

## Abstract

Single-layered particleboards were produced from granulated *Quercus cerris* bark containing cork and phloem granules using standard hot-press equipment and phenol–formaldehyde resin. The experimental boards were tested for thickness swelling, mechanical strength and thermal properties. Scanning electron microscopy observations were carried out to analyze the panel structure. The results showed that *Q. cerris* bark particleboards had low thickness swelling in water, high resistance to thermal degradation and high calorific values but their mechanical strength was below that of commercial wood particleboards. The produced *Q. cerris* bark particleboards were adequate for exterior applications where mechanical strength is not the key factor. Potential for process and feedstock optimization was acknowledged.