

## **DEVELOPMENT OF DISCOLOURATION DURING CONVENTIONAL DRYING OF OAK TIMBER**

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### **ABSTRACT**

*This research aimed to examine the development of inhomogeneous colour changes in oak timber during conventional drying and its relation to moisture content distribution across the wood thickness. To explore this phenomenon, control boards (quarter-sawn and flat-sawn, 38 mm thick) were cut from two oak logs, one of the sessile oak (*Quercus petraea*) and one of the pedunculate oak (*Quercus robur*). The control boards were dried in a conventional kiln according to the common drying schedule, and at specific time intervals, samples were taken to determine the moisture content profile. During each cutting of the samples, the appearance of discolouration was controlled. The results of the study revealed that there is a connection between the moisture content distribution within the boards and the appearance of discolouration. Furthermore, it was found that sessile oak timber dries more slowly and with less intense discolourations than pedunculate oak timber. It is confirmed that quarter-sawn boards dry slower compared to flat-sawn boards, and this applies to both wood species.*

**Keywords:** conventional drying, oak timber, discolouration, moisture content profile