

Derivatives of Cardanol through the Ene Reaction with Diethyl Azodicarboxylate

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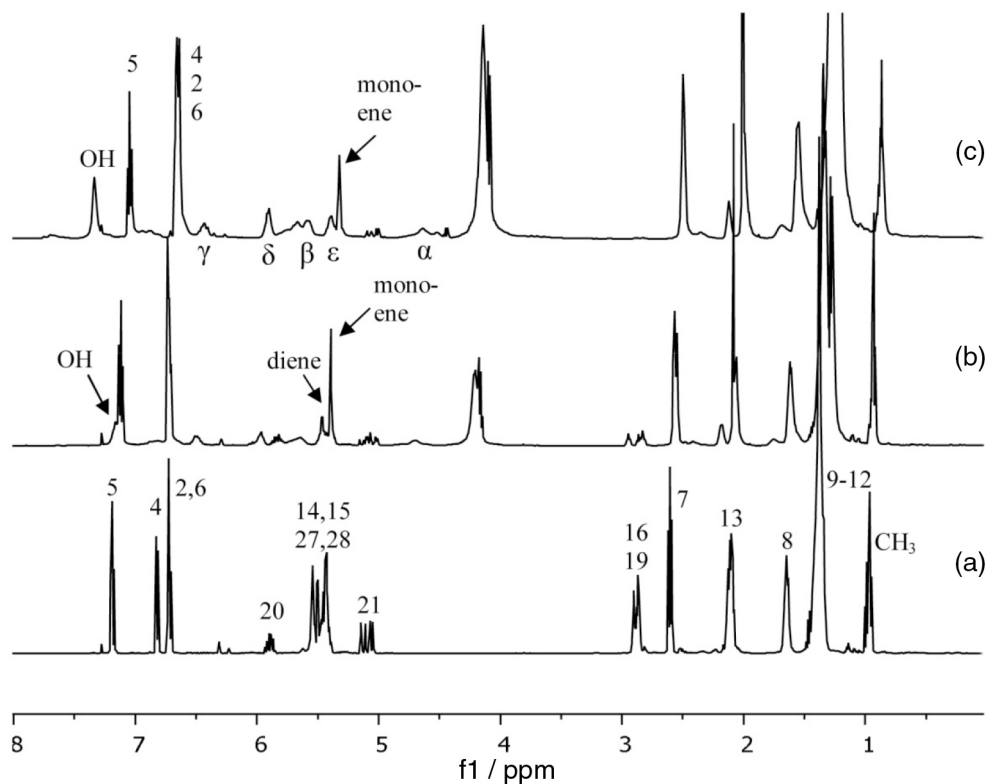


Figure S1. ¹H NMR (500 MHz, CDCl₃) spectra of cardanol (a) sample C-0; cardanol-DEAD reaction products: (b) sample C-1; (c) sample C-2. The Greek letters shown in spectrum (c) correspond to the protons shown in Figure 2. The assignments shown in spectrum (a) refer specifically to the triene; further assignments for triene and diene are given in Figure S2.

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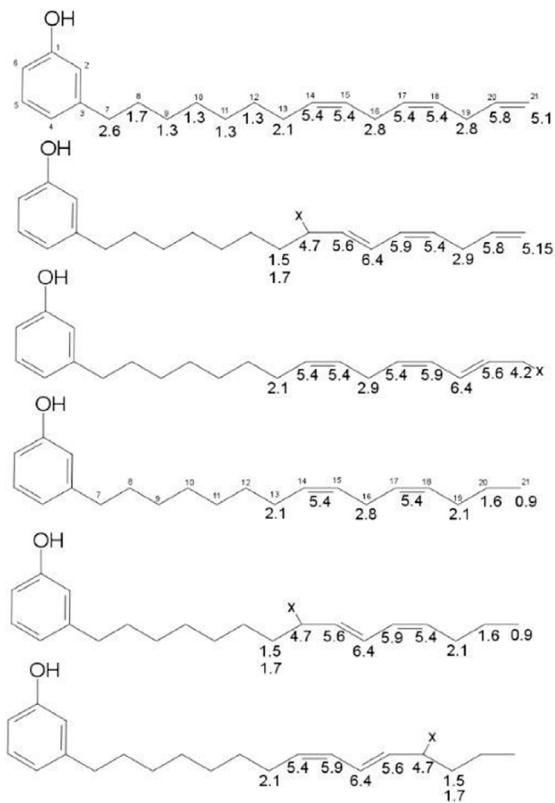


Figure S2. Tentative ^1H NMR (500 MHz, CDCl_3) chemical shift assignments of cardanol diene and triene and their DEAD reaction products, where X = aza-dicarboxylate ester.

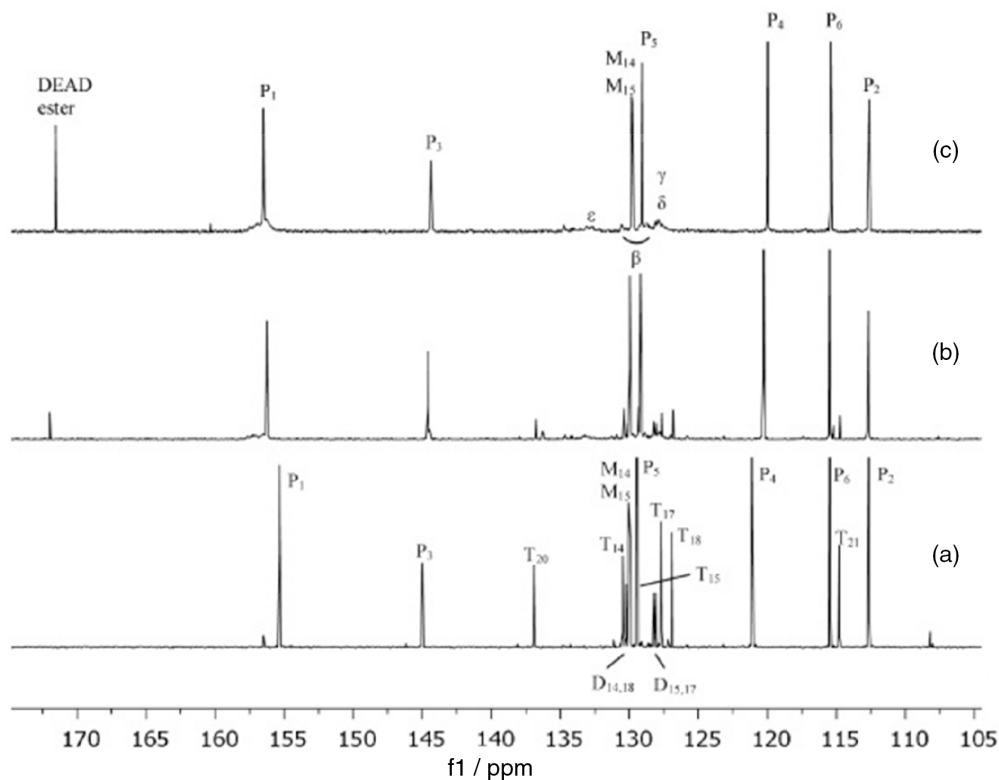


Figure S3. ^{13}C NMR (125 MHz, CDCl_3) spectra of cardanol: (a) sample C-0; cardanol-DEAD reaction products: (b) sample C-1; (c) sample C-2, with tentative assignments. The designation P corresponds to phenol, T for diene, D for diene, and M for mono-ene, and subscripts for the carbon numbers. The Greek letters corresponds to the carbons shown in Figure 2.