

Turkish Journal of Agriculture and Forestry



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The Acidity of Important Beech and Oak Species

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Abstract: The corrosion of metals in contact with wood, discoloration of wood itself, undesirable effects on wood preservatives and the curing of the synthetic resins especially glues in fiberboards, particleboards and some other effects could be traced back to the acidity of wood. Thus, this phenomenon is of a great importance in the wood utilization. In this study, two important industrial wood species, *Quercus frainetto* and *Fagus sylvatica* grown in Belgrad Forest in Turkey were investigated with respect to free, bound and total acidity of wood. Cold and hot water extracts were taken to determine the free and bound acidity respectively. The extraction with 0.1M CH_3COONa solution delivered the total acidity. The wood samples extracted with alcohol-benzene and alcohol solvents successively were investigated according to the same methods. They showed much lower acidity than those of unextracted wood. Additionally, the wood extractives were isolated and their contribution to the wood acidity was estimated. According to the results the oak heartwood exhibited most acidic character. The extractive material played a subordinate role in the total acidity of beech wood, whereas nearly half of the acidity in oak wood originated from the extracts especially tannins.

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