Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry.
This journal is © The Royal Society of Chemistry 2015

Electronic Supplementary Information

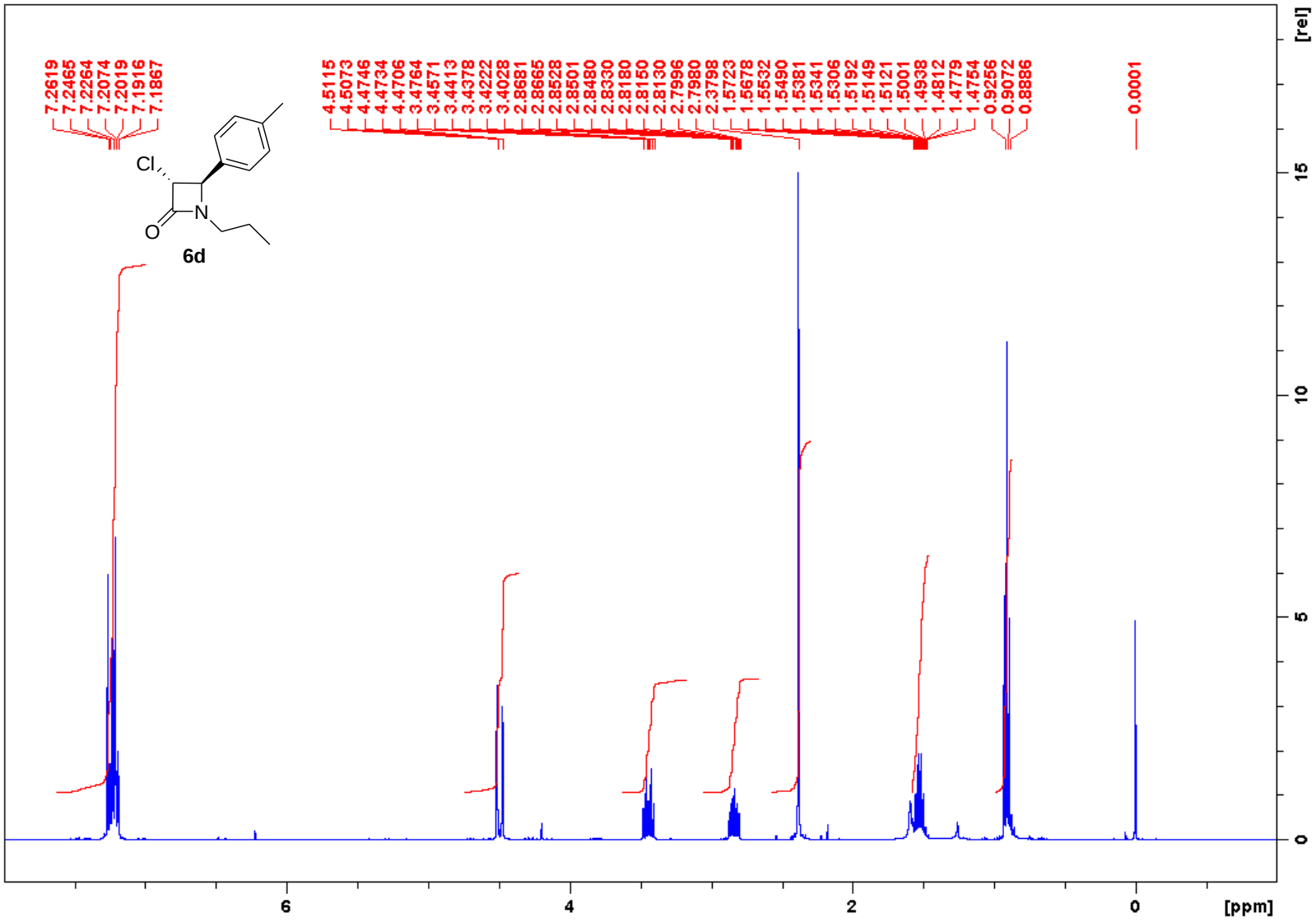
Synthesis of 2-aryl-3-(2-cyanoethyl)aziridines and their chemical and enzymatic hydrolysis towards γ-lactams and γ-lactones

Karen Mollet,[1] Lena Decuyper,[1] Saskia Vander Meeren,[1] Nicola Piens,[1] Karel De Winter,[2] Tom Desmet[2] and Matthias D'hooghe[1,*]

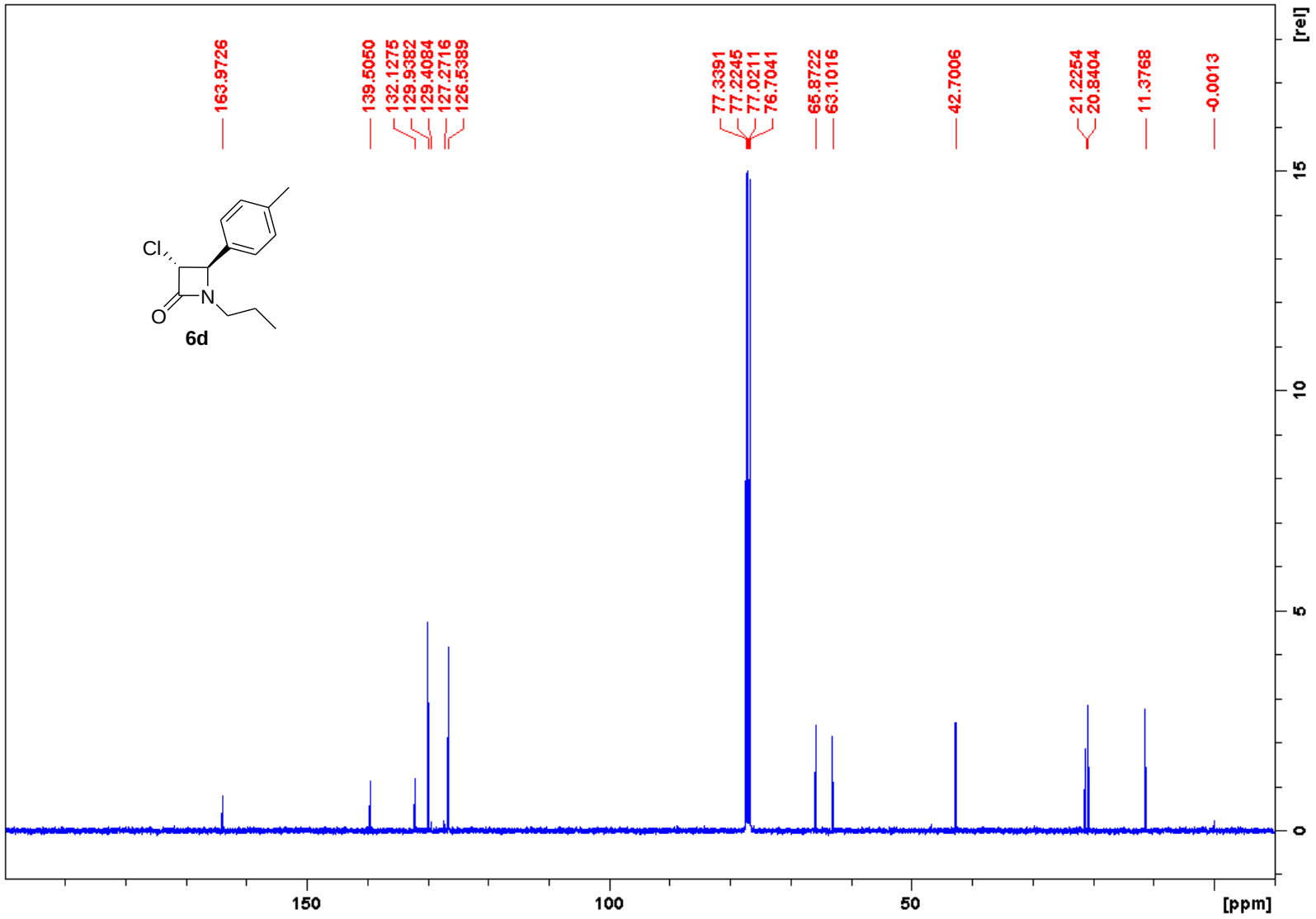
[1]SynBioC Research Group, Department of Sustainable Organic Chemistry and Technology, Faculty of Bioscience Engineering, Ghent University, Coupure links 653, B-9000 Ghent, Belgium
matthias.dhooghe@UGent.be
[2]Department of Biochemical and Microbial Technology, Faculty of Bioscience Engineering, Ghent University, Coupure links 653, B-9000 Ghent, Belgium

Contents

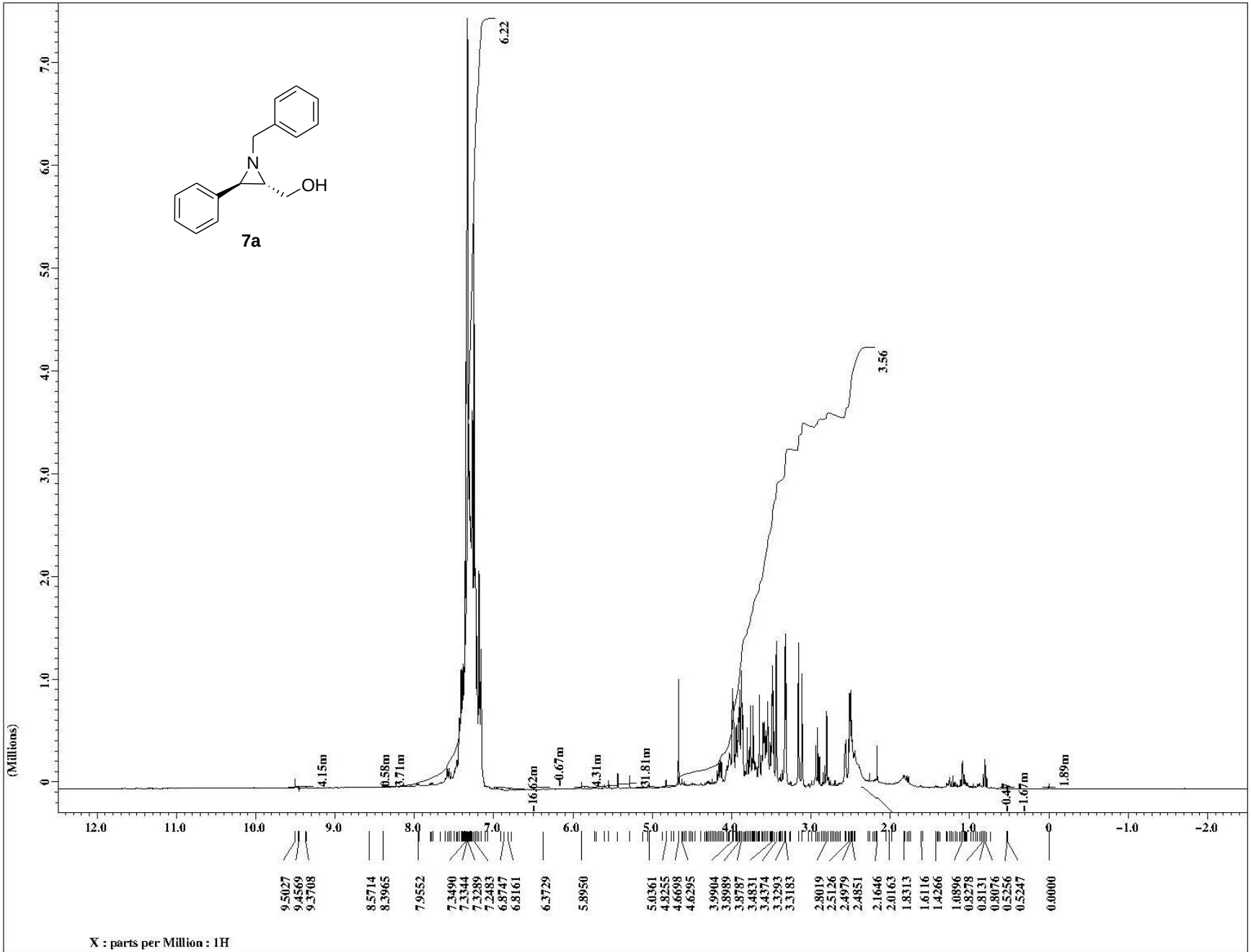
Trans-3-chloro-4-(4-methylphenyl)-1-propylazetidin-2-one **6d**: ^{1}H NMR



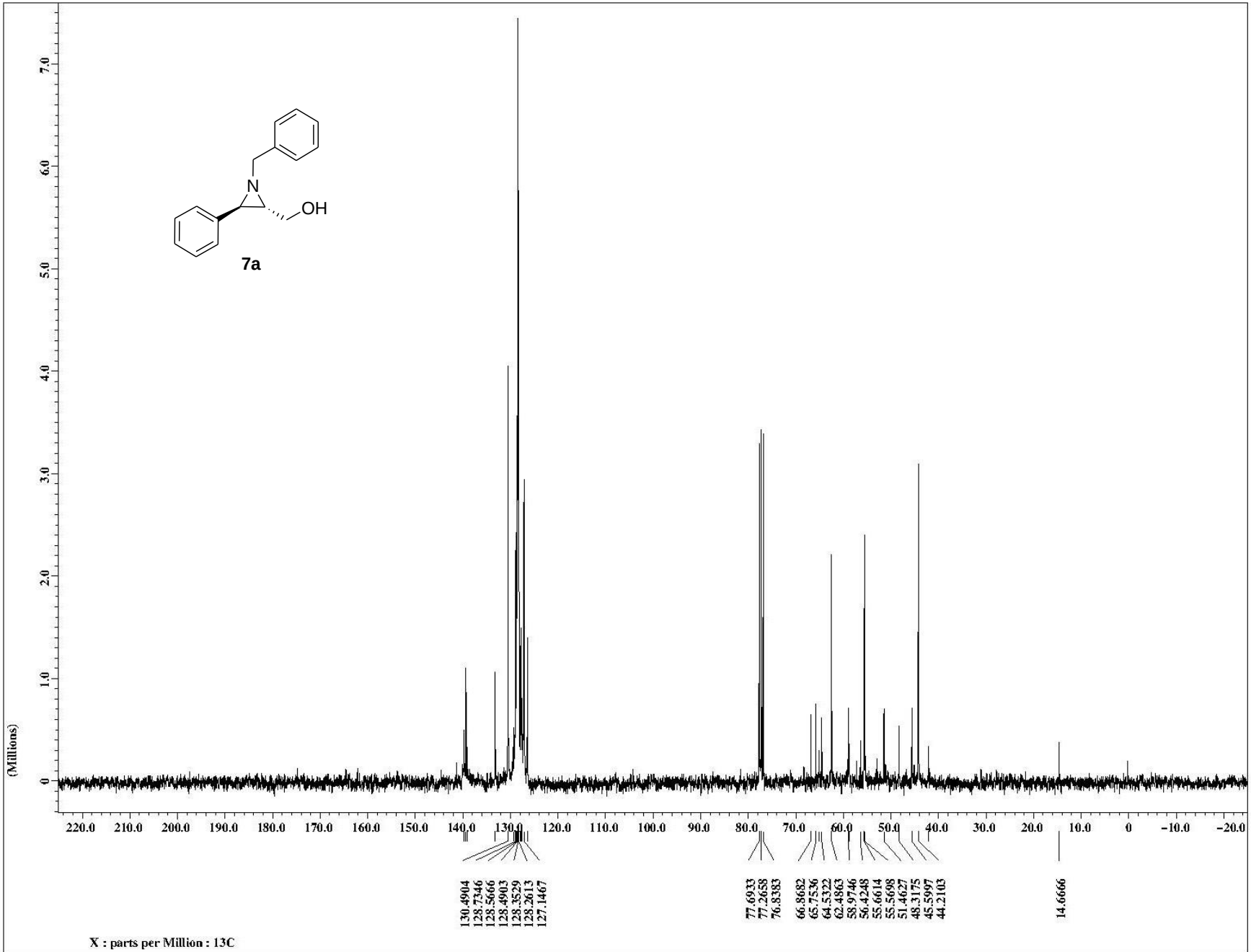
Trans-3-chloro-4-(4-methylphenyl)-1-propylazetidin-2-one **6d**: ^{13}C NMR



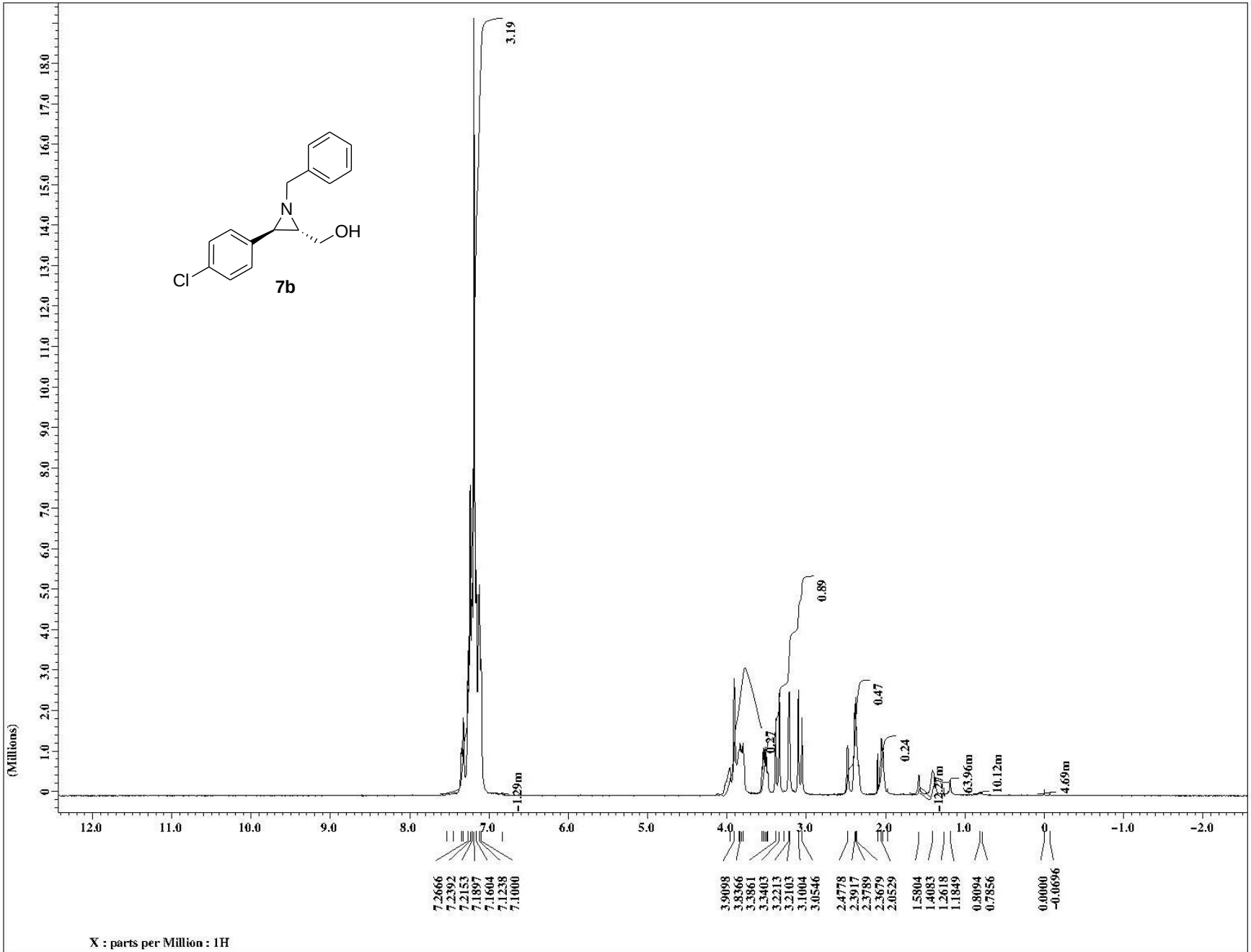
Trans-1-benzyl-3-hydroxymethyl-2-phenylaziridine **7a**: ^{1}H NMR



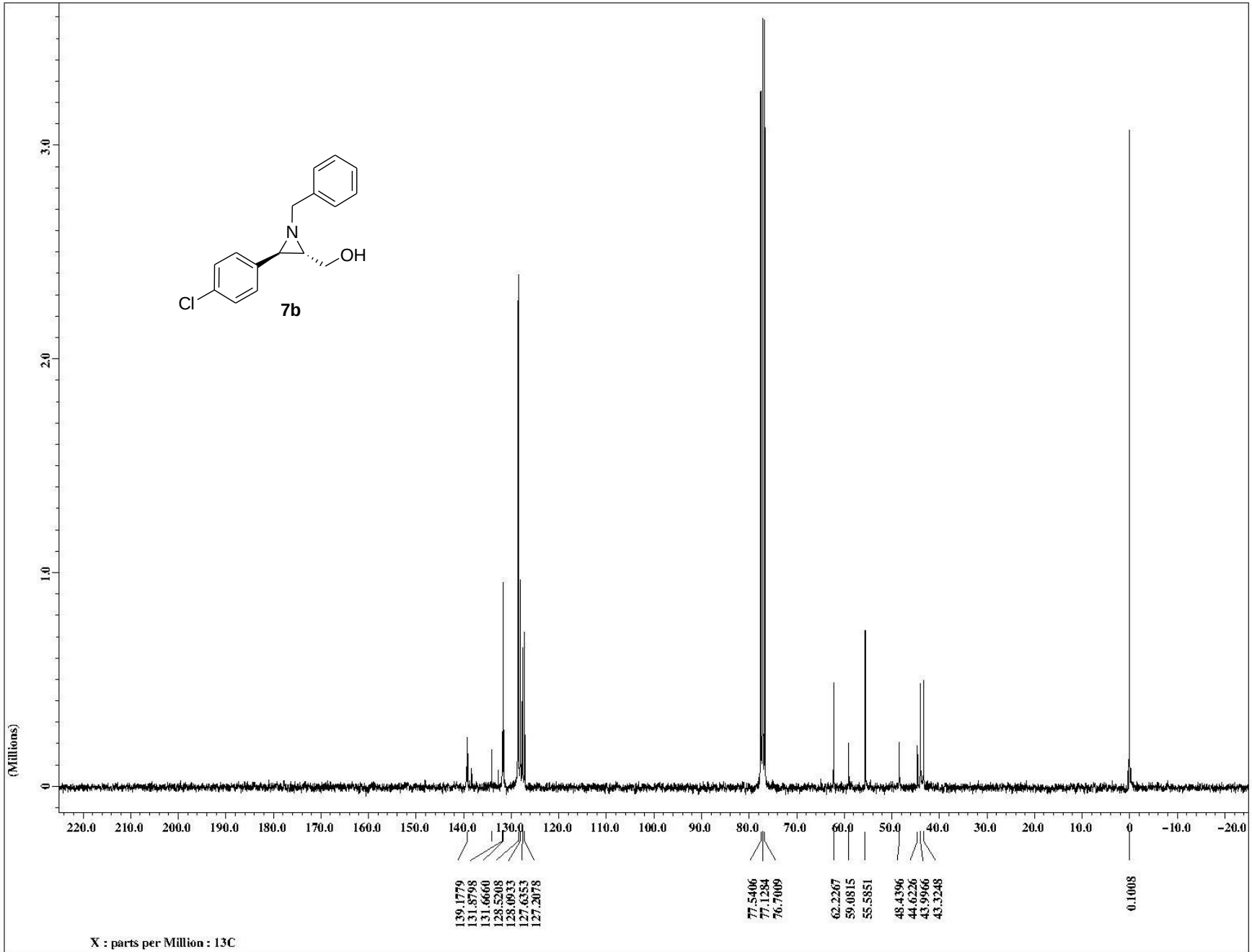
Trans-1-benzyl-3-hydroxymethyl-2-phenylaziridine **7a**: ^{13}C NMR



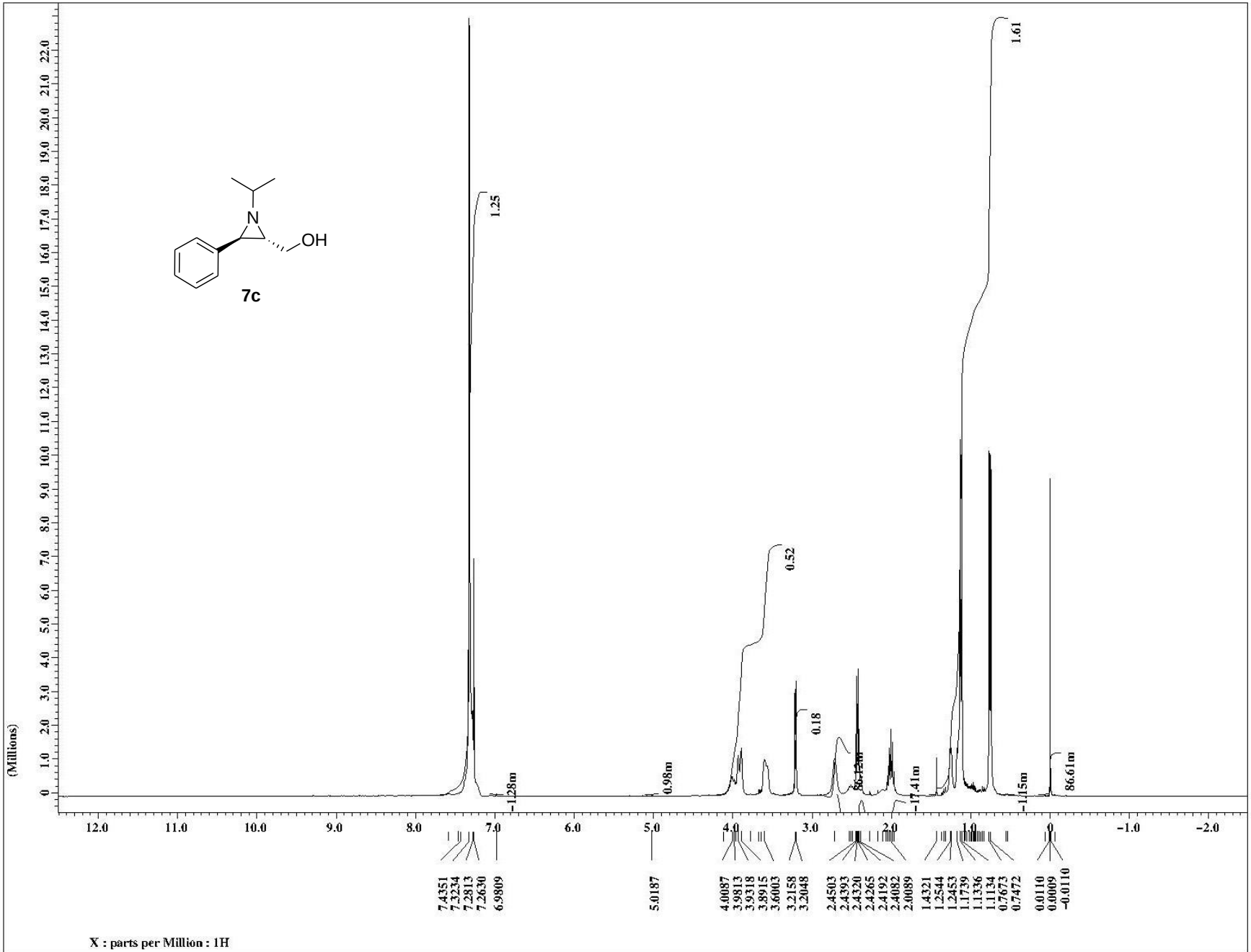
Trans-1-benzyl-2-(4-chlorophenyl)-3-(hydroxymethyl)aziridine **7b**: ^{1}H NMR



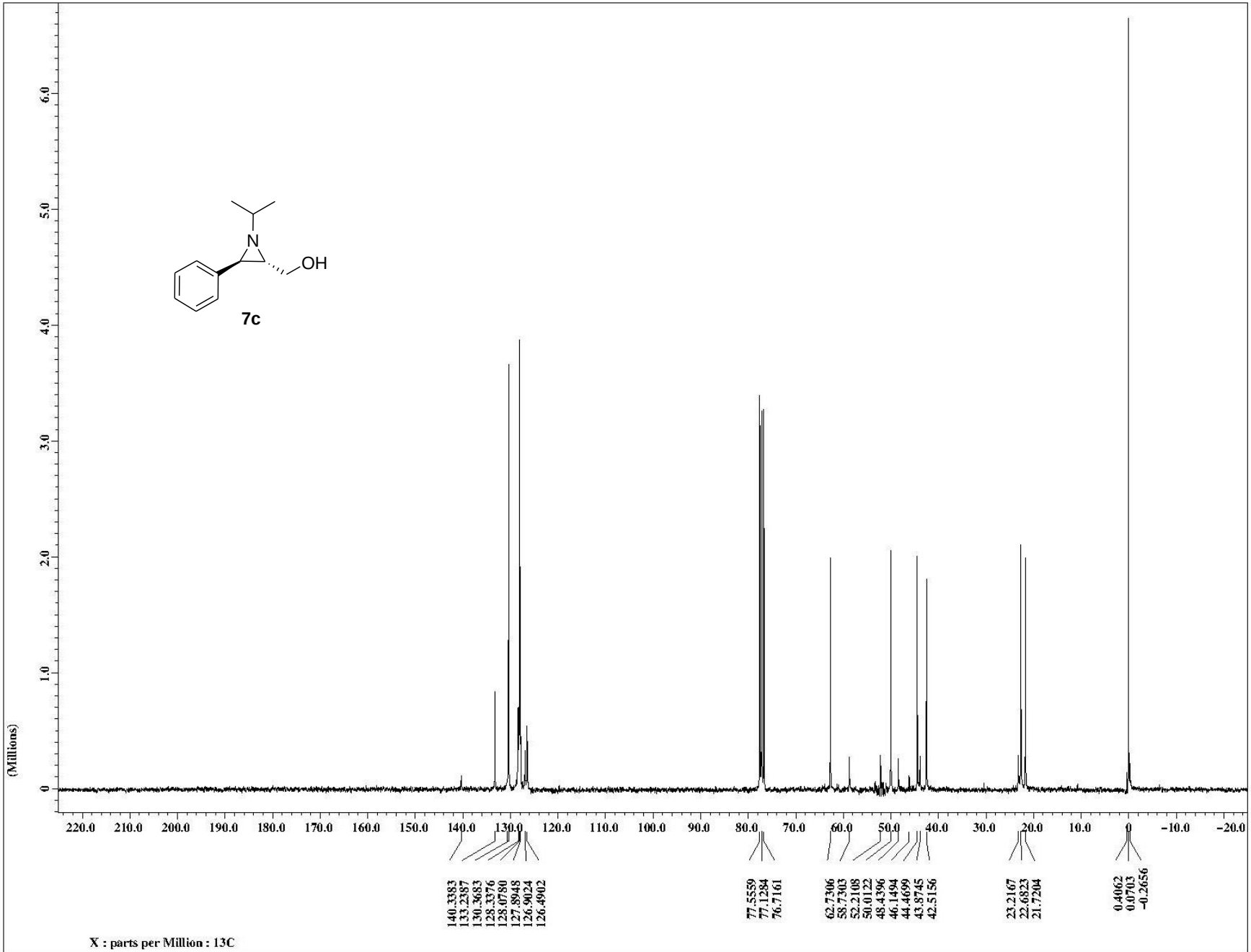
Trans-1-benzyl-2-(4-chlorophenyl)-3-(hydroxymethyl)aziridine **7b**: ^{13}C NMR



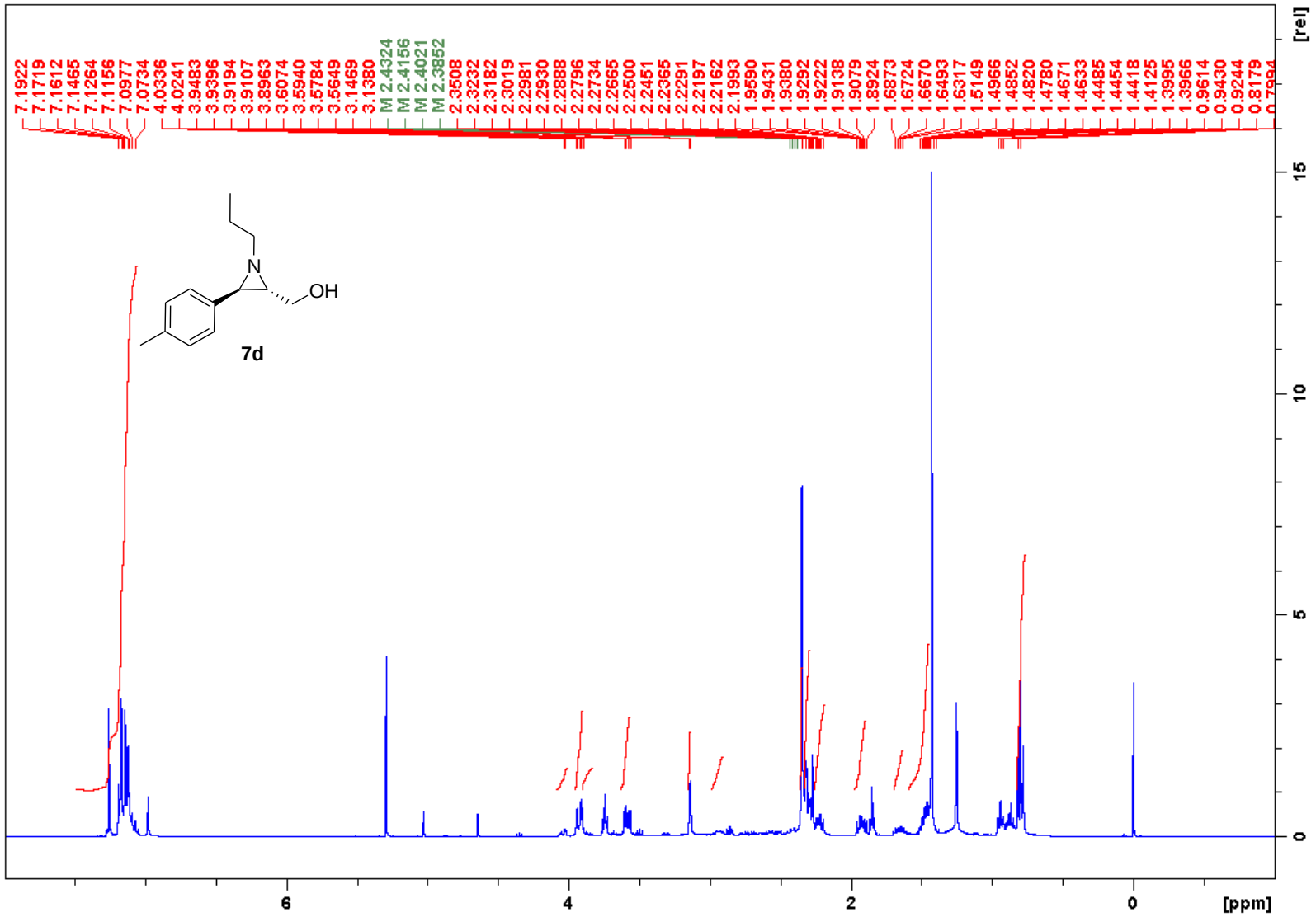
Trans-3-hydroxymethyl-1-isopropyl-2-phenylaziridine **7c**: ^{1}H NMR



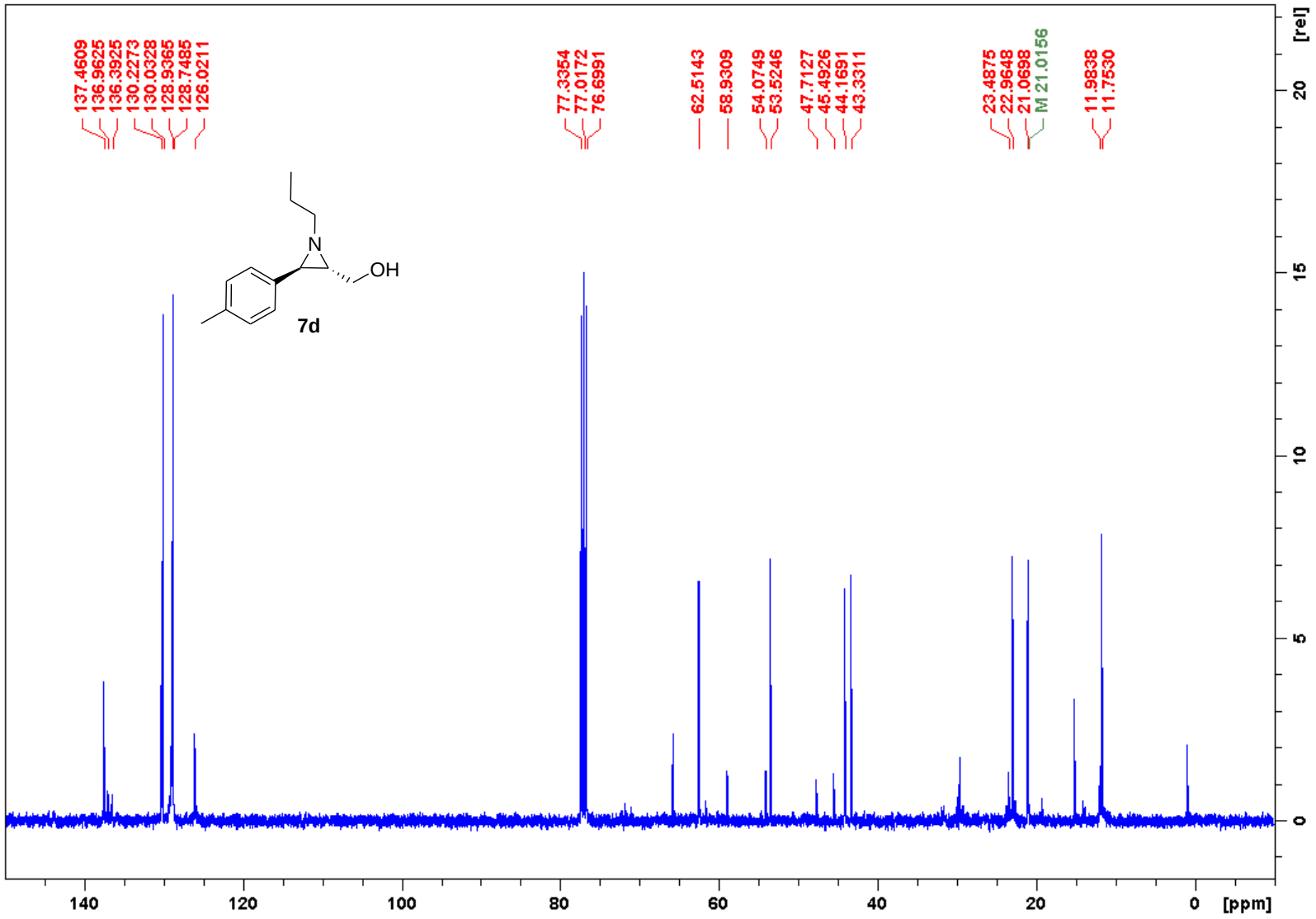
Trans-3-hydroxymethyl-1-isopropyl-2-phenylaziridine **7c**: ^{13}C NMR



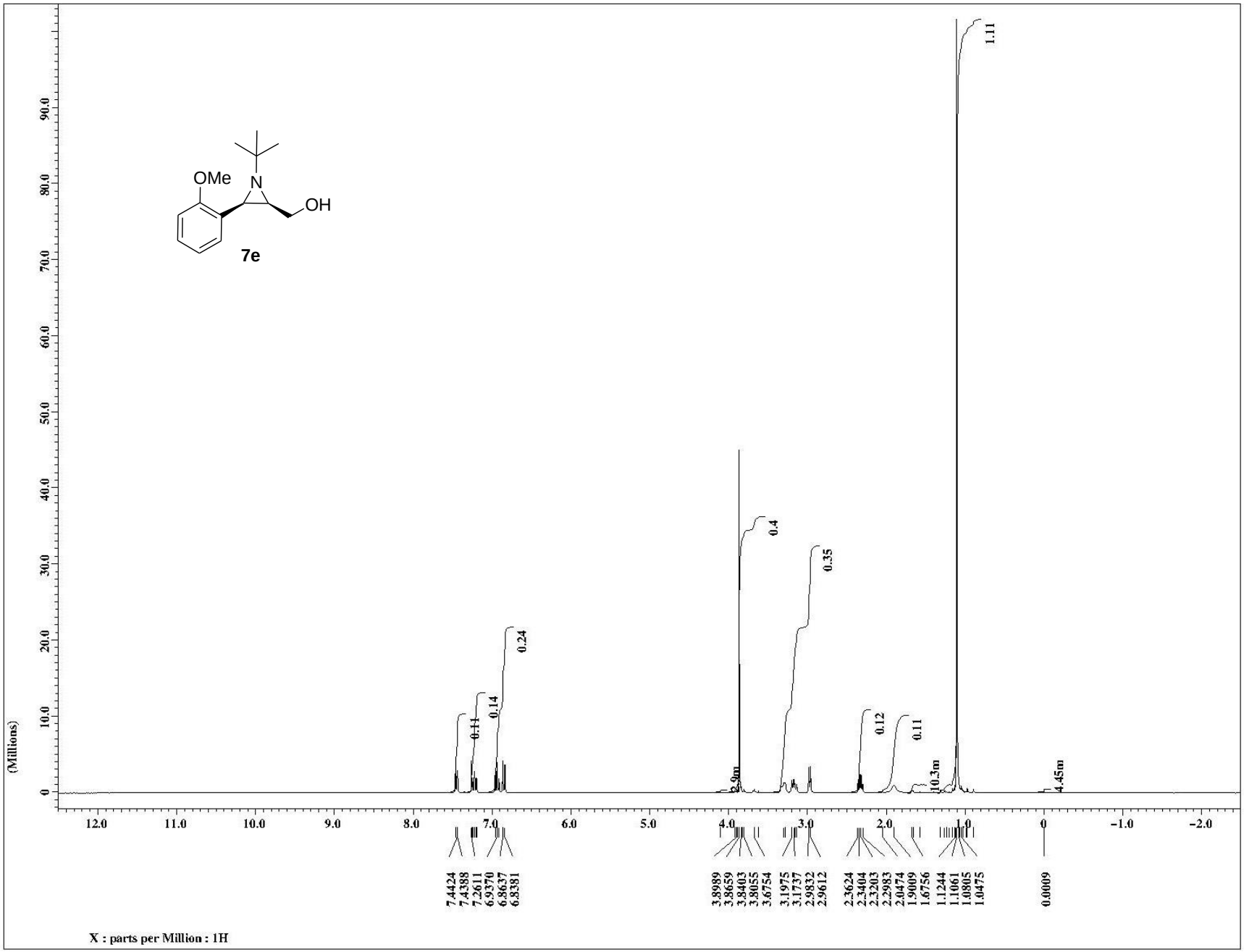
Trans-3-hydroxymethyl-2-(4-methylphenyl)-1-propylaziridine **7d**: ^{1}H NMR



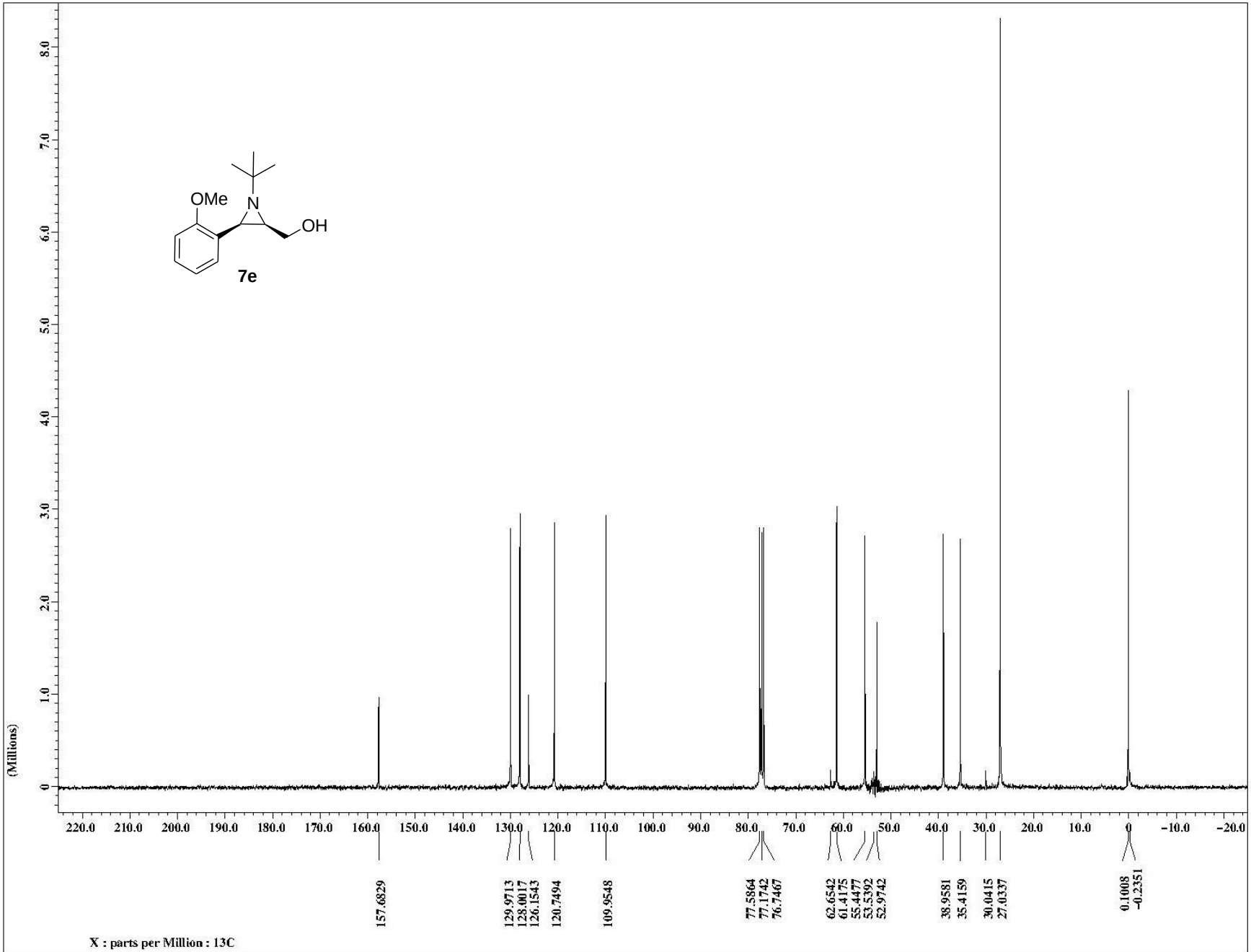
Trans-3-hydroxymethyl-2-(4-methylphenyl)-1-propylaziridine **7d**: ^{13}C NMR



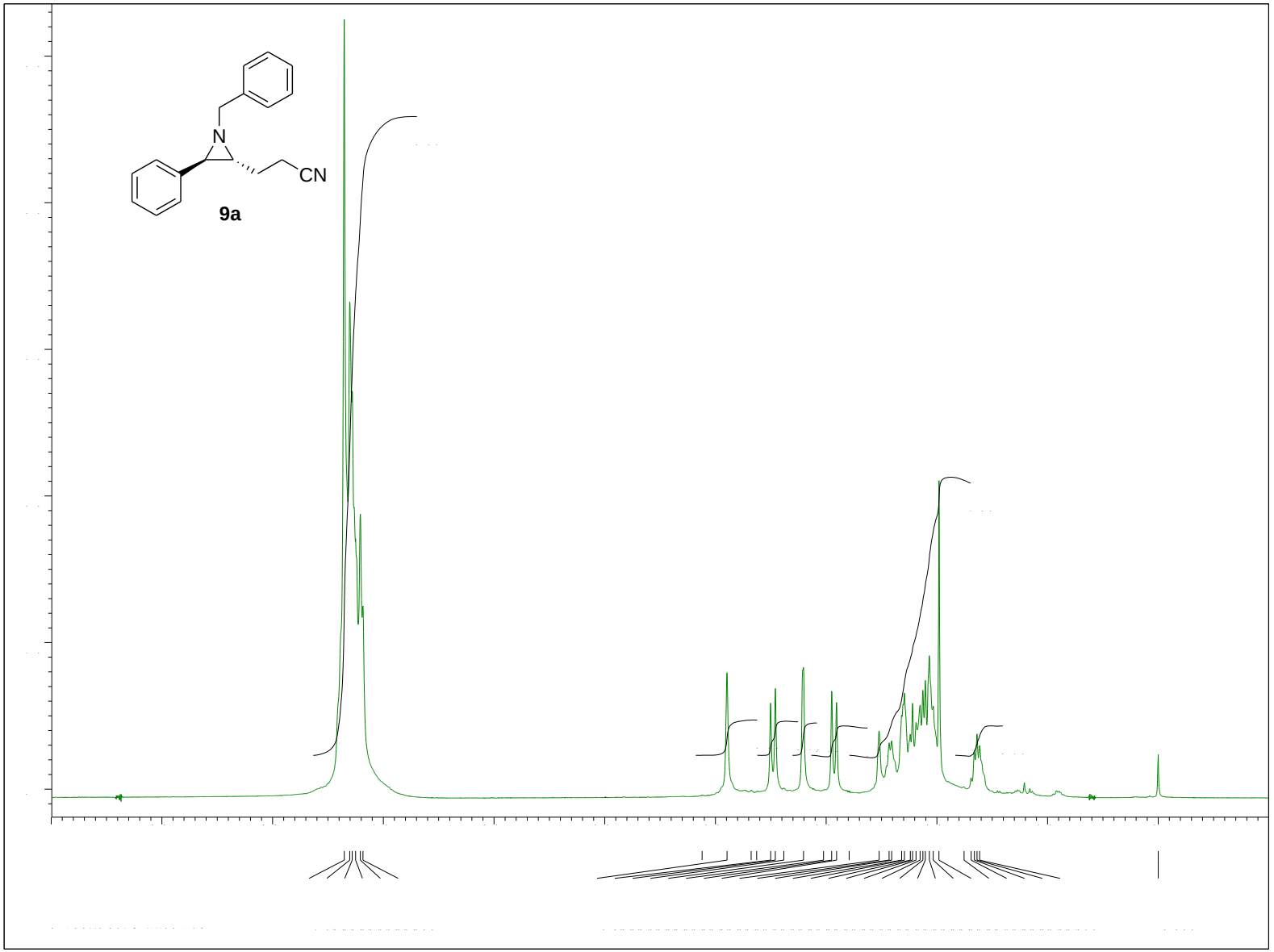
Cis-1-*tert*-butyl-3-hydroxymethyl-2-(2-methoxyphenyl)aziridine **7e**: ^{1}H NMR



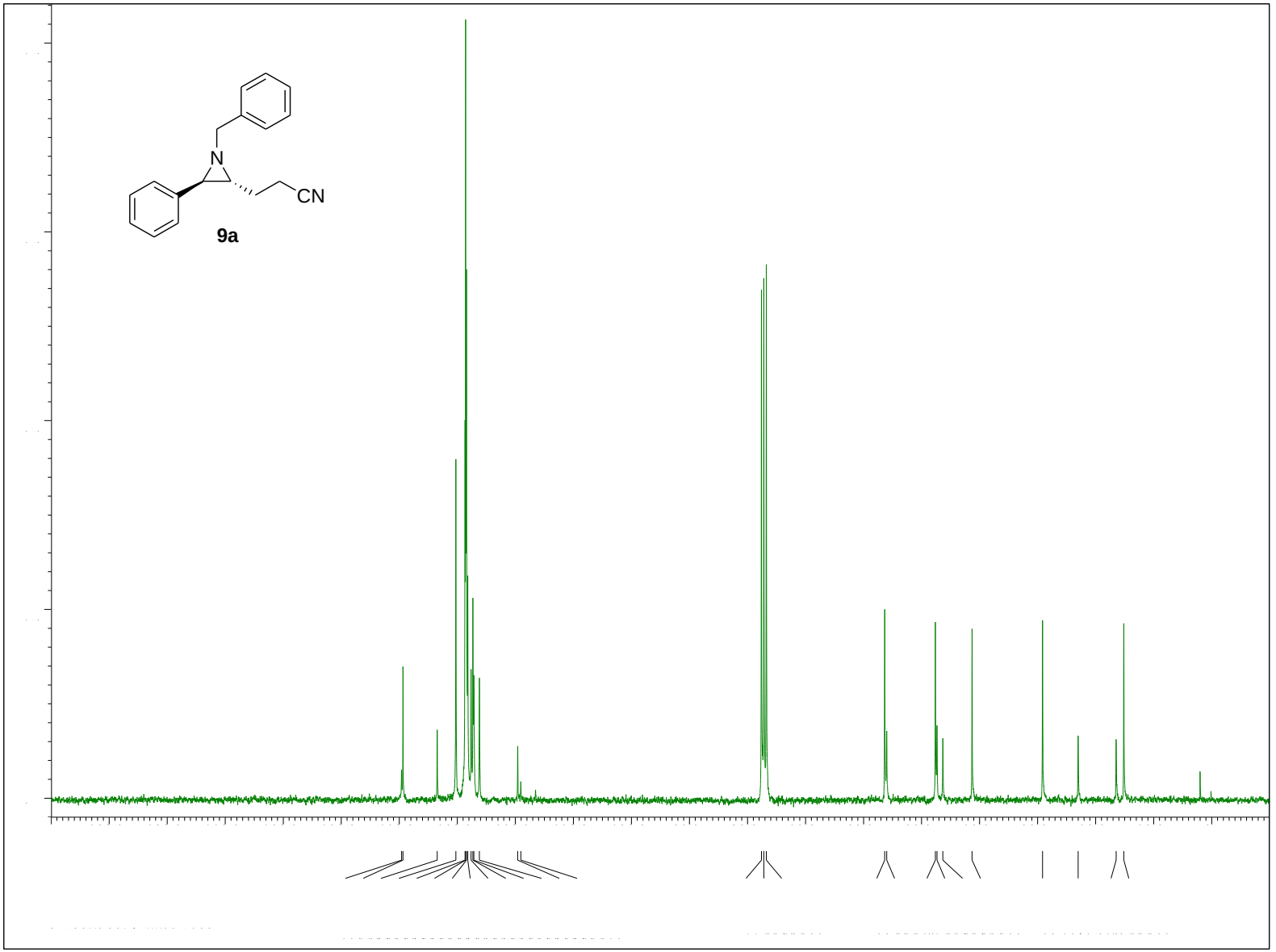
Cis-1-*tert*-butyl-3-hydroxymethyl-2-(2-methoxyphenyl)aziridine **7e**: ^{13}C NMR



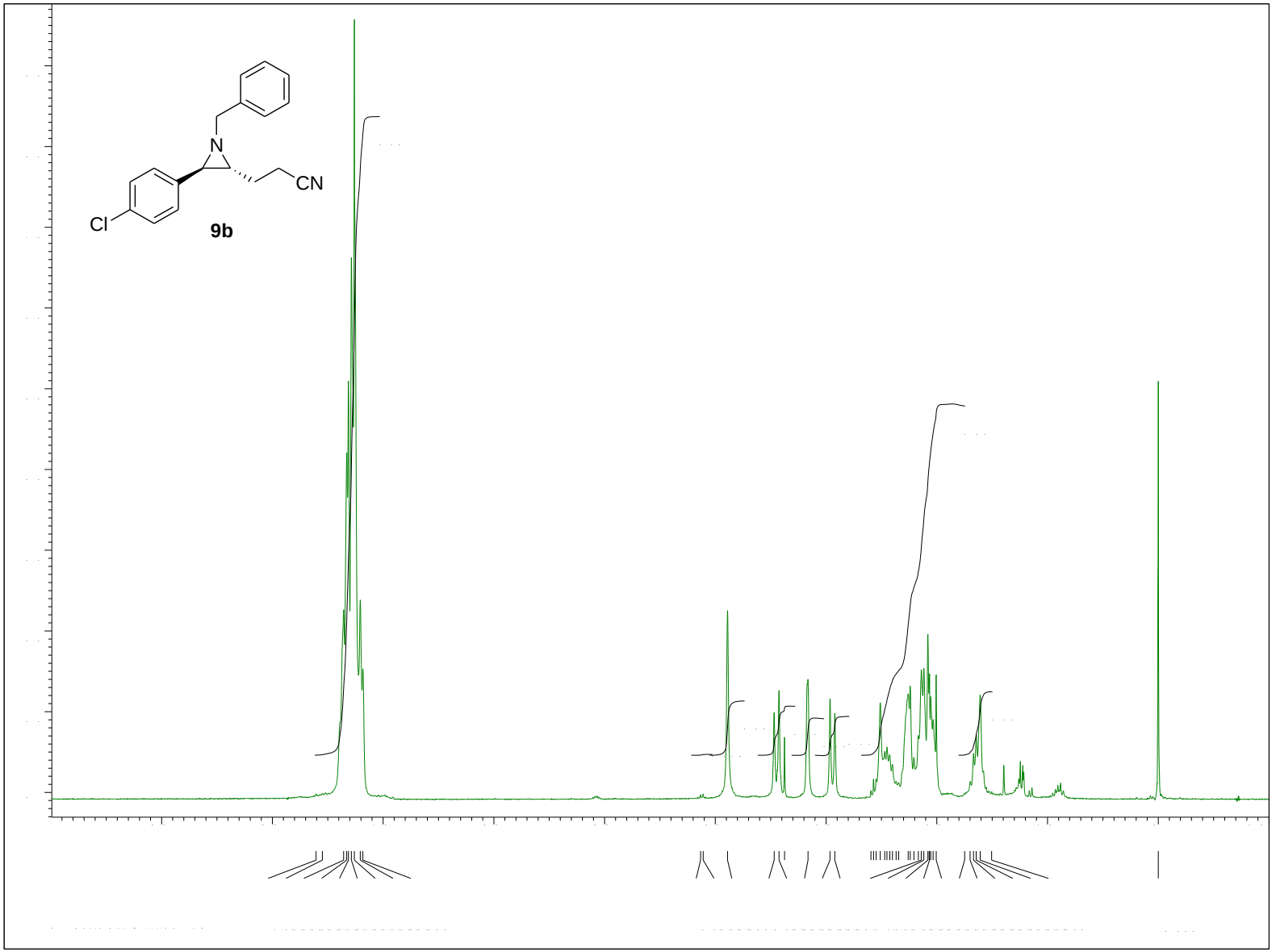
Trans-1-benzyl-3-(2-cyanoethyl)-2-phenylaziridine **9a**: ^{1}H NMR



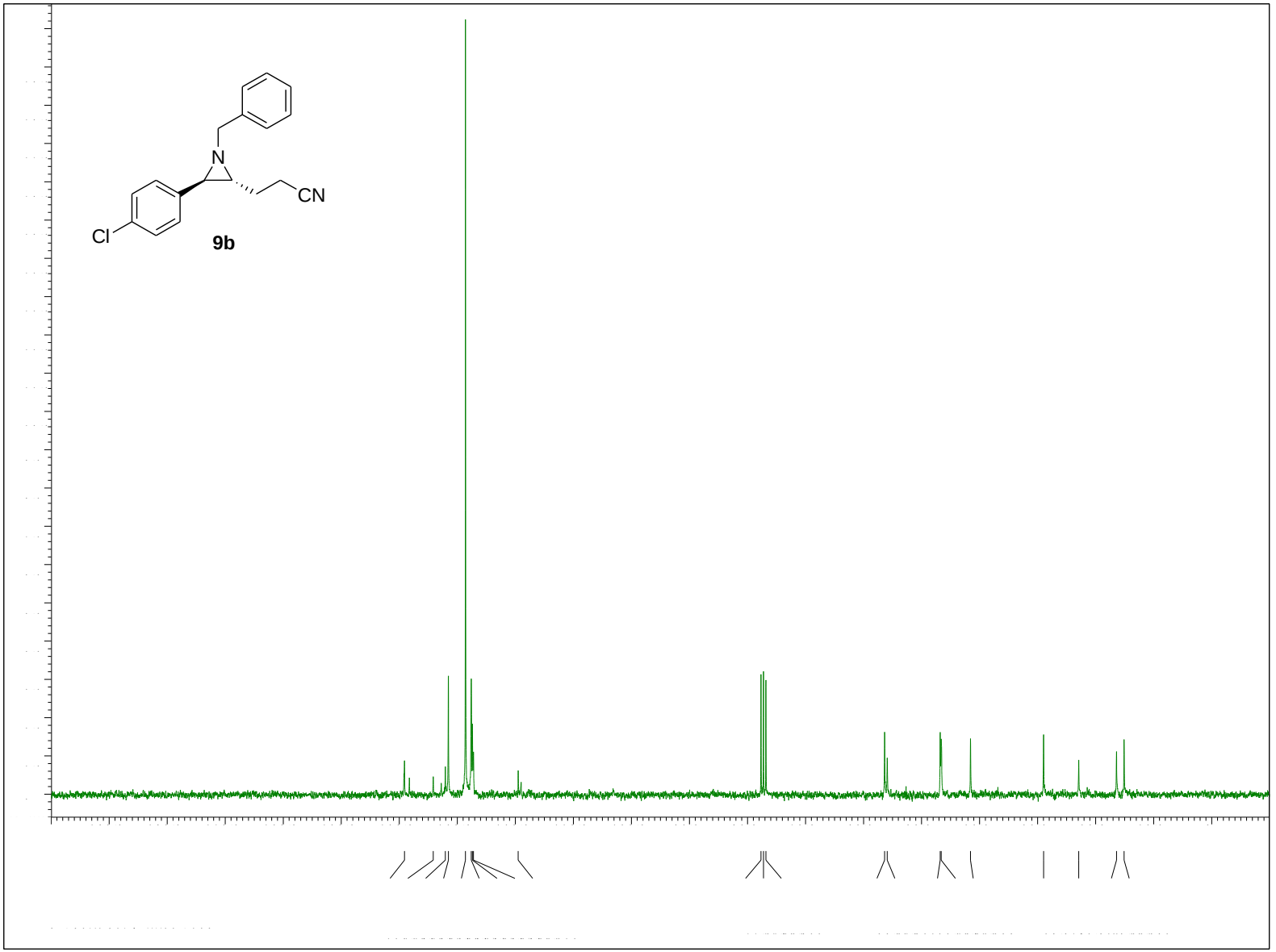
Trans-1-benzyl-3-(2-cyanoethyl)-2-phenylaziridine **9a**: ^{13}C NMR



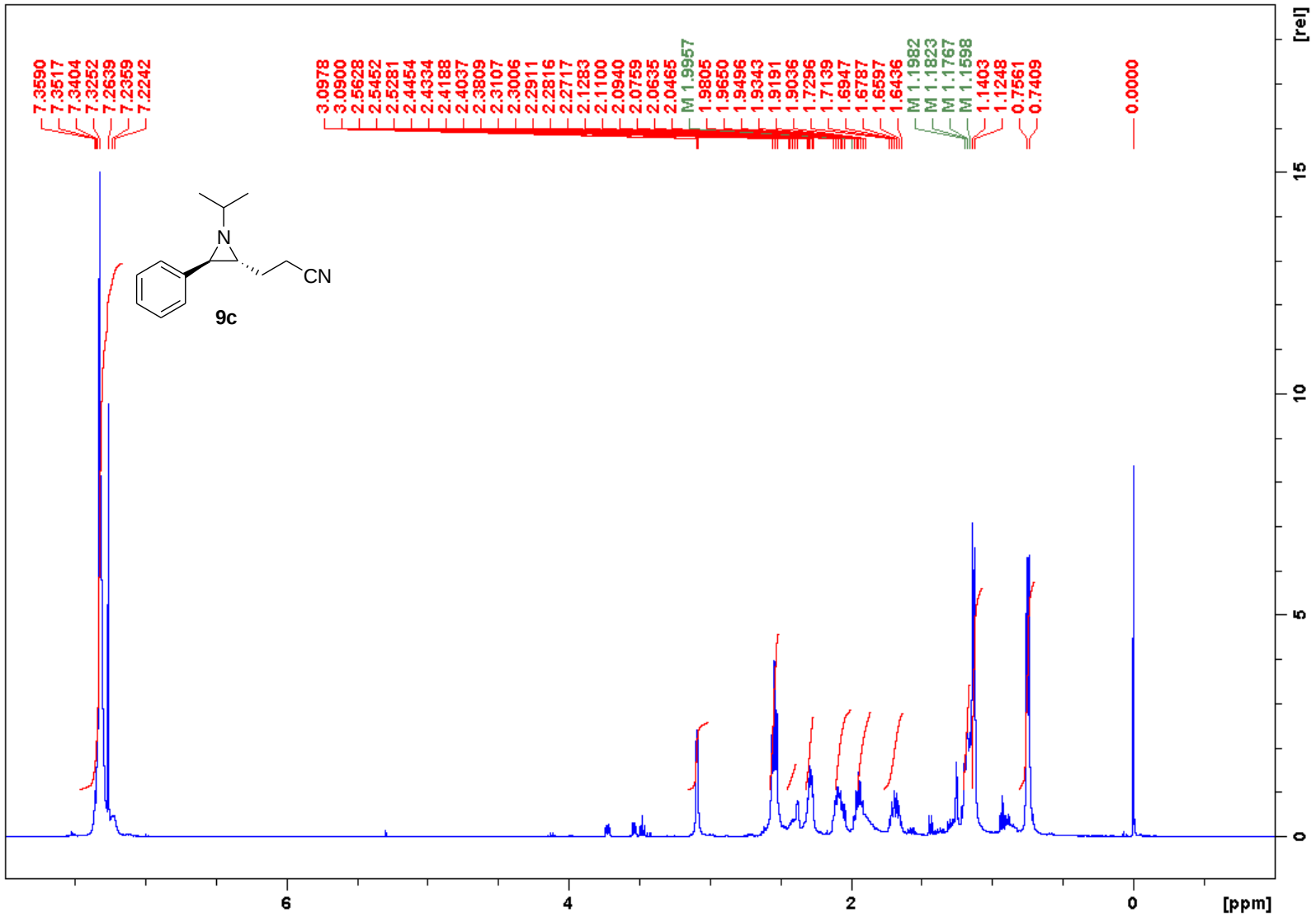
Trans-1-benzyl-2-(4-chlorophenyl)-3-(2-cyanoethyl)aziridine **9b**: ^{1}H NMR



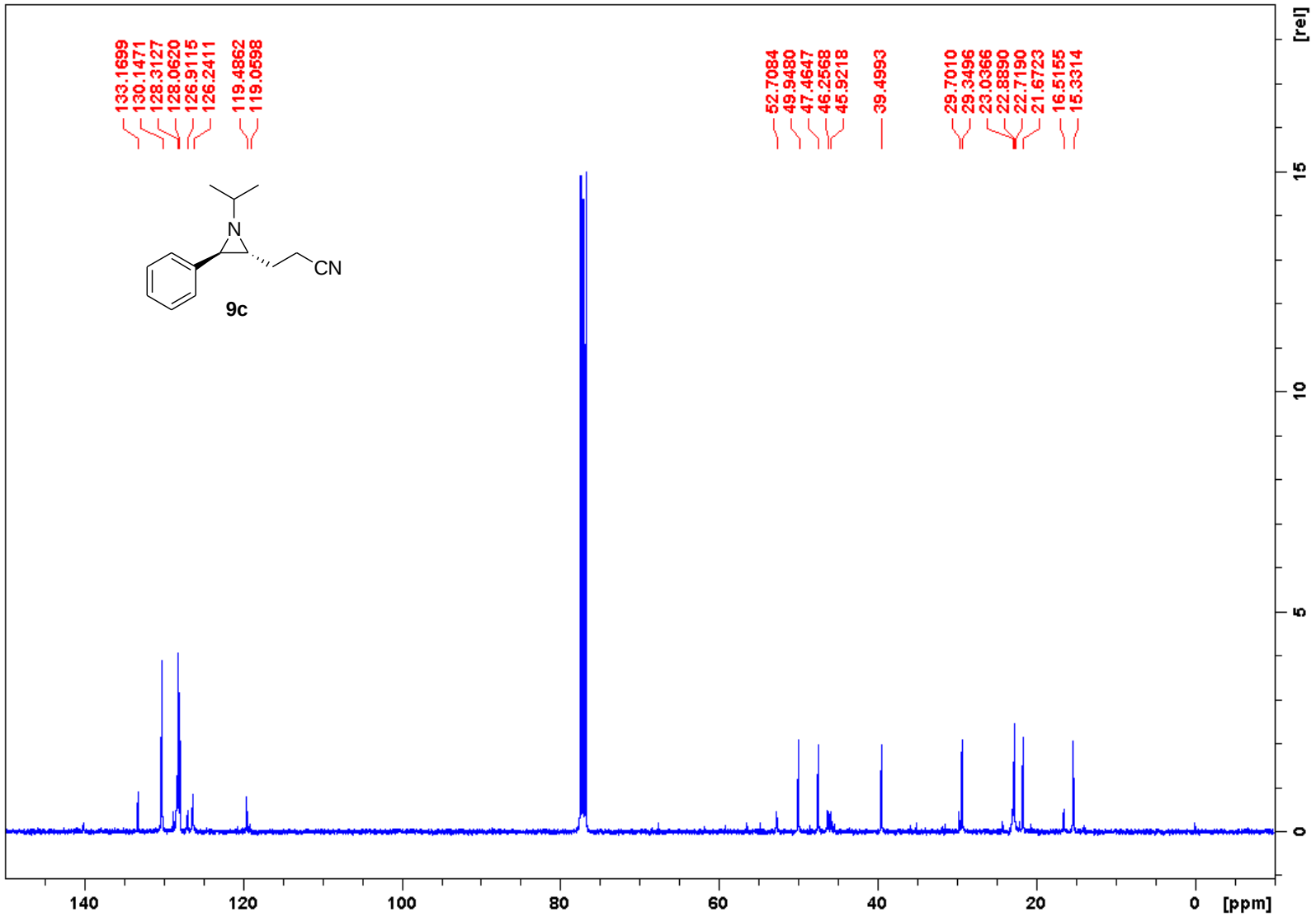
Trans-1-benzyl-2-(4-chlorophenyl)-3-(2-cyanoethyl)aziridine **9b**: ^{13}C NMR



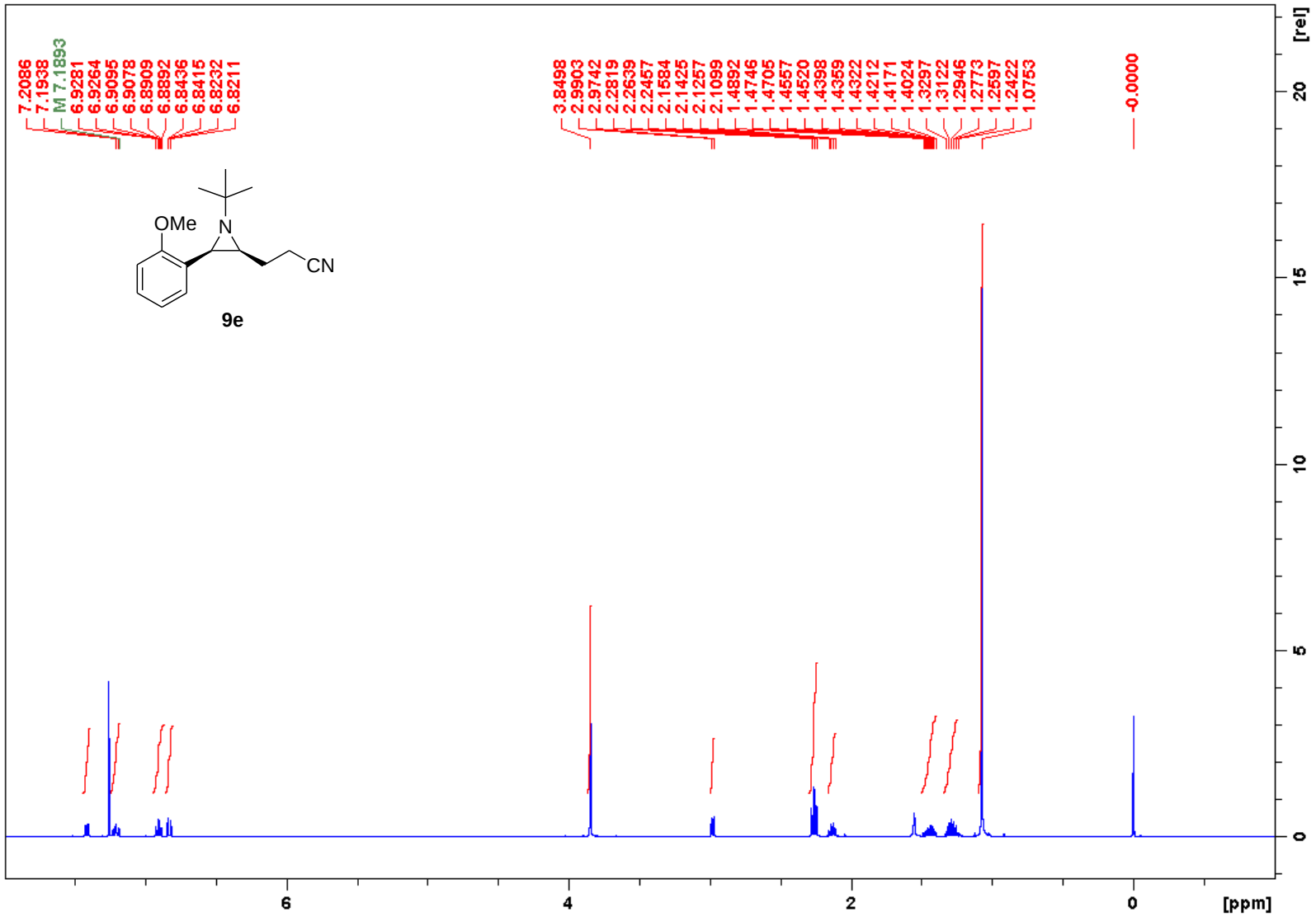
Trans-3-(2-cyanoethyl)-1-isopropyl-2-phenylaziridine **9c**: ^{1}H NMR



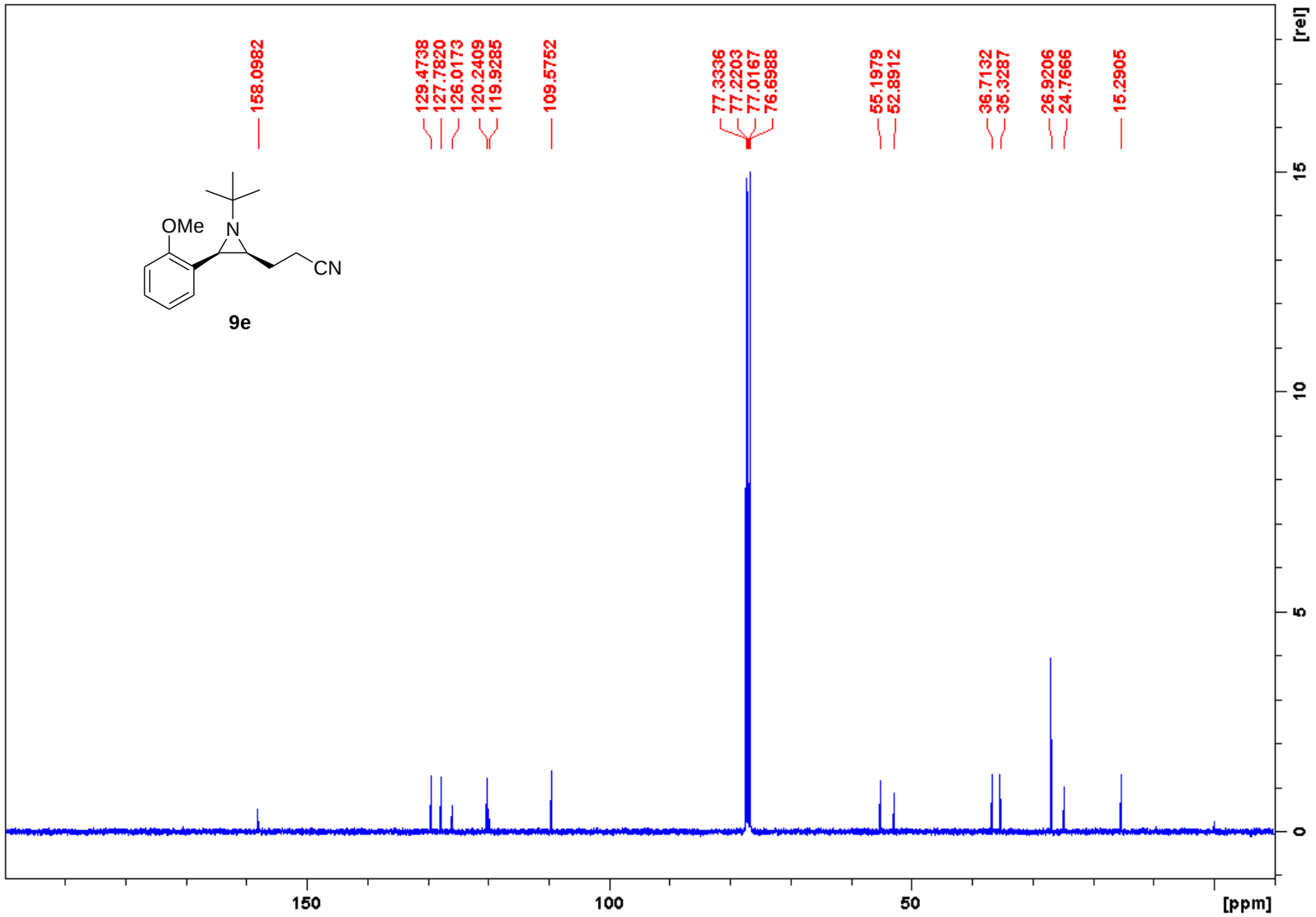
Trans-3-(2-cyanoethyl)-1-isopropyl-2-phenylaziridine **9c**: ^{13}C NMR



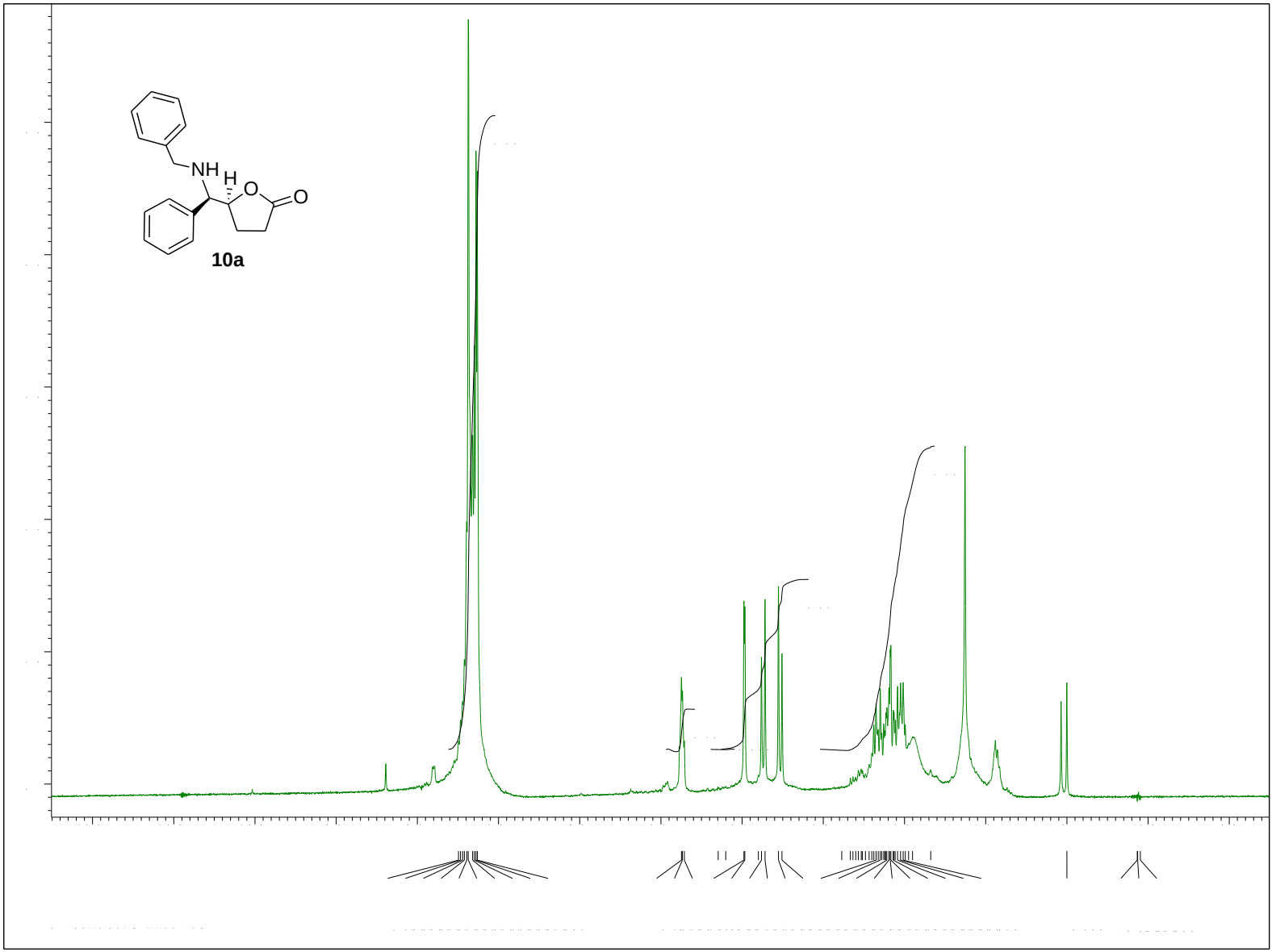
Cis-1-*tert*-butyl-3-(2-cyanoethyl)-2-(2-methoxyphenyl)aziridine **9e**: ^{1}H NMR



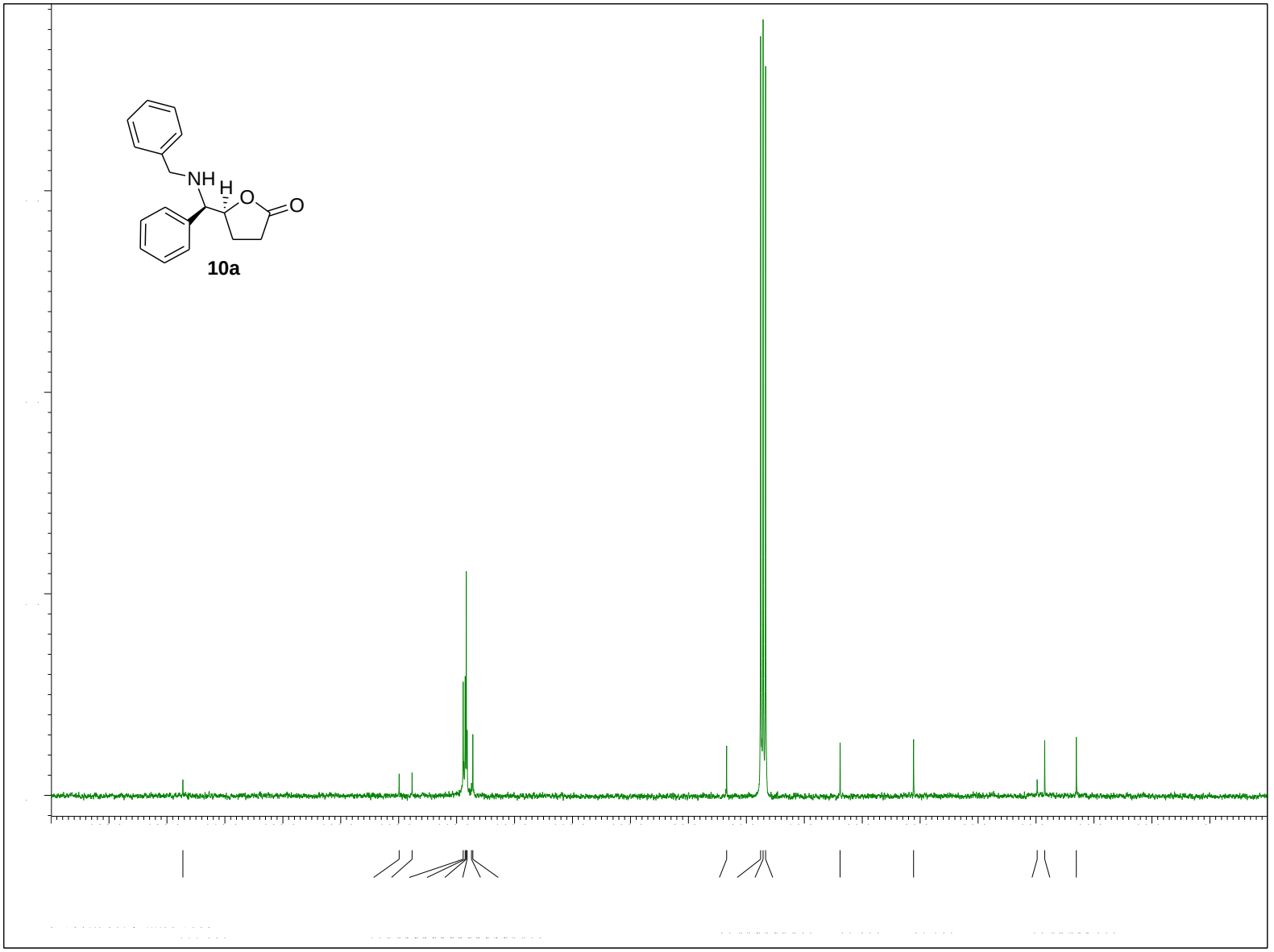
Cis-1-*tert*-butyl-3-(2-cyanoethyl)-2-(2-methoxyphenyl)aziridine **9e**: ^{13}C NMR



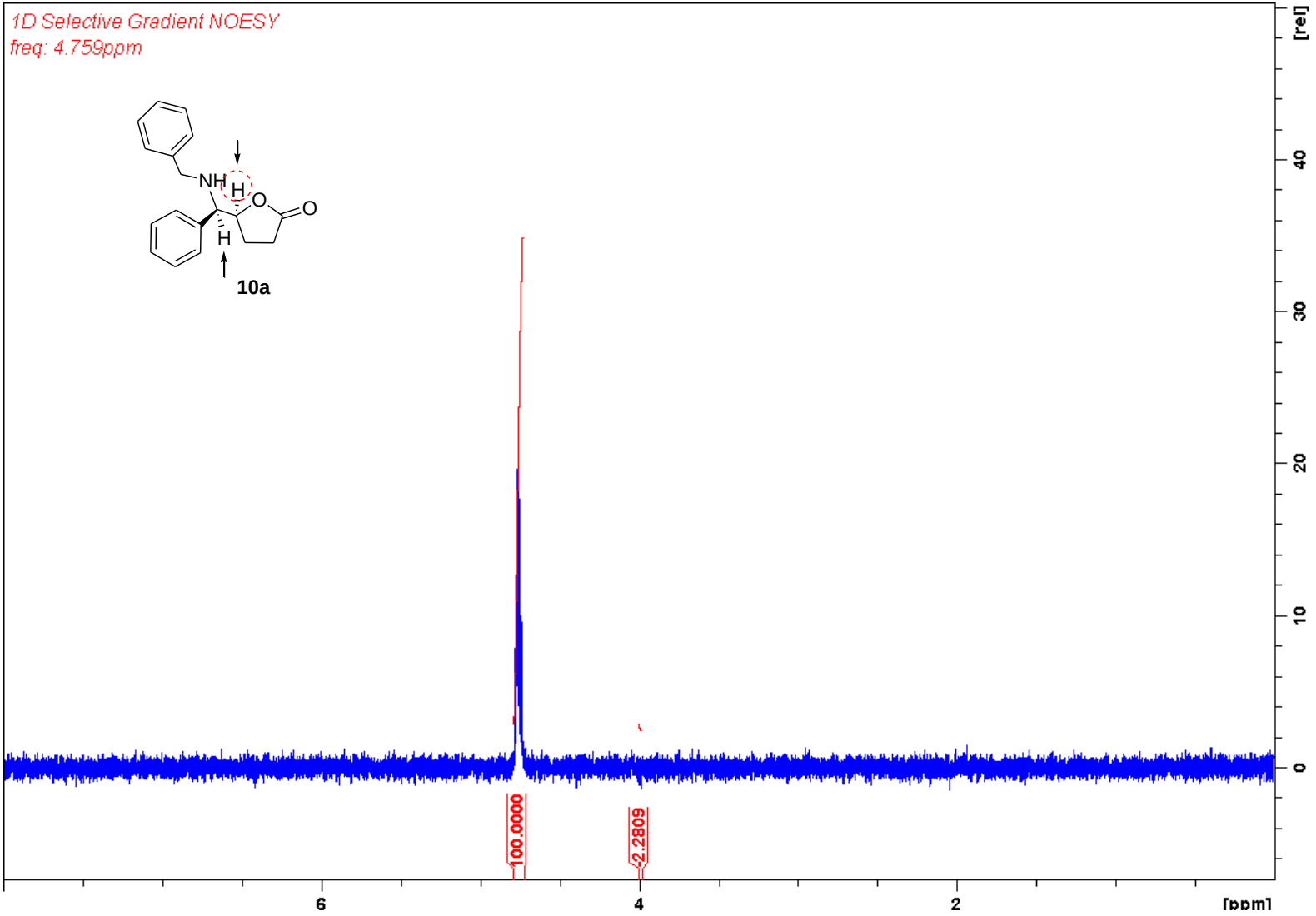
(4*S**,1'*R**)-4-(Benzylaminophenylmethyl)butyrolactone **10a**: ^{1}H NMR



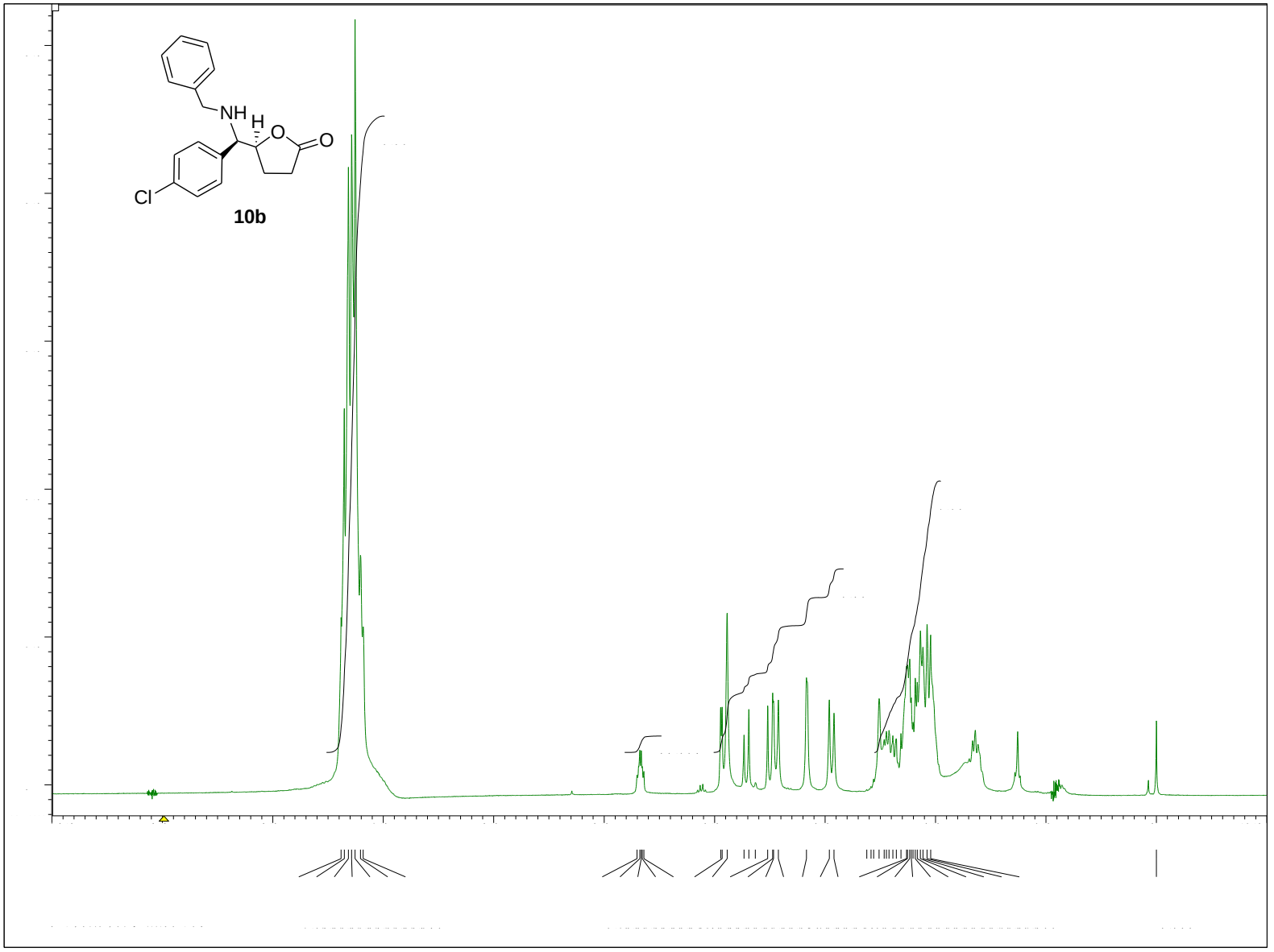
(4*S**,1'*R**)-4-(Benzylaminophenylmethyl)butyrolactone **10a**: ^{13}C NMR



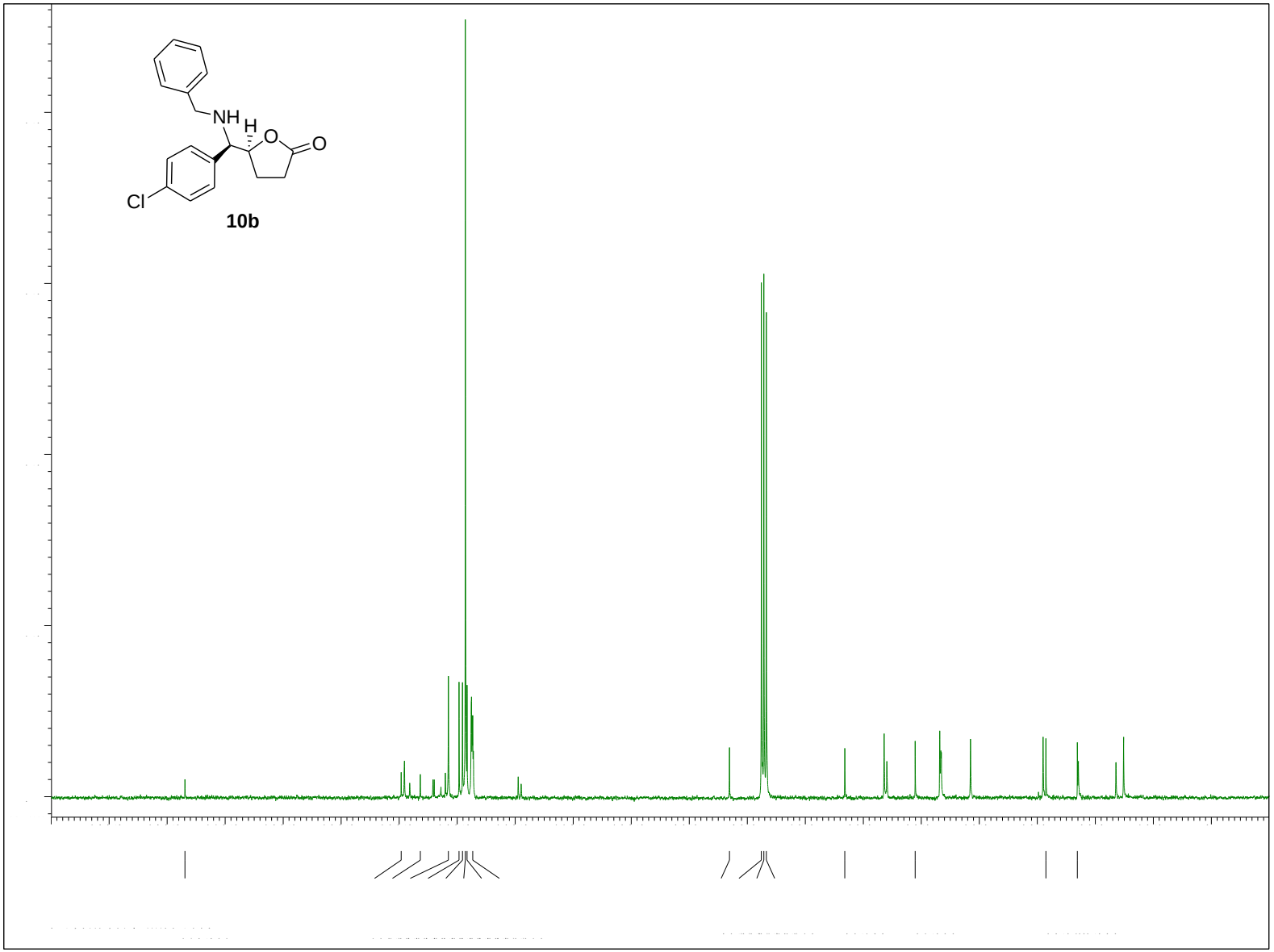
(4*S**,1'*R**)-4-(Benzylaminophenylmethyl)butyrolactone **10a**: 1D NOESY



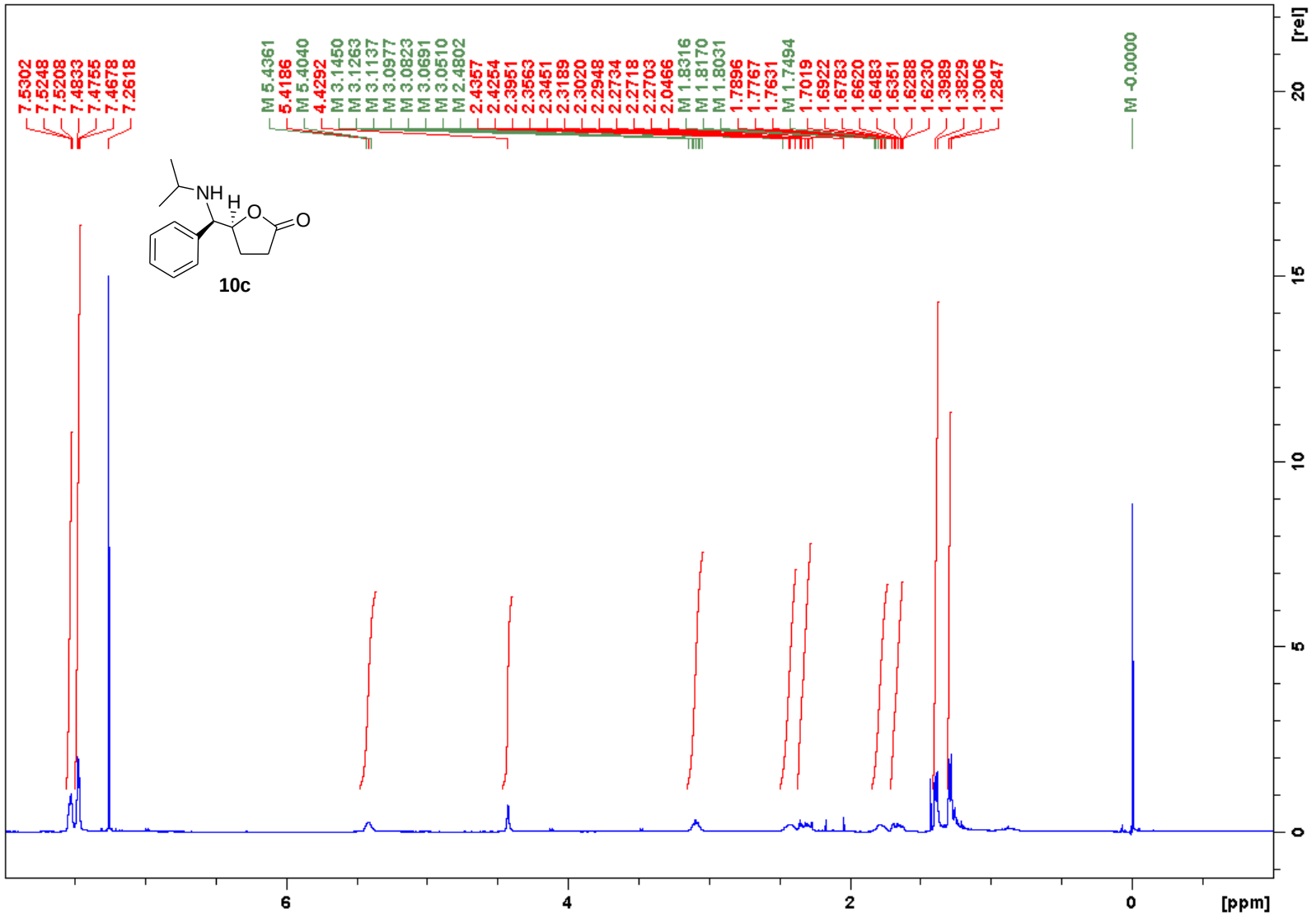
(4*S**,1'*R**)-4-[Benzylamino(4-chlorophenyl)methyl]butyrolactone **10b**: ^{1}H NMR



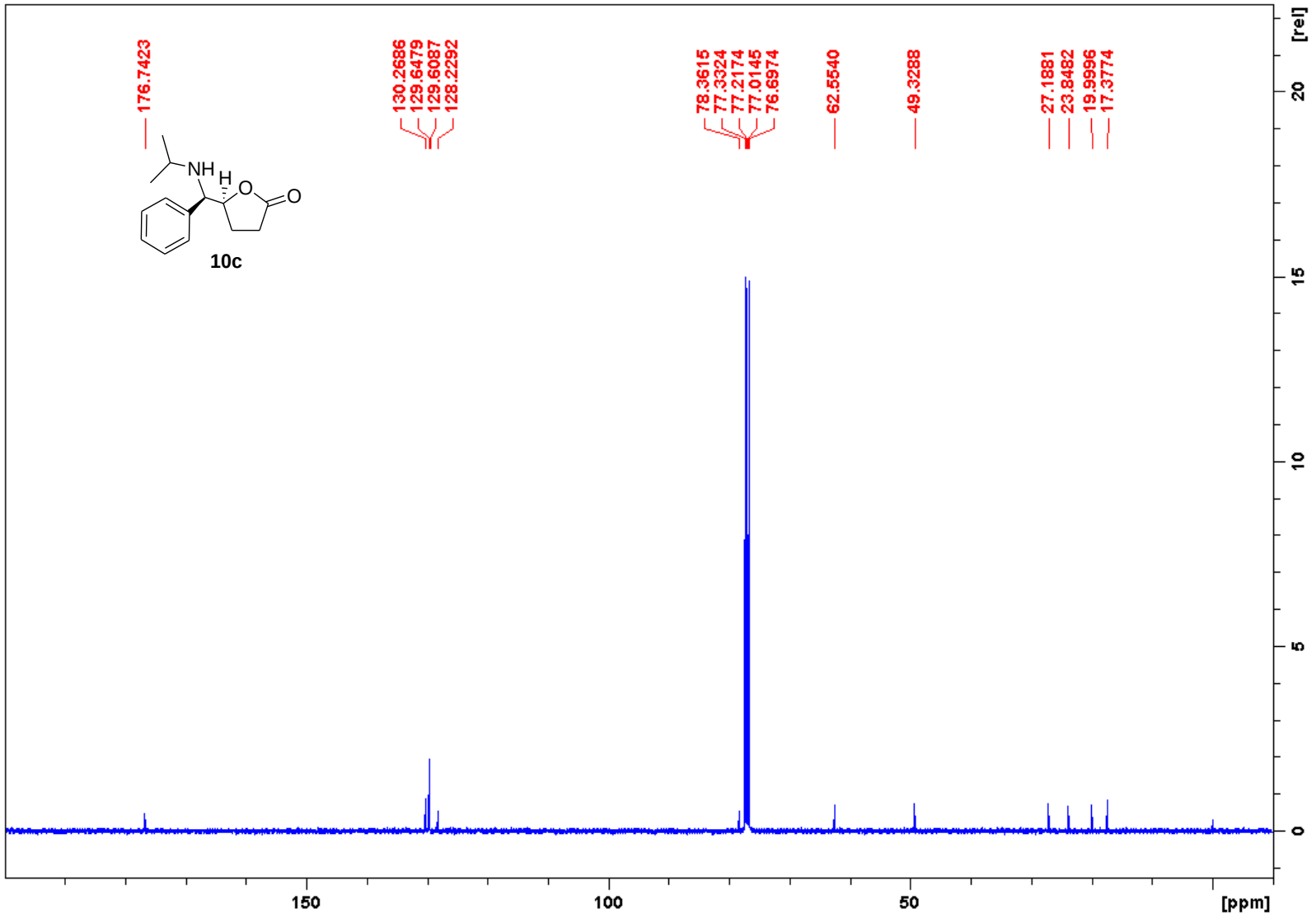
(4*S**,1'*R**)-4-[Benzylamino(4-chlorophenyl)methyl]butyrolactone **10b**: ^{13}C NMR



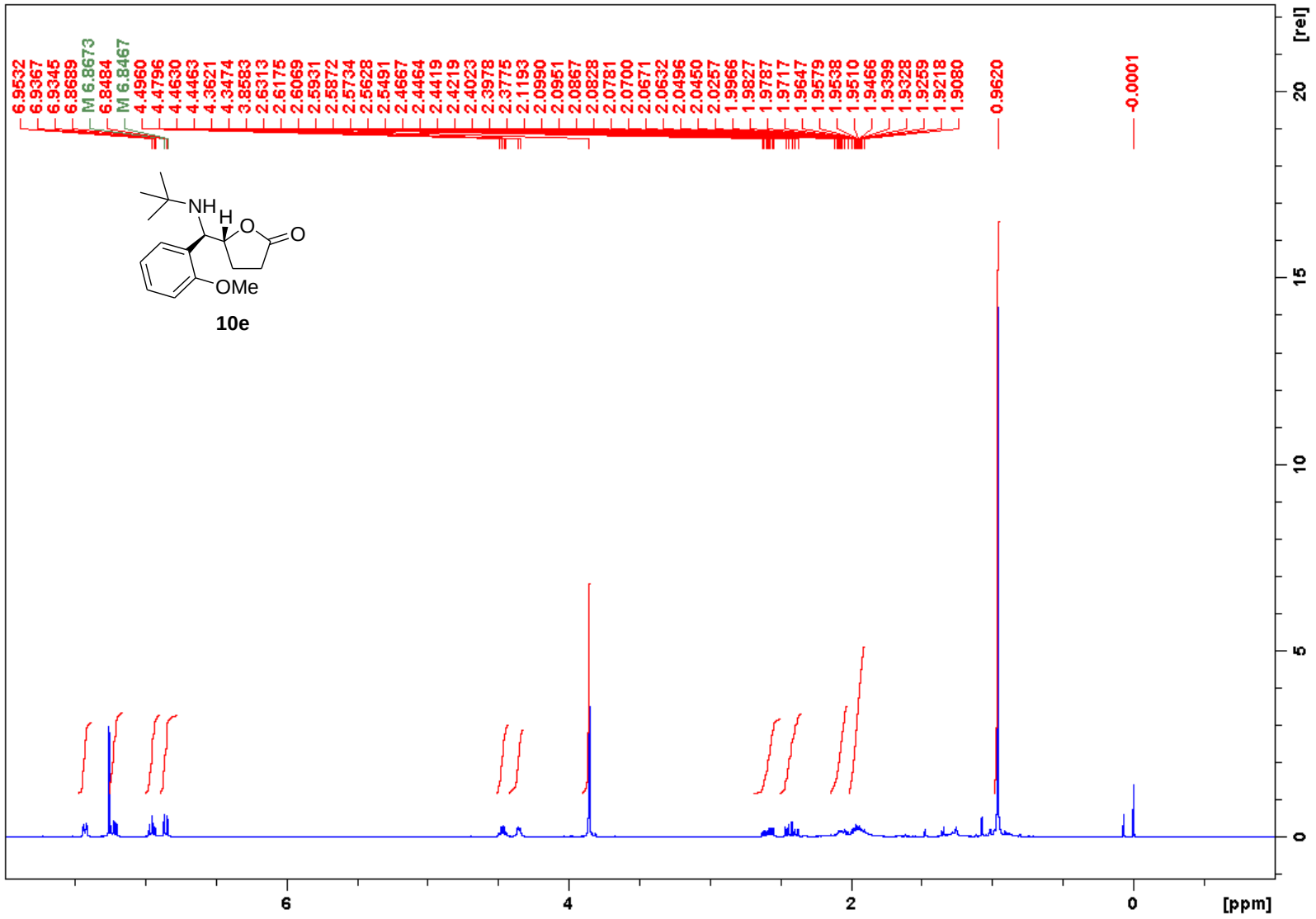
(4*S**,1'*R**)-4-[(Isopropylamino)phenylmethyl]butyrolactone **10c**: ^{1}H NMR



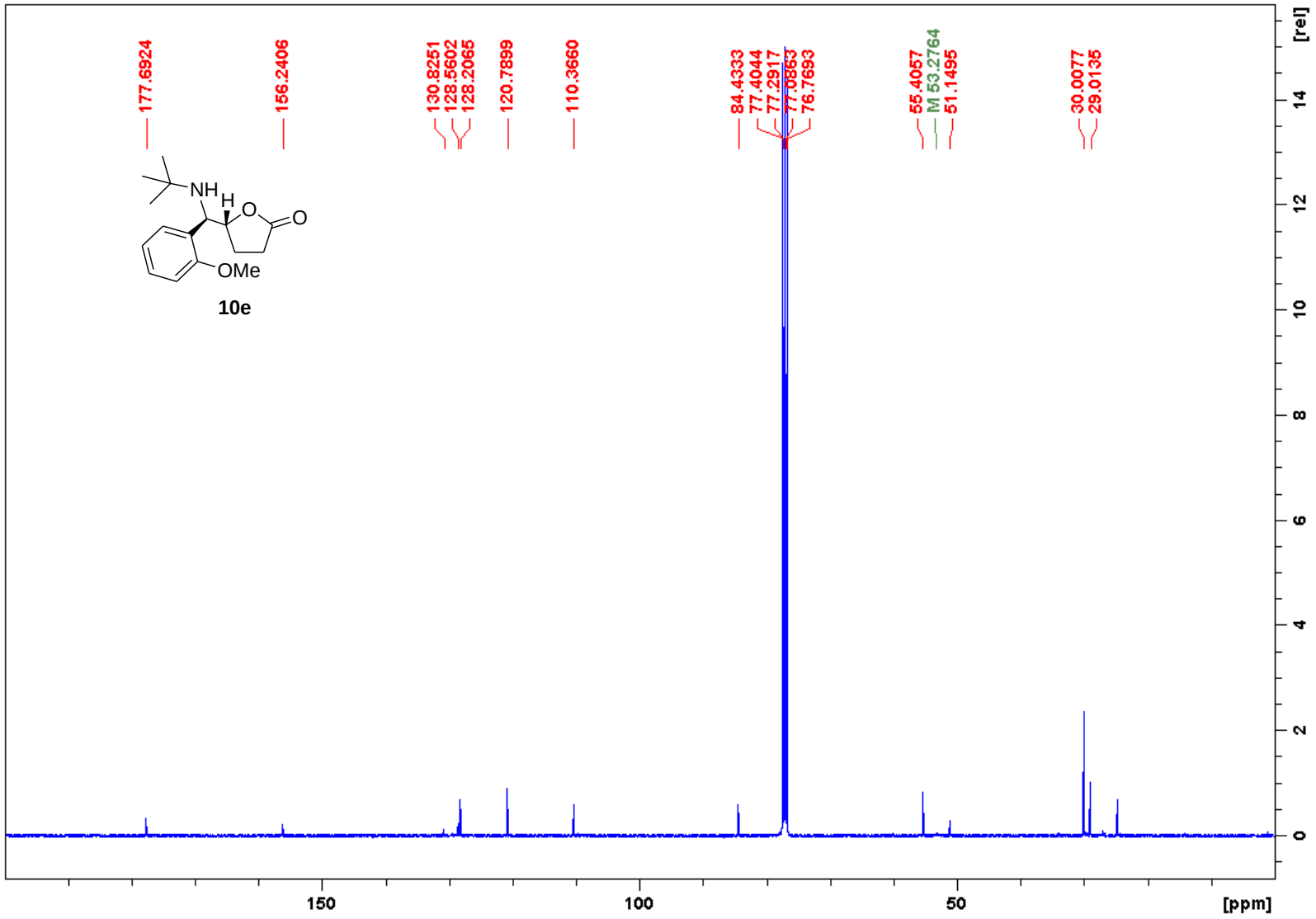
(4*S**,1'*R**)-4-[(Isopropylamino)phenylmethyl]butyrolactone **10c**: ^{13}C NMR



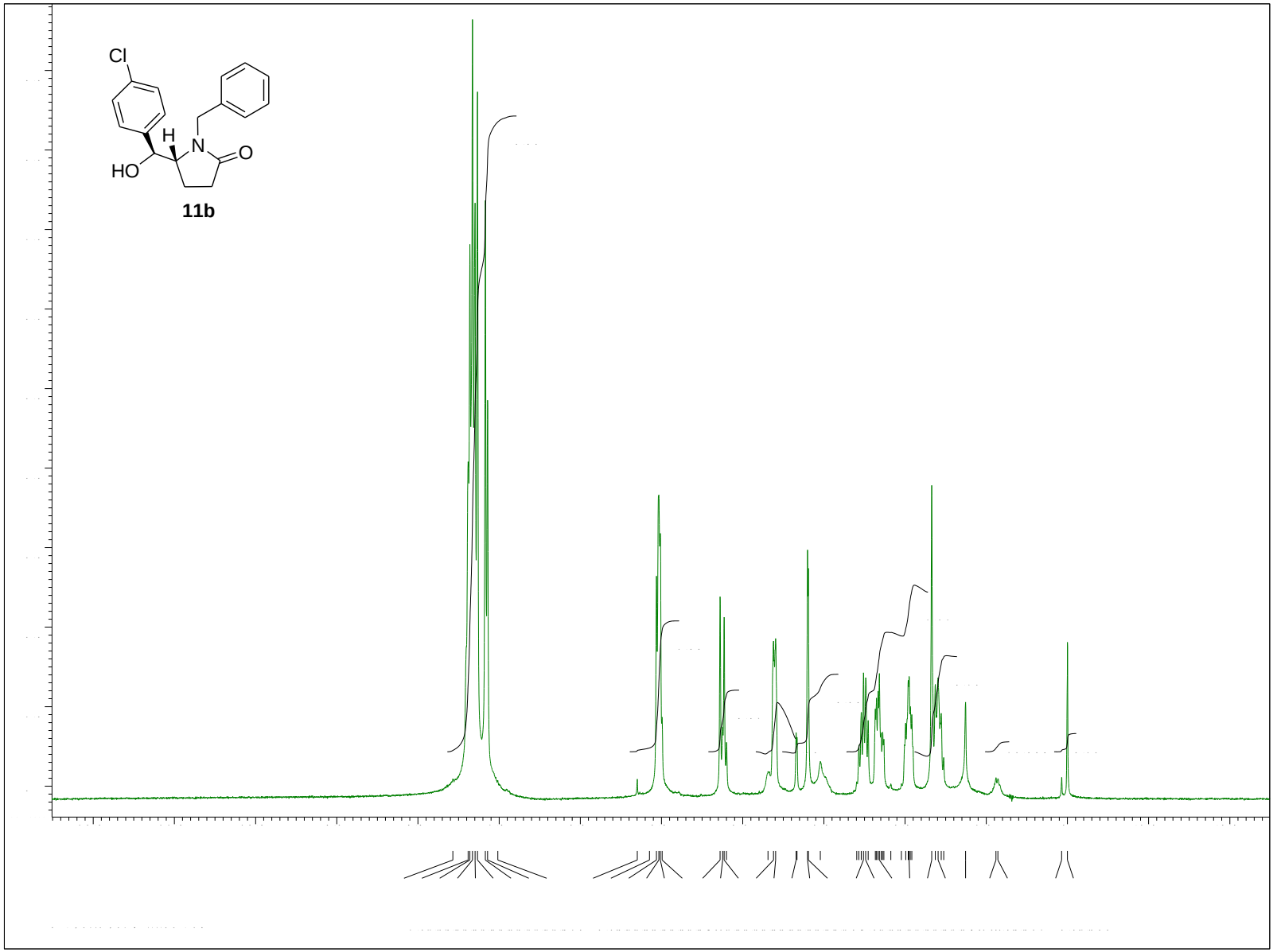
(4*R**,1'*R**)-4-[(*tert*-Butylamino)(2-methoxyphenyl)methyl]butyrolactone **10e**: ^{1}H NMR



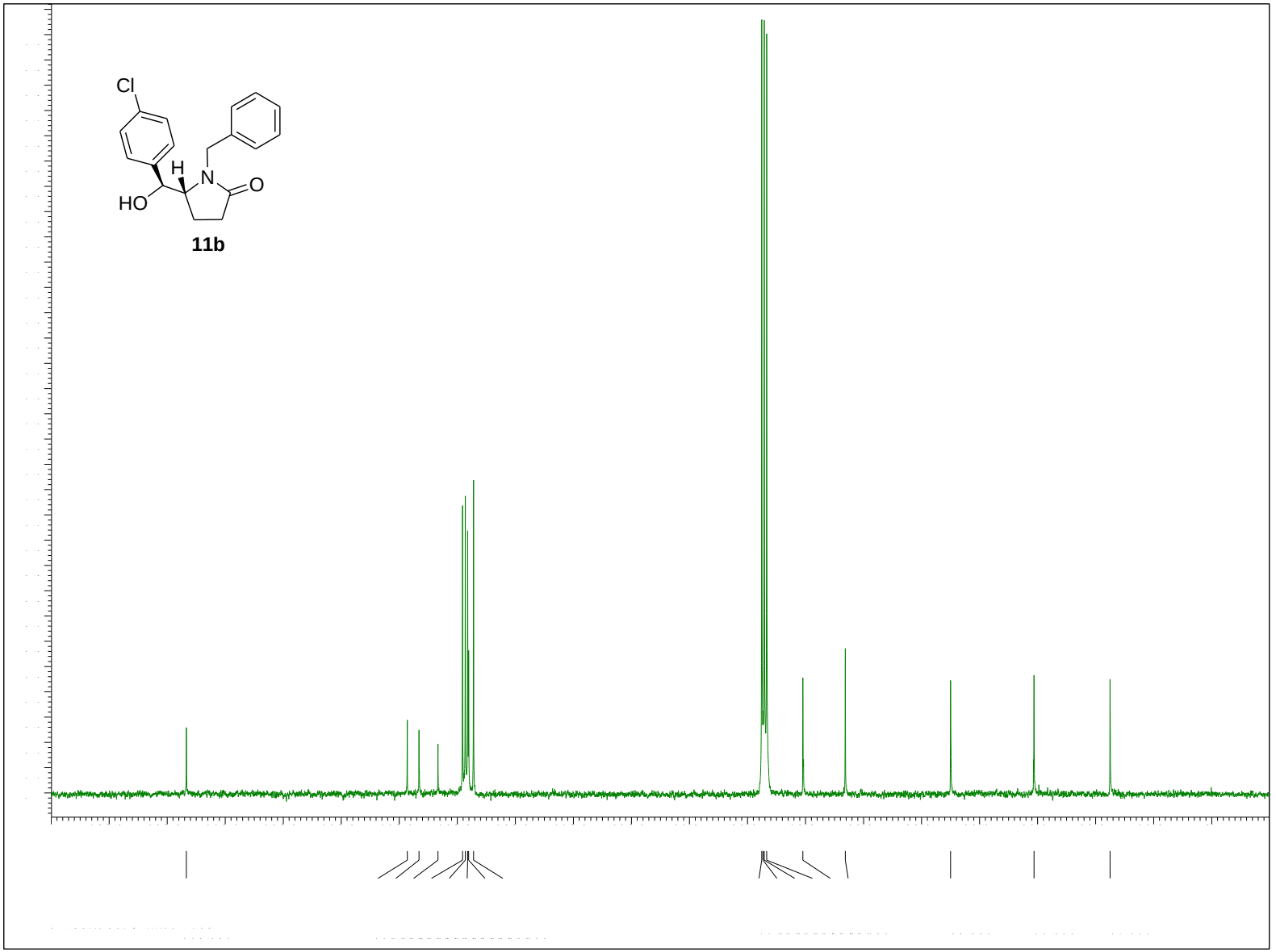
(4*R**,1'*R**)-4-[(*tert*-Butylamino)(2-methoxyphenyl)methyl]butyrolactone **10e**: ^{13}C NMR



(5*R**,1'*S**)-1-Benzyl-5-[(4-chlorophenyl)hydroxymethyl]pyrrolidin-2-one **11b**: ^{1}H NMR

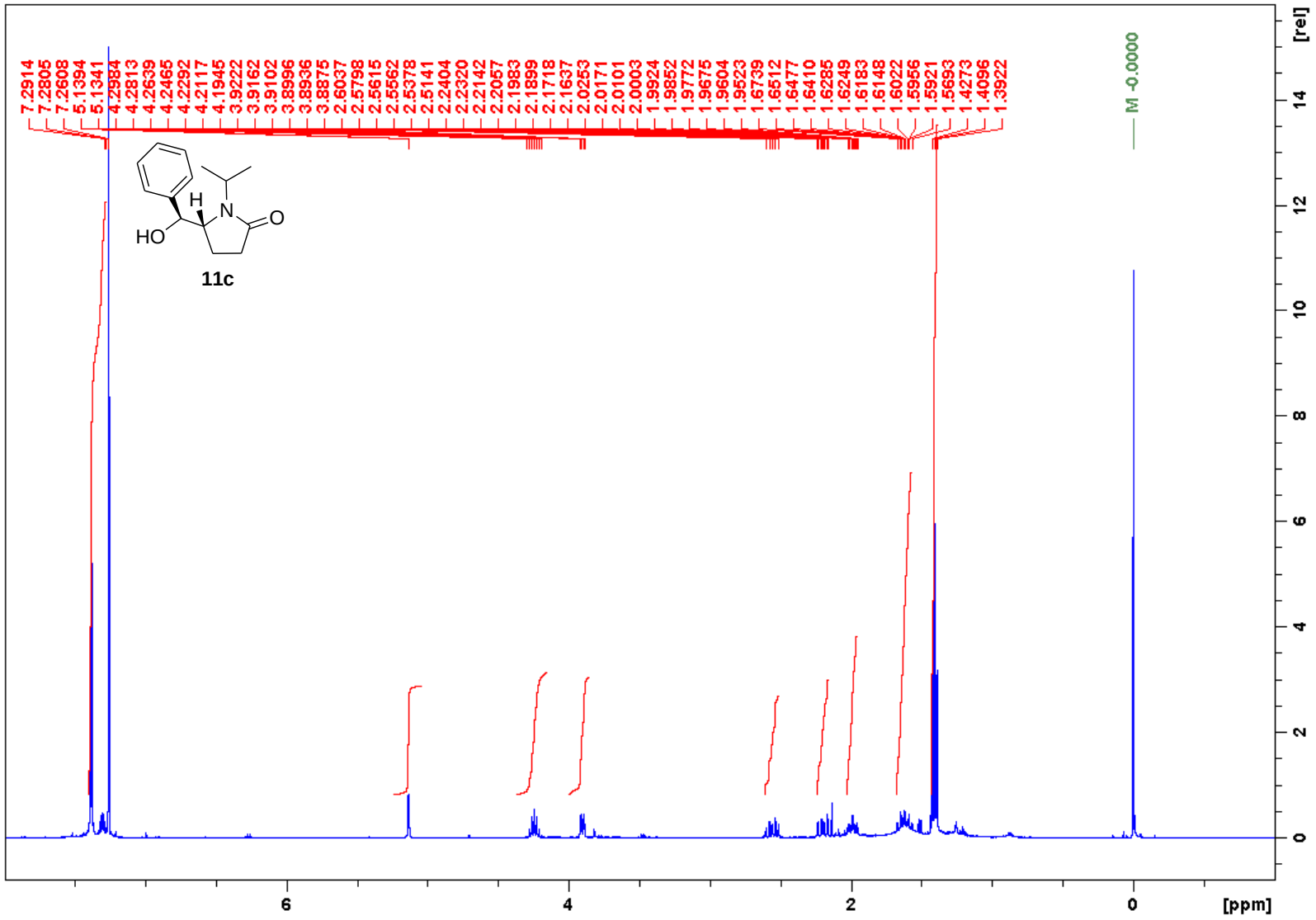


(5*R**,1'*S**)-1-Benzyl-5-[(4-chlorophenyl)hydroxymethyl]pyrrolidin-2-one **11b**: ^{13}C NMR



11b

(5*R**,1'*S**)-1-Isopropyl-5-[hydroxyl(phenyl)methyl]pyrrolidin-2-one **11c**: ^{1}H NMR



(5*R**,1'*S**)-1-Isopropyl-5-[hydroxyl(phenyl)methyl]pyrrolidin-2-one **11c**: ^{13}C NMR