

EFFECT OF HOT WATER EXTRACTION ON THE SOLUBILITY OF MILLED AND SOLID OAK WOOD (*QUERCUS ROBUR* L.)

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ABSTRACT

*This study investigates the solubility of milled and solid oak wood (*Quercus robur* L.) samples using Method B (hot water extraction) as described in the ASTM D1110-21 standard. Serving as a continuation of previous research employing cold water extraction (Method A), the current work provides a comparative view of how elevated temperatures influence the release of water-soluble extractives, including tannins, gums, sugars, colouring matter and starches found in the wood. Although present in minor quantities, these extractives can significantly impact wood properties during hydrothermal processing, particularly in terms of discolouration and surface chemistry. The study focuses on oak wood (*Quercus robur* L.) due to its high technical and economic value in Croatia.*

Keywords: penduculate oak (*Quercus robur* L.), hot water solubility, milled, solid, extraction, wood.