

*Supporting Information*

**Eco-Friendly Liquid Chromatographic Separations Based On The Use  
Of Cyclodextrins As Mobile Phase Additives**

Víctor González-Ruiz,<sup>a</sup> Andrés G. León,<sup>a‡</sup> Ana I. Olives,<sup>a</sup> M. Antonia Martín,<sup>\*a</sup>  
J. Carlos Menéndez<sup>b</sup>

<sup>a</sup>Sección Departamental de Química Analítica, Facultad de Farmacia, Universidad Complutense, 28040 Madrid, Spain. Fax: +34 91 3941754; Tel: +34 91 3941756; E-mail: mantonia@farm.ucm.es

<sup>b</sup>Departamento de Química Orgánica y Farmacéutica, Facultad de Farmacia, Universidad Complutense, 28040 Madrid, Spain.

<sup>‡</sup>Present address: Laboratorio de Análisis de Medicamentos, Departamento de Análisis y Control, Facultad de Farmacia, Universidad de Los Andes, Mérida, Venezuela.

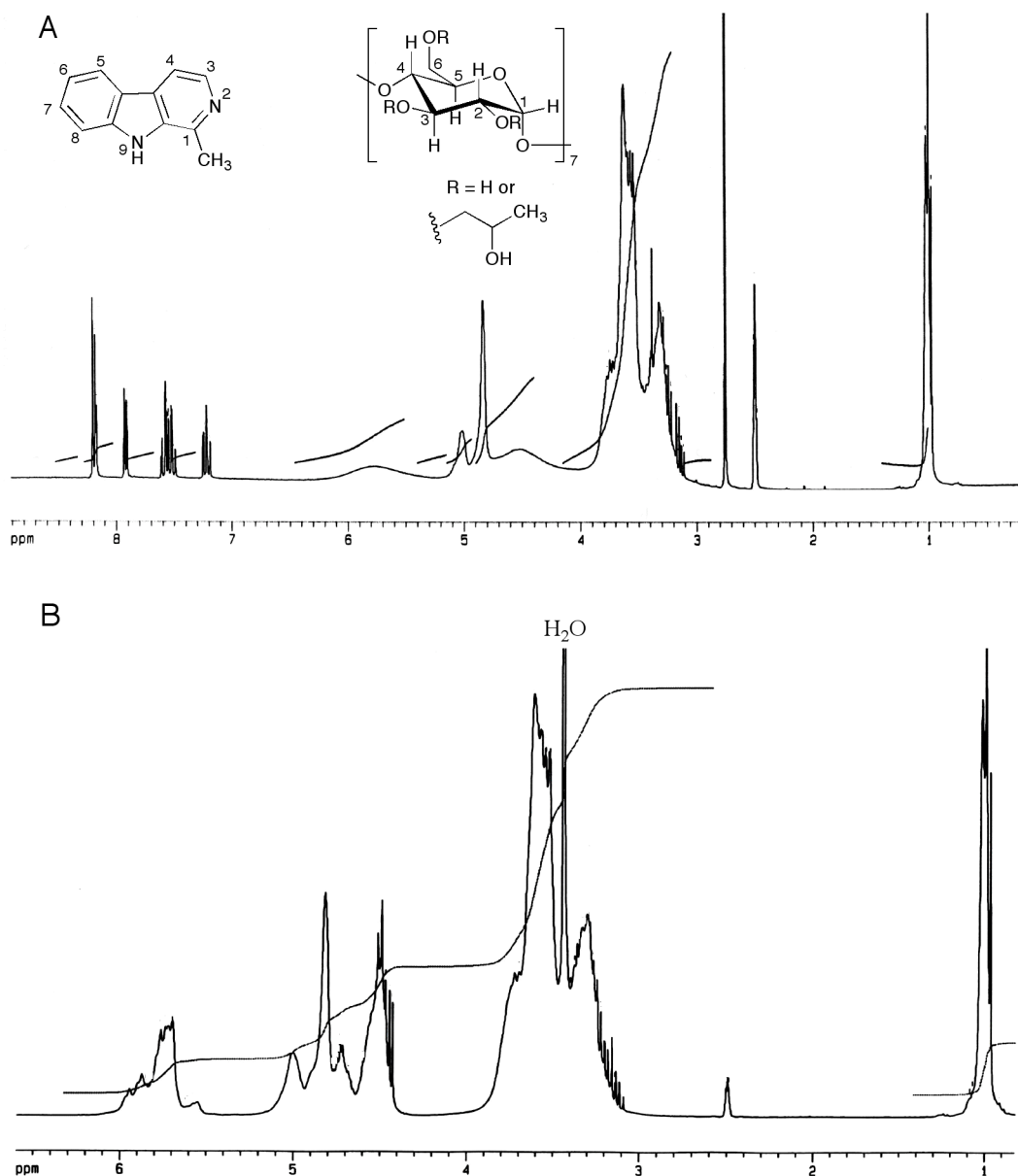


Figure S1: (Supporting Information): <sup>1</sup>H-NMR spectrum of the complex harmane/HPβ-CD (1:1) (A) and <sup>1</sup>H-NMR spectrum of HPβ-CD (B). The spectra were obtained at 250 MHz in d<sub>6</sub>-DMSO. The spectral region corresponds to the CD protons both on carbon and oxygen.

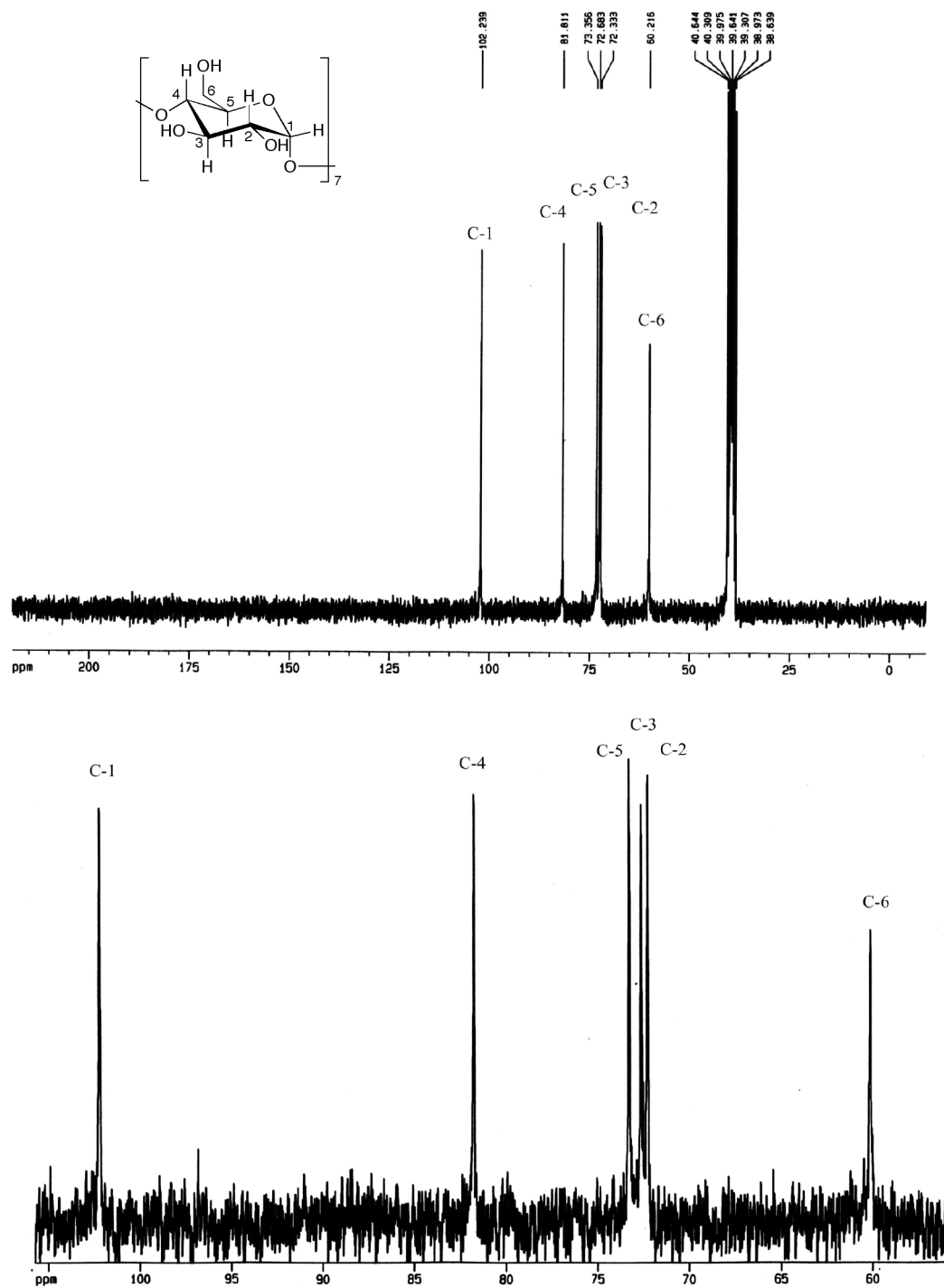


Figure S2:  $^{13}\text{C}$ -NMR spectrum of  $\beta$ -CD obtained in at 250 MHz in  $d_6$ -DMSO.

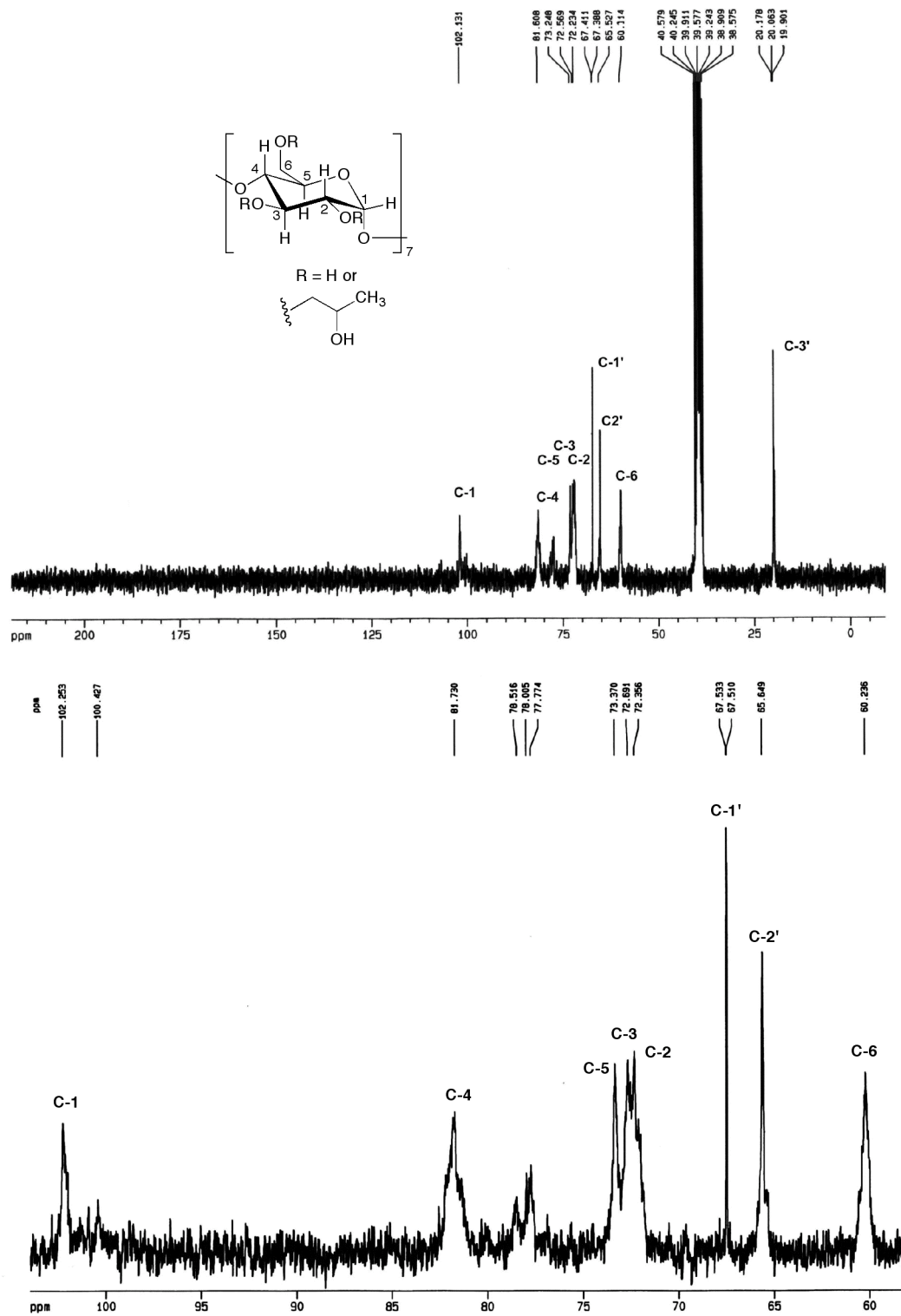


Figure S3:  $^{13}\text{C}$ -NMR spectrum of HP $\beta$ -CD obtained in at 250 MHz in  $d_6$ -DMSO.

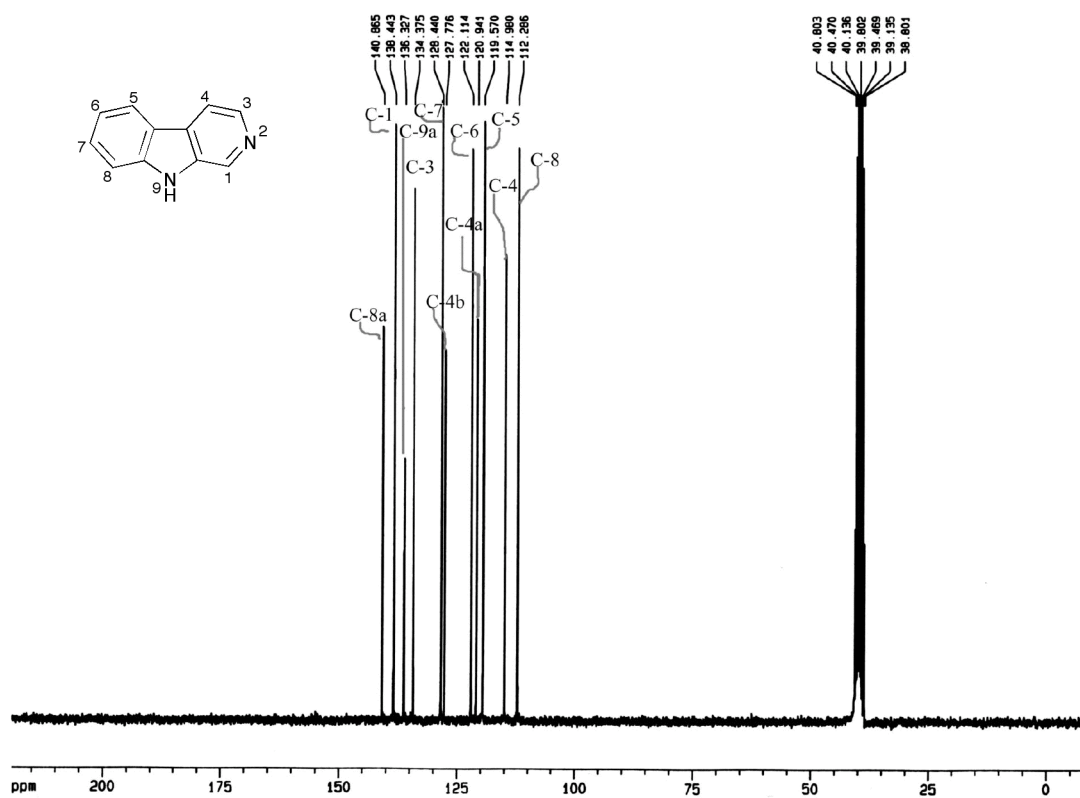


Figure S4:  $^{13}\text{C}$ -NMR spectrum of norharmane obtained in at 250 MHz in  $\text{d}_6$ -DMSO.

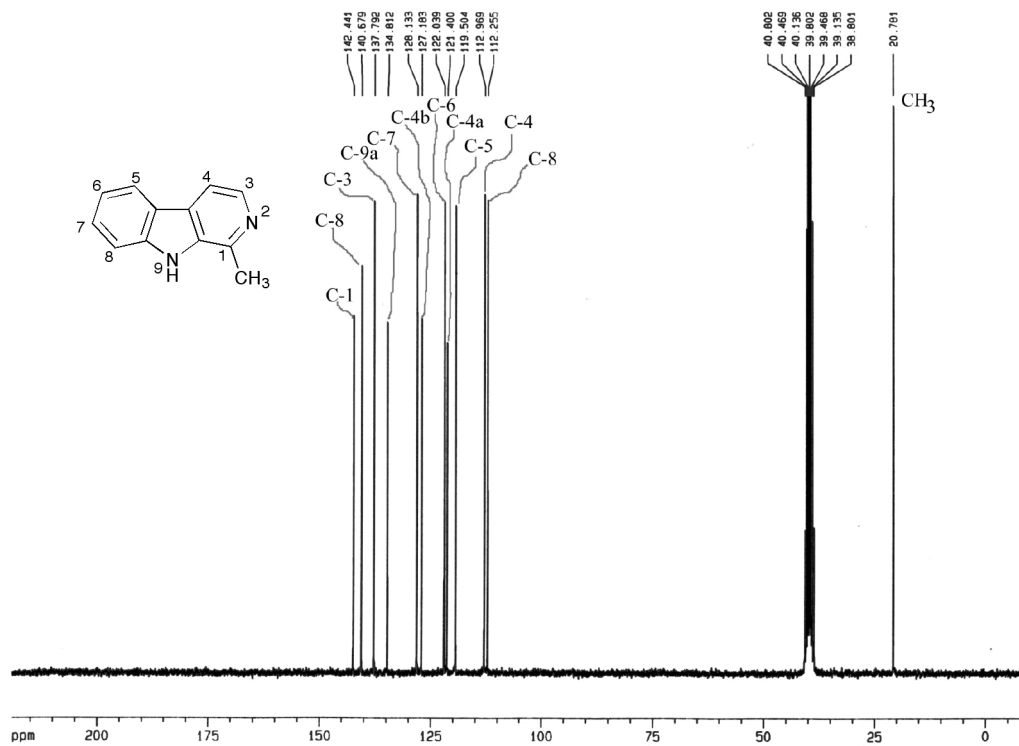


Figure S5: <sup>13</sup>C-NMR spectrum of harmaline obtained in at 250 MHz in d<sub>6</sub>-DMSO.

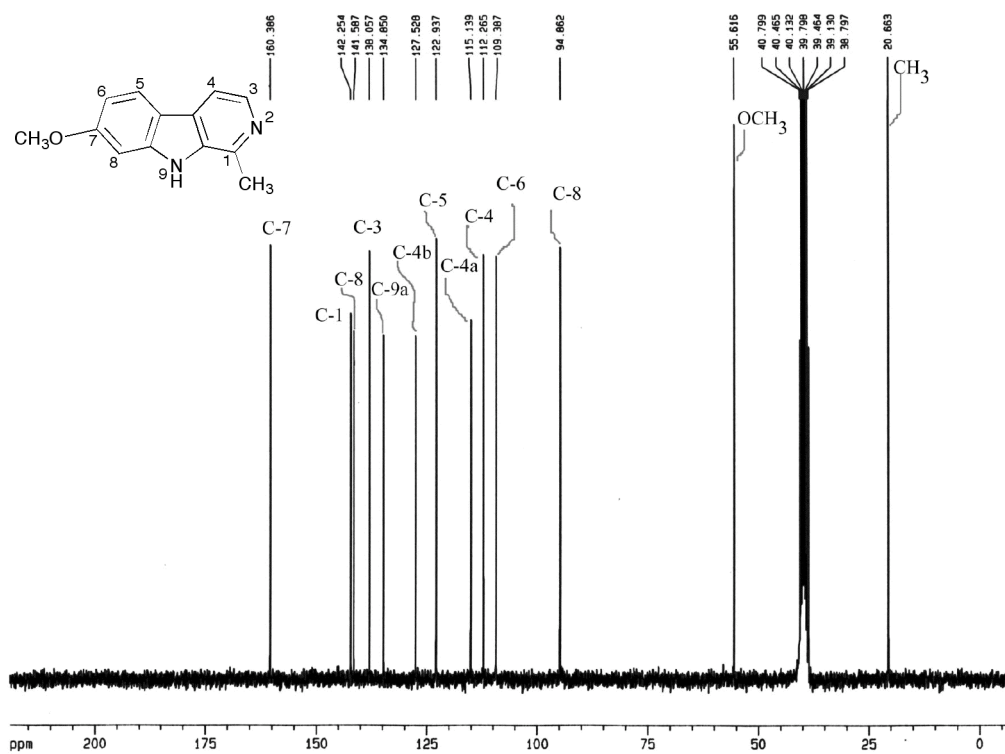


Figure S6:  $^{13}\text{C}$ -NMR spectrum of harmine obtained in at 250 MHz in  $d_6$ -DMSO.

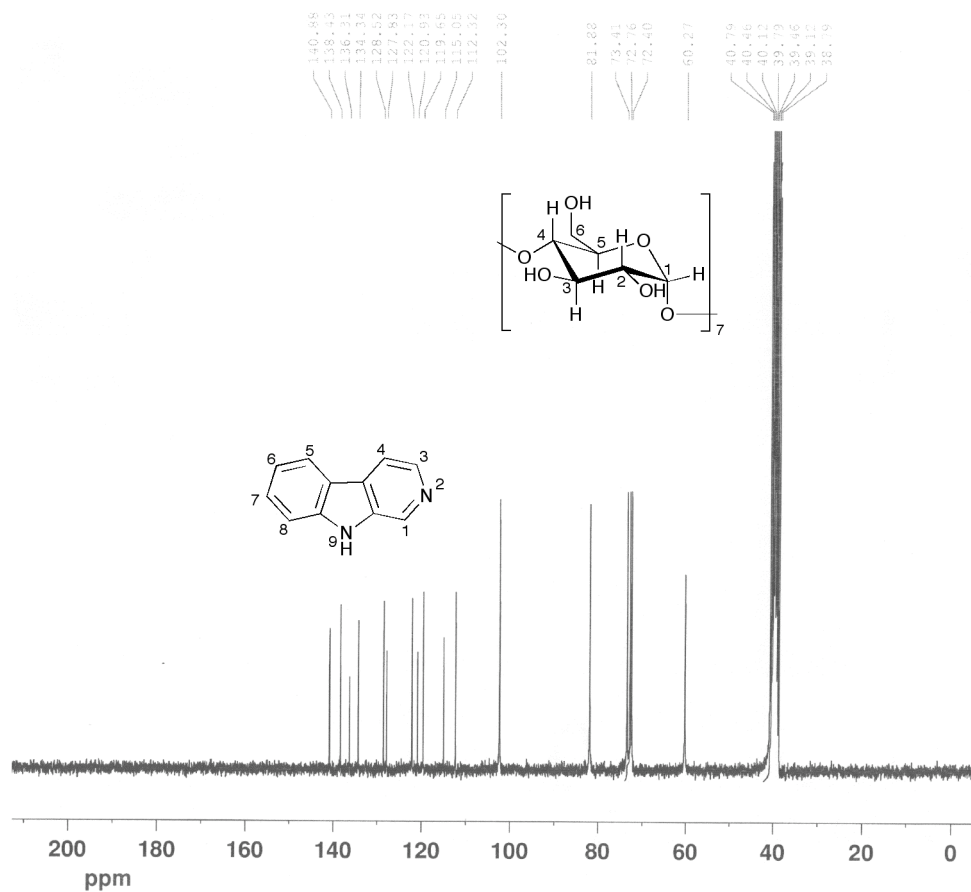


Figure S7:  $^{13}\text{C}$ -NMR spectrum of the norharmane/ $\beta$ -CD (1:2) inclusion complex obtained in at 250 MHz in  $d_6$ -DMSO.



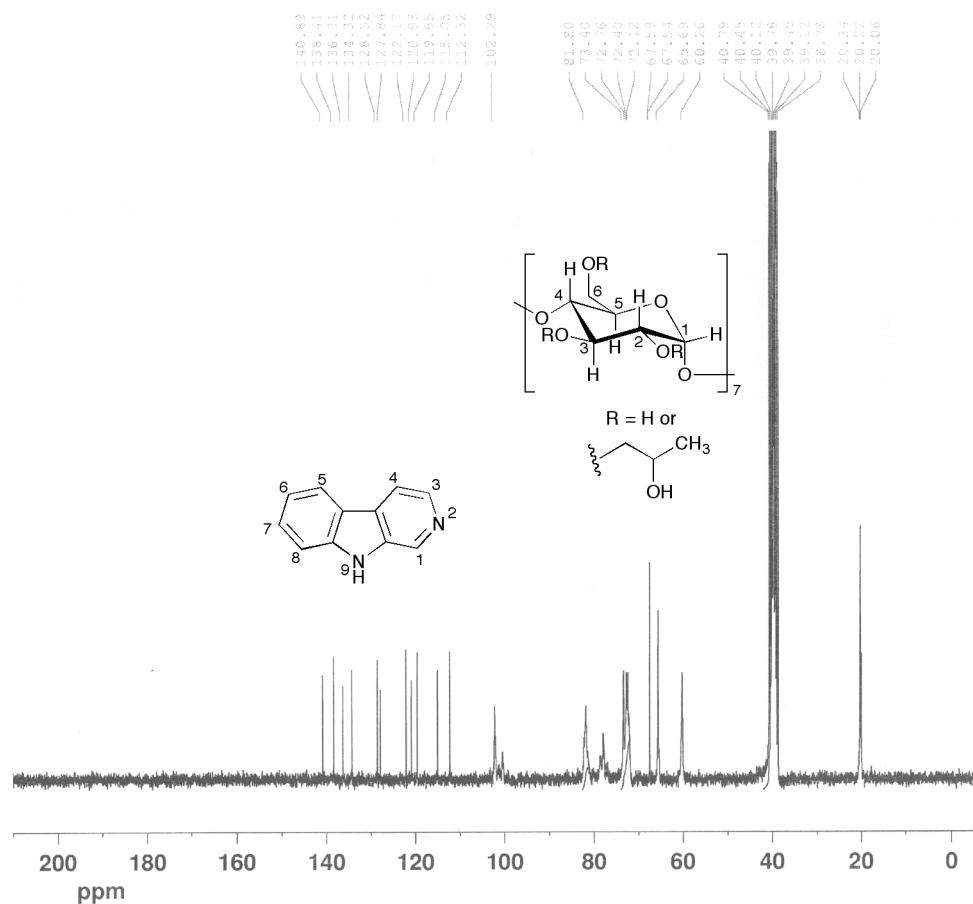


Figure S8:  $^{13}\text{C}$ -NMR spectrum of the norharmane/HP $\beta$ -CD (1:2) inclusion complex obtained in at 250 MHz in  $d_6$ -DMSO.

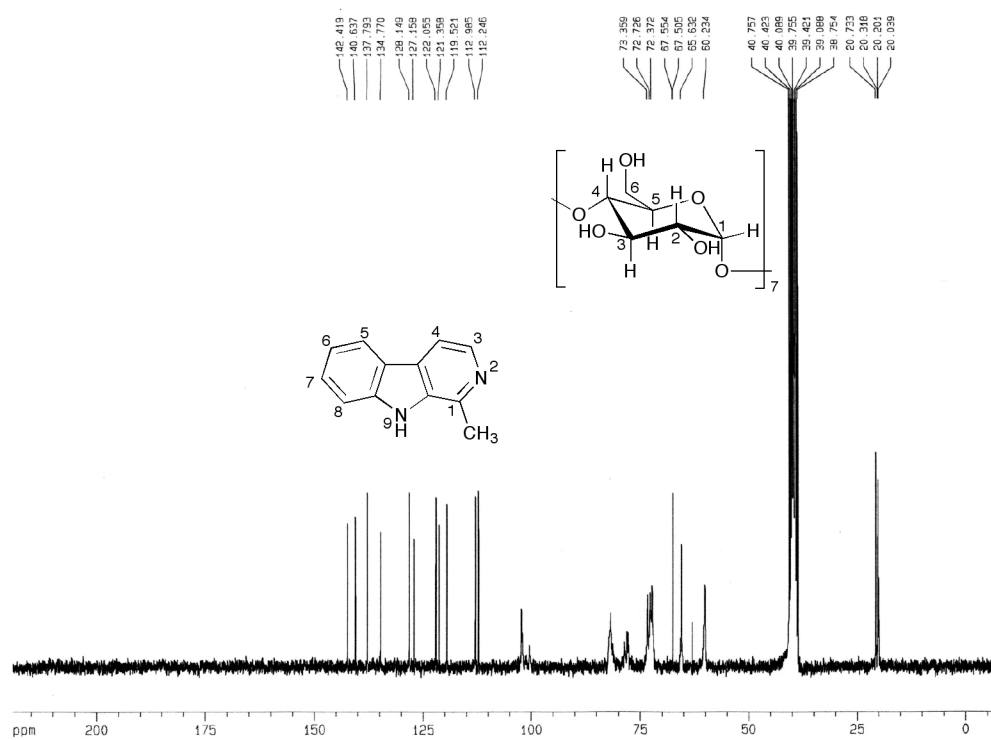


Figure S9:  $^{13}\text{C}$ -NMR spectrum of the harmane/ $\beta$ -CD (1:1) inclusion complex obtained in at 250 MHz in  $\text{d}_6$ -DMSO.

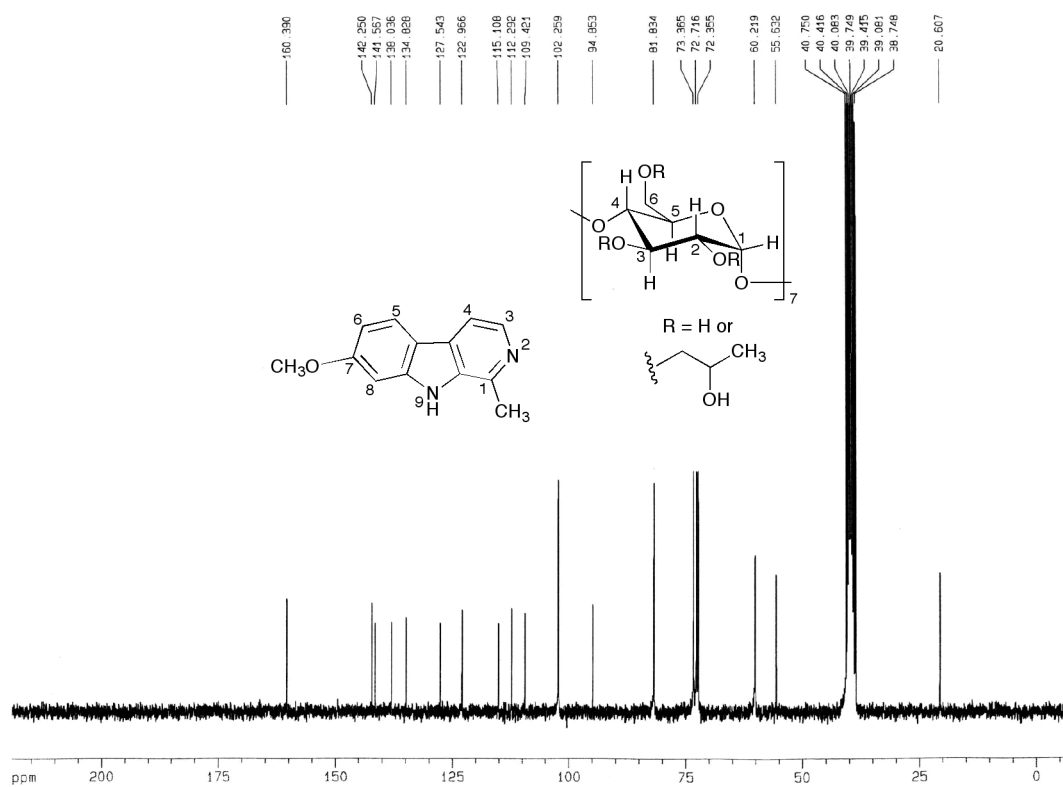


Figure S10:  $^{13}\text{C}$ -NMR spectrum of the harmine/ $\beta$ -CD (1:2) inclusion complex obtained in at 250 MHz in  $d_6$ -DMSO.

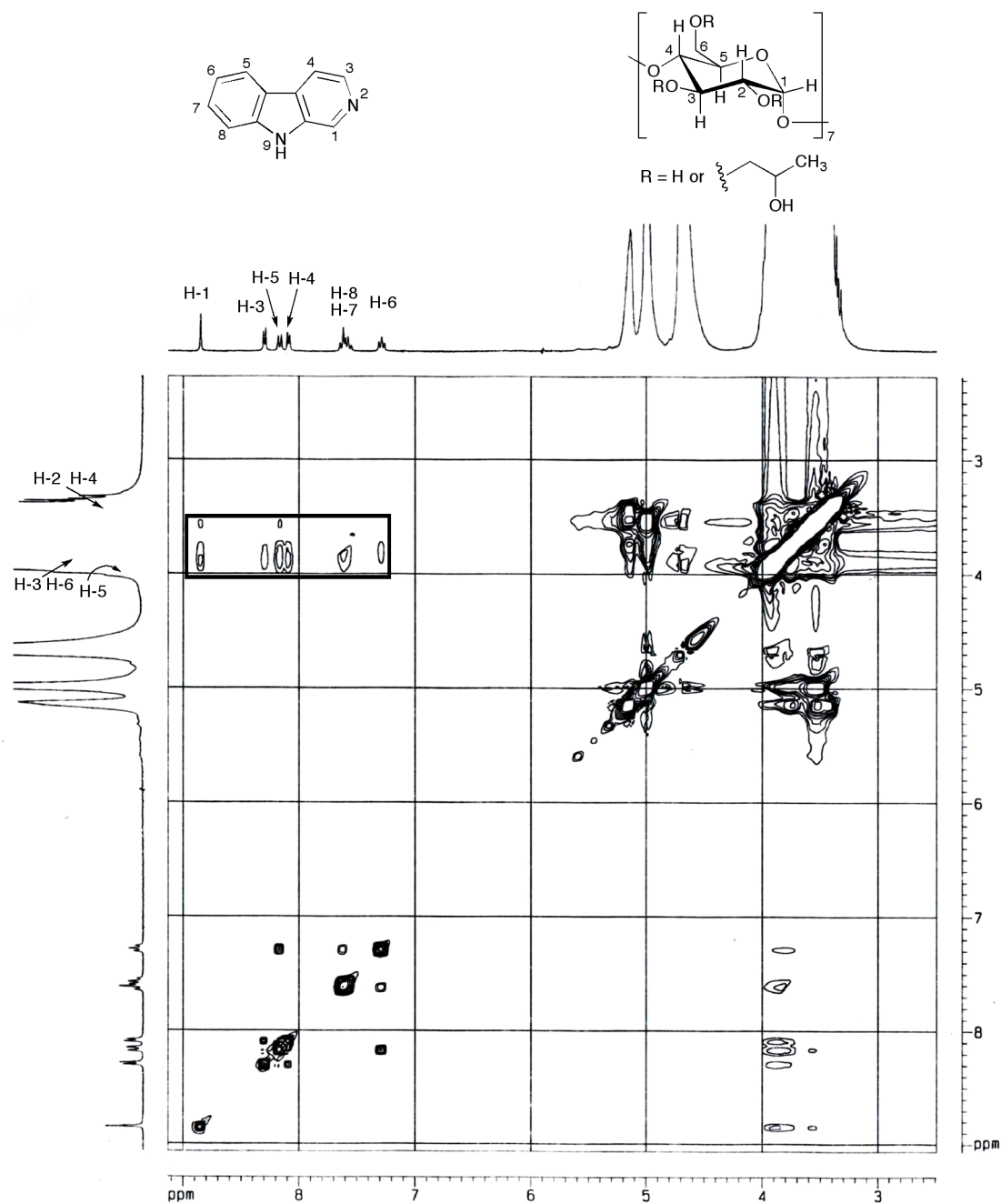


Figure S11: Partial contour plot of the 2D-ROESY experiment (D<sub>2</sub>O, 250 MHz) corresponding to the inclusion complex norharmane/HPβ-CD (1:1)

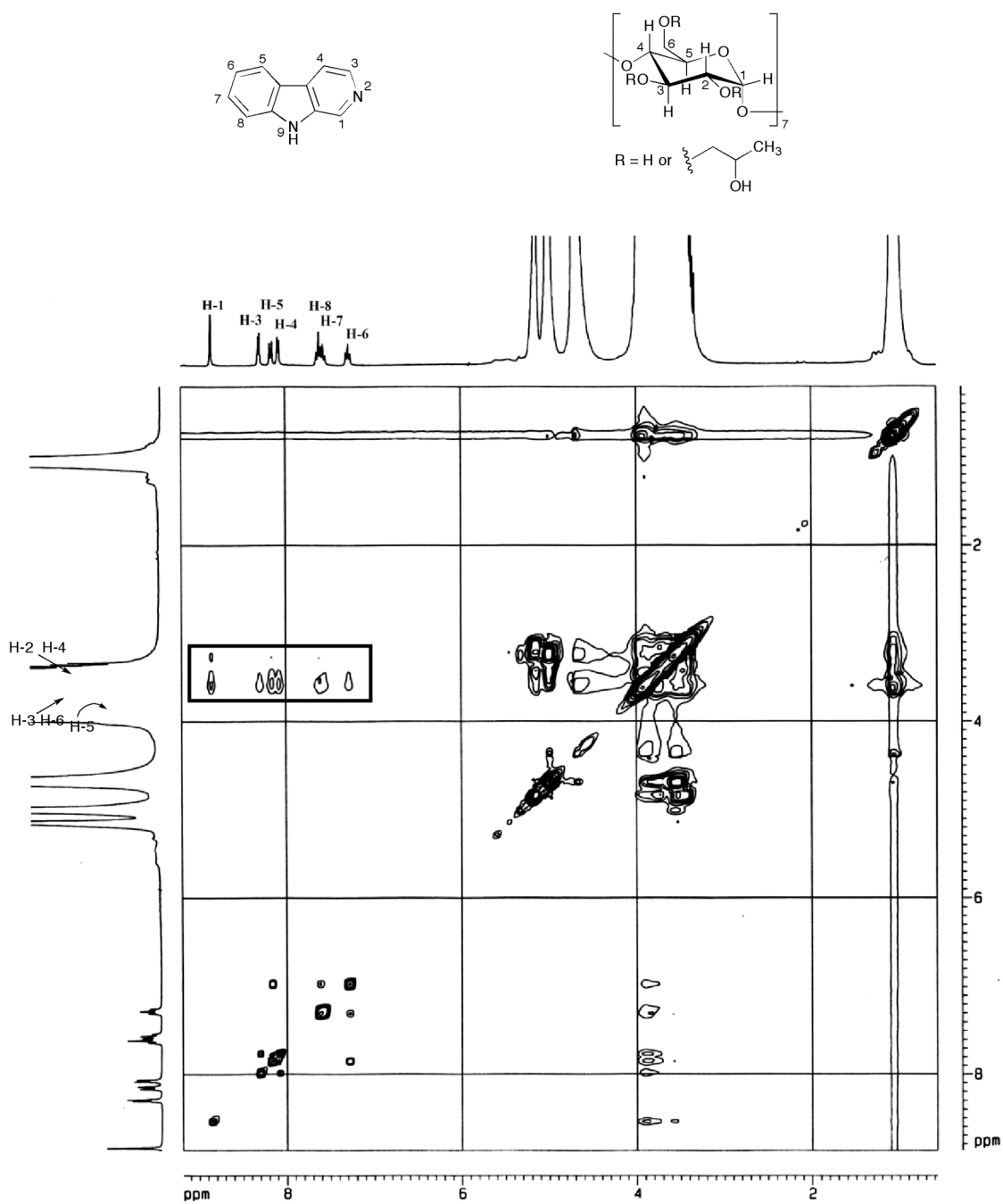


Figure S12: Partial contour plot of 2D-ROESY experiment (D<sub>2</sub>O, 250 MHz) corresponding to the inclusion complex norharmane/HPβ-CD (1:2)

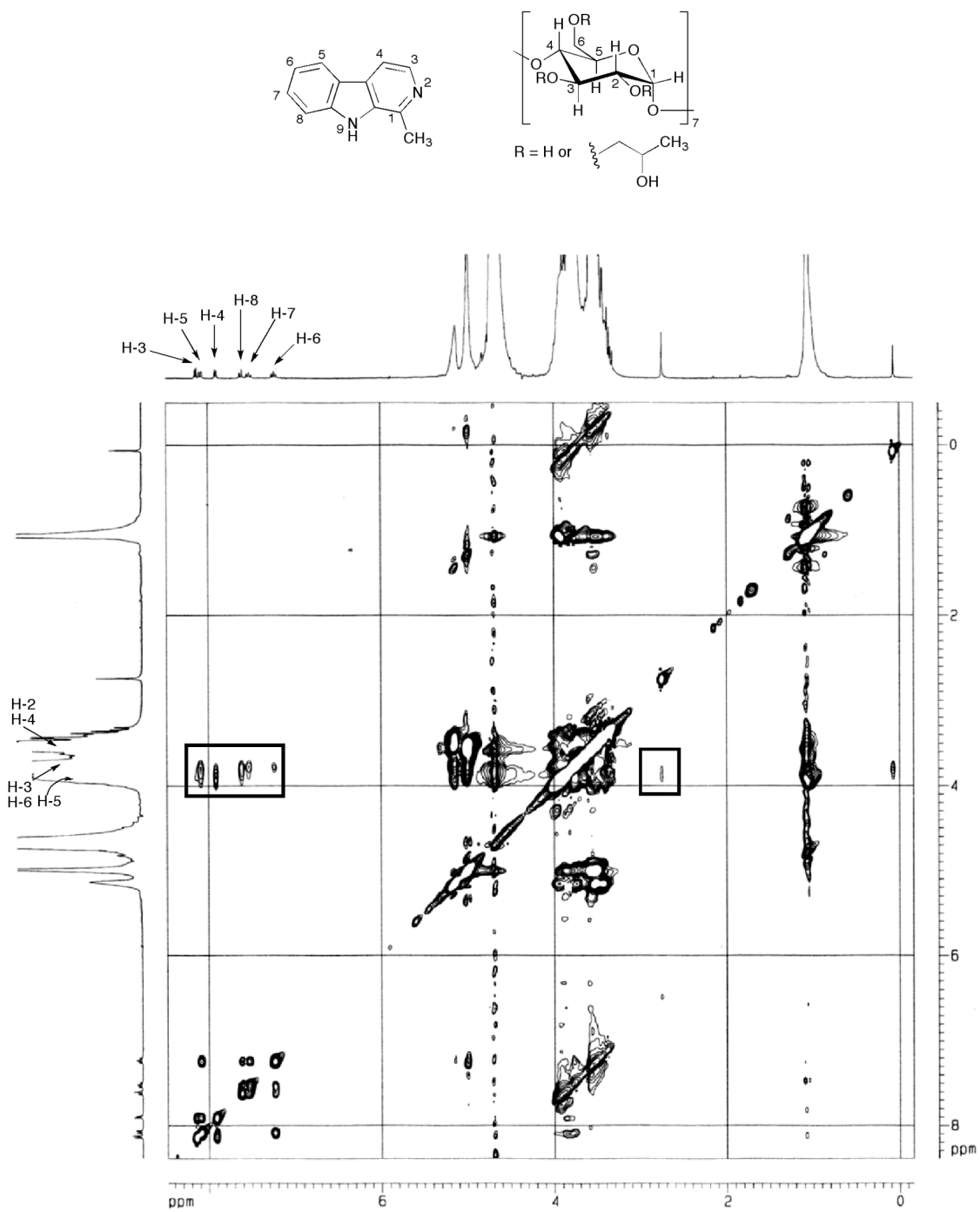


Figure S13: Contour plot of 2D-ROESY experiment (D<sub>2</sub>O, 250 MHz) corresponding to the inclusion complex harmane/HPβ-CD (1:1)

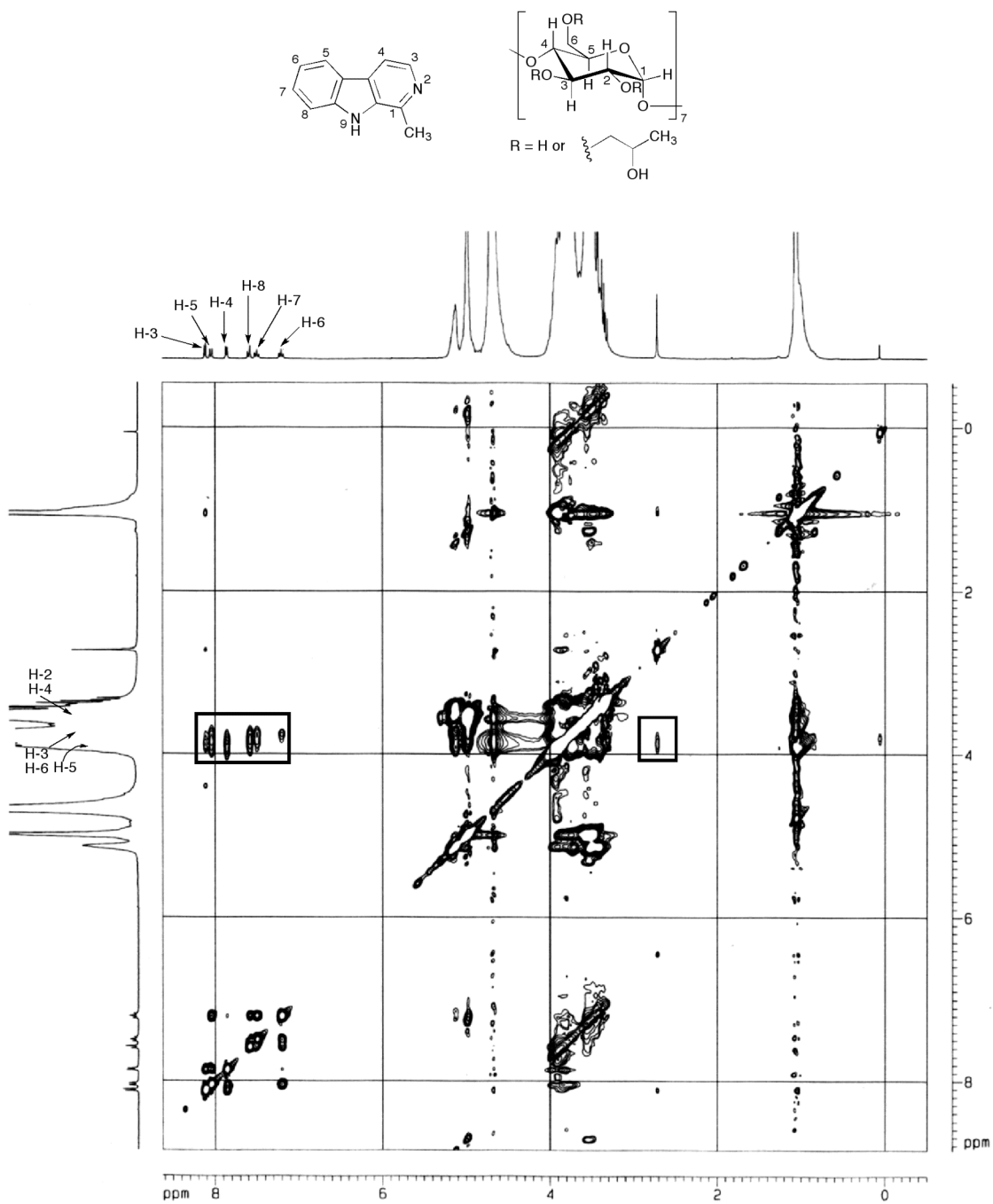


Figure S14: Contour plot of 2D-ROESY experiment (D<sub>2</sub>O, 250 MHz) corresponding to the inclusion complex harmane/HPβ-CD (1:2)

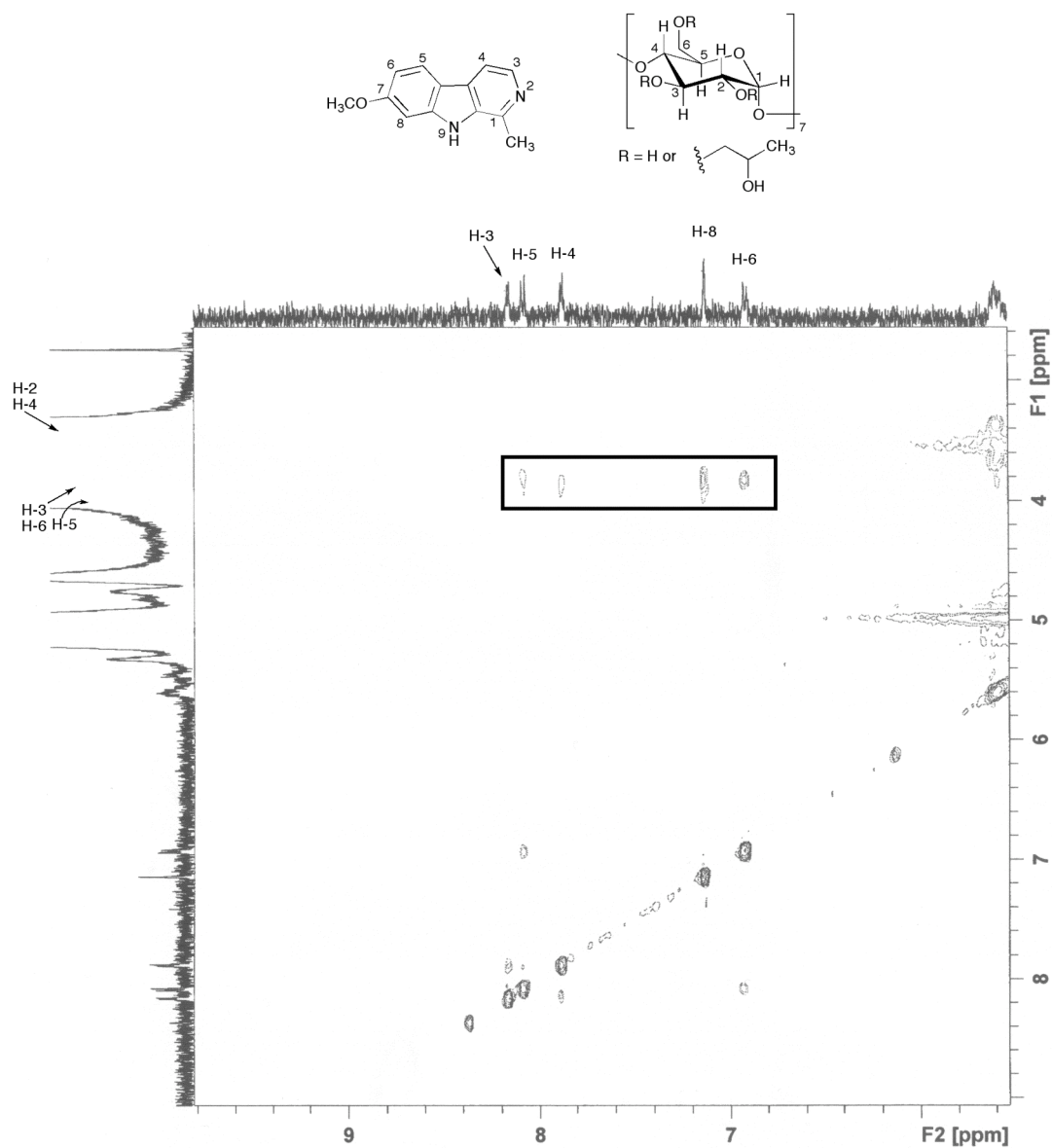


Figure S15: Partial contour plot of 2D-ROESY experiment (D<sub>2</sub>O, 250 MHz) corresponding to the inclusion complex harmine/HPβ-CD (1:1)



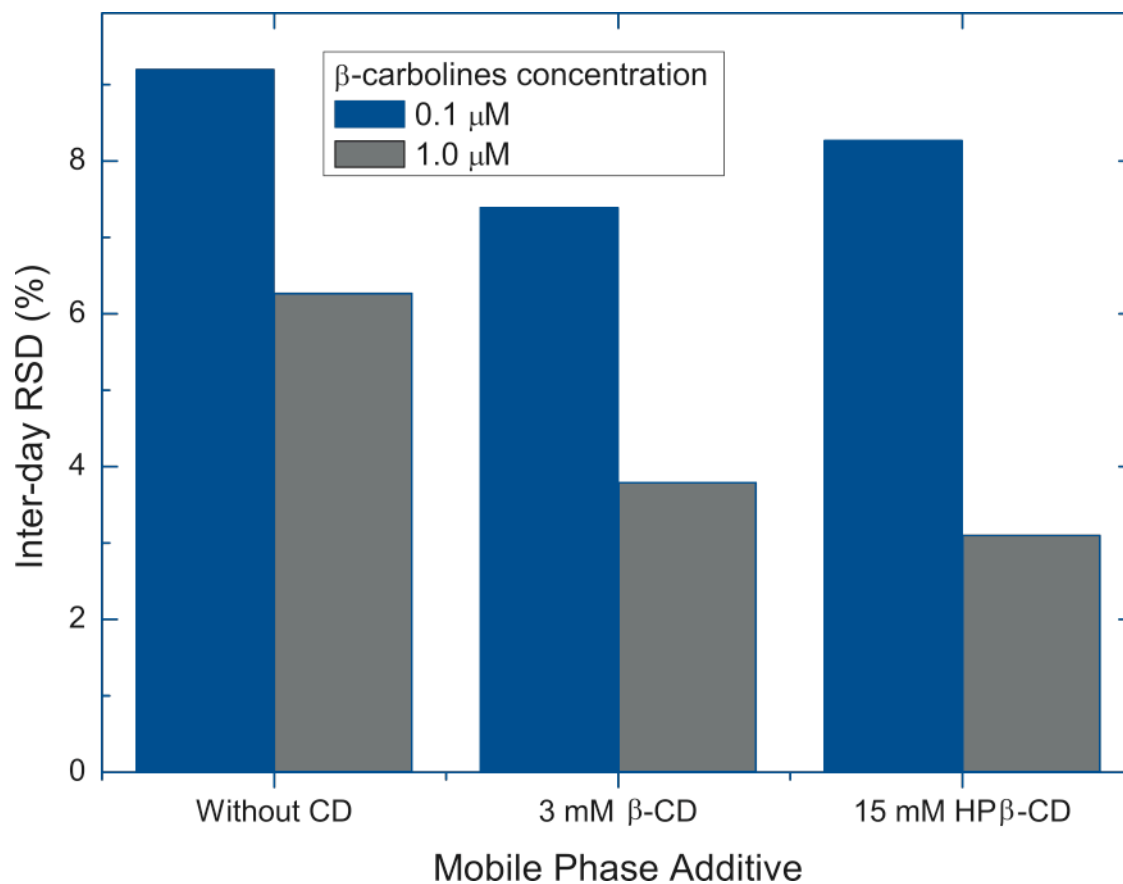


Figure S16: Effect of CDs as MPA on the inter-day precision obtained in the separation of norharmane. Mobile phase: EtOH : buffered aqueous solution, 30 : 70 (v : v).