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## APPENDIX

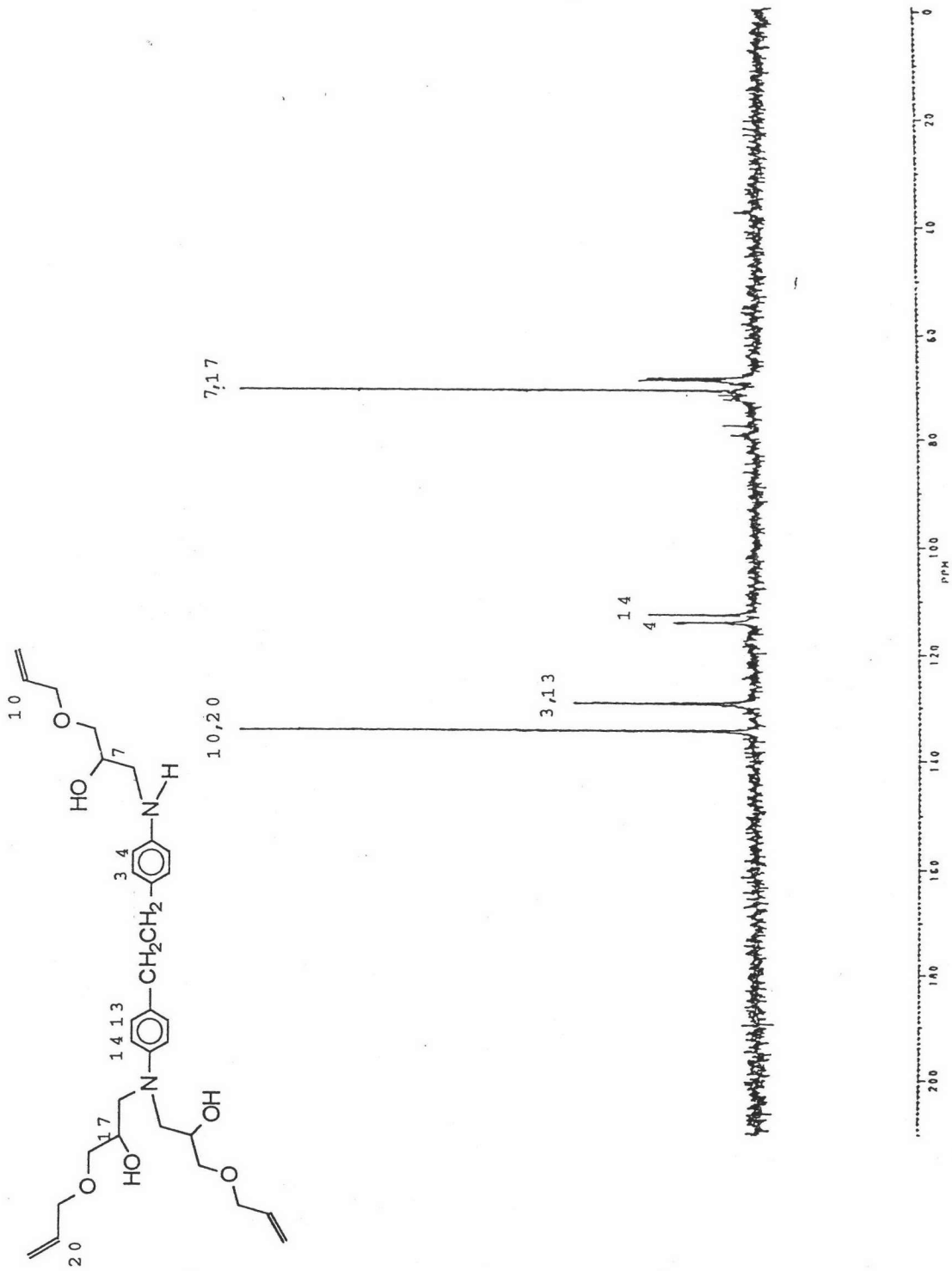


Fig A28 The DEPT 90 <sup>13</sup>C-NMR spectrum (CDCl<sub>3</sub>) of N,N,N',N'-Tris(2-hydroxy-4-oxa-6-heptenyl)ethylenediamine (55)

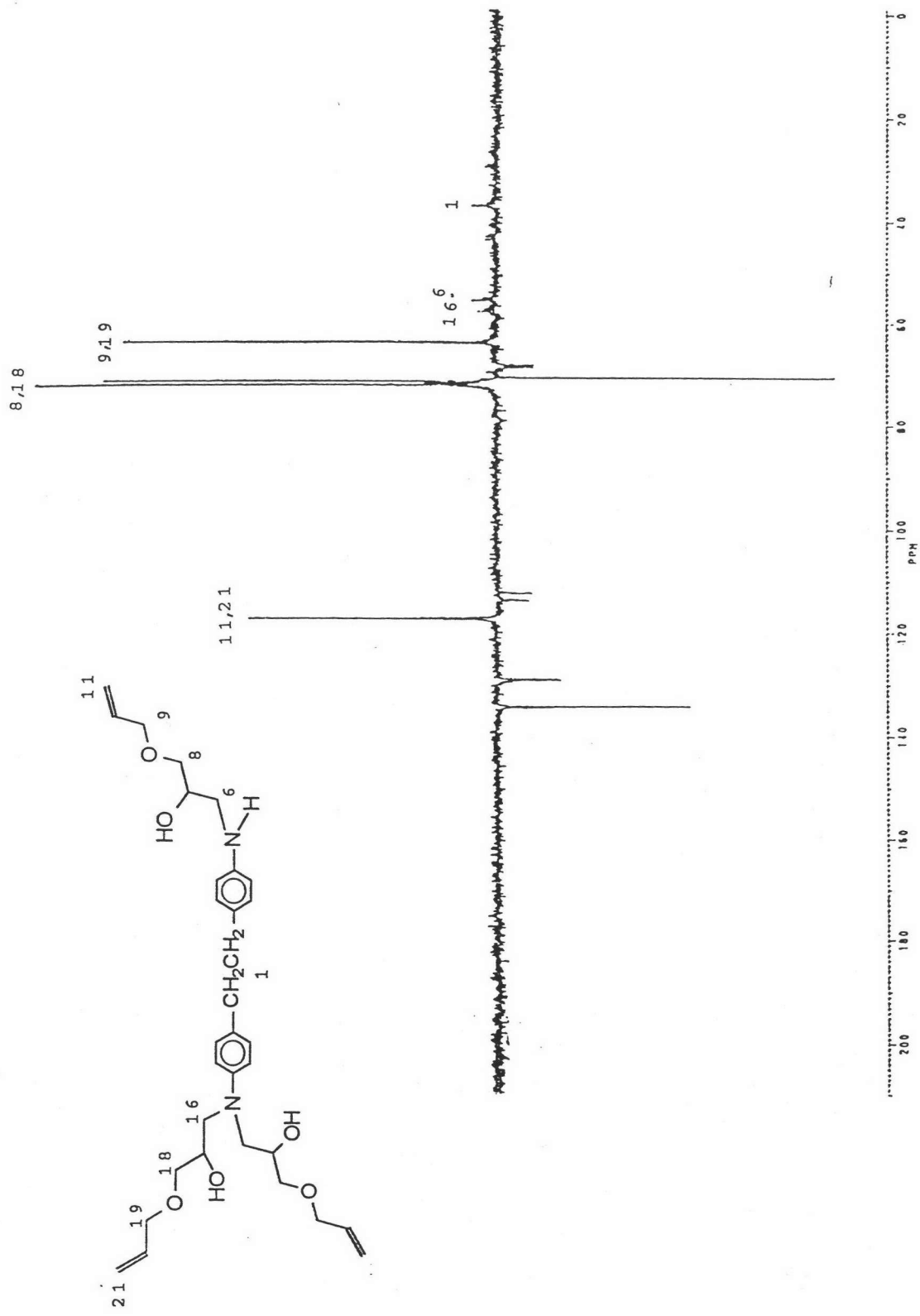


Fig A27 The DEPT 135 <sup>13</sup>C-NMR spectrum (CDCl<sub>3</sub>) of N,N,N',N'-Tris(2-hydroxy-4-oxa-6-heptenyl)ethylenedianiline (55)

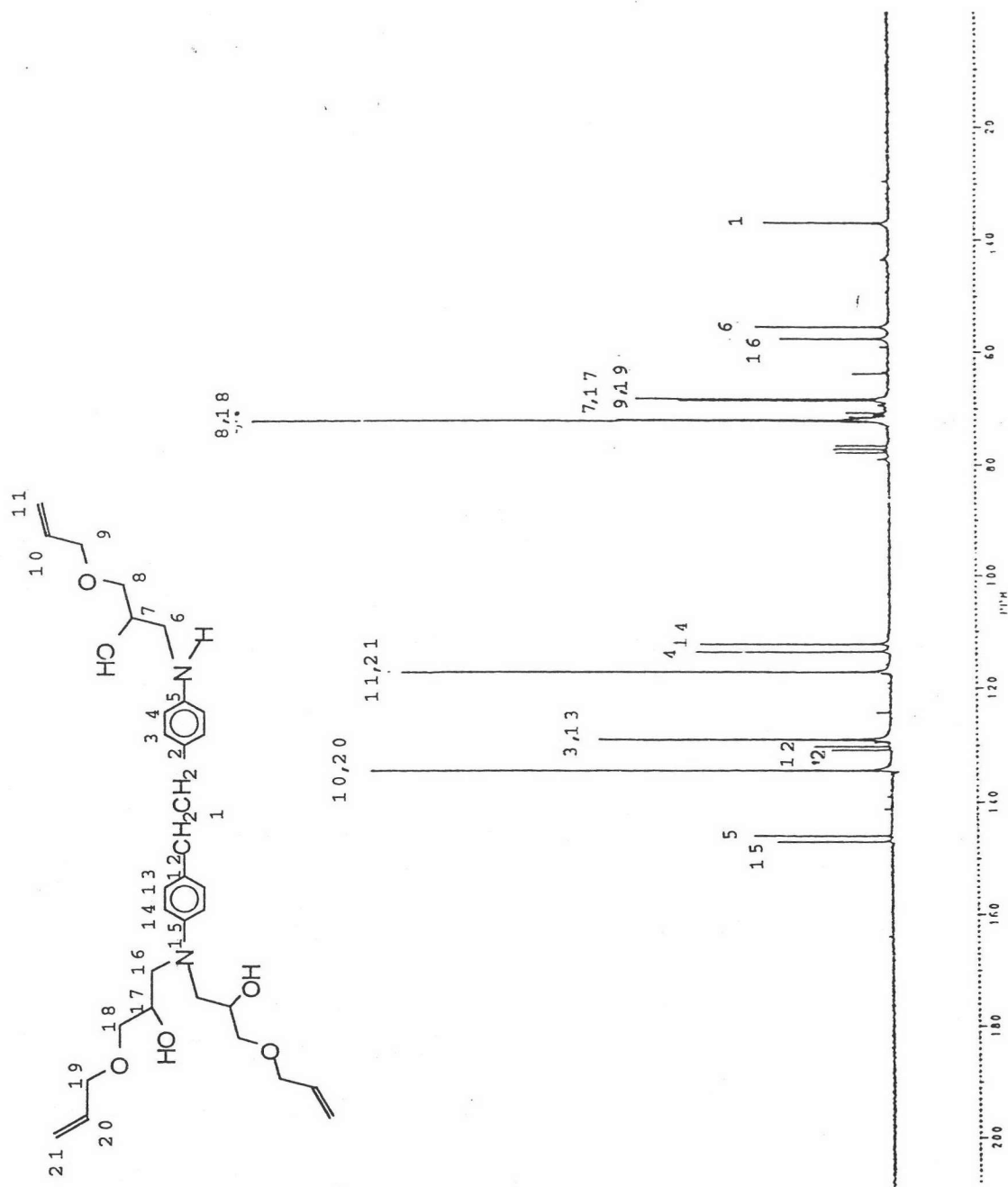


Fig. A26 <sup>13</sup>C-NMR spectrum (CDCl<sub>3</sub>) of N,N,N',N'-Tris(2-hydroxy-4-oxa-6-heptenyl)ethylenediamine (55)



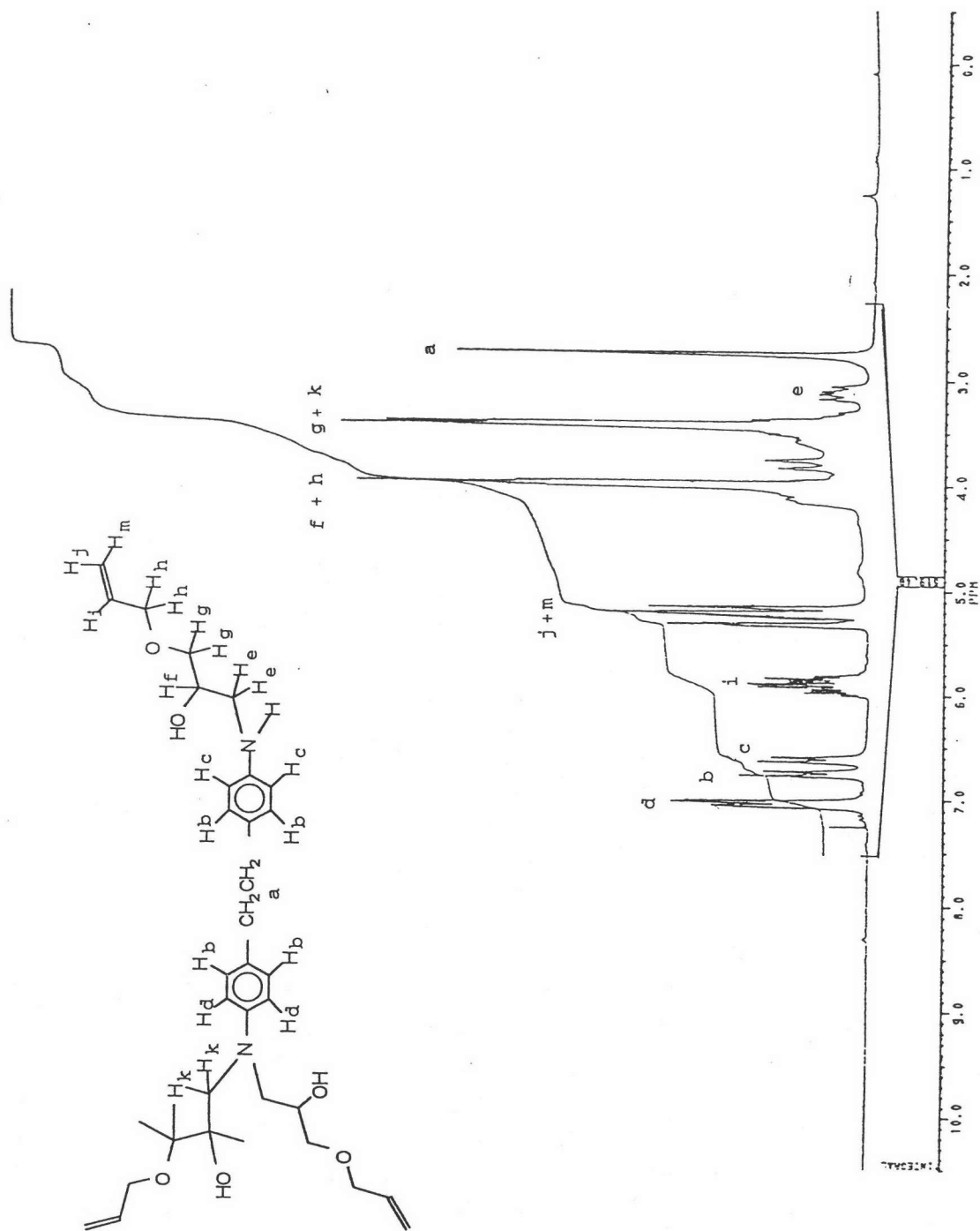


Fig A25  $^1\text{H-NMR}$  spectrum ( $\text{CDCl}_3$ ) of **N,N,N',N'-Tris(2-hydroxy-4-oxa-6-heptenyl)ethylenedianiline (55)**

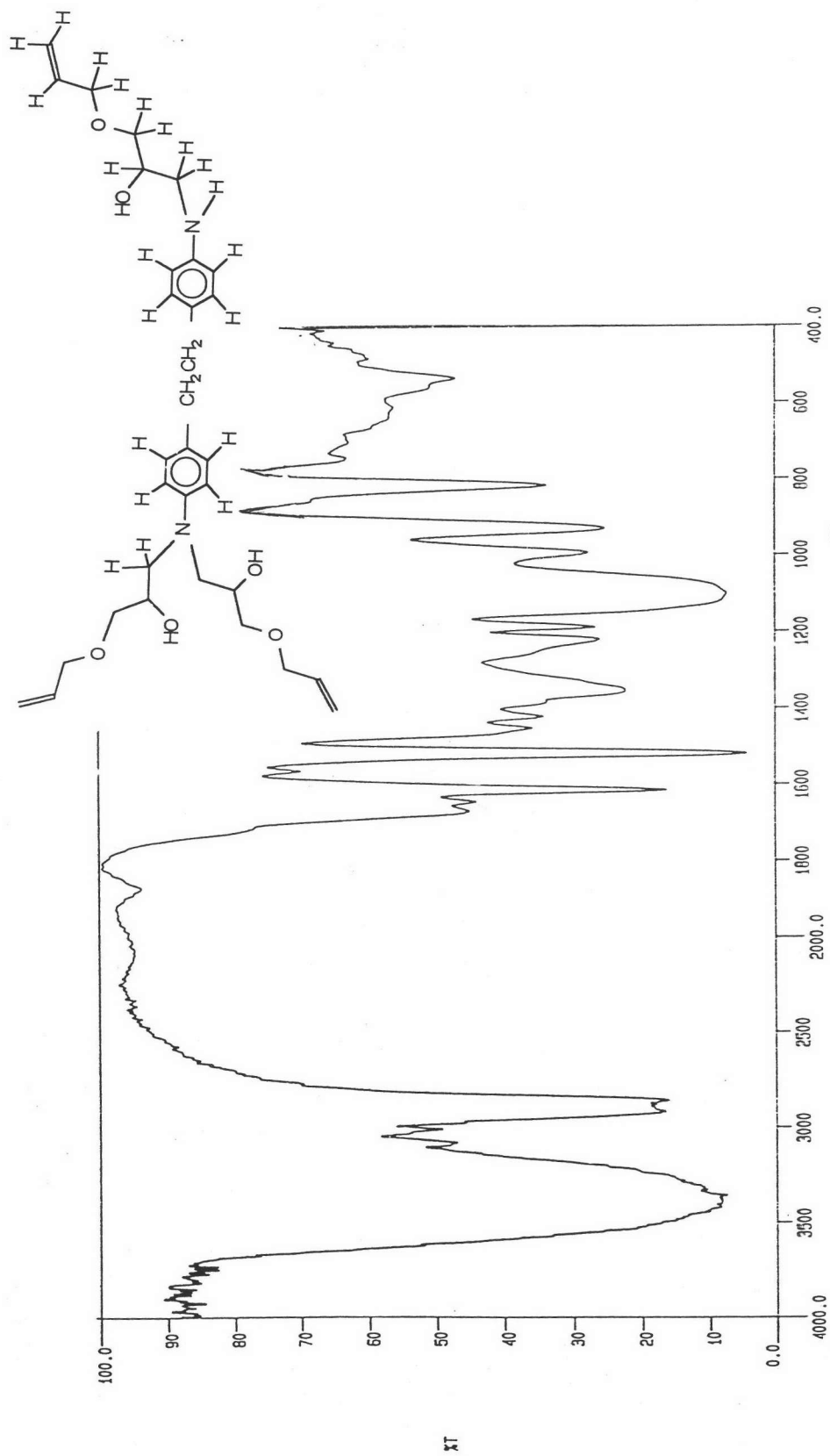


Fig A24 IR spectrum (neat) of N,N,N',N'-Tris(2-hydroxy-4-oxa-6-heptenyl)ethylenediamine (55)

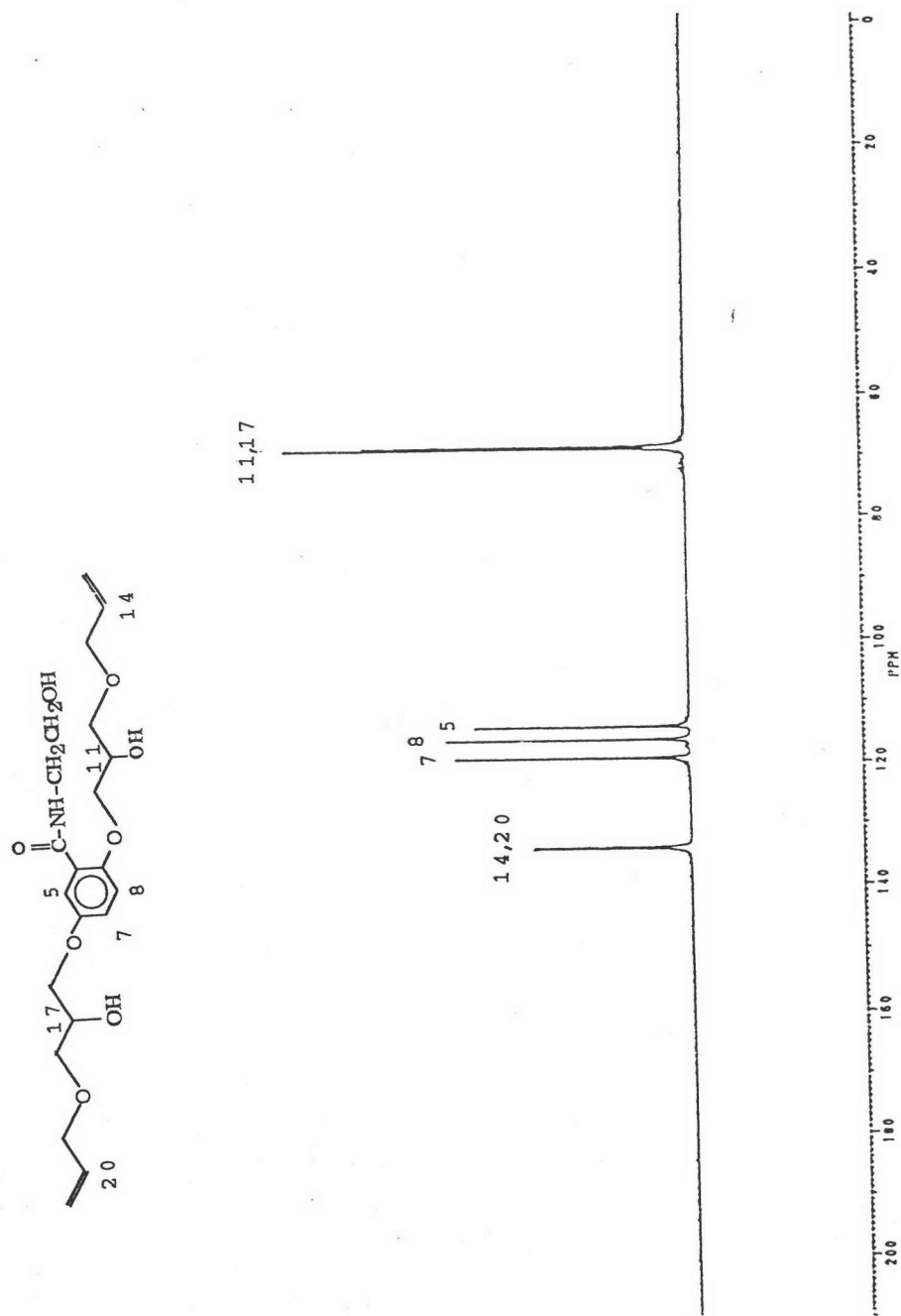


Fig A22 The DEPT 90  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 2,5-Di(2-hydroxy-4-oxa-6-hepteoxy)-N-(2-hydroxyethyl)benzamide (**54**)

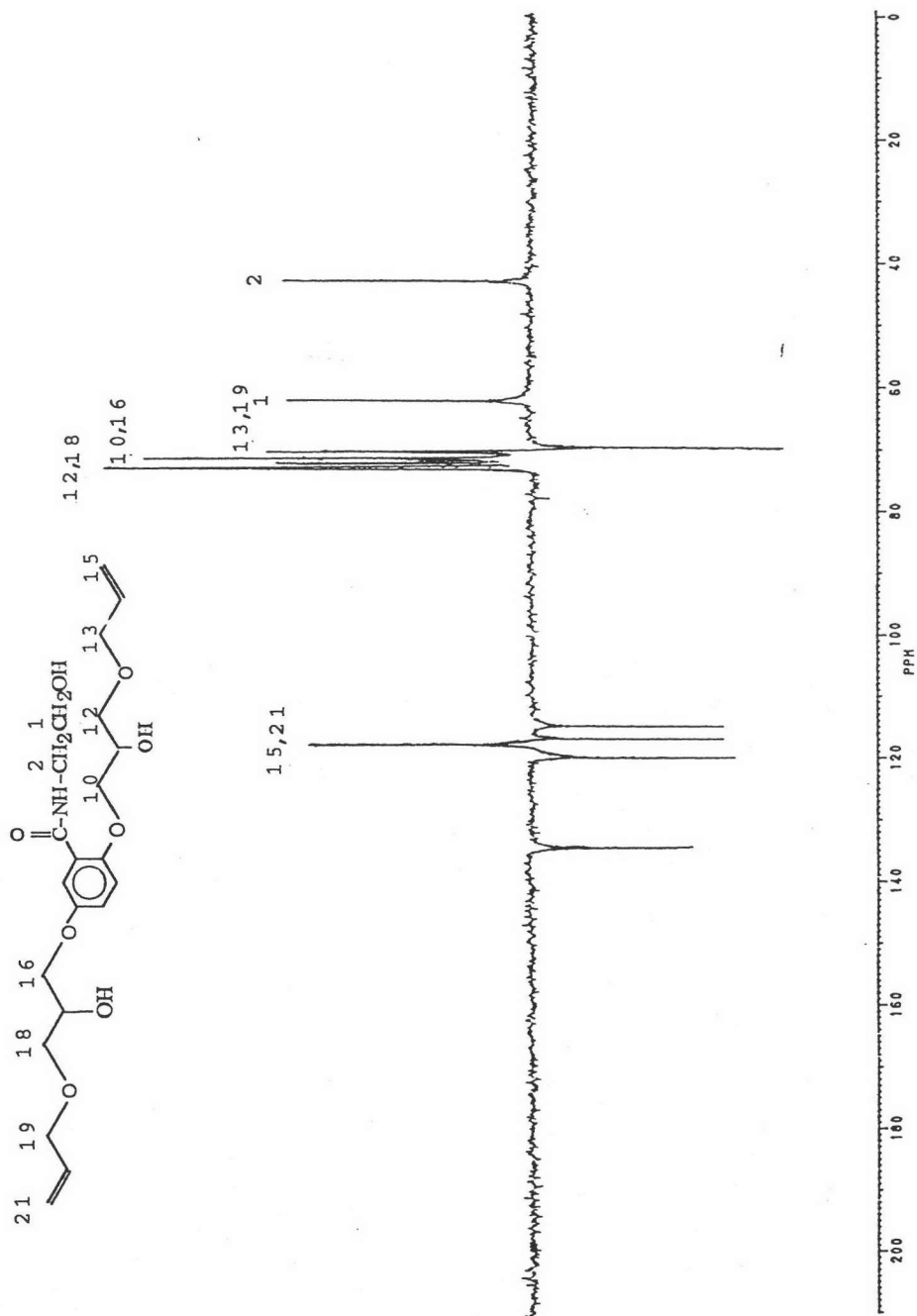


Fig A21 The DEPT 135  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 2,5-Di(2-hydroxy-4-oxa-6-hepteoxy)-N-(2-hydroxyethyl)benzamide (**54**)

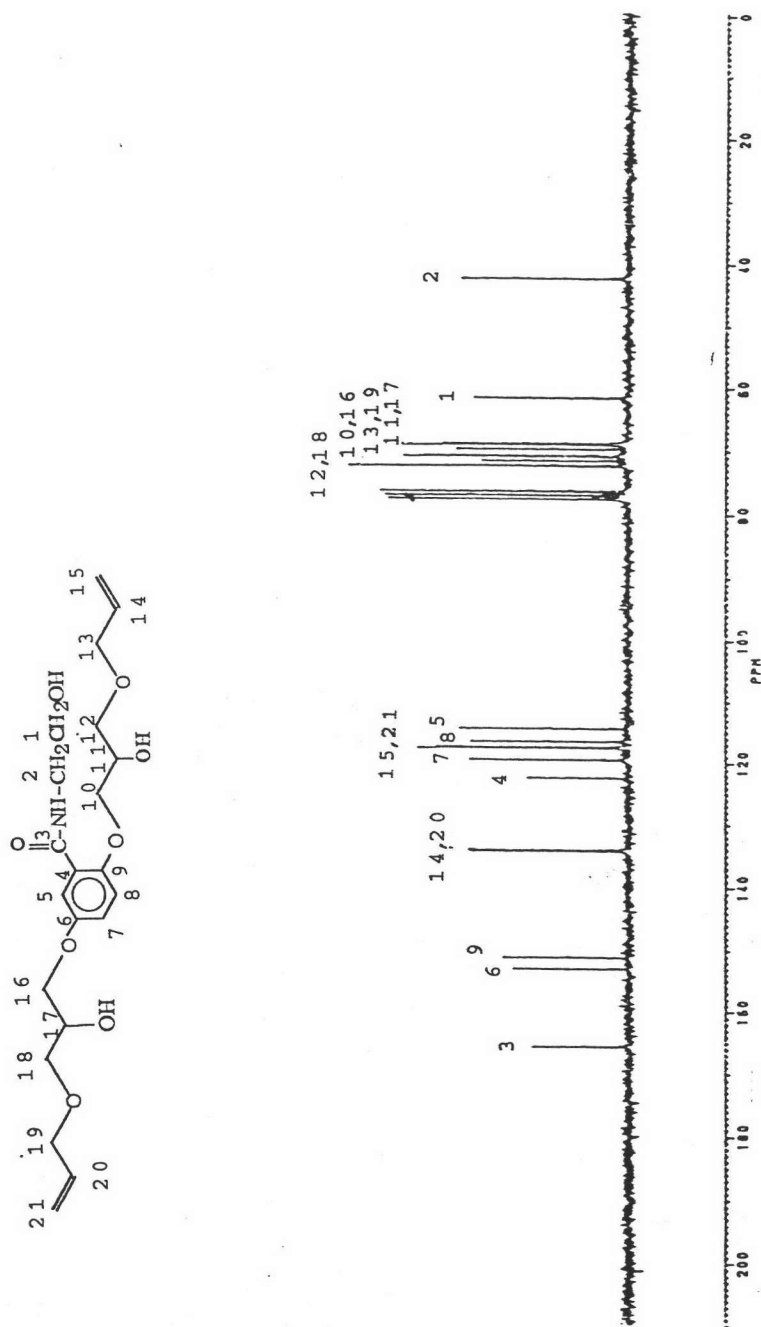


Fig A20  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 2,5-Di(2-hydroxy-4-oxa-6-heptoxy)-N-(2-hydroxyethyl)benzamide (**54**)

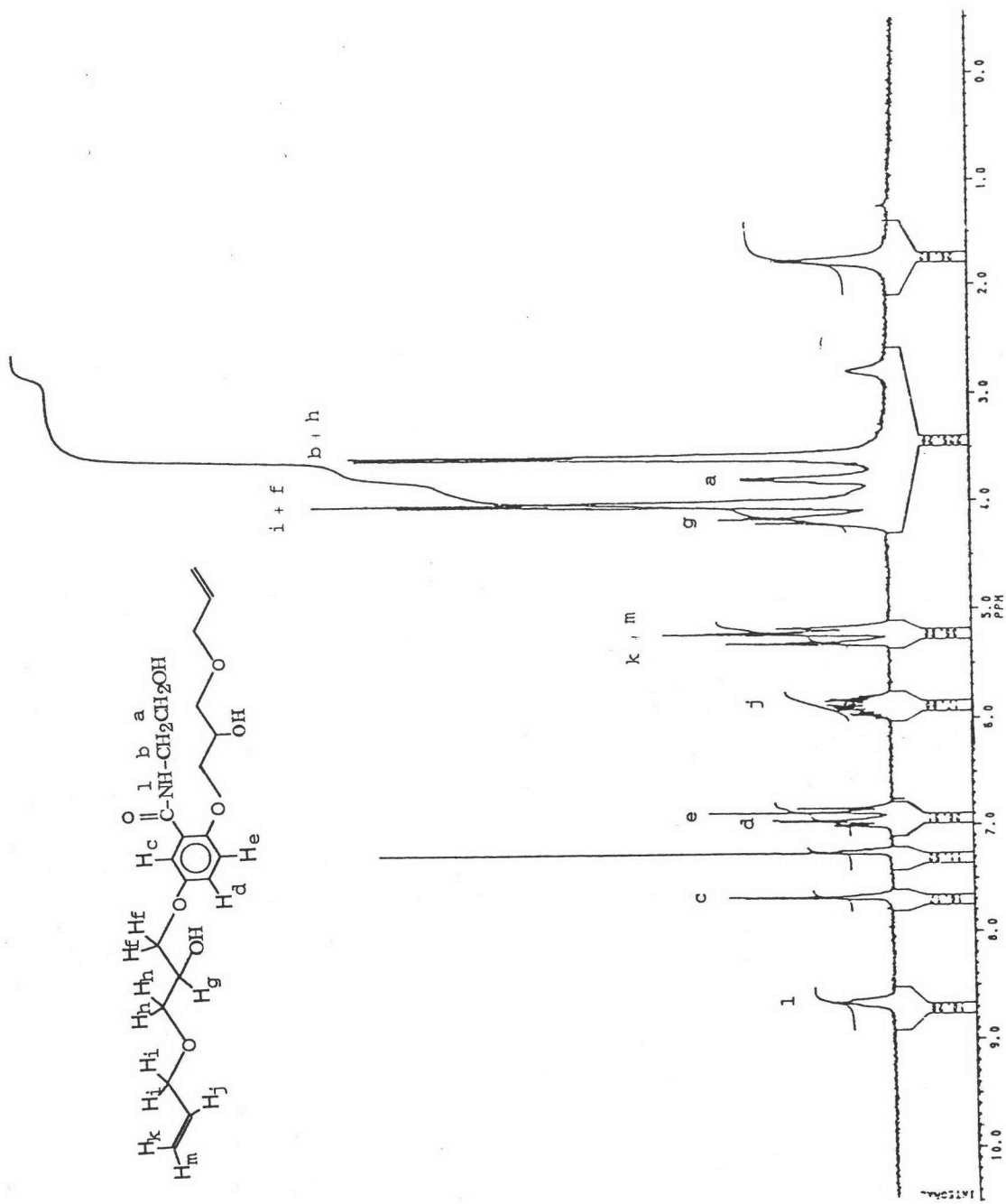


Fig A19  $^1\text{H-NMR}$  spectrum ( $\text{CDCl}_3$ ) of 2,5-Di(2-hydroxy-4-oxa-6-heptoxy)-N-(2-hydroxyethyl)benzamide (54)

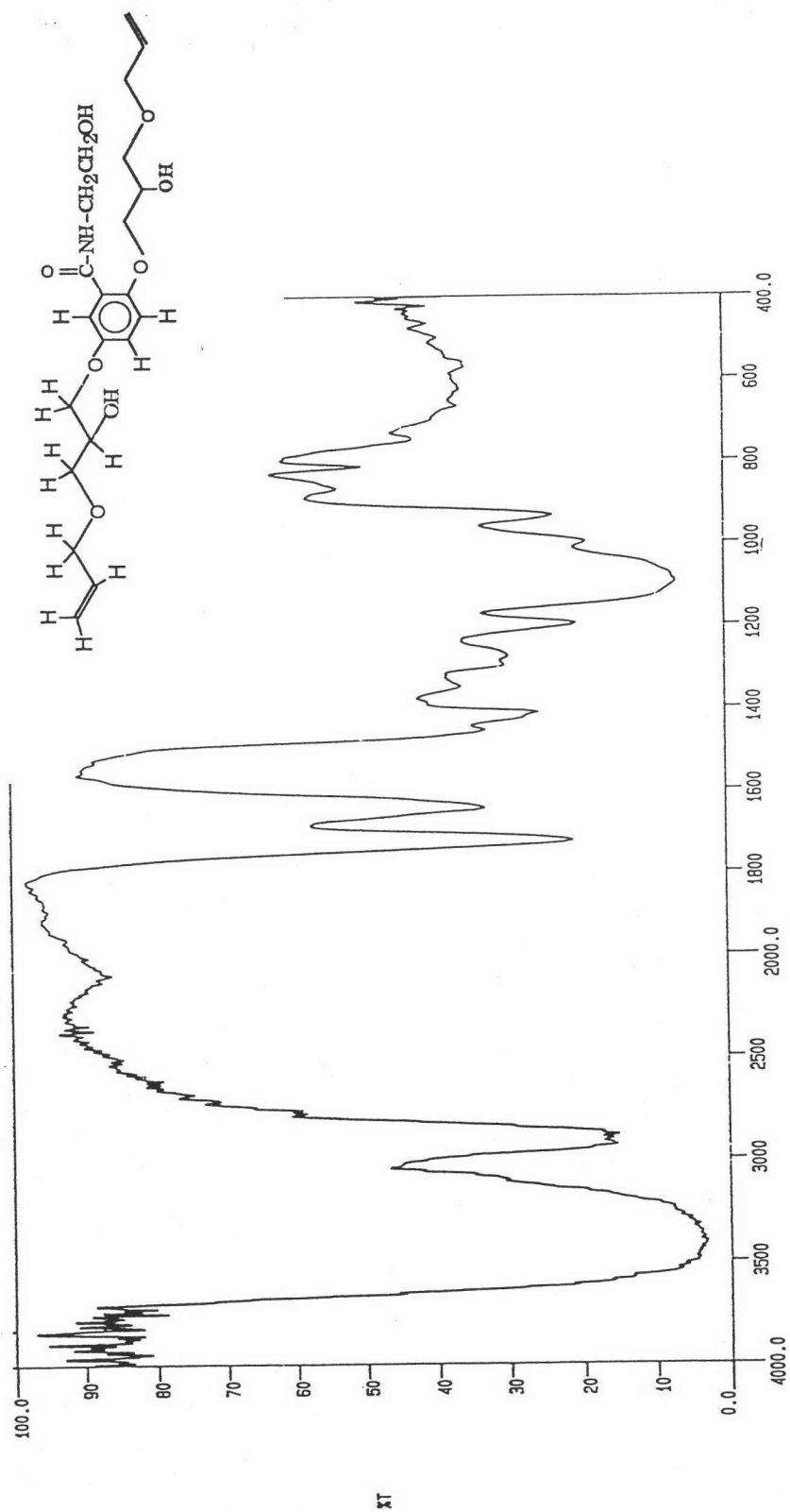


Fig A18 IR spectrum (neat) of 2,5-Di(2-hydroxy-4-oxa-6-heptoxy)-N-(2-hydroxyethyl)benzamide (54)

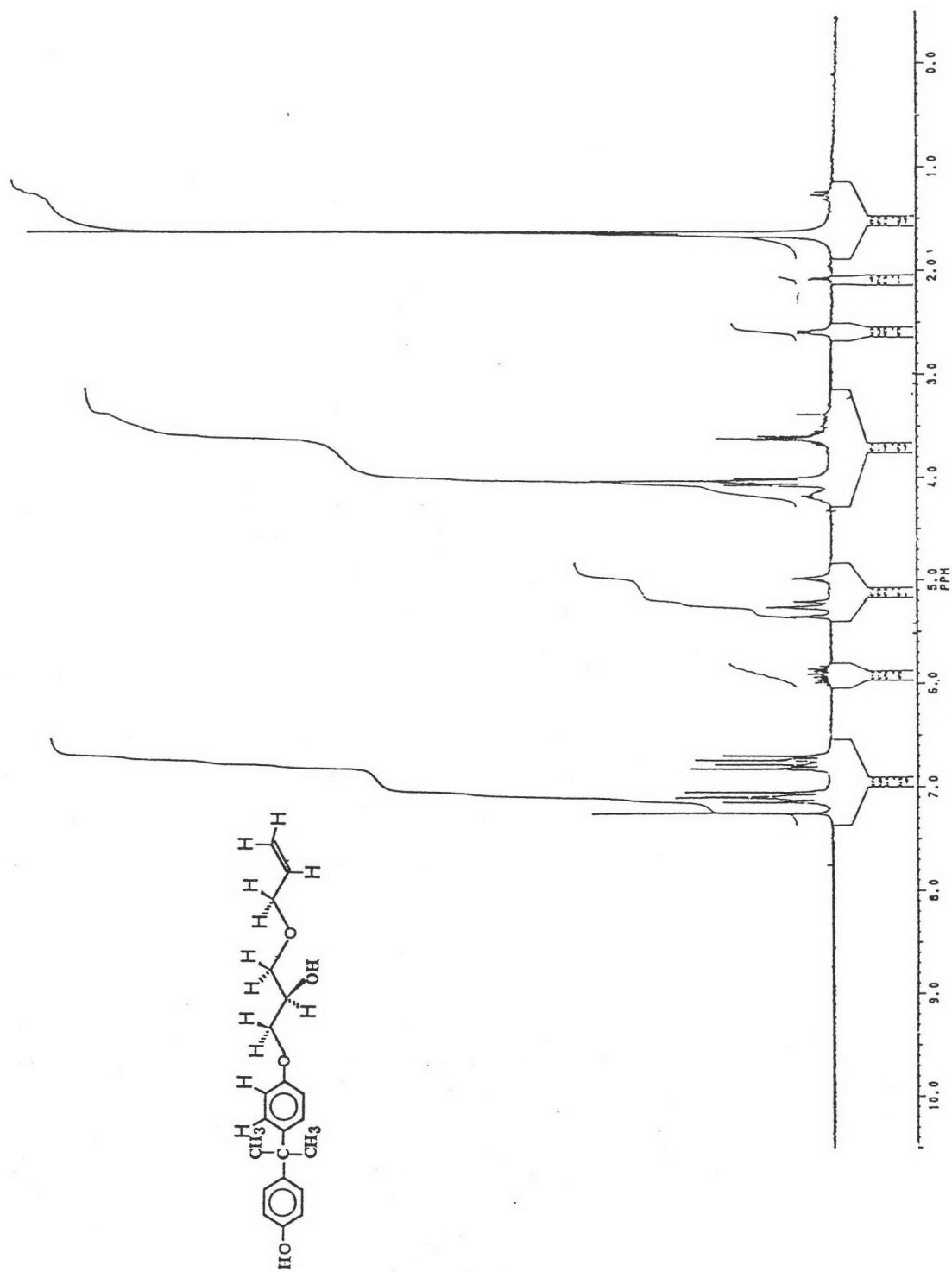


Fig A17 <sup>1</sup>H-NMR spectrum (CDCl<sub>3</sub>) of 4,4'-Isopropylidene (2-hydroxy-4-oxa-6-heptene)phenyl ether (56)



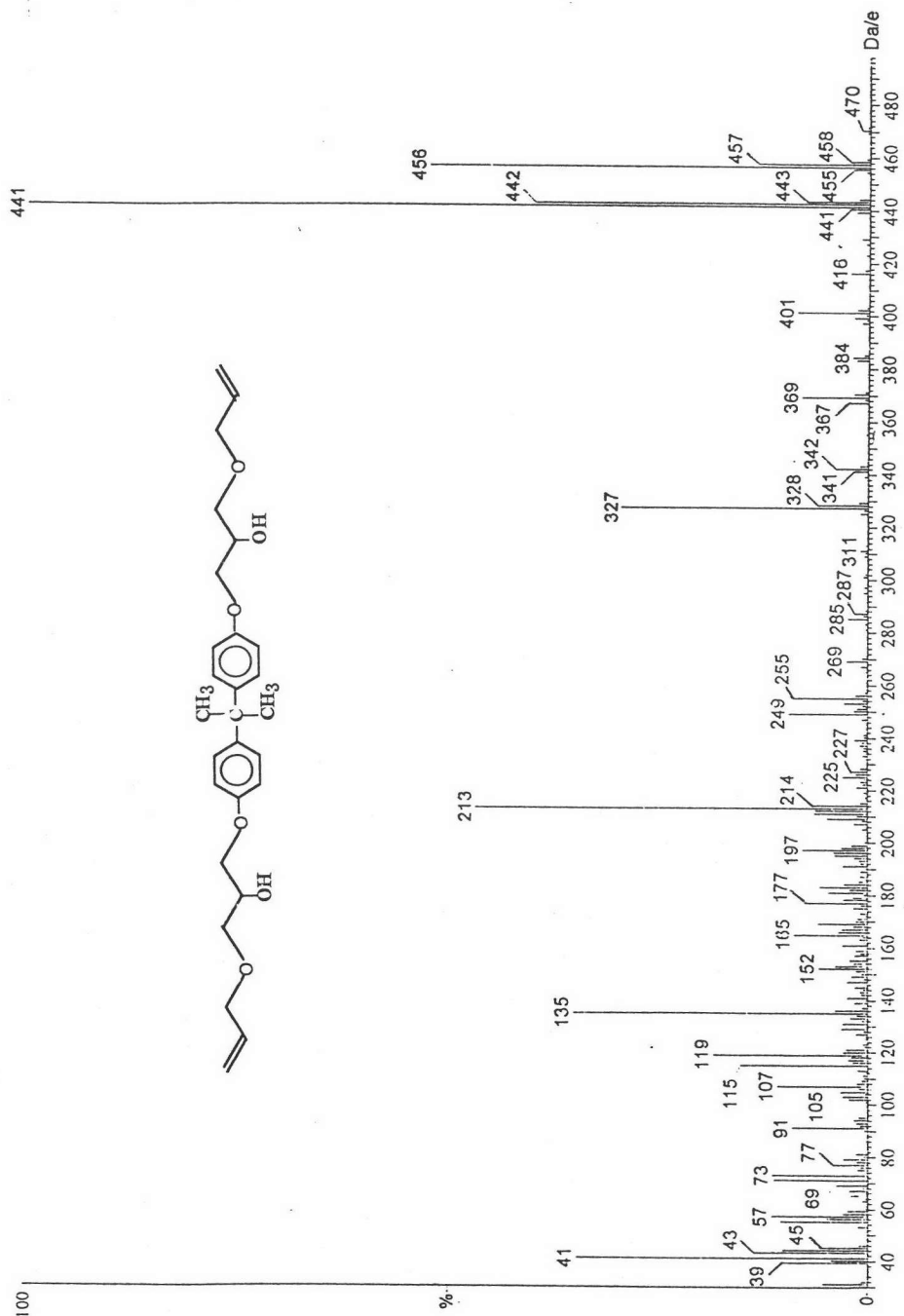


Fig A16 The MS spectrum of 4,4'-isopropylidenedi(2-hydroxy-4-oxa-6-heptene)phenyl ether (9)

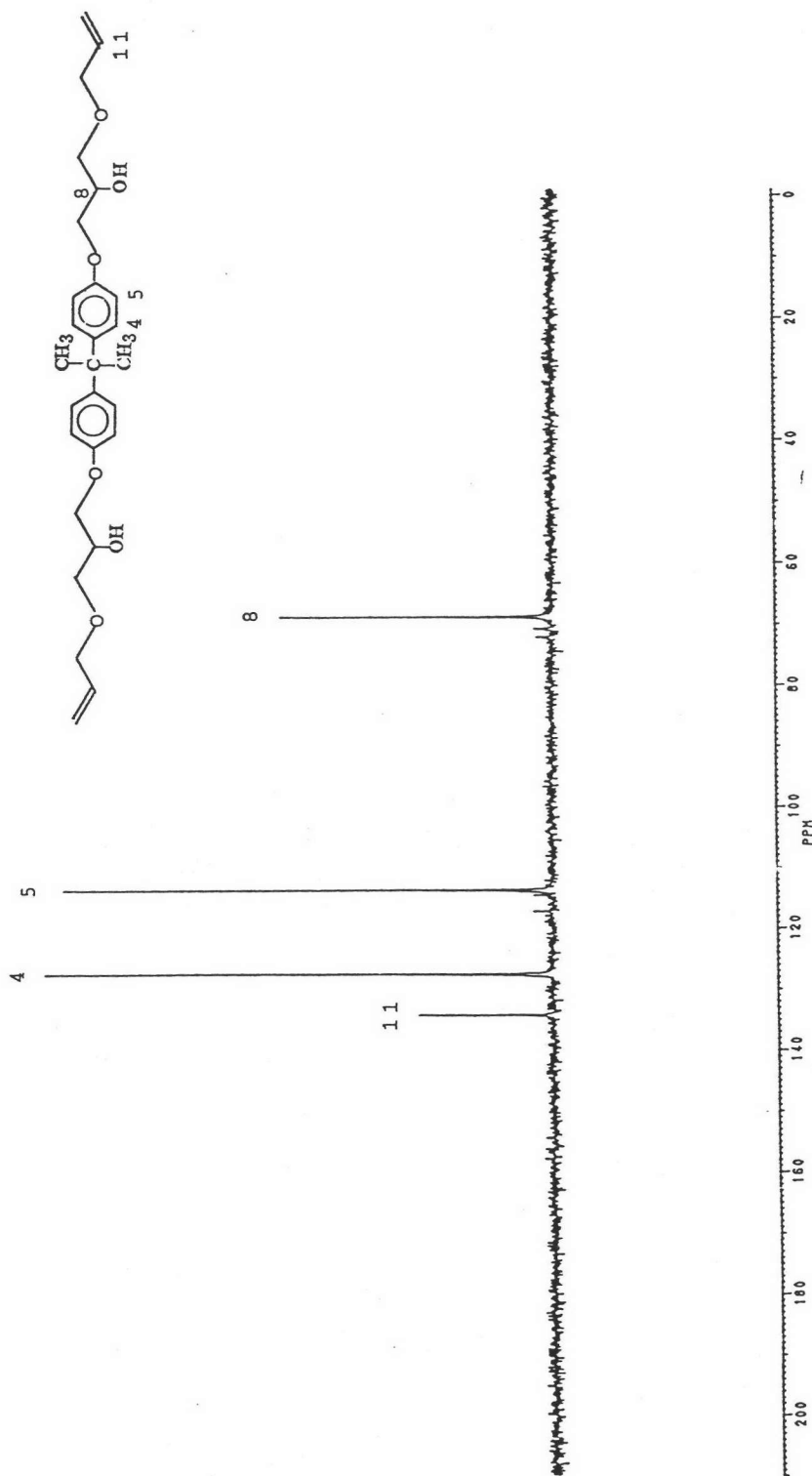


Fig A15 The DEPT 90  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 4,4'-Isopropylidenedi(2-hydroxy-4-oxa-6-heptene)phenyl ether (**9**)

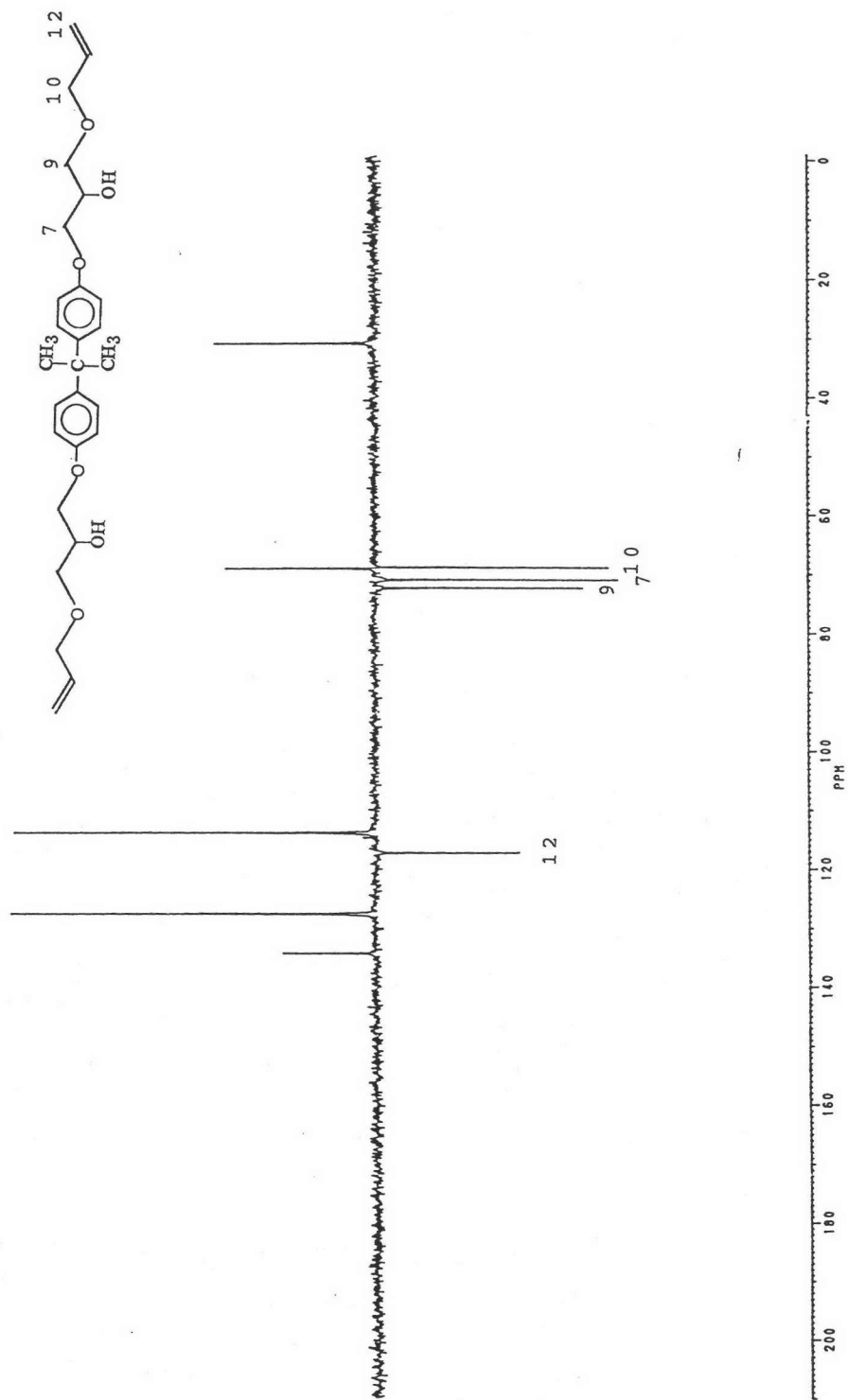


Fig A14 The DEPT 135  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 4,4'-Isopropylidenedi(2-hydroxy-4-oxa-6-heptene)phenyl ether (9)

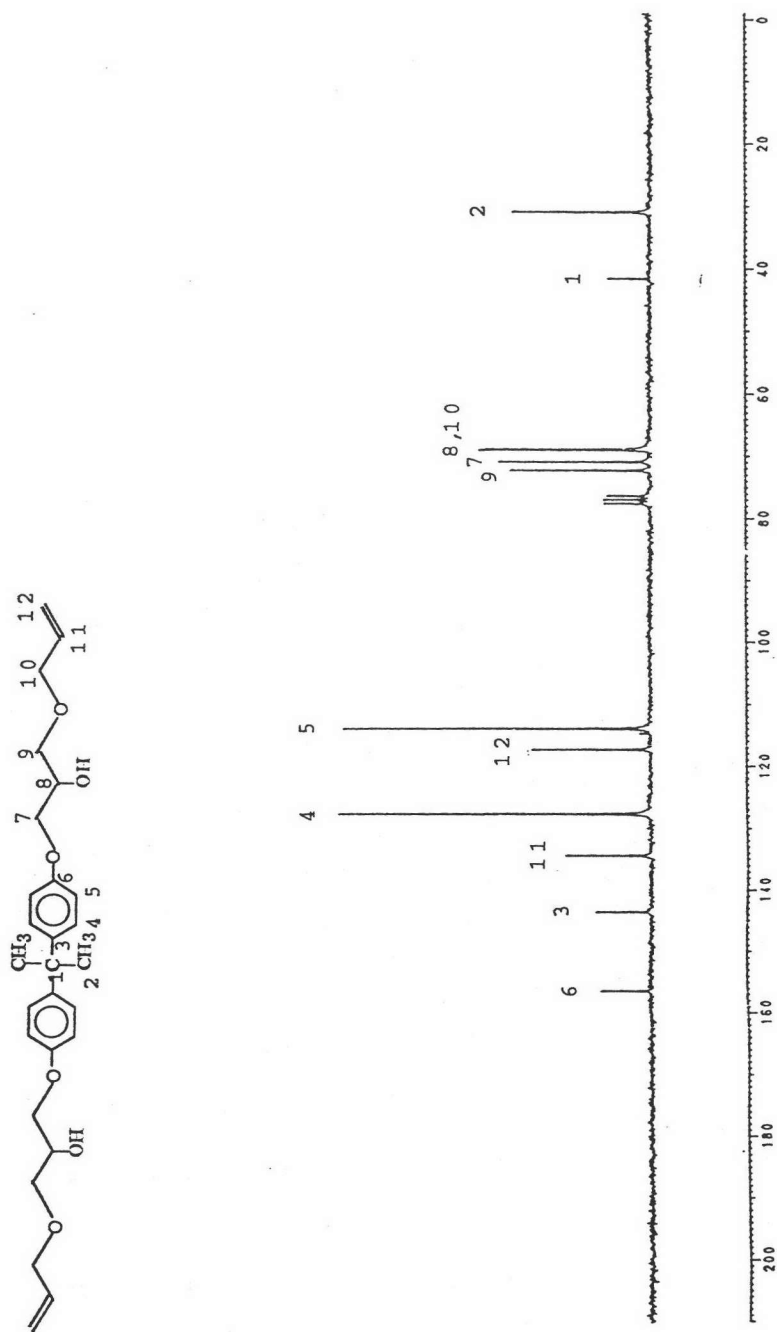


Fig A13  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 4,4'-isopropylidenedi(2-hydroxy-4-oxa-6-heptene)phenyl ether (9)



Fig A12  $^1\text{H-NMR}$  spectrum ( $\text{CDCl}_3$ ) of 4,4'-Isopropylidenedi(2-hydroxy-4-oxa-6-heptene)phenyl ether (9)

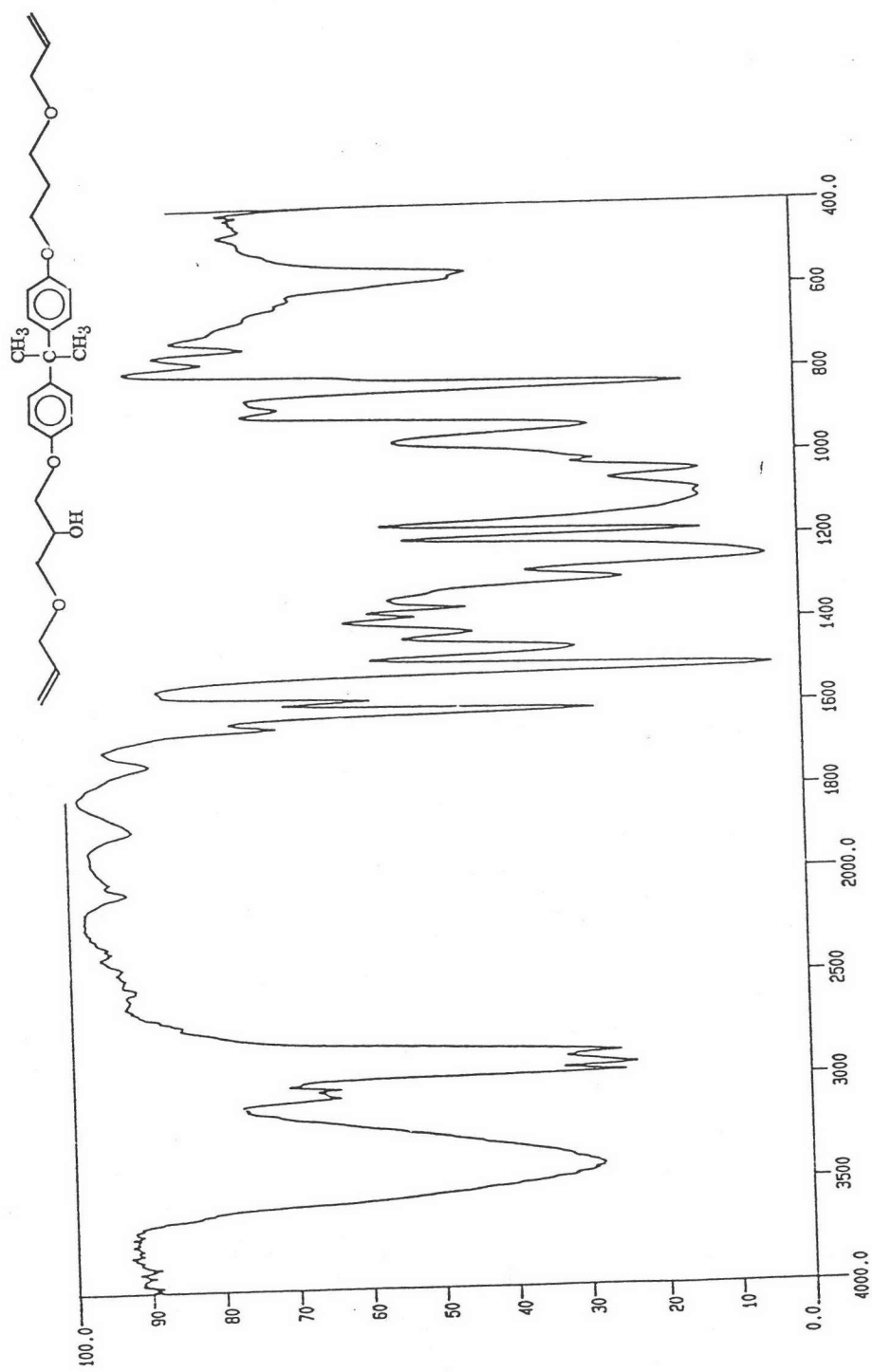


Fig A11 IR spectrum (neat) of 4,4'-Isopropylidenedi(2-hydroxy-4-oxa-6-heptene)phenyl ether (9)

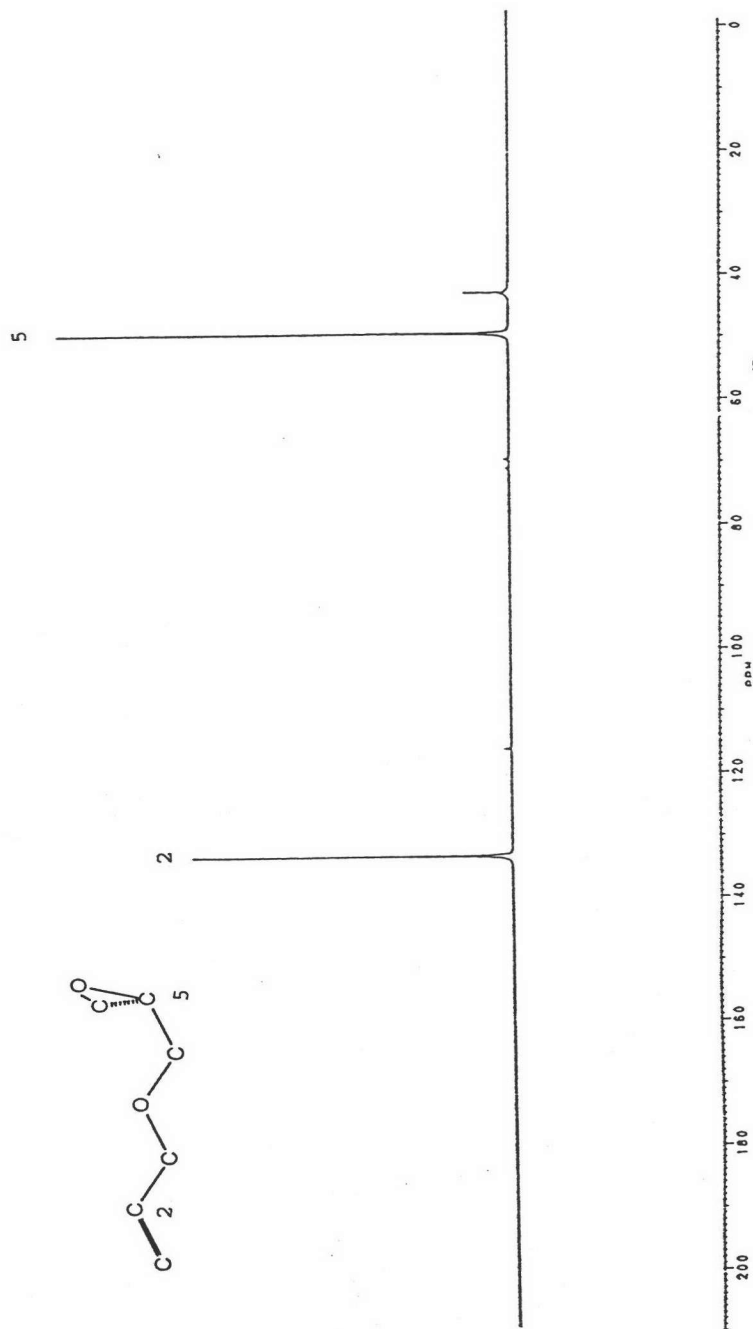


Fig A10 The DEPT 90  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 6,7-Epoxy-4-oxa-1-heptene (7)

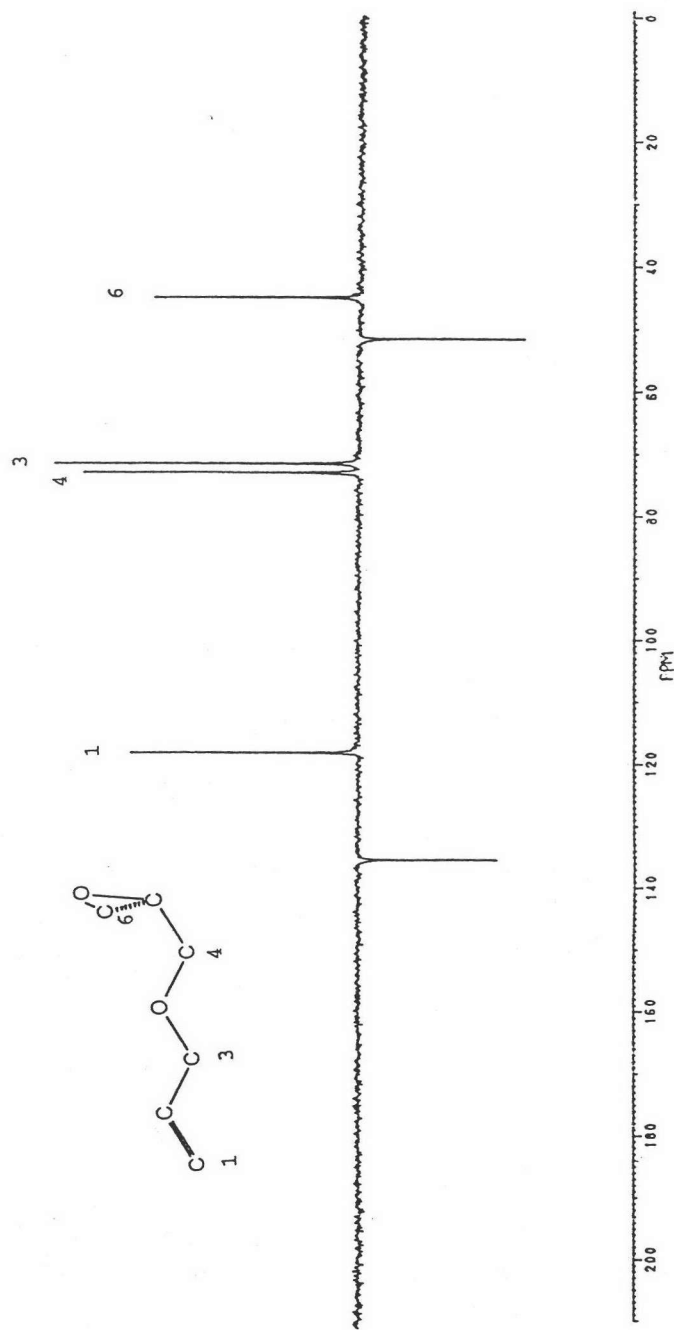
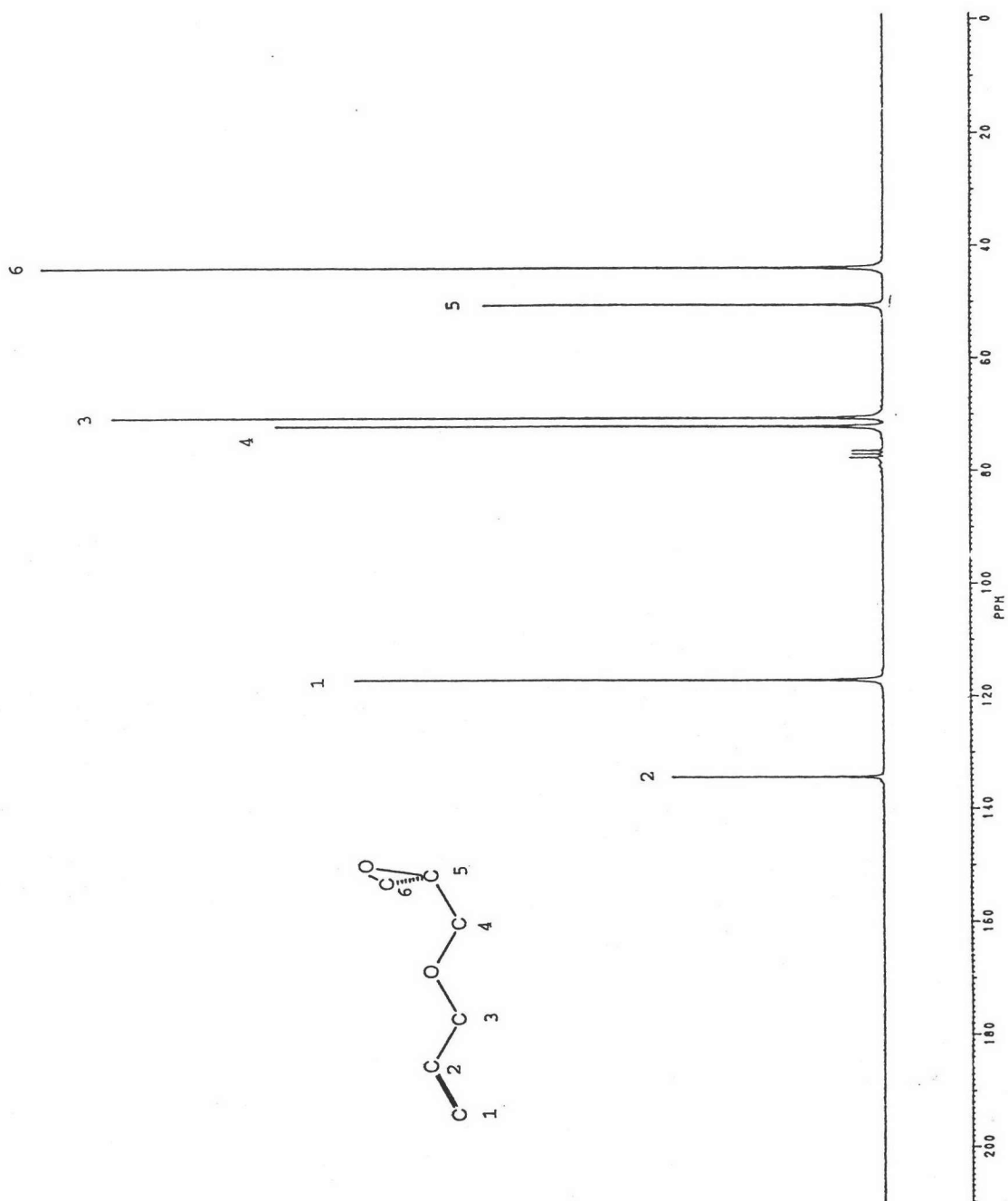
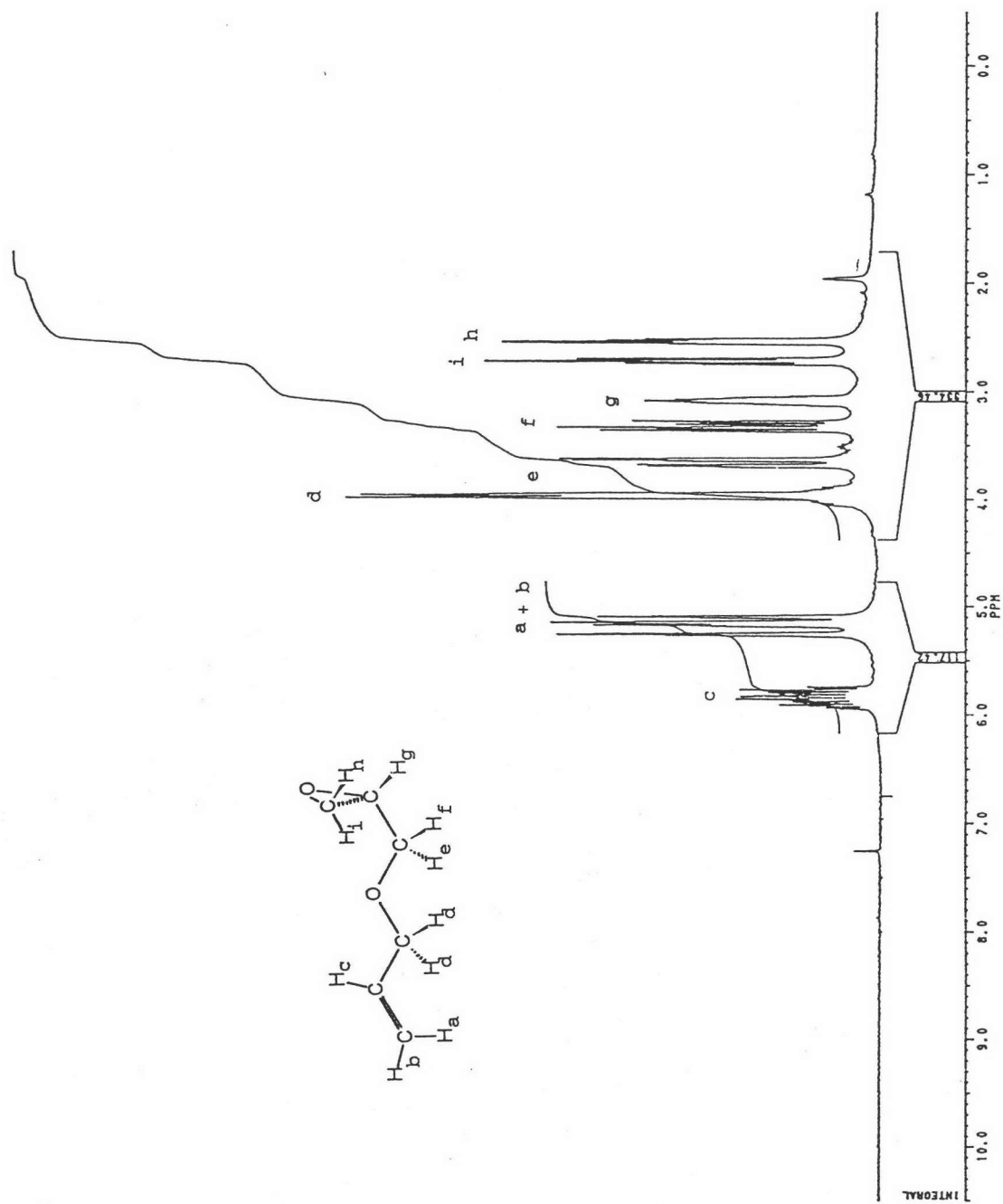


Fig A9 The DEPT  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 6,7-Epoxy-4-oxa-1-heptene (7)



Fig A8  $^{13}\text{C}$ -NMR spectrum ( $\text{CDCl}_3$ ) of 6,7-Epoxy-4-oxa-1-heptene (7)

Fig A7  $^1\text{H-NMR}$  spectrum ( $\text{CDCl}_3$ ) of 6,7-Epoxy-4-oxa-1-heptene (7)

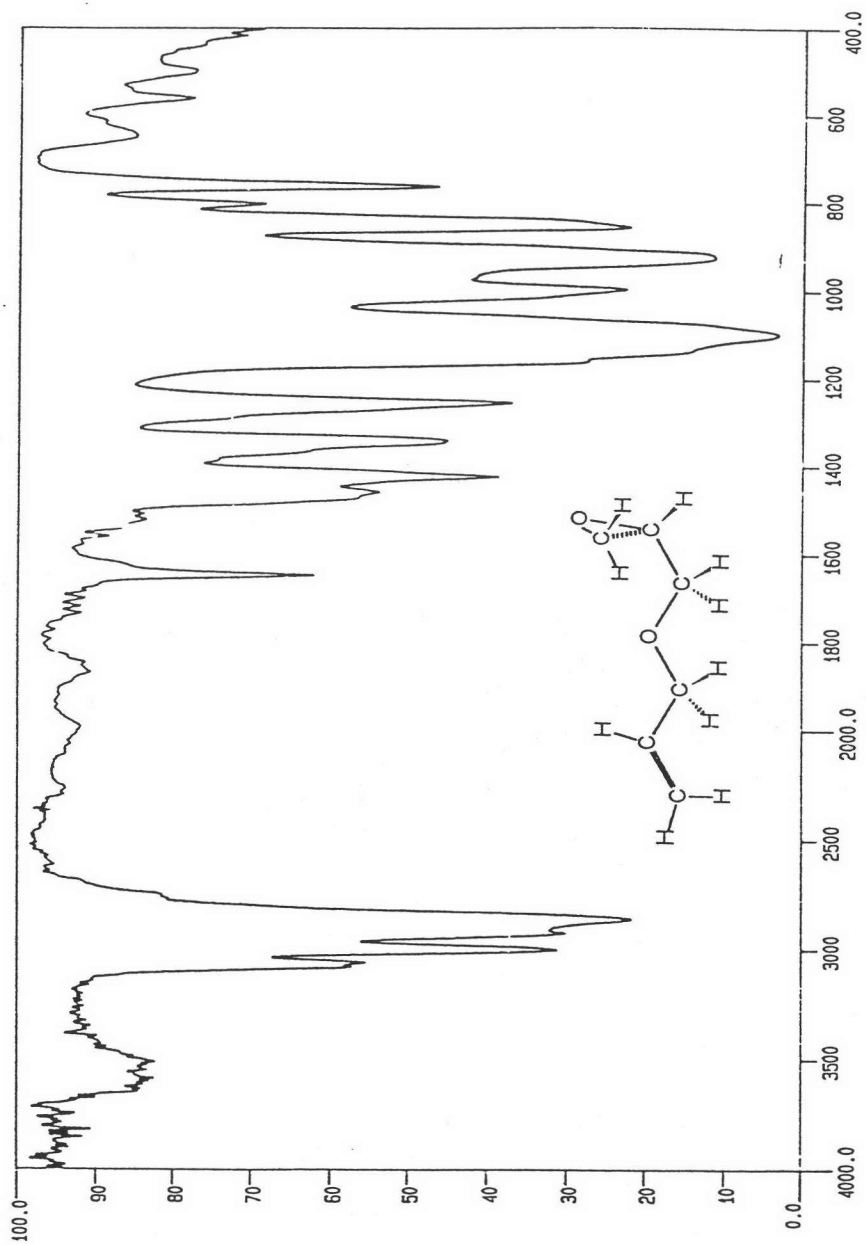


Fig A6 IR spectrum (neat) of 6,7-Epoxy-4-oxa-1-heptene (7)

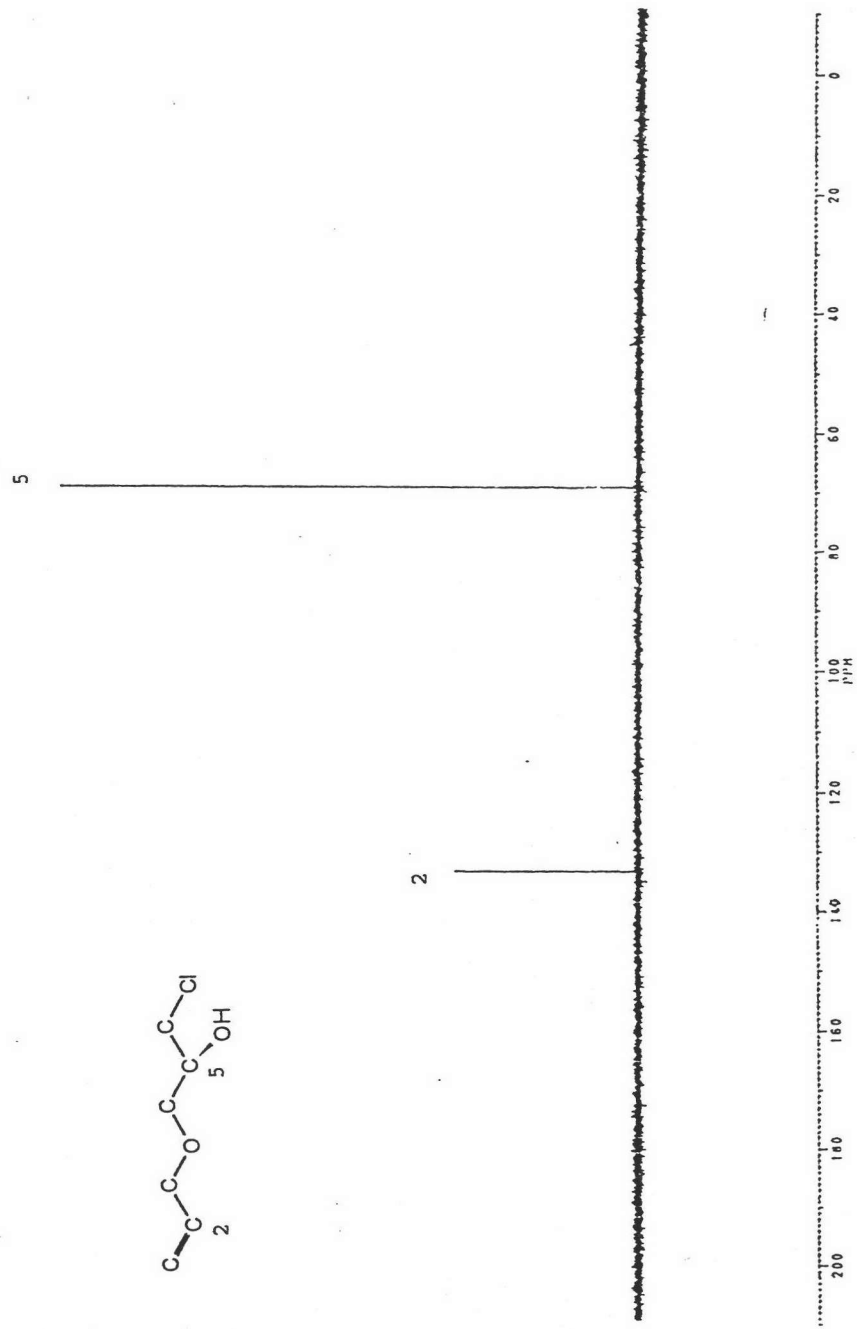


Fig A5 The DEPT 90 <sup>13</sup>C-NMR spectrum (d<sub>6</sub>-acetone + CDCl<sub>3</sub>) of 7-Chloro-6-hydroxy-4-oxa-1-heptene (6)

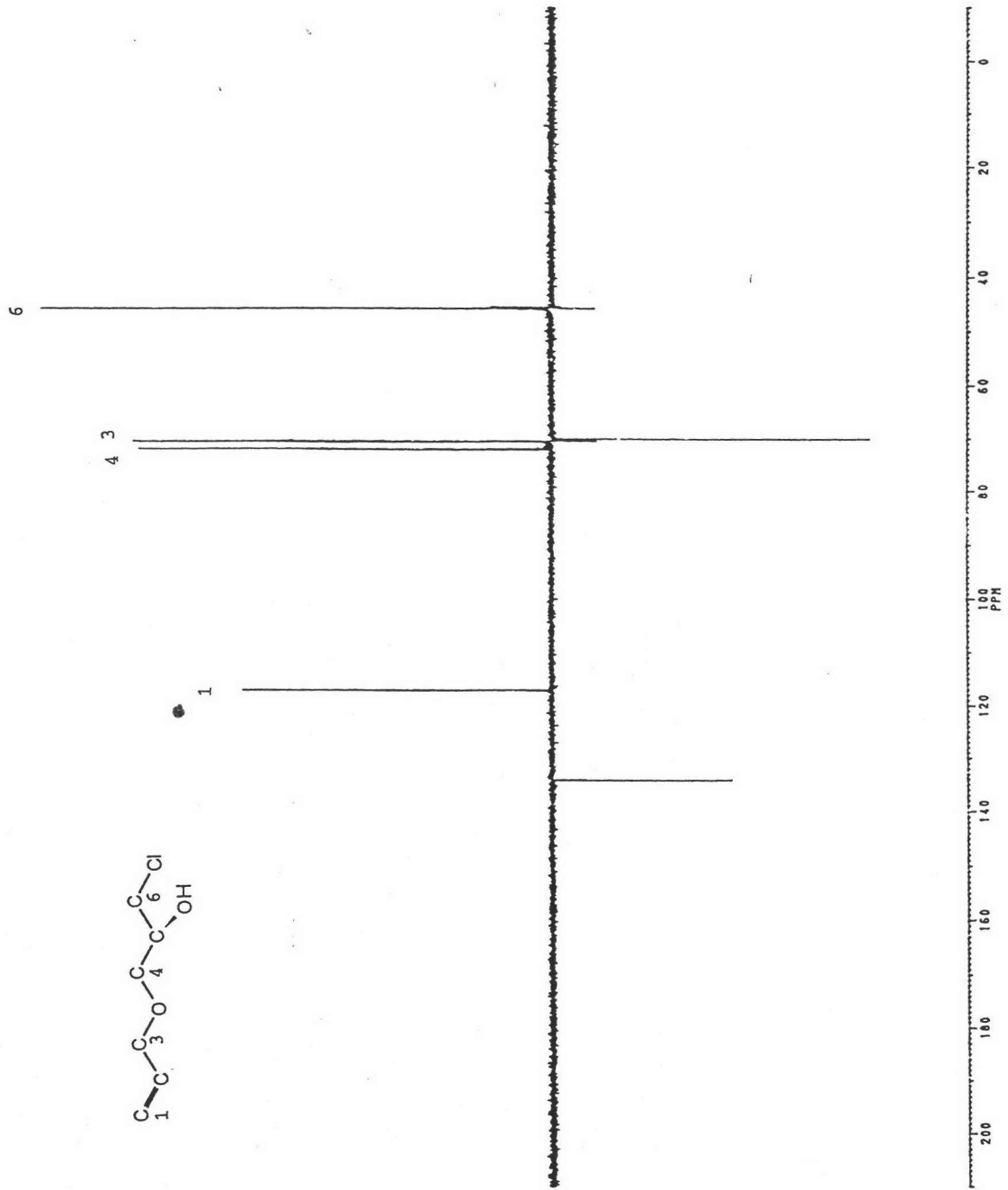


Fig A4 The DEPT  $^{13}\text{C}$ -NMR spectrum ( $\text{d}_6$ -acetone +  $\text{CDCl}_3$ ) of 7-chloro-6-hydroxy-1-heptene (**6**)

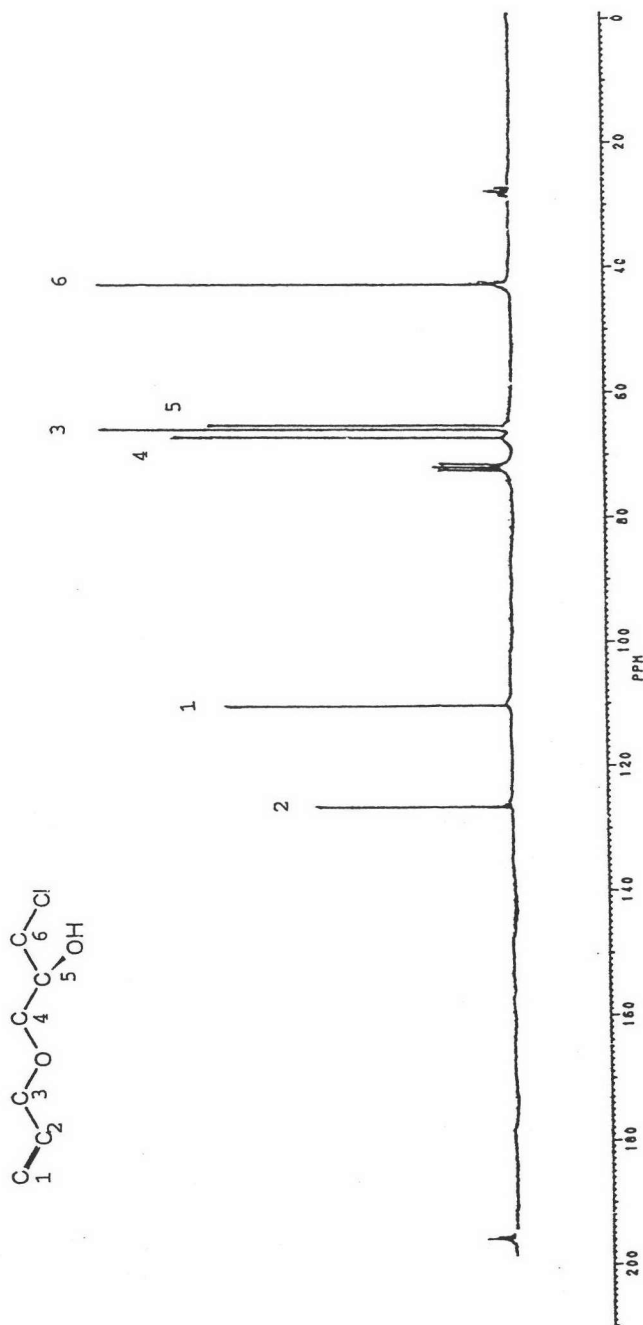
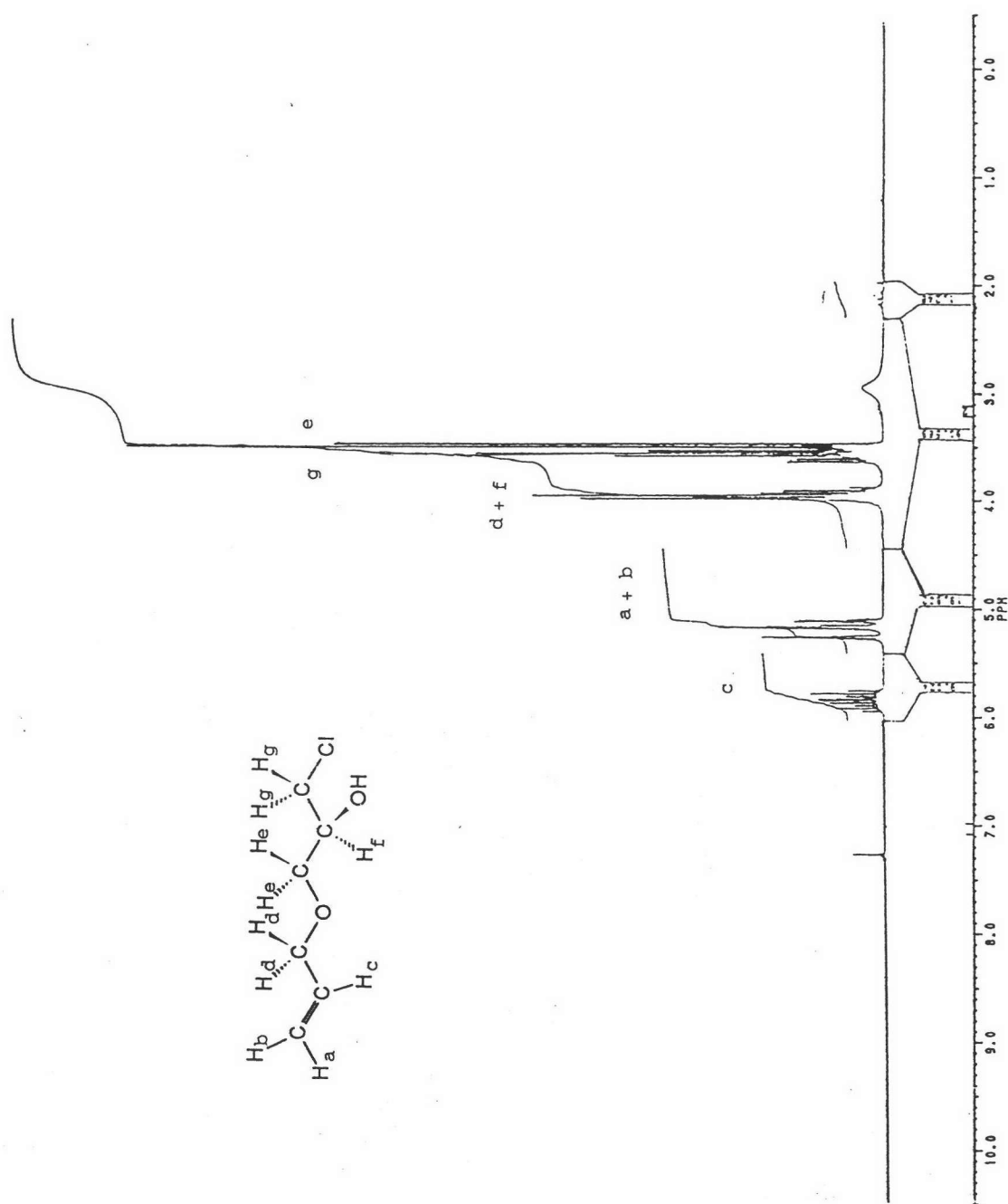


Fig A3  $^{13}\text{C}$ -NMR spectrum ( $d_6$ -acetone +  $\text{CDCl}_3$ ) of 7-Chloro-6-hydroxy-4-oxa-1-heptene (**6**)

Fig A2  $^1\text{H-NMR}$  spectrum ( $d_6$ -acetone +  $\text{CDCl}_3$ ) of 7-Chloro-6-hydroxy-4-oxa-1-heptene (**6**)

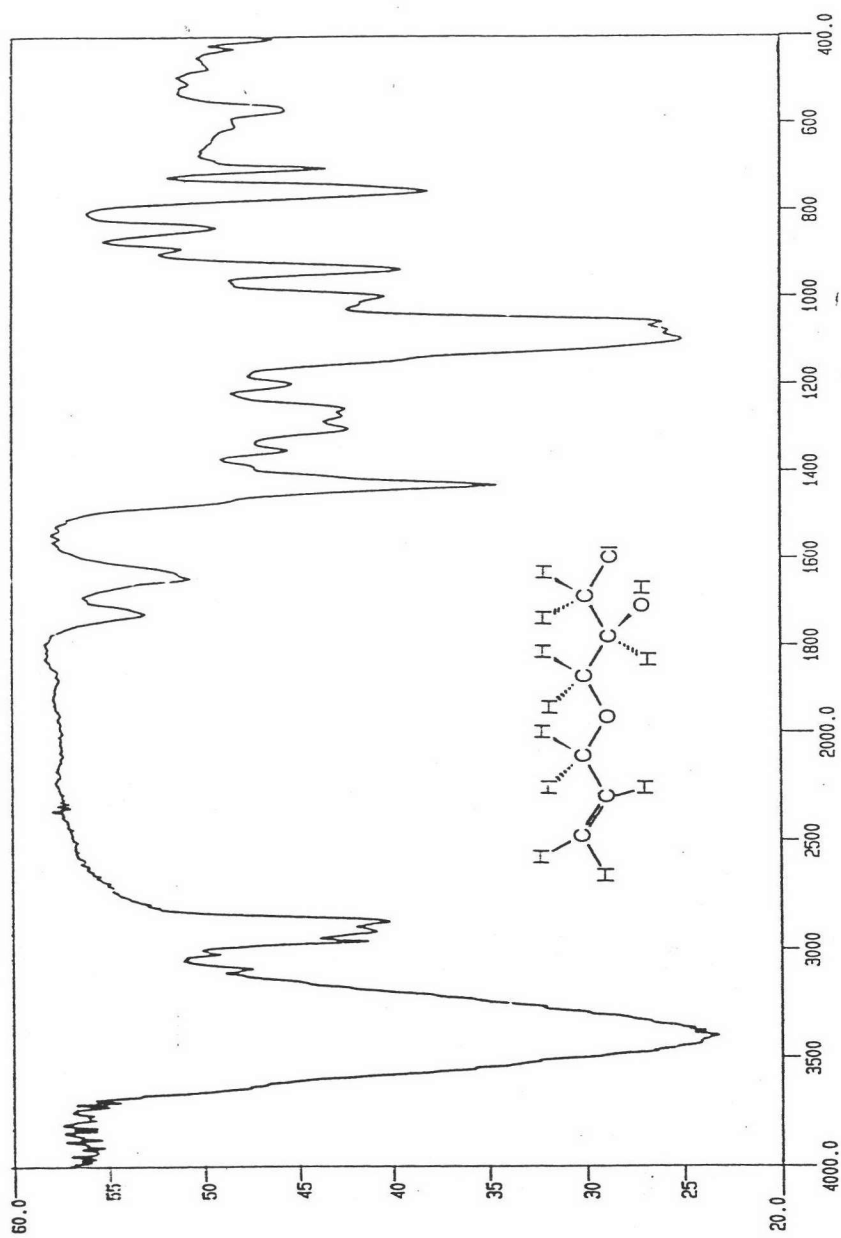


Fig A1 IR spectrum (neat) of 7-Chloro-6-hydroxy-1-heptene (**6**)



## VITA

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