

Figure S1. Solid state EPR spectra of starting nut shells.

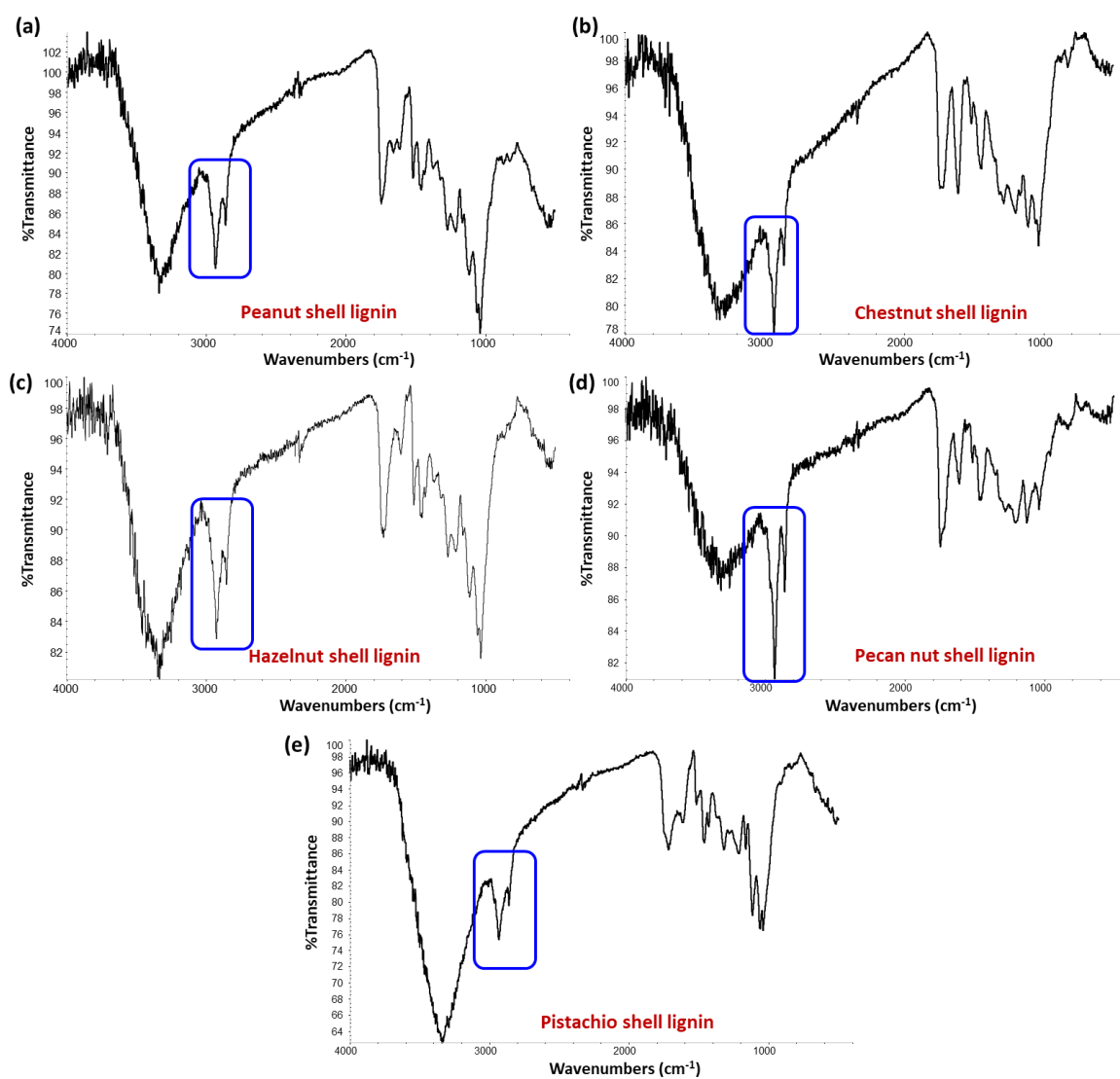


Figure S2. ATR-FTIR spectra of (a) peanut, (b) chestnut, (c) hazelnut, (d) pecan nut and (e) pistachio shell lignins. Highlighted are the bands associated to the aromatic C-H bond stretching vibration of lignins.

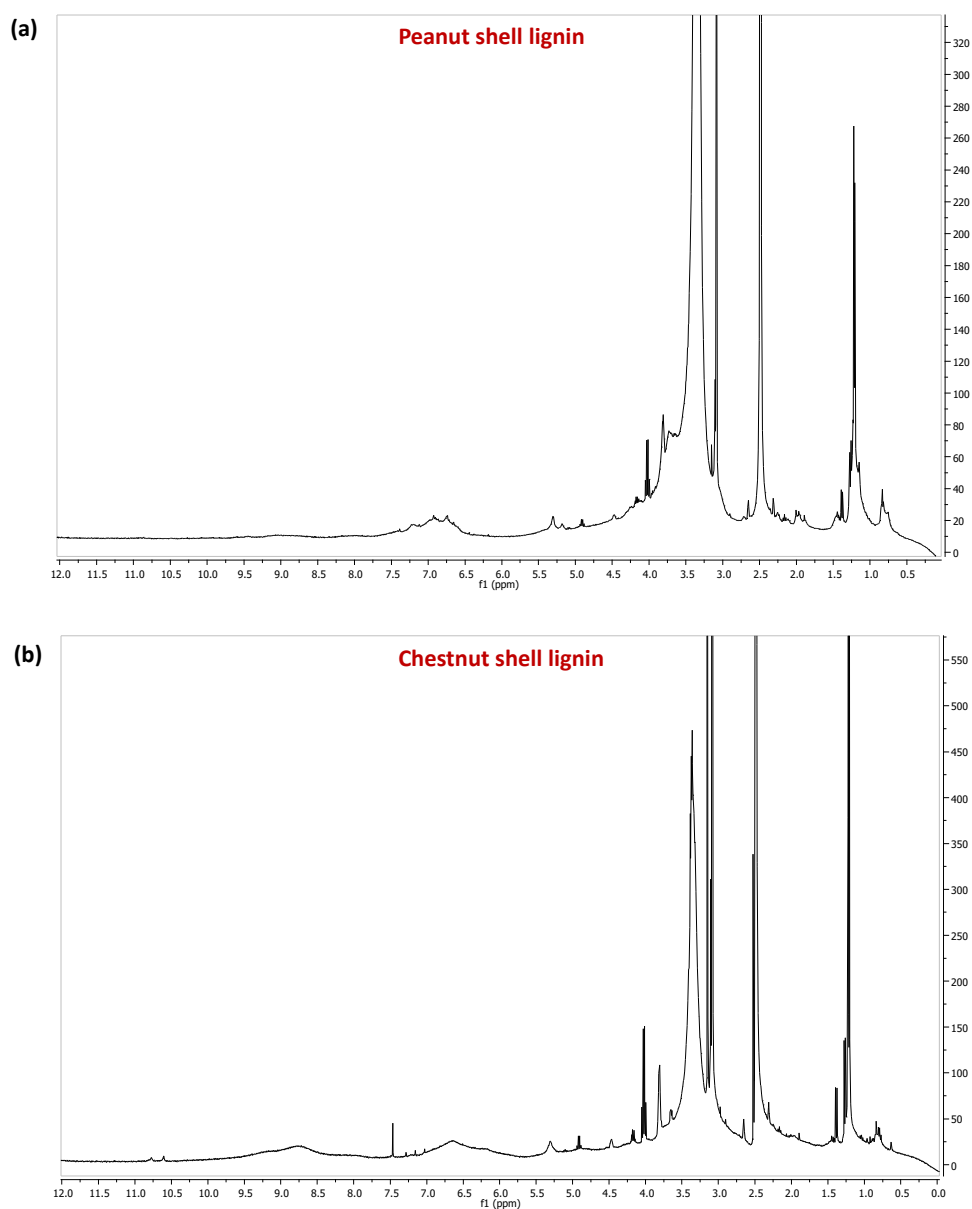


Figure S3. ^1H NMR spectra ($\text{DMSO}-d_6$) of (a) peanut and (b) chestnut shell lignins.

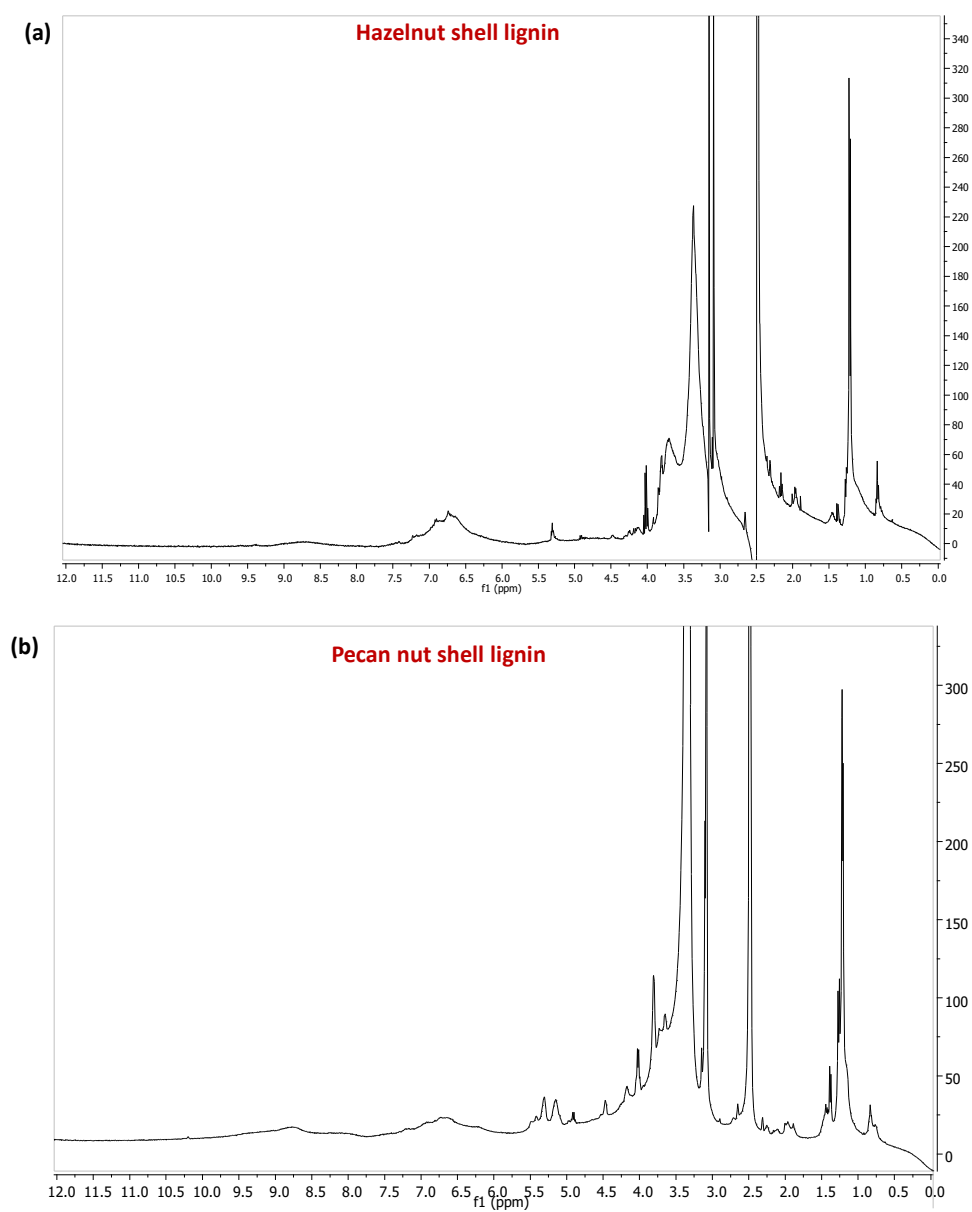


Figure S4. ^1H NMR spectra ($\text{DMSO}-d_6$) of (a) hazelnut and (b) pecan nut shell lignins.

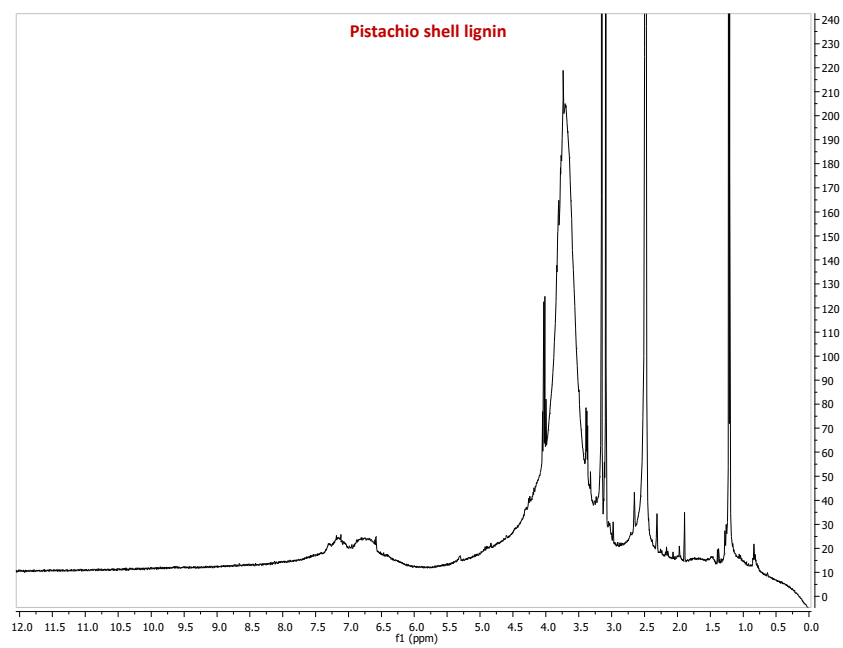


Figure S5. ^1H NMR spectrum ($\text{DMSO}-d_6$) of pistachio shell lignin.

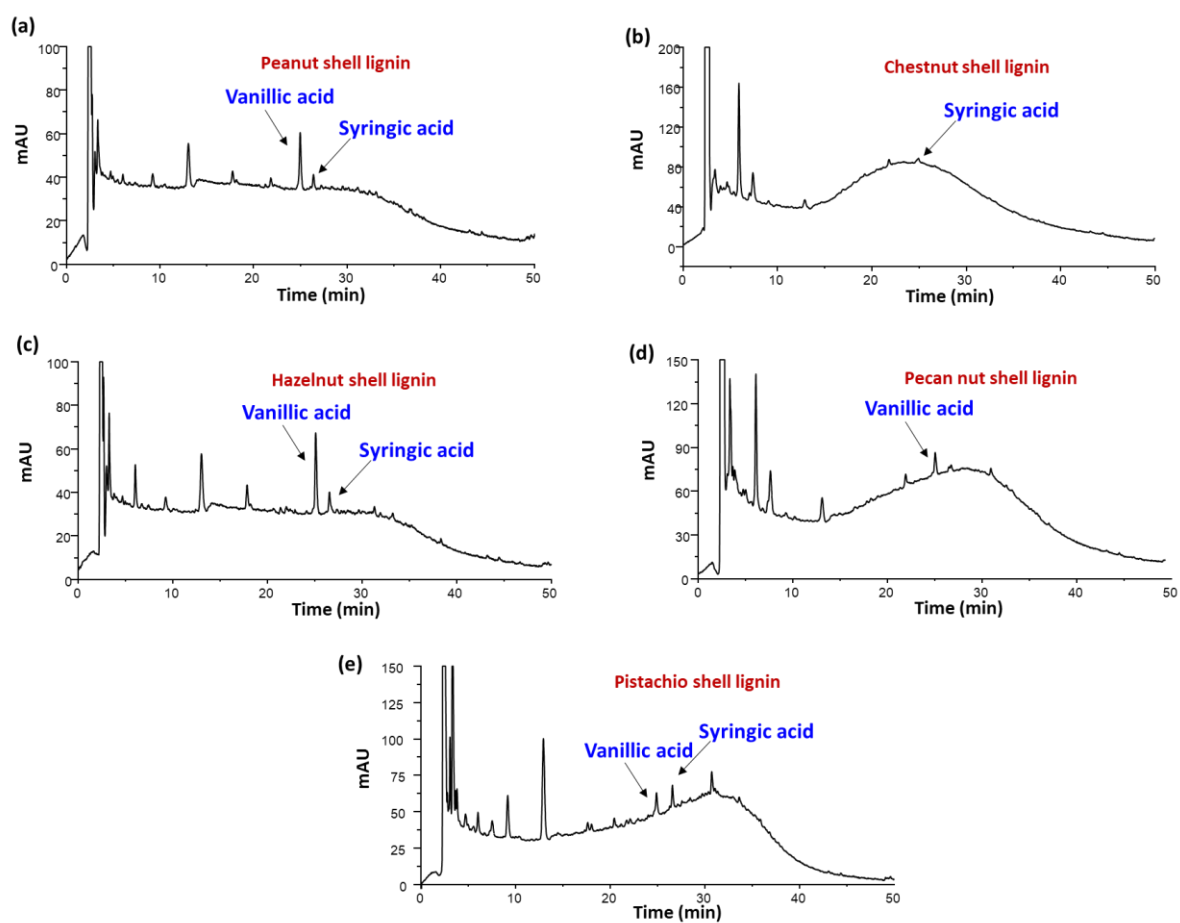


Figure S6. HPLC profiles of the alkaline hydrogen peroxide degradation mixtures of (a) peanut, (b) chestnut, (c) hazelnut, (d) pecan nut, and (e) pistachio shell lignins.