

Enantioselective Friedel-Crafts Alkylation of Indole Derivatives Catalysed by new Yb(OTf)₃-Pyridylalkylamine Complexes as Chiral Lewis Acids

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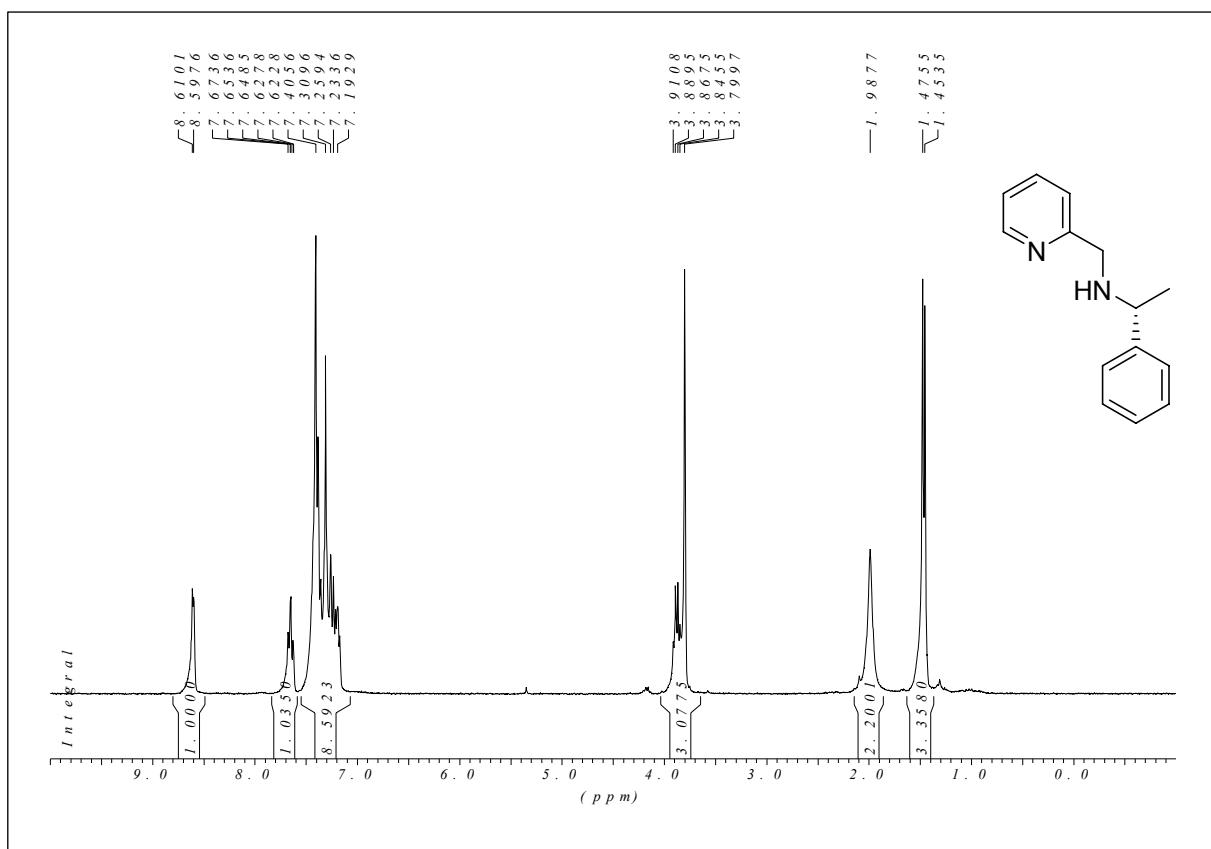
SUPPORTING INFORMATION

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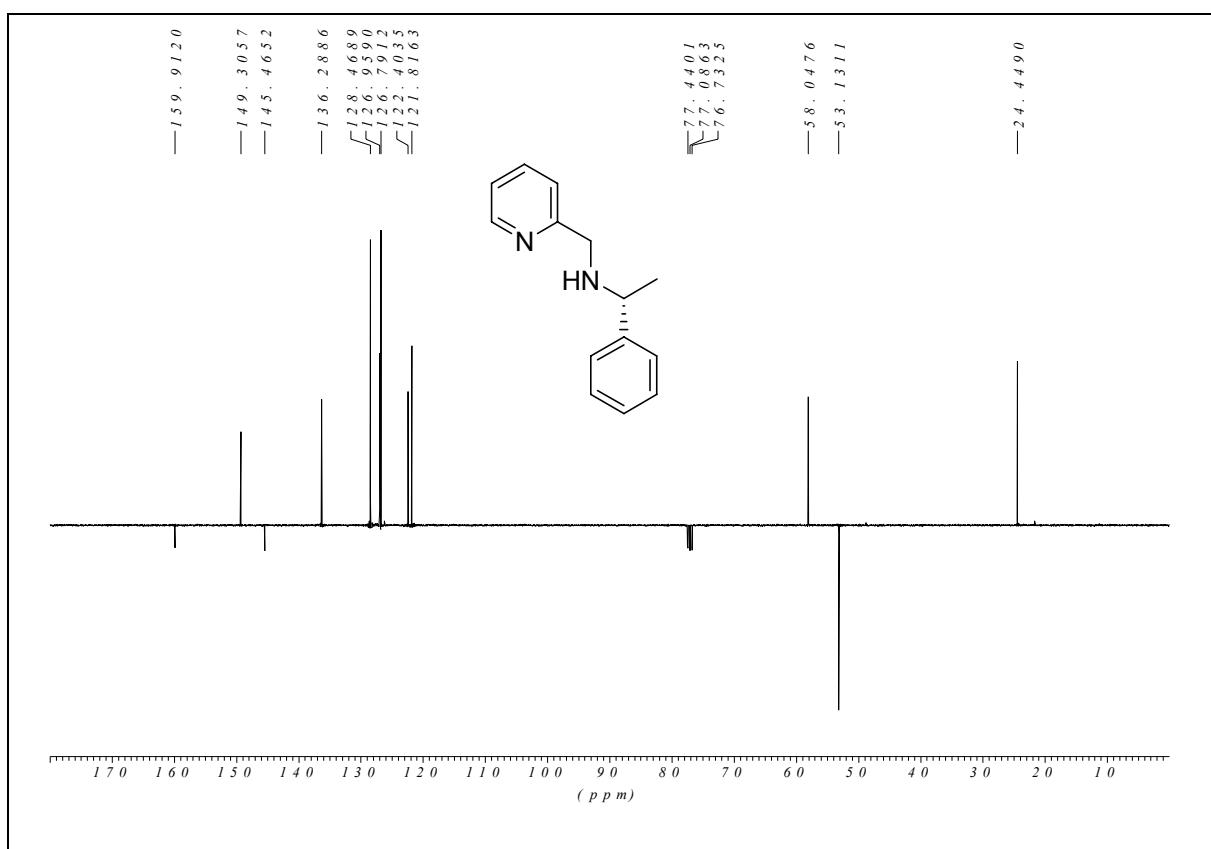
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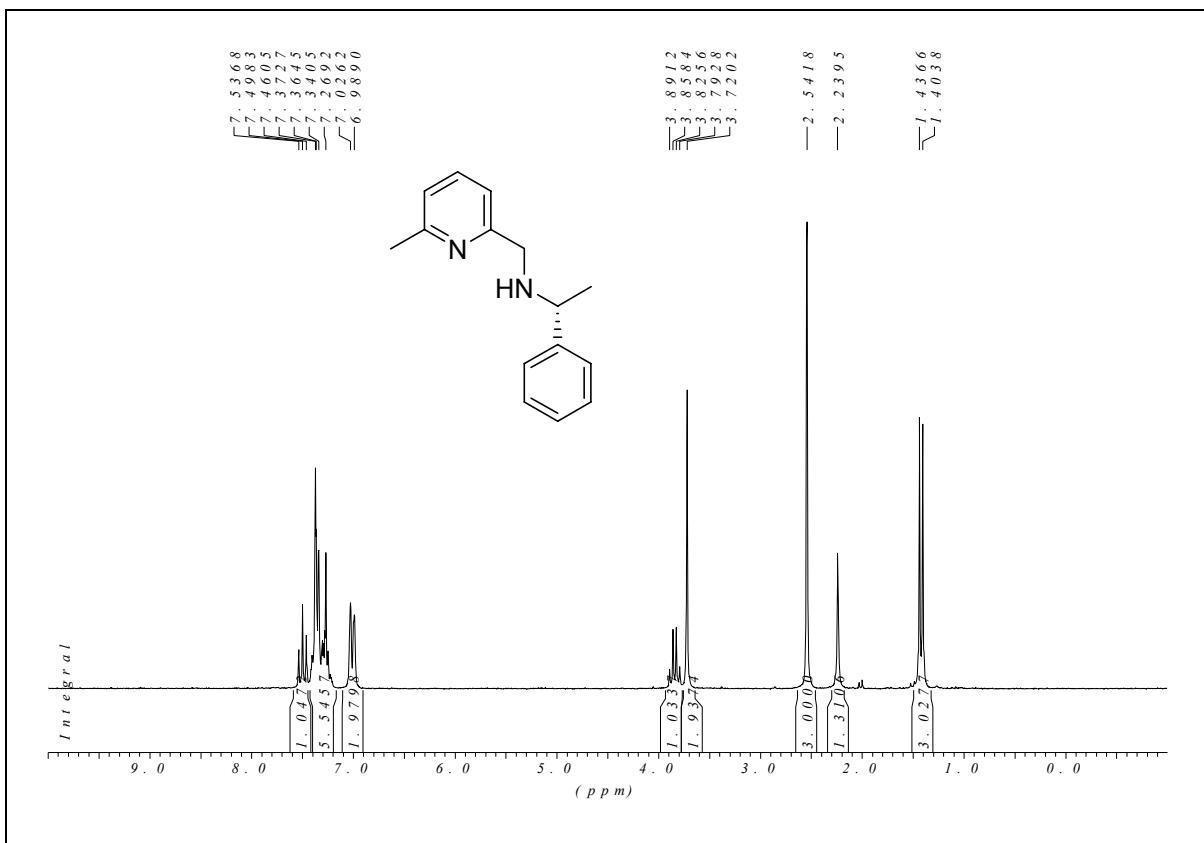
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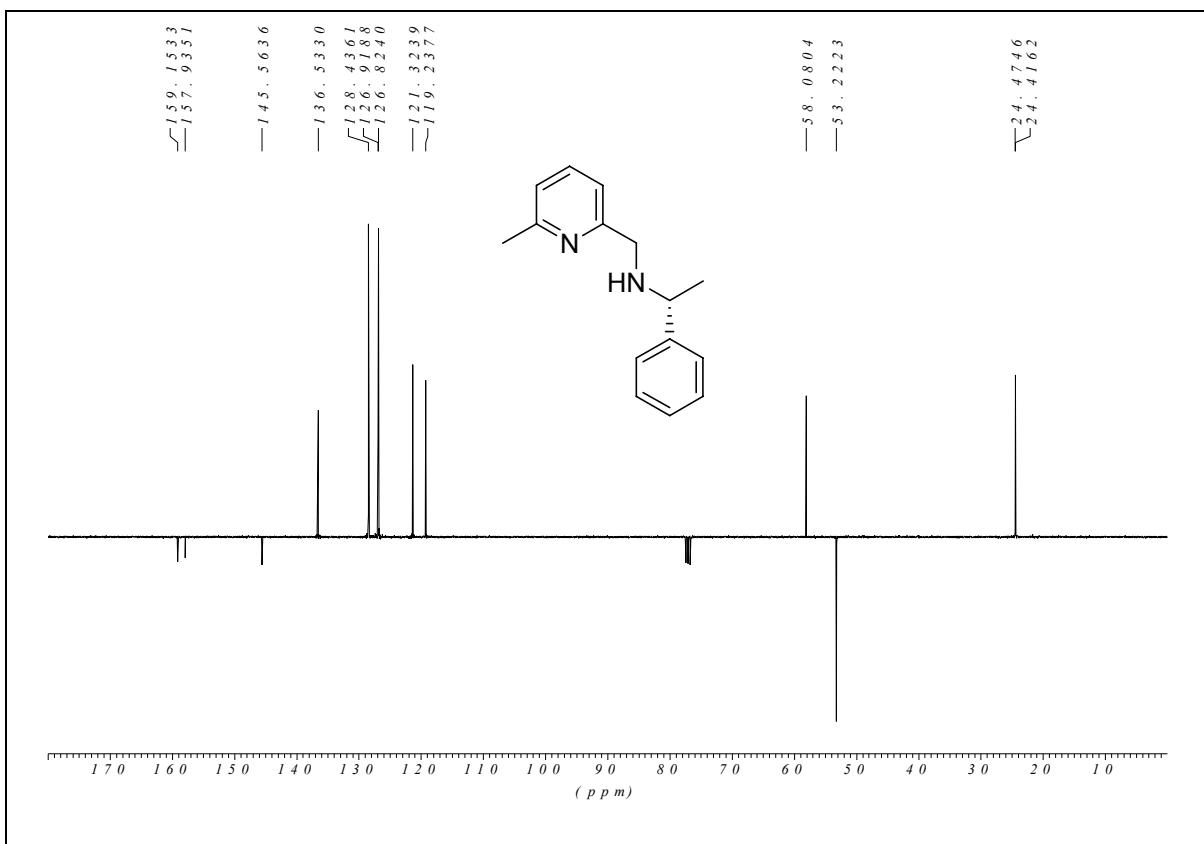
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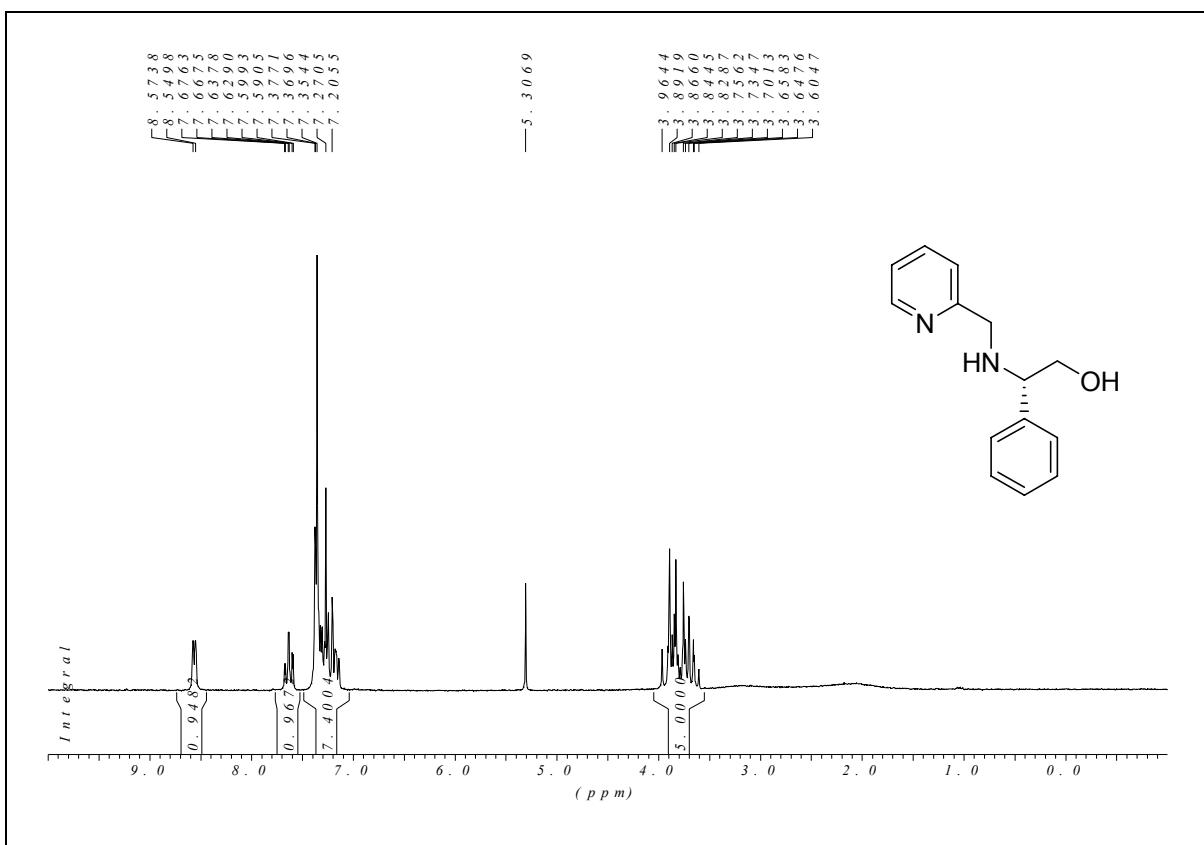
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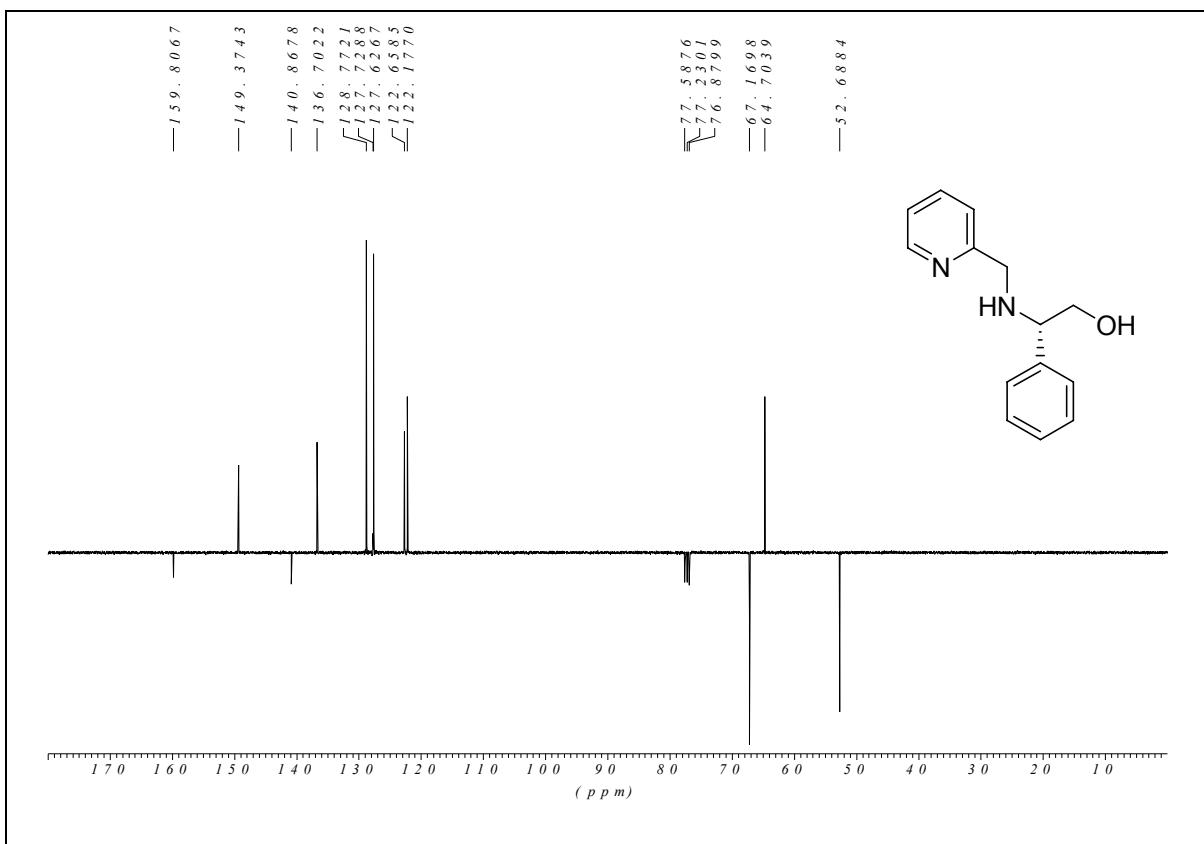
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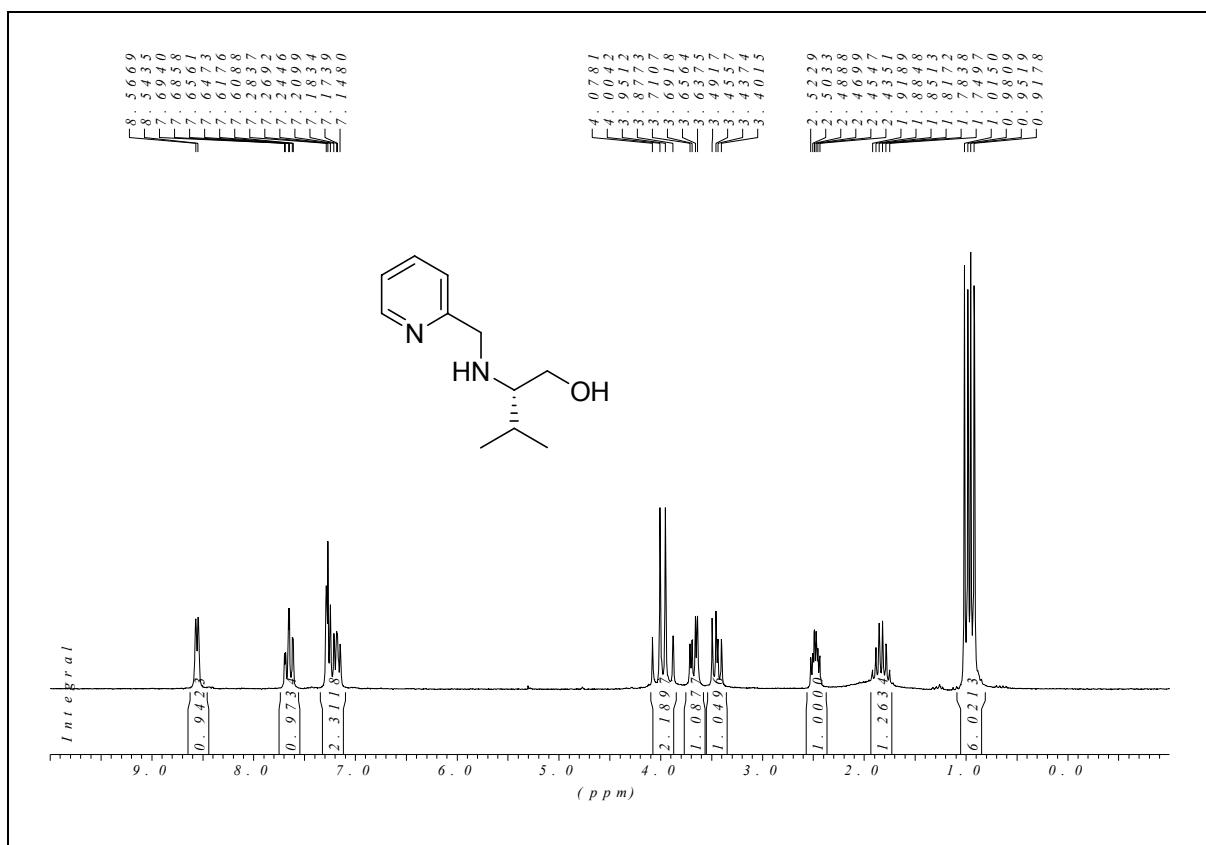
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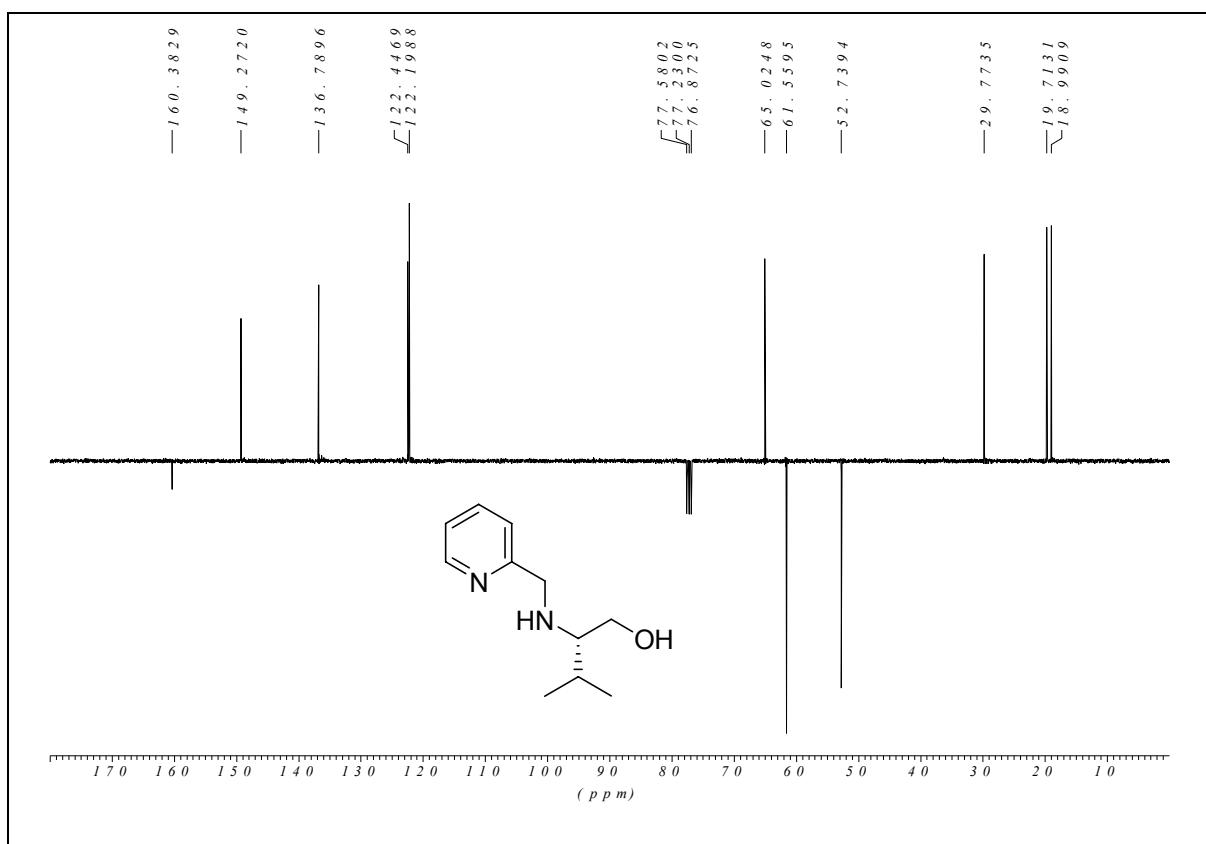
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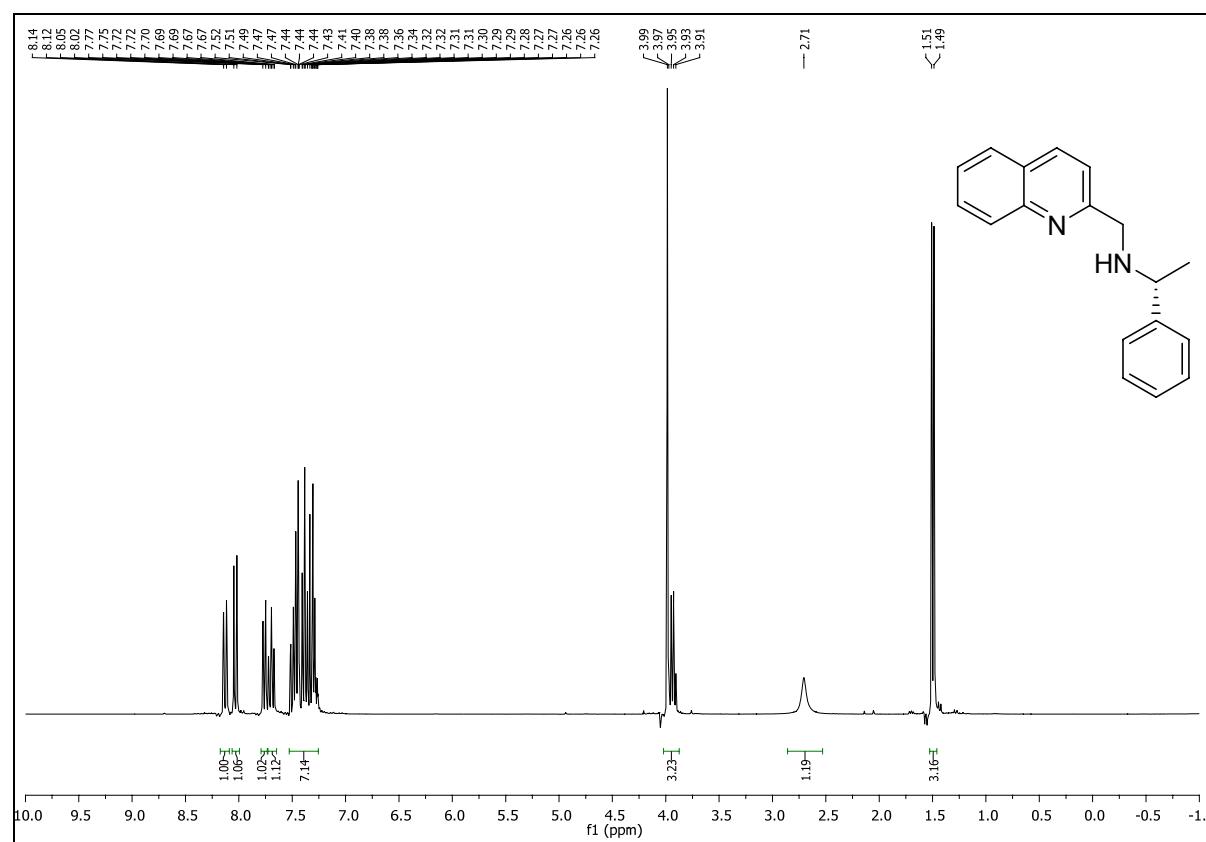
¹H NMR (CDCl₃, 200 MHz) of L8



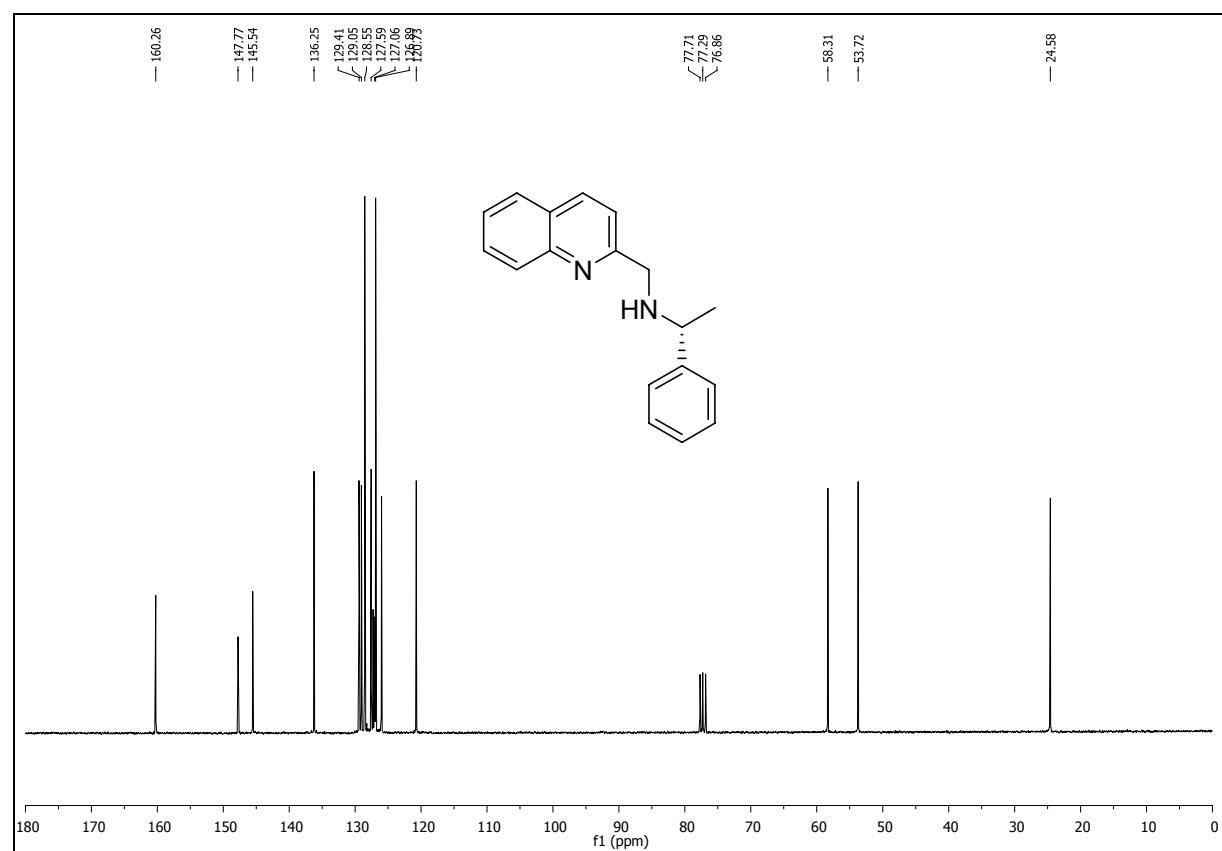
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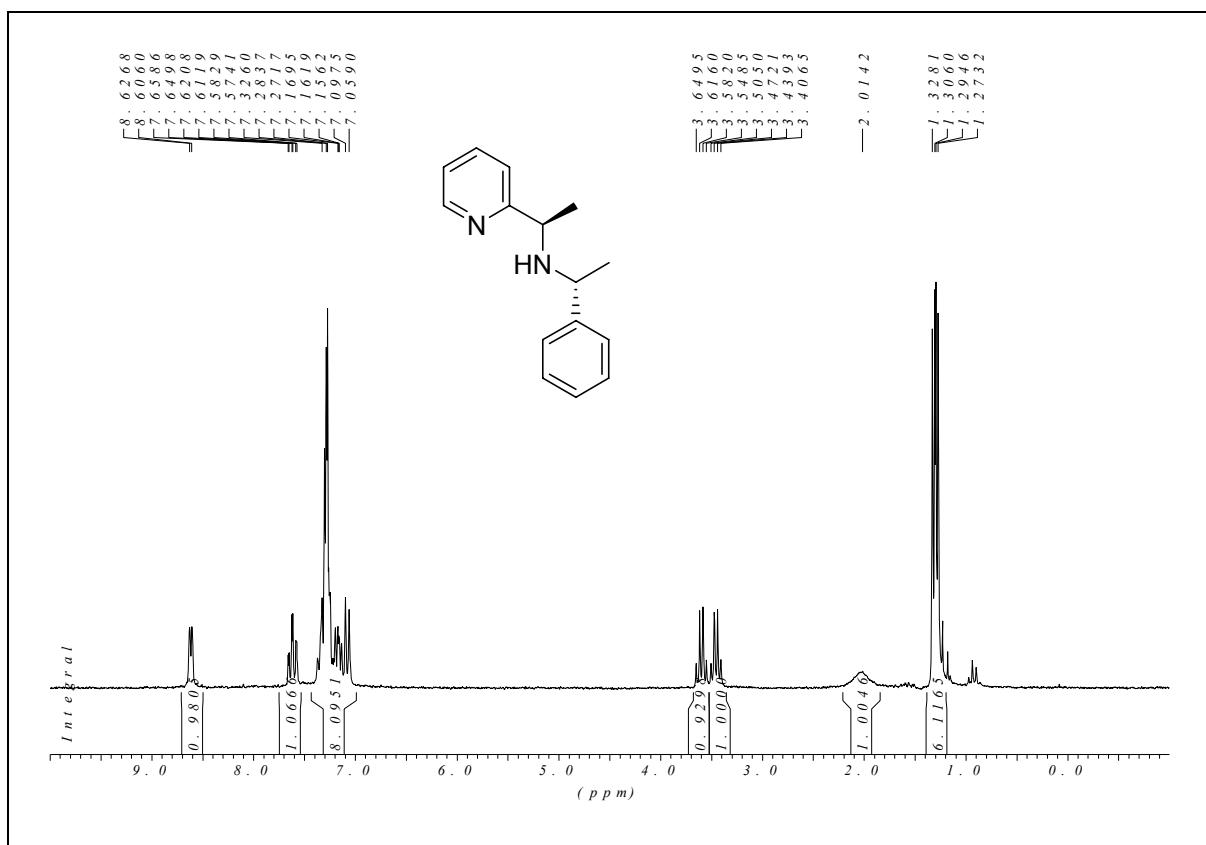
¹H NMR (CDCl_3 , 300 MHz) of L9



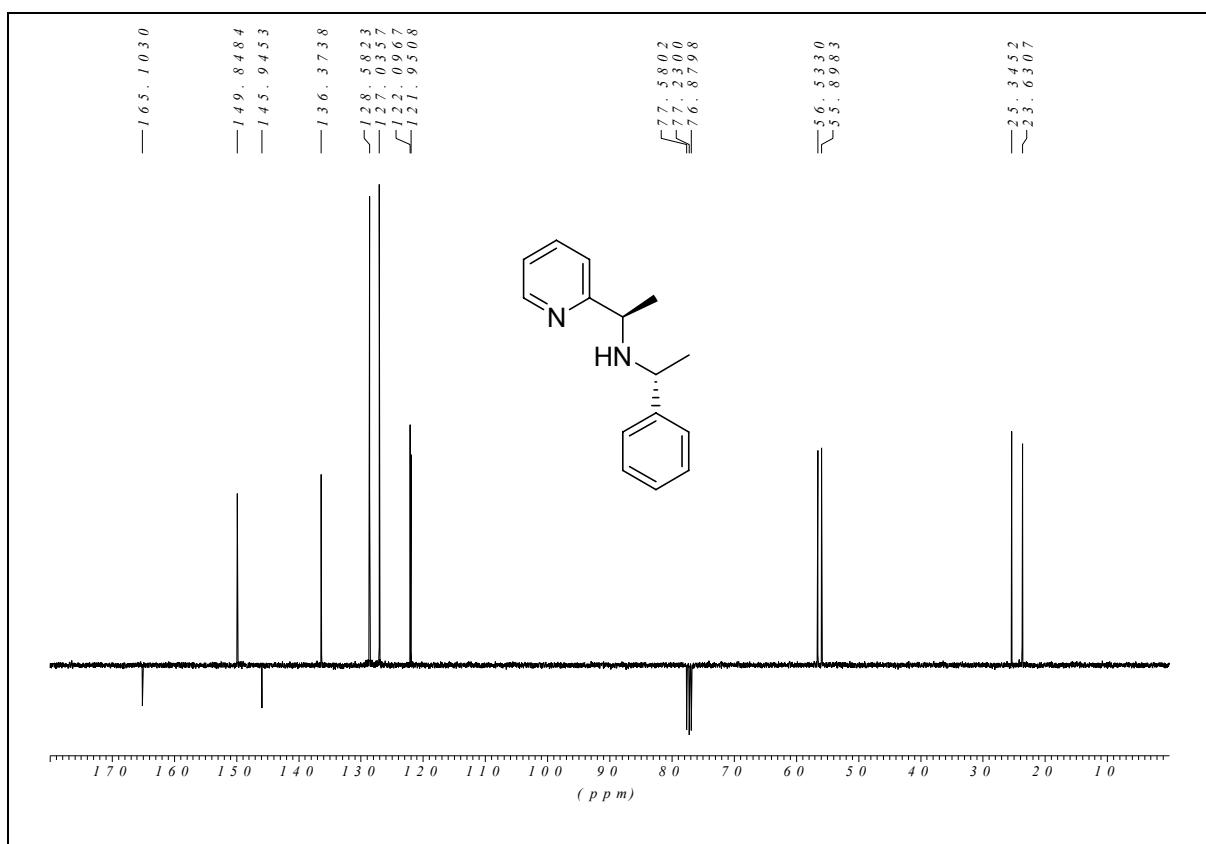
¹³C NMR (CDCl_3 , 75 MHz) of L9



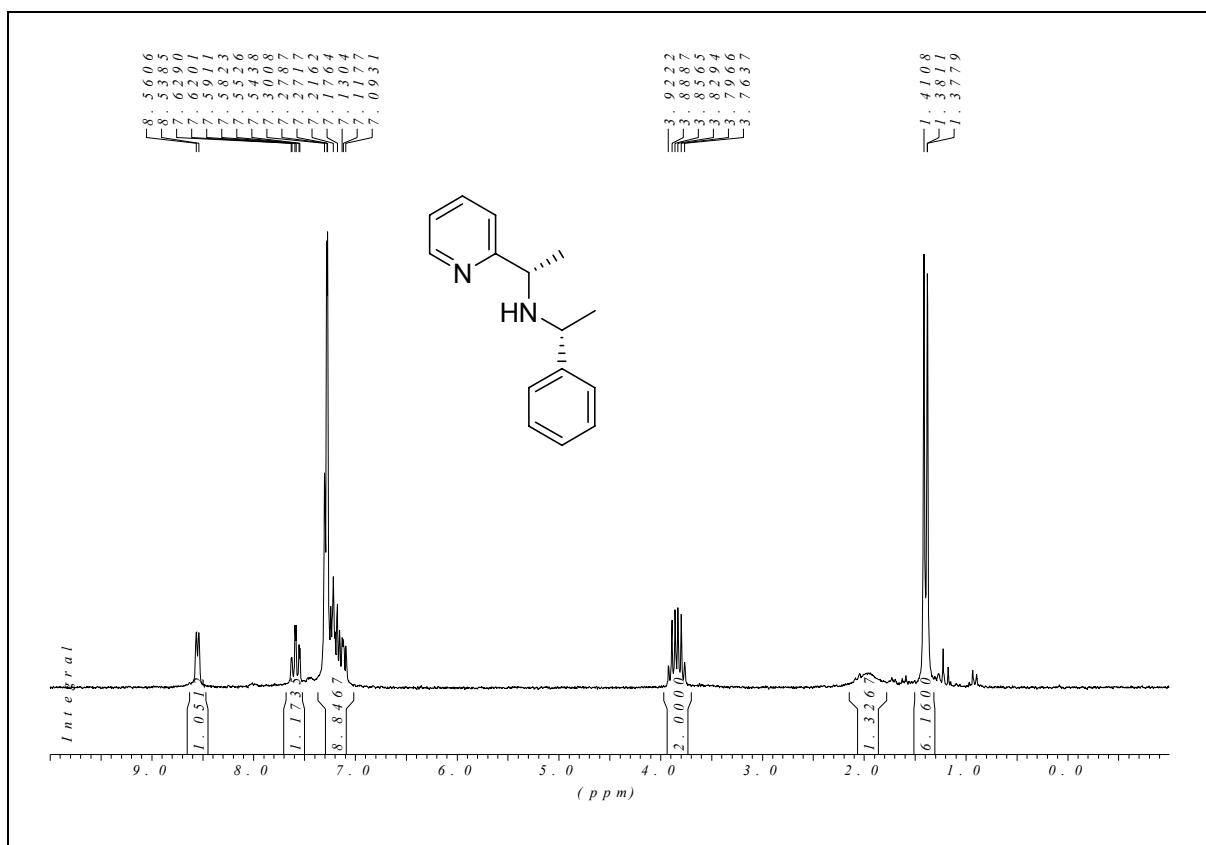
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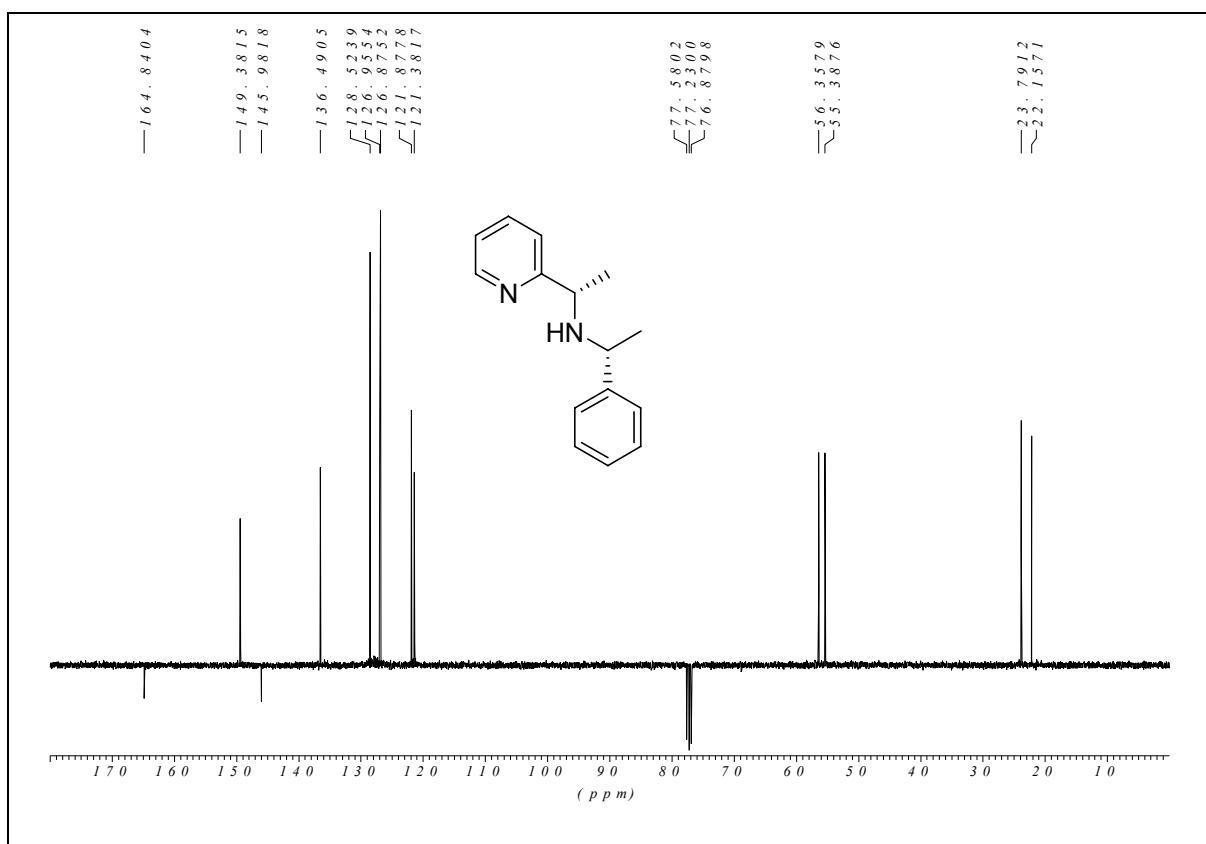
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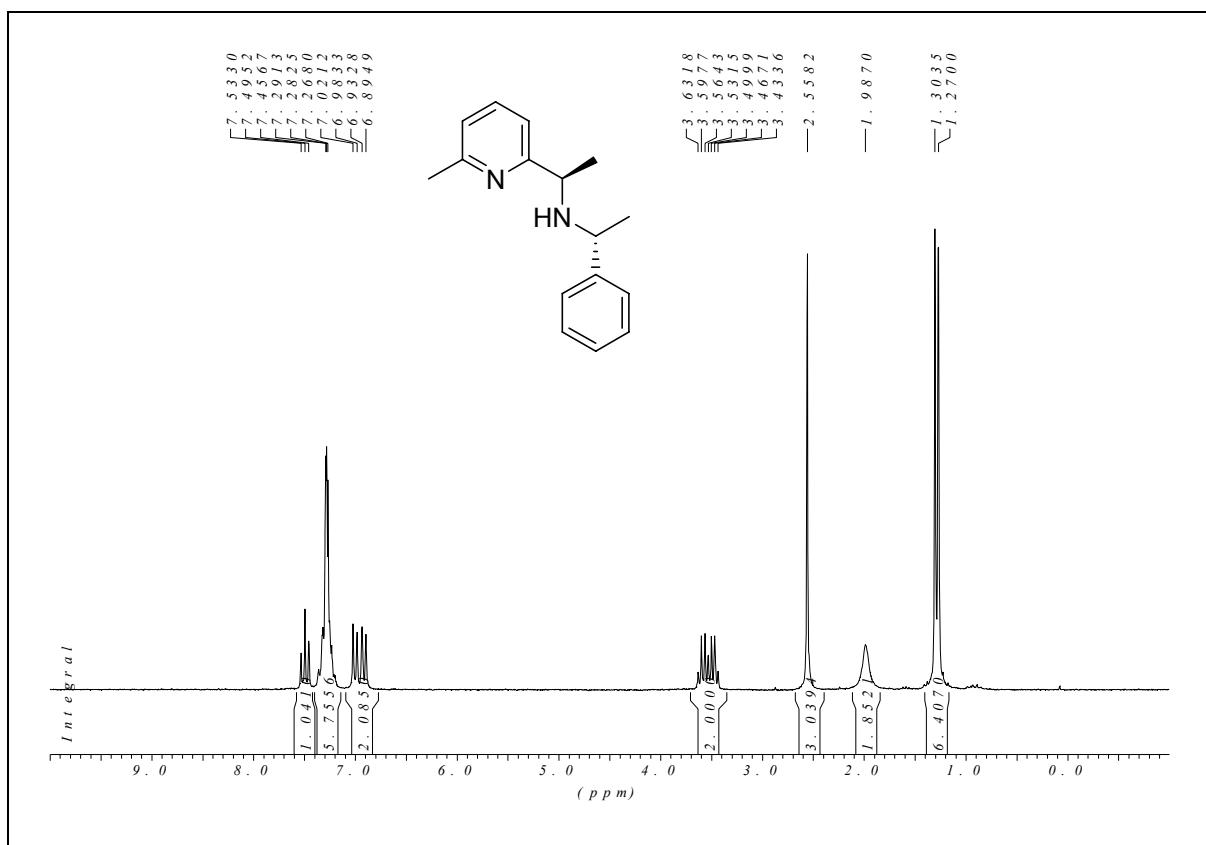
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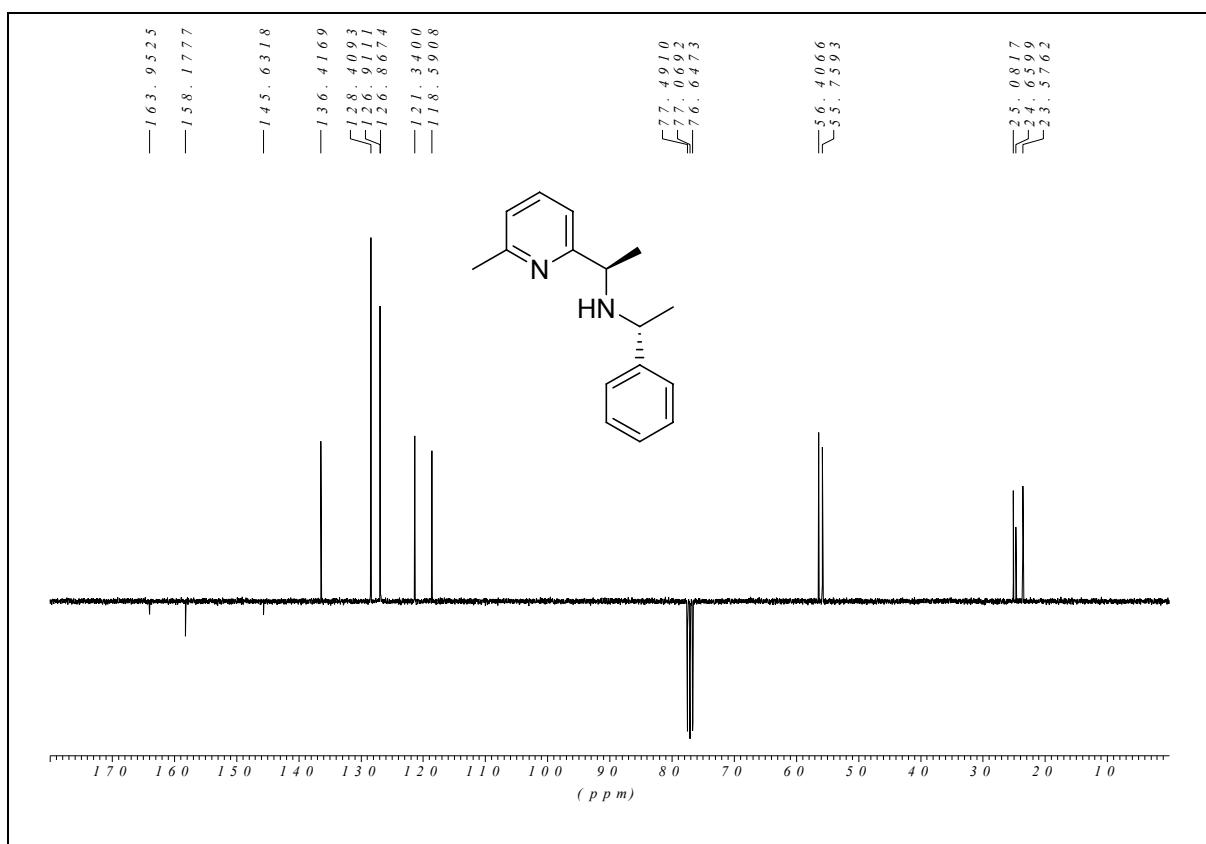
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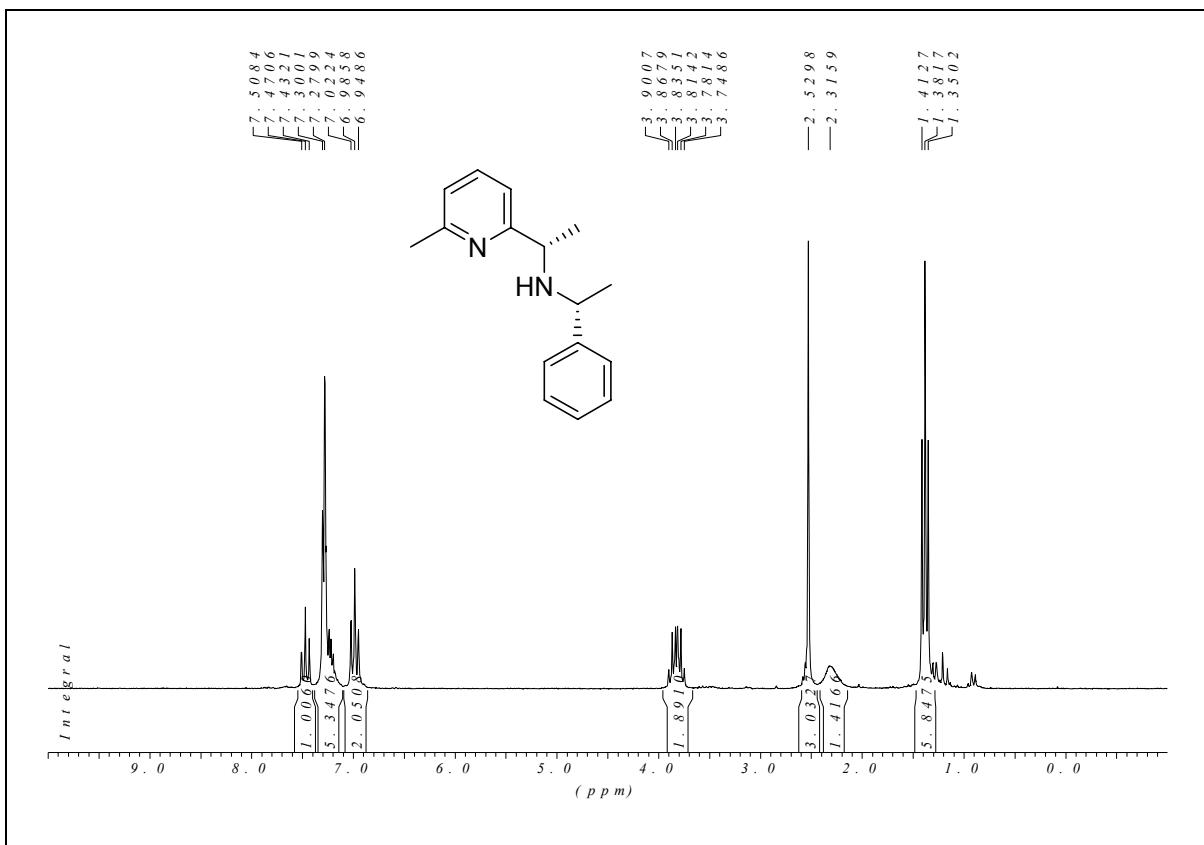
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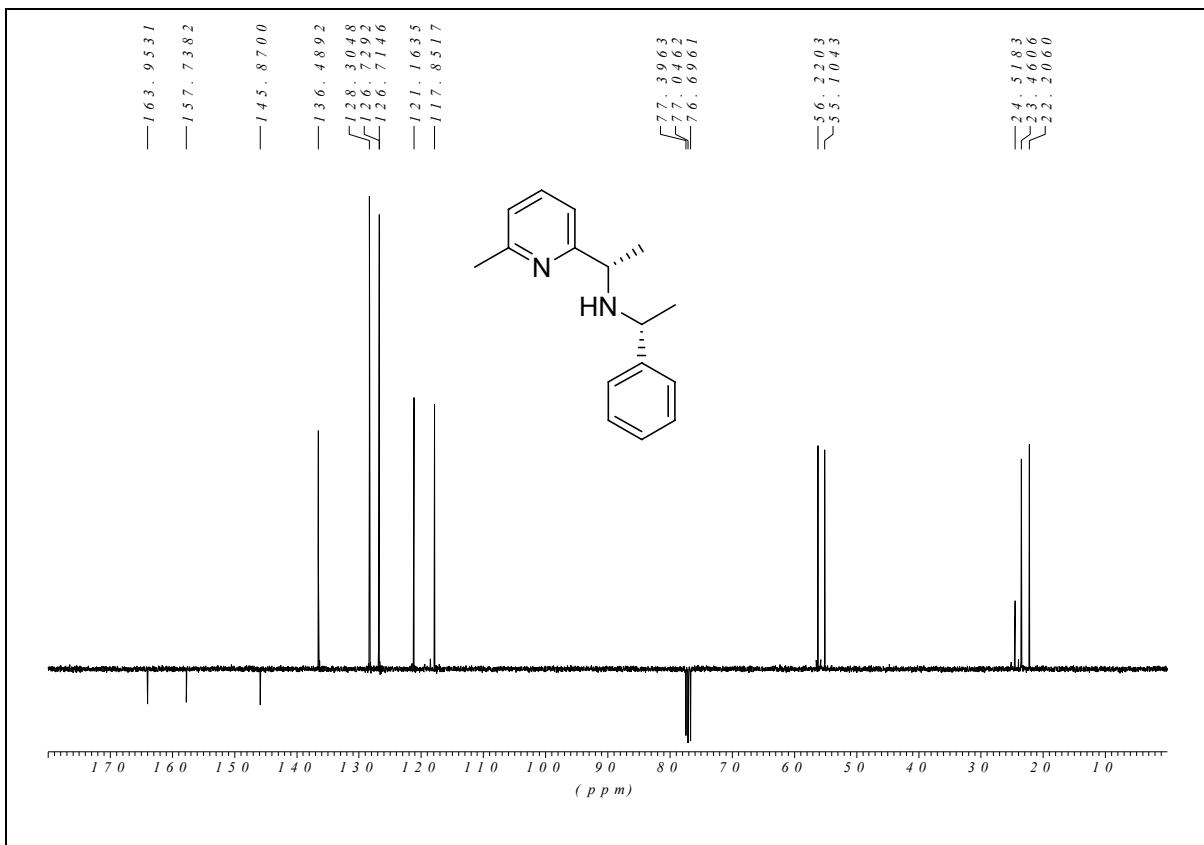
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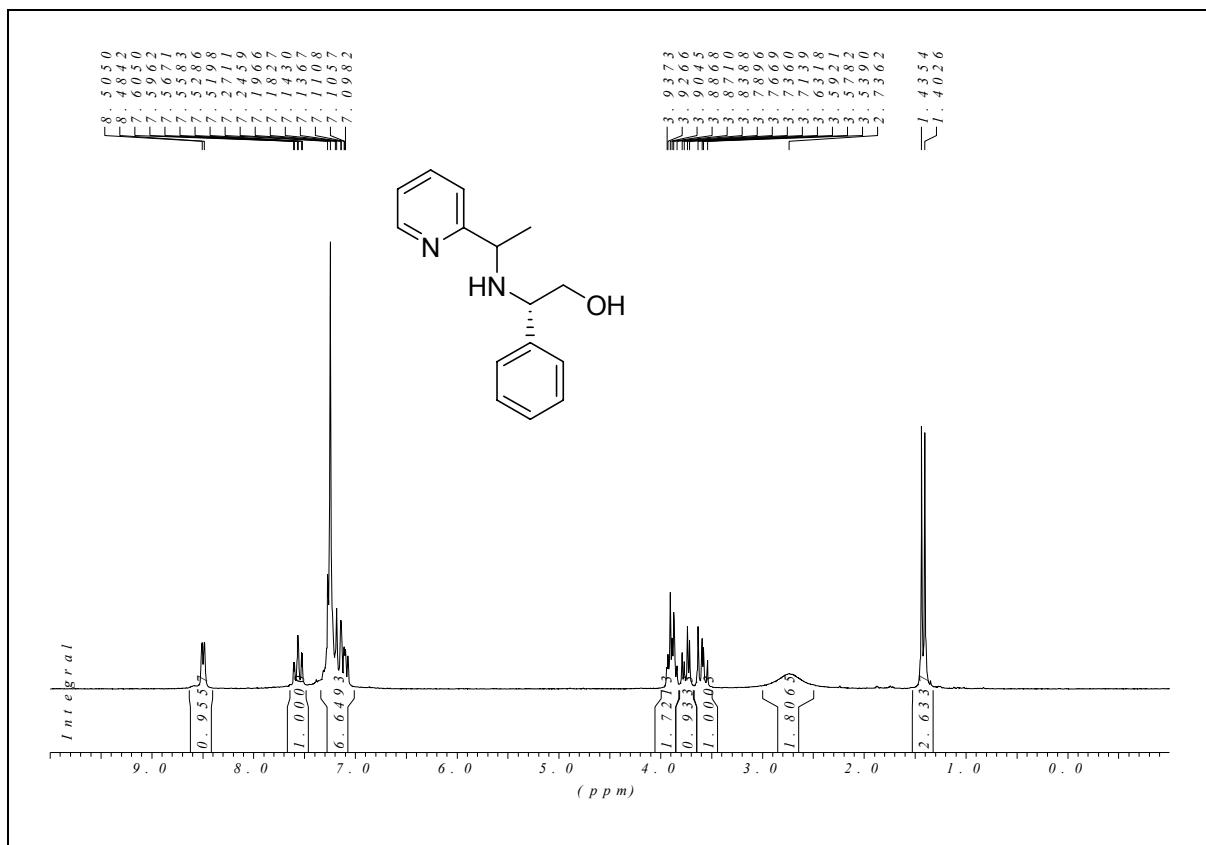
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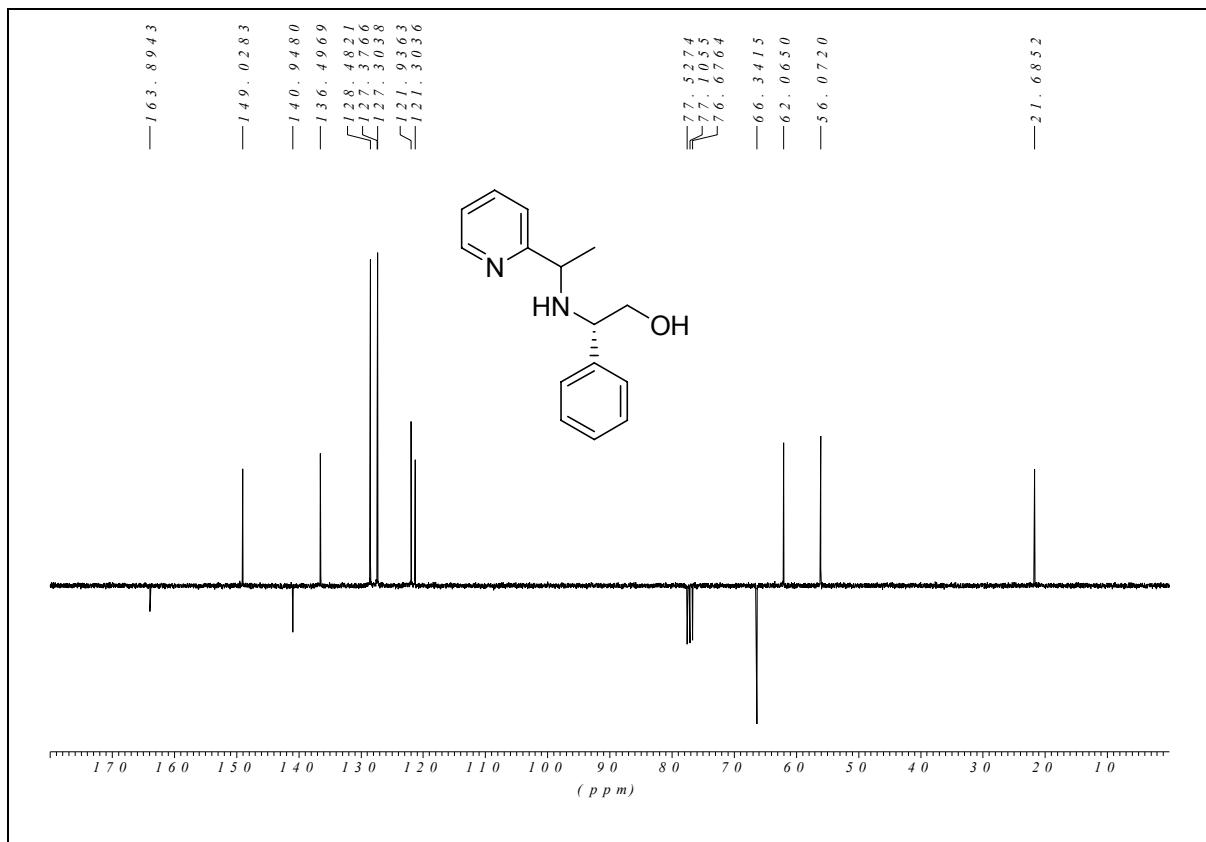
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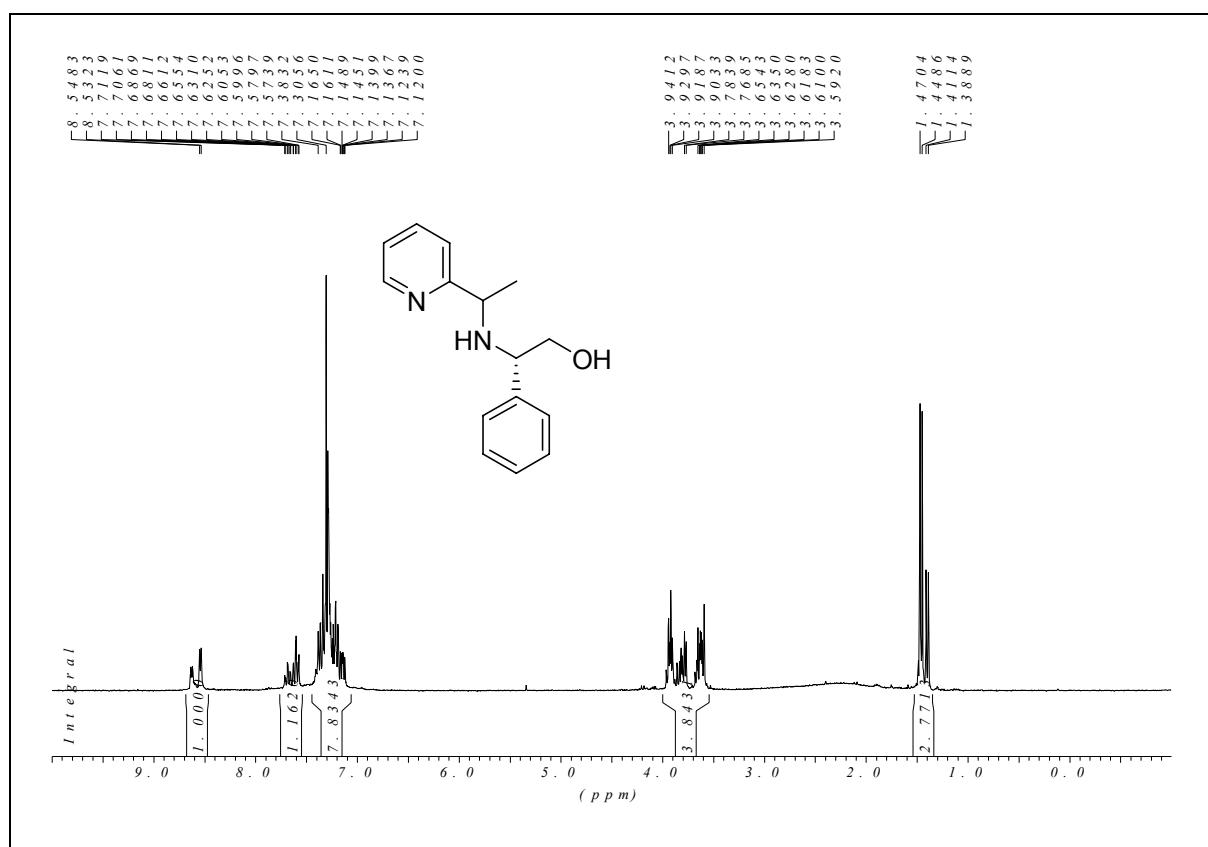
¹H NMR (CDCl₃, 200 MHz) of (1'S)-L7 (first eluted diastereoisomer)



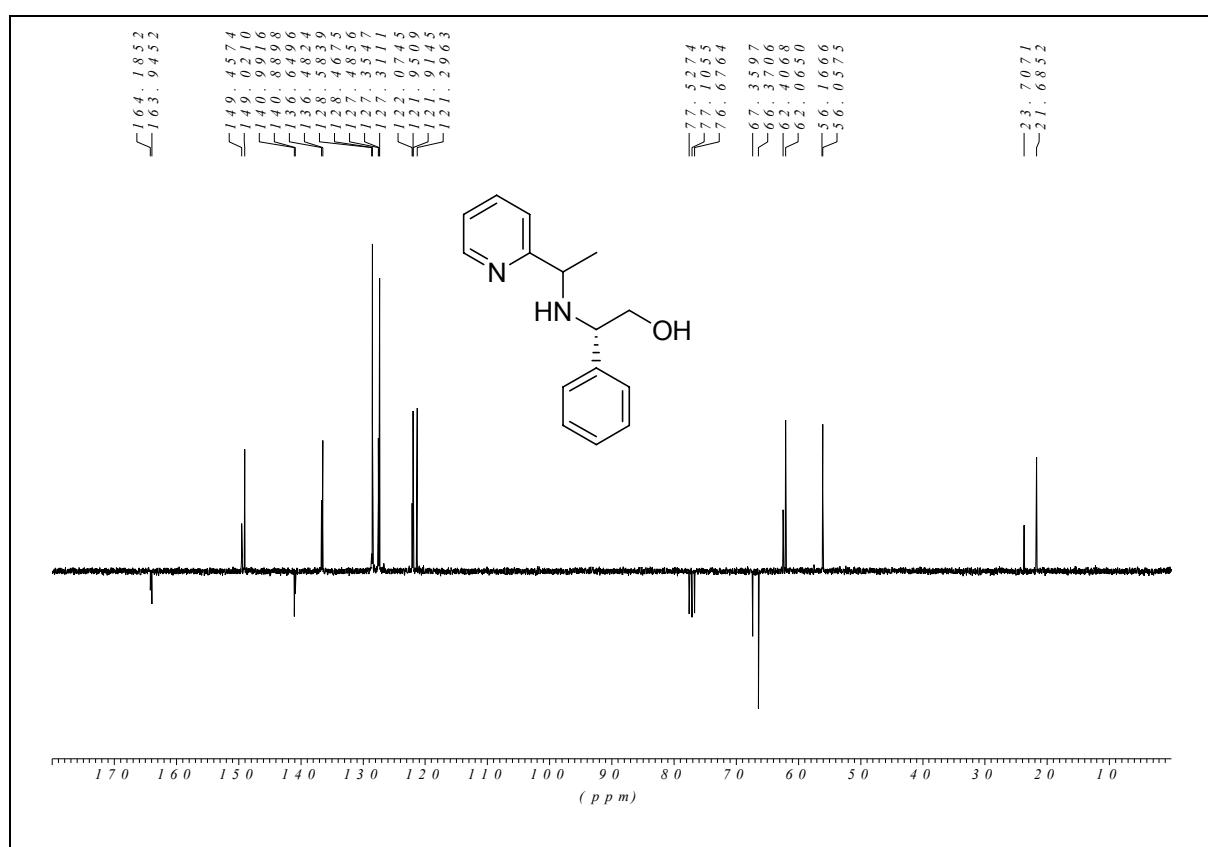
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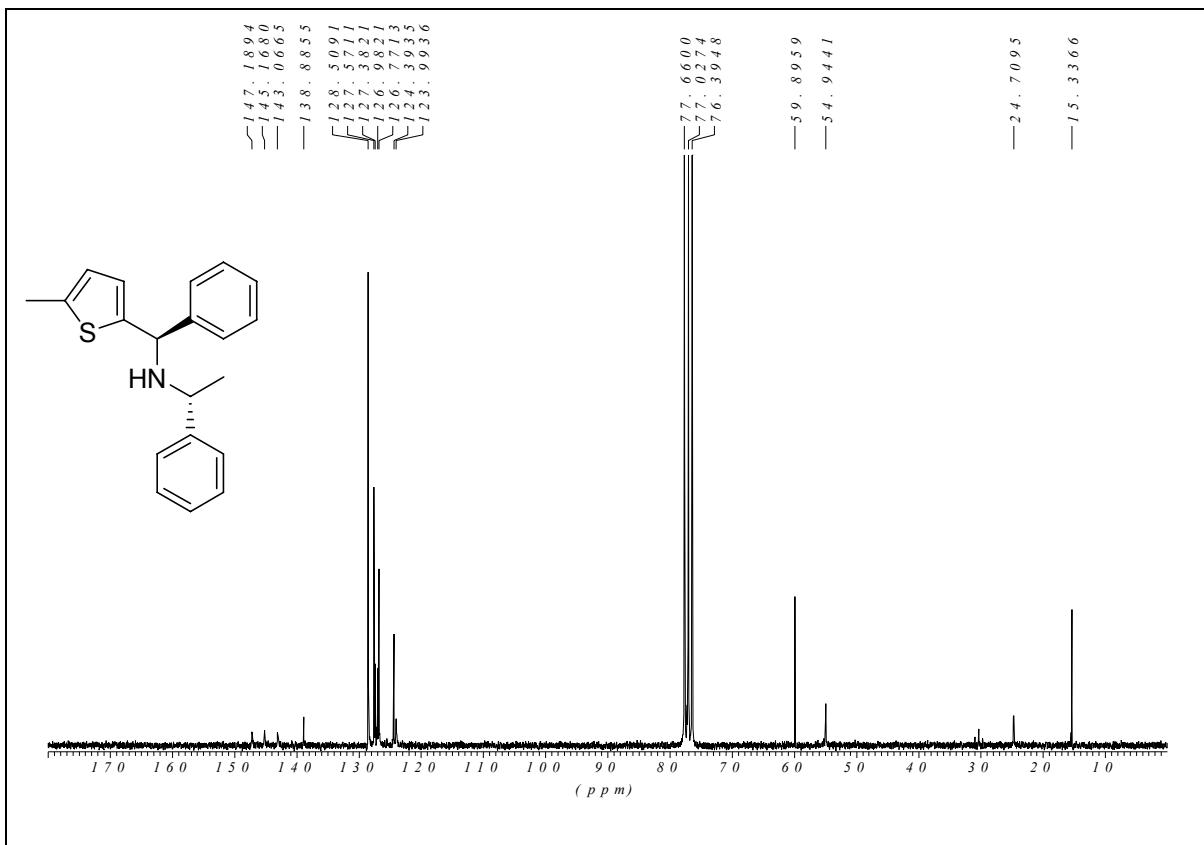
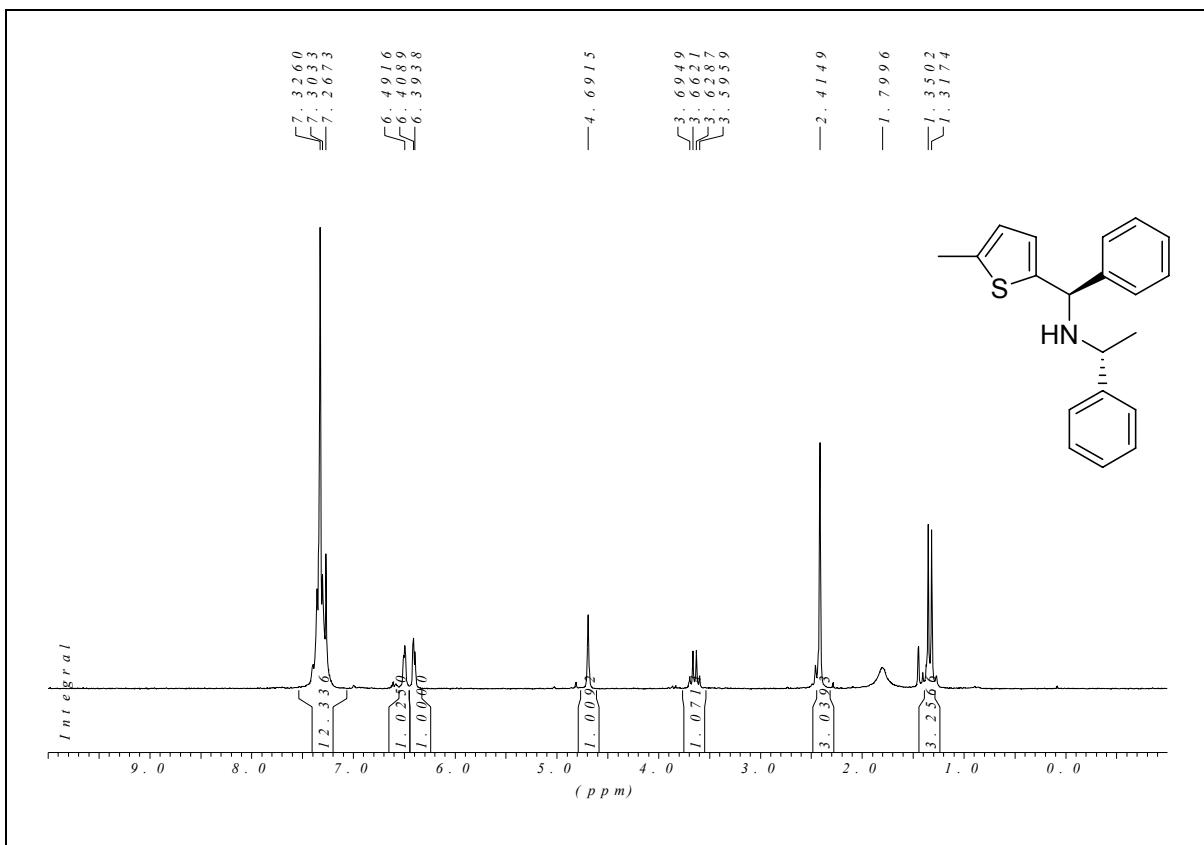
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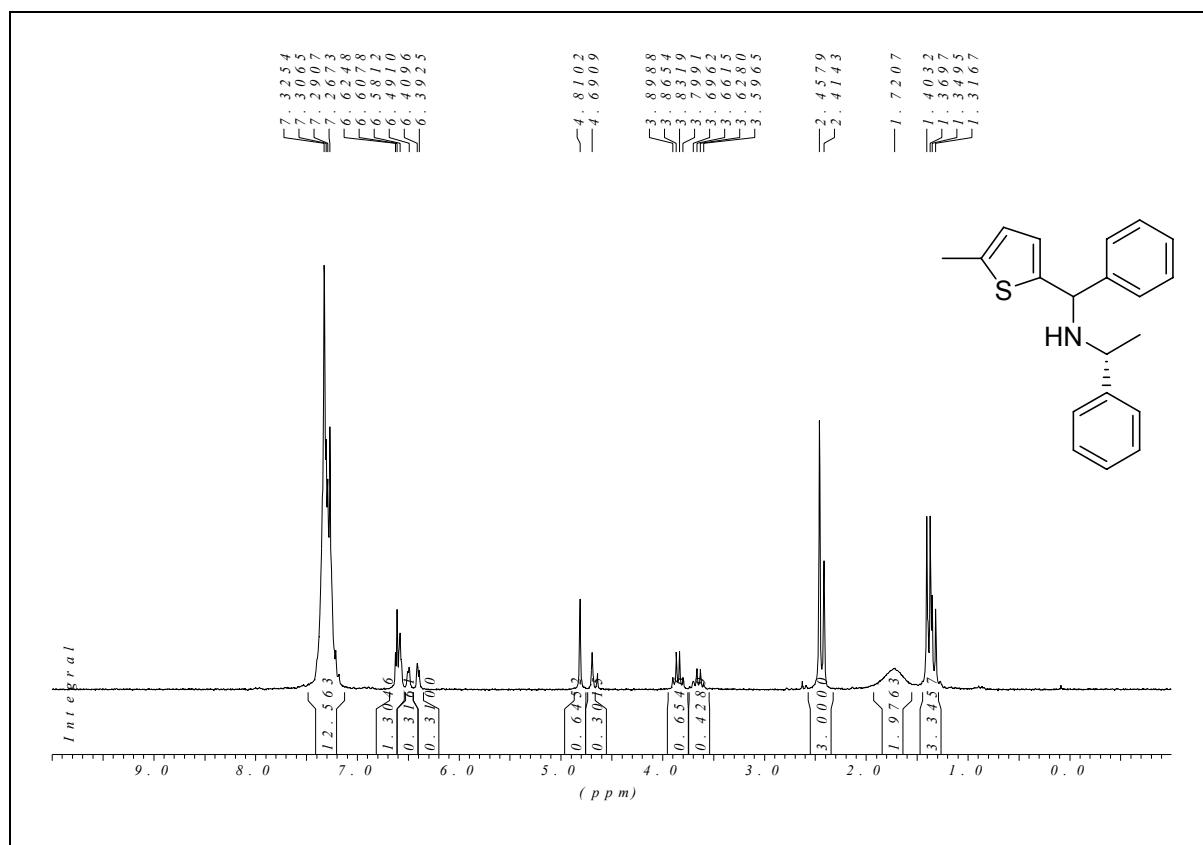
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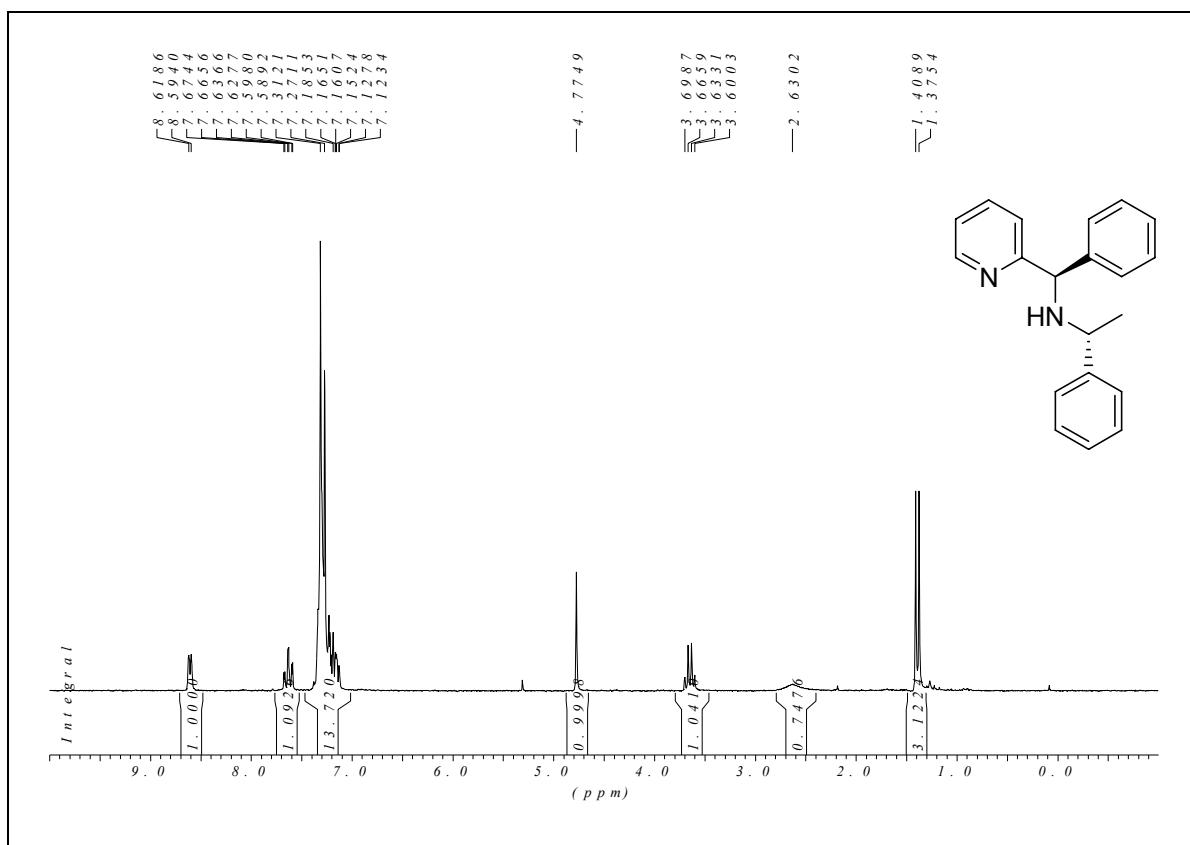
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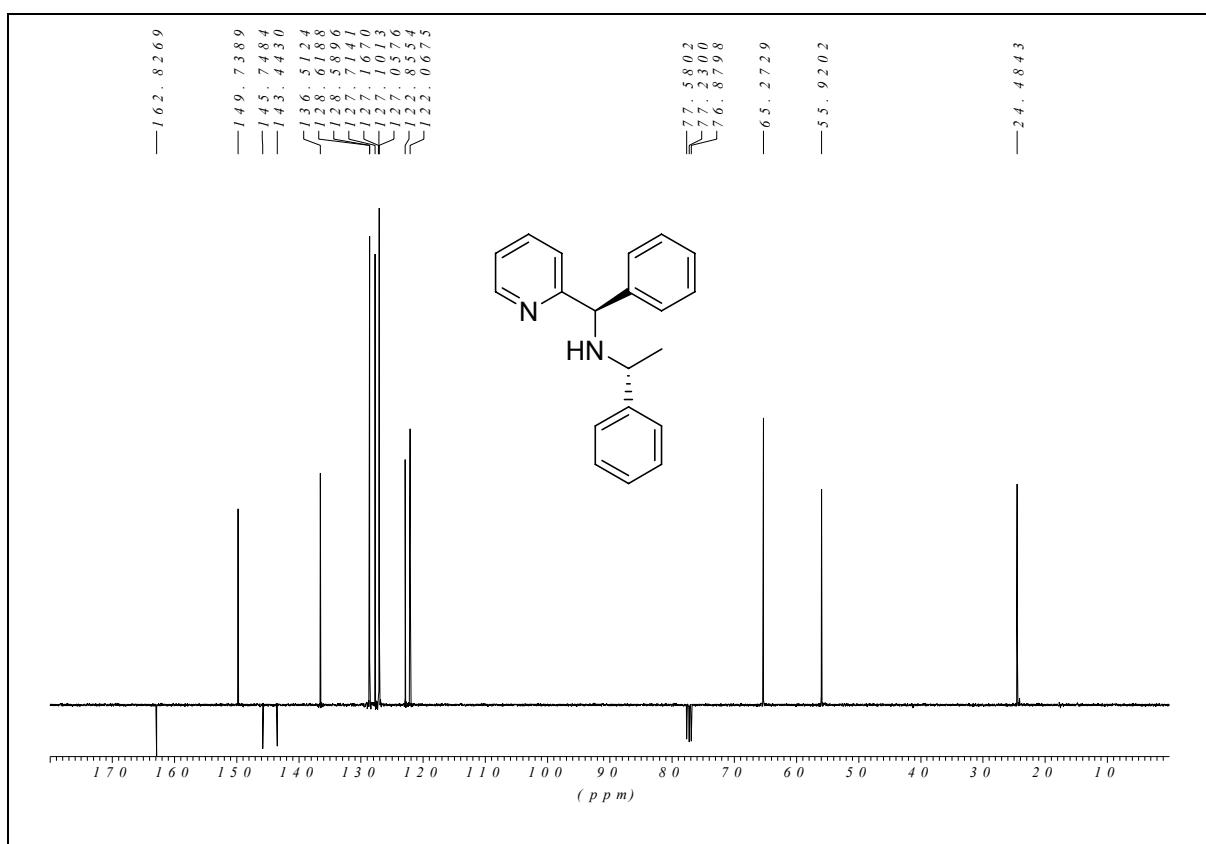
¹H NMR (CDCl₃, 200 MHz) of L10 (mixture of diastereoisomers)



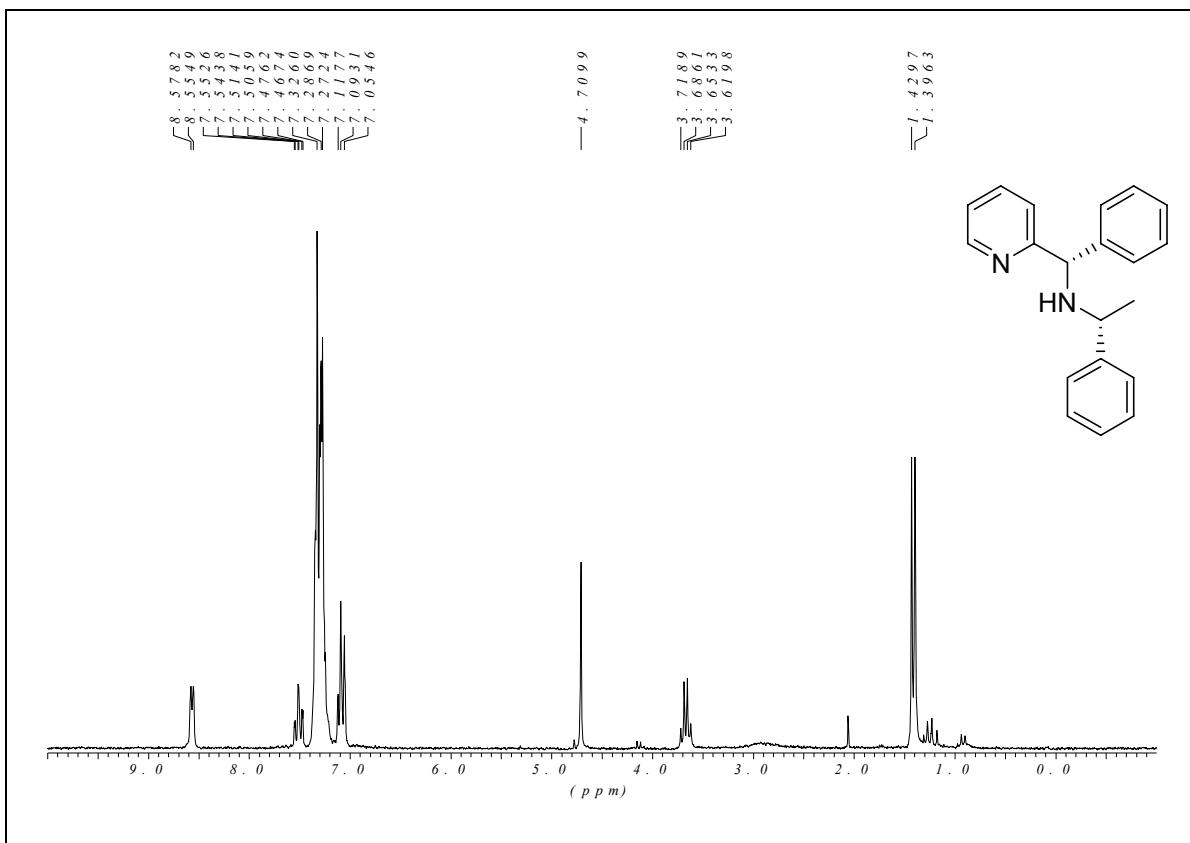
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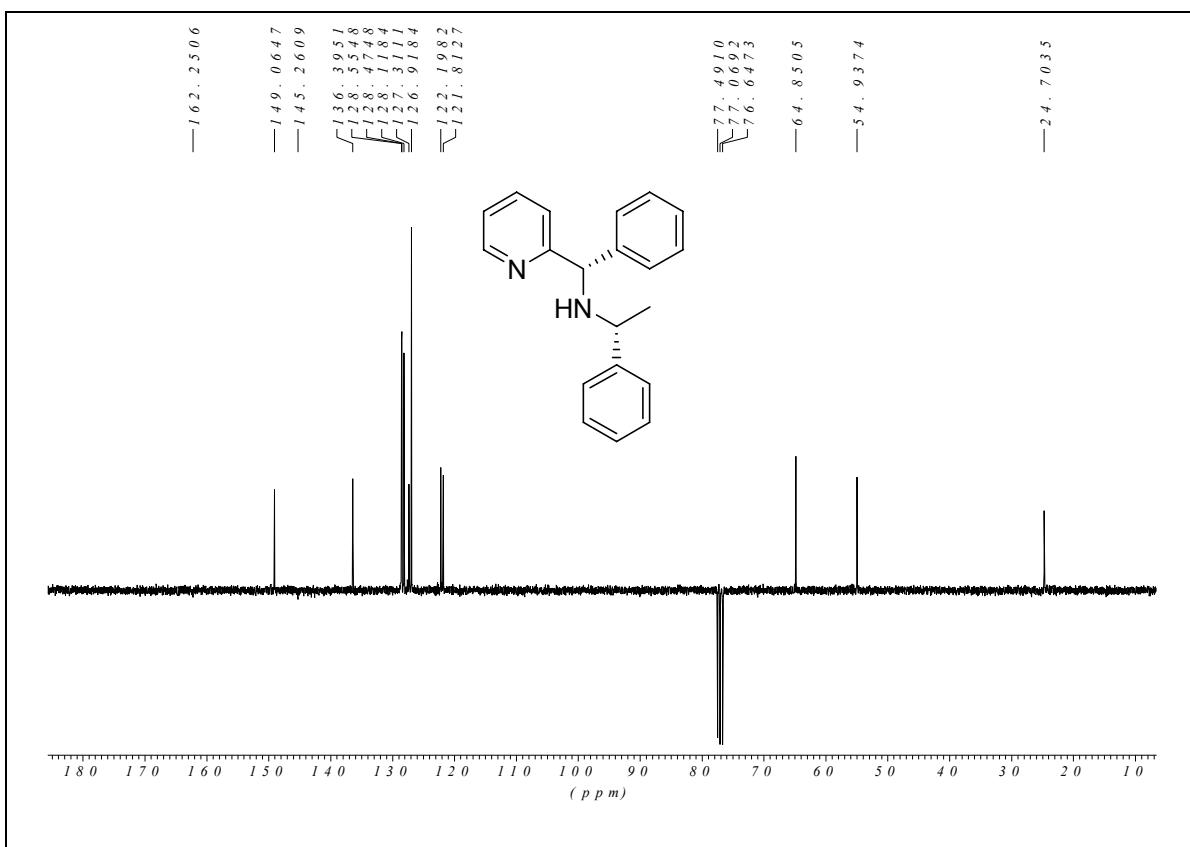
¹³C NMR (CDCl₃, 90 MHz) of (1*R*,1'*R*)-L3



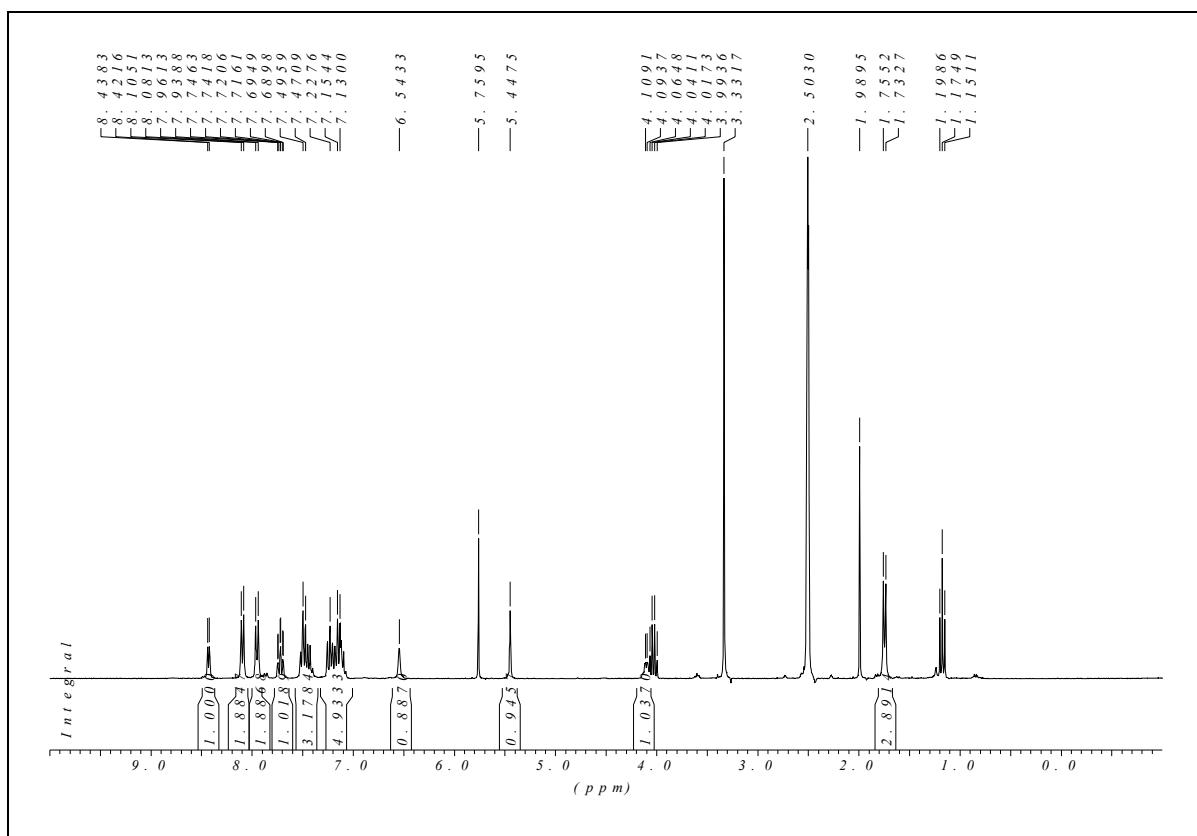
¹H NMR (CDCl₃, 200 MHz) of (1*S*,1'*R*)-L3



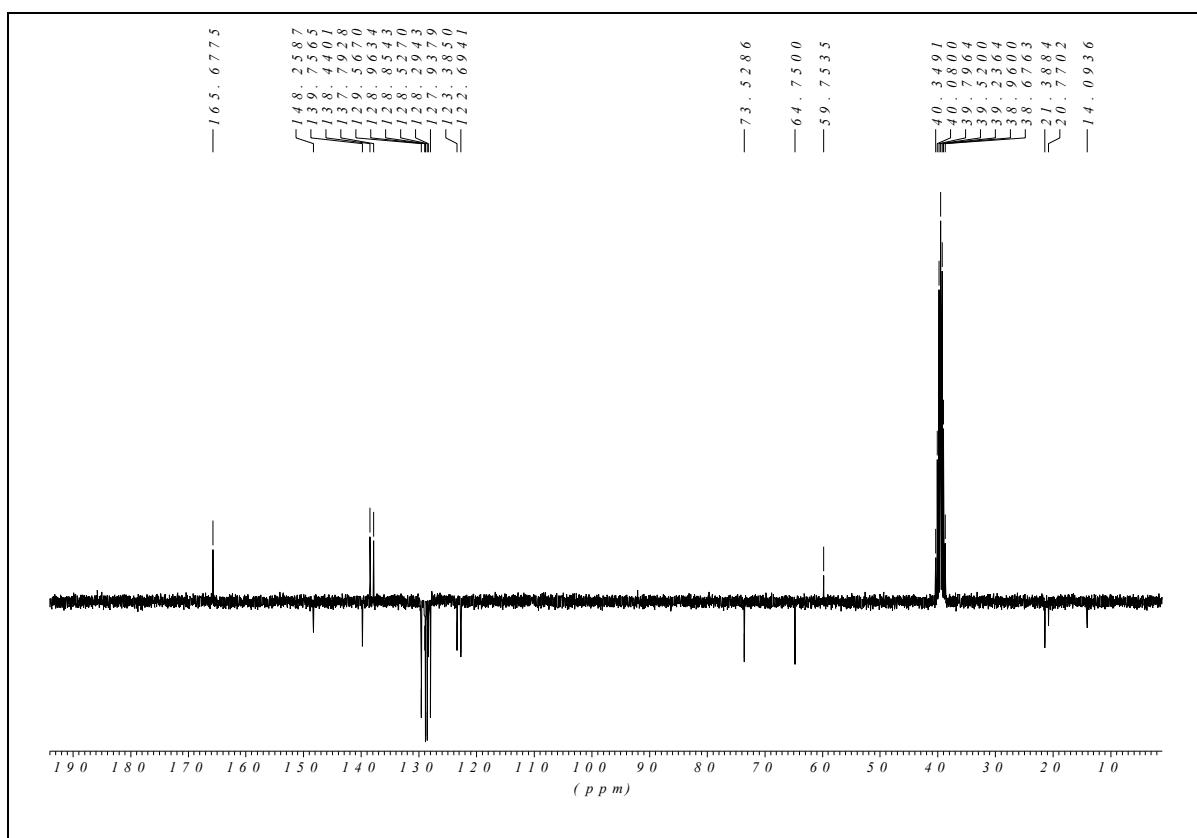
¹³C NMR (CDCl₃, 75 MHz) of (1*S*,1'*R*)-L3



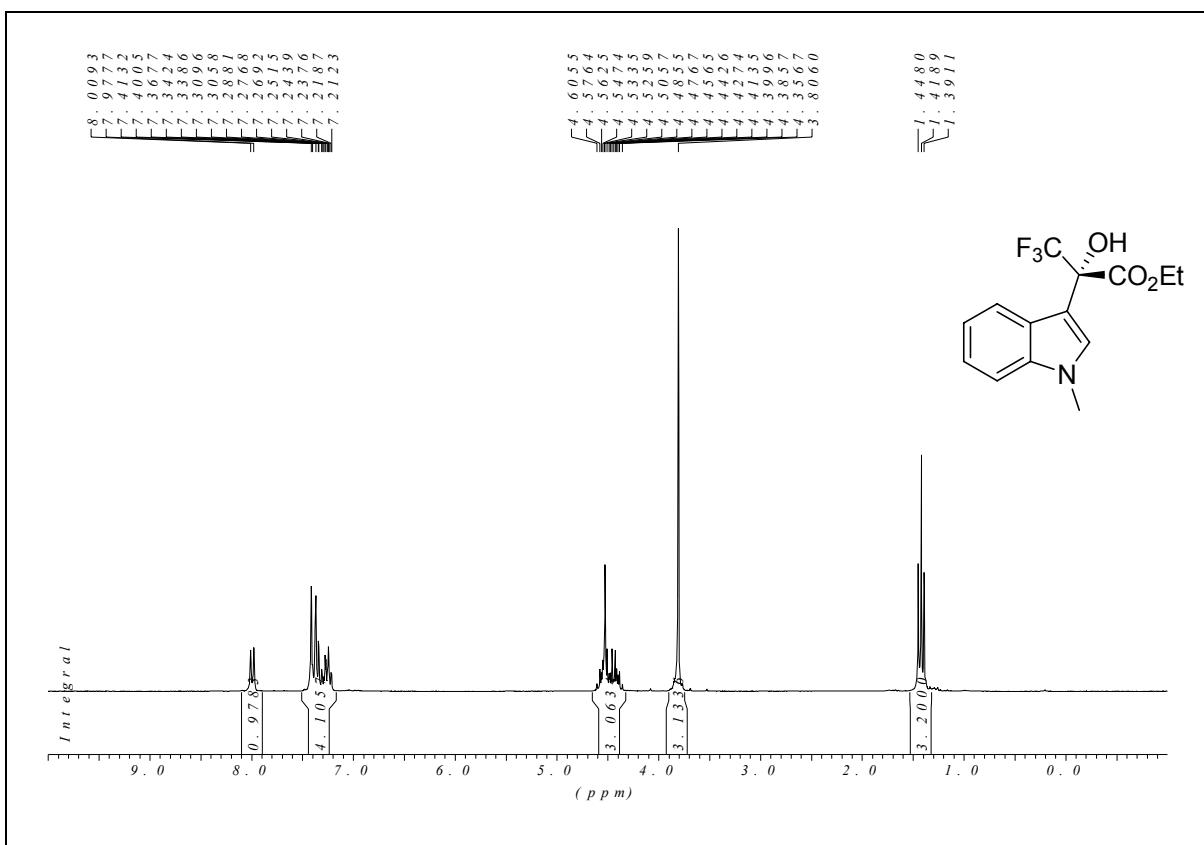
¹H NMR ([D₆]dmso, 300 MHz) of PdCl₂-(1S,1'R)-L3 complex



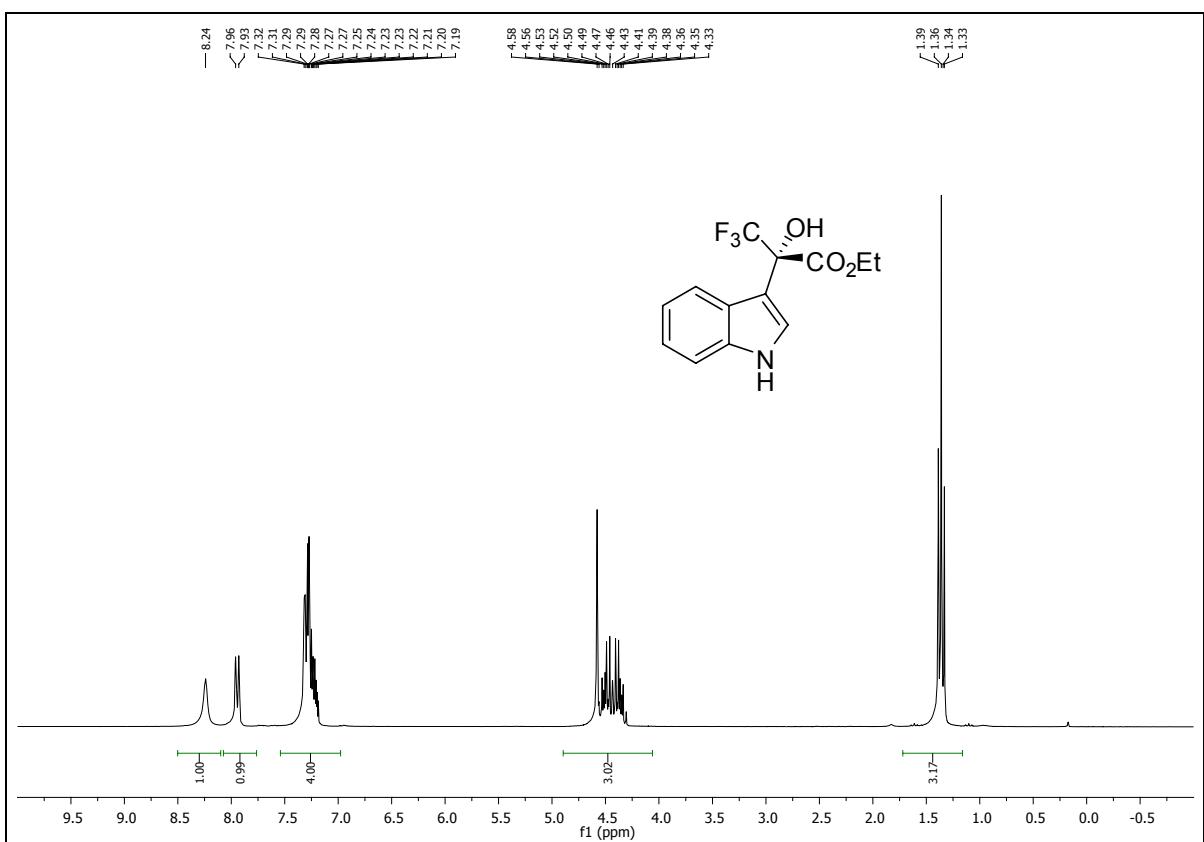
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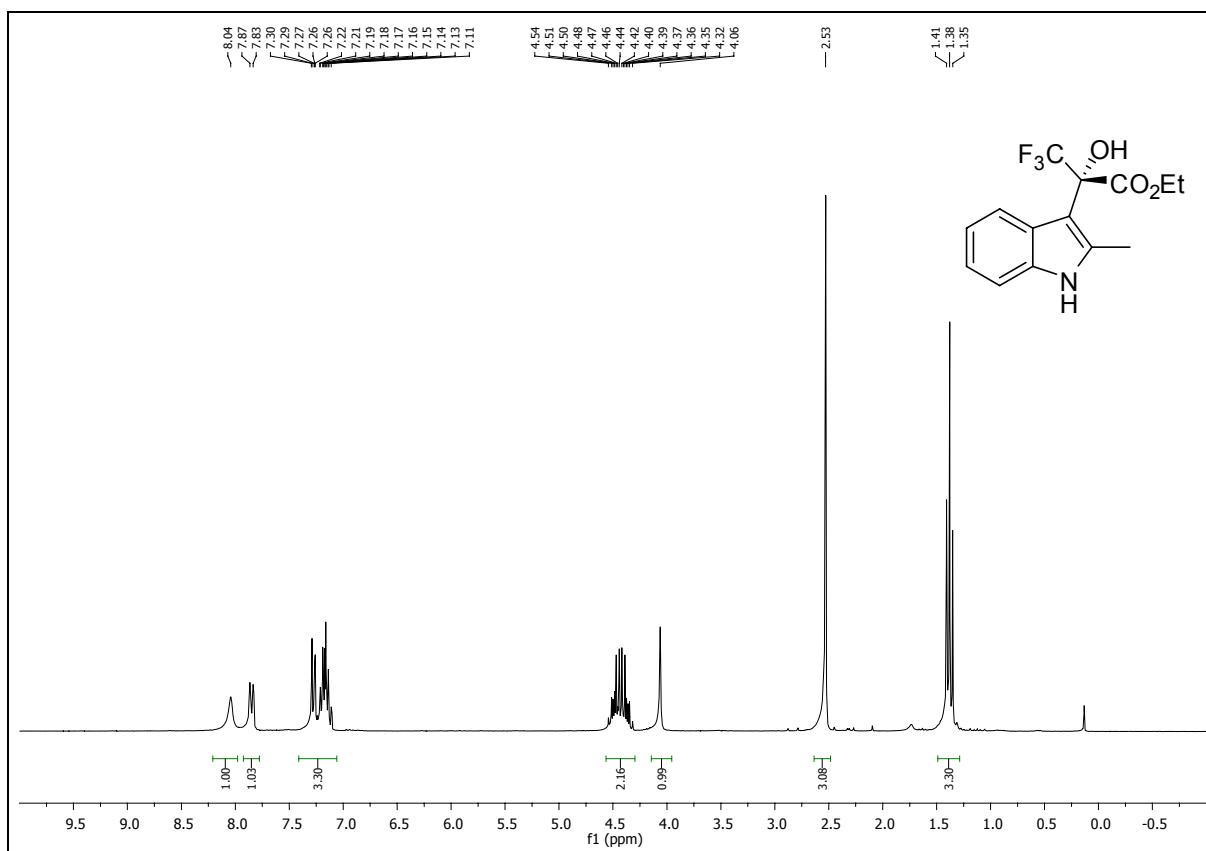
¹H NMR (CDCl_3 , 250 MHz) of 3a



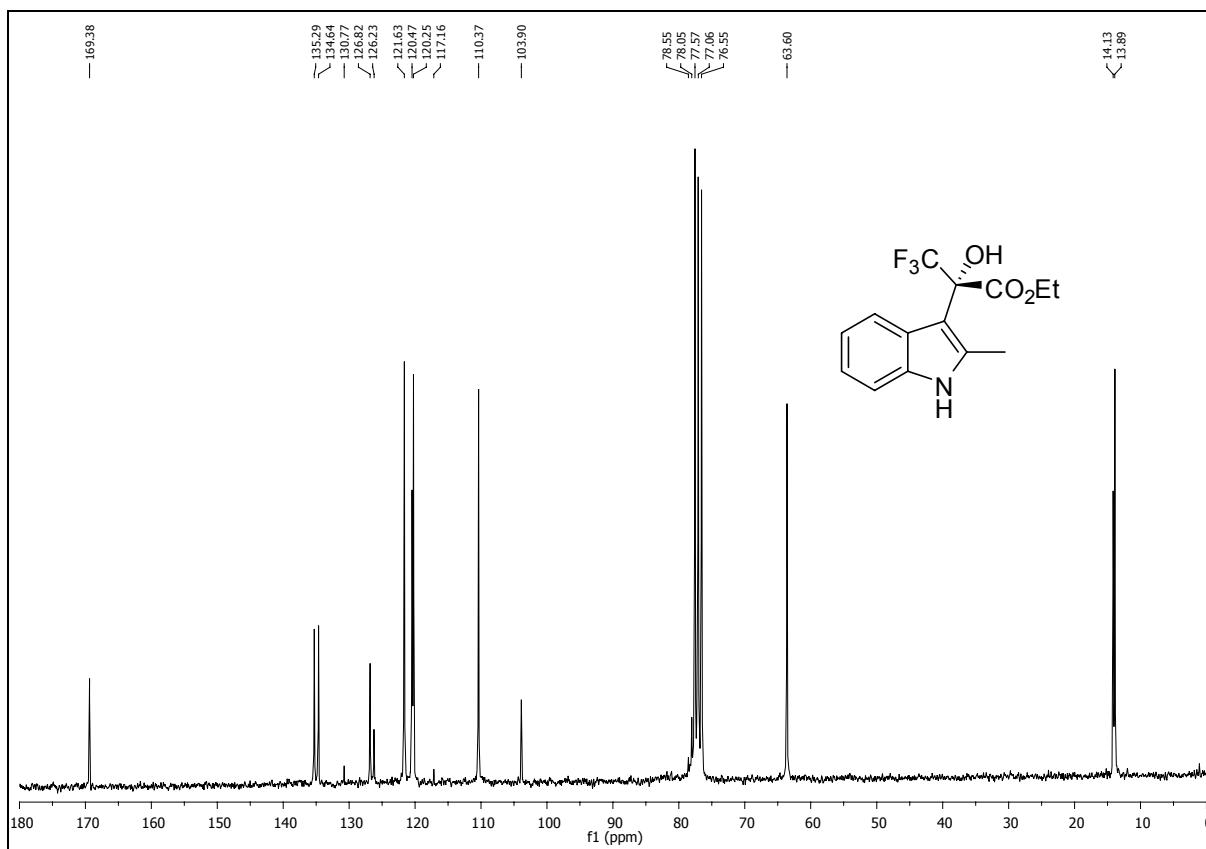
¹H NMR (CDCl_3 , 250 MHz) of 3b



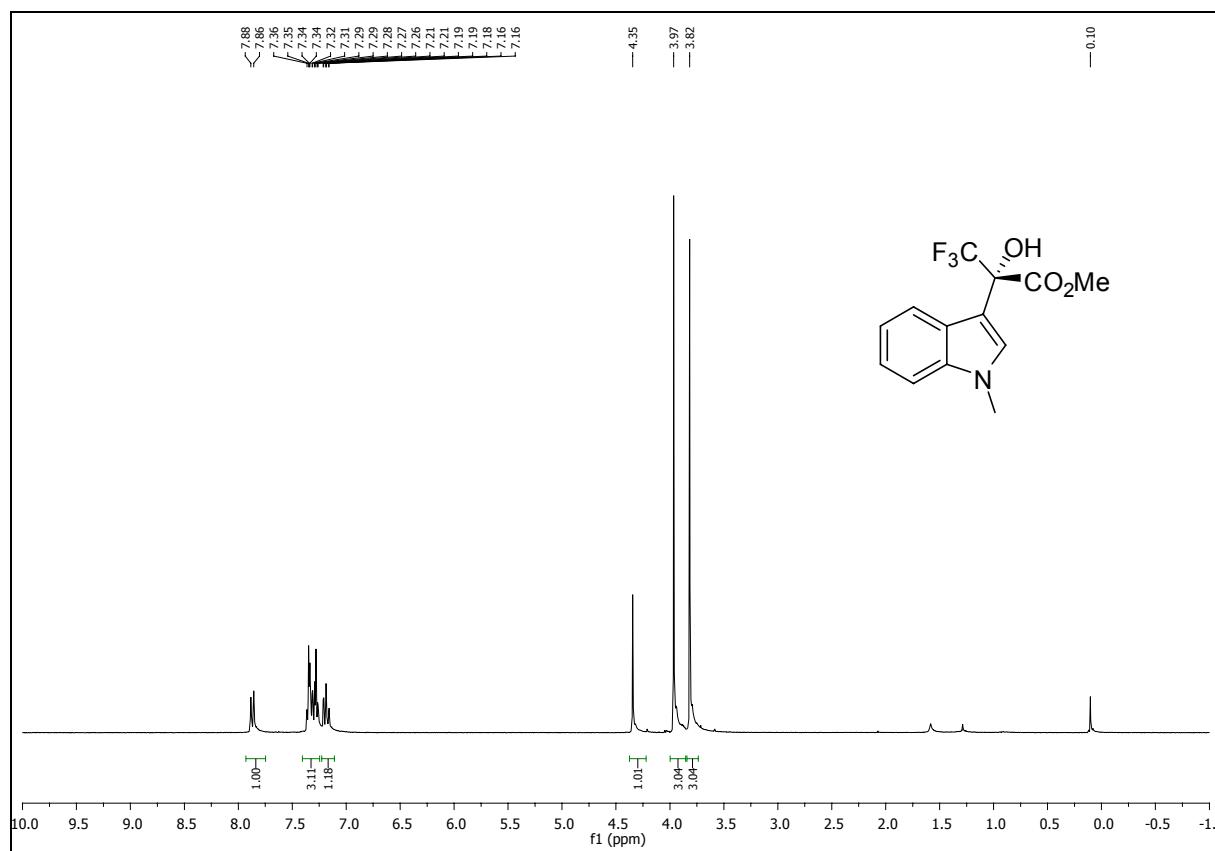
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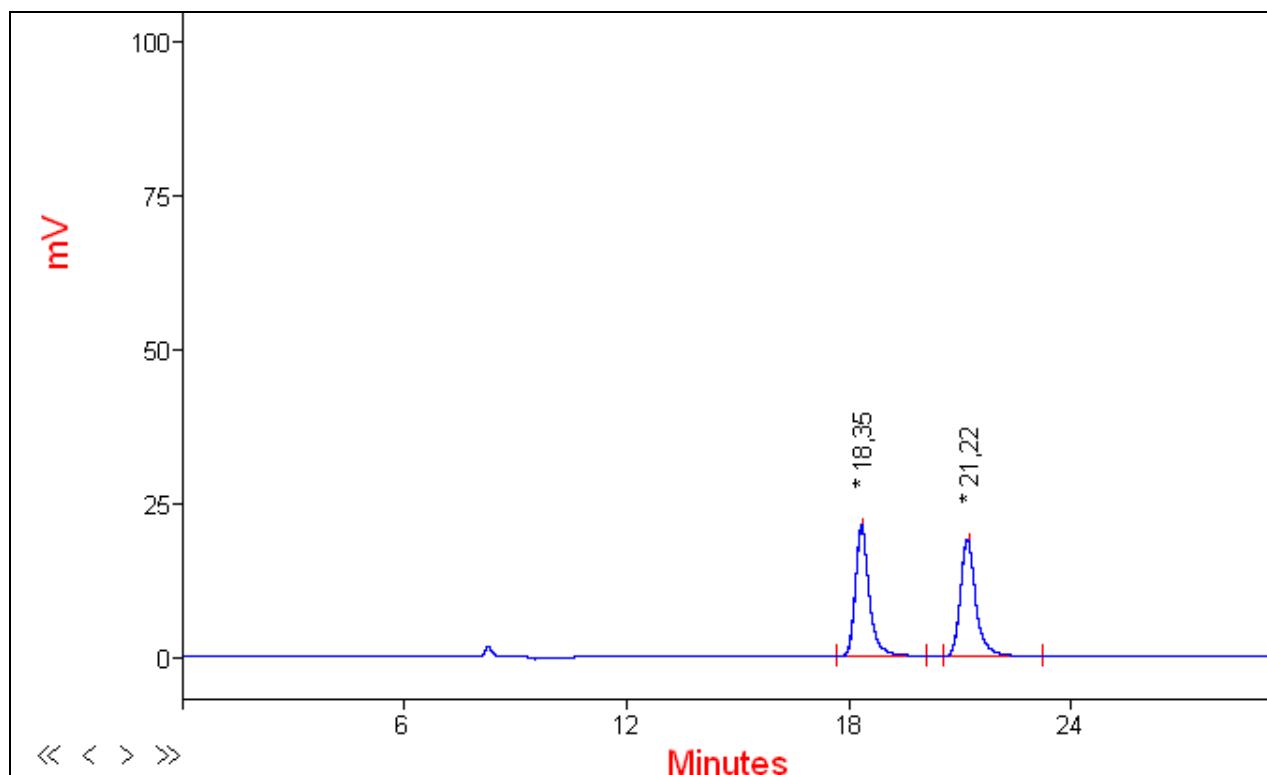
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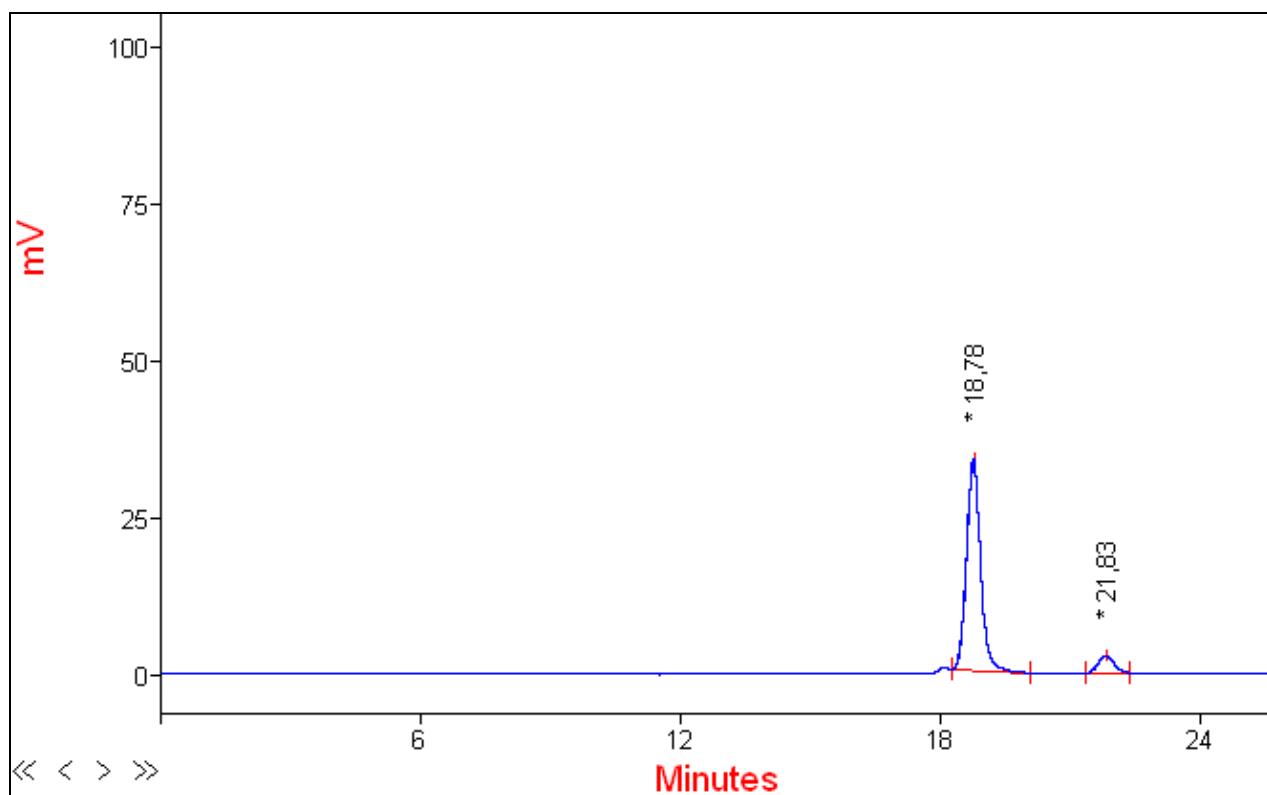
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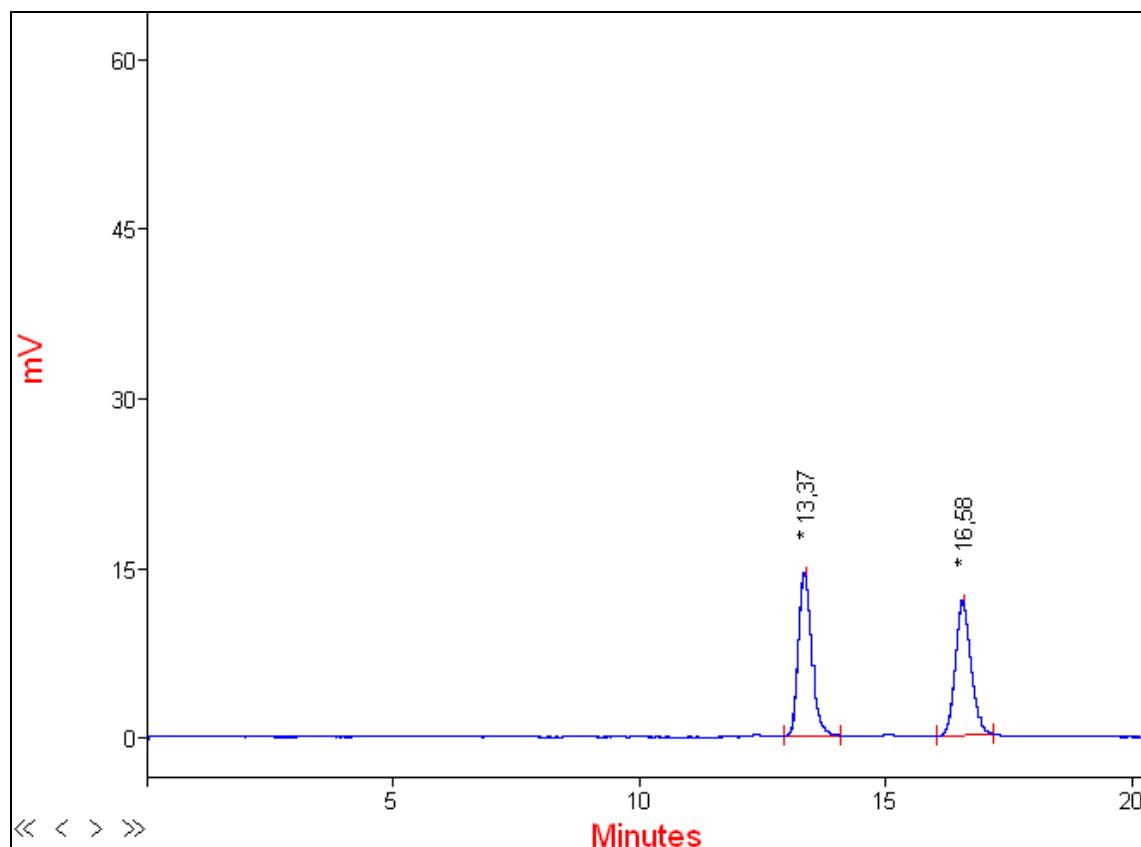
HPLC of 3a (racemic mixture)



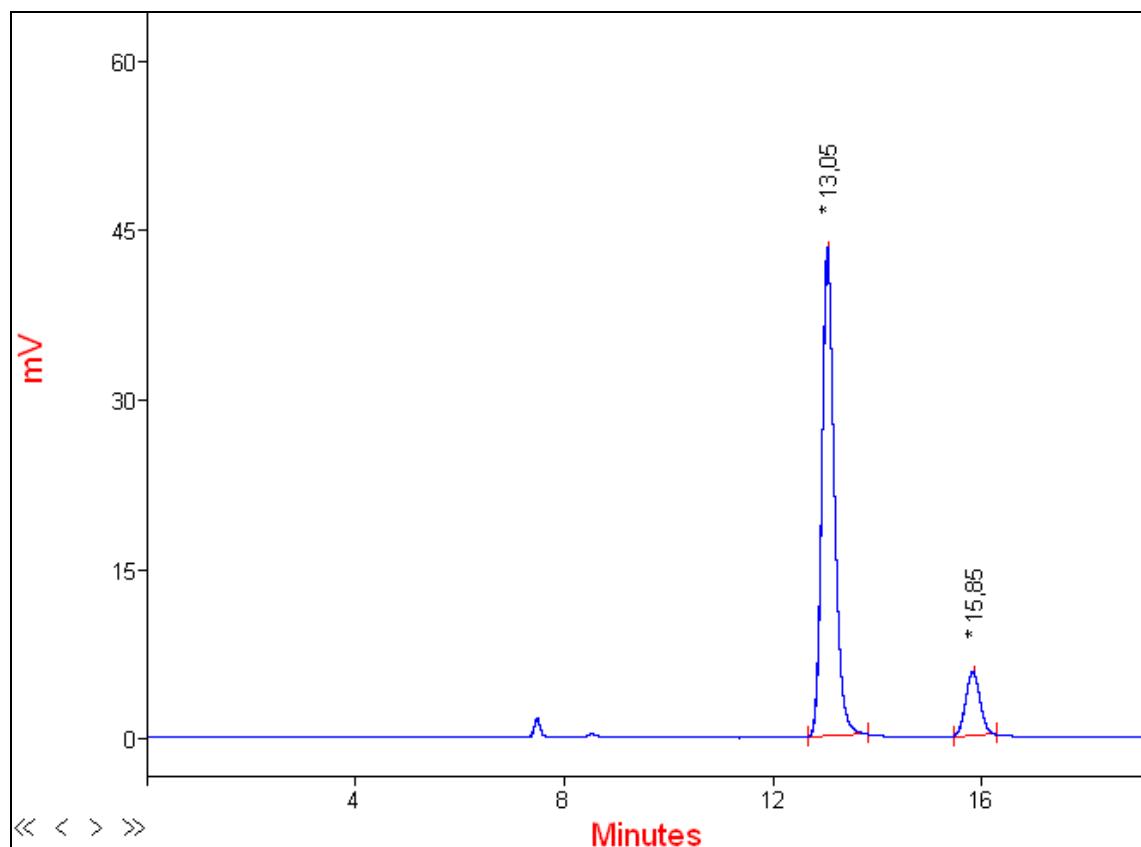
HPLC of (*S*)-3a (82% ee)



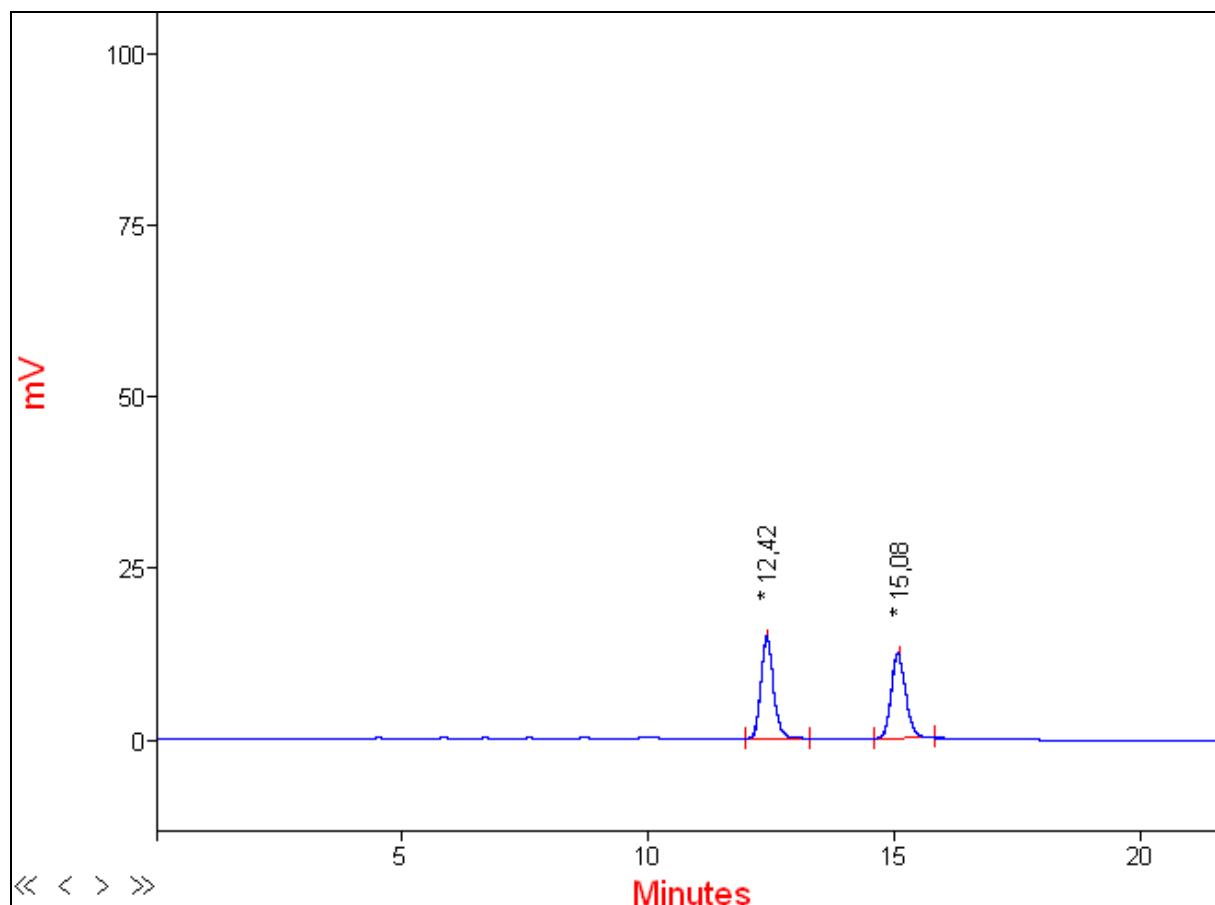
HPLC of 3b (racemic mixture)



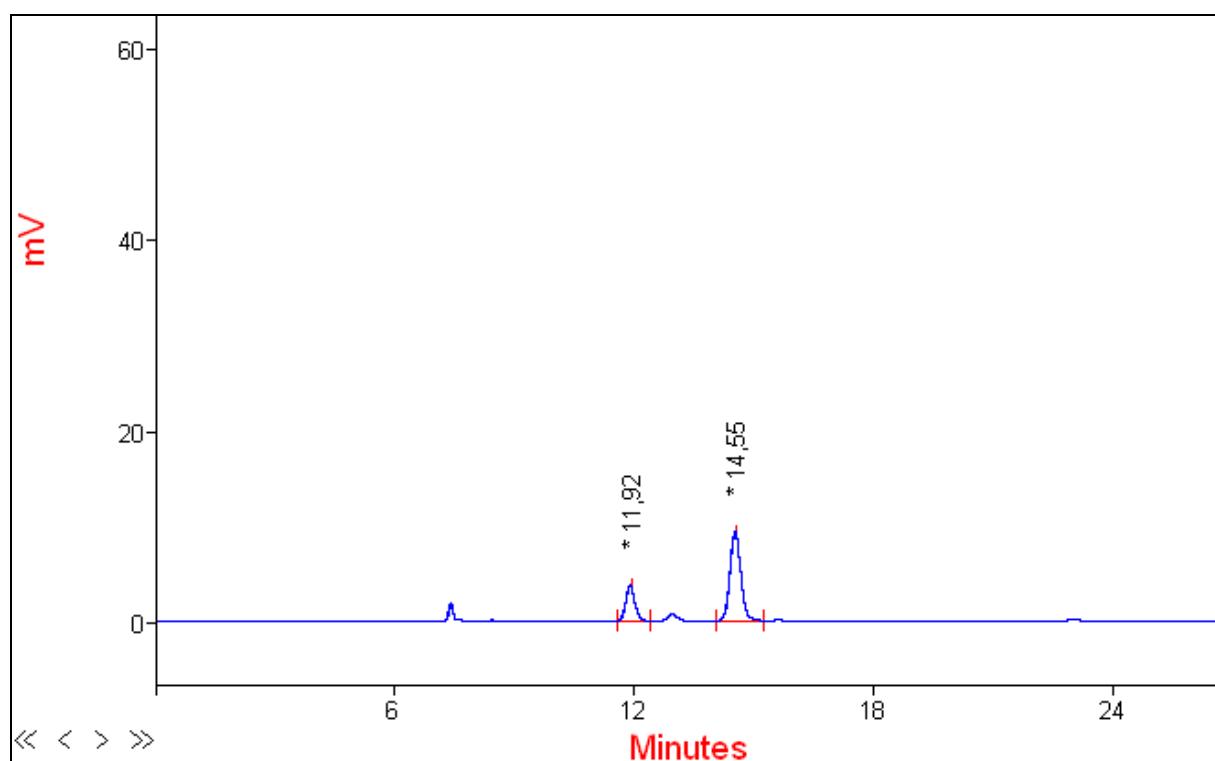
HPLC of (*S*)-3b (74% ee)



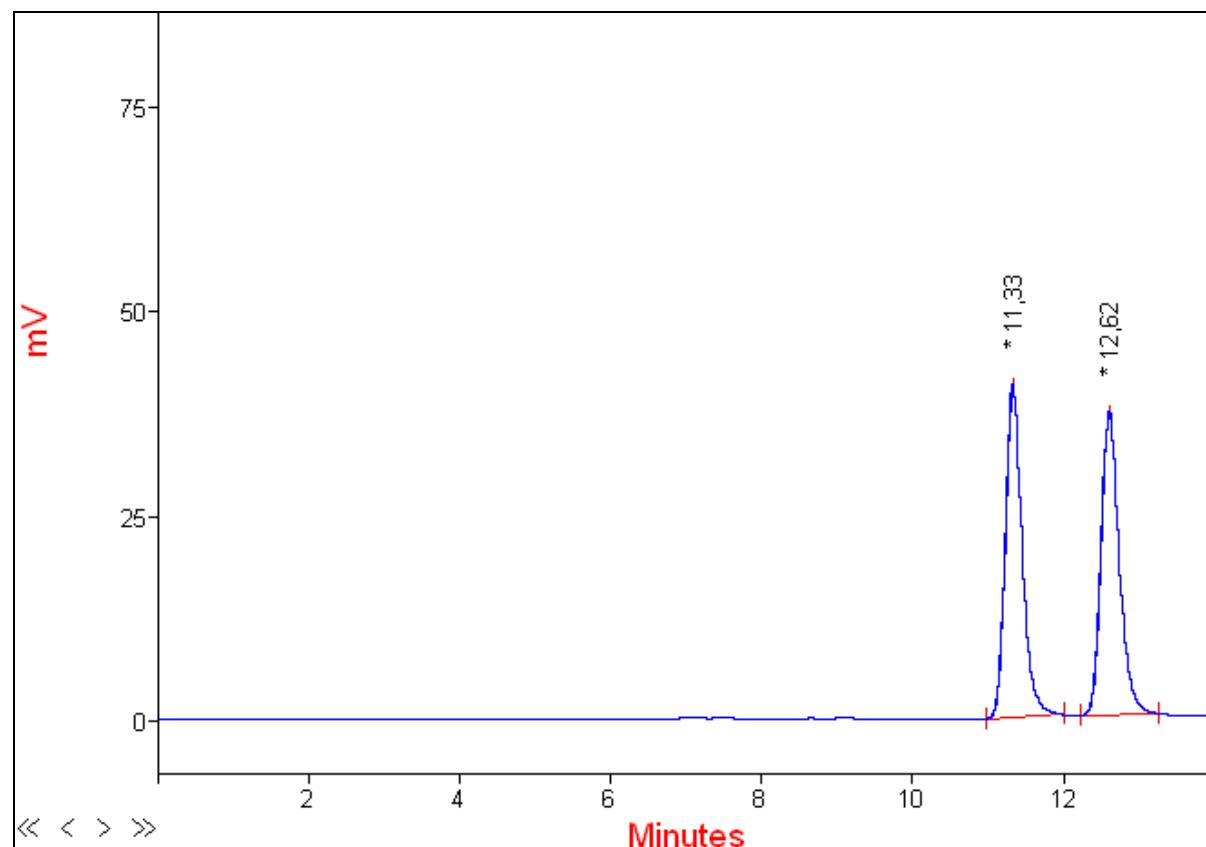
HPLC of 3c (racemic mixture)



HPLC of 3c (51% ee)



HPLC of 3d (racemic mixture)



HPLC of (*S*)-3d (79% ee)

