

**Synthesis of 4-aryl piperidin-4-ol derivatives of loperamide as potent antiproliferative agents  
against HCT-116 and HL-60 cells**

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Nagasawa<sup>c</sup>, and Tatsunori Iwamura<sup>b\*</sup>

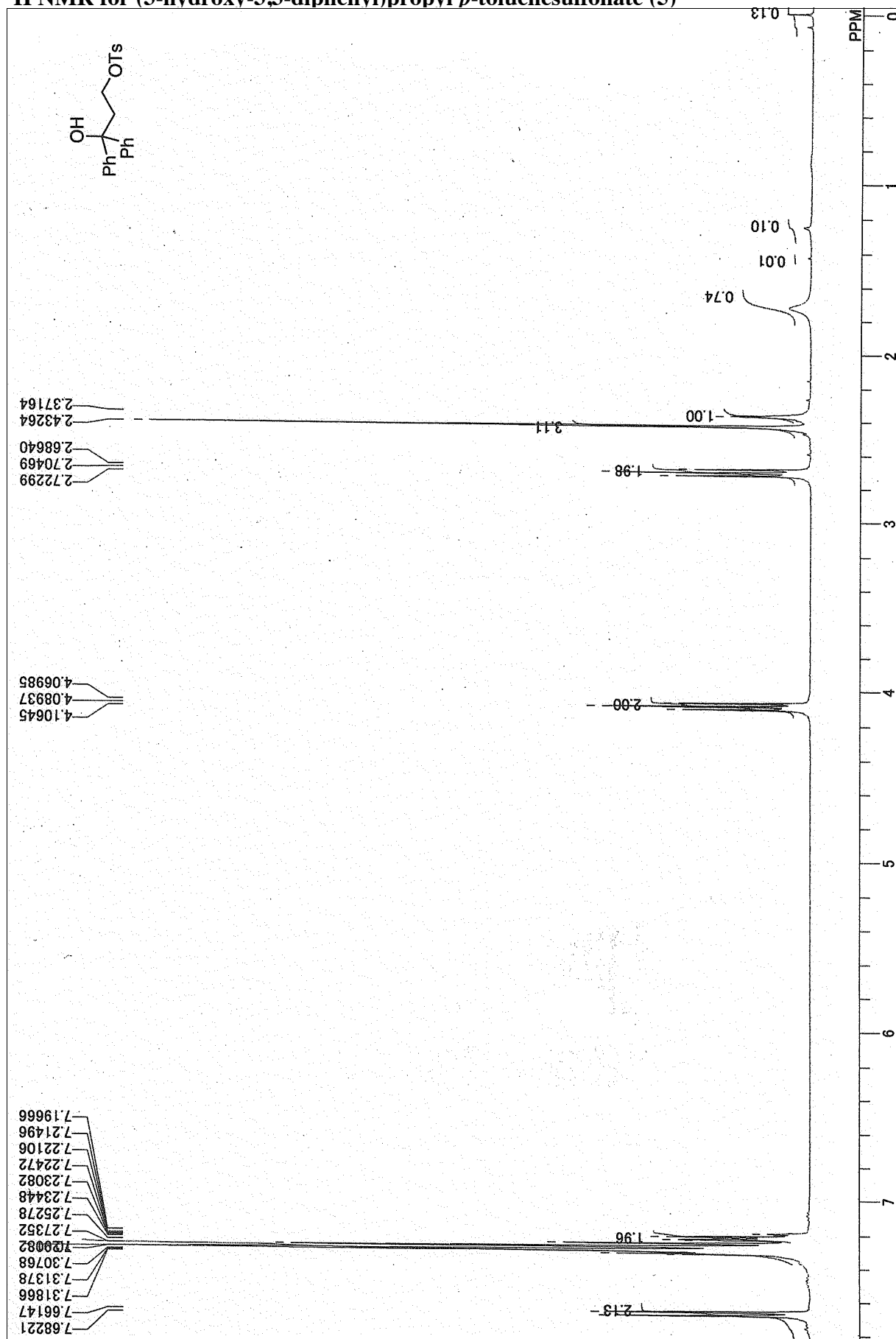
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Sciences, Fukuyama, Hiroshima 729-0292, Japan:*

**Supporting Information**

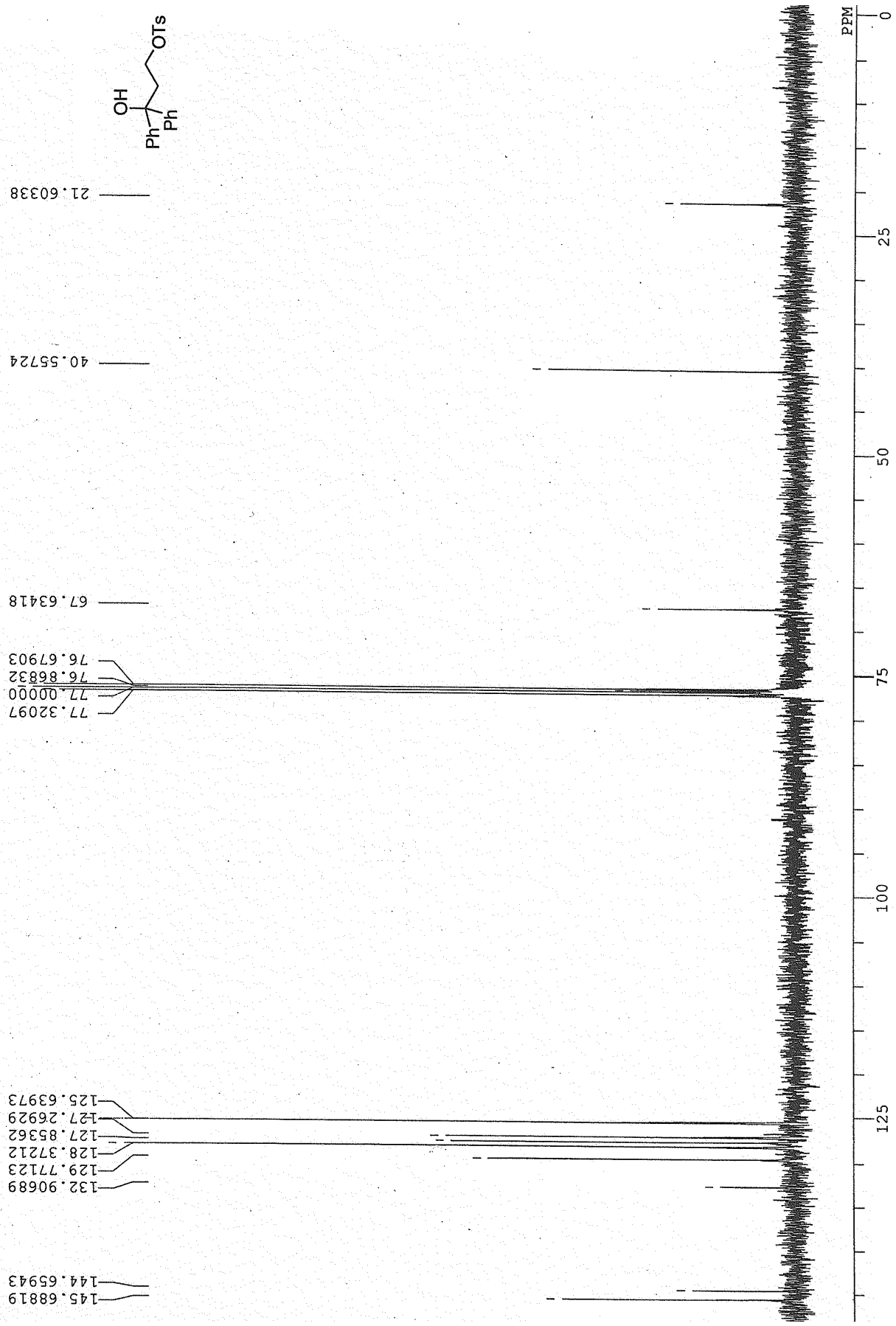
**Spectral data for loperamide analogs**

**S2-S15**

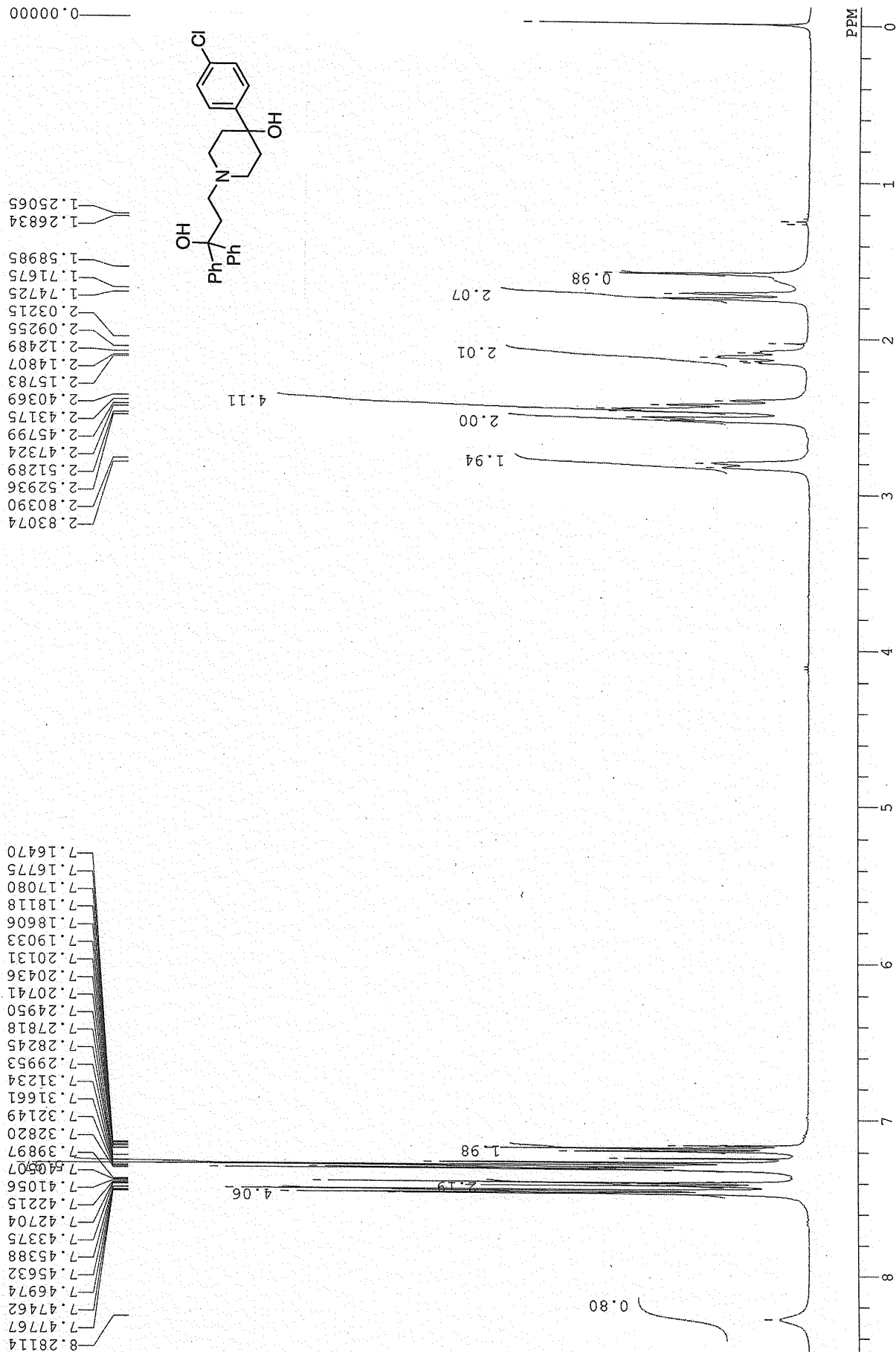
<sup>1</sup>H NMR for (3-hydroxy-3,3-diphenyl)propyl *p*-toluenesulfonate (5)



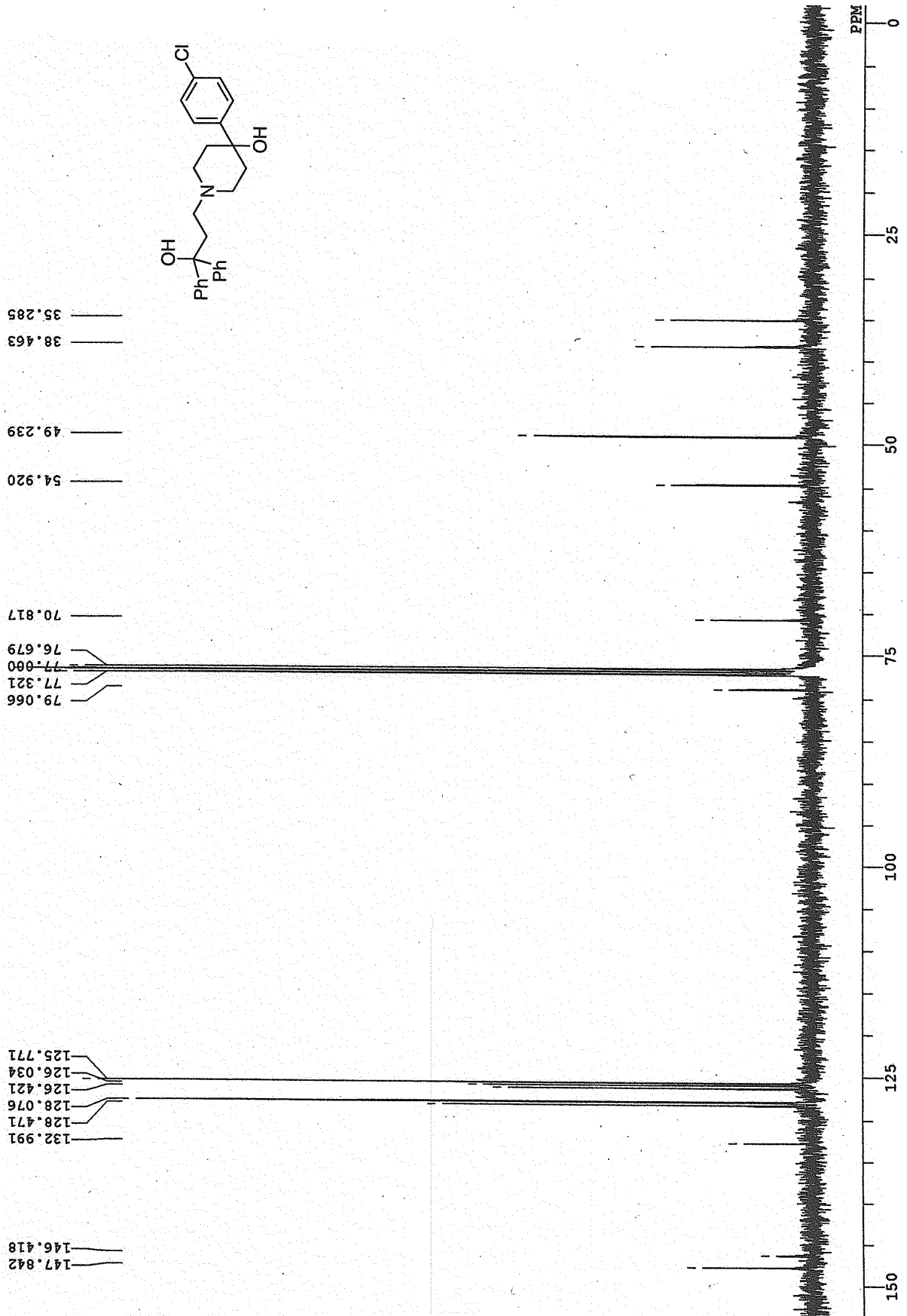
<sup>13</sup>C NMR for (3-hydroxy-3,3-diphenyl)propyl *p*-toluenesulfonate (5)



**<sup>1</sup>H NMR for 1,1-diphenyl-3-[4-hydroxy-4-(4-chlorophenyl)piperidin-1-yl]-1-propanol (10a)**

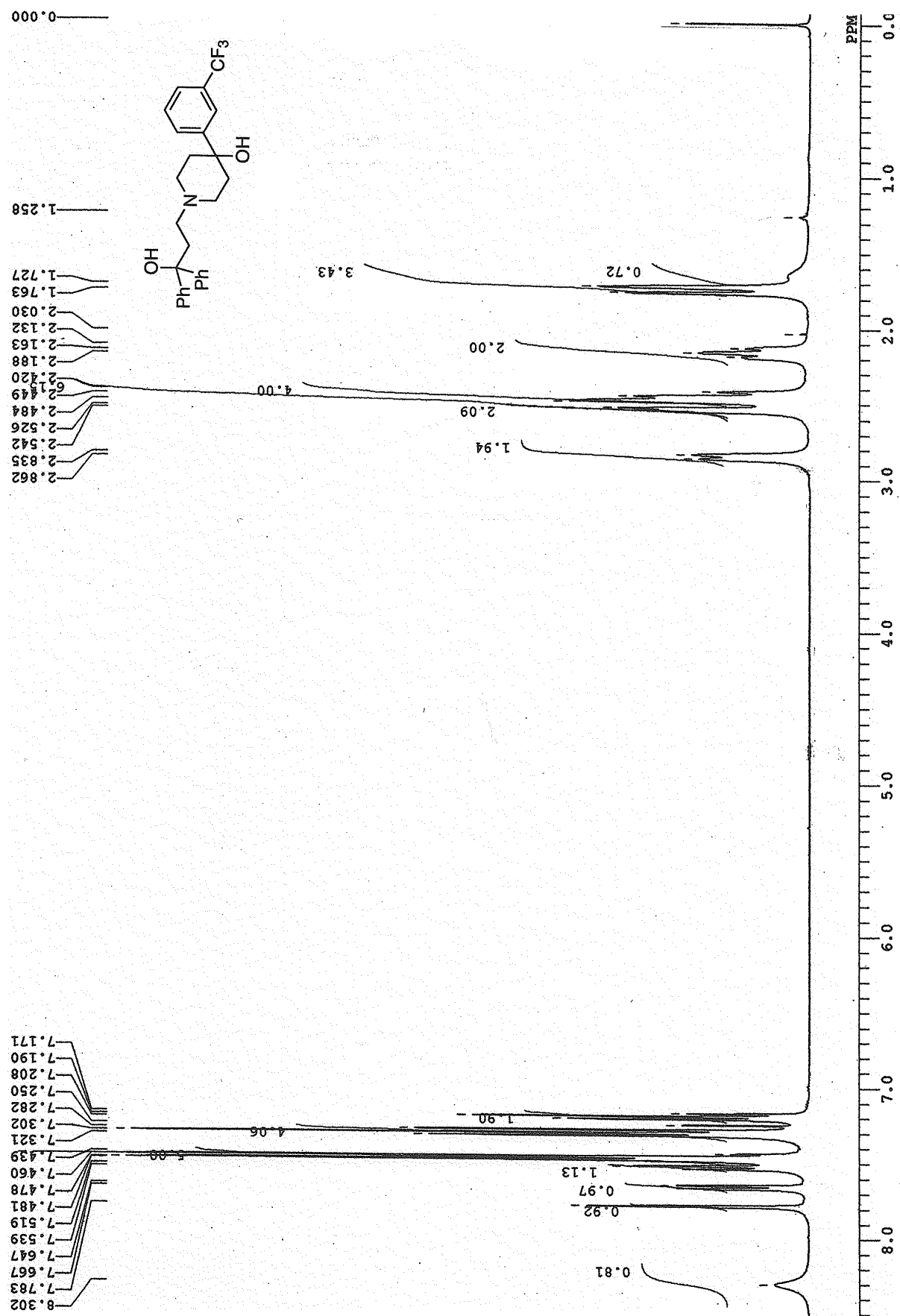


<sup>13</sup>C NMR for 1,1-diphenyl-3-[4-hydroxy-4-(4-chlorophenyl)piperidin-1-yl]-1-propanol (10a)



<sup>1</sup>H NMR for 1,1-diphenyl-3-[4-hydroxy-4-(3-trifluoromethylphenyl)piperidin-1-yl]-1-propanol

(10b)

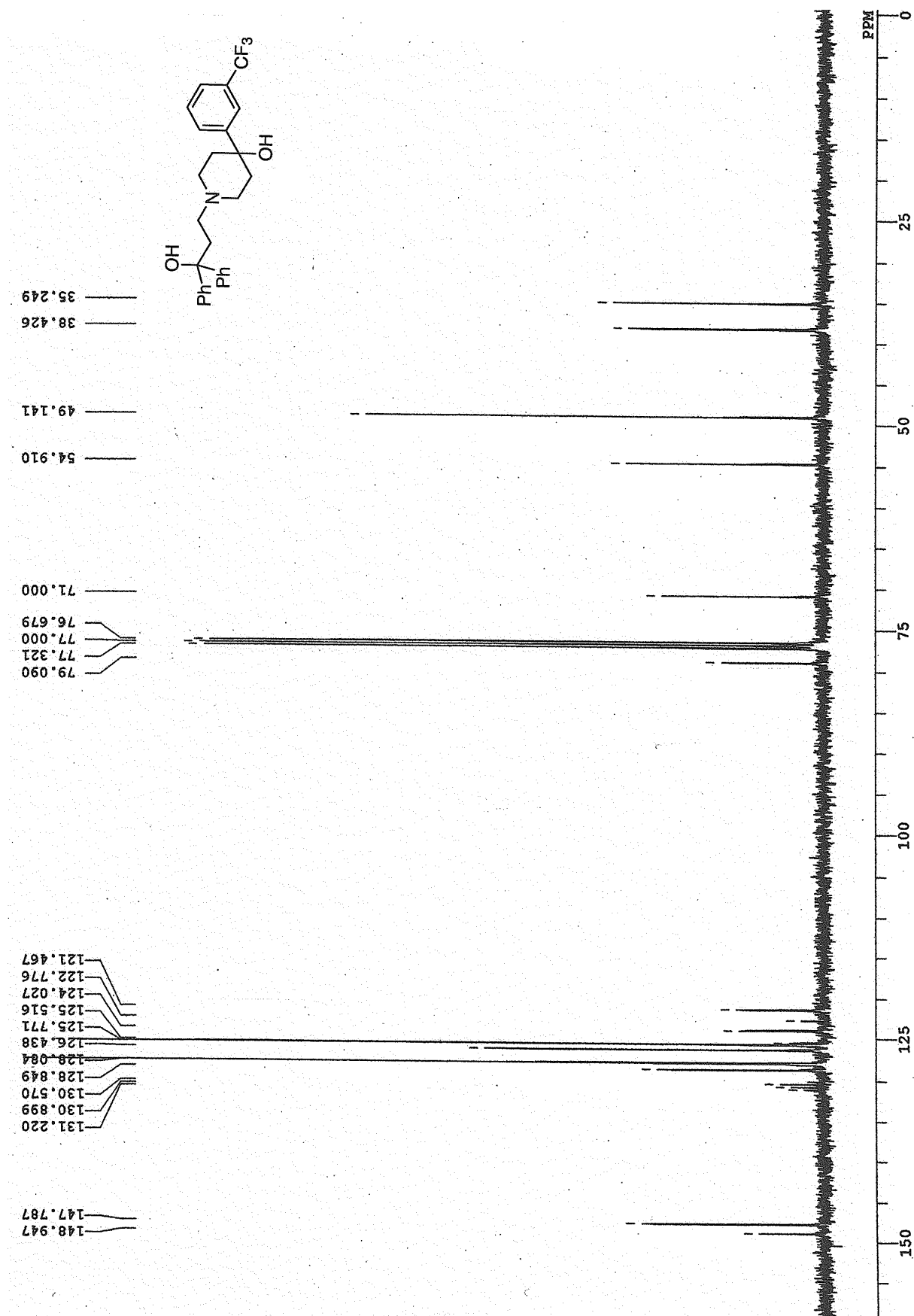


<sup>13</sup>C

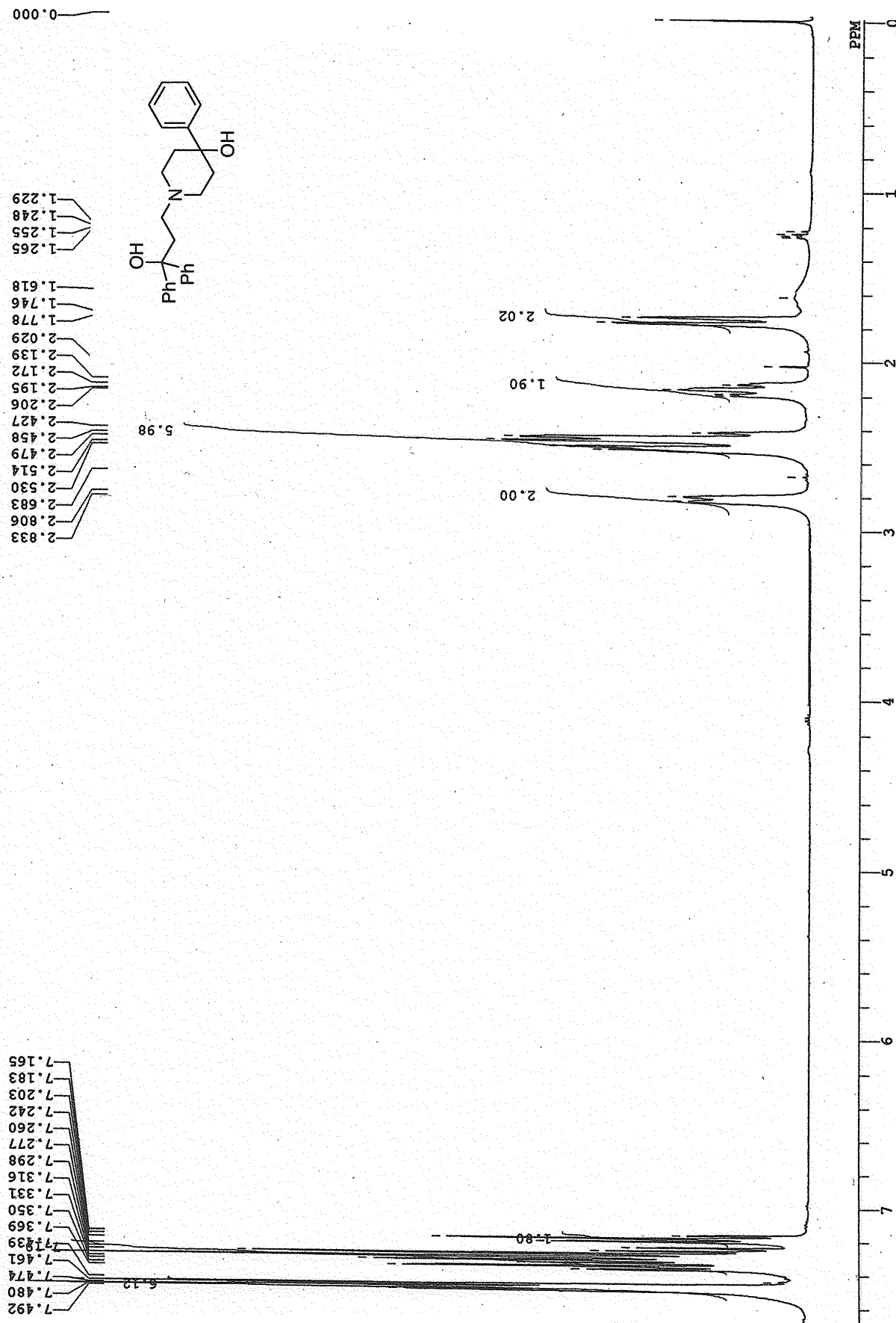
NMR

for

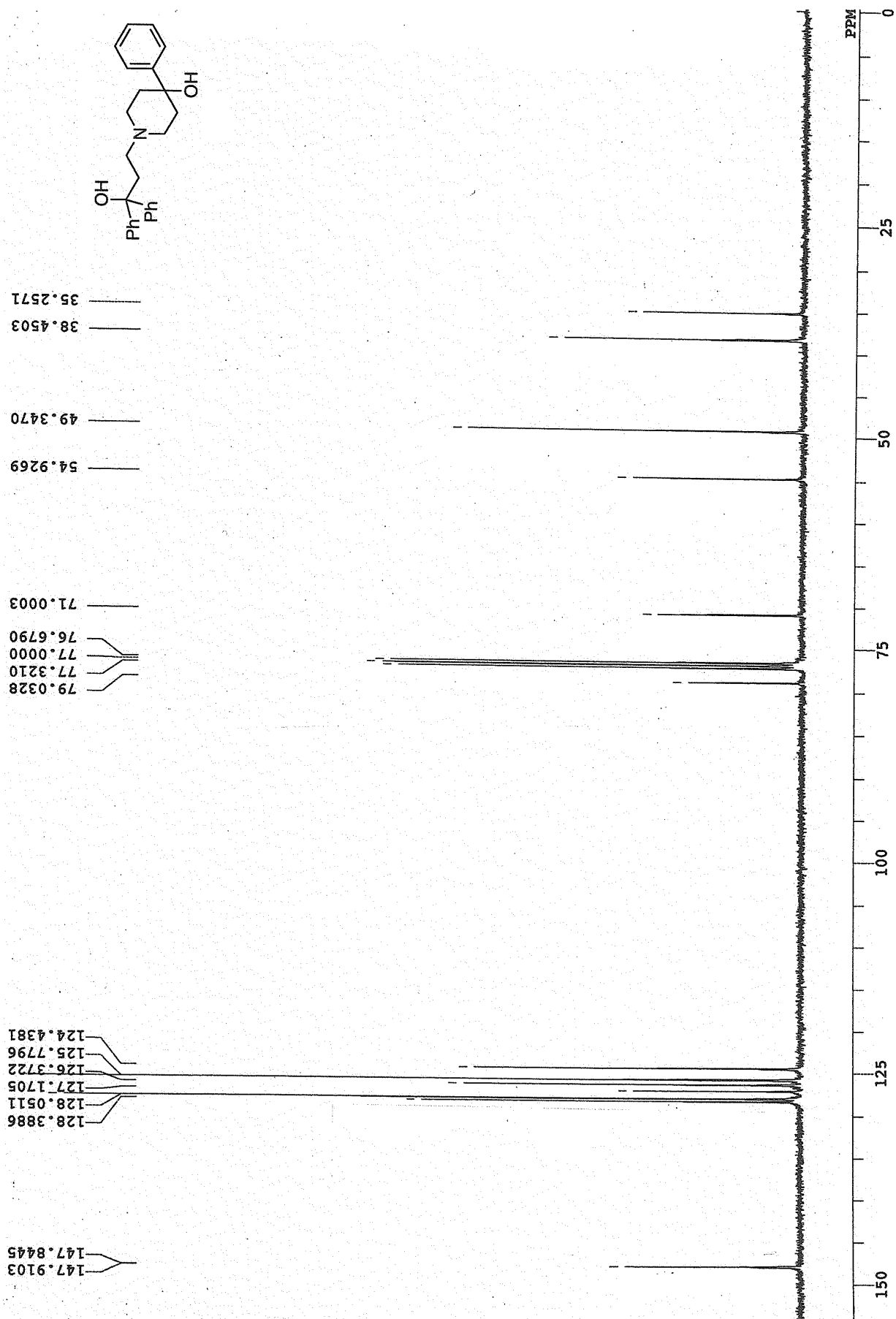
1,1-diphenyl-3-[4-hydroxy-4-(3-trifluoromethylphenyl)piperidin-1-yl]-1-propanol (10b)



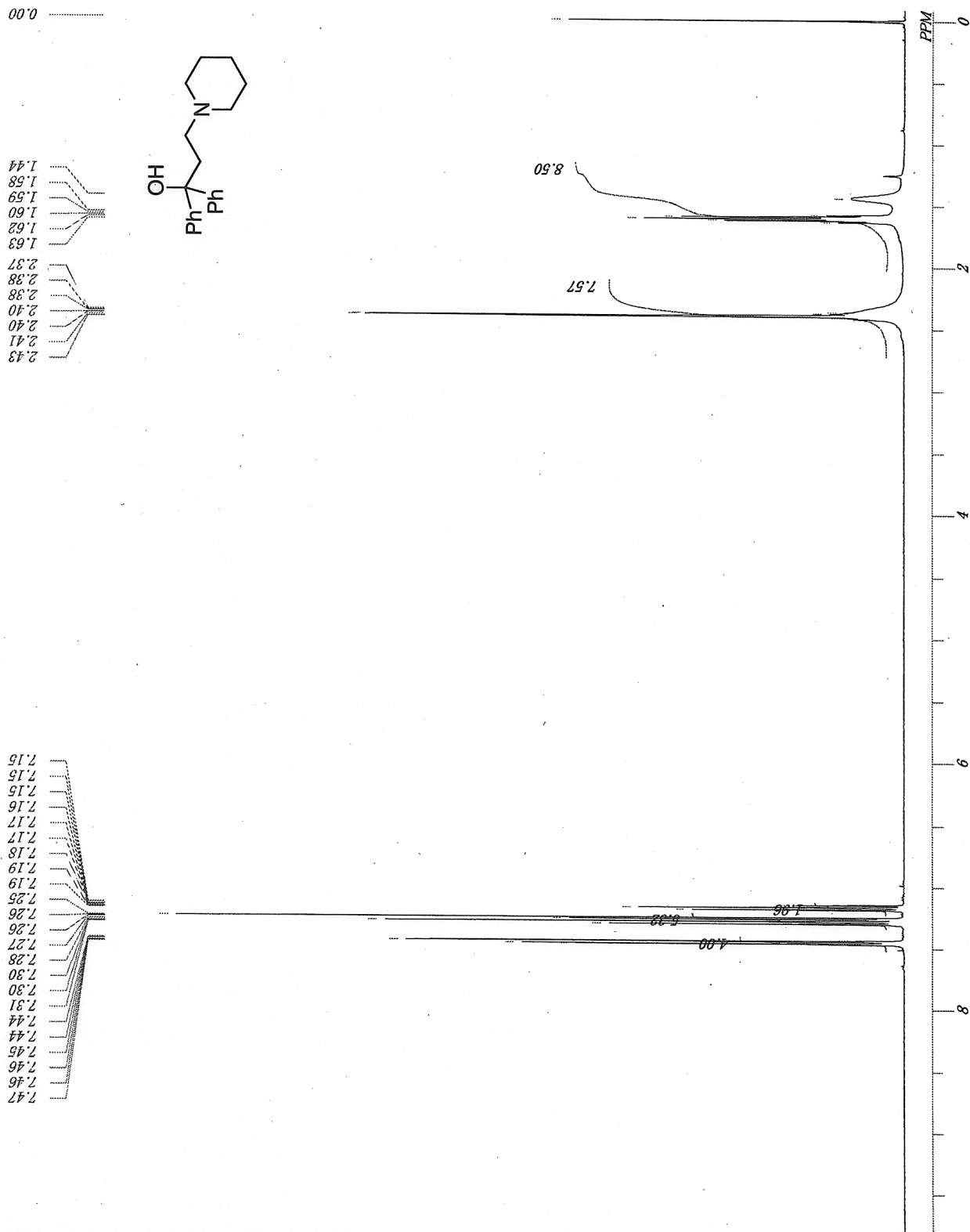
<sup>1</sup>H NMR for 1,1-diphenyl-3-(4-hydroxy-4-phenylpiperidin-1-yl)-1-propanol (10c)



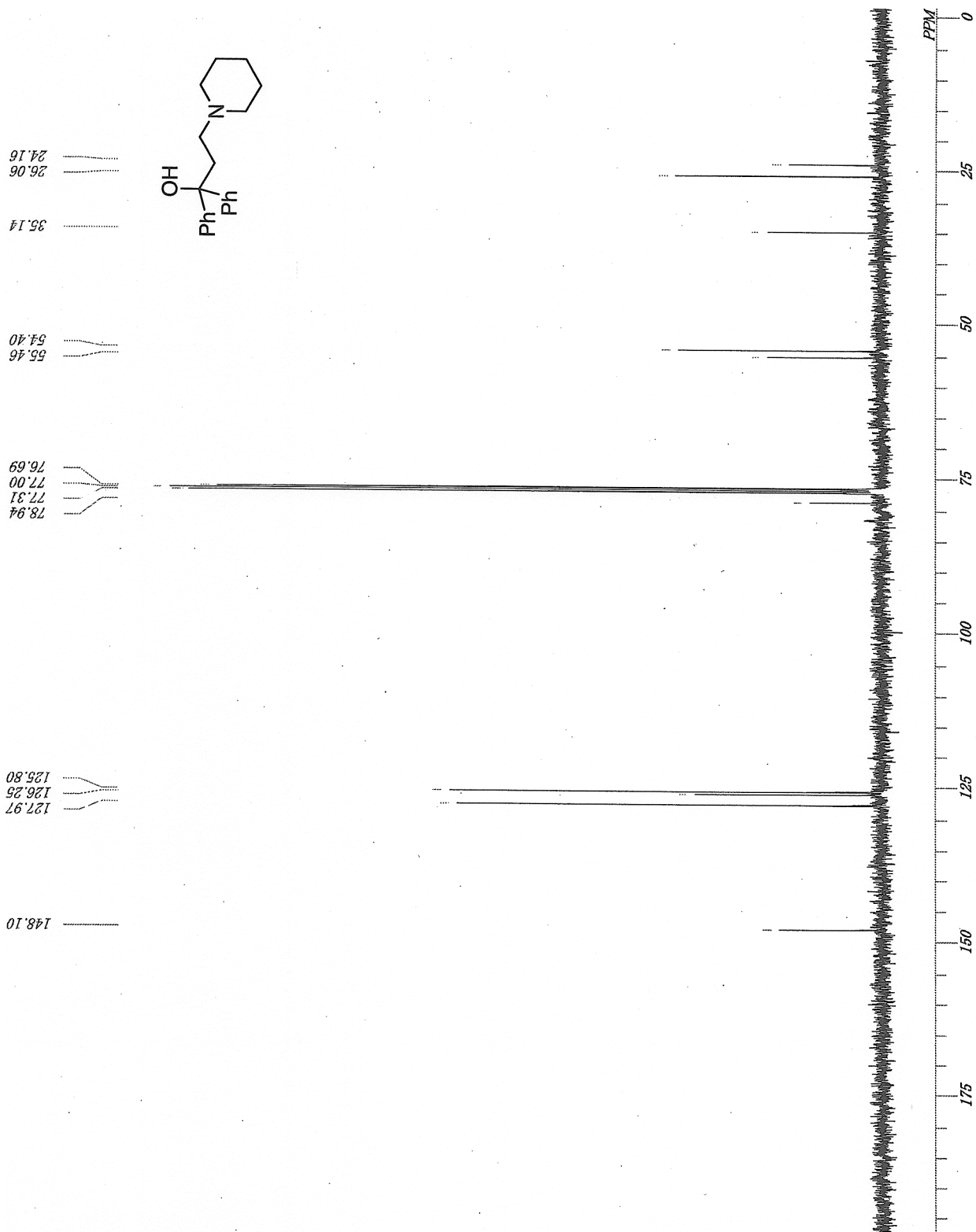
<sup>13</sup>C NMR for 1,1-diphenyl-3-(4-hydroxy-4-phenylpiperidin-1-yl)-1-propanol (10c)



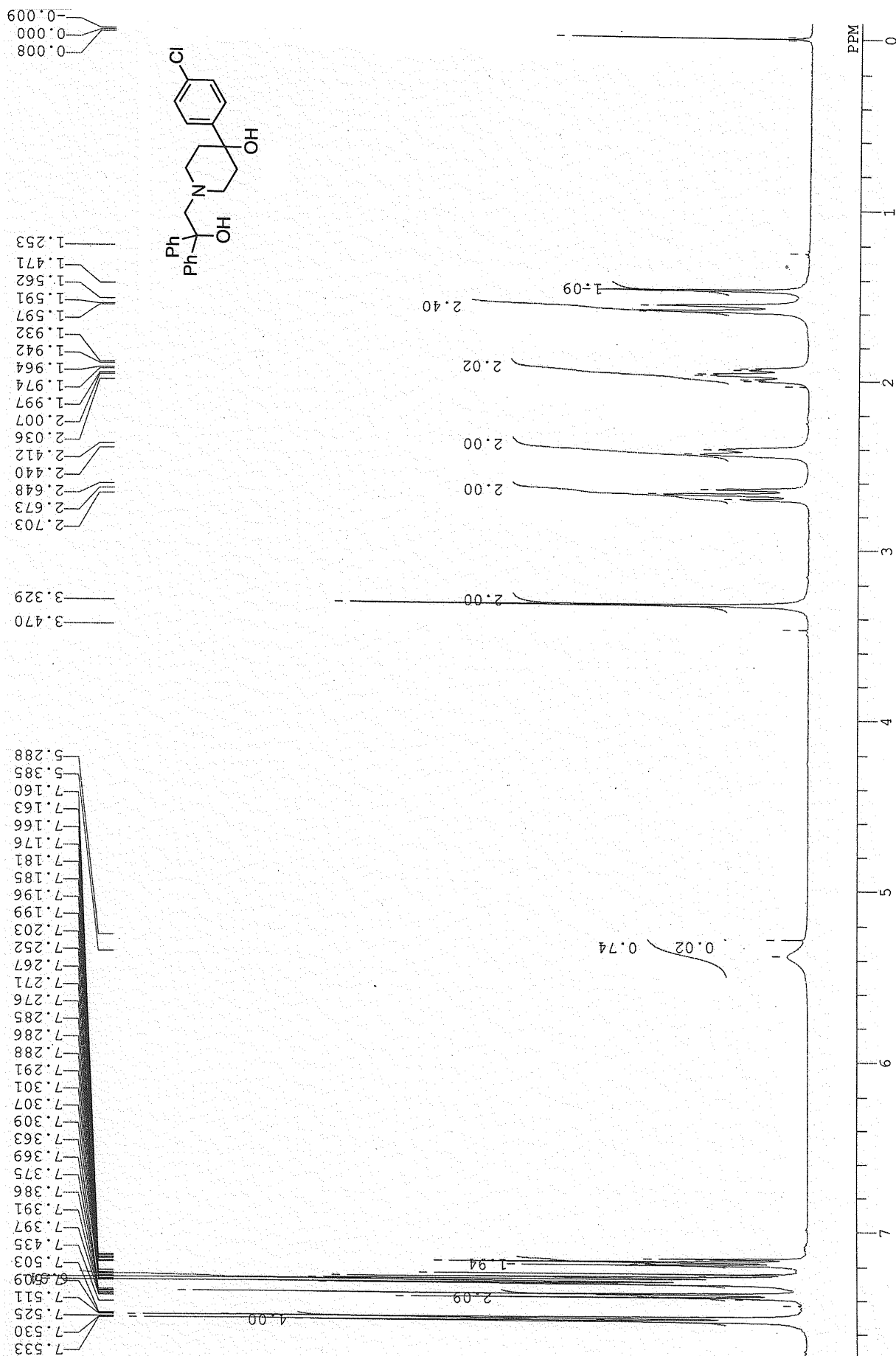
<sup>1</sup>H NMR for 1,1-diphenyl-3-(piperidin-1-yl)-1-propanol (10d)



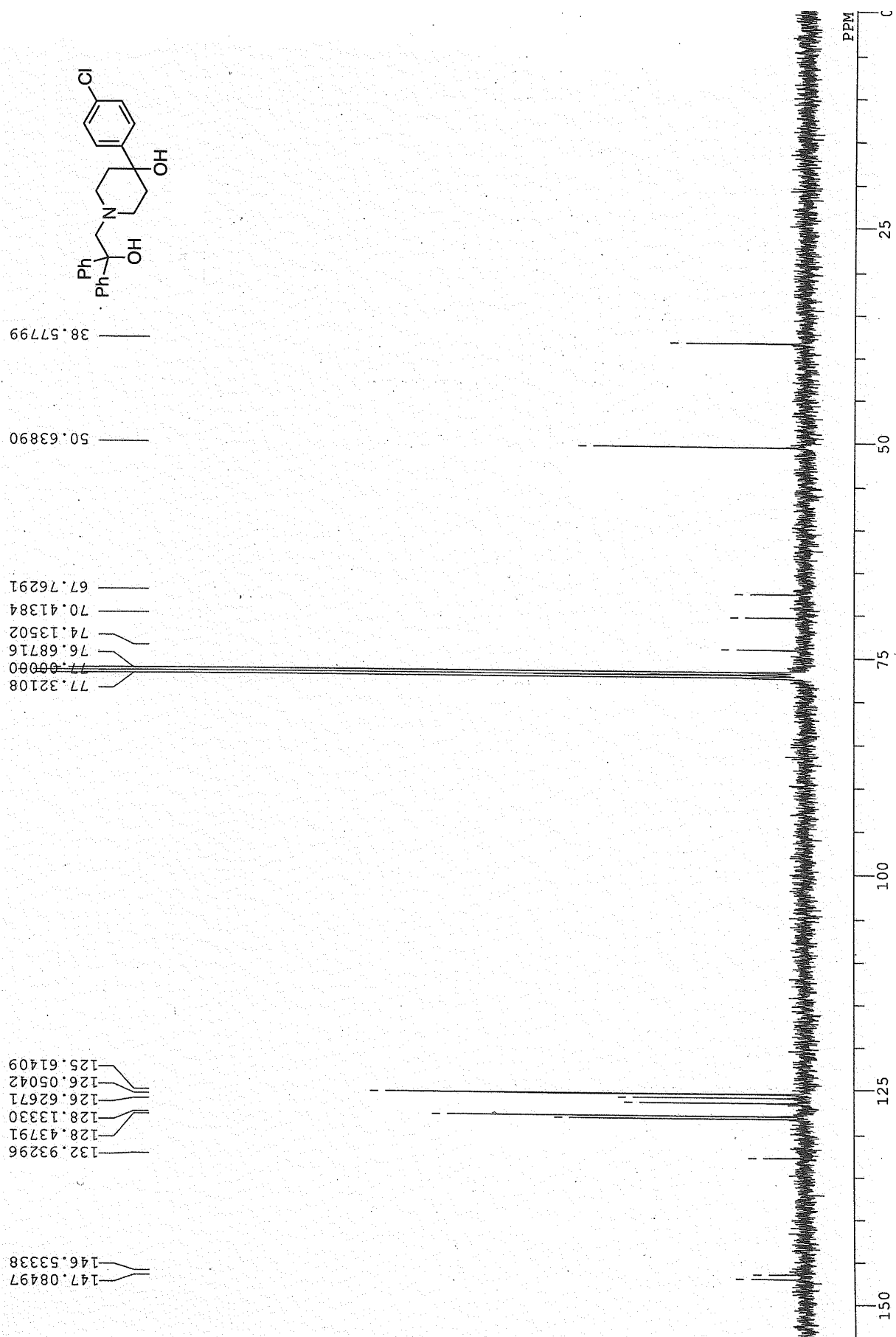
<sup>13</sup>C NMR for 1,1-diphenyl-3-(piperidin-1-yl)-1-propanol (10d)



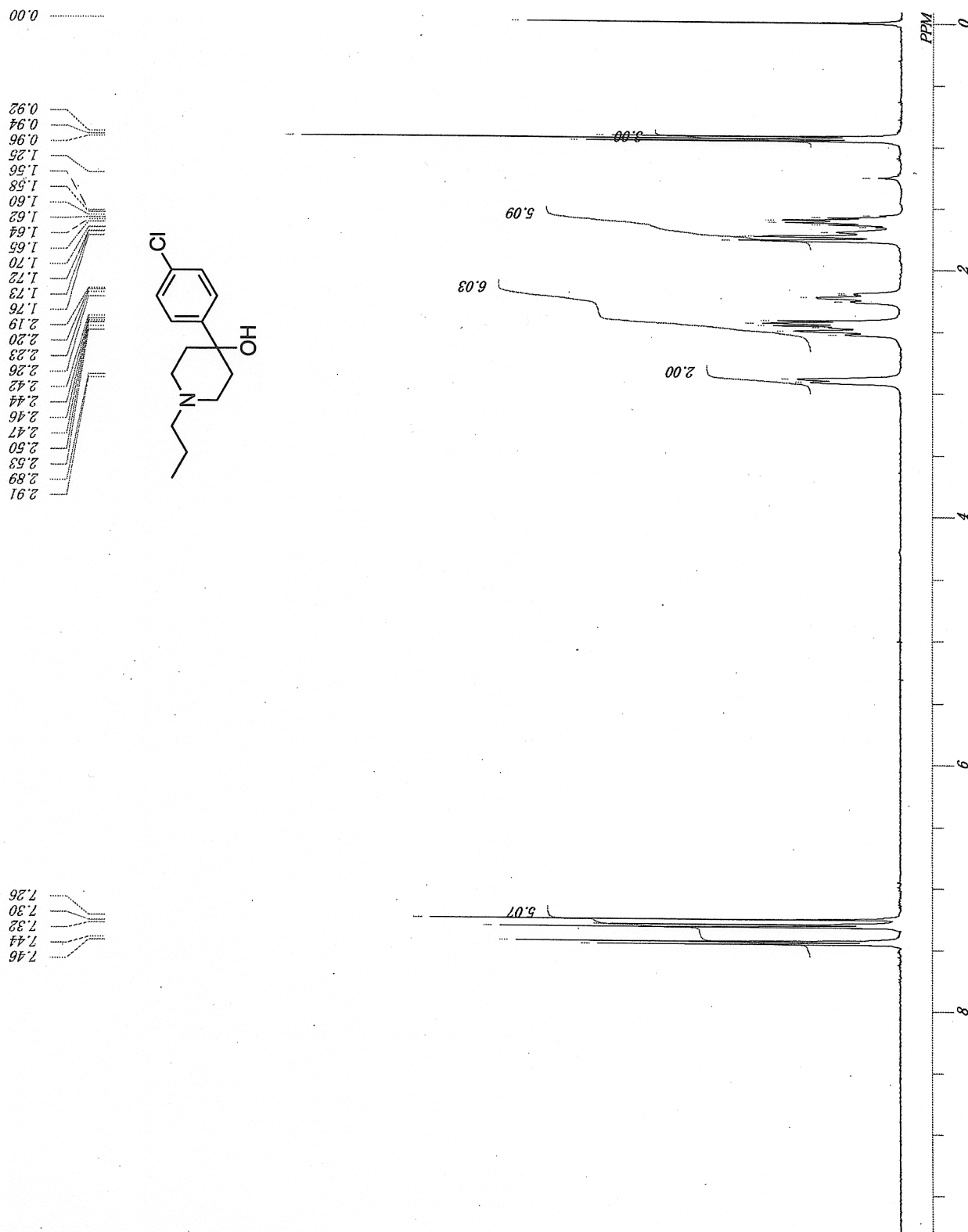
**<sup>1</sup>H NMR for 1,1-diphenyl-2-[4-hydroxy-4-(4-chlorophenyl)piperidin-1-yl]-1-ethanol (11a)**



<sup>13</sup>C NMR for 1,1-diphenyl-2-[4-hydroxy-4-(4-chlorophenyl)piperidin-1-yl]-1-ethanol (11a)



<sup>1</sup>H NMR for *N*-propyl-4-(4-chlorophenyl)-4-piperidinol (12a)



<sup>13</sup>C NMR for *N*-propyl-4-(4-chlorophenyl)-4-piperidinol (12a)

