Electronic Supplementary Information:
Effect of Enantiomeric Ratio and Preparation Method on Proline Polymorphism
Robert T. Berendt$^{a,b}$ and Eric J. Munson*$^a$

$^a$ The University of Kansas, Department of Pharmaceutical Chemistry, Lawrence, KS 66047
$^b$ Current address: Food and Drug Administration, 10903 New Hampshire Ave, Silver Spring, MD 20910, USA. E-mail: robert.berendt@fda.hhs.gov
$^*$ Corresponding author, current address: The University of Kentucky, Department of Pharmaceutical Sciences, Lexington, KY 40536, USA. Fax: +1 859 257 7564; Tel: +1 859 323 3107; E-mail: eric.munson@uky.edu

Experimental
Sample preparation

DL-proline form II (DL-II) was obtained in a crystallographically pure state for VTI, SSNMR, and PXRD analyses by cryogrinding an equimolar ratio of D- and L-proline for 60 min, followed by warming to 60°C under anhydrous conditions.

Results

ESI Figure 1. Representative proline DSC thermograms used to construct the binary melting-point phase diagram in Figure 2 of the main text. The thermograms are arranged by increasing level of L-proline in D-proline in the following order: enantiopure D-proline (top), 4, 6, 10, 15, 20, 25, 30, 35, 40, 45, 50% L-proline (bottom).
ESI Figure 2. DSC thermograms of 25–50% L-proline samples prepared by lyophilization. The corresponding $^{13}$C CP-MAS NMR spectra are shown in Figure 6 of the main text.
**ESI Figure 3.** $^{13}$C CP-MAS NMR spectra (top to bottom) of proline crystal forms corresponding to enantiopure a) L and b) L-MH; and racemic cocrystals c) DL-MH, d) DL-I and e) DL-II.
**ESI Figure 4.** PXRD patterns of proline crystal forms: a) L, b) L-MH, c) DL-MH, d) DL-I, and e) DL-II.