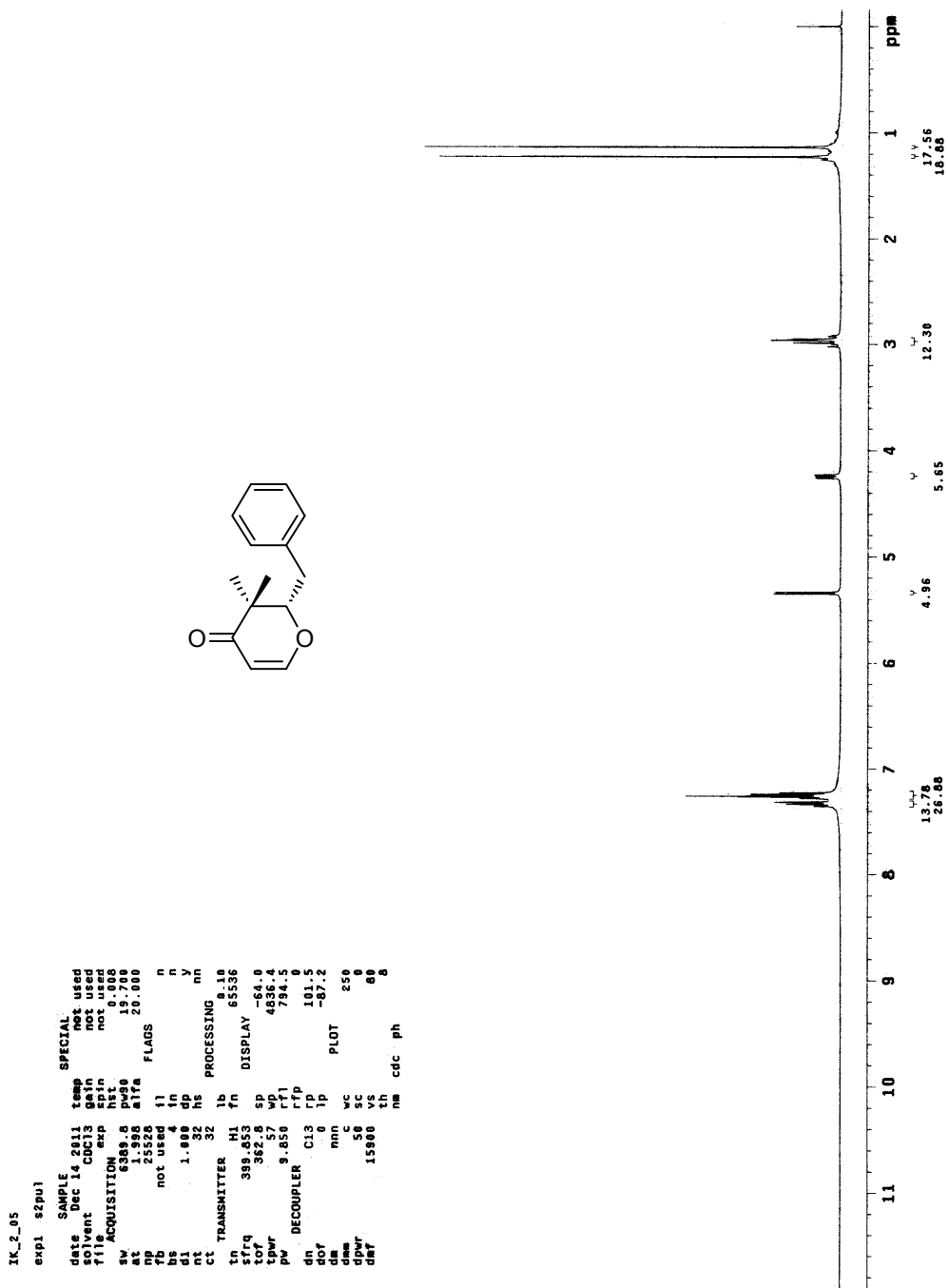
¹H NMR spectrum of 4



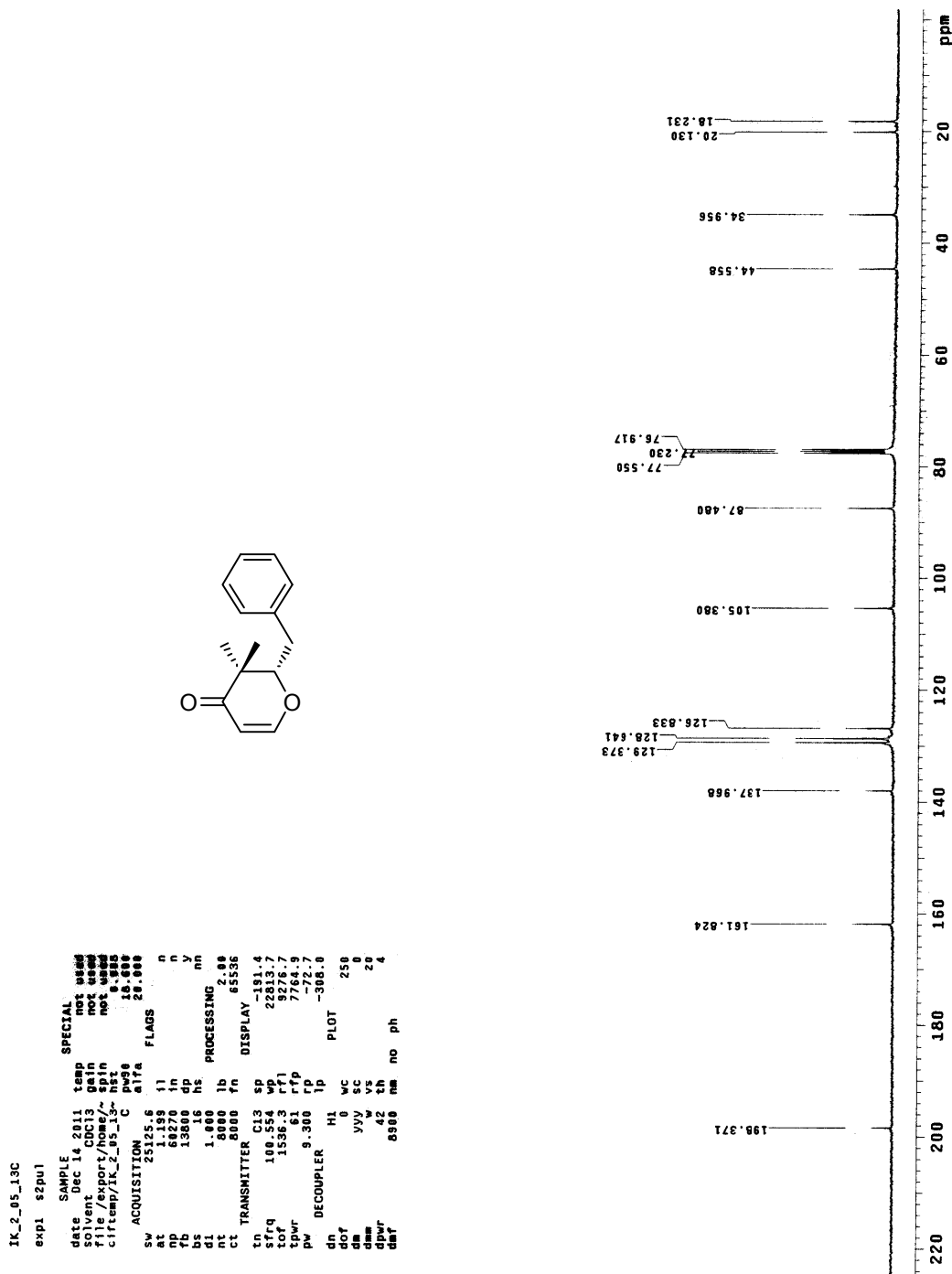
¹³C NMR spectrum of 4



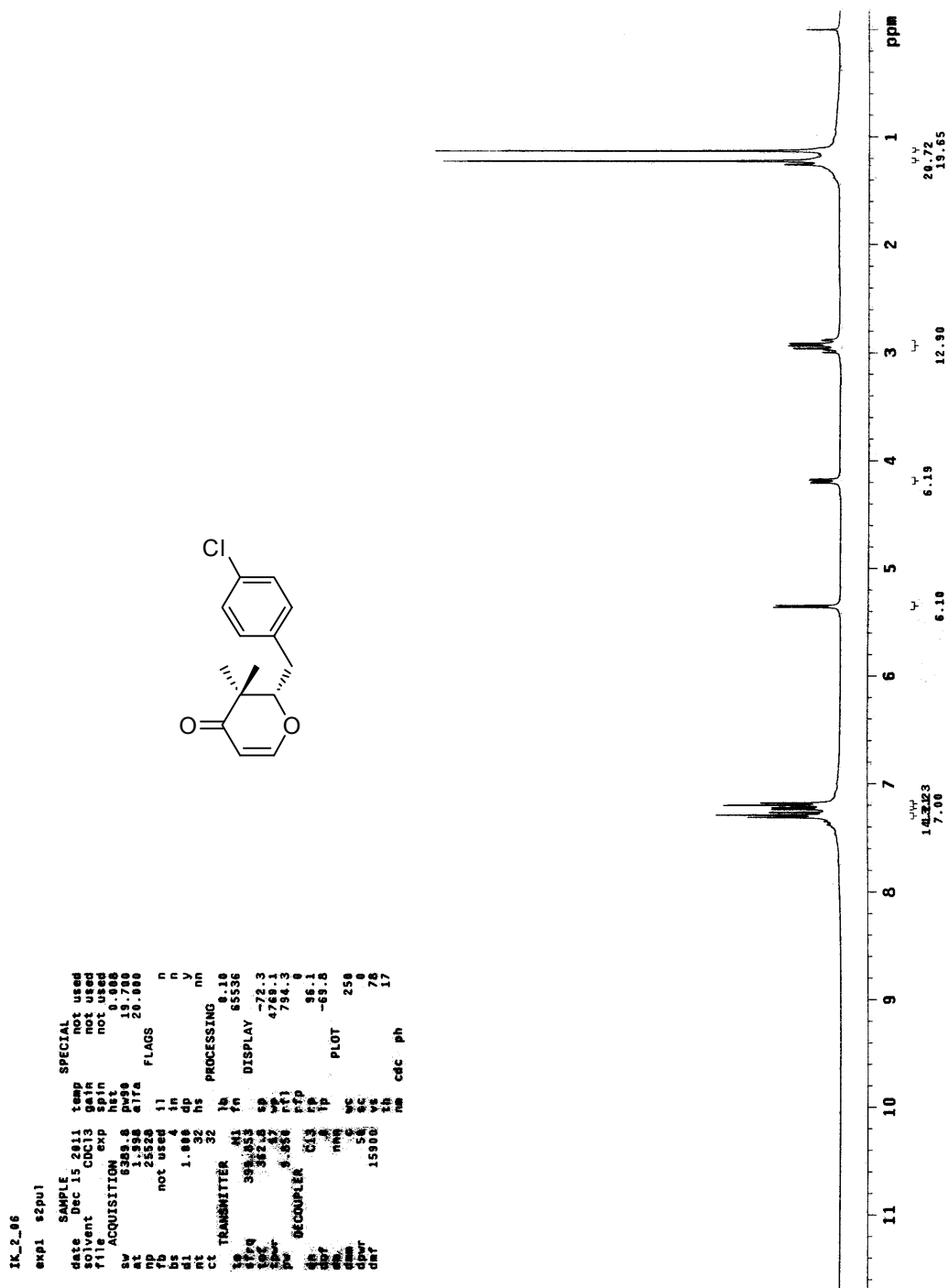
¹H NMR spectrum of 5



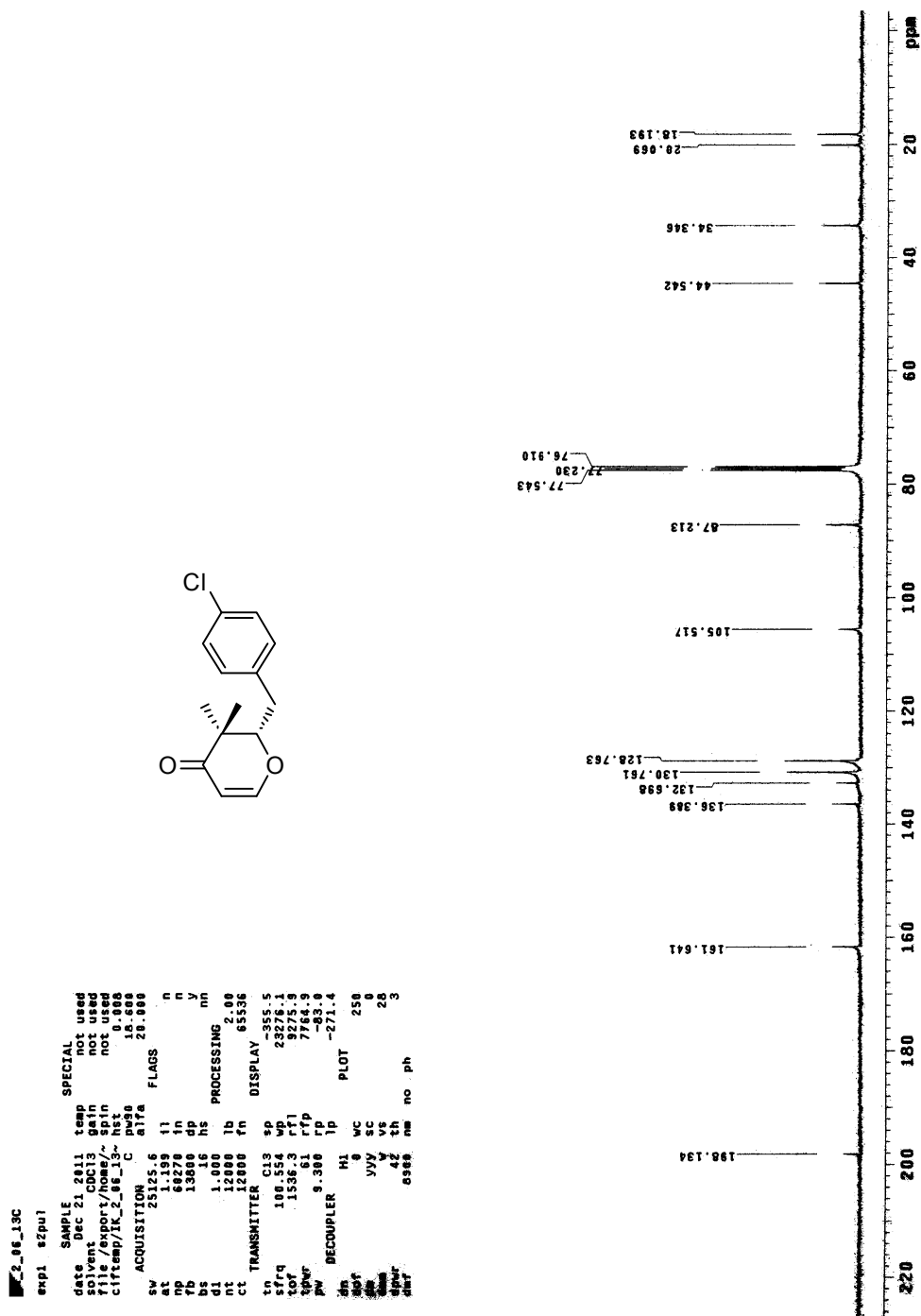
¹³C NMR spectrum of 5



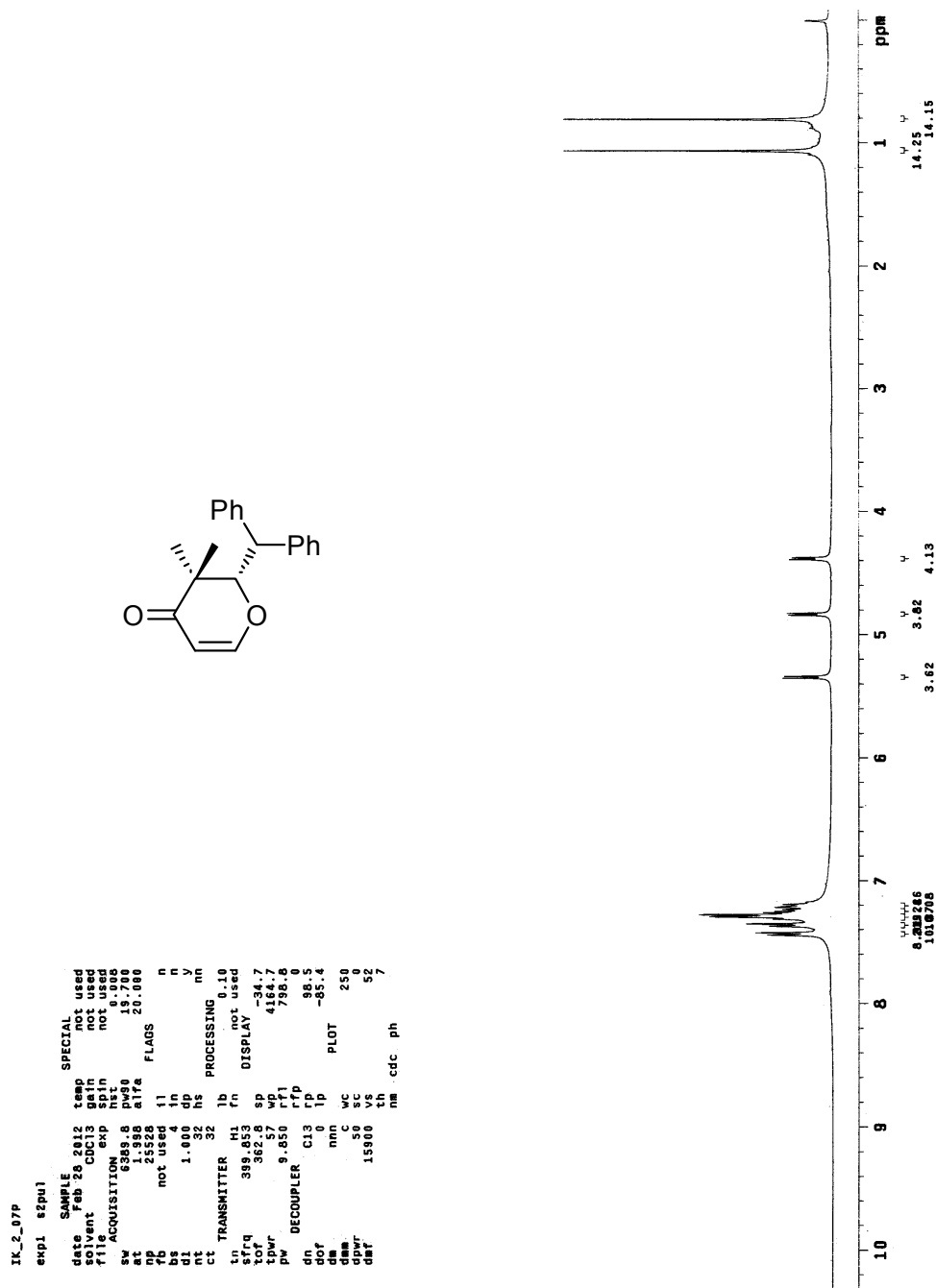
¹H NMR spectrum of 6



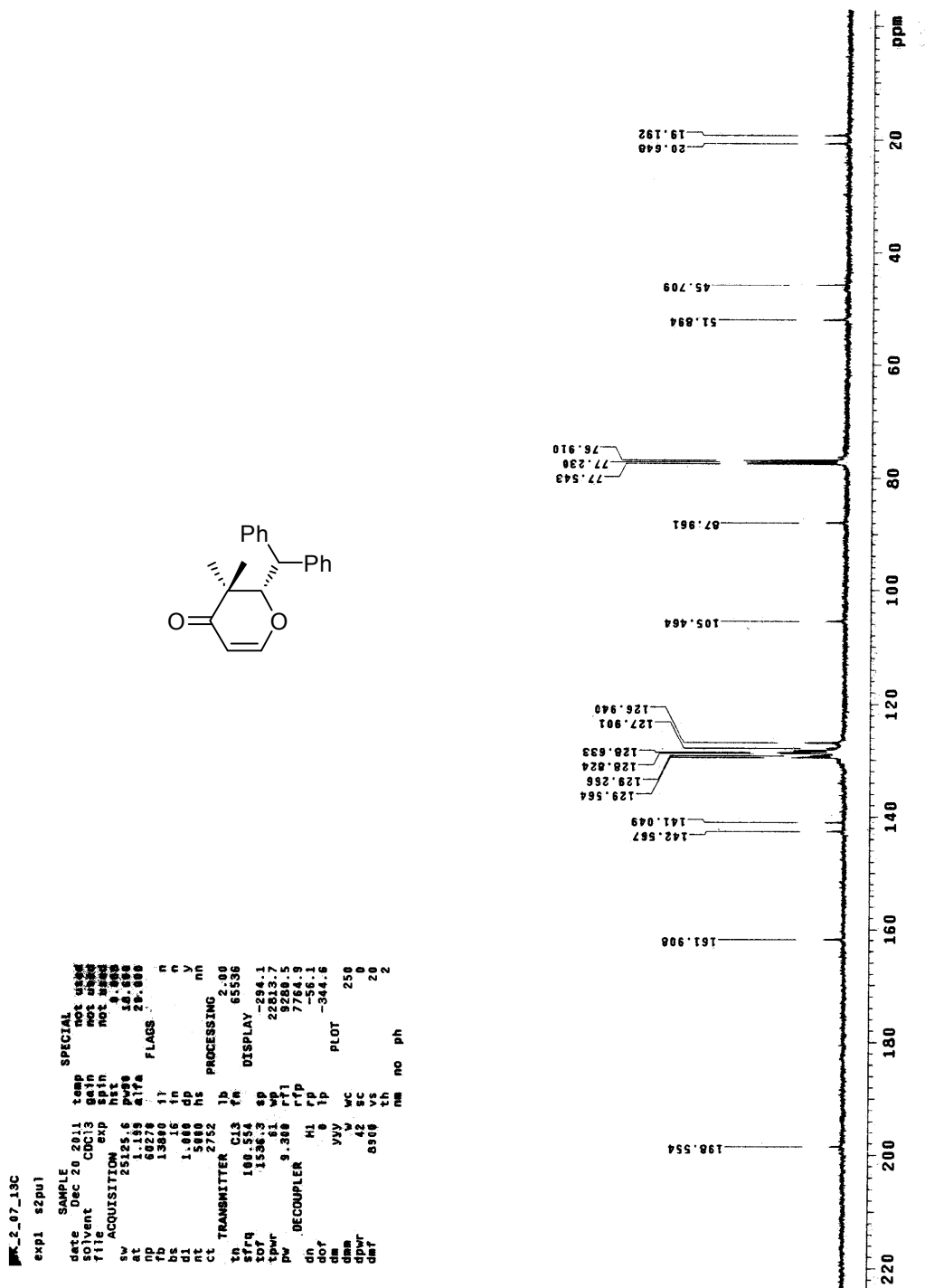
¹³C NMR spectrum of 6



¹H NMR spectrum of 7



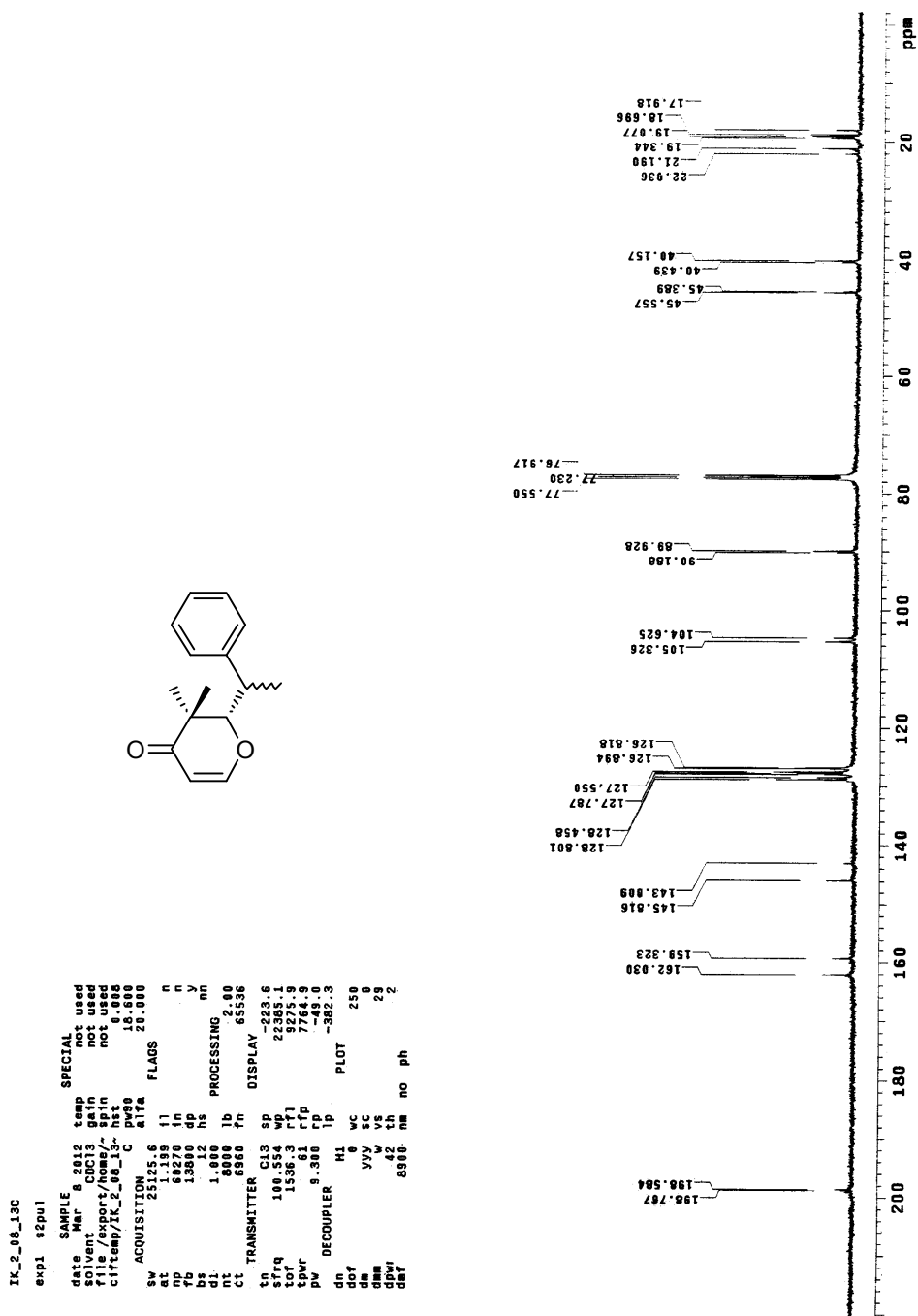
¹³C NMR spectrum of 7



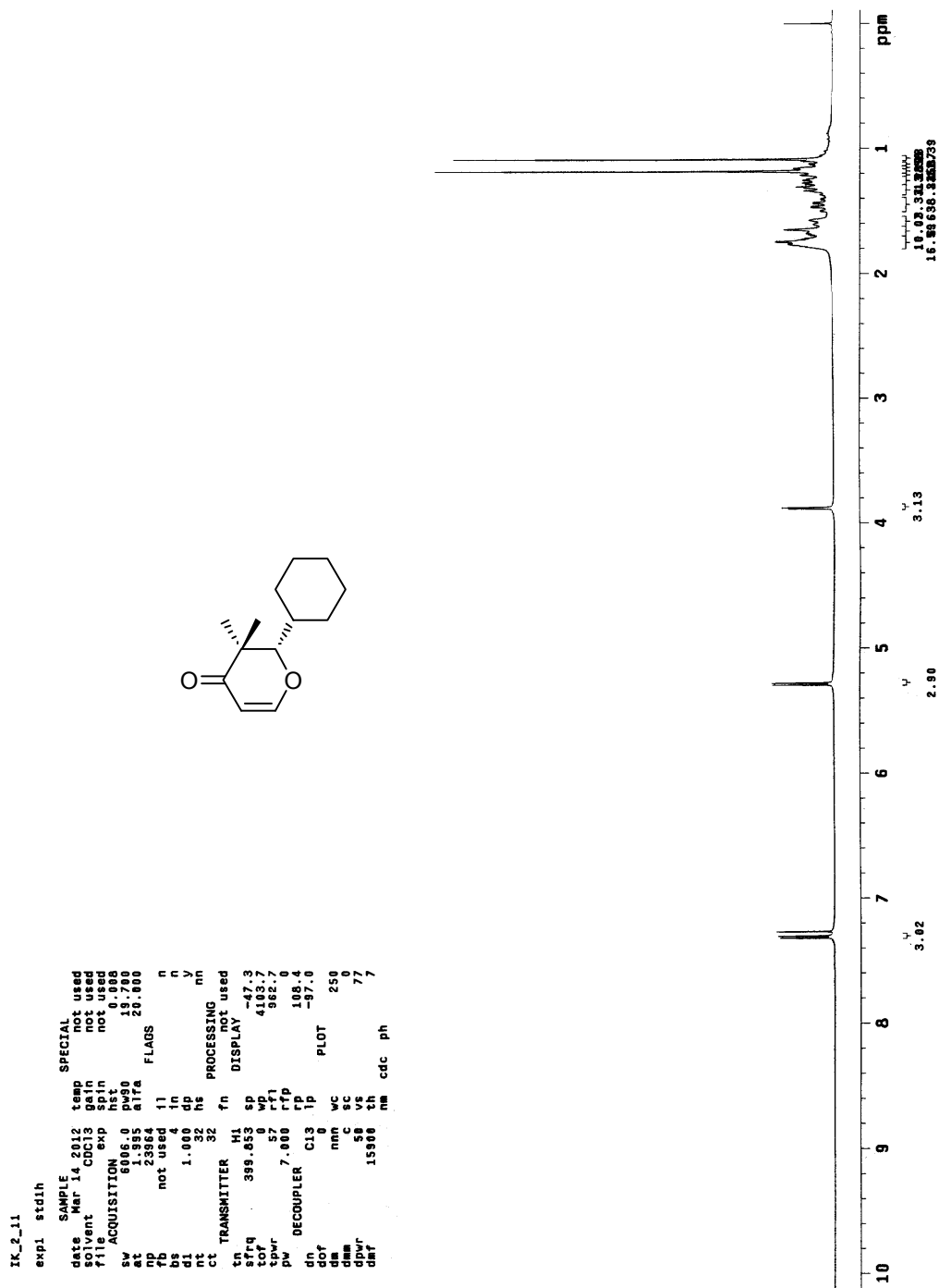
¹H NMR spectrum of 8



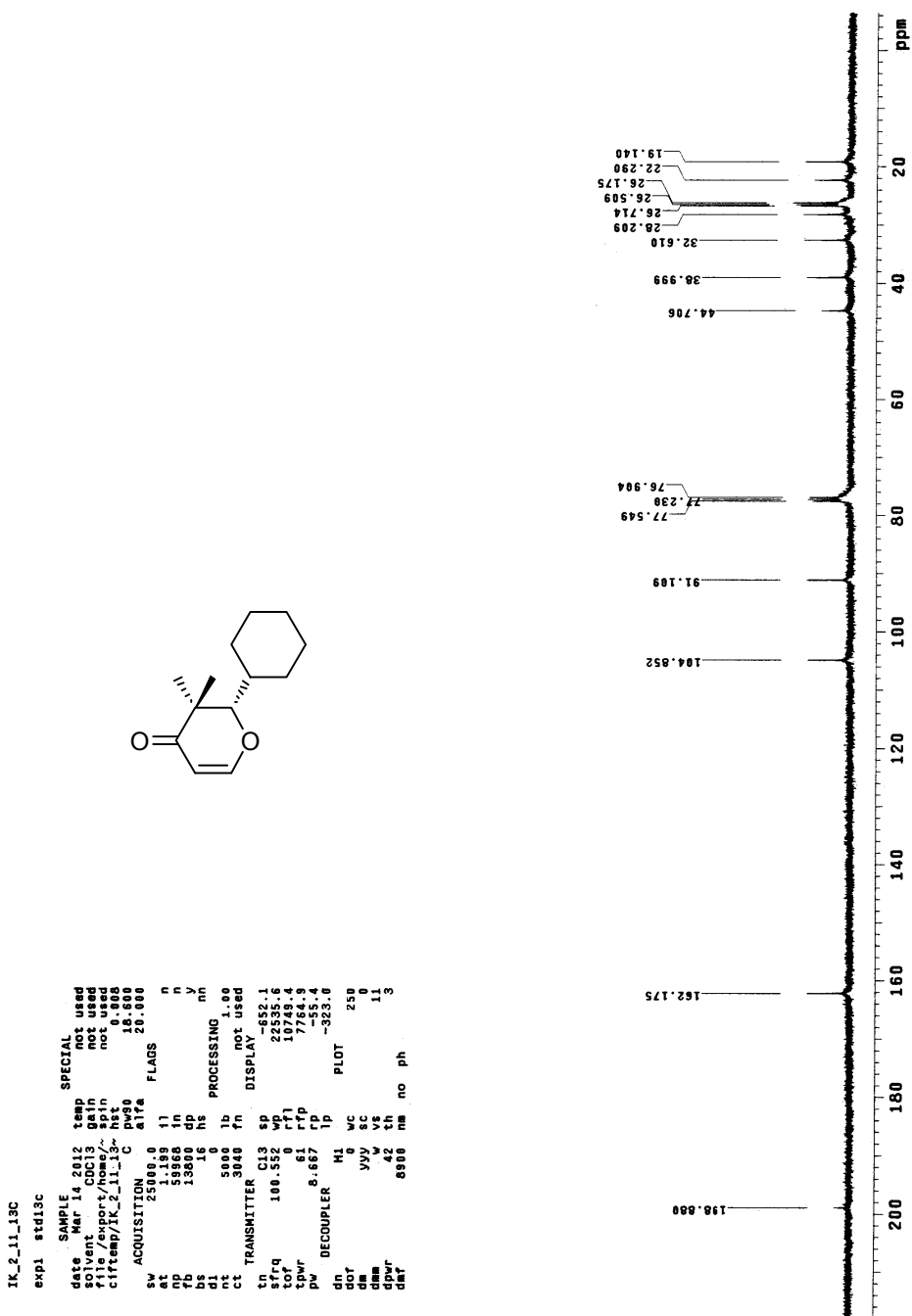
¹³C NMR spectrum of 8



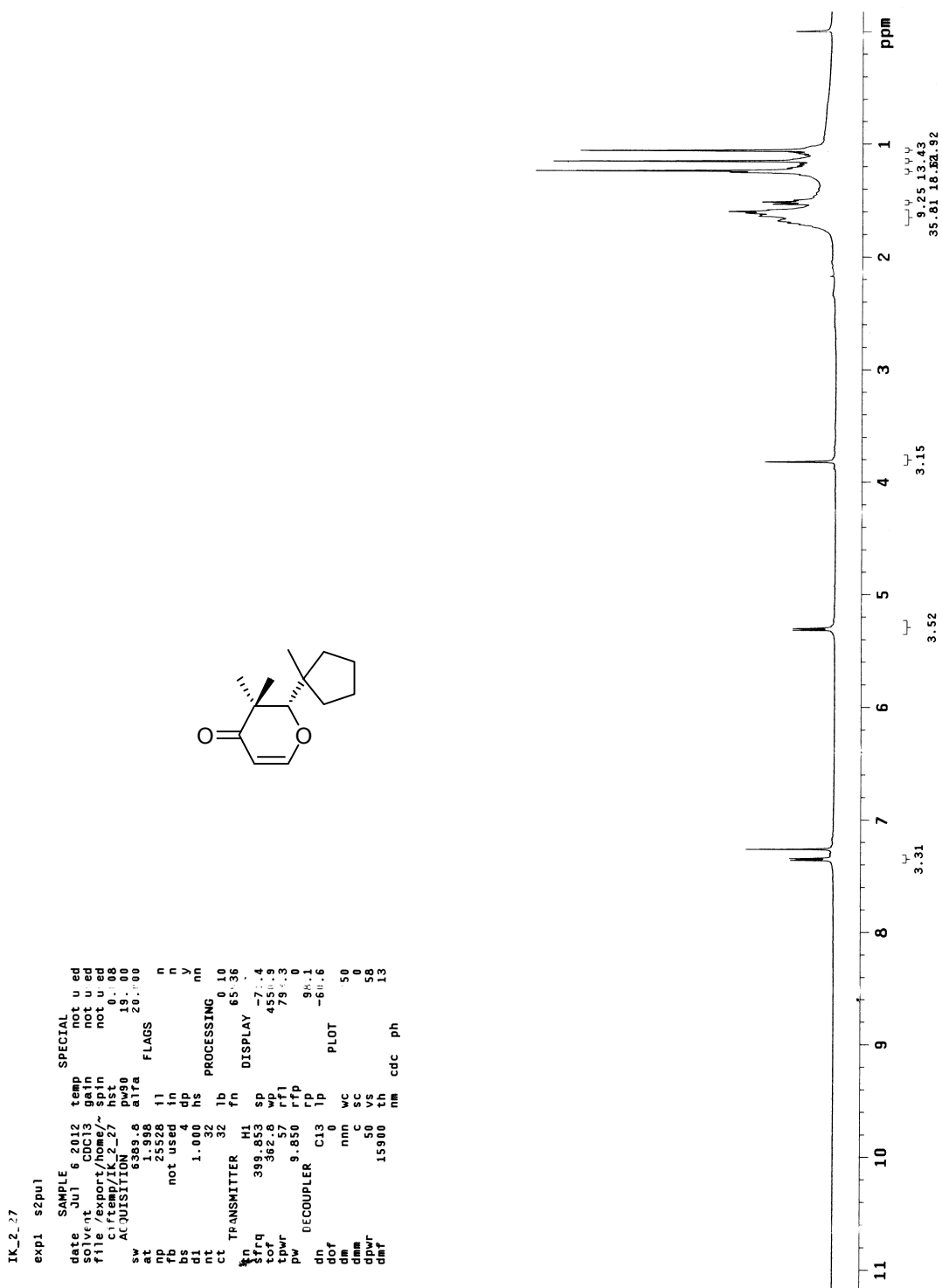
¹H NMR spectrum of **9**



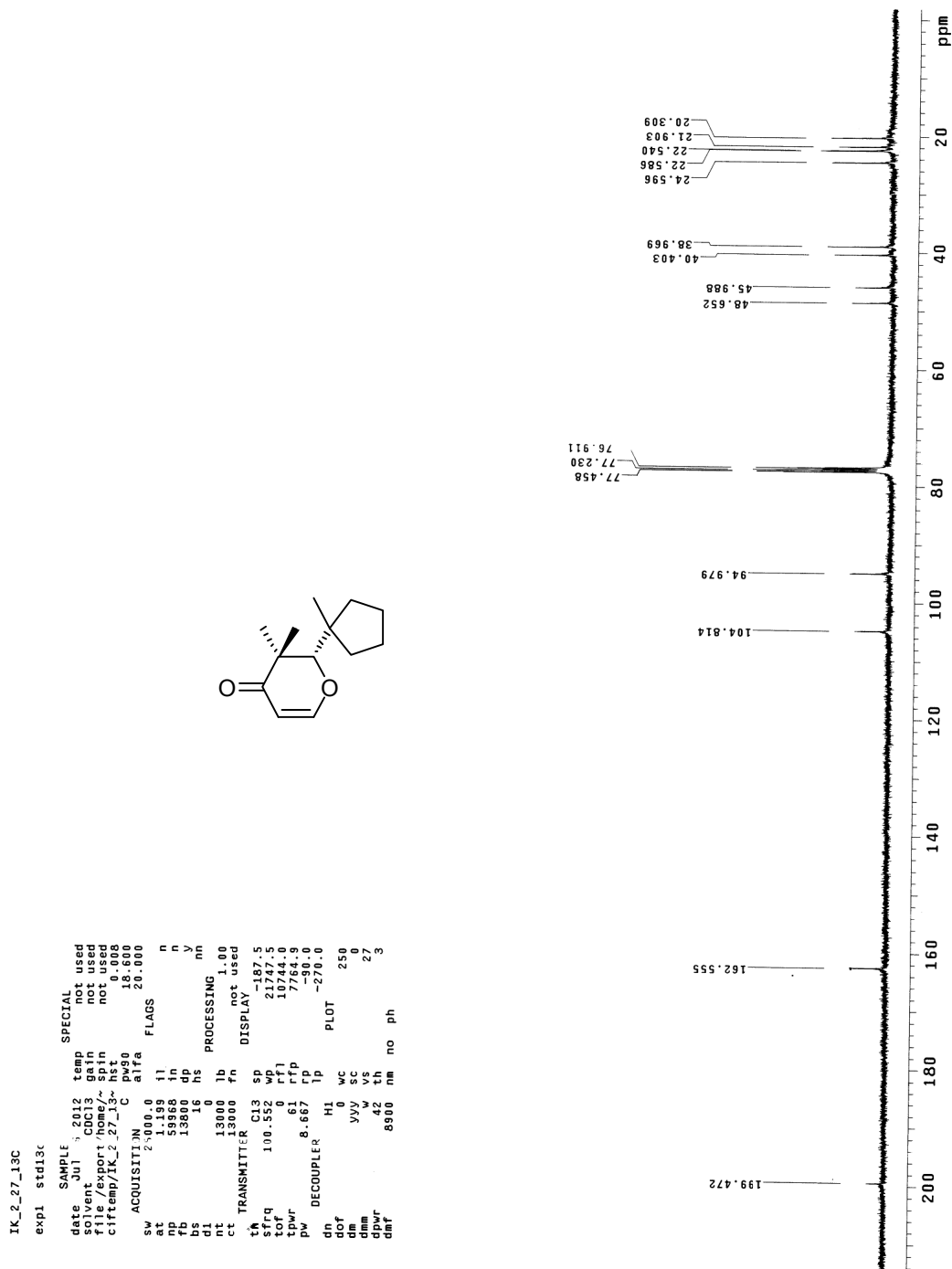
¹³C NMR spectrum of 9



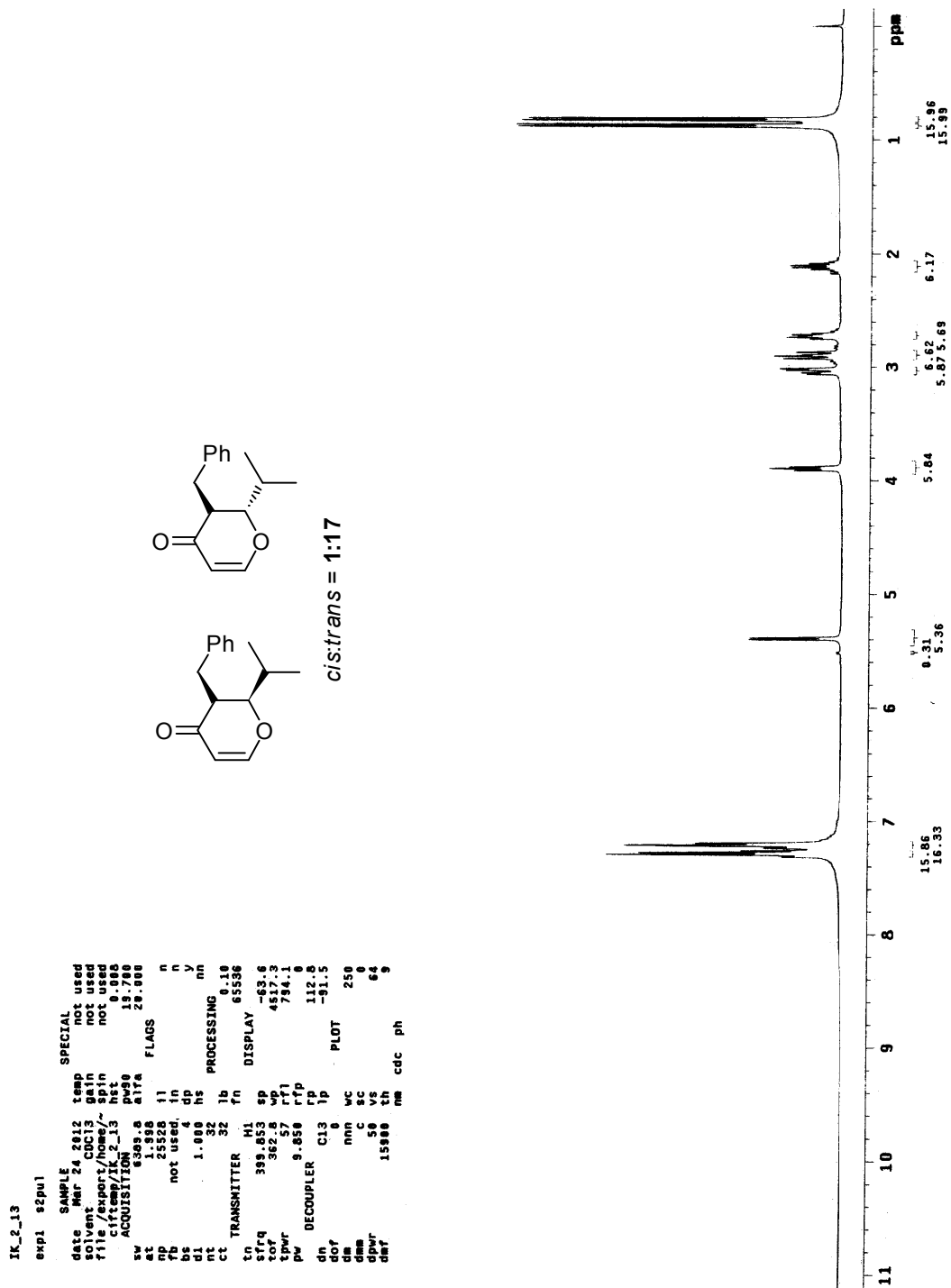
¹H NMR spectrum of 10



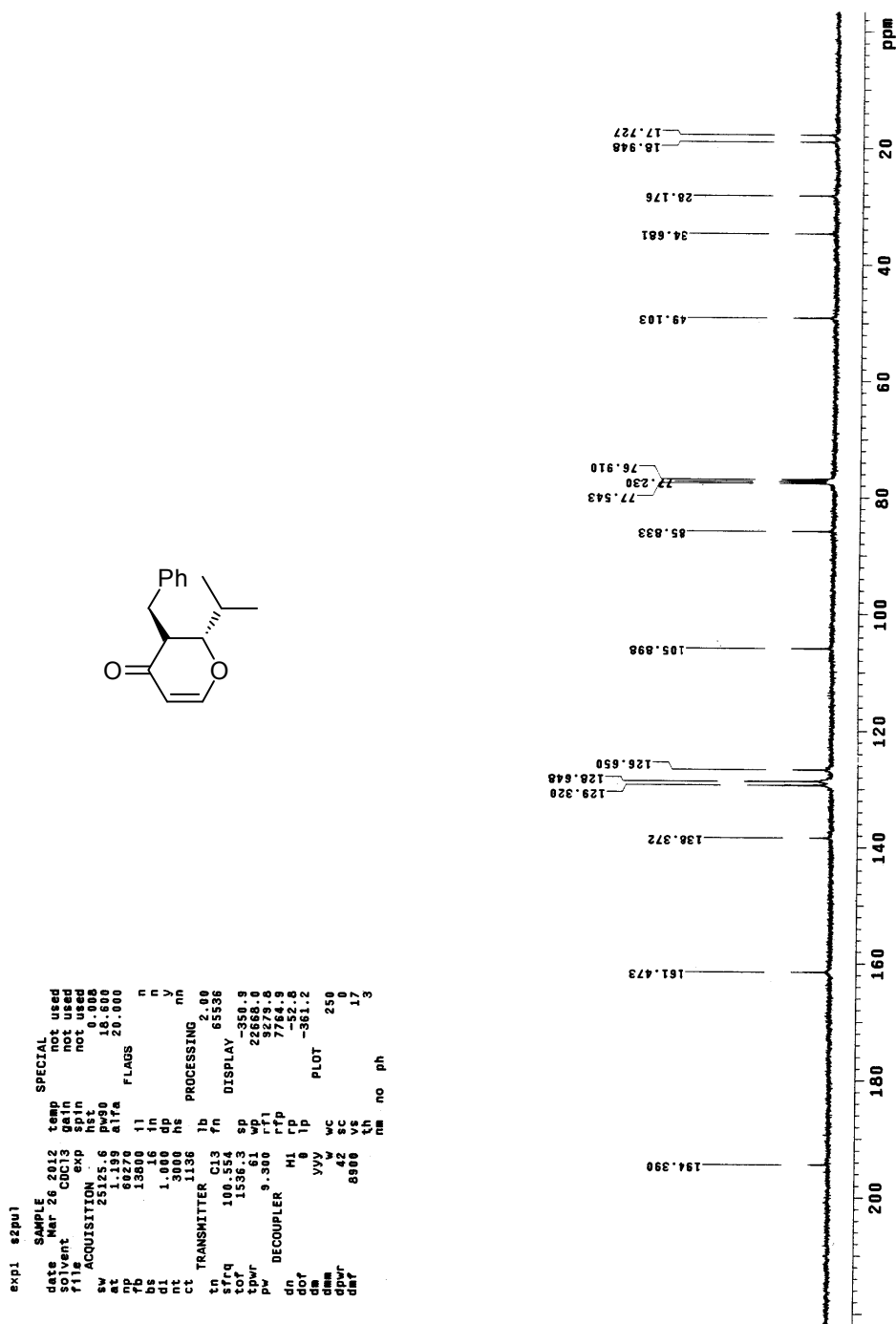
¹³C NMR spectrum of 10



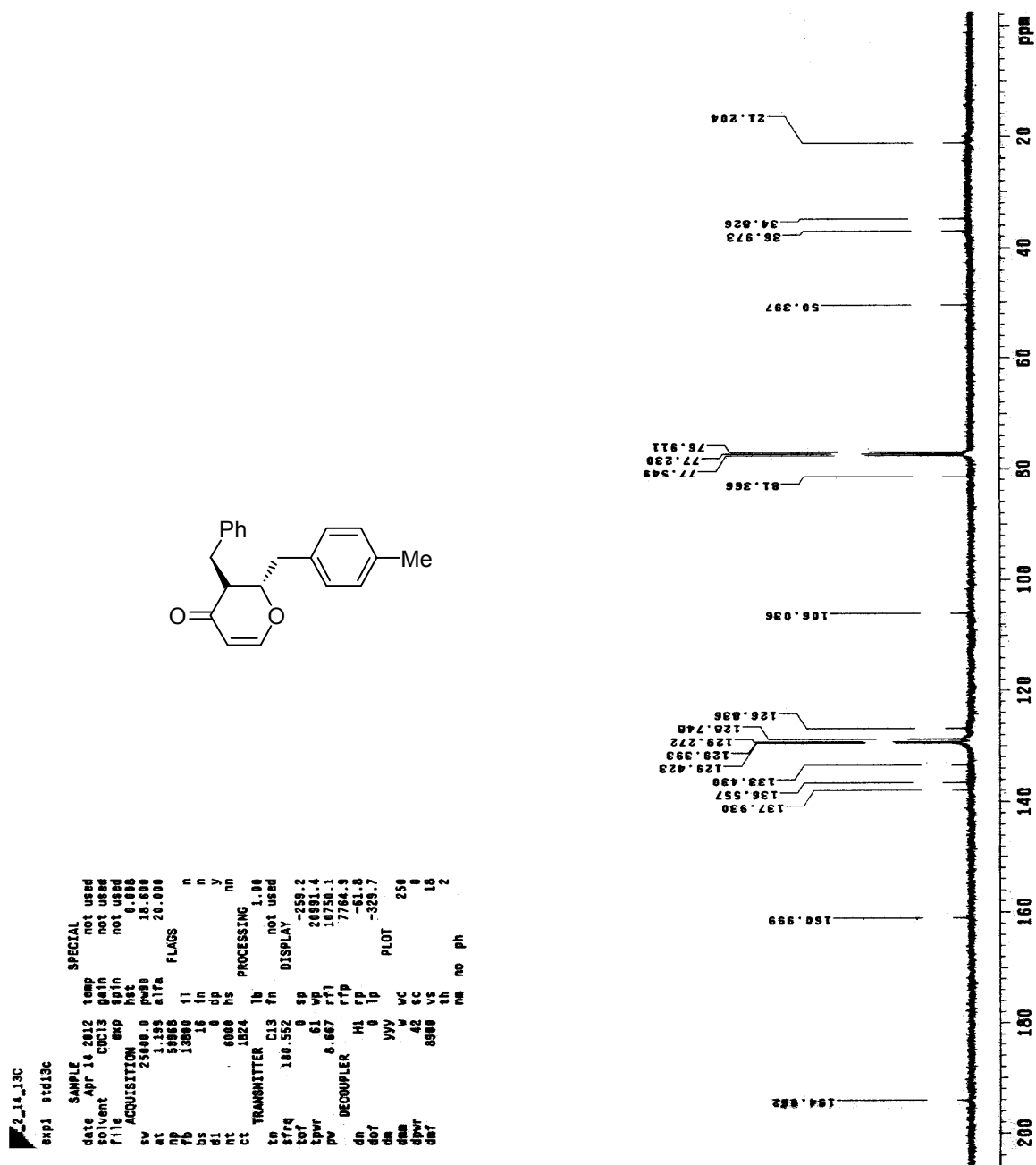
^1H NMR spectrum of 13



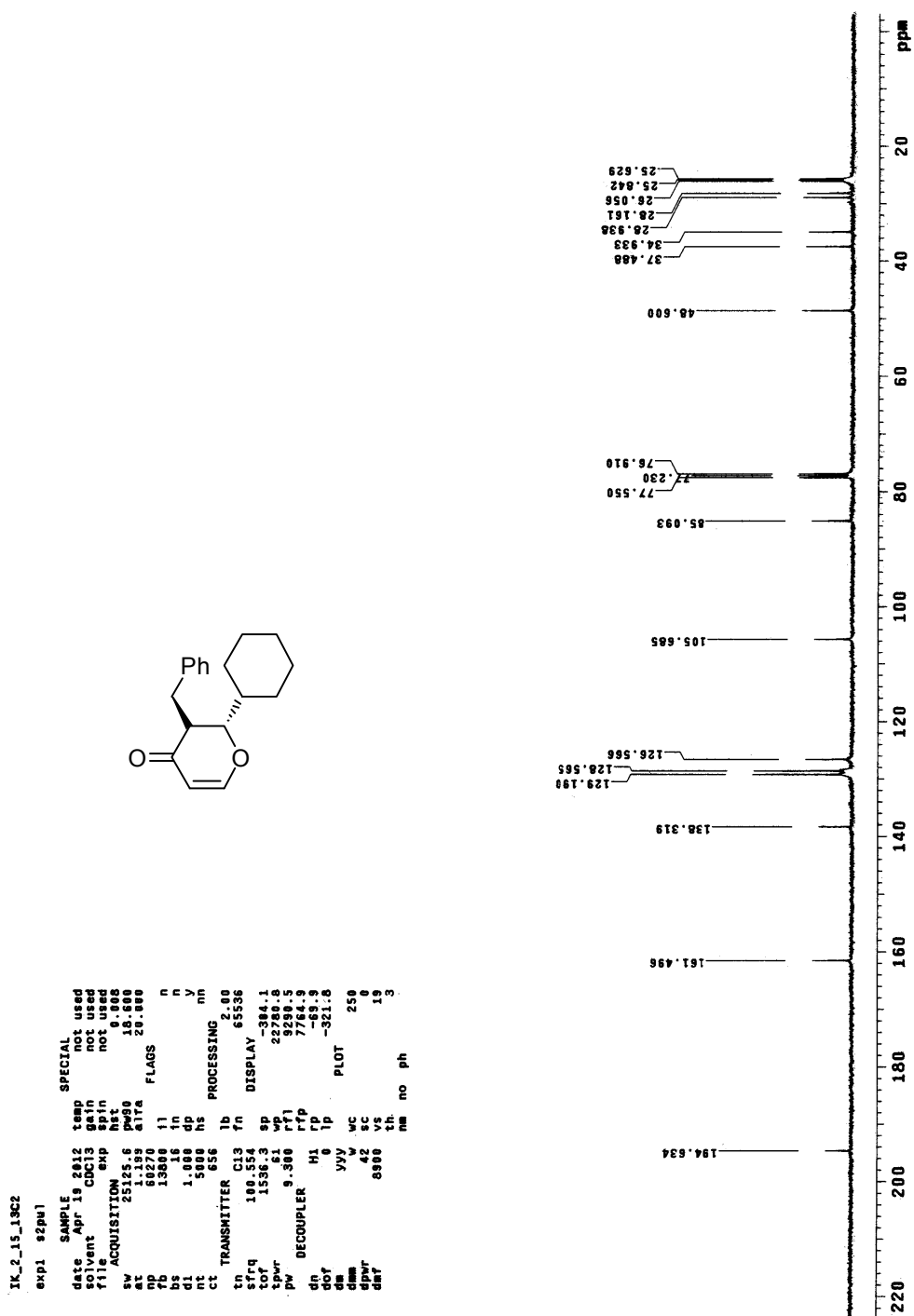
¹³C NMR spectrum of 13



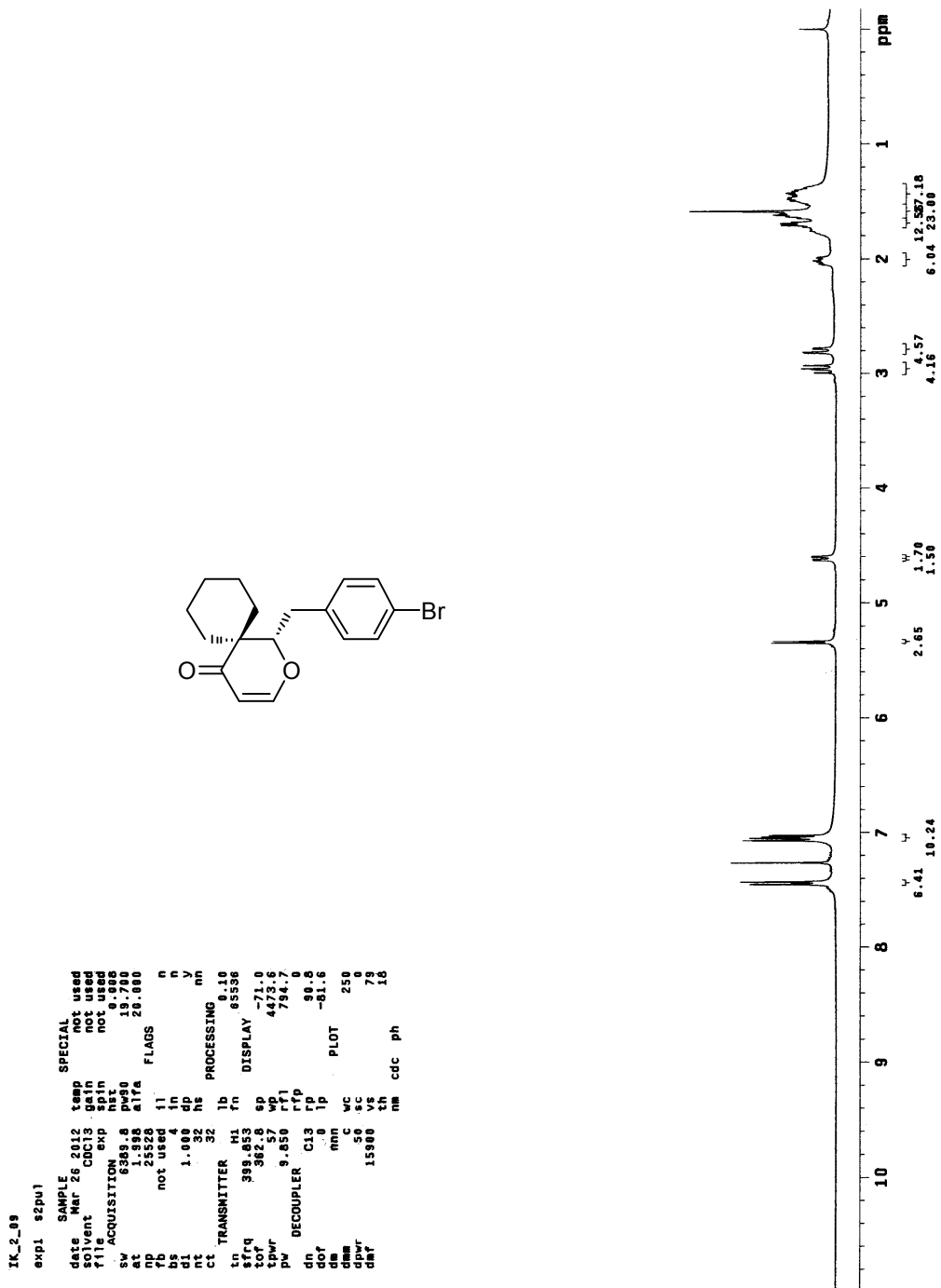
^{13}C NMR spectrum of 14



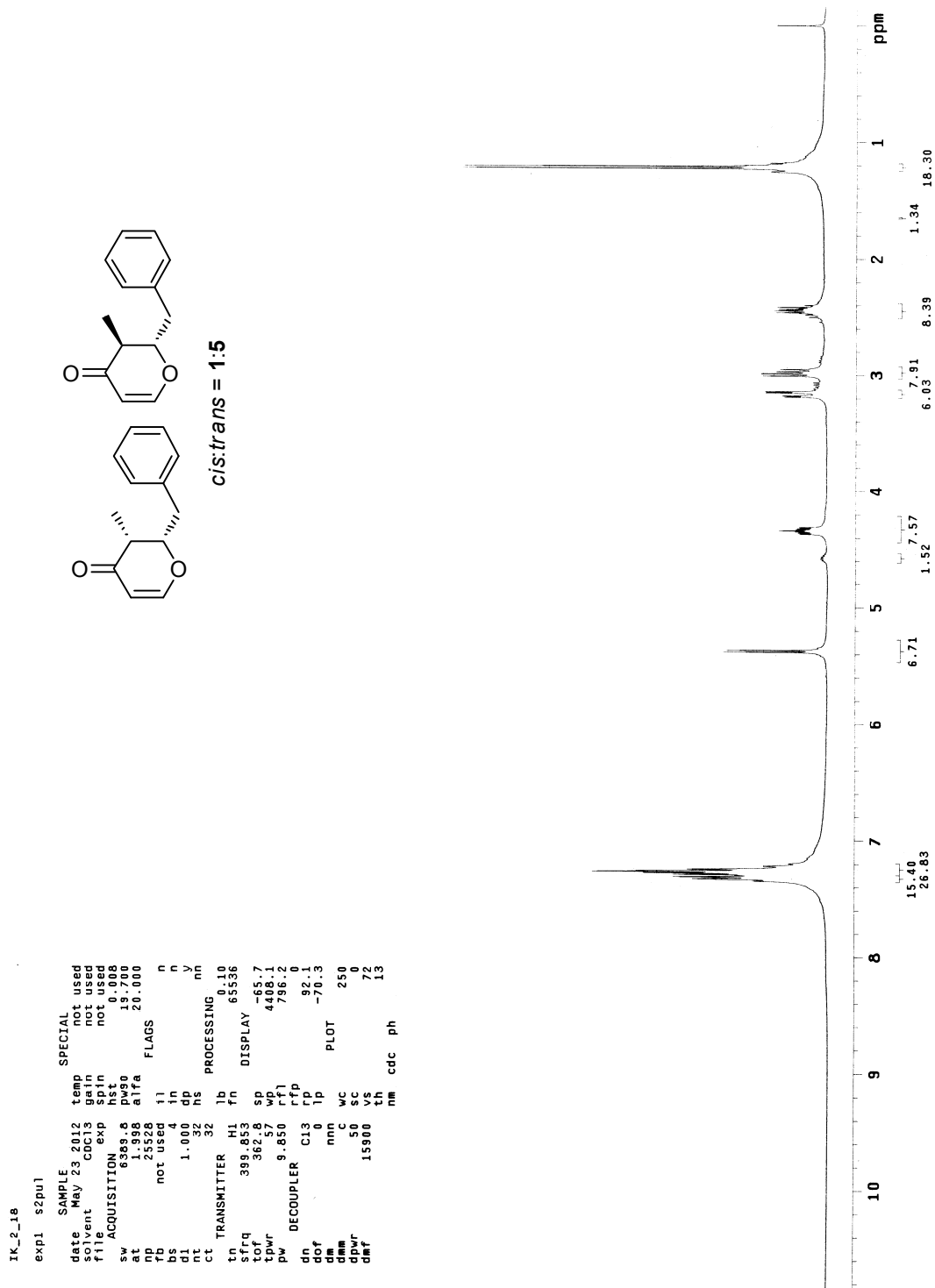
^{13}C NMR spectrum of **15**



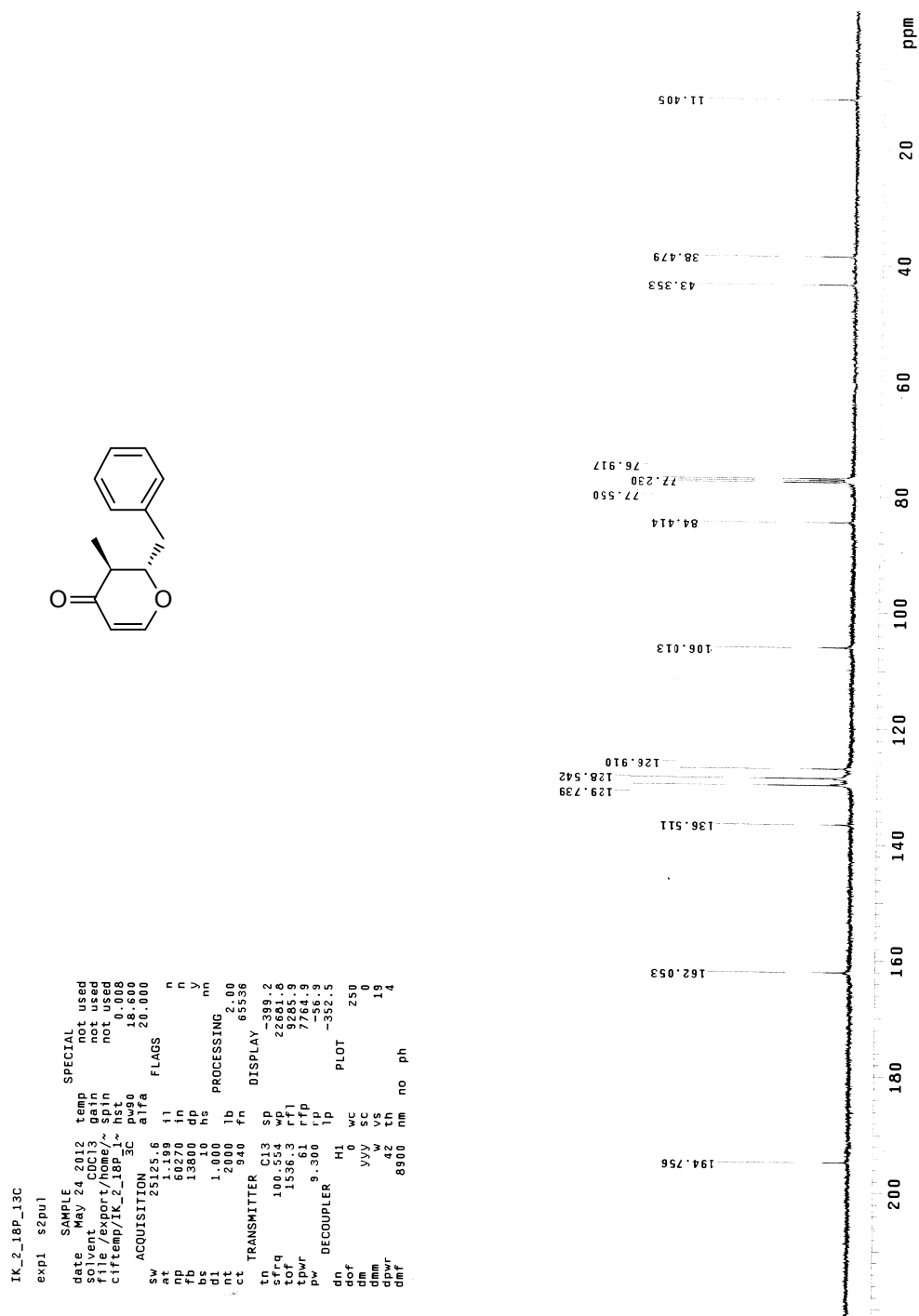
^1H NMR spectrum of **16**



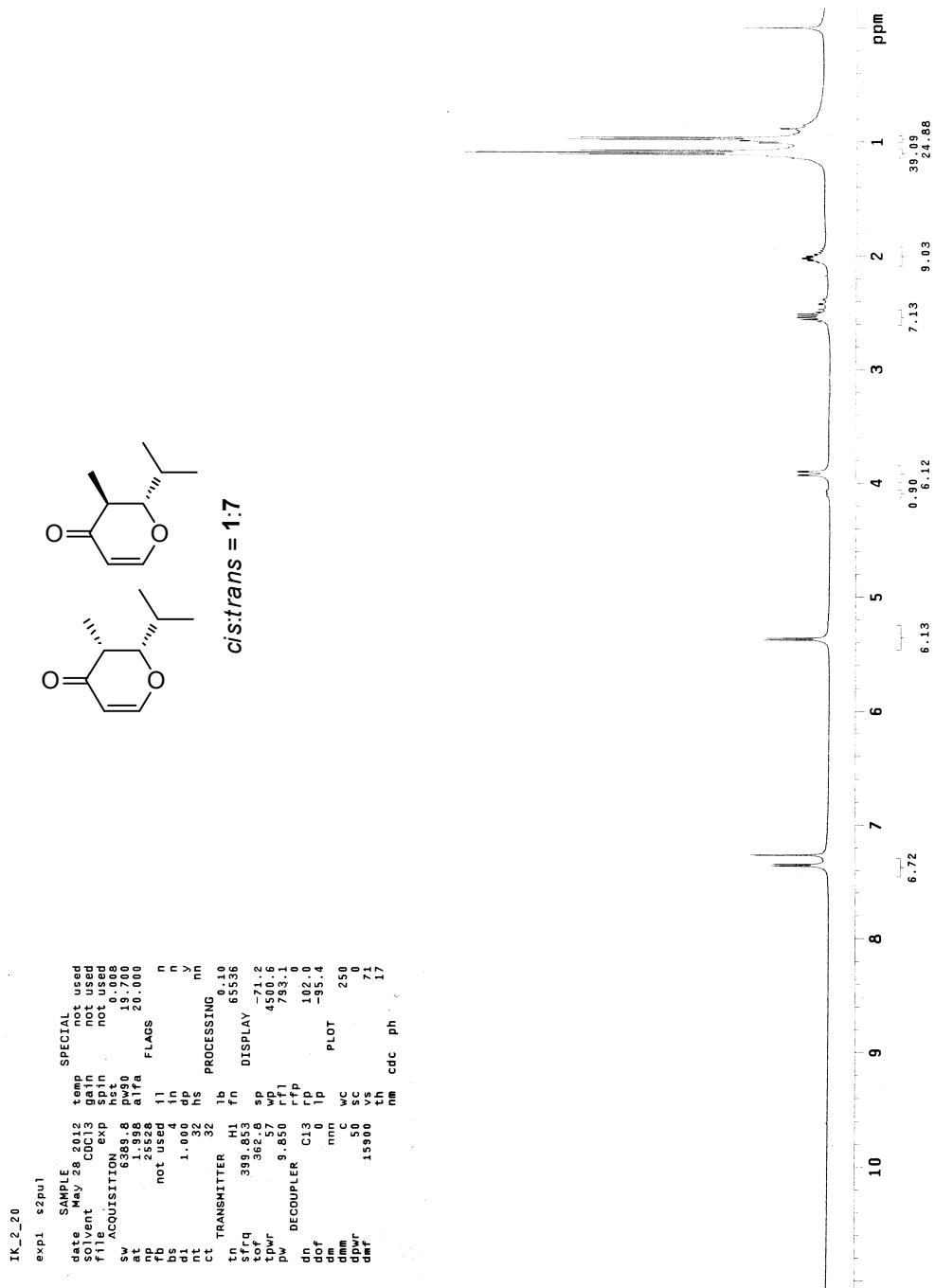
^1H NMR spectrum of 17



¹³C NMR spectrum of 17



^1H NMR spectrum of 18



¹³C NMR spectrum of 18

