

**Rapid Synthesis of Highly Functionalised  $\alpha$ -Amino Amides and Medium Ring Lactones  
using Multicomponent Reactions of Amino Alcohols and Isocyanides**

Martin Bachman, Sam E. Mann and Tom D. Sheppard\*

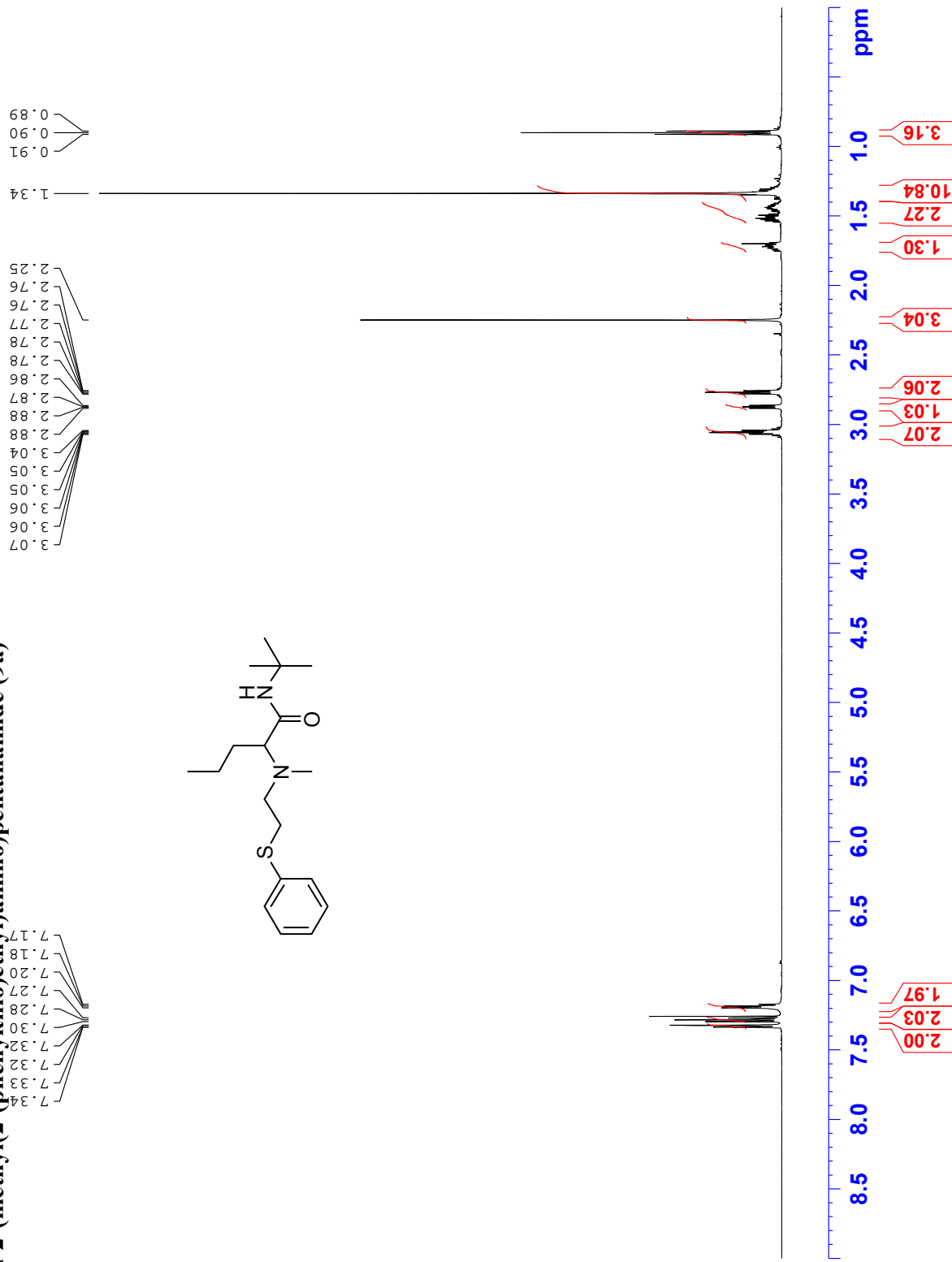
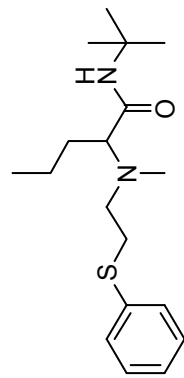
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Christopher Ingold Laboratories, 20 Gordon St, London, WC1H 0AJ, UK*

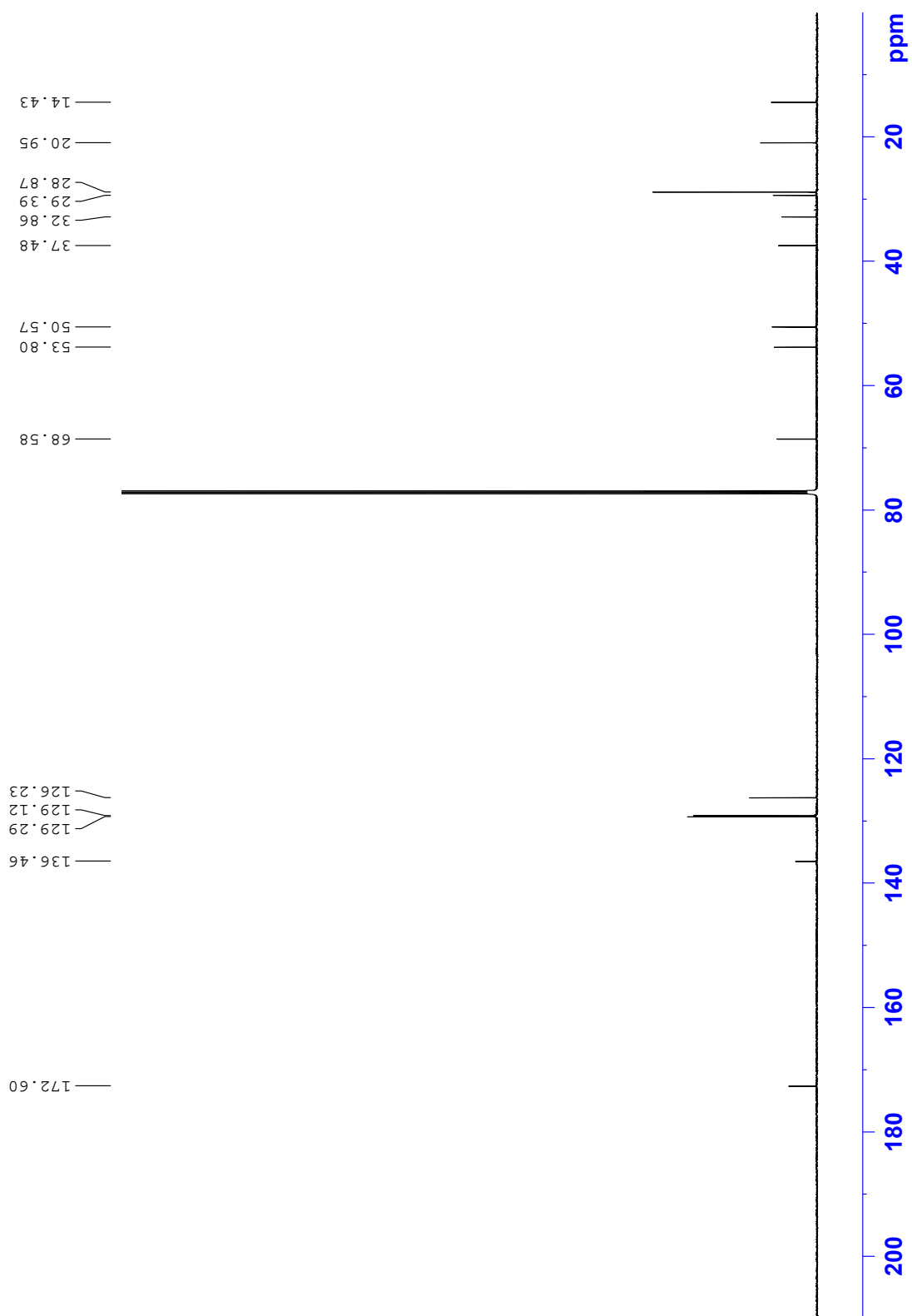
tom.sheppard@ucl.ac.uk

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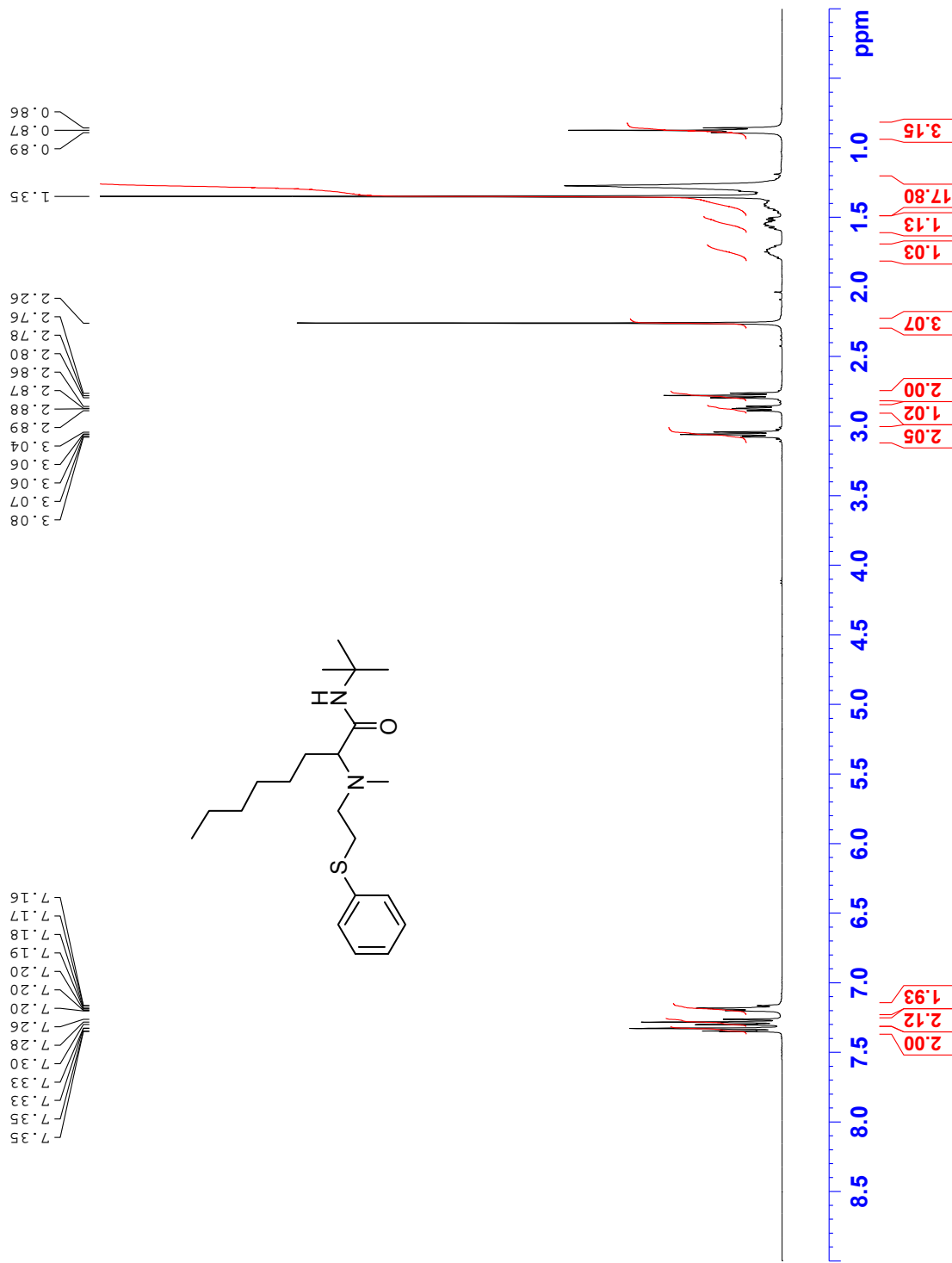
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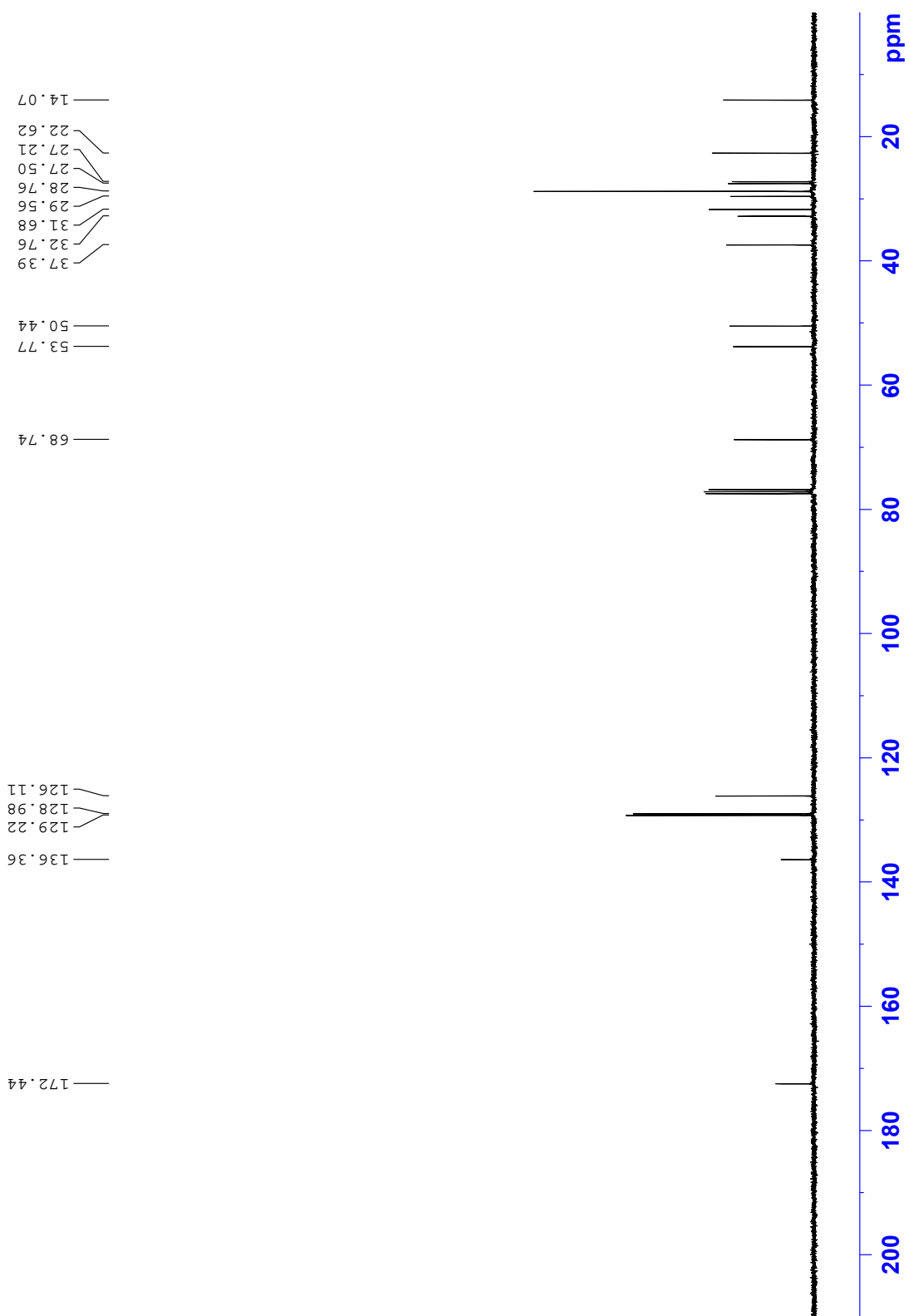
***N*-tert-Butyl-2-(methyl(2-(phenylthio)ethyl)amino)pentanamide (9a)**



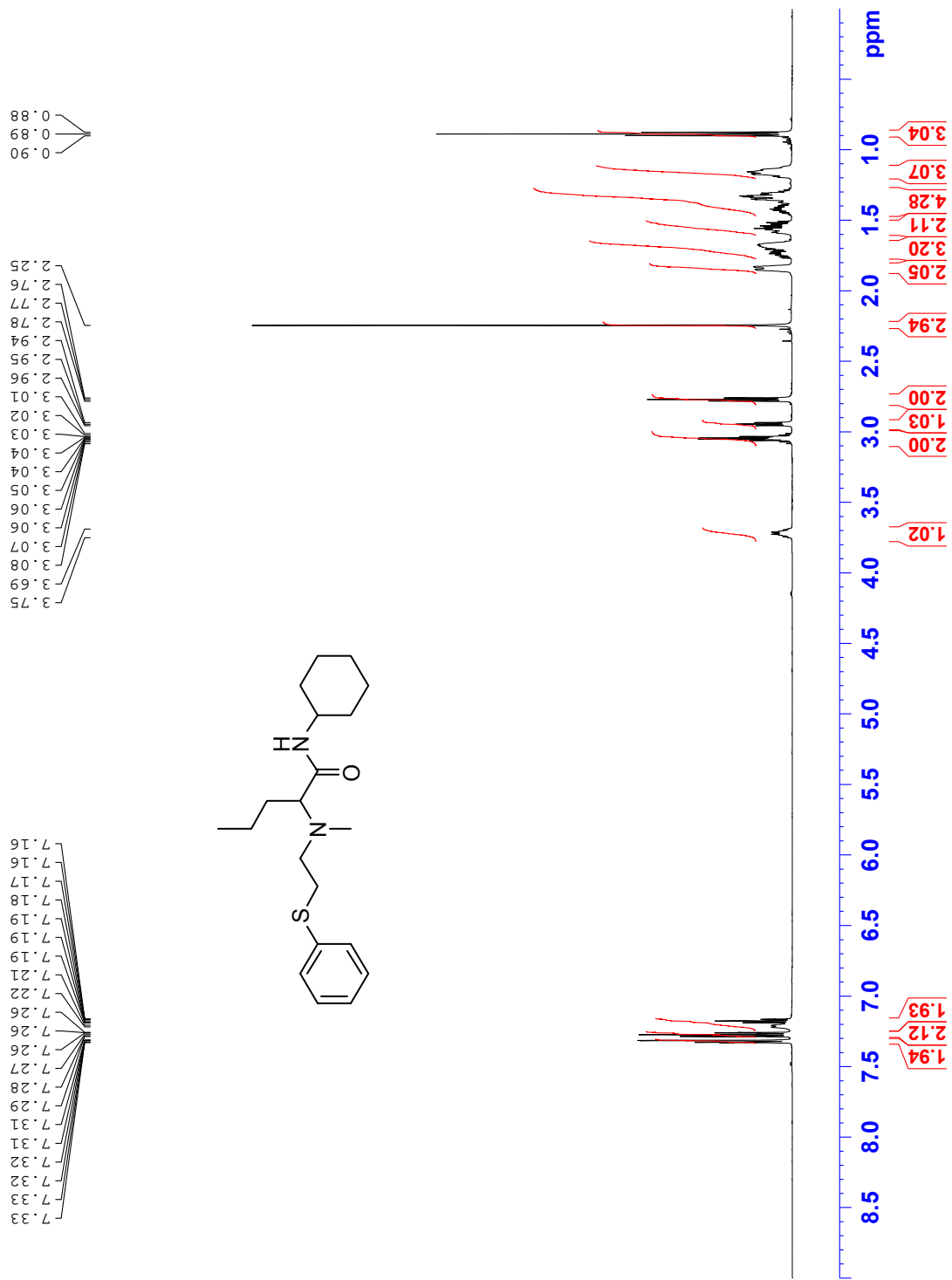


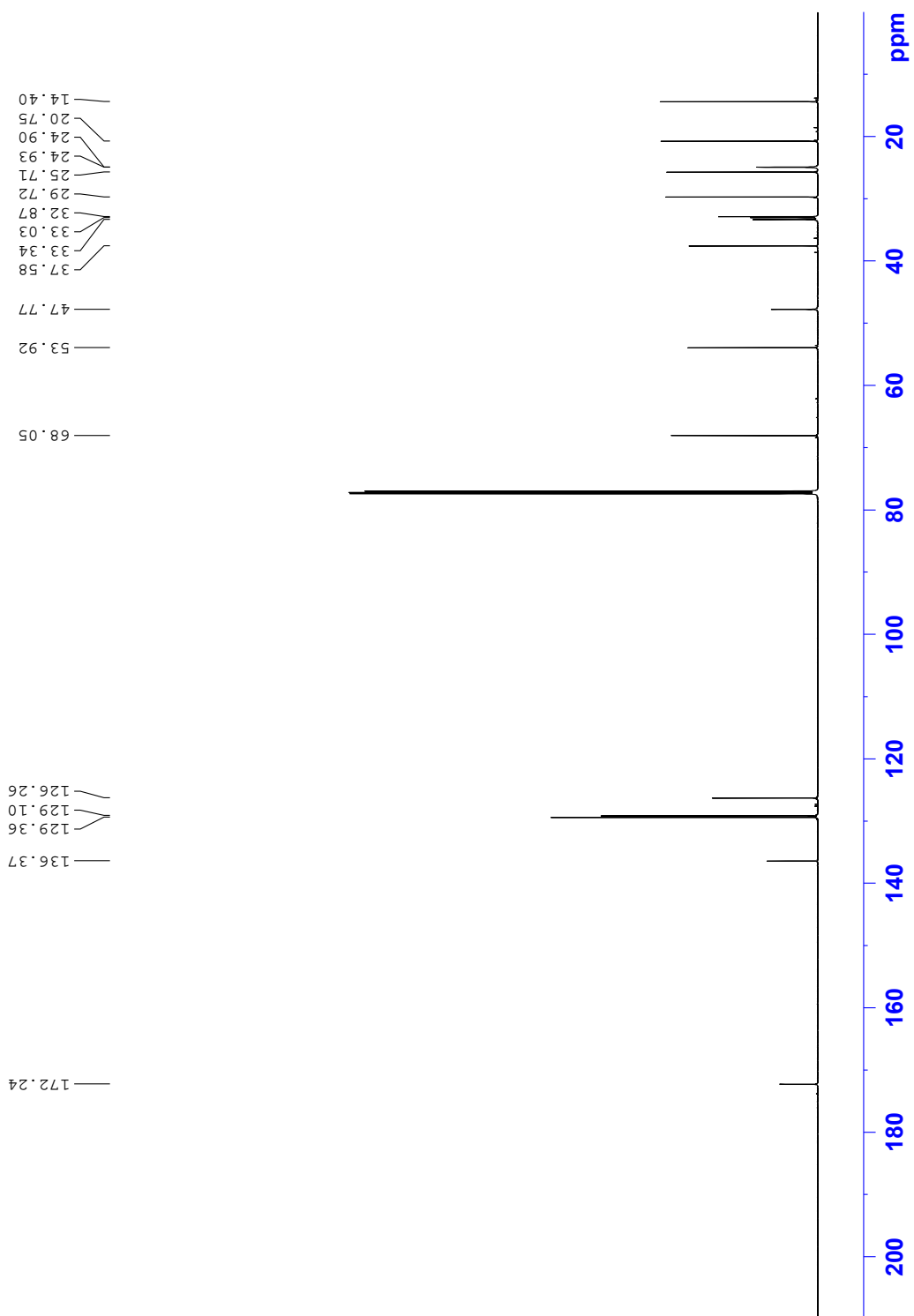
***N*-(*tert*-Butyl)-2-(methyl(2-(phenylthio)ethyl)amino)octanamide (9b)**



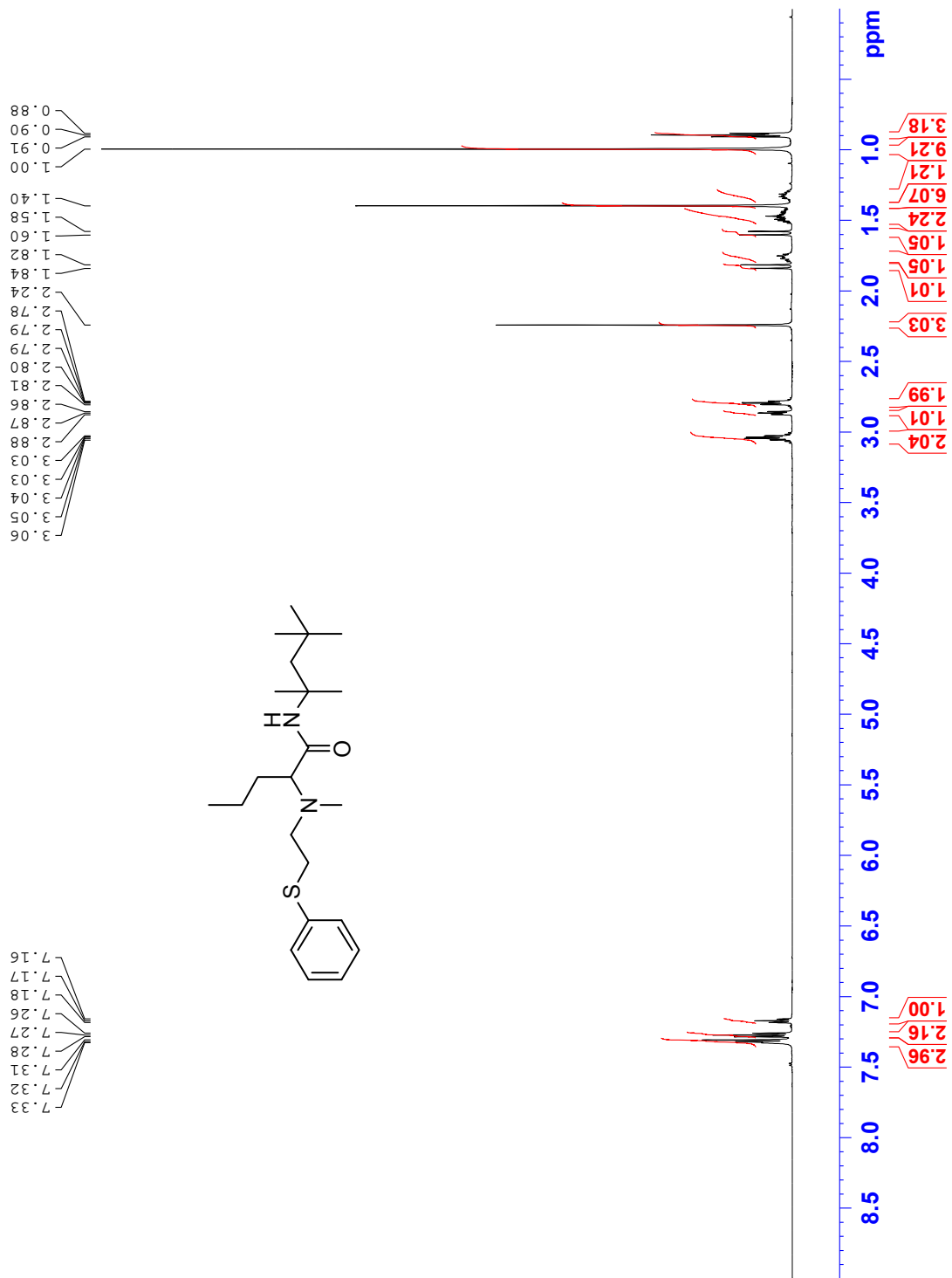


***N*-Cyclohexyl-2-(methyl(2-(phenylthio)ethyl)amino)pentanamide (9c)**

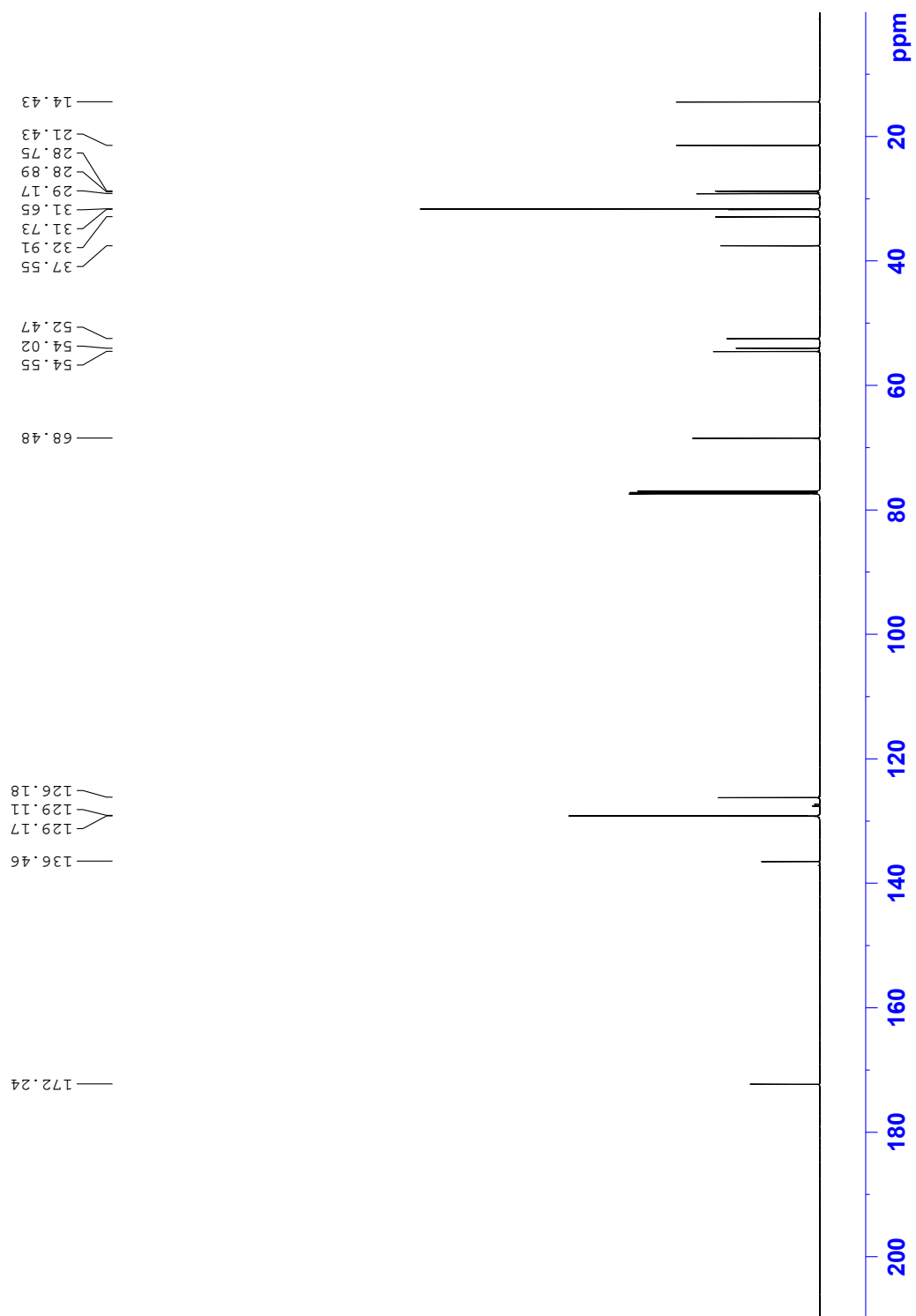




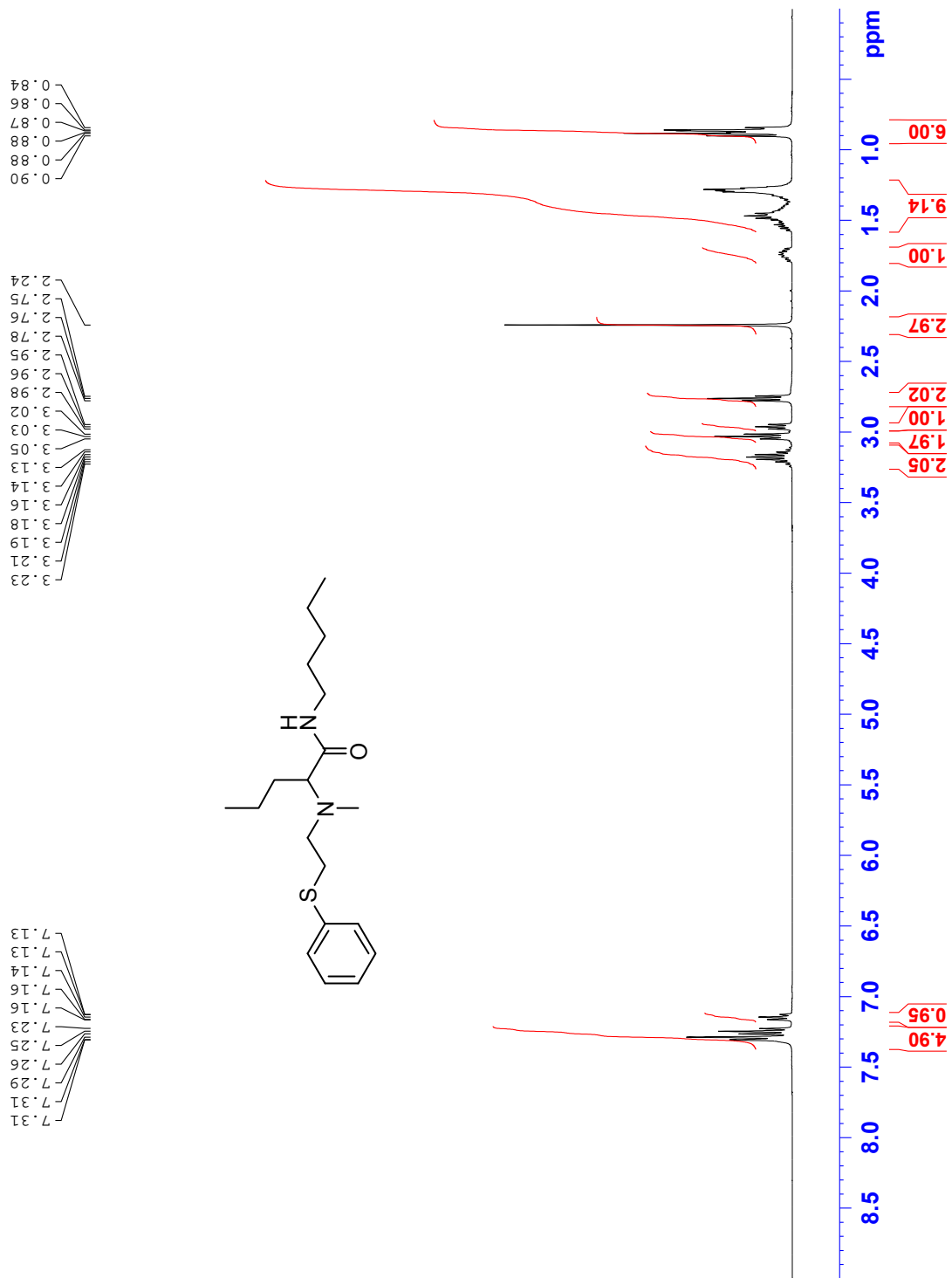
**2-(Methyl(2-(phenylthio)ethyl)amino)-N-(2,4,4-trimethylpentan-2-yl)pentanamide (9d)**

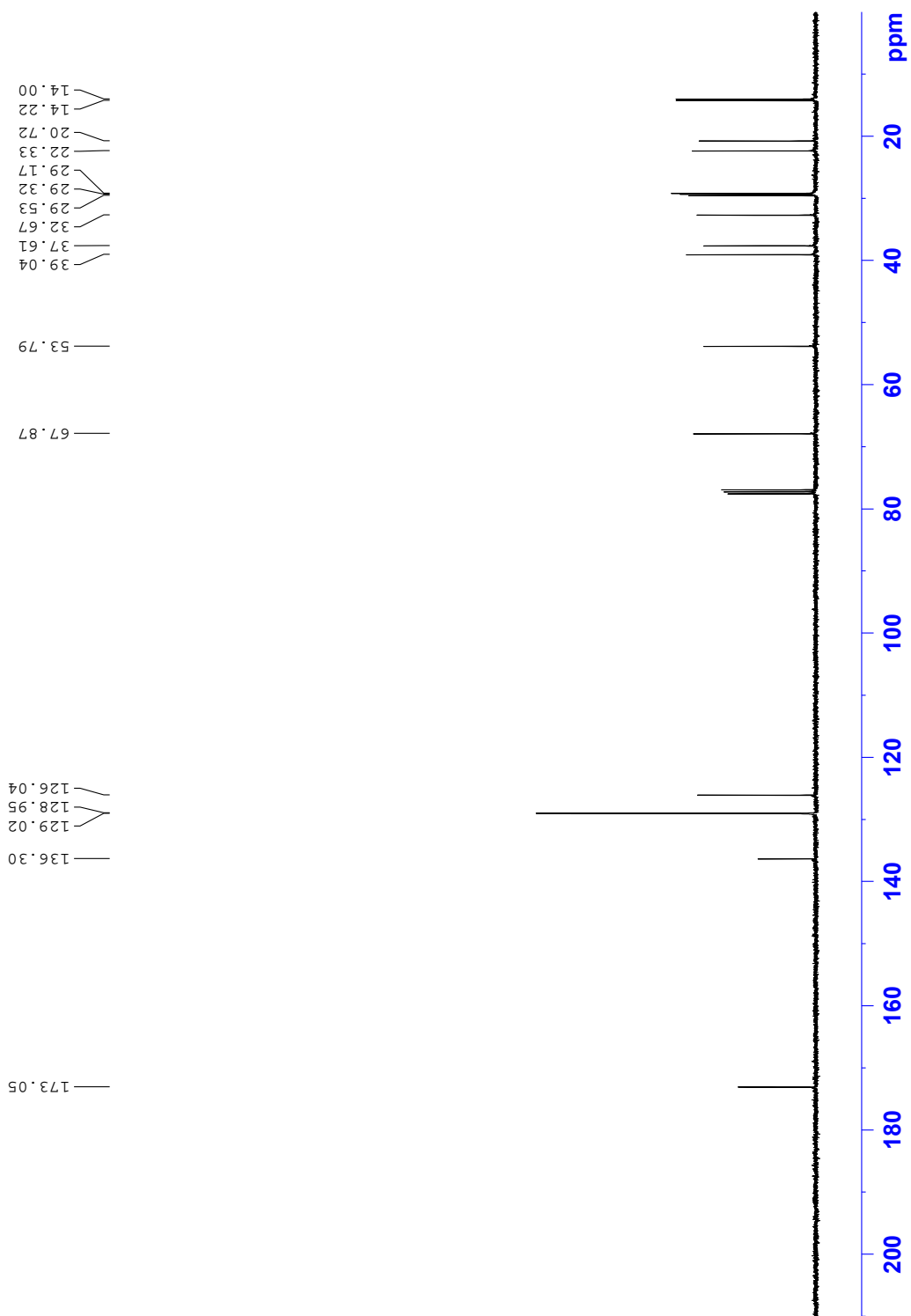




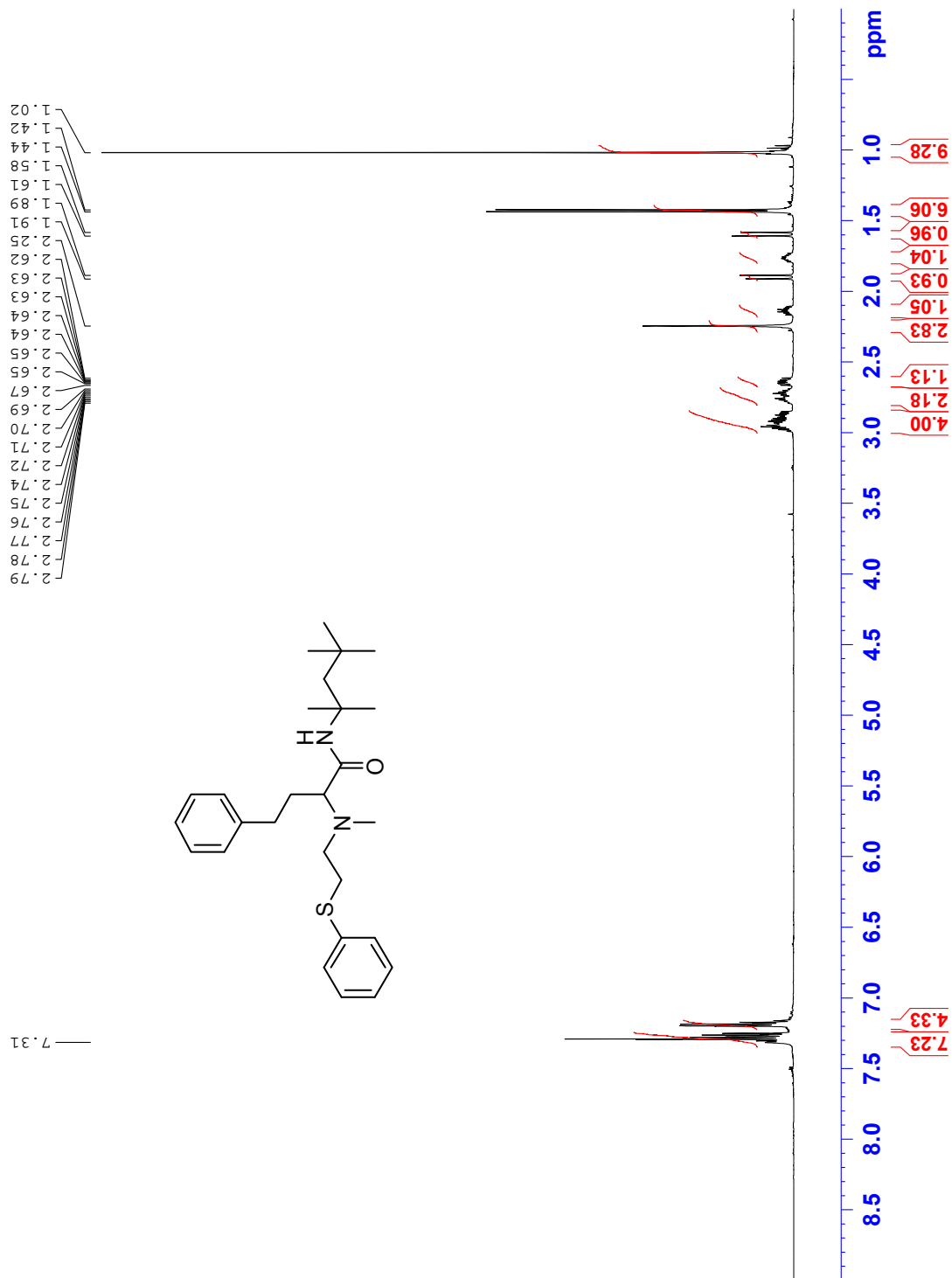


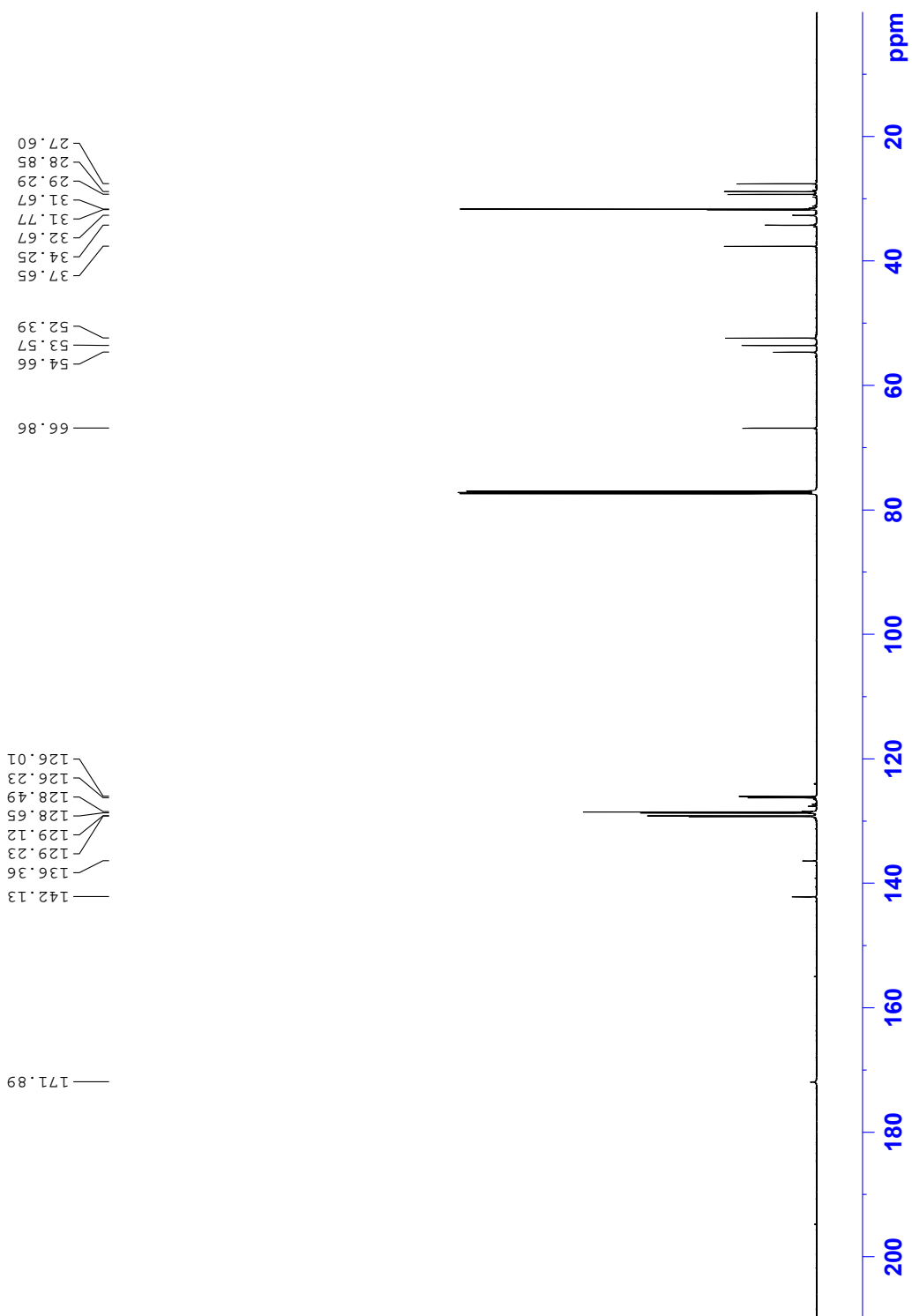
**2-(Methyl(2-(phenylthio)ethyl)amino)-N-pentylpentanamide (9e)**



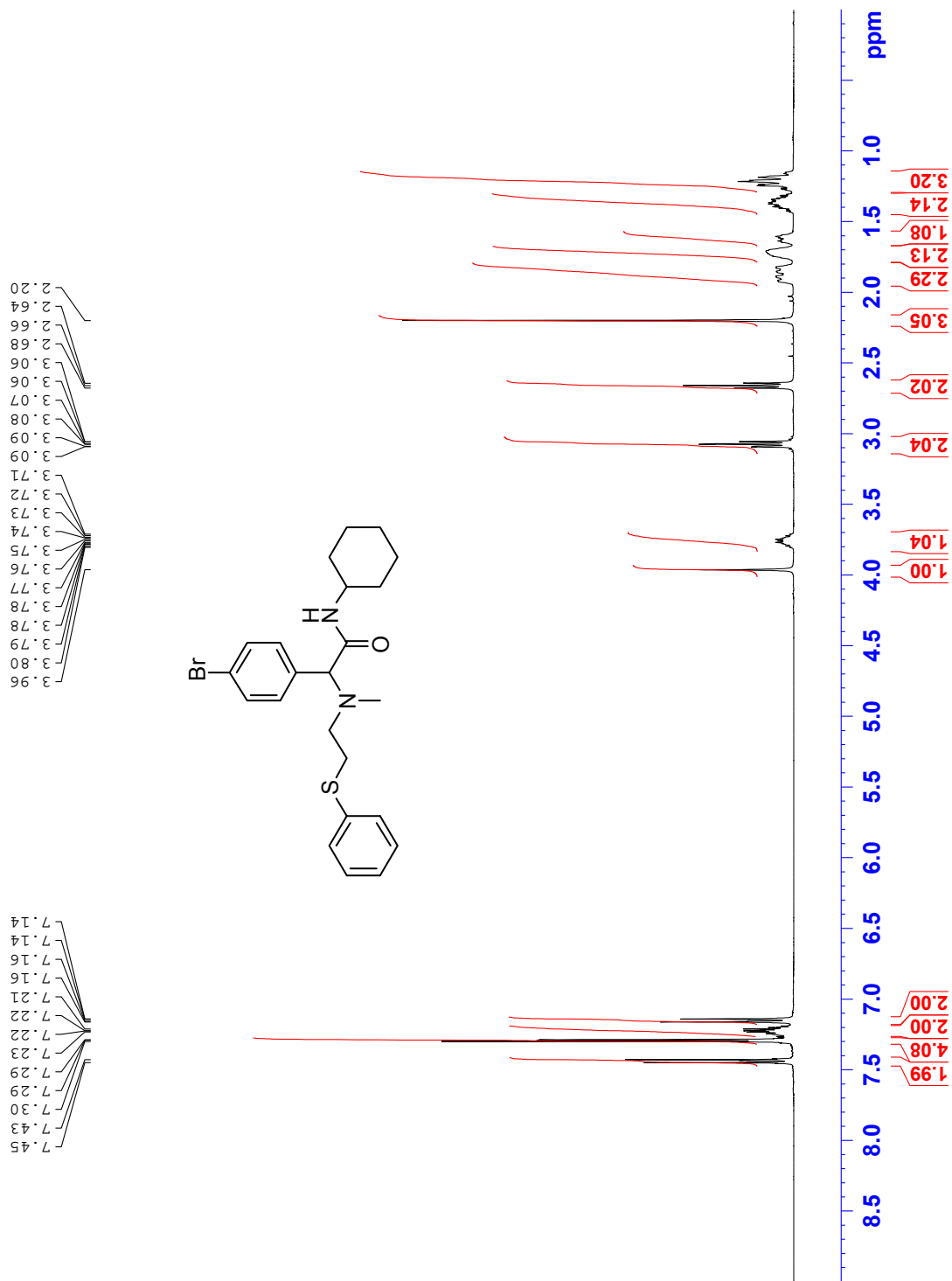


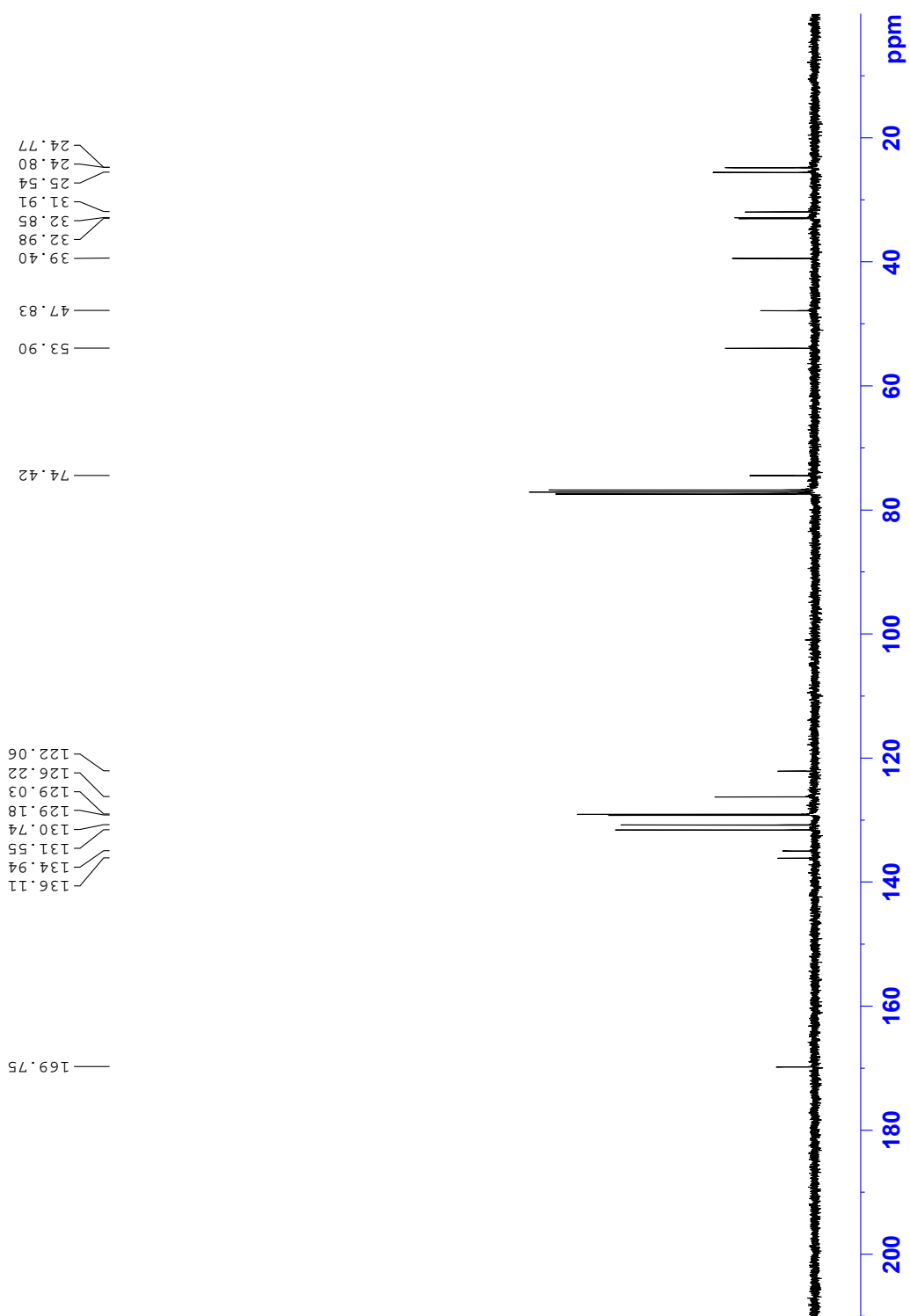
**2-(Methyl(2-(phenylthio)ethyl)amino)-4-phenyl-N-(2,4,4-trimethylpentan-2-yl)butanamide (9f)**



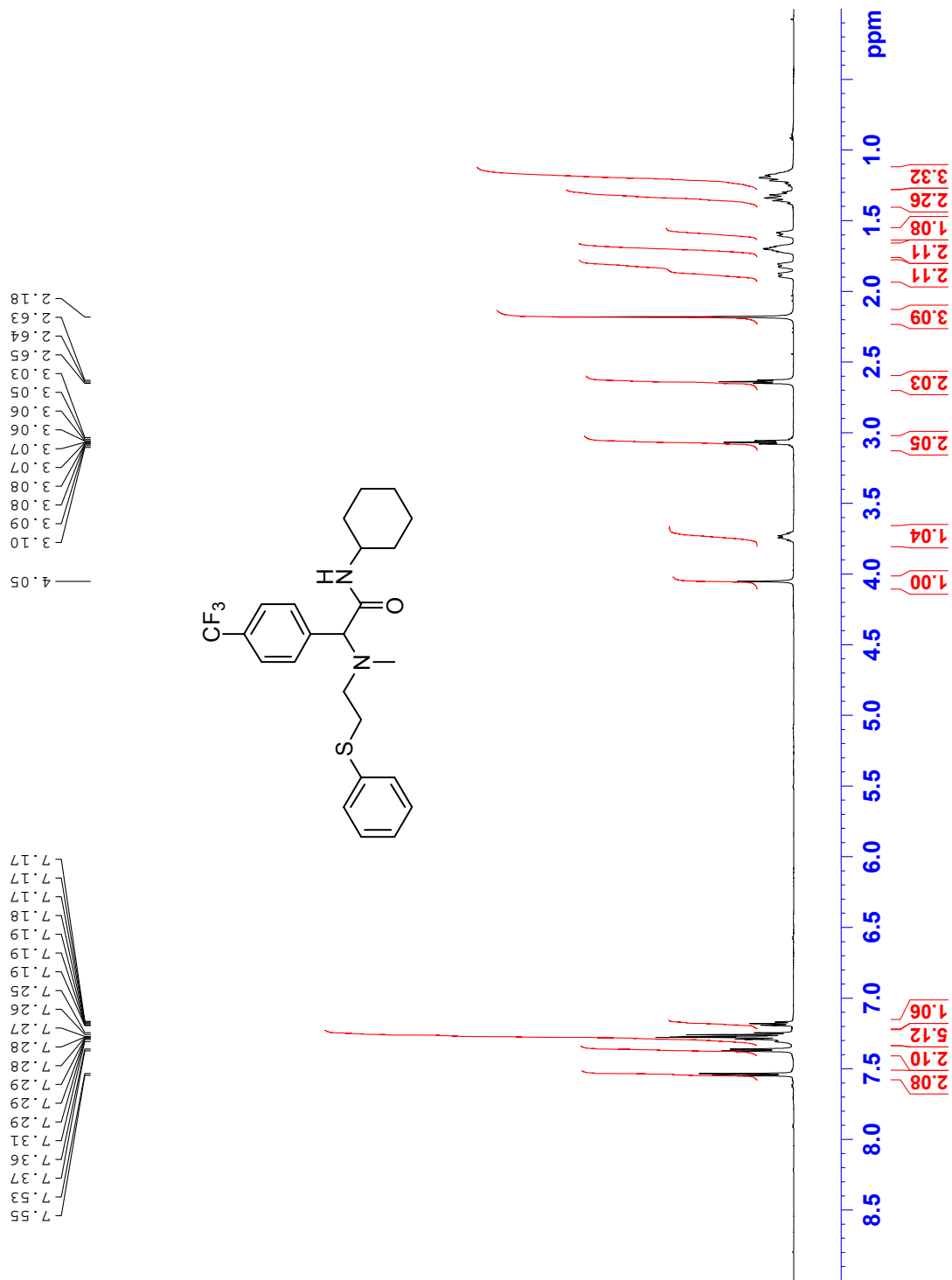


**2-(4-Bromophenyl)-N-cyclohexyl-2-(methyl(2-(phenylthio)ethyl)amino)acetamide (9g)**

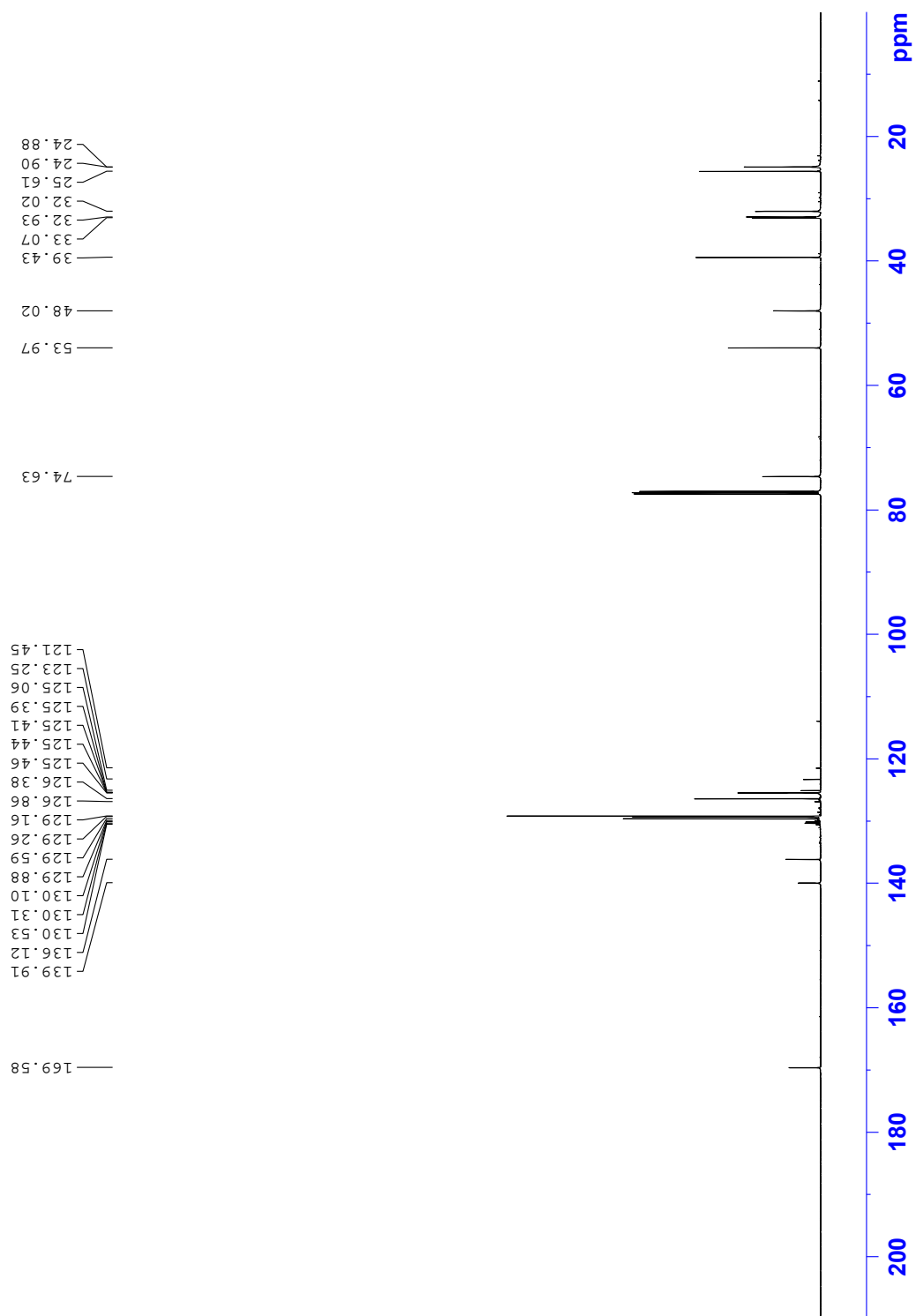




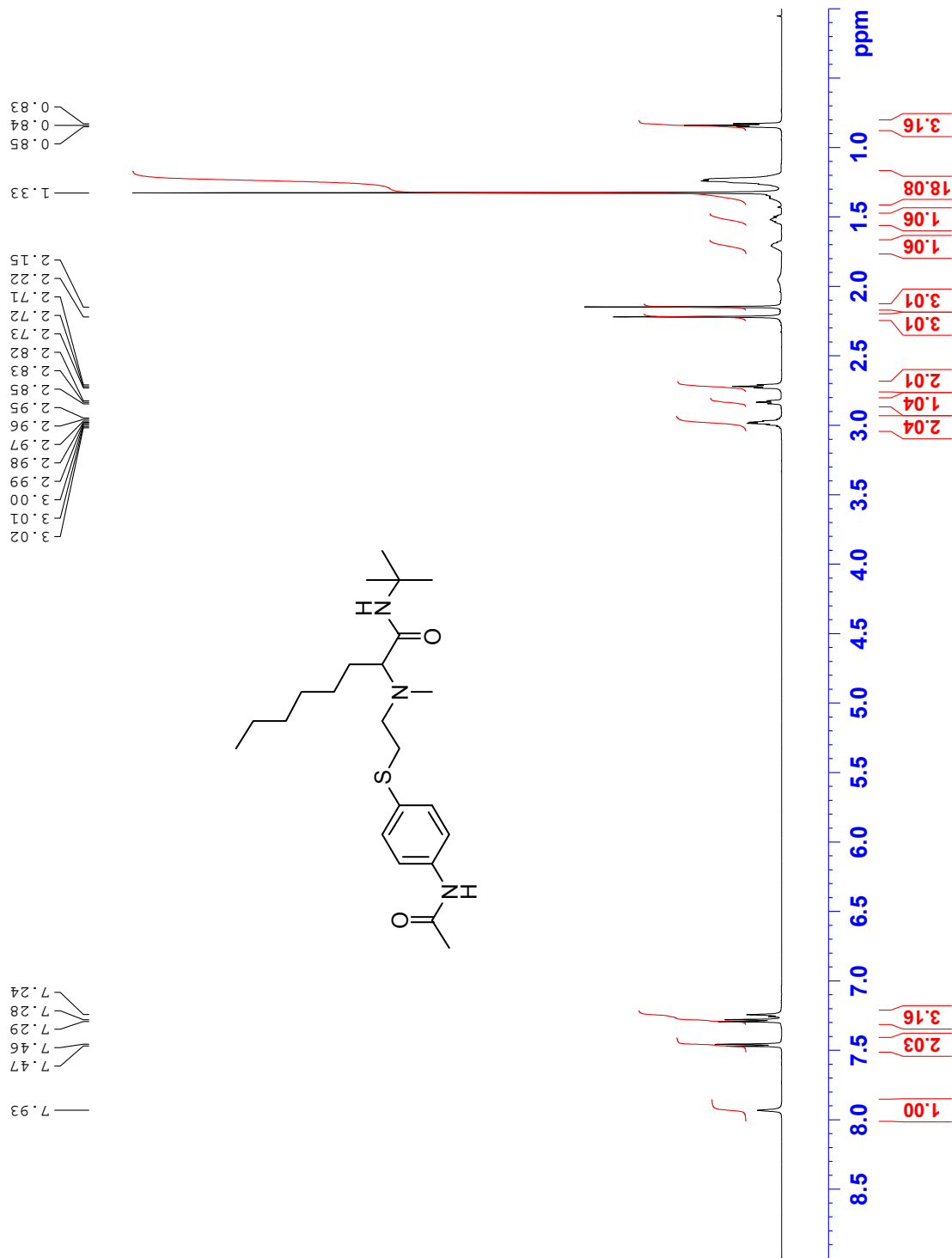
***N*-Cyclohexyl-2-(methyl(2-(phenylthio)ethyl)amino)-2-(4-(trifluoromethyl)phenyl)acetamide (9h)**

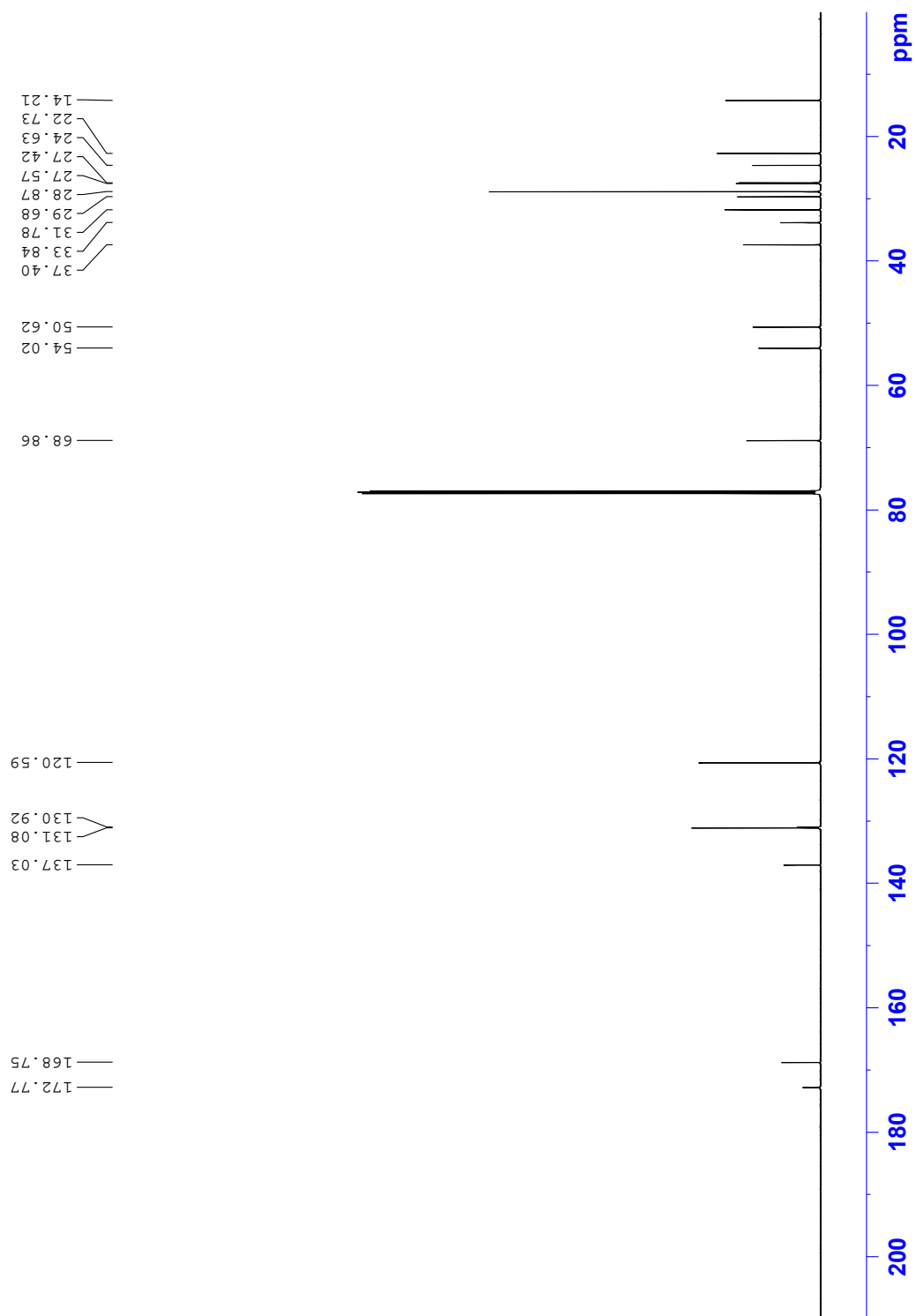




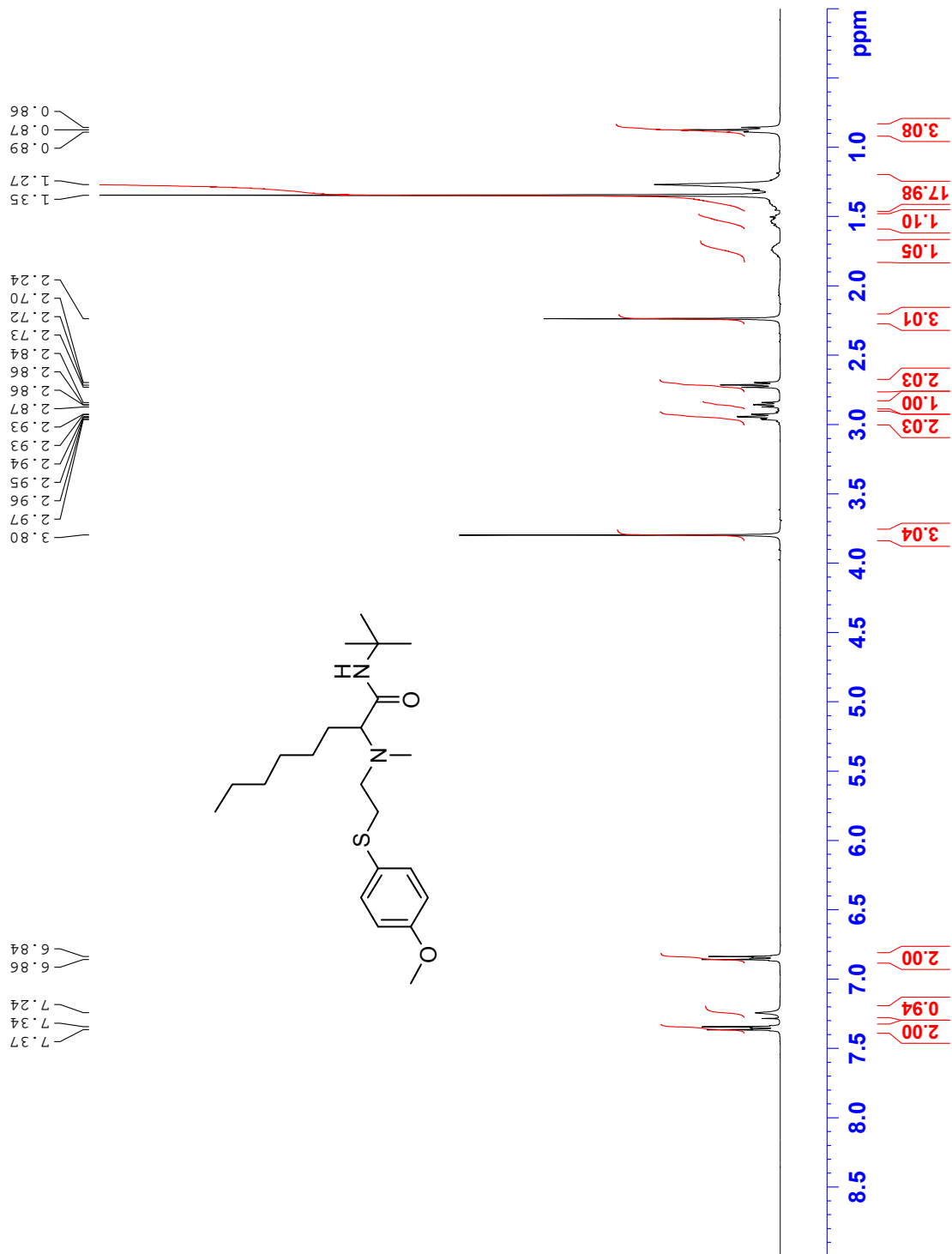


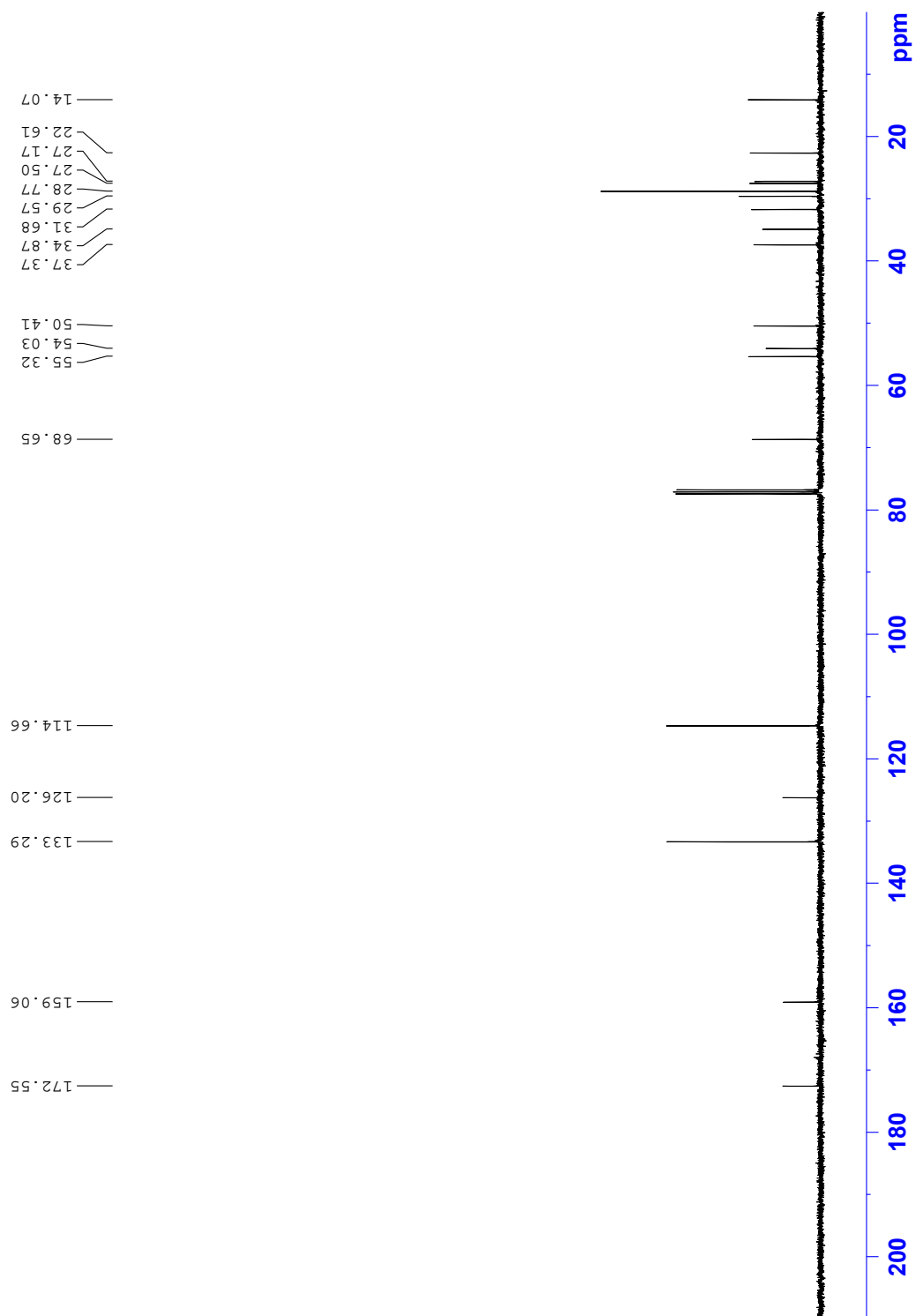
2-((2-((4-Acetamidophenyl)thio)ethyl)(methyl)amino)-N-(*tert*-butyl)octanamide (9i)



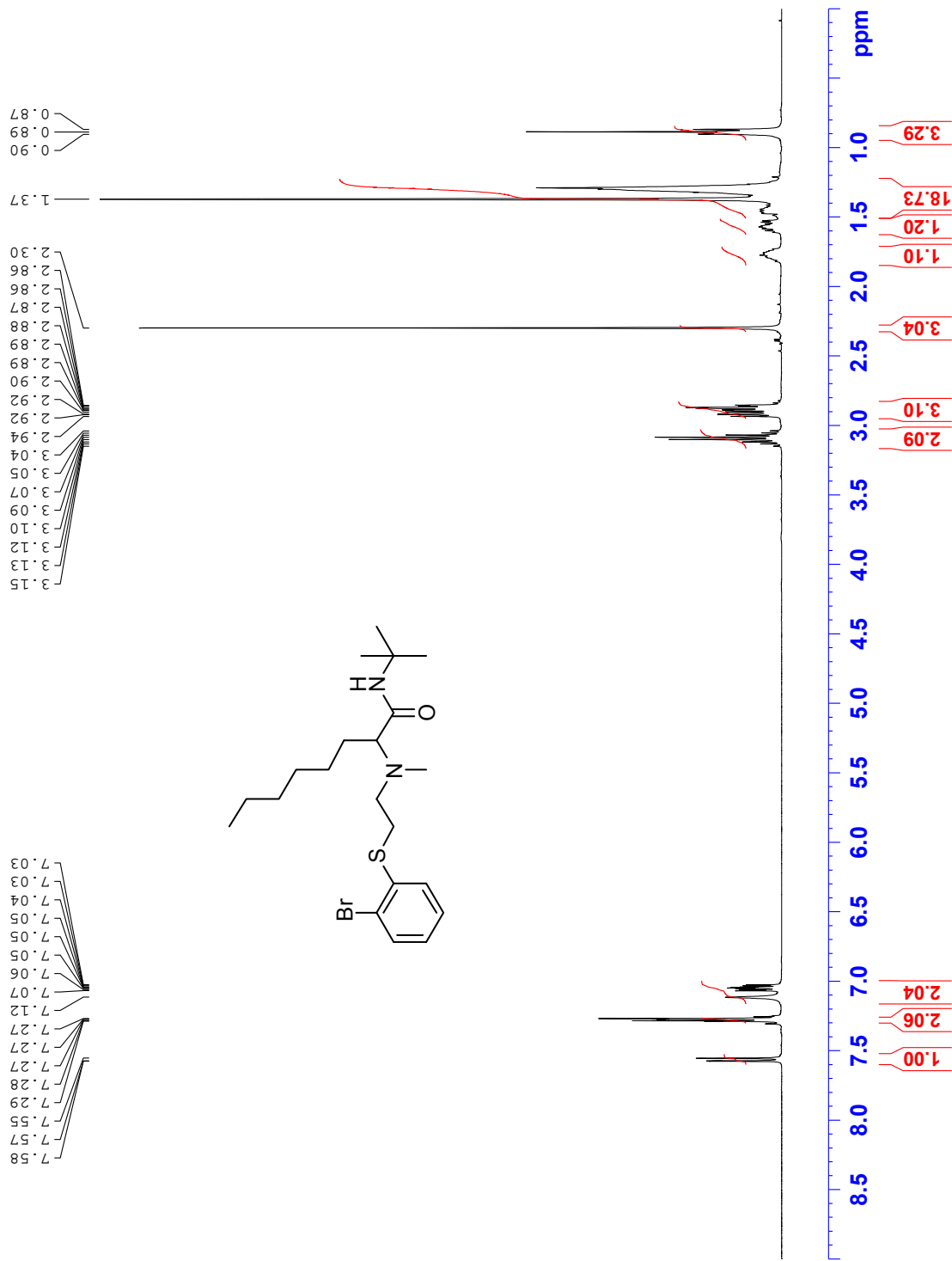


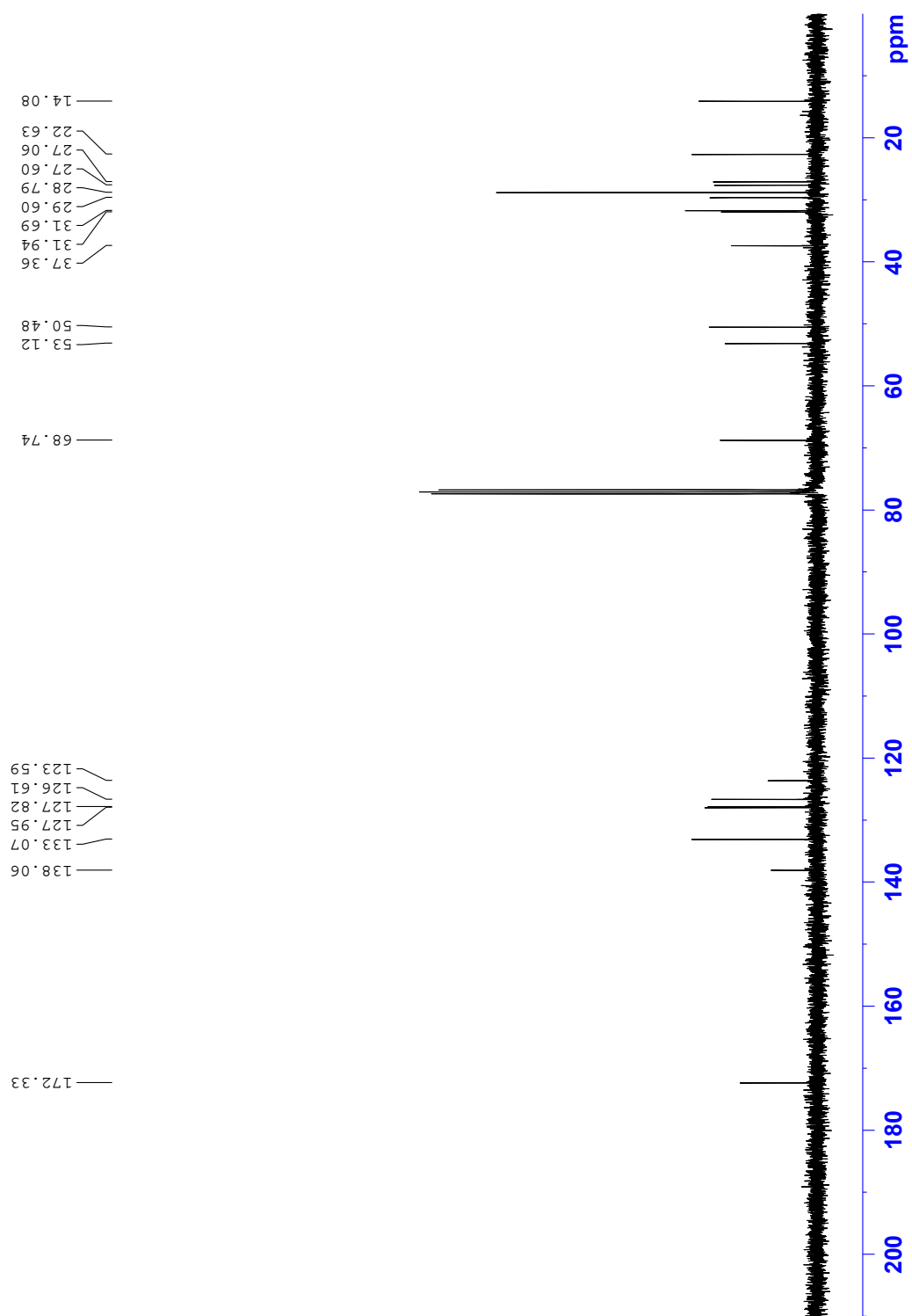
***N*-(*tert*-Butyl)-2-((2-(4-methoxyphenyl)thio)ethyl)(methylamino)octanamide (9j)**



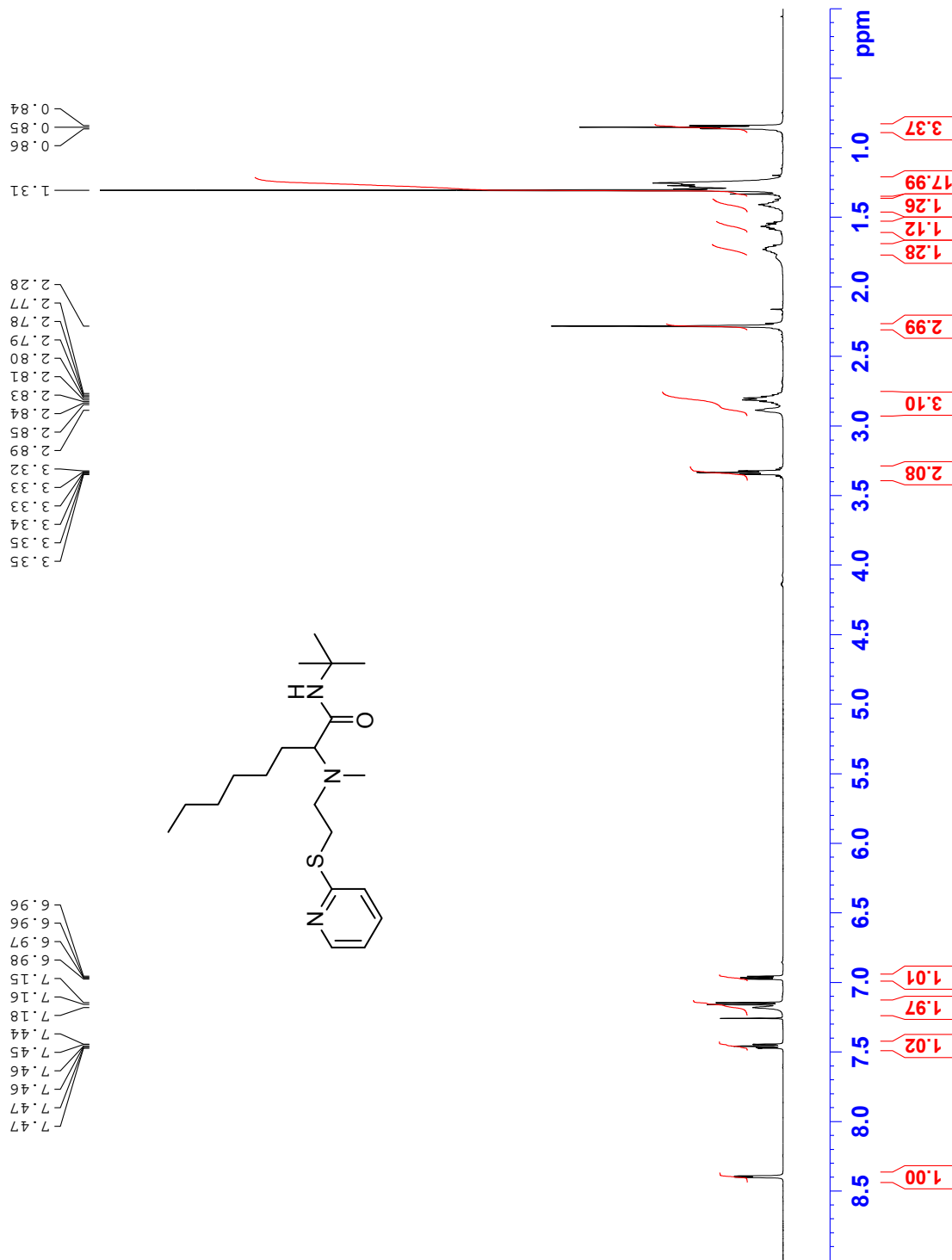


2-((2-(2-Bromophenyl)thio)ethyl)(methyl)amino)-N-(*tert*-butyl)octanamide (9k)

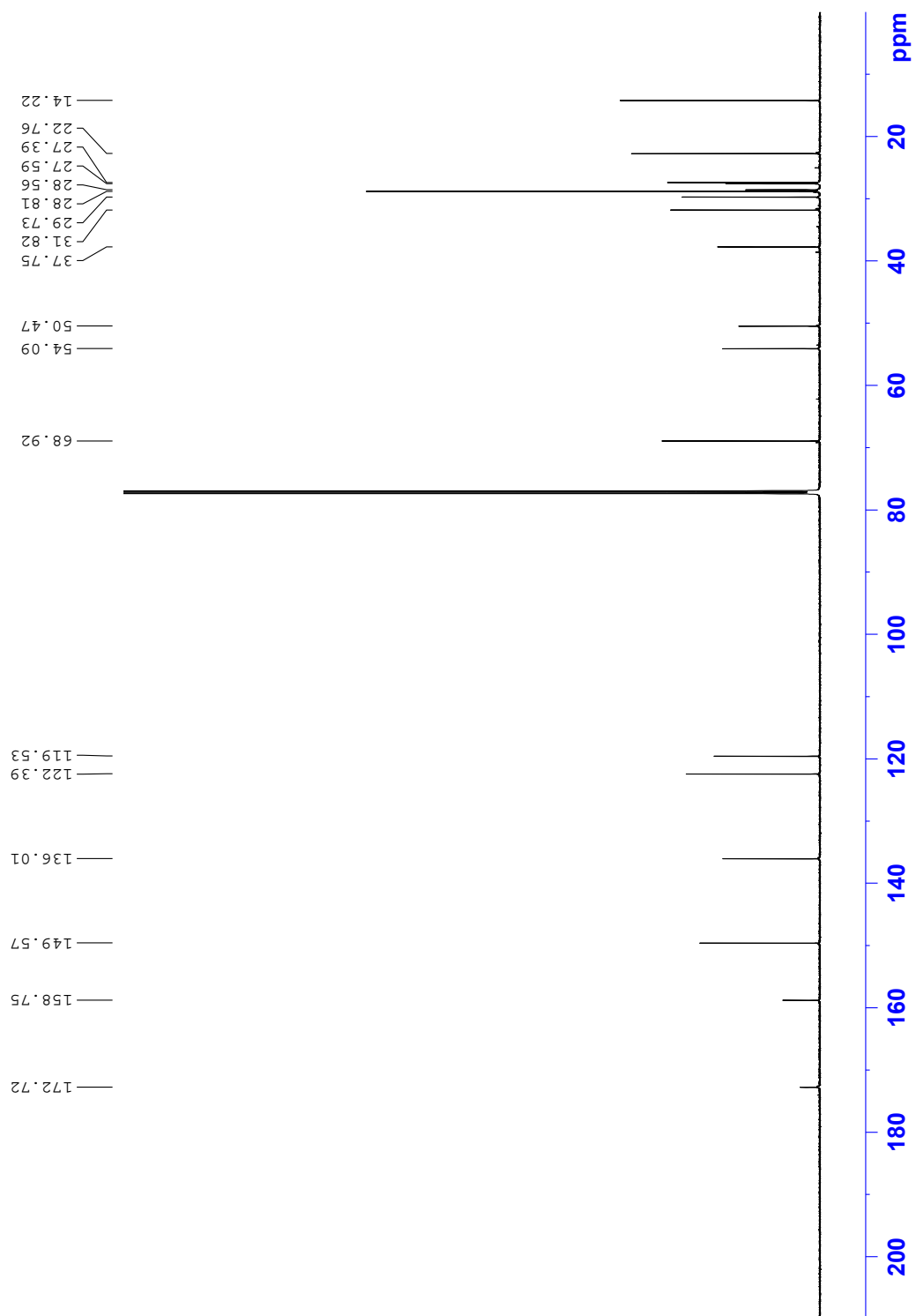




***N*-(*tert*-Butyl)-2-(methyl(2-(pyridin-2-ylthio)ethyl)amino)octanamide (9I)**

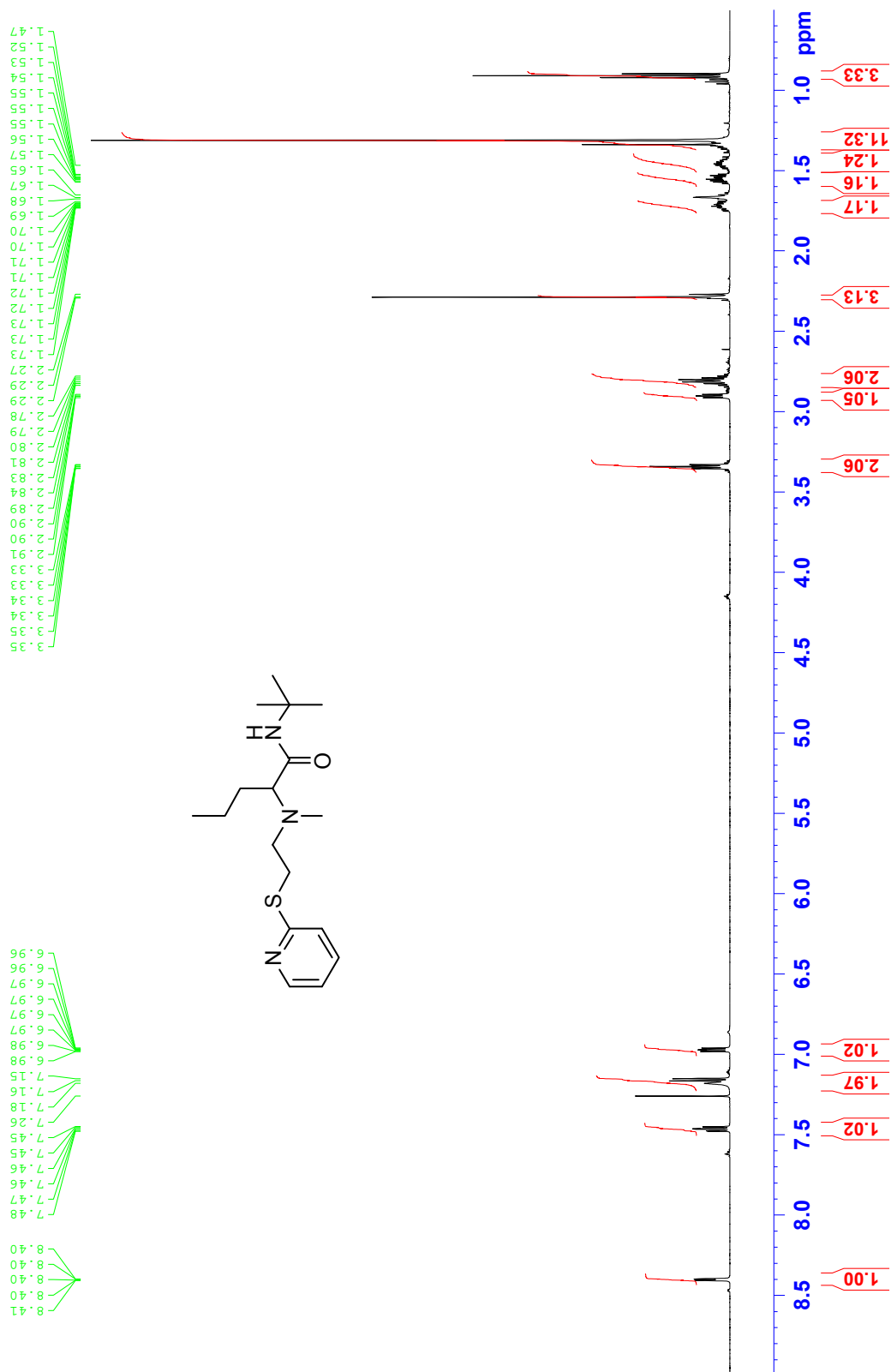






*N*-(*tert*-Butyl)-2-(methyl(2-(pyridin-2-ylthio)ethyl)amino)pentanamide (9m)

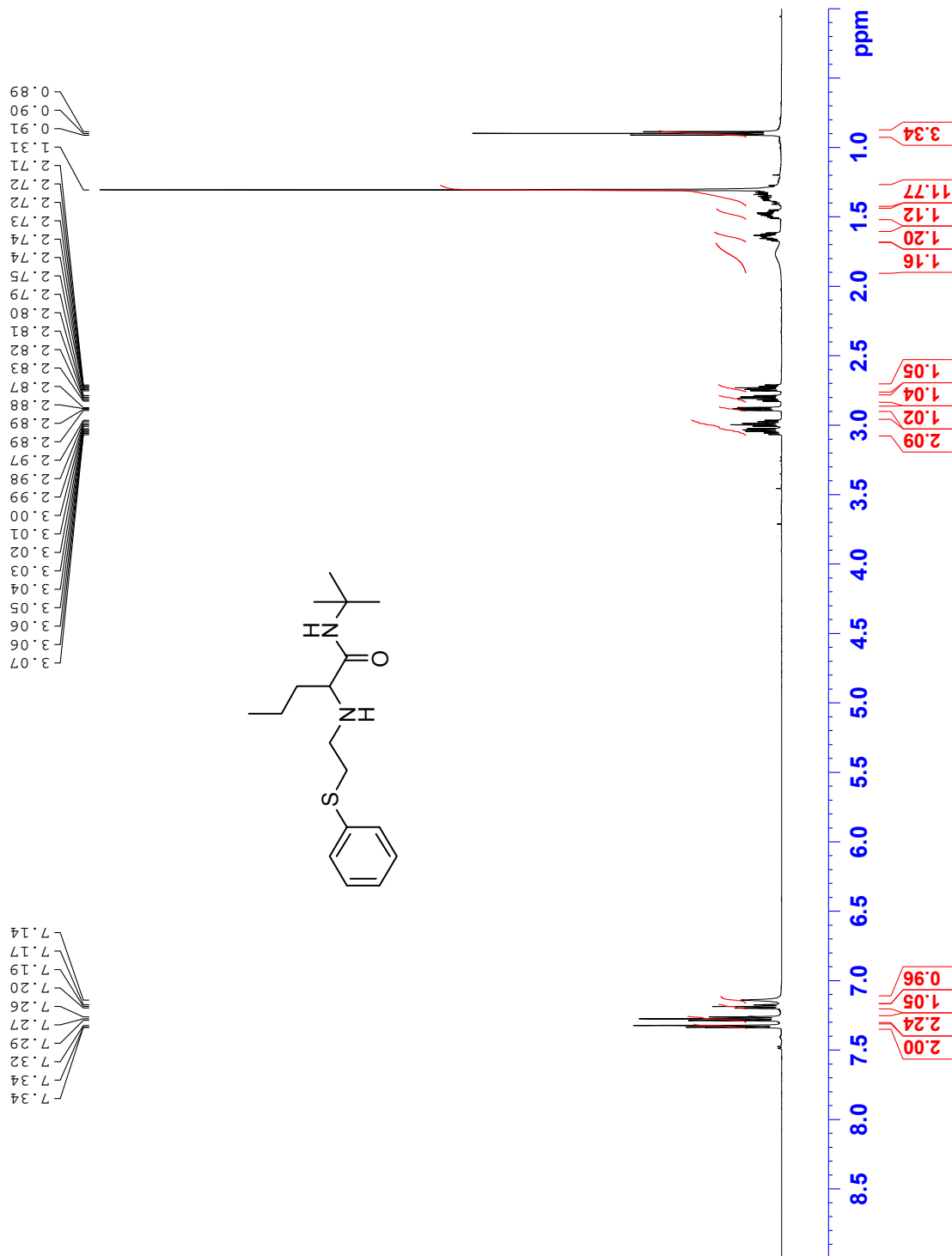
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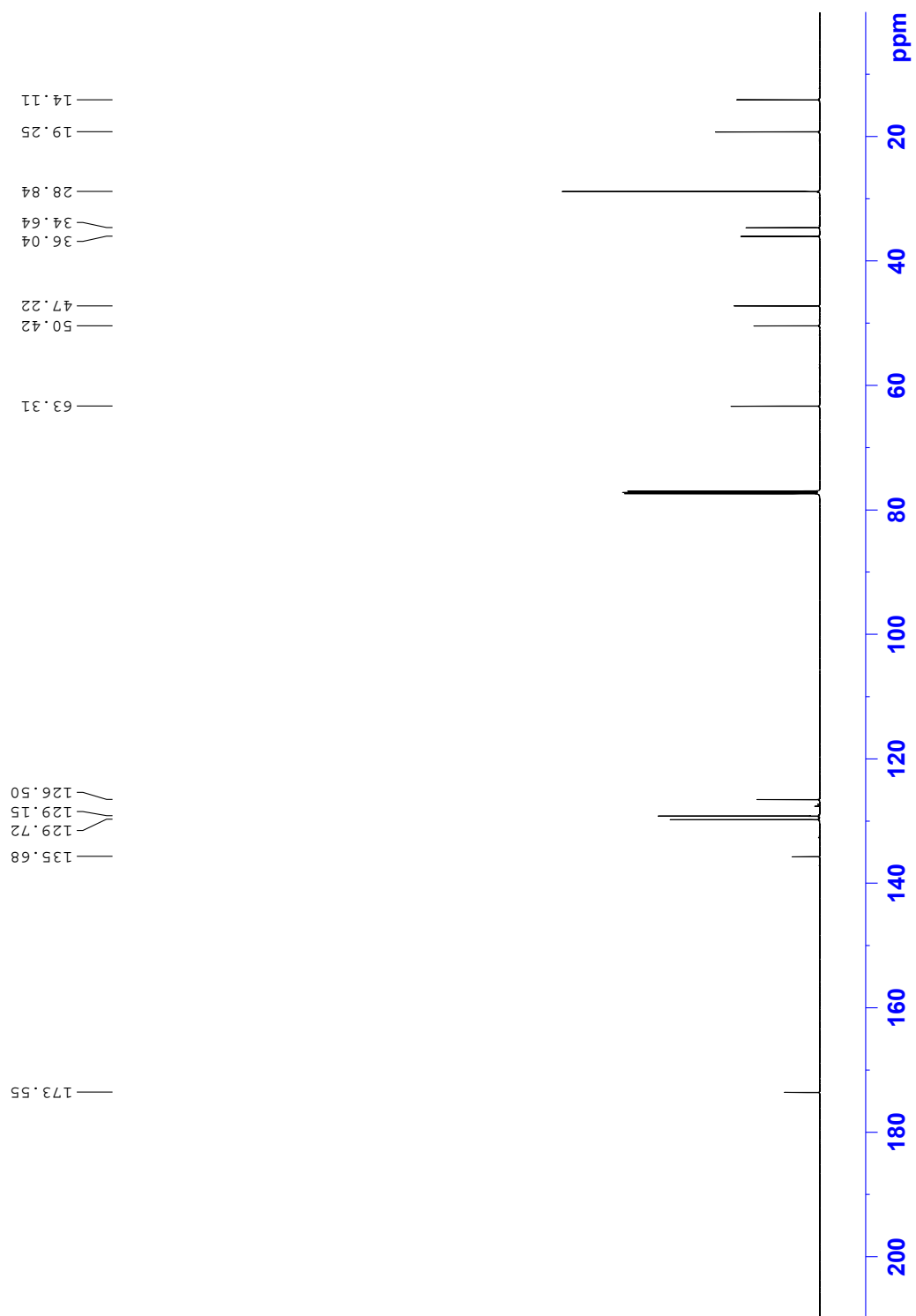


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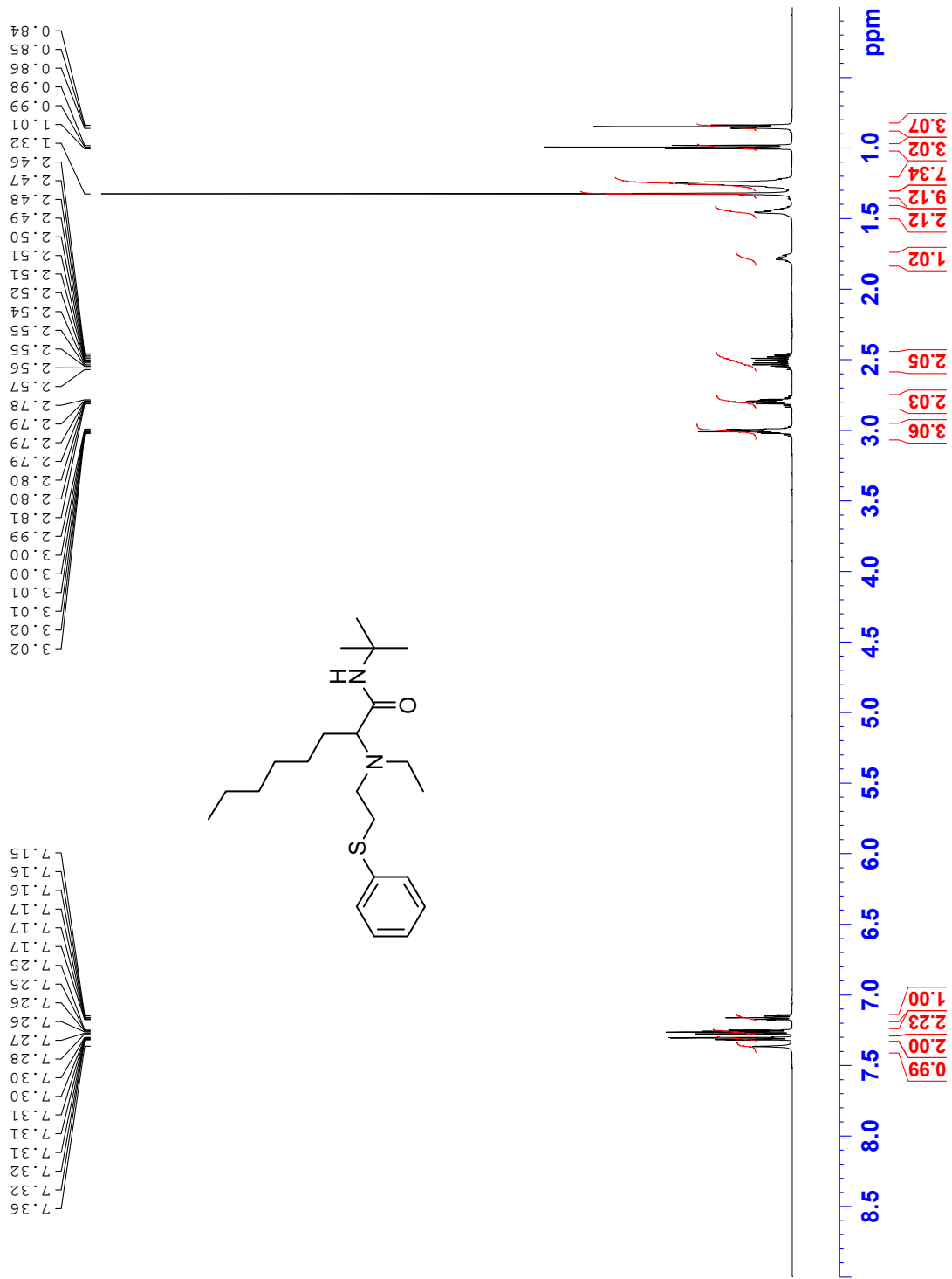


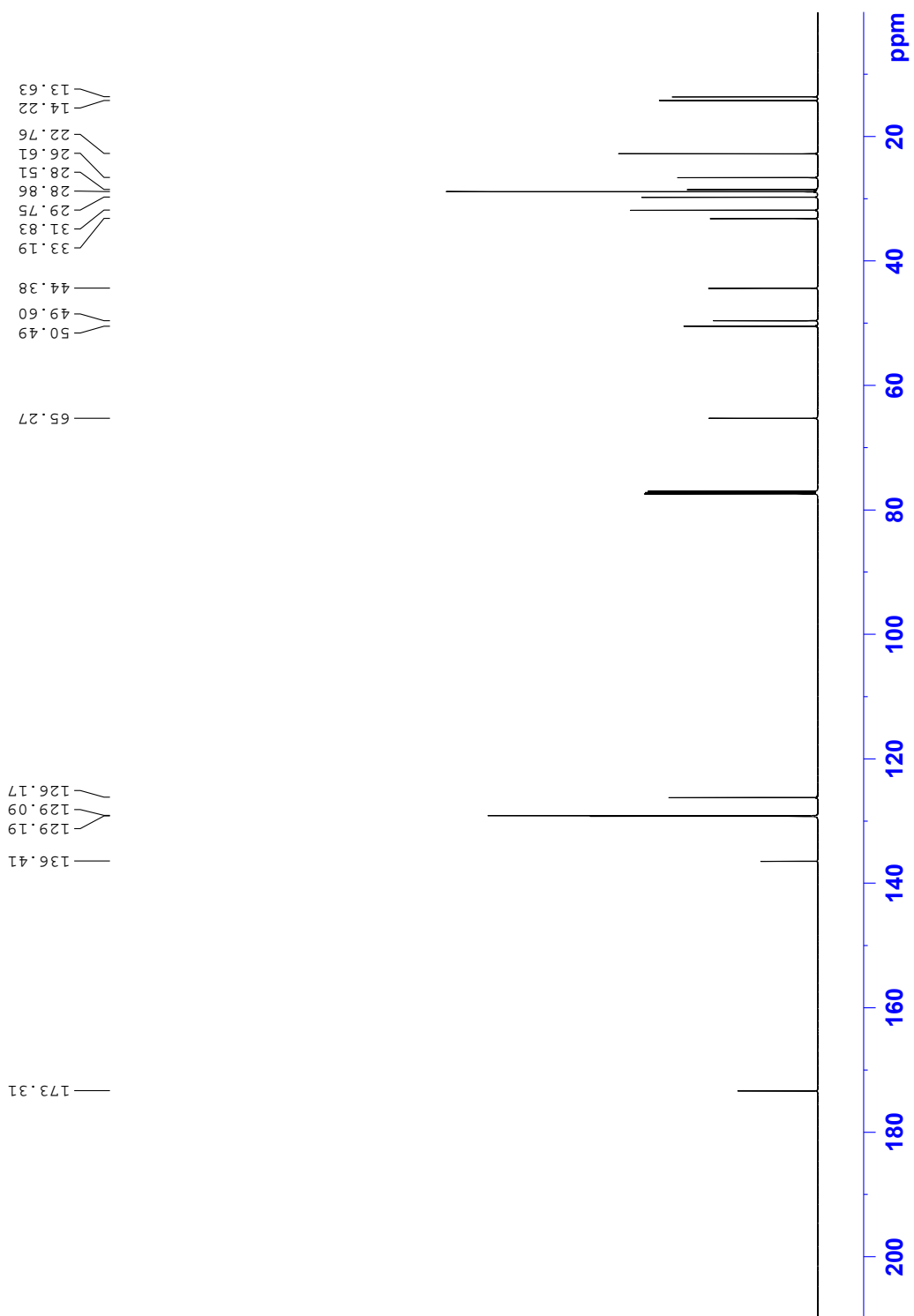
***N*-(*tert*-Butyl)-2-((2-(phenylthio)ethyl)amino)pentanamide (9n)**



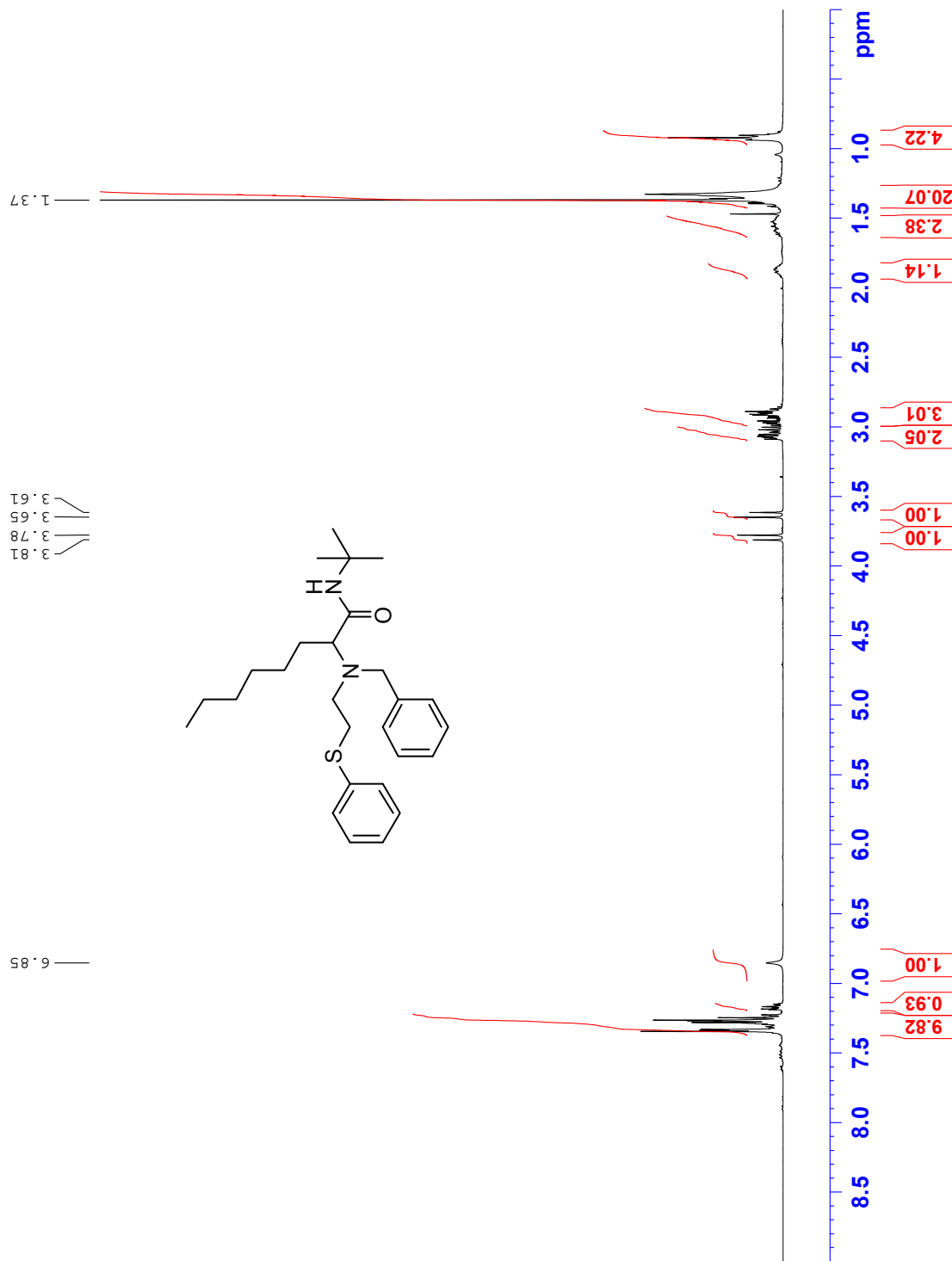


***N*-(*tert*-Butyl)-2-(ethyl(2-(phenylthio)ethyl)amino)octanamide (9o)**

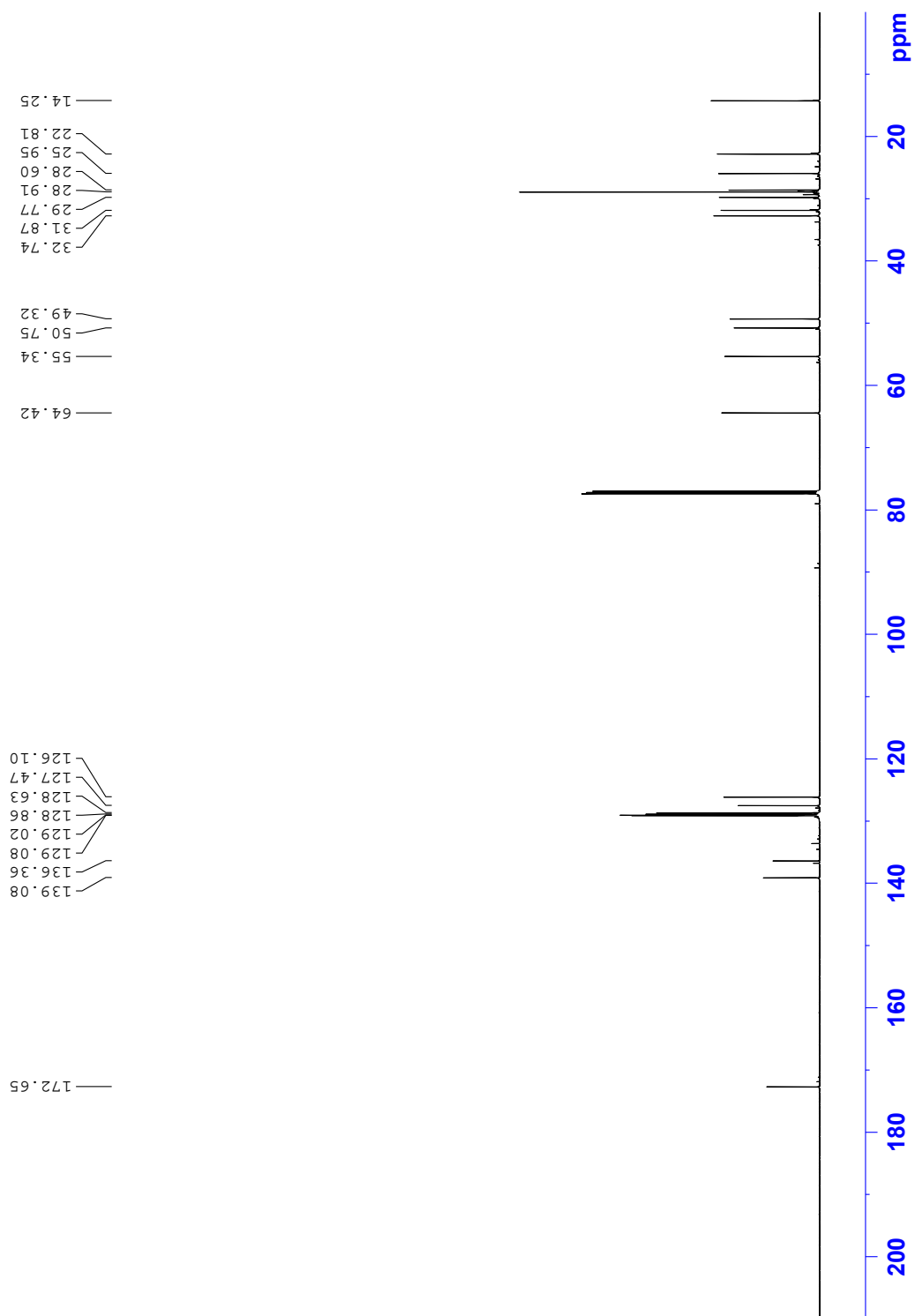




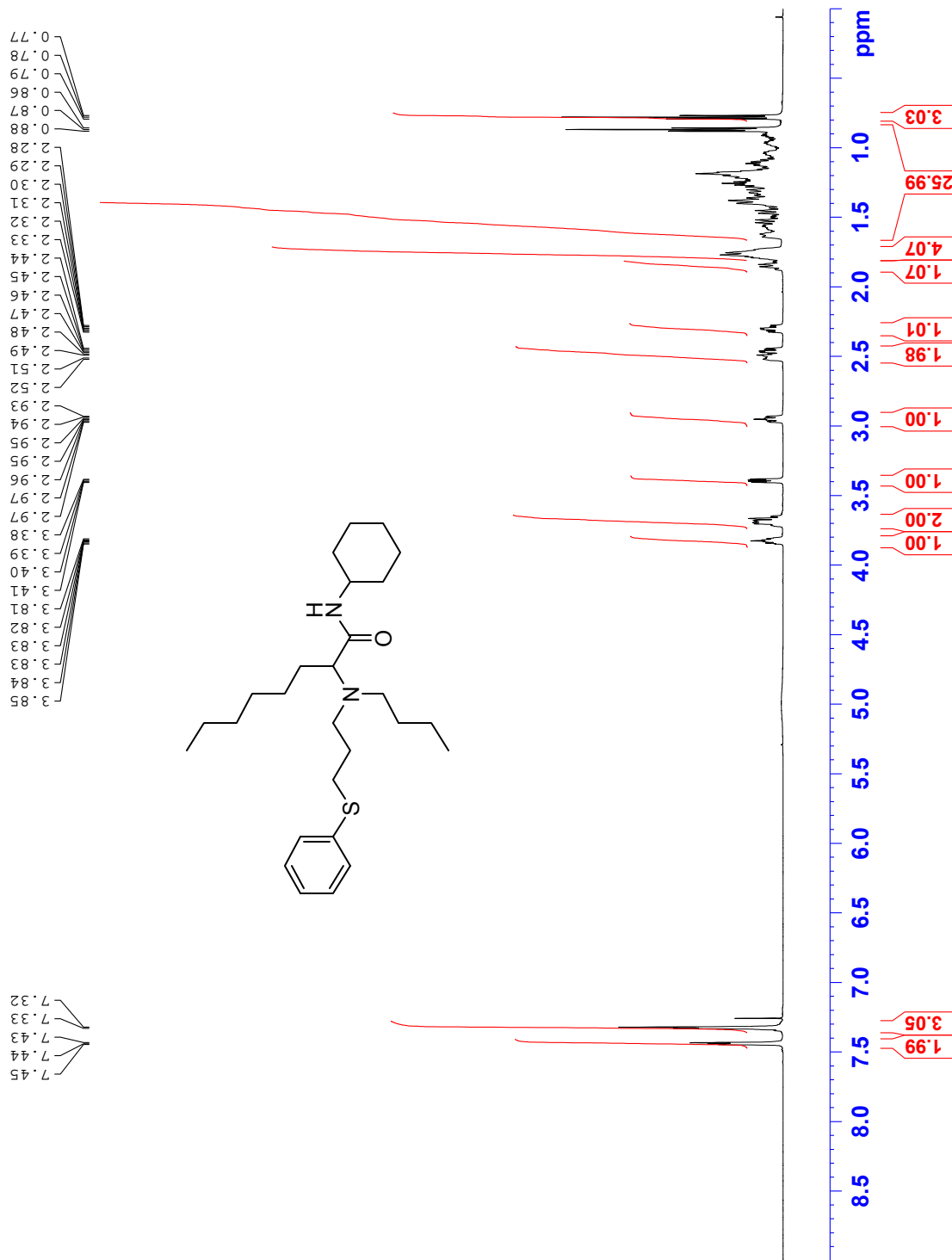
2-(Benzyl(2-(phenylthio)ethyl)amino)-N-(tert-butyl)octanamide (9p)





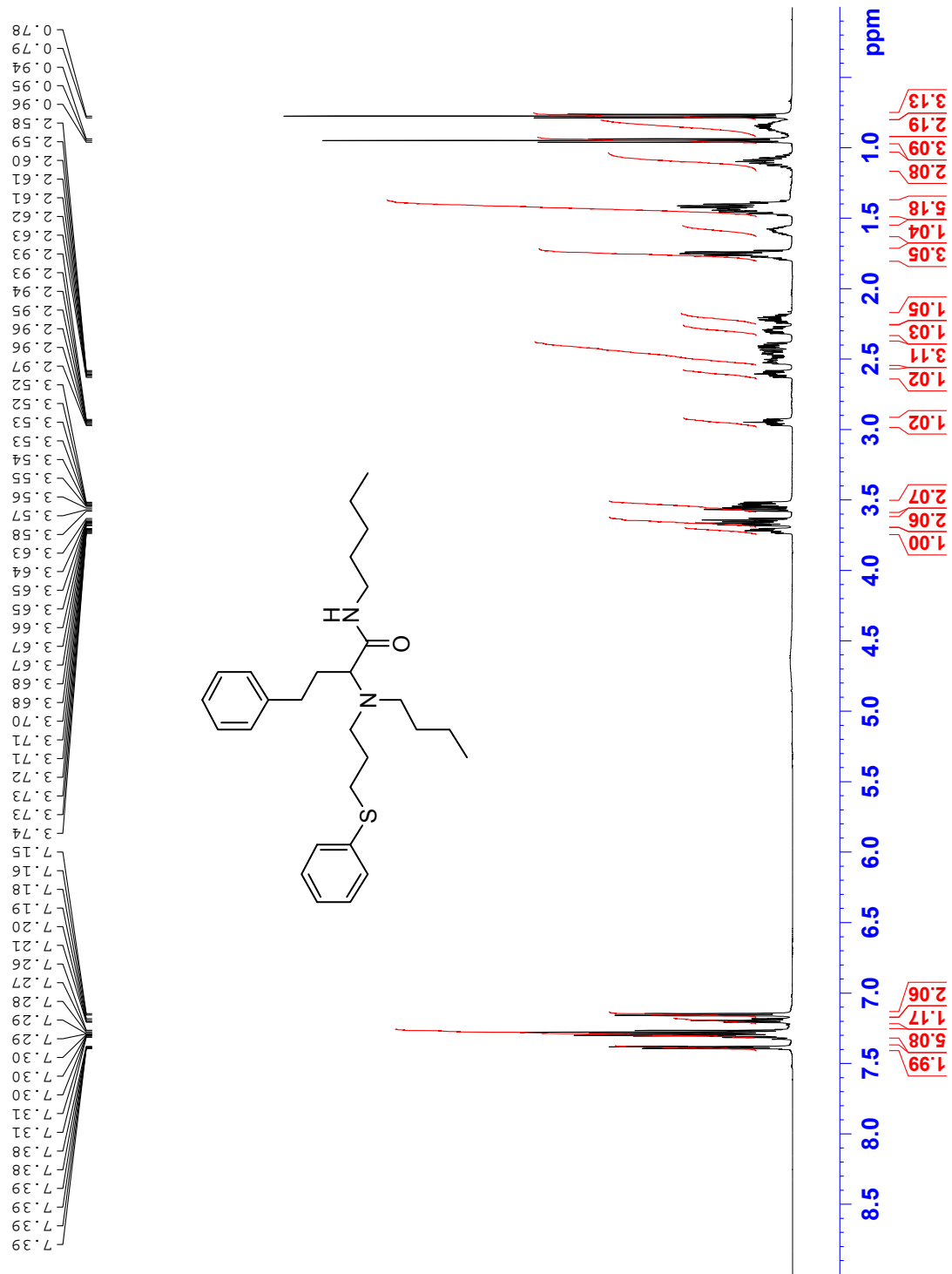


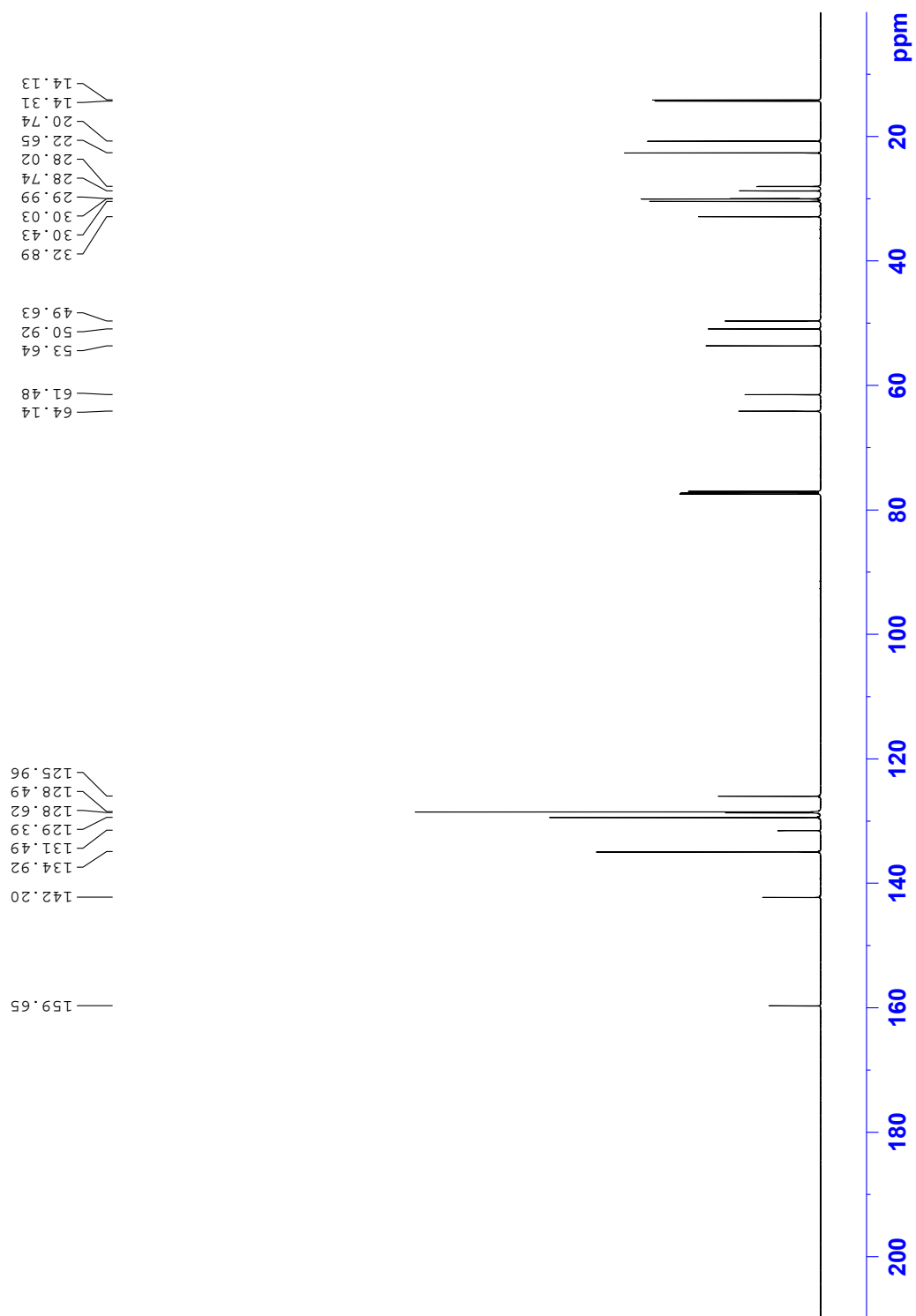
**2-(Butyl(3-(phenylthio)propyl)amino)-N-cyclohexyloctanamide (9q)**



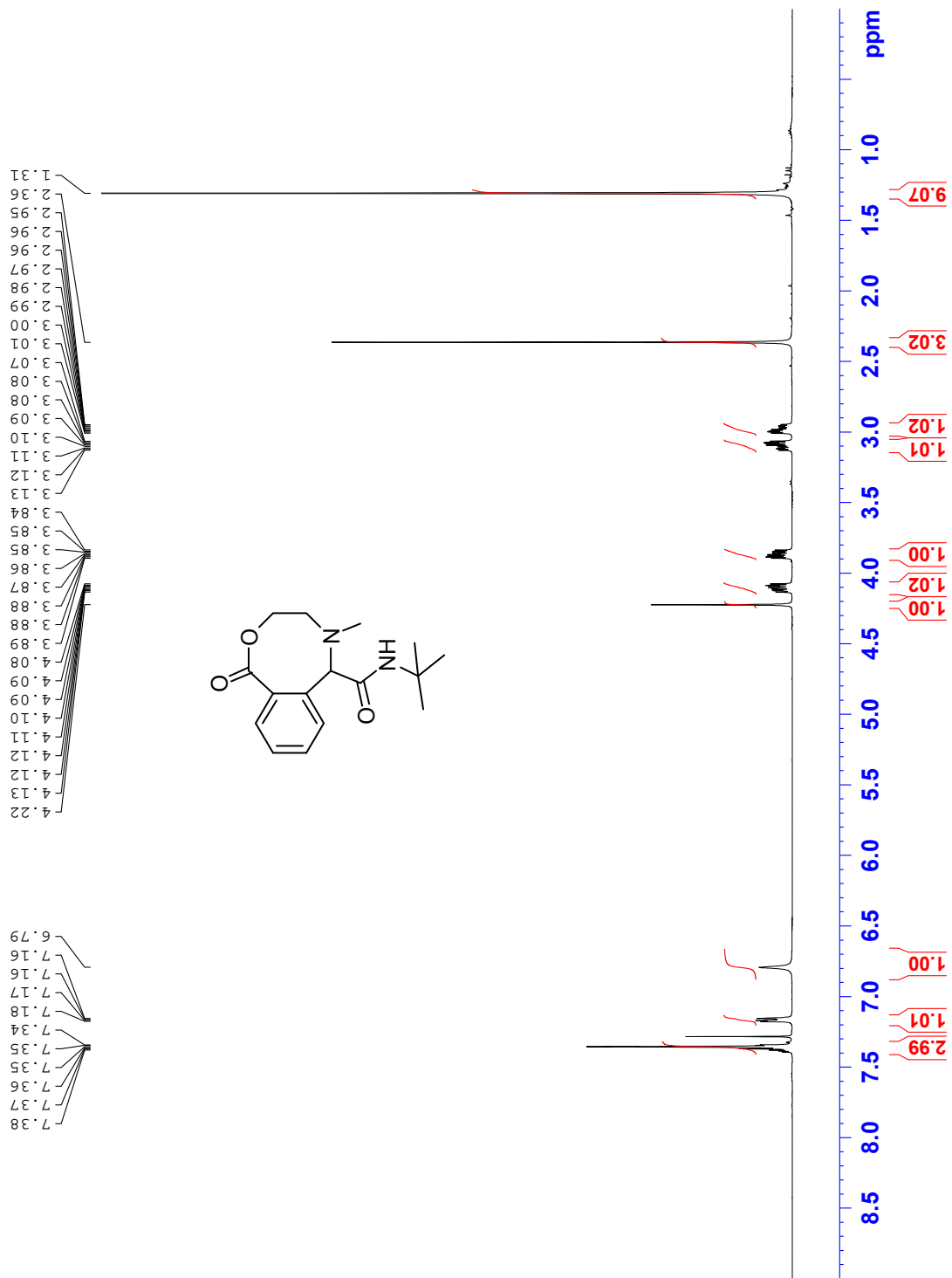


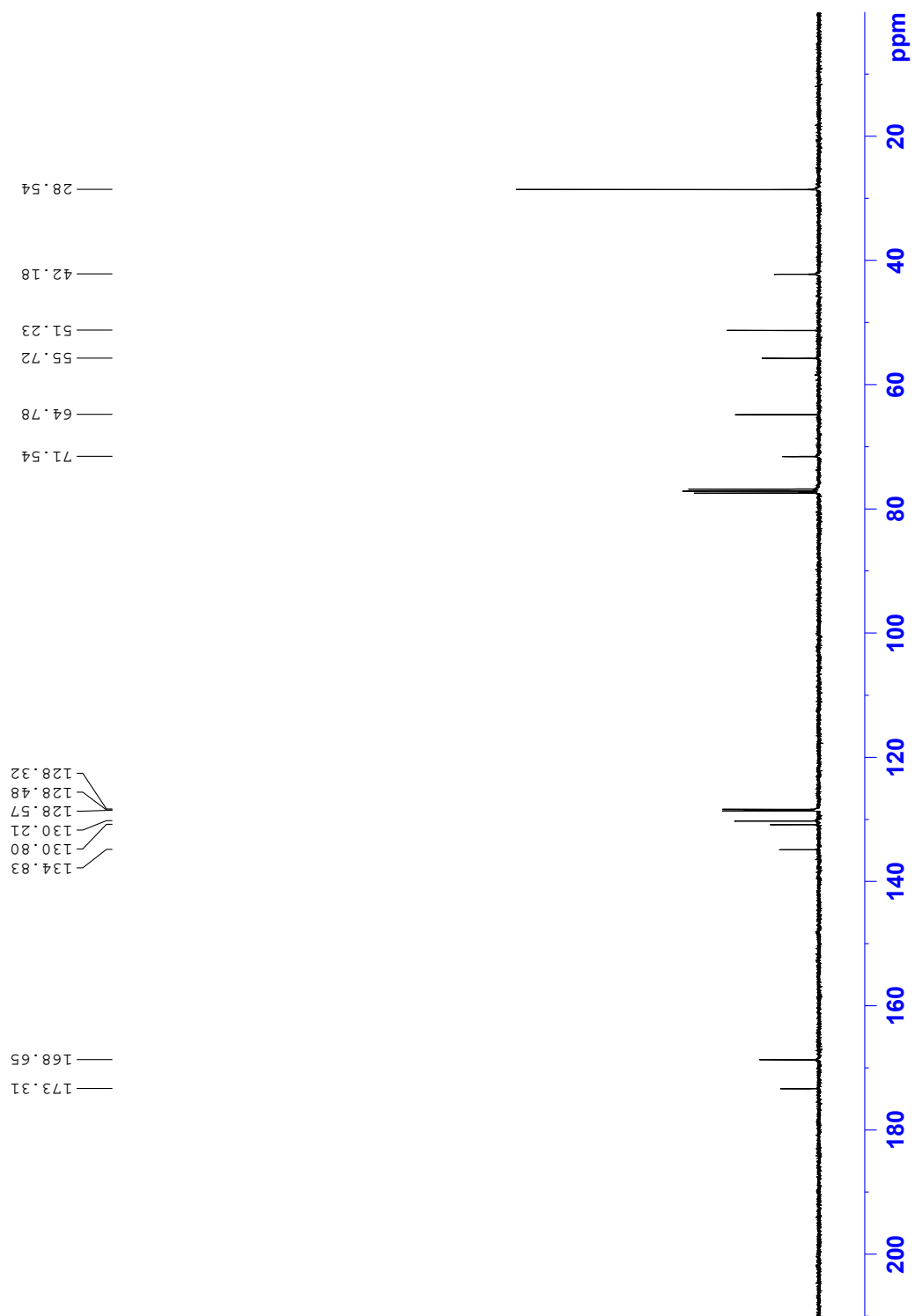
2-(Butyl(3-(phenylthio)propyl)amino)-N-pentyl-4-phenylbutanamide (9r)





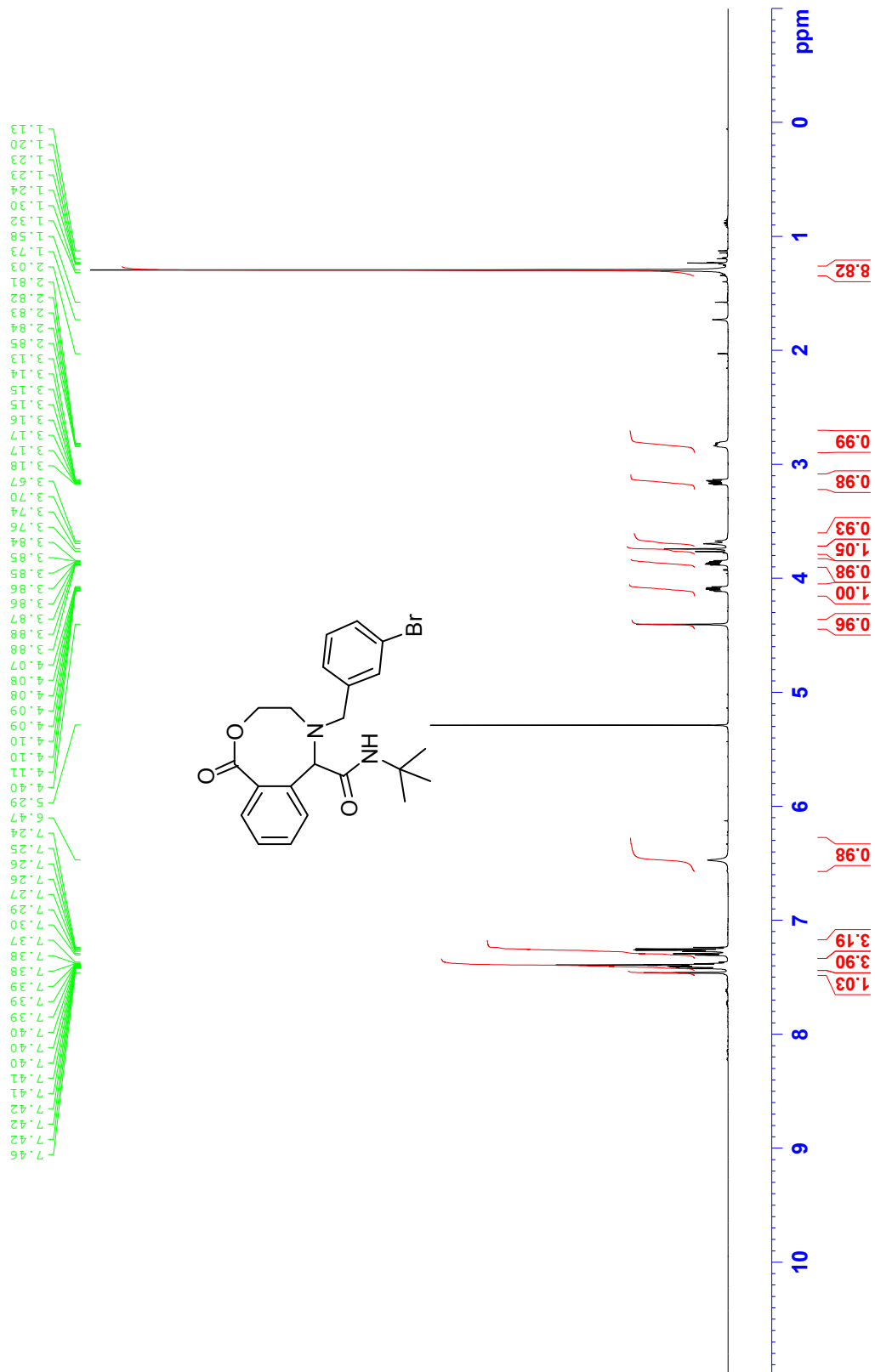
***N-tert-Butyl-4-methyl-8-oxo-2,3,5-trihydrobenzo[*f*][1,4]oxazine-5-carboxamide (10a)***





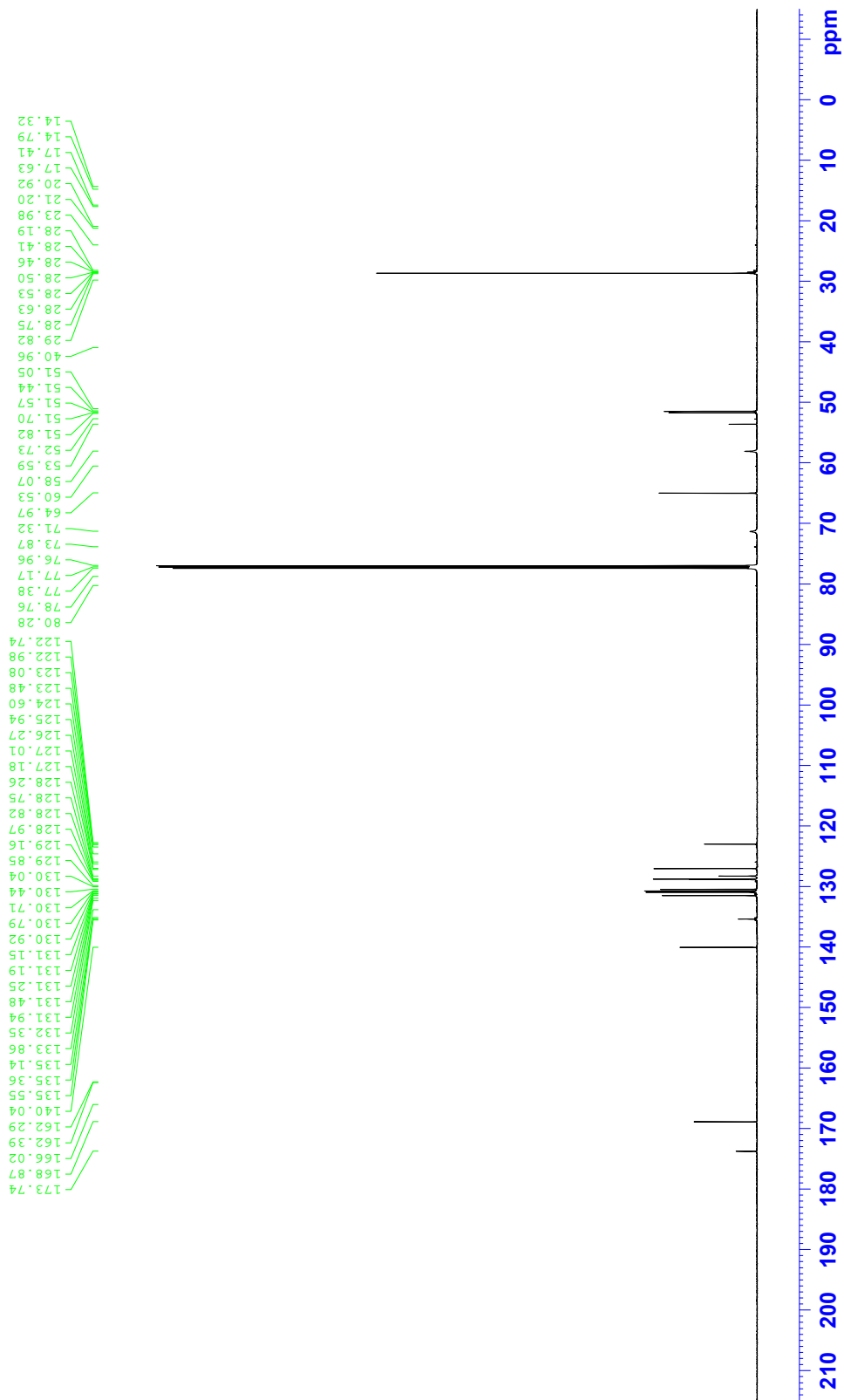
4-(3-Bromobenzyl)-N-(*tert*-butyl)-8-oxo-2,3,5-trihydrobenzo[1,4]oxazine-5-carboxamide (10b)

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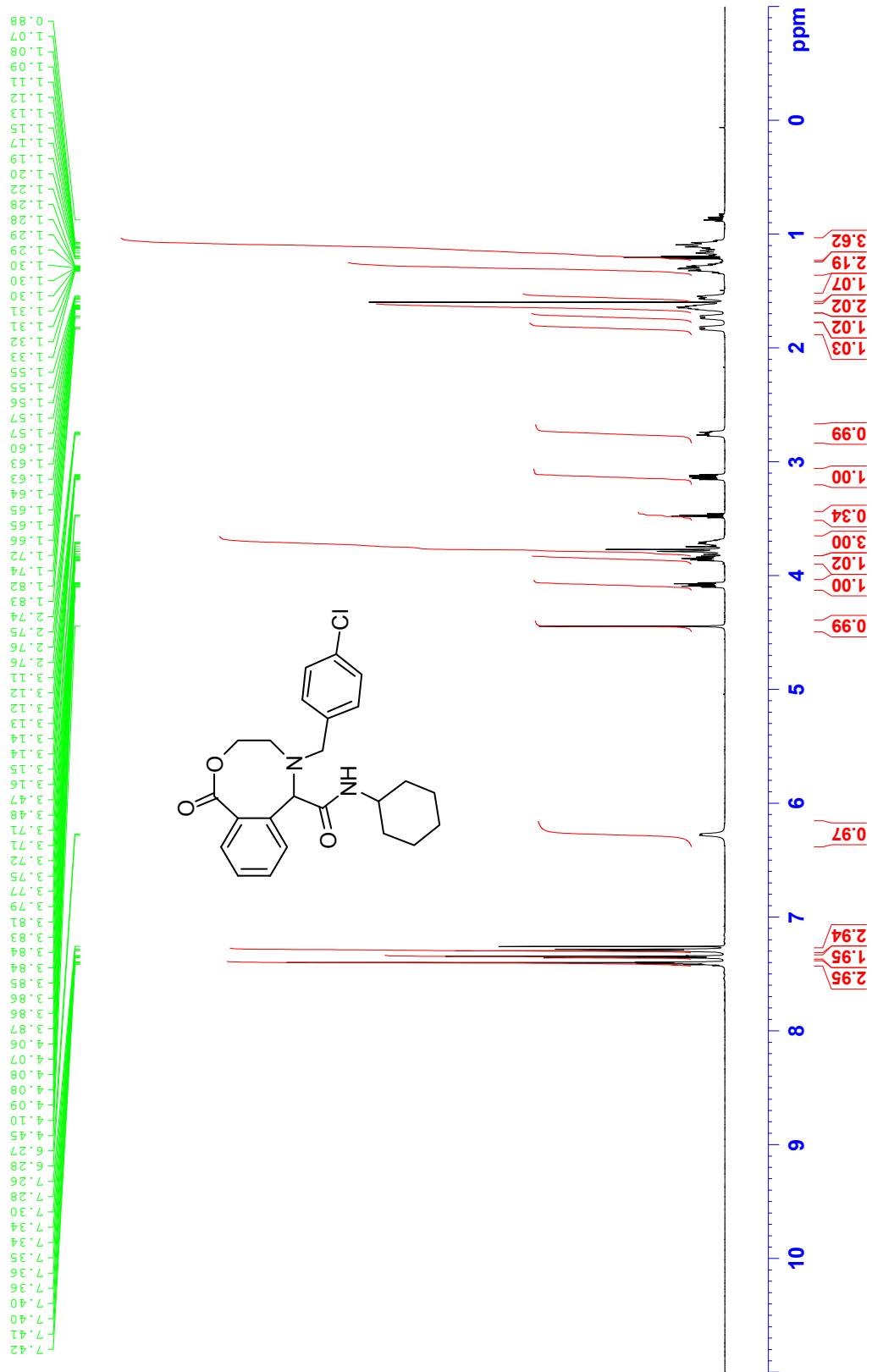
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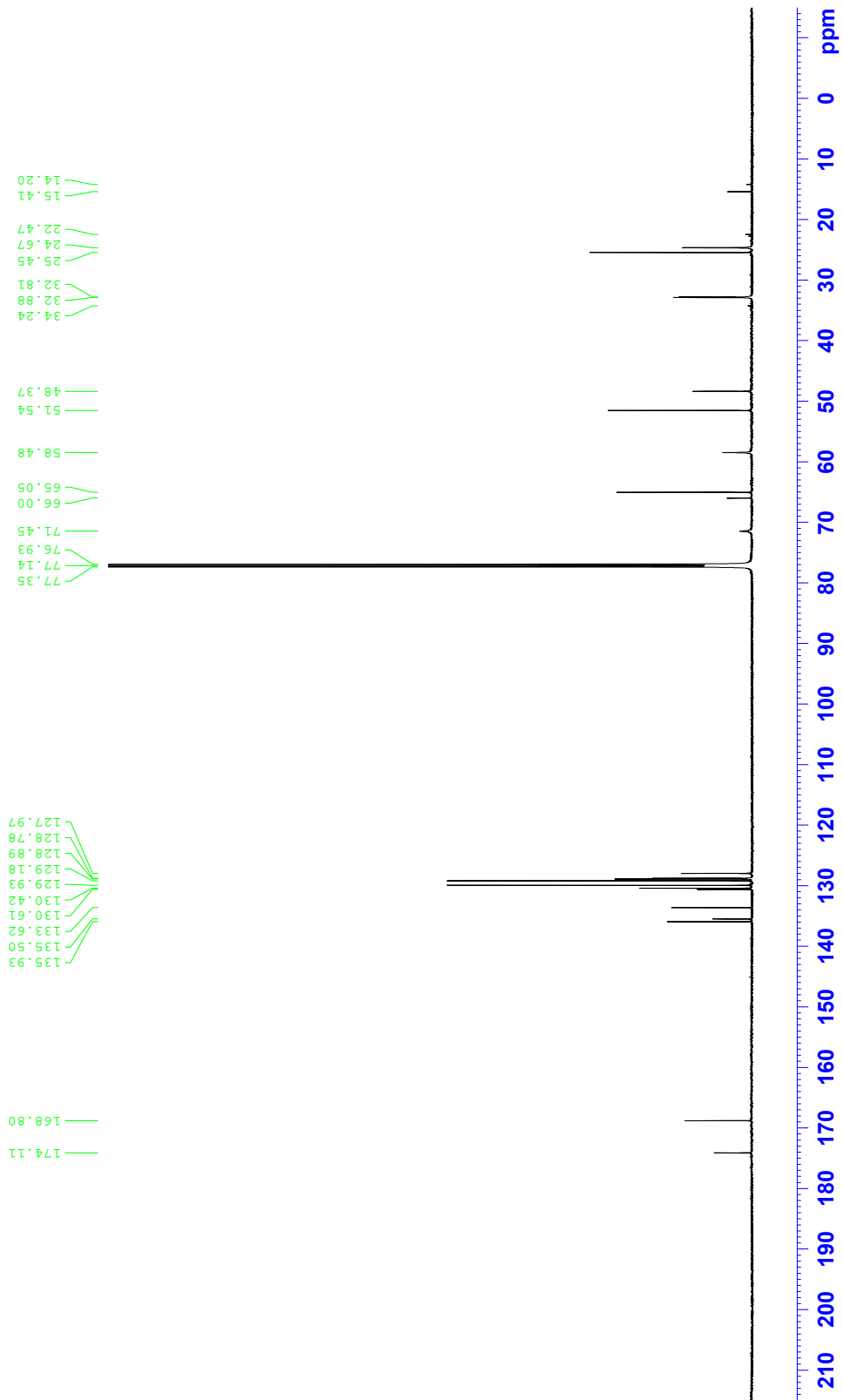
S41

4-(4-Chlorobenzyl)-N-cyclohexyl-8-oxo-2,3,5-trihydrobenzo[1,4]oxazocine-5-carboxamide (10c)

SM964-2  
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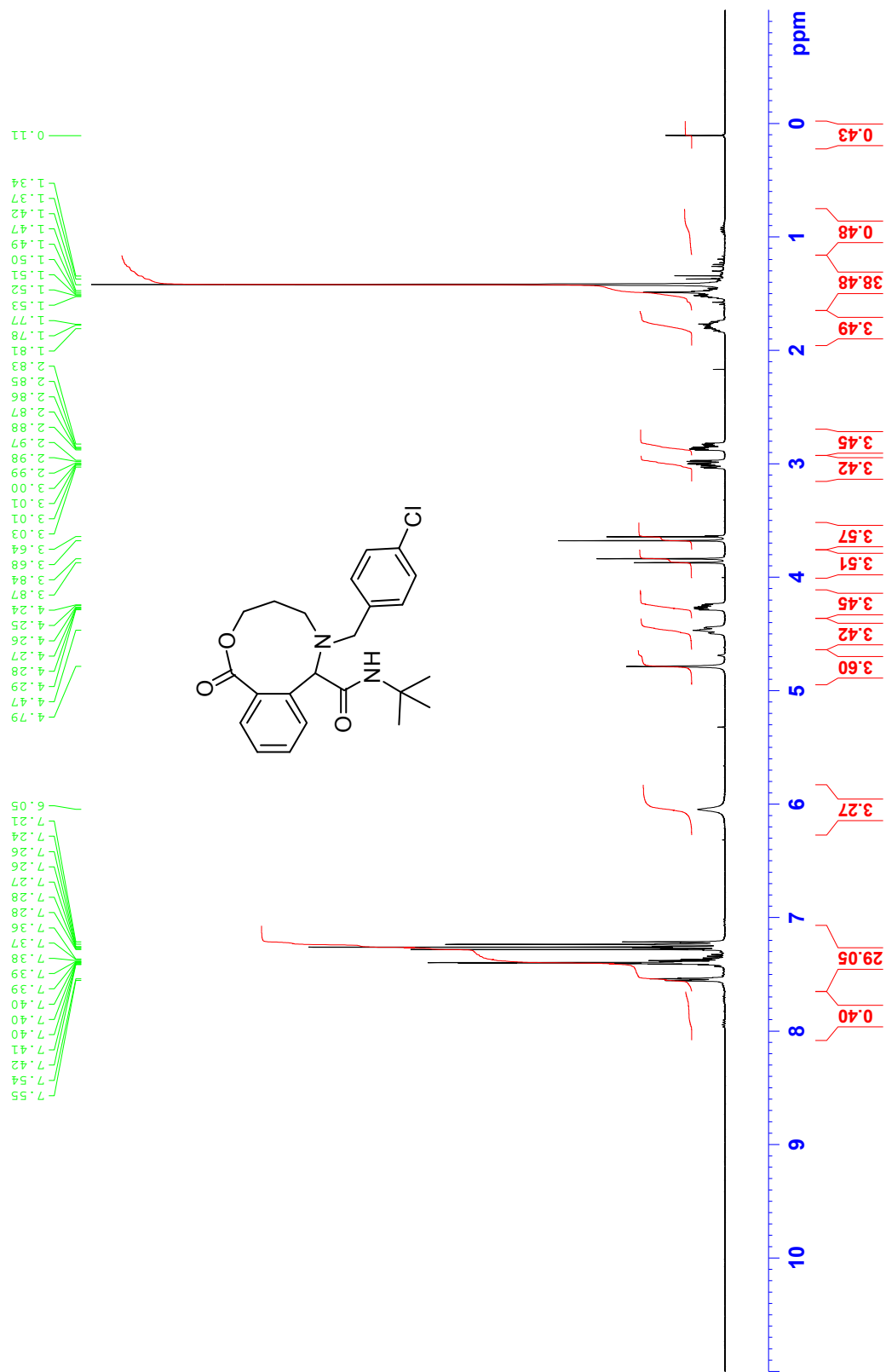


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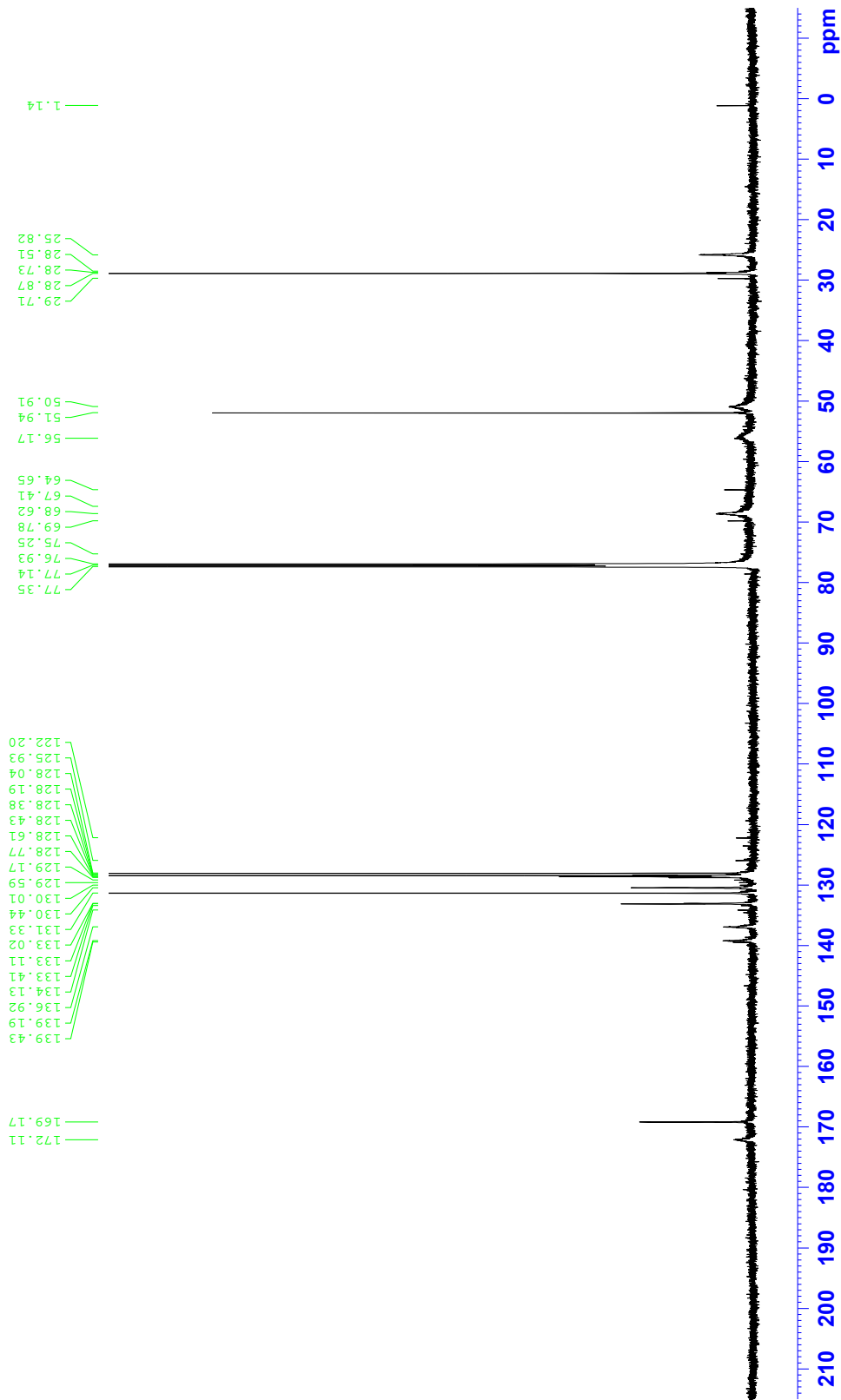


***N*-(*tert*-Butyl)-5-(4-chlorobenzyl)-9-oxo-2,3,4,6-tetrahydrobenzo[g][1,5]oxazonine-6-carboxamide (10d)**

SM947-1

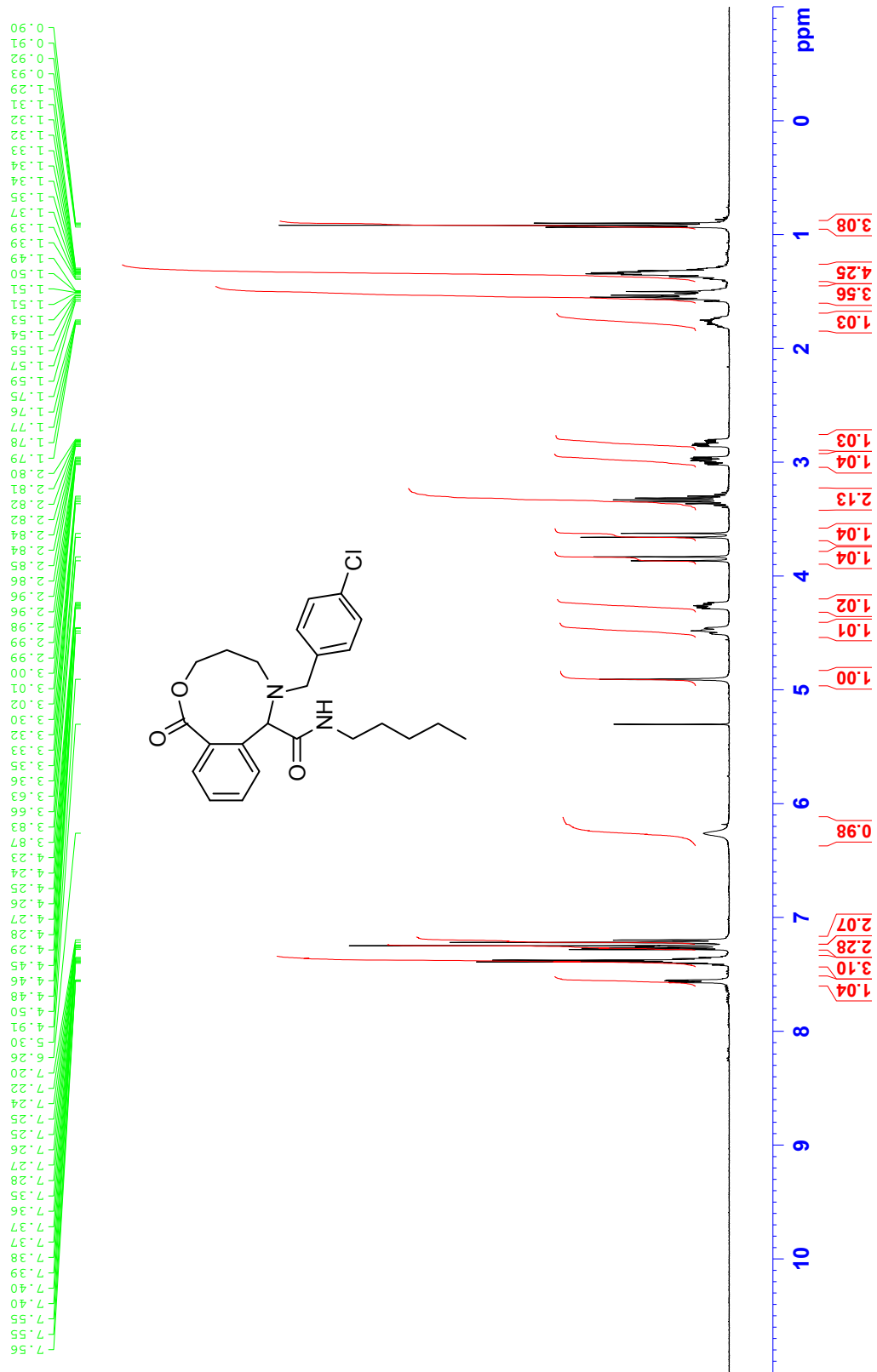


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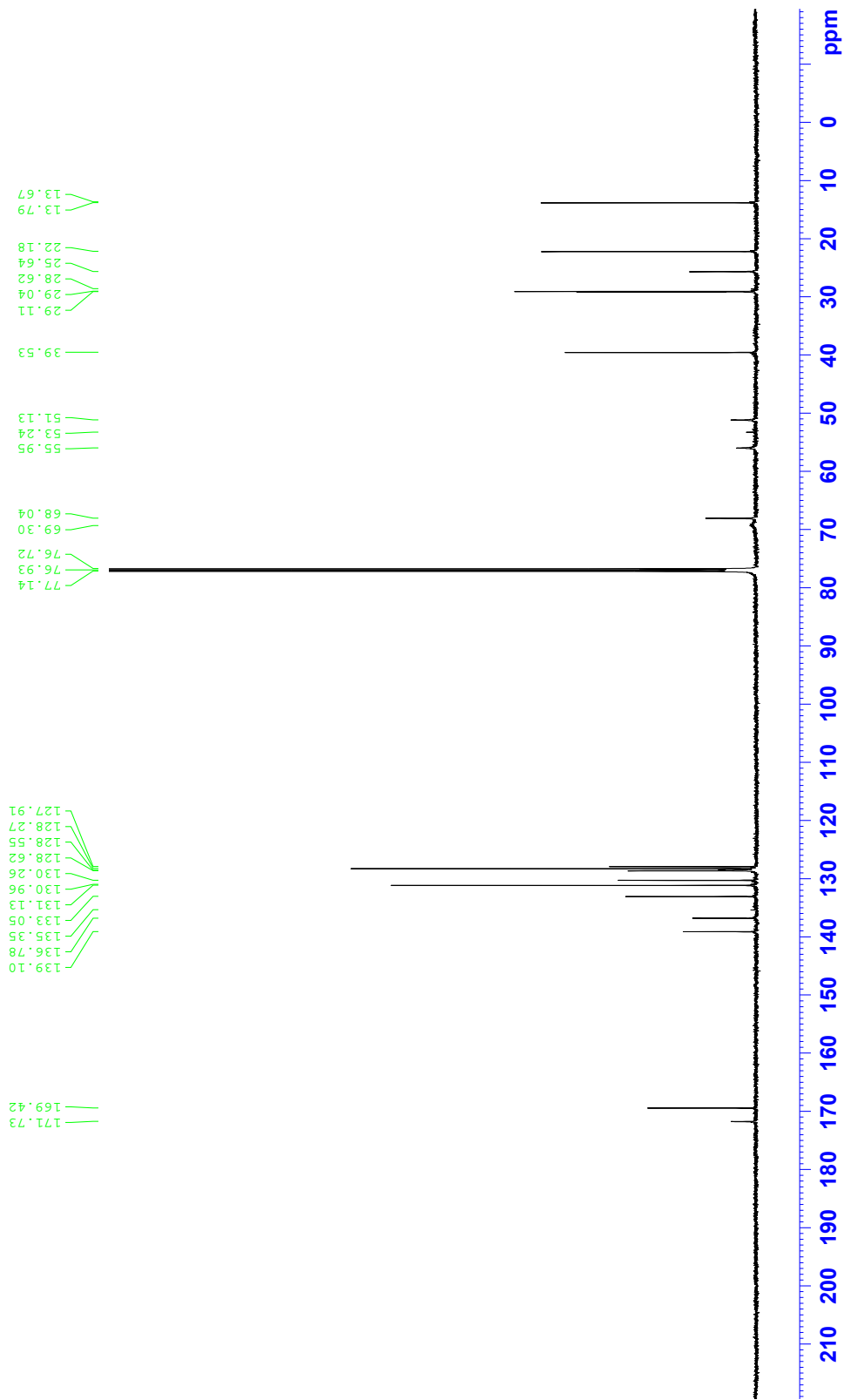
5-(4-Chlorobenzyl)-9-oxo-N-pentyl-2,3,4,6-tetrahydrobenzo[g][1,5]oxazonine-6-carboxamide (10e)

SM1030-1



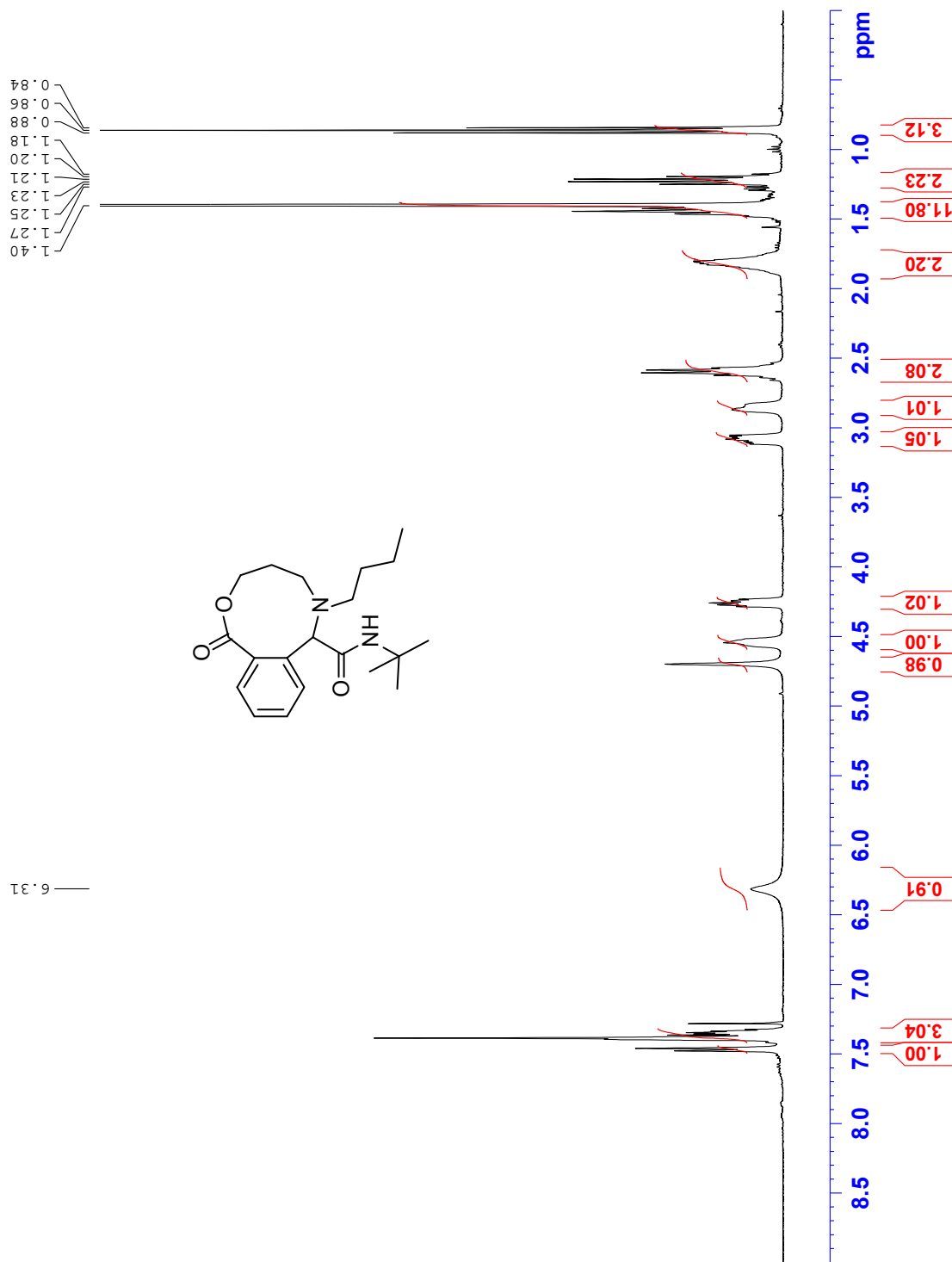
S46

SM1030-1 333K

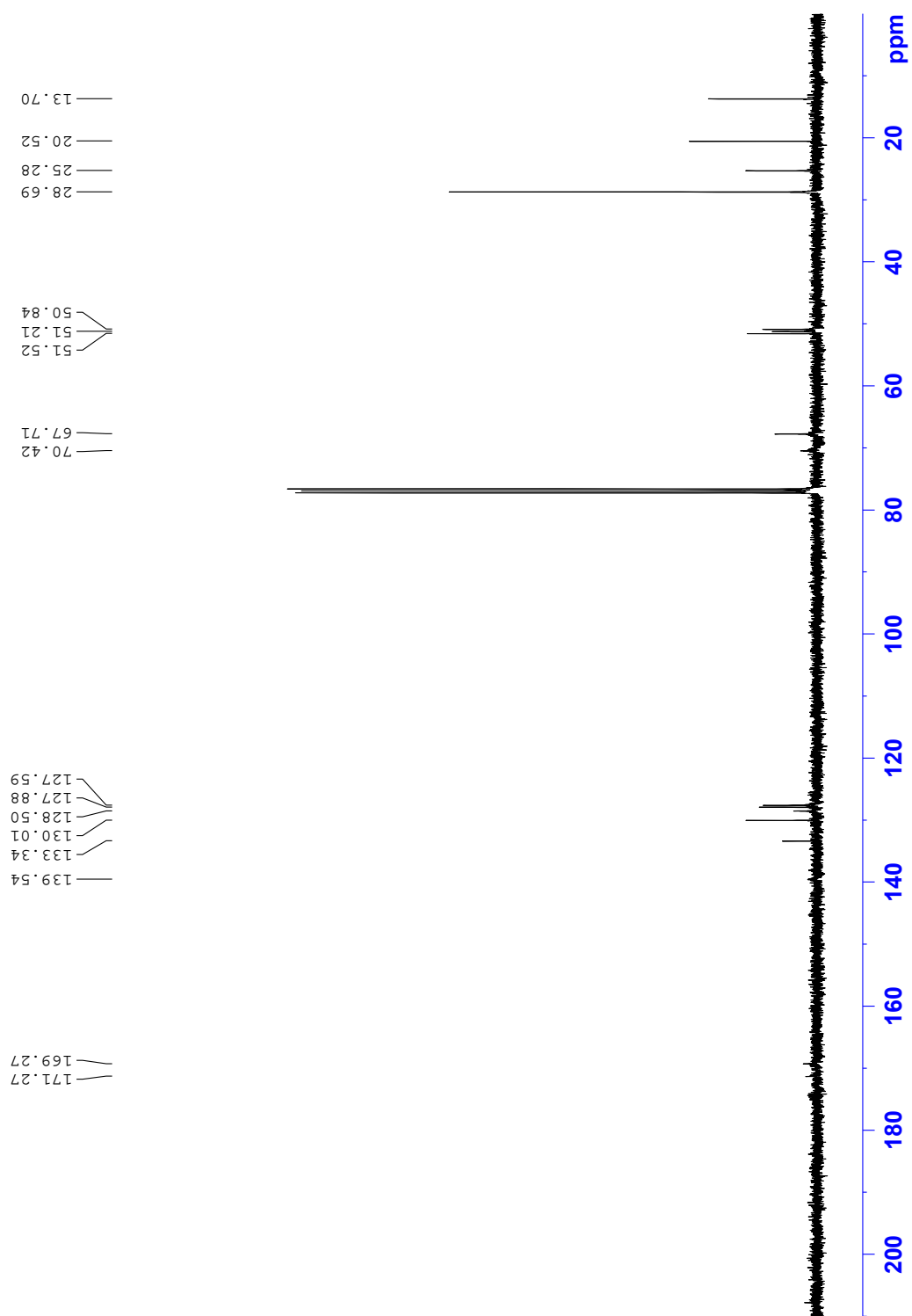


S47

***N*-(*tert*-Butyl)-5-butyl-9-oxo-2,3,4,6-tetrahydrobenzo[g][1,5]oxazone-6-carboxamide (10f)**



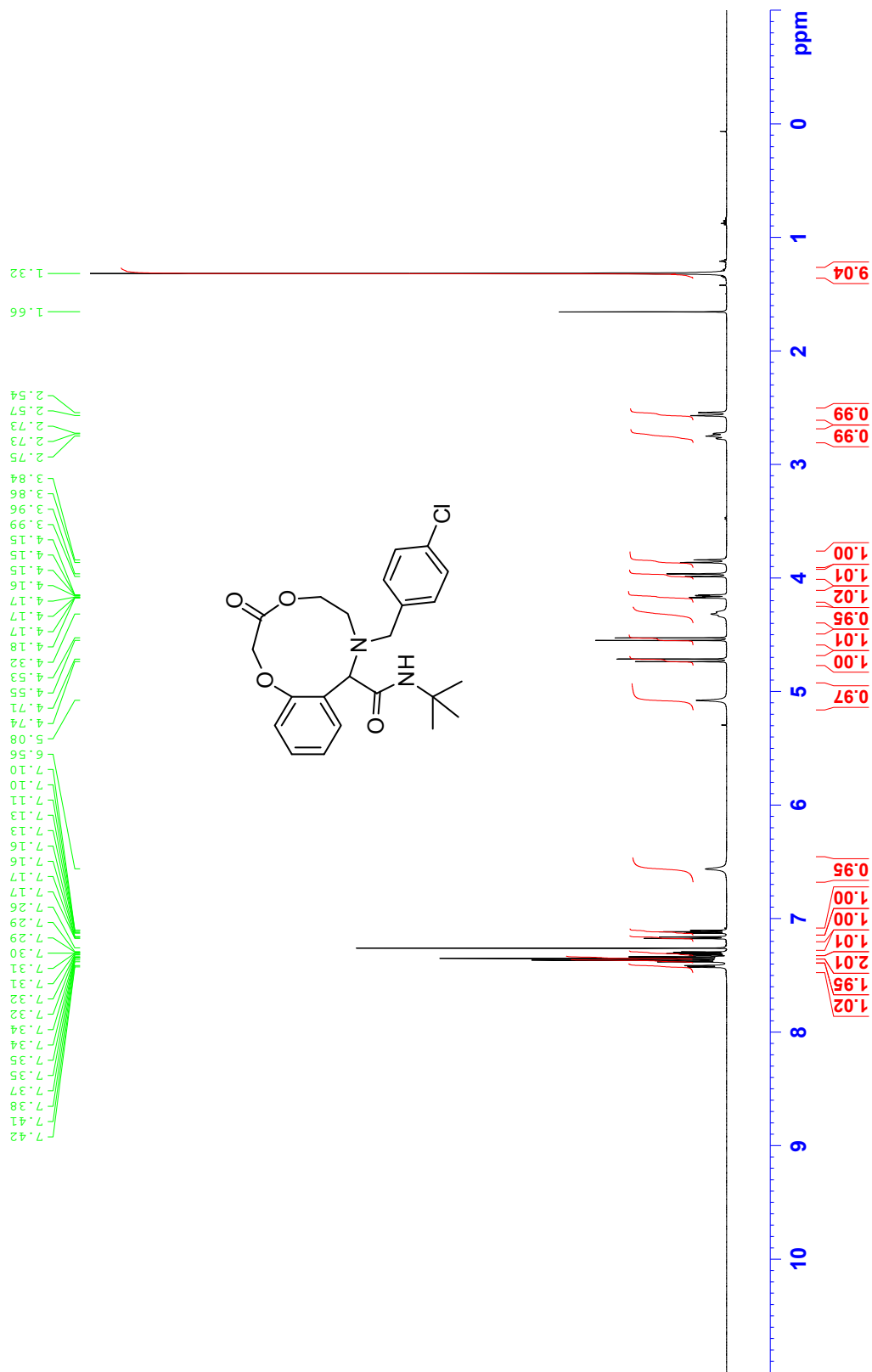




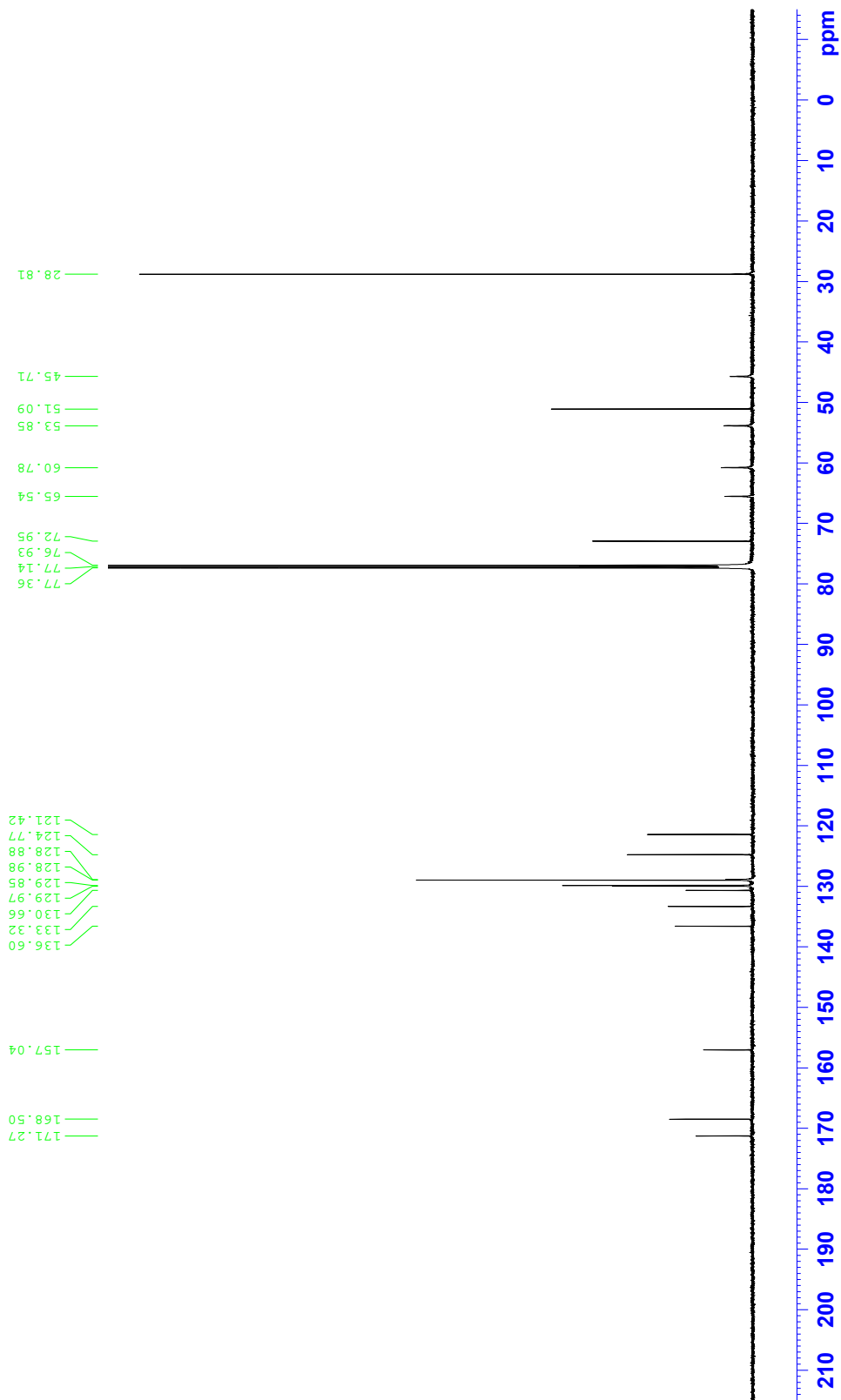
***N*-(*tert*-Butyl)-7-(2-chlorobenzyl)-3-oxo-2,3,5,6,7,8-hexahydrobenzo[*l*][1,4,7]dioxazine-8-carboxamide (10g)**

SM971-1

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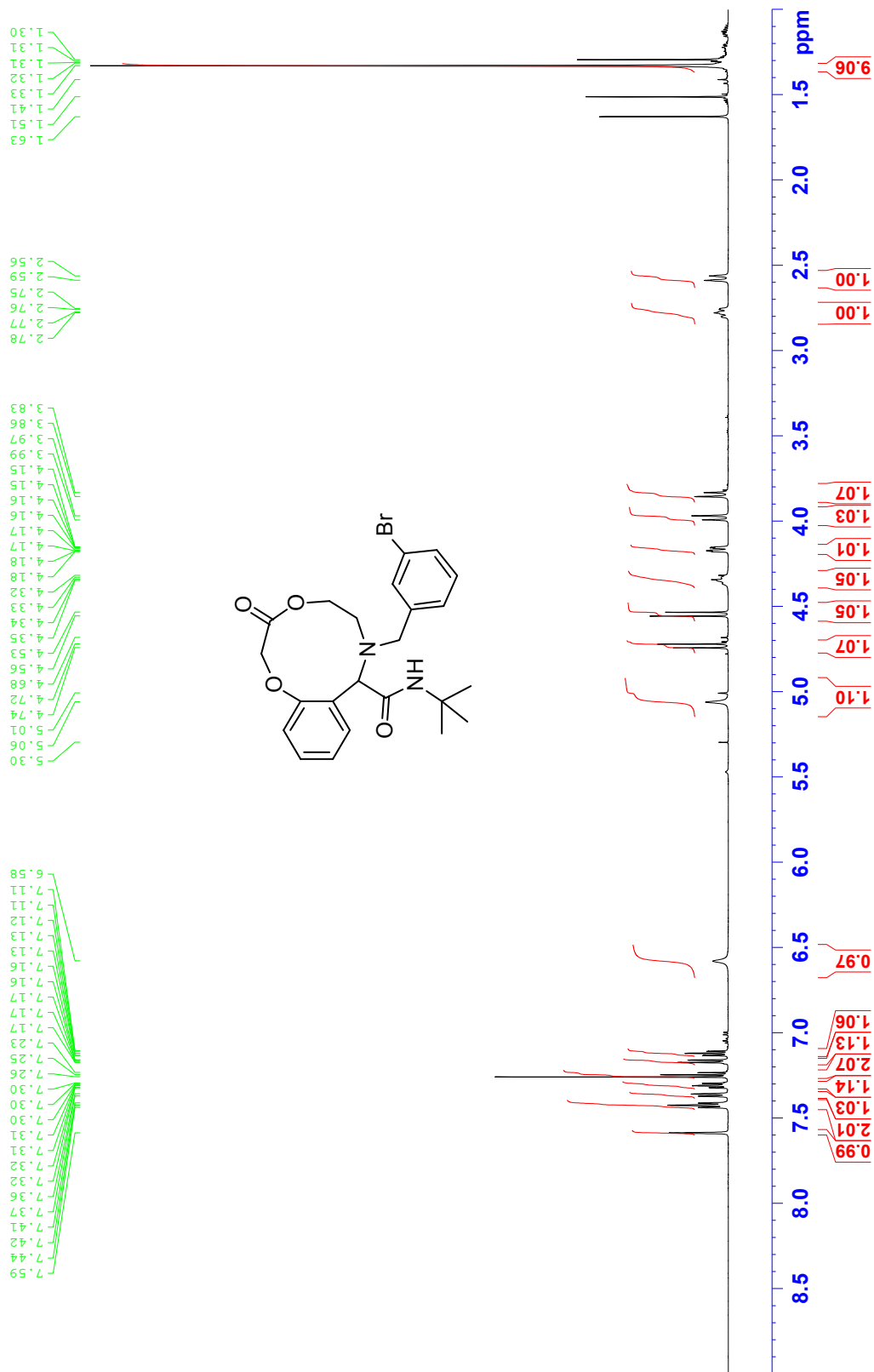
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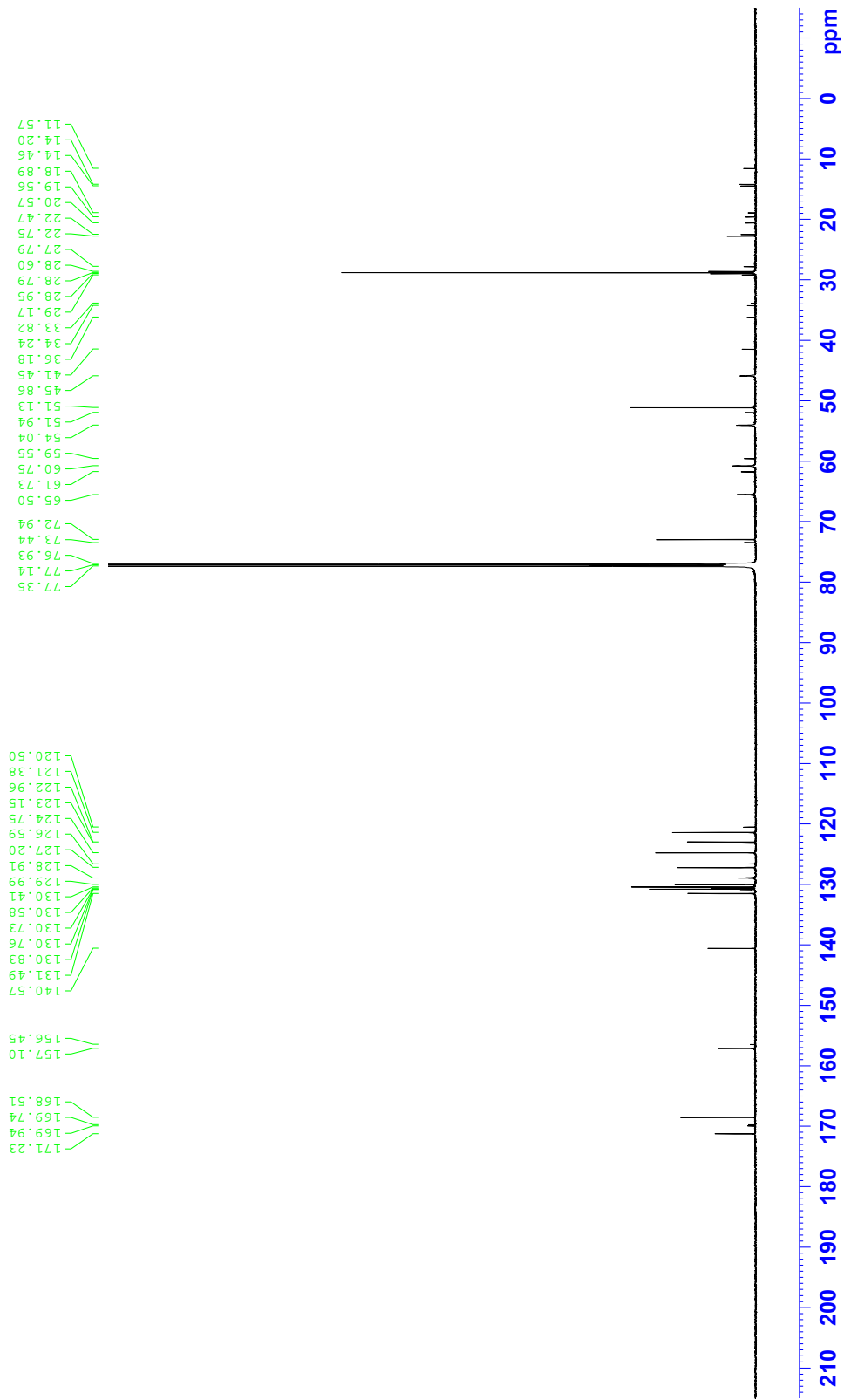
7-(3-Bromobenzyl)-N-(*tert*-butyl)-3-oxo-2,3,5,6,7,8-hexahydrobenzo[*l*][1,4,7]dioxazine-8-carboxamide (10h)

SM975-1

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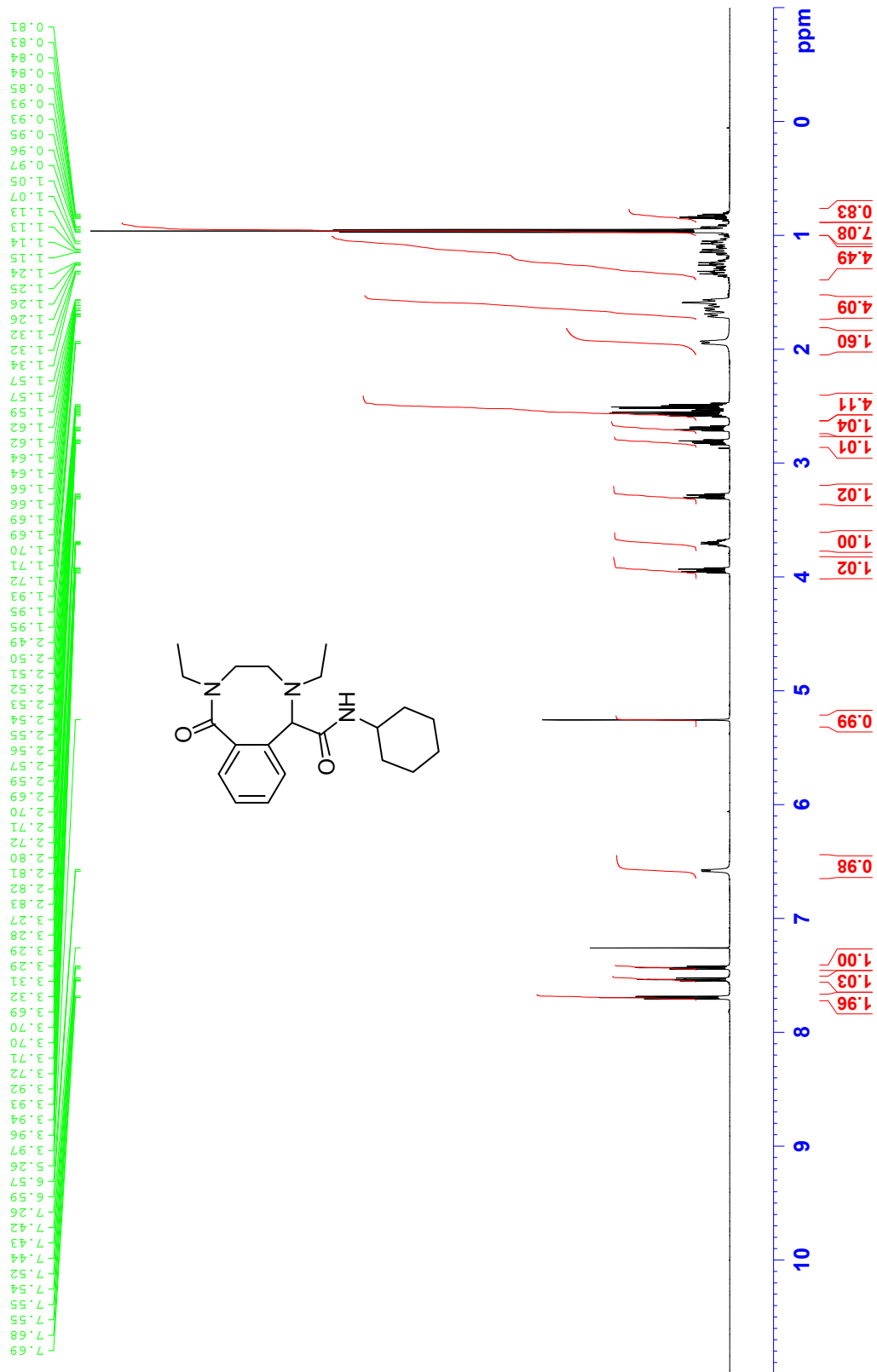
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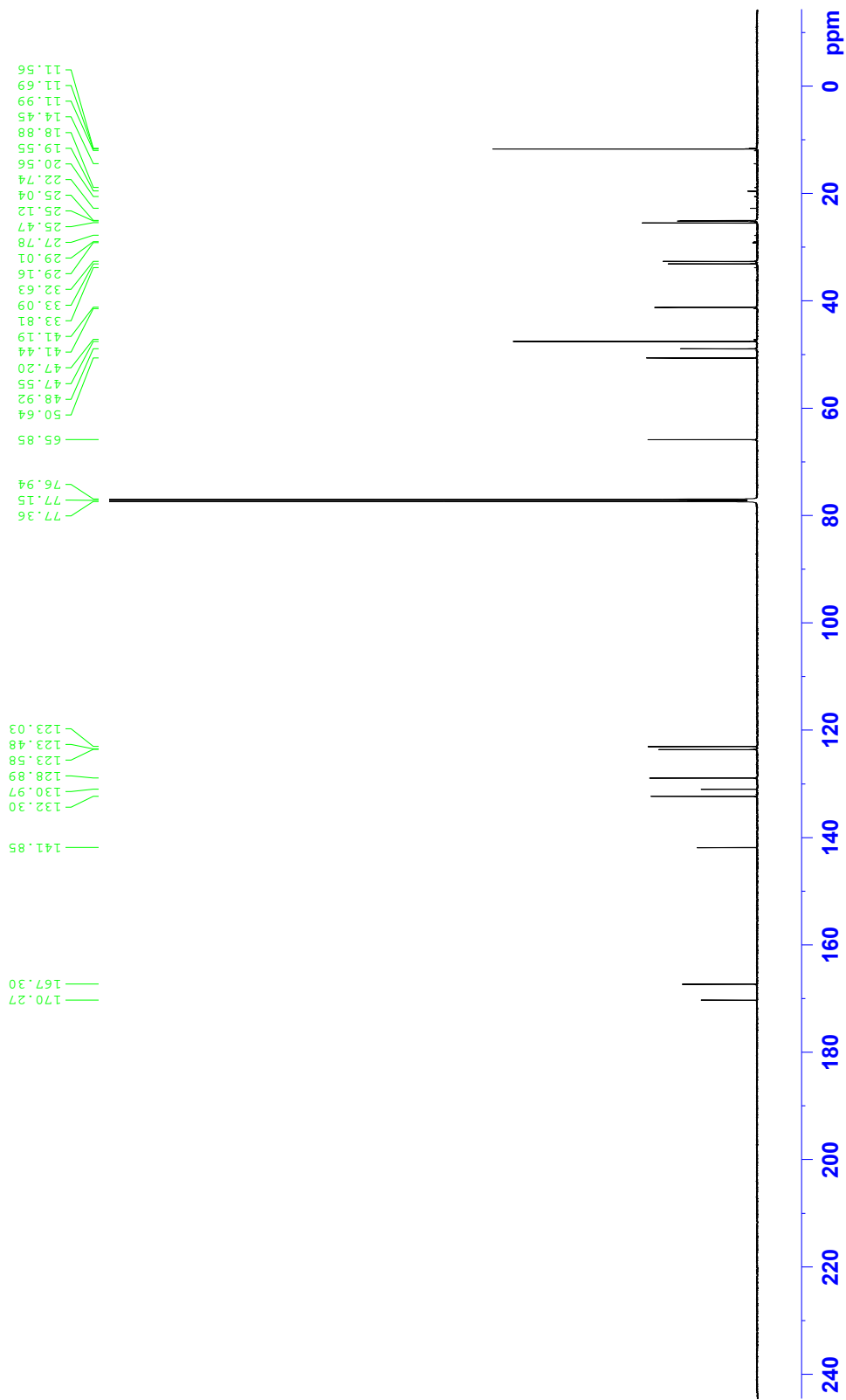
*N*-Cyclohexyl-1,4-diethyl-8-oxo-2,3,5-trihydrobenzo[*f*][1,4]diazocine-5-carboxamide (10i)

SM1003-1

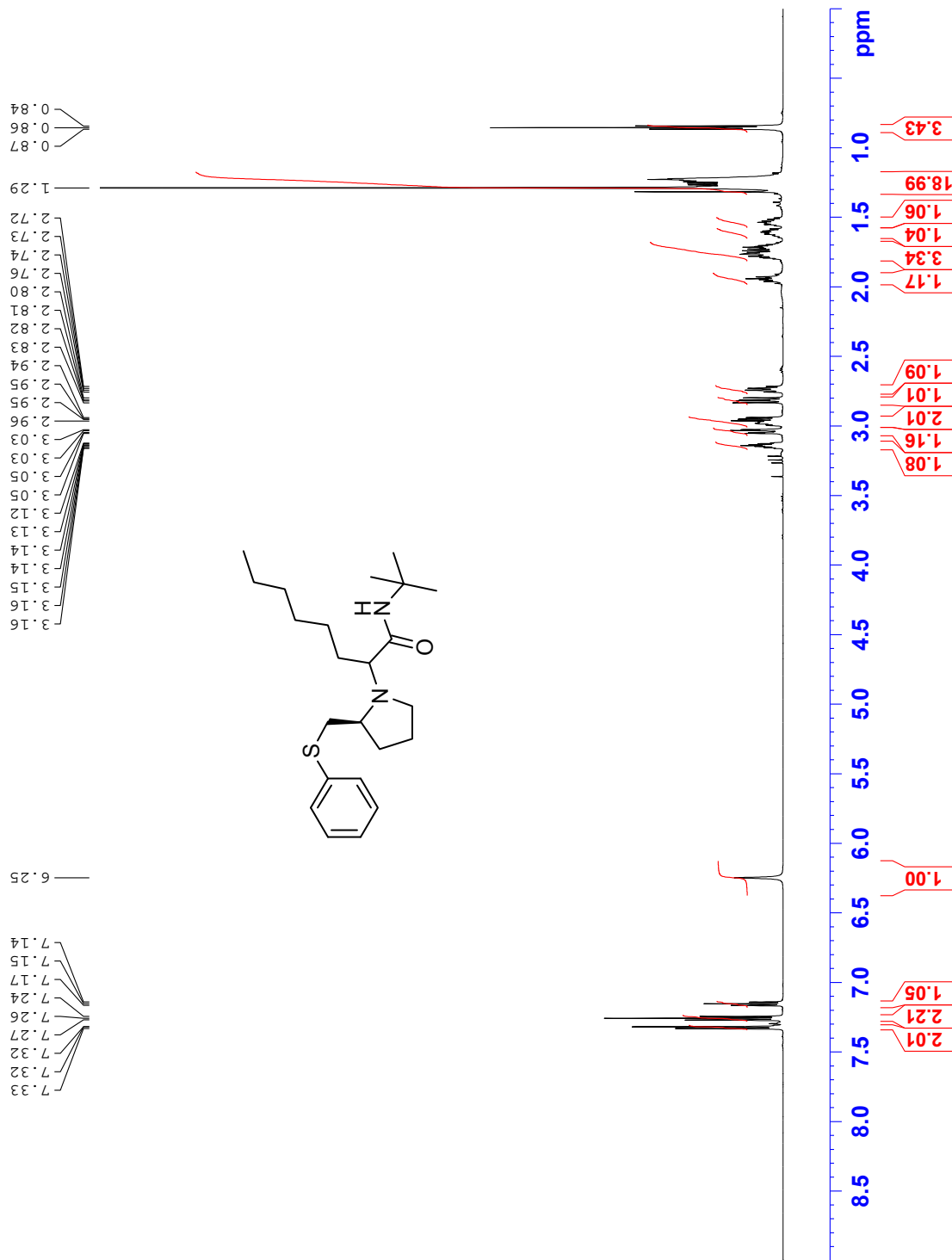
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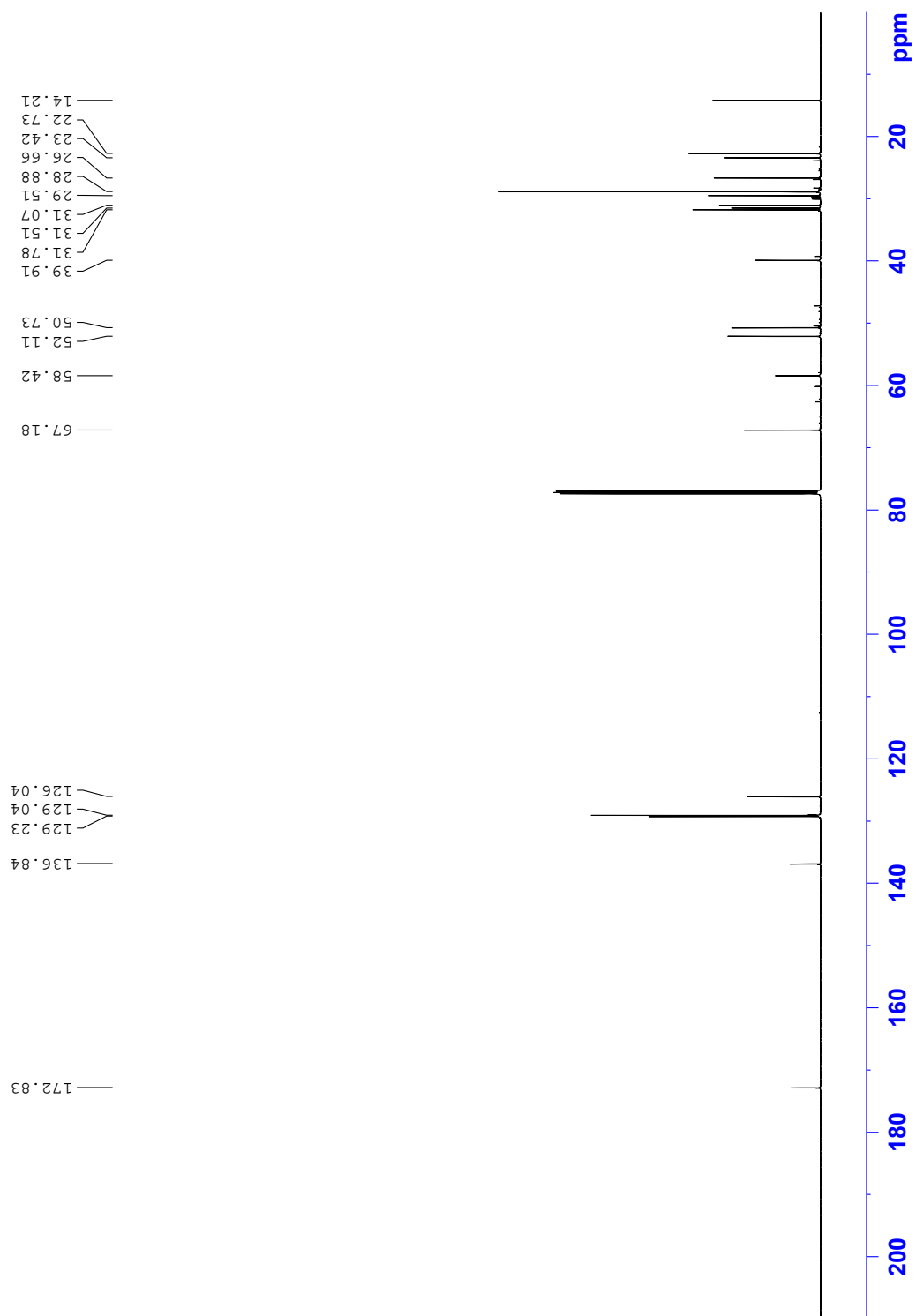
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***N*-(*tert*-Butyl)-2-((*S*)-2-(phenylthio)methyl)pyrrolidin-1-yl)octanamide (11a)**



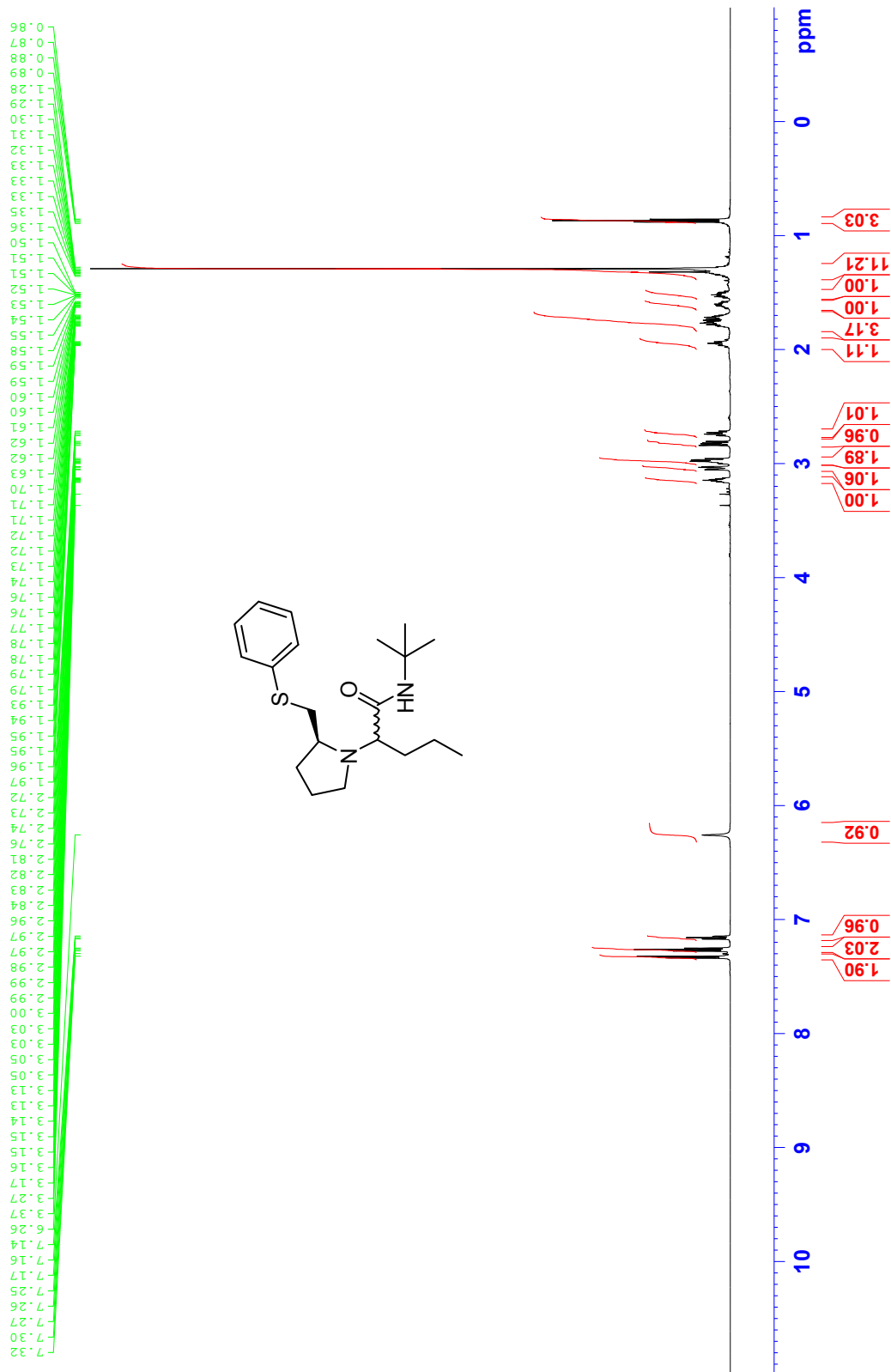




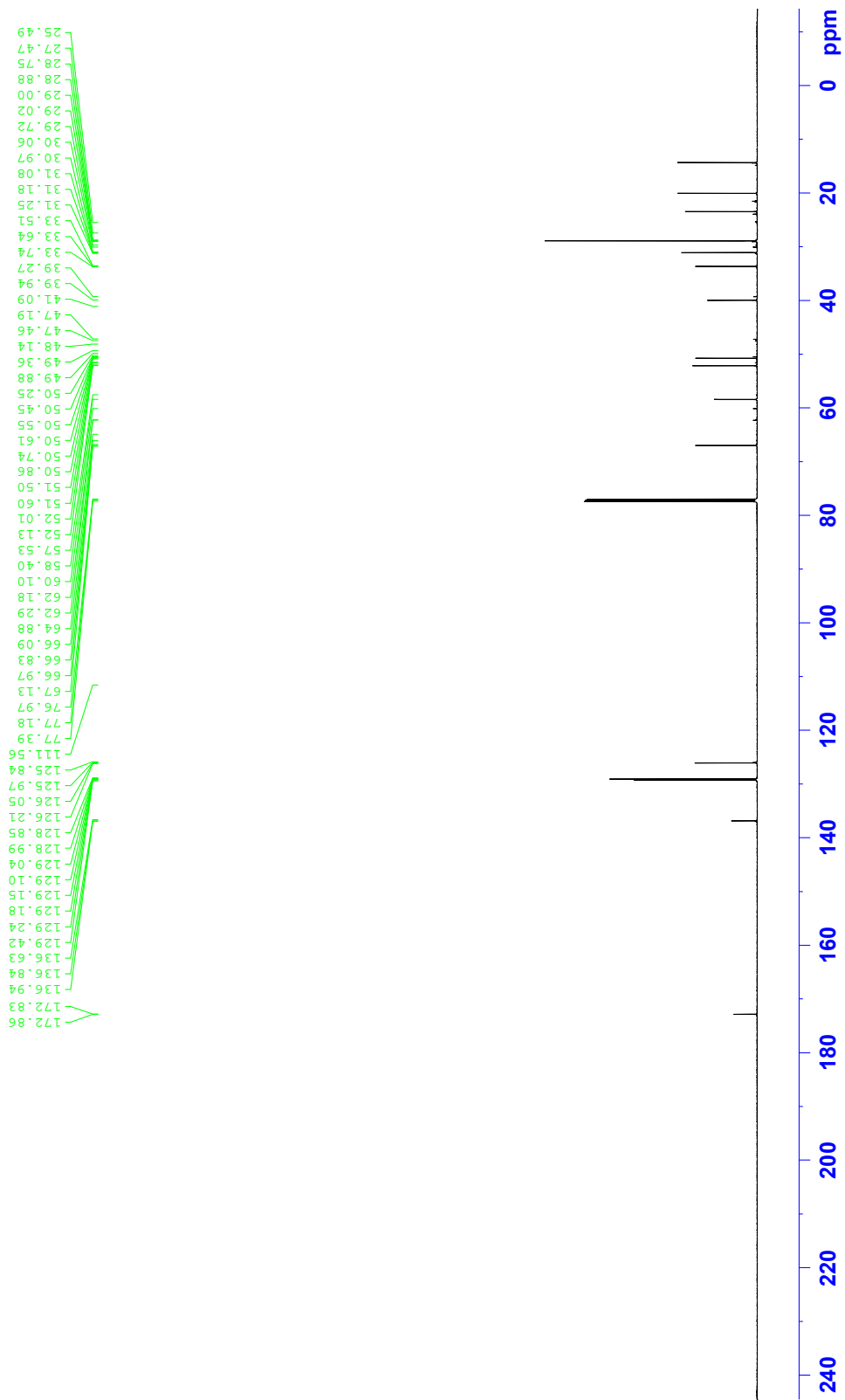
*N*-(*tert*-Butyl)-2-((*S*)-2-(phenylthio)methyl)pyrrolidin-1-yl)pentanamide (11b)

SM1045-1

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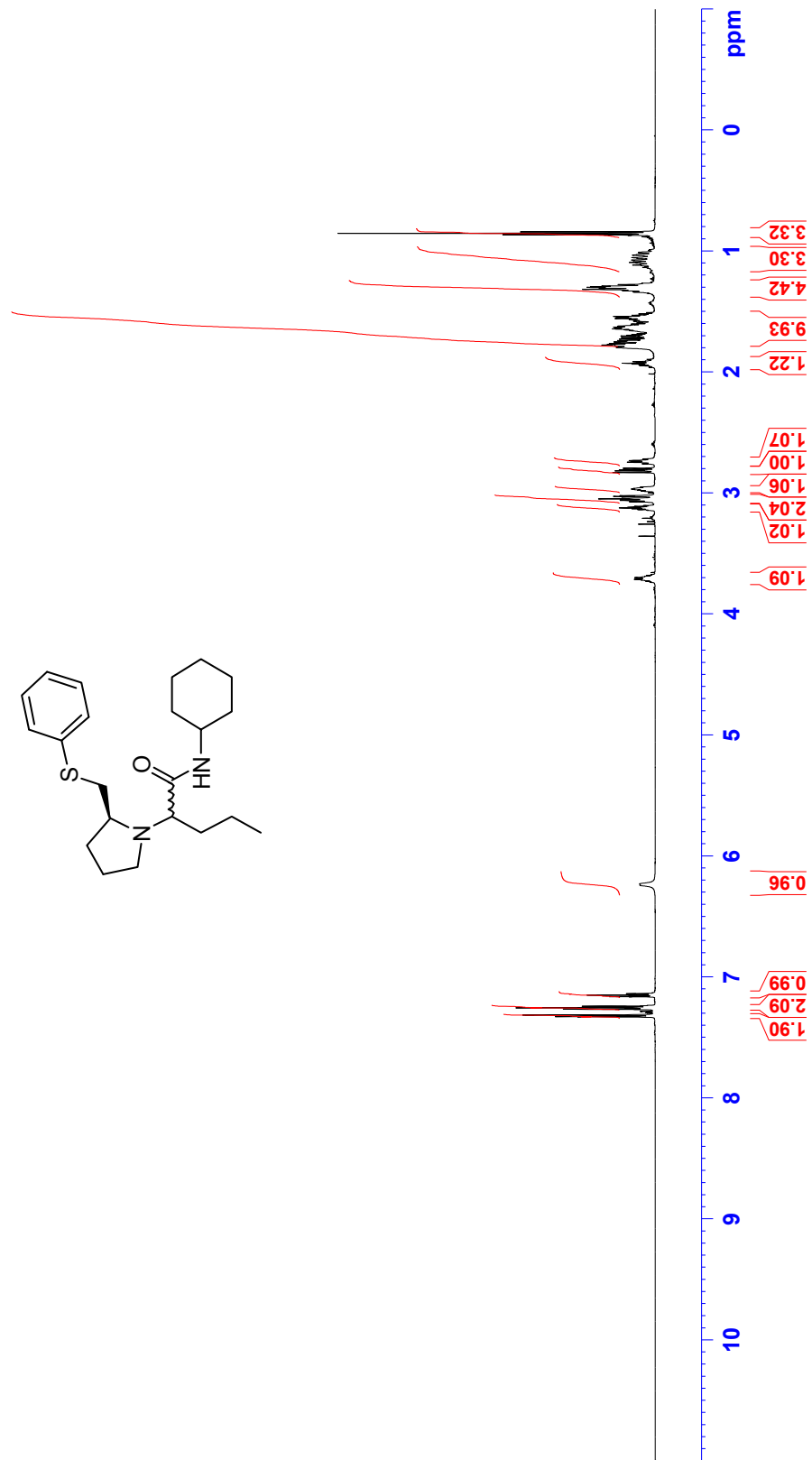
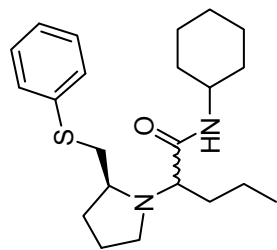
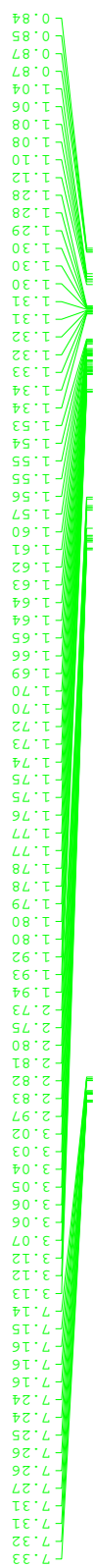


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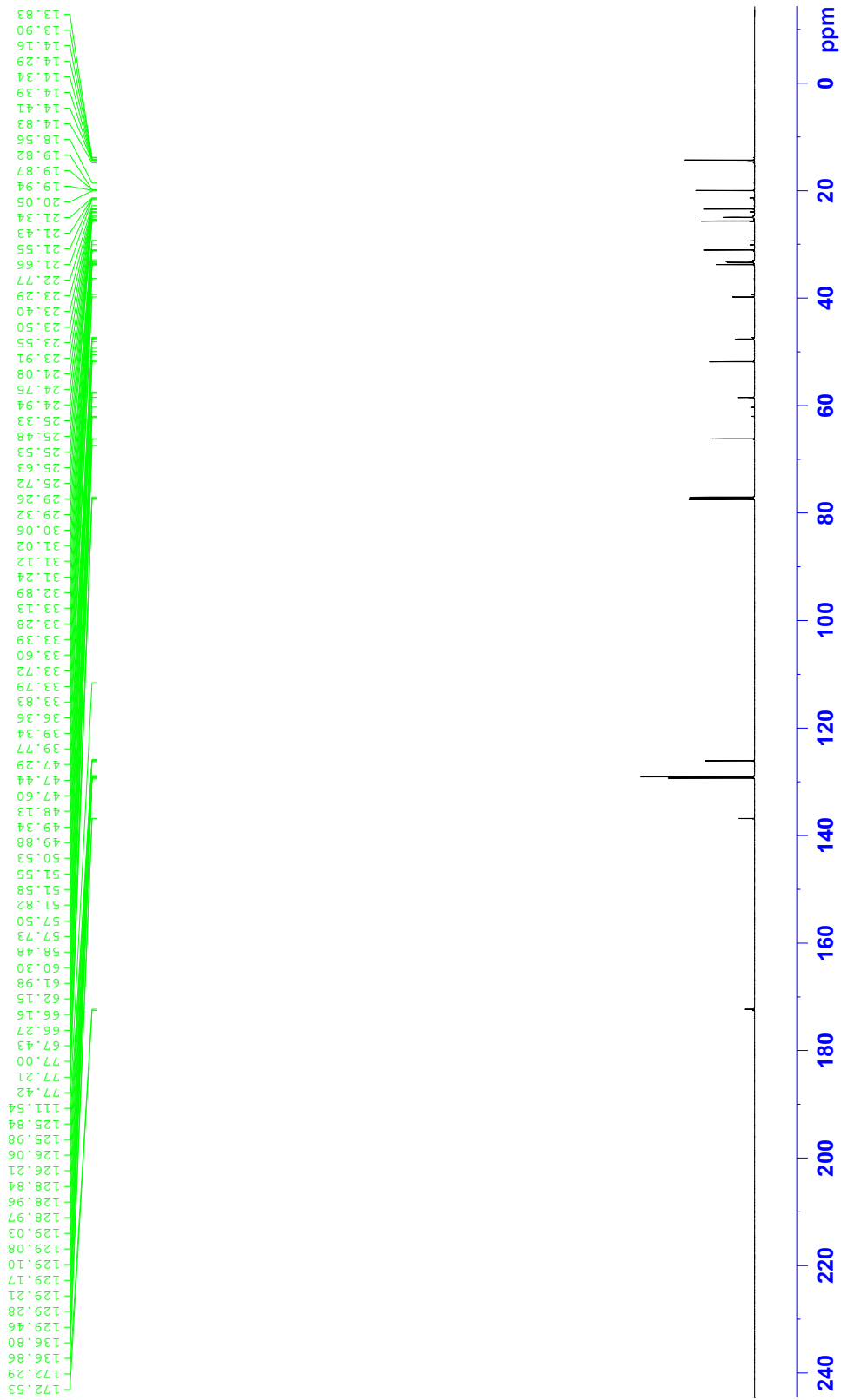


***N*-(Cyclohexyl)-2-((*S*)-2-(phenylthio)methyl)pyrrolidin-1-yl)pentanamide (11c)**

SM1046-1  
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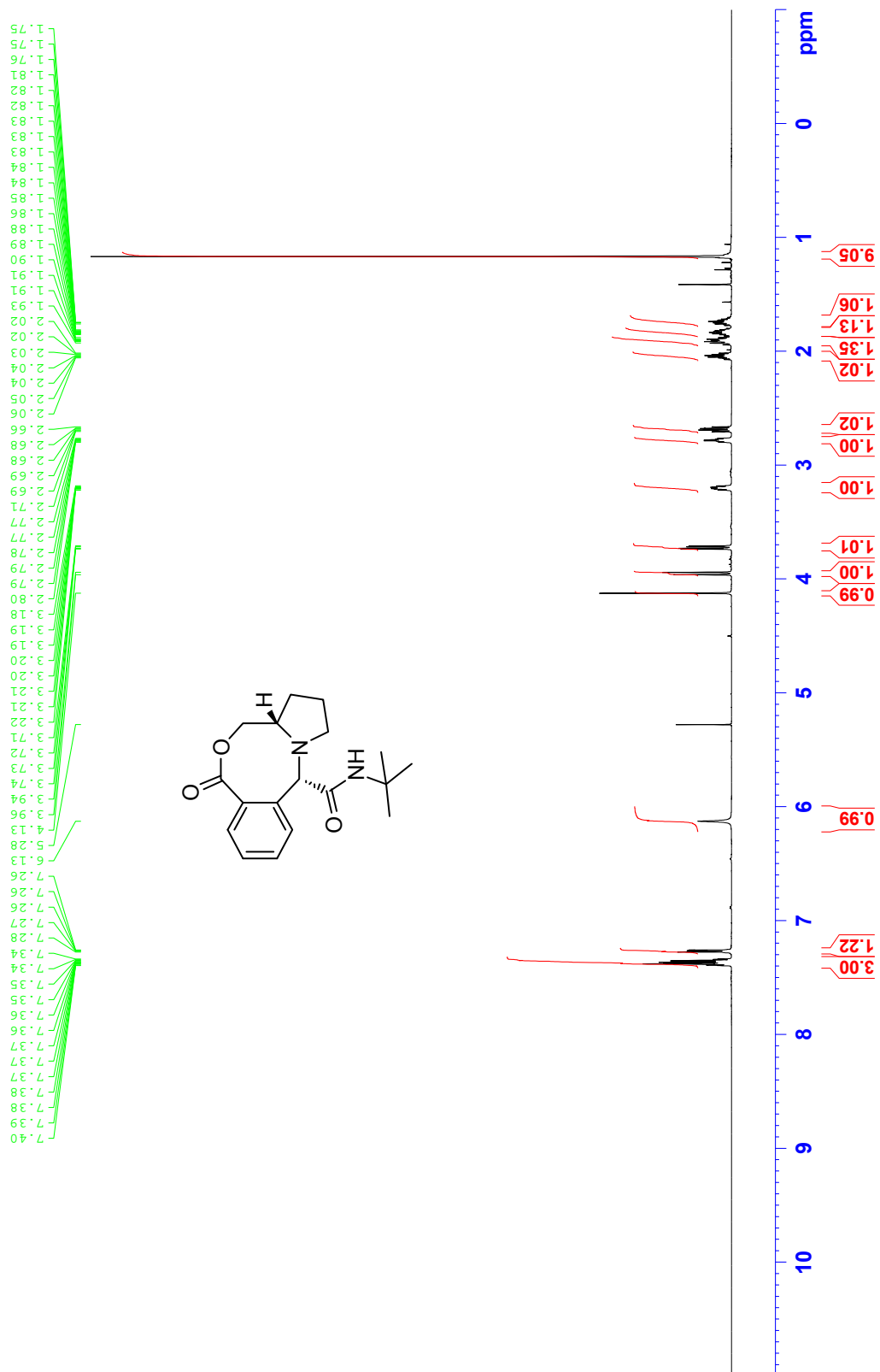


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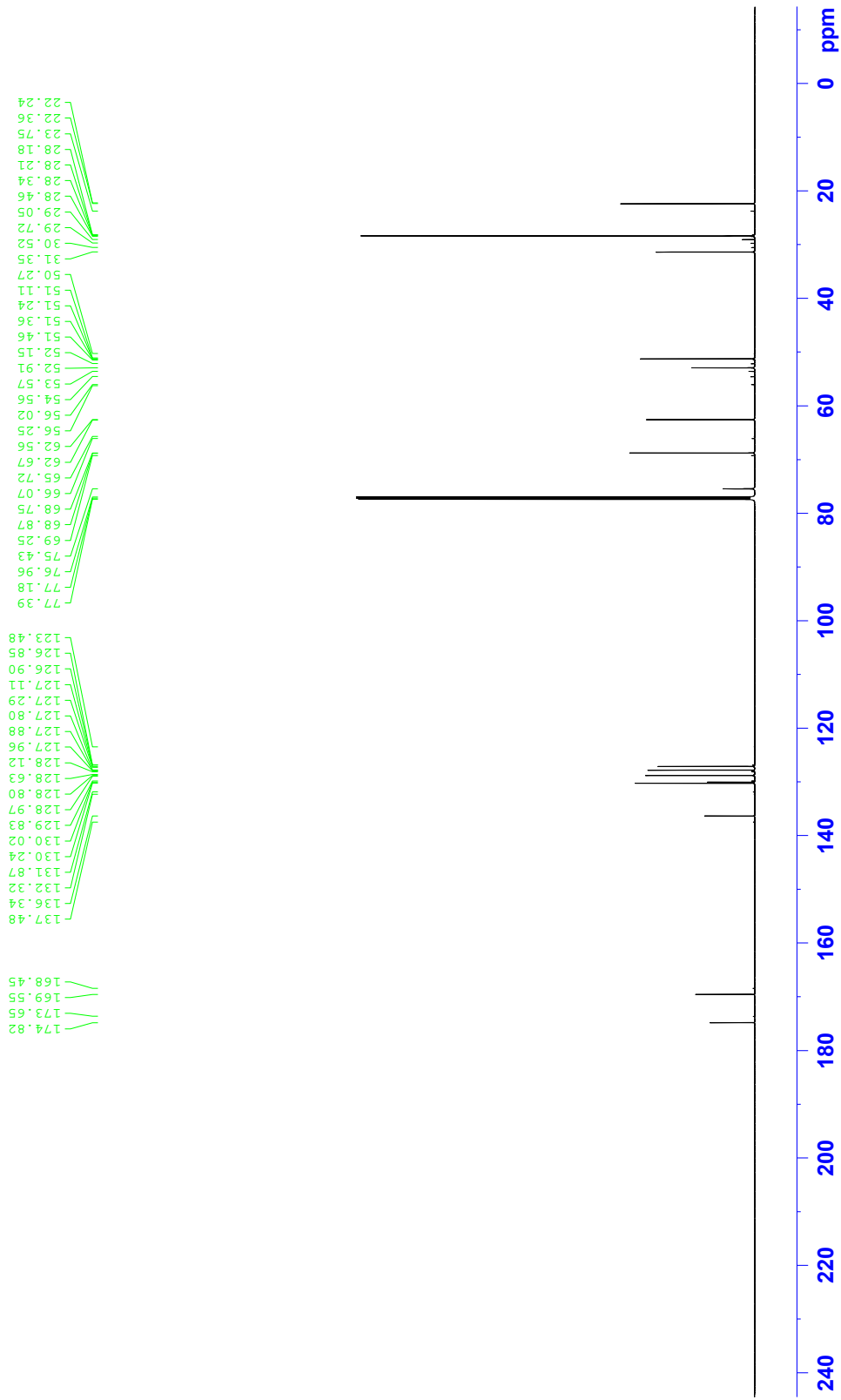


(3*S*,8*S*)-*N*-(*tert*-Butyl)-8-oxo-2,5-dihydrobenzo[1,4]oxazocine-5-carboxamide [(*S*,*S*)-12]

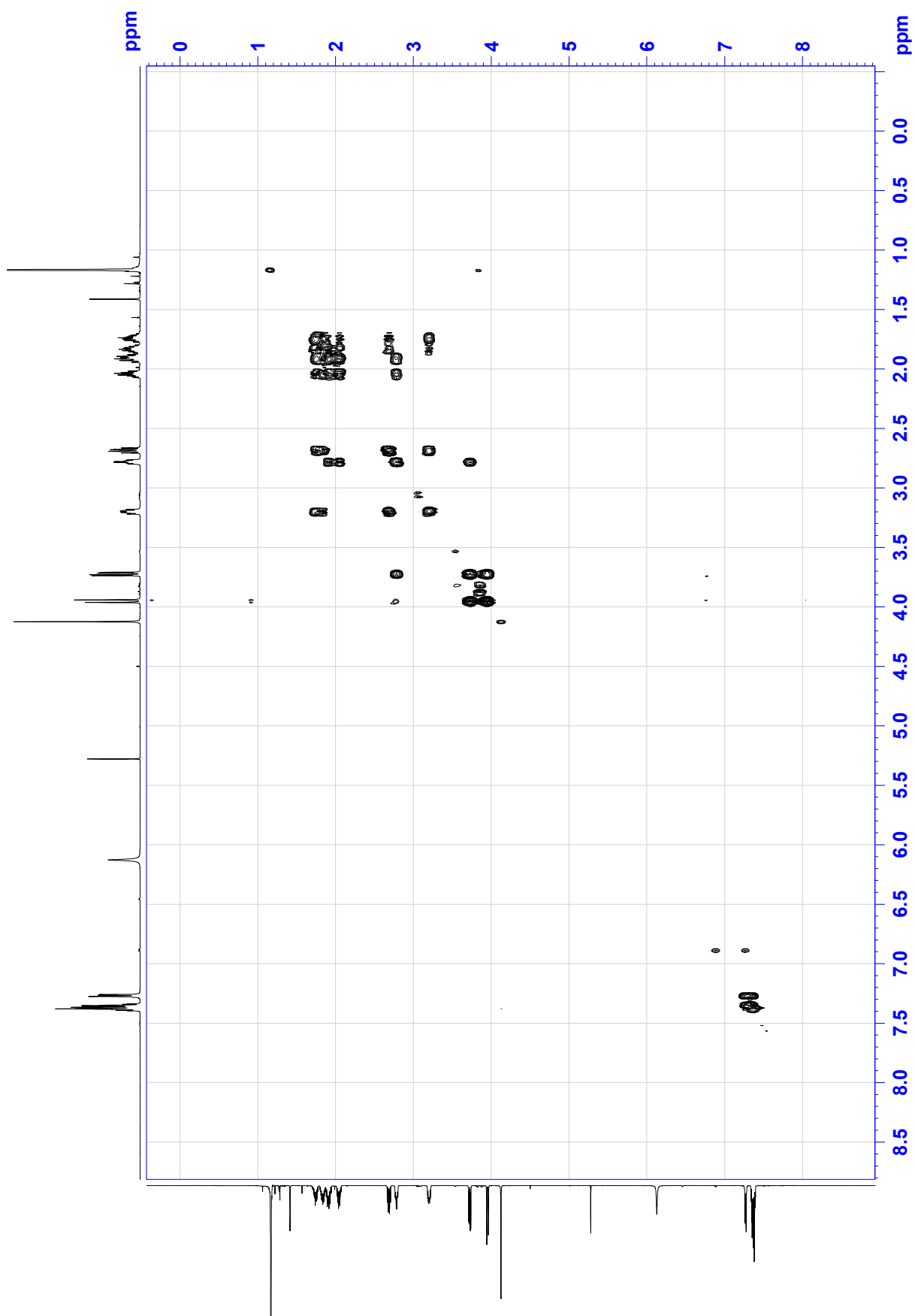
SM1011-1  
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SM1011-1  
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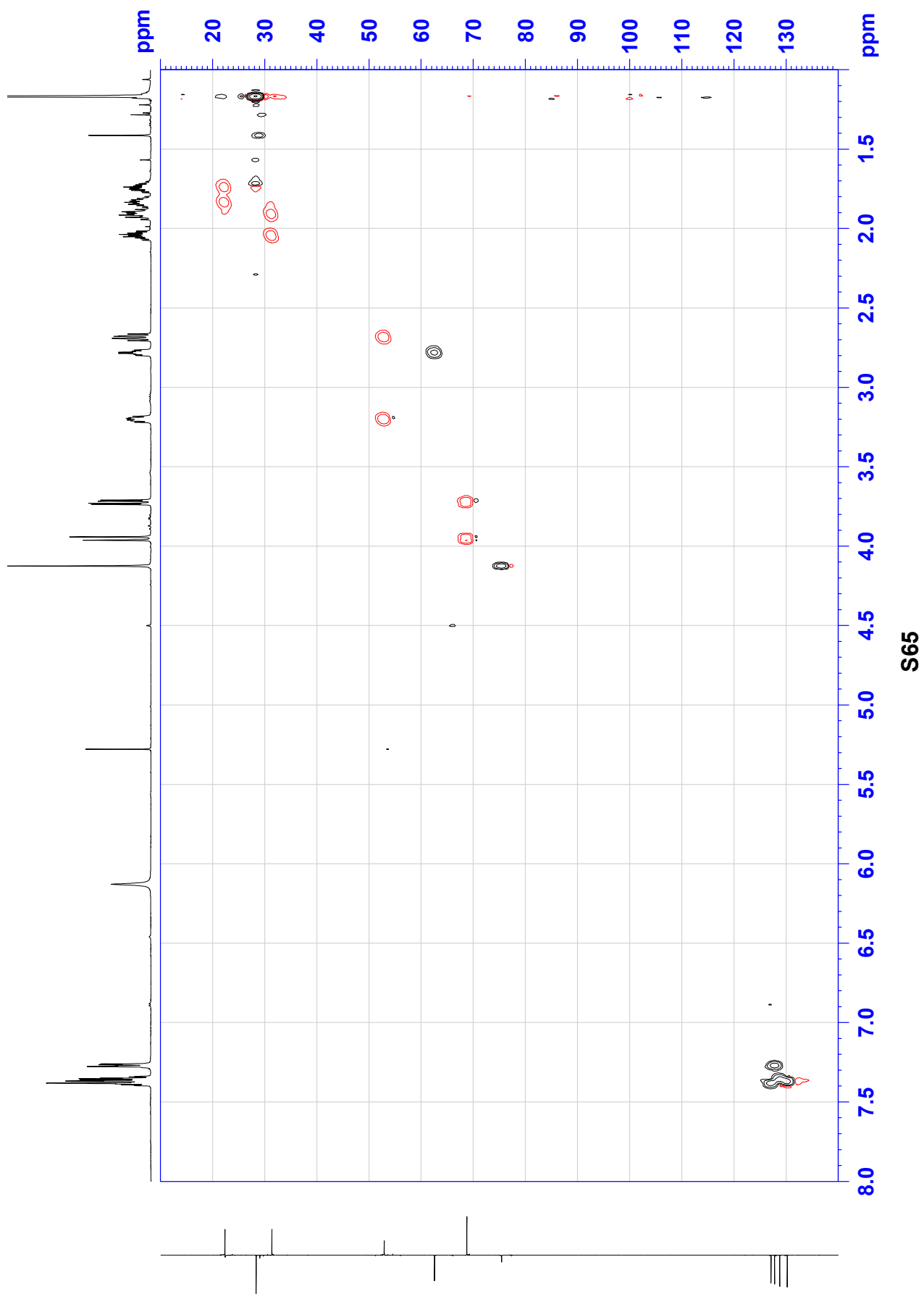


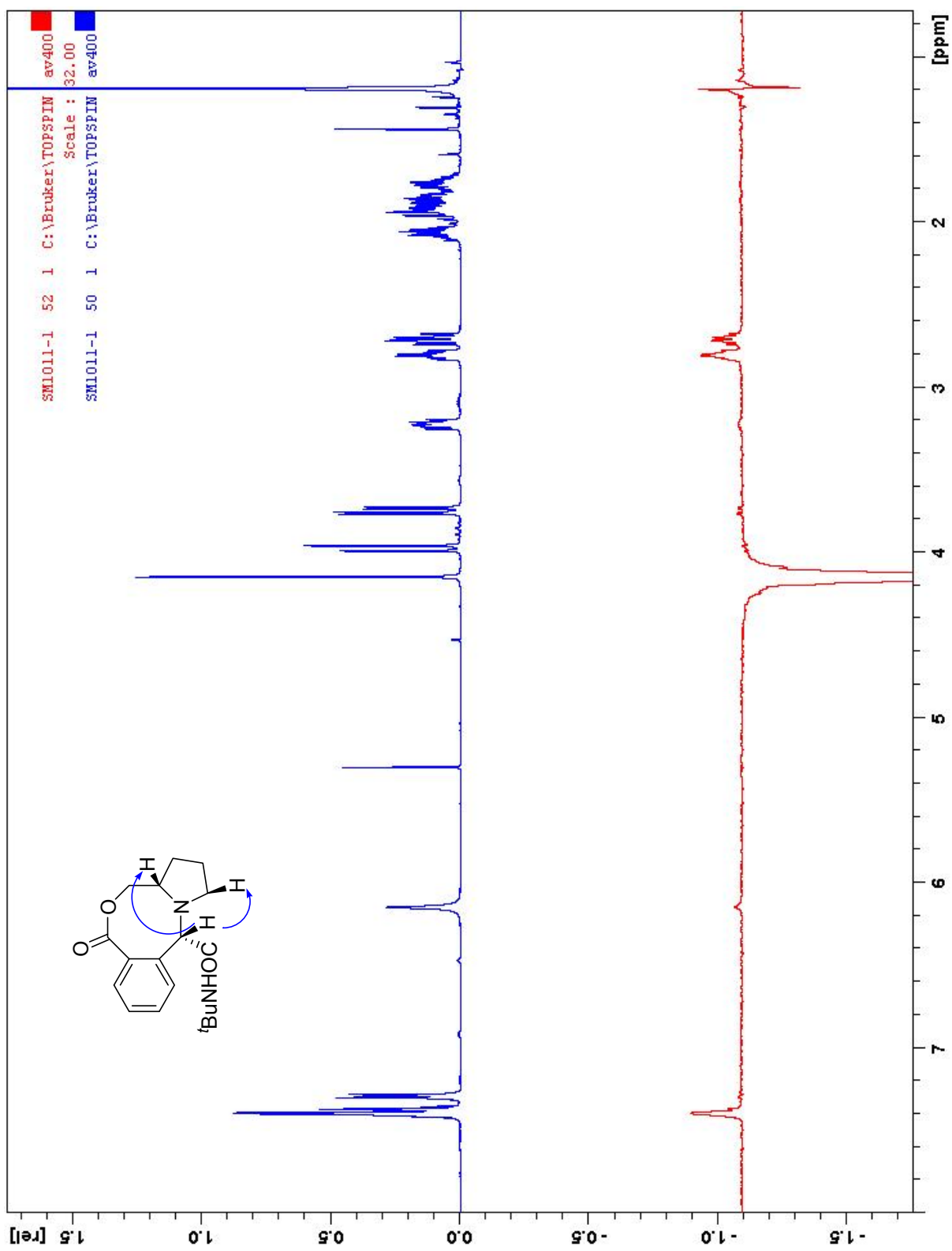
S63

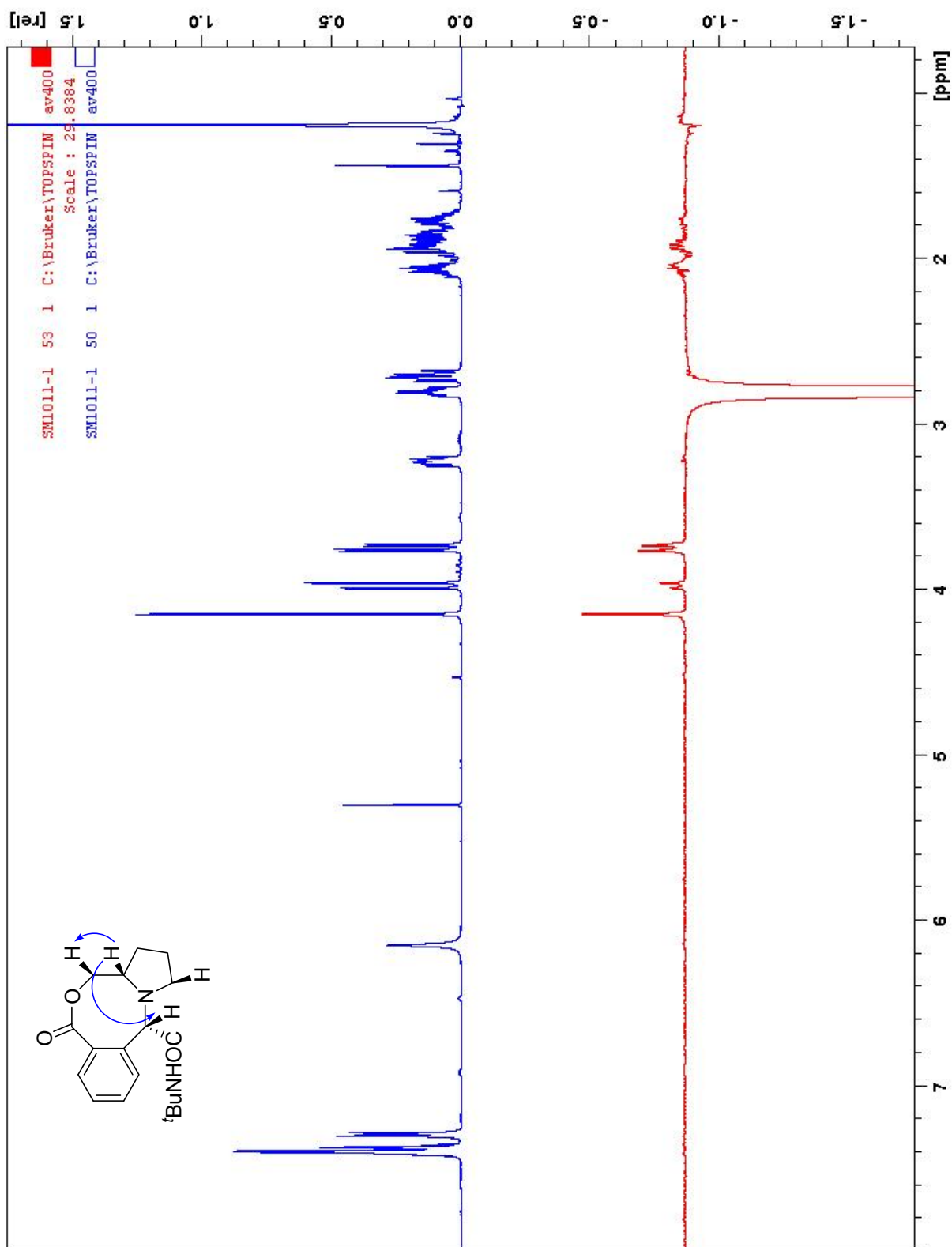


S64



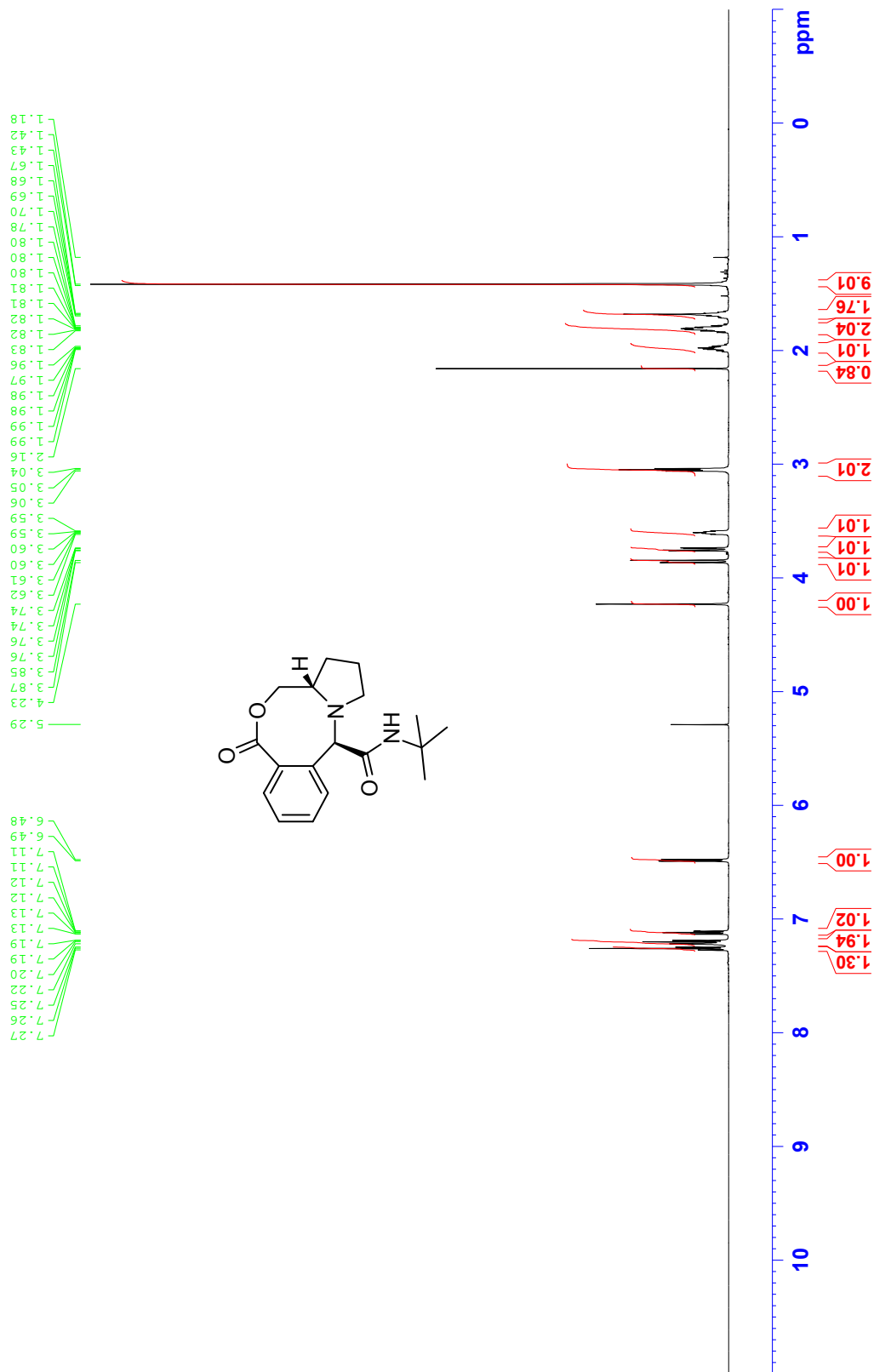




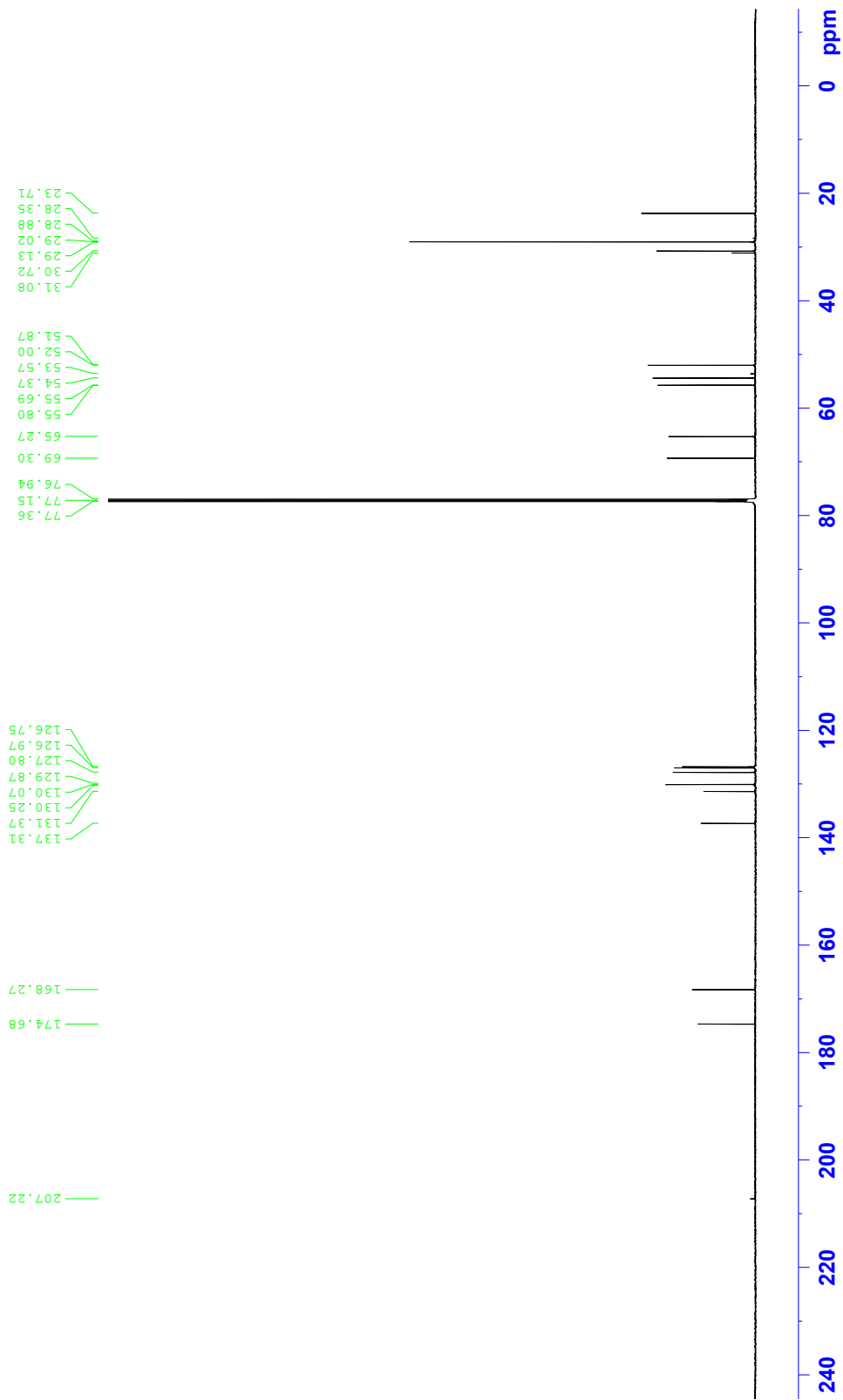


(3*S*,8*R*)-*N*-(*tert*-Butyl)-8-oxo-2,5-dihydrobenzo[*f*]pyrrolo[3,4-*c*]1,4-oxazine-5-carboxamide [(*S*,*R*)-12]

SM1011-2  
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SM1011-2  
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S69

