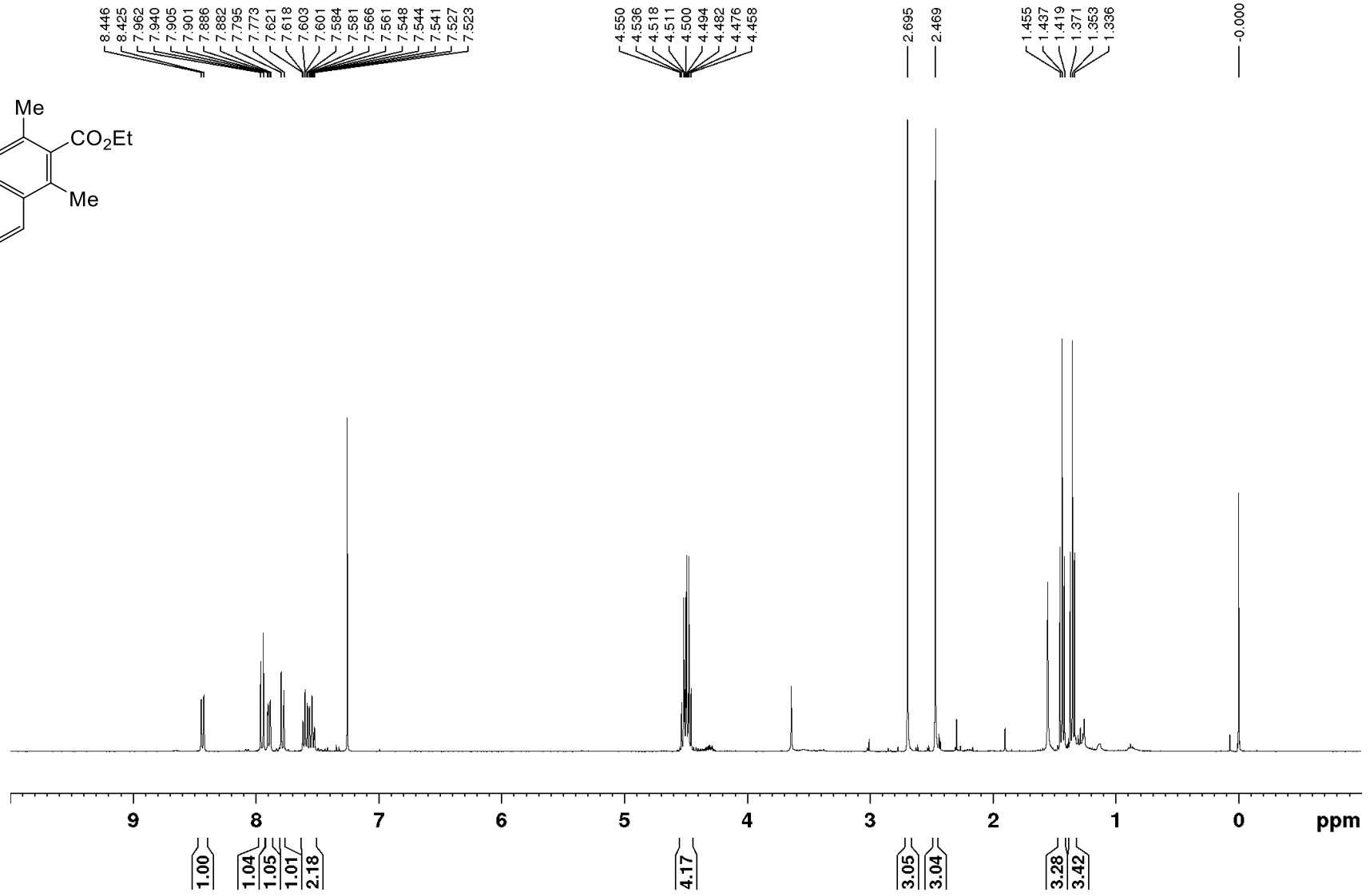
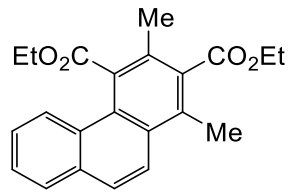
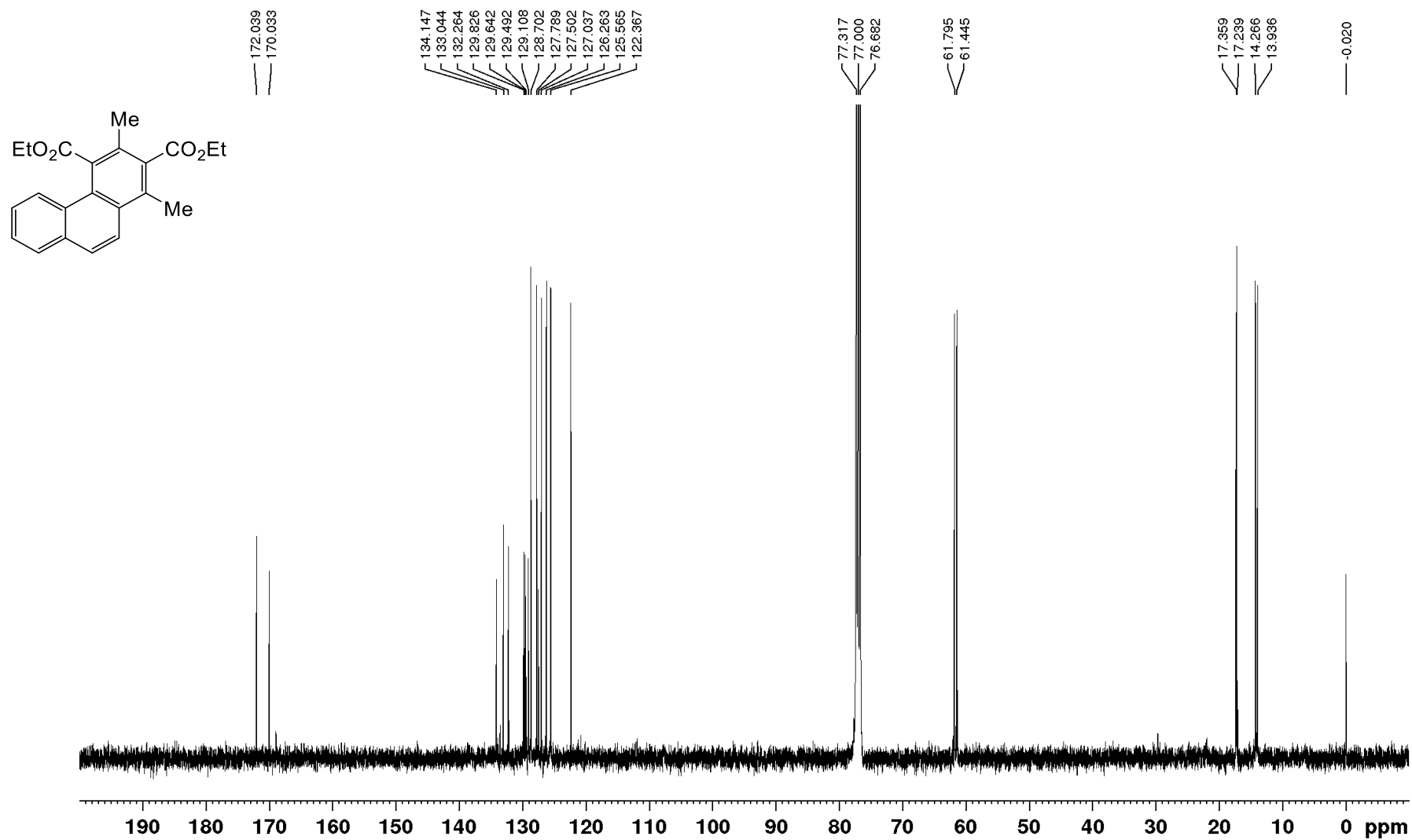


Supporting Information: ^1H and ^{13}C NMR Spectra

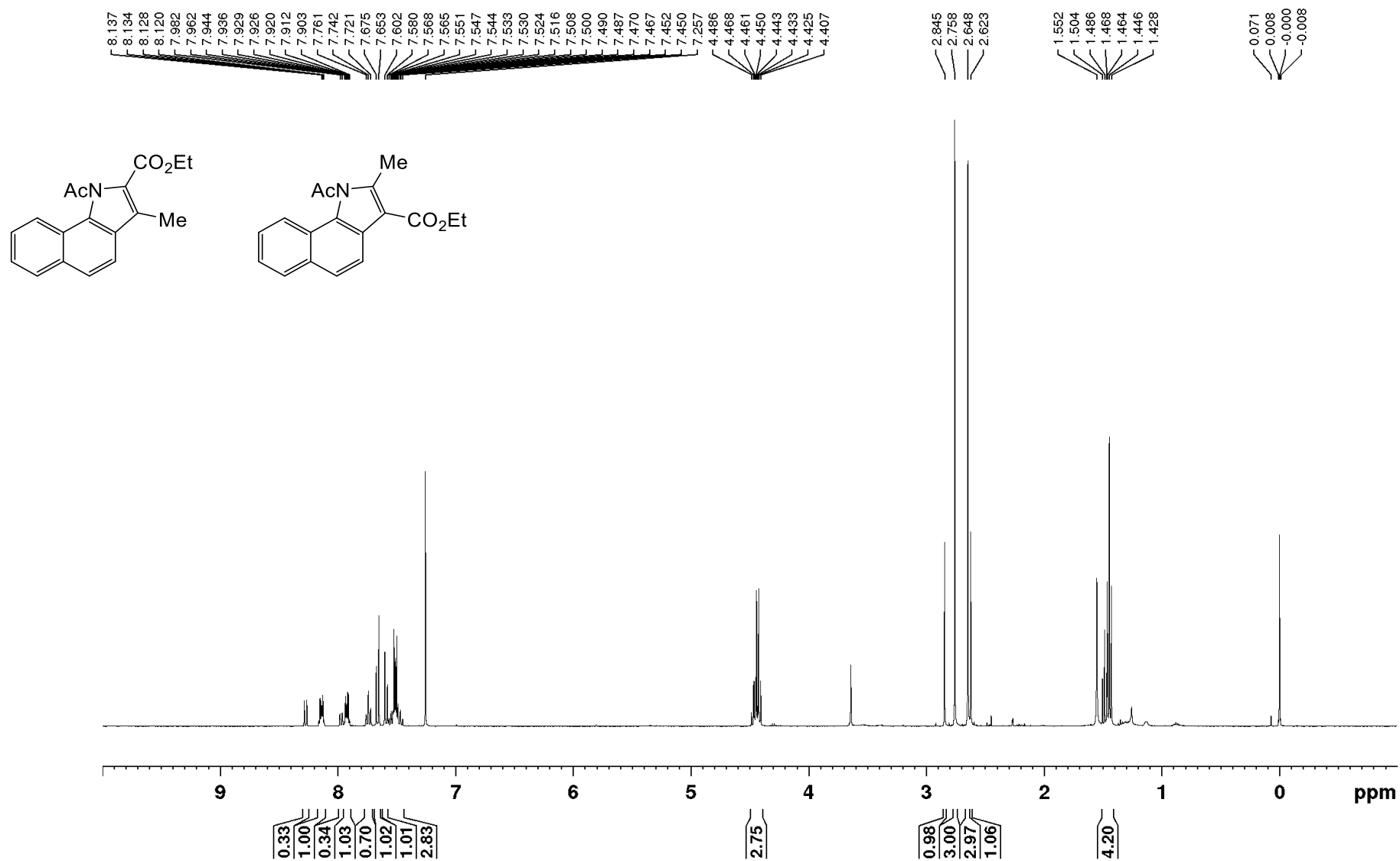
Diethyl 1,3-dimethylphenanthrene-2,4-dicarboxylate (5ca)



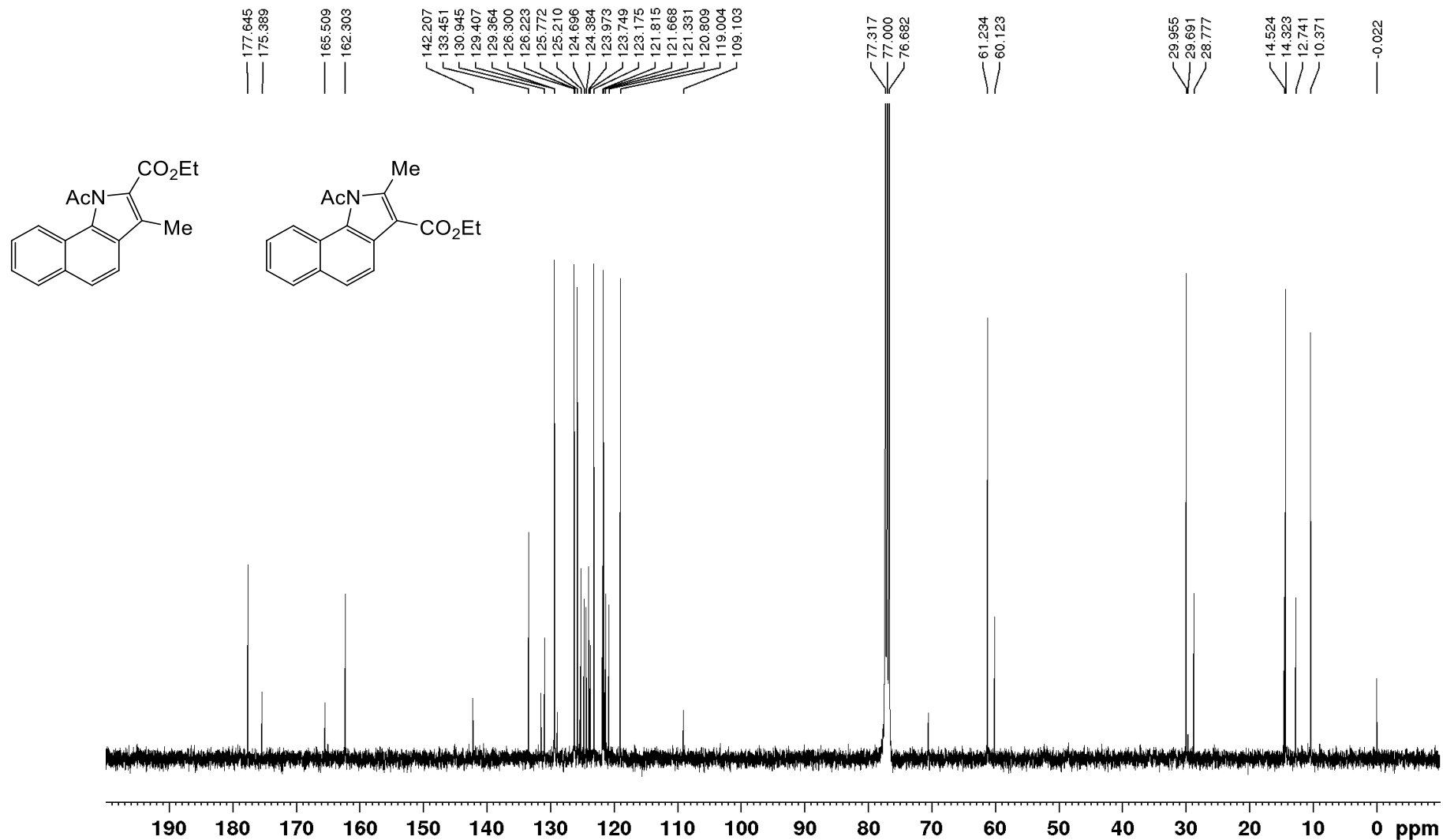
Diethyl 1,3-dimethylphenanthrene-2,4-dicarboxylate (5ca)



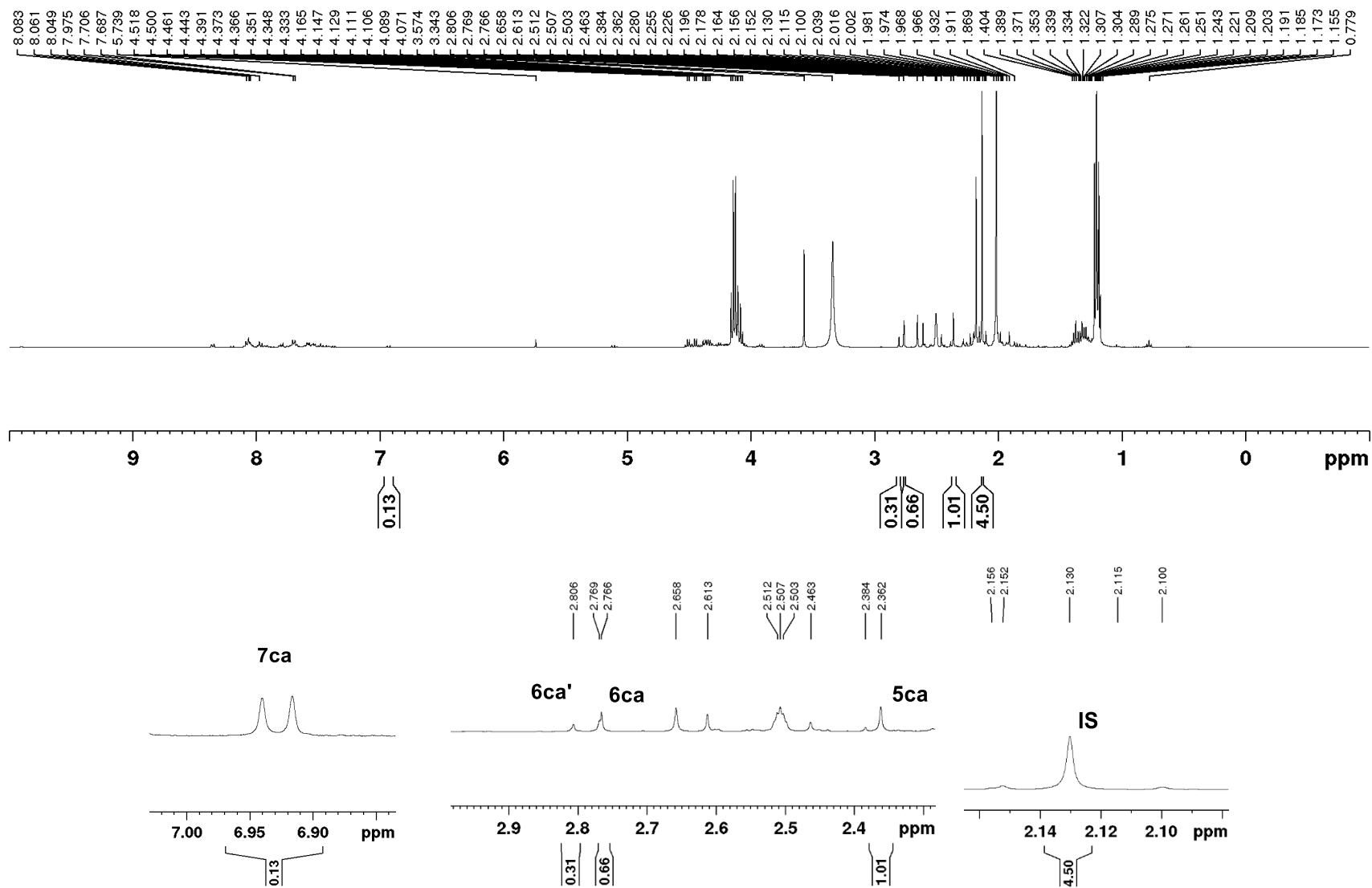
Ethyl 1-acetyl-3-methyl-1*H*-benzo[*g*]indole-2-carboxylate (6ca) and ethyl 1-acetyl-2-methyl-1*H*-benzo[*g*]indole-3-carboxylate (6ca')



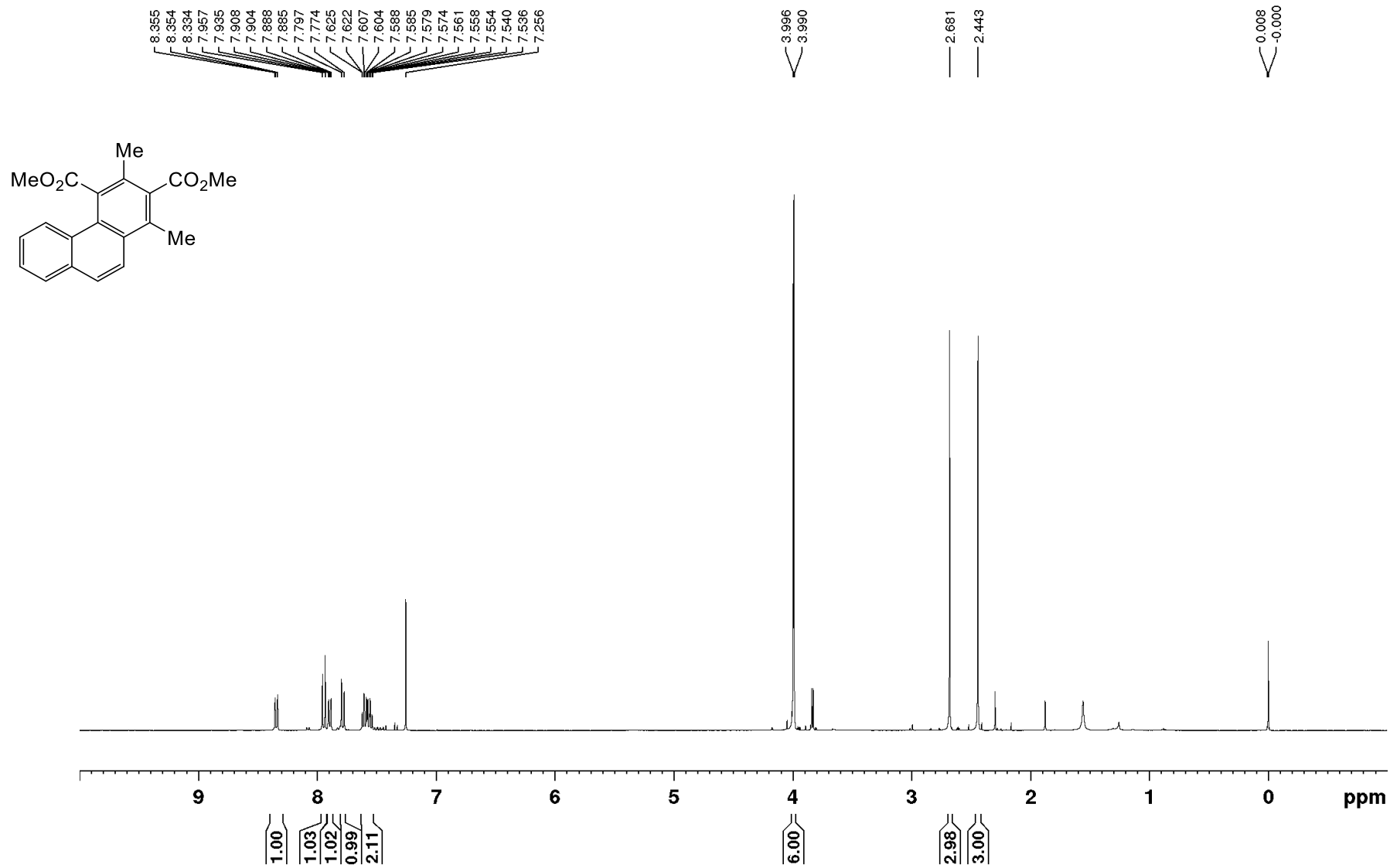
Ethyl 1-acetyl-3-methyl-1*H*-benzo[*g*]indole-2-carboxylate (6ca) and ethyl 1-acetyl-2-methyl-1*H*-benzo[*g*]indole-3-carboxylate (6ca')



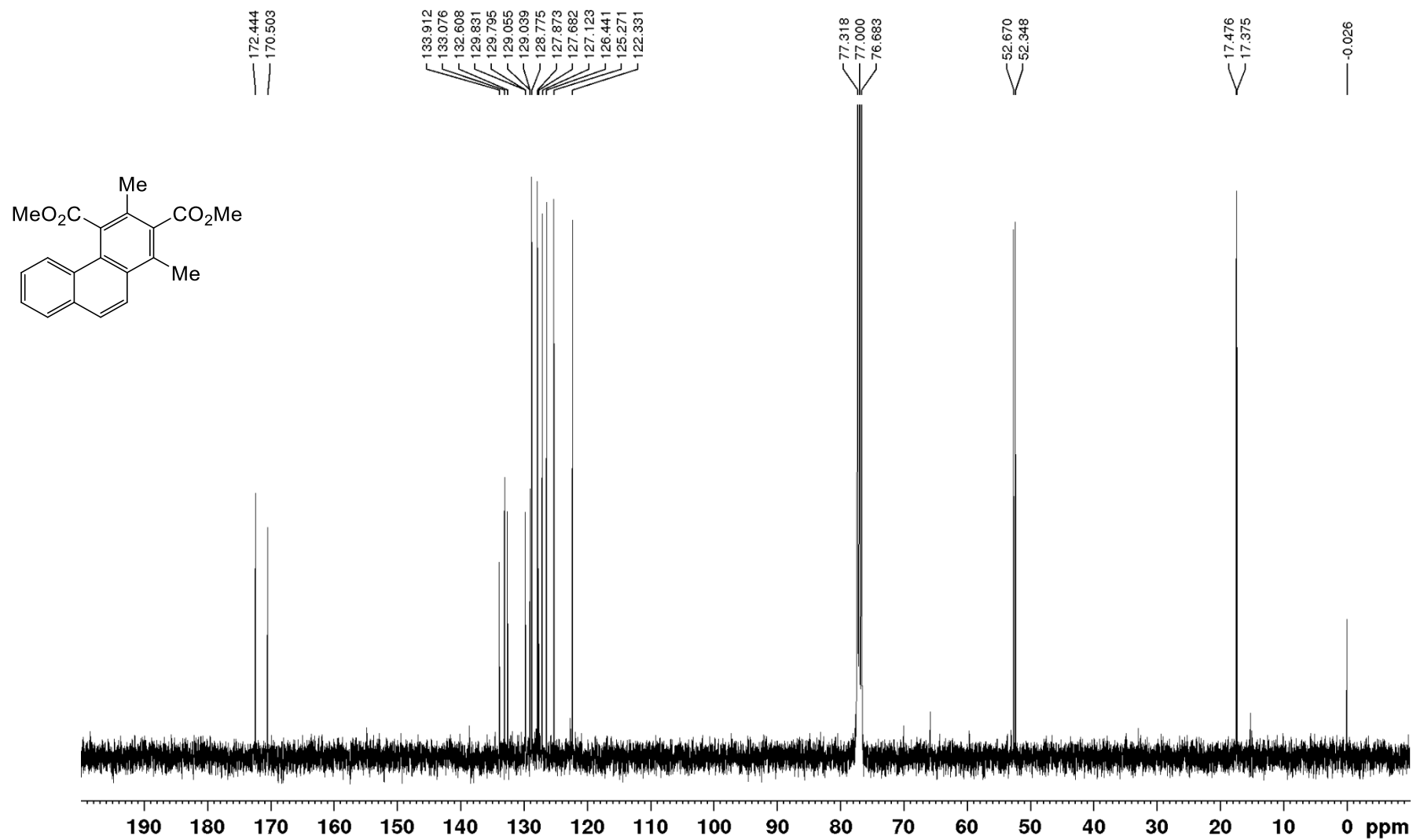
¹H NMR of a mixture of 5ca, 6ca, 6ca', and 7ca with C₆Me₆ in DMSO-d₆



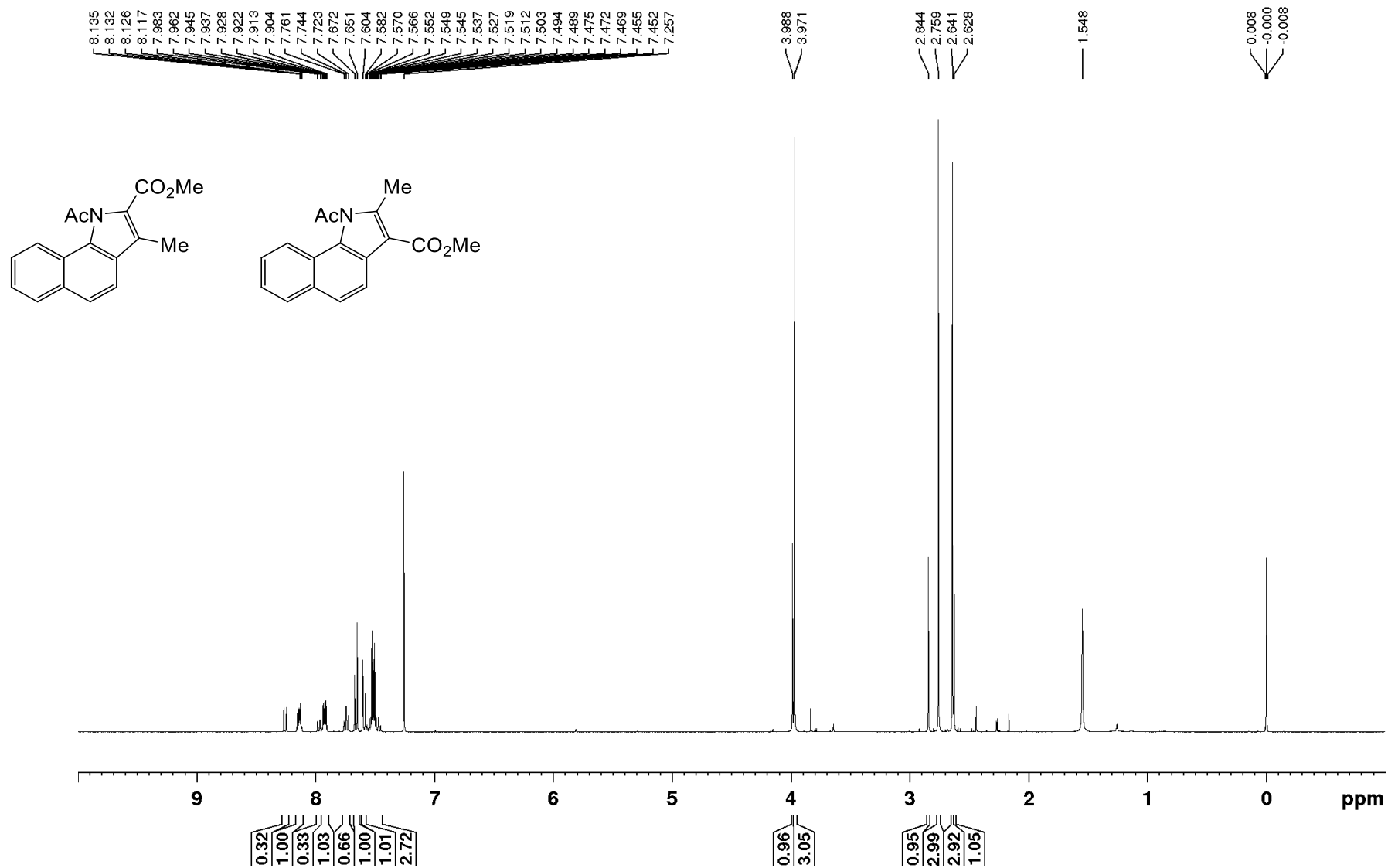
Dimethyl 1,3-dimethylphenanthrene-2,4-dicarboxylate (5cb)



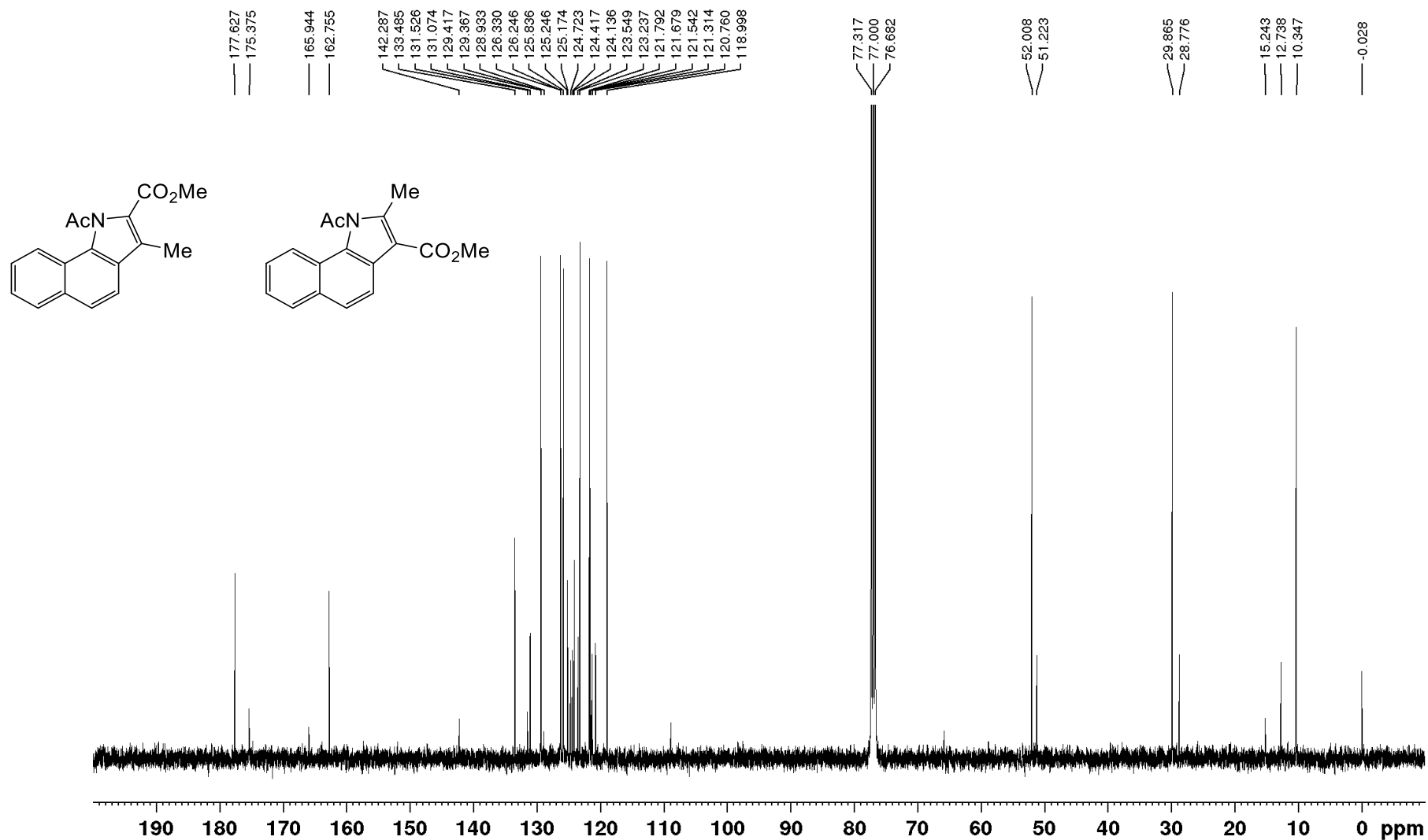
Dimethyl 1,3-dimethylphenanthrene-2,4-dicarboxylate (5cb)



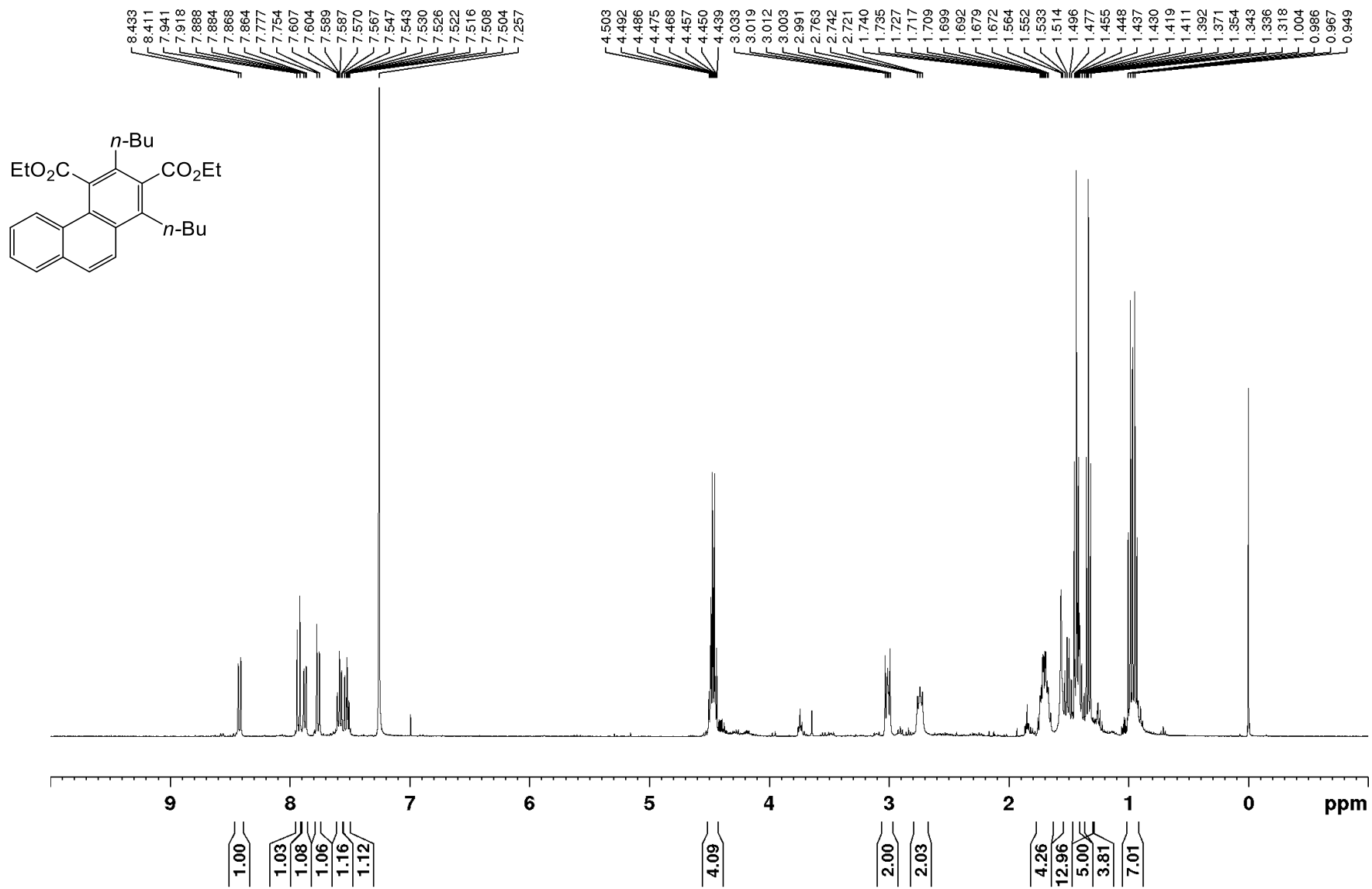
Methyl 1-acetyl-3-methyl-1*H*-benzo[*g*]indole-2-carboxylate (6**cb**) and methyl 1-acetyl-2-methyl-1*H*-benzo[*g*]indole-3-carboxylate (6**cb'**)



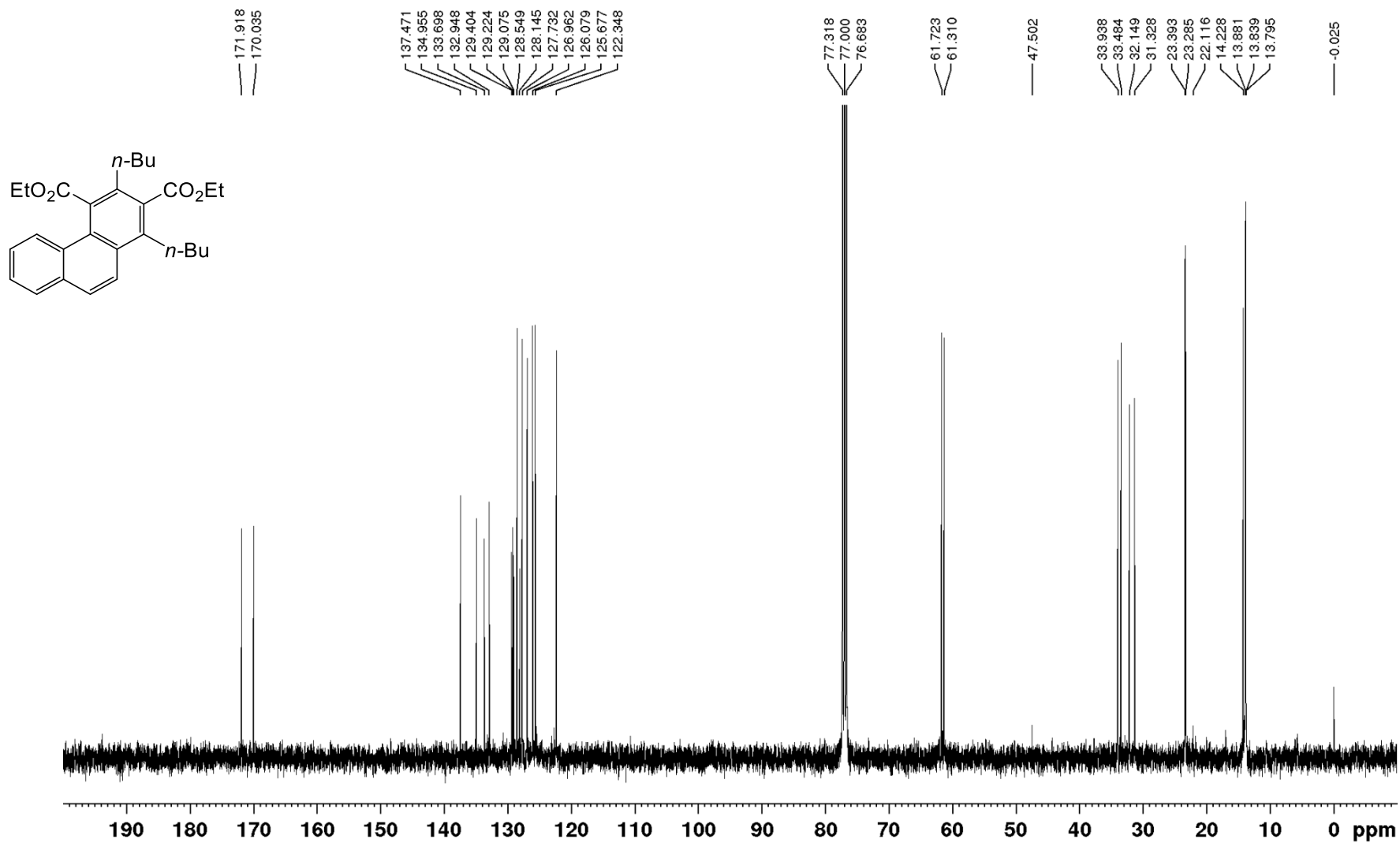
Methyl 1-acetyl-3-methyl-1*H*-benzo[*g*]indole-2-carboxylate (6b) and methyl 1-acetyl-2-methyl-1*H*-benzo[*g*]indole-3-carboxylate (6b')



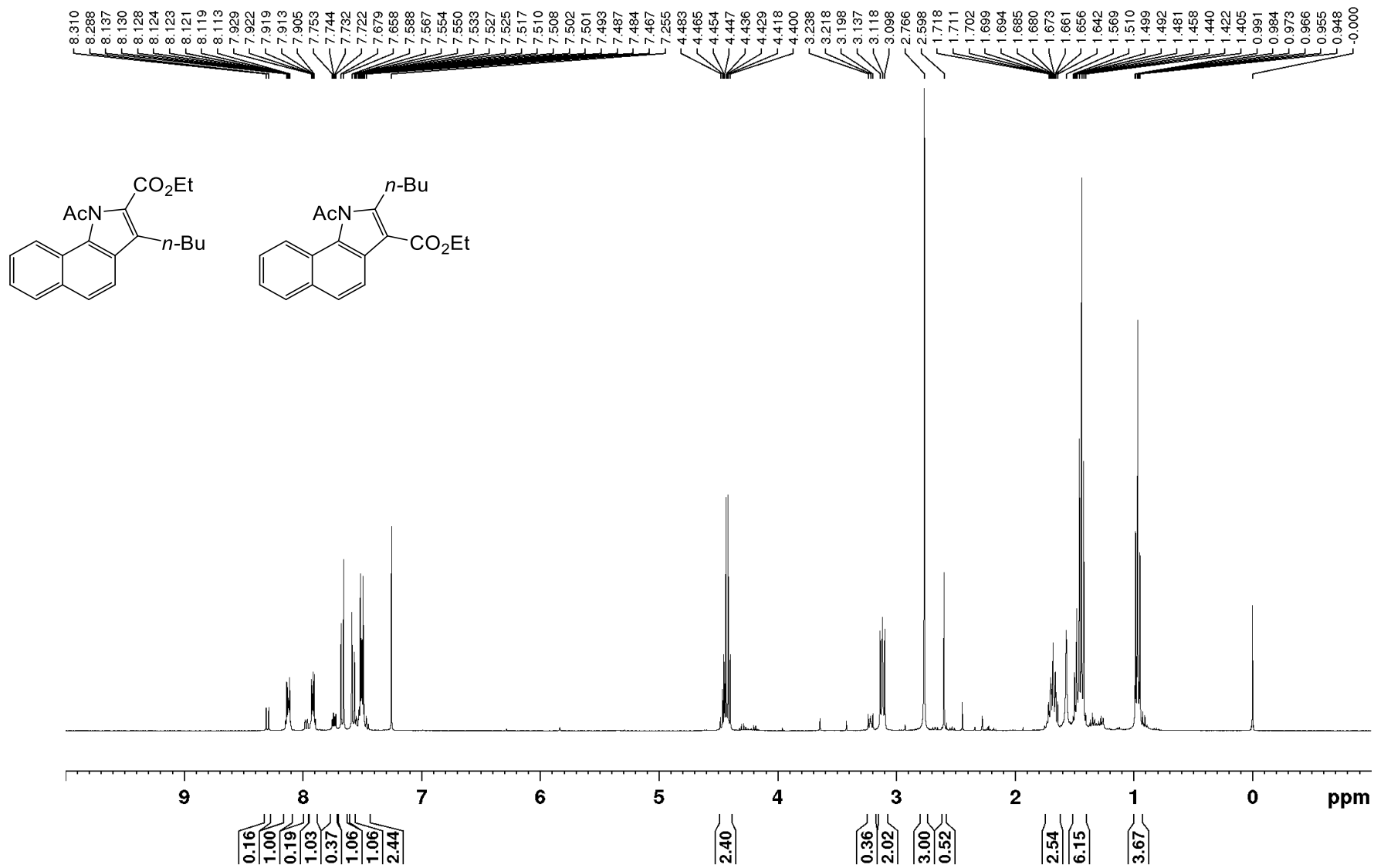
Diethyl 1,3-dibutylphenanthrene-2,4-dicarboxylate (5cc)



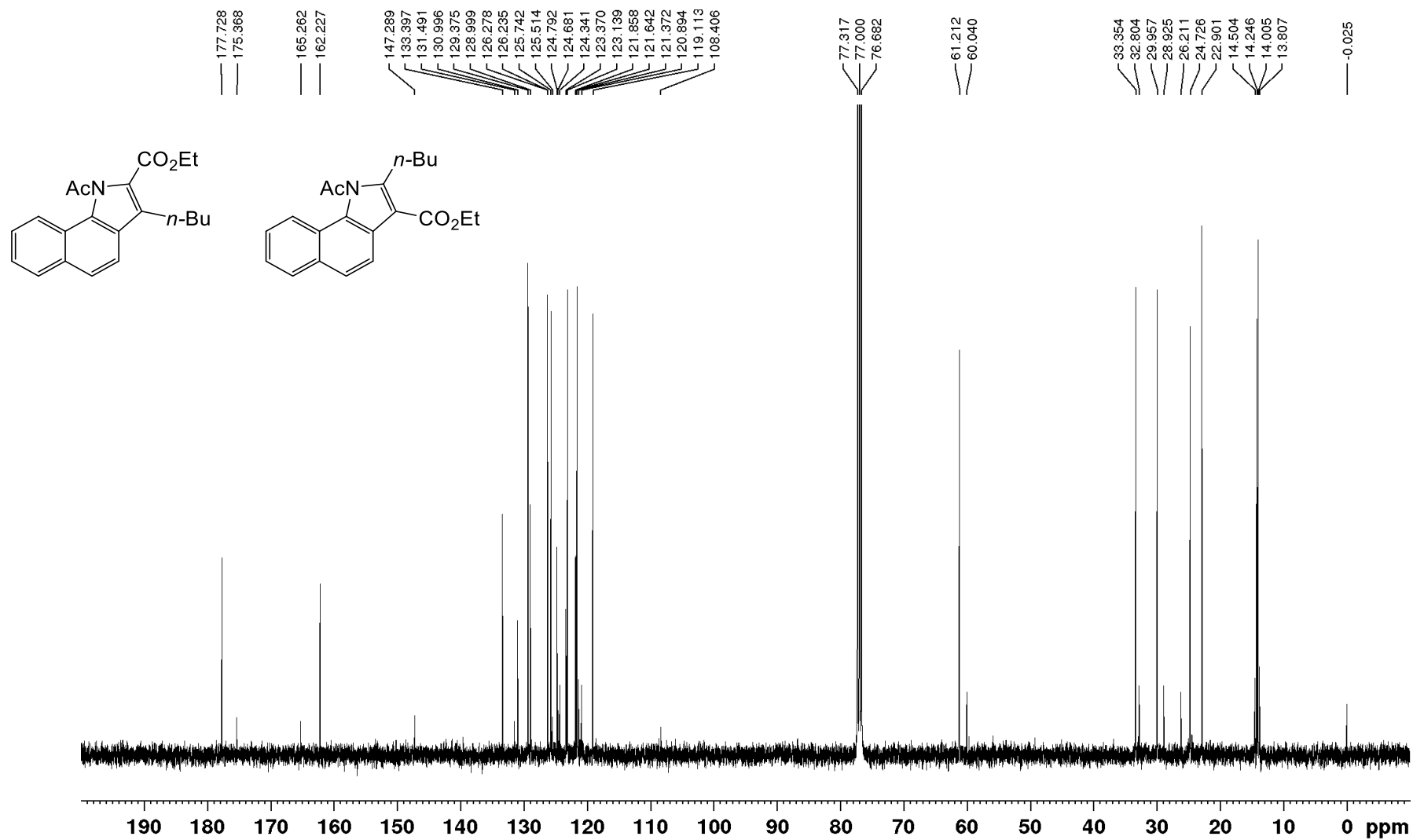
Diethyl 1,3-dibutylphenanthrene-2,4-dicarboxylate (5cc)



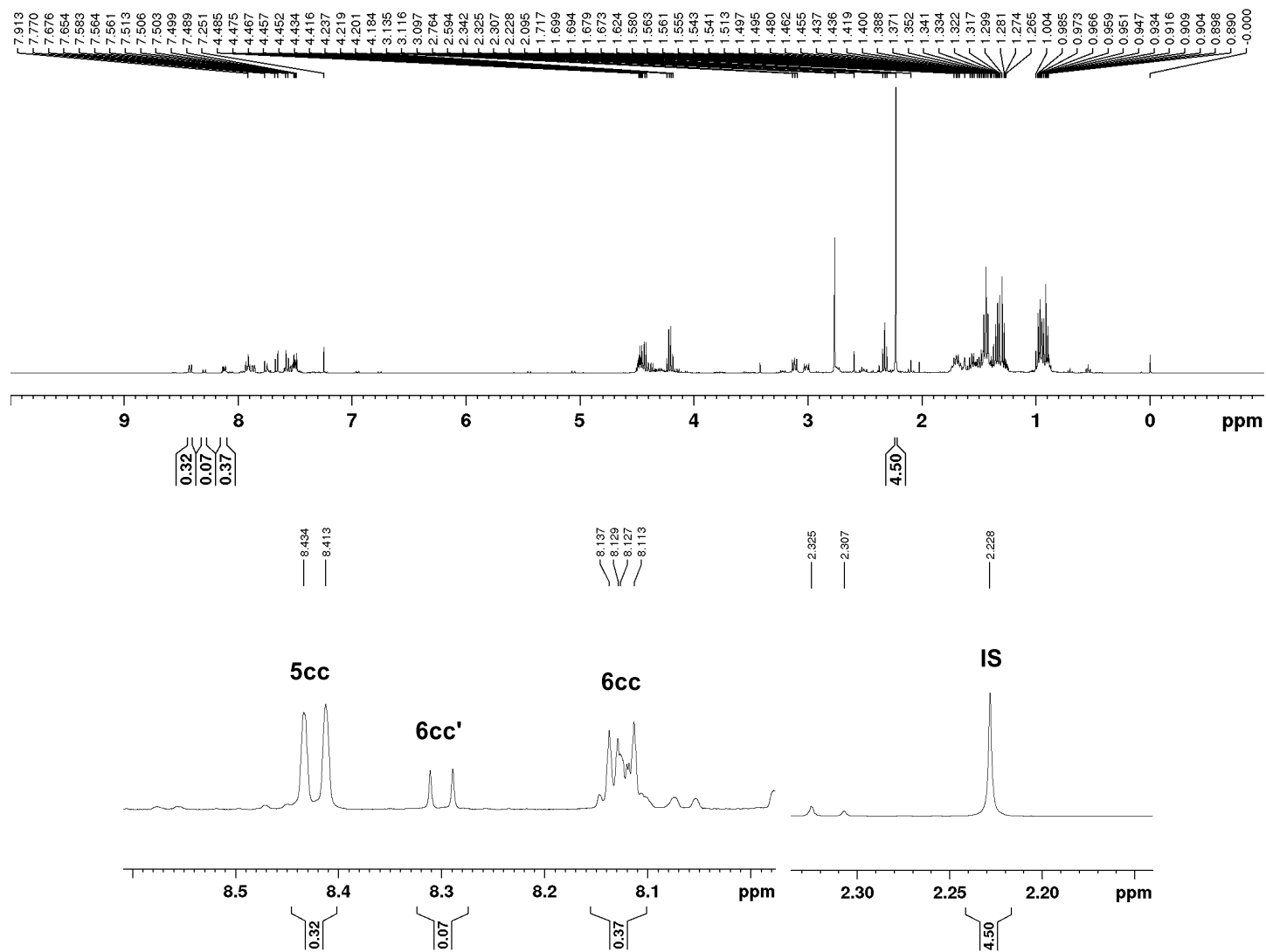
Diethyl 1,3-dibutylphenanthrene-2,4-dicarboxylate (5cc') and diethyl 1,3-dibutylphenanthrene-2,4-dicarboxylate (6cc')



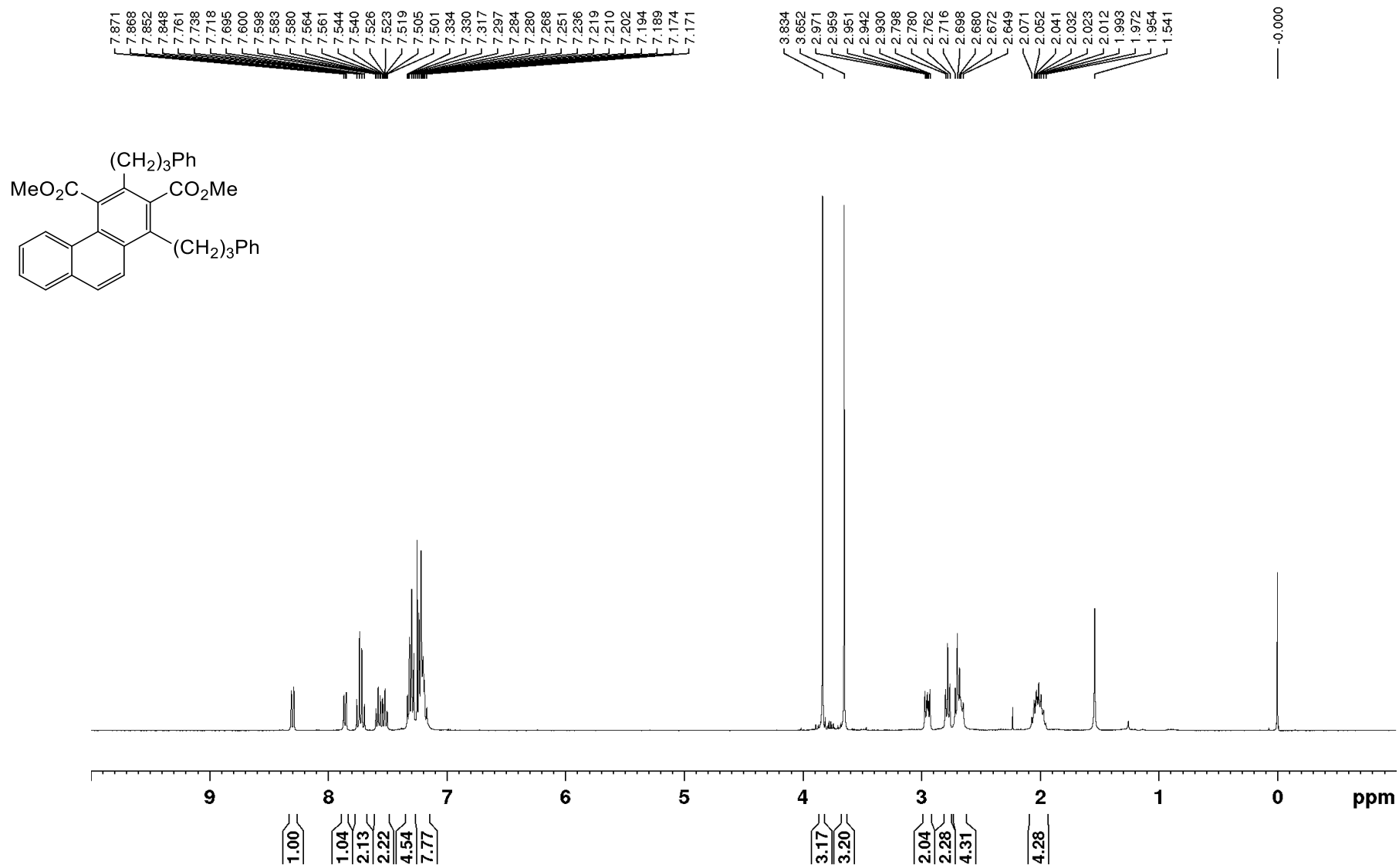
Ethyl 1-acetyl-3-butyl-1*H*-benzo[*g*]indole-2-carboxylate (6cc) and ethyl 1-acetyl-2-butyl-1*H*-benzo[*g*]indole-3-carboxylate (6cc')



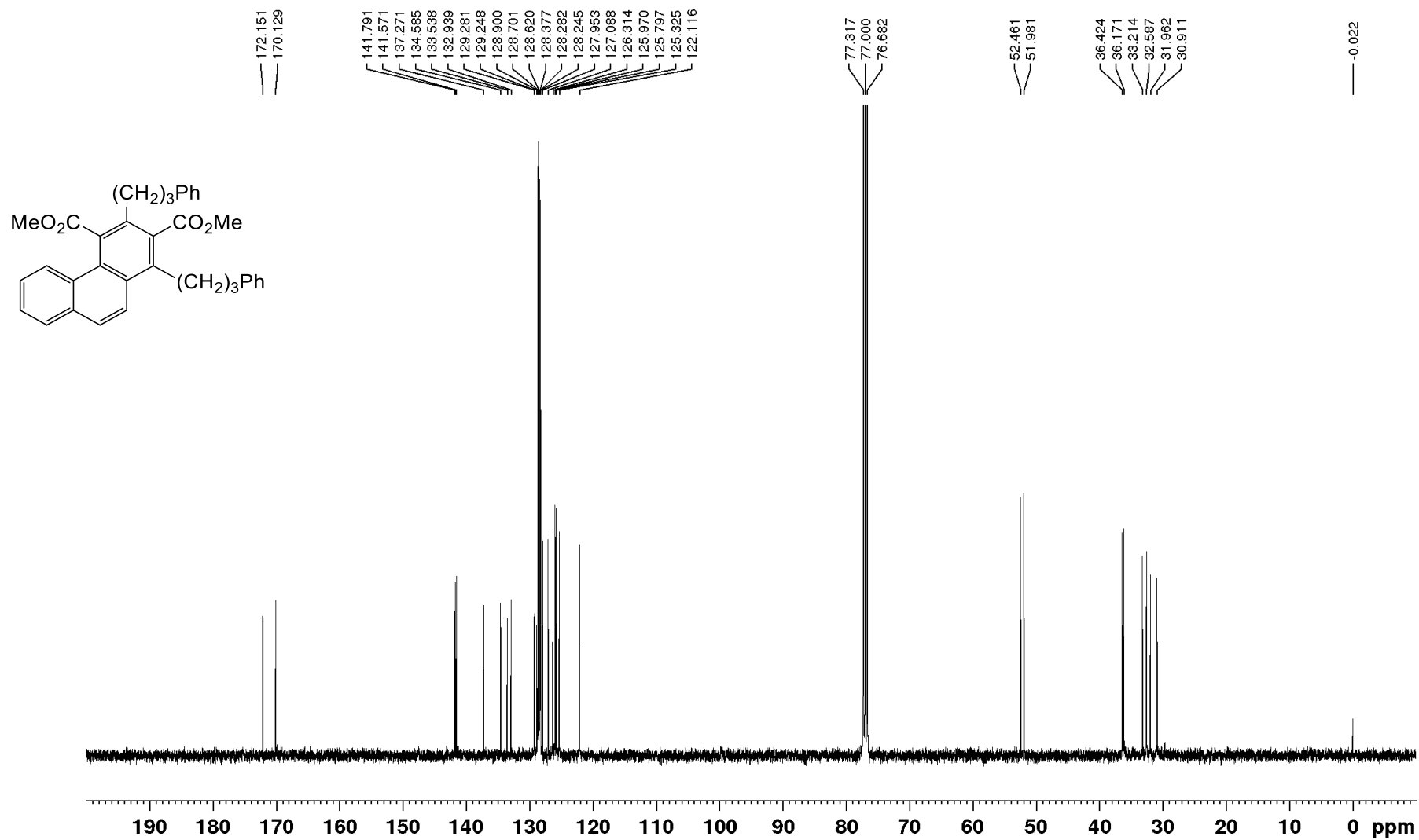
¹H NMR of a mixture of 5cc, 6cc, and 6cc' with C₆Me₆ in CDCl₃



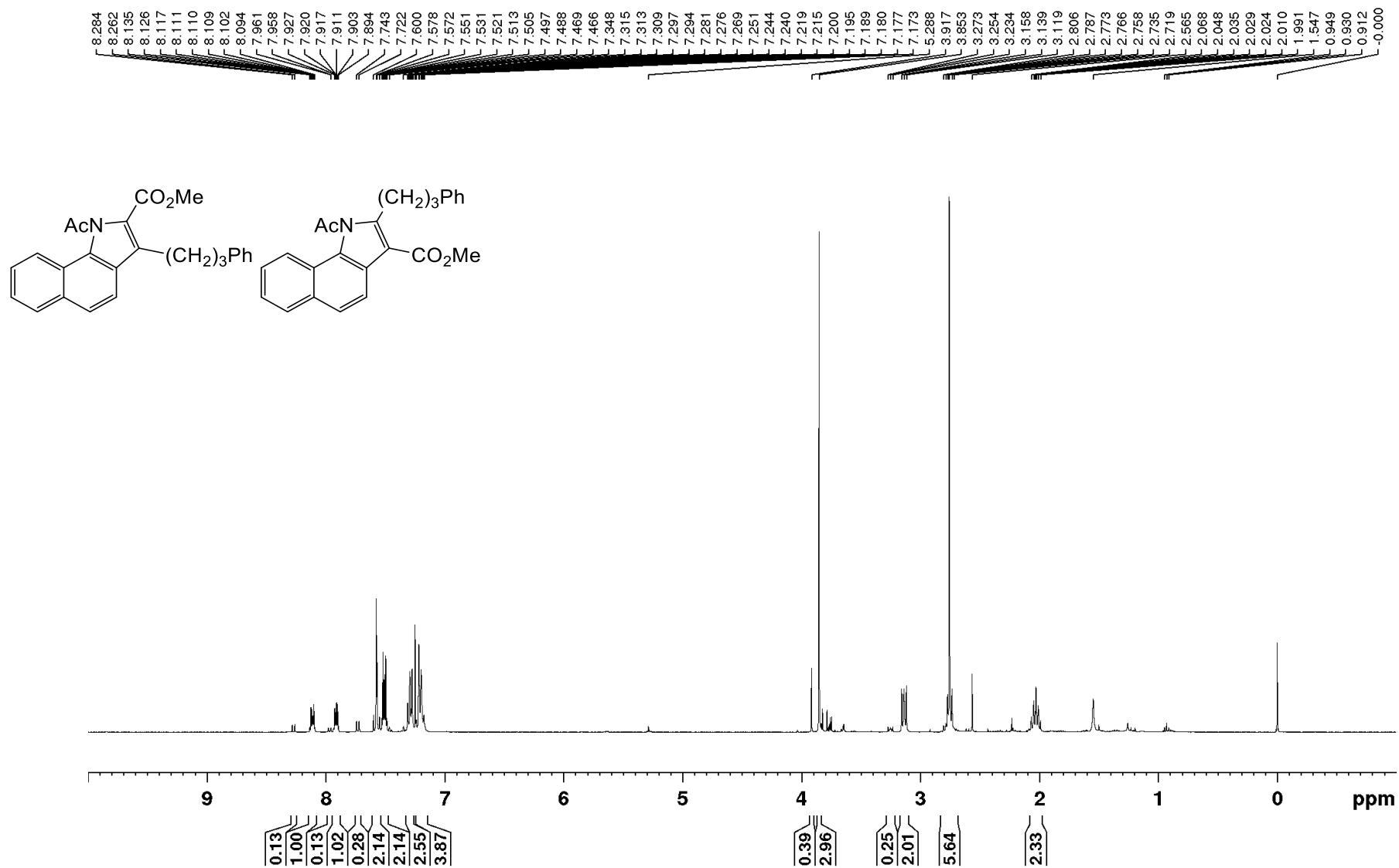
Dimethyl 1,3-bis(3-phenylpropyl)phenanthrene-2,4-dicarboxylate (5cd)



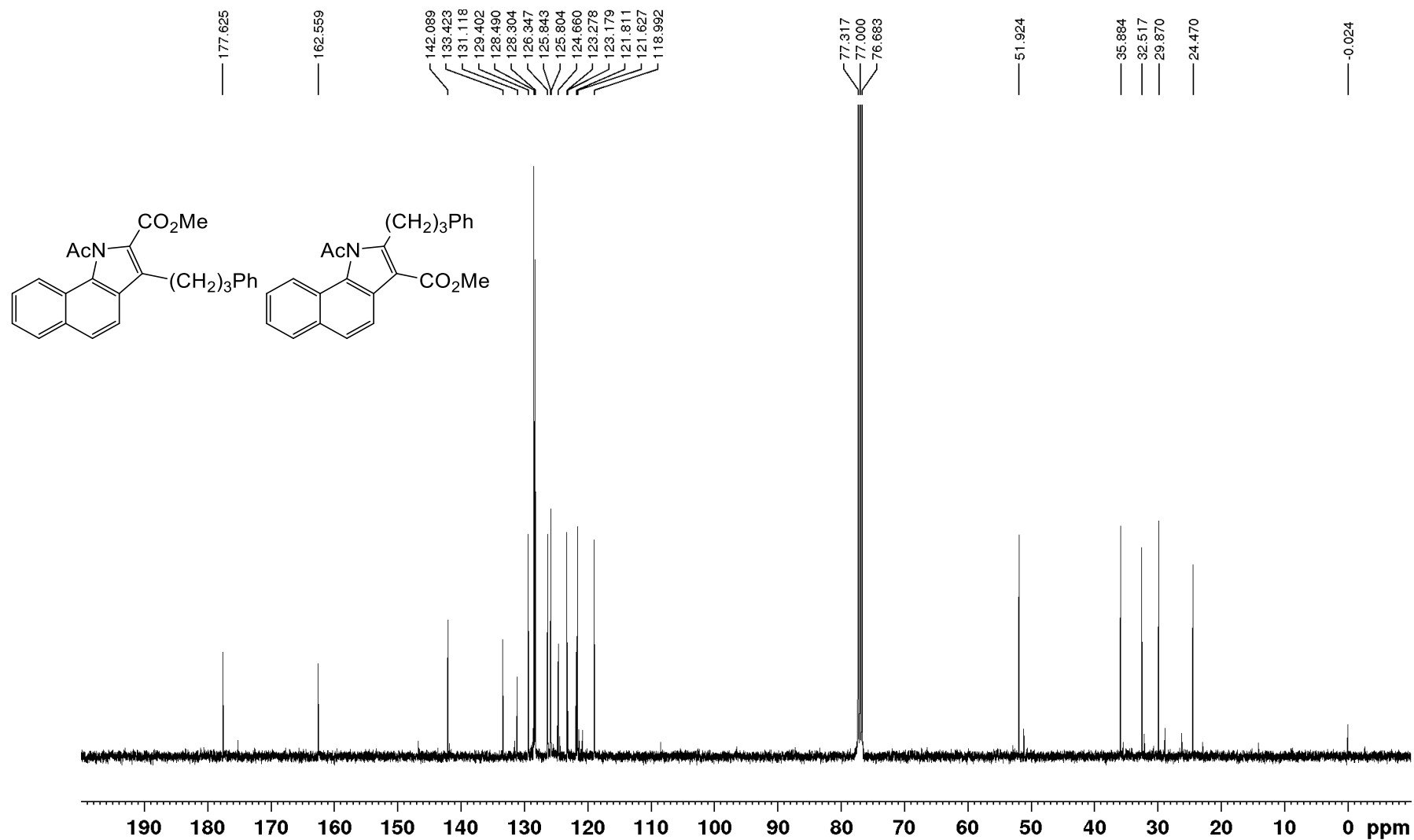
Dimethyl 1,3-bis(3-phenylpropyl)phenanthrene-2,4-dicarboxylate (5cd)



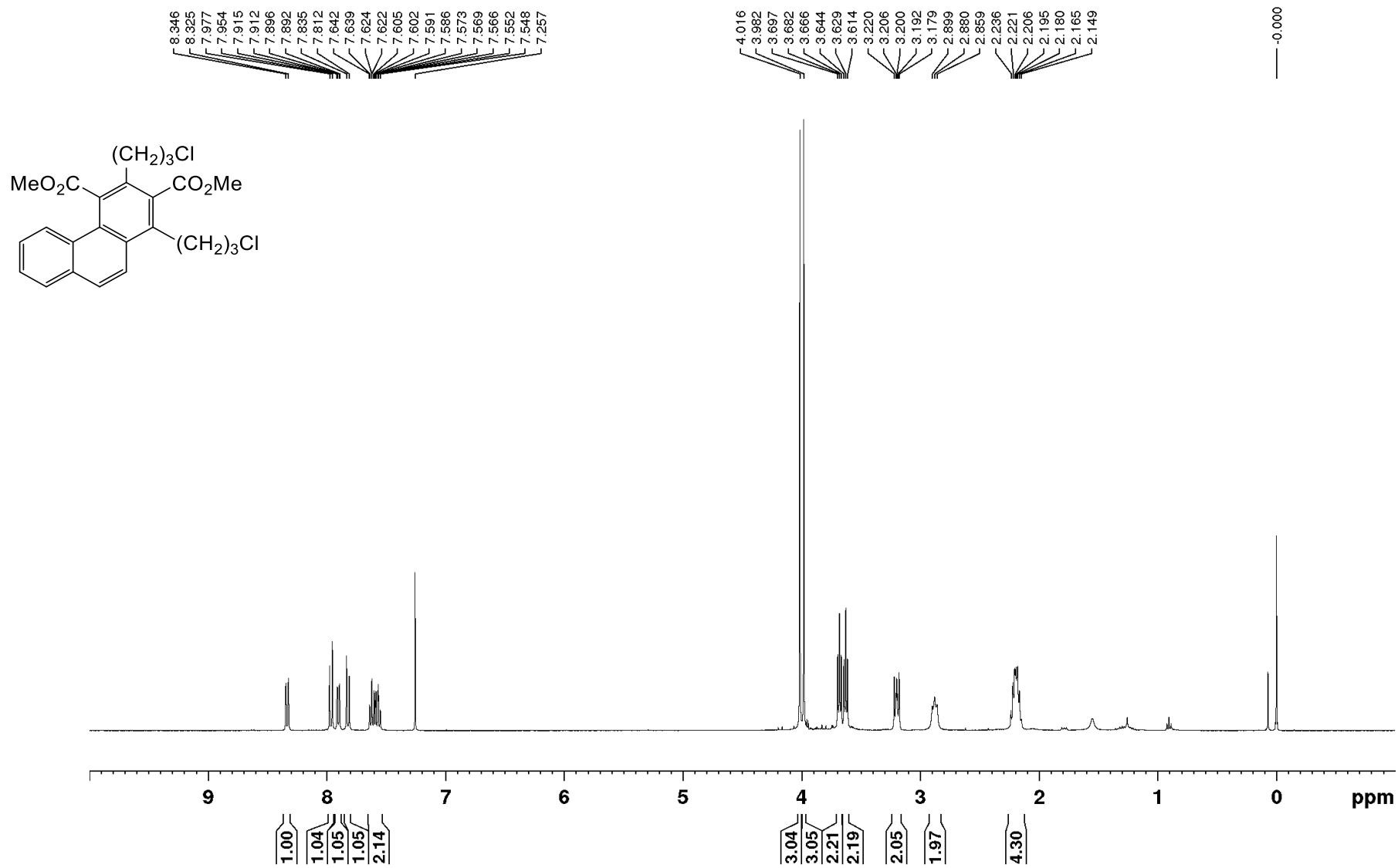
Methyl 1-acetyl-3-(3-phenylpropyl)-1*H*-benzo[*g*]indole-2-carboxylate (6cd) and methyl 1-acetyl-2-(3-phenylpropyl)-1*H*-benzo[*g*]indole-3-carboxylate (6cd')



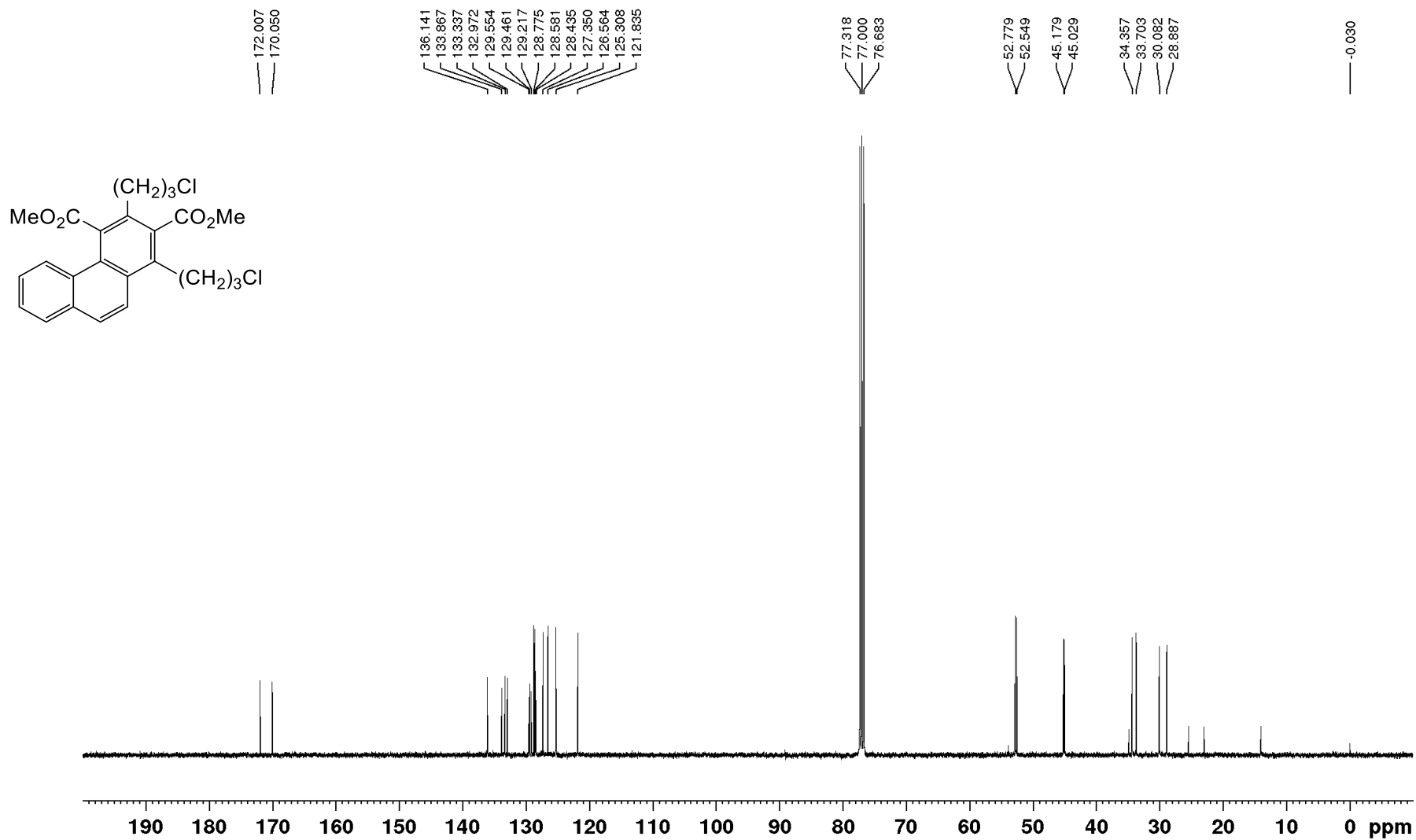
Methyl 1-acetyl-3-(3-phenylpropyl)-1*H*-benzo[*g*]indole-2-carboxylate (6cd) and methyl 1-acetyl-2-(3-phenylpropyl)-1*H*-benzo[*g*]indole-3-carboxylate (6cd')



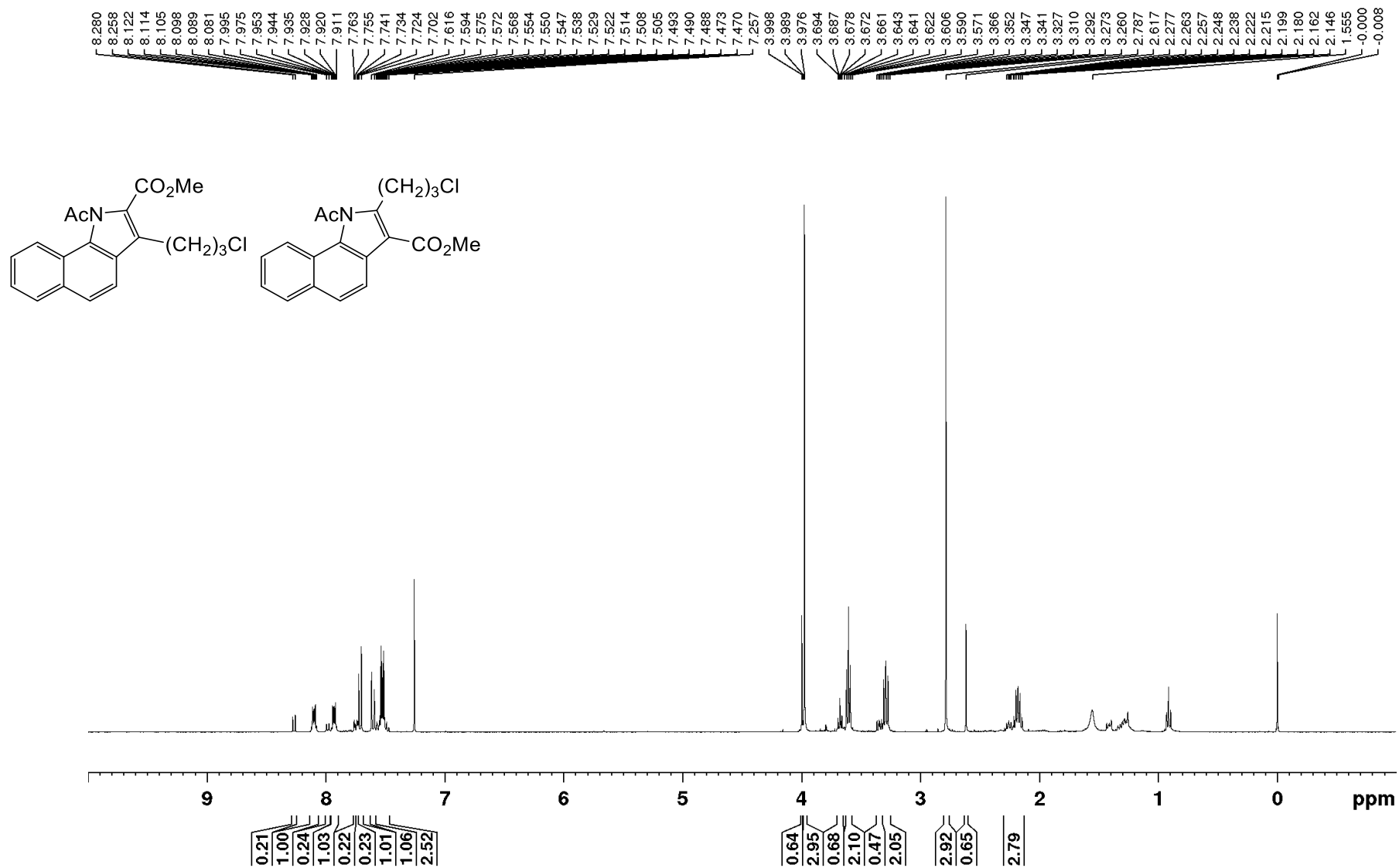
Dimethyl 1,3-bis(3-chloropropyl)phenanthrene-2,4-dicarboxylate (5ce)



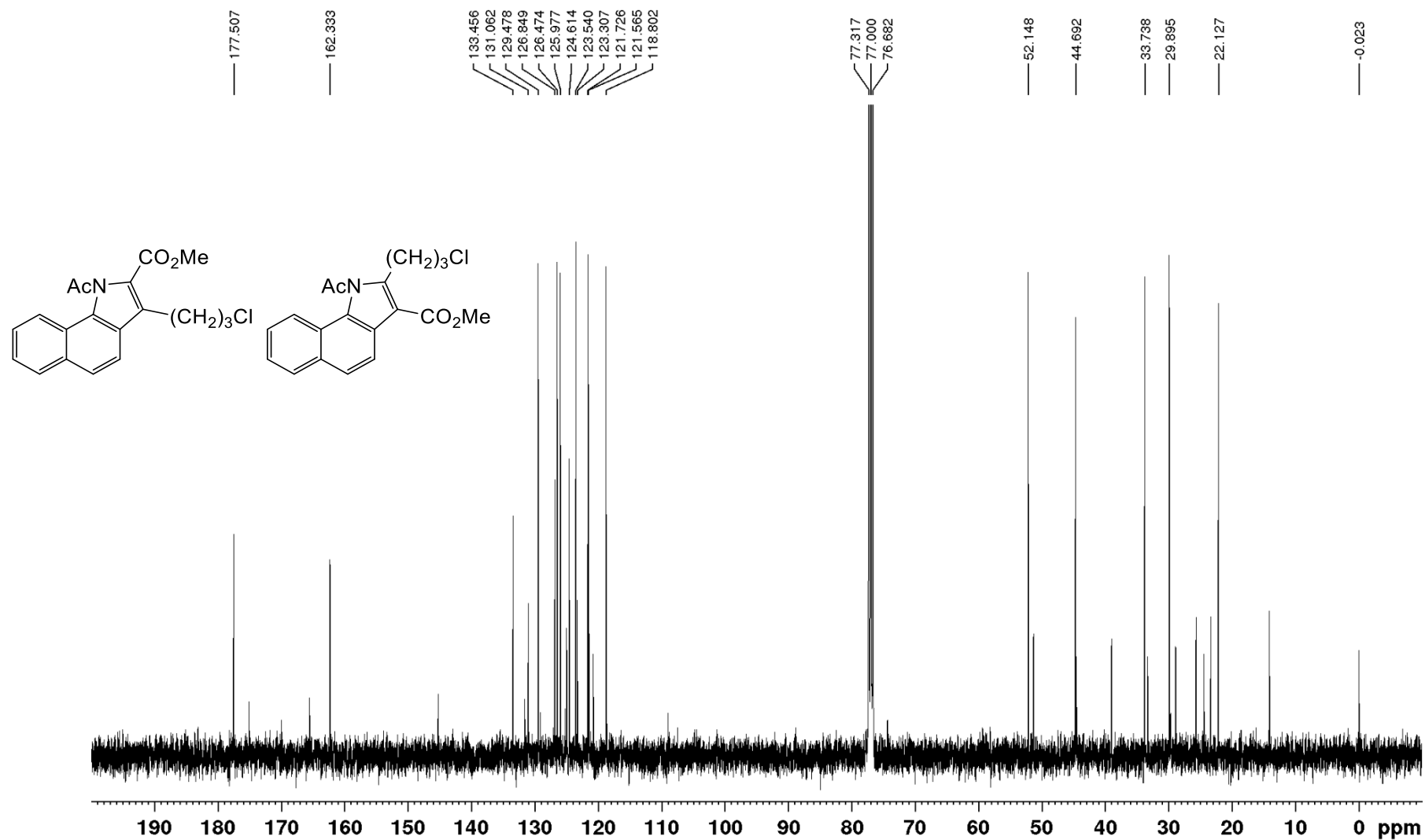
Dimethyl 1,3-bis(3-chloropropyl)phenanthrene-2,4-dicarboxylate (5ce)



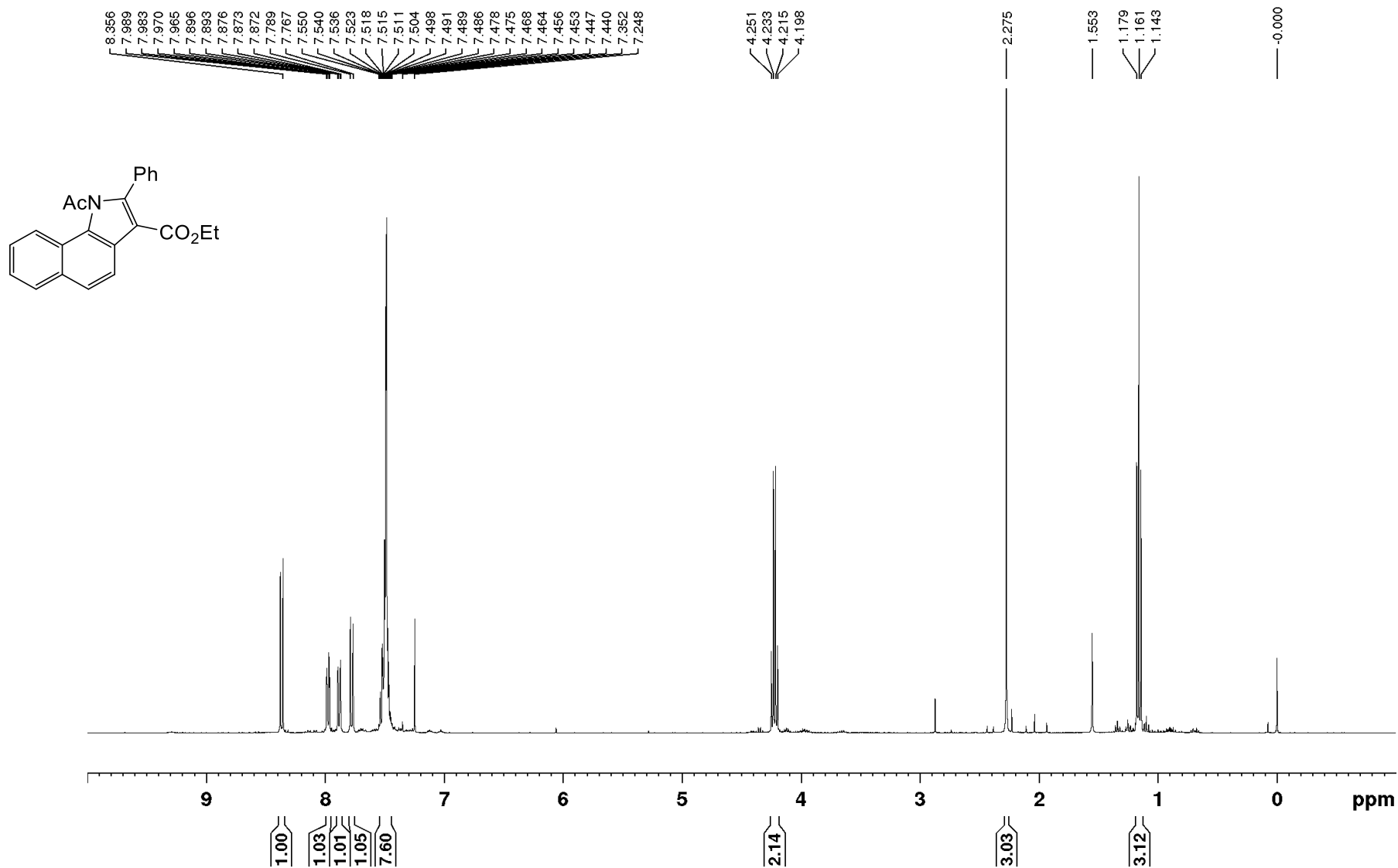
Methyl 1-acetyl-3-(3-chloropropyl)-1*H*-benzo[*g*]indole-2-carboxylate (6ce) and methyl 1-acetyl-2-(3-chloropropyl)-1*H*-benzo[*g*]indole-3-carboxylate (6ce')



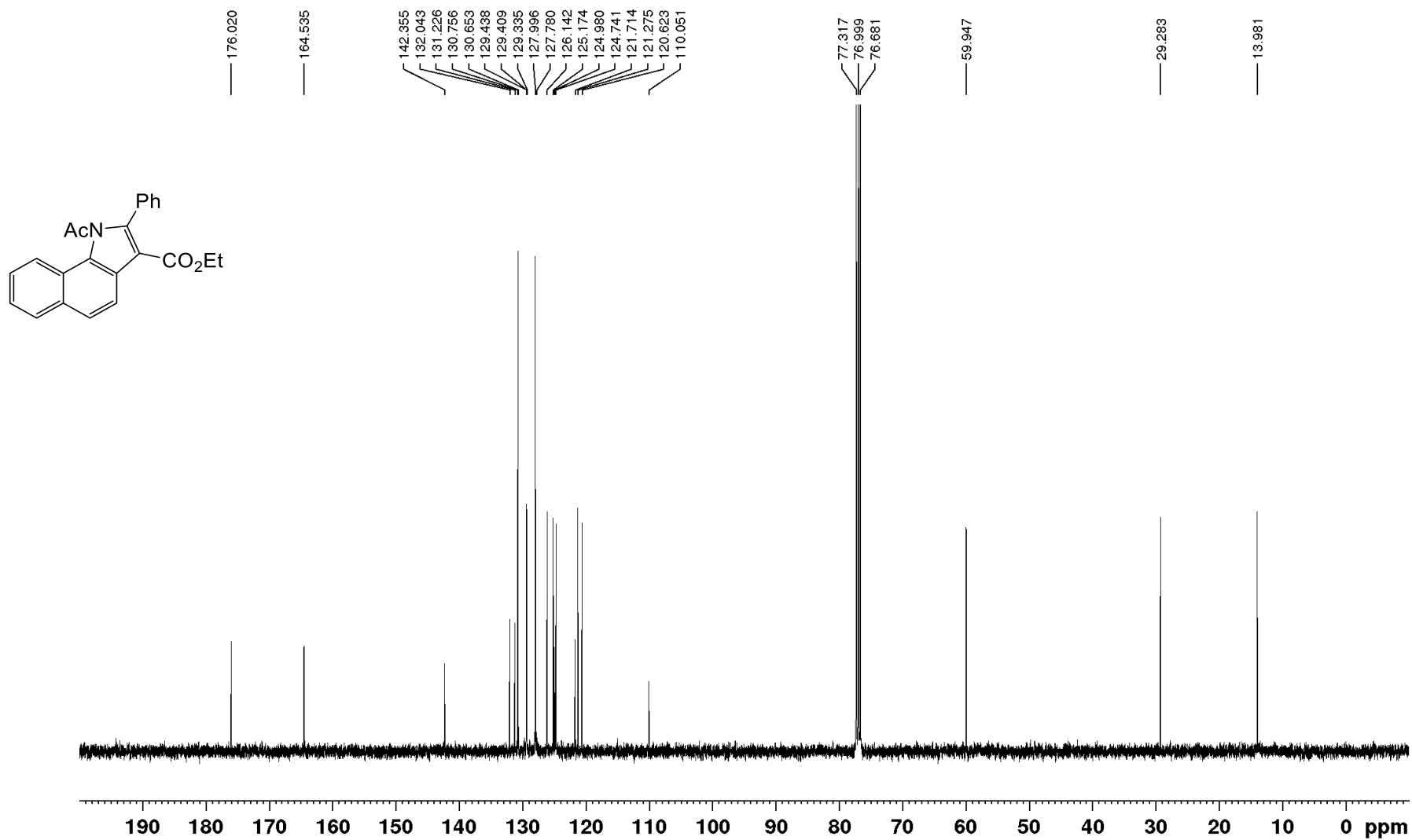
Methyl 1-acetyl-3-(3-chloropropyl)-1*H*-benzo[*g*]indole-2-carboxylate (6*ce*) and methyl 1-acetyl-2-(3-chloropropyl)-1*H*-benzo[*g*]indole-3-carboxylate (6*ce'*)



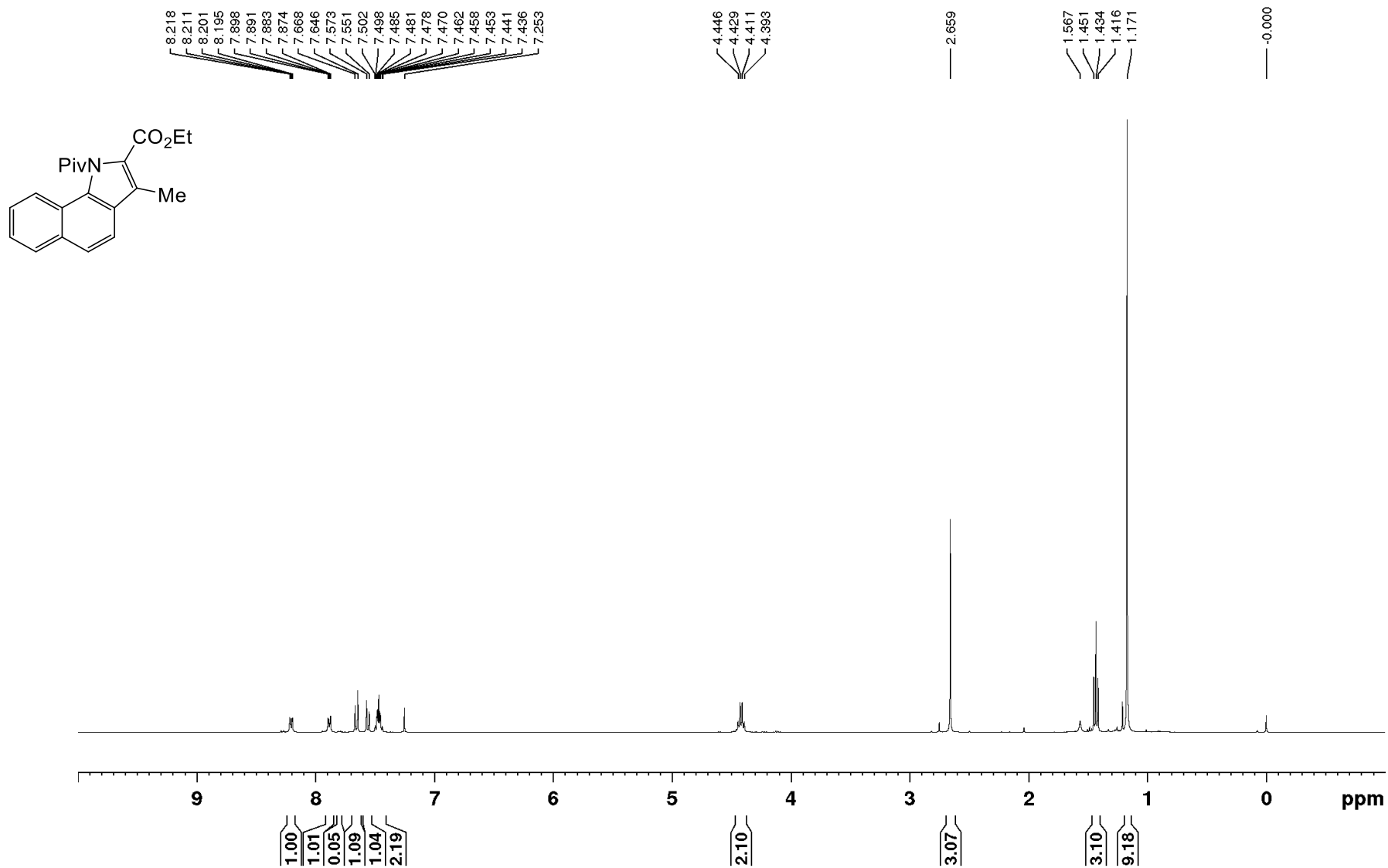
Ethyl 1-acetyl-2-phenyl-1H-benzo[g]indole-3-carboxylate (6cf')



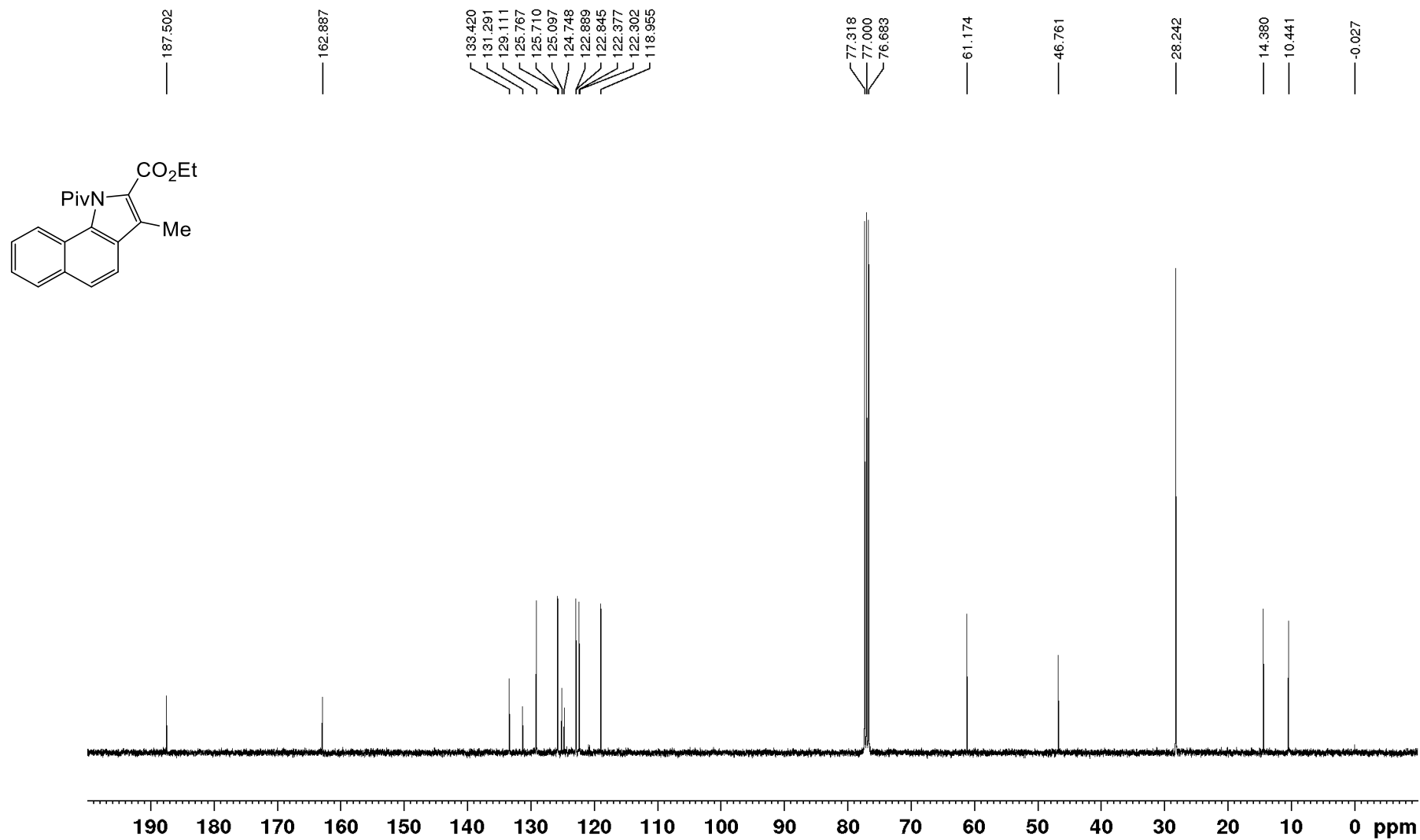
Ethyl 1-acetyl-2-phenyl-1*H*-benzo[*g*]indole-3-carboxylate (6cf')



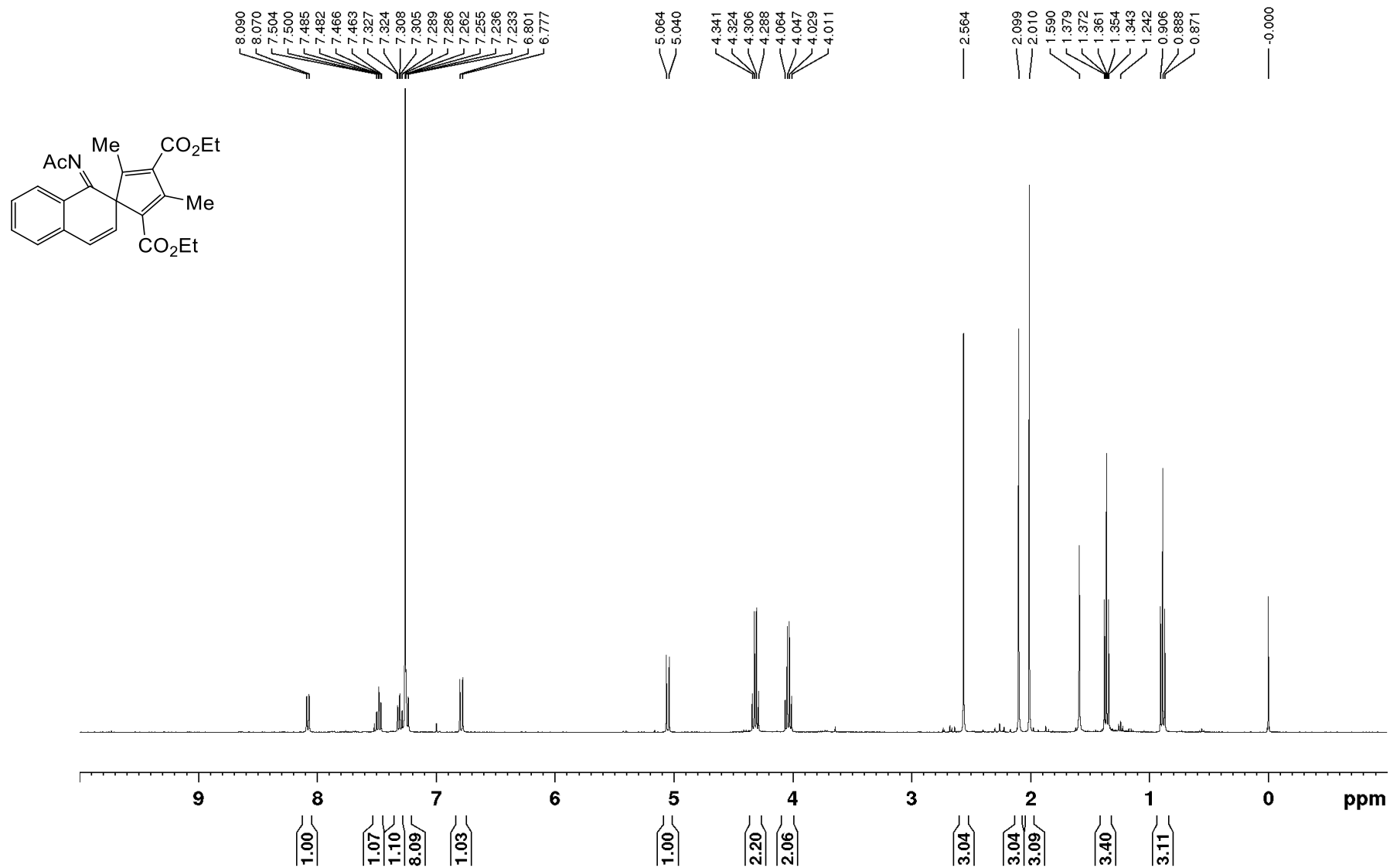
Ethyl 3-methyl-1-pivaloyl-1H-benzo[g]indole-2-carboxylate (6ea)



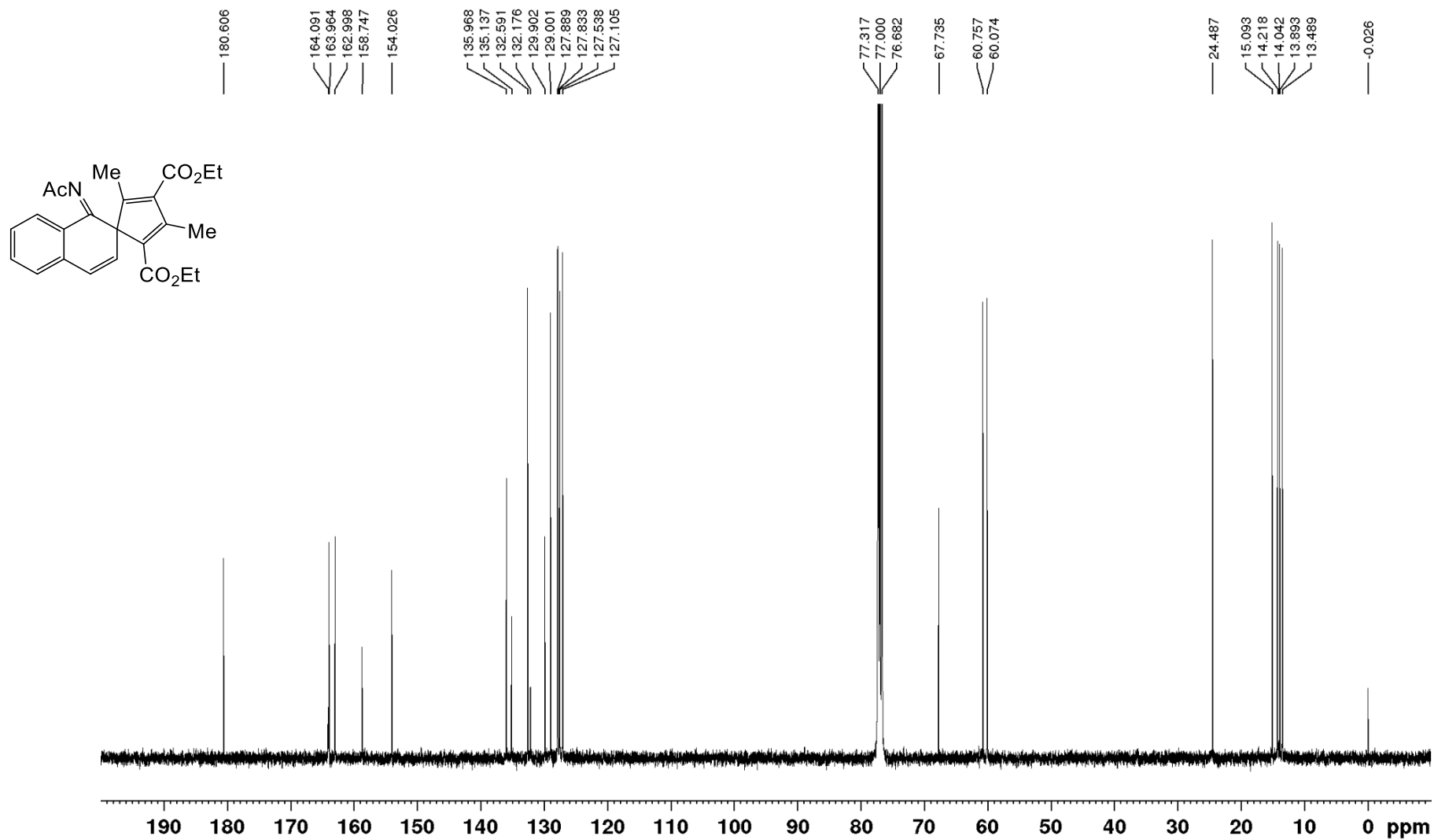
Ethyl 3-methyl-1-pivaloyl-1H-benzo[g]indole-2-carboxylate (6ea)



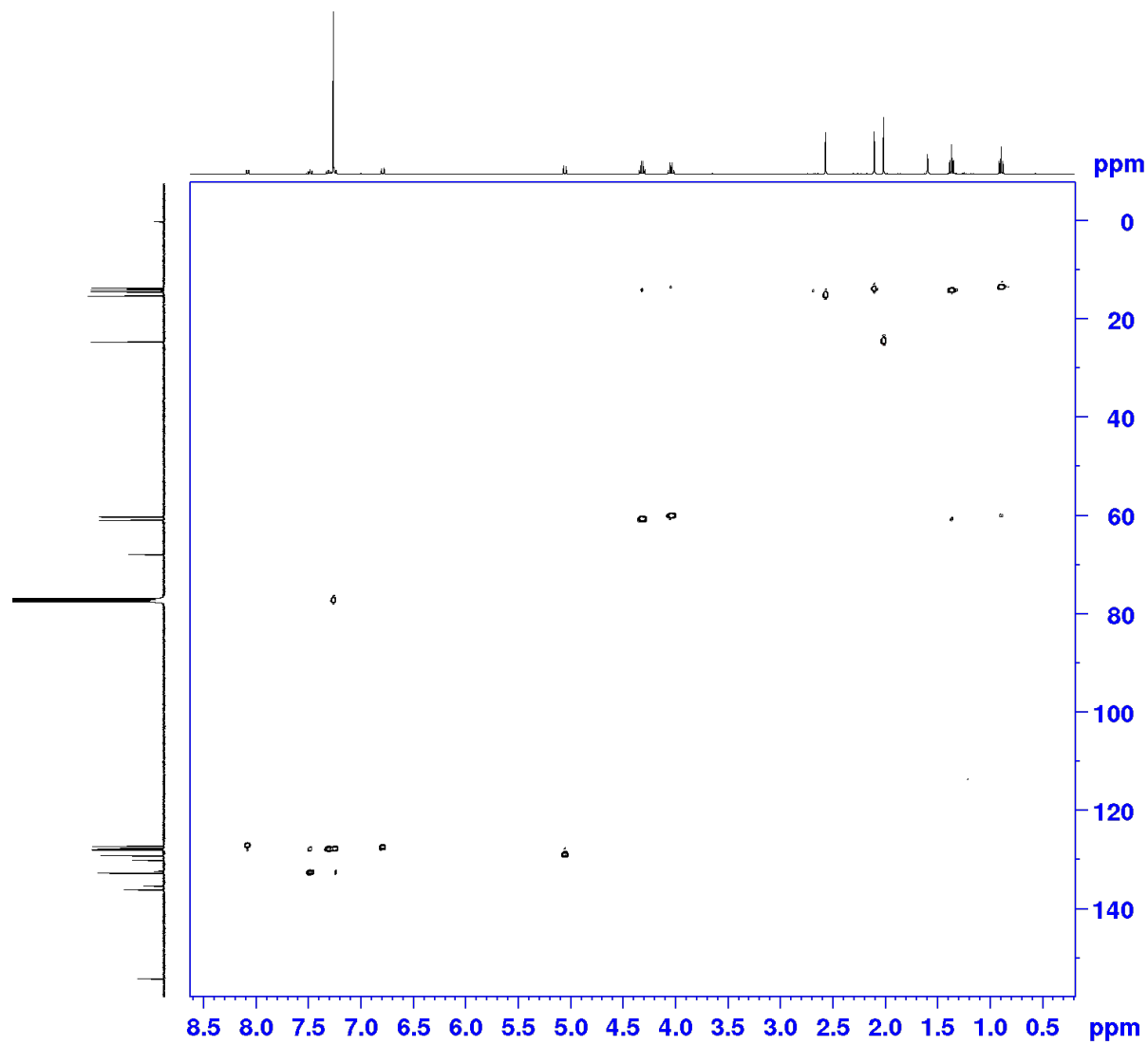
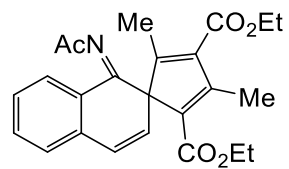
Diethyl (Z)-1'-(acetylimino)-3,5-dimethyl-1'H-spiro[cyclopentane-1,2'-naphthalene]-2,4-diene-2,4-dicarboxylate (7ca)



Diethyl (Z)-1'-(acetylimino)-3,5-dimethyl-1'H-spiro[cyclopentane-1,2'-naphthalene]-2,4-diene-2,4-dicarboxylate (7ca)



Diethyl (Z)-1'-(acetylimino)-3,5-dimethyl-1'H-spiro[cyclopentane-1,2'-naphthalene]-2,4-diene-2,4-dicarboxylate (7ca) (HSQC)



Diethyl (Z)-1'-(acetylimino)-3,5-dimethyl-1'H-spiro[cyclopentane-1,2'-naphthalene]-2,4-diene-2,4-dicarboxylate (7ca) (HMBC)

