

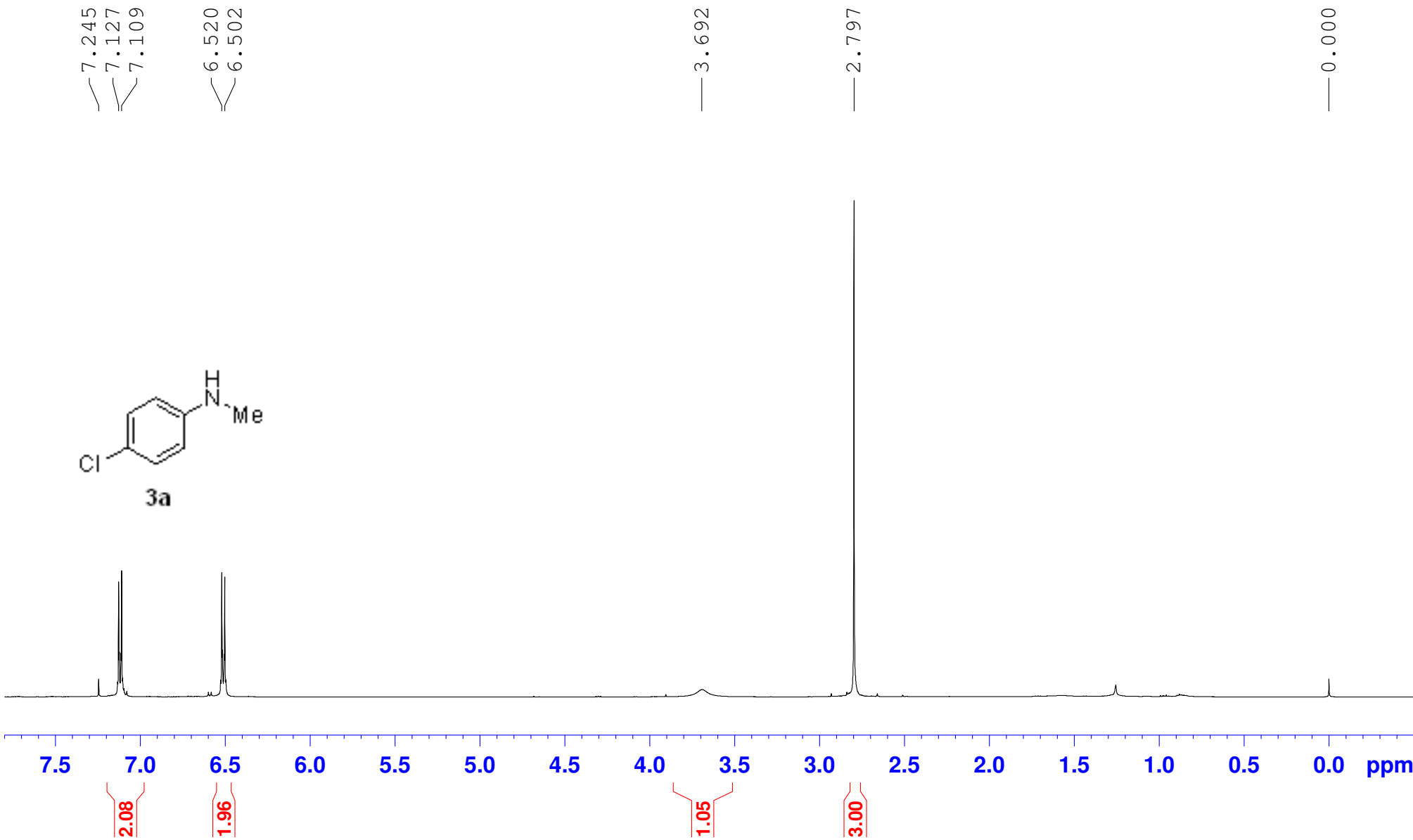
Electronic Supplementary Information (ESI)

General and efficient method for direct *N*-monomethylation of aromatic primary amines with methanol

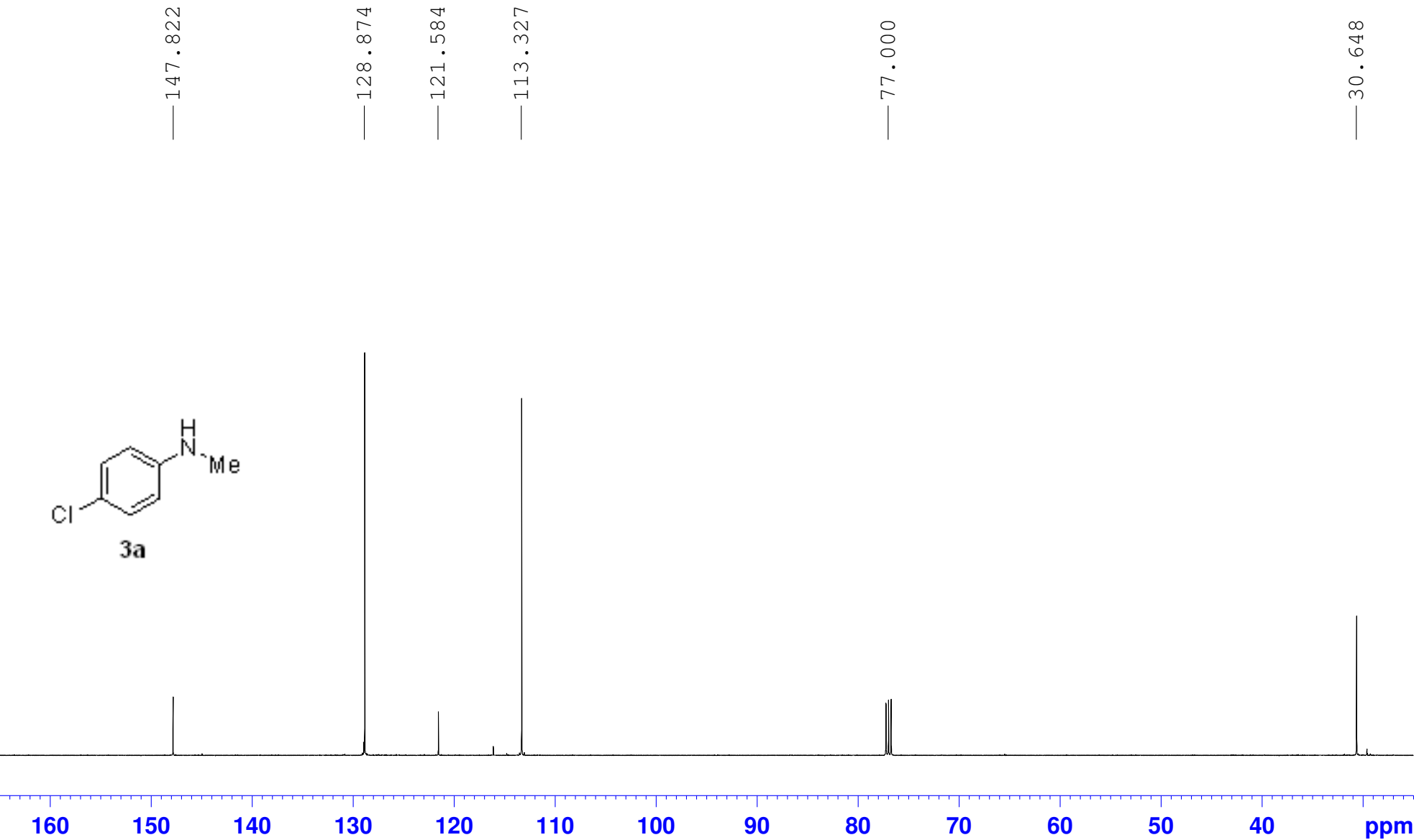
Feng Li,* Jianjiang Xie, Haixia Shan, Chunlou Sun and Lin Chen

School of Chemical Engineering, Nanjing University of Science and Technology, Nanjing 210094, P. R. China

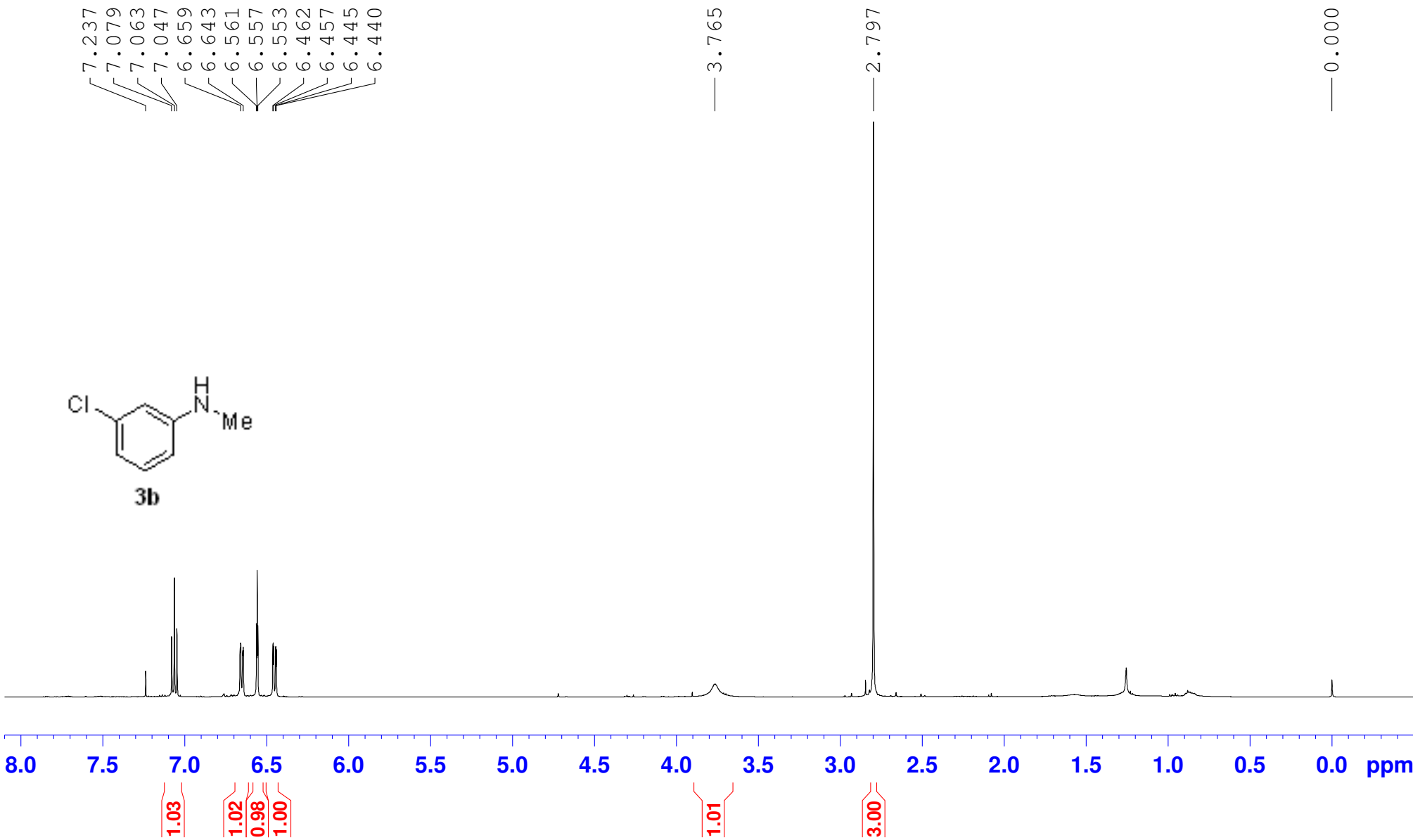
4-chloro-N-methylbenzenamine
Proton CDCl3



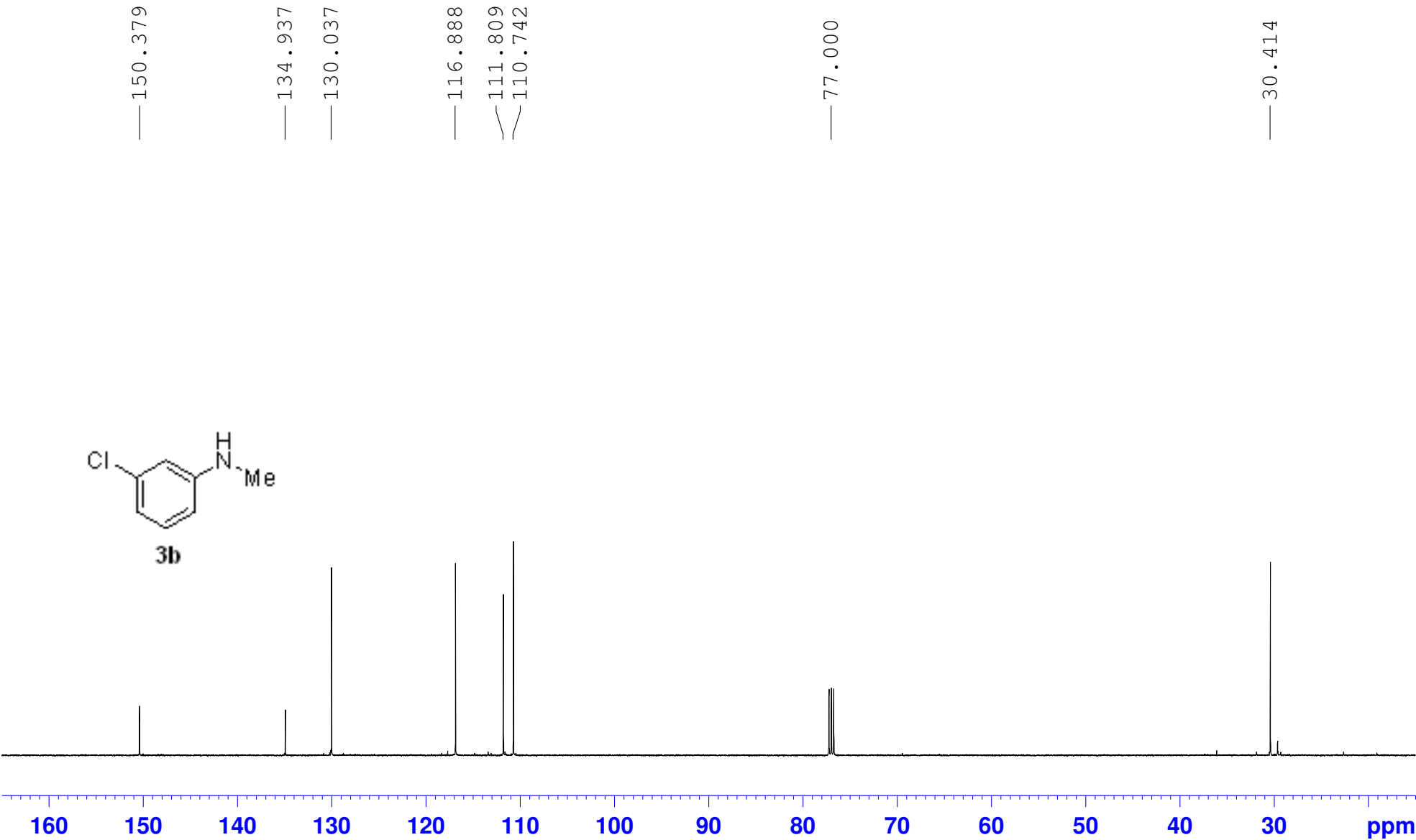
4-chloro-N-methylbenzenamine
C13CPD CDC13



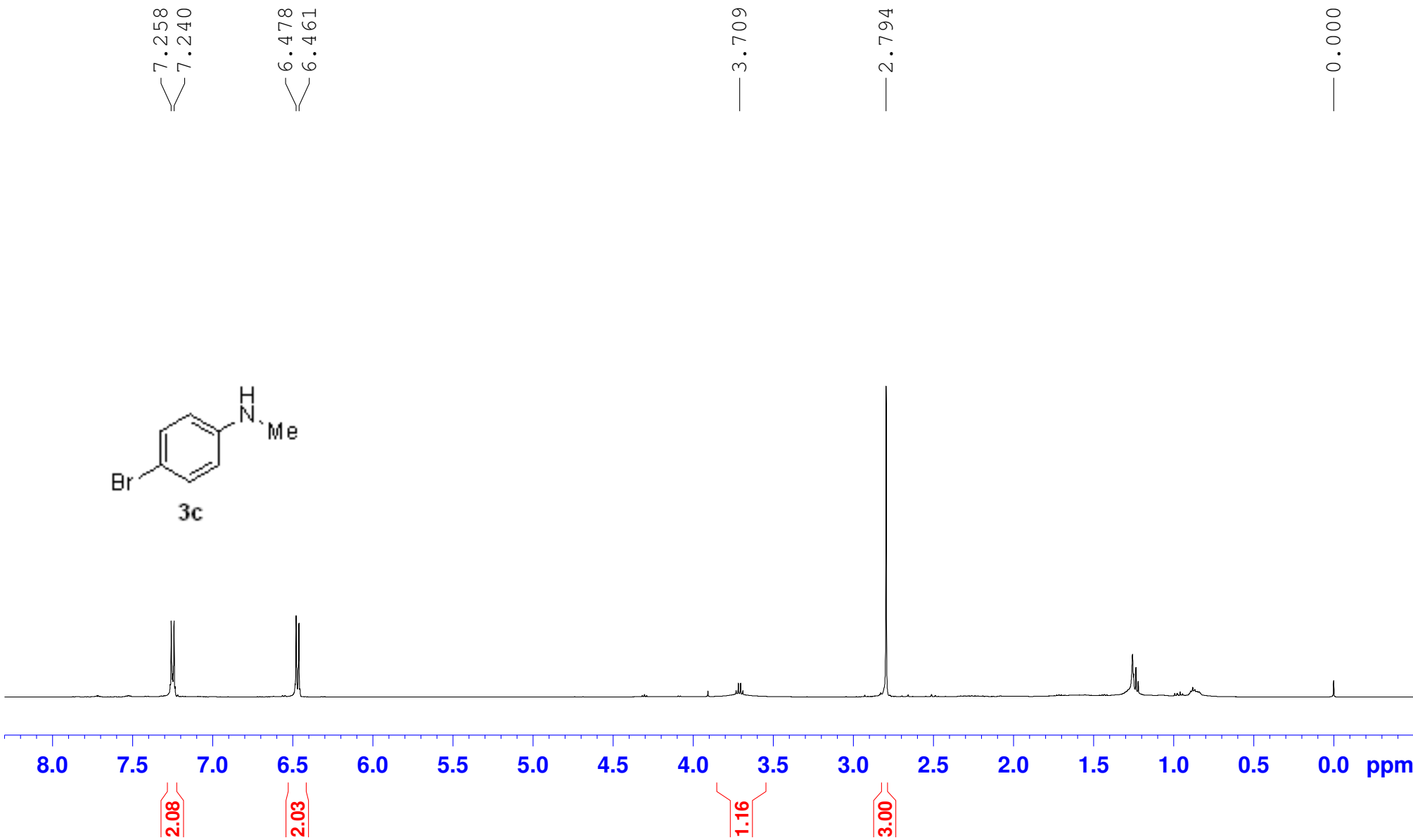
3-chloro-N-methylbenzenamine
Proton CDCl3



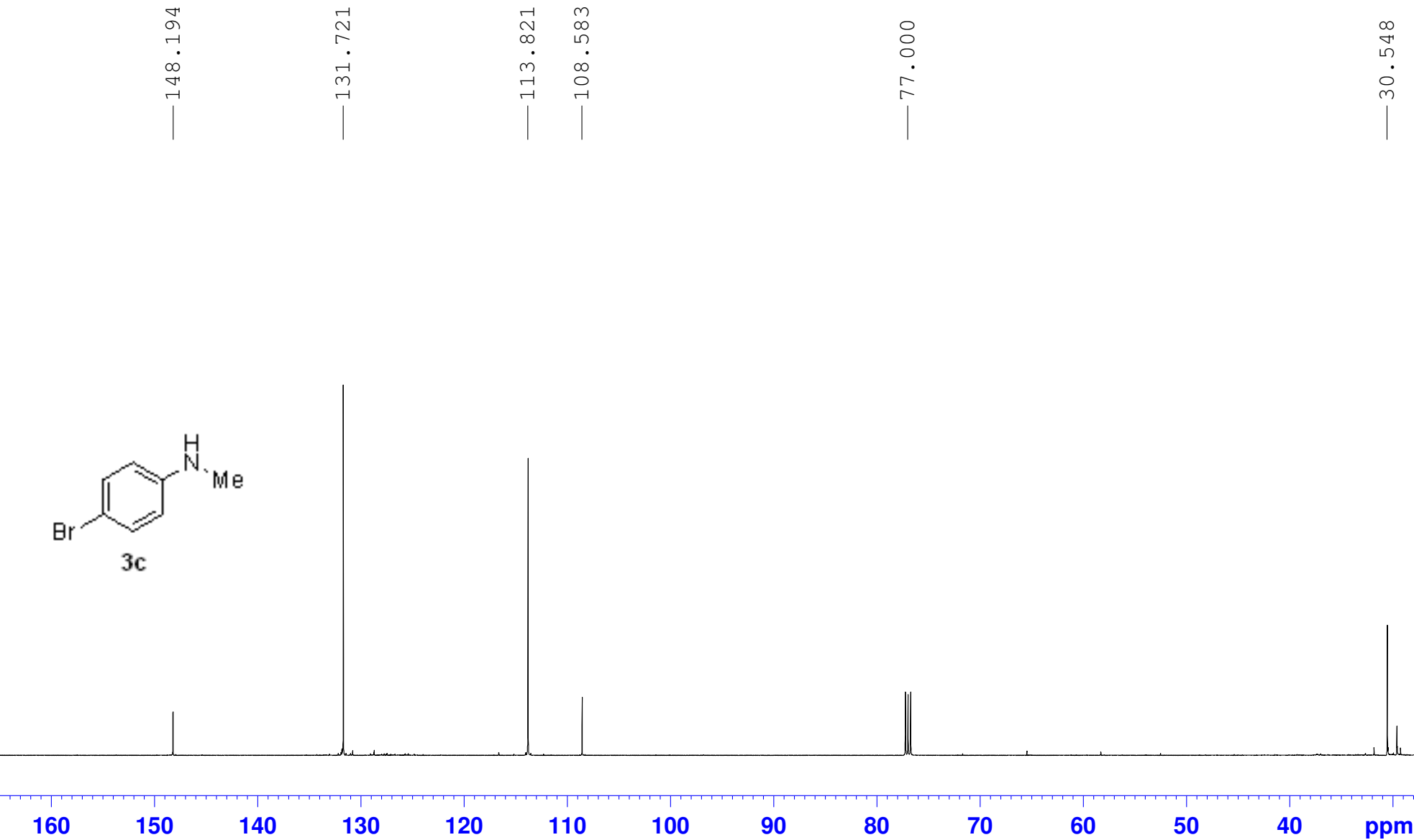
3-chloro-N-methylbenzenamine
C13CPD CDC13



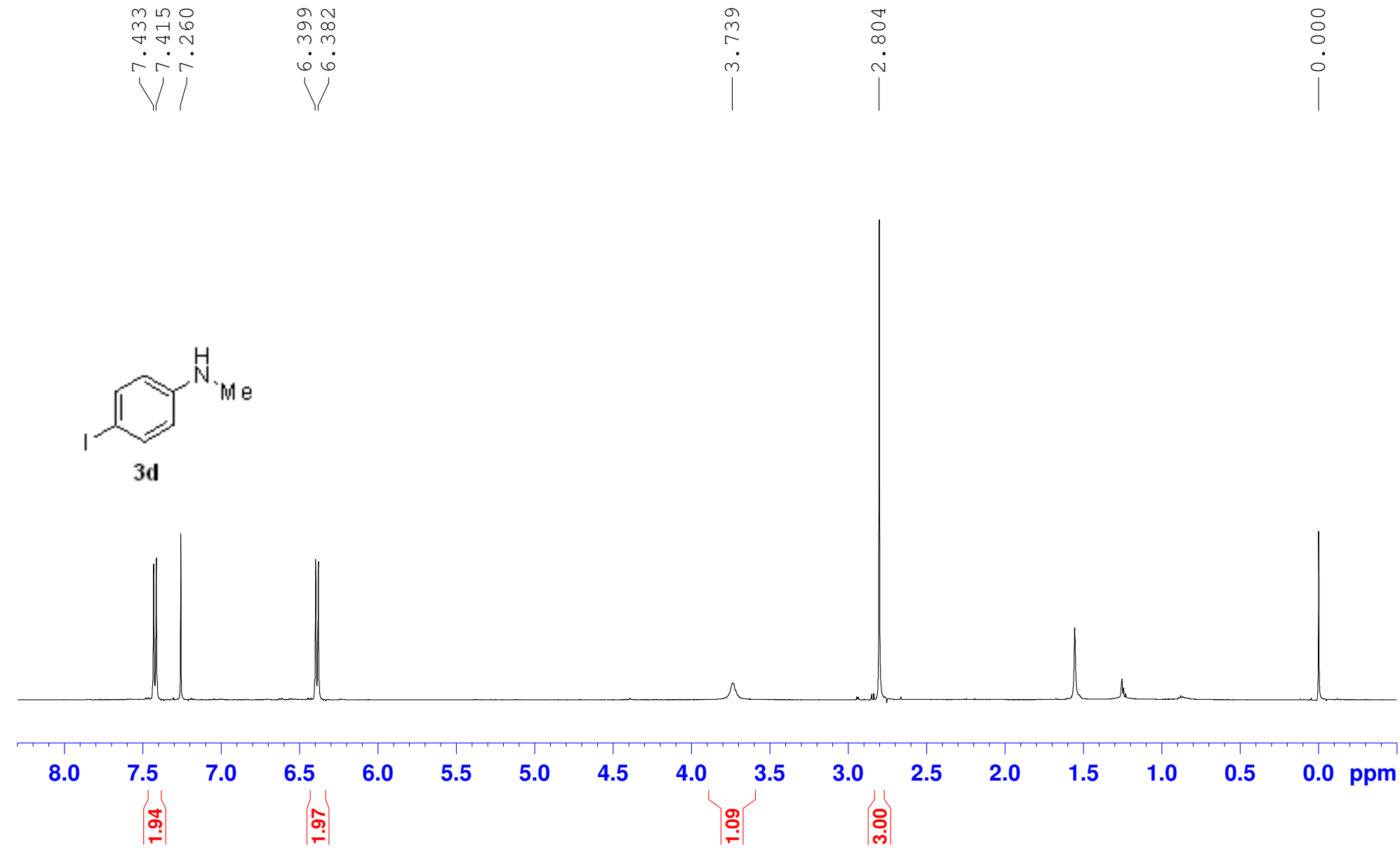
4-bromo-N-methylbenzenamine
Proton CDCl3



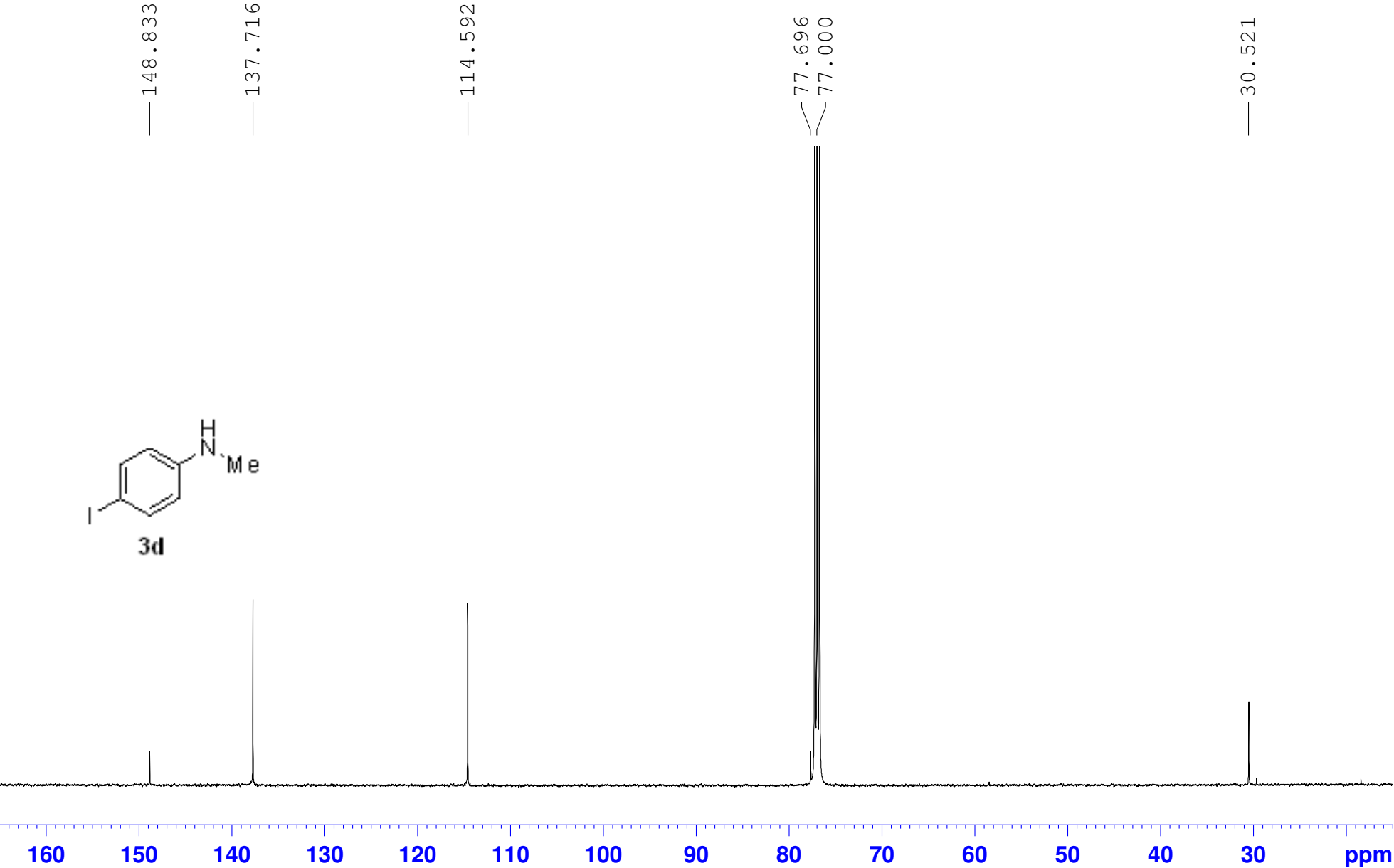
4-bromo-N-methylbenzenamine
C13CPD CDC13



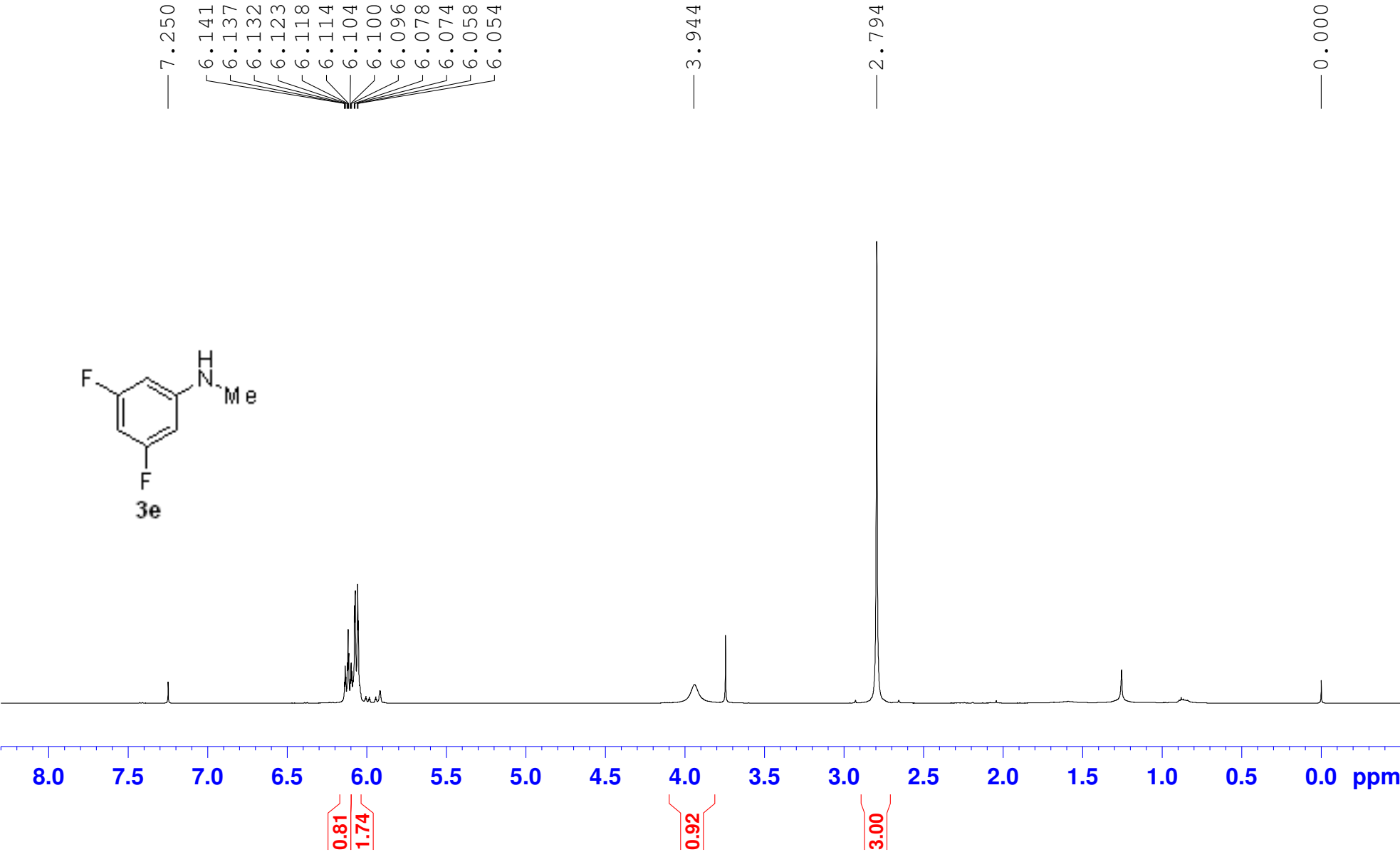
4-iodo-N-methylbenzenamine
Proton CDCl3



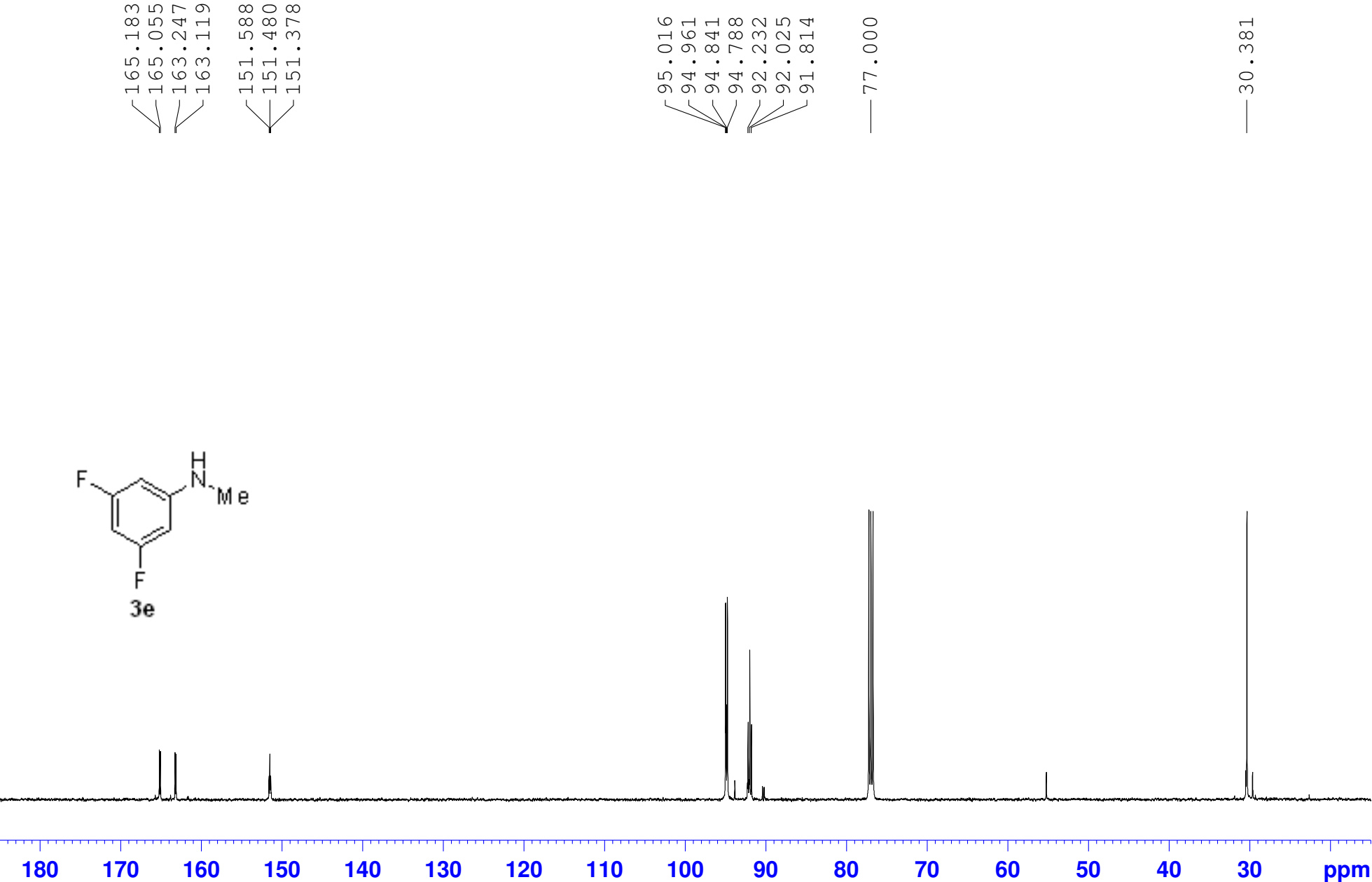
4-iodo-N-methylbenzenamine
C13CPD CDC13



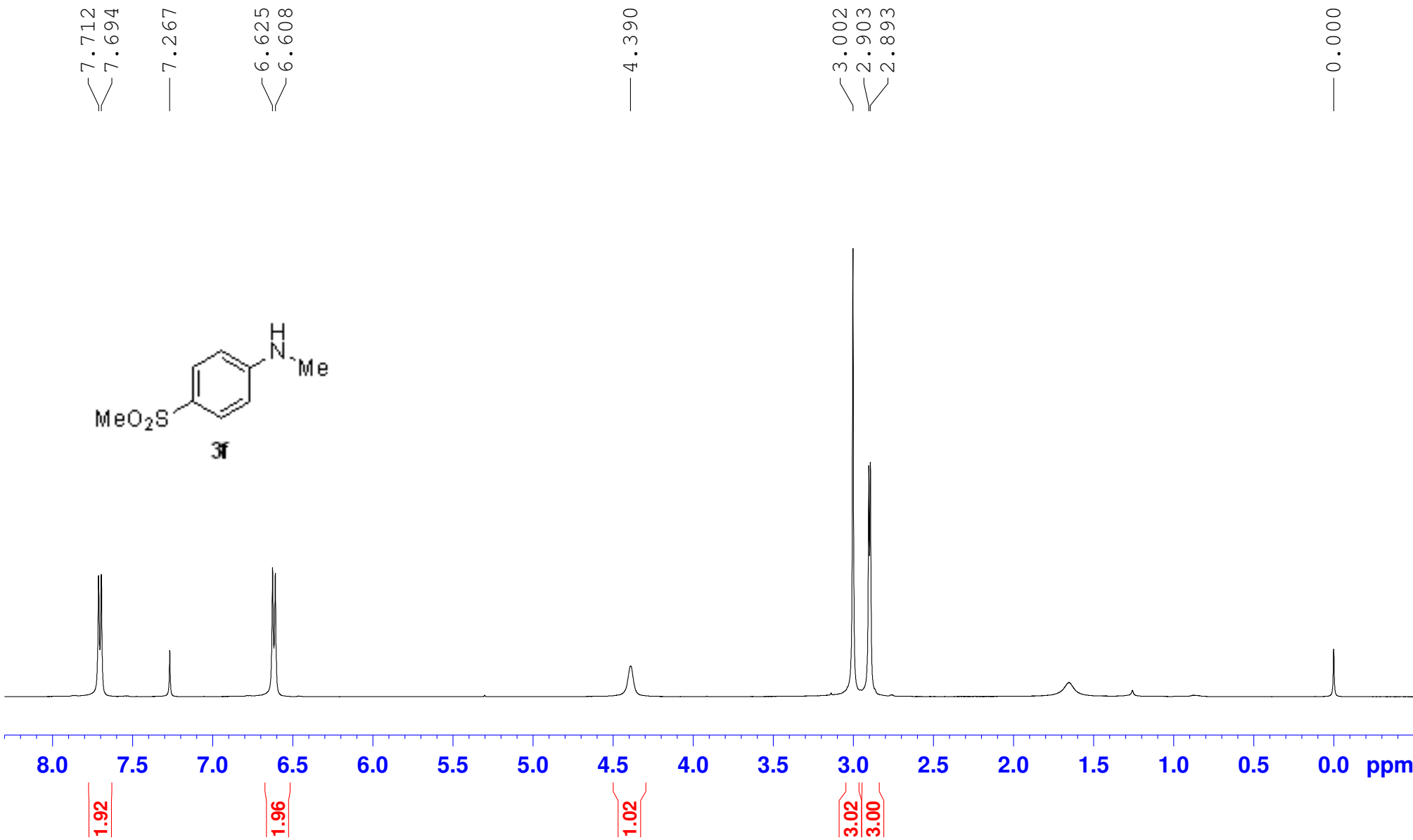
3,5-difluoro-N-methylbenzenamine
Proton CDCl3



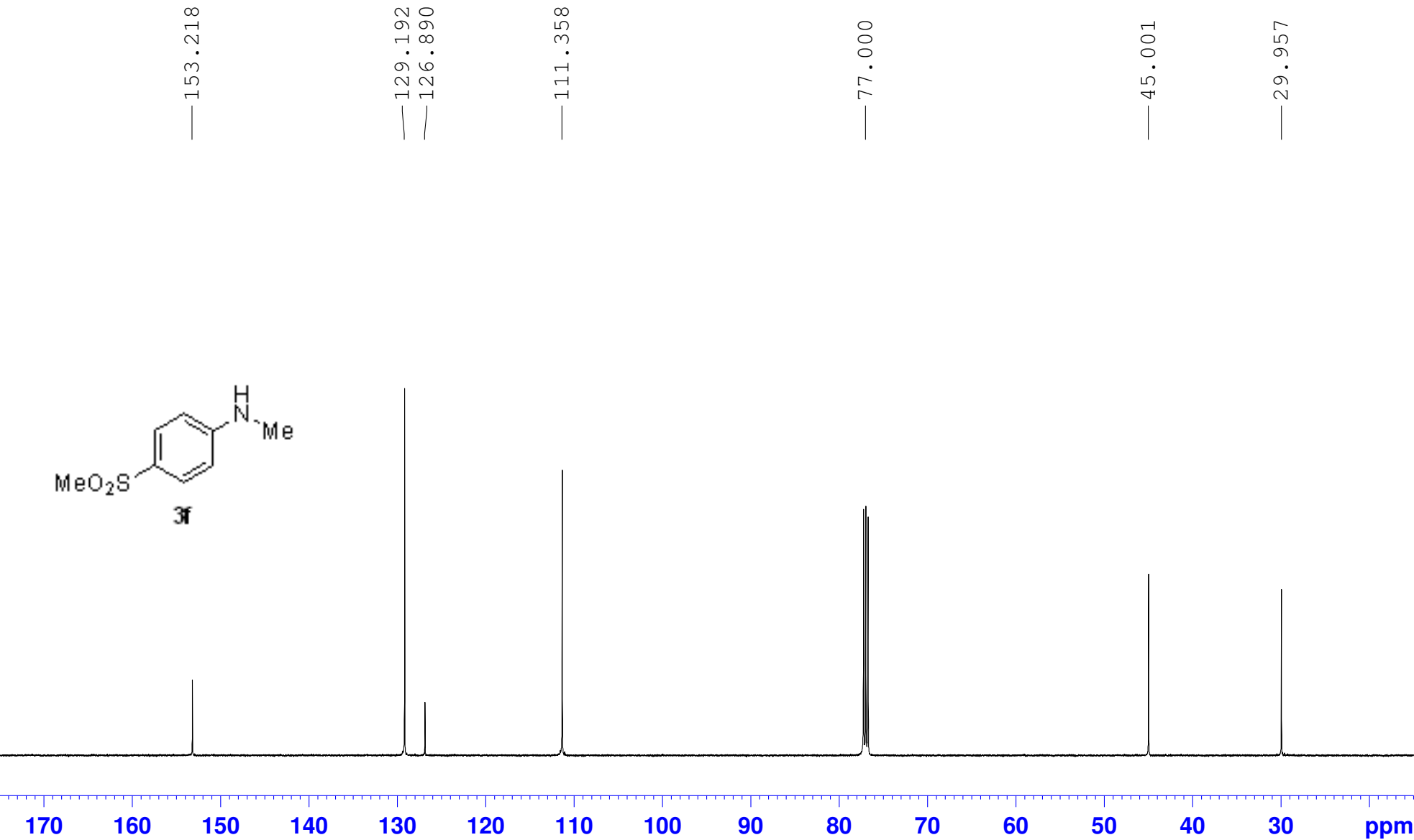
3,5-difluoro-N-methylbenzenamine
C13CPD CDCl3



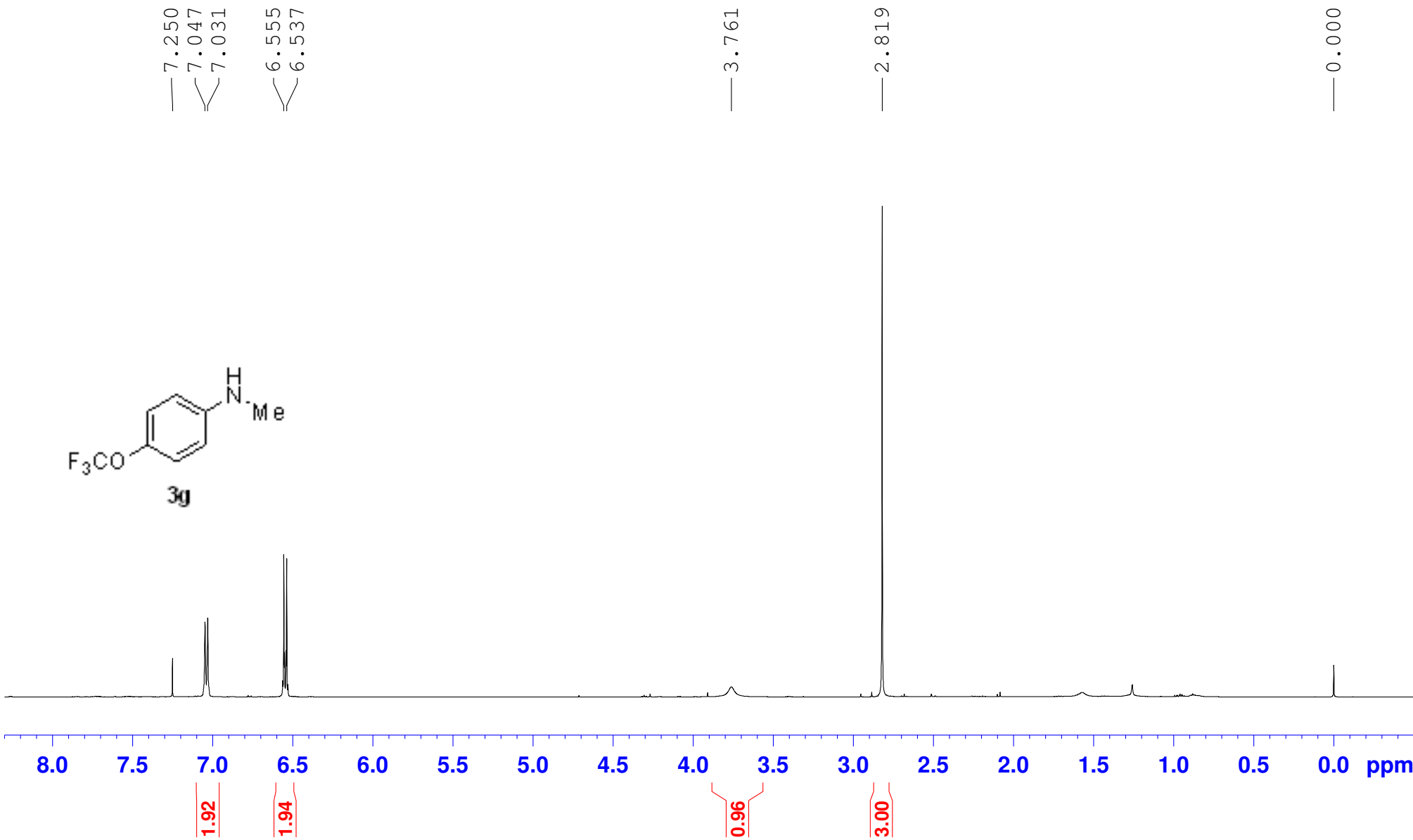
N-methyl-4-(methylsulfonyl)benzenamine
Proton CDCl3



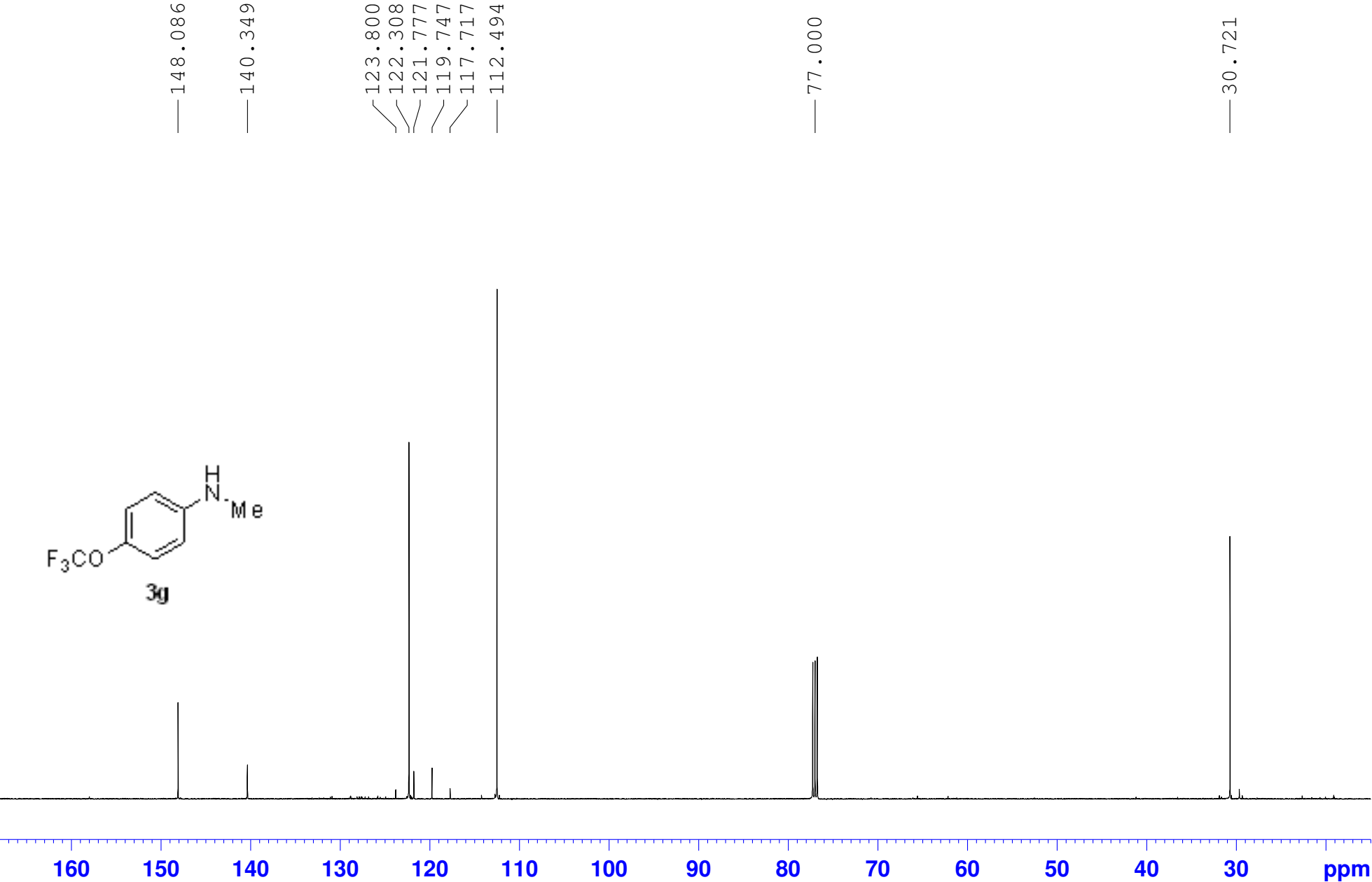
N-methyl-4-(methylsulfonyl)benzenamine
C13CPD CDC13



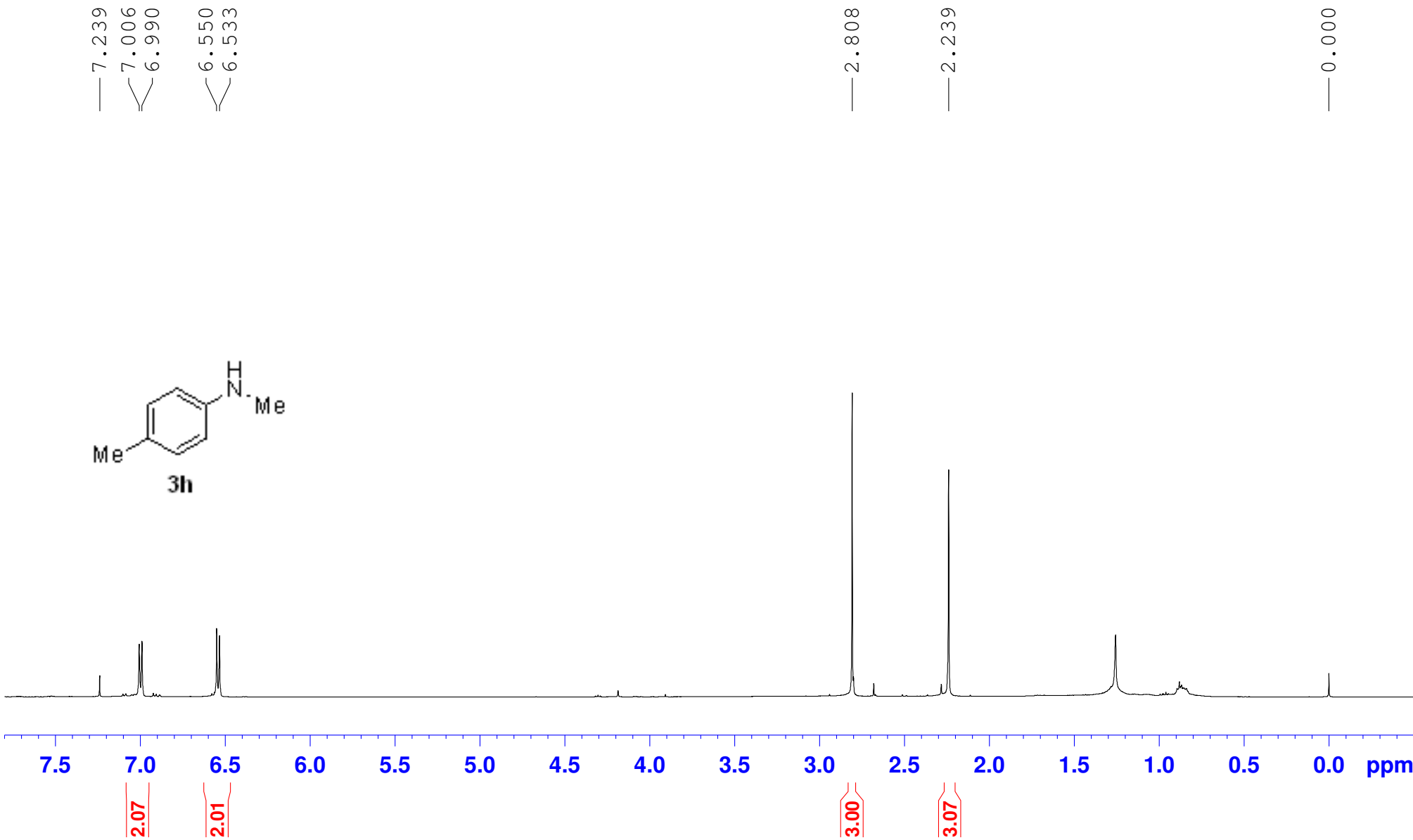
N-methyl-4-(trifluoromethoxy) benzenamine
Proton CDCl3



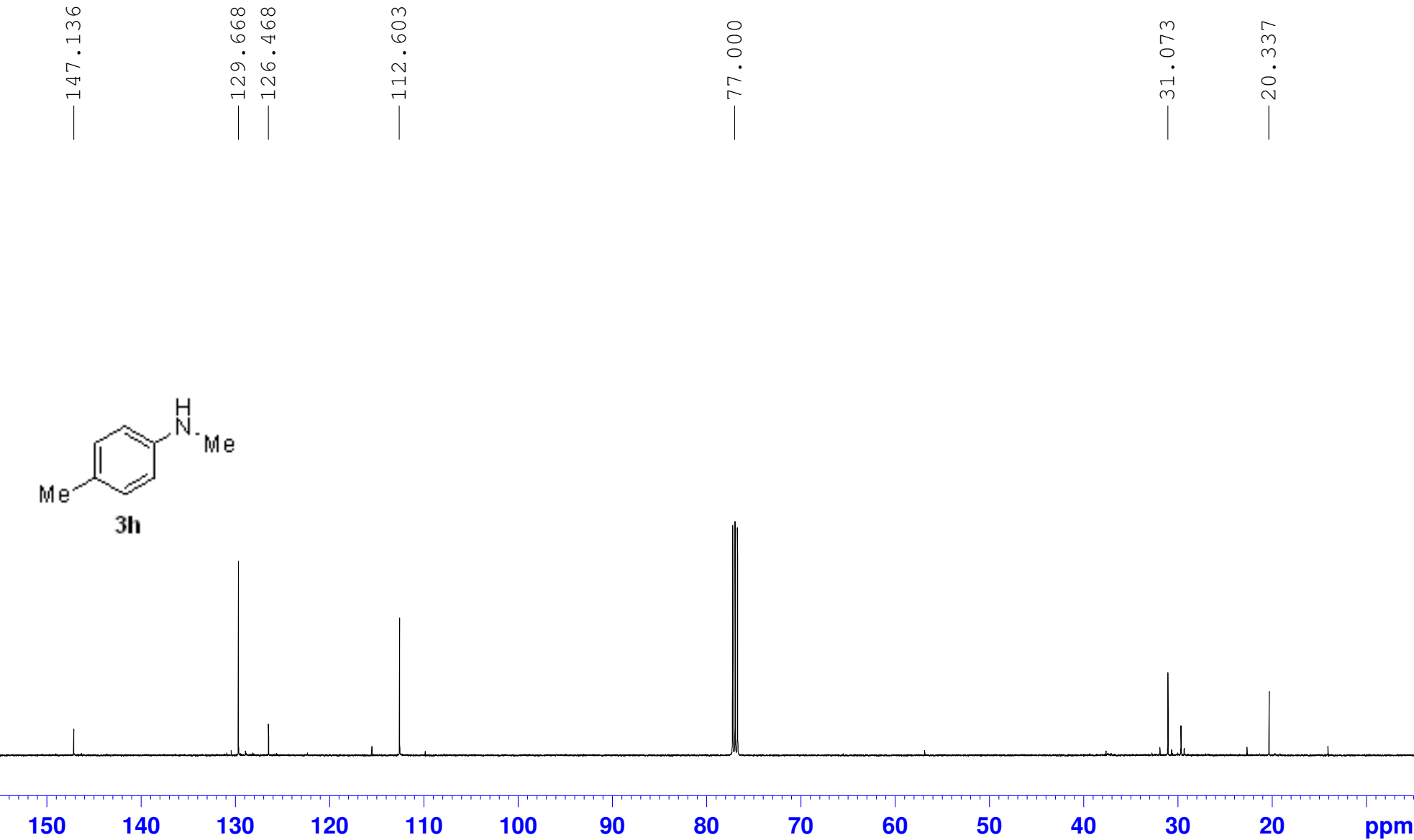
N-methyl-4-(trifluoromethoxy) benzenamine
C13CPD CDC13



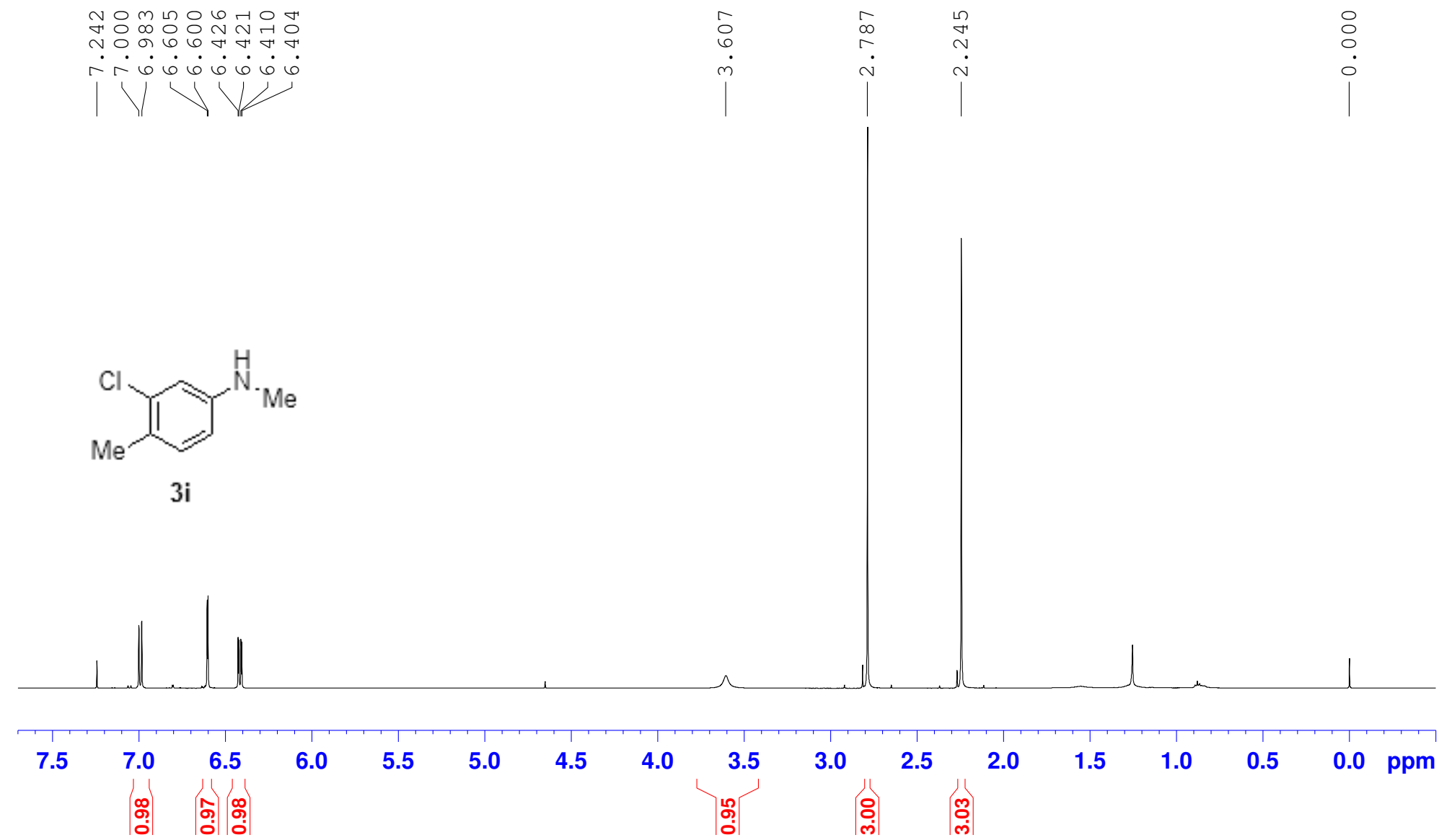
N,4-dimethylbenzenamine
Proton CDCl3



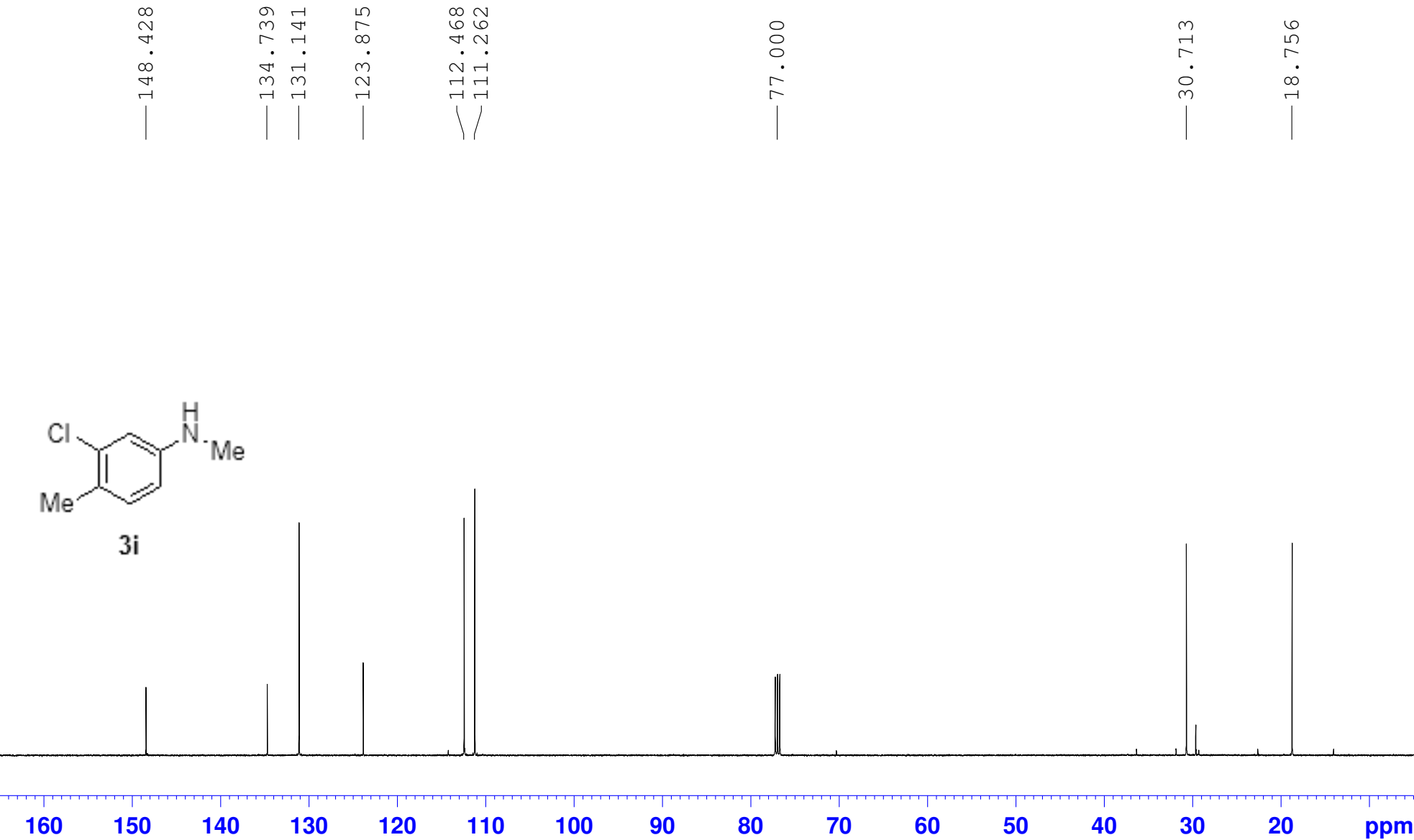
N,4-dimethylbenzenamine
C13CPD CDCl3



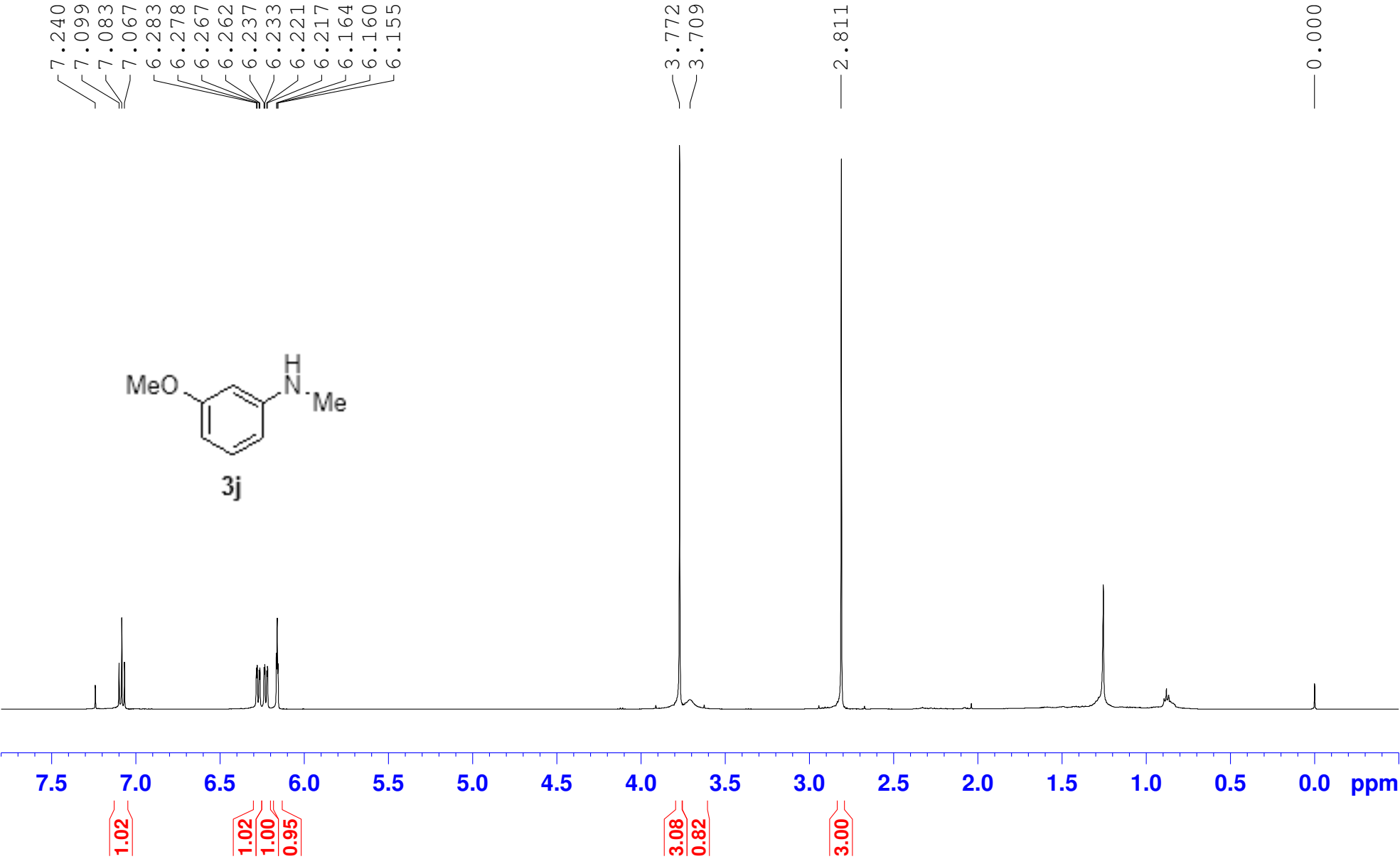
3-chloro-N,4-dimethylbenzenamine
Proton CDCl3



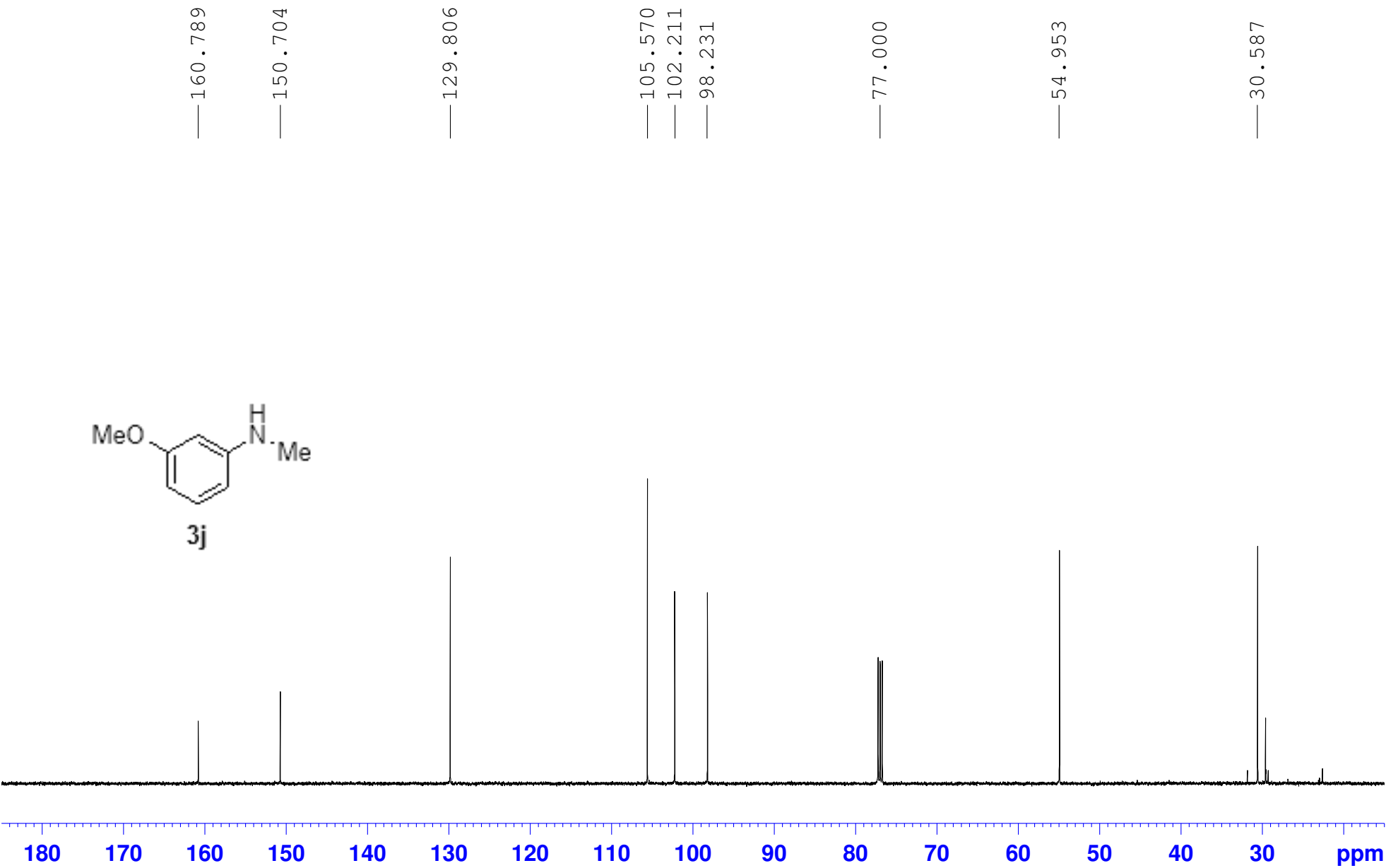
3-chloro-N,4-dimethylbenzenamine
C13CPD CDC13



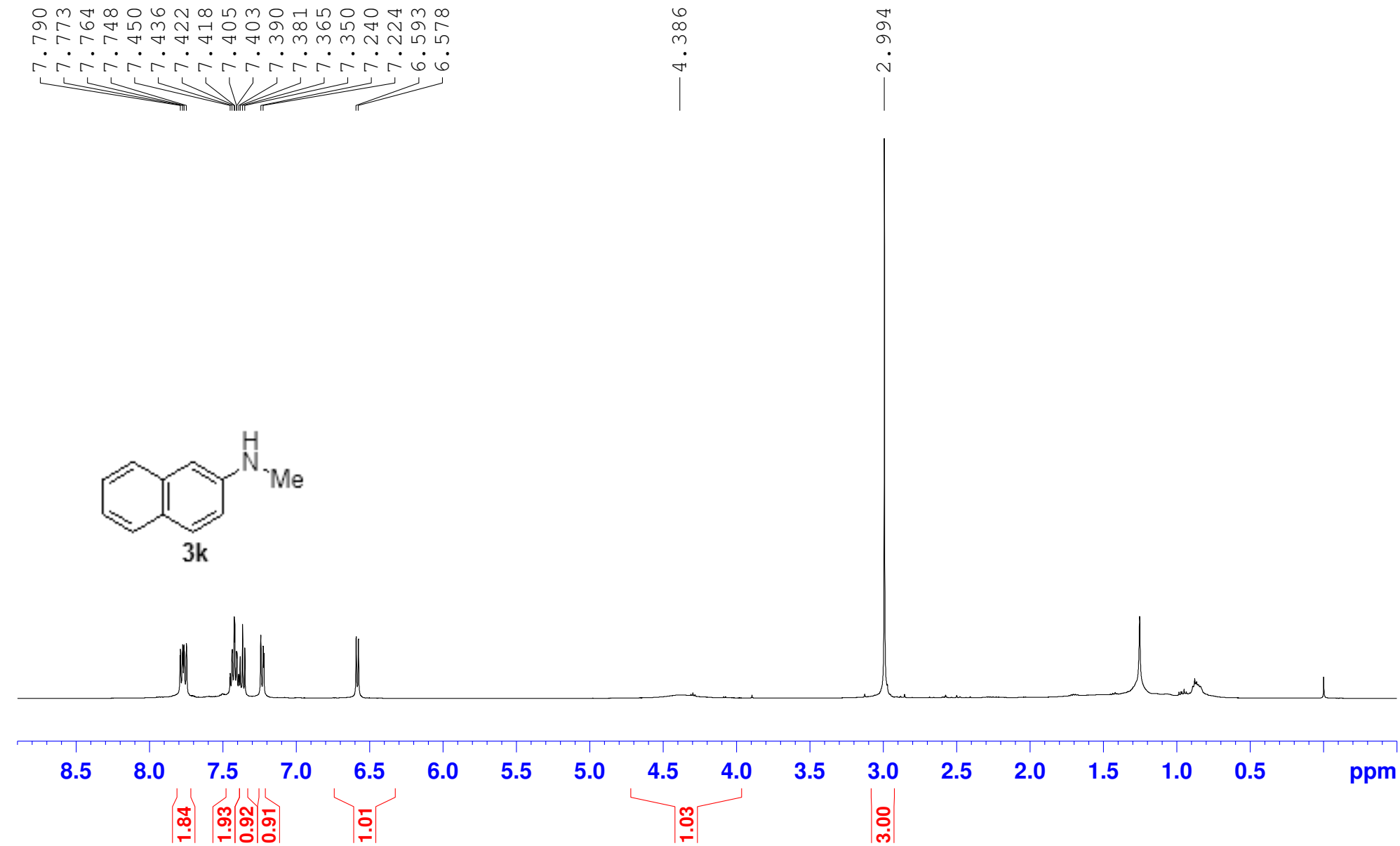
3-methoxy-N-methylbenzenamine
Proton CDCl3



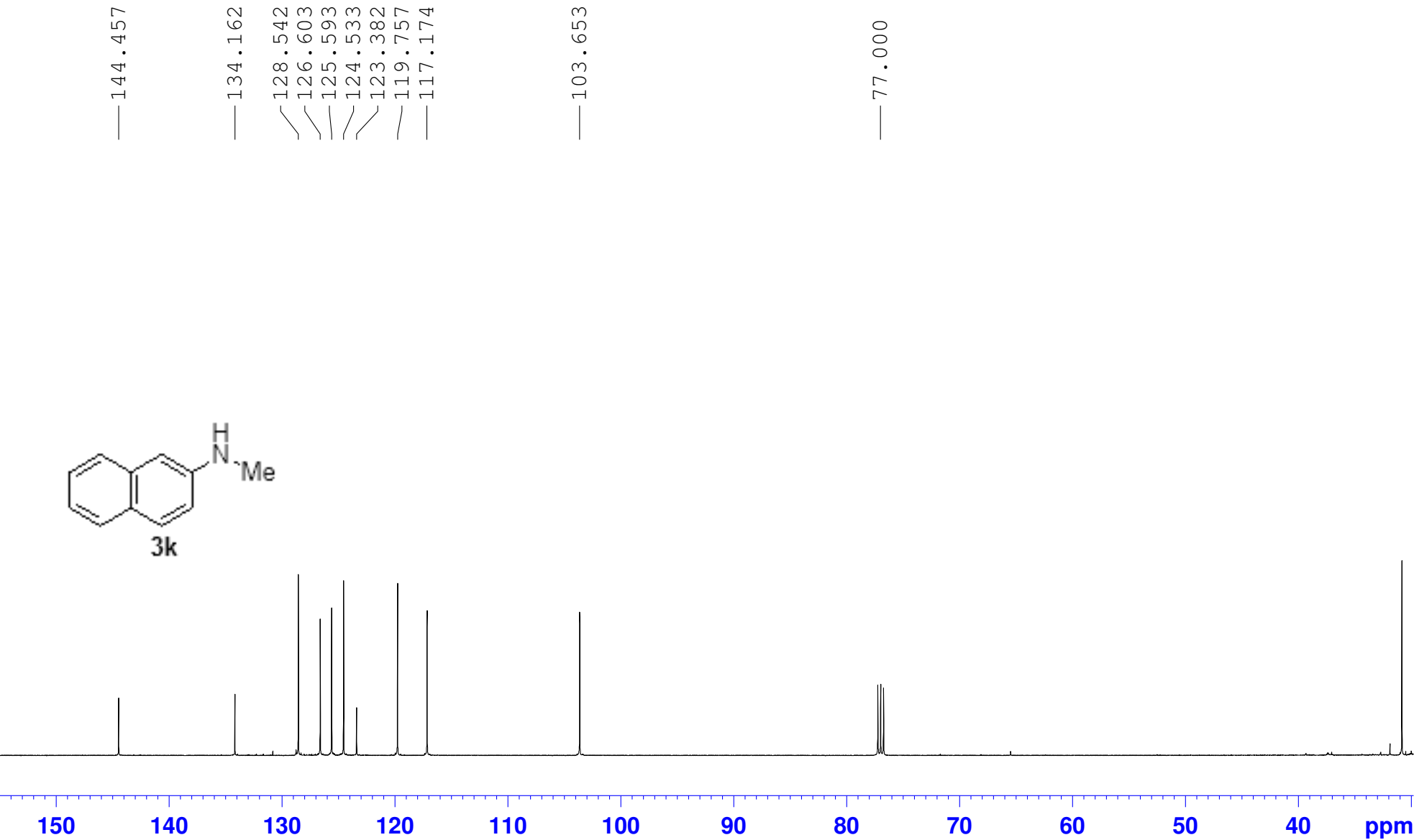
3-methoxy-N-methylbenzenamine
C13CPD CDC13



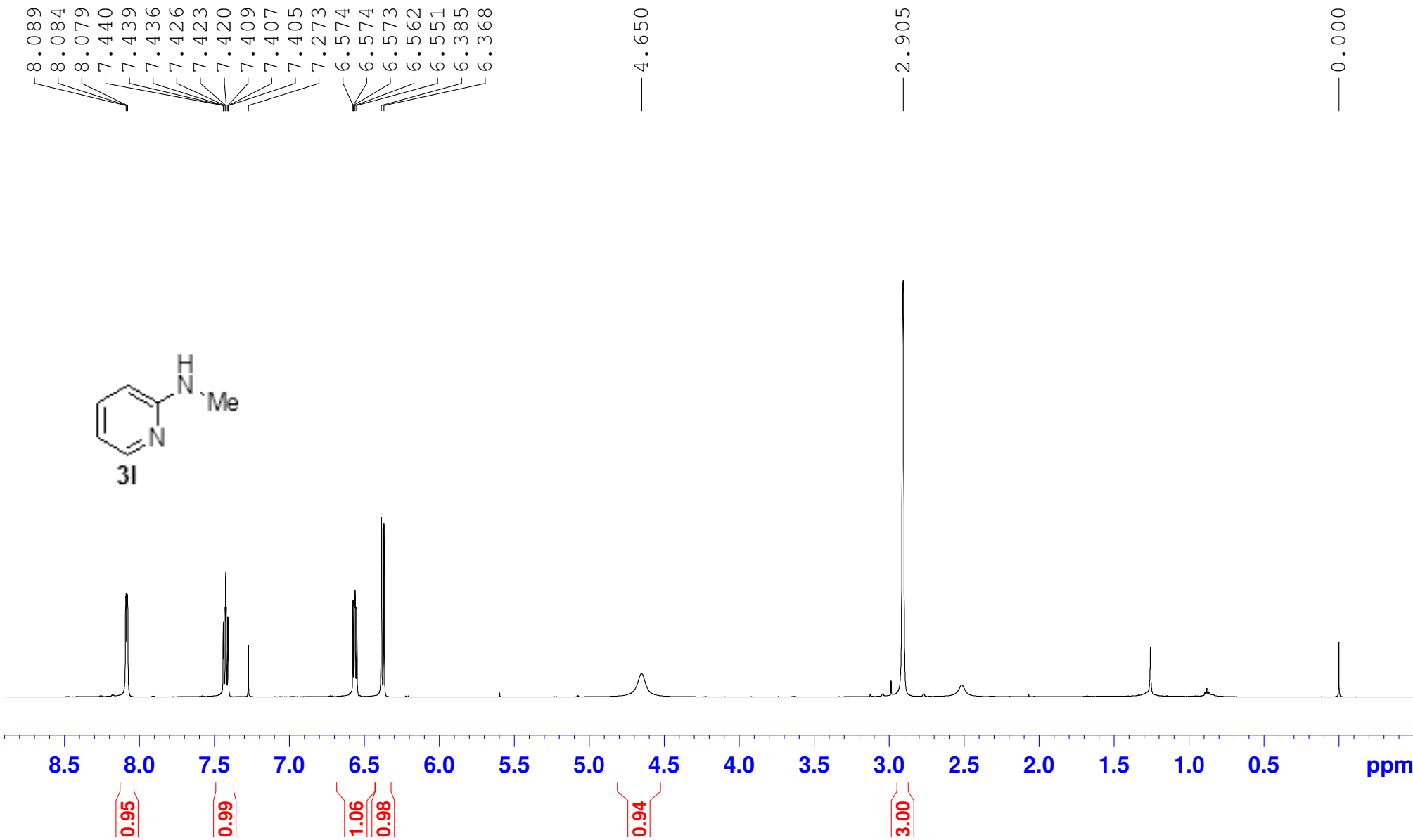
N-methylnaphthalen-1-amine
Proton CDCl3



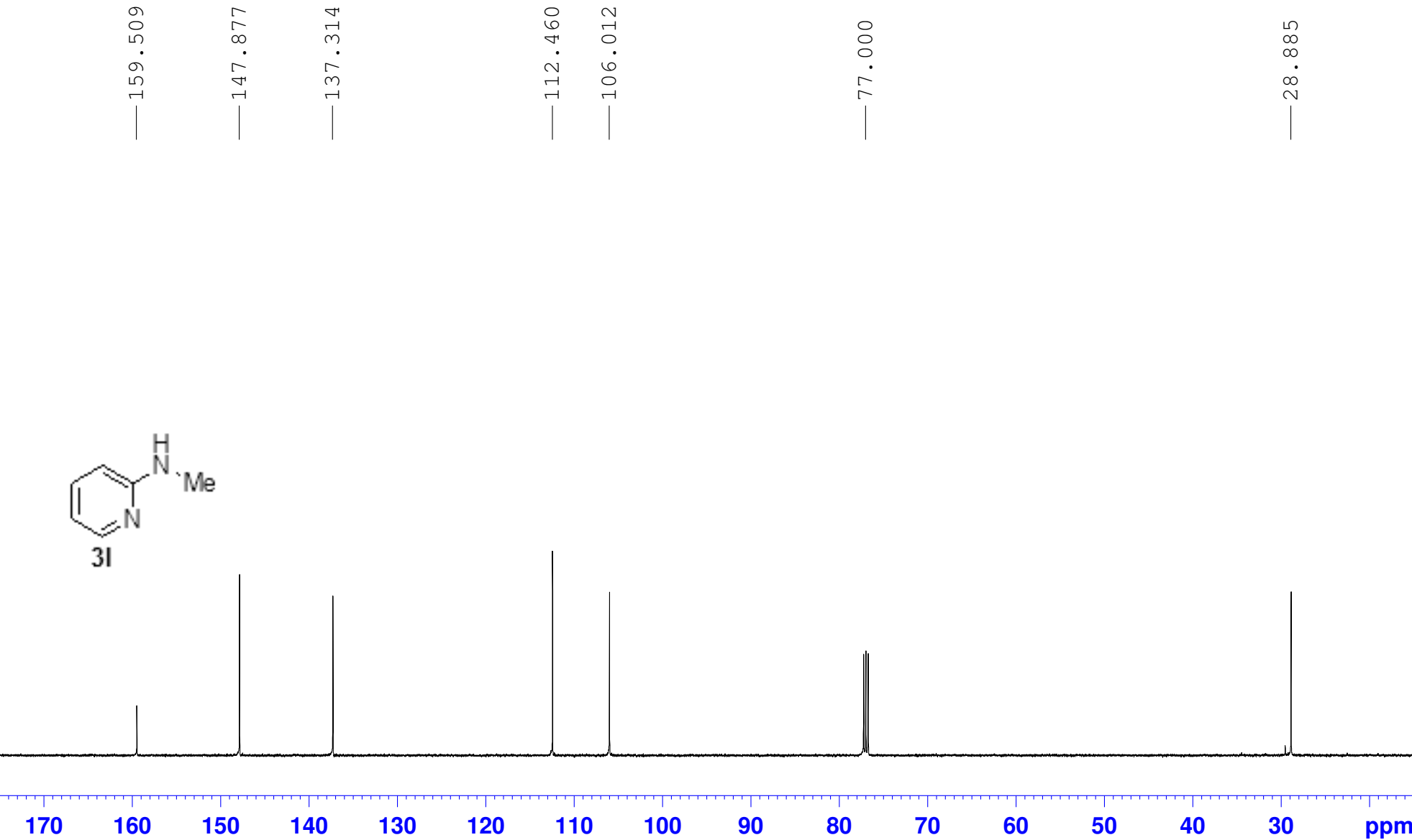
N-methylnaphthalen-1-amine
C13CPD CDC13



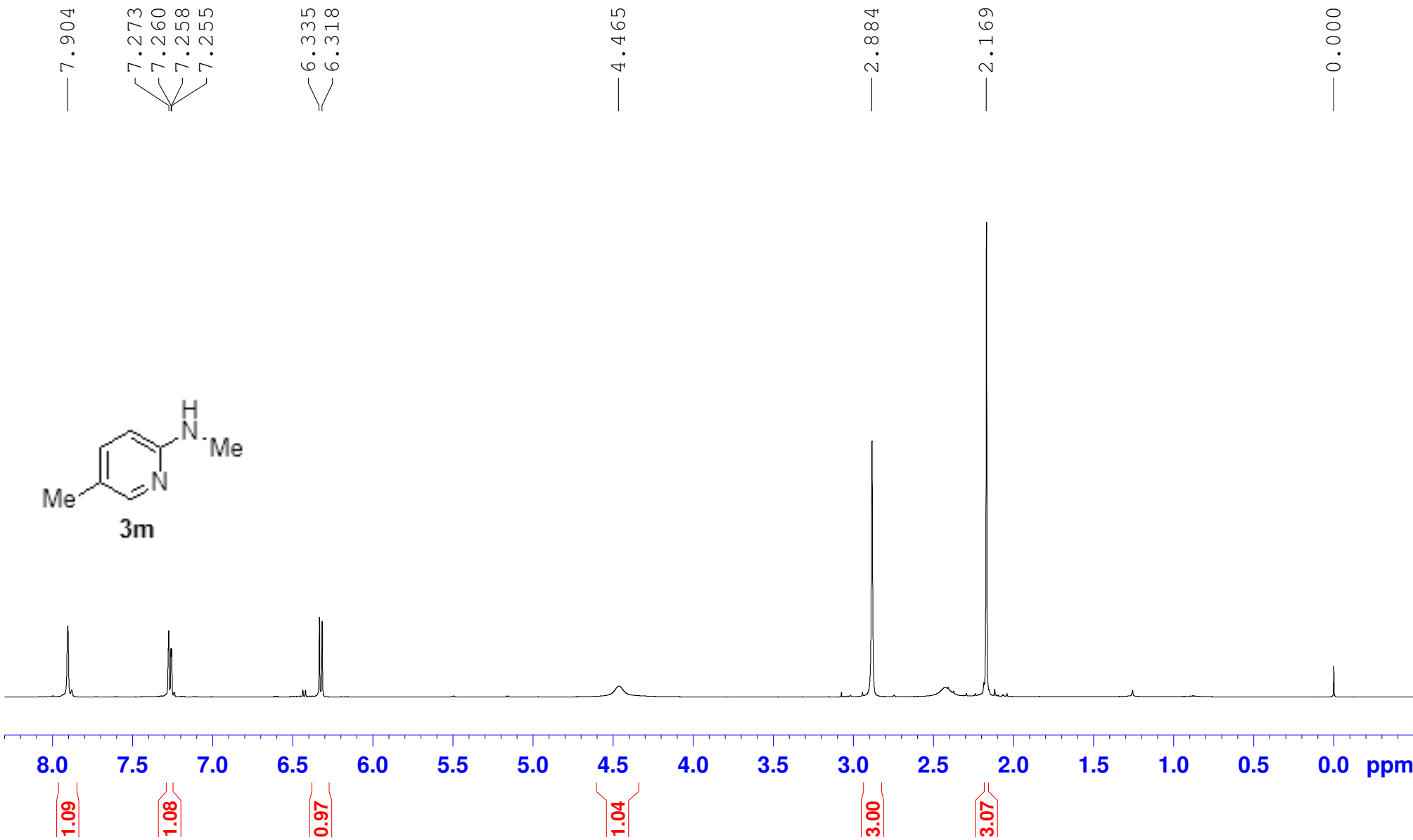
N-methylpyridin-2-amine
Proton CDCl3



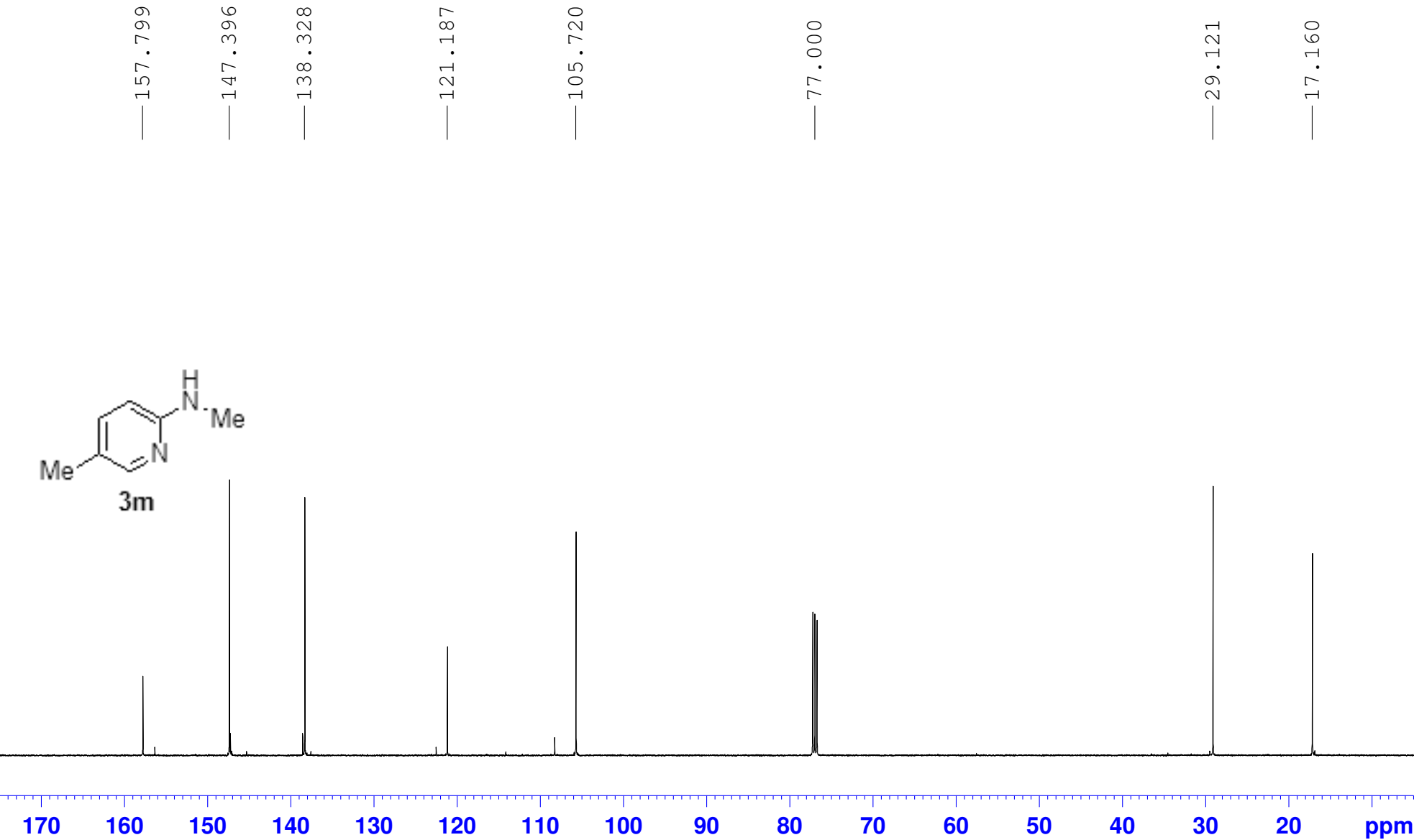
N-methylpyridin-2-amine
C13CPD CDCl3



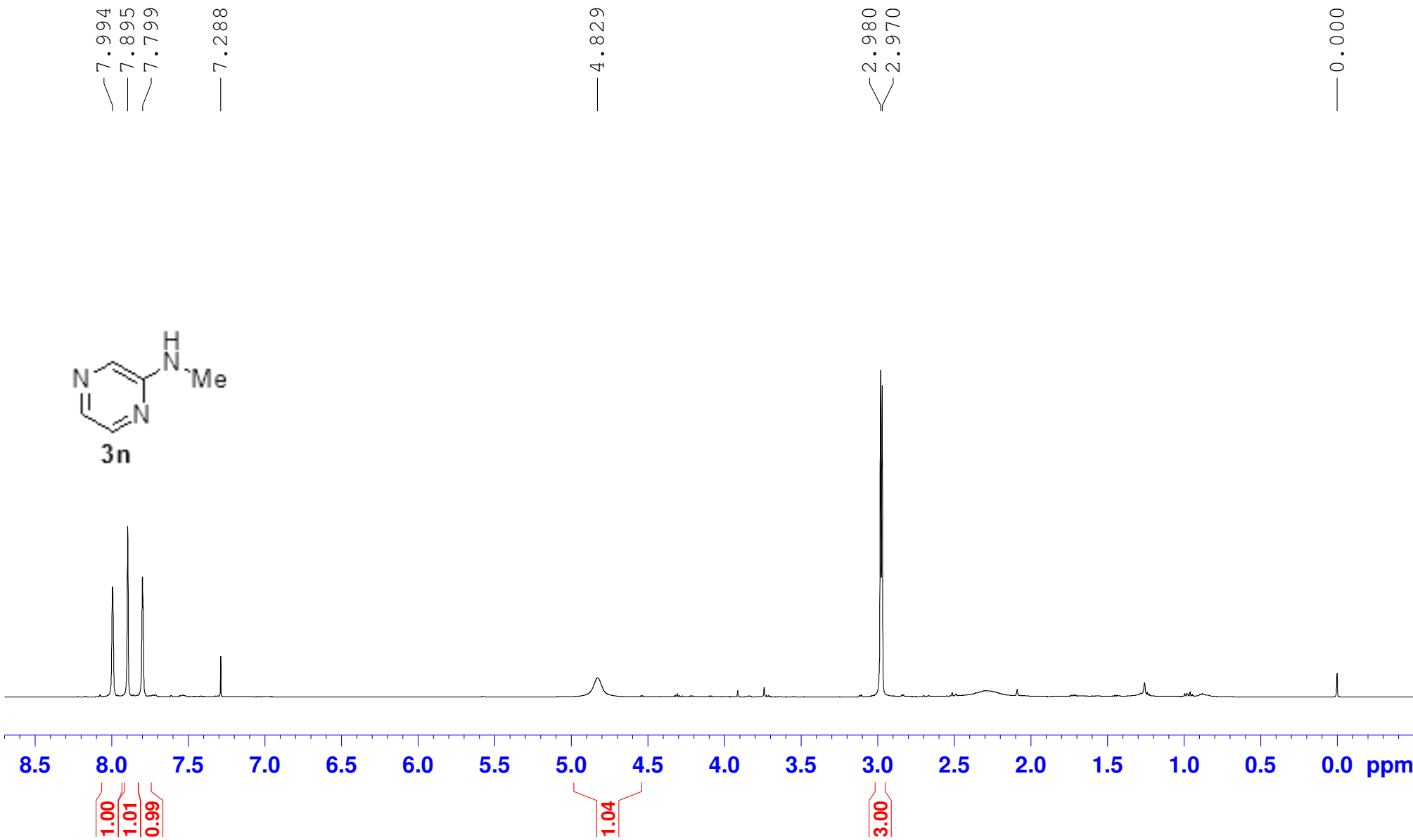
N,5-dimethylpyridin-2-amine
Proton CDCl3



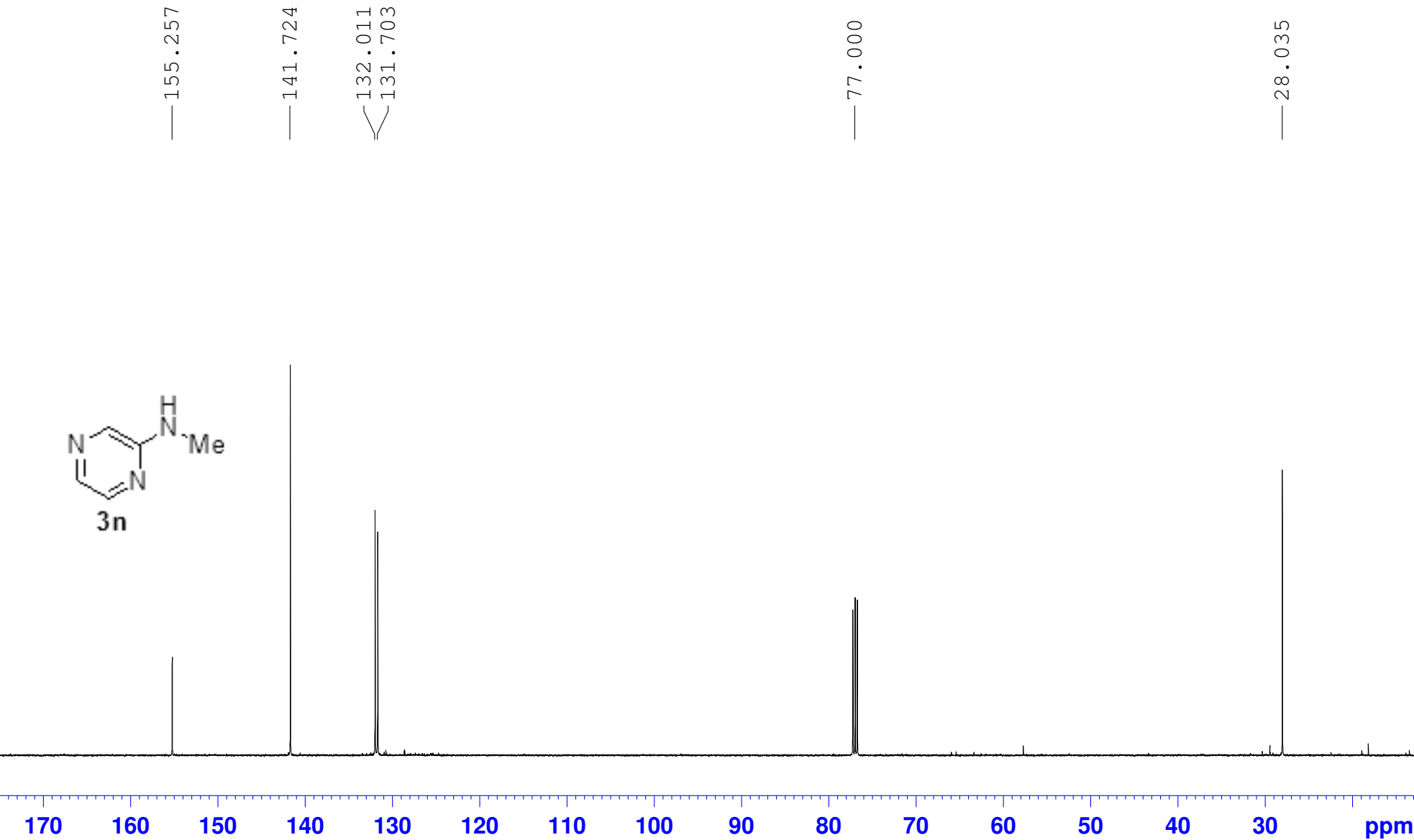
N,5-dimethylpyridin-2-amine
C13CPD CDCl3



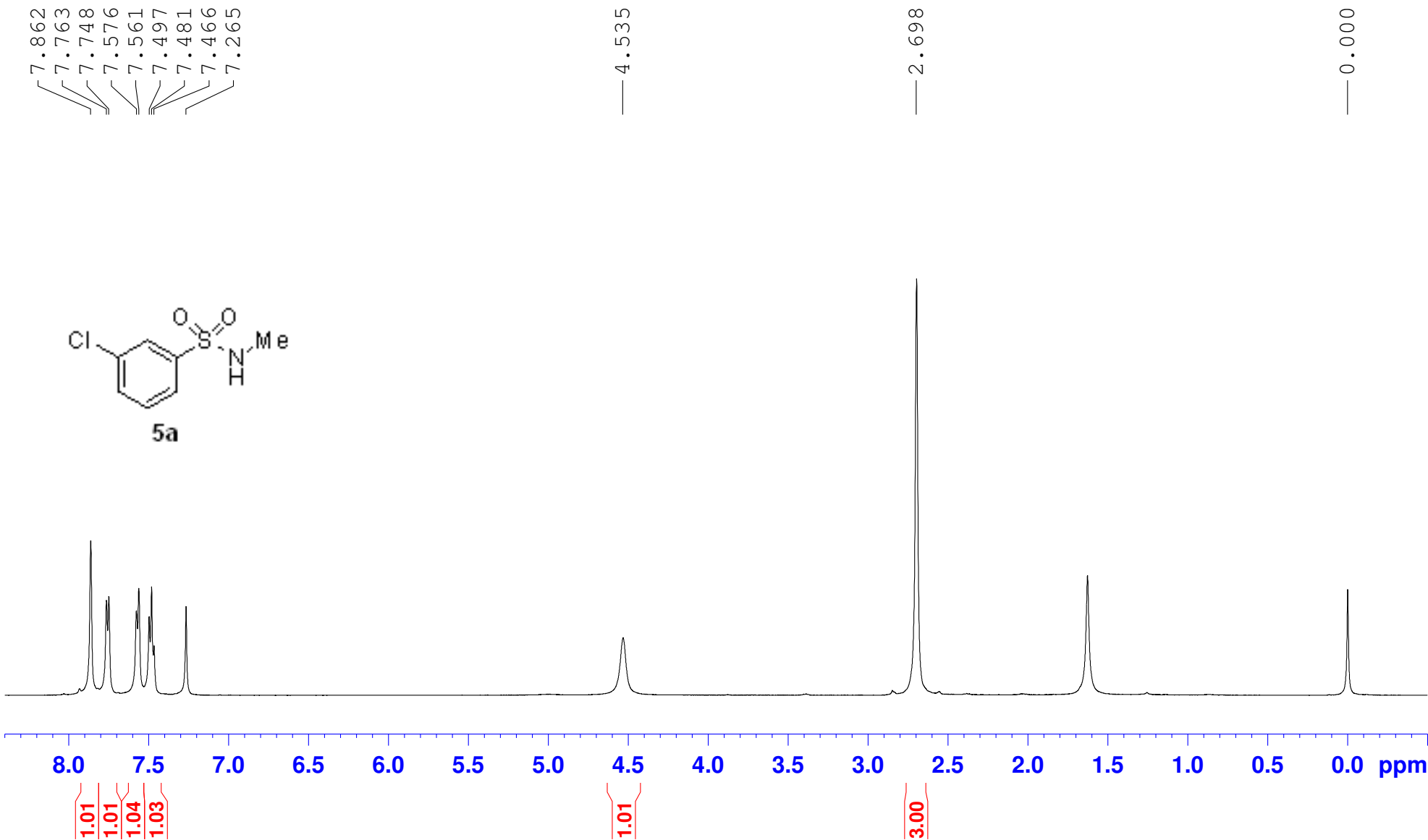
N-methylpyrazin-2-amine
Proton CDCl3



N-methylpyrazin-2-amine
C13CPD CDCl3



3-chloro-N-methylbenzenesulfonamide
Proton CDCl3

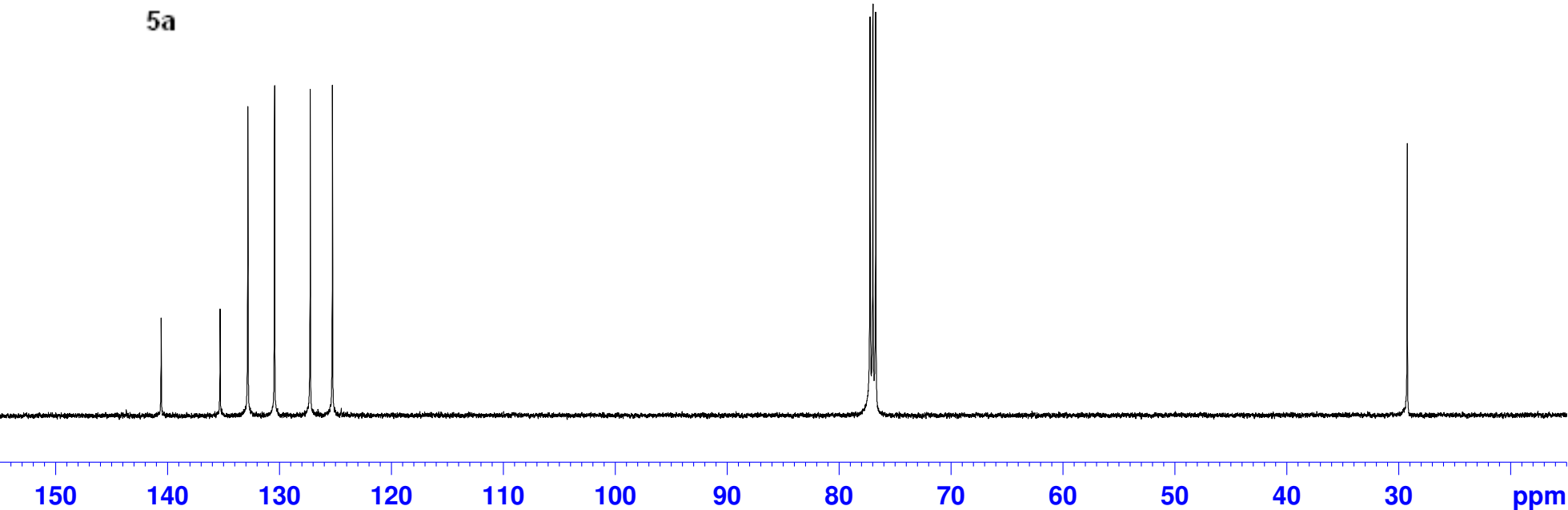
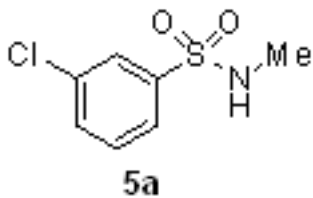


3-chloro-N-methylbenzenesulfonamide
C13CPD CDCl3

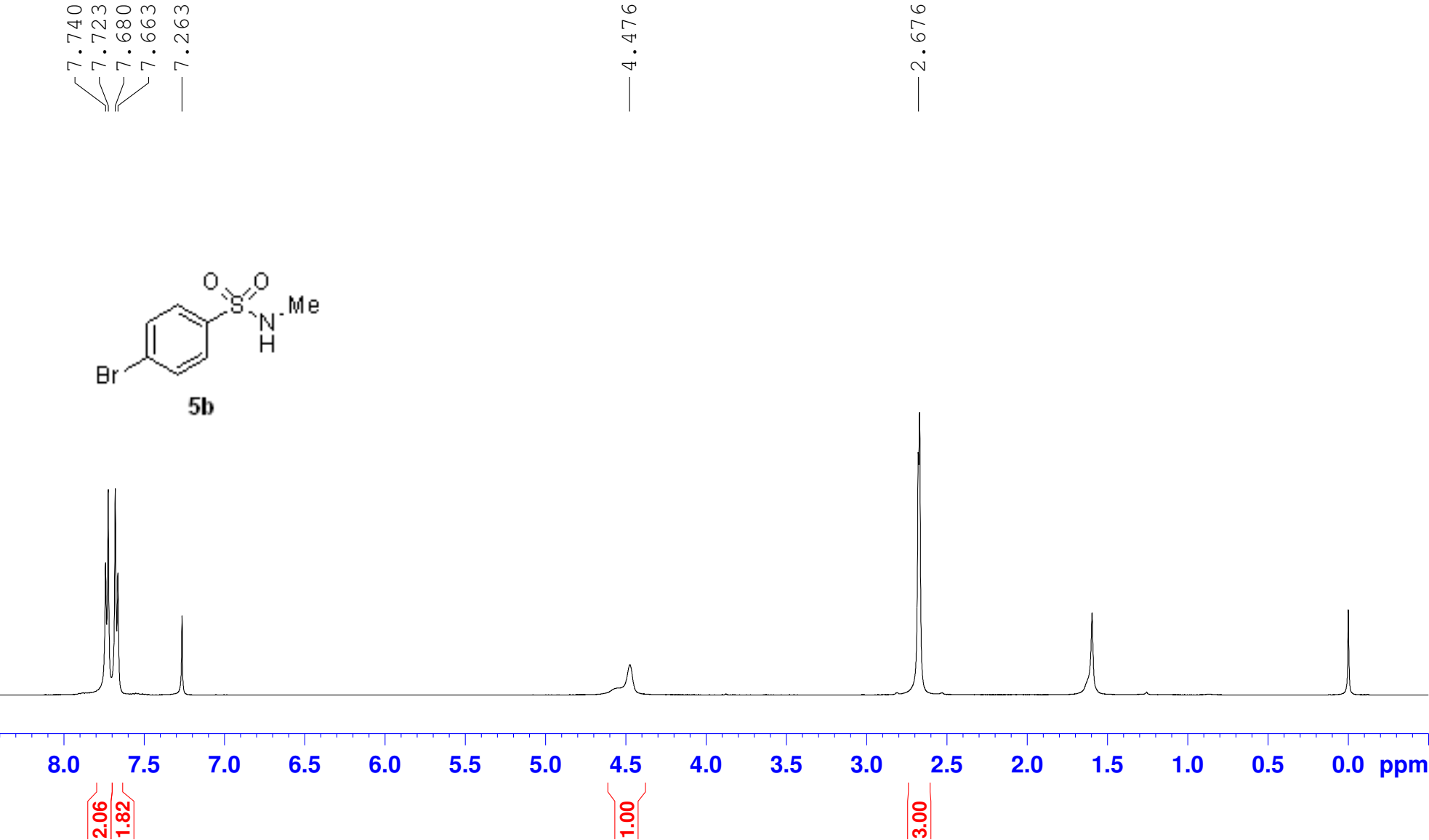
— 140.561
— 135.288
— 132.814
— 130.426
— 127.241
— 125.254

— 77.000

— 29.250



4-bromo-N-methylbenzenesulfonamide
Proton CDCl3

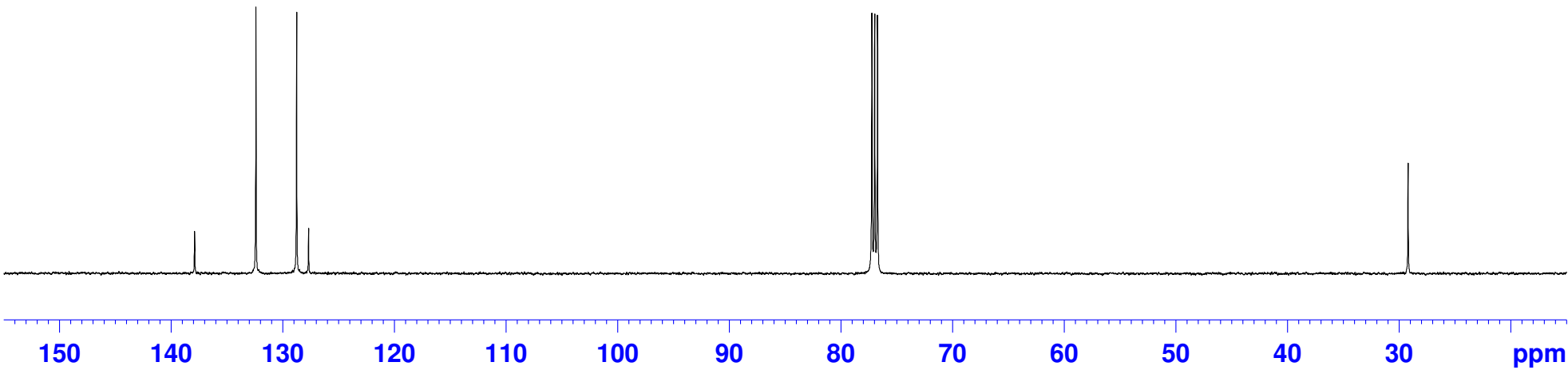
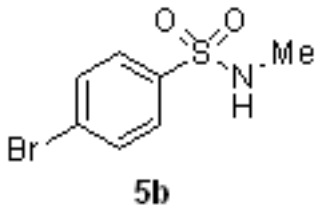


4-Bromo-N-methylbenzenesulfonamide
C13CPD CDC13

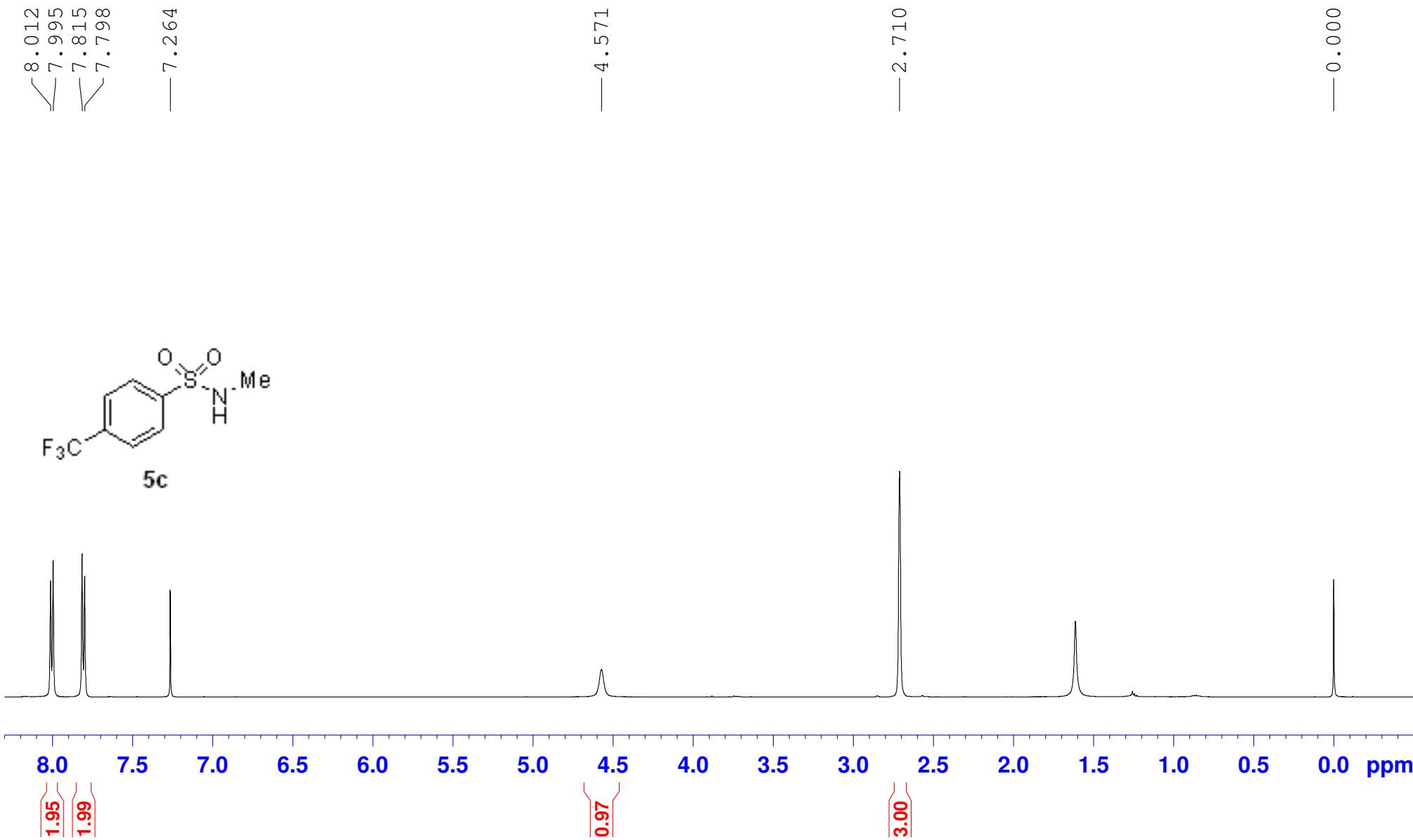
137.886
132.391
128.742
127.672

77.000

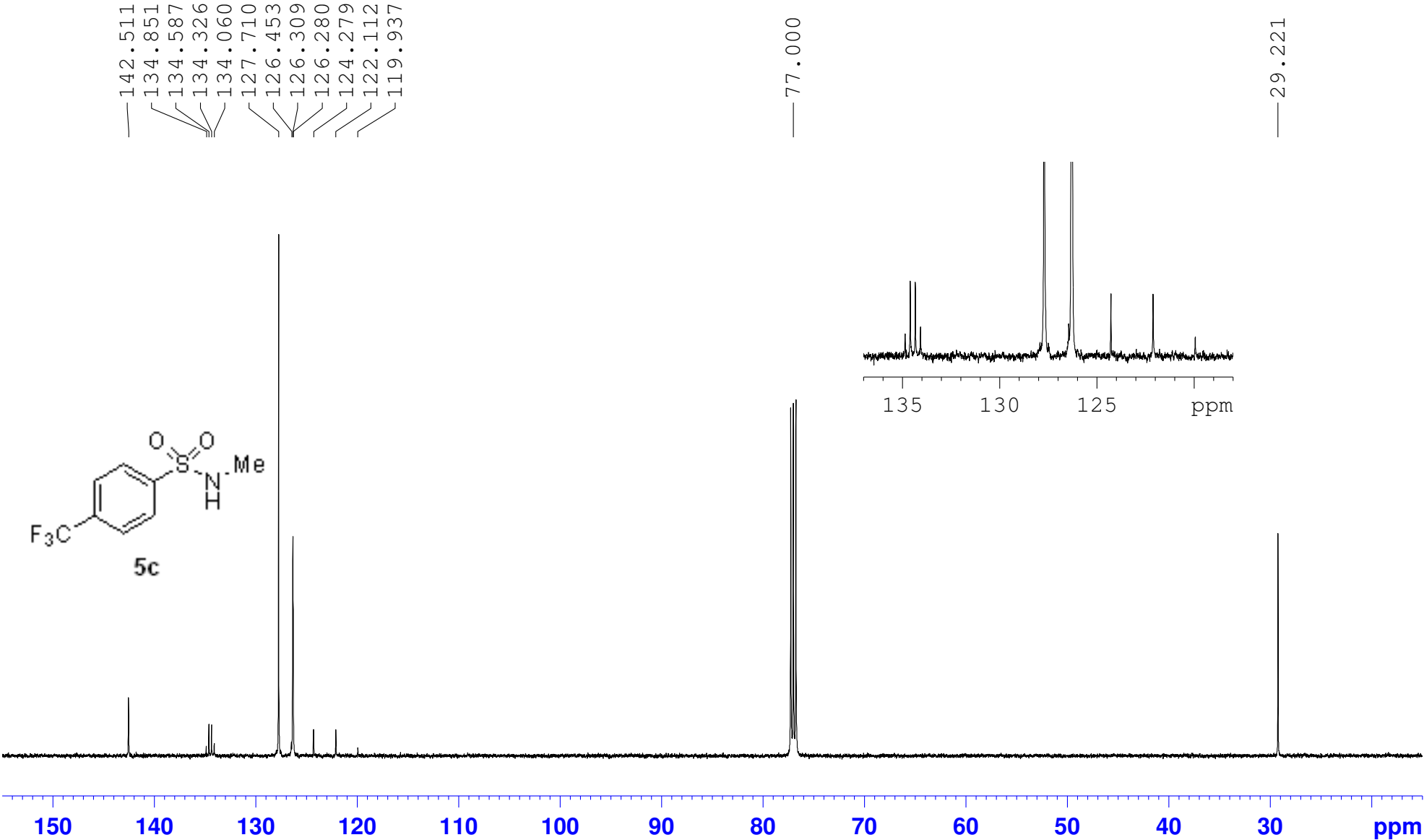
29.215



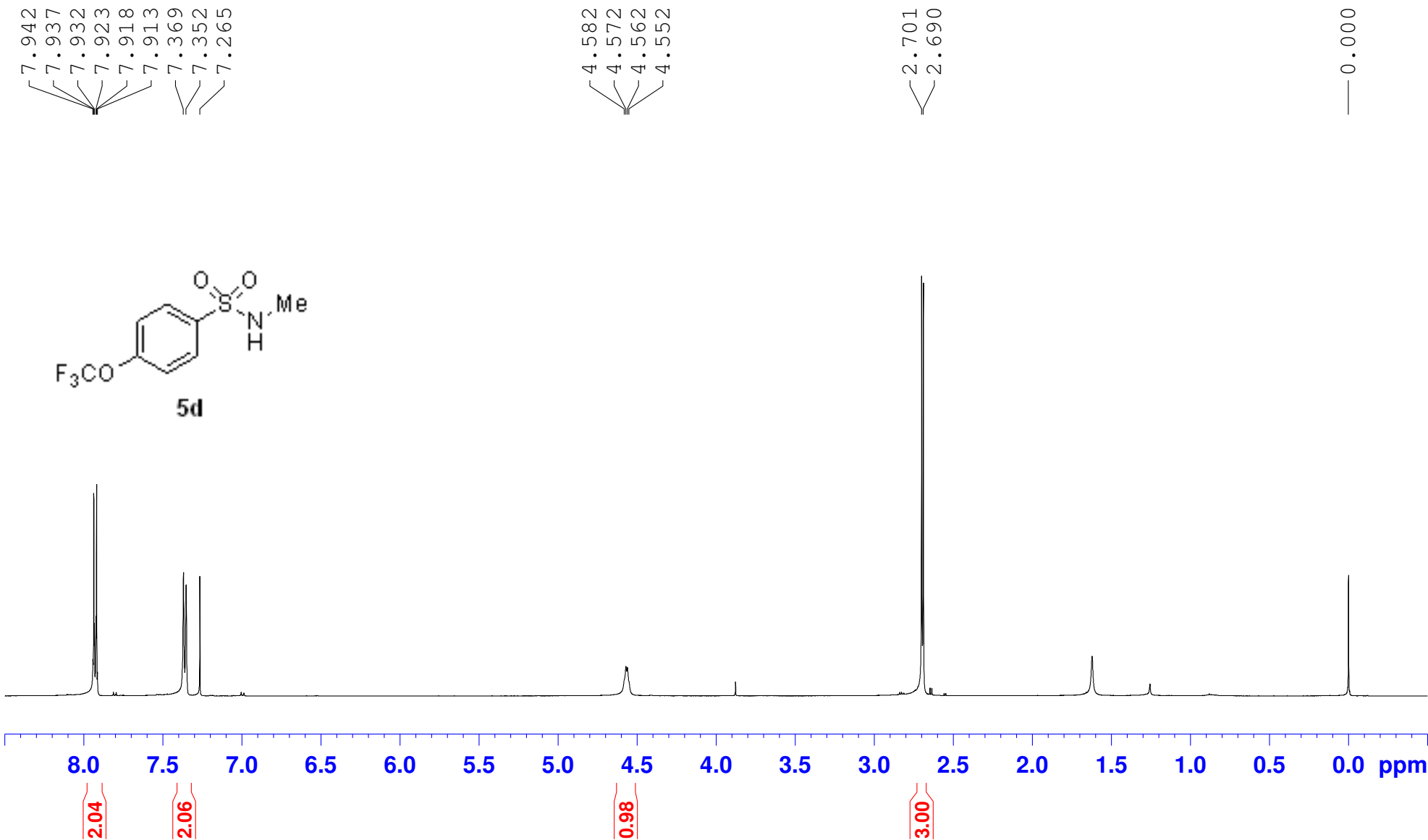
N-methyl-4-(trifluoromethyl)benzenesulfonamide
Proton CDCl3



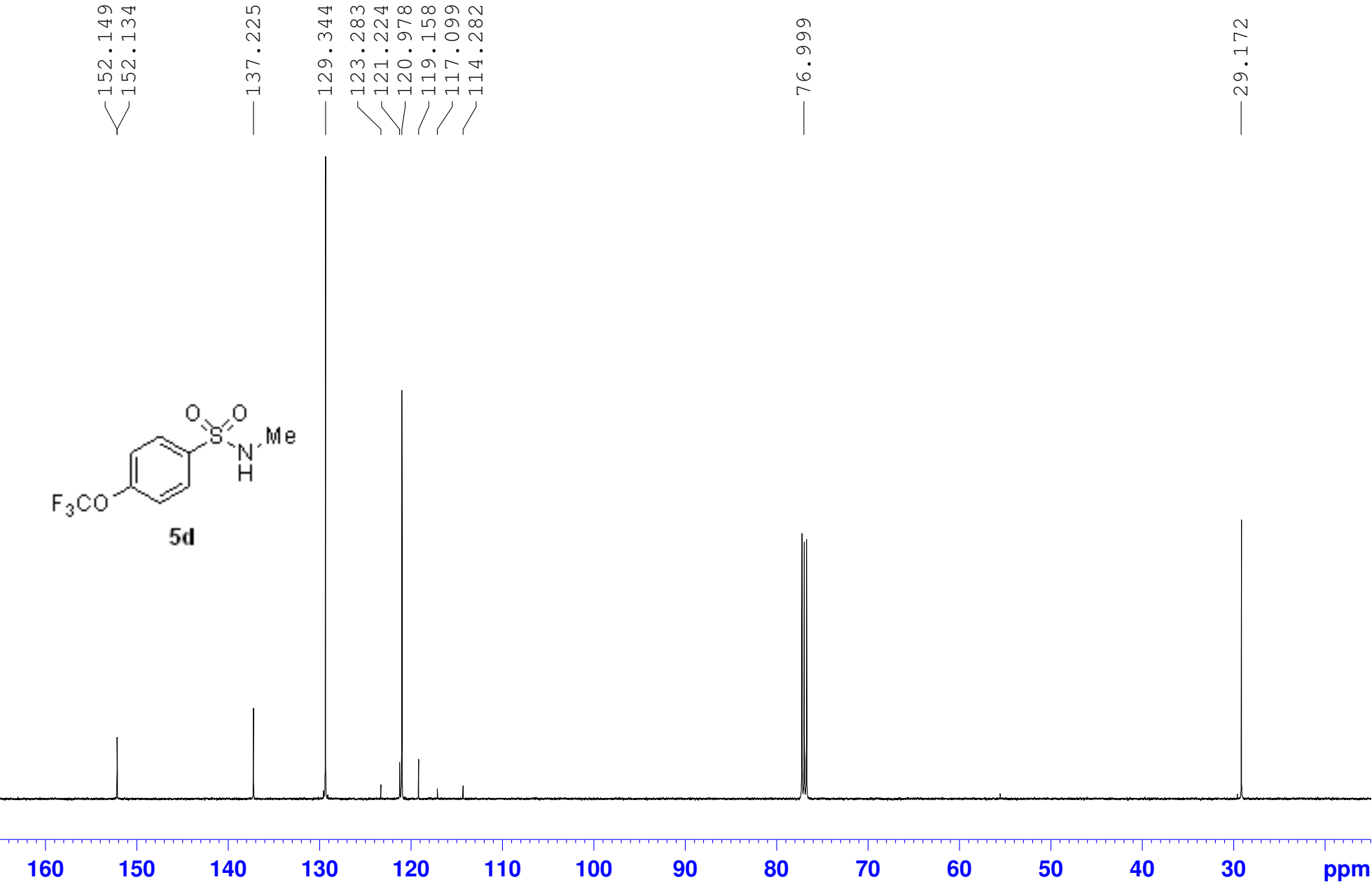
N-methyl-4-(trifluoromethyl)benzenesulfonamide
C13CPD CDCl3



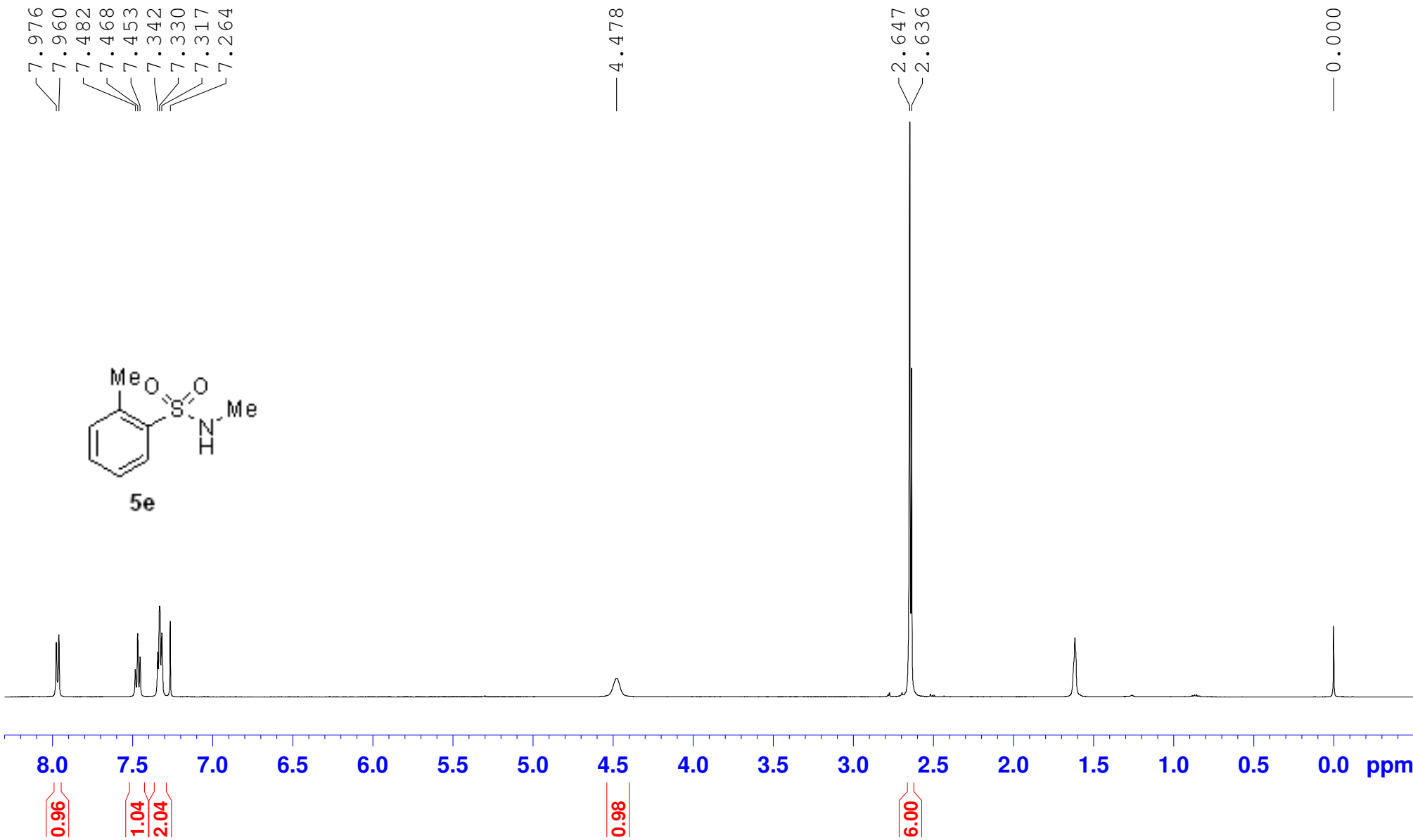
N-methyl-4-(trifluoromethoxy) benzenesulfonamide
Proton CDCl3



N-methyl-4-(trifluoromethoxy) benzenesulfonamide
C13CPD CDCl3



N,2-dimethylbenzenesulfonamide
Proton CDCl3



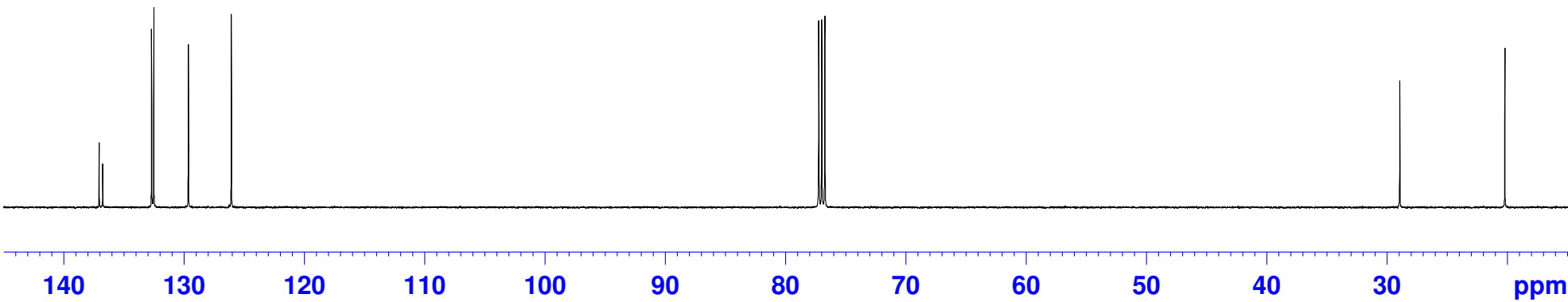
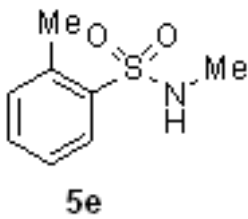
N,2-dimethylbenzenesulfonamide
C13CPD CDCl3

137.086
136.794
132.724
132.543
129.661
126.093

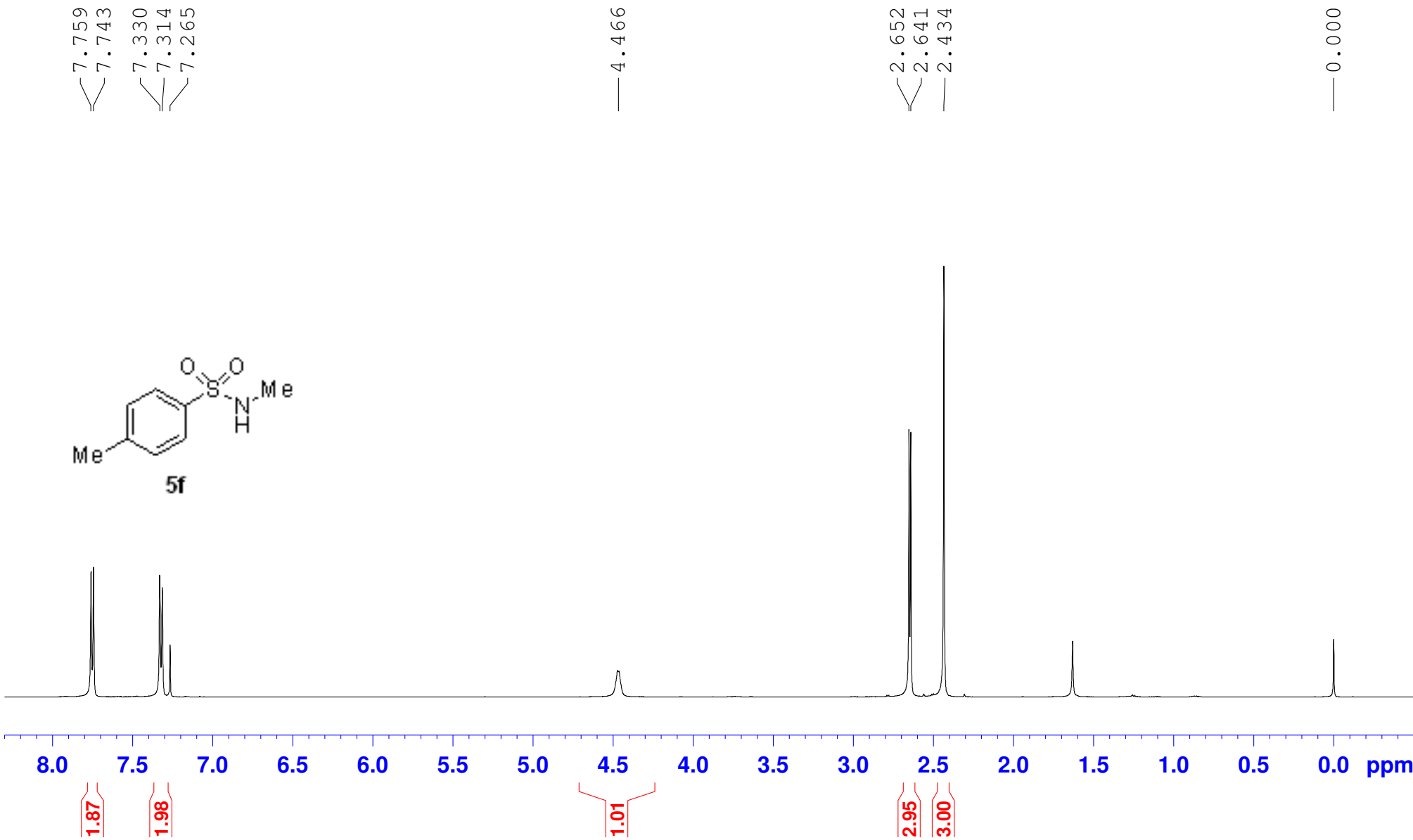
77.000

28.953

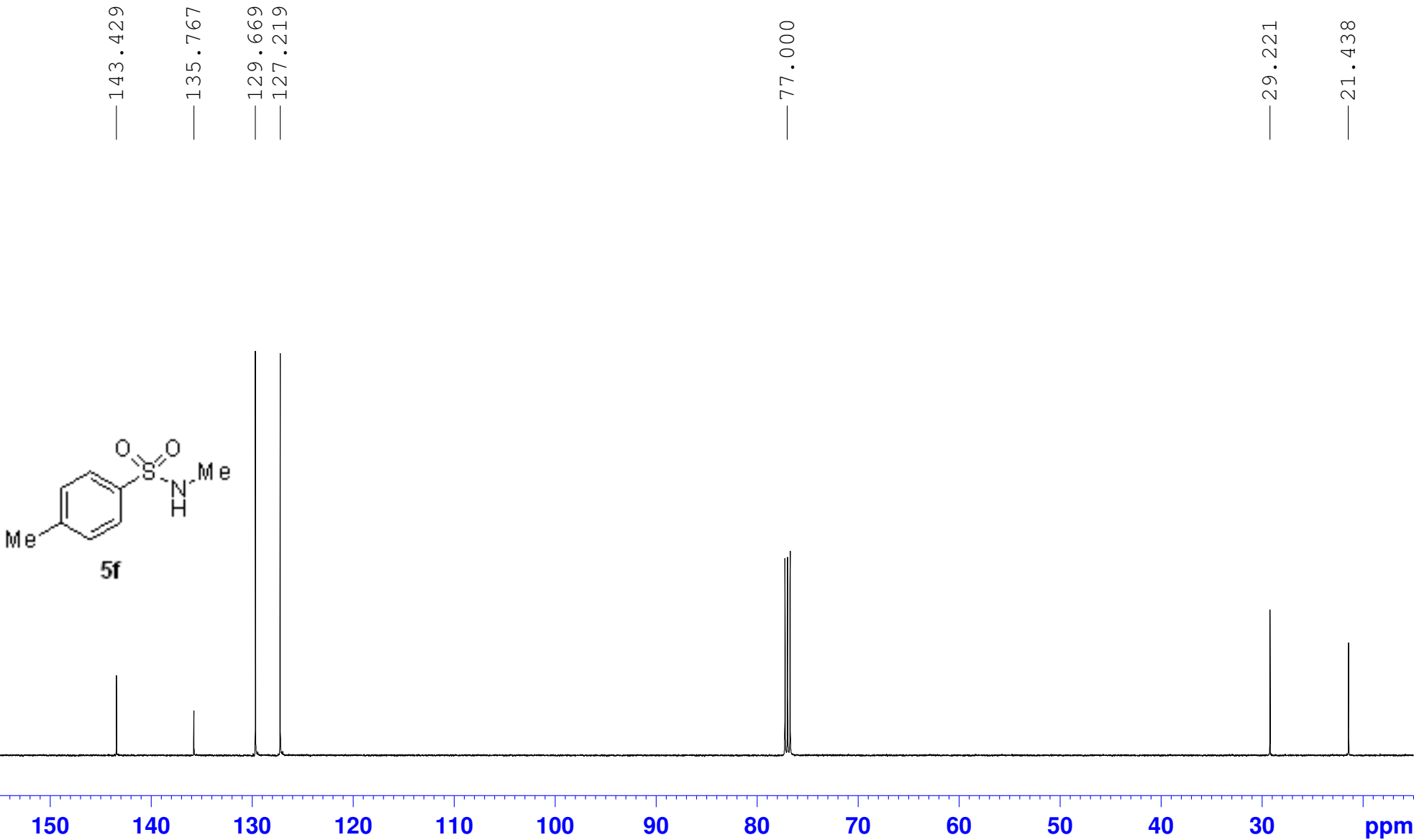
20.214



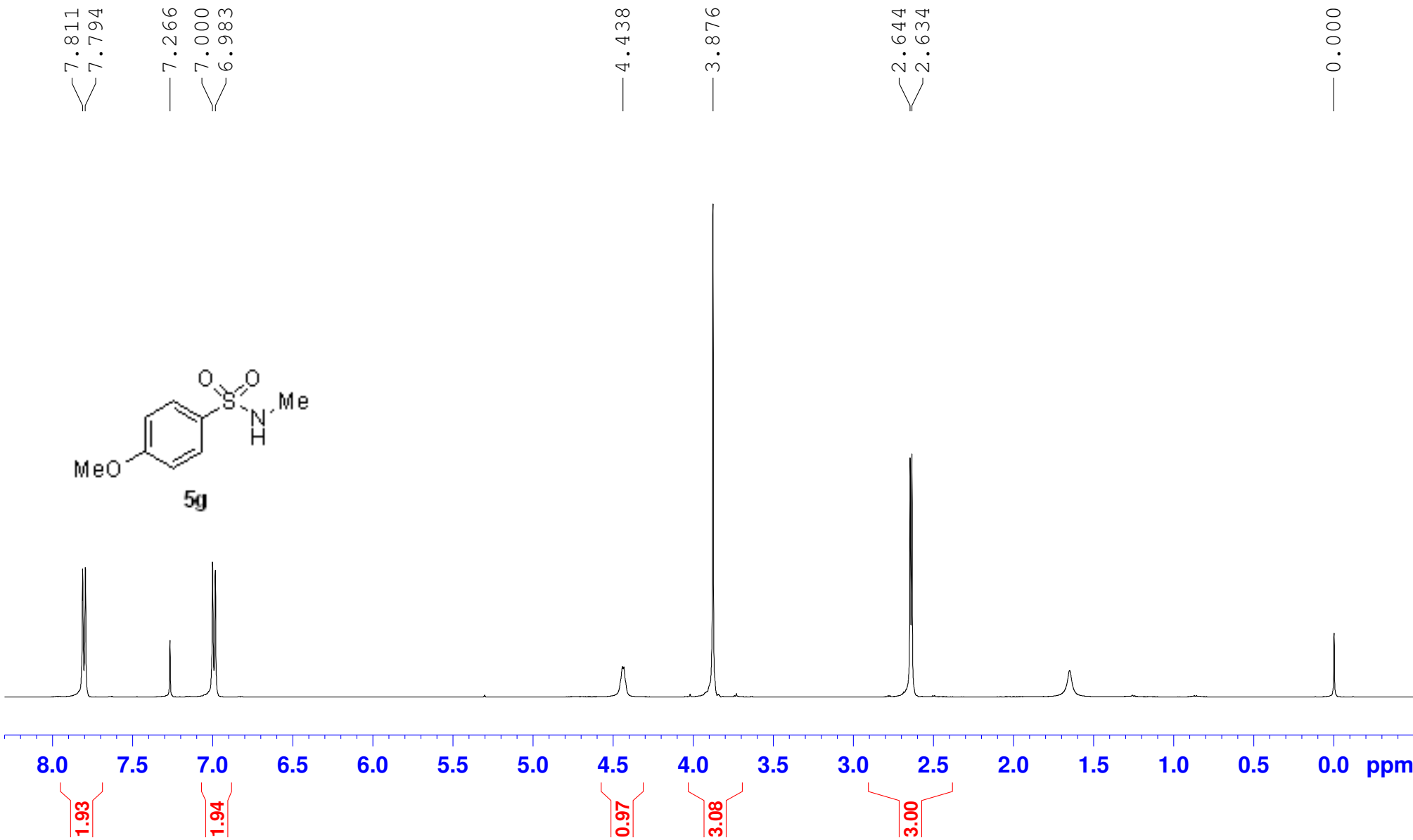
N,4-dimethylbenzenesulfonamide
Proton CDCl₃



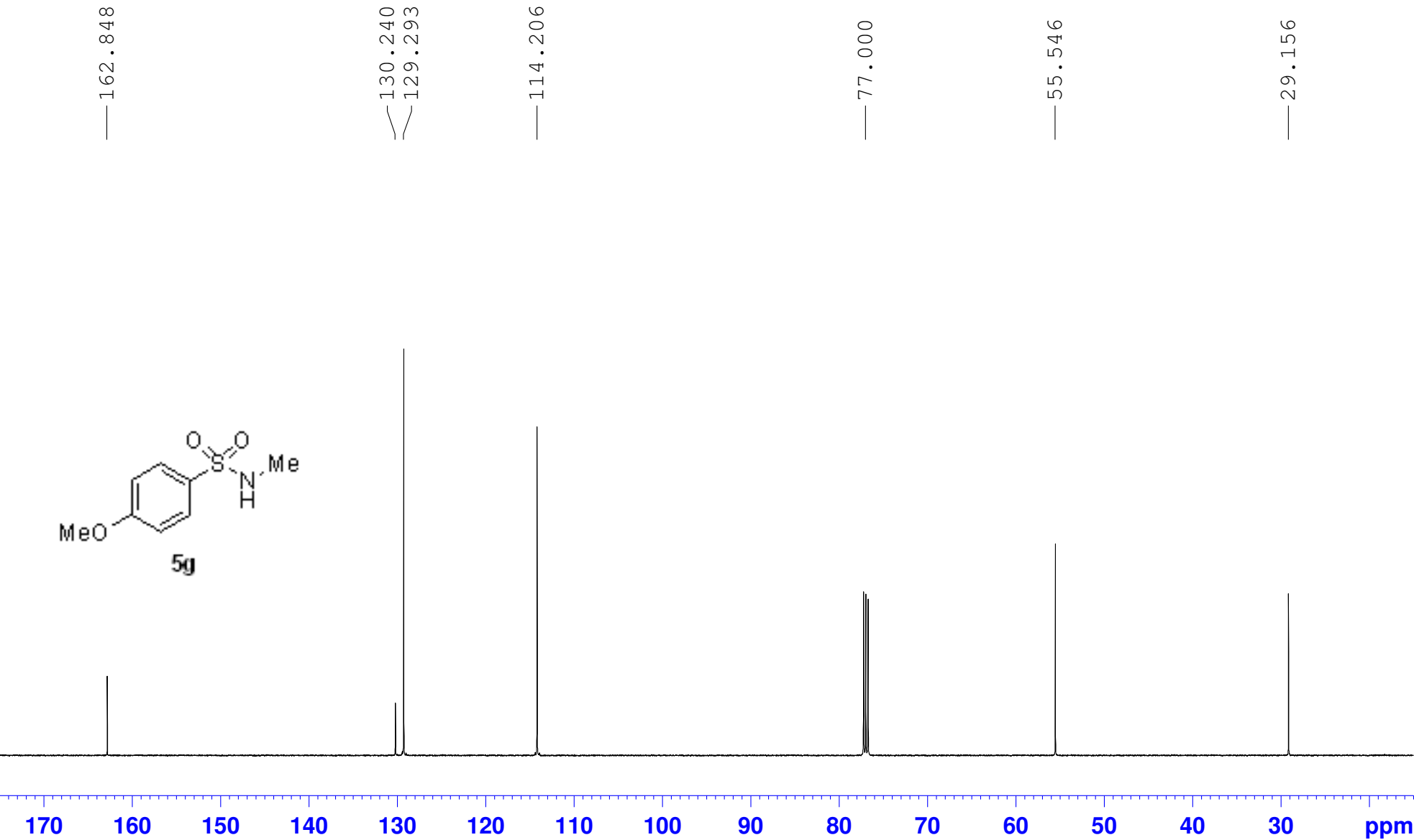
N,4-dimethylbenzenesulfonamide
C13CPD CDC13



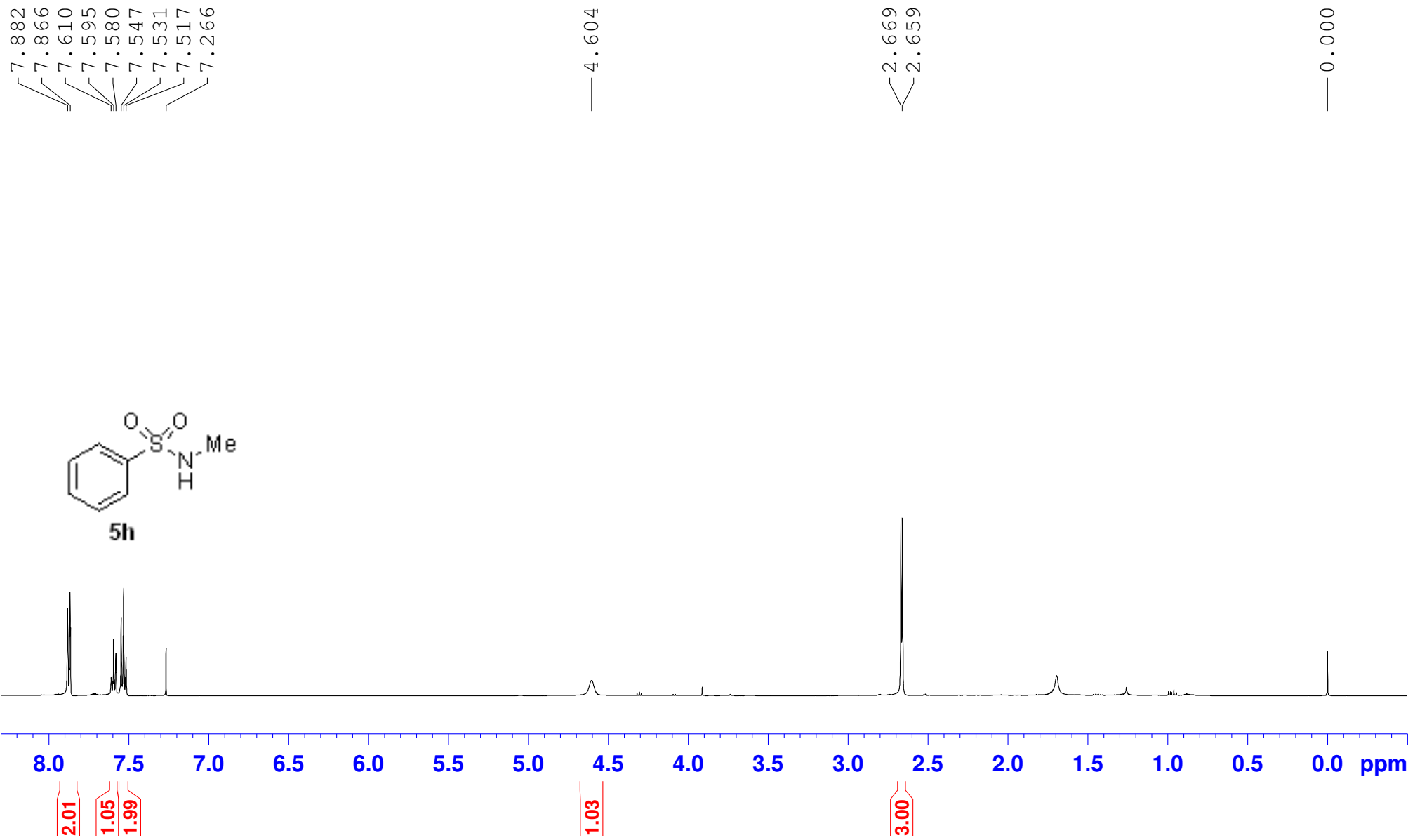
4-methoxy-N-methylbenzenesulfonamide
Proton CDCl3



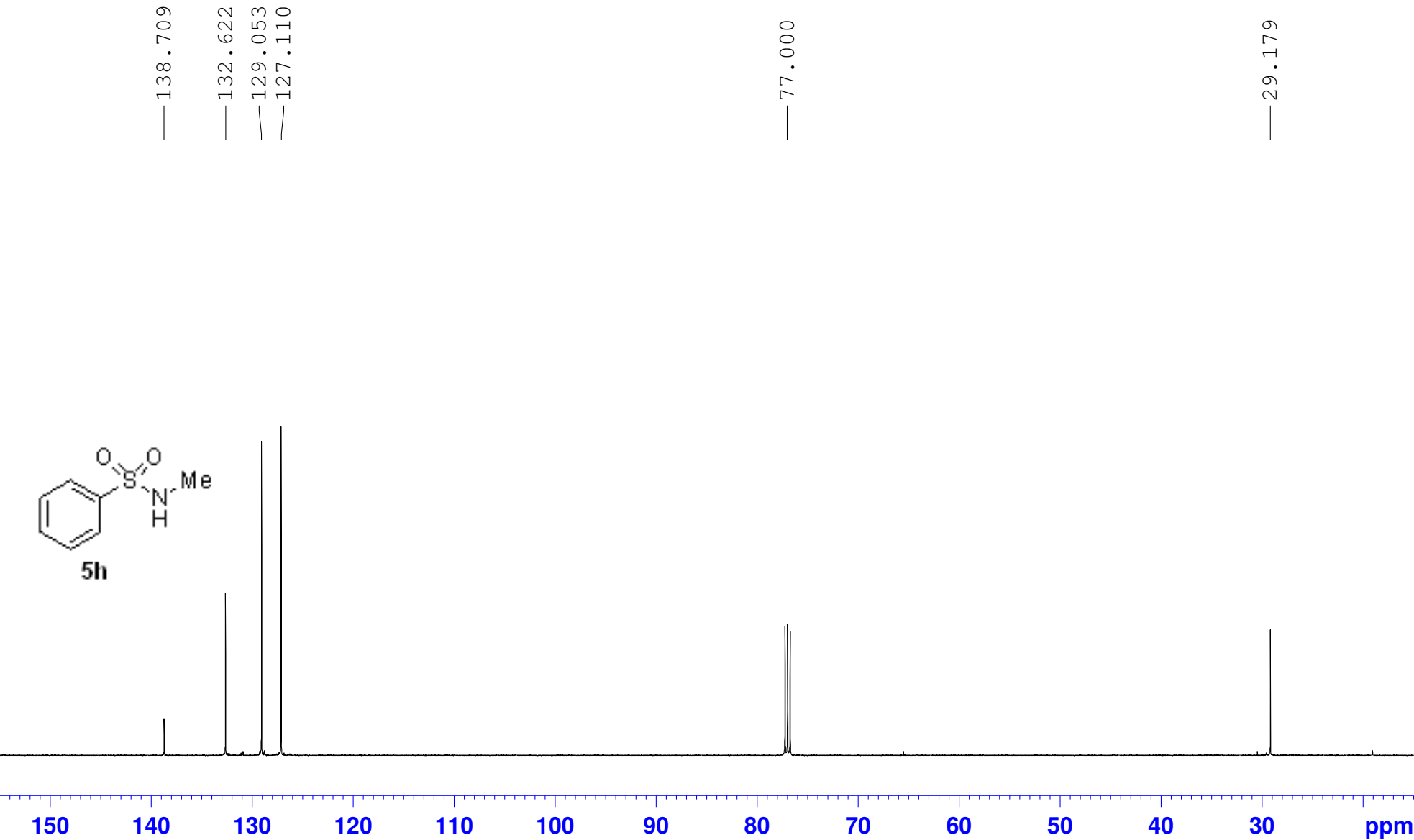
4-methoxy-N-methylbenzenesulfonamide
C13CPD CDC13



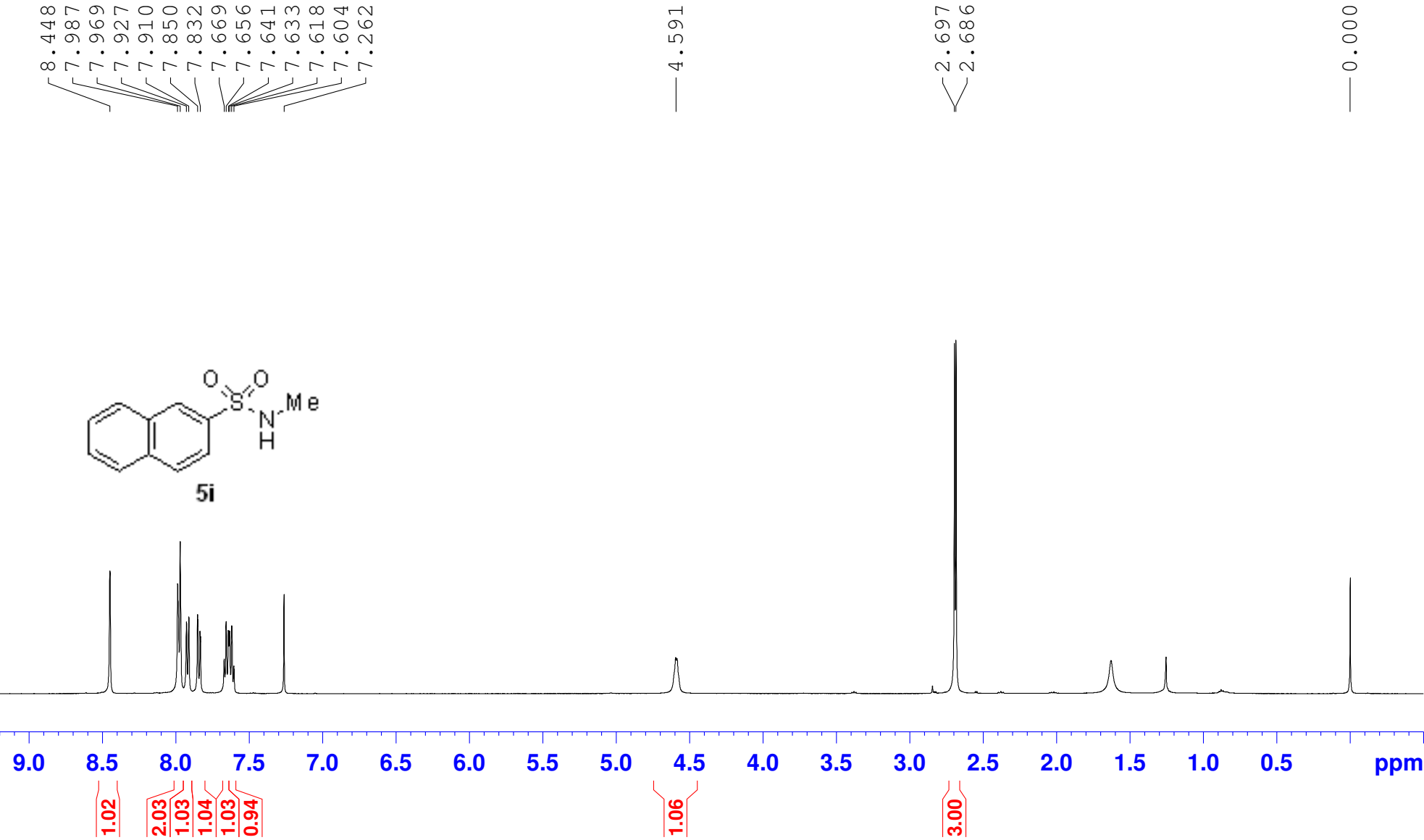
N-methylbenzenesulfonamide
Proton CDCl3



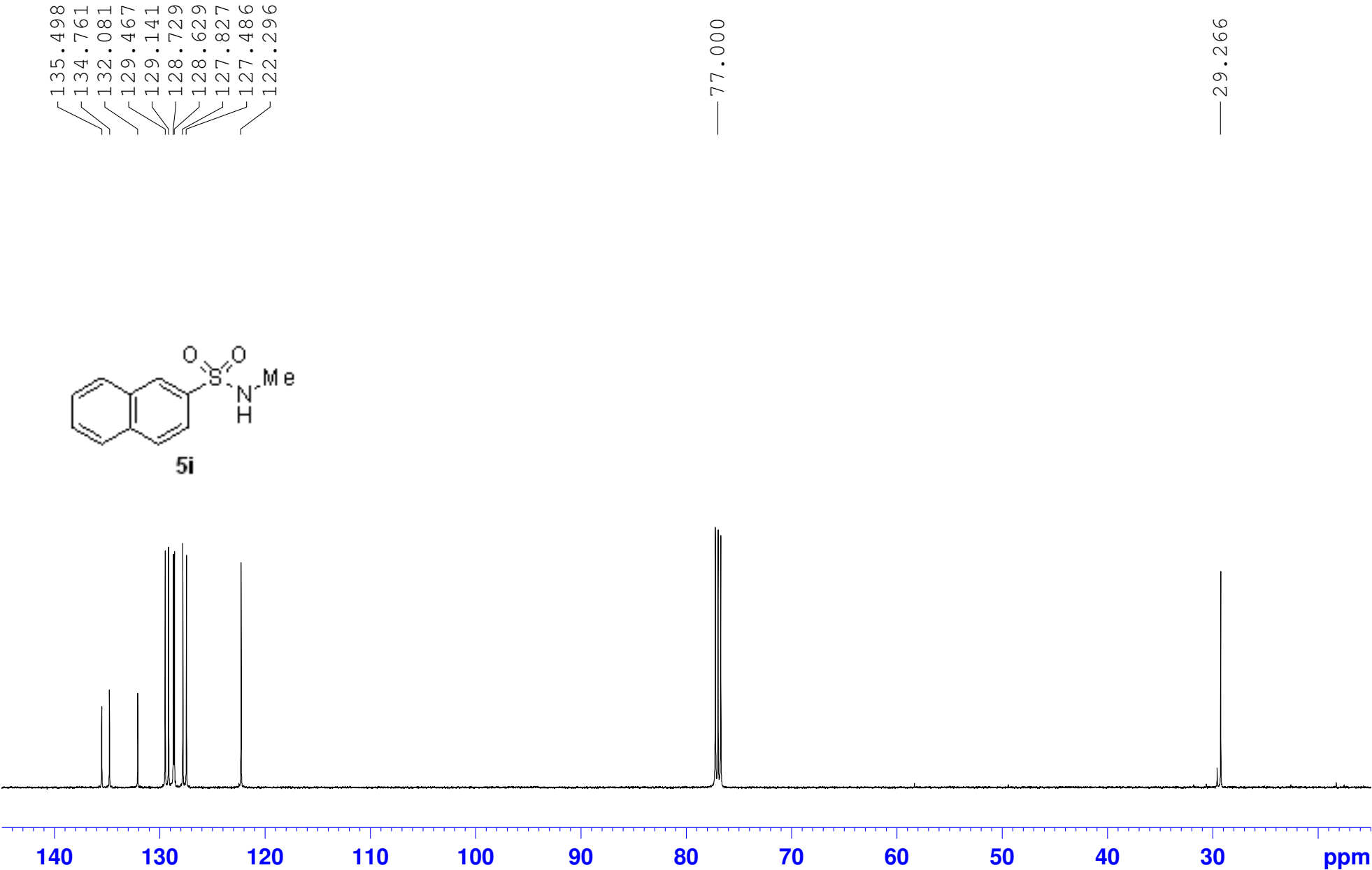
N-methylbenzenesulfonamide
C13CPD CDC13



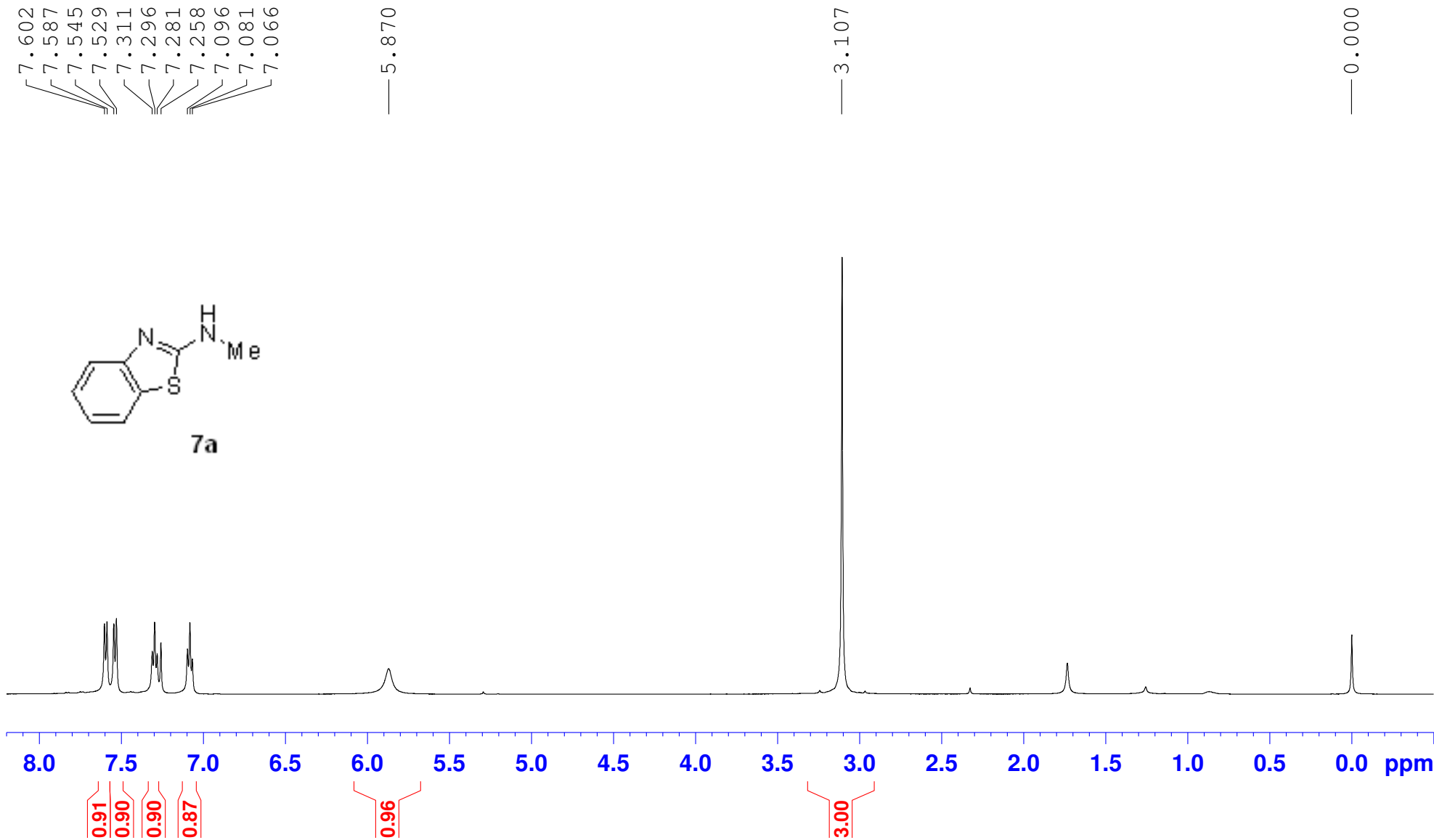
N-methylnaphthalene-2-sulfonamide
Proton CDCl3



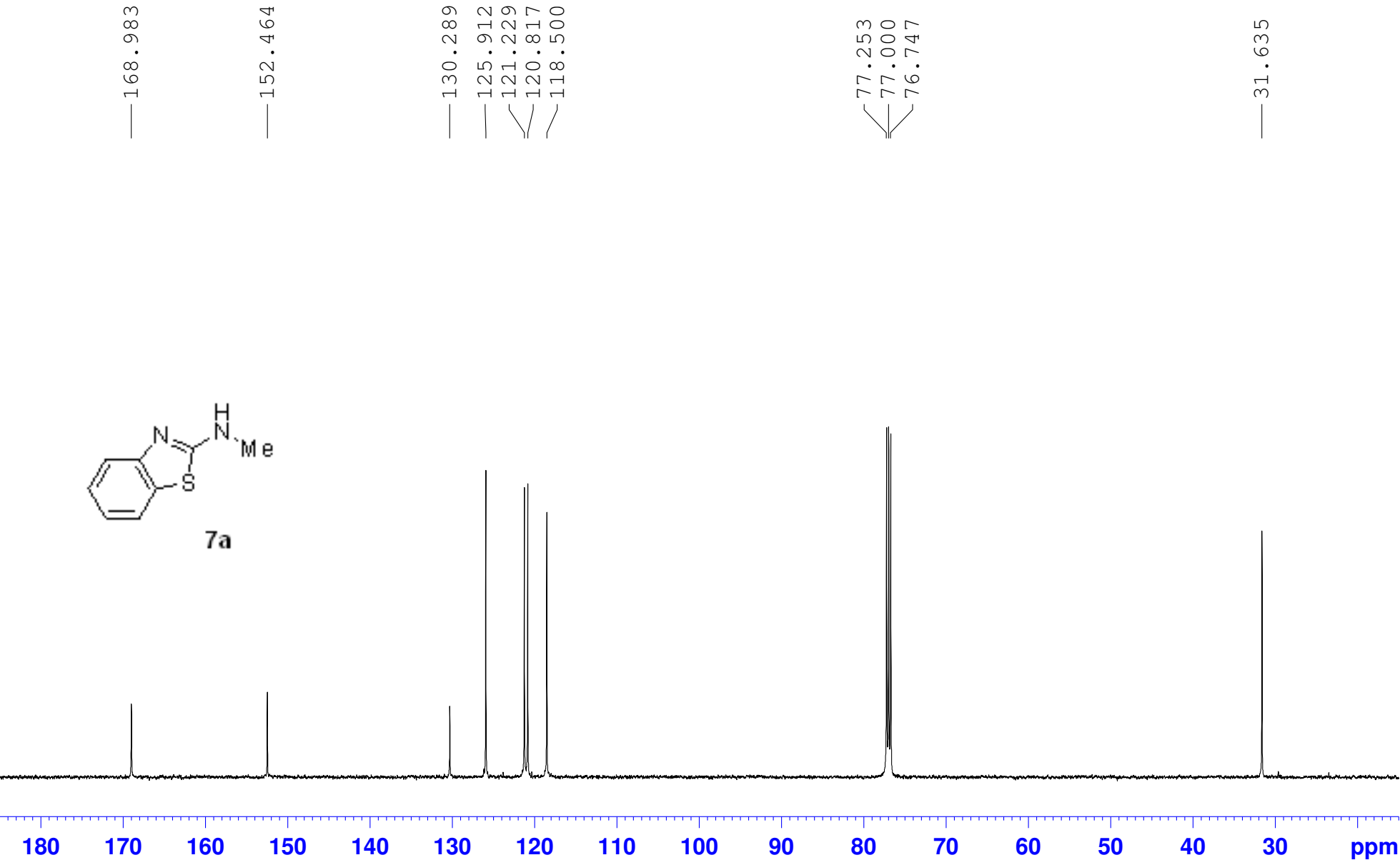
N-methylnaphthalene-2-sulfonamide
C13CPD CDC13



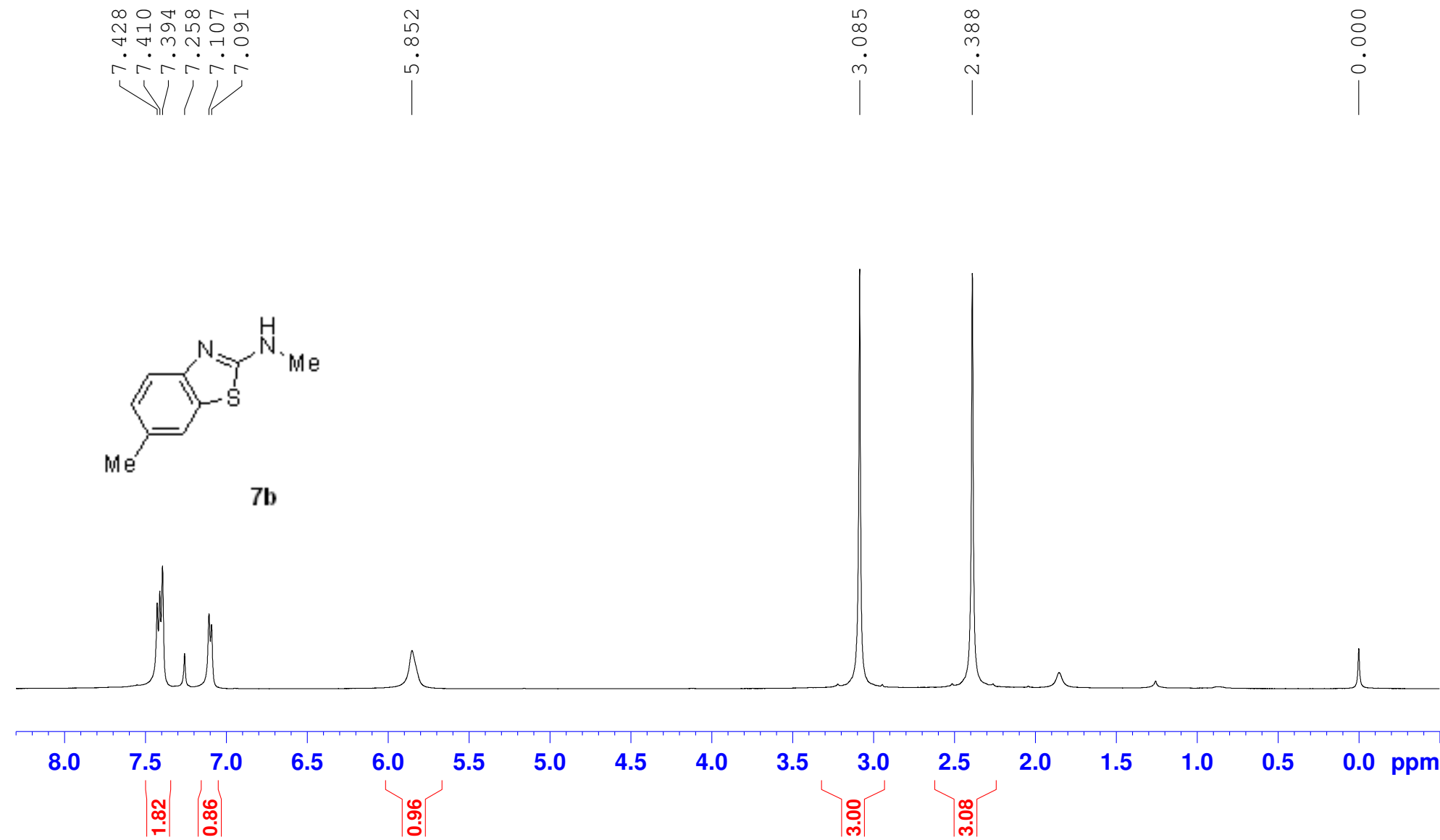
N-methylbenzo[d]thiazol-2-amine
Proton CDCl3



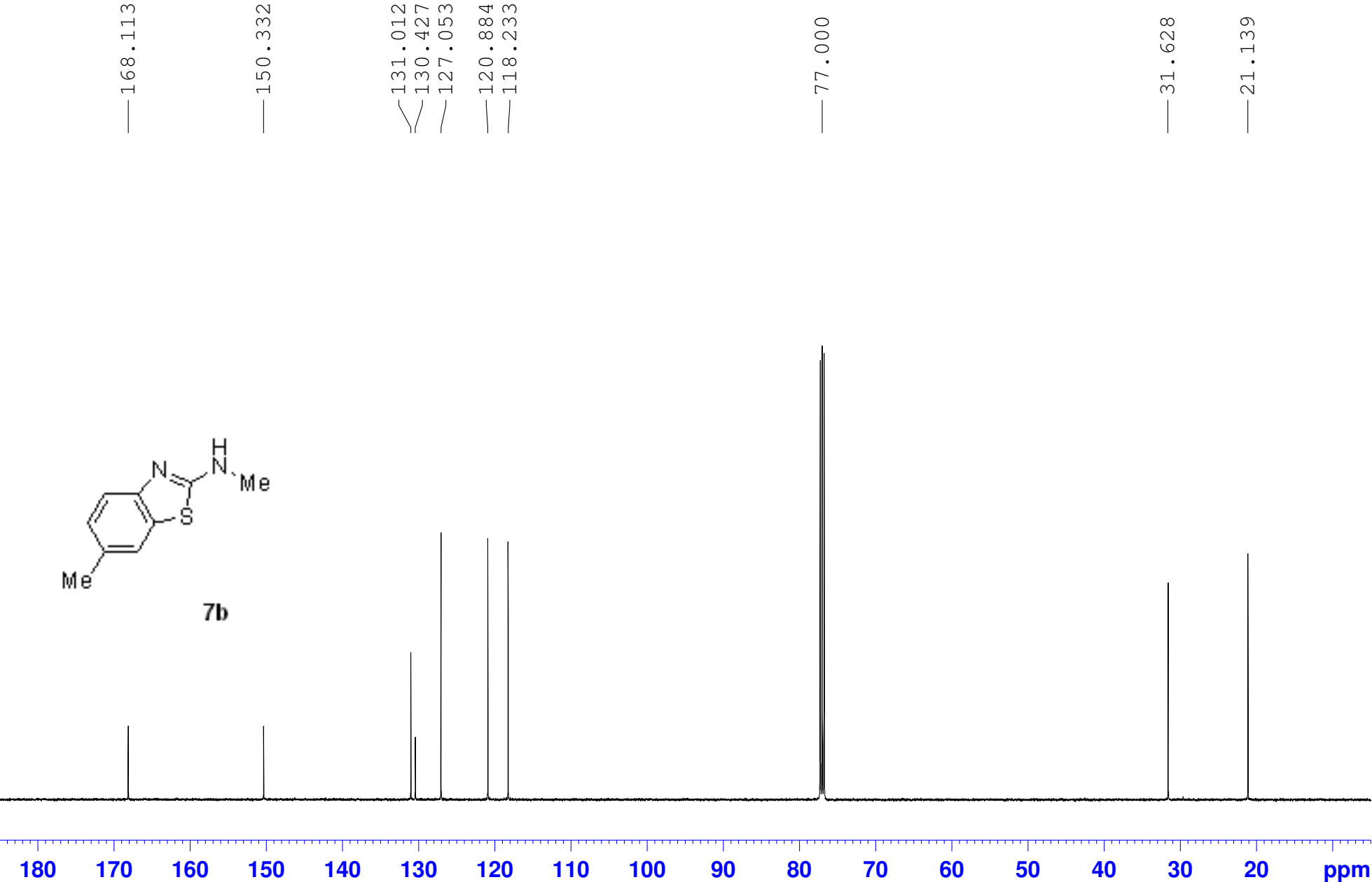
N-methylbenzo[d]thiazol-2-amine
C13CPD CDCl3



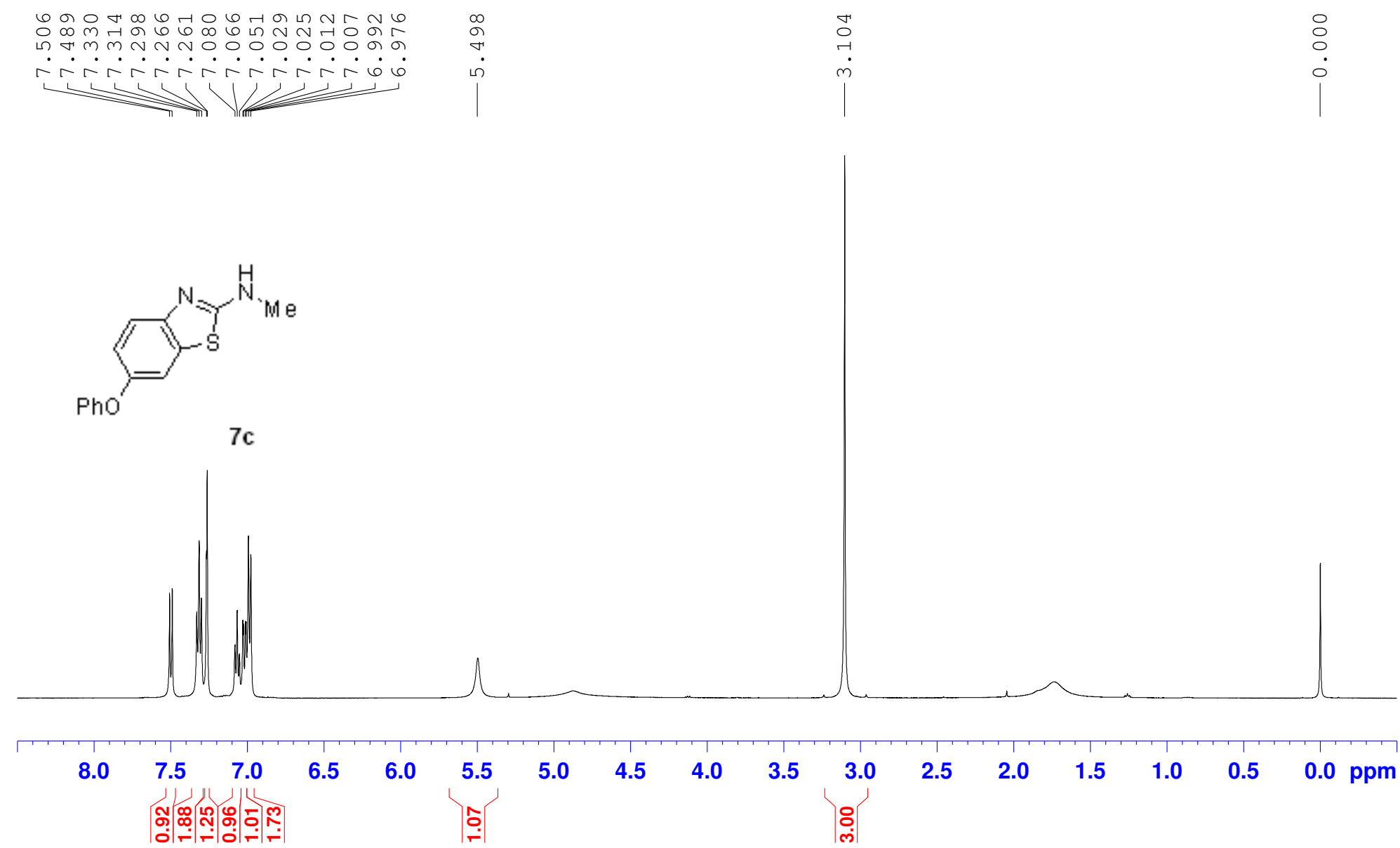
N,6-dimethylbenzo[d]thiazol-2-amine
Proton CDCl3



N,6-dimethylbenzo[d]thiazol-2-amine
C13CPD CDCl3

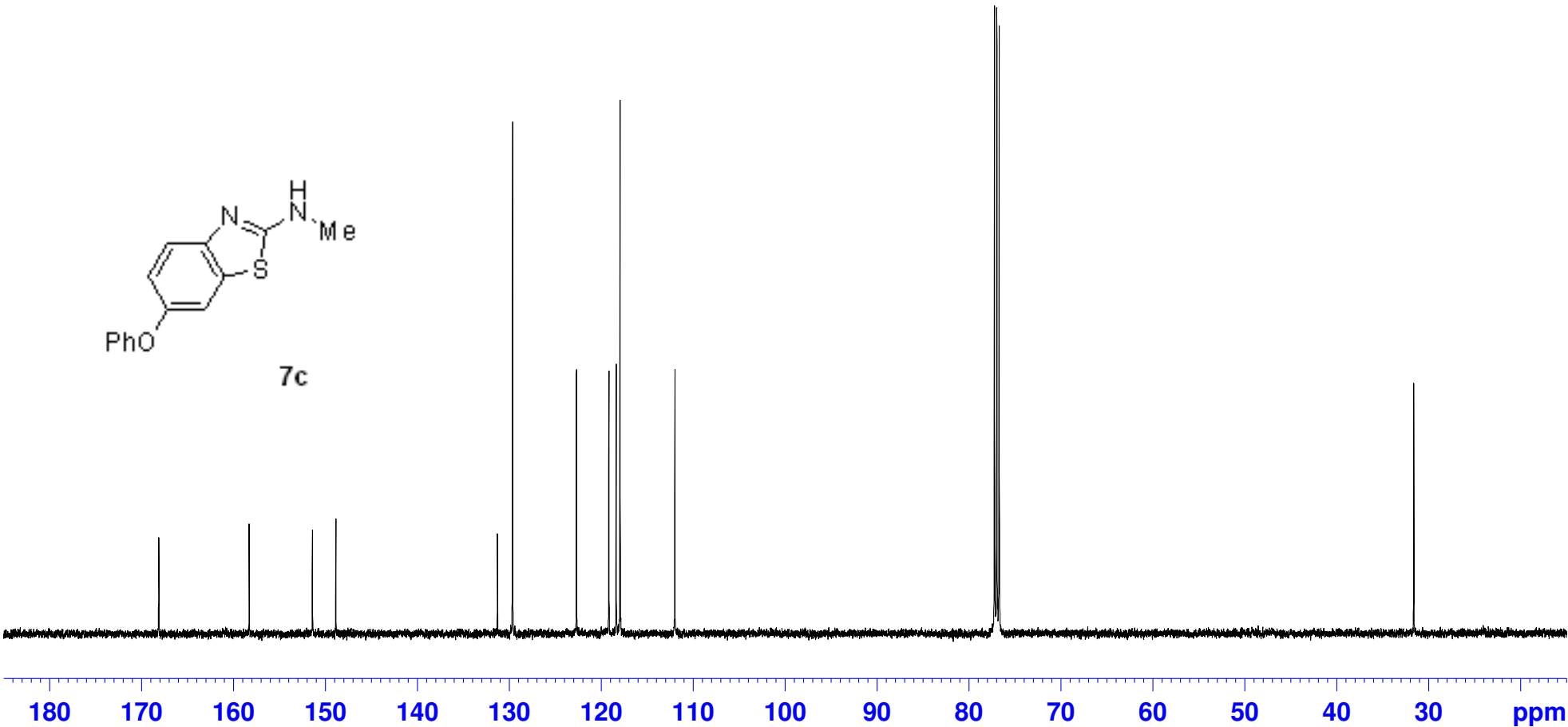
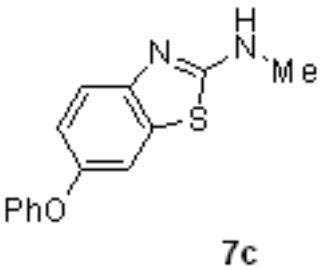


N-methyl-6-phenoxybenzo[d]thiazol-2-amine
Proton CDCl3

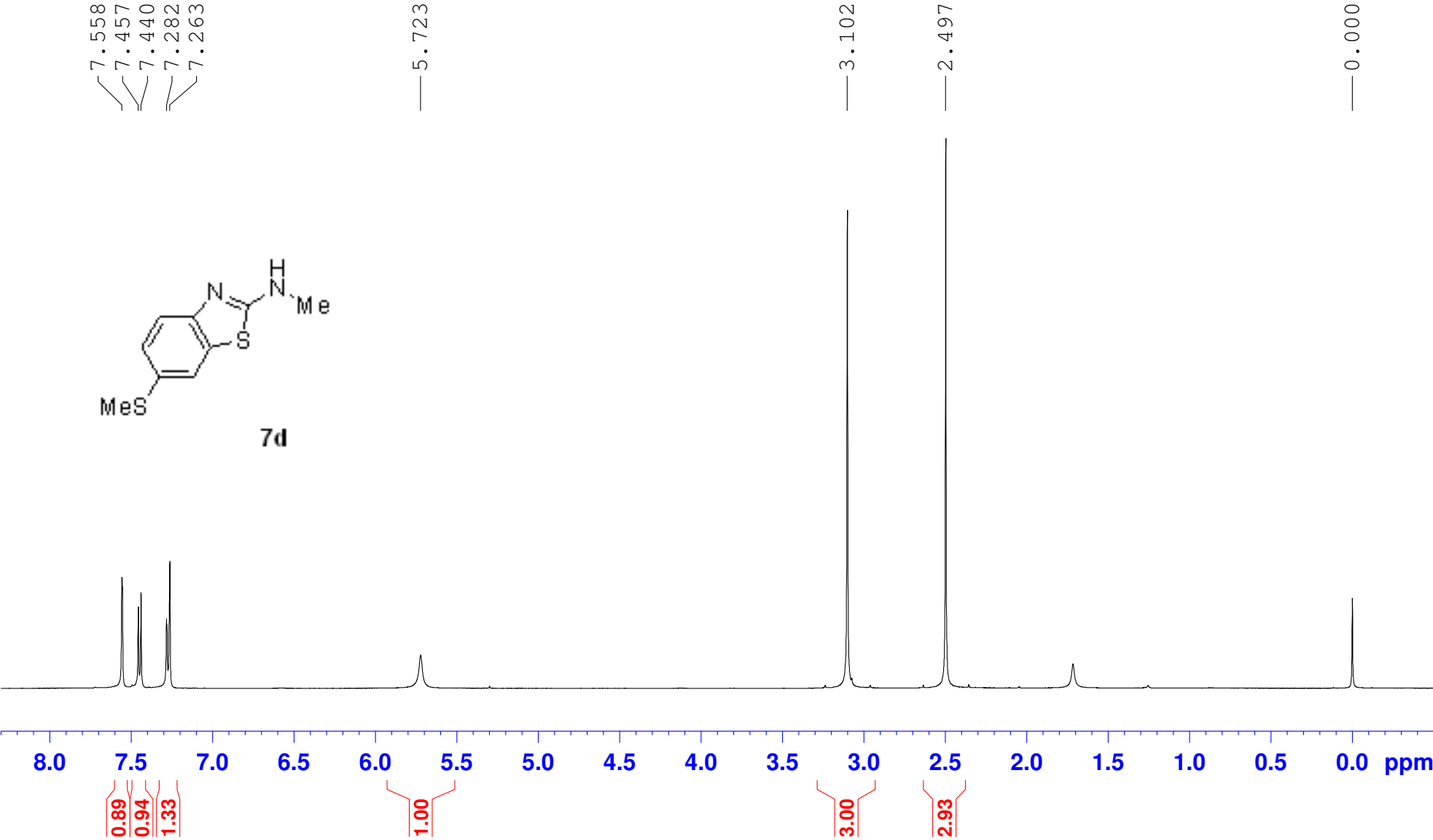


N-methyl-6-phenoxybenzo[d]thiazol-2-amine
C13CPD CDC13

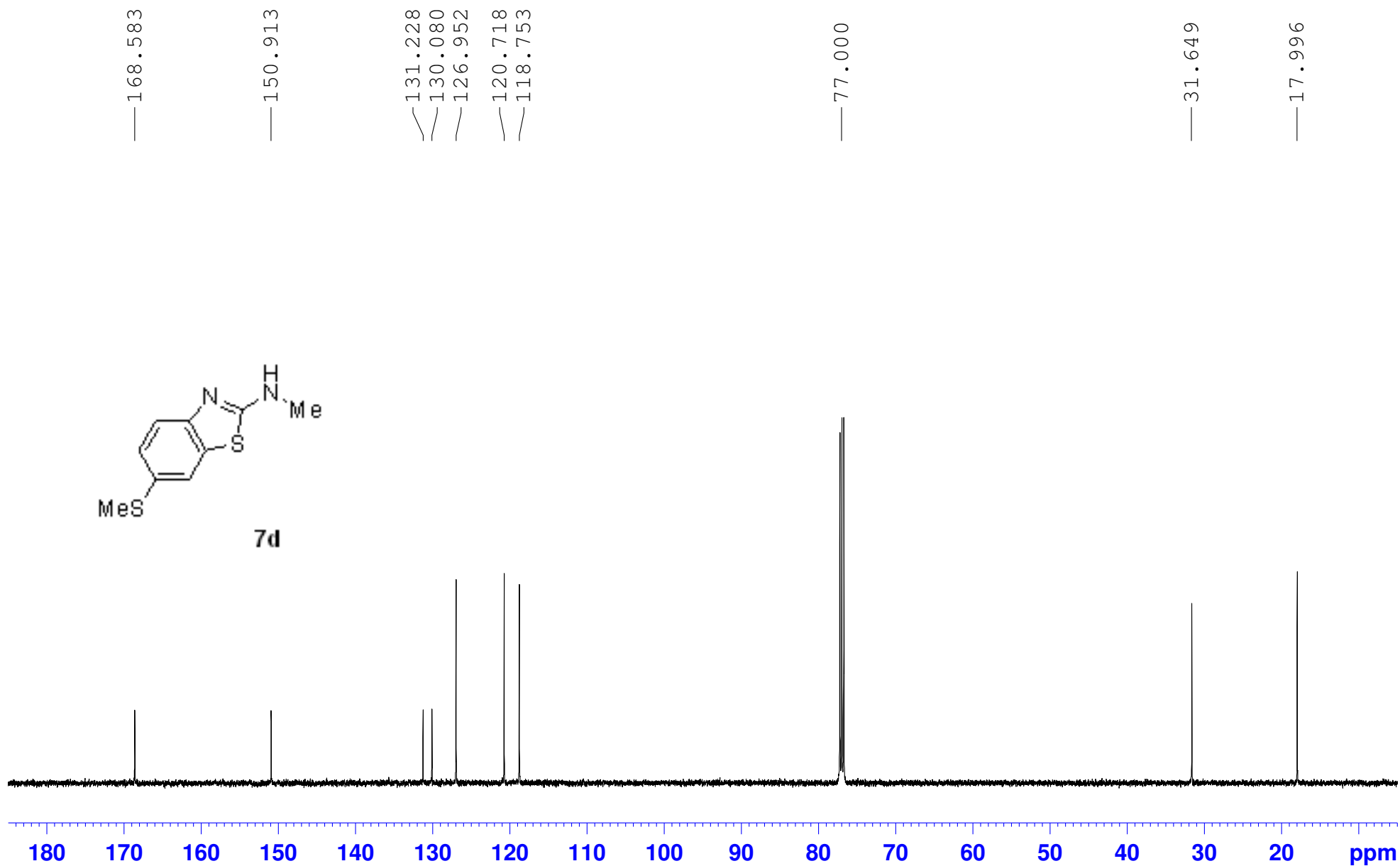
168.107 158.282 151.404 148.855 131.280 129.632 122.680 119.158 118.356 117.937 111.971 77.000 31.642



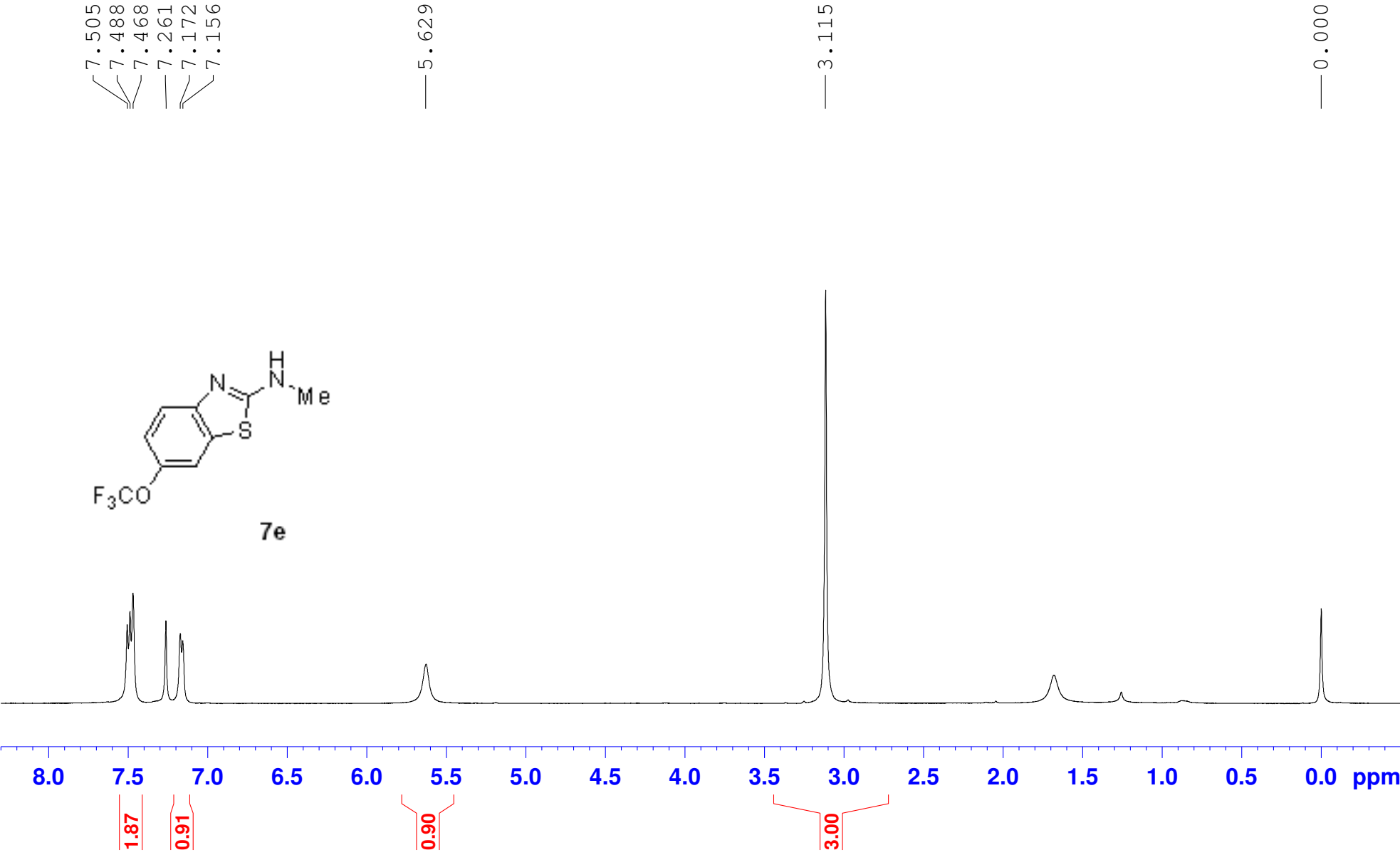
N-methyl-6-(methylthio)benzo[d]thiazol-2-amine
Proton CDCl3



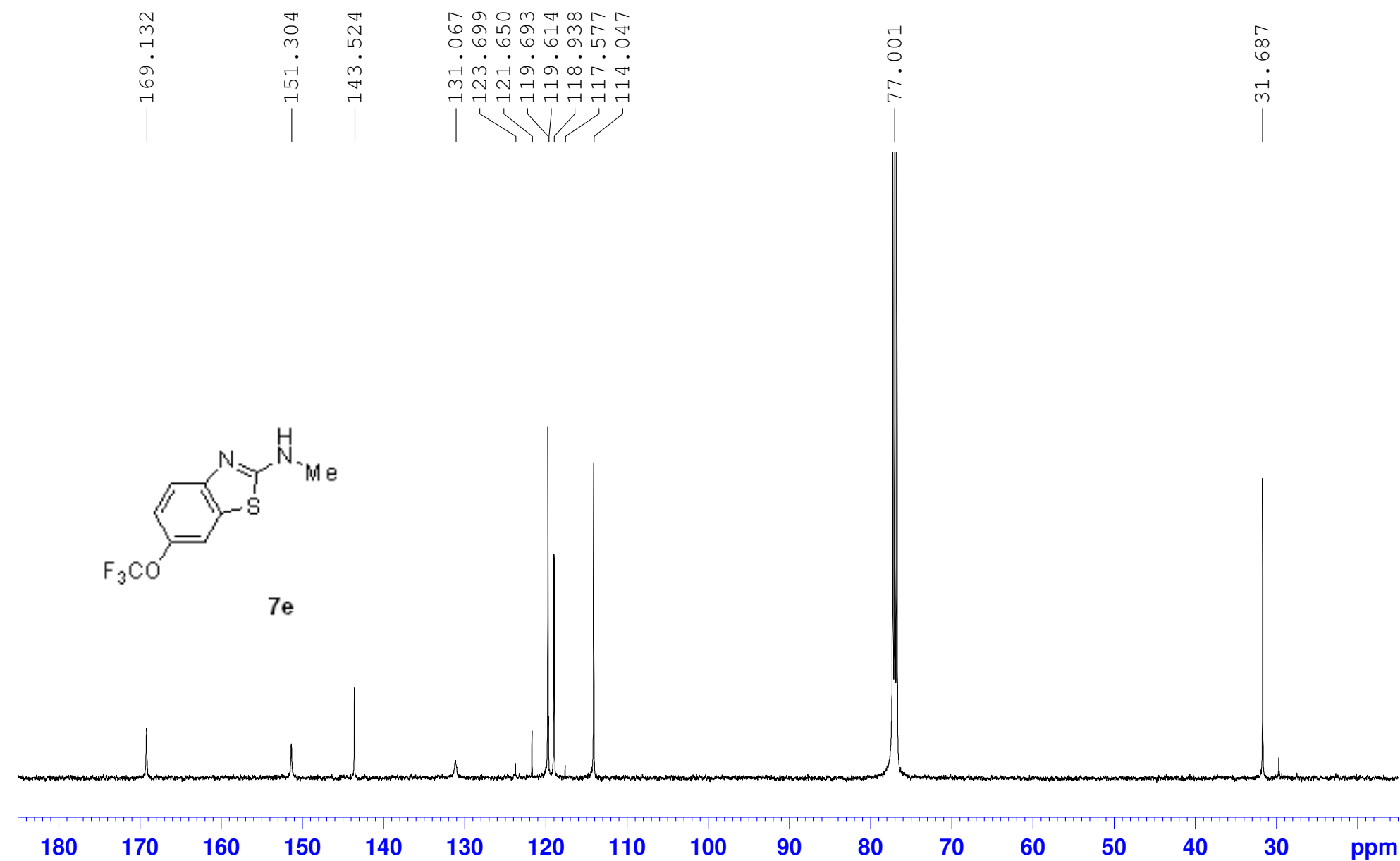
N-methyl-6- (methylthio)benzo[d]thiazol-2-amine
C13CPD CDC13



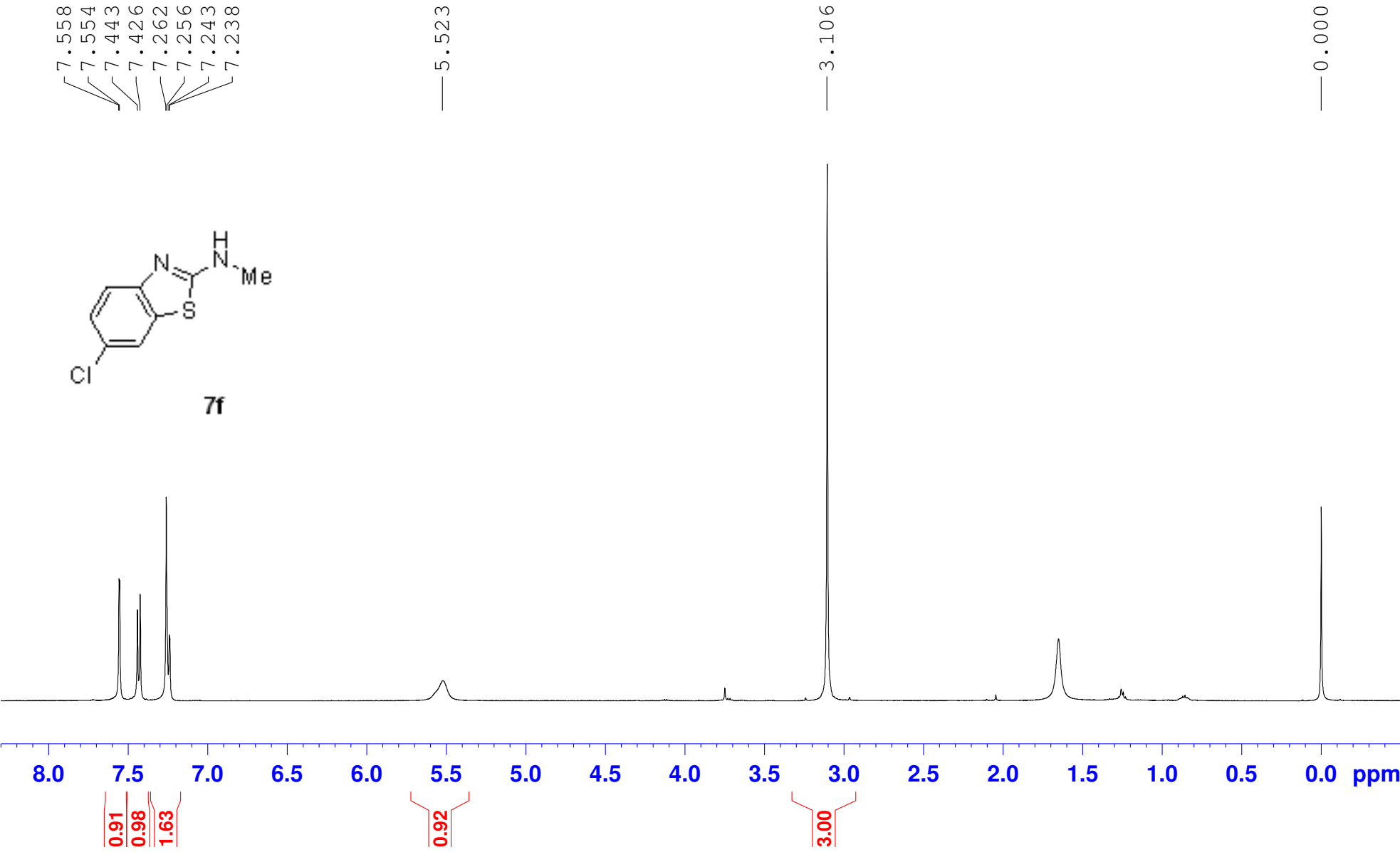
N-methyl-6-(trifluoromethoxy)benzo[d]thiazol-2-amine
Proton CDCl3



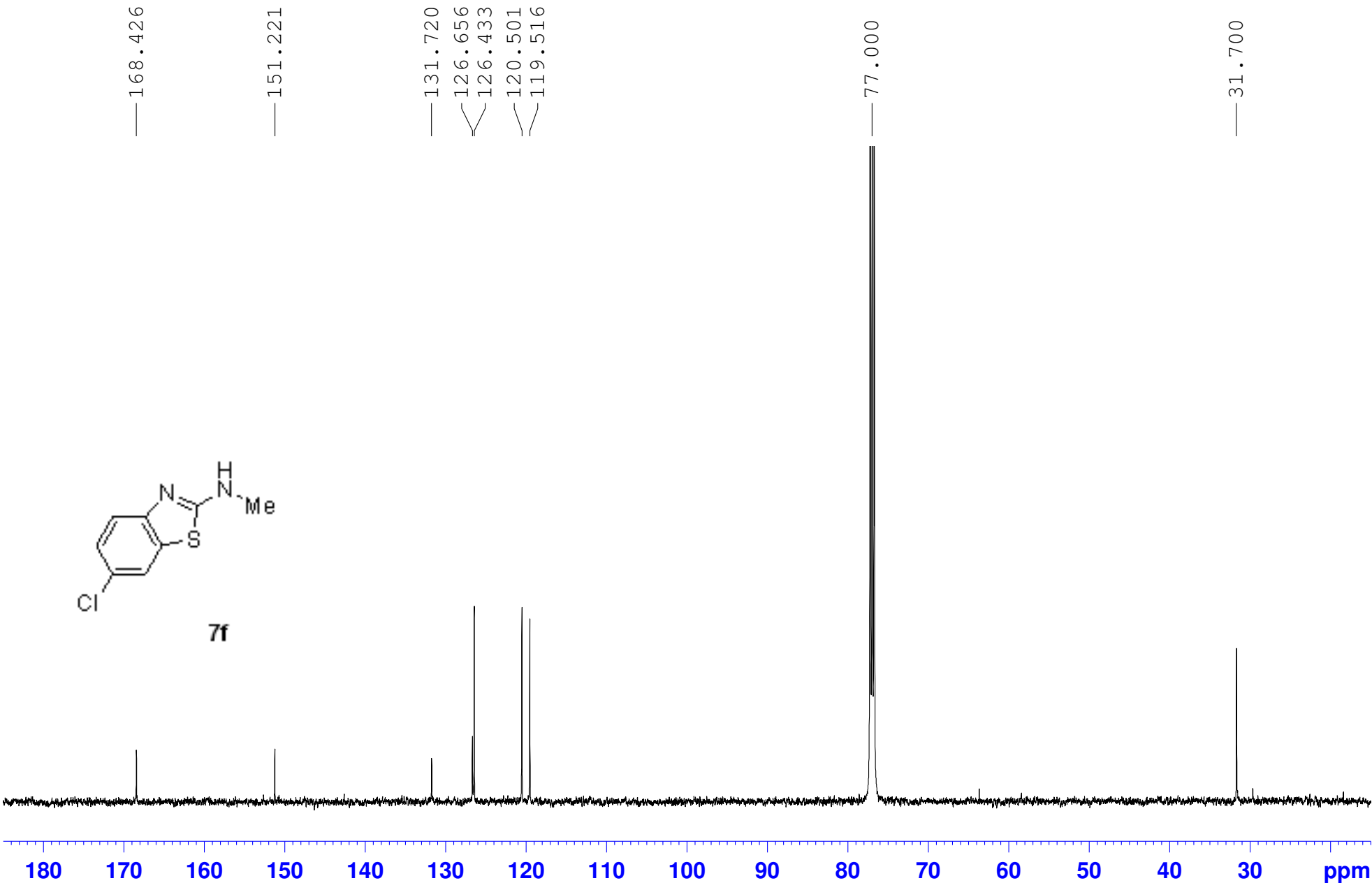
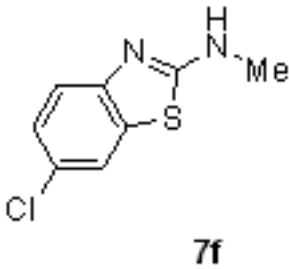
N-methyl-6-(trifluoromethoxy)benzo[d]thiazol-2-amine
C13CPD CDCl3



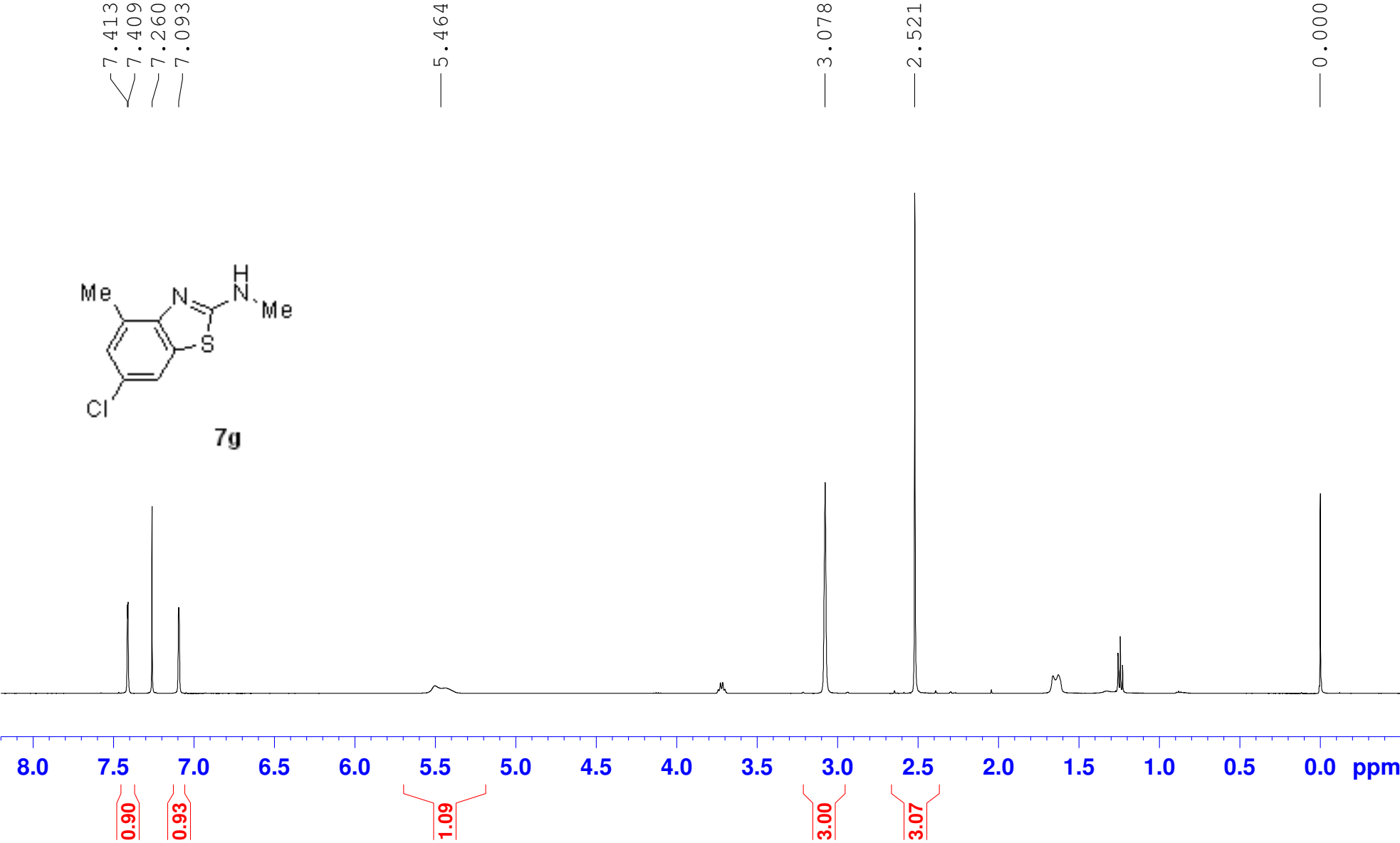
6-chloro-N-methylbenzo[d]thiazol-2-amine
Proton CDCl3



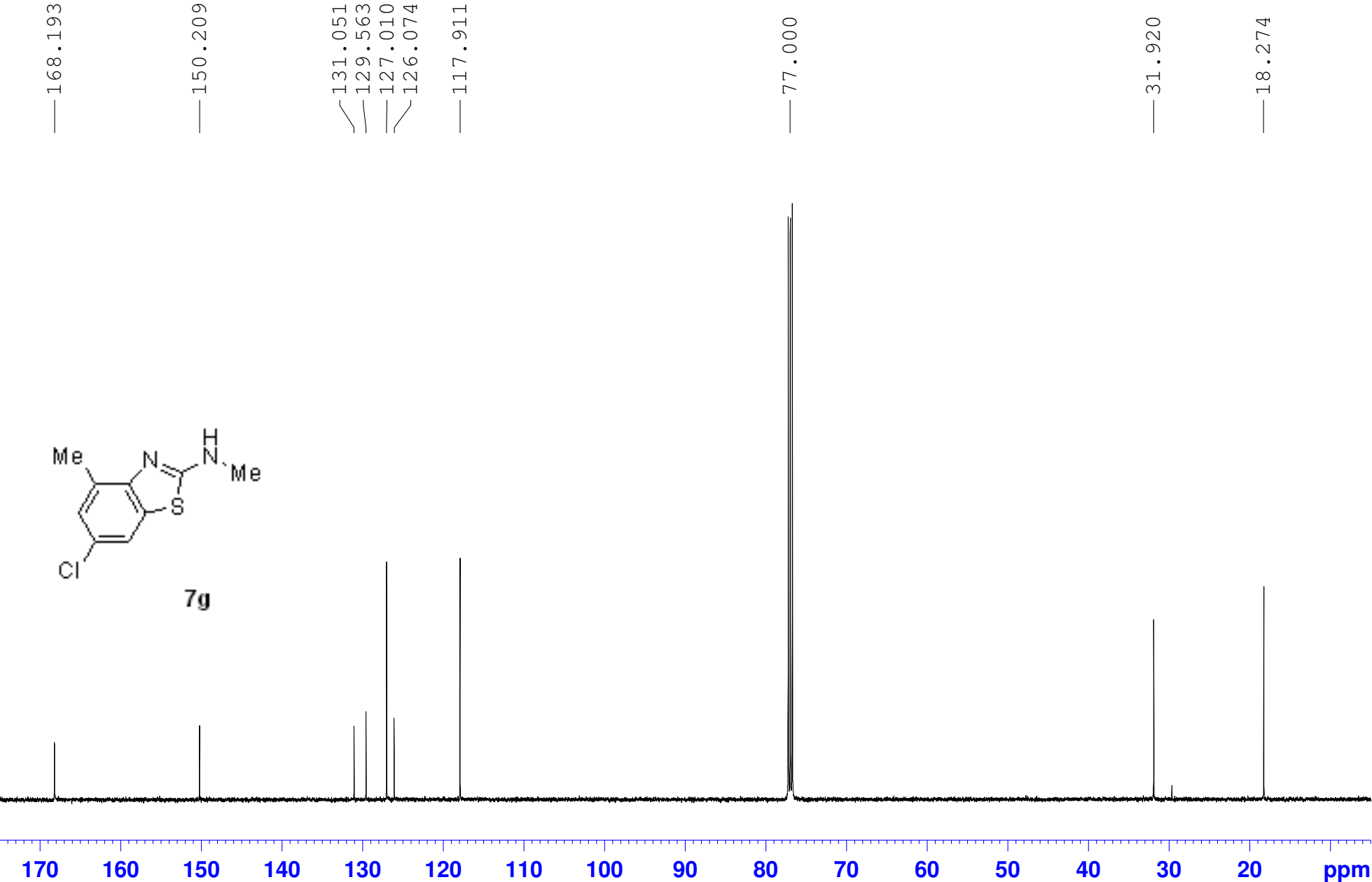
6-chloro-N-methylbenzo[d]thiazol-2-amine
C13CPD CDC13



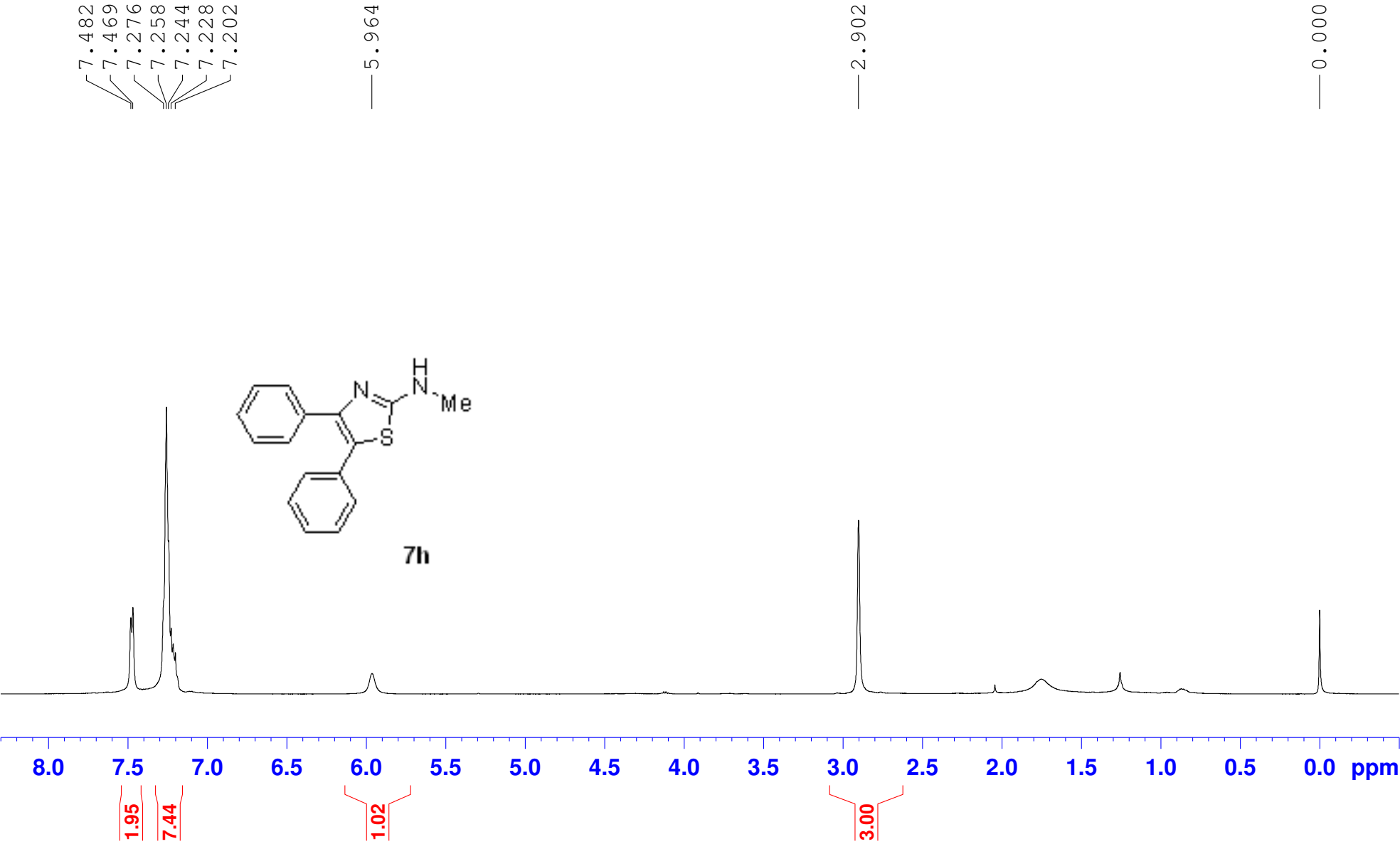
6-chloro-N,4-dimethylbenzo[d]thiazol-2-amine
Proton CDCl3



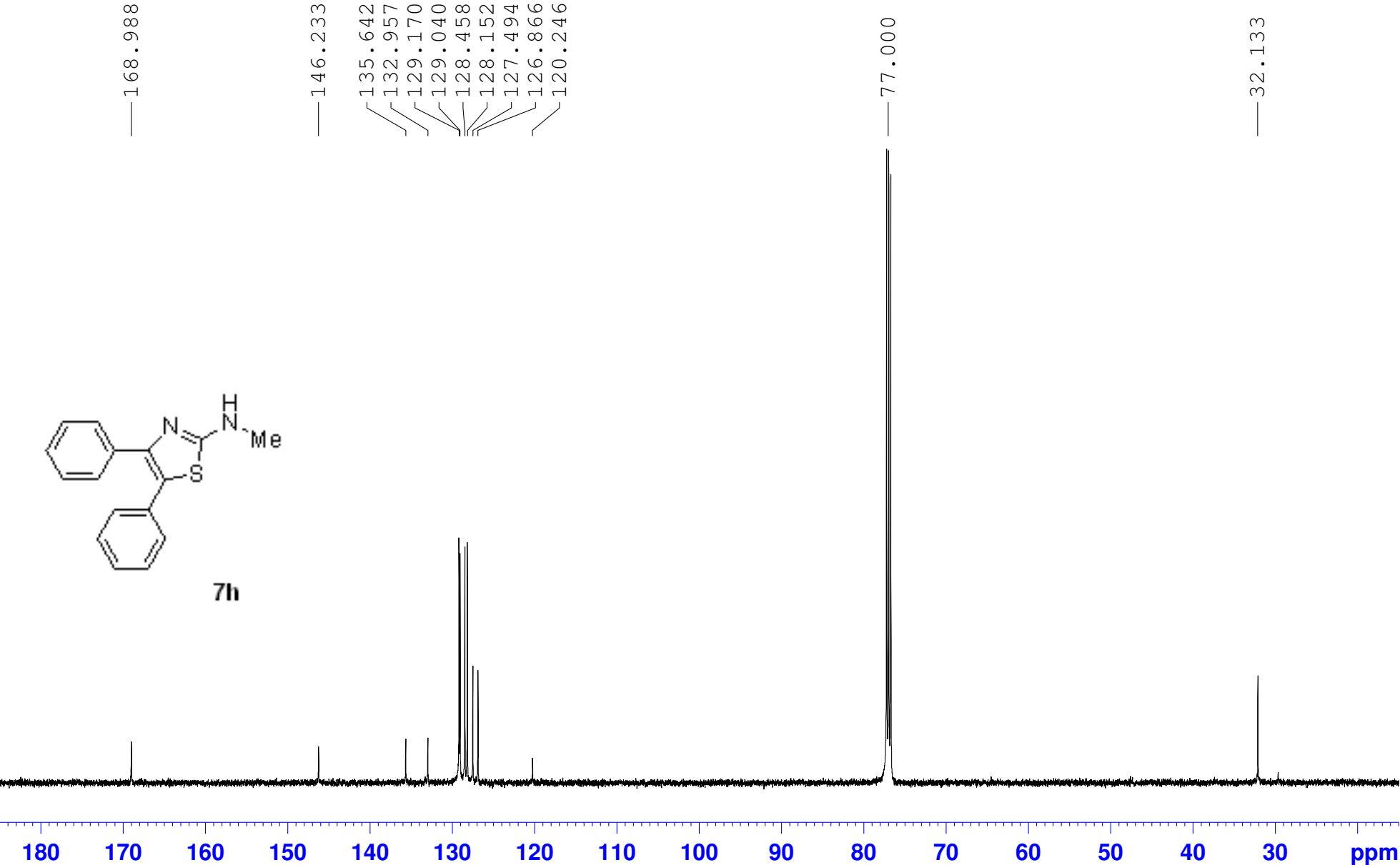
6-chloro-N,4-dimethylbenzo[d]thiazol-2-amine
C13CPD CDC13



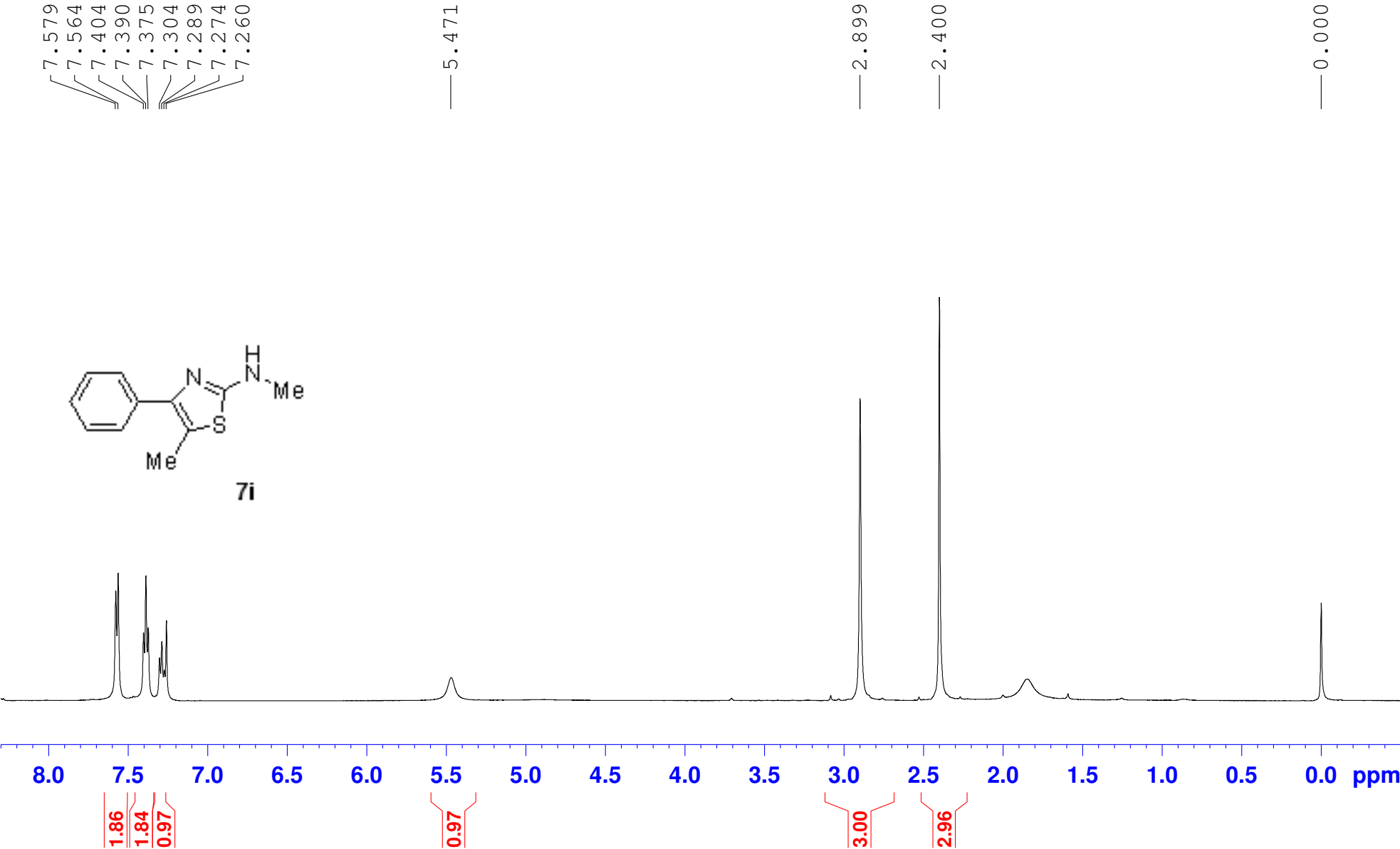
N-methyl-4,5-diphenylthiazol-2-amine
Proton CDCl3



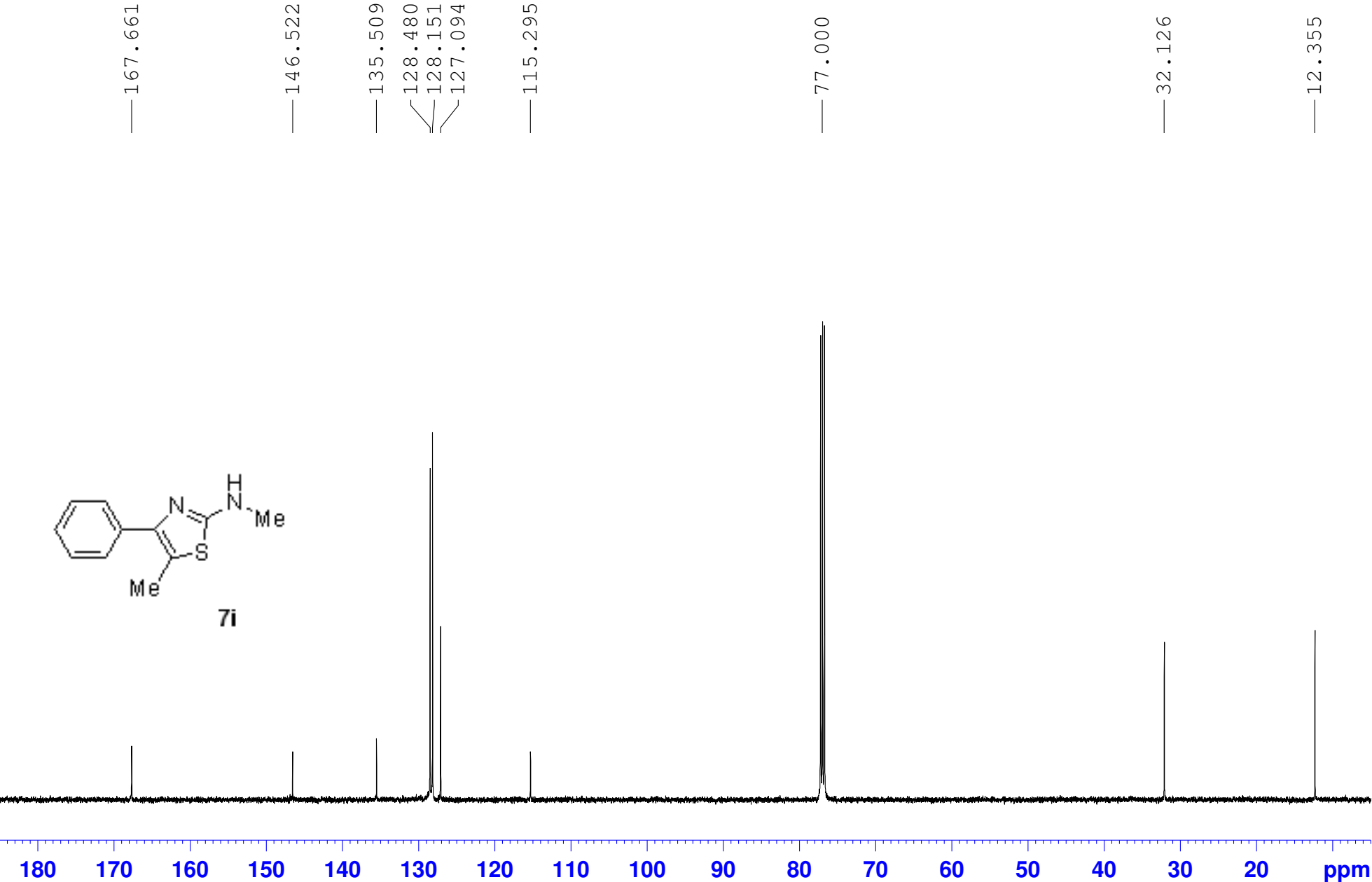
N-methyl-4,5-diphenylthiazol-2-amine
C13CPD CDC13



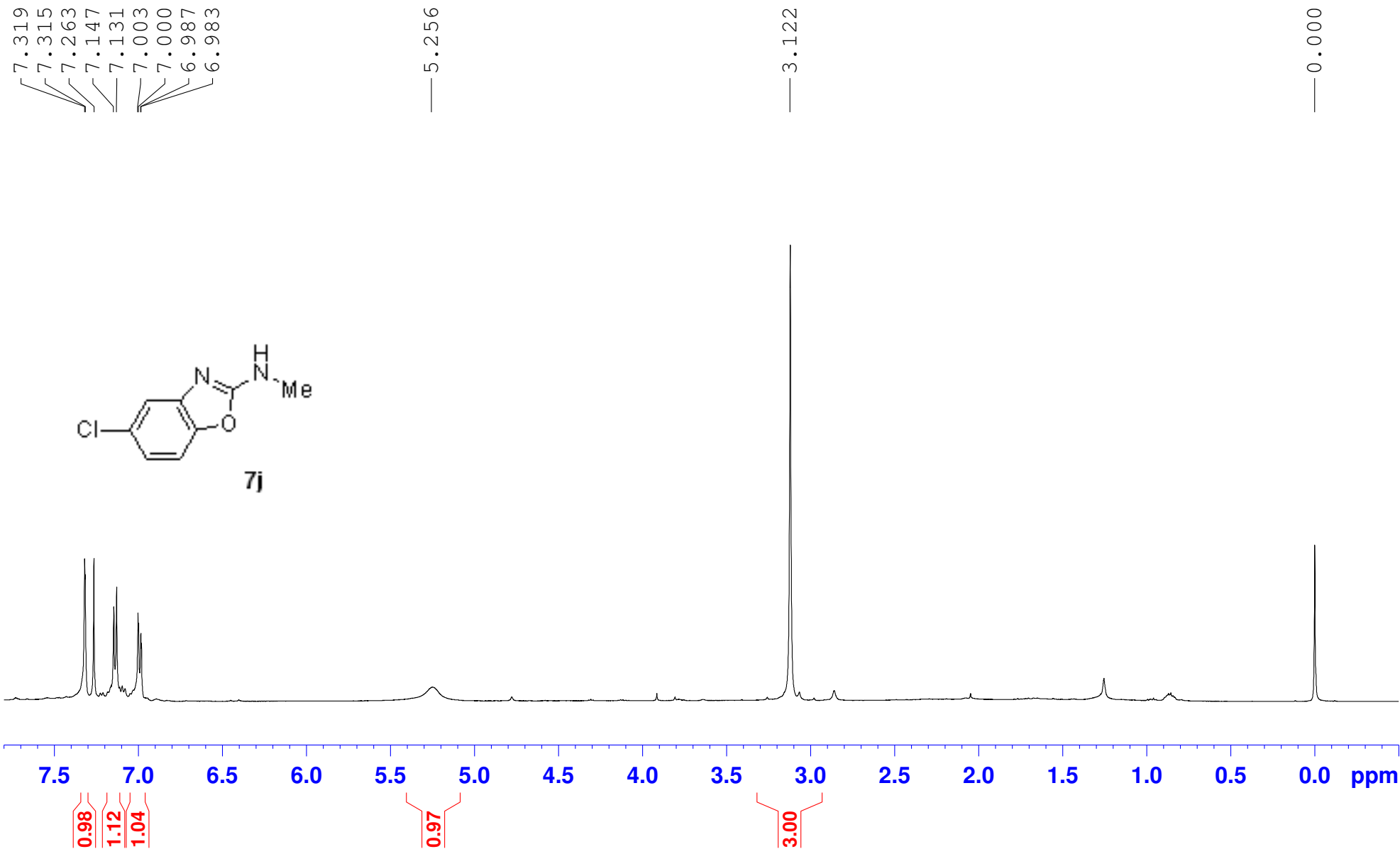
N,5-dimethyl-4-phenylthiazol-2-amine
Proton CDCl3



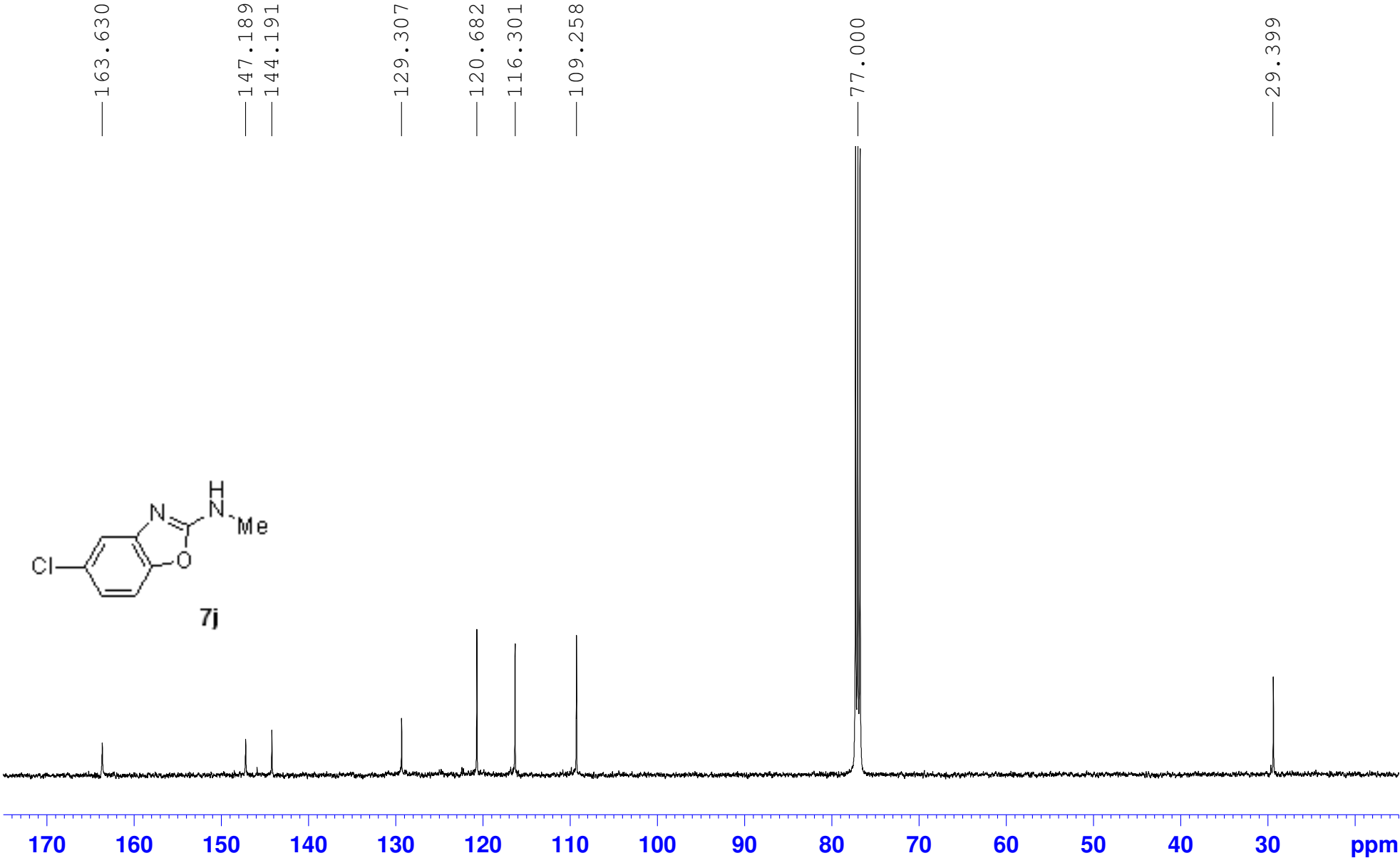
N,5-dimethyl-4-phenylthiazol-2-amine
C13CPD CDCl3



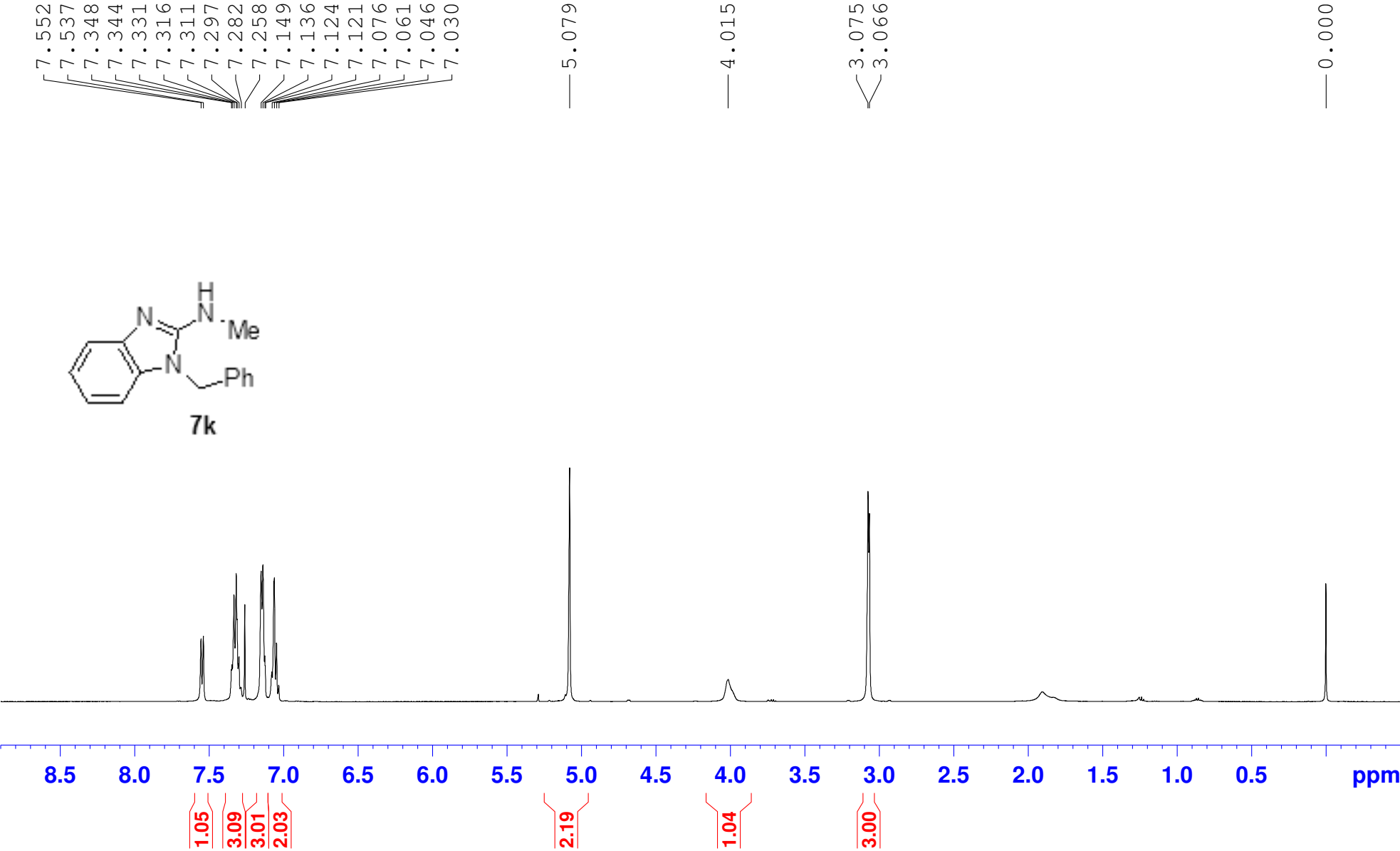
5-chloro-N-methylbenzo[d]oxazol-2-amine
Proton CDCl3



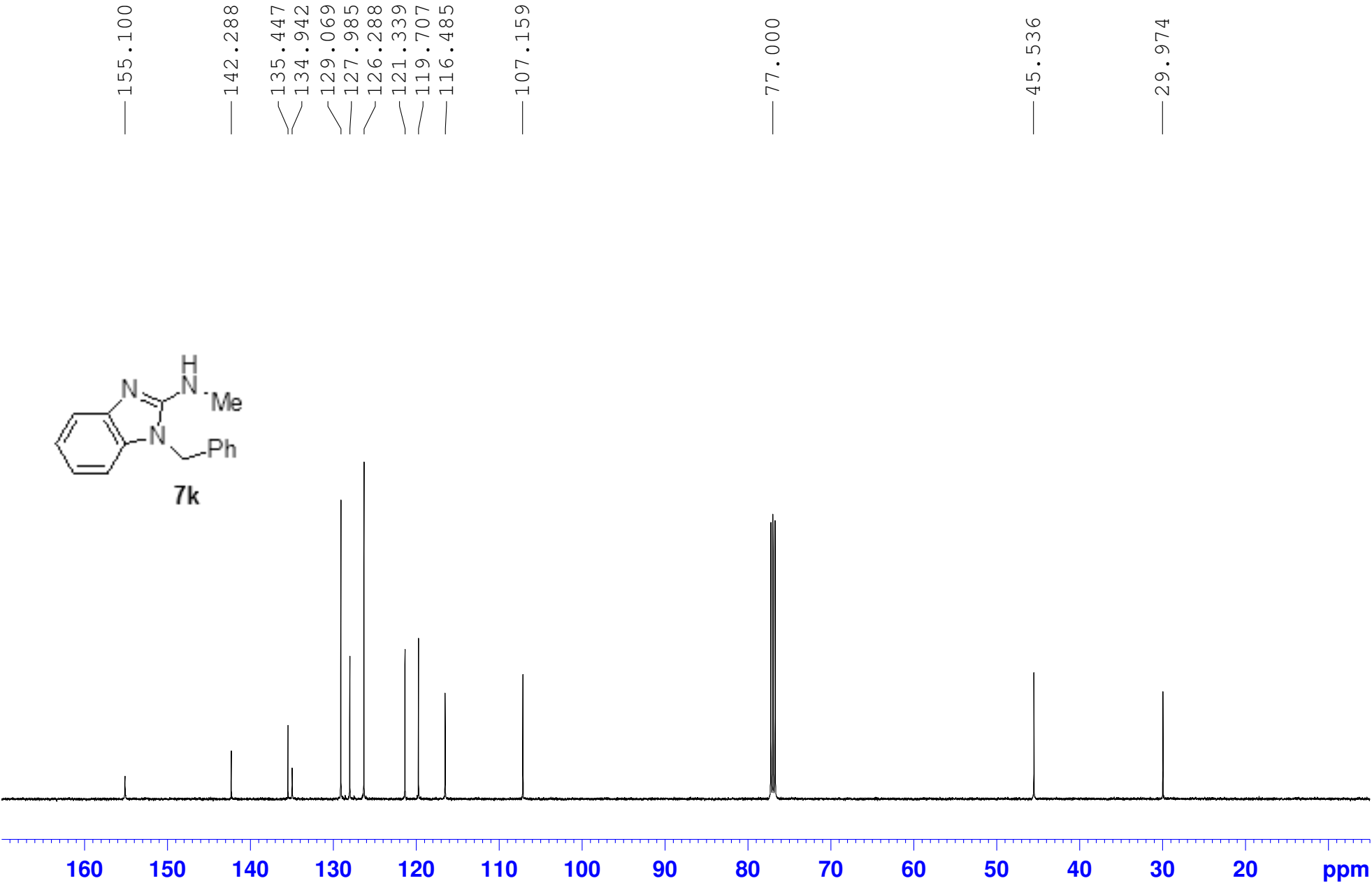
5-chloro-N-methylbenzo[d]oxazol-2-amine
C13CPD CDC13



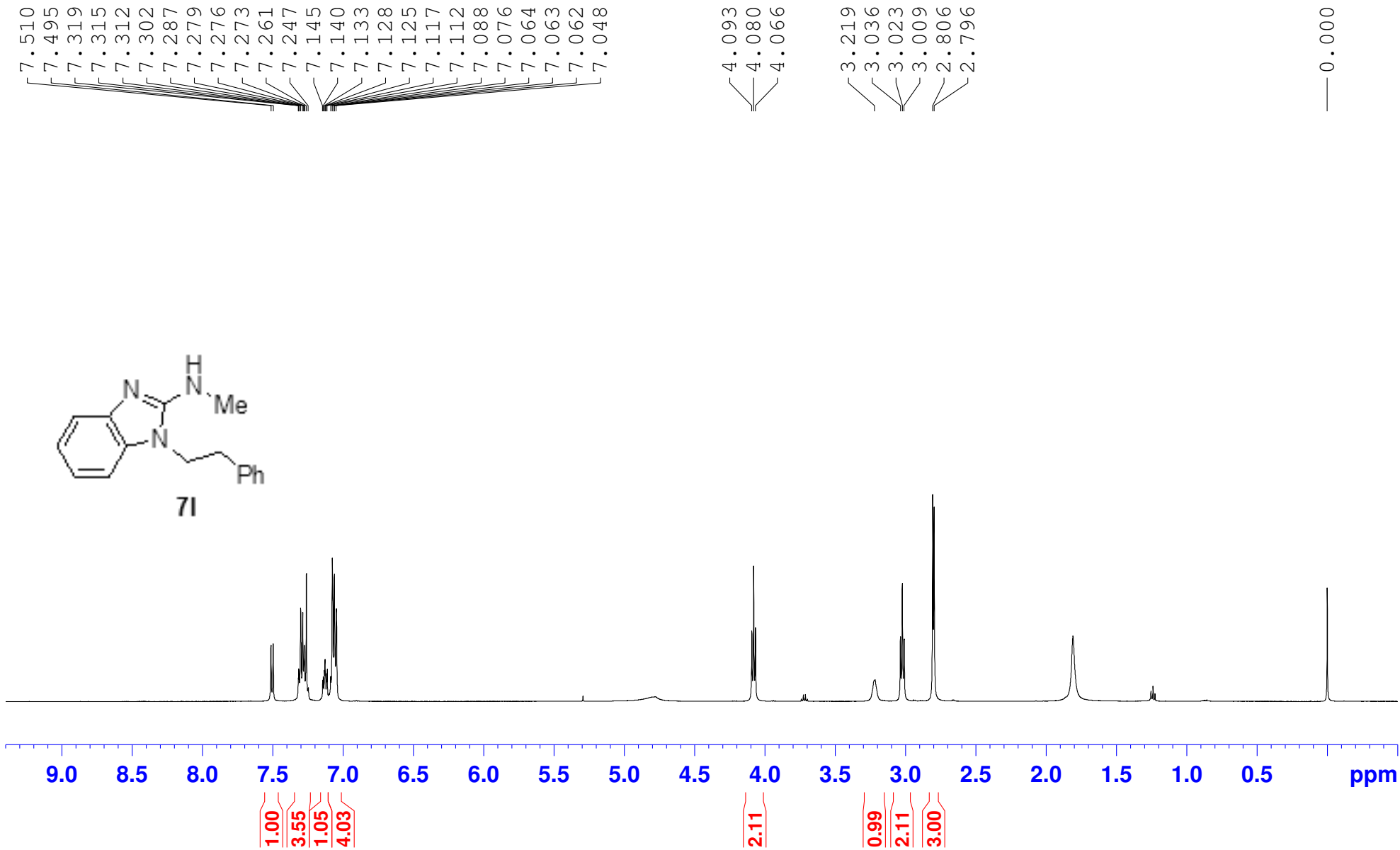
1-benzyl-N-methyl-1H-benzo[d]imidazol-2-amine
Proton CDCl3



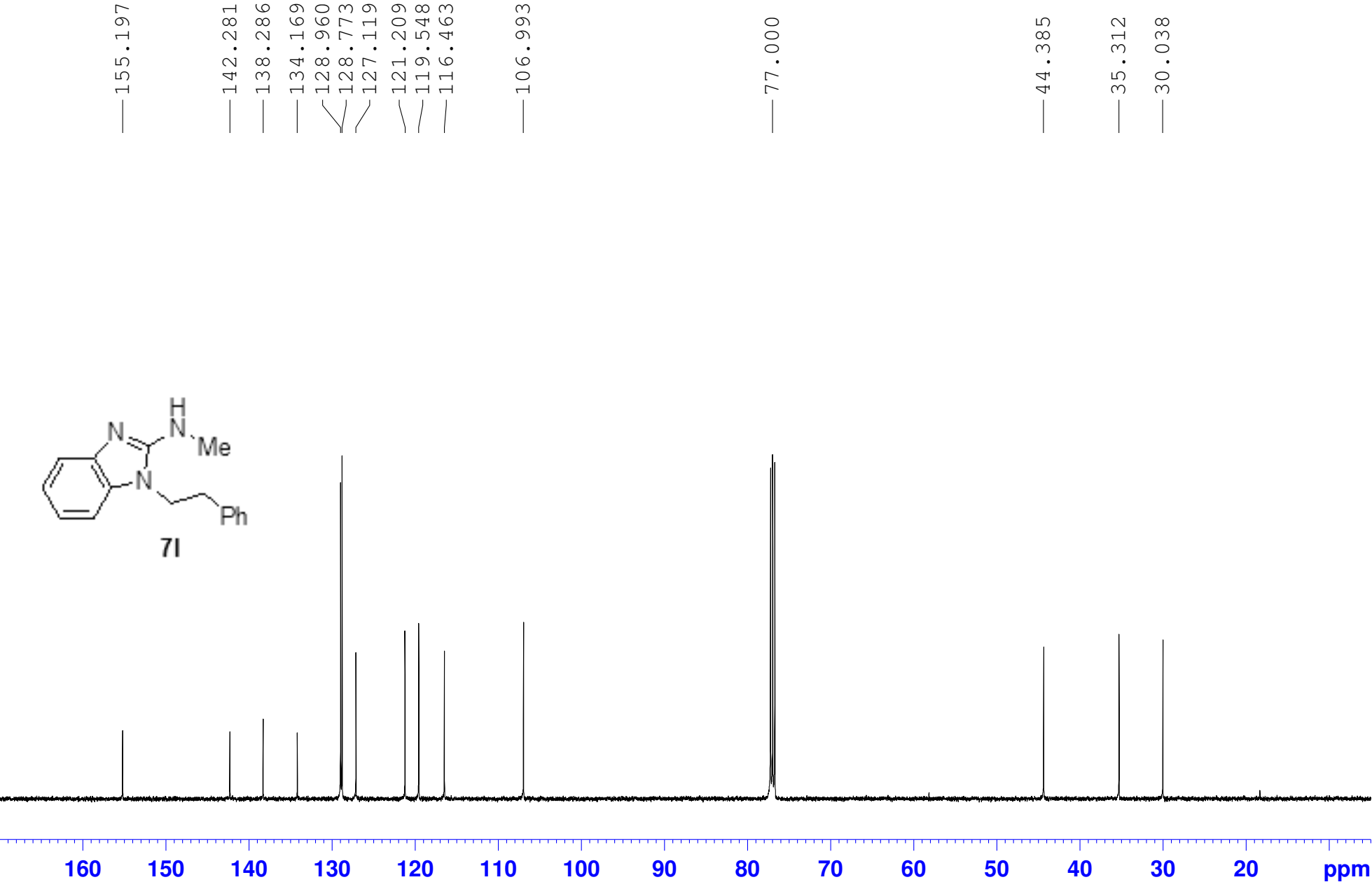
1-benzyl-N-methyl-1H-benzo[d]imidazol-2-amine
C13CPD CDC13



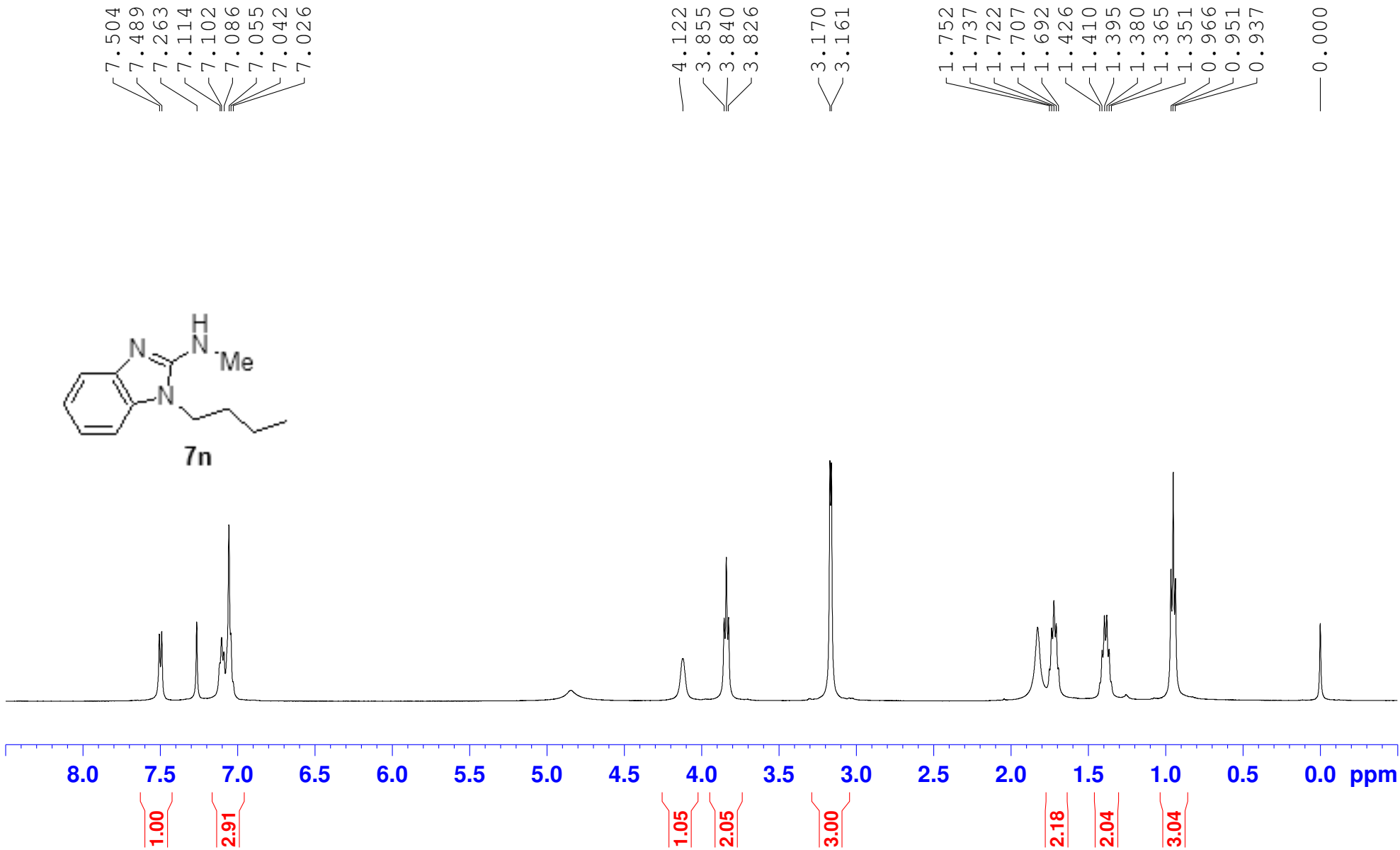
N-methyl-1-phenethyl-1H-benzo[d]imidazol-2-amine
Proton CDCl3



N-methyl-1-phenethyl-1H-benzo[d]imidazol-2-amine
C13CPD CDCL3



1-butyl-N-methyl-1H-benzo[d]imidazol-2-amine
Proton CDCl3



1-butyl-N-methyl-1H-benzo[d]imidazol-2-amine
C13CPD CDCL3

