Electronic Supplementary Information

Steric Hindrance Effects in Tripodal Ligands for Extraction and Back-Extraction of Ag^+

Yuki Hiruta[a§], Takafumi Watanabe[a§], Etsuko Nakamura[a], Naoko Iwasawa[a], Hiroyasu Sato[b] Kensaku Hamada[b], Daniel Citterio[a], and Koji Suzuki*[a]

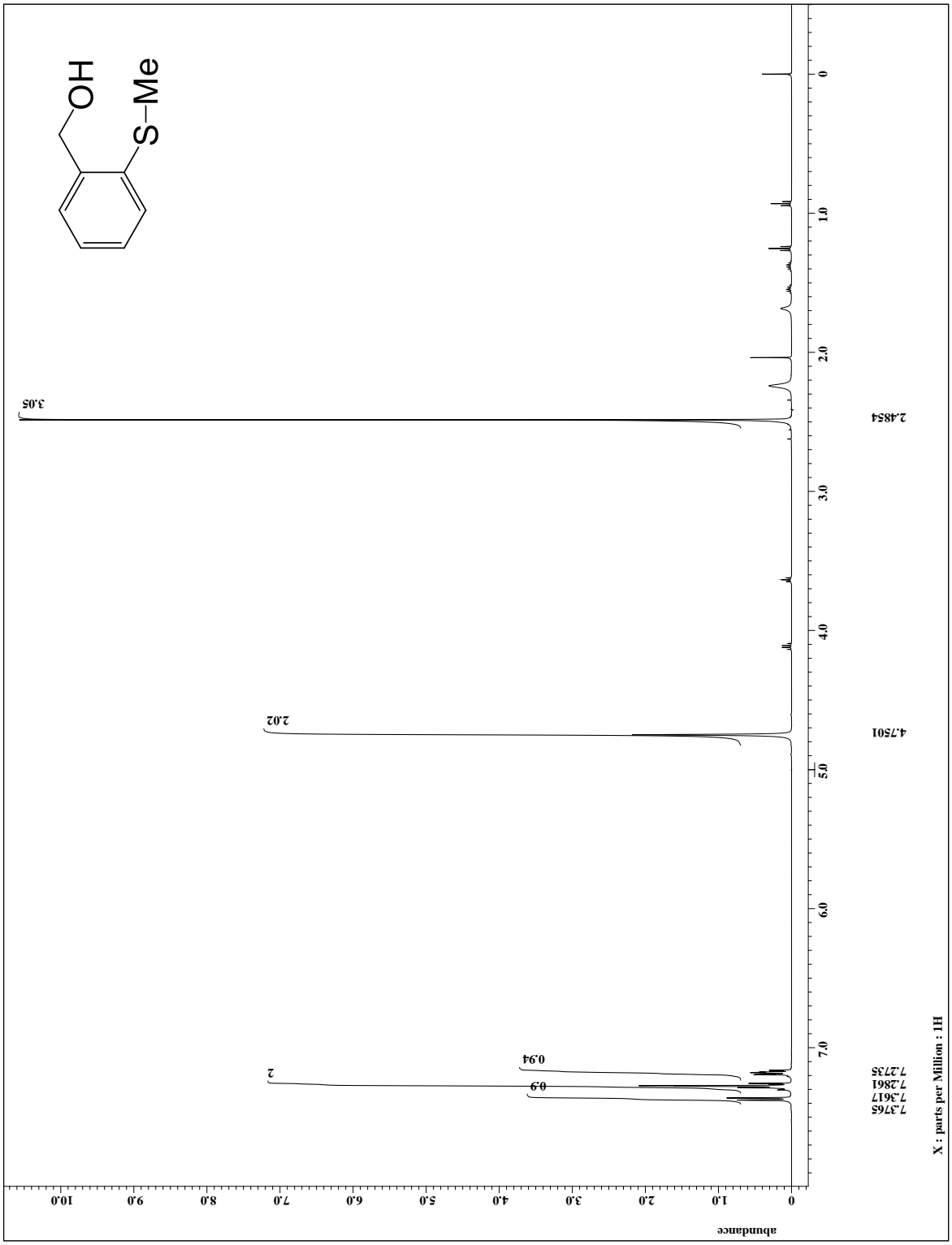
[a]Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan

[b] Rigaku, Corporation, 3-9-12, Matsubara-cho, Akishima-shi, Tokyo 196-8666, Japan

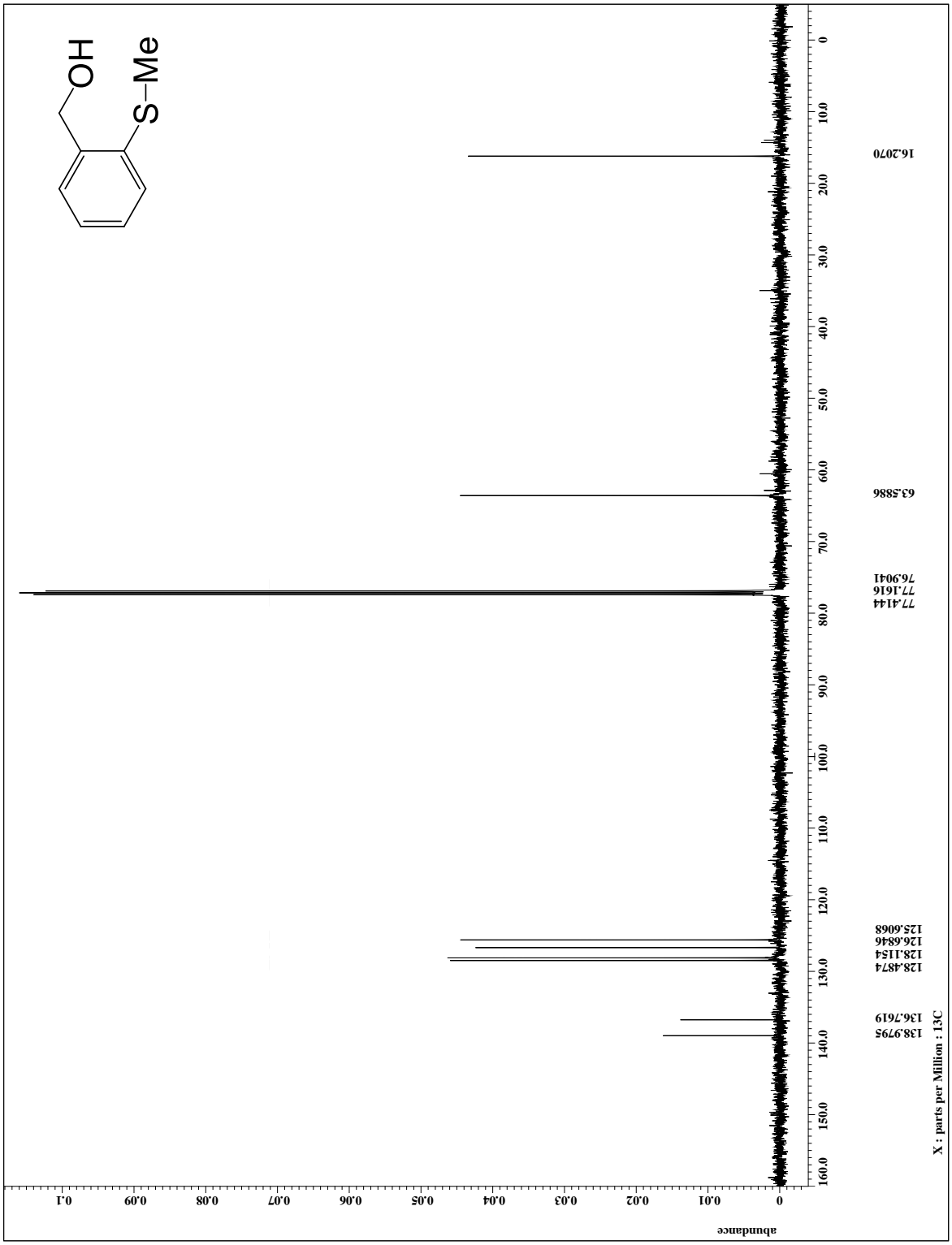
§ These authors have equally contributed to this work.

E-mail: suzuki@applc.keio.ac.jp

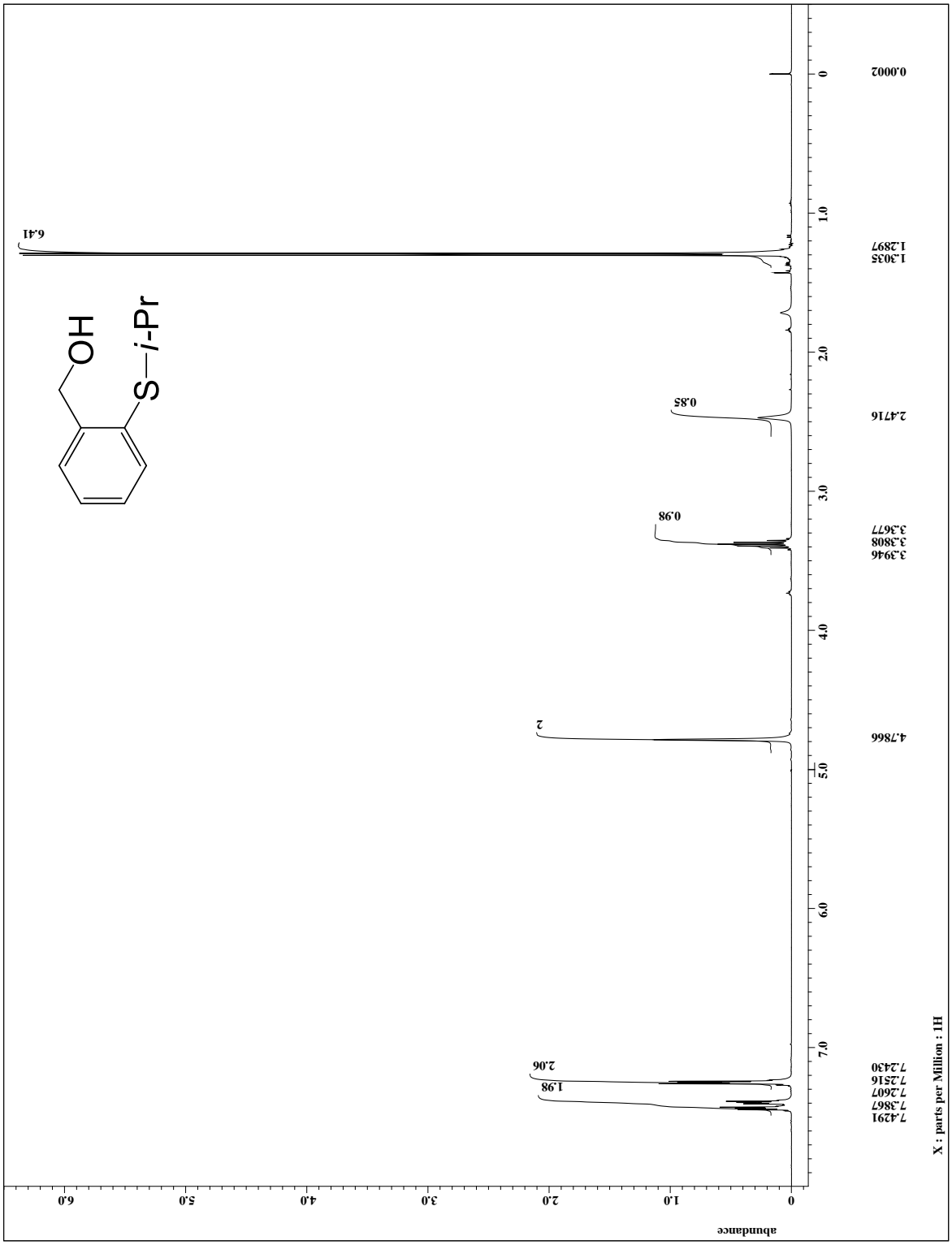
^{1}H NMR Spectrum of **3a**



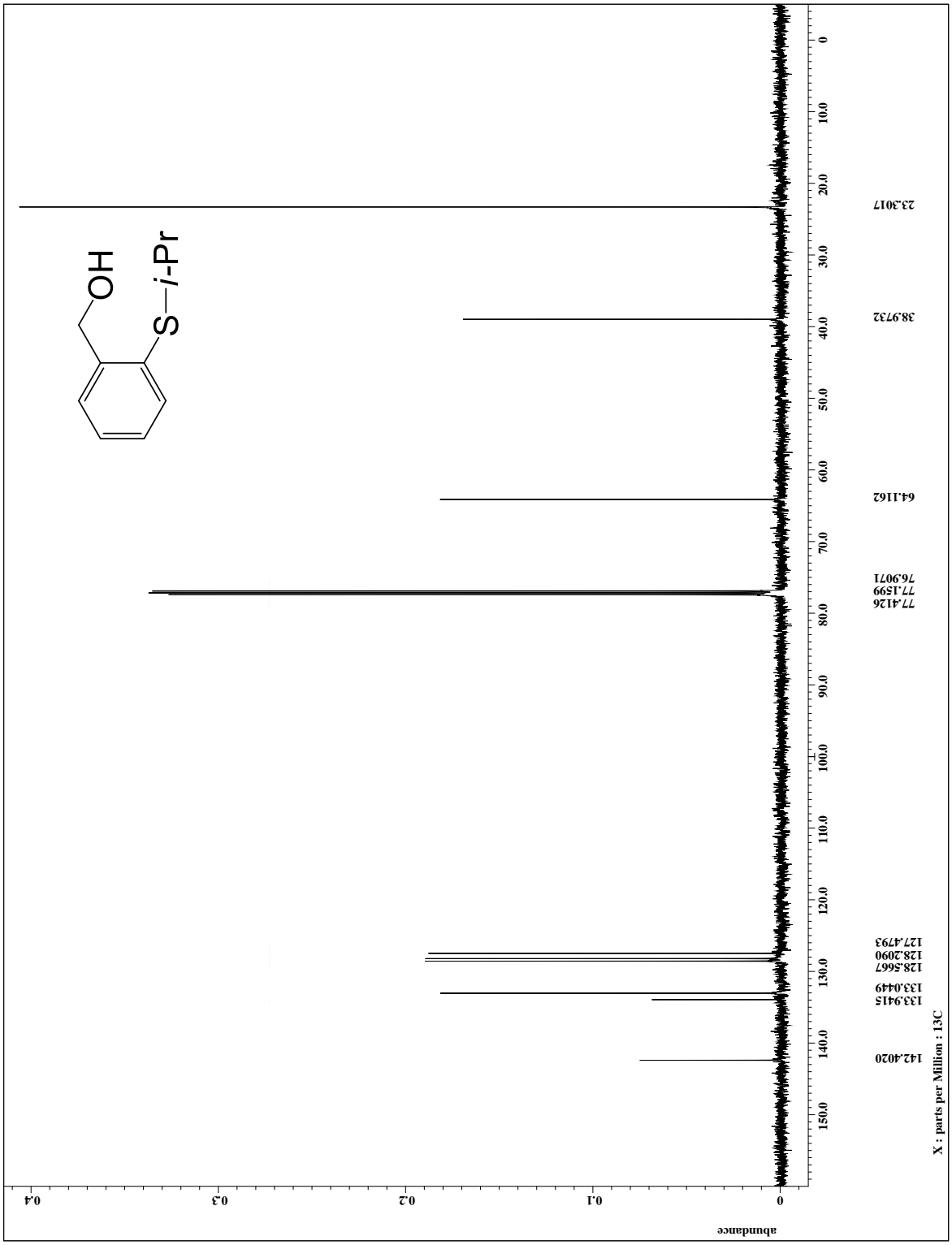
^{13}C NMR Spectrum of **3a**



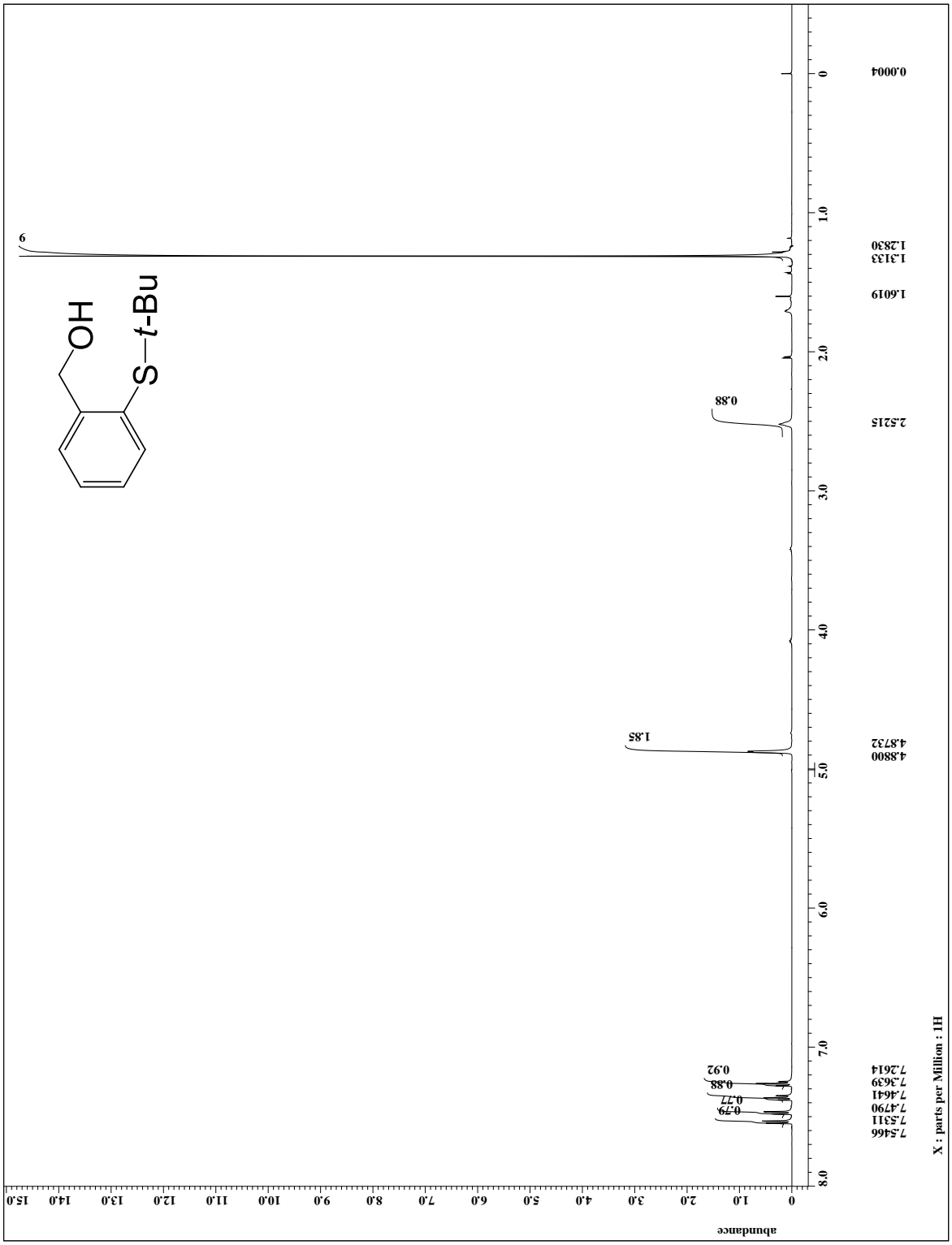
^{1}H NMR Spectrum of **3b**



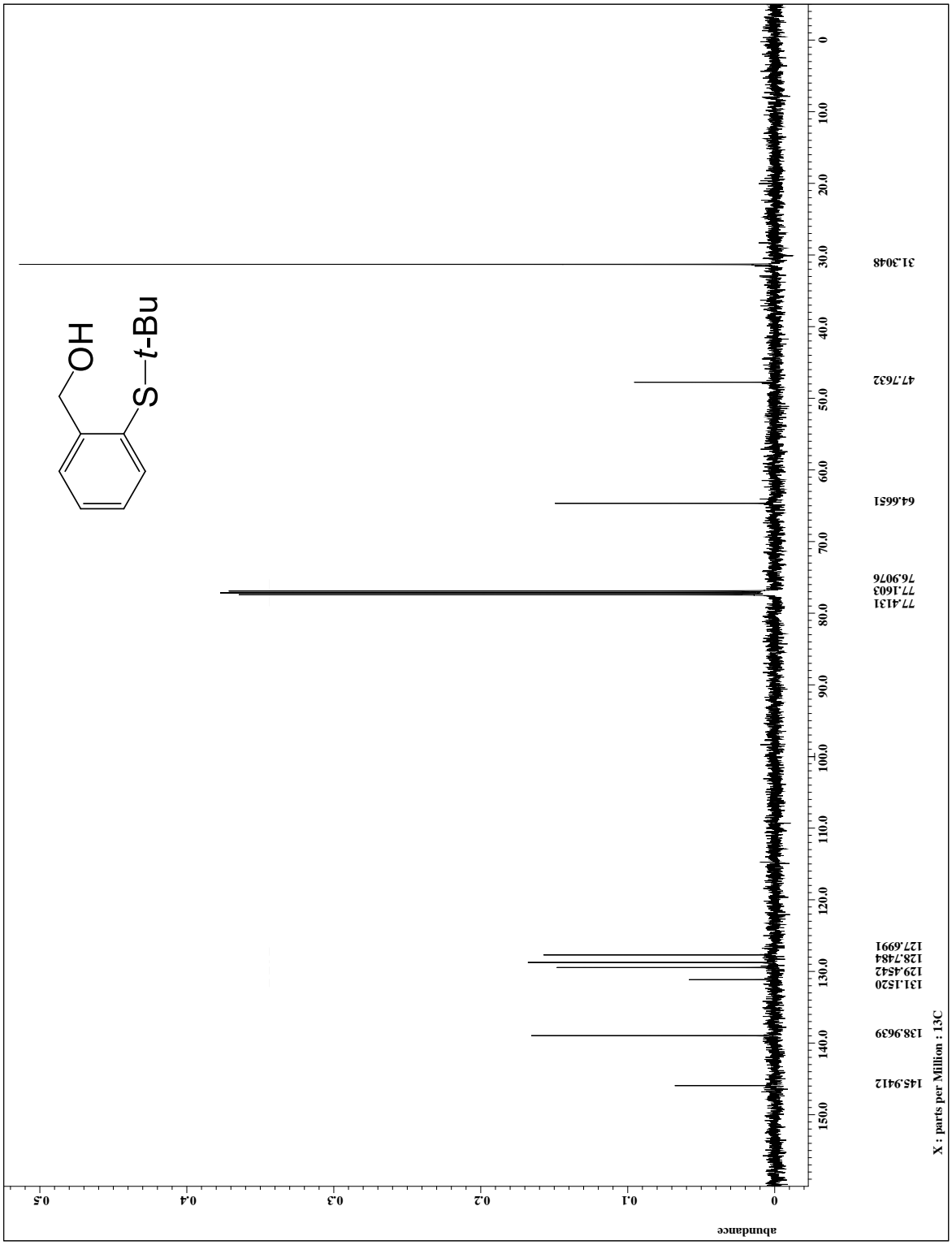
^{13}C NMR Spectrum of **3b**



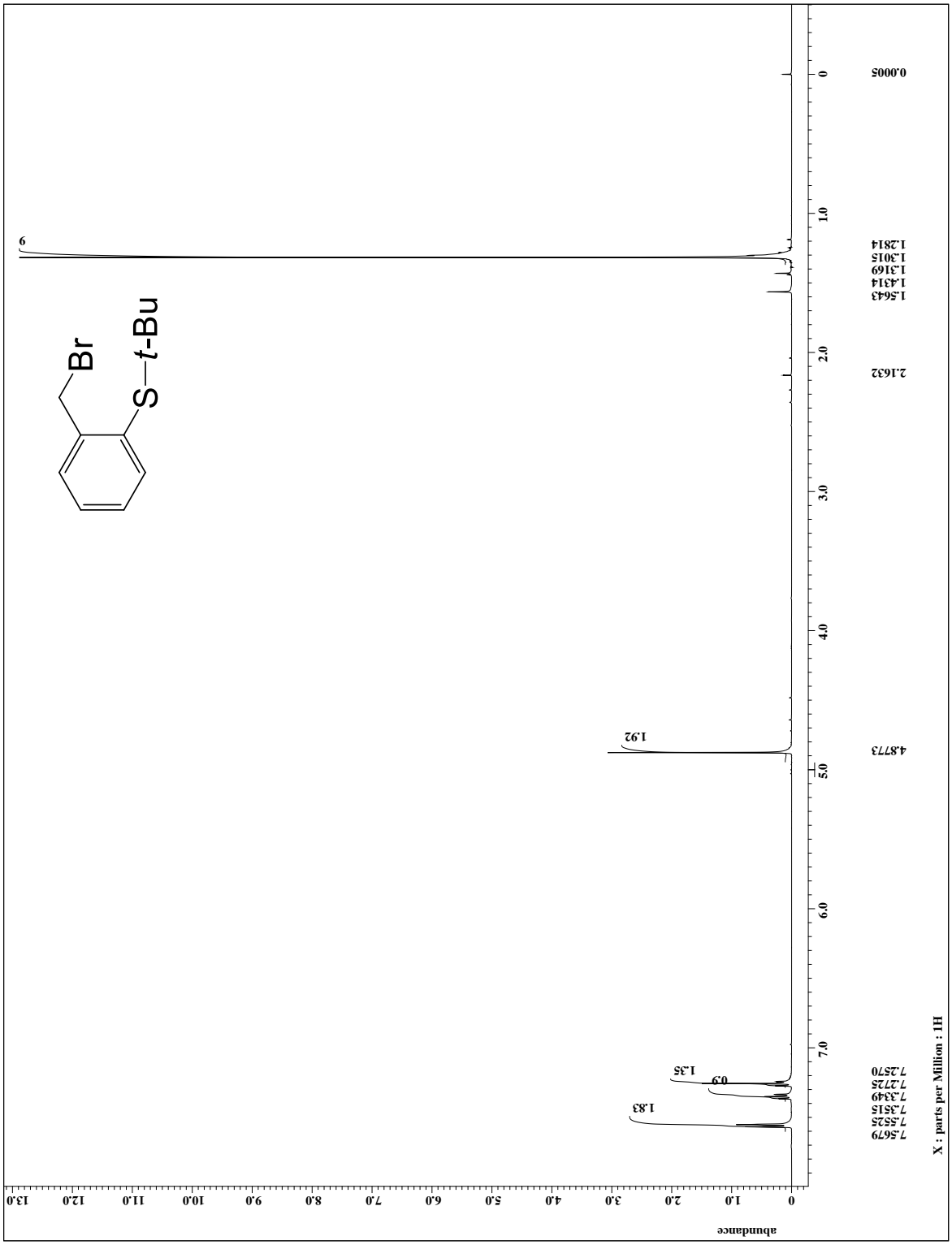
^{1}H NMR Spectrum of **3c**



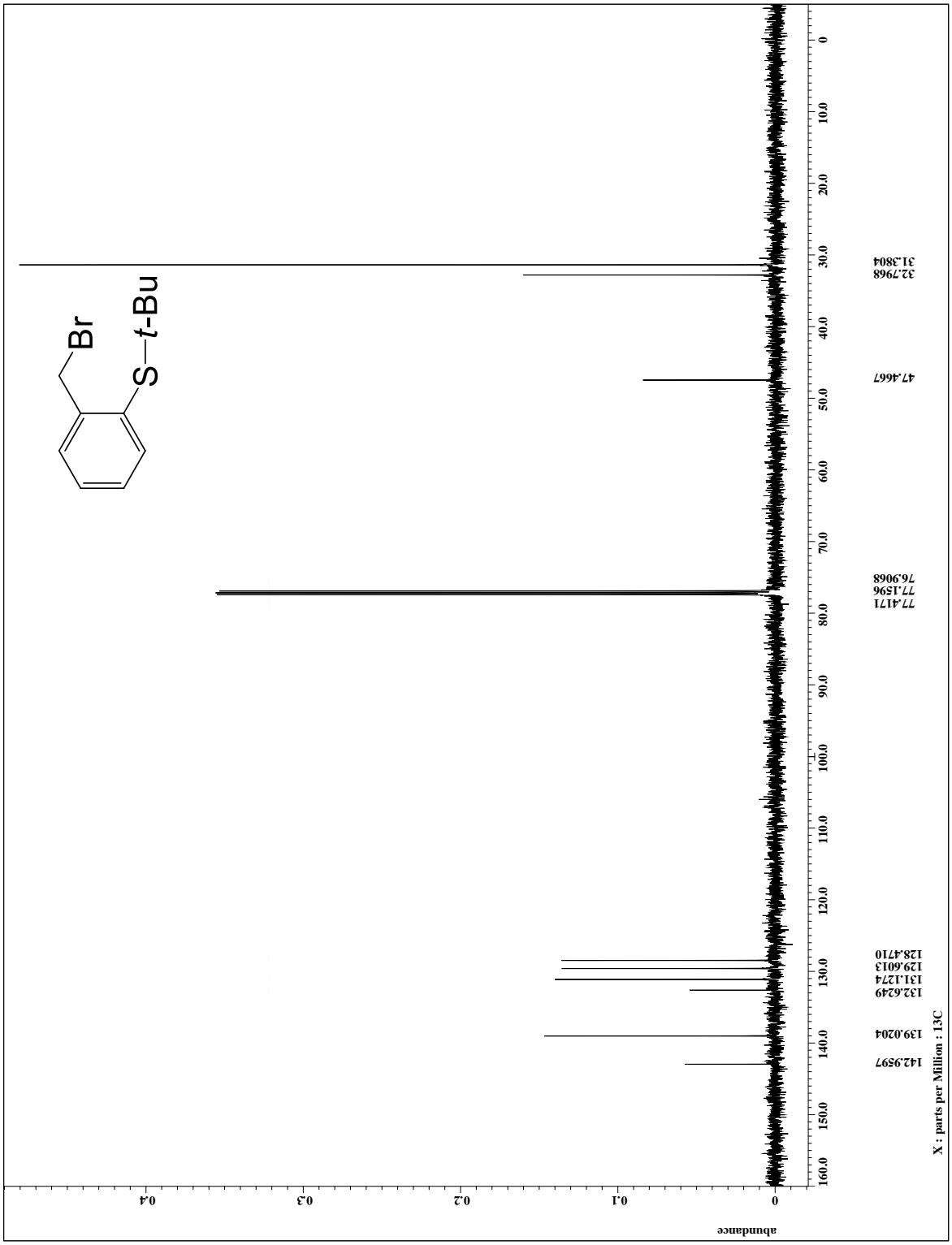
^{13}C NMR Spectrum of **3c**



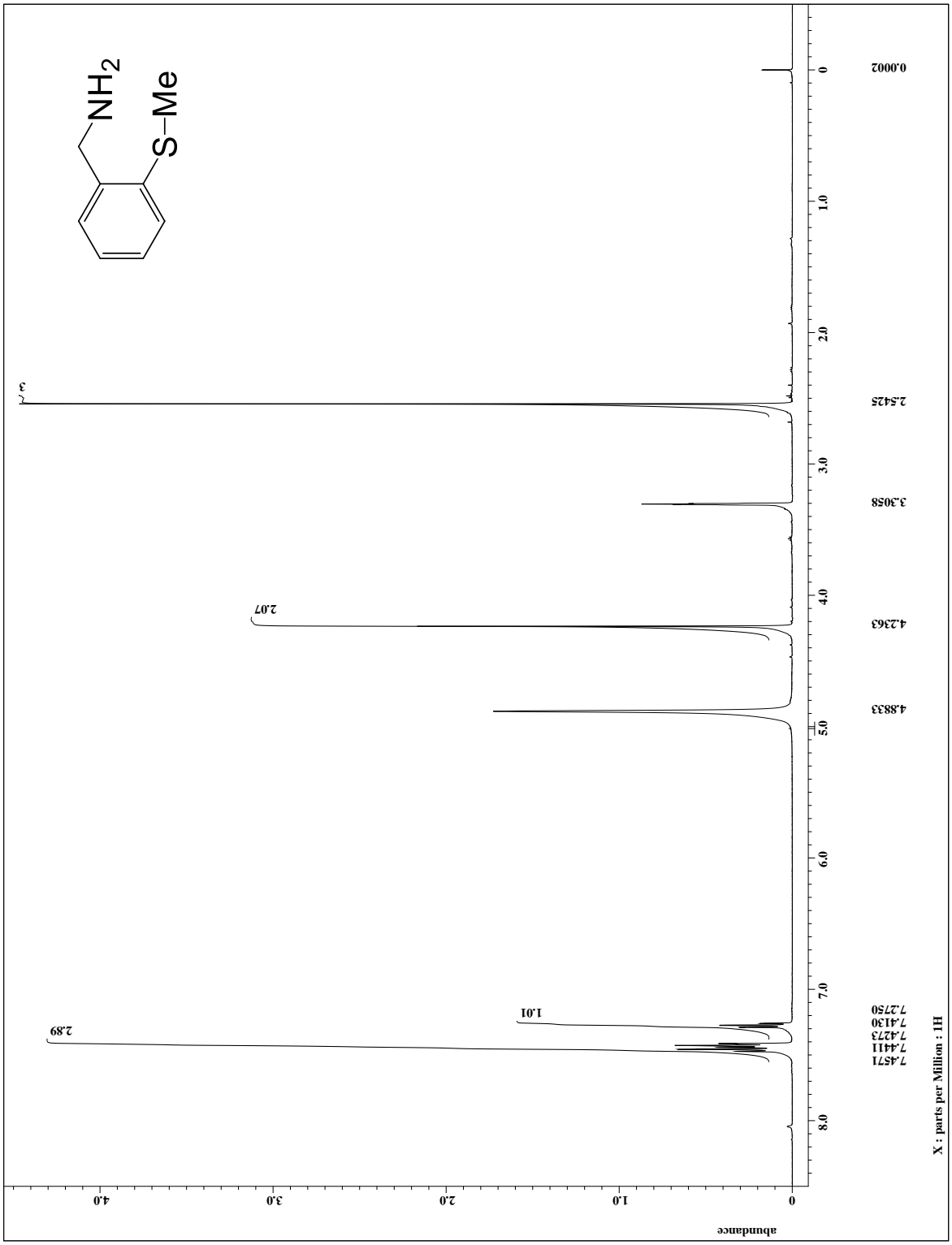
^{1}H NMR Spectrum of **4c**



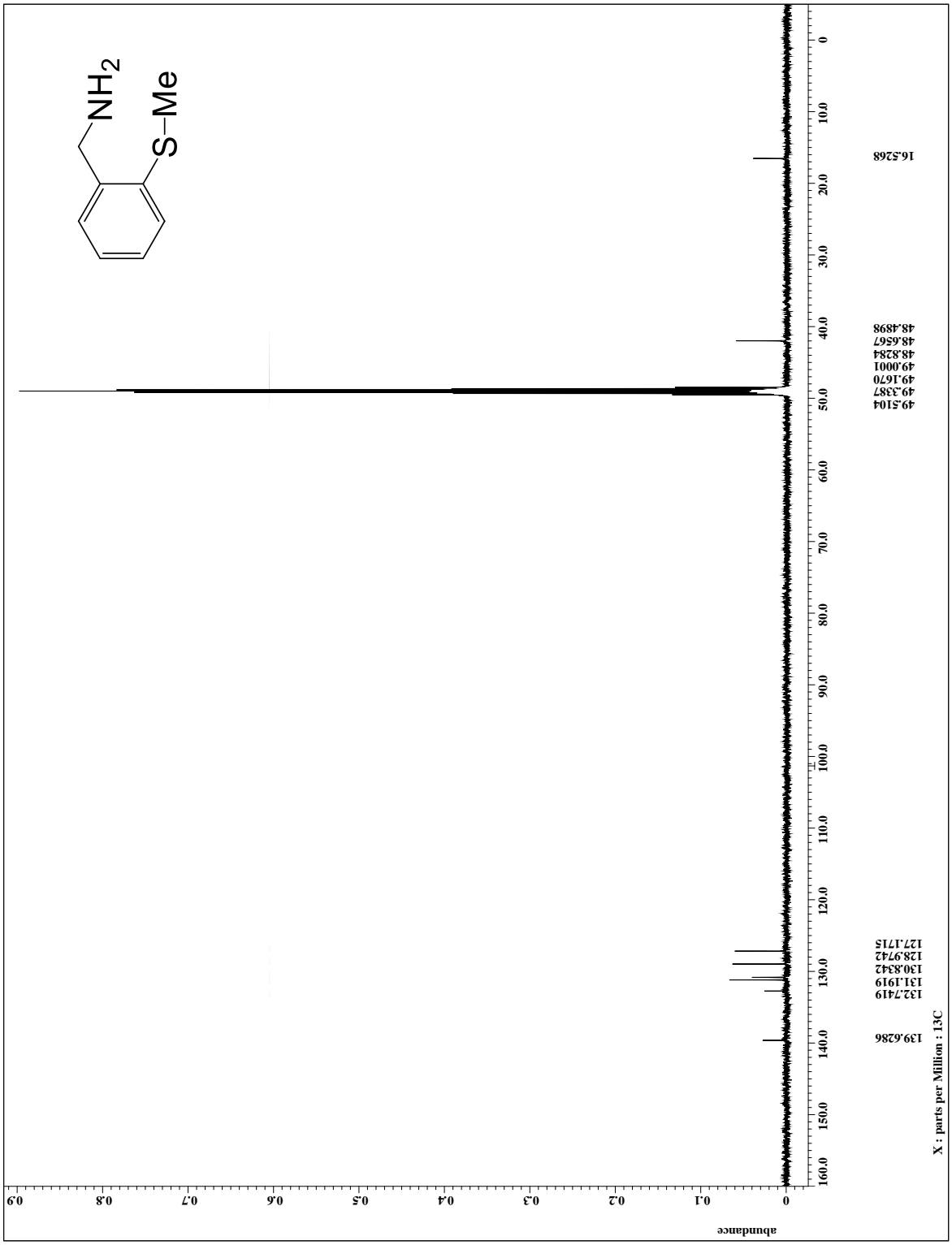
^{13}C NMR Spectrum of **4c**



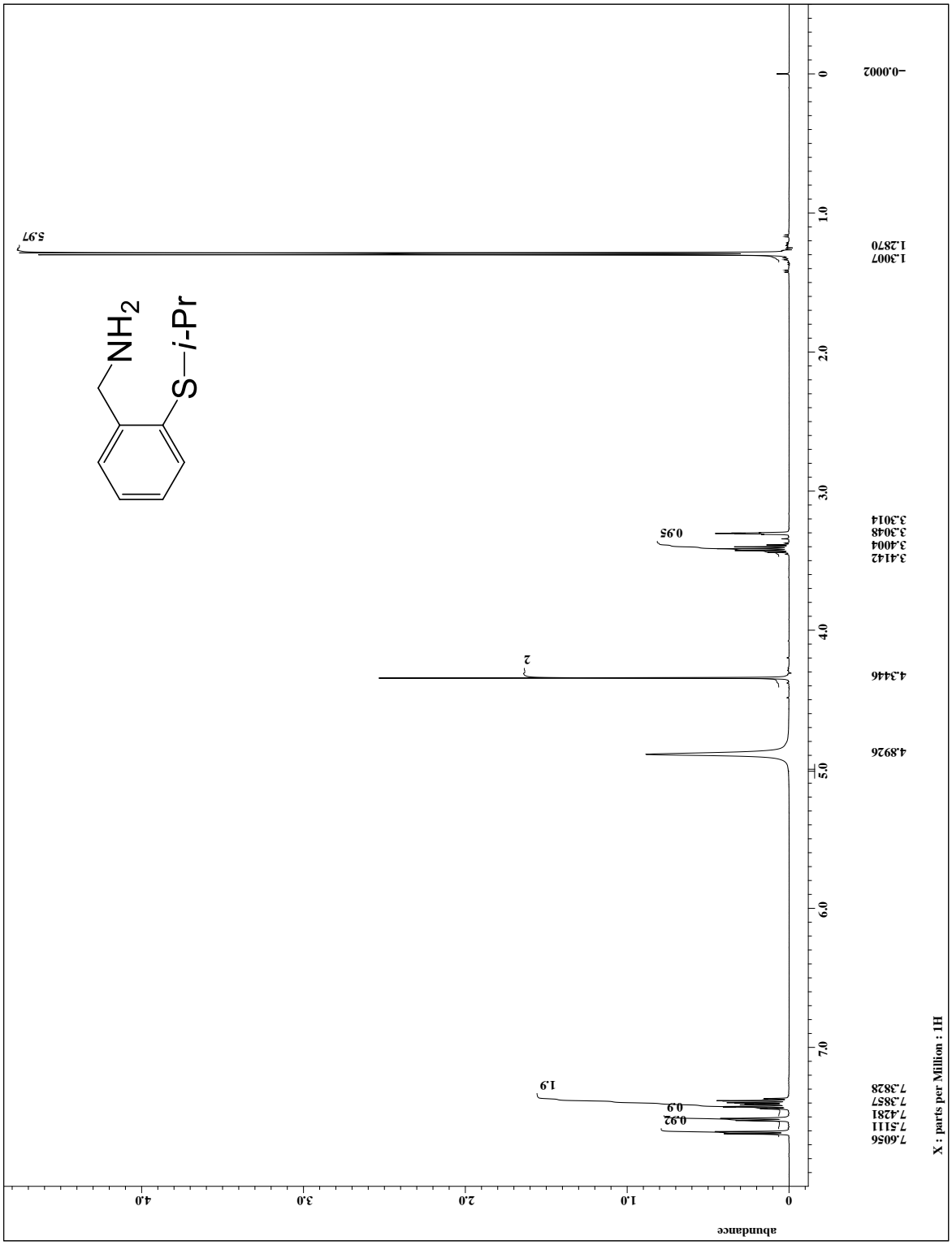
^{1}H NMR Spectrum of **5a**



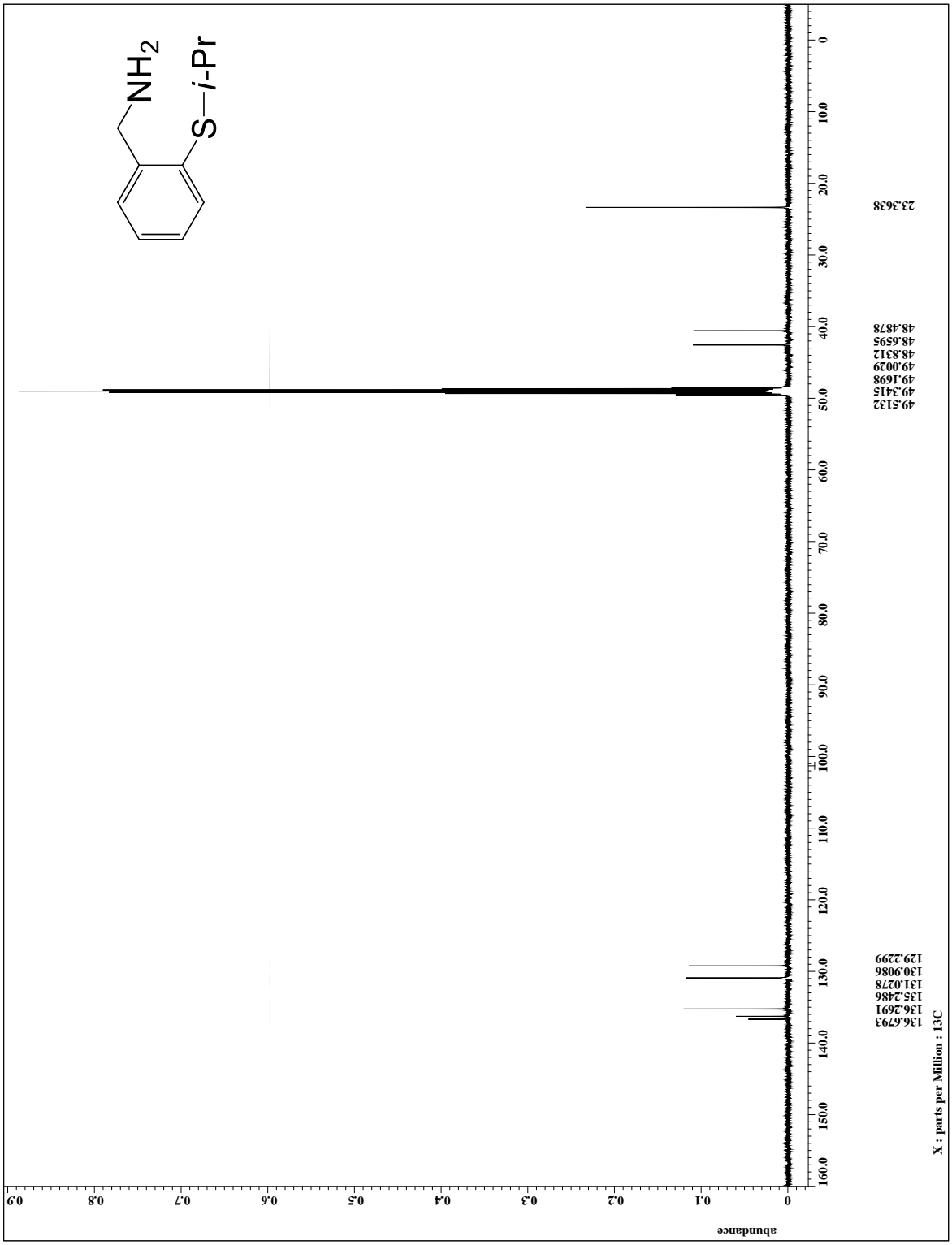
^{13}C NMR Spectrum of **5a**



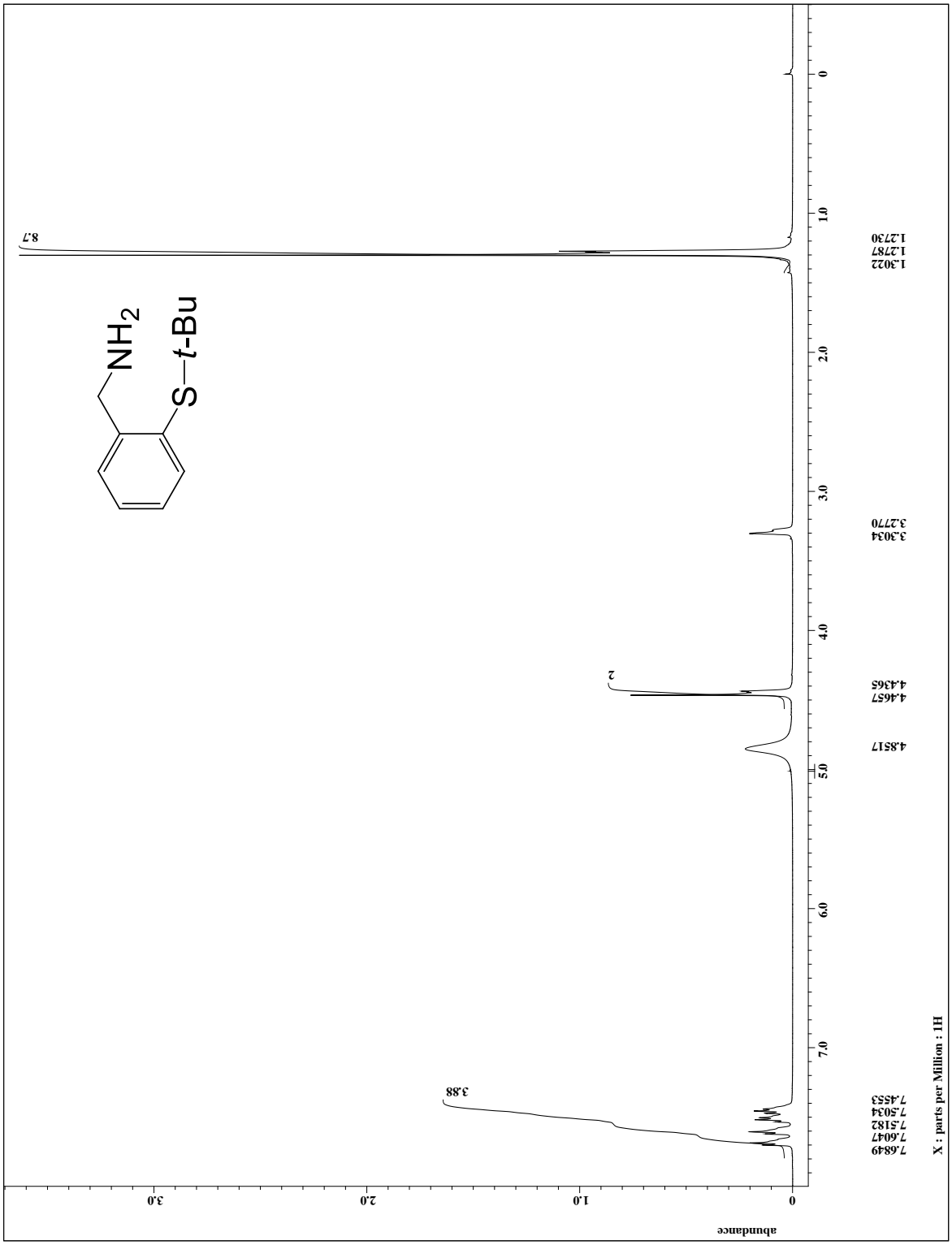
^{1}H NMR Spectrum of **5b**



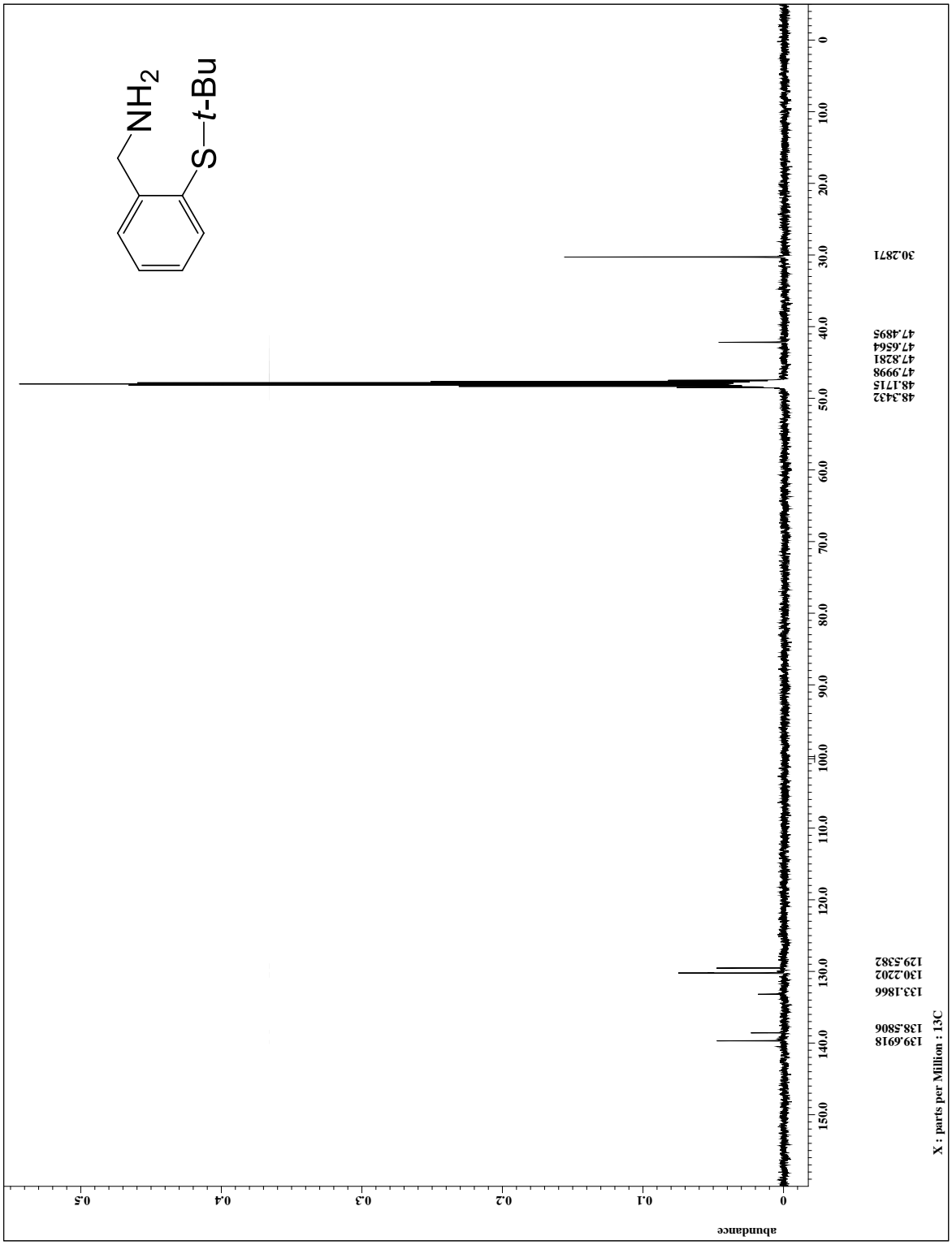
^{13}C NMR Spectrum of **5b**



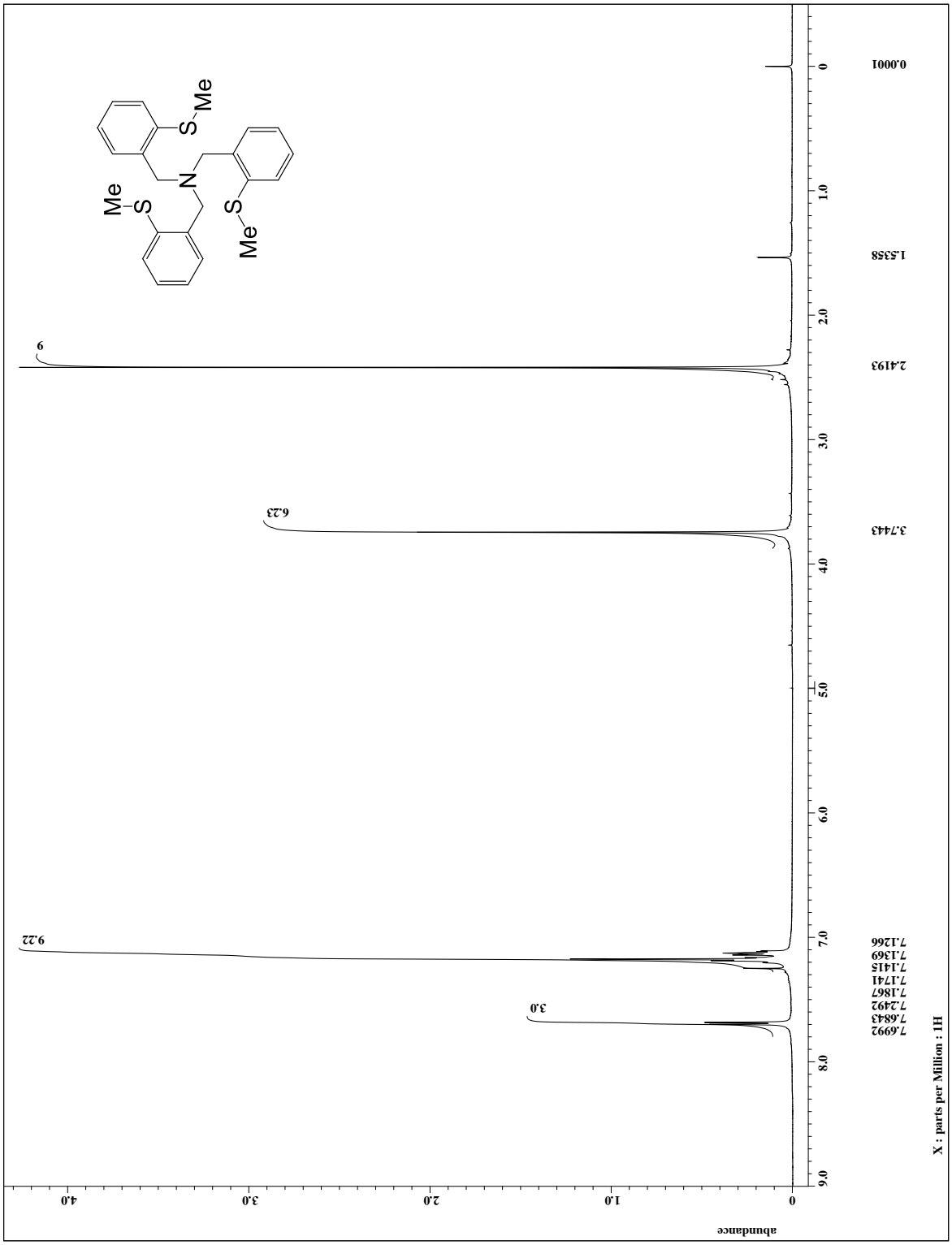
^{1}H NMR Spectrum of **5c**



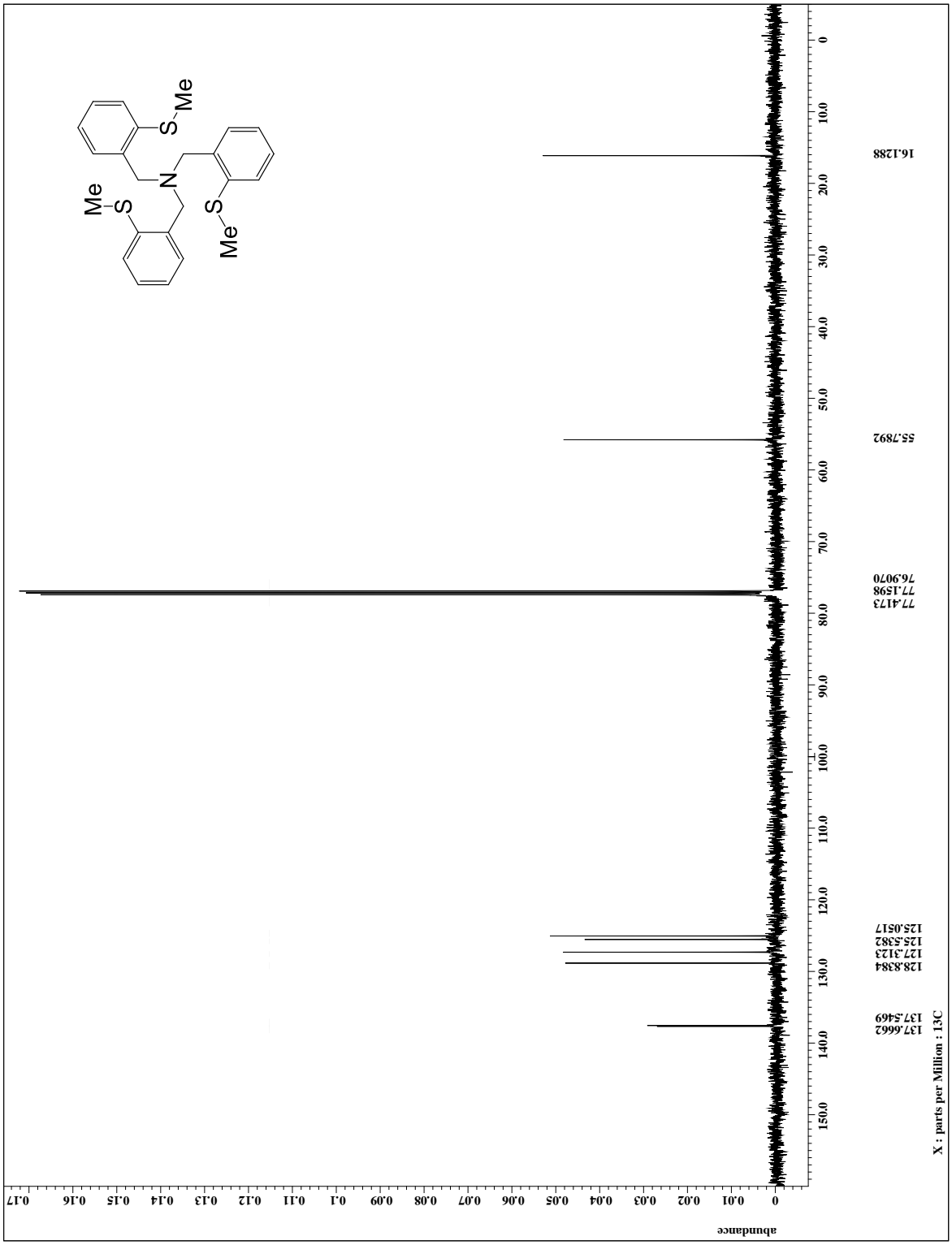
^{13}C NMR Spectrum of **5c**



^{1}H NMR Spectrum of **6a**

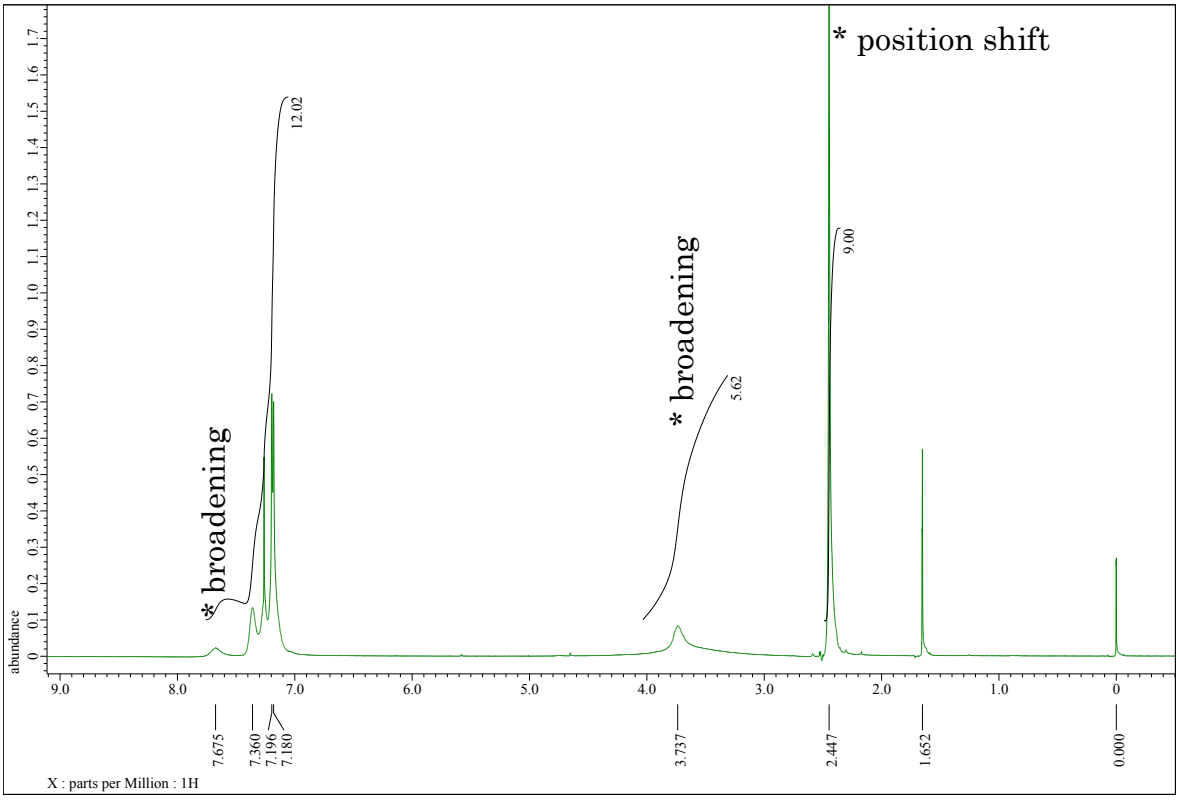


^{13}C NMR Spectrum of **6a**



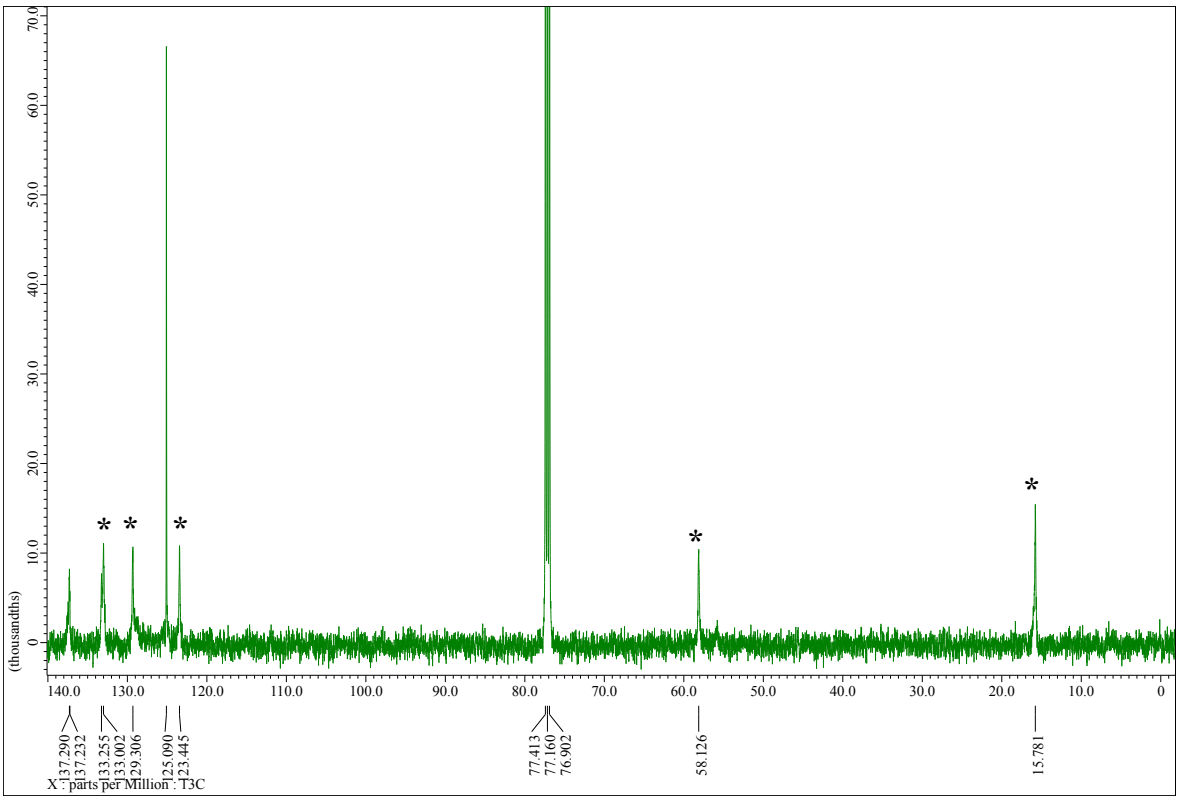
^{1}H Spectrum of **6a** + $AgNO_3$

Peaks marked with an asterisk (*) showed significant changes compared to the spectra of 6a recorded in the absence of $AgNO_3$.

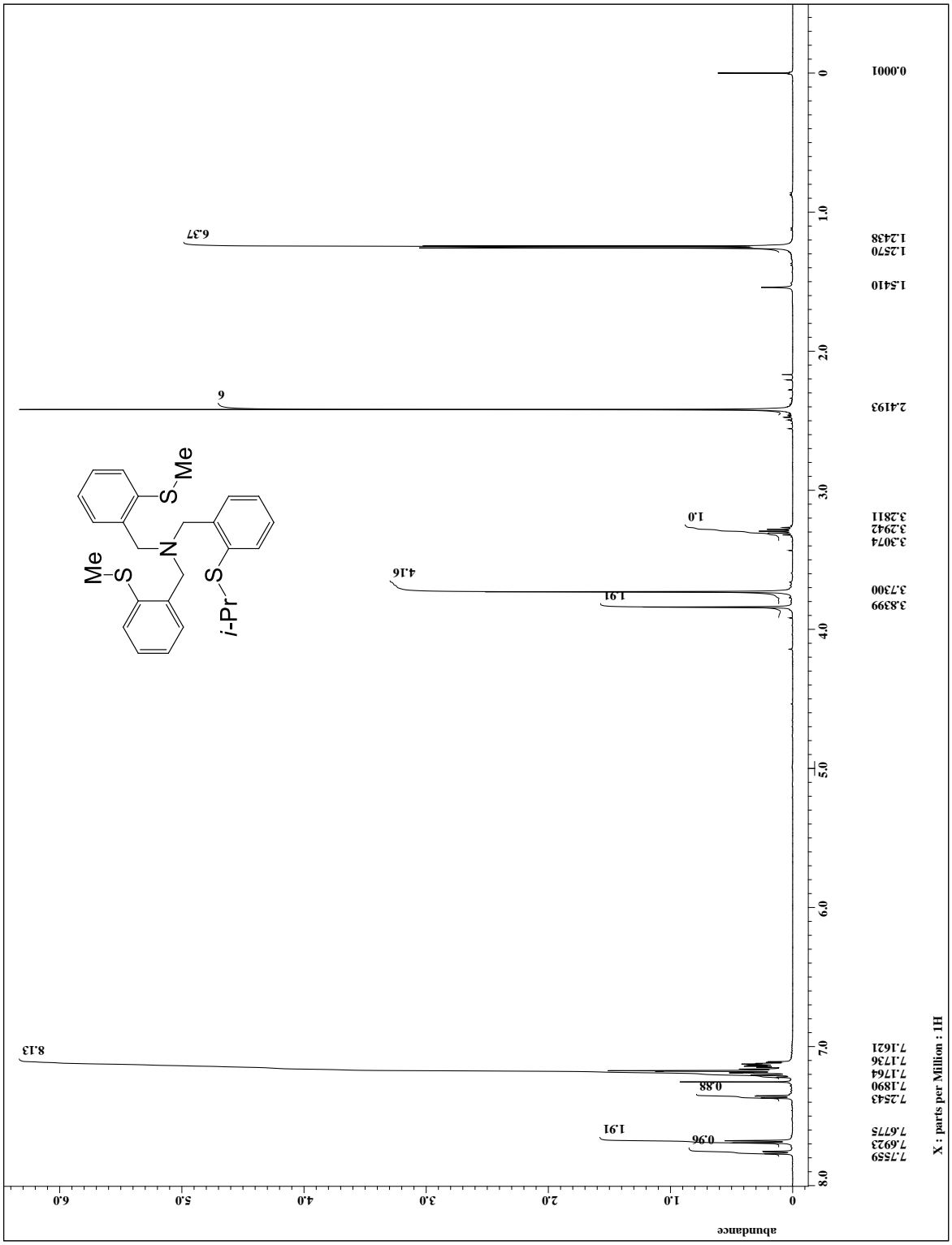


^{13}C NMR Spectrum of **6a** + $AgNO_3$

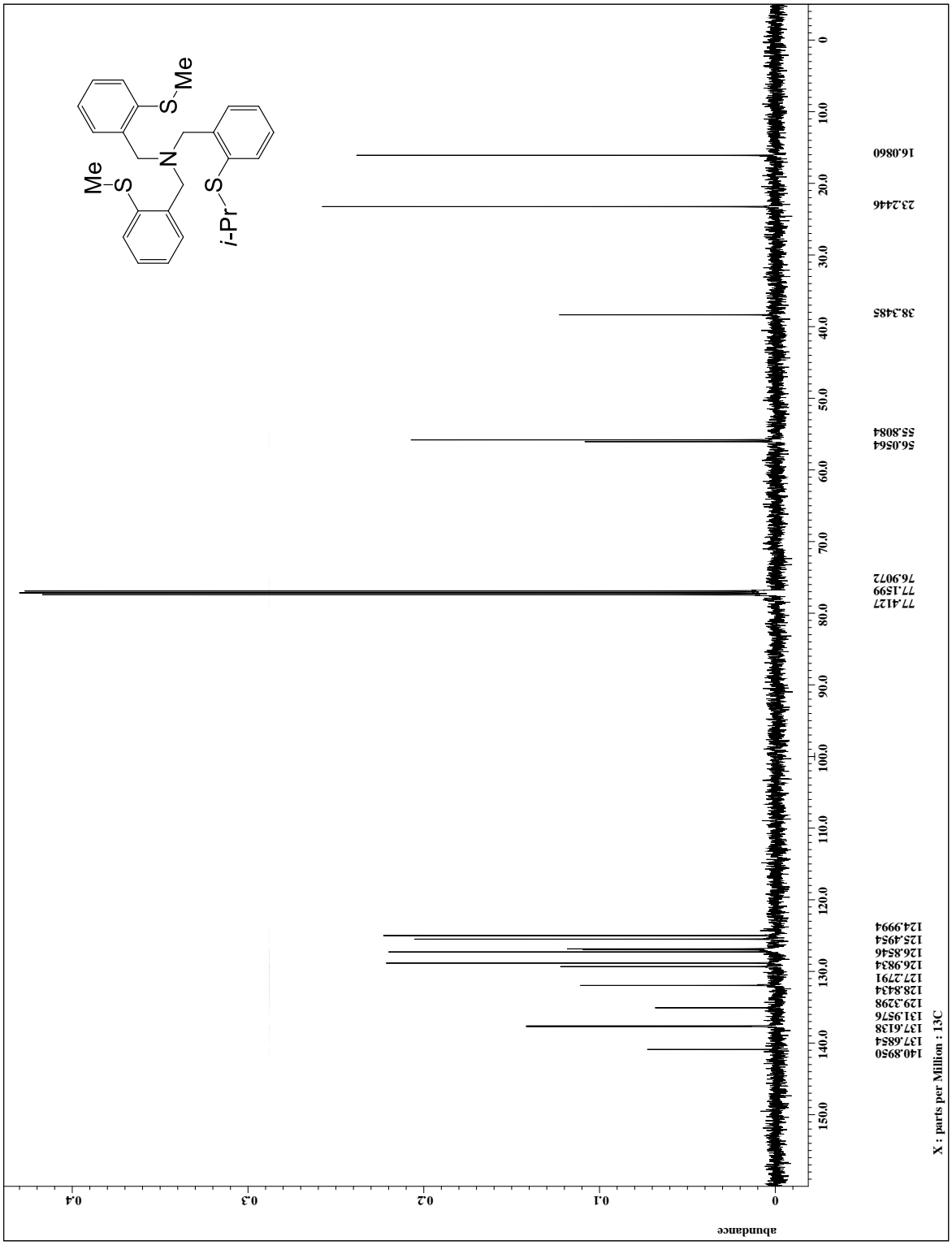
Peaks marked with an asterisk (*) showed significant changes compared to the spectra of 6a recorded in the absence of $AgNO_3$.



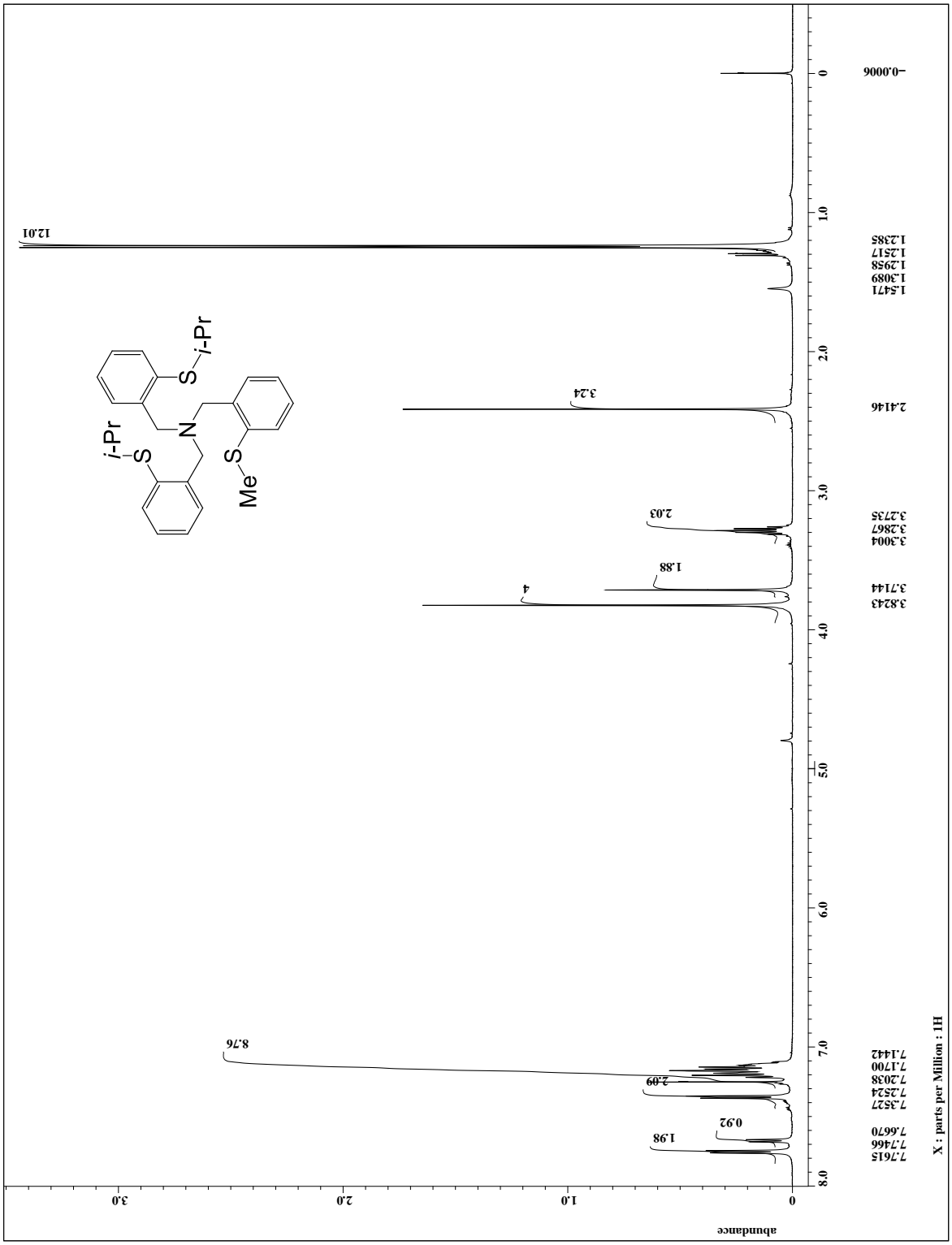
^{1}H NMR Spectrum of **6b**



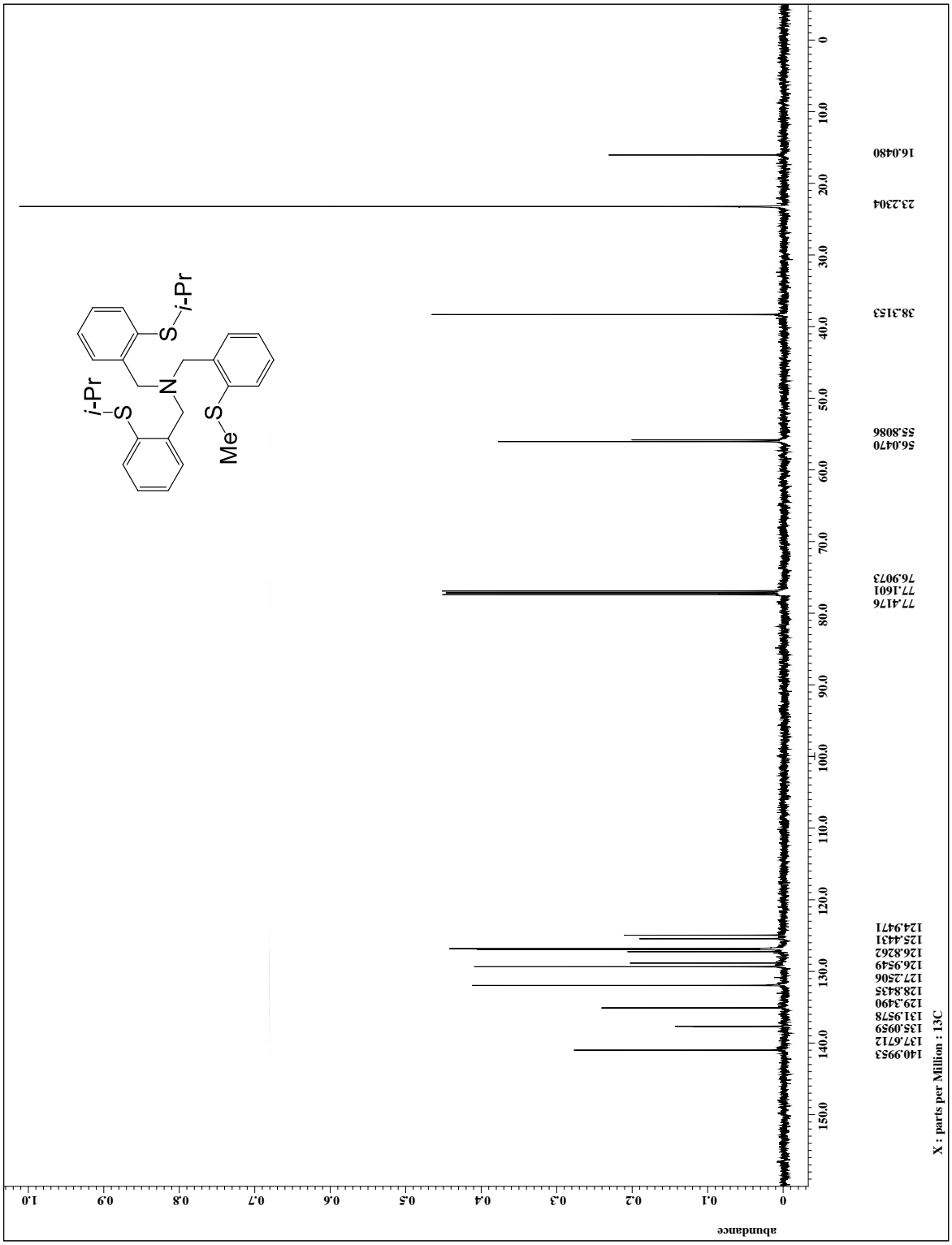
^{13}C NMR Spectrum of **6b**



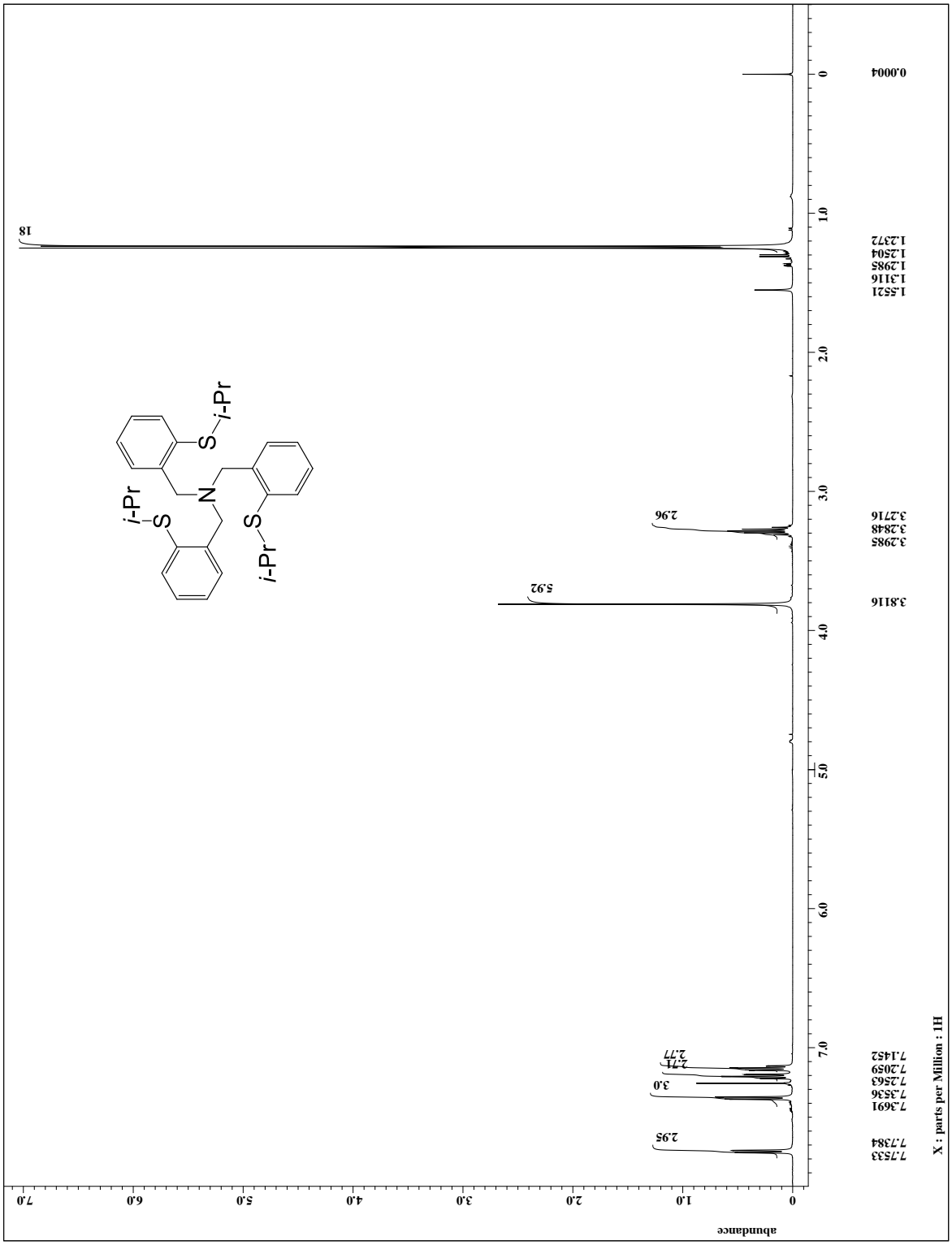
^{1}H NMR Spectrum of **6c**



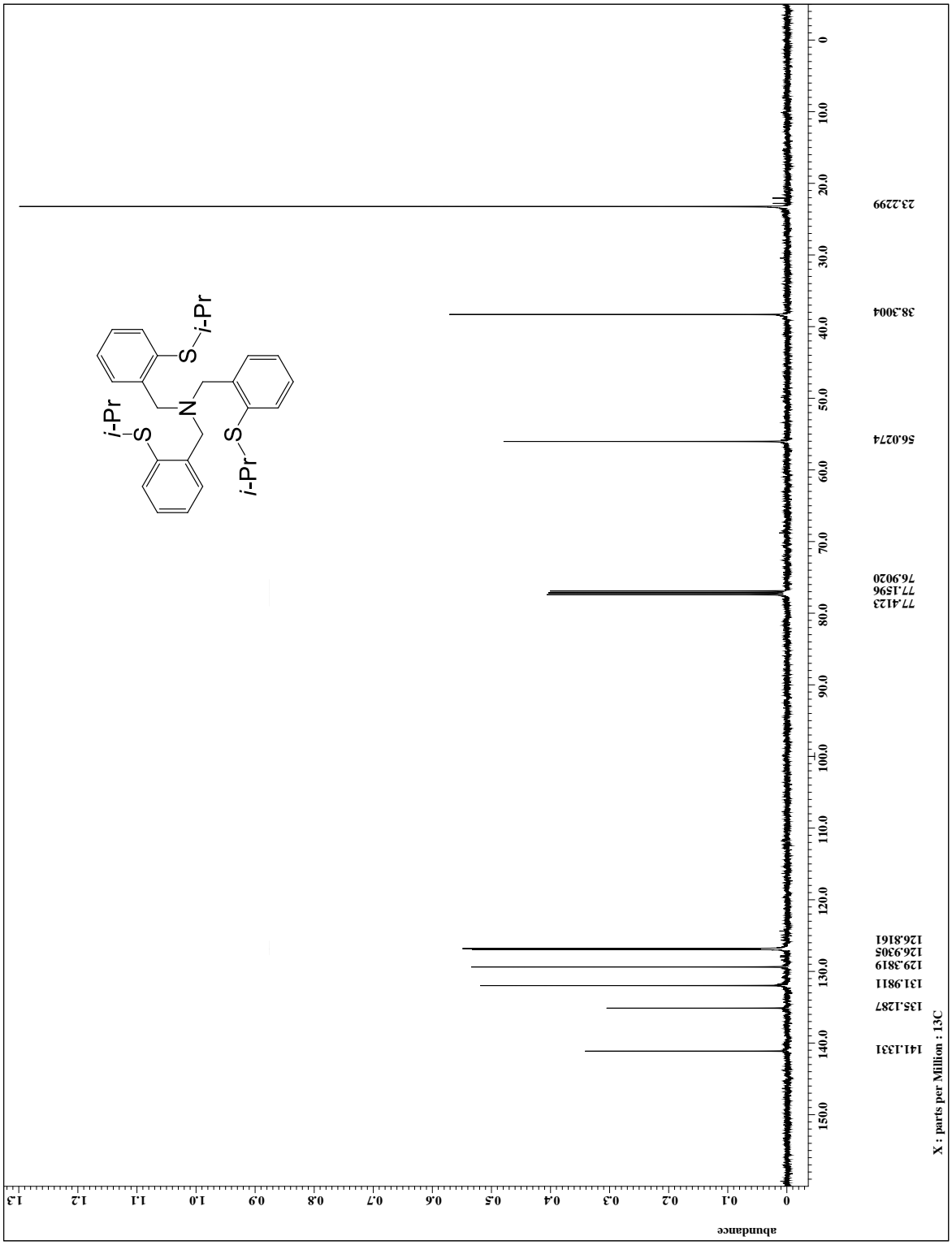
^{13}C NMR Spectrum of **6c**



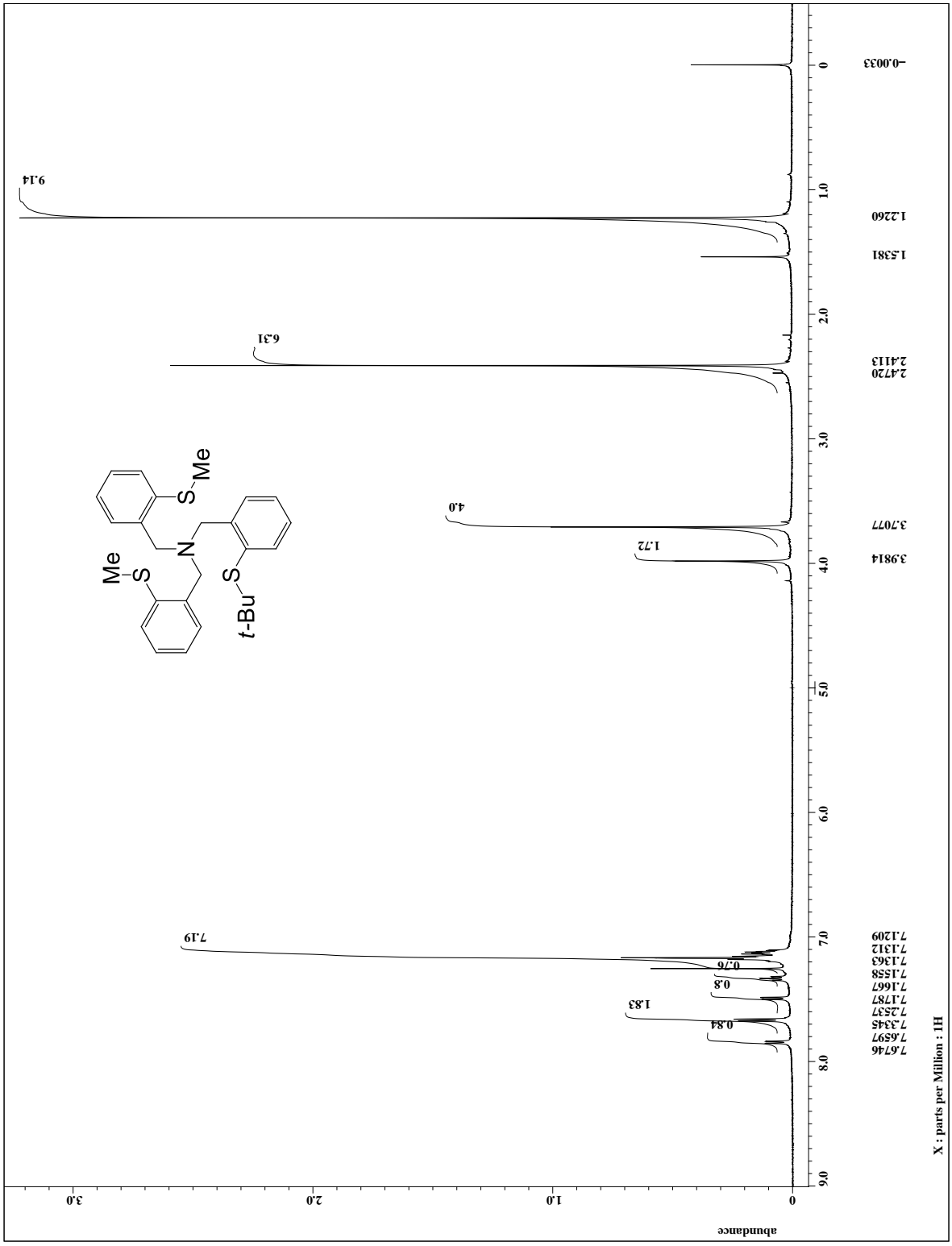
^{1}H NMR Spectrum of **6d**



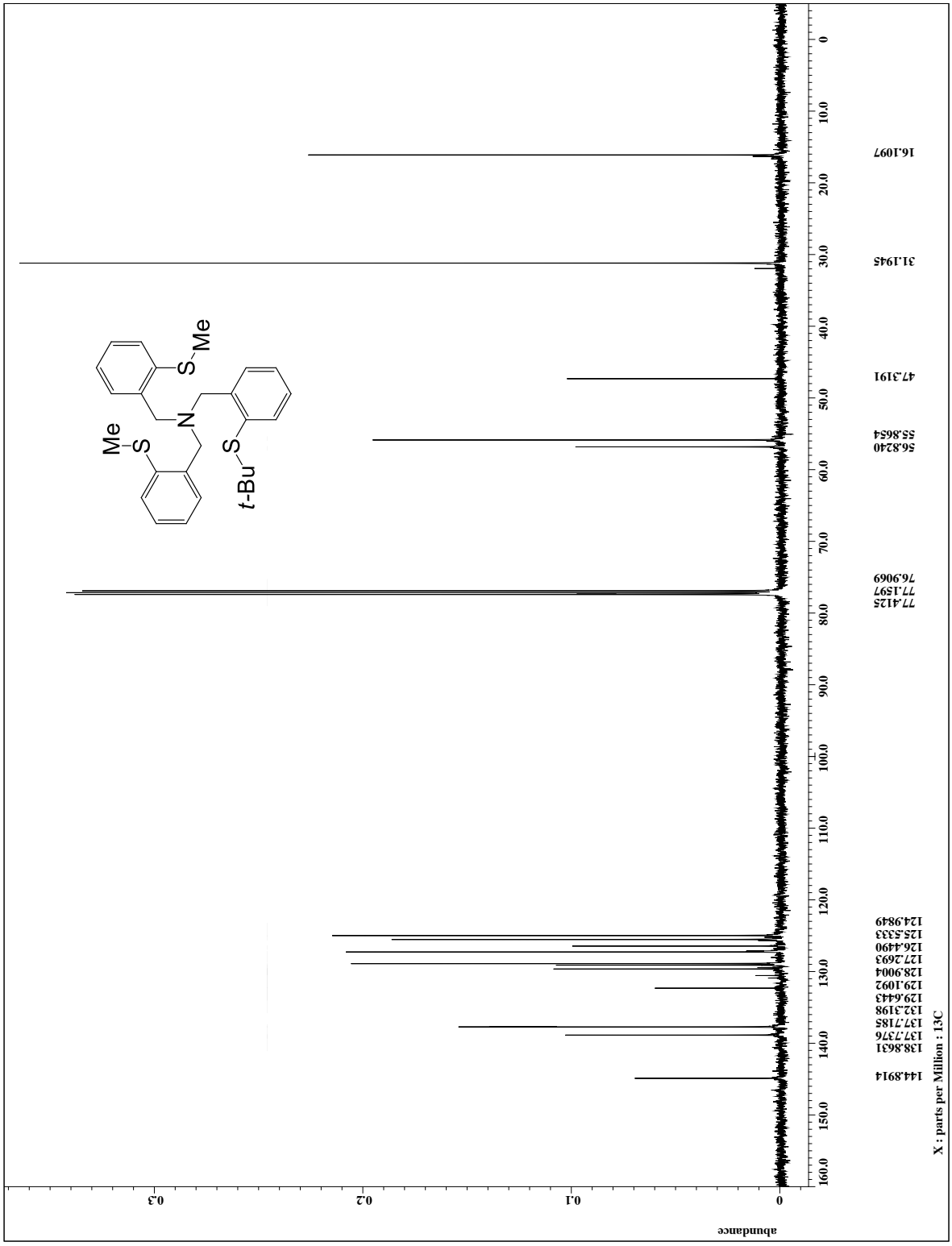
^{13}C NMR Spectrum of **6d**



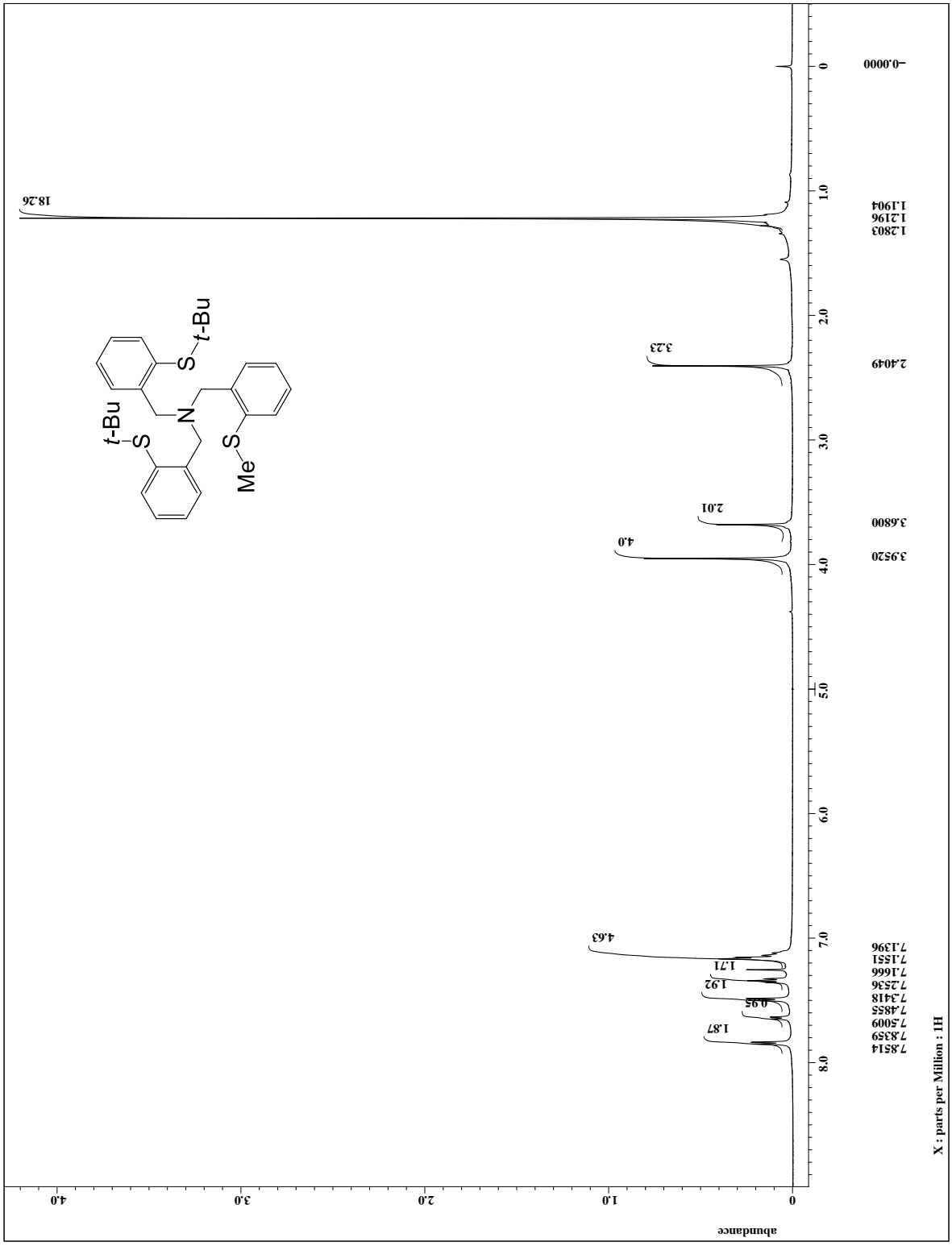
^{1}H NMR Spectrum of **6e**



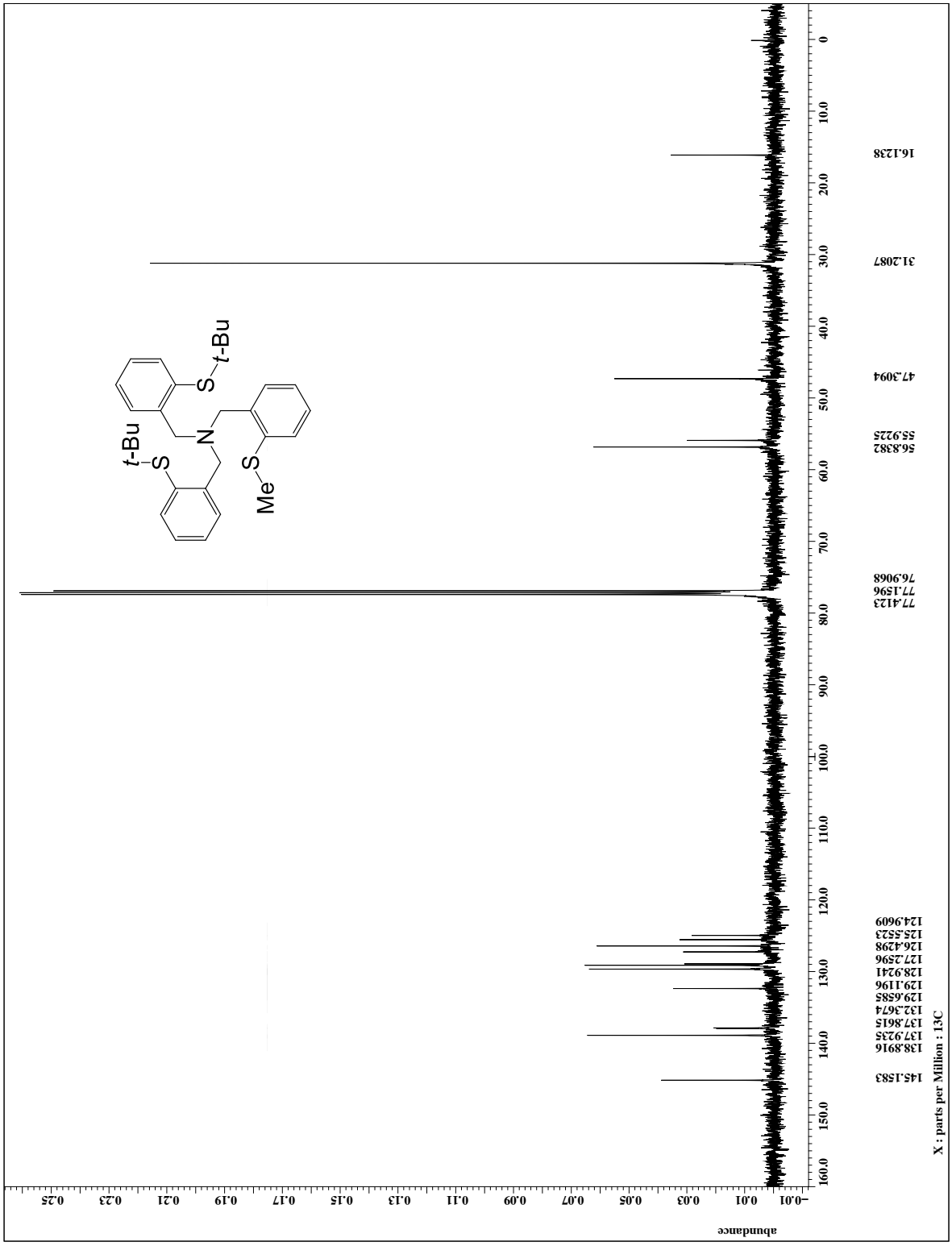
^{13}C NMR Spectrum of **6e**



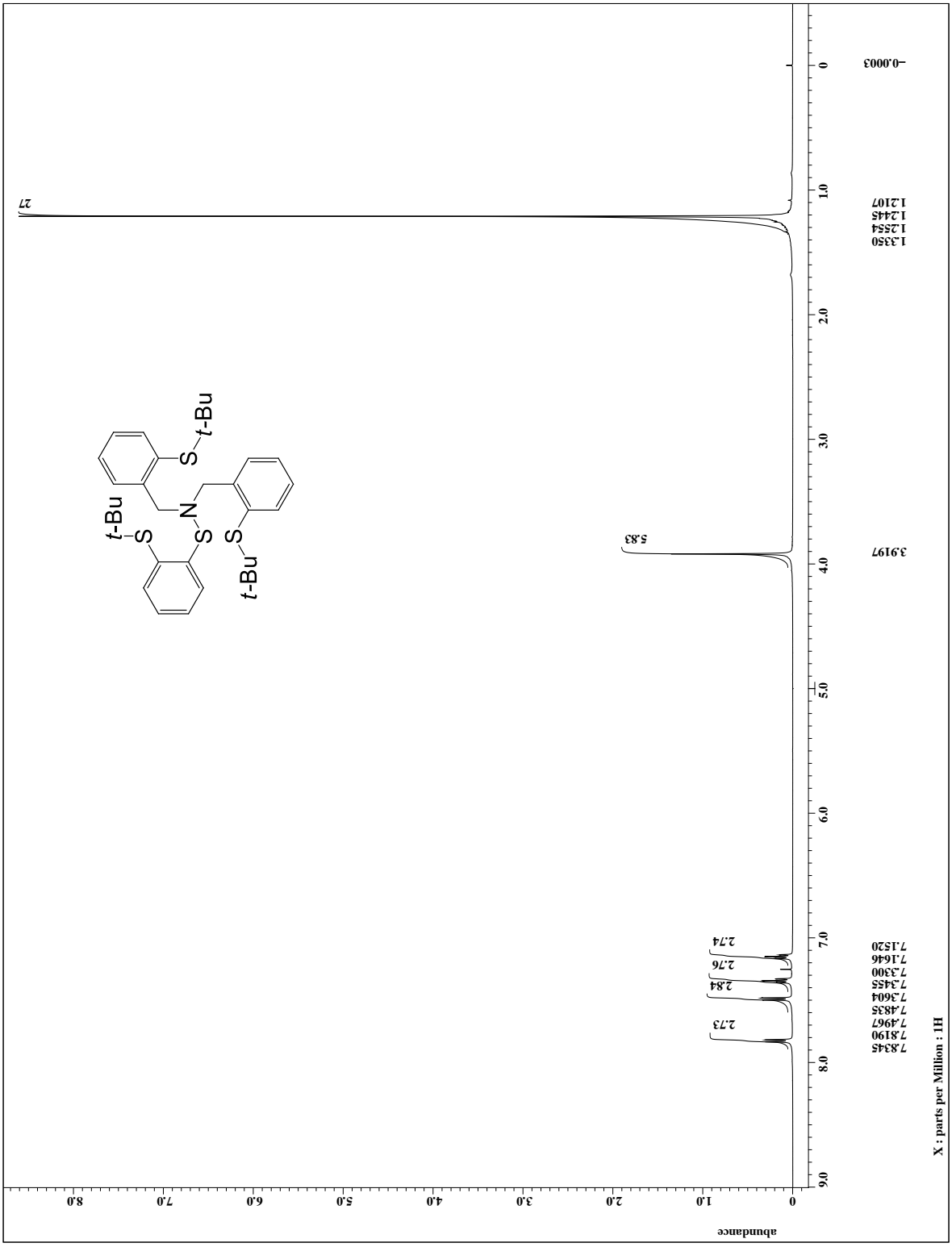
^{1}H NMR Spectrum of **6f**



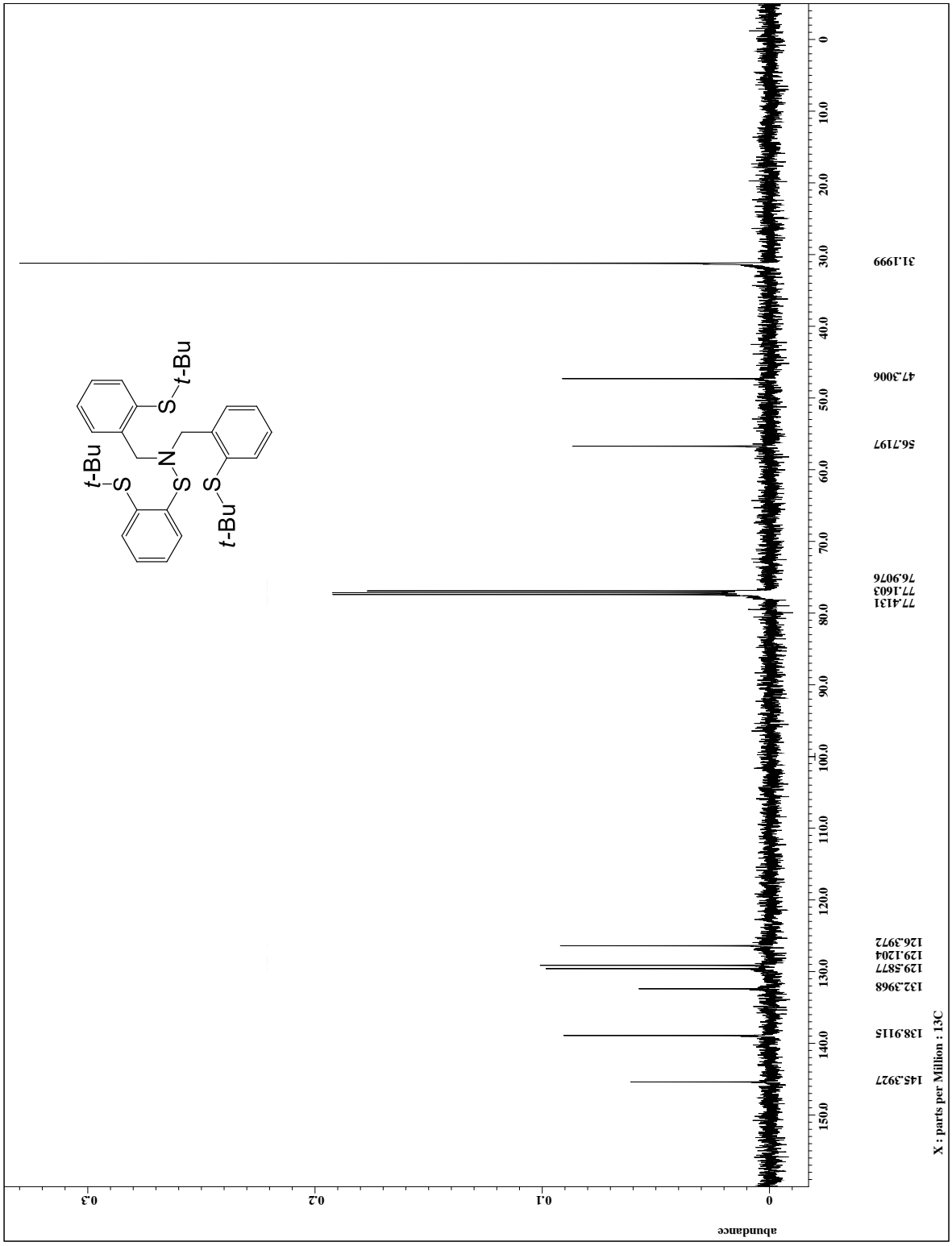
^{13}C NMR Spectrum of **6f**



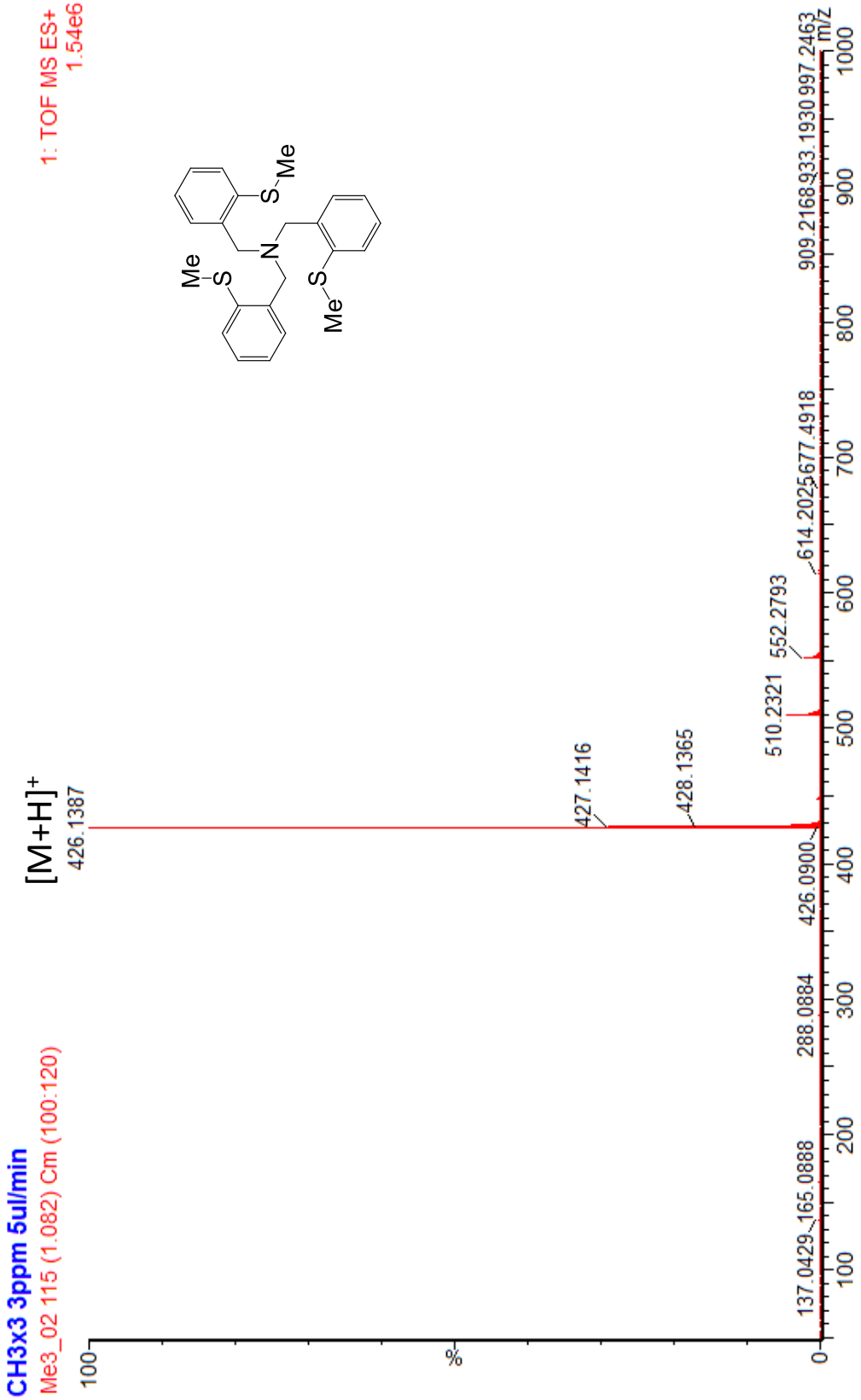
^{1}H NMR Spectrum of **6g**



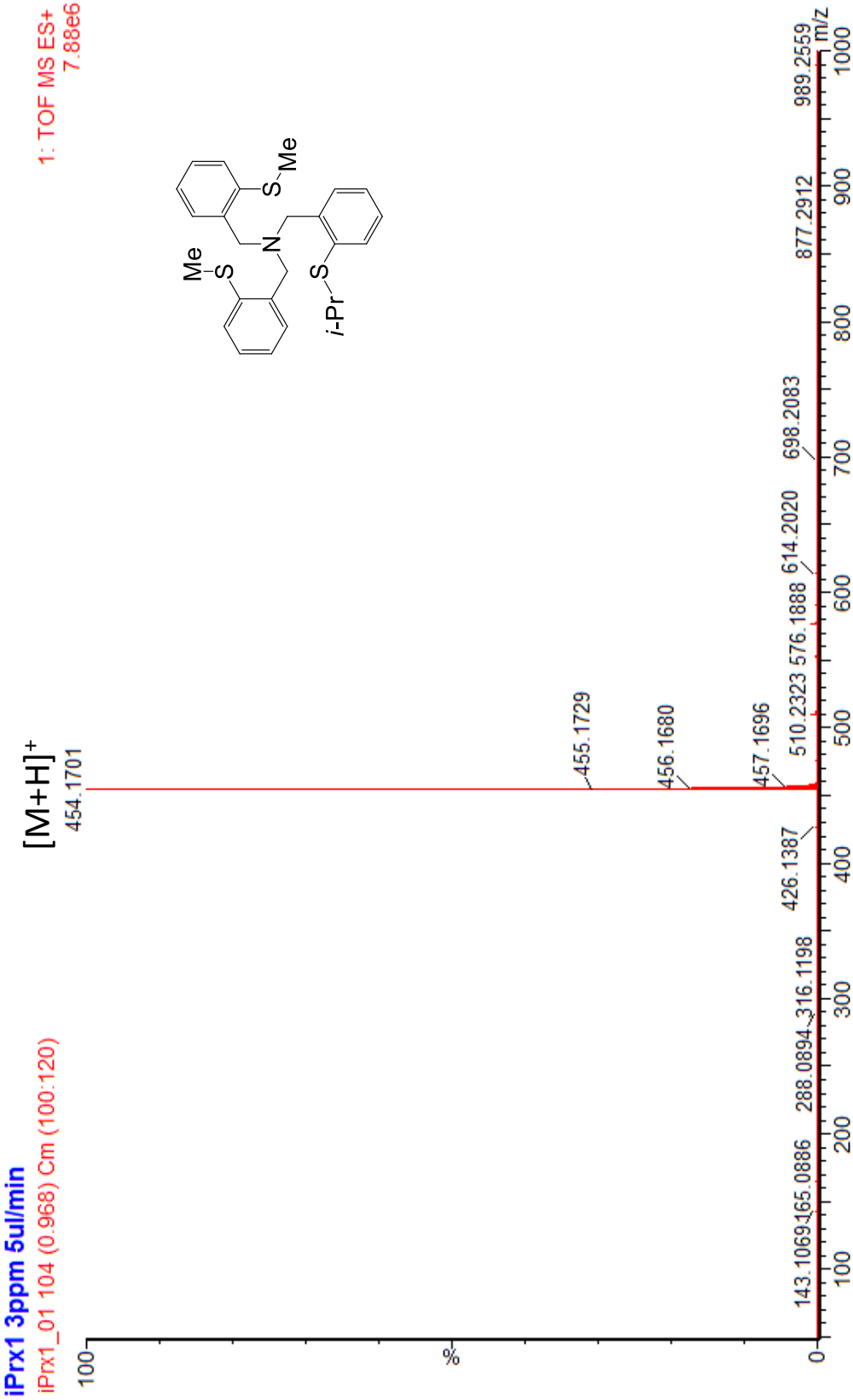
^{13}C NMR Spectrum of **6g**



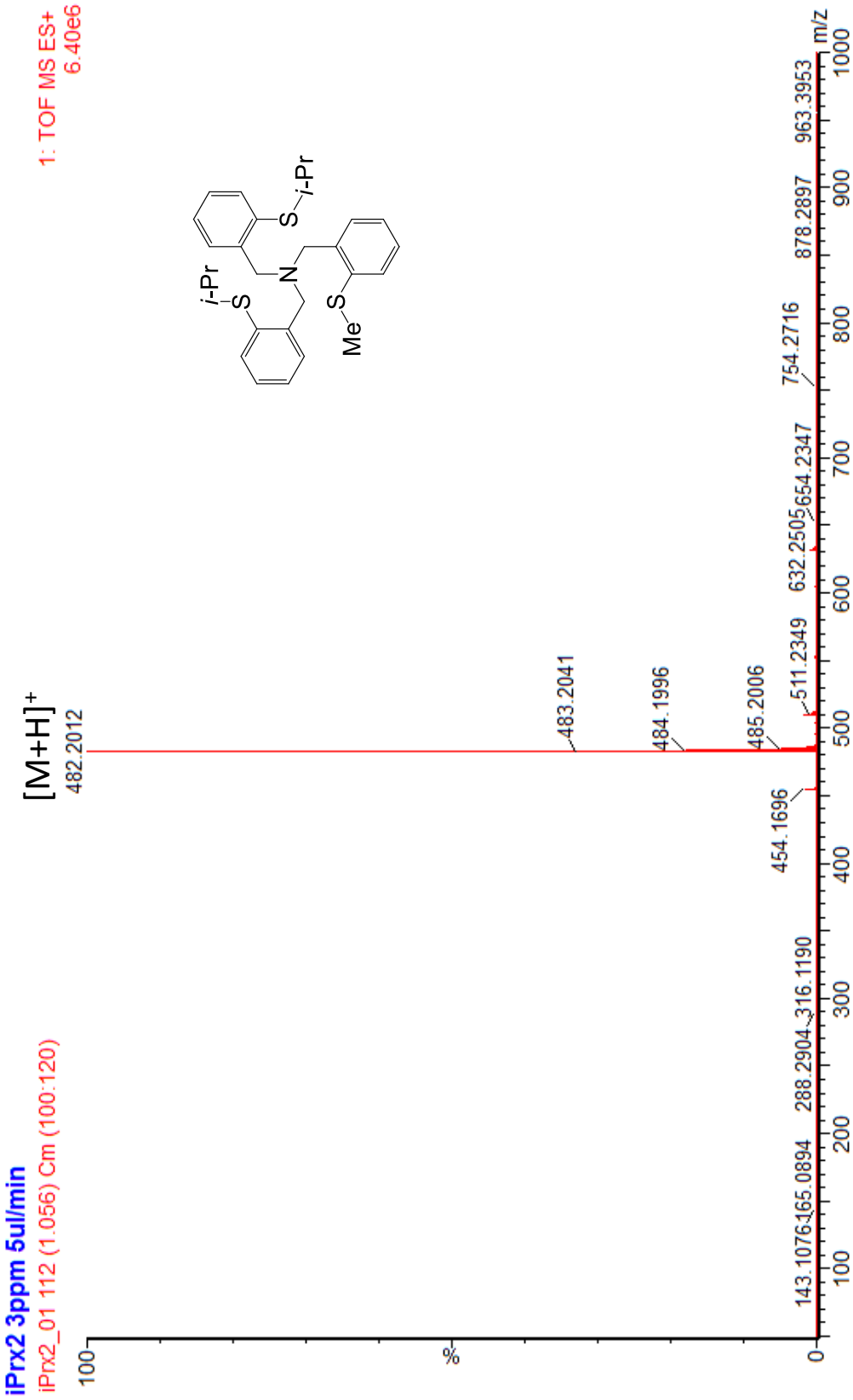
HRMS Spectrum of **6a**



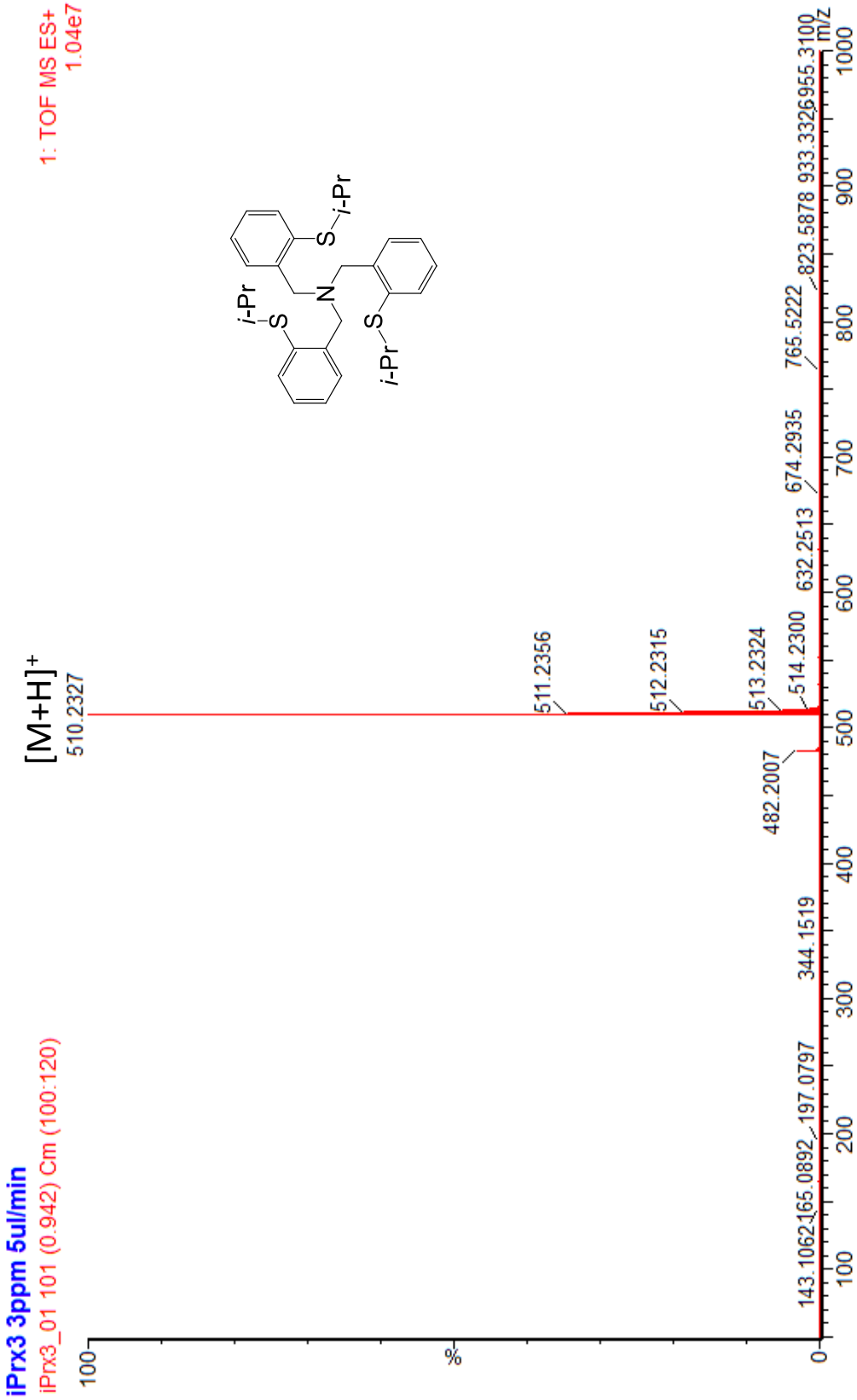
HRMS Spectrum of **6b**



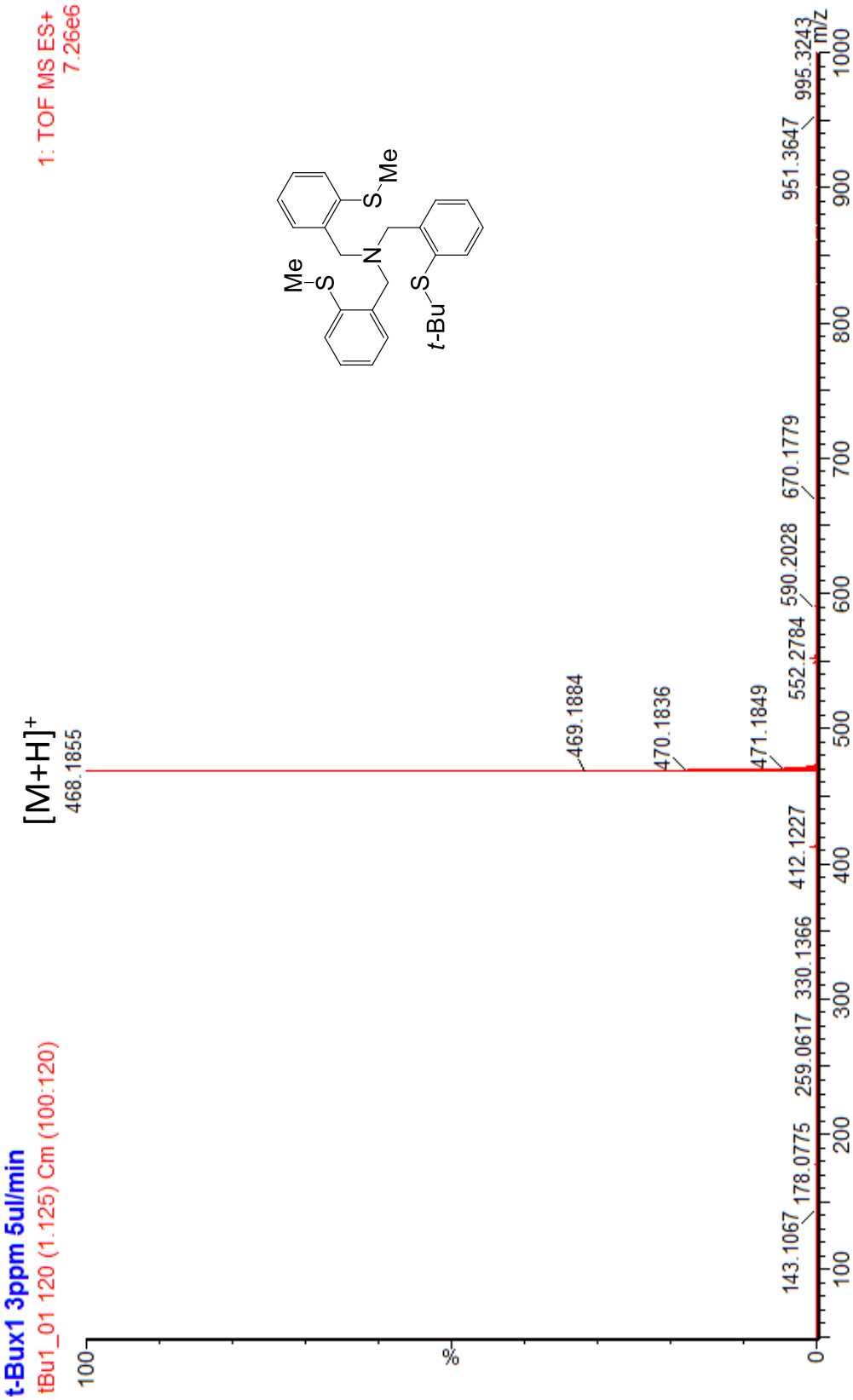
HRMS Spectrum of **6c**



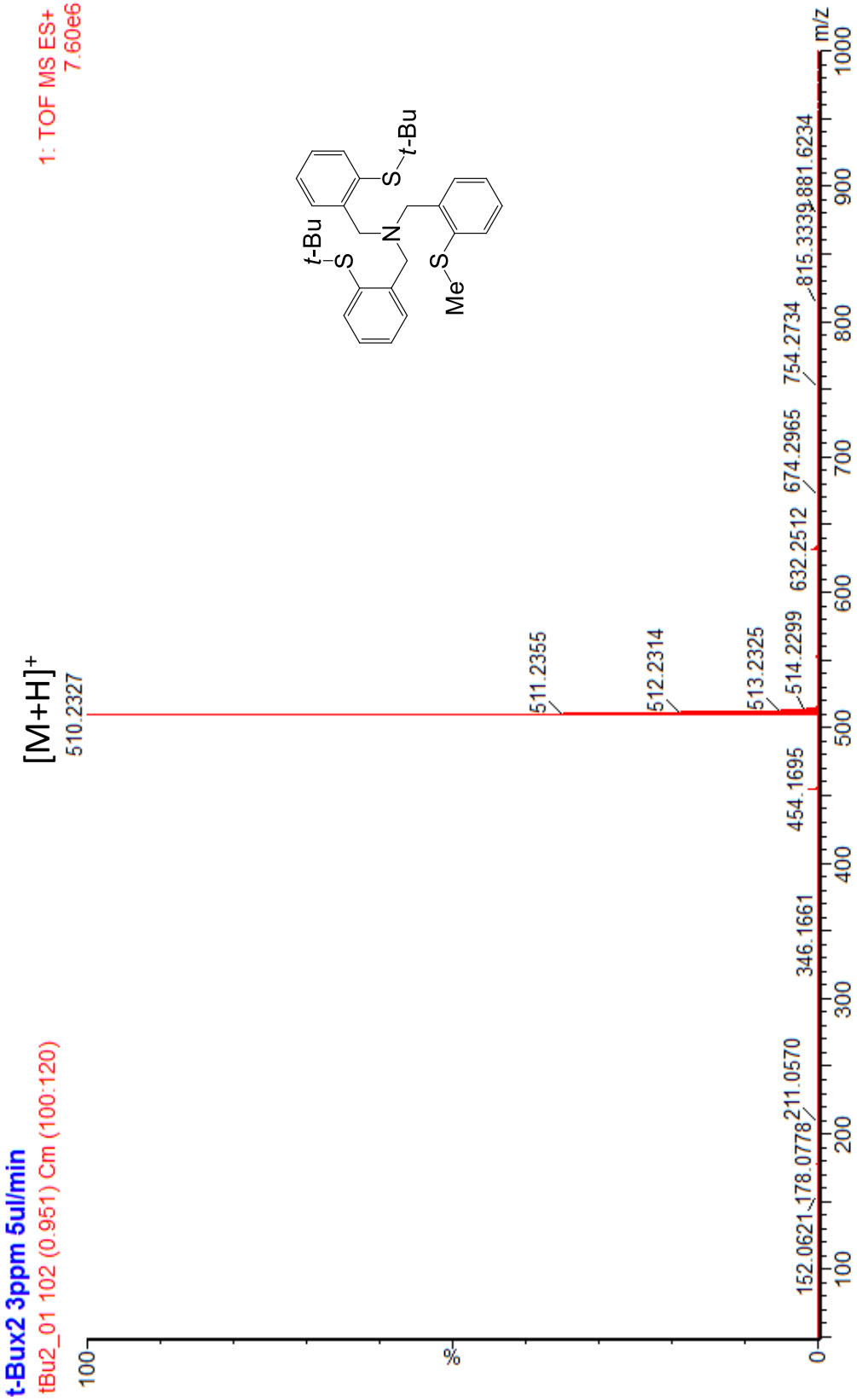
HRMS Spectrum of **6d**



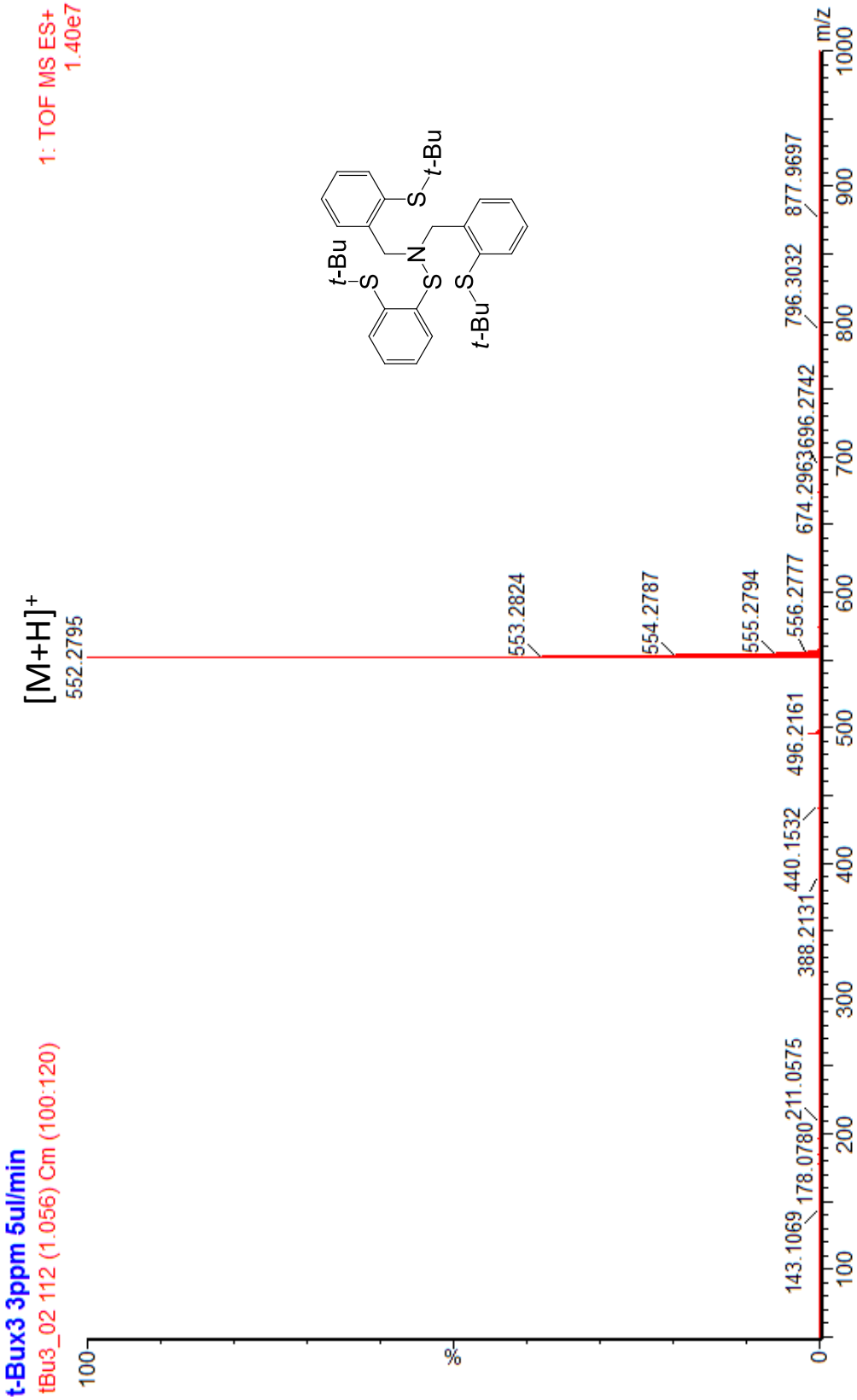
HRMS Spectrum of **6e**



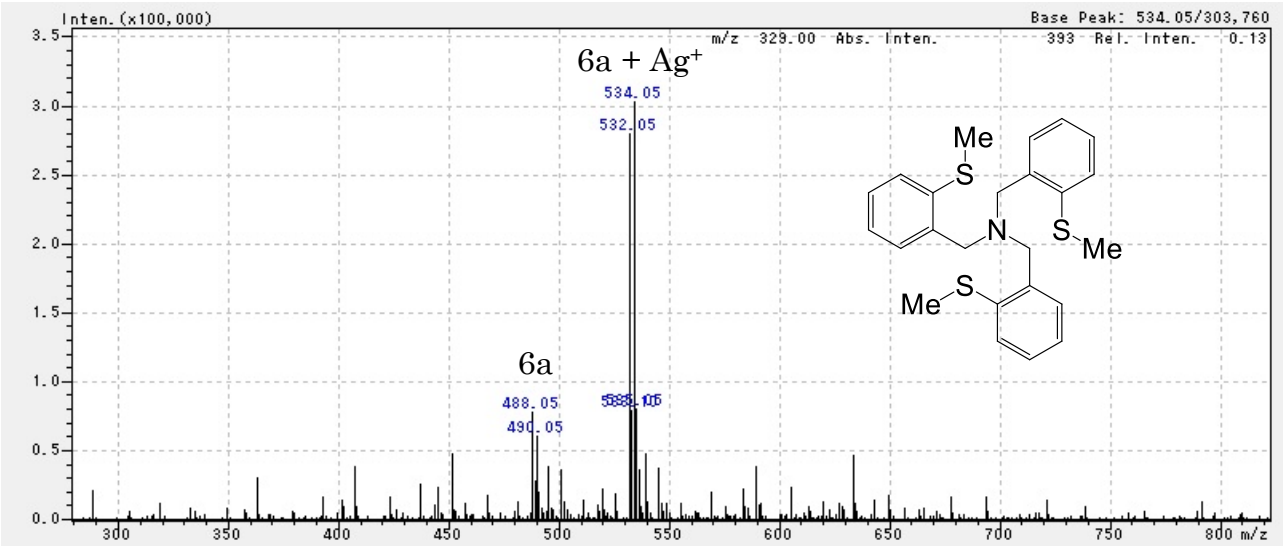
HRMS Spectrum of **6f**



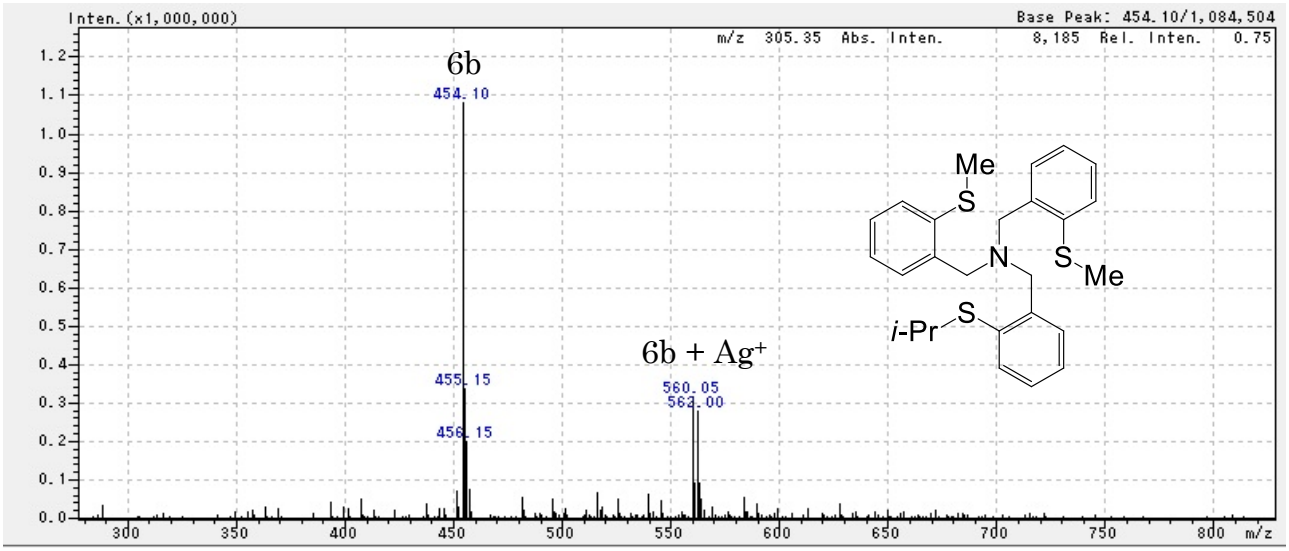
HRMS Spectrum of **6g**



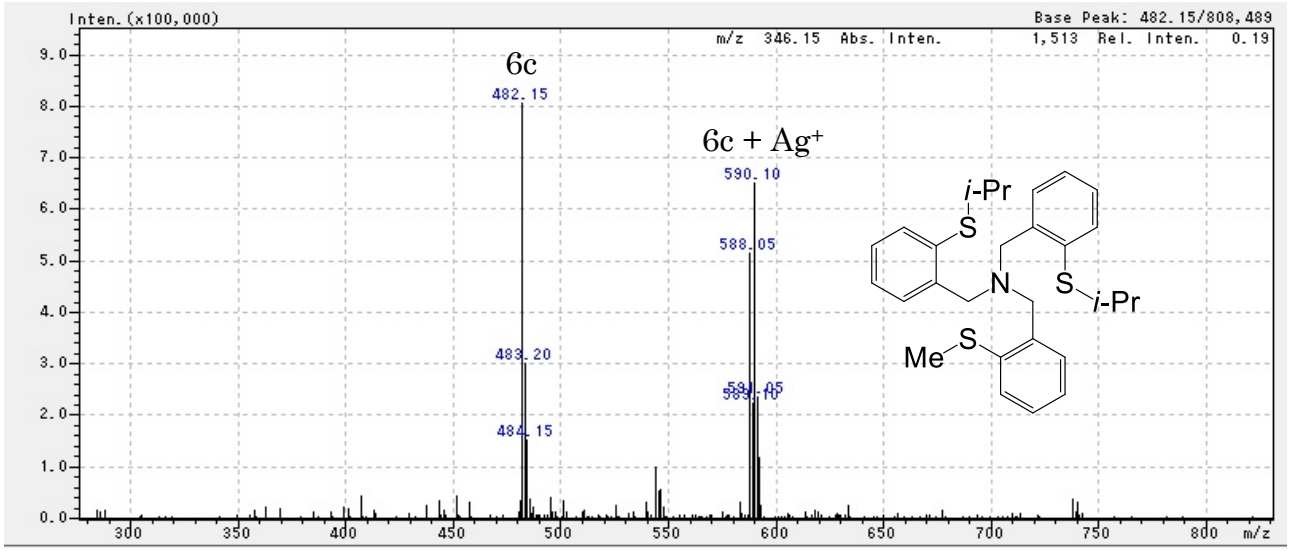
ESI-MS Spectrum of **6a + $AgClO_4$**



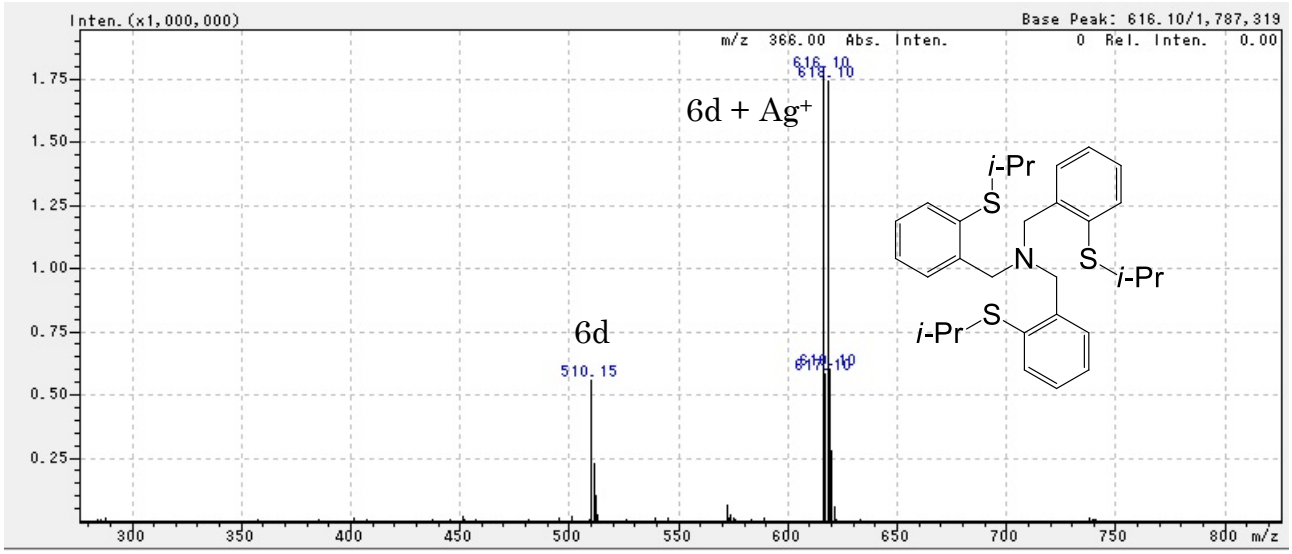
ESI-MS Spectrum of **6b + $AgClO_4$**



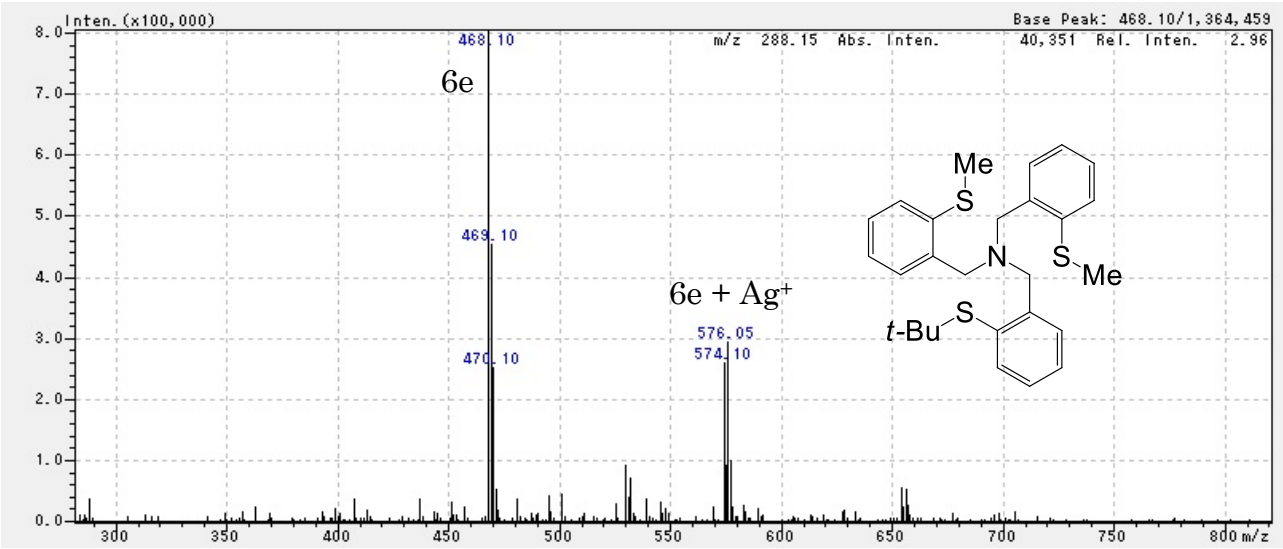
ESI-MS Spectrum of **6c + $AgClO_4$**



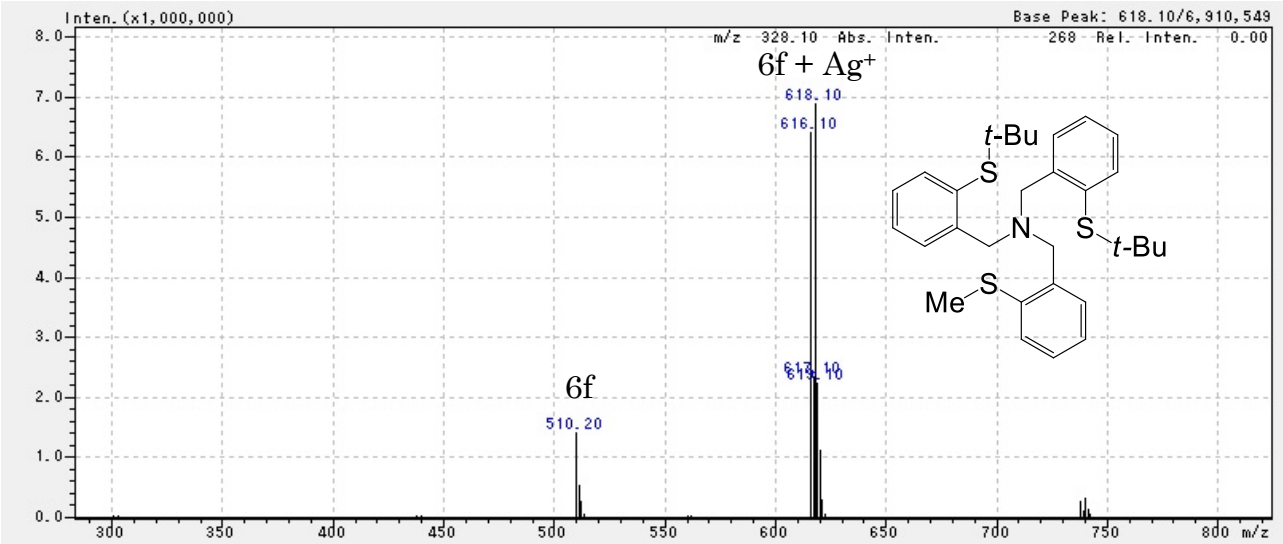
ESI-MS Spectrum of **6d + $AgClO_4$**



ESI-MS Spectrum of **6e + $AgClO_4$**



ESI-MS Spectrum of **6f + $AgClO_4$**



ESI-MS Spectrum of **6g + $AgClO_4$**