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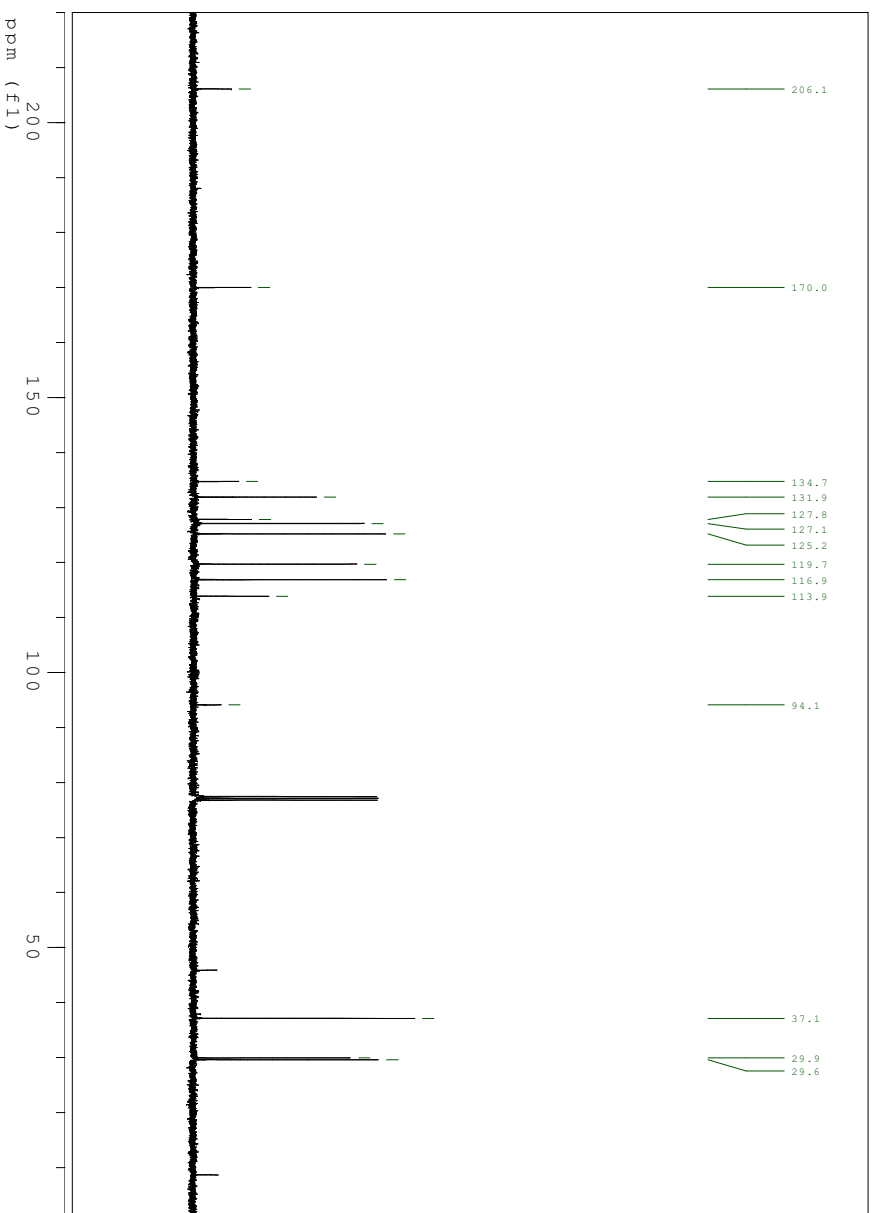
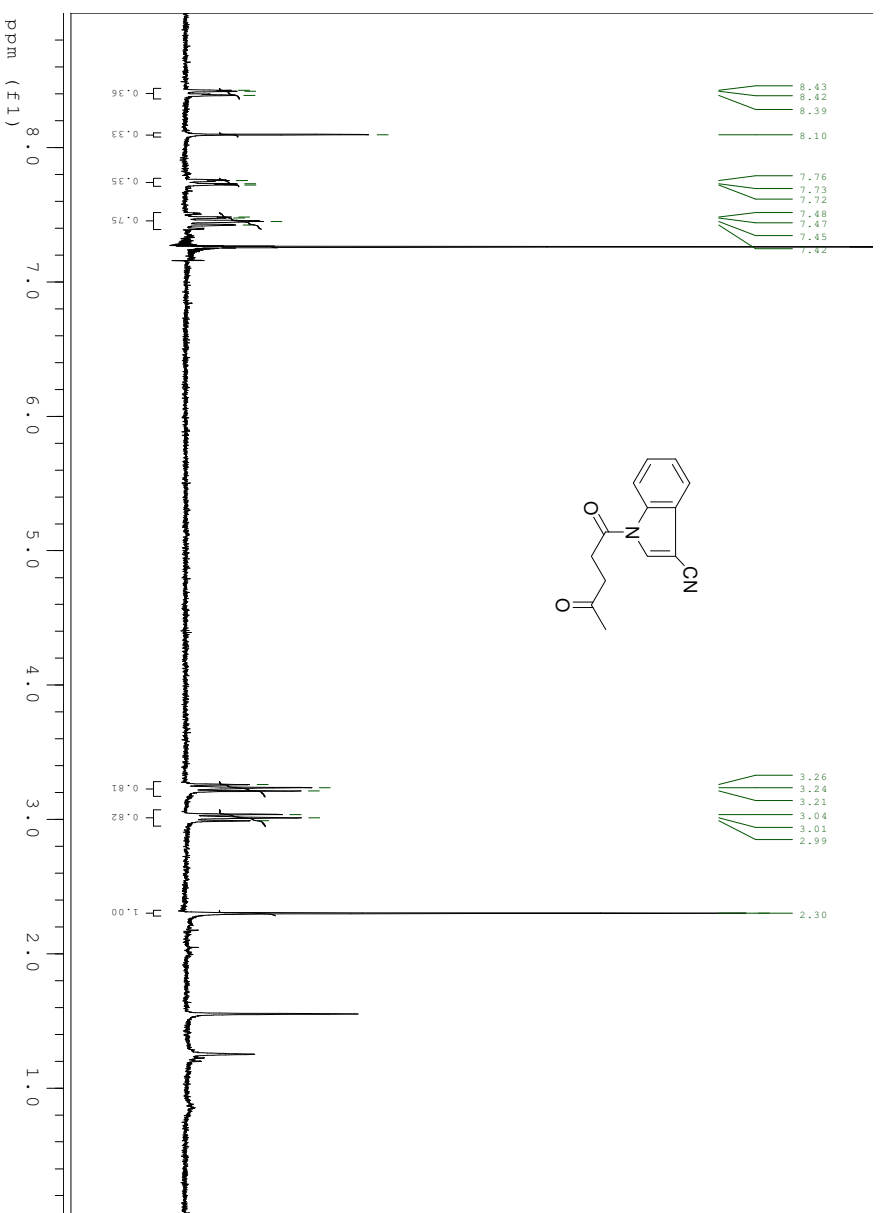
**Highly Diastereoselective Samarium Diiodide Induced Cyclizations of
New 3-Substituted Indole Derivatives**

Christine Beemelmans and Hans-Ulrich Reissig*

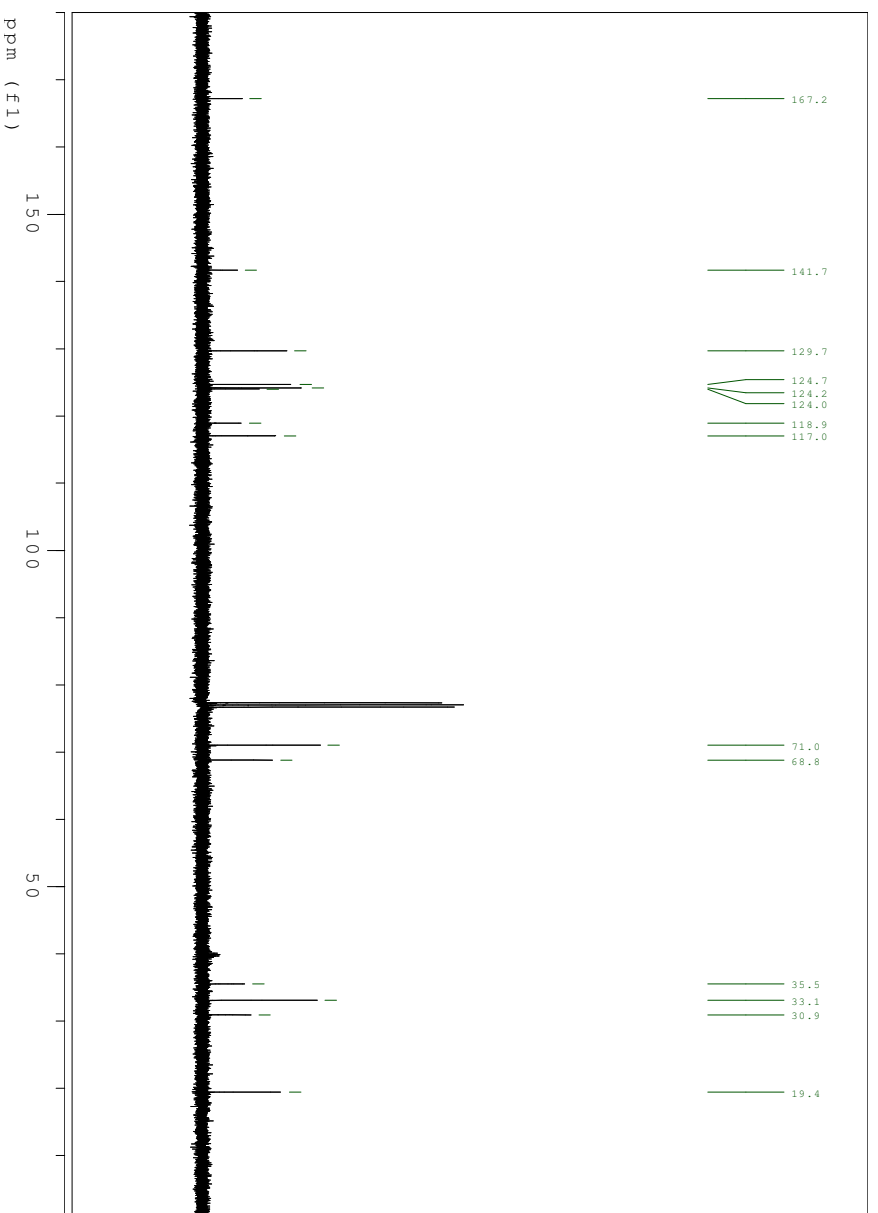
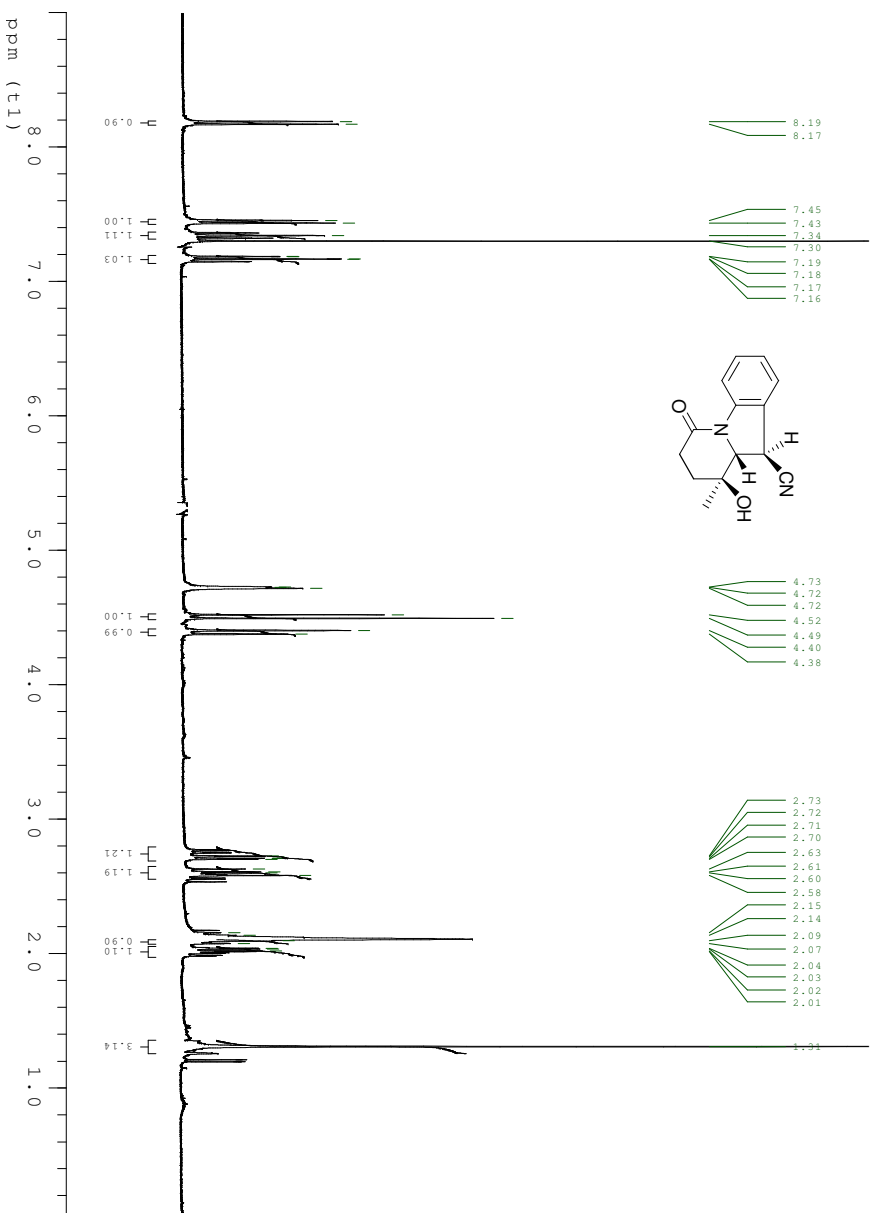
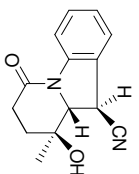
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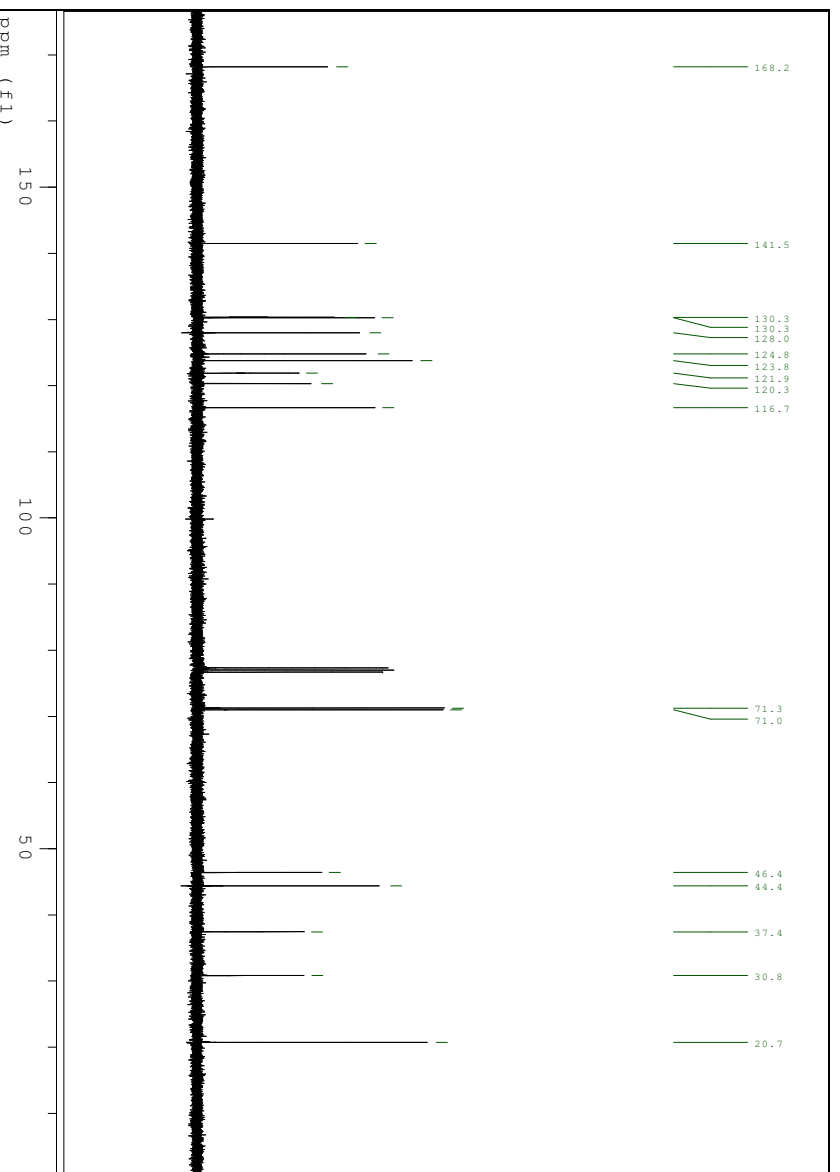
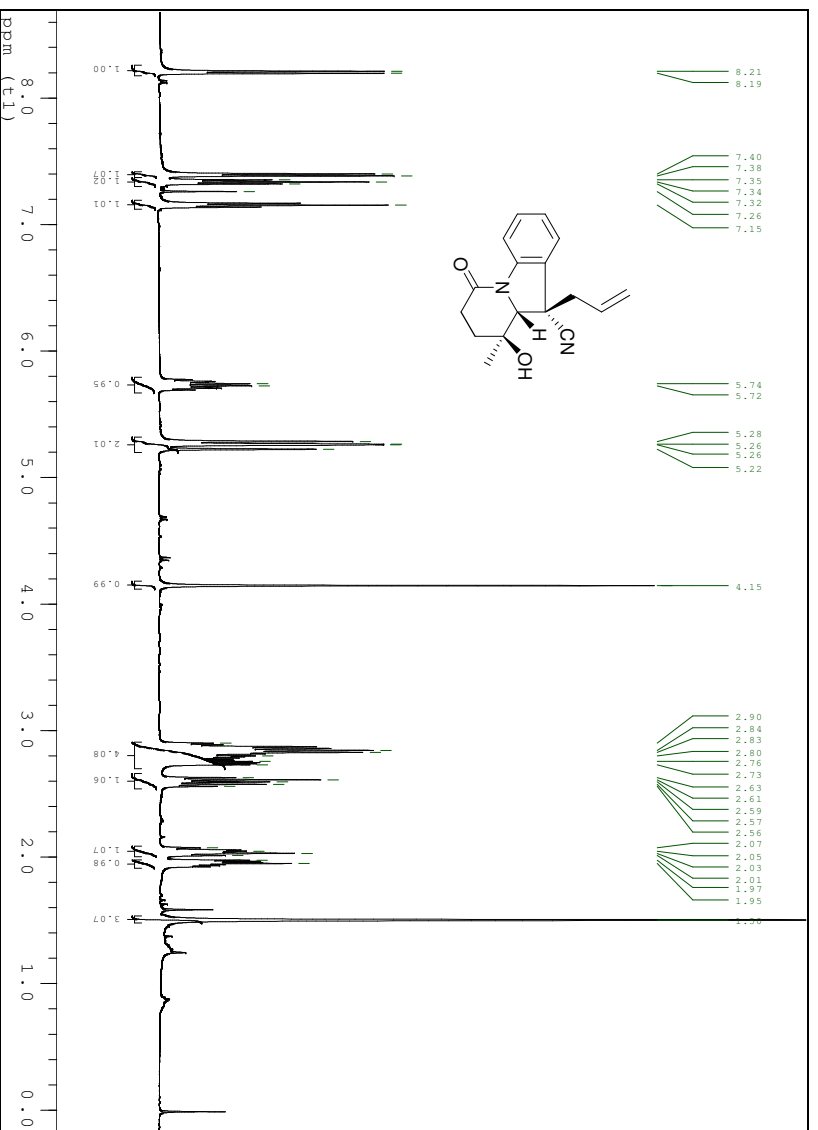
1-(4-Oxopentanyl)-1H-indole-3-carbonitrile (1)



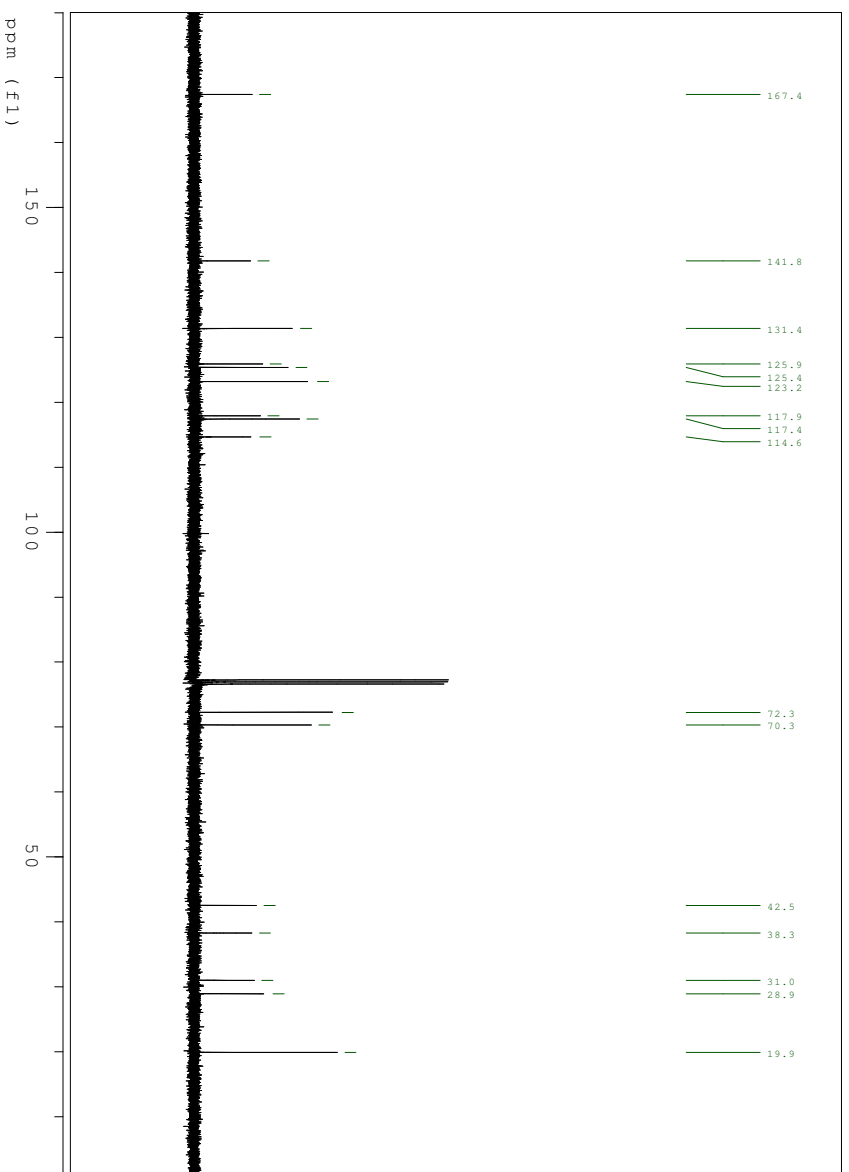
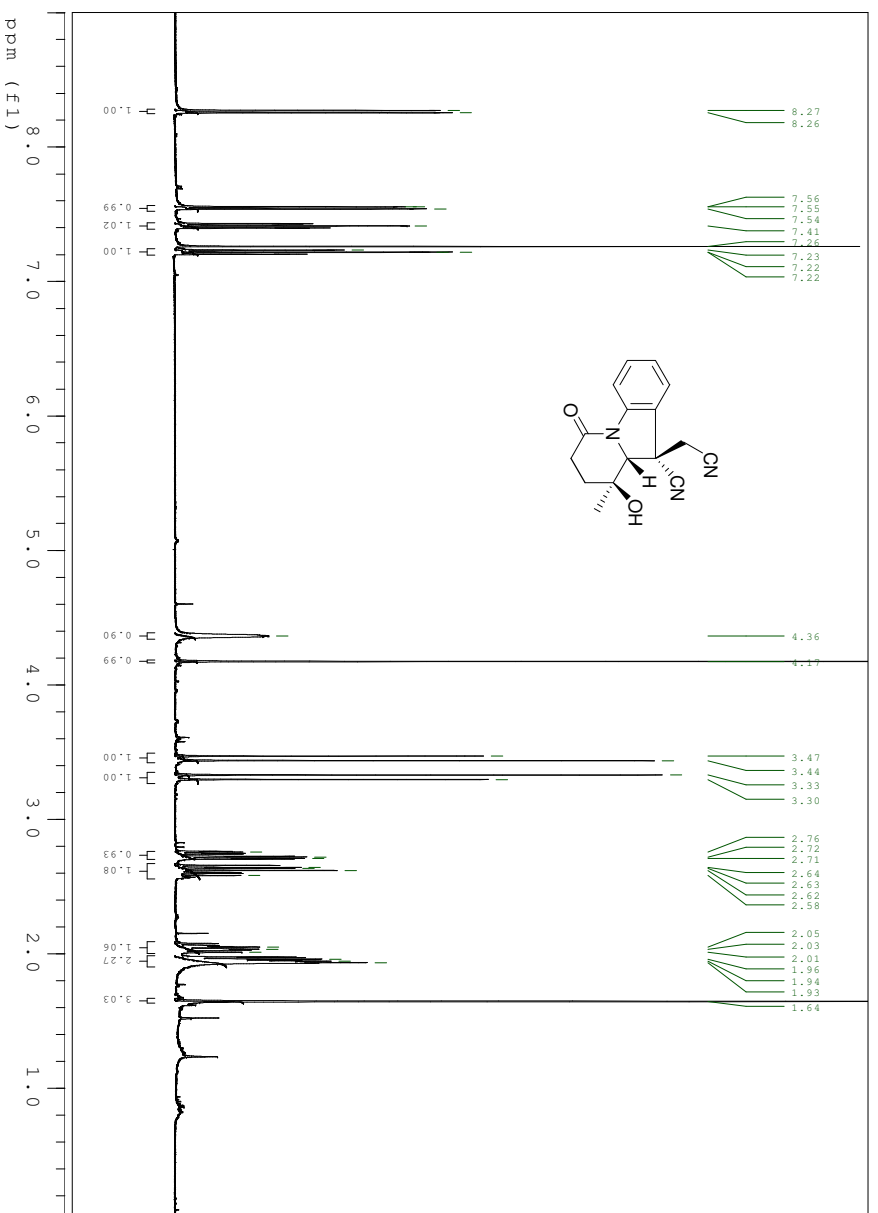
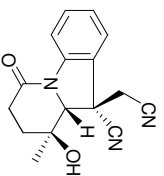
(9*S*,9*aR*,10*R*)-9-hydroxy-9-methyl-6-oxo-6,7,8,9,9*a*,10-hexahydropyrido[1,2-*a*]indole-10-carbonitrile (2)



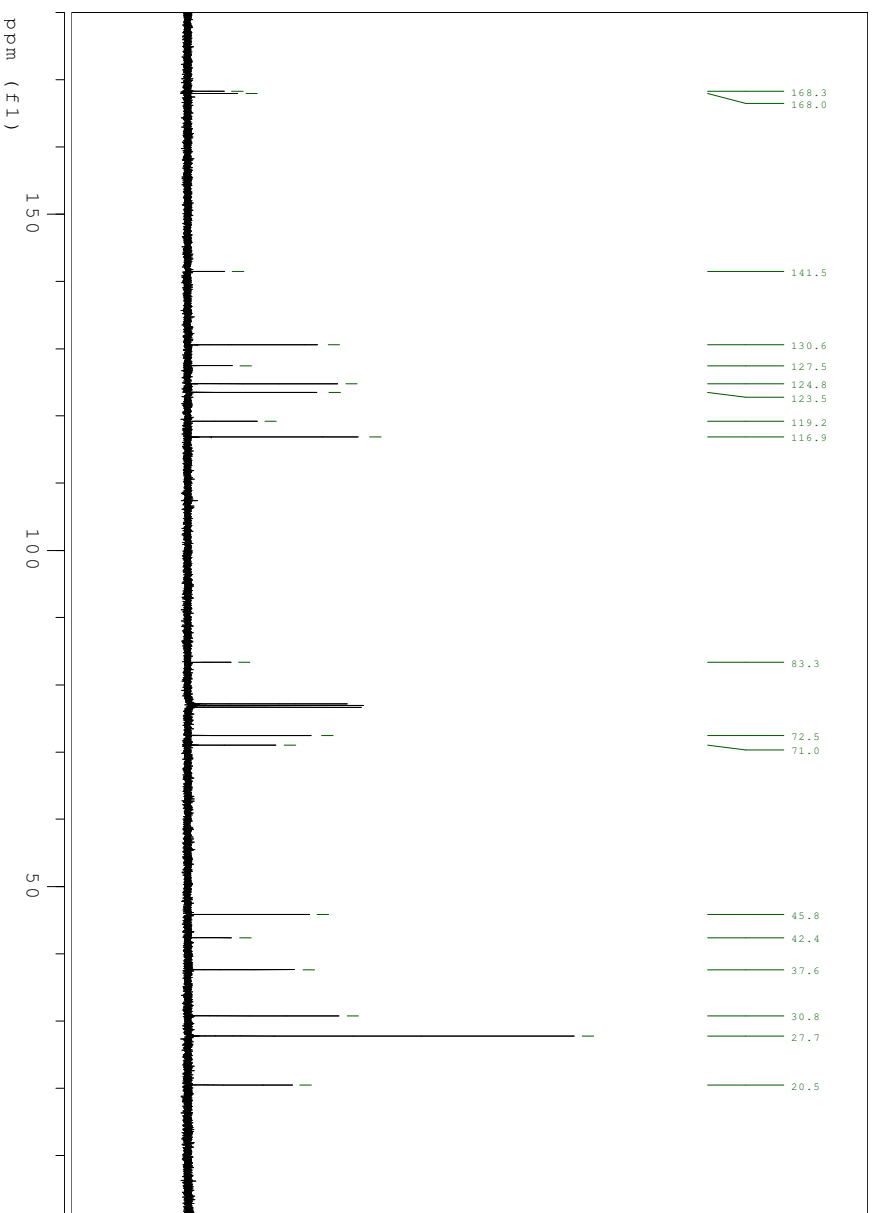
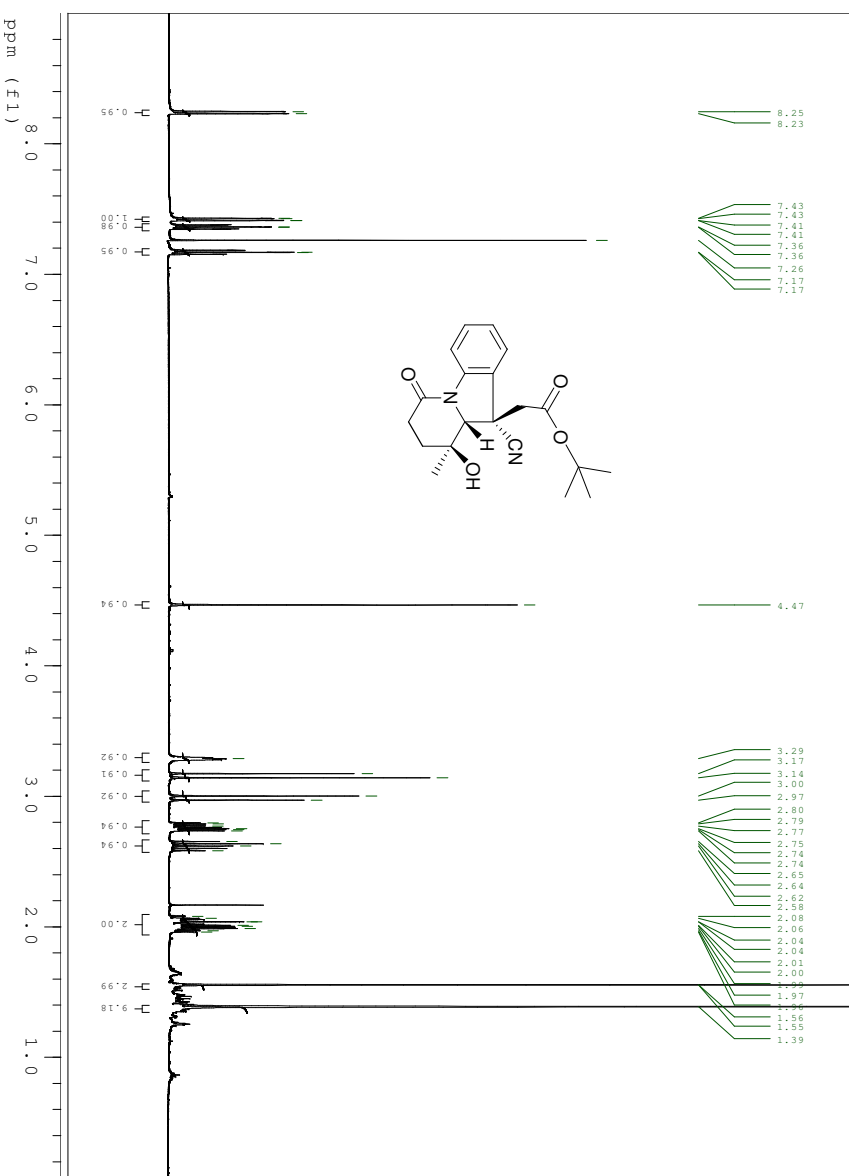
(9*S*,9*aR*,10*S*)-10-Allyl-9-hydroxy-9-methyl-6-oxo-6,7,8,9,9*a*,10-hexahydropyrido[1,2-*a*]indole-10-carbonitrile (4, entry 1)



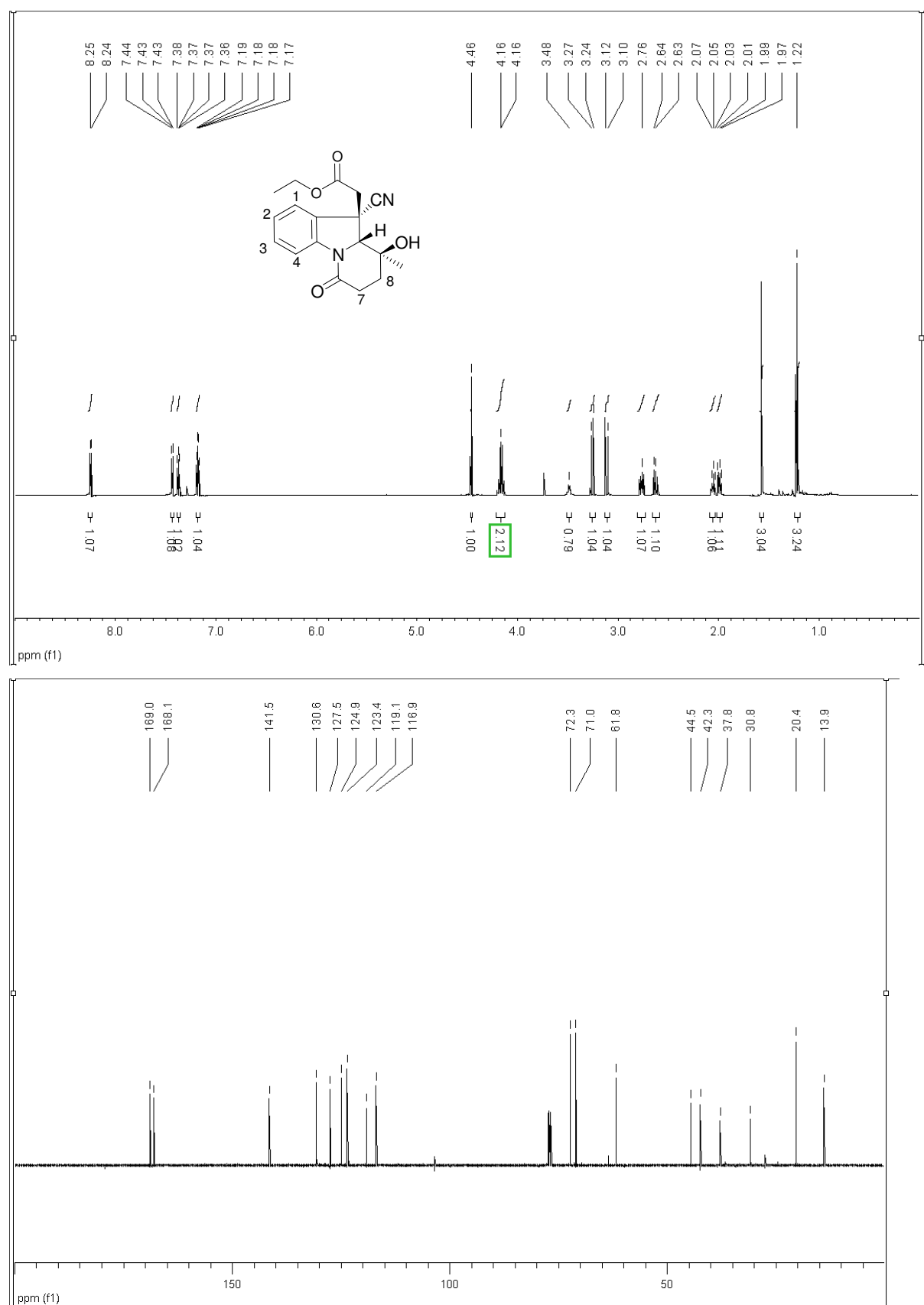
(9*S*,9*aR*,10*S*)-10-(Cyanomethyl)-9-hydroxy-9-methyl-6-oxo-6,7,8,9,9*a*,10-hexahydropyrido[1,2-*a*]indole-10-carbonitrile (4, entry2)



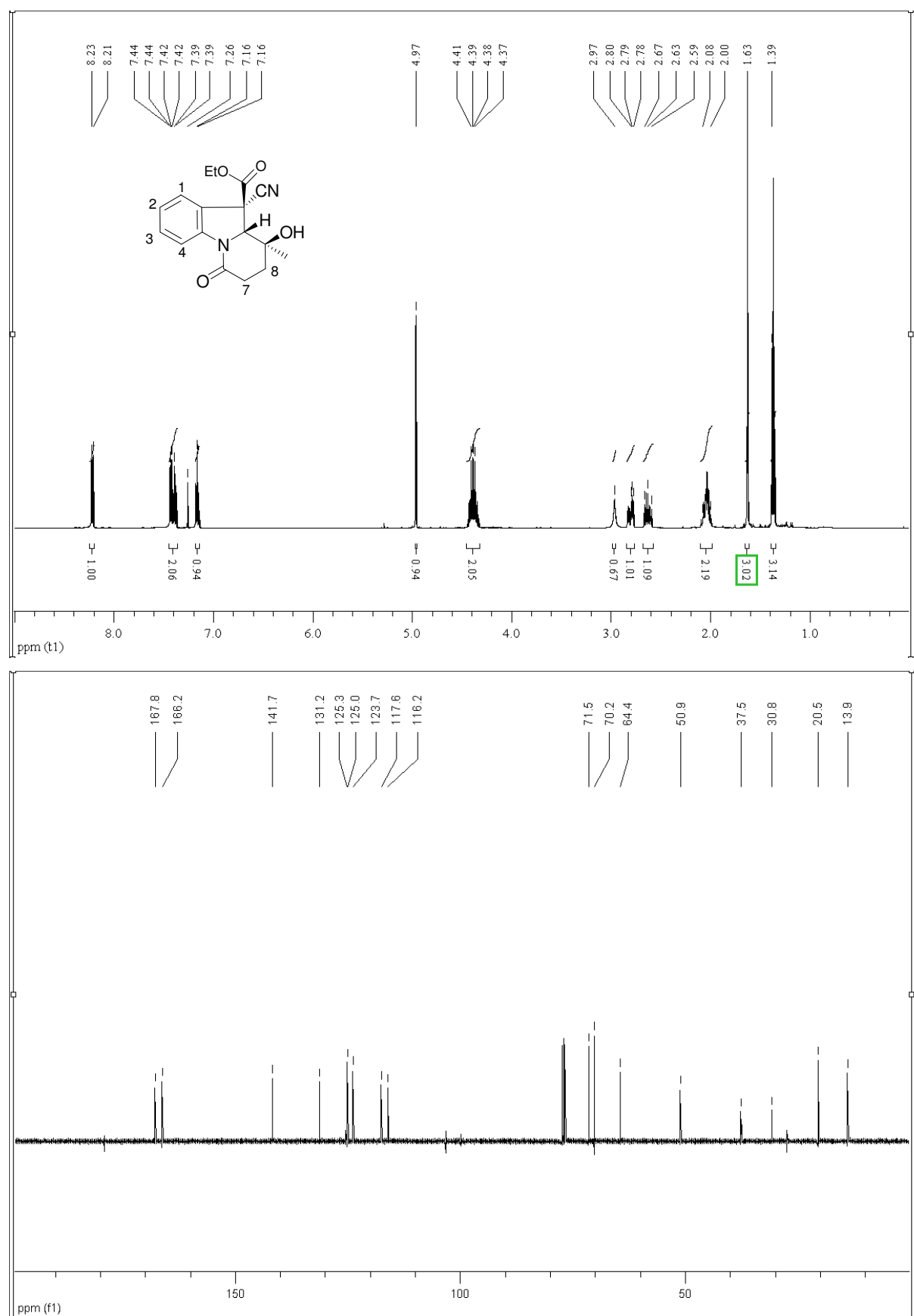
(9*S*,9*aR*,10*S*)-tert-Butyl-2-(10-cyano-9-hydroxy-9-methyl-6-oxo-6,7,8,9*a*,10-hexahydropyridol[1,2-*a*]indol-10-yl)acetate (4, entry 3)



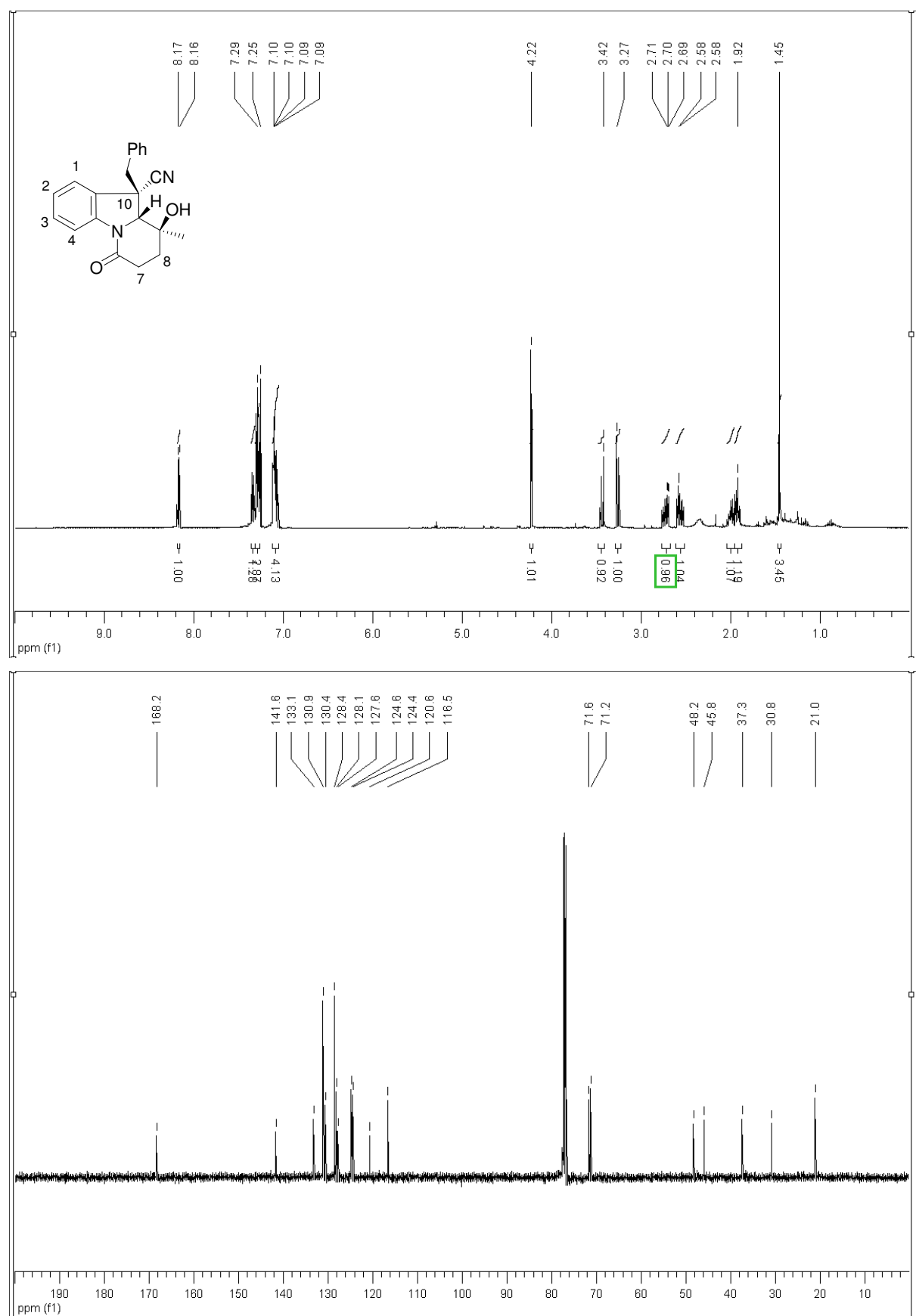
rac-((9*S,9*aR**,10*R**)- Ethyl (10-cyano-9-hydroxy-9-methyl-6-oxo-7,8,9,9*a*,10-hexahydropyrido[1,2-*a*]indol-10-yl)acetate (4, entry 4)**



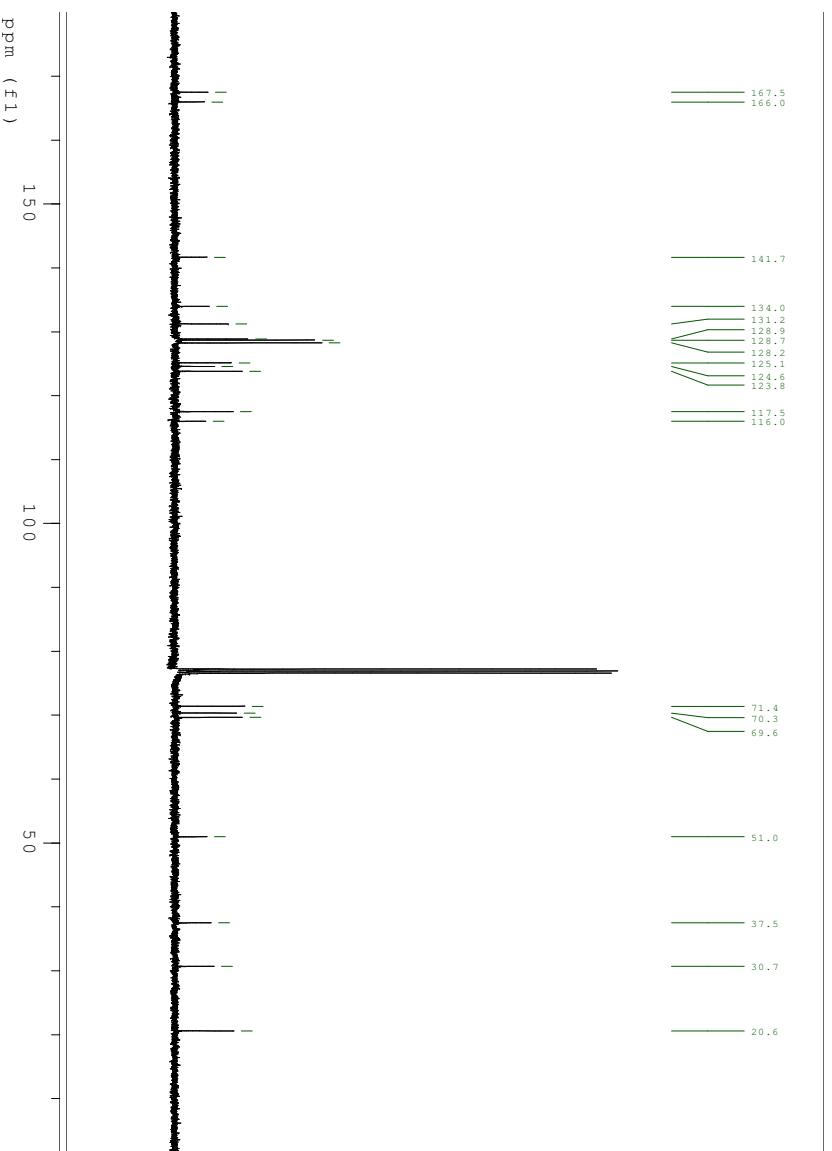
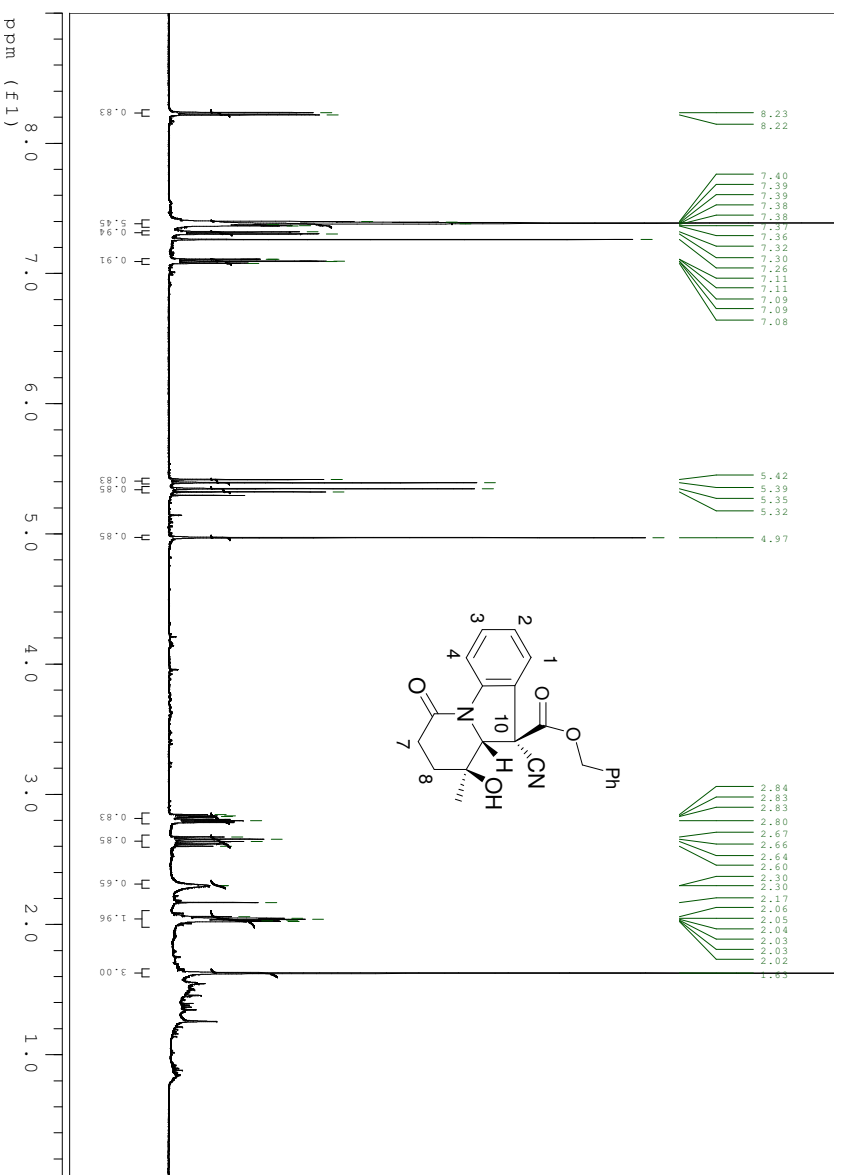
rac-(9S*,9aR*,10R*)-10-Cyano-9-hydroxy-9-methyl-6-oxo-7,8,9,9a,10-hexahydro-pyrido-[1,2-a]indole-10-carboxylic acid ethyl ester (4, entry 5)



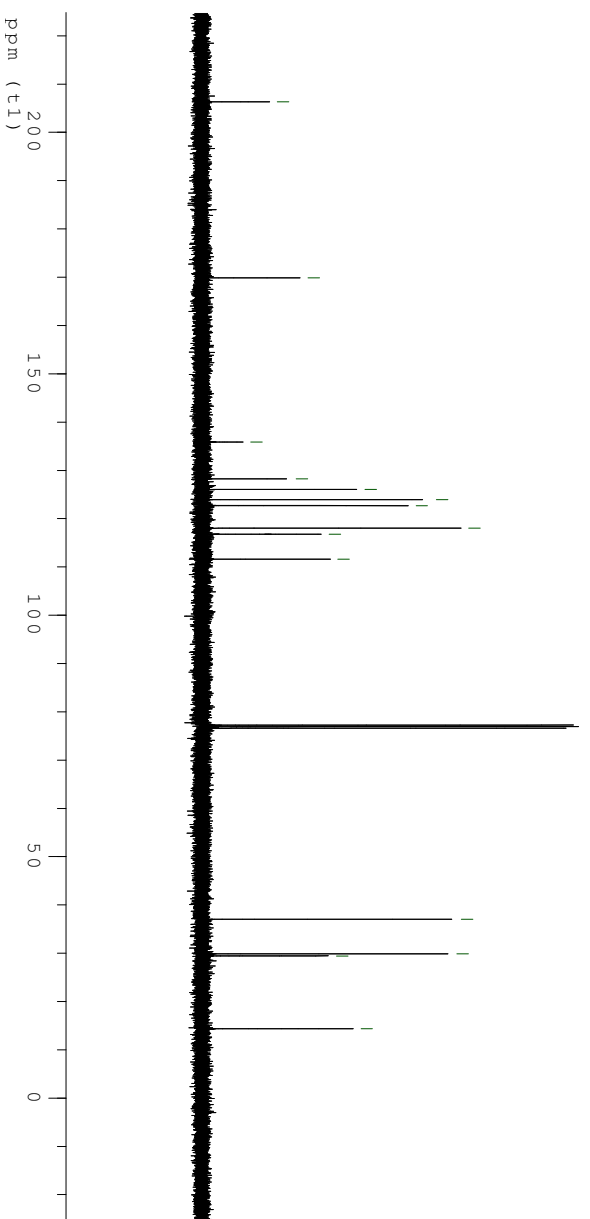
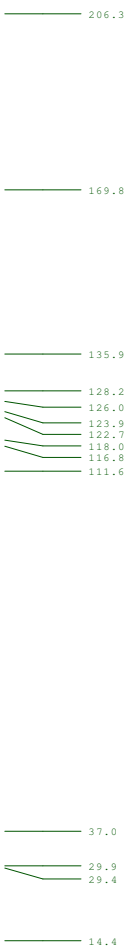
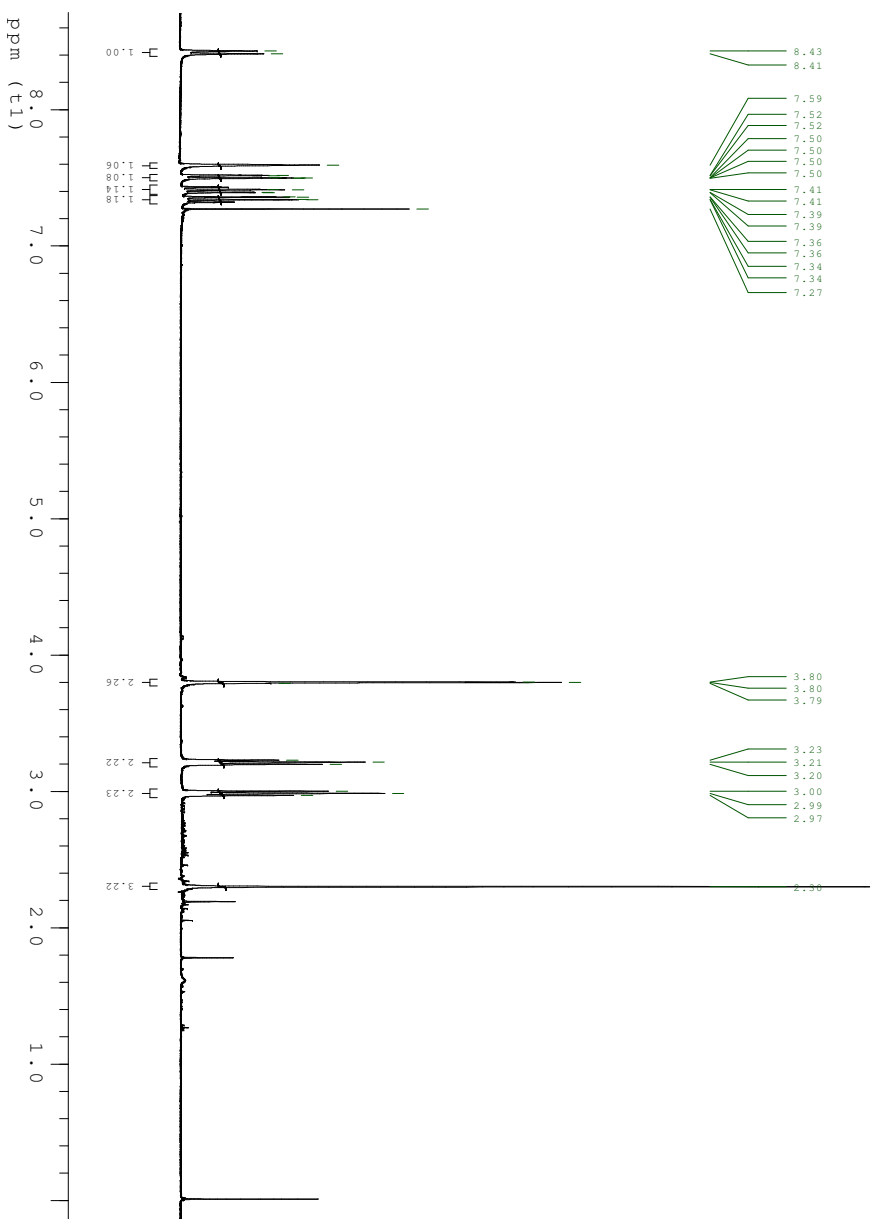
rac-(9S*,9aR*,10S*)-10-Benzyl-9-hydroxy-9-methyl-6-oxo-7,8,9,9a,10-hexahydropyrido[1,2-a]indole-10-carbonitrile (4, entry 6)



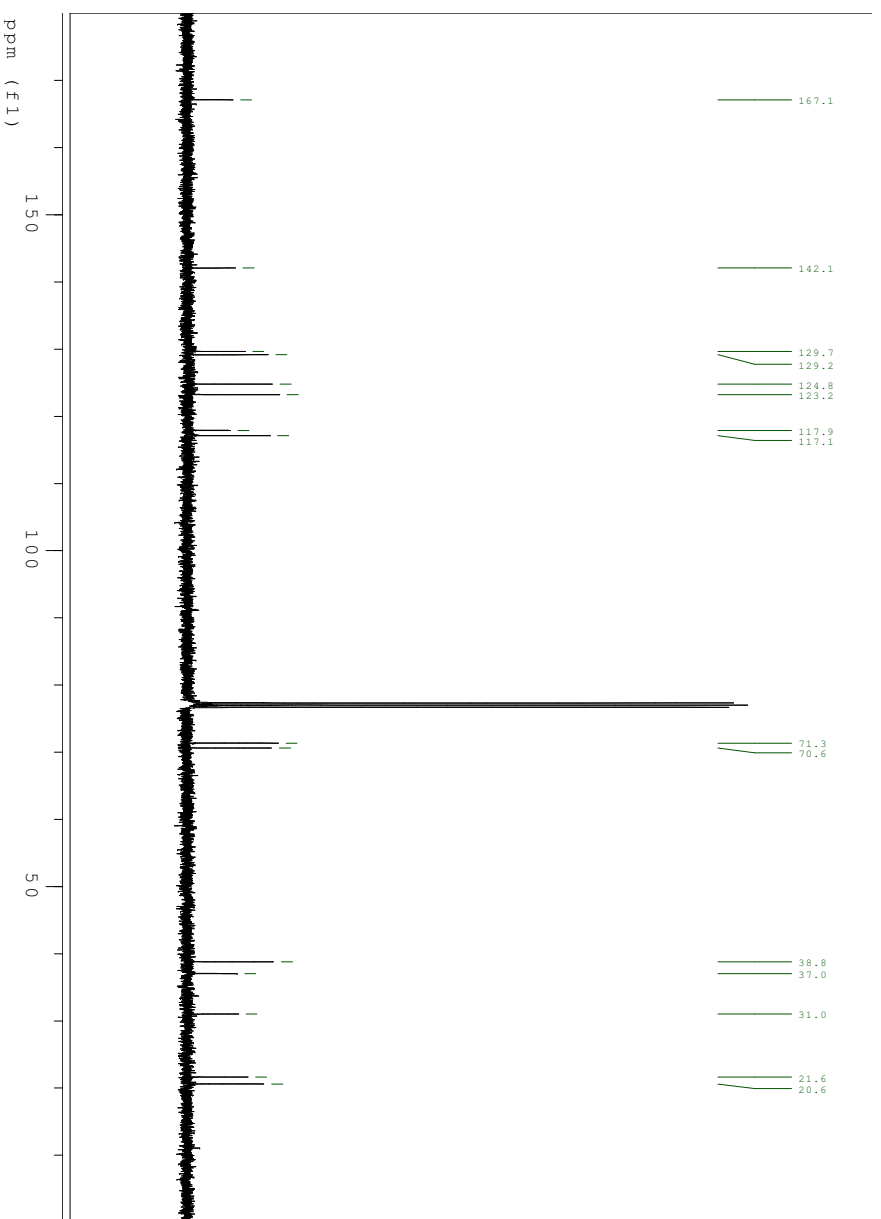
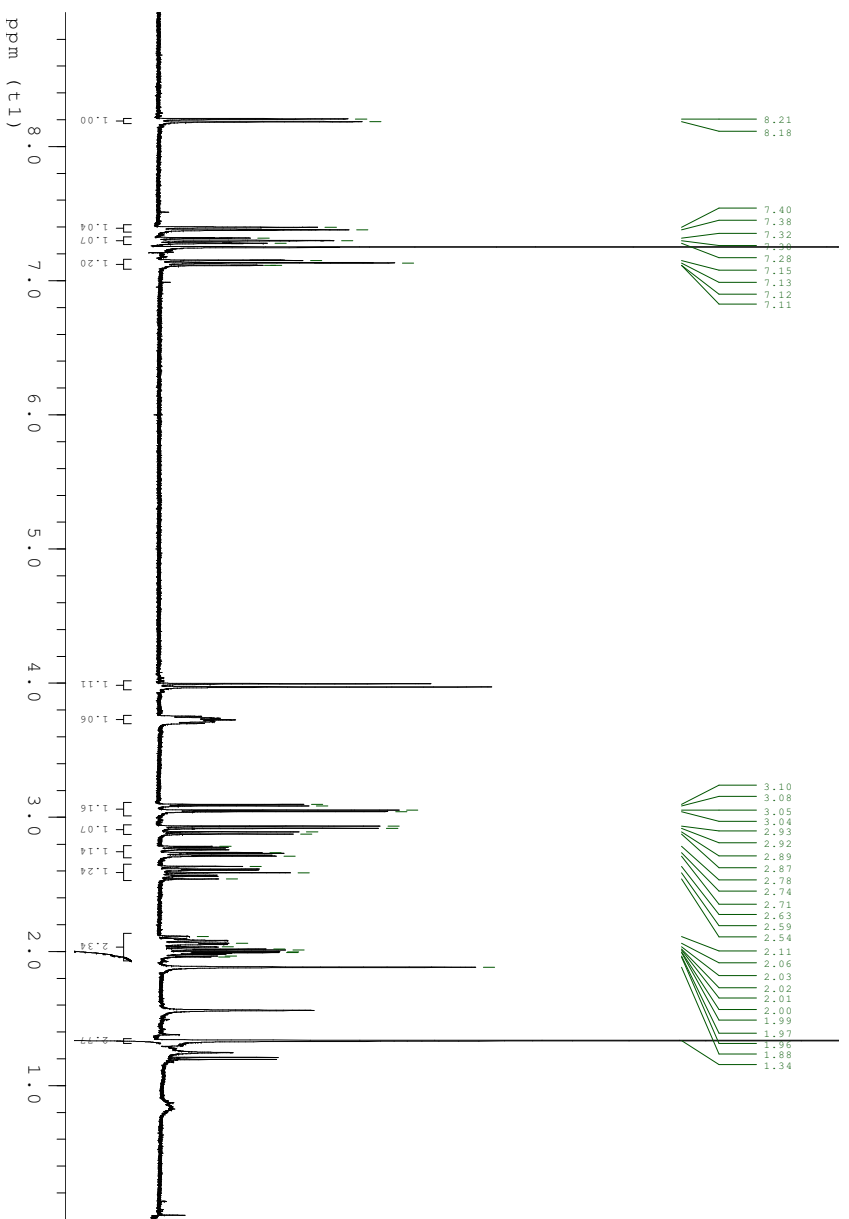
rac-(9*S,9*aR**,10*R**)-Benzyl 10-Cyano-9-hydroxy-9-methyl-6-oxo-7,8,9,9*a*,10-hexahydropyrido[1,2-*a*]indole-10-carboxylate (4, entry 7)**



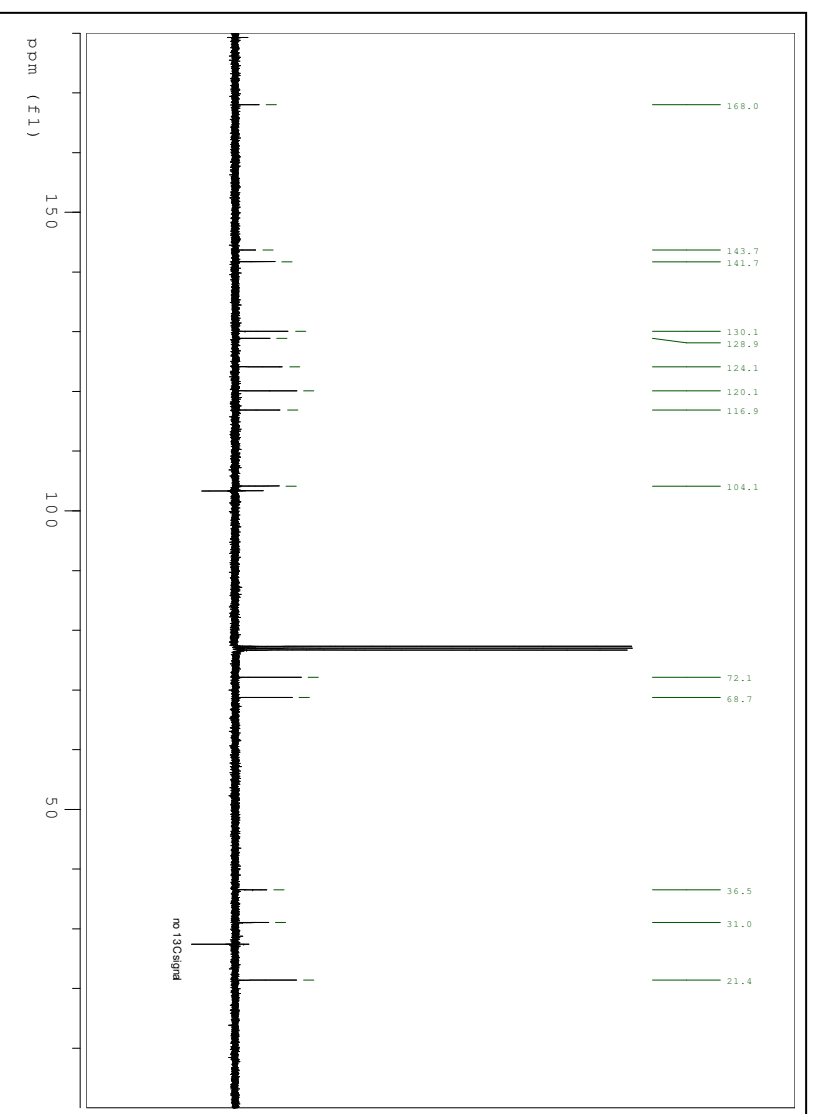
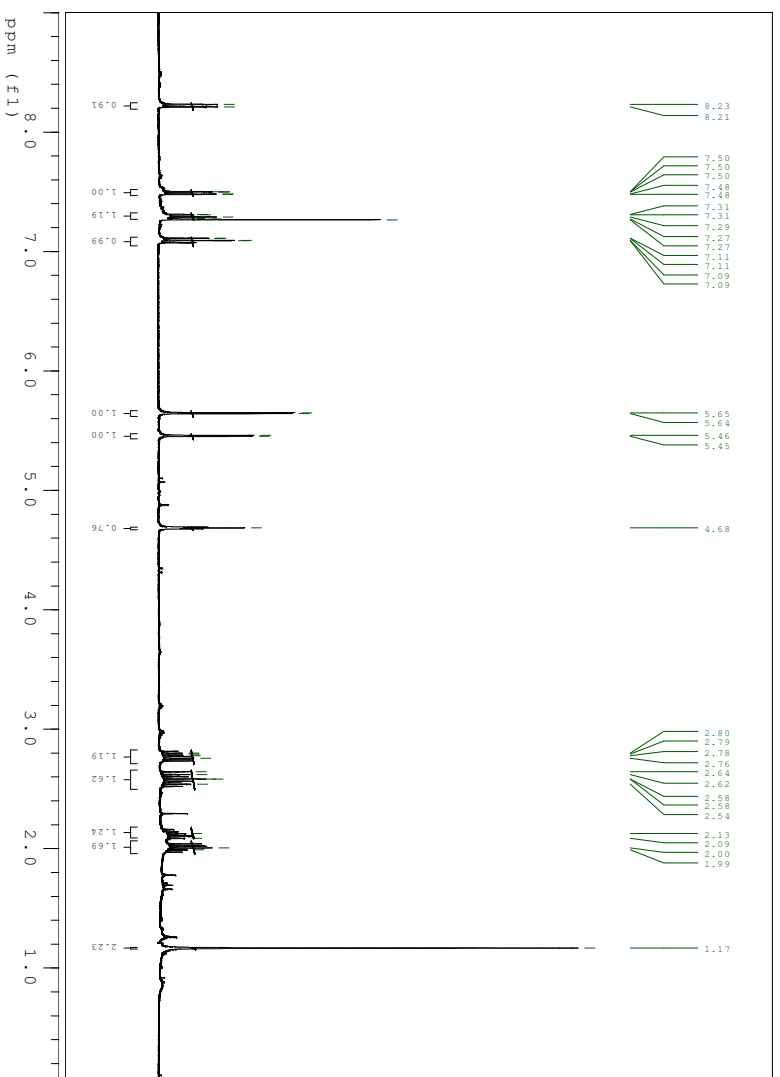
2-(1-(4-Oxopentanyl)-1H-indol-3-yl)acetonitrile (5)



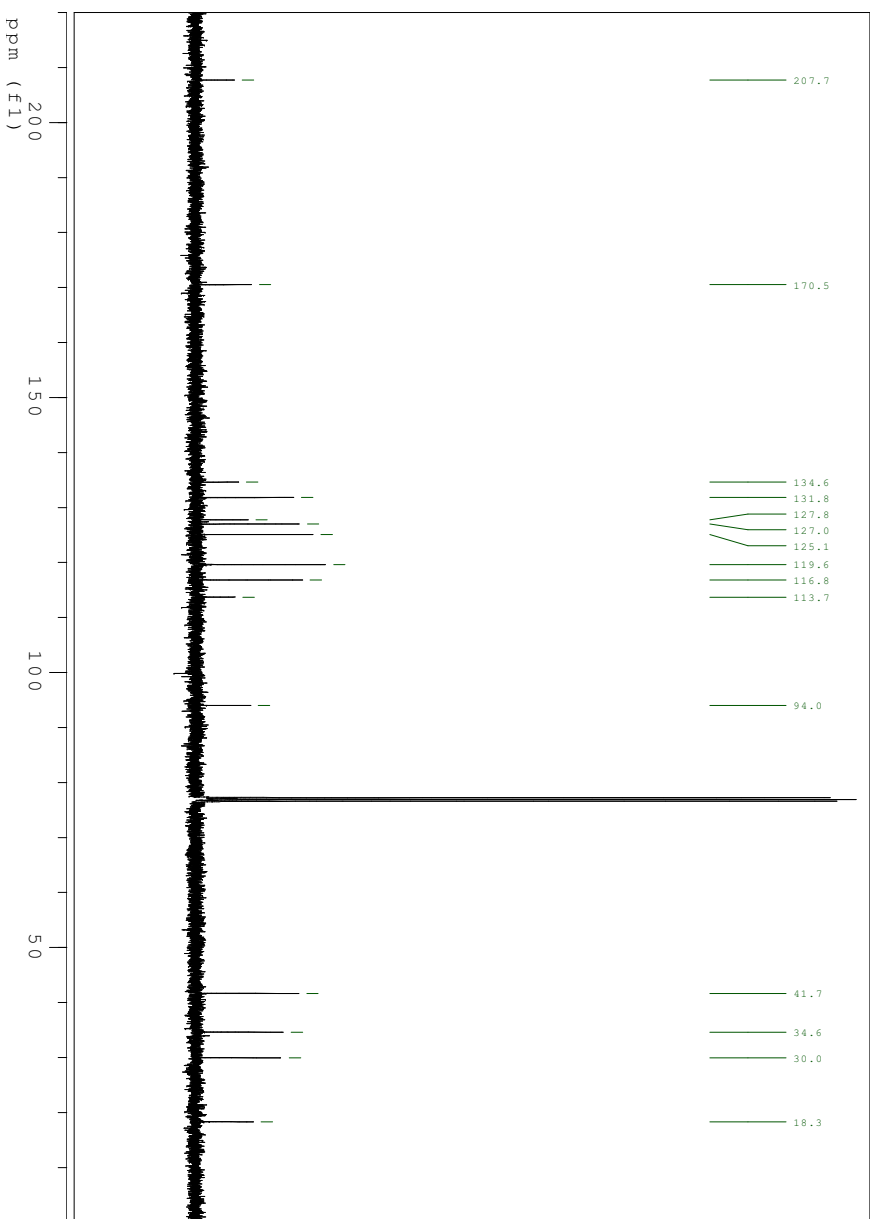
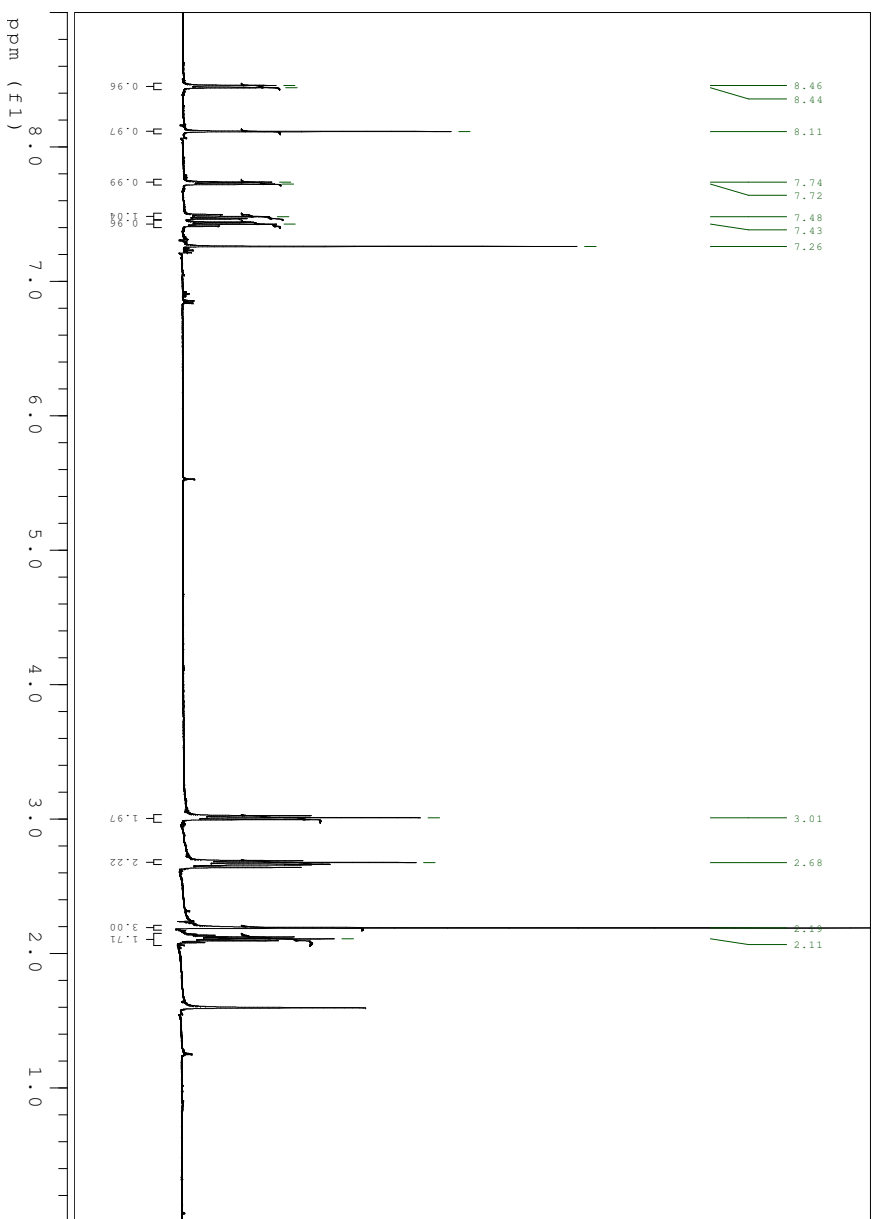
(9*S*, 9*aR*, 10*S*)-9-Hydroxy-9-methyl-6-oxo-6,7,8,9,9*a*,10-hexahydropyridol[1,2-*c*]indole-10-yl-acetonitrile (6)



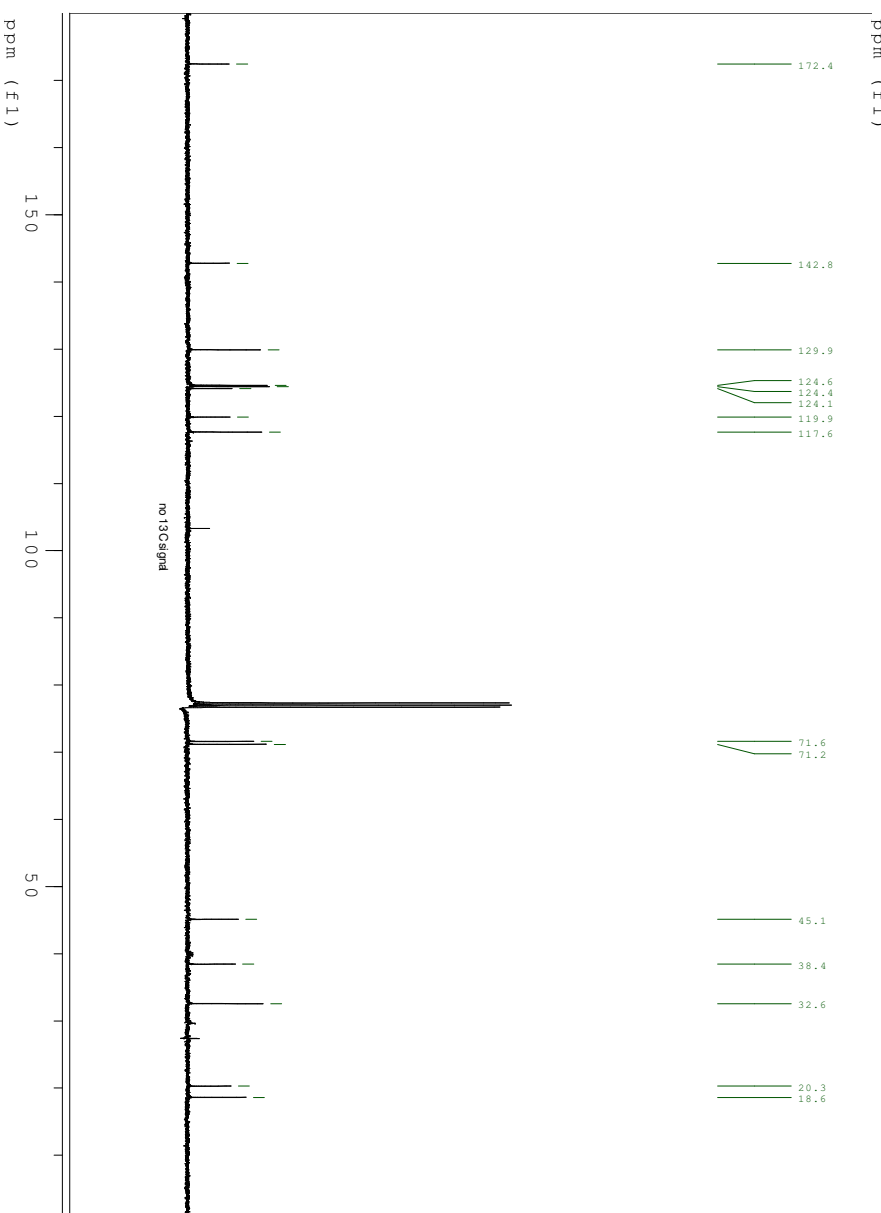
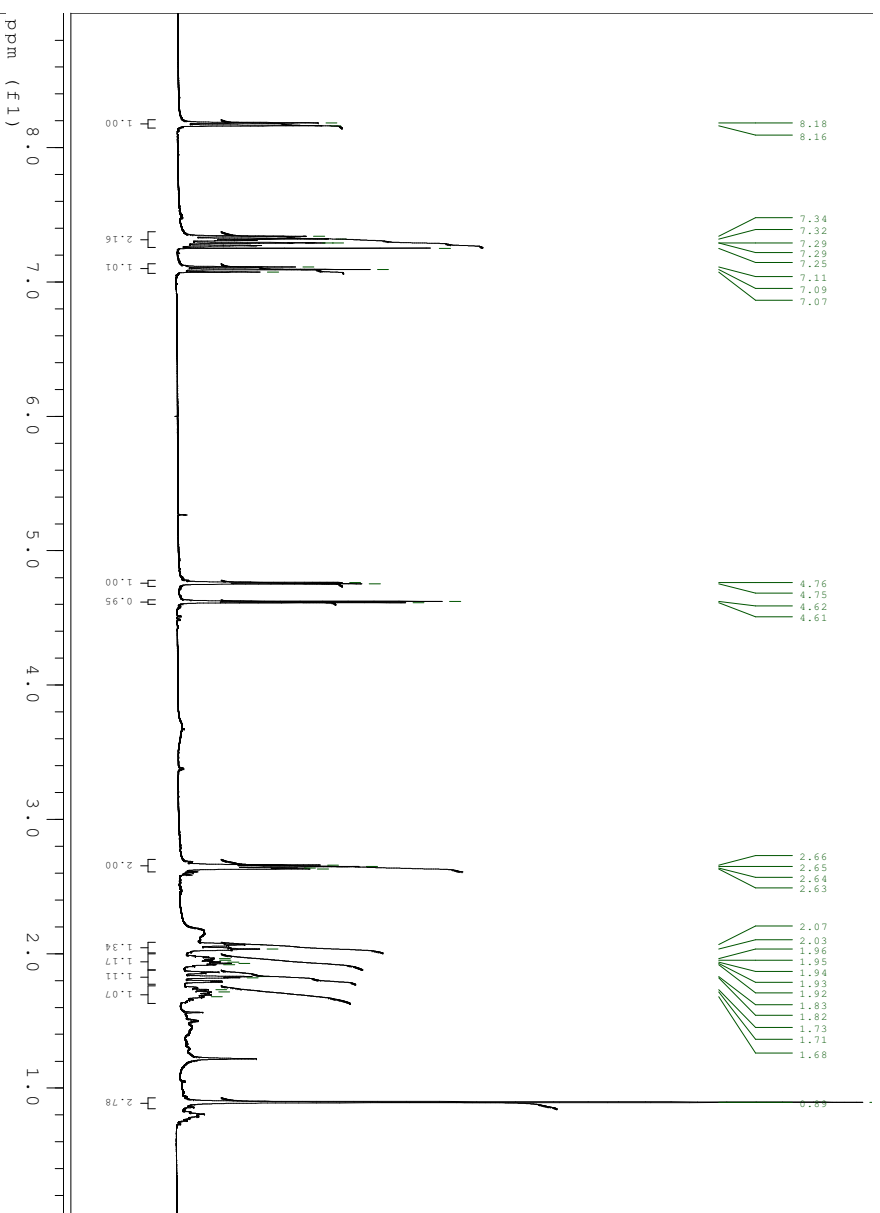
(9*S*,9*a*R)-9-Hydroxy-9-methyl-10-methylene-8,9,9*a*,10-tetrahydropyridol[1,2-*a*]indol-6(*7H*)-one (8)



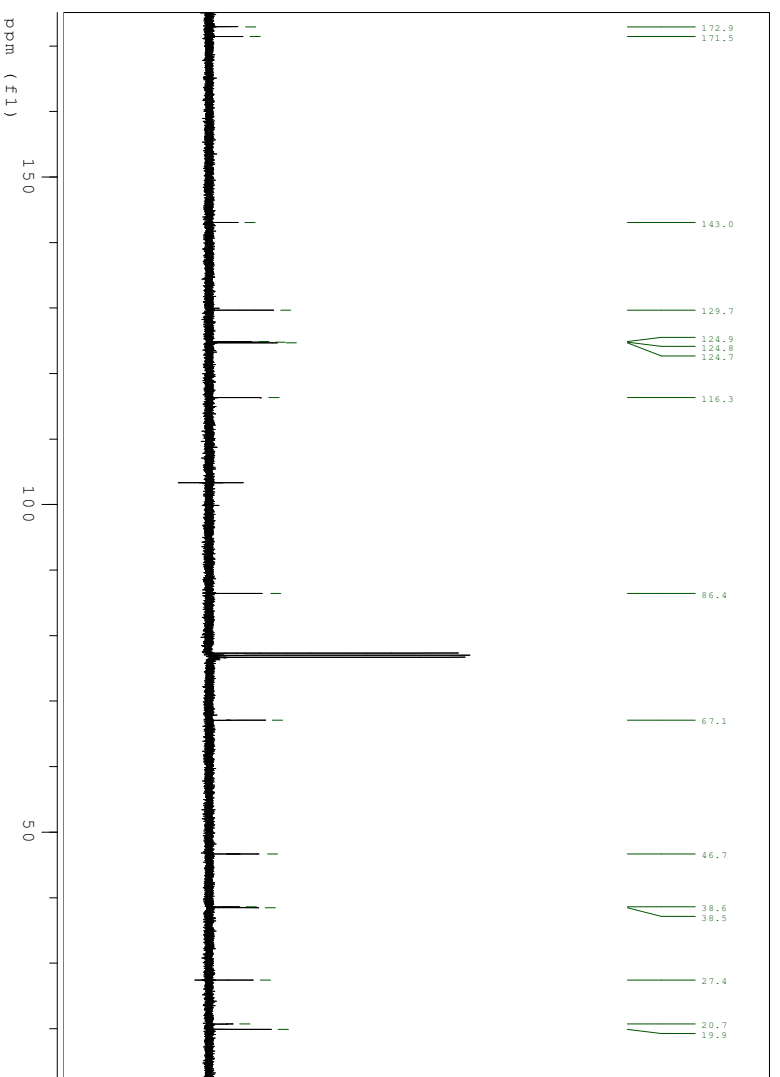
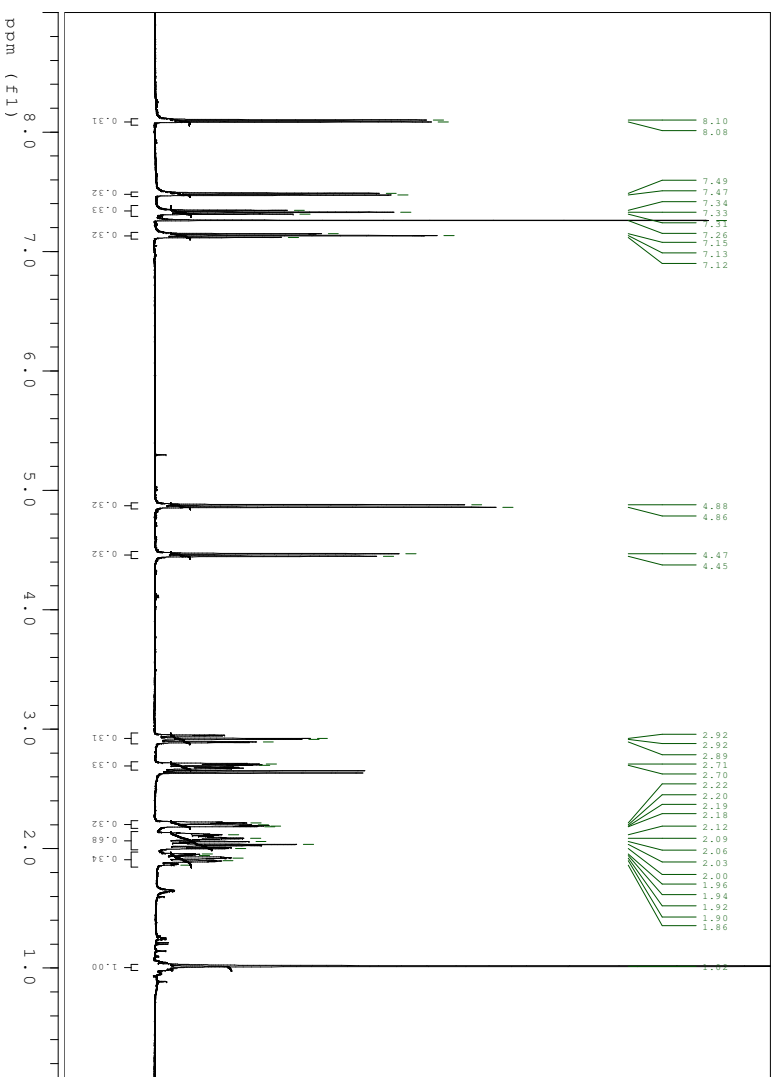
1-(5-Oxohexanoyl)-1*H*-indole-3-carbonitrile (9)



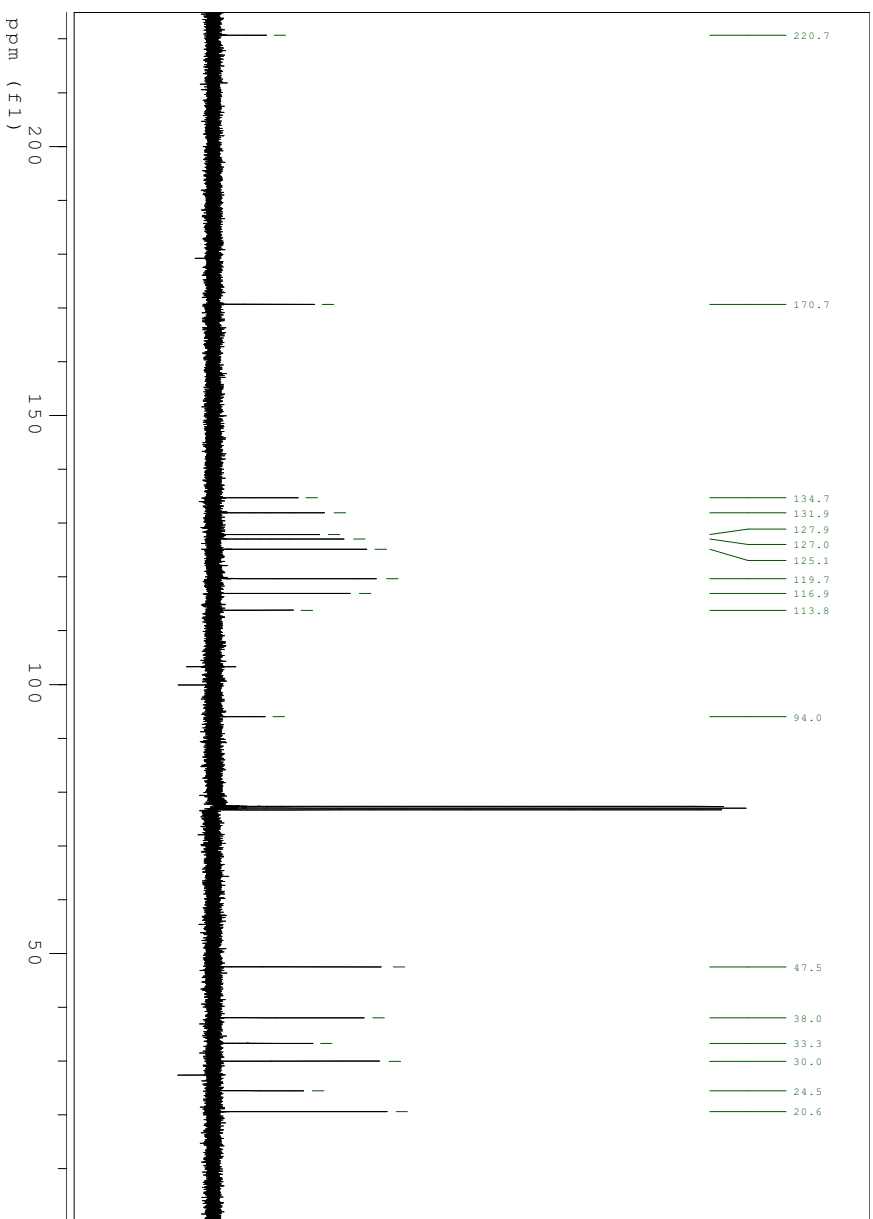
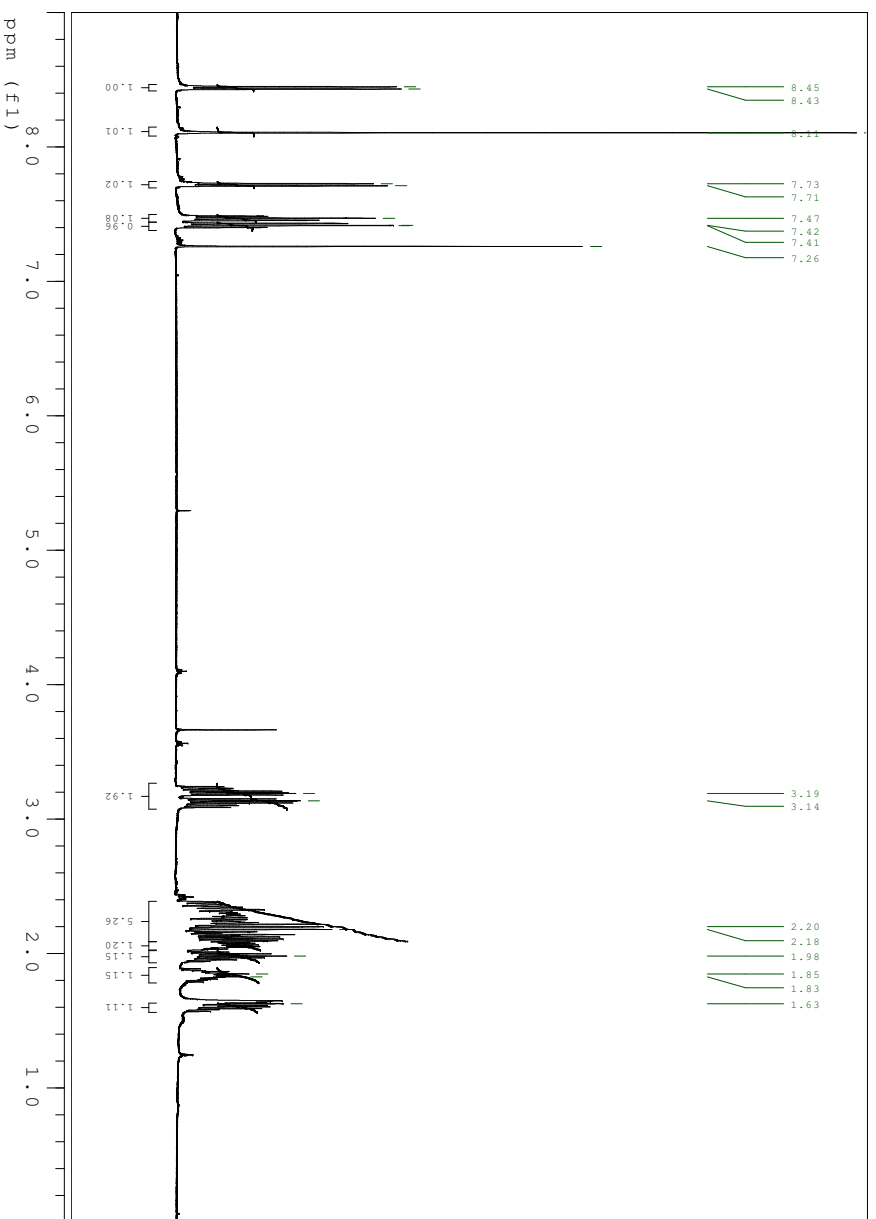
(9*S*,9*aR*,10*R*)-10-Hydroxy-10-methyl-6-oxo-6,7,8,9,10,10*a*,11-hexahydro-6*H*-azepino[1,2-*a*]indole-11-carbonitrile (10)



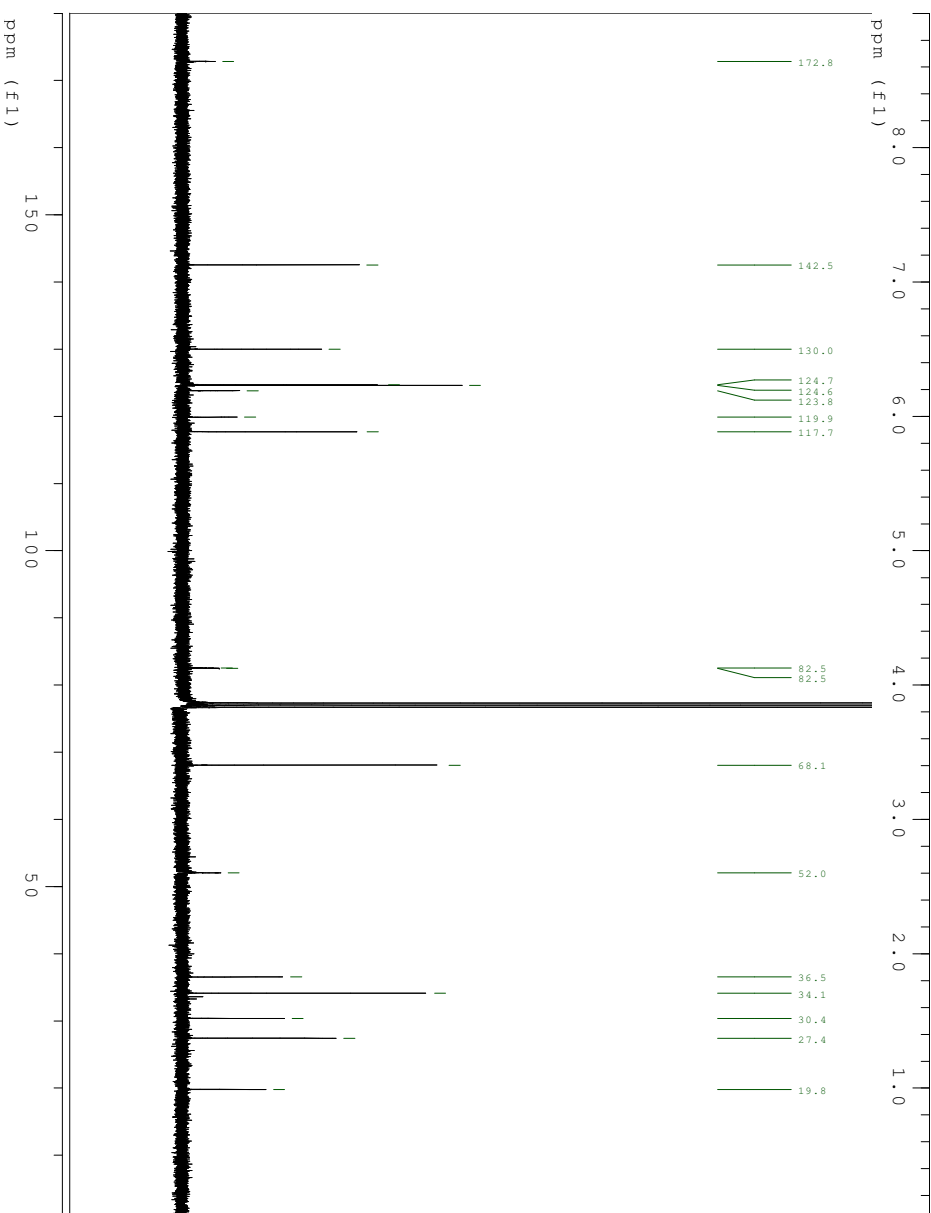
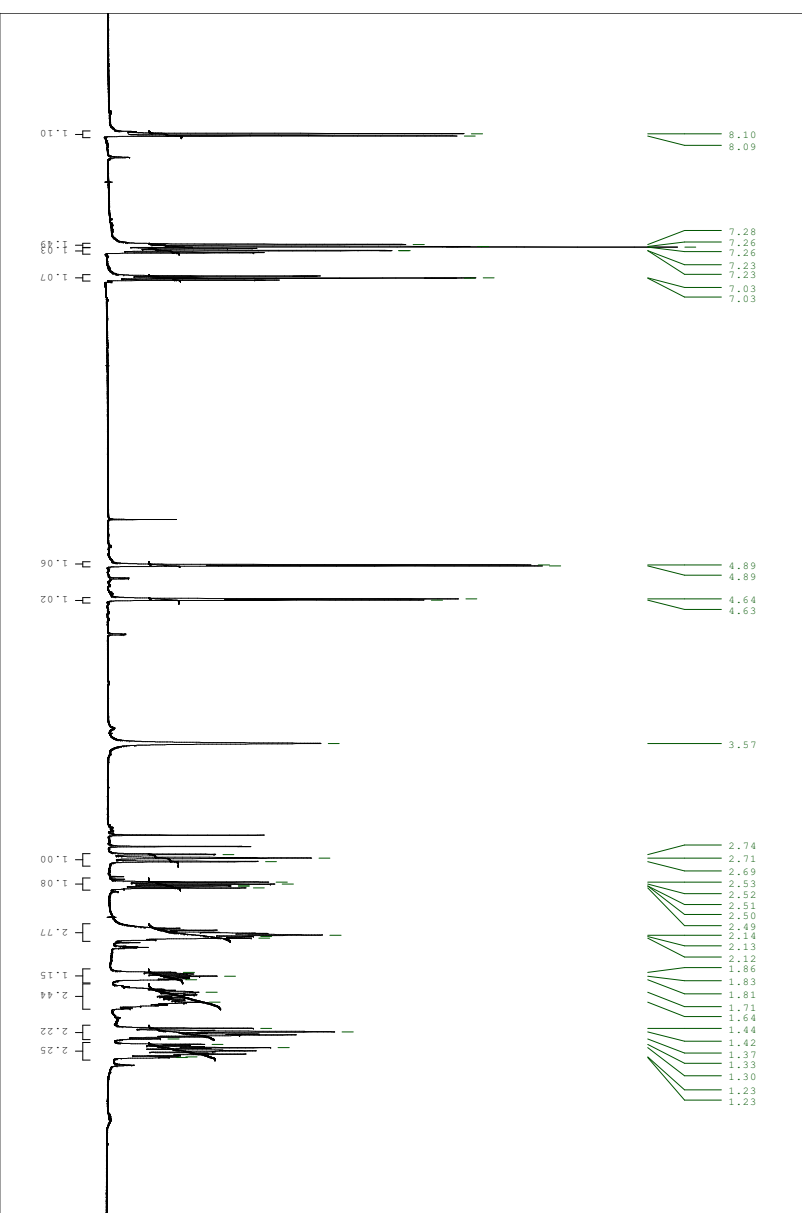
(2aS,10bS,10cR)-2a-Methyl-2a,3,4,5,10b,10c-hexahydro-2-oxa-6a-azabenzol[*a*]cyclopental[*cd*]azulene-1,6-dione (11)



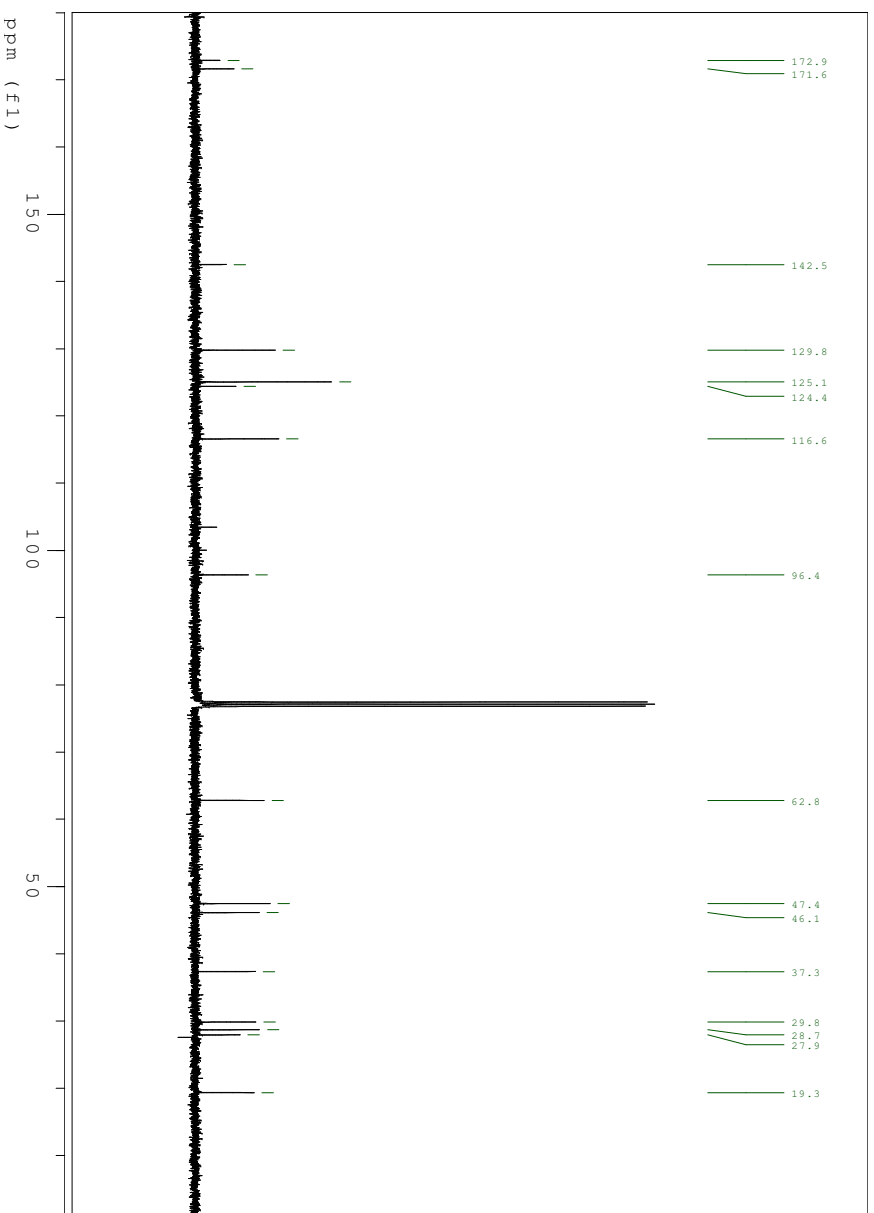
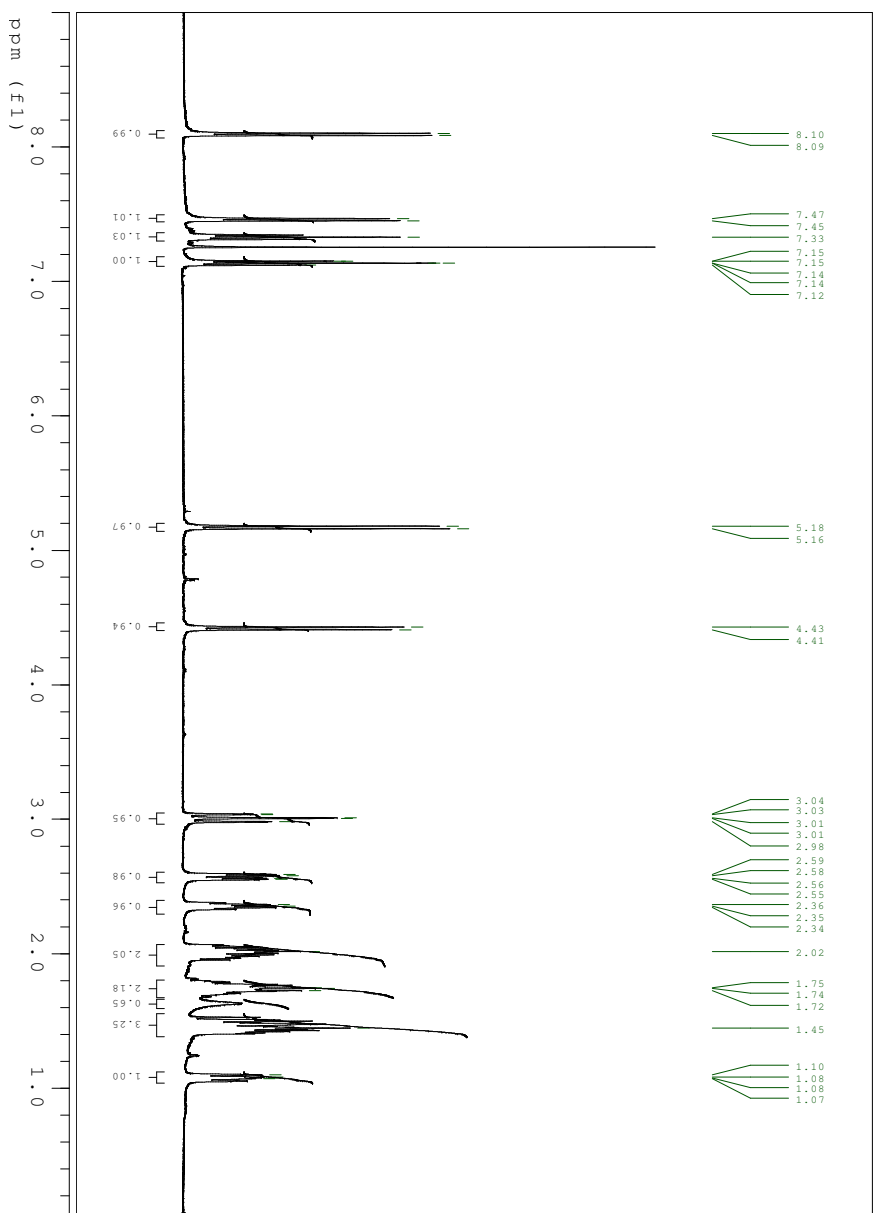
1-(3-(2-Oxocyclopentyl)propanoyl)-1*H*-indole-3-carbonitrile (13)

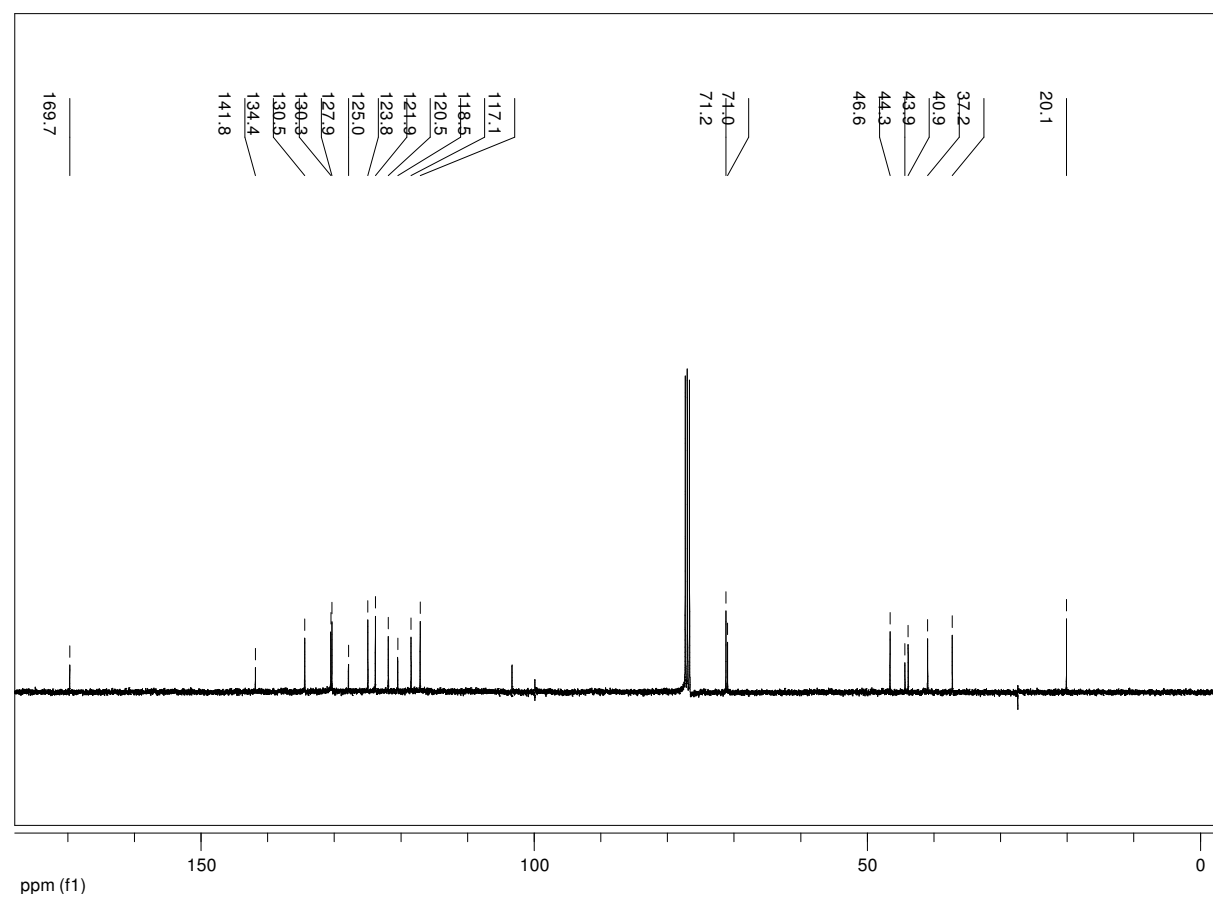


(3a*R*,11*R*,11a*R*,11b*S*)-11b-Hydroxy-6-oxo-1,2,3,3a,4,5,6,11,11a,11b-decahydrocyclopenta[3,4]azepino[1,2-*c*]indole-11-carbonitrile (14)

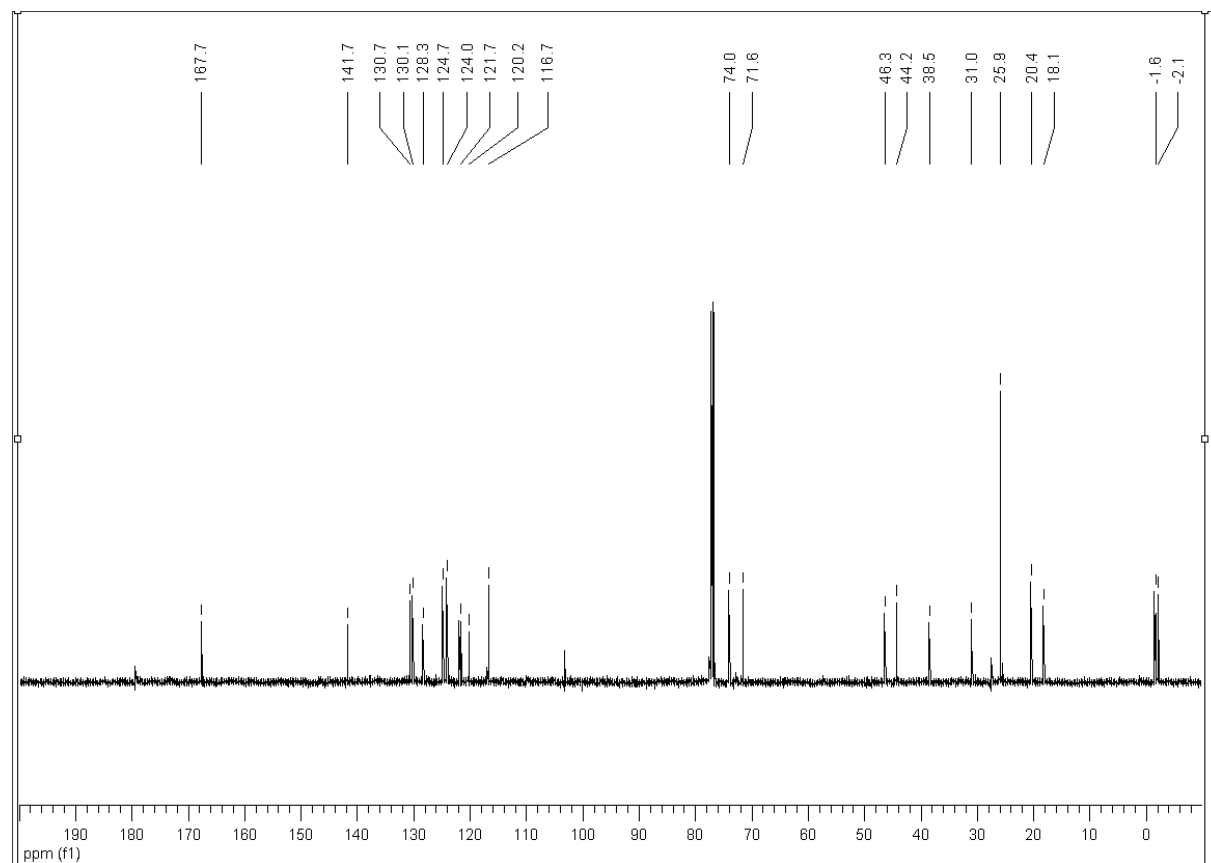
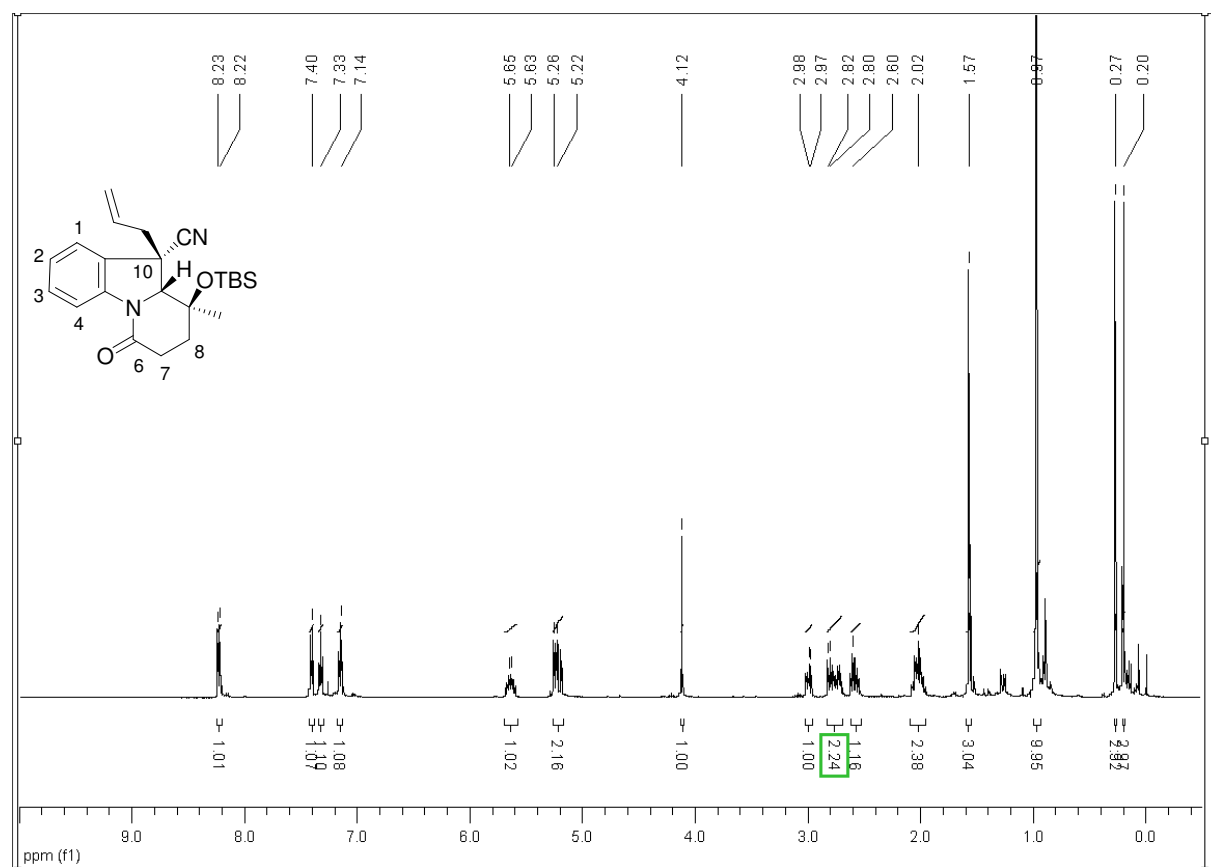


(3a*R*,10b*S*,12a*S*,12b*R*)-1,2,3,3a,4,5,10b,12b-Octahydro-6*H*,11*H*-12-oxa-6a-azabenzol[*a*]dicyclopenta[*cd,e*]azulene-6,11-dione (15)

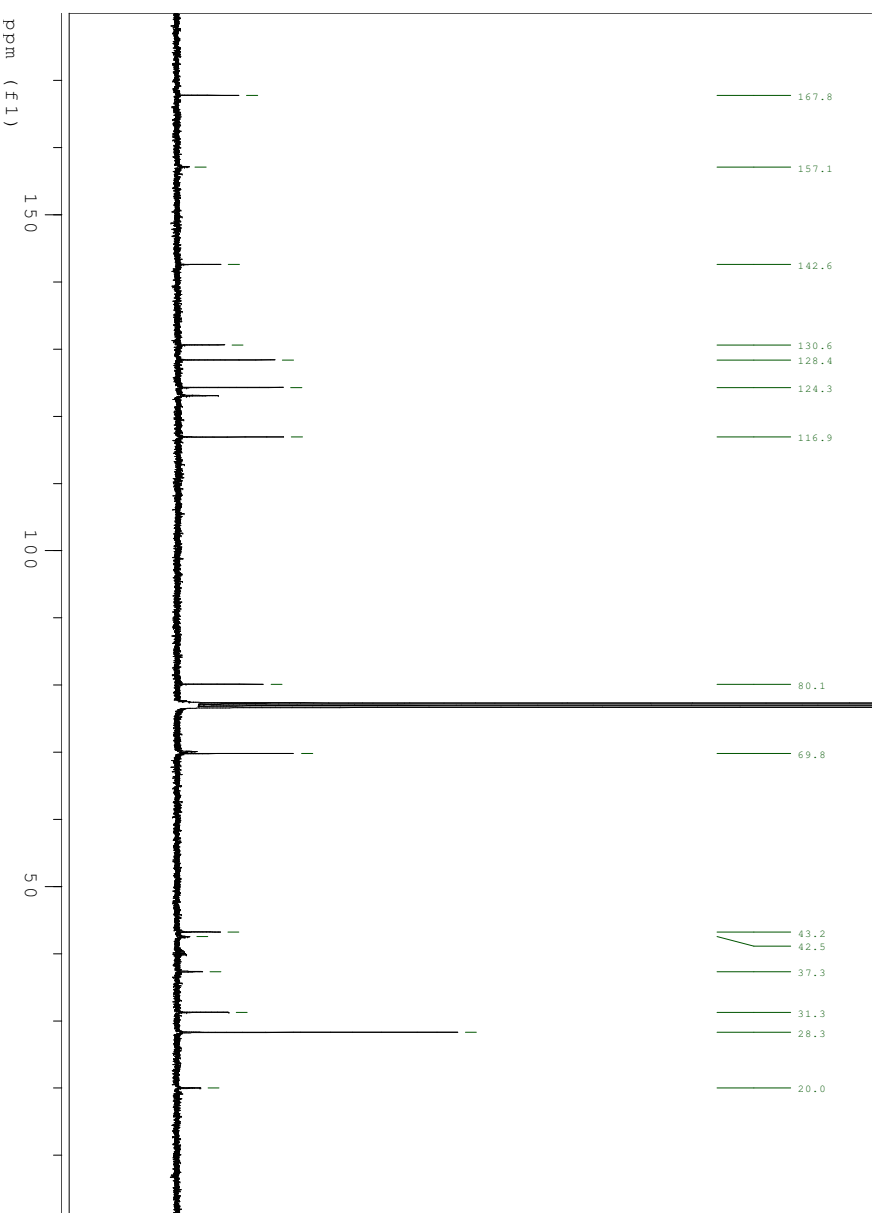
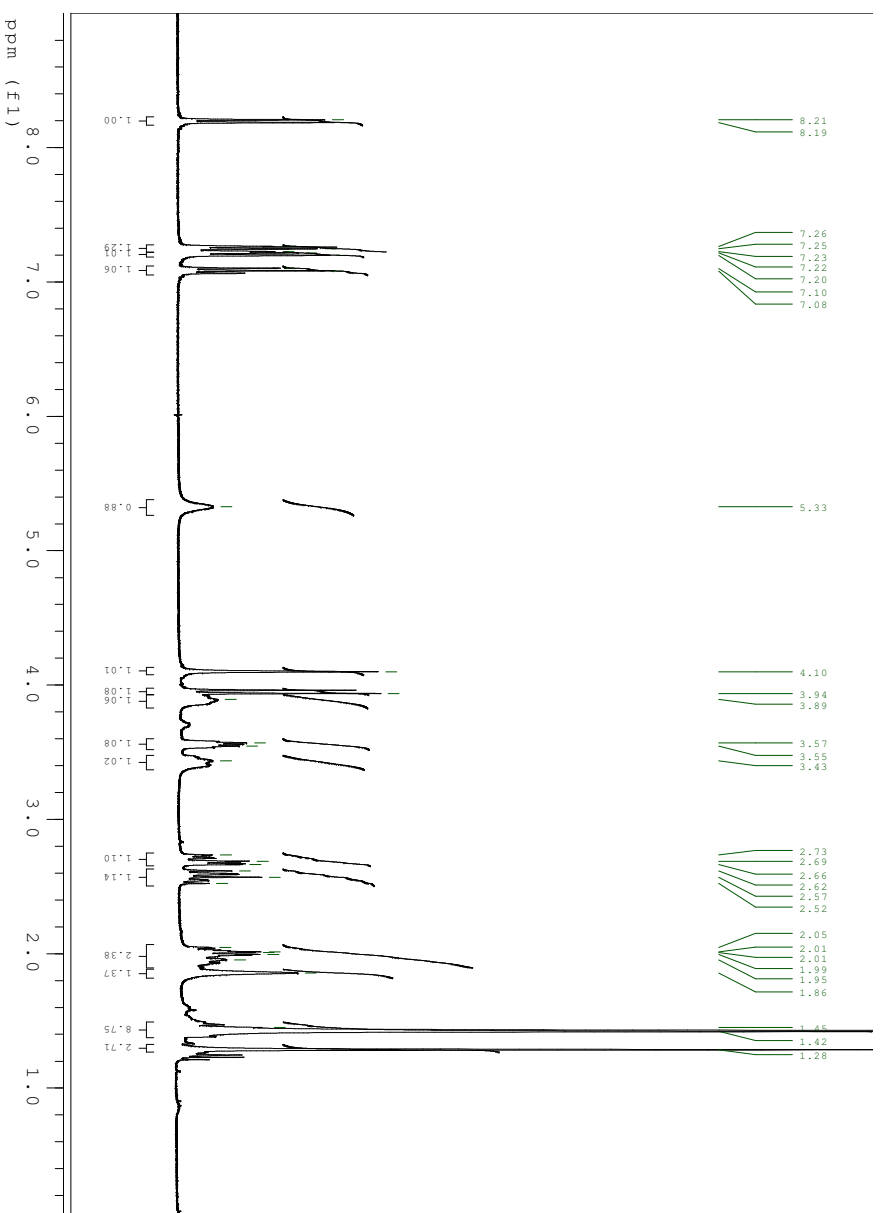


[illegible]

rac-(9S*,9aR*,10S*)-10-Allyl-9-(*tert*-butyl-dimethylsilyloxy)-9-methyl-6-oxo-7,8,9,9a,10-hexahydropyrido[1,2-a]indole-10-carbonitrile (19)



(9S,9aR,10R)-*tert*-Butyl-(9-hydroxy-9-methyl-6-oxo-7,8,9,9a,10-hexahydropyrido[1,2-a]indol-10-yl)methylcarbamate (20)



(9S,9aR,10R)-*tert*-Butyl-2-(9-hydroxy-9-methyl-6-oxo-7,8,9,9a,10-hexahydropyrido[1,2-a]indol-10-yl)ethylcarbamate (21)

