Characterization of palo podrido, an natural process of delignification in wood

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Chemical and morphological changes of incipient to advanced stages of palo podrido, an extensively delignified wood, and other types of white rot decay found in the temperate forests of southern Chile were investigated. Palo podrido is a general term for white rot decay that is either selective or nonselective for the removal of lignin, whereas palo blanco describes the white decayed wood that has advanced stages of delignification. Selective delignification occurs mainly in trunks of Eucryphia cordifolia and Nothofagus dombeyi, which have the lowest lignin content and whose lignins have the largest amount of ?-aryl ether bonds and the highest syringyl/guaiacyl ratio of all the native woods included in this study. A Ganoderma species was the main white rot fungus associated with the decay. The structural changes in lignin during the white rot degradation were examined by thioacidolysis, which revealed that the ?-aryl ether-linked syringyl units were more specifically degraded than the